The
Digital Geographic Information Exchange Standard
(DIGEST)

Part 4 -Annex B
ATTRIBUTE and VALUE CODES

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Annex B - Attribute and Value Codes

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ANNEX B - ATTRIBUTE AND VALUE CODES

AAH Absolute Horizontal Accuracy

Absolute horizontal accuracy integer value used in the ISO 8211 encapsulation. Units shall be described by reading the UNIaah field.

AAH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	-32767 to 32767	1 unit	N/A

AAV Absolute Vertical Accuracy

Absolute vertical accuracy integer value used in the ISO 8211 encapsulation. Units shall be described by reading the UNIaav field.

AAV 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	-32767 to 32767	1 unit	N/A

ACC Accuracy Category

Accuracy of geographic position.

ACC 0 Unknown
ACC 1 Accurate
ACC 2 Approximate
ACC 3 Doubtful
ACC 5 Disputed
ACC 6 Undisputed
ACC 7 Precise
ACC 8 Abrogated
ACC 997 Unpopulated
ACC 998 Not Applicable
ACC 999 Other

AE1 Absolute Ellipsoid Height Accuracy in Metres - High End (WGS84)

The accuracy of the ellipsoid height relative to WGS 84 at the high end of the runway.
Version 2.1: New Attribute

AE1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AE2 Absolute Ellipsoid Height Accuracy in Metres – Low End (WGS84)

The accuracy of the ellipsoid height relative to WGS 84 at the low end of the runway.
Version 2.1: New Attribute

AE2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AEH Absolute Ellipsoid Height Accuracy in Metres (WGS84)

The accuracy of the ellipsoid height relative to WGS 84.
Version 2.1: New Attribute

AEH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AFA Available Facilities

Facilities available at or in the near vicinity.

AFA 0 Unknown
AFA 1 Visitors Berth
AFA 2 Visitors Mooring
AFA 3 Sailmaker
AFA 4 Chandler
AFA 5 Provisions
AFA 6 Physician/Doctor
AFA 7 Pharmacy/Chemist
AFA 8 Drinking Water
AFA 9 Fuel Station
AFA 10 Electricity
AFA 11 Bottle Gas/LPG
AFA 12 Showers
AFA 13 Launderette
AFA 14 Toilets
AFA 15 Post Box
AFA 16 Public Telephone
AFA 17 Refuse Bin
AFA 18 Water Police
AFA 19 Helipad
AFA 20 Ticket Sales
AFA 21 No Ticket Sales
AFA 22 Yacht Club
AFA 23 Boat Hoist
AFA 24 Boat Yard
AFA 25 Hotel Accommodation
AFA 26 Restaurant
AFA 27 Desalination facilities
AFA 28 Parking Lot
AFA 29 Parking for boats and trailers
AFA 30 Recreational Vehicle Park
AFA 31 Campground
AFA 32 Sewerage pump-out station
AFA 33 Emergency telephone
AFA 34 Landing and launching place for boats
AFA 35 Scrubbing Berth
AFA 36 Picnic Area

AFA 37 Mechanics Workshop
Version 2.1: New Attribute Value to map S-57 attribute CATSCF to FACC.

AFA 38 Guard or Security Service
Version 2.1: New Attribute Value to map S-57 attribute CATSCF to FACC.

AFA 995 None

AFA 997 Unpopulated

AFA 998 Not Applicable

AFA 999 Other

AGC Arresting Gear Category

Device used to stop an uncontrolled aircraft at the end of a runway.

AGC 0 Unknown

AGC 1 Net

AGC 2 Cable

AGC 6 Jet Barrier

AGC 997 Unpopulated

AGC 998 Not Applicable

AGC 999 Other

AHA Absolute Horizontal Accuracy in Meters

The difference between the recorded horizontal coordinates of features and their true positions expressed as a circular error at 90% probability.

AHA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AHC Associated Hydrographic Category

The annual water content of the associated hydrographic feature as defined by the Inland Shoreline.

AHC 0 Unknown

AHC 1 Perennial

AHC 2 Intermittent

AHC 3 Ephemeral

AHC 997 Unpopulated

AHC 998 Not Applicable

AHC 999 Other

AHO Accuracy of Obstruction Height Above Ground Level

Indicates the difference between the recorded heights above ground level of features and their true heights at 90% probability.

AHO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AIA Airspace Identification Attribute

A set of characters which enables an individual airspace to be uniquely identified.

AIA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	15 Characters

ALA Absolute Latitude Accuracy in Metres (WGS84)

The accuracy of the latitudinal value relative to WGS 84.
Version 2.1: New Attribute
ALA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

ALC Aircraft Load Class

A description of any load restrictions which apply to aircraft using a facility.
ALC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

ALN Air Route Segments Length

Length, in nautical miles, of individual air route segments.
ALN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

ALO Absolute Longitude Accuracy in Metres (WGS84)

The accuracy of the longitudinal value relative to WGS 84.
Version 2.1: New Attribute
ALO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AO1 Angle of Orientation With Greater Than 1 Degree Resolution

The angular distance measured from true north (0 deg) clockwise to the major axis of the feature. If the feature is square, the axis 0 through 89 deg shall be recorded. If the feature is circular, 360 deg shall be recorded.
Version 2.1: New Attribute to
AO1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

AO2 Absolute Orthometric Height Accuracy in Metres – High End (WGS84)

The accuracy of the orthometric height relative to WGS 84 of the high end of the runway.
Version 2.1: New Attribute
AO2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AO3 Absolute Orthometric Height Accuracy in Metres – Low End (WGS84)

The accuracy of the orthometric height relative to WGS 84 of the low end of the runway.
Version 2.1: New Attribute
AO3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AOH Absolute Orthometric Height Accuracy in Metres (WGS84)

The accuracy of the orthometric height relative to WGS 84.
Version 2.1: New Attribute

AOH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AOO Angle of Orientation

The angular distance measured from true north (0 deg) clockwise to the major axis of the feature. If the feature is square, the axis 0 through 89 deg shall be recorded. If the feature is circular, 360 deg shall be recorded.

AOO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 360	1 deg	N/A

APT Airfield Type

Unique airfield type.

APT 0 Unknown
APT 1 Major Airfield
APT 2 Minor Airfield
APT 3 Light/General Aviation Aircraft Operating Only
APT 4 Seaplane Base
APT 5 Glider Site
APT 6 Microlight/Ultralight Site
APT 7 Hang Glider Site
APT 8 Winch Launched Hang Glider Site
APT 9 Heliport
APT 10 Helicopter Site
APT 11 Heliport at Hospitals
APT 12 Emergency
APT 13 Parascending/Parasailing Site
APT 14 Airport/Airfield
APT 15 Undefined Landing Area
APT 997 Unpopulated
APT 998 Not Applicable
APT 999 Other

ARA Area Coverage Attribute

The absolute area within the delineation of the feature.

ARA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Sq. Metres	Short Integer	0 to 32767	1	N/A

ARE Area With Greater Than 1 Meter Squared Resolution

The absolute area within the delineation of the feature measured with greater precision and range. (See also ARA)

ARE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Sq. Metres	Floating Point	N/A	N/A	N/A

ARH Area Coverage Attribute Hectares

The absolute area within the delineation of the feature in hectares.

ARH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Hectares	Short Integer	-32767 to 32767	1 ha	N/A

ARR Angle of Radar Reflector

If DIR = 3 then ARR is the angular distance measured from true north (0 deg) clockwise to the reflective side of the feature.

ARR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 360	1 deg	N/A

ASS Approach Surface Section Number

A coded number representing the section's distance from the beginning of the approach surface.
Version 2.1: New Attribute

ASS 0 Unknown
New Attribute Value

ASS 1 <= 10,000 ft.
New Attribute Value

ASS 2 > 10,000 ft. and <= 20,000 ft.
New Attribute Value

ASS 3 > 20,000 ft. and <= 30,000 ft.
New Attribute Value

ASS 4 > 30,000 ft. and <= 42,332 ft.
New Attribute Value

ASS 997 Unpopulated
New Attribute Value

ASS 998 Not Applicable
New Attribute Value

ASS 999 Other
New Attribute Value

ATC Aqueduct Type Category

Type of aqueduct.

ATC 0 Unknown

ATC 1 Qanat/Kanat/Karez Shaft

ATC 2 VALUE INTENTIONALLY LEFT BLANK (Other)

ATC 3 Underground Aqueduct

ATC 997 Unpopulated

ATC 998 Not Applicable

ATC 999 Other

ATL ATS Route Level

Defines the ATS Route Structure of which this route is effective.

ATL	0	Unknown
ATL	1	Both
ATL	2	High Level (FL195)
ATL	3	Low Level (FL195)
ATL	4	Night Low Flying
ATL	997	Unpopulated
ATL	998	Not Applicable
ATL	999	Other

ATN Aids to Navigation

Indicates whether a feature is marked or unmarked by an aid to navigation.

ATN	0	Unknown
ATN	1	Marked
ATN	2	Unmarked
ATN	3	Lit
ATN	4	Unlit
ATN	997	Unpopulated
ATN	998	Not Applicable
ATN	999	Other

AUA ATS Use Attribute

The particular use of the designated airspace.

AUA	0	Unknown
AUA	1	Advisory Area (ADA)
AUA	2	Air Defense Identification Zone (ADIZ)
AUA	3	Air Route Traffic Control Center (ARTCC)
AUA	4	Alert Area
AUA	5	Area Control Center (ACC)
AUA	6	Buffer Zone (BZ)
AUA	7	Canadian Air Defense Identification Zone (CADIZ)
AUA	8	Control Area (CTA)
AUA	9	Control Zone (CTLZ)
AUA	10	Danger Area
AUA	11	Dew East Military Identification Zone (DEMIZ)
AUA	12	Distant Early Warning Identification Zone (DEWIZ)
AUA	13	Flight Information Region (FIR)
AUA	14	French Peripheral Identification Zone (LIP)
AUA	15	Military Aerodrome Traffic Zone (MAIZ)
AUA	16	Military Common Area Control (MCAC)
AUA	17	Military Climb Corridor (MCC)
AUA	18	Military Flying Area (Canada, MFA)
AUA	19	Mid-Canada Identification Zone (MIDIZ)
AUA	20	Military Operations Area (MOA)
AUA	21	Military Terminal Control Area (MTCA)
AUA	22	Military Upper Control Area (MUCA)
AUA	23	Oceanic Control Area (non-FAA) (OCA)

AUA	24	Operating Area (OPAREA)
AUA	25	Prohibited Area
AUA	26	Positive Control Area (PCA)
AUA	27	Positive Control Zone (PCZ)
AUA	28	Radar Area
AUA	29	Restricted Area
AUA	30	Security Identification Zone (SIZ)
AUA	31	Special Air Traffic Rules Area
AUA	32	Special Rules Zone
AUA	33	Transition Area (For Chart Use Only - TA)
AUA	34	Terminal Control Area (TCA)
AUA	35	Continental Control Area (CCA)
AUA	36	Special Operations Area (Air)
AUA	37	Terminal Radar Service Area (TRSA)
AUA	38	Upper Advisory Area (UDA)
AUA	39	Upper Control Area (UTA)
AUA	40	Upper Flight Information Region (UIR)
AUA	41	Warning Area
AUA	42	Zone of Interior (ZI)
AUA	43	VALUE INTENTIONALLY LEFT BLANK
AUA	44	Korea Limited Identification Zone (KLIZ)
AUA	45	Uncontrolled Airspace
AUA	46	Controlled Airspace
AUA	47	Airport Traffic Area (ATA)
AUA	48	Airport Radar Service Area (ARSA)
AUA	49	Controlled Firing Area
AUA	50	Parachute Jump Area
AUA	51	Airport Advisory Area
AUA	52	Designated Mountainous Area
AUA	54	Non-Free Flying Area
AUA	55	Control Zone - No Fixed Wing Special VFR Permitted
AUA	56	Altimeter Change Boundary
AUA	57	Defense Area
AUA	58	Aerodrome Control Zone
AUA	59	Class C Control Zone
AUA	60	Sparsely Settled Area
AUA	62	ICAO
AUA	63	Upper Airspace Centers Operational Air Traffic
AUA	64	Controlled Visual Flight Rules (CVFR)
AUA	65	Bird Hazard Areas
AUA	66	Temporary Reserved Airspace (TRA)
AUA	67	Air Route Traffic Control Center Sector or Discrete
AUA	68	Sub-Flight Information Region (SUB FIR)
AUA	69	Radar Area Sector Boundary
AUA	70	Oceanic Control Area (FAA) (OCA)
AUA	74	Refueling/Track Area
AUA	75	Berlin Control Zone

AUA	76	Helicopter Protection Area
AUA	77	Traffic Information Zone
AUA	78	Low Flying Area
AUA	79	Special Use Airspace Exclusions
AUA	997	Unpopulated
AUA	998	Not Applicable
AUA	999	Other

AUB Airspace Use Boundary

Designated airspace within which some or all aircraft may be subject to air traffic control.

AUB	0	Unknown
AUB	1	Flight Information Region (FIR)
AUB	2	Sub-FIR
AUB	3	Control Zone (CTZ/CTR)
AUB	4	Military CTZ/CTR
AUB	5	VALUE INTENTIONALLY LEFT BLANK
AUB	6	Special Rules Zone (SRZ)
AUB	7	Advisory Area (ADA)
AUB	8	Terminal Control Area (TCA)/Military TCA (MTMA)
AUB	9	VALUE INTENTIONALLY LEFT BLANK
AUB	10	Military Climb Corridor
AUB	11	Altimetric Setting Region (ASR)
AUB	12	Designated Mountainous Area
AUB	13	Area Control Center (ACC)
AUB	14	Radar Area
AUB	15	Radar Area Sector Boundary
AUB	16	Radar Service Area
AUB	17	Terminal Radar Service Area (TRSA)
AUB	18	Transition Area (TA)
AUB	19	Upper Information Region (UIR)
AUB	20	Upper Control Area
AUB	21	Military Upper
AUB	22	Upper Advisory Area (UDA)
AUB	23	Control Area (CTA)
AUB	24	Special Rules Area
AUB	25	Mandatory Radar Service Area
AUB	26	Training Airspace
AUB	27	Air-to-Air Refueling Area/Track/Route
AUB	28	Continental Control Area (CCA)
AUB	29	Oceanic Control Area (non-FAA) (OCA)
AUB	30	Oceanic Control Area (FAA) (OCA)
AUB	31	Upper Airspace Centers Operational Air Traffic
AUB	32	Air Defense Identification Zone (ADIZ)
AUB	33	Buffer Zone
AUB	34	Distant Early Warning Military Identification Zone (DEWMIZ)
AUB	35	DEW Identification Zone (DEWIZ)
AUB	36	French Peripheral Identification Zone (LIP)
AUB	37	Canadian Air Defense Identification Zone (CADIZ)

AUB	38	Mid-Canada Identification Zone (MIDIZ)
AUB	39	Security Identification Zone (SIZ)
AUB	40	Zone of Interior
AUB	41	Korea Limited Identification Zone
AUB	42	VALUE INTENTIONALLY LEFT BLANK
AUB	43	Aerodrome Traffic Zone (ATZ)
AUB	44	Aerodrome Control Zone
AUB	45	Military ATZ
AUB	46	Airport Radar Service Area (ARSA)
AUB	47	Airport Advisory Area
AUB	48	Uncontrolled Airspace
AUB	49	Controlled Airspace
AUB	50	Controlled Visual Flight Rules (CVFR)
AUB	51	Positive Control Area (PCA)
AUB	52	Positive Control Zone (PCZ)
AUB	53	Mandatory Radio Area
AUB	54	Special Access Lane Entry
AUB	55	Special Access Lane Exit
AUB	56	Flight Information Center (FIC)/Flight Service Station (FSS)
AUB	57	Military Sector Control Center (SCC-AM)
AUB	58	Air Route Traffic Control Center (ARTCC)
AUB	59	ARTCC Sector Discrete
AUB	60	VFR Sector Boundary
AUB	61	Military Common Area Control (MCAC)
AUB	62	Traffic Information Zone
AUB	63	Low Flying Area (LFA)
AUB	64	LFA Sub-Boundary
AUB	65	Low Flying Tactical Training Area (TTA)
AUB	66	Low Flying Tactical Route Boundary
AUB	67	Low Flying Flow Arrow
AUB	68	Low Flying Dividing Line
AUB	69	Low Flying Flow Corridor Boundary
AUB	70	Low Flying Dedicated User Area
AUB	71	Low Flying Weather Corridor
AUB	72	Maximum Elevation Figure
AUB	997	Unpopulated
AUB	998	Not Applicable
AUB	999	Other

AUL Airspace Use Limitations

Airspace wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations.

AUL	0	Unknown
AUL	1	Danger Area
AUL	2	Prohibited Area
AUL	3	Restricted Area
AUL	4	Prohibited VFR
AUL	5	Alert Area

AUL	6	Warning Area
AUL	7	Defense Area
AUL	8	Controlled Firing Area
AUL	9	Temporary Reserved Airspace (TRA)
AUL	10	Parachute Drop Zone
AUL	11	Hazard to Aircraft
AUL	12	Gas Venting Station
AUL	13	Town to be Avoided
AUL	14	Nature Reserves, Parks, Conservation Areas
AUL	15	Helicopter Protection
AUL	16	Air Exercise Area
AUL	17	Area of Intense Air Activity
AUL	18	Bird Sanctuary
AUL	19	Bird Hazard Area
AUL	20	Industrial Hazards/Object needing protection
AUL	21	Health Resorts/Medical Establishments
AUL	22	Low Flying Avoidance Area
AUL	23	Mink Farm
AUL	24	Low Flying Tactical Training Avoidances
AUL	25	Low Flying Dedicated User Area
AUL	26	Area of Intensive Microlight/Ultralight Flying
AUL	27	Provost Marshal
AUL	28	Military Operating Area (MOA)
AUL	29	High Intensity Radio Transmission Area (HIRTA)
AUL	30	Military Flying Area (MFA)
AUL	31	Operating Area (OPAREA)
AUL	32	Non-free Flying Area
AUL	33	Sparsely Settled Area
AUL	34	Caution Area
AUL	997	Unpopulated
AUL	998	Not Applicable
AUL	999	Other

AUR Airspace Use Routes

A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

AUR	0	Unknown
AUR	1	Airway
AUR	2	Air Route
AUR	3	Purple Airway
AUR	4	Royal Low Level Corridor
AUR	5	Corridor
AUR	6	Atlantic
AUR	7	Bahamas
AUR	8	Advisory
AUR	9	Direct
AUR	10	Military
AUR	11	Oceanic

AUR 12 Area Navigation (RNAV)
AUR 13 SUBS
AUR 14 TACAN
AUR 15 Helicopter Route
AUR 16 Helicopter Routes not available to single engine
AUR 17 Low Flying Route
AUR 18 Royal Helicopter Route
AUR 19 Jet
AUR 20 North America
AUR 21 Canadian Control Area Tracks
AUR 997 Unpopulated
AUR 998 Not Applicable
AUR 999 Other

AUS Airspace/Facility Operating Times

Status of Air Space and any restrictions that are applicable.

AUS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

AV1 Lowest Airspace Height

Height (AGL - above ground level) above surface level to the lowest portion of the feature (used only for Air Information).

AV1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

AV2 Highest Airspace Height

Height (AGL - above ground level) above surface level to the highest portion of the feature (used only for Air Information).

AV2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

AVA Absolute Vertical Accuracy in Meters

The difference between the recorded elevations of features and their true elevations at a specific point referenced to the same vertical datum at 90% probability.

AVA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

AWD Air Route Segments Width

Width of individual air route segments.

AWD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

AZ1 Lowest Airspace Z-value

Measurement to specify lowest vertical limits.

AZ1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

AZ2 Highest Airspace Z-value

Measurement to specify highest vertical limits.

AZ2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

AZ3 Minimum Safe Altitude Sector

The minimum safe altitude, in feet, above MSL which provides a 1000 foot obstacle clearance within the airspace.

AZ3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

BAC Built-Up Area Classification

The indication of the relative density of the Built-Up Area.

BAC 0 Unknown
BAC 1 Sparse to Moderate
BAC 2 Dense
BAC 3 Moderate
Version 2.1: New Attribute Value
BAC 997 Unpopulated
BAC 998 Not Applicable
BAC 999 Other

BCC Bypass Condition Category

The ease or ability to circumvent a destroyed section of bridge, tunnel or pass within a 2 kilometer distance on each side of the feature. Bypass condition will not consider other bridges in bypass determination.

BCC 0 Unknown
BCC 1 Easy (Obstacle can be crossed within 2 KM of feature, no work)
BCC 2 Difficult (Obstacle can be crossed within 2 KM of feature, work required).
BCC 3 Impossible (Obstacle cannot be bypassed within 2 KM of feature)
BCC 997 Unpopulated
BCC 998 Not Applicable
BCC 999 Other

BCR Bottom Return Rock Classification

Tabulates bottom return rock.

BCR 0 Unknown
BCR 1 Classified
BCR 2 Detected
BCR 3 Identified
BCR 997 Unpopulated
BCR 998 Not Applicable

BCR 999 Other

BCT Bottom Configuration Type

The type of configuration of underwater bottom topography.

BCT 0 Unknown
BCT 1 Double Break in Slope
BCT 2 Break in Slope
BCT 3 Depression, Flat Bottom
BCT 4 Depression, Steep Sided
BCT 5 Depression, V-Shaped
BCT 6 Depression, Sediment Filled
BCT 7 Elevation, Flat Topped
BCT 8 Elevation, Peaked
BCT 9 Elevation, Rounded
BCT 10 Slumped Blocks
BCT 11 Scarp, Probably Faulted
BCT 12 Slump Debris
BCT 13 Step
BCT 14 Terrace
BCT 997 Unpopulated
BCT 998 Not Applicable
BCT 999 Other

BDC Bridge Design Category

Structural design characteristics of the bridge or bridge segment.

BDC 0 Unknown
BDC 1 Arch
BDC 2 Cantilever
BDC 3 Deck
BDC 4 Slab
BDC 5 Floating Bridge
BDC 6 Girder
BDC 7 Stringer (Beam)
BDC 8 Truss
BDC 9 Suspension
BDC 11 VALUE INTENTIONALLY LEFT BLANK (Other)
BDC 12 Transporter (Ferry Bridge)
BDC 997 Unpopulated
BDC 998 Not Applicable
BDC 999 Other

BDT Beacon-Daymark Relationship

Defines whether the BC010 feature is a beacon, a daymark, or both.
Version 2.1: New Attribute to distinguish between beacons, daymarks, and beacons with daymarks.

BDT 0 Unknown
Version 2.1: New Attribute Value

BDT 1 Beacon
Version 2.1: New Attribute Value

BDT 2 Daymark
Version 2.1: New Attribute Value

BDT 3 Beacon with Daymark
Version 2.1: New Attribute Value

BDT 997 Unpopulated
Version 2.1: New Attribute Value

BDT 998 Not Applicable
Version 2.1: New Attribute Value

BDT 999 Other
Version 2.1: New Attribute Value

BEN Basic Encyclopedia Number

Unique number associated with a feature which is used to identify the feature in other national or intelligence data bases.

BEN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	16 Characters

BER Berth Identifier

The designated number or letter used to identify this feature.

BER 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

BET Beacon Type Category

Type of beacon.

BET 0 Unknown

BET 1 Cardinal
Version 2.1: New Attribute Value to map S-57 attribute BCNCAR to FACC

BET 5 Lateral
Version 2.1: New Attribute Value to map S-57 attribute BCNLAT to FACC

BET 7 Mooring Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BET 10 ODAS (Ocean-Data-Acquisition-System)
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BET 31 Seaplane Anchorage Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BET 34 Spoil Ground Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BET 35 Articulated Lights

BET 36 Floating Beacon

BET 40 Radar Transponder Beacon

BET 41 Pile Beacon

BET 42 Cairn

BET 43 Buoyant Beacon

BET 44 Firing Danger Area Mark

BET 45 Target mark

BET 46 Marker Ship Mark

BET 47 Degaussing Range Mark

BET 48 Barge Mark

BET 49 Cable Mark

BET	50	Outfall Mark
BET	51	Recording Mark
BET	52	Recreation Zone Mark
BET	53	Leading Mark
BET	54	Measured Distance Mark
BET	55	TSS Mark (Traffic Separation Scheme)
BET	56	Anchoring Prohibited Mark
BET	57	Berthing Prohibited Mark
BET	58	Overtaking Prohibited Mark
BET	59	Two-way Traffic Prohibited Mark
BET	60	"Reduced Wake" Mark Version 2.0 Amendment 1: New Attribute Value to map S-57 attribute CATSPM to FACC. Version 2.1: Added Quotes around Reduced Wake
BET	61	Speed Limit Mark
BET	62	Stop Mark
BET	63	"Sound Ship's Siren" Mark Version 2.0 Amendment 1: New Attribute Value to map S-57 attribute CATSPM to FACC Version 2.1: Added Quotes around Sound Ship's Siren
BET	64	Restricted Vertical Clearance Mark
BET	65	Maximum Vessel's Draught Mark
BET	66	Restricted Horizontal Clearance Mark
BET	67	Strong Current Warning Mark
BET	68	Berthing Permitted Mark
BET	69	Overhead Power Cable Mark
BET	70	"Channel Edge Gradient" Mark Version 2.0 Amendment 1: New Attribute Value to map S-57 attribute CATSPM to FACC Version 2.1: Added Quotes around Channel Edge Gradient
BET	71	Telephone Mark
BET	72	Ferry Crossing Mark
BET	73	Pipeline Mark
BET	74	Clearing Mark
BET	75	Refuge Beacon
BET	76	Foul Ground Mark
BET	77	Yachting Mark
BET	78	Heliport Mark
BET	79	GPS Mark
BET	80	Seaplane Landing Mark
BET	81	Diving
BET	82	Information
BET	85	Caution
BET	86	Private
BET	87	Swim
BET	88	Control
BET	89	Keep-Out
BET	90	Daybeacon
BET	91	Lateral preferred channel to port mark
BET	92	Lateral preferred channel to starboard mark
BET	93	Lateral starboard-hand mark

BET 94 Lateral port-hand mark
BET 95 Cardinal West Mark
BET 96 Cardinal South Mark
BET 97 Cardinal East Mark
BET 98 Cardinal North Mark
BET 99 Installation
BET 102 Entry Prohibited Mark
BET 103 Work In Progress Mark
BET 104 Daymark Board/Articulated
BET 105 Daymark Board-Triangle
BET 106 Daymark Board-Rectangle
BET 107 Stake/Pole
BET 108 Withy
BET 109 Beacon Tower
BET 110 Lattice Beacon
BET 111 Wellhead Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 112 Channel Separation Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 113 Marine Farm Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 114 Artificial Reef Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 115 Special Purpose
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 116 Notice Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 117 General Warning Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 118 Anchorage Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 119 Control Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BET 997 Unpopulated
BET 998 Not Applicable
BET 999 Other

BFC Building Function Category

Type or purpose of the building.

BFC 0 Unknown
BFC 1 Fabrication Structures
BFC 2 Government Building
BFC 3 Capitol Building
BFC 4 Castle
BFC 5 Government Administration Building
BFC 6 Hospital
BFC 7 House of Worship
BFC 8 Military Administration/Operations Building
BFC 9 Museum

BFC	10	Observatory
BFC	11	Palace
BFC	12	Police Station
BFC	13	Prison
BFC	14	Ranger Station
BFC	15	School
BFC	16	House
BFC	17	Multi Unit Dwelling
BFC	18	Cemetery Building
BFC	19	Farm Building
BFC	20	Greenhouse
BFC	21	Garage
BFC	22	Watermill/Gristmill
BFC	23	Wind Tunnel
BFC	24	Warehouse
BFC	25	Roundhouse
BFC	26	Railroad Storage/Repair Facility
BFC	27	Depot Terminal
BFC	28	Administration Building
BFC	29	Aircraft Maintenance Shop
BFC	30	Hangar
BFC	31	Customs House
BFC	33	Health Office
BFC	34	Firing Range
BFC	35	Post Office
BFC	36	Barracks/Dormitory
BFC	37	Fire Station
BFC	38	Jail
BFC	39	VALUE INTENTIONALLY LEFT BLANK (Guardhouse)
BFC	40	Telephone Switching Station
BFC	41	Roadside Rest House (STANAG 2253) Version 2.1: New Attribute Value
BFC	42	Road Maintenance Station Version 2.1: New Attribute Value
BFC	50	Church
BFC	51	Market
BFC	52	Town Hall
BFC	53	Bank
BFC	54	Service/Refueling Station
BFC	55	Yacht Club/Sailing Club
BFC	56	Public Inn
BFC	57	Restaurant
BFC	58	Observation
BFC	59	Research and Development Lab/Research Facility
BFC	60	University/College
BFC	61	Courthouse
BFC	62	Legation

BFC	63	Mission
BFC	64	Chancery
BFC	65	Ambassadorial Residence
BFC	66	Embassy
BFC	67	Consulate
BFC	68	Guard House
BFC	69	Guard Shack/Guard Room
BFC	70	Kennel
BFC	71	Oil Mill (Vegetable)
BFC	72	Aerator
BFC	73	Carpentry
BFC	74	Sawmill
BFC	75	Kiln/Oven
BFC	76	Signal Box/Railway Signalman's House
BFC	77	Harbor Master's Office
BFC	78	Marine Police
BFC	79	Rescue
BFC	80	Port Control
BFC	81	Maritime Station
BFC	82	Lighthouse
BFC	83	Power Generation
BFC	84	Filtration Plant
BFC	85	Newspaper Plant
BFC	86	Telephone Exchange (Main)
BFC	87	Auditorium
BFC	88	Opera House
BFC	89	Processing/Treatment
BFC	90	Pumphouse
BFC	91	Mobile Home
BFC	92	Weather Station
BFC	93	Dependents Housing/Bivouac Area
BFC	94	Railroad Station
BFC	95	Hotel
BFC	96	Diplomatic Building
BFC	97	Trading Post
BFC	98	Shed
BFC	99	Battery
BFC	100	Medical Center
BFC	101	Municipal Hall
BFC	102	Oil/Gas Facilities Building
BFC	103	Outbuilding
BFC	104	Paper/Pulp Mill
BFC	105	Reformatory
BFC	106	Sanitarium
BFC	107	Satellite Tracking Station
BFC	108	Seminary
BFC	109	Senior Citizen's Home

BFC 110 Shipyard
BFC 111 Sportsplex
BFC 112 Steel Mill
BFC 113 Weigh Scale (Highway)
BFC 114 Non-Christian Place of Worship
BFC 115 Hostel
BFC 116 Factory
BFC 117 Motel
BFC 118 Community Center
BFC 119 City Hall
BFC 120 Automobile Plant
BFC 121 Armory
BFC 122 Shopping Center
BFC 123 Correctional Institute
BFC 124 Repair Facility
BFC 125 Barn/Machinery Shed
BFC 126 Astronomical Station
BFC 127 Theater
BFC 128 Library
BFC 129 Airport Terminal
BFC 130 Bus Station
BFC 131 Pilot Office
BFC 132 Pilot Look-out
BFC 133 Commercial building
BFC 134 Fort
BFC 135 Blockhouse
BFC 136 Martello Tower
BFC 137 Guard Tower
BFC 138 Redoubt
Version 2.1: New Attribute Value to map S-57 attribute CATFOR to FACC.
BFC 139 Cooling
Version 2.1: New Attribute Value to map S-57 attribute CATFOR to FACC.
BFC 150 Barracks
Version 2.1: New Attribute Value
BFC 151 Dormitory
Version 2.1: New Attribute Value
BFC 723 Combined Fire and Police Station
BFC 997 Unpopulated
BFC 998 Not Applicable
BFC 999 Other

BGL Bank Gradient Left

Slope of the left bank (facing downstream) above water level.
Version 2.1: Removed range limits of +/- 90%.

BGL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	N/A	1 %	N/A

BGR Bank Gradient Right

Slope of the right bank (facing downstream) above water level.
Version 2.1: Removed range limits of +/- 90%.

BGR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	N/A	1 %	N/A

BHL Bank Height Left

Height of the left bank above the water level (facing downstream) to the average water level.

BHL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

BHR Bank Height Right

Height of the right bank above the water level (facing downstream) to the average water level.

BHR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

BIT Beach Indicator Type

Indicates the relative portion of a beach.

BIT 0 Unknown
BIT 1 Nearshore
BIT 2 Foreshore
BIT 3 Backshore
BIT 997 Unpopulated
BIT 998 Not Applicable
BIT 999 Other

BLC Barge Load Class

A description of any load restrictions which apply to barges using a section of waterway or facility.

BLC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

BMC Bottom Materials Composition

Predominant material composition of the bottom of a body of water.

BMC 0 Unknown
BMC 1 Clay and Silt
BMC 2 Silty Sands
BMC 3 Sand and Gravel
BMC 4 Gravel and Cobble
BMC 5 Rocks and Boulders
BMC 6 Bedrock
BMC 7 Paved
BMC 8 Peat
BMC 9 Sand over mud
BMC 10 Mixed qualities

BMC 11 Coral
BMC 12 Slash
BMC 13 Seamount
BMC 14 Sand
BMC 997 Unpopulated
BMC 998 Not Applicable
BMC 999 Other

BOC Bog Category

Tabulates the components or structure of a bog.

BOC 0 Unknown
BOC 1 Palsa
BOC 2 String
BOC 997 Unpopulated
BOC 998 Not Applicable
BOC 999 Other

BOT Bridge Opening Type

The type of structure or mechanism by which a portion of a bridge is moved to allow passage of a vessel.

BOT 0 Unknown
BOT 4 Draw/Bascule
BOT 10 Swing
BOT 11 Lift
BOT 12 Retractable
BOT 13 Not Applicable
BOT 997 Unpopulated
BOT 999 Other

BR2 Broadcast Frequency (2)

The frequency on which a station broadcasts (second occurrence).

BR2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Hertz	Long Integer	N/A	1 Hz	N/A

BRA Bottom Return Attributes Classification

Tabulates bottom return attributes.

BRA 0 Unknown
BRA 1 Classified
BRA 2 Detected
BRA 3 Identified
BRA 997 Unpopulated
BRA 998 Not Applicable
BRA 999 Other

BRC Bottom Return Classification

Tabulates bottom return types.

BRC 0 Unknown
BRC 1 Classification of Bottom Return Identity
BRC 2 Bottom Return Track Number
BRC 3 Classification of Bottom Return Seabed Inst.

BRC 4 Classification of Bottom Return Rock
BRC 5 Classification of Bottom Return Obstacles
BRC 6 Classification of Bottom Return Wreck
BRC 997 Unpopulated
BRC 998 Not Applicable
BRC 999 Other

BRF Broadcast Frequency

Broadcast frequency of a communications device.

BRF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Hertz	Long Integer	N/A	1 Hz	N/A

BRG Bearing of Object

The bearing of an object from an observer (on any point along the line) towards the object or feature, expressed in degrees and tenths (e.g. 3.0 degrees).
Version 2.1: Modified DEG to degrees.

BRG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

BRI Bottom Return Identity Classification

Tabulates bottom return identity.

BRI 0 Unknown
BRI 2 Neutral
BRI 997 Unpopulated
BRI 998 Not Applicable
BRI 999 Other

BRN Bridge Reference Number

A unique number relating information to bridge and bridge spans.

BRN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	24 Characters

BRO Bottom Return Obstacles Classification

Tabulates bottom return obstacles.

BRO 0 Unknown
BRO 1 Classified
BRO 2 Detected
BRO 3 Identified
BRO 997 Unpopulated
BRO 998 Not Applicable
BRO 999 Other

BRR Bearing and Reciprocal Category

True course of a vessel in 0.1 degree increments, when proceeding along a track or route, followed by its reciprocal bearing (i.e. 053.1-233.1).
Version 2.1: Modified increments from N/A to 0.1 to match definition.

BRR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	11 Characters

BRS Bearing From Seaward

True course of a vessel when proceeding from seaward along a track or course.

BRS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

BRT Bottom Return Track Number

Identifies track number.

BRT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	N/A	1 unit	N/A

BRW Bottom Return Wreck Classification

Tabulates bottom return wreck.

BRW 0 Unknown
BRW 1 Classified
BRW 2 Detected
BRW 3 Identified
BRW 997 Unpopulated
BRW 998 Not Applicable
BRW 999 Other

BSC Bridge/Bridge Superstructure Category

Structural design characteristics.

BSC 0 Unknown
BSC 1 Arch (assume open spandrel)
BSC 2 Cantilever
BSC 3 Deck
BSC 4 Drawbridge
BSC 5 Floating Bridge/Pontoon
BSC 6 Girder
BSC 7 Tower Suspension
BSC 8 Truss
BSC 9 Suspension
BSC 10 Swing
BSC 11 Lift
BSC 12 Transporter
BSC 13 Bascule
BSC 14 Unspecified Fixed
BSC 15 Slab

BSC 16 Stringer (beam)
BSC 17 Arch Suspension
BSC 18 Retractable
BSC 19 Suspension, bow string
BSC 20 Suspension, cable stayed
BSC 21 Moveable Surface
BSC 22 Covered
BSC 23 Opening
BSC 24 Footbridge
BSC 25 Fixed
BSC 26 Arch (closed spandrel)
BSC 27 Cable Stayed
BSC 997 Unpopulated
BSC 998 Not Applicable
BSC 999 Other

BSM Bridge Span Mobility

Identifies bridge spans that move in some manner allowing passage underneath the span.

BSM 0 Unknown
BSM 1 Moveable Span
BSM 2 Fixed Span
BSM 997 Unpopulated
BSM 998 Not Applicable
BSM 999 Other

BSN Bridge Serial Number

Unique number associated with a bridge which is used to identify the bridge in other national or intelligence databases.

BSN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	80 Characters

BSP Bridge Span Category

Identifies type of moveable span.

BSP 0 Unknown
BSP 1 Truss
BSP 2 Truss, moveable or swing
BSP 3 Plate girder
BSP 4 Plate girder moveable as vertical lift
BSP 5 Plate girder moveable as draw bridge
BSP 6 Plate girder moveable as bascule
BSP 7 Stringer, beam
BSP 8 Stringer, moveable as vertical lift
BSP 9 Stringer, moveable as draw bridge
BSP 10 Slab
BSP 11 Arc, closed span
BSP 12 Arc, open span
BSP 13 Floating bridge, pontoon bridge
BSP 14 Culvert

BSP	15	Frame structure
BSP	16	Vault structure
BSP	17	Unspecified fixed
BSP	18	Retractable
BSP	997	Unpopulated
BSP	998	Not Applicable
BSP	999	Other

BSR Bottom Return Seabed Inst.

True course of a vessel when proceeding from seaward along a track or course.

BSR	0	Unknown
BSR	1	Classified
BSR	2	Detected
BSR	3	Identified
BSR	997	Unpopulated
BSR	998	Not Applicable
BSR	999	Other

BST Boundary Status Type

Identifies the status of a boundary.

BST	0	Unknown
BST	1	Definite
BST	2	Indefinite
BST	3	In Dispute
BST	4	No Defined Boundary
BST	5	Recognized by the producer Version 2.1: New Attribute Value
BST	6	Not Recognized by the producer Version 2.1: New Attribute Value
BST	997	Unpopulated
BST	998	Not Applicable
BST	999	Other

BTC Beacon/Buoy Type Category

Type buoy or beacon.

BTC	0	Unknown
BTC	1	Cardinal
BTC	2	Float
BTC	3	Isolated Danger
BTC	4	Large Navigational Buoy (LANBY)
BTC	5	Lateral
BTC	6	Light Float
BTC	7	Mooring
BTC	8	Mooring with Telegraph
BTC	9	Mooring with Telephone
BTC	10	Ocean Data Acquisition System (ODAS)
BTC	11	Outer, Landfall
BTC	12	Port (From Seaward or According to Direction of Buoyage)
BTC	13	Preferred Channel to Port
BTC	14	Preferred Channel to Starboard

BTC	15	Special Purpose
BTC	16	Starboard (From Seaward per Direction of Buoyage)
BTC	17	Tanker
BTC	18	Safe Water
BTC	19	Anchorage
BTC	20	Fairway
BTC	21	Mid-Channel
BTC	22	Bifurcation
BTC	23	Junction
BTC	24	Wreck
BTC	25	Obstruction
BTC	26	Telegraph Cable
BTC	27	Warping
BTC	28	Quarantine
BTC	29	Practice Area
BTC	30	Explosive Anchorage
BTC	31	Aeronautical Anchorage
BTC	32	Compass Adjustment
BTC	33	Fish Trap
BTC	34	Spoil Ground
BTC	35	Articulated Lights
BTC	36	Floating Beacon
BTC	37	Dan
BTC	38	Floodlit/Illuminated
BTC	39	Trot
BTC	81	Diving
BTC	82	Information
BTC	83	DND Buoy (Canadian Department of National Defence)
BTC	85	Caution
BTC	86	Private
BTC	87	Swim
BTC	88	Control
BTC	89	Keep-Out
BTC	90	Daybeacon
BTC	91	Lateral preferred channel to port mark
BTC	92	Lateral preferred channel to starboard mark
BTC	93	Lateral starboard-hand mark
BTC	94	Lateral port-hand mark
BTC	95	Cardinal West Mark
BTC	96	Cardinal South Mark
BTC	97	Cardinal East Mark
BTC	98	Cardinal North Mark
BTC	99	Installation
BTC	997	Unpopulated
BTC	998	Not Applicable
BTC	999	Other

BUD Brush/Undergrowth Density Code

Density of brush or undergrowth.

BUD	0	Unknown
BUD	1	Open (<=5%)
BUD	2	Sparse (>5%<=15%)
BUD	3	Medium (>15%<=50%)
BUD	4	Dense (>50%)
BUD	5	VALUE INTENTIONALLY LEFT BLANK (Not Applicable) Version 2.1: Removed duplicate attribute value
BUD	997	Unpopulated
BUD	998	Not Applicable
BUD	999	Other

BUT Buoy Type Category

Type of buoy.

BUT	0	Unknown
BUT	1	Cardinal
BUT	2	Float
BUT	3	Isolated Danger
BUT	4	Large Navigational Buoy (LANBY)
BUT	5	Lateral
BUT	6	Light Float
BUT	7	Mooring
BUT	8	Mooring with Telegraph
BUT	9	Mooring with Telephone
BUT	10	Ocean Data Acquisition System (ODAS)
BUT	11	Outer, Landfall
BUT	12	Port (From Seaward or According to Dir. of Buoyage)
BUT	13	Preferred Channel to Port
BUT	14	Preferred Channel to Starboard
BUT	15	Special Purpose
BUT	16	Starboard (From Seaward per Dir. of Buoyage)
BUT	17	Tanker
BUT	18	Safe Water
BUT	19	Anchorage
BUT	20	Fairway
BUT	21	Mid-Channel
BUT	22	Bifurcation
BUT	23	Junction
BUT	24	Wreck
BUT	25	Obstruction
BUT	26	Telegraph Cable
BUT	27	Warping
BUT	28	Quarantine
BUT	29	Practice Area
BUT	30	Explosive Anchorage
BUT	31	Aeronautical Anchorage
BUT	32	Compass Adjustment

BUT	33	Fish Trap
BUT	34	Spoil Ground
BUT	35	Articulated Lights
BUT	36	Floating Beacon
BUT	37	Dan
BUT	38	Floodlit/Illuminated
BUT	39	Trot
BUT	81	Diving
BUT	82	Information
BUT	83	DND Buoy (Canadian Department of National Defence)
BUT	84	APEX (ARC) Buoy
BUT	85	Caution
BUT	86	Private
BUT	87	Swim
BUT	88	Control
BUT	89	Keep-Out
BUT	90	Daybeacon
BUT	91	Lateral preferred channel to port mark
BUT	92	Lateral preferred channel to starboard mark
BUT	93	Lateral starboard-hand mark
BUT	94	Lateral port-hand mark
BUT	95	Cardinal West Mark
BUT	96	Cardinal South Mark
BUT	97	Cardinal East Mark
BUT	98	Cardinal North Mark
BUT	99	Installation
BUT	100	Waverider
BUT	101	Wave Meter
BUT	102	Navigation, communication and control buoy (NCCB)
BUT	103	Ice Buoy
BUT	104	Firing danger area mark Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BUT	105	Target Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BUT	106	Marker ship Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BUT	107	Degaussing Range Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BUT	108	Barge Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC
BUT	109	Cable Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.
BUT	110	Outfall Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.
BUT	111	Recording Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.
BUT	112	Recreation Zone Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 113 Leading mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 114 Measured distance
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 115 TSS Mark (Traffic Separation Scheme)
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 116 Anchoring prohibited
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 117 Berthing Prohibited.
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 118 Overtaking Prohibited
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 119 Two-Way Traffic Prohibited
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 120 "Reduced Wake"
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 121 Speed Limit
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 122 Stop
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 123 "Sound Ship's Siren"
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 124 Restricted Vertical Clearance
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 125 Maximum Vessel's Draft
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 126 Restricted Horizontal Clearance
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 127 Strong Current Warning
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 128 Berthing Permitted
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 129 Overhead Power Cable
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC.

BUT 130 "Channel Edge Gradient"
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 131 Telephone
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 132 Ferry Crossing
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 133 Pipeline
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 134 Clearing mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 135 Refuge
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 136 Foul Ground
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 137 Yachting
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 138 Heliport
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 139 GPS Mark
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 140 Work In Progress
Version 2.1: New Attribute Value to map S-57 attribute CATSPM to FACC

BUT 997 Unpopulated

BUT 998 Not Applicable

BUT 999 Other

BVL Bank Vegetation Left

Density of vegetation found on the downstream left bank.

BVL 0 Unknown

BVL 1 Open (<=5%)

BVL 2 Sparse (>5%<=15%)

BVL 3 Medium (>15%<=50%)

BVL 4 Dense (>50%)

BVL 997 Unpopulated

BVL 998 Not Applicable

BVL 999 Other

BVR Bank Vegetation Right

Density of vegetation found on the downstream right bank.

BVR 0 Unknown

BVR 1 Open (<=5%)

BVR 2 Sparse (>5%<=15%)

BVR 3 Medium (>15%<=50%)

BVR 4 Dense (>50%)

BVR 997 Unpopulated

BVR 998 Not Applicable

BVR 999 Other

BWL Below Water Bank Slope (Left)

Slope (in percent) of the left bank under the water facing downstream.
Version 2.1: Removed range limits of +/- 90%.

BWL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	N/A	1 %	N/A

BWR Below Water Bank Slope (Right)

Slope (in percent) of the right bank under the water facing downstream.
Version 2.1: Removed range limits of +/- 90%.

BWR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	N/A	1 %	N/A

C60 Rate of Current (IHO)

Rate of current flow at tide reference level.

C60 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C61 Rate of Current (1) (IHO)

Rate of current flow 1 hour after tide reference level.

C61 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C62 Rate of Current (2) (IHO)

Rate of current flow 2 hours after tide reference level.

C62 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C63 Rate of Current (3) (IHO)

Rate of current flow 3 hours after tide reference level.

C63 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C64 Rate of Current (4) (IHO)

Rate of current flow 4 hours after tide reference level.

C64 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C65 Rate of Current (5) (IHO)

Rate of current flow 5 hours after tide reference level.

C65 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C66 Rate of Current (6) (IHO)

Rate of current flow 6 hours after tide reference level.

C66 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C67 Rate of Current (7) (IHO)

Rate of current flow 5 hours before tide reference level.

C67 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C68 Rate of Current (8) (IHO)

Rate of current flow 4 hours before tide reference level.

C68 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C69 Rate of Current (9) (IHO)

Rate of current flow 3 hours before tide reference level.

C69 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C70 Rate of Current (10) (IHO)

Rate of current flow 2 hours before tide reference level.

C70 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C71 Rate of Current (11) (IHO)

Rate of current flow 1 hour before tide reference level.

C71 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C80 Rate of Current

Rate of current flow at high water.

C80 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C81 Rate of Current (1)

Rate of current flow 1 hour after high water.

C81 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C82 Rate of Current (2)

Rate of current flow 2 hours after high water.

C82 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C83 Rate of Current (3)

Rate of current flow 3 hours after high water.

C83 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C84 Rate of Current (4)

Rate of current flow 4 hours after high water.

C84 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C85 Rate of Current (5)

Rate of current flow 5 hours after high water.

C85 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C86 Rate of Current (6)

Rate of current flow 6 hours after high water.

C86 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C87 Rate of Current (7)

Rate of current flow 7 hours after high water.

C87 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C88 Rate of Current (8)

Rate of current flow 8 hours after high water.

C88 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C89 Rate of Current (9)

Rate of current flow 9 hours after high water.

C89 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C90 Rate of Current (10)

Rate of current flow 10 hours after high water.

C90 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

C91 Rate of Current (11)

Rate of current flow 11 hours after high water.

C91 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

CAB Cable Classification

Classifies the function of a cable.
Version 2.1: Modified definition from "Tabulates the kind of transmission." to "Classifies the Function of a Cable"

CAB	0	Unknown
CAB	1	Undefined
CAB	2	Power Line
CAB	3	Telephone
CAB	4	Telegraph
CAB	5	Mooring (IHO S-57) Version 2.1: New Attribute Value to Permit directly mapping S-57 CBLOH and CATCBL to FACC.
CAB	6	Transmission Line (IHO S-57) Version 2.1: New Attribute Value to Permit directly mapping S-57 CBLOH and CATCBL to FACC.
CAB	997	Unpopulated
CAB	998	Not Applicable
CAB	999	Other

CAC Collection Attribute Category

Classifies the collection criteria.

CAC	0	Unknown
CAC	1	Data Not Requested By User
CAC	2	Area Too Rough to Collect
CAC	3	No Available Imagery
CAC	4	Different Height Threshold Within Data Block
CAC	5	Low Data Collection Criteria
CAC	6	No Available Map Source
CAC	7	No Suitable Imagery
CAC	8	Data Not Required
CAC	9	Collected
CAC	10	Derived
CAC	997	Unpopulated
CAC	998	Not Applicable
CAC	999	Other

CAP Capacity

The capacity of a feature. Units will be qualified using a structured text approach, e.g. 100 (cars)[per hour] where the unit is in parentheses ( ) and a qualifier is in brackets[ ].

CAP	0	Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	80 Characters

CCA Constriction/Expansion Category

The type of a constriction or expansion.

CCA	0	Unknown
CCA	1	Gateway
CCA	2	A narrow pass between rocks
CCA	3	Road siding on narrow roads
CCA	4	A passage through a building

CCA	5	Underpass Version 2.1: New Attribute Value
CCA	997	Unpopulated
CCA	998	Not Applicable
CCA	999	Other

CCC Color Code Category

Color of the sea floor, light, buoy, structure, or other feature.

CCC	0	Unknown
CCC	1	Black
CCC	2	Blue
CCC	3	Brown
CCC	4	Gray
CCC	5	Green
CCC	7	Chocolate
CCC	8	VALUE INTENTIONALLY LEFT BLANK
CCC	9	Orange
CCC	10	VALUE INTENTIONALLY LEFT BLANK
CCC	11	VALUE INTENTIONALLY LEFT BLANK
CCC	12	Red
CCC	13	VALUE INTENTIONALLY LEFT BLANK
CCC	14	Violet
CCC	15	White
CCC	16	VALUE INTENTIONALLY LEFT BLANK
CCC	17	VALUE INTENTIONALLY LEFT BLANK
CCC	18	VALUE INTENTIONALLY LEFT BLANK
CCC	19	Yellow
CCC	20	Red & White (RW)
CCC	21	Red & Green (RG)
CCC	22	Red & Black (RB)
CCC	23	Red-Green-Red (RGR)
CCC	24	Green & White (GW)
CCC	25	Green & Red (GR)
CCC	26	Green & Black (GB)
CCC	27	Green-Red-Green (GRG)
CCC	28	Green-Yellow-Black (GYB)
CCC	29	Yellow & Black (YB)
CCC	30	Yellow-Black-Yellow (YBY)
CCC	31	Yellow & Red (YR)
CCC	32	Yellow & Green (YG)
CCC	33	Yellow-Red-White (YRW)
CCC	34	Black & Yellow (BY)
CCC	35	Black-Yellow-Black (BYB)
CCC	36	Black-Red-Black (BRB)
CCC	37	Black & White (BW)
CCC	38	Black & Red (BR)
CCC	39	Black & Green (BG)
CCC	40	White & Red (WR)

CCC 41 White & Orange (WOr)
CCC 42 White & Green (WG)
CCC 43 White & Black (WB)
CCC 44 White & Yellow (WY)
CCC 45 White-Red-Green (WRG)
CCC 46 White-Green-White (WGW)
CCC 47 Magenta
CCC 48 Amber
CCC 49 Buff
CCC 50 Nautical Purple
CCC 51 Pink
CCC 997 Unpopulated
CCC 998 Not Applicable
CCC 999 Other

CCR Color Code Remarks

Textual description of unique aspects of buoy or beacon coloring.

CCR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

CDA Covered Drain Attribute

Condition where an artificial or improved natural drainage way is completely covered over and connects open drainage ways at each end.

CDA 0 Unknown
CDA 1 Uncovered
CDA 2 Covered
CDA 3 VALUE INTENTIONALLY LEFT BLANK (Not Applicable)
Version 2.1: Removed duplicate attribute value
CDA 997 Unpopulated
CDA 998 Not Applicable
CDA 999 Other

CDL Covered Drain Length

Length of covered drainage way.

CDL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

CDP Calendar Date Type

The type of report or activity.

CDP 0 Unknown
CDP 1 Aerial Photography
CDP 2 Air Information
CDP 3 Approximate
CDP 4 Field Classification
CDP 5 Compilation
CDP 6 Copyright
CDP 7 Creation

CDP 8 Digitizing
CDP 9 Distribution/Dispatching
CDP 10 Downgrading
CDP 11 Drafting/Scribing/Drawing
CDP 12 Edition
CDP 13 Field Examination
CDP 14 Intelligence
CDP 15 Date Interpretable
CDP 16 Processing
CDP 17 Print/Publication
CDP 18 Receipt
CDP 19 Source
CDP 20 Earliest Date of Source
CDP 21 Latest Date of Source
CDP 22 Specifications
CDP 23 Survey
CDP 24 Up-to-dateness/revision
CDP 25 Map Edit
CDP 26 Information as of ---
CDP 27 Perishable Information Date
CDP 28 Cycle Date
CDP 29 Significant Date
CDP 30 Date of Magnetic Information
CDP 31 Notice to Mariners
CDP 997 Unpopulated
CDP 998 Not Applicable
CDP 999 Other

CDV Calendar Date Value

The calendar date as specified by ISO 8601.

CDV 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	8 Characters

CET Cut/Embankment Type Category

Identifies the number of sides that are used as a cut or an embankment.

CET 0 Unknown
CET 1 One Side
CET 2 Both Sides
CET 997 Unpopulated
CET 998 Not Applicable
CET 999 Other

CFD Cultural Feature Density

The measure of the concentration of buildings and other cultural features within the delineation of this feature.

CFD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

CHA Light Characteristic Category

The sequence, grouping, and distinctive character of a light.

CHA 0 Unknown
CHA 1 Alternating
CHA 2 Composite Group Flashing
CHA 3 Composite Group Occulting
CHA 4 Ultra Quick
CHA 5 Fixed
CHA 6 Fixed and Flashing
CHA 7 Fixed and Group Flashing
CHA 8 Flashing
CHA 9 Group Flashing
CHA 10 Group Occulting
CHA 11 Interrupted Quick Flashing
CHA 12 Interrupted Ultra Quick
CHA 13 Interrupted Very Quick
CHA 14 Isophase
CHA 15 Long-Flashing
CHA 16 Morse Code
CHA 17 Occulting
CHA 19 VALUE INTENTIONALLY LEFT BLANK
CHA 20 VALUE INTENTIONALLY LEFT BLANK
CHA 21 Lighted
CHA 22 VALUE INTENTIONALLY LEFT BLANK
CHA 23 Unlighted
CHA 24 VALUE INTENTIONALLY LEFT BLANK
CHA 25 VALUE INTENTIONALLY LEFT BLANK
CHA 26 VALUE INTENTIONALLY LEFT BLANK
CHA 27 VALUE INTENTIONALLY LEFT BLANK
CHA 28 Group Quick Flashing
CHA 29 Group Very Quick
CHA 30 Very Quick
CHA 31 Quick
CHA 32 VALUE INTENTIONALLY LEFT BLANK
CHA 33 Intensified
CHA 34 VALUE INTENTIONALLY LEFT BLANK
CHA 35 VALUE INTENTIONALLY LEFT BLANK
CHA 36 Directional
CHA 37 VALUE INTENTIONALLY LEFT BLANK
CHA 38 VALUE INTENTIONALLY LEFT BLANK

CHA 39 VALUE INTENTIONALLY LEFT BLANK
CHA 40 VALUE INTENTIONALLY LEFT BLANK
CHA 41 VALUE INTENTIONALLY LEFT BLANK
CHA 42 VALUE INTENTIONALLY LEFT BLANK
CHA 43 Directional Moiré
CHA 44 Quick flashing
CHA 45 Very quick flashing
CHA 46 Flash / long flash
CHA 47 Occulting / flash
CHA 48 Fixed / long flash
CHA 49 Occulting alternating
CHA 50 Long flash alternating
CHA 51 Flash alternating
CHA 52 Group alternating
CHA 53 2 fixed (vertical)
CHA 54 2 fixed (horizontal)
CHA 55 3 fixed (vertical)
CHA 56 3 fixed (horizontal)
CHA 57 Quick-Flash Plus Long-Flash
CHA 58 Very Quick-Flash Plus Long-Flash
CHA 59 Ultra Quick-Flash Plus Long-Flash
CHA 60 Fixed And Alternating Flashing
CHA 997 Unpopulated
CHA 998 Not Applicable
CHA 999 Other

CHL Channel Number

The channel representing the frequency assigned by the controlling authority.

CHL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	80 Characters

CHT Channel Type

Categories of navigational channels. (See also BH191)
Version 2.1: New Attribute

CHT 0 Unknown
Version 2.1: New Attribute Value
CHT 1 Lagoonal Channel
Version 2.1: New Attribute Value
CHT 997 Unpopulated
Version 2.1: New Attribute Value
CHT 998 Not Applicable
Version 2.1: New Attribute Value
CHT 999 Other
Version 2.1: New Attribute Value

CIC Color Intensity Category

Identifies the intensity of color.

CIC 0 Unknown

CIC 1 Dark
CIC 2 Light
CIC 997 Unpopulated
CIC 998 Not Applicable
CIC 999 Other

CLI Communication Lines Isolation

Distinguishes between communication lines that are in the open by themselves (isolated) and those that are in the midst of other features (not isolated).

CLI 0 Unknown
CLI 1 Isolated
CLI 2 Not isolated
CLI 997 Unpopulated
CLI 998 Not Applicable
CLI 999 Other

CLR Class of Rapids

Indicates the relative difficulty in traversing the rapids. Six Classes based on the International Scale of River Difficulty.
Version 2.1: Added new Attribute.

CLR 0 Unknown
Version 2.1: New Attribute Value.
CLR 1 Class 1 Easy
Version 2.1: New Attribute Value.
CLR 2 Class 2 Novice or Medium
Version 2.1: New Attribute Value.
CLR 3 Class 3 Intermediate or Difficult
Version 2.1: New Attribute Value.
CLR 4 Class 4 Advanced or Very Difficult
Version 2.1: New Attribute Value.
CLR 5 Class 5 Expert or Extremely Difficult
Version 2.1: New Attribute Value.
CLR 6 Class 6 Extreme and Exploratory or Unrunnable
Version 2.1: New Attribute Value.
CLR 997 Unpopulated
Version 2.1: New Attribute Value.
CLR 998 Not Applicable
Version 2.1: New Attribute Value.
CLR 999 Other
Version 2.1: New Attribute Value.

COC Conspicuous Category

A conspicuous object is easily identifiable and plainly visible under varying conditions of light from harbors, approach channels, or offshore because of its size, shape, or height.

COC 0 Unknown
COC 1 Conspicuous from sea
COC 2 VALUE INTENTIONALLY LEFT BLANK
COC 3 Radar Conspicuous from sea
COC 4 Conspicuous from land
COC 5 Conspicuous from air
COC 6 Inconspicuous

COC 7 Generally Conspicuous
COC 8 Not visual conspicuous
COC 9 Visual conspicuous
COC 10 Not radar conspicuous
COC 997 Unpopulated
COC 998 Not Applicable
COC 999 Other

COD Certainty of Delineation

Indicates knowledge of the feature's limits or information.

COD 0 Unknown
COD 1 Limits and Information Known
COD 2 Limits and Information Unknown
COD 997 Unpopulated
COD 998 Not Applicable
COD 999 Other

COE Certainty of Existence

Indicates knowledge of the feature's existence.

COE 0 Unknown
COE 1 Definite
COE 2 Doubtful
COE 3 Reported
COE 997 Unpopulated
COE 998 Not Applicable
COE 999 Other

COL Character of Light

Any identifier composed of the class, number and color(s) of flashes or occultations, of a light or lights at one geographic position [e.g. Q(6)+L F1, VQ G, L F1 (3+2)WR].

COL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

COT Contour Type Category

Classifies the type of contour.

COT 0 Unknown
COT 1 Depression
COT 997 Unpopulated
COT 998 Not Applicable
COT 999 Other

CPA Control Point Attribute

Type of control point.

CPA 0 Unknown
CPA 1 Bench Mark
CPA 2 Horizontal
CPA 3 Horizontal With Bench Mark
CPA 4 Astronomic position
CPA 5 Vertical

CPA	6	VALUE INTENTIONALLY LEFT BLANK (Main Station) Version 2.1: Replaced by CPA 8-11 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	7	VALUE INTENTIONALLY LEFT BLANK (Secondary Station) Version 2.1: Replaced by CPA 8-11 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	8	Horizontal main station Version 2.1: Replaced CPA 6 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	9	Horizontal Secondary station Version 2.1: Replaced CPA 7 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	10	Vertical main station Version 2.1: Replaced CPA 6 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	11	Vertical secondary station Version 2.1: Replaced CPA 7 to map S-57 attributes CATPRN and CATCTR to FACC
CPA	997	Unpopulated
CPA	998	Not Applicable
CPA	999	Other

CRA Crane Type Category

Type of crane.

CRA	0	Unknown
CRA	1	VALUE INTENTIONALLY LEFT BLANK
CRA	2	Bridge/Gantry
CRA	3	Rotating
CRA	4	Floating
CRA	5	Fixed
CRA	6	Traveling
CRA	99	Container
CRA	997	Unpopulated
CRA	998	Not Applicable
CRA	999	Other

CRC Crossing Category

Shape attributed to the crossing of two or more lines of communication.

CRC	0	Unknown
CRC	1	Junction
CRC	2	Intersection
CRC	3	Star shaped branching (more than 4 roads)
CRC	997	Unpopulated
CRC	998	Not Applicable
CRC	999	Other

CRM Crane Mobility Type

Indicates the mobility of a crane type. (See CRA.)

CRM	0	Unknown
CRM	1	Fixed
CRM	2	Traveling
CRM	3	Floating
CRM	997	Unpopulated
CRM	998	Not Applicable
CRM	999	Other

CRN Current Rate Minimum

Minimum speed of current.

CRN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

CRS Current Rate (Speed)

Current speed in knots.

CRS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

CRV Depth Curve or Contour Value

A specified value assigned to a particular depth curve or contour.

CRV 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

CRX Current Rate Maximum

Maximum speed of current.

CRX 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	N/A	N/A

CSC Crossing Control Category

Defines the method of traffic control for a road crossing.

CSC 0 Unknown
CSC 2 Signal Devices
CSC 3 Stop Sign(s)
CSC 4 No control or warning signs.
CSC 997 Unpopulated
CSC 998 Not Applicable
CSC 999 Other

CSM Secondary Material Characteristics

Characteristics of secondary material composition of feature.

CSM 0 Unknown
CSM 1 Broken
CSM 2 Coarse
CSM 3 Decayed
CSM 4 Fine, Minute Particles
CSM 5 Gritty
CSM 6 Hard
CSM 7 Rotten
CSM 8 Soft
CSM 9 Sticky
CSM 10 Stiff
CSM 11 Streaky

CSM 12 Tenacious
CSM 13 Uneven
CSM 17 Calcareous
CSM 18 Flinty
CSM 19 Glacial
CSM 20 Ground
CSM 21 Large
CSM 22 Rocky
CSM 23 Small
CSM 24 Speckled
CSM 25 Varied
CSM 26 Volcanic
CSM 27 Medium
CSM 997 Unpopulated
CSM 998 Not Applicable
CSM 999 Other

CTC Culvert Type Category

Divides culverts into various categories, of which the two main ones are regular culverts and box culverts, either of which can be earth back-filled.

CTC 0 Unknown
CTC 1 Regular, Earth Back-Filled
CTC 2 Box, Earth Back-Filled
CTC 3 Box, Load Bearing
CTC 997 Unpopulated
CTC 998 Not Applicable
CTC 999 Other

CTL Cumulative Track Length

Total cumulative length of track contained within confines of the feature, exclusive of the branch or main trunk lines running into and/or out of the feature.

CTL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Long Integer	N/A	1 m	N/A

CUR Current Type Category

The horizontal movement of a body of water.

CUR 0 Unknown
CUR 1 Ebb
CUR 2 Flood
CUR 3 General Flow
CUR 4 River Flow
CUR 5 Ocean Flow
CUR 6 Rip
CUR 7 Longshore
CUR 997 Unpopulated
CUR 998 Not Applicable
CUR 999 Other

CVH Depth Curve or Contour Value High

The maximum value of a depth curve polygon.

CVH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

CVL Depth Curve or Contour Value Low

The minimum value of a depth curve polygon.

CVL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

D60 Direction of Current (IHO)

Direction of current flow at tide reference level.

D60 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D61 Direction of Current (1) (IHO)

Direction of current flow 1 hour after tide reference level.

D61 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D62 Direction of Current (2) (IHO)

Direction of current flow 2 hours after tide reference level.

D62 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D63 Direction of Current (3) (IHO)

Direction of current flow 3 hours after tide reference level.

D63 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D64 Direction of Current (4) (IHO)

Direction of current flow 4 hours after tide reference level.

D64 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D65 Direction of Current (5) (IHO)

Direction of current flow 5 hours after tide reference level.

D65 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D66 Direction of Current (6) (IHO)

Direction of current flow 6 hours after tide reference level.

D66 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D67 Direction of Current (7) (IHO)

Direction of current flow 5 hours before tide reference level.

D67 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D68 Direction of Current (8) (IHO)

Direction of current flow 4 hours before tide reference level.

D68 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D69 Direction of Current (9) (IHO)

Direction of current flow 3 hours before tide reference level.

D69 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D70 Direction of Current (10) (IHO)

Direction of current flow 2 hours before tide reference level.

D70 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D71 Direction of Current (11) (IHO)

Direction of current flow 1 hour before tide reference level.

D71 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D80 Direction of Current

Direction of current flow at high water.

D80 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D81 Direction of Current (1)

Direction of current flow 1 hour after high water.

D81 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D82 Direction of Current (2)

Direction of current flow 2 hours after high water.

D82 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D83 Direction of Current (3)

Direction of current flow 3 hours after high water.

D83 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D84 Direction of Current (4)

Direction of current flow 4 hours after high water.

D84 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D85 Direction of Current (5)

Direction of current flow 5 hours after high water.

D85 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D86 Direction of Current (6)

Direction of current flow 6 hours after high water.

D86 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D87 Direction of Current (7)

Direction of current flow 7 hours after high water.

D87 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D88 Direction of Current (8)

Direction of current flow 8 hours after high water.

D88 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D89 Direction of Current (9)

Direction of current flow 9 hours after high water.

D89 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D90 Direction of Current (10)

Direction of current flow 10 hours after high water.

D90 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

D91 Direction of Current (11)

Direction of current flow 11 hours after high water.

D91 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DAN Description of Aids to Navigation

Textual description of aids to navigation marking a feature, e.g.. "Marked by buoys".

DAN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

DEP Depth Below Surface Level

Distance measured from the highest point at surface level to the lowest point of the feature below the surface. Recorded values are positive numbers.

DEP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

DF1 Direction of Traffic - 1

Direction of traffic, first occurrence.

DF1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DF2 Direction of Traffic - 2

Direction of traffic, second occurrence.

DF2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DF3 Direction of Traffic - 3

Direction of traffic, third occurrence.

DF3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DF4 Direction of Traffic - 4

Direction of traffic, fourth occurrence.

DF4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DFT Dam Face Type

Type of face of a dam.

DFT 0 Unknown
DFT 1 Vertical
DFT 2 Slope
DFT 997 Unpopulated
DFT 998 Not Applicable
DFT 999 Other

DGC Drop Gate Category

Distinguishes between two drop gate types.

DGC 0 Unknown
DGC 1 Overhead Drop
DGC 2 Side Drop
DGC 997 Unpopulated
DGC 998 Not Applicable
DGC 999 Other

DIR Directivity

The side or sides of a feature which produces the greatest reflectivity potential.

DIR 0 Unknown
DIR 1 Uni
DIR 2 Bi
DIR 3 Omni
DIR 997 Unpopulated
DIR 998 Not Applicable
DIR 999 Other

DMB Density Measure (Brush/Undergrowth)

Actual percent (%) of ground covered by undergrowth.

DMB 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

DMF Density Measure (Feature Count)

Indicates the number of features of this type within an area.

DMF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Features	Short Integer	-32767 to 32767	1 feature	N/A

DMK Density Measure (% of Kelp Cover)

Concentration of kelp weed in the sea, measured in percent coverage within area of feature.

DMK 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

DMR Density Measure (% of Roof Cover)

Roof cover measured by percent within area of feature.

DMR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

DMS Density Measure (Structure Count)

Density of structures within a square kilometer (1000m x 1000m).

DMS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structures	Short Integer	-32767 to 32767	1 structure	N/A

DMT Density Measure (% of Tree/Canopy Cover)

Canopy cover measured by percent within area of feature during the summer season.

DMT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

DOF Direction of Flow

Bearing of movement or direction of the flow.

DOF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DP1 Highest level of groundwater

Highest annual average level of ground water.

DP1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

DP2 Lowest level of groundwater

Lowest annual average level of ground water.

DP2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

DR1 Depth Range Value 1

Minimum value of a depth range.

DR1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

DR2 Depth Range Value 2

Maximum value of a depth range.

DR2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

DR3 Depth Range With greater than 1 meter resolution - Value 1

Minimum value of a depth range.

DR3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

DR4 Depth Range With greater than 1 meter resolution - Value 2

Maximum value of a depth range.

DR4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

DRP Description of Reference Point

Description of the feature(s) which form a Leading Line or Clearing Line.

DRP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

DRW Density of Woody Vegetation Range

Range indicating percentage of total ground surface covered by Trees (EC030) and Scrub Brush (EB015) within delineated area of feature.

DRW 0 Unknown
DRW 1 >0 % and <= 5 %
DRW 2 >5 % and <=15 %
DRW 3 >15 %
DRW 4 Not Applicable
DRW 997 Unpopulated
DRW 999 Other

DTE Date End

Latest date on which an object (e.g. a buoy) will be present. Coded YYYYMMDD.

DTE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

DTF Displaced Threshold Distance in Feet

The distance in feet from the runway end to that point of the runway usable for landing.
Version 2.1: New Attribute

DTF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

DTM Displaced Threshold Distance in Metres

The distance in meters from the runway end to that point of the runway usable for landing.
Version 2.1: New Attribute

DTM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

DTS Date Start

Earliest date on which an object (e.g. a buoy) will be present. Coded YYYYMMDD.

DTS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

DW1 Depth of Water (1)

Predominant water depth within delineation of feature, determined in meters at the greatest depth along a cross section of the feature (First Range).

DW1 0 Unknown
DW1 1 <= 0.8
DW1 2 > 0.8 and <= 1.6
DW1 3 > 1.6 and <= 2.4
DW1 4 > 2.4
DW1 5 Not Applicable
DW1 997 Unpopulated
DW1 999 Other

DW2 Depth of Water (2)

Predominant water depth within delineation of feature, determined in meters at the greatest depth along a cross section of the feature (Second Range).

DW2 0 Unknown
DW2 1 <= 1.6
DW2 2 > 1.6 and <= 2.4
DW2 3 > 2.4
DW2 4 Not Applicable
DW2 997 Unpopulated
DW2 999 Other

DWT Dam or Weir Type

Used to differentiate whether a BI020 Dam/Weir is a Dam or a Weir.
Version 2.1: New Attribute to permit mapping of S-57 object DAMCON which includes both dams and weirs as well as nautical gates.

DWT 0 Unknown
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

DWT 1 Weir
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

DWT 2 Dam
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

DWT 997 Unpopulated
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

DWT 998 Not Applicable
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

DWT 999 Other
Version 2.1: New Attribute Value to map S-57 attribute DAMCON to FACC.

EBT Educational Building Type

Identifies the type of educational building.

EBT 0 Unknown
EBT 1 Academy
EBT 2 College
EBT 3 Educational Center
EBT 4 Lyceum
EBT 5 University
EBT 6 Seminary
EBT 8 Not Applicable
EBT 997 Unpopulated
EBT 999 Other

EDP Electronic Depth

Depth of water obtained by electronic depth measuring instruments.

EDP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	0 to 32767	1 m	N/A

EHF Ellipsoid Height in Feet – High End

Elevation above the ellipsoid at the highest end of the runway.
Version 2.1: New Attribute

EHF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

EHM Ellipsoid Height In Metres – High End

Elevation above the ellipsoid at the highest end of the runway.
Version 2.1: New Attribute

EHM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

ELA Elevation Accuracy

Indicates whether the ZVL value is accurately known.

ELA 0 Unknown
ELA 1 Accurate
ELA 2 Approximate
ELA 997 Unpopulated
ELA 998 Not Applicable
ELA 999 Other

ELF Ellipsoid Height In Feet – Low End

Elevation above the ellipsoid at the lowest end of the runway.
Version 2.1: New Attribute

ELF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

ELM Ellipsoid Height in Metres – Low End

Elevation above the ellipsoid at the lowest end of the runway.
Version 2.1: New Attribute

ELM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

EOL Elevation of Light

The elevation of a light.

EOL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

EPW Electrical Power Capacity

Electrical Power capacity of a feature expressed in megawatts.

EPW 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Megawatts	Short Integer	-32767 to 32767	1 mW	N/A

ETN Electric Tension

The nominal voltage of supplied power to a transport system.

ETN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Volts	Short Integer	-32767 to 32767	1 v	N/A

EXS Existence Category

The state or condition of the feature.

EXS 0 Unknown
EXS 1 Definite
EXS 2 Doubtful
EXS 3 Reported
EXS 4 VALUE INTENTIONALLY LEFT BLANK
EXS 5 Under Construction
EXS 6 Abandoned/Disused
EXS 7 Destroyed
EXS 8 Dismantled
EXS 10 Proposed
EXS 11 Temporary
EXS 12 Alternate
EXS 13 VALUE INTENTIONALLY LEFT BLANK
EXS 16 VALUE INTENTIONALLY LEFT BLANK

EXS	17	VALUE INTENTIONALLY LEFT BLANK
EXS	18	Permanent
EXS	19	VALUE INTENTIONALLY LEFT BLANK
EXS	20	Corresponds to Recommended Track
EXS	21	Does Not Correspond to Recommended Track
EXS	22	One-Way
EXS	23	Two-Way
EXS	25	Not Maintained
EXS	26	Maintained
EXS	27	Closed/Locked
EXS	28	Operational
EXS	29	VALUE INTENTIONALLY LEFT BLANK
EXS	30	Not Isolated
EXS	31	Isolated
EXS	32	Navigable
EXS	33	Ruined
EXS	34	VALUE INTENTIONALLY LEFT BLANK
EXS	35	VALUE INTENTIONALLY LEFT BLANK (Other)
EXS	36	Commissioned and Operational
EXS	37	Commissioned and on Test
EXS	38	Commissioned and out of service
EXS	39	Not commissioned and operational
EXS	40	Not commissioned and on test
EXS	41	Not commissioned and out of service
EXS	42	Continuous Operation
EXS	43	Intermittent operation
EXS	44	Approximate/About
EXS	45	Natural
EXS	46	Man-Made
EXS	47	Swept
EXS	48	Controlled
EXS	49	Non-Controlled
EXS	50	Non-Tidal
EXS	51	Tidal/Tidal Fluctuation
EXS	52	Dissipating
EXS	53	Incomplete
EXS	54	Antique/Ancient
EXS	55	Unexamined/Unsurveyed
EXS	56	Unattended/Unwatched
EXS	57	Sonar Confirmed
EXS	58	Sonar Not Confirmed
EXS	59	Not Usable
EXS	60	Indefinite (Shoreline)
EXS	61	Definite Shoreline
EXS	62	Partially Destroyed
EXS	65	Inactive
EXS	66	Damaged

EXS 70 Occasional
EXS 71 Recommended
EXS 72 Illuminated
EXS 73 Historic
EXS 74 Synchronized
EXS 75 Watched
EXS 723 Navigable and abandoned
EXS 724 Navigable and operational
EXS 997 Unpopulated
EXS 998 Not Applicable
EXS 999 Other

FAC Pier-Wharf-Quay Face Type

Describes whether a pier or quay is of solid, closed construction or of open pile construction.
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the mari

FAC 0 Unknown
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FAC 1 Open
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FAC 2 Solid Face
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FAC 997 Unpopulated
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FAC 998 Not Applicable
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FAC 999 Other
Version 2.1: New Attribute to differentiate open and solid piers and quays in order to map S-57 to FACC. The use of pier/wharf/quay will not work if the maritime use of the word wharf as a collective name for piers and quays is followed.

FCL Ferry Crossing Length

Length of crossing between shore points.

FCL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

FCO Feature Configuration

Configuration of feature.

FCO 0 Unknown
FCO 1 Dispersed

FCO 2 Multiple
FCO 3 Single
FCO 4 Inclined
FCO 5 Divided same widths
FCO 6 Divided different widths
FCO 7 Non-divided
FCO 8 Poorly defined
FCO 9 Well-defined
FCO 11 Double
FCO 12 Juxtaposition
FCO 997 Unpopulated
FCO 998 Not Applicable
FCO 999 Other

FCT Ferry Crossing Times

The usual time taken for a ferry crossing, including typical loading and unloading times.

FCT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Minutes	Short Integer	-32767 to 32767	1 min	N/A

FDT Fog Detector

Indicates whether or not a fog detector light is attached to, or connected with the feature.

FDT 0 Unknown
FDT 1 Fog Detector Light Present
FDT 2 Fog Detector Light Absent
FDT 997 Unpopulated
FDT 998 Not Applicable
FDT 999 Other

FEO Feature Element Orientation

The angular distance measured from true north (0 deg) clockwise to the predominant linear pattern of the elements within the feature.

FEO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

FER Ferry Type

Indicates the maneuverability of a ferry vessel.

FER 0 Unknown
FER 1 With cables/chains
FER 2 Without cables/chains
FER 3 Ice Ferry
FER 997 Unpopulated
FER 998 Not Applicable
FER 999 Other

FFA Fuel Facilities Available

Fuel facilities available at or in the near vicinity.

FFA 0 Unknown
FFA 1 Gasoline

FFA	2	Aviation Fuel
FFA	3	Kerosene
FFA	4	Water
FFA	5	Diesel
FFA	6	Coal
FFA	7	Oil
FFA	8	Lubricants
FFA	9	Methane
FFA	10	Special
FFA	11	Liquid Propane Gas (LPG)
FFA	12	Compressed Natural Gas (CNG)
FFA	13	Butane
FFA	14	Ethanol
FFA	995	None
FFA	997	Unpopulated
FFA	998	Not Applicable
FFA	999	Other

FFC Fishing Facility Classification

Encodes the various types of fishing facilities.

FFC	0	Undefined
FFC	1	Fishing stake
FFC	2	Fish trap
FFC	3	Fish weir
FFC	4	Tunny/Tuna net
FFC	997	Unpopulated
FFC	998	Not Applicable
FFC	999	Other

FHC Harbor Facility Classification

Tabulates the kind of operation/service.

FHC	0	Undefined
FHC	1	Ro-Ro terminal (Roll on, Roll off)
FHC	2	Timber yard
FHC	3	Ferry Terminal
FHC	4	Fishing Harbor
FHC	5	Yacht harbor/marina
FHC	6	Naval base
FHC	7	Tanker terminal
FHC	8	Passenger terminal
FHC	9	Shipyard
FHC	10	Container terminal
FHC	11	Bulk Terminal
FHC	997	Unpopulated
FHC	998	Not Applicable
FHC	999	Other

FL1 Flight Level 1

A minimum surface of constant atmospheric pressure which is related to a specific pressure datum, (1,013.2 hectopascal (hPa) or 29.92 inches) and is separated from the consecutive flight levels by a pressure interval corresponding to 500 feet (152.4 m.).

FL1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

FL2 Flight Level 2

A maximum surface of constant atmospheric pressure which is related to a specific pressure datum, (1,013.2 hectopascal (hPa) or 29.92 inches) and is separated from the consecutive flight levels by a pressure interval corresponding to 500 feet (152.4 m.).

FL2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-32767 to 32767	1 ft	N/A

FLT Floodlit Illumination

Indication of the presence of floodlighting to illuminate the structure of a light.

FLT 0 Unknown
FLT 1 Floodlit
FLT 2 Not Floodlit
FLT 997 Unpopulated
FLT 998 Not Applicable
FLT 999 Other

FRQ Frequency of Signal

Audio frequency of acoustical signal.

FRQ 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Hertz	Long Integer	N/A	1 Hz	N/A

FRT Firing Range Type

Type of firing range.

FRT 0 Unknown
FRT 1 Rifle/Small Arms
FRT 2 Tank
FRT 3 Artillery
FRT 4 Grenade
FRT 5 Demolition Area
FRT 6 Impact Area
FRT 997 Unpopulated
FRT 998 Not Applicable
FRT 999 Other

FTC Farming Type Category

Type of field pattern or use.

FTC 0 Unknown
FTC 1 Slash & Burn-Shifting cultivation
FTC 2 Permanent field

FTC 3 Terraced
FTC 4 Ditch Irrigation
FTC 5 Grazing
FTC 6 Regular (planting pattern)
FTC 7 Linear (planting pattern)
FTC 8 Crop Rotation
FTC 9 Not Applicable
FTC 98 Type of field Pattern
FTC 997 Unpopulated
FTC 999 Other

FTI Fence Type Indicator

Type of fence.

FTI 0 Unknown
FTI 1 Metal
FTI 2 Wood
FTI 3 Stone
FTI 4 Rock
FTI 5 Barbed Wire
FTI 6 Chain Link
FTI 997 Unpopulated
FTI 998 Not Applicable
FTI 999 Other

FTP Fabrication Type

Denotes the type of fabrication industry as light or heavy. Light fabrication industries are characterized by light steel or woodframe buildings and lack heavy equipment. Heavy fabrication industries are characterized by large heavy steel frame building

FTP 0 Unknown
FTP 1 Light Fabrication (Light fabrication industries are characterized by light steel or woodframe buildings and lack heavy equipment.)
FTP 2 Heavy Fabrication (Heavy fabrication industries are characterized by large heavy steel frame buildings and may utilize large cranes for heavy lifting.)
FTP 997 Unpopulated
FTP 998 Not Applicable
FTP 999 Other

FTR Feature Rate

A quantified rate associated with a feature (e.g. Cars crossing a Bridge-AQ040). Units will be quantified using a structured text approach (e.g. 100(cars)[crossing bridge per hour] where the type of unit is in parentheses ( ) and a unit qualifier is in b

FTR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	80 Characters

FVO Feature Vertical Orientation

Describes the orientation of the usual axis of a feature relative to the vertical.

FVO 0 Unknown
FVO 1 Upright
FVO 2 On side

FVO 3 Leaning
FVO 4 Inverted
FVO 5 Horizontal
FVO 997 Unpopulated
FVO 998 Not Applicable
FVO 999 Other

GAW Gauge Width

The width of a single pair of rails, measured along the shortest distance from inside rail to inside rail.

GAW 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Centimetres	Short Integer	-32767 to 32767	1 cm	N/A

GEH Geomorphic Height

Height of the feature above average surface level as determined by a corresponding digital elevation matrix.

GEH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

GEN Generation of Fog Signal Category

Type of mechanism of fog signal generating.

GEN 0 Undefined
GEN 1 Automatically
GEN 2 By wave action
GEN 3 By hand
GEN 4 By wind
GEN 997 Unpopulated
GEN 998 Not Applicable
GEN 999 Other

GEO Geographic Location Category

Describes the general geographic location of the feature.

GEO 0 Unknown
GEO 1 Arctic
GEO 997 Unpopulated
GEO 998 Not Applicable
GEO 999 Other

GLI Greater Than or Equal To/Less Than Contour Interval

Indicates whether the predominant feature height or depth is greater than (or equal to), or less than the contour interval.

GLI 0 Unknown
GLI 1 Greater than or equal to contour interval
GLI 2 Less than contour interval
GLI 997 Unpopulated
GLI 998 Not Applicable
GLI 999 Other

GNC Gate (Nautical) Classification

Tabulation of various types of nautical gates.

GNC 0 Undefined

GNC 1 Gate in general
GNC 2 Tidal Gate (Flood Barrage)
GNC 3 Caisson
GNC 4 Lock Gate
GNC 5 Dyke Gate
GNC 997 Unpopulated
GNC 998 Not Applicable
GNC 999 Other

GPD Geomorphic Depth

Depth of the feature below average surface level as determined by a corresponding digital elevation matrix. If not obtainable, the average depth will be used.

GPD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

GRP Group of Signals Definition

Encodes the number of signals, the combination of signals or the Morse character(s) within one full period of sequence.

GRP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

GSA Glide Slope Angle

Glide slope angle in degrees.
Version 2.1: New Attribute

GSA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

GSC Ground Slope Category

Range indicating the slope of ground within delineated area of feature usually manually derived, reported in percent.

GSC 0 Unknown
GSC 1 (0 to > 45) Culturally or Naturally Dissected Land
GSC 2 <= 3
GSC 3 > 3 and <= 10
GSC 4 > 10 and <= 20
GSC 5 > 20 and <= 30
GSC 6 > 30 and <= 45
GSC 7 > 45
GSC 8 > 10 and <= 15
GSC 9 > 15 and <= 20
GSC 10 > 45 and <= 60
GSC 11 > 60
GSC 12 > 60 and <= 85
GSC 13 > 85
GSC 997 Unpopulated
GSC 998 Not Applicable

GSC 999 Other

GTC Gate Type Category

The classification of the type of barrier or gate.

GTC 0 Unknown
GTC 1 Tollgate
GTC 2 Crossing
GTC 99 VALUE INTENTIONALLY LEFT BLANK (Other)
GTC 997 Unpopulated
GTC 998 Not Applicable
GTC 999 Other

GUG Guyed or Unguyed Category

Presence of support wires.

GUG 0 Unknown
GUG 1 Guyed
GUG 2 Unguyed
GUG 997 Unpopulated
GUG 998 Not Applicable
GUG 999 Other

GW1 Gap Width Range (1)

Predominant horizontal gap width range (1) in meters, measured between the top of the first accessible break in slope above mean water level on each bank.

GW1 0 Unknown
GW1 1 <= 3
GW1 2 > 3 and <= 18
GW1 3 > 18 and <= 25
GW1 4 > 25 and <= 50
GW1 5 > 50 and <= 75
GW1 6 > 75 and <= 100
GW1 7 > 100 and <= 142
GW1 8 > 142
GW1 9 Not Applicable
GW1 997 Unpopulated
GW1 999 Other

GW2 Gap Width Range (2)

Predominant horizontal gap width range (2) in meters, measured between the top of the first accessible break in slope above mean water level on each bank.

GW2 0 Unknown
GW2 1 > 18 and <= 142
GW2 2 > 142 and <= 1000
GW2 3 > 1000
GW2 4 NA
GW2 997 Unpopulated
GW2 999 Other

GW3 Gap Width Range (3)

The predominant horizontal gap width range with greater precision, measured between the top of the first accessible break in slope above mean water level on each bank.

GW3 0 Unknown

GW3 1 <=1.5
GW3 2 >1.5 and <=3.0
GW3 3 >3.0 and <=18.0
GW3 4 >18.0 and <=25.0
GW3 5 >25.0 and <=30.0
GW3 6 >30.0 and <=35.0
GW3 7 >35.0 and <=40.0
GW3 8 >40.0 and <=45.0
GW3 9 >45.0 and <=50.0
GW3 10 >50.0 and <=75.0
GW3 11 >75.0 and <=100.0
GW3 12 >100.0 and <=142.0
GW3 13 >142.00
GW3 997 Unpopulated
GW3 998 Not Applicable
GW3 999 Other

HCA Horizontal Clearance Attribute

The distance available to pass a load that extends laterally beyond the wheels of a vehicle.

HCA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

HCC Horizontal Clearance Code

The distance available to pass a load that extends laterally beyond the wheels of a vehicle.

HCC 0 Unknown
HCC 1 Restricted
HCC 2 Unlimited
HCC 997 Unpopulated
HCC 998 Not Applicable
HCC 999 Other

HDH Hydrographic Drying Height

The height of the feature, which tidal waters cover and uncover, referenced to a specified vertical datum.

HDH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

HDI Hydrographic Depth/Height Information

Information about the accuracy or availability of depth or uncovering height of a feature.

HDI 0 Unknown
HDI 9 Depth Known by Other Than Wire Drag
HDI 10 Depth Known by Wire Drag
HDI 11 Depth Unknown But Safe to Depth Shown
HDI 12 Depth Unknown
HDI 13 Uncovering Height Known
HDI 14 Uncovering Height Unknown
HDI 15 Not Applicable
HDI 997 Unpopulated

HDI 999 Other

HDP Hydrographic Depth

The depth of the feature below water, measured from the top or surface of the feature, referenced to a specified vertical datum. Recorded values are positive numbers.

HDP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

HFC Hydrological Form Category

Form or configuration of the hydrological feature.

HFC 0 Unknown
HFC 1 Channelized Stream
HFC 2 Disappearing
HFC 7 Non-Tidal
HFC 8 Normal Channel
HFC 10 Tidal/Tidal Fluctuating
HFC 14 Braided
HFC 16 Dissipating
HFC 19 Gorge
HFC 21 Wadi/Wash
HFC 30 Disappearing in sinkhole
HFC 31 Disappearing in other than sinkhole
HFC 32 Oxbow
HFC 33 Split stream
HFC 997 Unpopulated
HFC 998 Not Applicable
HFC 999 Other

HGF Height Above Surface Level in Feet

Distance measured from the lowest point of the base at ground or water level (downhill side/downstream side) to the tallest point of the feature.

Version 2.1: New Attribute

HGF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	0 to 32767	1 ft	N/A

HGT Height Above Surface Level

Distance measured from the lowest point of the base at ground or water level (downhill side/downstream side) to the tallest point of the feature.

HGT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

HGU Height 2/Depth 2

Height above water level on upstream side.

HGU 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

HID Harbor Identification Code

Identification code linking harbor to external database or reference.

HID 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

HL1 Bank Height Left (1)

Predominant height range (1) of the left bank (facing downstream) in meters, measured from mean water level to the first break in slope above the mean water level.

HL1 0 Unknown
HL1 1 <= .5
HL1 2 > .5 and <= 1.0
HL1 3 > 1.0 and <= 5.0
HL1 4 > 5.0
HL1 5 Not Applicable
HL1 997 Unpopulated
HL1 999 Other

HL2 Bank Height Left (2)

Predominant height range (2) of the left bank (facing downstream) in meters, measured from mean water level to the first break in slope above the mean water level.

HL2 0 Unknown
HL2 1 <= 1
HL2 2 > 1 and <= 5
HL2 3 > 5
HL2 4 Not Applicable
HL2 997 Unpopulated
HL2 999 Other

HL3 Bank Height Left (3)

The predominant height range of the left bank (facing downstream) with greater precision, measured from mean water level to the top of the first accessible break in slope above the mean water level.

HL3 0 Unknown
HL3 1 <=0.2
HL3 2 >0.2 and <=0.5
HL3 3 >0.5 and <=1.0
HL3 4 >1.0 and <=1.5
HL3 5 >1.5 and <=2.0
HL3 6 >2.0 and <=5.0
HL3 7 >5.0
HL3 997 Unpopulated
HL3 998 Not Applicable
HL3 999 Other

HLK Hulk Type

Classification of types of hulks or permanently moored ships.

HLK 0 Unknown
HLK 1 Floating Restaurant
HLK 2 Historic Ship
HLK 3 Museum

HLK 4 Accommodation
HLK 5 Floating Breakwater
HLK 997 Unpopulated
HLK 998 Not Applicable
HLK 999 Other

HLT Hydrographic Light Type

The type of light used for marine navigation.

HLT 0 Unknown
HLT 1 Sectored Light
HLT 2 VALUE INTENTIONALLY LEFT BLANK (Other)
HLT 3 Moiré Effect Light
HLT 4 Strip Light
HLT 5 Occasional
HLT 6 Lighted Beacon
HLT 7 Directional Light
HLT 8 Vertically Disposed
Version 2.1: New Attribute Value to map S-57 attribute CATLIT to FACC.
HLT 997 Unpopulated
HLT 998 Not Applicable
HLT 999 Other

HOC Hydrographic Origin Category

Origin of the feature.

HOC 0 Unknown
HOC 1 Controlled
HOC 4 Man-Made
HOC 5 Natural
HOC 997 Unpopulated
HOC 998 Not Applicable
HOC 999 Other

HOD Horizontal Datum Classification

Horizontal datum. (This attribute should only be used for a feature whose datum is different from that of the geo data set (see Part 3-6.2).) DO NOT USE - Replaced by HZD Horizontal Geodetic Datum in order to align the list of available datums with tha

HOD 0 Undefined
HOD 1 Adindan
HOD 2 Afgooye
HOD 3 Ain el Abd 1970
HOD 4 Anna 1 Astro 1965
HOD 5 Antigua Island Astro 1943
HOD 6 Arc 1950
HOD 7 Arc 1960
HOD 8 Ascension Island 1958
HOD 9 Astro beacon "E" 1945
HOD 10 Astro DOS 71/4
HOD 11 Astro Tern Island (FRIG) 1961
HOD 12 Astronomical Station 1952
HOD 13 Australian Geodetic 1966

HOD	14	Australian Geodetic 1984
HOD	15	Ayabelle Lighthouse
HOD	16	Bellevue (IGN)
HOD	17	Bermuda 1957
HOD	18	Bissau
HOD	19	Bogota Observatory
HOD	20	Bukit Rimpah
HOD	21	Camp Area Astro
HOD	22	Campo Inchauspe
HOD	23	Canton Astro 1966
HOD	24	Cape
HOD	25	Cape Canaveral
HOD	26	Carthage
HOD	27	Chatham Island Astro 1971
HOD	28	Chua Astro
HOD	29	Corrego Alegre
HOD	30	Dabola
HOD	31	Djakarta (Batavia)
HOD	32	DOS 1968
HOD	33	Easter Island 1967
HOD	34	European 1950 (European Datum)
HOD	35	European 1979
HOD	36	Fort Thomas 1955
HOD	37	Gan 1970
HOD	38	Geodetic Datum 1949
HOD	39	Graciosa Base SW 1948
HOD	40	Guam 1963
HOD	41	Gunong Segara
HOD	42	GUX 1 Astro
HOD	43	Herat North
HOD	44	Hjörsey 1955
HOD	45	Hong Kong 1963
HOD	46	Hu-Tzu-Shan
HOD	47	Indian
HOD	48	Indian 1954
HOD	49	Indian 1975
HOD	50	Ireland 1965
HOD	51	ISTS 061 Astro 1968
HOD	52	ISTS 073 Astro 1969
HOD	53	Johnston Island 1961
HOD	54	Kandawala
HOD	55	Kerguelen Island 1949
HOD	56	Kertau 1948 (or Revised Kertau)
HOD	57	Kusaie Astro 1951
HOD	58	L. C. 5 Astro 1961
HOD	59	Leigon
HOD	60	Liberia 1964

HOD	61	Luzon
HOD	62	Mahe 1971
HOD	63	Massawa
HOD	64	Merchich
HOD	65	Midway Astro 1961
HOD	66	Minna
HOD	67	Montserrat Island Astro 1958
HOD	68	M'Poraloko
HOD	69	Nahrwan
HOD	70	Naparima, BWI
HOD	71	North American 1927
HOD	72	North American 1983
HOD	73	Observatorio Meteorologico 1939
HOD	74	Old Egyptian 1907
HOD	75	Old Hawaiian
HOD	76	Oman
HOD	77	Ordnance Survey of Great Britain 1936
HOD	78	Pico de las Nieves
HOD	79	Pitcairn Astro 1967
HOD	80	Point 58 Mean Solution
HOD	81	Pointe Noire 1948
HOD	82	Porto Santo 1936
HOD	83	Provisional South American 1956
HOD	84	Provisional South Chilean 1963 (also known as Hito XVIII 1963)
HOD	85	Puerto Rico
HOD	86	Qatar National
HOD	87	Qornoq
HOD	88	Reunion
HOD	89	Rome 1940 (or Monte Mario 1940)
HOD	90	Santo (DOS) 1965
HOD	91	Sao Braz
HOD	92	Sapper Hill 1943
HOD	93	Schwarzeck
HOD	94	Selvagem Grande 1938
HOD	95	South American 1969
HOD	96	South Asia
HOD	97	Tananarive Observatory 1925
HOD	98	Timbalai 1948
HOD	99	Tokyo
HOD	100	Tristan Astro 1968
HOD	101	Viti Levu 1916
HOD	102	Wake-Eniwetok 1960
HOD	103	Wake Island Astro 1952
HOD	104	WGS-72
HOD	105	WGS-84
HOD	106	Yacare
HOD	107	Zanderij

HOD 108 Potsdam Datum
HOD 109 American Samoa 1962
HOD 110 Deception Island
HOD 111 Indian 1960
HOD 112 Indonesian 1974
HOD 113 North Sahara 1959
HOD 114 Pulkovo 1942
HOD 115 S-42 (Pulkovo 1942)
HOD 116 S-JTSK
HOD 117 Voirol 1960
HOD 997 Unpopulated
HOD 998 Not Applicable
HOD 999 Other

HQC Hypsography Portrayal Category

Type of line shown.

HQC 0 Unknown
HQC 1 Index
HQC 2 Intermediate
HQC 3 Supplementary (1/2)
HQC 4 Form Lines
HQC 5 Depression Index
HQC 6 Depression Intermediate
HQC 7 Approximate Index
HQC 8 Mound Index
HQC 9 Mound Intermediate
HQC 12 Intermediate Approximate
HQC 13 Supplementary Approximate
HQC 14 Supplementary (1/4)
HQC 15 Depression Approximate
HQC 16 Auxiliary
HQC 18 Intermediate Depression Approximate
HQC 19 Carrying Contour (coincident contours)
HQC 20 Supplemental Carrying Contour
HQC 21 Carrying Contour
HQC 22 Supplemental Depression
HQC 23 Supplemental Depression Approximate
HQC 98 Transition or erroneous
HQC 99 Connector
HQC 997 Unpopulated
HQC 998 Not Applicable
HQC 999 Other

HR1 Bank Height Right (1)

Predominant height range (1) of the right bank (facing downstream) in meters, measured from mean water level to the first break in slope above the mean water level.

HR1 0 Unknown
HR1 1 <= .5
HR1 2 > .5 and <= 1.0

HR1	3	> 1.0 and <= 5.0
HR1	4	> 5.0
HR1	5	Not Applicable
HR1	997	Unpopulated
HR1	999	Other

HR2 Bank Height Right (2)

Predominant height range (2) of the right bank (facing downstream) in meters, measured from mean water level to the first break in slope above the mean water level.

HR2	0	Unknown
HR2	1	<= 1
HR2	2	> 1 and <= 5
HR2	3	> 5
HR2	4	Not Applicable
HR2	997	Unpopulated
HR2	999	Other

HR3 Bank Height Right (3)

The predominant height range of the right bank (facing downstream) with greater precision, measured from mean water level to the top of the first accessible break in slope above the mean water level.

HR3	0	Unknown
HR3	1	<=0.2
HR3	2	>0.2 and <=0.5
HR3	3	>0.5 and <=1.0
HR3	4	>1.0 and <=1.5
HR3	5	>1.5 and <=2.0
HR3	6	>2.0 and <=5.0
HR3	7	>5.0
HR3	997	Unpopulated
HR3	998	Not Applicable
HR3	999	Other

HS1 Current Information (1)

Month of appearance of the current.

HS1	0	Unknown/Not Applicable
HS1	1	Jan
HS1	2	Feb
HS1	3	Mar
HS1	4	Apr
HS1	5	May
HS1	6	Jun
HS1	7	Jul
HS1	8	Aug
HS1	9	Sep
HS1	10	Oct
HS1	11	Nov
HS1	12	Dec
HS1	997	Unpopulated
HS1	998	Not Applicable
HS1	999	Other

HS2 Current Information (2)

Month of disappearance of the current, if different from HS1.

HS2	0	Unknown/Not Applicable
HS2	1	Jan
HS2	2	Feb
HS2	3	Mar
HS2	4	Apr
HS2	5	May
HS2	6	Jun
HS2	7	Jul
HS2	8	Aug
HS2	9	Sep
HS2	10	Oct
HS2	11	Nov
HS2	12	Dec
HS2	997	Unpopulated
HS2	998	Not Applicable
HS2	999	Other

HSB Height Above Sea Bottom

Vertical distance from sea bottom to lowest portion of feature.

HSB 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

HSC Hospital Capacity

Number of beds within a hospital.
Version 2.1: Modified lower range to begin at 0.

HSC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Beds	Short Integer	0 to 32767	1 bed	N/A

HTR Height Range

Height range with greater precision (in meters).

HTR	0	Unknown
HTR	1	<=0.5
HTR	2	>0.5 and <=1.0
HTR	3	>1.0 and <=1.5
HTR	4	>1.5 and <=2.0
HTR	5	>2.0 and <=5.0
HTR	6	>5.0 and <=10.0
HTR	7	>10.0 and <=20.0
HTR	8	>20.0 and <=35.0
HTR	9	>35.0
HTR	997	Unpopulated
HTR	998	Not Applicable
HTR	999	Other

HWT House of Worship Type

Type of house of worship used.

HWT	0	Unknown
HWT	2	Cathedral
HWT	3	Chapel
HWT	4	Church
HWT	5	Marabout
HWT	6	Minaret
HWT	7	Monastery, Convent
HWT	9	Mosque
HWT	11	Pagoda
HWT	14	Shrine
HWT	15	Tabernacle
HWT	16	Temple
HWT	20	Synagogue
HWT	21	Stupa
HWT	22	VALUE INTENTIONALLY LEFT BLANK (Not Applicable) Version 2.1: Removed duplicate attribute value
HWT	23	Any
HWT	997	Unpopulated
HWT	998	Not Applicable
HWT	999	Other

HYC Hydrological Category

Identifies the annual water content of the feature.

HYC	0	Unknown
HYC	2	Not Applicable
HYC	3	Dry
HYC	6	Non-Perennial/Intermittent/Fluctuating
HYC	8	Perennial/Permanent
HYC	997	Unpopulated
HYC	999	Other

HZD Horizontal Datum

Horizontal geodetic datum. (This attribute should only be used for a feature whose datum is different from that of the geo data set (see Part 3-6.2).)

HZD	0	Unknown
HZD	1	Adindan
HZD	2	Adindan (Ethiopia)
HZD	3	Adindan (Sudan)
HZD	4	Adindan (Mali)
HZD	5	Adindan (Senegal)
HZD	6	Adindan (Burkina Faso)
HZD	7	Adindan (Cameroon)
HZD	8	Adindan (Mean value: Ethiopia and Sudan)
HZD	9	Afgooye (Somalia)
HZD	10	Antigua Island Astro 1943
HZD	11	Ain el Abd 1970
HZD	12	Ain el Abd 1970 (Bahrain Island)

HZD	13	Ain el Abd 1970 (Saudi Arabia)
HZD	14	American Samoa Datum 1962
HZD	15	Amersfoort 1885/1903 (Netherlands)
HZD	16	Anna 1 Astro 1965 (Cocos Islands)
HZD	17	Approximate Luzon Datum (Philippines)
HZD	18	Arc 1950
HZD	19	Arc 1950 (Botswana)
HZD	20	Arc 1950 (Lesotho)
HZD	21	Arc 1950 (Malawi)
HZD	22	Arc 1950 (Swaziland)
HZD	23	Arc 1950 (Zaire)
HZD	24	Arc 1950 (Zambia)
HZD	25	Arc 1950 (Zimbabwe)
HZD	26	Arc 1950 (Burundi)
HZD	27	Arc 1950 (Mean value: Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia, and Zimbabwe)
HZD	28	Arc 1960
HZD	29	Arc 1960 (Kenya)
HZD	30	Arc 1960 (Tanzania)
HZD	31	Arc 1960 (Mean value: Kenya, Tanzania)
HZD	32	Arc 1935 (Africa)
HZD	33	Ascension Island 1958 (Ascension Island)
HZD	34	Montserrat Island Astro 1958
HZD	35	Astro Station 1952 (Marcus Island)
HZD	36	Astro Beacon "E" (Iwo Jima Island)
HZD	37	Average Terrestrial System 1977, New Brunswick
HZD	38	Australian Geod. 1966 (Australia and Tasmania Is.)
HZD	39	Australian Geod. 1984 (Australia and Tasmania Is.)
HZD	40	Djakarta (Batavia) (Sumatra Island, Indonesia)
HZD	41	Djakarta (Batavia) (Sumatra Island, Indonesia) with Zero Meridian Djakarta
HZD	42	Bekaa Base South End (Lebanon)
HZD	43	Belgium 1950 System (Lommel Signal, Belgium) (See code ODU for Belgium 1972)
HZD	44	Bermuda 1957 (Bermuda Islands)
HZD	45	Bissau (Guinea-Bissau)
HZD	46	Modified BJZ54 (China)
HZD	47	BJZ54 (A954 Beijing Coordinates) (China)
HZD	48	Bogota Observatory (Colombia)
HZD	49	Bogota Observatory (Colombia) with Zero Meridian Bogota
HZD	50	Bern 1898 (Switzerland)
HZD	51	Bern 1898 (Switzerland) with Zero Meridian Bern
HZD	52	Bukit Rimpah (Bangka & Belitung Islands, Indonesia)
HZD	53	Cape Canaveral (Mean value: Florida and Bahama Islands)
HZD	54	Campo Inchauspe (Argentina)
HZD	55	Camacupa Base SW End (Campo De Aviacao, Angola)
HZD	56	Canton Astro 1966 (Phoenix Islands)
HZD	57	Cape (South Africa)
HZD	58	Camp Area Astro (Camp McMurdo Area, Antarctica)

HZD	59	S-JTSK, Czechoslavakia (prior to 1 Jan 1993)
HZD	60	Carthage (Tunisia)
HZD	61	Compensation Géodétique du Québec 1977
HZD	62	Chatham 1971 (Chatham Island, New Zealand)
HZD	63	Chua Astro (Paraguay)
HZD	64	Corrego Alegre (Brazil)
HZD	65	Conakry Pyramid of the Service Geographique (Guinea)
HZD	66	Guyana CSG67
HZD	67	Dabola (Guinea)
HZD	68	DCS-3 Lighthouse, Saint Lucia, Lesser Antilles
HZD	69	Deception Island, Antarctica
HZD	70	GUX 1 Astro (Guadacanal Island)
HZD	71	Dominica Astro M-12, Dominica, Lesser Antilles
HZD	72	Easter Island 1967 (Easter Island)
HZD	73	Wake-Eniwetok 1960 (Marshall Islands)
HZD	74	European 1950
HZD	75	European 1950 (Western Europe: Austria, Denmark, France, Federal Republic of Germany, Netherlands, and Switzerland)
HZD	76	European 1950 (Greece)
HZD	77	European 1950 (Norway and Finland)
HZD	78	European 1950 (Portugal and Spain)
HZD	79	European 1950 (Cyprus)
HZD	80	European 1950 (Egypt)
HZD	81	European 1950 (England, Channel Islands, Scotland, and Shetland Islands)
HZD	82	European 1950 (Iran)
HZD	83	European 1950 (Sardinia)
HZD	84	European 1950 (Sicily)
HZD	85	European 1950 (England, Channel Islands, Ireland, Northern Ireland, Scotland, Shetland Islands, and Wales)
HZD	86	European 1950 (Malta)
HZD	87	European 1950 (Mean value: Austria, Belgium, Denmark, Finland, France, Federal Republic of Germany, Gibraltar, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, & Switzerland)
HZD	88	European 1950 (Iraq, Israel, Jordan, Kuwait, Lebanon, Saudi Arabia, and Syria)
HZD	89	European 1950 (Tunisia)
HZD	90	European 1979 (Mean value: Austria, Finland, Netherlands, Norway, Spain, Sweden, and Switzerland)
HZD	91	European Terrestrial Reference System 1989 (ETRS89)
HZD	92	Oman (Oman)
HZD	93	Observatorio Meteorologico 1939 (Corvo and Flores Islands, Azores)
HZD	94	Fort Thomas 1955 (Nevis, St Kitts, Leeward Islands)
HZD	95	Gan 1970 (Addu Atoll, Republic of Maldives)
HZD	96	Gandajika Base (Zaire)
HZD	97	Geocentric Datum of Australia (GDA)
HZD	98	GDZ80 (China)
HZD	99	Geodetic Datum 1949 (New Zealand)
HZD	100	DOS 1968 (Gizo Island, New Georgia Islands)

HZD 101 Graciosa Base SW (Faial, Graciosa, Pico, Sao Jorge, and Terceira Island, Azores)
HZD 102 Greek Datum, Greece
HZD 103 Greek Geodetic Reference System 1987 (GGRS 87)
HZD 104 Gunong Segara (Kalimantan Island, Indonesia)
HZD 105 Gunong Serindung
HZD 106 Guam 1963
HZD 107 Herat North (Afganistan)
HZD 108 Hermannskogel
HZD 109 Provisional South Chilean 1963 (or Hito XVIII 1963) (S. Chile, 53°S)
HZD 110 Hjörsey 1955 (Iceland)
HZD 111 Hong Kong 1963 (Hong Kong)
HZD 112 Hong Kong 1929
HZD 113 Hu-Tzu-Shan
HZD 114 Hungarian 1972
HZD 115 Bellevue (IGN) (Efate and Erromango Islands)
HZD 116 Indonesian 1974
HZD 117 Indian
HZD 118 Indian (Thailand and Vietnam)
HZD 119 Indian (Bangladesh)
HZD 120 Indian (India and Nepal)
HZD 121 Indian (Pakistan)
HZD 122 Indian (1954)
HZD 123 Indian 1954 (Thailand)
HZD 124 Indian 1960
HZD 125 Indian 1960 (Vietnam: near 16°N)
HZD 126 Indian 1960 (Con Son Island (Vietnam))
HZD 127 Indian 1975
HZD 128 Indian 1975 (Thailand)
HZD 129 Ireland 1965 (Ireland and Northern Ireland)
HZD 130 ISTS 061 Astro 1968 (South Georgia Islands)
HZD 131 ISTS 073 Astro 1969 (Diego Garcia)
HZD 132 Johnston Island 1961 (Johnston Island)
HZD 133 Kalianpur (India)
HZD 134 Kandawala (Sri Lanka)
HZD 135 Kertau 1948 (or Revised Kertau) (West Malaysia and Singapore)
HZD 136 KCS 2, Sierra Leone
HZD 137 Kerguelen Island 1949 (Kerguelen Island)
HZD 138 Korean Geodetic System 1995 (South Korea)
HZD 139 KKJ (or Kartastokoordinaattijarjestelma), Finland
HZD 140 Kusaie Astro 1951
HZD 141 Kuwait Oil Company (K28)
HZD 142 L.C. 5 Astro 1961 (Cayman Brac Island)
HZD 143 Leigon (Ghana)
HZD 144 Liberia 1964 (Liberia)
HZD 145 Lisbon (Castelo di São Jorge), Portugal
HZD 146 Local Astro.
HZD 147 Loma Quintana (Venezuela)

HZD	148	Luzon
HZD	149	Luzon (Philipines except Mindanao Island)
HZD	150	Luzon (Mindanao Island)
HZD	151	Marco Astro (Salvage Islands)
HZD	152	Martinique Fort-Desaix
HZD	153	Massawa (Eritrea, Ethiopia)
HZD	154	Manokwari (West Irian)
HZD	155	Mayotte Combani
HZD	156	Mount Dillon, Tobago
HZD	157	Merchich (Morocco)
HZD	158	Midway Astro 1961 (Midway Island)
HZD	159	Mahe 1971 (Mahe Island)
HZD	160	Minna
HZD	161	Minna (Cameroon)
HZD	162	Minna (Nigeria)
HZD	163	Rome 1940 (or Monte Mario 1940), Italy
HZD	164	Rome 1940 (or Monte Mario 1940), Italy, with Zero Meridian Rome
HZD	165	Montjong Lowe
HZD	166	M'Poraloko (Gabon)
HZD	167	Viti Levu 1916 (Viti Levu Island, Fiji Islands)
HZD	168	Nahrwan
HZD	169	Nahrwan (Masirah Island, Oman)
HZD	170	Nahrwan (United Arab Emirates)
HZD	171	Nahrwan (Saudi Arabia)
HZD	172	Naparima (BWI, Trinidad and Tobago)
HZD	173	North American 1983
HZD	174	North American 1983 (Alaska, excluding Aleutian Islands)
HZD	175	North American 1983 (Canada)
HZD	176	North American 1983 (CONUS)
HZD	177	North American 1983 (Mexico and Central America))
HZD	178	North American 1983 (Aleutian Islands)
HZD	179	North American 1983 (Hawaii)
HZD	180	North American 1927
HZD	181	North American 1927 (Eastern US)
HZD	182	North American 1927 (Western US)
HZD	183	North American 1927 (Mean value: CONUS)
HZD	184	North American 1927 (Alaska)
HZD	185	North American 1927 (Mean value: Canada)
HZD	186	North American 1927 (Alberta and British Columbia)
HZD	187	North American 1927 (Newfoundland, New Brunswick, Nova Scotia and Quebec)
HZD	188	North American 1927 (Manitoba and Ontario)
HZD	189	North American 1927 (Northwest Territories and Saskatchewan)
HZD	190	North American 1927 (Yukon)
HZD	191	North American 1927 (Mexico)
HZD	192	North American 1927 (Central America - Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua)
HZD	193	North American 1927 (Canal Zone)

HZD	194	North American 1927 (Caribbean, Barbados, Caicos Islands, Cuba, Dominican Republic, Grand Cayman, Jamaica, Leeward Islands, and Turks Islands)
HZD	195	North American 1927 (Bahamas, except San Salvador Island)
HZD	196	North American 1927 (San Salvador Island)
HZD	197	North American 1927 (Cuba)
HZD	198	North American 1927 (Hayes Peninsula, Greenland)
HZD	199	North American 1927 (Aleutian Islands East of 180°W)
HZD	200	North American 1927 (Aleutian Islands West of 180°W)
HZD	201	Revised Nahrwan
HZD	202	New French or Nouvelle Triangulation Française (NTF) with Zero Meridian Paris
HZD	203	Alt: FDA
HZD	204	North Sahara 1959
HZD	205	Ocotopeque, Guatemala
HZD	206	Belgium 1972 (Observatoire d'Uccle)
HZD	207	Old Egyptian (Egypt)
HZD	208	Ordnance Survey of Great Britain 1936
HZD	209	Ordnance Survey G.B. 1936 (England)
HZD	210	Ordnance Survey G.B. 1936 (England, Isle of Man, and Wales)
HZD	211	Ordnance Survey G.B. 1936 (Scotland and Shetland Islands)
HZD	212	Ordnance Survey G.B. 1936 (Wales)
HZD	213	Ordnance Survey G.B. 1936 (Mean value: England, Isle of Man, Scotland, Shetland, and Wales)
HZD	214	Old Hawaiian
HZD	215	Old Hawaiian (Hawaii)
HZD	216	Old Hawaiian (Kauai)
HZD	217	Old Hawaiian (Maui)
HZD	218	Old Hawaiian (Oahu)
HZD	219	Old Hawaiian (Mean value)
HZD	220	Oslo Observatory (Old), Norway
HZD	221	Padang Base West End (Sumatra, Indonesia)
HZD	222	Padang Base West End (Sumatra, Indonesia) with Zero Meridian Djakarta
HZD	223	Palestine 1928 (Israel, Jordan)
HZD	224	Potsdam or Helmertturm (Germany)
HZD	225	Ayabelle Lighthouse (Djibouti)
HZD	226	Pitcairn Astro 1967 (Pitcairn Island)
HZD	227	Pico de las Nieves (Canary Islands)
HZD	228	SE Base (Porto Santo) (Porto Santo & Madeira Islands)
HZD	229	Provisional South American 1956
HZD	230	Prov. S. American 1956 (Bolivia)
HZD	231	Prov. S. American 1956 (Northern Chile near 19°S)
HZD	232	Prov. S. American 1956 (Southern Chile near 43°S)
HZD	233	Prov. S. American 1956 (Columbia)
HZD	234	Prov. S. American 1956 (Ecuador)
HZD	235	Prov. S. American 1956 (Guyana)
HZD	236	Prov. S. American 1956 (Peru)
HZD	237	Prov. S. American 1956 (Venezuela)

HZD	238	Prov. S. American 1956 (Mean value: Bolivia, Chile, Colombia, Ecuador, Guyana, Peru, & Venezuela)
HZD	239	Point 58 Mean Solution (Burkina Faso and Niger)
HZD	240	Pointe Noire 1948
HZD	241	Pulkovo 1942 (Russia)
HZD	242	Puerto Rico (Puerto Rico and Virgin Islands)
HZD	243	Qatar National (Qatar)
HZD	244	Qornoq (South Greenland)
HZD	245	Rauenberg (Berlin, Germany)
HZD	246	Reconnaissance Triangulation, Morocco
HZD	247	Reunion 1947
HZD	248	RT90, Stockholm, Sweden
HZD	249	Santo (DOS) 1965 (Espirito Santo Island)
HZD	250	South African (South Africa)
HZD	251	Sainte Anne I 1984 (Guadeloupe)
HZD	252	South American 1969
HZD	253	South American 1969 (Argentina)
HZD	254	South American 1969 (Bolivia)
HZD	255	South American 1969 (Brazil)
HZD	256	South American 1969 (Chile)
HZD	257	South American 1969 (Columbia)
HZD	258	South American 1969 (Ecuador)
HZD	259	South American 1969 (Guyana)
HZD	260	South American 1969 (Paraguay)
HZD	261	South American 1969 (Peru)
HZD	262	South American 1969 (Baltra, Galapagos Islands)
HZD	263	South American 1969 (Trinidad and Tobago)
HZD	264	South American 1969 (Venezuela)
HZD	265	South American 1969 (Mean value: Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, Guyana, Paraguay, Peru, Trinidad and Tobago, and Venezuela)
HZD	266	Sao Braz (Sao Miguel, Santa Maria Islands, Azores)
HZD	267	Sapper Hill 1943 (East Falkland Islands)
HZD	268	Schwarzeck (Namibia)
HZD	269	Soviet Geodetic System 1985
HZD	270	Soviet Geodetic System 1990
HZD	271	Selvagem Grande 1938 (Salvage Islands)
HZD	272	Astro Dos 71/4 (St. Helena Island)
HZD	273	Sierra Leone 1960
HZD	274	South Asia (Southeast Asia, Singapore)
HZD	275	S-42 (Pulkovo 1942)
HZD	276	St. Pierre et Miquelon 1950
HZD	277	Stockholm 1938 (Sweden)
HZD	278	Sydney Observatory, New South Wales, Australia
HZD	279	Tananarive Observatory 1925
HZD	280	Tananarive Observatory 1925, with Zero Meridian Paris
HZD	281	Tristan Astro 1968 (Tristan da Cunha)
HZD	282	Timbalai 1948 (Brunei and East Malaysia - Sarawak and Sabah)

HZD 283 Timbali 1968
HZD 284 Tokyo
HZD 285 Tokyo (Japan)
HZD 286 Tokyo (Korea)
HZD 287 Tokyo (Okinawa)
HZD 288 Tokyo (Mean value: Japan, Korea, and Okinawa)
HZD 289 Trinidad 1903
HZD 290 Astro Tern Is. 1961 (Tern Island, Hawaii)
HZD 291 Undetermined or Unknown
HZD 292 Voirol 1875
HZD 293 Voirol 1875 with Zero Meridian Paris
HZD 294 Voirol 1960, Algeria
HZD 295 Voirol 1960, Algeria, with Zero Meridian Paris
HZD 296 Wake Island Astro 1952
HZD 297 World Geodetic System 1960
HZD 298 World Geodetic System 1966
HZD 299 World Geodetic System 1972
HZD 300 World Geodetic System 1984
HZD 301 Yacare (Uruguay)
HZD 302 Zanderij (Surinam)
HZD 303 Other Known Datum
HZD 304 Finnish-KKJ
Version 2.1: New Attribute Value to map S-57 attribute HORDAT to FACC.
HZD 997 Unpopulated
HZD 998 Not Applicable
HZD 999 Other

IAC IALA Aid Category

Conformity of a navigational aid to the IALA system of navigational aids.

IAC 0 Unknown
IAC 1 Non-IALA Aid
IAC 2 IALA Aid
IAC 3 IALA Aid - Region A
IAC 4 IALA Aid - Region B
IAC 997 Unpopulated
IAC 998 Not Applicable
IAC 999 Other

IAS IMO Adoption Status

Status of International Maritime Organization adoption. Replaced "Approved" with "Adopted"
Version 2.0 Amendment 1: Replaced "Approved" with "Adopted"

IAS 0 Unknown
IAS 1 Adopted
IAS 2 Not Adopted
IAS 997 Unpopulated
IAS 998 Not Applicable
IAS 999 Other

IBC Installation Buoy Classification

Tabulates the various types of installation buoys.

IBC 0 Undefined
IBC 1 Catenary Anchor Leg Mooring (CALM)
IBC 2 Single Buoy Mooring (SBM)
IBC 997 Unpopulated
IBC 998 Not Applicable
IBC 999 Other

ICC Ice Classification

Tabulates the kind of ice.

ICC 0 Undefined
ICC 1 Fast ice
ICC 2 Sea ice
ICC 3 Growler area
ICC 4 Pancake ice
ICC 5 Glacier (See BJ030)
ICC 6 Ice Peak (See BJ060)
ICC 7 Pack ice (See BJ070)
ICC 8 Polar ice (See BJ080)
ICC 9 Debris-covered
ICC 997 Unpopulated
ICC 998 Not Applicable
ICC 999 Other

ICE Ice Factor

The value of the maximum variation in the vertical clearance of an overhead cable due to an accumulation of ice.

ICE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

ICL ICAO Airspace Classification

ICAO designated airspace classification.

ICL 0 Unknown
ICL 1 Class A
ICL 2 Class B
ICL 3 Class C
ICL 4 Class D
ICL 5 Class E
ICL 6 Class F
ICL 7 Class G
ICL 997 Unpopulated
ICL 998 Not Applicable
ICL 999 Other

IDN Identification Number

A unique number relating specific interior map/chart features to border information.

IDN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	-32767 to 32767	1 unit	N/A

IKO ICAO Designator

International Civil Aviation Organization location identifier as designated in ICAO document 7910.

IKO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	256 Characters

IWO Inland Water Obstruction

An indicator that a feature in an inland water body is an obstruction to vessel movement.

IWO 0 Unknown
IWO 1 Obstruction
IWO 2 Not an obstruction
IWO 997 Unpopulated
IWO 998 Not Applicable
IWO 999 Other

JCR Junction Connectivity Road

Indicates whether or not all roads can be accessed from all other roads at a junction.

JCR 0 Unknown (ICA 0 IN DIGEST 2.0)
JCR 1 Full Connectivity (ICA 1 IN DIGEST 2.0)
JCR 2 Restricted Access (ICA 2 IN DIGEST 2.0)
JCR 997 Unpopulated
JCR 998 Not Applicable
JCR 999 Other

KVA Kilovolt Capacity Attribute

Maximum voltage available on the line, as reported in kilovolts.

KVA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Kilovolts	Short Integer	N/A	1 kv	N/A

LAB Label of Feature

Label applied to the feature.

LAB 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

LAF Line Associated Features

The type and/or number of features associated with a leading or clearing line.

LAF 0 Unknown
LAF 1 One Object (Other than a Directional Light)
LAF 2 Directional Light
LAF 3 Two or more lights
LAF 4 Two or more beacons

LAF 5 Two or More Objects (Other Than Two Lights or Beacons)
LAF 6 Measured Distance Markers
LAF 7 Directional Radiobeacon
LAF 8 Moiré Effect Light
LAF 9 Leading Radio Transponder Beacon
Version 2.1: New Attribute Value to map S-57 attribute CATLIT to FACC.
LAF 997 Unpopulated
LAF 998 Not Applicable
LAF 999 Other

LC1 Load Class Type 1

Military Load Classification (weight bearing capacity) Type 1. (See STANAGs 2021 and 2253 for method of calculation)

LC1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Military Load Class	Short Integer	0 to 999	1 lc	N/A

LC2 Load Class Type 2

Military Load Classification (weight bearing capacity) Type 2. (See STANAGs 2021 and 2253 for method of calculation)

LC2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Military Load Class	Short Integer	0 to 999	1 lc	N/A

LC3 Load Class Type 3

Military Load Classification (weight bearing capacity) Type 3. (See STANAGs 2021 and 2253 for method of calculation)

LC3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Military Load Class	Short Integer	0 to 999	1 lc	N/A

LC4 Load Class Type 4

Military Load Classification (weight bearing capacity) Type 4. (See STANAGs 2021 and 2253 for method of calculation)

LC4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Military Load Class	Short Integer	0 to 999	1 lc	N/A

LCN Light Characteristic Number

Number of flashes/occultations in a group flashing/occulting light character.

LCN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Occults	Short Integer	-32767 to 32767	1 occult	N/A

LEC Length of Cab

A measurement of the longer of two linear axes in meters of the pedestal or cab. For a square feature, measure either axis. For a round feature, measure the diameter.

LEC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

LEF Length/Diameter in Feet

A measurement of the longer of two linear axes in feet. For a square feature, measure either axis. For a round feature, measure the diameter. For a bridge, the length is the distance between the bridge abutments.
Version 2.1: New Attribute

LEF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

LEN Length/Diameter

A measurement of the longer of two linear axes in meters. For a square feature, measure either axis. For a round feature, measure the diameter. For a bridge, the length is the distance between the bridge abutments.

LEN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

LFA Light Function Aeronautical

Type of lighting provided or type of lighting system used.

LFA 0 Unknown
LFA 1 Airport Terminal Lights
LFA 2 Apron Flood
LFA 3 Boundary Lights
LFA 4 Runway Centerline Lighting
LFA 5 Runway End Identification Lighting (REIL)
LFA 6 Runway Lights/Runway Edge Lights
LFA 7 Sequenced Strobe
LFA 8 Taxiway Lighting
LFA 9 Visual Approach Slope Indicator (VASI)
LFA 10 Rotating Beacon
LFA 11 Obstruction Lighting
LFA 12 Threshold Light(s)
LFA 13 Touchdown Zone Lighting
LFA 14 Other Airport Lighting
LFA 15 ALSF-1 (Approach Lighting System with seq. flashing)
LFA 16 ALSF-II
LFA 17 (SSALF)
LFA 18 (SSALR)
LFA 19 (MALSF)
LFA 20 (MALSR)
LFA 21 Landing Direction Indicator (LDIN)
LFA 22 RAIL (Runway Alignment Indicator Lights)
LFA 23 ODALS (Omni Directional Approach Landing System)

LFA	24	Other Approach Lighting
LFA	25	Precision Approach Path Indicator (PAPI)
LFA	26	Strobe
LFA	27	Runway Flood
LFA	28	Variable Intensity Runway Lights
LFA	29	Portable Runway Lights
LFA	30	Flares
LFA	31	Wind Indicator Lights
LFA	32	Visual Approach Slope Indicator (3 bar)
LFA	33	Optical Landing System
LFA	51	Aeronautical
LFA	52	Auxiliary
LFA	53	Beacon
LFA	54	VALUE INTENTIONALLY LEFT BLANK
LFA	55	Fishing
LFA	56	Fog Detector
LFA	57	Harbor
LFA	58	Horizontal
LFA	59	Obstruction
LFA	60	Occasional
LFA	61	Private
LFA	62	Range
LFA	63	Seasonal
LFA	64	Tidal
LFA	65	Vertical
LFA	66	Articulated
LFA	67	Primary
LFA	68	Secondary
LFA	69	Major
LFA	70	Minor
LFA	71	Visual Approach Slope Indicator (2 bar)
LFA	72	Identification Beacon
LFA	73	None available
LFA	100	Overrun centerline
LFA	101	Centerline and bar
LFA	102	U.S. Configuration (B)
LFA	103	Hong Kong Curve
LFA	104	Left single row
LFA	105	Center row
LFA	106	Former NATO standard
LFA	107	NATO standard
LFA	108	Center and double row
LFA	109	Portable approach
LFA	110	Center row (Cat 2 high visibility)
LFA	111	Center row (Cat 1 high intensity)
LFA	112	Navy parallel row and crossbar
LFA	113	Two parallel row

LFA 114 Left row (High intensity)
LFA 115 Air Force overrun
LFA 116 Calvert (British)
LFA 117 Single row centerline
LFA 118 Narrow multi cross
LFA 119 Centerline (High intensity approach lights)
LFA 120 Alternate centerline and bar approach lights
LFA 121 Cross
LFA 122 Neon ladder
LFA 123 Singapore centerline approach lights
LFA 124 Centerline 2 crossbars approach lights
LFA 125 T-VASI T-bar
LFA 126 PVASI pulsating
LFA 127 APAP alignment of elements systems
LFA 128 VASI (with indicator for threshold crossing height)
LFA 129 LCVASI low cost
LFA 130 High intensity runway lights
LFA 131 Medium intensity runway lights
LFA 132 Low intensity runway lights
LFA 997 Unpopulated
LFA 998 Not Applicable
LFA 999 Other

LFC Light Function Classification

Tabulates the various functions of a light.

LFC 0 Undefined
LFC 1 Direction function
LFC 2 Rear/upper light
LFC 3 Front/lower light
LFC 4 Leading light
LFC 5 Aerolight
LFC 6 Air obstruction light
LFC 7 Fog detector light
LFC 8 Flood light
LFC 9 Strip light
LFC 10 Subsidiary light
LFC 11 Spotlight
LFC 12 Emergency
LFC 13 Bearing Light
LFC 14 Upper
Version 2.1: New Attribute Value to map S-57 attribute CATLIT to FACC.
LFC 15 Middle
Version 2.1: New Attribute Value to map S-57 attribute CATLIT to FACC.
LFC 16 Lower
Version 2.1: New Attribute Value to map S-57 attribute CATLIT to FACC.
LFC 997 Unpopulated
LFC 998 Not Applicable
LFC 999 Other

LNC Line Characteristic

The characteristics of a line used during interpolation between two points.

LNC	0	Unknown
LNC	1	Rhumb or Loxodrome Line
LNC	2	Geodesic or Great Circle Line
LNC	997	Unpopulated
LNC	998	Not Applicable
LNC	999	Other

LOC Location Category

Status of feature relative to surrounding area or water.

LOC	0	Unknown
LOC	1	Above Surface/Does not Cover (Height Known)
LOC	2	Awash at Chart Datum
LOC	3	Dries/Covers (Height Unknown)
LOC	4	Below Water Surface
LOC	5	Covered < 20 Metres
LOC	6	Covered >= 20 Metres but < 30 Metres
LOC	7	Covered > = 30 Metres
LOC	8	On Ground Surface
LOC	9	Depth Known
LOC	10	Depth Known (Cleared by Drag Wire)
LOC	11	Depth Unknown But Safe to Depth Shown
LOC	12	VALUE INTENTIONALLY LEFT BLANK
LOC	13	Hull Showing
LOC	14	Masts Showing
LOC	15	On Water Surface/Floating
LOC	16	Partially Submerged
LOC	17	Sunken/On sea bottom
LOC	19	Above Surface/Does not Cover (Height Unknown)
LOC	20	Funnel Showing
LOC	21	Superstructure Showing
LOC	22	Off Shore
LOC	23	Below Sea Bottom
LOC	24	Suspended or Elevated above sea bottom
LOC	25	Suspended or Elevated Above Ground or Water Surface
LOC	28	Masts and Funnel Showing
LOC	30	Non-Floating
LOC	31	Elevated
LOC	32	Depressed
LOC	33	Not submerged
LOC	34	Inland
LOC	35	Overhead
LOC	36	Height Above Bottom
LOC	37	Exact Position Known
LOC	38	Exact Position Unknown
LOC	39	Depth Unknown
LOC	40	Underground

LOC 997 Unpopulated
LOC 998 Not Applicable
LOC 999 Other

LOG Length of Gradient

The length of a segment having a gradient > =7 percent for a Road (AP030) or > =3 percent for a Railroad Track (AN010).
Version 2.1: Modified <=3 percent to >=3 percent.

LOG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

LOR Length of Range

Length of range, in nautical miles, established by aids to navigation on the shore.

LOR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

LRP Length of Range With greater than 1 NM resolution

Length of range, in nautical miles, established by aids to navigation on the shore.

LRP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Floating Point	N/A	N/A	N/A

LSA Light Sector Angle

Angular limits of light visibility. Limits of sectors and arcs of visibility are arranged clockwise and shall be given from seaward toward the light.

LSA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

LSI Light Sector Angle Initial

Initial angular limit of light visibility. Limits of sectors and arcs of visibility are arranged clockwise and shall be given from seaward toward the light.

LSI 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

LST Light Sector Angle Terminal

Terminal angular limit of light visibility. Limits of sectors and arcs of visibility are arranged clockwise and shall be given from seaward toward the light.

LST 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

LTN Track/Lane Number

The number of track(s) or lanes of the feature, including both directions.

LTN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Tracks/Lanes	Short Integer	-32767 to 32767	1 track/lane	N/A

LVG Light Range, Geographical

The maximum distance at which light can theoretically reach an observer, as only at the curvature of the earth and the refraction of the atmosphere, and by the elevation of the light and height of eye of the observer.

LVG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

LVL Light Range, Luminous

The maximum distance at which a light can be seen by the intensity of the light and meteorological visibility.

LVL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

LVN Light Range, Nominal

The luminous range when the meteorological range is 10 sea miles.

LVN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

MAA Maximum Authorized Altitude

The highest altitude in an airway or route at which adequate reception of navigation aid signals is assured.

MAA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	256 Characters

MAC Maritime Area Category

Area in which certain activities or factors of significance to navigation or operations apply.

MAC 0 Unknown
MAC 1 Customs Area
MAC 2 Dredged Channel/Dredged Area
MAC 3 Harbor Area
MAC 4 Mine Danger Area
MAC 5 Prohibited Shipping Area/Entry Prohibited
MAC 6 Reclamation Area
MAC 7 Restricted Area
MAC 9 Works in Progress Area
MAC 10 Wire Drag Area/Swept Area
MAC 11 Anchorage (general)
MAC 12 Anchoring Berths
MAC 13 Explosives anchorage

MAC 14 Large Vessel/Deep Water/Deep Draft anchorage
MAC 15 Anchoring Prohibited
MAC 16 Quarantine Anchorage
MAC 17 Reserved Anchorage
MAC 18 Small Vessel Anchorage/Marina
MAC 19 Tanker Anchorage
MAC 20 Submarine Cable Area
MAC 21 Pipeline Area
MAC 22 Fishing Prohibited
MAC 23 Cable and Pipeline Area
MAC 24 Turning Area/Swinging Circle
MAC 25 Spoil Area/Spoil Ground (See OPS for status)
MAC 26 Unsurveyed Area
MAC 27 Submarine Exercise Area
MAC 28 Mine Laying Practice Area
MAC 29 Firing Danger Area
MAC 30 Dumping Ground for Hazardous Materials
MAC 31 Incineration Area
MAC 32 Oil Field
MAC 33 Gas Field
MAC 34 Historic Wreck
MAC 35 Explosive Dumping Ground
MAC 36 Former Mine Danger Area
MAC 37 Safety Zone
MAC 38 Chemical field
MAC 39 Separation Zone
MAC 40 Roundabout Zone (TSS)
MAC 41 Inshore Traffic Zone (TSS)
MAC 42 Precautionary Area
MAC 43 Area to be avoided
MAC 44 Degaussing Range
MAC 45 Outfall Area
MAC 46 Intake Area
MAC 47 Fish Haven/Protected Area
MAC 48 Pilot Boarding Area
MAC 49 Cargo Transshipment Area
MAC 50 Red Rocks
MAC 51 Laterite
MAC 52 Evaporites
MAC 53 Seaplane
MAC 54 Time Limited
MAC 55 Fairway
MAC 56 Fish Trap Area
MAC 57 Marine Farm
MAC 58 Dredging Area
MAC 61 Sewer Area
MAC 79 Free Port Area

MAC	80	Fish Sanctuary
MAC	81	Degaussing Range (Do not use this value, use MAC 44)
MAC	82	Development Area
MAC	83	Diving prohibited zone
MAC	84	Danger of stranding area
MAC	85	Navigational aid safety zone
MAC	86	Historic wreck restricted area
MAC	87	Seal sanctuary
MAC	88	Game preserve
MAC	89	Bird sanctuary
MAC	90	Nature preserve
MAC	91	Practice area in general
MAC	92	Torpedo practice area
MAC	93	Anchorage for up to 24 hours
MAC	94	Small craft mooring area
MAC	95	Seaplane Anchorage
MAC	96	Unrestricted anchorage
MAC	97	Crossing (TSS)
MAC	98	Offshore Production Area
MAC	99	Dock Area
MAC	100	VALUE INTENTIONALLY LEFT BLANK (Caution Area) Version 2.1: Removed duplicate value of MAC 123.
MAC	101	Marine Sanctuary
MAC	102	Waiting Area
MAC	103	Mineswept Channel
MAC	104	Major Navy Operating Area
MAC	105	Minor Navy Operating Area
MAC	106	ASW Operating Area
MAC	107	Submarine Operating Area
MAC	108	Submarine Transit Lane (Submerged)
MAC	109	Submarine Transit Lane (Surface)
MAC	110	Surface Free Lane
MAC	111	Surface Operating Area (Major)
MAC	112	Surface Operating Area (Minor)
MAC	113	Anchoring and fishing prohibited
MAC	114	Sea Test Range
MAC	115	Submarine and Gunnery Exercise Area
MAC	116	Named Operating Area
MAC	117	Territorial Sea Area
MAC	118	Continental Shelf Area
MAC	119	Contiguous Zone
MAC	120	Exclusive Economic Zone
MAC	121	Fishery Zone
MAC	122	Fishing Ground
MAC	123	Caution Area
MAC	124	Vessel dumping ground
MAC	125	Military Practice Area

MAC 126 Swimming Area
MAC 127 VALUE INTENTIONALLY LEFT BLANK (Waiting Area)
Version 2.1: Removed duplicate of MAC 102.
MAC 128 Research Area
MAC 129 Ecological Reserve
MAC 130 No Wake Area
MAC 131 Anchoring Restricted
MAC 132 Fishing Restricted
MAC 133 Trawling Prohibited
MAC 134 Trawling Restricted
MAC 135 Entry Restricted
MAC 136 Dredging Prohibited
MAC 137 Dredging Restricted
MAC 138 Diving Restricted
MAC 139 Construction Prohibited
MAC 140 Exercise Area Limit
MAC 141 Unexploded Ordinance
MAC 142 Submarine Warning Area
MAC 143 Naval Operations Area
MAC 144 Inwater Tracking Range
MAC 145 FORACS V Limits
MAC 146 Missile Test Area
MAC 147 Bombing and Strafing Targets Area
MAC 148 Drill Minefield
MAC 149 Abandoned Drill Minefield
MAC 150 Acronym Area - Purple
MAC 151 Acronym Area - Brown
MAC 152 Acronym Area - Blue
MAC 153 Landing Craft Air Cushion (LCAC)
MAC 154 Area FOXTROT
MAC 155 Submarine Danger Area
MAC 156 Surface Ship Safety Lane
MAC 157 Atlantic Fleet Weapons Range
MAC 158 Naval Defense Sea Area
MAC 159 UQC/WQC Test Area
MAC 160 Water Skiing Area
Version 2.1: New Attribute Value to map S-57 attribute CATREA to FACC.
MAC 161 Discharging Prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.
MAC 162 Discharging Restricted
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.
MAC 163 Industrial or mineral exploration or development prohibited.
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.
MAC 164 Industrial or mineral exploration or development restricted.
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.
MAC 165 Drilling prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 166 Drilling restricted
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 167 Removal of historical artifacts prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 168 Cargo transhipment (lightering) prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 169 Dragging prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 170 Stopping prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 171 Landing prohibited
Version 2.1: New Attribute Value to map S-57 attribute RESTRN to FACC.

MAC 997 Unpopulated

MAC 998 Not Applicable

MAC 999 Other

MAG Magnetic Variation

Horizontal angle between true north and magnetic north measured East (positive value) or West (negative value) according to whether magnetic north lies east or west of true north.

MAG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

MAR Color of Navigation Mark Classification

Tabulates colors of navigation marks.

MAR 0 Undefined

MAR 1 Green

MAR 2 Black

MAR 3 Red

MAR 4 Yellow

MAR 5 White

MAR 6 Orange

MAR 7 Black/yellow

MAR 8 Black/yellow/black

MAR 9 Yellow/black

MAR 10 Yellow/black/yellow

MAR 11 Red/white

MAR 12 Green/red/green

MAR 13 Red/green/red

MAR 14 Black/red/black

MAR 15 Yellow/red/yellow

MAR 16 Green/red

MAR 17 Red/green

MAR 997 Unpopulated

MAR 998 Not Applicable

MAR 999 Other

MAS Maintenance Status

Indicates whether the feature is maintained.

MAS 0 Unknown

MAS 1 Maintained
MAS 2 Not Maintained
MAS 997 Unpopulated
MAS 998 Not Applicable
MAS 999 Other

MAT Mine Attributes Classification

Defines subsidiary mine attribute classifications and tabulates mine attributes.

MAT 0 Unknown
MAT 1 Classification of mine identity (MID)
MAT 2 Classification of mine status (MSC)
MAT 3 Classification of mine position (MPC)
MAT 4 Classification of mine special information (MSI)
MAT 997 Unpopulated
MAT 998 Not Applicable
MAT 999 Other

MBI Military Bridge Information

A free text field used to indicate if the bridge is subject to preplanned military interdiction.

MBI 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

MBL Maritime Boundary Limit

A line where on either side certain activities or factors of significance to navigation or operations apply.

MBL 0 Unknown
MBL 1 COLREGS Demarcation Line
MBL 2 Customs Boundary
MBL 3 Fishing Zone Boundary
MBL 4 Harbor Limit
MBL 5 Separation Line (TSS)
MBL 6 Territorial Waters-Limit of Sovereignty
MBL 7 Territorial Waters Baseline
MBL 8 Maritime Limit (General)
MBL 9 International Boundary (at sea)
MBL 10 Continental Shelf Boundary
MBL 11 Limit of Exclusive Economic Zone
MBL 12 Limit of Contiguous Zone
MBL 13 Clearing Line
MBL 14 Danger Line
MBL 15 Armistice Boundary
MBL 16 Gulf Stream Limits
MBL 17 Three Nautical Mile Line
MBL 18 Approximate Bathymetry
MBL 19 Management and Zoning
Version 2.1: New Attribute Value.
MBL 98 Traffic Services Limit
MBL 997 Unpopulated
MBL 998 Not Applicable

MBL 999 Other

MCA Morse Code Attribute

The ASCII (ISO 646) letter that is being emitted by either the Navigation Signal Type (NST), Sound Signal Type (SST), Light Characteristic (CHA), or Electronic Beacon Type (BET).

MCA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	80 Characters

MCC Material Composition Category

Characteristics of primary material composition of feature.

MCC 0 Unknown
MCC 1 Aircraft
MCC 2 Aluminum
MCC 3 Ammunition
MCC 4 Ash
MCC 5 Asphalt
MCC 6 Basalt
MCC 7 Bedrock
MCC 8 Boulders
MCC 9 Brick
MCC 10 Calcareous
MCC 11 Cement
MCC 12 Chalk
MCC 13 Chemical
MCC 14 Cinders
MCC 15 Cirripedia
MCC 16 Clay
MCC 17 Coal
MCC 18 Cobble
MCC 19 Coke
MCC 20 Composition
MCC 21 Concrete
MCC 22 Conglomerate
MCC 23 Copper
MCC 24 Coral
MCC 25 Coral Head
MCC 26 Desalinated Water
MCC 27 Diamonds
MCC 28 Diatoms
MCC 29 Dolomite
MCC 30 Earthen
MCC 31 Electric
MCC 32 Eroded Lands
MCC 33 Explosives
MCC 34 Flysch
MCC 35 Food
MCC 36 Foraminifera

MCC 37 Fucus
MCC 38 Gas
MCC 39 Gasoline
MCC 40 Glass
MCC 41 Globigerina
MCC 42 Gold
MCC 43 Granite
MCC 44 VALUE INTENTIONALLY LEFT BLANK
MCC 45 Grass/Thatch
MCC 46 Gravel
MCC 47 Green Rocks
MCC 48 Ground
MCC 49 Ground (Shells)
MCC 50 Heat
MCC 51 Iron
MCC 52 Lava
MCC 53 VALUE INTENTIONALLY LEFT BLANK
MCC 54 Lead
MCC 55 Loess
MCC 56 Lumber
MCC 57 Macadam
MCC 58 Madrepores
MCC 59 Manganese
MCC 60 Marble
MCC 61 Marl
MCC 62 Masonry (Brick/Stone)
MCC 63 Mattes
MCC 64 Metal
MCC 65 Mud
MCC 66 Mussels
MCC 67 Oil
MCC 68 Oil Blister
MCC 69 Ooze
MCC 70 Oysters
MCC 71 Paper
MCC 72 Part Metal
MCC 73 Pebbles
MCC 74 Plastic
MCC 75 Polyzoa
MCC 76 Porphyry
MCC 77 Prestressed Concrete
MCC 78 Pteropods
MCC 79 Pumice
MCC 80 Quartz
MCC 81 Radiolaria
MCC 82 Radioactive Material
MCC 83 Reinforced Concrete

MCC 84 Rock/Rocky
MCC 85 Rubber
MCC 86 Rubble
MCC 87 Salt
MCC 88 Sand
MCC 89 Sandstone
MCC 90 Schist
MCC 91 Spoils/Tailings
MCC 92 Scoria
MCC 93 Sea Tangle
MCC 94 Seaweed
MCC 95 Sewage
MCC 96 Shells
MCC 98 Shingle
MCC 99 Silt
MCC 100 Silver
MCC 101 Slag
MCC 102 Sludge
MCC 103 Snow/Ice
MCC 104 Soil
MCC 105 Spicules
MCC 106 Sponge
MCC 107 Steel
MCC 108 Stone
MCC 109 Sugar
MCC 110 Travertine
MCC 111 Tufa
MCC 112 Uranium
MCC 113 Vegetation Products
MCC 114 Volcanic
MCC 115 Volcanic Ash
MCC 116 Water
MCC 117 Wood
MCC 118 Zinc
MCC 119 Evaporites
MCC 120 Glass Reinforced Plastic (GRP)
MCC 997 Unpopulated
MCC 998 Not Applicable
MCC 999 Other

MCS Material Composition Secondary

Secondary material composition of feature.

MCS 0 Unknown
MCS 4 Ash
MCS 8 Boulders
MCS 12 Chalk
MCS 14 Cinders
MCS 15 Cirripedia

MCS	16	Clay
MCS	18	Cobble
MCS	24	Coral
MCS	25	Coral Head
MCS	28	Diatoms
MCS	36	Foraminifera
MCS	37	Fucus
MCS	41	Globigerina
MCS	45	Grass /Thatch
MCS	46	Gravel
MCS	48	Ground
MCS	52	Lava
MCS	55	Loess
MCS	58	Madrepores
MCS	59	Manganese
MCS	61	Marl
MCS	63	Mattes
MCS	65	Mud
MCS	66	Mussels
MCS	69	Ooze
MCS	70	Oysters
MCS	73	Pebbles
MCS	75	Polyzoa
MCS	78	Pteropods
MCS	79	Pumice
MCS	80	Quartz
MCS	81	Radiolaria
MCS	84	Rock/Rocky
MCS	88	Sand
MCS	90	Schist
MCS	92	Scoria
MCS	93	Sea Tangle
MCS	94	Seaweed
MCS	96	Shells
MCS	98	Shingle
MCS	99	Silt
MCS	104	Soil
MCS	105	Spicules
MCS	106	Sponge
MCS	108	Stone
MCS	111	Tufa
MCS	112	Uranium
MCS	113	Vegetation Products
MCS	114	Volcanic
MCS	115	Volcanic Ash
MCS	116	Water
MCS	117	Wood

MCS 118 Zinc
MCS 119 Evaporites
MCS 120 Glass Reinforced Plastic (GRP)
MCS 997 Unpopulated
MCS 998 Not Applicable
MCS 999 Other

MCT Mooring Connection Type

Type of connection used in a mooring system.

MCT 0 Unknown
MCT 1 Mooring Cable/Chain
MCT 997 Unpopulated
MCT 998 Not Applicable
MCT 999 Other

MCU Material Composition Underlying

Underlying material composition of feature.

MCU 0 Unknown
MCU 4 Ash
MCU 8 Boulders
MCU 12 Chalk
MCU 14 Cinders
MCU 15 Cirripedia
MCU 16 Clay
MCU 18 Cobble
MCU 24 Coral
MCU 25 Coral Head
MCU 28 Diatoms
MCU 36 Foraminifera
MCU 37 Fucus
MCU 41 Globigerina
MCU 45 Grass/Thatch
MCU 46 Gravel
MCU 48 Ground
MCU 52 Lava
MCU 58 Madrepores
MCU 59 Manganese
MCU 61 Marl
MCU 63 Mattes
MCU 65 Mud
MCU 66 Mussels
MCU 69 Ooze
MCU 70 Oysters
MCU 73 Pebbles
MCU 75 Polyzoa
MCU 78 Pteropods
MCU 79 Pumice
MCU 80 Quartz
MCU 81 Radiolaria

MCU 84 Rock/Rocky
MCU 88 Sand
MCU 90 Schist
MCU 92 Scoria
MCU 93 Sea Tangle
MCU 94 Seaweed
MCU 96 Shells
MCU 98 Shingle
MCU 99 Silt
MCU 105 Spicules
MCU 106 Sponge
MCU 108 Stone
MCU 111 Tufa
MCU 112 Uranium
MCU 113 Vegetation Products
MCU 114 Volcanic
MCU 115 Volcanic Ash
MCU 116 Water
MCU 117 Wood
MCU 118 Zinc
MCU 119 Evaporites
MCU 120 Glass Reinforced Plastic (GRP)
MCU 997 Unpopulated
MCU 998 Not Applicable
MCU 999 Other

MEA Minimum Enroute Altitude

The lowest altitude published by the host country between radio fixes which assures acceptable navigational signal coverage and meets obstacle clearing clearance requirements.

MEA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	80 Characters

MED Median Category

Presence of a divider between multiple lanes/rails.

MED 0 Unknown
MED 1 With Median
MED 2 Without Median
MED 6 Median Width <5 Metres
MED 7 Median Width >=5 Metres and <20 Metres
MED 8 Median Width >=20 Metres and <35 Metres
MED 9 Median Width >=35 Metres and <80 Metres
MED 10 Median Width >=80
MED 997 Unpopulated
MED 998 Not Applicable
MED 999 Other

MFA Maintenance Facilities Available

Maintenance facilities available at or in the near vicinity.

MFA	0	Unknown
MFA	1	Ship maintenance and repair facilities
MFA	2	Ship construction
MFA	3	Barge maintenance and repair facilities
MFA	4	Barge construction
MFA	5	Locomotive maintenance and repair facilities
MFA	6	Locomotive construction
MFA	7	Aircraft maintenance and repair facilities
MFA	8	Aircraft construction
MFA	9	Road vehicle maintenance and repair facilities
MFA	10	Road vehicle construction
MFA	11	Ship salvage
MFA	12	Sailmaker
MFA	13	Inspection Ramp
MFA	14	Boat Hoist
MFA	15	General Mechanical fabrication
MFA	16	General Electrical fabrication
MFA	17	General Construction fabrication
MFA	995	None
MFA	997	Unpopulated
MFA	998	Not Applicable
MFA	999	Other

MHF Material Handling Facilities

Material handling facilities available at or in the near vicinity.

MHF	0	Unknown
MHF	1	Bulk grain
MHF	2	Bulk ore
MHF	3	Container handling
MHF	4	Container trailer handling
MHF	5	Ro-Ro (Roll on Roll off)
MHF	6	Cranes
MHF	7	Bulk liquids
MHF	8	Bulk fuels
MHF	9	Rail transfer equipment
MHF	10	Civilian labor
MHF	11	Forklift trucks
MHF	12	Dock levelling facilities/vehicle or rail ramps
MHF	13	Syncrolift Version 2.1: New Attribute Value to map S-57 attribute CATHAF to FACC.
MHF	14	Straddle Carrier Version 2.1: New Attribute Value to map S-57 attribute CATHAF to FACC.
MHF	995	None
MHF	997	Unpopulated
MHF	998	Not Applicable
MHF	999	Other

MIA Mine Actuation Independent Influence Acoustic Classification

Tabulates mine actuation independent influence acoustic types.

MIA	0	Unknown
MIA	1	Low freq.
MIA	2	Audio freq.
MIA	3	High freq.
MIA	4	Multiple freq.
MIA	997	Unpopulated
MIA	998	Not Applicable
MIA	999	Other

MIC Mine Actuation Independent Contact Classification

Tabulates attributes of independent contact mine actuation.

MIC	0	Unknown
MIC	1	Plain
MIC	2	Snagline
MIC	3	Antenna
MIC	997	Unpopulated
MIC	998	Not Applicable
MIC	999	Other

MID Mine Identity Classification

Tabulates mine identity attributes.

MID	0	Unknown
MID	2	Friend
MID	3	Hostile
MID	4	Neutral
MID	997	Unpopulated
MID	998	Not Applicable
MID	999	Other

MII Mine Actuation Independent Influence Classification

Defines subsidiary mine actuation independent influence classifications and tabulates mine actuation independent influence types.

MII	0	Unknown
MII	1	Pressure
MII	2	Combined
MII	3	Classif. of mine actuation independent influence magnetic (MIM)
MII	4	Classif. of mine actuation independent influence acoustic (MIA)
MII	997	Unpopulated
MII	998	Not Applicable
MII	999	Other

MIM Mine Actuation Independent Influence Magnetic Classification

Tabulates mine actuation independent influence magnetic types.

MIM	0	Unknown
MIM	1	Sensitive
MIM	2	Mid-sensitive
MIM	3	Course
MIM	997	Unpopulated

MIM 998 Not Applicable
MIM 999 Other

MIN Mining Category

Unique mining characteristic.

MIN 0 Unknown
MIN 1 Borrow
MIN 2 Horizontal Shaft
MIN 3 Open Pit
MIN 4 Placer
MIN 5 Prospect
MIN 6 Strip
MIN 7 Vertical Shaft
MIN 8 Peat Cuttings
MIN 9 Below Surface Mine
MIN 997 Unpopulated
MIN 998 Not Applicable
MIN 999 Other

MIO Mine Actuation Independent Other Classification

Tabulates mine actuation, independent of other types.

MIO 0 Unknown
MIO 1 Electric Fields
MIO 2 Laser Sensors
MIO 3 Seismic
MIO 4 Cosmic ray
MIO 5 Infra red
MIO 6 Redistribution
MIO 7 Velocity field
MIO 8 VALUE INTENTIONALLY LEFT BLANK (Other)
MIO 997 Unpopulated
MIO 998 Not Applicable
MIO 999 Other

MLR Multiple Light Ranges

A set of two numbers for light ranges of visibility (at a light) expressed in nautical miles; the numbers are separated by a slash (/) if only two visibilities exist, or by a dash (-) separating the greatest and least visibilities if three or more exist.

MLR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	256 Characters

MMT Mine Special Information Special Mine Types Classification

Tabulates mine special information special mine types.

MMT 0 Unknown
MMT 1 Anti-sweeper
MMT 2 Anti-hunter
MMT 3 Anti-hovercraft
MMT 4 Drill
MMT 5 Explosive filled

MMT 6 Exercise filled
MMT 7 Exercise
MMT 8 Practice
MMT 9 Disposal Charge
MMT 997 Unpopulated
MMT 998 Not Applicable
MMT 999 Other

MNA Mine Actuation Classification

Defines subsidiary mine actuation classifications and tabulates the Mine Actuation types.

MNA 0 Unknown
MNA 1 Classif. of mine actuation controlled (MNC)
MNA 2 Classif. of mine actuation independent (MNI)
MNA 3 Mine actuation no information
MNA 997 Unpopulated
MNA 998 Not Applicable
MNA 999 Other

MNC Mine Actuation Controlled Classification

Defines subsidiary mine actuation classification controlled methods and classification.

MNC 0 Unknown
MNC 1 Mine actuation controlled cable
MNC 2 Classif. of mine actuation controlled cableless (MNL)
MNC 997 Unpopulated
MNC 998 Not Applicable
MNC 999 Other

MNI Mine Actuation Independent Classification

Defines subsidiary mine actuation independent classifications.

MNI 0 Unknown
MNI 1 Classif. of mine actuation independent contact (MIC)
MNI 2 Classif. of mine actuation independent influence (MII)
MNI 3 Classif. of mine actuation independent other (MIO)
MNI 997 Unpopulated
MNI 998 Not Applicable
MNI 999 Other

MNL Mine Actuation Controlled Cableless Classification

Tabulates the types of cableless controlled methods and classification.

MNL 0 Unknown
MNL 1 Frequency Communications Link
MNL 2 Explicit Communications link
MNL 3 Alternating Current Communications Link
MNL 997 Unpopulated
MNL 998 Not Applicable
MNL 999 Other

MOC Minimum Obstruction Clearance

The lowest published altitude in effect between radio fixes on VOR airways, off fairway routes, or route segments which meets obstacle clearance requirements for the entire route segment and which assures acceptable navigation signal.

MOC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

MOL Multiplicity of Lights

The number of lights of identical character that exist as a co-located group.
Version 2.1: Modified increments to "lt" from "lts"

MOL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Lights	Short Integer	0 to 32767	1 lt	N/A

MPC Mine Position Classification

Defines subsidiary mine position classifications and tabulates mine position types.

MPC 0 Unknown
MPC 1 Classif. of mine position ground (MPG)
MPC 2 Classif. of mine position moored (MPM)
MPC 3 Classif. of mine position other (MPO)
MPC 4 Mine position no information
MPC 997 Unpopulated
MPC 998 Not Applicable
MPC 999 Other

MPG Mine Position Ground Classification

Tabulates ground mine charge size.

MPG 0 Unknown
MPG 1 <= 500 kg/charge
MPG 2 > 500 kg
MPG 997 Unpopulated
MPG 998 Not Applicable
MPG 999 Other

MPM Mine Position Moored Classification

Tabulates mine moored position types.

MPM 0 Unknown
MPM 1 Deep Moored
MPM 2 Short tethered
MPM 997 Unpopulated
MPM 998 Not Applicable
MPM 999 Other

MPO Mine Position Other Classification

Tabulates other mine position types.

MPO 0 Unknown
MPO 1 Drifting
MPO 2 Oscillating
MPO 3 Creeping

MPO	4	Mobile
MPO	5	Homing
MPO	6	Rising
MPO	7	Bouquet
MPO	8	Active
MPO	997	Unpopulated
MPO	998	Not Applicable
MPO	999	Other

MSC Mine Status Classification

Tabulates types of mine status.

MSC	0	Unknown
MSC	1	Afloat
MSC	2	Sunk
MSC	3	Disposed
MSC	4	Fouled
MSC	5	Exploded
MSC	6	Countermined
MSC	7	Neutralized
MSC	8	Rendered safe
MSC	9	Recovered
MSC	10	Removed
MSC	997	Unpopulated
MSC	998	Not Applicable
MSC	999	Other

MSD Mine Special Information Special Devices Classification

Tabulates mine special information special devices types and subsidiary mine special information special devices classifications.

MSD	0	Unknown
MSD	1	Arming delay
MSD	2	Ship count
MSD	3	Intermittent arming
MSD	4	Delayed rising
MSD	5	Obstructers
MSD	6	Sterilizers
MSD	7	Flooders
MSD	8	Anti-watching
MSD	9	Classif. -mine special info special devices anti-sweep wire (MSW)
MSD	10	Classif. -mine special info special devices anti-recovery (MSR)
MSD	11	Classif. -mine special info special devices anti-hunting (MSH)
MSD	997	Unpopulated
MSD	998	Not Applicable
MSD	999	Other

MSH Mine Special Information Special Devices Anti-Hunting Classification

Tabulates mine special information special devices anti-hunting types.

MSH	0	Unknown
MSH	1	Anechoic coating
MSH	2	Automatic mine burial

MSH	3	Irregular shaping
MSH	4	Acoustic impedance
MSH	5	Acoustic transparency
MSH	6	Non-metallic case
MSH	7	Sonar decoys
MSH	8	VALUE INTENTIONALLY LEFT BLANK (Other)
MSH	997	Unpopulated
MSH	998	Not Applicable
MSH	999	Other

MSI Mine Special Information Classification

Defines subsidiary mine special information classifications.

MSI	0	Unknown
MSI	1	Classif. of mine special info usefulness (MSU)
MSI	2	Classif. of mine special info special mine types (MMT)
MSI	3	Classif. of mine special info special devices (MSD)
MSI	997	Unpopulated
MSI	998	Not Applicable
MSI	999	Other

MSR Mine Special Information Special Devices Anti-Recovery Classification

Tabulates mine special information special devices anti-recovery types.

MSR	0	Unknown
MSR	1	Switch
MSR	2	Mooring level switch
MSR	3	Stripping equipment
MSR	4	VALUE INTENTIONALLY LEFT BLANK (Other)
MSR	997	Unpopulated
MSR	998	Not Applicable
MSR	999	Other

MST Missile Site Type

Class of missile at site.

MST	0	Unknown
MST	1	ABM
MST	2	ICBM
MST	3	IRBM
MST	4	SA1
MST	5	SA2
MST	6	SA3
MST	7	SA4
MST	8	SA5
MST	9	SA6
MST	10	SA7
MST	11	SA8
MST	12	SA9
MST	13	MRBM
MST	14	SSM
MST	15	SAM

MST 997 Unpopulated
MST 998 Not Applicable
MST 999 Other

MSU Mine Special Information Usefulness Classification

Tabulates mine special information usefulness types.

MSU 0 Unknown
MSU 1 General purpose ground
MSU 2 Deep water
MSU 3 Medium depth anti-submarine
MSU 4 Continental shelf
MSU 5 Maritime anti-invasion
MSU 6 Anti-surface effect vehicle
MSU 997 Unpopulated
MSU 998 Not Applicable
MSU 999 Other

MSW Mine Special Information Special Devices Anti-Sweep Wire Classification

Tabulates mine special information special devices anti-sweep wire types.

MSW 0 Unknown
MSW 1 Chain moorings
MSW 2 Sprocket
MSW 3 Grapnel
MSW 4 Cutters
MSW 5 Sensitive Tubing
MSW 6 VALUE INTENTIONALLY LEFT BLANK (Other)
MSW 997 Unpopulated
MSW 998 Not Applicable
MSW 999 Other

MTC Mast Type Category

Type of mast.

MTC 0 Unknown
MTC 1 Communication Mast
MTC 2 Television Mast
MTC 3 Radio Mast
MTC 4 Light Support Mast
MTC 5 Microwave Mast
MTC 997 Unpopulated
MTC 998 Not Applicable
MTC 999 Other

MTN Mine Track Number

Mine track Number. Expressed by a track number of 4 digits.
Version 2.1: Modified increments to "track no." from "track #"

MTN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Track Number	Short Integer	-9999 to 9999	1 track no.	N/A

MTT Maritime Track Type

Defines restrictions, direction and other characteristics of maritime tracks.

MTT 0 Unknown
MTT 1 Based on Fixed Marks
MTT 2 Not Based on Fixed Marks
MTT 3 Maximum Authorized Draft
MTT 4 Mandatory Direction
MTT 5 Recommended Direction
MTT 997 Unpopulated
MTT 998 Not Applicable
MTT 999 Other

MVC Maximum Vertical Clearance

The greatest distance between the traveled way and any obstruction vertically above it.

MVC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

MWF Mooring / Warping Facility Classification

Tabulates mooring/warping facility types.

MWF 0 Unknown
MWF 1 Undefined
MWF 2 Dolphin
MWF 3 Deviation dolphin
MWF 4 Bollard
MWF 5 Tie-up Wall
MWF 6 Post or Pile
MWF 997 Unpopulated
MWF 998 Not Applicable
MWF 999 Other

MWG Median Width with greater than 1 meter resolution

The measured distance at map scale between connecting, adjacent and two-way road centerlines having divided roadbeds.

MWG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

NA2 Second Name

Fundamentally a touristic name for a feature which exists in addition to a geographic name.

NA2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

NA3 Classification Name

Fundamentally a grammalogue, index number, order or classification number for a feature.

NA3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

NA4 Country Code (FIPS Pub 10-4)

A four character country identification code as designated in Federal Information Processing Standard (FIPS) Pub 10-4, Countries, Dependencies, Areas of Special Sovereignty, and their Principal Administrative Divisions, identifying the country and the pr

NA4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	4 Characters

NAM Name

Any identifier or code.

NAM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

NAS Native Settlement Type

The distribution of native dwellings within the delineated area of the feature.

NAS 0 Unknown
NAS 1 Centralized Habitation
NAS 2 Continuous Habitation
NAS 997 Unpopulated
NAS 998 Not Applicable
NAS 999 Other

NLC Navigation Line Classification

Tabulates navigation line types.

NLC 0 Unknown
NLC 1 Undefined
NLC 2 Clearing line
NLC 3 Transit line
NLC 997 Unpopulated
NLC 998 Not Applicable
NLC 999 Other

NM3 Name 3

Name of the political entity on one side (relative to NM4) of a boundary line.

NM3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

NM4 Name 4

Name of the political entity on the other side (relative to NM3) of a boundary line.

NM4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

NMD Notice to Mariners Date

The publication date of a Notice To Mariners as specified by ISO 8601.
Version 2.1: New Attribute to permit mapping of S-57 attribute NMDATE to FACC.

NMD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	8 Characters

NMS Navigation Mark System

Indicates the specific navigation marks system.

NMS 0 Undefined
NMS 1 IALA A
NMS 2 IALA B
NMS 3 Modified U.S.
NMS 4 Old U.S.
NMS 5 U.S. Intracoastal waterway
NMS 6 U.S. uniform state
NMS 7 U.S. Western rivers
NMS 8 SIGNI
NMS 9 No System
NMS 10 Other System
NMS 997 Unpopulated
NMS 998 Not Applicable
NMS 999 Other

NOP Number of Platforms

The number of platforms at a railway station or similar facility.

NOP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Platforms	Short Integer	-32767 to 32767	1 platform	N/A

NOS Number of Spans

Number of spans in a bridge or aqueduct.

NOS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Spans	Short Integer	-32767 to 32767	1 span	N/A

NPL Number of Parallel Lines

Total number of parallel lines within the feature.

NPL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Lines	Short Integer	-32767 to 32767	1 line	N/A

NS2 Navigation System Types (2)

Type of equipment or system used in electronic navigation (secondary system).

NS2	0	Unknown
NS2	1	Circular Radio Beacon
NS2	2	CONSOL
NS2	3	DECCA
NS2	4	Radio Direction Finding
NS2	5	Directional Radio Beacon
NS2	6	Distance Finding
NS2	7	Long Range Air Navigation System (LORAN)
NS2	8	OMEGA
NS2	9	VALUE INTENTIONALLY LEFT BLANK (Other)
NS2	10	Radar Responder Beacon (RACON)
NS2	11	Radar
NS2	12	Radio
NS2	13	Radio Telephone
NS2	14	VALUE INTENTIONALLY LEFT BLANK
NS2	15	TV
NS2	16	Microwave
NS2	17	Non-Directional Radio Beacon (NDB)
NS2	18	NDB/Distance Measuring Equipment (NDB/DME)
NS2	19	Radio Range (RNG)
NS2	20	VHF Omni Directional Radio Range (VOR)
NS2	21	VHF Omni Directional (VOR /DME)
NS2	22	VHF Omni Directional (VORTAC)
NS2	23	Tactical Air Navigation Equipment (TACAN)
NS2	24	Instrument Landing System (ILS)
NS2	25	Instrument Landing System/Distance Measuring Equipment (ILS/DME)
NS2	26	Localizer (LOC)
NS2	27	Localizer/Distance Measuring Equipment (LOC/DME)
NS2	28	Simplified Directional Facility (SDF)
NS2	29	Landing Distance Available (LDA)
NS2	30	Microwave Landing System (MLS)
NS2	31	Fan Marker
NS2	32	Bone Marker
NS2	33	Radio Telegraph
NS2	34	Ground Controlled Approach (GCA)
NS2	35	Radar Antenna
NS2	37	Precision Approach Radar (PAR)
NS2	38	Aeronautical Radio
NS2	39	VALUE INTENTIONALLY LEFT BLANK
NS2	40	Radio Beacon
NS2	41	Rotating Loop Radio Beacon
NS2	42	Visual Flight Rules (VFR) Test Signal Maker
NS2	43	VALUE INTENTIONALLY LEFT BLANK
NS2	44	Console Radio Beacon
NS2	45	Radar Station

NS2	46	Aeronautical Radio Range
NS2	47	Hifix
NS2	48	Hyperfix
NS2	49	Tricolor Panel
NS2	50	Radio station
NS2	51	Radiobeacon, Type Unknown
NS2	52	None
NS2	53	QTG Station (R)
NS2	54	Ramark (Ramark)
NS2	55	Radar reflector
NS2	56	LO (Locator)
NS2	57	LLZ (Localizer)
NS2	58	DME (Distance Measuring Equipment)
NS2	997	Unpopulated
NS2	998	Not Applicable
NS2	999	Other

NST Navigation System Types

Type of equipment or system used in electronic navigation (primary system).

NST	0	Unknown
NST	1	Circular Radio Beacon
NST	2	CONSOL
NST	3	DECCA
NST	4	Radio Direction Finding
NST	5	Directional Radio Beacon
NST	6	Distance Finding
NST	7	Long Range Air Navigation System (LORAN)
NST	8	OMEGA
NST	9	VALUE INTENTIONALLY LEFT BLANK (Other)
NST	10	Radar Responder Beacon (RACON)
NST	11	Radar
NST	12	Radio
NST	13	Radio Telephone
NST	14	VALUE INTENTIONALLY LEFT BLANK
NST	15	TV
NST	16	Microwave
NST	17	Non-Directional Radio Beacon (NDB)
NST	18	NDB/Distance Measuring Equipment (NDB/DME)
NST	19	Radio Range (RNG)
NST	20	VHF Omni Directional Radio Range (VOR)
NST	21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME) Version 2.1: Added "/Distance Measuring Equipment" to description.
NST	22	VHF Omni Directional Radio Range and TACAN (VORTAC) Version 2.1: Added " and TACAN" to description.
NST	23	Tactical Air Navigation Equipment (TACAN)
NST	24	Instrument Landing System (ILS)
NST	25	Instrument Landing System/Distance Measuring Equipment (ILS/DME)
NST	26	Localizer (LOC)

NST	27	Localizer/Distance Measuring Equipment (LOC/DME)
NST	28	Simplified Directional Facility (SDF)
NST	29	Localizer type Direction Aid (LDA) Version 2.1: Corrected description "Landing Distance Available (LDA)" with "Localizer type Direction Aid (LDA)"
NST	30	Microwave Landing System (MLS)
NST	31	Fan Marker
NST	32	Bone Marker
NST	33	Radio Telegraph
NST	34	Ground Controlled Approach (GCA)
NST	35	Radar Antenna
NST	37	Precision Approach Radar (PAR)
NST	38	Aeronautical Radio
NST	39	VALUE INTENTIONALLY LEFT BLANK
NST	40	Radio Beacon
NST	41	Rotating Loop Radio Beacon
NST	42	Visual Flight Rules (VFR) Test Signal Maker
NST	43	VALUE INTENTIONALLY LEFT BLANK
NST	44	Consol Radio Beacon
NST	45	Radar Station
NST	46	Aeronautical Radio Range
NST	47	Hifix
NST	48	Hyperfix
NST	49	Tricolor Panel
NST	50	Radio station
NST	51	Radiobeacon, Type Unknown
NST	52	None
NST	53	QTG Station (R)
NST	54	Ramark (Ramark)
NST	55	Radar reflector
NST	56	Locator (without DME IM) Beacon (L) Version 2.1: Replaced incorrect description " (LO (Locator) with "Locator" (without DME IM) Beacon (L)"
NST	57	LLZ (Localizer)
NST	58	DME (Distance Measuring Equipment)
NST	59	Differential GPS
NST	60	Toran
NST	61	Syledis
NST	62	Chaika (Chayka)
NST	63	Microwave Landing System Azimuth Guidance (MLSAZ) Version 2.1: New Attribute Value
NST	64	Microwave Landing System Elevation Guidance (MLSEL) Version 2.1: New Attribute Value
NST	65	Precision Approach Path Indicator (PAPI) Version 2.1: New Attribute Value
NST	66	Pulsating Visual Approach Slope Indicator (PVASI) Version 2.1: New Attribute Value

NST 67 Visual Approach Slope Indicator (VASI)
Version 2.1: New Attribute Value

NST 68 Tri-Color Visual Approach Slope Indicator (TRCV)
Version 2.1: New Attribute Value

NST 69 "T"-Visual Approach Slope Indicator (TVASI)
Version 2.1: New Attribute Value

NST 70 Airport Surveillance Radar (ASR)
Version 2.1: New Attribute Value

NST 71 PAR Touchdown Reflector
Version 2.1: New Attribute Value

NST 72 Glide Slope
Version 2.1: New Attribute Value

NST 73 Air Route Surveillance Radar (ARSR)
Version 2.1: New Attribute Value

NST 997 Unpopulated

NST 998 Not Applicable

NST 999 Other

OBC Oil Barrier Classification

Tabulates types of oil barriers.

OBC 0 Undefined

OBC 1 Oil retention (high pressure pipe)

OBC 2 Floating oil barrier

OBC 997 Unpopulated

OBC 998 Not Applicable

OBC 999 Other

OCC Overhead Clearance Category Code

The coded distance between the traveled way and any obstruction vertically above it. (Ref. STANAG 2253).

OCC 0 Unknown

OCC 1 Restricted

OCC 2 Unlimited

OCC 997 Unpopulated

OCC 998 Not Applicable

OCC 999 Other

ODF Opposite Direction of Flow

Opposite direction of flow value of air route segments.

ODF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

OHB Overall Height of Bridge

Vertical distance measured from the lowest point at ground or water level to the highest portion of bridge (including superstructure).

OHB 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

OHC Overhead Clearance Category

The least distance between the traveled way and any obstruction vertically above it. (Ref. STANAG 2253)

OHC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

OHD Derived Obstacle Height/Depth Category

Categorized maximum height or depth of an obstacle feature, in meters, with delineated segment of area.

OHD 0 Unknown
OHD 1 >1.5 and <=5.0
OHD 2 >5.0 and <=10.0
OHD 3 >10.0 and <=20.0
OHD 4 >20.0 and <=40.0
OHD 5 >40.0
OHD 997 Unpopulated
OHD 998 Not Applicable
OHD 999 Other

OHF Orthometric Height in Feet – High End

Elevation above the geoid at the highest end of the runway. A negative value indicates a height below the geoid.

Version 2.1: New Attribute

OHF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

OHM Orthometric Height in Metres – High End

Elevation above the geoid at the highest end of the runway. A negative value indicates a height below the geoid.

Version 2.1: New Attribute

OHM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

OLF Orthometric Height in Feet – Low End

Elevation above the geoid at the lowest end of the runway. A negative value indicates a height below the geoid

Version 2.1: New Attribute

OLF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

OLM Orthometric Height in Metres – Low End

Elevation above the geoid at the lowest end of the runway. A negative value indicates a height below the geoid.
Version 2.1: New Attribute

OLM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

OLQ Obstruction Light Quality

Indicates whether single or multiple obstruction lights are present.

OLQ 0 Unknown
OLQ 1 One Light Present
OLQ 2 Multiple Lights Present
OLQ 997 Unpopulated
OLQ 998 Not Applicable
OLQ 999 Other

OOC Overhead Obstruction Category

Type of overhead obstruction.

OOC 0 Unknown
OOC 1 Viaduct, frame construction
OOC 2 Viaduct, arc construction
OOC 3 Roof
OOC 4 Powerline of railway
OOC 5 High-Tension powerline
OOC 6 Bridge Superstructure
OOC 997 Unpopulated
OOC 998 Not Applicable
OOC 999 Other

OPC Offshore Platform Classification

Tabulates types of offshore platforms.

OPC 0 Undefined
OPC 1 Oil derrick/rig
OPC 2 Production Platform
OPC 3 Observation/Research Platform
OPC 4 Articulated Loading Platform (ALP)
OPC 5 Single anchor leg mooring (SALM)
OPC 6 Mooring Tower
OPC 7 Artificial Island
OPC 8 Floating production, storage and off-loading vessel (FPSO)
OPC 9 Accommodation Platform
OPC 10 Navigation Aid Support
Version 2.1: New Attribute Value
OPC 997 Unpopulated
OPC 998 Not Applicable
OPC 999 Other

OPS Operational Status

Indicates whether or not the feature is in operation.

OPS 0 Unknown
OPS 1 Operational
OPS 2 Non-Operational
OPS 997 Unpopulated
OPS 998 Not Applicable
OPS 999 Other

OPT Operations Times

The operating times for facilities, airspace, etc.

OPT 0 Unknown
OPT 1 Daytime (Sunrise/Sunset)
OPT 2 Nighttime
OPT 3 Continuous
OPT 4 Summertime (April-October)
OPT 5 Wintertime (November-March)
OPT 997 Unpopulated
OPT 998 Not Applicable
OPT 999 Other

OR2 Operating Range Category (2)

The secondary range of the NAVAID beyond which the capture of the signal is not completely assured.

OR2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

ORC Operating Range Category

The range of the NAVAID beyond which the capture of the signal is not completely assured.

ORC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

ORD Ordinal Category

Indicator of relative importance of a feature

ORD 0 Unknown
ORD 1 Primary/1st Order
ORD 2 Secondary/2nd Order
ORD 3 Tertiary/3rd Order
ORD 4 Quaternary/4th Order
ORD 5 Quintary/5th Order
ORD 997 Unpopulated
ORD 998 Not Applicable
ORD 999 Other

ORS Operating Restrictions

Times or conditions during which the use of a feature is restricted.

ORS 0 Unknown
ORS 1 Daytime operations only (Sunrise/Sunset)
ORS 2 Night-time operations only (Sunset/Sunrise)

ORS	3	Continuous operations
ORS	4	Susceptible to snow
ORS	5	Susceptible to ice
ORS	6	Susceptible to flooding
ORS	996	Special restrictions apply, see TXT
ORS	997	Unpopulated
ORS	998	Not Applicable
ORS	999	Other

OWO Over Water Obstruction

Indicates the presence of an obstruction over an area of navigable water.

OWO	0	Unknown
OWO	1	Feature crosses navigable water
OWO	2	Feature does not cross navigable water
OWO	997	Unpopulated
OWO	998	Not Applicable
OWO	999	Other

PAB Point Abeam Type

The type of offline feature to which the point on the runway is abeam.
Version 2.1: New Attribute

PAB	0	Unknown Version 2.1: New Attribute Value
PAB	1	Glideslope (GS) Version 2.1: New Attribute Value
PAB	2	Microwave Landing System Elevation Guidance (MLSEL) Version 2.1: New Attribute Value
PAB	3	Localizer (LOC) Version 2.1: New Attribute Value
PAB	4	Offset Localizer type Directional Aid (LDA) Version 2.1: New Attribute Value
PAB	5	Offset Simplified Directional Facility (SDF) Version 2.1: New Attribute Value
PAB	6	Microwave Landing System Azimuth Guidance (MLSAZ) Version 2.1: New Attribute Value
PAB	7	Precision Approach Radar (PAR) Version 2.1: New Attribute Value
PAB	8	PAR Touchdown Reflector Version 2.1: New Attribute Value
PAB	997	Unpopulated Version 2.1: New Attribute Value
PAB	998	Not Applicable Version 2.1: New Attribute Value
PAB	999	Other Version 2.1: New Attribute Value

PAN Primary Approach Transitional Surface Section Number

A number representing a section of the primary/approach transitional surface. The primary/approach transitional surface is broken down into the following two groups of sections: (1) Those sections corresponding to the lateral primary surface sections whi

PAN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	N/A	unit	N/A

PAT Color Pattern Category

The color breakdown of pattern of buoys, beacons, lights, other aids to navigation, and other features of interest to a mariner.
Version 2.1: Replaces previous description of "The color breakdown of pattern of buoy." with "The color breakdown of pattern

PAT 0 Unknown
PAT 1 Checkered
PAT 2 Diagonal Bands
PAT 3 Single Color
PAT 4 Horizontal Bands
PAT 5 VALUE INTENTIONALLY LEFT BLANK
PAT 6 Vertical Stripes
PAT 7 Stripes (Direction Unknown)
PAT 8 Border Stripe
PAT 98 Squared
PAT 99 Horizontal bands from top to bottom
PAT 997 Unpopulated
PAT 998 Not Applicable
PAT 999 Other

PBP Pilot Boarding Place Classification

Tabulates types of pilot boarding place.

PBP 0 Undefined
PBP 1 Boarding by pilot-cruising vessel
PBP 2 Boarding by helicopter
PBP 3 Pilot comes out from shore
PBP 997 Unpopulated
PBP 998 Not Applicable
PBP 999 Other

PBR Publication Reference

Encodes the reference to a specific paragraph from a nautical publication.
Version 2.1: New Attribute to permit mapping of S-57 metadata attribute PUBREF to FACC.

PBR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	256 Characters

PBV Pilot Boarding Vehicle

The method by which pilots are transferred to and from ships using pilot services.

PBV 0 Unknown
PBV 1 By Boat
PBV 2 By Helicopter

PBV 997 Unpopulated
PBV 998 Not Applicable
PBV 999 Other

PCC Percentage Content

Percentage of total composition.

PCC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	-32767 to 32767	1 %	N/A

PCI Point of Change Identifier

Identifies category of feature associated with a point of change.

PCI 0 Unknown
PCI 1 Transportation / road or railroad
PCI 2 Hydrography / drainage
PCI 3 Boundaries
PCI 4 Road width change
PCI 5 Obstacles
PCI 997 Unpopulated
PCI 998 Not Applicable
PCI 999 Other

PCU Pedestrian Capacity

Number of pedestrians a feature can accommodate.

PCU 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Persons	Short Integer	-32767 to 32767	1 person	N/A

PDE Periodic Date End

The end of the active period for a seasonal object (e.g. a buoy). Coded YYYYMMDD.

PDE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

PDR Pedestrian Rate

Number of pedestrians per time unit (this attribute utilizes the structured text approach), e.g. 10(persons)[per hour].

PDR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	80 Characters

PDS Periodic Date Start

The start of the active period for a seasonal object (e.g. a buoy). Coded YYYYMMDD.

PDS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

PER Period of Light

The time occupied by an entire cycle of intervals of light and eclipse.

PER 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Seconds	Floating Point	N/A	N/A	N/A

PEV Position Evaluation

Evaluation of the position accuracy of a Non-submarine contact. Reference STANAG 3715.

PEV 0 Unknown
PEV 1 Accuracy <= 1 nautical mile
PEV 2 Accuracy > 1 nautical mile and <= 3 nautical miles
PEV 3 Accuracy > 3 nautical miles and <= 5 nautical miles
PEV 4 Accuracy > 5 nautical miles and <= 10 nautical miles
PEV 5 Accuracy uncertain
PEV 997 Unpopulated
PEV 998 Not Applicable
PEV 999 Other

PFD Predominant Feature Depth

Predominant depth within the delineation of feature.

PFD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

PFE Predominant Feature Depth With greater than 1 meter resolution

Predominant depth within the delineation of feature.

PFE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

PFG Predominant Feature Height With greater than 1 meter resolution

Predominant height within delineation of feature.

PFG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

PFH Predominant Feature Height

Predominant height within delineation of feature.

PFH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

PH4 Predominant Height (10 m Range)

Predominant height range of a specified urban area (reported in 10 meter ranges).

PH4 0 Unknown
PH4 1 <= 10
PH4 2 > 10 and <= 20
PH4 3 > 20 and <= 30

PH4 4 > 30 and <= 40
PH4 5 > 40 and <= 50
PH4 6 > 50 and <= 60
PH4 7 > 60 and <= 70
PH4 8 > 70 and <= 80
PH4 9 > 80 and <= 90
PH4 10 > 90 and <= 100
PH4 11 > 100
PH4 12 Not Applicable
PH4 997 Unpopulated
PH4 999 Other

PHT Predominant Height

Height of 51% or more of the feature. If not obtainable, then the average height of the feature will be used.

PHT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

PIC Pictorial Representation

Specifies whether a pictorial representation of the object is available.

PIC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

PIL Pilot District

Specifies the pilot district for which a pilot is responsible.

PIL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

PLC Pile Classification

Tabulates types of piles.

PLC 0 Undefined
PLC 1 Stake
PLC 2 Snag
PLC 3 Post
PLC 4 Tripodal
PLC 997 Unpopulated
PLC 998 Not Applicable
PLC 999 Other

PLT Pipeline Type

Identifies function of pipeline.

PLT 0 Undefined
PLT 1 Transport
PLT 2 Outfall
PLT 3 Intake
PLT 4 Sewer
PLT 5 Valve

PLT 6 Pipeline in general
PLT 7 Bubbler System
PLT 8 Supply Pipe
PLT 997 Unpopulated
PLT 998 Not Applicable
PLT 999 Other

POI Point of Interest

Place determined to be of interest or importance.

POI 0 Unknown
POI 1 Historic Battlefield
POI 997 Unpopulated
POI 998 Not Applicable
POI 999 Other

POP Pond Partition Category

Classifies the kinds of ponds that the partitions separate.

POP 0 Unknown
POP 1 Fish Pond
POP 2 Reservoir
POP 3 Waste Pond
POP 997 Unpopulated
POP 998 Not Applicable
POP 999 Other

PPC Power Plant Category

Energy source used to generate power.

PPC 0 Unknown
PPC 1 Hydro-electric
PPC 2 Nuclear
PPC 3 Solar
PPC 4 Thermal
PPC 5 Wind
PPC 6 Tidal
PPC 7 Internal Combustion
PPC 997 Unpopulated
PPC 998 Not Applicable
PPC 999 Other

PPL Populated Place Category

The number of people within a feature (e.g., administrative and built-up areas).

PPL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Persons	Long Integer	N/A	1 person	N/A

PPT Populated Place Type

The type of populated place.

PPT 0 Unknown
PPT 1 Native Settlement
PPT 2 Shanty Town

PPT	3	Tent Dwellings
PPT	99	Inland Village
PPT	997	Unpopulated
PPT	998	Not Applicable
PPT	999	Other

PR1 Periodic Restriction Beginning

Beginning month for restrictions due to climate or other limitations.

PR1	0	Unknown
PR1	1	Beginning seasonal limit - Jan.
PR1	2	Beginning seasonal limit - Feb.
PR1	3	Beginning seasonal limit - Mar.
PR1	4	Beginning seasonal limit - Apr.
PR1	5	Beginning seasonal limit - May
PR1	6	Beginning seasonal limit - Jun.
PR1	7	Beginning seasonal limit - Jul.
PR1	8	Beginning seasonal limit - Aug.
PR1	9	Beginning seasonal limit - Sep.
PR1	10	Beginning seasonal limit - Oct.
PR1	11	Beginning seasonal limit - Nov.
PR1	12	Beginning seasonal limit - Dec.
PR1	997	Unpopulated
PR1	998	Not Applicable
PR1	999	Other

PR2 Periodic Restriction Ending

Ending month for restrictions due to climate or other limitations.

PR2	0	Unknown
PR2	1	Ending seasonal limit - Jan.
PR2	2	Ending seasonal limit - Feb.
PR2	3	Ending seasonal limit - Mar.
PR2	4	Ending seasonal limit - Apr.
PR2	5	Ending seasonal limit - May
PR2	6	Ending seasonal limit - Jun.
PR2	7	Ending seasonal limit - Jul.
PR2	8	Ending seasonal limit - Aug.
PR2	9	Ending seasonal limit - Sep.
PR2	10	Ending seasonal limit - Oct.
PR2	11	Ending seasonal limit - Nov.
PR2	12	Ending seasonal limit - Dec.
PR2	997	Unpopulated
PR2	998	Not Applicable
PR2	999	Other

PRC Periodic Restriction Category

Restriction due to climate or other limitations.

PRC	0	Unknown
PRC	1	Perennially Open, Not Subject to Ice
PRC	2	Subject to Ice

PRC	3	Permanent Ice
PRC	4	Seasonal limit - Jan.
PRC	5	Seasonal limit - Feb.
PRC	6	Seasonal limit - Mar.
PRC	7	Seasonal limit - Apr.
PRC	8	Seasonal limit - May
PRC	9	Seasonal limit - Jun.
PRC	10	Seasonal limit - Jul.
PRC	11	Seasonal limit - Aug.
PRC	12	Seasonal limit - Sep.
PRC	13	Seasonal limit - Oct.
PRC	14	Seasonal limit - Nov.
PRC	15	Seasonal limit - Dec.
PRC	16	Closed
PRC	997	Unpopulated
PRC	998	Not Applicable
PRC	999	Other

PRM Permanency

Indicates whether an object is temporary or permanent. See EXS 11 and EXS 18.

PRM	0	Unknown
PRM	1	Permanent
PRM	2	Temporary
PRM	997	Unpopulated
PRM	998	Not Applicable
PRM	999	Other

PRO Product Category

Principal material involved or product resulting from activity at site.

PRO	0	Unknown
PRO	1	Aircraft
PRO	2	Aluminum
PRO	3	Ammunition
PRO	4	Ash
PRO	5	Asphalt
PRO	6	Basalt
PRO	7	Bedrock
PRO	8	Boulders
PRO	9	Brick
PRO	10	Calcareous
PRO	11	Cement
PRO	12	Chalk
PRO	13	Chemical
PRO	14	Cinders
PRO	15	Cirripedia
PRO	16	Clay
PRO	17	Coal
PRO	18	Cobble
PRO	19	Coke

PRO	20	Composition
PRO	21	Concrete
PRO	22	Conglomerate
PRO	23	Copper
PRO	24	Coral
PRO	25	Coral Head
PRO	26	Desalinated Water
PRO	27	Diamonds
PRO	28	Diatoms
PRO	29	Dolomite
PRO	30	Earthen
PRO	31	Electric
PRO	32	Eroded Lands
PRO	33	Explosives
PRO	34	Flysch
PRO	35	Food
PRO	36	Foraminifera
PRO	37	Fucus
PRO	38	Gas
PRO	39	Gasoline
PRO	40	Glass
PRO	41	Globigerina
PRO	42	Gold
PRO	43	Granite
PRO	44	VALUE INTENTIONALLY LEFT BLANK
PRO	45	Grass/Thatch
PRO	46	Gravel
PRO	47	Green Rocks
PRO	48	Ground
PRO	49	Ground (Shells)
PRO	50	Heat
PRO	51	Iron
PRO	52	Lava
PRO	53	VALUE INTENTIONALLY LEFT BLANK
PRO	54	Lead
PRO	55	Loess
PRO	56	Lumber
PRO	57	Macadam
PRO	58	Madrepores
PRO	59	Manganese
PRO	60	Marble
PRO	61	Marl
PRO	62	Masonry (Brick/Stone)
PRO	63	Mattes
PRO	64	Metal
PRO	65	Mud
PRO	66	Mussels

PRO	67	Oil
PRO	68	Oil Blister
PRO	69	Ooze
PRO	70	Oysters
PRO	71	Paper
PRO	72	Part Metal
PRO	73	Pebbles
PRO	74	Plastic
PRO	75	Polyzoa
PRO	76	Porphyry
PRO	77	Prestressed Concrete
PRO	78	Pteropods
PRO	79	Pumice
PRO	80	Quartz
PRO	81	Radiolaria
PRO	82	Radioactive Material
PRO	83	Reinforced Concrete
PRO	84	Rock/Rocky
PRO	85	Rubber
PRO	86	Rubble
PRO	87	Salt
PRO	88	Sand
PRO	89	Sandstone
PRO	90	Schist
PRO	91	VALUE INTENTIONALLY LEFT BLANK
PRO	92	Scoria
PRO	93	Sea Tangle
PRO	94	Seaweed
PRO	95	Sewage
PRO	96	Shells
PRO	97	VALUE INTENTIONALLY LEFT BLANK
PRO	98	Shingle
PRO	99	Silt
PRO	100	Silver
PRO	101	Slag
PRO	102	Sludge
PRO	103	Snow/Ice
PRO	104	Soil
PRO	105	Spicules
PRO	106	Sponge
PRO	107	Steel
PRO	108	Stone
PRO	109	Sugar
PRO	110	Travertine
PRO	111	Tufa
PRO	112	Uranium
PRO	113	Vegetation Products

PRO 114 Volcanic
PRO 115 Volcanic Ash
PRO 116 Water
PRO 117 Wood
PRO 118 Zinc
PRO 119 Bauxite
PRO 120 Bananas
PRO 121 Cotton
PRO 122 Bamboo
PRO 123 Coffee
PRO 124 Common fruit and/or nuts
PRO 125 Palms
PRO 126 Palmetto
PRO 127 Tailings
PRO 128 Refuse
PRO 129 Tobacco
PRO 130 None
PRO 131 Personnel
PRO 132 VALUE INTENTIONALLY LEFT BLANK(Not Applicable)
PRO 133 Telecommunications
PRO 134 Fish
PRO 135 Textile
PRO 137 Automobiles and Trucks
PRO 138 Crustaceans
PRO 139 Cultivated Shellfish
PRO 140 Ore
PRO 141 Drinking Water
PRO 142 Milk
PRO 143 Sawdust and, or Wood Chips
PRO 144 Scrap Metal
PRO 145 Liquefied Natural Gas (LNG)
PRO 146 Liquefied Petroleum Gas (LPG)
PRO 147 Wine
PRO 148 Grain
PRO 149 Mineral Oil
PRO 150 Waste
PRO 151 Cultured Pearls
Version 2.1: New Attribute Value to map S-57 attribute CATMFA to FACC.
PRO 997 Not Applicable
PRO 998 Multiple
PRO 999 Other

PSC Physical Surface Characteristics

Principal characteristic(s) of the surface.

PSC 0 Unknown
PSC 1 Broken
PSC 2 Coarse
PSC 3 Decayed

PSC 4 Fine, minute particles
PSC 5 Gritty
PSC 6 Hard
PSC 7 Rotten
PSC 8 Soft
PSC 9 Sticky
PSC 10 Stiff
PSC 11 Streaky
PSC 12 Tenacious
PSC 13 Uneven
PSC 14 Bare/cleared
PSC 15 Karst
PSC 16 Membrane
PSC 17 Calcareous
PSC 18 Flinty
PSC 19 Glacial
PSC 20 Ground
PSC 21 Large
PSC 22 Rocky
PSC 23 Small
PSC 24 Speckled
PSC 25 Varied
PSC 26 Volcanic
PSC 27 Medium
PSC 28 Springs in Seabed
PSC 29 Mobile Bottom
PSC 99 VALUE INTENTIONALLY LEFT BLANK (Medium)
PSC 100 Unsurfaced
PSC 997 Unpopulated
PSC 998 Not Applicable
PSC 999 Other

PSN Primary Surface Section Number

A number representing a section of the primary surface. The primary surface is broken down into sections: (a) the 200 foot sections of the primary surface from either end of the runway and working outward, (b) the approximately 3000 foot sections startin

PSN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	N/A	unit	N/A

PST Physical State Category

Describes the physical state of the feature.

PST 0 Unknown
PST 1 Solid
PST 2 Liquid
PST 997 Unpopulated
PST 998 Not Applicable
PST 999 Other

PWC Pier/Wharf /Quay Classification

Classification of decked berthing structure, based on configuration and structure.

PWC 0 Unknown
PWC 1 Pier
PWC 2 Wharf
PWC 3 Quay
PWC 997 Unpopulated
PWC 998 Not Applicable
PWC 999 Other

QID Quality/Source Record Identifiers

The three character tag for the Source or Quality Record followed by the record number, (e.g. QAL4).

QID 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	4 Characters

QLE Releasability

Releasability statement with regard to the feature.

QLE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	4 Characters

QUA Quality of Position

Stipulates the quality of the position.

QUA 0 Undefined
QUA 1 Surveyed
QUA 2 Unsurveyed
QUA 3 Inadequately surveyed
QUA 4 Approximated
QUA 5 Doubtful
QUA 6 Unreliable
QUA 7 Reported (not surveyed)
QUA 8 Reported (not confirmed)
QUA 9 Estimated
QUA 10 Calculated
QUA 11 Precisely Known (Not Surveyed)
Version 2.1: New Attribute Value to map S-57 metadata attribute QUAPOS to FACC.
QUA 997 Unpopulated
QUA 998 Not Applicable
QUA 999 Other

QUD Quadrant Identifier

Number (1, 2, 3,or 4) identifying the quadrant of the runway area as defined by the meridian and parallel intersecting at the center point of the runway. Quadrant identifiers shall be assigned such that quadrants 1 and 2 are on one side and quadrants 3 a

QUD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	1 to 4	unit	N/A

QUL Percentage Reliability of a Qualitative Attribute

Percentage reliability of a Qualitative Attribute.

QUL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

QUT Standard Deviation of a Qualitative Attribute

Standard deviation of a Qualitative Attribute.

QUT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	0 to 4	1 unit	N/A

RAD Radius of Sharp Curve

Radius of curvature of sharp curves, expressed in meters.

RAD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

RAG Non-submarine Contact Reporting Agency Type

Classification of Non-submarine contact reporting source based on US Wreck List and NATO STANAG 3715. Replicates attribute RAG in the Wreck List.
Version 2.1: New Attribute

RAG 0 Unknown
Version 2.1: New Attribute Value

RAG 1 Survivor Report
Version 2.1: New Attribute Value

RAG 2 Salvage Report
Version 2.1: New Attribute Value

RAG 3 Casualty Report
Version 2.1: New Attribute Value

RAG 4 Action Report
Version 2.1: New Attribute Value

RAG 5 Photograph Report
Version 2.1: New Attribute Value

RAG 6 US Coast & Geodetic Survey/National Ocean Service Report
Version 2.1: New Attribute Value

RAG 7 US Naval Headquarters/Commands Report
Version 2.1: New Attribute Value

RAG 8 Hydrographic/Admiralty Office
Version 2.1: New Attribute Value

RAG 9 Wreck List
Version 2.1: New Attribute Value

RAG 10 Chart Records
Version 2.1: New Attribute Value

RAG 11 Coast Guard Records
Version 2.1: New Attribute Value

RAG 12 Notice to Mariners
Version 2.1: New Attribute Value

RAG 13 North Sea Fishing Charts
Version 2.1: New Attribute Value

RAG 14 Chart
Version 2.1: New Attribute Value

RAG 15 Minesweeper
Version 2.1: New Attribute Value

RAG 16 Survey
Version 2.1: New Attribute Value

RAG 17 Position Accurate Field Check
Version 2.1: New Attribute Value

RAG 18 Sonar Report
Version 2.1: New Attribute Value

RAG 19 MAD Report
Version 2.1: New Attribute Value

RAG 20 Undifferentiated Sonar or MAD Report
Version 2.1: New Attribute Value

RAG 997 Unpopulated
Version 2.1: New Attribute Value

RAG 998 Not Applicable
Version 2.1: New Attribute Value

RAG 999 Other
Version 2.1: New Attribute Value

RAN Range of Effectiveness

Radius of effectiveness of a navigational aid.

RAN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

RAS Radar Station Classification

Tabulates types of radar stations.

RAS 0 Undefined

RAS 1 Radar surveillance station

RAS 2 Coast radar station

RAS 997 Unpopulated

RAS 998 Not Applicable

RAS 999 Other

RBC Reliability of Bridge

Reliability of bridge characteristics and military load classification based upon data source.

RBC 0 Unknown

RBC 1 Known

RBC 2 Estimated

RBC 997 Unpopulated

RBC 998 Not Applicable

RBC 999 Other

RCD Recording Date

The date when the specific object or cartographic primitive was captured, edited, or deleted. Coded YYYYMMDD.

RCD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

RDT Road Type

Classifies the various types of roads.

RDT 0 Unknown
RDT 1 Street
RDT 2 Rapid transit
RDT 3 Laneway
RDT 4 Service Lane
RDT 997 Unpopulated
RDT 998 Not Applicable
RDT 999 Other

REF Radar Reflector Attribute

Indicates whether or not a radar reflector is attached to, or connected with, a feature.

REF 0 Unknown
REF 1 Radar Reflector Present
REF 2 Radar Reflector Absent
REF 997 Unpopulated
REF 998 Not Applicable
REF 999 Other

REL Religious Denomination

Name of religious order at site.

REL 0 Unknown
REL 1 Buddhist
REL 2 Moslem
REL 3 Roman Catholic
REL 4 Christian (undefined)
REL 5 Judaism
REL 6 Greek Orthodox
REL 7 Protestant
REL 8 Shinto
REL 997 Unpopulated
REL 998 Not Applicable
REL 999 Other

RET Reflection Type Category

The type of sonar reflection detected.

RET 0 Unknown
RET 1 Hyperbolic, from Bottom
RET 2 Hyperbolic, from Sub-Bottom
RET 997 Unpopulated
RET 998 Not Applicable
RET 999 Other

RFQ Radar Transponder Beacon Frequency

Specifies the specific frequency of a radar transponder beacon.

RFQ 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Kilohertz	Short Integer	-32767 to 32767	1 kHz	N/A

RGC Railroad Gauge Category

The type of gauge used.

RGC 0 Unknown
RGC 1 Broad
RGC 2 Narrow
RGC 3 Normal (Country Specific)
RGC 4 Any
RGC 5 Standard (US) 4ft. 8.5 in.
RGC 997 Unpopulated
RGC 998 Not Applicable
RGC 999 Other

RGS Range Significance

Indicates relative location of a beacon or light in a range.

RGS 0 Unknown
RGS 1 Front
RGS 2 Middle
RGS 3 Rear
RGS 4 Shared
RGS 997 Unpopulated
RGS 998 Not Applicable
RGS 999 Other

RID Runway Identifier

The degree identification of the runway in a two-digit identifier ranging from 01-36, derived from the runway heading, rounded to the nearest ten degrees and divided by ten. For parallel runways a third character is added to differentiate between left (

RID 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	3 Characters

RIH Runway Identifier - High End

The higher degree identification of the runway in a two-digit identifier ranging from 19-36, derived from the runway (high end) heading, rounded to the nearest ten degrees and divided by ten. For parallel runways a third character is added to differentia

RIH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	3 Characters

RIL Runway Identifier - Low End

The lower degree identification of the runway in a two-digit identifier ranging from 01-18, derived from the runway (low end) heading, rounded to the nearest ten degrees and divided by ten. For parallel runways a third character is added to differentiate

RIL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	3 Characters

RIT Road Interchange Type

The unique interchange design.

RIT 0 Unknown
RIT 1 Cloverleaf
RIT 2 Diamond
RIT 3 Fork
RIT 4 Rotary/Traffic Circle/Roundabout
RIT 5 Staggered Ramps
RIT 6 Standard Ramps
RIT 7 Symmetrical Ramps
RIT 8 Trumpet
RIT 9 Turban
RIT 10 Wye
RIT 997 Unpopulated
RIT 998 Not Applicable
RIT 999 Other

RKF Rock Strata Formation

The structure of a rock formation.

RKF 0 Unknown
RKF 1 Columnar
RKF 2 Needle
RKF 3 Pinnacle
RKF 4 VALUE INTENTIONALLY LEFT BLANK
RKF 5 VALUE INTENTIONALLY LEFT BLANK
RKF 997 Unpopulated
RKF 998 Not Applicable
RKF 999 Other

RMA Railroad Maximum Axle Load

Maximum load allowable on any single railroad vehicle axle.

RMA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Tons	Short Integer	-32767 to 32767	1 tn	N/A

RMT Railroad Maximum Load

Maximum load allowable on a segment of a railroad or railroad feature.

RMT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Tons	Short Integer	-32767 to 32767	1 tn	N/A

RN2 Secondary Route Number

Alternative official route number (I-95,A-1,M-2 etc.) assigned to the feature.

RN2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

RNK Ranking of Feature

Significance of feature, indicates likely range of facilities available at or in the close vicinity.

RNK 0 Unknown
RNK 1 Primary Rank
RNK 2 Secondary Rank
RNK 3 Tertiary Rank
RNK 997 Unpopulated
RNK 998 Not Applicable
RNK 999 Other

ROS Radio Station Classification

Tabulates types of radio stations.

ROS 0 Undefined
ROS 1 Circular (non-directional) marine or aeromarine radio beacon
ROS 2 Directional radio beacon
ROS 3 Rotating pattern radio beacon
ROS 4 Consol beacon
ROS 5 Radio direction finding station
ROS 6 Coast radio station providing QTG service
ROS 7 Aeronautical radio beacon
ROS 997 Unpopulated
ROS 998 Not Applicable
ROS 999 Other

RPA Required Port Access

An indicator that a water feature is used for access to a required port, or that the feature is in a water body used for access to a required port.

RPA 0 Unknown
RPA 1 Access Required
RPA 2 Access Not Required
RPA 997 Unpopulated
RPA 998 Not Applicable
RPA 999 Other

RRA Railroad Power Source

Source of electrical power for railroad.

RRA 0 Unknown
RRA 1 Electrified Track
RRA 3 Overhead Electrified
RRA 4 Non-electrified
RRA 997 Unpopulated
RRA 998 Not Applicable
RRA 999 Other

RRC Railroad Categories

The type of railroad system used to support various transportation uses.

RRC	0	Unknown
RRC	2	Car-Line
RRC	3	Monorail
RRC	6	Subway
RRC	8	Logging
RRC	10	Miniature
RRC	11	Rapid Transit Route - Rail
RRC	13	Marine Railroad
RRC	14	Tramway
RRC	15	Inclined Railway
RRC	16	Main Line
RRC	17	Branch Line
RRC	21	Railroad in Road
RRC	997	Unpopulated
RRC	998	Not Applicable
RRC	999	Other

RSA Rail Siding/Spur Attribute

Type of connecting track.

RSA	0	Unknown
RSA	1	Spur
RSA	2	Siding
RSA	3	Passing
RSA	997	Unpopulated
RSA	998	Not Applicable
RSA	999	Other

RSC Rescue Station Classification

Tabulates types of rescue station.

RSC	0	Undefined
RSC	1	Rescue station with life boat
RSC	2	Rescue station with rocket
RSC	3	Rescue station with life boat and rocket
RSC	4	Refuge for shipwrecked mariners
RSC	5	Refuge for intertidal area walkers
RSC	6	Lifeboat lying at a mooring
RSC	7	Aid Radio Station Version 2.1: New Attribute Value to map S-57 attribute RSCSTA to FACC.
RSC	8	First Aid Equipment Version 2.1: New Attribute Value to map S-57 attribute RSCSTA to FACC.
RSC	997	Unpopulated
RSC	998	Not Applicable
RSC	999	Other

RST Road/Runway Surface Type

The physical surface composition of a road or runway.

RST	0	Unknown
RST	1	Hard/Paved

RST 2 Loose/Unpaved
RST 3 Loose/Light
RST 4 Corduroy
RST 5 Grass/Sod (Soft)
RST 6 Natural
RST 7 Permanent
RST 8 Temporary
RST 997 Unpopulated
RST 998 Not Applicable
RST 999 Other

RTA Railroad Track Arrangement

The arrangement of trackage on a single railroad bed including both directions.

RTA 0 Unknown
RTA 1 Single
RTA 2 Double
RTA 3 Multiple
RTA 4 Juxtaposition
RTA 997 Unpopulated
RTA 998 Not Applicable
RTA 999 Other

RTB Radar Transponder Beacon Classification

Tabulates types of radar transponder beacon.

RTB 0 Undefined
RTB 1 Ramark, radar beacon transmitting continuously
RTB 2 Racon, radar transponder beacon with Morse identification
RTB 3 Leading Racon and, or Radar Transponder Beacon
RTB 997 Unpopulated
RTB 998 Not Applicable
RTB 999 Other

RTC Road Type Category

NATO road type classification (see STANAG 3675).

RTC 0 Unknown
RTC 1 NATO Category X
RTC 2 NATO Category Y
RTC 3 NATO Category Z
RTC 997 Unpopulated
RTC 998 Not Applicable
RTC 999 Other

RTN Route Number

Official route number (I-95, M-2, A-1, etc.) assigned to the feature.

RTN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	24 Characters

RTP Reservoir Type

Indicates the method of containing the water in a reservoir.

RTP	0	Unknown
RTP	1	Constructed Basin
RTP	2	Back-up Water Impounded by a Dam
RTP	997	Unpopulated
RTP	998	Not Applicable
RTP	999	Other

RTT Route Intended Use

Intended use of the route.

RTT	0	Unknown
RTT	1	Recommended Track
RTT	2	Recommended Track for Other Than Deep Draft Vessels
RTT	3	Recommended Track for Deep Draft Vessels
RTT	4	Deep Water Route
RTT	5	Transit Route
RTT	6	Radar Guided Track
RTT	7	Measured Distance Line
RTT	8	Safety Fairway/Channel
RTT	9	Traffic Lane (TSS)
RTT	10	Roundabout Lane (TSS)
RTT	11	Two-way Route
RTT	12	Recommended Track (TSS)
RTT	13	Recommended Direction of Traffic Flow
RTT	14	Primary Route
RTT	15	Secondary Route
RTT	16	Limited Access Route (e.g. Motorway/Autobahn/Interstate)
RTT	17	Q-Route
RTT	18	Recommended Route Version 2.1: New Attribute Value
RTT	96	Recommended Traffic Lane Part
RTT	97	Centerline
RTT	98	Deep Water Route - Centerline
RTT	99	Deep Water Route - Part
RTT	997	Unpopulated
RTT	998	Not Applicable
RTT	999	Other

RWL Radar Wave Length

The distance between two successive peaks (or other points of identical phase) on a electromagnetic wave in the radar band of the electromagnetic spectrum.
Version 2.1: New Attribute to permit mapping of S-57 attribute RADWAL to FACC.

RWL	0	Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

RWT Runway End Type

Indicates high or low end of runway.
Version 2.1: New Attribute

RWT 0 Unknown
Version 2.1: New Attribute Value

RWT 1 High End
Version 2.1: New Attribute Value

RWT 2 Low End
Version 2.1: New Attribute Value

RWT 997 Unpopulated
Version 2.1: New Attribute Value

RWT 998 Not Applicable
Version 2.1: New Attribute Value

RWT 999 Other
Version 2.1: New Attribute Value

SAV Standardized Attribute Values

Standardized attribute values for use with non-enumerated attributes.

SAV 1 NULL (Empty)
Version 2.1: New Attribute Value

SAV 2 Unknown
Version 2.1: New Attribute Value

SAV 3 Multiple
Version 2.1: New Attribute Value

SAV 4 Unpopulated
Version 2.1: New Attribute Value

SAV 5 Not Applicable
Version 2.1: New Attribute Value

SAV 6 Other
Version 2.1: New Attribute Value

SAW Signal Station, Warning Classification

Tabulates types of signal station, warning.

SAW 0 Undefined

SAW 1 Danger

SAW 2 Maritime obstruction

SAW 3 Cable

SAW 4 Military practice

SAW 5 Distress

SAW 6 Weather

SAW 7 Storm

SAW 8 Ice

SAW 9 Time

SAW 10 Tide

SAW 11 Tidal stream

SAW 12 Tide gauge

SAW 13 Tide scale

SAW 14 Diving

SAW 15 Water Level Gauge
Version 2.1: New Attribute Value to map S-57 attribute CATSIW to FACC.

SAW 997 Unpopulated
SAW 998 Not Applicable
SAW 999 Other

SBC Shelter Belt Condition

Indicates whether a linear stand of trees functions as a shelter belt, protecting roadways, railroads, cropland, construction, etc., from the effects of adverse weather.

SBC 0 Unknown
SBC 1 Functions as a shelter belt
SBC 2 Does not function as a shelter belt
SBC 997 Unpopulated
SBC 998 Not Applicable
SBC 999 Other

SC1 Sector Limit 1

The first limit of a light or radio transponder beacon sector as measured clockwise from the source.
Version 2.1: New Attribute to permit mapping of S-57 attribute SECTR1 to FACC.

SC1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

SC2 Sector Limit 2

The second limit of a light or radio transponder beacon sector as measured clockwise from the source.
Version 2.1: New Attribute to permit mapping of S-57 attribute SECTR2 to FACC.

SC2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

SCC Spring/Well Characteristic Category

Type of available water.

SCC 0 Unknown
SCC 1 Alkaline
SCC 2 Not Applicable
SCC 3 VALUE INTENTIONALLY LEFT BLANK
SCC 4 Mineral
SCC 5 VALUE INTENTIONALLY LEFT BLANK
SCC 6 VALUE INTENTIONALLY LEFT BLANK
SCC 9 Freshwater/Potable
SCC 10 Salt
SCC 11 Fresh
SCC 997 Unpopulated
SCC 999 Other

SD1 Stem Diameter Size Range (1)

Estimated range (1) of the average stem diameter within area of feature, determined in centimetres at a distance of 1.4 meters above the ground.

SD1 0 Unknown
SD1 1 > 0 and <= 5.00
SD1 2 > 5.00 and <= 10.00
SD1 3 > 10.00 and <= 20.00

SD1 4 > 20.00 and <= 30.00
SD1 5 > 30.00 and <= 40.00
SD1 6 > 40.00 and <= 60.00
SD1 7 > 60.00
SD1 8 Not Applicable
SD1 997 Unpopulated
SD1 999 Other

SD2 Stem Diameter Size Range (2)

Estimated range (2) of the average stem diameter within area of feature, determined in centimetres at a distance of 1.4 meters above the ground.

SD2 0 Unknown
SD2 1 > 0 and <= 10.00
SD2 2 > 10.00 and <= 30.00
SD2 3 > 30.00 and <= 60.00
SD2 4 > 60.00 and <= 100.00
SD2 5 > 100.00
SD2 6 Not Applicable
SD2 997 Unpopulated
SD2 999 Other

SDC Soil Depth Category

General depth of soil or surface material.

SDC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

SDE Soil Depth With Greater Precision

Ranges of detailed depth (meters) of soil or unconsolidated material over bedrock.

SDE 0 Unknown
SDE 1 <=0.25
SDE 2 >0.25 and <=0.5
SDE 3 >0.5 and <=1.5
SDE 4 >1.5 and <=2.5
SDE 5 >2.5 and <=5.0
SDE 6 >5.0 and <=10.0
SDE 7 >10.0
SDE 997 Unpopulated
SDE 998 Not Applicable
SDE 999 Other

SDO Sand Dune Orientation

Characteristic alignment of the dune as caused by the prevailing winds.

SDO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

SDR Stem Diameter Size With greater than 1 meter resolution

The average diameter of trees in a stand, measured at a height of 1.4 m above the ground.

SDR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

SDS Stem Diameter Size

The average diameter of trees in a stand, measured at a height of 1.4 m above the ground.

SDS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

SEA Sea Area Classification

A property of large bodies of water characterized by tidal conditions, swells, or high heavy wave action. The condition can apply to both fresh and salt water.

SEA 0 Undefined
SEA 1 Sea area in general
SEA 2 Gat
SEA 3 Bank
SEA 4 Deep
SEA 5 Bay
SEA 6 Bench
SEA 7 Basin
SEA 8 Watt
SEA 9 Trench
SEA 10 Mud Flats
SEA 11 Reef
SEA 12 Ledge
SEA 13 Canyon
SEA 14 Narrows
SEA 15 Shoal
SEA 16 Knoll
SEA 17 Ridge
SEA 18 Seamount
SEA 19 Pinnacle
SEA 20 Abyssal Plain
SEA 21 Plateau
SEA 22 Spur
SEA 23 Shelf
SEA 24 Trough
SEA 25 Saddle
SEA 26 Abyssal Hills
SEA 27 Apron
SEA 28 Archipelagic Apron
SEA 29 Borderland
SEA 30 Continental Margin
SEA 31 Continental Rise

SEA	32	Escarpment
SEA	33	Fan
SEA	34	Fracture Zone
SEA	35	Gap
SEA	36	Guyot
SEA	37	Hill
SEA	38	Hole
SEA	39	Levee
SEA	40	Median Valley
SEA	41	Moat
SEA	42	Mountains
SEA	43	Peak
SEA	44	Province
SEA	45	Rise
SEA	46	Sea Channel
SEA	47	Seamount Chain
SEA	48	Shelf-edge
SEA	49	Sill
SEA	50	Slope
SEA	51	Terrace
SEA	52	Valley
SEA	53	Canal
SEA	54	Lake
SEA	55	River
SEA	56	Reach Version 2.1: New Attribute Value to map S-57 attribute CATSEA to FACC.
SEA	57	Lowlands Version 2.1: New Attribute Value to map S-57 attribute CATSEA to FACC.
SEA	58	Canyon Lands Version 2.1: New Attribute Value to map S-57 attribute CATSEA to FACC.
SEA	59	Crater Version 2.1: New Attribute Value to map S-57 attribute CATSEA to FACC.
SEA	997	Unpopulated
SEA	998	Not Applicable
SEA	999	Other

SEC Security Classification

Defines the highest level of security associated with a feature.

SEC	0	Unknown
SEC	1	Top Secret
SEC	2	Secret
SEC	3	Confidential
SEC	4	Restricted
SEC	5	Unclassified
SEC	997	Unpopulated
SEC	998	Not Applicable
SEC	999	Other

SEQ Sequence of a Signal

Specifies the sequence of times occupied by intervals of light and eclipse.

SEQ 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

SFA Storage Facilities

Storage facilities available at or in the near vicinity.

SFA 0 Unknown
SFA 1 Soft standing only
SFA 2 Hard standing only
SFA 3 Dutch Barn
SFA 4 Warehouse
SFA 5 Specialized warehouse
SFA 6 Grain storage
SFA 7 Ore storage
SFA 8 Liquid storage
SFA 9 Explosives
SFA 10 Ammunition
SFA 11 Gaseous storage
SFA 12 Salt
SFA 13 Gravel
SFA 14 Sand
SFA 15 VALUE INTENTIONALLY LEFT BLANK (Explosives)
Version 2.1: Removed duplicate attribute value
SFA 16 Food
SFA 17 Diesel Fuel
SFA 18 Gasoline
SFA 19 Oil
SFA 20 Water
SFA 995 None
SFA 997 Unpopulated
SFA 998 Not Applicable
SFA 999 Other

SFC Sea Floor Feature Category

Type of object or area on the sea floor or below the water surface.

SFC 0 Unknown (Obstruction)
SFC 2 VALUE INTENTIONALLY LEFT BLANK (Other)
SFC 3 Fish Haven
SFC 4 Well
SFC 5 Submerged Production Platform
SFC 6 Wreckage
SFC 7 Shoaling
SFC 8 Less Water Reported
SFC 9 Unexploded Ordnance
SFC 10 Unspecified Non-submarine Contact
SFC 11 Pinnacle

SFC 997 Unpopulated
SFC 998 Not Applicable
SFC 999 Other

SGC Gradient/Slope

Percentage of slope. (i.e. The change in height divided by the horizontal distance over which the change takes place, times one hundred ((h2-h1)/d)*100.)

SGC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	-32767 to 32767	1 %	N/A

SGO Slope Gradient Orientation

The angular distance measured from true north (0 degrees) clockwise to the direction of maximum uphill slope of a feature.

SGO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

SHC Safe Horizontal Clearance

Minimum safe horizontal distance between adjacent structures on either side of a navigable channel.

SHC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

SHO Shoreline Category

Tabulates the topography and material types likely to be found on a shoreline.

SHO 0 Unknown
SHO 1 Hillocks
SHO 2 Flat
SHO 3 Sandy
SHO 4 Stony or shingly shore
SHO 5 Artificial
SHO 6 Steep
SHO 7 Glacier
SHO 8 Ice Coast
SHO 9 Steep Coast
SHO 997 Unpopulated
SHO 998 Not Applicable
SHO 999 Other

SHP Shape of Beacon

Describes the characteristic geometric form of the beacon.

SHP 0 Undefined
SHP 1 Stake/Pole
SHP 2 Withy
SHP 3 Beacon Tower
SHP 4 Lattice Beacon
SHP 5 Pile Beacon
SHP 6 Cairn

SHP	7	Buoyant Beacon
SHP	8	Daymark Board - Square
SHP	9	Daymark Board - Triangle
SHP	10	Daymark Board - Rectangle
SHP	11	Articulated Beacon
SHP	997	Unpopulated
SHP	998	Not Applicable
SHP	999	Other

SIC Snow/Ice Category

Indicates the composition of the feature.

SIC	0	Unknown
SIC	1	Snow
SIC	2	Ice
SIC	997	Unpopulated
SIC	998	Not Applicable
SIC	999	Other

SIT Signal Station, Traffic Classification

Tabulates types of signal station, traffic.

SIT	0	Undefined
SIT	1	Port control
SIT	2	Port entry and departure
SIT	3	International port traffic
SIT	4	Berthing
SIT	5	Dock
SIT	6	Lock
SIT	7	Flood barrage
SIT	8	Bridge passage
SIT	9	Dredging
SIT	10	Traffic Control Light Version 2.1: New Attribute Value to map S-57 attribute CATSIT to FACC.
SIT	997	Unpopulated
SIT	998	Not Applicable
SIT	999	Other

SL1 Slope Gradient Left (1)

Predominant slope range (1) on the left bank (facing downstream) in percent, measured from mean water level to the first accessible break in slope above the mean water level.

SL1	0	Unknown
SL1	1	<= 30
SL1	2	> 30 and <= 45
SL1	3	> 45 and <= 60
SL1	4	> 60
SL1	5	Not Applicable
SL1	997	Unpopulated
SL1	999	Other

SL2 Slope Gradient Left (2)

Predominant slope range (2) of the left bank (facing downstream) in percent, measured from mean water level to the first accessible break in slope above the mean water level.

SL2 0 Unknown
SL2 1 <= 60
SL2 2 > 60
SL2 3 Not Applicable
SL2 997 Unpopulated
SL2 999 Other

SLC Shipping Load Class

A description of any load restrictions which apply to ships using a section of waterway or facility.

SLC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	80 Characters

SLT Shoreline Type Category

The physical characteristic of the shoreline area.

SLT 0 Unknown
SLT 6 Mangrove/Nipa
SLT 8 Marsh, Swamp
SLT 10 Rocky
SLT 11 Rubble
SLT 13 Sandy
SLT 14 Stony, Shingly
SLT 15 VALUE INTENTIONALLY LEFT BLANK (Other)
SLT 16 Coral
SLT 17 Ice
SLT 997 Unpopulated
SLT 998 Not Applicable
SLT 999 Other

SM1 Surficial Material Depth Category

Estimates general depth of soil or unconsolidated surface materials, expressed in 0.5 meter increments.

SM1 0 Unknown
SM1 1 < 0.5 (Metres)
SM1 2 >= 0.5 (Metres)
SM1 997 Unpopulated
SM1 998 Not Applicable
SM1 999 Other

SMC Surface Material Category

Surface material composition excluding internal structural material.

SMC 0 Unknown
SMC 1 Aircraft
SMC 2 Aluminum
SMC 3 Ammunition
SMC 4 Ash
SMC 5 Asphalt
SMC 6 Basalt

SMC	7	Bedrock
SMC	8	Boulders
SMC	9	Brick
SMC	10	Calcareous
SMC	11	Cement
SMC	12	Chalk
SMC	13	Chemical
SMC	14	Cinders
SMC	15	Cirripedia
SMC	16	Clay
SMC	17	Coal
SMC	18	Cobble
SMC	19	Coke
SMC	20	Composition
SMC	21	Concrete
SMC	22	Conglomerate
SMC	23	Copper
SMC	24	Coral
SMC	25	Coral Head
SMC	26	Desalinated Water
SMC	27	Diamonds
SMC	28	Diatoms
SMC	29	Dolomite
SMC	30	Earthen
SMC	31	Electric
SMC	32	Eroded Lands
SMC	33	Explosives
SMC	34	Flysch
SMC	35	Food
SMC	36	Foraminifera
SMC	37	Fucus
SMC	38	Gas
SMC	39	Gasoline
SMC	40	Glass
SMC	41	Globigerina
SMC	42	Gold
SMC	43	Granite
SMC	44	VALUE INTENTIONALLY LEFT BLANK
SMC	45	Grass/Thatch
SMC	46	Gravel
SMC	47	Green Rocks
SMC	48	Ground
SMC	49	Ground (Shells)
SMC	50	Heat
SMC	51	Iron
SMC	52	Lava
SMC	53	VALUE INTENTIONALLY LEFT BLANK

SMC	54	Lead
SMC	55	Loess
SMC	56	Lumber
SMC	57	Macadam
SMC	58	Madrepores
SMC	59	Manganese
SMC	60	Marble
SMC	61	Marl
SMC	62	Masonry (Brick/Stone)
SMC	63	Mattes
SMC	64	Metal
SMC	65	Mud
SMC	66	Mussels
SMC	67	Oil
SMC	68	Oil Blister
SMC	69	Ooze
SMC	70	Oysters
SMC	71	Paper
SMC	72	Part Metal
SMC	73	Pebbles
SMC	74	Plastic
SMC	75	Polyzoa
SMC	76	Porphyry
SMC	77	Prestressed Concrete
SMC	78	Pteropods
SMC	79	Pumice
SMC	80	Quartz
SMC	81	Radiolaria
SMC	82	Radioactive Material
SMC	83	Reinforced Concrete
SMC	84	Rock/Rocky
SMC	85	Rubber
SMC	86	Rubble
SMC	87	Salt
SMC	88	Sand
SMC	89	Sandstone
SMC	90	Schist
SMC	91	Spoils/Tailings
SMC	92	Scoria
SMC	93	Sea Tangle
SMC	94	Seaweed
SMC	95	Sewage
SMC	96	Shells
SMC	97	VALUE INTENTIONALLY LEFT BLANK
SMC	98	Shingle
SMC	99	Silt
SMC	100	Silver

SMC 101 Slag
SMC 102 Sludge
SMC 103 Snow/Ice
SMC 104 Soil
SMC 105 Spicules
SMC 106 Sponge
SMC 107 Steel
SMC 108 Stone
SMC 109 Sugar
SMC 110 Travertine
SMC 111 Tufa
SMC 112 Uranium
SMC 113 Vegetation Products
SMC 114 Volcanic
SMC 115 Volcanic Ash
SMC 116 Water
SMC 117 Wood
SMC 118 Zinc
SMC 119 Distorted Surface
SMC 120 Sand and Gravel
SMC 121 Rip-Rap
SMC 122 Evaporites
SMC 124 Sand and Boulders
SMC 126 Sand and Mud
SMC 127 Karst
SMC 198 Kelp
SMC 199 Sandwaves
SMC 200 Herbaceous/Scrub Vegetation (Excluding trees)
SMC 201 Trees
SMC 202 Wetland Vegetation
SMC 203 Herbaceous Vegetation
SMC 204 Treed Vegetation
SMC 205 Paint
SMC 250 Composite - 50 % or more of the runway length is permanent
SMC 251 PEM - part concrete, part asphalt or part bitumen bound macadam
SMC 252 Permanent - hard surface type unknown
SMC 253 Bituminous - tar or asphalt mixed in place, oiled
SMC 254 Composite Soft - less than 50% of the runway length is permanent
SMC 255 Graded or rolled earth, grass on graded earth
SMC 256 Grass or earth not graded or rolled
SMC 257 Ice
SMC 258 Snow
SMC 259 Macadam - crushed rock water bound
SMC 260 Membrane - plastic or other coated fiber material
SMC 261 Mix - mix in place using non-bituminous binder such as portland cement
SMC 262 Laterite
SMC 263 Sand - sand graded, rolled or oiled

SMC	997	Unpopulated
SMC	998	Not Applicable
SMC	999	Other

SND Sounding Category

Condition of depth.

SND	0	Unknown
SND	1	Drying Heights
SND	2	No Bottom Found
SND	3	VALUE INTENTIONALLY LEFT BLANK
SND	4	VALUE INTENTIONALLY LEFT BLANK
SND	6	VALUE INTENTIONALLY LEFT BLANK
SND	7	VALUE INTENTIONALLY LEFT BLANK
SND	8	Out of position
SND	9	Slant
SND	10	Ordinary
SND	11	Not Regularly Maintained
SND	12	Depth Known Version 2.1: New Attribute Value
SND	13	Normal (IHO) Version 2.1: New Attribute Value
SND	14	Hairline (IHO) Version 2.1: New Attribute Value
SND	90	Adequately sounded
SND	91	No bottom found at depth shown
SND	92	Depth unknown
SND	93	Doubtful Sounding
SND	94	Unreliable sounding
SND	95	Least depth known
SND	96	Least depth unknown, safe clearance at value shown
SND	97	Value reported (not surveyed)
SND	98	Value reported (not confirmed)
SND	99	Maintained depth
SND	997	Unpopulated
SND	998	Not Applicable
SND	999	Other

SOH Severity of Hazard

Severity of hazard.

SOH	0	Unknown
SOH	1	Dangerous
SOH	2	Non-Dangerous
SOH	3	Obstruction
SOH	99	Non-Dangerous to surface navigation but, avoid anchoring/trawling
SOH	997	Unpopulated
SOH	998	Not Applicable
SOH	999	Other

SOU Exposition of Sounding

Indicated whether the value of a sounding is shallower than, deeper than, or within the range depth of the surrounding depth area.

SOU 0 Undefined
SOU 1 Within the range of depth of the surrounding depth area
SOU 2 Shallower than the range of depth of the surrounding depth area
SOU 3 Deeper than the range of depth of the surrounding depth area
SOU 997 Unpopulated
SOU 998 Not Applicable
SOU 999 Other

SPD Speed Limit (MPH)

The maximum speed legally permitted on a given stretch of road.

SPD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Miles Per Hour	Short Integer	0 to 32767	1 mph	N/A

SPE Spot Elevation Category

Qualifies the spot elevation.

SPE 0 Unknown
SPE 1 Top of trees
SPE 2 Out of position
SPE 3 Summit
SPE 997 Unpopulated
SPE 998 Not Applicable
SPE 999 Other

SPL Span Length Longest

Length of longest span of a bridge.

SPL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

SPM Speed Limit (KPH)

Speed Limit in kilometers per hour.

SPM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Kilometres Per Hour	Short Integer	0 to 32767	1 km/h	N/A

SPR Slope Polygon Range

Range indicating the slope of ground within delineated area of feature, reported in percent.

SPR 0 Unknown
SPR 1 <= 3
SPR 2 > 3 and <= 10
SPR 3 > 10 and <= 15
SPR 4 > 15 and <= 20
SPR 5 > 20 and <= 30
SPR 6 > 30 and <= 45

SPR	7	> 45 and <= 60
SPR	8	> 60 and <= 85
SPR	9	> 85
SPR	10	Culturally or Naturally Dissected Land (0 to >85)
SPR	997	Unpopulated
SPR	998	Not Applicable
SPR	999	Other

SR1 Slope Gradient Right (1)

Predominant slope range (1) of the right bank (facing downstream) in percent, measured from mean water level to the first break in slope above the mean water level.

SR1	0	Unknown
SR1	1	<= 30
SR1	2	> 30 and <= 45
SR1	3	> 45 and <= 60
SR1	4	> 60
SR1	5	Not Applicable
SR1	997	Unpopulated
SR1	999	Other

SR2 Slope Gradient Right (2)

Predominant slope range (2) of the right bank (facing downstream) in percent, measured from mean water level to the first break in slope above the mean water level.

SR2	0	Unknown
SR2	1	<= 60
SR2	2	> 60
SR2	3	Not Applicable
SR2	997	Unpopulated
SR2	999	Other

SRD Surface Roughness Description

Describes the condition of the surface materials that may be used for mobility prediction, construction material, and landing sites.

SRD	0	Unknown
SRD	1	No surface roughness effect
SRD	2	Area of high landslide potential
SRD	3	Uncohesive surface material/flat
SRD	4	Rough
SRD	5	Angular
SRD	6	Rounded
SRD	11	Surface of numerous cobbles and boulders
SRD	12	Areas of stony terrain
SRD	13	Stony soil with surface rock
SRD	14	Stony soil with scattered boulders
SRD	15	Stony soil with numerous boulders
SRD	16	Numerous boulders
SRD	17	Numerous rock outcrops
SRD	18	Area of scattered boulders
SRD	19	Talus slope
SRD	20	Boulder Field

SRD	31	Highly fractured rock surface
SRD	32	Weathered lava flows
SRD	33	Unweathered lava flows
SRD	34	Stony soil with numerous rock outcrops
SRD	35	Irregular surface with deep fractures of foliation
SRD	36	Rugged terrain with numerous rock outcrops
SRD	37	Rugged bedrock surface
SRD	38	Sand dunes
SRD	39	Sand dunes/low
SRD	40	Sand dunes/high
SRD	41	Active sand dunes
SRD	42	Stabilized sand dunes
SRD	43	Highly distorted area, sharp rocky ridges
SRD	51	Stony soil cut by numerous gullies
SRD	52	Moderately dissected terrain
SRD	53	Moderately dissected terrain with scattered rock outcrops
SRD	54	Dissected floodplain
SRD	55	Highly dissected terrain
SRD	56	Area with deep erosional gullies
SRD	57	Steep, rugged, dissected terrain with narrow gullies
SRD	58	Karst areas of numerous sinkholes and solution valleys
SRD	59	Karst area of numerous sinkholes
SRD	60	Karst/hummocky terrain covered with large conical hills
SRD	61	Karst/hummocky terrain covered with low, broad-based mounds
SRD	62	Arroyo/wadi/wash
SRD	63	Playa/dry lake
SRD	64	Area of numerous meander scars and/or oxbow lakes
SRD	65	Solifluction lobes and frost scars
SRD	66	Hummocky ground, areas of frost heaving
SRD	67	Area of frost polygons
SRD	68	Area containing sabkhas
SRD	69	Area of numerous small lakes and ponds
SRD	70	Area of numerous crevasses
SRD	81	Area of numerous terraces
SRD	82	Quarries
SRD	83	Strip mines
SRD	84	Quarry/gravel pit
SRD	85	Quarry/sand pit
SRD	86	Mine tailings/waste piles
SRD	87	Salt evaporators
SRD	88	Area of numerous dikes
SRD	89	Area of numerous diked fields
SRD	90	Area of numerous fences
SRD	91	Area of numerous stone walls
SRD	92	Area of numerous man-made canals/drains/ditches
SRD	93	Area of numerous terraced fields
SRD	94	Parallel earthen mounds (row crops)

SRD 95 Area of numerous hedgerows
SRD 997 Unpopulated
SRD 998 Not Applicable
SRD 999 Other

SRQ Surface Roughness Qualifier

A code which relates a surface material mapping unit to a Surface Roughness Description (SRD) value.

SRQ 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Qualifiers	Short Integer	-32767 to 32767	1 qualifier	N/A

SSC Structure Shape Category

Geometric form, appearance, or configuration of the feature.

SSC 0 Unknown
SSC 1 Barrel, Ton
SSC 2 Blimp
SSC 3 Boat Hull (Float)
SSC 4 Bullet
SSC 5 VALUE INTENTIONALLY LEFT BLANK
SSC 6 Conical/Peaked/NUN
SSC 7 Cylindrical (Upright)/CAN
SSC 9 VALUE INTENTIONALLY LEFT BLANK
SSC 10 Pillar/Spindle
SSC 11 VALUE INTENTIONALLY LEFT BLANK
SSC 12 Pyramid
SSC 13 VALUE INTENTIONALLY LEFT BLANK
SSC 14 VALUE INTENTIONALLY LEFT BLANK
SSC 15 Solid/filled
SSC 16 Spar
SSC 17 Spherical (Hemispherical)
SSC 18 Truss
SSC 19 With Radome
SSC 20 VALUE INTENTIONALLY LEFT BLANK
SSC 21 Artificial Mountain
SSC 22 Crescent
SSC 23 Ferris Wheel
SSC 24 Enclosed
SSC 25 Roller Coaster
SSC 26 Lateral
SSC 27 Mounds
SSC 28 Ripple
SSC 29 Star
SSC 30 Transverse
SSC 31 VALUE INTENTIONALLY LEFT BLANK
SSC 33 VALUE INTENTIONALLY LEFT BLANK
SSC 34 VALUE INTENTIONALLY LEFT BLANK
SSC 35 VALUE INTENTIONALLY LEFT BLANK
SSC 36 Windmotor

SSC	38	VALUE INTENTIONALLY LEFT BLANK
SSC	40	VALUE INTENTIONALLY LEFT BLANK
SSC	46	Open
SSC	52	'A' Frame
SSC	53	'H' Frame
SSC	54	'I' Frame
SSC	56	'Y' Frame
SSC	57	VALUE INTENTIONALLY LEFT BLANK
SSC	58	VALUE INTENTIONALLY LEFT BLANK
SSC	59	Telescoping Gasholder (Gasometer)
SSC	60	Mast
SSC	61	Tripod
SSC	62	VALUE INTENTIONALLY LEFT BLANK
SSC	63	VALUE INTENTIONALLY LEFT BLANK
SSC	65	Cylindrical with flat top
SSC	66	Cylindrical with domed top
SSC	71	Cylindrical/Peaked
SSC	73	Superbuoy
SSC	74	'T' Frame
SSC	75	Tetrahedron
SSC	76	Funnel
SSC	77	Arch
SSC	78	Multi-Arch
SSC	79	Round
SSC	80	Rectangular
SSC	81	Dragons Teeth
SSC	82	I-Beam
SSC	83	Square
SSC	84	Irregular
SSC	85	Diamond Shaped Buoy
SSC	86	Oval
SSC	87	Dome
SSC	88	Spherical with Column Support
SSC	89	Cylindrical or Peaked with tower support
SSC	90	High-Rise Building
SSC	91	Cylindrical
SSC	92	Cubic
SSC	93	Pole
SSC	94	Board
SSC	95	Column (Pillar)
SSC	96	Plaque
SSC	97	Statue
SSC	98	Cross
SSC	107	Tower
SSC	108	Scanner
SSC	109	Obelisk
SSC	110	Radome, Tower Mounted

SSC	997	Unpopulated
SSC	998	Not Applicable
SSC	999	Other

SSR Structure Shape of Roof

Roof shape.

SSR	0	Unknown
SSR	6	Conical/Peaked/NUN
SSR	38	Curved/Round (Quonset)
SSR	40	Dome
SSR	41	Flat
SSR	42	Gable (Pitched)
SSR	43	VALUE INTENTIONALLY LEFT BLANK
SSR	44	VALUE INTENTIONALLY LEFT BLANK
SSR	45	VALUE INTENTIONALLY LEFT BLANK
SSR	46	VALUE INTENTIONALLY LEFT BLANK
SSR	47	Sawtooth
SSR	48	VALUE INTENTIONALLY LEFT BLANK
SSR	49	VALUE INTENTIONALLY LEFT BLANK
SSR	50	With Monitor
SSR	51	With Steeple
SSR	55	Flat with Monitor
SSR	58	VALUE INTENTIONALLY LEFT BLANK
SSR	64	Gable with Monitor
SSR	65	VALUE INTENTIONALLY LEFT BLANK
SSR	66	VALUE INTENTIONALLY LEFT BLANK
SSR	71	VALUE INTENTIONALLY LEFT BLANK
SSR	72	VALUE INTENTIONALLY LEFT BLANK
SSR	77	With Cupola
SSR	78	With Turret
SSR	79	With Tower
SSR	80	With Minaret
SSR	997	Unpopulated
SSR	998	Not Applicable
SSR	999	Other

SST Sound Signal Type

Type of audible signal.

SST	0	Unknown
SST	1	Bell
SST	2	Diaphone
SST	3	Explosive Fog Signal
SST	4	Gong
SST	5	Gun
SST	6	Horn
SST	7	Nautophone
SST	8	Radio Fog Signal
SST	9	Siren
SST	10	Submarine Fog Bell

SST	11	Submarine Oscillator
SST	12	Submarine Sound Signal (Connected to Shore)
SST	13	Submarine Sound Signal (Not Connected to Shore)
SST	14	Whistle
SST	15	Reed
SST	16	None
SST	98	Tyfon
SST	997	Unpopulated
SST	998	Not Applicable
SST	999	Other

STA Station Type Category (Maritime)

Equipment or activity at site.

STA	0	Unknown
STA	1	Coast Guard
STA	2	Fireboat
STA	3	Marine Police
STA	4	Ice Signal
STA	5	Lifeboat/Rescue
STA	6	Port Control
STA	7	VALUE INTENTIONALLY LEFT BLANK
STA	8	VALUE INTENTIONALLY LEFT BLANK
STA	9	VALUE INTENTIONALLY LEFT BLANK
STA	10	VALUE INTENTIONALLY LEFT BLANK
STA	11	Pilot
STA	12	VALUE INTENTIONALLY LEFT BLANK
STA	13	Signal
STA	14	Signal Mast
STA	15	Storm Signal
STA	16	Stream Signal
STA	17	Tide Signal
STA	18	Time Ball
STA	19	Time Signal
STA	20	Unmanned Oceanographic
STA	21	Weather Signal
STA	22	Fog Signal
STA	23	VALUE INTENTIONALLY LEFT BLANK
STA	25	Semaphore
STA	26	STA
STA	27	Tidal Current Signal
STA	28	Traffic Signal
STA	29	Bridge Signal
STA	30	Lock Signal
STA	31	VALUE INTENTIONALLY LEFT BLANK
STA	32	International Port Signals
STA	33	Firing Practice Signal Station
STA	34	Signal Station, Traffic
STA	35	Warning

STA	36	Radar Surveillance Station
STA	37	Pilot Lookout Station
STA	38	Theodolite Station
STA	39	Camera Station
STA	40	RADAR Target
STA	41	SONAR Target
STA	42	UQC/WQC Station
STA	43	UEWS
STA	44	BOMIS
STA	45	Transit Hut
STA	46	FORACS Transducer 77 (FT77)
STA	47	NMH
STA	997	Unpopulated
STA	998	Not Applicable
STA	999	Other

STC Source Type Code

The source from which features are captured or upgraded.

STC	0	Unknown
STC	1	Survey Source
STC	2	Stereo Imagery Exploitation
STC	3	Mono Imagery Exploitation
STC	4	Cartographic Source
STC	5	Reported Information
STC	997	Unpopulated
STC	998	Not Applicable
STC	999	Other

STG Soil Trafficability Group (Derived from STP)

Soils described by the Unified Soil Classification System categorized by their wet weather trafficability characteristics.

STG	0	Unknown
STG	1	A [GW,GP,SW,SP]
STG	2	B [CH]
STG	3	C [GC,SC,CL]
STG	4	D [GM,SM,ML,ML-CL,MH,OL,OH]
STG	5	E [PT]
STG	6	X [Not Evaluated]
STG	997	Unpopulated
STG	998	Not Applicable
STG	999	Other

STL Seasonal Tent Location

The seasonal habitat location of nomadic people.

STL	0	Unknown
STL	1	Winter Location
STL	2	Summer Location
STL	997	Unpopulated
STL	998	Not Applicable
STL	999	Other

STP Soil Types

Soils described by the Unified Soil Classification System (USCS)

STP	0	Unknown
STP	1	GW Well graded gravels or gravel-sand mixtures, little or no fines
STP	2	GP Poorly graded gravels or gravel-sand mixtures, little or no fines
STP	3	GM Silty gravels, gravel-sand-silt mixtures
STP	4	GC Clayey gravels, gravel-sand-clay mixtures
STP	5	SW Well graded sand or gravelly sands, little or no fines
STP	6	SP Poorly graded sands or gravelly sands, little or no fines
STP	7	SM Silty sands, sand-silt mixture
STP	8	SC Clayey sands, sand-clay mixtures
STP	9	ML Inorganic silts and very fine sands, rock floor, silty or clayey fine sands or clayey with slight plasticity
STP	10	CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
STP	11	OL Organic silts and organic silty clays
STP	12	CH Inorganic clays of high plasticity, fat clays
STP	13	MH Inorganic silts, micaceous or diatomaceous
STP	14	OH Organic clays of medium to high plasticity, organic silts
STP	15	PT Peat and other highly organic soils
STP	17	ML-CL Soil type having both ML and CL characteristics
STP	18	Evaporites
STP	99	Not Evaluated
STP	501	CCM-1 (used for DA010)
STP	502	CCM-2 (used for DA010)
STP	503	CCM-3 (used for DA010)
STP	504	CCM-4 (used for DA010)
STP	505	CCM-5 (used for DA010)
STP	506	CCM-6 (used for DA010)
STP	997	Unpopulated
STP	998	Not Applicable
STP	999	Other

STQ Summer Tree Cover Density Code

Coded value indicating percent of summer canopy closure within delineated area of feature.

STQ	0	Unknown
STQ	1	<=25
STQ	2	>25 and <=50
STQ	3	>50 and <=75
STQ	4	>75
STQ	5	VALUE INTENTIONALLY LEFT BLANK (Not Applicable) Version 2.1: Removed duplicate attribute value
STQ	997	Unpopulated
STQ	998	Not Applicable
STQ	999	Other

STR Summer Tree Cover Density

Value indicating percent of summer canopy closure within delineated area of feature. (See also STQ for coded attribute)

STR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Percent	Short Integer	0 to 100	1 %	N/A

SUA Special Use Airspace Altitude Limits

Description of the altitude limits of Special Use Airspaces.

SUA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	256 Characters

SUE Survey Date - End

The end date of the survey. Coded YYYYMMDD.

SUE 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

SUP Supervision of Light

Stipulates whether the light is equipped with a standby or emergency equipment.

SUP 0 Undefined
SUP 1 Watched light
SUP 2 Unwatched light
SUP 997 Unpopulated
SUP 998 Not Applicable
SUP 999 Other

SUR Survey Category

Tabulates the various qualifiers of the survey carried out for a feature.

SUR 0 Unknown (See QUA)
SUR 1 Surveyed
SUR 2 Inadequately Surveyed
SUR 997 Unpopulated
SUR 998 Not Applicable
SUR 999 Other

SUS Survey Date - Start

The start date of the survey. Coded YYYYMMDD.

SUS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Structured Text	ASCII Text	N/A	N/A	8 Characters

SVA Slaved Variation (Declination)

The fixed value of magnetic variation applied to true direction to obtain the magnetic values for radials, courses, and headings.
Version 2.1: New Attribute

SVA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

SVC Sounding Velocity

Indicates type of correction that has been added to, or subtracted from instrument reading to obtain correct depth.

SVC 0 Unknown
SVC 1 Echo Sounder Calibrated at 4800 ft/sec Uncorrected
SVC 2 Echo Sounder Calibrated at 1500 m/sec Uncorrected
SVC 3 Mathews Tables (NP 139) Corrected
SVC 4 Sound Velocity Meter (SVM) Corrected
SVC 5 Corrected by other means of calibration
SVC 997 Unpopulated
SVC 998 Not Applicable
SVC 999 Other

SWC Soil Wetness Condition

General moisture content or condition of a soil.

SWC 0 Unknown
SWC 1 Dry
SWC 2 Moist
SWC 3 Wet
SWC 4 Frozen/Permafrost
SWC 997 Unpopulated
SWC 998 Not Applicable
SWC 999 Other

SWL Single Wheel Bearing Load

The estimated single wheel load (ESWL).

SWL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Kips	Short Integer	-32767 to 32767	1 kip	N/A

SWT Well/Spring Feature Type

Identifies the type of spring or water-hole.

SWT 0 Unknown
SWT 1 Geyser
SWT 2 Hot Spring
SWT 3 Fumarole
SWT 4 Artesian
SWT 5 Water-hole
SWT 6 Walled-In Spring
SWT 997 Unpopulated
SWT 998 Not Applicable

SWT 999 Other

TCL Tree Canopy Levels

The number of canopies (vegetation levels) in a woodland.

TCL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Levels	Short Integer	-32767 to 32767	1 level	N/A

TCS Tunnel Cross-Section

The distinctive shape of a tunnel viewed from the ends.
Version 2.1: New Attribute

TCS 0 Unknown
Version 2.1: New Attribute Value

TCS 1 Arch
Version 2.1: New Attribute Value

TCS 2 Box
Version 2.1: New Attribute Value

TCS 3 Circular
Version 2.1: New Attribute Value

TCS 997 Unpopulated
Version 2.1: New Attribute Value

TCS 998 Not Applicable
Version 2.1: New Attribute Value

TCS 999 Other
Version 2.1: New Attribute Value

TEC Technique of Sounding Measurement

Encodes the various techniques and methods of sounding measurement.

TEC 0 Undefined
TEC 1 Found by echo sounder
TEC 2 Found by side scan sonar
TEC 3 Found by multi-beam
TEC 4 Found by diver
TEC 5 Found by lead-line
TEC 6 Found by wire-drag
TEC 7 Found by Laser
TEC 8 Swept by Vertical Acoustic System
TEC 9 Found by Electromagnetic Sensor
TEC 10 Photogrammetry
TEC 11 Satellite Imagery
TEC 12 Found by Leveling
TEC 13 Computer Generated
TEC 14 Swept by side scan sonar
Version 2.1: New Attribute Value to map S-57 metadata object M_QUAL to FACC.
TEC 997 Unpopulated
TEC 998 Not Applicable
TEC 999 Other

TEL Telescope Category

Classifies the types of telescopes.

TEL 0 Unknown

TEL 1 Optical
TEL 2 Parabolic Radio Antenna
TEL 3 Radio Ground Array
TEL 997 Unpopulated
TEL 998 Not Applicable
TEL 999 Other

THM Touchdown Zone Elevation in Metres - High End

The highest elevation in the first 3000 feet of the high end usable landing surface measured from Mean Sea Level (MSL). A negative value indicates the elevation is below mean sea level.
Version 2.1: New Attribute

THM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

TID Tidal/Non-Tidal Category

Identifies whether a feature is affected by tidal water.

TID 0 Unknown
TID 1 Non-Tidal
TID 2 Tidal/Tidal Fluctuating
TID 997 Unpopulated
TID 998 Not Applicable
TID 999 Other

TIM Time Attribute

The time, expressed in hours of duration, for which an activity is permitted.

TIM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Hours	Short Integer	0 to 24	1 hr	N/A

TLM Touchdown Zone Elevation in Metres - Low End

The highest elevation in the first 3000 feet of the low end usable landing surface measured from Mean Sea Level (MSL). A negative value indicates the elevation is below mean sea level.
Version 2.1: New Attribute

TLM 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

TLN Total Length

The total length of the traveled way between two locations.

TLN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Long Integer	N/A	1 m	N/A

TMC Top Mark Characteristic

The characteristic shape secured at the top of a buoy or beacon to aid identification.

TMC 0 Unknown
TMC 1 East Mark (2 cones - base together)
TMC 2 Isolated Danger (2 balls)
TMC 3 North Mark (2 cones - pointing up)

TMC	4	Port Hand (can or cylinder)
TMC	5	Safe Water (1 ball)
TMC	6	Special (X)
TMC	7	Starboard Hand (1 cone - pointing up)
TMC	8	South Mark (2 cones - pointing down)
TMC	9	West Mark (2 cones - points together)
TMC	10	Nun
TMC	11	VALUE INTENTIONALLY LEFT BLANK
TMC	12	Ball
TMC	13	Can
TMC	14	St. Andrew's Cross
TMC	15	Ball Over Cone
TMC	16	Cone Over Ball
TMC	17	Broom Point Up
TMC	18	Perch
TMC	19	Diamond
TMC	20	Broom Point Down
TMC	21	Cone (Point Upwards)
TMC	22	Cone (Point Downwards)
TMC	23	Upright Cross
TMC	24	Optical Reflector
TMC	25	Can (Open)
TMC	26	Can (Filled)
TMC	27	Ball (Open)
TMC	28	Ball (Filled)
TMC	29	Can Over Ball (Open)
TMC	30	Cross Over Ball (Filled)
TMC	31	Diamond Over Ball (Filled)
TMC	32	Double Cone, Points Apart (Open)
TMC	33	None
TMC	34	VALUE INTENTIONALLY LEFT BLANK (Square) Version 2.1: Removed duplicate attribute value
TMC	35	"T" Shape
TMC	36	Cross Over Ball (Open)
TMC	37	Double ball (Open)
TMC	38	Flag
TMC	39	Sphere over Rhombus
TMC	40	Square
TMC	41	Rectangle, Horizontal
TMC	42	Rectangle, Vertical
TMC	43	Trapezium, Up
TMC	44	Trapezium, Down
TMC	45	Triangle, Point Up
TMC	46	Triangle, Point Down
TMC	47	Circle
TMC	48	Two Upright Crosses (One Over the Other)
TMC	49	Triangle Pointing Up Over a Circle

TMC 50 Upright Cross Over a Circle
TMC 51 Rhombus Over a Circle
TMC 52 Circle Over a Triangle Pointing Up
TMC 53 Other Shape
Version 2.1: Removed reference to S-57 attribute INFORM.
TMC 997 Unpopulated
TMC 998 Not Applicable
TMC 999 Other

TNG Tonnage

Tonnage of a sunken or stranded wreck, a hulk, or other vessel. Reference STANAG 3715.

TNG 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Tons	Long Integer	N/A	1 tn	N/A

TOP Shape of Top Mark

Tabulates the various shapes of top mark.

TOP 0 Unknown
TOP 1 Cone, point up
TOP 2 Cone, point down
TOP 3 Sphere
TOP 4 2 spheres
TOP 5 Cylinder
TOP 6 Board
TOP 7 X-shaped
TOP 8 Cross shaped
TOP 9 Cube, point up
TOP 10 2 cones, point-to-point
TOP 11 2 cones, base-to-base
TOP 12 Diamond
TOP 13 2 cones (points upward)
TOP 14 2 cones (points downward)
TOP 15 Besom (point up)
TOP 16 Besom (point down)
TOP 997 Unpopulated
TOP 998 Not Applicable
TOP 999 Other

TRA Traversability

Indicates whether the feature is traversable by foot.

TRA 0 Unknown
TRA 1 Traversable
TRA 2 Non-Traversable
TRA 4 Polygon
TRA 5 Pond
TRA 997 Unpopulated
TRA 998 Not Applicable
TRA 999 Other

TRE Tree Type Category

Type of tree coverage.

TRE	0	Unknown
TRE	1	Deciduous
TRE	2	Evergreen
TRE	3	Mixed
TRE	997	Unpopulated
TRE	998	Not Applicable
TRE	999	Other

TRF Traffic Flow

Encodes the general destination of traffic.

TRF	0	Undefined
TRF	1	Inbound
TRF	2	Outbound
TRF	3	One-way
TRF	4	Two-way
TRF	997	Unpopulated
TRF	998	Not Applicable
TRF	999	Other

TRK Recommended Track Classification

Tabulates types of recommended track.

TRK	0	Undefined
TRK	1	Based on a system of fixed marks
TRK	2	Not based on a system of fixed marks
TRK	997	Unpopulated
TRK	998	Not Applicable
TRK	999	Other

TS1 Tree Spacing Range (1)

Estimated range (1) of the average distance between trees in a stand, determined in decimetres from center to center of adjacent trees.

TS1	0	Unknown
TS1	1	> 0 and <= 5.0
TS1	2	> 5.0 and <= 10.0
TS1	3	> 10.0 and <= 15.0
TS1	4	> 15.0 and <= 20.0
TS1	5	> 20.0 and <= 25.0
TS1	6	> 25.0 and <= 30.0
TS1	7	> 30.0 and <= 35.0
TS1	8	> 35.0 and <= 40.0
TS1	9	> 40.0 and <= 50.0
TS1	10	> 50.0 and <= 60.0
TS1	11	> 60.0 and <= 80.0
TS1	12	> 80.0 and <= 100.0
TS1	13	> 100.0 and <= 150.0
TS1	14	> 150.0
TS1	15	Not Applicable

TS1 997 Unpopulated
TS1 999 Other

TS2 Tree Spacing Range (2)

Estimated range (2) of the average distance between trees in a stand, determined in decimetres from center to center of adjacent trees.

TS2 0 Unknown
TS2 1 > 0 and <= 30.0
TS2 2 > 30.0 and <= 70.0
TS2 3 > 70.0 and <= 100.0
TS2 4 > 100.0
TS2 5 Not Applicable
TS2 997 Unpopulated
TS2 999 Other

TS3 Tree Spacing Range (3)

Estimated range (3) of the average distance between trees in a stand, determined in decimetres from center to center of adjacent trees.

TS3 0 Unknown
TS3 1 >0 and <=10.0
TS3 2 >10.0 and <=20.0
TS3 3 >20.0 and <=30.0
TS3 4 >30.0 and <=50.0
TS3 5 >50.0 and <=70.0
TS3 6 >70.0 and <=100.0
TS3 7 >100.0 and <=150.0
TS3 8 >150.0
TS3 997 Unpopulated
TS3 998 Not Applicable
TS3 999 Other

TSC Tree Spacing Category

Average distance between adjacent tree centerlines within area of feature.

TSC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

TSD Tree Spacing With greater than 1 meter resolution

Average distance between adjacent tree centerlines within area of feature.
Version 2.1: Corrected Typo - changed increments from 1 Meter to 0.1 Meter.

TSD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

TSP Traffic Scheme Part

Component of the traffic routing system.

TSP 0 Unknown
TSP 1 Arrow
TSP 2 Outer Boundary
TSP 3 Separation Zone Area

TSP 4 Separation Zone Line
TSP 5 Separation Zone Point
TSP 6 Inbound Area
TSP 7 Outbound Area
TSP 997 Unpopulated
TSP 998 Not Applicable
TSP 999 Other

TSR Tailored Surface Roughness Description

Describes a unique condition of the surface materials or surface geomorphology that may be used for mobility prediction, construction material, and landing sites, and is not covered under the standard SRD values.

TSR 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

TSS Traffic Separation Scheme Classification

Tabulates types of traffic separation schemes.

TSS 0 Undefined
TSS 1 IMO - adopted
TSS 2 Not IMO - adopted
TSS 997 Unpopulated
TSS 998 Not Applicable
TSS 999 Other

TST Transmission Line Suspension

Types of suspension of power transmission lines between pylons.

TST 0 Unknown
TST 1 Normal Suspension
TST 2 Catenary (Over Mountains)
TST 3 Catenary (Over Water)
TST 997 Unpopulated
TST 998 Not Applicable
TST 999 Other

TTC Tower Type Category

Appearance or configuration of the feature.

TTC 0 Unknown
TTC 1 Bridge
TTC 2 Observation/Lookout
TTC 3 VALUE INTENTIONALLY LEFT BLANK (Other)
TTC 4 Undefined
TTC 5 Light tower
TTC 6 Water tower
TTC 7 Radio tower
TTC 8 Cooling tower
TTC 9 Radar tower
TTC 10 Lookout tower
TTC 11 Television Tower
TTC 12 Fire

TTC	13	Mooring Tower, articulated loading platform , single anchor leg
TTC	14	Powerline
TTC	15	Loran
TTC	16	Control
TTC	17	Microwave
TTC	997	Unpopulated
TTC	998	Not Applicable
TTC	999	Other

TUC Transportation Use Category

Identifies the primary user, function, or authority of the transportation system.

TUC	0	Unknown
TUC	1	Both Road and Railroad
TUC	2	Highway
TUC	3	Railroad
TUC	4	Road
TUC	6	Street
TUC	7	Through Route
TUC	8	Air Traffic Control
TUC	12	Marine
TUC	13	Air
TUC	14	Bus
TUC	17	Pedestrian
TUC	18	Pipeline
TUC	19	Animal
TUC	20	Aircraft
TUC	21	Ship
TUC	22	Automotive
TUC	23	Boat
TUC	24	Bulk Motor Boat/Barge
TUC	25	VALUE INTENTIONALLY LEFT BLANK
TUC	26	Passenger
TUC	27	Chair lift
TUC	28	Ski tow
TUC	29	Sleigh tow
TUC	30	Cart tow
TUC	31	Motor Cycle
TUC	32	Bicycle
TUC	33	Minerals
TUC	34	Waterway
TUC	35	No Transport Use
TUC	36	Slip Road/Access Road
TUC	37	Portage
TUC	38	Canal
TUC	39	Caravan Route
TUC	40	Subway
TUC	41	Aqueduct
TUC	42	Both Road and Runway

TUC 997 Unpopulated
TUC 998 Not Applicable
TUC 999 Other

TXT Text Attribute

Narrative or other description.

TXT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	Lexical	N/A	N/A	256 Characters

TY3 Type of Benchmark (Airfield)

Indicates whether the benchmark is a primary airfield control (PAC) or a secondary airfield control (SAC).
Version 2.1: New Attribute

TY3 0 Unknown
Version 2.1: New Attribute Value
TY3 1 Primary Airfield Control Station (PACS)
Version 2.1: New Attribute Value
TY3 2 Secondary Airfield Control Station (SACS)
Version 2.1: New Attribute Value
TY3 997 Unpopulated
Version 2.1: New Attribute Value
TY3 998 Not Applicable
Version 2.1: New Attribute Value
TY3 999 Other
Version 2.1: New Attribute Value

TZH Touchdown Zone Elevation in Feet - High End

The highest elevation in the first 3000 feet of the high end usable landing surface measured from MSL. A negative value indicates the elevation is below mean sea level.
Version 2.1: New Attribute

TZH 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

TZL Touchdown Zone Elevation in Feet - Low End

The highest elevation in the first 3000 feet of the low end usable landing surface measured from MSL. A negative value indicates the elevation is below mean sea level.
Version 2.1: New Attribute

TZL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

UBC Underbridge Clearance Category

Clearance below bridge, measured from the lowest surface level to the base of the lower of either a cross beam or the lowest bridge deck.

UBC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

UBD Underbridge Clearance With Greater Precision

Clearance below bridge, measured from the lowest surface level to the base of the lower of either a cross beam or the lowest bridge deck.

UBD 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

UID Feature Identification Number

Unique numeric feature identifier within a dataset.
Version 2.1: Added "within a dataset" to the definition.

UID 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Long Integer	N/A	1 unit	N/A

UMC Underlying Material Characteristics

Characteristics of underlying material composition of feature.

UMC 0 Unknown
UMC 1 Broken
UMC 2 Coarse
UMC 3 Decayed
UMC 4 Fine, Minute Particles
UMC 5 Gritty
UMC 6 Hard
UMC 7 Rotten
UMC 8 Soft
UMC 9 Sticky
UMC 10 Stiff
UMC 11 Streaky
UMC 12 Tenacious
UMC 13 Uneven
UMC 17 Calcareous
UMC 18 Flinty
UMC 19 Glacial
UMC 20 Ground
UMC 21 Large
UMC 22 Rocky
UMC 23 Small
UMC 24 Speckled
UMC 25 Varied
UMC 26 Volcanic
UMC 27 Medium
UMC 62 Masonry (Brick/Stone)
Version 2.1: New Attribute Value
UMC 997 Unpopulated
UMC 998 Not Applicable
UMC 999 Other

UNI Units

Identifies the units of measure. [Reference DIGEST Part 3 for Units associated with DIGEST header data.]"

UNI	0	Unknown
UNI	1	Metres
UNI	2	Fathoms and Feet Version 2.1: New Attribute Value
UNI	3	Fathoms and Fractions Version 2.1: New Attribute Value
UNI	11	Nautical Miles
UNI	22	Feet
UNI	23	Kilometers
UNI	24	Yards
UNI	25	Cables Version 2.1: New Attribute Value
UNI	26	Degrees of Arc Version 2.1: New Attribute Value
UNI	27	Millimetres Version 2.1: New Attribute Value
UNI	997	Unpopulated
UNI	998	Not Applicable
UNI	999	Other

USE Usage

Use (identifies the primary user, function, or controlling authority).

USE	0	Unknown
USE	1	VALUE INTENTIONALLY LEFT BLANK
USE	2	VALUE INTENTIONALLY LEFT BLANK
USE	3	VALUE INTENTIONALLY LEFT BLANK
USE	4	National
USE	5	State
USE	6	Private
USE	7	Tribal
USE	8	Military
USE	9	VALUE INTENTIONALLY LEFT BLANK
USE	10	VALUE INTENTIONALLY LEFT BLANK (Other)
USE	11	Motel/Hotel
USE	12	Apartment
USE	13	Open
USE	14	VALUE INTENTIONALLY LEFT BLANK
USE	15	VALUE INTENTIONALLY LEFT BLANK
USE	16	City
USE	17	Advertising Billboard
USE	18	Scoreboard
USE	19	Highway Sign
USE	20	Closed
USE	21	Restricted
USE	22	Joint Military/Civilian

USE	23	International
USE	24	Unidentified Aircraft Landing Area
USE	25	Federal
USE	26	Primary/1st Order
USE	30	Secondary/2nd Order
USE	31	Tertiary/3rd Order
USE	32	Insular
USE	33	Provincial
USE	37	Interstate
USE	41	Industrial
USE	42	Commercial
USE	43	Institutional
USE	44	Residential
USE	45	Agricultural
USE	48	Decoy
USE	49	Civilian/Public
USE	50	Limited
USE	51	Telegraph
USE	52	Telephone
USE	53	Power
USE	57	Marine
USE	60	Avalanche
USE	61	Refugee
USE	62	Prisoner
USE	68	Animal sanctuary
USE	69	Levee/Dike
USE	70	Reserve/Reservation
USE	73	Terminus/Terminal
USE	74	Low Altitude Enroute
USE	75	High Altitude Enroute
USE	76	Low and High Altitude Enroute
USE	77	Short Take-off Landing Approach
USE	78	Visual Approach
USE	79	Non-Precision Instrument Approach
USE	80	Precision Instrument Approach
USE	81	Entry
USE	82	Exit
USE	83	Transaction
USE	84	Feeder
USE	85	Initial Approach Fix
USE	86	Final Approach Fix
USE	87	Visual Descent Point
USE	88	Missed Approach Point
USE	89	Radar
USE	90	Mileage Break Down
USE	91	NAVAID Changeover
USE	92	Altimeter Change

USE	93	Compulsory Reporting Points
USE	94	Non-Compulsory Reporting Points
USE	95	Alert Apron/Hardstand
USE	96	Operational Apron/Hardstand
USE	97	Hangar/Apron
USE	98	Base Flight Apron
USE	99	Engine Test Pad/Apron
USE	100	Transient Apron
USE	101	Depot Apron
USE	102	Stub Apron
USE	103	Dispersal Hardstand
USE	104	Pad Hardstand
USE	105	Refueling Hardstand
USE	106	Parking Hardstand
USE	107	Engine Run-up Hardstand
USE	108	Firing-In Hardstand
USE	109	Compass Rose Hardstand
USE	110	Maintenance Hardstand
USE	111	Quaternary/4th Order
USE	112	Quintary/5th Order
USE	113	Regional
USE	114	Communal
USE	115	Snow Shed
USE	116	Rock Shed
USE	117	Outfall
USE	118	Intake
USE	119	Berthing of vessels
USE	120	Recreational
USE	121	Aircraft Facility/airport reference point
USE	122	Firebreak
USE	123	Tourist
USE	124	Irrigation
USE	125	Retaining
USE	127	As a Causeway
USE	128	Mixed Urban or built-up Land
USE	129	Military District
USE	130	Transportation
USE	131	Flood Barrage
USE	132	Container
USE	133	Single Point Mooring
USE	134	Utilities and Communication
USE	136	As a Fill
USE	139	Fill
USE	140	Medical
USE	141	Forest Preserve
USE	142	Flood Control and/or Rate Measurement
USE	143	ARIP Initial Point

USE	144	ARCP Control Point
USE	145	Nav Check Point
USE	146	Exit or End
USE	147	Entry or Starting
USE	148	Anchor Point
USE	150	Alternate Entry
USE	151	Alternate Exit
USE	152	Alternate Entry or Exit
USE	153	Turning
USE	154	Compass Adjustment
USE	155	Prohibited Area
USE	156	Timeball
USE	157	Clock
USE	158	Reserved
USE	159	Mandatory
USE	160	Maritime Station
USE	900	Butts
USE	901	School
USE	986	VALUE INTENTIONALLY LEFT BLANK (Military District) Version 2.1: Removed duplicate attribute value
USE	990	Unpopulated Version 2.1: New Attribute Value
USE	991	Not Applicable
USE	992	Drag Strip
USE	993	Filtration Pond
USE	994	Dugout
USE	995	Drinking Water
USE	996	Triangulation
USE	997	Cable Sign/Pipeline Indicator
USE	998	Sea-Plane landing area
USE	999	Other

USP Urban Street Pattern

The predominant geometric configuration of streets found within the delineated area of the feature.

USP	0	Unknown
USP	2	Rectangular/Grid-Regular
USP	3	Rectangular/Grid-Irregular
USP	4	Curvilinear (cluster)
USP	6	Concentric/Radial-Regular
USP	7	Concentric/Radial-Irregular
USP	9	Mixed-Curvilinear (cluster) and Rectangular (grid)
USP	10	Mixed-Concentric/Radial and Rectangular (grid)
USP	11	Mixed-Curvilinear (cluster) and Concentric/Radial
USP	12	VALUE INTENTIONALLY LEFT BLANK (Other)
USP	13	Linear Strip
USP	997	Unpopulated
USP	998	Not Applicable
USP	999	Other

UT1 UTM Grid Northing

Full 7 digits of the UTM grid coordinate Northing value. (UTS, along with the last five digits of both UT1 and UT2 can designate a feature's coordinates on the earth's surface.)

UT1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	8 Characters

UT2 UTM Grid Easting

Full 6 digits of the UTM grid coordinate Easting value. (UTS along with the last five digits of both UT1 and UT2 can designate a feature's coordinates on the earth's surface.)

UT2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	8 Characters

UTS UTM Square Identification

Locates feature to within a specific 100,000 m square, by a 5-digit alphanumeric designation. 1st two numbers are the UTM grid zone, 3rd letter is a specific 6-degree x 8-degree block within the grid zone (the unique Grid Zone Designation), and the last

UTS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	5 Characters

UZ1 UTM Grid Zone (1)

Two-character grid zone identifier.

UZ1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	2 Characters

UZ2 UTM Grid Zone (2)

Two-character grid zone identifier.

UZ2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	2 Characters

VA1 Variation anomaly value with greater than 1 degree resolution

The difference between the magnetic variation of the disturbance area and the magnetic variation of the surrounding area.

VA1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	N/A	N/A	N/A

VAL Value

Generic numeric (integer) value.

VAL 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Short Integer	-32767 to 32767	1 unit	N/A

VAV Variation Anomaly Value

The difference between the magnetic variation of the disturbance area and the magnetic variation of the surrounding area.

VAV 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

VC1 Vertical Clearance, Closed With greater than 1 meter resolution

Encodes the vertical clearance of an object in closed condition, e.g. a closed lifting bridge, measured from the horizontal plane towards the object overhead.

VC1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

VC2 Vertical Clearance, Opened With greater than 1 meter resolution

Encodes the vertical clearance of an object in opened condition, e.g. an open lifting bridge, measured from the horizontal plane towards the object overhead.

VC2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

VC3 Vertical Clearance, Safe With greater than 1 meter resolution

Encodes the safe vertical clearance of an object measured from the horizontal plane toward the object.

VC3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

VCA Void Collection Attribute

Reason data is not collected.

VCA 0 Unknown
VCA 1 Data Not Requested By User
VCA 2 Area Too Rough to Collect
VCA 3 No Available Imagery
VCA 4 Different Height Threshold Within Data Block
VCA 5 Low Data Collection Criteria
VCA 6 No Available Map Source
VCA 7 No Suitable Imagery
VCA 8 Data Not Required
VCA 997 Unpopulated
VCA 998 Not Applicable
VCA 999 Other

VCC Vertical Clearance, Closed

Encodes the vertical clearance of an object in closed condition, e.g. a closed lifting bridge, measured from the horizontal plane towards the object overhead.

VCC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

VCO Vertical Clearance, Opened

Encodes the vertical clearance of an object in opened condition, e.g. an open lifting bridge, measured from the plane towards the object overhead.

VCO 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

VCS Vertical Clearance, Safe

Encodes the safe vertical clearance of an object measured from the plane toward the object overhead.

VCS 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

VCT Void Collection Type

Identifies type of missing information.

VCT 0 Unknown
VCT 1 Relief
VCT 2 VALUE INTENTIONALLY LEFT BLANK (Other)
VCT 997 Unpopulated
VCT 998 Not Applicable
VCT 999 Other

VDC Vertical (Sounding) Datum Category

The tidal datum to which soundings and drying heights are referenced. It is usually taken to correspond to a low water stage of the tide. (Also known as Chart Sounding Datum).

VDC 0 Unknown
VDC 1 VALUE INTENTIONALLY LEFT BLANK
VDC 2 High Water
VDC 3 Higher High Water
VDC 4 Indian Spring Low Water
VDC 5 Low Water
VDC 6 Lower Low Water
VDC 7 Mean High Water
VDC 8 Mean High Water Neaps
VDC 9 Mean High Water Springs
VDC 10 Mean Higher High Water
VDC 11 Mean Low Water
VDC 12 Mean Low Water Neaps
VDC 13 Mean Low Water Springs
VDC 14 Mean Lower Low Water
VDC 15 Mean Sea Level
VDC 16 Mean Tide Level
VDC 17 Neap Tide
VDC 18 Spring Tide
VDC 19 Mean Lower Low Water Springs
VDC 20 Lowest Astronomical Tide
VDC 21 Chart Datum (Unspecified)

VDC 22 Highest Astronomical Tide (HAT)
Version 2.1: Modified name by adding "(HAT)" to agree with IHO usage.
VDC 24 Mean Higher High Water Springs
VDC 26 Highest Normal High Water
VDC 28 Highest High Water
VDC 30 Indian Spring High Water
VDC 90 Lowest Low Water
VDC 91 Lowest Low Water Springs
VDC 92 Approximate Mean Low Water Springs
VDC 93 Low Water Springs
VDC 94 Approximate Lowest Astronomical Tide
VDC 95 Nearly Lowest Low Water
VDC 96 Approximate Mean Low Water
VDC 97 Approximate Mean Lower Low Water
VDC 98 Approximate Mean Sea Level
VDC 99 High Water Springs
VDC 100 Equinoctial Spring Low Water
VDC 101 Local Datum
VDC 102 International Great Lakes Datum 1985
VDC 103 Mean Water Level
VDC 104 Lower Low Water Large Tide
VDC 105 Higher High Water Large Tide
VDC 106 Highest Astronomical Tide
VDC 107 Nearly Highest High Water
Version 2.1: New Attribute Value to map S-57 attribute VERDAT to FACC.
VDC 997 Unpopulated
VDC 998 Not Applicable
VDC 999 Other

VEC Vehicle Capacity (Number of Vehicles)

Number of vehicles that a feature can accommodate.

VEC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Vehicles	Short Integer	-32767 to 32767	1 vehicle	N/A

VEG Vegetation Characteristics

Type of plant or plantings.

VEG 0 Unknown
VEG 1 Dry Crops
VEG 2 VALUE INTENTIONALLY LEFT BLANK
VEG 3 VALUE INTENTIONALLY LEFT BLANK
VEG 4 Rice Paddies
VEG 5 Agriculture with scattered forests or rows of trees
VEG 6 Cranberry
VEG 7 Peat
VEG 8 Pasture, meadow, steppe
VEG 9 Grassland with scattered trees
VEG 10 Tropical Grass

VEG	11	Casuarina
VEG	12	Coniferous
VEG	16	Nipa Palm
VEG	17	Palm
VEG	18	Filao
VEG	19	Mangrove
VEG	20	Grove
VEG	22	Wheat
VEG	23	Corn
VEG	24	Deciduous
VEG	25	Evergreen
VEG	26	Cork-Oak
VEG	27	Fir
VEG	28	Beech
VEG	29	Eucalyptus
VEG	30	Oak
VEG	31	Pine
VEG	32	Walnut
VEG	33	Maple
VEG	34	Poplar
VEG	35	Olive
VEG	36	Chestnut
VEG	37	Larch
VEG	38	Cypress
VEG	39	Peach
VEG	40	Apple
VEG	41	Carob
VEG	42	Almond
VEG	43	Citrus
VEG	44	Elm
VEG	45	Ilex
VEG	46	Birch
VEG	47	Ash
VEG	48	Hazel
VEG	49	Mixed Deciduous
VEG	50	Mixed Trees
VEG	51	Herb/Shrub
VEG	52	Forest Clearing
VEG	53	Brushland open to medium density
VEG	54	Brushland medium to dense density
VEG	55	With Trees
VEG	56	Without Trees
VEG	57	Agriculture with scattered trees or rows of trees
VEG	58	Reed
VEG	59	Moss
VEG	60	Kelp
VEG	61	Sea Weed

VEG 62 Sea Grass
VEG 63 Saragasso
VEG 64 Wet
VEG 65 Alpine
VEG 66 Garden
VEG 67 Heath/Heathland
VEG 997 Unpopulated
VEG 998 Not Applicable
VEG 999 Other

VEM Quality of Vertical Measurement

Qualifiers of the various values of vertical measurement.

VEM 0 Undefined
VEM 1 Measured
VEM 2 Estimated
VEM 997 Unpopulated
VEM 998 Not Applicable
VEM 999 Other

VGT Volcanic Geologic Type

The type of geologic formation created by volcanic activity.

VGT 0 Unknown
VGT 1 Volcano
VGT 2 Cinder Cone
VGT 3 Shield
VGT 4 Caldera
VGT 5 Composite
VGT 997 Unpopulated
VGT 998 Not Applicable
VGT 999 Other

VH1 Predominant Vegetation Height Range (1)

Range of predominant height (in meters) of vegetation within delineated area of feature (First Range).

VH1 0 Unknown
VH1 1 <= 2
VH1 2 > 2 and <= 5
VH1 3 > 5 and <= 10
VH1 4 > 10 and <= 15
VH1 5 > 15 and <= 20
VH1 6 > 20 and <= 30
VH1 7 > 30 and <= 40
VH1 8 > 40
VH1 9 > 20 and <= 25
VH1 10 > 25 and <= 30
VH1 11 > 30 and <= 35
VH1 12 > 35
VH1 13 Not Applicable
VH1 997 Unpopulated
VH1 999 Other

VH2 Predominant Vegetation Height Range (2)

Range of predominant height (in meters) of vegetation within delineated area of feature (Second Range).

VH2 0 Unknown
VH2 1 <= 5
VH2 2 > 5 and <= 20
VH2 3 > 20
VH2 4 Not Applicable
VH2 997 Unpopulated
VH2 999 Other

VH3 Predominant Vegetation Height Range (3)

A range of predominant height (in meters) of vegetation within delineated area of feature (Third Range).

VH3 0 Unknown
VH3 1 >0 and <=5
VH3 2 >5 and <=10
VH3 3 >10 and <=20
VH3 4 >20 and <=40
VH3 5 >40
VH3 997 Unpopulated
VH3 998 Not Applicable
VH3 999 Other

VIS Visibility of Light

Encodes the specific visibility of light.

VIS 0 Undefined
VIS 1 High intensity
VIS 2 Low intensity
VIS 3 Faint
VIS 4 Intensified
VIS 5 Unintensified
VIS 6 Visibility deliberately restricted
VIS 7 Obscured
VIS 8 Partially obscured
VIS 997 Unpopulated
VIS 998 Not Applicable
VIS 999 Other

VOI Vertical Obstruction Identifier

Identification code that uniquely identifies a feature that is a vertical obstruction to low-level flight. (1-2 First two characters of NA4 - Country Code; 3-6 World Aeronautical Chart (WAC) Identifier; 7-10 Unique Obstruction Identification Number; 11 P

VOI 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	11 Characters

VRC Vegetation Roughness Category

An indexed value indicating the roughness of vegetation.

VRC 0 Unknown
VRC 1 0.00 100% reduction
VRC 2 0.05

VRC	3	0.10	
VRC	4	0.15	
VRC	5	0.20	
VRC	6	0.25	
VRC	7	0.30	
VRC	8	0.35	
VRC	9	0.40	
VRC	10	0.45	
VRC	11	0.50	50% reduction
VRC	12	0.55	
VRC	13	0.60	
VRC	14	0.65	
VRC	15	0.70	
VRC	16	0.75	
VRC	17	0.80	
VRC	18	0.85	
VRC	19	0.90	
VRC	20	0.95	
VRC	21	1.00	0% reduction
VRC	22	Not evaluated area where development has precluded evaluation of soil	
VRC	23	Not Applicable	
VRC	997	Unpopulated	
VRC	999	Other	

VRF Visual Reflector Status

Indicates the presence or absence of a visual reflector on a buoy, beacon, etc.
Version 2.1: New Attribute

VRF	0	Unknown Version 2.1: New Attribute Value
VRF	1	Present Version 2.1: New Attribute Value
VRF	2	Not Present Version 2.1: New Attribute Value
VRF	997	Unpopulated Version 2.1: New Attribute Value
VRF	998	Not Applicable Version 2.1: New Attribute Value
VRF	999	Other Version 2.1: New Attribute Value

VRR Vertical Reference Category

Relative location referenced to sounding datum, unless otherwise indicated.

VRR	0	Unknown
VRR	1	Above Surface/Does Not Cover (at High Water)
VRR	2	Awash at Sounding Datum
VRR	4	Below Surface/Submerged
VRR	8	Covers and Uncovers
VRR	9	Not Applicable
VRR	997	Unpopulated

VRR 999 Other

WD1 Minimum Traveled Way Width

Minimum width of the traveled way, excluding hard pavements and shoulders (in decimetres).

WD1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

WD2 Total Usable Width

Total usable width including pavements and hard shoulders (in decimetres).

WD2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

WD3 Military Gap Width

The minimum horizontal bridging distance between banks (in decimetres).

WD3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Short Integer	-32767 to 32767	1 dm	N/A

WD4 Wet Gap Width

The wet gap width at low tide (in meters).

WD4 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

WD5 Width Top

The width at the top of a feature (in meters).

WD5 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

WD6 Width Bottom

The width at the bottom of a feature (in meters).

WD6 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

WDA Water Depth Average

The average water depth (in meters).

WDA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

WDT Date of report

The date a non-submarine contact was reported. Reference STANAG 3715.

WDT 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII text	N/A	N/A	8 Characters

WFT Well Feature Type

Type of well.

WFT 0 Unknown
WFT 1 Water hole
WFT 2 Walled-in
WFT 3 Artesian Well
WFT 4 Fountain
WFT 5 Dug or Drilled Well
WFT 6 Dug
Version 2.1: New Attribute Value
WFT 7 Drilled
Version 2.1: New Attribute Value
WFT 997 Unpopulated
WFT 998 Not Applicable
WFT 999 Other

WGF Width in Feet

A measurement of the shorter of two linear axes. For a square feature, measure either axis. For a round feature, width shall be equal to LEN. For a bridge, the width is the measurement perpendicular to the axis between the abutments.

Version 2.1: New

WGF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Floating Point	N/A	N/A	N/A

WGP Width with greater than 1 meter resolution

A measurement of the shorter of two linear axes. For a square feature, measure either axis. For a round feature, width shall be equal to LEN. For a bridge, the width is the measurement perpendicular to the axis between the abutments.

Version 2.1: New

WGP 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

WID Width

A measurement of the shorter of two linear axes. For a square feature, measure either axis. For a round feature, width shall be equal to LEN. For a bridge, the width is the measurement perpendicular to the axis between the abutments.

WID 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-32767 to 32767	1 m	N/A

WKT Wreck Type

Type of wreck as listed in Non Submarine Contacts list. Reference STANAG 3715.

WKT	0	Unknown
WKT	1	Anomalies
WKT	2	Aircraft
WKT	3	Auxiliary
WKT	4	Battleship
WKT	5	Barge
WKT	6	Buoy
WKT	7	Caisson
WKT	8	Aircraft Carrier
WKT	9	Cargo
WKT	10	Subchaser
WKT	11	Coaster
WKT	12	Cruiser
WKT	13	Ship Debris (plates, misc. metal)
WKT	14	Destroyer, Destroyer Escort, Corvette
WKT	15	Dredge
WKT	16	Drill Vessel or Drill Rig
WKT	17	Explosives
WKT	18	Fishing Vessel
WKT	19	Fishing Reef
WKT	20	Ferry
WKT	21	Frigate
WKT	22	Gunboat
WKT	23	Hospital Ship
WKT	24	Hydrographic Survey, Air Cushion, Hydrofoil
WKT	25	Junk
WKT	26	Lash Vessel
WKT	27	Landing Craft, Infantry (LCI)
WKT	28	Gas Carrier, Natural Petroleum
WKT	29	Landing Ship, Infantry (LSI)
WKT	30	Landing Ship, Tank (LST)
WKT	31	Lightship
WKT	32	Minesweeper, Minelayer
WKT	33	Net Tender
WKT	34	Bulk Carrier
WKT	35	Obstruction
WKT	36	Passenger Cargo
WKT	37	Patrol Boat
WKT	38	Pinnacle Rock
WKT	39	Roll On - Roll Off
WKT	40	Sailing Ship
WKT	41	Sea Bee, Lash Barge
WKT	42	Submarine Float
WKT	43	Submarine
WKT	44	Survey Vessel

WKT 45 Tanker
WKT 46 Tender, Submarine, Airplane, Oil Rig
WKT 47 Target
WKT 48 Torpedo Boat
WKT 49 Transport
WKT 50 Tug
WKT 51 Trawler
WKT 52 Very Large Container
WKT 53 Well Head
WKT 54 Yacht
WKT 997 Unpopulated
WKT 998 Not Applicable
WKT 999 Other

WLE Water Level Effect

Encodes the possible effects of the surrounding water.

WLE 0 Unknown
WLE 1 Partly submerged at high water
WLE 2 Always dry
WLE 3 Always under water/submerged
WLE 4 Covers and uncovers
WLE 5 Awash
WLE 6 Drying
WLE 7 Subject to Inundation or Flooding
WLE 8 Floating
Version 2.1: New Attribute Value to map S-57 attribute WATLEV to FACC.
WLE 997 Unpopulated
WLE 998 Not Applicable
WLE 999 Other

WOC Width of Crest

Predominant distance across the crest of the dam, measured perpendicular to the centerline of its length along the crest.

WOC 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

WPC Work in Progress Category

Type of work in progress.

WPC 0 Unknown
WPC 1 Land Reclamation
WPC 2 Construction of Structures
WPC 997 Unpopulated
WPC 998 Not Applicable
WPC 999 Other

WPI Port Index

Unique maritime port identifier.

WPI 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text String	ASCII Text	N/A	N/A	24 Characters

WPT Waypoint Description Code

The name/type of a named waypoint

WPT 0 Unknown
WPT 1 Airport waypoint
WPT 2 Essential waypoint
WPT 3 Off-airway waypoint
WPT 4 Runway waypoint
WPT 5 Non-essential waypoint
WPT 6 Transition essential waypoint
WPT 7 VOR, VORDME, VORTAC
WPT 8 End of continuous airway procedure
WPT 9 Uncharted airway intersection
WPT 10 ATC compulsory waypoint
WPT 11 Gateway fix
WPT 12 First leg of missed approach
WPT 13 Final approach fix (FAF)
WPT 14 Holding fix
WPT 15 Final approach course fix
WPT 16 Missed approach point (MAP)
WPT 17 Runway End Coordinate
Version 2.1: New Attribute Value
WPT 18 Initial Approach Fix (IAF)
Version 2.1: New Attribute Value
WPT 19 Inner Marker (IM)
Version 2.1: New Attribute Value
WPT 20 Middle Marker (MM)
Version 2.1: New Attribute Value
WPT 21 Outer Marker (OM)
Version 2.1: New Attribute Value
WPT 22 DME Fix
Version 2.1: New Attribute Value
WPT 23 Back Course Marker (BCM)
Version 2.1: New Attribute Value
WPT 24 Fan Marker (FM)
Version 2.1: New Attribute Value
WPT 997 Unpopulated
WPT 998 Not Applicable
WPT 999 Other

WRK Wreck Classification

Tabulates types of wrecks.

WRK 0 Undefined
WRK 1 Non-dangerous wreck

WRK 2 Dangerous wreck
WRK 3 Remains of wreck/foul area
WRK 4 Wreck showing mast/masts
WRK 5 Wreck showing any portion of hull or superstructure
WRK 997 Unpopulated
WRK 998 Not Applicable
WRK 999 Other

WRN Wreck Number

A unique number identifying a wreck or other non-submarine contact. Reference STANAG 3715.

WRN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Numeric	Long Integer	N/A	1 unit	N/A

WSC Waste/Scrap Type Category

Identifies type of waste/scrap within defined feature limits.

WSC 0 Unknown
WSC 1 Automobile
WSC 997 Unpopulated
WSC 998 Not Applicable
WSC 999 Other

WSR Source of report

The source of a reported non-submarine contact. Reference STANAG 3715.

WSR 0 Unknown
WSR 8 Report SONAR verified
WSR 9 Report MAD verified
WSR 10 Japanese Naval and Merchant Losses during WW II By All Causes NAVEXOS P-468
WSR 11 US Losses - Director, Fleet Operations
WSR 12 H.O. Files
WSR 13 COMNAVPAC
WSR 14 COMNAVFE
WSR 15 H.O. Chart Reports and Charts
WSR 16 H.O. Notice to Mariners
WSR 17 Lloyds and Marine Underwriter's Reports
WSR 18 The Imperial Japanese Navy in WW II
WSR 19 U.S. Navy at War 1941-1945
WSR 20 German, Japanese, and Italian Submarine Losses in WW II
WSR 21 Swedish Merchant Losses 1914-1920
WSR 22 H.O. Wreck Information List and Supplement dated 10 MAR 1945 and 30 SEP 1946
WSR 23 American Ship Casualties of WW I
WSR 24 U.S. Coast Guard and Geodetic Survey Records
WSR 25 Tenth Fleet Records (OP-374)
WSR 26 Naval Losses of All Nations 9/3/39 - 8/15/45
WSR 27 Italian Naval and Merchant Losses, WW II
WSR 28 List of Danish War Losses 1914 - 1918
WSR 29 British Merchant Vessels Captured or Destroyed by Enemy Action 1914 - 1918
WSR 30 Abstracts of Losses 1914 - 1918
WSR 31 British and Foreign Merchant Ships Lost During WW II

WSR 32 A List of Neutral Ships Sunk by Germany
WSR 33 Greek Losses WW II
WSR 34 Italian Naval Losses - WW I
WSR 35 Spanish Merchant Losses - WW I
WSR 36 Netherlands Merchant Losses - WW I
WSR 37 Italian Merchant Losses - WW I
WSR 38 Maritime Declarations for Norwegian Ships for War Losses 1914 - 1918
WSR 39 Reports of Known Wrecks by U.S. Coast Guard Districts 1950
WSR 40 France - Naval and Merchant Losses during WW I
WSR 41 Sonar Reports and MAD Reports, U.S. Navy
WSR 42 Maritime Commission also ONI List WW I
WSR 43 Smaling Soforklaringer - Danish Ship War Losses 1914 - 1918
WSR 44 Merchant Vessels of the U.S. Lost (Commerce Department)
WSR 45 Naval Chronology WW II
WSR 46 Ship Visit Reports
WSR 47 Spanish Hydrographic Office
WSR 48 British Admiralty Wreck Charts 1921
WSR 49 Swedish Board of Shipping and Navigation, Hydrographic Dept.
WSR 50 British Admiralty Wreck Charts, 1961
WSR 51 Portugal Hydrographic Office
WSR 52 Italian Navy Survey
WSR 53 State of Shipping Casualties (Resulting in total loss in St. Lawrence River and Gulf, on the Atlantic Coast from 1896 up to date)
WSR 54 Italian Naval Surveys Charts and Lists
WSR 55 ONI
WSR 56 VALUE INTENTIONALLY LEFT BLANK
WSR 57 R.C.N. Wreck List (RCN Pub. 272)
WSR 58 Dutch Wreck List
WSR 59 North Sea Fishing Charts
WSR 60 Photographs of Pinnacles and Miscellaneous Metals
WSR 61 Coast and Geodetic Survey (National Ocean Survey) Charts
WSR 62 Radio Navigation Warning
WSR 63 OMAN National Hydrographic Office
WSR 997 Unpopulated
WSR 998 Not Applicable
WSR 999 Other

WT2 Width of Second Traveled Way

Minimum width of a second traveled way implementing the shorter width distance, excluding hard pavements and shoulders (in decimetres).

WT2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Floating Point	N/A	N/A	N/A

WTC Weather Type Category

Weather conditions under which a feature is usable.

WTC 0 Unknown
WTC 1 All Weather

WTC 2 Fair/Dry Weather
WTC 3 Winter Only
WTC 4 All Weather (Limited Traffic Due to Weather)
WTC 997 Unpopulated
WTC 998 Not Applicable
WTC 999 Other

WTI Wall Type Identifier

Type of wall structure category.

WTI 0 Unknown
WTI 1 Standing
WTI 2 Retaining
WTI 3 VALUE INTENTIONALLY LEFT BLANK (Other)
WTI 997 Unpopulated
WTI 998 Not Applicable
WTI 999 Other

WTR Winter Tree Cover Density Code

Coded value indicating percent of winter canopy closure within delineated area of feature.

WTR 0 Unknown
WTR 1 <= 25
WTR 2 > 25 and <= 50
WTR 3 > 50 and <= 75
WTR 4 > 75
WTR 5 Not Applicable
WTR 997 Unpopulated
WTR 999 Other

WV1 Water Velocity Average 1

Range of water velocity, estimated in meters/second within delineation of feature exclusive of high water due to runoff or low water due to drought.

WV1 0 Unknown
WV1 1 <= 1.5
WV1 2 > 1.5
WV1 3 Not Applicable
WV1 997 Unpopulated
WV1 999 Other

WVA Water Velocity Average

Average water velocity, estimated in meters/second within delineation of feature exclusive of high water due to runoff or low water due to drought.

WVA 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres/Sec.	Short Integer	-32767 to 32767	1 m/s	N/A

XPD Primary Display Mode

The normal display status of the feature.

XPD 0 Unknown
XPD 1 Normal Display (On)
XPD 2 Display Partially Suppressed
XPD 3 Display Fully Suppressed

XPD 997 Unpopulated
XPD 998 Not Applicable
XPD 999 Other

XSA Spatial Alignment

The existence status of the feature's spatial alignment.

XSA 0 Unknown
XSA 1 Alignment Definite
XSA 2 Reported Alignment
XSA 3 Approximate Alignment
XSA 4 Feature Connector
XSA 997 Unpopulated
XSA 998 Not Applicable
XSA 999 Other

YDH Water Depth Mean (Seasonal High Water)

The average seasonal high water depth range (in meters).

YDH 0 Unknown
YDH 1 <=0.8
YDH 2 >0.8 and <=1.6
YDH 3 >1.6 and <=2.4
YDH 4 >2.4
YDH 997 Unpopulated
YDH 998 Not Applicable
YDH 999 Other

YDL Water Depth Mean (Seasonal Low Water)

The average seasonal low water depth range (in meters).

YDL 0 Unknown
YDL 1 <=0.8
YDL 2 >0.8 and <=1.6
YDL 3 >1.6 and <=2.4
YDL 4 >2.4
YDL 997 Unpopulated
YDL 998 Not Applicable
YDL 999 Other

YLN Length of Greater Precision

A measurement of the longer of two axis capable of being expressed in decimal meter units.

YLN 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Decimetres	Floating Point	N/A	N/A	N/A

YSU Service Branch

Identifies a specific military organization.

YSU 0 Unknown
YSU 1 Air Force
YSU 2 Army
YSU 3 Coast Guard
YSU 4 Marines

YSU 5 Navy
YSU 6 VALUE INTENTIONALLY LEFT BLANK (Other)
YSU 7 Joint
YSU 997 Unpopulated
YSU 998 Not Applicable
YSU 999 Other

YVH Water Velocity Mean (Seasonal High Water)

Average normal seasonal high water velocity range estimated in meters/second, within delineation of the feature, exclusive of high water due to runoff or low water due to drought.

YVH 0 Unknown
YVH 1 <=0.5
YVH 2 >0.5 and <=1.5
YVH 3 >1.5 and <=2.5
YVH 4 >2.5
YVH 997 Unpopulated
YVH 998 Not Applicable
YVH 999 Other

YVL Water Velocity Mean (Seasonal Low Water)

Average normal seasonal low water velocity range estimated in meters/second, within delineation of the feature, exclusive of high water due to runoff or low water due to drought.

YVL 0 Unknown
YVL 1 <=0.5
YVL 2 >0.5 and <=1.5
YVL 3 >1.5 and <=2.5
YVL 4 >2.5
YVL 997 Unpopulated
YVL 998 Not Applicable
YVL 999 Other

YWQ Water Quality Attribute

Description of the drinking quality of water.

YWQ 0 Unknown
YWQ 1 Potable
YWQ 2 Treatable
YWQ 3 Contaminated
YWQ 997 Unpopulated
YWQ 998 Not Applicable
YWQ 999 Other

YWT Depth to Water Table

Ranges of average depth (meters) of a zone of saturation except where bounded by an impermeable body, in which no water table exists.

YWT 0 Unknown
YWT 1 >0 and <=0.3
YWT 2 >0.3 and <=1.2
YWT 3 >1.2
YWT 4 At ground surface
YWT 997 Unpopulated
YWT 998 Not Applicable

YWT 999 Other

ZV1 Lowest Z-value

Elevation above a given datum to the lowest portion of the feature.

ZV1 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-400 to 30000	1 m	N/A

ZV2 Highest Z-Value

Elevation above a given datum to the highest portion of the feature.

ZV2 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-400 to 30000	1 m	N/A

ZV3 Airfield/Aerodrome elevation

The highest point of an airport's usable runways measured in meters from mean sea level.

ZV3 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Short Integer	-400 to 30000	1 m	N/A

ZV6 Lowest Z-value With greater than 1 meter resolution

Elevation above a given datum to the lowest portion of the feature.

ZV6 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

ZV7 Highest Z-Value with greater than 1 meter resolution

Elevation above a given datum to the highest portion of the feature.

ZV7 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	N/A	N/A

ZVF Highest Z-Value in Feet

Height measured in feet above a given datum to the highest portion of the feature.

ZVF 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Feet	Short Integer	-1200 to 32767	1 ft	N/A