

METRIC

MIL-DTL-89045A

W/AMENDMENT 1

16 December 2009

SUPERSEDING

MIL-DTL-89045A

15 February 2007

DETAIL SPECIFICATION
 GEOSPATIAL SYMBOLS FOR DIGITAL DISPLAYS (GeoSym®)

This specification is for use by all departments and agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This detail specification defines the content and format for the National Geospatial-Intelligence Agency (NGA) Geospatial Symbols for Digital Displays (GeoSym). Although the GeoSym development was undertaken specifically to support the display of Vector Product Format (VPF) data encoded with the Feature and Attribute Coding Catalogue (FACC), the graphic files and symbol assignment files which make up GeoSym may be used with data which is not encoded in FACC if a mapping from the native encoding scheme to the FACC equivalent can be made.

1.2 Purpose. This detail specification defines the format and content of the symbol assignment files that comprise the GeoSym product. For the format and content of the symbol files, refer to the Symbols and Annotation for Maps and Imagery or the Military Handbook, Geospatial Symbols for Digital Displays. Symbols and symbol assignment files are provided to support the display of the following VPF products:

Digital Nautical Chart (DNC®)
 Digital Topographic Data (DTOP)
 Foundation Feature Data (FFD)
 Tactical Oceanic Data Level 0 (TOD0)
 Tactical Oceanic Data Level 1 (TOD1)
 Tactical Oceanic Data Level 2 (TOD2)
 Tactical Oceanic Data Level 3 (TOD3)
 Tactical Oceanic Data Level 4 (TOD4)
 Urban Vector Map (UVMaP)
 Vector Product Interim Terrain Data (VITD)
 Vector Map Level 0 (VMap0)
 Vector Map Level 1 (VMap1)
 Vector Smart Map Level 2 (VMap2)
 Vector Vertical Obstruction Data (VVOD)
 World Vector Shoreline Plus (WVSPlus™)

Comments, suggestions or questions on this document should be addressed to the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or emailed to ncgis-mail@nga.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil/>.

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2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

INTERNATIONAL STANDARDIZATION AGREEMENTS

STANAG 3675	Symbols on Land Maps, Aeronautical and Special Charts, Edition 2, 15 Jun 2000
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DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-0089012A(NGA)	World Vector Shoreline Plus, 24 Aug 1999
MIL-PRF-89023	Digital Nautical Chart, 19 Dec 1997 Amendment 1, 23 Feb 1999
MIL-PRF-89033	Vector Map Level 1, 1 June 1995 Amendment 1, 27 May 1998
MIL-PRF-89035A	Urban Vector Map, 1 August 2002
MIL-PRF-89037A	Digital Topographic Data, 1 August 2002
MIL-PRF-89039	Vector Map Level 0, 9 Feb 1995 Amendment 2, 27 June 2001
MIL-PRF-89040A	Vector Product Interim Terrain Data, 8 May 1996, Interim Amendment 1, 23 May 2000
MIL-PRF-89049A	VPF Products, General Specification, 15 December 2005
MIL-PRF-89049/9A	Vector Vertical Obstruction Data (VVOD), 15 December 2005
MIL-PRF-89049/10A	Tactical Ocean Data Level 0, 15 December 2005
MIL-PRF-89049/11A	Tactical Ocean Data Level 1, 15 December 2005
MIL-PRF-89049/12A	Tactical Ocean Data Level 2, 15 December 2005
MIL-PRF-89049/13	Tactical Ocean Data Level 3, 15 December 2005
MIL-PRF-89049/14A	Tactical Ocean Data Level 4, 15 December 2005

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-2402	Mapping, Charting and Geodesy Symbols for Graphic Products
MIL-STD-2407	Interface Standard for Vector Product Format

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Change Notice 1, 26 October 1999

DEPARTMENT OF DEFENSE HANDBOOKS

MIL-HDBK-857A *Department of Defense Handbook,
Geospatial Symbols for Digital Displays*

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DMA PRODUCT SPECIFICATIONS

PS/2BD/040	<i>DMA Product Specifications for Bottom Contour Charts (All Series), 4th Edition, March 1985</i>
PS/2DA/013	<i>DMA Product Specifications for Hull Integrity Test Site (HITS) Charts, 2nd Edition, December 1984</i>
PS/2DA/010	<i>DMA Product Specifications for Navy Operating Area (OPAREA) Charts, 1st Edition, December 1984</i>

(Copies of ex-DMA Product Specifications are available from the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or request can be emailed to ncgis-mail@nga.mil.)

Symbology and Annotation for Maps and Imagery (SAMI) CGM profile of the ISO/IEC 8632-1 CGM Standard 15 February 2007.

(Copies of this standard are available from ISO, and from NGA at <http://www.nga.mil/standards>.)

Draft MIL-PRF-89049/1	<i>Foundation Feature Data, 30 Nov 1998</i>
Draft MIL-V-89032	<i>Vector Smart Map Level 2, 30 Sept 1993</i>
	<i>Amendment 1, 14 Jan 1994</i>
	<i>Amendment 2, 16 Sept 1994</i>
	<i>Amendment 3, 22 Dec 1994</i>

(Copies of these documents are available from the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or request can be emailed to ncgis-mail@nga.mil.)

Digital Geographic Information Exchange Standard, Part 4: Feature and Attribute Coding Catalogue (FACC).

(Copies of this document are available from <https://www.dgiwg.org/digest/>)

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2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

ISO/IEC 8632-1:1999/Cor 1:2006(E). Information technology - Computer graphics - Metafile for the storage and transfer of picture description information - Part 1:Functional Specification- Second edition, 1999-12-15.

ISO/IEC 8632-3:1999(E). Information technology - Computer graphics - Metafile for the storage and transfer of picture description information - Part 3:Binary encoding - Second edition, 1999-12-15.

ISO/IEC 8632-4:1999(E). Information technology - Computer graphics - Metafile for the storage and transfer of picture description information - Part 4:Clear text encoding- Second edition, 1999-12-01.

ISO 9660:1988 (E). International Organization for Standardization Information Processing-Volume and File Structure of CD-ROM for Information Interchange. First edition, 1988.

(Copies of these documents are available from ISO at <http://www.iso.org/iso/en/prods-services/ISOstore/store.html>.)

IHO S52. 1996. International Hydrographic Organization Specifications for Chart Content and Display Aspects of ECDIS. Special Publication No. 52. 5th Edition, December 1996.

IHO S52 Appendix 2. Colour & Symbol Specifications for ECDIS. Special Publication No. 52, APPENDIX 2, Edition 4.2, March 2004.

IHO S52 Appendix 2, Annex A. IHO ECDIS Presentation Library Users' Manual. Special Publication No. 52, ANNEX A of APPENDIX 2, Edition/revision 3.3, March 2004.

IHO S57. International Hydrographic Organization Transfer Standard for Digital Hydrographic Data. Edition 3.1, November 2000.

(Copies of these documents are available from the International Hydrographic Organization (IHO) at <http://www.iho-ohi.net/english/home/>)

(Non-government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other information services.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3. REQUIREMENTS.

3.1 Accuracy.

3.1.1 Displaced feature symbols. The maximum displacement of symbology due to display-time processing shall not exceed the accuracy tolerances of the digital product being displayed.

3.2 Units of measure. Units of measurement in this specification are given in the metric system, as is the coordinate space defined within the Computer Graphic Metafiles.

3.3 GeoSym Specification Description. This section provides information about the GeoSym directory structure implemented to support the VPF products defined in section 1.2.

3.3.1 Sources. This GeoSym specification is based on the complete feature content of the VPF product specifications listed in paragraphs 2.2.1 and 2.2.2 above and the graphic symbology specified in IHO S-52, IHO S-57, MIL-STD-2402, STANAG 3675 and other standard symbology efforts.

3.3.2 Directory Structure Design. This specification contains the directory structure design and the symbology content to support VPF product display systems.

3.3.3 Feature Coding Scheme. NGA Vector Product Format (VPF) products, and this GeoSym specification utilize the Digital Geographic Information Exchange Standard (DIGEST) Part 4, Feature and Attribute Coding Catalogue (FACC), developed by the Digital Geospatial Information Working Group (DGIWG) for feature and attribute encoding of feature data, and in the symbol assignment rules of GeoSym. Symbols and symbol assignments have been included for some candidate FACC features, attributes, and attribute values, that have been implemented in VPF products, but were not approved for inclusion in DIGEST FACC.

3.3.4 Digital Marginalia. The symbology for legends, grid lines and other cartographic constructs that are normally considered to be part of the marginalia, is not defined in this specification.

3.4 Operating System. The GeoSym directories utilize the standard DOS system disc directory structure and file-naming conventions. However, GeoSym is intended to be utilized by the Windows NT 4.0, the Windows 2000, or the Windows XP operating systems. GeoSym will not function as designed in the Windows 9x operating systems due to the area patterns being 32x32 in size.

3.5 Geospatial Symbols for Digital Displays (GeoSym).

3.5.1 GeoSym Directory Structure Scheme. The GeoSym consists of three top-level directories that contain the CGM symbols, the symbol assignment files, and documentation respectively. The GeoSym directory structure is depicted in Figure 1 below. Subsequent paragraphs describe the contents of each of the top-level directories.

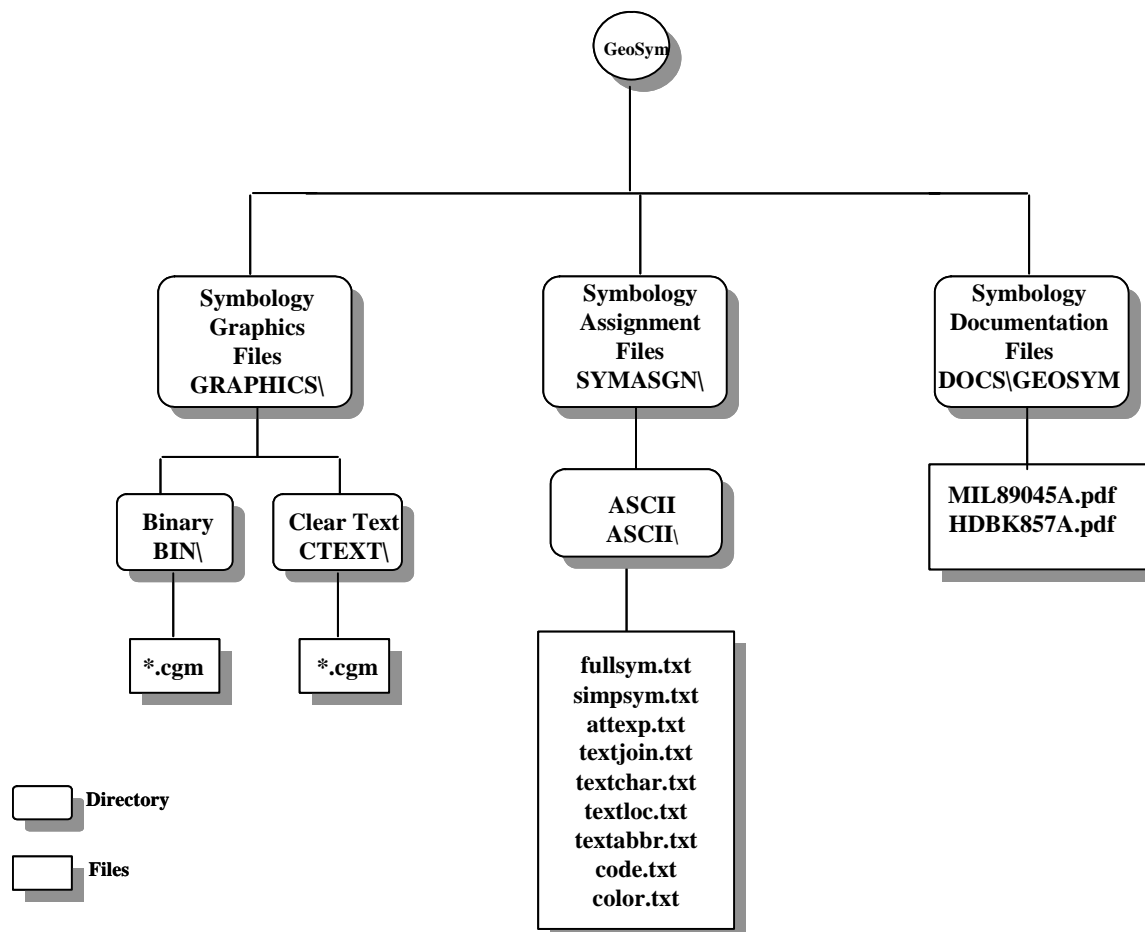
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FIGURE 1. Implementation of GeoSym directory structure

3.5.2 GeoSym Graphics Files Directory. All of the GeoSym symbol graphics files are contained under the directory called "GRAPHICS". A unique symbol graphic in CGM format has been created for any FACC feature/attribute combination where individual feature characteristics warrant separate symbology. In most cases the level of detail found on a 1:50,000-scale map or chart has been used to develop this symbology set. Symbology has been developed only for FACC features and attributes which have been implemented in one of the Vector Product Format (VPF) products being produced by the National Geospatial-Intelligence Agency (see section 1.2). The CGMs and the feature/attribute value combinations that they portray are presented in Appendix A.

The CGMs conform to the Symbology and Annotation for Maps and Imagery (SAMI) CGM profile of the ISO/IEC 8632-1 CGM Standard. The SAMI Profile was developed by NGA to support MIL-DTL-89045A and other imagery and map annotation uses. The MIL-DTL-89045A symbology requires more complex CGM structures than any other CGM implementation that uses the SAMI Profile. In the future the SAMI profile will be registered with ISO. The definition and usage of CGM primitives contained in this specification were constructed in accordance with SAMI Profile and the ISO/IEC 8632 CGM International Standard as well. Specific information regarding the GGM primitives contained herein can be obtained by referencing the SAMI CGM Profile and the ISO/IEC 8632-1,

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8632-3, and 8632-4 Computer Graphics Metafile International Standard.

The CGMs contained in GeoSym are encoded in both binary format (in the "BIN" subdirectory) and clear text format (in the "CTEXT" subdirectory). Clear text encoded CGMs are provided for the convenience of users who desire to review or evaluate the CGMs with a text editor, as well as with CGM graphic interpretation software. However, some CGM interpretation applications may not display the clear text and binary encoded CGMs identically. Only binary encoding is allowed in the SAMI Profile. The binary encoded CGMs are considered the official symbology defined by this specification and are the only CGMs to be used operationally.





Refer to the MIL-HDBK-857A Department of Defense (DoD) Handbook, Geospatial Symbols for Digital Displays (GeoSym), section 6.2 for detailed information regarding the structure of the CGMs.

3.5.2.1 Graphics Symbol Characteristics. The characteristics of individual symbols vary greatly. Some of the aspects of symbol design which distinguish each of the three feature delineation types of areas, lines, and points are described below. Appendix G of this specification contains a graphic depiction of each symbol.



3.5.2.1.1 Point Symbols. Most point symbols are standalone representations of a point feature or the center of an area feature. The following table depicts non-component point symbol CGMs, each completely symbolizing a point feature.

AL015, BFC=15 Building: School	2042.cgm	
BB150 Landing Place	0043.cgm	
BD180, VRR=4, HDP=0, SOH=1 Wreck: Submerged, Depth Unknown, Dangerous	0065.cgm	

However, in some cases, multiple point symbols are required to fully define a feature. For example, the FACC Buoy feature (BC020) may be assigned up to six CGMs to represent various attributes of the feature. The table below shows the CGM assigned for each of the Buoy feature's attribute values that are significant for symbolization.


BTC = 0 and SSC = 10 Buoy Type Category equal to UNKNOWN and Structure Shape Category equals Pillar/Spindle	0306.cgm	
TMC = 25 or 26 or 29 Top Mark Characteristic equals Can (Open), Can (Filled), or Can Over Ball (Open)	0213.cgm	
COL (Character of Light) text string contains "R" for red	0501.cgm	
SST = 1 or 2 or 3 or 4 or 6 or 9 or 14 or 15 Sound Signal Type equals one of the identified sound signal values (horn, whistle, etc)	0401.cgm	

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NST = 10 or 54 Navigation System Type equal to Racon or Ramark	0512.cgm	
REF = 1 Radar Reflector Attribute equals Radar Reflector Present	0510.cgm	

These component CGMs are stacked on top of each to create a completely symbolized portrayal of the Buoy feature. The origin (center) of each component graphic is set so that the graphic is positioned correctly relative to other components and relative to the point feature's location.

Refer to the MIL-HDBK-857A section 6.4.1.3 for detailed information regarding the specific instances where the component point symbols must be used to produce the correct symbol portrayal.




Open Can Buoy with Red Light, Fog Signal and RADAR Reflector	
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3.5.2.1.1.1 Special Processing for DNC Lights on Aids to Navigation. Certain fixed or floating aids to navigation features are symbolized, in addition to the rules-driven base symbology and components, with a particular color of a light flare. The color determination is made by parsing the value of the COL attribute. There will not be a row in the *.sym file for the selection and placement of the correct color light flare. Software will be required to parse the text string of the COL attribute to determine the appropriate CGM point symbol component to be placed. The following cgm files are provided for placement according to the color of the light flare.

white/yellow	0503.cgm
green	0502.cgm
red	0501.cgm
all others	0500.cgm

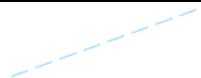
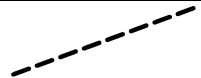
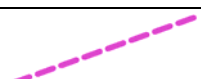
Refer to the guidance found in the MIL-HDBK-857A section 6.4.1.3.2 for specific information.

3.5.2.1.2 Line Symbols. Line symbols are used to symbolize linear features and the boundaries of area features. They are categorized into three groups: solid lines, dashed/dotted lines, and complex lines. Solid lines consist of a single line of various weights and colors such as:

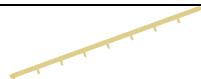
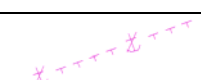
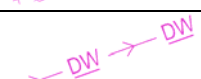
AP030 Road	0605.cgm	
AQ113, LOC=25 Pipeline/Pipe: Above ground or water	0610.cgm	
FC041, TSP=4 Traffic Separation Scheme: Separation zone	0620.cgm	

Dashed/dotted lines consist of a single line composed of dots and/or dashes of various lengths, weights, and colors, such as:

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BE015, HQC=3 or 14 Depth Contour: Supplementary (1/2 or 1/4)	0669.cgm	
AP030, FCO=7, RST=2, WTC=2 Road: Non-divided, loose/unpaved, fair/dry weather	3118.cgm	
AC031, MAC=40 or 41 Maritime Area: TSS	0665.cgm	




Complex lines consist of a combination of solid lines, dashed/dotted lines and/or point symbols that repeat along the linear or area feature at a given interval, such as:

CA010, MCC<>103 AND HQC=5 Contour Line (land): Depression Index	1307.cgm	
FC036, MAC=15 Restricted Area: Anchoring Prohibited	0739.cgm	
FC165, RTT=3, EXS=0 Route (Maritime): Recommended Track for Deep Vessels, Existence unknown	0723.cgm	

Point symbols that are used as part of the construction of the complex line symbols, are separate from the point symbols used to symbolize point features and area features. Symbol numbers 5010-5999 have been reserved for these point symbols. Appendix G Table 3-2 contained in Appendix G of this specification contains a graphic depiction of the component symbols used in the construction of the complex lines.

When a line symbol is used to depict the boundary of an area feature, it should be drawn clockwise around the area. This will result in the correct orientation of the complex line symbology relative to the area feature.

3.5.2.1.3 Area Symbols. Area symbols are one of two types of interior fills: a solid color fill or a pattern fill. Examples of some of these area symbol types are shown below:

AP020 Interchange	4018.cgm	Solid Color Fill	
DA010 Ground Surface Element - Lava	4108.cgm	Pattern Fill	
BH095 Marsh/Swamp	0910.cgm	Pattern Fill	

Refer to the guidance found in the MIL-HDBK-857A section 6.4.1.4 for specific information regarding cases where an area fill CGM and a pattern CGM both must be placed.

3.5.2.1.4 Special Symbols for Unknown Features. There are three symbols that are used to symbolize VPF features for which there is no symbol assignment in GeoSym. If this situation exists, it is an indication that either the GeoSym symbol assignment table is incorrect or that the VPF

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product dataset being displayed does not conform to the appropriate specification listed in section 2.2.1 or 2.2.2. The following table identifies which symbol should be used to symbolize an "unknown" point, line, or area feature. The default symbols should be placed under the following conditions:

1. There is no row in the *sym.txt file for the feature (fcode)
2. After evaluating all rows in the *sym.txt file for that fcode, there is no row that results in an evaluation of "true".

Table 1. Symbols to Place for Unknown Features

Unknown Feature Type	Point Symbol to Place	Linear Symbol to Place
Point (full chart or simplified)	5000.cgm	
Line (full chart or simplified)		5001.cgm
Area - Full Chart	5000.cgm	5001.cgm
Area - Simplified	5000.cgm	0634.cgm

Refer to the guidance found in the MIL-HDBK-857A section 6.4.1.6 for additional guidance related to special processing that must be performed when an unknown feature is encountered.

3.5.2.1.5 Special Symbol for the Uncertified Library. This section applies to DNC and TOD0-3. A certified library is issued by NGA and is periodically updated using the Vector Data Update VDU process to include Notice to Mariners and miscellaneous updates, and is authorized for digital navigation with certified systems such as Electronic Chart Display and Information Systems-Navy (ECDIS-N) or comparable systems. An uncertified library only supports situational awareness, mission planning, and Geographic Information System applications and is not to be used for digital navigation or to conduct tactical navigation operations.

In situations where it is necessary to distinguish between an uncertified and certified library, the application software should utilize 4324.cgm, AP(DQUALU01), to symbolize an uncertified library. This symbol will be displayed based on metadata information contained in the lineage.doc. Reference the MIL-HDBK-857A section 6.4.1.6.2 for further information.

3.5.2.1.6 Special Symbols for Declutter of VVOD by Aggregation. Due to the nature of the Vector Vertical Obstruction Data (VVOD) product, the application software may choose to perform cartographic thinning of the data in order to produce an acceptable visual display. There are various methods to achieve an acceptable display but basically they all involve the replacement of several single obstruction symbols with another symbol that represents a group of obstructions. The rules for declutter or thinning are a responsibility of the application software. GeoSym provides ICAO (default) and GTRI (alternate) based symbols that should be used to provide symbology for thinned data if the application software chooses to provide such functionality. The symbol numbers are as follows:

Default (ICAO)
7153
7154
Alternate (GTRI)
7137

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7145
7138
7146
7139
7140
7141

A visual representation of these special symbol instances can be found in Appendix G Table 3-1. Reference the MIL-HDBK-857A section 6.4.1.6.3 for further information.

3.5.3 GeoSym Symbology Assignment Files Directory. To facilitate the consistent use of symbols across VPF products and among users, a set of symbology assignment files accompanies the CGMs. These files reside under the directory called "SYMASGN" and are provided for use by application software to automatically assign a symbol(s) to a feature with a specific combination of attributes relevant to symbolization. These files also facilitate the display of some feature attribute information textually.

The symbology assignment files are represented in ASCII file format in the "ASCII" subdirectory.

3.5.3.1 Symbology Assignment Files.

The GeoSym symbology assignment files consist of two parts: the header and the data records. Each row of the header is terminated with a colon, with the exception of the last row, which consists of a single semi-colon character. This indicates the end of the header section and the beginning of the data records. The first row of the header contains the name of the file and an English description of that file. The subsequent rows of the header contain the order and definitions of each field contained in a row of data, according to the following format:

fieldname=datatype,datasize,fielddesc,coderef,:

Fieldname is an identifier of that particular field. *Datatype* indicates the type of data contained in that field (N=integer, T=character string). *Datasize* is the maximum number of bytes of datatype integer or the maximum number of characters in the text string required to store the values in the field. *Fielddesc* is an English description of that field. *Coderef* is used to indicate that the values contained in that field are integer codes whose meanings are defined in the associated code.txt file (see section 3.5.3.1.4). Fields that contain coded values will contain "code.txt" in the coderef position in the header. Fields that do not contain coded values will contain a dash, "-", in the coderef position.

Following every header is a series of one or more data records (or rows). Each row contains pipe-delimited fields corresponding to the field definitions defined in the header. The values contained in each row store the information pertaining to each defined field.

There is one exception to the header/record format defined here. The Text Abbreviation File has a unique record format and has no header (see section 3.5.3.1.3.4).

3.5.3.1.1 Symbol Assignment File. There are two main symbol assignment files contained in the GeoSym structure. The first one is named

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"fullsym.txt" and contains the information necessary to assign full chart or default symbology. In many cases this represents the most robust symbology for a given feature/attribute although the default symbology does not necessarily have to be more robust than the simplified or alternate set. Symbolization instructions for every VPF product referenced in section 1.2 are contained in this file. The second file is named "simplsym.txt" and contains the information necessary to assign simplified or alternate symbology. In many cases this represents simpler symbol representations than those defined in the fullsym.txt although it is not required. For example, the simplsym.txt definitions for the VVOD product are actually more complex than the default (fullsym.txt) VVOD symbology. At this time, not all products have simplified symbology defined. Therefore, the simplsym.txt file contains symbolization instructions for the applicable products only. Table 2 defines the header for both the fullsym.txt and simplsym.txt files.

Table 2. Header for Symbol Assignment File

```

fullsym.txt or simplsym.txt, Full or Simplified Symbol Assignment File:
id=N,2,Row Identifier,-,:
pid=N,1,VPF Product Identifier,code.txt,:
fcode=T,5,FACC Feature Code,-,:
delin=N,1,Delineation of Feature Code,code.txt,:
cov=T,5,VPF Coverage for Feature Code,-,:
pointsym=T,4,Point Symbol Number,-,:
linesym=T,4,Line Symbol Number,-,:
areasymp=T,4,Area Symbol Number,-,:
dispri=N,1,Display Priority,-,:
orient=T,3,Orientation Attribute,-,:
labatt=T,*,Label Attribute,-,:
txrowid=T,*,Foreign Key to Text Label Join File,-,:
vgroup=N,4,IHO Viewing Group,-,:
txtgroup=N,1,IHO Text Group,-,:
radar=N,1,IHO Radar Display Category,code.txt,:
dispcat=N,1,IMO Display Category,code.txt,:
feadesc=T,256,Feature Description,-,:
;

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The fields in the *sym.txt file can be divided into the following five categories:

[id] [Assignment Data] [Label Data] [ECDIS Supporting Data] [Descriptive Data]

The [id] category consists of a single column named *id*. This field contains a unique identifier for each row of data contained in the file. This number is used to access the associated attribute expression for that row (see attexp.txt file, section 3.5.3.1.2).

The [assignment data] category consists of the next 9 fields. The first four of these constitute the "if" part of the logical expression and the remaining five fields compose the "then" part. The *pid* field contains a coded numeric value that identifies the VPF product to which the rule applies. The mapping from *pid* number to product is defined in the code.txt file (see section 3.5.3.1.4). The *fcode* field contains the 5-character feature code as defined in the applicable VPF product specification. The *delin* field contains a coded numeric value that identifies the delineation of that *fcode*. The mapping from *delin* number to delineation type is defined in the code.txt file.

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The *cov* field is used only for those *fcodes* that are contained in multiple coverages within a VPF product. Some products, such as DTOP, have the same feature defined in multiple coverages and with different attribution within each coverage. This is a common practice for terrain-based products (e.g., DTOP, VITD) when representing common open water features, such as River/Stream features, across coverages. When this situation exists, it is necessary to have a different "if" part of the logical expression based on which coverage is being displayed. If the *cov* field is populated, it will contain one of two types of information: 1.) the abbreviation of the appropriate VPF coverage (e.g., *sdr,pop*) in that product as defined in that product's coverage attribute table (*cat*); or 2.) the "not" of that same coverage (e.g., *<>sdr,<>pop*).

The remaining five fields in the [assignment data] category contain the "then" information to symbolize the feature properly. The *pointsym*, *linesym*, and *areasymp* fields contain the prefixes of the specific symbol file(s), CGM(s), which contain the symbology to be displayed for a specific feature/attribute condition. See section 3.5.2.1 for a definition of point, line and area symbols. It is possible for any, all, or none of the **sym* fields to be populated for a given row in the **sym.txt* file. Table 3 depicts the possible combinations of symbols that can apply based on a feature's delineation (point, line, area). If none of the **sym* fields is populated, for a row in the **sym.txt* file, it is an indicator that a label attribute is being placed and other fields will be populated instead.

Table 3. Symbol to Feature Type Cross-Reference

	Point Symbol	Line Symbol	Area Symbol
Point Feature	X		
Linear Feature		X	
Area Feature	X	X	X

A point feature may be symbolized as either a point symbol or as a text label or both. If a point symbol is to be placed, a row will exist where the *pointsym* field will be populated with the appropriate point symbol number and both the *linesym* and *areasymp* fields will be blank. If a text label is to be placed, a row will exist where all of the **sym* fields will be blank and the *labatt* field will be populated (see [label data] below).

A linear feature will be symbolized exclusively by a line symbol that may or may not be labeled. The *linesym* field will be populated with the appropriate line symbol number. If the linear feature is to be labeled, a row will exist where only the *labatt* field will be populated (see [label data] below).

An area feature may be symbolized by any combination of point, line, or area symbol as well as with a text label. Therefore, it is possible for any combination of the **sym* fields to be populated as well as for none of them to be populated, as is the case when *labatt* is populated with the text label attribute (see [label data] below).

NOTE: VPF products can contain a fourth type of feature known as a text feature. GeoSym does not include rules to display text features. The application software should refer to the MIL-STD-2407 for information on how to display VPF text features.

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The *dispri* field contains a digit from 0 to 9 that defines the priority for each feature for display purposes. Nine is the highest priority. Symbols for features with higher priorities are displayed on top of and may obstruct symbols for features having lower priority. See section 6.5 in the MIL-HDBK-857A for a complete description of display hierarchy in GeoSym.

Finally, the *orient* field contains a three-letter FACC attribute code identifying the attribute that contains the angle of rotation to apply to the point symbol specified to symbolize the feature.

The [label data] category is comprised of two fields and is used to specify default display characteristics for attribute values that are to be displayed as labels in addition to or in place of a graphic symbol. Some examples are the Hydrographic Depth attribute (HDP) of the Sounding Feature (BE020); the Name attribute (NAM) of the Built-Up Area Feature (AL020); and the Color Code Category (CCC) and Character of Light (COL) attributes of the Buoy Feature (BC020). The *labatt* field contains a set of one or more three-character FACC attribute codes identifying the attributes that define the text labels. The *txrowid* field contains one or more pointers to records in the associated Text Label Join File (*textjoin.txt*, see 3.5.3.1.3.1) that identifies links to the Text Label Characteristics File (*textchar.txt*) and the Text Label Location File (*textloc.txt*). These files provide the default placement parameters and the display characteristics for the text labels. Multiple entries in the *labatt* field indicate there is more than one attribute value that needs to be displayed as a concatenated text string. Any *labatt* multiple attribute code entries are comma-delimited and the *txrowid* field must have the same number of comma-delimited values in order to point to the appropriate information in the *textjoin.txt* file.

The [ECDIS Supporting Data] category provides several pieces of information that are specific to the Electronic Chart Display (ECDIS)-compliant display requirements documented in the International Hydrographic Organization (IHO) S-52 and IHO S-57 specifications. These include the viewing group (*vgroup*) and text group (*txtgroup*), the display of the feature relative to raw radar (either always display Over radar or always Suppressed by radar), and the International Maritime Organization (IMO) display category (display base, standard, or other). Both the radar indicator and the IMO display category fields contain code values that are defined in the *code.txt* file (see section 3.5.3.1.4). Only hydrographic products that are to be displayed using an ECDIS viewer will have these fields populated. (Refer to S52, Appendix 2, Annex A for a complete explanation of the information defined in these fields.)

The [descriptive data] category provides a description of the feature being symbolized. The *feadesc* field contains an English textual description of the feature/attribute(s) being symbolized.

3.5.3.1.2 Attribute Expression File. The attribute expression file contains the conditional attribute expression components for each row in the symbol assignment file requiring a conditional attribute. There is a single *attexp.txt* file for both the *fullsym.txt* and *simpsym.txt* files. Each expression may be composed of one to many expression components. The header of the attribute expression file is described below.

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w/Amendment 1Table 4. Header for Attribute Expression File.

```

attexp.txt,Attribute Expression File:
cond_index=N,2,Key to Row ID in Symbol Assignment File,-,:
seq=N,1,Sequence Number of Expression Component,-,:
att=T,4,Attribute Code,-,:
oper=N,1,Relational Operator,code.txt,:
value=T,10,Attribute Value,-,:
connector=N,1,Expression Component Logical Connector,code.txt,:
;

```

The *cond_index* field contains a numeric value that links the complete attribute expression to the applicable row in the *sym.txt file. Each row of a multiple component expression will contain the same value in the *cond_index* field. The *seq* field contains a numeric value that identifies each row of a multiple component expression. In addition, the *seq* value controls the order in which each of the attribute expression components should be accessed in order to build a complete, accurate attribute expression.

The next three fields comprise the attribute expression component. The *att* field contains the name of the attribute that will be tested for compliance. In most cases, this will be a three-character FACC attribute code. However, for certain objects, S52 symbolization instructions are based on the values of external settings that are controlled by the ECDIS viewing operator. These types of attributes will always be four characters in length. Refer to the MIL-HDBK-857A section 6.4.1.1 for a complete list of these types of attributes. The *oper* field will contain a single digit that equates to one of the allowable logical operators (see code.txt, section 3.5.3.1.4). The *value* field contains the value of the attribute that must be satisfied in order for the expression component to be true. The contents of the *value* field will either be a number, a set of characters delimited by double quotes, or the word NULL (no quotes).

The final field in the attexp.txt file is the *connector* field. This field will contain a number indicating which, if any, of the four defined logical connectors is to be used between the current attribute expression component and the next component in the attribute expression (see code.txt, section 3.5.3.1.4). The value of *connector* will be 0 (zero) after the final component of a multi-component attribute expression or if the attribute expression consists of a single component.

A complete explanation of how to use and interpret the information contained in the attexp.txt file can be found in the MIL-HDBK-857A section 6.4.

3.5.3.1.3 Text Assignment Files. The text assignment files contain the default display characteristics and the text placement parameters for the attribute values to be displayed as labels. A complete explanation of how to use and interpret the information contained in the text assignment files can be found in the MIL-HDBK-857A sections 6.4.1.5 and 6.8.

3.5.3.1.3.1 Text Label Join File. The purpose of the text label join file is to combine a set of text characteristics (from a row in the text label characteristics file) with the parameters governing the placement of the text label (from a row in the text label location file). The header of the text label join file is described below.

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w/Amendment 1Table 5. Header for Text Label Join File.

```

textjoin.txt,Text Label Join File:
id=N,1,Row Identifier,-,:
textcharid=N,1,Foreign Key to Text Label Characteristics File,-,:
textlocid=N,1,Foreign Key to Text Label Location File,-,:
;

```

The *textcharid* and *textlocid* fields in the *textjoin.txt* file contain pointers to rows in the *textchar.txt* and *textloc.txt* files where the display characteristics and location parameters for the text labels are further specified. The *id* field contains the value(s) that is specified in the *txrowid* field in the **sym.txt* file.

3.5.3.1.3.2 Text Label Characteristics File. The header of the text label characteristics file is described below.

Table 6. Header for Text Label Characteristics File.

```

textchar.txt,Text Label Characteristics File:
id=N,1,Row Identifier,-,:
tfont=N,1,Text Font,code.txt,:
tstyle=N,1,Text Style,code.txt,:
tsize=N,1,Text Size (pt),-,:
tcolor=N,1,Foreign Key to Color Assignment File,-,:
tprepend=T,*,Characters to prepend to label attribute,-,:
tappend=T,*,Characters to append to label attribute,-,:
abindexid=N,1,Index Key to Text Abbreviations File,-,:
;

```

The fields in the *textchar.txt* file contain information that controls the display characteristics of the text labels. This information includes the font, style, size, and color of the text to be displayed. In addition, the *textchar.txt* contains the instructions for inserting characters before and after (prepend and append, respectively) a label and for processing abbreviated labels.

The *tfont* and *tstyle* fields contain numeric codes whose possible values are defined in the *code.txt* file (see 3.5.3.1.4). The *tsize* field provides the body size of the text in pica points (1 pt = 0.351 mm). The default text size is 10 pts, which is also the minimum permissible size. The *tcolor* field contains the row id of the record in the ASCII color assignment file (*color.txt*) that holds the color token to be used to display the text.

The *tprepend* field contains a list of characters that are to be placed before the actual attribute value is placed as the text label. Similarly, the *tappend* field has a list of characters that are to be placed after the actual attribute value is placed as the text label. In both the *tprepend* and the *tappend* fields, the mechanism used to define these extra, embedded characters is based on ISO 10646 (Unicode) 16-bit code definitions. The *abindexid* field is used to store an index id that points to the *textabbr.txt* file where a set of abbreviations is defined for replacing the attribute value of the text label with a specified abbreviation.

3.5.3.1.3.3 Text Label Location File. The header of the text label location file is described below.

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w/Amendment 1Table 7 Header for Text Label Location File.

```

textloc.txt,Text Label Location File:
id=N,1,Row Identifier,-,:
tjust=N,1,Text Justification,code.txt,:
tdist=N,1,Distance from base Feature (mm),-,:
tdir=N,2,Direction from base Feature (az degrees),-,:
;

```

The fields in the textloc.txt file contain information that controls the display location of the text labels. This information includes the justification, offset distance, and offset direction of the text to be displayed. In addition to the traditional vertical and horizontal justifications, one justification (sounding text) specifies that the attribute is a depth value. In this case, the default display for the text for the integer part of the depth value is centered on the point feature's position and any fractional part is displayed as a subscript. Reference the MIL-HDBK-857A section 6.8.3.1 for additional information regarding the proper representation of this justification.

The *tjust* field contains numeric codes whose possible values are defined in the code.txt file (see 3.5.3.1.4). The *tdist* and *tdir* fields describe the distance in millimeters and the azimuth from North in degrees for the default offset of the text label relative to the feature's position. Zero values in these fields indicate that the text is to be displayed at the center of the feature.

3.5.3.1.3.4 Text Abbreviations File. The format of the text abbreviations file is illustrated below. Its structure differs from the other text assignment files. In place of a header there is simply a brief description of the format for the ensuing data.

Table 8 Format for Text Abbreviations File.

```

textabbr.txt,Text Abbreviations File:
The first row contains the Abbreviation Index Identifier followed
by a colon(:). Each subsequent row, until the next row with an ID
and colon is encountered, defines two pipe-delimited (|) entries
with the attribute value and the abbreviation to be used.
;
1:
1|B
2|Bu
3|Br
.
.
46|WGW
2: (next set of abbreviations)
.
.
3: (next set of abbreviations)

```

The information in the textabbr.txt file defines the abbreviated text values to be used to replace the actual value stored in the specified label attribute. Each set of abbreviations is associated with a unique index number that is assigned to a row in the *abindexid* field of the textchar.txt file.

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Refer to the MIL-HDBK-857A section 6.8 for an explanation on how to correctly interpret the information provided in the various text assignment files in GeoSym.

3.5.3.1.4 Code Value Description File. The Code Value Description file defines the discrete coded values for specific attributes that are contained in the `fullsym.txt`, `simpsym.txt`, `atexp.txt`, `textchar.txt` or the `textloc.txt` files. This allows the application or the user to interpret the meaning of numeric values that are contained in the rows of the other symbology files. The first field in the `code.txt` file is the row identifier. The next two fields contain the name of the file and the name of the field in that file that contains coded values. The *value* field is the actual numeric code value and the *description* field contains the meaning of that coded value.

For example, a PID value of 5 in a row of the `fullsym.txt` file translates to the VPF product DNC. Fields that require this type of information have "code.txt" indicated in the file header for the respective field definition.

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Table 9. Code Value Description File.

code.txt,Code Value Description File:				
id=N,1,Row Identifier,-,:				
file=T,12,Name of the File,-,:				
attribute=T,9,Attribute Name,-,:				
value=N,1,Unique Value of Attribute,-,:				
description=T,21,Description of Value,-,:				
;				
1	fullsym.txt	pid	1	VMap Level 0
2	fullsym.txt	pid	2	VMap Level 1
3	fullsym.txt	pid	3	VMap Level 2
4	fullsym.txt	pid	4	UVMMap
5	fullsym.txt	pid	5	DNC
6	fullsym.txt	pid	8	WVSPPlus
7	fullsym.txt	pid	9	VITD
8	Fullsym.txt	Pid	16	VVOD
9	fullsym.txt	pid	17	FFD
10	fullsym.txt	pid	18	TOD Level 0
11	fullsym.txt	pid	19	TOD Level 1
12	fullsym.txt	pid	20	TOD Level 2
13	fullsym.txt	Pid	21	TOD Level 3
14	fullsym.txt	pid	22	TOD Level 4
15	fullsym.txt	pid	25	DTOP
16	fullsym.txt	delin	1	Point
17	fullsym.txt	delin	2	Line
18	fullsym.txt	delin	3	Area
19	fullsym.txt	radar	0	On top of Radar
20	fullsym.txt	radar	1	Suppressed by Radar
21	fullsym.txt	dispcat	1	Display Base
22	fullsym.txt	dispcat	2	Standard Display
23	fullsym.txt	dispcat	3	Other
24	simpsym.txt	pid	1	VMap Level 0
25	simpsym.txt	pid	2	VMap Level 1
26	simpsym.txt	pid	3	VMap Level 2
27	simpsym.txt	pid	4	UVMAP
28	simpsym.txt	pid	5	DNC
29	simpsym.txt	pid	9	VITD
30	Simpsym.txt	Pid	16	VVOD
31	simpsym.txt	pid	17	FFD
32	simpsym.txt	pid	18	TOD Level 0
33	simpsym.txt	pid	19	TOD Level 1
34	simpsym.txt	pid	20	TOD Level 2
35	simpsym.txt	pid	21	TOD Level 3
36	simpsym.txt	pid	25	DTOP
37	simpsym.txt	delin	1	Point
38	simpsym.txt	delin	2	Line
39	simpsym.txt	delin	3	Area
40	simpsym.txt	radar	0	On top of Radar
41	simpsym.txt	radar	1	Suppressed by Radar
42	simpsym.txt	dispcat	1	Display Base

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43	simpSYM.txt	dispcat	2	Standard Display
44	simpSYM.txt	dispcat	3	Other
45	attexp.txt	oper	1	=
46	attexp.txt	oper	2	<>
47	attexp.txt	oper	3	<
48	attexp.txt	oper	4	>
49	attexp.txt	oper	5	<=
50	attexp.txt	oper	6	>=
51	attexp.txt	connector	0	None
52	attexp.txt	connector	1	or
53	attexp.txt	connector	2	AND
54	attexp.txt	connector	3	and
55	attexp.txt	connector	4	OR
56	textchar.txt	tfont	0	Sans Serif
57	textchar.txt	tfont	1	Serif
58	textchar.txt	tstyle	0	Normal
59	textchar.txt	tstyle	1	Bold
60	textchar.txt	tstyle	2	Italic
61	textchar.txt	tstyle	3	Bold Italic
62	textchar.txt	tstyle	4	Underline
63	textchar.txt	tstyle	5	Bold Underline
64	textchar.txt	tstyle	6	Italic Underline
65	textchar.txt	tstyle	7	Bold Italic Underline
66	textloc.txt	tjust	1	Bottom Left
67	textloc.txt	tjust	2	Bottom Center
68	textloc.txt	tjust	3	Bottom Right
69	textloc.txt	tjust	4	Center Left
70	textloc.txt	tjust	5	Center Center
71	textloc.txt	tjust	6	Center Right
72	textloc.txt	tjust	7	Top Left
73	textloc.txt	tjust	8	Top Center
74	textloc.txt	tjust	9	Top Right
75	textloc.txt	tjust	10	Sounding Text

3.5.3.1.5 Color Assignment File.

GeoSym symbology files (CGMs) specify color for their primitives via an index number versus a direct color definition such as Red-Green-Blue (RGB) triplet values. The textchar.txt file also specifies a color index for the label attributes. The color assignment file contains the link between the color index number and the color token name assigned to that index. Also included for each index/token is the corresponding RGB value applicable in day lighting conditions against a white background.

Table 10. Header for Color Assignment File.

```
color.txt,Color Assignment File:
index=N,1,Color Index Number,-,:
token=T,14,Color Token Name,-,:
red=N,1,Red Value,-,:
green=N,1,Green Value,-,:
blue=N,1,Blue Value,-,:
;
```

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Refer to the MIL-HDBK-857A section 6.6 for a full explanation of color and its implementation in ECDIS. The contents of the color assignment file are to be used in two ways. First, the CGM interpreter software may use this information when displaying a given CGM, which contains a single color index number that equates to a specific row in the color.txt file. (Alternatively, the CGM interpreter software may use the application attribute structure "IC_ColorNameTable" which is embedded within each CGM. See section 6.6 of the MIL-HDBK-857A for an explanation of this CGM attribute). Secondly, the textchar.txt file contains a numeric key (tcolor) that is a pointer into the color assignment file to define the color with which to display the text label.

3.5.4 GeoSym Documentation Files. The directory called "DOCS" contains documentation files. The GeoSym specific documentation is in the GeoSym subfolder and consists of the following files:

The Detail Specification, Geospatial Symbols for Digital Displays, MIL-DTL-89045A in Portable Document Format (PDF).

The Department of Defense Handbook, Geospatial Symbols for Digital Displays, MIL-HDBK-857A in PDF.

4. Verification

4.1 Classification of inspection. The inspection requirements specified herein are classified as a conformance inspection.

4.2 Conformance inspection. Conformance inspection shall include the examinations of 4.2.1 and 4.2.2.

4.2.1 Visual examination. The contents shall be examined to ensure that all necessary and required files are present.

4.2.2 Examination. The files in the GeoSym directory structure shall be examined for compliance with the requirements specified in Section 3. Unless a waiver has been granted, non-compliance with any of the specified requirements shall constitute cause for rejection.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of material is to be performed by the Department of Defense (DoD) or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory)

6.1 Intended use. GeoSym is intended to support the electronic

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display of VPF data. This specification is designed for use with color-display devices. Use with non-color or grayscale display devices may not yield the intended results and is therefore inappropriate. Even though this specification is intended for softcopy map displays, certain limited uses for hardcopy map production may be suitable. (See MIL-HDBK-857A, Sections 4.1.1.2 and 4.1.7). GeoSym may also be used to provide a geospatial context to operational symbology. MIL-STD-2525, Common Warfighting Symbology provides a wide range of standard symbols for items of interest in the conduct of military operations. GeoSym can provide the geolocational aspects of an integrated display, to visualize to the user where the activity of interest is occurring. This product is intended for use by military and civilian branches of the government. GeoSym is a registered trademark of the U.S. Government, National Geospatial-Intelligence Agency.

6.2 Acquisition requirements. This section is not applicable to this specification.

6.3 Supersession. This specification supersedes MIL-DTL-89045 dated 17 June 2004.

6.4 Definitions.

Area feature. A geographic entity that encloses a region; for example, a lake, administrative area, or state.

Area symbol. A CGM that contains the graphic depiction for the interior of an area feature. An area symbol will either be a solid fill color or a repeating graphic pattern fill.

Attribute. A property of an entity; for example, the type of a building, or the width of a road.

Attribute value. The specific value of an attribute; for example, a building type of school, 48 feet for road width.

Computer Graphics Metafile. An International Standards Organization (ISO) Metafile format for describing pictures in vector form (ISO/IEC-8632-1).

Conditional expression. A logical expression using a specific syntax to represent a feature attribute value. A conditional expression is interpreted by software to identify the symbol condition, which best matches observed feature attribute value combinations. Valid operators include: =, <, >, AND, OR. Special operators include: NULL. Negation is supported by the combination <> and is used to mean "not equal to".

Directory. A file that contains a list of the unique names, file types (directory or file), beginning addresses, and lengths of other files.

Delineation. The dimensional classification of a feature (point, line, area).

Feature. A model of a real world geographic entity. A zero-, one-, or two-dimensional entity of uniform attribute scheme from an exhaustive attribute distribution across a plane, or a set of such entities sharing common attribute values. Simple, compound and complex are types of features.

Feature attribute. A property of a feature. (see Attribute)

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Field. A tab-delimited location in a row of each ASCII file that contains a single value for a given entity.

Field type. The data type of the value that is stored in a given field. This will either be an "N" for integer or a "T" for character.

File. A named set of records composed of ASCII characters.

Foreign key. One or more fields in one file that are used as a primary key in another file.

Graphics files. Contains the graphic representation of a symbol. Conforms to computer graphic metafile (CGM) format.

Index. A mechanism used to quickly identify a particular record or group of records based on a file's primary key.

Key. One or more fields whose values uniquely identify or can be used to select a row.

Line feature. A geographic entity that defines a linear (one-dimensional) structure; for example, a river, road, or a state boundary.

Line symbol. A CGM that contains the graphic depiction for a line feature or the bounding linework of an area feature. A line symbol will either be a solid line, a dashed/dotted line or a complex line.

Medium. A data storage device (e.g., a CD-ROM, hard disk drive, magnetic tape, or floppy disk).

Point feature. A geographic entity that defines a zero-dimensional location; for example, a well or a building.

Point symbol. A CGM that contains one or more graphic depictions for a point feature.

Product specification. A document that defines the precise content and format of a specific product. It contains technical requirements and database design decisions such as coding, tiling, special relationships between entities, and so forth.

Row. An ordered collection of fields pertaining to the entity.

Row id. An integer that uniquely identifies each row in a file.

Symbol assignment file. A file that stores the symbol rules of each feature. Each row id from the symbol assignment file is used as a key into the associated attribute expression file to access the conditional expression applicable for a given row.

Symbol conditions. The logical conditions used within the symbol rules to portray specific feature or environmental attribute values that influence how a feature is depicted by a symbol.

Vector product format. A standard format, structure, and organization for large geographic databases based on a georelational data model and intended for direct access.

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ASCII	American Standard Code for Information Interchange
CD-ROM	Compact Disc-Read Only Memory
CGM	Computer Graphics Metafile
DGIWG	Digital Geographic Information Working Group
DIGEST	Digital Geographic Exchange Standards
DNC	Digital Nautical Chart
DoD	Department of Defense
DOS	Disc Operating System
DTOP	Digital Topographic Data
ECDIS	Electronic Chart Display System
FACC	Feature and Attribute Coding Catalogue
FFD	Foundation Feature Data
GTRI	Georgia Tech Research Institute
HITS	Hull Integrity Test Site
ICAO	International Civil Aviation Organization
IHO	International Hydrographic Organization
IMO	International Maritime Organization
ISO	International Organization for Standardization
MC&G	Mapping, Charting, and Geodesy
NGA	National Geospatial-Intelligence Agency
OPAREA	Navy Operation Area
PDF	Portable Document Format
SAMI	Symbology and Annotation for Maps and Imagery
TOD	Tactical Oceanic Data
UVMaP	Urban Vector Map
VITD	Vector Product Interim Terrain Data
VMap	Vector Map
VPF	Vector Product Format
VDU	Vector Data Update
VVOD	Vector Vertical Obstruction Data
WVSPPlus	World Vector Shoreline Plus

6.5 Subject term (key word) listing.

Attribute
Chart
Charting
Computer Graphics Metafile

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Feature
Graphic
Map
Mapping
Portrayal
Vector Product Format
VPF

6.6 International standardization agreements. This section is not applicable to this specification.

6.7 NGA customer help desk. For questions concerning this or other NGA products, services, or specifications, please telephone the NGA Customer Help Desk at 1-800-455-0899, Commercial 314-263-4864, or DSN 693-4864.

6.8 Changes from previous issue. Marginal notations are identified by vertical bars where possible. Changes in this amendment not identified by vertical bars are detailed as follows:

<u>Type of Change</u>	<u>Section</u>	<u>Description</u>
Modification	Appendix A, B, D, E, F,	DNC - AK100, AK120, AK180 symbol assignment changed to 0804 and NAM label removed.
Addition	Appendix A, D, E, F	TOD4 - BE019 symbol and rules added

6.9 Considerations for GeoSym Viewing Software. The GeoSym specification does not include requirements for application software packages, beyond those instructions required to properly interpret the structure and content of the GeoSym files. It is outside the scope of GeoSym to define a set of requirements for any software package with regard to rendering the symbology contained in GeoSym. It is recommended that crafting such a set of requirements should be considered as a goal for each community of users of GeoSym. The International Hydrographic Organization (IHO) has indeed developed their own set of symbology presentation requirements and documented those requirements in the IHO S52 Appendix 2, Annex A. Based on functional requirements contained in that specification, as well as lessons learned from previous attempts at implementing a "GeoSym Viewer", section 7 of the MIL-HDBK-857A contains references to certain aspects of visualization that could enable a more "cartographically pleasing" result when displaying the GeoSym symbology in a map-like context.

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SYMBOL ASSIGNMENTS

A.1 SCOPE

A.1.1 Scope. This appendix is a consolidated representation of the GeoSym feature/attributes and corresponding graphic symbology. It is a mandatory part of the specification. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS

The following documents were used extensively in the selection of appropriate symbology for a given feature/attribute: IHO S52, IHO S57, MIL-STD-2402, OPAREA, HITS, BC, STANAG 3675 Ed2.

A.3 SYMBOL ASSIGNMENTS

This appendix provides a textual description and graphic depiction of each symbol and the symbol assignment expression that assigns each symbol to a specific feature/attribute entity. This appendix is sorted by fcode, feature delineation, and VPF product. Refer to Figure A-1 for information about each field contained in the Appendix and how to interpret the field's contents.

It is important to note that the symbols in this Appendix are drawn to appear correctly in the context of digital map display containing many other symbols. Therefore, some symbols may appear to be distorted or have exaggerated elements in their representation in this appendix. For example, the dots in symbol 0052 used by fcode BD000 appear to be too large in this appendix. However, when one views symbol 0052 in the GeoSym viewer (GEOSYMWV.EXE), the symbol displays correctly.

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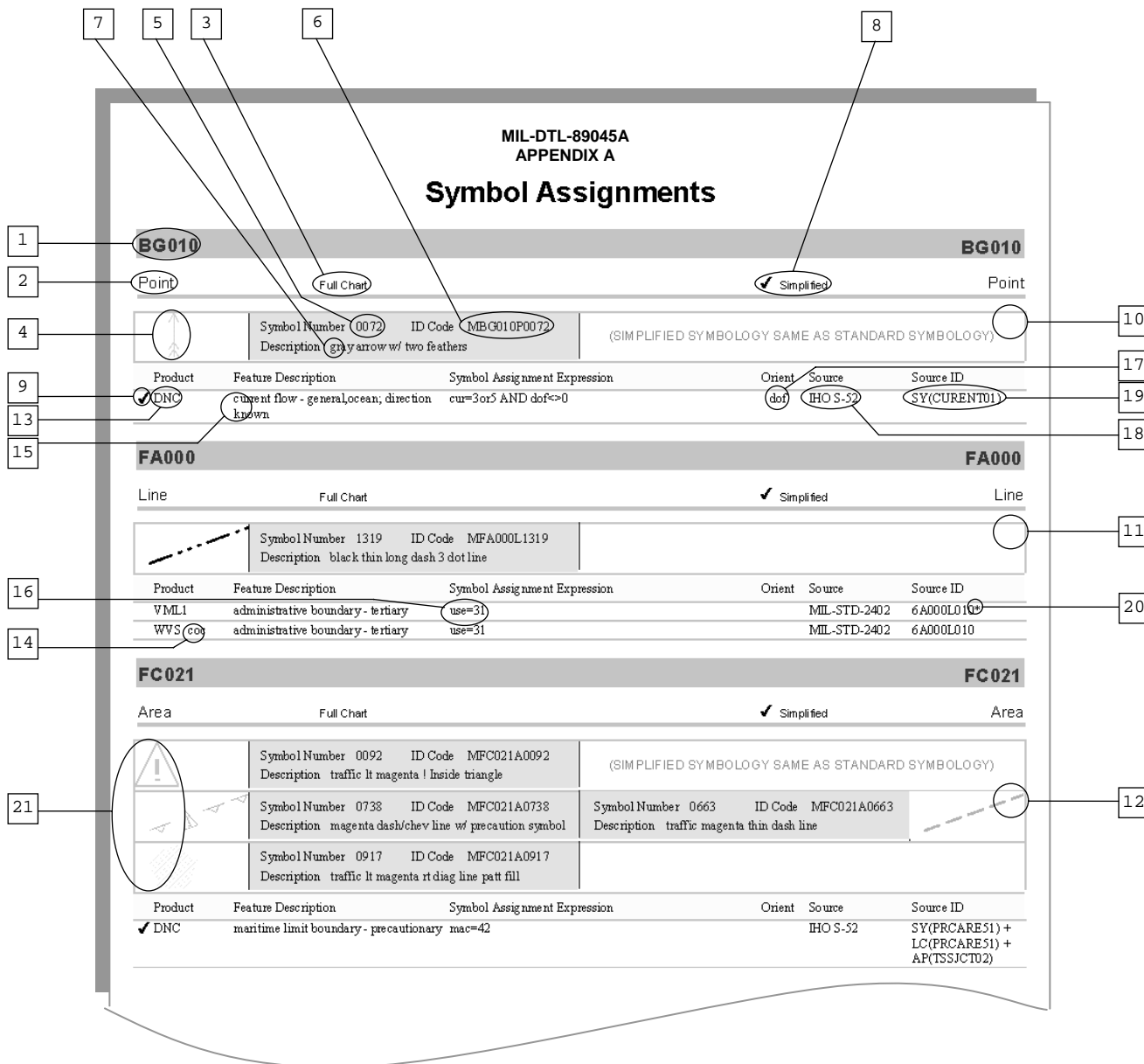


Figure A-1. Appendix A "How-To" Diagram

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Figure A-1 "How-To" Diagram Key

- 1 FCODE - The FACC feature code that identifies the feature being symbolized. The primary sort for Appendix A is alphabetically by FCODE.
- 2 Delineation - The delineation of the feature being symbolized (e.g. point, line, or area). The secondary sort for Appendix A is by delineation in the order point, line, and then area.
- 3 Full Chart Symbol Heading - Full chart symbology for each feature attribution combination is shown in the left-hand column.
- 4 Full Chart Symbol - The leftmost box contains the full chart symbology for the feature being symbolized. This box may contain a point symbol, a line symbol, an area solid fill or an area pattern fill. Note that the type of symbol appearing in the box does not necessarily indicate the delineation of the symbol. Some area features require separate line and point symbology components. (See #21)
- 5 Symbol Number - The four-digit code that identifies the symbol assigned to the feature attribute combinations listed. The third sort for Appendix A is by symbol number. (The Symbol Number also appears in the simplified symbol section. See #12)
- 6 Symbol ID Code - An alphanumeric identifier that is in a coded format. The first letter of the code is always M for MC&G symbology. The next 5 characters are the FACC feature code for the feature to which the symbol is associated. The sixth character specifies the symbol's delineation, P, L, or A, for point, line, or area respectively. The final four characters are used to store the symbol number. (The Symbol ID Code also appears in the simplified symbol section. See #12)
- 7 Symbol Description - An English description of the symbol. (The Symbol Description also appears in the simplified symbol section. See #12)
- 8 Simplified Symbol Heading - Simplified symbology for each feature/attribute combination that requires it is shown in the right-hand column.
- 9 Simplified Symbol Designator - A check mark is placed on the line for the feature attribution combinations for which the simplified symbology applies. Other feature/attribute combinations that also appear under the symbol but do not have a check mark do not apply to the simplified symbology shown in the rightmost box.
- 10 Same Simplified Symbology - The text "(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)" appears in the right-hand column if the simplified symbol assigned to the feature/attribute combination is the same as that assigned for the full chart symbol.
- 11 No Simplified Symbology - The symbol section in the right-hand column appears blank if there is no simplified symbol applicable for the feature/attribute combinations listed.
- 12 Different Simplified Symbology - If the simplified symbol assigned to the feature/attribute combination is different from the full chart symbol, then the simplified symbol is depicted and described in the right-hand column. (Note that this section also contains items 4, 5, 6 and 7.)
- 13 Product - An abbreviation that specifies the product for which the feature attribute combination applies. The fourth sort for Appendix A is by product abbreviation. The following abbreviations are used for the products listed in section 1.2:

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Digital Nautical Chart	DNC
Digital Topographic Data	DTOP
Foundation Feature Data	FFD
Tactical Ocean Data Level 0	TOD0
Tactical Ocean Data Level 1	TOD1
Tactical Ocean Data Level 2	TOD2
Tactical Ocean Data Level 3	TOD3
Tactical Ocean Data Level 4	TOD4
Urban Vector Map	UVM
Vector Product Interim Terrain Data	VITD
Vector Map Level 0	VML0
Vector Map Level 1	VML1
Vector Smart Map Level 2	VML2
Vector Vertical Obstruction Data	VVOD
World Vector Shoreline Plus	WVS

- 14 Coverage - Some products contain the same feature in multiple coverages and require the symbolization of that feature to be different. When necessary, the coverage field will be populated with the name of the coverage (e.g. "coc") or with an indication that the feature is not in that coverage (e.g., "<>coc").
- 15 Feature Description - An English description of the feature that includes a brief description of what the attribution implies.
- 16 Symbol Assignment Expression - The attribute(s) and value(s) that qualify the feature for a specific symbol. Only those attributes and their values that drive the symbology for a feature are listed.
- 17 Orientation - The three-letter FACC attribute code identifying the attribute that contains the angle of rotation to apply to the point symbol specified to symbolize the feature. If empty, the point symbol should be placed per its orientation in the CGM.
- 18 Source - The source from which the symbol assignment was derived. The source options are:
- | | |
|--------------|--|
| IHO S-52 | International Hydrographic Organization Specifications for Chart Content and Display Aspects of ECDIS including Appendix A and Appendix A, Annex A (Note: the GeoSym Edition 1 release version is compliant up to and including C&S Maintenance Document 1.) |
| MIL-STD-2402 | Mapping, Charting and Geodesy Symbols for Graphic Displays |
| OPAREA | DMA Product Specifications for Navy Operating Area (OPAREA) Charts |
| HITS | DMA Product Specifications for Hull Integrity Test Sites (HITS) |
| BC | DMA Product Specifications for Bottom Contour Charts |
| STANAG 3675 | Symbols on Land Maps, Aeronautical and Special Charts |
| Original | In some cases there was no appropriate source instruction and in those cases an original symbol was derived that was consistent and meaningful for the product. |
- 19 Source ID - The specific reference to the symbol number within the indicated source. Only applies to S-52, MIL-STD-2402 or STANAG 3675.

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- 20 Variation on Symbology - An asterisk following a source ID indicates that the symbol chosen for the feature attribute combination is loosely based on the source ID listed but some aspect(s) of the symbol have been changed.
- 21 Symbol Compilation - In the case of some area features, more than one symbol component is required for the complete symbolization of the feature. In these cases, all of the symbol components are listed and must be combined to form the complete symbol.

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Symbol Assignments

AA010**AA010**

Point Full Chart ✓ Simplified Point

	Symbol Number 0001 ID Code MAA010P0001 Description feature brown mine symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	mine/quarry			IHO S-52	SY(PRDINS02)

	Symbol Number 2001 ID Code MAA010P2001 Description black pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mine - active	exs<>6		MIL-STD-2402	1A010P001
✓ UVM	mine - active	exs<>6		MIL-STD-2402	1A010P001
✓ VML0	mine/quarry			MIL-STD-2402	1A010P001
✓ VML1	mine/quarry - active	exs<>6		MIL-STD-2402	1A010P001
✓ VML2	mine/quarry - active	exs<>6		MIL-STD-2402	1A010P001

	Symbol Number 6000 ID Code MAA010P6000 Description black upside down pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mine - inactive	exs=6		STANAG 3675	326
✓ UVM	mine - inactive	exs=6		STANAG 3675	326
✓ VML1	mine/quarry - inactive	exs=6		STANAG 3675	326
✓ VML2	mine/quarry - inactive	exs=6		STANAG 3675	326

Line Full Chart ✓ Simplified Line

	Symbol Number 3116 ID Code MAA010L3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	mine			MIL-STD-2402	1A010A003*

Area Full Chart ✓ Simplified Area



	Symbol Number 0027 ID Code MAA010A0027 Description feature brown mine symbol inside circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

	Symbol Number 0624 ID Code MAA010A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	mine/quarry			IHO S-52	SY(QUARRY01) + LS(DASH,1,LANDF)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 2001 ID Code MAA010A2001 Description black pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3116 ID Code MAA010A3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mine - active	exs<>6		MIL-STD-2402	1A010A001
✓ UVM	mine - active	exs<>6		MIL-STD-2402	1A010A001
✓ VML0	mine/quarry			MIL-STD-2402	1A010A001
✓ VML1	mine/quarry - active	exs<>6		MIL-STD-2402	1A010A001
✓ VML2	mine/quarry - active	exs<>6		MIL-STD-2402	1A010A001

	Symbol Number 6000 ID Code MAA010A6000 Description black upside down pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3116 ID Code MAA010A3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mine - inactive	exs=6		STANAG 3675	326
✓ UVM	mine - inactive	exs=6		STANAG 3675	326
✓ VML1	mine/quarry - inactive	exs=6		STANAG 3675	326
✓ VML2	mine/quarry - inactive	exs=6		STANAG 3675	326

AA012**AA012**

Point Full Chart ✓ Simplified Point

	Symbol Number 2001 ID Code MAA012P2001 Description black pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	quarry - active	exs<>6		MIL-STD-2402	1A030P001
✓ UVM	quarry - active	exs<>6		MIL-STD-2402	1A030P001

	Symbol Number 6000 ID Code MAA012P6000 Description black upside down pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	quarry - inactive	exs=6		STANAG 3675	326
✓ UVM	quarry - inactive	exs=6		STANAG 3675	326

Line Full Chart ✓ Simplified Line


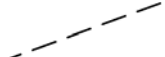
	Symbol Number 3116 ID Code MAA012L3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	quarry			MIL-STD-2402	1A030A003*


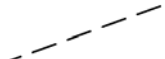
Refer to Appendix G for true symbol scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 2001 ID Code MAA012A2001 Description black pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3116 ID Code MAA012A3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	quarry - active	exs<>6		MIL-STD-2402	1A030A003
✓ UVM	quarry - active	exs<>6		MIL-STD-2402	1A030A003



	Symbol Number 6000 ID Code MAA012A6000 Description black upside down pick & hammer	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3116 ID Code MAA012A3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	quarry - inactive	exs=6		STANAG 3675	326
✓ UVM	quarry - inactive	exs=6		STANAG 3675	326



AA040

AA040



PointFull Chart✓ SimplifiedPoint

	Symbol Number 2002 ID Code MAA040P2002 Description black tower	Symbol Number 2019 ID Code MAA040P2019 Description black sm filled cir	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rig/superstructure			ORIGINAL	2002
✓ UVM	rig/superstructure			ORIGINAL	2002
✓ VML1	rig/superstructure			ORIGINAL	2002
✓ VML2	rig/superstructure			ORIGINAL	2002

	Symbol Number 7151 ID Code MAA040P7151 Description red pyramid with dot - ICAO	Symbol Number 7000 ID Code MAA040P7000 Description red vo rig symbol - GTRI	
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	rig / superstructure	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAA040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAA040P7142 Description red vo light component - GTRI	
--	---	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	rig / superstructure light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAA040P7155 Description red high vo tower - ICAO	Symbol Number 7000 ID Code MAA040P7000 Description red vo rig symbol - GTRI	
--	---	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	rig / superstructure high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7156 ID Code MAA040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAA040P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	rig / superstructure light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AA050**AA050**



Point Full Chart ✓ Simplified Point

	Symbol Number 0078 ID Code MAA050P0078 Description black sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	well - not water	pro<>116		MIL-STD-2402	1A050P001
✓ UVM	well - not water	pro<>116		MIL-STD-2402	1A050P001
✓ VML0	well			MIL-STD-2402	1A050P001
✓ VML1	well - not water	pro<>116		MIL-STD-2402	1A050P001
✓ VML2	well - not water	pro<>116		MIL-STD-2402	1A050P001

	Symbol Number 2003 ID Code MAA050P2003 Description basic blue solid filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	well - water/perennial	hyc=0or8 AND pro=116		STANAG 3675	124
✓ UVM	well - water/perennial	hyc=0or8 AND pro=116		STANAG 3675	124
✓ VML1	well - water/perennial	hyc=0or8 AND pro=116		STANAG 3675	124
✓ VML2	well - water/perennial	hyc=0or8 AND pro=116		STANAG 3675	124

	Symbol Number 6013 ID Code MAA050P6013 Description basic blue very thin circle	Symbol Number 2003 ID Code MAA050P2003 Description basic blue solid filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	well - water/non-perennial-dry	hyc<>0and<>8 AND pro=116		STANAG 3675	124
✓ UVM	well - water/non-perennial-dry	hyc<>0and<>8 AND pro=116		STANAG 3675	124
✓ VML1	well - water/non-perennial-dry	hyc<>0and<>8 AND pro=116		STANAG 3675	124
✓ VML2	well - water/non-perennial-dry	hyc<>0and<>8 AND pro=116		STANAG 3675	124

AA052**AA052**

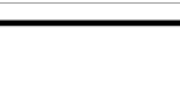

Point Full Chart ✓ Simplified Point

	Symbol Number 2002 ID Code MAA052P2002 Description black tower	Symbol Number 0078 ID Code MAA052P0078 Description black sm cir	
--	--	---	---



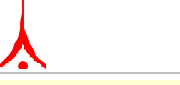
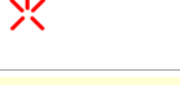
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	oil/gas field			ORIGINAL	2002



Refer to Appendix G for true symbol
scale representations.

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Area	Full Chart	✔ Simplified	Area
	Symbol Number 0600 ID Code MAA052A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0804 ID Code MAA052A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
			
			
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✔ VML0	oil/gas field		ORIGINAL 0600 0804

AB000 AB000

Point	Full Chart	✔ Simplified	Point
	Symbol Number 7151 ID Code MAB000P7151 Description red pyramid with dot - ICAO	Symbol Number 7002 ID Code MAB000P7002 Description red vo waste symbol - GTRI	
	Symbol Number 7152 ID Code MAB000P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAB000P7142 Description red vo light component - GTRI	
	Symbol Number 7155 ID Code MAB000P7155 Description red high vo tower - ICAO	Symbol Number 7002 ID Code MAB000P7002 Description red vo waste symbol - GTRI	
	Symbol Number 7156 ID Code MAB000P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAB000P7142 Description red vo light component - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✔ VVOD	disposal site / waste pile	hgt>0and<304	ORIGINAL 7151
✔ VVOD	disposal site / waste pile light	atn=3 AND hgt>0and<304	ORIGINAL 7152
✔ VVOD	disposal site / waste pile high	hgt=-32767 OR hgt>=304	ORIGINAL 7155
✔ VVOD	disposal site / waste pile light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	ORIGINAL 7156

Area	Full Chart	✔ Simplified	Area
	Symbol Number 0604 ID Code MAB000A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 4015 ID Code MAB000A4015 Description beige-rose solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
			
			
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✔ DTOP	disposal site/waste pile		ORIGINAL 0604 4015
✔ UVM	disposal site/waste pile		ORIGINAL 0604 4015
✔ VML1	disposal site/waste pile		ORIGINAL 0604 4015
✔ VML2	disposal site/waste pile		ORIGINAL 0604 4015

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0624 ID Code MAB000A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	disposal site/waste pile			IHO S-52	LS(DASH,1,LANDF)

AB010**AB010**

Area	Full Chart	✓ Simplified	Area
------	------------	--------------	------

	Symbol Number 0604 ID Code MAB010A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

	Symbol Number 4015 ID Code MAB010A4015 Description beige-rose solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	wrecking yard/scrap yard			ORIGINAL	0604 4015
✓ UVM	wrecking yard/scrap yard			ORIGINAL	0604 4015
✓ VML2	wrecking yard/scrap yard			ORIGINAL	0604 4015

	Symbol Number 0624 ID Code MAB010A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wrecking yard/scrap yard			IHO S-52	LS(DASH,1,LANDF)

AC000**AC000**



Point	Full Chart	✓ Simplified	Point
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	Symbol Number 2005 ID Code MAC000P2005 Description black building w/ 2 smokestacks above	Symbol Number 2019 ID Code MAC000P2019 Description black sm filled cir	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	processing plant/treatment plant			ORIGINAL	2005
✓ VML0	processing plant/treatment plant			ORIGINAL	2005
✓ VML1	processing plant/treatment plant			ORIGINAL	2005
✓ VML2	processing plant/treatment plant			ORIGINAL	2005

	Symbol Number 7151 ID Code MAC000P7151 Description red pyramid with dot - ICAO	Symbol Number 7004 ID Code MAC000P7004 Description red vo plant symbol - GTRI	
--	--	---	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	processing plant / treatment plant	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAC000P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAC000P7142 Description red vo light component - GTRI	
--	---	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	processing plant / treatment plant light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7155 ID Code MAC000P7155 Description red high vo tower - ICAO	Symbol Number 7004 ID Code MAC000P7004 Description red vo plant symbol - GTRI	
--	---	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	processing plant / treatment plant high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAC000P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAC000P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	processing plant / treatment plant light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Area Full Chart ✓ Simplified **Area**



	Symbol Number 0624 ID Code MAC000A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	processing plant/treatment plant			IHO S-52	LS(DASH,1,LANDF)
✓ DTOP	processing plant/treatment plant			IHO S-52	LS(DASH,1,LANDF)
✓ UVM	processing plant/treatment plant			IHO S-52	LS(DASH,1,LANDF)
✓ VML1	processing plant/treatment plant			IHO S-52	LS(DASH,1,LANDF)
✓ VML2	processing plant/treatment plant			IHO S-52	LS(DASH,1,LANDF)



AC010

AC010



Point Full Chart ✓ Simplified **Point**

	Symbol Number 7151 ID Code MAC010P7151 Description red pyramid with dot - ICAO	Symbol Number 7006 ID Code MAC010P7006 Description red vo furnace symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	blast furnace	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAC010P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAC010P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	blast furnace light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAC010P7155 Description red high vo tower - ICAO	Symbol Number 7006 ID Code MAC010P7006 Description red vo furnace symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	blast furnace high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAC010P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAC010P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	blast furnace light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol scale representations.

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AC020

AC020



Point Full Chart ✔ Simplified Point

	Symbol Number 2005 ID Code MAC020P2005 Description black building w/ 2 smokestacks above	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	catalytic cracker			ORIGINAL	2005
✔ UVM	catalytic cracker			ORIGINAL	2005
✔ VML2	catalytic cracker			ORIGINAL	2005

	Symbol Number 7151 ID Code MAC020P7151 Description red pyramid with dot - ICAO	Symbol Number 7008 ID Code MAC020P7008 Description red vo cracker symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	catalytic cracker	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAC020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAC020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	catalytic cracker light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAC020P7155 Description red high vo tower - ICAO	Symbol Number 7008 ID Code MAC020P7008 Description red vo cracker symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	catalytic cracker high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAC020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAC020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	catalytic cracker light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AC030

AC030

Area Full Chart ✔ Simplified Area




	Symbol Number 0600 ID Code MAC030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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	Symbol Number 4077 ID Code MAC030A4077 Description depth med blue narrow rt diag line patt fill	Symbol Number 0804 ID Code MAC030A0804 Description brown solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	settling basin/sludge pond			MIL-STD-2402	1C030A004

Refer to Appendix G for true symbol
scale representations.



**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

	Symbol Number 0600 ID Code MAC030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
	Symbol Number 6003 ID Code MAC030A6003 Description basic blue left diagonal line pattern	Symbol Number 6042 ID Code MAC030A6042 Description 100% cyan blue solid fill		

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	settling basin/sludge pond			STANAG 3675	122
✓ FFD	settling basin/sludge pond			STANAG 3675	122
✓ UVM	settling basin/sludge pond			STANAG 3675	122
✓ VML1	settling basin/sludge pond			STANAG 3675	122
✓ VML2	settling basin/sludge pond			STANAG 3675	122

AC040**AC040**



Point Full Chart ✓ Simplified Point

	Symbol Number 2002 ID Code MAC040P2002 Description black tower	Symbol Number 2019 ID Code MAC040P2019 Description black sm filled circle			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	oil/gas facilities			ORIGINAL	2002

AD010**AD010**



Point Full Chart ✓ Simplified Point

	Symbol Number 2009 ID Code MAD010P2009 Description black square w/ zap inside	Symbol Number 2019 ID Code MAD010P2019 Description black sm filled circle			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	power plant			ORIGINAL	2009
✓ VML1	power plant			ORIGINAL	2009

	Symbol Number 7151 ID Code MAD010P7151 Description red pyramid with dot - ICAO	Symbol Number 7010 ID Code MAD010P7010 Description red vo power plant symbol - GTRI			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power plant / power station	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAD010P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAD010P7142 Description red vo light component - GTRI			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power plant / power station light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAD010P7155 Description red high vo tower - ICAO	Symbol Number 7010 ID Code MAD010P7010 Description red vo power plant symbol - GTRI			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power plant / power station high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

	Symbol Number 7156 ID Code MAD010P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAD010P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power plant / power station light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line ✓ Simplified Line

	Symbol Number 7158 ID Code MAD010L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAD010L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power plant / power station			ORIGINAL	7158



Area ✓ Simplified Area

	Symbol Number 0600 ID Code MAD010A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAD010A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	power plant			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ DTOP	power plant			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ UVM	power plant			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ VML1	power plant			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ VML2	power plant			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

AD020**AD020**

Point ✓ Simplified Point

	Symbol Number 2010 ID Code MAD020P2010 Description black sun burst w/ dot inside	Symbol Number 2019 ID Code MAD020P2019 Description black sm filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	solar panels			ORIGINAL	2010
✓ VML2	solar panels			ORIGINAL	2010

AD030**AD030**


Point ✓ Simplified Point

	Symbol Number 0002 ID Code MAD030P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	substation/transformer yard			IHO S-52	SY(BUISGL11)

Refer to Appendix G for true symbol scale representations.



MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 2011 ID Code MAD030P2011 Description black open sq w/ dot inside w/ zap on top	Symbol Number 2019 ID Code MAD030P2019 Description black sm filled cir	●
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	substation/transformer yard			STANAG 3675	615
✓ UVM	substation/transformer yard			STANAG 3675	615
✓ VML0	substation/transformer yard			STANAG 3675	615
✓ VML2	substation/transformer yard			STANAG 3675	615

	Symbol Number 7151 ID Code MAD030P7151 Description red pyramid with dot - ICAO	Symbol Number 7012 ID Code MAD030P7012 Description red vo substation symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	substation / transformer yard	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAD030P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAD030P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	substation / transformer yard light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAD030P7155 Description red high vo tower - ICAO	Symbol Number 7012 ID Code MAD030P7012 Description red vo substation symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	substation / transformer yard high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAD030P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAD030P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	substation / transformer yard light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAD030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAD030A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	substation/transformer yard			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ DTOP	substation/transformer yard			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ UVM	substation/transformer yard			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ VML2	substation/transformer yard			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.

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AF010**AF010**



Point Full Chart ✔ Simplified Point

	Symbol Number 0003 ID Code MAF010P0003 Description black chimney symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	chimney/smokestack			IHO S-52	

	Symbol Number 6015 ID Code MAF010P6015 Description black sm open square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	chimney/smokestack			STANAG 3675	604
✔ UVM	chimney/smokestack			STANAG 3675	604
✔ VML1	chimney/smokestack			STANAG 3675	604
✔ VML2	chimney/smokestack			STANAG 3675	604

	Symbol Number 7151 ID Code MAF010P7151 Description red pyramid with dot - ICAO	Symbol Number 7014 ID Code MAF010P7014 Description red vo chimney symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	chimney / smokestack	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF010P7152 Description red pyramid lit component - ICAO	Symbol Number 7145 ID Code MAF010P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	chimney / smokestack light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAF010P7155 Description red high vo tower - ICAO	Symbol Number 7014 ID Code MAF010P7014 Description red vo chimney symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	chimney / smokestack high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF010P7156 Description red high vo tower lit component - ICAO	Symbol Number 7145 ID Code MAF010P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	chimney / smokestack light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✔ Simplified Line

	Symbol Number 7158 ID Code MAF010L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAF010L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	chimney / smokestack			ORIGINAL	7158

Refer to Appendix G for true symbol
scale representations.



**MIL-DTL-89045A w/Amendment 1
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AF020**AF020**



Point Full Chart ✔ Simplified Point

	Symbol Number 7151 ID Code MAF020P7151 Description red pyramid with dot - ICAO	Symbol Number 7016 ID Code MAF020P7016 Description red vo conveyor symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	conveyor	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAF020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	conveyor light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAF020P7155 Description red high vo tower - ICAO	Symbol Number 7016 ID Code MAF020P7016 Description red vo conveyor symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	conveyor high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



	Symbol Number 7156 ID Code MAF020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAF020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	conveyor light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✔ Simplified Line

	Symbol Number 3086 ID Code MAF020L3086 Description gray very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	conveyor			MIL-STD-2402	1F020L001
✔ UVM	conveyor			MIL-STD-2402	1F020L001
✔ VML1	conveyor			MIL-STD-2402	1F020L001
✔ VML2	conveyor			MIL-STD-2402	1F020L001

	Symbol Number 7158 ID Code MAF020L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAF020L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	conveyor			ORIGINAL	7158

Refer to Appendix G for true symbol scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

AF030**AF030**



Point Full Chart ✓ Simplified Point

	Symbol Number 0004 ID Code MAF030P0004 Description black tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	cooling tower			IHO S-52	SY(TOWERS03)

	Symbol Number 2016 ID Code MAF030P2016 Description black dot inside double cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cooling tower			MIL-STD-2402	1F030P005*
✓ UVM	cooling tower			MIL-STD-2402	1F030P005*
✓ VML1	cooling tower			MIL-STD-2402	1F030P005*
✓ VML2	cooling tower			MIL-STD-2402	1F030P005*

	Symbol Number 7151 ID Code MAF030P7151 Description red pyramid with dot - ICAO	Symbol Number 7018 ID Code MAF030P7018 Description red vo cooling tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	cooling tower	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF030P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAF030P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	cooling tower light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAF030P7155 Description red high vo tower - ICAO	Symbol Number 7018 ID Code MAF030P7018 Description red vo cooling tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	cooling tower high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF030P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAF030P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	cooling tower light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Area Full Chart ✓ Simplified Area

	Symbol Number 3117 ID Code MAF030A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4100 ID Code MAF030A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	cooling tower			MIL-STD-2402	1F030A001*

Refer to Appendix G for true symbol
scale representations.


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AF040**AF040**



Point Full Chart ✔ Simplified Point

	Symbol Number 0005 ID Code MAF040P0005 Description feature brown crane symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	crane			IHO S-52	SY(CRANES01)

	Symbol Number 6016 ID Code MAF040P6016 Description black crane symbol	Symbol Number 6015 ID Code MAF040P6015 Description black sm open square	<input type="checkbox"/>
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	crane			ORIGINAL	6016
✔ UVM	crane			ORIGINAL	6016
✔ VML1	crane			ORIGINAL	6016
✔ VML2	crane			ORIGINAL	6016

	Symbol Number 7151 ID Code MAF040P7151 Description red pyramid with dot - ICAO	Symbol Number 7020 ID Code MAF040P7020 Description red vo crane symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	crane	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAF040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	crane light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAF040P7155 Description red high vo tower - ICAO	Symbol Number 7020 ID Code MAF040P7020 Description red vo crane symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	crane high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAF040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	crane light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AF050**AF050**



Point Full Chart ✔ Simplified Point

	Symbol Number 7151 ID Code MAF050P7151 Description red pyramid with dot - ICAO	Symbol Number 7022 ID Code MAF050P7022 Description red vo dredge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	dredge / powershovel / dragline	hgt>0and<304		ORIGINAL	7151

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 7152 ID Code MAF050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAF050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dredge / powershovel / dragline light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAF050P7155 Description red high vo tower - ICAO	Symbol Number 7022 ID Code MAF050P7022 Description red vo dredge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dredge / powershovel / dragline high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAF050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dredge / powershovel / dragline light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AF070**AF070**



Point Full Chart ✓ Simplified Point

	Symbol Number 0006 ID Code MAF070P0006 Description black flare stack symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	flare pipe			IHO S-52	SY(FLASTK11)

	Symbol Number 0006 ID Code MAF070P0006 Description black flare stack symbol	Symbol Number 0051 ID Code MAF070P0051 Description black filled sm cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	flare pipe			IHO S-52	SY(FLASTK11)
✓ UVM	flare pipe			IHO S-52	SY(FLASTK11)
✓ VML1	flare pipe			IHO S-52	SY(FLASTK11)
✓ VML2	flare pipe			IHO S-52	SY(FLASTK11)

	Symbol Number 7151 ID Code MAF070P7151 Description red pyramid with dot - ICAO	Symbol Number 7024 ID Code MAF070P7024 Description red vo flare pipe symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	flare pipe	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF070P7152 Description red pyramid lit component - ICAO	Symbol Number 7145 ID Code MAF070P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	flare pipe light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
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	Symbol Number 7155 ID Code MAF070P7155 Description red high vo tower - ICAO	Symbol Number 7024 ID Code MAF070P7024 Description red vo flare pipe symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	flare pipe high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF070P7156 Description red high vo tower lit component - ICAO	Symbol Number 7145 ID Code MAF070P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	flare pipe light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AF080**AF080**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MAF080P7151 Description red pyramid with dot - ICAO	Symbol Number 7026 ID Code MAF080P7026 Description red vo hopper symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	hopper	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAF080P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAF080P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	hopper light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAF080P7155 Description red high vo tower - ICAO	Symbol Number 7026 ID Code MAF080P7026 Description red vo hopper symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	hopper high high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAF080P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAF080P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	hopper light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AH010**AH010**

Point Full Chart ✓ Simplified Point

	Symbol Number 0007 ID Code MAH010P0007 Description black square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bastion/rampart/fortification			IHO S-52	SY(FORSTC11)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 2043 ID Code MAH010P2043 Description black four black squares w/ connection	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	bastion/rampart/fortification			STANAG 3675	607


Line ✓ Simplified Line

	Symbol Number 6004 ID Code MAH010L6004 Description dk red brown thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	bastion/rampart/fortification			ORIGINAL	6004

Area ✓ Simplified Area

	Symbol Number 0600 ID Code MAH010A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAH010A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bastion/rampart/fortification			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

	Symbol Number 6004 ID Code MAH010A6004 Description dk red brown thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	bastion/rampart/fortification			ORIGINAL	6004

AH050

AH050

Point ✓ Simplified Point

	Symbol Number 0007 ID Code MAH050P0007 Description black square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fortification			IHO S-52	SY(FORSTC11)

	Symbol Number 2043 ID Code MAH050P2043 Description black four black squares w/ connection	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	fortification			STANAG 3675	607
✓ UVM	fortification			STANAG 3675	607
✓ VML1	fortification			STANAG 3675	607
✓ VML2	fortification			STANAG 3675	607

Refer to Appendix G for true symbol
scale representations.



MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 7151 ID Code MAH050P7151 Description red pyramid with dot - ICAO	Symbol Number 7028 ID Code MAH050P7028 Description red vo fort symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	fortification	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAH050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAH050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	fortification light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAH050P7155 Description red high vo tower - ICAO	Symbol Number 7028 ID Code MAH050P7028 Description red vo fort symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	fortification high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



	Symbol Number 7156 ID Code MAH050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAH050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	fortification light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 6004 ID Code MAH050L6004 Description dk red brown thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	fortification			ORIGINAL	6004

	Symbol Number 7158 ID Code MAH050L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAH050L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	fortification			ORIGINAL	7158

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAH050A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAH050A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fortification			IHO S-52	LS(SOLD,I,CHBLK) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 6004 ID Code MAH050A6004 Description dk red brown thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	fortification			ORIGINAL	6004
✓ UVM	fortification			ORIGINAL	6004
✓ VML1	fortification			ORIGINAL	6004
✓ VML2	fortification			ORIGINAL	6004

AH060**AH060**

Point Full Chart ✓ Simplified Point

	Symbol Number 2072 ID Code MAH060P2072 Description gray shadowed square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	underground bunker			ORIGINAL	2072

Line Full Chart ✓ Simplified Line

	Symbol Number 3117 ID Code MAH060L3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	underground bunker			ORIGINAL	3117

Area Full Chart ✓ Simplified Area

	Symbol Number 3117 ID Code MAH060A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4100 ID Code MAH060A4100 Description lt gray solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	underground bunker			ORIGINAL	3117 4100

AI020**AI020**

Area Full Chart ✓ Simplified Area

	Symbol Number 3114 ID Code MAI020A3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mobile home/mobile home park			MIL-STD-2402	1I020A001
✓ UVM	mobile home/mobile home park			MIL-STD-2402	1I020A001
✓ VML2	mobile home/mobile home park			MIL-STD-2402	1I020A001

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
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AI030**AI030**

Point Full Chart ✓ Simplified Point

	Symbol Number 2026 ID Code MAI030P2026 Description black tent	Symbol Number 2019 ID Code MAI030P2019 Description black sm filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	camp			ORIGINAL	2026

AJ030**AJ030**

Area Full Chart ✓ Simplified Area

	Symbol Number 4217 ID Code MAJ030A4217 Description dk tan very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	feedlot/stockyard/holding pen			ORIGINAL	4217
✓ UVM	feedlot/stockyard/holding pen			ORIGINAL	4217
✓ VML2	feedlot/stockyard/holding pen			ORIGINAL	4217

AJ050**AJ050**



Point Full Chart ✓ Simplified Point

	Symbol Number 0008 ID Code MAJ050P0008 Description black sm cir w/ X on top	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	windmill			IHO S-52	SY(WNDMIL12)

	Symbol Number 6017 ID Code MAJ050P6017 Description black sm filled cir w/ vert line w/ "X" on top	Symbol Number 0063 ID Code MAJ050P0063 Description black 6 point asterisk	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	windmill			STANAG 3675	619
✓ UVM	windmill			STANAG 3675	619
✓ VML1	windmill			STANAG 3675	619
✓ VML2	windmill			STANAG 3675	619

	Symbol Number 7151 ID Code MAJ050P7151 Description red pyramid with dot - ICAO	Symbol Number 7032 ID Code MAJ050P7032 Description red vo windmill symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmill	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAJ050P7152 Description red pyramid lit component - ICAO	Symbol Number 7145 ID Code MAJ050P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmill light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7155 ID Code MAJ050P7155 Description red high vo tower - ICAO	Symbol Number 7032 ID Code MAJ050P7032 Description red vo windmill symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmill high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAJ050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7145 ID Code MAJ050P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmill light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AJ051**AJ051**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MAJ051P7151 Description red pyramid with dot - ICAO	Symbol Number 7034 ID Code MAJ051P7034 Description red vo windmotor symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmotor	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAJ051P7152 Description red pyramid lit component - ICAO	Symbol Number 7145 ID Code MAJ051P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmotor light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAJ051P7155 Description red high vo tower - ICAO	Symbol Number 7034 ID Code MAJ051P7034 Description red vo windmotor symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmotor high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAJ051P7156 Description red high vo tower lit component - ICAO	Symbol Number 7145 ID Code MAJ051P7145 Description red vo light component high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmotor light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAJ051L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAJ051L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	windmotor			ORIGINAL	7158

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A



AK020

AK020



Point Full Chart ✓ Simplified Point

	Symbol Number 0024 ID Code MAK020P0024 Description black dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	amusement park attraction			IHO S-52	SY(POSGEN03)

	Symbol Number 2029 ID Code MAK020P2029 Description black ferris wheel	Symbol Number 0051 ID Code MAK020P0051 Description black filled sm cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	amusement park attraction			ORIGINAL	2029
✓ UVM	amusement park attraction			ORIGINAL	2029
✓ VML1	amusement park attraction			ORIGINAL	2029
✓ VML2	amusement park attraction			ORIGINAL	2029

	Symbol Number 7151 ID Code MAK020P7151 Description red pyramid with dot - ICAO	Symbol Number 7036 ID Code MAK020P7036 Description red vo park symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	amusement park attraction	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAK020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAK020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	amusement park attraction light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAK020P7155 Description red high vo tower - ICAO	Symbol Number 7036 ID Code MAK020P7036 Description red vo park symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	amusement park attraction high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAK020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAK020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	amusement park attraction light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 0600 ID Code MAK020L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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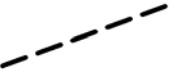

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	amusement park attraction			IHO S-52	LS(SOLD,1,CHBLK)

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
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AK030**AK030**



Area Full Chart ✓ Simplified Area

	Symbol Number 3117 ID Code MAK030A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 6005 ID Code MAK030A6005 Description olive green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	amusement park			ORIGINAL	3117 6005
✓ UVM	amusement park			ORIGINAL	3117 6005
✓ VML2	amusement park			ORIGINAL	3117 6005

AK040**AK040**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAK040A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAK040A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	athletic field			IHO S-52	LS(SOLD,I,CHBLK) + AC(CHBRN)

	Symbol Number 4279 ID Code MAK040A4279 Description nav orange thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	athletic field			MIL-STD-2402	1K040A002
✓ UVM	athletic field			MIL-STD-2402	1K040A001
✓ VML0	athletic field			MIL-STD-2402	1K040A002
✓ VML2	athletic field			MIL-STD-2402	1K040A002

AK060**AK060**

Area Full Chart ✓ Simplified Area

	Symbol Number 3117 ID Code MAK060A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	campground/campsite			ORIGINAL	3117
✓ UVM	campground/campsite			ORIGINAL	3117
✓ VML2	campground/campsite			ORIGINAL	3117

Refer to Appendix G for true symbol scale representations.

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AK070**AK070**

Area Full Chart ✓ Simplified Area

	Symbol Number 4279 ID Code MAK070A4279 Description nav orange thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	drive in theater			MIL-STD-2402	1K070A001
✓ VML2	drive in theater			MIL-STD-2402	1K070A001

AK080**AK080**

Point Full Chart ✓ Simplified Point

	Symbol Number 0024 ID Code MAK080P0024 Description black dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	drive in theater screen			IHO S-52	SY(POSGEN03)

AK090**AK090**

Area Full Chart ✓ Simplified Area

	Symbol Number 0822 ID Code MAK090A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fairgrounds			IHO S-52	AC(LANDA)

	Symbol Number 4279 ID Code MAK090A4279 Description nav orange thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	fairgrounds			MIL-STD-2402	1K090A001
✓ UVM	fairgrounds			MIL-STD-2402	1K090A001
✓ VML2	fairgrounds			MIL-STD-2402	1K090A001

AK100**AK100**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAK100A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAK100A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	golf course			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 4279 ID Code MAK100A4279 Description nav orange thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	golf course			MIL-STD-2402	1K100A001
✓ UVM	golf course			MIL-STD-2402	1K100A001
✓ VML2	golf course			MIL-STD-2402	1K100A001

AK110**AK110**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAK110A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4243 ID Code MAK110A4243 Description depth dk gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

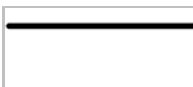

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	grandstand			ORIGINAL	0600 4243

AK120**AK120**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAK120A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	park			ORIGINAL	0600
✓ UVM	park			ORIGINAL	0600
✓ VML1	park			ORIGINAL	0600
✓ VML2	park			ORIGINAL	0600

	Symbol Number 0600 ID Code MAK120A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAK120A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	park			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

AK130**AK130**

Line Full Chart ✓ Simplified Line

	Symbol Number 0605 ID Code MAK130L0605 Description feature brown thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	race track			IHO S-52	LS(SOLD,2,LANDF)

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 3114 ID Code MAK130L3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	race track			STANAG 3675	612
✓ UVM	race track			STANAG 3675	612
✓ VML1	race track			STANAG 3675	612
✓ VML2	race track			STANAG 3675	612

Area Full Chart ✓ Simplified Area

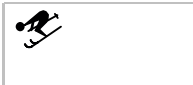
	Symbol Number 3114 ID Code MAK130A3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	race track			STANAG 3675	612
✓ VML0	race track			STANAG 3675	612



AK150

AK150



Point Full Chart ✓ Simplified Point

	Symbol Number 2034 ID Code MAK150P2034 Description black skier	Symbol Number 0051 ID Code MAK150P0051 Description black filled sm cir	●
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	ski jump			ORIGINAL	2034
✓ VML1	ski jump			ORIGINAL	2034
✓ VML2	ski jump			ORIGINAL	2034

	Symbol Number 7151 ID Code MAK150P7151 Description red pyramid with dot - ICAO	Symbol Number 7038 ID Code MAK150P7038 Description red vo ski symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	ski jump	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAK150P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAK150P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	ski jump light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAK150P7155 Description red high vo tower - ICAO	Symbol Number 7038 ID Code MAK150P7038 Description red vo ski symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	ski jump high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAK150P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAK150P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	ski jump light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol
scale representations.

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Line Full Chart ✓ Simplified Line

	Symbol Number 0656 ID Code MAK150L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	ski jump			MIL-STD-2402	1K150L001
✓ VML2	ski jump			MIL-STD-2402	1K150L001

AK160**AK160**



Point Full Chart ✓ Simplified Point

	Symbol Number 0002 ID Code MAK160P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	stadium/amphitheater			IHO S-52	SY(BUISGL11)

	Symbol Number 2035 ID Code MAK160P2035 Description black dot inside cir	Symbol Number 6048 ID Code MAK160P6048 Description gray filled circle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	stadium/amphitheater			MIL-STD-2402	1K160P001
✓ VML1	stadium/amphitheater			MIL-STD-2402	1K160P001

	Symbol Number 7151 ID Code MAK160P7151 Description red pyramid with dot - ICAO	Symbol Number 7040 ID Code MAK160P7040 Description red vo stadium symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	stadium / amphitheater	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAK160P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAK160P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	stadium / amphitheater light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAK160P7155 Description red high vo tower - ICAO	Symbol Number 7040 ID Code MAK160P7040 Description red vo stadium symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	stadium / amphitheater high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



	Symbol Number 7156 ID Code MAK160P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAK160P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	stadium / amphitheater light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol
scale representations.


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Line Full Chart ✔ Simplified Line

	Symbol Number 7158 ID Code MAK160L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAK160L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	stadium / amphitheater			ORIGINAL	7158

Area Full Chart ✔ Simplified Area

	Symbol Number 0600 ID Code MAK160A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
	Symbol Number 0804 ID Code MAK160A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	stadium/amphitheater			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

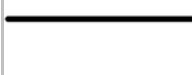

	Symbol Number 3113 ID Code MAK160A3113 Description black solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	stadium/amphitheater			MIL-STD-2402	1K160A001
✔ UVM	stadium/amphitheater			MIL-STD-2402	1K160A001
✔ VML2	stadium/amphitheater			MIL-STD-2402	1K160A001

AK170

AK170

Area Full Chart ✔ Simplified Area

	Symbol Number 0600 ID Code MAK170A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
	Symbol Number 4138 ID Code MAK170A4138 Description med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	swimming pool			MIL-STD-2402	1K170A001
✔ UVM	swimming pool			MIL-STD-2402	1K170A001
✔ VML2	swimming pool			MIL-STD-2402	1K170A001

Refer to Appendix G for true symbol
scale representations.

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AK180

AK180

Area Full Chart Simplified Area

	Symbol Number 0600 ID Code MAK180A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAK180A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	zoo/safari park			IHO S-52	LS(SOLD,I,CHBLK) + AC(CHBRN)



	Symbol Number 3117 ID Code MAK180A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 6005 ID Code MAK180A6005 Description olive green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DTOP	zoo/safari park			ORIGINAL	3117 6005
<input checked="" type="checkbox"/> UVM	zoo/safari park			ORIGINAL	3117 6005
<input checked="" type="checkbox"/> VML2	zoo/safari park			ORIGINAL	3117 6005

AL005

AL005

Area Full Chart Simplified Area


	Symbol Number 0081 ID Code MAL005A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MAL005A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MAL005A4186 Description magenta thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	animal sanctuary			IHO S-52	SY(INFARE51) + LC(CTYARE51)

AL015

AL015

Point Full Chart Simplified Point

	Symbol Number 0002 ID Code MAL015P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	building - maritime station	bfc=81 AND sta=0or2or3or4or7or11		IHO S-52	SY(BUISGL11)

	Symbol Number 0010 ID Code MAL015P0010 Description black 'iron cross'	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	building - house of worship (church)	bfc=7 AND hwt=0or2or3or4or7or22		IHO S-52	SY(BUIREL13)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0011 ID Code MAL015P0011 Description black X inscribed in rectangle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - house of worship (temple/pagoda)	bfc=7 AND hwt=11or14or15or16or20or21		IHO S-52	SY(BUIREL14)
	Symbol Number 0012 ID Code MAL015P0012 Description black mosque/minaret w/ dot in circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - house of worship (mosque)	bfc=7 AND hwt=5or6or9		IHO S-52	SY(BUIREL15)
	Symbol Number 0013 ID Code MAL015P0013 Description lt magenta CG in rectangle w/ pale green fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - maritime station	bfc=81 AND sta=1		IHO S-52	SY(CGUSTA02)
	Symbol Number 0014 ID Code MAL015P0014 Description black filled diamond cntred on horizontal line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - maritime station	bfc=81 AND sta=5		IHO S-52	SY(RSCSTA02)
	Symbol Number 0015 ID Code MAL015P0015 Description lt magenta SS in rectangle w/ pale green fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - maritime station	bfc=81 AND sta<0and<1and<2and<3and<5and<6and<11		IHO S-52	SY(SISTAT02)
	Symbol Number 0401 ID Code MAL015P0401 Description lt magenta arcs origin offset - maximum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - maritime station (rescue), sound signal	bfc=81 AND sta=5 AND sst<16		IHO S-52	SY(FOGSIG01) for water
	Symbol Number 0402 ID Code MAL015P0402 Description lt magenta arcs origin offset - minimum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - maritime station (not rescue), sound signal	bfc=81 AND sta<5 AND sst<16		IHO S-52	SY(FOGSIG01) for land
	Symbol Number 1001 ID Code MAL015P1001 Description red filled square black outline	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - generic	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96		MIL-STD-2402	1L015P006
✓ VML1	building - government	bfc=2or3or5or12or13or14		MIL-STD-2402	1L015P006

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 1001 ID Code MAL015P1001 Description red filled square black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - government	bfc=2or3or5or8or12or13or14or28or31or35or37or38or52or61or62or64or65or66or67or77or78or79or80or96or101or119or121or123or723		MIL-STD-2402	1L015P006
✓ VML2	building - government	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96		MIL-STD-2402	1L015P006

	Symbol Number 1002 ID Code MAL015P1002 Description black filled cir w/ white cross inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - hospital	bfc=6		MIL-STD-2402	1L015P009
✓ UVM	building - hospital	bfc=6or100		MIL-STD-2402	1L015P009
✓ VML2	building - hospital	bfc=6		MIL-STD-2402	1L015P009

	Symbol Number 2036 ID Code MAL015P2036 Description black sm filled square	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - generic	bfc=90or91or92or93or95or98or999		MIL-STD-2402	1L015P062
✓ DTOP	building - generic	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36or53or59or69or70or83or85or86or87or88or89		MIL-STD-2402	1L015P062
✓ UVM	building - generic (industry)	bfc=81or83or84or85or86or89or90or94or102or104or110or112or113or116or120or124or125		MIL-STD-2402	1L015P006
✓ UVM	building - generic (industry)	bfc=1or21or22or23or24or25or26or27or29or30or40or54or59or71or72or73or74or75or76		MIL-STD-2402	1L015P006
✓ UVM	building - generic (population)	bfc=0or9or10or11or16or17or18or19or20or33or34or36or39or51or53or55or56or57or58		MIL-STD-2402	1L015P062
✓ UVM	building - generic (population)	bfc=63or69or70or87or88or91or92or93or95or97or98or99or103or105or106or107or109or111or115or117or118or122or126or127or128or999		MIL-STD-2402	1L015P062
✓ VML1	building - generic	bfc=0or1or9or10or11or16or17or18or19or20or22or23or24or27or83or999		MIL-STD-2402	1L015P062
✓ VML2	building - generic	bfc=53or59or69or70or83or85or86or87or88or89or90or91or92or93or95or98or999		MIL-STD-2402	1L015P062
✓ VML2	building - generic	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36		MIL-STD-2402	1L015P062

	Symbol Number 2036 ID Code MAL015P2036 Description black sm filled square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building - not house of worship, not maritime station	bfc=<7and<81		MIL-STD-2402	1L015P062
✓ VML0	building			MIL-STD-2402	1L015P062

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 2042 ID Code MAL015P2042 Description black filled square w/ flag on top	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - school	bfc=15		MIL-STD-2402	1L015P008
✓ UVM	building - school, college, seminary	bfc=15or60or108		MIL-STD-2402	1L015P008
✓ VML1	building - school	bfc=15		MIL-STD-2402	1L015P008
✓ VML2	building - school	bfc=15		MIL-STD-2402	1L015P008

	Symbol Number 2043 ID Code MAL015P2043 Description black four black squares w/ connection	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - castle	bfc=4		STANAG 3675	609
✓ UVM	building - castle	bfc=4		STANAG 3675	609
✓ VML1	building - castle	bfc=4		STANAG 3675	609
✓ VML2	building - castle	bfc=4		STANAG 3675	609

	Symbol Number 2045 ID Code MAL015P2045 Description black filled square w/ cross on top	Symbol Number 1003 ID Code MAL015P1003 Description black cross	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - house of worship - church	bfc=7		MIL-STD-2402	1L015P011
✓ UVM	building - house of worship - church	bfc=7or114 AND hwt=0or2or3or4or7or23 OR bfc=50		MIL-STD-2402	1L015P011
✓ VML1	building - house of worship - church	bfc=7 AND hwt=0or2or3or4or7		MIL-STD-2402	1L015P011
✓ VML2	building - house of worship - church	bfc=7 AND hwt=0or2or3or4or7		MIL-STD-2402	1L015P011

	Symbol Number 2047 ID Code MAL015P2047 Description black filled square w/ T on top	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - house of worship - synagogue	bfc=7or114 AND hwt=20		MIL-STD-2402	1L015P037
✓ VML1	building - house of worship - synagogue	bfc=7 AND hwt=20		MIL-STD-2402	1L015P037
✓ VML2	building - house of worship - synagogue	bfc=7 AND hwt=20		MIL-STD-2402	1L015P037

	Symbol Number 2048 ID Code MAL015P2048 Description black pinwheel	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - house of worship - stupa	bfc=7or114 AND hwt=21		MIL-STD-2402	1L015P035
✓ VML1	building - house of worship - stupa	bfc=7 AND hwt=21		MIL-STD-2402	1L015P035
✓ VML2	building - house of worship - stupa	bfc=7 AND hwt=21		MIL-STD-2402	1L015P035

	Symbol Number 6030 ID Code MAL015P6030 Description black six pt star w/ dot inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	building - lighthouse	bfc=82		STANAG 3675	610
✓ UVM	building - lighthouse	bfc=82		STANAG 3675	610
✓ VML1	building - lighthouse	bfc=82		STANAG 3675	610
✓ VML2	building - lighthouse	bfc=82		STANAG 3675	610

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 6033 ID Code MAL015P6033 Description black pagoda w/ open square	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - house of worship - pagoda	bfc=7or114 AND hwt=11		STANAG 3675	609
✓ VML1	building - house of worship - pagoda	bfc=7 AND hwt=11		STANAG 3675	609
✓ VML2	building - house of worship - pagoda	bfc=7 AND hwt=11		STANAG 3675	609

	Symbol Number 6034 ID Code MAL015P6034 Description black temple w/ open square	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - house of worship - temple	bfc=7or114 AND hwt=14or15or16		STANAG 3675	609
✓ VML1	building - house of worship - temple	bfc=7 AND hwt=14or15or16		STANAG 3675	609
✓ VML2	building - house of worship - temple	bfc=7 AND hwt=14or15or16		STANAG 3675	609

	Symbol Number 6035 ID Code MAL015P6035 Description black mosque w/ filled square	Symbol Number 0038 ID Code MAL015P0038 Description lt brown filled square w/ black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	building - house of worship - mosque	bfc=7or114 AND hwt=5or6or9		STANAG 3675	609
✓ VML1	building - house of worship - mosque	bfc=7 AND hwt=5or6or9		STANAG 3675	609
✓ VML2	building - house of worship - mosque	bfc=7 AND hwt=5or6or9		STANAG 3675	609

	Symbol Number 7151 ID Code MAL015P7151 Description red pyramid with dot - ICAO	Symbol Number 7044 ID Code MAL015P7044 Description red vo building symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAL015P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAL015P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAL015P7155 Description red high vo tower - ICAO	Symbol Number 7044 ID Code MAL015P7044 Description red vo building symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAL015P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL015P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156



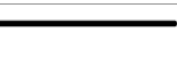


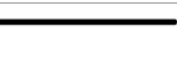



Refer to Appendix G for true symbol
scale representations.

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Line	Full Chart	✓ Simplified	Line
	Symbol Number 1406 ID Code MAL015L1406 Description brown thin solid line	Symbol Number 0600 ID Code MAL015L0600 Description black very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - school	bfc=15	ORIGINAL 1406
✓ UVM	building - school	bfc=15or60or108	ORIGINAL 1406
✓ VML2	building - school	bfc=15	ORIGINAL 1406
	Symbol Number 3001 ID Code MAL015L3001 Description lt beige thin solid line	Symbol Number 0600 ID Code MAL015L0600 Description black very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - house of worship	bfc=7	ORIGINAL 3001
✓ UVM	building - house of worship	bfc=7or114	ORIGINAL 3001
✓ VML2	building - house of worship	bfc=7	ORIGINAL 3001
	Symbol Number 3104 ID Code MAL015L3104 Description red solid line	Symbol Number 0600 ID Code MAL015L0600 Description black very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ UVM	building - government	bfc=2or3or5or8or28or52or121	ORIGINAL 3104
	Symbol Number 3112 ID Code MAL015L3112 Description black thin solid line	Symbol Number 0600 ID Code MAL015L0600 Description black very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - generic	bfc<>6and<>7and<>15	MIL-STD-2402 1L015L001
✓ UVM	building - generic	bfc<>2and<>3and<>5and<>8and<>15and<>28and<>52and<>121and<>6and<>7and<>114and<>100and<>60and<>108	MIL-STD-2402 1L015L001
✓ VML2	building - generic	bfc<>6and<>7and<>15	MIL-STD-2402 1L015L001
	Symbol Number 3153 ID Code MAL015L3153 Description beige-rose thin solid line	Symbol Number 0600 ID Code MAL015L0600 Description black very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - hospital	bfc=6	ORIGINAL 3153
✓ UVM	building - hospital	bfc=6or100	ORIGINAL 3153
✓ VML2	building - hospital	bfc=6	ORIGINAL 3153
	Symbol Number 7158 ID Code MAL015L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAL015L7144 Description red vo thin line - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ VVOD	building		ORIGINAL 7158

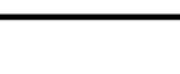

Refer to Appendix G for true symbol scale representations.

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Area	Full Chart	✓ Simplified	Area
	Symbol Number 4156 ID Code MAL015A4156 Description black solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - generic	bfc<>6and<>7and<>15	MIL-STD-2402 1L015A022
✓ UVM	building - generic	bfc<>2and<>3and<>5and<>8and<>28and<>52and<>121and<>15and<>6and<>7and<>114and<>100and<>60and<>108	MIL-STD-2402 1L015A022
✓ VML1	building - generic	bfc<>7and<>15	MIL-STD-2402 1L015A022
✓ VML2	building - generic	bfc<>6and<>7and<>15	MIL-STD-2402 1L015A022
	Symbol Number 0600 ID Code MAL015A0600 Description black very thin solid line		
	Symbol Number 1601 ID Code MAL015A1601 Description red solid fill	Symbol Number 4156 ID Code MAL015A4156 Description black solid fill	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ UVM	building - government	bfc=2or3or5or8or28or52or121	MIL-STD-2402 1L015A025
	Symbol Number 0600 ID Code MAL015A0600 Description black very thin solid line		
	Symbol Number 4002 ID Code MAL015A4002 Description lt beige solid fill	Symbol Number 4156 ID Code MAL015A4156 Description black solid fill	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - house of worship	bfc=7	ORIGINAL 0600 4002
✓ UVM	building - house of worship	bfc=7or114	ORIGINAL 0600 4002
✓ VML1	building - house of worship	bfc=7	ORIGINAL 0600 4002
✓ VML2	building - house of worship	bfc=7	ORIGINAL 0600 4002
	Symbol Number 0600 ID Code MAL015A0600 Description black very thin solid line		
	Symbol Number 4015 ID Code MAL015A4015 Description beige-rose solid fill	Symbol Number 4156 ID Code MAL015A4156 Description black solid fill	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - hospital	bfc=6	ORIGINAL 0600 4015
✓ UVM	building - hospital	bfc=6or100	ORIGINAL 0600 4015
✓ VML2	building - hospital	bfc=6	ORIGINAL 0600 4015
	Symbol Number 0600 ID Code MAL015A0600 Description black very thin solid line		
	Symbol Number 4025 ID Code MAL015A4025 Description feature brown solid fill	Symbol Number 4156 ID Code MAL015A4156 Description black solid fill	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	building - school	bfc=15	MIL-STD-2402 1L015A030
✓ UVM	building - school	bfc=15or60or108	MIL-STD-2402 1L015A030
✓ VML1	building - school	bfc=15	MIL-STD-2402 1L015A030
✓ VML2	building - school	bfc=15	MIL-STD-2402 1L015A030

Refer to Appendix G for true symbol scale representations.


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	Symbol Number 0600 ID Code MAL015A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAL015A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building			IHO S-52	LS(SOLD,I,CHBLK) + AC(CHBRN)

AL018**AL018**



Point Full Chart ✓ Simplified Point

	Symbol Number 0002 ID Code MAL018P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	building superstructure addition			IHO S-52	SY(BUISGL11)

	Symbol Number 7151 ID Code MAL018P7151 Description red pyramid with dot - ICAO	Symbol Number 7044 ID Code MAL018P7044 Description red vo building symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building superstructure addition	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAL018P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAL018P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building superstructure addition light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAL018P7155 Description red high vo tower - ICAO	Symbol Number 7044 ID Code MAL018P7044 Description red vo building symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building superstructure addition high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAL018P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL018P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building superstructure addition light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAL018L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAL018L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	building superstructure addition			ORIGINAL	7158

Refer to Appendix G for true symbol
scale representations.

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AL020**AL020**

Point Full Chart ✓ Simplified Point

	Symbol Number 0016 ID Code MAL020P0016 Description feature brown filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	built-up area			IHO S-52	SY(BUAARE02)

	Symbol Number 2053 ID Code MAL020P2053 Description black sm open square w/ dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	built-up area			MIL-STD-2402	1L020P002
✓ VML1	built-up area			MIL-STD-2402	1L020P002

Area Full Chart ✓ Simplified Area

	Symbol Number 4002 ID Code MAL020A4002 Description lt beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	built-up area sparse	bac=0or1		MIL-STD-2402	1L020A006
✓ VML2	built-up area sparse	bac=0or1		MIL-STD-2402	1L020A006

	Symbol Number 4128 ID Code MAL020A4128 Description tan BUA solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP pop	built-up area			MIL-STD-2402	1L020A006
✓ DTOP <>pop	built-up area			MIL-STD-2402	1L020A006
✓ FFD	built-up area			MIL-STD-2402	1L020A006
✓ UVM	built-up area dense	bac=2		STANAG 3675	601
✓ VITD	built-up area			MIL-STD-2402	1L020A010
✓ VML0	built-up area			MIL-STD-2402	1L020A006
✓ VML1	built-up area			MIL-STD-2402	1L020A006
✓ VML2	built-up area dense	bac=2		STANAG 3675	601

	Symbol Number 0604 ID Code MAL020A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAL020A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	built-up area			IHO S-52	LS(SOLD,1,LANDF) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.


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AL025**AL025**

Point Full Chart ✓ Simplified Point

	Symbol Number 0017 ID Code MAL025P0017 Description black three stacked sm circs	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	cairn			IHO S-52	SY(CAIRNS11)

	Symbol Number 0017 ID Code MAL025P0017 Description black three stacked sm circs	Symbol Number 0078 ID Code MAL025P0078 Description black sm cir	○
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cairn			IHO S-52	SY(CAIRNS11)
✓ VML0	cairn			IHO S-52	SY(CAIRNS11)
✓ VML1	cairn			IHO S-52	SY(CAIRNS11)
✓ VML2	cairn			IHO S-52	SY(CAIRNS11)

AL030**AL030**

Point Full Chart ✓ Simplified Point

	Symbol Number 6018 ID Code MAL030P6018 Description black "L" with dashed outline	Symbol Number 0185 ID Code MAL030P0185 Description black topmark special X	✕
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cemetery			STANAG 3675	603
✓ UVM	cemetery			STANAG 3675	603
✓ VML2	cemetery			STANAG 3675	603

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAL030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAL030A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	cemetery			IHO S-52	LS(SOLD,I,CHBLK) + AC(CHBRN)

	Symbol Number 3117 ID Code MAL030A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 6006 ID Code MAL030A6006 Description black cemetery patt fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cemetery			STANAG 3675	603
✓ UVM	cemetery			STANAG 3675	603
✓ VML2	cemetery			STANAG 3675	603

Refer to Appendix G for true symbol
scale representations.

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AL045**AL045**

Area Full Chart ✓ Simplified Area

	Symbol Number 0684 ID Code MAL045A0684 Description red thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	complex outline			MIL-STD-2402	1L045A001
✓ UVM	complex outline			MIL-STD-2402	1L045A001

AL050**AL050**



Point Full Chart ✓ Simplified Point

	Symbol Number 0018 ID Code MAL050P0018 Description black rectangle above inverted T	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	display sign			IHO S-52	SY(NOTBRD11)

	Symbol Number 7151 ID Code MAL050P7151 Description red pyramid with dot - ICAO	Symbol Number 7048 ID Code MAL050P7048 Description red vo sign symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	display sign	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAL050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAL050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	display sign light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAL050P7155 Description red high vo tower - ICAO	Symbol Number 7048 ID Code MAL050P7048 Description red vo sign symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	display sign high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAL050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	display sign light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol scale representations.

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AL060**AL060**

Line Full Chart ✓ Simplified Line

	Symbol Number 1301 ID Code MAL060L1301 Description black line w/ squares	Symbol Number 3113 ID Code MAL060L3113 Description black solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	dragon teeth			MIL-STD-2402	1L060L002
✓ VITD	dragon teeth			MIL-STD-2402	1L060L002
✓ VML2	dragon teeth			MIL-STD-2402	1L060L002

Area Full Chart ✓ Simplified Area

	Symbol Number 1301 ID Code MAL060A1301 Description black line w/ squares	Symbol Number 3113 ID Code MAL060A3113 Description black solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	dragon teeth			MIL-STD-2402	1L060A002
✓ VITD	dragon teeth			MIL-STD-2402	1L060A002
✓ VML2	dragon teeth			MIL-STD-2402	1L060A002

AL070**AL070**

Line Full Chart ✓ Simplified Line

	Symbol Number 0600 ID Code MAL070L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fence			IHO S-52	LS(SOLD,I,CHBLK)

	Symbol Number 3148 ID Code MAL070L3148 Description black very thin patt line -x -x -x	Symbol Number 0600 ID Code MAL070L0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	fence			MIL-STD-2402	1L070L004
✓ UVM	fence			MIL-STD-2402	1L070L004
✓ VML1	fence			MIL-STD-2402	1L070L004
✓ VML2	fence			MIL-STD-2402	1L070L004

AL073**AL073**

Point Full Chart ✓ Simplified Point

	Symbol Number 0019 ID Code MAL073P0019 Description feature brown flag symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	flagstaff/flagpole			IHO S-52	SY(FLGSTF01)

Refer to Appendix G for true symbol scale representations.

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AL075**AL075**

Point Full Chart ✓ Simplified Point

	Symbol Number 1205 ID Code MAL075P1205 Description brown vert line w/ horizontal ticks on rt side	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	gallery			ORIGINAL	1205

Line Full Chart ✓ Simplified Line

	Symbol Number 1401 ID Code MAL075L1401 Description black outline open line w/ rt diag fill	Symbol Number 3113 ID Code MAL075L3113 Description black solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	gallery			MIL-STD-2402	1L075L001

AL100**AL100**

Point Full Chart ✓ Simplified Point

	Symbol Number 2058 ID Code MAL100P2058 Description gray filled square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	hut			MIL-STD-2402	1L100P001*
✓ UVM	hut			MIL-STD-2402	1L100P001*
✓ VML1	hut			MIL-STD-2402	1L100P001*
✓ VML2	hut			MIL-STD-2402	1L100P001*

AL105**AL105**

Point Full Chart ✓ Simplified Point

	Symbol Number 2053 ID Code MAL105P2053 Description black sm open square w/ dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	settlement			ORIGINAL	2053

	Symbol Number 2060 ID Code MAL105P2060 Description black square w/ S inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML2	settlement			ORIGINAL	2060

Refer to Appendix G for true symbol scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 0802 ID Code MAL105A0802 Description gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <>pop	settlement			ORIGINAL	0802



	Symbol Number 4100 ID Code MAL105A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP pop	settlement			MIL-STD-2402	1L135A001
✓ FFD	settlement			MIL-STD-2402	1L135A001
✓ VML1	settlement			MIL-STD-2402	1L135A001
✓ VML2	settlement			MIL-STD-2402	1L135A001



AL110

AL110



PointFull Chart✓ SimplifiedPoint

	Symbol Number 7151 ID Code MAL110P7151 Description red pyramid with dot - ICAO	Symbol Number 7050 ID Code MAL110P7050 Description red vo light symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light standard / light support	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAL110P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAL110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light standard / light support light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAL110P7155 Description red high vo tower - ICAO	Symbol Number 7050 ID Code MAL110P7050 Description red vo light symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light standard / light support high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAL110P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light standard / light support light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

LineFull Chart✓ SimplifiedLine

	Symbol Number 7158 ID Code MAL110L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAL110L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light standard / light support			ORIGINAL	7158

Refer to Appendix G for true symbol scale representations.

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AL120**AL120**

Point Full Chart ✓ Simplified Point

	Symbol Number 1004 ID Code MAL120P1004 Description black pencil shape symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	missile site			MIL-STD-2402	1L120P003

Line Full Chart ✓ Simplified Line

	Symbol Number 3061 ID Code MAL120L3061 Description magenta thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	missile site			ORIGINAL	3061

Area Full Chart ✓ Simplified Area

	Symbol Number 3061 ID Code MAL120A3061 Description magenta thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	missile site			ORIGINAL	3061

AL130**AL130**



Point Full Chart ✓ Simplified Point

	Symbol Number 0020 ID Code MAL130P0020 Description black hatched trapezoid	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	monument			IHO S-52	SY(MONUMT12)

	Symbol Number 2063 ID Code MAL130P2063 Description black monument symbol	Symbol Number 6048 ID Code MAL130P6048 Description gray filled circle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	monument			STANAG 3675	611
✓ UVM	monument			STANAG 3675	611
✓ VML0	monument			STANAG 3675	611
✓ VML1	monument			STANAG 3675	611
✓ VML2	monument			STANAG 3675	611

	Symbol Number 7151 ID Code MAL130P7151 Description red pyramid with dot - ICAO	Symbol Number 7052 ID Code MAL130P7052 Description red vo monument symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	monument	hgt>0and<304		ORIGINAL	7151

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 7152 ID Code MAL130P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAL130P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	monument light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAL130P7155 Description red high vo tower - ICAO	Symbol Number 7052 ID Code MAL130P7052 Description red vo monument symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	monument high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAL130P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL130P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	monument light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAL130L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAL130L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	monument			ORIGINAL	7158

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAL130A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 4175 ID Code MAL130A4175 Description lt orange solid fill		

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	monument			ORIGINAL	0600 4175

AL135

AL135

Point Full Chart ✓ Simplified Point

	Symbol Number 2053 ID Code MAL135P2053 Description black sm open square w/ dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	native settlement			MIL-STD-2402	1L135P001

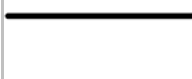

	Symbol Number 2060 ID Code MAL135P2060 Description black square w/ S inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	native settlement			MIL-STD-2402	1L135P001

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A


AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MAL135A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0823 ID Code MAL135A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <>pop	native settlement			MIL-STD-2402	1L135A001*
✓ DTOP pop	native settlement			ORIGINAL	0600 0823
✓ FFD	native settlement			ORIGINAL	0600 0823
✓ UVM	native settlement			ORIGINAL	0600 0823
✓ VML0	native settlement			ORIGINAL	0600 0823
✓ VML1	native settlement			ORIGINAL	0600 0823
✓ VML2	native settlement			ORIGINAL	0600 0823

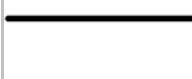

AL140**AL140**

PointFull Chart✓ SimplifiedPoint

	Symbol Number 0014 ID Code MAL140P0014 Description black filled diamond cntred on horizontal line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	particle accelerator			MIL-STD-2402	1L140P001

AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MAL140A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4100 ID Code MAL140A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	particle accelerator			ORIGINAL	0600 4100
✓ UVM	particle accelerator			ORIGINAL	0600 4100
✓ VML2	particle accelerator			ORIGINAL	0600 4100

AL155**AL155**

PointFull Chart✓ SimplifiedPoint

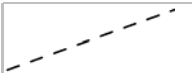
	Symbol Number 1206 ID Code MAL155P1206 Description black line w/ indented rectangle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	overhead obstruction location			MIL-STD-2402	1L155P001

Refer to Appendix G for true symbol
scale representations.

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Line Full Chart ✓ Simplified Line

	Symbol Number 3114 ID Code MAL155L3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	overhead obstruction location			ORIGINAL	3114

AL170

AL170

Area Full Chart ✓ Simplified Area

	Symbol Number 0604 ID Code MAL170A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4002 ID Code MAL170A4002 Description lt beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	plaza/city square			ORIGINAL	0604 4002
✓ UVM	plaza/city square			ORIGINAL	0604 4002
✓ VML2	plaza/city square			ORIGINAL	0604 4002

AL195

AL195

Point Full Chart ✓ Simplified Point


	Symbol Number 2051 ID Code MAL195P2051 Description black ramp symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ramp			ORIGINAL	2051
✓ VITD	ramp			ORIGINAL	2051


AL200

AL200

Point Full Chart ✓ Simplified Point

	Symbol Number 0002 ID Code MAL200P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, does not cover	loc=22 AND vrr=1		IHO S-52	SY(BUISGL11)
✓ DNC	ruins - on ground surface	loc=8		IHO S-52	SY(BUISGL11)

	Symbol Number 0002 ID Code MAL200P0002 Description feature brown filled square w/ black outline	Symbol Number 2036 ID Code MAL200P2036 Description black sm filled square
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ruins			IHO S-52	SY(BUISGL11)
✓ UVM	ruins			IHO S-52	SY(BUISGL11)
✓ VML1	ruins			IHO S-52	SY(BUISGL11)
✓ VML2	ruins			IHO S-52	SY(BUISGL11)

Refer to Appendix G for true symbol scale representations.


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	Symbol Number 0052 ID Code MAL200P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth unknown	loc=22 AND verr=4 AND hdp=0		IHO S-52	SY(OBSTRN01)

	Symbol Number 0053 ID Code MAL200P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth 20m or less	loc=22 AND verr=4 AND hdp>0and<=20		IHO S-52	SY(DANGER01)

	Symbol Number 0054 ID Code MAL200P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth greater than 20m	loc=22 AND verr=4 AND hdp>20		IHO S-52	SY(DANGER02)

	Symbol Number 0055 ID Code MAL200P0055 Description yellow-green solid circle w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, covers and uncovers	loc=22 AND verr=8		IHO S-52	SY(OBSTRN03)

	Symbol Number 2036 ID Code MAL200P2036 Description black sm filled square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	ruins			IHO S-52	SY(BUISGL11)

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAL200A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAL200A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, does not cover	loc=22 AND verr=1		IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)
✓ DNC	ruins - on ground surface	loc=8		IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

	Symbol Number 0626 ID Code MAL200A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0803 ID Code MAL200A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, covers and uncovers	loc=22 AND verr=8		IHO S-52	LS(DASH,2,CSTLN) + AC(DEPIT)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0629 ID Code MAL200A0629 Description gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth greater than 20m	loc=22 AND vrr=4 AND hdp>20		IHO S-52	LS(DASH,2,CHGRD)

	Symbol Number 0680 ID Code MAL200A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth 20m or less	loc=22 AND vrr=4 AND hdp>0and<=20		IHO S-52	LS(DOTT,2,CHBLK)

	Symbol Number 0680 ID Code MAL200A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MAL200A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ruins - offshore, submerged - depth unknown	loc=22 AND vrr=4 AND hdp=0		IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)


	Symbol Number 3114 ID Code MAL200A3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ruins			MIL-STD-2402	1L200A001
✓ UVM	ruins			MIL-STD-2402	1L200A001
✓ VML1	ruins			MIL-STD-2402	1L200A001
✓ VML2	ruins			MIL-STD-2402	1L200A001

AL210

AL210

Point Full Chart ✓ Simplified Point



	Symbol Number 2070 ID Code MAL210P2070 Description black diag bands in rectangle	Symbol Number 0078 ID Code MAL210P0078 Description black sm cir	○
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	snow shed/rock shed			MIL-STD-2402	1L210P001
✓ VML0	snow shed/rock shed			MIL-STD-2402	1L210P001
✓ VML1	snow shed/rock shed			MIL-STD-2402	1L210P001
✓ VML2	snow shed/rock shed			MIL-STD-2402	1L210P001

Refer to Appendix G for true symbol
scale representations.

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Line Full Chart ✓ Simplified Line

	Symbol Number 3146 ID Code MAL210L3146 Description black solid triangle line patt	Symbol Number 3112 ID Code MAL210L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	snow shed/rock shed			MIL-STD-2402	4B010L002
✓ VML0	snow shed/rock shed			MIL-STD-2402	4B010L002
✓ VML1	snow shed/rock shed			MIL-STD-2402	4B010L002
✓ VML2	snow shed/rock shed			MIL-STD-2402	4B010L002

AL240**AL240**



Point Full Chart ✓ Simplified Point

	Symbol Number 0004 ID Code MAL240P0004 Description black tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tower (non-communication)			IHO S-52	SY(TOWERS03)

	Symbol Number 2071 ID Code MAL240P2071 Description black dot inside cir	Symbol Number 2019 ID Code MAL240P2019 Description black sm filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tower (non-communication)			MIL-STD-2402	1L240P009
✓ UVM	tower (non-communication)			MIL-STD-2402	1L240P009
✓ VML0	tower (non-communication)			MIL-STD-2402	1L240P009
✓ VML1	tower (non-communication)			MIL-STD-2402	1L240P009
✓ VML2	tower (non-communication)			MIL-STD-2402	1L240P009

	Symbol Number 7151 ID Code MAL240P7151 Description red pyramid with dot - ICAO	Symbol Number 7141 ID Code MAL240P7141 Description red vo single low - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tower (non-communication)	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAL240P7152 Description red pyramid lit component - ICAO	Symbol Number 7146 ID Code MAL240P7146 Description red vo light component low - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tower (non-communication) light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAL240P7155 Description red high vo tower - ICAO	Symbol Number 7140 ID Code MAL240P7140 Description red vo single high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tower (non-communication) high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



	Symbol Number 7156 ID Code MAL240P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAL240P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tower (non-communication) light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol
scale representations.

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Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAL240L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAL240L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tower (non-communication)			ORIGINAL	7158

AL250


AL250

Point Full Chart ✓ Simplified Point

	Symbol Number 2072 ID Code MAL250P2072 Description gray shadowed square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOPT	underground dwelling			MIL-STD-2402	1L250P001
✓ UVM	underground dwelling			MIL-STD-2402	1L250P001
✓ VML2	underground dwelling			MIL-STD-2402	1L250P001

Area Full Chart ✓ Simplified Area

	Symbol Number 3117 ID Code MAL250A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
	Symbol Number 4100 ID Code MAL250A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	underground dwelling			ORIGINAL	3117 4100

AL260


AL260

Point Full Chart ✓ Simplified Point

	Symbol Number 2323 ID Code MAL260P2323 Description black dot	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	wall			ORIGINAL	2323

Line Full Chart ✓ Simplified Line

	Symbol Number 0600 ID Code MAL260L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wall			IHO S-52	LS(SOLD,1,CHBLK)

Refer to Appendix G for true symbol
scale representations.



MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 3113 ID Code MAL260L3113 Description black solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	wall			MIL-STD-2402	1L260L001
✓ UVM	wall			MIL-STD-2402	1L260L001
✓ VITD	wall			MIL-STD-2402	1L260L001
✓ VML0	wall			MIL-STD-2402	1L260L001
✓ VML1	wall			MIL-STD-2402	1L260L001
✓ VML2	wall			MIL-STD-2402	1L260L001

AM010**AM010**



Point Full Chart Simplified Point

	Symbol Number 2073 ID Code MAM010P2073 Description black square w/ diag line inside	Symbol Number 2036 ID Code MAM010P2036 Description black sm filled square	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	depot (storage)			MIL-STD-2402	1M010P001*
✓ VML0	depot (storage)			MIL-STD-2402	1M010P001*


	Symbol Number 7151 ID Code MAM010P7151 Description red pyramid with dot - ICAO	Symbol Number 7056 ID Code MAM010P7056 Description red vo depot symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	depot	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7155 ID Code MAM010P7155 Description red high vo tower - ICAO	Symbol Number 7056 ID Code MAM010P7056 Description red vo depot symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	depot high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

Area Full Chart Simplified Area

	Symbol Number 0624 ID Code MAM010A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depot (storage)			IHO S-52	LS(DASH,1,LANDF)

	Symbol Number 1573 ID Code MAM010A1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAM010A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	depot (storage)			ORIGINAL	1573 0804
✓ UVM	depot (storage)			ORIGINAL	1573 0804
✓ VML2	depot (storage)			ORIGINAL	1573 0804

Refer to Appendix G for true symbol
scale representations.

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AM020

AM020



Point Full Chart ✔ Simplified Point

	Symbol Number 0021 ID Code MAM020P0021 Description feature brown filled cir w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	grain bin/silo			IHO S-52	SY(SILBUI11)

	Symbol Number 2074 ID Code MAM020P2074 Description brown cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	grain bin/silo			MIL-STD-2402	1M020P002*
✔ UVM	grain bin/silo			MIL-STD-2402	1M020P002*
✔ VML1	grain bin/silo			MIL-STD-2402	1M020P002*
✔ VML2	grain bin/silo			MIL-STD-2402	1M020P002*

	Symbol Number 7151 ID Code MAM020P7151 Description red pyramid with dot - ICAO	Symbol Number 7058 ID Code MAM020P7058 Description red vo silo symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	grain bin / silo	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAM020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAM020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	grain bin / silo light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAM020P7155 Description red high vo tower - ICAO	Symbol Number 7058 ID Code MAM020P7058 Description red vo silo symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	grain bin / silo high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



	Symbol Number 7156 ID Code MAM020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAM020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	grain bin / silo light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol
scale representations.










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AreaFull Chart✓ SimplifiedArea

	Symbol Number 1573 ID Code MAM020A1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0804 ID Code MAM020A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	grain bin/silo			ORIGINAL	1573 0804
✓ UVM	grain bin/silo			ORIGINAL	1573 0804
✓ VML2	grain bin/silo			ORIGINAL	1573 0804



AM030**AM030**

PointFull Chart✓ SimplifiedPoint

	Symbol Number 0004 ID Code MAM030P0004 Description black tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	grain elevator			IHO S-52	SY(TOWERS03)
	Symbol Number 0004 ID Code MAM030P0004 Description black tower symbol	Symbol Number 2019 ID Code MAM030P2019 Description black sm filled cir			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	grain elevator			IHO S-52	SY(TOWERS03)
✓ UVM	grain elevator			IHO S-52	SY(TOWERS03)
✓ VML1	grain elevator			IHO S-52	SY(TOWERS03)
✓ VML2	grain elevator			IHO S-52	SY(TOWERS03)
	Symbol Number 7151 ID Code MAM030P7151 Description red pyramid with dot - ICAO	Symbol Number 7060 ID Code MAM030P7060 Description red vo elevator symbol - GTRI			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	grain elevator	hgt>0and<304		ORIGINAL	7151
	Symbol Number 7152 ID Code MAM030P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAM030P7142 Description red vo light component - GTRI			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	grain elevator light	atn=3 AND hgt>0and<304		ORIGINAL	7152
	Symbol Number 7155 ID Code MAM030P7155 Description red high vo tower - ICAO	Symbol Number 7060 ID Code MAM030P7060 Description red vo elevator symbol - GTRI			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	grain elevator high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

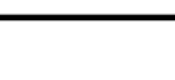
Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 7156 ID Code MAM030P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAM030P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	grain elevator light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156


Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAM030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAM030A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	grain elevator			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

	Symbol Number 1573 ID Code MAM030A1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAM030A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	grain elevator			ORIGINAL	1573 0804
✓ UVM	grain elevator			ORIGINAL	1573 0804
✓ VML2	grain elevator			ORIGINAL	1573 0804

AM040

AM040

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAM040A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4123 ID Code MAM040A4123 Description depth gray stiple patt fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	mineral pile			ORIGINAL	0600 4123

	Symbol Number 0624 ID Code MAM040A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	mineral pile			IHO S-52	LS(DASH,1,LANDF)

Refer to Appendix G for true symbol
scale representations.

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AM060



AM060

Point Full Chart ✓ Simplified Point

	Symbol Number 2076 ID Code MAM060P2076 Description red brown filled semicircle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	storage bunker/storage mound			MIL-STD-2402	1M060P001*
✓ UVM	storage bunker/storage mound			MIL-STD-2402	1M060P001*
✓ VML2	storage bunker/storage mound			MIL-STD-2402	1M060P001*

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAM060A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4109 ID Code MAM060A4109 Description depth gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	storage bunker/storage mound			ORIGINAL	0600 4109
✓ UVM	storage bunker/storage mound			ORIGINAL	0600 4109
✓ VML2	storage bunker/storage mound			ORIGINAL	0600 4109

AM070

AM070



Point Full Chart ✓ Simplified Point

	Symbol Number 0022 ID Code MAM070P0022 Description black cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tank			IHO S-52	SY(TNKCON12)

	Symbol Number 2019 ID Code MAM070P2019 Description black sm filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tank			MIL-STD-2402	1M070P003
✓ UVM	tank			MIL-STD-2402	1M070P003
✓ VML0	tank			MIL-STD-2402	1M070P003
✓ VML1	tank			MIL-STD-2402	1M070P003
✓ VML2	tank			MIL-STD-2402	1M070P003

	Symbol Number 7151 ID Code MAM070P7151 Description red pyramid with dot - ICAO	Symbol Number 7062 ID Code MAM070P7062 Description red vo tank symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tank	hgt>0and<304		ORIGINAL	7151

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 7152 ID Code MAM070P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAM070P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tank light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAM070P7155 Description red high vo tower - ICAO	Symbol Number 7062 ID Code MAM070P7062 Description red vo tank symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tank high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAM070P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAM070P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tank light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAM070L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAM070L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	tank			ORIGINAL	7158

Area Full Chart ✓ Simplified Area

	Symbol Number 4156 ID Code MAM070A4156 Description black solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tank			MIL-STD-2402	1M070A014
✓ UVM	tank			MIL-STD-2402	1M070A014
✓ VML2	tank			MIL-STD-2402	1M070A014

	Symbol Number 0600 ID Code MAM070A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAM070A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tank			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.

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AM080**AM080**

Point Full Chart ✔ Simplified Point

	Symbol Number 0023 ID Code MAM080P0023 Description black water tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	water tower			IHO S-52	SY(TOWERS12)

	Symbol Number 2003 ID Code MAM080P2003 Description basic blue solid filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML0	water tower			MIL-STD-2402	1M080P001

	Symbol Number 2078 ID Code MAM080P2078 Description basic blue dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	water tower			MIL-STD-2402	1M080P001
✔ UVM	water tower			MIL-STD-2402	1M080P001
✔ VML1	water tower			MIL-STD-2402	1M080P001
✔ VML2	water tower			MIL-STD-2402	1M080P001

	Symbol Number 7151 ID Code MAM080P7151 Description red pyramid with dot - ICAO	Symbol Number 7064 ID Code MAM080P7064 Description red vo water tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	water tower	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAM080P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAM080P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	water tower light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAM080P7155 Description red high vo tower - ICAO	Symbol Number 7064 ID Code MAM080P7064 Description red vo water tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	water tower high	hgt=-32767 OR hgt>=304		ORIGINAL	7155


	Symbol Number 7156 ID Code MAM080P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAM080P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	water tower light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol
scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 6007 ID Code MAN080A6007 Description midnight blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	water tower			ORIGINAL	6007

AN010**AN010**

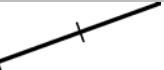

LineFull Chart✓ SimplifiedLine

	Symbol Number 0605 ID Code MAN010L0605 Description feature brown thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	railroad			IHO S-52	LS(SOLD,2,LANDF)

	Symbol Number 3114 ID Code MAN010L3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -dismantled	exs=8		STANAG 3675	522
✓ FFD	railroad -dismantled	exs=8		STANAG 3675	522
✓ UVM	railroad -dismantled	exs=8		STANAG 3675	522
✓ VITD	railroad -dismantled	exs=8		STANAG 3675	522
✓ VML1	railroad -dismantled	exs=8		STANAG 3675	522
✓ VML2	railroad -dismantled	exs=8		STANAG 3675	522

	Symbol Number 3123 ID Code MAN010L3123 Description black solid line w/ single tics both sides	Symbol Number 3112 ID Code MAN010L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -operational/normal/single	exs=0or28 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N010L003
✓ FFD	railroad -operational/normal/single	exs=0or28 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N050L003
✓ UVM	railroad -operational/normal/single	exs=0or28 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N010L003
✓ VITD	railroad -operational/normal/single	exs=0or1 AND fco<>2 AND rrc<>4		MIL-STD-2402	1N010L003
✓ VML1	railroad -operational/normal/single	exs=0or28 AND fco=0or3 AND rgc<>2		MIL-STD-2402	1N010L003
✓ VML2	railroad -operational/normal/single	exs=0or28 AND fco=0or3 AND rgc<>2		MIL-STD-2402	1N010L003

	Symbol Number 3123 ID Code MAN010L3123 Description black solid line w/ single tics both sides	Symbol Number 3113 ID Code MAN010L3113 Description black solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	railroad -operational/normal/single	exs=28 AND fco=0or3		MIL-STD-2402	1N010L003

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 3125 ID Code MAN010L3125 Description black solid line w/ single tics alt sides	Symbol Number 3112 ID Code MAN010L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -operational/narrow/single	exs=0or28 AND ltn<2 AND rgc=2		MIL-STD-2402	1N050L005
✓ FFD	railroad -operational/narrow/single	exs=0or28 AND ltn<2 AND rgc=2		MIL-STD-2402	1N050L005
✓ UVM	railroad -operational/narrow/single	exs=0or28 AND ltn<2 AND rgc=2		MIL-STD-2402	1N010L067
✓ VITD	railroad -operational/narrow/single	exs=0or1 AND fco<>2 AND rrc=4		MIL-STD-2402	1N050L005
✓ VML1	railroad -operational/narrow/single	exs=0or28 AND fco=0or3 AND rgc=2		MIL-STD-2402	1N010L067
✓ VML2	railroad -operational/narrow/single	exs=0or28 AND fco=0or3 AND rgc=2		MIL-STD-2402	1N010L067

	Symbol Number 3127 ID Code MAN010L3127 Description black solid line w/ double tics both sides	Symbol Number 3112 ID Code MAN010L3112 Description black thin solid line	
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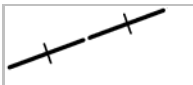
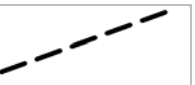
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -operational/normal/multiple	exs=0or28 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L009
✓ FFD	railroad -operational/normal/multiple	exs=0or28 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L009
✓ UVM	railroad -operational/normal/multiple	exs=0or28 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L009
✓ VITD	railroad -operational/normal/multiple	exs=0or1 AND fco=2 AND rrc<>4		MIL-STD-2402	1N010L009
✓ VML1	railroad -operational/normal/multiple	exs=0or28 AND fco<>0and<>3 AND rgc<>2		MIL-STD-2402	1N010L009
✓ VML2	railroad -operational/normal/multiple	exs=0or28 AND fco<>0and<>3 AND rgc<>2		MIL-STD-2402	1N010L009

	Symbol Number 3127 ID Code MAN010L3127 Description black solid line w/ double tics both sides	Symbol Number 3113 ID Code MAN010L3113 Description black solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	railroad -operational/normal/multiple	exs=28 AND fco<>0and<>3		MIL-STD-2402	1N010L009

	Symbol Number 3129 ID Code MAN010L3129 Description black solid line w/ double tics alt sides	Symbol Number 3112 ID Code MAN010L3112 Description black thin solid line	
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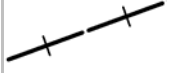
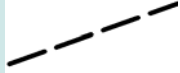
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -operational/narrow/multiple	exs=0or28 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L011
✓ FFD	railroad -operational/narrow/multiple	exs=0or28 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L011
✓ UVM	railroad -operational/narrow/multiple	exs=0or28 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L011
✓ VITD	railroad -operational/narrow/multiple	exs=0or1 AND fco=2 AND rrc=4		MIL-STD-2402	1N010L011
✓ VML1	railroad -operational/narrow/multiple	exs=0or28 AND fco<>0and<>3 AND rgc=2		MIL-STD-2402	1N010L011
✓ VML2	railroad -operational/narrow/multiple	exs=0or28 AND fco<>0and<>3 AND rgc=2		MIL-STD-2402	1N010L011

	Symbol Number 3131 ID Code MAN010L3131 Description black dash line w/ single tics both sides	Symbol Number 3117 ID Code MAN010L3117 Description black thin dash line	
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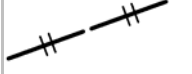
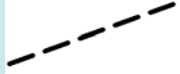
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad -not operational/normal/single	exs=5or6or7 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N010L022
✓ FFD	railroad -not operational/normal/single	exs=5or6or7 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N010L022
✓ UVM	railroad -not operational/normal/single	exs=5or6or7 AND ltn<2 AND rgc<>2		MIL-STD-2402	1N010L022
✓ VITD	railroad -not operational/normal/single	exs=5 AND fco<>2 AND rrc<>4		MIL-STD-2402	1N010L022
✓ VML1	railroad -not operational/normal/single	exs=5or6or7 AND fco=0or3 AND rgc<>2		MIL-STD-2402	1N010L022
✓ VML2	railroad -not operational/normal/single	exs=5or6or7 AND fco=0or3 AND rgc<>2		MIL-STD-2402	1N010L022

Refer to Appendix G for true symbol
scale representations.

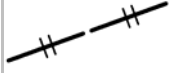
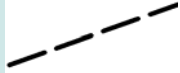
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	Symbol Number 3131 ID Code MAN010L3131 Description black dash line w/ single tics both sides	Symbol Number 3120 ID Code MAN010L3120 Description black thin long dash line	
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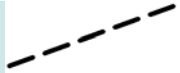
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	railroad -not operational/normal/single	exs<>28 AND fco=0or3		MIL-STD-2402	1N010L022

	Symbol Number 3133 ID Code MAN010L3133 Description black dash line w/ double tics both sides	Symbol Number 3117 ID Code MAN010L3117 Description black thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOPT	railroad -not operational/normal/multiple	exs=5or6or7 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L021
✓ FFD	railroad -not operational/normal/multiple	exs=5or6or7 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L021
✓ UVM	railroad -not operational/normal/multiple	exs=5or6or7 AND ltn>1 AND rgc<>2		MIL-STD-2402	1N010L021
✓ VITD	railroad -not operational/normal/multiple	exs=5 AND fco=2 AND rrc<>4		MIL-STD-2402	1N010L021
✓ VML1	railroad -not operational/normal/multiple	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2		MIL-STD-2402	1N010L021
✓ VML2	railroad -not operational/normal/multiple	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2		MIL-STD-2402	1N010L021

	Symbol Number 3133 ID Code MAN010L3133 Description black dash line w/ double tics both sides	Symbol Number 3120 ID Code MAN010L3120 Description black thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	railroad -not operational/normal/multiple	exs<>28 AND fco<>0and<>3		MIL-STD-2402	1N010L021

	Symbol Number 3135 ID Code MAN010L3135 Description black dash line w/ single tics alt sides	Symbol Number 3117 ID Code MAN010L3117 Description black thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOPT	railroad -not operational/narrow/single	exs=5or6or7 AND ltn<2 AND rgc=2		MIL-STD-2402	1N050L064
✓ FFD	railroad -not operational/narrow/single	exs=5or6or7 AND ltn<2 AND rgc=2		MIL-STD-2402	1N050L064
✓ UVM	railroad -not operational/narrow/single	exs=5or6or7 AND ltn<2 AND rgc=2		MIL-STD-2402	1N010L023
✓ VITD	railroad -not operational/narrow/single	exs=5 AND fco<>2 AND rrc=4		MIL-STD-2402	1N050L064
✓ VML1	railroad -not operational/narrow/single	exs=5or6or7 AND fco=0or3 AND rgc=2		MIL-STD-2402	1N010L023
✓ VML2	railroad -not operational/narrow/single	exs=5or6or7 AND fco=0or3 AND rgc=2		MIL-STD-2402	1N010L023

	Symbol Number 3137 ID Code MAN010L3137 Description black dash line w/ double tics alt sides	Symbol Number 3117 ID Code MAN010L3117 Description black thin dash line	
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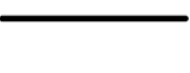
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOPT	railroad -not operational/narrow/multiple	exs=5or6or7 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L024
✓ FFD	railroad -not operational/narrow/multiple	exs=5or6or7 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L024
✓ UVM	railroad -not operational/narrow/multiple	exs=5or6or7 AND ltn>1 AND rgc=2		MIL-STD-2402	1N010L024
✓ VITD	railroad -not operational/narrow/multiple	exs=5 AND fco=2 AND rrc=4		MIL-STD-2402	1N010L024
✓ VML1	railroad -not operational/narrow/multiple	exs=5or6or7 AND fco<>0and<>3 AND rgc=2		MIL-STD-2402	1N010L024
✓ VML2	railroad -not operational/narrow/multiple	exs=5or6or7 AND fco<>0and<>3 AND rgc=2		MIL-STD-2402	1N010L024

Refer to Appendix G for true symbol
scale representations.


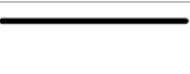
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AN050**AN050**

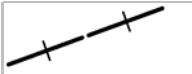
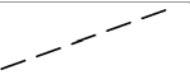
Line Full Chart ✓ Simplified Line

	Symbol Number 3123 ID Code MAN050L3123 Description black solid line w/ single tics both sides	Symbol Number 0600 ID Code MAN050L0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad siding/railroad spur - operational/normal	exs=0or28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ FFD	railroad siding/railroad spur - operational/normal	exs=0or28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ UVM	railroad siding/railroad spur - operational/normal	exs=0or28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ VITD	railroad siding/railroad spur - operational/normal	exs=0or1 AND rrc<>4		STANAG 3675	519,520,521,522
✓ VML1	railroad siding/railroad spur - operational/normal	exs=0or28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ VML2	railroad siding/railroad spur - operational/normal	exs=0or28 AND rgc<>2		STANAG 3675	519,520,521,522

	Symbol Number 3125 ID Code MAN050L3125 Description black solid line w/ single tics alt sides	Symbol Number 0600 ID Code MAN050L0600 Description black very thin solid line	
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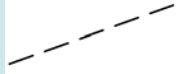
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad siding/railroad spur - operational/narrow	exs=0or28 AND rgc=2		STANAG 3675	519,520,521,522
✓ FFD	railroad siding/railroad spur - operational/narrow	exs=0or28 AND rgc=2		STANAG 3675	519,520,521,522
✓ UVM	railroad siding/railroad spur - operational/narrow	exs=0or28 AND rgc=2		STANAG 3675	519,520,521,522
✓ VITD	railroad siding/railroad spur - operational/narrow	exs=0or1 AND rrc=4		MIL-STD-2402	1N050L005
✓ VML1	railroad siding/railroad spur - operational/narrow	exs=0or28 AND rgc=2		STANAG 3675	519,520,521,522
✓ VML2	railroad siding/railroad spur - operational/narrow	exs=0or28 AND rgc=2		STANAG 3675	519,520,521,522

	Symbol Number 3131 ID Code MAN050L3131 Description black dash line w/ single tics both sides	Symbol Number 3116 ID Code MAN050L3116 Description black very thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad siding/railroad spur - non-operational/normal	exs<>0and<>28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ FFD	railroad siding/railroad spur - non-operational/normal	exs<>0and<>28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ UVM	railroad siding/railroad spur - non-operational/normal	exs<>0and<>28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ VITD	railroad siding/railroad spur - non-operational/normal	exs=5 AND rrc<>4		STANAG 3675	519,520,521,522
✓ VML1	railroad siding/railroad spur - non-operational/normal	exs<>0and<>28 AND rgc<>2		STANAG 3675	519,520,521,522
✓ VML2	railroad siding/railroad spur - non-operational/normal	exs<>0and<>28 AND rgc<>2		STANAG 3675	519,520,521,522

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 3135 ID Code MAN050L3135 Description black dash line w/ single tics alt sides	Symbol Number 3116 ID Code MAN050L3116 Description black very thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad siding/railroad spur - non-operational/narrow	exs<>0and<>28 AND rgc=2		STANAG 3675	519,520,521,522
✓ FFD	railroad siding/railroad spur - non-operational/narrow	exs<>0and<>28 AND rgc=2		STANAG 3675	519,520,521,522
✓ UVM	railroad siding/railroad spur - non-operational/narrow	exs<>0and<>28 AND rgc=2		STANAG 3675	519,520,521,522
✓ VITD	railroad siding/railroad spur - non-operational/narrow	exs=5 AND rrc=4		STANAG 3675	519,520,521,522
✓ VML1	railroad siding/railroad spur - non-operational/narrow	exs<>0and<>28 AND rgc=2		STANAG 3675	519,520,521,522
✓ VML2	railroad siding/railroad spur - non-operational/narrow	exs<>0and<>28 AND rgc=2		STANAG 3675	519,520,521,522

AN060

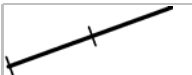

AN060

Point Full Chart ✓ Simplified Point

	Symbol Number 2036 ID Code MAN060P2036 Description black sm filled square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	railroad yard/marshalling yard			MIL-STD-2402	1N080P001

Line Full Chart ✓ Simplified Line

	Symbol Number 3123 ID Code MAN060L3123 Description black solid line w/ single tics both sides	Symbol Number 3121 ID Code MAN060L3121 Description black long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	railroad yard/marshalling yard			MIL-STD-2402	1N080L002



Area Full Chart ✓ Simplified Area

	Symbol Number 0802 ID Code MAN060A0802 Description gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	railroad yard/marshalling yard			ORIGINAL	0802

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0600 ID Code MAN060A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0802 ID Code MAN060A0802 Description gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad yard/marshaling yard			ORIGINAL	0600 0802
✓ FFD	railroad yard/marshaling yard			ORIGINAL	0600 0802
✓ UVM	railroad yard/marshaling yard			ORIGINAL	0600 0802
✓ VITD	railroad yard/marshaling yard			ORIGINAL	0600 0802
✓ VML1	railroad yard/marshaling yard			ORIGINAL	0600 0802
✓ VML2	railroad yard/marshaling yard			ORIGINAL	0600 0802

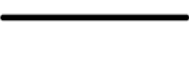


AN075**AN075**

Point ✓ Simplified Point

	Symbol Number 2080 ID Code MAN075P2080 Description black rt diag line inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	railroad turntable			MIL-STD-2402	1N075P001
✓ VML2	railroad turntable			MIL-STD-2402	1N075P001

Area ✓ Simplified Area

	Symbol Number 0600 ID Code MAN075A0600 Description black very thin solid line	
	Symbol Number 4167 ID Code MAN075A4167 Description black cross hatch patt fill	Symbol Number 4156 ID Code MAN075A4156 Description black solid fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	railroad turntable			ORIGINAL	0600 4167

AP010**AP010**

Line ✓ Simplified Line

	Symbol Number 3116 ID Code MAP010L3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	cart track			MIL-STD-2402	1P010L001
✓ VITD	cart track			MIL-STD-2402	1P010L001
✓ VML1	cart track			MIL-STD-2402	1P010L001

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 3117 ID Code MAP010L3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cart track			MIL-STD-2402	1P010L004
✓ UVM	cart track			MIL-STD-2402	1P010L004
✓ VML2	cart track			MIL-STD-2402	1P010L004

AP020**AP020**

Point Full Chart ✓ Simplified Point


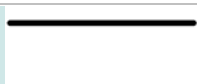
	Symbol Number 2081 ID Code MAP020P2081 Description black open square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	interchange			MIL-STD-2402	1P020P001

Line Full Chart ✓ Simplified Line

	Symbol Number 0605 ID Code MAP020L0605 Description feature brown thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	interchange			IHO S-52	LS(SOLD,2,LANDF)

	Symbol Number 6021 ID Code MAP020L6021 Description 100% red brown cased line w/ gray solid	Symbol Number 0600 ID Code MAP020L0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	interchange			STANAG 3675	511
✓ UVM	interchange			STANAG 3675	511
✓ VML2	interchange			STANAG 3675	511

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAP020A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4018 ID Code MAP020A4018 Description lt tan solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	interchange			ORIGINAL	0600 4018

Refer to Appendix G for true symbol
scale representations.



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AP030**AP030**



Line Full Chart ✔ Simplified Line

	Symbol Number 0605 ID Code MAP030L0605 Description feature brown thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	road			IHO S-52	LS(SOLD,2,LANDF)

	Symbol Number 6021 ID Code MAP030L6021 Description 100% red brown cased line w/ gray solid	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line 
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	road - divided w/ median	med=1		STANAG 3675	501
✔ FFD	road - divided w/ median	med=1		STANAG 3675	501
✔ UVM	road - divided w/ median	med=1		STANAG 3675	501
✔ VITD	road - divided w/ median	fco=5or6		STANAG 3675	501
✔ VML0	road - divided w/ median	med=1		STANAG 3675	501
✔ VML1	road - divided w/ median	med=1		STANAG 3675	501
✔ VML2	road - divided w/ median	med=1		STANAG 3675	501

	Symbol Number 6022 ID Code MAP030L6022 Description 100% red brown thick line w/ gray dash	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line 
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	road - all weather, hard surface, no median, 4 lns	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✔ VML1	road - all weather, hard surface, no median, 4 lns	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✔ VML2	road - all weather, hard surface, no median, 4 lns	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502

	Symbol Number 6023 ID Code MAP030L6023 Description 100% red brown thin line	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line 
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	road - all weather, hard surface, no median, 1 ln	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✔ VML1	road - all weather, hard surface, no median, 1 ln	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✔ VML2	road - all weather, hard surface, no median, 1 ln	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 6024 ID Code MAP030L6024 Description 100% red brown line	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	road - all weather, hard surface, no median	med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✓ FFD	road - all weather, hard surface, no median	med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✓ UVM	road - all weather, hard surface, no median, 2-3 lns	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✓ VITD	road - all weather, hard surface, no median	fco=0or7 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✓ VML0	road - no median	med<>1		STANAG 3675	502
✓ VML1	road - all weather, hard surface, no median, 2-3 lns	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502
✓ VML2	road - all weather, hard surface, no median, 2-3 lns	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2		STANAG 3675	502

	Symbol Number 6024 ID Code MAP030L6024 Description 100% red brown line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	road (libref)			ORIGINAL	6024

	Symbol Number 6025 ID Code MAP030L6025 Description 100% red brown thin line w/ gray dash	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	road - all weather, loose surface, no median	med<>1 AND rst=2 AND wtc<>2		STANAG 3675	503
✓ FFD	road - all weather, loose surface, no median	med<>1 AND rst=2 AND wtc<>2		STANAG 3675	503
✓ UVM	road - all weather, loose surface, no median	med<>1 AND rst=2or3 AND wtc<>2		STANAG 3675	503
✓ VITD	road - all weather, loose surface, no median	fco=0or7 AND rst=2 AND wtc<>2		STANAG 3675	503
✓ VML1	road - all weather, loose surface, no median	med<>1 AND rst=2or3 AND wtc<>2		STANAG 3675	503
✓ VML2	road - all weather, loose surface, no median	med<>1 AND rst=2or3 AND wtc<>2		STANAG 3675	503

	Symbol Number 6026 ID Code MAP030L6026 Description gray vy thin solid line	Symbol Number 1855 ID Code MAP030L1855 Description red brown thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	road - fair weather, no median	med<>1 AND wtc=2		STANAG 3675	504
✓ FFD	road - fair weather, no median	med<>1 AND wtc=2		STANAG 3675	504
✓ UVM	road - fair weather, no median	med<>1 AND wtc=2		STANAG 3675	504
✓ VITD	road - fair weather, no median	fco=0or7 AND wtc=2		STANAG 3675	504
✓ VML1	road - fair weather, no median	med<>1 AND wtc=2		STANAG 3675	504
✓ VML2	road - fair weather, no median	med<>1 AND wtc=2		STANAG 3675	504

Refer to Appendix G for true symbol scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MAP030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	road - fair/dry weather no median	med<>1 AND wtc=2		STANAG 3675	504

	Symbol Number 0600 ID Code MAP030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 1906 ID Code MAP030A1906 Description lt red brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	road - all weather no median	med<>1 AND wtc<>2		STANAG 3675	502

	Symbol Number 0600 ID Code MAP030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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
	Symbol Number 4036 ID Code MAP030A4036 Description red brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	road - divided w/median	med=1		STANAG 3675	501

AP040

AP040

PointFull Chart✓ SimplifiedPoint

	Symbol Number 2038 ID Code MAP040P2038 Description black dot w/ parallel lines inside circle	Symbol Number 0078 ID Code MAP040P0078 Description black sm cir	○
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	gate			ORIGINAL	2038

AP050

AP050

LineFull Chart✓ SimplifiedLine

	Symbol Number 0656 ID Code MAP050L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	trail			MIL-STD-2402	1P050L003
✓ FFD	trail			MIL-STD-2402	1P050L003
✓ UVM	trail			MIL-STD-2402	1P050L003
✓ VML0	trail			MIL-STD-2402	1P050L003
✓ VML1	trail			MIL-STD-2402	1P050L003
✓ VML2	trail			MIL-STD-2402	1P050L003

Refer to Appendix G for true symbol
scale representations.

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AQ010

AQ010

Line Full Chart ✓ Simplified Line

	Symbol Number 0657 ID Code MAQ010L0657 Description gray thick dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)
✓ DTOP	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)
✓ UVM	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)
✓ VML0	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)
✓ VML1	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)
✓ VML2	aerial cableway lines/ski lift lines			IHO S-52	LS(DASH,4,CHGRD)

	Symbol Number 7158 ID Code MAQ010L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAQ010L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aerial cableway lines / ski lift lines			ORIGINAL	7158



AQ020

AQ020



Point Full Chart ✓ Simplified Point

	Symbol Number 0024 ID Code MAQ020P0024 Description black dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	aerial cableway pylon/ski pylon			IHO S-52	SY(POSGEN03)

	Symbol Number 7151 ID Code MAQ020P7151 Description red pyramid with dot - ICAO	Symbol Number 7070 ID Code MAQ020P7070 Description red vo aerial pylon symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aerial cableway pylon / ski pylon	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aerial cableway pylon / ski pylon light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAQ020P7155 Description red high vo tower - ICAO	Symbol Number 7070 ID Code MAQ020P7070 Description red vo aerial pylon symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aerial cableway pylon / ski pylon high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 7156 ID Code MAQ020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aerial cableway pylon / ski pylon light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AQ040**AQ040**



Point Full Chart ✓ Simplified Point

	Symbol Number 2083 ID Code MAQ040P2083 Description black double line with flares on ends	Symbol Number 6041 ID Code MAQ040P6041 Description black cir w/ "B" inside	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ FFD	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ UVM	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ VITD	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ VML0	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ VML1	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012
✓ VML2	bridge/overpass/viaduct			MIL-STD-2402	1Q040P012

	Symbol Number 7151 ID Code MAQ040P7151 Description red pyramid with dot - ICAO	Symbol Number 7072 ID Code MAQ040P7072 Description red vo bridge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge / overpass / viaduct	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge / overpass / viaduct light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAQ040P7155 Description red high vo tower - ICAO	Symbol Number 7072 ID Code MAQ040P7072 Description red vo bridge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge / overpass / viaduct high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAQ040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge / overpass / viaduct light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 0627 ID Code MAQ040L0627 Description gray very thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge/overpass/viaduct (opening)	bsc<>12 AND bot<>4and<>10and<>11		IHO S-52	LS(SOLD,5,CHGRD)

Refer to Appendix G for true symbol scale representations.



**MIL-DTL-89045A w/Amendment 1
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	Symbol Number 0753 ID Code MAQ040L0753 Description gray very thick line w/ cntrd magenta dbl cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge/overpass/viaduct (not opening)	bsc=12 OR bot=4or10or11		IHO S-52	LC=LS(SOLD,5,CHGRD) + SY(BRIDGE01)

	Symbol Number 3113 ID Code MAQ040L3113 Description black solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ FFD	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ UVM	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ VITD	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ VML0	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ VML1	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*
✓ VML2	bridge/overpass/viaduct			MIL-STD-2402	1Q040L019*

	Symbol Number 7158 ID Code MAQ040L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAQ040L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge / overpass / viaduct			ORIGINAL	7158

Area Full Chart ✓ Simplified Area

	Symbol Number 4156 ID Code MAQ040A4156 Description black solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	bridge/overpass/viaduct			ORIGINAL	4156

	Symbol Number 0611 ID Code MAQ040A0611 Description gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge/overpass/viaduct (opening)	bsc<>12 AND bot<>4and<>10and<>11		IHO S-52	LS(SOLD,4,CHGRD)

	Symbol Number 0046 ID Code MAQ040A0046 Description magenta small circle inside circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0611 ID Code MAQ040A0611 Description gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge/overpass/viaduct (not opening)	bsc=12 OR bot=4or10or11		IHO S-52	SY(BRIDGE01) + LS(SOLD,4,CHGRD)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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AQ045**AQ045**

Point Full Chart ✓ Simplified Point

	Symbol Number 2083 ID Code MAQ045P2083 Description black double line with flares on ends	Symbol Number 6041 ID Code MAQ045P6041 Description black cir w/ "B" inside	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	bridge span			ORIGINAL	2083
✓ VITD	bridge span			ORIGINAL	2083

Line Full Chart ✓ Simplified Line

	Symbol Number 0627 ID Code MAQ045L0627 Description gray very thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge span			IHO S-52	LS(SOLD,5,CHGRD)



Area Full Chart ✓ Simplified Area

	Symbol Number 0611 ID Code MAQ045A0611 Description gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bridge span			IHO S-52	LS(SOLD,4,CHGRD)

AQ050**AQ050**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MAQ050P7151 Description red pyramid with dot - ICAO	Symbol Number 7072 ID Code MAQ050P7072 Description red vo bridge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge superstructure	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge superstructure light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAQ050P7155 Description red high vo tower - ICAO	Symbol Number 7072 ID Code MAQ050P7072 Description red vo bridge symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge superstructure high	hgt=-32767 OR hgt>=304		ORIGINAL	7155



Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7156 ID Code MAQ050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge superstructure light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156



Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAQ050L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAQ050L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge superstructure			ORIGINAL	7158

AQ055**AQ055**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MAQ055P7151 Description red pyramid with dot - ICAO	Symbol Number 7078 ID Code MAQ055P7078 Description red vo brid tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge tower / bridge pylon	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ055P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ055P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge tower / bridge pylon light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAQ055P7155 Description red high vo tower - ICAO	Symbol Number 7078 ID Code MAQ055P7078 Description red vo brid tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge tower / bridge pylon high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAQ055P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ055P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	bridge tower / bridge pylon light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AQ058**AQ058**



Point Full Chart ✓ Simplified Point

	Symbol Number 1171 ID Code MAQ058P1171 Description black opposing open equi triangles	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	constriction/expansion	wd1=40		MIL-STD-2402	1Q058P002

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 2087 ID Code MAQ058P2087 Description black opposing solid triangles pntng in	Symbol Number 1171 ID Code MAQ058P1171 Description black opposing open equi triangles	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	constriction/expansion			MIL-STD-2402	1Q058P001
✓ VITD	constriction/expansion	wd1<40		MIL-STD-2402	1Q058P001

AQ060**AQ060**



Point Full Chart ✓ Simplified Point

	Symbol Number 0004 ID Code MAQ060P0004 Description black tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	control tower			IHO S-52	SY(TOWERS03)

	Symbol Number 2088 ID Code MAQ060P2088 Description purple dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	control tower			MIL-STD-2402	1Q060P007
✓ UVM	control tower			MIL-STD-2402	1Q060P007
✓ VML1	control tower			MIL-STD-2402	1Q060P007
✓ VML2	control tower			MIL-STD-2402	1Q060P007

	Symbol Number 7151 ID Code MAQ060P7151 Description red pyramid with dot - ICAO	Symbol Number 7080 ID Code MAQ060P7080 Description red vo ctrl tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	control tower	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ060P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ060P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	control tower light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAQ060P7155 Description red high vo tower - ICAO	Symbol Number 7080 ID Code MAQ060P7080 Description red vo ctrl tower symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	control tower high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAQ060P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ060P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	control tower light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol scale representations.

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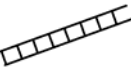

AQ064**AQ064**

Point Full Chart ✓ Simplified Point

	Symbol Number 2089 ID Code MAQ064P2089 Description black cir w/ four outer tics and dot inside	Symbol Number 2090 ID Code MAQ064P2090 Description black cir w/ "C" inside	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	causeway			ORIGINAL	2089

Line Full Chart ✓ Simplified Line

	Symbol Number 3142 ID Code MAQ064L3142 Description black parallel vy thin lines w/ tics (ladder patt)	Symbol Number 3112 ID Code MAQ064L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	causeway			MIL-STD-2402	2H100L001

AQ065**AQ065**

Point Full Chart ✓ Simplified Point

	Symbol Number 2090 ID Code MAQ065P2090 Description black cir w/ "C" inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	culvert			MIL-STD-2402	1Q065P002
✓ VML2	culvert			MIL-STD-2402	1Q065P002

Line Full Chart ✓ Simplified Line

	Symbol Number 3113 ID Code MAQ065L3113 Description black solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	culvert			MIL-STD-2402	1Q065P001*

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ065A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	culvert			ORIGINAL	0600

Refer to Appendix G for true symbol scale representations.


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AQ070**AQ070**

Point Full Chart ✓ Simplified Point

	Symbol Number 0213 ID Code MAQ070P0213	Symbol Number 0078 ID Code MAQ070P0078	○
	Description black buoy topmark can	Description black sm cir	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	ferry crossing			ORIGINAL	0213

	Symbol Number 1005 ID Code MAQ070P1005	Symbol Number 0078 ID Code MAQ070P0078	○
	Description black "F" inside boat	Description black sm cir	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ferry crossing			ORIGINAL	1005
✓ FFD	ferry crossing			ORIGINAL	1005
✓ UVM	ferry crossing			ORIGINAL	1005
✓ VITD	ferry crossing			ORIGINAL	1005
✓ VML1	ferry crossing			ORIGINAL	1005
✓ VML2	ferry crossing			ORIGINAL	1005

Line Full Chart ✓ Simplified Line

	Symbol Number 0700 ID Code MAQ070L0700	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Description magenta dash very thin line w/ boat shape	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ferry crossing - without cables	fer=2		IHO S-52	LC(FERYRT01)

	Symbol Number 0701 ID Code MAQ070L0701	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Description black dash very thin line w/ boat shape	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ferry crossing - with cables	fer=1		IHO S-52	LC(FERYRT02)

	Symbol Number 3115 ID Code MAQ070L3115	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Description black thin short dash line	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ferry crossing			MIL-STD-2402	1Q070L004
✓ FFD	ferry crossing			MIL-STD-2402	1Q070L004
✓ UVM	ferry crossing			MIL-STD-2402	1Q070L004
✓ VITD	ferry crossing			MIL-STD-2402	1Q070L004
✓ VML0	ferry crossing			MIL-STD-2402	1Q070L004
✓ VML1	ferry crossing			MIL-STD-2402	1Q070L004
✓ VML2	ferry crossing			MIL-STD-2402	1Q070L004

Refer to Appendix G for true symbol scale representations.

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AQ080**AQ080**



Point Full Chart ✓ Simplified Point

	Symbol Number 0096 ID Code MAQ080P0096 Description magenta square w/ i	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ferry site			IHO S-52	SY(CHINFO07)

AQ090**AQ090**

Point Full Chart ✓ Simplified Point

	Symbol Number 2038 ID Code MAQ090P2038 Description black dot w/ parallel lines inside circle	Symbol Number 0078 ID Code MAQ090P0078 Description black sm cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	entrance/exit			ORIGINAL	2038

AQ110**AQ110**



Point Full Chart ✓ Simplified Point

	Symbol Number 0026 ID Code MAQ110P0026 Description black tall slender triangle w/ cir at bottom	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	mooring mast			IHO S-52	SY(MSTCON14)

	Symbol Number 2094 ID Code MAQ110P2094 Description purple solid ellipse extending from pole	Symbol Number 6049 ID Code MAQ110P6049 Description purple filled circle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mooring mast			MIL-STD-2402	1Q110P002
✓ UVM	mooring mast			MIL-STD-2402	1Q110P002
✓ VML1	mooring mast			MIL-STD-2402	1Q110P002
✓ VML2	mooring mast			MIL-STD-2402	1Q110P002

	Symbol Number 7151 ID Code MAQ110P7151 Description red pyramid with dot - ICAO	Symbol Number 7082 ID Code MAQ110P7082 Description red vo mast symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	mooring mast	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAQ110P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAQ110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	mooring mast light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7155 ID Code MAQ110P7155 Description red high vo tower - ICAO	Symbol Number 7082 ID Code MAQ110P7082 Description red vo mast symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	mooring mast high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAQ110P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAQ110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	mooring mast light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

AQ111**AQ111**

Point Full Chart ✓ Simplified Point

	Symbol Number 1171 ID Code MAQ111P1171 Description black opposing open equi triangles	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	prepared raft or float bridge site			MIL-STD-2402	1Q111P001
✓ VITD	prepared raft or float bridge site			MIL-STD-2402	1Q111P001

Line Full Chart ✓ Simplified Line

	Symbol Number 3115 ID Code MAQ111L3115 Description black thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	prepared raft or float bridge site			MIL-STD-2402	1Q070L004

AQ113**AQ113**

Line Full Chart ✓ Simplified Line

	Symbol Number 0610 ID Code MAQ113L0610 Description gray solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pipeline/pipe - above ground or over water	loc=25		IHO S-52	LS(SOLD,3,CHGRD)

	Symbol Number 0704 ID Code MAQ113L0704 Description gray dash very thin line w/ sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pipeline/pipe - not above ground or over water; sewage, outfall, intake	loc<>25 AND pro=95 OR plt=2or3		IHO S-52	LC(PIPSOL06)
✓ DNC	pipeline/pipe - not above ground or over water; water	loc<>25 AND pro=116		IHO S-52	LC(PIPSOL06)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0705 ID Code MAQ113L0705 Description magenta dash very thin line w/ cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pipeline/pipe - not above ground or over water; not sewage or water	loc<>25 AND pro<>95and<>116 AND plt<>2and<>3		IHO S-52	LC(PIPSOL05)

	Symbol Number 1314 ID Code MAQ113L1314 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pipeline - on ground/elevated - not water	loc=0or8or25 AND pro<>116		STANAG 3675	527
✓ UVM	pipeline - on ground/elevated - not water	loc=0or8or25 AND pro<>116		STANAG 3675	527
✓ VITD	pipeline/pipe			STANAG 3675	527
✓ VML0	pipeline/pipe - on ground	loc=8		STANAG 3675	527
✓ VML1	pipeline/pipe - surface; not water	loc=0or8 AND pro<>116		STANAG 3675	527
✓ VML2	pipeline - on ground/elevated - not water	loc=0or8or25 AND pro<>116		STANAG 3675	527

	Symbol Number 4311 ID Code MAQ113L4311 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pipeline - on ground/elevated - water	exs<>5and<>6 AND loc=0or8or25 AND pro=116		STANAG 3675	110
✓ UVM	pipeline - on ground/elevated - water	exs<>5and<>6 AND loc=0or8or25 AND pro=116		STANAG 3675	110
✓ VML1	pipeline/pipe - surface; water	loc=0or8 AND pro=116		STANAG 3675	110
✓ VML2	pipeline - on ground/elevated - water	exs<>5and<>6 AND loc=0or8or25 AND pro=116		STANAG 3675	110

	Symbol Number 4316 ID Code MAQ113L4316 Description 100% cyan blue very thin long dash line	Symbol Number 4311 ID Code MAQ113L4311 Description 100% cyan blue very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pipeline - abandoned/under construction - water	exs=5or6 AND pro=116		STANAG 3675	110
✓ UVM	pipeline - abandoned/under construction - water	exs=5or6 AND pro=116		STANAG 3675	110
✓ VML2	pipeline - abandoned/under construction - water	exs=5or6 AND pro=116		STANAG 3675	110

	Symbol Number 6037 ID Code MAQ113L6037 Description 100% cyan blue very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pipeline - underground - water	exs<>5and<>6 AND loc=4 AND pro=116		STANAG 3675	110
✓ UVM	pipeline - underground - water	exs<>5and<>6 AND loc=4 AND pro=116		STANAG 3675	110
✓ VML1	pipeline/pipe - underground; water	loc=4 AND pro=116		STANAG 3675	110
✓ VML2	pipeline - underground - water	exs<>5and<>6 AND loc=4 AND pro=116		STANAG 3675	110

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 6040 ID Code MAQ113L6040 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pipeline - underground - not water	loc=4 AND pro<>116		STANAG 3675	527
✓ UVM	pipeline - underground - not water	loc=4 AND pro<>116		STANAG 3675	527
✓ VML0	pipeline/pipe - underground	loc=4		STANAG 3675	527
✓ VML1	pipeline/pipe - underground; not water	loc=4 AND pro<>116		STANAG 3675	527
✓ VML2	pipeline - underground - not water	loc=4 AND pro<>116		STANAG 3675	527

	Symbol Number 7158 ID Code MAQ113L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAQ113L7144 Description red vo thin line - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	pipeline / pipe			ORIGINAL	7158

AQ116**AQ116**

Point Full Chart ✓ Simplified Point

	Symbol Number 0002 ID Code MAQ116P0002 Description feature brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pumping station			IHO S-52	SY(BUISGL11)

	Symbol Number 2097 ID Code MAQ116P2097 Description black sm square w/ "P" inside	Symbol Number 2036 ID Code MAQ116P2036 Description black sm filled square	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pumping station			MIL-STD-2402	1L180P002*
✓ UVM	pumping station			MIL-STD-2402	1L180P002*
✓ VML0	pumping station			MIL-STD-2402	1L180P002*
✓ VML1	pumping station			MIL-STD-2402	1L180P002*
✓ VML2	pumping station			MIL-STD-2402	1L180P002*

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ116A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MAQ116A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pumping station			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

	Symbol Number 4262 ID Code MAQ116A4262 Description purple thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pumping station			MIL-STD-2402	1L180A001
✓ UVM	pumping station			MIL-STD-2402	1L180A001
✓ VML2	pumping station			MIL-STD-2402	1L180A001

AQ118**AQ118**

Point Full Chart ✓ Simplified Point

	Symbol Number 1172 ID Code MAQ118P1172 Description black diamond w/ curve staffed arrow	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sharp curve(s)			MIL-STD-2402	1Q118P001
✓ VITD	sharp curve(s)			MIL-STD-2402	1Q118P001

AQ120**AQ120**

Point Full Chart ✓ Simplified Point

	Symbol Number 1211 ID Code MAQ120P1211 Description black two rt pointing triangles	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	steep grade			MIL-STD-2402	1Q125P001

AQ125**AQ125**

Point Full Chart ✓ Simplified Point

	Symbol Number 2099 ID Code MAQ125P2099 Description black dot inside cir inside square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	station (miscellaneous)			ORIGINAL	2099

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ125A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4100 ID Code MAQ125A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	station (miscellaneous)			ORIGINAL	0600 4100

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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AQ130**AQ130**

Point Full Chart ✓ Simplified Point

	Symbol Number 2100 ID Code MAQ130P2100 Description black box w/ round top w/ "T" inside	Symbol Number 2019 ID Code MAQ130P2019 Description black sm filled cir	●
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	tunnel			ORIGINAL	2100

	Symbol Number 2100 ID Code MAQ130P2100 Description black box w/ round top w/ "T" inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
--	---	---	--	--	--

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tunnel			ORIGINAL	2100
✓ FFD	tunnel			ORIGINAL	2100
✓ VITD	tunnel			ORIGINAL	2100
✓ VML1	tunnel			ORIGINAL	2100
✓ VML2	tunnel			ORIGINAL	2100

Line Full Chart ✓ Simplified Line

	Symbol Number 0656 ID Code MAQ130L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tunnel			IHO S-52	LS(DASH,1,CHGRD)

	Symbol Number 3117 ID Code MAQ130L3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tunnel			STANAG 3675	518
✓ FFD	tunnel			STANAG 3675	518
✓ UVM	tunnel			STANAG 3675	518
✓ VITD	tunnel			STANAG 3675	518
✓ VML0	tunnel			STANAG 3675	518
✓ VML1	tunnel			STANAG 3675	518
✓ VML2	tunnel			STANAG 3675	518

Area Full Chart ✓ Simplified Area

	Symbol Number 3112 ID Code MAQ130A3112 Description black thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	tunnel			ORIGINAL	3112

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

AQ135**AQ135**



Point Full Chart ✓ Simplified Point

	Symbol Number 2101 ID Code MAQ135P2101 Description red brown octagon shape w/ "R" inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	vehicle stopping area/rest area			ORIGINAL	2101

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ135A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 6008 ID Code MAQ135A6008 Description orange left diag line patt fill	Symbol Number 4175 ID Code MAQ135A4175 Description lt orange solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	vehicle stopping area/rest area			ORIGINAL	0600 6008
✓ VML2	vehicle stopping area/rest area			ORIGINAL	0600 6008

AQ140**AQ140**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ140A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

	Symbol Number 6008 ID Code MAQ140A6008 Description orange left diag line patt fill	Symbol Number 4175 ID Code MAQ140A4175 Description lt orange solid fill	
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	vehicle storage/parking area			ORIGINAL	0600 6008
✓ UVM	vehicle storage/parking area			ORIGINAL	0600 6008
✓ VML2	vehicle storage/parking area			ORIGINAL	0600 6008

AQ150**AQ150**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MAQ150A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 1904 ID Code MAQ150A1904 Description golden yellow solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	flight of steps			ORIGINAL	0600 1904

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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AT005**AT005**



Line Full Chart ✓ Simplified Line

	Symbol Number 0708 ID Code MAT005L0708 Description magenta broken zig-zag line w/ flash symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	cable			IHO S-52	LC(CBLSUB06)

AT006**AT006**

Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MAT006P7151 Description red pyramid with dot - ICAO	Symbol Number 7090 ID Code MAT006P7090 Description red vo overhead cable - GTRI	
--	--	---	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	overhead cable	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7155 ID Code MAT006P7155 Description red high vo tower - ICAO	Symbol Number 7090 ID Code MAT006P7090 Description red vo overhead cable - GTRI	
--	---	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	overhead cable high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

AT010**AT010**



Point Full Chart ✓ Simplified Point

	Symbol Number 2102 ID Code MAT010P2102 Description black satellite dish symbol	Symbol Number 0185 ID Code MAT010P0185 Description black topmark special X	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	disk/dish			IHO S-52	SY(DSHAER11)
✓ UVM	disk/dish			IHO S-52	SY(DSHAER11)
✓ VML1	disk/dish			IHO S-52	SY(DSHAER11)
✓ VML2	disk/dish			IHO S-52	SY(DSHAER11)

	Symbol Number 2102 ID Code MAT010P2102 Description black satellite dish symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	disk/dish			IHO S-52	SY(DSHAER11)

	Symbol Number 7151 ID Code MAT010P7151 Description red pyramid with dot - ICAO	Symbol Number 7092 ID Code MAT010P7092 Description red vo disk symbol - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	disk / dish	hgt>0and<304		ORIGINAL	7151

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 7152 ID Code MAT010P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAT010P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	disk / dish light	atn=3 AND hgt>0and<304		ORIGINAL	7152

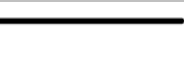
	Symbol Number 7155 ID Code MAT010P7155 Description red high vo tower - ICAO	Symbol Number 7092 ID Code MAT010P7092 Description red vo disk symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	disk / dish high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAT010P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAT010P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	disk / dish light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Area Full Chart Simplified **Area**



	Symbol Number 0600 ID Code MAT010A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4089 ID Code MAT010A4089 Description aero-blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	disk/dish			ORIGINAL	0600 4089

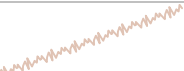

AT020**AT020**

Point Full Chart Simplified **Point**

	Symbol Number 2105 ID Code MAT020P2105 Description black cir around satellite dish symbol	Symbol Number 0022 ID Code MAT020P0022 Description black cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	early warning radar site			ORIGINAL	2105

Line Full Chart Simplified **Line**



	Symbol Number 1513 ID Code MAT020L1513 Description beige jagged line	Symbol Number 4236 ID Code MAT020L4236 Description beige solid line	
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	early warning radar site			ORIGINAL	1513

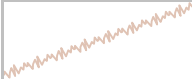

Refer to Appendix G for true symbol scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MAT020A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MAT020A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	early warning radar site			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

	Symbol Number 1513 ID Code MAT020A1513 Description beige jagged line		Symbol Number 4236 ID Code MAT020A4236 Description beige solid line
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	early warning radar site			ORIGINAL	1513



AT030

AT030

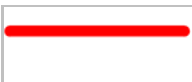

LineFull Chart✓ SimplifiedLine

	Symbol Number 0657 ID Code MAT030L0657 Description gray thick dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	power transmission line			IHO S-52	LS(DASH,4,CHGRD)

	Symbol Number 3074 ID Code MAT030L3074 Description purple thin solid line w/ dots on each side		Symbol Number 4262 ID Code MAT030L4262 Description purple thin dash line
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	power transmission line			MIL-STD-2402	1T030L007
✓ UVM	power transmission line			MIL-STD-2402	1T030L007
✓ VML0	power transmission line			MIL-STD-2402	1T030L007
✓ VML1	power transmission line			MIL-STD-2402	1T030L007
✓ VML2	power transmission line			MIL-STD-2402	1T030L007

	Symbol Number 7158 ID Code MAT030L7158 Description red vo thin line - ICAO		Symbol Number 7157 ID Code MAT030L7157 Description red vo thin solid line w/ dots on each side -
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	power transmission line			ORIGINAL	7158

AT040

AT040











PointFull Chart✓ SimplifiedPoint

	Symbol Number 0024 ID Code MAT040P0024 Description black dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	power transmission pylon			IHO S-52	SY(POSGEN03)




Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 2104 ID Code MAT040P2104 Description purple tower symbol	Symbol Number 6049 ID Code MAT040P6049 Description purple filled circle	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ UVM	power transmission pylon		ORIGINAL 2104
	Symbol Number 7151 ID Code MAT040P7151 Description red pyramid with dot - ICAO	Symbol Number 7096 ID Code MAT040P7096 Description red vo power pylon symbol - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ VVOD	power transmission pylon	hgt>0and<304	ORIGINAL 7151
	Symbol Number 7152 ID Code MAT040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAT040P7142 Description red vo light component - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ VVOD	power transmission pylon light	atn=3 AND hgt>0and<304	ORIGINAL 7152
	Symbol Number 7155 ID Code MAT040P7155 Description red high vo tower - ICAO	Symbol Number 7096 ID Code MAT040P7096 Description red vo power pylon symbol - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ VVOD	power transmission pylon high	hgt=-32767 OR hgt>=304	ORIGINAL 7155
	Symbol Number 7156 ID Code MAT040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAT040P7142 Description red vo light component - GTRI	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ VVOD	power transmission pylon light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	ORIGINAL 7156

AT045**AT045**

Point Full Chart ✓ Simplified Point

	Symbol Number 0028 ID Code MAT045P0028 Description black dome inside lg magenta circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar transmitter - dome	ssc=87		IHO S-52	SY(DOMES011)+SY(RDOSTA02)
	Symbol Number 0029 ID Code MAT045P0029 Description black rectangle below T in lg magenta cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar transmitter - scanner	ssc=108		IHO S-52	SY(RASCAN11)+SY(RDOSTA02)
	Symbol Number 0030 ID Code MAT045P0030 Description black triangle w/ in lg magenta cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar transmitter - mast	ssc=60		IHO S-52	SY(MSTCON14)+SY(RDOSTA02)

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 0031 ID Code MAT045P0031 Description black tower inside lg magenta cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar transmitter - tower	ssc=107		IHO S-52	SY(TOWERS03)+SY(RDOSTA02)

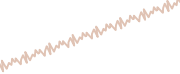

	Symbol Number 0511 ID Code MAT045P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar transmitter - other, unknown	ssc=0or999		IHO S-52	SY(RDOSTA02)

	Symbol Number 2105 ID Code MAT045P2105 Description black cir around satellite dish symbol	Symbol Number 0022 ID Code MAT045P0022 Description black cir	
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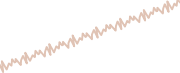

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	radar transmitter			ORIGINAL	2105

Line Full Chart ✓ Simplified Line

	Symbol Number 1513 ID Code MAT045L1513 Description beige jagged line	Symbol Number 4236 ID Code MAT045L4236 Description beige solid line	
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	radar transmitter			ORIGINAL	1513

Area Full Chart ✓ Simplified Area


	Symbol Number 1513 ID Code MAT045A1513 Description beige jagged line	Symbol Number 4236 ID Code MAT045A4236 Description beige solid line	
--	--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	radar transmitter			ORIGINAL	1513



AT050

AT050

Point Full Chart ✓ Simplified Point

	Symbol Number 0033 ID Code MAT050P0033 Description feature brown fill sqr black otln in lg mgnta cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	communication building			IHO S-52	SY(BUISGL11)+SY(RDOSTA02)

	Symbol Number 2106 ID Code MAT050P2106 Description black filled square w/ outward ticks	Symbol Number 2036 ID Code MAT050P2036 Description black sm filled square	
--	---	---	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	communication building			MIL-STD-2402	1T050P020*
✓ UVM	communication building			MIL-STD-2402	1T050P020*
✓ VML0	communication building			MIL-STD-2402	1T050P020*
✓ VML2	communication building			MIL-STD-2402	1T050P020*

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 7151 ID Code MAT050P7151 Description red pyramid with dot - ICAO	Symbol Number 7046 ID Code MAT050P7046 Description red vo communication bldg symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	communication building	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAT050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAT050P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	communication building light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAT050P7155 Description red high vo tower - ICAO	Symbol Number 7046 ID Code MAT050P7046 Description red vo communication bldg symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	communication building high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAT050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAT050P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	communication building light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MAT050L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAT050L7144 Description red vo thin line - GTRI	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	communication building			ORIGINAL	7158

Area Full Chart ✓ Simplified Area

	Symbol Number 4003 ID Code MAT050A4003 Description beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	communication building			MIL-STD-2402	1T050A005*
✓ UVM	communication building			MIL-STD-2402	1T050A006
✓ VML2	communication building			MIL-STD-2402	1T050A005*

AT060

AT060



Line Full Chart ✓ Simplified Line

	Symbol Number 0657 ID Code MAT060L0657 Description gray thick dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	telephone line/telegraph line			IHO S-52	LS(DASH,4,CHGRD)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 3096 ID Code MAT060L3096 Description gray very thin dash line w/ dot	Symbol Number 3086 ID Code MAT060L3086 Description gray very thin short dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	telephone line/telegraph line			MIL-STD-2402	1T060L002*
✓ UVM	telephone line/telegraph line			MIL-STD-2402	1T060L002*
✓ VML0	telephone line/telegraph line			MIL-STD-2402	1T060L002*
✓ VML1	telephone line/telegraph line			MIL-STD-2402	1T060L002*
✓ VML2	telephone line/telegraph line			MIL-STD-2402	1T060L002*

	Symbol Number 7158 ID Code MAT060L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAT060L7144 Description red vo thin line - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	telephone line / telegraph line			ORIGINAL	7158

AT070**AT070**



Point Full Chart ✓ Simplified Point

	Symbol Number 2107 ID Code MAT070P2107 Description black vert line w/ two horiz lines at top	Symbol Number 0185 ID Code MAT070P0185 Description black topmark special X	X
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	telephone-telegraph pylon/pole			ORIGINAL	2107

	Symbol Number 7151 ID Code MAT070P7151 Description red pyramid with dot - ICAO	Symbol Number 7106 ID Code MAT070P7106 Description red vo tel pole symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	telephone-telegraph pylon / pole	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAT070P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MAT070P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	telephone-telegraph pylon / pole light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MAT070P7155 Description red high vo tower - ICAO	Symbol Number 7106 ID Code MAT070P7106 Description red vo tel pole symbol - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	telephone-telegraph pylon / pole high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAT070P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAT070P7142 Description red vo light component - GTRI	
--	---	--	---


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	telephone-telegraph pylon / pole light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Refer to Appendix G for true symbol scale representations.


**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

AT080**AT080**



Point Full Chart ✔ Simplified Point

	Symbol Number 0004 ID Code MAT080P0004 Description black tower symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	communication tower			IHO S-52	SY(TOWERS03)

	Symbol Number 6019 ID Code MAT080P6019 Description black tower with "x" inside	Symbol Number 0185 ID Code MAT080P0185 Description black topmark special X	X
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	communication tower			STANAG 3675	605
✔ UVM	communication tower			STANAG 3675	605
✔ VML0	communication tower			STANAG 3675	605
✔ VML1	communication tower			STANAG 3675	605
✔ VML2	communication tower			STANAG 3675	605

	Symbol Number 7151 ID Code MAT080P7151 Description red pyramid with dot - ICAO	Symbol Number 7148 ID Code MAT080P7148 Description red vo communication tower low - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	communication tower	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MAT080P7152 Description red pyramid lit component - ICAO	Symbol Number 7146 ID Code MAT080P7146 Description red vo light component low - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	communication tower light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MAT080P7155 Description red high vo tower - ICAO	Symbol Number 7147 ID Code MAT080P7147 Description red vo communication tower high - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	communication tower high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MAT080P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MAT080P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	communication tower - high light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✔ Simplified Line

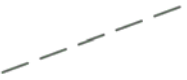





	Symbol Number 7158 ID Code MAT080L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MAT080L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VVOD	communication tower			ORIGINAL	7158

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

BA010**BA010**

Line	Full Chart	✓ Simplified	Line
	Symbol Number 0632 ID Code MBA010L0632 Description dk gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	coastline/shoreline - mangrove, marsh	slt=6or8	IHO S-52 LS(DASH,1,CSTLN)
	Symbol Number 0743 ID Code MBA010L0743 Description dk gray small open rectangle dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	coastline/shoreline - approximate; not mangrove or marsh	acc=2 AND slt<>6and<>8	IHO S-52 LC(LOWACC21)
	Symbol Number 1573 ID Code MBA010L1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	coastline/shoreline - accurate; not mangrove or marsh	acc=1 AND slt<>6and<>8	IHO S-52 LS(SOLD,1,CSTLN)
✓ VVOD	coastline/shoreline (libref)		ORIGINAL 1573
WVS	coastline/shoreline		IHO S-52 LS(SOLD,1,CSTLN)
	Symbol Number 1656 ID Code MBA010L1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	coastline/shoreline - not mangrove or marsh	slt<>6and<>8	MIL-STD-2402 2A010L002
✓ FFD	coastline/shoreline - accurate	acc=1	MIL-STD-2402 2A010L002
✓ UVM	coastline/shoreline - not mangrove or marsh	slt<>6and<>8	MIL-STD-2402 2A010L002
✓ VML0	coastline/shoreline		MIL-STD-2402 2A010L002
✓ VML1	coastline/shoreline -not mangrove or marsh	slt<>6and<>8	MIL-STD-2402 2A010L002
✓ VML2	coastline.shoreline - not mangrove or marsh	slt<>6and<>8	MIL-STD-2402 2A010L002
	Symbol Number 4182 ID Code MBA010L4182 Description 100% cyan blue very thin short dash line	Symbol Number 1656 ID Code MBA010L1656 Description 100% cyan blue very thin solid line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DTOP	coastline/shoreline - mangrove, marsh	slt=6or8	MIL-STD-2402 2A010L007
✓ FFD	coastline/shoreline - not accurate	acc<>1	MIL-STD-2402 2A010L007
✓ UVM	coastline/shoreline - mangrove, marsh	slt=6or8	MIL-STD-2402 2A010L007
✓ VML1	coastline/shoreline - mangrove, marsh	slt=6or8	MIL-STD-2402 2A010L007
✓ VML2	coastline/shoreline - mangrove, marsh	slt=6or8	MIL-STD-2402 2A010L007

Refer to Appendix G for true symbol scale representations.

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BA020**BA020**

Point Full Chart ✓ Simplified Point

	Symbol Number 0150 ID Code MBA020P0150 Description yellow-green filled sm cir w/ gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foreshore			ORIGINAL	0150

Line Full Chart ✓ Simplified Line

	Symbol Number 3082 ID Code MBA020L3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foreshore			IHO S-52	LS(SOLD,1,CHGRD)

Area Full Chart ✓ Simplified Area

	Symbol Number 0803 ID Code MBA020A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foreshore			IHO S-52	AC(DEPIT)
✓ DTOP	foreshore			IHO S-52	AC(DEPIT)
✓ UVM	foreshore			IHO S-52	AC(DEPIT)
✓ VML1	foreshore			IHO S-52	AC(DEPIT)
✓ VML2	foreshore			IHO S-52	AC(DEPIT)

	Symbol Number 0949 ID Code MBA020A0949 Description depth gray diamond patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foreshore - shallow display mode on	isdm=1		IHO S-52	AP(DIAMOND1)

BA030**BA030**

Point Full Chart ✓ Simplified Point

	Symbol Number 0035 ID Code MBA030P0035 Description lt brown sm filled cir w/ gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	island			IHO S-52	SY(LNDARE01)

	Symbol Number 2111 ID Code MBA030P2111 Description brown filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	island			MIL-STD-2402	4B135P001

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

Area Full Chart ✓ Simplified Area

	Symbol Number 0822 ID Code MBA030A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	island			IHO S-52	AC(LANDA)
✓ DTOP	island			IHO S-52	AC(LANDA)
✓ FFD	island			IHO S-52	AC(LANDA)
✓ UVM	island			IHO S-52	AC(LANDA)
✓ VITD	island			MIL-STD-2402	4B135A001
✓ VML1	island			IHO S-52	AC(LANDA)
✓ VML2	island			IHO S-52	AC(LANDA)

BA040**BA040**




Area Full Chart ✓ Simplified Area

	Symbol Number 0805 ID Code MBA040A0805 Description depth white fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	water (except inland)			MIL-STD-2402	2A040A001
✓ DTOP	water (except inland)			MIL-STD-2402	2A040A001
✓ FFD	water (except inland)			MIL-STD-2402	2A040A001
✓ UVM	water (except inland)			MIL-STD-2402	2A040A001
✓ VML0	water (except inland)			MIL-STD-2402	2A040A001
✓ VML1	water (except inland)			MIL-STD-2402	2A040A001
✓ VML2	water (except inland)			MIL-STD-2402	2A040A001
WVS	water (except inland)			MIL-STD-2402	2A040A002

BA050**BA050**

Area Full Chart ✓ Simplified Area

	Symbol Number 4220 ID Code MBA050A4220 Description beige thin solid line	
	Symbol Number 4005 ID Code MBA050A4005 Description beige stipple dot patt fill	Symbol Number 4003 ID Code MBA050A4003 Description beige solid fill 




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	beach			ORIGINAL	4220 4005

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
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BA060**BA060**


Area Full Chart ✔ Simplified Area

	Symbol Number 4220 ID Code MBA060A4220 Description beige thin solid line				
	Symbol Number 4005 ID Code MBA060A4005 Description beige stipple dot patt fill	Symbol Number 4003 ID Code MBA060A4003 Description beige solid fill 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	beach zone			ORIGINAL	4220 4005



BB010**BB010**


Point Full Chart ✔ Simplified Point

	Symbol Number 0036 ID Code MBB010P0036 Description magenta anchor	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - not anchoring berth	mac<>12		IHO S-52	SY(ACHARE02)
✔ DTOP	anchorage			IHO S-52	SY(ACHARE02)
✔ VML2	anchorage			IHO S-52	SY(ACHARE02)

	Symbol Number 0037 ID Code MBB010P0037 Description magenta anchor w/ sm cir on shaft	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - anchoring berth	mac=12		IHO S-52	SY(ACHBRT07)

Line Full Chart ✔ Simplified Line



	Symbol Number 0711 ID Code MBB010L0711 Description magenta dash/chevron line w/anchor symbol	Symbol Number 3000 ID Code MBB010L3000 Description lt magenta thin dash line 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - not anchoring berth	mac<>12		IHO S-52	LC(ACHARE51)

	Symbol Number 3000 ID Code MBB010L3000 Description lt magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - anchoring berth	mac=12		IHO S-52	LS(DASH,2,CHMGF)



Refer to Appendix G for true symbol scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A



Area Full Chart ✔ Simplified Area

	Symbol Number 0037 ID Code MBB010A0037 Description magenta anchor w/ sm cir on shaft	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3000 ID Code MBB010A3000 Description lt magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - anchoring berth	mac=12		IHO S-52	SY(ACHBRT07) + LS(DASH,2,CHMGF)

	Symbol Number 0902 ID Code MBB010A0902 Description lt magenta anchor	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0711 ID Code MBB010A0711 Description magenta dash/chevron line w/anchor symbol	Symbol Number 0634 ID Code MBB010A0634 Description magenta very thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	anchorage			IHO S-52	SY(ACHARE51) + LC(ACHARE51)
✔ VML2	anchorage			IHO S-52	SY(ACHARE51) + LC(ACHARE51)

	Symbol Number 0902 ID Code MBB010A0902 Description lt magenta anchor	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0711 ID Code MBB010A0711 Description magenta dash/chevron line w/anchor symbol	Symbol Number 3000 ID Code MBB010A3000 Description lt magenta thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	anchorage - not anchoring berth	mac<>12		IHO S-52	SY(ACHARE51) + LC(ACHARE51)

BB020

BB020

Point Full Chart ✔ Simplified Point

	Symbol Number 0032 ID Code MBB020P0032 Description magenta circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	berth			IHO S-52	SY(BRTHNO01)

BB030

BB030

Point Full Chart ✔ Simplified Point

	Symbol Number 0051 ID Code MBB030P0051 Description black filled sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	bollard			IHO S-52	SY(PILPNT02)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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BB040**BB040**

Line Full Chart ✓ Simplified Line

	Symbol Number 0623 ID Code MBB040L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakwater/groyne - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✓ DTOP	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ UVM	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML0	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML1	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML2	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0626 ID Code MBB040L0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakwater/groyne - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBB040A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakwater/groyne - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✓ DTOP	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ UVM	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML2	breakwater/groyne			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0626 ID Code MBB040A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakwater/groyne - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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BB050**BB050**

Point Full Chart ✓ Simplified Point

	Symbol Number 0039 ID Code MBB050P0039 Description traffic magenta cir w/ 1 cone	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	calling-in point - more than two-way traffic, 1st direction	df3<>0	df1	IHO S-52	SY(RDOCAL02)
✓ DNC	calling-in point - more than two-way traffic, 2nd direction	df3<>0	df2	IHO S-52	SY(RDOCAL02)
✓ DNC	calling-in point - more than two-way traffic, 3rd direction	df3<>0	df3	IHO S-52	SY(RDOCAL02)
✓ DNC	calling-in point - more than two-way traffic, 4th direction	df4<>0	df4	IHO S-52	SY(RDOCAL02)
✓ DNC	calling-in point - one way traffic	df1<>0 AND df2=0	df1	IHO S-52	SY(RDOCAL02)

	Symbol Number 0040 ID Code MBB050P0040 Description traffic magenta cir w/ 2 cones	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	calling-in point - two way traffic	df2<>0 AND df3=0	df1	IHO S-52	SY(RDOCAL03)

	Symbol Number 0041 ID Code MBB050P0041 Description magenta cir w/ 2 cones and 2 ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	calling-in point - direction of traffic unknown	df1=0		IHO S-52	SY(RCLDEF01)

BB080**BB080**


Point Full Chart ✓ Simplified Point


	Symbol Number 0038 ID Code MBB080P0038 Description lt brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	dolphin			IHO S-52	SY(MORFAC03)

BB090**BB090**

Area Full Chart ✓ Simplified Area

	Symbol Number 1573 ID Code MBB090A1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0822 ID Code MBB090A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	drydock			IHO S-52	LS(SOLD,I,CSTLN) + AC(LANDA)

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 3112 ID Code MBB090A3112 Description black thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	drydock			MIL-STD-2402	2B090A003
✓ UVM	drydock			MIL-STD-2402	2B090A003
✓ VML2	drydock			MIL-STD-2402	2B090A003

BB100**BB100**

Line Full Chart ✓ Simplified Line

	Symbol Number 0712 ID Code MBB100L0712 Description gray L complex line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fish stakes			IHO S-52	LC(FSHFAC02)

BB105**BB105**




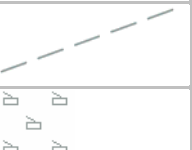
Point Full Chart ✓ Simplified Point

	Symbol Number 0042 ID Code MBB105P0042 Description magenta fish w/ arcs above and below	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fishing harbor			IHO S-52	SY(HRBFAC09)

BB110**BB110**

Area Full Chart ✓ Simplified Area

	Symbol Number 0047 ID Code MBB110A0047 Description gray rectangle w/ angle line on top	
	Symbol Number 0716 ID Code MBB110A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MBB110A0656 Description gray very thin dash line
	Symbol Number 0903 ID Code MBB110A0903 Description gray fish trap patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	fish traps/fish weirs			IHO S-52	SY(FSHFAC02) + LC(NAVARE51)

Refer to Appendix G for true symbol
scale representations.

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BB115**BB115**

Area Full Chart ✔ Simplified Area

	Symbol Number 0656 ID Code MBB115A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	gridiron			IHO S-52	LS(DASH,1,CHGRD)

BB140**BB140**

Line Full Chart ✔ Simplified Line

	Symbol Number 0623 ID Code MBB140L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	jetty - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✔ DTOP	jetty			IHO S-52	LS(SOLD,2,CSTLN)
✔ UVM	jetty			IHO S-52	LS(SOLD,2,CSTLN)
✔ VML1	jetty - unknown, partly submerged at high water	vrr=0or1		IHO S-52	LS(SOLD,2,CSTLN)
✔ VML2	jetty			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0626 ID Code MBB140L0626 Description dk gray thin dash line	Symbol Number 0623 ID Code MBB140L0623 Description dk gray thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML1	jetty - covers and uncovers	vrr=8		IHO S-52	LS(DASH,2,CSTLN)

	Symbol Number 0626 ID Code MBB140L0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	jetty - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Area Full Chart ✔ Simplified Area

	Symbol Number 0623 ID Code MBB140A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	jetty - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✔ DTOP	jetty			IHO S-52	LS(SOLD,2,CSTLN)
✔ UVM	jetty			IHO S-52	LS(SOLD,2,CSTLN)
✔ VML2	jetty			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0626 ID Code MBB140A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	jetty - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Refer to Appendix G for true symbol scale representations.

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BB150**BB150**

Point Full Chart ✓ Simplified Point

	Symbol Number 0043 ID Code MBB150P0043 Description magenta yacht inside lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	landing place			IHO S-52	SY(SMCFAC02)

Area Full Chart ✓ Simplified Area

	Symbol Number 0043 ID Code MBB150A0043 Description magenta yacht inside lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0604 ID Code MBB150A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MBB150A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	landing place			IHO S-52	SY(SMCFAC02) + LS(SOLD,1,LANDF) + AC(CHBRN)

BB160**BB160**



Point Full Chart ✓ Simplified Point

	Symbol Number 0038 ID Code MBB160P0038 Description lt brown filled square w/ black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	mooring ring			IHO S-52	SY(MORFAC03)

BB170**BB170**

Point Full Chart ✓ Simplified Point

	Symbol Number 0044 ID Code MBB170P0044 Description black installation buoy	Symbol Number 0311 ID Code MBB170P0311 Description black mooring/installation buoy	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	offshore loading facility			IHO S-52	SY(BOYINB01)

	Symbol Number 0500 ID Code MBB170P0500 Description magenta flare with black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	offshore loading facility - light	cha=21		IHO S-52	SY(LITDEF11)

Refer to Appendix G for true symbol scale representations.

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Line Full Chart ✔ Simplified Line

	Symbol Number 0625 ID Code MBB170L0625 Description dk gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	offshore loading facility			IHO S-52	LS(SOLD,4,CSTLN)

Area Full Chart ✔ Simplified Area

	Symbol Number 0625 ID Code MBB170A0625 Description dk gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MBB170A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	offshore loading facility			IHO S-52	LS(SOLD,4,CSTLN) + AC(CHBRN)



BB180 **BB180**

Point Full Chart ✔ Simplified Point

	Symbol Number 0045 ID Code MBB180P0045 Description gray fish inside net	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	oyster bed/mussel bed			IHO S-52	SY(MARCUL02)

Area Full Chart ✔ Simplified Area

	Symbol Number 0716 ID Code MBB180A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MBB180A0656 Description gray very thin dash line
	Symbol Number 0904 ID Code MBB180A0904 Description gray fish in net patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	oyster bed/mussel bed			IHO S-52	LC(NAVARE51) + AP(MARCUL02)

Refer to Appendix G for true symbol
scale representations.

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BB190**BB190**

Line Full Chart ✓ Simplified Line

	Symbol Number 0623 ID Code MBB190L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pier/wharf/quay			STANAG 3675	624
✓ FFD	pier/wharf/quay			STANAG 3675	624
✓ UVM	pier/wharf/quay			STANAG 3675	624
✓ VML0	pier/wharf/quay			STANAG 3675	624
✓ VML1	pier/wharf/quay			STANAG 3675	624
✓ VML2	pier/wharf/quay			STANAG 3675	624

	Symbol Number 0625 ID Code MBB190L0625 Description dk gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pier/wharf/quay			IHO S-52	LS(SOLD,4,CSTLN)

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBB190A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pier/wharf/quay			STANAG 3675	624
✓ FFD	pier/wharf/quay			STANAG 3675	624
✓ UVM	pier/wharf/quay			STANAG 3675	624
✓ VML1	pier/wharf/quay			STANAG 3675	624
✓ VML2	pier/wharf/quay			STANAG 3675	624

	Symbol Number 0625 ID Code MBB190A0625 Description dk gray thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pier/wharf/quay			IHO S-52	LS(SOLD,4,CSTLN)

BB220**BB220**

Line Full Chart ✓ Simplified Line

	Symbol Number 0623 ID Code MBB220L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ramp (maritime) - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✓ DTOP	ramp (maritime)			IHO S-52	LS(SOLD,2,CSTLN)


Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0626 ID Code MBB220L0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ramp (maritime) - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBB220A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ramp (maritime) - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✓ DTOP	ramp (maritime)			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0626 ID Code MBB220A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ramp (maritime) - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

BB230

BB230

Line Full Chart ✓ Simplified Line


	Symbol Number 0623 ID Code MBB230L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	seawall			IHO S-52	LS(SOLD,2,CSTLN)
✓ DTOP	seawall			IHO S-52	LS(SOLD,2,CSTLN)
✓ UVM	seawall			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML0	seawall			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML1	seawall			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML2	seawall			IHO S-52	LS(SOLD,2,CSTLN)

BB240

BB240

Line Full Chart ✓ Simplified Line

	Symbol Number 0623 ID Code MBB240L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	slipway/patent slip - partly submerged at high water	vrr=1		IHO S-52	LS(SOLD,2,CSTLN)
✓ UVM	slipway/patent slip			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML2	slipway/patent slip			IHO S-52	LS(SOLD,2,CSTLN)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0626 ID Code MBB240L0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	slipway/patent slip - submerged, covers and uncovers	vrr=4or8		IHO S-52	LS(DASH,2,CSTLN)

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBB240A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML2	slipway/patent slip			IHO S-52	LS(SOLD,2,CSTLN)



BC010

BC010

Point Full Chart ✓ Simplified Point

	Symbol Number 0009 ID Code MBC010P0009 Description feature brown dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - radar station	nst=45		IHO S-52	SY(POSGEN01)

	Symbol Number 0100 ID Code MBC010P0100 Description black beacon/buoy base	Symbol Number 0101 ID Code MBC010P0101 Description yellow rectangle w/ outline black outline	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - base			IHO S-52	SY(BCNGEN01)

	Symbol Number 0114 ID Code MBC010P0114 Description black topmark open parallelogram	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - rhombus/diamond	tmc=19or31		IHO S-52	SY(TOPMAR14)

	Symbol Number 0122 ID Code MBC010P0122 Description black topmark one cone up	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - one cone up	tmc=16or21		IHO S-52	SY(TOPMAR22)

	Symbol Number 0124 ID Code MBC010P0124 Description black topmark one cone down	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - one cone down	tmc=22		IHO S-52	SY(TOPMAR24)

	Symbol Number 0125 ID Code MBC010P0125 Description black topmark two cones up	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - two cones up	tmc=3		IHO S-52	SY(TOPMAR25)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0126 ID Code MBC010P0126 Description black topmark two cones down				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - two cones down	tmc=8		IHO S-52	SY(TOPMAR26)
	Symbol Number 0127 ID Code MBC010P0127 Description black topmark two cones point out				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - two cones out	tmc=1		IHO S-52	SY(TOPMAR27)
	Symbol Number 0128 ID Code MBC010P0128 Description black topmark two cones point in				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - two cones in	tmc=9		IHO S-52	SY(TOPMAR28)
	Symbol Number 0130 ID Code MBC010P0130 Description black topmark one ball				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - one ball	tmc=15or27or28		IHO S-52	SY(TOPMAR30)
	Symbol Number 0132 ID Code MBC010P0132 Description black topmark two balls				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - two balls	tmc=2		IHO S-52	SY(TOPMAR32)
	Symbol Number 0133 ID Code MBC010P0133 Description black topmark can				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - can	tmc=25or26or29		IHO S-52	SY(TOPMAR33)
	Symbol Number 0185 ID Code MBC010P0185 Description black topmark special X				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - special (x)	tmc=6		IHO S-52	SY(TOPMAR85)
	Symbol Number 0186 ID Code MBC010P0186 Description black topmark cross				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - upright cross	tmc=23or30		IHO S-52	SY(TOPMAR86)
	Symbol Number 0187 ID Code MBC010P0187 Description black topmark perch				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - perch	tmc=18		IHO S-52	SY(TOPMAR87)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0188 ID Code MBC010P0188 Description black topmark broom up	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - broom point up	tmc=17		IHO S-52	SY(TOPMAR88)

	Symbol Number 0199 ID Code MBC010P0199 Description black default topmark upright	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	beacon - default topmark	tmc=0or32		IHO S-52	SY(TMARDEF1)

	Symbol Number 0401 ID Code MBC010P0401 Description lt magenta arcs origin offset - maximum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - sound signal	sst=1or2or3or4or6or9or14or15		IHO S-52	SY(FOGSIG01) for water

	Symbol Number 0510 ID Code MBC010P0510 Description magenta arc w/ 5 ticks pointing upward	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - radar reflector present	ref=1		IHO S-52	SY(RADRFL03)

	Symbol Number 0511 ID Code MBC010P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - radio navigation system	nst=1or4or5or17or41or51or53		IHO S-52	SY(RDOSTA02)

	Symbol Number 0512 ID Code MBC010P0512 Description magenta lg dashed cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	beacon - radar navigation system	nst=10or54		IHO S-52	SY(RTPBCN02)

BC020**BC020**

Point Full Chart ✓ Simplified Point

	Symbol Number 0009 ID Code MBC020P0009 Description feature brown dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - radar station	nst=45		IHO S-52	SY(POSGEN01)

	Symbol Number 0051 ID Code MBC020P0051 Description black filled sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - articulated light (base)	btc=35		IHO S-52	SY(PILPNT02)















Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0202 ID Code MBC020P0202 Description black buoy topmark one cone up				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - one cone up	tmc=16or21		IHO S-52	SY(TOPMAR02)
	Symbol Number 0204 ID Code MBC020P0204 Description black buoy topmark one cone down				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - one cone down	tmc=22		IHO S-52	SY(TOPMAR04)
	Symbol Number 0205 ID Code MBC020P0205 Description black buoy topmark two cones up				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - two cones up	tmc=3		IHO S-52	SY(TOPMAR05)
	Symbol Number 0206 ID Code MBC020P0206 Description black buoy topmark two cones down				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - two cones down	tmc=8		IHO S-52	SY(TOPMAR06)
	Symbol Number 0207 ID Code MBC020P0207 Description black buoy topmark two cones point out				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - two cones out	tmc=1		IHO S-52	SY(TOPMAR07)
	Symbol Number 0208 ID Code MBC020P0208 Description black buoy topmark two cones point in				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - two cones in	tmc=9		IHO S-52	SY(TOPMAR08)
	Symbol Number 0210 ID Code MBC020P0210 Description black buoy topmark one ball				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - one ball	tmc=15or27or28		IHO S-52	SY(TOPMAR10)
	Symbol Number 0212 ID Code MBC020P0212 Description black buoy topmark two balls				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - two balls	tmc=2		IHO S-52	SY(TOPMAR12)
	Symbol Number 0213 ID Code MBC020P0213 Description black buoy topmark can				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - can	tmc=25or26or29		IHO S-52	SY(TOPMAR13)






Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0214 ID Code MBC020P0214 Description black buoy topmark open parallelogram				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - rhombus/diamond	tmc=19or31		IHO S-52	SY(TOPMAR14) for buoys
	Symbol Number 0217 ID Code MBC020P0217 Description black buoy topmark upright cross				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - upright cross	tmc=23or30		IHO S-52	SY(TOPMAR17)
	Symbol Number 0265 ID Code MBC020P0265 Description black buoy topmark special X				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - special (x)	tmc=6		IHO S-52	SY(TOPMAR65)
	Symbol Number 0299 ID Code MBC020P0299 Description black buoy default topmark				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	buoy - default topmark	tmc=0or17or18or32		IHO S-52	SY(TMARDEF2)
	Symbol Number 0300 ID Code MBC020P0300 Description black default buoy beside magenta ?	Symbol Number 0313 ID Code MBC020P0313 Description yellow circle w/ outline black outline			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - default; type unknown	btc=0 AND ssc=0or85or999		IHO S-52	SY(BOYGEN03)
	Symbol Number 0301 ID Code MBC020P0301 Description black barrel buoy	Symbol Number 0313 ID Code MBC020P0313 Description yellow circle w/ outline black outline			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - barrel; type unknown	btc=0 AND ssc=1		IHO S-52	SY(BOYBAR01)
	Symbol Number 0302 ID Code MBC020P0302 Description black can buoy	Symbol Number 6052 ID Code MBC020P6052 Description yellow parallelogram w/ outline blk outline			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - can; type unknown	btc=0 AND ssc=7		IHO S-52	SY(BOYCAN01)
	Symbol Number 0303 ID Code MBC020P0303 Description black cone buoy	Symbol Number 6053 ID Code MBC020P6053 Description yellow rt triangle w/ outline blk outline			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - conical; type unknown	btc=0 AND ssc=6		IHO S-52	SY(BOYCON01)
	Symbol Number 0304 ID Code MBC020P0304 Description black mooring barrel buoy	Symbol Number 0311 ID Code MBC020P0311 Description black mooring/installation buoy			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - mooring; barrel	btc=7 AND ssc=1		IHO S-52	SY(BOYMOR01)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0305 ID Code MBC020P0305 Description black mooring can buoy	Symbol Number 0311 ID Code MBC020P0311 Description black mooring/installation buoy	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - mooring;can	btc=7 AND ssc=7	IHO S-52 SY(BOYMOR03)
	Symbol Number 0306 ID Code MBC020P0306 Description black pillar buoy	Symbol Number 6051 ID Code MBC020P6051 Description yellow narrow parallelogram w/ outline blk	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - pillar; type unknown	btc=0 AND ssc=10	IHO S-52 SY(BOYPIL01)
	Symbol Number 0307 ID Code MBC020P0307 Description black spherical buoy	Symbol Number 0313 ID Code MBC020P0313 Description yellow circle w/ outline black outline	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - sphere; type unknown	btc=0 AND ssc=17	IHO S-52 SY(BOYSPH01)
	Symbol Number 0308 ID Code MBC020P0308 Description black spar buoy	Symbol Number 6051 ID Code MBC020P6051 Description yellow narrow parallelogram w/ outline blk	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - spar; type unknown	btc=0 AND ssc=16	IHO S-52 SY(BOYSPR01)
	Symbol Number 0309 ID Code MBC020P0309 Description black superbuoy	Symbol Number 0312 ID Code MBC020P0312 Description black superbuoy - simplified	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - ODAS	btc=10	IHO S-52 SY(BOYSUP01)
✓ DNC	buoy - superbuoy; type unknown	btc=0 AND ssc=73	IHO S-52 SY(BOYSUP01)
	Symbol Number 0310 ID Code MBC020P0310 Description black lanby	Symbol Number 0312 ID Code MBC020P0312 Description black superbuoy - simplified	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - LANBY	btc=4	IHO S-52 SY(BOYSUP03)
	Symbol Number 0311 ID Code MBC020P0311 Description black mooring/installation buoy	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - mooring; not barrel, not can	btc=7 AND ssc<>1and<>7	IHO S-52 SY(BOYMOR11)
	Symbol Number 0401 ID Code MBC020P0401 Description lt magenta arcs origin offset - maximum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - sound signal	sst=1or2or3or4or6or9or14or15	IHO S-52 SY(FOGSIG01) for water
	Symbol Number 0510 ID Code MBC020P0510 Description magenta arc w/ 5 ticks pointing upward	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	buoy - radar reflector present	ref=1	IHO S-52 SY(RADRFL03)

Refer to Appendix G for true symbol scale representations.



MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 0511 ID Code MBC020P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - non-pillar; radio navigation system	nst=1or4or5or17or41or51or53 AND ssc<>10		IHO S-52	SY(RDOSTA02)

	Symbol Number 0512 ID Code MBC020P0512 Description magenta lg dashed cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - non-pillar; radar navigation system	nst=10or54 AND ssc<>10		IHO S-52	SY(RTPBCN02)

	Symbol Number 0513 ID Code MBC020P0513 Description black lt float	Symbol Number 0515 ID Code MBC020P0515 Description black lt float, simplified	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - light float	btc=6		IHO S-52	SY(LITFLT01)

	Symbol Number 4325 ID Code MBC020P4325 Description magenta lg cir	Symbol Number 0511 ID Code MBC020P0511 Description magenta lg cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - pillar; radio navigation system	nst=1or4or5or17or41or51or53 AND ssc=10		IHO S-52	SY(RDOSTA02)

	Symbol Number 4326 ID Code MBC020P4326 Description magenta lg dashed cir	Symbol Number 0512 ID Code MBC020P0512 Description magenta lg dashed cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	buoy - pillar; radar navigation system	nst=10or54 AND ssc=10		IHO S-52	SY(RTPBCN02)

BC040**BC040**

Point Full Chart ✓ Simplified Point

	Symbol Number 0009 ID Code MBC040P0009 Description feature brown dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light - radar station	nst=45		IHO S-52	SY(POSGEN01)

	Symbol Number 0051 ID Code MBC040P0051 Description black filled sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light - base symbol			IHO S-52	SY(PILPNT02)

	Symbol Number 0114 ID Code MBC040P0114 Description black topmark open parallelogram	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - rhombus/diamond	tmc=19or31		IHO S-52	SY(TOPMAR14)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

	Symbol Number 0122 ID Code MBC040P0122 Description black topmark one cone up				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - one cone up	tmc=16or21		IHO S-52	SY(TOPMAR22)
	Symbol Number 0124 ID Code MBC040P0124 Description black topmark one cone down				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - one cone down	tmc=22		IHO S-52	SY(TOPMAR24)
	Symbol Number 0125 ID Code MBC040P0125 Description black topmark two cones up				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - two cones up	tmc=3		IHO S-52	SY(TOPMAR25)
	Symbol Number 0126 ID Code MBC040P0126 Description black topmark two cones down				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - two cones down	tmc=8		IHO S-52	SY(TOPMAR26)
	Symbol Number 0127 ID Code MBC040P0127 Description black topmark two cones point out				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - two cones out	tmc=1		IHO S-52	SY(TOPMAR27)
	Symbol Number 0128 ID Code MBC040P0128 Description black topmark two cones point in				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - two cones in	tmc=9		IHO S-52	SY(TOPMAR28)
	Symbol Number 0130 ID Code MBC040P0130 Description black topmark one ball				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - one ball	tmc=15or27or28		IHO S-52	SY(TOPMAR30)
	Symbol Number 0132 ID Code MBC040P0132 Description black topmark two balls				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - two balls	tmc=2		IHO S-52	SY(TOPMAR32)
	Symbol Number 0133 ID Code MBC040P0133 Description black topmark can				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - can	tmc=25or26or29		IHO S-52	SY(TOPMAR33)



Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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	Symbol Number 0185 ID Code MBC040P0185 Description black topmark special X				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - special (x)	tmc=6		IHO S-52	SY(TOPMAR85)
	Symbol Number 0186 ID Code MBC040P0186 Description black topmark cross				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - upright cross	tmc=23or30		IHO S-52	SY(TOPMAR86)
	Symbol Number 0187 ID Code MBC040P0187 Description black topmark perch				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - perch	tmc=18		IHO S-52	SY(TOPMAR87)
	Symbol Number 0188 ID Code MBC040P0188 Description black topmark broom up				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - broom point up	tmc=17		IHO S-52	SY(TOPMAR88)
	Symbol Number 0199 ID Code MBC040P0199 Description black default topmark upright				
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
DNC	light - default topmark	tmc=0or32		IHO S-52	SY(TMARDEF1)
	Symbol Number 0401 ID Code MBC040P0401 Description lt magenta arcs origin offset - maximum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	light - sound signal	sst=1or2or3or4or6or9or14or15		IHO S-52	SY(FOGSIG01) for water
	Symbol Number 0510 ID Code MBC040P0510 Description magenta arc w/ 5 ticks pointing upward	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	light - radar reflector present	ref=1		IHO S-52	SY(RADRFL03)
	Symbol Number 0511 ID Code MBC040P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	light - radio navigation system	nst=1or4or5or17or41or51or53		IHO S-52	SY(RDOSTA02)
	Symbol Number 0512 ID Code MBC040P0512 Description magenta lg dashed cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	light - radar navigation system	nst=10or54		IHO S-52	SY(RTPBCN02)

Refer to Appendix G for true symbol scale representations.



**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

	Symbol Number 7151 ID Code MBC040P7151 Description red pyramid with dot - ICAO	Symbol Number 7110 ID Code MBC040P7110 Description red vo light symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBC040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBC040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light (lit)	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MBC040P7155 Description red high vo tower - ICAO	Symbol Number 7110 ID Code MBC040P7110 Description red vo light symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MBC040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBC040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	light (lit) high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 0713 ID Code MBC040L0713 Description magenta compressed zig-zag line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light			MIL-STD-2402	2C050L001

BC050**BC050**



Point Full Chart ✓ Simplified Point

	Symbol Number 6030 ID Code MBC050P6030 Description black six pt star w/ dot inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	lighthouse			STANAG 3675	610
✓ VML0	lighthouse			STANAG 3675	610

	Symbol Number 7151 ID Code MBC050P7151 Description red pyramid with dot - ICAO	Symbol Number 7112 ID Code MBC050P7112 Description red vo lighthouse symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	lighthouse	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBC050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBC050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	lighthouse lit	hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 7155 ID Code MBC050P7155 Description red high vo tower - ICAO	Symbol Number 7112 ID Code MBC050P7112 Description red vo lighthouse symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	lighthouse high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MBC050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBC050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	lighthouse high lit	hgt=-32767 OR hgt>=304		ORIGINAL	7156

BC055**BC055**

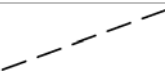
Point Full Chart ✓ Simplified Point

	Symbol Number 0151 ID Code MBC055P0151 Description magenta box above inverted T with open cir	Symbol Number 0152 ID Code MBC055P0152 Description magenta box w/ dot and line below	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	marker			IHO S-52	SY(DAYSQR21)

BC060**BC060**

Area Full Chart ✓ Simplified Area

	Symbol Number 3116 ID Code MBC060A3116 Description black very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light sector			IHO S-52	LS(DASH,1,CHBLK)

BC070**BC070**

Point Full Chart ✓ Simplified Point

	Symbol Number 0009 ID Code MBC070P0009 Description feature brown dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light vessel/lightship - radar station	nst=45		IHO S-52	SY(POSGEN01)

	Symbol Number 0401 ID Code MBC070P0401 Description lt magenta arcs origin offset - maximum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	light vessel/lightship - sound signal	sst=1or2or3or4or6or9or14or15		IHO S-52	SY(FOGSIG01) for water

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0510 ID Code MBC070P0510 Description magenta arc w/ 5 ticks pointing upward	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	light vessel/lightship - radar reflector present	ref=1		IHO S-52	SY(RADRFL03)
	Symbol Number 0511 ID Code MBC070P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	light vessel/lightship - radio navigation system	nst=1or4or5or17or41or51or53		IHO S-52	SY(RDOSTA02)
	Symbol Number 0512 ID Code MBC070P0512 Description magenta lg dashed cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	light vessel/lightship - radar navigation system	nst=10or54		IHO S-52	SY(RTPBCN02)
	Symbol Number 0514 ID Code MBC070P0514 Description black lt vessel	Symbol Number 0516 ID Code MBC070P0516 Description black lt vessel, simplified			
✓ DNC	light vessel/lightship			IHO S-52	SY(LITVES01)
	Symbol Number 7151 ID Code MBC070P7151 Description red pyramid with dot - ICAO	Symbol Number 7113 ID Code MBC070P7113 Description red vo lightship symbol - GTRI			
✓ VVOD	light vessel / lightship	hgt>0and<304		ORIGINAL	7151
	Symbol Number 7152 ID Code MBC070P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBC070P7142 Description red vo light component - GTRI			
✓ VVOD	light vessel / lightship lit	hgt>0and<304		ORIGINAL	7152
	Symbol Number 7155 ID Code MBC070P7155 Description red high vo tower - ICAO	Symbol Number 7113 ID Code MBC070P7113 Description red vo lightship symbol - GTRI			
✓ VVOD	light vessel / lightship high	hgt=-32767 OR hgt>=304		ORIGINAL	7155
	Symbol Number 7156 ID Code MBC070P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBC070P7142 Description red vo light component - GTRI			
✓ VVOD	light vessel / lightship high lit	hgt=-32767 OR hgt>=304		ORIGINAL	7156


Refer to Appendix G for true symbol scale representations.

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BC080


BC080


Point Full Chart Simplified Point

	Symbol Number 0052 ID Code MBC080P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	perches/stakes			IHO S-52	SY(OBSTRN01)

Area Full Chart Simplified Area

	Symbol Number 0680 ID Code MBC080A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBC080A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	perches/stakes			IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

BC100

BC100

Line Full Chart Simplified Line


	Symbol Number 0656 ID Code MBC100L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	leading line			IHO S-52	LS(DASH,1,CHGRD)


BD000

BD000

Point Full Chart Simplified Point

	Symbol Number 0052 ID Code MBD000P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	underwater danger/hazard - depth unknown	hdp=0		IHO S-52	SY(OBSTRN01)

	Symbol Number 0053 ID Code MBD000P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
<input checked="" type="checkbox"/> DNC	underwater danger/hazard - depth 20m or less	hdp>0and<=20		IHO S-52	SY(DANGER01)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0054 ID Code MBD000P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - depth greater than 20m	hdp>20		IHO S-52	SY(DANGER02)

	Symbol Number 0058 ID Code MBD000P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

Line Full Chart ✓ Simplified Line


	Symbol Number 3139 ID Code MBD000L3139 Description black very thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	underwater danger/hazard			ORIGINAL	3139

Area Full Chart ✓ Simplified Area


	Symbol Number 0629 ID Code MBD000A0629 Description gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - depth greater than 20m	hdp>20		IHO S-52	LS(DASH,2,CHGRD)


	Symbol Number 0680 ID Code MBD000A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - depth 20m or less	hdp>0and<=20		IHO S-52	LS(DOTT,2,CHBLK)

	Symbol Number 0680 ID Code MBD000A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBD000A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - depth unknown	hdp=0		IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

	Symbol Number 0058 ID Code MBD000A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	underwater danger/hazard - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

Refer to Appendix G for true symbol scale representations.

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BD005**BD005**

Point Full Chart ✓ Simplified Point

	Symbol Number 0052 ID Code MBD005P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	miscellaneous underwater feature - obstruction	wkt=35		HITS	Para 403.A

	Symbol Number 0524 ID Code MBD005P0524 Description magenta open circle w/ diagonal cross bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	miscellaneous underwater feature - sonar confirmed	exs=57		BC	Para 601.A.2
✓ TOD2	miscellaneous underwater feature - sonar confirmed	exs=57		BC	Para 601.A.2
✓ TOD3	miscellaneous underwater feature - sonar confirmed	exs=57		BC	Para 601.A.2

	Symbol Number 0525 ID Code MBD005P0525 Description magenta open very thin circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	miscellaneous underwater feature - reported	exs=58		BC	Para 601.A.1
✓ TOD2	miscellaneous underwater feature - reported	exs=58		BC	Para 601.A.1
✓ TOD3	miscellaneous underwater feature - reported	exs=58		BC	Para 601.A.1
TOD4	miscellaneous underwater feature - not obstruction	wkt<>35		HITS	Para 403.A

BD010**BD010**

Point Full Chart ✓ Simplified Point

	Symbol Number 0056 ID Code MBD010P0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakers			IHO S-52	SY(WATTUR02)



Line Full Chart ✓ Simplified Line

	Symbol Number 0752 ID Code MBD010L0752 Description gray very thin dash line w/ cntred waves	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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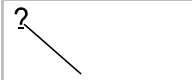
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	breakers			IHO S-52	LC=LS(DASH,1,CHGRD)+SY(WATTUR02)

Refer to Appendix G for true symbol scale representations.

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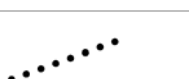
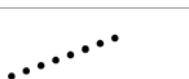


Area	Full Chart	✓ Simplified	Area
	Symbol Number 0056 ID Code MBD010A0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0656 ID Code MBD010A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	breakers		IHO S-52 SY(WATTUR02) + LS(DASH,1,CHGRD)

BD020**BD020**

Point	Full Chart	✓ Simplified	Point
	Symbol Number 0052 ID Code MBD020P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - submerged; depth unknown	vrr=4 AND hdp=0	IHO S-52 SY(OBSTRN01)
	Symbol Number 0053 ID Code MBD020P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20	IHO S-52 SY(DANGER01)
	Symbol Number 0054 ID Code MBD020P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - submerged; depth greater than 20m	vrr=4 AND hdp>20	IHO S-52 SY(DANGER02)
	Symbol Number 0055 ID Code MBD020P0055 Description yellow-green solid circle w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - covers and uncovers; depth null	vrr=8 AND hdp=NULL	IHO S-52 SY(OBSTRN03)
	Symbol Number 0057 ID Code MBD020P0057 Description lt brown square with dk gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - partly submerged/dry; depth null	vrr=1 AND hdp=NULL	IHO S-52 SY(OBSTRN11)
	Symbol Number 0058 ID Code MBD020P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	crib - not accurate	acc<>1	IHO S-52 SY(LOWACC01)

Refer to Appendix G for true symbol
scale representations.

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Area	Full Chart	✔ Simplified	Area
	Symbol Number 0623 ID Code MBD020A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0804 ID Code MBD020A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - above surface	vrr=1 AND hdp=NULL	IHO S-52 LS(SOLD,2,CSTLN) + AC(CHBRN)
	Symbol Number 0626 ID Code MBD020A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0803 ID Code MBD020A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - covers and uncovers	vrr=8 AND hdp=NULL	IHO S-52 LS(DASH,2,CSTLN) + AC(DEPIT)
	Symbol Number 0629 ID Code MBD020A0629 Description gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - submerged; depth greater than 20m	vrr=4 AND hdp>20	IHO S-52 LS(DASH,2,CHGRD)
	Symbol Number 0680 ID Code MBD020A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20	IHO S-52 LS(DOTT,2,CHBLK)
	Symbol Number 0680 ID Code MBD020A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0810 ID Code MBD020A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - submerged; depth unknown	vrr=4 AND hdp=0	IHO S-52 LS(DOTT,2,CHBLK) + AC(DEPVS)
	Symbol Number 0058 ID Code MBD020A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✔ DNC	crib - not accurate	acc<>1	IHO S-52 SY(LOWACC01)

Refer to Appendix G for true symbol
scale representations.


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BD030**BD030**

Point Full Chart ✓ Simplified Point

	Symbol Number 0052 ID Code MBD030P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	discolored water			IHO S-52	SY(OBSTRN01)

	Symbol Number 0058 ID Code MBD030P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	discolored water - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

Area Full Chart ✓ Simplified Area

	Symbol Number 0680 ID Code MBD030A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBD030A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	discolored water			IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

	Symbol Number 0058 ID Code MBD030A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	discolored water - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

BD040**BD040**

Point Full Chart ✓ Simplified Point

	Symbol Number 0056 ID Code MBD040P0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	eddies			IHO S-52	SY(WATTUR02)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

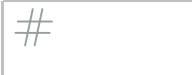
Area Full Chart ✓ Simplified Area

	Symbol Number 0056 ID Code MBD040A0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0656 ID Code MBD040A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	eddies			IHO S-52	SY(WATTUR02) + LS(DASH,1,CHGRD)



BD050**BD050**

Point Full Chart ✓ Simplified Point

	Symbol Number 0059 ID Code MBD050P0059 Description gray pound (#) symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foul ground			IHO S-52	SY(FOULGND1)


Area Full Chart ✓ Simplified Area

	Symbol Number 0059 ID Code MBD050A0059 Description gray pound (#) symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0716 ID Code MBD050A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MBD050A0656 Description gray very thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	foul ground			IHO S-52	SY(FOULGND1) + LC(NAVARE51)

BD060**BD060**

Point Full Chart ✓ Simplified Point

	Symbol Number 0060 ID Code MBD060P0060 Description gray kelp symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	kelp/seaweed			IHO S-52	SY(WEDKLP03)

Area Full Chart ✓ Simplified Area

	Symbol Number 0060 ID Code MBD060A0060 Description gray kelp symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 3077 ID Code MBD060A3077 Description lt gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	kelp/seaweed			IHO S-52	SY(WEDKLP03) + LS(DASH,1,CHGRF)

Refer to Appendix G for true symbol scale representations.

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BD080**BD080**

Point Full Chart ✓ Simplified Point

	Symbol Number 0056 ID Code MBD080P0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	overfalls/tide rips			IHO S-52	SY(WATTUR02)

Area Full Chart ✓ Simplified Area

	Symbol Number 0056 ID Code MBD080A0056 Description gray waves symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0656 ID Code MBD080A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	overfalls/tide rips			IHO S-52	SY(WATTUR02) + LS(DASH,1,CHGRD)

BD100**BD100**

Point Full Chart ✓ Simplified Point



	Symbol Number 0051 ID Code MBD100P0051 Description black filled sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pile/piling/post			IHO S-52	SY(PILPNT02)

	Symbol Number 2264 ID Code MBD100P2264 Description black cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pile/piling/post			MIL-STD-2402	2D100P001
✓ VML2	pile/piling/post			MIL-STD-2402	2D100P001



Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBD100A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MBD100A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

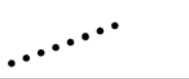

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pile/piling/post - does not cover	vrr=1		IHO S-52	LS(SOLD,2,CSTLN) + AC(CHBRN)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0626 ID Code MBD100A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0803 ID Code MBD100A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pile/piling/post - covers and uncovers	vrr=8		IHO S-52	LS(DASH,2,CSTLN) + AC(DEPIT)

	Symbol Number 0680 ID Code MBD100A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBD100A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pile/piling/post - submerged	vrr=4		IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)
✓ DTOP	pile/piling/post			IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)
✓ VML2	pile/piling/post			IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

	Symbol Number 0058 ID Code MBD100A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	pile/piling/post - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

BD110**BD110**

Point Full Chart ✓ Simplified Point

	Symbol Number 0061 ID Code MBD110P0061 Description black dot inside square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	platform			IHO S-52	SY(OFSPLF01)

	Symbol Number 0402 ID Code MBD110P0402 Description lt magenta arcs origin offset - minimum	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	platform - sound signal	sst<>16		IHO S-52	SY(FOGSIG01) for land

	Symbol Number 0500 ID Code MBD110P0500 Description magenta flare with black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	platform - lighted	cha=21		IHO S-52	SY(LITDEF11)

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 0512 ID Code MBD110P0512 Description magenta lg dashed cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	platform - radar navigation system	nst=10or54		IHO S-52	SY(RTPBCN02)

	Symbol Number 7151 ID Code MBD110P7151 Description red pyramid with dot - ICAO	Symbol Number 7114 ID Code MBD110P7114 Description red vo platform symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	platform	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBD110P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBD110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	platform light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MBD110P7155 Description red high vo tower - ICAO	Symbol Number 7114 ID Code MBD110P7114 Description red vo platform symbol - GTRI	
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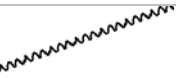
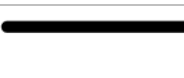
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	platform high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MBD110P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBD110P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	platform light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156


BD120**BD120**

Line Full Chart ✓ Simplified Line

	Symbol Number 3186 ID Code MBD120L3186 Description black jagged line	Symbol Number 3112 ID Code MBD120L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	reef			MIL-STD-2402	2D120L002
✓ VML0	reef			MIL-STD-2402	2D120L002
✓ VML1	reef			MIL-STD-2402	2D120L002
✓ VML2	reef			MIL-STD-2402	2D120L002


Area Full Chart ✓ Simplified Area

	Symbol Number 0803 ID Code MBD120A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - covers and uncovers	vrr=8		IHO S-52	AC(DEPIT)

Refer to Appendix G for true symbol
scale representations.

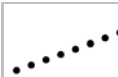
MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 0949 ID Code MBD120A0949 Description depth gray diamond patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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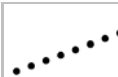
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - covers and uncovers, shallow display mode on	vrr=8 AND isdm=1		IHO S-52	AP(DIAMOND1)


	Symbol Number 0629 ID Code MBD120A0629 Description gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - submerged, depth greater than 20m	vrr=4 AND hdp>20		IHO S-52	LS(DASH,2,CHGRD)

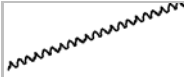
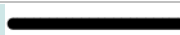
	Symbol Number 0680 ID Code MBD120A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - submerged, depth 20m or less	vrr=4 AND hdp>0and<=20		IHO S-52	LS(DOTT,2,CHBLK)


	Symbol Number 0680 ID Code MBD120A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBD120A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - not covers and uncovers, depth unknown or null	vrr<>8 AND hdp=0orNULL		IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

	Symbol Number 3186 ID Code MBD120A3186 Description black jagged line	Symbol Number 3112 ID Code MBD120A3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	reef			MIL-STD-2402	2D120A010*
✓ VML1	reef			MIL-STD-2402	2D120A010*
✓ VML2	reef			MIL-STD-2402	2D120A010*


	Symbol Number 0058 ID Code MBD120A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reef - not covers and uncovers, not accurate	vrr<>8 AND acc<>1		IHO S-52	SY(LOWACC01)

BD130

BD130

Point Full Chart ✓ Simplified Point

	Symbol Number 0053 ID Code MBD130P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rock - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20		IHO S-52	SY(DANGER01)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0054 ID Code MBD130P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rock - submerged; depth greater than 20m	vrr=4 AND hdp>20		IHO S-52	SY(DANGER02)

	Symbol Number 0058 ID Code MBD130P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rock - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

	Symbol Number 0062 ID Code MBD130P0062 Description black cross in dotted cir, depth med blue fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rock - submerged; depth unknown	vrr=4 AND hdp=0		IHO S-52	SY(UWTROC03)

	Symbol Number 0063 ID Code MBD130P0063 Description black 6 point asterisk	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rock - depth null	hdp=NULL		IHO S-52	SY(UWTROC04)
✓ DTOP	rock - unk/covers/uncovers	vrr=0or8		IHO S-52	SY(UWTROC04)
✓ VML0	rock			IHO S-52	SY(UWTROC04)
✓ VML1	rock - unk/covers/uncovers	vrr=0or8		IHO S-52	SY(UWTROC04)
✓ VML2	rock - unk/covers/uncovers	vrr=0or8		IHO S-52	SY(UWTROC04)

	Symbol Number 6044 ID Code MBD130P6044 Description black plus sign with 4 dots	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rock - awash	vrr=2		STANAG 3675	204
✓ VML1	rock - awash	vrr=2		STANAG 3675	204
✓ VML2	rock - awash	vrr=2		STANAG 3675	204

BD140**BD140**

Point Full Chart ✓ Simplified Point

	Symbol Number 0052 ID Code MBD140P0052 Description depth med blue fill cir w/ black dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - submerged; depth unknown	vrr=4 AND hdp=0		IHO S-52	SY(OBSTRN01)

	Symbol Number 0053 ID Code MBD140P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20		IHO S-52	SY(DANGER01)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0054 ID Code MBD140P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - submerged; depth greater than 20m	vrr=4 AND hdp>20		IHO S-52	SY(DANGER02)

	Symbol Number 0055 ID Code MBD140P0055 Description yellow-green solid circle w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - covers and uncovers; depth null	vrr=8 AND hdp=NULL		IHO S-52	SY(OBSTRN03)

	Symbol Number 0057 ID Code MBD140P0057 Description lt brown square with dk gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - partly submerged/dry; depth null	vrr=1 AND hdp=NULL		IHO S-52	SY(OBSTRN11)

	Symbol Number 0058 ID Code MBD140P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBD140A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MBD140A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - does not cover	vrr=1		IHO S-52	LS(SOLD,2,CSTLN) + AC(CHBRN)

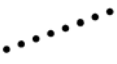

	Symbol Number 0626 ID Code MBD140A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0803 ID Code MBD140A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - covers and uncovers	vrr=8		IHO S-52	LS(DASH,2,CSTLN) + AC(DEPIT)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0680 ID Code MBD140A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBD140A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - submerged	vrr=4		IHO S-52	LS(DOTT,2,CHBLK) + AC(DEPVS)

	Symbol Number 0058 ID Code MBD140A0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snags/stumps - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

BD180**BD180**

Point Full Chart ✓ Simplified Point

	Symbol Number 0053 ID Code MBD180P0053 Description depth med blue fill lg oval w/ black dot outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20		IHO S-52	SY(DANGER01)

	Symbol Number 0054 ID Code MBD180P0054 Description black lg oval w/ dotted outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; depth greater than 20m	vrr=4 AND hdp>20		IHO S-52	SY(DANGER02)

	Symbol Number 0058 ID Code MBD180P0058 Description black leader line w/ question mark	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - not accurate	acc<>1		IHO S-52	SY(LOWACC01)

	Symbol Number 0064 ID Code MBD180P0064 Description gray wreck symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - not submerged; depth null	hdp=NULL AND vrr=1or2or8		IHO S-52	SY(WRECKS01)
✓ DNC	wreck - showing mast/hull/superstructure; depth null	loc<>4 AND hdp=NULL		IHO S-52	SY(WRECKS01)

	Symbol Number 0065 ID Code MBD180P0065 Description black bar 3 ticks in dotted depth med blue oval	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; dangerous; depth unknown	vrr=4 AND soh=1 AND hdp=0		IHO S-52	SY(WRECKS05)
✓ DNC	wreck - unknown; depth null	hdp=NULL AND vrr=0		IHO S-52	SY(WRECKS05)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0066 ID Code MBD180P0066 Description black horiz bar w/3 ticks	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; not dangerous; depth unknown	vrr=4 AND soh=2 AND hdp=0		IHO S-52	SY(WRECKS04)
TOD4	wreck			HITS	Para 403.A

	Symbol Number 0524 ID Code MBD180P0524 Description magenta open circle w/ diagonal cross bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	wreck - sonar confirmed	exs=57		BC	Para 601.A.2
✓ TOD2	wreck - sonar confirmed	exs=57		BC	Para 601.A.2
✓ TOD3	wreck - sonar confirmed	exs=57		BC	Para 601.A.2

	Symbol Number 0525 ID Code MBD180P0525 Description magenta open very thin circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	wreck - reported	exs=58		BC	Para 601.A.1
✓ TOD2	wreck - reported	exs=58		BC	Para 601.A.1
✓ TOD3	wreck - reported	exs=58		BC	Para 601.A.1

	Symbol Number 2212 ID Code MBD180P2212 Description black solid filled shipwreck symbol	Symbol Number 0122 ID Code MBD180P0122 Description black topmark one cone up	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOF	wreck			MIL-STD-2402	2D180P013
✓ VML0	wreck			MIL-STD-2402	2D180P013
✓ VML1	wreck			MIL-STD-2402	2D180P013
✓ VML2	wreck			MIL-STD-2402	2D180P013

Area Full Chart ✓ Simplified Area

	Symbol Number 0623 ID Code MBD180A0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MBD180A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - does not cover; depth null	vrr=1 AND hdp=NULL		IHO S-52	LS(SOLD,2,CSTLN) + AC(CHBRN)



	Symbol Number 0626 ID Code MBD180A0626 Description dk gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0803 ID Code MBD180A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - covers and uncovers; depth null	vrr=8 AND hdp=NULL		IHO S-52	LS(DASH,2,CSTLN) + AC(DEPIT)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0630 ID Code MBD180A0630 Description dk gray thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBD180A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; depth unknown	vrr=4 AND hdp=0		IHO S-52	LS(DOTT,2,CSTLN) + AC(DEPVS)
✓ DNC	wreck - unknown; awash; depth null	vrr=0or2 AND hdp=NULL		IHO S-52	LS(DOTT,2,CSTLN) + AC(DEPVS)

	Symbol Number 0680 ID Code MBD180A0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; depth 20m or less	vrr=4 AND hdp>0and<=20		IHO S-52	LS(DOTT,2,CHBLK)

	Symbol Number 3117 ID Code MBD180A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	wreck - submerged; depth greater than 20m	vrr=4 AND hdp>20		IHO S-52	LS(DASH,2,CHBLK)

BE010**BE010**

Line Full Chart ✓ Simplified Line

	Symbol Number 0608 ID Code MBE010L0608 Description depth gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth curve - accurate	acc=1		IHO S-52	LS(SOLD,1,DEPCN)

	Symbol Number 0614 ID Code MBE010L0614 Description depth gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth curve - not accurate	acc=2		IHO S-52	LS(DASH,1,DEPCN)

Area Full Chart ✓ Simplified Area

	Symbol Number 0805 ID Code MBE010A0805 Description depth white fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area (deep water); 2 shades	idsm=1 AND cvl>=ssdcand<>99999		IHO S-52	AC(DEPDW)
✓ DNC	depth area (very deep); 4 shades	idsm=0 AND cvl>=msdcand<>99999		IHO S-52	AC(DEPDW)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0810 ID Code MBE010A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area (very shallow); 2 shades; shallow mode off	idsm=1 AND isdm=0 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✓ DNC	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✓ DNC	depth area (very shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl<mssc		IHO S-52	AC(DEPVS)
✓ DNC	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AC(DEPVS)

	Symbol Number 0820 ID Code MBE010A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area (medium deep); 4 shades	idsm=0 AND cvl>=ssdcand<msdc		IHO S-52	AC(DEPMD)

	Symbol Number 0821 ID Code MBE010A0821 Description depth lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area (medium shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ DNC	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)

	Symbol Number 0823 ID Code MBE010A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area; depth unknown	cvl=99999		IHO S-52	AC(NODTA)

	Symbol Number 0934 ID Code MBE010A0934 Description gray dash wide patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area; depth unknown	cvl=99999		IHO S-52	AP(PRTSUR01)

	Symbol Number 0949 ID Code MBE010A0949 Description depth gray diamond patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AP(DIAMOND1)
✓ DNC	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AP(DIAMOND1)
✓ DNC	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AP(DIAMOND1)

	Symbol Number 0631 ID Code MBE010A0631 Description gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	depth area; depth unknown	cvl=99999		IHO S-52	LS(SOLD,2,CHGRD)

Refer to Appendix G for true symbol scale representations.

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BE015**BE015**

Line Full Chart ✔ Simplified Line

	Symbol Number 0608 ID Code MBE015L0608 Description depth gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ TOD1	depth contour - accurate	acc=1		IHO S-52	LS(SOLD,1,DEPCN)
✔ TOD2	depth contour - accurate	acc=1		IHO S-52	LS(SOLD,1,DEPCN)
✔ TOD3	depth contour - accurate	acc=1		IHO S-52	LS(SOLD,1,DEPCN)
TOD4	depth contour - accurate,not index	acc=1 AND hqc<>1		HITS	Para 402.A*

	Symbol Number 0609 ID Code MBE015L0609 Description depth dk gray thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	depth contour - accurate, index	acc=1 AND hqc=1		HITS	Para 402.A*

	Symbol Number 0614 ID Code MBE015L0614 Description depth gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ TOD1	depth contour - not accurate	acc=2		IHO S-52	LS(DASH,1,DEPCN)
✔ TOD2	depth contour - not accurate	acc=2		IHO S-52	LS(DASH,1,DEPCN)
✔ TOD3	depth contour - not accurate	acc=2		IHO S-52	LS(DASH,1,DEPCN)

	Symbol Number 0688 ID Code MBE015L0688 Description depth dk gray thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	depth contour - not accurate, index	acc<>1 AND hqc=1		HITS	Para 402.A*

	Symbol Number 0689 ID Code MBE015L0689 Description depth gray very thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	depth contour - not accurate, not index	acc<>1 AND hqc<>1		HITS	Para 402.A*

	Symbol Number 3082 ID Code MBE015L3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ FFD	depth contour			MIL-STD-2402	2E015L005
✔ VML0	depth contour			MIL-STD-2402	2E015L005
✔ VML1	depth contour			MIL-STD-2402	2E015L005
✔ VML2	depth contour			MIL-STD-2402	2E015L005
WVS	depth contour			MIL-STD-2402	2E015L005

Refer to Appendix G for true symbol
scale representations.


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BE019**BE019**

Area Full Chart ✔ Simplified Area

	Symbol Number 0805 ID Code MBE019A0805 Description depth white fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ TOD1	depth area (deep water); 2 shades	idsm=1 AND cvl>=ssdcand<-32767		IHO S-52	AC(DEPDW)
✔ TOD1	depth area (very deep); 4 shades	idsm=0 AND cvl>=msdcand<-32767		IHO S-52	AC(DEPDW)
✔ TOD2	depth area (deep water); 2 shades	idsm=1 AND cvl>=ssdcand<-32767		IHO S-52	AC(DEPDW)
✔ TOD2	depth area (very deep); 4 shades	idsm=0 AND cvl>=msdcand<-32767		IHO S-52	AC(DEPDW)
✔ TOD3	depth area (deep water); 2 shades	idsm=1 AND cvl>=ssdcand<-32767		IHO S-52	AC(DEPDW)
✔ TOD3	depth area (very deep); 4 shades	idsm=0 AND cvl>=msdcand<-32767		IHO S-52	AC(DEPDW)
TOD4	depth area (deep water); 2 shades	idsm=1 AND cvl>=ssdcand<-32767		IHO S-52	AC(DEPDW)
TOD4	depth area (very deep); 4 shades	idsm=0 AND cvl>=msdcand<-32767		IHO S-52	AC(DEPDW)

	Symbol Number 0810 ID Code MBE019A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ TOD1	depth area (very shallow); 2 shades; shallow mode off	idsm=1 AND isdm=0 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD1	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD1	depth area (very shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl<mssc		IHO S-52	AC(DEPVS)
✔ TOD1	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AC(DEPVS)
✔ TOD2	depth area (very shallow); 2 shades; shallow mode off	idsm=1 AND isdm=0 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD2	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD2	depth area (very shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl<mssc		IHO S-52	AC(DEPVS)
✔ TOD2	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AC(DEPVS)
✔ TOD3	depth area (very shallow); 2 shades; shallow mode off	idsm=1 AND isdm=0 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD3	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AC(DEPVS)
✔ TOD3	depth area (very shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl<mssc		IHO S-52	AC(DEPVS)
✔ TOD3	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AC(DEPVS)
TOD4	depth area (very shallow); 2 shades; shallow mode off	idsm=1 AND isdm=0 AND cvl<ssdc		IHO S-52	AC(DEPVS)
TOD4	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AC(DEPVS)
TOD4	depth area (very shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl<mssc		IHO S-52	AC(DEPVS)
TOD4	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AC(DEPVS)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0820 ID Code MBE019A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area (medium deep); 4 shades	idsm=0 AND cvl>=ssdcand<msdc		IHO S-52	AC(DEPMD)
✓ TOD2	depth area (medium deep); 4 shades	idsm=0 AND cvl>=ssdcand<msdc		IHO S-52	AC(DEPMD)
✓ TOD3	depth area (medium deep); 4 shades	idsm=0 AND cvl>=ssdcand<msdc		IHO S-52	AC(DEPMD)
TOD4	depth area (medium deep); 4 shades	idsm=0 AND cvl>=ssdcand<msdc		IHO S-52	AC(DEPMD)
WVS	depth area			IHO S-52	AC(DEPMD)

	Symbol Number 0821 ID Code MBE019A0821 Description depth lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area (medium shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ TOD1	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ TOD2	depth area (medium shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ TOD2	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ TOD3	depth area (medium shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
✓ TOD3	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
TOD4	depth area (medium shallow); 4 shades; shallow mode off	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)
TOD4	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AC(DEPMS)

	Symbol Number 0823 ID Code MBE019A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area; depth unknown	cvl=-32767		IHO S-52	AC(NODTA)
✓ TOD2	depth area; depth unknown	cvl=-32767		IHO S-52	AC(NODTA)
✓ TOD3	depth area; depth unknown	cvl=-32767		IHO S-52	AC(NODTA)
TOD4	depth area; depth unknown	cvl=-32767		IHO S-52	AC(NODTA)

- - - -	Symbol Number 0934 ID Code MBE019A0934 Description gray dash wide patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area; depth unknown	cvl=-32767		IHO S-52	AP(PRTSUR01)
✓ TOD2	depth area; depth unknown	cvl=-32767		IHO S-52	AP(PRTSUR01)
✓ TOD3	depth area; depth unknown	cvl=-32767		IHO S-52	AP(PRTSUR01)
TOD4	depth area; depth unknown	cvl=-32767		IHO S-52	AP(PRTSUR01)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0949 ID Code MBE019A0949 Description depth gray diamond patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD1	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD1	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AP(DIAMOND1)
✓ TOD2	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD2	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD2	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AP(DIAMOND1)
✓ TOD3	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD3	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AP(DIAMOND1)
✓ TOD3	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AP(DIAMOND1)
TOD4	depth area (medium shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		IHO S-52	AP(DIAMOND1)
TOD4	depth area (very shallow); 2 shades; shallow mode on	idsm=1 AND isdm=1 AND cvl<ssdc		IHO S-52	AP(DIAMOND1)
TOD4	depth area (very shallow); 4 shades; shallow mode on	idsm=0 AND isdm=1 AND cvl<mssc		IHO S-52	AP(DIAMOND1)

	Symbol Number 0631 ID Code MBE019A0631 Description gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	depth area; depth unknown	cvl=-32767		IHO S-52	LS(SOLD,2,CHGRD)
✓ TOD2	depth area; depth unknown	cvl=-32767		IHO S-52	LS(SOLD,2,CHGRD)
✓ TOD3	depth area; depth unknown	cvl=-32767		IHO S-52	LS(SOLD,2,CHGRD)
TOD4	depth area; depth unknown	cvl=-32767		IHO S-52	LS(SOLD,2,CHGRD)

BE020**BE020**

Point Full Chart ✓ Simplified Point

	Symbol Number 1251 ID Code MBE020P1251 Description sounding gray circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	sounding or drying height - circle (light) indicating low accuracy	acc<>1		IHO S-52	SY(SOUND*C2)
✓ TOD1	sounding - circle (light) indicating low accuracy	acc<>1		IHO S-52	SY(SOUND*C2)
✓ TOD2	sounding - circle (light) indicating low accuracy	acc<>1		IHO S-52	SY(SOUND*C2)
✓ TOD3	sounding - circle (light) indicating low accuracy	acc<>1		IHO S-52	SY(SOUND*C2)
TOD4	sounding - circle (light) indicating low accuracy	acc<>1		IHO S-52	SY(SOUND*C2)

Refer to Appendix G for true symbol scale representations.


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	Symbol Number 1256 ID Code MBE020P1256 Description sounding black overbar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	drying height overbar (dark)	hdh>=0 AND hdp=NULL		IHO S-52	SY(SOUNDSA1)

BE030**BE030**

Area Full Chart ✓ Simplified Area

	Symbol Number 0820 ID Code MBE030A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	track swath			ORIGINAL	0820
✓ TOD2	track swath			ORIGINAL	0820
✓ TOD3	track swath			ORIGINAL	0820

BE040**BE040**

Line Full Chart ✓ Simplified Line

	Symbol Number 0670 ID Code MBE040L0670 Description depth med blue thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD1	track line			MIL-STD-2402	2E030L001
✓ TOD2	track line			MIL-STD-2402	2E030L001
✓ TOD3	track line			MIL-STD-2402	2E030L001

BF010**BF010**

Point Full Chart ✓ Simplified Point

	Symbol Number 1233 ID Code MBF010P1233 Description black horiz line below triangle w/ B inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	bottom characteristics - surface unknown mcc=0 AND psc=0			ORIGINAL	1233

BF012**BF012**

Point Full Chart ✓ Simplified Point

	Symbol Number 0022 ID Code MBF012P0022 Description black cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site core site			HITS	Para 404.E

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

BG010**BG010**

Point Full Chart ✔ Simplified Point

	Symbol Number 0071 ID Code MBG010P0071 Description gray arrow w/ 2 feathers and 2 ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	current flow - general; direction unknown	cur=0 OR dof=0		IHO S-52	SY(CURDEF01)
✔ TOD0	current flow - general; direction unknown	cur=0 OR dof=0		IHO S-52	SY(CURDEF01)

	Symbol Number 0072 ID Code MBG010P0072 Description gray arrow w/ two feathers	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	current flow - general, ocean; direction known	cur=3or5 AND dof<>0	dof	IHO S-52	SY(CURRENT01)
✔ TOD0	current flow - ocean; direction known	cur=5 AND dof<>0	dof	IHO S-52	SY(CURRENT01)

	Symbol Number 0073 ID Code MBG010P0073 Description gray arrow w/ no feathers	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	current flow - ebb; direction known	cur=1 AND dof<>0	dof	IHO S-52	SY(EBBSTR01)

	Symbol Number 0074 ID Code MBG010P0074 Description gray arrow w/ one feather	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	current flow - flood; direction known	cur=2 AND dof<>0	dof	IHO S-52	SY(FLDSTR01)

	Symbol Number 1006 ID Code MBG010P1006 Description basic blue line w/ arrow	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	current flow		aoo	MIL-STD-2402	2G010P004

BG020**BG020**

Point Full Chart ✔ Simplified Point

	Symbol Number 0015 ID Code MBG020P0015 Description It magenta SS in rectangle w/ pale green fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	tide gauge			IHO S-52	SY(SISTAT02)

Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
APPENDIX A**

BG030**BG030**

Point Full Chart ✓ Simplified Point

	Symbol Number 0076 ID Code MBG030P0076 Description gray diamond	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tide data point			IHO S-52	SY(TIDSTR01)

BG040**BG040**

Point Full Chart ✓ Simplified Point

	Symbol Number 0154 ID Code MBG040P0154 Description magenta cir.arrows pting out,represent only	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	current diagram			ORIGINAL	0154

BH000**BH000**

Line Full Chart ✓ Simplified Line

	Symbol Number 0621 ID Code MBH000L0621 Description depth med blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	inland water			ORIGINAL	0621

Area Full Chart ✓ Simplified Area

	Symbol Number 4152 ID Code MBH000A4152 Description lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	inland water			ORIGINAL	4152

BH010**BH010**



Point Full Chart ✓ Simplified Point

	Symbol Number 1007 ID Code MBH010P1007 Description basic blue cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	aqueduct			MIL-STD-2402	2H010P003
✓ VML1	aqueduct			MIL-STD-2402	2H010P003
✓ VML2	aqueduct			MIL-STD-2402	2H010P003

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 7151 ID Code MBH010P7151 Description red pyramid with dot - ICAO	Symbol Number 7117 ID Code MBH010P7117 Description red vo aqueduct symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aqueduct	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBH010P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBH010P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aqueduct light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MBH010P7155 Description red high vo tower - ICAO	Symbol Number 7117 ID Code MBH010P7117 Description red vo aqueduct symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aqueduct high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MBH010P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBH010P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aqueduct light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 0610 ID Code MBH010L0610 Description gray solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	aqueduct - elevated	loc=25		IHO S-52	LS(SOLD,3,CHGRD)

	Symbol Number 0704 ID Code MBH010L0704 Description gray dash very thin line w/ sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	aqueduct - not elevated	loc<>25		IHO S-52	LC(PIPSOL06)

	Symbol Number 4311 ID Code MBH010L4311 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	aqueduct - surface/elevated	loc=0or8or25		STANAG 3675	110
✓ FFD	aqueduct - surface/elevated	loc=0or8or25		STANAG 3675	110
✓ UVM	aqueduct - surface/elevated	atc<>1and<>3 AND exs<>5and<>6 AND loc=0or8or25		STANAG 3675	110
✓ VML1	aqueduct - surface/elevated	exs<>5and<>6 AND loc=0or8or25		STANAG 3675	110
✓ VML2	aqueduct - surface/elevated	exs<>5and<>6 AND loc=0or8or25		STANAG 3675	110

Refer to Appendix G for true symbol
scale representations.


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	Symbol Number 4316 ID Code MBH010L4316 Description 100% cyan blue very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	aqueduct - adandoned/under construction	atc<>1and<>3 AND exs=5or6		STANAG 3675	110
✓ VML1	aqueduct - abandoned/under construction	exs=5or6		STANAG 3675	110
✓ VML2	aqueduct - abandoned/under construction	exs=5or6		STANAG 3675	110

	Symbol Number 6037 ID Code MBH010L6037 Description 100% cyan blue very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	aqueduct - underground	loc=4		STANAG 3675	110
✓ FFD	aqueduct - underground	loc=4		STANAG 3675	110
✓ UVM	aqueduct - underground	atc<>1and<>3 AND exs<>5and<>6 AND loc=4 OR atc=3		STANAG 3675	110
✓ VML1	aqueduct - underground	exs<>5and<>6 AND loc=4		STANAG 3675	110
✓ VML2	aqueduct - underground	exs<>5and<>6 AND loc=4		STANAG 3675	110

	Symbol Number 6038 ID Code MBH010L6038 Description 100% cyan blue vy thin lng dsh line w/open cir	Symbol Number 6037 ID Code MBH010L6037 Description 100% cyan blue very thin short dash line
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	aqueduct - kanat	atc=1		STANAG 3675	110



	Symbol Number 7158 ID Code MBH010L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MBH010L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	aqueduct			ORIGINAL	7158

BH015

BH015

Area Full Chart Simplified Area

	Symbol Number 6009 ID Code MBH015A6009 Description lt blue marsh/swamp patt fill	Symbol Number 0810 ID Code MBH015A0810 Description depth med blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	bog			STANAG 3675	111
✓ VML0	bog			STANAG 3675	111
✓ VML1	bog			STANAG 3675	111
✓ VML2	bog			STANAG 3675	111

BH020

BH020

Line Full Chart Simplified Line

	Symbol Number 0600 ID Code MBH020L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	canal			IHO S-52	LS(SOLD,I,CHBLK)

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 3108 ID Code MBH020L3108 Description 100% cyan blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	canal - perennial	hyc=0or8		MIL-STD-2402	2H020L001
✓ FFD	canal - perennial	hyc=8		MIL-STD-2402	2H020L001
✓ UVM	canal - perennial	hyc=8		MIL-STD-2402	2H020L001
✓ VITD	canal			MIL-STD-2402	2H020L001
✓ VML1	canal - perennial	hyc=8		MIL-STD-2402	2H020L001
✓ VML2	canal - perennial	hyc=8		MIL-STD-2402	2H020L001

	Symbol Number 3109 ID Code MBH020L3109 Description 100% cyan blue thin dotted line	Symbol Number 3108 ID Code MBH020L3108 Description 100% cyan blue thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	canal - dry	hyc=3		MIL-STD-2402	2H020L002*

	Symbol Number 3167 ID Code MBH020L3167 Description 100% cyan blue thin short dash line	Symbol Number 3108 ID Code MBH020L3108 Description 100% cyan blue thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	canal - not perennial	hyc<>8		MIL-STD-2402	2H020L002
✓ UVM	canal - not perennial	hyc<>8		MIL-STD-2402	2H020L002
✓ VML1	canal - not perennial	hyc<>8		MIL-STD-2402	2H020L002
✓ VML2	canal - not perennial	hyc<>8		MIL-STD-2402	2H020L002

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MBH020A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBH020A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	canal			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)



	Symbol Number 1656 ID Code MBH020A1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0820 ID Code MBH020A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <>sdr	canal			STANAG 3675	108
✓ DTOP sdr	canal - perennial	hyc=8		STANAG 3675	108
✓ FFD	canal - perennial	hyc=8		STANAG 3675	108
✓ UVM	canal - navigable; perennial	exs=32 AND hyc=8		STANAG 3675	108
✓ VITD	canal - perennial	hyc=8		STANAG 3675	108
✓ VML2	canal - navigable; perennial	exs=32 AND hyc=8		STANAG 3675	108

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 4182 ID Code MBH020A4182 Description 100% cyan blue very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0820 ID Code MBH020A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)


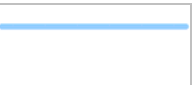
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP sdr	canal - non-perennial, dry, unknown	hyc<>8		STANAG 3675	108
✓ FFD	canal - non-perennial, dry, unknown	hyc<>8		STANAG 3675	108
✓ UVM	canal - not navigable or not perennial	exs<>32 OR hyc<>8		STANAG 3675	108
✓ VITD	canal - not perennial	hyc<>8		STANAG 3675	108
✓ VML2	canal - not navigable or not perennial	exs<>32 OR hyc<>8		STANAG 3675	108

BH030**BH030**

Line ✓ Simplified Line

	Symbol Number 0621 ID Code MBH030L0621 Description depth med blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ditch			MIL-STD-2402	2H030L006
✓ FFD	ditch			MIL-STD-2402	2H030L006
✓ UVM	ditch - perennial, unknown	hyc=0or8		MIL-STD-2402	2H030L006
✓ VML1	ditch - perennial, unknown	hyc=0or8		MIL-STD-2402	2H030L006
✓ VML2	ditch - perennial, unknown	hyc=0or8		MIL-STD-2402	2H030L006

	Symbol Number 0669 ID Code MBH030L0669 Description depth med blue very thin dash line	Symbol Number 0621 ID Code MBH030L0621 Description depth med blue very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	ditch - intermittent	hyc=6		MIL-STD-2402	2H030L002
✓ VML1	ditch - not perennial	hyc<>0and<>8		MIL-STD-2402	2H030L002
✓ VML2	ditch - intermittent	hyc=6		MIL-STD-2402	2H030L002

Area ✓ Simplified Area

	Symbol Number 0821 ID Code MBH030A0821 Description depth lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	ditch			MIL-STD-2402	2H030A002
✓ UVM	ditch			MIL-STD-2402	2H030A002
✓ VML2	ditch			MIL-STD-2402	2H030A002

	Symbol Number 0600 ID Code MBH030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0821 ID Code MBH030A0821 Description depth lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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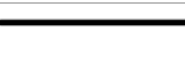


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <>sdr	ditch			MIL-STD-2402	2H030A003*
✓ DTOP sdr	ditch - not covered			MIL-STD-2402	2H030A003*

Refer to Appendix G for true symbol
scale representations.

**MIL-DTL-89045A w/Amendment 1
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BH040**BH040**

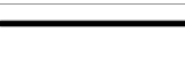

Area Full Chart ✔ Simplified Area

	Symbol Number 0600 ID Code MBH040A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 6003 ID Code MBH040A6003 Description basic blue lft diag line patt fill	Symbol Number 6042 ID Code MBH040A6042 Description 100% cyan blue solid fill 




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	filtration beds/aeration beds			STANAG 3675	122
✔ FFD	filtration beds/aeration beds			STANAG 3675	122
✔ UVM	filtration beds/aeration beds			STANAG 3675	122
✔ VML1	filtration beds/aeration beds			STANAG 3675	122
✔ VML2	filtration beds/aeration beds			STANAG 3675	122

BH050**BH050**

Area Full Chart ✔ Simplified Area

	Symbol Number 0600 ID Code MBH050A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBH050A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	fish hatchery/fish farm/marine farm			STANAG 3675	121
✔ FFD	fish hatchery/fish farm/marine farm			STANAG 3675	121
✔ UVM	fish hatchery/fish farm/marine farm			STANAG 3675	121
✔ VML0	fish hatchery/fish farm/marine farm			STANAG 3675	121
✔ VML1	fish hatchery/fish farm/marine farm			STANAG 3675	121
✔ VML2	fish hatchery/fish farm/marine farm			STANAG 3675	121

	Symbol Number 0716 ID Code MBH050A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MBH050A0656 Description gray very thin dash line 
	Symbol Number 0904 ID Code MBH050A0904 Description gray fish in net patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	fish hatchery/fish farm/marine farm			IHO S-52	LC(NAVARE51) + AP(MARCUL02)

Refer to Appendix G for true symbol scale representations.

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BH060**BH060**



Line Full Chart ✓ Simplified Line

	Symbol Number 4311 ID Code MBH060L4311 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	flume			STANAG 3675	110
✓ UVM	flume			STANAG 3675	110
✓ VML1	flume			STANAG 3675	110
✓ VML2	flume			STANAG 3675	110

BH070**BH070**

Point Full Chart ✓ Simplified Point

	Symbol Number 2087 ID Code MBH070P2087 Description black opposing solid triangles pntng in	Symbol Number 6048 ID Code MBH070P6048 Description gray filled circle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ford			MIL-STD-2402	2H070P005
✓ FFD	ford			MIL-STD-2402	2H070P005
✓ UVM	ford			MIL-STD-2402	2H070P005
✓ VITD	ford			MIL-STD-2402	2H070P005
✓ VML0	ford			MIL-STD-2402	2H070P005
✓ VML1	ford			MIL-STD-2402	2H070P005
✓ VML2	ford			MIL-STD-2402	2H070P005



Line Full Chart ✓ Simplified Line

	Symbol Number 3114 ID Code MBH070L3114 Description black very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ford			MIL-STD-2402	2H070L001
✓ FFD	ford			MIL-STD-2402	2H070L001
✓ UVM	ford			MIL-STD-2402	2H070L001
✓ VITD	ford			MIL-STD-2402	2H070L001
✓ VML0	ford			MIL-STD-2402	2H070L001
✓ VML1	ford			MIL-STD-2402	2H070L001
✓ VML2	ford			MIL-STD-2402	2H070L001

BH075**BH075**

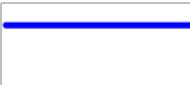

Point Full Chart ✓ Simplified Point

	Symbol Number 2320 ID Code MBH075P2320 Description basic blue sm cir in cir w/4 squares outside	Symbol Number 1009 ID Code MBH075P1009 Description UI very dk blue filled diamond	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	fountain			ORIGINAL	2320

Refer to Appendix G for true symbol
scale representations.






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Area	Full Chart	✓ Simplified	Area
	Symbol Number 4266 ID Code MBH075A4266 Description basic blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 1609 ID Code MBH075A1609 Description basic blue diag grid patt fill		
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ UVM	fountain		ORIGINAL 4266 1609

BH077**BH077**

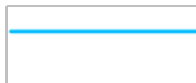

Area	Full Chart	✓ Simplified	Area
	Symbol Number 1511 ID Code MBH077A1511 Description brown thin line outward ticks	Symbol Number 3014 ID Code MBH077A3014 Description brown solid line	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ UVM	hummock		ORIGINAL 1511
✓ VML0	hummock		ORIGINAL 1511
✓ VML2	hummock		ORIGINAL 1511

BH080**BH080**

Area	Full Chart	✓ Simplified	Area
	Symbol Number 0600 ID Code MBH080A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0810 ID Code MBH080A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DNC	lake/pond		IHO S-52 LS(SOLD,1,CHBLK) + AC(DEPVS)
	Symbol Number 1656 ID Code MBH080A1656 Description 100% cyan blue very thin solid line		
	Symbol Number 4079 ID Code MBH080A4079 Description 31% cyan blue stipple dot patt fill	Symbol Number 4154 ID Code MBH080A4154 Description 31% cyan blue solid fill	
Product	Feature Description	Symbol Assignment Expression	Source ID
✓ DTOP sdr	lake/pond - not perennial	hyc<>8	STANAG 3675 103
✓ FFD	lake/pond - dry	hyc=3	STANAG 3675 103
✓ UVM	lake/pond - dry, intermittent	hyc=3or6	STANAG 3675 103
✓ VML1	lake/pond - dry, intermittent	hyc=3or6	STANAG 3675 103
✓ VML2	lake/pond - dry, intermittent	hyc=3or6	STANAG 3675 103

Refer to Appendix G for true symbol
scale representations.


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	Symbol Number 1656 ID Code MBH080A1656 Description 100% cyan blue very thin solid line	
	Symbol Number 4154 ID Code MBH080A4154 Description 31% cyan blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)


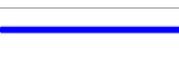
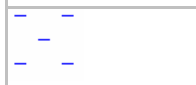

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <sdr	lake/pond			STANAG 3675	103
✓ DTOP sdr	lake/pond - perennial	hyc=8		STANAG 3675	103
✓ FFD	lake/pond - perennial, unknown	hyc=0or8		STANAG 3675	103
✓ UVM	lake/pond - perennial, unknown	hyc=0or8		STANAG 3675	103
✓ VML1	lake/pond - perennial, unknown	hyc=0or8		STANAG 3675	103
✓ VML2	lake/pond - perennial, unknown	hyc=0or8		STANAG 3675	103

BH090**BH090**

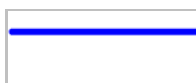
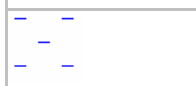
Area Full Chart ✓ Simplified Area

	Symbol Number 6050 ID Code MBH090A6050 Description depth pale blue inundation area patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	land subject to inundation			MIL-STD-2402	2H090A001

	Symbol Number 1655 ID Code MBH090A1655 Description basic blue thin dash line	Symbol Number 4266 ID Code MBH090A4266 Description basic blue very thin solid line	
	Symbol Number 4078 ID Code MBH090A4078 Description basic blue inundation area patt fill	Symbol Number 4301 ID Code MBH090A4301 Description reserved very dk blue solid fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	land subject to inundation - controlled	hoc=1		STANAG 3675	117
✓ VML1	land subject to inundation - controlled	exs=48		STANAG 3675	117
✓ VML2	land subject to inundation - controlled	exs=48		STANAG 3675	117

	Symbol Number 4266 ID Code MBH090A4266 Description basic blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4078 ID Code MBH090A4078 Description basic blue inundation area patt fill	Symbol Number 4301 ID Code MBH090A4301 Description reserved very dk blue solid fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	land subject to inundation			MIL-STD-2402	2H090A001
✓ FFD	land subject to inundation			MIL-STD-2402	2H090A001
✓ UVM	land subject to inundation - natural	hoc=0or5		STANAG 3675	117
✓ VITD	land subject to inundation			MIL-STD-2402	2H090A005
✓ VML0	land subject to inundation			MIL-STD-2402	2H090A001
✓ VML1	land subject to inundation - natural	exs=0or45		STANAG 3675	117
✓ VML2	land subject to inundation - natural	exs=0or45		STANAG 3675	117

Refer to Appendix G for true symbol
scale representations.



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BH095**BH095**



Area Full Chart ✓ Simplified Area

	Symbol Number 0910 ID Code MBH095A0910 Description brown marsh patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	marsh/swamp			IHO S-52	AP(MARSHES1)

	Symbol Number 1605 ID Code MBH095A1605 Description yellow-green tree-top patt fill	Symbol Number 6007 ID Code MBH095A6007 Description midnight blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	marsh/swamp - deciduous	veg=24		MIL-STD-2402	5C030A015



	Symbol Number 1606 ID Code MBH095A1606 Description yellow-green triangle tree patt fill	Symbol Number 6007 ID Code MBH095A6007 Description midnight blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	marsh/swamp - evergreen, mixed	veg=25or50		MIL-STD-2402	5C030A002

	Symbol Number 4080 ID Code MBH095A4080 Description basic blue marsh/swamp patt fill	Symbol Number 6007 ID Code MBH095A6007 Description midnight blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	marsh/swamp - no trees	veg=0or56		MIL-STD-2402	5D040A002
✓ FFD	marsh/swamp			MIL-STD-2402	5D040A002
✓ UVM	marsh/swamp			MIL-STD-2402	5D040A002
✓ VITD	marsh/swamp			MIL-STD-2402	2H095A001
✓ VML0	marsh/swamp			MIL-STD-2402	5D040A002
✓ VML1	marsh/swamp			MIL-STD-2402	5D040A002
✓ VML2	marsh/swamp			MIL-STD-2402	5D040A002

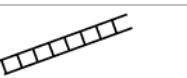
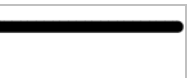
	Symbol Number 1655 ID Code MBH095A1655 Description basic blue thin dash line	
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	Symbol Number 1613 ID Code MBH095A1613 Description yellow-green nipa patt fill	Symbol Number 6007 ID Code MBH095A6007 Description midnight blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	marsh/swamp - palm, mangrove	veg=16or19		MIL-STD-2402	5C030A030*

BH100**BH100**

Line Full Chart ✓ Simplified Line



	Symbol Number 3142 ID Code MBH100L3142 Description black parallel vy thin lines w/ tics (ladder patt)	Symbol Number 3112 ID Code MBH100L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	moat			MIL-STD-2402	2H100L001
✓ VITD	moat			MIL-STD-2402	2H100L001

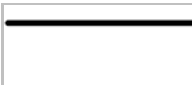

Refer to Appendix G for true symbol
scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MBH100A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4003 ID Code MBH100A4003 Description beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	moat - dry	hyc=3		ORIGINAL	0600 4003

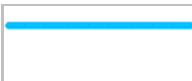
	Symbol Number 0600 ID Code MBH100A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4152 ID Code MBH100A4152 Description lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	moat - not dry	hyc<>3		ORIGINAL	0600 4152


BH110

BH110

LineFull Chart✓ SimplifiedLine

	Symbol Number 4311 ID Code MBH110L4311 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	penstock - surface/elevated	loc=0or8or25		STANAG 3675	110
✓ UVM	penstock - surface/elevated	loc=0or8or25		STANAG 3675	110
✓ VML1	penstock - surface/elevated	loc=0or8or25		STANAG 3675	110
✓ VML2	penstock - surface/elevated	loc=0or8or25		STANAG 3675	110


	Symbol Number 6037 ID Code MBH110L6037 Description 100% cyan blue very thin short dash line	Symbol Number 4311 ID Code MBH110L4311 Description 100% cyan blue very thin solid line
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	penstock - underground	loc=4		STANAG 3675	110
✓ UVM	penstock - underground	loc=4		STANAG 3675	110
✓ VML1	penstock - underground	loc=4		STANAG 3675	110
✓ VML2	penstock - underground	loc=4		STANAG 3675	110

BH120

BH120


PointFull Chart✓ SimplifiedPoint

	Symbol Number 2003 ID Code MBH120P2003 Description basic blue solid filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	rapids			ORIGINAL	2003


Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 2231 ID Code MBH120P2231 Description UI very dk blue open diamond	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rapids			ORIGINAL	2231
✓ VML1	rapids			ORIGINAL	2231
✓ VML2	rapids			ORIGINAL	2231



Line Full Chart ✓ Simplified Line



	Symbol Number 0610 ID Code MBH120L0610 Description gray solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	rapids			IHO S-52	LS(SOLD,3,CHGRD)

	Symbol Number 0682 ID Code MBH120L0682 Description UI very dk blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rapids			MIL-STD-2402	2H120L001*
✓ VML1	rapids			MIL-STD-2402	2H120L001*
✓ VML2	rapids			MIL-STD-2402	2H120L001*

BH130**BH130**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MBH130A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0810 ID Code MBH130A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	reservoir			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)


	Symbol Number 1656 ID Code MBH130A1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 4154 ID Code MBH130A4154 Description 31% cyan blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	reservoir			MIL-STD-2402	2H130A001*
✓ FFD	reservoir			MIL-STD-2402	2H130A001*
✓ UVM	reservoir			MIL-STD-2402	2H130A001*
✓ VML1	reservoir			MIL-STD-2402	2H130A001*
✓ VML2	reservoir			MIL-STD-2402	2H130A001*

Refer to Appendix G for true symbol
scale representations.

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BH135**BH135**

Area Full Chart ✔ Simplified Area

↓ ↓ ↓ ↓	Symbol Number 4085 ID Code MBH135A4085 Description basic blue rice patt fill	Symbol Number 6002 ID Code MBH135A6002 Description steel blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ FFD	rice field			MIL-STD-2402	5A010A001
✔ VITD	rice field			MIL-STD-2402	5A010A001
✔ VML0	rice field			MIL-STD-2402	5A010A001
✔ VML1	rice field			MIL-STD-2402	5A010A001
✔ VML2	rice field			MIL-STD-2402	5A010A001

BH140**BH140**



Line Full Chart ✔ Simplified Line

	Symbol Number 0600 ID Code MBH140L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	river/stream			IHO S-52	LS(SOLD,1,CHBLK)

	Symbol Number 1656 ID Code MBH140L1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ FFD	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ UVM	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ VITD	river/stream - perennial, braided, unknownn	hyc=0or8or14		MIL-STD-2402	2H140L001
✔ VML0	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ VML1	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ VML2	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140L001
✔ VVOD	river/stream (libref)			ORIGINAL	1656



	Symbol Number 4182 ID Code MBH140L4182 Description 100% cyan blue very thin short dash line	Symbol Number 1656 ID Code MBH140L1656 Description 100% cyan blue very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002
✔ FFD	river/stream - dry, non-perennial	hyc=3or6		MIL-STD-2402	2H140L002
✔ UVM	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002
✔ VITD	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002
✔ VML0	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002
✔ VML1	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002
✔ VML2	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140L002



Refer to Appendix G for true symbol scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 0600 ID Code MBH140A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBH140A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	river/stream			IHO S-52	LS(SOLD,I,CHBLK) + AC(DEPVS)

	Symbol Number 1656 ID Code MBH140A1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4154 ID Code MBH140A4154 Description 31% cyan blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP <sdr	river/stream			MIL-STD-2402	2H140A002
✓ DTOP sdr	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140A002
✓ FFD	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140A002
✓ UVM	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140A002
✓ VITD	river/stream - perennial, braided, unknown	hyc=0or8or14		MIL-STD-2402	2H140A002
✓ VML1	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140A002
✓ VML2	river/stream - perennial, unknown	hyc=0or8		MIL-STD-2402	2H140A002

	Symbol Number 4182 ID Code MBH140A4182 Description 100% cyan blue very thin short dash line		Symbol Number 1656 ID Code MBH140A1656 Description 100% cyan blue very thin solid line
	Symbol Number 4079 ID Code MBH140A4079 Description 31% cyan blue stipple dot patt fill		Symbol Number 4154 ID Code MBH140A4154 Description 31% cyan blue solid fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP sdr	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140A003
✓ FFD	river/stream - dry, non-perennial	hyc=3or6		MIL-STD-2402	2H140A003
✓ UVM	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140A003
✓ VITD	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140A003
✓ VML1	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140A003
✓ VML2	river/stream - dry, intermittent	hyc=3or6		MIL-STD-2402	2H140A003

BH145**BH145**

PointFull Chart✓ SimplifiedPoint

	Symbol Number 2232 ID Code MBH145P2232 Description basic blue solid arrowhead	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	river stream vanishing point			MIL-STD-2402	2H145P001*
✓ VML1	river stream vanishing point			MIL-STD-2402	2H145P001*
✓ VML2	river stream vanishing point			MIL-STD-2402	2H145P001*

Refer to Appendix G for true symbol
scale representations.

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BH150**BH150**

Area Full Chart ✔ Simplified Area

	Symbol Number 4182 ID Code MBH150A4182 Description 100% cyan blue very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 1611 ID Code MBH150A1611 Description depth med blue dot patt fill	Symbol Number 0810 ID Code MBH150A0810 Description depth med blue solid fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	salt pan			STANAG 3675	120
✔ UVM	salt pan			STANAG 3675	120
✔ VML1	salt pan			STANAG 3675	120
✔ VML2	salt pan			STANAG 3675	120

BH155**BH155**

Point Full Chart ✔ Simplified Point

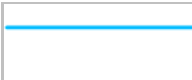


	Symbol Number 2233 ID Code MBH155P2233 Description 100% cyan blue square w/ grid inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML0	salt evaporator			ORIGINAL	2233

Area Full Chart ✔ Simplified Area

	Symbol Number 0911 ID Code MBH155A0911 Description depth med blue grid patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	salt evaporator			MIL-STD-2402	2H150A001

	Symbol Number 1656 ID Code MBH155A1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0911 ID Code MBH155A0911 Description depth med blue grid patt fill	Symbol Number 0810 ID Code MBH155A0810 Description depth med blue solid fill 



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	salt evaporator			STANAG 3675	119
✔ FFD	salt evaporator			STANAG 3675	119
✔ UVM	salt evaporator			STANAG 3675	119
✔ VML0	salt evaporator			STANAG 3675	119
✔ VML1	salt evaporator			STANAG 3675	119
✔ VML2	salt evaporator			STANAG 3675	119

Refer to Appendix G for true symbol scale representations.

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APPENDIX A**

BH160**BH160**

Area Full Chart ✔ Simplified Area

	Symbol Number 4289 ID Code MBH160A4289 Description basic blue stipple dot patt fill	Symbol Number 4071 ID Code MBH160A4071 Description basic blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	sebkha			MIL-STD-2402	2H160A001
✔ UVM	sebkha			MIL-STD-2402	2H160A001
✔ VML1	sebkha			MIL-STD-2402	2H160A001
✔ VML2	sebkha			MIL-STD-2402	2H160A001

BH165**BH165**

Point Full Chart ✔ Simplified Point

	Symbol Number 2234 ID Code MBH165P2234 Description gray cir diagly half filled	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	spillway			ORIGINAL	2234

Line Full Chart ✔ Simplified Line

	Symbol Number 3082 ID Code MBH165L3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	spillway			ORIGINAL	3082

Area Full Chart ✔ Simplified Area

	Symbol Number 3082 ID Code MBH165A3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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	Symbol Number 4145 ID Code MBH165A4145 Description med blue lft diag dash line patt fill			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	spillway			ORIGINAL	3082 4145

Refer to Appendix G for true symbol scale representations.


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BH170**BH170**



Point Full Chart ✔ Simplified Point

	Symbol Number 1008 ID Code MBH170P1008 Description basic blue filled cir w/ tail below	Symbol Number 2003 ID Code MBH170P2003 Description basic blue solid filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	spring/water-hole - perennial	hyc=0or8		MIL-STD-2402	2H170P002
✔ UVM	spring/water-hole - perennial	hyc=0or8		MIL-STD-2402	2H170P002
✔ VML1	spring/water-hole - perennial	hyc=0or8		MIL-STD-2402	2H170P002
✔ VML2	spring/water-hole - perennial	hyc=0or8		MIL-STD-2402	2H170P002

	Symbol Number 2003 ID Code MBH170P2003 Description basic blue solid filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
--	--	---	--	--	--



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML0	spring/water-hole			MIL-STD-2402	2H170P002

	Symbol Number 6031 ID Code MBH170P6031 Description basic blue open cir w/ tail below	Symbol Number 2003 ID Code MBH170P2003 Description basic blue solid filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	spring/water-hole - not perennial/dry	hyc<>0and<>8		STANAG 3675	123
✔ UVM	spring/water-hole - not perennial/dry	hyc<>0and<>8		STANAG 3675	123
✔ VML1	spring/water-hole - not perennial/dry	hyc<>0and<>8		STANAG 3675	123
✔ VML2	spring/water-hole - not perennial/dry	hyc<>0and<>8		STANAG 3675	123

BH180**BH180**

Point Full Chart ✔ Simplified Point

	Symbol Number 1009 ID Code MBH180P1009 Description UI very dk blue filled diamond	Symbol Number 2003 ID Code MBH180P2003 Description basic blue solid filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	waterfall			ORIGINAL	1009
✔ VML0	waterfall			ORIGINAL	1009
✔ VML1	waterfall			ORIGINAL	1009
✔ VML2	waterfall			ORIGINAL	1009

Line Full Chart ✔ Simplified Line

	Symbol Number 0615 ID Code MBH180L0615 Description pale green solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	waterfall			IHO S-52	LS(SOLD,3,CHWHT)

Refer to Appendix G for true symbol
scale representations.

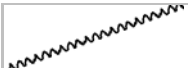

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	Symbol Number 0682 ID Code MBH180L0682 Description UI very dk blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	waterfall			MIL-STD-2402	2H180L001
✓ VML1	waterfall			MIL-STD-2402	2H180L001
✓ VML2	waterfall			MIL-STD-2402	2H180L001

BH190**BH190**


Area Full Chart ✓ Simplified Area

	Symbol Number 3186 ID Code MBH190A3186 Description black jagged line	Symbol Number 3112 ID Code MBH190A3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	lagoon/reef pool			STANAG 3675	203



BH200**BH200**

Line Full Chart ✓ Simplified Line

	Symbol Number 3109 ID Code MBH200L3109 Description 100% cyan blue thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	miscellaneous surface drainage feature			ORIGINAL	3109


Area Full Chart ✓ Simplified Area

	Symbol Number 4150 ID Code MBH200A4150 Description depth pale blue stiple dot patt fill	Symbol Number 0820 ID Code MBH200A0820 Description depth pale blue solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	miscellaneous surface drainage feature			ORIGINAL	4150

BH210**BH210**

Line Full Chart ✓ Simplified Line

	Symbol Number 0600 ID Code MBH210L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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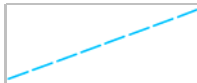

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	inland shoreline			IHO S-52	LS(SOLD,1,CHBLK)

	Symbol Number 1656 ID Code MBH210L1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	inland shoreline - unknown, rocky, rubble, sandy, stony, other	slt=0or10or11or13or14or15		STANAG 3675	102

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 4182 ID Code MBH210L4182 Description 100% cyan blue very thin short dash line	Symbol Number 1656 ID Code MBH210L1656 Description 100% cyan blue very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	inland shoreline - mangrove, marsh	slt=6or8		MIL-STD-2402	2H075L002

BI010**BI010**



Point Full Chart ✓ Simplified Point

	Symbol Number 1010 ID Code MBI010P1010 Description basic blue solid square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cistern			MIL-STD-2402	2I010P001
✓ UVM	cistern			MIL-STD-2402	2I010P001
✓ VML1	cistern			MIL-STD-2402	2I010P001
✓ VML2	cistern			MIL-STD-2402	2I010P001

BI020**BI020**



Point Full Chart ✓ Simplified Point

	Symbol Number 2238 ID Code MBI020P2238 Description black vertical heavy weight line	Symbol Number 0078 ID Code MBI020P0078 Description black sm cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	dam/weir			MIL-STD-2402	2I020P002
✓ FFD	dam/weir			MIL-STD-2402	2I020P002
✓ VITD	dam/weir			MIL-STD-2402	2I020P002
✓ VML0	dam/weir			MIL-STD-2402	2I020P002
✓ VML1	dam/weir			MIL-STD-2402	2I020P002
✓ VML2	dam/weir			MIL-STD-2402	2I020P002

	Symbol Number 7151 ID Code MBI020P7151 Description red pyramid with dot - ICAO	Symbol Number 7119 ID Code MBI020P7119 Description red vo dam symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dam / weir	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBI020P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBI020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dam / weir light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MBI020P7155 Description red high vo tower - ICAO	Symbol Number 7119 ID Code MBI020P7119 Description red vo dam symbol - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dam / weir high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 7156 ID Code MBI020P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBI020P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dam / weir light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156



Line Full Chart ✓ Simplified **Line**

	Symbol Number 0607 ID Code MBI020L0607 Description feature brown thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	dam/weir			IHO S-52	LS(SOLD,4,LANDF)

	Symbol Number 3113 ID Code MBI020L3113 Description black solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	dam/weir			MIL-STD-2402	2I020L001
✓ FFD	dam/weir			MIL-STD-2402	2I020L001
✓ UVM	dam/weir			MIL-STD-2402	2I020L001
✓ VITD	dam/weir			MIL-STD-2402	2I020L001
✓ VML0	dam/weir			MIL-STD-2402	2I020L001
✓ VML1	dam/weir			MIL-STD-2402	2I020L001
✓ VML2	dam/weir			MIL-STD-2402	2I020L001

	Symbol Number 7158 ID Code MBI020L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MBI020L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	dam / weir			ORIGINAL	7158

Area Full Chart ✓ Simplified **Area**

	Symbol Number 4156 ID Code MBI020A4156 Description black solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	dam/weir			ORIGINAL	4156
✓ FFD	dam/weir			ORIGINAL	4156
✓ UVM	dam/weir			ORIGINAL	4156
✓ VML2	dam/weir			ORIGINAL	4156

Refer to Appendix G for true symbol
scale representations.

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BI030**BI030**

Point Full Chart ✔ Simplified Point

	Symbol Number 6047 ID Code MBI030P6047 Description black open double arrowhead	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	lock			STANAG 3675	626
✔ FFD	lock			STANAG 3675	626
✔ VITD	lock			STANAG 3675	626
✔ VML0	lock			STANAG 3675	626
✔ VML2	lock			STANAG 3675	626

Line Full Chart ✔ Simplified Line

	Symbol Number 0600 ID Code MBI030L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VITD	lock			MIL-STD-2402	2I030L001
✔ VML1	lock			MIL-STD-2402	2I030L001

Area Full Chart ✔ Simplified Area

	Symbol Number 0600 ID Code MBI030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	lock			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)
✔ FFD	lock			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)
✔ UVM	lock			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)
✔ VML2	lock			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)

	Symbol Number 0600 ID Code MBI030A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBI030A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	lock			IHO S-52	LS(SOLD,1,CHBLK) + AC(DEPVS)

Refer to Appendix G for true symbol
scale representations.

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BI040**BI040**

Point Full Chart ✓ Simplified Point

	Symbol Number 2239 ID Code MBI040P2239 Description black open arrowhead	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sluice gate			STANAG 3675	627
✓ UVM	sluice gate			STANAG 3675	627
✓ VML0	sluice gate			STANAG 3675	627
✓ VML2	sluice gate			STANAG 3675	627

Line Full Chart ✓ Simplified Line

	Symbol Number 0600 ID Code MBI040L0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sluice gate			IHO S-52	LS(SOLD,2,CSTLN)
✓ UVM	sluice gate			IHO S-52	LS(SOLD,2,CSTLN)
✓ VML2	sluice gate			IHO S-52	LS(SOLD,2,CSTLN)

	Symbol Number 0623 ID Code MBI040L0623 Description dk gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	sluice gate			IHO S-52	LS(SOLD,2,CSTLN)

BI050**BI050**



Point Full Chart ✓ Simplified Point

	Symbol Number 0024 ID Code MBI050P0024 Description black dot inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	water intake tower			MIL-STD-2402	2I050P001
✓ UVM	water intake tower			MIL-STD-2402	2I050P001
✓ VML1	water intake tower			MIL-STD-2402	2I050P001
✓ VML2	water intake tower			MIL-STD-2402	2I050P001

	Symbol Number 7151 ID Code MBI050P7151 Description red pyramid with dot - ICAO	Symbol Number 7125 ID Code MBI050P7125 Description red vo intake - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	water intake tower	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MBI050P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MBI050P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	water intake tower light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7155 ID Code MBI050P7155 Description red high vo tower - ICAO	Symbol Number 7125 ID Code MBI050P7125 Description red vo intake - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	water intake tower high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MBI050P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MBI050P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	water intake tower light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156



Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MBI050A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	water intake tower			MIL-STD-2402	2I050A001
✓ UVM	water intake tower			MIL-STD-2402	2I050A001
✓ VML2	water intake tower			MIL-STD-2402	2I050A001

BJ020**BJ020**

Area Full Chart ✓ Simplified Area

	Symbol Number 1406 ID Code MBJ020A1406 Description brown thin solid line	
	Symbol Number 4032 ID Code MBJ020A4032 Description brown stipple dot patt fill	Symbol Number 0804 ID Code MBJ020A0804 Description brown solid fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	moraine			MIL-STD-2402	2J020A001*
✓ VML1	moraine			MIL-STD-2402	2J020A001*
✓ VML2	moraine			MIL-STD-2402	2J020A001*

BJ030**BJ030**



Area Full Chart ✓ Simplified Area

	Symbol Number 0823 ID Code MBJ030A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	glacier			IHO S-52	AC(NODTA)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 0656 ID Code MBJ030A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0912 ID Code MBJ030A0912 Description gray random line patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	glacier			IHO S-52	LS(DASH,1,CHGRD) + AP(ICEARE04)

	Symbol Number 1655 ID Code MBJ030A1655 Description basic blue thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4151 ID Code MBJ030A4151 Description basic blue ripple jagged patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	glacier			STANAG 3675	319
✓ VML1	glacier			STANAG 3675	319
✓ VML2	glacier			STANAG 3675	319

BJ040**BJ040**

Line Full Chart ✓ Simplified Line

	Symbol Number 0755 ID Code MBJ040L0755 Description UI vy dk blue vy thin line w/vert inward ticks	Symbol Number 3047 ID Code MBJ040L3047 Description basic blue thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ice cliff			MIL-STD-2402	2J040L001
✓ VML0	ice cliff			MIL-STD-2402	2J040L001
✓ VML1	ice cliff			MIL-STD-2402	2J040L001
✓ VML2	ice cliff			MIL-STD-2402	2J040L001

BJ060**BJ060**

Point Full Chart ✓ Simplified Point

	Symbol Number 0077 ID Code MBJ060P0077 Description black radiating cones	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ice peak/nunatak			IHO S-52	SY(HILTOP11)

	Symbol Number 2242 ID Code MBJ060P2242 Description med blue 8 pt asterisk w/ open center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ice peak/nunatak			MIL-STD-2402	2J060P002
✓ VML1	ice peak/nunatak			MIL-STD-2402	2J060P002
✓ VML2	ice peak/nunatak			MIL-STD-2402	2J060P002

Refer to Appendix G for true symbol
scale representations.

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BJ065**BJ065**

Area Full Chart ✓ Simplified Area

	Symbol Number 0823 ID Code MBJ065A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ice shelf			IHO S-52	AC(NODTA)

	Symbol Number 0656 ID Code MBJ065A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0912 ID Code MBJ065A0912 Description gray random line patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ice shelf			IHO S-52	LS(DASH,1,CHGRD) + AP(ICEARE04)

	Symbol Number 4265 ID Code MBJ065A4265 Description basic blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBJ065A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ice shelf			ORIGINAL	4265 0810
✓ VML0	ice shelf			ORIGINAL	4265 0810
✓ VML1	ice shelf			ORIGINAL	4265 0810
✓ VML2	ice shelf			ORIGINAL	4265 0810

BJ070**BJ070**

Area Full Chart ✓ Simplified Area

	Symbol Number 4265 ID Code MBJ070A4265 Description basic blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0810 ID Code MBJ070A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	pack ice			STANAG 3675	210
✓ VML0	pack ice			STANAG 3675	210
✓ VML1	pack ice			STANAG 3675	210
✓ VML2	pack ice			STANAG 3675	210

Refer to Appendix G for true symbol
scale representations.

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BJ080**BJ080**

Area Full Chart ✓ Simplified Area

	Symbol Number 4265 ID Code MBJ080A4265 Description basic blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0810 ID Code MBJ080A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	polar ice			STANAG 3675	209
✓ VML0	polar ice			STANAG 3675	209
✓ VML1	polar ice			STANAG 3675	209
✓ VML2	polar ice			STANAG 3675	209

BJ100**BJ100**


Area Full Chart ✓ Simplified Area

	Symbol Number 0823 ID Code MBJ100A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snow field/ice field			IHO S-52	AC(NODTA)

	Symbol Number 0656 ID Code MBJ100A0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0912 ID Code MBJ100A0912 Description gray random line patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	snow field/ice field			IHO S-52	LS(DASH,1,CHGRD) + AP(ICEARE04)

	Symbol Number 0669 ID Code MBJ100A0669 Description depth med blue very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0820 ID Code MBJ100A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	snow field/ice field			STANAG 3675	321
✓ VML0	snow field/ice field			STANAG 3675	321
✓ VML1	snow field/ice field			STANAG 3675	321
✓ VML2	snow field/ice field			STANAG 3675	321

Refer to Appendix G for true symbol
scale representations.



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BJ110**BJ110**

Area Full Chart ✓ Simplified Area

	Symbol Number 0822 ID Code MBJ110A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	tundra			IHO S-52	AC(LANDA)

	Symbol Number 6045 ID Code MBJ110A6045 Description yellow-green marsh/swamp patt fill	Symbol Number 0803 ID Code MBJ110A0803 Description yellow-green solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	tundra			ORIGINAL	6045
✓ VML0	tundra			ORIGINAL	6045
✓ VML1	tundra			ORIGINAL	6045
✓ VML2	tundra			ORIGINAL	6045

CA010**CA010**


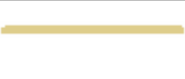
Line Full Chart ✓ Simplified Line

	Symbol Number 0604 ID Code MCA010L0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	contour line (land)			IHO S-52	LS(SOLD,I,LANDF)

	Symbol Number 1306 ID Code MCA010L1306 Description lt brown very very thin dash line	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (land) - supplementary 1/2	hqc=3 AND mcc<>103		MIL-STD-2402	3A010L003
✓ VML0	contour line (land) - supplementary approx., carrying, form lines	hqc=4or13or20or21		MIL-STD-2402	3A010L003
✓ VML2	contour line (land) - supplementary 1/2, approx, form lines	hqc=3or4or13 AND mcc<>103		MIL-STD-2402	3A010L003

	Symbol Number 1307 ID Code MCA010L1307 Description lt brown vy thin line w/ ticks on inside	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	contour line (land) - depression	hqc=5		MIL-STD-2402	3A010L004
✓ UVM	contour line (land) - depression index	hqc=5 AND mcc<>103		MIL-STD-2402	3A010L004
✓ VML2	contour line (land) - depression mound	hqc=5or8 AND mcc<>103		MIL-STD-2402	3A010L004

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 4304 ID Code MCA010L4304 Description lt brown very very thin solid line	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	contour line (land) - intermediate	hqc=2		MIL-STD-2402	3A010L002
✓ UVM	contour line (land) - intermediate	hqc=2 AND mcc<>103		MIL-STD-2402	3A010L002
✓ VML0	contour line (land) - intermediate unknown	hqc=0or2		MIL-STD-2402	3A010L002
✓ VML2	contour line (land) - intermediate	hqc=2 AND mcc<>103		MIL-STD-2402	3A010L002

	Symbol Number 4305 ID Code MCA010L4305 Description lt brown very very thin line w/ tick marks	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	contour line (land) - intermediate depression	hqc=6		MIL-STD-2402	3A010L005
✓ UVM	contour line (land) - intermediate depression	hqc=6 AND mcc<>103		MIL-STD-2402	3A010L005
✓ VML0	contour line (land) - depression intermediate	hqc=6		MIL-STD-2402	3A010L005
✓ VML2	contour line (land) - intermediate depression mound	hqc=6or9 AND mcc<>103		MIL-STD-2402	3A010L005

	Symbol Number 4306 ID Code MCA010L4306 Description lt brown very thin long dash line	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (land) - index approximate	hqc=7 AND mcc<>103		MIL-STD-2402	3A010L007
✓ VML2	contour line (land) - index approximate	hqc=7 AND mcc<>103		MIL-STD-2402	3A010L007

	Symbol Number 4307 ID Code MCA010L4307 Description lt brown very very thin long dash line	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (land) - intermediate approximate	hqc=12 AND mcc<>103		MIL-STD-2402	3A010L008
✓ VML0	contour line (land) - intermediate approximate	hqc=12		MIL-STD-2402	3A010L008
✓ VML2	contour line (land) - intermediate approximate	hqc=12 AND mcc<>103		MIL-STD-2402	3A010L008

	Symbol Number 4308 ID Code MCA010L4308 Description lt brown very very thin short dash line	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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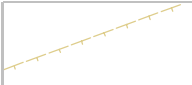
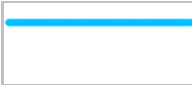

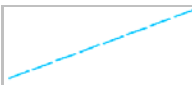
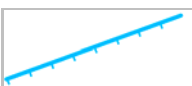
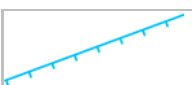

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (land) - supplementary 1/4	hqc=14 AND mcc<>103		MIL-STD-2402	3A010L021
✓ VML2	contour line (land) - supplementary 1/4	hqc=14 AND mcc<>103		MIL-STD-2402	3A010L021

	Symbol Number 4309 ID Code MCA010L4309 Description lt brown vy vy thin long dash line w/ ticks	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	contour line (land) - intermediate depression approx	hqc=18		ORIGINAL	4309


Refer to Appendix G for true symbol scale representations.

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	Symbol Number 4310 ID Code MCA010L4310 Description It brown very vy thin dash line w/ tick marks	Symbol Number 6011 ID Code MCA010L6011 Description It brown very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	contour line (land) - supplemental depression	hqc=22or23		ORIGINAL	4310
	Symbol Number 4311 ID Code MCA010L4311 Description 100% cyan blue very thin solid line	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - index unknown	hqc=0or1 AND mcc=103		MIL-STD-2402	3A010L027
✓ VML2	contour line (snow\ice) - index unknown	hqc=0or1 AND mcc=103		MIL-STD-2402	3A010L027
	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - intermediate	hqc=2 AND mcc=103		MIL-STD-2402	3A010L028
✓ VML2	contour line (snow\ice) - intermediate	hqc=2 AND mcc=103		MIL-STD-2402	3A010L028
	Symbol Number 4313 ID Code MCA010L4313 Description 100% cyan blue very very thin dash line	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - supplementary 1/2	hqc=3 AND mcc=103		MIL-STD-2402	3A010L019
✓ VML2	contour line (snow\ice) - supplementary 1/2, approx, form lines, approx	hqc=3or4or13 AND mcc=103		MIL-STD-2402	3A010L019
	Symbol Number 4314 ID Code MCA010L4314 Description 100% cyan blue vy thin line w/ ticks on inside	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - index depression	hqc=5 AND mcc=103		MIL-STD-2402	3A010L031
✓ VML2	contour line (snow\ice) - index depression mound	hqc=5or8 AND mcc=103		MIL-STD-2402	3A010L031
	Symbol Number 4315 ID Code MCA010L4315 Description 100% cyan blue very very thin line w/ ticks	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - intermediate depression	hqc=6 AND mcc=103		ORIGINAL	4315
✓ VML2	contour line (snow\ice) - intermediate depression mound	hqc=6or9 AND mcc=103		ORIGINAL	4315
	Symbol Number 4316 ID Code MCA010L4316 Description 100% cyan blue very thin long dash line	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - index approximate	hqc=7 AND mcc=103		MIL-STD-2402	3A010L029
✓ VML2	contour line (snow\ice) - index approximate	hqc=7 AND mcc=103		MIL-STD-2402	3A010L029

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 4317 ID Code MCA010L4317 Description 100% cyan blue very very thin long dash line	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - intermediate approximate	hqc=12 AND mcc=103		MIL-STD-2402	3A010L030
✓ VML2	contour line (snow\ice) - intermediate approximate	hqc=12 AND mcc=103		MIL-STD-2402	3A010L030

	Symbol Number 4318 ID Code MCA010L4318 Description 100% cyan blue very very thin short dash line	Symbol Number 4312 ID Code MCA010L4312 Description 100% cyan blue very very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	contour line (snow\ice) - supplementary 1/4	hqc=14 AND mcc=103		MIL-STD-2402	3A010L035
✓ VML2	contour line (snow\ice) - supplementary 1/4	hqc=14 AND mcc=103		MIL-STD-2402	3A010L035

	Symbol Number 6011 ID Code MCA010L6011 Description lt brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	contour line (land) - index, unknown	hqc=0or1		MIL-STD-2402	3A010L001
✓ UVM	contour line (land) - index	hqc=0or1 AND mcc<>103		MIL-STD-2402	3A010L001
✓ VML0	contour line (land) - carrying contour (coincident)	hqc=19		ORIGINAL	6011
✓ VML1	contour line (land)			MIL-STD-2402	3A010L001
✓ VML2	contour line (land) - index	hqc=0or1 AND mcc<>103		MIL-STD-2402	3A010L001

CA030

CA030

Point Full Chart ✓ Simplified Point

	Symbol Number 0078 ID Code MCA030P0078 Description black sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	spot elevation			IHO S-52	SY(POSGEN04)

	Symbol Number 1011 ID Code MCA030P1011 Description black sm filled cir beside +-	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	spot elevation - not accurate	ela<>1		MIL-STD-2402	3A030P006
✓ FFD	spot elevation - not accurate	ela<>1		MIL-STD-2402	3A030P006
✓ UVM	spot elevation - not accurate	ela<>1		MIL-STD-2402	3A030P006
✓ VML1	spot elevation - not accurate	ela<>1		MIL-STD-2402	3A030P006
✓ VML2	spot elevation - not accurate	ela<>1		MIL-STD-2402	3A030P006

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 2243 ID Code MCA030P2243 Description black sm filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	spot elevation - accurate	ela=1		MIL-STD-2402	3A030P001
✓ FFD	spot elevation - accurate	ela=1		MIL-STD-2402	3A030P001
✓ UVM	spot elevation - accurate	ela=1		MIL-STD-2402	3A030P001
✓ VML0	spot elevation			MIL-STD-2402	3A030P001
✓ VML1	spot elevation - accurate	ela=1		MIL-STD-2402	3A030P001
✓ VML2	spot elevation - accurate	ela=1		MIL-STD-2402	3A030P001

CA035**CA035**



Point Full Chart ✓ Simplified Point

	Symbol Number 2245 ID Code MCA035P2245 Description basic blue sm filled cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	inland water elevation			ORIGINAL	2245

DA005**DA005**

Area Full Chart ✓ Simplified Area

	Symbol Number 0600 ID Code MDA005A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4100 ID Code MDA005A4100 Description lt gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	asphalt lake			ORIGINAL	0600 4100
✓ UVM	asphalt lake			ORIGINAL	0600 4100
✓ VML1	asphalt lake			ORIGINAL	0600 4100
✓ VML2	asphalt lake			ORIGINAL	0600 4100

DA010**DA010**



Area Full Chart ✓ Simplified Area

	Symbol Number 0822 ID Code MDA010A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	ground surface element			IHO S-52	AC(LANDA)

Refer to Appendix G for true symbol scale representations.





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	Symbol Number 0604 ID Code MDA010A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0822 ID Code MDA010A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)





Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ground surface element - not rocky	smc<>84		ORIGINAL	0604 0822
✓ UVM	ground surface element - not rock, not lava, not sand	mcc<>8and<>46and<>52and<>84and<>88		ORIGINAL	0604 0822
✓ VITD	ground surface element - silts, clays, evaporites, other	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9		ORIGINAL	0604 0822
✓ VML0	ground surface element - not lava, not sand	smc<>52and<>88		ORIGINAL	0604 0822
✓ VML1	ground surface element - not rock, not lava, not sand	mcc<>8and<>46and<>52and<>88		ORIGINAL	0604 0822
✓ VML2	ground surface element - not rock, not lava, not sand	mcc<>8and<>46and<>52and<>88		ORIGINAL	0604 0822

	Symbol Number 0604 ID Code MDA010A0604 Description feature brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4034 ID Code MDA010A4034 Description lt brown heavy mixed stipple dot patt fill	Symbol Number 0822 ID Code MDA010A0822 Description lt brown solid fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	ground surface element - rocky	smc=84		MIL-STD-2402	4A010A002
✓ UVM	ground surface element - boulders, gravel, rock	mcc=8or46or84		ORIGINAL	0604 4034
✓ VITD	ground surface element - gravels	stp=1or2or3or4		ORIGINAL	0604 4034
✓ VML1	ground surface element - boulders, gravel	mcc=46or8		ORIGINAL	0604 4034
✓ VML2	ground surface element - boulders, gravel	mcc=46or8		ORIGINAL	0604 4034

	Symbol Number 0612 ID Code MDA010A0612 Description lt gray very thin solid line	Symbol Number 0604 ID Code MDA010A0604 Description feature brown very thin solid line	
	Symbol Number 4108 ID Code MDA010A4108 Description lt gray land cover/ripple patt fill	Symbol Number 0822 ID Code MDA010A0822 Description lt brown solid fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	ground surface element - lava	mcc=52		ORIGINAL	0612 4108
✓ VML0	ground surface element - lava	smc=52		ORIGINAL	0612 4108
✓ VML1	ground surface element - lava	mcc=52		ORIGINAL	0612 4108
✓ VML2	ground surface element - lava	mcc=52		ORIGINAL	0612 4108

	Symbol Number 4220 ID Code MDA010A4220 Description beige thin solid line	Symbol Number 0604 ID Code MDA010A0604 Description feature brown very thin solid line	
	Symbol Number 4005 ID Code MDA010A4005 Description beige stipple dot patt fill	Symbol Number 0822 ID Code MDA010A0822 Description lt brown solid fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	ground surface element - sand	mcc=88		MIL-STD-2402	4A010A003
✓ VITD	ground surface element - sands	stp=5or6or7or8or9		ORIGINAL	4220 4005
✓ VML0	ground surface element - sand	smc=88		MIL-STD-2402	4A010A003
✓ VML1	ground surface element - sand	mcc=88		MIL-STD-2402	4A010A003
✓ VML2	ground surface element - sand	mcc=88		MIL-STD-2402	4A010A003

Refer to Appendix G for true symbol scale representations.

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DA020

DA020

Area Full Chart ✓ Simplified Area

	Symbol Number 4003 ID Code MDA020A4003 Description beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	barren ground			ORIGINAL	4003



	Symbol Number 4201 ID Code MDA020A4201 Description depth gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	barren ground			ORIGINAL	4201

DB010

DB010

Line Full Chart ✓ Simplified Line

	Symbol Number 6014 ID Code MDB010L6014 Description dk tan vy thin line w/ ticks	Symbol Number 4217 ID Code MDB010L4217 Description dk tan very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	bluff/cliff/escarpment			STANAG 3675	305
✓ UVM	bluff/cliff/escarpment			STANAG 3675	305
✓ VITD	bluff/cliff/escarpment			STANAG 3675	305
✓ VML0	bluff/cliff/escarpment			STANAG 3675	305
✓ VML1	bluff/cliff/escarpment			STANAG 3675	305
✓ VML2	bluff/cliff/escarpment			STANAG 3675	305

DB030

DB030

Point Full Chart ✓ Simplified Point

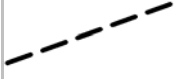
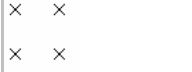
	Symbol Number 2247 ID Code MDB030P2247 Description black diag line w/ "L" on top	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cave			MIL-STD-2402	4B030P001
✓ UVM	cave			MIL-STD-2402	4B030P001
✓ VML1	cave			MIL-STD-2402	4B030P001
✓ VML2	cave			MIL-STD-2402	4B030P001

Refer to Appendix G for true symbol
scale representations.

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AreaFull Chart✓ SimplifiedArea

	Symbol Number 3117 ID Code MDB030A3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4249 ID Code MDB030A4249 Description black x patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	cave			ORIGINAL	3117 4249

DB060**DB060**

LineFull Chart✓ SimplifiedLine



	Symbol Number 1656 ID Code MDB060L1656 Description 100% cyan blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	crevice/crevasse - snow/ice	mcc=103		MIL-STD-2402	4B060L002
✓ VML1	crevice/crevasse - snow/ice	mcc=103		MIL-STD-2402	4B060L002
✓ VML2	crevice/crevasse - snow/ice	mcc=103		MIL-STD-2402	4B060L002



	Symbol Number 3024 ID Code MDB060L3024 Description brown very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	crevice/crevasse - earthen	mcc=0or30		MIL-STD-2402	4B060L001
✓ VML1	crevice/crevasse - earthen	mcc=0or30		MIL-STD-2402	4B060L001
✓ VML2	crevice/crevasse - earthen	mcc=0or30		MIL-STD-2402	4B060L001

AreaFull Chart✓ SimplifiedArea

	Symbol Number 4030 ID Code MDB060A4030 Description brown left diag thin line patt fill		Symbol Number 0804 ID Code MDB060A0804 Description brown solid fill
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	crevice/crevasse - earthen	mcc=0or30		MIL-STD-2402	4B060A002
✓ VML2	crevice/crevasse - earthen	mcc=0or30		MIL-STD-2402	4B060A002

	Symbol Number 6046 ID Code MDB060A6046 Description 100% cyan blue left diag thin line patt fill		Symbol Number 0820 ID Code MDB060A0820 Description depth pale blue solid fill
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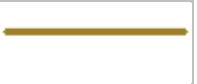
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	crevice/crevasse - snow/ice	mcc=103		STANAG 3675	316/317
✓ VML2	crevice/crevasse - snow/ice	mcc=103		STANAG 3675	316/317

Refer to Appendix G for true symbol
scale representations.

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DB070**DB070**



Line Full Chart ✓ Simplified Line

	Symbol Number 6014 ID Code MDB070L6014 Description dk tan vy thin line w/ ticks	Symbol Number 4217 ID Code MDB070L4217 Description dk tan very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cut			STANAG 3675	323
✓ UVM	cut			STANAG 3675	323
✓ VITD	cut			STANAG 3675	323
✓ VML1	cut			STANAG 3675	323
✓ VML2	cut			STANAG 3675	323



DB080**DB080**

Line Full Chart ✓ Simplified Line

	Symbol Number 1308 ID Code MDB080L1308 Description black very thin line w/ ticks	Symbol Number 0600 ID Code MDB080L0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	depression			MIL-STD-2402	4B071L002
✓ VML0	depression			MIL-STD-2402	4B071L002


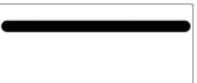
Area Full Chart ✓ Simplified Area

	Symbol Number 1509 ID Code MDB080A1509 Description black thin solid line ticks on inside	Symbol Number 0600 ID Code MDB080A0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	depression			MIL-STD-2402	4B080A001

DB090**DB090**

Line Full Chart ✓ Simplified Line

	Symbol Number 1516 ID Code MDB090L1516 Description black thin line outward ticks	Symbol Number 3112 ID Code MDB090L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	embankment/fill			STANAG 3675	324
✓ UVM	embankment/fill			STANAG 3675	324
✓ VITD	embankment/fill			STANAG 3675	324
✓ VML0	embankment/fill			STANAG 3675	324
✓ VML1	embankment/fill			STANAG 3675	324
✓ VML2	embankment/fill			STANAG 3675	324

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 3082 ID Code MDB090L3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	embankment/fill			IHO S-52	LS(SOLD,1,CHGRD)

Area ✓ Simplified Area

	Symbol Number 0913 ID Code MDB090A0913 Description feature brown solid filled circle patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	embankment/fill			ORIGINAL	0913

	Symbol Number 1516 ID Code MDB090A1516 Description black thin line outward ticks	Symbol Number 3112 ID Code MDB090A3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	embankment/fill			MIL-STD-2402	4B090A002
✓ VML2	embankment/fill			MIL-STD-2402	4B090A002

DB100**DB100**

Line ✓ Simplified Line

	Symbol Number 3003 ID Code MDB100L3003 Description tan very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	esker			MIL-STD-2402	4B100L001
✓ VML1	esker			MIL-STD-2402	4B100L001
✓ VML2	esker			MIL-STD-2402	4B100L001

DB110**DB110**

Line ✓ Simplified Line

	Symbol Number 3026 ID Code MDB110L3026 Description tan very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	fault			MIL-STD-2402	4B110L001
✓ UVM	fault			MIL-STD-2402	4B110L001
✓ VML0	fault			MIL-STD-2402	4B110L001
✓ VML1	fault			MIL-STD-2402	4B110L001
✓ VML2	fault			MIL-STD-2402	4B110L001

Refer to Appendix G for true symbol scale representations.

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DB115**DB115**

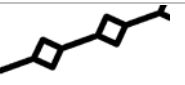

Point Full Chart ✓ Simplified Point

	Symbol Number 2248 ID Code MDB115P2248 Description brown sm filled cir w/ tail below	Symbol Number 2111 ID Code MDB115P2111 Description brown filled cir	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	geothermal feature			MIL-STD-2402	4B115P001
✓ VML1	geothermal feature			MIL-STD-2402	4B115P001
✓ VML2	geothermal feature			MIL-STD-2402	4B115P001


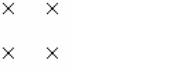
DB145**DB145**

Line Full Chart ✓ Simplified Line

	Symbol Number 1403 ID Code MDB145L1403 Description black line w/ open diamonds	Symbol Number 3112 ID Code MDB145L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	miscellaneous obstacle			MIL-STD-2402	4B145L001

Area Full Chart ✓ Simplified Area

	Symbol Number 3112 ID Code MDB145A3112 Description black thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4249 ID Code MDB145A4249 Description black x patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	miscellaneous obstacle			MIL-STD-2402	4B145A001*

DB150**DB150**

Point Full Chart ✓ Simplified Point

	Symbol Number 2249 ID Code MDB150P2249 Description black)(symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	mountain pass			MIL-STD-2402	4B150P001
✓ VML1	mountain pass			MIL-STD-2402	4B150P001
✓ VML2	mountain pass			MIL-STD-2402	4B150P001

Refer to Appendix G for true symbol scale representations.

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DB160**DB160**

Point Full Chart ✓ Simplified Point

	Symbol Number 2250 ID Code MDB160P2250 Description brown 6 pt asterisk w/ open center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rock strata/rock formation			MIL-STD-2402	4B160P001
✓ VML1	rock strata/rock formation			MIL-STD-2402	4B160P001
✓ VML2	rock strata/rock formation			MIL-STD-2402	4B160P001

Line Full Chart ✓ Simplified Line

	Symbol Number 3017 ID Code MDB160L3017 Description brown thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	rock strata/rock formation			ORIGINAL	3017

Area Full Chart ✓ Simplified Area

	Symbol Number 1573 ID Code MDB160A1573 Description dk gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0804 ID Code MDB160A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	rock strata/rock formation			ORIGINAL	1573 0804
✓ VML2	rock strata/rock formation			ORIGINAL	1573 0804

DB170**DB170**

Area Full Chart ✓ Simplified Area

	Symbol Number 0913 ID Code MDB170A0913 Description feature brown solid filled circle patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	sand dune/sand hills			MIL-STD-2402	4B170A009

	Symbol Number 4008 ID Code MDB170A4008 Description beige sand dune default	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - unknown	ssc=0		MIL-STD-2402	4B170A003
✓ UVM	sand dune/sand hills - unknown	ssc=0		MIL-STD-2402	4B170A003
✓ VML1	sand dune/sand hills - unknown	ssc=0		MIL-STD-2402	4B170A003
✓ VML2	sand dune/sand hills - unknown	ssc=0		MIL-STD-2402	4B170A003

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 4009 ID Code MDB170A4009 Description beige sand dune crescent	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - crescent	ssc=22		MIL-STD-2402	4B170A008
✓ UVM	sand dune/sand hills - crescent	ssc=22		MIL-STD-2402	4B170A008
✓ VML1	sand dune/sand hills - crescent	ssc=22		MIL-STD-2402	4B170A008
✓ VML2	sand dune/sand hills - crescent	ssc=22		MIL-STD-2402	4B170A008

	Symbol Number 4010 ID Code MDB170A4010 Description beige sand dune lateral	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - lateral	ssc=26		MIL-STD-2402	4B170A001
✓ UVM	sand dune/sand hills - lateral	ssc=26		MIL-STD-2402	4B170A001
✓ VML1	sand dune/sand hills - lateral	ssc=26		MIL-STD-2402	4B170A001
✓ VML2	sand dune/sand hills - lateral	ssc=26		MIL-STD-2402	4B170A001

	Symbol Number 4011 ID Code MDB170A4011 Description beige sand dune mound	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - mounds	ssc=27		MIL-STD-2402	4B170A006
✓ UVM	sand dune/sand hills - mounds	ssc=27		MIL-STD-2402	4B170A006
✓ VML1	sand dune/sand hills - mounds	ssc=27		MIL-STD-2402	4B170A006
✓ VML2	sand dune/sand hills - mounds	ssc=27		MIL-STD-2402	4B170A006

	Symbol Number 4012 ID Code MDB170A4012 Description beige sand dune ripple	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - ripple	ssc=28		MIL-STD-2402	4B170A004
✓ UVM	sand dune/sand hills - ripple	ssc=28		MIL-STD-2402	4B170A004
✓ VML1	sand dune/sand hills - ripple	ssc=28		MIL-STD-2402	4B170A004
✓ VML2	sand dune/sand hills - ripple	ssc=28		MIL-STD-2402	4B170A004

	Symbol Number 4013 ID Code MDB170A4013 Description beige sand dune star	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - star	ssc=29		MIL-STD-2402	4B170A005
✓ UVM	sand dune/sand hills - star	ssc=29		MIL-STD-2402	4B170A005
✓ VML1	sand dune/sand hills - star	ssc=29		MIL-STD-2402	4B170A005
✓ VML2	sand dune/sand hills - star	ssc=29		MIL-STD-2402	4B170A005

	Symbol Number 4014 ID Code MDB170A4014 Description beige sand dune transverse	Symbol Number 1903 ID Code MDB170A1903 Description rose solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	sand dune/sand hills - transverse	ssc=30		MIL-STD-2402	4B170A007
✓ UVM	sand dune/sand hills - transverse	ssc=30		MIL-STD-2402	4B170A007
✓ VML1	sand dune/sand hills - transverse	ssc=30		MIL-STD-2402	4B170A007
✓ VML2	sand dune/sand hills - transverse	ssc=30		MIL-STD-2402	4B170A007

Refer to Appendix G for true symbol
scale representations.

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DB180**DB180**

Point Full Chart ✓ Simplified Point

	Symbol Number 2251 ID Code MDB180P2251 Description brown sm open cir w/ eight ties outside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	volcano			MIL-STD-2402	4B180P001
✓ VML2	volcano			MIL-STD-2402	4B180P001

DB190**DB190**

Line Full Chart ✓ Simplified Line

	Symbol Number 3112 ID Code MDB190L3112 Description black thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	volcanic dike			MIL-STD-2402	4B190L001

	Symbol Number 3168 ID Code MDB190L3168 Description outline lt brown thin dotted line	Symbol Number 3112 ID Code MDB190L3112 Description black thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	volcanic dike			ORIGINAL	3168



DB200**DB200**

Line Full Chart ✓ Simplified Line

	Symbol Number 1406 ID Code MDB200L1406 Description brown thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	gully/gorge			ORIGINAL	1406

Area Full Chart ✓ Simplified Area

	Symbol Number 4027 ID Code MDB200A4027 Description brown wide left diag patt fill	Symbol Number 0804 ID Code MDB200A0804 Description brown solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	gully/gorge			ORIGINAL	4027
✓ VITD	gully/gorge			ORIGINAL	4027

Refer to Appendix G for true symbol scale representations.

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EA010**EA010**

Area Full Chart ✔ Simplified Area

	Symbol Number 4018 ID Code MEA010A4018 Description lt tan solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	cropland - dry	veg=1		ORIGINAL	4018
✔ UVM	cropland - dry	veg=1		ORIGINAL	4018
✔ VITD	cropland - dry	veg=1		ORIGINAL	4018
✔ VML0	cropland - dry	veg=1		ORIGINAL	4018
✔ VML1	cropland - dry	veg=1		ORIGINAL	4018
✔ VML2	cropland - dry	veg=1		ORIGINAL	4018

	Symbol Number 6002 ID Code MEA010A6002 Description steel blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	cropland - rice paddies	veg=4		ORIGINAL	6002
✔ UVM	cropland - rice paddies	veg=4		ORIGINAL	6002

	Symbol Number 6012 ID Code MEA010A6012 Description pale green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	cropland - other	veg=0		ORIGINAL	6012
✔ UVM	cropland - other	veg=0or999		ORIGINAL	6012
✔ VITD	cropland - other	veg<>1		ORIGINAL	6012
✔ VML0	cropland - other	veg<>1		ORIGINAL	6012
✔ VML1	cropland - other	veg<>1		ORIGINAL	6012
✔ VML2	cropland - other	veg<>1		ORIGINAL	6012



	Symbol Number 1412 ID Code MEA010A1412 Description yellow-green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 4067 ID Code MEA010A4067 Description yellow-green dot patt fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	cropland - other	veg=0		ORIGINAL	1412 4067
✔ DTOP	cropland - rice paddies	veg=4		ORIGINAL	1412 4067
✔ UVM	cropland - other	veg=0or999		ORIGINAL	1412 4067
✔ UVM	cropland - rice paddies	veg=4		ORIGINAL	1412 4067
✔ VITD	cropland - other	veg<>1		ORIGINAL	1412 4067
✔ VML0	cropland - other	veg<>1		ORIGINAL	1412 4067
✔ VML1	cropland - other	veg<>1		ORIGINAL	1412 4067
✔ VML2	cropland - other	veg<>1		ORIGINAL	1412 4067

Refer to Appendix G for true symbol
scale representations.


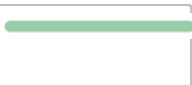
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	Symbol Number 3026 ID Code MEA010A3026 Description tan very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 6001 ID Code MEA010A6001 Description tan dot patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cropland - dry	veg=1		ORIGINAL	3026 6001
✓ UVM	cropland - dry	veg=1		ORIGINAL	3026 6001
✓ VITD	cropland - dry	veg=1		ORIGINAL	3026 6001
✓ VML0	cropland - dry	veg=1		ORIGINAL	3026 6001
✓ VML1	cropland - dry	veg=1		ORIGINAL	3026 6001
✓ VML2	cropland - dry	veg=1		ORIGINAL	3026 6001

EA020**EA020**

Line Full Chart ✓ Simplified Line

	Symbol Number 3036 ID Code MEA020L3036 Description yellow-green thin line w/rectangles one side	Symbol Number 1412 ID Code MEA020L1412 Description yellow-green thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	hedgerow			MIL-STD-2402	5A020L001
✓ UVM	hedgerow			MIL-STD-2402	5A020L001
✓ VITD	hedgerow			MIL-STD-2402	5A020L001
✓ VML0	hedgerow			MIL-STD-2402	5A020L001
✓ VML2	hedgerow			MIL-STD-2402	5A020L001

EA030**EA030**

Area Full Chart ✓ Simplified Area

	Symbol Number 0914 ID Code MEA030A0914 Description feature brown cirs patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	nursery			ORIGINAL	0914

	Symbol Number 1412 ID Code MEA030A1412 Description yellow-green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 4230 ID Code MEA030A4230 Description yellow-green squares in grid patt fill	Symbol Number 0805 ID Code MEA030A0805 Description depth white fill	



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	nursery			MIL-STD-2402	5A030A001*
✓ UVM	nursery			MIL-STD-2402	5A030A001*
✓ VML0	nursery			MIL-STD-2402	5A030A001*
✓ VML2	nursery			MIL-STD-2402	5A030A001*

Refer to Appendix G for true symbol scale representations.



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EA040**EA040**

Area Full Chart ✔ Simplified Area

	Symbol Number 4292 ID Code MEA040A4292 Description radar dk green thin solid line	Symbol Number 4292 ID Code MEA040A4292 Description radar dk green thin solid line
	Symbol Number 4051 ID Code MEA040A4051 Description radar dk green squares in grid patt fill	Symbol Number 0805 ID Code MEA040A0805 Description depth white fill



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	orchard/plantation			MIL-STD-2402	5A040A005
✔ FFD	orchard/plantation			MIL-STD-2402	5A040A005
✔ UVM	orchard/plantation			MIL-STD-2402	5A040A005
✔ VITD	orchard/plantation			ORIGINAL	4051
✔ VML0	orchard/plantation			MIL-STD-2402	5A040A005
✔ VML1	orchard/plantation			MIL-STD-2402	5A040A005
✔ VML2	orchard/plantation			MIL-STD-2402	5A040A005

	Symbol Number 0624 ID Code MEA040A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0915 ID Code MEA040A0915 Description feature brown tree side-view patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	orchard/plantation			IHO S-52	LS(DASH,1,LANDF) + AP(VEGATN03)

EA050**EA050**



Area Full Chart ✔ Simplified Area

	Symbol Number 4292 ID Code MEA050A4292 Description radar dk green thin solid line	Symbol Number 4292 ID Code MEA050A4292 Description radar dk green thin solid line
	Symbol Number 4054 ID Code MEA050A4054 Description radar dk green offset grid/dot patt fill	Symbol Number 0805 ID Code MEA050A0805 Description depth white fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	vineyards			MIL-STD-2402	5A050A001
✔ UVM	vineyards			MIL-STD-2402	5A050A001
✔ VITD	vineyards			ORIGINAL	4054
✔ VML0	vineyards			MIL-STD-2402	5A050A001
✔ VML1	vineyards			MIL-STD-2402	5A050A001
✔ VML2	vineyards			MIL-STD-2402	5A050A001


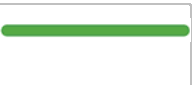


Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0624 ID Code MEA050A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0915 ID Code MEA050A0915 Description feature brown tree side-view patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	vineyards			IHO S-52	LS(DASH,1,LANDF) + AP(VEGATN03)

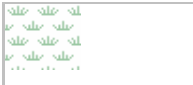

EA055**EA055**

Area Full Chart ✓ Simplified Area

	Symbol Number 4292 ID Code MEA055A4292 Description radar dk green thin solid line				
	Symbol Number 4054 ID Code MEA055A4054 Description radar dk green offset grid/dot patt fill	Symbol Number 0805 ID Code MEA055A0805 Description depth white fill			
					
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	hops			MIL-STD-2402	5A050A001



EB010**EB010**

Area Full Chart ✓ Simplified Area

	Symbol Number 4068 ID Code MEB010A4068 Description yellow-green grass patt fill	Symbol Number 0803 ID Code MEB010A0803 Description yellow-green solid fill			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	grassland			MIL-STD-2402	5B010A001
✓ UVM	grassland			MIL-STD-2402	5B010A001
✓ VITD	grassland			ORIGINAL	4068
✓ VML0	grassland			MIL-STD-2402	5B010A001
✓ VML1	grassland			MIL-STD-2402	5B010A001
✓ VML2	grassland			MIL-STD-2402	5B010A001

EB020**EB020**

Area Full Chart ✓ Simplified Area



	Symbol Number 4063 ID Code MEB020A4063 Description yellow-green stipple dot patt fill	Symbol Number 0803 ID Code MEB020A0803 Description yellow-green solid fill			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	scrub/brush			MIL-STD-2402	5B020A001
✓ UVM	scrub/brush			MIL-STD-2402	5B020A001
✓ VITD	scrub/brush			ORIGINAL	4063
✓ VML0	scrub/brush			MIL-STD-2402	5B020A001
✓ VML2	scrub/brush			MIL-STD-2402	5B020A001

Refer to Appendix G for true symbol
scale representations.

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EC010**EC010**

Area Full Chart ✔ Simplified Area

	Symbol Number 4052 ID Code MEC010A4052 Description yellow-green bamboo patt fill	Symbol Number 0803 ID Code MEC010A0803 Description yellow-green solid fill 
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	bamboo/cane			MIL-STD-2402	5C010A001
✔ UVM	bamboo/cane			MIL-STD-2402	5C010A001
✔ VITD	bamboo/cane			ORIGINAL	4052
✔ VML0	bamboo/cane			MIL-STD-2402	5C010A001
✔ VML2	bamboo/cane			MIL-STD-2402	5C010A001

EC020**EC020**

Point Full Chart ✔ Simplified Point



	Symbol Number 0150 ID Code MEC020P0150 Description yellow-green filled sm cir w/ gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	oasis - not palm	veg<>17		STANAG 3675	410
✔ VML1	oasis - not palm	veg<>17		STANAG 3675	410
✔ VML2	oasis - not palm	veg<>17		STANAG 3675	410

	Symbol Number 2252 ID Code MEC020P2252 Description yellow-green palm tree symbol	Symbol Number 0150 ID Code MEC020P0150 Description yellow-green filled sm cir w/ gray outline 
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	oasis - palm	veg=17		MIL-STD-2402	5C020P002
✔ VML1	oasis - palm	veg=17		MIL-STD-2402	5C020P002
✔ VML2	oasis - palm	veg=17		MIL-STD-2402	5C020P002




Area Full Chart ✔ Simplified Area

	Symbol Number 0150 ID Code MEC020A0150 Description yellow-green filled sm cir w/ gray outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 1412 ID Code MEC020A1412 Description yellow-green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	oasis - not palm	veg<>17		STANAG 3675	410
✔ VML0	oasis - not palm	veg<>17		STANAG 3675	410
✔ VML2	oasis - not palm	veg<>17		STANAG 3675	410

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 2252 ID Code MEC020A2252 Description yellow-green palm tree symbol	Symbol Number 0150 ID Code MEC020A0150 Description yellow-green filled sm cir w/ gray outline	
	Symbol Number 1412 ID Code MEC020A1412 Description yellow-green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	oasis - palm	veg=17		STANAG 3675	410
✓ VML0	oasis - palm	veg=17		STANAG 3675	410
✓ VML2	oasis - palm	veg=17		STANAG 3675	410

EC030**EC030**

Point Full Chart ✓ Simplified Point

	Symbol Number 0079 ID Code MEC030P0079 Description feature brown side view of stylised tree	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	trees			IHO S-52	SY(TREPNT04)

	Symbol Number 2253 ID Code MEC030P2253 Description yellow-green triangle tree symbol	Symbol Number 0522 ID Code MEC030P0522 Description green open triangle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML2	trees			MIL-STD-2402	5C030P001

Line Full Chart ✓ Simplified Line

	Symbol Number 3031 ID Code MEC030L3031 Description very dk green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	trees			MIL-STD-2402	5C030L001



Area Full Chart ✓ Simplified Area

	Symbol Number 4292 ID Code MEC030A4292 Description radar dk green thin solid line	Symbol Number 0822 ID Code MEC030A0822 Description lt brown solid fill	Symbol Number 0803 ID Code MEC030A0803 Description yellow-green solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	trees - clearing	veg=52		ORIGINAL	0822
✓ VITD	trees - forest clearing	veg=52		ORIGINAL	0822

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 4292 ID Code MEC030A4292 Description radar dk green thin solid line	Symbol Number MEC030A ID Code MEC030A Description
	Symbol Number 0803 ID Code MEC030A0803 Description yellow-green solid fill	Symbol Number 1605 ID Code MEC030A1605 Description yellow-green tree-top patt fill



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	trees - deciduous, unknown	veg=0or24		MIL-STD-2402	5C030A015
✓ FFD	trees - deciduous, unknown	tre=0or1		MIL-STD-2402	5C030A015
✓ UVM	trees - deciduous, mixed, unknown	tre=0or1or3		MIL-STD-2402	5C030A015
✓ VITD	trees - unknown, deciduous, mixed	veg=0or24or50		MIL-STD-2402	5C030A015
✓ VML0	trees - unknown, deciduous, mixed, other	veg=0or24or50or999		MIL-STD-2402	5C030A015
✓ VML1	trees - unknown, deciduous, mixed, other	veg=0or24or50or999		MIL-STD-2402	5C030A015
✓ VML2	trees - unknown, deciduous, mixed, other	veg=0or24or50or999		MIL-STD-2402	5C030A015

	Symbol Number 4292 ID Code MEC030A4292 Description radar dk green thin solid line	Symbol Number MEC030A ID Code MEC030A Description
	Symbol Number 0803 ID Code MEC030A0803 Description yellow-green solid fill	Symbol Number 1606 ID Code MEC030A1606 Description yellow-green triangle tree patt fill

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	trees - evergreen, mixed	veg=25or50		MIL-STD-2402	5C030A002
✓ FFD	trees - evergreen, mixed	tre=2or3		MIL-STD-2402	5C030A002
✓ UVM	trees - evergreen	tre=2		MIL-STD-2402	5C030A002
✓ VITD	trees - evergreen	veg=25		MIL-STD-2402	5C030A002
✓ VML0	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress	veg=11or12or17or18or25or29or38		MIL-STD-2402	5C030A002
✓ VML1	trees - casuarina, coniferous, palm, filao, eucalyptus, cypress	veg=11or12or17or18or29or38		MIL-STD-2402	5C030A002
✓ VML2	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress	veg=11or12or17or18or25or29or38		MIL-STD-2402	5C030A002

	Symbol Number 0624 ID Code MEC030A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0915 ID Code MEC030A0915 Description feature brown tree side-view patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	trees - not mangrove	veg<>19		IHO S-52	LS(DASH,1,LANDF) + AP(VEGATN03)

	Symbol Number 0624 ID Code MEC030A0624 Description feature brown very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0916 ID Code MEC030A0916 Description feature brown mangrove side-view patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	trees - mangrove	veg=19		IHO S-52	LS(DASH,1,LANDF) + AP(VEGATN04)

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 1655 ID Code MEC030A1655 Description basic blue thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 1613 ID Code MEC030A1613 Description yellow-green nipa patt fill	Symbol Number 0803 ID Code MEC030A0803 Description yellow-green solid fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	trees - nipa palm, mangrove	veg=16or19		MIL-STD-2402	5C030A030*
✓ VML1	trees - nipa palm, mangrove	veg=16or19		MIL-STD-2402	5C030A030*
✓ VML2	trees - nipa palm, mangrove	veg=16or19		MIL-STD-2402	5C030A030*

EC040**EC040**





Line ✓ Simplified Line

	Symbol Number 3076 ID Code MEC040L3076 Description It gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	cleared way/cut line/firebreak			MIL-STD-2402	5C015L001
✓ VML0	cleared way/cut line/firebreak			MIL-STD-2402	5C015L001
✓ VML1	cleared way/cut line/firebreak			MIL-STD-2402	5C015L001
✓ VML2	cleared way/cut line/firebreak			MIL-STD-2402	5C015L001

EE000**EE000**

Area ✓ Simplified Area

	Symbol Number 1412 ID Code MEE000A1412 Description yellow-green thin solid line	
	Symbol Number 4063 ID Code MEE000A4063 Description yellow-green stipple dot patt fill	Symbol Number 0805 ID Code MEE000A0805 Description depth white fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	miscellaneous vegetation			MIL-STD-2402	5B020A001

FA000**FA000**

Line ✓ Simplified Line

	Symbol Number 0680 ID Code MFA000L0680 Description black thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	administrative boundary - insular	use=32		MIL-STD-2402	6A000L005

Refer to Appendix G for true symbol scale representations.

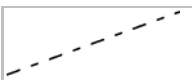
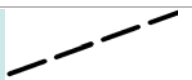
MIL-DTL-89045A w/Amendment 1 APPENDIX A

	Symbol Number 1310 ID Code MFA000L1310 Description black one long dash two short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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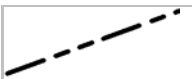
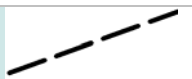
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	administrative boundary - international	use=23		MIL-STD-2402	6A000L002
✓ DTOP	administrative boundary - international	use=23		MIL-STD-2402	6A000L008
✓ FFD	administrative boundary - international	use=23		MIL-STD-2402	6A000L008
✓ UVM	administrative boundary - international	use=23		MIL-STD-2402	6A000L008
✓ VML0	administrative boundary - international	use=23		MIL-STD-2402	6A000L008
✓ VML1	administrative boundary - international	use=4or23		MIL-STD-2402	6A000L008
✓ VML2	administrative boundary - international	use=23		MIL-STD-2402	6A000L008
WVS coc	administrative boundary - national, international	use=4or23		MIL-STD-2402	6A000L008

	Symbol Number 1311 ID Code MFA000L1311 Description black long dash short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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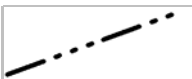
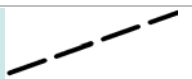
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	administrative boundary - primary, unknown	use=0or26		MIL-STD-2402	6A000L002
✓ FFD	administrative boundary - primary, unknown	use=0or26		MIL-STD-2402	6A000L002
✓ UVM	administrative boundary - primary, unknown, other	use=0or26or999		MIL-STD-2402	6A000L002
✓ VML0	administrative boundary - primary	use=26		MIL-STD-2402	6A000L002
✓ VML1	administrative boundary - primary, unknown	use=0or26		MIL-STD-2402	6A000L002
✓ VML2	administrative boundary - primary, unknown	use=0or26		MIL-STD-2402	6A000L002
✓ VVOD	Administrative Boundary (libref)			ORIGINAL	1311
WVS coc	administrative boundary - primary, unknown	use=0or26		MIL-STD-2402	6A000L002

	Symbol Number 1312 ID Code MFA000L1312 Description black very thin sht dash very sht dash line	Symbol Number 3120 ID Code MFA000L3120 Description black thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	administrative boundary - city	use=16		MIL-STD-2402	6A000L002

	Symbol Number 1318 ID Code MFA000L1318 Description black thin long dsh 2 shrt dsh line	Symbol Number 3120 ID Code MFA000L3120 Description black thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	administrative boundary - secondary	use=30		MIL-STD-2402	6A000L003
WVS coc	administrative boundary - secondary	use=30		MIL-STD-2402	6A000L003

	Symbol Number 1319 ID Code MFA000L1319 Description black thin long dash 3 dot line	Symbol Number 3120 ID Code MFA000L3120 Description black thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	administrative boundary - tertiary	use=31		MIL-STD-2402	6A000L010
WVS coc	administrative boundary - tertiary	use=31		MIL-STD-2402	6A000L010

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 1408 ID Code MFA000L1408 Description basic green vy thin long dash short dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
WVS mab	administrative boundary			ORIGINAL	1408

FA001**FA001**

Point Full Chart ✔ Simplified Point

	Symbol Number 2256 ID Code MFA001P2256 Description lt gray/white divided square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML0	administrative area			ORIGINAL	2256

Area Full Chart ✔ Simplified Area

	Symbol Number 0633 ID Code MFA001A0633 Description lt gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ FFD	administrative area			IHO S-52	LS(DASH,2,CHGRF)
✔ UVM	administrative area			IHO S-52	LS(DASH,2,CHGRF)
✔ VML0	administrative area			IHO S-52	LS(DASH,2,CHGRF)
✔ VML1	administrative area			IHO S-52	LS(DASH,2,CHGRF)
✔ VML2	administrative area			IHO S-52	LS(DASH,2,CHGRF)
WVS	administrative area			IHO S-52	LS(DASH,2,CHGRF)

FA015**FA015**

Point Full Chart ✔ Simplified Point

	Symbol Number 2257 ID Code MFA015P2257 Description black square w/ F	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	firing range/gunnery range			ORIGINAL	2257

Line Full Chart ✔ Simplified Line

	Symbol Number 3054 ID Code MFA015L3054 Description lt magenta very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	firing range/gunnery range			ORIGINAL	3054

Refer to Appendix G for true symbol scale representations.

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Area Full Chart ✓ Simplified Area

	Symbol Number 3115 ID Code MFA015A3115 Description black thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	firing range/gunnery range			ORIGINAL	3115

FA020

FA020

Line Full Chart ✓ Simplified Line

	Symbol Number 3119 ID Code MFA020L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	armistice line			MIL-STD-2402	6A020L001
✓ DTOP	armistice line			MIL-STD-2402	6A020L001
✓ FFD	armistice line			MIL-STD-2402	6A020L001
✓ UVM	armistice line			MIL-STD-2402	6A020L001
✓ VML0	armistice line			MIL-STD-2402	6A020L001
✓ VML1	armistice line			MIL-STD-2402	6A020L001
✓ VML2	armistice line			MIL-STD-2402	6A020L001
WVS	armistice line			MIL-STD-2402	6A020L001

FA030

FA030

Line Full Chart ✓ Simplified Line

	Symbol Number 3119 ID Code MFA030L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	cease-fire line			MIL-STD-2402	6A030L001
✓ FFD	cease-fire line			MIL-STD-2402	6A030L001
✓ VML0	cease-fire line			MIL-STD-2402	6A030L001
✓ VML1	cease-fire line			MIL-STD-2402	6A030L001
✓ VML2	cease-fire line			MIL-STD-2402	6A030L001
WVS	cease-fire line			MIL-STD-2402	6A030L001

FA040

FA040

Line Full Chart ✓ Simplified Line

	Symbol Number 3119 ID Code MFA040L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	claim line			STANAG 3675	631

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 3120 ID Code MFA040L3120 Description black thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	claim line			MIL-STD-2402	6A040L001
WVS	claim line			MIL-STD-2402	6A040L001

FA050**FA050**

Line Full Chart ✓ Simplified Line

	Symbol Number 3118 ID Code MFA050L3118 Description black dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
WVS	mandate line/convention line			ORIGINAL	3118

	Symbol Number 3119 ID Code MFA050L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	mandate line/convention line			STANAG 3675	631
✓ VML1	mandate line/convention line			STANAG 3675	631

FA060**FA060**

Line Full Chart ✓ Simplified Line

	Symbol Number 1310 ID Code MFA060L1310 Description black one long dash two short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	defacto boundary			MIL-STD-2402	6A060L002*
WVS	defacto boundary			MIL-STD-2402	6A060L002*

	Symbol Number 3119 ID Code MFA060L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOPT	defacto boundary			MIL-STD-2402	6A060L002*
✓ VML0	defacto boundary			MIL-STD-2402	6A060L002*
✓ VML1	defacto boundary			MIL-STD-2402	6A060L002*
✓ VML2	defacto boundary			MIL-STD-2402	6A060L002*

FA070**FA070**

Line Full Chart ✓ Simplified Line


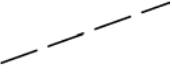
	Symbol Number 3143 ID Code MFA070L3143 Description black double dash very thin lines	
--	--	--

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
WVS	demilitarized zone	mb1=6		MIL-STD-2402	6A070A001

Refer to Appendix G for true symbol
scale representations.

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Area Full Chart ✔ Simplified Area

	Symbol Number 3143 ID Code MFA070A3143 Description black double dash very thin lines	Symbol Number 3119 ID Code MFA070A3119 Description black very thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	demilitarized zone			MIL-STD-2402	6A070A001
✔ UVM	demilitarized zone			MIL-STD-2402	6A070A001
✔ VML0	demilitarized zone			MIL-STD-2402	6A070A001
✔ VML1	demilitarized zone			MIL-STD-2402	6A070A001
✔ VML2	demilitarized zone			MIL-STD-2402	6A070A001

FA090

FA090

Line Full Chart ✔ Simplified Line

	Symbol Number 0612 ID Code MFA090L0612 Description lt gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	geophysical prospecting grid			MIL-STD-2402	1L085L001
✔ VML1	geophysical prospecting grid			MIL-STD-2402	1L085L001
✔ VML2	geophysical prospecting grid			MIL-STD-2402	1L085L001

FA110

FA110

Line Full Chart ✔ Simplified Line

	Symbol Number 3119 ID Code MFA110L3119 Description black very thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	international date line			MIL-STD-2402	6A110L001

	Symbol Number 3120 ID Code MFA110L3120 Description black thin long dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	international date line			MIL-STD-2402	6A110L001
✔ VML0	international date line			MIL-STD-2402	6A110L001
✔ VML1	international date line			MIL-STD-2402	6A110L001
✔ VML2	international date line			MIL-STD-2402	6A110L001

Refer to Appendix G for true symbol
scale representations.

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FA170**FA170**

Area Full Chart ✓ Simplified Area

	Symbol Number 3118 ID Code MFA170A3118 Description black dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	zone of occupation			MIL-STD-2402	6A170A001
✓ VML0	zone of occupation			MIL-STD-2402	6A170A001
✓ VML1	zone of occupation			MIL-STD-2402	6A170A001
✓ VML2	zone of occupation			MIL-STD-2402	6A170A001

FC021**FC021**

Point Full Chart ✓ Simplified Point

	Symbol Number 0080 ID Code MFC021P0080 Description magenta solid filled diamond inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - pilot boarding	mac=48		IHO S-52	SY(PILBOP02)

	Symbol Number 0084 ID Code MFC021P0084 Description magenta cir w/ ! Inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - not pilot boarding	mac<>48		IHO S-52	SY(CHINFO06)

Line Full Chart ✓ Simplified Line

	Symbol Number 0629 ID Code MFC021L0629 Description gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - fish traps	mac=56 AND mbl=NULL		IHO S-52	LS(DASH,2,CHGRD)
✓ DNC	maritime limit boundary - not clearing line	mbl<>7and<>13 AND mac=NULL		IHO S-52	LS(DASH,2,CHGRD)

	Symbol Number 0631 ID Code MFC021L0631 Description gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - unsurveyed	mac=26 AND mbl=NULL		IHO S-52	LS(SOLD,2,CHGRD)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0633 ID Code MFC021L0633 Description lt gray thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - marine farm	mac=57 AND mbl=NULL		IHO S-52	LS(DASH,2,CHGRF)
✓ TODO	maritime limit boundary - limit of territorial waters	mbl=6		IHO S-52	LS(DASH,2,CHGRF)
✓ TODO	maritime limit boundary - other	mbl<>6		IHO S-52	LS(DASH,2,CHGRF)
WVS	maritime limit boundary - territorial waters limits	mbl=6		IHO S-52	LS(DASH,2,CHGRF)

	Symbol Number 0634 ID Code MFC021L0634 Description magenta very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - dumping, explosive dumping	mac=30or35 AND mbl=NULL		IHO S-52	LS(DASH,1,CHMGD)
✓ DNC	maritime limit boundary - spoil	mac=25 AND mbl=NULL		IHO S-52	LS(DASH,1,CHMGD)

	Symbol Number 0635 ID Code MFC021L0635 Description lt magenta very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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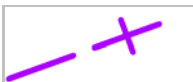

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - cargo Xshipment	mac=49 AND mbl=NULL		IHO S-52	LS(DASH,1,CHMGF)
✓ DNC	maritime limit boundary - incineration	mac=31 AND mbl=NULL		IHO S-52	LS(DASH,1,CHMGF)

	Symbol Number 0656 ID Code MFC021L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - clearing line	mbl=13 AND mac=NULL		IHO S-52	LS(DASH,1,CHGRD)
✓ DNC	maritime limit boundary - fairway	mac=55 AND mbl=NULL		IHO S-52	LS(DASH,1,CHGRD)

	Symbol Number 0663 ID Code MFC021L0663 Description traffic magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - precautionary	mac=42 AND mbl=NULL		IHO S-52	LS(DASH,2,TRFCD)
✓ DNC	maritime limit boundary - unknown, other	mac=0or999 AND mbl=NULL		IHO S-52	LS(DASH,2,TRFCD)

	Symbol Number 1451 ID Code MFC021L1451 Description purple dash line w/ tics both sides (- + -)	Symbol Number 3120 ID Code MFC021L3120 Description black thin long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	maritime limit boundary - international (at sea)	mbl=9		MIL-STD-2402	6A050L002
WVS	maritime limit boundary - international (at sea)	mbl=9		MIL-STD-2402	6A050L002

	Symbol Number 1651 ID Code MFC021L1651 Description traffic lt magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - pilot boarding	mac=48 AND mbl=NULL		IHO S-52	LS(DASH,2,TRFCF)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 3054 ID Code MFC021L3054 Description lt magenta very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	maritime limit boundary - unknown	mbl=0		MIL-STD-2402	6C090L001*
WVS	maritime limit boundary - other territorial baseline	mbl=999		MIL-STD-2402	6C090L001*

	Symbol Number 3077 ID Code MFC021L3077 Description lt gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - territorial waters baseline	mbl=7 AND mac=NULL		IHO S-52	LS(DASH,1,CHGRF)
WVS	maritime limit boundary - territorial waters baseline	mbl=7		IHO S-52	LS(DASH,1,CHGRF)

	Symbol Number 4186 ID Code MFC021L4186 Description magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - deguassing	mac=44 AND mbl=NULL		IHO S-52	LS(DASH,2,CHMGD)
✓ DNC	maritime limit boundary - dredging	mac=58 AND mbl=NULL		IHO S-52	LS(DASH,2,CHMGD)
✓ DNC	maritime limit boundary - oil field, gas field	mac=32or33 AND mbl=NULL		IHO S-52	LS(DASH,2,CHMGD)
✓ DNC	maritime limit boundary - submarine exercise, mine laying, firing range	mac=27or28or29 AND mbl=NULL		IHO S-52	LS(DASH,2,CHMGD)
✓ DNC	maritime limit boundary - turning area	mac=24 AND mbl=NULL		IHO S-52	LS(DASH,2,CHMGD)

Area Full Chart ✓ Simplified Area

	Symbol Number 0823 ID Code MFC021A0823 Description no data gray solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - unsurveyed	mac=26		IHO S-52	AC(NODTA)

	Symbol Number 0933 ID Code MFC021A0933 Description gray offset dash patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - unsurveyed	mac=26		IHO S-52	AP(NODATA03)

	Symbol Number 0631 ID Code MFC021A0631 Description gray thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - unsurveyed	mac=26		IHO S-52	LS(SOLD,2,CHGRD)

	Symbol Number 0716 ID Code MFC021A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MFC021A0656 Description gray very thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - fairway	mac=55		IHO S-52	LC(NAVARE51)

Refer to Appendix G for true symbol scale representations.




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	Symbol Number 0716 ID Code MFC021A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MFC021A0656 Description gray very thin dash line	
	Symbol Number 0904 ID Code MFC021A0904 Description gray fish in net patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - marine farm	mac=57		IHO S-52	LC(NAVARE51) + AP(MARCUL02)

	Symbol Number 0047 ID Code MFC021A0047 Description gray rectangle w/ angle line on top		
	Symbol Number 0716 ID Code MFC021A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MFC021A0656 Description gray very thin dash line	
	Symbol Number ID Code	Symbol Number 0903 ID Code MFC021A0903 Description gray fish trap patt fill	




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - fish traps	mac=56		IHO S-52	SY(FSHFAC02) + LC(NAVARE51)

	Symbol Number 0080 ID Code MFC021A0080 Description magenta solid filled diamond inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0734 ID Code MFC021A0734 Description magenta dash/chevron line	Symbol Number 1651 ID Code MFC021A1651 Description traffic lt magenta thin dash line	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - pilot boarding	mac=48		IHO S-52	SY(PILBOP02) + LC(CTYARE51)

	Symbol Number 0081 ID Code MFC021A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0734 ID Code MFC021A0734 Description magenta dash/chevron line	Symbol Number 0634 ID Code MFC021A0634 Description magenta very thin dash line	




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - spoil, dumping, explosive dumping	mac=25or30or35		IHO S-52	SY(INFARE51) + LC(CTYARE51)

	Symbol Number 0081 ID Code MFC021A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0734 ID Code MFC021A0734 Description magenta dash/chevron line	Symbol Number 0635 ID Code MFC021A0635 Description lt magenta very thin dash line	



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - cargo Xshipment	mac=49		IHO S-52	SY(INFARE51) + LC(CTYARE51)
✓ DNC	maritime limit boundary - incineration	mac=31		IHO S-52	SY(INFARE51) + LC(CTYARE51)

Refer to Appendix G for true symbol scale representations.



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	Symbol Number 0092 ID Code MFC021A0092 Description traffic lt magenta ! Inside triangle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0738 ID Code MFC021A0738 Description magenta dash/chev line w/precaution symbol	Symbol Number 0663 ID Code MFC021A0663 Description traffic magenta thin dash line
	Symbol Number 0917 ID Code MFC021A0917 Description traffic lt magenta rt diag line patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - precautionary	mac=42		IHO S-52	SY(PRCARE51) + LC(PRCARE51) + AP(TSSJCT02)

	Symbol Number 0093 ID Code MFC021A0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC021A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC021A4186 Description magenta thin dash line


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - deguassing	mac=44		IHO S-52	SY(CTYARE51) + LC(CTYARE51)
✓ DNC	maritime limit boundary - dredging area	mac=58		IHO S-52	SY(CTYARE51) + LC(CTYARE51)
✓ DNC	maritime limit boundary - oil field, gas field	mac=32or33		IHO S-52	SY(CTYARE51) + LC(CTYARE51)
✓ DNC	maritime limit boundary - submarine exercise, mine laying, firing range	mac=27or28or29		IHO S-52	SY(CTYARE51) + LC(CTYARE51)
✓ DNC	maritime limit boundary - turning area	mac=24		IHO S-52	SY(CTYARE51) + LC(CTYARE51)


	Symbol Number 0097 ID Code MFC021A0097 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0742 ID Code MFC021A0742 Description magenta dash/chevron line w/caution symbol	Symbol Number 0663 ID Code MFC021A0663 Description traffic magenta thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime limit boundary - unknown, other	mac=0or999		IHO S-52	SY(CTNARE51) + LC(CTNARE51)

FC031**FC031**

Point Full Chart ✓ Simplified Point

	Symbol Number 0082 ID Code MFC031P0082 Description traffic lt magenta cir w/ bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - entry prohibited	mac=5		IHO S-52	SY(ENTRES51)

	Symbol Number 0083 ID Code MFC031P0083 Description traffic lt magenta arc w/ arrowhead	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - roundabout zone (TSS)	mac=40		IHO S-52	SY(TSSRON51)






Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0084 ID Code MFC031P0084 Description magenta cir w/ ! Inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - unknown	mac=0	Orient	Source	Source ID
				IHO S-52	SY(CHINFO06)
	Symbol Number 0087 ID Code MFC031P0087 Description traffic lt magenta ! In lg cir w/ magenta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - dredged area	mac=2	Orient	Source	Source ID
				IHO S-52	SY(RSRDEF51)
	Symbol Number 0093 ID Code MFC031P0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - mine danger area	mac=4	Orient	Source	Source ID
				IHO S-52	SY(CTYARE51)
Line	Full Chart	✓ Simplified	Line		
	Symbol Number 0663 ID Code MFC031L0663 Description traffic magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - unknown, work in progress	mac=0or9	Orient	Source	Source ID
				IHO S-52	LS(DASH,2,TRFCD)
	Symbol Number 0665 ID Code MFC031L0665 Description traffic magenta thick dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - TSS	mac=40or41	Orient	Source	Source ID
				IHO S-52	LS(DASH,4,TRFCD)
	Symbol Number 3077 ID Code MFC031L3077 Description lt gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - dredged channel	mac=2	Orient	Source	Source ID
				IHO S-52	LS(DASH,1,CHGRF)
	Symbol Number 4186 ID Code MFC031L4186 Description magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	maritime area - entry prohibited	mac=5	Orient	Source	Source ID
				IHO S-52	LS(DASH,2,CHMGD)
✓ DNC	maritime area - mine danger	mac=4	Orient	Source	Source ID
				IHO S-52	LS(DASH,2,CHMGD)

Refer to Appendix G for true symbol
scale representations.

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Area	Full Chart	✓ Simplified	Area
	Symbol Number 0803 ID Code MFC031A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode off	mac=2 AND hdp=0 AND isdm=0	IHO S-52 AC(DEPIT)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode on	mac=2 AND hdp=0 AND isdm=1	IHO S-52 AC(DEPIT)
	Symbol Number 0805 ID Code MFC031A0805 Description depth white fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	maritime area - dredged channel, 2 shades, deep water	mac=2 AND idsm=1 AND hdp>=ssdc	IHO S-52 AC(DEPDW)
✓ DNC	maritime area - dredged channel, 4 shades, deep water	mac=2 AND idsm=0 AND hdp>=msdc	IHO S-52 AC(DEPDW)
	Symbol Number 0810 ID Code MFC031A0810 Description depth med blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode off	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	IHO S-52 AC(DEPVS)
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode on	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	IHO S-52 AC(DEPVS)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	IHO S-52 AC(DEPVS)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	IHO S-52 AC(DEPVS)
	Symbol Number 0820 ID Code MFC031A0820 Description depth pale blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	maritime area - dredged channel, 4 shades, medium deep	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	IHO S-52 AC(DEPMD)
	Symbol Number 0821 ID Code MFC031A0821 Description depth lt blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	IHO S-52 AC(DEPMS)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	IHO S-52 AC(DEPMS)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0919 ID Code MFC031A0919 Description gray diag spaced dot patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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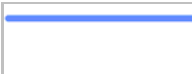
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - dredged channel, 2 shades, deep water	mac=2 AND idsm=1 AND hdp>=ssdc		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode off	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode on	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, deep water	mac=2 AND idsm=0 AND hdp>=msdc		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, medium deep	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode off	mac=2 AND hdp=0 AND isdm=0		IHO S-52	AP(DRGARE01)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode on	mac=2 AND hdp=0 AND isdm=1		IHO S-52	AP(DRGARE01)

	Symbol Number 0949 ID Code MFC031A0949 Description depth gray diamond patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode on	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1		IHO S-52	AP(DIAMOND1)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1		IHO S-52	AP(DIAMOND1)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1		IHO S-52	AP(DIAMOND1)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode on	mac=2 AND hdp=0 AND isdm=1		IHO S-52	AP(DIAMOND1)

	Symbol Number 0681 ID Code MFC031A0681 Description UI very dk blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - major op area	mac=104		OPAREA	

	Symbol Number 0682 ID Code MFC031A0682 Description UI very dk blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - minor op area	mac=105		OPAREA	

	Symbol Number 0683 ID Code MFC031A0683 Description UI very dk blue dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - sea test range	mac=114		OPAREA	

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0716 ID Code MFC031A0716 Description gray dash/chevron line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - safety lane	Symbol Assignment Expression: mac=156	Orient	Source: IHO S-52	Source ID: LC(NAVARE51)
	Symbol Number 0754 ID Code MFC031A0754 Description UI vy dk blue vy thin line w/5 rows dots inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - ASW area	Symbol Assignment Expression: mac=106	Orient	Source: OPAREA	Source ID
	Symbol Number 0755 ID Code MFC031A0755 Description UI vy dk blue vy thin line w/vert inward ticks	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - submarine op area	Symbol Assignment Expression: mac=107	Orient	Source: OPAREA	Source ID
	Symbol Number 0756 ID Code MFC031A0756 Description feature brown vy thin line w/vert inward ticks	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - submarine traffic lane submerged	Symbol Assignment Expression: mac=108	Orient	Source: OPAREA	Source ID
	Symbol Number 0757 ID Code MFC031A0757 Description feature brown vy thin line w/3 rows dots ins	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - submarine traffic lane surface	Symbol Assignment Expression: mac=109	Orient	Source: OPAREA	Source ID
	Symbol Number 0758 ID Code MFC031A0758 Description feature brown 5 dot vy thin line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ TOD0	Product: maritime area - surface traffic lane	Symbol Assignment Expression: mac=110	Orient	Source: OPAREA	Source ID

Refer to Appendix G for true symbol
scale representations.

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	Symbol Number 3077 ID Code MFC031A3077 Description lt gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - dredged channel, 2 shades, deep water	mac=2 AND idsm=1 AND hdp>=ssdc		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode off	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 2 shades, very shallow, shallow mode on	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, deep water	mac=2 AND idsm=0 AND hdp>=msdc		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, med shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, medium deep	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode off	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, 4 shades, very shallow, shallow mode on	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode off	mac=2 AND hdp=0 AND isdm=0		IHO S-52	LS(DASH,1,CHGRF)
✓ DNC	maritime area - dredged channel, depth unknown, shallow mode on	mac=2 AND hdp=0 AND isdm=1		IHO S-52	LS(DASH,1,CHGRF)

	Symbol Number 0081 ID Code MFC031A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0734 ID Code MFC031A0734 Description magenta dash/chevron line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - marine sanctuary	mac=101		IHO S-52	SY(INFARE51) + LC(CTYARE51)

	Symbol Number 0082 ID Code MFC031A0082 Description traffic lt magenta cir w/ bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0734 ID Code MFC031A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC031A4186 Description magenta thin dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - entry prohibited	mac=5		IHO S-52	SY(ENTRES51) + LC(CTYARE51)



	Symbol Number 0083 ID Code MFC031A0083 Description traffic lt magenta arc w/ arrowhead	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0917 ID Code MFC031A0917 Description traffic lt magenta rt diag line patt fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - roundabout zone (TSS)	mac=40		IHO S-52	SY(TSSRON51) + AP(TSSJCT02)

Refer to Appendix G for true symbol scale representations.




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	Symbol Number 0087 ID Code MFC031A0087 Description traffic lt magenta ! In lg cir w/ magenta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC031A0734 Description magenta dash/chevron line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - restricted areas	mac=0or144or145or154or999		IHO S-52	SY(RSRDEF51) + LC(CTYARE51)

	Symbol Number 0093 ID Code MFC031A0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC031A0734 Description magenta dash/chevron line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - military area, minefield	mac=143or148or149or158		IHO S-52	SY(CTYARE51) + LC(CTYARE51)
✓ TOD0	maritime area - military practice areas	mac=27or28or115or116or140or146or147or150or151or152 or153or157or159		IHO S-52	SY(CTYARE51) + LC(CTYARE51)

	Symbol Number 0093 ID Code MFC031A0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC031A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC031A4186 Description magenta thin dash line 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - mine danger	mac=4		IHO S-52	SY(CTYARE51) + LC(CTYARE51)

	Symbol Number 0097 ID Code MFC031A0097 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0742 ID Code MFC031A0742 Description magenta dash/chevron line w/caution symbol	Symbol Number 0663 ID Code MFC031A0663 Description traffic magenta thin dash line 



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - unknown, work in progress	mac=0or9		IHO S-52	SY(CTNARE51) + LC(CTNARE51)

	Symbol Number 0097 ID Code MFC031A0097 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0742 ID Code MFC031A0742 Description magenta dash/chevron line w/caution symbol	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	maritime area - caution areas	mac=141or142or155		IHO S-52	SY(CTNARE51) + LC(CTNARE51)

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 1236 ID Code MFC031A1236 Description lt magenta IT	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0722 ID Code MFC031A0722 Description magenta dashed T line	Symbol Number 0662 ID Code MFC031A0662 Description traffic magenta very thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	maritime area - inshore traffic zone (TSS)	mac=41		IHO S-52	SY(ITZARE51) + LC(RESARE51)

FC036**FC036**


Point Full Chart ✓ Simplified Point

	Symbol Number 0082 ID Code MFC036P0082 Description traffic lt magenta cir w/ bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - area to be avoided	mac=43		IHO S-52	SY(ENTRES51)

	Symbol Number 0085 ID Code MFC036P0085 Description lt magenta fish w/ intersecting diag line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - fishing prohibited	mac=22		IHO S-52	SY(FSHRES51)

	Symbol Number 0086 ID Code MFC036P0086 Description lt magenta open anchor w/ intrscng diag line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - anchoring prohibited	mac=15		IHO S-52	SY(ACHRES51)

	Symbol Number 0087 ID Code MFC036P0087 Description traffic lt magenta ! In lg cir w/ magenta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - unknown or other	mac=0or999		IHO S-52	SY(RSRDEF51)

	Symbol Number 0093 ID Code MFC036P0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - safety zone	mac=37		IHO S-52	SY(CTYARE51)










Line Full Chart ✓ Simplified Line

	Symbol Number 0722 ID Code MFC036L0722 Description magenta dashed T line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area			IHO S-52	LC(RESARE51)



Refer to Appendix G for true symbol scale representations.

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Area	Full Chart	✓ Simplified	Area
	Symbol Number 0081 ID Code MFC036A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0735 ID Code MFC036A0735 Description magenta dash/chevron line w/ dash, cir	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	restricted area - pipelines, sewer	mac=21or23or61	IHO S-52 SY(INFARE51) + LC(PIPARE51)
	Symbol Number 0081 ID Code MFC036A0081 Description lt magenta square w/ I	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0736 ID Code MFC036A0736 Description gray dash/chevron line w/ dash, cir	Symbol Number 0629 ID Code MFC036A0629 Description gray thin dash line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	restricted area - outfall, intake	mac=45or46	IHO S-52 SY(INFARE51) + LC(PIPARE61)
	Symbol Number 0082 ID Code MFC036A0082 Description traffic lt magenta cir w/ bar	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0734 ID Code MFC036A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	restricted area - area to be avoided	mac=43	IHO S-52 SY(ENTRES51) + LC(CTYARE51)
	Symbol Number 0085 ID Code MFC036A0085 Description lt magenta fish w/ intersectng diag line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0740 ID Code MFC036A0740 Description magenta T dash line w/ fish symbol	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	restricted area - fishing prohibited	mac=22	IHO S-52 SY(FSHRES51) + LC(FSHRES51)
	Symbol Number 0086 ID Code MFC036A0086 Description lt magenta open anchor w/ intrsctng diag line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
	Symbol Number 0739 ID Code MFC036A0739 Description magenta T dash line w/ anchor symbol	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ DNC	restricted area - anchoring prohibited	mac=15	IHO S-52 SY(ACHRES51) + LC(ACHRES51)

Refer to Appendix G for true symbol
scale representations.




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	Symbol Number 0087 ID Code MFC036A0087 Description traffic lt magenta ! In lg cir w/ magenta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC036A0734 Description magenta dash/chevron line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	restricted area			IHO S-52	SY(RSRDEF51) + LC(CTYARE51)

	Symbol Number 0087 ID Code MFC036A0087 Description traffic lt magenta ! In lg cir w/ magenta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC036A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - to be avoided, other	mac=0or999		IHO S-52	SY(RSRDEF51) + LC(CTYARE51)

	Symbol Number 0093 ID Code MFC036A0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MFC036A0734 Description magenta dash/chevron line	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line 


Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - safety zone	mac=37		IHO S-52	SY(CTYARE51) + LC(CTYARE51)

	Symbol Number 0094 ID Code MFC036A0094 Description lt magenta angled line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0737 ID Code MFC036A0737 Description magenta dash/chevron line w/ flash symbol	Symbol Number 4186 ID Code MFC036A4186 Description magenta thin dash line 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	restricted area - cables	mac=20		IHO S-52	SY(CBLARE51) + LC(CBLARE51)

FC041**FC041**

Point Full Chart ✓ Simplified Point

	Symbol Number 0088 ID Code MFC041P0088 Description traffic magenta filled arrow	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	traffic separation scheme (TSS)		dof	IHO S-52	SY(TSSLPT51)

Refer to Appendix G for true symbol scale representations.

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Line Full Chart ✓ Simplified Line

	Symbol Number 0620 ID Code MFC041L0620 Description traffic lt magenta very very thick solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	traffic separation scheme (TSS) - separation zone line	tsp=4		IHO S-52	LS(SOLD,6,TRFCF)

	Symbol Number 0665 ID Code MFC041L0665 Description traffic magenta thick dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	traffic separation scheme (TSS) - outer boundary	tsp=2		IHO S-52	LS(DASH,4,TRFCD)

Area Full Chart ✓ Simplified Area

	Symbol Number 0824 ID Code MFC041A0824 Description traffic lt magenta solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	traffic separation scheme (TSS) - separation zone area	tsp=3		IHO S-52	AC(TRFCF,3)

	Symbol Number 0097 ID Code MFC041A0097 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0917 ID Code MFC041A0917 Description traffic lt magenta rt diag line patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	traffic separation scheme (TSS) - inbound or outbound area	tsp=6or7		IHO S-52	SY(CTNARE51) + AP(TSSJCT02)

FC100

FC100

Line Full Chart ✓ Simplified Line

	Symbol Number 0656 ID Code MFC100L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	measured distance line			IHO S-52	LS(DASH,1,CHGRD)

FC101

FC101

Line Full Chart ✓ Simplified Line

	Symbol Number 0684 ID Code MFC101L0684 Description red thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	theodolite line			ORIGINAL	0684

Refer to Appendix G for true symbol scale representations.

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FC102**FC102**

Line Full Chart ✓ Simplified Line

	Symbol Number 3112 ID Code MFC102L3112 Description black thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	range center line			ORIGINAL	3112

FC130**FC130**

Line Full Chart ✓ Simplified Line

	Symbol Number 0663 ID Code MFC130L0663 Description traffic magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	radar reference line			IHO S-52	LS(DASH,2,TRFCD)

FC165**FC165**

Point Full Chart ✓ Simplified Point

	Symbol Number 0089 ID Code MFC165P0089 Description traffic magenta dashed arrow w/ 2 magenta '?'s	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	route (maritime) - direction unknown	dof=0		IHO S-52	SY(RTLDEF51)

	Symbol Number 1220 ID Code MFC165P1220 Description traffic magenta dashed open arrow	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	route (maritime) - direction known	dof<>0	dof	IHO S-52	SY(RCTLPT52)

Line Full Chart ✓ Simplified Line

	Symbol Number 0723 ID Code MFC165L0723 Description traffic magenta solid line w/ > and DW	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	route (maritime) - marked;1-way;recomm for deep draft vessels	atn=1 AND exs=22 AND rtt=3		IHO S-52	LC(DWRTCL08)

	Symbol Number 0724 ID Code MFC165L0724 Description traffic magenta dash line w/ > and DW	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	route (maritime) - unmarked;1-way;recomm for deep draft vessels	atn=2 AND exs=22 AND rtt=3		IHO S-52	LC(DWRTCL07)

Refer to Appendix G for true symbol scale representations.




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	Symbol Number 0725 ID Code MFC165L0725 Description traffic magenta solid line w/ < > and DW	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - marked;2-way;recomm for deep draft vessels	atn=1 AND exs=23 AND rtt=3	Orient	Source IHO S-52	Source ID LC(DWRTCL06)
	Symbol Number 0726 ID Code MFC165L0726 Description traffic magenta dash line w/ < > and DW	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - unmarked;2-way;recomm for deep draft vessels	atn=2 AND exs=23 AND rtt=3	Orient	Source IHO S-52	Source ID LC(DWRTCL05)
	Symbol Number 0727 ID Code MFC165L0727 Description traffic magenta dash line w/ < ? > and DW	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - unknown;recomm for deep draft vessels	exs=0 AND rtt=3	Orient	Source IHO S-52	Source ID LC(DWLDEF01)
	Symbol Number 0728 ID Code MFC165L0728 Description gray very thin line w/ >	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - marked;1-way;not recomm for deep draft vessels	atn=1 AND exs=22 AND rtt<>3	Orient	Source IHO S-52	Source ID LC(RECTRC12)
	Symbol Number 0729 ID Code MFC165L0729 Description gray very thin dash line w/ >	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - unmarked;1-way;not recomm for deep draft vessels	atn=2 AND exs=22 AND rtt<>3	Orient	Source IHO S-52	Source ID LC(RECTRC11)
	Symbol Number 0730 ID Code MFC165L0730 Description gray very thin line w/ <>	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - marked;2-way;not recomm for deep draft vessels	atn=1 AND exs=23 AND rtt<>3	Orient	Source IHO S-52	Source ID LC(RECTRC10)
	Symbol Number 0731 ID Code MFC165L0731 Description gray very thin dash line w/ <>	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - unmarked;2-way;not recomm for deep draft vessels	atn=2 AND exs=23 AND rtt<>3	Orient	Source IHO S-52	Source ID LC(RECTRC09)
	Symbol Number 0732 ID Code MFC165L0732 Description gray very thin dash line w/ < ? >	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
✓ DNC	route (maritime) - unknown;not recomm for deep draft vessels	exs=0 AND rtt<>3	Orient	Source IHO S-52	Source ID LC(RECDEF02)




Refer to Appendix G for true symbol scale representations.

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Area Full Chart ✔ Simplified Area


	Symbol Number 0097 ID Code MFC165A0097 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0742 ID Code MFC165A0742 Description magenta dash/chevron line w/caution symbol	Symbol Number 0663 ID Code MFC165A0663 Description traffic magenta thin dash line 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	route (maritime) - use unknown	rtt=0		IHO S-52	SY(CTNARE51) + LC(CTNARE51)

	Symbol Number 0098 ID Code MFC165A0098 Description traffic magenta dash dbl head arrow w/ 2 '?'s	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0734 ID Code MFC165A0734 Description magenta dash/chevron line	Symbol Number 0665 ID Code MFC165A0665 Description traffic magenta thick dash line 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	route (maritime) - 2-way	rtt=11		IHO S-52	SY(TWRDEF51) + LC(CTYARE51)




	Symbol Number 1238 ID Code MFC165A1238 Description traffic lt mag DW filled arrow btwn 2 mgnta ?	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0741 ID Code MFC165A0741 Description traffic magenta dash/chevron line w/ DW	Symbol Number 0661 ID Code MFC165A0661 Description traffic magenta dash line 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	route (maritime) - deep water	rtt=4		IHO S-52	SY(DWRTP51)+SY(TSLDEF51) + LC(DWRUTE51)

FC170**FC170**

Line Full Chart ✔ Simplified Line

	Symbol Number 0732 ID Code MFC170L0732 Description gray very thin dash line w/ < ? >	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	safety fairway			IHO S-52	LC(RECDEF02)

Area Full Chart ✔ Simplified Area

	Symbol Number 0091 ID Code MFC170A0091 Description gray ? inside angle brackets inside dashes	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)			
	Symbol Number 0716 ID Code MFC170A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MFC170A0656 Description gray very thin dash line 			
Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	safety fairway			IHO S-52	SY(RECDEF51) + LC(NAVARE51)
✔ TOD0	safety fairway			IHO S-52	SY(RECDEF51) + LC(NAVARE51)

Refer to Appendix G for true symbol scale representations.

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FC177**FC177**

Line Full Chart ✓ Simplified Line

	Symbol Number 0656 ID Code MFC177L0656 Description gray very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	swept area			IHO S-52	LS(DASH,1,CHGRD)

Area Full Chart ✓ Simplified Area

	Symbol Number 0095 ID Code MFC177A0095 Description lt gray under bar w/ upward bar on ends	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0716 ID Code MFC177A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MFC177A0656 Description gray very thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	swept area			IHO S-52	SY(SWPARE51) + LC(NAVARE51)

FC178**FC178**

Area Full Chart ✓ Simplified Area

	Symbol Number 0687 ID Code MFC178A0687 Description magenta thick long dash line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test area			HITS	Para 404.A

FC179**FC179**

Area Full Chart ✓ Simplified Area

	Symbol Number 1901 ID Code MFC179A1901 Description UI lt brown solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	side scan sonar coverage			HITS	Para 404.D

FC180**FC180**

Point Full Chart ✓ Simplified Point

	Symbol Number 0527 ID Code MFC180P0527 Description magenta filled circle	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature			ORIGINAL	0527


Refer to Appendix G for true symbol scale representations.

**MIL-DTL-89045A w/Amendment 1
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Line Full Chart Simplified Line

	Symbol Number 0686 ID Code MFC180L0686 Description magenta thick solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - not cable, not slope > 10 degrees	htc<>507and<>509		HITS	Para 315

	Symbol Number 0708 ID Code MFC180L0708 Description magenta broken zig-zag line w/ flash symbol	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - cable	htc=509		HITS	Para 315

	Symbol Number 0766 ID Code MFC180L0766 Description magenta very thin solid line with inward ticks	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - slope > 10 degrees	htc=507		HITS	Para 315


Area Full Chart Simplified Area

	Symbol Number 0825 ID Code MFC180A0825 Description lt magenta solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - hght not >2m,not slope>10 deg, not cable	htc<>503and<>507and<>509		HITS	Para 315

	Symbol Number 0826 ID Code MFC180A0826 Description magenta solid fill	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - height > 2m	htc=503		HITS	Para 315

	Symbol Number 0708 ID Code MFC180A0708 Description magenta broken zig-zag line w/ flash symbol	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - cable	htc=509		HITS	Para 315




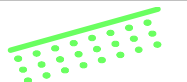

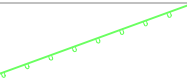
	Symbol Number 0766 ID Code MFC180A0766 Description magenta very thin solid line with inward ticks	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
TOD4	hull integrity test site bottom feature - slope > 10 degrees	htc=507		HITS	Para 315


Refer to Appendix G for true symbol scale representations.

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GA005**GA005**


Area	Full Chart	✓ Simplified	Area
	Symbol Number 0685 ID Code MGA005A0685 Description green thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	airspace - upper control area	aaa=39	OPAREA
	Symbol Number 0759 ID Code MGA005A0759 Description green thin line w/stagrd dots inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	air lanes/corridors	aaa=0or20or36or998	OPAREA
	Symbol Number 0760 ID Code MGA005A0760 Description magenta vy thin line w/ 3 row vert dots inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	airspace - air defense zone	aaa=2	OPAREA
	Symbol Number 0761 ID Code MGA005A0761 Description green vy thin line w/3 row vert dots	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	airspace - controlled	aaa=9or21or22or23or34or46or70	OPAREA
	Symbol Number 0762 ID Code MGA005A0762 Description green thin line with ticks inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	airspace - flight information region	aaa=13	OPAREA
	Symbol Number 0763 ID Code MGA005A0763 Description green thin line with open tabs inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	airspace - upper flight information region	aaa=40	OPAREA

GA015**GA015**

Area	Full Chart	✓ Simplified	Area
	Symbol Number 0764 ID Code MGA015A0764 Description magenta thin line w/ rt angle ticks inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)	
Product	Feature Description	Symbol Assignment Expression	Orient Source Source ID
✓ TOD0	special use airspace - warning area	aaa=0or5or6	OPAREA

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0765 ID Code MGA015A0765 Description magenta thin line w/ lft angle ticks inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	special use airspace - prohibited,restricted	aul=2or3		OPAREA	

GA020**GA020**

Point Full Chart ✓ Simplified Point

	Symbol Number 0501 ID Code MGA020P0501 Description lights red flare with black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	air obstruction light [DNC-specific]			IHO S-52	SY(LIGHTS11)

GA035**GA035**


Point Full Chart ✓ Simplified Point

	Symbol Number 0511 ID Code MGA035P0511 Description magenta lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	navaids (aeronautical)			IHO S-52	SY(RDOSTA02)

	Symbol Number 0517 ID Code MGA035P0517 Description magenta circle with dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - NDB	nst=17		MIL-STD-2402	1R030P004*

	Symbol Number 0518 ID Code MGA035P0518 Description magenta hexagon with dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - VOR	nst=20		MIL-STD-2402	1R030P007*

	Symbol Number 0519 ID Code MGA035P0519 Description magenta hexagon in square w/ dot in center	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - VOR/DME	nst=21		MIL-STD-2402	1R030P010*

	Symbol Number 0520 ID Code MGA035P0520 Description magenta hexagon, solid outer rectgls, cntr dot	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - VORTAC	nst=22		OPAREA	

Refer to Appendix G for true symbol
scale representations.



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	Symbol Number 0521 ID Code MGA035P0521 Description magenta hexagon, open outer rectgls, cntr dot	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - TACAN	nst=23		OPAREA	

	Symbol Number 0525 ID Code MGA035P0525 Description magenta open very thin circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	navaids (aeronautical) - unknown	nst=0		OPAREA	

	Symbol Number 7151 ID Code MGA035P7151 Description red pyramid with dot - ICAO	Symbol Number 7130 ID Code MGA035P7130 Description red vo navaids - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	navaids	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MGA035P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MGA035P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	navaids light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MGA035P7155 Description red high vo tower - ICAO	Symbol Number 7130 ID Code MGA035P7130 Description red vo navaids - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	navaids high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MGA035P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MGA035P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	navaids light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MGA035L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MGA035L7144 Description red vo thin line - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	navaids			ORIGINAL	7158

GA055

GA055

Point Full Chart ✓ Simplified Point

	Symbol Number 0522 ID Code MGA055P0522 Description green open triangle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	waypoint/reporting-calling in point - non compulsory	wpt<>10		OPAREA	

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 0523 ID Code MGA055P0523 Description green solid triangle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	waypoint/reporting-calling in point - compulsory	wpt=10		OPAREA	

GB005**GB005**

Point Full Chart ✓ Simplified Point

	Symbol Number 0090 ID Code MGB005P0090 Description feature brown outline of plane inside lg cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	airport/airfield			IHO S-52	SY(AIRARE02)

	Symbol Number 2267 ID Code MGB005P2267 Description aero-blue airplane	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	airport/airfield - non military; operational	exs=28 AND use<>8and<>22		MIL-STD-2402	1U030P001*
✓ FFD	airport/airfield - civilian, operational	exs=28 AND use<>8and<>22		MIL-STD-2402	1U030P001*
✓ UVM	airport/airfield - non military; operational	exs=28 AND use<>8and<>22		MIL-STD-2402	1U030P001*
✓ VML0	airport/airfield - non military	use<>8and<>22		MIL-STD-2402	1U030P001*
✓ VML1	airport/airfield - operational; non military	exs=28 AND use<>8and<>22		MIL-STD-2402	1U030P001*
✓ VML2	airport/airfield - operational; non military	exs=28 AND use<>8and<>22		MIL-STD-2402	1U030P001*

	Symbol Number 2268 ID Code MGB005P2268 Description lt gray airplane	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	airport/airfield - not operational	exs<>28		MIL-STD-2402	1U030P001*
✓ FFD	airport/airfield - non-operational	exs<>28		MIL-STD-2402	1U030P001*
✓ UVM	airport/airfield - not operational	exs<>28		MIL-STD-2402	1U030P001*
✓ VML1	airport/airfield - not operational	exs<>28		MIL-STD-2402	1U030P001*
✓ VML2	airport/airfield - not operational	exs<>28		MIL-STD-2402	1U030P001*


	Symbol Number 2269 ID Code MGB005P2269 Description lt red brown airplane	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	airport/airfield - military; operational	exs=28 AND use=8or22		MIL-STD-2402	1U030P001*
✓ FFD	airport/airfield - military, operational	exs=28 AND use=8or22		MIL-STD-2402	1U030P001*
✓ UVM	airport/airfield - military; operational	exs=28 AND use=8or22		MIL-STD-2402	1U030P001*
✓ VML0	airport/airfield - military	use=8or22		MIL-STD-2402	1U030P001*
✓ VML1	airport/airfield - operational; military	exs=28 AND use=8or22		MIL-STD-2402	1U030P001*
✓ VML2	airport/airfield - operational; military	exs=28 AND use=8or22		MIL-STD-2402	1U030P001*


Refer to Appendix G for true symbol scale representations.


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Area Full Chart ✓ Simplified Area

	Symbol Number 0822 ID Code MGB005A0822 Description lt brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	airport/airfield			IHO S-52	LS(SOLD,1,CHBLK) + AP(AIRARE02)

	Symbol Number 0600 ID Code MGB005A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0932 ID Code MGB005A0932 Description feature brown airplane patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	airport/airfield			IHO S-52	LS(SOLD,1,CHBLK) + AP(AIRARE02)

	Symbol Number 4183 ID Code MGB005A4183 Description aero-blue solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	airport/airfield			MIL-STD-2402	1U030A015
✓ FFD	airport/airfield			MIL-STD-2402	1U030A015
✓ UVM	airport/airfield			MIL-STD-2402	1U030A015
✓ VML2	airport/airfield			MIL-STD-2402	1U030A015

GB010

GB010

Point Full Chart ✓ Simplified Point

	Symbol Number 0503 ID Code MGB010P0503 Description lights yellow flare with black outline	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DNC	airport lighting			IHO S-52	SY(LIGHTS13)

	Symbol Number 1012 ID Code MGB010P1012 Description aero-blue solid filled star	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	airport lighting			MIL-STD-2402	1U040P004
✓ UVM	airport lighting			MIL-STD-2402	1U040P004
✓ VML1	airport lighting			MIL-STD-2402	1U040P004
✓ VML2	airport lighting			MIL-STD-2402	1U040P004

Refer to Appendix G for true symbol
scale representations.

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GB015**GB015**



Area Full Chart ✓ Simplified Area

	Symbol Number 3082 ID Code MGB015A3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4105 ID Code MGB015A4105 Description lt gray rt diag thin line patt fill	Symbol Number 4100 ID Code MGB015A4100 Description lt gray solid fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	apron/hardstand			ORIGINAL	3082 4105
✓ UVM	apron/hardstand			ORIGINAL	3082 4105
✓ VML2	apron/hardstand			ORIGINAL	3082 4105

GB030**GB030**

Point Full Chart ✓ Simplified Point

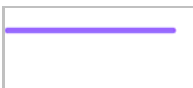

	Symbol Number 1013 ID Code MGB030P1013 Description aero-blue "H" inside aero-blue square	Symbol Number 6032 ID Code MGB030P6032 Description aero-blue "H" inside aero-blue square	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	helicopter landing pad at hospital	apt=11		STANAG 3675	703

	Symbol Number 6032 ID Code MGB030P6032 Description aero-blue "H" inside aero-blue square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	helicopter landing pad	apt<>11		STANAG 3675	703
✓ UVM	helicopter landing pad			STANAG 3675	703

Area Full Chart ✓ Simplified Area

	Symbol Number 3052 ID Code MGB030A3052 Description aero-blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 1612 ID Code MGB030A1612 Description aero-blue cross hatch patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	helicopter landing pad			ORIGINAL	3052 1612

GB035**GB035**

Point Full Chart ✓ Simplified Point

	Symbol Number 6032 ID Code MGB035P6032 Description aero-blue "H" inside aero-blue square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	heliport			STANAG 3675	

Refer to Appendix G for true symbol scale representations.

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Area Full Chart ✓ Simplified Area

	Symbol Number 4184 ID Code MGB035A4184 Description aero-blue very thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ FFD	heliport			ORIGINAL	4184
✓ UVM	heliport			ORIGINAL	4184

GB040**GB040**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MGB040P7151 Description red pyramid with dot - ICAO	Symbol Number 7132 ID Code MGB040P7132 Description red vo pad - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	launch pad	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MGB040P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MGB040P7142 Description red vo light component - GTRI	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	launch pad light	atn=3 AND hgt>0and<304		ORIGINAL	7152

	Symbol Number 7155 ID Code MGB040P7155 Description red high vo tower - ICAO	Symbol Number 7132 ID Code MGB040P7132 Description red vo pad - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	launch pad high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MGB040P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MGB040P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	launch pad light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

GB045**GB045**

Line Full Chart ✓ Simplified Line



	Symbol Number 3073 ID Code MGB045L3073 Description aero-blue thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	overrun/stopway			ORIGINAL	3073

Refer to Appendix G for true symbol
scale representations.

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AreaFull Chart✓ SimplifiedArea

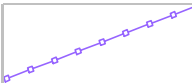

	Symbol Number 3073 ID Code MGB045A3073 Description aero-blue thin short dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4098 ID Code MGB045A4098 Description aero-blue wide rt diag line patt fill	

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	overrun/stopway			ORIGINAL	3073 4098
✓ UVM	overrun/stopway			ORIGINAL	3073 4098
✓ VML2	overrun/stopway			ORIGINAL	3073 4098

GB050



GB050

LineFull Chart✓ SimplifiedLine

	Symbol Number 1313 ID Code MGB050L1313 Description aero-blue line w/ squares	Symbol Number 3070 ID Code MGB050L3070 Description aero-blue thin solid line	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	revetment (airfield)			ORIGINAL	1313

AreaFull Chart✓ SimplifiedArea

	Symbol Number 1512 ID Code MGB050A1512 Description aero-blue vy thin line double ticks	Symbol Number 3070 ID Code MGB050A3070 Description aero-blue thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	revetment (airfield)			MIL-STD-2402	4B090A002



GB055

GB055

PointFull Chart✓ SimplifiedPoint

	Symbol Number 2273 ID Code MGB055P2273 Description aero-blue solid cir w/ open diag band	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)		
--	--	---	--	--

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	runway - operational	exs=28		MIL-STD-2402	1U160P003

	Symbol Number 2281 ID Code MGB055P2281 Description gray cir w/ open diag band	Symbol Number 2273 ID Code MGB055P2273 Description aero-blue solid cir w/ open diag band	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML1	runway - not operational	exs<>28		MIL-STD-2402	1U160P003

Refer to Appendix G for true symbol
scale representations.

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Line Full Chart ✔ Simplified Line

	Symbol Number 0606 ID Code MGB055L0606 Description feature brown solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	runway			IHO S-52	LS(SOLD,3,LANDF)

	Symbol Number 3069 ID Code MGB055L3069 Description aero-blue very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	runway			MIL-STD-2402	1U160L006
✔ VITD	runway			MIL-STD-2402	1U160L006
✔ VML1	runway			MIL-STD-2402	1U160L006

Area Full Chart ✔ Simplified Area

	Symbol Number 4089 ID Code MGB055A4089 Description aero-blue solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	runway			MIL-STD-2402	1U160A006
✔ FFD	runway			MIL-STD-2402	1U160A006
✔ UVM	runway			MIL-STD-2402	1U160A006
✔ VITD	runway			MIL-STD-2402	1U160A009
✔ VML2	runway			MIL-STD-2402	1U160A006

	Symbol Number 0600 ID Code MGB055A0600 Description black very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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	Symbol Number 0804 ID Code MGB055A0804 Description brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	runway			IHO S-52	LS(SOLD,1,CHBLK) + AC(CHBRN)

GB065**GB065**

Point Full Chart ✔ Simplified Point

	Symbol Number 0080 ID Code MGB065P0080 Description magenta solid filled diamond inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ FFD	seaplane base			ORIGINAL	0080

Refer to Appendix G for true symbol
scale representations.

MIL-DTL-89045A w/Amendment 1 APPENDIX A

Area Full Chart ✔ Simplified Area

	Symbol Number 4186 ID Code MGB065A4186 Description magenta thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ FFD	seaplane base			ORIGINAL	4186

GB070



GB070

Line Full Chart ✔ Simplified Line

	Symbol Number 0634 ID Code MGB070L0634 Description magenta very thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	seaplane landing/seaplane take-off area			IHO S-52	LS(DASH,1,CHMGD)

Area Full Chart ✔ Simplified Area

	Symbol Number 0093 ID Code MGB070A0093 Description traffic lt magenta ! Inside lg circle	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0734 ID Code MGB070A0734 Description magenta dash/chevron line	Symbol Number 0634 ID Code MGB070A0634 Description magenta very thin dash line

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	seaplane landing/seaplane take-off area			IHO S-52	SY(CTYARE51) + LC(CTYARE51)

GB075

GB075

Line Full Chart ✔ Simplified Line

	Symbol Number 3070 ID Code MGB075L3070 Description aero-blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ UVM	taxiway			MIL-STD-2402	1U200L002

Area Full Chart ✔ Simplified Area

	Symbol Number 3070 ID Code MGB075A3070 Description aero-blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	taxiway			MIL-STD-2402	1U200A002
✔ UVM	taxiway			MIL-STD-2402	1U200A002
✔ VML2	taxiway			MIL-STD-2402	1U200A002

Refer to Appendix G for true symbol
scale representations.



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APPENDIX A**

GB220**GB220**



Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MGB220P7151 Description red pyramid with dot - ICAO	Symbol Number 7134 ID Code MGB220P7134 Description red vo obs - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MGB220P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MGB220P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction light	atn=3 AND hgt>0and<304		ORIGINAL	7152



	Symbol Number 7155 ID Code MGB220P7155 Description red high vo tower - ICAO	Symbol Number 7134 ID Code MGB220P7134 Description red vo obs - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MGB220P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MGB220P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156



Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MGB220L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MGB220L7144 Description red vo thin line - GTRI	
--	--	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction			ORIGINAL	7158

GB221**GB221**

Point Full Chart ✓ Simplified Point

	Symbol Number 7151 ID Code MGB221P7151 Description red pyramid with dot - ICAO	Symbol Number 7136 ID Code MGB221P7136 Description red vo obs misc - GTRI	
--	--	---	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction miscellaneous	hgt>0and<304		ORIGINAL	7151

	Symbol Number 7152 ID Code MGB221P7152 Description red pyramid lit component - ICAO	Symbol Number 7142 ID Code MGB221P7142 Description red vo light component - GTRI	
--	---	--	---



Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction miscellaneous light	atn=3 AND hgt>0and<304		ORIGINAL	7152

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 7155 ID Code MGB221P7155 Description red high vo tower - ICAO	Symbol Number 7136 ID Code MGB221P7136 Description red vo obs misc - GTRI	
--	---	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction miscellaneous high	hgt=-32767 OR hgt>=304		ORIGINAL	7155

	Symbol Number 7156 ID Code MGB221P7156 Description red high vo tower lit component - ICAO	Symbol Number 7142 ID Code MGB221P7142 Description red vo light component - GTRI	
--	---	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction miscellaneous light high	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304		ORIGINAL	7156

Line Full Chart ✓ Simplified Line

	Symbol Number 7158 ID Code MGB221L7158 Description red vo thin line - ICAO	Symbol Number 7144 ID Code MGB221L7144 Description red vo thin line - GTRI	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VVOD	air obstruction miscellaneous			ORIGINAL	7158

SA010

SA010

Area Full Chart ✓ Simplified Area



	Symbol Number 4265 ID Code MSA010A4265 Description basic blue thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	common open water			ORIGINAL	4265

SA020

SA020

Area Full Chart ✓ Simplified Area

	Symbol Number 4203 ID Code MSA020A4203 Description depth gray line w/ two dashes	Symbol Number 4201 ID Code MSA020A4201 Description depth gray thin dash line	
--	--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	disturbed soil			ORIGINAL	4203

SA030

SA030

Area Full Chart ✓ Simplified Area

	Symbol Number 4202 ID Code MSA030A4202 Description depth gray thin dotted line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	exposed bedrock			ORIGINAL	4202

Refer to Appendix G for true symbol scale representations.

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SA040**SA040**

Area Full Chart ✓ Simplified Area

	Symbol Number 1655 ID Code MSA040A1655 Description basic blue thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	permanent snowfield			ORIGINAL	1655

SA050**SA050**

Area Full Chart ✓ Simplified Area

	Symbol Number 0803 ID Code MSA050A0803 Description yellow-green solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	slope polygon - 0 to >45%, dissected	gsc=1		ORIGINAL	0803

	Symbol Number 1601 ID Code MSA050A1601 Description red solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 60% and <= 85%	spr=7		ORIGINAL	1601

	Symbol Number 1901 ID Code MSA050A1901 Description UI It brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 10% and <= 15%	spr=2		ORIGINAL	1901
✓ VITD	slope polygon - > 10% and <= 20%	gsc=4		ORIGINAL	1901

	Symbol Number 1902 ID Code MSA050A1902 Description dk beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 15% and <= 20%	spr=3		ORIGINAL	1902

	Symbol Number 1903 ID Code MSA050A1903 Description rose solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 20% and <= 30%	spr=4		ORIGINAL	1903
✓ VITD	slope polygon - > 20% and <= 30%	gsc=5		ORIGINAL	1903

	Symbol Number 1904 ID Code MSA050A1904 Description golden yellow solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 30% and <= 45%	spr=5		ORIGINAL	1904
✓ VITD	slope polygon - > 30% and <= 45%	gsc=6		ORIGINAL	1904

Refer to Appendix G for true symbol
scale representations.

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(white)	Symbol Number 1905 ID Code MSA050A1905 Description basic white solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - % unknown	spr=999		ORIGINAL	1905
✓ VITD	slope polygon - % unknown	gsc=0		ORIGINAL	1905

	Symbol Number 1906 ID Code MSA050A1906 Description lt red brown solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 85%	spr=8		ORIGINAL	1906

	Symbol Number 4002 ID Code MSA050A4002 Description lt beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - <= 3%	spr=0		ORIGINAL	4002
✓ VITD	slope polygon - <= 3%	gsc=2		ORIGINAL	4002

	Symbol Number 4003 ID Code MSA050A4003 Description beige solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 3% and <= 10%	spr=1		ORIGINAL	4003
✓ VITD	slope polygon - > 3% and <= 10%	gsc=3		ORIGINAL	4003

	Symbol Number 4175 ID Code MSA050A4175 Description lt orange solid fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOP	slope polygon - > 45% and <= 60%	spr=6		ORIGINAL	4175
✓ VITD	slope polygon - > 45%	gsc=7		ORIGINAL	4175

SA060

SA060

Line Full Chart ✓ Simplified Line

	Symbol Number 3117 ID Code MSA060L3117 Description black thin dash line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VITD	covered drainage			MIL-STD-2402	2H020L018

SU001

SU001

Point Full Chart ✓ Simplified Point

	Symbol Number 2274 ID Code MSU001P2274 Description red "M" inside cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	---	---

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	military base			ORIGINAL	2274

Refer to Appendix G for true symbol
scale representations.

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Area Full Chart ✓ Simplified Area

	Symbol Number 3104 ID Code MSU001A3104 Description red solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ VML0	military base			ORIGINAL	3104

ZB020**ZB020**

Point Full Chart ✓ Simplified Point

	Symbol Number 2279 ID Code MZB020P2279 Description black triangle w/ dot inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ UVM	benchmark			ORIGINAL	2279

ZB030**ZB030**

Point Full Chart ✓ Simplified Point

	Symbol Number 2278 ID Code MZB030P2278 Description black dot in square	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOB	boundary monument			MIL-STD-2402	9B030P001
✓ VML2	boundary monument			MIL-STD-2402	9B030P001

ZB035**ZB035**

Point Full Chart ✓ Simplified Point

	Symbol Number 0078 ID Code MZB035P0078 Description black sm cir	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	control point/control station			IHO S-52	SY(POSGEN04)

	Symbol Number 2279 ID Code MZB035P2279 Description black triangle w/ dot inside	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
--	--	---




Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ DTOB	control point/control station			MIL-STD-2402	9B035P001
✓ UVM	control point/control station			MIL-STD-2402	9B035P001
✓ VML1	control point/control station			MIL-STD-2402	9B035P001
✓ VML2	control point/control station			MIL-STD-2402	9B035P001

Refer to Appendix G for true symbol
scale representations.




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ZC040**ZC040**

Area Full Chart ✔ Simplified Area

	Symbol Number 0733 ID Code MZC040A0733 Description lt magenta open flag	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0716 ID Code MZC040A0716 Description gray dash/chevron line	Symbol Number 0656 ID Code MZC040A0656 Description gray very thin dash line 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DNC	magnetic disturbance area			IHO S-52	SY(LOCMAG51) + LC(NAVARE51)

	Symbol Number 0733 ID Code MZC040A0733 Description lt magenta open flag	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 0716 ID Code MZC040A0716 Description gray dash/chevron line	Symbol Number 0657 ID Code MZC040A0657 Description gray thick dash line 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ VML1	magnetic disturbance area			IHO S-52	SY(LOCMAG51) + LC(NAVARE51)

ZD003**ZD003**




Line Full Chart ✔ Simplified Line

	Symbol Number 0600 ID Code MZD003L0600 Description black very thin solid line	
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Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
WVS	artifact location			ORIGINAL	0600

ZD020**ZD020**

Area Full Chart ✔ Simplified Area

	Symbol Number 3082 ID Code MZD020A3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4105 ID Code MZD020A4105 Description lt gray rt diag thin line patt fill	Symbol Number 4100 ID Code MZD020A4100 Description lt gray solid fill 

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✔ DTOP	void collection area			ORIGINAL	3082 4105
✔ FFD	void collection area			ORIGINAL	3082 4105
✔ VML1	void collection area			ORIGINAL	3082 4105
✔ VML2	void collection area			ORIGINAL	3082 4105

Refer to Appendix G for true symbol scale representations.

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	Symbol Number 3082 ID Code MZD020A3082 Description gray very thin solid line	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)
	Symbol Number 4105 ID Code MZD020A4105 Description lt gray rt diag thin line patt fill	(SIMPLIFIED SYMBOLOGY SAME AS STANDARD SYMBOLOGY)

Product	Feature Description	Symbol Assignment Expression	Orient	Source	Source ID
✓ TOD0	void collection area			ORIGINAL	3082 4105
✓ TOD1	void collection area			ORIGINAL	3082 4105
✓ TOD2	void collection area			ORIGINAL	3082 4105
✓ TOD3	void collection area			ORIGINAL	3082 4105
TOD4	void collection area			ORIGINAL	3082 4105
✓ VML0	void collection area			ORIGINAL	3082 4105

Refer to Appendix G for true symbol
scale representations.

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w/Amendment 1
APPENDIX B

TEXT LABEL ASSIGNMENTS

B.1 SCOPE

B.1.1 Scope. This appendix presents the text label information that is contained within the GeoSym symbology assignment tables. It is a mandatory part of the specification. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

B.3 TEXT LABELS IN GEOSYM

GeoSym contains the ability to assign a text label to augment the graphic symbology assignment. This is accomplished via the "labatt" column of the symbology assignment file. If this column is populated with one or more attribute values, then the value contained in the attribute(s) should be placed according to the instructions contained in the various text label assignment files table (see section 3.5.3.1.3). Appendix B is sorted by fcode, delineation, and VPF product. Refer to the MIL-HDBK-857A section 6.8 for instructions on how to use the text labeling information to place a text label for a point, line, or area feature.

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APPENDIX B

Text Label Assignments

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AA010**AA010****Point**

DTOP	mine - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	mine - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1	mine/quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	mine/quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

Line

UVM	mine - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

DTOP	mine - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	mine - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1	mine/quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	mine/quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

AA012**AA012****Point**

UVM	quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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Line

UVM	quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	quarry - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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AA040**AA040****Point**

VVOD	rig / superstructure - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	rig / superstructure - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AA050**AA050****Point**

DTOP	well - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	well - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1	well - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	well - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

**MIL-DTL-89045A w/Amendment 1
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AB000**AB000****Point**

VVOD	disposal site/waste pile - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	disposal site/waste pile - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AC000**AC000****Point**

DTOP	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	processing plant/treatment plant - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	processing plant/treatment plant - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

DTOP	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	processing plant/treatment plant - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AC010**AC010****Point**

VVOD	blast furnace - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	blast furnace - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AC020**AC020****Point**

VVOD	catalytic cracker - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	catalytic cracker - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AC030**AC030****Area**

UVM	settling basin/sludge pond - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AD010**AD010****Point**

VML1	power plant - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	power plant/power station - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	power plant/power station - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

DTOP	power plant - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	power plant - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	power plant - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	power plant - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AD030**AD030****Point**

UVM	substation/transformer yard - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	substation/transformer yard - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	substation/transformer yard - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	substation/transformer yard - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AF010**AF010****Point**

VVOD	chimney/smokestack - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	chimney/smokestack - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AF020**AF020****Point**

VVOD	conveyor - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	conveyor - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AF030**AF030****Point**

VVOD	cooling tower - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	cooling tower - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AF040**AF040****Point**

VVOD	crane - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	crane - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AF050**AF050****Point**

VVOD	dredge/powershovel/dragline - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	dredge/powershovel/dragline - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AF070**AF070****Point**

VVOD	flare pipe - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	flare pipe - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AF080**AF080****Point**

VVOD	hopper - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	hopper - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AH010**AH010****Point**

UVM	bastion/rampart/fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Line

UVM	bastion/rampart/fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	bastion/rampart/fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AH050**AH050****Point**

DTOP	fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
UVM	fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1	fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2	fortification - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	fortification - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	fortification - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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Line

UVM	fortification - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

DTOP	fortification - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	fortification - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	fortification - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	fortification - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AH060**AH060****Point**

UVM	underground bunker - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Line

UVM	underground bunker - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	underground bunker - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AJ030**AJ030****Area**

UVM	feedlot/stockyard/holding pen - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AJ050**AJ050****Point**

VVOD	windmill - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	windmill - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AJ051**AJ051****Point**

VVOD	windmotor - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	windmotor - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AK020**AK020****Point**

VVOD	amusement park attraction - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	amusement park attraction - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AK030**AK030****Area**

DTOP	amusement park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	amusement park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	amusement park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK040**AK040****Area**

DTOP	athletic field - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	athletic field - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	athletic field - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK060**AK060****Area**

DTOP	campground/campsite - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	campground/campsite - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	campground/campsite - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK090**AK090****Area**

DNC	fairgrounds - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
DTOP	fairgrounds - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	fairgrounds - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	fairgrounds - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK100**AK100****Area**

DTOP	golf course - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	golf course - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	golf course - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK120**AK120****Area**

DTOP	park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AK130**AK130****Line**

DTOP	race track - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	race track - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	race track - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	race track - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

UVM	race track - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AK150**AK150****Point**

VVOD	ski jump - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	ski jump - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AK160**AK160****Point**

VML1	stadium/amphitheater - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	stadium/amphitheater - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	stadium/amphitheater - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

DTOP	stadium/amphitheater - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	stadium/amphitheater - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	stadium/amphitheater - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AK180**AK180****Area**

DTOP	zoo/safari park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	zoo/safari park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	zoo/safari park - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL015**AL015****Point**

DNC	building - not maritime station, light label	bfc<>81 AND col<>"UNK"	col	Sans Serif	Normal	center left	black	10	4	90
DNC	building - maritime station - sound signal label (abbreviated)	bfc=81 AND sst<>0and<>16	sst	Sans Serif	Normal	center right	black	10	6	270

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DTOP building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
UVM building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1 building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2 building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD building - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD building - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Line

DTOP building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

DTOP building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL018

AL018

Point

VVOD building superstructure addition - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD building superstructure addition - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AL020

AL020

Point

DNC built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML0 built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1 built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

Area

FFD built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML0 built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 built-up area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL030

AL030

Point

UVM cemetery - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

DTOP cemetery - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM cemetery - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
VML2 cemetery - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL045**AL045****Area**

FFD complex outline - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM complex outline - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL050**AL050****Point**

VVOD display sign - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD display sign - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AL105**AL105****Point**

VML2 settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

FFD settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL110**AL110****Point**

VVOD light standard/light support - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD light standard/light support - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AL120**AL120****Point**

UVM missile site - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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Line

UVM missile site - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM missile site - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AL130**AL130****Point**

DTOP monument - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM monument - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1 monument - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2 monument - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD monument - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90

**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
VVOD monument - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM monument - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AL135

AL135

Point

UVM native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML0 native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

Area

FFD native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML0 native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 native settlement - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL170

AL170

Area

DTOP plaza/city square - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM plaza/city square - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 plaza/city square - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL200

AL200

Point

UVM ruins - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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Area

DTOP ruins - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM ruins - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 ruins - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AL240

AL240

Point

DNC tower - light label	col<>"UNK"	col	Sans Serif	Normal	center left	black	10	4	90
VVOD tower (non-communication) - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD tower (non-communication) - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AL250**AL250****Area**

UVM	underground dwelling - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM010**AM010****Point**

UVM	depot (storage) - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	depot - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	depot - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	depot (storage) - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM020**AM020****Point**

UVM	grain bin/silo - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	grain bin/silo - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	grain bin/silo - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	grain bin/silo - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM030**AM030****Point**

UVM	grain elevator - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	grain elevator - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	grain elevator - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	grain elevator - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM040**AM040****Area**

UVM	mineral pile - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM060**AM060****Point**

UVM	storage bunker/storage mound - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

UVM	storage bunker/storage mound - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AM070**AM070****Point**

DNC	tank - light label	col<>"UNK"	col	Sans Serif	Normal	center left	black	10	4	90
UVM	tank - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	tank - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	tank - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	tank - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AM080**AM080****Point**

UVM	water tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	water tower - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	water tower - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

UVM	water tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AN010**AN010****Line**

UVM	railroad - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	railroad - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	railroad - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AN060**AN060****Area**

UVM	railroad yard/marshaling yard - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AN075**AN075****Area**

UVM	railroad turntable - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AP020**AP020****Line**

UVM	interchange - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	interchange - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AP030**AP030****Line**

UVM	road - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	road - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	road - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

UVM	road - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AP040**AP040****Point**

UVM	gate - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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AQ020**AQ020****Point**

VVOD	aerial cableway pylon/ski pylon - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	aerial cableway pylon/ski pylon - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AQ040**AQ040****Point**

UVM	bridge/overpass/viaduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
VVOD	bridge/overpass/viaduct - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	bridge/overpass/viaduct - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Line

DNC	bridge/overpass/viaduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	bridge/overpass/viaduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

DNC	bridge/overpass/viaduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	bridge/overpass/viaduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AQ050**AQ050****Point**

VVOD	bridge superstructure - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	bridge superstructure - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

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APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AQ055**AQ055****Point**

VVOD	bridge tower/bridge pylon - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	bridge tower/bridge pylon - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AQ060**AQ060****Point**

UVM	control tower - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	control tower - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	control tower - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AQ070**AQ070****Point**

UVM	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
VML1	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
VML2	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90

Line

UVM	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	ferry crossing - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AQ090**AQ090****Point**

UVM	entrance/exit - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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AQ110**AQ110****Point**

UVM	mooring mast - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
VVOD	mooring mast - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	mooring mast - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AQ125**AQ125****Point**

UVM	station (miscellaneous) - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

UVM	station (miscellaneous) - name label	nam<->"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AQ130**AQ130****Point**

DTOP	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
FFD	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

Line

DTOP	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
FFD	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	tunnel - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AQ150**AQ150****Area**

UVM	flight of steps - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AT006**AT006****Point**

VVOD	overhead cable - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	overhead cable - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AT010**AT010****Point**

VVOD	disk/dish - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	disk/dish - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AT020**AT020****Point**

UVM	early warning radar site - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
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Line

UVM	early warning radar site - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	early warning radar site - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AT040**AT040****Point**

UVM	power transmission pylon - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	power transmission pylon - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	power transmission pylon - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

AT045**AT045****Point**

UVM	radar transmitter - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
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Line

UVM	radar transmitter - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	radar transmitter - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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AT050**AT050****Point**

DTOP	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	communication building - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	communication building - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Area

DTOP	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	communication building - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

AT070**AT070****Point**

UVM	telephone-telegraph pylon/pole - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	telephone-telegraph pylon/pole - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	telephone-telegraph pylon/pole - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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AT080**AT080****Point**

DNC	communication tower - light label	col<>"UNK"	col	Sans Serif	Normal	center left	black	10	4	90
DTOP	communication tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
UVM	communication tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1	communication tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	communication tower - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD	communication tower - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	communication tower - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BA030**BA030****Area**

FFD	island - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	island - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	island - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BA040**BA040****Area**

FFD	water (except inland) - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	water (except inland) - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML0	water (except inland) - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BA050**BA050****Area**

UVM	beach - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BB010**BB010****Point**

DNC	anchorage - anchoring berth - name label	mac=12 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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Area

DNC	anchorage - anchoring berth - name label	mac=12 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	5	90
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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BB020**BB020****Point**

DNC	berth - ber label	ber<>"UNK"	ber	Sans Serif	Normal	bottom left	black	10	4	90
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BB050**BB050****Point**

DNC	calling-in point - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	7	90
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BB170**BB170****Point**

DNC	offshore loading facility - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	45
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Area

DNC	offshore loading facility - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BC010**BC010****Point**

DNC	beacon - color label (abbreviated)	ccc<>0	ccc	Sans Serif	Normal	bottom right	black	10	11	300
DNC	beacon - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom right	black	10	10	270
DNC	beacon - sound signal label (abbreviated)	sst<>0and<>16	sst	Sans Serif	Normal	bottom right	black	10	11	250

BC020**BC020****Point**

DNC	buoy - color label (abbreviated)	ccc<>0	ccc	Sans Serif	Normal	bottom right	black	10	11	300
DNC	buoy - light label - col	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	col	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,eol (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,eol,l vn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,eol,l vn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,eol, mlr	Sans Serif	Normal	bottom left	black	10	10	90

**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description		Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC	buoy - light label - col,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	col,per	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,eol (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,per, eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,per, eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0and<>NULL AND eol<>0and<>NULL AND lvn<>0and<>NULL AND mlr<>"UNK"and<>NULL	col,per, eol,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per, eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,per, lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,per, lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - col,per,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - eol	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - eol,lvn (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	buoy - light label - eol,lvn,mlr (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	eol,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90

**MIL-DTL-89045A w/Amendment 1
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC buoy - light label - eol,mrlr (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mrlr<>"UNK"and<>NULL	eol,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - lvn	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mrlr="UNK"orNULL	lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - lvn,mrlr (concatenated)	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mrlr<>"UNK"and<>NULL	lvn,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - mrlr	col="UNK" AND per=0 AND eol=0 AND lvn=0 AND mrlr<>"UNK"and<>NULL	mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom right	black	10	10	270
DNC buoy - light label - per	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mrlr="UNK"orNULL	per	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,eol (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mrlr="UNK"orNULL	per,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,eol,lvn (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mrlr="UNK"orNULL	per,eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,eol,lvn,mrlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mrlr<>"UNK"and<>NULL	per,eol,lvn,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,eol,mrlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mrlr<>"UNK"and<>NULL	per,eol,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,lvn (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mrlr="UNK"orNULL	per,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,lvn,mrlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mrlr<>"UNK"and<>NULL	per,lvn,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - light label - per,mrlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mrlr<>"UNK"and<>NULL	per,mrlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC buoy - sound signal label (abbreviated)	sst<>0and<>16	sst	Sans Serif	Normal	bottom right	black	10	11	250

BC040**BC040****Point**

DNC light - color label (abbreviated)	ccc<>0	ccc	Sans Serif	Normal	bottom right	black	10	11	300
DNC light - light label - col	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mrlr="UNK"orNULL	col	Sans Serif	Normal	bottom left	black	10	10	90

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Product Feature Description		Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC	light - light label - col,eol (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,eol,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	col,per	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,eol (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,per,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,per,eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0and<>NULL AND eol<>0and<>NULL AND lvn<>0and<>NULL AND mlr<>"UNK"and<>NULL	col,per,eol,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per,eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,per,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - col,per,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,per,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90

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Product Feature Description		Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC	light - light label - col,per,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - eol	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light (concatenated) light label only eol,lvn	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light(concatenated) light label w/o col,per	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	eol,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - eol,mlr (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - lvn	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - lvn,mlr (concatenated)	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - mlr	col="UNK" AND per=0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom right	black	10	10	270
DNC	light - light label - per	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	per	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,eol (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	per,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,eol,lvn (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	per,eol, lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,eol,lvn,mlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	per,eol, lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,eol,mlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	per,eol, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,lvn (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	per,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,lvn,mlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	per,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC	light - light label - per,mlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	per,mlr	Sans Serif	Normal	bottom left	black	10	10	90

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC light - sound signal label (abbreviated)	sst<>0and<>16	sst	Sans Serif	Normal	bottom right	black	10	11	250
VVOD light - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD light - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BC050**BC050****Point**

VVM lighthouse - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VVOD lighthouse - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD lighthouse - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BC070**BC070****Point**

DNC lightship - light label - col	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	col	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,eol,l vn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,eol,l vn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,eol, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,lvn (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,mlr (concatenated)	col<>"UNK"and<>NULL AND per=0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	col,per	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,eol (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	col,per, eol	Sans Serif	Normal	bottom left	black	10	10	90

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC lightship - light label - col,per,eol,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	col,per, eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,eol,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0and<>NULL AND eol<>0and<>NULL AND lvn<>0and<>NULL AND mlr<>"UNK"and<>NULL	col,per, eol,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,eol,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per, eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,lvn (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	col,per, lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,lvn,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	col,per, lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - col,per,mlr (concatenated)	col<>"UNK"and<>NULL AND per<>0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	col,per, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - eol	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	eol	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - eol,lvn (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - eol,lvn,mlr (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	eol,lvn, mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - eol,mlr (concatenated)	col="UNK" AND per=0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - lvn	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - lvn,mlr (concatenated)	col="UNK" AND per=0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - mlr	col="UNK" AND per=0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC light vessel/lightship - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom right	black	10	10	270
DNC lightship - light label - per	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mlr="UNK"orNULL	per	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - per,eol (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mlr="UNK"orNULL	per,eol	Sans Serif	Normal	bottom left	black	10	10	90

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
DNC lightship - light label - per,eol,lvn (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mlr="UNK"orNULL	per,eol,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC light - light label - col,per,eol,mlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	per,eol,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - per,eol,mlr (concatenated)	col="UNK" AND per<>0 AND eol<>0 AND lvn=0 AND mlr<>"UNK"and<>NULL	per,eol,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - per,lvn (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mlr="UNK"orNULL	per,lvn	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - per,lvn,mlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn<>0 AND mlr<>"UNK"and<>NULL	per,lvn,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC lightship - light label - per,mlr (concatenated)	col="UNK" AND per<>0 AND eol=0 AND lvn=0 AND mlr<>"UNK"and<>NULL	per,mlr	Sans Serif	Normal	bottom left	black	10	10	90
DNC light vessel/lightship - sound signal label (abbreviated)	sst<>0and<>16	sst	Sans Serif	Normal	bottom right	black	10	11	250
VVOD light vessel/lightship - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD light vessel/lightship - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BD005**BD005****Point**

TOD1	miscellaneous underwater feature - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
TOD2	miscellaneous underwater feature - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
TOD3	miscellaneous underwater feature - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

BD110**BD110****Point**

DNC	platform - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	45
DNC	platform - sound signal label (abbreviated)	sst<>0and<>16	sst	Sans Serif	Normal	center right	black	10	6	270
VVOD	platform - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	platform - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BD120**BD120****Line**

VML1	reef - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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Area

VML1	reef - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BD130**BD130****Point**

DTOP	rock - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1	rock - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2	rock - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

BD180**BD180****Point**

TOD1	wreck - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
TOD2	wreck - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
TOD3	wreck - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

BE010**BE010****Line**

DNC	depth curve - label	crv<>99999	crv	Sans Serif	Normal	sounding text	sounding	10	0	0
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BE015**BE015****Line**

TOD1	depth curve - label	crv<>-32767	crv	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD2	depth curve - label	crv<>-32767	crv	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD3	depth curve - label	crv<>-32767	crv	Sans Serif	Normal	sounding text	sounding	10	0	0

BE020**BE020****Point**

DNC	drying height text (dark)	hdh>=0 AND hdp=NULL	hdh	Sans Serif	Normal	sounding text	sounding	10	0	0
DNC	sounding text (dark) - shallower than ssdc	hdp<=ssdc AND hdh=NULL	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
DNC	sounding text (light) - deeper than ssdc	hdp>ssdc AND hdh=NULL	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD1	sounding text (dark) - shallower than 200m	hdp<200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD1	sounding text (light) - deeper than 200m	hdp>=200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD2	sounding text (dark) - shallower than 200m	hdp<200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD2	sounding text (light) - deeper than 200m	hdp>=200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD3	sounding text (dark) - shallower than 200m	hdp<200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD3	sounding text (light) - deeper than 200m	hdp>=200	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
TOD4 sounding text (dark) - shallower than 123m	hdp<123	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0
TOD4 sounding text (light) - deeper than 123m	hdp>=123	hdp	Sans Serif	Normal	sounding text	sounding	10	0	0

BF010**BF010****Point**

DNC bottom characteristics - label mcc only	mcc<>0 AND psc=0	mcc	Sans Serif	Normal	center center	black	10	0	0
DNC bottom characteristics - label psc only	psc<>0 AND mcc=0	psc	Sans Serif	Normal	center center	black	10	0	0
DNC bottom characteristics - label psc and mcc (concatenated)	psc<>0 AND mcc<>0	psc,mcc	Sans Serif	Normal	center right	black	10	0	0

BF012**BF012****Point**

TOD4 hull integrity test site core site - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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BG010**BG010****Point**

TOD0 current flow - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	7	90
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BH010**BH010****Point**

UVM aqueduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD aqueduct - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD aqueduct - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Line

UVM aqueduct - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH020**BH020****Line**

UVM canal - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 canal - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 canal - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

UVM canal - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 canal - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

**MIL-DTL-89045A w/Amendment 1
APPENDIX B**

Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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BH040**BH040****Area**

UVM	filtration beds/aeration beds - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH050**BH050****Area**

UVM	fish hatchery/fish farm/marine farm - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH075**BH075****Point**

UVM	fountain - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

UVM	fountain - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH080**BH080****Area**

DTOP	lake/pond - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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FFD	lake/pond - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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UVM	lake/pond - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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VML1	lake/pond - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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VML2	lake/pond - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH100**BH100****Area**

UVM	moat - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH130**BH130****Area**

DTOP	reservoir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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FFD	reservoir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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UVM	reservoir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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VML1	reservoir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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VML2	reservoir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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BH140**BH140****Line**

UVM	river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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VML1	river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
VML2 river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

UVM river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 river/stream - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BH180

BH180

Point

DTOP waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1 waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2 waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

Line

DTOP waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 waterfall - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BI020

BI020

Point

DTOP dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
FFD dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
VML1 dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
VML2 dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
VVOD dam/weir - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD dam/weir - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

Line

DTOP dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
FFD dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

Area

DTOP dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
FFD dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 dam/weir - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BI030

BI030

Point

FFD lock - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	2	90
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
Area									
FFD lock - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM lock - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 lock - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BI050**BI050**

Point									
VVOD water intake tower - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD water intake tower - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

BJ065**BJ065**

Area									
VML0 ice shelf - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BJ070**BJ070**

Area									
VML0 pack ice - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

BJ080**BJ080**

Area									
VML0 polar ice - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

DB030**DB030**

Point									
DTOP cave - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
UVM cave - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1 cave - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2 cave - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
Area									
UVM cave - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

DB090**DB090**

Area									
UVM embankment/fill - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

DB110**DB110**

Line									
DTOP fault - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM fault - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
VML2 fault - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

DB150**DB150****Point**

DTOP mountain pass - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML1 mountain pass - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
VML2 mountain pass - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90

DB180**DB180****Area**

DNC volcano - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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DB200**DB200****Area**

UVM gully/gorge - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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EC030**EC030****Area**

UVM trees - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML1 trees - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 trees - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

FA001**FA001****Point**

VML0 administrative area - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

FFD administrative area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML0 administrative area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2 administrative area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
WVS administrative area - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

FA015**FA015****Point**

UVM firing range/gunnery range - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Line

UVM firing range/gunnery range - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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Area

UVM	firing range/gunnery range - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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FA070

FA070

Area

VML0	demilitarized zone - na2 label		na2	Sans Serif	Normal	center center	black	10	0	0
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FA170

FA170

Area

DTOP	zone of occupation - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML0	zone of occupation - na2 label		na2	Sans Serif	Normal	center center	black	10	0	0
VML2	zone of occupation - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

FC021

FC021

Point

DNC	maritime limit boundary - pilot boarding - name label	mac=48 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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FC031

FC031

Area

TOD0	maritime area - name label for CTNARE/FAIRWY	mac=141or142or155or156 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	90
TOD0	maritime area - name label for MIPARE	mac=27or28or115or116or140or146or147or150or151or152or153or157or159 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	90
TOD0	maritime area - name label for RESARE	mac=0or101or104or105or106or107or108or109or110or114or143or144or145or148or149or154or158or999 AND nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	90

FC036

FC036

Area

TOD0	restricted area - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	6	90
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FC170

FC170

Area

TOD0	safety fairway - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	9	90
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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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FC178**FC178****Area**

TOD4	hull integrity test area - test zone label	htz<>998	htz	Sans Serif	Normal	center center	black	10	0	0
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GA005**GA005****Area**

TOD0	airspace - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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GA015**GA015****Area**

TOD0	special use airspace - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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GA035**GA035****Point**

TOD0	navaids (aeronautical) - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VVOD	navaids - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	navaids - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

GA055**GA055****Point**

TOD0	waypoint/reporting-calling in point - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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GB005**GB005****Point**

DTOP	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
FFD	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
UVM	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML0	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML1	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

Area

DTOP	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
FFD	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
UVM	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
VML2	airport/airfield - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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GB010**GB010****Point**

UVM	airport lighting - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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GB030**GB030****Point**

DTOP	helicopter landing pad - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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UVM	helicopter landing pad - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

UVM	helicopter landing pad - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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GB035**GB035****Point**

FFD	heliport - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

FFD	heliport - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
-----	-----------------------	------------	-----	------------	--------	---------------	-------	----	---	---

UVM	heliport - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
-----	-----------------------	------------	-----	------------	--------	---------------	-------	----	---	---

GB040**GB040****Point**

VVOD	launch pad - AGL label	hgt<>-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
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VVOD	launch pad - MSL label	zv2<>-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40
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GB055**GB055****Point**

VML1	runway - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Line

VML1	runway - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
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Area

UVM	runway - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
-----	---------------------	------------	-----	------------	--------	---------------	-------	----	---	---

GB065**GB065****Point**

FFD	seaplane base - name label	nam<>"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
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Area

FFD	seaplane base - name label	nam<>"UNK"	nam	Sans Serif	Normal	center center	black	10	0	0
-----	----------------------------	------------	-----	------------	--------	---------------	-------	----	---	---

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Product Feature Description	Symbol Assignment Expression	Label Attribute	Font	Style	Justification	Color	Size (pts)	Distance (mm)	Direction (az. deg)
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GB220**GB220****Point**

VVOD	air obstruction - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	air obstruction - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

GB221**GB221****Point**

VVOD	air obstruction miscellaneous - AGL label	hgt<->-32767	hgt	Sans Serif	Bold	bottom left	basic red	14	4	90
VVOD	air obstruction miscellaneous - MSL label	zv2<->-32767	zv2	Sans Serif	Bold Italic	bottom left	basic red	14	6	40

ZB030**ZB030****Point**

DTOP	boundary monument - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90
VML2	boundary monument - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	4	90

ZB035**ZB035****Point**

VML1	control point/control station - name label	nam<->"UNK"	nam	Sans Serif	Normal	bottom left	black	10	3	90
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ZD012**ZD012****Point**

VITD	geographic information point - text label		txt	Sans Serif	Normal	center center	black	10	0	0
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Line

VITD	geographic information point - text label		txt	Sans Serif	Normal	center center	black	10	0	0
------	---	--	-----	------------	--------	---------------	-------	----	---	---

Area

VITD	geographic information point - text label		txt	Sans Serif	Normal	center center	black	10	0	0
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APPENDIX C

SYMBOL DESCRIPTIONS

C.1 SCOPE

C.1.1 Scope. This appendix describes each symbol contained in GeoSym. It is a mandatory part of the specification. The information contained herein is intended for compliance.

C.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

C.3 SYMBOL DESCRIPTIONS

Each CGM has a textual description associated with it. This description is based on the color, line weight, and graphical primitives used to construct the symbol. This appendix presents each symbol's description, along with the color tokens used to build the symbol and a name for the symbols that indicates whether the symbol is a point symbol (first two characters SY), line symbol (first two characters LS or LC) or area symbol (first two characters AC or AP).

Table C-1A shows the standard naming convention used for color based on the color token(s) assigned to the symbol and is sorted by the standardized English adjective. Table C-1B shows the same information sorted by color token. Table C-2 shows the standard naming convention used to describe the width of a line. GeoSym symbols conform to the S52 definition of line widths as being in multiples of approximately 3mm. For example, the name of symbol 0610 is LS(SOLD,3,CHGRD). That means that symbol 0610 is a solid line that is approximately .9mm in thickness and is the color CHGRD (gray).

The English adjectives presented in Tables C-1A, C-1B, and C-2 are used within every appendix in this specification.

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Table C-1A
Color Token to English Adjective Mapping
Sorted by English Adjective

English Adjective	Color Token
100% cyan blue	blu100
100% red brown	red-brown100
12% red brown	red12-brown21
21% brown	brown21
21% green	green21
21% purple	purple21
31% cyan blue	blu31
42% purple	purple42
54% red brown	red-brown54
7% brown	brown7
aero-blue	aero-blue
basic black	black
basic blue	blue
basic cyan	cyan
basic green	green
basic magenta	magenta
basic red	red
basic white	white
basic yellow	yellow
Beige	med-beige
beige-rose	beige-rose
Black	CHBLK
blue-green	ARPAT
Brown	CHBRN
cursor orange	CURSR
danger magenta	ISDNG
danger red	DNGHL
depth dk gray	DEPSC
depth gray	DEPCN
depth lt blue	DEPMS
depth med blue	DEPVS
depth pale blue	DEPMD
depth white	DEPDW
dk beige	dark-beige
dk gray	CSTLN
dk magenta	dark-magenta
dk red	PLRTE
dk red brown	dark-red-brown
dk tan	dark-tan
dk yellow	dark-yellow
feature brown	LANDF
golden yellow	ADINF

Table C-1B
Color Token to English Adjective Mapping
Sorted by Color Token

Color Token	English Adjective
ADINF	golden yellow
aero-blue	aero-blue
APLRT	lt orange
ARPAT	blue-green
beige-rose	beige-rose
BKJA1	gray test background
BKJA2	gray test foreground
black	basic black
blu100	100% cyan blue
blu31	31% cyan blue
blue	basic blue
blue_3	lt blue
blue_4	med blue
brown21	21% brown
brown7	7% brown
CHBLK	black
CHBRN	brown
CHCOR	orange
CHGRD	gray
CHGRF	lt gray
CHGRN	green
CHMGD	magenta
CHMGF	lt magenta
CHRED	red
CHWHT	pale green
CHYLW	yellow
CSTLN	dk gray
CURSR	cursor orange
cyan	basic cyan
dark-beige	dk beige
dark-green	very dk green
dark-magenta	dk magenta
dark-red-brown	dk red brown
dark-tan	dk tan
dark-yellow	dk yellow
DEPCN	depth gray
DEPDW	depth white
DEPIT	yellow-green
DEPMD	depth pale blue
DEPMS	depth lt blue
DEPSC	depth dk gray
DEPVS	depth med blue

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English Adjective	Color Token
Gray	CHGRD
gray test background	BKJA1
gray test foreground	BKJA2
Green	CHGRN
lights green	LITGN
lights red	LITRD
lights yellow	LITYW
lt beige	light-beige
lt blue	blue_3
lt brown	LANDA
lt gray	CHGRF
lt magenta	CHMGF
lt orange	APLRT
lt red brown	lite-red-brown
lt tan	light-tan
Magenta	CHMGD
med blue	blue_4
midnight blue	midnight-blu
nav orange	NINFO
no data gray	NODTA
not used1	not-used1
not used2	not-used2
olive green	olive-green
oparea green	opgreen
Orange	CHCOR
outline black	OUTLW
outline lt brown	OUTLL
pale green	CHWHT
past trk black	PSTRK
Purple	med-purple
radar dk green	RADHI
radar lt green	RADLO
Red	CHRED
red brown	med-red-brown
reserved dk gray	RESGR
reserved very dk blue	RESBL
reserved1 gray	RES01
reserved2 gray	RES02
reserved3 gray	RES03
Rose	med-rose
scale orange	SCLBR
secondary trk gray	SYTRK
ships black	SHIPS
sounding black	SNDG2
sounding gray	SNDG1

Color Token	English Adjective
DNGHL	danger red
green	basic green
green21	21% green
ISDNG	danger magenta
LANDA	lt brown
LANDF	feature brown
light-beige	lt beige
light-tan	lt tan
lite-red-brown	lt red brown
LITGN	lights green
LITRD	lights red
LITYW	lights yellow
magenta	basic magenta
med-beige	beige
med-purple	purple
med-red-brown	red brown
med-rose	rose
med-tan	tan
midnight-blu	midnight blue
NINFO	nav orange
NODTA	no data gray
not-used1	not used1
not-used2	not used2
olive-green	olive green
opgreen	oparea green
OUTLL	outline lt brown
OUTLW	outline black
PLRTE	dk red
PSTRK	past trk black
purple21	21% purple
purple42	42% purple
RADHI	radar dk green
RADLO	radar lt green
red	basic red
red12-brown21	12% red brown
red-brown100	100% red brown
red-brown54	54% red brown
RES01	reserved1 gray
RES02	reserved2 gray
RES03	reserved3 gray
RESBL	reserved very dk blue
RESGR	reserved dk gray
SCLBR	scale orange
SHIPS	ships black
SNDG1	sounding gray

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English Adjective	Color Token
steel blue	steel-blu
Tan	med-tan
tan BUA	tan-BUA
traffic lt magenta	TRFCF
traffic magenta	TRFCD
UI border gray	UIBDR
UI lt brown	UIAFF
UI lt green	UINFG
UI magenta	UINFM
UI med blue	UIAFD
UI orange	UINFO
UI red	UINFR
UI text gray	UINFF
UI very dk blue	UINFB
UI very dk gray	UINFD
UI white	UIBCK
very dk green	dark-green
Yellow	CHYLW
yellow-green	DEPIT

Color Token	English Adjective
SNDG2	sounding black
steel-blu	steel blue
SYTRK	secondary trk gray
tan-BUA	tan BUA
TRFCD	traffic magenta
TRFCF	traffic lt magenta
UIAFD	UI med blue
UIAFF	UI lt brown
UIBCK	UI white
UIBDR	UI border gray
UINFB	UI very dk blue
UINFD	UI very dk gray
UINFF	UI text gray
UINFG	UI lt green
UINFM	UI magenta
UINFO	UI orange
UINFR	UI red
white	basic white
yellow	basic yellow

Table C-2 S52 Widths to English Adjective

S52 Width	S52 Measure	English Name
1	0.3 mm	very thin
2	0.6 mm	thin
3	0.9 mm	(none)
4	1.2 mm	thick
5	1.5 mm	very thick
6	1.8 mm	very very thick
7	2.1 mm	Not Used in GeoSym
8	2.4 mm	Not Used in GeoSym

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Symbol Descriptions

Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0001	LANDF			SY(PRDINS02)	feature brown mine symbol
0002	LANDF	CHBLK		SY(BUISGL11)	feature brown filled square w/ black outline
0003	CHBLK			SY(CHIMNY11)	black chimney symbol
0004	CHBLK			SY(TOWERS03)	black tower symbol
0005	LANDF			SY(CRANES01)	feature brown crane symbol
0006	CHBLK			SY(FLASTK11)	black flare stack symbol
0007	CHBLK			SY(FORSTC11)	black square
0008	CHBLK			SY(WNDMIL12)	black sm cir w/ X on top
0009	LANDF			SY(POSGEN01)	feature brown dot inside cir
0010	CHBLK			SY(BUIREL13)	black 'iron cross'
0011	CHBLK			SY(BUIREL14)	black X inscribed in rectangle
0012	CHBLK			SY(BUIREL15)	black mosque/minaret w/ dot in circle
0013	CHMGF	CHWHT		SY(CGUSTA02)	lt magenta CG in rectangle w/ pale green fill
0014	CHBLK			SY(RSCSTA02)	black filled diamond cntred on horizontal line
0015	CHMGF	CHWHT		SY(SISTAT02)	lt magenta SS in rectangle w/ pale green fill
0016	LANDF			SY(BUAARE02)	feature brown filled cir
0017	CHBLK			SY(CAIRNS11)	black three stacked sm cir
0018	CHBLK			SY(NOTBRD11)	black rectange above inverted T
0019	LANDF			SY(FLGSTF01)	feature brown flag symbol
0020	CHBLK			SY(MONUMT12)	black hatched trapazoid
0021	LANDF	CHBLK		SY(SILBUI11)	feature brown filled cir w/ black outline
0022	CHBLK			SY(TNKCON12)	black cir
0023	CHBLK			SY(TOWERS12)	black water tower symbol
0024	CHBLK			SY(POSGEN03)	black dot inside cir
0026	CHBLK			SY(MSTCON14)	black tall slender triangle w/ cir at bottom
0027	LANDF			SY(QUARRY01)	feature brown mine symbol inside circle
0028	CHBLK	CHMGD		SY(DOMES011)+ SY(RDOSTA02)	black dome inside lg magenta circle
0029	CHBLK	CHMGD		SY(RASCAN11)+ SY(RDOSTA02)	black rectangle below T in lg magenta cir
0030	CHBLK	CHMGD		SY(MSTCON14)+ SY(RDOSTA02)	black triangle w/ in lg magenta cir
0031	CHBLK	CHMGD		SY(TOWERS03)+ SY(RDOSTA02)	black tower inside lg magenta cir
0032	CHMGD			SY(BRTHNO01)	magenta circle
0033	LANDF	CHBLK	CHMGD	SY(BUISGL11)+ SY(RDOSTA02)	feature brown fill sqr black otln in lg mgnta cir
0035	LANDA	CSTLN		SY(LNDARE01)	lt brown sm filled cir w/ gray outline
0036	CHMGD			SY(ACHARE02)	magenta anchor
0037	CHMGD			SY(ACHBRT07)	magenta anchor w/ sm cir on shaft
0038	LANDA	CHBLK		SY(MORFAC03)	lt brown filled square w/ black outline
0039	TRFCD			SY(RDOCAL02)	traffic magenta cir w/ 1 cone
0040	TRFCD			SY(RDOCAL03)	traffic magenta cir w/ 2 cones
0041	CHMGD			SY(RCLDEF01)	magenta cir w/ 2 cones and 2 ?

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0042	CHMGD			SY(HRBFAC09)	magenta fish w/ arcs above and below
0043	CHMGD			SY(SMCFAC02)	magenta yacht inside lg cir
0044	CHBLK			SY(BOYINB01)	black installation buoy
0045	CHGRD			SY(MARCUL02)	gray fish inside net
0046	CHMGD			SY(BRIDGE01)	magenta small circle inside circle
0047	CHGRD			SY(FSHFAC02)	gray rectangle w/ angle line on top
0051	CHBLK			SY(PILPNT02)	black filled sm cir
0052	DEPVS	CHBLK		SY(OBSTRN01)	depth med blue fill cir w/ black dotted outline
0053	DEPVS	CHBLK		SY(DANGER01)	depth med blue fill lg oval w/ black dot outline
0054	CHBLK			SY(DANGER02)	black lg oval w/ dotted outline
0055	DEPIT	CHBLK		SY(OBSTRN03)	yellow-green solid circle w/ black dot outline
0056	CHGRD			SY(WATTUR02)	gray waves symbol
0057	LANDA	CSTLN		SY(OBSTRN11)	lt brown square with dk gray outline
0058	CHBLK			SY(LOWACC01)	black leader line w/ question mark
0059	CHGRD			SY(FOULGND1)	gray pound (#) symbol
0060	CHGRD			SY(WEDKLP03)	gray kelp symbol
0061	CHBLK			SY(OFSPLF01)	black dot inside square
0062	CHBLK	DEPVS		SY(UWTROC03)	black cross in dotted cir, depth med blue fill
0063	CHBLK			SY(UWTROC04)	black 6 point asterisk
0064	CHGRD			SY(WRECKS01)	gray wreck symbol
0065	CHBLK	DEPVS		SY(WRECKS05)	black bar 3 ticks in dotted depth med blue oval
0066	CHBLK			SY(WRECKS04)	black horiz bar w/3 ticks
0071	CHGRD			SY(CURDEF01)	gray arrow w/ 2 feathers and 2 ?
0072	CHGRD			SY(CURENT01)	gray arrow w/ two feathers
0073	CHGRD			SY(EBBSTR01)	gray arrow w/ no feathers
0074	CHGRD			SY(FLDSTR01)	gray arrow w/ one feather
0076	CHGRD			SY(TIDSTR01)	gray diamond
0077	CHBLK			SY(HILTOP11)	black radiating cones
0078	CHBLK			SY(POSGEN04)	black sm cir
0079	LANDF			SY(TREPNT04)	feature brown side view of stylised tree
0080	CHMGD			SY(PILBOP02)	magenta solid filled diamond inside cir
0081	CHMGF			SY(INFARE51)	lt magenta square w/ I
0082	TRFCF			SY(ENTRES51)	traffic lt magenta cir w/ bar
0083	TRFCF			SY(TSSRON51)	traffic lt magenta arc w/ arrowhead
0084	CHMGD			SY(CHINFO06)	magenta cir w/ ! Inside
0085	CHMGF			SY(FSHRES51)	lt magenta fish w/ intersecting diag line
0086	CHMGF			SY(ACHRES51)	lt magenta open anchor w/ intrsctng diag line
0087	TRFCF	CHMGD		SY(RSRDEF51)	traffic lt magenta ! In lg cir w/ magenta ?
0088	TRFCD			SY(TSSLPT51)	traffic magenta filled arrow
0089	TRFCD	CHMGD		SY(RTLDEF51)	traffic magenta dashed arrow w/ 2 mgnta ?'s
0090	LANDF			SY(AIRARE02)	feature brown outline of plane inside lg cir
0091	CHGRD			SY(RECDEF51)	gray ? inside angle brackets inside dashes
0092	TRFCF			SY(PRCARE51)	traffic lt magenta ! Inside triangle
0093	TRFCF			SY(CTYARE51)	traffic lt magenta ! Inside lg circle

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0094	CHMGF			SY(CBLARE51)	lt magenta angled line
0095	CHGRF			SY(SWPARE51)	lt gray under bar w/ upward bar on ends
0096	CHMGD			SY(CHINFO07)	magenta square w/ i
0097	TRFCF			SY(CTNARE51)	traffic lt magenta ! Inside lg circle
0098	TRFCD	CHMGD		SY(TWRDEF51)	traffic magenta dash dbl head arrow w/ 2 ?'s
0100	CHBLK			SY(BCNGEN01)	black beacon/buoy base
0101	CHYLW	OUTLW		SY(BCNSPP21)	yellow rectangle w/ outline black outline
0114	CHBLK			SY(TOPMAR14)	black topmark open parallelogram
0122	CHBLK			SY(TOPMAR22)	black topmark one cone up
0124	CHBLK			SY(TOPMAR24)	black topmark one cone down
0125	CHBLK			SY(TOPMAR25)	black topmark two cones up
0126	CHBLK			SY(TOPMAR26)	black topmark two cones down
0127	CHBLK			SY(TOPMAR27)	black topmark two cones point out
0128	CHBLK			SY(TOPMAR28)	black topmark two cones point in
0130	CHBLK			SY(TOPMAR30)	black topmark one ball
0132	CHBLK			SY(TOPMAR32)	black topmark two balls
0133	CHBLK			SY(TOPMAR33)	black topmark can
0150	DEPIT	DEPCN		SY	yellow-green filled sm cir w/ gray outline
0151	CHMGD			SY(DAYSQR21)	magenta box above inverted T with open cir
0152	CHMGD			SY(DAYSQR01)	magenta box w/ dot and line below
0154	CHMGD			SY	magenta cir,arrows pting out,represent only
0185	CHBLK			SY(TOPMAR85)	black topmark special X
0186	CHBLK			SY(TOPMAR86)	black topmark cross
0187	CHBLK			SY(TOPMAR87)	black topmark perch
0188	CHBLK			SY(TOPMAR88)	black topmark broom up
0199	CHBLK			SY(TMARDEF1)	black default topmark upright
0202	CHBLK			SY(TOPMAR02)	black buoy topmark one cone up
0204	CHBLK			SY(TOPMAR04)	black buoy topmark one cone down
0205	CHBLK			SY(TOPMAR05)	black buoy topmark two cones up
0206	CHBLK			SY(TOPMAR06)	black buoy topmark two cones down
0207	CHBLK			SY(TOPMAR07)	black buoy topmark two cones point out
0208	CHBLK			SY(TOPMAR08)	black buoy topmark two cones point in
0210	CHBLK			SY(TOPMAR10)	black buoy topmark one ball
0212	CHBLK			SY(TOPMAR12)	black buoy topmark two balls
0213	CHBLK			SY(TOPMAR13)	black buoy topmark can
0214	CHBLK			SY(TOPMAR14) for buoys	black buoy topmark open parallelogram
0217	CHBLK			SY(TOPMAR17)	black buoy topmark upright cross
0265	CHBLK			SY(TOPMAR65)	black buoy topmark special X
0299	CHBLK			SY(TMARDEF2)	black buoy default topmark
0300	CHBLK	CHMGD		SY(BOYGEN03)	black default buoy beside magenta ?
0301	CHBLK			SY(BOYBAR01)	black barrel buoy
0302	CHBLK			SY(BOYCAN01)	black can buoy
0303	CHBLK			SY(BOYCON01)	black cone buoy
0304	CHBLK			SY(BOYMOR01)	black mooring barrel buoy

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0305	CHBLK			SY(BOYMOR03)	black mooring can buoy
0306	CHBLK			SY(BOYPIL01)	black pillar buoy
0307	CHBLK			SY(BOYSPH01)	black spherical buoy
0308	CHBLK			SY(BOYSPR01)	black spar buoy
0309	CHBLK			SY(BOYSUP01)	black superbuoy
0310	CHBLK			SY(BOYSUP03)	black lanby
0311	CHBLK			SY(BOYMOR11)	black mooring/installation buoy
0312	CHBLK			SY(BOYSUP02)	black superbuoy - simplified
0313	CHYLW	OUTLW		SY(BOYSPP11)	yellow circle w/ outline black outline
0401	CHMGF			SY(FOGSIG01) for nav aids	lt magenta arcs origin offset - maximum
0402	CHMGF			SY(FOGSIG01) for others	lt magenta arcs origin offset - minimum
0500	CHMGD	OUTLW		SY(LITDEF11)	magenta flare with black outline
0501	LITRD	OUTLW		SY(LIGHTS11)	lights red flare with black outline
0502	LITGN	OUTLW		SY(LIGHTS12)	lights green flare with black outline
0503	LITYW	OUTLW		SY(LIGHTS13)	lights yellow flare with black outline
0510	CHMGD			SY(RADRFL03)	magenta arc w/ 5 ticks pointing upward
0511	CHMGD			SY(RDOSTA02)	magenta lg cir
0512	CHMGD			SY(RTPBCN02)	magenta lg dashed cir
0513	CHBLK			SY(LITFLT01)	black lt float
0514	CHBLK			SY(LITVES01)	black lt vessel
0515	CHBLK			SY(LITFLT02)	black lt float, simplified
0516	CHBLK			SY(LITVES02)	black lt vessel, simplified
0517	CHMGD			SY(NDB)	magenta circle with dot in center
0518	CHMGD			SY(VOR)	magenta hexagon with dot in center
0519	CHMGD			SY(VORDME)	magenta hexagon in square w/ dot in center
0520	CHMGD			SY(VORTAC)	magenta hexagon, solid outer rectgls, cntr dot
0521	CHMGD			SY(TACAN)	magenta hexagon, open outer rectgls, cntr dot
0522	CHGRN			SY	green open triangle
0523	CHGRN			SY	green solid triangle
0524	CHMGD			SY	magenta open circle w/ diagonal cross bar
0525	CHMGD			SY	magenta open very thin circle
0527	CHMGD			SY	magenta filled circle
0600	CHBLK			LS(SOLD,1,CHBLK)	black very thin solid line
0604	LANDF			LS(SOLD,1,LANDF)	feature brown very thin solid line
0605	LANDF			LS(SOLD,2,LANDF)	feature brown thin solid line
0606	LANDF			LS(SOLD,3,LANDF)	feature brown solid line
0607	LANDF			LS(SOLD,4,LANDF)	feature brown thick solid line
0608	DEPCN			LS(SOLD,1,DEPCN)	depth gray very thin solid line
0609	DEPSC			LS(SOLD,2,DEPSC)	depth dk gray thin solid line
0610	CHGRD			LS(SOLD,3,CHGRD)	gray solid line
0611	CHGRD			LS(SOLD,4,CHGRD)	gray thick solid line
0612	CHGRF			LS(SOLD,1,CHGRF)	lt gray very thin solid line
0614	DEPCN			LS(DASH,1,DEPCN)	depth gray very thin dash line
0615	CHWHT			LS(SOLD,3,CHWHT)	pale green solid line

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0620	TRFCF			LS(SOLD,6,TRFCF)	traffic lt magenta very very thick solid line
0621	DEPVS			LS(SOLD,1,DEPVS)	depth med blue very thin solid line
0623	CSTLN			LS(SOLD,2,CSTLN)	dk gray thin solid line
0624	LANDF			LS(DASH,1,LANDF)	feature brown very thin dash line
0625	CSTLN			LS(SOLD,4,CSTLN)	dk gray thick solid line
0626	CSTLN			LS(DASH,2,CSTLN)	dk gray thin dash line
0627	CHGRD			LS(SOLD,5,CHGRD)	gray very thick solid line
0629	CHGRD			LS(DASH,2,CHGRD)	gray thin dash line
0630	CSTLN			LS(DOTT,2,CSTLN)	dk gray thin dotted line
0631	CHGRD			LS(SOLD,2,CHGRD)	gray thin solid line
0632	CSTLN			LS(DASH,1,CSTLN)	dk gray very thin dash line
0633	CHGRF			LS(DASH,2,CHGRF)	lt gray thin dash line
0634	CHMGD			LS(DASH,1,CHMGD)	magenta very thin dash line
0635	CHMGF			LS(DASH,1,CHMGF)	lt magenta very thin dash line
0656	CHGRD			LS(DASH,1,CHGRD)	gray very thin dash line
0657	CHGRD			LS(DASH,4,CHGRD)	gray thick dash line
0661	TRFCD			LS(DASH,3,TRFCD)	traffic magenta dash line
0662	TRFCD			LS(DASH,1,TRFCD)	traffic magenta very thin dash line
0663	TRFCD			LS(DASH,2,TRFCD)	traffic magenta thin dash line
0665	TRFCD			LS(DASH,4,TRFCD)	traffic magenta thick dash line
0669	DEPVS			LS(DASH,1,DEPVS)	depth med blue very thin dash line
0670	DEPVS			LS(DASH,2,DEPVS)	depth med blue thin dash line
0680	CHBLK			LS(DOTT,2,CHBLK)	black thin dotted line
0681	UINFB			LS(SOLD,2,UINFB)	UI very dk blue thin solid line
0682	UINFB			LS(SOLD,1,UINFB)	UI very dk blue very thin solid line
0683	UINFB			LS(DOTT,3,UINFB)	UI very dk blue dotted line
0684	CHRED			LS(SOLD,2,CHRED)	red thin solid line
0685	CHGRN			LS(SOLD,2,CHGRN)	green thin solid line
0686	CHMGD			LS(SOLD,4,CHMGD)	magenta thick solid line
0687	CHMGD			LS(L-DASH,4,CHMGD)	magenta thick long dash line
0688	DEPSC			LS(L-DASH,2,DEPSC)	depth dk gray thin long dash line
0689	DEPCN			LS(L-DASH,1,DEPCN)	depth gray very thin long dash line
0700	CHMGD			LC(FERYRT01)	magenta dash very thin line w/ boat shape
0701	CHBLK			LC(FERYRT02)	black dash very thin line w/ boat shape
0704	CHGRD			LC(PIPSOL06)	gray dash very thin line w/ sm cir
0705	CHMGD			LC(PIPSOL05)	magenta dash very thin line w/ cir
0708	CHMGD			LC(CBLSUB06)	magenta broken zig-zag line w/ flash symbol
0711	CHMGD			LC(ACHARE51)	magenta dash/chevron line w/anchor symbol
0712	CHGRD			LC(FSHFAC02)	gray L complex line
0713	CHMGD			LC	magenta compressed zig-zag line
0716	CHGRD			LC(NAVARE51)	gray dash/chevron line
0722	CHMGD			LC(RESARE51)	magenta dashed T line
0723	TRFCD			LC(DWRTCL08)	traffic magenta solid line w/ > and DW
0724	TRFCD			LC(DWRTCL07)	traffic magenta dash line w/ > and DW

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
0725	TRFCD			LC(DWRTCL06)	traffic magenta solid line w/ < > and DW
0726	TRFCD			LC(DWRTCL05)	traffic magenta dash line w/ < > and DW
0727	TRFCD			LC(DWLDEF01)	traffic magenta dash line w/ < ? > and DW
0728	CHGRD			LC(RECTRC12)	gray very thin line w/ >
0729	CHGRD			LC(RECTRC11)	gray very thin dash line w/ >
0730	CHGRD			LC(RECTRC10)	gray very thin line w/ < >
0731	CHGRD			LC(RECTRC09)	gray very thin dash line w/ < >
0732	CHGRD			LC(RECDEF02)	gray very thin dash line w/ < ? >
0733	CHMGF			SY(LOCMAG51)	lt magenta open flag
0734	CHMGD			LC(CTYARE51)	magenta dash/chevron line
0735	CHMGD			LC(PIPARE51)	magenta dash/chevron line w/ dash, cir
0736	CHGRD			LC(PIPARE61)	gray dash/chevron line w/ dash, cir
0737	CHMGD			LC(CBLARE51)	magenta dash/chevron line w/ flash symbol
0738	CHMGD			LC(PRCARE51)	magenta dash/chev line w/precaution symbol
0739	CHMGD			LC(ACHRES51)	magenta T dash line w/ anchor symbol
0740	CHMGD			LC(FSHRES51)	magenta T dash line w/ fish symbol
0741	TRFCD			LC(DWRUTE51)	traffic magenta dash/chevron line w/ DW
0742	CHMGD			LC(CTNARE51)	magenta dash/chevron line w/caution symbol
0743	CSTLN			LC(LOWACC21)	dk gray small open rectangle dash line
0752	CHGRD	CHGRD		LC=LS(DASH,1,CHGRD)+ SY(WATTUR02)	gray very thin dash line w/ cntred waves
0753	CHGRD	CHMGD		LC=LS(SOLD,5,CHGRD)+ SY(BRIDGE01)	gray very thck line w/ cntrd magenta dbl cir
0754	UINFB			LC(OPAREAAASW)	UI vy dk blue vy thin line w/5 rows dots inside
0755	UINFB			LC(OPAREASubOA)	UI vy dk blue vy thin line w/vert inward ticks
0756	LANDF			LC(OPAREAstlsub)	feature brown vy thin line w/vert inward ticks
0757	LANDF			LC(OPAREAstlsur)	feature brown vy thin line w/3 rows dots ins
0758	LANDF			LC(OPAREAsfl)	feature brown 5 dot vy thin line
0759	CHGRN			LC(OPAREAAalcorr)	green thin line w/stagrd dots inside
0760	CHMGD			LC(OPAREAADIZ)	magenta vy thin line w/ 3 row vert dots inside
0761	CHGRN			LC(OPAREActlas)	green vy thin line w/3 row vert dots
0762	CHGRN			LC(OPAREAFIR)	green thin line with ticks inside
0763	CHGRN			LC(OPAREAUIR)	green thin line with open tabs inside
0764	CHMGD			LC(OPAREAAWAB)	magenta thin line w/ rt angle ticks inside
0765	CHMGD			LC(OPAREAAARAB)	magenta thin line w/ lft angle ticks inside
0766	CHMGD			LC(HITSslope)	magenta very thin solid line with inward ticks
0802	CHGRD			AC(CHGRD)	gray solid fill
0803	DEPIT			AC(DEPIT)	yellow-green solid fill
0804	CHBRN			AC(CHBRN)	brown solid fill
0805	DEPDW			AC(DEPDW)	depth white fill
0810	DEPVS			AC(DEPVS)	depth med blue solid fill
0820	DEPMD			AC(DEPMD)	depth pale blue solid fill
0821	DEPMS			AC(DEPMS)	depth lt blue solid fill
0822	LANDA			AC(LANDA)	lt brown solid fill
0823	NODTA			AC(NODTA)	no data gray solid fill

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0824	TRFCF			AC(TRFCF)	traffic lt magenta solid fill
0825	CHMGF			AC(CHMGF)	lt magenta solid fill
0826	CHMGD			AC(CHMGD)	magenta solid fill
0902	CHMGF			SY(ACHARE51)	lt magenta anchor
0903	CHGRD			AP(FSHFAC04)	gray fish trap patt fill
0904	CHGRD			AP(MARCUL02)	gray fish in net patt fill
0910	CHBRN			AP(MARSHE51)	brown marsh patt fill
0911	DEPVS			AP	depth med blue grid patt fill
0912	CHGRD			AP(ICEARE04)	gray random line patt fill
0913	LANDF			AP	feature brown solid filled circle patt fill
0914	LANDF			AP	feature brown circs patt fill
0915	LANDF			AP(VEGATN03)	feature brown tree side-view patt fill
0916	LANDF			AP(VEGATN04)	feature brown mangrove side-view patt fill
0917	TRFCF			AP(TSSJCT02)	traffic lt magenta rt diag line patt fill
0919	CHGRD			AP(DRGARE01)	gray diag spaced dot patt fill
0932	LANDF			AP(AIRARE02)	feature brown airplane patt fill
0933	CHGRD			AP(NODATA03)	gray offset dash patt fill
0934	CHGRD			AP(PRTSUR01)	gray dash wide patt fill
0949	DEPCN			AP(DIAMOND1)	depth gray diamond patt fill
1001	CHRED	CHBLK		SY	red filled square black outline
1002	CHBLK			SY	black filled cir w/ white cross inside
1003	CHBLK			SY	black cross
1004	CHBLK			SY	black pencil shape symbol
1005	CHBLK			SY	black "F" inside boat
1006	blue			SY	basic blue line w/ arrow
1007	blue			SY	basic blue cir
1008	blue			SY	basic blue filled cir w/ tail below
1009	UINFB			SY	UI very dk blue filled diamond
1010	blue			SY	basic blue solid square
1011	CHBLK			SY	black sm filled cir beside +-
1012	aero-blue			SY	aero-blue solid filled star
1013	aero-blue			SY	aero-blue "H" inside aero-blue square
1171	CHBLK			SY	black opposing open equi triangles
1172	CHBLK			SY	black diamond w/ curve staffed arrow
1205	CHBRN			SY	brown vert line w/ horizontal ticks on rt side
1206	CHBLK			SY	black line w/ indented rectangle
1211	CHBLK			SY	black two rt pointing triangles
1220	TRFCD			SY(RCTLPT52)	traffic magenta dashed open arrow
1233	CHBLK			SY	black horiz line below triangle w/ B inside
1236	CHMGF			SY(ITZARE51)	lt magenta IT
1238	TRFCF	CHMGD		SY(DWRTPT51)+ SY(TSLDEF51)	traffic lt mag DW filled arrow btwn 2 mgnta ?
1251	SNDG1			SY(SOUND*C2)	sounding gray circle
1256	SNDG2			SY(SOUNDSA1)	sounding black overbar

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1301	CHBLK			LC	black line w/ squares
1306	LANDA			LS(DASH,1,LANDA)	lt brown very very thin dash line
1307	LANDA			LC	lt brown vy thin line w/ ticks on inside
1308	CHBLK			LC	black very thin line w/ ticks
1310	CHBLK			LC	black one long dash two short dash line
1311	CHBLK			LC	black long dash short dash line
1312	CHBLK			LC	black very thin sht dash very sht dash line
1313	aero-blue			LC	aero-blue line w/ squares
1314	CHBLK			LS(SOLD,1,CHBLK)	black very thin solid line
1318	CHBLK			LC	black thin long dsh 2 shrt dsh line
1319	CHBLK			LC	black thin long dash 3 dot line
1401	CHBLK			LC	black outline open line w/ rt diag fill
1403	CHBLK			LC	black line w/ open diamonds
1406	CHBRN			LS(SOLD,2,CHBRN)	brown thin solid line
1408	green			LC	basic green vy thin long dash short dash line
1412	DEPIT			LS(SOLD,2,DEPIT)	yellow-green thin solid line
1451	med-purple			LC	purple dash line w/ tics both sides (- + -)
1509	CHBLK			LC	black thin solid line ticks on inside
1511	CHBRN			LC	brown thin line outward ticks
1512	aero-blue			LC	aero-blue vy thin line double ticks
1513	med-beige			LC	beige jagged line
1516	CHBLK			LC	black thin line outward ticks
1573	CSTLN			LS(SOLD,1,CSTLN)	dk gray very thin solid line
1601	CHRED			AC(CHRED)	red solid fill
1605	DEPIT			AP	yellow-green tree-top patt fill
1606	DEPIT			AP	yellow-green triangle tree patt fill
1609	blue			AP	basic blue diag grid patt fill
1611	DEPVS			AP	depth med blue dot patt fill
1612	aero-blue			AP	aero-blue cross hatch patt fill
1613	DEPIT			AP	yellow-green nipa patt fill
1651	TRFCF			LS(DASH,2,TRFCF)	traffic lt magenta thin dash line
1655	blue			LS(DASH,2,blue)	basic blue thin dash line
1656	blu100			LS(SOLD,1,blu100)	100% cyan blue very thin solid line
1855	med-red-brown			LS(SOLD,2,med-red-brown)	red brown thin solid line
1901	UIAFF			AC(UIAFF)	UI lt brown solid fill
1902	dark-beige			AC(dark-beige)	dk beige solid fill
1903	med-rose			AC(med-rose)	rose solid fill
1904	ADINF			AC(ADINF)	golden yellow solid fill
1905	white			AC(white)	basic white solid fill
1906	lite-red-brown			AC(lite-red-brown)	lt red brown solid fill
2001	CHBLK			SY	black pick & hammer
2002	CHBLK			SY	black tower

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
2003	blue			SY	basic blue solid filled cir
2005	CHBLK			SY	black building w/ 2 smokestacks above
2009	CHBLK			SY	black square w/ zap inside
2010	CHBLK			SY	black sun burst w/ dot inside
2011	CHBLK			SY	black open sq w/ dot inside w/ zap on top
2016	CHBLK			SY	black dot inside double cir
2019	CHBLK			SY	black sm filled cir
2026	CHBLK			SY	black tent
2029	CHBLK			SY	black ferris wheel
2034	CHBLK			SY	black skier
2035	CHBLK			SY	black dot inside cir
2036	CHBLK			SY	black sm filled square
2038	CHBLK			SY	black dot w/ parallel lines inside circle
2042	CHBLK			SY	black filled square w/ flag on top
2043	CHBLK			SY	black four black squares w/ connection
2045	CHBLK			SY	black filled square w/ cross on top
2047	CHBLK			SY	black filled square w/ T on top
2048	CHBLK			SY	black pinwheel
2051	CHBLK			SY	black ramp symbol
2053	CHBLK			SY	black sm open square w/ dot in center
2058	CHGRD			SY	gray filled square
2060	CHBLK			SY	black square w/ S inside
2063	CHBLK			SY	black monument symbol
2070	CHBLK			SY	black diag bands in rectangle
2071	CHBLK			SY	black dot inside cir
2072	CHGRD			SY	gray shadowed square
2073	CHBLK			SY	black square w/ diag line inside
2074	CHBRN			SY	brown cir
2076	med-red- brown			SY	red brown filled semicircle
2078	blue			SY	basic blue dot inside cir
2080	CHBLK			SY	black rt diag line inside cir
2081	CHBLK			SY(SAE0002)	black open square
2083	CHBLK			SY	black double line with flares on ends
2087	CHBLK			SY	black opposing solid triangles pnting in
2088	med- purple			SY	purple dot inside cir
2089	CHBLK			SY	black cir w/ four outer tics and dot inside
2090	CHBLK			SY	black cir w/ "C" inside
2094	med- purple			SY	purple solid ellipse extending from pole
2097	CHBLK			SY	black sm square w/ "P" inside
2099	CHBLK			SY	black dot inside cir inside square
2100	CHBLK			SY	black box w/ round top w/ "T" inside

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
2101	med-red-brown			SY	red brown octagon shape w/ "R" inside
2102	CHBLK			SY(DSHAER11)	black satellite dish symbol
2104	med-purple			SY	purple tower symbol
2105	CHBLK			SY	black cir around satellite dish symbol
2106	CHBLK			SY	black filled square w/ outward ticks
2107	CHBLK			SY	black vert line w/ two horiz lines at top
2111	CHBRN			SY	brown filled cir
2212	CHBLK			SY	black solid filled shipwreck symbol
2231	UINFB			SY	UI very dk blue open diamond
2232	blue			SY	basic blue solid arrowhead
2233	blu100			SY	100% cyan blue square w/ grid inside
2234	CHGRD			SY	gray cir diagly half filled
2238	CHBLK			SY	black vertical heavy weight line
2239	CHBLK			SY	black open arrowhead
2242	blue_4			SY	med blue 8 pt asterisk w/ open center
2243	CHBLK			SY	black sm filled cir
2245	blue			SY	basic blue sm filled cir
2247	CHBLK			SY	black diag line w/ "L" on top
2248	CHBRN			SY	brown sm filled cir w/ tail below
2249	CHBLK			SY	black)(symbol
2250	CHBRN			SY	brown 6 pt asterisk w/ open center
2251	CHBRN			SY	brown sm open cir w/ eight tics outside
2252	DEPIT			SY	yellow-green palm tree symbol
2253	DEPIT			SY	yellow-green triangle tree symbol
2256	CHGRF			SY	lt gray/white divided square
2257	CHBLK			SY	black square w/ F
2264	CHBLK			SY	black cir
2267	aero-blue			SY	aero-blue airplane
2268	CHGRF			SY	lt gray airplane
2269	lite-red-brown			SY	lt red brown airplane
2273	aero-blue			SY	aero-blue solid cir w/ open diag band
2274	CHRED			SY	red "M" inside cir
2278	CHBLK			SY	black dot in square
2279	CHBLK			SY	black triangle w/ dot inside
2281	CHGRD			SY	gray cir w/ open diag band
2320	blue			SY(SAE0028)	basic blue sm cir in cir w/4 squares outside
2323	CHBLK			SY	black dot
3000	CHMGF			LS(DASH,2,CHMGF)	lt magenta thin dash line
3001	light-beige			LS(SOLD,2,light-beige)	lt beige thin solid line
3003	med-tan			LS(SOLD,1,med-tan)	tan very thin solid line
3014	CHBRN			LS(SOLD,3,CHBRN)	brown solid line
3017	CHBRN			LS(DASH,2,CHBRN)	brown thin dash line

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
3024	CHBRN			LS(SOLD,1,CHBRN)	brown very thin solid line
3026	med-tan			LS(SOLD,1,med-tan)	tan very thin solid line
3031	dark-green			LS(SOLD,2,dark-green)	very dk green thin solid line
3036	DEPIT			LC	yellow-green thin line w/rectangles one side
3047	blue			LS(L-DASH,2,blue)	basic blue thin long dash line
3052	aero-blue			LS(SOLD,1,aero-blue)	aero-blue very thin solid line
3054	CHMGF			LS(S-DASH,1,CHMGF)	lt magenta very thin short dash line
3061	CHMGD			LS(DOTT,2,CHMGD)	magenta thin dotted line
3069	aero-blue			LS(SOLD,1,aero-blue)	aero-blue very thin solid line
3070	aero-blue			LS(SOLD,2,aero-blue)	aero-blue thin solid line
3073	aero-blue			LS(S-DASH,2,aero-blue)	aero-blue thin short dash line
3074	med-purple			LC	purple thin solid line w/ dots on each side
3076	CHGRF			LS(SOLD,2,CHGRF)	lt gray thin solid line
3077	CHGRF			LS(DASH,1,CHGRF)	lt gray very thin dash line
3082	CHGRD			LS(SOLD,1,CHGRD)	gray very thin solid line
3086	CHGRD			LS(S-DASH,1,CHGRD)	gray very thin short dash line
3096	CHGRD			LC	gray very thin dash line w/ dot
3104	CHRED			LS(SOLD,3,CHRED)	red solid line
3108	blu100			LS(SOLD,2,blu100)	100% cyan blue thin solid line
3109	blu100			LS(DOTT,2,blu100)	100% cyan blue thin dotted line
3112	CHBLK			LS(SOLD,2,CHBLK)	black thin solid line
3113	CHBLK			LS(SOLD,3,CHBLK)	black solid line
3114	CHBLK			LS(S-DASH,1,CHBLK)	black very thin short dash line
3115	CHBLK			LS(S-DASH,2,CHBLK)	black thin short dash line
3116	CHBLK			LS(DASH,1,CHBLK)	black very thin dash line
3117	CHBLK			LS(DASH,2,CHBLK)	black thin dash line
3118	CHBLK			LS(DASH,3,CHBLK)	black dash line
3119	CHBLK			LS(L-DASH,1,CHBLK)	black very thin long dash line
3120	CHBLK			LS(L-DASH,2,CHBLK)	black thin long dash line
3121	CHBLK			LS(L-DASH,3,CHBLK)	black long dash line
3123	CHBLK			LC	black solid line w/ single tics both sides
3125	CHBLK			LC	black solid line w/ single tics alt sides
3127	CHBLK			LC	black solid line w/ double tics both sides
3129	CHBLK			LC	black solid line w/ double tics alt sides
3131	CHBLK			LC	black dash line w/ single tics both sides
3133	CHBLK			LC	black dash line w/ double tics both sides
3135	CHBLK			LC	black dash line w/ single tics alt sides
3137	CHBLK			LC	black dash line w/ double tics alt sides
3139	CHBLK			LS(DOTT,1,CHBLK)	black very thin dotted line
3142	CHBLK			LC	black parallel vy thin lines w/ tics (ladder patt)
3143	CHBLK			LC	black double dash very thin lines
3146	CHBLK			LC	black solid triangle line patt
3148	CHBLK			LC	black very thin patt line -x -x -x

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
3153	beige-rose			LS(SOLD,2,beige-rose)	beige-rose thin solid line
3167	blu100			LS(S-DASH,2,blu100)	100% cyan blue thin short dash line
3168	OUTLL			LS(DOTT,2,OUTLL)	outline lt brown thin dotted line
3186	CHBLK			LC	black jagged line
4002	light-beige			AC(light-beige)	lt beige solid fill
4003	med-beige			AC(med-beige)	beige solid fill
4005	med-beige			AP	beige stipple dot patt fill
4008	med-beige			AP	beige sand dune default
4009	med-beige			AP	beige sand dune crescent
4010	med-beige			AP	beige sand dune lateral
4011	med-beige			AP	beige sand dune mound
4012	med-beige			AP	beige sand dune ripple
4013	med-beige			AP	beige sand dune star
4014	med-beige			AP	beige sand dune transverse
4015	beige-rose			AC(beige-rose)	beige-rose solid fill
4018	light-tan			AC(light-tan)	lt tan solid fill
4025	LANDF			AC(LANDF)	feature brown solid fill
4027	CHBRN			AP	brown wide left diag patt fill
4030	CHBRN			AP	brown left diag thin line patt fill
4032	CHBRN			AP	brown stipple dot patt fill
4034	LANDA			AP	lt brown heavy mixed stipple dot patt fill
4036	med-red-brown			AC(med-red-brown)	red brown solid fill
4051	RADHI			AP	radar dk green squares in grid patt fill
4052	DEPIT			AP	yellow-green bamboo patt fill
4054	RADHI			AP	radar dk green offset grid/dot patt fill
4063	DEPIT			AP	yellow-green stipple dot patt fill
4067	DEPIT			AP	yellow-green dot patt fill
4068	DEPIT			AP	yellow-green grass patt fill
4071	blue			AC(blue)	basic blue solid fill
4077	DEPVS			AP	depth med blue narrow rt diag line patt fill
4078	blue			AP	basic blue inundation area patt fill
4079	blu31			AP	31% cyan blue stipple dot patt fill
4080	blue			AP	basic blue marsh/swamp patt fill
4085	blue			AP	basic blue rice patt fill
4089	aero-blue			AC(aero-blue)	aero-blue solid fill
4098	aero-blue			AP	aero-blue wide rt diag line patt fill
4100	CHGRF			AC(CHGRF)	lt gray solid fill
4105	CHGRF			AP	lt gray rt diag thin line patt fill
4108	CHGRF			AP	lt gray land cover/ripple patt fill
4109	DEPCN			AC(DEPCN)	depth gray solid fill
4123	DEPCN			AP	depth gray stiple patt fill
4128	tan-BUA			AC(tan-BUA)	tan BUA solid fill
4138	blue_4			AC(blue_4)	med blue solid fill

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
4145	blue_4			AP	med blue lft diag dash line patt fill
4150	DEPMD			AP	depth pale blue stiple dot patt fill
4151	blue			AP	basic blue ripple jagged patt fill
4152	blue_3			AC(blue_3)	lt blue solid fill
4154	blu31			AC(blu31)	31% cyan blue solid fill
4156	CHBLK			AC(CHBLK)	black solid fill
4167	CHBLK			AP	black cross hatch patt fill
4175	APLRT			AC(APLRT)	lt orange solid fill
4182	blu100			LS(S-DASH,1,blu100)	100% cyan blue very thin short dash line
4183	aero-blue			LS(SOLD,3,aero-blue)	aero-blue solid line
4184	aero-blue			LS(S-DASH,1,aero-blue)	aero-blue very thin short dash line
4186	CHMGD			LS(DASH,2,CHMGD)	magenta thin dash line
4201	DEPCN			LS(DASH,2,DEPCN)	depth gray thin dash line
4202	DEPCN			LS(DOTT,2,DEPCN)	depth gray thin dotted line
4203	DEPCN			LC	depth gray line w/ two dashes
4217	dark-tan			LS(SOLD,1,dark-tan)	dk tan very thin solid line
4220	med-beige			LS(SOLD,2,med-beige)	beige thin solid line
4230	DEPIT			AP	yellow-green squares in grid patt fill
4236	med-beige			LS(SOLD,3,med-beige)	beige solid line
4243	DEPSC			AC(DEPSC)	depth dk gray solid fill
4249	CHBLK			AP	black x patt fill
4262	med-purple			LS(DASH,2,med-purple)	purple thin dash line
4265	blue			LS(SOLD,2,blue)	basic blue thin solid line
4266	blue			LS(SOLD,1,blue)	basic blue very thin solid line
4279	NINFO			LS(S-DASH,2,NINFO)	nav orange thin short dash line
4289	blue			AP	basic blue stipple dot patt fill
4292	RADHI			LS(SOLD,2,RADHI)	radar dk green thin solid line
4301	RESBL			AC(RESBL)	reserved very dk blue solid fill
4304	LANDA			LS(SOLD,1,LANDA)	lt brown very very thin solid line
4305	LANDA			LC	lt brown very very thin line w/ tick marks
4306	LANDA			LS(L-DASH,1,LANDA)	lt brown very thin long dash line
4307	LANDA			LS(L-DASH,1,LANDA)	lt brown very very thin long dash line
4308	LANDA			LS(S-DASH,1,LANDA)	lt brown very very thin short dash line
4309	LANDA			LC	lt brown vy vy thin long dash line w/ ticks
4310	LANDA			LC	lt brown very vy thin dash line w/ tick marks
4311	blu100			LS(SOLD,1,blu100)	100% cyan blue very thin solid line
4312	blu100			LS(SOLD,1,blu100)	100% cyan blue very very thin solid line
4313	blu100			LS(DASH,1,blu100)	100% cyan blue very very thin dash line
4314	blu100			LC	100% cyan blue vy thin line w/ ticks on inside
4315	blu100			LC	100% cyan blue very very thin line w/ ticks
4316	blu100			LS(L-DASH,1,blu100)	100% cyan blue very thin long dash line
4317	blu100			LS(L-DASH,1,blu100)	100% cyan blue very very thin long dash line
4318	blu100			LS(S-DASH,1,blu100)	100% cyan blue very very thin short dash line

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
4324	CHGRD			AP(DQUALU01)	gray U inside oval patt fill
4325	CHMGD			SY(RDOSTA02) for pillar bouy	magenta lg cir
4326	CHMGD			SY(RTPBCN02) for pillar bouy	magenta lg dashed cir
5000	CHMGD			SY(QUESMRK1)	magenta question mark
5001	CHMGD			LC(QUESMRK1)	magenta thin line w/ question mark
6000	CHBLK			SY	black upside down pick & hammer
6001	med-tan			AP	tan dot patt fill
6002	steel-blu			AC(steel-blu)	steel blue solid fill
6003	blue			AP	basic blue lft diag line patt fill
6004	dark-red-brown			LS(DASH,2,dark-red-brown)	dk red brown thin dash line
6005	olive-green			AC(olive-green)	olive green solid fill
6006	CHBLK			AP	black cemetery patt fill
6007	midnight-blu			AC(midnight-blu)	midnight blue solid fill
6008	CHCOR			AP	orange left diag line patt fill
6009	blue_3			AP	lt blue marsh/swamp patt fill
6011	LANDA			LS(SOLD,1,LANDA)	lt brown very thin solid line
6012	CHWHT			AC(CHWHT)	pale green solid fill
6013	blue			SY	basic blue very thin circle
6014	dark-tan			LC	dk tan vy thin line w/ ticks
6015	CHBLK			SY	black sm open square
6016	CHBLK			SY	black crane symbol
6017	CHBLK			SY	black sm filled cir w/ vert line w/ "X" on top
6018	CHBLK			SY	black "L" with dashed outline
6019	CHBLK			SY	black tower with "x" inside
6021	red-brown100	CHBLK	CHGRD	LC	100% red brown cased line w/ gray solid
6022	red-brown100	CHGRD		LC	100% red brown thick line w/ gray dash
6023	red-brown100			LS(SOLD,2,red-brown100)	100% red brown thin line
6024	red-brown100			LS(SOLD,3,red-brown100)	100% red brown line
6025	red-brown100	CHGRD		LC	100% red brown thin line w/ gray dash
6026	CHGRD			LS(SOLD,1,CHGRD)	gray vy thin solid line
6030	CHBLK			SY	black six pt star w/ dot inside
6031	blue			SY	basic blue open cir w/ tail below
6032	aero-blue			SY	aero-blue "H" inside aero-blue square
6033	CHBLK			SY	black pagoda w/ open square
6034	CHBLK			SY	black temple w/ open square
6035	CHBLK			SY	black mosque w/ filled square

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
6037	blu100			LS(S-DASH,1,blu100)	100% cyan blue very thin short dash line
6038	blu100			LC	100% cyan blue vy thin lng dsh line w/open cir
6040	CHBLK			LS(L-DASH,1,CHBLK)	black very thin long dash line
6041	CHBLK			SY	black cir w/ "B" inside
6042	blu100			AC(blue100)	100% cyan blue solid fill
6044	CHBLK			SY	black plus sign with 4 dots
6045	DEPIT			AP	yellow-green marsh/swamp patt fill
6046	blu100			AP	100% cyan blue left diag thin line patt fill
6047	CHBLK			SY	black open double arrowhead
6048	CHGRD			SY	gray filled circle
6049	med-purple			SY	purple filled circle
6050	DEPMD			AP	depth pale blue inundation area patt fill
6051	CHYLW	OUTLW		SY(BOYSPP35)	yellow narrow parallelogram w/ outline blk outline
6052	CHYLW	OUTLW		SY(BOYSPP25)	yellow parallelogram w/ outline blk outline
6053	CHYLW	OUTLW		SY(BOYSPP15)	yellow rt triangle w/ outline blk outline
7000	red	white		SY	red vo rig symbol - GTRI
7002	red	white		SY	red vo waste symbol - GTRI
7004	red	white		SY	red vo plant symbol - GTRI
7006	red	white		SY	red vo furnace symbol - GTRI
7008	red	white		SY	red vo cracker symbol - GTRI
7010	red	white		SY	red vo power plant symbol - GTRI
7012	red	white		SY	red vo substation symbol - GTRI
7014	red	white		SY	red vo chimney symbol - GTRI
7016	red	white		SY	red vo conveyor symbol - GTRI
7018	red	white		SY	red vo cooling tower symbol - GTRI
7020	red	white		SY	red vo crane symbol - GTRI
7022	red	white		SY	red vo dredge symbol - GTRI
7024	red	white		SY	red vo flare pipe symbol - GTRI
7026	red	white		SY	red vo hopper symbol - GTRI
7028	red	white		SY	red vo fort symbol - GTRI
7032	red	white		SY	red vo windmill symbol - GTRI
7034	red	white		SY	red vo windmotor symbol - GTRI
7036	red	white		SY	red vo park symbol - GTRI
7038	red	white		SY	red vo ski symbol - GTRI
7040	red	white		SY	red vo stadium symbol - GTRI
7044	red	white		SY	red vo building symbol - GTRI
7046	red	white		SY	red vo communication bldg symbol - GTRI
7048	red	white		SY	red vo sign symbol - GTRI
7050	red	white		SY	red vo light symbol - GTRI
7052	red	white		SY	red vo monument symbol - GTRI
7056	red	white		SY	red vo depot symbol - GTRI
7058	red	white		SY	red vo silo symbol - GTRI
7060	red	white		SY	red vo elevator symbol - GTRI

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Symbol #	Token1	Token2	Token3	Symbol Name	Symbol Description
7062	red	white		SY	red vo tank symbol - GTRI
7064	red	white		SY	red vo water tower symbol - GTRI
7070	red	white		SY	red vo aerial pylon symbol - GTRI
7072	red	white		SY	red vo bridge symbol - GTRI
7078	red	white		SY	red vo brid tower symbol - GTRI
7080	red	white		SY	red vo ctrl tower symbol - GTRI
7082	red	white		SY	red vo mast symbol - GTRI
7090	red	white		SY	red vo overhead cable - GTRI
7092	red	white		SY	red vo disk symbol - GTRI
7096	red	white		SY	red vo power pylon symbol - GTRI
7106	red	white		SY	red vo tel pole symbol - GTRI
7110	red	white		SY	red vo light symbol - GTRI
7112	red	white		SY	red vo lighthouse symbol - GTRI
7113	red	white		SY	red vo lightship symbol - GTRI
7114	red	white		SY	red vo platform symbol - GTRI
7117	red	white		SY	red vo aqueduct symbol - GTRI
7119	red	white		SY	red vo dam symbol - GTRI
7125	red	white		SY	red vo intake - GTRI
7130	red	white		SY	red vo nav aids - GTRI
7132	red	white		SY	red vo pad - GTRI
7134	red	white		SY	red vo obs - GTRI
7136	red	white		SY	red vo obs misc - GTRI
7137	red	white		SY	red vo double high - GTRI
7138	red	white		SY	red vo double low - GTRI
7139	red	white		SY	red vo double mixed - GTRI
7140	red	white		SY	red vo single high - GTRI
7141	red	white		SY	red vo single low - GTRI
7142	red	white		SY	red vo light component - GTRI
7144	red	white		LC	red vo thin line - GTRI
7145	red	white		SY	red vo light component high - GTRI
7146	red	white		SY	red vo light component low - GTRI
7147	red	white		SY	red vo communication tower high - GTRI
7148	red	white		SY	red vo communication tower low - GTRI
7150	red	white		SY	red vo terrain avoidance mask - GTRI
7151	red			SY	red pyramid with dot - ICAO
7152	red			SY	red pyramid lit component - ICAO
7153	red			SY	red double pyramid with two dots - ICAO
7154	red			SY	red double pyramid lit component - ICAO
7155	red			SY	red high vo tower - ICAO
7156	red			SY	red high vo tower lit component - ICAO
7157	red	white		LC	red vo thin solid line w/ dots on each side - GTRI
7158	red			LS(SOLD,2,red)	red vo thin line - ICAO

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APPENDIX D

SYMBOL TO PRODUCT CROSS-REFERENCE

D.1 SCOPE

D.1.1 Scope. This appendix provides a cross-reference between each symbol and the products/features that use that symbol. It is a mandatory part of the specification. The information contained herein is intended for compliance.

D.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

D.3 SYMBOL TO PRODUCT CROSS REFERENCE

This appendix is sorted by symbol number and VPF product to provide a cross-reference between each symbol and the products/features that use that symbol. This appendix is completely textual and contains no graphic depictions of the symbols. Refer to Appendix A or Appendix G for a graphic depiction of the symbols.

There are two sections to this appendix. This first section provides information on the full chart (default) symbols and the second section provides information on the simplified (alternate) symbols.

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APPENDIX D

Symbol to Product Cross-Reference

Full Chart

0001	Point	SY(PRDINS02)		<i>feature brown mine symbol</i>
DNC	P	AA010		mine/quarry
0002	Point	SY(BUISGL11)		<i>feature brown filled square w/ black outline</i>
DNC	P	AD030		substation/transformer yard
DNC	P	AK160		stadium/amphitheater
DNC	P	AL015	bfc=81 AND sta=0or2or3or6or11	building - maritime station
DNC	P	AL018		building superstructure addition
DNC	P	AL200	loc=22 AND verr=1	ruins - offshore, does not cover
DNC	P	AL200	loc=8	ruins - on ground surface
DNC	P	AQ116		pumping station
DTOP	P	AL200		ruins
UVM	P	AL200		ruins
VML1	P	AL200		ruins
VML2	P	AL200		ruins
0003	Point	SY(CHIMNY11)		<i>black chimney symbol</i>
DNC	P	AF010		chimney/smokestack
0004	Point	SY(TOWERS03)		<i>black tower symbol</i>
DNC	P	AF030		cooling tower
DNC	P	AL240		tower (non-communication)
DNC	P	AM030		grain elevator
DNC	P	AQ060		control tower
DNC	P	AT080		communication tower
DTOP	P	AM030		grain elevator
UVM	P	AM030		grain elevator
VML1	P	AM030		grain elevator
VML2	P	AM030		grain elevator
0005	Point	SY(CRANES01)		<i>feature brown crane symbol</i>
DNC	P	AF040		crane
0006	Point	SY(FLASTK11)		<i>black flare stack symbol</i>
DNC	P	AF070		flare pipe
DTOP	P	AF070		flare pipe
UVM	P	AF070		flare pipe
VML1	P	AF070		flare pipe
VML2	P	AF070		flare pipe
0007	Point	SY(FORSTC11)		<i>black square</i>
DNC	P	AH010		bastion/rampart/fortification
DNC	P	AH050		fortification
0008	Point	SY(WNDMIL12)		<i>black sm cir w/ X on top</i>
DNC	P	AJ050		windmill
0009	Point	SY(POSGEN01)		<i>feature brown dot inside cir</i>
DNC	P	BC010	nst=45	beacon - radar station
DNC	P	BC020	nst=45	buoy - radar station
DNC	P	BC040	nst=45	light - radar station
DNC	P	BC070	nst=45	light vessel/lightship - radar station
0010	Point	SY(BUIREL13)		<i>black 'iron cross'</i>
DNC	P	AL015	bfc=7 AND hwt=0or2or3or4or7or22	building - house of worship (church)
0011	Point	SY(BUIREL14)		<i>black X inscribed in rectangle</i>
DNC	P	AL015	bfc=7 AND hwt=11or14or15or16or20or21	building - house of worship (temple/pagoda)
0012	Point	SY(BUIREL15)		<i>black mosque/minaret w/ dot in circle</i>
DNC	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship (mosque)

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Full Chart

Product	Delin	FCODE	Attribute Condition	Description
0013	Point	SY(CGUSTA02)		<i>lt magenta CG in rectangle w/ pale green fill</i>
DNC	P	AL015	bfc=81 AND sta=1	building - maritime station
0014	Point	SY(RSCSTA02)		<i>black filled diamond cntred on horizontal line</i>
DNC	P	AL015	bfc=81 AND sta=5	building - maritime station
VML1	P	AL140		particle accelerator
0015	Point	SY(SISTAT02)		<i>lt magenta SS in rectangle w/ pale green fill</i>
DNC	P	AL015	bfc=81 AND sta<>0and<>1and<>2and<>3and<>5and<>6and<>11	building - maritime station
DNC	P	BG020		tide gauge
0016	Point	SY(BUAARE02)		<i>feature brown filled cir</i>
DNC	P	AL020		built-up area
0017	Point	SY(CAIRNS11)		<i>black three stacked sm cir</i>
DNC	P	AL025		cairn
DTOP	P	AL025		cairn
VML0	P	AL025		cairn
VML1	P	AL025		cairn
VML2	P	AL025		cairn
0018	Point	SY(NOTBRD11)		<i>black rectange above inverted T</i>
DNC	P	AL050		display sign
0019	Point	SY(FLGSTF01)		<i>feature brown flag symbol</i>
DNC	P	AL073		flagstaff/flagpole
0020	Point	SY(MONUMT12)		<i>black hatched trapazoid</i>
DNC	P	AL130		monument
0021	Point	SY(SILBUI11)		<i>feature brown filled cir w/ black outline</i>
DNC	P	AM020		grain bin/silo
0022	Point	SY(TNKCON12)		<i>black cir</i>
DNC	P	AM070		tank
TOD4	P	BF012		hull integrity test site core site
0023	Point	SY(TOWERS12)		<i>black water tower symbol</i>
DNC	P	AM080		water tower
0024	Point	SY(POSGEN03)		<i>black dot inside cir</i>
DNC	P	AK020		amusement park attraction
DNC	P	AK080		drive in theater screen
DNC	P	AQ020		aerial cableway pylon/ski pylon
DNC	P	AT040		power transmission pylon
DTOP	P	BI050		water intake tower
UVM	P	BI050		water intake tower
VML1	P	BI050		water intake tower
VML2	P	BI050		water intake tower
0026	Point	SY(MSTCON14)		<i>black tall slender triangle w/ cir at bottom</i>
DNC	P	AQ110		mooring mast
0027	Point	SY(QUARRY01)		<i>feature brown mine symbol inside circle</i>
DNC	A	AA010		mine/quarry
0028	Point	SY(DOMES011)+ SY(RDOSTA02)		<i>black dome inside lg magenta circle</i>
DNC	P	AT045	ssc=87	radar transmitter - dome
0029	Point	SY(RASCAN11)+ SY(RDOSTA02)		<i>black rectangle below T in lg magenta cir</i>
DNC	P	AT045	ssc=108	radar transmitter - scanner
0030	Point	SY(MSTCON14)+ SY(RD0STA02)		<i>black triangle w/ in lg magenta cir</i>
DNC	P	AT045	ssc=60	radar transmitter - mast

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Full Chart

Product	Delin	FCODE	Attribute	Condition	Description
0031	Point	SY(TOWERS03)+ SY(RDOSTA02)			<i>black tower inside lg magenta cir</i>
DNC	P	AT045	ssc=107		radar transmitter - tower
0032	Point	SY(BRTHNO01)			<i>magenta circle</i>
DNC	P	BB020			berth
0033	Point	SY(BUISGL11)+ SY(RDOSTA02)			<i>feature brown fill sqr black otl in lg mgnta cir</i>
DNC	P	AT050			communication building
0035	Point	SY(LNDARE01)			<i>lt brown sm filled cir w/ gray outline</i>
DNC	P	BA030			island
0036	Point	SY(ACHARE02)			<i>magenta anchor</i>
DNC	P	BB010	mac<>12		anchorage - not anchoring berth
DTOP	P	BB010			anchorage
VML2	P	BB010			anchorage
0037	Point	SY(ACHBRT07)			<i>magenta anchor w/ sm cir on shaft</i>
DNC	P	BB010	mac=12		anchorage - anchoring berth
DNC	A	BB010	mac=12		anchorage - anchoring berth
0038	Point	SY(MORFAC03)			<i>lt brown filled square w/ black outline</i>
DNC	P	BB080			dolphin
DNC	P	BB160			mooring ring
0039	Point	SY(RDOCAL02)			<i>traffic magenta cir w/ 1 cone</i>
DNC	P	BB050	df1<>0 AND df2=0		calling-in point - one way traffic
DNC	P	BB050	df4<>0		calling-in point - more than two-way traffic, 4th direction
DNC	P	BB050	df3<>0		calling-in point - more than two-way traffic, 3rd direction
DNC	P	BB050	df3<>0		calling-in point - more than two-way traffic, 1st direction
DNC	P	BB050	df3<>0		calling-in point - more than two-way traffic, 2nd direction
0040	Point	SY(RDOCAL03)			<i>traffic magenta cir w/ 2 cones</i>
DNC	P	BB050	df2<>0 AND df3=0		calling-in point - two way traffic
0041	Point	SY(RCLDEF01)			<i>magenta cir w/ 2 cones and 2 ?</i>
DNC	P	BB050	df1=0		calling-in point - direction of traffic unknown
0042	Point	SY(HRBFAC09)			<i>magenta fish w/ arcs above and below</i>
DNC	P	BB105			fishing harbor
0043	Point	SY(SMCFAC02)			<i>magenta yacht inside lg cir</i>
DNC	P	BB150			landing place
DNC	A	BB150			landing place
0044	Point	SY(BOYINB01)			<i>black installation buoy</i>
DNC	P	BB170			offshore loading facility
0045	Point	SY(MARCUL02)			<i>gray fish inside net</i>
DNC	P	BB180			oyster bed/mussel bed
0046	Point	SY(BRIDGE01)			<i>magenta small circle inside circle</i>
DNC	A	AQ040	bsc=12 OR bot=4or10or11		bridge/overpass/viaduct (not opening)
0047	Point	SY(FSHFAC02)			<i>gray rectangle w/ angle line on top</i>
DNC	A	BB110			fish traps/fish weirs
DNC	A	FC021	mac=56		maritime limit boundary - fish traps
0051	Point	SY(PILPNT02)			<i>black filled sm cir</i>
DNC	P	BB030			bollard
DNC	P	BC020	btc=35		buoy - articulated light (base)
DNC	P	BC040			light - base symbol
DNC	P	BD100			pile/piling/post

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Full Chart

Product	Delin	FCODE	Attribute Condition	Description
0052	Point	SY(OBSTRN01)		<i>depth med blue fill cir w/ black dotted outline</i>
DNC	P	AL200	loc=22 AND vrr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	P	BC080		perches/stakes
DNC	P	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	P	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
DNC	P	BD030		discolored water
DNC	P	BD140	vrr=4 AND hdp=0	snags/stumps - submerged; depth unknown
TOD4	P	BD005	wkt=35	miscellaneous underwater feature - obstruction
0053	Point	SY(DANGER01)		<i>depth med blue fill lg oval w/ black dot outline</i>
DNC	P	AL200	loc=22 AND vrr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
DNC	P	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
DNC	P	BD020	vrr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
DNC	P	BD130	vrr=4 AND hdp>0and<=20	rock - submerged; depth 20m or less
DNC	P	BD140	vrr=4 AND hdp>0and<=20	snags/stumps - submerged; depth 20m or less
DNC	P	BD180	vrr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
0054	Point	SY(DANGER02)		<i>black lg oval w/ dotted outline</i>
DNC	P	AL200	loc=22 AND vrr=4 AND hdp>20	ruins - offshore, submerged - depth greater than 20m
DNC	P	BD000	hdp>20	underwater danger/hazard - depth greater than 20m
DNC	P	BD020	vrr=4 AND hdp>20	crib - submerged; depth greater than 20m
DNC	P	BD130	vrr=4 AND hdp>20	rock - submerged; depth greater than 20m
DNC	P	BD140	vrr=4 AND hdp>20	snags/stumps - submerged; depth greater than 20m
DNC	P	BD180	vrr=4 AND hdp>20	wreck - submerged; depth greater than 20m
0055	Point	SY(OBSTRN03)		<i>yellow-green solid circle w/ black dot outline</i>
DNC	P	AL200	loc=22 AND vrr=8	ruins - offshore, covers and uncovers
DNC	P	BD020	vrr=8 AND hdp=NULL	crib - covers and uncovers; depth null
DNC	P	BD140	vrr=8 AND hdp=NULL	snags/stumps - covers and uncovers; depth null
0056	Point	SY(WATTUR02)		<i>gray waves symbol</i>
DNC	P	BD010		breakers
DNC	P	BD040		eddies
DNC	P	BD080		overfalls/tide rips
DNC	A	BD010		breakers
DNC	A	BD040		eddies
DNC	A	BD080		overfalls/tide rips
0057	Point	SY(OBSTRN11)		<i>lt brown square with dk gray outline</i>
DNC	P	BD020	vrr=1 AND hdp=NULL	crib - partly submerged/dry; depth null
DNC	P	BD140	vrr=1 AND hdp=NULL	snags/stumps - partly submerged/dry; depth null
0058	Point	SY(LOWACC01)		<i>black leader line w/ question mark</i>
DNC	P	BD000	acc<>1	underwater danger/hazard - not accurate
DNC	P	BD020	acc<>1	crib - not accurate
DNC	P	BD030	acc<>1	discolored water - not accurate
DNC	P	BD130	acc<>1	rock - not accurate
DNC	P	BD140	acc<>1	snags/stumps - not accurate
DNC	P	BD180	acc<>1	wreck - not accurate
DNC	A	BD000	acc<>1	underwater danger/hazard - not accurate
DNC	A	BD020	acc<>1	crib - not accurate
DNC	A	BD030	acc<>1	discolored water - not accurate
DNC	A	BD100	acc<>1	pile/piling/post - not accurate
DNC	A	BD120	vrr<>8 AND acc<>1	reef - not covers and uncovers, not accurate
DNC	A	BD140	acc<>1	snags/stumps - not accurate
0059	Point	SY(FOULGND1)		<i>gray pound (#) symbol</i>
DNC	P	BD050		foul ground
DNC	A	BD050		foul ground

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Product	Delin	FCODE	Attribute	Condition	Description
0060	Point	SY(WEDKLP03)			<i>gray kelp symbol</i>
DNC	P	BD060			kelp/seaweed
DNC	A	BD060			kelp/seaweed
0061	Point	SY(OFSPLF01)			<i>black dot inside square</i>
DNC	P	BD110			platform
0062	Point	SY(UWTROC03)			<i>black cross in dotted cir, depth med blue fill</i>
DNC	P	BD130	vrr=4 AND hdp=0		rock - submerged; depth unknown
0063	Point	SY(UWTROC04)			<i>black 6 point asterisk</i>
DNC	P	BD130	hdp=NULL		rock - depth null
DTOP	P	BD130	vrr=0or8		rock - unk/covers/uncovers
VML0	P	BD130			rock
VML1	P	BD130	vrr=0or8		rock - unk/covers/uncovers
VML2	P	BD130	vrr=0or8		rock - unk/covers/uncovers
0064	Point	SY(WRECKS01)			<i>gray wreck symbol</i>
DNC	P	BD180	hdp=NULL AND vrr=1or2or8		wreck - not submerged; depth null
DNC	P	BD180	loc<>4 AND hdp=NULL		wreck - showing mast/hull/superstructure; depth null
0065	Point	SY(WRECKS05)			<i>black bar 3 ticks in dotted depth med blue oval</i>
DNC	P	BD180	hdp=NULL AND vrr=0		wreck - unknown; depth null
DNC	P	BD180	vrr=4 AND soh=1 AND hdp=0		wreck - submerged; dangerous; depth unknown
0066	Point	SY(WRECKS04)			<i>black horiz bar w/3 ticks</i>
DNC	P	BD180	vrr=4 AND soh=2 AND hdp=0		wreck - submerged; not dangerous; depth unknown
TOD4	P	BD180			wreck
0071	Point	SY(CURDEF01)			<i>gray arrow w/ 2 feathers and 2 ?</i>
DNC	P	BG010	cur=0 OR dof=0		current flow - general; direction unknown
TOD0	P	BG010	cur=0 OR dof=0		current flow - general; direction unknown
0072	Point	SY(CURRENT01)			<i>gray arrow w/ two feathers</i>
DNC	P	BG010	cur=3or5 AND dof<>0		current flow - general, ocean; direction known
TOD0	P	BG010	cur=5 AND dof<>0		current flow - ocean; direction known
0073	Point	SY(EBBSTR01)			<i>gray arrow w/ no feathers</i>
DNC	P	BG010	cur=1 AND dof<>0		current flow - ebb; direction known
0074	Point	SY(FLDSTR01)			<i>gray arrow w/ one feather</i>
DNC	P	BG010	cur=2 AND dof<>0		current flow - flood; direction known
0076	Point	SY(TIDSTR01)			<i>gray diamond</i>
DNC	P	BG030			tide data point
0077	Point	SY(HILTOP11)			<i>black radiating cones</i>
DNC	P	BJ060			ice peak/nunatak
0078	Point	SY(POSGEN04)			<i>black sm cir</i>
DNC	P	CA030			spot elevation
DTOP	P	AA050	pro<>116		well - not water
TOD0	P	ZB035			control point/control station
UVM	P	AA050	pro<>116		well - not water
VML0	P	AA050			well
VML1	P	AA050	pro<>116		well - not water
VML2	P	AA050	pro<>116		well - not water
0079	Point	SY(TREPNT04)			<i>feature brown side view of stylised tree</i>
DNC	P	EC030			trees
0080	Point	SY(PILBOP02)			<i>magenta solid filled diamond inside cir</i>
DNC	P	FC021	mac=48		maritime limit boundary - pilot boarding
DNC	A	FC021	mac=48		maritime limit boundary - pilot boarding

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Product	Delin	FCODE	Attribute	Condition	Description
FFD	P	GB065			seaplane base
0081	Point	SY(INFARE51)			<i>lt magenta square w/ l</i>
DNC	A	AL005			animal sanctuary
DNC	A	FC021	mac=25or30or35		maritime limit boundary - spoil, dumping, explosive dumping
DNC	A	FC021	mac=31		maritime limit boundary - incineration
DNC	A	FC021	mac=49		maritime limit boundary - cargo Xshipment
DNC	A	FC036	mac=21or23or61		restricted area - pipelines, sewer
DNC	A	FC036	mac=45or46		restricted area - outfall, intake
TOD0	A	FC031	mac=101		maritime area - marine sanctuary
0082	Point	SY(ENTRES51)			<i>traffic lt magenta cir w/ bar</i>
DNC	P	FC031	mac=5		maritime area - entry prohibited
DNC	P	FC036	mac=43		restricted area - area to be avoided
DNC	A	FC031	mac=5		maritime area - entry prohibited
DNC	A	FC036	mac=43		restricted area - area to be avoided
0083	Point	SY(TSSRON51)			<i>traffic lt magenta arc w/ arrowhead</i>
DNC	P	FC031	mac=40		maritime area - roundabout zone (TSS)
DNC	A	FC031	mac=40		maritime area - roundabout zone (TSS)
0084	Point	SY(CHINFO06)			<i>magenta cir w/ ! Inside</i>
DNC	P	FC021	mac<>48		maritime limit boundary - not pilot boarding
DNC	P	FC031	mac=0		maritime area - unknown
0085	Point	SY(FSHRES51)			<i>lt magenta fish w/ intersecting diag line</i>
DNC	P	FC036	mac=22		restricted area - fishing prohibited
DNC	A	FC036	mac=22		restricted area - fishing prohibited
0086	Point	SY(ACHRES51)			<i>lt magenta open anchor w/ intrscntg diag line</i>
DNC	P	FC036	mac=15		restricted area - anchoring prohibited
DNC	A	FC036	mac=15		restricted area - anchoring prohibited
0087	Point	SY(RSRDEF51)			<i>traffic lt magenta ! In lg cir w/ magenta ?</i>
DNC	P	FC031	mac=2		maritime area - dredged area
DNC	P	FC036	mac=0or999		restricted area - unknown or other
DNC	A	FC036	mac=0or999		restricted area - to be avoided, other
TOD0	A	FC031	mac=0or144or145or154or999		maritime area - restricted areas
TOD0	A	FC036			restricted area
0088	Point	SY(TSSLPT51)			<i>traffic magenta filled arrow</i>
DNC	P	FC041			traffic separation scheme (TSS)
0089	Point	SY(RTLDEF51)			<i>traffic magenta dashed arrow w/ 2 mgnta ?'s</i>
DNC	P	FC165	dof=0		route (maritime) - direction unknown
0090	Point	SY(AIRARE02)			<i>feature brown outline of plane inside lg cir</i>
DNC	P	GB005			airport/airfield
0091	Point	SY(RECDEF51)			<i>gray ? inside angle brackets inside dashes</i>
DNC	A	FC170			safety fairway
TOD0	A	FC170			safety fairway
0092	Point	SY(PRCARE51)			<i>traffic lt magenta ! Inside triangle</i>
DNC	A	FC021	mac=42		maritime limit boundary - precautionary
0093	Point	SY(CTYARE51)			<i>traffic lt magenta ! Inside lg circle</i>
DNC	P	FC031	mac=4		maritime area - mine danger area
DNC	P	FC036	mac=37		restricted area - safety zone
DNC	A	FC021	mac=24		maritime limit boundary - turning area
DNC	A	FC021	mac=58		maritime limit boundary - dredging area
DNC	A	FC021	mac=27or28or29		maritime limit boundary - submarine exercise, mine laying, firing range

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC021	mac=32or33	maritime limit boundary - oil field, gas field
DNC	A	FC021	mac=44	maritime limit boundary - deguassing
DNC	A	FC031	mac=4	maritime area - mine danger
DNC	A	FC036	mac=37	restricted area - safety zone
DNC	A	GB070		seaplane landing/seaplane take-off area
TOD0	A	FC031	mac=143or148or149or158	maritime area - military area, minefield
TOD0	A	FC031	mac=27or28or115or116or140or146or147or150or151or152or153or157or159	maritime area - military practice areas
0094	Point	SY(CBLARE51)		<i>lt magenta angled line</i>
DNC	A	FC036	mac=20	restricted area - cables
0095	Point	SY(SWPARE51)		<i>lt gray under bar w/ upward bar on ends</i>
DNC	A	FC177		swept area
0096	Point	SY(CHINFO07)		<i>magenta square w/ i</i>
DNC	P	AQ080		ferry site
0097	Point	SY(CTNARE51)		<i>traffic lt magenta ! Inside lg circle</i>
DNC	A	FC021	mac=0or999	maritime limit boundary - unknown, other
DNC	A	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	A	FC041	tsp=6or7	traffic separation scheme (TSS) - inbound or outbound area
DNC	A	FC165	rtt=0	route (maritime) - use unknown
TOD0	A	FC031	mac=141or142or155	maritime area - caution areas
0098	Point	SY(TWRDEF51)		<i>traffic magenta dash dbl head arrow w/ 2 ?'s</i>
DNC	A	FC165	rtt=11	route (maritime) - 2-way
0100	Point	SY(BCNGEN01)		<i>black beacon/buoy base</i>
DNC	P	BC010		beacon - base
0114	Point	SY(TOPMAR14)		<i>black topmark open parallelogram</i>
DNC	P	BC010	tmc=19or31	beacon - rhombus/diamond
DNC	P	BC040	tmc=19or31	light - rhombus/diamond
0122	Point	SY(TOPMAR22)		<i>black topmark one cone up</i>
DNC	P	BC010	tmc=16or21	beacon - one cone up
DNC	P	BC040	tmc=16or21	light - one cone up
0124	Point	SY(TOPMAR24)		<i>black topmark one cone down</i>
DNC	P	BC010	tmc=22	beacon - one cone down
DNC	P	BC040	tmc=22	light - one cone down
0125	Point	SY(TOPMAR25)		<i>black topmark two cones up</i>
DNC	P	BC010	tmc=3	beacon - two cones up
DNC	P	BC040	tmc=3	light - two cones up
0126	Point	SY(TOPMAR26)		<i>black topmark two cones down</i>
DNC	P	BC010	tmc=8	beacon - two cones down
DNC	P	BC040	tmc=8	light - two cones down
0127	Point	SY(TOPMAR27)		<i>black topmark two cones point out</i>
DNC	P	BC010	tmc=1	beacon - two cones out
DNC	P	BC040	tmc=1	light - two cones out
0128	Point	SY(TOPMAR28)		<i>black topmark two cones point in</i>
DNC	P	BC010	tmc=9	beacon - two cones in
DNC	P	BC040	tmc=9	light - two cones in
0130	Point	SY(TOPMAR30)		<i>black topmark one ball</i>
DNC	P	BC010	tmc=15or27or28	beacon - one ball
DNC	P	BC040	tmc=15or27or28	light - one ball

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Product	Delin	FCODE	Attribute	Condition	Description
0132	Point	SY(TOPMAR32)			<i>black topmark two balls</i>
DNC	P	BC010	tmc=2		beacon - two balls
DNC	P	BC040	tmc=2		light - two balls
0133	Point	SY(TOPMAR33)			<i>black topmark can</i>
DNC	P	BC010	tmc=25or26or29		beacon - can
DNC	P	BC040	tmc=25or26or29		light - can
0150	Point	SY			<i>yellow-green filled sm cir w/ gray outline</i>
DNC	P	BA020			foreshore
DTOP	P	EC020	veg<>17		oasis - not palm
DTOP	A	EC020	veg<>17		oasis - not palm
VML0	A	EC020	veg<>17		oasis - not palm
VML1	P	EC020	veg<>17		oasis - not palm
VML2	P	EC020	veg<>17		oasis - not palm
VML2	A	EC020	veg<>17		oasis - not palm
0151	Point	SY(DAYSQR21)			<i>magenta box above inverted T with open cir</i>
DNC	P	BC055			marker
0154	Point	SY			<i>magenta cir,arrows pting out,represent only</i>
DNC	P	BG040			current diagram
0185	Point	SY(TOPMAR85)			<i>black topmark special X</i>
DNC	P	BC010	tmc=6		beacon - special (x)
DNC	P	BC040	tmc=6		light - special (x)
0186	Point	SY(TOPMAR86)			<i>black topmark cross</i>
DNC	P	BC010	tmc=23or30		beacon - upright cross
DNC	P	BC040	tmc=23or30		light - upright cross
0187	Point	SY(TOPMAR87)			<i>black topmark perch</i>
DNC	P	BC010	tmc=18		beacon - perch
DNC	P	BC040	tmc=18		light - perch
0188	Point	SY(TOPMAR88)			<i>black topmark broom up</i>
DNC	P	BC010	tmc=17		beacon - broom point up
DNC	P	BC040	tmc=17		light - broom point up
0199	Point	SY(TMARDEF1)			<i>black default topmark upright</i>
DNC	P	BC010	tmc=0or32		beacon - default topmark
DNC	P	BC040	tmc=0or32		light - default topmark
0202	Point	SY(TOPMAR02)			<i>black buoy topmark one cone up</i>
DNC	P	BC020	tmc=16or21		buoy - one cone up
0204	Point	SY(TOPMAR04)			<i>black buoy topmark one cone down</i>
DNC	P	BC020	tmc=22		buoy - one cone down
0205	Point	SY(TOPMAR05)			<i>black buoy topmark two cones up</i>
DNC	P	BC020	tmc=3		buoy - two cones up
0206	Point	SY(TOPMAR06)			<i>black buoy topmark two cones down</i>
DNC	P	BC020	tmc=8		buoy - two cones down
0207	Point	SY(TOPMAR07)			<i>black buoy topmark two cones point out</i>
DNC	P	BC020	tmc=1		buoy - two cones out
0208	Point	SY(TOPMAR08)			<i>black buoy topmark two cones point in</i>
DNC	P	BC020	tmc=9		buoy - two cones in
0210	Point	SY(TOPMAR10)			<i>black buoy topmark one ball</i>
DNC	P	BC020	tmc=15or27or28		buoy - one ball

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Product	Delin	FCODE	Attribute	Condition	Description
0212	Point	SY(TOPMAR12)			<i>black buoy topmark two balls</i>
DNC	P	BC020	tmc=2		buoy - two balls
0213	Point	SY(TOPMAR13)			<i>black buoy topmark can</i>
DNC	P	BC020	tmc=25or26or29		buoy - can
VML0	P	AQ070			ferry crossing
0214	Point	SY(TOPMAR14) for buoys			<i>black buoy topmark open parallelogram</i>
DNC	P	BC020	tmc=19or31		buoy - rhombus/diamond
0217	Point	SY(TOPMAR17)			<i>black buoy topmark upright cross</i>
DNC	P	BC020	tmc=23or30		buoy - upright cross
0265	Point	SY(TOPMAR65)			<i>black buoy topmark special X</i>
DNC	P	BC020	tmc=6		buoy - special (x)
0299	Point	SY(TMARDEF2)			<i>black buoy default topmark</i>
DNC	P	BC020	tmc=0or17or18or32		buoy - default topmark
0300	Point	SY(BOYGEN03)			<i>black default buoy beside magenta ?</i>
DNC	P	BC020	btc=0 AND ssc=0or85or999		buoy - default; type unknown
0301	Point	SY(BOYBAR01)			<i>black barrel buoy</i>
DNC	P	BC020	btc=0 AND ssc=1		buoy - barrel; type unknown
0302	Point	SY(BOYCAN01)			<i>black can buoy</i>
DNC	P	BC020	btc=0 AND ssc=7		buoy - can; type unknown
0303	Point	SY(BOYCON01)			<i>black cone buoy</i>
DNC	P	BC020	btc=0 AND ssc=6		buoy - conical; type unknown
0304	Point	SY(BOYMOR01)			<i>black mooring barrel buoy</i>
DNC	P	BC020	btc=7 AND ssc=1		buoy - mooring; barrel
0305	Point	SY(BOYMOR03)			<i>black mooring can buoy</i>
DNC	P	BC020	btc=7 AND ssc=7		buoy - mooring; can
0306	Point	SY(BOYPIL01)			<i>black pillar buoy</i>
DNC	P	BC020	btc=0 AND ssc=10		buoy - pillar; type unknown
0307	Point	SY(BOYSPH01)			<i>black spherical buoy</i>
DNC	P	BC020	btc=0 AND ssc=17		buoy - sphere; type unknown
0308	Point	SY(BOYSPR01)			<i>black spar buoy</i>
DNC	P	BC020	btc=0 AND ssc=16		buoy - spar; type unknown
0309	Point	SY(BOYSUP01)			<i>black superbuoy</i>
DNC	P	BC020	btc=0 AND ssc=73		buoy - superbuoy; type unknown
DNC	P	BC020	btc=10		buoy - ODAS
0310	Point	SY(BOYSUP03)			<i>black lanby</i>
DNC	P	BC020	btc=4		buoy - LANBY
0311	Point	SY(BOYMOR11)			<i>black mooring/installation buoy</i>
DNC	P	BC020	btc=7 AND ssc<>1and<>7		buoy - mooring; not barrel, not can
0401	Point	SY(FOGSIG01) for nav aids			<i>It magenta arcs origin offset - maximum</i>
DNC	P	AL015	bfc=81 AND sta=5 AND sst<>16		building - maritime station (rescue), sound signal
DNC	P	BC010	sst=1or2or3or4or6or9or14or15		beacon - sound signal
DNC	P	BC020	sst=1or2or3or4or6or9or14or15		buoy - sound signal
DNC	P	BC040	sst=1or2or3or4or6or9or14or15		light - sound signal
DNC	P	BC070	sst=1or2or3or4or6or9or14or15		light vessel/lightship - sound signal
0402	Point	SY(FOGSIG01) for others			<i>It magenta arcs origin offset - minimum</i>
DNC	P	AL015	bfc=81 AND sta<>5 AND sst<>16		building - maritime station (not rescue), sound signal
DNC	P	BD110	sst<>16		platform - sound signal

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Product	Delin	FCODE	Attribute	Condition	Description
0500	Point	SY(LITDEF11)			<i>magenta flare with black outline</i>
DNC	P	BB170	cha=21		offshore loading facility - light
DNC	P	BD110	cha=21		platform - lighted
0501	Point	SY(LIGHTS11)			<i>lights red flare with black outline</i>
DNC	P	GA020			air obstruction light [DNC-specific]
0503	Point	SY(LIGHTS13)			<i>lights yellow flare with black outline</i>
DNC	P	GB010			airport lighting
0510	Point	SY(RADRFL03)			<i>magenta arc w/ 5 ticks pointing upward</i>
DNC	P	BC010	ref=1		beacon - radar reflector present
DNC	P	BC020	ref=1		buoy - radar reflector present
DNC	P	BC040	ref=1		light - radar reflector present
DNC	P	BC070	ref=1		light vessel/lightship - radar reflector present
0511	Point	SY(RDOSTA02)			<i>magenta lg cir</i>
DNC	P	AT045	ssc=0or999		radar transmitter - other, unknown
DNC	P	BC010	nst=1or4or5or17or41or51or53		beacon - radio navigation system
DNC	P	BC020	nst=1or4or5or17or41or51or53 AND ssc<>10		buoy - non-pillar; radio navigation system
DNC	P	BC040	nst=1or4or5or17or41or51or53		light - radio navigation system
DNC	P	BC070	nst=1or4or5or17or41or51or53		light vessel/lightship - radio navigation system
DNC	P	GA035			navaids (aeronautical)
0512	Point	SY(RTPBCN02)			<i>magenta lg dashed cir</i>
DNC	P	BC010	nst=10or54		beacon - radar navigation system
DNC	P	BC020	nst=10or54 AND ssc<>10		buoy - non-pillar; radar navigation system
DNC	P	BC040	nst=10or54		light - radar navigation system
DNC	P	BC070	nst=10or54		light vessel/lightship - radar navigation system
DNC	P	BD110	nst=10or54		platform - radar navigation system
0513	Point	SY(LITFLT01)			<i>black lt float</i>
DNC	P	BC020	btc=6		buoy - light float
0514	Point	SY(LITVES01)			<i>black lt vessel</i>
DNC	P	BC070			light vessel/lightship
0517	Point	SY(NDB)			<i>magenta circle with dot in center</i>
TOD0	P	GA035	nst=17		navaids (aeronautical) - NDB
0518	Point	SY(VOR)			<i>magenta hexagon with dot in center</i>
TOD0	P	GA035	nst=20		navaids (aeronautical) - VOR
0519	Point	SY(VORDME)			<i>magenta hexagon in square w/ dot in center</i>
TOD0	P	GA035	nst=21		navaids (aeronautical) - VOR/DME
0520	Point	SY(VORTAC)			<i>magenta hexagon, solid outer rectgls, cntr dot</i>
TOD0	P	GA035	nst=22		navaids (aeronautical) - VORTAC
0521	Point	SY(TACAN)			<i>magenta hexagon, open outer rectgls, cntr dot</i>
TOD0	P	GA035	nst=23		navaids (aeronautical) - TACAN
0522	Point	SY			<i>green open triangle</i>
TOD0	P	GA055	wpt<>10		waypoint/reporting-calling in point - non compulsory
0523	Point	SY			<i>green solid triangle</i>
TOD0	P	GA055	wpt=10		waypoint/reporting-calling in point - compulsory
0524	Point	SY			<i>magenta open circle w/ diagonal cross bar</i>
TOD1	P	BD005	exs=57		miscellaneous underwater feature - sonar confirmed
TOD1	P	BD180	exs=57		wreck - sonar confirmed
TOD2	P	BD005	exs=57		miscellaneous underwater feature - sonar confirmed
TOD2	P	BD180	exs=57		wreck - sonar confirmed
TOD3	P	BD005	exs=57		miscellaneous underwater feature - sonar confirmed

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Product	Delin	FCODE	Attribute Condition	Description
TOD3	P	BD180	exs=57	wreck - sonar confirmed
0525	Point	SY		<i>magenta open very thin circle</i>
TOD0	P	GA035	nst=0	navaids (aeronautical) - unknown
TOD1	P	BD005	exs=58	miscellaneous underwater feature - reported
TOD1	P	BD180	exs=58	wreck - reported
TOD2	P	BD005	exs=58	miscellaneous underwater feature - reported
TOD2	P	BD180	exs=58	wreck - reported
TOD3	P	BD005	exs=58	miscellaneous underwater feature - reported
TOD3	P	BD180	exs=58	wreck - reported
TOD4	P	BD005	wkt<>35	miscellaneous underwater feature - not obstruction
0527	Point	SY		<i>magenta filled circle</i>
TOD4	P	FC180		hull integrity test site bottom feature
0600	Line	LS(SOLD,1,CHBLK)		<i>black very thin solid line</i>
DNC	L	AK020		amusement park attraction
DNC	L	AL070		fence
DNC	L	AL260		wall
DNC	L	BH020		canal
DNC	L	BH140		river/stream
DNC	L	BH210		inland shoreline
DNC	A	AC030		settling basin/sludge pond
DNC	A	AD010		power plant
DNC	A	AD030		substation/transformer yard
DNC	A	AH010		bastion/rampart/fortification
DNC	A	AH050		fortification
DNC	A	AK040		athletic field
DNC	A	AK100		golf course
DNC	A	AK120		park
DNC	A	AK160		stadium/amphitheater
DNC	A	AK180		zoo/safari park
DNC	A	AL015		building
DNC	A	AL030		cemetery
DNC	A	AL200	loc=8	ruins - on ground surface
DNC	A	AL200	loc=22 AND vrr=1	ruins - offshore, does not cover
DNC	A	AM030		grain elevator
DNC	A	AM070		tank
DNC	A	AQ116		pumping station
DNC	A	AT020		early warning radar site
DNC	A	BH020		canal
DNC	A	BH080		lake/pond
DNC	A	BH130		reservoir
DNC	A	BH140		river/stream
DNC	A	BI030		lock
DNC	A	GB005		airport/airfield
DNC	A	GB055		runway
DTOP	L	BI040		sluice gate
DTOP	A	AC030		settling basin/sludge pond
DTOP	A	AD010		power plant
DTOP	A	AD030		substation/transformer yard
DTOP	A	AK120		park
DTOP	A	AK170		swimming pool
DTOP	A	AL015	bfc=15	building - school
DTOP	A	AL015	bfc=6	building - hospital
DTOP	A	AL015	bfc=7	building - house of worship

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	A	AL135	<>pop	native settlement
DTOP	A	AL135	pop	native settlement
DTOP	A	AL140		particle accelerator
DTOP	A	AM060		storage bunker/storage mound
DTOP	A	AN060		railroad yard/marshaling yard
DTOP	A	AQ135		vehicle stopping area/rest area
DTOP	A	AQ140		vehicle storage/parking area
DTOP	A	BH030	sdr	ditch - not covered
DTOP	A	BH030	<>sdr	ditch
DTOP	A	BH040		filtration beds/aeration beds
DTOP	A	BH050		fish hatchery/fish farm/marine farm
DTOP	A	BI030		lock
DTOP	A	BI050		water intake tower
DTOP	A	DA005		asphalt lake
FFD	A	AC030		settling basin/sludge pond
FFD	A	AL135		native settlement
FFD	A	AN060		railroad yard/marshaling yard
FFD	A	BH040		filtration beds/aeration beds
FFD	A	BH050		fish hatchery/fish farm/marine farm
FFD	A	BI030		lock
UVM	L	BI040		sluice gate
UVM	A	AC030		settling basin/sludge pond
UVM	A	AD010		power plant
UVM	A	AD030		substation/transformer yard
UVM	A	AK110		grandstand
UVM	A	AK120		park
UVM	A	AK170		swimming pool
UVM	A	AL015	bfc=7or114	building - house of worship
UVM	A	AL015	bfc=15or60or108	building - school
UVM	A	AL015	bfc=6or100	building - hospital
UVM	A	AL015	bfc=2or3or5or8or28or52or121	building - government
UVM	A	AL130		monument
UVM	A	AL135		native settlement
UVM	A	AL140		particle accelerator
UVM	A	AM040		mineral pile
UVM	A	AM060		storage bunker/storage mound
UVM	A	AN060		railroad yard/marshaling yard
UVM	A	AN075		railroad turntable
UVM	A	AP020		interchange
UVM	A	AP030	med=1	road - divided w/median
UVM	A	AP030	med<>1 AND wtc<>2	road - all weather no median
UVM	A	AP030	med<>1 AND wtc=2	road - fair/dry weather no median
UVM	A	AQ065		culvert
UVM	A	AQ125		station (miscellaneous)
UVM	A	AQ140		vehicle storage/parking area
UVM	A	AQ150		flight of steps
UVM	A	AT010		disk/dish
UVM	A	BH040		filtration beds/aeration beds
UVM	A	BH050		fish hatchery/fish farm/marine farm
UVM	A	BH100	hyc<>3	moat - not dry
UVM	A	BH100	hyc=3	moat - dry
UVM	A	BI030		lock
UVM	A	BI050		water intake tower
UVM	A	DA005		asphalt lake

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Product	Delin	FCODE	Attribute Condition	Description
VITD	L	BI030		lock
VITD	A	AN060		railroad yard/marshalling yard
VML0	A	AA052		oil/gas field
VML0	A	AL135		native settlement
VML0	A	BH050		fish hatchery/fish farm/marine farm
VML1	L	BI030		lock
VML1	A	AC030		settling basin/sludge pond
VML1	A	AD010		power plant
VML1	A	AK120		park
VML1	A	AL015	bfc=15	building - school
VML1	A	AL015	bfc=7	building - house of worship
VML1	A	AL135		native settlement
VML1	A	AN060		railroad yard/marshalling yard
VML1	A	BH040		filtration beds/aeration beds
VML1	A	BH050		fish hatchery/fish farm/marine farm
VML1	A	DA005		asphalt lake
VML2	L	BI040		sluice gate
VML2	A	AC030		settling basin/sludge pond
VML2	A	AD010		power plant
VML2	A	AD030		substation/transformer yard
VML2	A	AK120		park
VML2	A	AK170		swimming pool
VML2	A	AL015	bfc=15	building - school
VML2	A	AL015	bfc=6	building - hospital
VML2	A	AL015	bfc=7	building - house of worship
VML2	A	AL135		native settlement
VML2	A	AL140		particle accelerator
VML2	A	AM060		storage bunker/storage mound
VML2	A	AN060		railroad yard/marshalling yard
VML2	A	AQ135		vehicle stopping area/rest area
VML2	A	AQ140		vehicle storage/parking area
VML2	A	BH040		filtration beds/aeration beds
VML2	A	BH050		fish hatchery/fish farm/marine farm
VML2	A	BI030		lock
VML2	A	BI050		water intake tower
VML2	A	DA005		asphalt lake
WVS	L	ZD003		artifact location
0604	Line	LS(SOLD,1,LANDF)	<i>feature brown very thin solid line</i>	
DNC	L	CA010		contour line (land)
DNC	A	AL020		built-up area
DNC	A	BB150		landing place
DTOP	A	AB000		disposal site/waste pile
DTOP	A	AB010		wrecking yard/scrap yard
DTOP	A	AL170		plaza/city square
DTOP	A	DA010	smc<>84	ground surface element - not rocky
DTOP	A	DA010	smc=84	ground surface element - rocky
UVM	A	AB000		disposal site/waste pile
UVM	A	AB010		wrecking yard/scrap yard
UVM	A	AL170		plaza/city square
UVM	A	DA010	mcc=8or46or84	ground surface element - boulders, gravel, rock
UVM	A	DA010	mcc<>8and<>46and<>52and<>84and<>88	ground surface element - not rock, not lava, not sand
VITD	A	DA010	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9	ground surface element - silts, clays, evaporites, other
VITD	A	DA010	stp=1or2or3or4	ground surface element - gravels

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Product	Delin	FCODE	Attribute Condition	Description
VML0	A	DA010	smc<>52and<>88	ground surface element - not lava, not sand
VML1	A	AB000		disposal site/waste pile
VML1	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML1	A	DA010	mcc=46or8	ground surface element - boulders, gravel
VML2	A	AB000		disposal site/waste pile
VML2	A	AB010		wrecking yard/scrap yard
VML2	A	AL170		plaza/city square
VML2	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML2	A	DA010	mcc=46or8	ground surface element - boulders, gravel
0605	Line	LS(SOLD,2,LANDF)		<i>feature brown thin solid line</i>
DNC	L	AK130		race track
DNC	L	AN010		railroad
DNC	L	AP020		interchange
DNC	L	AP030		road
0606	Line	LS(SOLD,3,LANDF)		<i>feature brown solid line</i>
DNC	L	GB055		runway
0607	Line	LS(SOLD,4,LANDF)		<i>feature brown thick solid line</i>
DNC	L	BI020		dam/weir
0608	Line	LS(SOLD,1,DEPCN)		<i>depth gray very thin solid line</i>
DNC	L	BE010	acc=1	depth curve - accurate
TOD1	L	BE015	acc=1	depth contour - accurate
TOD2	L	BE015	acc=1	depth contour - accurate
TOD3	L	BE015	acc=1	depth contour - accurate
TOD4	L	BE015	acc=1 AND hqc<>1	depth contour - accurate,not index
0609	Line	LS(SOLD,2,DEPSC)		<i>depth dk gray thin solid line</i>
TOD4	L	BE015	acc=1 AND hqc=1	depth contour - accurate, index
0610	Line	LS(SOLD,3,CHGRD)		<i>gray solid line</i>
DNC	L	AQ113	loc=25	pipeline/pipe - above ground or over water
DNC	L	BH010	loc=25	aqueduct - elevated
DNC	L	BH120		rapids
0611	Line	LS(SOLD,4,CHGRD)		<i>gray thick solid line</i>
DNC	A	AQ040	bsc<>12 AND bot<>4and<>10and<>11	bridge/overpass/viaduct (opening)
DNC	A	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
DNC	A	AQ045		bridge span
0612	Line	LS(SOLD,1,CHGRF)		<i>lt gray very thin solid line</i>
DTOP	L	FA090		geophysical prospecting grid
UVM	A	DA010	mcc=52	ground surface element - lava
VML0	A	DA010	smc=52	ground surface element - lava
VML1	L	FA090		geophysical prospecting grid
VML1	A	DA010	mcc=52	ground surface element - lava
VML2	L	FA090		geophysical prospecting grid
VML2	A	DA010	mcc=52	ground surface element - lava
0614	Line	LS(DASH,1,DEPCN)		<i>depth gray very thin dash line</i>
DNC	L	BE010	acc=2	depth curve - not accurate
TOD1	L	BE015	acc=2	depth contour - not accurate
TOD2	L	BE015	acc=2	depth contour - not accurate
TOD3	L	BE015	acc=2	depth contour - not accurate
0615	Line	LS(SOLD,3,CHWHT)		<i>pale green solid line</i>
DNC	L	BH180		waterfall
0620	Line	LS(SOLD,6,TRFCF)		<i>traffic lt magenta very very thick solid line</i>
DNC	L	FC041	tsp=4	traffic separation scheme (TSS) - separation zone line

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Product	Delin	FCODE	Attribute	Condition	Description
0621	Line	LS(SOLD,1,DEPVS)			<i>depth med blue very thin solid line</i>
	DTOP	L BH030			ditch
	FFD	L BH030			ditch
	UVM	L BH030	hyc=0or8		ditch - perennial, unknown
	VML0	L BH000			inland water
	VML1	L BH030	hyc=0or8		ditch - perennial, unknown
	VML2	L BH030	hyc=0or8		ditch - perennial, unknown
0623	Line	LS(SOLD,2,CSTLN)			<i>dk gray thin solid line</i>
	DNC	L BB040	vrr=1		breakwater/groyne - partly submerged at high water
	DNC	L BB140	vrr=1		jetty - partly submerged at high water
	DNC	L BB220	vrr=1		ramp (maritime) - partly submerged at high water
	DNC	L BB230			seawall
	DNC	L BB240	vrr=1		slipway/patent slip - partly submerged at high water
	DNC	L BI040			sluice gate
	DNC	A BB040	vrr=1		breakwater/groyne - partly submerged at high water
	DNC	A BB140	vrr=1		jetty - partly submerged at high water
	DNC	A BB220	vrr=1		ramp (maritime) - partly submerged at high water
	DNC	A BD020	vrr=1 AND hdp=NULL		crib - above surface
	DNC	A BD100	vrr=1		pile/piling/post - does not cover
	DNC	A BD140	vrr=1		snags/stumps - does not cover
	DNC	A BD180	vrr=1 AND hdp=NULL		wreck - does not cover; depth null
	DTOP	L BB040			breakwater/groyne
	DTOP	L BB140			jetty
	DTOP	L BB190			pier/wharf/quay
	DTOP	L BB220			ramp (maritime)
	DTOP	L BB230			seawall
	DTOP	A BB040			breakwater/groyne
	DTOP	A BB140			jetty
	DTOP	A BB190			pier/wharf/quay
	DTOP	A BB220			ramp (maritime)
	FFD	L BB190			pier/wharf/quay
	FFD	A BB190			pier/wharf/quay
	UVM	L BB040			breakwater/groyne
	UVM	L BB140			jetty
	UVM	L BB190			pier/wharf/quay
	UVM	L BB230			seawall
	UVM	L BB240			slipway/patent slip
	UVM	A BB040			breakwater/groyne
	UVM	A BB140			jetty
	UVM	A BB190			pier/wharf/quay
	VML0	L BB040			breakwater/groyne
	VML0	L BB190			pier/wharf/quay
	VML0	L BB230			seawall
	VML1	L BB040			breakwater/groyne
	VML1	L BB140	vrr=0or1		jetty - unknown, partly submerged at high water
	VML1	L BB190			pier/wharf/quay
	VML1	L BB230			seawall
	VML1	A BB190			pier/wharf/quay
	VML2	L BB040			breakwater/groyne
	VML2	L BB140			jetty
	VML2	L BB190			pier/wharf/quay
	VML2	L BB230			seawall
	VML2	L BB240			slipway/patent slip
	VML2	A BB040			breakwater/groyne

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Product	Delin	FCODE	Attribute	Condition	Description
VML2	A	BB140			jetty
VML2	A	BB190			pier/wharf/quay
VML2	A	BB240			slipway/patent slip
0624	Line	LS(DASH,1,LANDF)			<i>feature brown very thin dash line</i>
DNC	A	AA010			mine/quarry
DNC	A	AB000			disposal site/waste pile
DNC	A	AB010			wrecking yard/scrap yard
DNC	A	AC000			processing plant/treatment plant
DNC	A	AM010			depot (storage)
DNC	A	AM040			mineral pile
DNC	A	EA040			orchard/plantation
DNC	A	EA050			vineyards
DNC	A	EC030	veg<>19		trees - not mangrove
DNC	A	EC030	veg=19		trees - mangrove
DTOP	A	AC000			processing plant/treatment plant
UVM	A	AC000			processing plant/treatment plant
VML1	A	AC000			processing plant/treatment plant
VML2	A	AC000			processing plant/treatment plant
0625	Line	LS(SOLD,4,CSTLN)			<i>dk gray thick solid line</i>
DNC	L	BB170			offshore loading facility
DNC	L	BB190			pier/wharf/quay
DNC	A	BB170			offshore loading facility
DNC	A	BB190			pier/wharf/quay
0626	Line	LS(DASH,2,CSTLN)			<i>dk gray thin dash line</i>
DNC	L	BB040	vrr=4or8		breakwater/groyne - submerged, covers and uncovers
DNC	L	BB140	vrr=4or8		jetty - submerged, covers and uncovers
DNC	L	BB220	vrr=4or8		ramp (maritime) - submerged, covers and uncovers
DNC	L	BB240	vrr=4or8		slipway/patent slip - submerged, covers and uncovers
DNC	A	AL200	loc=22 AND vrr=8		ruins - offshore, covers and uncovers
DNC	A	BB040	vrr=4or8		breakwater/groyne - submerged, covers and uncovers
DNC	A	BB140	vrr=4or8		jetty - submerged, covers and uncovers
DNC	A	BB220	vrr=4or8		ramp (maritime) - submerged, covers and uncovers
DNC	A	BD020	vrr=8 AND hdp=NULL		crib - covers and uncovers
DNC	A	BD100	vrr=8		pile/piling/post - covers and uncovers
DNC	A	BD140	vrr=8		snags/stumps - covers and uncovers
DNC	A	BD180	vrr=8 AND hdp=NULL		wreck - covers and uncovers; depth null
VML1	L	BB140	vrr=8		jetty - covers and uncovers
0627	Line	LS(SOLD,5,CHGRD)			<i>gray very thick solid line</i>
DNC	L	AQ040	bsc<>12 AND bot<>4and<>10and<>11		bridge/overpass/viaduct (opening)
DNC	L	AQ045			bridge span
0629	Line	LS(DASH,2,CHGRD)			<i>gray thin dash line</i>
DNC	L	FC021	mac=56 AND mbl=NULL		maritime limit boundary - fish traps
DNC	L	FC021	mbl<>7and<>13 AND mac=NULL		maritime limit boundary - not clearing line
DNC	A	AL200	loc=22 AND vrr=4 AND hdp>20		ruins - offshore, submerged - depth greater than 20m
DNC	A	BD000	hdp>20		underwater danger/hazard - depth greater than 20m
DNC	A	BD020	vrr=4 AND hdp>20		crib - submerged; depth greater than 20m
DNC	A	BD120	vrr=4 AND hdp>20		reef - submerged, depth greater than 20m
0630	Line	LS(DOTT,2,CSTLN)			<i>dk gray thin dotted line</i>
DNC	A	BD180	vrr=0or2 AND hdp=NULL		wreck - unknown; awash; depth null
DNC	A	BD180	vrr=4 AND hdp=0		wreck - submerged; depth unknown
0631	Line	LS(SOLD,2,CHGRD)			<i>gray thin solid line</i>
DNC	L	FC021	mac=26 AND mbl=NULL		maritime limit boundary - unsurveyed

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	BE010	cvl=99999	depth area; depth unknown
DNC	A	FC021	mac=26	maritime limit boundary - unsurveyed
TOD1	A	BE019	cvl=-32767	depth area; depth unknown
TOD2	A	BE019	cvl=-32767	depth area; depth unknown
TOD3	A	BE019	cvl=-32767	depth area; depth unknown
TOD4	A	BE019	cvl=-32767	depth area; depth unknown
0632	Line	LS(DASH,1,CSTLN)		<i>dk gray very thin dash line</i>
DNC	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
0633	Line	LS(DASH,2,CHGRF)		<i>lt gray thin dash line</i>
DNC	L	FC021	mac=57 AND mbl=NULL	maritime limit boundary - marine farm
FFD	A	FA001		administrative area
TOD0	L	FC021	mbl<>6	maritime limit boundary - other
TOD0	L	FC021	mbl=6	maritime limit boundary - limit of territorial waters
UVM	A	FA001		administrative area
VML0	A	FA001		administrative area
VML1	A	FA001		administrative area
VML2	A	FA001		administrative area
WVS	L	FC021	mbl=6	maritime limit boundary - territorial waters limits
WVS	A	FA001		administrative area
0634	Line	LS(DASH,1,CHMGD)		<i>magenta very thin dash line</i>
DNC	L	FC021	mac=25 AND mbl=NULL	maritime limit boundary - spoil
DNC	L	FC021	mac=30or35 AND mbl=NULL	maritime limit boundary - dumping, explosive dumping
DNC	L	GB070		seaplane landing/seaplane take-off area
0635	Line	LS(DASH,1,CHMGF)		<i>lt magenta very thin dash line</i>
DNC	L	FC021	mac=31 AND mbl=NULL	maritime limit boundary - incineration
DNC	L	FC021	mac=49 AND mbl=NULL	maritime limit boundary - cargo Xshipment
0656	Line	LS(DASH,1,CHGRD)		<i>gray very thin dash line</i>
DNC	L	AQ130		tunnel
DNC	L	BC100		leading line
DNC	L	FC021	mbl=13 AND mac=NULL	maritime limit boundary - clearing line
DNC	L	FC021	mac=55 AND mbl=NULL	maritime limit boundary - fairway
DNC	L	FC100		measured distance line
DNC	L	FC177		swept area
DNC	A	BB115		gridiron
DNC	A	BD010		breakers
DNC	A	BD040		eddies
DNC	A	BD080		overfalls/tide rips
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
DTOP	L	AP050		trail
FFD	L	AP050		trail
UVM	L	AK150		ski jump
UVM	L	AP050		trail
VML0	L	AP050		trail
VML1	L	AP050		trail
VML2	L	AK150		ski jump
VML2	L	AP050		trail
0657	Line	LS(DASH,4,CHGRD)		<i>gray thick dash line</i>
DNC	L	AQ010		aerial cableway lines/ski lift lines
DNC	L	AT030		power transmission line
DNC	L	AT060		telephone line/telegraph line

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	L	AQ010		aerial cableway lines/ski lift lines
UVM	L	AQ010		aerial cableway lines/ski lift lines
VML0	L	AQ010		aerial cableway lines/ski lift lines
VML1	L	AQ010		aerial cableway lines/ski lift lines
VML2	L	AQ010		aerial cableway lines/ski lift lines
0663	Line	LS(DASH,2,TRFCD)		<i>traffic magenta thin dash line</i>
DNC	L	FC021	mac=42 AND mbl=NULL	maritime limit boundary - precautionary
DNC	L	FC021	mac=0or999 AND mbl=NULL	maritime limit boundary - unknown, other
DNC	L	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	L	FC130		radar reference line
0665	Line	LS(DASH,4,TRFCD)		<i>traffic magenta thick dash line</i>
DNC	L	FC031	mac=40or41	maritime area - TSS
DNC	L	FC041	tsp=2	traffic separation scheme (TSS) - outer boundary
0669	Line	LS(DASH,1,DEPVS)		<i>depth med blue very thin dash line</i>
DTOP	A	BJ100		snow field/ice field
UVM	L	BH030	hyc=6	ditch - intermittent
VML0	A	BJ100		snow field/ice field
VML1	L	BH030	hyc<>0and<>8	ditch - not perennial
VML1	A	BJ100		snow field/ice field
VML2	L	BH030	hyc=6	ditch - intermittent
VML2	A	BJ100		snow field/ice field
0670	Line	LS(DASH,2,DEPVS)		<i>depth med blue thin dash line</i>
TOD1	L	BE040		track line
TOD2	L	BE040		track line
TOD3	L	BE040		track line
0680	Line	LS(DOTT,2,CHBLK)		<i>black thin dotted line</i>
DNC	L	FA000	use=32	administrative boundary - insular
DNC	A	AL200	loc=22 AND vrr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	A	AL200	loc=22 AND vrr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
DNC	A	BC080		perches/stakes
DNC	A	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	A	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
DNC	A	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
DNC	A	BD020	vrr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
DNC	A	BD030		discolored water
DNC	A	BD100	vrr=4	pile/piling/post - submerged
DNC	A	BD120	vrr<>8 AND hdp=0orNULL	reef - not covers and uncovers, depth unknown or null
DNC	A	BD120	vrr=4 AND hdp>0and<=20	reef - submerged, depth 20m or less
DNC	A	BD140	vrr=4	snags/stumps - submerged
DNC	A	BD180	vrr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
DTOP	A	BD100		pile/piling/post
VML2	A	BD100		pile/piling/post
0681	Line	LS(SOLD,2,UINFB)		<i>UI very dk blue thin solid line</i>
TOD0	A	FC031	mac=104	maritime area - major op area
0682	Line	LS(SOLD,1,UINFB)		<i>UI very dk blue very thin solid line</i>
DTOP	L	BH120		rapids
DTOP	L	BH180		waterfall
TOD0	A	FC031	mac=105	maritime area - minor op area
VML1	L	BH120		rapids
VML1	L	BH180		waterfall
VML2	L	BH120		rapids
VML2	L	BH180		waterfall

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Product	Delin	FCODE	Attribute	Condition	Description
0683	Line	LS(DOTT,3,UINFB)			<i>UI very dk blue dotted line</i>
TOD0	A	FC031	mac=114		maritime area - sea test range
0684	Line	LS(SOLD,2,CHRED)			<i>red thin solid line</i>
FFD	A	AL045			complex outline
TOD0	L	FC101			theodolite line
UVM	A	AL045			complex outline
0685	Line	LS(SOLD,2,CHGRN)			<i>green thin solid line</i>
TOD0	A	GA005	aua=39		airspace - upper control area
0686	Line	LS(SOLD,4,CHMGD)			<i>magenta thick solid line</i>
TOD4	L	FC180	htc<>507and<>509		hull integrity test site bottom feature - not cable, not slope > 10 degrees
0687	Line	LS(L-DASH,4,CHMGD)			<i>magenta thick long dash line</i>
TOD4	A	FC178			hull integrity test area
0688	Line	LS(L-DASH,2,DEPSC)			<i>depth dk gray thin long dash line</i>
TOD4	L	BE015	acc<>1 AND hqc=1		depth contour - not accurate, index
0689	Line	LS(L-DASH,1,DEPCN)			<i>depth gray very thin long dash line</i>
TOD4	L	BE015	acc<>1 AND hqc<>1		depth contour - not accurate, not index
0700	Line	LC(FERYRT01)			<i>magenta dash very thin line w/ boat shape</i>
DNC	L	AQ070	fer=2		ferry crossing - without cables
0701	Line	LC(FERYRT02)			<i>black dash very thin line w/ boat shape</i>
DNC	L	AQ070	fer=1		ferry crossing - with cables
0704	Line	LC(PIPSOL06)			<i>gray dash very thin line w/ sm cir</i>
DNC	L	AQ113	loc<>25 AND pro=116		pipeline/pipe - not above ground or over water; water
DNC	L	AQ113	loc<>25 AND pro=95 OR plt=2or3		pipeline/pipe - not above ground or over water; sewage, outfall, intake
DNC	L	BH010	loc<>25		aqueduct - not elevated
0705	Line	LC(PIPSOL05)			<i>magenta dash very thin line w/ cir</i>
DNC	L	AQ113	loc<>25 AND pro<>95and<>116 AND plt<>2and<>3		pipeline/pipe - not above ground or over water; not sewage or water
0708	Line	LC(CBLSUB06)			<i>magenta broken zig-zag line w/ flash symbol</i>
DNC	L	AT005			cable
TOD4	L	FC180	htc=509		hull integrity test site bottom feature - cable
TOD4	A	FC180	htc=509		hull integrity test site bottom feature - cable
0711	Line	LC(ACHARE51)			<i>magenta dash/chevron line w/anchor symbol</i>
DNC	L	BB010	mac<>12		anchorage - not anchoring berth
DNC	A	BB010	mac<>12		anchorage - not anchoring berth
DTOP	A	BB010			anchorage
VML2	A	BB010			anchorage
0712	Line	LC(FSHFAC02)			<i>gray L complex line</i>
DNC	L	BB100			fish stakes
0713	Line	LC			<i>magenta compressed zig-zag line</i>
DNC	L	BC040			light
0716	Line	LC(NAVARE51)			<i>gray dash/chevron line</i>
DNC	A	BB110			fish traps/fish weirs
DNC	A	BB180			oyster bed/mussel bed
DNC	A	BD050			foul ground
DNC	A	BH050			fish hatchery/fish farm/marine farm
DNC	A	FC021	mac=55		maritime limit boundary - fairway
DNC	A	FC021	mac=56		maritime limit boundary - fish traps
DNC	A	FC021	mac=57		maritime limit boundary - marine farm

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC170		safety fairway
DNC	A	FC177		swept area
DNC	A	ZC040		magnetic disturbance area
TOD0	A	FC031	mac=156	maritime area - safety lane
TOD0	A	FC170		safety fairway
VML1	A	ZC040		magnetic disturbance area
0722	Line	LC(RESARE51)		<i>magenta dashed T line</i>
DNC	L	FC036		restricted area
DNC	A	FC031	mac=41	maritime area - inshore traffic zone (TSS)
0723	Line	LC(DWRTCL08)		<i>traffic magenta solid line w/ > and DW</i>
DNC	L	FC165	atn=1 AND exs=22 AND rtt=3	route (maritime) - marked;1-way;recomm for deep draft vessels
0724	Line	LC(DWRTCL07)		<i>traffic magenta dash line w/ > and DW</i>
DNC	L	FC165	atn=2 AND exs=22 AND rtt=3	route (maritime) - unmarked;1-way;recomm for deep draft vessels
0725	Line	LC(DWRTCL06)		<i>traffic magenta solid line w/ < > and DW</i>
DNC	L	FC165	atn=1 AND exs=23 AND rtt=3	route (maritime) - marked;2-way;recomm for deep draft vessels
0726	Line	LC(DWRTCL05)		<i>traffic magenta dash line w/ < > and DW</i>
DNC	L	FC165	atn=2 AND exs=23 AND rtt=3	route (maritime) - unmarked;2-way;recomm for deep draft vessels
0727	Line	LC(DWLDEF01)		<i>traffic magenta dash line w/ < ? > and DW</i>
DNC	L	FC165	exs=0 AND rtt=3	route (maritime) - unknown;recomm for deep draft vessels
0728	Line	LC(RECTRC12)		<i>gray very thin line w/ ></i>
DNC	L	FC165	atn=1 AND exs=22 AND rtt<>3	route (maritime) - marked;1-way;not recomm for deep draft vessels
0729	Line	LC(RECTRC11)		<i>gray very thin dash line w/ ></i>
DNC	L	FC165	atn=2 AND exs=22 AND rtt<>3	route (maritime) - unmarked;1-way;not recomm for deep draft vessels
0730	Line	LC(RECTRC10)		<i>gray very thin line w/ < ></i>
DNC	L	FC165	atn=1 AND exs=23 AND rtt<>3	route (maritime) - marked;2-way;not recomm for deep draft vessels
0731	Line	LC(RECTRC09)		<i>gray very thin dash line w/ < ></i>
DNC	L	FC165	atn=2 AND exs=23 AND rtt<>3	route (maritime) - unmarked;2-way;not recomm for deep draft vessels
0732	Line	LC(RECDEF02)		<i>gray very thin dash line w/ < ? ></i>
DNC	L	FC165	exs=0 AND rtt<>3	route (maritime) - unknown;not recomm for deep draft vessels
DNC	L	FC170		safety fairway
0733	Point	SY(LOCMAG51)		<i>lt magenta open flag</i>
DNC	A	ZC040		magnetic disturbance area
VML1	A	ZC040		magnetic disturbance area
0734	Line	LC(CTYARE51)		<i>magenta dash/chevron line</i>
DNC	A	AL005		animal sanctuary
DNC	A	FC021	mac=48	maritime limit boundary - pilot boarding
DNC	A	FC021	mac=49	maritime limit boundary - cargo Xshipment
DNC	A	FC021	mac=44	maritime limit boundary - deguassing
DNC	A	FC021	mac=32or33	maritime limit boundary - oil field, gas field
DNC	A	FC021	mac=31	maritime limit boundary - incineration
DNC	A	FC021	mac=27or28or29	maritime limit boundary - submarine exercise, mine laying, firing range
DNC	A	FC021	mac=25or30or35	maritime limit boundary - spoil, dumping, explosive dumping

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC021	mac=24	maritime limit boundary - turning area
DNC	A	FC021	mac=58	maritime limit boundary - dredging area
DNC	A	FC031	mac=4	maritime area - mine danger
DNC	A	FC031	mac=5	maritime area - entry prohibited
DNC	A	FC036	mac=0or999	restricted area - to be avoided, other
DNC	A	FC036	mac=37	restricted area - safety zone
DNC	A	FC036	mac=43	restricted area - area to be avoided
DNC	A	FC165	rtt=11	route (maritime) - 2-way
DNC	A	GB070		seaplane landing/seaplane take-off area
TOD0	A	FC031	mac=101	maritime area - marine sanctuary
TOD0	A	FC031	mac=143or148or149or158	maritime area - military area, minefield
TOD0	A	FC031	mac=27or28or115or116or140or146or147or150or151or152or153or157or159	maritime area - military practice areas
TOD0	A	FC031	mac=0or144or145or154or999	maritime area - restricted areas
TOD0	A	FC036		restricted area
0735	Line	LC(PIPARE51)		<i>magenta dash/chevron line w/ dash, cir</i>
DNC	A	FC036	mac=21or23or61	restricted area - pipelines, sewer
0736	Line	LC(PIPARE61)		<i>gray dash/chevron line w/ dash, cir</i>
DNC	A	FC036	mac=45or46	restricted area - outfall, intake
0737	Line	LC(CBLARE51)		<i>magenta dash/chevron line w/ flash symbol</i>
DNC	A	FC036	mac=20	restricted area - cables
0738	Line	LC(PRCARE51)		<i>magenta dash/chev line w/precaution symbol</i>
DNC	A	FC021	mac=42	maritime limit boundary - precautionary
0739	Line	LC(ACHRES51)		<i>magenta T dash line w/ anchor symbol</i>
DNC	A	FC036	mac=15	restricted area - anchoring prohibited
0740	Line	LC(FSHRES51)		<i>magenta T dash line w/ fish symbol</i>
DNC	A	FC036	mac=22	restricted area - fishing prohibited
0741	Line	LC(DWRUTE51)		<i>traffic magenta dash/chevron line w/ DW</i>
DNC	A	FC165	rtt=4	route (maritime) - deep water
0742	Line	LC(CTNARE51)		<i>magenta dash/chevron line w/caution symbol</i>
DNC	A	FC021	mac=0or999	maritime limit boundary - unknown, other
DNC	A	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	A	FC165	rtt=0	route (maritime) - use unknown
TOD0	A	FC031	mac=141or142or155	maritime area - caution areas
0743	Line	LC(LOWACC21)		<i>dk gray small open rectangle dash line</i>
DNC	L	BA010	acc=2 AND slt<>6and<>8	coastline/shoreline - approximate; not mangrove or marsh
0752	Line	LC=LS(DASH,1,CHGRD)+SY(WATTUR02)		<i>gray very thin dash line w/ cntred waves</i>
DNC	L	BD010		breakers
0753	Line	LC=LS(SOLD,5,CHGRD)+SY(BRIDGE01)		<i>gray very thick line w/ cntrd magenta dbl cir</i>
DNC	L	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
0754	Line	LC(OPAREAA5W)		<i>UI vy dk blue vy thin line w/5 rows dots inside</i>
TOD0	A	FC031	mac=106	maritime area - ASW area
0755	Line	LC(OPAREASubOA)		<i>UI vy dk blue vy thin line w/vert inward ticks</i>
DTOP	L	BJ040		ice cliff
TOD0	A	FC031	mac=107	maritime area - submarine op area
VML0	L	BJ040		ice cliff
VML1	L	BJ040		ice cliff
VML2	L	BJ040		ice cliff

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Product	Delin	FCODE	Attribute Condition	Description
0756	Line	LC(OPAREAstlsur)		<i>feature brown vy thin line w/vert inward ticks</i>
TOD0	A	FC031	mac=108	maritime area - submarine traffic lane submerged
0757	Line	LC(OPAREAstlsur)		<i>feature brown vy thin line w/3 rows dots ins</i>
TOD0	A	FC031	mac=109	maritime area - submarine traffic lane surface
0758	Line	LC(OPAREAsfl)		<i>feature brown 5 dot vy thin line</i>
TOD0	A	FC031	mac=110	maritime area - surface traffic lane
0759	Line	LC(OPAREAalcorr)		<i>green thin line w/stagrd dots inside</i>
TOD0	A	GA005	aua=0or20or36or998	air lanes/corridors
0760	Line	LC(OPAREAADIZ)		<i>magenta vy thin line w/ 3 row vert dots inside</i>
TOD0	A	GA005	aua=2	airspace - air defense zone
0761	Line	LC(OPAREActlas)		<i>green vy thin line w/3 row vert dots</i>
TOD0	A	GA005	aua=9or21or22or23or34or46or70	airspace - controlled
0762	Line	LC(OPAREAFIR)		<i>green thin line with ticks inside</i>
TOD0	A	GA005	aua=13	airspace - flight information region
0763	Line	LC(OPAREAUIR)		<i>green thin line with open tabs inside</i>
TOD0	A	GA005	aua=40	airspace - upper flight information region
0764	Line	LC(OPAREAAWAB)		<i>magenta thin line w/ rt angle ticks inside</i>
TOD0	A	GA015	aul=0or5or6	special use airspace - warning area
0765	Line	LC(OPAREAARAB)		<i>magenta thin line w/ lft angle ticks inside</i>
TOD0	A	GA015	aul=2or3	special use airspace - prohibited,restricted
0766	Line	LC(HITSslope)		<i>magenta very thin solid line with inward ticks</i>
TOD4	L	FC180	htc=507	hull integrity test site bottom feature - slope > 10 degrees
TOD4	A	FC180	htc=507	hull integrity test site bottom feature - slope > 10 degrees
0802	Area	AC(CHGRD)		<i>gray solid fill</i>
DNC	A	AN060		railroad yard/marshalling yard
DTOP	A	AL105	<>pop	settlement
DTOP	A	AN060		railroad yard/marshaling yard
FFD	A	AN060		railroad yard/marshalling yard
UVM	A	AN060		railroad yard/marshaling yard
VITD	A	AN060		railroad yard/marshalling yard
VML1	A	AN060		railroad yard/marshalling yard
VML2	A	AN060		railroad yard/marshalling yard
0803	Area	AC(DEPIT)		<i>yellow-green solid fill</i>
DNC	A	AL200	loc=22 AND verr=8	ruins - offshore, covers and uncovers
DNC	A	BA020		foreshore
DNC	A	BD020	verr=8 AND hdp=NULL	crib - covers and uncovers
DNC	A	BD100	verr=8	pile/piling/post - covers and uncovers
DNC	A	BD120	verr=8	reef - covers and uncovers
DNC	A	BD140	verr=8	snags/stumps - covers and uncovers
DNC	A	BD180	verr=8 AND hdp=NULL	wreck - covers and uncovers; depth null
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DTOP	A	BA020		foreshore
UVM	A	BA020		foreshore
VITD	A	SA050	gsc=1	slope polygon - 0 to >45%, dissected
VML1	A	BA020		foreshore
VML2	A	BA020		foreshore

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Product	Delin	FCODE	Attribute Condition	Description
0804	Area	AC(CHBRN)		<i>brown solid fill</i>
DNC	A	AD010		power plant
DNC	A	AD030		substation/transformer yard
DNC	A	AH010		bastion/rampart/fortification
DNC	A	AH050		fortification
DNC	A	AK040		athletic field
DNC	A	AK100		golf course
DNC	A	AK120		park
DNC	A	AK160		stadium/amphitheater
DNC	A	AK180		zoo/safari park
DNC	A	AL015		building
DNC	A	AL020		built-up area
DNC	A	AL030		cemetery
DNC	A	AL200	loc=22 AND vrr=1	ruins - offshore, does not cover
DNC	A	AL200	loc=8	ruins - on ground surface
DNC	A	AM030		grain elevator
DNC	A	AM070		tank
DNC	A	AQ116		pumping station
DNC	A	AT020		early warning radar site
DNC	A	BB150		landing place
DNC	A	BB170		offshore loading facility
DNC	A	BD020	vrr=1 AND hdp=NULL	crib - above surface
DNC	A	BD100	vrr=1	pile/piling/post - does not cover
DNC	A	BD140	vrr=1	snags/stumps - does not cover
DNC	A	BD180	vrr=1 AND hdp=NULL	wreck - does not cover; depth null
DNC	A	GB055		runway
DTOP	A	AD010		power plant
DTOP	A	AD030		substation/transformer yard
DTOP	A	AM010		depot (storage)
DTOP	A	AM020		grain bin/silo
DTOP	A	AM030		grain elevator
DTOP	A	DB160		rock strata/rock formation
UVM	A	AD010		power plant
UVM	A	AD030		substation/transformer yard
UVM	A	AM010		depot (storage)
UVM	A	AM020		grain bin/silo
UVM	A	AM030		grain elevator
VML0	A	AA052		oil/gas field
VML1	A	AD010		power plant
VML2	A	AD010		power plant
VML2	A	AD030		substation/transformer yard
VML2	A	AM010		depot (storage)
VML2	A	AM020		grain bin/silo
VML2	A	AM030		grain elevator
VML2	A	DB160		rock strata/rock formation
0805	Area	AC(DEPDW)		<i>depth white fill</i>
DNC	A	BA040		water (except inland)
DNC	A	BE010	idsm=1 AND cvl>=ssdcand<>99999	depth area (deep water); 2 shades
DNC	A	BE010	idsm=0 AND cvl>=msdcand<>99999	depth area (very deep); 4 shades
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DTOP	A	BA040		water (except inland)
FFD	A	BA040		water (except inland)
TOD1	A	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades

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Product	Delin	FCODE	Attribute Condition	Description
TOD1	A	BE019	idsm=1 AND cvl>=ssdcand<-32767	depth area (deep water); 2 shades
TOD2	A	BE019	idsm=0 AND cvl>=msdcand<-32767	depth area (very deep); 4 shades
TOD2	A	BE019	idsm=1 AND cvl>=ssdcand<-32767	depth area (deep water); 2 shades
TOD3	A	BE019	idsm=0 AND cvl>=msdcand<-32767	depth area (very deep); 4 shades
TOD3	A	BE019	idsm=1 AND cvl>=ssdcand<-32767	depth area (deep water); 2 shades
TOD4	A	BE019	idsm=0 AND cvl>=msdcand<-32767	depth area (very deep); 4 shades
TOD4	A	BE019	idsm=1 AND cvl>=ssdcand<-32767	depth area (deep water); 2 shades
UVM	A	BA040		water (except inland)
VML0	A	BA040		water (except inland)
VML1	A	BA040		water (except inland)
VML2	A	BA040		water (except inland)
WVS	A	BA040		water (except inland)
0810	Area	AC(DEPVS)	<i>depth med blue solid fill</i>	
DNC	A	AL200	loc=22 AND vrr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	A	BC080		perches/stakes
DNC	A	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	A	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
DNC	A	BD030		discolored water
DNC	A	BD100	vrr=4	pile/piling/post - submerged
DNC	A	BD120	vrr<>8 AND hdp=0orNULL	reef - not covers and uncovers, depth unknown or null
DNC	A	BD140	vrr=4	snags/stumps - submerged
DNC	A	BD180	vrr=0or2 AND hdp=NULL	wreck - unknown; awash; depth null
DNC	A	BD180	vrr=4 AND hdp=0	wreck - submerged; depth unknown
DNC	A	BE010	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
DNC	A	BE010	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
DNC	A	BE010	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
DNC	A	BH020		canal
DNC	A	BH080		lake/pond
DNC	A	BH130		reservoir
DNC	A	BH140		river/stream
DNC	A	BI030		lock
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DTOP	A	BD100		pile/piling/post
DTOP	A	BH050		fish hatchery/fish farm/marine farm
DTOP	A	BJ065		ice shelf
DTOP	A	BJ070		pack ice
DTOP	A	BJ080		polar ice
FFD	A	BH050		fish hatchery/fish farm/marine farm
TOD1	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD1	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD1	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD2	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD2	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on

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Product	Delin	FCODE	Attribute Condition	Description
TOD3	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD4	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD4	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD4	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD4	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
UVM	A	BH050		fish hatchery/fish farm/marine farm
VML0	A	BH050		fish hatchery/fish farm/marine farm
VML0	A	BJ065		ice shelf
VML0	A	BJ070		pack ice
VML0	A	BJ080		polar ice
VML1	A	BH050		fish hatchery/fish farm/marine farm
VML1	A	BJ065		ice shelf
VML1	A	BJ070		pack ice
VML1	A	BJ080		polar ice
VML2	A	BD100		pile/piling/post
VML2	A	BH050		fish hatchery/fish farm/marine farm
VML2	A	BJ065		ice shelf
VML2	A	BJ070		pack ice
VML2	A	BJ080		polar ice
0820	Area	AC(DEPMD)	<i>depth pale blue solid fill</i>	
DNC	A	BE010	idsm=0 AND cvl>=ssdcand<mssc	depth area (medium deep); 4 shades
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<mssc	maritime area - dredged channel, 4 shades, medium deep
DTOP	A	BH020	<>sdr	canal
DTOP	A	BH020	sdr hyc<>8	canal - non-perennial, dry, unknown
DTOP	A	BH020	sdr hyc=8	canal - perennial
DTOP	A	BJ100		snow field/ice field
FFD	A	BH020	hyc<>8	canal - non-perennial, dry, unknown
FFD	A	BH020	hyc=8	canal - perennial
TOD1	A	BE019	idsm=0 AND cvl>=ssdcand<mssc	depth area (medium deep); 4 shades
TOD1	A	BE030		track swath
TOD2	A	BE019	idsm=0 AND cvl>=ssdcand<mssc	depth area (medium deep); 4 shades
TOD2	A	BE030		track swath
TOD3	A	BE019	idsm=0 AND cvl>=ssdcand<mssc	depth area (medium deep); 4 shades
TOD3	A	BE030		track swath
TOD4	A	BE019	idsm=0 AND cvl>=ssdcand<mssc	depth area (medium deep); 4 shades
UVM	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
UVM	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VITD	A	BH020	hyc<>8	canal - not perennial
VITD	A	BH020	hyc=8	canal - perennial
VML0	A	BJ100		snow field/ice field
VML1	A	BJ100		snow field/ice field
VML2	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VML2	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
VML2	A	BJ100		snow field/ice field
WVS	A	BE019		depth area
0821	Area	AC(DEPMS)	<i>depth lt blue solid fill</i>	
DNC	A	BE010	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DTOP	A	BH030	<>sdr	ditch
DTOP	A	BH030	sdr	ditch - not covered
FFD	A	BH030		ditch
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD1	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD2	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD4	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD4	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
UVM	A	BH030		ditch
VML2	A	BH030		ditch
0822	Area	AC(LANDA)	<i>lt brown solid fill</i>	
DNC	A	AK090		fairgrounds
DNC	A	BA030		island
DNC	A	BB090		drydock
DNC	A	BJ110		tundra
DNC	A	DA010		ground surface element
DNC	A	GB005		airport/airfield
DTOP	A	BA030		island
DTOP	A	DA010	smc<>84	ground surface element - not rocky
DTOP	A	EC030	veg=52	trees - clearing
FFD	A	BA030		island
UVM	A	BA030		island
UVM	A	DA010	mcc<>8and<>46and<>52and<>84and<>88	ground surface element - not rock, not lava, not sand
VITD	A	BA030		island
VITD	A	DA010	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9	ground surface element - silts, clays, evaporites, other
VITD	A	EC030	veg=52	trees - forest clearing
VML0	A	DA010	smc<>52and<>88	ground surface element - not lava, not sand
VML1	A	BA030		island
VML1	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML2	A	BA030		island
VML2	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
0823	Area	AC(NODTA)	<i>no data gray solid fill</i>	
DNC	A	BE010	cvl=99999	depth area; depth unknown
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
DNC	A	FC021	mac=26	maritime limit boundary - unsurveyed
DTOP	A	AL135	<>pop	native settlement
DTOP	A	AL135	pop	native settlement
FFD	A	AL135		native settlement
TOD1	A	BE019	cvl=-32767	depth area; depth unknown
TOD2	A	BE019	cvl=-32767	depth area; depth unknown
TOD3	A	BE019	cvl=-32767	depth area; depth unknown

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Product	Delin	FCODE	Attribute Condition	Description
TOD4	A	BE019	cvl=-32767	depth area; depth unknown
UVM	A	AL135		native settlement
VML0	A	AL135		native settlement
VML1	A	AL135		native settlement
VML2	A	AL135		native settlement
0824	Area	AC(TRFCF)		<i>traffic lt magenta solid fill</i>
DNC	A	FC041	tsp=3	traffic separation scheme (TSS) - separation zone area
0825	Area	AC(CHMGF)		<i>lt magenta solid fill</i>
TOD4	A	FC180	htc<>503and<>507and<>509	hull integrity test site bottom feature - hght not >2m,not slope>10 deg, not cable
0826	Area	AC(CHMGD)		<i>magenta solid fill</i>
TOD4	A	FC180	htc=503	hull integrity test site bottom feature - height > 2m
0902	Point	SY(ACHARE51)		<i>lt magenta anchor</i>
DNC	A	BB010	mac<>12	anchorage - not anchoring berth
DTOP	A	BB010		anchorage
VML2	A	BB010		anchorage
0904	Area	AP(MARCUL02)		<i>gray fish in net patt fill</i>
DNC	A	BB180		oyster bed/mussel bed
DNC	A	BH050		fish hatchery/fish farm/marine farm
DNC	A	FC021	mac=57	maritime limit boundary - marine farm
0910	Area	AP(MARSHE51)		<i>brown marsh patt fill</i>
DNC	A	BH095		marsh/swamp
0911	Area	AP		<i>depth med blue grid patt fill</i>
DNC	A	BH155		salt evaporator
DTOP	A	BH155		salt evaporator
FFD	A	BH155		salt evaporator
UVM	A	BH155		salt evaporator
VML0	A	BH155		salt evaporator
VML1	A	BH155		salt evaporator
VML2	A	BH155		salt evaporator
0912	Area	AP(ICEARE04)		<i>gray random line patt fill</i>
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
0913	Area	AP		<i>feature brown solid filled circle patt fill</i>
DNC	A	DB090		embankment/fill
DNC	A	DB170		sand dune/sand hills
0914	Area	AP		<i>feature brown circs patt fill</i>
DNC	A	EA030		nursery
0915	Area	AP(VEGATN03)		<i>feature brown tree side-view patt fill</i>
DNC	A	EA040		orchard/plantation
DNC	A	EA050		vineyards
DNC	A	EC030	veg<>19	trees - not mangrove
0916	Area	AP(VEGATN04)		<i>feature brown mangrove side-view patt fill</i>
DNC	A	EC030	veg=19	trees - mangrove
0917	Area	AP(TSSJCT02)		<i>traffic lt magenta rt diag line patt fill</i>
DNC	A	FC021	mac=42	maritime limit boundary - precautionary
DNC	A	FC031	mac=40	maritime area - roundabout zone (TSS)
DNC	A	FC041	tsp=6or7	traffic separation scheme (TSS) - inbound or outbound area

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Product	Delin	FCODE	Attribute Condition	Description
0919	Area	AP(DRGARE01)	<i>gray diag spaced dot patt fill</i>	
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<mssc	maritime area - dredged channel, 4 shades, medium deep
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=mssc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
0932	Area	AP(AIRARE02)	<i>feature brown airplane patt fill</i>	
DNC	A	GB005		airport/airfield
0933	Area	AP(NODATA03)	<i>gray offset dash patt fill</i>	
DNC	A	FC021	mac=26	maritime limit boundary - unsurveyed
0934	Area	AP(PRTSUR01)	<i>gray dash wide patt fill</i>	
DNC	A	BE010	cvl=99999	depth area; depth unknown
TOD1	A	BE019	cvl=-32767	depth area; depth unknown
TOD2	A	BE019	cvl=-32767	depth area; depth unknown
TOD3	A	BE019	cvl=-32767	depth area; depth unknown
TOD4	A	BE019	cvl=-32767	depth area; depth unknown
0949	Area	AP(DIAMOND1)	<i>depth gray diamond patt fill</i>	
DNC	A	BA020	isdm=1	foreshore - shallow display mode on
DNC	A	BD120	vrr=8 AND isdm=1	reef - covers and uncovers, shallow display mode on
DNC	A	BE010	isdm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
DNC	A	BE010	isdm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
DNC	A	BE010	isdm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
TOD1	A	BE019	isdm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD1	A	BE019	isdm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD1	A	BE019	isdm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	isdm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	isdm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD2	A	BE019	isdm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD3	A	BE019	isdm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD3	A	BE019	isdm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD3	A	BE019	isdm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on

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Product	Delin	FCODE	Attribute Condition	Description
TOD4	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD4	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD4	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
1001	Point	SY	<i>red filled square black outline</i>	
DTOP	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96	building - generic
UVM	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or38or52or61or62or64or65or66or67or77or78or79or80or96or101or119or121or123or723	building - government
VML1	P	AL015	bfc=2or3or5or12or13or14	building - government
VML2	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96	building - government
1002	Point	SY	<i>black filled cir w/ white cross inside</i>	
DTOP	P	AL015	bfc=6	building - hospital
UVM	P	AL015	bfc=6or100	building - hospital
VML2	P	AL015	bfc=6	building - hospital
1004	Point	SY	<i>black pencil shape symbol</i>	
UVM	P	AL120		missile site
1005	Point	SY	<i>black "F" inside boat</i>	
DTOP	P	AQ070		ferry crossing
FFD	P	AQ070		ferry crossing
UVM	P	AQ070		ferry crossing
VITD	P	AQ070		ferry crossing
VML1	P	AQ070		ferry crossing
VML2	P	AQ070		ferry crossing
1006	Point	SY	<i>basic blue line w/ arrow</i>	
UVM	P	BG010		current flow
1007	Point	SY	<i>basic blue cir</i>	
UVM	P	BH010		aqueduct
VML1	P	BH010		aqueduct
VML2	P	BH010		aqueduct
1008	Point	SY	<i>basic blue filled cir w/ tail below</i>	
DTOP	P	BH170	hyc=0or8	spring/water-hole - perennial
UVM	P	BH170	hyc=0or8	spring/water-hole - perennial
VML1	P	BH170	hyc=0or8	spring/water-hole - perennial
VML2	P	BH170	hyc=0or8	spring/water-hole - perennial
1009	Point	SY	<i>UI very dk blue filled diamond</i>	
DTOP	P	BH180		waterfall
VML0	P	BH180		waterfall
VML1	P	BH180		waterfall
VML2	P	BH180		waterfall
1010	Point	SY	<i>basic blue solid square</i>	
DTOP	P	BI010		cistern
UVM	P	BI010		cistern
VML1	P	BI010		cistern
VML2	P	BI010		cistern
1011	Point	SY	<i>black sm filled cir beside +-</i>	
DTOP	P	CA030	ela<>1	spot elevation - not accurate
FFD	P	CA030	ela<>1	spot elevation - not accurate
UVM	P	CA030	ela<>1	spot elevation - not accurate
VML1	P	CA030	ela<>1	spot elevation - not accurate
VML2	P	CA030	ela<>1	spot elevation - not accurate

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Product	Delin	FCODE	Attribute Condition	Description
1012	Point	SY		<i>aero-blue solid filled star</i>
DTOP	P	GB010		airport lighting
UVM	P	GB010		airport lighting
VML1	P	GB010		airport lighting
VML2	P	GB010		airport lighting
1013	Point	SY		<i>aero-blue "H" inside aero-blue square</i>
DTOP	P	GB030	apt=11	helicopter landing pad at hospital
1171	Point	SY		<i>black opposing open equi triangles</i>
DTOP	P	AQ111		prepared raft or float bridge site
VITD	P	AQ058	wd1=40	constriction/expansion
VITD	P	AQ111		prepared raft or float bridge site
1172	Point	SY		<i>black diamond w/ curve staffed arrow</i>
DTOP	P	AQ118		sharp curve(s)
VITD	P	AQ118		sharp curve(s)
1205	Point	SY		<i>brown vert line w/ horizontal ticks on rt side</i>
DTOP	P	AL075		gallery
1206	Point	SY		<i>black line w/ indented rectangle</i>
DTOP	P	AL155		overhead obstruction location
1211	Point	SY		<i>black two rt pointing triangles</i>
DTOP	P	AQ120		steep grade
1220	Point	SY(RCTLPT52)		<i>traffic magenta dashed open arrow</i>
DNC	P	FC165	dof<>0	route (maritime) - direction known
1233	Point	SY		<i>black horiz line below triangle w/ B inside</i>
DNC	P	BF010	mcc=0 AND psc=0	bottom characteristics - surface unknown
1236	Point	SY(ITZARE51)		<i>lt magenta IT</i>
DNC	A	FC031	mac=41	maritime area - inshore traffic zone (TSS)
1238	Point	SY(DWRTP51)+ SY(TSLDEF51)		<i>traffic lt mag DW filled arrow btwn 2 mgnta ?</i>
DNC	A	FC165	rtt=4	route (maritime) - deep water
1251	Point	SY(SOUND*C2)		<i>sounding gray circle</i>
DNC	P	BE020	acc<>1	sounding or drying height - circle (light) indicating low accuracy
TOD1	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
TOD2	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
TOD3	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
TOD4	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
1256	Point	SY(SOUNDSA1)		<i>sounding black overbar</i>
DNC	P	BE020	hdh>=0 AND hdp=NULL	drying height overbar (dark)
1301	Line	LC		<i>black line w/ squares</i>
DTOP	L	AL060		dragon teeth
DTOP	A	AL060		dragon teeth
VITD	L	AL060		dragon teeth
VITD	A	AL060		dragon teeth
VML2	L	AL060		dragon teeth
VML2	A	AL060		dragon teeth
1306	Line	LS(DASH,1,LANDA)		<i>lt brown very very thin dash line</i>
UVM	L	CA010	hqc=3 AND mcc<>103	contour line (land) - supplementary 1/2
VML0	L	CA010	hqc=4or13or20or21	contour line (land) - supplementary approx., carrying, form lines
VML2	L	CA010	hqc=3or4or13 AND mcc<>103	contour line (land) - supplementary 1/2, approx, form lines

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Product	Delin	FCODE	Attribute	Condition	Description
1307	Line	LC			<i>It brown vy thin line w/ ticks on inside</i>
FFD	L	CA010	hqc=5		contour line (land) - depression
UVM	L	CA010	hqc=5 AND mcc<>103		contour line (land) - depression index
VML2	L	CA010	hqc=5or8 AND mcc<>103		contour line (land) - depression mound
1308	Line	LC			<i>black very thin line w/ ticks</i>
DTOP	L	DB080			depression
VML0	L	DB080			depression
1310	Line	LC			<i>black one long dash two short dash line</i>
DNC	L	FA000	use=23		administrative boundary - international
DNC	L	FA060			defacto boundary
DTOP	L	FA000	use=23		administrative boundary - international
FFD	L	FA000	use=23		administrative boundary - international
UVM	L	FA000	use=23		administrative boundary - international
VML0	L	FA000	use=23		administrative boundary - international
VML1	L	FA000	use=4or23		administrative boundary - international
VML2	L	FA000	use=23		administrative boundary - international
WVS	L	FA000	coc use=4or23		administrative boundary - national, international
WVS	L	FA060			defacto boundary
1311	Line	LC			<i>black long dash short dash line</i>
DTOP	L	FA000	use=0or26		administrative boundary - primary, unknown
FFD	L	FA000	use=0or26		administrative boundary - primary, unknown
UVM	L	FA000	use=0or26or999		administrative boundary - primary, unknown, other
VML0	L	FA000	use=26		administrative boundary - primary
VML1	L	FA000	use=0or26		administrative boundary - primary, unknown
VML2	L	FA000	use=0or26		administrative boundary - primary, unknown
VVOD	L	FA000			Administrative Boundary (libref)
WVS	L	FA000	coc use=0or26		administrative boundary - primary, unknown
1312	Line	LC			<i>black very thin sht dash very sht dash line</i>
UVM	L	FA000	use=16		administrative boundary - city
1313	Line	LC			<i>aero-blue line w/ squares</i>
UVM	L	GB050			revetment (airfield)
1314	Line	LS(SOLD,1,CHBLK)			<i>black very thin solid line</i>
DTOP	L	AQ113	loc=0or8or25 AND pro<>116		pipeline - on ground/elevated - not water
UVM	L	AQ113	loc=0or8or25 AND pro<>116		pipeline - on ground/elevated - not water
VITD	L	AQ113			pipeline/pipe
VML0	L	AQ113	loc=8		pipeline/pipe - on ground
VML1	L	AQ113	loc=0or8 AND pro<>116		pipeline/pipe - surface; not water
VML2	L	AQ113	loc=0or8or25 AND pro<>116		pipeline - on ground/elevated - not water
1318	Line	LC			<i>black thin long dsh 2 shrt dsh line</i>
VML1	L	FA000	use=30		administrative boundary - secondary
WVS	L	FA000	coc use=30		administrative boundary - secondary
1319	Line	LC			<i>black thin long dash 3 dot line</i>
VML1	L	FA000	use=31		administrative boundary - tertiary
WVS	L	FA000	coc use=31		administrative boundary - tertiary
1401	Line	LC			<i>black outline open line w/ rt diag fill</i>
DTOP	L	AL075			gallery
1403	Line	LC			<i>black line w/ open diamonds</i>
DTOP	L	DB145			miscellaneous obstacle
1406	Line	LS(SOLD,2,CHBRN)			<i>brown thin solid line</i>
DTOP	L	AL015	bfc=15		building - school

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Product	Delin	FCODE	Attribute	Condition	Description
DTOP	A	BJ020			moraine
UVM	L	AL015	bfc=15or60or108		building - school
VITD	L	DB200			gully/gorge
VML1	A	BJ020			moraine
VML2	L	AL015	bfc=15		building - school
VML2	A	BJ020			moraine
1408	Line	LC			<i>basic green vy thin long dash short dash line</i>
WVS	L	FA000	mab		administrative boundary
1412	Line	LS(SOLD,2,DEPIT)			<i>yellow-green thin solid line</i>
DTOP	A	EA010	veg=0		cropland - other
DTOP	A	EA010	veg=4		cropland - rice paddies
DTOP	A	EA030			nursery
DTOP	A	EC020	veg<>17		oasis - not palm
DTOP	A	EC020	veg=17		oasis - palm
UVM	A	EA010	veg=0or999		cropland - other
UVM	A	EA010	veg=4		cropland - rice paddies
UVM	A	EA030			nursery
VITD	A	EA010	veg<>1		cropland - other
VML0	A	EA010	veg<>1		cropland - other
VML0	A	EA030			nursery
VML0	A	EC020	veg=17		oasis - palm
VML0	A	EC020	veg<>17		oasis - not palm
VML1	A	EA010	veg<>1		cropland - other
VML2	A	EA010	veg<>1		cropland - other
VML2	A	EA030			nursery
VML2	A	EC020	veg<>17		oasis - not palm
VML2	A	EC020	veg=17		oasis - palm
1451	Line	LC			<i>purple dash line w/ tics both sides (- + -)</i>
FFD	L	FC021	mbl=9		maritime limit boundary - international (at sea)
WVS	L	FC021	mbl=9		maritime limit boundary - international (at sea)
1509	Line	LC			<i>black thin solid line ticks on inside</i>
VITD	A	DB080			depression
1511	Line	LC			<i>brown thin line outward ticks</i>
UVM	A	BH077			hummock
VML0	A	BH077			hummock
VML2	A	BH077			hummock
1512	Line	LC			<i>aero-blue vy thin line double ticks</i>
UVM	A	GB050			revetment (airfield)
1513	Line	LC			<i>beige jagged line</i>
UVM	L	AT020			early warning radar site
UVM	L	AT045			radar transmitter
UVM	A	AT020			early warning radar site
UVM	A	AT045			radar transmitter
1516	Line	LC			<i>black thin line outward ticks</i>
DTOP	L	DB090			embankment/fill
UVM	L	DB090			embankment/fill
UVM	A	DB090			embankment/fill
VITD	L	DB090			embankment/fill
VML0	L	DB090			embankment/fill
VML1	L	DB090			embankment/fill
VML2	L	DB090			embankment/fill
VML2	A	DB090			embankment/fill

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Product	Delin	FCODE	Attribute Condition	Description
1573	Line	LS(SOLD,1,CSTLN)		<i>dk gray very thin solid line</i>
DNC	L	BA010	acc=1 AND slt<>6and<>8	coastline/shoreline - accurate; not mangrove or marsh
DNC	A	BB090		drydock
DTOP	A	AM010		depot (storage)
DTOP	A	AM020		grain bin/silo
DTOP	A	AM030		grain elevator
DTOP	A	DB160		rock strata/rock formation
UVM	A	AM010		depot (storage)
UVM	A	AM020		grain bin/silo
UVM	A	AM030		grain elevator
VML2	A	AM010		depot (storage)
VML2	A	AM020		grain bin/silo
VML2	A	AM030		grain elevator
VML2	A	DB160		rock strata/rock formation
VVOD	L	BA010		coastline/shoreline (libref)
WVS	L	BA010		coastline/shoreline
1601	Area	AC(CHRED)		<i>red solid fill</i>
DTOP	A	SA050	spr=7	slope polygon - > 60% and <= 85%
UVM	A	AL015	bfc=2or3or5or8or28or52or121	building - government
1605	Area	AP		<i>yellow-green tree-top patt fill</i>
DTOP	A	BH095	veg=24	marsh/swamp - deciduous
DTOP	A	EC030	veg=0or24	trees - deciduous, unknown
FFD	A	EC030	tre=0or1	trees - deciduous, unknown
UVM	A	EC030	tre=0or1or3	trees - deciduous, mixed, unknown
VITD	A	EC030	veg=0or24or50	trees - unknown, deciduous, mixed
VML0	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML1	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML2	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
1606	Area	AP		<i>yellow-green triangle tree patt fill</i>
DTOP	A	BH095	veg=25or50	marsh/swamp - evergreen, mixed
DTOP	A	EC030	veg=25or50	trees - evergreen, mixed
FFD	A	EC030	tre=2or3	trees - evergreen, mixed
UVM	A	EC030	tre=2	trees - evergreen
VITD	A	EC030	veg=25	trees - evergreen
VML0	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
VML1	A	EC030	veg=11or12or17or18or29or38	trees - casuarina, coniferous, palm, filao, eucalyptus, cypress
VML2	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
1609	Area	AP		<i>basic blue diag grid patt fill</i>
UVM	A	BH075		fountain
1611	Area	AP		<i>depth med blue dot patt fill</i>
DTOP	A	BH150		salt pan
UVM	A	BH150		salt pan
VML1	A	BH150		salt pan
VML2	A	BH150		salt pan
1612	Area	AP		<i>aero-blue cross hatch patt fill</i>
UVM	A	GB030		helicopter landing pad
1613	Area	AP		<i>yellow-green nipa patt fill</i>
DTOP	A	BH095	veg=16or19	marsh/swamp - palm, mangrove
VML0	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML1	A	EC030	veg=16or19	trees - nipa palm, mangrove

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	EC030	veg=16or19	trees - nipa palm, mangrove
1651	Line	LS(DASH,2,TRFCF)		<i>traffic lt magenta thin dash line</i>
DNC	L	FC021	mac=48 AND mbl=NULL	maritime limit boundary - pilot boarding
1655	Line	LS(DASH,2,blue)		<i>basic blue thin dash line</i>
DTOP	A	BH095	veg=16or19	marsh/swamp - palm, mangrove
DTOP	A	BJ030		glacier
UVM	A	BH090	hoc=1	land subject to inundation - controlled
VITD	A	SA040		permanent snowfield
VML0	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML1	A	BH090	exs=48	land subject to inundation - controlled
VML1	A	BJ030		glacier
VML1	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML2	A	BH090	exs=48	land subject to inundation - controlled
VML2	A	BJ030		glacier
VML2	A	EC030	veg=16or19	trees - nipa palm, mangrove
1656	Line	LS(SOLD,1,blu100)		<i>100% cyan blue very thin solid line</i>
DTOP	L	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
DTOP	L	BH140	hyc=0or8	river/stream - perennial, unknown
DTOP	L	DB060	mcc=103	crevice/crevasse - snow/ice
DTOP	A	BH020	<>sdr	canal
DTOP	A	BH020	sdr hyc=8	canal - perennial
DTOP	A	BH080	<>sdr	lake/pond
DTOP	A	BH080	sdr hyc<>8	lake/pond - not perennial
DTOP	A	BH080	sdr hyc=8	lake/pond - perennial
DTOP	A	BH130		reservoir
DTOP	A	BH140	<>sdr	river/stream
DTOP	A	BH140	sdr hyc=0or8	river/stream - perennial, unknown
DTOP	A	BH155		salt evaporator
FFD	L	BA010	acc=1	coastline/shoreline - accurate
FFD	L	BH140	hyc=0or8	river/stream - perennial, unknown
FFD	A	BH020	hyc=8	canal - perennial
FFD	A	BH080	hyc=0or8	lake/pond - perennial, unknown
FFD	A	BH080	hyc=3	lake/pond - dry
FFD	A	BH130		reservoir
FFD	A	BH140	hyc=0or8	river/stream - perennial, unknown
FFD	A	BH155		salt evaporator
UVM	L	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
UVM	L	BH140	hyc=0or8	river/stream - perennial, unknown
UVM	L	BH210	slt=0or10or11or13or14or15	inland shoreline - unknown, rocky, rubble, sandy, stony, other
UVM	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
UVM	A	BH080	hyc=0or8	lake/pond - perennial, unknown
UVM	A	BH080	hyc=3or6	lake/pond - dry, intermittent
UVM	A	BH130		reservoir
UVM	A	BH140	hyc=0or8	river/stream - perennial, unknown
UVM	A	BH155		salt evaporator
VITD	L	BH140	hyc=0or8or14	river/stream - perennial, braided, unknown
VITD	A	BH020	hyc=8	canal - perennial
VITD	A	BH140	hyc=0or8or14	river/stream - perennial, braided, unknown
VML0	L	BA010		coastline/shoreline
VML0	L	BH140	hyc=0or8	river/stream - perennial, unknown
VML0	A	BH155		salt evaporator
VML1	L	BA010	slt<>6and<>8	coastline/shoreline -not mangrove or marsh
VML1	L	BH140	hyc=0or8	river/stream - perennial, unknown

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Product	Delin	FCODE	Attribute Condition	Description
VML1	L	DB060	mcc=103	crevice/crevasse - snow/ice
VML1	A	BH080	hyc=0or8	lake/pond - perennial, unknown
VML1	A	BH080	hyc=3or6	lake/pond - dry, intermittent
VML1	A	BH130		reservoir
VML1	A	BH140	hyc=0or8	river/stream - perennial, unknown
VML1	A	BH155		salt evaporator
VML2	L	BA010	slt<>6and<>8	coastline.shoreline - not mangrove or marsh
VML2	L	BH140	hyc=0or8	river/stream - perennial, unknown
VML2	L	DB060	mcc=103	crevice/crevasse - snow/ice
VML2	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VML2	A	BH080	hyc=3or6	lake/pond - dry, intermittent
VML2	A	BH080	hyc=0or8	lake/pond - perennial, unknown
VML2	A	BH130		reservoir
VML2	A	BH140	hyc=0or8	river/stream - perennial, unknown
VML2	A	BH155		salt evaporator
VVOD	L	BH140		river/stream (libref)
1901	Area	AC(UIAFF)		<i>UI It brown solid fill</i>
DTOP	A	SA050	spr=2	slope polygon - > 10% and <= 15%
TOD4	A	FC179		side scan sonar coverage
VITD	A	SA050	gsc=4	slope polygon - > 10% and <= 20%
1902	Area	AC(dark-beige)		<i>dk beige solid fill</i>
DTOP	A	SA050	spr=3	slope polygon - > 15% and <= 20%
1903	Area	AC(med-rose)		<i>rose solid fill</i>
DTOP	A	SA050	spr=4	slope polygon - > 20% and <= 30%
VITD	A	SA050	gsc=5	slope polygon - > 20% and <= 30%
1904	Area	AC(ADINF)		<i>golden yellow solid fill</i>
DTOP	A	SA050	spr=5	slope polygon - > 30% and <= 45%
UVM	A	AQ150		flight of steps
VITD	A	SA050	gsc=6	slope polygon - > 30% and <= 45%
1905	Area	AC(white)		<i>basic white solid fill</i>
DTOP	A	SA050	spr=999	slope polygon - % unknown
VITD	A	SA050	gsc=0	slope polygon - % unknown
1906	Area	AC(lite-red-brown)		<i>lt red brown solid fill</i>
DTOP	A	SA050	spr=8	slope polygon - > 85%
UVM	A	AP030	med<>1 AND wtc<>2	road - all weather no median
2001	Point	SY		<i>black pick & hammer</i>
DTOP	P	AA010	exs<>6	mine - active
DTOP	P	AA012	exs<>6	quarry - active
DTOP	A	AA010	exs<>6	mine - active
DTOP	A	AA012	exs<>6	quarry - active
UVM	P	AA010	exs<>6	mine - active
UVM	P	AA012	exs<>6	quarry - active
UVM	A	AA010	exs<>6	mine - active
UVM	A	AA012	exs<>6	quarry - active
VML0	P	AA010		mine/quarry
VML0	A	AA010		mine/quarry
VML1	P	AA010	exs<>6	mine/quarry - active
VML1	A	AA010	exs<>6	mine/quarry - active
VML2	P	AA010	exs<>6	mine/quarry - active
VML2	A	AA010	exs<>6	mine/quarry - active
2002	Point	SY		<i>black tower</i>
DTOP	P	AA040		rig/superstructure

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Product	Delin	FCODE	Attribute Condition	Description
UVM	P	AA040		rig/superstructure
VML0	P	AA052		oil/gas field
VML0	P	AC040		oil/gas facilities
VML1	P	AA040		rig/superstructure
VML2	P	AA040		rig/superstructure
2003	Point	SY		<i>basic blue solid filled cir</i>
DTOP	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
UVM	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
VML0	P	AM080		water tower
VML0	P	BH120		rapids
VML0	P	BH170		spring/water-hole
VML1	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
VML2	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
2005	Point	SY		<i>black building w/ 2 smokestacks above</i>
DTOP	P	AC000		processing plant/treatment plant
DTOP	P	AC020		catalytic cracker
UVM	P	AC020		catalytic cracker
VML0	P	AC000		processing plant/treatment plant
VML1	P	AC000		processing plant/treatment plant
VML2	P	AC000		processing plant/treatment plant
VML2	P	AC020		catalytic cracker
2009	Point	SY		<i>black square w/ zap inside</i>
VML0	P	AD010		power plant
VML1	P	AD010		power plant
2010	Point	SY		<i>black sun burst w/ dot inside</i>
DTOP	P	AD020		solar panels
VML2	P	AD020		solar panels
2011	Point	SY		<i>black open sq w/ dot inside w/ zap on top</i>
DTOP	P	AD030		substation/transformer yard
UVM	P	AD030		substation/transformer yard
VML0	P	AD030		substation/transformer yard
VML2	P	AD030		substation/transformer yard
2016	Point	SY		<i>black dot inside double cir</i>
DTOP	P	AF030		cooling tower
UVM	P	AF030		cooling tower
VML1	P	AF030		cooling tower
VML2	P	AF030		cooling tower
2019	Point	SY		<i>black sm filled cir</i>
DTOP	P	AM070		tank
UVM	P	AM070		tank
VML0	P	AM070		tank
VML1	P	AM070		tank
VML2	P	AM070		tank
2026	Point	SY		<i>black tent</i>
VML0	P	AI030		camp
2029	Point	SY		<i>black ferris wheel</i>
DTOP	P	AK020		amusement park attraction
UVM	P	AK020		amusement park attraction
VML1	P	AK020		amusement park attraction
VML2	P	AK020		amusement park attraction

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Product	Delin	FCODE	Attribute Condition	Description
2034	Point	SY		<i>black skier</i>
UVM	P	AK150		ski jump
VML1	P	AK150		ski jump
VML2	P	AK150		ski jump
2035	Point	SY		<i>black dot inside cir</i>
VML0	P	AK160		stadium/amphitheater
VML1	P	AK160		stadium/amphitheater
2036	Point	SY		<i>black sm filled square</i>
DNC	P	AL015	bfc=<7and<>81	building - not house of worship, not maritime station
DTOP	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36or53or59or69or70or83or85or86or87or88or89	building - generic
DTOP	P	AL015	bfc=90or91or92or93or95or98or999	building - generic
UVM	P	AL015	bfc=0or9or10or11or16or17or18or19or20or33or34or36or39or51or53or55or56or57or58	building - generic (population)
UVM	P	AL015	bfc=1or21or22or23or24or25or26or27or29or30or40or54or59or71or72or73or74or75or76	building - generic (industry)
UVM	P	AL015	bfc=63or69or70or87or88or91or92or93or95or97or98or99or103or105or106or107or109or111or115or117or118or122or126or127or128or999	building - generic (population)
UVM	P	AL015	bfc=81or83or84or85or86or89or90or94or102or104or110or112or113or116or120or124or125	building - generic (industry)
VML0	P	AL015		building
VML0	P	AL200		ruins
VML0	P	AN060		railroad yard/marshalling yard
VML1	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or22or23or24or27or83or999	building - generic
VML2	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36	building - generic
VML2	P	AL015	bfc=53or59or69or70or83or85or86or87or88or89or90or91or92or93or95or98or999	building - generic
2038	Point	SY		<i>black dot w/ parallel lines inside circle</i>
UVM	P	AP040		gate
UVM	P	AQ090		entrance/exit
2042	Point	SY		<i>black filled square w/ flag on top</i>
DTOP	P	AL015	bfc=15	building - school
UVM	P	AL015	bfc=15or60or108	building - school, college, seminary
VML1	P	AL015	bfc=15	building - school
VML2	P	AL015	bfc=15	building - school
2043	Point	SY		<i>black four black squares w/ connection</i>
DTOP	P	AH050		fortification
DTOP	P	AL015	bfc=4	building - castle
UVM	P	AH010		bastion/rampart/fortification
UVM	P	AH050		fortification
UVM	P	AL015	bfc=4	building - castle
VML1	P	AH050		fortification
VML1	P	AL015	bfc=4	building - castle
VML2	P	AH050		fortification
VML2	P	AL015	bfc=4	building - castle
2045	Point	SY		<i>black filled square w/ cross on top</i>
DTOP	P	AL015	bfc=7	building - house of worship - church
UVM	P	AL015	bfc=7or114 AND hwt=0or2or3or4or7or23 OR bfc=50	building - house of worship - church
VML1	P	AL015	bfc=7 AND hwt=0or2or3or4or7	building - house of worship - church
VML2	P	AL015	bfc=7 AND hwt=0or2or3or4or7	building - house of worship - church

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Product	Delin	FCODE	Attribute Condition	Description
2047	Point	SY		<i>black filled square w/ T on top</i>
UVM	P	AL015	bfc=7or114 AND hwt=20	building - house of worship - synagogue
VML1	P	AL015	bfc=7 AND hwt=20	building - house of worship - synagogue
VML2	P	AL015	bfc=7 AND hwt=20	building - house of worship - synagogue
2048	Point	SY		<i>black pinwheel</i>
UVM	P	AL015	bfc=7or114 AND hwt=21	building - house of worship - stupa
VML1	P	AL015	bfc=7 AND hwt=21	building - house of worship - stupa
VML2	P	AL015	bfc=7 AND hwt=21	building - house of worship - stupa
2051	Point	SY		<i>black ramp symbol</i>
DTOP	P	AL195		ramp
VITD	P	AL195		ramp
2053	Point	SY		<i>black sm open square w/ dot in center</i>
VML0	P	AL020		built-up area
VML0	P	AL105		settlement
VML0	P	AL135		native settlement
VML1	P	AL020		built-up area
2058	Point	SY		<i>gray filled square</i>
DTOP	P	AL100		hut
UVM	P	AL100		hut
VML1	P	AL100		hut
VML2	P	AL100		hut
2060	Point	SY		<i>black square w/ S inside</i>
UVM	P	AL135		native settlement
VML2	P	AL105		settlement
2063	Point	SY		<i>black monument symbol</i>
DTOP	P	AL130		monument
UVM	P	AL130		monument
VML0	P	AL130		monument
VML1	P	AL130		monument
VML2	P	AL130		monument
2070	Point	SY		<i>black diag bands in rectangle</i>
DTOP	P	AL210		snow shed/rock shed
VML0	P	AL210		snow shed/rock shed
VML1	P	AL210		snow shed/rock shed
VML2	P	AL210		snow shed/rock shed
2071	Point	SY		<i>black dot inside cir</i>
DTOP	P	AL240		tower (non-communication)
UVM	P	AL240		tower (non-communication)
VML0	P	AL240		tower (non-communication)
VML1	P	AL240		tower (non-communication)
VML2	P	AL240		tower (non-communication)
2072	Point	SY		<i>gray shadowed square</i>
DTOP	P	AL250		underground dwelling
UVM	P	AH060		underground bunker
UVM	P	AL250		underground dwelling
VML2	P	AL250		underground dwelling
2073	Point	SY		<i>black square w/ diag line inside</i>
UVM	P	AM010		depot (storage)
VML0	P	AM010		depot (storage)

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Product	Delin	FCODE	Attribute	Condition	Description
2074	Point	SY		<i>brown cir</i>	
DTOP	P	AM020			grain bin/silo
UVM	P	AM020			grain bin/silo
VML1	P	AM020			grain bin/silo
VML2	P	AM020			grain bin/silo
2076	Point	SY		<i>red brown filled semicircle</i>	
DTOP	P	AM060			storage bunker/storage mound
UVM	P	AM060			storage bunker/storage mound
VML2	P	AM060			storage bunker/storage mound
2078	Point	SY		<i>basic blue dot inside cir</i>	
DTOP	P	AM080			water tower
UVM	P	AM080			water tower
VML1	P	AM080			water tower
VML2	P	AM080			water tower
2080	Point	SY		<i>black rt diag line inside cir</i>	
DTOP	P	AN075			railroad turntable
VML2	P	AN075			railroad turntable
2081	Point	SY(SAE0002)		<i>black open square</i>	
VML1	P	AP020			interchange
2083	Point	SY		<i>black double line with flares on ends</i>	
DTOP	P	AQ040			bridge/overpass/viaduct
DTOP	P	AQ045			bridge span
FFD	P	AQ040			bridge/overpass/viaduct
UVM	P	AQ040			bridge/overpass/viaduct
VITD	P	AQ040			bridge/overpass/viaduct
VITD	P	AQ045			bridge span
VML0	P	AQ040			bridge/overpass/viaduct
VML1	P	AQ040			bridge/overpass/viaduct
VML2	P	AQ040			bridge/overpass/viaduct
2087	Point	SY		<i>black opposing solid triangles pnting in</i>	
DTOP	P	AQ058			constriction/expansion
DTOP	P	BH070			ford
FFD	P	BH070			ford
UVM	P	BH070			ford
VITD	P	AQ058	wd1<40		constriction/expansion
VITD	P	BH070			ford
VML0	P	BH070			ford
VML1	P	BH070			ford
VML2	P	BH070			ford
2088	Point	SY		<i>purple dot inside cir</i>	
DTOP	P	AQ060			control tower
UVM	P	AQ060			control tower
VML1	P	AQ060			control tower
VML2	P	AQ060			control tower
2089	Point	SY		<i>black cir w/ four outer tics and dot inside</i>	
VML0	P	AQ064			causeway
2090	Point	SY		<i>black cir w/ "C" inside</i>	
DTOP	P	AQ065			culvert
VML2	P	AQ065			culvert
2094	Point	SY		<i>purple solid ellipse extending from pole</i>	
DTOP	P	AQ110			mooring mast

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Product	Delin	FCODE	Attribute Condition	Description
UVM	P	AQ110		mooring mast
VML1	P	AQ110		mooring mast
VML2	P	AQ110		mooring mast
2097	Point	SY	<i>black sm square w/ "P" inside</i>	
DTOP	P	AQ116		pumping station
UVM	P	AQ116		pumping station
VML0	P	AQ116		pumping station
VML1	P	AQ116		pumping station
VML2	P	AQ116		pumping station
2099	Point	SY	<i>black dot inside cir inside square</i>	
UVM	P	AQ125		station (miscellaneous)
2100	Point	SY	<i>black box w/ round top w/ "T" inside</i>	
DTOP	P	AQ130		tunnel
FFD	P	AQ130		tunnel
VITD	P	AQ130		tunnel
VML0	P	AQ130		tunnel
VML1	P	AQ130		tunnel
VML2	P	AQ130		tunnel
2101	Point	SY	<i>red brown octagon shape w/ "R" inside</i>	
VML1	P	AQ135		vehicle stopping area/rest area
2102	Point	SY(DSHAER11)	<i>black satellite dish symbol</i>	
DNC	P	AT010		disk/dish
DTOP	P	AT010		disk/dish
UVM	P	AT010		disk/dish
VML1	P	AT010		disk/dish
VML2	P	AT010		disk/dish
2104	Point	SY	<i>purple tower symbol</i>	
UVM	P	AT040		power transmission pylon
2105	Point	SY	<i>black cir around satellite dish symbol</i>	
UVM	P	AT020		early warning radar site
UVM	P	AT045		radar transmitter
2106	Point	SY	<i>black filled square w/ outward ticks</i>	
DTOP	P	AT050		communication building
UVM	P	AT050		communication building
VML0	P	AT050		communication building
VML2	P	AT050		communication building
2107	Point	SY	<i>black vert line w/ two horiz lines at top</i>	
UVM	P	AT070		telephone-telegraph pylon/pole
2111	Point	SY	<i>brown filled cir</i>	
VML0	P	BA030		island
2212	Point	SY	<i>black solid filled shipwreck symbol</i>	
DTOP	P	BD180		wreck
VML0	P	BD180		wreck
VML1	P	BD180		wreck
VML2	P	BD180		wreck
2231	Point	SY	<i>UI very dk blue open diamond</i>	
DTOP	P	BH120		rapids
VML1	P	BH120		rapids
VML2	P	BH120		rapids

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Product	Delin	FCODE	Attribute	Condition	Description
2232	Point	SY			<i>basic blue solid arrowhead</i>
DTOP	P	BH145			river stream vanishing point
VML1	P	BH145			river stream vanishing point
VML2	P	BH145			river stream vanishing point
2233	Point	SY			<i>100% cyan blue square w/ grid inside</i>
VML0	P	BH155			salt evaporator
2234	Point	SY			<i>gray cir diagly half filled</i>
UVM	P	BH165			spillway
2238	Point	SY			<i>black vertical heavy weight line</i>
DTOP	P	BI020			dam/weir
FFD	P	BI020			dam/weir
VITD	P	BI020			dam/weir
VML0	P	BI020			dam/weir
VML1	P	BI020			dam/weir
VML2	P	BI020			dam/weir
2239	Point	SY			<i>black open arrowhead</i>
DTOP	P	BI040			sluice gate
UVM	P	BI040			sluice gate
VML0	P	BI040			sluice gate
VML2	P	BI040			sluice gate
2242	Point	SY			<i>med blue 8 pt asterisk w/ open center</i>
DTOP	P	BJ060			ice peak/nunatak
VML1	P	BJ060			ice peak/nunatak
VML2	P	BJ060			ice peak/nunatak
2243	Point	SY			<i>black sm filled cir</i>
DTOP	P	CA030	ela=1		spot elevation - accurate
FFD	P	CA030	ela=1		spot elevation - accurate
UVM	P	CA030	ela=1		spot elevation - accurate
VML0	P	CA030			spot elevation
VML1	P	CA030	ela=1		spot elevation - accurate
VML2	P	CA030	ela=1		spot elevation - accurate
2245	Point	SY			<i>basic blue sm filled cir</i>
VML0	P	CA035			inland water elevation
2247	Point	SY			<i>black diag line w/ "L" on top</i>
DTOP	P	DB030			cave
UVM	P	DB030			cave
VML1	P	DB030			cave
VML2	P	DB030			cave
2248	Point	SY			<i>brown sm filled cir w/ tail below</i>
DTOP	P	DB115			geothermal feature
VML1	P	DB115			geothermal feature
VML2	P	DB115			geothermal feature
2249	Point	SY			<i>black)(symbol</i>
DTOP	P	DB150			mountain pass
VML1	P	DB150			mountain pass
VML2	P	DB150			mountain pass
2250	Point	SY			<i>brown 6 pt asterisk w/ open center</i>
DTOP	P	DB160			rock strata/rock formation
VML1	P	DB160			rock strata/rock formation
VML2	P	DB160			rock strata/rock formation

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Product	Delin	FCODE	Attribute	Condition	Description
2251	Point	SY			<i>brown sm open cir w/ eight tics outside</i>
DTOP	P	DB180			volcano
VML2	P	DB180			volcano
2252	Point	SY			<i>yellow-green palm tree symbol</i>
DTOP	P	EC020	veg=17		oasis - palm
DTOP	A	EC020	veg=17		oasis - palm
VML0	A	EC020	veg=17		oasis - palm
VML1	P	EC020	veg=17		oasis - palm
VML2	P	EC020	veg=17		oasis - palm
VML2	A	EC020	veg=17		oasis - palm
2253	Point	SY			<i>yellow-green triangle tree symbol</i>
VML2	P	EC030			trees
2256	Point	SY			<i>lt gray/white divided square</i>
VML0	P	FA001			administrative area
2257	Point	SY			<i>black square w/ F</i>
UVM	P	FA015			firing range/gunnery range
2264	Point	SY			<i>black cir</i>
DTOP	P	BD100			pile/piling/post
VML2	P	BD100			pile/piling/post
2267	Point	SY			<i>aero-blue airplane</i>
DTOP	P	GB005	exs=28 AND use<>8and<>22		airport/airfield - non military; operational
FFD	P	GB005	exs=28 AND use<>8and<>22		airport/airfield - civilian, operational
UVM	P	GB005	exs=28 AND use<>8and<>22		airport/airfield - non military; operational
VML0	P	GB005	use<>8and<>22		airport/airfield - non military
VML1	P	GB005	exs=28 AND use<>8and<>22		airport/airfield - operational; non military
VML2	P	GB005	exs=28 AND use<>8and<>22		airport/airfield - operational; non military
2268	Point	SY			<i>lt gray airplane</i>
DTOP	P	GB005	exs<>28		airport/airfield - not operational
FFD	P	GB005	exs<>28		airport/airfield - non-operational
UVM	P	GB005	exs<>28		airport/airfield - not operational
VML1	P	GB005	exs<>28		airport/airfield - not operational
VML2	P	GB005	exs<>28		airport/airfield - not operational
2269	Point	SY			<i>lt red brown airplane</i>
DTOP	P	GB005	exs=28 AND use=8or22		airport/airfield - military; operational
FFD	P	GB005	exs=28 AND use=8or22		airport/airfield - military; operational
UVM	P	GB005	exs=28 AND use=8or22		airport/airfield - military; operational
VML0	P	GB005	use=8or22		airport/airfield - military
VML1	P	GB005	exs=28 AND use=8or22		airport/airfield - operational; military
VML2	P	GB005	exs=28 AND use=8or22		airport/airfield - operational; military
2273	Point	SY			<i>aero-blue solid cir w/ open diag band</i>
VML1	P	GB055	exs=28		runway - operational
2274	Point	SY			<i>red "M" inside cir</i>
VML0	P	SU001			military base
2278	Point	SY			<i>black dot in square</i>
DTOP	P	ZB030			boundary monument
VML2	P	ZB030			boundary monument
2279	Point	SY			<i>black triangle w/ dot inside</i>
DTOP	P	ZB035			control point/control station
UVM	P	ZB020			benchmark
UVM	P	ZB035			control point/control station

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Product	Delin	FCODE	Attribute	Condition	Description
VML1	P	ZB035			control point/control station
VML2	P	ZB035			control point/control station
2281	Point	SY			<i>gray cir w/ open diag band</i>
VML1	P	GB055	exs<>28		runway - not operational
2320	Point	SY(SAE0028)			<i>basic blue sm cir in cir w/4 squares outside</i>
UVM	P	BH075			fountain
2323	Point	SY			<i>black dot</i>
VML0	P	AL260			wall
3000	Line	LS(DASH,2,CHMGF)			<i>lt magenta thin dash line</i>
DNC	L	BB010	mac=12		anchorage - anchoring berth
DNC	A	BB010	mac=12		anchorage - anchoring berth
3001	Line	LS(SOLD,2,light-beige)			<i>lt beige thin solid line</i>
DTOP	L	AL015	bfc=7		building - house of worship
UVM	L	AL015	bfc=7or114		building - house of worship
VML2	L	AL015	bfc=7		building - house of worship
3003	Line	LS(SOLD,1,med-tan)			<i>tan very thin solid line</i>
DTOP	L	DB100			esker
VML1	L	DB100			esker
VML2	L	DB100			esker
3017	Line	LS(DASH,2,CHBRN)			<i>brown thin dash line</i>
VML0	L	DB160			rock strata/rock formation
3024	Line	LS(SOLD,1,CHBRN)			<i>brown very thin solid line</i>
DTOP	L	DB060	mcc=0or30		crevice/crevasse - earthen
VML1	L	DB060	mcc=0or30		crevice/crevasse - earthen
VML2	L	DB060	mcc=0or30		crevice/crevasse - earthen
3026	Line	LS(SOLD,1,med-tan)			<i>tan very thin solid line</i>
DTOP	L	DB110			fault
DTOP	A	EA010	veg=1		cropland - dry
UVM	L	DB110			fault
UVM	A	EA010	veg=1		cropland - dry
VITD	A	EA010	veg=1		cropland - dry
VML0	L	DB110			fault
VML0	A	EA010	veg=1		cropland - dry
VML1	L	DB110			fault
VML1	A	EA010	veg=1		cropland - dry
VML2	L	DB110			fault
VML2	A	EA010	veg=1		cropland - dry
3031	Line	LS(SOLD,2,dark-green)			<i>very dk green thin solid line</i>
VML1	L	EC030			trees
3036	Line	LC			<i>yellow-green thin line w/rectangles one side</i>
DTOP	L	EA020			hedgerow
UVM	L	EA020			hedgerow
VITD	L	EA020			hedgerow
VML0	L	EA020			hedgerow
VML2	L	EA020			hedgerow
3052	Line	LS(SOLD,1,aero-blue)			<i>aero-blue very thin solid line</i>
UVM	A	GB030			helicopter landing pad
3054	Line	LS(S-DASH,1,CHMGF)			<i>lt magenta very thin short dash line</i>
FFD	L	FC021	mbl=0		maritime limit boundary - unknown
UVM	L	FA015			firing range/gunnery range

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Product	Delin	FCODE	Attribute Condition	Description
WVS	L	FC021	mbl=999	maritime limit boundary - other territorial baseline
3061	Line	LS(DOTT,2,CHMGD)		<i>magenta thin dotted line</i>
UVM	L	AL120		missile site
UVM	A	AL120		missile site
3069	Line	LS(SOLD,1,aero-blue)		<i>aero-blue very thin solid line</i>
UVM	L	GB055		runway
VITD	L	GB055		runway
VML1	L	GB055		runway
3070	Line	LS(SOLD,2,aero-blue)		<i>aero-blue thin solid line</i>
DTOP	A	GB075		taxiway
UVM	L	GB075		taxiway
UVM	A	GB075		taxiway
VML2	A	GB075		taxiway
3073	Line	LS(S-DASH,2,aero-blue)		<i>aero-blue thin short dash line</i>
DTOP	A	GB045		overrun/stopway
UVM	L	GB045		overrun/stopway
UVM	A	GB045		overrun/stopway
VML2	A	GB045		overrun/stopway
3074	Line	LC		<i>purple thin solid line w/ dots on each side</i>
DTOP	L	AT030		power transmission line
UVM	L	AT030		power transmission line
VML0	L	AT030		power transmission line
VML1	L	AT030		power transmission line
VML2	L	AT030		power transmission line
3076	Line	LS(SOLD,2,CHGRF)		<i>lt gray thin solid line</i>
UVM	L	EC040		cleared way/cut line/firebreak
VML0	L	EC040		cleared way/cut line/firebreak
VML1	L	EC040		cleared way/cut line/firebreak
VML2	L	EC040		cleared way/cut line/firebreak
3077	Line	LS(DASH,1,CHGRF)		<i>lt gray very thin dash line</i>
DNC	L	FC021	mbl=7 AND mac=NULL	maritime limit boundary - territorial waters baseline
DNC	L	FC031	mac=2	maritime area - dredged channel
DNC	A	BD060		kelp/seaweed
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
WVS	L	FC021	mbl=7	maritime limit boundary - territorial waters baseline

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Product	Delin	FCODE	Attribute	Condition	Description
3082	Line	LS(SOLD,1,CHGRD)		<i>gray very thin solid line</i>	
DNC	L	BA020			foreshore
DNC	L	DB090			embankment/fill
DTOP	A	GB015			apron/hardstand
DTOP	A	ZD020			void collection area
FFD	L	BE015			depth contour
FFD	A	ZD020			void collection area
TOD0	A	ZD020			void collection area
TOD1	A	ZD020			void collection area
TOD2	A	ZD020			void collection area
TOD3	A	ZD020			void collection area
TOD4	A	ZD020			void collection area
UVM	L	BH165			spillway
UVM	A	BH165			spillway
UVM	A	GB015			apron/hardstand
VML0	L	BE015			depth contour
VML0	A	ZD020			void collection area
VML1	L	BE015			depth contour
VML1	A	ZD020			void collection area
VML2	L	BE015			depth contour
VML2	A	GB015			apron/hardstand
VML2	A	ZD020			void collection area
WVS	L	BE015			depth contour
3086	Line	LS(S-DASH,1,CHGRD)		<i>gray very thin short dash line</i>	
DTOP	L	AF020			conveyor
UVM	L	AF020			conveyor
VML1	L	AF020			conveyor
VML2	L	AF020			conveyor
3096	Line	LC		<i>gray very thin dash line w/ dot</i>	
DTOP	L	AT060			telephone line/telegraph line
UVM	L	AT060			telephone line/telegraph line
VML0	L	AT060			telephone line/telegraph line
VML1	L	AT060			telephone line/telegraph line
VML2	L	AT060			telephone line/telegraph line
3104	Line	LS(SOLD,3,CHRED)		<i>red solid line</i>	
UVM	L	AL015	bfc=2or3or5or8or28or52or121		building - government
VML0	A	SU001			military base
3108	Line	LS(SOLD,2,blu100)		<i>100% cyan blue thin solid line</i>	
DTOP	L	BH020	hyc=0or8		canal - perennial
FFD	L	BH020	hyc=8		canal - perennial
UVM	L	BH020	hyc=8		canal - perennial
VITD	L	BH020			canal
VML1	L	BH020	hyc=8		canal - perennial
VML2	L	BH020	hyc=8		canal - perennial
3109	Line	LS(DOTT,2,blu100)		<i>100% cyan blue thin dotted line</i>	
DTOP	L	BH020	hyc=3		canal - dry
DTOP	L	BH200			miscellaneous surface drainage feature
3112	Line	LS(SOLD,2,CHBLK)		<i>black thin solid line</i>	
DTOP	L	AL015	bfc<>6and<>7and<>15		building - generic
DTOP	A	BB090			drydock
DTOP	A	DB145			miscellaneous obstacle
TOD0	L	FC102			range center line

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Product	Delin	FCODE	Attribute Condition	Description
UVM	L	AL015	bfc<>2and<>3and<>5and<>8and<>15and<>28and<>52and<>121and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
UVM	A	AQ130		tunnel
UVM	A	BB090		drydock
VITD	L	DB190		volcanic dike
VML2	L	AL015	bfc<>6and<>7and<>15	building - generic
VML2	A	BB090		drydock
3113	Line	LS(SOLD,3,CHBLK)		<i>black solid line</i>
DTOP	L	AL260		wall
DTOP	L	AQ040		bridge/overpass/viaduct
DTOP	L	BI020		dam/weir
DTOP	A	AK160		stadium/amphitheater
FFD	L	AQ040		bridge/overpass/viaduct
FFD	L	BI020		dam/weir
UVM	L	AL260		wall
UVM	L	AQ040		bridge/overpass/viaduct
UVM	L	AQ065		culvert
UVM	L	BI020		dam/weir
UVM	A	AK160		stadium/amphitheater
VITD	L	AL260		wall
VITD	L	AQ040		bridge/overpass/viaduct
VITD	L	BI020		dam/weir
VML0	L	AL260		wall
VML0	L	AQ040		bridge/overpass/viaduct
VML0	L	BI020		dam/weir
VML1	L	AL260		wall
VML1	L	AQ040		bridge/overpass/viaduct
VML1	L	BI020		dam/weir
VML2	L	AL260		wall
VML2	L	AQ040		bridge/overpass/viaduct
VML2	L	BI020		dam/weir
VML2	A	AK160		stadium/amphitheater
3114	Line	LS(S-DASH,1,CHBLK)		<i>black very thin short dash line</i>
DTOP	L	AK130		race track
DTOP	L	AL155		overhead obstruction location
DTOP	L	AN010	exs=8	railroad -dismantled
DTOP	L	BH070		ford
DTOP	A	AI020		mobile home/mobile home park
DTOP	A	AL200		ruins
FFD	L	AN010	exs=8	railroad -dismantled
FFD	L	BH070		ford
UVM	L	AK130		race track
UVM	L	AN010	exs=8	railroad -dismantled
UVM	L	BH070		ford
UVM	A	AI020		mobile home/mobile home park
UVM	A	AK130		race track
UVM	A	AL200		ruins
VITD	L	AN010	exs=8	railroad -dismantled
VITD	L	BH070		ford
VML0	L	BH070		ford
VML0	A	AK130		race track
VML1	L	AK130		race track
VML1	L	AN010	exs=8	railroad -dismantled

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Product	Delin	FCODE	Attribute	Condition	Description
VML1	L	BH070			ford
VML1	A	AL200			ruins
VML2	L	AK130			race track
VML2	L	AN010	exs=8		railroad -dismantled
VML2	L	BH070			ford
VML2	A	AI020			mobile home/mobile home park
VML2	A	AL200			ruins
3115	Line	LS(S-DASH,2,CHBLK)		<i>black thin short dash line</i>	
DTOP	L	AQ070			ferry crossing
FFD	L	AQ070			ferry crossing
UVM	L	AQ070			ferry crossing
UVM	A	FA015			firing range/gunnery range
VITD	L	AQ070			ferry crossing
VITD	L	AQ111			prepared raft or float bridge site
VML0	L	AQ070			ferry crossing
VML1	L	AQ070			ferry crossing
VML2	L	AQ070			ferry crossing
3116	Line	LS(DASH,1,CHBLK)		<i>black very thin dash line</i>	
DNC	A	BC060			light sector
DTOP	A	AA010	exs=6		mine - inactive
DTOP	A	AA010	exs<>6		mine - active
DTOP	A	AA012	exs<>6		quarry - active
DTOP	A	AA012	exs=6		quarry - inactive
FFD	L	AP010			cart track
UVM	L	AA010			mine
UVM	L	AA012			quarry
UVM	A	AA010	exs<>6		mine - active
UVM	A	AA010	exs=6		mine - inactive
UVM	A	AA012	exs<>6		quarry - active
UVM	A	AA012	exs=6		quarry - inactive
VITD	L	AP010			cart track
VML0	A	AA010			mine/quarry
VML1	L	AP010			cart track
VML1	A	AA010	exs<>6		mine/quarry - active
VML1	A	AA010	exs=6		mine/quarry - inactive
VML2	A	AA010	exs<>6		mine/quarry - active
VML2	A	AA010	exs=6		mine/quarry - inactive
3117	Line	LS(DASH,2,CHBLK)		<i>black thin dash line</i>	
DNC	A	BD180	vrr=4 AND hdp>20		wreck - submerged; depth greater than 20m
DTOP	L	AP010			cart track
DTOP	L	AQ130			tunnel
DTOP	A	AK030			amusement park
DTOP	A	AK060			campground/campsite
DTOP	A	AK180			zoo/safari park
DTOP	A	AL030			cemetery
FFD	L	AQ130			tunnel
UVM	L	AH060			underground bunker
UVM	L	AP010			cart track
UVM	L	AQ130			tunnel
UVM	A	AF030			cooling tower
UVM	A	AH060			underground bunker
UVM	A	AK030			amusement park
UVM	A	AK060			campground/campsite

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Product	Delin	FCODE	Attribute Condition	Description
UVM	A	AK180		zoo/safari park
UVM	A	AL030		cemetery
UVM	A	AL250		underground dwelling
UVM	A	DB030		cave
VITD	L	AQ130		tunnel
VITD	L	SA060		covered drainage
VML0	L	AQ130		tunnel
VML1	L	AQ130		tunnel
VML2	L	AP010		cart track
VML2	L	AQ130		tunnel
VML2	A	AK030		amusement park
VML2	A	AK060		campground/campsite
VML2	A	AK180		zoo/safari park
VML2	A	AL030		cemetery
3118	Line	LS(DASH,3,CHBLK)		<i>black dash line</i>
DTOP	A	FA170		zone of occupation
VML0	A	FA170		zone of occupation
VML1	A	FA170		zone of occupation
VML2	A	FA170		zone of occupation
WVS	L	FA050		mandate line/convention line
3119	Line	LS(L-DASH,1,CHBLK)		<i>black very thin long dash line</i>
DNC	L	FA020		armistice line
DNC	L	FA110		international date line
DTOP	L	FA020		armistice line
DTOP	L	FA030		cease-fire line
DTOP	L	FA060		defacto boundary
FFD	L	FA020		armistice line
FFD	L	FA030		cease-fire line
UVM	L	FA020		armistice line
VML0	L	FA020		armistice line
VML0	L	FA030		cease-fire line
VML0	L	FA040		claim line
VML0	L	FA050		mandate line/convention line
VML0	L	FA060		defacto boundary
VML1	L	FA020		armistice line
VML1	L	FA030		cease-fire line
VML1	L	FA050		mandate line/convention line
VML1	L	FA060		defacto boundary
VML2	L	FA020		armistice line
VML2	L	FA030		cease-fire line
VML2	L	FA060		defacto boundary
WVS	L	FA020		armistice line
WVS	L	FA030		cease-fire line
3120	Line	LS(L-DASH,2,CHBLK)		<i>black thin long dash line</i>
DNC	L	FA040		claim line
DTOP	L	FA110		international date line
VML0	L	FA110		international date line
VML1	L	FA110		international date line
VML2	L	FA110		international date line
WVS	L	FA040		claim line
3123	Line	LC		<i>black solid line w/ single tics both sides</i>
DTOP	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
DTOP	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal

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Product	Delin	FCODE	Attribute Condition	Description
FFD	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
FFD	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
UVM	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
UVM	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
VITD	L	AN010	exs=0or1 AND fco<>2 AND rrc<>4	railroad -operational/normal/single
VITD	L	AN050	exs=0or1 AND rrc<>4	railroad siding/railroad spur - operational/normal
VITD	L	AN060		railroad yard/marshalling yard
VML0	L	AN010	exs=28 AND fco=0or3	railroad -operational/normal/single
VML1	L	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
VML1	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
VML2	L	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
VML2	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
3125	Line	LC	<i>black solid line w/ single tics alt sides</i>	
DTOP	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
DTOP	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
FFD	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
FFD	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
UVM	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
UVM	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
VITD	L	AN010	exs=0or1 AND fco<>2 AND rrc=4	railroad -operational/narrow/single
VITD	L	AN050	exs=0or1 AND rrc=4	railroad siding/railroad spur - operational/narrow
VML1	L	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single
VML1	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
VML2	L	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single
VML2	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
3127	Line	LC	<i>black solid line w/ double tics both sides</i>	
DTOP	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
FFD	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
UVM	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
VITD	L	AN010	exs=0or1 AND fco=2 AND rrc<>4	railroad -operational/normal/multiple
VML0	L	AN010	exs=28 AND fco<>0and<>3	railroad -operational/normal/multiple
VML1	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
VML2	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
3129	Line	LC	<i>black solid line w/ double tics alt sides</i>	
DTOP	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
FFD	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
UVM	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
VITD	L	AN010	exs=0or1 AND fco=2 AND rrc=4	railroad -operational/narrow/multiple
VML1	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
VML2	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
3131	Line	LC	<i>black dash line w/ single tics both sides</i>	
DTOP	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
DTOP	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
FFD	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
FFD	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
UVM	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
UVM	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
VITD	L	AN010	exs=5 AND fco<>2 AND rrc<>4	railroad -not operational/normal/single
VITD	L	AN050	exs=5 AND rrc<>4	railroad siding/railroad spur - non-operational/normal
VML0	L	AN010	exs<>28 AND fco=0or3	railroad -not operational/normal/single
VML1	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single
VML1	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
VML2	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single

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Product	Delin	FCODE	Attribute Condition	Description
VML2	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
3133	Line	LC	<i>black dash line w/ double tics both sides</i>	
DTOP	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
FFD	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
UVM	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
VITD	L	AN010	exs=5 AND fco=2 AND rrc<>4	railroad -not operational/normal/multiple
VML0	L	AN010	exs<>28 AND fco<>0and<>3	railroad -not operational/normal/multiple
VML1	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
VML2	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
3135	Line	LC	<i>black dash line w/ single tics alt sides</i>	
DTOP	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
DTOP	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
FFD	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
FFD	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
UVM	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
UVM	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
VITD	L	AN010	exs=5 AND fco<>2 AND rrc=4	railroad -not operational/narrow/single
VITD	L	AN050	exs=5 AND rrc=4	railroad siding/railroad spur - non-operational/narrow
VML1	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
VML1	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
VML2	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
VML2	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
3137	Line	LC	<i>black dash line w/ double tics alt sides</i>	
DTOP	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
FFD	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
UVM	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
VITD	L	AN010	exs=5 AND fco=2 AND rrc=4	railroad -not operational/narrow/multiple
VML1	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple
VML2	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple
3139	Line	LS(DOTT,1,CHBLK)	<i>black very thin dotted line</i>	
VML0	L	BD000		underwater danger/hazard
3142	Line	LC	<i>black parallel vy thin lines w/ tics (ladder patt)</i>	
DTOP	L	BH100		moat
VITD	L	BH100		moat
VML0	L	AQ064		causeway
3143	Line	LC	<i>black double dash very thin lines</i>	
DTOP	A	FA070		demilitarized zone
UVM	A	FA070		demilitarized zone
VML0	A	FA070		demilitarized zone
VML1	A	FA070		demilitarized zone
VML2	A	FA070		demilitarized zone
WVS	L	FA070	mbl=6	demilitarized zone
3146	Line	LC	<i>black solid triangle line patt</i>	
DTOP	L	AL210		snow shed/rock shed
VML0	L	AL210		snow shed/rock shed
VML1	L	AL210		snow shed/rock shed
VML2	L	AL210		snow shed/rock shed
3148	Line	LC	<i>black very thin patt line -x -x -x</i>	
DTOP	L	AL070		fence
UVM	L	AL070		fence
VML1	L	AL070		fence
VML2	L	AL070		fence

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Product	Delin	FCODE	Attribute Condition	Description
3153	Line	LS(SOLD,2,beige-rose)		<i>beige-rose thin solid line</i>
DTOP	L	AL015	bfc=6	building - hospital
UVM	L	AL015	bfc=6or100	building - hospital
VML2	L	AL015	bfc=6	building - hospital
3167	Line	LS(S-DASH,2,blu100)		<i>100% cyan blue thin short dash line</i>
FFD	L	BH020	hyc<>8	canal - not perennial
UVM	L	BH020	hyc<>8	canal - not perennial
VML1	L	BH020	hyc<>8	canal - not perennial
VML2	L	BH020	hyc<>8	canal - not perennial
3168	Line	LS(DOTT,2,OUTLL)		<i>outline lt brown thin dotted line</i>
DTOP	L	DB190		volcanic dike
3186	Line	LC		<i>black jagged line</i>
DTOP	L	BD120		reef
DTOP	A	BD120		reef
VML0	L	BD120		reef
VML1	L	BD120		reef
VML1	A	BD120		reef
VML1	A	BH190		lagoon/reef pool
VML2	L	BD120		reef
VML2	A	BD120		reef
4002	Area	AC(light-beige)		<i>lt beige solid fill</i>
DTOP	A	AL015	bfc=7	building - house of worship
DTOP	A	AL170		plaza/city square
DTOP	A	SA050	spr=0	slope polygon - <= 3%
UVM	A	AL015	bfc=7or114	building - house of worship
UVM	A	AL020	bac=0or1	built-up area sparse
UVM	A	AL170		plaza/city square
VITD	A	SA050	gsc=2	slope polygon - <= 3%
VML1	A	AL015	bfc=7	building - house of worship
VML2	A	AL015	bfc=7	building - house of worship
VML2	A	AL020	bac=0or1	built-up area sparse
VML2	A	AL170		plaza/city square
4003	Area	AC(med-beige)		<i>beige solid fill</i>
DTOP	A	AT050		communication building
DTOP	A	DA020		barren ground
DTOP	A	SA050	spr=1	slope polygon - > 3% and <= 10%
UVM	A	AT050		communication building
UVM	A	BH100	hyc=3	moat - dry
VITD	A	SA050	gsc=3	slope polygon - > 3% and <= 10%
VML2	A	AT050		communication building
4005	Area	AP		<i>beige stipple dot patt fill</i>
DTOP	A	BA060		beach zone
UVM	A	BA050		beach
UVM	A	DA010	mcc=88	ground surface element - sand
VITD	A	DA010	stp=5or6or7or8or9	ground surface element - sands
VML0	A	DA010	smc=88	ground surface element - sand
VML1	A	DA010	mcc=88	ground surface element - sand
VML2	A	DA010	mcc=88	ground surface element - sand
4008	Area	AP		<i>beige sand dune default</i>
DTOP	A	DB170	ssc=0	sand dune/sand hills - unknown
UVM	A	DB170	ssc=0	sand dune/sand hills - unknown
VML1	A	DB170	ssc=0	sand dune/sand hills - unknown

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Product	Delin	FCODE	Attribute	Condition	Description
VML2	A	DB170	ssc=0		sand dune/sand hills - unknown
4009	Area	AP			<i>beige sand dune crescent</i>
DTOP	A	DB170	ssc=22		sand dune/sand hills - crescent
UVM	A	DB170	ssc=22		sand dune/sand hills - crescent
VML1	A	DB170	ssc=22		sand dune/sand hills - crescent
VML2	A	DB170	ssc=22		sand dune/sand hills - crescent
4010	Area	AP			<i>beige sand dune lateral</i>
DTOP	A	DB170	ssc=26		sand dune/sand hills - lateral
UVM	A	DB170	ssc=26		sand dune/sand hills - lateral
VML1	A	DB170	ssc=26		sand dune/sand hills - lateral
VML2	A	DB170	ssc=26		sand dune/sand hills - lateral
4011	Area	AP			<i>beige sand dune mound</i>
DTOP	A	DB170	ssc=27		sand dune/sand hills - mounds
UVM	A	DB170	ssc=27		sand dune/sand hills - mounds
VML1	A	DB170	ssc=27		sand dune/sand hills - mounds
VML2	A	DB170	ssc=27		sand dune/sand hills - mounds
4012	Area	AP			<i>beige sand dune ripple</i>
DTOP	A	DB170	ssc=28		sand dune/sand hills - ripple
UVM	A	DB170	ssc=28		sand dune/sand hills - ripple
VML1	A	DB170	ssc=28		sand dune/sand hills - ripple
VML2	A	DB170	ssc=28		sand dune/sand hills - ripple
4013	Area	AP			<i>beige sand dune star</i>
DTOP	A	DB170	ssc=29		sand dune/sand hills - star
UVM	A	DB170	ssc=29		sand dune/sand hills - star
VML1	A	DB170	ssc=29		sand dune/sand hills - star
VML2	A	DB170	ssc=29		sand dune/sand hills - star
4014	Area	AP			<i>beige sand dune transverse</i>
DTOP	A	DB170	ssc=30		sand dune/sand hills - transverse
UVM	A	DB170	ssc=30		sand dune/sand hills - transverse
VML1	A	DB170	ssc=30		sand dune/sand hills - transverse
VML2	A	DB170	ssc=30		sand dune/sand hills - transverse
4015	Area	AC(beige-rose)			<i>beige-rose solid fill</i>
DTOP	A	AB000			disposal site/waste pile
DTOP	A	AB010			wrecking yard/scrap yard
DTOP	A	AL015	bfc=6		building - hospital
UVM	A	AB000			disposal site/waste pile
UVM	A	AB010			wrecking yard/scrap yard
UVM	A	AL015	bfc=6or100		building - hospital
VML1	A	AB000			disposal site/waste pile
VML2	A	AB000			disposal site/waste pile
VML2	A	AB010			wrecking yard/scrap yard
VML2	A	AL015	bfc=6		building - hospital
4018	Area	AC(light-tan)			<i>lt tan solid fill</i>
DTOP	A	EA010	veg=1		cropland - dry
UVM	A	AP020			interchange
UVM	A	EA010	veg=1		cropland - dry
VITD	A	EA010	veg=1		cropland - dry
VML0	A	EA010	veg=1		cropland - dry
VML1	A	EA010	veg=1		cropland - dry
VML2	A	EA010	veg=1		cropland - dry

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Product	Delin	FCODE	Attribute	Condition	Description
4025	Area	AC(LANDF)			<i>feature brown solid fill</i>
DTOP	A	AL015	bfc=15		building - school
UVM	A	AL015	bfc=15or60or108		building - school
VML1	A	AL015	bfc=15		building - school
VML2	A	AL015	bfc=15		building - school
4027	Area	AP			<i>brown wide left diag patt fill</i>
UVM	A	DB200			gully/gorge
VITD	A	DB200			gully/gorge
4030	Area	AP			<i>brown left diag thin line patt fill</i>
DTOP	A	DB060	mcc=0or30		crevice/crevasse - earthen
VML2	A	DB060	mcc=0or30		crevice/crevasse - earthen
4032	Area	AP			<i>brown stipple dot patt fill</i>
DTOP	A	BJ020			moraine
VML1	A	BJ020			moraine
VML2	A	BJ020			moraine
4034	Area	AP			<i>lt brown heavy mixed stipple dot patt fill</i>
DTOP	A	DA010	smc=84		ground surface element - rocky
UVM	A	DA010	mcc=8or46or84		ground surface element - boulders, gravel, rock
VITD	A	DA010	stp=1or2or3or4		ground surface element - gravels
VML1	A	DA010	mcc=46or8		ground surface element - boulders, gravel
VML2	A	DA010	mcc=46or8		ground surface element - boulders, gravel
4036	Area	AC(med-red-brown)			<i>red brown solid fill</i>
UVM	A	AP030	med=1		road - divided w/median
4051	Area	AP			<i>radar dk green squares in grid patt fill</i>
DTOP	A	EA040			orchard/plantation
FFD	A	EA040			orchard/plantation
UVM	A	EA040			orchard/plantation
VITD	A	EA040			orchard/plantation
VML0	A	EA040			orchard/plantation
VML1	A	EA040			orchard/plantation
VML2	A	EA040			orchard/plantation
4052	Area	AP			<i>yellow-green bamboo patt fill</i>
DTOP	A	EC010			bamboo/cane
UVM	A	EC010			bamboo/cane
VITD	A	EC010			bamboo/cane
VML0	A	EC010			bamboo/cane
VML2	A	EC010			bamboo/cane
4054	Area	AP			<i>radar dk green offset grid/dot patt fill</i>
DTOP	A	EA050			vineyards
UVM	A	EA050			vineyards
UVM	A	EA055			hops
VITD	A	EA050			vineyards
VML0	A	EA050			vineyards
VML1	A	EA050			vineyards
VML2	A	EA050			vineyards
4063	Area	AP			<i>yellow-green stipple dot patt fill</i>
DTOP	A	EB020			scrub/brush
UVM	A	EB020			scrub/brush
UVM	A	EE000			miscellaneous vegetation
VITD	A	EB020			scrub/brush
VML0	A	EB020			scrub/brush

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Product	Delin	FCODE	Attribute	Condition	Description
VML2	A	EB020			scrub/brush
4067	Area	AP			<i>yellow-green dot patt fill</i>
DTOP	A	EA010	veg=0		cropland - other
DTOP	A	EA010	veg=4		cropland - rice paddies
UVM	A	EA010	veg=0or999		cropland - other
UVM	A	EA010	veg=4		cropland - rice paddies
VITD	A	EA010	veg<>1		cropland - other
VML0	A	EA010	veg<>1		cropland - other
VML1	A	EA010	veg<>1		cropland - other
VML2	A	EA010	veg<>1		cropland - other
4068	Area	AP			<i>yellow-green grass patt fill</i>
DTOP	A	EB010			grassland
UVM	A	EB010			grassland
VITD	A	EB010			grassland
VML0	A	EB010			grassland
VML1	A	EB010			grassland
VML2	A	EB010			grassland
4077	Area	AP			<i>depth med blue narrow rt diag line patt fill</i>
DNC	A	AC030			settling basin/sludge pond
4078	Area	AP			<i>basic blue inundation area patt fill</i>
DTOP	A	BH090			land subject to inundation
FFD	A	BH090			land subject to inundation
UVM	A	BH090	hoc=0or5		land subject to inundation - natural
UVM	A	BH090	hoc=1		land subject to inundation - controlled
VITD	A	BH090			land subject to inundation
VML0	A	BH090			land subject to inundation
VML1	A	BH090	exs=48		land subject to inundation - controlled
VML1	A	BH090	exs=0or45		land subject to inundation - natural
VML2	A	BH090	exs=0or45		land subject to inundation - natural
VML2	A	BH090	exs=48		land subject to inundation - controlled
4079	Area	AP			<i>31% cyan blue stipple dot patt fill</i>
DTOP	A	BH080	sdr	hyc<>8	lake/pond - not perennial
DTOP	A	BH140	sdr	hyc=3or6	river/stream - dry, intermittent
FFD	A	BH080		hyc=3	lake/pond - dry
FFD	A	BH140		hyc=3or6	river/stream - dry, non-perennial
UVM	A	BH080		hyc=3or6	lake/pond - dry, intermittent
UVM	A	BH140		hyc=3or6	river/stream - dry, intermittent
VITD	A	BH140		hyc=3or6	river/stream - dry, intermittent
VML1	A	BH080		hyc=3or6	lake/pond - dry, intermittent
VML1	A	BH140		hyc=3or6	river/stream - dry, intermittent
VML2	A	BH080		hyc=3or6	lake/pond - dry, intermittent
VML2	A	BH140		hyc=3or6	river/stream - dry, intermittent
4080	Area	AP			<i>basic blue marsh/swamp patt fill</i>
DTOP	A	BH095	veg=0or56		marsh/swamp - no trees
FFD	A	BH095			marsh/swamp
UVM	A	BH095			marsh/swamp
VITD	A	BH095			marsh/swamp
VML0	A	BH095			marsh/swamp
VML1	A	BH095			marsh/swamp
VML2	A	BH095			marsh/swamp
4085	Area	AP			<i>basic blue rice patt fill</i>
FFD	A	BH135			rice field

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Product	Delin	FCODE	Attribute Condition	Description
VITD	A	BH135		rice field
VML0	A	BH135		rice field
VML1	A	BH135		rice field
VML2	A	BH135		rice field
4089	Area	AC(aero-blue)		<i>aero-blue solid fill</i>
DTOP	A	GB055		runway
FFD	A	GB055		runway
UVM	A	AT010		disk/dish
UVM	A	GB055		runway
VITD	A	GB055		runway
VML2	A	GB055		runway
4098	Area	AP		<i>aero-blue wide rt diag line patt fill</i>
DTOP	A	GB045		overrun/stopway
UVM	A	GB045		overrun/stopway
VML2	A	GB045		overrun/stopway
4100	Area	AC(CHGRF)		<i>lt gray solid fill</i>
DTOP	A	AL105	pop	settlement
DTOP	A	AL140		particle accelerator
DTOP	A	DA005		asphalt lake
FFD	A	AL105		settlement
UVM	A	AF030		cooling tower
UVM	A	AH060		underground bunker
UVM	A	AL140		particle accelerator
UVM	A	AL250		underground dwelling
UVM	A	AQ125		station (miscellaneous)
UVM	A	DA005		asphalt lake
VML1	A	AL105		settlement
VML1	A	DA005		asphalt lake
VML2	A	AL105		settlement
VML2	A	AL140		particle accelerator
VML2	A	DA005		asphalt lake
4105	Area	AP		<i>lt gray rt diag thin line patt fill</i>
DTOP	A	GB015		apron/hardstand
DTOP	A	ZD020		void collection area
FFD	A	ZD020		void collection area
TOD0	A	ZD020		void collection area
TOD1	A	ZD020		void collection area
TOD2	A	ZD020		void collection area
TOD3	A	ZD020		void collection area
TOD4	A	ZD020		void collection area
UVM	A	GB015		apron/hardstand
VML0	A	ZD020		void collection area
VML1	A	ZD020		void collection area
VML2	A	GB015		apron/hardstand
VML2	A	ZD020		void collection area
4108	Area	AP		<i>lt gray land cover/ripple patt fill</i>
UVM	A	DA010	mcc=52	ground surface element - lava
VML0	A	DA010	smc=52	ground surface element - lava
VML1	A	DA010	mcc=52	ground surface element - lava
VML2	A	DA010	mcc=52	ground surface element - lava
4109	Area	AC(DEPCN)		<i>depth gray solid fill</i>
DTOP	A	AM060		storage bunker/storage mound

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Product	Delin	FCODE	Attribute	Condition	Description
UVM	A	AM060			storage bunker/storage mound
VML2	A	AM060			storage bunker/storage mound
4123	Area	AP			<i>depth gray stiple patt fill</i>
UVM	A	AM040			mineral pile
4128	Area	AC(tan-BUA)			<i>tan BUA solid fill</i>
DTOP	A	AL020	<>pop		built-up area
DTOP	A	AL020	pop		built-up area
FFD	A	AL020			built-up area
UVM	A	AL020		bac=2	built-up area dense
VITD	A	AL020			built-up area
VML0	A	AL020			built-up area
VML1	A	AL020			built-up area
VML2	A	AL020		bac=2	built-up area dense
4138	Area	AC(blue_4)			<i>med blue solid fill</i>
DTOP	A	AK170			swimming pool
UVM	A	AK170			swimming pool
VML2	A	AK170			swimming pool
4145	Area	AP			<i>med blue lft diag dash line patt fill</i>
UVM	A	BH165			spillway
4150	Area	AP			<i>depth pale blue stiple dot patt fill</i>
DTOP	A	BH200			miscellaneous surface drainage feature
4151	Area	AP			<i>basic blue ripple jagged patt fill</i>
DTOP	A	BJ030			glacier
VML1	A	BJ030			glacier
VML2	A	BJ030			glacier
4152	Area	AC(blue_3)			<i>lt blue solid fill</i>
UVM	A	BH100		hyc<>3	moat - not dry
VML0	A	BH000			inland water
4154	Area	AC(blu31)			<i>31% cyan blue solid fill</i>
DTOP	A	BH080	sdr	hyc=8	lake/pond - perennial
DTOP	A	BH080	<>sdr		lake/pond
DTOP	A	BH130			reservoir
DTOP	A	BH140	sdr	hyc=0or8	river/stream - perennial, unknown
DTOP	A	BH140	<>sdr		river/stream
FFD	A	BH080		hyc=0or8	lake/pond - perennial, unknown
FFD	A	BH130			reservoir
FFD	A	BH140		hyc=0or8	river/stream - perennial, unknown
UVM	A	BH080		hyc=0or8	lake/pond - perennial, unknown
UVM	A	BH130			reservoir
UVM	A	BH140		hyc=0or8	river/stream - perennial, unknown
VITD	A	BH140		hyc=0or8or14	river/stream - perennial, braided, unknown
VML1	A	BH080		hyc=0or8	lake/pond - perennial, unknown
VML1	A	BH130			reservoir
VML1	A	BH140		hyc=0or8	river/stream - perennial, unknown
VML2	A	BH080		hyc=0or8	lake/pond - perennial, unknown
VML2	A	BH130			reservoir
VML2	A	BH140		hyc=0or8	river/stream - perennial, unknown
4156	Area	AC(CHBLK)			<i>black solid fill</i>
DTOP	A	AL015		bfc<>6and<>7and<>15	building - generic
DTOP	A	AM070			tank
DTOP	A	BI020			dam/weir

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Product	Delin	FCODE	Attribute Condition	Description
FFD	A	BI020		dam/weir
UVM	A	AL015	bfc<>2and<>3and<>5and<>8and<>28and<>52and<>121and<>15and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
UVM	A	AM070		tank
UVM	A	AQ040		bridge/overpass/viaduct
UVM	A	BI020		dam/weir
VML1	A	AL015	bfc<>7and<>15	building - generic
VML2	A	AL015	bfc<>6and<>7and<>15	building - generic
VML2	A	AM070		tank
VML2	A	BI020		dam/weir
4167	Area	AP		<i>black cross hatch patt fill</i>
UVM	A	AN075		railroad turntable
4175	Area	AC(APLRT)		<i>lt orange solid fill</i>
DTOP	A	SA050	spr=6	slope polygon - > 45% and <= 60%
UVM	A	AL130		monument
VITD	A	SA050	gsc=7	slope polygon - > 45%
4182	Line	LS(S-DASH,1,blu100)		<i>100% cyan blue very thin short dash line</i>
DTOP	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
DTOP	L	BH140	hyc=3or6	river/stream - dry, intermittent
DTOP	A	BH020	sdr hyc<>8	canal - non-perennial, dry, unknown
DTOP	A	BH140	sdr hyc=3or6	river/stream - dry, intermittent
DTOP	A	BH150		salt pan
FFD	L	BA010	acc<>1	coastline/shoreline - not accurate
FFD	L	BH140	hyc=3or6	river/stream - dry, non-perennial
FFD	A	BH020	hyc<>8	canal - non-perennial, dry, unknown
FFD	A	BH140	hyc=3or6	river/stream - dry, non-perennial
UVM	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
UVM	L	BH140	hyc=3or6	river/stream - dry, intermittent
UVM	L	BH210	slt=6or8	inland shoreline - mangrove, marsh
UVM	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
UVM	A	BH140	hyc=3or6	river/stream - dry, intermittent
UVM	A	BH150		salt pan
VITD	L	BH140	hyc=3or6	river/stream - dry, intermittent
VITD	A	BH020	hyc<>8	canal - not perennial
VITD	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML0	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML1	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
VML1	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML1	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML1	A	BH150		salt pan
VML2	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
VML2	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML2	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
VML2	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML2	A	BH150		salt pan
4183	Line	LS(SOLD,3,aero-blue)		<i>aero-blue solid line</i>
DTOP	A	GB005		airport/airfield
FFD	A	GB005		airport/airfield
UVM	A	GB005		airport/airfield
VML2	A	GB005		airport/airfield
4184	Line	LS(S-DASH,1,aero-blue)		<i>aero-blue very thin short dash line</i>
FFD	A	GB035		heliport

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Product	Delin	FCODE	Attribute	Condition	Description
UVM	A	GB035			heliport
4186	Line	LS(DASH,2,CHMGD)			<i>magenta thin dash line</i>
DNC	L	FC021	mac=32or33 AND mbl=NULL		maritime limit boundary - oil field, gas field
DNC	L	FC021	mac=44 AND mbl=NULL		maritime limit boundary - deguassing
DNC	L	FC021	mac=27or28or29 AND mbl=NULL		maritime limit boundary - submarine exercise, mine laying, firing range
DNC	L	FC021	mac=24 AND mbl=NULL		maritime limit boundary - turning area
DNC	L	FC021	mac=58 AND mbl=NULL		maritime limit boundary - dredging
DNC	L	FC031	mac=4		maritime area - mine danger
DNC	L	FC031	mac=5		maritime area - entry prohibited
FFD	A	GB065			seaplane base
4201	Line	LS(DASH,2,DEPCN)			<i>depth gray thin dash line</i>
VITD	A	DA020			barren ground
4202	Line	LS(DOTT,2,DEPCN)			<i>depth gray thin dotted line</i>
VITD	A	SA030			exposed bedrock
4203	Line	LC			<i>depth gray line w/ two dashes</i>
VITD	A	SA020			disturbed soil
4217	Line	LS(SOLD,1,dark-tan)			<i>dk tan very thin solid line</i>
DTOP	A	AJ030			feedlot/stockyard/holding pen
UVM	A	AJ030			feedlot/stockyard/holding pen
VML2	A	AJ030			feedlot/stockyard/holding pen
4220	Line	LS(SOLD,2,med-beige)			<i>beige thin solid line</i>
DTOP	A	BA060			beach zone
UVM	A	BA050			beach
UVM	A	DA010	mcc=88		ground surface element - sand
VITD	A	DA010	stp=5or6or7or8or9		ground surface element - sands
VML0	A	DA010	smc=88		ground surface element - sand
VML1	A	DA010	mcc=88		ground surface element - sand
VML2	A	DA010	mcc=88		ground surface element - sand
4230	Area	AP			<i>yellow-green squares in grid patt fill</i>
DTOP	A	EA030			nursery
UVM	A	EA030			nursery
VML0	A	EA030			nursery
VML2	A	EA030			nursery
4243	Area	AC(DEPSC)			<i>depth dk gray solid fill</i>
UVM	A	AK110			grandstand
4249	Area	AP			<i>black x patt fill</i>
DTOP	A	DB145			miscellaneous obstacle
UVM	A	DB030			cave
4262	Line	LS(DASH,2,med-purple)			<i>purple thin dash line</i>
DTOP	A	AQ116			pumping station
UVM	A	AQ116			pumping station
VML2	A	AQ116			pumping station
4265	Line	LS(SOLD,2,blue)			<i>basic blue thin solid line</i>
DTOP	A	BJ065			ice shelf
DTOP	A	BJ070			pack ice
DTOP	A	BJ080			polar ice
VITD	A	SA010			common open water
VML0	A	BJ065			ice shelf
VML0	A	BJ070			pack ice
VML0	A	BJ080			polar ice

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Product	Delin	FCODE	Attribute	Condition	Description
VML1	A	BJ065			ice shelf
VML1	A	BJ070			pack ice
VML1	A	BJ080			polar ice
VML2	A	BJ065			ice shelf
VML2	A	BJ070			pack ice
VML2	A	BJ080			polar ice
4266	Line	LS(SOLD,1,blue)		<i>basic blue very thin solid line</i>	
DTOP	A	BH090			land subject to inundation
FFD	A	BH090			land subject to inundation
UVM	A	BH075			fountain
UVM	A	BH090	hoc=0or5		land subject to inundation - natural
VITD	A	BH090			land subject to inundation
VML0	A	BH090			land subject to inundation
VML1	A	BH090	exs=0or45		land subject to inundation - natural
VML2	A	BH090	exs=0or45		land subject to inundation - natural
4279	Line	LS(S-DASH,2,NINFO)		<i>nav orange thin short dash line</i>	
DTOP	A	AK040			athletic field
DTOP	A	AK090			fairgrounds
DTOP	A	AK100			golf course
UVM	A	AK040			athletic field
UVM	A	AK070			drive in theater
UVM	A	AK090			fairgrounds
UVM	A	AK100			golf course
VML0	A	AK040			athletic field
VML2	A	AK040			athletic field
VML2	A	AK070			drive in theater
VML2	A	AK090			fairgrounds
VML2	A	AK100			golf course
4289	Area	AP		<i>basic blue stipple dot patt fill</i>	
DTOP	A	BH160			sebkha
UVM	A	BH160			sebkha
VML1	A	BH160			sebkha
VML2	A	BH160			sebkha
4304	Line	LS(SOLD,1,LANDA)		<i>lt brown very very thin solid line</i>	
FFD	L	CA010	hqc=2		contour line (land) - intermediate
UVM	L	CA010	hqc=2 AND mcc<>103		contour line (land) - intermediate
VML0	L	CA010	hqc=0or2		contour line (land) - intermediate unknown
VML2	L	CA010	hqc=2 AND mcc<>103		contour line (land) - intermediate
4305	Line	LC		<i>lt brown very very thin line w/ tick marks</i>	
FFD	L	CA010	hqc=6		contour line (land) - intermediate depression
UVM	L	CA010	hqc=6 AND mcc<>103		contour line (land) - intermediate depression
VML0	L	CA010	hqc=6		contour line (land) - depression intermediate
VML2	L	CA010	hqc=6or9 AND mcc<>103		contour line (land) - intermediate depression mound
4306	Line	LS(L-DASH,1,LANDA)		<i>lt brown very thin long dash line</i>	
UVM	L	CA010	hqc=7 AND mcc<>103		contour line (land) - index approximate
VML2	L	CA010	hqc=7 AND mcc<>103		contour line (land) - index approximate
4307	Line	LS(L-DASH,1,LANDA)		<i>lt brown very very thin long dash line</i>	
UVM	L	CA010	hqc=12 AND mcc<>103		contour line (land) - intermediate approximate
VML0	L	CA010	hqc=12		contour line (land) - intermediate approximate
VML2	L	CA010	hqc=12 AND mcc<>103		contour line (land) - intermediate approximate
4308	Line	LS(S-DASH,1,LANDA)		<i>lt brown very very thin short dash line</i>	
UVM	L	CA010	hqc=14 AND mcc<>103		contour line (land) - supplementary 1/4

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Product	Delin	FCODE	Attribute Condition	Description
VML2	L	CA010	hqc=14 AND mcc<>103	contour line (land) - supplementary 1/4
4309	Line	LC	<i>It brown vy vy thin long dash line w/ ticks</i>	
VML0	L	CA010	hqc=18	contour line (land) - intermediate depression approx
4310	Line	LC	<i>It brown very vy thin dash line w/ tick marks</i>	
VML0	L	CA010	hqc=22or23	contour line (land) - supplemental depression
4311	Line	LS(SOLD,1,blu100)	<i>100% cyan blue very thin solid line</i>	
DTOP	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
DTOP	L	BH010	loc=0or8or25	aqueduct - surface/elevated
DTOP	L	BH060		flume
DTOP	L	BH110	loc=0or8or25	penstock - surface/elevated
FFD	L	BH010	loc=0or8or25	aqueduct - surface/elevated
UVM	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
UVM	L	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
UVM	L	BH060		flume
UVM	L	BH110	loc=0or8or25	penstock - surface/elevated
UVM	L	CA010	hqc=0or1 AND mcc=103	contour line (snow/ice) - index unknown
VML1	L	AQ113	loc=0or8 AND pro=116	pipeline/pipe - surface; water
VML1	L	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
VML1	L	BH060		flume
VML1	L	BH110	loc=0or8or25	penstock - surface/elevated
VML2	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
VML2	L	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
VML2	L	BH060		flume
VML2	L	BH110	loc=0or8or25	penstock - surface/elevated
VML2	L	CA010	hqc=0or1 AND mcc=103	contour line (snow/ice) - index unknown
4312	Line	LS(SOLD,1,blu100)	<i>100% cyan blue very very thin solid line</i>	
UVM	L	CA010	hqc=2 AND mcc=103	contour line (snow/ice) - intermediate
VML2	L	CA010	hqc=2 AND mcc=103	contour line (snow/ice) - intermediate
4313	Line	LS(DASH,1,blu100)	<i>100% cyan blue very very thin dash line</i>	
UVM	L	CA010	hqc=3 AND mcc=103	contour line (snow/ice) - supplementary 1/2
VML2	L	CA010	hqc=3or4or13 AND mcc=103	contour line (snow/ice) - supplementary 1/2, approx, form lines, approx
4314	Line	LC	<i>100% cyan blue vy thin line w/ ticks on inside</i>	
UVM	L	CA010	hqc=5 AND mcc=103	contour line (snow/ice) - index depression
VML2	L	CA010	hqc=5or8 AND mcc=103	contour line (snow/ice) - index depression mound
4315	Line	LC	<i>100% cyan blue very very thin line w/ ticks</i>	
UVM	L	CA010	hqc=6 AND mcc=103	contour line (snow/ice) - intermediate depression
VML2	L	CA010	hqc=6or9 AND mcc=103	contour line (snow/ice) - intermediate depression mound
4316	Line	LS(L-DASH,1,blu100)	<i>100% cyan blue very thin long dash line</i>	
DTOP	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
UVM	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
UVM	L	BH010	atc<>1and<>3 AND exs=5or6	aqueduct - adandoned/under construction
UVM	L	CA010	hqc=7 AND mcc=103	contour line (snow/ice) - index approximate
VML1	L	BH010	exs=5or6	aqueduct - abandoned/under construction
VML2	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
VML2	L	BH010	exs=5or6	aqueduct - abandoned/under construction
VML2	L	CA010	hqc=7 AND mcc=103	contour line (snow/ice) - index approximate
4317	Line	LS(L-DASH,1,blu100)	<i>100% cyan blue very very thin long dash line</i>	
UVM	L	CA010	hqc=12 AND mcc=103	contour line (snow/ice) - intermediate approximate
VML2	L	CA010	hqc=12 AND mcc=103	contour line (snow/ice) - intermediate approximate

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Product	Delin	FCODE	Attribute Condition	Description
4318	Line	LS(S-DASH,1,blu100)		<i>100% cyan blue very very thin short dash line</i>
UVM	L	CA010	hqc=14 AND mcc=103	contour line (snowice) - supplementary 1/4
VML2	L	CA010	hqc=14 AND mcc=103	contour line (snowice) - supplementary 1/4
4325	Point	SY(RDOSTA02) for pillar bouy		<i>magenta lg cir</i>
DNC	P	BC020	nst=1or4or5or17or41or51or53 AND ssc=10	buoy - pillar; radio navigation system
4326	Point	SY(RTPBCN02) for pillar bouy		<i>magenta lg dashed cir</i>
DNC	P	BC020	nst=10or54 AND ssc=10	buoy - pillar; radar navigation system
6000	Point	SY		<i>black upside down pick & hammer</i>
DTOP	P	AA010	exs=6	mine - inactive
DTOP	P	AA012	exs=6	quarry - inactive
DTOP	A	AA010	exs=6	mine - inactive
DTOP	A	AA012	exs=6	quarry - inactive
UVM	P	AA010	exs=6	mine - inactive
UVM	P	AA012	exs=6	quarry - inactive
UVM	A	AA010	exs=6	mine - inactive
UVM	A	AA012	exs=6	quarry - inactive
VML1	P	AA010	exs=6	mine/quarry - inactive
VML1	A	AA010	exs=6	mine/quarry - inactive
VML2	P	AA010	exs=6	mine/quarry - inactive
VML2	A	AA010	exs=6	mine/quarry - inactive
6001	Area	AP		<i>tan dot patt fill</i>
DTOP	A	EA010	veg=1	cropland - dry
UVM	A	EA010	veg=1	cropland - dry
VITD	A	EA010	veg=1	cropland - dry
VML0	A	EA010	veg=1	cropland - dry
VML1	A	EA010	veg=1	cropland - dry
VML2	A	EA010	veg=1	cropland - dry
6002	Area	AC(steel-blu)		<i>steel blue solid fill</i>
DTOP	A	EA010	veg=4	cropland - rice paddies
UVM	A	EA010	veg=4	cropland - rice paddies
6003	Area	AP		<i>basic blue lft diag line patt fill</i>
DTOP	A	AC030		settling basin/sludge pond
DTOP	A	BH040		filtration beds/aeration beds
FFD	A	AC030		settling basin/sludge pond
FFD	A	BH040		filtration beds/aeration beds
UVM	A	AC030		settling basin/sludge pond
UVM	A	BH040		filtration beds/aeration beds
VML1	A	AC030		settling basin/sludge pond
VML1	A	BH040		filtration beds/aeration beds
VML2	A	AC030		settling basin/sludge pond
VML2	A	BH040		filtration beds/aeration beds
6004	Line	LS(DASH,2,dark-red-brown)		<i>dk red brown thin dash line</i>
DTOP	A	AH050		fortification
UVM	L	AH010		bastion/rampart/fortification
UVM	L	AH050		fortification
UVM	A	AH010		bastion/rampart/fortification
UVM	A	AH050		fortification
VML1	A	AH050		fortification
VML2	A	AH050		fortification
6005	Area	AC(olive-green)		<i>olive green solid fill</i>
DTOP	A	AK030		amusement park

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Product	Delin	FCODE	Attribute	Condition	Description
DTOP	A	AK180			zoo/safari park
UVM	A	AK030			amusement park
UVM	A	AK180			zoo/safari park
VML2	A	AK030			amusement park
VML2	A	AK180			zoo/safari park
6006	Area	AP			<i>black cemetery patt fill</i>
DTOP	A	AL030			cemetery
UVM	A	AL030			cemetery
VML2	A	AL030			cemetery
6007	Area	AC(midnight-blu)			<i>midnight blue solid fill</i>
UVM	A	AM080			water tower
6008	Area	AP			<i>orange left diag line patt fill</i>
DTOP	A	AQ135			vehicle stopping area/rest area
DTOP	A	AQ140			vehicle storage/parking area
UVM	A	AQ140			vehicle storage/parking area
VML2	A	AQ135			vehicle stopping area/rest area
VML2	A	AQ140			vehicle storage/parking area
6009	Area	AP			<i>lt blue marsh/swamp patt fill</i>
UVM	A	BH015			bog
VML0	A	BH015			bog
VML1	A	BH015			bog
VML2	A	BH015			bog
6011	Line	LS(SOLD,1,LANDA)			<i>lt brown very thin solid line</i>
FFD	L	CA010	hqc=0or1		contour line (land) - index, unknown
UVM	L	CA010	hqc=0or1 AND mcc<>103		contour line (land) - index
VML0	L	CA010	hqc=19		contour line (land) - carrying contour (coincident)
VML1	L	CA010			contour line (land)
VML2	L	CA010	hqc=0or1 AND mcc<>103		contour line (land) - index
6012	Area	AC(CHWHT)			<i>pale green solid fill</i>
DTOP	A	EA010	veg=0		cropland - other
UVM	A	EA010	veg=0or999		cropland - other
VITD	A	EA010	veg<>1		cropland - other
VML0	A	EA010	veg<>1		cropland - other
VML1	A	EA010	veg<>1		cropland - other
VML2	A	EA010	veg<>1		cropland - other
6013	Point	SY			<i>basic blue very thin circle</i>
DTOP	P	AA050	hyc<>0and<>8 AND pro=116		well - water/non-perennial-dry
UVM	P	AA050	hyc<>0and<>8 AND pro=116		well - water/non-perennial-dry
VML1	P	AA050	hyc<>0and<>8 AND pro=116		well - water/non-perennial-dry
VML2	P	AA050	hyc<>0and<>8 AND pro=116		well - water/non-perennial-dry
6014	Line	LC			<i>dk tan vy thin line w/ ticks</i>
DTOP	L	DB010			bluff/cliff/escarpment
DTOP	L	DB070			cut
UVM	L	DB010			bluff/cliff/escarpment
UVM	L	DB070			cut
VITD	L	DB010			bluff/cliff/escarpment
VITD	L	DB070			cut
VML0	L	DB010			bluff/cliff/escarpment
VML1	L	DB010			bluff/cliff/escarpment
VML1	L	DB070			cut
VML2	L	DB010			bluff/cliff/escarpment
VML2	L	DB070			cut

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Product	Delin	FCODE	Attribute Condition	Description
6015	Point	SY		<i>black sm open square</i>
DTOP	P	AF010		chimney/smokestack
UVM	P	AF010		chimney/smokestack
VML1	P	AF010		chimney/smokestack
VML2	P	AF010		chimney/smokestack
6016	Point	SY		<i>black crane symbol</i>
DTOP	P	AF040		crane
UVM	P	AF040		crane
VML1	P	AF040		crane
VML2	P	AF040		crane
6017	Point	SY		<i>black sm filled cir w/ vert line w/ "X" on top</i>
DTOP	P	AJ050		windmill
UVM	P	AJ050		windmill
VML1	P	AJ050		windmill
VML2	P	AJ050		windmill
6018	Point	SY		<i>black "L" with dashed outline</i>
DTOP	P	AL030		cemetery
UVM	P	AL030		cemetery
VML2	P	AL030		cemetery
6019	Point	SY		<i>black tower with "x" inside</i>
DTOP	P	AT080		communication tower
UVM	P	AT080		communication tower
VML0	P	AT080		communication tower
VML1	P	AT080		communication tower
VML2	P	AT080		communication tower
6021	Line	LC		<i>100% red brown cased line w/ gray solid</i>
DTOP	L	AP020		interchange
DTOP	L	AP030	med=1	road - divided w/ median
FFD	L	AP030	med=1	road - divided w/ median
UVM	L	AP020		interchange
UVM	L	AP030	med=1	road - divided w/ median
VITD	L	AP030	fco=5or6	road - divided w/ median
VML0	L	AP030	med=1	road - divided w/ median
VML1	L	AP030	med=1	road - divided w/ median
VML2	L	AP020		interchange
VML2	L	AP030	med=1	road - divided w/ median
6022	Line	LC		<i>100% red brown thick line w/ gray dash</i>
UVM	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
VML1	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
VML2	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
6023	Line	LS(SOLD,2,red-brown100)		<i>100% red brown thin line</i>
UVM	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
VML1	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
VML2	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
6024	Line	LS(SOLD,3,red-brown100)		<i>100% red brown line</i>
DTOP	L	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
FFD	L	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
UVM	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
VITD	L	AP030	fco=0or7 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
VML0	L	AP030	med<>1	road - no median
VML1	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns

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Product	Delin	FCODE	Attribute Condition	Description
VML2	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
VVOD	L	AP030		road (libref)
6025	Line	LC		<i>100% red brown thin line w/ gray dash</i>
DTOP	L	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
FFD	L	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
UVM	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
VITD	L	AP030	fco=0or7 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
VML1	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
VML2	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
6026	Line	LS(SOLD,1,CHGRD)		<i>gray vy thin solid line</i>
DTOP	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
FFD	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
UVM	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
VITD	L	AP030	fco=0or7 AND wtc=2	road - fair weather, no median
VML1	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
VML2	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
6030	Point	SY		<i>black six pt star w/ dot inside</i>
DTOP	P	AL015	bfc=82	building - lighthouse
UVM	P	AL015	bfc=82	building - lighthouse
UVM	P	BC050		lighthouse
VML0	P	BC050		lighthouse
VML1	P	AL015	bfc=82	building - lighthouse
VML2	P	AL015	bfc=82	building - lighthouse
6031	Point	SY		<i>basic blue open cir w/ tail below</i>
DTOP	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
UVM	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
VML1	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
VML2	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
6032	Point	SY		<i>aero-blue "H" inside aero-blue square</i>
DTOP	P	GB030	apt<>11	helicopter landing pad
FFD	P	GB035		heliport
UVM	P	GB030		helicopter landing pad
6033	Point	SY		<i>black pagoda w/ open square</i>
UVM	P	AL015	bfc=7or114 AND hwt=11	building - house of worship - pagoda
VML1	P	AL015	bfc=7 AND hwt=11	building - house of worship - pagoda
VML2	P	AL015	bfc=7 AND hwt=11	building - house of worship - pagoda
6034	Point	SY		<i>black temple w/ open square</i>
UVM	P	AL015	bfc=7or114 AND hwt=14or15or16	building - house of worship - temple
VML1	P	AL015	bfc=7 AND hwt=14or15or16	building - house of worship - temple
VML2	P	AL015	bfc=7 AND hwt=14or15or16	building - house of worship - temple
6035	Point	SY		<i>black mosque w/ filled square</i>
UVM	P	AL015	bfc=7or114 AND hwt=5or6or9	building - house of worship - mosque
VML1	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship - mosque
VML2	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship - mosque
6037	Line	LS(S-DASH,1,blu100)		<i>100% cyan blue very thin short dash line</i>
DTOP	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
DTOP	L	BH010	loc=4	aqueduct - underground
DTOP	L	BH110	loc=4	penstock - underground
FFD	L	BH010	loc=4	aqueduct - underground
UVM	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
UVM	L	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=4 OR atc=3	aqueduct - underground

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Product	Delin	FCODE	Attribute Condition	Description
UVM	L	BH110	loc=4	penstock - underground
VML1	L	AQ113	loc=4 AND pro=116	pipeline/pipe - underground; water
VML1	L	BH010	exs<>5and<>6 AND loc=4	aqueduct - underground
VML1	L	BH110	loc=4	penstock - underground
VML2	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
VML2	L	BH010	exs<>5and<>6 AND loc=4	aqueduct - underground
VML2	L	BH110	loc=4	penstock - underground
6038	Line	LC		<i>100% cyan blue vy thin lng dsh line w/open cir</i>
UVM	L	BH010	atc=1	aqueduct - kanat
6040	Line	LS(L-DASH,1,CHBLK)		<i>black very thin long dash line</i>
DTOP	L	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
UVM	L	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
VML0	L	AQ113	loc=4	pipeline/pipe - underground
VML1	L	AQ113	loc=4 AND pro<>116	pipeline/pipe - underground; not water
VML2	L	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
6044	Point	SY		<i>black plus sign with 4 dots</i>
DTOP	P	BD130	vrr=2	rock - awash
VML1	P	BD130	vrr=2	rock - awash
VML2	P	BD130	vrr=2	rock - awash
6045	Area	AP		<i>yellow-green marsh/swamp patt fill</i>
DTOP	A	BJ110		tundra
VML0	A	BJ110		tundra
VML1	A	BJ110		tundra
VML2	A	BJ110		tundra
6046	Area	AP		<i>100% cyan blue left diag thin line patt fill</i>
DTOP	A	DB060	mcc=103	crevice/crevasse - snow/ice
VML2	A	DB060	mcc=103	crevice/crevasse - snow/ice
6047	Point	SY		<i>black open double arrowhead</i>
DTOP	P	BI030		lock
FFD	P	BI030		lock
VITD	P	BI030		lock
VML0	P	BI030		lock
VML2	P	BI030		lock
6050	Area	AP		<i>depth pale blue inundation area patt fill</i>
DNC	A	BH090		land subject to inundation
7151	Point	SY		<i>red pyramid with dot - ICAO</i>
VVOD	P	AA040	hgt>0and<304	rig / superstructure
VVOD	P	AB000	hgt>0and<304	disposal site / waste pile
VVOD	P	AC000	hgt>0and<304	processing plant / treatment plant
VVOD	P	AC010	hgt>0and<304	blast furnace
VVOD	P	AC020	hgt>0and<304	catalytic cracker
VVOD	P	AD010	hgt>0and<304	power plant / power station
VVOD	P	AD030	hgt>0and<304	substation / transformer yard
VVOD	P	AF010	hgt>0and<304	chimney / smokestack
VVOD	P	AF020	hgt>0and<304	conveyor
VVOD	P	AF030	hgt>0and<304	cooling tower
VVOD	P	AF040	hgt>0and<304	crane
VVOD	P	AF050	hgt>0and<304	dredge / powershovel / dragline
VVOD	P	AF070	hgt>0and<304	flare pipe
VVOD	P	AF080	hgt>0and<304	hopper
VVOD	P	AH050	hgt>0and<304	fortification
VVOD	P	AJ050	hgt>0and<304	windmill

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Product	Delin	FCODE	Attribute Condition	Description
VVOD	P	AJ051	hgt>0and<304	windmotor
VVOD	P	AK020	hgt>0and<304	amusement park attraction
VVOD	P	AK150	hgt>0and<304	ski jump
VVOD	P	AK160	hgt>0and<304	stadium / amphitheater
VVOD	P	AL015	hgt>0and<304	building
VVOD	P	AL018	hgt>0and<304	building superstructure addition
VVOD	P	AL050	hgt>0and<304	display sign
VVOD	P	AL110	hgt>0and<304	light standard / light support
VVOD	P	AL130	hgt>0and<304	monument
VVOD	P	AL240	hgt>0and<304	tower (non-communication)
VVOD	P	AM010	hgt>0and<304	depot
VVOD	P	AM020	hgt>0and<304	grain bin / silo
VVOD	P	AM030	hgt>0and<304	grain elevator
VVOD	P	AM070	hgt>0and<304	tank
VVOD	P	AM080	hgt>0and<304	water tower
VVOD	P	AQ020	hgt>0and<304	aerial cableway pylon / ski pylon
VVOD	P	AQ040	hgt>0and<304	bridge / overpass / viaduct
VVOD	P	AQ050	hgt>0and<304	bridge superstructure
VVOD	P	AQ055	hgt>0and<304	bridge tower / bridge pylon
VVOD	P	AQ060	hgt>0and<304	control tower
VVOD	P	AQ110	hgt>0and<304	mooring mast
VVOD	P	AT006	hgt>0and<304	overhead cable
VVOD	P	AT010	hgt>0and<304	disk / dish
VVOD	P	AT040	hgt>0and<304	power transmission pylon
VVOD	P	AT050	hgt>0and<304	communication building
VVOD	P	AT070	hgt>0and<304	telephone-telegraph pylon / pole
VVOD	P	AT080	hgt>0and<304	communication tower
VVOD	P	BC040	hgt>0and<304	light
VVOD	P	BC050	hgt>0and<304	lighthouse
VVOD	P	BC070	hgt>0and<304	light vessel / lightship
VVOD	P	BD110	hgt>0and<304	platform
VVOD	P	BH010	hgt>0and<304	aqueduct
VVOD	P	BI020	hgt>0and<304	dam / weir
VVOD	P	BI050	hgt>0and<304	water intake tower
VVOD	P	GA035	hgt>0and<304	navaids
VVOD	P	GB040	hgt>0and<304	launch pad
VVOD	P	GB220	hgt>0and<304	air obstruction
VVOD	P	GB221	hgt>0and<304	air obstruction miscellaneous
7152	Point	SY	<i>red pyramid lit component - ICAO</i>	
VVOD	P	AA040	atn=3 AND hgt>0and<304	rig / superstructure light
VVOD	P	AB000	atn=3 AND hgt>0and<304	disposal site / waste pile light
VVOD	P	AC000	atn=3 AND hgt>0and<304	processing plant / treatment plant light
VVOD	P	AC010	atn=3 AND hgt>0and<304	blast furnace light
VVOD	P	AC020	atn=3 AND hgt>0and<304	catalytic cracker light
VVOD	P	AD010	atn=3 AND hgt>0and<304	power plant / power station light
VVOD	P	AD030	atn=3 AND hgt>0and<304	substation / transformer yard light
VVOD	P	AF010	atn=3 AND hgt>0and<304	chimney / smokestack light
VVOD	P	AF020	atn=3 AND hgt>0and<304	conveyor light
VVOD	P	AF030	atn=3 AND hgt>0and<304	cooling tower light
VVOD	P	AF040	atn=3 AND hgt>0and<304	crane light
VVOD	P	AF050	atn=3 AND hgt>0and<304	dredge / powershovel / dragline light
VVOD	P	AF070	atn=3 AND hgt>0and<304	flare pipe light
VVOD	P	AF080	atn=3 AND hgt>0and<304	hopper light
VVOD	P	AH050	atn=3 AND hgt>0and<304	fortification light

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APPENDIX D
Full Chart

Product	Delin	FCODE	Attribute Condition	Description
VVOD	P	AJ050	atn=3 AND hgt>0and<304	windmill light
VVOD	P	AJ051	atn=3 AND hgt>0and<304	windmotor light
VVOD	P	AK020	atn=3 AND hgt>0and<304	amusement park attraction light
VVOD	P	AK150	atn=3 AND hgt>0and<304	ski jump light
VVOD	P	AK160	atn=3 AND hgt>0and<304	stadium / amphitheater light
VVOD	P	AL015	atn=3 AND hgt>0and<304	building light
VVOD	P	AL018	atn=3 AND hgt>0and<304	building superstructure addition light
VVOD	P	AL050	atn=3 AND hgt>0and<304	display sign light
VVOD	P	AL110	atn=3 AND hgt>0and<304	light standard / light support light
VVOD	P	AL130	atn=3 AND hgt>0and<304	monument light
VVOD	P	AL240	atn=3 AND hgt>0and<304	tower (non-communication) light
VVOD	P	AM020	atn=3 AND hgt>0and<304	grain bin / silo light
VVOD	P	AM030	atn=3 AND hgt>0and<304	grain elevator light
VVOD	P	AM070	atn=3 AND hgt>0and<304	tank light
VVOD	P	AM080	atn=3 AND hgt>0and<304	water tower light
VVOD	P	AQ020	atn=3 AND hgt>0and<304	aerial cableway pylon / ski pylon light
VVOD	P	AQ040	atn=3 AND hgt>0and<304	bridge / overpass / viaduct light
VVOD	P	AQ050	atn=3 AND hgt>0and<304	bridge superstructure light
VVOD	P	AQ055	atn=3 AND hgt>0and<304	bridge tower / bridge pylon light
VVOD	P	AQ060	atn=3 AND hgt>0and<304	control tower light
VVOD	P	AQ110	atn=3 AND hgt>0and<304	mooring mast light
VVOD	P	AT010	atn=3 AND hgt>0and<304	disk / dish light
VVOD	P	AT040	atn=3 AND hgt>0and<304	power transmission pylon light
VVOD	P	AT050	atn=3 AND hgt>0and<304	communication building light
VVOD	P	AT070	atn=3 AND hgt>0and<304	telephone-telegraph pylon / pole light
VVOD	P	AT080	atn=3 AND hgt>0and<304	communication tower light
VVOD	P	BC040	atn=3 AND hgt>0and<304	light (lit)
VVOD	P	BC050	hgt>0and<304	lighthouse lit
VVOD	P	BC070	hgt>0and<304	light vessel / lightship lit
VVOD	P	BD110	atn=3 AND hgt>0and<304	platform light
VVOD	P	BH010	atn=3 AND hgt>0and<304	aqueduct light
VVOD	P	BI020	atn=3 AND hgt>0and<304	dam / weir light
VVOD	P	BI050	atn=3 AND hgt>0and<304	water intake tower light
VVOD	P	GA035	atn=3 AND hgt>0and<304	navaids light
VVOD	P	GB040	atn=3 AND hgt>0and<304	launch pad light
VVOD	P	GB220	atn=3 AND hgt>0and<304	air obstruction light
VVOD	P	GB221	atn=3 AND hgt>0and<304	air obstruction miscellaneous light
7155	Point	SY	<i>red high vo tower - ICAO</i>	
VVOD	P	AA040	hgt=-32767 OR hgt>=304	rig / superstructure high
VVOD	P	AB000	hgt=-32767 OR hgt>=304	disposal site / waste pile high
VVOD	P	AC000	hgt=-32767 OR hgt>=304	processing plant / treatment plant high
VVOD	P	AC010	hgt=-32767 OR hgt>=304	blast furnace high
VVOD	P	AC020	hgt=-32767 OR hgt>=304	catalytic cracker high
VVOD	P	AD010	hgt=-32767 OR hgt>=304	power plant / power station high
VVOD	P	AD030	hgt=-32767 OR hgt>=304	substation / transformer yard high
VVOD	P	AF010	hgt=-32767 OR hgt>=304	chimney / smokestack high
VVOD	P	AF020	hgt=-32767 OR hgt>=304	conveyor high
VVOD	P	AF030	hgt=-32767 OR hgt>=304	cooling tower high
VVOD	P	AF040	hgt=-32767 OR hgt>=304	crane high
VVOD	P	AF050	hgt=-32767 OR hgt>=304	dredge / powershovel / dragline high
VVOD	P	AF070	hgt=-32767 OR hgt>=304	flare pipe high
VVOD	P	AF080	hgt=-32767 OR hgt>=304	hopper high high
VVOD	P	AH050	hgt=-32767 OR hgt>=304	fortification high
VVOD	P	AJ050	hgt=-32767 OR hgt>=304	windmill high

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APPENDIX D
Full Chart

Product	Delin	FCODE	Attribute Condition	Description
VVOD	P	AJ051	hgt=-32767 OR hgt>=304	windmotor high
VVOD	P	AK020	hgt=-32767 OR hgt>=304	amusement park attraction high
VVOD	P	AK150	hgt=-32767 OR hgt>=304	ski jump high
VVOD	P	AK160	hgt=-32767 OR hgt>=304	stadium / amphitheater high
VVOD	P	AL015	hgt=-32767 OR hgt>=304	building high
VVOD	P	AL018	hgt=-32767 OR hgt>=304	building superstructure addition high
VVOD	P	AL050	hgt=-32767 OR hgt>=304	display sign high
VVOD	P	AL110	hgt=-32767 OR hgt>=304	light standard / light support high
VVOD	P	AL130	hgt=-32767 OR hgt>=304	monument high
VVOD	P	AL240	hgt=-32767 OR hgt>=304	tower (non-communication) high
VVOD	P	AM010	hgt=-32767 OR hgt>=304	depot high
VVOD	P	AM020	hgt=-32767 OR hgt>=304	grain bin / silo high
VVOD	P	AM030	hgt=-32767 OR hgt>=304	grain elevator high
VVOD	P	AM070	hgt=-32767 OR hgt>=304	tank high
VVOD	P	AM080	hgt=-32767 OR hgt>=304	water tower high
VVOD	P	AQ020	hgt=-32767 OR hgt>=304	aerial cableway pylon / ski pylon high
VVOD	P	AQ040	hgt=-32767 OR hgt>=304	bridge / overpass / viaduct high
VVOD	P	AQ050	hgt=-32767 OR hgt>=304	bridge superstructure high
VVOD	P	AQ055	hgt=-32767 OR hgt>=304	bridge tower / bridge pylon high
VVOD	P	AQ060	hgt=-32767 OR hgt>=304	control tower high
VVOD	P	AQ110	hgt=-32767 OR hgt>=304	mooring mast high
VVOD	P	AT006	hgt=-32767 OR hgt>=304	overhead cable high
VVOD	P	AT010	hgt=-32767 OR hgt>=304	disk / dish high
VVOD	P	AT040	hgt=-32767 OR hgt>=304	power transmission pylon high
VVOD	P	AT050	hgt=-32767 OR hgt>=304	communication building high
VVOD	P	AT070	hgt=-32767 OR hgt>=304	telephone-telegraph pylon / pole high
VVOD	P	AT080	hgt=-32767 OR hgt>=304	communication tower high
VVOD	P	BC040	hgt=-32767 OR hgt>=304	light high
VVOD	P	BC050	hgt=-32767 OR hgt>=304	lighthouse high
VVOD	P	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high
VVOD	P	BD110	hgt=-32767 OR hgt>=304	platform high
VVOD	P	BH010	hgt=-32767 OR hgt>=304	aqueduct high
VVOD	P	BI020	hgt=-32767 OR hgt>=304	dam / weir high
VVOD	P	BI050	hgt=-32767 OR hgt>=304	water intake tower high
VVOD	P	GA035	hgt=-32767 OR hgt>=304	navaids high
VVOD	P	GB040	hgt=-32767 OR hgt>=304	launch pad high
VVOD	P	GB220	hgt=-32767 OR hgt>=304	air obstruction high
VVOD	P	GB221	hgt=-32767 OR hgt>=304	air obstruction miscellaneous high
7156	Point	SY	<i>red high vo tower lit component - ICAO</i>	
VVOD	P	AA040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	rig / superstructure light high
VVOD	P	AB000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disposal site / waste pile light high
VVOD	P	AC000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	processing plant / treatment plant light high
VVOD	P	AC010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	blast furnace light high
VVOD	P	AC020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	catalytic cracker light high
VVOD	P	AD010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power plant / power station light high
VVOD	P	AD030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	substation / transformer yard light high
VVOD	P	AF010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	chimney / smokestack light high
VVOD	P	AF020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	conveyor light high
VVOD	P	AF030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	cooling tower light high
VVOD	P	AF040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	crane light high
VVOD	P	AF050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dredge / powershovel / dragline light high
VVOD	P	AF070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	flare pipe light high
VVOD	P	AF080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	hopper light high
VVOD	P	AH050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	fortification light high

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Full Chart

Product	Delin	FCODE	Attribute Condition	Description
VVOD	P	AJ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmill light high
VVOD	P	AJ051	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmotor light high
VVOD	P	AK020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	amusement park attraction light high
VVOD	P	AK150	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	ski jump light high
VVOD	P	AK160	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	stadium / amphitheater light high
VVOD	P	AL015	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building light high
VVOD	P	AL018	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building superstructure addition light high
VVOD	P	AL050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	display sign light high
VVOD	P	AL110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light standard / light support light high
VVOD	P	AL130	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	monument light high
VVOD	P	AL240	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tower (non-communication) light high
VVOD	P	AM020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain bin / silo light high
VVOD	P	AM030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain elevator light high
VVOD	P	AM070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tank light high
VVOD	P	AM080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water tower light high
VVOD	P	AQ020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aerial cableway pylon / ski pylon light high
VVOD	P	AQ040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge / overpass / viaduct light high
VVOD	P	AQ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge superstructure light high
VVOD	P	AQ055	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge tower / bridge pylon light high
VVOD	P	AQ060	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	control tower light high
VVOD	P	AQ110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	mooring mast light high
VVOD	P	AT010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disk / dish light high
VVOD	P	AT040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power transmission pylon light high
VVOD	P	AT050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication building light high
VVOD	P	AT070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	telephone-telegraph pylon / pole light high
VVOD	P	AT080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication tower - high light high
VVOD	P	BC040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light (lit) high
VVOD	P	BC050	hgt=-32767 OR hgt>=304	lighthouse high lit
VVOD	P	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high lit
VVOD	P	BD110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	platform light high
VVOD	P	BH010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aqueduct light high
VVOD	P	BI020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dam / weir light high
VVOD	P	BI050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water intake tower light high
VVOD	P	GA035	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	navaids light high
VVOD	P	GB040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	launch pad light high
VVOD	P	GB220	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction light high
VVOD	P	GB221	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction miscellaneous light high
7158	Line	LS(SOLD,2,red)	<i>red vo thin line - ICAO</i>	
VVOD	L	AD010		power plant / power station
VVOD	L	AF010		chimney / smokestack
VVOD	L	AF020		conveyor
VVOD	L	AH050		fortification
VVOD	L	AJ051		windmotor
VVOD	L	AK160		stadium / amphitheater
VVOD	L	AL015		building
VVOD	L	AL018		building superstructure addition
VVOD	L	AL110		light standard / light support
VVOD	L	AL130		monument
VVOD	L	AL240		tower (non-communication)
VVOD	L	AM070		tank
VVOD	L	AQ010		aerial cableway lines / ski lift lines
VVOD	L	AQ040		bridge / overpass / viaduct
VVOD	L	AQ050		bridge superstructure
VVOD	L	AQ113		pipeline / pipe

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APPENDIX D
Full Chart

Product	Delin	FCODE	Attribute Condition	Description
VVOD	L	AT030		power transmission line
VVOD	L	AT050		communication building
VVOD	L	AT060		telephone line / telegraph line
VVOD	L	AT080		communication tower
VVOD	L	BH010		aqueduct
VVOD	L	BI020		dam / weir
VVOD	L	GA035		navais
VVOD	L	GB220		air obstruction
VVOD	L	GB221		air obstruction miscellaneous

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APPENDIX D

Symbol to Product Cross-Reference Simplified

0001	Point	SY(PRDINS02)		<i>feature brown mine symbol</i>
DNC	P	AA010		mine/quarry
0002	Point	SY(BUISGL11)		<i>feature brown filled square w/ black outline</i>
DNC	P	AD030		substation/transformer yard
DNC	P	AK160		stadium/amphitheater
DNC	P	AL015	bfc=81 AND sta=0or2or3or6or11	building - maritime station
DNC	P	AL018		building superstructure addition
DNC	P	AL200	loc=22 AND vrr=1	ruins - offshore, does not cover
DNC	P	AL200	loc=8	ruins - on ground surface
DNC	P	AQ116		pumping station
0003	Point	SY(CHIMNY11)		<i>black chimney symbol</i>
DNC	P	AF010		chimney/smokestack
0004	Point	SY(TOWERS03)		<i>black tower symbol</i>
DNC	P	AF030		cooling tower
DNC	P	AL240		tower (non-communication)
DNC	P	AM030		grain elevator
DNC	P	AQ060		control tower
DNC	P	AT080		communication tower
0005	Point	SY(CRANES01)		<i>feature brown crane symbol</i>
DNC	P	AF040		crane
0006	Point	SY(FLASTK11)		<i>black flare stack symbol</i>
DNC	P	AF070		flare pipe
0007	Point	SY(FORSTC11)		<i>black square</i>
DNC	P	AH010		bastion/rampart/fortification
DNC	P	AH050		fortification
0008	Point	SY(WNDMIL12)		<i>black sm cir w/ X on top</i>
DNC	P	AJ050		windmill
0009	Point	SY(POSGEN01)		<i>feature brown dot inside cir</i>
DNC	P	BC010	nst=45	beacon - radar station
DNC	P	BC020	nst=45	buoy - radar station
DNC	P	BC040	nst=45	light - radar station
DNC	P	BC070	nst=45	light vessel/lightship - radar station
0010	Point	SY(BUIREL13)		<i>black 'iron cross'</i>
DNC	P	AL015	bfc=7 AND hwt=0or2or3or4or7or22	building - house of worship (church)
0011	Point	SY(BUIREL14)		<i>black X inscribed in rectangle</i>
DNC	P	AL015	bfc=7 AND hwt=11or14or15or16or20or21	building - house of worship (temple/pagoda)
0012	Point	SY(BUIREL15)		<i>black mosque/minaret w/ dot in circle</i>
DNC	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship (mosque)
0013	Point	SY(CGUSTA02)		<i>lt magenta CG in rectangle w/ pale green fill</i>
DNC	P	AL015	bfc=81 AND sta=1	building - maritime station
0014	Point	SY(RSCSTA02)		<i>black filled diamond cntred on horizontal line</i>
DNC	P	AL015	bfc=81 AND sta=5	building - maritime station
VML1	P	AL140		particle accelerator
0015	Point	SY(SISTAT02)		<i>lt magenta SS in rectangle w/ pale green fill</i>
DNC	P	AL015	bfc=81 AND sta<>0and<>1and<>2and<>3and<>5and<>6and<>11	building - maritime station
DNC	P	BG020		tide gauge
0016	Point	SY(BUAARE02)		<i>feature brown filled cir</i>
DNC	P	AL020		built-up area

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APPENDIX D
Simplified

Product	Delin	FCODE	Attribute Condition	Description
0017	Point	SY(CAIRNS11)		<i>black three stacked sm circs</i>
DNC	P	AL025		cairn
0018	Point	SY(NOTBRD11)		<i>black rectange above inverted T</i>
DNC	P	AL050		display sign
0019	Point	SY(FLGSTF01)		<i>feature brown flag symbol</i>
DNC	P	AL073		flagstaff/flagpole
0020	Point	SY(MONUMT12)		<i>black hatched trapazoid</i>
DNC	P	AL130		monument
0021	Point	SY(SILBUI11)		<i>feature brown filled cir w/ black outline</i>
DNC	P	AM020		grain bin/silo
0022	Point	SY(TNKCON12)		<i>black cir</i>
DNC	P	AM070		tank
UVM	P	AT020		early warning radar site
UVM	P	AT045		radar transmitter
0023	Point	SY(TOWERS12)		<i>black water tower symbol</i>
DNC	P	AM080		water tower
0024	Point	SY(POSGEN03)		<i>black dot inside cir</i>
DNC	P	AK020		amusement park attraction
DNC	P	AK080		drive in theater screen
DNC	P	AQ020		aerial cableway pylon/ski pylon
DNC	P	AT040		power transmission pylon
DTOP	P	BI050		water intake tower
UVM	P	BI050		water intake tower
VML1	P	BI050		water intake tower
VML2	P	BI050		water intake tower
0026	Point	SY(MSTCON14)		<i>black tall slender triangle w/ cir at bottom</i>
DNC	P	AQ110		mooring mast
0027	Point	SY(QUARRY01)		<i>feature brown mine symbol inside circle</i>
DNC	A	AA010		mine/quarry
0028	Point	SY(DOMES011)+ SY(RDOSTA02)		<i>black dome inside lg magenta circle</i>
DNC	P	AT045	ssc=87	radar transmitter - dome
0029	Point	SY(RASCAN11)+ SY(RDOSTA02)		<i>black rectangle below T in lg magenta cir</i>
DNC	P	AT045	ssc=108	radar transmitter - scanner
0030	Point	SY(MSTCON14)+ SY(RD0STA02)		<i>black triangle w/ in lg magenta cir</i>
DNC	P	AT045	ssc=60	radar transmitter - mast
0031	Point	SY(TOWERS03)+ SY(RDOSTA02)		<i>black tower inside lg magenta cir</i>
DNC	P	AT045	ssc=107	radar transmitter - tower
0032	Point	SY(BRTHNO01)		<i>magenta circle</i>
DNC	P	BB020		berth
0033	Point	SY(BUISGL11)+ SY(RDOSTA02)		<i>feature brown fill sqr black otlm in lg mgnta cir</i>
DNC	P	AT050		communication building
0035	Point	SY(LNDARE01)		<i>lt brown sm filled cir w/ gray outline</i>
DNC	P	BA030		island
0036	Point	SY(ACHARE02)		<i>magenta anchor</i>
DNC	P	BB010	mac<>12	anchorage - not anchoring berth
DTOP	P	BB010		anchorage
VML2	P	BB010		anchorage

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APPENDIX D
Simplified

Product	Delin	FCODE	Attribute Condition	Description
0037	Point	SY(ACHBRT07)		<i>magenta anchor w/ sm cir on shaft</i>
DNC	P	BB010	mac=12	anchorage - anchoring berth
DNC	A	BB010	mac=12	anchorage - anchoring berth
0038	Point	SY(MORFAC03)		<i>lt brown filled square w/ black outline</i>
DNC	P	BB080		dolphin
DNC	P	BB160		mooring ring
DTOP	P	AL015	bfc=15	building - school
DTOP	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96	building - generic
DTOP	P	AL015	bfc=4	building - castle
DTOP	P	AL015	bfc=90or91or92or93or95or98or999	building - generic
DTOP	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36or53or59or69or70or83or85or86or87or88or89	building - generic
UVM	P	AL015	bfc=63or69or70or87or88or91or92or93or95or97or98or99or103or105or106or107or109or111or115or117or118or122or126or127or128or999	building - generic (population)
UVM	P	AL015	bfc=81or83or84or85or86or89or90or94or102or104or110or112or113or116or120or124or125	building - generic (industry)
UVM	P	AL015	bfc=7or114 AND hwt=5or6or9	building - house of worship - mosque
UVM	P	AL015	bfc=7or114 AND hwt=21	building - house of worship - stupa
UVM	P	AL015	bfc=7or114 AND hwt=20	building - house of worship - synagogue
UVM	P	AL015	bfc=7or114 AND hwt=11	building - house of worship - pagoda
UVM	P	AL015	bfc=4	building - castle
UVM	P	AL015	bfc=1or21or22or23or24or25or26or27or29or30or40or54or59or71or72or73or74or75or76	building - generic (industry)
UVM	P	AL015	bfc=15or60or108	building - school, college, seminary
UVM	P	AL015	bfc=0or9or10or11or16or17or18or19or20or33or34or36or39or51or53or55or56or57or58	building - generic (population)
UVM	P	AL015	bfc=7or114 AND hwt=14or15or16	building - house of worship - temple
VML1	P	AL015	bfc=7 AND hwt=14or15or16	building - house of worship - temple
VML1	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship - mosque
VML1	P	AL015	bfc=7 AND hwt=21	building - house of worship - stupa
VML1	P	AL015	bfc=7 AND hwt=20	building - house of worship - synagogue
VML1	P	AL015	bfc=15	building - school
VML1	P	AL015	bfc=2or3or5or12or13or14	building - government
VML1	P	AL015	bfc=4	building - castle
VML1	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or22or23or24or27or83or999	building - generic
VML1	P	AL015	bfc=7 AND hwt=11	building - house of worship - pagoda
VML2	P	AL015	bfc=7 AND hwt=14or15or16	building - house of worship - temple
VML2	P	AL015	bfc=7 AND hwt=5or6or9	building - house of worship - mosque
VML2	P	AL015	bfc=7 AND hwt=20	building - house of worship - synagogue
VML2	P	AL015	bfc=7 AND hwt=11	building - house of worship - pagoda
VML2	P	AL015	bfc=53or59or69or70or83or85or86or87or88or89or90or91or92or93or95or98or999	building - generic
VML2	P	AL015	bfc=4	building - castle
VML2	P	AL015	bfc=15	building - school
VML2	P	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36	building - generic
VML2	P	AL015	bfc=7 AND hwt=21	building - house of worship - stupa
0039	Point	SY(RDOCAL02)		<i>traffic magenta cir w/ 1 cone</i>
DNC	P	BB050	df1<>0 AND df2=0	calling-in point - one way traffic
DNC	P	BB050	df3<>0	calling-in point - more than two-way traffic, 1st direction
DNC	P	BB050	df3<>0	calling-in point - more than two-way traffic, 2nd direction
DNC	P	BB050	df3<>0	calling-in point - more than two-way traffic, 3rd direction
DNC	P	BB050	df4<>0	calling-in point - more than two-way traffic, 4th direction

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Product	Delin	FCODE	Attribute Condition	Description
0040	Point	SY(RDOCAL03)		<i>traffic magenta cir w/ 2 cones</i>
DNC	P	BB050	df2<>0 AND df3=0	calling-in point - two way traffic
0041	Point	SY(RCLDEF01)		<i>magenta cir w/ 2 cones and 2 ?</i>
DNC	P	BB050	df1=0	calling-in point - direction of traffic unknown
0042	Point	SY(HRBFAC09)		<i>magenta fish w/ arcs above and below</i>
DNC	P	BB105		fishing harbor
0043	Point	SY(SMCFAC02)		<i>magenta yacht inside lg cir</i>
DNC	P	BB150		landing place
DNC	A	BB150		landing place
0045	Point	SY(MARCUL02)		<i>gray fish inside net</i>
DNC	P	BB180		oyster bed/mussel bed
0046	Point	SY(BRIDGE01)		<i>magenta small circle inside circle</i>
DNC	A	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
0051	Point	SY(PILPNT02)		<i>black filled sm cir</i>
DNC	P	BB030		bollard
DNC	P	BC020	btc=35	buoy - articulated light (base)
DNC	P	BC040		light - base symbol
DNC	P	BD100		pile/piling/post
DTOP	P	AF070		flare pipe
DTOP	P	AK020		amusement park attraction
UVM	P	AF070		flare pipe
UVM	P	AK020		amusement park attraction
UVM	P	AK150		ski jump
VML1	P	AF070		flare pipe
VML1	P	AK020		amusement park attraction
VML1	P	AK150		ski jump
VML2	P	AF070		flare pipe
VML2	P	AK020		amusement park attraction
VML2	P	AK150		ski jump
0052	Point	SY(OBSTRN01)		<i>depth med blue fill cir w/ black dotted outline</i>
DNC	P	AL200	loc=22 AND verr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	P	BC080		perches/stakes
DNC	P	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	P	BD020	verr=4 AND hdp=0	crib - submerged; depth unknown
DNC	P	BD030		discolored water
DNC	P	BD140	verr=4 AND hdp=0	snags/stumps - submerged; depth unknown
0053	Point	SY(DANGER01)		<i>depth med blue fill lg oval w/ black dot outline</i>
DNC	P	AL200	loc=22 AND verr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
DNC	P	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
DNC	P	BD020	verr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
DNC	P	BD130	verr=4 AND hdp>0and<=20	rock - submerged; depth 20m or less
DNC	P	BD140	verr=4 AND hdp>0and<=20	snags/stumps - submerged; depth 20m or less
DNC	P	BD180	verr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
0054	Point	SY(DANGER02)		<i>black lg oval w/ dotted outline</i>
DNC	P	AL200	loc=22 AND verr=4 AND hdp>20	ruins - offshore, submerged - depth greater than 20m
DNC	P	BD000	hdp>20	underwater danger/hazard - depth greater than 20m
DNC	P	BD020	verr=4 AND hdp>20	crib - submerged; depth greater than 20m
DNC	P	BD130	verr=4 AND hdp>20	rock - submerged; depth greater than 20m
DNC	P	BD140	verr=4 AND hdp>20	snags/stumps - submerged; depth greater than 20m
DNC	P	BD180	verr=4 AND hdp>20	wreck - submerged; depth greater than 20m

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Product	Delin	FCODE	Attribute Condition	Description
0055	Point	SY(OBSTRN03)		<i>yellow-green solid circle w/ black dot outline</i>
DNC	P	AL200	loc=22 AND verr=8	ruins - offshore, covers and uncovers
DNC	P	BD020	verr=8 AND hdp=NULL	crib - covers and uncovers; depth null
DNC	P	BD140	verr=8 AND hdp=NULL	snags/stumps - covers and uncovers; depth null
0056	Point	SY(WATTUR02)		<i>gray waves symbol</i>
DNC	P	BD010		breakers
DNC	P	BD040		eddies
DNC	P	BD080		overfalls/tide rips
DNC	A	BD010		breakers
DNC	A	BD040		eddies
DNC	A	BD080		overfalls/tide rips
0057	Point	SY(OBSTRN11)		<i>lt brown square with dk gray outline</i>
DNC	P	BD020	verr=1 AND hdp=NULL	crib - partly submerged/dry; depth null
DNC	P	BD140	verr=1 AND hdp=NULL	snags/stumps - partly submerged/dry; depth null
0058	Point	SY(LOWACC01)		<i>black leader line w/ question mark</i>
DNC	P	BD000	acc<>1	underwater danger/hazard - not accurate
DNC	P	BD020	acc<>1	crib - not accurate
DNC	P	BD030	acc<>1	discolored water - not accurate
DNC	P	BD130	acc<>1	rock - not accurate
DNC	P	BD140	acc<>1	snags/stumps - not accurate
DNC	P	BD180	acc<>1	wreck - not accurate
DNC	A	BD000	acc<>1	underwater danger/hazard - not accurate
DNC	A	BD020	acc<>1	crib - not accurate
DNC	A	BD030	acc<>1	discolored water - not accurate
DNC	A	BD100	acc<>1	pile/piling/post - not accurate
DNC	A	BD120	verr<>8 AND acc<>1	reef - not covers and uncovers, not accurate
DNC	A	BD140	acc<>1	snags/stumps - not accurate
0059	Point	SY(FOULGND1)		<i>gray pound (#) symbol</i>
DNC	P	BD050		foul ground
DNC	A	BD050		foul ground
0060	Point	SY(WEDKLP03)		<i>gray kelp symbol</i>
DNC	P	BD060		kelp/seaweed
DNC	A	BD060		kelp/seaweed
0061	Point	SY(OFSPLF01)		<i>black dot inside square</i>
DNC	P	BD110		platform
0062	Point	SY(UWTROC03)		<i>black cross in dotted cir, depth med blue fill</i>
DNC	P	BD130	verr=4 AND hdp=0	rock - submerged; depth unknown
0063	Point	SY(UWTROC04)		<i>black 6 point asterisk</i>
DNC	P	BD130	hdp=NULL	rock - depth null
DTOP	P	AJ050		windmill
DTOP	P	BD130	verr=0or8	rock - unk/covers/uncovers
UVM	P	AJ050		windmill
VML0	P	BD130		rock
VML1	P	AJ050		windmill
VML1	P	BD130	verr=0or8	rock - unk/covers/uncovers
VML2	P	AJ050		windmill
VML2	P	BD130	verr=0or8	rock - unk/covers/uncovers
0064	Point	SY(WRECKS01)		<i>gray wreck symbol</i>
DNC	P	BD180	hdp=NULL AND verr=1or2or8	wreck - not submerged; depth null
DNC	P	BD180	loc<>4 AND hdp=NULL	wreck - showing mast/hull/superstructure; depth null

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Product	Delin	FCODE	Attribute Condition	Description
0065	Point	SY(WRECKS05)		<i>black bar 3 ticks in dotted depth med blue oval</i>
DNC	P	BD180	hdp=NULL AND vrr=0	wreck - unknown; depth null
DNC	P	BD180	vrr=4 AND soh=1 AND hdp=0	wreck - submerged; dangerous; depth unknown
0066	Point	SY(WRECKS04)		<i>black horiz bar w/3 ticks</i>
DNC	P	BD180	vrr=4 AND soh=2 AND hdp=0	wreck - submerged; not dangerous; depth unknown
0071	Point	SY(CURDEF01)		<i>gray arrow w/ 2 feathers and 2 ?</i>
DNC	P	BG010	cur=0 OR dof=0	current flow - general; direction unknown
TOD0	P	BG010	cur=0 OR dof=0	current flow - general; direction unknown
0072	Point	SY(CURENT01)		<i>gray arrow w/ two feathers</i>
DNC	P	BG010	cur=3or5 AND dof<>0	current flow - general, ocean; direction known
TOD0	P	BG010	cur=5 AND dof<>0	current flow - ocean; direction known
0073	Point	SY(EBBSTR01)		<i>gray arrow w/ no feathers</i>
DNC	P	BG010	cur=1 AND dof<>0	current flow - ebb; direction known
0074	Point	SY(FLDSTR01)		<i>gray arrow w/ one feather</i>
DNC	P	BG010	cur=2 AND dof<>0	current flow - flood; direction known
0076	Point	SY(TIDSTR01)		<i>gray diamond</i>
DNC	P	BG030		tide data point
0077	Point	SY(HILTOP11)		<i>black radiating cones</i>
DNC	P	BJ060		ice peak/nunatak
0078	Point	SY(POSGEN04)		<i>black sm cir</i>
DNC	P	CA030		spot elevation
DTOP	P	AA050	pro<>116	well - not water
DTOP	P	AL025		cairn
DTOP	P	AL210		snow shed/rock shed
DTOP	P	AQ070		ferry crossing
DTOP	P	BI020		dam/weir
FFD	P	AQ070		ferry crossing
FFD	P	BI020		dam/weir
TOD0	P	ZB035		control point/control station
UVM	P	AA050	pro<>116	well - not water
UVM	P	AP040		gate
UVM	P	AQ070		ferry crossing
UVM	P	AQ090		entrance/exit
VITD	P	AQ070		ferry crossing
VITD	P	BI020		dam/weir
VML0	P	AA050		well
VML0	P	AA052		oil/gas field
VML0	P	AL025		cairn
VML0	P	AL210		snow shed/rock shed
VML0	P	AQ070		ferry crossing
VML0	P	BI020		dam/weir
VML1	P	AA050	pro<>116	well - not water
VML1	P	AL025		cairn
VML1	P	AL210		snow shed/rock shed
VML1	P	AQ070		ferry crossing
VML1	P	BI020		dam/weir
VML2	P	AA050	pro<>116	well - not water
VML2	P	AL025		cairn
VML2	P	AL210		snow shed/rock shed
VML2	P	AQ070		ferry crossing
VML2	P	BI020		dam/weir

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Product	Delin	FCODE	Attribute	Condition	Description
0079	Point	SY(TREPNT04)			<i>feature brown side view of stylised tree</i>
DNC	P	EC030			trees
0080	Point	SY(PILBOP02)			<i>magenta solid filled diamond inside cir</i>
DNC	P	FC021	mac=48		maritime limit boundary - pilot boarding
DNC	A	FC021	mac=48		maritime limit boundary - pilot boarding
FFD	P	GB065			seaplane base
0081	Point	SY(INFARE51)			<i>lt magenta square w/ l</i>
DNC	A	AL005			animal sanctuary
DNC	A	FC021	mac=25or30or35		maritime limit boundary - spoil, dumping, explosive dumping
DNC	A	FC021	mac=31		maritime limit boundary - incineration
DNC	A	FC021	mac=49		maritime limit boundary - cargo Xshipment
DNC	A	FC036	mac=21or23or61		restricted area - pipelines, sewer
DNC	A	FC036	mac=45or46		restricted area - outfall, intake
TOD0	A	FC031	mac=101		maritime area - marine sanctuary
0082	Point	SY(ENTRES51)			<i>traffic lt magenta cir w/ bar</i>
DNC	P	FC031	mac=5		maritime area - entry prohibited
DNC	P	FC036	mac=43		restricted area - area to be avoided
DNC	A	FC031	mac=5		maritime area - entry prohibited
DNC	A	FC036	mac=43		restricted area - area to be avoided
0083	Point	SY(TSSRON51)			<i>traffic lt magenta arc w/ arrowhead</i>
DNC	P	FC031	mac=40		maritime area - roundabout zone (TSS)
DNC	A	FC031	mac=40		maritime area - roundabout zone (TSS)
0084	Point	SY(CHINFO06)			<i>magenta cir w/ ! Inside</i>
DNC	P	FC021	mac<>48		maritime limit boundary - not pilot boarding
DNC	P	FC031	mac=0		maritime area - unknown
0085	Point	SY(FSHRES51)			<i>lt magenta fish w/ intersecting diag line</i>
DNC	P	FC036	mac=22		restricted area - fishing prohibited
DNC	A	FC036	mac=22		restricted area - fishing prohibited
0086	Point	SY(ACHRES51)			<i>lt magenta open anchor w/ intrsctng diag line</i>
DNC	P	FC036	mac=15		restricted area - anchoring prohibited
DNC	A	FC036	mac=15		restricted area - anchoring prohibited
0087	Point	SY(RSRDEF51)			<i>traffic lt magenta ! In lg cir w/ magenta ?</i>
DNC	P	FC031	mac=2		maritime area - dredged area
DNC	P	FC036	mac=0or999		restricted area - unknown or other
DNC	A	FC036	mac=0or999		restricted area - to be avoided, other
TOD0	A	FC031	mac=0or144or145or154or999		maritime area - restricted areas
TOD0	A	FC036			restricted area
0088	Point	SY(TSSLPT51)			<i>traffic magenta filled arrow</i>
DNC	P	FC041			traffic separation scheme (TSS)
0089	Point	SY(RTLDEF51)			<i>traffic magenta dashed arrow w/ 2 mgnta ?'s</i>
DNC	P	FC165	dof=0		route (maritime) - direction unknown
0090	Point	SY(AIRARE02)			<i>feature brown outline of plane inside lg cir</i>
DNC	P	GB005			airport/airfield
0091	Point	SY(RECDEF51)			<i>gray ? inside angle brackets inside dashes</i>
DNC	A	FC170			safety fairway
TOD0	A	FC170			safety fairway
0092	Point	SY(PRCARE51)			<i>traffic lt magenta ! Inside triangle</i>
DNC	A	FC021	mac=42		maritime limit boundary - precautionary

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Product	Delin	FCODE	Attribute Condition	Description
0093	Point	SY(CTYARE51)		<i>traffic lt magenta ! Inside lg circle</i>
DNC	P	FC031	mac=4	maritime area - mine danger area
DNC	P	FC036	mac=37	restricted area - safety zone
DNC	A	FC021	mac=24	maritime limit boundary - turning area
DNC	A	FC021	mac=58	maritime limit boundary - dredging area
DNC	A	FC021	mac=44	maritime limit boundary - deguassing
DNC	A	FC021	mac=27or28or29	maritime limit boundary - submarine exercise, mine laying, firing range
DNC	A	FC021	mac=32or33	maritime limit boundary - oil field, gas field
DNC	A	FC031	mac=4	maritime area - mine danger
DNC	A	FC036	mac=37	restricted area - safety zone
DNC	A	GB070		seaplane landing/seaplane take-off area
TOD0	A	FC031	mac=27or28or115or116or140or146or147or150or151or152or153or157or159	maritime area - military practice areas
TOD0	A	FC031	mac=143or148or149or158	maritime area - military area, minefield
0094	Point	SY(CBLARE51)		<i>lt magenta angled line</i>
DNC	A	FC036	mac=20	restricted area - cables
0095	Point	SY(SWPARE51)		<i>lt gray under bar w/ upward bar on ends</i>
DNC	A	FC177		swept area
0096	Point	SY(CHINFO07)		<i>magenta square w/ i</i>
DNC	P	AQ080		ferry site
0097	Point	SY(CTNARE51)		<i>traffic lt magenta ! Inside lg circle</i>
DNC	A	FC021	mac=0or999	maritime limit boundary - unknown, other
DNC	A	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	A	FC041	tsp=6or7	traffic separation scheme (TSS) - inbound or outbound area
DNC	A	FC165	rtt=0	route (maritime) - use unknown
TOD0	A	FC031	mac=141or142or155	maritime area - caution areas
0098	Point	SY(TWRDEF51)		<i>traffic magenta dash dbl head arrow w/ 2 ?'s</i>
DNC	A	FC165	rtt=11	route (maritime) - 2-way
0101	Point	SY(BCNSPP21)		<i>yellow rectangle w/ outline black outline</i>
DNC	P	BC010		beacon - base
0122	Point	SY(TOPMAR22)		<i>black topmark one cone up</i>
DTOP	P	BD180		wreck
VML0	P	BD180		wreck
VML1	P	BD180		wreck
VML2	P	BD180		wreck
0150	Point	SY		<i>yellow-green filled sm cir w/ gray outline</i>
DNC	P	BA020		foreshore
DTOP	P	EC020	veg<>17	oasis - not palm
DTOP	P	EC020	veg=17	oasis - palm
DTOP	A	EC020	veg<>17	oasis - not palm
DTOP	A	EC020	veg=17	oasis - palm
VML0	A	EC020	veg=17	oasis - palm
VML0	A	EC020	veg<>17	oasis - not palm
VML1	P	EC020	veg=17	oasis - palm
VML1	P	EC020	veg<>17	oasis - not palm
VML2	P	EC020	veg<>17	oasis - not palm
VML2	P	EC020	veg=17	oasis - palm
VML2	A	EC020	veg<>17	oasis - not palm
VML2	A	EC020	veg=17	oasis - palm

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Product	Delin	FCODE	Attribute Condition	Description
0152	Point	SY(DAYSQR01)		<i>magenta box w/ dot and line below</i>
DNC	P	BC055		marker
0154	Point	SY		<i>magenta cir,arrows ping out,represent only</i>
DNC	P	BG040		current diagram
0185	Point	SY(TOPMAR85)		<i>black topmark special X</i>
DTOP	P	AL030		cemetery
DTOP	P	AT010		disk/dish
DTOP	P	AT080		communication tower
UVM	P	AL030		cemetery
UVM	P	AT010		disk/dish
UVM	P	AT070		telephone-telegraph pylon/pole
UVM	P	AT080		communication tower
VML0	P	AT080		communication tower
VML1	P	AT010		disk/dish
VML1	P	AT080		communication tower
VML2	P	AL030		cemetery
VML2	P	AT010		disk/dish
VML2	P	AT080		communication tower
0311	Point	SY(BOYMOR11)		<i>black mooring/installation buoy</i>
DNC	P	BB170		offshore loading facility
DNC	P	BC020	btc=7 AND ssc<>1and<>7	buoy - mooring; not barrel, not can
DNC	P	BC020	btc=7 AND ssc=1	buoy - mooring; barrel
DNC	P	BC020	btc=7 AND ssc=7	buoy - mooring;can
0312	Point	SY(BOYSUP02)		<i>black superbuoy - simplified</i>
DNC	P	BC020	btc=0 AND ssc=73	buoy - superbuoy; type unknown
DNC	P	BC020	btc=10	buoy - ODAS
DNC	P	BC020	btc=4	buoy - LANBY
0313	Point	SY(BOYSPP11)		<i>yellow circle w/ outline black outline</i>
DNC	P	BC020	btc=0 AND ssc=17	buoy - sphere; type unknown
DNC	P	BC020	btc=0 AND ssc=0or85or999	buoy - default; type unknown
DNC	P	BC020	btc=0 AND ssc=1	buoy - barrel; type unknown
0401	Point	SY(FOGSIG01) for nav aids		<i>lt magenta arcs origin offset - maximum</i>
DNC	P	AL015	bfc=81 AND sta=5 AND sst<>16	building - maritime station (rescue), sound signal
DNC	P	BC010	sst=1or2or3or4or6or9or14or15	beacon - sound signal
DNC	P	BC020	sst=1or2or3or4or6or9or14or15	buoy - sound signal
DNC	P	BC040	sst=1or2or3or4or6or9or14or15	light - sound signal
DNC	P	BC070	sst=1or2or3or4or6or9or14or15	light vessel/lightship - sound signal
0402	Point	SY(FOGSIG01) for others		<i>lt magenta arcs origin offset - minimum</i>
DNC	P	AL015	bfc=81 AND sta<>5 AND sst<>16	building - maritime station (not rescue), sound signal
DNC	P	BD110	sst<>16	platform - sound signal
0500	Point	SY(LITDEF11)		<i>magenta flare with black outline</i>
DNC	P	BB170	cha=21	offshore loading facility - light
DNC	P	BD110	cha=21	platform - lighted
0501	Point	SY(LIGHTS11)		<i>lights red flare with black outline</i>
DNC	P	GA020		air obstruction light [DNC-specific]
0503	Point	SY(LIGHTS13)		<i>lights yellow flare with black outline</i>
DNC	P	GB010		airport lighting
0510	Point	SY(RADRFL03)		<i>magenta arc w/ 5 ticks pointing upward</i>
DNC	P	BC010	ref=1	beacon - radar reflector present
DNC	P	BC020	ref=1	buoy - radar reflector present

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Product	Delin	FCODE	Attribute Condition	Description
DNC	P	BC040	ref=1	light - radar reflector present
DNC	P	BC070	ref=1	light vessel/lightship - radar reflector present
0511	Point	SY(RDOSTA02)		<i>magenta lg cir</i>
DNC	P	AT045	ssc=0or999	radar transmitter - other, unknown
DNC	P	BC010	nst=1or4or5or17or41or51or53	beacon - radio navigation system
DNC	P	BC020	nst=1or4or5or17or41or51or53 AND ssc<>10	buoy - non-pillar; radio navigation system
DNC	P	BC020	nst=1or4or5or17or41or51or53 AND ssc=10	buoy - pillar; radio navigation system
DNC	P	BC040	nst=1or4or5or17or41or51or53	light - radio navigation system
DNC	P	BC070	nst=1or4or5or17or41or51or53	light vessel/lightship - radio navigation system
DNC	P	GA035		navaids (aeronautical)
0512	Point	SY(RTPBCN02)		<i>magenta lg dashed cir</i>
DNC	P	BC010	nst=10or54	beacon - radar navigation system
DNC	P	BC020	nst=10or54 AND ssc<>10	buoy - non-pillar; radar navigation system
DNC	P	BC020	nst=10or54 AND ssc=10	buoy - pillar; radar navigation system
DNC	P	BC040	nst=10or54	light - radar navigation system
DNC	P	BC070	nst=10or54	light vessel/lightship - radar navigation system
DNC	P	BD110	nst=10or54	platform - radar navigation system
0515	Point	SY(LITFLT02)		<i>black lt float, simplified</i>
DNC	P	BC020	btc=6	buoy - light float
0516	Point	SY(LITVES02)		<i>black lt vessel, simplified</i>
DNC	P	BC070		light vessel/lightship
0517	Point	SY(NDB)		<i>magenta circle with dot in center</i>
TOD0	P	GA035	nst=17	navaids (aeronautical) - NDB
0518	Point	SY(VOR)		<i>magenta hexagon with dot in center</i>
TOD0	P	GA035	nst=20	navaids (aeronautical) - VOR
0519	Point	SY(VORDME)		<i>magenta hexagon in square w/ dot in center</i>
TOD0	P	GA035	nst=21	navaids (aeronautical) - VOR/DME
0520	Point	SY(VORTAC)		<i>magenta hexagon, solid outer rectgls, cntr dot</i>
TOD0	P	GA035	nst=22	navaids (aeronautical) - VORTAC
0521	Point	SY(TACAN)		<i>magenta hexagon, open outer rectgls, cntr dot</i>
TOD0	P	GA035	nst=23	navaids (aeronautical) - TACAN
0522	Point	SY		<i>green open triangle</i>
TOD0	P	GA055	wpt<>10	waypoint/reporting-calling in point - non compulsory
VML2	P	EC030		trees
0523	Point	SY		<i>green solid triangle</i>
TOD0	P	GA055	wpt=10	waypoint/reporting-calling in point - compulsory
0524	Point	SY		<i>magenta open circle w/ diagonal cross bar</i>
TOD1	P	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
TOD1	P	BD180	exs=57	wreck - sonar confirmed
TOD2	P	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
TOD2	P	BD180	exs=57	wreck - sonar confirmed
TOD3	P	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
TOD3	P	BD180	exs=57	wreck - sonar confirmed
0525	Point	SY		<i>magenta open very thin circle</i>
TOD0	P	GA035	nst=0	navaids (aeronautical) - unknown
TOD1	P	BD005	exs=58	miscellaneous underwater feature - reported
TOD1	P	BD180	exs=58	wreck - reported
TOD2	P	BD005	exs=58	miscellaneous underwater feature - reported
TOD2	P	BD180	exs=58	wreck - reported
TOD3	P	BD005	exs=58	miscellaneous underwater feature - reported

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Product	Delin	FCODE	Attribute Condition	Description
TOD3	P	BD180	exs=58	wreck - reported
0600	Line	LS(SOLD,1,CHBLK)		<i>black very thin solid line</i>
DNC	L	AK020		amusement park attraction
DNC	L	AL070		fence
DNC	L	AL260		wall
DNC	L	BH020		canal
DNC	L	BH140		river/stream
DNC	L	BH210		inland shoreline
DNC	A	AC030		settling basin/sludge pond
DNC	A	AD010		power plant
DNC	A	AD030		substation/transformer yard
DNC	A	AH010		bastion/rampart/fortification
DNC	A	AH050		fortification
DNC	A	AK040		athletic field
DNC	A	AK100		golf course
DNC	A	AK120		park
DNC	A	AK160		stadium/amphitheater
DNC	A	AK180		zoo/safari park
DNC	A	AL015		building
DNC	A	AL030		cemetery
DNC	A	AL200	loc=8	ruins - on ground surface
DNC	A	AL200	loc=22 AND verr=1	ruins - offshore, does not cover
DNC	A	AM030		grain elevator
DNC	A	AM070		tank
DNC	A	AQ116		pumping station
DNC	A	AT020		early warning radar site
DNC	A	BH020		canal
DNC	A	BH080		lake/pond
DNC	A	BH130		reservoir
DNC	A	BH140		river/stream
DNC	A	BI030		lock
DNC	A	GB005		airport/airfield
DNC	A	GB055		runway
DTOP	L	AL015	bfc=7	building - house of worship
DTOP	L	AL015	bfc=6	building - hospital
DTOP	L	AL015	bfc<>6and<>7and<>15	building - generic
DTOP	L	AL015	bfc=15	building - school
DTOP	L	AL070		fence
DTOP	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
DTOP	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
DTOP	L	AP020		interchange
DTOP	L	BI040		sluice gate
DTOP	L	DB080		depression
DTOP	A	AC030		settling basin/sludge pond
DTOP	A	AD010		power plant
DTOP	A	AD030		substation/transformer yard
DTOP	A	AK120		park
DTOP	A	AK170		swimming pool
DTOP	A	AL135	<>pop	native settlement
DTOP	A	AL135	pop	native settlement
DTOP	A	AL140		particle accelerator
DTOP	A	AM060		storage bunker/storage mound
DTOP	A	AN060		railroad yard/marshaling yard
DTOP	A	AQ135		vehicle stopping area/rest area

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	A	AQ140		vehicle storage/parking area
DTOP	A	BH030	sdr	ditch - not covered
DTOP	A	BH030	<>sdr	ditch
DTOP	A	BH040		filtration beds/aeration beds
DTOP	A	BH050		fish hatchery/fish farm/marine farm
DTOP	A	BI030		lock
DTOP	A	BI050		water intake tower
DTOP	A	DA005		asphalt lake
FFD	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
FFD	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
FFD	A	AC030		settling basin/sludge pond
FFD	A	AL135		native settlement
FFD	A	AN060		railroad yard/marshalling yard
FFD	A	BH040		filtration beds/aeration beds
FFD	A	BH050		fish hatchery/fish farm/marine farm
FFD	A	BI030		lock
UVM	L	AL015	bfc<>2and<>3and<>5and<>8and<>15and<>28and<>52and<>121and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
UVM	L	AL015	bfc=7or114	building - house of worship
UVM	L	AL015	bfc=6or100	building - hospital
UVM	L	AL015	bfc=15or60or108	building - school
UVM	L	AL015	bfc=2or3or5or8or28or52or121	building - government
UVM	L	AL070		fence
UVM	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
UVM	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
UVM	L	AP020		interchange
UVM	L	BI040		sluice gate
UVM	A	AC030		settling basin/sludge pond
UVM	A	AD010		power plant
UVM	A	AD030		substation/transformer yard
UVM	A	AK110		grandstand
UVM	A	AK120		park
UVM	A	AK170		swimming pool
UVM	A	AL130		monument
UVM	A	AL135		native settlement
UVM	A	AL140		particle accelerator
UVM	A	AM040		mineral pile
UVM	A	AM060		storage bunker/storage mound
UVM	A	AN060		railroad yard/marshaling yard
UVM	A	AP020		interchange
UVM	A	AP030	med<>1 AND wtc=2	road - fair/dry weather no median
UVM	A	AP030	med=1	road - divided w/median
UVM	A	AP030	med<>1 AND wtc<>2	road - all weather no median
UVM	A	AQ065		culvert
UVM	A	AQ125		station (miscellaneous)
UVM	A	AQ140		vehicle storage/parking area
UVM	A	AQ150		flight of steps
UVM	A	AT010		disk/dish
UVM	A	BH040		filtration beds/aeration beds
UVM	A	BH050		fish hatchery/fish farm/marine farm
UVM	A	BH100	hyc=3	moat - dry
UVM	A	BH100	hyc<>3	moat - not dry
UVM	A	BI030		lock
UVM	A	BI050		water intake tower

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Product	Delin	FCODE	Attribute Condition	Description
UVM	A	DA005		asphalt lake
VITD	L	AN050	exs=0or1 AND rrc<>4	railroad siding/railroad spur - operational/normal
VITD	L	AN050	exs=0or1 AND rrc=4	railroad siding/railroad spur - operational/narrow
VITD	L	BI030		lock
VITD	A	AN060		railroad yard/marshalling yard
VITD	A	DB080		depression
VML0	L	DB080		depression
VML0	A	AA052		oil/gas field
VML0	A	AL135		native settlement
VML0	A	BH050		fish hatchery/fish farm/marine farm
VML1	L	AL070		fence
VML1	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
VML1	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
VML1	L	BI030		lock
VML1	A	AC030		settling basin/sludge pond
VML1	A	AD010		power plant
VML1	A	AK120		park
VML1	A	AL135		native settlement
VML1	A	AN060		railroad yard/marshalling yard
VML1	A	BH040		filtration beds/aeration beds
VML1	A	BH050		fish hatchery/fish farm/marine farm
VML1	A	DA005		asphalt lake
VML2	L	AL015	bfc=6	building - hospital
VML2	L	AL015	bfc=7	building - house of worship
VML2	L	AL015	bfc<>6and<>7and<>15	building - generic
VML2	L	AL015	bfc=15	building - school
VML2	L	AL070		fence
VML2	L	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
VML2	L	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
VML2	L	AP020		interchange
VML2	L	BI040		sluice gate
VML2	A	AC030		settling basin/sludge pond
VML2	A	AD010		power plant
VML2	A	AD030		substation/transformer yard
VML2	A	AK120		park
VML2	A	AK170		swimming pool
VML2	A	AL135		native settlement
VML2	A	AL140		particle accelerator
VML2	A	AM060		storage bunker/storage mound
VML2	A	AN060		railroad yard/marshalling yard
VML2	A	AQ135		vehicle stopping area/rest area
VML2	A	AQ140		vehicle storage/parking area
VML2	A	BH040		filtration beds/aeration beds
VML2	A	BH050		fish hatchery/fish farm/marine farm
VML2	A	BI030		lock
VML2	A	BI050		water intake tower
VML2	A	DA005		asphalt lake
0604	Line	LS(SOLD,1,LANDF)		<i>feature brown very thin solid line</i>
DNC	L	CA010		contour line (land)
DNC	A	AL020		built-up area
DNC	A	BB150		landing place
DTOP	A	AB000		disposal site/waste pile
DTOP	A	AB010		wrecking yard/scrap yard
DTOP	A	AL170		plaza/city square

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	A	DA010	smc<>84	ground surface element - not rocky
DTOP	A	DA010	smc=84	ground surface element - rocky
UVM	A	AB000		disposal site/waste pile
UVM	A	AB010		wrecking yard/scrap yard
UVM	A	AL170		plaza/city square
UVM	A	DA010	mcc=88	ground surface element - sand
UVM	A	DA010	mcc=8or46or84	ground surface element - boulders, gravel, rock
UVM	A	DA010	mcc=52	ground surface element - lava
UVM	A	DA010	mcc<>8and<>46and<>52and<>84and<>88	ground surface element - not rock, not lava, not sand
VITD	A	DA010	stp=1or2or3or4	ground surface element - gravels
VITD	A	DA010	stp=5or6or7or8or9	ground surface element - sands
VITD	A	DA010	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9	ground surface element - silts, clays, evaporites, other
VML0	A	DA010	smc<>52and<>88	ground surface element - not lava, not sand
VML0	A	DA010	smc=52	ground surface element - lava
VML0	A	DA010	smc=88	ground surface element - sand
VML1	A	AB000		disposal site/waste pile
VML1	A	DA010	mcc=52	ground surface element - lava
VML1	A	DA010	mcc=46or8	ground surface element - boulders, gravel
VML1	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML1	A	DA010	mcc=88	ground surface element - sand
VML2	A	AB000		disposal site/waste pile
VML2	A	AB010		wrecking yard/scrap yard
VML2	A	AL170		plaza/city square
VML2	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML2	A	DA010	mcc=46or8	ground surface element - boulders, gravel
VML2	A	DA010	mcc=52	ground surface element - lava
VML2	A	DA010	mcc=88	ground surface element - sand
0605	Line	LS(SOLD,2,LANDF)		<i>feature brown thin solid line</i>
DNC	L	AK130		race track
DNC	L	AN010		railroad
DNC	L	AP020		interchange
DNC	L	AP030		road
0606	Line	LS(SOLD,3,LANDF)		<i>feature brown solid line</i>
DNC	L	GB055		runway
0607	Line	LS(SOLD,4,LANDF)		<i>feature brown thick solid line</i>
DNC	L	BI020		dam/weir
0608	Line	LS(SOLD,1,DEPCN)		<i>depth gray very thin solid line</i>
DNC	L	BE010	acc=1	depth curve - accurate
TOD1	L	BE015	acc=1	depth contour - accurate
TOD2	L	BE015	acc=1	depth contour - accurate
TOD3	L	BE015	acc=1	depth contour - accurate
0610	Line	LS(SOLD,3,CHGRD)		<i>gray solid line</i>
DNC	L	AQ113	loc=25	pipeline/pipe - above ground or over water
DNC	L	BH010	loc=25	aqueduct - elevated
DNC	L	BH120		rapids
0611	Line	LS(SOLD,4,CHGRD)		<i>gray thick solid line</i>
DNC	A	AQ040	bsc<>12 AND bot<>4and<>10and<>11	bridge/overpass/viaduct (opening)
DNC	A	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
DNC	A	AQ045		bridge span
0612	Line	LS(SOLD,1,CHGRF)		<i>It gray very thin solid line</i>
DTOP	L	FA090		geophysical prospecting grid

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Product	Delin	FCODE	Attribute Condition	Description
VML1	L	FA090		geophysical prospecting grid
VML2	L	FA090		geophysical prospecting grid
0614	Line	LS(DASH,1,DEPCN)		<i>depth gray very thin dash line</i>
DNC	L	BE010	acc=2	depth curve - not accurate
TOD1	L	BE015	acc=2	depth contour - not accurate
TOD2	L	BE015	acc=2	depth contour - not accurate
TOD3	L	BE015	acc=2	depth contour - not accurate
0615	Line	LS(SOLD,3,CHWHT)		<i>pale green solid line</i>
DNC	L	BH180		waterfall
0620	Line	LS(SOLD,6,TRFCF)		<i>traffic lt magenta very very thick solid line</i>
DNC	L	FC041	tsp=4	traffic separation scheme (TSS) - separation zone line
0621	Line	LS(SOLD,1,DEPVS)		<i>depth med blue very thin solid line</i>
DTOP	L	BH030		ditch
FFD	L	BH030		ditch
UVM	L	BH030	hyc=0or8	ditch - perennial, unknown
UVM	L	BH030	hyc=6	ditch - intermittent
VML0	L	BH000		inland water
VML1	L	BH030	hyc<>0and<>8	ditch - not perennial
VML1	L	BH030	hyc=0or8	ditch - perennial, unknown
VML2	L	BH030	hyc=0or8	ditch - perennial, unknown
VML2	L	BH030	hyc=6	ditch - intermittent
0623	Line	LS(SOLD,2,CSTLN)		<i>dk gray thin solid line</i>
DNC	L	BB040	vrr=1	breakwater/groynes - partly submerged at high water
DNC	L	BB140	vrr=1	jetty - partly submerged at high water
DNC	L	BB220	vrr=1	ramp (maritime) - partly submerged at high water
DNC	L	BB230		seawall
DNC	L	BB240	vrr=1	slipway/patent slip - partly submerged at high water
DNC	L	BI040		sluice gate
DNC	A	BB040	vrr=1	breakwater/groynes - partly submerged at high water
DNC	A	BB140	vrr=1	jetty - partly submerged at high water
DNC	A	BB220	vrr=1	ramp (maritime) - partly submerged at high water
DNC	A	BD020	vrr=1 AND hdp=NULL	crib - above surface
DNC	A	BD100	vrr=1	pile/piling/post - does not cover
DNC	A	BD140	vrr=1	snags/stumps - does not cover
DNC	A	BD180	vrr=1 AND hdp=NULL	wreck - does not cover; depth null
DTOP	L	BB040		breakwater/groynes
DTOP	L	BB140		jetty
DTOP	L	BB190		pier/wharf/quay
DTOP	L	BB220		ramp (maritime)
DTOP	L	BB230		seawall
DTOP	A	BB040		breakwater/groynes
DTOP	A	BB140		jetty
DTOP	A	BB190		pier/wharf/quay
DTOP	A	BB220		ramp (maritime)
FFD	L	BB190		pier/wharf/quay
FFD	A	BB190		pier/wharf/quay
UVM	L	BB040		breakwater/groynes
UVM	L	BB140		jetty
UVM	L	BB190		pier/wharf/quay
UVM	L	BB230		seawall
UVM	L	BB240		slipway/patent slip
UVM	A	BB040		breakwater/groynes
UVM	A	BB140		jetty

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Product	Delin	FCODE	Attribute Condition	Description
UVM	A	BB190		pier/wharf/quay
VML0	L	BB040		breakwater/groyne
VML0	L	BB190		pier/wharf/quay
VML0	L	BB230		seawall
VML1	L	BB040		breakwater/groyne
VML1	L	BB140	vrr=0or1	jetty - unknown, partly submerged at high water
VML1	L	BB140	vrr=8	jetty - covers and uncovers
VML1	L	BB190		pier/wharf/quay
VML1	L	BB230		seawall
VML1	A	BB190		pier/wharf/quay
VML2	L	BB040		breakwater/groyne
VML2	L	BB140		jetty
VML2	L	BB190		pier/wharf/quay
VML2	L	BB230		seawall
VML2	L	BB240		slipway/patent slip
VML2	A	BB040		breakwater/groyne
VML2	A	BB140		jetty
VML2	A	BB190		pier/wharf/quay
VML2	A	BB240		slipway/patent slip
0624	Line	LS(DASH,1,LANDF)		<i>feature brown very thin dash line</i>
DNC	A	AA010		mine/quarry
DNC	A	AB000		disposal site/waste pile
DNC	A	AB010		wrecking yard/scrap yard
DNC	A	AC000		processing plant/treatment plant
DNC	A	AM010		depot (storage)
DNC	A	AM040		mineral pile
DNC	A	EA040		orchard/plantation
DNC	A	EA050		vineyards
DNC	A	EC030	veg<>19	trees - not mangrove
DNC	A	EC030	veg=19	trees - mangrove
DTOP	A	AC000		processing plant/treatment plant
UVM	A	AC000		processing plant/treatment plant
VML1	A	AC000		processing plant/treatment plant
VML2	A	AC000		processing plant/treatment plant
0625	Line	LS(SOLD,4,CSTLN)		<i>dk gray thick solid line</i>
DNC	L	BB170		offshore loading facility
DNC	L	BB190		pier/wharf/quay
DNC	A	BB170		offshore loading facility
DNC	A	BB190		pier/wharf/quay
0626	Line	LS(DASH,2,CSTLN)		<i>dk gray thin dash line</i>
DNC	L	BB040	vrr=4or8	breakwater/groyne - submerged, covers and uncovers
DNC	L	BB140	vrr=4or8	jetty - submerged, covers and uncovers
DNC	L	BB220	vrr=4or8	ramp (maritime) - submerged, covers and uncovers
DNC	L	BB240	vrr=4or8	slipway/patent slip - submerged, covers and uncovers
DNC	A	AL200	loc=22 AND vrr=8	ruins - offshore, covers and uncovers
DNC	A	BB040	vrr=4or8	breakwater/groyne - submerged, covers and uncovers
DNC	A	BB140	vrr=4or8	jetty - submerged, covers and uncovers
DNC	A	BB220	vrr=4or8	ramp (maritime) - submerged, covers and uncovers
DNC	A	BD020	vrr=8 AND hdp=NULL	crib - covers and uncovers
DNC	A	BD100	vrr=8	pile/piling/post - covers and uncovers
DNC	A	BD140	vrr=8	snags/stumps - covers and uncovers
DNC	A	BD180	vrr=8 AND hdp=NULL	wreck - covers and uncovers; depth null

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Product	Delin	FCODE	Attribute Condition	Description
0627	Line	LS(SOLD,5,CHGRD)		<i>gray very thick solid line</i>
DNC	L	AQ040	bsc<>12 AND bot<>4and<>10and<>11	bridge/overpass/viaduct (opening)
DNC	L	AQ045		bridge span
0629	Line	LS(DASH,2,CHGRD)		<i>gray thin dash line</i>
DNC	L	FC021	mac=56 AND mbl=NULL	maritime limit boundary - fish traps
DNC	L	FC021	mbl<>7and<>13 AND mac=NULL	maritime limit boundary - not clearing line
DNC	A	AL200	loc=22 AND vrr=4 AND hdp>20	ruins - offshore, submerged - depth greater than 20m
DNC	A	BD000	hdp>20	underwater danger/hazard - depth greater than 20m
DNC	A	BD020	vrr=4 AND hdp>20	crib - submerged; depth greater than 20m
DNC	A	BD120	vrr=4 AND hdp>20	reef - submerged, depth greater than 20m
DNC	A	FC036	mac=45or46	restricted area - outfall, intake
0630	Line	LS(DOTT,2,CSTLN)		<i>dk gray thin dotted line</i>
DNC	A	BD180	vrr=0or2 AND hdp=NULL	wreck - unknown; awash; depth null
DNC	A	BD180	vrr=4 AND hdp=0	wreck - submerged; depth unknown
0631	Line	LS(SOLD,2,CHGRD)		<i>gray thin solid line</i>
DNC	L	FC021	mac=26 AND mbl=NULL	maritime limit boundary - unsurveyed
DNC	A	BE010	cvl=99999	depth area; depth unknown
DNC	A	FC021	mac=26	maritime limit boundary - unsurveyed
TOD1	A	BE019	cvl=-32767	depth area; depth unknown
TOD2	A	BE019	cvl=-32767	depth area; depth unknown
TOD3	A	BE019	cvl=-32767	depth area; depth unknown
0632	Line	LS(DASH,1,CSTLN)		<i>dk gray very thin dash line</i>
DNC	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
0633	Line	LS(DASH,2,CHGRF)		<i>lt gray thin dash line</i>
DNC	L	FC021	mac=57 AND mbl=NULL	maritime limit boundary - marine farm
FFD	A	FA001		administrative area
TOD0	L	FC021	mbl=6	maritime limit boundary - limit of territorial waters
TOD0	L	FC021	mbl<>6	maritime limit boundary - other
UVM	A	FA001		administrative area
VML0	A	FA001		administrative area
VML1	A	FA001		administrative area
VML2	A	FA001		administrative area
0634	Line	LS(DASH,1,CHMGD)		<i>magenta very thin dash line</i>
DNC	L	FC021	mac=25 AND mbl=NULL	maritime limit boundary - spoil
DNC	L	FC021	mac=30or35 AND mbl=NULL	maritime limit boundary - dumping, explosive dumping
DNC	L	GB070		seaplane landing/seaplane take-off area
DNC	A	FC021	mac=25or30or35	maritime limit boundary - spoil, dumping, explosive dumping
DNC	A	GB070		seaplane landing/seaplane take-off area
DTOP	A	BB010		anchorage
VML2	A	BB010		anchorage
0635	Line	LS(DASH,1,CHMGF)		<i>lt magenta very thin dash line</i>
DNC	L	FC021	mac=31 AND mbl=NULL	maritime limit boundary - incineration
DNC	L	FC021	mac=49 AND mbl=NULL	maritime limit boundary - cargo Xshipment
DNC	A	FC021	mac=49	maritime limit boundary - cargo Xshipment
DNC	A	FC021	mac=31	maritime limit boundary - incineration
0656	Line	LS(DASH,1,CHGRD)		<i>gray very thin dash line</i>
DNC	L	AQ130		tunnel
DNC	L	BC100		leading line
DNC	L	FC021	mbl=13 AND mac=NULL	maritime limit boundary - clearing line
DNC	L	FC021	mac=55 AND mbl=NULL	maritime limit boundary - fairway
DNC	L	FC100		measured distance line

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Product	Delin	FCODE	Attribute Condition	Description
DNC	L	FC177		swept area
DNC	A	BB110		fish traps/fish weirs
DNC	A	BB115		gridiron
DNC	A	BB180		oyster bed/mussel bed
DNC	A	BD010		breakers
DNC	A	BD040		eddies
DNC	A	BD050		foul ground
DNC	A	BD080		overfalls/tide rips
DNC	A	BH050		fish hatchery/fish farm/marine farm
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
DNC	A	FC021	mac=55	maritime limit boundary - fairway
DNC	A	FC021	mac=56	maritime limit boundary - fish traps
DNC	A	FC021	mac=57	maritime limit boundary - marine farm
DNC	A	FC170		safety fairway
DNC	A	FC177		swept area
DNC	A	ZC040		magnetic disturbance area
DTOP	L	AP050		trail
FFD	L	AP050		trail
TOD0	A	FC170		safety fairway
UVM	L	AK150		ski jump
UVM	L	AP050		trail
VML0	L	AP050		trail
VML1	L	AP050		trail
VML2	L	AK150		ski jump
VML2	L	AP050		trail
0657	Line	LS(DASH,4,CHGRD)		<i>gray thick dash line</i>
DNC	L	AQ010		aerial cableway lines/ski lift lines
DNC	L	AT030		power transmission line
DNC	L	AT060		telephone line/telegraph line
DTOP	L	AQ010		aerial cableway lines/ski lift lines
UVM	L	AQ010		aerial cableway lines/ski lift lines
VML0	L	AQ010		aerial cableway lines/ski lift lines
VML1	L	AQ010		aerial cableway lines/ski lift lines
VML1	A	ZC040		magnetic disturbance area
VML2	L	AQ010		aerial cableway lines/ski lift lines
0661	Line	LS(DASH,3,TRFCD)		<i>traffic magenta dash line</i>
DNC	A	FC165	rtt=4	route (maritime) - deep water
0662	Line	LS(DASH,1,TRFCD)		<i>traffic magenta very thin dash line</i>
DNC	A	FC031	mac=41	maritime area - inshore traffic zone (TSS)
0663	Line	LS(DASH,2,TRFCD)		<i>traffic magenta thin dash line</i>
DNC	L	FC021	mac=0or999 AND mbl=NULL	maritime limit boundary - unknown, other
DNC	L	FC021	mac=42 AND mbl=NULL	maritime limit boundary - precautionary
DNC	L	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	L	FC130		radar reference line
DNC	A	FC021	mac=0or999	maritime limit boundary - unknown, other
DNC	A	FC021	mac=42	maritime limit boundary - precautionary
DNC	A	FC031	mac=0or9	maritime area - unknown, work in progress
DNC	A	FC165	rtt=0	route (maritime) - use unknown
0665	Line	LS(DASH,4,TRFCD)		<i>traffic magenta thick dash line</i>
DNC	L	FC031	mac=40or41	maritime area - TSS
DNC	L	FC041	tsp=2	traffic separation scheme (TSS) - outer boundary

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC165	rtt=11	route (maritime) - 2-way
0669	Line	LS(DASH,1,DEPVS)		<i>depth med blue very thin dash line</i>
DTOP	A	BJ100		snow field/ice field
VML0	A	BJ100		snow field/ice field
VML1	A	BJ100		snow field/ice field
VML2	A	BJ100		snow field/ice field
0670	Line	LS(DASH,2,DEPVS)		<i>depth med blue thin dash line</i>
TOD1	L	BE040		track line
TOD2	L	BE040		track line
TOD3	L	BE040		track line
0680	Line	LS(DOTT,2,CHBLK)		<i>black thin dotted line</i>
DNC	L	FA000	use=32	administrative boundary - insular
DNC	A	AL200	loc=22 AND vrr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	A	AL200	loc=22 AND vrr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
DNC	A	BC080		perches/stakes
DNC	A	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	A	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
DNC	A	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
DNC	A	BD020	vrr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
DNC	A	BD030		discolored water
DNC	A	BD100	vrr=4	pile/piling/post - submerged
DNC	A	BD120	vrr<>8 AND hdp=0orNULL	reef - not covers and uncovers, depth unknown or null
DNC	A	BD120	vrr=4 AND hdp>0and<=20	reef - submerged, depth 20m or less
DNC	A	BD140	vrr=4	snags/stumps - submerged
DNC	A	BD180	vrr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
DTOP	A	BD100		pile/piling/post
VML2	A	BD100		pile/piling/post
0681	Line	LS(SOLD,2,UINFB)		<i>UI very dk blue thin solid line</i>
TOD0	A	FC031	mac=104	maritime area - major op area
0682	Line	LS(SOLD,1,UINFB)		<i>UI very dk blue very thin solid line</i>
DTOP	L	BH120		rapids
DTOP	L	BH180		waterfall
TOD0	A	FC031	mac=105	maritime area - minor op area
VML1	L	BH120		rapids
VML1	L	BH180		waterfall
VML2	L	BH120		rapids
VML2	L	BH180		waterfall
0683	Line	LS(DOTT,3,UINFB)		<i>UI very dk blue dotted line</i>
TOD0	A	FC031	mac=114	maritime area - sea test range
0684	Line	LS(SOLD,2,CHRED)		<i>red thin solid line</i>
FFD	A	AL045		complex outline
TOD0	L	FC101		theodolite line
UVM	A	AL045		complex outline
0685	Line	LS(SOLD,2,CHGRN)		<i>green thin solid line</i>
TOD0	A	GA005	aua=39	airspace - upper control area
0700	Line	LC(FERYRT01)		<i>magenta dash very thin line w/ boat shape</i>
DNC	L	AQ070	fer=2	ferry crossing - without cables
0701	Line	LC(FERYRT02)		<i>black dash very thin line w/ boat shape</i>
DNC	L	AQ070	fer=1	ferry crossing - with cables
0704	Line	LC(PIPSOL06)		<i>gray dash very thin line w/ sm cir</i>
DNC	L	AQ113	loc<>25 AND pro=116	pipeline/pipe - not above ground or over water; water

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Product	Delin	FCODE	Attribute Condition	Description
DNC	L	AQ113	loc<>25 AND pro=95 OR plt=2or3	pipeline/pipe - not above ground or over water; sewage, outfall, intake
DNC	L	BH010	loc<>25	aqueduct - not elevated
0705	Line	LC(PIPSOL05)		<i>magenta dash very thin line w/ cir</i>
DNC	L	AQ113	loc<>25 AND pro<>95and<>116 AND plt<>2and<>3	pipeline/pipe - not above ground or over water; not sewage or water
0708	Line	LC(CBLSUB06)		<i>magenta broken zig-zag line w/ flash symbol</i>
DNC	L	AT005		cable
0712	Line	LC(FSHFAC02)		<i>gray L complex line</i>
DNC	L	BB100		fish stakes
0713	Line	LC		<i>magenta compressed zig-zag line</i>
DNC	L	BC040		light
0716	Line	LC(NAVARE51)		<i>gray dash/chevron line</i>
TOD0	A	FC031	mac=156	maritime area - safety lane
0722	Line	LC(RESARE51)		<i>magenta dashed T line</i>
DNC	L	FC036		restricted area
0723	Line	LC(DWRTCL08)		<i>traffic magenta solid line w/ > and DW</i>
DNC	L	FC165	atn=1 AND exs=22 AND rtt=3	route (maritime) - marked;1-way;recomm for deep draft vessels
0724	Line	LC(DWRTCL07)		<i>traffic magenta dash line w/ > and DW</i>
DNC	L	FC165	atn=2 AND exs=22 AND rtt=3	route (maritime) - unmarked;1-way;recomm for deep draft vessels
0725	Line	LC(DWRTCL06)		<i>traffic magenta solid line w/ < > and DW</i>
DNC	L	FC165	atn=1 AND exs=23 AND rtt=3	route (maritime) - marked;2-way;recomm for deep draft vessels
0726	Line	LC(DWRTCL05)		<i>traffic magenta dash line w/ < > and DW</i>
DNC	L	FC165	atn=2 AND exs=23 AND rtt=3	route (maritime) - unmarked;2-way;recomm for deep draft vessels
0727	Line	LC(DWLDEF01)		<i>traffic magenta dash line w/ < ? > and DW</i>
DNC	L	FC165	exs=0 AND rtt=3	route (maritime) - unknown;recomm for deep draft vessels
0728	Line	LC(RECTRC12)		<i>gray very thin line w/ ></i>
DNC	L	FC165	atn=1 AND exs=22 AND rtt<>3	route (maritime) - marked;1-way;not recomm for deep draft vessels
0729	Line	LC(RECTRC11)		<i>gray very thin dash line w/ ></i>
DNC	L	FC165	atn=2 AND exs=22 AND rtt<>3	route (maritime) - unmarked;1-way;not recomm for deep draft vessels
0730	Line	LC(RECTRC10)		<i>gray very thin line w/ < ></i>
DNC	L	FC165	atn=1 AND exs=23 AND rtt<>3	route (maritime) - marked;2-way;not recomm for deep draft vessels
0731	Line	LC(RECTRC09)		<i>gray very thin dash line w/ < ></i>
DNC	L	FC165	atn=2 AND exs=23 AND rtt<>3	route (maritime) - unmarked;2-way;not recomm for deep draft vessels
0732	Line	LC(RECDEF02)		<i>gray very thin dash line w/ < ? ></i>
DNC	L	FC165	exs=0 AND rtt<>3	route (maritime) - unknown;not recomm for deep draft vessels
DNC	L	FC170		safety fairway
0733	Point	SY(LOCMAG51)		<i>lt magenta open flag</i>
DNC	A	ZC040		magnetic disturbance area
VML1	A	ZC040		magnetic disturbance area

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Product	Delin	FCODE	Attribute Condition	Description
0734	Line	LC(CTYARE51)		<i>magenta dash/chevron line</i>
TOD0	A	FC031	mac=27or28or115or116or140or146or147or150or151or152 or153or157or159	maritime area - military practice areas
TOD0	A	FC031	mac=143or148or149or158	maritime area - military area, minefield
TOD0	A	FC031	mac=0or144or145or154or999	maritime area - restricted areas
TOD0	A	FC031	mac=101	maritime area - marine sanctuary
TOD0	A	FC036		restricted area
0742	Line	LC(CTNARE51)		<i>magenta dash/chevron line w/caution symbol</i>
TOD0	A	FC031	mac=141or142or155	maritime area - caution areas
0743	Line	LC(LOWACC21)		<i>dk gray small open rectangle dash line</i>
DNC	L	BA010	acc=2 AND slt<>6and<>8	coastline/shoreline - approximate; not mangrove or marsh
0752	Line	LC=LS(DASH,1,CHGRD)+ SY(WATTUR02)		<i>gray very thin dash line w/ cntred waves</i>
DNC	L	BD010		breakers
0753	Line	LC=LS(SOLD,5,CHGRD)+ SY(BRIDGE01)		<i>gray very thck line w/ cntrd magenta dbl cir</i>
DNC	L	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
0754	Line	LC(OPAREASW)		<i>UI vy dk blue vy thin line w/5 rows dots inside</i>
TOD0	A	FC031	mac=106	maritime area - ASW area
0755	Line	LC(OPAREASubOA)		<i>UI vy dk blue vy thin line w/vert inward ticks</i>
TOD0	A	FC031	mac=107	maritime area - submarine op area
0756	Line	LC(OPAREAstlsub)		<i>feature brown vy thin line w/vert inward ticks</i>
TOD0	A	FC031	mac=108	maritime area - submarine traffic lane submerged
0757	Line	LC(OPAREAstlsur)		<i>feature brown vy thin line w/3 rows dots ins</i>
TOD0	A	FC031	mac=109	maritime area - submarine traffic lane surface
0758	Line	LC(OPAREAsfl)		<i>feature brown 5 dot vy thin line</i>
TOD0	A	FC031	mac=110	maritime area - surface traffic lane
0759	Line	LC(OPAREAAalcorr)		<i>green thin line w/stagrd dots inside</i>
TOD0	A	GA005	aua=0or20or36or998	air lanes/corridors
0760	Line	LC(OPAREAADIZ)		<i>magenta vy thin line w/ 3 row vert dots inside</i>
TOD0	A	GA005	aua=2	airspace - air defense zone
0761	Line	LC(OPAREActlas)		<i>green vy thin line w/3 row vert dots</i>
TOD0	A	GA005	aua=9or21or22or23or34or46or70	airspace - controlled
0762	Line	LC(OPAREAFIR)		<i>green thin line with ticks inside</i>
TOD0	A	GA005	aua=13	airspace - flight information region
0763	Line	LC(OPAREAUIR)		<i>green thin line with open tabs inside</i>
TOD0	A	GA005	aua=40	airspace - upper flight information region
0764	Line	LC(OPAREAAWAB)		<i>magenta thin line w/ rt angle ticks inside</i>
TOD0	A	GA015	aul=0or5or6	special use airspace - warning area
0765	Line	LC(OPAREAAARAB)		<i>magenta thin line w/ lft angle ticks inside</i>
TOD0	A	GA015	aul=2or3	special use airspace - prohibited,restricted
0802	Area	AC(CHGRD)		<i>gray solid fill</i>
DNC	A	AN060		railroad yard/marshalling yard
DTOP	A	AL105	<>pop	settlement
DTOP	A	AN060		railroad yard/marshalling yard
FFD	A	AN060		railroad yard/marshalling yard
UVM	A	AN060		railroad yard/marshalling yard
VITD	A	AN060		railroad yard/marshalling yard

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Product	Delin	FCODE	Attribute Condition	Description
VML1	A	AN060		railroad yard/marshalling yard
VML2	A	AN060		railroad yard/marshalling yard
0803	Area	AC(DEPIT)		<i>yellow-green solid fill</i>
DNC	A	AL200	loc=22 AND verr=8	ruins - offshore, covers and uncovers
DNC	A	BA020		foreshore
DNC	A	BD020	verr=8 AND hdp=NULL	crib - covers and uncovers
DNC	A	BD100	verr=8	pile/piling/post - covers and uncovers
DNC	A	BD120	verr=8	reef - covers and uncovers
DNC	A	BD140	verr=8	snags/stumps - covers and uncovers
DNC	A	BD180	verr=8 AND hdp=NULL	wreck - covers and uncovers; depth null
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DTOP	A	BA020		foreshore
DTOP	A	BJ110		tundra
DTOP	A	EB010		grassland
DTOP	A	EB020		scrub/brush
DTOP	A	EC010		bamboo/cane
DTOP	A	EC030	veg=0or24	trees - deciduous, unknown
DTOP	A	EC030	veg=25or50	trees - evergreen, mixed
DTOP	A	EC030	veg=52	trees - clearing
FFD	A	EC030	tre=0or1	trees - deciduous, unknown
FFD	A	EC030	tre=2or3	trees - evergreen, mixed
UVM	A	BA020		foreshore
UVM	A	EB010		grassland
UVM	A	EB020		scrub/brush
UVM	A	EC010		bamboo/cane
UVM	A	EC030	tre=2	trees - evergreen
UVM	A	EC030	tre=0or1or3	trees - deciduous, mixed, unknown
VITD	A	EB010		grassland
VITD	A	EB020		scrub/brush
VITD	A	EC010		bamboo/cane
VITD	A	EC030	veg=0or24or50	trees - unknown, deciduous, mixed
VITD	A	EC030	veg=25	trees - evergreen
VITD	A	EC030	veg=52	trees - forest clearing
VITD	A	SA050	gsc=1	slope polygon - 0 to >45%, dissected
VML0	A	BJ110		tundra
VML0	A	EB010		grassland
VML0	A	EB020		scrub/brush
VML0	A	EC010		bamboo/cane
VML0	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML0	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
VML0	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML1	A	BA020		foreshore
VML1	A	BJ110		tundra
VML1	A	EB010		grassland
VML1	A	EC030	veg=11or12or17or18or29or38	trees - casuarina, coniferous, palm, filao, eucalyptus, cypress
VML1	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML1	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML2	A	BA020		foreshore
VML2	A	BJ110		tundra
VML2	A	EB010		grassland

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	EB020		scrub/brush
VML2	A	EC010		bamboo/cane
VML2	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML2	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
VML2	A	EC030	veg=16or19	trees - nipa palm, mangrove
0804	Area	AC(CHBRN)		<i>brown solid fill</i>
DNC	A	AC030		settling basin/sludge pond
DNC	A	AD010		power plant
DNC	A	AD030		substation/transformer yard
DNC	A	AH010		bastion/rampart/fortification
DNC	A	AH050		fortification
DNC	A	AK040		athletic field
DNC	A	AK100		golf course
DNC	A	AK120		park
DNC	A	AK160		stadium/amphitheater
DNC	A	AK180		zoo/safari park
DNC	A	AL015		building
DNC	A	AL020		built-up area
DNC	A	AL030		cemetery
DNC	A	AL200	loc=22 AND vrr=1	ruins - offshore, does not cover
DNC	A	AL200	loc=8	ruins - on ground surface
DNC	A	AM030		grain elevator
DNC	A	AM070		tank
DNC	A	AQ116		pumping station
DNC	A	AT020		early warning radar site
DNC	A	BB150		landing place
DNC	A	BB170		offshore loading facility
DNC	A	BD020	vrr=1 AND hdp=NULL	crib - above surface
DNC	A	BD100	vrr=1	pile/piling/post - does not cover
DNC	A	BD140	vrr=1	snags/stumps - does not cover
DNC	A	BD180	vrr=1 AND hdp=NULL	wreck - does not cover; depth null
DNC	A	GB055		runway
DTOP	A	AD010		power plant
DTOP	A	AD030		substation/transformer yard
DTOP	A	AM010		depot (storage)
DTOP	A	AM020		grain bin/silo
DTOP	A	AM030		grain elevator
DTOP	A	BJ020		moraine
DTOP	A	DB060	mcc=0or30	crevice/crevasse - earthen
DTOP	A	DB160		rock strata/rock formation
UVM	A	AD010		power plant
UVM	A	AD030		substation/transformer yard
UVM	A	AM010		depot (storage)
UVM	A	AM020		grain bin/silo
UVM	A	AM030		grain elevator
UVM	A	DB200		gully/gorge
VITD	A	DB200		gully/gorge
VML0	A	AA052		oil/gas field
VML1	A	AD010		power plant
VML1	A	BJ020		moraine
VML2	A	AD010		power plant
VML2	A	AD030		substation/transformer yard
VML2	A	AM010		depot (storage)

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	AM020		grain bin/silo
VML2	A	AM030		grain elevator
VML2	A	BJ020		moraine
VML2	A	DB060	mcc=0or30	crevice/crevasse - earthen
VML2	A	DB160		rock strata/rock formation
0805	Area	AC(DEPDW)		<i>depth white fill</i>
DNC	A	BA040		water (except inland)
DNC	A	BE010	idsm=1 AND cvl>=ssdcand<>99999	depth area (deep water); 2 shades
DNC	A	BE010	idsm=0 AND cvl>=msdcand<>99999	depth area (very deep); 4 shades
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DTOP	A	BA040		water (except inland)
DTOP	A	EA030		nursery
DTOP	A	EA040		orchard/plantation
DTOP	A	EA050		vineyards
FFD	A	BA040		water (except inland)
FFD	A	EA040		orchard/plantation
TOD1	A	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
TOD1	A	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
TOD2	A	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
TOD2	A	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
TOD3	A	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
TOD3	A	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
UVM	A	BA040		water (except inland)
UVM	A	EA030		nursery
UVM	A	EA040		orchard/plantation
UVM	A	EA050		vineyards
UVM	A	EA055		hops
UVM	A	EE000		miscellaneous vegetation
VITD	A	EA040		orchard/plantation
VITD	A	EA050		vineyards
VML0	A	BA040		water (except inland)
VML0	A	EA030		nursery
VML0	A	EA040		orchard/plantation
VML0	A	EA050		vineyards
VML1	A	BA040		water (except inland)
VML1	A	EA040		orchard/plantation
VML1	A	EA050		vineyards
VML2	A	BA040		water (except inland)
VML2	A	EA030		nursery
VML2	A	EA040		orchard/plantation
VML2	A	EA050		vineyards
0810	Area	AC(DEPVS)		<i>depth med blue solid fill</i>
DNC	A	AL200	loc=22 AND verr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
DNC	A	BC080		perches/stakes
DNC	A	BD000	hdp=0	underwater danger/hazard - depth unknown
DNC	A	BD020	verr=4 AND hdp=0	crib - submerged; depth unknown
DNC	A	BD030		discolored water
DNC	A	BD100	verr=4	pile/piling/post - submerged
DNC	A	BD120	verr<>8 AND hdp=0orNULL	reef - not covers and uncovers, depth unknown or null
DNC	A	BD140	verr=4	snags/stumps - submerged
DNC	A	BD180	verr=0or2 AND hdp=NULL	wreck - unknown; awash; depth null
DNC	A	BD180	verr=4 AND hdp=0	wreck - submerged; depth unknown
DNC	A	BE010	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
DNC	A	BE010	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
DNC	A	BE010	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
DNC	A	BH020		canal
DNC	A	BH080		lake/pond
DNC	A	BH130		reservoir
DNC	A	BH140		river/stream
DNC	A	BI030		lock
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DTOP	A	BD100		pile/piling/post
DTOP	A	BH050		fish hatchery/fish farm/marine farm
DTOP	A	BH150		salt pan
DTOP	A	BH155		salt evaporator
DTOP	A	BJ065		ice shelf
DTOP	A	BJ070		pack ice
DTOP	A	BJ080		polar ice
FFD	A	BH050		fish hatchery/fish farm/marine farm
FFD	A	BH155		salt evaporator
TOD1	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 2 shades; shallow mode on
TOD1	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD1	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD2	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD3	A	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
TOD3	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
UVM	A	BH015		bog
UVM	A	BH050		fish hatchery/fish farm/marine farm
UVM	A	BH150		salt pan
UVM	A	BH155		salt evaporator
VML0	A	BH015		bog
VML0	A	BH050		fish hatchery/fish farm/marine farm
VML0	A	BH155		salt evaporator
VML0	A	BJ065		ice shelf
VML0	A	BJ070		pack ice
VML0	A	BJ080		polar ice
VML1	A	BH015		bog
VML1	A	BH050		fish hatchery/fish farm/marine farm
VML1	A	BH150		salt pan
VML1	A	BH155		salt evaporator
VML1	A	BJ065		ice shelf
VML1	A	BJ070		pack ice
VML1	A	BJ080		polar ice
VML2	A	BD100		pile/piling/post
VML2	A	BH015		bog

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	BH050		fish hatchery/fish farm/marine farm
VML2	A	BH150		salt pan
VML2	A	BH155		salt evaporator
VML2	A	BJ065		ice shelf
VML2	A	BJ070		pack ice
VML2	A	BJ080		polar ice
0820	Area	AC(DEPMD)	depth pale blue solid fill	
DNC	A	BE010	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
DTOP	A	BH020	<>sdr	canal
DTOP	A	BH020	sdr hyc<>8	canal - non-perennial, dry, unknown
DTOP	A	BH020	sdr hyc=8	canal - perennial
DTOP	A	BH200		miscellaneous surface drainage feature
DTOP	A	BJ100		snow field/ice field
DTOP	A	DB060	mcc=103	crevice/crevasse - snow/ice
FFD	A	BH020	hyc=8	canal - perennial
FFD	A	BH020	hyc<>8	canal - non-perennial, dry, unknown
TOD1	A	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
TOD1	A	BE030		track swath
TOD2	A	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
TOD2	A	BE030		track swath
TOD3	A	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
TOD3	A	BE030		track swath
UVM	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
UVM	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VITD	A	BH020	hyc<>8	canal - not perennial
VITD	A	BH020	hyc=8	canal - perennial
VML0	A	BJ100		snow field/ice field
VML1	A	BJ100		snow field/ice field
VML2	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
VML2	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VML2	A	BJ100		snow field/ice field
VML2	A	DB060	mcc=103	crevice/crevasse - snow/ice
0821	Area	AC(DEPMS)	depth lt blue solid fill	
DNC	A	BE010	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DTOP	A	BH030	<>sdr	ditch
DTOP	A	BH030	sdr	ditch - not covered
FFD	A	BH030		ditch
TOD1	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off

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Product	Delin	FCODE	Attribute Condition	Description
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
UVM	A	BH030		ditch
VML2	A	BH030		ditch
0822	Area	AC(LANDA)		<i>lt brown solid fill</i>
DNC	A	AK090		fairgrounds
DNC	A	BA030		island
DNC	A	BB090		drydock
DNC	A	BJ110		tundra
DNC	A	DA010		ground surface element
DNC	A	GB005		airport/airfield
DTOP	A	BA030		island
DTOP	A	DA010	smc<>84	ground surface element - not rocky
DTOP	A	DA010	smc=84	ground surface element - rocky
FFD	A	BA030		island
UVM	A	BA030		island
UVM	A	DA010	mcc=52	ground surface element - lava
UVM	A	DA010	mcc=88	ground surface element - sand
UVM	A	DA010	mcc=8or46or84	ground surface element - boulders, gravel, rock
UVM	A	DA010	mcc<>8and<>46and<>52and<>84and<>88	ground surface element - not rock, not lava, not sand
VITD	A	BA030		island
VITD	A	DA010	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9	ground surface element - silts, clays, evaporites, other
VITD	A	DA010	stp=1or2or3or4	ground surface element - gravels
VITD	A	DA010	stp=5or6or7or8or9	ground surface element - sands
VML0	A	DA010	smc=52	ground surface element - lava
VML0	A	DA010	smc=88	ground surface element - sand
VML0	A	DA010	smc<>52and<>88	ground surface element - not lava, not sand
VML1	A	BA030		island
VML1	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
VML1	A	DA010	mcc=46or8	ground surface element - boulders, gravel
VML1	A	DA010	mcc=52	ground surface element - lava
VML1	A	DA010	mcc=88	ground surface element - sand
VML2	A	BA030		island
VML2	A	DA010	mcc=52	ground surface element - lava
VML2	A	DA010	mcc=88	ground surface element - sand
VML2	A	DA010	mcc=46or8	ground surface element - boulders, gravel
VML2	A	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
0823	Area	AC(NODTA)		<i>no data gray solid fill</i>
DNC	A	BE010	cvl=99999	depth area; depth unknown
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
DNC	A	FC021	mac=26	maritime limit boundary - unsurveyed
DTOP	A	AL135	<>pop	native settlement
DTOP	A	AL135	pop	native settlement
FFD	A	AL135		native settlement
TOD1	A	BE019	cvl=-32767	depth area; depth unknown
TOD2	A	BE019	cvl=-32767	depth area; depth unknown
TOD3	A	BE019	cvl=-32767	depth area; depth unknown
UVM	A	AL135		native settlement
VML0	A	AL135		native settlement
VML1	A	AL135		native settlement
VML2	A	AL135		native settlement

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Product	Delin	FCODE	Attribute Condition	Description
0824	Area	AC(TRFCF)		<i>traffic lt magenta solid fill</i>
DNC	A	FC041	tsp=3	traffic separation scheme (TSS) - separation zone area
0902	Point	SY(ACHARE51)		<i>lt magenta anchor</i>
DNC	A	BB010	mac<>12	anchorage - not anchoring berth
DTOP	A	BB010		anchorage
VML2	A	BB010		anchorage
0903	Area	AP(FSHFAC04)		<i>gray fish trap patt fill</i>
DNC	A	BB110		fish traps/fish weirs
DNC	A	FC021	mac=56	maritime limit boundary - fish traps
0904	Area	AP(MARCUL02)		<i>gray fish in net patt fill</i>
DNC	A	BB180		oyster bed/mussel bed
DNC	A	BH050		fish hatchery/fish farm/marine farm
DNC	A	FC021	mac=57	maritime limit boundary - marine farm
0910	Area	AP(MARSHES1)		<i>brown marsh patt fill</i>
DNC	A	BH095		marsh/swamp
0911	Area	AP		<i>depth med blue grid patt fill</i>
DNC	A	BH155		salt evaporator
0912	Area	AP(ICEARE04)		<i>gray random line patt fill</i>
DNC	A	BJ030		glacier
DNC	A	BJ065		ice shelf
DNC	A	BJ100		snow field/ice field
0913	Area	AP		<i>feature brown solid filled circle patt fill</i>
DNC	A	DB090		embankment/fill
DNC	A	DB170		sand dune/sand hills
0914	Area	AP		<i>feature brown circs patt fill</i>
DNC	A	EA030		nursery
0915	Area	AP(VEGATN03)		<i>feature brown tree side-view patt fill</i>
DNC	A	EA040		orchard/plantation
DNC	A	EA050		vineyards
DNC	A	EC030	veg<>19	trees - not mangrove
0916	Area	AP(VEGATN04)		<i>feature brown mangrove side-view patt fill</i>
DNC	A	EC030	veg=19	trees - mangrove
0919	Area	AP(DRGARE01)		<i>gray diag spaced dot patt fill</i>
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<mssc	maritime area - dredged channel, 4 shades, medium deep
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=mssc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off

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Product	Delin	FCODE	Attribute	Condition	Description
0932	Area	AP(AIRARE02)			<i>feature brown airplane patt fill</i>
DNC	A	GB005			airport/airfield
0933	Area	AP(NODATA03)			<i>gray offset dash patt fill</i>
DNC	A	FC021	mac=26		maritime limit boundary - unsurveyed
0934	Area	AP(PRTSUR01)			<i>gray dash wide patt fill</i>
DNC	A	BE010	cvl=99999		depth area; depth unknown
TOD1	A	BE019	cvl=-32767		depth area; depth unknown
TOD2	A	BE019	cvl=-32767		depth area; depth unknown
TOD3	A	BE019	cvl=-32767		depth area; depth unknown
0949	Area	AP(DIAMOND1)			<i>depth gray diamond patt fill</i>
DNC	A	BA020	isdsm=1		foreshore - shallow display mode on
DNC	A	BD120	vrr=8 AND isdm=1		reef - covers and uncovers, shallow display mode on
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl<mssc		depth area (very shallow); 4 shades; shallow mode on
DNC	A	BE010	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		depth area (medium shallow); 4 shades; shallow mode on
DNC	A	BE010	idsm=1 AND isdm=1 AND cvl<ssdc		depth area (very shallow); 2 shades; shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1		maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1		maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1		maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1		maritime area - dredged channel, depth unknown, shallow mode on
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		depth area (medium shallow); 4 shades; shallow mode on
TOD1	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc		depth area (very shallow); 2 shades; shallow mode on
TOD1	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc		depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc		depth area (very shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		depth area (medium shallow); 4 shades; shallow mode on
TOD2	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc		depth area (very shallow); 2 shades; shallow mode on
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl<mssc		depth area (very shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc		depth area (medium shallow); 4 shades; shallow mode on
TOD3	A	BE019	idsm=1 AND isdm=1 AND cvl<ssdc		depth area (very shallow); 2 shades; shallow mode on
1001	Point	SY			<i>red filled square black outline</i>
UVM	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or38or52or61or62or64or65or66or67or77or78or79or80or96or101or119or121or123or723		building - government
VML2	P	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96		building - government
1002	Point	SY			<i>black filled cir w/ white cross inside</i>
DTOP	P	AL015	bfc=6		building - hospital
UVM	P	AL015	bfc=6or100		building - hospital
VML2	P	AL015	bfc=6		building - hospital
1003	Point	SY			<i>black cross</i>
DTOP	P	AL015	bfc=7		building - house of worship - church
UVM	P	AL015	bfc=7or114 AND hwt=0or2or3or4or7or23 OR bfc=50		building - house of worship - church
VML1	P	AL015	bfc=7 AND hwt=0or2or3or4or7		building - house of worship - church
VML2	P	AL015	bfc=7 AND hwt=0or2or3or4or7		building - house of worship - church
1004	Point	SY			<i>black pencil shape symbol</i>
UVM	P	AL120			missile site
1006	Point	SY			<i>basic blue line w/ arrow</i>
UVM	P	BG010			current flow

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1007	Point	SY		<i>basic blue cir</i>
UVM	P	BH010		aqueduct
VML1	P	BH010		aqueduct
VML2	P	BH010		aqueduct
1009	Point	SY		<i>UI very dk blue filled diamond</i>
UVM	P	BH075		fountain
1010	Point	SY		<i>basic blue solid square</i>
DTOP	P	BI010		cistern
UVM	P	BI010		cistern
VML1	P	BI010		cistern
VML2	P	BI010		cistern
1011	Point	SY		<i>black sm filled cir beside +-</i>
DTOP	P	CA030	ela<>1	spot elevation - not accurate
FFD	P	CA030	ela<>1	spot elevation - not accurate
UVM	P	CA030	ela<>1	spot elevation - not accurate
VML1	P	CA030	ela<>1	spot elevation - not accurate
VML2	P	CA030	ela<>1	spot elevation - not accurate
1012	Point	SY		<i>aero-blue solid filled star</i>
DTOP	P	GB010		airport lighting
UVM	P	GB010		airport lighting
VML1	P	GB010		airport lighting
VML2	P	GB010		airport lighting
1171	Point	SY		<i>black opposing open equi triangles</i>
DTOP	P	AQ058		constriction/expansion
DTOP	P	AQ111		prepared raft or float bridge site
VITD	P	AQ058	wd1=40	constriction/expansion
VITD	P	AQ058	wd1<40	constriction/expansion
VITD	P	AQ111		prepared raft or float bridge site
1172	Point	SY		<i>black diamond w/ curve staffed arrow</i>
DTOP	P	AQ118		sharp curve(s)
VITD	P	AQ118		sharp curve(s)
1205	Point	SY		<i>brown vert line w/ horizontal ticks on rt side</i>
DTOP	P	AL075		gallery
1206	Point	SY		<i>black line w/ indented rectangle</i>
DTOP	P	AL155		overhead obstruction location
1211	Point	SY		<i>black two rt pointing triangles</i>
DTOP	P	AQ120		steep grade
1220	Point	SY(RCTLPT52)		<i>traffic magenta dashed open arrow</i>
DNC	P	FC165	dof<>0	route (maritime) - direction known
1233	Point	SY		<i>black horiz line below triangle w/ B inside</i>
DNC	P	BF010	mcc=0 AND psc=0	bottom characteristics - surface unknown
1236	Point	SY(ITZARE51)		<i>lt magenta IT</i>
DNC	A	FC031	mac=41	maritime area - inshore traffic zone (TSS)
1238	Point	SY(DWRTP51)+ SY(TSLDEF51)		<i>traffic lt mag DW filled arrow btwn 2 mgnta ?</i>
DNC	A	FC165	rtt=4	route (maritime) - deep water
1251	Point	SY(SOUND*C2)		<i>sounding gray circle</i>
DNC	P	BE020	acc<>1	sounding or drying height - circle (light) indicating low accuracy
TOD1	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
TOD2	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy

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Product	Delin	FCODE	Attribute Condition	Description
TOD3	P	BE020	acc<>1	sounding - circle (light) indicating low accuracy
1256	Point	SY(SOUNDSA1)		<i>sounding black overbar</i>
DNC	P	BE020	hdh>=0 AND hdp=NULL	drying height overbar (dark)
1310	Line	LC		<i>black one long dash two short dash line</i>
DNC	L	FA000	use=23	administrative boundary - international
DNC	L	FA060		defacto boundary
DTOP	L	FA000	use=23	administrative boundary - international
FFD	L	FA000	use=23	administrative boundary - international
UVM	L	FA000	use=23	administrative boundary - international
VML0	L	FA000	use=23	administrative boundary - international
VML1	L	FA000	use=4or23	administrative boundary - international
VML2	L	FA000	use=23	administrative boundary - international
1311	Line	LC		<i>black long dash short dash line</i>
DTOP	L	FA000	use=0or26	administrative boundary - primary, unknown
FFD	L	FA000	use=0or26	administrative boundary - primary, unknown
UVM	L	FA000	use=0or26or999	administrative boundary - primary, unknown, other
VML0	L	FA000	use=26	administrative boundary - primary
VML1	L	FA000	use=0or26	administrative boundary - primary, unknown
VML2	L	FA000	use=0or26	administrative boundary - primary, unknown
VVOD	L	FA000		Administrative Boundary (libref)
1314	Line	LS(SOLD,1,CHBLK)		<i>black very thin solid line</i>
DTOP	L	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
UVM	L	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
VITD	L	AQ113		pipeline/pipe
VML0	L	AQ113	loc=8	pipeline/pipe - on ground
VML1	L	AQ113	loc=0or8 AND pro<>116	pipeline/pipe - surface; not water
VML2	L	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
1406	Line	LS(SOLD,2,CHBRN)		<i>brown thin solid line</i>
VITD	L	DB200		gully/gorge
1412	Line	LS(SOLD,2,DEPIT)		<i>yellow-green thin solid line</i>
DTOP	L	EA020		hedgerow
DTOP	A	EA010	veg=0	cropland - other
DTOP	A	EA010	veg=4	cropland - rice paddies
DTOP	A	EA030		nursery
DTOP	A	EC020	veg=17	oasis - palm
DTOP	A	EC020	veg<>17	oasis - not palm
UVM	L	EA020		hedgerow
UVM	A	EA010	veg=4	cropland - rice paddies
UVM	A	EA010	veg=0or999	cropland - other
UVM	A	EA030		nursery
UVM	A	EE000		miscellaneous vegetation
VITD	L	EA020		hedgerow
VITD	A	EA010	veg<>1	cropland - other
VML0	L	EA020		hedgerow
VML0	A	EA010	veg<>1	cropland - other
VML0	A	EA030		nursery
VML0	A	EC020	veg=17	oasis - palm
VML0	A	EC020	veg<>17	oasis - not palm
VML1	A	EA010	veg<>1	cropland - other
VML2	L	EA020		hedgerow
VML2	A	EA010	veg<>1	cropland - other
VML2	A	EA030		nursery

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	EC020	veg<>17	oasis - not palm
VML2	A	EC020	veg=17	oasis - palm
1573	Line	LS(SOLD,1,CSTLN)		<i>dk gray very thin solid line</i>
DNC	L	BA010	acc=1 AND slt<>6and<>8	coastline/shoreline - accurate; not mangrove or marsh
DNC	A	BB090		drydock
DTOP	A	AM010		depot (storage)
DTOP	A	AM020		grain bin/silo
DTOP	A	AM030		grain elevator
DTOP	A	DB160		rock strata/rock formation
UVM	A	AM010		depot (storage)
UVM	A	AM020		grain bin/silo
UVM	A	AM030		grain elevator
VML2	A	AM010		depot (storage)
VML2	A	AM020		grain bin/silo
VML2	A	AM030		grain elevator
VML2	A	DB160		rock strata/rock formation
VVOD	L	BA010		coastline/shoreline (libref)
1601	Area	AC(CHRED)		<i>red solid fill</i>
DTOP	A	SA050	spr=7	slope polygon - > 60% and <= 85%
1651	Line	LS(DASH,2,TRFCF)		<i>traffic lt magenta thin dash line</i>
DNC	L	FC021	mac=48 AND mbl=NULL	maritime limit boundary - pilot boarding
DNC	A	FC021	mac=48	maritime limit boundary - pilot boarding
1655	Line	LS(DASH,2,blue)		<i>basic blue thin dash line</i>
DTOP	A	BJ030		glacier
VITD	A	SA040		permanent snowfield
VML0	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML1	A	BJ030		glacier
VML1	A	EC030	veg=16or19	trees - nipa palm, mangrove
VML2	A	BJ030		glacier
VML2	A	EC030	veg=16or19	trees - nipa palm, mangrove
1656	Line	LS(SOLD,1,blu100)		<i>100% cyan blue very thin solid line</i>
DTOP	L	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
DTOP	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
DTOP	L	BH140	hyc=0or8	river/stream - perennial, unknown
DTOP	L	BH140	hyc=3or6	river/stream - dry, intermittent
DTOP	L	DB060	mcc=103	crevice/crevasse - snow/ice
DTOP	A	BH020	<>sdr	canal
DTOP	A	BH020	sdr hyc=8	canal - perennial
DTOP	A	BH080	sdr hyc<>8	lake/pond - not perennial
DTOP	A	BH080	sdr hyc=8	lake/pond - perennial
DTOP	A	BH080	<>sdr	lake/pond
DTOP	A	BH130		reservoir
DTOP	A	BH140	<>sdr	river/stream
DTOP	A	BH140	sdr hyc=0or8	river/stream - perennial, unknown
DTOP	A	BH140	sdr hyc=3or6	river/stream - dry, intermittent
DTOP	A	BH155		salt evaporator
FFD	L	BA010	acc=1	coastline/shoreline - accurate
FFD	L	BA010	acc<>1	coastline/shoreline - not accurate
FFD	L	BH140	hyc=0or8	river/stream - perennial, unknown
FFD	L	BH140	hyc=3or6	river/stream - dry, non-perennial
FFD	A	BH020	hyc=8	canal - perennial
FFD	A	BH080	hyc=3	lake/pond - dry
FFD	A	BH080	hyc=0or8	lake/pond - perennial, unknown

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Product	Delin	FCODE	Attribute Condition	Description
FFD	A	BH130		reservoir
FFD	A	BH140	hyc=3or6	river/stream - dry, non-perennial
FFD	A	BH140	hyc=0or8	river/stream - perennial, unknown
FFD	A	BH155		salt evaporator
UVM	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
UVM	L	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
UVM	L	BH140	hyc=3or6	river/stream - dry, intermittent
UVM	L	BH140	hyc=0or8	river/stream - perennial, unknown
UVM	L	BH210	slt=0or10or11or13or14or15	inland shoreline - unknown, rocky, rubble, sandy, stony, other
UVM	L	BH210	slt=6or8	inland shoreline - mangrove, marsh
UVM	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
UVM	A	BH080	hyc=3or6	lake/pond - dry, intermittent
UVM	A	BH080	hyc=0or8	lake/pond - perennial, unknown
UVM	A	BH130		reservoir
UVM	A	BH140	hyc=0or8	river/stream - perennial, unknown
UVM	A	BH140	hyc=3or6	river/stream - dry, intermittent
UVM	A	BH155		salt evaporator
VITD	L	BH140	hyc=0or8or14	river/stream - perennial, braided, unknownn
VITD	L	BH140	hyc=3or6	river/stream - dry, intermittent
VITD	A	BH020	hyc=8	canal - perennial
VITD	A	BH140	hyc=0or8or14	river/stream - perennial, braided, unknown
VITD	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML0	L	BA010		coastline/shoreline
VML0	L	BH140	hyc=0or8	river/stream - perennial, unknown
VML0	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML0	A	BH155		salt evaporator
VML1	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
VML1	L	BA010	slt<>6and<>8	coastline/shoreline -not mangrove or marsh
VML1	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML1	L	BH140	hyc=0or8	river/stream - perennial, unknown
VML1	L	DB060	mcc=103	crevice/crevasse - snow/ice
VML1	A	BH080	hyc=3or6	lake/pond - dry, intermittent
VML1	A	BH080	hyc=0or8	lake/pond - perennial, unknown
VML1	A	BH130		reservoir
VML1	A	BH140	hyc=0or8	river/stream - perennial, unknown
VML1	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML1	A	BH155		salt evaporator
VML2	L	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
VML2	L	BA010	slt<>6and<>8	coastline.shoreline - not mangrove or marsh
VML2	L	BH140	hyc=3or6	river/stream - dry, intermittent
VML2	L	BH140	hyc=0or8	river/stream - perennial, unknown
VML2	L	DB060	mcc=103	crevice/crevasse - snow/ice
VML2	A	BH020	exs=32 AND hyc=8	canal - navigable; perennial
VML2	A	BH080	hyc=3or6	lake/pond - dry, intermittent
VML2	A	BH080	hyc=0or8	lake/pond - perennial, unknown
VML2	A	BH130		reservoir
VML2	A	BH140	hyc=3or6	river/stream - dry, intermittent
VML2	A	BH140	hyc=0or8	river/stream - perennial, unknown
VML2	A	BH155		salt evaporator
VVOD	L	BH140		river/stream (libref)
1855	Line	LS(SOLD,2,med-red-brown)		<i>red brown thin solid line</i>
DTOP	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
DTOP	L	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	L	AP030	med=1	road - divided w/ median
DTOP	L	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
FFD	L	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
FFD	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
FFD	L	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
FFD	L	AP030	med=1	road - divided w/ median
UVM	L	AP030	med=1	road - divided w/ median
UVM	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
UVM	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
UVM	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
UVM	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
UVM	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
VITD	L	AP030	fco=0or7 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
VITD	L	AP030	fco=0or7 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
VITD	L	AP030	fco=0or7 AND wtc=2	road - fair weather, no median
VITD	L	AP030	fco=5or6	road - divided w/ median
VML0	L	AP030	med=1	road - divided w/ median
VML0	L	AP030	med<>1	road - no median
VML1	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
VML1	L	AP030	med=1	road - divided w/ median
VML1	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
VML1	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
VML1	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
VML1	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
VML2	L	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
VML2	L	AP030	med<>1 AND wtc=2	road - fair weather, no median
VML2	L	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
VML2	L	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
VML2	L	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
VML2	L	AP030	med=1	road - divided w/ median
1901	Area	AC(UIAFF)		<i>UI lt brown solid fill</i>
DTOP	A	SA050	spr=2	slope polygon - > 10% and <= 15%
VITD	A	SA050	gsc=4	slope polygon - > 10% and <= 20%
1902	Area	AC(dark-beige)		<i>dk beige solid fill</i>
DTOP	A	SA050	spr=3	slope polygon - > 15% and <= 20%
1903	Area	AC(med-rose)		<i>rose solid fill</i>
DTOP	A	DB170	ssc=28	sand dune/sand hills - ripple
DTOP	A	DB170	ssc=29	sand dune/sand hills - star
DTOP	A	DB170	ssc=0	sand dune/sand hills - unknown
DTOP	A	DB170	ssc=22	sand dune/sand hills - crescent
DTOP	A	DB170	ssc=30	sand dune/sand hills - transverse
DTOP	A	DB170	ssc=27	sand dune/sand hills - mounds
DTOP	A	DB170	ssc=26	sand dune/sand hills - lateral
DTOP	A	SA050	spr=4	slope polygon - > 20% and <= 30%
UVM	A	DB170	ssc=30	sand dune/sand hills - transverse
UVM	A	DB170	ssc=27	sand dune/sand hills - mounds
UVM	A	DB170	ssc=0	sand dune/sand hills - unknown
UVM	A	DB170	ssc=28	sand dune/sand hills - ripple
UVM	A	DB170	ssc=26	sand dune/sand hills - lateral
UVM	A	DB170	ssc=22	sand dune/sand hills - crescent
UVM	A	DB170	ssc=29	sand dune/sand hills - star
VITD	A	SA050	gsc=5	slope polygon - > 20% and <= 30%
VML1	A	DB170	ssc=0	sand dune/sand hills - unknown

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Product	Delin	FCODE	Attribute Condition	Description
VML1	A	DB170	ssc=30	sand dune/sand hills - transverse
VML1	A	DB170	ssc=29	sand dune/sand hills - star
VML1	A	DB170	ssc=28	sand dune/sand hills - ripple
VML1	A	DB170	ssc=27	sand dune/sand hills - mounds
VML1	A	DB170	ssc=22	sand dune/sand hills - crescent
VML1	A	DB170	ssc=26	sand dune/sand hills - lateral
VML2	A	DB170	ssc=28	sand dune/sand hills - ripple
VML2	A	DB170	ssc=30	sand dune/sand hills - transverse
VML2	A	DB170	ssc=27	sand dune/sand hills - mounds
VML2	A	DB170	ssc=26	sand dune/sand hills - lateral
VML2	A	DB170	ssc=22	sand dune/sand hills - crescent
VML2	A	DB170	ssc=0	sand dune/sand hills - unknown
VML2	A	DB170	ssc=29	sand dune/sand hills - star
1904	Area	AC(ADINF)		<i>golden yellow solid fill</i>
DTOP	A	SA050	spr=5	slope polygon - > 30% and <= 45%
UVM	A	AQ150		flight of steps
VITD	A	SA050	gsc=6	slope polygon - > 30% and <= 45%
1905	Area	AC(white)		<i>basic white solid fill</i>
DTOP	A	SA050	spr=999	slope polygon - % unknown
VITD	A	SA050	gsc=0	slope polygon - % unknown
1906	Area	AC(lite-red-brown)		<i>lt red brown solid fill</i>
DTOP	A	SA050	spr=8	slope polygon - > 85%
UVM	A	AP030	med<>1 AND wtc<>2	road - all weather no median
2001	Point	SY		<i>black pick & hammer</i>
DTOP	P	AA010	exs<>6	mine - active
DTOP	P	AA012	exs<>6	quarry - active
DTOP	A	AA010	exs<>6	mine - active
DTOP	A	AA012	exs<>6	quarry - active
UVM	P	AA010	exs<>6	mine - active
UVM	P	AA012	exs<>6	quarry - active
UVM	A	AA010	exs<>6	mine - active
UVM	A	AA012	exs<>6	quarry - active
VML0	P	AA010		mine/quarry
VML0	A	AA010		mine/quarry
VML1	P	AA010	exs<>6	mine/quarry - active
VML1	A	AA010	exs<>6	mine/quarry - active
VML2	P	AA010	exs<>6	mine/quarry - active
VML2	A	AA010	exs<>6	mine/quarry - active
2003	Point	SY		<i>basic blue solid filled cir</i>
DTOP	P	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
DTOP	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
DTOP	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
DTOP	P	BH170	hyc=0or8	spring/water-hole - perennial
DTOP	P	BH180		waterfall
UVM	P	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
UVM	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
UVM	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
UVM	P	BH170	hyc=0or8	spring/water-hole - perennial
VML0	P	AM080		water tower
VML0	P	BH120		rapids
VML0	P	BH170		spring/water-hole
VML0	P	BH180		waterfall
VML1	P	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry

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Product	Delin	FCODE	Attribute Condition	Description
VML1	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
VML1	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
VML1	P	BH170	hyc=0or8	spring/water-hole - perennial
VML1	P	BH180		waterfall
VML2	P	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
VML2	P	AA050	hyc=0or8 AND pro=116	well - water/perennial
VML2	P	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
VML2	P	BH170	hyc=0or8	spring/water-hole - perennial
VML2	P	BH180		waterfall
2005	Point	SY		<i>black building w/ 2 smokestacks above</i>
DTOP	P	AC020		catalytic cracker
UVM	P	AC020		catalytic cracker
VML2	P	AC020		catalytic cracker
2016	Point	SY		<i>black dot inside double cir</i>
DTOP	P	AF030		cooling tower
UVM	P	AF030		cooling tower
VML1	P	AF030		cooling tower
VML2	P	AF030		cooling tower
2019	Point	SY		<i>black sm filled cir</i>
DTOP	P	AA040		rig/superstructure
DTOP	P	AC000		processing plant/treatment plant
DTOP	P	AD020		solar panels
DTOP	P	AD030		substation/transformer yard
DTOP	P	AL240		tower (non-communication)
DTOP	P	AM030		grain elevator
DTOP	P	AM070		tank
UVM	P	AA040		rig/superstructure
UVM	P	AD030		substation/transformer yard
UVM	P	AL240		tower (non-communication)
UVM	P	AM030		grain elevator
UVM	P	AM070		tank
VML0	P	AC000		processing plant/treatment plant
VML0	P	AC040		oil/gas facilities
VML0	P	AD010		power plant
VML0	P	AD030		substation/transformer yard
VML0	P	AI030		camp
VML0	P	AL240		tower (non-communication)
VML0	P	AM070		tank
VML0	P	AQ130		tunnel
VML1	P	AA040		rig/superstructure
VML1	P	AC000		processing plant/treatment plant
VML1	P	AD010		power plant
VML1	P	AL240		tower (non-communication)
VML1	P	AM030		grain elevator
VML1	P	AM070		tank
VML2	P	AA040		rig/superstructure
VML2	P	AC000		processing plant/treatment plant
VML2	P	AD020		solar panels
VML2	P	AD030		substation/transformer yard
VML2	P	AL240		tower (non-communication)
VML2	P	AM030		grain elevator
VML2	P	AM070		tank

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Product	Delin	FCODE	Attribute Condition	Description
2036	Point	SY		<i>black sm filled square</i>
DNC	P	AL015	bfc<>7and<>81	building - not house of worship, not maritime station
DTOP	P	AL200		ruins
DTOP	P	AQ116		pumping station
DTOP	P	AT050		communication building
UVM	P	AL200		ruins
UVM	P	AM010		depot (storage)
UVM	P	AQ116		pumping station
UVM	P	AT050		communication building
VML0	P	AL015		building
VML0	P	AL200		ruins
VML0	P	AM010		depot (storage)
VML0	P	AN060		railroad yard/marshalling yard
VML0	P	AQ116		pumping station
VML0	P	AT050		communication building
VML1	P	AL200		ruins
VML1	P	AQ116		pumping station
VML2	P	AL200		ruins
VML2	P	AQ116		pumping station
VML2	P	AT050		communication building
2043	Point	SY		<i>black four black squares w/ connection</i>
DTOP	P	AH050		fortification
UVM	P	AH010		bastion/rampart/fortification
UVM	P	AH050		fortification
VML1	P	AH050		fortification
VML2	P	AH050		fortification
2051	Point	SY		<i>black ramp symbol</i>
DTOP	P	AL195		ramp
VITD	P	AL195		ramp
2053	Point	SY		<i>black sm open square w/ dot in center</i>
VML0	P	AL020		built-up area
VML0	P	AL105		settlement
VML0	P	AL135		native settlement
VML1	P	AL020		built-up area
2058	Point	SY		<i>gray filled square</i>
DTOP	P	AL100		hut
UVM	P	AL100		hut
VML1	P	AL100		hut
VML2	P	AL100		hut
2060	Point	SY		<i>black square w/ S inside</i>
UVM	P	AL135		native settlement
VML2	P	AL105		settlement
2072	Point	SY		<i>gray shadowed square</i>
DTOP	P	AL250		underground dwelling
UVM	P	AH060		underground bunker
UVM	P	AL250		underground dwelling
VML2	P	AL250		underground dwelling
2074	Point	SY		<i>brown cir</i>
DTOP	P	AM020		grain bin/silo
UVM	P	AM020		grain bin/silo
VML1	P	AM020		grain bin/silo
VML2	P	AM020		grain bin/silo

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Product	Delin	FCODE	Attribute Condition	Description
2076	Point	SY		<i>red brown filled semicircle</i>
DTOP	P	AM060		storage bunker/storage mound
UVM	P	AM060		storage bunker/storage mound
VML2	P	AM060		storage bunker/storage mound
2078	Point	SY		<i>basic blue dot inside cir</i>
DTOP	P	AM080		water tower
UVM	P	AM080		water tower
VML1	P	AM080		water tower
VML2	P	AM080		water tower
2080	Point	SY		<i>black rt diag line inside cir</i>
DTOP	P	AN075		railroad turntable
VML2	P	AN075		railroad turntable
2081	Point	SY(SAE0002)		<i>black open square</i>
VML1	P	AP020		interchange
2088	Point	SY		<i>purple dot inside cir</i>
DTOP	P	AQ060		control tower
UVM	P	AQ060		control tower
VML1	P	AQ060		control tower
VML2	P	AQ060		control tower
2090	Point	SY		<i>black cir w/ "C" inside</i>
DTOP	P	AQ065		culvert
VML0	P	AQ064		causeway
VML2	P	AQ065		culvert
2099	Point	SY		<i>black dot inside cir inside square</i>
UVM	P	AQ125		station (miscellaneous)
2100	Point	SY		<i>black box w/ round top w/ "T" inside</i>
DTOP	P	AQ130		tunnel
FFD	P	AQ130		tunnel
VITD	P	AQ130		tunnel
VML1	P	AQ130		tunnel
VML2	P	AQ130		tunnel
2101	Point	SY		<i>red brown octagon shape w/ "R" inside</i>
VML1	P	AQ135		vehicle stopping area/rest area
2102	Point	SY(DSHAER11)		<i>black satellite dish symbol</i>
DNC	P	AT010		disk/dish
2111	Point	SY		<i>brown filled cir</i>
DTOP	P	DB115		geothermal feature
VML0	P	BA030		island
VML1	P	DB115		geothermal feature
VML2	P	DB115		geothermal feature
2231	Point	SY		<i>UI very dk blue open diamond</i>
DTOP	P	BH120		rapids
VML1	P	BH120		rapids
VML2	P	BH120		rapids
2232	Point	SY		<i>basic blue solid arrowhead</i>
DTOP	P	BH145		river stream vanishing point
VML1	P	BH145		river stream vanishing point
VML2	P	BH145		river stream vanishing point
2233	Point	SY		<i>100% cyan blue square w/ grid inside</i>
VML0	P	BH155		salt evaporator

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Product	Delin	FCODE	Attribute Condition	Description
2234	Point	SY		<i>gray cir diagly half filled</i>
UVM	P	BH165		spillway
2239	Point	SY		<i>black open arrowhead</i>
DTOP	P	BI040		sluice gate
UVM	P	BI040		sluice gate
VML0	P	BI040		sluice gate
VML2	P	BI040		sluice gate
2242	Point	SY		<i>med blue 8 pt asterisk w/ open center</i>
DTOP	P	BJ060		ice peak/nunatak
VML1	P	BJ060		ice peak/nunatak
VML2	P	BJ060		ice peak/nunatak
2243	Point	SY		<i>black sm filled cir</i>
DTOP	P	CA030	ela=1	spot elevation - accurate
FFD	P	CA030	ela=1	spot elevation - accurate
UVM	P	CA030	ela=1	spot elevation - accurate
VML0	P	CA030		spot elevation
VML1	P	CA030	ela=1	spot elevation - accurate
VML2	P	CA030	ela=1	spot elevation - accurate
2245	Point	SY		<i>basic blue sm filled cir</i>
VML0	P	CA035		inland water elevation
2247	Point	SY		<i>black diag line w/ "L" on top</i>
DTOP	P	DB030		cave
UVM	P	DB030		cave
VML1	P	DB030		cave
VML2	P	DB030		cave
2249	Point	SY		<i>black)(symbol</i>
DTOP	P	DB150		mountain pass
VML1	P	DB150		mountain pass
VML2	P	DB150		mountain pass
2250	Point	SY		<i>brown 6 pt asterisk w/ open center</i>
DTOP	P	DB160		rock strata/rock formation
VML1	P	DB160		rock strata/rock formation
VML2	P	DB160		rock strata/rock formation
2251	Point	SY		<i>brown sm open cir w/ eight tics outside</i>
DTOP	P	DB180		volcano
VML2	P	DB180		volcano
2256	Point	SY		<i>lt gray/white divided square</i>
VML0	P	FA001		administrative area
2257	Point	SY		<i>black square w/ F</i>
UVM	P	FA015		firing range/gunnery range
2264	Point	SY		<i>black cir</i>
DTOP	P	BD100		pile/piling/post
VML2	P	BD100		pile/piling/post
2267	Point	SY		<i>aero-blue airplane</i>
DTOP	P	GB005	exs=28 AND use<>8and<>22	airport/airfield - non military; operational
FFD	P	GB005	exs=28 AND use<>8and<>22	airport/airfield - civilian, operational
UVM	P	GB005	exs=28 AND use<>8and<>22	airport/airfield - non military; operational
VML0	P	GB005	use<>8and<>22	airport/airfield - non military
VML1	P	GB005	exs=28 AND use<>8and<>22	airport/airfield - operational; non military
VML2	P	GB005	exs=28 AND use<>8and<>22	airport/airfield - operational; non military

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Product	Delin	FCODE	Attribute Condition	Description
2268	Point	SY		<i>lt gray airplane</i>
DTOP	P	GB005	exs<>28	airport/airfield - not operational
FFD	P	GB005	exs<>28	airport/airfield - non-operational
UVM	P	GB005	exs<>28	airport/airfield - not operational
VML1	P	GB005	exs<>28	airport/airfield - not operational
VML2	P	GB005	exs<>28	airport/airfield - not operational
2269	Point	SY		<i>lt red brown airplane</i>
DTOP	P	GB005	exs=28 AND use=8or22	airport/airfield - military; operational
FFD	P	GB005	exs=28 AND use=8or22	airport/airfield - military; operational
UVM	P	GB005	exs=28 AND use=8or22	airport/airfield - military; operational
VML0	P	GB005	use=8or22	airport/airfield - military
VML1	P	GB005	exs=28 AND use=8or22	airport/airfield - operational; military
VML2	P	GB005	exs=28 AND use=8or22	airport/airfield - operational; military
2273	Point	SY		<i>aero-blue solid cir w/ open diag band</i>
VML1	P	GB055	exs<>28	runway - not operational
VML1	P	GB055	exs=28	runway - operational
2274	Point	SY		<i>red "M" inside cir</i>
VML0	P	SU001		military base
2278	Point	SY		<i>black dot in square</i>
DTOP	P	ZB030		boundary monument
VML2	P	ZB030		boundary monument
2279	Point	SY		<i>black triangle w/ dot inside</i>
DTOP	P	ZB035		control point/control station
UVM	P	ZB020		benchmark
UVM	P	ZB035		control point/control station
VML1	P	ZB035		control point/control station
VML2	P	ZB035		control point/control station
2323	Point	SY		<i>black dot</i>
VML0	P	AL260		wall
3000	Line	LS(DASH,2,CHMGF)		<i>lt magenta thin dash line</i>
DNC	L	BB010	mac<>12	anchorage - not anchoring berth
DNC	L	BB010	mac=12	anchorage - anchoring berth
DNC	A	BB010	mac<>12	anchorage - not anchoring berth
DNC	A	BB010	mac=12	anchorage - anchoring berth
3003	Line	LS(SOLD,1,med-tan)		<i>tan very thin solid line</i>
DTOP	L	DB100		esker
VML1	L	DB100		esker
VML2	L	DB100		esker
3014	Line	LS(SOLD,3,CHBRN)		<i>brown solid line</i>
UVM	A	BH077		hummock
VML0	A	BH077		hummock
VML2	A	BH077		hummock
3017	Line	LS(DASH,2,CHBRN)		<i>brown thin dash line</i>
VML0	L	DB160		rock strata/rock formation
3024	Line	LS(SOLD,1,CHBRN)		<i>brown very thin solid line</i>
DTOP	L	DB060	mcc=0or30	crevice/crevasse - earthen
VML1	L	DB060	mcc=0or30	crevice/crevasse - earthen
VML2	L	DB060	mcc=0or30	crevice/crevasse - earthen
3026	Line	LS(SOLD,1,med-tan)		<i>tan very thin solid line</i>
DTOP	L	DB110		fault

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Product	Delin	FCODE	Attribute	Condition	Description
DTOP	A	EA010	veg=1		cropland - dry
UVM	L	DB110			fault
UVM	A	EA010	veg=1		cropland - dry
VITD	A	EA010	veg=1		cropland - dry
VML0	L	DB110			fault
VML0	A	EA010	veg=1		cropland - dry
VML1	L	DB110			fault
VML1	A	EA010	veg=1		cropland - dry
VML2	L	DB110			fault
VML2	A	EA010	veg=1		cropland - dry
3031	Line	LS(SOLD,2,dark-green)			<i>very dk green thin solid line</i>
VML1	L	EC030			trees
3047	Line	LS(L-DASH,2,blue)			<i>basic blue thin long dash line</i>
DTOP	L	BJ040			ice cliff
VML0	L	BJ040			ice cliff
VML1	L	BJ040			ice cliff
VML2	L	BJ040			ice cliff
3052	Line	LS(SOLD,1,aero-blue)			<i>aero-blue very thin solid line</i>
UVM	A	GB030			helicopter landing pad
3054	Line	LS(S-DASH,1,CHMGF)			<i>lt magenta very thin short dash line</i>
FFD	L	FC021	mbl=0		maritime limit boundary - unknown
UVM	L	FA015			firing range/gunnery range
3061	Line	LS(DOTT,2,CHMGD)			<i>magenta thin dotted line</i>
UVM	L	AL120			missile site
UVM	A	AL120			missile site
3069	Line	LS(SOLD,1,aero-blue)			<i>aero-blue very thin solid line</i>
UVM	L	GB055			runway
VITD	L	GB055			runway
VML1	L	GB055			runway
3070	Line	LS(SOLD,2,aero-blue)			<i>aero-blue thin solid line</i>
DTOP	A	GB075			taxiway
UVM	L	GB050			revetment (airfield)
UVM	L	GB075			taxiway
UVM	A	GB050			revetment (airfield)
UVM	A	GB075			taxiway
VML2	A	GB075			taxiway
3073	Line	LS(S-DASH,2,aero-blue)			<i>aero-blue thin short dash line</i>
DTOP	A	GB045			overrun/stopway
UVM	L	GB045			overrun/stopway
UVM	A	GB045			overrun/stopway
VML2	A	GB045			overrun/stopway
3076	Line	LS(SOLD,2,CHGRF)			<i>lt gray thin solid line</i>
UVM	L	EC040			cleared way/cut line/firebreak
VML0	L	EC040			cleared way/cut line/firebreak
VML1	L	EC040			cleared way/cut line/firebreak
VML2	L	EC040			cleared way/cut line/firebreak
3077	Line	LS(DASH,1,CHGRF)			<i>lt gray very thin dash line</i>
DNC	L	FC021	mbl=7 AND mac=NULL		maritime limit boundary - territorial waters baseline
DNC	L	FC031	mac=2		maritime area - dredged channel
DNC	A	BD060			kelp/seaweed

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
DNC	A	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
DNC	A	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
DNC	A	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
3082	Line	LS(SOLD,1,CHGRD)	<i>gray very thin solid line</i>	
DNC	L	BA020		foreshore
DNC	L	DB090		embankment/fill
DTOP	A	GB015		apron/hardstand
DTOP	A	ZD020		void collection area
FFD	L	BE015		depth contour
FFD	A	ZD020		void collection area
TOD0	A	ZD020		void collection area
TOD1	A	ZD020		void collection area
TOD2	A	ZD020		void collection area
TOD3	A	ZD020		void collection area
UVM	L	BH165		spillway
UVM	A	BH165		spillway
UVM	A	GB015		apron/hardstand
VML0	L	BE015		depth contour
VML0	A	ZD020		void collection area
VML1	L	BE015		depth contour
VML1	A	ZD020		void collection area
VML2	L	BE015		depth contour
VML2	A	GB015		apron/hardstand
VML2	A	ZD020		void collection area
3086	Line	LS(S-DASH,1,CHGRD)	<i>gray very thin short dash line</i>	
DTOP	L	AF020		conveyor
DTOP	L	AT060		telephone line/telegraph line
UVM	L	AF020		conveyor
UVM	L	AT060		telephone line/telegraph line
VML0	L	AT060		telephone line/telegraph line
VML1	L	AF020		conveyor
VML1	L	AT060		telephone line/telegraph line
VML2	L	AF020		conveyor
VML2	L	AT060		telephone line/telegraph line
3104	Line	LS(SOLD,3,CHRED)	<i>red solid line</i>	
VML0	A	SU001		military base
3108	Line	LS(SOLD,2,blu100)	<i>100% cyan blue thin solid line</i>	
DTOP	L	BH020	hyc=0or8	canal - perennial
DTOP	L	BH020	hyc=3	canal - dry

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Product	Delin	FCODE	Attribute Condition	Description
FFD	L	BH020	hyc<>8	canal - not perennial
FFD	L	BH020	hyc=8	canal - perennial
UVM	L	BH020	hyc<>8	canal - not perennial
UVM	L	BH020	hyc=8	canal - perennial
VITD	L	BH020		canal
VML1	L	BH020	hyc<>8	canal - not perennial
VML1	L	BH020	hyc=8	canal - perennial
VML2	L	BH020	hyc<>8	canal - not perennial
VML2	L	BH020	hyc=8	canal - perennial
3109	Line	LS(DOTT,2,blu100)		<i>100% cyan blue thin dotted line</i>
DTOP	L	BH200		miscellaneous surface drainage feature
3112	Line	LS(SOLD,2,CHBLK)		<i>black thin solid line</i>
DTOP	L	AL210		snow shed/rock shed
DTOP	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
DTOP	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
DTOP	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
DTOP	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
DTOP	L	BD120		reef
DTOP	L	BH100		moat
DTOP	L	DB090		embankment/fill
DTOP	L	DB145		miscellaneous obstacle
DTOP	L	DB190		volcanic dike
DTOP	A	BB090		drydock
DTOP	A	BD120		reef
DTOP	A	DB145		miscellaneous obstacle
FFD	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
FFD	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
FFD	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
FFD	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
TOD0	L	FC102		range center line
UVM	L	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
UVM	L	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
UVM	L	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
UVM	L	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
UVM	L	DB090		embankment/fill
UVM	A	AQ130		tunnel
UVM	A	BB090		drydock
UVM	A	DB090		embankment/fill
VITD	L	AN010	exs=0or1 AND fco<>2 AND rrc=4	railroad -operational/narrow/single
VITD	L	AN010	exs=0or1 AND fco=2 AND rrc<>4	railroad -operational/normal/multiple
VITD	L	AN010	exs=0or1 AND fco=2 AND rrc=4	railroad -operational/narrow/multiple
VITD	L	AN010	exs=0or1 AND fco<>2 AND rrc<>4	railroad -operational/normal/single
VITD	L	BH100		moat
VITD	L	DB090		embankment/fill
VITD	L	DB190		volcanic dike
VML0	L	AL210		snow shed/rock shed
VML0	L	AQ064		causeway
VML0	L	BD120		reef
VML0	L	DB090		embankment/fill
VML1	L	AL210		snow shed/rock shed
VML1	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
VML1	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
VML1	L	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
VML1	L	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single

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Product	Delin	FCODE	Attribute Condition	Description
VML1	L	BD120		reef
VML1	L	DB090		embankment/fill
VML1	A	BD120		reef
VML1	A	BH190		lagoon/reef pool
VML2	L	AL210		snow shed/rock shed
VML2	L	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single
VML2	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
VML2	L	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
VML2	L	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
VML2	L	BD120		reef
VML2	L	DB090		embankment/fill
VML2	A	BB090		drydock
VML2	A	BD120		reef
VML2	A	DB090		embankment/fill
3113	Line	LS(SOLD,3,CHBLK)		<i>black solid line</i>
DTOP	L	AL060		dragon teeth
DTOP	L	AL075		gallery
DTOP	L	AL260		wall
DTOP	L	AQ040		bridge/overpass/viaduct
DTOP	L	BI020		dam/weir
DTOP	A	AK160		stadium/amphitheater
DTOP	A	AL060		dragon teeth
FFD	L	AQ040		bridge/overpass/viaduct
FFD	L	BI020		dam/weir
UVM	L	AL260		wall
UVM	L	AQ040		bridge/overpass/viaduct
UVM	L	AQ065		culvert
UVM	L	BI020		dam/weir
UVM	A	AK160		stadium/amphitheater
VITD	L	AL060		dragon teeth
VITD	L	AL260		wall
VITD	L	AQ040		bridge/overpass/viaduct
VITD	L	BI020		dam/weir
VITD	A	AL060		dragon teeth
VML0	L	AL260		wall
VML0	L	AN010	exs=28 AND fco<>0and<>3	railroad -operational/normal/multiple
VML0	L	AN010	exs=28 AND fco=0or3	railroad -operational/normal/single
VML0	L	AQ040		bridge/overpass/viaduct
VML0	L	BI020		dam/weir
VML1	L	AL260		wall
VML1	L	AQ040		bridge/overpass/viaduct
VML1	L	BI020		dam/weir
VML2	L	AL060		dragon teeth
VML2	L	AL260		wall
VML2	L	AQ040		bridge/overpass/viaduct
VML2	L	BI020		dam/weir
VML2	A	AK160		stadium/amphitheater
VML2	A	AL060		dragon teeth
3114	Line	LS(S-DASH,1,CHBLK)		<i>black very thin short dash line</i>
DTOP	L	AK130		race track
DTOP	L	AL155		overhead obstruction location
DTOP	L	AN010	exs=8	railroad -dismantled
DTOP	L	BH070		ford
DTOP	A	AI020		mobile home/mobile home park

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Product	Delin	FCODE	Attribute Condition	Description
DTOP	A	AL200		ruins
FFD	L	AN010	exs=8	railroad -dismantled
FFD	L	BH070		ford
UVM	L	AK130		race track
UVM	L	AN010	exs=8	railroad -dismantled
UVM	L	BH070		ford
UVM	A	AI020		mobile home/mobile home park
UVM	A	AK130		race track
UVM	A	AL200		ruins
VITD	L	AN010	exs=8	railroad -dismantled
VITD	L	BH070		ford
VML0	L	BH070		ford
VML0	A	AK130		race track
VML1	L	AK130		race track
VML1	L	AN010	exs=8	railroad -dismantled
VML1	L	BH070		ford
VML1	A	AL200		ruins
VML2	L	AK130		race track
VML2	L	AN010	exs=8	railroad -dismantled
VML2	L	BH070		ford
VML2	A	AI020		mobile home/mobile home park
VML2	A	AL200		ruins
3115	Line	LS(S-DASH,2,CHBLK)		<i>black thin short dash line</i>
DTOP	L	AQ070		ferry crossing
FFD	L	AQ070		ferry crossing
UVM	L	AQ070		ferry crossing
UVM	A	FA015		firing range/gunnery range
VITD	L	AQ070		ferry crossing
VITD	L	AQ111		prepared raft or float bridge site
VML0	L	AQ070		ferry crossing
VML1	L	AQ070		ferry crossing
VML2	L	AQ070		ferry crossing
3116	Line	LS(DASH,1,CHBLK)		<i>black very thin dash line</i>
DNC	A	BC060		light sector
DTOP	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
DTOP	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
DTOP	A	AA010	exs<>6	mine - active
DTOP	A	AA010	exs=6	mine - inactive
DTOP	A	AA012	exs=6	quarry - inactive
DTOP	A	AA012	exs<>6	quarry - active
FFD	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
FFD	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
FFD	L	AP010		cart track
UVM	L	AA010		mine
UVM	L	AA012		quarry
UVM	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
UVM	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
UVM	A	AA010	exs<>6	mine - active
UVM	A	AA010	exs=6	mine - inactive
UVM	A	AA012	exs<>6	quarry - active
UVM	A	AA012	exs=6	quarry - inactive
VITD	L	AN050	exs=5 AND rrc<>4	railroad siding/railroad spur - non-operational/normal
VITD	L	AN050	exs=5 AND rrc=4	railroad siding/railroad spur - non-operational/narrow
VITD	L	AP010		cart track

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Product	Delin	FCODE	Attribute Condition	Description
VML0	A	AA010		mine/quarry
VML1	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
VML1	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
VML1	L	AP010		cart track
VML1	A	AA010	exs<>6	mine/quarry - active
VML1	A	AA010	exs=6	mine/quarry - inactive
VML2	L	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
VML2	L	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
VML2	A	AA010	exs<>6	mine/quarry - active
VML2	A	AA010	exs=6	mine/quarry - inactive
3117	Line	LS(DASH,2,CHBLK)	<i>black thin dash line</i>	
DNC	A	BD180	vrr=4 AND hdp>20	wreck - submerged; depth greater than 20m
DTOP	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
DTOP	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
DTOP	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
DTOP	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
DTOP	L	AP010		cart track
DTOP	L	AQ130		tunnel
DTOP	A	AK030		amusement park
DTOP	A	AK060		campground/campsite
DTOP	A	AK180		zoo/safari park
DTOP	A	AL030		cemetery
FFD	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
FFD	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
FFD	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
FFD	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
FFD	L	AQ130		tunnel
UVM	L	AH060		underground bunker
UVM	L	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
UVM	L	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
UVM	L	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
UVM	L	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
UVM	L	AP010		cart track
UVM	L	AQ130		tunnel
UVM	A	AF030		cooling tower
UVM	A	AH060		underground bunker
UVM	A	AK030		amusement park
UVM	A	AK060		campground/campsite
UVM	A	AK180		zoo/safari park
UVM	A	AL030		cemetery
UVM	A	AL250		underground dwelling
UVM	A	DB030		cave
VITD	L	AN010	exs=5 AND fco<>2 AND rrc<>4	railroad -not operational/normal/single
VITD	L	AN010	exs=5 AND fco<>2 AND rrc=4	railroad -not operational/narrow/single
VITD	L	AN010	exs=5 AND fco=2 AND rrc<>4	railroad -not operational/normal/multiple
VITD	L	AN010	exs=5 AND fco=2 AND rrc=4	railroad -not operational/narrow/multiple
VITD	L	AQ130		tunnel
VITD	L	SA060		covered drainage
VML0	L	AQ130		tunnel
VML1	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple
VML1	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single
VML1	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
VML1	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
VML1	L	AQ130		tunnel

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Product	Delin	FCODE	Attribute Condition	Description
VML2	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
VML2	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
VML2	L	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple
VML2	L	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single
VML2	L	AP010		cart track
VML2	L	AQ130		tunnel
VML2	A	AK030		amusement park
VML2	A	AK060		campground/campsite
VML2	A	AK180		zoo/safari park
VML2	A	AL030		cemetery
3118	Line	LS(DASH,3,CHBLK)		<i>black dash line</i>
DTOP	A	FA170		zone of occupation
VML0	A	FA170		zone of occupation
VML1	A	FA170		zone of occupation
VML2	A	FA170		zone of occupation
3119	Line	LS(L-DASH,1,CHBLK)		<i>black very thin long dash line</i>
DNC	L	FA020		armistice line
DNC	L	FA110		international date line
DTOP	L	FA020		armistice line
DTOP	L	FA030		cease-fire line
DTOP	L	FA060		defacto boundary
DTOP	A	FA070		demilitarized zone
FFD	L	FA020		armistice line
FFD	L	FA030		cease-fire line
UVM	L	FA020		armistice line
UVM	A	FA070		demilitarized zone
VML0	L	FA020		armistice line
VML0	L	FA030		cease-fire line
VML0	L	FA040		claim line
VML0	L	FA050		mandate line/convention line
VML0	L	FA060		defacto boundary
VML0	A	FA070		demilitarized zone
VML1	L	FA020		armistice line
VML1	L	FA030		cease-fire line
VML1	L	FA050		mandate line/convention line
VML1	L	FA060		defacto boundary
VML1	A	FA070		demilitarized zone
VML2	L	FA020		armistice line
VML2	L	FA030		cease-fire line
VML2	L	FA060		defacto boundary
VML2	A	FA070		demilitarized zone
3120	Line	LS(L-DASH,2,CHBLK)		<i>black thin long dash line</i>
DNC	L	FA040		claim line
DTOP	L	FA110		international date line
FFD	L	FC021	mbl=9	maritime limit boundary - international (at sea)
UVM	L	FA000	use=16	administrative boundary - city
VML0	L	AN010	exs<>28 AND fco<>0and<>3	railroad -not operational/normal/multiple
VML0	L	AN010	exs<>28 AND fco=0or3	railroad -not operational/normal/single
VML0	L	FA110		international date line
VML1	L	FA000	use=30	administrative boundary - secondary
VML1	L	FA000	use=31	administrative boundary - tertiary
VML1	L	FA110		international date line
VML2	L	FA110		international date line

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Product	Delin	FCODE	Attribute	Condition	Description
3121	Line	LS(L-DASH,3,CHBLK)			<i>black long dash line</i>
VITD	L	AN060			railroad yard/marshalling yard
3139	Line	LS(DOTT,1,CHBLK)			<i>black very thin dotted line</i>
VML0	L	BD000			underwater danger/hazard
4002	Area	AC(light-beige)			<i>lt beige solid fill</i>
DTOP	A	AL170			plaza/city square
DTOP	A	SA050	spr=0		slope polygon - <= 3%
UVM	A	AL020	bac=0or1		built-up area sparse
UVM	A	AL170			plaza/city square
VITD	A	SA050	gsc=2		slope polygon - <= 3%
VML2	A	AL020	bac=0or1		built-up area sparse
VML2	A	AL170			plaza/city square
4003	Area	AC(med-beige)			<i>beige solid fill</i>
DTOP	A	AT050			communication building
DTOP	A	BA060			beach zone
DTOP	A	DA020			barren ground
DTOP	A	SA050	spr=1		slope polygon - > 3% and <= 10%
UVM	A	AT050			communication building
UVM	A	BA050			beach
UVM	A	BH100	hyc=3		moat - dry
VITD	A	SA050	gsc=3		slope polygon - > 3% and <= 10%
VML2	A	AT050			communication building
4015	Area	AC(beige-rose)			<i>beige-rose solid fill</i>
DTOP	A	AB000			disposal site/waste pile
DTOP	A	AB010			wrecking yard/scrap yard
UVM	A	AB000			disposal site/waste pile
UVM	A	AB010			wrecking yard/scrap yard
VML1	A	AB000			disposal site/waste pile
VML2	A	AB000			disposal site/waste pile
VML2	A	AB010			wrecking yard/scrap yard
4018	Area	AC(light-tan)			<i>lt tan solid fill</i>
DTOP	A	EA010	veg=1		cropland - dry
UVM	A	AP020			interchange
UVM	A	EA010	veg=1		cropland - dry
VITD	A	EA010	veg=1		cropland - dry
VML0	A	EA010	veg=1		cropland - dry
VML1	A	EA010	veg=1		cropland - dry
VML2	A	EA010	veg=1		cropland - dry
4036	Area	AC(med-red-brown)			<i>red brown solid fill</i>
UVM	A	AP030	med=1		road - divided w/median
4071	Area	AC(blue)			<i>basic blue solid fill</i>
DTOP	A	BH160			sebkha
UVM	A	BH160			sebkha
VML1	A	BH160			sebkha
VML2	A	BH160			sebkha
4089	Area	AC(aero-blue)			<i>aero-blue solid fill</i>
DTOP	A	GB055			runway
FFD	A	GB055			runway
UVM	A	AT010			disk/dish
UVM	A	GB055			runway
VITD	A	GB055			runway

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Product	Delin	FCODE	Attribute	Condition	Description
VML2	A	GB055			runway
4100	Area	AC(CHGRF)			<i>lt gray solid fill</i>
DTOP	A	AL105	pop		settlement
DTOP	A	AL140			particle accelerator
DTOP	A	DA005			asphalt lake
DTOP	A	GB015			apron/hardstand
DTOP	A	ZD020			void collection area
FFD	A	AL105			settlement
FFD	A	ZD020			void collection area
UVM	A	AF030			cooling tower
UVM	A	AL140			particle accelerator
UVM	A	AQ125			station (miscellaneous)
UVM	A	DA005			asphalt lake
UVM	A	GB015			apron/hardstand
VML1	A	AL105			settlement
VML1	A	DA005			asphalt lake
VML1	A	ZD020			void collection area
VML2	A	AL105			settlement
VML2	A	AL140			particle accelerator
VML2	A	DA005			asphalt lake
VML2	A	GB015			apron/hardstand
VML2	A	ZD020			void collection area
4105	Area	AP			<i>lt gray rt diag thin line patt fill</i>
TOD0	A	ZD020			void collection area
TOD1	A	ZD020			void collection area
TOD2	A	ZD020			void collection area
TOD3	A	ZD020			void collection area
4109	Area	AC(DEPCN)			<i>depth gray solid fill</i>
DTOP	A	AM060			storage bunker/storage mound
UVM	A	AM060			storage bunker/storage mound
VML2	A	AM060			storage bunker/storage mound
4128	Area	AC(tan-BUA)			<i>tan BUA solid fill</i>
DTOP	A	AL020	<>pop		built-up area
DTOP	A	AL020	pop		built-up area
FFD	A	AL020			built-up area
UVM	A	AL020		bac=2	built-up area dense
VITD	A	AL020			built-up area
VML0	A	AL020			built-up area
VML1	A	AL020			built-up area
VML2	A	AL020		bac=2	built-up area dense
4138	Area	AC(blue_4)			<i>med blue solid fill</i>
DTOP	A	AK170			swimming pool
UVM	A	AK170			swimming pool
VML2	A	AK170			swimming pool
4151	Area	AP			<i>basic blue ripple jagged patt fill</i>
DTOP	A	BJ030			glacier
VML1	A	BJ030			glacier
VML2	A	BJ030			glacier
4152	Area	AC(blue_3)			<i>lt blue solid fill</i>
UVM	A	BH100		hyc<>3	moat - not dry
VML0	A	BH000			inland water

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Product	Delin	FCODE	Attribute	Condition	Description
4154	Area	AC(blu31)			<i>31% cyan blue solid fill</i>
DTOP	A	BH080	<>sdr		lake/pond
DTOP	A	BH080	sdr	hyc<>8	lake/pond - not perennial
DTOP	A	BH080	sdr	hyc=8	lake/pond - perennial
DTOP	A	BH130			reservoir
DTOP	A	BH140	sdr	hyc=3or6	river/stream - dry, intermittent
DTOP	A	BH140	<>sdr		river/stream
DTOP	A	BH140	sdr	hyc=0or8	river/stream - perennial, unknown
FFD	A	BH080		hyc=0or8	lake/pond - perennial, unknown
FFD	A	BH080		hyc=3	lake/pond - dry
FFD	A	BH130			reservoir
FFD	A	BH140		hyc=0or8	river/stream - perennial, unknown
FFD	A	BH140		hyc=3or6	river/stream - dry, non-perennial
UVM	A	BH080		hyc=0or8	lake/pond - perennial, unknown
UVM	A	BH080		hyc=3or6	lake/pond - dry, intermittent
UVM	A	BH130			reservoir
UVM	A	BH140		hyc=0or8	river/stream - perennial, unknown
UVM	A	BH140		hyc=3or6	river/stream - dry, intermittent
VITD	A	BH140		hyc=0or8or14	river/stream - perennial, braided, unknown
VITD	A	BH140		hyc=3or6	river/stream - dry, intermittent
VML1	A	BH080		hyc=0or8	lake/pond - perennial, unknown
VML1	A	BH080		hyc=3or6	lake/pond - dry, intermittent
VML1	A	BH130			reservoir
VML1	A	BH140		hyc=0or8	river/stream - perennial, unknown
VML1	A	BH140		hyc=3or6	river/stream - dry, intermittent
VML2	A	BH080		hyc=0or8	lake/pond - perennial, unknown
VML2	A	BH080		hyc=3or6	lake/pond - dry, intermittent
VML2	A	BH130			reservoir
VML2	A	BH140		hyc=0or8	river/stream - perennial, unknown
VML2	A	BH140		hyc=3or6	river/stream - dry, intermittent
4156	Area	AC(CHBLK)			<i>black solid fill</i>
DTOP	A	AL015		bfc<>6and<>7and<>15	building - generic
DTOP	A	AL015		bfc=15	building - school
DTOP	A	AL015		bfc=6	building - hospital
DTOP	A	AL015		bfc=7	building - house of worship
DTOP	A	AM070			tank
DTOP	A	BI020			dam/weir
FFD	A	BI020			dam/weir
UVM	A	AL015		bfc=15or60or108	building - school
UVM	A	AL015		bfc=7or114	building - house of worship
UVM	A	AL015		bfc<>2and<>3and<>5and<>8and<>28and<>52and<>121and<>15and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
UVM	A	AL015		bfc=2or3or5or8or28or52or121	building - government
UVM	A	AL015		bfc=6or100	building - hospital
UVM	A	AM070			tank
UVM	A	AN075			railroad turntable
UVM	A	AQ040			bridge/overpass/viaduct
UVM	A	BI020			dam/weir
VML1	A	AL015		bfc<>7and<>15	building - generic
VML1	A	AL015		bfc=15	building - school
VML1	A	AL015		bfc=7	building - house of worship
VML2	A	AL015		bfc<>6and<>7and<>15	building - generic
VML2	A	AL015		bfc=7	building - house of worship

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	AL015	bfc=15	building - school
VML2	A	AL015	bfc=6	building - hospital
VML2	A	AM070		tank
VML2	A	BI020		dam/weir
4175	Area	AC(APLRT)		<i>lt orange solid fill</i>
DTOP	A	AQ135		vehicle stopping area/rest area
DTOP	A	AQ140		vehicle storage/parking area
DTOP	A	SA050	spr=6	slope polygon - > 45% and <= 60%
UVM	A	AQ140		vehicle storage/parking area
VITD	A	SA050	gsc=7	slope polygon - > 45%
VML2	A	AQ135		vehicle stopping area/rest area
VML2	A	AQ140		vehicle storage/parking area
4182	Line	LS(S-DASH,1,blu100)		<i>100% cyan blue very thin short dash line</i>
DTOP	A	BH020 sdr	hyc<>8	canal - non-perennial, dry, unknown
DTOP	A	BH150		salt pan
FFD	A	BH020	hyc<>8	canal - non-perennial, dry, unknown
UVM	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
UVM	A	BH150		salt pan
VITD	A	BH020	hyc<>8	canal - not perennial
VML1	A	BH150		salt pan
VML2	A	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
VML2	A	BH150		salt pan
4183	Line	LS(SOLD,3,aero-blue)		<i>aero-blue solid line</i>
DTOP	A	GB005		airport/airfield
FFD	A	GB005		airport/airfield
UVM	A	GB005		airport/airfield
VML2	A	GB005		airport/airfield
4184	Line	LS(S-DASH,1,aero-blue)		<i>aero-blue very thin short dash line</i>
FFD	A	GB035		heliport
UVM	A	GB035		heliport
4186	Line	LS(DASH,2,CHMGD)		<i>magenta thin dash line</i>
DNC	L	FC021	mac=24 AND mbl=NULL	maritime limit boundary - turning area
DNC	L	FC021	mac=58 AND mbl=NULL	maritime limit boundary - dredging
DNC	L	FC021	mac=44 AND mbl=NULL	maritime limit boundary - deguassing
DNC	L	FC021	mac=32or33 AND mbl=NULL	maritime limit boundary - oil field, gas field
DNC	L	FC021	mac=27or28or29 AND mbl=NULL	maritime limit boundary - submarine exercise, mine laying, firing range
DNC	L	FC031	mac=4	maritime area - mine danger
DNC	L	FC031	mac=5	maritime area - entry prohibited
DNC	A	AL005		animal sanctuary
DNC	A	FC021	mac=24	maritime limit boundary - turning area
DNC	A	FC021	mac=27or28or29	maritime limit boundary - submarine exercise, mine laying, firing range
DNC	A	FC021	mac=32or33	maritime limit boundary - oil field, gas field
DNC	A	FC021	mac=44	maritime limit boundary - deguassing
DNC	A	FC021	mac=58	maritime limit boundary - dredging area
DNC	A	FC031	mac=4	maritime area - mine danger
DNC	A	FC031	mac=5	maritime area - entry prohibited
DNC	A	FC036	mac=37	restricted area - safety zone
DNC	A	FC036	mac=22	restricted area - fishing prohibited
DNC	A	FC036	mac=21or23or61	restricted area - pipelines, sewer
DNC	A	FC036	mac=20	restricted area - cables
DNC	A	FC036	mac=15	restricted area - anchoring prohibited

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Product	Delin	FCODE	Attribute Condition	Description
DNC	A	FC036	mac=43	restricted area - area to be avoided
DNC	A	FC036	mac=0or999	restricted area - to be avoided, other
FFD	A	GB065		seaplane base
4201	Line	LS(DASH,2,DEPCN)		<i>depth gray thin dash line</i>
VITD	A	DA020		barren ground
VITD	A	SA020		disturbed soil
4202	Line	LS(DOTT,2,DEPCN)		<i>depth gray thin dotted line</i>
VITD	A	SA030		exposed bedrock
4217	Line	LS(SOLD,1,dark-tan)		<i>dk tan very thin solid line</i>
DTOP	L	DB010		bluff/cliff/escarpment
DTOP	L	DB070		cut
DTOP	A	AJ030		feedlot/stockyard/holding pen
UVM	L	DB010		bluff/cliff/escarpment
UVM	L	DB070		cut
UVM	A	AJ030		feedlot/stockyard/holding pen
VITD	L	DB010		bluff/cliff/escarpment
VITD	L	DB070		cut
VML0	L	DB010		bluff/cliff/escarpment
VML1	L	DB010		bluff/cliff/escarpment
VML1	L	DB070		cut
VML2	L	DB010		bluff/cliff/escarpment
VML2	L	DB070		cut
VML2	A	AJ030		feedlot/stockyard/holding pen
4236	Line	LS(SOLD,3,med-beige)		<i>beige solid line</i>
UVM	L	AT020		early warning radar site
UVM	L	AT045		radar transmitter
UVM	A	AT020		early warning radar site
UVM	A	AT045		radar transmitter
4243	Area	AC(DEPSC)		<i>depth dk gray solid fill</i>
UVM	A	AK110		grandstand
4262	Line	LS(DASH,2,med-purple)		<i>purple thin dash line</i>
DTOP	L	AT030		power transmission line
DTOP	A	AQ116		pumping station
UVM	L	AT030		power transmission line
UVM	A	AQ116		pumping station
VML0	L	AT030		power transmission line
VML1	L	AT030		power transmission line
VML2	L	AT030		power transmission line
VML2	A	AQ116		pumping station
4265	Line	LS(SOLD,2,blue)		<i>basic blue thin solid line</i>
DTOP	A	BJ065		ice shelf
DTOP	A	BJ070		pack ice
DTOP	A	BJ080		polar ice
VITD	A	SA010		common open water
VML0	A	BJ065		ice shelf
VML0	A	BJ070		pack ice
VML0	A	BJ080		polar ice
VML1	A	BJ065		ice shelf
VML1	A	BJ070		pack ice
VML1	A	BJ080		polar ice
VML2	A	BJ065		ice shelf
VML2	A	BJ070		pack ice

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Product	Delin	FCODE	Attribute Condition	Description
VML2	A	BJ080		polar ice
4266	Line	LS(SOLD,1,blue)		<i>basic blue very thin solid line</i>
DTOP	A	BH090		land subject to inundation
FFD	A	BH090		land subject to inundation
UVM	A	BH075		fountain
UVM	A	BH090	hoc=0or5	land subject to inundation - natural
UVM	A	BH090	hoc=1	land subject to inundation - controlled
VITD	A	BH090		land subject to inundation
VML0	A	BH090		land subject to inundation
VML1	A	BH090	exs=48	land subject to inundation - controlled
VML1	A	BH090	exs=0or45	land subject to inundation - natural
VML2	A	BH090	exs=48	land subject to inundation - controlled
VML2	A	BH090	exs=0or45	land subject to inundation - natural
4279	Line	LS(S-DASH,2,NINFO)		<i>nav orange thin short dash line</i>
DTOP	A	AK040		athletic field
DTOP	A	AK090		fairgrounds
DTOP	A	AK100		golf course
UVM	A	AK040		athletic field
UVM	A	AK070		drive in theater
UVM	A	AK090		fairgrounds
UVM	A	AK100		golf course
VML0	A	AK040		athletic field
VML2	A	AK040		athletic field
VML2	A	AK070		drive in theater
VML2	A	AK090		fairgrounds
VML2	A	AK100		golf course
4292	Line	LS(SOLD,2,RADHI)		<i>radar dk green thin solid line</i>
DTOP	A	EA040		orchard/plantation
DTOP	A	EA050		vineyards
DTOP	A	EC030	veg=0or24	trees - deciduous, unknown
DTOP	A	EC030	veg=25or50	trees - evergreen, mixed
DTOP	A	EC030	veg=52	trees - clearing
FFD	A	EA040		orchard/plantation
FFD	A	EC030	tre=2or3	trees - evergreen, mixed
FFD	A	EC030	tre=0or1	trees - deciduous, unknown
UVM	A	EA040		orchard/plantation
UVM	A	EA050		vineyards
UVM	A	EA055		hops
UVM	A	EC030	tre=0or1or3	trees - deciduous, mixed, unknown
UVM	A	EC030	tre=2	trees - evergreen
VITD	A	EA040		orchard/plantation
VITD	A	EA050		vineyards
VITD	A	EC030	veg=0or24or50	trees - unknown, deciduous, mixed
VITD	A	EC030	veg=25	trees - evergreen
VITD	A	EC030	veg=52	trees - forest clearing
VML0	A	EA040		orchard/plantation
VML0	A	EA050		vineyards
VML0	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
VML0	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML1	A	EA040		orchard/plantation
VML1	A	EA050		vineyards
VML1	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other

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VML1	A	EC030	veg=11or12or17or18or29or38	trees - casuarina, coniferous, palm, filao, eucalyptus, cypress
VML2	A	EA040		orchard/plantation
VML2	A	EA050		vineyards
VML2	A	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
VML2	A	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress
4301	Area	AC(RESBL)		<i>reserved very dk blue solid fill</i>
DTOP	A	BH090		land subject to inundation
FFD	A	BH090		land subject to inundation
UVM	A	BH090	hoc=0or5	land subject to inundation - natural
UVM	A	BH090	hoc=1	land subject to inundation - controlled
VITD	A	BH090		land subject to inundation
VML0	A	BH090		land subject to inundation
VML1	A	BH090	exs=0or45	land subject to inundation - natural
VML1	A	BH090	exs=48	land subject to inundation - controlled
VML2	A	BH090	exs=0or45	land subject to inundation - natural
VML2	A	BH090	exs=48	land subject to inundation - controlled
4311	Line	LS(SOLD,1,blu100)		<i>100% cyan blue very thin solid line</i>
DTOP	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
DTOP	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
DTOP	L	BH010	loc=0or8or25	aqueduct - surface/elevated
DTOP	L	BH060		flume
DTOP	L	BH110	loc=0or8or25	penstock - surface/elevated
DTOP	L	BH110	loc=4	penstock - underground
FFD	L	BH010	loc=0or8or25	aqueduct - surface/elevated
UVM	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
UVM	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
UVM	L	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
UVM	L	BH060		flume
UVM	L	BH110	loc=4	penstock - underground
UVM	L	BH110	loc=0or8or25	penstock - surface/elevated
VML1	L	AQ113	loc=0or8 AND pro=116	pipeline/pipe - surface; water
VML1	L	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
VML1	L	BH060		flume
VML1	L	BH110	loc=0or8or25	penstock - surface/elevated
VML1	L	BH110	loc=4	penstock - underground
VML2	L	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
VML2	L	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
VML2	L	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
VML2	L	BH060		flume
VML2	L	BH110	loc=4	penstock - underground
VML2	L	BH110	loc=0or8or25	penstock - surface/elevated
4312	Line	LS(SOLD,1,blu100)		<i>100% cyan blue very thin solid line</i>
UVM	L	CA010	hqc=7 AND mcc=103	contour line (snow) - index approximate
UVM	L	CA010	hqc=6 AND mcc=103	contour line (snow) - intermediate depression
UVM	L	CA010	hqc=5 AND mcc=103	contour line (snow) - index depression
UVM	L	CA010	hqc=3 AND mcc=103	contour line (snow) - supplementary 1/2
UVM	L	CA010	hqc=2 AND mcc=103	contour line (snow) - intermediate
UVM	L	CA010	hqc=14 AND mcc=103	contour line (snow) - supplementary 1/4
UVM	L	CA010	hqc=0or1 AND mcc=103	contour line (snow) - index unknown
UVM	L	CA010	hqc=12 AND mcc=103	contour line (snow) - intermediate approximate
VML2	L	CA010	hqc=2 AND mcc=103	contour line (snow) - intermediate
VML2	L	CA010	hqc=6or9 AND mcc=103	contour line (snow) - intermediate depression mound

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VML2	L	CA010	hqc=7 AND mcc=103	contour line (snowice) - index approximate
VML2	L	CA010	hqc=3or4or13 AND mcc=103	contour line (snowice) - supplementary 1/2, approx, form lines, approx
VML2	L	CA010	hqc=12 AND mcc=103	contour line (snowice) - intermediate approximate
VML2	L	CA010	hqc=0or1 AND mcc=103	contour line (snowice) - index unknown
VML2	L	CA010	hqc=5or8 AND mcc=103	contour line (snowice) - index depression mound
VML2	L	CA010	hqc=14 AND mcc=103	contour line (snowice) - supplementary 1/4
4316	Line	LS(L-DASH,1,blu100)		<i>100% cyan blue very thin long dash line</i>
UVM	L	BH010	atc<>1and<>3 AND exs=5or6	aqueduct - adandoned/under construction
VML1	L	BH010	exs=5or6	aqueduct - abandoned/under construction
VML2	L	BH010	exs=5or6	aqueduct - abandoned/under construction
6000	Point	SY		<i>black upside down pick & hammer</i>
DTOP	P	AA010	exs=6	mine - inactive
DTOP	P	AA012	exs=6	quarry - inactive
DTOP	A	AA010	exs=6	mine - inactive
DTOP	A	AA012	exs=6	quarry - inactive
UVM	P	AA010	exs=6	mine - inactive
UVM	P	AA012	exs=6	quarry - inactive
UVM	A	AA010	exs=6	mine - inactive
UVM	A	AA012	exs=6	quarry - inactive
VML1	P	AA010	exs=6	mine/quarry - inactive
VML1	A	AA010	exs=6	mine/quarry - inactive
VML2	P	AA010	exs=6	mine/quarry - inactive
VML2	A	AA010	exs=6	mine/quarry - inactive
6002	Area	AC(steel-blu)		<i>steel blue solid fill</i>
DTOP	A	EA010	veg=4	cropland - rice paddies
FFD	A	BH135		rice field
UVM	A	EA010	veg=4	cropland - rice paddies
VITD	A	BH135		rice field
VML0	A	BH135		rice field
VML1	A	BH135		rice field
VML2	A	BH135		rice field
6004	Line	LS(DASH,2,dark-red-brown)		<i>dk red brown thin dash line</i>
DTOP	A	AH050		fortification
UVM	L	AH010		bastion/rampart/fortification
UVM	L	AH050		fortification
UVM	A	AH010		bastion/rampart/fortification
UVM	A	AH050		fortification
VML1	A	AH050		fortification
VML2	A	AH050		fortification
6005	Area	AC(olive-green)		<i>olive green solid fill</i>
DTOP	A	AK030		amusement park
DTOP	A	AK180		zoo/safari park
UVM	A	AK030		amusement park
UVM	A	AK180		zoo/safari park
VML2	A	AK030		amusement park
VML2	A	AK180		zoo/safari park
6007	Area	AC(midnight-blu)		<i>midnight blue solid fill</i>
DTOP	A	BH095	veg=0or56	marsh/swamp - no trees
DTOP	A	BH095	veg=16or19	marsh/swamp - palm, mangrove
DTOP	A	BH095	veg=24	marsh/swamp - deciduous
DTOP	A	BH095	veg=25or50	marsh/swamp - evergreen, mixed
FFD	A	BH095		marsh/swamp

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Product	Delin	FCODE	Attribute Condition	Description
UVM	A	AM080		water tower
UVM	A	BH095		marsh/swamp
VITD	A	BH095		marsh/swamp
VML0	A	BH095		marsh/swamp
VML1	A	BH095		marsh/swamp
VML2	A	BH095		marsh/swamp
6011	Line	LS(SOLD,1,LANDA)		<i>It brown very thin solid line</i>
FFD	L	CA010	hqc=0or1	contour line (land) - index, unknown
FFD	L	CA010	hqc=2	contour line (land) - intermediate
FFD	L	CA010	hqc=5	contour line (land) - depression
FFD	L	CA010	hqc=6	contour line (land) - intermediate depression
UVM	L	CA010	hqc=0or1 AND mcc<>103	contour line (land) - index
UVM	L	CA010	hqc=7 AND mcc<>103	contour line (land) - index approximate
UVM	L	CA010	hqc=6 AND mcc<>103	contour line (land) - intermediate depression
UVM	L	CA010	hqc=5 AND mcc<>103	contour line (land) - depression index
UVM	L	CA010	hqc=3 AND mcc<>103	contour line (land) - supplementary 1/2
UVM	L	CA010	hqc=2 AND mcc<>103	contour line (land) - intermediate
UVM	L	CA010	hqc=12 AND mcc<>103	contour line (land) - intermediate approximate
UVM	L	CA010	hqc=14 AND mcc<>103	contour line (land) - supplementary 1/4
VML0	L	CA010	hqc=19	contour line (land) - carrying contour (coincident)
VML0	L	CA010	hqc=22or23	contour line (land) - supplemental depression
VML0	L	CA010	hqc=4or13or20or21	contour line (land) - supplementary approx., carrying, form lines
VML0	L	CA010	hqc=6	contour line (land) - depression intermediate
VML0	L	CA010	hqc=12	contour line (land) - intermediate approximate
VML0	L	CA010	hqc=0or2	contour line (land) - intermediate unknown
VML0	L	CA010	hqc=18	contour line (land) - intermediate depression approx
VML1	L	CA010		contour line (land)
VML2	L	CA010	hqc=6or9 AND mcc<>103	contour line (land) - intermediate depression mound
VML2	L	CA010	hqc=7 AND mcc<>103	contour line (land) - index approximate
VML2	L	CA010	hqc=5or8 AND mcc<>103	contour line (land) - depression mound
VML2	L	CA010	hqc=3or4or13 AND mcc<>103	contour line (land) - supplementary 1/2, approx, form lines
VML2	L	CA010	hqc=14 AND mcc<>103	contour line (land) - supplementary 1/4
VML2	L	CA010	hqc=12 AND mcc<>103	contour line (land) - intermediate approximate
VML2	L	CA010	hqc=0or1 AND mcc<>103	contour line (land) - index
VML2	L	CA010	hqc=2 AND mcc<>103	contour line (land) - intermediate
6012	Area	AC(CHWHT)		<i>pale green solid fill</i>
DTOP	A	EA010	veg=0	cropland - other
UVM	A	EA010	veg=0or999	cropland - other
VITD	A	EA010	veg<>1	cropland - other
VML0	A	EA010	veg<>1	cropland - other
VML1	A	EA010	veg<>1	cropland - other
VML2	A	EA010	veg<>1	cropland - other
6015	Point	SY		<i>black sm open square</i>
DTOP	P	AF010		chimney/smokestack
DTOP	P	AF040		crane
UVM	P	AF010		chimney/smokestack
UVM	P	AF040		crane
VML1	P	AF010		chimney/smokestack
VML1	P	AF040		crane
VML2	P	AF010		chimney/smokestack
VML2	P	AF040		crane

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Product	Delin	FCODE	Attribute	Condition	Description
6024	Line	LS(SOLD,3,red-brown100)		<i>100% red brown line</i>	
VVOD	L	AP030			road (libref)
6030	Point	SY		<i>black six pt star w/ dot inside</i>	
DTOP	P	AL015	bfc=82		building - lighthouse
UVM	P	AL015	bfc=82		building - lighthouse
UVM	P	BC050			lighthouse
VML0	P	BC050			lighthouse
VML1	P	AL015	bfc=82		building - lighthouse
VML2	P	AL015	bfc=82		building - lighthouse
6032	Point	SY		<i>aero-blue "H" inside aero-blue square</i>	
DTOP	P	GB030	apt=11		helicopter landing pad at hospital
DTOP	P	GB030	apt<>11		helicopter landing pad
FFD	P	GB035			heliport
UVM	P	GB030			helicopter landing pad
6037	Line	LS(S-DASH,1,blu100)		<i>100% cyan blue very thin short dash line</i>	
DTOP	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116		pipeline - underground - water
DTOP	L	BH010	loc=4		aqueduct - underground
FFD	L	BH010	loc=4		aqueduct - underground
UVM	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116		pipeline - underground - water
UVM	L	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=4 OR atc=3		aqueduct - underground
UVM	L	BH010	atc=1		aqueduct - kanat
VML1	L	AQ113	loc=4 AND pro=116		pipeline/pipe - underground; water
VML1	L	BH010	exs<>5and<>6 AND loc=4		aqueduct - underground
VML2	L	AQ113	exs<>5and<>6 AND loc=4 AND pro=116		pipeline - underground - water
VML2	L	BH010	exs<>5and<>6 AND loc=4		aqueduct - underground
6040	Line	LS(L-DASH,1,CHBLK)		<i>black very thin long dash line</i>	
DTOP	L	AQ113	loc=4 AND pro<>116		pipeline - underground - not water
UVM	L	AQ113	loc=4 AND pro<>116		pipeline - underground - not water
VML0	L	AQ113	loc=4		pipeline/pipe - underground
VML1	L	AQ113	loc=4 AND pro<>116		pipeline/pipe - underground; not water
VML2	L	AQ113	loc=4 AND pro<>116		pipeline - underground - not water
6041	Point	SY		<i>black cir w/ "B" inside</i>	
DTOP	P	AQ040			bridge/overpass/viaduct
DTOP	P	AQ045			bridge span
FFD	P	AQ040			bridge/overpass/viaduct
UVM	P	AQ040			bridge/overpass/viaduct
VITD	P	AQ040			bridge/overpass/viaduct
VITD	P	AQ045			bridge span
VML0	P	AQ040			bridge/overpass/viaduct
VML1	P	AQ040			bridge/overpass/viaduct
VML2	P	AQ040			bridge/overpass/viaduct
6042	Area	AC(blu100)		<i>100% cyan blue solid fill</i>	
DTOP	A	AC030			settling basin/sludge pond
DTOP	A	BH040			filtration beds/aeration beds
FFD	A	AC030			settling basin/sludge pond
FFD	A	BH040			filtration beds/aeration beds
UVM	A	AC030			settling basin/sludge pond
UVM	A	BH040			filtration beds/aeration beds
VML1	A	AC030			settling basin/sludge pond
VML1	A	BH040			filtration beds/aeration beds
VML2	A	AC030			settling basin/sludge pond
VML2	A	BH040			filtration beds/aeration beds

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Product	Delin	FCODE	Attribute Condition	Description
6044	Point	SY		<i>black plus sign with 4 dots</i>
DTOP	P	BD130	vrr=2	rock - awash
VML1	P	BD130	vrr=2	rock - awash
VML2	P	BD130	vrr=2	rock - awash
6047	Point	SY		<i>black open double arrowhead</i>
DTOP	P	BI030		lock
FFD	P	BI030		lock
VITD	P	BI030		lock
VML0	P	BI030		lock
VML2	P	BI030		lock
6048	Point	SY		<i>gray filled circle</i>
DTOP	P	AL130		monument
DTOP	P	BH070		ford
FFD	P	BH070		ford
UVM	P	AL130		monument
UVM	P	BH070		ford
VITD	P	BH070		ford
VML0	P	AK160		stadium/amphitheater
VML0	P	AL130		monument
VML0	P	BH070		ford
VML1	P	AK160		stadium/amphitheater
VML1	P	AL130		monument
VML1	P	BH070		ford
VML2	P	AL130		monument
VML2	P	BH070		ford
6049	Point	SY		<i>purple filled circle</i>
DTOP	P	AQ110		mooring mast
UVM	P	AQ110		mooring mast
UVM	P	AT040		power transmission pylon
VML1	P	AQ110		mooring mast
VML2	P	AQ110		mooring mast
6050	Area	AP		<i>depth pale blue inundation area patt fill</i>
DNC	A	BH090		land subject to inundation
6051	Point	SY(BOYSPP35)		<i>yellow narrow parallelogram w/ outline blk outline</i>
DNC	P	BC020	btc=0 AND ssc=10	buoy - pillar; type unknown
DNC	P	BC020	btc=0 AND ssc=16	buoy - spar; type unknown
6052	Point	SY(BOYSPP25)		<i>yellow parallelogram w/ outline blk outline</i>
DNC	P	BC020	btc=0 AND ssc=7	buoy - can; type unknown
6053	Point	SY(BOYSPP15)		<i>yellow rt triangle w/ outline blk outline</i>
DNC	P	BC020	btc=0 AND ssc=6	buoy - conical; type unknown
7000	Point	SY		<i>red vo rig symbol - GTRI</i>
VVOD	P	AA040	hgt>0and<304	rig / superstructure
VVOD	P	AA040	hgt=-32767 OR hgt>=304	rig / superstructure high
7002	Point	SY		<i>red vo waste symbol - GTRI</i>
VVOD	P	AB000	hgt=-32767 OR hgt>=304	disposal site / waste pile high
VVOD	P	AB000	hgt>0and<304	disposal site / waste pile
7004	Point	SY		<i>red vo plant symbol - GTRI</i>
VVOD	P	AC000	hgt=-32767 OR hgt>=304	processing plant / treatment plant high
VVOD	P	AC000	hgt>0and<304	processing plant / treatment plant

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Product	Delin	FCODE	Attribute Condition	Description
7006	Point	SY		<i>red vo furnace symbol - GTRI</i>
VVOD	P	AC010	hgt=-32767 OR hgt>=304	blast furnace high
VVOD	P	AC010	hgt>0and<304	blast furnace
7008	Point	SY		<i>red vo cracker symbol - GTRI</i>
VVOD	P	AC020	hgt=-32767 OR hgt>=304	catalytic cracker high
VVOD	P	AC020	hgt>0and<304	catalytic cracker
7010	Point	SY		<i>red vo power plant symbol - GTRI</i>
VVOD	P	AD010	hgt=-32767 OR hgt>=304	power plant / power station high
VVOD	P	AD010	hgt>0and<304	power plant / power station
7012	Point	SY		<i>red vo substation symbol - GTRI</i>
VVOD	P	AD030	hgt=-32767 OR hgt>=304	substation / transformer yard high
VVOD	P	AD030	hgt>0and<304	substation / transformer yard
7014	Point	SY		<i>red vo chimney symbol - GTRI</i>
VVOD	P	AF010	hgt=-32767 OR hgt>=304	chimney / smokestack high
VVOD	P	AF010	hgt>0and<304	chimney / smokestack
7016	Point	SY		<i>red vo conveyor symbol - GTRI</i>
VVOD	P	AF020	hgt=-32767 OR hgt>=304	conveyor high
VVOD	P	AF020	hgt>0and<304	conveyor
7018	Point	SY		<i>red vo cooling tower symbol - GTRI</i>
VVOD	P	AF030	hgt=-32767 OR hgt>=304	cooling tower high
VVOD	P	AF030	hgt>0and<304	cooling tower
7020	Point	SY		<i>red vo crane symbol - GTRI</i>
VVOD	P	AF040	hgt>0and<304	crane
VVOD	P	AF040	hgt=-32767 OR hgt>=304	crane high
7022	Point	SY		<i>red vo dredge symbol - GTRI</i>
VVOD	P	AF050	hgt=-32767 OR hgt>=304	dredge / powershovel / dragline high
VVOD	P	AF050	hgt>0and<304	dredge / powershovel / dragline
7024	Point	SY		<i>red vo flare pipe symbol - GTRI</i>
VVOD	P	AF070	hgt=-32767 OR hgt>=304	flare pipe high
VVOD	P	AF070	hgt>0and<304	flare pipe
7026	Point	SY		<i>red vo hopper symbol - GTRI</i>
VVOD	P	AF080	hgt=-32767 OR hgt>=304	hopper high high
VVOD	P	AF080	hgt>0and<304	hopper
7028	Point	SY		<i>red vo fort symbol - GTRI</i>
VVOD	P	AH050	hgt=-32767 OR hgt>=304	fortification high
VVOD	P	AH050	hgt>0and<304	fortification
7032	Point	SY		<i>red vo windmill symbol - GTRI</i>
VVOD	P	AJ050	hgt=-32767 OR hgt>=304	windmill high
VVOD	P	AJ050	hgt>0and<304	windmill
7034	Point	SY		<i>red vo windmotor symbol - GTRI</i>
VVOD	P	AJ051	hgt=-32767 OR hgt>=304	windmotor high
VVOD	P	AJ051	hgt>0and<304	windmotor
7036	Point	SY		<i>red vo park symbol - GTRI</i>
VVOD	P	AK020	hgt=-32767 OR hgt>=304	amusement park attraction high
VVOD	P	AK020	hgt>0and<304	amusement park attraction
7038	Point	SY		<i>red vo ski symbol - GTRI</i>
VVOD	P	AK150	hgt=-32767 OR hgt>=304	ski jump high
VVOD	P	AK150	hgt>0and<304	ski jump

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Product	Delin	FCODE	Attribute Condition	Description
7040	Point	SY		<i>red vo stadium symbol - GTRI</i>
VVOD	P	AK160	hgt=-32767 OR hgt>=304	stadium / amphitheater high
VVOD	P	AK160	hgt>0and<304	stadium / amphitheater
7044	Point	SY		<i>red vo building symbol - GTRI</i>
VVOD	P	AL015	hgt=-32767 OR hgt>=304	building high
VVOD	P	AL015	hgt>0and<304	building
VVOD	P	AL018	hgt>0and<304	building superstructure addition
VVOD	P	AL018	hgt=-32767 OR hgt>=304	building superstructure addition high
7046	Point	SY		<i>red vo communication bldg symbol - GTRI</i>
VVOD	P	AT050	hgt=-32767 OR hgt>=304	communication building high
VVOD	P	AT050	hgt>0and<304	communication building
7048	Point	SY		<i>red vo sign symbol - GTRI</i>
VVOD	P	AL050	hgt=-32767 OR hgt>=304	display sign high
VVOD	P	AL050	hgt>0and<304	display sign
7050	Point	SY		<i>red vo light symbol - GTRI</i>
VVOD	P	AL110	hgt=-32767 OR hgt>=304	light standard / light support high
VVOD	P	AL110	hgt>0and<304	light standard / light support
7052	Point	SY		<i>red vo monument symbol - GTRI</i>
VVOD	P	AL130	hgt=-32767 OR hgt>=304	monument high
VVOD	P	AL130	hgt>0and<304	monument
7056	Point	SY		<i>red vo depot symbol - GTRI</i>
VVOD	P	AM010	hgt=-32767 OR hgt>=304	depot high
VVOD	P	AM010	hgt>0and<304	depot
7058	Point	SY		<i>red vo silo symbol - GTRI</i>
VVOD	P	AM020	hgt>0and<304	grain bin / silo
VVOD	P	AM020	hgt=-32767 OR hgt>=304	grain bin / silo high
7060	Point	SY		<i>red vo elevator symbol - GTRI</i>
VVOD	P	AM030	hgt>0and<304	grain elevator
VVOD	P	AM030	hgt=-32767 OR hgt>=304	grain elevator high
7062	Point	SY		<i>red vo tank symbol - GTRI</i>
VVOD	P	AM070	hgt=-32767 OR hgt>=304	tank high
VVOD	P	AM070	hgt>0and<304	tank
7064	Point	SY		<i>red vo water tower symbol - GTRI</i>
VVOD	P	AM080	hgt=-32767 OR hgt>=304	water tower high
VVOD	P	AM080	hgt>0and<304	water tower
7070	Point	SY		<i>red vo aerial pylon symbol - GTRI</i>
VVOD	P	AQ020	hgt=-32767 OR hgt>=304	aerial cableway pylon / ski pylon high
VVOD	P	AQ020	hgt>0and<304	aerial cableway pylon / ski pylon
7072	Point	SY		<i>red vo bridge symbol - GTRI</i>
VVOD	P	AQ040	hgt=-32767 OR hgt>=304	bridge / overpass / viaduct high
VVOD	P	AQ040	hgt>0and<304	bridge / overpass / viaduct
VVOD	P	AQ050	hgt=-32767 OR hgt>=304	bridge superstructure high
VVOD	P	AQ050	hgt>0and<304	bridge superstructure
7078	Point	SY		<i>red vo brid tower symbol - GTRI</i>
VVOD	P	AQ055	hgt>0and<304	bridge tower / bridge pylon
VVOD	P	AQ055	hgt=-32767 OR hgt>=304	bridge tower / bridge pylon high
7080	Point	SY		<i>red vo ctrl tower symbol - GTRI</i>
VVOD	P	AQ060	hgt=-32767 OR hgt>=304	control tower high
VVOD	P	AQ060	hgt>0and<304	control tower

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Product	Delin	FCODE	Attribute Condition	Description
7082	Point	SY		<i>red vo mast symbol - GTRI</i>
VVOD	P	AQ110	hgt=-32767 OR hgt>=304	mooring mast high
VVOD	P	AQ110	hgt>0and<304	mooring mast
7090	Point	SY		<i>red vo overhead cable - GTRI</i>
VVOD	P	AT006	hgt=-32767 OR hgt>=304	overhead cable high
VVOD	P	AT006	hgt>0and<304	overhead cable
7092	Point	SY		<i>red vo disk symbol - GTRI</i>
VVOD	P	AT010	hgt>0and<304	disk / dish
VVOD	P	AT010	hgt=-32767 OR hgt>=304	disk / dish high
7096	Point	SY		<i>red vo power pylon symbol - GTRI</i>
VVOD	P	AT040	hgt>0and<304	power transmission pylon
VVOD	P	AT040	hgt=-32767 OR hgt>=304	power transmission pylon high
7106	Point	SY		<i>red vo tel pole symbol - GTRI</i>
VVOD	P	AT070	hgt=-32767 OR hgt>=304	telephone-telegraph pylon / pole high
VVOD	P	AT070	hgt>0and<304	telephone-telegraph pylon / pole
7110	Point	SY		<i>red vo light symbol - GTRI</i>
VVOD	P	BC040	hgt=-32767 OR hgt>=304	light high
VVOD	P	BC040	hgt>0and<304	light
7112	Point	SY		<i>red vo lighthouse symbol - GTRI</i>
VVOD	P	BC050	hgt=-32767 OR hgt>=304	lighthouse high
VVOD	P	BC050	hgt>0and<304	lighthouse
7113	Point	SY		<i>red vo lightship symbol - GTRI</i>
VVOD	P	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high
VVOD	P	BC070	hgt>0and<304	light vessel / lightship
7114	Point	SY		<i>red vo platform symbol - GTRI</i>
VVOD	P	BD110	hgt=-32767 OR hgt>=304	platform high
VVOD	P	BD110	hgt>0and<304	platform
7117	Point	SY		<i>red vo aqueduct symbol - GTRI</i>
VVOD	P	BH010	hgt>0and<304	aqueduct
VVOD	P	BH010	hgt=-32767 OR hgt>=304	aqueduct high
7119	Point	SY		<i>red vo dam symbol - GTRI</i>
VVOD	P	BI020	hgt=-32767 OR hgt>=304	dam / weir high
VVOD	P	BI020	hgt>0and<304	dam / weir
7125	Point	SY		<i>red vo intake - GTRI</i>
VVOD	P	BI050	hgt=-32767 OR hgt>=304	water intake tower high
VVOD	P	BI050	hgt>0and<304	water intake tower
7130	Point	SY		<i>red vo nav aids - GTRI</i>
VVOD	P	GA035	hgt=-32767 OR hgt>=304	nav aids high
VVOD	P	GA035	hgt>0and<304	nav aids
7132	Point	SY		<i>red vo pad - GTRI</i>
VVOD	P	GB040	hgt=-32767 OR hgt>=304	launch pad high
VVOD	P	GB040	hgt>0and<304	launch pad
7134	Point	SY		<i>red vo obs - GTRI</i>
VVOD	P	GB220	hgt=-32767 OR hgt>=304	air obstruction high
VVOD	P	GB220	hgt>0and<304	air obstruction
7136	Point	SY		<i>red vo obs misc - GTRI</i>
VVOD	P	GB221	hgt=-32767 OR hgt>=304	air obstruction miscellaneous high
VVOD	P	GB221	hgt>0and<304	air obstruction miscellaneous

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Product	Delin	FCODE	Attribute Condition	Description
7140	Point	SY		<i>red vo single high - GTRI</i>
VVOD	P	AL240	hgt=-32767 OR hgt>=304	tower (non-communication) high
7141	Point	SY		<i>red vo single low - GTRI</i>
VVOD	P	AL240	hgt>0and<304	tower (non-communication)
7142	Point	SY		<i>red vo light component - GTRI</i>
VVOD	P	AA040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	rig / superstructure light high
VVOD	P	AA040	atn=3 AND hgt>0and<304	rig / superstructure light
VVOD	P	AB000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disposal site / waste pile light high
VVOD	P	AB000	atn=3 AND hgt>0and<304	disposal site / waste pile light
VVOD	P	AC000	atn=3 AND hgt>0and<304	processing plant / treatment plant light
VVOD	P	AC000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	processing plant / treatment plant light high
VVOD	P	AC010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	blast furnace light high
VVOD	P	AC010	atn=3 AND hgt>0and<304	blast furnace light
VVOD	P	AC020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	catalytic cracker light high
VVOD	P	AC020	atn=3 AND hgt>0and<304	catalytic cracker light
VVOD	P	AD010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power plant / power station light high
VVOD	P	AD010	atn=3 AND hgt>0and<304	power plant / power station light
VVOD	P	AD030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	substation / transformer yard light high
VVOD	P	AD030	atn=3 AND hgt>0and<304	substation / transformer yard light
VVOD	P	AF020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	conveyor light high
VVOD	P	AF020	atn=3 AND hgt>0and<304	conveyor light
VVOD	P	AF030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	cooling tower light high
VVOD	P	AF030	atn=3 AND hgt>0and<304	cooling tower light
VVOD	P	AF040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	crane light high
VVOD	P	AF040	atn=3 AND hgt>0and<304	crane light
VVOD	P	AF050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dredge / powershovel / dragline light high
VVOD	P	AF050	atn=3 AND hgt>0and<304	dredge / powershovel / dragline light
VVOD	P	AF080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	hopper light high
VVOD	P	AF080	atn=3 AND hgt>0and<304	hopper light
VVOD	P	AH050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	fortification light high
VVOD	P	AH050	atn=3 AND hgt>0and<304	fortification light
VVOD	P	AK020	atn=3 AND hgt>0and<304	amusement park attraction light
VVOD	P	AK020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	amusement park attraction light high
VVOD	P	AK150	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	ski jump light high
VVOD	P	AK150	atn=3 AND hgt>0and<304	ski jump light
VVOD	P	AK160	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	stadium / amphitheater light high
VVOD	P	AK160	atn=3 AND hgt>0and<304	stadium / amphitheater light
VVOD	P	AL015	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building light high
VVOD	P	AL015	atn=3 AND hgt>0and<304	building light
VVOD	P	AL018	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building superstructure addition light high
VVOD	P	AL018	atn=3 AND hgt>0and<304	building superstructure addition light
VVOD	P	AL050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	display sign light high
VVOD	P	AL050	atn=3 AND hgt>0and<304	display sign light
VVOD	P	AL110	atn=3 AND hgt>0and<304	light standard / light support light
VVOD	P	AL110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light standard / light support light high
VVOD	P	AL130	atn=3 AND hgt>0and<304	monument light
VVOD	P	AL130	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	monument light high
VVOD	P	AL240	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tower (non-communication) light high
VVOD	P	AM020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain bin / silo light high
VVOD	P	AM020	atn=3 AND hgt>0and<304	grain bin / silo light
VVOD	P	AM030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain elevator light high
VVOD	P	AM030	atn=3 AND hgt>0and<304	grain elevator light
VVOD	P	AM070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tank light high

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Product	Delin	FCODE	Attribute Condition	Description
VVOD	P	AM070	atn=3 AND hgt>0and<304	tank light
VVOD	P	AM080	atn=3 AND hgt>0and<304	water tower light
VVOD	P	AM080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water tower light high
VVOD	P	AQ020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aerial cableway pylon / ski pylon light high
VVOD	P	AQ020	atn=3 AND hgt>0and<304	aerial cableway pylon / ski pylon light
VVOD	P	AQ040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge / overpass / viaduct light high
VVOD	P	AQ040	atn=3 AND hgt>0and<304	bridge / overpass / viaduct light
VVOD	P	AQ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge superstructure light high
VVOD	P	AQ050	atn=3 AND hgt>0and<304	bridge superstructure light
VVOD	P	AQ055	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge tower / bridge pylon light high
VVOD	P	AQ055	atn=3 AND hgt>0and<304	bridge tower / bridge pylon light
VVOD	P	AQ060	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	control tower light high
VVOD	P	AQ060	atn=3 AND hgt>0and<304	control tower light
VVOD	P	AQ110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	mooring mast light high
VVOD	P	AQ110	atn=3 AND hgt>0and<304	mooring mast light
VVOD	P	AT010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disk / dish light high
VVOD	P	AT010	atn=3 AND hgt>0and<304	disk / dish light
VVOD	P	AT040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power transmission pylon light high
VVOD	P	AT040	atn=3 AND hgt>0and<304	power transmission pylon light
VVOD	P	AT050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication building light high
VVOD	P	AT050	atn=3 AND hgt>0and<304	communication building light
VVOD	P	AT070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	telephone-telegraph pylon / pole light high
VVOD	P	AT070	atn=3 AND hgt>0and<304	telephone-telegraph pylon / pole light
VVOD	P	AT080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication tower - high light high
VVOD	P	BC040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light (lit) high
VVOD	P	BC040	atn=3 AND hgt>0and<304	light (lit)
VVOD	P	BC050	hgt>0and<304	lighthouse lit
VVOD	P	BC050	hgt=-32767 OR hgt>=304	lighthouse high lit
VVOD	P	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high lit
VVOD	P	BC070	hgt>0and<304	light vessel / lightship lit
VVOD	P	BD110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	platform light high
VVOD	P	BD110	atn=3 AND hgt>0and<304	platform light
VVOD	P	BH010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aqueduct light high
VVOD	P	BH010	atn=3 AND hgt>0and<304	aqueduct light
VVOD	P	BI020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dam / weir light high
VVOD	P	BI020	atn=3 AND hgt>0and<304	dam / weir light
VVOD	P	BI050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water intake tower light high
VVOD	P	BI050	atn=3 AND hgt>0and<304	water intake tower light
VVOD	P	GA035	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	navaids light high
VVOD	P	GA035	atn=3 AND hgt>0and<304	navaids light
VVOD	P	GB040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	launch pad light high
VVOD	P	GB040	atn=3 AND hgt>0and<304	launch pad light
VVOD	P	GB220	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction light high
VVOD	P	GB220	atn=3 AND hgt>0and<304	air obstruction light
VVOD	P	GB221	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction miscellaneous light high
VVOD	P	GB221	atn=3 AND hgt>0and<304	air obstruction miscellaneous light
7144	Line	LC	<i>red vo thin line - GTRI</i>	
VVOD	L	AD010		power plant / power station
VVOD	L	AF010		chimney / smokestack
VVOD	L	AF020		conveyor
VVOD	L	AH050		fortification
VVOD	L	AJ051		windmotor
VVOD	L	AK160		stadium / amphitheater
VVOD	L	AL015		building

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Product	Delin	FCODE	Attribute Condition	Description
VVOD	L	AL018		building superstructure addition
VVOD	L	AL110		light standard / light support
VVOD	L	AL130		monument
VVOD	L	AL240		tower (non-communication)
VVOD	L	AM070		tank
VVOD	L	AQ010		aerial cableway lines / ski lift lines
VVOD	L	AQ040		bridge / overpass / viaduct
VVOD	L	AQ050		bridge superstructure
VVOD	L	AQ113		pipeline / pipe
VVOD	L	AT050		communication building
VVOD	L	AT060		telephone line / telegraph line
VVOD	L	AT080		communication tower
VVOD	L	BH010		aqueduct
VVOD	L	BI020		dam / weir
VVOD	L	GA035		navaids
VVOD	L	GB220		air obstruction
VVOD	L	GB221		air obstruction miscellaneous
7145	Point	SY	<i>red vo light component high - GTRI</i>	
VVOD	P	AF010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	chimney / smokestack light high
VVOD	P	AF010	atn=3 AND hgt>0and<304	chimney / smokestack light
VVOD	P	AF070	atn=3 AND hgt>0and<304	flare pipe light
VVOD	P	AF070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	flare pipe light high
VVOD	P	AJ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmill light high
VVOD	P	AJ050	atn=3 AND hgt>0and<304	windmill light
VVOD	P	AJ051	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmotor light high
VVOD	P	AJ051	atn=3 AND hgt>0and<304	windmotor light
7146	Point	SY	<i>red vo light component low - GTRI</i>	
VVOD	P	AL240	atn=3 AND hgt>0and<304	tower (non-communication) light
VVOD	P	AT080	atn=3 AND hgt>0and<304	communication tower light
7147	Point	SY	<i>red vo communication tower high - GTRI</i>	
VVOD	P	AT080	hgt=-32767 OR hgt>=304	communication tower high
7148	Point	SY	<i>red vo communication tower low - GTRI</i>	
VVOD	P	AT080	hgt>0and<304	communication tower
7157	Line	LC	<i>red vo thin solid line w/ dots on each side - GTRI</i>	
VVOD	L	AT030		power transmission line

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APPENDIX E

PRODUCT SYMBOLIZATION REFERENCE

E.1 SCOPE

E.1.1 Scope. This appendix provides a product-based symbolization reference showing the symbol(s) used to symbolize each feature in that product. It is a mandatory part of the specification. The information contained herein is intended for compliance.

E.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

E.3 PRODUCT SYMBOLIZATION REFERENCE

This appendix is organized by VPF product and sorted by fcode/delineation. The assigned full chart (default) symbology for that fcode/delineation is presented textually in a single row. For those products that also have simplified (alternate) symbology, there will be an additional row of symbology identified.

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APPENDIX E

Product Symbolization Reference

DNC

Point Symbology

Line Symbology

Area Symbology

AA010

AA010

Area

mine/quarry

Full Chart Symbology:

0027 feature brown mine symbol inside circle 0624 feature brown very thin dash line

Simplified Symbology:

0027 feature brown mine symbol inside circle 0624 feature brown very thin dash line

Point

mine/quarry

Full Chart Symbology:

0001 feature brown mine symbol

Simplified Symbology:

0001 feature brown mine symbol

AB000

AB000

Area

disposal site/waste pile

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

AB010

AB010

Area

wrecking yard/scrap yard

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AC000**AC000**

Area

processing plant/treatment plant

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

AC030**AC030**

Area

settling basin/sludge pond

Full Chart Symbology:

0600 black very thin solid line

4077 depth med blue narrow rt diag line patt fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AD010**AD010**

Area

power plant

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AD030**AD030**

Area

substation/transformer yard

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

substation/transformer yard

Full Chart Symbology:

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AF010**AF010****Point****chimney/smokestack****Full Chart Symbology:**

0003 black chimney symbol

Simplified Symbology:

0003 black chimney symbol

AF030**AF030****Point****cooling tower****Full Chart Symbology:**

0004 black tower symbol

Simplified Symbology:

0004 black tower symbol

AF040**AF040****Point****crane****Full Chart Symbology:**

0005 feature brown crane symbol

Simplified Symbology:

0005 feature brown crane symbol

AF070**AF070****Point****flare pipe****Full Chart Symbology:**

0006 black flare stack symbol

Simplified Symbology:

0006 black flare stack symbol

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AH010**AH010****Area****bastion/rampart/fortification****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**bastion/rampart/fortification****Full Chart Symbology:**

0007 black square

Simplified Symbology:

0007 black square

AH050**AH050****Area****fortification****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**fortification****Full Chart Symbology:**

0007 black square

Simplified Symbology:

0007 black square

AJ050**AJ050****Point****windmill****Full Chart Symbology:**

0008 black sm cir w/ X on top

Simplified Symbology:

0008 black sm cir w/ X on top

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AK020**AK020**

Line

amusement park attraction

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point

amusement park attraction

Full Chart Symbology:

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

AK040**AK040**

Area

athletic field

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AK080**AK080**

Point

drive in theater screen

Full Chart Symbology:

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

AK090**AK090**

Area

fairgrounds

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AK100**AK100****Area****golf course****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AK120**AK120****Area****park****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AK130**AK130****Line****race track****Full Chart Symbology:**

0605 feature brown thin solid line

Simplified Symbology:

0605 feature brown thin solid line

AK160**AK160****Area****stadium/amphitheater****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**stadium/amphitheater****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AK180**AK180**

Area

zoo/safari park

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AL005**AL005**

Area

animal sanctuary

Full Chart Symbology:

0081 lt magenta square w/ l

0734 magenta dash/chevron line

Simplified Symbology:

0081 lt magenta square w/ l

4186 magenta thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Area

building

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

building - house of worship (church)

bfc=7 AND hwt=0or2or3or4or7or22

Full Chart Symbology:

0010 black 'iron cross'

Simplified Symbology:

0010 black 'iron cross'

building - house of worship (mosque)

bfc=7 AND hwt=5or6or9

Full Chart Symbology:

0012 black mosque/minaret w/ dot in circle

Simplified Symbology:

0012 black mosque/minaret w/ dot in circle

building - house of worship (temple/pagoda)

bfc=7 AND hwt=11or14or15or16or20or21

Full Chart Symbology:

0011 black X inscribed in rectangle

Simplified Symbology:

0011 black X inscribed in rectangle

building - maritime station (not rescue), sound signal

bfc=81 AND sta<>5 AND sst<>16

Full Chart Symbology:

0402 lt magenta arcs origin offset - minimum

Simplified Symbology:

0402 lt magenta arcs origin offset - minimum

building - maritime station (rescue), sound signal

bfc=81 AND sta=5 AND sst<>16

Full Chart Symbology:

0401 lt magenta arcs origin offset - maximum

Simplified Symbology:

0401 lt magenta arcs origin offset - maximum

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - maritime station**

**bfc=81 AND
sta<>0and<>1and<>2and<>3and<>5and<>6and<>
11**

Full Chart Symbology:

0015 It magenta SS in rectangle w/ pale green fill

Simplified Symbology:

0015 It magenta SS in rectangle w/ pale green fill

building - maritime station

bfc=81 AND sta=0or2or3or6or11

Full Chart Symbology:

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

building - maritime station

bfc=81 AND sta=1

Full Chart Symbology:

0013 It magenta CG in rectangle w/ pale green fill

Simplified Symbology:

0013 It magenta CG in rectangle w/ pale green fill

building - maritime station

bfc=81 AND sta=5

Full Chart Symbology:

0014 black filled diamond cntred on horizontal line

Simplified Symbology:

0014 black filled diamond cntred on horizontal line

building - not house of worship, not maritime station

bfc<>7and<>81

Full Chart Symbology:

2036 black sm filled square

Simplified Symbology:

2036 black sm filled square

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DNC

Point Symbology

Line Symbology

Area Symbology

AL018**AL018****Point****building superstructure addition****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

AL020**AL020****Area****built-up area****Full Chart Symbology:**

0604 feature brown very thin solid line

0804 brown solid fill

Simplified Symbology:

0604 feature brown very thin solid line

0804 brown solid fill

Point**built-up area****Full Chart Symbology:**

0016 feature brown filled cir

Simplified Symbology:

0016 feature brown filled cir

AL025**AL025****Point****cairn****Full Chart Symbology:**

0017 black three stacked sm cirs

Simplified Symbology:

0017 black three stacked sm cirs

AL030**AL030****Area****cemetery****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

AL050**AL050****Point****display sign****Full Chart Symbology:**

0018 black rectangle above inverted T

Simplified Symbology:

0018 black rectangle above inverted T

AL070**AL070****Line****fence****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

AL073**AL073****Point****flagstaff/flagpole****Full Chart Symbology:**

0019 feature brown flag symbol

Simplified Symbology:

0019 feature brown flag symbol

AL130**AL130****Point****monument****Full Chart Symbology:**

0020 black hatched trapazoid

Simplified Symbology:

0020 black hatched trapazoid

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AL200**AL200****Area**

ruins - offshore, covers and uncovers **loc=22 AND verr=8**

Full Chart Symbology:	0626 dk gray thin dash line	0803 yellow-green solid fill
Simplified Symbology:	0626 dk gray thin dash line	0803 yellow-green solid fill

ruins - offshore, does not cover **loc=22 AND verr=1**

Full Chart Symbology:	0600 black very thin solid line	0804 brown solid fill
Simplified Symbology:	0600 black very thin solid line	0804 brown solid fill

ruins - offshore, submerged - depth 20m or less **loc=22 AND verr=4 AND hdp>0and<=20**

Full Chart Symbology:	0680 black thin dotted line	
Simplified Symbology:	0680 black thin dotted line	

ruins - offshore, submerged - depth greater than 20m **loc=22 AND verr=4 AND hdp>20**

Full Chart Symbology:	0629 gray thin dash line	
Simplified Symbology:	0629 gray thin dash line	

ruins - offshore, submerged - depth unknown **loc=22 AND verr=4 AND hdp=0**

Full Chart Symbology:	0680 black thin dotted line	0810 depth med blue solid fill
Simplified Symbology:	0680 black thin dotted line	0810 depth med blue solid fill

ruins - on ground surface **loc=8**

Full Chart Symbology:	0600 black very thin solid line	0804 brown solid fill
Simplified Symbology:	0600 black very thin solid line	0804 brown solid fill

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APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AL200**AL200****Point****ruins - offshore, covers and uncovers****loc=22 AND vrr=8****Full Chart Symbology:**0055 yellow-green solid circle w/ black dot
outline**Simplified Symbology:**0055 yellow-green solid circle w/ black dot
outline**ruins - offshore, does not cover****loc=22 AND vrr=1****Full Chart Symbology:**0002 feature brown filled square w/ black
outline**Simplified Symbology:**0002 feature brown filled square w/ black
outline**ruins - offshore, submerged - depth 20m or less****loc=22 AND vrr=4 AND hdp>0and<=20****Full Chart Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**Simplified Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**ruins - offshore, submerged - depth greater than 20m****loc=22 AND vrr=4 AND hdp>20****Full Chart Symbology:**

0054 black lg oval w/ dotted outline

Simplified Symbology:

0054 black lg oval w/ dotted outline

ruins - offshore, submerged - depth unknown**loc=22 AND vrr=4 AND hdp=0****Full Chart Symbology:**0052 depth med blue fill cir w/ black dotted
outline**Simplified Symbology:**0052 depth med blue fill cir w/ black dotted
outline

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

AL200**AL200****ruins - on ground surface****loc=8****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

AL240**AL240****Point****tower (non-communication)****Full Chart Symbology:**

0004 black tower symbol

Simplified Symbology:

0004 black tower symbol

AL260**AL260****Line****wall****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

AM010**AM010****Area****depot (storage)****Full Chart Symbology:**

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

AM020**AM020****Point****grain bin/silo****Full Chart Symbology:**

0021 feature brown filled cir w/ black outline

Simplified Symbology:

0021 feature brown filled cir w/ black outline

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DNC

Point Symbology

Line Symbology

Area Symbology

AM030**AM030**

Area

grain elevator

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

grain elevator

Full Chart Symbology:

0004 black tower symbol

Simplified Symbology:

0004 black tower symbol

AM040**AM040**

Area

mineral pile

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

AM070**AM070**

Area

tank

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

tank

Full Chart Symbology:

0022 black cir

Simplified Symbology:

0022 black cir

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DNC

Point Symbology

Line Symbology

Area Symbology

AM080**AM080****Point****water tower****Full Chart Symbology:**

0023 black water tower symbol

Simplified Symbology:

0023 black water tower symbol

AN010**AN010****Line****railroad****Full Chart Symbology:**

0605 feature brown thin solid line

Simplified Symbology:

0605 feature brown thin solid line

AN060**AN060****Area****railroad yard/marshalling yard****Full Chart Symbology:**

0802 gray solid fill

Simplified Symbology:

0802 gray solid fill

AP020**AP020****Line****interchange****Full Chart Symbology:**

0605 feature brown thin solid line

Simplified Symbology:

0605 feature brown thin solid line

AP030**AP030****Line****road****Full Chart Symbology:**

0605 feature brown thin solid line

Simplified Symbology:

0605 feature brown thin solid line

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DNC

Point Symbology

Line Symbology

Area Symbology

AQ010**AQ010**

Line

aerial cableway lines/ski lift lines

Full Chart Symbology:	0657 gray thick dash line
Simplified Symbology:	0657 gray thick dash line

AQ020**AQ020**

Point

aerial cableway pylon/ski pylon

Full Chart Symbology:	0024 black dot inside cir
Simplified Symbology:	0024 black dot inside cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

AQ040**AQ040**

Area

bridge/overpass/viaduct (not opening)

bsc=12 OR bot=4or10or11

Full Chart Symbology:

0046 magenta small circle inside circle 0611 gray thick solid line

Simplified Symbology:

0046 magenta small circle inside circle 0611 gray thick solid line

bridge/overpass/viaduct (opening)

bsc<>12 AND bot<>4and<>10and<>11

Full Chart Symbology:

0611 gray thick solid line

Simplified Symbology:

0611 gray thick solid line

Line

bridge/overpass/viaduct (not opening)

bsc=12 OR bot=4or10or11

Full Chart Symbology:

0753 gray very thck line w/ cntrd magenta dbl
cir

Simplified Symbology:

0753 gray very thck line w/ cntrd magenta dbl
cir

bridge/overpass/viaduct (opening)

bsc<>12 AND bot<>4and<>10and<>11

Full Chart Symbology:

0627 gray very thick solid line

Simplified Symbology:

0627 gray very thick solid line

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DNC

Point Symbology

Line Symbology

Area Symbology

AQ045**AQ045**

Area

bridge span

Full Chart Symbology:

0611 gray thick solid line

Simplified Symbology:

0611 gray thick solid line

Line

bridge span

Full Chart Symbology:

0627 gray very thick solid line

Simplified Symbology:

0627 gray very thick solid line

AQ060**AQ060**

Point

control tower

Full Chart Symbology:

0004 black tower symbol

Simplified Symbology:

0004 black tower symbol

AQ070**AQ070**

Line

ferry crossing - with cables

fer=1
Full Chart Symbology:

0701 black dash very thin line w/ boat shape

Simplified Symbology:

0701 black dash very thin line w/ boat shape

ferry crossing - without cables

fer=2
Full Chart Symbology:

0700 magenta dash very thin line w/ boat shape

Simplified Symbology:

0700 magenta dash very thin line w/ boat shape

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APPENDIX E

DNC

Point Symbology

Line Symbology

Area Symbology

AQ080

AQ080

Point

ferry site

Full Chart Symbology:

0096 magenta square w/ i

Simplified Symbology:

0096 magenta square w/ i

AQ110

AQ110

Point

mooring mast

Full Chart Symbology:

0026 black tall slender triangle w/ cir at bottom

Simplified Symbology:

0026 black tall slender triangle w/ cir at bottom

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

AQ116**AQ116****Area****pumping station****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**pumping station****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

0002 feature brown filled square w/ black outline

AQ130**AQ130****Line****tunnel****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AT005**AT005****Line****cable****Full Chart Symbology:**

0708 magenta broken zig-zag line w/ flash symbol

Simplified Symbology:

0708 magenta broken zig-zag line w/ flash symbol

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DNC

Point Symbology

Line Symbology

Area Symbology

AT010**AT010****Point****disk/dish****Full Chart Symbology:**

2102 black satellite dish symbol

Simplified Symbology:

2102 black satellite dish symbol

AT020**AT020****Area****early warning radar site****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

AT030**AT030****Line****power transmission line****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

AT040**AT040****Point****power transmission pylon****Full Chart Symbology:**

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

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DNC

Point Symbology

Line Symbology

Area Symbology

AT045**AT045****Point****radar transmitter - dome****ssc=87****Full Chart Symbology:**

0028 black dome inside lg magenta circle

Simplified Symbology:

0028 black dome inside lg magenta circle

radar transmitter - mast**ssc=60****Full Chart Symbology:**

0030 black triangle w/ in lg magenta cir

Simplified Symbology:

0030 black triangle w/ in lg magenta cir

radar transmitter - other, unknown**ssc=0or999****Full Chart Symbology:**

0511 magenta lg cir

Simplified Symbology:

0511 magenta lg cir

radar transmitter - scanner**ssc=108****Full Chart Symbology:**

0029 black rectangle below T in lg magenta cir

Simplified Symbology:

0029 black rectangle below T in lg magenta cir

radar transmitter - tower**ssc=107****Full Chart Symbology:**

0031 black tower inside lg magenta cir

Simplified Symbology:

0031 black tower inside lg magenta cir

AT050**AT050****Point****communication building****Full Chart Symbology:**

0033 feature brown fill sqr black otln in lg mgnta cir

Simplified Symbology:

0033 feature brown fill sqr black otln in lg mgnta cir

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DNC

Point Symbology

Line Symbology

Area Symbology

AT060**AT060****Line****telephone line/telegraph line**

Full Chart Symbology:	0657 gray thick dash line
Simplified Symbology:	0657 gray thick dash line

AT080**AT080****Point****communication tower**

Full Chart Symbology:	0004 black tower symbol
Simplified Symbology:	0004 black tower symbol

BA010**BA010****Line****coastline/shoreline - accurate; not mangrove or marsh acc=1 AND slt<>6and<>8**

Full Chart Symbology:	1573 dk gray very thin solid line
Simplified Symbology:	1573 dk gray very thin solid line

coastline/shoreline - approximate; not mangrove or marsh acc=2 AND slt<>6and<>8

Full Chart Symbology:	0743 dk gray small open rectangle dash line
Simplified Symbology:	0743 dk gray small open rectangle dash line

coastline/shoreline - mangrove, marsh slt=6or8

Full Chart Symbology:	0632 dk gray very thin dash line
Simplified Symbology:	0632 dk gray very thin dash line

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DNC

Point Symbology

Line Symbology

Area Symbology

BA020**BA020**

Area

foreshore

Full Chart Symbology:

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

foreshore - shallow display mode on

isdm=1
Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

Line

foreshore

Full Chart Symbology:

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

Point

foreshore

Full Chart Symbology:

0150 yellow-green filled sm cir w/ gray outline

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

MIL-DTL-89045A w/Amendment 1
APPENDIX E

DNC

Point Symbology

Line Symbology

Area Symbology

BA030

BA030

Area

island

Full Chart Symbology:	0822 It brown solid fill
Simplified Symbology:	0822 It brown solid fill

Point

island

Full Chart Symbology:	0035 It brown sm filled cir w/ gray outline
Simplified Symbology:	0035 It brown sm filled cir w/ gray outline

BA040

BA040

Area

water (except inland)

Full Chart Symbology:	0805 depth white fill
Simplified Symbology:	0805 depth white fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB010**BB010****Area**

anchorage - anchoring berth **mac=12**

Full Chart Symbology:

0037 magenta anchor w/ sm cir on shaft 3000 lt magenta thin dash line

Simplified Symbology:

0037 magenta anchor w/ sm cir on shaft 3000 lt magenta thin dash line

anchorage - not anchoring berth **mac<>12**

Full Chart Symbology:

0902 lt magenta anchor 0711 magenta dash/chevron line w/anchor symbol

Simplified Symbology:

0902 lt magenta anchor 3000 lt magenta thin dash line

Line

anchorage - anchoring berth **mac=12**

Full Chart Symbology:

3000 lt magenta thin dash line

Simplified Symbology:

3000 lt magenta thin dash line

anchorage - not anchoring berth **mac<>12**

Full Chart Symbology:

0711 magenta dash/chevron line w/anchor symbol

Simplified Symbology:

3000 lt magenta thin dash line

Point

anchorage - anchoring berth **mac=12**

Full Chart Symbology:

0037 magenta anchor w/ sm cir on shaft

Simplified Symbology:

0037 magenta anchor w/ sm cir on shaft

anchorage - not anchoring berth **mac<>12**

Full Chart Symbology:

0036 magenta anchor

Simplified Symbology:

0036 magenta anchor

MIL-DTL-89045A w/Amendment 1
APPENDIX E

DNC

Point Symbology

Line Symbology

Area Symbology

BB020

BB020

Point

berth

Full Chart Symbology:

0032 magenta circle

Simplified Symbology:

0032 magenta circle

BB030

BB030

Point

bollard

Full Chart Symbology:

0051 black filled sm cir

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB040**BB040**

Area

breakwater/groyne - partly submerged at high water vrr=1

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

breakwater/groyne - submerged, covers and uncovers vrr=4or8

Full Chart Symbology:	0626 dk gray thin dash line
Simplified Symbology:	0626 dk gray thin dash line

Line

breakwater/groyne - partly submerged at high water vrr=1

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

breakwater/groyne - submerged, covers and uncovers vrr=4or8

Full Chart Symbology:	0626 dk gray thin dash line
Simplified Symbology:	0626 dk gray thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB050**BB050****Point**

calling-in point - direction of traffic unknown df1=0

Full Chart Symbology:

0041 magenta cir w/ 2 cones and 2 ?

Simplified Symbology:

0041 magenta cir w/ 2 cones and 2 ?

calling-in point - more than two-way traffic, 1st direction df3<>0

Full Chart Symbology:

0039 traffic magenta cir w/ 1 cone

Simplified Symbology:

0039 traffic magenta cir w/ 1 cone

calling-in point - more than two-way traffic, 2nd direction df3<>0

Full Chart Symbology:

0039 traffic magenta cir w/ 1 cone

Simplified Symbology:

0039 traffic magenta cir w/ 1 cone

calling-in point - more than two-way traffic, 3rd direction df3<>0

Full Chart Symbology:

0039 traffic magenta cir w/ 1 cone

Simplified Symbology:

0039 traffic magenta cir w/ 1 cone

calling-in point - more than two-way traffic, 4th direction df4<>0

Full Chart Symbology:

0039 traffic magenta cir w/ 1 cone

Simplified Symbology:

0039 traffic magenta cir w/ 1 cone

calling-in point - one way traffic df1<>0 AND df2=0

Full Chart Symbology:

0039 traffic magenta cir w/ 1 cone

Simplified Symbology:

0039 traffic magenta cir w/ 1 cone

calling-in point - two way traffic df2<>0 AND df3=0

Full Chart Symbology:

0040 traffic magenta cir w/ 2 cones

Simplified Symbology:

0040 traffic magenta cir w/ 2 cones

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB080**BB080****Point****dolphin****Full Chart Symbology:**

0038 It brown filled square w/ black outline

Simplified Symbology:

0038 It brown filled square w/ black outline

BB090**BB090****Area****drydock****Full Chart Symbology:**

1573 dk gray very thin solid line

0822 It brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0822 It brown solid fill

BB100**BB100****Line****fish stakes****Full Chart Symbology:**

0712 gray L complex line

Simplified Symbology:

0712 gray L complex line

BB105**BB105****Point****fishing harbor****Full Chart Symbology:**

0042 magenta fish w/ arcs above and below

Simplified Symbology:

0042 magenta fish w/ arcs above and below

BB110**BB110****Area****fish traps/fish weirs****Full Chart Symbology:**

0047 gray rectangle w/ angle line on top

0716 gray dash/chevron line

Simplified Symbology:

0656 gray very thin dash line

0903 gray fish trap patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB115**BB115****Area****gridiron****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

BB140**BB140****Area****jetty - partly submerged at high water****vrr=1****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

jetty - submerged, covers and uncovers**vrr=4or8****Full Chart Symbology:**

0626 dk gray thin dash line

Simplified Symbology:

0626 dk gray thin dash line

Line**jetty - partly submerged at high water****vrr=1****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

jetty - submerged, covers and uncovers**vrr=4or8****Full Chart Symbology:**

0626 dk gray thin dash line

Simplified Symbology:

0626 dk gray thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB150**BB150****Area****landing place****Full Chart Symbology:**

0043 magenta yacht inside lg cir

0604 feature brown very thin solid line

0804 brown solid fill

Simplified Symbology:

0043 magenta yacht inside lg cir

0604 feature brown very thin solid line

0804 brown solid fill

Point**landing place****Full Chart Symbology:**

0043 magenta yacht inside lg cir

Simplified Symbology:

0043 magenta yacht inside lg cir

BB160**BB160****Point****mooring ring****Full Chart Symbology:**

0038 lt brown filled square w/ black outline

Simplified Symbology:

0038 lt brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB170**BB170**

Area

offshore loading facility

Full Chart Symbology:

0625 dk gray thick solid line

0804 brown solid fill

Simplified Symbology:

0625 dk gray thick solid line

0804 brown solid fill

Line

offshore loading facility

Full Chart Symbology:

0625 dk gray thick solid line

Simplified Symbology:

0625 dk gray thick solid line

Point

offshore loading facility

Full Chart Symbology:

0044 black installation buoy

Simplified Symbology:

0311 black mooring/installation buoy

offshore loading facility - light

cha=21
Full Chart Symbology:

0500 magenta flare with black outline

Simplified Symbology:

0500 magenta flare with black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB180**BB180****Area****oyster bed/mussel bed**

Full Chart Symbology:	0716 gray dash/chevron line	0904 gray fish in net patt fill
Simplified Symbology:	0656 gray very thin dash line	0904 gray fish in net patt fill

Point**oyster bed/mussel bed**

Full Chart Symbology:	0045 gray fish inside net
Simplified Symbology:	0045 gray fish inside net

BB190**BB190****Area****pier/wharf/quay**

Full Chart Symbology:	0625 dk gray thick solid line
Simplified Symbology:	0625 dk gray thick solid line

Line**pier/wharf/quay**

Full Chart Symbology:	0625 dk gray thick solid line
Simplified Symbology:	0625 dk gray thick solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB220**BB220****Area**

ramp (maritime) - partly submerged at high water vrr=1

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

ramp (maritime) - submerged, covers and uncovers vrr=4or8

Full Chart Symbology:

0626 dk gray thin dash line

Simplified Symbology:

0626 dk gray thin dash line

Line

ramp (maritime) - partly submerged at high water vrr=1

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

ramp (maritime) - submerged, covers and uncovers vrr=4or8

Full Chart Symbology:

0626 dk gray thin dash line

Simplified Symbology:

0626 dk gray thin dash line

BB230**BB230****Line****seawall****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BB240**BB240**

Line

slipway/patent slip - partly submerged at high water vrr=1

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

slipway/patent slip - submerged, covers and uncovers vrr=4or8

Full Chart Symbology:	0626 dk gray thin dash line
Simplified Symbology:	0626 dk gray thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BC010**BC010****Point****beacon - base****Full Chart Symbology:**

0100 black beacon/buoy base

Simplified Symbology:

0101 yellow rectangle w/ outline black outline

beacon - broom point up**tmc=17****Full Chart Symbology:**

0188 black topmark broom up

beacon - can**tmc=25or26or29****Full Chart Symbology:**

0133 black topmark can

beacon - default topmark**tmc=0or32****Full Chart Symbology:**

0199 black default topmark upright

beacon - one ball**tmc=15or27or28****Full Chart Symbology:**

0130 black topmark one ball

beacon - one cone down**tmc=22****Full Chart Symbology:**

0124 black topmark one cone down

beacon - one cone up**tmc=16or21****Full Chart Symbology:**

0122 black topmark one cone up

beacon - perch**tmc=18****Full Chart Symbology:**

0187 black topmark perch

beacon - radar navigation system**nst=10or54****Full Chart Symbology:**

0512 magenta lg dashed cir

Simplified Symbology:

0512 magenta lg dashed cir

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology	Line Symbology	Area Symbology
BC010		BC010
beacon - radar reflector present		ref=1
Full Chart Symbology: 0510 magenta arc w/ 5 ticks pointing upward		
Simplified Symbology: 0510 magenta arc w/ 5 ticks pointing upward		
beacon - radar station		nst=45
Full Chart Symbology: 0009 feature brown dot inside cir		
Simplified Symbology: 0009 feature brown dot inside cir		
beacon - radio navigation system		nst=1or4or5or17or41or51or53
Full Chart Symbology: 0511 magenta lg cir		
Simplified Symbology: 0511 magenta lg cir		
beacon - rhombus/diamond		tmc=19or31
Full Chart Symbology: 0114 black topmark open parallelogram		
beacon - sound signal		sst=1or2or3or4or6or9or14or15
Full Chart Symbology: 0401 lt magenta arcs origin offset - maximum		
Simplified Symbology: 0401 lt magenta arcs origin offset - maximum		
beacon - special (x)		tmc=6
Full Chart Symbology: 0185 black topmark special X		
beacon - two balls		tmc=2
Full Chart Symbology: 0132 black topmark two balls		
beacon - two cones down		tmc=8
Full Chart Symbology: 0126 black topmark two cones down		
beacon - two cones in		tmc=9
Full Chart Symbology: 0128 black topmark two cones point in		

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DNC

Point Symbology	Line Symbology	Area Symbology
BC010		BC010
beacon - two cones out		tmc=1
Full Chart Symbology: 0127 black topmark two cones point out		
beacon - two cones up		tmc=3
Full Chart Symbology: 0125 black topmark two cones up		
beacon - upright cross		tmc=23or30
Full Chart Symbology: 0186 black topmark cross		

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DNC

Point Symbology

Line Symbology

Area Symbology

BC020**BC020****Point**

buoy - articulated light (base) btc=35

Full Chart Symbology:

0051 black filled sm cir

Simplified Symbology:

0051 black filled sm cir

buoy - barrel; type unknown btc=0 AND ssc=1

Full Chart Symbology:

0301 black barrel buoy

Simplified Symbology:

0313 yellow circle w/ outline black outline

buoy - can; type unknown btc=0 AND ssc=7

Full Chart Symbology:

0302 black can buoy

Simplified Symbology:

6052 yellow parallelogram w/ outline blk outline

buoy - can tmc=25or26or29

Full Chart Symbology:

0213 black buoy topmark can

buoy - conical; type unknown btc=0 AND ssc=6

Full Chart Symbology:

0303 black cone buoy

Simplified Symbology:

6053 yellow rt triangle w/ outline blk outline

buoy - default topmark tmc=0or17or18or32

Full Chart Symbology:

0299 black buoy default topmark

buoy - default; type unknown btc=0 AND ssc=0or85or999

Full Chart Symbology:

0300 black default buoy beside magenta ?

Simplified Symbology:

0313 yellow circle w/ outline black outline

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology	Line Symbology	Area Symbology		
BC020		BC020		
buoy - LANBY		btc=4		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0310 black lanby</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0312 black superbuoy - simplified</td> </tr> </table>			Full Chart Symbology: 0310 black lanby	Simplified Symbology: 0312 black superbuoy - simplified
Full Chart Symbology: 0310 black lanby				
Simplified Symbology: 0312 black superbuoy - simplified				
buoy - light float		btc=6		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0513 black lt float</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0515 black lt float, simplified</td> </tr> </table>			Full Chart Symbology: 0513 black lt float	Simplified Symbology: 0515 black lt float, simplified
Full Chart Symbology: 0513 black lt float				
Simplified Symbology: 0515 black lt float, simplified				
buoy - mooring; barrel		btc=7 AND ssc=1		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0304 black mooring barrel buoy</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0311 black mooring/installation buoy</td> </tr> </table>			Full Chart Symbology: 0304 black mooring barrel buoy	Simplified Symbology: 0311 black mooring/installation buoy
Full Chart Symbology: 0304 black mooring barrel buoy				
Simplified Symbology: 0311 black mooring/installation buoy				
buoy - mooring; not barrel, not can		btc=7 AND ssc<>1and<>7		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0311 black mooring/installation buoy</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0311 black mooring/installation buoy</td> </tr> </table>			Full Chart Symbology: 0311 black mooring/installation buoy	Simplified Symbology: 0311 black mooring/installation buoy
Full Chart Symbology: 0311 black mooring/installation buoy				
Simplified Symbology: 0311 black mooring/installation buoy				
buoy - mooring;can		btc=7 AND ssc=7		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0305 black mooring can buoy</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0311 black mooring/installation buoy</td> </tr> </table>			Full Chart Symbology: 0305 black mooring can buoy	Simplified Symbology: 0311 black mooring/installation buoy
Full Chart Symbology: 0305 black mooring can buoy				
Simplified Symbology: 0311 black mooring/installation buoy				
buoy - non-pillar; radar navigation system		nst=10or54 AND ssc<>10		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0512 magenta lg dashed cir</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0512 magenta lg dashed cir</td> </tr> </table>			Full Chart Symbology: 0512 magenta lg dashed cir	Simplified Symbology: 0512 magenta lg dashed cir
Full Chart Symbology: 0512 magenta lg dashed cir				
Simplified Symbology: 0512 magenta lg dashed cir				
buoy - non-pillar; radio navigation system		nst=1or4or5or17or41or51or53 AND ssc<>10		
<table border="1" style="width: 100%;"> <tr> <td style="padding: 2px;">Full Chart Symbology: 0511 magenta lg cir</td> </tr> <tr> <td style="padding: 2px;">Simplified Symbology: 0511 magenta lg cir</td> </tr> </table>			Full Chart Symbology: 0511 magenta lg cir	Simplified Symbology: 0511 magenta lg cir
Full Chart Symbology: 0511 magenta lg cir				
Simplified Symbology: 0511 magenta lg cir				

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology	Line Symbology	Area Symbology
BC020		BC020
buoy - ODAS		btc=10
Full Chart Symbology: 0309 black superbuoy		
Simplified Symbology: 0312 black superbuoy - simplified		
buoy - one ball		tmc=15or27or28
Full Chart Symbology: 0210 black buoy topmark one ball		
buoy - one cone down		tmc=22
Full Chart Symbology: 0204 black buoy topmark one cone down		
buoy - one cone up		tmc=16or21
Full Chart Symbology: 0202 black buoy topmark one cone up		
buoy - pillar; radar navigation system		nst=10or54 AND ssc=10
Full Chart Symbology: 4326 magenta lg dashed cir		
Simplified Symbology: 0512 magenta lg dashed cir		
buoy - pillar; radio navigation system		nst=1or4or5or17or41or51or53 AND ssc=10
Full Chart Symbology: 4325 magenta lg cir		
Simplified Symbology: 0511 magenta lg cir		
buoy - pillar; type unknown		btc=0 AND ssc=10
Full Chart Symbology: 0306 black pillar buoy		
Simplified Symbology: 6051 yellow narrow parallelogram w/ outline blk outline		
buoy - radar reflector present		ref=1
Full Chart Symbology: 0510 magenta arc w/ 5 ticks pointing upward		
Simplified Symbology: 0510 magenta arc w/ 5 ticks pointing upward		

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DNC

Point Symbology

Line Symbology

Area Symbology

BC020**BC020****buoy - radar station****nst=45****Full Chart Symbology:**

0009 feature brown dot inside cir

Simplified Symbology:

0009 feature brown dot inside cir

buoy - rhombus/diamond**tmc=19or31****Full Chart Symbology:**

0214 black buoy topmark open parallelogram

buoy - sound signal**sst=1or2or3or4or6or9or14or15****Full Chart Symbology:**

0401 lt magenta arcs origin offset - maximum

Simplified Symbology:

0401 lt magenta arcs origin offset - maximum

buoy - spar; type unknown**btc=0 AND ssc=16****Full Chart Symbology:**

0308 black spar buoy

Simplified Symbology:6051 yellow narrow parallelogram w/ outline
blk outline**buoy - special (x)****tmc=6****Full Chart Symbology:**

0265 black buoy topmark special X

buoy - sphere; type unknown**btc=0 AND ssc=17****Full Chart Symbology:**

0307 black spherical buoy

Simplified Symbology:

0313 yellow circle w/ outline black outline

buoy - superbuoy; type unknown**btc=0 AND ssc=73****Full Chart Symbology:**

0309 black superbuoy

Simplified Symbology:

0312 black superbuoy - simplified

buoy - two balls**tmc=2****Full Chart Symbology:**

0212 black buoy topmark two balls

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology	Line Symbology	Area Symbology
BC020		BC020
buoy - two cones down		tmc=8
Full Chart Symbology: 0206 black buoy topmark two cones down		
buoy - two cones in		tmc=9
Full Chart Symbology: 0208 black buoy topmark two cones point in		
buoy - two cones out		tmc=1
Full Chart Symbology: 0207 black buoy topmark two cones point out		
buoy - two cones up		tmc=3
Full Chart Symbology: 0205 black buoy topmark two cones up		
buoy - upright cross		tmc=23or30
Full Chart Symbology: 0217 black buoy topmark upright cross		

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BC040**BC040****Line****light****Full Chart Symbology:**

0713 magenta compressed zig-zag line

Simplified Symbology:

0713 magenta compressed zig-zag line

Point**light - base symbol****Full Chart Symbology:**

0051 black filled sm cir

Simplified Symbology:

0051 black filled sm cir

light - broom point up**tmc=17****Full Chart Symbology:**

0188 black topmark broom up

light - can**tmc=25or26or29****Full Chart Symbology:**

0133 black topmark can

light - default topmark**tmc=0or32****Full Chart Symbology:**

0199 black default topmark upright

light - one ball**tmc=15or27or28****Full Chart Symbology:**

0130 black topmark one ball

light - one cone down**tmc=22****Full Chart Symbology:**

0124 black topmark one cone down

light - one cone up**tmc=16or21****Full Chart Symbology:**

0122 black topmark one cone up

light - perch**tmc=18****Full Chart Symbology:**

0187 black topmark perch

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology	Line Symbology	Area Symbology		
BC040		BC040		
light - radar navigation system		nst=10or54		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0512 magenta lg dashed cir</td> </tr> <tr> <td>Simplified Symbology: 0512 magenta lg dashed cir</td> </tr> </table>			Full Chart Symbology: 0512 magenta lg dashed cir	Simplified Symbology: 0512 magenta lg dashed cir
Full Chart Symbology: 0512 magenta lg dashed cir				
Simplified Symbology: 0512 magenta lg dashed cir				
light - radar reflector present		ref=1		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0510 magenta arc w/ 5 ticks pointing upward</td> </tr> <tr> <td>Simplified Symbology: 0510 magenta arc w/ 5 ticks pointing upward</td> </tr> </table>			Full Chart Symbology: 0510 magenta arc w/ 5 ticks pointing upward	Simplified Symbology: 0510 magenta arc w/ 5 ticks pointing upward
Full Chart Symbology: 0510 magenta arc w/ 5 ticks pointing upward				
Simplified Symbology: 0510 magenta arc w/ 5 ticks pointing upward				
light - radar station		nst=45		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0009 feature brown dot inside cir</td> </tr> <tr> <td>Simplified Symbology: 0009 feature brown dot inside cir</td> </tr> </table>			Full Chart Symbology: 0009 feature brown dot inside cir	Simplified Symbology: 0009 feature brown dot inside cir
Full Chart Symbology: 0009 feature brown dot inside cir				
Simplified Symbology: 0009 feature brown dot inside cir				
light - radio navigation system		nst=1or4or5or17or41or51or53		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0511 magenta lg cir</td> </tr> <tr> <td>Simplified Symbology: 0511 magenta lg cir</td> </tr> </table>			Full Chart Symbology: 0511 magenta lg cir	Simplified Symbology: 0511 magenta lg cir
Full Chart Symbology: 0511 magenta lg cir				
Simplified Symbology: 0511 magenta lg cir				
light - rhombus/diamond		tmc=19or31		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0114 black topmark open parallelogram</td> </tr> </table>			Full Chart Symbology: 0114 black topmark open parallelogram	
Full Chart Symbology: 0114 black topmark open parallelogram				
light - sound signal		sst=1or2or3or4or6or9or14or15		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0401 lt magenta arcs origin offset - maximum</td> </tr> <tr> <td>Simplified Symbology: 0401 lt magenta arcs origin offset - maximum</td> </tr> </table>			Full Chart Symbology: 0401 lt magenta arcs origin offset - maximum	Simplified Symbology: 0401 lt magenta arcs origin offset - maximum
Full Chart Symbology: 0401 lt magenta arcs origin offset - maximum				
Simplified Symbology: 0401 lt magenta arcs origin offset - maximum				
light - special (x)		tmc=6		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0185 black topmark special X</td> </tr> </table>			Full Chart Symbology: 0185 black topmark special X	
Full Chart Symbology: 0185 black topmark special X				
light - two balls		tmc=2		
<table border="1" style="width: 100%;"> <tr> <td>Full Chart Symbology: 0132 black topmark two balls</td> </tr> </table>			Full Chart Symbology: 0132 black topmark two balls	
Full Chart Symbology: 0132 black topmark two balls				

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DNC

Point Symbology	Line Symbology	Area Symbology
BC040		BC040
light - two cones down		tmc=8
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0126 black topmark two cones down </div>		
light - two cones in		tmc=9
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0128 black topmark two cones point in </div>		
light - two cones out		tmc=1
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0127 black topmark two cones point out </div>		
light - two cones up		tmc=3
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0125 black topmark two cones up </div>		
light - upright cross		tmc=23or30
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0186 black topmark cross </div>		
BC055		BC055
Point		
marker		
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: 0151 magenta box above inverted T with open cir </div>		
<div style="border: 1px solid black; padding: 5px;"> Simplified Symbology: 0152 magenta box w/ dot and line below </div>		
BC060		BC060
Area		
light sector		
<div style="border: 1px solid black; padding: 5px;"> Full Chart Symbology: <div style="text-align: right;">3116 black very thin dash line</div> </div>		
<div style="border: 1px solid black; padding: 5px;"> Simplified Symbology: <div style="text-align: right;">3116 black very thin dash line</div> </div>		

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BC070**BC070****Point****light vessel/lightship****Full Chart Symbology:**

0514 black lt vessel

Simplified Symbology:

0516 black lt vessel, simplified

light vessel/lightship - radar navigation system**nst=10or54****Full Chart Symbology:**

0512 magenta lg dashed cir

Simplified Symbology:

0512 magenta lg dashed cir

light vessel/lightship - radar reflector present**ref=1****Full Chart Symbology:**

0510 magenta arc w/ 5 ticks pointing upward

Simplified Symbology:

0510 magenta arc w/ 5 ticks pointing upward

light vessel/lightship - radar station**nst=45****Full Chart Symbology:**

0009 feature brown dot inside cir

Simplified Symbology:

0009 feature brown dot inside cir

light vessel/lightship - radio navigation system**nst=1or4or5or17or41or51or53****Full Chart Symbology:**

0511 magenta lg cir

Simplified Symbology:

0511 magenta lg cir

light vessel/lightship - sound signal**sst=1or2or3or4or6or9or14or15****Full Chart Symbology:**

0401 lt magenta arcs origin offset - maximum

Simplified Symbology:

0401 lt magenta arcs origin offset - maximum

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BC080**BC080****Area****perches/stakes****Full Chart Symbology:**

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Point**perches/stakes****Full Chart Symbology:**0052 depth med blue fill cir w/ black dotted
outline**Simplified Symbology:**0052 depth med blue fill cir w/ black dotted
outline**BC100****BC100****Line****leading line****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

BD000**BD000**

Area

underwater danger/hazard - depth 20m or less hdp>0and<=20

Full Chart Symbology:	0680 black thin dotted line
Simplified Symbology:	0680 black thin dotted line

underwater danger/hazard - depth greater than 20m hdp>20

Full Chart Symbology:	0629 gray thin dash line
Simplified Symbology:	0629 gray thin dash line

underwater danger/hazard - depth unknown hdp=0

Full Chart Symbology:	0680 black thin dotted line	0810 depth med blue solid fill
Simplified Symbology:	0680 black thin dotted line	0810 depth med blue solid fill

underwater danger/hazard - not accurate acc<>1

Full Chart Symbology:	0058 black leader line w/ question mark
Simplified Symbology:	0058 black leader line w/ question mark

Point

underwater danger/hazard - depth 20m or less hdp>0and<=20

Full Chart Symbology:	0053 depth med blue fill lg oval w/ black dot outline
Simplified Symbology:	0053 depth med blue fill lg oval w/ black dot outline

underwater danger/hazard - depth greater than 20m hdp>20

Full Chart Symbology:	0054 black lg oval w/ dotted outline
Simplified Symbology:	0054 black lg oval w/ dotted outline

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DNC

Point Symbology

Line Symbology

Area Symbology

BD000**BD000****underwater danger/hazard - depth unknown****hdp=0****Full Chart Symbology:**

0052 depth med blue fill cir w/ black dotted outline

Simplified Symbology:

0052 depth med blue fill cir w/ black dotted outline

underwater danger/hazard - not accurate**acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

BD010**BD010****Area****breakers****Full Chart Symbology:**

0056 gray waves symbol

0656 gray very thin dash line

Simplified Symbology:

0056 gray waves symbol

0656 gray very thin dash line

Line**breakers****Full Chart Symbology:**

0752 gray very thin dash line w/ cntred waves

Simplified Symbology:

0752 gray very thin dash line w/ cntred waves

Point**breakers****Full Chart Symbology:**

0056 gray waves symbol

Simplified Symbology:

0056 gray waves symbol

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

BD020**BD020****Area****crib - above surface****vrr=1 AND hdp=NULL****Full Chart Symbology:**

0623 dk gray thin solid line

0804 brown solid fill

Simplified Symbology:

0623 dk gray thin solid line

0804 brown solid fill

crib - covers and uncovers**vrr=8 AND hdp=NULL****Full Chart Symbology:**

0626 dk gray thin dash line

0803 yellow-green solid fill

Simplified Symbology:

0626 dk gray thin dash line

0803 yellow-green solid fill

crib - not accurate**acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

crib - submerged; depth 20m or less**vrr=4 AND hdp>0and<=20****Full Chart Symbology:**

0680 black thin dotted line

Simplified Symbology:

0680 black thin dotted line

crib - submerged; depth greater than 20m**vrr=4 AND hdp>20****Full Chart Symbology:**

0629 gray thin dash line

Simplified Symbology:

0629 gray thin dash line

crib - submerged; depth unknown**vrr=4 AND hdp=0****Full Chart Symbology:**

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

BD020**BD020****Point****crib - covers and uncovers; depth null****vrr=8 AND hdp=NULL****Full Chart Symbology:**0055 yellow-green solid circle w/ black dot
outline**Simplified Symbology:**0055 yellow-green solid circle w/ black dot
outline**crib - not accurate****acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

crib - partly submerged/dry; depth null**vrr=1 AND hdp=NULL****Full Chart Symbology:**

0057 lt brown square with dk gray outline

Simplified Symbology:

0057 lt brown square with dk gray outline

crib - submerged; depth 20m or less**vrr=4 AND hdp>0and<=20****Full Chart Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**Simplified Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**crib - submerged; depth greater than 20m****vrr=4 AND hdp>20****Full Chart Symbology:**

0054 black lg oval w/ dotted outline

Simplified Symbology:

0054 black lg oval w/ dotted outline

crib - submerged; depth unknown**vrr=4 AND hdp=0****Full Chart Symbology:**0052 depth med blue fill cir w/ black dotted
outline**Simplified Symbology:**0052 depth med blue fill cir w/ black dotted
outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD030**BD030****Area****discolored water****Full Chart Symbology:**

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

discolored water - not accurate**acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

Point**discolored water****Full Chart Symbology:**

0052 depth med blue fill cir w/ black dotted outline

Simplified Symbology:

0052 depth med blue fill cir w/ black dotted outline

discolored water - not accurate**acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD040**BD040**

Area

eddies

Full Chart Symbology:

0056 gray waves symbol

0656 gray very thin dash line

Simplified Symbology:

0056 gray waves symbol

0656 gray very thin dash line

Point

eddies

Full Chart Symbology:

0056 gray waves symbol

Simplified Symbology:

0056 gray waves symbol

BD050**BD050**

Area

foul ground

Full Chart Symbology:

0059 gray pound (#) symbol

0716 gray dash/chevron line

Simplified Symbology:

0059 gray pound (#) symbol

0656 gray very thin dash line

Point

foul ground

Full Chart Symbology:

0059 gray pound (#) symbol

Simplified Symbology:

0059 gray pound (#) symbol

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD060**BD060****Area****kelp/seaweed****Full Chart Symbology:**

0060 gray kelp symbol

3077 lt gray very thin dash line

Simplified Symbology:

0060 gray kelp symbol

3077 lt gray very thin dash line

Point**kelp/seaweed****Full Chart Symbology:**

0060 gray kelp symbol

Simplified Symbology:

0060 gray kelp symbol

BD080**BD080****Area****overfalls/tide rips****Full Chart Symbology:**

0056 gray waves symbol

0656 gray very thin dash line

Simplified Symbology:

0056 gray waves symbol

0656 gray very thin dash line

Point**overfalls/tide rips****Full Chart Symbology:**

0056 gray waves symbol

Simplified Symbology:

0056 gray waves symbol

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD100**BD100****Area****pile/piling/post - covers and uncovers** **vrr=8****Full Chart Symbology:**

0626 dk gray thin dash line

0803 yellow-green solid fill

Simplified Symbology:

0626 dk gray thin dash line

0803 yellow-green solid fill

pile/piling/post - does not cover **vrr=1****Full Chart Symbology:**

0623 dk gray thin solid line

0804 brown solid fill

Simplified Symbology:

0623 dk gray thin solid line

0804 brown solid fill

pile/piling/post - not accurate **acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

pile/piling/post - submerged **vrr=4****Full Chart Symbology:**

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Point**pile/piling/post****Full Chart Symbology:**

0051 black filled sm cir

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

BD110**BD110****Point****platform****Full Chart Symbology:**

0061 black dot inside square

Simplified Symbology:

0061 black dot inside square

platform - lighted**cha=21****Full Chart Symbology:**

0500 magenta flare with black outline

Simplified Symbology:

0500 magenta flare with black outline

platform - radar navigation system**nst=10or54****Full Chart Symbology:**

0512 magenta lg dashed cir

Simplified Symbology:

0512 magenta lg dashed cir

platform - sound signal**sst<>16****Full Chart Symbology:**

0402 lt magenta arcs origin offset - minimum

Simplified Symbology:

0402 lt magenta arcs origin offset - minimum

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DNC

Point Symbology

Line Symbology

Area Symbology

BD120**BD120****Area**

reef - covers and uncovers, shallow display mode on vrr=8 AND isdm=1

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

reef - covers and uncovers vrr=8

Full Chart Symbology:

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

reef - not covers and uncovers, depth unknown or null vrr<>8 AND hdp=0orNULL

Full Chart Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

reef - not covers and uncovers, not accurate vrr<>8 AND acc<>1

Full Chart Symbology:

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

reef - submerged, depth 20m or less vrr=4 AND hdp>0and<=20

Full Chart Symbology:

0680 black thin dotted line

Simplified Symbology:

0680 black thin dotted line

reef - submerged, depth greater than 20m vrr=4 AND hdp>20

Full Chart Symbology:

0629 gray thin dash line

Simplified Symbology:

0629 gray thin dash line

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DNC

Point Symbology

Line Symbology

Area Symbology

BD130**BD130****Point**

rock - depth null **hdp=NULL**

Full Chart Symbology:

0063 black 6 point asterisk

Simplified Symbology:

0063 black 6 point asterisk

rock - not accurate **acc<>1**

Full Chart Symbology:

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

rock - submerged; depth 20m or less **vrr=4 AND hdp>0and<=20**

Full Chart Symbology:

0053 depth med blue fill lg oval w/ black dot outline

Simplified Symbology:

0053 depth med blue fill lg oval w/ black dot outline

rock - submerged; depth greater than 20m **vrr=4 AND hdp>20**

Full Chart Symbology:

0054 black lg oval w/ dotted outline

Simplified Symbology:

0054 black lg oval w/ dotted outline

rock - submerged; depth unknown **vrr=4 AND hdp=0**

Full Chart Symbology:

0062 black cross in dotted cir, depth med blue fill

Simplified Symbology:

0062 black cross in dotted cir, depth med blue fill

**MIL-DTL-89045A w/Amendment 1
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DNC

Point Symbology

Line Symbology

Area Symbology

BD140**BD140**

Area

snags/stumps - covers and uncovers **vrr=8**

Full Chart Symbology:

0626 dk gray thin dash line

0803 yellow-green solid fill

Simplified Symbology:

0626 dk gray thin dash line

0803 yellow-green solid fill

snags/stumps - does not cover **vrr=1**

Full Chart Symbology:

0623 dk gray thin solid line

0804 brown solid fill

Simplified Symbology:

0623 dk gray thin solid line

0804 brown solid fill

snags/stumps - not accurate **acc<>1**

Full Chart Symbology:

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

snags/stumps - submerged **vrr=4**

Full Chart Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Point

snags/stumps - covers and uncovers; depth null **vrr=8 AND hdp=NULL**

Full Chart Symbology:

0055 yellow-green solid circle w/ black dot outline

Simplified Symbology:

0055 yellow-green solid circle w/ black dot outline

snags/stumps - not accurate **acc<>1**

Full Chart Symbology:

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

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DNC

Point Symbology

Line Symbology

Area Symbology

BD140**BD140****snags/stumps - partly submerged/dry; depth null****vrr=1 AND hdp=NULL****Full Chart Symbology:**

0057 lt brown square with dk gray outline

Simplified Symbology:

0057 lt brown square with dk gray outline

snags/stumps - submerged; depth 20m or less**vrr=4 AND hdp>0and<=20****Full Chart Symbology:**

0053 depth med blue fill lg oval w/ black dot outline

Simplified Symbology:

0053 depth med blue fill lg oval w/ black dot outline

snags/stumps - submerged; depth greater than 20m**vrr=4 AND hdp>20****Full Chart Symbology:**

0054 black lg oval w/ dotted outline

Simplified Symbology:

0054 black lg oval w/ dotted outline

snags/stumps - submerged; depth unknown**vrr=4 AND hdp=0****Full Chart Symbology:**

0052 depth med blue fill cir w/ black dotted outline

Simplified Symbology:

0052 depth med blue fill cir w/ black dotted outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD180**BD180****Area****wreck - covers and uncovers; depth null****vrr=8 AND hdp=NULL****Full Chart Symbology:**

0626 dk gray thin dash line

0803 yellow-green solid fill

Simplified Symbology:

0626 dk gray thin dash line

0803 yellow-green solid fill

wreck - does not cover; depth null**vrr=1 AND hdp=NULL****Full Chart Symbology:**

0623 dk gray thin solid line

0804 brown solid fill

Simplified Symbology:

0623 dk gray thin solid line

0804 brown solid fill

wreck - submerged; depth 20m or less**vrr=4 AND hdp>0and<=20****Full Chart Symbology:**

0680 black thin dotted line

Simplified Symbology:

0680 black thin dotted line

wreck - submerged; depth greater than 20m**vrr=4 AND hdp>20****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

wreck - submerged; depth unknown**vrr=4 AND hdp=0****Full Chart Symbology:**

0630 dk gray thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0630 dk gray thin dotted line

0810 depth med blue solid fill

wreck - unknown; awash; depth null**vrr=0or2 AND hdp=NULL****Full Chart Symbology:**

0630 dk gray thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0630 dk gray thin dotted line

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD180**BD180****Point****wreck - not accurate****acc<>1****Full Chart Symbology:**

0058 black leader line w/ question mark

Simplified Symbology:

0058 black leader line w/ question mark

wreck - not submerged; depth null**hdp=NULL AND vrr=1or2or8****Full Chart Symbology:**

0064 gray wreck symbol

Simplified Symbology:

0064 gray wreck symbol

wreck - showing mast/hull/superstructure; depth null**loc<>4 AND hdp=NULL****Full Chart Symbology:**

0064 gray wreck symbol

Simplified Symbology:

0064 gray wreck symbol

wreck - submerged; dangerous; depth unknown**vrr=4 AND soh=1 AND hdp=0****Full Chart Symbology:**0065 black bar 3 ticks in dotted depth med
blue oval**Simplified Symbology:**0065 black bar 3 ticks in dotted depth med
blue oval**wreck - submerged; depth 20m or less****vrr=4 AND hdp>0and<=20****Full Chart Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**Simplified Symbology:**0053 depth med blue fill lg oval w/ black dot
outline**wreck - submerged; depth greater than 20m****vrr=4 AND hdp>20****Full Chart Symbology:**

0054 black lg oval w/ dotted outline

Simplified Symbology:

0054 black lg oval w/ dotted outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BD180**BD180****wreck - submerged; not dangerous; depth unknown****vrr=4 AND soh=2 AND hdp=0****Full Chart Symbology:**

0066 black horiz bar w/3 ticks

Simplified Symbology:

0066 black horiz bar w/3 ticks

wreck - unknown; depth null**hdp=NULL AND vrr=0****Full Chart Symbology:**0065 black bar 3 ticks in dotted depth med
blue oval**Simplified Symbology:**0065 black bar 3 ticks in dotted depth med
blue oval

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BE010**BE010****Area**

depth area (deep water); 2 shades **idsm=1 AND cvl>=ssdcand<>99999**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (medium deep); 4 shades **idsm=0 AND cvl>=ssdcand<msdc**

Full Chart Symbology:

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

depth area (medium shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

depth area (medium shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

depth area (very deep); 4 shades **idsm=0 AND cvl>=msdcand<>99999**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (very shallow); 2 shades; shallow mode off **idsm=1 AND isdm=0 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology	Line Symbology	Area Symbology
BE010		BE010
depth area (very shallow); 2 shades; shallow mode on		idsm=1 AND isdm=1 AND cvl<ssdc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area (very shallow); 4 shades; shallow mode off		idsm=0 AND isdm=0 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
depth area (very shallow); 4 shades; shallow mode on		idsm=0 AND isdm=1 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area; depth unknown		cvl=99999
Full Chart Symbology:		0823 no data gray solid fill
Simplified Symbology:		0823 no data gray solid fill
Full Chart Symbology:		0934 gray dash wide patt fill
Simplified Symbology:		0934 gray dash wide patt fill
Full Chart Symbology:	0631 gray thin solid line	
Simplified Symbology:	0631 gray thin solid line	

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DNC

Point Symbology

Line Symbology

Area Symbology

BE010**BE010****Line**

depth curve - accurate **acc=1**

Full Chart Symbology:

0608 depth gray very thin solid line

Simplified Symbology:

0608 depth gray very thin solid line

depth curve - not accurate **acc=2**

Full Chart Symbology:

0614 depth gray very thin dash line

Simplified Symbology:

0614 depth gray very thin dash line

BE020**BE020****Point**

drying height overbar (dark) **hdh>=0 AND hdp=NULL**

Full Chart Symbology:

1256 sounding black overbar

Simplified Symbology:

1256 sounding black overbar

sounding or drying height - circle (light) indicating low accuracy **acc<>1**

Full Chart Symbology:

1251 sounding gray circle

Simplified Symbology:

1251 sounding gray circle

BF010**BF010****Point**

bottom characteristics - surface unknown **mcc=0 AND psc=0**

Full Chart Symbology:

1233 black horiz line below triangle w/ B inside

Simplified Symbology:

1233 black horiz line below triangle w/ B inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BG010**BG010****Point****current flow - ebb; direction known****cur=1 AND dof<>0****Full Chart Symbology:**

0073 gray arrow w/ no feathers

Simplified Symbology:

0073 gray arrow w/ no feathers

current flow - flood; direction known**cur=2 AND dof<>0****Full Chart Symbology:**

0074 gray arrow w/ one feather

Simplified Symbology:

0074 gray arrow w/ one feather

current flow - general, ocean; direction known**cur=3or5 AND dof<>0****Full Chart Symbology:**

0072 gray arrow w/ two feathers

Simplified Symbology:

0072 gray arrow w/ two feathers

current flow - general; direction unknown**cur=0 OR dof=0****Full Chart Symbology:**

0071 gray arrow w/ 2 feathers and 2 ?

Simplified Symbology:

0071 gray arrow w/ 2 feathers and 2 ?

BG020**BG020****Point****tide gauge****Full Chart Symbology:**

0015 lt magenta SS in rectangle w/ pale green fill

Simplified Symbology:

0015 lt magenta SS in rectangle w/ pale green fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BG030**BG030****Point****tide data point****Full Chart Symbology:**

0076 gray diamond

Simplified Symbology:

0076 gray diamond

BG040**BG040****Point****current diagram****Full Chart Symbology:**

0154 magenta cir,arrows pting out,represent only

Simplified Symbology:

0154 magenta cir,arrows pting out,represent only

BH010**BH010****Line****aqueduct - elevated****loc=25****Full Chart Symbology:**

0610 gray solid line

Simplified Symbology:

0610 gray solid line

aqueduct - not elevated**loc<>25****Full Chart Symbology:**

0704 gray dash very thin line w/ sm cir

Simplified Symbology:

0704 gray dash very thin line w/ sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DNC

Point Symbology

Line Symbology

Area Symbology

BH020**BH020**

Area

canal

Full Chart Symbology:	0600 black very thin solid line	0810 depth med blue solid fill
Simplified Symbology:	0600 black very thin solid line	0810 depth med blue solid fill

Line

canal

Full Chart Symbology:	0600 black very thin solid line
Simplified Symbology:	0600 black very thin solid line

BH050**BH050**

Area

fish hatchery/fish farm/marine farm

Full Chart Symbology:	0716 gray dash/chevron line	0904 gray fish in net patt fill
Simplified Symbology:	0656 gray very thin dash line	0904 gray fish in net patt fill

BH080**BH080**

Area

lake/pond

Full Chart Symbology:	0600 black very thin solid line	0810 depth med blue solid fill
Simplified Symbology:	0600 black very thin solid line	0810 depth med blue solid fill

BH090**BH090**

Area

land subject to inundation

Full Chart Symbology:	6050 depth pale blue inundation area patt fill
Simplified Symbology:	6050 depth pale blue inundation area patt fill

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Point Symbology

Line Symbology

Area Symbology

BH095**BH095****Area****marsh/swamp****Full Chart Symbology:**

0910 brown marsh patt fill

Simplified Symbology:

0910 brown marsh patt fill

BH120**BH120****Line****rapids****Full Chart Symbology:**

0610 gray solid line

Simplified Symbology:

0610 gray solid line

BH130**BH130****Area****reservoir****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

BH140**BH140****Area****river/stream****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

Line**river/stream****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

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Point Symbology

Line Symbology

Area Symbology

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

0911 depth med blue grid patt fill

Simplified Symbology:

0911 depth med blue grid patt fill

BH180**BH180****Line****waterfall****Full Chart Symbology:**

0615 pale green solid line

Simplified Symbology:

0615 pale green solid line

BH210**BH210****Line****inland shoreline****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

BI020**BI020****Line****dam/weir****Full Chart Symbology:**

0607 feature brown thick solid line

Simplified Symbology:

0607 feature brown thick solid line

BI030**BI030****Area****lock****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

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Point Symbology

Line Symbology

Area Symbology

BI040**BI040****Line****sluice gate****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BJ030**BJ030****Area****glacier****Full Chart Symbology:**

0823 no data gray solid fill

Simplified Symbology:

0823 no data gray solid fill

Full Chart Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

Simplified Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

BJ060**BJ060****Point****ice peak/nunatak****Full Chart Symbology:**

0077 black radiating cones

Simplified Symbology:

0077 black radiating cones

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Point Symbology

Line Symbology

Area Symbology

BJ065**BJ065**

Area

ice shelf

Full Chart Symbology:

0823 no data gray solid fill

Simplified Symbology:

0823 no data gray solid fill

Full Chart Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

Simplified Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

BJ100**BJ100**

Area

snow field/ice field

Full Chart Symbology:

0823 no data gray solid fill

Simplified Symbology:

0823 no data gray solid fill

Full Chart Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

Simplified Symbology:

0656 gray very thin dash line

0912 gray random line patt fill

BJ110**BJ110**

Area

tundra

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

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Point Symbology

Line Symbology

Area Symbology

CA010**CA010**

Line

contour line (land)

Full Chart Symbology:

0604 feature brown very thin solid line

Simplified Symbology:

0604 feature brown very thin solid line

CA030**CA030**

Point

spot elevation

Full Chart Symbology:

0078 black sm cir

Simplified Symbology:

0078 black sm cir

DA010**DA010**

Area

ground surface element

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

DB090**DB090**

Area

embankment/fill

Full Chart Symbology:

0913 feature brown solid filled circle patt fill

Simplified Symbology:

0913 feature brown solid filled circle patt fill

Line

embankment/fill

Full Chart Symbology:

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

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Point Symbology

Line Symbology

Area Symbology

DB170**DB170****Area****sand dune/sand hills****Full Chart Symbology:**

0913 feature brown solid filled circle patt fill

Simplified Symbology:

0913 feature brown solid filled circle patt fill

EA030**EA030****Area****nursery****Full Chart Symbology:**

0914 feature brown cirs patt fill

Simplified Symbology:

0914 feature brown cirs patt fill

EA040**EA040****Area****orchard/plantation****Full Chart Symbology:**

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

Simplified Symbology:

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

EA050**EA050****Area****vineyards****Full Chart Symbology:**

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

Simplified Symbology:

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

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Point Symbology

Line Symbology

Area Symbology

EC030**EC030****Area****trees - mangrove****veg=19****Full Chart Symbology:**

0624 feature brown very thin dash line

0916 feature brown mangrove side-view patt fill

Simplified Symbology:

0624 feature brown very thin dash line

0916 feature brown mangrove side-view patt fill

trees - not mangrove**veg<>19****Full Chart Symbology:**

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

Simplified Symbology:

0624 feature brown very thin dash line

0915 feature brown tree side-view patt fill

Point**trees****Full Chart Symbology:**

0079 feature brown side view of stylised tree

Simplified Symbology:

0079 feature brown side view of stylised tree

FA000**FA000****Line****administrative boundary - insular****use=32****Full Chart Symbology:**

0680 black thin dotted line

Simplified Symbology:

0680 black thin dotted line

administrative boundary - international**use=23****Full Chart Symbology:**

1310 black one long dash two short dash line

Simplified Symbology:

1310 black one long dash two short dash line

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Point Symbology

Line Symbology

Area Symbology

FA020**FA020**

Line

armistice line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA040**FA040**

Line

claim line**Full Chart Symbology:**

3120 black thin long dash line

Simplified Symbology:

3120 black thin long dash line

FA060**FA060**

Line

defacto boundary**Full Chart Symbology:**

1310 black one long dash two short dash line

Simplified Symbology:

1310 black one long dash two short dash line

FA110**FA110**

Line

international date line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

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Point Symbology

Line Symbology

Area Symbology

FC021**FC021****Area****maritime limit boundary - cargo Xshipment mac=49****Full Chart Symbology:**

0081 lt magenta square w/ l 0734 magenta dash/chevron line

Simplified Symbology:

0081 lt magenta square w/ l 0635 lt magenta very thin dash line

maritime limit boundary - deguassing mac=44**Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle 0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle 4186 magenta thin dash line

maritime limit boundary - dredging area mac=58**Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle 0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle 4186 magenta thin dash line

maritime limit boundary - fairway mac=55**Full Chart Symbology:**

0716 gray dash/chevron line

Simplified Symbology:

0656 gray very thin dash line

maritime limit boundary - fish traps mac=56**Full Chart Symbology:**

0047 gray rectangle w/ angle line on top 0716 gray dash/chevron line

Simplified Symbology:

0656 gray very thin dash line 0903 gray fish trap patt fill

maritime limit boundary - incineration mac=31**Full Chart Symbology:**

0081 lt magenta square w/ l 0734 magenta dash/chevron line

Simplified Symbology:

0081 lt magenta square w/ l 0635 lt magenta very thin dash line

maritime limit boundary - marine farm mac=57**Full Chart Symbology:**

0716 gray dash/chevron line 0904 gray fish in net patt fill

Simplified Symbology:

0656 gray very thin dash line 0904 gray fish in net patt fill

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Point Symbology

Line Symbology

Area Symbology

FC021**FC021**

maritime limit boundary - oil field, gas field **mac=32or33**

Full Chart Symbology:

0093 traffic lt magenta ! Inside lg circle 0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle 4186 magenta thin dash line

maritime limit boundary - pilot boarding **mac=48**

Full Chart Symbology:

0080 magenta solid filled diamond inside cir 0734 magenta dash/chevron line

Simplified Symbology:

0080 magenta solid filled diamond inside cir 1651 traffic lt magenta thin dash line

maritime limit boundary - precautionary **mac=42**

Full Chart Symbology:

0092 traffic lt magenta ! Inside triangle 0738 magenta dash/chev line w/precaution symbol 0917 traffic lt magenta rt diag line patt fill

Simplified Symbology:

0092 traffic lt magenta ! Inside triangle 0663 traffic magenta thin dash line

maritime limit boundary - spoil, dumping, explosive dumping **mac=25or30or35**

Full Chart Symbology:

0081 lt magenta square w/ l 0734 magenta dash/chevron line

Simplified Symbology:

0081 lt magenta square w/ l 0634 magenta very thin dash line

maritime limit boundary - submarine exercise, mine laying, firing range **mac=27or28or29**

Full Chart Symbology:

0093 traffic lt magenta ! Inside lg circle 0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle 4186 magenta thin dash line

maritime limit boundary - turning area **mac=24**

Full Chart Symbology:

0093 traffic lt magenta ! Inside lg circle 0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle 4186 magenta thin dash line

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Point Symbology

Line Symbology

Area Symbology

FC021**FC021****maritime limit boundary - unknown, other****mac=0or999****Full Chart Symbology:**

0097 traffic lt magenta ! Inside lg circle

0742 magenta dash/chevron line w/caution symbol

Simplified Symbology:

0097 traffic lt magenta ! Inside lg circle

0663 traffic magenta thin dash line

maritime limit boundary - unsurveyed**mac=26****Full Chart Symbology:**

0823 no data gray solid fill

Simplified Symbology:

0823 no data gray solid fill

Full Chart Symbology:

0933 gray offset dash patt fill

Simplified Symbology:

0933 gray offset dash patt fill

Full Chart Symbology:

0631 gray thin solid line

Simplified Symbology:

0631 gray thin solid line

Line**maritime limit boundary - cargo Xshipment****mac=49 AND mbl=NULL****Full Chart Symbology:**

0635 lt magenta very thin dash line

Simplified Symbology:

0635 lt magenta very thin dash line

maritime limit boundary - clearing line**mbi=13 AND mac=NULL****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

maritime limit boundary - deguassing**mac=44 AND mbl=NULL****Full Chart Symbology:**

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

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Point Symbology	Line Symbology	Area Symbology
FC021		FC021
maritime limit boundary - dredging		mac=58 AND mbl=NULL
Full Chart Symbology:	4186 magenta thin dash line	
Simplified Symbology:	4186 magenta thin dash line	
maritime limit boundary - dumping, explosive dumping		mac=30or35 AND mbl=NULL
Full Chart Symbology:	0634 magenta very thin dash line	
Simplified Symbology:	0634 magenta very thin dash line	
maritime limit boundary - fairway		mac=55 AND mbl=NULL
Full Chart Symbology:	0656 gray very thin dash line	
Simplified Symbology:	0656 gray very thin dash line	
maritime limit boundary - fish traps		mac=56 AND mbl=NULL
Full Chart Symbology:	0629 gray thin dash line	
Simplified Symbology:	0629 gray thin dash line	
maritime limit boundary - incineration		mac=31 AND mbl=NULL
Full Chart Symbology:	0635 lt magenta very thin dash line	
Simplified Symbology:	0635 lt magenta very thin dash line	
maritime limit boundary - marine farm		mac=57 AND mbl=NULL
Full Chart Symbology:	0633 lt gray thin dash line	
Simplified Symbology:	0633 lt gray thin dash line	
maritime limit boundary - not clearing line		mbl<>7and<>13 AND mac=NULL
Full Chart Symbology:	0629 gray thin dash line	
Simplified Symbology:	0629 gray thin dash line	

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Point Symbology

Line Symbology

Area Symbology

FC021**FC021**

maritime limit boundary - oil field, gas field **mac=32or33 AND mbl=NULL**

Full Chart Symbology:

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

maritime limit boundary - pilot boarding **mac=48 AND mbl=NULL**

Full Chart Symbology:

1651 traffic lt magenta thin dash line

Simplified Symbology:

1651 traffic lt magenta thin dash line

maritime limit boundary - precautionary **mac=42 AND mbl=NULL**

Full Chart Symbology:

0663 traffic magenta thin dash line

Simplified Symbology:

0663 traffic magenta thin dash line

maritime limit boundary - spoil **mac=25 AND mbl=NULL**

Full Chart Symbology:

0634 magenta very thin dash line

Simplified Symbology:

0634 magenta very thin dash line

maritime limit boundary - submarine exercise, mine laying, firing range **mac=27or28or29 AND mbl=NULL**

Full Chart Symbology:

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

maritime limit boundary - territorial waters baseline **mbl=7 AND mac=NULL**

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

maritime limit boundary - turning area **mac=24 AND mbl=NULL**

Full Chart Symbology:

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

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DNC

Point Symbology

Line Symbology

Area Symbology

FC021**FC021****maritime limit boundary - unknown, other****mac=0or999 AND mbl=NULL****Full Chart Symbology:**

0663 traffic magenta thin dash line

Simplified Symbology:

0663 traffic magenta thin dash line

maritime limit boundary - unsurveyed**mac=26 AND mbl=NULL****Full Chart Symbology:**

0631 gray thin solid line

Simplified Symbology:

0631 gray thin solid line

Point

maritime limit boundary - not pilot boarding**mac<>48****Full Chart Symbology:**

0084 magenta cir w/ ! Inside

Simplified Symbology:

0084 magenta cir w/ ! Inside

maritime limit boundary - pilot boarding**mac=48****Full Chart Symbology:**

0080 magenta solid filled diamond inside cir

Simplified Symbology:

0080 magenta solid filled diamond inside cir

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Point Symbology

Line Symbology

Area Symbology

FC031**FC031****Area**

maritime area - dredged channel, 2 shades, deep water mac=2 AND idsm=1 AND hdp>=ssdc

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

Full Chart Symbology:

0919 gray diag spaced dot patt fill

Simplified Symbology:

0919 gray diag spaced dot patt fill

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

maritime area - dredged channel, 2 shades, very shallow, shallow mode off mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

Full Chart Symbology:

0919 gray diag spaced dot patt fill

Simplified Symbology:

0919 gray diag spaced dot patt fill

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

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Point Symbology

Line Symbology

Area Symbology

FC031**FC031**

maritime area - dredged channel, 2 shades, very shallow, shallow mode on mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

Full Chart Symbology:

0919 gray diag spaced dot patt fill

Simplified Symbology:

0919 gray diag spaced dot patt fill

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

maritime area - dredged channel, 4 shades, deep water mac=2 AND idsm=0 AND hdp>=msdc

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

Full Chart Symbology:

0919 gray diag spaced dot patt fill

Simplified Symbology:

0919 gray diag spaced dot patt fill

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

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Point Symbology	Line Symbology	Area Symbology
FC031		FC031
maritime area - dredged channel, 4 shades, med shallow, shallow mode off		mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0
Full Chart Symbology:		0821 depth lt blue solid fill
Simplified Symbology:		0821 depth lt blue solid fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	
maritime area - dredged channel, 4 shades, med shallow, shallow mode on		mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1
Full Chart Symbology:		0821 depth lt blue solid fill
Simplified Symbology:		0821 depth lt blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	

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Point Symbology	Line Symbology	Area Symbology
FC031		FC031
maritime area - dredged channel, 4 shades, medium deep mac=2 AND idsm=0 AND hdp>=ssdcand<msdc		
Full Chart Symbology:		0820 depth pale blue solid fill
Simplified Symbology:		0820 depth pale blue solid fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	
maritime area - dredged channel, 4 shades, very shallow, shallow mode off mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0		
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	

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DNC

Point Symbology	Line Symbology	Area Symbology
FC031		FC031
maritime area - dredged channel, 4 shades, very shallow, shallow mode on		mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	
maritime area - dredged channel, depth unknown, shallow mode off		mac=2 AND hdp=0 AND isdm=0
Full Chart Symbology:		0803 yellow-green solid fill
Simplified Symbology:		0803 yellow-green solid fill
Full Chart Symbology:		0919 gray diag spaced dot patt fill
Simplified Symbology:		0919 gray diag spaced dot patt fill
Full Chart Symbology:	3077 lt gray very thin dash line	
Simplified Symbology:	3077 lt gray very thin dash line	

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Point Symbology

Line Symbology

Area Symbology

FC031**FC031**

maritime area - dredged channel, depth unknown, shallow mode on mac=2 AND hdp=0 AND isdm=1

Full Chart Symbology:

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

Full Chart Symbology:

0919 gray diag spaced dot patt fill

Simplified Symbology:

0919 gray diag spaced dot patt fill

Full Chart Symbology:

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

maritime area - entry prohibited**mac=5****Full Chart Symbology:**

0082 traffic lt magenta cir w/ bar

0734 magenta dash/chevron line

Simplified Symbology:

0082 traffic lt magenta cir w/ bar

4186 magenta thin dash line

maritime area - inshore traffic zone (TSS)**mac=41****Full Chart Symbology:**

1236 lt magenta IT

0722 magenta dashed T line

Simplified Symbology:

1236 lt magenta IT

0662 traffic magenta very thin dash line

maritime area - mine danger**mac=4****Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

4186 magenta thin dash line

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Point Symbology

Line Symbology

Area Symbology

FC031**FC031****maritime area - roundabout zone (TSS)****mac=40****Full Chart Symbology:**

0083 traffic lt magenta arc w/ arrowhead

0917 traffic lt magenta rt diag line patt fill

Simplified Symbology:

0083 traffic lt magenta arc w/ arrowhead

maritime area - unknown, work in progress**mac=0or9****Full Chart Symbology:**

0097 traffic lt magenta ! Inside lg circle

0742 magenta dash/chevron line w/caution symbol

Simplified Symbology:

0097 traffic lt magenta ! Inside lg circle

0663 traffic magenta thin dash line

Line**maritime area - dredged channel****mac=2****Full Chart Symbology:**

3077 lt gray very thin dash line

Simplified Symbology:

3077 lt gray very thin dash line

maritime area - entry prohibited**mac=5****Full Chart Symbology:**

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

maritime area - mine danger**mac=4****Full Chart Symbology:**

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

maritime area - TSS**mac=40or41****Full Chart Symbology:**

0665 traffic magenta thick dash line

Simplified Symbology:

0665 traffic magenta thick dash line

maritime area - unknown, work in progress**mac=0or9****Full Chart Symbology:**

0663 traffic magenta thin dash line

Simplified Symbology:

0663 traffic magenta thin dash line

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Point Symbology

Line Symbology

Area Symbology

FC031**FC031****Point****maritime area - dredged area****mac=2****Full Chart Symbology:**

0087 traffic lt magenta ! In lg cir w/ magenta ?

Simplified Symbology:

0087 traffic lt magenta ! In lg cir w/ magenta ?

maritime area - entry prohibited**mac=5****Full Chart Symbology:**

0082 traffic lt magenta cir w/ bar

Simplified Symbology:

0082 traffic lt magenta cir w/ bar

maritime area - mine danger area**mac=4****Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

maritime area - roundabout zone (TSS)**mac=40****Full Chart Symbology:**

0083 traffic lt magenta arc w/ arrowhead

Simplified Symbology:

0083 traffic lt magenta arc w/ arrowhead

maritime area - unknown**mac=0****Full Chart Symbology:**

0084 magenta cir w/ ! Inside

Simplified Symbology:

0084 magenta cir w/ ! Inside

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DNC

Point Symbology

Line Symbology

Area Symbology

FC036**FC036****Area****restricted area - anchoring prohibited****mac=15****Full Chart Symbology:**

0086 lt magenta open anchor w/ intrsctng diag line 0739 magenta T dash line w/ anchor symbol

Simplified Symbology:

0086 lt magenta open anchor w/ intrsctng diag line 4186 magenta thin dash line

restricted area - area to be avoided**mac=43****Full Chart Symbology:**

0082 traffic lt magenta cir w/ bar 0734 magenta dash/chevron line

Simplified Symbology:

0082 traffic lt magenta cir w/ bar 4186 magenta thin dash line

restricted area - cables**mac=20****Full Chart Symbology:**

0094 lt magenta angled line 0737 magenta dash/chevron line w/ flash symbol

Simplified Symbology:

0094 lt magenta angled line 4186 magenta thin dash line

restricted area - fishing prohibited**mac=22****Full Chart Symbology:**

0085 lt magenta fish w/ intersecting diag line 0740 magenta T dash line w/ fish symbol

Simplified Symbology:

0085 lt magenta fish w/ intersecting diag line 4186 magenta thin dash line

restricted area - outfall, intake**mac=45or46****Full Chart Symbology:**

0081 lt magenta square w/ l 0736 gray dash/chevron line w/ dash, cir

Simplified Symbology:

0081 lt magenta square w/ l 0629 gray thin dash line

restricted area - pipelines, sewer**mac=21or23or61****Full Chart Symbology:**

0081 lt magenta square w/ l 0735 magenta dash/chevron line w/ dash, cir

Simplified Symbology:

0081 lt magenta square w/ l 4186 magenta thin dash line

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Point Symbology

Line Symbology

Area Symbology

FC036**FC036****restricted area - safety zone****mac=37****Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

4186 magenta thin dash line

restricted area - to be avoided, other**mac=0or999****Full Chart Symbology:**

0087 traffic lt magenta ! In lg cir w/ magenta ?

0734 magenta dash/chevron line

Simplified Symbology:

0087 traffic lt magenta ! In lg cir w/ magenta ?

4186 magenta thin dash line

Line

restricted area**Full Chart Symbology:**

0722 magenta dashed T line

Simplified Symbology:

0722 magenta dashed T line

Point

restricted area - anchoring prohibited**mac=15****Full Chart Symbology:**

0086 lt magenta open anchor w/ intrsctng diag line

Simplified Symbology:

0086 lt magenta open anchor w/ intrsctng diag line

restricted area - area to be avoided**mac=43****Full Chart Symbology:**

0082 traffic lt magenta cir w/ bar

Simplified Symbology:

0082 traffic lt magenta cir w/ bar

restricted area - fishing prohibited**mac=22****Full Chart Symbology:**

0085 lt magenta fish w/ intersecting diag line

Simplified Symbology:

0085 lt magenta fish w/ intersecting diag line

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Point Symbology

Line Symbology

Area Symbology

FC036**FC036****restricted area - safety zone****mac=37****Full Chart Symbology:**

0093 traffic lt magenta ! Inside lg circle

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

restricted area - unknown or other**mac=0or999****Full Chart Symbology:**

0087 traffic lt magenta ! In lg cir w/ magenta ?

Simplified Symbology:

0087 traffic lt magenta ! In lg cir w/ magenta ?

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DNC

Point Symbology

Line Symbology

Area Symbology

FC041**FC041**

Area

traffic separation scheme (TSS) - inbound or outbound area **tsp=6or7**

Full Chart Symbology:	
0097 traffic lt magenta ! Inside lg circle	0917 traffic lt magenta rt diag line patt fill
Simplified Symbology:	
0097 traffic lt magenta ! Inside lg circle	

traffic separation scheme (TSS) - separation zone area **tsp=3**

Full Chart Symbology:	
	0824 traffic lt magenta solid fill
Simplified Symbology:	
	0824 traffic lt magenta solid fill

Line

traffic separation scheme (TSS) - outer boundary **tsp=2**

Full Chart Symbology:	
	0665 traffic magenta thick dash line
Simplified Symbology:	
	0665 traffic magenta thick dash line

traffic separation scheme (TSS) - separation zone line **tsp=4**

Full Chart Symbology:	
	0620 traffic lt magenta very very thick solid line
Simplified Symbology:	
	0620 traffic lt magenta very very thick solid line

Point

traffic separation scheme (TSS)

Full Chart Symbology:	
0088 traffic magenta filled arrow	
Simplified Symbology:	
0088 traffic magenta filled arrow	

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Point Symbology

Line Symbology

Area Symbology

FC100**FC100****Line****measured distance line****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

FC130**FC130****Line****radar reference line****Full Chart Symbology:**

0663 traffic magenta thin dash line

Simplified Symbology:

0663 traffic magenta thin dash line

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DNC

Point Symbology

Line Symbology

Area Symbology

FC165**FC165****Area****route (maritime) - 2-way****rtt=11****Full Chart Symbology:**

0098 traffic magenta dash dbl head arrow w/ 2 ?'s 0734 magenta dash/chevron line

Simplified Symbology:

0098 traffic magenta dash dbl head arrow w/ 2 ?'s 0665 traffic magenta thick dash line

route (maritime) - deep water**rtt=4****Full Chart Symbology:**

1238 traffic lt mag DW filled arrow btwn 2 mgnta ? 0741 traffic magenta dash/chevron line w/ DW

Simplified Symbology:

1238 traffic lt mag DW filled arrow btwn 2 mgnta ? 0661 traffic magenta dash line

route (maritime) - use unknown**rtt=0****Full Chart Symbology:**

0097 traffic lt magenta ! Inside lg circle 0742 magenta dash/chevron line w/caution symbol

Simplified Symbology:

0097 traffic lt magenta ! Inside lg circle 0663 traffic magenta thin dash line

Line**route (maritime) - marked;1-way;not recomb for deep draft vessels****atn=1 AND exs=22 AND rtt<>3****Full Chart Symbology:**

0728 gray very thin line w/ >

Simplified Symbology:

0728 gray very thin line w/ >

route (maritime) - marked;1-way;recomb for deep draft vessels**atn=1 AND exs=22 AND rtt=3****Full Chart Symbology:**

0723 traffic magenta solid line w/ > and DW

Simplified Symbology:

0723 traffic magenta solid line w/ > and DW

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DNC

Point Symbology	Line Symbology	Area Symbology
FC165		FC165
route (maritime) - marked;2-way;not recomb for deep draft vessels		atn=1 AND exs=23 AND rtt<>3
Full Chart Symbology:	0730 gray very thin line w/ < >	
Simplified Symbology:	0730 gray very thin line w/ < >	
route (maritime) - marked;2-way;recomb for deep draft vessels		atn=1 AND exs=23 AND rtt=3
Full Chart Symbology:	0725 traffic magenta solid line w/ < > and DW	
Simplified Symbology:	0725 traffic magenta solid line w/ < > and DW	
route (maritime) - unknown;not recomb for deep draft vessels		exs=0 AND rtt<>3
Full Chart Symbology:	0732 gray very thin dash line w/ < ? >	
Simplified Symbology:	0732 gray very thin dash line w/ < ? >	
route (maritime) - unknown;recomb for deep draft vessels		exs=0 AND rtt=3
Full Chart Symbology:	0727 traffic magenta dash line w/ < ? > and DW	
Simplified Symbology:	0727 traffic magenta dash line w/ < ? > and DW	
route (maritime) - unmarked;1-way;not recomb for deep draft vessels		atn=2 AND exs=22 AND rtt<>3
Full Chart Symbology:	0729 gray very thin dash line w/ >	
Simplified Symbology:	0729 gray very thin dash line w/ >	
route (maritime) - unmarked;1-way;recomb for deep draft vessels		atn=2 AND exs=22 AND rtt=3
Full Chart Symbology:	0724 traffic magenta dash line w/ > and DW	
Simplified Symbology:	0724 traffic magenta dash line w/ > and DW	

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Point Symbology	Line Symbology	Area Symbology
FC165		FC165
route (maritime) - unmarked;2-way;not recomb for deep draft vessels		atn=2 AND exs=23 AND rtt<>3
Full Chart Symbology:		
0731 gray very thin dash line w/ < >		
Simplified Symbology:		
0731 gray very thin dash line w/ < >		
route (maritime) - unmarked;2-way;recomb for deep draft vessels		atn=2 AND exs=23 AND rtt=3
Full Chart Symbology:		
0726 traffic magenta dash line w/ < > and DW		
Simplified Symbology:		
0726 traffic magenta dash line w/ < > and DW		
Point		
route (maritime) - direction known		dof<>0
Full Chart Symbology:		
1220 traffic magenta dashed open arrow		
Simplified Symbology:		
1220 traffic magenta dashed open arrow		
route (maritime) - direction unknown		dof=0
Full Chart Symbology:		
0089 traffic magenta dashed arrow w/ 2 mgnta ?'s		
Simplified Symbology:		
0089 traffic magenta dashed arrow w/ 2 mgnta ?'s		

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DNC

Point Symbology

Line Symbology

Area Symbology

FC170**FC170**

Area

safety fairway

Full Chart Symbology:

0091 gray ? inside angle brackets inside dashes

0716 gray dash/chevron line

Simplified Symbology:

0091 gray ? inside angle brackets inside dashes

0656 gray very thin dash line

Line

safety fairway

Full Chart Symbology:

0732 gray very thin dash line w/ < ? >

Simplified Symbology:

0732 gray very thin dash line w/ < ? >

FC177**FC177**

Area

swept area

Full Chart Symbology:

0095 lt gray under bar w/ upward bar on ends

0716 gray dash/chevron line

Simplified Symbology:

0095 lt gray under bar w/ upward bar on ends

0656 gray very thin dash line

Line

swept area

Full Chart Symbology:

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

GA020**GA020**

Point

air obstruction light [DNC-specific]

Full Chart Symbology:

0501 lights red flare with black outline

Simplified Symbology:

0501 lights red flare with black outline

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DNC

Point Symbology

Line Symbology

Area Symbology

GA035**GA035**

Point

navaids (aeronautical)

Full Chart Symbology:

0511 magenta lg cir

Simplified Symbology:

0511 magenta lg cir

GB005**GB005**

Area

airport/airfield

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

Full Chart Symbology:

0600 black very thin solid line

0932 feature brown airplane patt fill

Simplified Symbology:

0600 black very thin solid line

0932 feature brown airplane patt fill

Point

airport/airfield

Full Chart Symbology:

0090 feature brown outline of plane inside lg cir

Simplified Symbology:

0090 feature brown outline of plane inside lg cir

GB010**GB010**

Point

airport lighting

Full Chart Symbology:

0503 lights yellow flare with black outline

Simplified Symbology:

0503 lights yellow flare with black outline

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Point Symbology

Line Symbology

Area Symbology

GB055**GB055****Area****runway**

Full Chart Symbology:	0600 black very thin solid line	0804 brown solid fill
Simplified Symbology:	0600 black very thin solid line	0804 brown solid fill

Line**runway**

Full Chart Symbology:	0606 feature brown solid line
Simplified Symbology:	0606 feature brown solid line

GB070**GB070****Area****seaplane landing/seaplane take-off area**

Full Chart Symbology:	0093 traffic lt magenta ! Inside lg circle	0734 magenta dash/chevron line
Simplified Symbology:	0093 traffic lt magenta ! Inside lg circle	0634 magenta very thin dash line

Line**seaplane landing/seaplane take-off area**

Full Chart Symbology:	0634 magenta very thin dash line
Simplified Symbology:	0634 magenta very thin dash line

ZC040**ZC040****Area****magnetic disturbance area**

Full Chart Symbology:	0733 lt magenta open flag	0716 gray dash/chevron line
Simplified Symbology:	0733 lt magenta open flag	0656 gray very thin dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AA010**AA010**

Area

mine - active**exs<>6**

Full Chart Symbology:	
2001 black pick & hammer	3116 black very thin dash line
Simplified Symbology:	
2001 black pick & hammer	3116 black very thin dash line

mine - inactive**exs=6**

Full Chart Symbology:	
6000 black upside down pick & hammer	3116 black very thin dash line
Simplified Symbology:	
6000 black upside down pick & hammer	3116 black very thin dash line

Point

mine - active**exs<>6**

Full Chart Symbology:	
2001 black pick & hammer	
Simplified Symbology:	
2001 black pick & hammer	

mine - inactive**exs=6**

Full Chart Symbology:	
6000 black upside down pick & hammer	
Simplified Symbology:	
6000 black upside down pick & hammer	

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DTOP

Point Symbology

Line Symbology

Area Symbology

AA012**AA012****Area****quarry - active****exs<>6****Full Chart Symbology:**

2001 black pick & hammer

3116 black very thin dash line

Simplified Symbology:

2001 black pick & hammer

3116 black very thin dash line

quarry - inactive**exs=6****Full Chart Symbology:**

6000 black upside down pick & hammer

3116 black very thin dash line

Simplified Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Point**quarry - active****exs<>6****Full Chart Symbology:**

2001 black pick & hammer

Simplified Symbology:

2001 black pick & hammer

quarry - inactive**exs=6****Full Chart Symbology:**

6000 black upside down pick & hammer

Simplified Symbology:

6000 black upside down pick & hammer

AA040**AA040****Point****rig/superstructure****Full Chart Symbology:**

2002 black tower

Simplified Symbology:

2019 black sm filled cir

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DTOP

Point Symbology

Line Symbology

Area Symbology

AA050**AA050****Point****well - not water****pro<>116****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

well - water/non-perennial-dry**hyc<>0and<>8 AND pro=116****Full Chart Symbology:**

6013 basic blue very thin circle

Simplified Symbology:

2003 basic blue solid filled cir

well - water/perennial**hyc=0or8 AND pro=116****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

AB000**AB000****Area****disposal site/waste pile****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

AB010**AB010****Area****wrecking yard/scrap yard****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

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DTOP

Point Symbology

Line Symbology

Area Symbology

AC000**AC000**

Area

processing plant/treatment plant

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

Point

processing plant/treatment plant

Full Chart Symbology:

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2019 black sm filled cir

AC020**AC020**

Point

catalytic cracker

Full Chart Symbology:

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2005 black building w/ 2 smokestacks above

AC030**AC030**

Area

settling basin/sludge pond

Full Chart Symbology:

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

AD010**AD010**

Area

power plant

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

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DTOP

Point Symbology

Line Symbology

Area Symbology

AD020**AD020**

Point

solar panels

Full Chart Symbology:

2010 black sun burst w/ dot inside

Simplified Symbology:

2019 black sm filled cir

AD030**AD030**

Area

substation/transformer yard

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

substation/transformer yard

Full Chart Symbology:

2011 black open sq w/ dot inside w/ zap on top

Simplified Symbology:

2019 black sm filled cir

AF010**AF010**

Point

chimney/smokestack

Full Chart Symbology:

6015 black sm open square

Simplified Symbology:

6015 black sm open square

AF020**AF020**

Line

conveyor

Full Chart Symbology:

3086 gray very thin short dash line

Simplified Symbology:

3086 gray very thin short dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AF030**AF030****Point****cooling tower****Full Chart Symbology:**

2016 black dot inside double cir

Simplified Symbology:

2016 black dot inside double cir

AF040**AF040****Point****crane****Full Chart Symbology:**

6016 black crane symbol

Simplified Symbology:

6015 black sm open square

AF070**AF070****Point****flare pipe****Full Chart Symbology:**

0006 black flare stack symbol

Simplified Symbology:

0051 black filled sm cir

AH050**AH050****Area****fortification****Full Chart Symbology:**

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Point**fortification****Full Chart Symbology:**

2043 black four black squares w/ connection

Simplified Symbology:

2043 black four black squares w/ connection

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DTOP

Point Symbology

Line Symbology

Area Symbology

AI020**AI020**

Area

mobile home/mobile home park

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AJ030**AJ030**

Area

feedlot/stockyard/holding pen

Full Chart Symbology:

4217 dk tan very thin solid line

Simplified Symbology:

4217 dk tan very thin solid line

AJ050**AJ050**

Point

windmill

Full Chart Symbology:

6017 black sm filled cir w/ vert line w/ "X" on top

Simplified Symbology:

0063 black 6 point asterisk

AK020**AK020**

Point

amusement park attraction

Full Chart Symbology:

2029 black ferris wheel

Simplified Symbology:

0051 black filled sm cir

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DTOP

Point Symbology

Line Symbology

Area Symbology

AK030**AK030**

Area

amusement park**Full Chart Symbology:**

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

AK040**AK040**

Area

athletic field**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK060**AK060**

Area

campground/campsite**Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AK090**AK090**

Area

fairgrounds**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK100**AK100**

Area

golf course**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AK120**AK120**

Area

park

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

AK130**AK130**

Line

race track

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AK160**AK160**

Area

stadium/amphitheater

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

AK170**AK170**

Area

swimming pool

Full Chart Symbology:

0600 black very thin solid line

4138 med blue solid fill

Simplified Symbology:

0600 black very thin solid line

4138 med blue solid fill

AK180**AK180**

Area

zoo/safari park

Full Chart Symbology:

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

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DTOP

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Area

building - generic **bfc<>6and<>7and<>15**

Full Chart Symbology:

4156 black solid fill

Simplified Symbology:

4156 black solid fill

building - hospital **bfc=6**

Full Chart Symbology:

0600 black very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

4156 black solid fill

building - house of worship **bfc=7**

Full Chart Symbology:

0600 black very thin solid line

4002 lt beige solid fill

Simplified Symbology:

4156 black solid fill

building - school **bfc=15**

Full Chart Symbology:

0600 black very thin solid line

4025 feature brown solid fill

Simplified Symbology:

4156 black solid fill

Line

building - generic **bfc<>6and<>7and<>15**

Full Chart Symbology:

3112 black thin solid line

Simplified Symbology:

0600 black very thin solid line

building - hospital **bfc=6**

Full Chart Symbology:

3153 beige-rose thin solid line

Simplified Symbology:

0600 black very thin solid line

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DTOP

Point Symbology	Line Symbology	Area Symbology
AL015		AL015
building - house of worship		bfc=7
Full Chart Symbology:		
	3001	lt beige thin solid line
Simplified Symbology:		
	0600	black very thin solid line
building - school		bfc=15
Full Chart Symbology:		
	1406	brown thin solid line
Simplified Symbology:		
	0600	black very thin solid line
Point		
building - castle		bfc=4
Full Chart Symbology:		
	2043	black four black squares w/ connection
Simplified Symbology:		
	0038	lt brown filled square w/ black outline
building - generic		bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36or53or59or69or70or83or85or86or87or88or89
Full Chart Symbology:		
	2036	black sm filled square
Simplified Symbology:		
	0038	lt brown filled square w/ black outline
building - generic		bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96
Full Chart Symbology:		
	1001	red filled square black outline
Simplified Symbology:		
	0038	lt brown filled square w/ black outline
building - generic		bfc=90or91or92or93or95or98or999
Full Chart Symbology:		
	2036	black sm filled square
Simplified Symbology:		
	0038	lt brown filled square w/ black outline

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DTOP

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - hospital****bfc=6****Full Chart Symbology:**

1002 black filled cir w/ white cross inside

Simplified Symbology:

1002 black filled cir w/ white cross inside

building - house of worship - church**bfc=7****Full Chart Symbology:**

2045 black filled square w/ cross on top

Simplified Symbology:

1003 black cross

building - lighthouse**bfc=82****Full Chart Symbology:**

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

building - school**bfc=15****Full Chart Symbology:**

2042 black filled square w/ flag on top

Simplified Symbology:

0038 lt brown filled square w/ black outline

AL020**AL020****Area****built-up area****Full Chart Symbology:**

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

Full Chart Symbology:

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AL025**AL025****Point****cairn****Full Chart Symbology:**

0017 black three stacked sm cirs

Simplified Symbology:

0078 black sm cir

AL030**AL030****Area****cemetery****Full Chart Symbology:**

3117 black thin dash line

6006 black cemetery patt fill

Simplified Symbology:

3117 black thin dash line

Point**cemetery****Full Chart Symbology:**

6018 black "L" with dashed outline

Simplified Symbology:

0185 black topmark special X

AL060**AL060****Area****dragon teeth****Full Chart Symbology:**

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

Line**dragon teeth****Full Chart Symbology:**

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AL070**AL070****Line****fence****Full Chart Symbology:**

3148 black very thin patt line -x -x -x

Simplified Symbology:

0600 black very thin solid line

AL075**AL075****Line****gallery****Full Chart Symbology:**

1401 black outline open line w/ rt diag fill

Simplified Symbology:

3113 black solid line

Point**gallery****Full Chart Symbology:**

1205 brown vert line w/ horizontal ticks on rt side

Simplified Symbology:

1205 brown vert line w/ horizontal ticks on rt side

AL100**AL100****Point****hut****Full Chart Symbology:**

2058 gray filled square

Simplified Symbology:

2058 gray filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AL105**AL105**

Area

settlement

Full Chart Symbology:

4100 lt gray solid fill

Simplified Symbology:

4100 lt gray solid fill

Full Chart Symbology:

0802 gray solid fill

Simplified Symbology:

0802 gray solid fill

AL130**AL130**

Point

monument

Full Chart Symbology:

2063 black monument symbol

Simplified Symbology:

6048 gray filled circle

AL135**AL135**

Area

native settlement

Full Chart Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Full Chart Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology

Line Symbology

Area Symbology

AL140**AL140**

Area

particle accelerator

Full Chart Symbology:

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

AL155**AL155**

Line

overhead obstruction location

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point

overhead obstruction location

Full Chart Symbology:

1206 black line w/ indented rectangle

Simplified Symbology:

1206 black line w/ indented rectangle

AL170**AL170**

Area

plaza/city square

Full Chart Symbology:

0604 feature brown very thin solid line

4002 lt beige solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4002 lt beige solid fill

AL195**AL195**

Point

ramp

Full Chart Symbology:

2051 black ramp symbol

Simplified Symbology:

2051 black ramp symbol

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AL200**AL200**

Area

ruins

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point

ruins

Full Chart Symbology:

0002 feature brown filled square w/ black outline

Simplified Symbology:

2036 black sm filled square

AL210**AL210**

Line

snow shed/rock shed

Full Chart Symbology:

3146 black solid triangle line patt

Simplified Symbology:

3112 black thin solid line

Point

snow shed/rock shed

Full Chart Symbology:

2070 black diag bands in rectangle

Simplified Symbology:

0078 black sm cir

AL240**AL240**

Point

tower (non-communication)

Full Chart Symbology:

2071 black dot inside cir

Simplified Symbology:

2019 black sm filled cir

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APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AL250**AL250****Point****underground dwelling****Full Chart Symbology:**

2072 gray shadowed square

Simplified Symbology:

2072 gray shadowed square

AL260**AL260****Line****wall****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

AM010**AM010****Area****depot (storage)****Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

AM020**AM020****Area****grain bin/silo****Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point**grain bin/silo****Full Chart Symbology:**

2074 brown cir

Simplified Symbology:

2074 brown cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AM030**AM030**

Area

grain elevator

Full Chart Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

grain elevator

Full Chart Symbology:

0004 black tower symbol

Simplified Symbology:

2019 black sm filled cir

AM060**AM060**

Area

storage bunker/storage mound

Full Chart Symbology:

0600 black very thin solid line

4109 depth gray solid fill

Simplified Symbology:

0600 black very thin solid line

4109 depth gray solid fill

Point

storage bunker/storage mound

Full Chart Symbology:

2076 red brown filled semicircle

Simplified Symbology:

2076 red brown filled semicircle

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APPENDIX E

DTOP

Point Symbology

Line Symbology

Area Symbology

AM070

AM070

Area

tank

Full Chart Symbology:

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Point

tank

Full Chart Symbology:

2019 black sm filled cir

Simplified Symbology:

2019 black sm filled cir

AM080

AM080

Point

water tower

Full Chart Symbology:

2078 basic blue dot inside cir

Simplified Symbology:

2078 basic blue dot inside cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

AN010**AN010****Line**

railroad -dismantled **exs=8**

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

railroad -not operational/narrow/multiple **exs=5or6or7 AND ltn>1 AND rgc=2**

Full Chart Symbology:

3137 black dash line w/ double tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/narrow/single **exs=5or6or7 AND ltn<2 AND rgc=2**

Full Chart Symbology:

3135 black dash line w/ single tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/multiple **exs=5or6or7 AND ltn>1 AND rgc<>2**

Full Chart Symbology:

3133 black dash line w/ double tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/single **exs=5or6or7 AND ltn<2 AND rgc<>2**

Full Chart Symbology:

3131 black dash line w/ single tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -operational/narrow/multiple **exs=0or28 AND ltn>1 AND rgc=2**

Full Chart Symbology:

3129 black solid line w/ double tics alt sides

Simplified Symbology:

3112 black thin solid line

railroad -operational/narrow/single **exs=0or28 AND ltn<2 AND rgc=2**

Full Chart Symbology:

3125 black solid line w/ single tics alt sides

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology	Line Symbology	Area Symbology
AN010		AN010
railroad -operational/normal/multiple		exs=0or28 AND ltn>1 AND rgc<>2
Full Chart Symbology:	3127 black solid line w/ double tics both sides	
Simplified Symbology:	3112 black thin solid line	
railroad -operational/normal/single		exs=0or28 AND ltn<2 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	3112 black thin solid line	
AN050		AN050
Line		
railroad siding/railroad spur - non-operational/narrow		exs<>0and<>28 AND rgc=2
Full Chart Symbology:	3135 black dash line w/ single tics alt sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - non-operational/normal		exs<>0and<>28 AND rgc<>2
Full Chart Symbology:	3131 black dash line w/ single tics both sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - operational/narrow		exs=0or28 AND rgc=2
Full Chart Symbology:	3125 black solid line w/ single tics alt sides	
Simplified Symbology:	0600 black very thin solid line	
railroad siding/railroad spur - operational/normal		exs=0or28 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	0600 black very thin solid line	

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DTOP

Point Symbology

Line Symbology

Area Symbology

AN060**AN060****Area****railroad yard/marshaling yard****Full Chart Symbology:**

0600 black very thin solid line

0802 gray solid fill

Simplified Symbology:

0600 black very thin solid line

0802 gray solid fill

AN075**AN075****Point****railroad turntable****Full Chart Symbology:**

2080 black rt diag line inside cir

Simplified Symbology:

2080 black rt diag line inside cir

AP010**AP010****Line****cart track****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AP020**AP020****Line****interchange****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

0600 black very thin solid line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****Line**

road - all weather, hard surface, no median **med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, loose surface, no median **med<>1 AND rst=2 AND wtc<>2**

Full Chart Symbology:

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median **med=1**

Full Chart Symbology:

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median **med<>1 AND wtc=2**

Full Chart Symbology:

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AQ010**AQ010****Line****aerial cableway lines/ski lift lines****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AQ040**AQ040****Line****bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ045**AQ045****Point****bridge span****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ058**AQ058****Point****constriction/expansion****Full Chart Symbology:**

2087 black opposing solid triangles pnting in

Simplified Symbology:

1171 black opposing open equi triangles

AQ060**AQ060****Point****control tower****Full Chart Symbology:**

2088 purple dot inside cir

Simplified Symbology:

2088 purple dot inside cir

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DTOP

Point Symbology

Line Symbology

Area Symbology

AQ065**AQ065****Point****culvert****Full Chart Symbology:**

2090 black cir w/ "C" inside

Simplified Symbology:

2090 black cir w/ "C" inside

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

AQ110**AQ110****Point****mooring mast****Full Chart Symbology:**

2094 purple solid ellipse extending from pole

Simplified Symbology:

6049 purple filled circle

AQ111**AQ111****Point****prepared raft or float bridge site****Full Chart Symbology:**

1171 black opposing open equi triangles

Simplified Symbology:

1171 black opposing open equi triangles

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DTOP

Point Symbology

Line Symbology

Area Symbology

AQ113

AQ113

Line

pipeline - abandoned/under construction - water exs=5or6 AND pro=116

Full Chart Symbology:	4316 100% cyan blue very thin long dash line
Simplified Symbology:	4311 100% cyan blue very thin solid line

pipeline - on ground/elevated - not water loc=0or8or25 AND pro<>116

Full Chart Symbology:	1314 black very thin solid line
Simplified Symbology:	1314 black very thin solid line

pipeline - on ground/elevated - water exs<>5and<>6 AND loc=0or8or25 AND pro=116

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

pipeline - underground - not water loc=4 AND pro<>116

Full Chart Symbology:	6040 black very thin long dash line
Simplified Symbology:	6040 black very thin long dash line

pipeline - underground - water exs<>5and<>6 AND loc=4 AND pro=116

Full Chart Symbology:	6037 100% cyan blue very thin short dash line
Simplified Symbology:	6037 100% cyan blue very thin short dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

AQ116**AQ116**

Area

pumping station

Full Chart Symbology:

4262 purple thin dash line

Simplified Symbology:

4262 purple thin dash line

Point

pumping station

Full Chart Symbology:

2097 black sm square w/ "P" inside

Simplified Symbology:

2036 black sm filled square

AQ118**AQ118**

Point

sharp curve(s)

Full Chart Symbology:

1172 black diamond w/ curve staffed arrow

Simplified Symbology:

1172 black diamond w/ curve staffed arrow

AQ120**AQ120**

Point

steep grade

Full Chart Symbology:

1211 black two rt pointing triangles

Simplified Symbology:

1211 black two rt pointing triangles

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130**

Line

tunnel

Full Chart Symbology:

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point

tunnel

Full Chart Symbology:

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2100 black box w/ round top w/ "T" inside

AQ135**AQ135**

Area

vehicle stopping area/rest area

Full Chart Symbology:

0600 black very thin solid line

6008 orange left diag line patt fill

Simplified Symbology:

0600 black very thin solid line

4175 lt orange solid fill

AQ140**AQ140**

Area

vehicle storage/parking area

Full Chart Symbology:

0600 black very thin solid line

6008 orange left diag line patt fill

Simplified Symbology:

0600 black very thin solid line

4175 lt orange solid fill

AT010**AT010**

Point

disk/dish

Full Chart Symbology:

2102 black satellite dish symbol

Simplified Symbology:

0185 black topmark special X

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DTOP

Point Symbology

Line Symbology

Area Symbology

AT030**AT030**

Line

power transmission line

Full Chart Symbology:

3074 purple thin solid line w/ dots on each side

Simplified Symbology:

4262 purple thin dash line

AT050**AT050**

Area

communication building

Full Chart Symbology:

4003 beige solid fill

Simplified Symbology:

4003 beige solid fill

Point

communication building

Full Chart Symbology:

2106 black filled square w/ outward ticks

Simplified Symbology:

2036 black sm filled square

AT060**AT060**

Line

telephone line/telegraph line

Full Chart Symbology:

3096 gray very thin dash line w/ dot

Simplified Symbology:

3086 gray very thin short dash line

AT080**AT080**

Point

communication tower

Full Chart Symbology:

6019 black tower with "x" inside

Simplified Symbology:

0185 black topmark special X

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology

Line Symbology

Area Symbology

BA010**BA010****Line****coastline/shoreline - mangrove, marsh****slt=6or8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

coastline/shoreline - not mangrove or marsh**slt<>6and<>8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA020**BA020****Area****foreshore****Full Chart Symbology:**

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

BA030**BA030****Area****island****Full Chart Symbology:**

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

BA040**BA040****Area****water (except inland)****Full Chart Symbology:**

0805 depth white fill

Simplified Symbology:

0805 depth white fill

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DTOP

Point Symbology

Line Symbology

Area Symbology

BA060**BA060**

Area

beach zone

Full Chart Symbology:

4220 beige thin solid line

4005 beige stipple dot patt fill

Simplified Symbology:

4003 beige solid fill

BB010**BB010**

Area

anchorage

Full Chart Symbology:

0902 lt magenta anchor

0711 magenta dash/chevron line w/anchor symbol

Simplified Symbology:

0902 lt magenta anchor

0634 magenta very thin dash line

Point

anchorage

Full Chart Symbology:

0036 magenta anchor

Simplified Symbology:

0036 magenta anchor

BB040**BB040**

Area

breakwater/groyne

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line

breakwater/groyne

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

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DTOP

Point Symbology

Line Symbology

Area Symbology

BB090**BB090****Area****drydock****Full Chart Symbology:**

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

BB140**BB140****Area****jetty****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**jetty****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB190**BB190****Area****pier/wharf/quay****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**pier/wharf/quay****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

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DTOP

Point Symbology

Line Symbology

Area Symbology

BB220**BB220**

Area

ramp (maritime)

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line

ramp (maritime)

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB230**BB230**

Line

seawall

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BD100**BD100**

Area

pile/piling/post

Full Chart Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Point

pile/piling/post

Full Chart Symbology:

2264 black cir

Simplified Symbology:

2264 black cir

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology

Line Symbology

Area Symbology

BD120**BD120**

Area

reef

Full Chart Symbology:

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

Line

reef

Full Chart Symbology:

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

BD130**BD130**

Point

rock - awash

vrr=2

Full Chart Symbology:

6044 black plus sign with 4 dots

Simplified Symbology:

6044 black plus sign with 4 dots

rock - unk/covers/uncovers

vrr=0or8

Full Chart Symbology:

0063 black 6 point asterisk

Simplified Symbology:

0063 black 6 point asterisk

BD180**BD180**

Point

wreck

Full Chart Symbology:

2212 black solid filled shipwreck symbol

Simplified Symbology:

0122 black topmark one cone up

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DTOP

Point Symbology

Line Symbology

Area Symbology

BH010**BH010****Line****aqueduct - surface/elevated****loc=0or8or25****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

aqueduct - underground**loc=4****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH020**BH020**

Area

canal

Full Chart Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill

canal - non-perennial, dry, unknown

hyc<>8

Full Chart Symbology:	4182 100% cyan blue very thin short dash line	0820 depth pale blue solid fill
Simplified Symbology:	4182 100% cyan blue very thin short dash line	0820 depth pale blue solid fill

canal - perennial

hyc=8

Full Chart Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill

Line

canal - dry

hyc=3

Full Chart Symbology:	3109 100% cyan blue thin dotted line
Simplified Symbology:	3108 100% cyan blue thin solid line

canal - perennial

hyc=0or8

Full Chart Symbology:	3108 100% cyan blue thin solid line
Simplified Symbology:	3108 100% cyan blue thin solid line

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APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH030

BH030

Area

ditch

Full Chart Symbology:	0600 black very thin solid line	0821 depth lt blue solid fill
Simplified Symbology:	0600 black very thin solid line	0821 depth lt blue solid fill

ditch - not covered

Full Chart Symbology:	0600 black very thin solid line	0821 depth lt blue solid fill
Simplified Symbology:	0600 black very thin solid line	0821 depth lt blue solid fill

Line

ditch

Full Chart Symbology:	0621 depth med blue very thin solid line
Simplified Symbology:	0621 depth med blue very thin solid line

BH040

BH040

Area

filtration beds/aeration beds

Full Chart Symbology:	0600 black very thin solid line	6003 basic blue lft diag line patt fill
Simplified Symbology:	0600 black very thin solid line	6042 100% cyan blue solid fill

BH050

BH050

Area

fish hatchery/fish farm/marine farm

Full Chart Symbology:	0600 black very thin solid line	0810 depth med blue solid fill
Simplified Symbology:	0600 black very thin solid line	0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH060**BH060**

Line

flume

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

BH070**BH070**

Line

ford

Full Chart Symbology:	3114 black very thin short dash line
Simplified Symbology:	3114 black very thin short dash line

Point

ford

Full Chart Symbology:	2087 black opposing solid triangles pnting in
Simplified Symbology:	6048 gray filled circle

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH080**BH080****Area****lake/pond****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - not perennial**hyc<>8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - perennial**hyc=8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH090**BH090****Area****land subject to inundation****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH095**BH095**

Area

marsh/swamp - deciduous**veg=24**

Full Chart Symbology:

1605 yellow-green tree-top patt fill

Simplified Symbology:

6007 midnight blue solid fill

marsh/swamp - evergreen, mixed**veg=25or50**

Full Chart Symbology:

1606 yellow-green triangle tree patt fill

Simplified Symbology:

6007 midnight blue solid fill

marsh/swamp - no trees**veg=0or56**

Full Chart Symbology:

4080 basic blue marsh/swamp patt fill

Simplified Symbology:

6007 midnight blue solid fill

marsh/swamp - palm, mangrove**veg=16or19**

Full Chart Symbology:

1655 basic blue thin dash line

1613 yellow-green nipa patt fill

Simplified Symbology:

6007 midnight blue solid fill

BH100**BH100**

Line

moat

Full Chart Symbology:

3142 black parallel vy thin lines w/ tics (ladder
patt)

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH110**BH110****Line****penstock - surface/elevated****loc=0or8or25****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

penstock - underground**loc=4****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

4311 100% cyan blue very thin solid line

BH120**BH120****Line****rapids****Full Chart Symbology:**

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point**rapids****Full Chart Symbology:**

2231 UI very dk blue open diamond

Simplified Symbology:

2231 UI very dk blue open diamond

BH130**BH130****Area****reservoir****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH140**BH140****Area****river/stream**

Full Chart Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

river/stream - dry, intermittent**hyc=3or6**

Full Chart Symbology:	4182 100% cyan blue very thin short dash line	4079 31% cyan blue stipple dot patt fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

river/stream - perennial, unknown**hyc=0or8**

Full Chart Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

Line**river/stream - dry, intermittent****hyc=3or6**

Full Chart Symbology:	4182 100% cyan blue very thin short dash line
Simplified Symbology:	1656 100% cyan blue very thin solid line

river/stream - perennial, unknown**hyc=0or8**

Full Chart Symbology:	1656 100% cyan blue very thin solid line
Simplified Symbology:	1656 100% cyan blue very thin solid line

BH145**BH145****Point****river stream vanishing point**

Full Chart Symbology:	2232 basic blue solid arrowhead
Simplified Symbology:	2232 basic blue solid arrowhead

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH150**BH150****Area****salt pan****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 1611 depth med blue dot patt fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0810 depth med blue solid fill

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

BH160**BH160****Area****sebkha****Full Chart Symbology:**

4289 basic blue stipple dot patt fill

Simplified Symbology:

4071 basic blue solid fill

BH170**BH170****Point****spring/water-hole - not perennial/dry****hyc<>0and<>8****Full Chart Symbology:**

6031 basic blue open cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

spring/water-hole - perennial**hyc=0or8****Full Chart Symbology:**

1008 basic blue filled cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BH180**BH180**

Line

waterfall

Full Chart Symbology:

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point

waterfall

Full Chart Symbology:

1009 UI very dk blue filled diamond

Simplified Symbology:

2003 basic blue solid filled cir

BH200**BH200**

Area

miscellaneous surface drainage feature

Full Chart Symbology:

4150 depth pale blue stiple dot patt fill

Simplified Symbology:

0820 depth pale blue solid fill

Line

miscellaneous surface drainage feature

Full Chart Symbology:

3109 100% cyan blue thin dotted line

Simplified Symbology:

3109 100% cyan blue thin dotted line

BI010**BI010**

Point

cistern

Full Chart Symbology:

1010 basic blue solid square

Simplified Symbology:

1010 basic blue solid square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BI020**BI020**

Area

dam/weir

Full Chart Symbology:

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Line

dam/weir

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

Point

dam/weir

Full Chart Symbology:

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

BI030**BI030**

Area

lock

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point

lock

Full Chart Symbology:

6047 black open double arrowhead

Simplified Symbology:

6047 black open double arrowhead

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BI040**BI040**

Line

sluice gate

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point

sluice gate

Full Chart Symbology:

2239 black open arrowhead

Simplified Symbology:

2239 black open arrowhead

BI050**BI050**

Area

water intake tower

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point

water intake tower

Full Chart Symbology:

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

BJ020**BJ020**

Area

moraine

Full Chart Symbology:

1406 brown thin solid line

4032 brown stipple dot patt fill

Simplified Symbology:

0804 brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BJ030**BJ030****Area****glacier****Full Chart Symbology:**

1655 basic blue thin dash line

4151 basic blue ripple jagged patt fill

Simplified Symbology:

1655 basic blue thin dash line

4151 basic blue ripple jagged patt fill

BJ040**BJ040****Line****ice cliff****Full Chart Symbology:**

0755 UI vy dk blue vy thin line w/vert inward ticks

Simplified Symbology:

3047 basic blue thin long dash line

BJ060**BJ060****Point****ice peak/nunatak****Full Chart Symbology:**

2242 med blue 8 pt asterisk w/ open center

Simplified Symbology:

2242 med blue 8 pt asterisk w/ open center

BJ065**BJ065****Area****ice shelf****Full Chart Symbology:**

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

BJ070**BJ070**

Area

pack ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ080**BJ080**

Area

polar ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ100**BJ100**

Area

snow field/ice field

Full Chart Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

Simplified Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

BJ110**BJ110**

Area

tundra

Full Chart Symbology:

6045 yellow-green marsh/swamp patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

CA030**CA030****Point****spot elevation - accurate****ela=1****Full Chart Symbology:**

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

spot elevation - not accurate**ela<>1****Full Chart Symbology:**

1011 black sm filled cir beside +-

Simplified Symbology:

1011 black sm filled cir beside +-

DA005**DA005****Area****asphalt lake****Full Chart Symbology:**

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

DA010**DA010****Area****ground surface element - not rocky****smc<>84****Full Chart Symbology:**

0604 feature brown very thin solid line

0822 lt brown solid fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - rocky**smc=84****Full Chart Symbology:**

0604 feature brown very thin solid line

4034 lt brown heavy mixed stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

**MIL-DTL-89045A w/Amendment 1
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DTOP

Point Symbology

Line Symbology

Area Symbology

DA020**DA020**

Area

barren ground

Full Chart Symbology:	
	4003 beige solid fill
Simplified Symbology:	
	4003 beige solid fill

DB010**DB010**

Line

bluff/cliff/escarpment

Full Chart Symbology:	
	6014 dk tan vy thin line w/ ticks
Simplified Symbology:	
	4217 dk tan very thin solid line

DB030**DB030**

Point

cave

Full Chart Symbology:	
	2247 black diag line w/ "L" on top
Simplified Symbology:	
	2247 black diag line w/ "L" on top

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DTOP

Point Symbology

Line Symbology

Area Symbology

DB060**DB060****Area****crevice/crevasse - earthen****mcc=0or30****Full Chart Symbology:**

4030 brown left diag thin line patt fill

Simplified Symbology:

0804 brown solid fill

crevice/crevasse - snow/ice**mcc=103****Full Chart Symbology:**

6046 100% cyan blue left diag thin line patt fill

Simplified Symbology:

0820 depth pale blue solid fill

Line**crevice/crevasse - earthen****mcc=0or30****Full Chart Symbology:**

3024 brown very thin solid line

Simplified Symbology:

3024 brown very thin solid line

crevice/crevasse - snow/ice**mcc=103****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

DB070**DB070****Line****cut****Full Chart Symbology:**

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

DB080**DB080**

Line

depression**Full Chart Symbology:**

1308 black very thin line w/ ticks

Simplified Symbology:

0600 black very thin solid line

DB090**DB090**

Line

embankment/fill**Full Chart Symbology:**

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

DB100**DB100**

Line

esker**Full Chart Symbology:**

3003 tan very thin solid line

Simplified Symbology:

3003 tan very thin solid line

DB110**DB110**

Line

fault**Full Chart Symbology:**

3026 tan very thin solid line

Simplified Symbology:

3026 tan very thin solid line

DB115**DB115**

Point

geothermal feature**Full Chart Symbology:**

2248 brown sm filled cir w/ tail below

Simplified Symbology:

2111 brown filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

DB145**DB145**

Area

miscellaneous obstacle

Full Chart Symbology:

3112 black thin solid line

4249 black x patt fill

Simplified Symbology:

3112 black thin solid line

Line

miscellaneous obstacle

Full Chart Symbology:

1403 black line w/ open diamonds

Simplified Symbology:

3112 black thin solid line

DB150**DB150**

Point

mountain pass

Full Chart Symbology:

2249 black)(symbol

Simplified Symbology:

2249 black)(symbol

DB160**DB160**

Area

rock strata/rock formation

Full Chart Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

rock strata/rock formation

Full Chart Symbology:

2250 brown 6 pt asterisk w/ open center

Simplified Symbology:

2250 brown 6 pt asterisk w/ open center

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DTOP

Point Symbology

Line Symbology

Area Symbology

DB170**DB170**

Area

sand dune/sand hills - crescent

ssc=22

Full Chart Symbology:

4009 beige sand dune crescent

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - lateral

ssc=26

Full Chart Symbology:

4010 beige sand dune lateral

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - mounds

ssc=27

Full Chart Symbology:

4011 beige sand dune mound

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - ripple

ssc=28

Full Chart Symbology:

4012 beige sand dune ripple

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - star

ssc=29

Full Chart Symbology:

4013 beige sand dune star

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - transverse

ssc=30

Full Chart Symbology:

4014 beige sand dune transverse

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - unknown

ssc=0

Full Chart Symbology:

4008 beige sand dune default

Simplified Symbology:

1903 rose solid fill

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APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

DB180**DB180**

Point

volcano

Full Chart Symbology:

2251 brown sm open cir w/ eight tics outside

Simplified Symbology:

2251 brown sm open cir w/ eight tics outside

DB190**DB190**

Line

volcanic dike

Full Chart Symbology:

3168 outline lt brown thin dotted line

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

EA010**EA010****Area****cropland - dry****veg=1****Full Chart Symbology:**

4018 lt tan solid fill

Simplified Symbology:

4018 lt tan solid fill

Full Chart Symbology:

3026 tan very thin solid line

6001 tan dot patt fill

Simplified Symbology:

3026 tan very thin solid line

cropland - other**veg=0****Full Chart Symbology:**

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

Full Chart Symbology:

6012 pale green solid fill

Simplified Symbology:

6012 pale green solid fill

cropland - rice paddies**veg=4****Full Chart Symbology:**

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

Full Chart Symbology:

6002 steel blue solid fill

Simplified Symbology:

6002 steel blue solid fill

EA020**EA020****Line****hedgerow****Full Chart Symbology:**

3036 yellow-green thin line w/rectangles one side

Simplified Symbology:

1412 yellow-green thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

EA030**EA030**

Area

nursery

Full Chart Symbology:

1412 yellow-green thin solid line

4230 yellow-green squares in grid patt fill

Simplified Symbology:

1412 yellow-green thin solid line

0805 depth white fill

EA040**EA040**

Area

orchard/plantation

Full Chart Symbology:

4051 radar dk green squares in grid patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EA050**EA050**

Area

vineyards

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EB010**EB010**

Area

grassland

Full Chart Symbology:

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EB020**EB020**

Area

scrub/brush

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

0803 yellow-green solid fill

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APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

EC010**EC010****Area****bamboo/cane****Full Chart Symbology:**

4052 yellow-green bamboo patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC020**EC020****Area****oasis - not palm****veg<>17****Full Chart Symbology:**

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

oasis - palm**veg=17****Full Chart Symbology:**

2252 yellow-green palm tree symbol 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

Point**oasis - not palm****veg<>17****Full Chart Symbology:**

0150 yellow-green filled sm cir w/ gray outline

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

oasis - palm**veg=17****Full Chart Symbology:**

2252 yellow-green palm tree symbol

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

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DTOP

Point Symbology

Line Symbology

Area Symbology

EC030**EC030**

Area

trees - clearing **veg=52**

Full Chart Symbology:		0822 lt brown solid fill
Simplified Symbology:	4292 radar dk green thin solid line	0803 yellow-green solid fill

trees - deciduous, unknown **veg=0or24**

Full Chart Symbology:		1605 yellow-green tree-top patt fill
Simplified Symbology:	4292 radar dk green thin solid line	0803 yellow-green solid fill

trees - evergreen, mixed **veg=25or50**

Full Chart Symbology:		1606 yellow-green triangle tree patt fill
Simplified Symbology:	4292 radar dk green thin solid line	0803 yellow-green solid fill

FA000**FA000**

Line

administrative boundary - international **use=23**

Full Chart Symbology:	1310 black one long dash two short dash line
Simplified Symbology:	1310 black one long dash two short dash line

administrative boundary - primary, unknown **use=0or26**

Full Chart Symbology:	1311 black long dash short dash line
Simplified Symbology:	1311 black long dash short dash line

FA020**FA020**

Line

armistice line

Full Chart Symbology:	3119 black very thin long dash line
Simplified Symbology:	3119 black very thin long dash line

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DTOP

Point Symbology

Line Symbology

Area Symbology

FA030**FA030**

Line

cease-fire line

Full Chart Symbology:

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA060**FA060**

Line

de facto boundary

Full Chart Symbology:

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA070**FA070**

Area

demilitarized zone

Full Chart Symbology:

3143 black double dash very thin lines

Simplified Symbology:

3119 black very thin long dash line

FA090**FA090**

Line

geophysical prospecting grid

Full Chart Symbology:

0612 lt gray very thin solid line

Simplified Symbology:

0612 lt gray very thin solid line

FA110**FA110**

Line

international date line

Full Chart Symbology:

3120 black thin long dash line

Simplified Symbology:

3120 black thin long dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

FA170**FA170**

Area

zone of occupation

Full Chart Symbology:

3118 black dash line

Simplified Symbology:

3118 black dash line

GB005**GB005**

Area

airport/airfield

Full Chart Symbology:

4183 aero-blue solid line

Simplified Symbology:

4183 aero-blue solid line

Point

airport/airfield - military; operational

exs=28 AND use=8or22
Full Chart Symbology:

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - non military; operational

exs=28 AND use<>8and<>22
Full Chart Symbology:

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

airport/airfield - not operational

exs<>28
Full Chart Symbology:

2268 lt gray airplane

Simplified Symbology:

2268 lt gray airplane

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DTOP

Point Symbology

Line Symbology

Area Symbology

GB010**GB010****Point****airport lighting****Full Chart Symbology:**

1012 aero-blue solid filled star

Simplified Symbology:

1012 aero-blue solid filled star

GB015**GB015****Area****apron/hardstand****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 lt gray solid fill

GB030**GB030****Point****helicopter landing pad at hospital****apt=11****Full Chart Symbology:**

1013 aero-blue "H" inside aero-blue square

Simplified Symbology:

6032 aero-blue "H" inside aero-blue square

helicopter landing pad**apt<>11****Full Chart Symbology:**

6032 aero-blue "H" inside aero-blue square

Simplified Symbology:

6032 aero-blue "H" inside aero-blue square

GB045**GB045****Area****overrun/stopway****Full Chart Symbology:**

3073 aero-blue thin short dash line

4098 aero-blue wide rt diag line patt fill

Simplified Symbology:

3073 aero-blue thin short dash line

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APPENDIX E

DTOP

Point Symbology

Line Symbology

Area Symbology

GB055

GB055

Area

runway

Full Chart Symbology:

4089 aero-blue solid fill

Simplified Symbology:

4089 aero-blue solid fill

GB075

GB075

Area

taxiway

Full Chart Symbology:

3070 aero-blue thin solid line

Simplified Symbology:

3070 aero-blue thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

DTOP

Point Symbology

Line Symbology

Area Symbology

SA050**SA050****Area**

slope polygon - % unknown spr=999

Full Chart Symbology:

1905 basic white solid fill

Simplified Symbology:

1905 basic white solid fill

slope polygon - <= 3% spr=0

Full Chart Symbology:

4002 lt beige solid fill

Simplified Symbology:

4002 lt beige solid fill

slope polygon - > 10% and <= 15% spr=2

Full Chart Symbology:

1901 UI lt brown solid fill

Simplified Symbology:

1901 UI lt brown solid fill

slope polygon - > 15% and <= 20% spr=3

Full Chart Symbology:

1902 dk beige solid fill

Simplified Symbology:

1902 dk beige solid fill

slope polygon - > 20% and <= 30% spr=4

Full Chart Symbology:

1903 rose solid fill

Simplified Symbology:

1903 rose solid fill

slope polygon - > 3% and <= 10% spr=1

Full Chart Symbology:

4003 beige solid fill

Simplified Symbology:

4003 beige solid fill

slope polygon - > 30% and <= 45% spr=5

Full Chart Symbology:

1904 golden yellow solid fill

Simplified Symbology:

1904 golden yellow solid fill

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DTOP

Point Symbology

Line Symbology

Area Symbology

SA050**SA050****slope polygon - > 45% and <= 60%****spr=6****Full Chart Symbology:**

4175 lt orange solid fill

Simplified Symbology:

4175 lt orange solid fill

slope polygon - > 60% and <= 85%**spr=7****Full Chart Symbology:**

1601 red solid fill

Simplified Symbology:

1601 red solid fill

slope polygon - > 85%**spr=8****Full Chart Symbology:**

1906 lt red brown solid fill

Simplified Symbology:

1906 lt red brown solid fill

ZB030**ZB030**

Point

boundary monument**Full Chart Symbology:**

2278 black dot in square

Simplified Symbology:

2278 black dot in square

ZB035**ZB035**

Point

control point/control station**Full Chart Symbology:**

2279 black triangle w/ dot inside

Simplified Symbology:

2279 black triangle w/ dot inside

MIL-DTL-89045A w/Amendment 1
APPENDIX E

DTOP

Point Symbology

Line Symbology

Area Symbology

ZD020

ZD020

Area

void collection area

Full Chart Symbology:	3082 gray very thin solid line	4105 lt gray rt diag thin line patt fill
Simplified Symbology:	3082 gray very thin solid line	4100 lt gray solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

FFD

Point Symbology

Line Symbology

Area Symbology

AC030**AC030**

Area

settling basin/sludge pond

Full Chart Symbology:

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

AL020**AL020**

Area

built-up area

Full Chart Symbology:

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

AL045**AL045**

Area

complex outline

Full Chart Symbology:

0684 red thin solid line

Simplified Symbology:

0684 red thin solid line

AL105**AL105**

Area

settlement

Full Chart Symbology:

4100 lt gray solid fill

Simplified Symbology:

4100 lt gray solid fill

AL135**AL135**

Area

native settlement

Full Chart Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

**MIL-DTL-89045A w/Amendment 1
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FFD

Point Symbology

Line Symbology

Area Symbology

AN010**AN010****Line**

railroad -dismantled **exs=8**

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

railroad -not operational/narrow/multiple **exs=5or6or7 AND ltn>1 AND rgc=2**

Full Chart Symbology:

3137 black dash line w/ double tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/narrow/single **exs=5or6or7 AND ltn<2 AND rgc=2**

Full Chart Symbology:

3135 black dash line w/ single tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/multiple **exs=5or6or7 AND ltn>1 AND rgc<>2**

Full Chart Symbology:

3133 black dash line w/ double tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/single **exs=5or6or7 AND ltn<2 AND rgc<>2**

Full Chart Symbology:

3131 black dash line w/ single tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -operational/narrow/multiple **exs=0or28 AND ltn>1 AND rgc=2**

Full Chart Symbology:

3129 black solid line w/ double tics alt sides

Simplified Symbology:

3112 black thin solid line

railroad -operational/narrow/single **exs=0or28 AND ltn<2 AND rgc=2**

Full Chart Symbology:

3125 black solid line w/ single tics alt sides

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
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Point Symbology	Line Symbology	Area Symbology
AN010		AN010
railroad -operational/normal/multiple		exs=0or28 AND ltn>1 AND rgc<>2
Full Chart Symbology:	3127 black solid line w/ double tics both sides	
Simplified Symbology:	3112 black thin solid line	
railroad -operational/normal/single		exs=0or28 AND ltn<2 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	3112 black thin solid line	
AN050		AN050
Line		
railroad siding/railroad spur - non-operational/narrow		exs<>0and<>28 AND rgc=2
Full Chart Symbology:	3135 black dash line w/ single tics alt sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - non-operational/normal		exs<>0and<>28 AND rgc<>2
Full Chart Symbology:	3131 black dash line w/ single tics both sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - operational/narrow		exs=0or28 AND rgc=2
Full Chart Symbology:	3125 black solid line w/ single tics alt sides	
Simplified Symbology:	0600 black very thin solid line	
railroad siding/railroad spur - operational/normal		exs=0or28 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	0600 black very thin solid line	

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FFD

Point Symbology

Line Symbology

Area Symbology

AN060**AN060****Area****railroad yard/marshalling yard****Full Chart Symbology:**

0600 black very thin solid line

0802 gray solid fill

Simplified Symbology:

0600 black very thin solid line

0802 gray solid fill

AP010**AP010****Line****cart track****Full Chart Symbology:**

3116 black very thin dash line

Simplified Symbology:

3116 black very thin dash line

AP030**AP030****Line****road - all weather, hard surface, no median****med<>1 AND rst=0or1 AND wtc<>2****Full Chart Symbology:**

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, loose surface, no median**med<>1 AND rst=2 AND wtc<>2****Full Chart Symbology:**

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median**med=1****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median**med<>1 AND wtc=2****Full Chart Symbology:**

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

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FFD

Point Symbology

Line Symbology

Area Symbology

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AQ040**AQ040****Line****bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

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FFD

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130****Line****tunnel****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point**tunnel****Full Chart Symbology:**

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2100 black box w/ round top w/ "T" inside

BA010**BA010****Line****coastline/shoreline - accurate****acc=1****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

coastline/shoreline - not accurate**acc<>1****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA030**BA030****Area****island****Full Chart Symbology:**

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

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Point Symbology

Line Symbology

Area Symbology

BA040**BA040****Area****water (except inland)**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

BB190**BB190****Area****pier/wharf/quay**

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**pier/wharf/quay**

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BE015**BE015****Line****depth contour**

Full Chart Symbology:

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

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Point Symbology

Line Symbology

Area Symbology

BH010**BH010****Line****aqueduct - surface/elevated****loc=0or8or25****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

aqueduct - underground**loc=4****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

BH020**BH020****Area****canal - non-perennial, dry, unknown****hyc<>8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 0820 depth pale blue solid fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0820 depth pale blue solid fill

canal - perennial**hyc=8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0820 depth pale blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0820 depth pale blue solid fill

Line**canal - not perennial****hyc<>8****Full Chart Symbology:**

3167 100% cyan blue thin short dash line

Simplified Symbology:

3108 100% cyan blue thin solid line

canal - perennial**hyc=8****Full Chart Symbology:**

3108 100% cyan blue thin solid line

Simplified Symbology:

3108 100% cyan blue thin solid line

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Point Symbology

Line Symbology

Area Symbology

BH030**BH030****Area****ditch****Full Chart Symbology:**

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Line**ditch****Full Chart Symbology:**

0621 depth med blue very thin solid line

Simplified Symbology:

0621 depth med blue very thin solid line

BH040**BH040****Area****filtration beds/aeration beds****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

BH050**BH050****Area****fish hatchery/fish farm/marine farm****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

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FFD

Point Symbology

Line Symbology

Area Symbology

BH070**BH070****Line****ford****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point**ford****Full Chart Symbology:**

2087 black opposing solid triangles pnting in

Simplified Symbology:

6048 gray filled circle

BH080**BH080****Area****lake/pond - dry****hyc=3****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH090**BH090****Area****land subject to inundation****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

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Point Symbology

Line Symbology

Area Symbology

BH095**BH095****Area****marsh/swamp****Full Chart Symbology:**

4080 basic blue marsh/swamp patt fill

Simplified Symbology:

6007 midnight blue solid fill

BH130**BH130****Area****reservoir****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH135**BH135****Area****rice field****Full Chart Symbology:**

4085 basic blue rice patt fill

Simplified Symbology:

6002 steel blue solid fill

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Point Symbology

Line Symbology

Area Symbology

BH140**BH140****Area****river/stream - dry, non-perennial****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

river/stream - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Line**river/stream - dry, non-perennial****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

river/stream - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

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APPENDIX E**

FFD

Point Symbology

Line Symbology

Area Symbology

BI020**BI020****Area****dam/weir****Full Chart Symbology:**

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Line**dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**dam/weir****Full Chart Symbology:**

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

BI030**BI030****Area****lock****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**lock****Full Chart Symbology:**

6047 black open double arrowhead

Simplified Symbology:

6047 black open double arrowhead

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FFD

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****Line****contour line (land) - depression****hqc=5****Full Chart Symbology:**

1307 It brown vy thin line w/ ticks on inside

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - index, unknown**hqc=0or1****Full Chart Symbology:**

6011 It brown very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate depression**hqc=6****Full Chart Symbology:**

4305 It brown very very thin line w/ tick marks

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate**hqc=2****Full Chart Symbology:**

4304 It brown very very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

CA030**CA030****Point****spot elevation - accurate****ela=1****Full Chart Symbology:**

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

spot elevation - not accurate**ela<>1****Full Chart Symbology:**

1011 black sm filled cir beside +-

Simplified Symbology:1011 black sm filled cir beside +-

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FFD

Point Symbology

Line Symbology

Area Symbology

EA040**EA040****Area****orchard/plantation**

Full Chart Symbology:		4051 radar dk green squares in grid patt fill
Simplified Symbology:	4292 radar dk green thin solid line	0805 depth white fill

EC030**EC030****Area****trees - deciduous, unknown****tre=0or1**

Full Chart Symbology:		1605 yellow-green tree-top patt fill
Simplified Symbology:	4292 radar dk green thin solid line	0803 yellow-green solid fill

trees - evergreen, mixed**tre=2or3**

Full Chart Symbology:		1606 yellow-green triangle tree patt fill
Simplified Symbology:	4292 radar dk green thin solid line	0803 yellow-green solid fill

FA000**FA000****Line****administrative boundary - international****use=23**

Full Chart Symbology:	1310 black one long dash two short dash line
Simplified Symbology:	1310 black one long dash two short dash line

administrative boundary - primary, unknown**use=0or26**

Full Chart Symbology:	1311 black long dash short dash line
Simplified Symbology:	1311 black long dash short dash line

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Point Symbology

Line Symbology

Area Symbology

FA001**FA001****Area****administrative area**

Full Chart Symbology:	0633 lt gray thin dash line
Simplified Symbology:	0633 lt gray thin dash line

FA020**FA020****Line****armistice line**

Full Chart Symbology:	3119 black very thin long dash line
Simplified Symbology:	3119 black very thin long dash line

FA030**FA030****Line****cease-fire line**

Full Chart Symbology:	3119 black very thin long dash line
Simplified Symbology:	3119 black very thin long dash line

FC021**FC021****Line****maritime limit boundary - international (at sea)****mbi=9**

Full Chart Symbology:	1451 purple dash line w/ tics both sides (- + -)
Simplified Symbology:	3120 black thin long dash line

maritime limit boundary - unknown**mbi=0**

Full Chart Symbology:	3054 lt magenta very thin short dash line
Simplified Symbology:	3054 lt magenta very thin short dash line

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Point Symbology

Line Symbology

Area Symbology

GB005**GB005****Area****airport/airfield****Full Chart Symbology:**

4183 aero-blue solid line

Simplified Symbology:

4183 aero-blue solid line

Point**airport/airfield - civilian, operational****exs=28 AND use<>8and<>22****Full Chart Symbology:**

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

airport/airfield - military, operational**exs=28 AND use=8or22****Full Chart Symbology:**

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - non-operational**exs<>28****Full Chart Symbology:**

2268 lt gray airplane

Simplified Symbology:

2268 lt gray airplane

GB035**GB035****Area****heliport****Full Chart Symbology:**

4184 aero-blue very thin short dash line

Simplified Symbology:

4184 aero-blue very thin short dash line

Point**heliport****Full Chart Symbology:**

6032 aero-blue "H" inside aero-blue square

Simplified Symbology:

6032 aero-blue "H" inside aero-blue square

**MIL-DTL-89045A w/Amendment 1
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Point Symbology

Line Symbology

Area Symbology

GB055**GB055****Area****runway****Full Chart Symbology:**

4089 aero-blue solid fill

Simplified Symbology:

4089 aero-blue solid fill

GB065**GB065****Area****seaplane base****Full Chart Symbology:**

4186 magenta thin dash line

Simplified Symbology:

4186 magenta thin dash line

Point**seaplane base****Full Chart Symbology:**

0080 magenta solid filled diamond inside cir

Simplified Symbology:

0080 magenta solid filled diamond inside cir

ZD020**ZD020****Area****void collection area****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 lt gray solid fill

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TOD Level 0

Point Symbology

Line Symbology

Area Symbology

BG010**BG010****Point****current flow - general; direction unknown****cur=0 OR dof=0****Full Chart Symbology:**

0071 gray arrow w/ 2 feathers and 2 ?

Simplified Symbology:

0071 gray arrow w/ 2 feathers and 2 ?

current flow - ocean; direction known**cur=5 AND dof<>0****Full Chart Symbology:**

0072 gray arrow w/ two feathers

Simplified Symbology:

0072 gray arrow w/ two feathers

FC021**FC021****Line****maritime limit boundary - limit of territorial waters****mbl=6****Full Chart Symbology:**

0633 It gray thin dash line

Simplified Symbology:

0633 It gray thin dash line

maritime limit boundary - other**mbl<>6****Full Chart Symbology:**

0633 It gray thin dash line

Simplified Symbology:

0633 It gray thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

FC031**FC031**

Area

maritime area - ASW area

mac=106
Full Chart Symbology:

0754 UI vy dk blue vy thin line w/5 rows dots inside

Simplified Symbology:

0754 UI vy dk blue vy thin line w/5 rows dots inside

maritime area - caution areas

mac=141or142or155
Full Chart Symbology:

0097 traffic lt magenta ! Inside lg circle

0742 magenta dash/chevron line w/caution symbol

Simplified Symbology:

0097 traffic lt magenta ! Inside lg circle

0742 magenta dash/chevron line w/caution symbol

maritime area - major op area

mac=104
Full Chart Symbology:

0681 UI very dk blue thin solid line

Simplified Symbology:

0681 UI very dk blue thin solid line

maritime area - marine sanctuary

mac=101
Full Chart Symbology:

0081 lt magenta square w/ l

0734 magenta dash/chevron line

Simplified Symbology:

0081 lt magenta square w/ l

0734 magenta dash/chevron line

maritime area - military area, minefield

mac=143or148or149or158
Full Chart Symbology:

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

maritime area - military practice areas

mac=27or28or115or116or140or146or147or150or151or152or153or157or159
Full Chart Symbology:

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

Simplified Symbology:

0093 traffic lt magenta ! Inside lg circle

0734 magenta dash/chevron line

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TOD Level 0

Point Symbology	Line Symbology	Area Symbology
FC031		FC031
maritime area - minor op area		mac=105
Full Chart Symbology:	0682 UI very dk blue very thin solid line	
Simplified Symbology:	0682 UI very dk blue very thin solid line	
maritime area - restricted areas		mac=0or144or145or154or999
Full Chart Symbology:	0087 traffic lt magenta ! In lg cir w/ magenta ? 0734 magenta dash/chevron line	
Simplified Symbology:	0087 traffic lt magenta ! In lg cir w/ magenta ? 0734 magenta dash/chevron line	
maritime area - safety lane		mac=156
Full Chart Symbology:	0716 gray dash/chevron line	
Simplified Symbology:	0716 gray dash/chevron line	
maritime area - sea test range		mac=114
Full Chart Symbology:	0683 UI very dk blue dotted line	
Simplified Symbology:	0683 UI very dk blue dotted line	
maritime area - submarine op area		mac=107
Full Chart Symbology:	0755 UI vy dk blue vy thin line w/vert inward ticks	
Simplified Symbology:	0755 UI vy dk blue vy thin line w/vert inward ticks	
maritime area - submarine traffic lane submerged		mac=108
Full Chart Symbology:	0756 feature brown vy thin line w/vert inward ticks	
Simplified Symbology:	0756 feature brown vy thin line w/vert inward ticks	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

FC031**FC031****maritime area - submarine traffic lane surface****mac=109****Full Chart Symbology:**0757 feature brown vy thin line w/3 rows dots
ins**Simplified Symbology:**0757 feature brown vy thin line w/3 rows dots
ins**maritime area - surface traffic lane****mac=110****Full Chart Symbology:**

0758 feature brown 5 dot vy thin line

Simplified Symbology:

0758 feature brown 5 dot vy thin line

FC036**FC036****Area****restricted area****Full Chart Symbology:**

0087 traffic lt magenta ! ln lg cir w/ magenta ? 0734 magenta dash/chevron line

Simplified Symbology:

0087 traffic lt magenta ! ln lg cir w/ magenta ? 0734 magenta dash/chevron line

FC101**FC101****Line****theodolite line****Full Chart Symbology:**

0684 red thin solid line

Simplified Symbology:

0684 red thin solid line

FC102**FC102****Line****range center line****Full Chart Symbology:**

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

MIL-DTL-89045A w/Amendment 1
APPENDIX E

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

FC170

FC170

Area

safety fairway

Full Chart Symbology:

0091 gray ? inside angle brackets inside dashes 0716 gray dash/chevron line

Simplified Symbology:

0091 gray ? inside angle brackets inside dashes 0656 gray very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

GA005**GA005**

Area

air lanes/corridors **aua=0or20or36or998**

Full Chart Symbology:	0759 green thin line w/stagrd dots inside
Simplified Symbology:	0759 green thin line w/stagrd dots inside

airspace - air defense zone **aua=2**

Full Chart Symbology:	0760 magenta vy thin line w/ 3 row vert dots inside
Simplified Symbology:	0760 magenta vy thin line w/ 3 row vert dots inside

airspace - controlled **aua=9or21or22or23or34or46or70**

Full Chart Symbology:	0761 green vy thin line w/3 row vert dots
Simplified Symbology:	0761 green vy thin line w/3 row vert dots

airspace - flight information region **aua=13**

Full Chart Symbology:	0762 green thin line with ticks inside
Simplified Symbology:	0762 green thin line with ticks inside

airspace - upper control area **aua=39**

Full Chart Symbology:	0685 green thin solid line
Simplified Symbology:	0685 green thin solid line

airspace - upper flight information region **aua=40**

Full Chart Symbology:	0763 green thin line with open tabs inside
Simplified Symbology:	0763 green thin line with open tabs inside

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APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

GA015**GA015**

Area

special use airspace - prohibited,restricted

aul=2or3

Full Chart Symbology:

0765 magenta thin line w/ lft angle ticks inside

Simplified Symbology:

0765 magenta thin line w/ lft angle ticks inside

special use airspace - warning area

aul=0or5or6

Full Chart Symbology:

0764 magenta thin line w/ rt angle ticks inside

Simplified Symbology:

0764 magenta thin line w/ rt angle ticks inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

GA035**GA035****Point****navaids (aeronautical) - NDB****nst=17****Full Chart Symbology:**

0517 magenta circle with dot in center

Simplified Symbology:

0517 magenta circle with dot in center

navaids (aeronautical) - TACAN**nst=23****Full Chart Symbology:**0521 magenta hexagon, open outer rectgls,
cntr dot**Simplified Symbology:**0521 magenta hexagon, open outer rectgls,
cntr dot**navaids (aeronautical) - unknown****nst=0****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

navaids (aeronautical) - VOR/DME**nst=21****Full Chart Symbology:**0519 magenta hexagon in square w/ dot in
center**Simplified Symbology:**0519 magenta hexagon in square w/ dot in
center**navaids (aeronautical) - VOR****nst=20****Full Chart Symbology:**

0518 magenta hexagon with dot in center

Simplified Symbology:

0518 magenta hexagon with dot in center

navaids (aeronautical) - VORTAC**nst=22****Full Chart Symbology:**0520 magenta hexagon, solid outer rectgls,
cntr dot**Simplified Symbology:**0520 magenta hexagon, solid outer rectgls,
cntr dot

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 0

Point Symbology

Line Symbology

Area Symbology

GA055**GA055****Point****waypoint/reporting-calling in point - compulsory****wpt=10****Full Chart Symbology:**

0523 green solid triangle

Simplified Symbology:

0523 green solid triangle

waypoint/reporting-calling in point - non compulsory**wpt<>10****Full Chart Symbology:**

0522 green open triangle

Simplified Symbology:

0522 green open triangle

ZB035**ZB035****Point****control point/control station****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

ZD020**ZD020****Area****void collection area****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 1

Point Symbology

Line Symbology

Area Symbology

BD005**BD005****Point****miscellaneous underwater feature - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

miscellaneous underwater feature - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar**BD180****BD180****Point****wreck - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

wreck - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 1

Point Symbology

Line Symbology

Area Symbology

BE015**BE015**

Line

depth contour - accurate**acc=1**

Full Chart Symbology:	0608 depth gray very thin solid line
Simplified Symbology:	0608 depth gray very thin solid line

depth contour - not accurate**acc=2**

Full Chart Symbology:	0614 depth gray very thin dash line
Simplified Symbology:	0614 depth gray very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 1

Point Symbology

Line Symbology

Area Symbology

BE019**BE019**

Area

depth area (deep water); 2 shades **idsm=1 AND cvl>=ssdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (medium deep); 4 shades **idsm=0 AND cvl>=ssdcand<msdc**

Full Chart Symbology:

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

depth area (medium shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

depth area (medium shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

depth area (very deep); 4 shades **idsm=0 AND cvl>=msdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (very shallow); 2 shades; shallow mode off **idsm=1 AND isdm=0 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 1

Point Symbology	Line Symbology	Area Symbology
BE019		BE019
depth area (very shallow); 2 shades; shallow mode on		idsm=1 AND isdm=1 AND cvl<ssdc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area (very shallow); 4 shades; shallow mode off		idsm=0 AND isdm=0 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
depth area (very shallow); 4 shades; shallow mode on		idsm=0 AND isdm=1 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area; depth unknown		cvl=-32767
Full Chart Symbology:		0823 no data gray solid fill
Simplified Symbology:		0823 no data gray solid fill
Full Chart Symbology:		0934 gray dash wide patt fill
Simplified Symbology:		0934 gray dash wide patt fill
Full Chart Symbology:	0631 gray thin solid line	
Simplified Symbology:	0631 gray thin solid line	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 1

Point Symbology

Line Symbology

Area Symbology

BE020**BE020****Point**

sounding - circle (light) indicating low accuracy **acc<>1**

Full Chart Symbology:

1251 sounding gray circle

Simplified Symbology:

1251 sounding gray circle

BE030**BE030****Area****track swath****Full Chart Symbology:**

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

BE040**BE040****Line****track line****Full Chart Symbology:**

0670 depth med blue thin dash line

Simplified Symbology:

0670 depth med blue thin dash line

ZD020**ZD020****Area****void collection area****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 2

Point Symbology

Line Symbology

Area Symbology

BD005**BD005****Point****miscellaneous underwater feature - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

miscellaneous underwater feature - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar**BD180****BD180****Point****wreck - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

wreck - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 2

Point Symbology

Line Symbology

Area Symbology

BE015**BE015**

Line

depth contour - accurate**acc=1**

Full Chart Symbology:	0608 depth gray very thin solid line
Simplified Symbology:	0608 depth gray very thin solid line

depth contour - not accurate**acc=2**

Full Chart Symbology:	0614 depth gray very thin dash line
Simplified Symbology:	0614 depth gray very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 2

Point Symbology

Line Symbology

Area Symbology

BE019**BE019**

Area

depth area (deep water); 2 shades **idsm=1 AND cvl>=ssdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (medium deep); 4 shades **idsm=0 AND cvl>=ssdcand<msdc**

Full Chart Symbology:

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

depth area (medium shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

depth area (medium shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

depth area (very deep); 4 shades **idsm=0 AND cvl>=msdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (very shallow); 2 shades; shallow mode off **idsm=1 AND isdm=0 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 2

Point Symbology	Line Symbology	Area Symbology
BE019		BE019
depth area (very shallow); 2 shades; shallow mode on		idsm=1 AND isdm=1 AND cvl<ssdc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area (very shallow); 4 shades; shallow mode off		idsm=0 AND isdm=0 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
depth area (very shallow); 4 shades; shallow mode on		idsm=0 AND isdm=1 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area; depth unknown		cvl=-32767
Full Chart Symbology:		0823 no data gray solid fill
Simplified Symbology:		0823 no data gray solid fill
Full Chart Symbology:		0934 gray dash wide patt fill
Simplified Symbology:		0934 gray dash wide patt fill
Full Chart Symbology:	0631 gray thin solid line	
Simplified Symbology:	0631 gray thin solid line	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 2

Point Symbology

Line Symbology

Area Symbology

BE020**BE020****Point**

sounding - circle (light) indicating low accuracy **acc<>1**

Full Chart Symbology:

1251 sounding gray circle

Simplified Symbology:

1251 sounding gray circle

BE030**BE030****Area****track swath****Full Chart Symbology:**

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

BE040**BE040****Line****track line****Full Chart Symbology:**

0670 depth med blue thin dash line

Simplified Symbology:

0670 depth med blue thin dash line

ZD020**ZD020****Area****void collection area****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 3

Point Symbology

Line Symbology

Area Symbology

BD005**BD005****Point****miscellaneous underwater feature - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

miscellaneous underwater feature - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar**BD180****BD180****Point****wreck - reported****exs=58****Full Chart Symbology:**

0525 magenta open very thin circle

Simplified Symbology:

0525 magenta open very thin circle

wreck - sonar confirmed**exs=57****Full Chart Symbology:**0524 magenta open circle w/ diagonal cross
bar**Simplified Symbology:**0524 magenta open circle w/ diagonal cross
bar

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 3

Point Symbology

Line Symbology

Area Symbology

BE015**BE015**

Line

depth contour - accurate**acc=1**

Full Chart Symbology:	0608 depth gray very thin solid line
Simplified Symbology:	0608 depth gray very thin solid line

depth contour - not accurate**acc=2**

Full Chart Symbology:	0614 depth gray very thin dash line
Simplified Symbology:	0614 depth gray very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 3

Point Symbology

Line Symbology

Area Symbology

BE019**BE019**

Area

depth area (deep water); 2 shades **idsm=1 AND cvl>=ssdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (medium deep); 4 shades **idsm=0 AND cvl>=ssdcand<msdc**

Full Chart Symbology:

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

depth area (medium shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

depth area (medium shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

Simplified Symbology:

0949 depth gray diamond patt fill

depth area (very deep); 4 shades **idsm=0 AND cvl>=msdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

depth area (very shallow); 2 shades; shallow mode off **idsm=1 AND isdm=0 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 3

Point Symbology	Line Symbology	Area Symbology
BE019		BE019
depth area (very shallow); 2 shades; shallow mode on		idsm=1 AND isdm=1 AND cvl<ssdc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area (very shallow); 4 shades; shallow mode off		idsm=0 AND isdm=0 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
depth area (very shallow); 4 shades; shallow mode on		idsm=0 AND isdm=1 AND cvl<mssc
Full Chart Symbology:		0810 depth med blue solid fill
Simplified Symbology:		0810 depth med blue solid fill
Full Chart Symbology:		0949 depth gray diamond patt fill
Simplified Symbology:		0949 depth gray diamond patt fill
depth area; depth unknown		cvl=-32767
Full Chart Symbology:		0823 no data gray solid fill
Simplified Symbology:		0823 no data gray solid fill
Full Chart Symbology:		0934 gray dash wide patt fill
Simplified Symbology:		0934 gray dash wide patt fill
Full Chart Symbology:	0631 gray thin solid line	
Simplified Symbology:	0631 gray thin solid line	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 3

Point Symbology

Line Symbology

Area Symbology

BE020**BE020****Point**

sounding - circle (light) indicating low accuracy **acc<>1**

Full Chart Symbology:

1251 sounding gray circle

Simplified Symbology:

1251 sounding gray circle

BE030**BE030****Area****track swath****Full Chart Symbology:**

0820 depth pale blue solid fill

Simplified Symbology:

0820 depth pale blue solid fill

BE040**BE040****Line****track line****Full Chart Symbology:**

0670 depth med blue thin dash line

Simplified Symbology:

0670 depth med blue thin dash line

ZD020**ZD020****Area****void collection area****Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 4

Point Symbology

Line Symbology

Area Symbology

BD005**BD005****Point**

miscellaneous underwater feature - not obstruction **wkt<>35**

Full Chart Symbology:

0525 magenta open very thin circle

miscellaneous underwater feature - obstruction **wkt=35**

Full Chart Symbology:

0052 depth med blue fill cir w/ black dotted outline

BD180**BD180****Point****wreck****Full Chart Symbology:**

0066 black horiz bar w/3 ticks

BE015**BE015****Line**

depth contour - accurate, index **acc=1 AND hqc=1**

Full Chart Symbology:

0609 depth dk gray thin solid line

depth contour - accurate,not index **acc=1 AND hqc<>1**

Full Chart Symbology:

0608 depth gray very thin solid line

depth contour - not accurate, index **acc<>1 AND hqc=1**

Full Chart Symbology:

0688 depth dk gray thin long dash line

depth contour - not accurate, not index **acc<>1 AND hqc<>1**

Full Chart Symbology:

0689 depth gray very thin long dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 4

Point Symbology

Line Symbology

Area Symbology

BE019**BE019**

Area

depth area (deep water); 2 shades **idsm=1 AND cvl>=ssdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

depth area (medium deep); 4 shades **idsm=0 AND cvl>=ssdcand<msdc**

Full Chart Symbology:

0820 depth pale blue solid fill

depth area (medium shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

depth area (medium shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl>=msscand<ssdc**

Full Chart Symbology:

0821 depth lt blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

depth area (very deep); 4 shades **idsm=0 AND cvl>=msdcand<->-32767**

Full Chart Symbology:

0805 depth white fill

depth area (very shallow); 2 shades; shallow mode off **idsm=1 AND isdm=0 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

depth area (very shallow); 2 shades; shallow mode on **idsm=1 AND isdm=1 AND cvl<ssdc**

Full Chart Symbology:

0810 depth med blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

depth area (very shallow); 4 shades; shallow mode off **idsm=0 AND isdm=0 AND cvl<mssc**

Full Chart Symbology:

0810 depth med blue solid fill

depth area (very shallow); 4 shades; shallow mode on **idsm=0 AND isdm=1 AND cvl<mssc**

Full Chart Symbology:

0810 depth med blue solid fill

Full Chart Symbology:

0949 depth gray diamond patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 4

Point Symbology	Line Symbology	Area Symbology
BE019		BE019
depth area; depth unknown		cvl=-32767
Full Chart Symbology:		0823 no data gray solid fill
Full Chart Symbology:		0934 gray dash wide patt fill
Full Chart Symbology:		0631 gray thin solid line
BE020		BE020
Point		
sounding - circle (light) indicating low accuracy		acc<>1
Full Chart Symbology:		1251 sounding gray circle
BF012		BF012
Point		
hull integrity test site core site		
Full Chart Symbology:		0022 black cir
FC178		FC178
Area		
hull integrity test area		
Full Chart Symbology:		0687 magenta thick long dash line
FC179		FC179
Area		
side scan sonar coverage		
Full Chart Symbology:		1901 UI It brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

TOD Level 4

Point Symbology

Line Symbology

Area Symbology

FC180**FC180**

Area

hull integrity test site bottom feature - cable htc=509

Full Chart Symbology:

0708 magenta broken zig-zag line w/ flash
symbol

hull integrity test site bottom feature - height > 2m htc=503

Full Chart Symbology:

0826 magenta solid fill

**hull integrity test site bottom feature - hght not >2m,not
slope>10 deg, not cable htc<>503and<>507and<>509**

Full Chart Symbology:

0825 lt magenta solid fill

hull integrity test site bottom feature - slope > 10 degrees htc=507

Full Chart Symbology:

0766 magenta very thin solid line with inward
ticks

Line

hull integrity test site bottom feature - cable htc=509

Full Chart Symbology:

0708 magenta broken zig-zag line w/ flash
symbol

**hull integrity test site bottom feature - not cable, not slope
> 10 degrees htc<>507and<>509**

Full Chart Symbology:

0686 magenta thick solid line

hull integrity test site bottom feature - slope > 10 degrees htc=507

Full Chart Symbology:

0766 magenta very thin solid line with inward
ticks

Point

hull integrity test site bottom feature

Full Chart Symbology:

0527 magenta filled circle

MIL-DTL-89045A w/Amendment 1
APPENDIX E

TOD Level 4

Point Symbology

Line Symbology

Area Symbology

ZD020

ZD020

Area

void collection area

Full Chart Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AA010**AA010**

Area

mine - active **exs<>6**

Full Chart Symbology:	
2001 black pick & hammer	3116 black very thin dash line
Simplified Symbology:	
2001 black pick & hammer	3116 black very thin dash line

mine - inactive **exs=6**

Full Chart Symbology:	
6000 black upside down pick & hammer	3116 black very thin dash line
Simplified Symbology:	
6000 black upside down pick & hammer	3116 black very thin dash line

Line

mine

Full Chart Symbology:	
	3116 black very thin dash line
Simplified Symbology:	
3116 black very thin dash line	

Point

mine - active **exs<>6**

Full Chart Symbology:	
2001 black pick & hammer	
Simplified Symbology:	
2001 black pick & hammer	

mine - inactive **exs=6**

Full Chart Symbology:	
6000 black upside down pick & hammer	
Simplified Symbology:	
6000 black upside down pick & hammer	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AA012**AA012**

Area

quarry - active **exs<>6**

Full Chart Symbology:

2001 black pick & hammer

3116 black very thin dash line

Simplified Symbology:

2001 black pick & hammer

3116 black very thin dash line

quarry - inactive **exs=6**

Full Chart Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Simplified Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Line

quarry

Full Chart Symbology:

3116 black very thin dash line

Simplified Symbology:

3116 black very thin dash line

Point

quarry - active **exs<>6**

Full Chart Symbology:

2001 black pick & hammer

Simplified Symbology:

2001 black pick & hammer

quarry - inactive **exs=6**

Full Chart Symbology:

6000 black upside down pick & hammer

Simplified Symbology:

6000 black upside down pick & hammer

AA040**AA040**

Point

rig/superstructure

Full Chart Symbology:

2002 black tower

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AA050**AA050****Point****well - not water****pro<>116****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

well - water/non-perennial-dry**hyc<>0and<>8 AND pro=116****Full Chart Symbology:**

6013 basic blue very thin circle

Simplified Symbology:

2003 basic blue solid filled cir

well - water/perennial**hyc=0or8 AND pro=116****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

AB000**AB000****Area****disposal site/waste pile****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

AB010**AB010****Area****wrecking yard/scrap yard****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AC000**AC000**

Area

processing plant/treatment plant

Full Chart Symbology:

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

AC020**AC020**

Point

catalytic cracker

Full Chart Symbology:

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2005 black building w/ 2 smokestacks above

AC030**AC030**

Area

settling basin/sludge pond

Full Chart Symbology:

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

AD010**AD010**

Area

power plant

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AD030**AD030**

Area

substation/transformer yard

Full Chart Symbology:

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point

substation/transformer yard

Full Chart Symbology:

2011 black open sq w/ dot inside w/ zap on top

Simplified Symbology:

2019 black sm filled cir

AF010**AF010**

Point

chimney/smokestack

Full Chart Symbology:

6015 black sm open square

Simplified Symbology:

6015 black sm open square

AF020**AF020**

Line

conveyor

Full Chart Symbology:

3086 gray very thin short dash line

Simplified Symbology:

3086 gray very thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AF030**AF030**

Area

cooling tower

Full Chart Symbology:

3117 black thin dash line

4100 lt gray solid fill

Simplified Symbology:

3117 black thin dash line

4100 lt gray solid fill

Point

cooling tower

Full Chart Symbology:

2016 black dot inside double cir

Simplified Symbology:

2016 black dot inside double cir

AF040**AF040**

Point

crane

Full Chart Symbology:

6016 black crane symbol

Simplified Symbology:

6015 black sm open square

AF070**AF070**

Point

flare pipe

Full Chart Symbology:

0006 black flare stack symbol

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AH010**AH010**

Area

bastion/rampart/fortification

Full Chart Symbology:

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Line

bastion/rampart/fortification

Full Chart Symbology:

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Point

bastion/rampart/fortification

Full Chart Symbology:

2043 black four black squares w/ connection

Simplified Symbology:

2043 black four black squares w/ connection

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AH050**AH050**

Area

fortification

Full Chart Symbology:

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Line

fortification

Full Chart Symbology:

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Point

fortification

Full Chart Symbology:

2043 black four black squares w/ connection

Simplified Symbology:

2043 black four black squares w/ connection

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AH060**AH060**

Area

underground bunker

Full Chart Symbology:

3117 black thin dash line

4100 lt gray solid fill

Simplified Symbology:

3117 black thin dash line

Line

underground bunker

Full Chart Symbology:

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point

underground bunker

Full Chart Symbology:

2072 gray shadowed square

Simplified Symbology:

2072 gray shadowed square

AI020**AI020**

Area

mobile home/mobile home park

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AJ030**AJ030**

Area

feedlot/stockyard/holding pen

Full Chart Symbology:

4217 dk tan very thin solid line

Simplified Symbology:

4217 dk tan very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AJ050**AJ050****Point****windmill****Full Chart Symbology:**

6017 black sm filled cir w/ vert line w/ "X" on top

Simplified Symbology:

0063 black 6 point asterisk

AK020**AK020****Point****amusement park attraction****Full Chart Symbology:**

2029 black ferris wheel

Simplified Symbology:

0051 black filled sm cir

AK030**AK030****Area****amusement park****Full Chart Symbology:**

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

AK040**AK040****Area****athletic field****Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AK060**AK060**

Area

campground/campsite**Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AK070**AK070**

Area

drive in theater**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK090**AK090**

Area

fairgrounds**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK100**AK100**

Area

golf course**Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK110**AK110**

Area

grandstand**Full Chart Symbology:**

0600 black very thin solid line

4243 depth dk gray solid fill

Simplified Symbology:

0600 black very thin solid line

4243 depth dk gray solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AK120**AK120**

Area

park

Full Chart Symbology:

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

AK130**AK130**

Area

race track

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Line

race track

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AK150**AK150**

Line

ski jump

Full Chart Symbology:

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

Point

ski jump

Full Chart Symbology:

2034 black skier

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AK160**AK160**

Area

stadium/amphitheater

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

AK170**AK170**

Area

swimming pool

Full Chart Symbology:

0600 black very thin solid line

4138 med blue solid fill

Simplified Symbology:

0600 black very thin solid line

4138 med blue solid fill

AK180**AK180**

Area

zoo/safari park

Full Chart Symbology:

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Area

building - generic

bfc=<2and<3and<5and<8and<28and<52and<121and<15and<6and<7and<114and<100and<60and<108

Full Chart Symbology:		
	0600 black very thin solid line	4156 black solid fill
Simplified Symbology:		
	0600 black very thin solid line	4156 black solid fill

building - government

bfc=2or3or5or8or28or52or121

Full Chart Symbology:		
	0600 black very thin solid line	1601 red solid fill
Simplified Symbology:		
	0600 black very thin solid line	4156 black solid fill

building - hospital

bfc=6or100

Full Chart Symbology:		
	0600 black very thin solid line	4015 beige-rose solid fill
Simplified Symbology:		
	0600 black very thin solid line	4156 black solid fill

building - house of worship

bfc=7or114

Full Chart Symbology:		
	0600 black very thin solid line	4002 light beige solid fill
Simplified Symbology:		
	0600 black very thin solid line	4156 black solid fill

building - school

bfc=15or60or108

Full Chart Symbology:		
	0600 black very thin solid line	4025 feature brown solid fill
Simplified Symbology:		
	0600 black very thin solid line	4156 black solid fill

Line

building - generic

bfc=<2and<3and<5and<8and<15and<28and<52and<121and<6and<7and<114and<100and<60and<108

Full Chart Symbology:		
	3112 black thin solid line	
Simplified Symbology:		
	0600 black very thin solid line	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - government****bfc=2or3or5or8or28or52or121****Full Chart Symbology:**

3104 red solid line

Simplified Symbology:

0600 black very thin solid line

building - hospital**bfc=6or100****Full Chart Symbology:**

3153 beige-rose thin solid line

Simplified Symbology:

0600 black very thin solid line

building - house of worship**bfc=7or114****Full Chart Symbology:**

3001 lt beige thin solid line

Simplified Symbology:

0600 black very thin solid line

building - school**bfc=15or60or108****Full Chart Symbology:**

1406 brown thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**building - castle****bfc=4****Full Chart Symbology:**

2043 black four black squares w/ connection

Simplified Symbology:

0038 lt brown filled square w/ black outline

building - generic (industry)**bfc=1or21or22or23or24or25or26or27or29or30or40
or54or59or71or72or73or74or75or76****Full Chart Symbology:**

2036 black sm filled square

Simplified Symbology:

0038 lt brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology	Line Symbology	Area Symbology
AL015		AL015
building - generic (industry)		bfc=81or83or84or85or86or89or90or94or102or104or110or112or113or116or120or124or125
Full Chart Symbology: 2036 black sm filled square		
Simplified Symbology: 0038 lt brown filled square w/ black outline		
building - generic (population)		bfc=0or9or10or11or16or17or18or19or20or33or34or36or39or51or53or55or56or57or58
Full Chart Symbology: 2036 black sm filled square		
Simplified Symbology: 0038 lt brown filled square w/ black outline		
building - generic (population)		bfc=63or69or70or87or88or91or92or93or95or97or98or99or103or105or106or107or109or111or115or117or118or122or126or127or128or999
Full Chart Symbology: 2036 black sm filled square		
Simplified Symbology: 0038 lt brown filled square w/ black outline		
building - government		bfc=2or3or5or8or12or13or14or28or31or35or37or38or52or61or62or64or65or66or67or77or78or79or80or96or101or119or121or123or723
Full Chart Symbology: 1001 red filled square black outline		
Simplified Symbology: 1001 red filled square black outline		
building - hospital		bfc=6or100
Full Chart Symbology: 1002 black filled cir w/ white cross inside		
Simplified Symbology: 1002 black filled cir w/ white cross inside		
building - house of worship - church		bfc=7or114 AND hwt=0or2or3or4or7or23 OR bfc=50
Full Chart Symbology: 2045 black filled square w/ cross on top		
Simplified Symbology: 1003 black cross		

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - house of worship - mosque****bfc=7or114 AND hwt=5or6or9****Full Chart Symbology:**

6035 black mosque w/ filled square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - pagoda**bfc=7or114 AND hwt=11****Full Chart Symbology:**

6033 black pagoda w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - stupa**bfc=7or114 AND hwt=21****Full Chart Symbology:**

2048 black pinwheel

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - synagogue**bfc=7or114 AND hwt=20****Full Chart Symbology:**

2047 black filled square w/ T on top

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - temple**bfc=7or114 AND hwt=14or15or16****Full Chart Symbology:**

6034 black temple w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - lighthouse**bfc=82****Full Chart Symbology:**

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

building - school, college, seminary**bfc=15or60or108****Full Chart Symbology:**

2042 black filled square w/ flag on top

Simplified Symbology:

0038 It brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL020**AL020**

Area

built-up area dense**bac=2****Full Chart Symbology:**

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

built-up area sparse**bac=0or1****Full Chart Symbology:**

4002 lt beige solid fill

Simplified Symbology:

4002 lt beige solid fill

AL030**AL030**

Area

cemetery**Full Chart Symbology:**

3117 black thin dash line

6006 black cemetery patt fill

Simplified Symbology:

3117 black thin dash line

Point

cemetery**Full Chart Symbology:**

6018 black "L" with dashed outline

Simplified Symbology:

0185 black topmark special X

AL045**AL045**

Area

complex outline**Full Chart Symbology:**

0684 red thin solid line

Simplified Symbology:

0684 red thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL070**AL070****Line****fence****Full Chart Symbology:**

3148 black very thin patt line -x -x -x

Simplified Symbology:

0600 black very thin solid line

AL100**AL100****Point****hut****Full Chart Symbology:**

2058 gray filled square

Simplified Symbology:

2058 gray filled square

AL120**AL120****Area****missile site****Full Chart Symbology:**

3061 magenta thin dotted line

Simplified Symbology:

3061 magenta thin dotted line

Line**missile site****Full Chart Symbology:**

3061 magenta thin dotted line

Simplified Symbology:

3061 magenta thin dotted line

Point**missile site****Full Chart Symbology:**

1004 black pencil shape symbol

Simplified Symbology:

1004 black pencil shape symbol

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL130**AL130****Area****monument****Full Chart Symbology:**

0600 black very thin solid line

4175 lt orange solid fill

Simplified Symbology:

0600 black very thin solid line

Point**monument****Full Chart Symbology:**

2063 black monument symbol

Simplified Symbology:

6048 gray filled circle

AL135**AL135****Area****native settlement****Full Chart Symbology:**

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Point**native settlement****Full Chart Symbology:**

2060 black square w/ S inside

Simplified Symbology:

2060 black square w/ S inside

AL140**AL140****Area****particle accelerator****Full Chart Symbology:**

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL170**AL170****Area****plaza/city square****Full Chart Symbology:**

0604 feature brown very thin solid line

4002 lt beige solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4002 lt beige solid fill

AL200**AL200****Area****ruins****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point**ruins****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

2036 black sm filled square

AL240**AL240****Point****tower (non-communication)****Full Chart Symbology:**

2071 black dot inside cir

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AL250**AL250**

Area

underground dwelling

Full Chart Symbology:

3117 black thin dash line

4100 lt gray solid fill

Simplified Symbology:

3117 black thin dash line

Point

underground dwelling

Full Chart Symbology:

2072 gray shadowed square

Simplified Symbology:

2072 gray shadowed square

AL260**AL260**

Line

wall

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

AM010**AM010**

Area

depot (storage)

Full Chart Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

depot (storage)

Full Chart Symbology:

2073 black square w/ diag line inside

Simplified Symbology:

2036 black sm filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AM020**AM020****Area****grain bin/silo****Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point**grain bin/silo****Full Chart Symbology:**

2074 brown cir

Simplified Symbology:

2074 brown cir

AM030**AM030****Area****grain elevator****Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point**grain elevator****Full Chart Symbology:**

0004 black tower symbol

Simplified Symbology:

2019 black sm filled cir

AM040**AM040****Area****mineral pile****Full Chart Symbology:**

0600 black very thin solid line

4123 depth gray stiple patt fill

Simplified Symbology:

0600 black very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AM060**AM060****Area****storage bunker/storage mound****Full Chart Symbology:**

0600 black very thin solid line

4109 depth gray solid fill

Simplified Symbology:

0600 black very thin solid line

4109 depth gray solid fill

Point**storage bunker/storage mound****Full Chart Symbology:**

2076 red brown filled semicircle

Simplified Symbology:

2076 red brown filled semicircle

AM070**AM070****Area****tank****Full Chart Symbology:**

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Point**tank****Full Chart Symbology:**

2019 black sm filled cir

Simplified Symbology:

2019 black sm filled cir

MIL-DTL-89045A w/Amendment 1
APPENDIX E

UVMap

Point Symbology

Line Symbology

Area Symbology

AM080

AM080

Area

water tower

Full Chart Symbology:

6007 midnight blue solid fill

Simplified Symbology:

6007 midnight blue solid fill

Point

water tower

Full Chart Symbology:

2078 basic blue dot inside cir

Simplified Symbology:

2078 basic blue dot inside cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AN010

AN010

Line

railroad -dismantled **exs=8**

Full Chart Symbology:	3114 black very thin short dash line
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Simplified Symbology:	3114 black very thin short dash line
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railroad -not operational/narrow/multiple **exs=5or6or7 AND ltn>1 AND rgc=2**

Full Chart Symbology:	3137 black dash line w/ double tics alt sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/narrow/single **exs=5or6or7 AND ltn<2 AND rgc=2**

Full Chart Symbology:	3135 black dash line w/ single tics alt sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/normal/multiple **exs=5or6or7 AND ltn>1 AND rgc<>2**

Full Chart Symbology:	3133 black dash line w/ double tics both sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/normal/single **exs=5or6or7 AND ltn<2 AND rgc<>2**

Full Chart Symbology:	3131 black dash line w/ single tics both sides
------------------------------	--

Simplified Symbology:	3117 black thin dash line
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railroad -operational/narrow/multiple **exs=0or28 AND ltn>1 AND rgc=2**

Full Chart Symbology:	3129 black solid line w/ double tics alt sides
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Simplified Symbology:	3112 black thin solid line
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railroad -operational/narrow/single **exs=0or28 AND ltn<2 AND rgc=2**

Full Chart Symbology:	3125 black solid line w/ single tics alt sides
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Simplified Symbology:	3112 black thin solid line
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**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AN010**AN010****railroad -operational/normal/multiple****exs=0or28 AND ltn>1 AND rgc<>2**

Full Chart Symbology:

3127 black solid line w/ double tics both sides

Simplified Symbology:

3112 black thin solid line

railroad -operational/normal/single**exs=0or28 AND ltn<2 AND rgc<>2**

Full Chart Symbology:

3123 black solid line w/ single tics both sides

Simplified Symbology:

3112 black thin solid line

AN050**AN050****Line****railroad siding/railroad spur - non-operational/narrow****exs<>0and<>28 AND rgc=2**

Full Chart Symbology:

3135 black dash line w/ single tics alt sides

Simplified Symbology:

3116 black very thin dash line

railroad siding/railroad spur - non-operational/normal**exs<>0and<>28 AND rgc<>2**

Full Chart Symbology:

3131 black dash line w/ single tics both sides

Simplified Symbology:

3116 black very thin dash line

railroad siding/railroad spur - operational/narrow**exs=0or28 AND rgc=2**

Full Chart Symbology:

3125 black solid line w/ single tics alt sides

Simplified Symbology:

0600 black very thin solid line

railroad siding/railroad spur - operational/normal**exs=0or28 AND rgc<>2**

Full Chart Symbology:

3123 black solid line w/ single tics both sides

Simplified Symbology:

0600 black very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AN060**AN060****Area****railroad yard/marshaling yard****Full Chart Symbology:**

0600 black very thin solid line

0802 gray solid fill

Simplified Symbology:

0600 black very thin solid line

0802 gray solid fill

AN075**AN075****Area****railroad turntable****Full Chart Symbology:**

0600 black very thin solid line

4167 black cross hatch patt fill

Simplified Symbology:

4156 black solid fill

AP010**AP010****Line****cart track****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AP020**AP020****Area****interchange****Full Chart Symbology:**

0600 black very thin solid line

4018 lt tan solid fill

Simplified Symbology:

0600 black very thin solid line

4018 lt tan solid fill

Line**interchange****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

0600 black very thin solid line

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AP030**AP030**

Area

road - all weather no median **med<>1 AND wtc<>2**

Full Chart Symbology:	0600 black very thin solid line	1906 It red brown solid fill
Simplified Symbology:	0600 black very thin solid line	1906 It red brown solid fill

road - divided w/median **med=1**

Full Chart Symbology:	0600 black very thin solid line	4036 red brown solid fill
Simplified Symbology:	0600 black very thin solid line	4036 red brown solid fill

road - fair/dry weather no median **med<>1 AND wtc=2**

Full Chart Symbology:	0600 black very thin solid line
Simplified Symbology:	0600 black very thin solid line

Line

road - all weather, hard surface, no median, 1 ln **ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:	6023 100% red brown thin line
Simplified Symbology:	1855 red brown thin solid line

road - all weather, hard surface, no median, 2-3 Ins **ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:	6024 100% red brown line
Simplified Symbology:	1855 red brown thin solid line

road - all weather, hard surface, no median, 4 Ins **ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:	6022 100% red brown thick line w/ gray dash
Simplified Symbology:	1855 red brown thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****road - all weather, loose surface, no median****med<>1 AND rst=2or3 AND wtc<>2****Full Chart Symbology:**

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median**med=1****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median**med<>1 AND wtc=2****Full Chart Symbology:**

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

AP040**AP040****Point****gate****Full Chart Symbology:**

2038 black dot w/ parallel lines inside circle

Simplified Symbology:

0078 black sm cir

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

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UVMap

Point Symbology

Line Symbology

Area Symbology

AQ010**AQ010****Line****aerial cableway lines/ski lift lines****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

AQ040**AQ040****Area****bridge/overpass/viaduct****Full Chart Symbology:**

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Line**bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ060**AQ060****Point****control tower****Full Chart Symbology:**

2088 purple dot inside cir

Simplified Symbology:

2088 purple dot inside cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

AQ065**AQ065****Area****culvert****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Line**culvert****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

AQ090**AQ090****Point****entrance/exit****Full Chart Symbology:**

2038 black dot w/ parallel lines inside circle

Simplified Symbology:

0078 black sm cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

AQ110**AQ110****Point****mooring mast****Full Chart Symbology:**

2094 purple solid ellipse extending from pole

Simplified Symbology:

6049 purple filled circle

AQ113**AQ113****Line****pipeline - abandoned/under construction - water****exs=5or6 AND pro=116****Full Chart Symbology:**

4316 100% cyan blue very thin long dash line

Simplified Symbology:

4311 100% cyan blue very thin solid line

pipeline - on ground/elevated - not water**loc=0or8or25 AND pro<>116****Full Chart Symbology:**

1314 black very thin solid line

Simplified Symbology:

1314 black very thin solid line

pipeline - on ground/elevated - water**exs<>5and<>6 AND loc=0or8or25 AND pro=116****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

pipeline - underground - not water**loc=4 AND pro<>116****Full Chart Symbology:**

6040 black very thin long dash line

Simplified Symbology:

6040 black very thin long dash line

pipeline - underground - water**exs<>5and<>6 AND loc=4 AND pro=116****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

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UVMap

Point Symbology

Line Symbology

Area Symbology

AQ116**AQ116**

Area

pumping station

Full Chart Symbology:

4262 purple thin dash line

Simplified Symbology:

4262 purple thin dash line

Point

pumping station

Full Chart Symbology:

2097 black sm square w/ "P" inside

Simplified Symbology:

2036 black sm filled square

AQ125**AQ125**

Area

station (miscellaneous)

Full Chart Symbology:

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

Point

station (miscellaneous)

Full Chart Symbology:

2099 black dot inside cir inside square

Simplified Symbology:

2099 black dot inside cir inside square

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130**

Area

tunnel

Full Chart Symbology:

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

Line

tunnel

Full Chart Symbology:

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AQ140**AQ140**

Area

vehicle storage/parking area

Full Chart Symbology:

0600 black very thin solid line

6008 orange left diag line patt fill

Simplified Symbology:

0600 black very thin solid line

4175 lt orange solid fill

AQ150**AQ150**

Area

flight of steps

Full Chart Symbology:

0600 black very thin solid line

1904 golden yellow solid fill

Simplified Symbology:

0600 black very thin solid line

1904 golden yellow solid fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

AT010**AT010****Area****disk/dish****Full Chart Symbology:**

0600 black very thin solid line

4089 aero-blue solid fill

Simplified Symbology:

0600 black very thin solid line

4089 aero-blue solid fill

Point**disk/dish****Full Chart Symbology:**

2102 black satellite dish symbol

Simplified Symbology:

0185 black topmark special X

AT020**AT020****Area****early warning radar site****Full Chart Symbology:**

1513 beige jagged line

Simplified Symbology:

4236 beige solid line

Line**early warning radar site****Full Chart Symbology:**

1513 beige jagged line

Simplified Symbology:

4236 beige solid line

Point**early warning radar site****Full Chart Symbology:**

2105 black cir around satellite dish symbol

Simplified Symbology:

0022 black cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

AT030**AT030****Line****power transmission line****Full Chart Symbology:**

3074 purple thin solid line w/ dots on each side

Simplified Symbology:

4262 purple thin dash line

AT040**AT040****Point****power transmission pylon****Full Chart Symbology:**

2104 purple tower symbol

Simplified Symbology:

6049 purple filled circle

AT045**AT045****Area****radar transmitter****Full Chart Symbology:**

1513 beige jagged line

Simplified Symbology:

4236 beige solid line

Line**radar transmitter****Full Chart Symbology:**

1513 beige jagged line

Simplified Symbology:

4236 beige solid line

Point**radar transmitter****Full Chart Symbology:**

2105 black cir around satellite dish symbol

Simplified Symbology:

0022 black cir

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APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

AT050**AT050****Area****communication building****Full Chart Symbology:**

4003 beige solid fill

Simplified Symbology:

4003 beige solid fill

Point**communication building****Full Chart Symbology:**

2106 black filled square w/ outward ticks

Simplified Symbology:

2036 black sm filled square

AT060**AT060****Line****telephone line/telegraph line****Full Chart Symbology:**

3096 gray very thin dash line w/ dot

Simplified Symbology:

3086 gray very thin short dash line

AT070**AT070****Point****telephone-telegraph pylon/pole****Full Chart Symbology:**

2107 black vert line w/ two horiz lines at top

Simplified Symbology:

0185 black topmark special X

AT080**AT080****Point****communication tower****Full Chart Symbology:**

6019 black tower with "x" inside

Simplified Symbology:

0185 black topmark special X

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

BA010**BA010****Line****coastline/shoreline - mangrove, marsh****slt=6or8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

coastline/shoreline - not mangrove or marsh**slt<>6and<>8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA020**BA020****Area****foreshore****Full Chart Symbology:**

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

BA030**BA030****Area****island****Full Chart Symbology:**

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

BA040**BA040****Area****water (except inland)****Full Chart Symbology:**

0805 depth white fill

Simplified Symbology:

0805 depth white fill

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

BA050**BA050**

Area

beach

Full Chart Symbology:

4220 beige thin solid line

4005 beige stipple dot patt fill

Simplified Symbology:

4003 beige solid fill

BB040**BB040**

Area

breakwater/groyne

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line

breakwater/groyne

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB090**BB090**

Area

drydock

Full Chart Symbology:

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

BB140**BB140**

Area

jetty

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line

jetty

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB190**BB190**

Area

pier/wharf/quay

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line

pier/wharf/quay

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB230**BB230**

Line

seawall

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

BB240**BB240**

Line

slipway/patent slip

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BC050**BC050**

Point

lighthouse

Full Chart Symbology:

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

BG010**BG010**

Point

current flow

Full Chart Symbology:

1006 basic blue line w/ arrow

Simplified Symbology:

1006 basic blue line w/ arrow

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APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

BH010**BH010**

Line

aqueduct - adandoned/under construction **atc<>1and<>3 AND exs=5or6**

Full Chart Symbology:	4316 100% cyan blue very thin long dash line
Simplified Symbology:	4316 100% cyan blue very thin long dash line

aqueduct - kanat **atc=1**

Full Chart Symbology:	6038 100% cyan blue vy thin lng dsh line w/open cir
Simplified Symbology:	6037 100% cyan blue very thin short dash line

aqueduct - surface/elevated **atc<>1and<>3 AND exs<>5and<>6 AND
loc=0or8or25**

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

aqueduct - underground **atc<>1and<>3 AND exs<>5and<>6 AND loc=4 OR
atc=3**

Full Chart Symbology:	6037 100% cyan blue very thin short dash line
Simplified Symbology:	6037 100% cyan blue very thin short dash line

Point

aqueduct

Full Chart Symbology:	1007 basic blue cir
Simplified Symbology:	1007 basic blue cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

BH015**BH015**

Area

bog

Full Chart Symbology:

6009 lt blue marsh/swamp patt fill

Simplified Symbology:

0810 depth med blue solid fill

BH020**BH020**

Area

canal - navigable; perennial

exs=32 AND hyc=8

Full Chart Symbology:

1656 100% cyan blue very thin solid line

0820 depth pale blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

0820 depth pale blue solid fill

canal - not navigable or not perennial

exs<>32 OR hyc<>8

Full Chart Symbology:

4182 100% cyan blue very thin short dash line

0820 depth pale blue solid fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line

0820 depth pale blue solid fill

Line

canal - not perennial

hyc<>8

Full Chart Symbology:

3167 100% cyan blue thin short dash line

Simplified Symbology:

3108 100% cyan blue thin solid line

canal - perennial

hyc=8

Full Chart Symbology:

3108 100% cyan blue thin solid line

Simplified Symbology:

3108 100% cyan blue thin solid line

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UVMMap

Point Symbology

Line Symbology

Area Symbology

BH030**BH030****Area****ditch****Full Chart Symbology:**

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Line**ditch - intermittent****hyc=6****Full Chart Symbology:**

0669 depth med blue very thin dash line

Simplified Symbology:

0621 depth med blue very thin solid line

ditch - perennial, unknown**hyc=0or8****Full Chart Symbology:**

0621 depth med blue very thin solid line

Simplified Symbology:

0621 depth med blue very thin solid line

BH040**BH040****Area****filtration beds/aeration beds****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

BH050**BH050****Area****fish hatchery/fish farm/marine farm****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

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APPENDIX E**

UVMMap

Point Symbology

Line Symbology

Area Symbology

BH060**BH060**

Line

flume

Full Chart Symbology:

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

BH070**BH070**

Line

ford

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point

ford

Full Chart Symbology:

2087 black opposing solid triangles pnting in

Simplified Symbology:

6048 gray filled circle

BH075**BH075**

Area

fountain

Full Chart Symbology:

4266 basic blue very thin solid line

1609 basic blue diag grid patt fill

Simplified Symbology:

4266 basic blue very thin solid line

Point

fountain

Full Chart Symbology:2320 basic blue sm cir in cir w/4 squares
outside**Simplified Symbology:**

1009 UI very dk blue filled diamond

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

BH077**BH077**

Area

hummock**Full Chart Symbology:**

1511 brown thin line outward ticks

Simplified Symbology:

3014 brown solid line

BH080**BH080**

Area

lake/pond - dry, intermittent**hyc=3or6****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH090**BH090**

Area

land subject to inundation - controlled**hoc=1****Full Chart Symbology:**

1655 basic blue thin dash line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

land subject to inundation - natural**hoc=0or5****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

BH095**BH095**

Area

marsh/swamp

Full Chart Symbology:	4080 basic blue marsh/swamp patt fill
Simplified Symbology:	6007 midnight blue solid fill

BH100**BH100**

Area

moat - dry

hyc=3

Full Chart Symbology:	0600 black very thin solid line	4003 beige solid fill
Simplified Symbology:	0600 black very thin solid line	4003 beige solid fill

moat - not dry

hyc<>3

Full Chart Symbology:	0600 black very thin solid line	4152 lt blue solid fill
Simplified Symbology:	0600 black very thin solid line	4152 lt blue solid fill

BH110**BH110**

Line

penstock - surface/elevated

loc=0or8or25

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

penstock - underground

loc=4

Full Chart Symbology:	6037 100% cyan blue very thin short dash line
Simplified Symbology:	4311 100% cyan blue very thin solid line

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UVMMap

Point Symbology

Line Symbology

Area Symbology

BH130**BH130**

Area

reservoir

Full Chart Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

BH140**BH140**

Area

river/stream - dry, intermittent

hyc=3or6

Full Chart Symbology:	4182 100% cyan blue very thin short dash line	4079 31% cyan blue stipple dot patt fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

river/stream - perennial, unknown

hyc=0or8

Full Chart Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	4154 31% cyan blue solid fill

Line

river/stream - dry, intermittent

hyc=3or6

Full Chart Symbology:	4182 100% cyan blue very thin short dash line
Simplified Symbology:	1656 100% cyan blue very thin solid line

river/stream - perennial, unknown

hyc=0or8

Full Chart Symbology:	1656 100% cyan blue very thin solid line
Simplified Symbology:	1656 100% cyan blue very thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

BH150**BH150**

Area

salt pan**Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 1611 depth med blue dot patt fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0810 depth med blue solid fill

BH155**BH155**

Area

salt evaporator**Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

BH160**BH160**

Area

sebkha**Full Chart Symbology:**

4289 basic blue stipple dot patt fill

Simplified Symbology:

4071 basic blue solid fill

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APPENDIX E

UVMMap

Point Symbology

Line Symbology

Area Symbology

BH165

BH165

Area

spillway

Full Chart Symbology:

3082 gray very thin solid line

4145 med blue lft diag dash line patt fill

Simplified Symbology:

3082 gray very thin solid line

Line

spillway

Full Chart Symbology:

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

Point

spillway

Full Chart Symbology:

2234 gray cir diagly half filled

Simplified Symbology:

2234 gray cir diagly half filled

BH170

BH170

Point

spring/water-hole - not perennial/dry

hyc<>0and<>8

Full Chart Symbology:

6031 basic blue open cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

spring/water-hole - perennial

hyc=0or8

Full Chart Symbology:

1008 basic blue filled cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

BH210**BH210****Line****inland shoreline - mangrove, marsh****slt=6or8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

**inland shoreline - unknown, rocky, rubble, sandy, stony,
other****slt=0or10or11or13or14or15****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BI010**BI010****Point****cistern****Full Chart Symbology:**

1010 basic blue solid square

Simplified Symbology:

1010 basic blue solid square

BI020**BI020****Area****dam/weir****Full Chart Symbology:**

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Line**dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

BI030**BI030****Area****lock****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

BI040**BI040****Line****sluice gate****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**sluice gate****Full Chart Symbology:**

2239 black open arrowhead

Simplified Symbology:

2239 black open arrowhead

BI050**BI050****Area****water intake tower****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**water intake tower****Full Chart Symbology:**

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

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UVMap

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****Line**

contour line (land) - depression index **hqc=5 AND mcc<>103**

Full Chart Symbology:

1307 It brown vy thin line w/ ticks on inside

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - index approximate **hqc=7 AND mcc<>103**

Full Chart Symbology:

4306 It brown very thin long dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - index **hqc=0or1 AND mcc<>103**

Full Chart Symbology:

6011 It brown very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate approximate **hqc=12 AND mcc<>103**

Full Chart Symbology:

4307 It brown very very thin long dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate depression **hqc=6 AND mcc<>103**

Full Chart Symbology:

4305 It brown very very thin line w/ tick marks

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate **hqc=2 AND mcc<>103**

Full Chart Symbology:

4304 It brown very very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - supplementary 1/2 **hqc=3 AND mcc<>103**

Full Chart Symbology:

1306 It brown very very thin dash line

Simplified Symbology:

6011 It brown very thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****contour line (land) - supplementary 1/4****hqc=14 AND mcc<>103****Full Chart Symbology:**

4308 It brown very very thin short dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (snow\ice) - index approximate**hqc=7 AND mcc=103****Full Chart Symbology:**

4316 100% cyan blue very thin long dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - index depression**hqc=5 AND mcc=103****Full Chart Symbology:**

4314 100% cyan blue vy thin line w/ ticks on inside

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - index unknown**hqc=0or1 AND mcc=103****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate approximate**hqc=12 AND mcc=103****Full Chart Symbology:**

4317 100% cyan blue very very thin long dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate depression**hqc=6 AND mcc=103****Full Chart Symbology:**

4315 100% cyan blue very very thin line w/ ticks

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate**hqc=2 AND mcc=103****Full Chart Symbology:**

4312 100% cyan blue very very thin solid line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****contour line (snowice) - supplementary 1/2****hqc=3 AND mcc=103****Full Chart Symbology:**

4313 100% cyan blue very very thin dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snowice) - supplementary 1/4**hqc=14 AND mcc=103****Full Chart Symbology:**4318 100% cyan blue very very thin short
dash line**Simplified Symbology:**

4312 100% cyan blue very very thin solid line

CA030**CA030****Point****spot elevation - accurate****ela=1****Full Chart Symbology:**

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

spot elevation - not accurate**ela<>1****Full Chart Symbology:**

1011 black sm filled cir beside +-

Simplified Symbology:

1011 black sm filled cir beside +-

DA005**DA005****Area****asphalt lake****Full Chart Symbology:**

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

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UVMMap

Point Symbology

Line Symbology

Area Symbology

DA010**DA010**

Area

ground surface element - boulders, gravel, rock **mcc=8or46or84**

Full Chart Symbology:	0604 feature brown very thin solid line	4034 It brown heavy mixed stipple dot patt fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 It brown solid fill

ground surface element - lava **mcc=52**

Full Chart Symbology:	0612 It gray very thin solid line	4108 It gray land cover/ripple patt fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 It brown solid fill

ground surface element - not rock, not lava, not sand **mcc=<>8and<>46and<>52and<>84and<>88**

Full Chart Symbology:	0604 feature brown very thin solid line	0822 It brown solid fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 It brown solid fill

ground surface element - sand **mcc=88**

Full Chart Symbology:	4220 beige thin solid line	4005 beige stipple dot patt fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 It brown solid fill

DB010**DB010**

Line

bluff/cliff/escarpment

Full Chart Symbology:	6014 dk tan vy thin line w/ ticks
Simplified Symbology:	4217 dk tan very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

DB030**DB030**

Area

cave

Full Chart Symbology:

3117 black thin dash line

4249 black x patt fill

Simplified Symbology:

3117 black thin dash line

Point

cave

Full Chart Symbology:

2247 black diag line w/ "L" on top

Simplified Symbology:

2247 black diag line w/ "L" on top

DB070**DB070**

Line

cut

Full Chart Symbology:

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB090**DB090**

Area

embankment/fill

Full Chart Symbology:

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

Line

embankment/fill

Full Chart Symbology:

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

DB110

DB110

Line

fault

Full Chart Symbology:	3026 tan very thin solid line
Simplified Symbology:	3026 tan very thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

DB170**DB170**

Area

sand dune/sand hills - crescent

ssc=22

Full Chart Symbology:

4009 beige sand dune crescent

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - lateral

ssc=26

Full Chart Symbology:

4010 beige sand dune lateral

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - mounds

ssc=27

Full Chart Symbology:

4011 beige sand dune mound

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - ripple

ssc=28

Full Chart Symbology:

4012 beige sand dune ripple

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - star

ssc=29

Full Chart Symbology:

4013 beige sand dune star

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - transverse

ssc=30

Full Chart Symbology:

4014 beige sand dune transverse

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - unknown

ssc=0

Full Chart Symbology:

4008 beige sand dune default

Simplified Symbology:

1903 rose solid fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

DB200**DB200**

Area

gully/gorge

Full Chart Symbology:

4027 brown wide left diag patt fill

Simplified Symbology:

0804 brown solid fill

EA010**EA010**

Area

cropland - dry**veg=1**

Full Chart Symbology:

3026 tan very thin solid line

6001 tan dot patt fill

Simplified Symbology:

3026 tan very thin solid line

Full Chart Symbology:

4018 lt tan solid fill

Simplified Symbology:

4018 lt tan solid fill

cropland - other**veg=0or999**

Full Chart Symbology:

6012 pale green solid fill

Simplified Symbology:

6012 pale green solid fill

Full Chart Symbology:

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

cropland - rice paddies**veg=4**

Full Chart Symbology:

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

Full Chart Symbology:

6002 steel blue solid fill

Simplified Symbology:

6002 steel blue solid fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

EA020**EA020**

Line

hedgerow

Full Chart Symbology:

3036 yellow-green thin line w/rectangles one side

Simplified Symbology:

1412 yellow-green thin solid line

EA030**EA030**

Area

nursery

Full Chart Symbology:

1412 yellow-green thin solid line

4230 yellow-green squares in grid patt fill

Simplified Symbology:

1412 yellow-green thin solid line

0805 depth white fill

EA040**EA040**

Area

orchard/plantation

Full Chart Symbology:

4051 radar dk green squares in grid patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EA050**EA050**

Area

vineyards

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

**MIL-DTL-89045A w/Amendment 1
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UVMMap

Point Symbology

Line Symbology

Area Symbology

EA055**EA055**

Area

hops

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EB010**EB010**

Area

grassland

Full Chart Symbology:

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EB020**EB020**

Area

scrub/brush

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC010**EC010**

Area

bamboo/cane

Full Chart Symbology:

4052 yellow-green bamboo patt fill

Simplified Symbology:

0803 yellow-green solid fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

EC030**EC030**

Area

trees - deciduous, mixed, unknown**tre=0or1or3**

Full Chart Symbology:

1605 yellow-green tree-top patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

trees - evergreen**tre=2**

Full Chart Symbology:

1606 yellow-green triangle tree patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

EC040**EC040**

Line

cleared way/cut line/firebreak

Full Chart Symbology:

3076 lt gray thin solid line

Simplified Symbology:

3076 lt gray thin solid line

EE000**EE000**

Area

miscellaneous vegetation

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

0805 depth white fill

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UVMap

Point Symbology

Line Symbology

Area Symbology

FA000**FA000****Line****administrative boundary - city****use=16****Full Chart Symbology:**1312 black very thin sht dash very sht dash
line**Simplified Symbology:**

3120 black thin long dash line

administrative boundary - international**use=23****Full Chart Symbology:**

1310 black one long dash two short dash line

Simplified Symbology:

1310 black one long dash two short dash line

administrative boundary - primary, unknown, other**use=0or26or999****Full Chart Symbology:**

1311 black long dash short dash line

Simplified Symbology:

1311 black long dash short dash line

FA001**FA001****Area****administrative area****Full Chart Symbology:**

0633 lt gray thin dash line

Simplified Symbology:

0633 lt gray thin dash line

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UVMap

Point Symbology

Line Symbology

Area Symbology

FA015**FA015****Area****firing range/gunnery range****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Line**firing range/gunnery range****Full Chart Symbology:**

3054 lt magenta very thin short dash line

Simplified Symbology:

3054 lt magenta very thin short dash line

Point**firing range/gunnery range****Full Chart Symbology:**

2257 black square w/ F

Simplified Symbology:

2257 black square w/ F

FA020**FA020****Line****armistice line****Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA070**FA070****Area****demilitarized zone****Full Chart Symbology:**

3143 black double dash very thin lines

Simplified Symbology:

3119 black very thin long dash line

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APPENDIX E

UVMap

Point Symbology

Line Symbology

Area Symbology

GB005

GB005

Area

airport/airfield

Full Chart Symbology:

4183 aero-blue solid line

Simplified Symbology:

4183 aero-blue solid line

Point

airport/airfield - military; operational

exs=28 AND use=8or22

Full Chart Symbology:

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - non military; operational

exs=28 AND use<>8and<>22

Full Chart Symbology:

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

airport/airfield - not operational

exs<>28

Full Chart Symbology:

2268 lt gray airplane

Simplified Symbology:

2268 lt gray airplane

GB010

GB010

Point

airport lighting

Full Chart Symbology:

1012 aero-blue solid filled star

Simplified Symbology:

1012 aero-blue solid filled star

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APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

GB015**GB015**

Area

apron/hardstand

Full Chart Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 lt gray solid fill

GB030**GB030**

Area

helicopter landing pad

Full Chart Symbology:

3052 aero-blue very thin solid line

1612 aero-blue cross hatch patt fill

Simplified Symbology:

3052 aero-blue very thin solid line

Point

helicopter landing pad

Full Chart Symbology:

6032 aero-blue "H" inside aero-blue square

Simplified Symbology:

6032 aero-blue "H" inside aero-blue square

GB035**GB035**

Area

heliport

Full Chart Symbology:

4184 aero-blue very thin short dash line

Simplified Symbology:

4184 aero-blue very thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

UVMap

Point Symbology

Line Symbology

Area Symbology

GB045**GB045**

Area

overrun/stopway

Full Chart Symbology:

3073 aero-blue thin short dash line

4098 aero-blue wide rt diag line patt fill

Simplified Symbology:

3073 aero-blue thin short dash line

Line

overrun/stopway

Full Chart Symbology:

3073 aero-blue thin short dash line

Simplified Symbology:

3073 aero-blue thin short dash line

GB050**GB050**

Area

revetment (airfield)

Full Chart Symbology:

1512 aero-blue vy thin line double ticks

Simplified Symbology:

3070 aero-blue thin solid line

Line

revetment (airfield)

Full Chart Symbology:

1313 aero-blue line w/ squares

Simplified Symbology:

3070 aero-blue thin solid line

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UVMap

Point Symbology

Line Symbology

Area Symbology

GB055**GB055****Area****runway****Full Chart Symbology:**

4089 aero-blue solid fill

Simplified Symbology:

4089 aero-blue solid fill

Line**runway****Full Chart Symbology:**

3069 aero-blue very thin solid line

Simplified Symbology:

3069 aero-blue very thin solid line

GB075**GB075****Area****taxiway****Full Chart Symbology:**

3070 aero-blue thin solid line

Simplified Symbology:

3070 aero-blue thin solid line

Line**taxiway****Full Chart Symbology:**

3070 aero-blue thin solid line

Simplified Symbology:

3070 aero-blue thin solid line

ZB020**ZB020****Point****benchmark****Full Chart Symbology:**

2279 black triangle w/ dot inside

Simplified Symbology:

2279 black triangle w/ dot inside

MIL-DTL-89045A w/Amendment 1
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UVMap

Point Symbology

Line Symbology

Area Symbology

ZB035

ZB035

Point

control point/control station

Full Chart Symbology:

2279 black triangle w/ dot inside

Simplified Symbology:

2279 black triangle w/ dot inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AL020**AL020**

Area

built-up area

Full Chart Symbology:

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

AL060**AL060**

Area

dragon teeth

Full Chart Symbology:

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

Line

dragon teeth

Full Chart Symbology:

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

AL195**AL195**

Point

ramp

Full Chart Symbology:

2051 black ramp symbol

Simplified Symbology:

2051 black ramp symbol

AL260**AL260**

Line

wall

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AN010**AN010**

Line

railroad -dismantled **exs=8**

Full Chart Symbology:
3114 black very thin short dash line

Simplified Symbology:
3114 black very thin short dash line

railroad -not operational/narrow/multiple **exs=5 AND fco=2 AND rrc=4**

Full Chart Symbology:
3137 black dash line w/ double tics alt sides

Simplified Symbology:
3117 black thin dash line

railroad -not operational/narrow/single **exs=5 AND fco<>2 AND rrc=4**

Full Chart Symbology:
3135 black dash line w/ single tics alt sides

Simplified Symbology:
3117 black thin dash line

railroad -not operational/normal/multiple **exs=5 AND fco=2 AND rrc<>4**

Full Chart Symbology:
3133 black dash line w/ double tics both sides

Simplified Symbology:
3117 black thin dash line

railroad -not operational/normal/single **exs=5 AND fco<>2 AND rrc<>4**

Full Chart Symbology:
3131 black dash line w/ single tics both sides

Simplified Symbology:
3117 black thin dash line

railroad -operational/narrow/multiple **exs=0or1 AND fco=2 AND rrc=4**

Full Chart Symbology:
3129 black solid line w/ double tics alt sides

Simplified Symbology:
3112 black thin solid line

railroad -operational/narrow/single **exs=0or1 AND fco<>2 AND rrc=4**

Full Chart Symbology:
3125 black solid line w/ single tics alt sides

Simplified Symbology:
3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology	Line Symbology	Area Symbology
AN010		AN010
railroad -operational/normal/multiple		exs=0or1 AND fco=2 AND rrc<>4
Full Chart Symbology:	3127 black solid line w/ double tics both sides	
Simplified Symbology:	3112 black thin solid line	
railroad -operational/normal/single		exs=0or1 AND fco<>2 AND rrc<>4
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	3112 black thin solid line	
AN050		AN050
Line		
railroad siding/railroad spur - non-operational/narrow		exs=5 AND rrc=4
Full Chart Symbology:	3135 black dash line w/ single tics alt sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - non-operational/normal		exs=5 AND rrc<>4
Full Chart Symbology:	3131 black dash line w/ single tics both sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - operational/narrow		exs=0or1 AND rrc=4
Full Chart Symbology:	3125 black solid line w/ single tics alt sides	
Simplified Symbology:	0600 black very thin solid line	
railroad siding/railroad spur - operational/normal		exs=0or1 AND rrc<>4
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	0600 black very thin solid line	

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APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AN060**AN060**

Area

railroad yard/marshalling yard

Full Chart Symbology:	0600 black very thin solid line	0802 gray solid fill
Simplified Symbology:	0600 black very thin solid line	0802 gray solid fill

Line

railroad yard/marshalling yard

Full Chart Symbology:	3123 black solid line w/ single tics both sides
Simplified Symbology:	3121 black long dash line

AP010**AP010**

Line

cart track

Full Chart Symbology:	3116 black very thin dash line
Simplified Symbology:	3116 black very thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****Line**

road - all weather, hard surface, no median **fco=0or7 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, loose surface, no median **fco=0or7 AND rst=2 AND wtc<>2**

Full Chart Symbology:

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median **fco=5or6**

Full Chart Symbology:

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median **fco=0or7 AND wtc=2**

Full Chart Symbology:

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

AQ040**AQ040****Line**

bridge/overpass/viaduct

Full Chart Symbology:

3113 black solid line

Simplified Symbology:

3113 black solid line

Point

bridge/overpass/viaduct

Full Chart Symbology:

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AQ045**AQ045****Point****bridge span****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ058**AQ058****Point****constriction/expansion****wd1<40****Full Chart Symbology:**

2087 black opposing solid triangles pnting in

Simplified Symbology:

1171 black opposing open equi triangles

constriction/expansion**wd1=40****Full Chart Symbology:**

1171 black opposing open equi triangles

Simplified Symbology:

1171 black opposing open equi triangles

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AQ111**AQ111****Line****prepared raft or float bridge site****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**prepared raft or float bridge site****Full Chart Symbology:**

1171 black opposing open equi triangles

Simplified Symbology:

1171 black opposing open equi triangles

AQ113**AQ113****Line****pipeline/pipe****Full Chart Symbology:**

1314 black very thin solid line

Simplified Symbology:

1314 black very thin solid line

AQ118**AQ118****Point****sharp curve(s)****Full Chart Symbology:**

1172 black diamond w/ curve staffed arrow

Simplified Symbology:

1172 black diamond w/ curve staffed arrow

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130**

Line

tunnel

Full Chart Symbology:

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point

tunnel

Full Chart Symbology:

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2100 black box w/ round top w/ "T" inside

BA030**BA030**

Area

island

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

BH020**BH020****Area****canal - not perennial****hyc<>8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 0820 depth pale blue solid fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0820 depth pale blue solid fill

canal - perennial**hyc=8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0820 depth pale blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0820 depth pale blue solid fill

Line**canal****Full Chart Symbology:**

3108 100% cyan blue thin solid line

Simplified Symbology:

3108 100% cyan blue thin solid line

BH070**BH070****Line****ford****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point**ford****Full Chart Symbology:**

2087 black opposing solid triangles pnting in

Simplified Symbology:

6048 gray filled circle

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

BH090**BH090**

Area

land subject to inundation

Full Chart Symbology:	4266 basic blue very thin solid line	4078 basic blue inundation area patt fill
Simplified Symbology:	4266 basic blue very thin solid line	4301 reserved very dk blue solid fill

BH095**BH095**

Area

marsh/swamp

Full Chart Symbology:		4080 basic blue marsh/swamp patt fill
Simplified Symbology:		6007 midnight blue solid fill

BH100**BH100**

Line

moat

Full Chart Symbology:	3142 black parallel vy thin lines w/ tics (ladder patt)	
Simplified Symbology:	3112 black thin solid line	

BH135**BH135**

Area

rice field

Full Chart Symbology:		4085 basic blue rice patt fill
Simplified Symbology:		6002 steel blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

BH140**BH140****Area****river/stream - dry, intermittent****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

river/stream - perennial, braided, unknown**hyc=0or8or14****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Line**river/stream - dry, intermittent****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

river/stream - perennial, braided, unknownn**hyc=0or8or14****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BI020**BI020****Line****dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**dam/weir****Full Chart Symbology:**

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

BI030**BI030****Line****lock****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**lock****Full Chart Symbology:**

6047 black open double arrowhead

Simplified Symbology:

6047 black open double arrowhead

DA010**DA010****Area****ground surface element - gravels****stp=1or2or3or4****Full Chart Symbology:**

0604 feature brown very thin solid line

4034 lt brown heavy mixed stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - sands**stp=5or6or7or8or9****Full Chart Symbology:**

4220 beige thin solid line

4005 beige stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - silts, clays, evaporites, other**stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9****Full Chart Symbology:**

0604 feature brown very thin solid line

0822 lt brown solid fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

DA020**DA020**

Area

barren ground

Full Chart Symbology:

4201 depth gray thin dash line

Simplified Symbology:

4201 depth gray thin dash line

DB010**DB010**

Line

bluff/cliff/escarpment

Full Chart Symbology:

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB070**DB070**

Line

cut

Full Chart Symbology:

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB080**DB080**

Area

depression

Full Chart Symbology:

1509 black thin solid line ticks on inside

Simplified Symbology:

0600 black very thin solid line

DB090**DB090**

Line

embankment/fill

Full Chart Symbology:

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

DB190**DB190**

Line

volcanic dike

Full Chart Symbology:

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

DB200**DB200**

Area

gully/gorge

Full Chart Symbology:

4027 brown wide left diag patt fill

Simplified Symbology:

0804 brown solid fill

Line

gully/gorge

Full Chart Symbology:

1406 brown thin solid line

Simplified Symbology:

1406 brown thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

EA010**EA010****Area****cropland - dry****veg=1****Full Chart Symbology:**

3026 tan very thin solid line

6001 tan dot patt fill

Simplified Symbology:

3026 tan very thin solid line

Full Chart Symbology:

4018 lt tan solid fill

Simplified Symbology:

4018 lt tan solid fill

cropland - other**veg<>1****Full Chart Symbology:**

6012 pale green solid fill

Simplified Symbology:

6012 pale green solid fill

Full Chart Symbology:

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

EA020**EA020****Line****hedgerow****Full Chart Symbology:**

3036 yellow-green thin line w/rectangles one side

Simplified Symbology:

1412 yellow-green thin solid line

EA040**EA040****Area****orchard/plantation****Full Chart Symbology:**

4051 radar dk green squares in grid patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

EA050**EA050**

Area

vineyards

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EB010**EB010**

Area

grassland

Full Chart Symbology:

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EB020**EB020**

Area

scrub/brush

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC010**EC010**

Area

bamboo/cane

Full Chart Symbology:

4052 yellow-green bamboo patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

EC030**EC030****Area****trees - evergreen****veg=25****Full Chart Symbology:**

1606 yellow-green triangle tree patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

trees - forest clearing**veg=52****Full Chart Symbology:**

0822 lt brown solid fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

trees - unknown, deciduous, mixed**veg=0or24or50****Full Chart Symbology:**

1605 yellow-green tree-top patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

GB055**GB055****Area****runway****Full Chart Symbology:**

4089 aero-blue solid fill

Simplified Symbology:

4089 aero-blue solid fill

Line**runway****Full Chart Symbology:**

3069 aero-blue very thin solid line

Simplified Symbology:

3069 aero-blue very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

SA010**SA010**

Area

common open water

Full Chart Symbology:

4265 basic blue thin solid line

Simplified Symbology:

4265 basic blue thin solid line

SA020**SA020**

Area

disturbed soil

Full Chart Symbology:

4203 depth gray line w/ two dashes

Simplified Symbology:

4201 depth gray thin dash line

SA030**SA030**

Area

exposed bedrock

Full Chart Symbology:

4202 depth gray thin dotted line

Simplified Symbology:

4202 depth gray thin dotted line

SA040**SA040**

Area

permanent snowfield

Full Chart Symbology:

1655 basic blue thin dash line

Simplified Symbology:

1655 basic blue thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology

Line Symbology

Area Symbology

SA050**SA050**

Area

slope polygon - % unknown **gsc=0**

Full Chart Symbology:

1905 basic white solid fill

Simplified Symbology:

1905 basic white solid fill

slope polygon - <= 3% **gsc=2**

Full Chart Symbology:

4002 lt beige solid fill

Simplified Symbology:

4002 lt beige solid fill

slope polygon - > 10% and <= 20% **gsc=4**

Full Chart Symbology:

1901 UI lt brown solid fill

Simplified Symbology:

1901 UI lt brown solid fill

slope polygon - > 20% and <= 30% **gsc=5**

Full Chart Symbology:

1903 rose solid fill

Simplified Symbology:

1903 rose solid fill

slope polygon - > 3% and <= 10% **gsc=3**

Full Chart Symbology:

4003 beige solid fill

Simplified Symbology:

4003 beige solid fill

slope polygon - > 30% and <= 45% **gsc=6**

Full Chart Symbology:

1904 golden yellow solid fill

Simplified Symbology:

1904 golden yellow solid fill

slope polygon - > 45% **gsc=7**

Full Chart Symbology:

4175 lt orange solid fill

Simplified Symbology:

4175 lt orange solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VITD

Point Symbology	Line Symbology	Area Symbology
SA050		SA050
slope polygon - 0 to >45%, dissected		gsc=1
Full Chart Symbology:		0803 yellow-green solid fill
Simplified Symbology:		0803 yellow-green solid fill
SA060		SA060

Line

covered drainage

Full Chart Symbology:	3117 black thin dash line
Simplified Symbology:	3117 black thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AA010**AA010****Area****mine/quarry****Full Chart Symbology:**

2001 black pick & hammer

3116 black very thin dash line

Simplified Symbology:

2001 black pick & hammer

3116 black very thin dash line

Point**mine/quarry****Full Chart Symbology:**

2001 black pick & hammer

Simplified Symbology:

2001 black pick & hammer

AA050**AA050****Point****well****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

AA052**AA052****Area****oil/gas field****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**oil/gas field****Full Chart Symbology:**

2002 black tower

Simplified Symbology:

0078 black sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AC000**AC000****Point****processing plant/treatment plant****Full Chart Symbology:**

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2019 black sm filled cir

AC040**AC040****Point****oil/gas facilities****Full Chart Symbology:**

2002 black tower

Simplified Symbology:

2019 black sm filled cir

AD010**AD010****Point****power plant****Full Chart Symbology:**

2009 black square w/ zap inside

Simplified Symbology:

2019 black sm filled cir

AD030**AD030****Point****substation/transformer yard****Full Chart Symbology:**

2011 black open sq w/ dot inside w/ zap on top

Simplified Symbology:

2019 black sm filled cir

AI030**AI030****Point****camp****Full Chart Symbology:**

2026 black tent

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AK040**AK040****Area****athletic field****Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK130**AK130****Area****race track****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AK160**AK160****Point****stadium/amphitheater****Full Chart Symbology:**

2035 black dot inside cir

Simplified Symbology:

6048 gray filled circle

AL015**AL015****Point****building****Full Chart Symbology:**

2036 black sm filled square

Simplified Symbology:

2036 black sm filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AL020**AL020****Area****built-up area****Full Chart Symbology:**

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

Point**built-up area****Full Chart Symbology:**

2053 black sm open square w/ dot in center

Simplified Symbology:

2053 black sm open square w/ dot in center

AL025**AL025****Point****cairn****Full Chart Symbology:**

0017 black three stacked sm circs

Simplified Symbology:

0078 black sm cir

AL105**AL105****Point****settlement****Full Chart Symbology:**

2053 black sm open square w/ dot in center

Simplified Symbology:

2053 black sm open square w/ dot in center

AL130**AL130****Point****monument****Full Chart Symbology:**

2063 black monument symbol

Simplified Symbology:

6048 gray filled circle

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AL135**AL135**

Area

native settlement

Full Chart Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

Point

native settlement

Full Chart Symbology:

2053 black sm open square w/ dot in center

Simplified Symbology:

2053 black sm open square w/ dot in center

AL200**AL200**

Point

ruins

Full Chart Symbology:

2036 black sm filled square

Simplified Symbology:

2036 black sm filled square

AL210**AL210**

Line

snow shed/rock shed

Full Chart Symbology:

3146 black solid triangle line patt

Simplified Symbology:

3112 black thin solid line

Point

snow shed/rock shed

Full Chart Symbology:

2070 black diag bands in rectangle

Simplified Symbology:

0078 black sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AL240**AL240****Point****tower (non-communication)****Full Chart Symbology:**

2071 black dot inside cir

Simplified Symbology:

2019 black sm filled cir

AL260**AL260****Line****wall****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**wall****Full Chart Symbology:**

2323 black dot

Simplified Symbology:

2323 black dot

AM010**AM010****Point****depot (storage)****Full Chart Symbology:**

2073 black square w/ diag line inside

Simplified Symbology:

2036 black sm filled square

AM070**AM070****Point****tank****Full Chart Symbology:**

2019 black sm filled cir

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AM080**AM080****Point****water tower****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

AN010**AN010****Line****railroad -not operational/normal/multiple****exs<>28 AND fco<>0and<>3****Full Chart Symbology:**

3133 black dash line w/ double tics both sides

Simplified Symbology:

3120 black thin long dash line

railroad -not operational/normal/single**exs<>28 AND fco=0or3****Full Chart Symbology:**

3131 black dash line w/ single tics both sides

Simplified Symbology:

3120 black thin long dash line

railroad -operational/normal/multiple**exs=28 AND fco<>0and<>3****Full Chart Symbology:**

3127 black solid line w/ double tics both sides

Simplified Symbology:

3113 black solid line

railroad -operational/normal/single**exs=28 AND fco=0or3****Full Chart Symbology:**

3123 black solid line w/ single tics both sides

Simplified Symbology:

3113 black solid line

AN060**AN060****Point****railroad yard/marshalling yard****Full Chart Symbology:**

2036 black sm filled square

Simplified Symbology:

2036 black sm filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****Line****road - divided w/ median****med=1****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - no median**med<>1****Full Chart Symbology:**

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AQ010**AQ010****Line****aerial cableway lines/ski lift lines****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AQ040**AQ040****Line****bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ064**AQ064****Line****causeway****Full Chart Symbology:**3142 black parallel vy thin lines w/ tics (ladder
patt)**Simplified Symbology:**

3112 black thin solid line

Point**causeway****Full Chart Symbology:**

2089 black cir w/ four outer tics and dot inside

Simplified Symbology:

2090 black cir w/ "C" inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

0213 black buoy topmark can

Simplified Symbology:

0078 black sm cir

AQ113**AQ113****Line****pipeline/pipe - on ground****loc=8****Full Chart Symbology:**

1314 black very thin solid line

Simplified Symbology:

1314 black very thin solid line

pipeline/pipe - underground**loc=4****Full Chart Symbology:**

6040 black very thin long dash line

Simplified Symbology:

6040 black very thin long dash line

AQ116**AQ116****Point****pumping station****Full Chart Symbology:**

2097 black sm square w/ "P" inside

Simplified Symbology:

2036 black sm filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130****Line****tunnel****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point**tunnel****Full Chart Symbology:**

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2019 black sm filled cir

AT030**AT030****Line****power transmission line****Full Chart Symbology:**

3074 purple thin solid line w/ dots on each side

Simplified Symbology:

4262 purple thin dash line

AT050**AT050****Point****communication building****Full Chart Symbology:**

2106 black filled square w/ outward ticks

Simplified Symbology:

2036 black sm filled square

AT060**AT060****Line****telephone line/telegraph line****Full Chart Symbology:**

3096 gray very thin dash line w/ dot

Simplified Symbology:

3086 gray very thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

AT080**AT080****Point****communication tower****Full Chart Symbology:**

6019 black tower with "x" inside

Simplified Symbology:

0185 black topmark special X

BA010**BA010****Line****coastline/shoreline****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA030**BA030****Point****island****Full Chart Symbology:**

2111 brown filled cir

Simplified Symbology:

2111 brown filled cir

BA040**BA040****Area****water (except inland)****Full Chart Symbology:**

0805 depth white fill

Simplified Symbology:

0805 depth white fill

BB040**BB040****Line****breakwater/groyne****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BB190**BB190**

Line

pier/wharf/quay**Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB230**BB230**

Line

seawall**Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BC050**BC050**

Point

lighthouse**Full Chart Symbology:**

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

BD000**BD000**

Line

underwater danger/hazard**Full Chart Symbology:**

3139 black very thin dotted line

Simplified Symbology:

3139 black very thin dotted line

BD120**BD120**

Line

reef**Full Chart Symbology:**

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BD130**BD130****Point****rock****Full Chart Symbology:**

0063 black 6 point asterisk

Simplified Symbology:

0063 black 6 point asterisk

BD180**BD180****Point****wreck****Full Chart Symbology:**

2212 black solid filled shipwreck symbol

Simplified Symbology:

0122 black topmark one cone up

BE015**BE015****Line****depth contour****Full Chart Symbology:**

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

BH000**BH000****Area****inland water****Full Chart Symbology:**

4152 lt blue solid fill

Simplified Symbology:

4152 lt blue solid fill

Line**inland water****Full Chart Symbology:**

0621 depth med blue very thin solid line

Simplified Symbology:

0621 depth med blue very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BH015**BH015**

Area

bog

Full Chart Symbology:

6009 lt blue marsh/swamp patt fill

Simplified Symbology:

0810 depth med blue solid fill

BH050**BH050**

Area

fish hatchery/fish farm/marine farm

Full Chart Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

BH070**BH070**

Line

ford

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point

ford

Full Chart Symbology:

2087 black opposing solid triangles pnting in

Simplified Symbology:

6048 gray filled circle

BH077**BH077**

Area

hummock

Full Chart Symbology:

1511 brown thin line outward ticks

Simplified Symbology:

3014 brown solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BH090**BH090****Area****land subject to inundation****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

BH095**BH095****Area****marsh/swamp****Full Chart Symbology:**

4080 basic blue marsh/swamp patt fill

Simplified Symbology:

6007 midnight blue solid fill

BH120**BH120****Point****rapids****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

BH135**BH135****Area****rice field****Full Chart Symbology:**

4085 basic blue rice patt fill

Simplified Symbology:

6002 steel blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BH140**BH140****Line****river/stream - dry, intermittent****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

river/stream - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

Point**salt evaporator****Full Chart Symbology:**

2233 100% cyan blue square w/ grid inside

Simplified Symbology:

2233 100% cyan blue square w/ grid inside

BH170**BH170****Point****spring/water-hole****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BH180**BH180****Point****waterfall****Full Chart Symbology:**

1009 UI very dk blue filled diamond

Simplified Symbology:

2003 basic blue solid filled cir

BI020**BI020****Line****dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**dam/weir****Full Chart Symbology:**

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

BI030**BI030****Point****lock****Full Chart Symbology:**

6047 black open double arrowhead

Simplified Symbology:

6047 black open double arrowhead

BI040**BI040****Point****sluice gate****Full Chart Symbology:**

2239 black open arrowhead

Simplified Symbology:

2239 black open arrowhead

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BJ040**BJ040**

Line

ice cliff**Full Chart Symbology:**

0755 UI vy dk blue vy thin line w/vert inward ticks

Simplified Symbology:

3047 basic blue thin long dash line

BJ065**BJ065**

Area

ice shelf**Full Chart Symbology:**

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ070**BJ070**

Area

pack ice**Full Chart Symbology:**

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ080**BJ080**

Area

polar ice**Full Chart Symbology:**

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

BJ100

BJ100

Area

snow field/ice field

Full Chart Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

Simplified Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

BJ110

BJ110

Area

tundra

Full Chart Symbology:

6045 yellow-green marsh/swamp patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

CA010**CA010**

Line

contour line (land) - carrying contour (coincident) hqc=19

Full Chart Symbology:

6011 It brown very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - depression intermediate hqc=6

Full Chart Symbology:

4305 It brown very very thin line w/ tick marks

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate approximate hqc=12

Full Chart Symbology:

4307 It brown very very thin long dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate depression approx hqc=18

Full Chart Symbology:

4309 It brown vy vy thin long dash line w/ ticks

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate unknown hqc=0or2

Full Chart Symbology:

4304 It brown very very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - supplemental depression hqc=22or23

Full Chart Symbology:

4310 It brown very vy thin dash line w/ tick marks

Simplified Symbology:

6011 It brown very thin solid line

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

CA010

CA010

contour line (land) - supplementary approx., carrying,
form lines

hqc=4or13or20or21

Full Chart Symbology:

1306 It brown very very thin dash line

Simplified Symbology:

6011 It brown very thin solid line

CA030

CA030

Point

spot elevation

Full Chart Symbology:

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

CA035

CA035

Point

inland water elevation

Full Chart Symbology:

2245 basic blue sm filled cir

Simplified Symbology:

2245 basic blue sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

DA010**DA010**

Area

ground surface element - lava

smc=52

Full Chart Symbology:	0612 lt gray very thin solid line	4108 lt gray land cover/ripple patt fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 lt brown solid fill

ground surface element - not lava, not sand

smc<>52and<>88

Full Chart Symbology:	0604 feature brown very thin solid line	0822 lt brown solid fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 lt brown solid fill

ground surface element - sand

smc=88

Full Chart Symbology:	4220 beige thin solid line	4005 beige stipple dot patt fill
Simplified Symbology:	0604 feature brown very thin solid line	0822 lt brown solid fill

DB010**DB010**

Line

bluff/cliff/escarpment

Full Chart Symbology:	6014 dk tan vy thin line w/ ticks
Simplified Symbology:	4217 dk tan very thin solid line

DB080**DB080**

Line

depression

Full Chart Symbology:	1308 black very thin line w/ ticks
Simplified Symbology:	0600 black very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

DB090**DB090**

Line

embankment/fill

Full Chart Symbology:

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

DB110**DB110**

Line

fault

Full Chart Symbology:

3026 tan very thin solid line

Simplified Symbology:

3026 tan very thin solid line

DB160**DB160**

Line

rock strata/rock formation

Full Chart Symbology:

3017 brown thin dash line

Simplified Symbology:

3017 brown thin dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

EA010**EA010**

Area

cropland - dry

veg=1

Full Chart Symbology:	3026 tan very thin solid line	6001 tan dot patt fill
Simplified Symbology:	3026 tan very thin solid line	

Full Chart Symbology:		4018 lt tan solid fill
Simplified Symbology:	4018 lt tan solid fill	

cropland - other

veg<>1

Full Chart Symbology:		6012 pale green solid fill
Simplified Symbology:	6012 pale green solid fill	

Full Chart Symbology:	1412 yellow-green thin solid line	4067 yellow-green dot patt fill
Simplified Symbology:	1412 yellow-green thin solid line	

EA020**EA020**

Line

hedgerow

Full Chart Symbology:	3036 yellow-green thin line w/rectangles one side	
Simplified Symbology:	1412 yellow-green thin solid line	

EA030**EA030**

Area

nursery

Full Chart Symbology:	1412 yellow-green thin solid line	4230 yellow-green squares in grid patt fill
Simplified Symbology:	1412 yellow-green thin solid line	0805 depth white fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

EA040**EA040**

Area

orchard/plantation

Full Chart Symbology:

4051 radar dk green squares in grid patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EA050**EA050**

Area

vineyards

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EB010**EB010**

Area

grassland

Full Chart Symbology:

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EB020**EB020**

Area

scrub/brush

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC010**EC010**

Area

bamboo/cane

Full Chart Symbology:

4052 yellow-green bamboo patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

EC020**EC020****Area**

oasis - not palm **veg<>17**

Full Chart Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

oasis - palm **veg=17**

Full Chart Symbology:

2252 yellow-green palm tree symbol 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

EC030**EC030****Area**

trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress **veg=11or12or17or18or25or29or38**

Full Chart Symbology:

1606 yellow-green triangle tree patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

trees - nipa palm, mangrove **veg=16or19**

Full Chart Symbology:

1655 basic blue thin dash line

1613 yellow-green nipa patt fill

Simplified Symbology:

1655 basic blue thin dash line

0803 yellow-green solid fill

trees - unknown, deciduous, mixed, other **veg=0or24or50or999**

Full Chart Symbology:

1605 yellow-green tree-top patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

EC040**EC040****Line****cleared way/cut line/firebreak**

Full Chart Symbology:	3076 lt gray thin solid line
Simplified Symbology:	3076 lt gray thin solid line

FA000**FA000****Line****administrative boundary - international****use=23**

Full Chart Symbology:	1310 black one long dash two short dash line
Simplified Symbology:	1310 black one long dash two short dash line

administrative boundary - primary**use=26**

Full Chart Symbology:	1311 black long dash short dash line
Simplified Symbology:	1311 black long dash short dash line

FA001**FA001****Area****administrative area**

Full Chart Symbology:	0633 lt gray thin dash line
Simplified Symbology:	0633 lt gray thin dash line

Point**administrative area**

Full Chart Symbology:	2256 lt gray/white divided square
Simplified Symbology:	2256 lt gray/white divided square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

FA020**FA020**

Line

armistice line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA030**FA030**

Line

cease-fire line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA040**FA040**

Line

claim line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA050**FA050**

Line

mandate line/convention line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA060**FA060**

Line

defacto boundary**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

FA070**FA070****Area****demilitarized zone****Full Chart Symbology:**

3143 black double dash very thin lines

Simplified Symbology:

3119 black very thin long dash line

FA110**FA110****Line****international date line****Full Chart Symbology:**

3120 black thin long dash line

Simplified Symbology:

3120 black thin long dash line

FA170**FA170****Area****zone of occupation****Full Chart Symbology:**

3118 black dash line

Simplified Symbology:

3118 black dash line

GB005**GB005****Point****airport/airfield - military****use=8or22****Full Chart Symbology:**

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - non military**use<>8and<>22****Full Chart Symbology:**

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 0

Point Symbology

Line Symbology

Area Symbology

SU001

SU001

Area

military base

Full Chart Symbology:	3104 red solid line
Simplified Symbology:	3104 red solid line

Point

military base

Full Chart Symbology:	2274 red "M" inside cir
Simplified Symbology:	2274 red "M" inside cir

ZD020

ZD020

Area

void collection area

Full Chart Symbology:	3082 gray very thin solid line	4105 lt gray rt diag thin line patt fill
Simplified Symbology:	3082 gray very thin solid line	

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AA010**AA010****Area****mine/quarry - active****exs<>6****Full Chart Symbology:**

2001 black pick & hammer

3116 black very thin dash line

Simplified Symbology:

2001 black pick & hammer

3116 black very thin dash line

mine/quarry - inactive**exs=6****Full Chart Symbology:**

6000 black upside down pick & hammer

3116 black very thin dash line

Simplified Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Point**mine/quarry - active****exs<>6****Full Chart Symbology:**

2001 black pick & hammer

Simplified Symbology:

2001 black pick & hammer

mine/quarry - inactive**exs=6****Full Chart Symbology:**

6000 black upside down pick & hammer

Simplified Symbology:

6000 black upside down pick & hammer

AA040**AA040****Point****rig/superstructure****Full Chart Symbology:**

2002 black tower

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AA050**AA050****Point****well - not water****pro<>116****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

well - water/non-perennial-dry**hyc<>0and<>8 AND pro=116****Full Chart Symbology:**

6013 basic blue very thin circle

Simplified Symbology:

2003 basic blue solid filled cir

well - water/perennial**hyc=0or8 AND pro=116****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

AB000**AB000****Area****disposal site/waste pile****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AC000**AC000****Area****processing plant/treatment plant****Full Chart Symbology:**

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

Point**processing plant/treatment plant****Full Chart Symbology:**

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2019 black sm filled cir

AC030**AC030****Area****settling basin/sludge pond****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

AD010**AD010****Area****power plant****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**power plant****Full Chart Symbology:**

2009 black square w/ zap inside

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AF010**AF010****Point****chimney/smokestack****Full Chart Symbology:**

6015 black sm open square

Simplified Symbology:

6015 black sm open square

AF020**AF020****Line****conveyor****Full Chart Symbology:**

3086 gray very thin short dash line

Simplified Symbology:

3086 gray very thin short dash line

AF030**AF030****Point****cooling tower****Full Chart Symbology:**

2016 black dot inside double cir

Simplified Symbology:

2016 black dot inside double cir

AF040**AF040****Point****crane****Full Chart Symbology:**

6016 black crane symbol

Simplified Symbology:

6015 black sm open square

AF070**AF070****Point****flare pipe****Full Chart Symbology:**

0006 black flare stack symbol

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AH050**AH050****Area****fortification****Full Chart Symbology:**

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Point**fortification****Full Chart Symbology:**

2043 black four black squares w/ connection

Simplified Symbology:

2043 black four black squares w/ connection

AJ050**AJ050****Point****windmill****Full Chart Symbology:**

6017 black sm filled cir w/ vert line w/ "X" on top

Simplified Symbology:

0063 black 6 point asterisk

AK020**AK020****Point****amusement park attraction****Full Chart Symbology:**

2029 black ferris wheel

Simplified Symbology:

0051 black filled sm cir

AK120**AK120****Area****park****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AK130**AK130****Line****race track****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AK150**AK150****Point****ski jump****Full Chart Symbology:**

2034 black skier

Simplified Symbology:

0051 black filled sm cir

AK160**AK160****Point****stadium/amphitheater****Full Chart Symbology:**

2035 black dot inside cir

Simplified Symbology:

6048 gray filled circle

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Area

building - generic **bfc=<7and<15**

Full Chart Symbology:	4156 black solid fill
Simplified Symbology:	4156 black solid fill

building - house of worship **bfc=7**

Full Chart Symbology:	0600 black very thin solid line	4002 lt beige solid fill
Simplified Symbology:	4156 black solid fill	

building - school **bfc=15**

Full Chart Symbology:	0600 black very thin solid line	4025 feature brown solid fill
Simplified Symbology:	4156 black solid fill	

Point

building - castle **bfc=4**

Full Chart Symbology:
2043 black four black squares w/ connection
Simplified Symbology:
0038 lt brown filled square w/ black outline

building - generic **bfc=0or1or9or10or11or16or17or18or19or20or22or23or24or27or83or999**

Full Chart Symbology:
2036 black sm filled square
Simplified Symbology:
0038 lt brown filled square w/ black outline

building - government **bfc=2or3or5or12or13or14**

Full Chart Symbology:
1001 red filled square black outline
Simplified Symbology:
0038 lt brown filled square w/ black outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - house of worship - church****bfc=7 AND hwt=0or2or3or4or7****Full Chart Symbology:**

2045 black filled square w/ cross on top

Simplified Symbology:

1003 black cross

building - house of worship - mosque**bfc=7 AND hwt=5or6or9****Full Chart Symbology:**

6035 black mosque w/ filled square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - pagoda**bfc=7 AND hwt=11****Full Chart Symbology:**

6033 black pagoda w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - stupa**bfc=7 AND hwt=21****Full Chart Symbology:**

2048 black pinwheel

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - synagogue**bfc=7 AND hwt=20****Full Chart Symbology:**

2047 black filled square w/ T on top

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - temple**bfc=7 AND hwt=14or15or16****Full Chart Symbology:**

6034 black temple w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - lighthouse**bfc=82****Full Chart Symbology:**

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - school****bfc=15****Full Chart Symbology:**

2042 black filled square w/ flag on top

Simplified Symbology:

0038 lt brown filled square w/ black outline

AL020**AL020****Area****built-up area****Full Chart Symbology:**

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

Point**built-up area****Full Chart Symbology:**

2053 black sm open square w/ dot in center

Simplified Symbology:

2053 black sm open square w/ dot in center

AL025**AL025****Point****cairn****Full Chart Symbology:**

0017 black three stacked sm cirs

Simplified Symbology:

0078 black sm cir

AL070**AL070****Line****fence****Full Chart Symbology:**

3148 black very thin patt line -x -x -x

Simplified Symbology:

0600 black very thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL100**AL100****Point****hut****Full Chart Symbology:**

2058 gray filled square

Simplified Symbology:

2058 gray filled square

AL105**AL105****Area****settlement****Full Chart Symbology:**

4100 lt gray solid fill

Simplified Symbology:

4100 lt gray solid fill

AL130**AL130****Point****monument****Full Chart Symbology:**

2063 black monument symbol

Simplified Symbology:

6048 gray filled circle

AL135**AL135****Area****native settlement****Full Chart Symbology:**

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL140**AL140****Point****particle accelerator****Full Chart Symbology:**

0014 black filled diamond cntred on horizontal line

Simplified Symbology:

0014 black filled diamond cntred on horizontal line

AL200**AL200****Area****ruins****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point**ruins****Full Chart Symbology:**

0002 feature brown filled square w/ black outline

Simplified Symbology:

2036 black sm filled square

AL210**AL210****Line****snow shed/rock shed****Full Chart Symbology:**

3146 black solid triangle line patt

Simplified Symbology:

3112 black thin solid line

Point**snow shed/rock shed****Full Chart Symbology:**

2070 black diag bands in rectangle

Simplified Symbology:

0078 black sm cir

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AL240**AL240****Point****tower (non-communication)****Full Chart Symbology:**

2071 black dot inside cir

Simplified Symbology:

2019 black sm filled cir

AL260**AL260****Line****wall****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

AM020**AM020****Point****grain bin/silo****Full Chart Symbology:**

2074 brown cir

Simplified Symbology:

2074 brown cir

AM030**AM030****Point****grain elevator****Full Chart Symbology:**

0004 black tower symbol

Simplified Symbology:

2019 black sm filled cir

AM070**AM070****Point****tank****Full Chart Symbology:**

2019 black sm filled cir

Simplified Symbology:

2019 black sm filled cir

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AM080

AM080

Point

water tower

Full Chart Symbology:

2078 basic blue dot inside cir

Simplified Symbology:

2078 basic blue dot inside cir

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AN010**AN010****Line**

railroad -dismantled **exs=8**

Full Chart Symbology:

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

railroad -not operational/narrow/multiple **exs=5or6or7 AND fco<>0and<>3 AND rgc=2**

Full Chart Symbology:

3137 black dash line w/ double tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/narrow/single **exs=5or6or7 AND fco=0or3 AND rgc=2**

Full Chart Symbology:

3135 black dash line w/ single tics alt sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/multiple **exs=5or6or7 AND fco<>0and<>3 AND rgc<>2**

Full Chart Symbology:

3133 black dash line w/ double tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -not operational/normal/single **exs=5or6or7 AND fco=0or3 AND rgc<>2**

Full Chart Symbology:

3131 black dash line w/ single tics both sides

Simplified Symbology:

3117 black thin dash line

railroad -operational/narrow/multiple **exs=0or28 AND fco<>0and<>3 AND rgc=2**

Full Chart Symbology:

3129 black solid line w/ double tics alt sides

Simplified Symbology:

3112 black thin solid line

railroad -operational/narrow/single **exs=0or28 AND fco=0or3 AND rgc=2**

Full Chart Symbology:

3125 black solid line w/ single tics alt sides

Simplified Symbology:

3112 black thin solid line

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VMap Level 1

Point Symbology	Line Symbology	Area Symbology
AN010		AN010
railroad -operational/normal/multiple		exs=0or28 AND fco<>0and<>3 AND rgc<>2
Full Chart Symbology:	3127 black solid line w/ double tics both sides	
Simplified Symbology:	3112 black thin solid line	
railroad -operational/normal/single		exs=0or28 AND fco=0or3 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	3112 black thin solid line	
AN050		AN050
Line		
railroad siding/railroad spur - non-operational/narrow		exs<>0and<>28 AND rgc=2
Full Chart Symbology:	3135 black dash line w/ single tics alt sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - non-operational/normal		exs<>0and<>28 AND rgc<>2
Full Chart Symbology:	3131 black dash line w/ single tics both sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - operational/narrow		exs=0or28 AND rgc=2
Full Chart Symbology:	3125 black solid line w/ single tics alt sides	
Simplified Symbology:	0600 black very thin solid line	
railroad siding/railroad spur - operational/normal		exs=0or28 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	0600 black very thin solid line	

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AN060**AN060****Area****railroad yard/marshalling yard****Full Chart Symbology:**

0600 black very thin solid line

0802 gray solid fill

Simplified Symbology:

0600 black very thin solid line

0802 gray solid fill

AP010**AP010****Line****cart track****Full Chart Symbology:**

3116 black very thin dash line

Simplified Symbology:

3116 black very thin dash line

AP020**AP020****Point****interchange****Full Chart Symbology:**

2081 black open square

Simplified Symbology:

2081 black open square

**MIL-DTL-89045A w/Amendment 1
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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****Line**

road - all weather, hard surface, no median, 1 ln **ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6023 100% red brown thin line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, hard surface, no median, 2-3 Ins **ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, hard surface, no median, 4 Ins **ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6022 100% red brown thick line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - all weather, loose surface, no median **med<>1 AND rst=2or3 AND wtc<>2**

Full Chart Symbology:

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median **med=1**

Full Chart Symbology:

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median **med<>1 AND wtc=2**

Full Chart Symbology:

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AQ010**AQ010****Line****aerial cableway lines/ski lift lines****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

AQ040**AQ040****Line****bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ060**AQ060****Point****control tower****Full Chart Symbology:**

2088 purple dot inside cir

Simplified Symbology:

2088 purple dot inside cir

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

AQ110**AQ110****Point****mooring mast****Full Chart Symbology:**

2094 purple solid ellipse extending from pole

Simplified Symbology:

6049 purple filled circle

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AQ113**AQ113****Line****pipeline/pipe - surface; not water****loc=0or8 AND pro<>116****Full Chart Symbology:**

1314 black very thin solid line

Simplified Symbology:

1314 black very thin solid line

pipeline/pipe - surface; water**loc=0or8 AND pro=116****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

pipeline/pipe - underground; water**loc=4 AND pro=116****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

pipeline/pipe - underground; not water**loc=4 AND pro<>116****Full Chart Symbology:**

6040 black very thin long dash line

Simplified Symbology:

6040 black very thin long dash line

AQ116**AQ116****Point****pumping station****Full Chart Symbology:**

2097 black sm square w/ "P" inside

Simplified Symbology:

2036 black sm filled square

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AQ130**AQ130****Line****tunnel****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point**tunnel****Full Chart Symbology:**

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2100 black box w/ round top w/ "T" inside

AQ135**AQ135****Point****vehicle stopping area/rest area****Full Chart Symbology:**

2101 red brown octagon shape w/ "R" inside

Simplified Symbology:

2101 red brown octagon shape w/ "R" inside

AT010**AT010****Point****disk/dish****Full Chart Symbology:**

2102 black satellite dish symbol

Simplified Symbology:

0185 black topmark special X

AT030**AT030****Line****power transmission line****Full Chart Symbology:**

3074 purple thin solid line w/ dots on each side

Simplified Symbology:

4262 purple thin dash line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

AT060**AT060****Line****telephone line/telegraph line****Full Chart Symbology:**

3096 gray very thin dash line w/ dot

Simplified Symbology:

3086 gray very thin short dash line

AT080**AT080****Point****communication tower****Full Chart Symbology:**

6019 black tower with "x" inside

Simplified Symbology:

0185 black topmark special X

BA010**BA010****Line****coastline/shoreline - mangrove, marsh****slt=6or8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

coastline/shoreline -not mangrove or marsh**slt<>6and<>8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA020**BA020****Area****foreshore****Full Chart Symbology:**

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BA030**BA030**

Area

island

Full Chart Symbology:

0822 lt brown solid fill

Simplified Symbology:

0822 lt brown solid fill

BA040**BA040**

Area

water (except inland)

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

BB040**BB040**

Line

breakwater/groynes

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB140**BB140**

Line

jetty - covers and uncovers**vrr=8**

Full Chart Symbology:

0626 dk gray thin dash line

Simplified Symbology:

0623 dk gray thin solid line

jetty - unknown, partly submerged at high water**vrr=0or1**

Full Chart Symbology:

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BB190**BB190****Area****pier/wharf/quay****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**pier/wharf/quay****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB230**BB230****Line****seawall****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BD120**BD120****Area****reef****Full Chart Symbology:**

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

Line**reef****Full Chart Symbology:**

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BD130**BD130****Point****rock - awash****vrr=2****Full Chart Symbology:**

6044 black plus sign with 4 dots

Simplified Symbology:

6044 black plus sign with 4 dots

rock - unk/covers/uncovers**vrr=0or8****Full Chart Symbology:**

0063 black 6 point asterisk

Simplified Symbology:

0063 black 6 point asterisk

BD180**BD180****Point****wreck****Full Chart Symbology:**

2212 black solid filled shipwreck symbol

Simplified Symbology:

0122 black topmark one cone up

BE015**BE015****Line****depth contour****Full Chart Symbology:**

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH010**BH010****Line**

aqueduct - abandoned/under construction **exs=5or6**

Full Chart Symbology:

4316 100% cyan blue very thin long dash line

Simplified Symbology:

4316 100% cyan blue very thin long dash line

aqueduct - surface/elevated **exs<>5and<>6 AND loc=0or8or25**

Full Chart Symbology:

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

aqueduct - underground **exs<>5and<>6 AND loc=4**

Full Chart Symbology:

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

Point**aqueduct****Full Chart Symbology:**

1007 basic blue cir

Simplified Symbology:

1007 basic blue cir

BH015**BH015****Area****bog****Full Chart Symbology:**

6009 lt blue marsh/swamp patt fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH020**BH020****Line****canal - not perennial****hyc<>8****Full Chart Symbology:**

3167 100% cyan blue thin short dash line

Simplified Symbology:

3108 100% cyan blue thin solid line

canal - perennial**hyc=8****Full Chart Symbology:**

3108 100% cyan blue thin solid line

Simplified Symbology:

3108 100% cyan blue thin solid line

BH030**BH030****Line****ditch - not perennial****hyc<>0and<>8****Full Chart Symbology:**

0669 depth med blue very thin dash line

Simplified Symbology:

0621 depth med blue very thin solid line

ditch - perennial, unknown**hyc=0or8****Full Chart Symbology:**

0621 depth med blue very thin solid line

Simplified Symbology:

0621 depth med blue very thin solid line

BH040**BH040****Area****filtration beds/aeration beds****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH050**BH050****Area****fish hatchery/fish farm/marine farm**

Full Chart Symbology:	0600 black very thin solid line	0810 depth med blue solid fill
Simplified Symbology:	0600 black very thin solid line	0810 depth med blue solid fill

BH060**BH060****Line****flume**

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

BH070**BH070****Line****ford**

Full Chart Symbology:	3114 black very thin short dash line
Simplified Symbology:	3114 black very thin short dash line

Point**ford**

Full Chart Symbology:	2087 black opposing solid triangles pnting in
Simplified Symbology:	6048 gray filled circle

**MIL-DTL-89045A w/Amendment 1
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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH080**BH080**

Area

lake/pond - dry, intermittent**hyc=3or6****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH090**BH090**

Area

land subject to inundation - controlled**exs=48****Full Chart Symbology:**

1655 basic blue thin dash line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

land subject to inundation - natural**exs=0or45****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

BH095**BH095**

Area

marsh/swamp**Full Chart Symbology:**

4080 basic blue marsh/swamp patt fill

Simplified Symbology:

6007 midnight blue solid fill

**MIL-DTL-89045A w/Amendment 1
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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH110**BH110**

Line

penstock - surface/elevated**loc=0or8or25****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

penstock - underground**loc=4****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

4311 100% cyan blue very thin solid line

BH120**BH120**

Line

rapids**Full Chart Symbology:**

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point

rapids**Full Chart Symbology:**

2231 UI very dk blue open diamond

Simplified Symbology:

2231 UI very dk blue open diamond

BH130**BH130**

Area

reservoir**Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

**MIL-DTL-89045A w/Amendment 1
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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH135**BH135****Area****rice field****Full Chart Symbology:**

4085 basic blue rice patt fill

Simplified Symbology:

6002 steel blue solid fill

BH140**BH140****Area****river/stream - dry, intermittent****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

river/stream - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Line**river/stream - dry, intermittent****hyc=3or6****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

river/stream - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH145**BH145****Point****river stream vanishing point****Full Chart Symbology:**

2232 basic blue solid arrowhead

Simplified Symbology:

2232 basic blue solid arrowhead

BH150**BH150****Area****salt pan****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 1611 depth med blue dot patt fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0810 depth med blue solid fill

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

BH160**BH160****Area****sebkha****Full Chart Symbology:**

4289 basic blue stipple dot patt fill

Simplified Symbology:

4071 basic blue solid fill

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VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BH170

BH170

Point

spring/water-hole - not perennial/dry

hyc<>0and<>8

Full Chart Symbology:

6031 basic blue open cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

spring/water-hole - perennial

hyc=0or8

Full Chart Symbology:

1008 basic blue filled cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

BH180

BH180

Line

waterfall

Full Chart Symbology:

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point

waterfall

Full Chart Symbology:

1009 UI very dk blue filled diamond

Simplified Symbology:

2003 basic blue solid filled cir

BH190

BH190

Area

lagoon/reef pool

Full Chart Symbology:

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BI010**BI010****Point****cistern****Full Chart Symbology:**

1010 basic blue solid square

Simplified Symbology:

1010 basic blue solid square

BI020**BI020****Line****dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**dam/weir****Full Chart Symbology:**

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

BI030**BI030****Line****lock****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

BI050**BI050****Point****water intake tower****Full Chart Symbology:**

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BJ020**BJ020****Area****moraine****Full Chart Symbology:**

1406 brown thin solid line

4032 brown stipple dot patt fill

Simplified Symbology:

0804 brown solid fill

BJ030**BJ030****Area****glacier****Full Chart Symbology:**

1655 basic blue thin dash line

4151 basic blue ripple jagged patt fill

Simplified Symbology:

1655 basic blue thin dash line

4151 basic blue ripple jagged patt fill

BJ040**BJ040****Line****ice cliff****Full Chart Symbology:**

0755 UI vy dk blue vy thin line w/vert inward ticks

Simplified Symbology:

3047 basic blue thin long dash line

BJ060**BJ060****Point****ice peak/nunatak****Full Chart Symbology:**

2242 med blue 8 pt asterisk w/ open center

Simplified Symbology:

2242 med blue 8 pt asterisk w/ open center

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

BJ065**BJ065**

Area

ice shelf

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ070**BJ070**

Area

pack ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ080**BJ080**

Area

polar ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ100**BJ100**

Area

snow field/ice field

Full Chart Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

Simplified Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

BJ110**BJ110**

Area

tundra

Full Chart Symbology:

6045 yellow-green marsh/swamp patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****Line****contour line (land)****Full Chart Symbology:**

6011 It brown very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

CA030**CA030****Point****spot elevation - accurate****ela=1****Full Chart Symbology:**

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

spot elevation - not accurate**ela<>1****Full Chart Symbology:**

1011 black sm filled cir beside +-

Simplified Symbology:

1011 black sm filled cir beside +-

DA005**DA005****Area****asphalt lake****Full Chart Symbology:**

0600 black very thin solid line

4100 It gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 It gray solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

DA010**DA010****Area**

ground surface element - boulders, gravel **mcc=46or8**

Full Chart Symbology:

0604 feature brown very thin solid line

4034 lt brown heavy mixed stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - lava **mcc=52**

Full Chart Symbology:

0612 lt gray very thin solid line

4108 lt gray land cover/ripple patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - not rock, not lava, not sand **mcc=<>8and<>46and<>52and<>88**

Full Chart Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

ground surface element - sand **mcc=88**

Full Chart Symbology:

4220 beige thin solid line

4005 beige stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 lt brown solid fill

DB010**DB010****Line****bluff/cliff/escarpment****Full Chart Symbology:**

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB030**DB030****Point****cave****Full Chart Symbology:**

2247 black diag line w/ "L" on top

Simplified Symbology:

2247 black diag line w/ "L" on top

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

DB060**DB060**

Line

crevice/crevasse - earthen**mcc=0or30****Full Chart Symbology:**

3024 brown very thin solid line

Simplified Symbology:

3024 brown very thin solid line

crevice/crevasse - snow/ice**mcc=103****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

DB070**DB070**

Line

cut**Full Chart Symbology:**

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB090**DB090**

Line

embankment/fill**Full Chart Symbology:**

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

DB100**DB100**

Line

esker**Full Chart Symbology:**

3003 tan very thin solid line

Simplified Symbology:

3003 tan very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

DB110**DB110****Line****fault****Full Chart Symbology:**

3026 tan very thin solid line

Simplified Symbology:

3026 tan very thin solid line

DB115**DB115****Point****geothermal feature****Full Chart Symbology:**

2248 brown sm filled cir w/ tail below

Simplified Symbology:

2111 brown filled cir

DB150**DB150****Point****mountain pass****Full Chart Symbology:**

2249 black)(symbol

Simplified Symbology:

2249 black)(symbol

DB160**DB160****Point****rock strata/rock formation****Full Chart Symbology:**

2250 brown 6 pt asterisk w/ open center

Simplified Symbology:

2250 brown 6 pt asterisk w/ open center

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

DB170**DB170**

Area

sand dune/sand hills - crescent

ssc=22

Full Chart Symbology:

4009 beige sand dune crescent

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - lateral

ssc=26

Full Chart Symbology:

4010 beige sand dune lateral

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - mounds

ssc=27

Full Chart Symbology:

4011 beige sand dune mound

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - ripple

ssc=28

Full Chart Symbology:

4012 beige sand dune ripple

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - star

ssc=29

Full Chart Symbology:

4013 beige sand dune star

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - transverse

ssc=30

Full Chart Symbology:

4014 beige sand dune transverse

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - unknown

ssc=0

Full Chart Symbology:

4008 beige sand dune default

Simplified Symbology:

1903 rose solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

EA010**EA010**

Area

cropland - dry

veg=1

Full Chart Symbology:		
	4018	lt tan solid fill
Simplified Symbology:		
	4018	lt tan solid fill

Full Chart Symbology:		
	3026	tan very thin solid line
		6001
		tan dot patt fill
Simplified Symbology:		
	3026	tan very thin solid line

cropland - other

veg<>1

Full Chart Symbology:		
	1412	yellow-green thin solid line
		4067
		yellow-green dot patt fill
Simplified Symbology:		
	1412	yellow-green thin solid line

Full Chart Symbology:		
		6012
		pale green solid fill
Simplified Symbology:		
		6012
		pale green solid fill

EA040**EA040**

Area

orchard/plantation

Full Chart Symbology:		
		4051
		radar dk green squares in grid patt fill
Simplified Symbology:		
	4292	radar dk green thin solid line
		0805
		depth white fill

EA050**EA050**

Area

vineyards

Full Chart Symbology:		
		4054
		radar dk green offset grid/dot patt fill
Simplified Symbology:		
	4292	radar dk green thin solid line
		0805
		depth white fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

EB010**EB010****Area****grassland****Full Chart Symbology:**

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC020**EC020****Point****oasis - not palm****veg<>17****Full Chart Symbology:**

0150 yellow-green filled sm cir w/ gray outline

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

oasis - palm**veg=17****Full Chart Symbology:**

2252 yellow-green palm tree symbol

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

EC030**EC030**

Area

**trees - casuarina, coniferous, palm, filao, eucalyptus,
cypress**

veg=11or12or17or18or29or38

Full Chart Symbology:		
	1606	yellow-green triangle tree patt fill
Simplified Symbology:	4292	radar dk green thin solid line
	0803	yellow-green solid fill

trees - nipa palm, mangrove

veg=16or19

Full Chart Symbology:		
	1655	basic blue thin dash line
Simplified Symbology:	1655	basic blue thin dash line
	0803	yellow-green solid fill

trees - unknown, deciduous, mixed, other

veg=0or24or50or999

Full Chart Symbology:		
	1605	yellow-green tree-top patt fill
Simplified Symbology:	4292	radar dk green thin solid line
	0803	yellow-green solid fill

Line

trees

Full Chart Symbology:	
	3031 very dk green thin solid line
Simplified Symbology:	3031 very dk green thin solid line

EC040**EC040**

Line

cleared way/cut line/firebreak

Full Chart Symbology:	
	3076 lt gray thin solid line
Simplified Symbology:	3076 lt gray thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

FA000**FA000****Line**

administrative boundary - international use=4or23

Full Chart Symbology:	1310 black one long dash two short dash line
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Simplified Symbology:	1310 black one long dash two short dash line
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administrative boundary - primary, unknown use=0or26

Full Chart Symbology:	1311 black long dash short dash line
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Simplified Symbology:	1311 black long dash short dash line
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administrative boundary - secondary use=30

Full Chart Symbology:	1318 black thin long dsh 2 shrt dsh line
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Simplified Symbology:	3120 black thin long dash line
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administrative boundary - tertiary use=31

Full Chart Symbology:	1319 black thin long dash 3 dot line
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Simplified Symbology:	3120 black thin long dash line
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FA001**FA001****Area**

administrative area

Full Chart Symbology:	0633 lt gray thin dash line
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Simplified Symbology:	0633 lt gray thin dash line
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FA020**FA020****Line**

armistice line

Full Chart Symbology:	3119 black very thin long dash line
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Simplified Symbology:	3119 black very thin long dash line
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**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

FA030**FA030**

Line

cease-fire line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA050**FA050**

Line

mandate line/convention line**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA060**FA060**

Line

defacto boundary**Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA070**FA070**

Area

demilitarized zone**Full Chart Symbology:**

3143 black double dash very thin lines

Simplified Symbology:

3119 black very thin long dash line

FA090**FA090**

Line

geophysical prospecting grid**Full Chart Symbology:**

0612 lt gray very thin solid line

Simplified Symbology:

0612 lt gray very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

FA110**FA110****Line****international date line****Full Chart Symbology:**

3120 black thin long dash line

Simplified Symbology:

3120 black thin long dash line

FA170**FA170****Area****zone of occupation****Full Chart Symbology:**

3118 black dash line

Simplified Symbology:

3118 black dash line

GB005**GB005****Point****airport/airfield - not operational****exs<>28****Full Chart Symbology:**

2268 lt gray airplane

Simplified Symbology:

2268 lt gray airplane

airport/airfield - operational; military**exs=28 AND use=8or22****Full Chart Symbology:**

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - operational; non military**exs=28 AND use<>8and<>22****Full Chart Symbology:**

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

GB010**GB010****Point****airport lighting****Full Chart Symbology:**

1012 aero-blue solid filled star

Simplified Symbology:

1012 aero-blue solid filled star

GB055**GB055****Line****runway****Full Chart Symbology:**

3069 aero-blue very thin solid line

Simplified Symbology:

3069 aero-blue very thin solid line

Point**runway - not operational****exs<>28****Full Chart Symbology:**

2281 gray cir w/ open diag band

Simplified Symbology:

2273 aero-blue solid cir w/ open diag band

runway - operational**exs=28****Full Chart Symbology:**

2273 aero-blue solid cir w/ open diag band

Simplified Symbology:

2273 aero-blue solid cir w/ open diag band

ZB035**ZB035****Point****control point/control station****Full Chart Symbology:**

2279 black triangle w/ dot inside

Simplified Symbology:

2279 black triangle w/ dot inside

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 1

Point Symbology

Line Symbology

Area Symbology

ZC040**ZC040**

Area

magnetic disturbance area

Full Chart Symbology:

0733 It magenta open flag

0716 gray dash/chevron line

Simplified Symbology:

0733 It magenta open flag

0657 gray thick dash line

ZD020**ZD020**

Area

void collection area

Full Chart Symbology:

3082 gray very thin solid line

4105 It gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 It gray solid fill

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AA010

AA010

Area

mine/quarry - active

exs<>6

Full Chart Symbology:

2001 black pick & hammer

3116 black very thin dash line

Simplified Symbology:

2001 black pick & hammer

3116 black very thin dash line

mine/quarry - inactive

exs=6

Full Chart Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Simplified Symbology:

6000 black upside down pick & hammer

3116 black very thin dash line

Point

mine/quarry - active

exs<>6

Full Chart Symbology:

2001 black pick & hammer

Simplified Symbology:

2001 black pick & hammer

mine/quarry - inactive

exs=6

Full Chart Symbology:

6000 black upside down pick & hammer

Simplified Symbology:

6000 black upside down pick & hammer

AA040

AA040

Point

rig/superstructure

Full Chart Symbology:

2002 black tower

Simplified Symbology:

2019 black sm filled cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AA050**AA050****Point****well - not water****pro<>116****Full Chart Symbology:**

0078 black sm cir

Simplified Symbology:

0078 black sm cir

well - water/non-perennial-dry**hyc<>0and<>8 AND pro=116****Full Chart Symbology:**

6013 basic blue very thin circle

Simplified Symbology:

2003 basic blue solid filled cir

well - water/perennial**hyc=0or8 AND pro=116****Full Chart Symbology:**

2003 basic blue solid filled cir

Simplified Symbology:

2003 basic blue solid filled cir

AB000**AB000****Area****disposal site/waste pile****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

AB010**AB010****Area****wrecking yard/scrap yard****Full Chart Symbology:**

0604 feature brown very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

0604 feature brown very thin solid line

4015 beige-rose solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AC000**AC000****Area****processing plant/treatment plant****Full Chart Symbology:**

0624 feature brown very thin dash line

Simplified Symbology:

0624 feature brown very thin dash line

Point**processing plant/treatment plant****Full Chart Symbology:**

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2019 black sm filled cir

AC020**AC020****Point****catalytic cracker****Full Chart Symbology:**

2005 black building w/ 2 smokestacks above

Simplified Symbology:

2005 black building w/ 2 smokestacks above

AC030**AC030****Area****settling basin/sludge pond****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

AD010**AD010****Area****power plant****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AD020**AD020****Point****solar panels****Full Chart Symbology:**

2010 black sun burst w/ dot inside

Simplified Symbology:

2019 black sm filled cir

AD030**AD030****Area****substation/transformer yard****Full Chart Symbology:**

0600 black very thin solid line

0804 brown solid fill

Simplified Symbology:

0600 black very thin solid line

0804 brown solid fill

Point**substation/transformer yard****Full Chart Symbology:**

2011 black open sq w/ dot inside w/ zap on top

Simplified Symbology:

2019 black sm filled cir

AF010**AF010****Point****chimney/smokestack****Full Chart Symbology:**

6015 black sm open square

Simplified Symbology:

6015 black sm open square

AF020**AF020****Line****conveyor****Full Chart Symbology:**

3086 gray very thin short dash line

Simplified Symbology:

3086 gray very thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AF030**AF030****Point****cooling tower****Full Chart Symbology:**

2016 black dot inside double cir

Simplified Symbology:

2016 black dot inside double cir

AF040**AF040****Point****crane****Full Chart Symbology:**

6016 black crane symbol

Simplified Symbology:

6015 black sm open square

AF070**AF070****Point****flare pipe****Full Chart Symbology:**

0006 black flare stack symbol

Simplified Symbology:

0051 black filled sm cir

AH050**AH050****Area****fortification****Full Chart Symbology:**

6004 dk red brown thin dash line

Simplified Symbology:

6004 dk red brown thin dash line

Point**fortification****Full Chart Symbology:**

2043 black four black squares w/ connection

Simplified Symbology:

2043 black four black squares w/ connection

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AI020**AI020****Area****mobile home/mobile home park****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AJ030**AJ030****Area****feedlot/stockyard/holding pen****Full Chart Symbology:**

4217 dk tan very thin solid line

Simplified Symbology:

4217 dk tan very thin solid line

AJ050**AJ050****Point****windmill****Full Chart Symbology:**

6017 black sm filled cir w/ vert line w/ "X" on top

Simplified Symbology:

0063 black 6 point asterisk

AK020**AK020****Point****amusement park attraction****Full Chart Symbology:**

2029 black ferris wheel

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AK030**AK030**

Area

amusement park

Full Chart Symbology:

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

AK040**AK040**

Area

athletic field

Full Chart Symbology:

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK060**AK060**

Area

campground/campsite

Full Chart Symbology:

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AK070**AK070**

Area

drive in theater

Full Chart Symbology:

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK090**AK090**

Area

fairgrounds

Full Chart Symbology:

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AK100**AK100****Area****golf course****Full Chart Symbology:**

4279 nav orange thin short dash line

Simplified Symbology:

4279 nav orange thin short dash line

AK120**AK120****Area****park****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

AK130**AK130****Line****race track****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

AK150**AK150****Line****ski jump****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

Point**ski jump****Full Chart Symbology:**

2034 black skier

Simplified Symbology:

0051 black filled sm cir

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AK160**AK160****Area****stadium/amphitheater****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

AK170**AK170****Area****swimming pool****Full Chart Symbology:**

0600 black very thin solid line

4138 med blue solid fill

Simplified Symbology:

0600 black very thin solid line

4138 med blue solid fill

AK180**AK180****Area****zoo/safari park****Full Chart Symbology:**

3117 black thin dash line

6005 olive green solid fill

Simplified Symbology:

3117 black thin dash line

6005 olive green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Area

building - generic **bfc=<6and<7and<15**

Full Chart Symbology:

4156 black solid fill

Simplified Symbology:

4156 black solid fill

building - hospital **bfc=6**

Full Chart Symbology:

0600 black very thin solid line

4015 beige-rose solid fill

Simplified Symbology:

4156 black solid fill

building - house of worship **bfc=7**

Full Chart Symbology:

0600 black very thin solid line

4002 lt beige solid fill

Simplified Symbology:

4156 black solid fill

building - school **bfc=15**

Full Chart Symbology:

0600 black very thin solid line

4025 feature brown solid fill

Simplified Symbology:

4156 black solid fill

Line

building - generic **bfc=<6and<7and<15**

Full Chart Symbology:

3112 black thin solid line

Simplified Symbology:

0600 black very thin solid line

building - hospital **bfc=6**

Full Chart Symbology:

3153 beige-rose thin solid line

Simplified Symbology:

0600 black very thin solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - house of worship****bfc=7****Full Chart Symbology:**

3001 lt beige thin solid line

Simplified Symbology:

0600 black very thin solid line

building - school**bfc=15****Full Chart Symbology:**

1406 brown thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**building - castle****bfc=4****Full Chart Symbology:**

2043 black four black squares w/ connection

Simplified Symbology:

0038 lt brown filled square w/ black outline

building - generic**bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36****Full Chart Symbology:**

2036 black sm filled square

Simplified Symbology:

0038 lt brown filled square w/ black outline

building - generic**bfc=53or59or69or70or83or85or86or87or88or89or90or91or92or93or95or98or999****Full Chart Symbology:**

2036 black sm filled square

Simplified Symbology:

0038 lt brown filled square w/ black outline

building - government**bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96****Full Chart Symbology:**

1001 red filled square black outline

Simplified Symbology:

1001 red filled square black outline

**MIL-DTL-89045A w/Amendment 1
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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - hospital****bfc=6****Full Chart Symbology:**

1002 black filled cir w/ white cross inside

Simplified Symbology:

1002 black filled cir w/ white cross inside

building - house of worship - church**bfc=7 AND hwt=0or2or3or4or7****Full Chart Symbology:**

2045 black filled square w/ cross on top

Simplified Symbology:

1003 black cross

building - house of worship - mosque**bfc=7 AND hwt=5or6or9****Full Chart Symbology:**

6035 black mosque w/ filled square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - pagoda**bfc=7 AND hwt=11****Full Chart Symbology:**

6033 black pagoda w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - stupa**bfc=7 AND hwt=21****Full Chart Symbology:**

2048 black pinwheel

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - synagogue**bfc=7 AND hwt=20****Full Chart Symbology:**

2047 black filled square w/ T on top

Simplified Symbology:

0038 It brown filled square w/ black outline

building - house of worship - temple**bfc=7 AND hwt=14or15or16****Full Chart Symbology:**

6034 black temple w/ open square

Simplified Symbology:

0038 It brown filled square w/ black outline

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL015**AL015****building - lighthouse****bfc=82****Full Chart Symbology:**

6030 black six pt star w/ dot inside

Simplified Symbology:

6030 black six pt star w/ dot inside

building - school**bfc=15****Full Chart Symbology:**

2042 black filled square w/ flag on top

Simplified Symbology:

0038 lt brown filled square w/ black outline

AL020**AL020****Area****built-up area dense****bac=2****Full Chart Symbology:**

4128 tan BUA solid fill

Simplified Symbology:

4128 tan BUA solid fill

built-up area sparse**bac=0or1****Full Chart Symbology:**

4002 lt beige solid fill

Simplified Symbology:

4002 lt beige solid fill

AL025**AL025****Point****cairn****Full Chart Symbology:**

0017 black three stacked sm cirs

Simplified Symbology:

0078 black sm cir

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL030**AL030****Area****cemetery****Full Chart Symbology:**

3117 black thin dash line

6006 black cemetery patt fill

Simplified Symbology:

3117 black thin dash line

Point**cemetery****Full Chart Symbology:**

6018 black "L" with dashed outline

Simplified Symbology:

0185 black topmark special X

AL060**AL060****Area****dragon teeth****Full Chart Symbology:**

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

Line**dragon teeth****Full Chart Symbology:**

1301 black line w/ squares

Simplified Symbology:

3113 black solid line

AL070**AL070****Line****fence****Full Chart Symbology:**

3148 black very thin patt line -x -x -x

Simplified Symbology:

0600 black very thin solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL100**AL100****Point****hut****Full Chart Symbology:**

2058 gray filled square

Simplified Symbology:

2058 gray filled square

AL105**AL105****Area****settlement****Full Chart Symbology:**

4100 lt gray solid fill

Simplified Symbology:

4100 lt gray solid fill

Point**settlement****Full Chart Symbology:**

2060 black square w/ S inside

Simplified Symbology:

2060 black square w/ S inside

AL130**AL130****Point****monument****Full Chart Symbology:**

2063 black monument symbol

Simplified Symbology:

6048 gray filled circle

AL135**AL135****Area****native settlement****Full Chart Symbology:**

0600 black very thin solid line

0823 no data gray solid fill

Simplified Symbology:

0600 black very thin solid line

0823 no data gray solid fill

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL140**AL140****Area****particle accelerator**

Full Chart Symbology:	0600 black very thin solid line	4100 lt gray solid fill
Simplified Symbology:	0600 black very thin solid line	4100 lt gray solid fill

AL170**AL170****Area****plaza/city square**

Full Chart Symbology:	0604 feature brown very thin solid line	4002 lt beige solid fill
Simplified Symbology:	0604 feature brown very thin solid line	4002 lt beige solid fill

AL200**AL200****Area****ruins**

Full Chart Symbology:	3114 black very thin short dash line
Simplified Symbology:	3114 black very thin short dash line

Point**ruins**

Full Chart Symbology: 0002 feature brown filled square w/ black outline
Simplified Symbology: 2036 black sm filled square

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AL210**AL210****Line****snow shed/rock shed****Full Chart Symbology:**

3146 black solid triangle line patt

Simplified Symbology:

3112 black thin solid line

Point**snow shed/rock shed****Full Chart Symbology:**

2070 black diag bands in rectangle

Simplified Symbology:

0078 black sm cir

AL240**AL240****Point****tower (non-communication)****Full Chart Symbology:**

2071 black dot inside cir

Simplified Symbology:

2019 black sm filled cir

AL250**AL250****Point****underground dwelling****Full Chart Symbology:**

2072 gray shadowed square

Simplified Symbology:

2072 gray shadowed square

AL260**AL260****Line****wall****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AM010**AM010**

Area

depot (storage)**Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

AM020**AM020**

Area

grain bin/silo**Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

grain bin/silo**Full Chart Symbology:**

2074 brown cir

Simplified Symbology:

2074 brown cir

AM030**AM030**

Area

grain elevator**Full Chart Symbology:**

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

grain elevator**Full Chart Symbology:**

0004 black tower symbol

Simplified Symbology:

2019 black sm filled cir

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AM060**AM060**

Area

storage bunker/storage mound

Full Chart Symbology:

0600 black very thin solid line

4109 depth gray solid fill

Simplified Symbology:

0600 black very thin solid line

4109 depth gray solid fill

Point

storage bunker/storage mound

Full Chart Symbology:

2076 red brown filled semicircle

Simplified Symbology:

2076 red brown filled semicircle

AM070**AM070**

Area

tank

Full Chart Symbology:

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Point

tank

Full Chart Symbology:

2019 black sm filled cir

Simplified Symbology:

2019 black sm filled cir

AM080**AM080**

Point

water tower

Full Chart Symbology:

2078 basic blue dot inside cir

Simplified Symbology:

2078 basic blue dot inside cir

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AN010**AN010****Line**

railroad -dismantled **exs=8**

Full Chart Symbology:	3114 black very thin short dash line
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Simplified Symbology:	3114 black very thin short dash line
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railroad -not operational/narrow/multiple **exs=5or6or7 AND fco<>0and<>3 AND rgc=2**

Full Chart Symbology:	3137 black dash line w/ double tics alt sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/narrow/single **exs=5or6or7 AND fco=0or3 AND rgc=2**

Full Chart Symbology:	3135 black dash line w/ single tics alt sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/normal/multiple **exs=5or6or7 AND fco<>0and<>3 AND rgc<>2**

Full Chart Symbology:	3133 black dash line w/ double tics both sides
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Simplified Symbology:	3117 black thin dash line
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railroad -not operational/normal/single **exs=5or6or7 AND fco=0or3 AND rgc<>2**

Full Chart Symbology:	3131 black dash line w/ single tics both sides
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Simplified Symbology:	3117 black thin dash line
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railroad -operational/narrow/multiple **exs=0or28 AND fco<>0and<>3 AND rgc=2**

Full Chart Symbology:	3129 black solid line w/ double tics alt sides
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Simplified Symbology:	3112 black thin solid line
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railroad -operational/narrow/single **exs=0or28 AND fco=0or3 AND rgc=2**

Full Chart Symbology:	3125 black solid line w/ single tics alt sides
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Simplified Symbology:	3112 black thin solid line
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VMap Level 2

Point Symbology	Line Symbology	Area Symbology
AN010		AN010
railroad -operational/normal/multiple		exs=0or28 AND fco<>0and<>3 AND rgc<>2
Full Chart Symbology:	3127 black solid line w/ double tics both sides	
Simplified Symbology:	3112 black thin solid line	
railroad -operational/normal/single		exs=0or28 AND fco=0or3 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	3112 black thin solid line	
AN050		AN050
Line		
railroad siding/railroad spur - non-operational/narrow		exs<>0and<>28 AND rgc=2
Full Chart Symbology:	3135 black dash line w/ single tics alt sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - non-operational/normal		exs<>0and<>28 AND rgc<>2
Full Chart Symbology:	3131 black dash line w/ single tics both sides	
Simplified Symbology:	3116 black very thin dash line	
railroad siding/railroad spur - operational/narrow		exs=0or28 AND rgc=2
Full Chart Symbology:	3125 black solid line w/ single tics alt sides	
Simplified Symbology:	0600 black very thin solid line	
railroad siding/railroad spur - operational/normal		exs=0or28 AND rgc<>2
Full Chart Symbology:	3123 black solid line w/ single tics both sides	
Simplified Symbology:	0600 black very thin solid line	

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AN060**AN060****Area****railroad yard/marshalling yard****Full Chart Symbology:**

0600 black very thin solid line

0802 gray solid fill

Simplified Symbology:

0600 black very thin solid line

0802 gray solid fill

AN075**AN075****Point****railroad turntable****Full Chart Symbology:**

2080 black rt diag line inside cir

Simplified Symbology:

2080 black rt diag line inside cir

AP010**AP010****Line****cart track****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

AP020**AP020****Line****interchange****Full Chart Symbology:**

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

0600 black very thin solid line

**MIL-DTL-89045A w/Amendment 1
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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AP030**AP030****Line**

road - all weather, hard surface, no median, 1 ln **ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6023 100% red brown thin line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, hard surface, no median, 2-3 Ins **ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6024 100% red brown line

Simplified Symbology:

1855 red brown thin solid line

road - all weather, hard surface, no median, 4 Ins **ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2**

Full Chart Symbology:

6022 100% red brown thick line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - all weather, loose surface, no median **med<>1 AND rst=2or3 AND wtc<>2**

Full Chart Symbology:

6025 100% red brown thin line w/ gray dash

Simplified Symbology:

1855 red brown thin solid line

road - divided w/ median **med=1**

Full Chart Symbology:

6021 100% red brown cased line w/ gray solid

Simplified Symbology:

1855 red brown thin solid line

road - fair weather, no median **med<>1 AND wtc=2**

Full Chart Symbology:

6026 gray vy thin solid line

Simplified Symbology:

1855 red brown thin solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AP050**AP050****Line****trail****Full Chart Symbology:**

0656 gray very thin dash line

Simplified Symbology:

0656 gray very thin dash line

AQ010**AQ010****Line****aerial cableway lines/ski lift lines****Full Chart Symbology:**

0657 gray thick dash line

Simplified Symbology:

0657 gray thick dash line

AQ040**AQ040****Line****bridge/overpass/viaduct****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**bridge/overpass/viaduct****Full Chart Symbology:**

2083 black double line with flares on ends

Simplified Symbology:

6041 black cir w/ "B" inside

AQ060**AQ060****Point****control tower****Full Chart Symbology:**

2088 purple dot inside cir

Simplified Symbology:

2088 purple dot inside cir

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AQ065**AQ065****Point****culvert****Full Chart Symbology:**

2090 black cir w/ "C" inside

Simplified Symbology:

2090 black cir w/ "C" inside

AQ070**AQ070****Line****ferry crossing****Full Chart Symbology:**

3115 black thin short dash line

Simplified Symbology:

3115 black thin short dash line

Point**ferry crossing****Full Chart Symbology:**

1005 black "F" inside boat

Simplified Symbology:

0078 black sm cir

AQ110**AQ110****Point****mooring mast****Full Chart Symbology:**

2094 purple solid ellipse extending from pole

Simplified Symbology:

6049 purple filled circle

**MIL-DTL-89045A w/Amendment 1
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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AQ113

AQ113

Line

pipeline - abandoned/under construction - water exs=5or6 AND pro=116

Full Chart Symbology:	4316 100% cyan blue very thin long dash line
Simplified Symbology:	4311 100% cyan blue very thin solid line

pipeline - on ground/elevated - not water loc=0or8or25 AND pro<>116

Full Chart Symbology:	1314 black very thin solid line
Simplified Symbology:	1314 black very thin solid line

pipeline - on ground/elevated - water exs<>5and<>6 AND loc=0or8or25 AND pro=116

Full Chart Symbology:	4311 100% cyan blue very thin solid line
Simplified Symbology:	4311 100% cyan blue very thin solid line

pipeline - underground - not water loc=4 AND pro<>116

Full Chart Symbology:	6040 black very thin long dash line
Simplified Symbology:	6040 black very thin long dash line

pipeline - underground - water exs<>5and<>6 AND loc=4 AND pro=116

Full Chart Symbology:	6037 100% cyan blue very thin short dash line
Simplified Symbology:	6037 100% cyan blue very thin short dash line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AQ116**AQ116****Area****pumping station****Full Chart Symbology:**

4262 purple thin dash line

Simplified Symbology:

4262 purple thin dash line

Point**pumping station****Full Chart Symbology:**

2097 black sm square w/ "P" inside

Simplified Symbology:

2036 black sm filled square

AQ130**AQ130****Line****tunnel****Full Chart Symbology:**

3117 black thin dash line

Simplified Symbology:

3117 black thin dash line

Point**tunnel****Full Chart Symbology:**

2100 black box w/ round top w/ "T" inside

Simplified Symbology:

2100 black box w/ round top w/ "T" inside

AQ135**AQ135****Area****vehicle stopping area/rest area****Full Chart Symbology:**

0600 black very thin solid line

6008 orange left diag line patt fill

Simplified Symbology:

0600 black very thin solid line

4175 lt orange solid fill

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AQ140**AQ140****Area****vehicle storage/parking area****Full Chart Symbology:**

0600 black very thin solid line

6008 orange left diag line patt fill

Simplified Symbology:

0600 black very thin solid line

4175 lt orange solid fill

AT010**AT010****Point****disk/dish****Full Chart Symbology:**

2102 black satellite dish symbol

Simplified Symbology:

0185 black topmark special X

AT030**AT030****Line****power transmission line****Full Chart Symbology:**

3074 purple thin solid line w/ dots on each side

Simplified Symbology:

4262 purple thin dash line

AT050**AT050****Area****communication building****Full Chart Symbology:**

4003 beige solid fill

Simplified Symbology:

4003 beige solid fill

Point**communication building****Full Chart Symbology:**

2106 black filled square w/ outward ticks

Simplified Symbology:

2036 black sm filled square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

AT060**AT060****Line****telephone line/telegraph line****Full Chart Symbology:**

3096 gray very thin dash line w/ dot

Simplified Symbology:

3086 gray very thin short dash line

AT080**AT080****Point****communication tower****Full Chart Symbology:**

6019 black tower with "x" inside

Simplified Symbology:

0185 black topmark special X

BA010**BA010****Line****coastline.shoreline - not mangrove or marsh****slt<>6and<>8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

coastline/shoreline - mangrove, marsh**slt=6or8****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

BA020**BA020****Area****foreshore****Full Chart Symbology:**

0803 yellow-green solid fill

Simplified Symbology:

0803 yellow-green solid fill

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BA030**BA030**

Area

island

Full Chart Symbology:

0822 It brown solid fill

Simplified Symbology:

0822 It brown solid fill

BA040**BA040**

Area

water (except inland)

Full Chart Symbology:

0805 depth white fill

Simplified Symbology:

0805 depth white fill

BB010**BB010**

Area

anchorage

Full Chart Symbology:

0902 It magenta anchor

0711 magenta dash/chevron line w/anchor
symbol
Simplified Symbology:

0902 It magenta anchor

0634 magenta very thin dash line

Point

anchorage

Full Chart Symbology:

0036 magenta anchor

Simplified Symbology:

0036 magenta anchor

**MIL-DTL-89045A w/Amendment 1
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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BB040**BB040****Area****breakwater/groyne****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**breakwater/groyne****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

BB090**BB090****Area****drydock****Full Chart Symbology:**

3112 black thin solid line

Simplified Symbology:

3112 black thin solid line

BB140**BB140****Area****jetty****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

Line**jetty****Full Chart Symbology:**

0623 dk gray thin solid line

Simplified Symbology:

0623 dk gray thin solid line

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BB190**BB190****Area****pier/wharf/quay**

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

Line**pier/wharf/quay**

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

BB230**BB230****Line****seawall**

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

BB240**BB240****Area****slipway/patent slip**

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

Line**slipway/patent slip**

Full Chart Symbology:	0623 dk gray thin solid line
Simplified Symbology:	0623 dk gray thin solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BD100**BD100**

Area

pile/piling/post

Full Chart Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Simplified Symbology:

0680 black thin dotted line

0810 depth med blue solid fill

Point

pile/piling/post

Full Chart Symbology:

2264 black cir

Simplified Symbology:

2264 black cir

BD120**BD120**

Area

reef

Full Chart Symbology:

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

Line

reef

Full Chart Symbology:

3186 black jagged line

Simplified Symbology:

3112 black thin solid line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BD130**BD130****Point****rock - awash****vrr=2****Full Chart Symbology:**

6044 black plus sign with 4 dots

Simplified Symbology:

6044 black plus sign with 4 dots

rock - unk/covers/uncovers**vrr=0or8****Full Chart Symbology:**

0063 black 6 point asterisk

Simplified Symbology:

0063 black 6 point asterisk

BD180**BD180****Point****wreck****Full Chart Symbology:**

2212 black solid filled shipwreck symbol

Simplified Symbology:

0122 black topmark one cone up

BE015**BE015****Line****depth contour****Full Chart Symbology:**

3082 gray very thin solid line

Simplified Symbology:

3082 gray very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH010**BH010****Line**

aqueduct - abandoned/under construction **exs=5or6**

Full Chart Symbology:

4316 100% cyan blue very thin long dash line

Simplified Symbology:

4316 100% cyan blue very thin long dash line

aqueduct - surface/elevated **exs<>5and<>6 AND loc=0or8or25**

Full Chart Symbology:

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

aqueduct - underground **exs<>5and<>6 AND loc=4**

Full Chart Symbology:

6037 100% cyan blue very thin short dash line

Simplified Symbology:

6037 100% cyan blue very thin short dash line

Point**aqueduct****Full Chart Symbology:**

1007 basic blue cir

Simplified Symbology:

1007 basic blue cir

BH015**BH015****Area****bog****Full Chart Symbology:**

6009 lt blue marsh/swamp patt fill

Simplified Symbology:

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH020**BH020**

Area

canal - navigable; perennial**exs=32 AND hyc=8**

Full Chart Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill
Simplified Symbology:	1656 100% cyan blue very thin solid line	0820 depth pale blue solid fill

canal - not navigable or not perennial**exs<>32 OR hyc<>8**

Full Chart Symbology:	4182 100% cyan blue very thin short dash line	0820 depth pale blue solid fill
Simplified Symbology:	4182 100% cyan blue very thin short dash line	0820 depth pale blue solid fill

Line

canal - not perennial**hyc<>8**

Full Chart Symbology:	3167 100% cyan blue thin short dash line
Simplified Symbology:	3108 100% cyan blue thin solid line

canal - perennial**hyc=8**

Full Chart Symbology:	3108 100% cyan blue thin solid line
Simplified Symbology:	3108 100% cyan blue thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH030**BH030****Area****ditch****Full Chart Symbology:**

0821 depth lt blue solid fill

Simplified Symbology:

0821 depth lt blue solid fill

Line**ditch - intermittent****hyc=6****Full Chart Symbology:**

0669 depth med blue very thin dash line

Simplified Symbology:

0621 depth med blue very thin solid line

ditch - perennial, unknown**hyc=0or8****Full Chart Symbology:**

0621 depth med blue very thin solid line

Simplified Symbology:

0621 depth med blue very thin solid line

BH040**BH040****Area****filtration beds/aeration beds****Full Chart Symbology:**

0600 black very thin solid line

6003 basic blue lft diag line patt fill

Simplified Symbology:

0600 black very thin solid line

6042 100% cyan blue solid fill

BH050**BH050****Area****fish hatchery/fish farm/marine farm****Full Chart Symbology:**

0600 black very thin solid line

0810 depth med blue solid fill

Simplified Symbology:

0600 black very thin solid line

0810 depth med blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH060**BH060****Line****flume****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

BH070**BH070****Line****ford****Full Chart Symbology:**

3114 black very thin short dash line

Simplified Symbology:

3114 black very thin short dash line

Point**ford****Full Chart Symbology:**

2087 black opposing solid triangles pnting in

Simplified Symbology:

6048 gray filled circle

BH077**BH077****Area****hummock****Full Chart Symbology:**

1511 brown thin line outward ticks

Simplified Symbology:

3014 brown solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH080**BH080**

Area

lake/pond - dry, intermittent**hyc=3or6****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

lake/pond - perennial, unknown**hyc=0or8****Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

BH090**BH090**

Area

land subject to inundation - controlled**exs=48****Full Chart Symbology:**

1655 basic blue thin dash line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

land subject to inundation - natural**exs=0or45****Full Chart Symbology:**

4266 basic blue very thin solid line

4078 basic blue inundation area patt fill

Simplified Symbology:

4266 basic blue very thin solid line

4301 reserved very dk blue solid fill

BH095**BH095**

Area

marsh/swamp**Full Chart Symbology:**

4080 basic blue marsh/swamp patt fill

Simplified Symbology:

6007 midnight blue solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH110**BH110**

Line

penstock - surface/elevated**loc=0or8or25****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4311 100% cyan blue very thin solid line

penstock - underground**loc=4****Full Chart Symbology:**

6037 100% cyan blue very thin short dash line

Simplified Symbology:

4311 100% cyan blue very thin solid line

BH120**BH120**

Line

rapids**Full Chart Symbology:**

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point

rapids**Full Chart Symbology:**

2231 UI very dk blue open diamond

Simplified Symbology:

2231 UI very dk blue open diamond

BH130**BH130**

Area

reservoir**Full Chart Symbology:**

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line

4154 31% cyan blue solid fill

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH135**BH135**

Area

rice field

Full Chart Symbology:

4085 basic blue rice patt fill

Simplified Symbology:

6002 steel blue solid fill

BH140**BH140**

Area

river/stream - dry, intermittent

hyc=3or6
Full Chart Symbology:

4182 100% cyan blue very thin short dash line 4079 31% cyan blue stipple dot patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

river/stream - perennial, unknown

hyc=0or8
Full Chart Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 4154 31% cyan blue solid fill

Line

river/stream - dry, intermittent

hyc=3or6
Full Chart Symbology:

4182 100% cyan blue very thin short dash line

Simplified Symbology:

1656 100% cyan blue very thin solid line

river/stream - perennial, unknown

hyc=0or8
Full Chart Symbology:

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH145**BH145****Point****river stream vanishing point****Full Chart Symbology:**

2232 basic blue solid arrowhead

Simplified Symbology:

2232 basic blue solid arrowhead

BH150**BH150****Area****salt pan****Full Chart Symbology:**

4182 100% cyan blue very thin short dash line 1611 depth med blue dot patt fill

Simplified Symbology:

4182 100% cyan blue very thin short dash line 0810 depth med blue solid fill

BH155**BH155****Area****salt evaporator****Full Chart Symbology:**

1656 100% cyan blue very thin solid line 0911 depth med blue grid patt fill

Simplified Symbology:

1656 100% cyan blue very thin solid line 0810 depth med blue solid fill

BH160**BH160****Area****sebkha****Full Chart Symbology:**

4289 basic blue stipple dot patt fill

Simplified Symbology:

4071 basic blue solid fill

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BH170

BH170

Point

spring/water-hole - not perennial/dry

hyc<>0and<>8

Full Chart Symbology:

6031 basic blue open cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

spring/water-hole - perennial

hyc=0or8

Full Chart Symbology:

1008 basic blue filled cir w/ tail below

Simplified Symbology:

2003 basic blue solid filled cir

BH180

BH180

Line

waterfall

Full Chart Symbology:

0682 UI very dk blue very thin solid line

Simplified Symbology:

0682 UI very dk blue very thin solid line

Point

waterfall

Full Chart Symbology:

1009 UI very dk blue filled diamond

Simplified Symbology:

2003 basic blue solid filled cir

BI010

BI010

Point

cistern

Full Chart Symbology:

1010 basic blue solid square

Simplified Symbology:

1010 basic blue solid square

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BI020**BI020****Area****dam/weir****Full Chart Symbology:**

4156 black solid fill

Simplified Symbology:

4156 black solid fill

Line**dam/weir****Full Chart Symbology:**

3113 black solid line

Simplified Symbology:

3113 black solid line

Point**dam/weir****Full Chart Symbology:**

2238 black vertical heavy weight line

Simplified Symbology:

0078 black sm cir

BI030**BI030****Area****lock****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**lock****Full Chart Symbology:**

6047 black open double arrowhead

Simplified Symbology:

6047 black open double arrowhead

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BI040**BI040****Line****sluice gate****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**sluice gate****Full Chart Symbology:**

2239 black open arrowhead

Simplified Symbology:

2239 black open arrowhead

BI050**BI050****Area****water intake tower****Full Chart Symbology:**

0600 black very thin solid line

Simplified Symbology:

0600 black very thin solid line

Point**water intake tower****Full Chart Symbology:**

0024 black dot inside cir

Simplified Symbology:

0024 black dot inside cir

BJ020**BJ020****Area****moraine****Full Chart Symbology:**

1406 brown thin solid line

4032 brown stipple dot patt fill

Simplified Symbology:

0804 brown solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BJ030**BJ030****Area****glacier**

Full Chart Symbology:	1655 basic blue thin dash line	4151 basic blue ripple jagged patt fill
Simplified Symbology:	1655 basic blue thin dash line	4151 basic blue ripple jagged patt fill

BJ040**BJ040****Line****ice cliff**

Full Chart Symbology:	0755 UI vy dk blue vy thin line w/vert inward ticks
Simplified Symbology:	3047 basic blue thin long dash line

BJ060**BJ060****Point****ice peak/nunatak**

Full Chart Symbology:	2242 med blue 8 pt asterisk w/ open center
Simplified Symbology:	2242 med blue 8 pt asterisk w/ open center

BJ065**BJ065****Area****ice shelf**

Full Chart Symbology:	4265 basic blue thin solid line	0810 depth med blue solid fill
Simplified Symbology:	4265 basic blue thin solid line	0810 depth med blue solid fill

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

BJ070**BJ070**

Area

pack ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ080**BJ080**

Area

polar ice

Full Chart Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

Simplified Symbology:

4265 basic blue thin solid line

0810 depth med blue solid fill

BJ100**BJ100**

Area

snow field/ice field

Full Chart Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

Simplified Symbology:

0669 depth med blue very thin dash line

0820 depth pale blue solid fill

BJ110**BJ110**

Area

tundra

Full Chart Symbology:

6045 yellow-green marsh/swamp patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****Line**

contour line (land) - depression mound **hqc=5or8 AND mcc<>103**

Full Chart Symbology:

1307 It brown vy thin line w/ ticks on inside

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - index approximate **hqc=7 AND mcc<>103**

Full Chart Symbology:

4306 It brown very thin long dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - index **hqc=0or1 AND mcc<>103**

Full Chart Symbology:

6011 It brown very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate approximate **hqc=12 AND mcc<>103**

Full Chart Symbology:

4307 It brown very very thin long dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate depression mound **hqc=6or9 AND mcc<>103**

Full Chart Symbology:

4305 It brown very very thin line w/ tick marks

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - intermediate **hqc=2 AND mcc<>103**

Full Chart Symbology:

4304 It brown very very thin solid line

Simplified Symbology:

6011 It brown very thin solid line

contour line (land) - supplementary 1/2, approx, form lines **hqc=3or4or13 AND mcc<>103**

Full Chart Symbology:

1306 It brown very very thin dash line

Simplified Symbology:

6011 It brown very thin solid line

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

CA010**CA010****contour line (land) - supplementary 1/4****hqc=14 AND mcc<>103****Full Chart Symbology:**

4308 It brown very very thin short dash line

Simplified Symbology:

6011 It brown very thin solid line

contour line (snow\ice) - index approximate**hqc=7 AND mcc=103****Full Chart Symbology:**

4316 100% cyan blue very thin long dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - index depression mound**hqc=5or8 AND mcc=103****Full Chart Symbology:**

4314 100% cyan blue vy thin line w/ ticks on inside

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - index unknown**hqc=0or1 AND mcc=103****Full Chart Symbology:**

4311 100% cyan blue very thin solid line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate approximate**hqc=12 AND mcc=103****Full Chart Symbology:**

4317 100% cyan blue very very thin long dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate depression mound**hqc=6or9 AND mcc=103****Full Chart Symbology:**

4315 100% cyan blue very very thin line w/ ticks

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snow\ice) - intermediate**hqc=2 AND mcc=103****Full Chart Symbology:**

4312 100% cyan blue very very thin solid line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

CA010**CA010**

contour line (snowice) - supplementary 1/2, approx, form lines, approx hqc=3or4or13 AND mcc=103

Full Chart Symbology:

4313 100% cyan blue very very thin dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

contour line (snowice) - supplementary 1/4 hqc=14 AND mcc=103

Full Chart Symbology:

4318 100% cyan blue very very thin short dash line

Simplified Symbology:

4312 100% cyan blue very very thin solid line

CA030**CA030****Point**

spot elevation - accurate ela=1

Full Chart Symbology:

2243 black sm filled cir

Simplified Symbology:

2243 black sm filled cir

spot elevation - not accurate ela<>1

Full Chart Symbology:

1011 black sm filled cir beside +-

Simplified Symbology:

1011 black sm filled cir beside +-

DA005**DA005****Area**

asphalt lake

Full Chart Symbology:

0600 black very thin solid line

4100 lt gray solid fill

Simplified Symbology:

0600 black very thin solid line

4100 lt gray solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DA010**DA010****Area**

ground surface element - boulders, gravel **mcc=46or8**

Full Chart Symbology:

0604 feature brown very thin solid line

4034 It brown heavy mixed stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 It brown solid fill

ground surface element - lava **mcc=52**

Full Chart Symbology:

0612 It gray very thin solid line

4108 It gray land cover/ripple patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 It brown solid fill

ground surface element - not rock, not lava, not sand **mcc=<>8and<>46and<>52and<>88**

Full Chart Symbology:

0604 feature brown very thin solid line

0822 It brown solid fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 It brown solid fill

ground surface element - sand **mcc=88**

Full Chart Symbology:

4220 beige thin solid line

4005 beige stipple dot patt fill

Simplified Symbology:

0604 feature brown very thin solid line

0822 It brown solid fill

DB010**DB010****Line****bluff/cliff/escarpment****Full Chart Symbology:**

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

DB030**DB030****Point****cave****Full Chart Symbology:**

2247 black diag line w/ "L" on top

Simplified Symbology:

2247 black diag line w/ "L" on top

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DB060**DB060**

Area

crevice/crevasse - earthen**mcc=0or30**

Full Chart Symbology:

4030 brown left diag thin line patt fill

Simplified Symbology:

0804 brown solid fill

crevice/crevasse - snow/ice**mcc=103**

Full Chart Symbology:

6046 100% cyan blue left diag thin line patt fill

Simplified Symbology:

0820 depth pale blue solid fill

Line

crevice/crevasse - earthen**mcc=0or30**

Full Chart Symbology:

3024 brown very thin solid line

Simplified Symbology:

3024 brown very thin solid line

crevice/crevasse - snow/ice**mcc=103**

Full Chart Symbology:

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

DB070**DB070**

Line

cut

Full Chart Symbology:

6014 dk tan vy thin line w/ ticks

Simplified Symbology:

4217 dk tan very thin solid line

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DB090**DB090****Area****embankment/fill****Full Chart Symbology:**

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

Line**embankment/fill****Full Chart Symbology:**

1516 black thin line outward ticks

Simplified Symbology:

3112 black thin solid line

DB100**DB100****Line****esker****Full Chart Symbology:**

3003 tan very thin solid line

Simplified Symbology:

3003 tan very thin solid line

DB110**DB110****Line****fault****Full Chart Symbology:**

3026 tan very thin solid line

Simplified Symbology:

3026 tan very thin solid line

DB115**DB115****Point****geothermal feature****Full Chart Symbology:**

2248 brown sm filled cir w/ tail below

Simplified Symbology:

2111 brown filled cir

MIL-DTL-89045A w/Amendment 1
APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DB150

DB150

Point

mountain pass

Full Chart Symbology:

2249 black)(symbol

Simplified Symbology:

2249 black)(symbol

DB160

DB160

Area

rock strata/rock formation

Full Chart Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Simplified Symbology:

1573 dk gray very thin solid line

0804 brown solid fill

Point

rock strata/rock formation

Full Chart Symbology:

2250 brown 6 pt asterisk w/ open center

Simplified Symbology:

2250 brown 6 pt asterisk w/ open center

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DB170**DB170****Area****sand dune/sand hills - crescent****ssc=22****Full Chart Symbology:**

4009 beige sand dune crescent

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - lateral**ssc=26****Full Chart Symbology:**

4010 beige sand dune lateral

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - mounds**ssc=27****Full Chart Symbology:**

4011 beige sand dune mound

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - ripple**ssc=28****Full Chart Symbology:**

4012 beige sand dune ripple

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - star**ssc=29****Full Chart Symbology:**

4013 beige sand dune star

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - transverse**ssc=30****Full Chart Symbology:**

4014 beige sand dune transverse

Simplified Symbology:

1903 rose solid fill

sand dune/sand hills - unknown**ssc=0****Full Chart Symbology:**

4008 beige sand dune default

Simplified Symbology:

1903 rose solid fill

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

DB180**DB180****Point****volcano****Full Chart Symbology:**

2251 brown sm open cir w/ eight tics outside

Simplified Symbology:

2251 brown sm open cir w/ eight tics outside

EA010**EA010****Area****cropland - dry****veg=1****Full Chart Symbology:**

4018 lt tan solid fill

Simplified Symbology:

4018 lt tan solid fill

Full Chart Symbology:

3026 tan very thin solid line

6001 tan dot patt fill

Simplified Symbology:

3026 tan very thin solid line

cropland - other**veg<>1****Full Chart Symbology:**

6012 pale green solid fill

Simplified Symbology:

6012 pale green solid fill

Full Chart Symbology:

1412 yellow-green thin solid line

4067 yellow-green dot patt fill

Simplified Symbology:

1412 yellow-green thin solid line

EA020**EA020****Line****hedgerow****Full Chart Symbology:**

3036 yellow-green thin line w/rectangles one side

Simplified Symbology:

1412 yellow-green thin solid line

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

EA030**EA030**

Area

nursery

Full Chart Symbology:

1412 yellow-green thin solid line

4230 yellow-green squares in grid patt fill

Simplified Symbology:

1412 yellow-green thin solid line

0805 depth white fill

EA040**EA040**

Area

orchard/plantation

Full Chart Symbology:

4051 radar dk green squares in grid patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EA050**EA050**

Area

vineyards

Full Chart Symbology:

4054 radar dk green offset grid/dot patt fill

Simplified Symbology:

4292 radar dk green thin solid line

0805 depth white fill

EB010**EB010**

Area

grassland

Full Chart Symbology:

4068 yellow-green grass patt fill

Simplified Symbology:

0803 yellow-green solid fill

EB020**EB020**

Area

scrub/brush

Full Chart Symbology:

4063 yellow-green stipple dot patt fill

Simplified Symbology:

0803 yellow-green solid fill

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

EC010**EC010**

Area

bamboo/cane

Full Chart Symbology:

4052 yellow-green bamboo patt fill

Simplified Symbology:

0803 yellow-green solid fill

EC020**EC020**

Area

oasis - not palm

veg<>17
Full Chart Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

oasis - palm

veg=17
Full Chart Symbology:

2252 yellow-green palm tree symbol 1412 yellow-green thin solid line

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline 1412 yellow-green thin solid line

Point

oasis - not palm

veg<>17
Full Chart Symbology:

0150 yellow-green filled sm cir w/ gray outline

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

oasis - palm

veg=17
Full Chart Symbology:

2252 yellow-green palm tree symbol

Simplified Symbology:

0150 yellow-green filled sm cir w/ gray outline

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

EC030**EC030**

Area

**trees - casuarina, coniferous, palm, filao, evergreen,
eucalyptus, cypress**

veg=11or12or17or18or25or29or38

Full Chart Symbology:	
	1606 yellow-green triangle tree patt fill
Simplified Symbology:	
4292 radar dk green thin solid line	0803 yellow-green solid fill

trees - nipa palm, mangrove

veg=16or19

Full Chart Symbology:	
	1613 yellow-green nipa patt fill
Simplified Symbology:	
1655 basic blue thin dash line	0803 yellow-green solid fill

trees - unknown, deciduous, mixed, other

veg=0or24or50or999

Full Chart Symbology:	
	1605 yellow-green tree-top patt fill
Simplified Symbology:	
4292 radar dk green thin solid line	0803 yellow-green solid fill

Point

trees

Full Chart Symbology:	
	2253 yellow-green triangle tree symbol
Simplified Symbology:	
0522 green open triangle	

EC040**EC040**

Line

cleared way/cut line/firebreak

Full Chart Symbology:	
	3076 lt gray thin solid line
Simplified Symbology:	
3076 lt gray thin solid line	

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

FA000**FA000****Line****administrative boundary - international****use=23****Full Chart Symbology:**

1310 black one long dash two short dash line

Simplified Symbology:

1310 black one long dash two short dash line

administrative boundary - primary, unknown**use=0or26****Full Chart Symbology:**

1311 black long dash short dash line

Simplified Symbology:

1311 black long dash short dash line

FA001**FA001****Area****administrative area****Full Chart Symbology:**

0633 lt gray thin dash line

Simplified Symbology:

0633 lt gray thin dash line

FA020**FA020****Line****armistice line****Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA030**FA030****Line****cease-fire line****Full Chart Symbology:**

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

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VMap Level 2

Point Symbology

Line Symbology

Area Symbology

FA060**FA060**

Line

de facto boundary

Full Chart Symbology:

3119 black very thin long dash line

Simplified Symbology:

3119 black very thin long dash line

FA070**FA070**

Area

demilitarized zone

Full Chart Symbology:

3143 black double dash very thin lines

Simplified Symbology:

3119 black very thin long dash line

FA090**FA090**

Line

geophysical prospecting grid

Full Chart Symbology:

0612 lt gray very thin solid line

Simplified Symbology:

0612 lt gray very thin solid line

FA110**FA110**

Line

international date line

Full Chart Symbology:

3120 black thin long dash line

Simplified Symbology:

3120 black thin long dash line

FA170**FA170**

Area

zone of occupation

Full Chart Symbology:

3118 black dash line

Simplified Symbology:

3118 black dash line

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APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

GB005

GB005

Area

airport/airfield

Full Chart Symbology:

4183 aero-blue solid line

Simplified Symbology:

4183 aero-blue solid line

Point

airport/airfield - not operational

exs<>28

Full Chart Symbology:

2268 lt gray airplane

Simplified Symbology:

2268 lt gray airplane

airport/airfield - operational; military

exs=28 AND use=8or22

Full Chart Symbology:

2269 lt red brown airplane

Simplified Symbology:

2269 lt red brown airplane

airport/airfield - operational; non military

exs=28 AND use<>8and<>22

Full Chart Symbology:

2267 aero-blue airplane

Simplified Symbology:

2267 aero-blue airplane

GB010

GB010

Point

airport lighting

Full Chart Symbology:

1012 aero-blue solid filled star

Simplified Symbology:

1012 aero-blue solid filled star

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APPENDIX E**

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

GB015**GB015**

Area

apron/hardstand**Full Chart Symbology:**

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 lt gray solid fill

GB045**GB045**

Area

overrun/stopway**Full Chart Symbology:**

3073 aero-blue thin short dash line

4098 aero-blue wide rt diag line patt fill

Simplified Symbology:

3073 aero-blue thin short dash line

GB055**GB055**

Area

runway**Full Chart Symbology:**

4089 aero-blue solid fill

Simplified Symbology:

4089 aero-blue solid fill

GB075**GB075**

Area

taxiway**Full Chart Symbology:**

3070 aero-blue thin solid line

Simplified Symbology:

3070 aero-blue thin solid line

ZB030**ZB030**

Point

boundary monument**Full Chart Symbology:**

2278 black dot in square

Simplified Symbology:

2278 black dot in square

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APPENDIX E

VMap Level 2

Point Symbology

Line Symbology

Area Symbology

ZB035

ZB035

Point

control point/control station

Full Chart Symbology:

2279 black triangle w/ dot inside

Simplified Symbology:

2279 black triangle w/ dot inside

ZD020

ZD020

Area

void collection area

Full Chart Symbology:

3082 gray very thin solid line

4105 lt gray rt diag thin line patt fill

Simplified Symbology:

3082 gray very thin solid line

4100 lt gray solid fill

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VVOD

Point Symbology

Line Symbology

Area Symbology

AA040**AA040****Point****rig / superstructure high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7000 red vo rig symbol - GTRI

rig / superstructure light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

rig / superstructure light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

rig / superstructure**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7000 red vo rig symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
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VVOD

Point Symbology

Line Symbology

Area Symbology

AB000**AB000****Point****disposal site / waste pile high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7002 red vo waste symbol - GTRI

disposal site / waste pile light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

disposal site / waste pile light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

disposal site / waste pile**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7002 red vo waste symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AC000**AC000****Point****processing plant / treatment plant high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7004 red vo plant symbol - GTRI

processing plant / treatment plant light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

processing plant / treatment plant light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

processing plant / treatment plant**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7004 red vo plant symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AC010**AC010****Point****blast furnace high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7006 red vo furnace symbol - GTRI

blast furnace light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

blast furnace light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

blast furnace**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7006 red vo furnace symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
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VVOD

Point Symbology

Line Symbology

Area Symbology

AC020**AC020****Point****catalytic cracker high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7008 red vo cracker symbol - GTRI

catalytic cracker light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

catalytic cracker light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

catalytic cracker**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7008 red vo cracker symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
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VVOD

Point Symbology

Line Symbology

Area Symbology

AD010**AD010**

Line

power plant / power station

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

power plant / power station high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7010 red vo power plant symbol - GTRI

power plant / power station light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

power plant / power station light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

power plant / power station

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7010 red vo power plant symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AD030**AD030**

Point

substation / transformer yard high

hgt=-32767 OR hgt>=304

Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7012 red vo substation symbol - GTRI

substation / transformer yard light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304

Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

substation / transformer yard light

atn=3 AND hgt>0and<304

Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

substation / transformer yard

hgt>0and<304

Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7012 red vo substation symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AF010**AF010**

Line

chimney / smokestack

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

chimney / smokestack high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7014 red vo chimney symbol - GTRI

chimney / smokestack light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

chimney / smokestack light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

chimney / smokestack

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7014 red vo chimney symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF020**AF020**

Line

conveyor

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

conveyor high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7016 red vo conveyor symbol - GTRI

conveyor light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

conveyor light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

conveyor

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7016 red vo conveyor symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF030**AF030****Point****cooling tower high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7018 red vo cooling tower symbol - GTRI

cooling tower light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

cooling tower light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

cooling tower**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7018 red vo cooling tower symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF040**AF040****Point****crane high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7020 red vo crane symbol - GTRI

crane light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

crane light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

crane**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7020 red vo crane symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF050**AF050****Point****dredge / powershovel / dragline high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7022 red vo dredge symbol - GTRI

dredge / powershovel / dragline light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

dredge / powershovel / dragline light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

dredge / powershovel / dragline**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7022 red vo dredge symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF070**AF070****Point****flare pipe high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7024 red vo flare pipe symbol - GTRI

flare pipe light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

flare pipe light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

flare pipe**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7024 red vo flare pipe symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AF080**AF080****Point****hopper high high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7026 red vo hopper symbol - GTRI

hopper light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

hopper light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

hopper**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7026 red vo hopper symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AH050**AH050**

Line

fortification

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

fortification high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7028 red vo fort symbol - GTRI

fortification light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

fortification light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

fortification

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7028 red vo fort symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AJ050**AJ050****Point****windmill high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7032 red vo windmill symbol - GTRI

windmill light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

windmill light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

windmill**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7032 red vo windmill symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AJ051**AJ051**

Line

windmotor

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

windmotor high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7034 red vo windmotor symbol - GTRI

windmotor light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

windmotor light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7145 red vo light component high - GTRI

windmotor

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7034 red vo windmotor symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AK020**AK020****Point****amusement park attraction high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7036 red vo park symbol - GTRI

amusement park attraction light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

amusement park attraction light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

amusement park attraction**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7036 red vo park symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
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VVOD

Point Symbology

Line Symbology

Area Symbology

AK150**AK150****Point****ski jump high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7038 red vo ski symbol - GTRI

ski jump light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

ski jump light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

ski jump**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7038 red vo ski symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AK160**AK160**

Line

stadium / amphitheater

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

stadium / amphitheater high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7040 red vo stadium symbol - GTRI

stadium / amphitheater light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

stadium / amphitheater light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

stadium / amphitheater

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7040 red vo stadium symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AL015**AL015**

Line

building

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

building high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7044 red vo building symbol - GTRI

building light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

building light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

building

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7044 red vo building symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AL018**AL018**

Line

building superstructure addition

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

building superstructure addition high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7044 red vo building symbol - GTRI

building superstructure addition light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

building superstructure addition light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

building superstructure addition

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7044 red vo building symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AL050**AL050****Point****display sign high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7048 red vo sign symbol - GTRI

display sign light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

display sign light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

display sign**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7048 red vo sign symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AL110**AL110**

Line

light standard / light support

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

light standard / light support high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7050 red vo light symbol - GTRI

light standard / light support light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light standard / light support light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light standard / light support

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7050 red vo light symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AL130**AL130**

Line

monument

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

monument high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7052 red vo monument symbol - GTRI

monument light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

monument light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

monument

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7052 red vo monument symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AL240**AL240**

Line

tower (non-communication)

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

tower (non-communication) high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7140 red vo single high - GTRI

tower (non-communication) light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

tower (non-communication) light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7146 red vo light component low - GTRI

tower (non-communication)

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7141 red vo single low - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AM010**AM010****Point****depot high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7056 red vo depot symbol - GTRI

depot**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7056 red vo depot symbol - GTRI

AM020**AM020****Point****grain bin / silo high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7058 red vo silo symbol - GTRI

grain bin / silo light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

grain bin / silo light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

grain bin / silo**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7058 red vo silo symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AM030**AM030****Point****grain elevator high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7060 red vo elevator symbol - GTRI

grain elevator light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

grain elevator light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

grain elevator**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7060 red vo elevator symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AM070**AM070**

Line

tank

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

tank high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7062 red vo tank symbol - GTRI

tank light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

tank light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

tank

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7062 red vo tank symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AM080**AM080****Point****water tower high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7064 red vo water tower symbol - GTRI

water tower light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

water tower light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

water tower**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7064 red vo water tower symbol - GTRI

AP030**AP030****Line****road (libref)****Full Chart Symbology:**

6024 100% red brown line

Simplified Symbology:

6024 100% red brown line

AQ010**AQ010****Line****aerial cableway lines / ski lift lines****Full Chart Symbology:**

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ020

AQ020

Point

aerial cableway pylon / ski pylon high
hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7070 red vo aerial pylon symbol - GTRI

aerial cableway pylon / ski pylon light high
atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

aerial cableway pylon / ski pylon light
atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

aerial cableway pylon / ski pylon
hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7070 red vo aerial pylon symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ040**AQ040**

Line

bridge / overpass / viaduct

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

bridge / overpass / viaduct high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7072 red vo bridge symbol - GTRI

bridge / overpass / viaduct light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge / overpass / viaduct light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge / overpass / viaduct

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7072 red vo bridge symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ050**AQ050**

Line

bridge superstructure

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

bridge superstructure high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7072 red vo bridge symbol - GTRI

bridge superstructure light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge superstructure light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge superstructure

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7072 red vo bridge symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ055**AQ055****Point****bridge tower / bridge pylon high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7078 red vo brid tower symbol - GTRI

bridge tower / bridge pylon light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge tower / bridge pylon light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

bridge tower / bridge pylon**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7078 red vo brid tower symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ060**AQ060****Point****control tower high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7080 red vo ctrl tower symbol - GTRI

control tower light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

control tower light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

control tower**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7080 red vo ctrl tower symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AQ110**AQ110****Point****mooring mast high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7082 red vo mast symbol - GTRI

mooring mast light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

mooring mast light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

mooring mast**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7082 red vo mast symbol - GTRI

AQ113**AQ113****Line****pipeline / pipe****Full Chart Symbology:**

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AT006**AT006****Point****overhead cable high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7090 red vo overhead cable - GTRI

overhead cable**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7090 red vo overhead cable - GTRI

AT010**AT010****Point****disk / dish high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7092 red vo disk symbol - GTRI

disk / dish light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

disk / dish light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

disk / dish**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7092 red vo disk symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
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VVOD

Point Symbology

Line Symbology

Area Symbology

AT030**AT030**

Line

power transmission line

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7157 red vo thin solid line w/ dots on each side - GTRI

AT040**AT040**

Point

power transmission pylon high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7096 red vo power pylon symbol - GTRI

power transmission pylon light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

power transmission pylon light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

power transmission pylon

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7096 red vo power pylon symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

AT050**AT050**

Line

communication building

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

communication building high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:
7046 red vo communication bldg symbol -
GTRI

communication building light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

communication building light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

communication building

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:
7046 red vo communication bldg symbol -
GTRI**AT060****AT060**

Line

telephone line / telegraph line

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AT070**AT070****Point****telephone-telegraph pylon / pole high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7106 red vo tel pole symbol - GTRI

telephone-telegraph pylon / pole light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

telephone-telegraph pylon / pole light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

telephone-telegraph pylon / pole**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7106 red vo tel pole symbol - GTRI

**MIL-DTL-89045A w/Amendment 1
APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

AT080**AT080**

Line

communication tower

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

communication tower - high light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304

Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

communication tower high

hgt=-32767 OR hgt>=304

Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7147 red vo communication tower high - GTRI

communication tower light

atn=3 AND hgt>0and<304

Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7146 red vo light component low - GTRI

communication tower

hgt>0and<304

Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7148 red vo communication tower low - GTRI

BA010**BA010**

Line

coastline/shoreline (libref)

Full Chart Symbology:

1573 dk gray very thin solid line

Simplified Symbology:

1573 dk gray very thin solid line

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

BC040**BC040****Point****light (lit) high****atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light (lit)**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light high**hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7110 red vo light symbol - GTRI

light**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7110 red vo light symbol - GTRI

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APPENDIX E**

VVOD

Point Symbology

Line Symbology

Area Symbology

BC050**BC050****Point****lighthouse high lit****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

lighthouse high**hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7112 red vo lighthouse symbol - GTRI

lighthouse lit**hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

lighthouse**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7112 red vo lighthouse symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

BC070**BC070****Point****light vessel / lightship high lit****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light vessel / lightship high**hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7113 red vo lightship symbol - GTRI

light vessel / lightship lit**hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

light vessel / lightship**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7113 red vo lightship symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

BD110**BD110****Point****platform high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7114 red vo platform symbol - GTRI

platform light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

platform light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

platform**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7114 red vo platform symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

BH010**BH010**

Line

aqueduct

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

aqueduct high

hgt=-32767 OR hgt>=304

Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7117 red vo aqueduct symbol - GTRI

aqueduct light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304

Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

aqueduct light

atn=3 AND hgt>0and<304

Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

aqueduct

hgt>0and<304

Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7117 red vo aqueduct symbol - GTRI

BH140**BH140**

Line

river/stream (libref)

Full Chart Symbology:

1656 100% cyan blue very thin solid line

Simplified Symbology:

1656 100% cyan blue very thin solid line

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VVOD

Point Symbology

Line Symbology

Area Symbology

BI020**BI020**

Line

dam / weir

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

dam / weir high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7119 red vo dam symbol - GTRI

dam / weir light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

dam / weir light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

dam / weir

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7119 red vo dam symbol - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

BI050**BI050**

Point

water intake tower high**hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7125 red vo intake - GTRI

water intake tower light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

water intake tower light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

water intake tower**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7125 red vo intake - GTRI

FA000**FA000**

Line

Administrative Boundary (libref)**Full Chart Symbology:**

1311 black long dash short dash line

Simplified Symbology:

1311 black long dash short dash line

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VVOD

Point Symbology

Line Symbology

Area Symbology

GA035**GA035**

Line

navaids

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

navaids high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7130 red vo navaids - GTRI

navaids light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

navaids light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

navaids

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7130 red vo navaids - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

GB040**GB040****Point****launch pad high****hgt=-32767 OR hgt>=304****Full Chart Symbology:**

7155 red high vo tower - ICAO

Simplified Symbology:

7132 red vo pad - GTRI

launch pad light high**atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304****Full Chart Symbology:**

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

launch pad light**atn=3 AND hgt>0and<304****Full Chart Symbology:**

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

launch pad**hgt>0and<304****Full Chart Symbology:**

7151 red pyramid with dot - ICAO

Simplified Symbology:

7132 red vo pad - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

GB220**GB220**

Line

air obstruction

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

air obstruction high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7134 red vo obs - GTRI

air obstruction light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

air obstruction light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

air obstruction

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7134 red vo obs - GTRI

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VVOD

Point Symbology

Line Symbology

Area Symbology

GB221**GB221**

Line

air obstruction miscellaneous

Full Chart Symbology:

7158 red vo thin line - ICAO

Simplified Symbology:

7144 red vo thin line - GTRI

Point

air obstruction miscellaneous high

hgt=-32767 OR hgt>=304
Full Chart Symbology:

7155 red high vo tower - ICAO

Simplified Symbology:

7136 red vo obs misc - GTRI

air obstruction miscellaneous light high

atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304
Full Chart Symbology:

7156 red high vo tower lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

air obstruction miscellaneous light

atn=3 AND hgt>0and<304
Full Chart Symbology:

7152 red pyramid lit component - ICAO

Simplified Symbology:

7142 red vo light component - GTRI

air obstruction miscellaneous

hgt>0and<304
Full Chart Symbology:

7151 red pyramid with dot - ICAO

Simplified Symbology:

7136 red vo obs misc - GTRI

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WVSPPlus

Point Symbology

Line Symbology

Area Symbology

BA010**BA010**

Line

coastline/shoreline

Full Chart Symbology:

1573 dk gray very thin solid line

BA040**BA040**

Area

water (except inland)

Full Chart Symbology:

0805 depth white fill

BE015**BE015**

Line

depth contour

Full Chart Symbology:

3082 gray very thin solid line

BE019**BE019**

Area

depth area

Full Chart Symbology:

0820 depth pale blue solid fill

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WVSPPlus

Point Symbology

Line Symbology

Area Symbology

FA000**FA000****Line****administrative boundary**

Full Chart Symbology:

1408 basic green vy thin long dash short dash
line**administrative boundary - national, international****use=4or23**

Full Chart Symbology:

1310 black one long dash two short dash line

administrative boundary - primary, unknown**use=0or26**

Full Chart Symbology:

1311 black long dash short dash line

administrative boundary - secondary**use=30**

Full Chart Symbology:

1318 black thin long dsh 2 shrt dsh line

administrative boundary - tertiary**use=31**

Full Chart Symbology:

1319 black thin long dash 3 dot line

FA001**FA001****Area****administrative area**

Full Chart Symbology:

0633 lt gray thin dash line

FA020**FA020****Line****armistice line**

Full Chart Symbology:

3119 black very thin long dash line

FA030**FA030****Line****cease-fire line**

Full Chart Symbology:

3119 black very thin long dash line

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WVSPPlus

Point Symbology	Line Symbology	Area Symbology
FA040		FA040
Line		
claim line		
Full Chart Symbology: 3120 black thin long dash line		
FA050		FA050
Line		
mandate line/convention line		
Full Chart Symbology: 3118 black dash line		
FA060		FA060
Line		
defacto boundary		
Full Chart Symbology: 1310 black one long dash two short dash line		
FA070		FA070
Line		
demilitarized zone	mb1=6	
Full Chart Symbology: 3143 black double dash very thin lines		

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WVSPPlus

Point Symbology

Line Symbology

Area Symbology

FC021**FC021****Line**

maritime limit boundary - international (at sea) mbl=9

Full Chart Symbology:

1451 purple dash line w/ tics both sides (- + -)

maritime limit boundary - other territorial baseline mbl=999

Full Chart Symbology:

3054 lt magenta very thin short dash line

maritime limit boundary - territorial waters baseline mbl=7

Full Chart Symbology:

3077 lt gray very thin dash line

maritime limit boundary - territorial waters limits mbl=6

Full Chart Symbology:

0633 lt gray thin dash line

ZD003**ZD003****Line**

artifact location

Full Chart Symbology:

0600 black very thin solid line

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PRODUCT DISPLAY PRIORITY REFERENCE

F.1 SCOPE

F.1.1 Scope. This appendix provides a product-based report of the display priorities assigned to each feature/attribute combination. It is a mandatory part of the specification. The information contained herein is intended for compliance.

F.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

F.3 PRODUCT DISPLAY PROIORITY REFERENCE

This appendix is sorted by product and then by display priority. It lists the delineation-specific feature/attribute combinations that are assigned each of the display priority values (0 to 9). Nine is the highest priority. Symbols for features with higher priorities are displayed on top of and may obstruct symbols for features having lower priority. See section 6.5 in the MIL-HDBK-857A for a complete description of display hierarchy in GeoSym.

This appendix represents the default display priority values contained in the *sym.txt files contained in the SYMASN\ASCII directory.

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Product Display Priority Reference

DNC**DNC****Display Priority 0**

Area	BA040		water (except inland)
Area	BE010	cvl=99999	depth area; depth unknown
Area	BE010	cvl=99999	depth area; depth unknown
Area	BE010	cvl=99999	depth area; depth unknown
Area	BE010	idsm=0 AND cvl>=msdcand<>99999	depth area (very deep); 4 shades
Area	BE010	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
Area	BE010	idsm=0 AND isdm=0 AND cvl<msdc	depth area (very shallow); 4 shades; shallow mode off
Area	BE010	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
Area	BE010	idsm=0 AND isdm=1 AND cvl<msdc	depth area (very shallow); 4 shades; shallow mode on
Area	BE010	idsm=0 AND isdm=1 AND cvl<msdc	depth area (very shallow); 4 shades; shallow mode on
Area	BE010	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE010	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE010	idsm=1 AND cvl>=ssdcand<>99999	depth area (deep water); 2 shades
Area	BE010	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
Area	BE010	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	BE010	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on

Display Priority 1

Area	AK090		fairgrounds
Area	BA020		foreshore
Area	BA020	isdsm=1	foreshore - shallow display mode on
Area	BA030		island
Area	BD120	vrr=8	reef - covers and uncovers
Area	BD120	vrr=8 AND isdm=1	reef - covers and uncovers, shallow display mode on
Area	BJ110		tundra
Area	DA010		ground surface element
Area	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
Area	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off
Area	FC031	mac=2 AND hdp=0 AND isdm=0	maritime area - dredged channel, depth unknown, shallow mode off

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DNC**DNC**

Display Priority	1
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Area	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
Area	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
Area	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
Area	FC031	mac=2 AND hdp=0 AND isdm=1	maritime area - dredged channel, depth unknown, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
Area	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
Area	FC031	mac=2 AND idsm=0 AND hdp>=msdc	maritime area - dredged channel, 4 shades, deep water
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=0	maritime area - dredged channel, 4 shades, med shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>=msscand<ssdc AND isdm=1	maritime area - dredged channel, 4 shades, med shallow, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
Area	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
Area	FC031	mac=2 AND idsm=0 AND hdp>=ssdcand<msdc	maritime area - dredged channel, 4 shades, medium deep
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=0	maritime area - dredged channel, 4 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on

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DNC**DNC****Display Priority 1**

Area	FC031	mac=2 AND idsm=0 AND hdp>0and<mssc AND isdm=1	maritime area - dredged channel, 4 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
Area	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
Area	FC031	mac=2 AND idsm=1 AND hdp>=ssdc	maritime area - dredged channel, 2 shades, deep water
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=0	maritime area - dredged channel, 2 shades, very shallow, shallow mode off
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on
Area	FC031	mac=2 AND idsm=1 AND hdp>0and<ssdc AND isdm=1	maritime area - dredged channel, 2 shades, very shallow, shallow mode on

Display Priority 2

Line	BH020		canal
Line	BH140		river/stream
Line	FC031	mac=2	maritime area - dredged channel
Area	BH020		canal
Area	BH080		lake/pond
Area	BH090		land subject to inundation
Area	BH130		reservoir
Area	BH140		river/stream
Area	BI030		lock
Area	GB005		airport/airfield
Area	GB005		airport/airfield

Display Priority 3

Point	AA010		mine/quarry
Point	AL020		built-up area
Point	BD010		breakers
Point	BD040		eddies

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DNC**DNC**

Display Priority	3
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Point	BD060		kelp/seaweed
Point	BD080		overfalls/tide rips
Point	BJ060		ice peak/nunatak
Line	AK020		amusement park attraction
Line	AL070		fence
Line	AL260		wall
Line	AT005		cable
Line	BH120		rapids
Line	BH180		waterfall
Line	BH210		inland shoreline
Line	FC021	mac=26 AND mbl=NULL	maritime limit boundary - unsurveyed
Line	FC021	mbl<>7and<>13 AND mac=NULL	maritime limit boundary - not clearing line
Line	FC021	mbl=7 AND mac=NULL	maritime limit boundary - territorial waters baseline
Area	AC030		settling basin/sludge pond
Area	AL020		built-up area
Area	AN060		railroad yard/marshalling yard
Area	BB010	mac<>12	anchorage - not anchoring berth
Area	BB180		oyster bed/mussel bed
Area	BD060		kelp/seaweed
Area	BH050		fish hatchery/fish farm/marine farm
Area	BH095		marsh/swamp
Area	BH155		salt evaporator
Area	BJ030		glacier
Area	BJ030		glacier
Area	BJ065		ice shelf
Area	BJ065		ice shelf
Area	BJ100		snow field/ice field
Area	BJ100		snow field/ice field
Area	DB090		embankment/fill
Area	DB170		sand dune/sand hills
Area	EA030		nursery
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EC030	veg<>19	trees - not mangrove

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DNC**DNC****Display Priority 3**

Area	EC030	veg=19	trees - mangrove
Area	FC021	mac=0or999	maritime limit boundary - unknown, other
Area	FC021	mac=25or30or35	maritime limit boundary - spoil, dumping, explosive dumping
Area	FC021	mac=26	maritime limit boundary - unsurveyed
Area	FC021	mac=26	maritime limit boundary - unsurveyed
Area	FC021	mac=26	maritime limit boundary - unsurveyed
Area	FC021	mac=31	maritime limit boundary - incineration
Area	FC021	mac=49	maritime limit boundary - cargo Xshipment
Area	FC021	mac=57	maritime limit boundary - marine farm
Area	FC031	mac=0or9	maritime area - unknown, work in progress
Area	FC036	mac=20	restricted area - cables
Area	FC036	mac=21or23or61	restricted area - pipelines, sewer
Area	FC036	mac=45or46	restricted area - outfall, intake
Area	FC165	rtt=0	route (maritime) - use unknown

Display Priority 4

Point	AF040		crane
Point	AH010		bastion/rampart/fortification
Point	AH050		fortification
Point	AL015	bfc<>7and<>81	building - not house of worship, not maritime station
Point	AL200	loc=22 AND verr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
Point	AL200	loc=22 AND verr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
Point	AL200	loc=22 AND verr=4 AND hdp>20	ruins - offshore, submerged - depth greater than 20m
Point	AL200	loc=22 AND verr=8	ruins - offshore, covers and uncovers
Point	AM020		grain bin/silo
Point	AM030		grain elevator
Point	AM070		tank
Point	AM080		water tower
Point	AQ080		ferry site
Point	BA030		island
Point	BB105		fishing harbor
Point	BB180		oyster bed/mussel bed
Point	BC010	nst=1or4or5or17or41or51or53	beacon - radio navigation system
Point	BC020	nst=1or4or5or17or41or51or53 AND ssc<>10	buoy - non-pillar; radio navigation system

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Display	Priority		
	4		
Point	BC020	nst=1or4or5or17or41or51or53 AND ssc=10	buoy - pillar; radio navigation system
Point	BC040	nst=1or4or5or17or41or51or53	light - radio navigation system
Point	BC070	nst=1or4or5or17or41or51or53	light vessel/lightship - radio navigation system
Point	BC080		perches/stakes
Point	BD000	acc<>1	underwater danger/hazard - not accurate
Point	BD000	hdp=0	underwater danger/hazard - depth unknown
Point	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
Point	BD000	hdp>20	underwater danger/hazard - depth greater than 20m
Point	BD020	acc<>1	crib - not accurate
Point	BD020	vrr=1 AND hdp=NULL	crib - partly submerged/dry; depth null
Point	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
Point	BD020	vrr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
Point	BD020	vrr=4 AND hdp>20	crib - submerged; depth greater than 20m
Point	BD020	vrr=8 AND hdp=NULL	crib - covers and uncovers; depth null
Point	BD030		discolored water
Point	BD030	acc<>1	discolored water - not accurate
Point	BD050		foul ground
Point	BD130	acc<>1	rock - not accurate
Point	BD130	hdp=NULL	rock - depth null
Point	BD130	vrr=4 AND hdp=0	rock - submerged; depth unknown
Point	BD130	vrr=4 AND hdp>0and<=20	rock - submerged; depth 20m or less
Point	BD130	vrr=4 AND hdp>20	rock - submerged; depth greater than 20m
Point	BD140	acc<>1	snags/stumps - not accurate
Point	BD140	vrr=1 AND hdp=NULL	snags/stumps - partly submerged/dry; depth null
Point	BD140	vrr=4 AND hdp=0	snags/stumps - submerged; depth unknown
Point	BD140	vrr=4 AND hdp>0and<=20	snags/stumps - submerged; depth 20m or less
Point	BD140	vrr=4 AND hdp>20	snags/stumps - submerged; depth greater than 20m
Point	BD140	vrr=8 AND hdp=NULL	snags/stumps - covers and uncovers; depth null
Point	BD180	acc<>1	wreck - not accurate
Point	BD180	hdp=NULL AND vrr=0	wreck - unknown; depth null
Point	BD180	hdp=NULL AND vrr=1or2or8	wreck - not submerged; depth null
Point	BD180	loc<>4 AND hdp=NULL	wreck - showing mast/hull/superstructure; depth null
Point	BD180	vrr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
Point	BD180	vrr=4 AND hdp>20	wreck - submerged; depth greater than 20m

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Display Priority	4
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Point	BD180	vrr=4 AND soh=1 AND hdp=0	wreck - submerged; dangerous; depth unknown
Point	BD180	vrr=4 AND soh=2 AND hdp=0	wreck - submerged; not dangerous; depth unknown
Point	BF010	mcc=0 AND psc=0	bottom characteristics - surface unknown
Point	BG010	cur=1 AND dof<>0	current flow - ebb; direction known
Point	BG010	cur=2 AND dof<>0	current flow - flood; direction known
Point	BG030		tide data point
Point	BG040		current diagram
Point	CA030		spot elevation
Point	EC030		trees
Point	FC021	mac<>48	maritime limit boundary - not pilot boarding
Point	FC031	mac=0	maritime area - unknown
Point	FC031	mac=2	maritime area - dredged area
Point	FC165	dof<>0	route (maritime) - direction known
Point	FC165	dof=0	route (maritime) - direction unknown
Point	GA035		navaids (aeronautical)
Point	GB005		airport/airfield
Line	AK130		race track
Line	AN010		railroad
Line	AP020		interchange
Line	AP030		road
Line	AQ070	fer=1	ferry crossing - with cables
Line	AQ070	fer=2	ferry crossing - without cables
Line	AQ130		tunnel
Line	BA020		foreshore
Line	BB010	mac<>12	anchorage - not anchoring berth
Line	BB100		fish stakes
Line	BC100		leading line
Line	BD010		breakers
Line	CA010		contour line (land)
Line	DB090		embankment/fill
Line	FA000	use=23	administrative boundary - international
Line	FA000	use=32	administrative boundary - insular
Line	FA020		armistice line
Line	FA040		claim line

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Display Priority	4
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Line	FA060		defacto boundary
Line	FA110		international date line
Line	FC021	mac=0or999 AND mbl=NULL	maritime limit boundary - unknown, other
Line	FC021	mac=25 AND mbl=NULL	maritime limit boundary - spoil
Line	FC021	mac=30or35 AND mbl=NULL	maritime limit boundary - dumping, explosive dumping
Line	FC021	mac=31 AND mbl=NULL	maritime limit boundary - incineration
Line	FC021	mac=49 AND mbl=NULL	maritime limit boundary - cargo Xshipment
Line	FC021	mac=56 AND mbl=NULL	maritime limit boundary - fish traps
Line	FC021	mac=57 AND mbl=NULL	maritime limit boundary - marine farm
Line	FC021	mbl=13 AND mac=NULL	maritime limit boundary - clearing line
Line	FC031	mac=0or9	maritime area - unknown, work in progress
Line	FC100		measured distance line
Area	AA010		mine/quarry
Area	AB000		disposal site/waste pile
Area	AB010		wrecking yard/scrap yard
Area	AC000		processing plant/treatment plant
Area	AD010		power plant
Area	AD030		substation/transformer yard
Area	AH010		bastion/rampart/fortification
Area	AH050		fortification
Area	AK040		athletic field
Area	AK100		golf course
Area	AK120		park
Area	AK160		stadium/amphitheater
Area	AK180		zoo/safari park
Area	AL015		building
Area	AL030		cemetery
Area	AL200	loc=22 AND verr=1	ruins - offshore, does not cover
Area	AL200	loc=22 AND verr=4 AND hdp=0	ruins - offshore, submerged - depth unknown
Area	AL200	loc=22 AND verr=4 AND hdp>0and<=20	ruins - offshore, submerged - depth 20m or less
Area	AL200	loc=22 AND verr=4 AND hdp>20	ruins - offshore, submerged - depth greater than 20m
Area	AL200	loc=22 AND verr=8	ruins - offshore, covers and uncovers
Area	AL200	loc=8	ruins - on ground surface

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Display Priority	4
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Area	AM010		depot (storage)
Area	AM030		grain elevator
Area	AM040		mineral pile
Area	AM070		tank
Area	AQ116		pumping station
Area	AT020		early warning radar site
Area	BB090		drydock
Area	BB110		fish traps/fish weirs
Area	BB150		landing place
Area	BC080		perches/stakes
Area	BD000	acc<>1	underwater danger/hazard - not accurate
Area	BD000	hdp=0	underwater danger/hazard - depth unknown
Area	BD000	hdp>0and<=20	underwater danger/hazard - depth 20m or less
Area	BD000	hdp>20	underwater danger/hazard - depth greater than 20m
Area	BD010		breakers
Area	BD020	acc<>1	crib - not accurate
Area	BD020	vrr=1 AND hdp=NULL	crib - above surface
Area	BD020	vrr=4 AND hdp=0	crib - submerged; depth unknown
Area	BD020	vrr=4 AND hdp>0and<=20	crib - submerged; depth 20m or less
Area	BD020	vrr=4 AND hdp>20	crib - submerged; depth greater than 20m
Area	BD020	vrr=8 AND hdp=NULL	crib - covers and uncovers
Area	BD030		discolored water
Area	BD030	acc<>1	discolored water - not accurate
Area	BD040		eddies
Area	BD050		foul ground
Area	BD080		overfalls/tide rips
Area	BD100	acc<>1	pile/piling/post - not accurate
Area	BD100	vrr=1	pile/piling/post - does not cover
Area	BD100	vrr=4	pile/piling/post - submerged
Area	BD100	vrr=8	pile/piling/post - covers and uncovers
Area	BD120	vrr<>8 AND acc<>1	reef - not covers and uncovers, not accurate
Area	BD120	vrr<>8 AND hdp=0orNULL	reef - not covers and uncovers, depth unknown or null
Area	BD120	vrr=4 AND hdp>0and<=20	reef - submerged, depth 20m or less

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Area	BD120	vrr=4 AND hdp>20	reef - submerged, depth greater than 20m
Area	BD140	acc<>1	snags/stumps - not accurate
Area	BD140	vrr=1	snags/stumps - does not cover
Area	BD140	vrr=4	snags/stumps - submerged
Area	BD140	vrr=8	snags/stumps - covers and uncovers
Area	BD180	vrr=0or2 AND hdp=NULL	wreck - unknown; awash; depth null
Area	BD180	vrr=1 AND hdp=NULL	wreck - does not cover; depth null
Area	BD180	vrr=4 AND hdp=0	wreck - submerged; depth unknown
Area	BD180	vrr=4 AND hdp>0and<=20	wreck - submerged; depth 20m or less
Area	BD180	vrr=4 AND hdp>20	wreck - submerged; depth greater than 20m
Area	BD180	vrr=8 AND hdp=NULL	wreck - covers and uncovers; depth null
Area	FC021	mac=27or28or29	maritime limit boundary - submarine exercise, mine laying, firing range
Area	FC021	mac=32or33	maritime limit boundary - oil field, gas field
Area	FC021	mac=42	maritime limit boundary - precautionary
Area	FC021	mac=48	maritime limit boundary - pilot boarding
Area	FC021	mac=55	maritime limit boundary - fairway
Area	FC021	mac=56	maritime limit boundary - fish traps
Area	FC041	tsp=3	traffic separation scheme (TSS) - separation zone area
Area	FC165	rtt=11	route (maritime) - 2-way
Area	FC165	rtt=4	route (maritime) - deep water
Area	FC177		swept area
Area	GB070		seaplane landing/seaplane take-off area
Area	ZC040		magnetic disturbance area

Display Priority 5

Point	AT045	ssc=0or999	radar transmitter - other, unknown
Point	AT045	ssc=107	radar transmitter - tower
Point	AT045	ssc=108	radar transmitter - scanner
Point	AT045	ssc=60	radar transmitter - mast
Point	AT045	ssc=87	radar transmitter - dome
Point	BB010	mac=12	anchorage - anchoring berth
Point	BB020		berth
Point	BB150		landing place
Point	BC010	nst=45	beacon - radar station

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Display Priority		5	
Point	BC020	btc=35	buoy - articulated light (base)
Point	BC020	nst=45	buoy - radar station
Point	BC040		light - base symbol
Point	BC040	nst=45	light - radar station
Point	BC070	nst=45	light vessel/lightship - radar station
Point	BD100		pile/piling/post
Point	BD110		platform
Point	BG010	cur=0 OR dof=0	current flow - general; direction unknown
Point	BG010	cur=3or5 AND dof<>0	current flow - general, ocean; direction known
Line	BE010	acc=1	depth curve - accurate
Line	BE010	acc=2	depth curve - not accurate
Line	FC021	mac=27or28or29 AND mbl=NULL	maritime limit boundary - submarine exercise, mine laying, firing range
Line	FC021	mac=32or33 AND mbl=NULL	maritime limit boundary - oil field, gas field
Line	FC021	mac=42 AND mbl=NULL	maritime limit boundary - precautionary
Line	FC021	mac=48 AND mbl=NULL	maritime limit boundary - pilot boarding
Line	FC021	mac=55 AND mbl=NULL	maritime limit boundary - fairway
Line	FC177		swept area
Line	GB070		seaplane landing/seaplane take-off area
Area	AL005		animal sanctuary
Area	BB010	mac=12	anchorage - anchoring berth
Area	BB115		gridiron
Area	BB170		offshore loading facility
Area	FC021	mac=24	maritime limit boundary - turning area
Area	FC021	mac=44	maritime limit boundary - deguassing
Area	FC021	mac=58	maritime limit boundary - dredging area
Area	FC031	mac=4	maritime area - mine danger
Area	FC031	mac=41	maritime area - inshore traffic zone (TSS)
Area	FC036	mac=0or999	restricted area - to be avoided, other
Area	FC036	mac=37	restricted area - safety zone
Area	GB055		runway

Display Priority		6	
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Point	AD030		substation/transformer yard
Point	AF010		chimney/smokestack

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Display Priority	6
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Point	AF030		cooling tower
Point	AF070		flare pipe
Point	AJ050		windmill
Point	AK020		amusement park attraction
Point	AK080		drive in theater screen
Point	AK160		stadium/amphitheater
Point	AL015	bfc=7 AND hwt=0or2or3or4or7or22	building - house of worship (church)
Point	AL015	bfc=7 AND hwt=11or14or15or16or20or21	building - house of worship (temple/pagoda)
Point	AL015	bfc=7 AND hwt=5or6or9	building - house of worship (mosque)
Point	AL015	bfc=81 AND sta<>5 AND sst<>16	building - maritime station (not rescue), sound signal
Point	AL015	bfc=81 AND sta=0or2or3or6or11	building - maritime station
Point	AL015	bfc=81 AND sta=5 AND sst<>16	building - maritime station (rescue), sound signal
Point	AL018		building superstructure addition
Point	AL025		cairn
Point	AL073		flagstaff/flagpole
Point	AL130		monument
Point	AL200	loc=22 AND vrr=1	ruins - offshore, does not cover
Point	AL200	loc=8	ruins - on ground surface
Point	AL240		tower (non-communication)
Point	AQ060		control tower
Point	AQ110		mooring mast
Point	AQ116		pumping station
Point	AT010		disk/dish
Point	AT050		communication building
Point	AT080		communication tower
Point	BB010	mac<>12	anchorage - not anchoring berth
Point	BB030		bollard
Point	BB050	df1<>0 AND df2=0	calling-in point - one way traffic
Point	BB050	df1=0	calling-in point - direction of traffic unknown
Point	BB050	df2<>0 AND df3=0	calling-in point - two way traffic
Point	BB050	df3<>0	calling-in point - more than two-way traffic, 2nd direction
Point	BB050	df3<>0	calling-in point - more than two-way traffic, 3rd direction

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Display	Priority		
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Point	BB050	df3<>0	calling-in point - more than two-way traffic, 1st direction
Point	BB050	df4<>0	calling-in point - more than two-way traffic, 4th direction
Point	BB080		dolphin
Point	BB160		mooring ring
Point	BC010	nst=10or54	beacon - radar navigation system
Point	BC010	ref=1	beacon - radar reflector present
Point	BC010	sst=1or2or3or4or6or9or14or15	beacon - sound signal
Point	BC010	tmc=0or32	beacon - default topmark
Point	BC010	tmc=1	beacon - two cones out
Point	BC010	tmc=15or27or28	beacon - one ball
Point	BC010	tmc=16or21	beacon - one cone up
Point	BC010	tmc=17	beacon - broom point up
Point	BC010	tmc=18	beacon - perch
Point	BC010	tmc=19or31	beacon - rhombus/diamond
Point	BC010	tmc=2	beacon - two balls
Point	BC010	tmc=22	beacon - one cone down
Point	BC010	tmc=23or30	beacon - upright cross
Point	BC010	tmc=25or26or29	beacon - can
Point	BC010	tmc=3	beacon - two cones up
Point	BC010	tmc=6	beacon - special (x)
Point	BC010	tmc=8	beacon - two cones down
Point	BC010	tmc=9	beacon - two cones in
Point	BC020	nst=10or54 AND ssc<>10	buoy - non-pillar; radar navigation system
Point	BC020	nst=10or54 AND ssc=10	buoy - pillar; radar navigation system
Point	BC020	ref=1	buoy - radar reflector present
Point	BC020	sst=1or2or3or4or6or9or14or15	buoy - sound signal
Point	BC020	tmc=0or17or18or32	buoy - default topmark
Point	BC020	tmc=1	buoy - two cones out
Point	BC020	tmc=15or27or28	buoy - one ball
Point	BC020	tmc=16or21	buoy - one cone up
Point	BC020	tmc=19or31	buoy - rhombus/diamond
Point	BC020	tmc=2	buoy - two balls
Point	BC020	tmc=22	buoy - one cone down

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Display Priority	6		
Point	BC020	tmc=23or30	buoy - upright cross
Point	BC020	tmc=25or26or29	buoy - can
Point	BC020	tmc=3	buoy - two cones up
Point	BC020	tmc=6	buoy - special (x)
Point	BC020	tmc=8	buoy - two cones down
Point	BC020	tmc=9	buoy - two cones in
Point	BC040	nst=10or54	light - radar navigation system
Point	BC040	ref=1	light - radar reflector present
Point	BC040	sst=1or2or3or4or6or9or14or15	light - sound signal
Point	BC040	tmc=0or32	light - default topmark
Point	BC040	tmc=1	light - two cones out
Point	BC040	tmc=15or27or28	light - one ball
Point	BC040	tmc=16or21	light - one cone up
Point	BC040	tmc=17	light - broom point up
Point	BC040	tmc=18	light - perch
Point	BC040	tmc=19or31	light - rhombus/diamond
Point	BC040	tmc=2	light - two balls
Point	BC040	tmc=22	light - one cone down
Point	BC040	tmc=23or30	light - upright cross
Point	BC040	tmc=25or26or29	light - can
Point	BC040	tmc=3	light - two cones up
Point	BC040	tmc=6	light - special (x)
Point	BC040	tmc=8	light - two cones down
Point	BC040	tmc=9	light - two cones in
Point	BC070	nst=10or54	light vessel/lightship - radar navigation system
Point	BC070	ref=1	light vessel/lightship - radar reflector present
Point	BC070	sst=1or2or3or4or6or9or14or15	light vessel/lightship - sound signal
Point	BD110	nst=10or54	platform - radar navigation system
Point	BD110	sst<>16	platform - sound signal
Point	BE020	acc<>1	sounding or drying height - circle (light) indicating low accuracy
Point	BE020	hdh>=0 AND hdp=NULL	drying height overbar (dark)
Point	FC021	mac=48	maritime limit boundary - pilot boarding
Point	FC031	mac=4	maritime area - mine danger area

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Display Priority	6
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Point	FC036	mac=0or999	restricted area - unknown or other
Point	FC036	mac=37	restricted area - safety zone
Line	AQ113	loc<>25 AND pro<>95and<>116 AND plt<>2and<>3	pipeline/pipe - not above ground or over water; not sewage or water
Line	AQ113	loc<>25 AND pro=116	pipeline/pipe - not above ground or over water; water
Line	AQ113	loc<>25 AND pro=95 OR plt=2or3	pipeline/pipe - not above ground or over water; sewage, outfall, intake
Line	BB010	mac=12	anchorage - anchoring berth
Line	BB170		offshore loading facility
Line	BC040		light
Line	BH010	loc<>25	aqueduct - not elevated
Line	BI020		dam/weir
Line	FC021	mac=24 AND mbl=NULL	maritime limit boundary - turning area
Line	FC021	mac=44 AND mbl=NULL	maritime limit boundary - deguassing
Line	FC021	mac=58 AND mbl=NULL	maritime limit boundary - dredging
Line	FC031	mac=4	maritime area - mine danger
Line	FC036		restricted area
Line	FC130		radar reference line
Line	FC165	atn=1 AND exs=22 AND rtt<>3	route (maritime) - marked;1-way;not recomm for deep draft vessels
Line	FC165	atn=1 AND exs=22 AND rtt=3	route (maritime) - marked;1-way;recomm for deep draft vessels
Line	FC165	atn=1 AND exs=23 AND rtt<>3	route (maritime) - marked;2-way;not recomm for deep draft vessels
Line	FC165	atn=1 AND exs=23 AND rtt=3	route (maritime) - marked;2-way;recomm for deep draft vessels
Line	FC165	atn=2 AND exs=22 AND rtt<>3	route (maritime) - unmarked;1-way;not recomm for deep draft vessels
Line	FC165	atn=2 AND exs=22 AND rtt=3	route (maritime) - unmarked;1-way;recomm for deep draft vessels
Line	FC165	atn=2 AND exs=23 AND rtt<>3	route (maritime) - unmarked;2-way;not recomm for deep draft vessels
Line	FC165	atn=2 AND exs=23 AND rtt=3	route (maritime) - unmarked;2-way;recomm for deep draft vessels
Line	FC165	exs=0 AND rtt<>3	route (maritime) - unknown;not recomm for deep draft vessels
Line	FC165	exs=0 AND rtt=3	route (maritime) - unknown;recomm for deep draft vessels
Line	FC170		safety fairway
Line	GB055		runway

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Area	BB040	vrr=1	breakwater/groyne - partly submerged at high water
Area	BB040	vrr=4or8	breakwater/groyne - submerged, covers and uncovers
Area	BB140	vrr=1	jetty - partly submerged at high water
Area	BB140	vrr=4or8	jetty - submerged, covers and uncovers
Area	BB190		pier/wharf/quay
Area	BB220	vrr=1	ramp (maritime) - partly submerged at high water
Area	BB220	vrr=4or8	ramp (maritime) - submerged, covers and uncovers
Area	FC031	mac=40	maritime area - roundabout zone (TSS)
Area	FC031	mac=5	maritime area - entry prohibited
Area	FC036	mac=15	restricted area - anchoring prohibited
Area	FC036	mac=22	restricted area - fishing prohibited
Area	FC036	mac=43	restricted area - area to be avoided
Area	FC041	tsp=6or7	traffic separation scheme (TSS) - inbound or outbound area
Area	FC170		safety fairway

Display Priority 7

Point	AL015	bfc=81 AND sta<>0and<>1and<>2and<>3and<>5and<>6and<>11	building - maritime station
Point	AL015	bfc=81 AND sta=1	building - maritime station
Point	AL015	bfc=81 AND sta=5	building - maritime station
Point	BA020		foreshore
Point	BC055		marker
Point	BG020		tide gauge
Point	FC031	mac=40	maritime area - roundabout zone (TSS)
Point	FC031	mac=5	maritime area - entry prohibited
Point	FC036	mac=15	restricted area - anchoring prohibited
Point	FC036	mac=22	restricted area - fishing prohibited
Point	FC036	mac=43	restricted area - area to be avoided
Point	FC041		traffic separation scheme (TSS)
Line	BA010	acc=1 AND slt<>6and<>8	coastline/shoreline - accurate; not mangrove or marsh
Line	BA010	acc=2 AND slt<>6and<>8	coastline/shoreline - approximate; not mangrove or marsh
Line	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
Line	BB040	vrr=1	breakwater/groyne - partly submerged at high water

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Line	BB040	vrr=4or8	breakwater/groyne - submerged, covers and uncovers
Line	BB140	vrr=1	jetty - partly submerged at high water
Line	BB140	vrr=4or8	jetty - submerged, covers and uncovers
Line	BB190		pier/wharf/quay
Line	BB220	vrr=1	ramp (maritime) - partly submerged at high water
Line	BB220	vrr=4or8	ramp (maritime) - submerged, covers and uncovers
Line	BB230		seawall
Line	BB240	vrr=1	slipway/patent slip - partly submerged at high water
Line	BB240	vrr=4or8	slipway/patent slip - submerged, covers and uncovers
Line	FC031	mac=40or41	maritime area - TSS
Line	FC031	mac=5	maritime area - entry prohibited
Line	FC041	tsp=2	traffic separation scheme (TSS) - outer boundary

Display Priority 8

Point	AL050		display sign
Point	AQ020		aerial cableway pylon/ski pylon
Point	AT040		power transmission pylon
Point	BB170		offshore loading facility
Point	BB170	cha=21	offshore loading facility - light
Point	BC010		beacon - base
Point	BC020	btc=0 AND ssc=0or85or999	buoy - default; type unknown
Point	BC020	btc=0 AND ssc=1	buoy - barrel; type unknown
Point	BC020	btc=0 AND ssc=10	buoy - pillar; type unknown
Point	BC020	btc=0 AND ssc=16	buoy - spar; type unknown
Point	BC020	btc=0 AND ssc=17	buoy - sphere; type unknown
Point	BC020	btc=0 AND ssc=6	buoy - conical; type unknown
Point	BC020	btc=0 AND ssc=7	buoy - can; type unknown
Point	BC020	btc=0 AND ssc=73	buoy - superbuoy; type unknown
Point	BC020	btc=10	buoy - ODAS
Point	BC020	btc=4	buoy - LANBY
Point	BC020	btc=6	buoy - light float
Point	BC020	btc=7 AND ssc<>1and<>7	buoy - mooring; not barrel, not can
Point	BC020	btc=7 AND ssc=1	buoy - mooring; barrel
Point	BC020	btc=7 AND ssc=7	buoy - mooring;can

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DNC**DNC**

Display Priority		8	
Point	BC070		light vessel/lightship
Point	BD110	cha=21	platform - lighted
Point	GA020		air obstruction light [DNC-specific]
Point	GB010		airport lighting
Line	AQ010		aerial cableway lines/ski lift lines
Line	AQ040	bsc<>12 AND bot<>4and<>10and<>11	bridge/overpass/viaduct (opening)
Line	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
Line	AQ045		bridge span
Line	AQ113	loc=25	pipeline/pipe - above ground or over water
Line	AT030		power transmission line
Line	AT060		telephone line/telegraph line
Line	BH010	loc=25	aqueduct - elevated
Line	BI040		sluice gate
Line	FC041	tsp=4	traffic separation scheme (TSS) - separation zone line
Area	AQ040	bsc<>12 AND bot<>4and<>10and<>11	bridge/overpass/viaduct (opening)
Area	AQ040	bsc=12 OR bot=4or10or11	bridge/overpass/viaduct (not opening)
Area	AQ045		bridge span
Area	BC060		light sector

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DTOP**DTOP****Display Priority 0**

Area	BA030		island
Area	BA060		beach zone
Area	DA010	smc<>84	ground surface element - not rocky
Area	DA010	smc=84	ground surface element - rocky
Area	DA020		barren ground
Area	SA050	spr=0	slope polygon - <= 3%
Area	SA050	spr=1	slope polygon - > 3% and <= 10%
Area	SA050	spr=2	slope polygon - > 10% and <= 15%
Area	SA050	spr=3	slope polygon - > 15% and <= 20%
Area	SA050	spr=4	slope polygon - > 20% and <= 30%
Area	SA050	spr=5	slope polygon - > 30% and <= 45%
Area	SA050	spr=6	slope polygon - > 45% and <= 60%
Area	SA050	spr=7	slope polygon - > 60% and <= 85%
Area	SA050	spr=8	slope polygon - > 85%
Area	SA050	spr=999	slope polygon - % unknown

Display Priority 1

Area	BH020		canal
Area	BH020	hyc<>8	canal - non-perennial, dry, unknown
Area	BH080	hyc<>8	lake/pond - not perennial
Area	BH140		river/stream
Area	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BH160		sebkha
Area	BH200		miscellaneous surface drainage feature
Area	BJ020		moraine
Area	DA005		asphalt lake
Area	DB170	ssc=0	sand dune/sand hills - unknown
Area	DB170	ssc=22	sand dune/sand hills - crescent
Area	DB170	ssc=26	sand dune/sand hills - lateral
Area	DB170	ssc=27	sand dune/sand hills - mounds
Area	DB170	ssc=28	sand dune/sand hills - ripple
Area	DB170	ssc=29	sand dune/sand hills - star
Area	DB170	ssc=30	sand dune/sand hills - transverse

Display Priority 2

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DTOP**DTOP**

Display Priority	2
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Line	BH200		miscellaneous surface drainage feature
Area	AL020		built-up area
Area	AL020		built-up area
Area	AL105		settlement
Area	AL105		settlement
Area	AL135		native settlement
Area	AL135		native settlement
Area	BH090		land subject to inundation
Area	BH095	veg=0or56	marsh/swamp - no trees
Area	BH095	veg=16or19	marsh/swamp - palm, mangrove
Area	BH095	veg=24	marsh/swamp - deciduous
Area	BH095	veg=25or50	marsh/swamp - evergreen, mixed
Area	BJ030		glacier
Area	BJ065		ice shelf
Area	BJ100		snow field/ice field
Area	BJ110		tundra
Area	EA010	veg=0	cropland - other
Area	EA010	veg=0	cropland - other
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=4	cropland - rice paddies
Area	EA010	veg=4	cropland - rice paddies
Area	EA030		nursery
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EB010		grassland
Area	EB020		scrub/brush
Area	EC010		bamboo/cane
Area	EC020	veg<>17	oasis - not palm
Area	EC020	veg=17	oasis - palm
Area	EC030	veg=0or24	trees - deciduous, unknown
Area	EC030	veg=25or50	trees - evergreen, mixed
Area	EC030	veg=52	trees - clearing

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Display Priority	3
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Point	AQ111		prepared raft or float bridge site
Point	AQ118		sharp curve(s)
Point	AQ120		steep grade
Point	BD100		pile/piling/post
Point	BH120		rapids
Point	BH180		waterfall
Point	EC020	veg<>17	oasis - not palm
Point	EC020	veg=17	oasis - palm
Line	AL075		gallery
Line	AL155		overhead obstruction location
Line	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
Line	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
Line	BH030		ditch
Line	BH100		moat
Line	BH120		rapids
Line	BH180		waterfall
Line	DB190		volcanic dike
Line	EA020		hedgerow
Area	AC030		settling basin/sludge pond
Area	AK170		swimming pool
Area	BA020		foreshore
Area	BA040		water (except inland)
Area	BB090		drydock
Area	BD100		pile/piling/post
Area	BH030		ditch
Area	BH030		ditch - not covered
Area	BH040		filtration beds/aeration beds
Area	BH050		fish hatchery/fish farm/marine farm
Area	BH080		lake/pond
Area	BH080	hyc=8	lake/pond - perennial
Area	BH130		reservoir
Area	BH140	hyc=0or8	river/stream - perennial, unknown
Area	BH150		salt pan

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DTOP**DTOP****Display Priority 3**

Area	BH155		salt evaporator
Area	BJ070		pack ice
Area	BJ080		polar ice

Display Priority 5

Point	AM060		storage bunker/storage mound
Line	AK130		race track
Area	AA010	exs<>6	mine - active
Area	AA010	exs=6	mine - inactive
Area	AA012	exs<>6	quarry - active
Area	AA012	exs=6	quarry - inactive
Area	AB000		disposal site/waste pile
Area	AB010		wrecking yard/scrap yard
Area	AD030		substation/transformer yard
Area	AI020		mobile home/mobile home park
Area	AJ030		feedlot/stockyard/holding pen
Area	AK030		amusement park
Area	AK040		athletic field
Area	AK060		campground/campsite
Area	AK090		fairgrounds
Area	AK100		golf course
Area	AK120		park
Area	AK160		stadium/amphitheater
Area	AK180		zoo/safari park
Area	AL030		cemetery
Area	AL170		plaza/city square
Area	AL200		ruins
Area	AM010		depot (storage)
Area	AM060		storage bunker/storage mound
Area	AQ135		vehicle stopping area/rest area
Area	AQ140		vehicle storage/parking area

Display Priority 6

Point	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
Point	AA050	hyc=0or8 AND pro=116	well - water/perennial

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DTOP**DTOP****Display Priority** 6

Point	BH145		river stream vanishing point
Point	BH170	hyc<0and<>8	spring/water-hole - not perennial/dry
Point	BH170	hyc=0or8	spring/water-hole - perennial
Point	BI010		cistern
Line	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
Line	BB220		ramp (maritime)
Line	BH010	loc=0or8or25	aqueduct - surface/elevated
Line	BH020	hyc=0or8	canal - perennial
Line	BH020	hyc=3	canal - dry
Line	BH060		flume
Line	BH110	loc=0or8or25	penstock - surface/elevated
Line	BH140	hyc=0or8	river/stream - perennial, unknown
Line	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BB040		breakwater/groyne
Area	BB140		jetty
Area	BB220		ramp (maritime)
Area	BH020	hyc=8	canal - perennial
Area	BI020		dam/weir
Area	BI030		lock
Area	BI050		water intake tower
Area	FA070		demilitarized zone
Area	FA170		zone of occupation

Display Priority 7

Point	AD020		solar panels
Point	AL195		ramp
Point	AQ045		bridge span
Point	AQ070		ferry crossing
Point	BB010		anchorage
Point	BH070		ford
Point	BJ060		ice peak/nunatak
Point	DB030		cave
Point	DB115		geothermal feature
Point	DB150		mountain pass

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Display Priority	7
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Point	DB160		rock strata/rock formation
Point	DB180		volcano
Line	AL060		dragon teeth
Line	AL070		fence
Line	AL260		wall
Line	AP010		cart track
Line	AP050		trail
Line	AQ070		ferry crossing
Line	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
Line	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
Line	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
Line	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
Line	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
Line	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
Line	BB040		breakwater/groyne
Line	BB140		jetty
Line	BB190		pier/wharf/quay
Line	BB230		seawall
Line	BH070		ford
Line	BJ040		ice cliff
Line	DB010		bluff/cliff/escarpment
Line	DB060	mcc=0or30	crevice/crevasse - earthen
Line	DB060	mcc=103	crevice/crevasse - snow/ice
Line	DB070		cut
Line	DB080		depression
Line	DB090		embankment/fill
Line	DB100		esker
Line	DB110		fault
Line	DB145		miscellaneous obstacle
Line	FA090		geophysical prospecting grid
Area	AC000		processing plant/treatment plant
Area	AD010		power plant
Area	AH050		fortification
Area	AL060		dragon teeth

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DTOP**DTOP****Display Priority 7**

Area	AL140		particle accelerator
Area	AQ116		pumping station
Area	AT050		communication building
Area	BB010		anchorage
Area	BB190		pier/wharf/quay
Area	BD120		reef
Area	DB060	mcc=0or30	crevice/crevasse - earthen
Area	DB060	mcc=103	crevice/crevasse - snow/ice
Area	DB145		miscellaneous obstacle
Area	DB160		rock strata/rock formation

Display Priority 8

Point	AA010	exs<>6	mine - active
Point	AA010	exs=6	mine - inactive
Point	AA012	exs<>6	quarry - active
Point	AA012	exs=6	quarry - inactive
Point	AA040		rig/superstructure
Point	AA050	pro<>116	well - not water
Point	AC000		processing plant/treatment plant
Point	AC020		catalytic cracker
Point	AD030		substation/transformer yard
Point	AF010		chimney/smokestack
Point	AF030		cooling tower
Point	AF040		crane
Point	AF070		flare pipe
Point	AH050		fortification
Point	AJ050		windmill
Point	AK020		amusement park attraction
Point	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36or53or59or69or70or83or85or86or87or88or89	building - generic
Point	AL015	bfc=15	building - school
Point	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96	building - generic
Point	AL015	bfc=4	building - castle
Point	AL015	bfc=6	building - hospital

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DTOP**DTOP**

Display Priority	8		
Point	AL015	bfc=7	building - house of worship - church
Point	AL015	bfc=82	building - lighthouse
Point	AL015	bfc=90or91or92or93or95or98or999	building - generic
Point	AL025		cairn
Point	AL030		cemetery
Point	AL075		gallery
Point	AL100		hut
Point	AL130		monument
Point	AL155		overhead obstruction location
Point	AL200		ruins
Point	AL210		snow shed/rock shed
Point	AL240		tower (non-communication)
Point	AL250		underground dwelling
Point	AM020		grain bin/silo
Point	AM030		grain elevator
Point	AM070		tank
Point	AM080		water tower
Point	AN075		railroad turntable
Point	AQ040		bridge/overpass/viaduct
Point	AQ058		constriction/expansion
Point	AQ060		control tower
Point	AQ065		culvert
Point	AQ110		mooring mast
Point	AQ116		pumping station
Point	AQ130		tunnel
Point	AT010		disk/dish
Point	AT050		communication building
Point	AT080		communication tower
Point	BD130	vrr=0or8	rock - unk/covers/uncovers
Point	BD130	vrr=2	rock - awash
Point	BD180		wreck
Point	BI020		dam/weir
Point	BI030		lock
Point	BI040		sluice gate

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DTOP

DTOP

Display Priority	8		
Point	BI050		water intake tower
Point	CA030	ela<>1	spot elevation - not accurate
Point	CA030	ela=1	spot elevation - accurate
Point	GB005	exs<>28	airport/airfield - not operational
Point	GB005	exs=28 AND use<>8and<>22	airport/airfield - non military; operational
Point	GB005	exs=28 AND use=8or22	airport/airfield - military; operational
Point	GB010		airport lighting
Point	GB030	apt<>11	helicopter landing pad
Point	GB030	apt=11	helicopter landing pad at hospital
Point	ZB030		boundary monument
Point	ZB035		control point/control station
Line	AF020		conveyor
Line	AL015	bfc<>6and<>7and<>15	building - generic
Line	AL015	bfc=15	building - school
Line	AL015	bfc=6	building - hospital
Line	AL015	bfc=7	building - house of worship
Line	AL210		snow shed/rock shed
Line	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
Line	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
Line	AN010	exs=8	railroad -dismantled
Line	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
Line	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
Line	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
Line	AP020		interchange
Line	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
Line	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	med<>1 AND wtc=2	road - fair weather, no median
Line	AP030	med=1	road - divided w/ median
Line	AQ010		aerial cableway lines/ski lift lines

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DTOP**DTOP**

Display Priority		8	
Line	AQ040		bridge/overpass/viaduct
Line	AQ130		tunnel
Line	AT030		power transmission line
Line	AT060		telephone line/telegraph line
Line	BD120		reef
Line	BH010	loc=4	aqueduct - underground
Line	BH110	loc=4	penstock - underground
Line	BI020		dam/weir
Line	BI040		sluice gate
Line	FA000	use=0or26	administrative boundary - primary, unknown
Line	FA000	use=23	administrative boundary - international
Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FA060		defacto boundary
Line	FA110		international date line
Area	AL015	bfc<>6and<>7and<>15	building - generic
Area	AL015	bfc=15	building - school
Area	AL015	bfc=6	building - hospital
Area	AL015	bfc=7	building - house of worship
Area	AM020		grain bin/silo
Area	AM030		grain elevator
Area	AM070		tank
Area	AN060		railroad yard/marshaling yard
Area	GB005		airport/airfield
Area	GB015		apron/hardstand
Area	GB045		overrun/stopway
Area	GB055		runway
Area	GB075		taxiway
Area	ZD020		void collection area

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FFD

FFD

Display Priority 0

Area	BA030		island
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Display Priority 1

Area	BH080	hyc=3	lake/pond - dry
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Area	BH140	hyc=3or6	river/stream - dry, non-perennial
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Display Priority 2

Area	AL020		built-up area
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Area	AL105		settlement
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Area	AL135		native settlement
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Area	BH090		land subject to inundation
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Area	BH095		marsh/swamp
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Area	BH135		rice field
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Area	EA040		orchard/plantation
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Area	EC030	tre=0or1	trees - deciduous, unknown
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Area	EC030	tre=2or3	trees - evergreen, mixed
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Display Priority 3

Line	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
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Area	AC030		settling basin/sludge pond
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Area	BA040		water (except inland)
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Area	BH020	hyc<>8	canal - non-perennial, dry, unknown
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Area	BH020	hyc=8	canal - perennial
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Area	BH030		ditch
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Area	BH040		filtration beds/aeration beds
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Area	BH050		fish hatchery/fish farm/marine farm
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Area	BH080	hyc=0or8	lake/pond - perennial, unknown
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Area	BH130		reservoir
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Area	BH140	hyc=0or8	river/stream - perennial, unknown
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Area	BH155		salt evaporator
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Display Priority 6

Line	BH010	loc=0or8or25	aqueduct - surface/elevated
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Line	BH020	hyc<>8	canal - not perennial
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Line	BH020	hyc=8	canal - perennial
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Line	BH030		ditch
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Line	BH140	hyc=0or8	river/stream - perennial, unknown
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FFD**FFD****Display Priority 6**

Line	BH140	hyc=3or6	river/stream - dry, non-perennial
Area	BI020		dam/weir
Area	BI030		lock
Area	FA001		administrative area

Display Priority 7

Point	AQ070		ferry crossing
Point	BH070		ford
Line	AP010		cart track
Line	AP050		trail
Line	AQ070		ferry crossing
Line	BA010	acc<>1	coastline/shoreline - not accurate
Line	BA010	acc=1	coastline/shoreline - accurate
Line	BB190		pier/wharf/quay
Line	BH070		ford
Area	BB190		pier/wharf/quay

Display Priority 8

Point	AQ040		bridge/overpass/viaduct
Point	AQ130		tunnel
Point	BI020		dam/weir
Point	BI030		lock
Point	CA030	ela<>1	spot elevation - not accurate
Point	CA030	ela=1	spot elevation - accurate
Point	GB005	exs<>28	airport/airfield - non-operational
Point	GB005	exs=28 AND use<>8and<>22	airport/airfield - civilian, operational
Point	GB005	exs=28 AND use=8or22	airport/airfield - military, operational
Point	GB035		heliport
Point	GB065		seaplane base
Line	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
Line	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
Line	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple

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FFD

FFD

Display	Priority	8	
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
Line	AN010	exs=8	railroad -dismantled
Line	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
Line	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
Line	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
Line	AP030	med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
Line	AP030	med<>1 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	med<>1 AND wtc=2	road - fair weather, no median
Line	AP030	med=1	road - divided w/ median
Line	AQ040		bridge/overpass/viaduct
Line	AQ130		tunnel
Line	BE015		depth contour
Line	BH010	loc=4	aqueduct - underground
Line	BI020		dam/weir
Line	CA010	hqc=0or1	contour line (land) - index, unknown
Line	CA010	hqc=2	contour line (land) - intermediate
Line	CA010	hqc=5	contour line (land) - depression
Line	CA010	hqc=6	contour line (land) - intermediate depression
Line	FA000	use=0or26	administrative boundary - primary, unknown
Line	FA000	use=23	administrative boundary - international
Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FC021	mbl=0	maritime limit boundary - unknown
Line	FC021	mbl=9	maritime limit boundary - international (at sea)
Area	AL045		complex outline
Area	AN060		railroad yard/marshalling yard
Area	GB005		airport/airfield
Area	GB035		heliport
Area	GB055		runway
Area	GB065		seaplane base
Area	ZD020		void collection area

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TOD Level 0**TOD Level 0****Display Priority 0**

Area	ZD020		void collection area
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Display Priority 3

Area	FC031	mac=141or142or155	maritime area - caution areas
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Display Priority 4

Area	FC031	mac=156	maritime area - safety lane
Area	FC031	mac=27or28or115or116or140or146or147or150or151or152or153or157or159	maritime area - military practice areas
Area	GA005	aaa=0or20or36or998	air lanes/corridors
Area	GA005	aaa=13	airspace - flight information region
Area	GA005	aaa=2	airspace - air defense zone
Area	GA005	aaa=39	airspace - upper control area
Area	GA005	aaa=40	airspace - upper flight information region
Area	GA005	aaa=9or21or22or23or34or46or70	airspace - controlled
Area	GA015	aaa=0or5or6	special use airspace - warning area
Area	GA015	aaa=2or3	special use airspace - prohibited,restricted

Display Priority 5

Point	BG010	cur=0 OR dof=0	current flow - general; direction unknown
Point	BG010	cur=5 AND dof<>0	current flow - ocean; direction known
Point	GA035	nst=0	navaids (aeronautical) - unknown
Point	GA035	nst=17	navaids (aeronautical) - NDB
Point	GA035	nst=20	navaids (aeronautical) - VOR
Point	GA035	nst=21	navaids (aeronautical) - VOR/DME
Point	GA035	nst=22	navaids (aeronautical) - VORTAC
Point	GA035	nst=23	navaids (aeronautical) - TACAN
Point	GA055	wpt<>10	waypoint/reporting-calling in point - non compulsory
Point	GA055	wpt=10	waypoint/reporting-calling in point - compulsory
Point	ZB035		control point/control station
Line	FC021	mbl<>6	maritime limit boundary - other
Line	FC021	mbl=6	maritime limit boundary - limit of territorial waters
Line	FC101		theodolite line
Line	FC102		range center line
Area	FC031	mac=0or144or145or154or999	maritime area - restricted areas
Area	FC031	mac=101	maritime area - marine sanctuary
Area	FC031	mac=104	maritime area - major op area

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TOD Level 0**TOD Level 0**

Display Priority	5
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Area	FC031	mac=105	maritime area - minor op area
Area	FC031	mac=106	maritime area - ASW area
Area	FC031	mac=107	maritime area - submarine op area
Area	FC031	mac=108	maritime area - submarine traffic lane submerged
Area	FC031	mac=109	maritime area - submarine traffic lane surface
Area	FC031	mac=110	maritime area - surface traffic lane
Area	FC031	mac=114	maritime area - sea test range
Area	FC031	mac=143or148or149or158	maritime area - military area, minefield
Area	FC036		restricted area

Display Priority	6
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Area	FC170		safety fairway
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TOD Level 1**TOD Level 1****Display Priority 0**

Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
Area	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
Area	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
Area	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	ZD020		void collection area

Display Priority 1

Area	BE030		track swath
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Display Priority 4

Point	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
Point	BD005	exs=58	miscellaneous underwater feature - reported
Point	BD180	exs=57	wreck - sonar confirmed
Point	BD180	exs=58	wreck - reported

Display Priority 5

Line	BE015	acc=1	depth contour - accurate
Line	BE015	acc=2	depth contour - not accurate

Display Priority 6

Point	BE020	acc<>1	sounding - circle (light) indicating low accuracy
Line	BE040		track line

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TOD Level 2**TOD Level 2****Display Priority 0**

Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
Area	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
Area	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
Area	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	ZD020		void collection area

Display Priority 1

Area	BE030		track swath
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Display Priority 4

Point	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
Point	BD005	exs=58	miscellaneous underwater feature - reported
Point	BD180	exs=57	wreck - sonar confirmed
Point	BD180	exs=58	wreck - reported

Display Priority 5

Line	BE015	acc=1	depth contour - accurate
Line	BE015	acc=2	depth contour - not accurate

Display Priority 6

Point	BE020	acc<>1	sounding - circle (light) indicating low accuracy
Line	BE040		track line

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TOD Level 3**TOD Level 3****Display Priority 0**

Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
Area	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
Area	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
Area	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	ZD020		void collection area

Display Priority 1

Area	BE030		track swath
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Display Priority 4

Point	BD005	exs=57	miscellaneous underwater feature - sonar confirmed
Point	BD005	exs=58	miscellaneous underwater feature - reported
Point	BD180	exs=57	wreck - sonar confirmed
Point	BD180	exs=58	wreck - reported

Display Priority 5

Line	BE015	acc=1	depth contour - accurate
Line	BE015	acc=2	depth contour - not accurate

Display Priority 6

Point	BE020	acc<>1	sounding - circle (light) indicating low accuracy
Line	BE040		track line

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TOD Level 4**TOD Level 4****Display Priority 0**

Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	cvl=-32767	depth area; depth unknown
Area	BE019	idsm=0 AND cvl>=msdcand<>-32767	depth area (very deep); 4 shades
Area	BE019	idsm=0 AND cvl>=ssdcand<msdc	depth area (medium deep); 4 shades
Area	BE019	idsm=0 AND isdm=0 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=0 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode off
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl<mssc	depth area (very shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=0 AND isdm=1 AND cvl>=msscand<ssdc	depth area (medium shallow); 4 shades; shallow mode on
Area	BE019	idsm=1 AND cvl>=ssdcand<>-32767	depth area (deep water); 2 shades
Area	BE019	idsm=1 AND isdm=0 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode off
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on
Area	BE019	idsm=1 AND isdm=1 AND cvl<ssdc	depth area (very shallow); 2 shades; shallow mode on

Display Priority 1

Area	FC179		side scan sonar coverage
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Display Priority 2

Area	FC180	htc<>503and<>507and<>509	hull integrity test site bottom feature - hght not >2m,not slope>10 deg, not cable
Area	FC180	htc=503	hull integrity test site bottom feature - height > 2m

Display Priority 3

Line	BE015	acc<>1 AND hqc<>1	depth contour - not accurate, not index
Line	BE015	acc<>1 AND hqc=1	depth contour - not accurate, index
Line	BE015	acc=1 AND hqc<>1	depth contour - accurate,not index
Line	BE015	acc=1 AND hqc=1	depth contour - accurate, index
Line	FC180	htc<>507and<>509	hull integrity test site bottom feature - not cable, not slope > 10 degrees
Line	FC180	htc=507	hull integrity test site bottom feature - slope > 10 degrees
Line	FC180	htc=509	hull integrity test site bottom feature - cable
Area	FC178		hull integrity test area

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TOD Level 4**TOD Level 4****Display Priority 3**

Area	FC180	htc=507	hull integrity test site bottom feature - slope > 10 degrees
Area	FC180	htc=509	hull integrity test site bottom feature - cable

Display Priority 4

Point	BD005	wkt<>35	miscellaneous underwater feature - not obstruction
Point	BD005	wkt=35	miscellaneous underwater feature - obstruction
Point	BD180		wreck
Point	BF012		hull integrity test site core site
Point	FC180		hull integrity test site bottom feature

Display Priority 5

Point	BE020	acc<>1	sounding - circle (light) indicating low accuracy
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Display Priority 8

Area	ZD020		void collection area
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UVMMap

UVMMap

Display Priority 0

Area	BA030		island
Area	BA050		beach

Display Priority 1

Area	BH080	hyc=3or6	lake/pond - dry, intermittent
Area	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BH160		sebkha
Area	DA005		asphalt lake
Area	DA010	mcc=<8and<46and<52and<84and<88	ground surface element - not rock, not lava, not sand
Area	DA010	mcc=52	ground surface element - lava
Area	DA010	mcc=88	ground surface element - sand
Area	DA010	mcc=8or46or84	ground surface element - boulders, gravel, rock
Area	DB170	ssc=0	sand dune/sand hills - unknown
Area	DB170	ssc=22	sand dune/sand hills - crescent
Area	DB170	ssc=26	sand dune/sand hills - lateral
Area	DB170	ssc=27	sand dune/sand hills - mounds
Area	DB170	ssc=28	sand dune/sand hills - ripple
Area	DB170	ssc=29	sand dune/sand hills - star
Area	DB170	ssc=30	sand dune/sand hills - transverse

Display Priority 2

Area	AL020	bac=0or1	built-up area sparse
Area	AL020	bac=2	built-up area dense
Area	AL135		native settlement
Area	BH015		bog
Area	BH077		hummock
Area	BH090	hoc=0or5	land subject to inundation - natural
Area	BH090	hoc=1	land subject to inundation - controlled
Area	BH095		marsh/swamp
Area	EA010	veg=0or999	cropland - other
Area	EA010	veg=0or999	cropland - other
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=4	cropland - rice paddies
Area	EA010	veg=4	cropland - rice paddies

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UVMMap

UVMMap

Display Priority 2

Area	EA030		nursery
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EA055		hops
Area	EB010		grassland
Area	EB020		scrub/brush
Area	EC010		bamboo/cane
Area	EC030	tre=0or1or3	trees - deciduous, mixed, unknown
Area	EC030	tre=2	trees - evergreen
Area	EE000		miscellaneous vegetation

Display Priority 3

Line	AN010	exs=0or28 AND ltn>1 AND rgc<>2	railroad -operational/normal/multiple
Line	EA020		hedgerow
Area	AC030		settling basin/sludge pond
Area	AK170		swimming pool
Area	AQ130		tunnel
Area	BA020		foreshore
Area	BA040		water (except inland)
Area	BB090		drydock
Area	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
Area	BH020	exs=32 AND hyc=8	canal - navigable; perennial
Area	BH030		ditch
Area	BH040		filtration beds/aeration beds
Area	BH050		fish hatchery/fish farm/marine farm
Area	BH080	hyc=0or8	lake/pond - perennial, unknown
Area	BH100	hyc<>3	moat - not dry
Area	BH100	hyc=3	moat - dry
Area	BH130		reservoir
Area	BH140	hyc=0or8	river/stream - perennial, unknown
Area	BH150		salt pan
Area	BH155		salt evaporator
Area	DB200		gully/gorge

Display Priority 5

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UVMMap

UVMMap

Display Priority	5
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Point	AM010		depot (storage)
Point	AM060		storage bunker/storage mound
Line	AK130		race track
Area	AA010	exs<>6	mine - active
Area	AA010	exs=6	mine - inactive
Area	AA012	exs<>6	quarry - active
Area	AA012	exs=6	quarry - inactive
Area	AB000		disposal site/waste pile
Area	AB010		wrecking yard/scrap yard
Area	AD030		substation/transformer yard
Area	AI020		mobile home/mobile home park
Area	AJ030		feedlot/stockyard/holding pen
Area	AK030		amusement park
Area	AK040		athletic field
Area	AK060		campground/campsite
Area	AK070		drive in theater
Area	AK090		fairgrounds
Area	AK100		golf course
Area	AK110		grandstand
Area	AK120		park
Area	AK160		stadium/amphitheater
Area	AK180		zoo/safari park
Area	AL030		cemetery
Area	AL170		plaza/city square
Area	AL200		ruins
Area	AM010		depot (storage)
Area	AM040		mineral pile
Area	AM060		storage bunker/storage mound
Area	AQ140		vehicle storage/parking area

Display Priority	6
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Point	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
Point	AA050	hyc=0or8 AND pro=116	well - water/perennial
Point	AL135		native settlement

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UVMMap

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Display Priority	6
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Point	BG010		current flow
Point	BH010		aqueduct
Point	BH075		fountain
Point	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
Point	BH170	hyc=0or8	spring/water-hole - perennial
Point	BI010		cistern
Line	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
Line	BH010	atc<>1and<>3 AND exs<>5and<>6 AND loc=4 OR atc=3	aqueduct - underground
Line	BH010	atc<>1and<>3 AND exs=5or6	aqueduct - adandoned/under construction
Line	BH010	atc=1	aqueduct - kanat
Line	BH020	hyc<>8	canal - not perennial
Line	BH020	hyc=8	canal - perennial
Line	BH030	hyc=0or8	ditch - perennial, unknown
Line	BH030	hyc=6	ditch - intermittent
Line	BH060		flume
Line	BH110	loc=0or8or25	penstock - surface/elevated
Line	BH140	hyc=0or8	river/stream - perennial, unknown
Line	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BB040		breakwater/groyne
Area	BB140		jetty
Area	BH075		fountain
Area	BH165		spillway
Area	BI020		dam/weir
Area	BI030		lock
Area	BI050		water intake tower
Area	FA001		administrative area
Area	FA070		demilitarized zone

Display Priority	7
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Point	AL120		missile site
Point	AQ070		ferry crossing
Point	AQ125		station (miscellaneous)
Point	AT020		early warning radar site
Point	BH070		ford

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UVMMap

UVMMap

Display Priority	7
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Point	DB030		cave
Line	AL070		fence
Line	AL120		missile site
Line	AL260		wall
Line	AP010		cart track
Line	AP050		trail
Line	AQ070		ferry crossing
Line	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
Line	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
Line	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
Line	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
Line	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
Line	AT020		early warning radar site
Line	BA010	slt<>6and<>8	coastline/shoreline - not mangrove or marsh
Line	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
Line	BB040		breakwater/groynes
Line	BB140		jetty
Line	BB190		pier/wharf/quay
Line	BB230		seawall
Line	BB240		slipway/patent slip
Line	BH070		ford
Line	BH210	slt=0or10or11or13or14or15	inland shoreline - unknown, rocky, rubble, sandy, stony, other
Line	BH210	slt=6or8	inland shoreline - mangrove, marsh
Line	DB010		bluff/cliff/escarpment
Line	DB070		cut
Line	DB090		embankment/fill
Line	DB110		fault
Line	EC040		cleared way/cut line/firebreak
Area	AC000		processing plant/treatment plant
Area	AD010		power plant
Area	AF030		cooling tower
Area	AH010		bastion/rampart/fortification
Area	AH050		fortification

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UVMMap

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Display Priority	7
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Area	AH060		underground bunker
Area	AL120		missile site
Area	AL140		particle accelerator
Area	AL250		underground dwelling
Area	AM080		water tower
Area	AQ040		bridge/overpass/viaduct
Area	AQ116		pumping station
Area	AQ125		station (miscellaneous)
Area	AT010		disk/dish
Area	AT020		early warning radar site
Area	AT045		radar transmitter
Area	AT050		communication building
Area	BB190		pier/wharf/quay
Area	DB030		cave
Area	DB090		embankment/fill
Area	FA015		firing range/gunnery range

Display Priority	8
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Point	AA010	exs<>6	mine - active
Point	AA010	exs=6	mine - inactive
Point	AA012	exs<>6	quarry - active
Point	AA012	exs=6	quarry - inactive
Point	AA040		rig/superstructure
Point	AA050	pro<>116	well - not water
Point	AC020		catalytic cracker
Point	AD030		substation/transformer yard
Point	AF010		chimney/smokestack
Point	AF030		cooling tower
Point	AF040		crane
Point	AF070		flare pipe
Point	AH010		bastion/rampart/fortification
Point	AH050		fortification
Point	AH060		underground bunker
Point	AJ050		windmill

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UVMMap

Display	Priority		
	8		
Point	AK020		amusement park attraction
Point	AK150		ski jump
Point	AL015	bfc=0or9or10or11or16or17or18or19or20or33or34or36or39or51or53or55or56or57or58	building - generic (population)
Point	AL015	bfc=15or60or108	building - school, college, seminary
Point	AL015	bfc=1or21or22or23or24or25or26or27or29or30or40or54or59or71or72or73or74or75or76	building - generic (industry)
Point	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or38or52or61or62or64or65or66or67or77or78or79or80or96or101or119or121or123or723	building - government
Point	AL015	bfc=4	building - castle
Point	AL015	bfc=63or69or70or87or88or91or92or93or95or97or98or99or103or105or106or107or109or111or115or117or118or122or126or127or128or999	building - generic (population)
Point	AL015	bfc=6or100	building - hospital
Point	AL015	bfc=7or114 AND hwt=0or2or3or4or7or23 OR bfc=50	building - house of worship - church
Point	AL015	bfc=7or114 AND hwt=11	building - house of worship - pagoda
Point	AL015	bfc=7or114 AND hwt=14or15or16	building - house of worship - temple
Point	AL015	bfc=7or114 AND hwt=20	building - house of worship - synagogue
Point	AL015	bfc=7or114 AND hwt=21	building - house of worship - stupa
Point	AL015	bfc=7or114 AND hwt=5or6or9	building - house of worship - mosque
Point	AL015	bfc=81or83or84or85or86or89or90or94or102or104or110or112or113or116or120or124or125	building - generic (industry)
Point	AL015	bfc=82	building - lighthouse
Point	AL030		cemetery
Point	AL100		hut
Point	AL130		monument
Point	AL200		ruins
Point	AL240		tower (non-communication)
Point	AL250		underground dwelling
Point	AM020		grain bin/silo
Point	AM030		grain elevator
Point	AM070		tank
Point	AM080		water tower
Point	AP040		gate
Point	AQ040		bridge/overpass/viaduct
Point	AQ060		control tower

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Display	Priority	8	
Point	AQ090		entrance/exit
Point	AQ110		mooring mast
Point	AQ116		pumping station
Point	AT010		disk/dish
Point	AT040		power transmission pylon
Point	AT045		radar transmitter
Point	AT050		communication building
Point	AT070		telephone-telegraph pylon/pole
Point	AT080		communication tower
Point	BC050		lighthouse
Point	BH165		spillway
Point	BI040		sluice gate
Point	BI050		water intake tower
Point	CA030	ela<>1	spot elevation - not accurate
Point	CA030	ela=1	spot elevation - accurate
Point	FA015		firing range/gunnery range
Point	GB005	exs<>28	airport/airfield - not operational
Point	GB005	exs=28 AND use<>8and<>22	airport/airfield - non military; operational
Point	GB005	exs=28 AND use=8or22	airport/airfield - military; operational
Point	GB010		airport lighting
Point	GB030		helicopter landing pad
Point	ZB020		benchmark
Point	ZB035		control point/control station
Line	AA010		mine
Line	AA012		quarry
Line	AF020		conveyor
Line	AH010		bastion/rampart/fortification
Line	AH050		fortification
Line	AH060		underground bunker
Line	AK150		ski jump
Line	AL015	bfc<>2and<>3and<>5and<>8and<>15and<>28and<>52and<>121and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
Line	AL015	bfc=15or60or108	building - school
Line	AL015	bfc=2or3or5or8or28or52or121	building - government

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UVMMap

UVMMap

Display	Priority	8	
Line	AL015	bfc=6or100	building - hospital
Line	AL015	bfc=7or114	building - house of worship
Line	AN010	exs=0or28 AND ltn<2 AND rgc<>2	railroad -operational/normal/single
Line	AN010	exs=0or28 AND ltn<2 AND rgc=2	railroad -operational/narrow/single
Line	AN010	exs=0or28 AND ltn>1 AND rgc=2	railroad -operational/narrow/multiple
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc<>2	railroad -not operational/normal/single
Line	AN010	exs=5or6or7 AND ltn<2 AND rgc=2	railroad -not operational/narrow/single
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc<>2	railroad -not operational/normal/multiple
Line	AN010	exs=5or6or7 AND ltn>1 AND rgc=2	railroad -not operational/narrow/multiple
Line	AN010	exs=8	railroad -dismantled
Line	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
Line	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
Line	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
Line	AP020		interchange
Line	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
Line	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
Line	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
Line	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	med<>1 AND wtc=2	road - fair weather, no median
Line	AP030	med=1	road - divided w/ median
Line	AQ010		aerial cableway lines/ski lift lines
Line	AQ040		bridge/overpass/viaduct
Line	AQ065		culvert
Line	AQ130		tunnel
Line	AT030		power transmission line
Line	AT045		radar transmitter
Line	AT060		telephone line/telegraph line
Line	BH110	loc=4	penstock - underground
Line	BH165		spillway
Line	BI020		dam/weir
Line	BI040		sluice gate

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UVMMap

UVMMap

Display	Priority	8	
Line	CA010	hqc=0or1 AND mcc<>103	contour line (land) - index
Line	CA010	hqc=0or1 AND mcc=103	contour line (snow\ice) - index unknown
Line	CA010	hqc=12 AND mcc<>103	contour line (land) - intermediate approximate
Line	CA010	hqc=12 AND mcc=103	contour line (snow\ice) - intermediate approximate
Line	CA010	hqc=14 AND mcc<>103	contour line (land) - supplementary 1/4
Line	CA010	hqc=14 AND mcc=103	contour line (snow\ice) - supplementary 1/4
Line	CA010	hqc=2 AND mcc<>103	contour line (land) - intermediate
Line	CA010	hqc=2 AND mcc=103	contour line (snow\ice) - intermediate
Line	CA010	hqc=3 AND mcc<>103	contour line (land) - supplementary 1/2
Line	CA010	hqc=3 AND mcc=103	contour line (snow\ice) - supplementary 1/2
Line	CA010	hqc=5 AND mcc<>103	contour line (land) - depression index
Line	CA010	hqc=5 AND mcc=103	contour line (snow\ice) - index depression
Line	CA010	hqc=6 AND mcc<>103	contour line (land) - intermediate depression
Line	CA010	hqc=6 AND mcc=103	contour line (snow\ice) - intermediate depression
Line	CA010	hqc=7 AND mcc<>103	contour line (land) - index approximate
Line	CA010	hqc=7 AND mcc=103	contour line (snow\ice) - index approximate
Line	FA000	use=0or26or999	administrative boundary - primary, unknown, other
Line	FA000	use=16	administrative boundary - city
Line	FA000	use=23	administrative boundary - international
Line	FA015		firing range/gunnery range
Line	FA020		armistice line
Line	GB045		overrun/stopway
Line	GB050		revetment (airfield)
Line	GB055		runway
Line	GB075		taxiway
Area	AK130		race track
Area	AL015	bfc<>2and<>3and<>5and<>8and<>28and<>52and<>121and<>15and<>6and<>7and<>114and<>100and<>60and<>108	building - generic
Area	AL015	bfc=15or60or108	building - school
Area	AL015	bfc=2or3or5or8or28or52or121	building - government
Area	AL015	bfc=6or100	building - hospital
Area	AL015	bfc=7or114	building - house of worship
Area	AL045		complex outline
Area	AL130		monument

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UVMMap

UVMMap

Display Priority		8	
Area	AM020	grain bin/silo	
Area	AM030	grain elevator	
Area	AM070	tank	
Area	AN060	railroad yard/marshaling yard	
Area	AN075	railroad turntable	
Area	AP020	interchange	
Area	AP030	med<>1 AND wtc<>2	road - all weather no median
Area	AP030	med<>1 AND wtc=2	road - fair/dry weather no median
Area	AP030	med=1	road - divided w/median
Area	AQ065	culvert	
Area	AQ150	flight of steps	
Area	GB005	airport/airfield	
Area	GB015	apron/hardstand	
Area	GB030	helicopter landing pad	
Area	GB035	heliport	
Area	GB045	overrun/stopway	
Area	GB050	revetment (airfield)	
Area	GB055	runway	
Area	GB075	taxiway	

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VITD

VITD

Display Priority 0

Area	AN060		railroad yard/marshalling yard
Area	BA030		island
Area	DA010	stp<>1and<>2and<>3and<>4and<>5and<>6and<>7and<>8and<>9	ground surface element - silts, clays, evaporites, other
Area	DA010	stp=1or2or3or4	ground surface element - gravels
Area	DA010	stp=5or6or7or8or9	ground surface element - sands
Area	DA020		barren ground
Area	SA010		common open water
Area	SA020		disturbed soil
Area	SA030		exposed bedrock
Area	SA050	gsc=0	slope polygon - % unknown
Area	SA050	gsc=1	slope polygon - 0 to >45%, dissected
Area	SA050	gsc=2	slope polygon - <= 3%
Area	SA050	gsc=3	slope polygon - > 3% and <= 10%
Area	SA050	gsc=4	slope polygon - > 10% and <= 20%
Area	SA050	gsc=5	slope polygon - > 20% and <= 30%
Area	SA050	gsc=6	slope polygon - > 30% and <= 45%
Area	SA050	gsc=7	slope polygon - > 45%

Display Priority 1

Area	BH020	hyc<>8	canal - not perennial
Area	BH020	hyc=8	canal - perennial
Area	BH140	hyc=0or8or14	river/stream - perennial, braided, unknown
Area	BH140	hyc=3or6	river/stream - dry, intermittent

Display Priority 2

Line	AL260		wall
Line	BI030		lock
Line	EA020		hedgerow
Area	AL020		built-up area
Area	BH090		land subject to inundation
Area	BH095		marsh/swamp
Area	BH135		rice field
Area	EA010	veg<>1	cropland - other
Area	EA010	veg<>1	cropland - other
Area	EA010	veg=1	cropland - dry

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VITD**VITD****Display Priority 2**

Area	EA010	veg=1	cropland - dry
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EB010		grassland
Area	EB020		scrub/brush
Area	EC010		bamboo/cane
Area	EC030	veg=0or24or50	trees - unknown, deciduous, mixed
Area	EC030	veg=25	trees - evergreen
Area	EC030	veg=52	trees - forest clearing
Area	SA040		permanent snowfield

Display Priority 3

Point	AQ070		ferry crossing
Point	AQ111		prepared raft or float bridge site
Point	AQ118		sharp curve(s)
Point	AQ130		tunnel
Line	AN010	exs=0or1 AND fco<>2 AND rrc<>4	railroad -operational/normal/single
Line	AN010	exs=0or1 AND fco=2 AND rrc<>4	railroad -operational/normal/multiple
Line	AN010	exs=5 AND fco<>2 AND rrc<>4	railroad -not operational/normal/single
Line	AN050	exs=0or1 AND rrc<>4	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or1 AND rrc=4	railroad siding/railroad spur - operational/narrow
Line	AN060		railroad yard/marshalling yard
Line	AP010		cart track
Line	AQ070		ferry crossing
Line	AQ111		prepared raft or float bridge site
Line	AQ130		tunnel
Line	BH100		moat
Line	DB010		bluff/cliff/escarpment
Line	DB070		cut
Line	DB090		embankment/fill
Line	DB190		volcanic dike
Line	DB200		gully/gorge
Line	SA060		covered drainage
Area	DB080		depression

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VITD**VITD****Display Priority 3**

Area	DB200		gully/gorge
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Display Priority 4

Area	GB055		runway
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Display Priority 5

Point	BI020		dam/weir
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Line	BI020		dam/weir
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Line	GB055		runway
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Display Priority 6

Line	BH020		canal
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Line	BH140	hyc=0or8or14	river/stream - perennial, braided, unknownn
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Line	BH140	hyc=3or6	river/stream - dry, intermittent
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Display Priority 7

Point	AL195		ramp
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Point	AQ040		bridge/overpass/viaduct
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Point	AQ045		bridge span
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Point	BH070		ford
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Point	BI030		lock
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Line	AL060		dragon teeth
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Line	AQ040		bridge/overpass/viaduct
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Line	AQ113		pipeline/pipe
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Line	BH070		ford
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Area	AL060		dragon teeth
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Display Priority 8

Point	AQ058	wd1<40	constriction/expansion
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Point	AQ058	wd1=40	constriction/expansion
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Line	AN010	exs=0or1 AND fco<>2 AND rrc=4	railroad -operational/narrow/single
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Line	AN010	exs=0or1 AND fco=2 AND rrc=4	railroad -operational/narrow/multiple
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Line	AN010	exs=5 AND fco<>2 AND rrc=4	railroad -not operational/narrow/single
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Line	AN010	exs=5 AND fco=2 AND rrc<>4	railroad -not operational/normal/multiple
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Line	AN010	exs=5 AND fco=2 AND rrc=4	railroad -not operational/narrow/multiple
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Line	AN010	exs=8	railroad -dismantled
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Line	AN050	exs=5 AND rrc<>4	railroad siding/railroad spur - non-operational/normal
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VITD**VITD**

Display Priority	8
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Line	AN050	exs=5 AND rrc=4	railroad siding/railroad spur - non-operational/narrow
Line	AP030	fco=0or7 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median
Line	AP030	fco=0or7 AND rst=2 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	fco=0or7 AND wtc=2	road - fair weather, no median
Line	AP030	fco=5or6	road - divided w/ median

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VMap Level 0**VMap Level 0****Display Priority 1**

Area	DA010	smc<>52and<>88	ground surface element - not lava, not sand
Area	DA010	smc=52	ground surface element - lava
Area	DA010	smc=88	ground surface element - sand

Display Priority 2

Line	EA020		hedgerow
Area	AL020		built-up area
Area	AL135		native settlement
Area	BH015		bog
Area	BH077		hummock
Area	BH090		land subject to inundation
Area	BH095		marsh/swamp
Area	BH135		rice field
Area	BJ065		ice shelf
Area	BJ100		snow field/ice field
Area	BJ110		tundra
Area	EA010	veg<>1	cropland - other
Area	EA010	veg<>1	cropland - other
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=1	cropland - dry
Area	EA030		nursery
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EB010		grassland
Area	EB020		scrub/brush
Area	EC010		bamboo/cane
Area	EC020	veg<>17	oasis - not palm
Area	EC020	veg=17	oasis - palm
Area	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
Area	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress

Display Priority 3

Point	BH120		rapids
Point	BH155		salt evaporator
Point	BH180		waterfall

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VMap Level 0**VMap Level 0****Display Priority 3**

Area	BA040		water (except inland)
Area	BH000		inland water
Area	BH050		fish hatchery/fish farm/marine farm
Area	BH155		salt evaporator
Area	BJ070		pack ice
Area	BJ080		polar ice
Area	EC030	veg=16or19	trees - nipa palm, mangrove

Display Priority 5

Point	AI030		camp
Point	AM010		depot (storage)
Area	AA010		mine/quarry
Area	AA052		oil/gas field
Area	AK040		athletic field
Area	AK130		race track

Display Priority 6

Point	AA050		well
Point	AL020		built-up area
Point	AL105		settlement
Point	AL135		native settlement
Point	BH170		spring/water-hole
Line	AQ113	loc=4	pipeline/pipe - underground
Line	BH000		inland water
Line	BH140	hyc=0or8	river/stream - perennial, unknown
Line	BH140	hyc=3or6	river/stream - dry, intermittent
Area	FA001		administrative area
Area	FA070		demilitarized zone
Area	FA170		zone of occupation

Display Priority 7

Point	AD010		power plant
Point	AL260		wall
Point	AQ064		causeway
Point	AQ070		ferry crossing
Point	BA030		island

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VMap Level 0**VMap Level 0**

Display Priority	7
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Point	BH070		ford
Point	SU001		military base
Line	AL260		wall
Line	AP050		trail
Line	AQ064		causeway
Line	AQ070		ferry crossing
Line	AQ113	loc=8	pipeline/pipe - on ground
Line	BA010		coastline/shoreline
Line	BB040		breakwater/groynes
Line	BB190		pier/wharf/quay
Line	BB230		seawall
Line	BH070		ford
Line	BJ040		ice cliff
Line	DB010		bluff/cliff/escarpment
Line	DB080		depression
Line	DB090		embankment/fill
Line	DB110		fault
Line	DB160		rock strata/rock formation
Line	EC040		cleared way/cut line/firebreak
Area	SU001		military base

Display Priority	8
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Point	AA010		mine/quarry
Point	AA052		oil/gas field
Point	AC000		processing plant/treatment plant
Point	AC040		oil/gas facilities
Point	AD030		substation/transformer yard
Point	AK160		stadium/amphitheater
Point	AL015		building
Point	AL025		cairn
Point	AL130		monument
Point	AL200		ruins
Point	AL210		snow shed/rock shed
Point	AL240		tower (non-communication)

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VMap Level 0**VMap Level 0**

Display	Priority	8	
Point	AM070		tank
Point	AM080		water tower
Point	AN060		railroad yard/marshalling yard
Point	AQ040		bridge/overpass/viaduct
Point	AQ116		pumping station
Point	AQ130		tunnel
Point	AT050		communication building
Point	AT080		communication tower
Point	BC050		lighthouse
Point	BD130		rock
Point	BD180		wreck
Point	BI020		dam/weir
Point	BI030		lock
Point	BI040		sluice gate
Point	CA030		spot elevation
Point	CA035		inland water elevation
Point	FA001		administrative area
Point	GB005	use<>8and<>22	airport/airfield - non military
Point	GB005	use=8or22	airport/airfield - military
Line	AL210		snow shed/rock shed
Line	AN010	exs<>28 AND fco<>0and<>3	railroad -not operational/normal/multiple
Line	AN010	exs<>28 AND fco=0or3	railroad -not operational/normal/single
Line	AN010	exs=28 AND fco<>0and<>3	railroad -operational/normal/multiple
Line	AN010	exs=28 AND fco=0or3	railroad -operational/normal/single
Line	AP030	med<>1	road - no median
Line	AP030	med=1	road - divided w/ median
Line	AQ010		aerial cableway lines/ski lift lines
Line	AQ040		bridge/overpass/viaduct
Line	AQ130		tunnel
Line	AT030		power transmission line
Line	AT060		telephone line/telegraph line
Line	BD000		underwater danger/hazard
Line	BD120		reef
Line	BE015		depth contour

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VMap Level 0**VMap Level 0**

Display Priority		8	
Line	BI020		dam/weir
Line	CA010	hqc=0or2	contour line (land) - intermediate unknown
Line	CA010	hqc=12	contour line (land) - intermediate approximate
Line	CA010	hqc=18	contour line (land) - intermediate depression approx
Line	CA010	hqc=19	contour line (land) - carrying contour (coincident)
Line	CA010	hqc=22or23	contour line (land) - supplemental depression
Line	CA010	hqc=4or13or20or21	contour line (land) - supplementary approx., carrying, form lines
Line	CA010	hqc=6	contour line (land) - depression intermediate
Line	FA000	use=23	administrative boundary - international
Line	FA000	use=26	administrative boundary - primary
Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FA040		claim line
Line	FA050		mandate line/convention line
Line	FA060		defacto boundary
Line	FA110		international date line
Area	ZD020		void collection area

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VMap Level 1**VMap Level 1****Display Priority 0**

Area	BA030		island
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Display Priority 1

Area	BH080	hyc=3or6	lake/pond - dry, intermittent
Area	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BH160		sebkha
Area	BJ020		moraine
Area	DA005		asphalt lake
Area	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
Area	DA010	mcc=46or8	ground surface element - boulders, gravel
Area	DA010	mcc=52	ground surface element - lava
Area	DA010	mcc=88	ground surface element - sand
Area	DB170	ssc=0	sand dune/sand hills - unknown
Area	DB170	ssc=22	sand dune/sand hills - crescent
Area	DB170	ssc=26	sand dune/sand hills - lateral
Area	DB170	ssc=27	sand dune/sand hills - mounds
Area	DB170	ssc=28	sand dune/sand hills - ripple
Area	DB170	ssc=29	sand dune/sand hills - star
Area	DB170	ssc=30	sand dune/sand hills - transverse

Display Priority 2

Area	AL020		built-up area
Area	AL105		settlement
Area	AL135		native settlement
Area	BH015		bog
Area	BH090	exs=0or45	land subject to inundation - natural
Area	BH090	exs=48	land subject to inundation - controlled
Area	BH095		marsh/swamp
Area	BH135		rice field
Area	BJ030		glacier
Area	BJ065		ice shelf
Area	BJ100		snow field/ice field
Area	BJ110		tundra
Area	EA010	veg<>1	cropland - other
Area	EA010	veg<>1	cropland - other

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VMap Level 1**VMap Level 1****Display Priority 2**

Area	EA010	veg=1	cropland - dry
Area	EA010	veg=1	cropland - dry
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EB010		grassland
Area	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
Area	EC030	veg=11or12or17or18or29or38	trees - casuarina, coniferous, palm, filao, eucalyptus, cypress

Display Priority 3

Point	BH120		rapids
Point	BH180		waterfall
Point	EC020	veg<>17	oasis - not palm
Point	EC020	veg=17	oasis - palm
Line	BH120		rapids
Line	BH180		waterfall
Line	EC030		trees
Area	AC030		settling basin/sludge pond
Area	BA020		foreshore
Area	BA040		water (except inland)
Area	BH040		filtration beds/aeration beds
Area	BH050		fish hatchery/fish farm/marine farm
Area	BH080	hyc=0or8	lake/pond - perennial, unknown
Area	BH130		reservoir
Area	BH140	hyc=0or8	river/stream - perennial, unknown
Area	BH150		salt pan
Area	BH155		salt evaporator
Area	BH190		lagoon/reef pool
Area	BJ070		pack ice
Area	BJ080		polar ice
Area	EC030	veg=16or19	trees - nipa palm, mangrove

Display Priority 5

Point	AQ135		vehicle stopping area/rest area
Area	AA010	exs<>6	mine/quarry - active
Area	AA010	exs=6	mine/quarry - inactive

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VMap Level 1**VMap Level 1****Display Priority 5**

Area	AB000		disposal site/waste pile
Area	AK120		park
Area	AL200		ruins

Display Priority 6

Point	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
Point	AA050	hyc=0or8 AND pro=116	well - water/perennial
Point	AL020		built-up area
Point	BH010		aqueduct
Point	BH145		river stream vanishing point
Point	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
Point	BH170	hyc=0or8	spring/water-hole - perennial
Point	BI010		cistern
Line	AQ113	loc=4 AND pro<>116	pipeline/pipe - underground; not water
Line	AQ113	loc=4 AND pro=116	pipeline/pipe - underground; water
Line	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
Line	BH020	hyc<>8	canal - not perennial
Line	BH020	hyc=8	canal - perennial
Line	BH030	hyc<>0and<>8	ditch - not perennial
Line	BH030	hyc=0or8	ditch - perennial, unknown
Line	BH060		flume
Line	BH110	loc=0or8or25	penstock - surface/elevated
Line	BH140	hyc=0or8	river/stream - perennial, unknown
Line	BH140	hyc=3or6	river/stream - dry, intermittent
Area	FA001		administrative area
Area	FA070		demilitarized zone
Area	FA170		zone of occupation

Display Priority 7

Point	AD010		power plant
Point	AL140		particle accelerator
Point	AQ070		ferry crossing
Point	BH070		ford
Point	BJ060		ice peak/nunatak
Point	DB030		cave

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VMap Level 1

VMap Level 1

Display Priority		7	
Point	DB115	geothermal feature	
Point	DB150	mountain pass	
Point	DB160	rock strata/rock formation	
Line	AL070	fence	
Line	AL260	wall	
Line	AP010	cart track	
Line	AP050	trail	
Line	AQ070	ferry crossing	
Line	AQ113	loc=0or8 AND pro<>116	pipeline/pipe - surface; not water
Line	AQ113	loc=0or8 AND pro=116	pipeline/pipe - surface; water
Line	BA010	slt<>6and<>8	coastline/shoreline -not mangrove or marsh
Line	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
Line	BB040		breakwater/groyne
Line	BB140	vrr=0or1	jetty - unknown, partly submerged at high water
Line	BB140	vrr=8	jetty - covers and uncovers
Line	BB190		pier/wharf/quay
Line	BB230		seawall
Line	BH070		ford
Line	BJ040		ice cliff
Line	DB010		bluff/cliff/escarpment
Line	DB060	mcc=0or30	crevice/crevasse - earthen
Line	DB060	mcc=103	crevice/crevasse - snow/ice
Line	DB070		cut
Line	DB090		embankment/fill
Line	DB100		esker
Line	DB110		fault
Line	EC040		cleared way/cut line/firebreak
Line	FA090		geophysical prospecting grid
Area	AC000		processing plant/treatment plant
Area	AD010		power plant
Area	AH050		fortification
Area	BB190		pier/wharf/quay
Area	BD120		reef

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VMap Level 1

VMap Level 1

Display	Priority	8	
Point	AA010	exs<>6	mine/quarry - active
Point	AA010	exs=6	mine/quarry - inactive
Point	AA040		rig/superstructure
Point	AA050	pro<>116	well - not water
Point	AC000		processing plant/treatment plant
Point	AF010		chimney/smokestack
Point	AF030		cooling tower
Point	AF040		crane
Point	AF070		flare pipe
Point	AH050		fortification
Point	AJ050		windmill
Point	AK020		amusement park attraction
Point	AK150		ski jump
Point	AK160		stadium/amphitheater
Point	AL015	bfc=0or1or9or10or11or16or17or18or19or20or22or23or24or27or83or999	building - generic
Point	AL015	bfc=15	building - school
Point	AL015	bfc=2or3or5or12or13or14	building - government
Point	AL015	bfc=4	building - castle
Point	AL015	bfc=7 AND hwt=0or2or3or4or7	building - house of worship - church
Point	AL015	bfc=7 AND hwt=11	building - house of worship - pagoda
Point	AL015	bfc=7 AND hwt=14or15or16	building - house of worship - temple
Point	AL015	bfc=7 AND hwt=20	building - house of worship - synagogue
Point	AL015	bfc=7 AND hwt=21	building - house of worship - stupa
Point	AL015	bfc=7 AND hwt=5or6or9	building - house of worship - mosque
Point	AL015	bfc=82	building - lighthouse
Point	AL025		cairn
Point	AL100		hut
Point	AL130		monument
Point	AL200		ruins
Point	AL210		snow shed/rock shed
Point	AL240		tower (non-communication)
Point	AM020		grain bin/silo
Point	AM030		grain elevator

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VMap Level 1

VMap Level 1

Display	Priority		
	8		
Point	AM070		tank
Point	AM080		water tower
Point	AP020		interchange
Point	AQ040		bridge/overpass/viaduct
Point	AQ060		control tower
Point	AQ110		mooring mast
Point	AQ116		pumping station
Point	AQ130		tunnel
Point	AT010		disk/dish
Point	AT080		communication tower
Point	BD130	vrr=0or8	rock - unk/covers/uncovers
Point	BD130	vrr=2	rock - awash
Point	BD180		wreck
Point	BI020		dam/weir
Point	BI050		water intake tower
Point	CA030	ela<>1	spot elevation - not accurate
Point	CA030	ela=1	spot elevation - accurate
Point	GB005	exs<>28	airport/airfield - not operational
Point	GB005	exs=28 AND use<>8and<>22	airport/airfield - operational; non military
Point	GB005	exs=28 AND use=8or22	airport/airfield - operational; military
Point	GB010		airport lighting
Point	GB055	exs<>28	runway - not operational
Point	GB055	exs=28	runway - operational
Point	ZB035		control point/control station
Line	AF020		conveyor
Line	AK130		race track
Line	AL210		snow shed/rock shed
Line	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
Line	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
Line	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
Line	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single
Line	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
Line	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple
Line	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single

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VMap Level 1

VMap Level 1

Display	Priority	8	
Line	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
Line	AN010	exs=8	railroad -dismantled
Line	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
Line	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
Line	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
Line	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
Line	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
Line	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
Line	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	med<>1 AND wtc=2	road - fair weather, no median
Line	AP030	med=1	road - divided w/ median
Line	AQ010		aerial cableway lines/ski lift lines
Line	AQ040		bridge/overpass/viaduct
Line	AQ130		tunnel
Line	AT030		power transmission line
Line	AT060		telephone line/telegraph line
Line	BD120		reef
Line	BE015		depth contour
Line	BH010	exs<>5and<>6 AND loc=4	aqueduct - underground
Line	BH010	exs=5or6	aqueduct - abandoned/under construction
Line	BH110	loc=4	penstock - underground
Line	BI020		dam/weir
Line	BI030		lock
Line	CA010		contour line (land)
Line	FA000	use=0or26	administrative boundary - primary, unknown
Line	FA000	use=30	administrative boundary - secondary
Line	FA000	use=31	administrative boundary - tertiary
Line	FA000	use=4or23	administrative boundary - international
Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FA050		mandate line/convention line

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Display Priority	8
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Line	FA060		defacto boundary
Line	FA110		international date line
Line	GB055		runway
Area	AL015	bfc<>7and<>15	building - generic
Area	AL015	bfc=15	building - school
Area	AL015	bfc=7	building - house of worship
Area	AN060		railroad yard/marshalling yard
Area	ZC040		magnetic disturbance area
Area	ZD020		void collection area

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VMap Level 2**VMap Level 2****Display Priority 0**

Area	BA030		island
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Display Priority 1

Area	BH080	hyc=3or6	lake/pond - dry, intermittent
Area	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BH160		sebkha
Area	BJ020		moraine
Area	DA005		asphalt lake
Area	DA010	mcc<>8and<>46and<>52and<>88	ground surface element - not rock, not lava, not sand
Area	DA010	mcc=46or8	ground surface element - boulders, gravel
Area	DA010	mcc=52	ground surface element - lava
Area	DA010	mcc=88	ground surface element - sand
Area	DB170	ssc=0	sand dune/sand hills - unknown
Area	DB170	ssc=22	sand dune/sand hills - crescent
Area	DB170	ssc=26	sand dune/sand hills - lateral
Area	DB170	ssc=27	sand dune/sand hills - mounds
Area	DB170	ssc=28	sand dune/sand hills - ripple
Area	DB170	ssc=29	sand dune/sand hills - star
Area	DB170	ssc=30	sand dune/sand hills - transverse

Display Priority 2

Line	EA020		hedgerow
Area	AL020	bac=0or1	built-up area sparse
Area	AL020	bac=2	built-up area dense
Area	AL105		settlement
Area	AL135		native settlement
Area	BH015		bog
Area	BH077		hummock
Area	BH090	exs=0or45	land subject to inundation - natural
Area	BH090	exs=48	land subject to inundation - controlled
Area	BH095		marsh/swamp
Area	BH135		rice field
Area	BJ030		glacier
Area	BJ065		ice shelf
Area	BJ100		snow field/ice field

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VMap Level 2**VMap Level 2****Display Priority 2**

Area	BJ110		tundra
Area	EA010	veg<>1	cropland - other
Area	EA010	veg<>1	cropland - other
Area	EA010	veg=1	cropland - dry
Area	EA010	veg=1	cropland - dry
Area	EA030		nursery
Area	EA040		orchard/plantation
Area	EA050		vineyards
Area	EB010		grassland
Area	EB020		scrub/brush
Area	EC010		bamboo/cane
Area	EC020	veg<>17	oasis - not palm
Area	EC020	veg=17	oasis - palm
Area	EC030	veg=0or24or50or999	trees - unknown, deciduous, mixed, other
Area	EC030	veg=11or12or17or18or25or29or38	trees - casuarina, coniferous, palm, filao, evergreen, eucalyptus, cypress

Display Priority 3

Point	BD100		pile/piling/post
Point	BH120		rapids
Point	BH180		waterfall
Point	EC020	veg<>17	oasis - not palm
Point	EC020	veg=17	oasis - palm
Line	BH120		rapids
Line	BH180		waterfall
Area	AC030		settling basin/sludge pond
Area	AK170		swimming pool
Area	BA020		foreshore
Area	BA040		water (except inland)
Area	BB090		drydock
Area	BD100		pile/piling/post
Area	BH020	exs<>32 OR hyc<>8	canal - not navigable or not perennial
Area	BH020	exs=32 AND hyc=8	canal - navigable; perennial
Area	BH030		ditch
Area	BH040		filtration beds/aeration beds

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VMap Level 2**VMap Level 2****Display Priority 3**

Area	BH050		fish hatchery/fish farm/marine farm
Area	BH080	hyc=0or8	lake/pond - perennial, unknown
Area	BH130		reservoir
Area	BH140	hyc=0or8	river/stream - perennial, unknown
Area	BH150		salt pan
Area	BH155		salt evaporator
Area	BJ070		pack ice
Area	BJ080		polar ice
Area	EC030	veg=16or19	trees - nipa palm, mangrove

Display Priority 4

Point	EC030		trees
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Display Priority 5

Point	AM060		storage bunker/storage mound
Area	AA010	exs<>6	mine/quarry - active
Area	AA010	exs=6	mine/quarry - inactive
Area	AB000		disposal site/waste pile
Area	AB010		wrecking yard/scrap yard
Area	AD030		substation/transformer yard
Area	AI020		mobile home/mobile home park
Area	AJ030		feedlot/stockyard/holding pen
Area	AK030		amusement park
Area	AK040		athletic field
Area	AK060		campground/campsite
Area	AK070		drive in theater
Area	AK090		fairgrounds
Area	AK100		golf course
Area	AK120		park
Area	AK160		stadium/amphitheater
Area	AK180		zoo/safari park
Area	AL030		cemetery
Area	AL170		plaza/city square
Area	AL200		ruins
Area	AM010		depot (storage)

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VMap Level 2**VMap Level 2****Display Priority 5**

Area	AM060		storage bunker/storage mound
Area	AQ135		vehicle stopping area/rest area
Area	AQ140		vehicle storage/parking area

Display Priority 6

Point	AA050	hyc<>0and<>8 AND pro=116	well - water/non-perennial-dry
Point	AA050	hyc=0or8 AND pro=116	well - water/perennial
Point	AL105		settlement
Point	BH010		aqueduct
Point	BH145		river stream vanishing point
Point	BH170	hyc<>0and<>8	spring/water-hole - not perennial/dry
Point	BH170	hyc=0or8	spring/water-hole - perennial
Point	BI010		cistern
Line	BH010	exs<>5and<>6 AND loc=0or8or25	aqueduct - surface/elevated
Line	BH010	exs<>5and<>6 AND loc=4	aqueduct - underground
Line	BH010	exs=5or6	aqueduct - abandoned/under construction
Line	BH020	hyc<>8	canal - not perennial
Line	BH020	hyc=8	canal - perennial
Line	BH030	hyc=0or8	ditch - perennial, unknown
Line	BH030	hyc=6	ditch - intermittent
Line	BH060		flume
Line	BH110	loc=0or8or25	penstock - surface/elevated
Line	BH140	hyc=0or8	river/stream - perennial, unknown
Line	BH140	hyc=3or6	river/stream - dry, intermittent
Area	BB040		breakwater/groyne
Area	BB140		jetty
Area	BB240		slipway/patent slip
Area	BI020		dam/weir
Area	BI030		lock
Area	BI050		water intake tower
Area	FA001		administrative area
Area	FA070		demilitarized zone
Area	FA170		zone of occupation

Display Priority 7

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VMap Level 2**VMap Level 2**

Display	Priority	7	
Point	AD020		solar panels
Point	AQ070		ferry crossing
Point	BB010		anchorage
Point	BH070		ford
Point	BJ060		ice peak/nunatak
Point	DB030		cave
Point	DB115		geothermal feature
Point	DB150		mountain pass
Point	DB160		rock strata/rock formation
Point	DB180		volcano
Line	AL060		dragon teeth
Line	AL070		fence
Line	AL260		wall
Line	AP010		cart track
Line	AP050		trail
Line	AQ070		ferry crossing
Line	AQ113	exs<>5and<>6 AND loc=0or8or25 AND pro=116	pipeline - on ground/elevated - water
Line	AQ113	exs<>5and<>6 AND loc=4 AND pro=116	pipeline - underground - water
Line	AQ113	exs=5or6 AND pro=116	pipeline - abandoned/under construction - water
Line	AQ113	loc=0or8or25 AND pro<>116	pipeline - on ground/elevated - not water
Line	AQ113	loc=4 AND pro<>116	pipeline - underground - not water
Line	BA010	slt<>6and<>8	coastline.shoreline - not mangrove or marsh
Line	BA010	slt=6or8	coastline/shoreline - mangrove, marsh
Line	BB040		breakwater/groyne
Line	BB140		jetty
Line	BB190		pier/wharf/quay
Line	BB230		seawall
Line	BB240		slipway/patent slip
Line	BH070		ford
Line	BJ040		ice cliff
Line	DB010		bluff/cliff/escarpment
Line	DB060	mcc=0or30	crevice/crevasse - earthen
Line	DB060	mcc=103	crevice/crevasse - snow/ice
Line	DB070		cut

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VMap Level 2**VMap Level 2****Display Priority 7**

Line	DB090		embankment/fill
Line	DB100		esker
Line	DB110		fault
Line	EC040		cleared way/cut line/firebreak
Line	FA090		geophysical prospecting grid
Area	AC000		processing plant/treatment plant
Area	AD010		power plant
Area	AH050		fortification
Area	AL060		dragon teeth
Area	AL140		particle accelerator
Area	AQ116		pumping station
Area	AT050		communication building
Area	BB010		anchorage
Area	BB190		pier/wharf/quay
Area	BD120		reef
Area	DB060	mcc=0or30	crevice/crevasse - earthen
Area	DB060	mcc=103	crevice/crevasse - snow/ice
Area	DB090		embankment/fill
Area	DB160		rock strata/rock formation

Display Priority 8

Point	AA010	exs<>6	mine/quarry - active
Point	AA010	exs=6	mine/quarry - inactive
Point	AA040		rig/superstructure
Point	AA050	pro<>116	well - not water
Point	AC000		processing plant/treatment plant
Point	AC020		catalytic cracker
Point	AD030		substation/transformer yard
Point	AF010		chimney/smokestack
Point	AF030		cooling tower
Point	AF040		crane
Point	AF070		flare pipe
Point	AH050		fortification
Point	AJ050		windmill

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VMap Level 2

VMap Level 2

Display Priority	8	
Point	AK020	amusement park attraction
Point	AK150	ski jump
Point	AL015	bfc=0or1or9or10or11or16or17or18or19or20or21or22or23or24or25or26or27or29or30or33or36
Point	AL015	bfc=15
Point	AL015	bfc=2or3or5or8or12or13or14or28or31or35or37or61or66or77or96
Point	AL015	bfc=4
Point	AL015	bfc=53or59or69or70or83or85or86or87or88or89or90or91or92or93or95or98or999
Point	AL015	bfc=6
Point	AL015	bfc=7 AND hwt=0or2or3or4or7
Point	AL015	bfc=7 AND hwt=11
Point	AL015	bfc=7 AND hwt=14or15or16
Point	AL015	bfc=7 AND hwt=20
Point	AL015	bfc=7 AND hwt=21
Point	AL015	bfc=7 AND hwt=5or6or9
Point	AL015	bfc=82
Point	AL025	cairn
Point	AL030	cemetery
Point	AL100	hut
Point	AL130	monument
Point	AL200	ruins
Point	AL210	snow shed/rock shed
Point	AL240	tower (non-communication)
Point	AL250	underground dwelling
Point	AM020	grain bin/silo
Point	AM030	grain elevator
Point	AM070	tank
Point	AM080	water tower
Point	AN075	railroad turntable
Point	AQ040	bridge/overpass/viaduct
Point	AQ060	control tower
Point	AQ065	culvert
Point	AQ110	mooring mast

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VMap Level 2

VMap Level 2

Display	Priority	8	
Point	AQ116		pumping station
Point	AQ130		tunnel
Point	AT010		disk/dish
Point	AT050		communication building
Point	AT080		communication tower
Point	BD130	vrr=0or8	rock - unk/covers/uncovers
Point	BD130	vrr=2	rock - awash
Point	BD180		wreck
Point	BI020		dam/weir
Point	BI030		lock
Point	BI040		sluice gate
Point	BI050		water intake tower
Point	CA030	ela<>1	spot elevation - not accurate
Point	CA030	ela=1	spot elevation - accurate
Point	GB005	exs<>28	airport/airfield - not operational
Point	GB005	exs=28 AND use<>8and<>22	airport/airfield - operational; non military
Point	GB005	exs=28 AND use=8or22	airport/airfield - operational; military
Point	GB010		airport lighting
Point	ZB030		boundary monument
Point	ZB035		control point/control station
Line	AF020		conveyor
Line	AK130		race track
Line	AK150		ski jump
Line	AL015	bfc<>6and<>7and<>15	building - generic
Line	AL015	bfc=15	building - school
Line	AL015	bfc=6	building - hospital
Line	AL015	bfc=7	building - house of worship
Line	AL210		snow shed/rock shed
Line	AN010	exs=0or28 AND fco<>0and<>3 AND rgc<>2	railroad -operational/normal/multiple
Line	AN010	exs=0or28 AND fco<>0and<>3 AND rgc=2	railroad -operational/narrow/multiple
Line	AN010	exs=0or28 AND fco=0or3 AND rgc<>2	railroad -operational/normal/single
Line	AN010	exs=0or28 AND fco=0or3 AND rgc=2	railroad -operational/narrow/single
Line	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc<>2	railroad -not operational/normal/multiple
Line	AN010	exs=5or6or7 AND fco<>0and<>3 AND rgc=2	railroad -not operational/narrow/multiple

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VMap Level 2**VMap Level 2**

Display	Priority	8	
Line	AN010	exs=5or6or7 AND fco=0or3 AND rgc<>2	railroad -not operational/normal/single
Line	AN010	exs=5or6or7 AND fco=0or3 AND rgc=2	railroad -not operational/narrow/single
Line	AN010	exs=8	railroad -dismantled
Line	AN050	exs<>0and<>28 AND rgc<>2	railroad siding/railroad spur - non-operational/normal
Line	AN050	exs<>0and<>28 AND rgc=2	railroad siding/railroad spur - non-operational/narrow
Line	AN050	exs=0or28 AND rgc<>2	railroad siding/railroad spur - operational/normal
Line	AN050	exs=0or28 AND rgc=2	railroad siding/railroad spur - operational/narrow
Line	AP020		interchange
Line	AP030	ltn=0or1 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 1 ln
Line	AP030	ltn=2or3 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 2-3 lns
Line	AP030	ltn>=4 AND med<>1 AND rst=0or1 AND wtc<>2	road - all weather, hard surface, no median, 4 lns
Line	AP030	med<>1 AND rst=2or3 AND wtc<>2	road - all weather, loose surface, no median
Line	AP030	med<>1 AND wtc=2	road - fair weather, no median
Line	AP030	med=1	road - divided w/ median
Line	AQ010		aerial cableway lines/ski lift lines
Line	AQ040		bridge/overpass/viaduct
Line	AQ130		tunnel
Line	AT030		power transmission line
Line	AT060		telephone line/telegraph line
Line	BD120		reef
Line	BE015		depth contour
Line	BH110	loc=4	penstock - underground
Line	BI020		dam/weir
Line	BI040		sluice gate
Line	CA010	hqc=0or1 AND mcc<>103	contour line (land) - index
Line	CA010	hqc=0or1 AND mcc=103	contour line (snow\ice) - index unknown
Line	CA010	hqc=12 AND mcc<>103	contour line (land) - intermediate approximate
Line	CA010	hqc=12 AND mcc=103	contour line (snow\ice) - intermediate approximate
Line	CA010	hqc=14 AND mcc<>103	contour line (land) - supplementary 1/4
Line	CA010	hqc=14 AND mcc=103	contour line (snow\ice) - supplementary 1/4
Line	CA010	hqc=2 AND mcc<>103	contour line (land) - intermediate
Line	CA010	hqc=2 AND mcc=103	contour line (snow\ice) - intermediate

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VMap Level 2**VMap Level 2**

Display	Priority	8	
Line	CA010	hqc=3or4or13 AND mcc<>103	contour line (land) - supplementary 1/2, approx, form lines
Line	CA010	hqc=3or4or13 AND mcc=103	contour line (snow\ice) - supplementary 1/2, approx, form lines, approx
Line	CA010	hqc=5or8 AND mcc<>103	contour line (land) - depression mound
Line	CA010	hqc=5or8 AND mcc=103	contour line (snow\ice) - index depression mound
Line	CA010	hqc=6or9 AND mcc<>103	contour line (land) - intermediate depression mound
Line	CA010	hqc=6or9 AND mcc=103	contour line (snow\ice) - intermediate depression mound
Line	CA010	hqc=7 AND mcc<>103	contour line (land) - index approximate
Line	CA010	hqc=7 AND mcc=103	contour line (snow\ice) - index approximate
Line	FA000	use=0or26	administrative boundary - primary, unknown
Line	FA000	use=23	administrative boundary - international
Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FA060		defacto boundary
Line	FA110		international date line
Area	AL015	bfc<>6and<>7and<>15	building - generic
Area	AL015	bfc=15	building - school
Area	AL015	bfc=6	building - hospital
Area	AL015	bfc=7	building - house of worship
Area	AM020		grain bin/silo
Area	AM030		grain elevator
Area	AM070		tank
Area	AN060		railroad yard/marshalling yard
Area	GB005		airport/airfield
Area	GB015		apron/hardstand
Area	GB045		overrun/stopway
Area	GB055		runway
Area	GB075		taxiway
Area	ZD020		void collection area

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VVOD**VVOD****Display Priority 7**

Line	AP030	road (libref)
Line	BA010	coastline/shoreline (libref)
Line	BH140	river/stream (libref)
Line	FA000	Administrative Boundary (libref)

Display Priority 8

Point	AA040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	rig / superstructure light high
Point	AA040	atn=3 AND hgt>0and<304	rig / superstructure light
Point	AA040	hgt=-32767 OR hgt>=304	rig / superstructure high
Point	AA040	hgt>0and<304	rig / superstructure
Point	AB000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disposal site / waste pile light high
Point	AB000	atn=3 AND hgt>0and<304	disposal site / waste pile light
Point	AB000	hgt=-32767 OR hgt>=304	disposal site / waste pile high
Point	AB000	hgt>0and<304	disposal site / waste pile
Point	AC000	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	processing plant / treatment plant light high
Point	AC000	atn=3 AND hgt>0and<304	processing plant / treatment plant light
Point	AC000	hgt=-32767 OR hgt>=304	processing plant / treatment plant high
Point	AC000	hgt>0and<304	processing plant / treatment plant
Point	AC010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	blast furnace light high
Point	AC010	atn=3 AND hgt>0and<304	blast furnace light
Point	AC010	hgt=-32767 OR hgt>=304	blast furnace high
Point	AC010	hgt>0and<304	blast furnace
Point	AC020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	catalytic cracker light high
Point	AC020	atn=3 AND hgt>0and<304	catalytic cracker light
Point	AC020	hgt=-32767 OR hgt>=304	catalytic cracker high
Point	AC020	hgt>0and<304	catalytic cracker
Point	AD010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power plant / power station light high
Point	AD010	atn=3 AND hgt>0and<304	power plant / power station light
Point	AD010	hgt=-32767 OR hgt>=304	power plant / power station high
Point	AD010	hgt>0and<304	power plant / power station
Point	AD030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	substation / transformer yard light high
Point	AD030	atn=3 AND hgt>0and<304	substation / transformer yard light
Point	AD030	hgt=-32767 OR hgt>=304	substation / transformer yard high
Point	AD030	hgt>0and<304	substation / transformer yard

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Display	Priority	8	
Point	AF010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	chimney / smokestack light high
Point	AF010	atn=3 AND hgt>0and<304	chimney / smokestack light
Point	AF010	hgt=-32767 OR hgt>=304	chimney / smokestack high
Point	AF010	hgt>0and<304	chimney / smokestack
Point	AF020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	conveyor light high
Point	AF020	atn=3 AND hgt>0and<304	conveyor light
Point	AF020	hgt=-32767 OR hgt>=304	conveyor high
Point	AF020	hgt>0and<304	conveyor
Point	AF030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	cooling tower light high
Point	AF030	atn=3 AND hgt>0and<304	cooling tower light
Point	AF030	hgt=-32767 OR hgt>=304	cooling tower high
Point	AF030	hgt>0and<304	cooling tower
Point	AF040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	crane light high
Point	AF040	atn=3 AND hgt>0and<304	crane light
Point	AF040	hgt=-32767 OR hgt>=304	crane high
Point	AF040	hgt>0and<304	crane
Point	AF050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dredge / powershovel / dragline light high
Point	AF050	atn=3 AND hgt>0and<304	dredge / powershovel / dragline light
Point	AF050	hgt=-32767 OR hgt>=304	dredge / powershovel / dragline high
Point	AF050	hgt>0and<304	dredge / powershovel / dragline
Point	AF070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	flare pipe light high
Point	AF070	atn=3 AND hgt>0and<304	flare pipe light
Point	AF070	hgt=-32767 OR hgt>=304	flare pipe high
Point	AF070	hgt>0and<304	flare pipe
Point	AF080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	hopper light high
Point	AF080	atn=3 AND hgt>0and<304	hopper light
Point	AF080	hgt=-32767 OR hgt>=304	hopper high high
Point	AF080	hgt>0and<304	hopper
Point	AH050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	fortification light high
Point	AH050	atn=3 AND hgt>0and<304	fortification light
Point	AH050	hgt=-32767 OR hgt>=304	fortification high
Point	AH050	hgt>0and<304	fortification
Point	AJ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmill light high
Point	AJ050	atn=3 AND hgt>0and<304	windmill light

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Display	Priority	8	
Point	AJ050	hgt=-32767 OR hgt>=304	windmill high
Point	AJ050	hgt>0and<304	windmill
Point	AJ051	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	windmotor light high
Point	AJ051	atn=3 AND hgt>0and<304	windmotor light
Point	AJ051	hgt=-32767 OR hgt>=304	windmotor high
Point	AJ051	hgt>0and<304	windmotor
Point	AK020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	amusement park attraction light high
Point	AK020	atn=3 AND hgt>0and<304	amusement park attraction light
Point	AK020	hgt=-32767 OR hgt>=304	amusement park attraction high
Point	AK020	hgt>0and<304	amusement park attraction
Point	AK150	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	ski jump light high
Point	AK150	atn=3 AND hgt>0and<304	ski jump light
Point	AK150	hgt=-32767 OR hgt>=304	ski jump high
Point	AK150	hgt>0and<304	ski jump
Point	AK160	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	stadium / amphitheater light high
Point	AK160	atn=3 AND hgt>0and<304	stadium / amphitheater light
Point	AK160	hgt=-32767 OR hgt>=304	stadium / amphitheater high
Point	AK160	hgt>0and<304	stadium / amphitheater
Point	AL015	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building light high
Point	AL015	atn=3 AND hgt>0and<304	building light
Point	AL015	hgt=-32767 OR hgt>=304	building high
Point	AL015	hgt>0and<304	building
Point	AL018	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	building superstructure addition light high
Point	AL018	atn=3 AND hgt>0and<304	building superstructure addition light
Point	AL018	hgt=-32767 OR hgt>=304	building superstructure addition high
Point	AL018	hgt>0and<304	building superstructure addition
Point	AL050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	display sign light high
Point	AL050	atn=3 AND hgt>0and<304	display sign light
Point	AL050	hgt=-32767 OR hgt>=304	display sign high
Point	AL050	hgt>0and<304	display sign
Point	AL110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light standard / light support light high
Point	AL110	atn=3 AND hgt>0and<304	light standard / light support light
Point	AL110	hgt=-32767 OR hgt>=304	light standard / light support high
Point	AL110	hgt>0and<304	light standard / light support

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Display	Priority	8	
Point	AL130	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	monument light high
Point	AL130	atn=3 AND hgt>0and<304	monument light
Point	AL130	hgt=-32767 OR hgt>=304	monument high
Point	AL130	hgt>0and<304	monument
Point	AL240	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tower (non-communication) light high
Point	AL240	atn=3 AND hgt>0and<304	tower (non-communication) light
Point	AL240	hgt=-32767 OR hgt>=304	tower (non-communication) high
Point	AL240	hgt>0and<304	tower (non-communication)
Point	AM010	hgt=-32767 OR hgt>=304	depot high
Point	AM010	hgt>0and<304	depot
Point	AM020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain bin / silo light high
Point	AM020	atn=3 AND hgt>0and<304	grain bin / silo light
Point	AM020	hgt=-32767 OR hgt>=304	grain bin / silo high
Point	AM020	hgt>0and<304	grain bin / silo
Point	AM030	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	grain elevator light high
Point	AM030	atn=3 AND hgt>0and<304	grain elevator light
Point	AM030	hgt=-32767 OR hgt>=304	grain elevator high
Point	AM030	hgt>0and<304	grain elevator
Point	AM070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	tank light high
Point	AM070	atn=3 AND hgt>0and<304	tank light
Point	AM070	hgt=-32767 OR hgt>=304	tank high
Point	AM070	hgt>0and<304	tank
Point	AM080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water tower light high
Point	AM080	atn=3 AND hgt>0and<304	water tower light
Point	AM080	hgt=-32767 OR hgt>=304	water tower high
Point	AM080	hgt>0and<304	water tower
Point	AQ020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aerial cableway pylon / ski pylon light high
Point	AQ020	atn=3 AND hgt>0and<304	aerial cableway pylon / ski pylon light
Point	AQ020	hgt=-32767 OR hgt>=304	aerial cableway pylon / ski pylon high
Point	AQ020	hgt>0and<304	aerial cableway pylon / ski pylon
Point	AQ040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge / overpass / viaduct light high
Point	AQ040	atn=3 AND hgt>0and<304	bridge / overpass / viaduct light
Point	AQ040	hgt=-32767 OR hgt>=304	bridge / overpass / viaduct high
Point	AQ040	hgt>0and<304	bridge / overpass / viaduct

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Display	Priority		
	8		
Point	AQ050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge superstructure light high
Point	AQ050	atn=3 AND hgt>0and<304	bridge superstructure light
Point	AQ050	hgt=-32767 OR hgt>=304	bridge superstructure high
Point	AQ050	hgt>0and<304	bridge superstructure
Point	AQ055	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	bridge tower / bridge pylon light high
Point	AQ055	atn=3 AND hgt>0and<304	bridge tower / bridge pylon light
Point	AQ055	hgt=-32767 OR hgt>=304	bridge tower / bridge pylon high
Point	AQ055	hgt>0and<304	bridge tower / bridge pylon
Point	AQ060	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	control tower light high
Point	AQ060	atn=3 AND hgt>0and<304	control tower light
Point	AQ060	hgt=-32767 OR hgt>=304	control tower high
Point	AQ060	hgt>0and<304	control tower
Point	AQ110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	mooring mast light high
Point	AQ110	atn=3 AND hgt>0and<304	mooring mast light
Point	AQ110	hgt=-32767 OR hgt>=304	mooring mast high
Point	AQ110	hgt>0and<304	mooring mast
Point	AT006	hgt=-32767 OR hgt>=304	overhead cable high
Point	AT006	hgt>0and<304	overhead cable
Point	AT010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	disk / dish light high
Point	AT010	atn=3 AND hgt>0and<304	disk / dish light
Point	AT010	hgt=-32767 OR hgt>=304	disk / dish high
Point	AT010	hgt>0and<304	disk / dish
Point	AT040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	power transmission pylon light high
Point	AT040	atn=3 AND hgt>0and<304	power transmission pylon light
Point	AT040	hgt=-32767 OR hgt>=304	power transmission pylon high
Point	AT040	hgt>0and<304	power transmission pylon
Point	AT050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication building light high
Point	AT050	atn=3 AND hgt>0and<304	communication building light
Point	AT050	hgt=-32767 OR hgt>=304	communication building high
Point	AT050	hgt>0and<304	communication building
Point	AT070	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	telephone-telegraph pylon / pole light high
Point	AT070	atn=3 AND hgt>0and<304	telephone-telegraph pylon / pole light
Point	AT070	hgt=-32767 OR hgt>=304	telephone-telegraph pylon / pole high
Point	AT070	hgt>0and<304	telephone-telegraph pylon / pole

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Display Priority	8		
Point	AT080	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	communication tower - high light high
Point	AT080	atn=3 AND hgt>0and<304	communication tower light
Point	AT080	hgt=-32767 OR hgt>=304	communication tower high
Point	AT080	hgt>0and<304	communication tower
Point	BC040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	light (lit) high
Point	BC040	atn=3 AND hgt>0and<304	light (lit)
Point	BC040	hgt=-32767 OR hgt>=304	light high
Point	BC040	hgt>0and<304	light
Point	BC050	hgt=-32767 OR hgt>=304	lighthouse high lit
Point	BC050	hgt=-32767 OR hgt>=304	lighthouse high
Point	BC050	hgt>0and<304	lighthouse
Point	BC050	hgt>0and<304	lighthouse lit
Point	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high lit
Point	BC070	hgt=-32767 OR hgt>=304	light vessel / lightship high
Point	BC070	hgt>0and<304	light vessel / lightship lit
Point	BC070	hgt>0and<304	light vessel / lightship
Point	BD110	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	platform light high
Point	BD110	atn=3 AND hgt>0and<304	platform light
Point	BD110	hgt=-32767 OR hgt>=304	platform high
Point	BD110	hgt>0and<304	platform
Point	BH010	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	aqueduct light high
Point	BH010	atn=3 AND hgt>0and<304	aqueduct light
Point	BH010	hgt=-32767 OR hgt>=304	aqueduct high
Point	BH010	hgt>0and<304	aqueduct
Point	BI020	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	dam / weir light high
Point	BI020	atn=3 AND hgt>0and<304	dam / weir light
Point	BI020	hgt=-32767 OR hgt>=304	dam / weir high
Point	BI020	hgt>0and<304	dam / weir
Point	BI050	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	water intake tower light high
Point	BI050	atn=3 AND hgt>0and<304	water intake tower light
Point	BI050	hgt=-32767 OR hgt>=304	water intake tower high
Point	BI050	hgt>0and<304	water intake tower
Point	GA035	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	navaids light high
Point	GA035	atn=3 AND hgt>0and<304	navaids light

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Display	Priority	8	
Point	GA035	hgt=-32767 OR hgt>=304	navaids high
Point	GA035	hgt>0and<304	navaids
Point	GB040	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	launch pad light high
Point	GB040	atn=3 AND hgt>0and<304	launch pad light
Point	GB040	hgt=-32767 OR hgt>=304	launch pad high
Point	GB040	hgt>0and<304	launch pad
Point	GB220	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction light high
Point	GB220	atn=3 AND hgt>0and<304	air obstruction light
Point	GB220	hgt=-32767 OR hgt>=304	air obstruction high
Point	GB220	hgt>0and<304	air obstruction
Point	GB221	atn=3 AND hgt=-32767 OR atn=3 AND hgt>=304	air obstruction miscellaneous light high
Point	GB221	atn=3 AND hgt>0and<304	air obstruction miscellaneous light
Point	GB221	hgt=-32767 OR hgt>=304	air obstruction miscellaneous high
Point	GB221	hgt>0and<304	air obstruction miscellaneous
Line	AD010		power plant / power station
Line	AF010		chimney / smokestack
Line	AF020		conveyor
Line	AH050		fortification
Line	AJ051		windmotor
Line	AK160		stadium / amphitheater
Line	AL015		building
Line	AL018		building superstructure addition
Line	AL110		light standard / light support
Line	AL130		monument
Line	AL240		tower (non-communication)
Line	AM070		tank
Line	AQ010		aerial cableway lines / ski lift lines
Line	AQ040		bridge / overpass / viaduct
Line	AQ050		bridge superstructure
Line	AQ113		pipeline / pipe
Line	AT030		power transmission line
Line	AT050		communication building
Line	AT060		telephone line / telegraph line
Line	AT080		communication tower

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VVOD**VVOD****Display Priority 8**

Line	BH010		aqueduct
Line	BI020		dam / weir
Line	GA035		navaids
Line	GB220		air obstruction
Line	GB221		air obstruction miscellaneous

WVSPPlus**WVSPPlus****Display Priority 0**

Area	BA040		water (except inland)
Area	BE019		depth area

Display Priority 4

Line	BE015		depth contour
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Display Priority 6

Line	BA010		coastline/shoreline
Area	FA001		administrative area

Display Priority 7

Line	FA020		armistice line
Line	FA030		cease-fire line
Line	FA040		claim line
Line	FA050		mandate line/convention line
Line	FA070	mbl=6	demilitarized zone
Line	ZD003		artifact location

Display Priority 8

Line	FA000		administrative boundary
Line	FA000	use=0or26	administrative boundary - primary, unknown
Line	FA000	use=30	administrative boundary - secondary
Line	FA000	use=31	administrative boundary - tertiary
Line	FA000	use=4or23	administrative boundary - national, international
Line	FA060		defacto boundary
Line	FC021	mbl=6	maritime limit boundary - territorial waters limits
Line	FC021	mbl=7	maritime limit boundary - territorial waters baseline
Line	FC021	mbl=9	maritime limit boundary - international (at sea)
Line	FC021	mbl=999	maritime limit boundary - other territorial baseline

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SYMBOL GRAPHICS

G.1 SCOPE

G.1.1 Scope. This appendix provides a graphic depiction of each symbol. It is a mandatory part of the specification. The information contained herein is intended for compliance.

G.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

G.3 SYMBOL GRAPHICS

This appendix is sorted by symbol number and presents a graphic depiction of each symbol. The symbol depictions shown in this appendix are size-relative and based on the actual CGM representation of each symbol. It is important to note that the symbols are drawn to appear correctly in the context of digital map display containing many other symbols. Therefore, some symbols may appear to be distorted or have exaggerated elements in their representation in this appendix. For example, the dots in symbol 0052 in this appendix appear to be too large. However, when one views symbol 0052 in the GeoSym viewer (GEOSYMWV.EXE), the symbol displays correctly.

G.3.1 Area, Line, Point Feature Graphics.

This table represents all area, linear and point CGM symbols used to represent VPF features.

There are symbol numbers listed in this appendix that do not appear in Appendix A because their placement is not accessed through an attribute expression. Those instances are marked with an asterisk beside the symbol number. Currently, these symbols are limited to 0502, 0503, 4324, 5000, 5001, 7153, 7154, 7137, 7138, 7139, and 7150. Specific requirements for these CGM symbols are detailed elsewhere in this specification.

Some of the symbol representations in this appendix are displayed on a tan background versus the basic paper white. The symbol representations displayed on tan are done so to ensure the white symbol outlines display correctly. The tan background should not be considered part of the symbol.

G.3.2 Complex Line Component Point Graphics.

This table represents the embedded point symbol components used in the creation of complex line CGM files. These graphic depictions are for reference only as these symbol components do not standalone.

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0001	0002	0003	0004	0005	0006	0007	0008	0009	0010
0011	0012	0013	0014	0015	0016	0017	0018	0019	0020
0021	0022	0023	0024	0026	0027	0028	0029	0030	0031
0032	0033	0035	0036	0037	0038	0039	0040	0041	0042
0043	0044	0045	0046	0047	0051	0052	0053	0054	0055
0056	0057	0058	0059	0060	0061	0062	0063	0064	0065
0066	0071	0072	0073	0074	0076	0077	0078	0079	0080
0081	0082	0083	0084	0085	0086	0087	0088	0089	0090
0091	0092	0093	0094	0095	0096	0097	0098	0100	0101
0114	0122	0124	0125	0126	0127	0128	0130	0132	0133

































































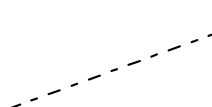
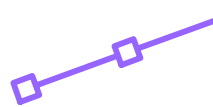



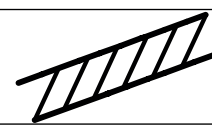
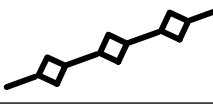

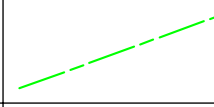










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0150	0151	0152	0154	0185	0186	0187	0188	0199	0202
0204	0205	0206	0207	0208	0210	0212	0213	0214	0217
0265	0299	0300	0301	0302	0303	0304	0305	0306	0307
0308	0309	0310	0311	0312	0313	0401	0402	0500	0501
0502*	0503*	0510	0511	0512	0513	0514	0515	0516	0517
0518	0519	0520	0521	0522	0523	0524	0525	0527	0600
0604	0605	0606	0607	0608	0609	0610	0611	0612	
0614	0615	0620	0621	0623	0624	0625			
0626	0627	0629	0630	0631	0632				
0633	0634	0635	0656	0657					

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0661	0662	0663	0665	0669
0670	0680	0681	0682	0683
0687	0688	0689	0700	0701
0704	0705	0708	0711	0712
0713	0716	0722	0723	0724
0725	0726	0727	0728	0729
0730	0731	0732	0733	0734
0735	0736	0737	0738	0739
0740	0741	0742	0743	0752
0753	0754	0755	0756	0757
0758	0759	0760		

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0761	0762	0763	0764	0765	0766	0802	0803		
									
0804	0805	0810	0820	0821	0822	0823	0824	0825	0826
									
0902	0903	0904	0910	0911	0912	0913	0914	0915	0916
									
0917	0919	0932	0933	0934	0949	1001	1002	1003	1004
									
1005	1006	1007	1008	1009	1010	1011	1012	1013	1171
									
1172	1205	1206	1211	1220	1233	1236	1238	1251	
									
1256	1301	1306	1307	1308	1310				
									
1311	1312	1313	1314	1318					
									
1319	1401	1403	1406	1408	1412				
									
1451	1509	1511	1512	1513	1516	1573	1601	1605	

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1606	1609	1611	1612	1613	1651	1655			1656
					(white)				
1855	1901	1902	1903	1904	1905	1906	2001	2002	2003
2005	2009	2010	2011	2016	2019	2026	2029	2034	2035
2036	2038	2042	2043	2045	2047	2048	2051	2053	2058
2060	2063	2070	2071	2072	2073	2074	2076	2078	2080
2081	2083	2087	2088	2089	2090	2094	2097	2099	2100
2101	2102	2104	2105	2106	2107	2111	2212	2231	2232
2233	2234	2238	2239	2242	2243	2245	2247	2248	2249
2250	2251	2252	2253	2256	2257	2264	2267	2268	2269
2273	2274	2278	2279	2281	2320	2323	3000		3001




























































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3003	3014	3017	3024	3026	3031	3036			
3047	3052	3054	3061	3069	3070	3073			
3074	3076	3077	3082	3086	3096				
3104	3108	3109	3112	3113	3114	3115			
3116	3117	3118	3119	3120					
3121	3123	3125	3127	3129					
3131	3133	3135	3137	3139	3142				
3143	3146	3148	3153	3167	3168				
3186	4002	4003	4005	4008	4009	4010	4011	4012	
4013	4014	4015	4018	4025	4027	4030	4032	4034	4036












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4051	4052	4054	4063	4067	4068	4071	4077	4078	4079
4080	4085	4089	4098	4100	4105	4108	4109	4123	4128
4138	4145	4150	4151	4152	4154	4156	4167	4175	4182
4183	4184	4186		4201		4202	4203		4217
4220	4230	4236	4243	4249	4262	4265	4266	4279	
4289	4292	4301	4304	4305	4306	4307		4308	
4309	4310		4311	4312	4313		4314	4315	
4316		4317		4318	4324*	4325	4326		
5000*	5001*								
6000	6001	6002	6003	6004	6005	6006	6007	6008	

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7000	7002	7004	7006	7008	7010	7012	7014	7016	7018
									
7020	7022	7024	7026	7028	7032	7034	7036	7038	7040
									
7044	7046	7048	7050	7052	7056	7058	7060	7062	7064
									
7070	7072	7078	7080	7082	7090	7092	7096	7106	7110
									
7112	7113	7114	7117	7119	7125	7130	7132	7134	7136
									
7137*	7138*	7139*	7140	7141	7142	7144		7145	7146

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7147	7148	7150*	7151	7152	7153*	7154*	7155	7156	
									
7157		7158							

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5010	5011	5012	5013	5015	5016	5020	5021	5023	5024
		<u>DW</u>			DW				
5025	5026	5027	5028	5029	5030	5032	5033	5034	5035
5036	5037	5038	5039	5041	5042	5043	5046	5047	5051
5052	5054	5055	5056	5060	5062	5063	5064	5071	5073
5074	5075	5077	5078	5079	5080	5082	5083	5084	5095
5097	5099	5100	5101	5106	5107		5110	5111	5112
5113	5114	5115	5116	5117	5118	5119	5120	5121	5122
	<u>u</u>								
5123	5124	5125	5126	5131	5135	5137	5138	5139	5142
5143	5146								

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Navy - NO
DISA - DC2

Preparing Activity
NGA - MP
(Project GINT-2009-001)

Review activities:
Air Force - 33
Navy - CG
DLA - DH
Marine Corps - MC
NSA - NS
NORAD - US

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil> .