


Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Vertical	
	Center of Antenna Supporting Structure	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal	Vertical	
	± 1 ft	Orthometric	Ellipsoidal
		± 1 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID		
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System		
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.		
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.		
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.		
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.		
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.		

offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to “visual”)
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.14.Navaid Equipment – Middle Marker (MM)

Definition: A marker beacon that defines a point along the glideslope of an ILS normally located at or near the point of decision height (ILS Category I). It is keyed to transmit alternate dots and dashes, with the alternate dots and dashes keyed at the rate of 95 dot/dash combinations per minute on a 1300 Hz tone, which is received aurally and visually by compatible airborne equipment.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	

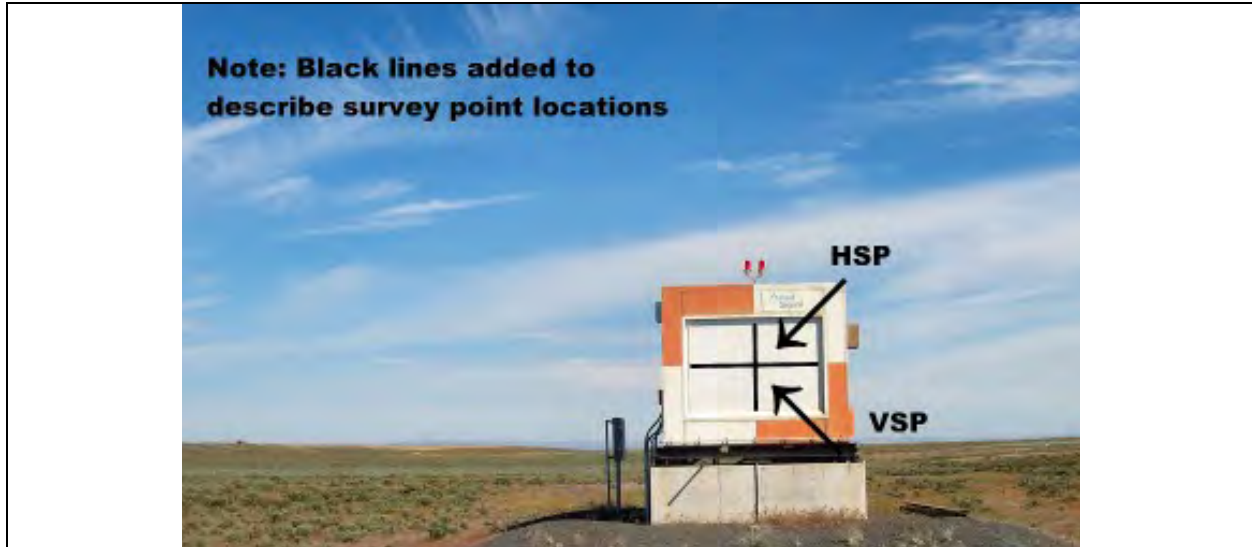
Information Assurance Level	Unclassified		
Equivalent Standards	AIXM	<i>NavaidEquipment</i>	Extension
	FGDC	<i>NavaidEquipmentExtension</i>	Extension
	SDSFIE	<i>navigational aid point</i>	
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .		
Related Features			
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Vertical	
	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
			
Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 10 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.		

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.15.Navaid Equipment – MLS Azimuth Antenna (MLSAZ)

Definition: Antenna in a Microwave Landing System (MLS) providing horizontal guidance for incoming aircraft. MLS is precision instrument approach system operating in the microwave spectrum which normally consists of an Azimuth Station, an Elevation Station and Precision Distance Measuring Equipment.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Phase Center Reference Point		Phase Center Reference Point	




Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 1 ft	± 1 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to “visual”)
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.16.Navaid Equipment – MLS Elevation Antenna (MLSEZ)

Definition: Antenna in a Microwave Landing System (MLS) providing vertical guidance for incoming aircraft. MLS is precision instrument approach system operating in the microwave spectrum which normally consists of an Azimuth Station, an Elevation Station and Precision Distance Measuring Equipment.	
Feature Group	Navigational Aids

Feature Class Name	NavaidEquipment		
Feature Type	Point		
CADD Standard Requirements			
Layer/Level	Description		
C-AFLD-AIDS-	Airfield Navigational Aid -		
	Color	Line Type	Line Weight
AutoDesk Standards	4	Continuous	1
MicroStation Standards	7		7
Information Assurance Level	Unclassified		
Equivalent Standards	AIXM	NavaidEquipment	Extension
	FGDC	NavaidEquipmentExtension	Extension
	SDSFIE	navigational aid point	
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3.		
Related Features			
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	Phase Center Reference Point		Phase Center Reference Point
			
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 1 ft		Orthometric ± 0.25 ft
Resolution	Geographic Coordinates		Distances and Elevations
	Hundredth of arc second		Nearest one foot
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature		

description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.

referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.17.Navaid Equipment – Non-Directional Beacon (NDB)

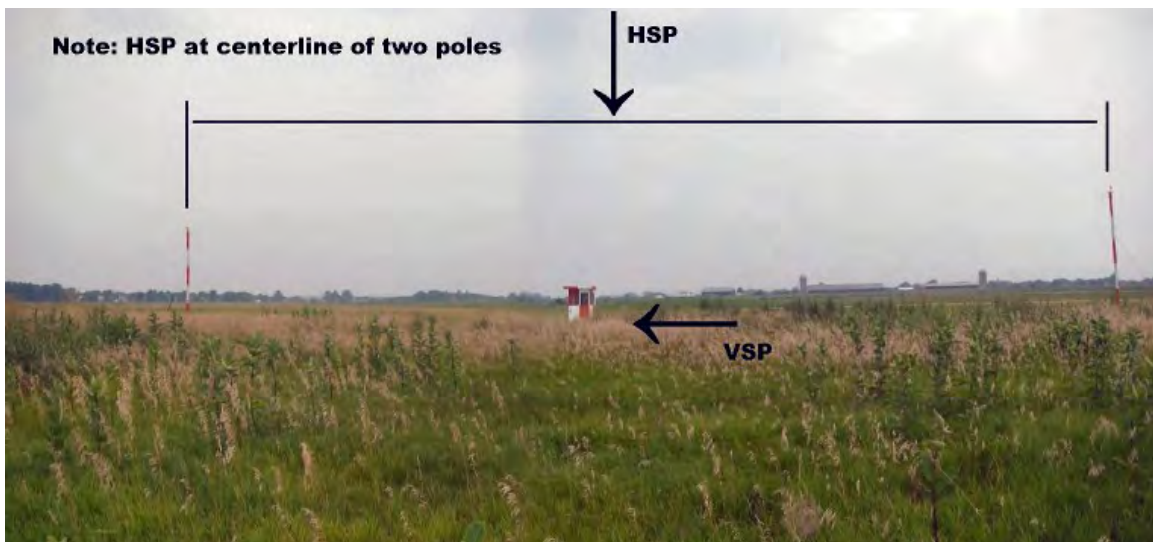
Definition: An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and "home" on or track to or from the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			

Survey Point Location	Horizontal	Vertical
	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.

The following photograph displays an NDB of the single frame type:



The following photography displays a NDB of the dual frame type:



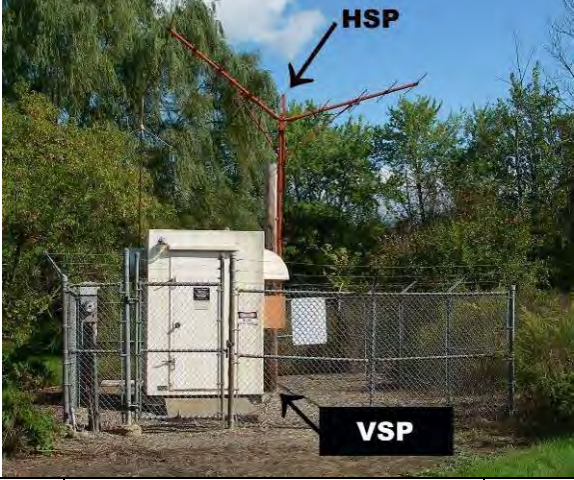
Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 10 ft	± 20 ft	N/A

Resolution	Geographic Coordinates	Distances and Elevations
	Hundredth of arc second	Nearest one foot
Feature Attributes		
Attribute (Datatype)	Description	
name (VARCHAR2 (50))	Name of the feature	
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.	
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]	
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID	
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System	
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.	
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.	
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.	
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.	
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.	
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.	
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
owner (String 75)	The owner of the facility	

runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.18.Navaid Equipment – Outer Marker (OM)

Definition: A marker beacon at or near the glideslope intercept altitude of an ILS approach. It is keyed to transmit two dashes per second on a 400 Hz tone, which is received aurally and visually by compatible airborne equipment. The OM is normally located four to seven miles from the runway threshold on the extended centerline of the runway.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			

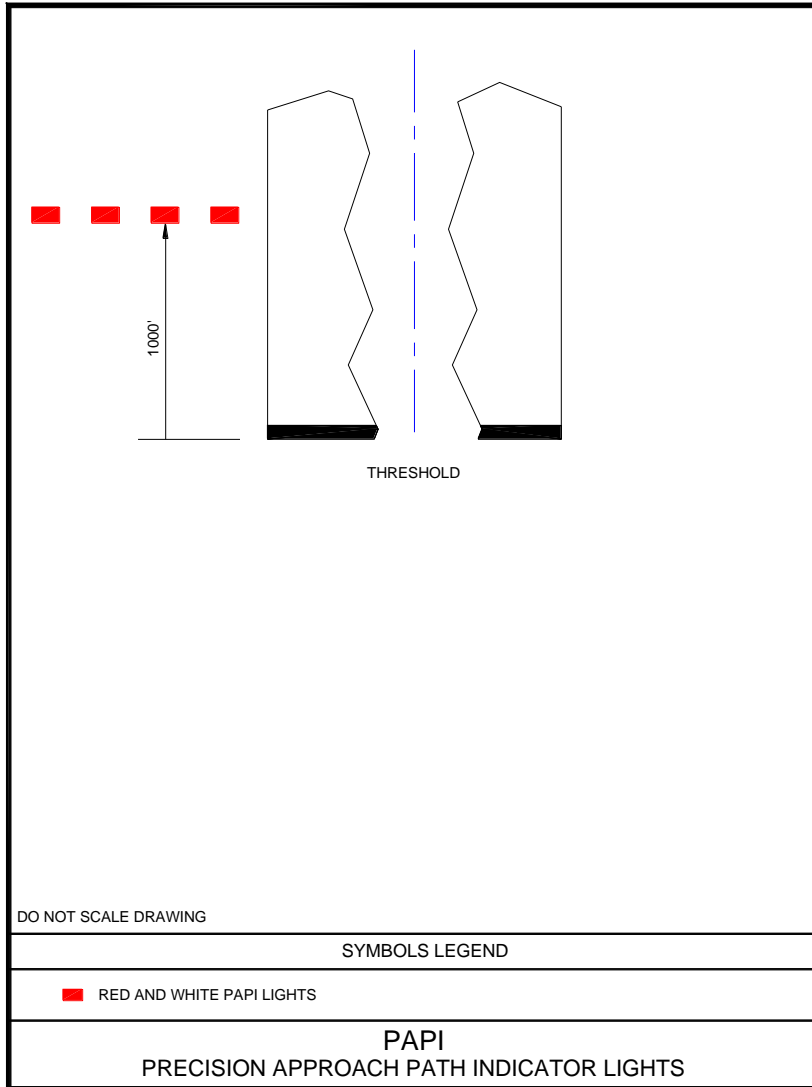
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation		No monumentation required.		
Survey Point Location	Horizontal		Vertical	
	Center of Antenna Array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
				
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 10 ft		Orthometric	Ellipsoidal
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		

navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.

ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

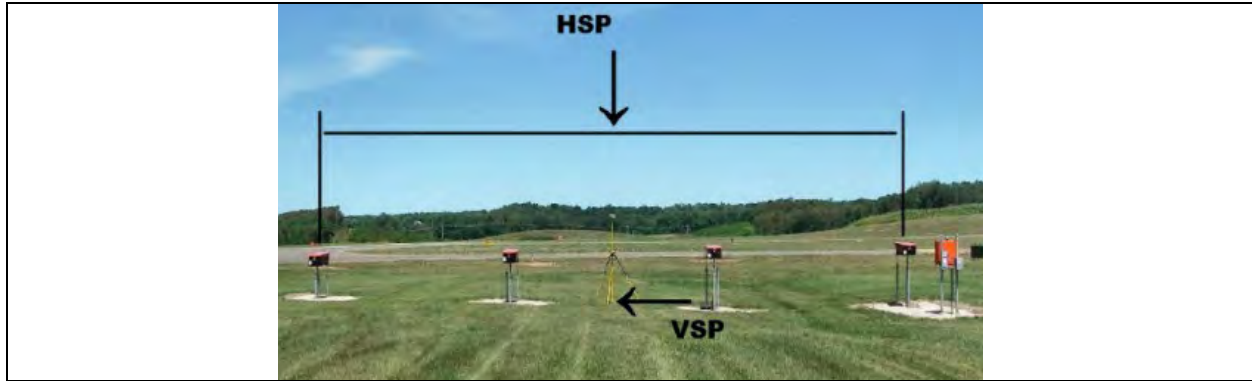
5.10.19.Navaid Equipment – Precision Approach Path Indicator (PAPI) System

Definition: An airport lighting facility, similar to VASI, providing vertical approach slope guidance to aircraft during approach to landing. PAPIs consist of a single row of either two or four lights, normally installed on the left side of the runway, and have an effective visual range of about 5 miles during the day and up to 20 miles at night. PAPIs radiate a directional pattern of high intensity red and white focused light beams which indicate that the pilot is "on path" if the pilot sees an equal number of white lights and red lights, with white to the left of the red; "above path" if the pilot sees more white than red lights; and "below path" if the pilot sees more red than white lights.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				



The PAPI is a simple visual aid to assist pilots during their approach to landing in Visual Flight Rules (VFR) conditions. It enables pilots to acquire the correct glide slope and subsequently to maintain their position on it, thus ensuring an accurate approach and landing. The PAPI system consists of four sharp transition projector units located at the side of the runway spaced laterally ± 30 foot intervals. A second complementary set is sometimes provided on the opposite side of the runway. The setting angles of the red/white interfaces of the four units are graded; the differences in angle between the units being typically 20 minutes of arc. The nominal glide slope is midway between the angular settings of the center pair of units and the on-glide-slope signal and is thus two red and two white lights in the bar. If the aircraft goes below the glide slope, the pilot will see a progressively increasing number of red lights. Conversely, if the aircraft goes above the glide slope, the number of white lights seen is increased.

Monumentation	No monumentation required.	
Survey Point Location	Horizontal	Vertical
	Center of light array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 5 ft	± 10 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.

stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to “visual”)
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.20.Navaid Equipment – Precision Approach Radar (PAR) Touchdown Reflectors

Definition: Radar equipment in some ATC facilities operated by the FAA and/or the military services at joint-use civil/military locations and separate military installations to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway.	
Feature Group	Navigational Aids
Feature Class Name	NavaidEquipment
Feature Type	Point
CADD Standard Requirements	
Layer/Level	Description
C-AFLD-AIDS-	Airfield Navigational Aid -

	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 10 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)		Specifies the type of NAVAID		

navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.

Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.
-------------------------	---

5.10.21.Navaid Equipment – Pulse Light Approach Slope Indicator (PLASI) System

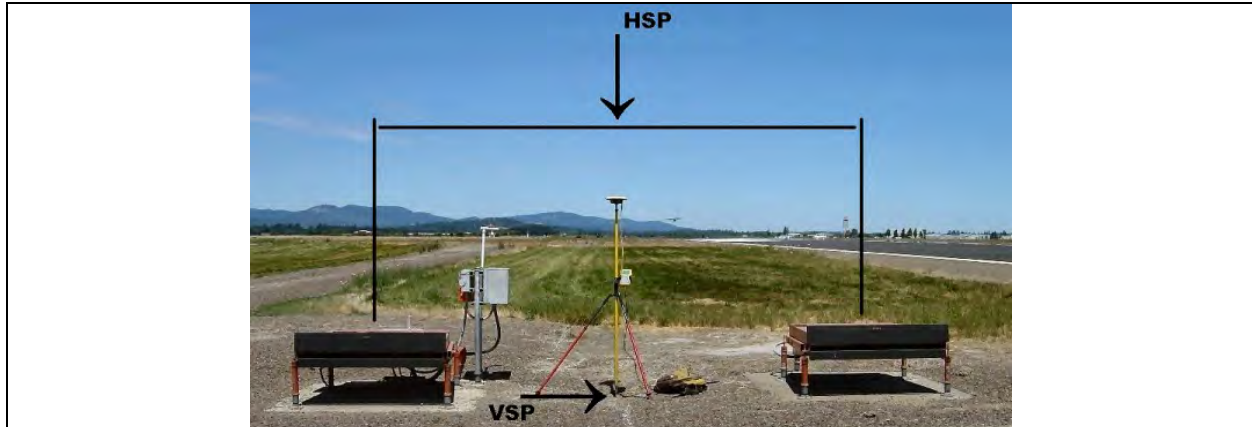
Definition: Pulse Light Approach Slope Indicator (PLASI) systems are a visual approach aid for use in visual flight conditions.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of light array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.			

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.22.Navaid Equipment – Pulsating Visual Approach Slope Indicator (PVASI)

Definition: The Visual Approach Slope Indicator (VASI) is a system of lights on the side of an airport runway that provides visual descent guidance information during the approach to a runway.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational_aid_point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of light array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 5 ft	± 10 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	

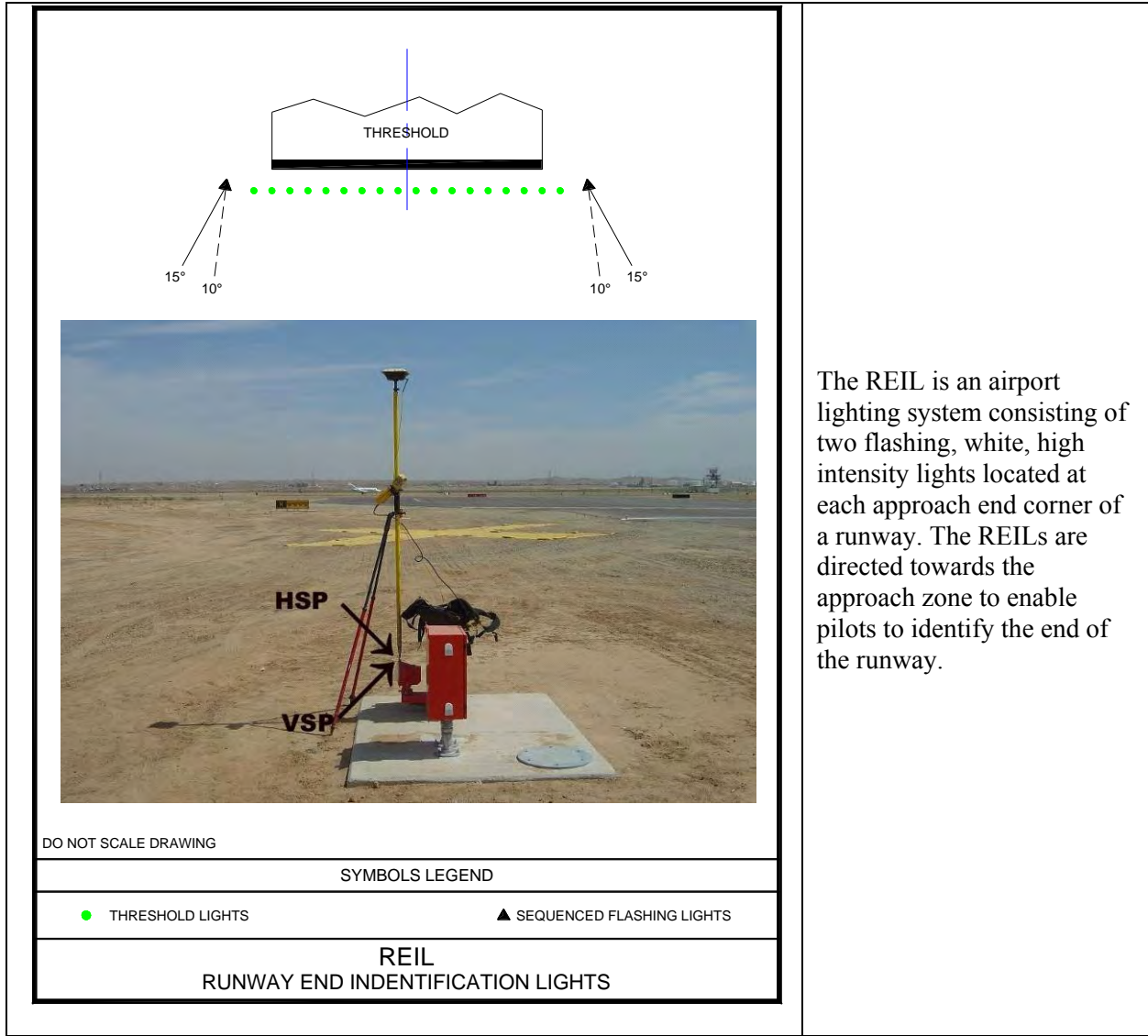
Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDS. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.23.Navaid Equipment – Runway End Identifier Lights (REIL)

Definition: Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.	
Feature Group	Navigational Aids
Feature Class Name	NavaidEquipment
Feature Type	Point

CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				



The REIL is an airport lighting system consisting of two flashing, white, high intensity lights located at each approach end corner of a runway. The REILs are directed towards the approach zone to enable pilots to identify the end of the runway.

Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Vertical	
	Center of Light	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal ± 3 ft	Vertical	
		Orthometric ± 5 ft	Ellipsoidal N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature	
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.	

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.24.Navaid Equipment – Simplified Directional Facility (SDF)

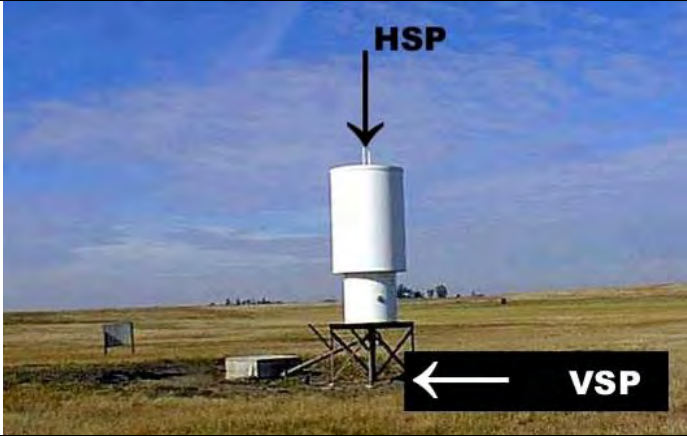
Definition: NAVAID used for nonprecision instrument approaches. The final approach course is similar to that of an ILS localizer except that the SDF course may be offset from the runway, generally not more than 3 degrees, and the course may be wider than the localizer, resulting in a lower degree of accuracy.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			

Survey Point Location	Horizontal	Vertical	
	Center of Antenna Supporting Structure	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal	Vertical	
	± 1 ft	Orthometric	Ellipsoidal
		± 1 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID		
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System		
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.		
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.		
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.		
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.		
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.		

offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.25.Navaid Equipment – Tactical Air Navigation (TACAN)

Definition: An ultra-high frequency electronic rho-theta air navigation aid which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>	Extension	

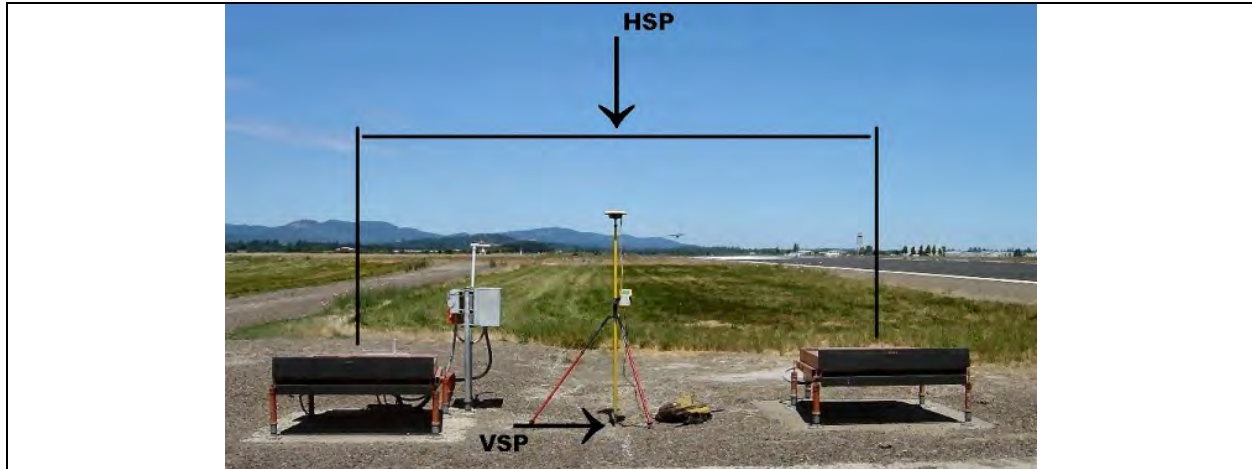
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of Antenna Cover		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
				
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 10 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.		

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.26.Navaid Equipment – Tricolor Visual Approach Slope Indicator System (TRCV)

Definition: Tri-color visual approach slope indicators normally consist of a single light unit projecting a three-color visual approach path into the final approach area of the runway upon which the indicator is installed.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3 .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of light array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Accuracy Requirements (in feet)	Horizontal	Vertical	
	± 5 ft	Orthometric ± 10 ft	Ellipsoidal N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature	
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.	
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]	
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)		Specifies the type of NAVAID	
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)		Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System	
useCode (Enumeration: CodeUseCode)		The code that represents the airspace structure in which the aeronautical navigational aid is utilized.	
antennaToThresholdDistance (Real)		The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.	

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to “visual”)
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDS. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.27.Navaid Equipment – “T” Visual Approach Slope Indicator System (T-VASI)

Definition: T-VASI system provides approach slope guidance by means of illuminated symbols like the PAPI.	
Feature Group	Navigational Aids
Feature Class Name	NavaidEquipment
Feature Type	Point



CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of light array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric ± 10 ft	Ellipsoidal ± 10 ft
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)		Specifies the type of NAVAID		

navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.

Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.
-------------------------	---

5.10.28.Navaid Equipment – VHF Omni Directional Range (VOR)

Definition: A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the NAS. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. Voice features may be used by ATC or FSS for transmitting instructions/information to pilots.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavigationalAidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of Antenna Cover		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	

 <p style="text-align: center;">Standalone VOR</p>	 <p style="text-align: center;">VOR coupled with DME</p>			
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 10 ft	Orthometric	Ellipsoidal	
Resolution	Geographic Coordinates		Distances and Elevations	
	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)		Specifies the type of NAVAID		
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)		Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System		
useCode (Enumeration: CodeUseCode)		The code that represents the airspace structure in which the aeronautical navigational aid is utilized.		
antennaToThresholdDistance (Real)		The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.		

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDS. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.29.Navaid Equipment – Visual Approach Slope Indicator System (VASI)

Definition: An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he/she is "on path" if he/she sees red/white, "above path" if white/white, and "below path" if red/red. Some airports serving large aircraft have three-bar VASIs which provide two visual glide paths to the same runway.

Feature Group	Navigational Aids		
Feature Class Name	NavaidEquipment		
Feature Type	Point		
CADD Standard Requirements			
Layer/Level	Description		
C-AFLD-AIDS-	Airfield Navigational Aid -		
	Color	Line Type	Line Weight
AutoDesk Standards	4	Continuous	1
MicroStation Standards	7		7
Information Assurance Level	Unclassified		
Equivalent Standards	AIXM	<i>NavaidEquipment</i>	Extension
	FGDC	<i>NavaidEquipmentExtension</i>	Extension
	SDSFIE	<i>navigational_aid_point</i>	
Documentation and Submission Requirements	Document this feature as described in paragraphs <u>1.5.2</u> and <u>1.5.3</u> .		
Related Features			
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	Center of Light Array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 5 ft		Orthometric ± 10 ft
Resolution	Geographic Coordinates		Distances and Elevations
	Hundredth of arc second		Nearest one foot
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.		

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAID
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)	Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to "visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.30.Navaid Equipment – VOR/TACAN (VORTAC)

Definition: A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavaidEquipment</i>		Extension
	FGDC	<i>NavaidEquipmentExtension</i>		Extension
	SDSFIE	<i>navigational aid point</i>		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.5.2 and 1.5.3.			
Related Features				
Data Capture Rules: <i>Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	Center of Antenna Cover		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Accuracy Requirements (in feet)	Horizontal	Vertical	
	± 10 ft	Orthometric ± 20 ft	Ellipsoidal N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature	
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters.	
faaFacilityId (String 4)		Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]	
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)		Specifies the type of NAVAID	
navigationalAidSystemType (Enumeration: CodeNavaidSystemType)		Identifies the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System	
useCode (Enumeration: CodeUseCode)		The code that represents the airspace structure in which the aeronautical navigational aid is utilized.	
antennaToThresholdDistance (Real)		The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.	

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of Visual navigational aid system (use only when CodeNavaidEquipmentType is set to “visual”)
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDS. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.10.31.NAVAID Site

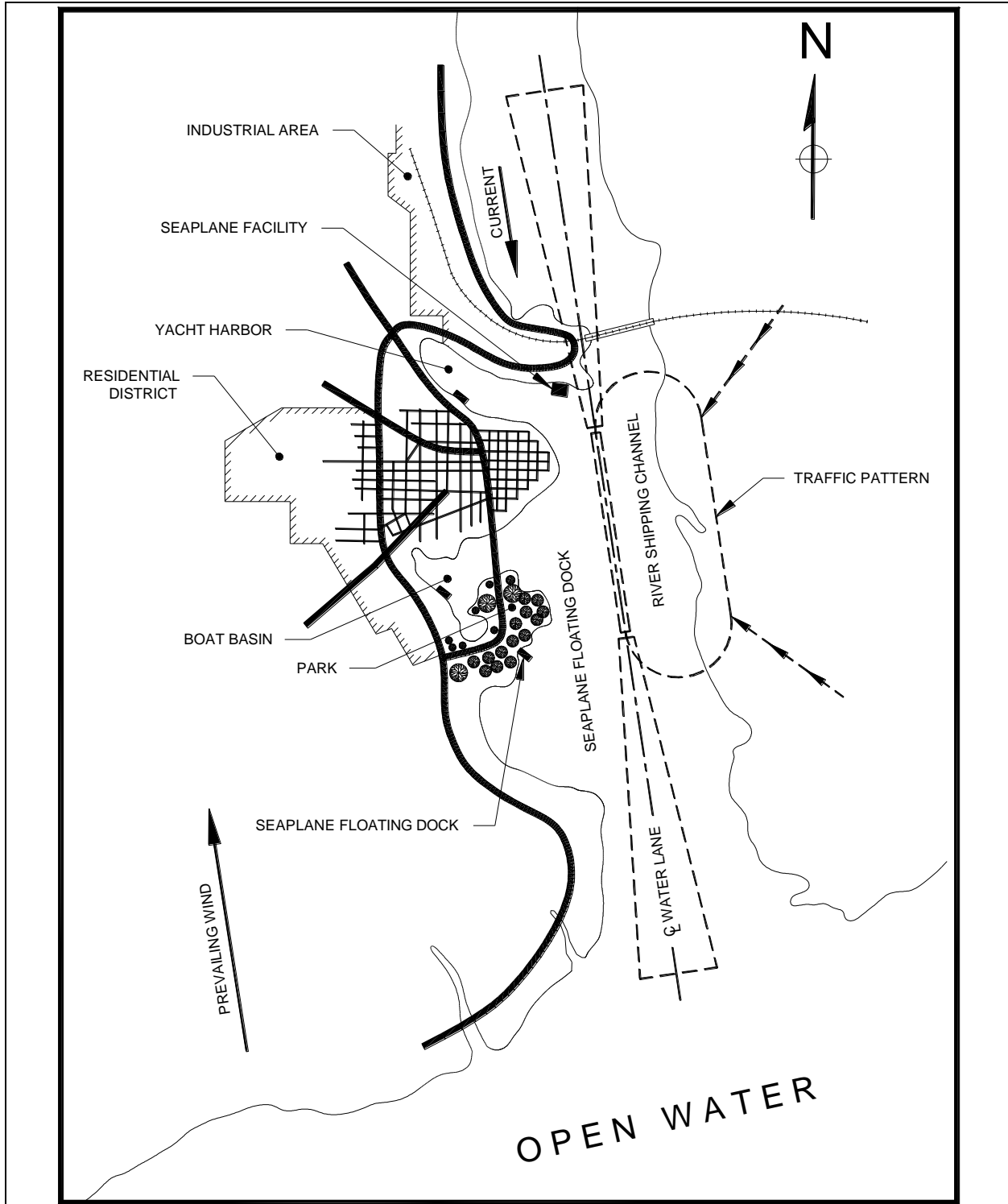
Definition: The parcel, lease, or right-of-way boundary for a NAVAID or facility that is located off airport property.	
Feature Group	Navigational Aids
Feature Class Name	NAVAIDSite
Feature Type	Polygon

CADD Standard Requirements			
Layer/Level	Description		
C-AIRF-AIDS-SITE	Airfield Navigational Aid - Site		
	Color	Linetype	Line Weight
AutoDesk Standards	1	Continuous	1
MicroStation Standards	3		7
Information Assurance Level	Unclassified		
Equivalent Standards	AIXM	<i>NavaidSite</i>	Extension
	FGDC	<i>NavigationalAidSite</i>	Extension
	SDSFIE	<i>Airfield_facility_surface_site</i>	
Documentation and Submission Requirements	No documentation required.		
Related Features			
Data Capture Rules: <i>Collect a closed polygon to its greatest horizontal extent.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 5 ft		Orthometric
			Ellipsoidal
± 10 ft		N/A	
Resolution	Geographic Coordinates		Distances and Elevations
	Hundredth of arc second		Nearest one foot
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature	
description (VARCHAR2 (255))		A brief description of the facility and any special characteristics.	
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
faaFacilityId (String 4)		The location identifier assigned to the feature by FAA	
facilityType (String 16)		The type of facility or feature related to airfield operations.	
propertyCustodian (String 50)		The regional property management office responsible for ownership of the site	
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.	

5.11. Group: SEAPLANE

5.11.1. Water Operating Area

Definition: An area designated and marked for the takeoff and landing of aircraft. This is equivalent to the Airport Operating Area of a land based airport.				
Feature Group	SeaPlane			
Feature Class Name	WaterOperatingArea			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-WTOA-	Seaplane dock			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	3	Continuous	1 MM	User Defined
MicroStation Standards	2		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	None		
	FGDC	None		
	SDSFIE	None		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the WaterOperatingArea using a bounding polygon to capture the area at its greatest extents.</i>				



Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A

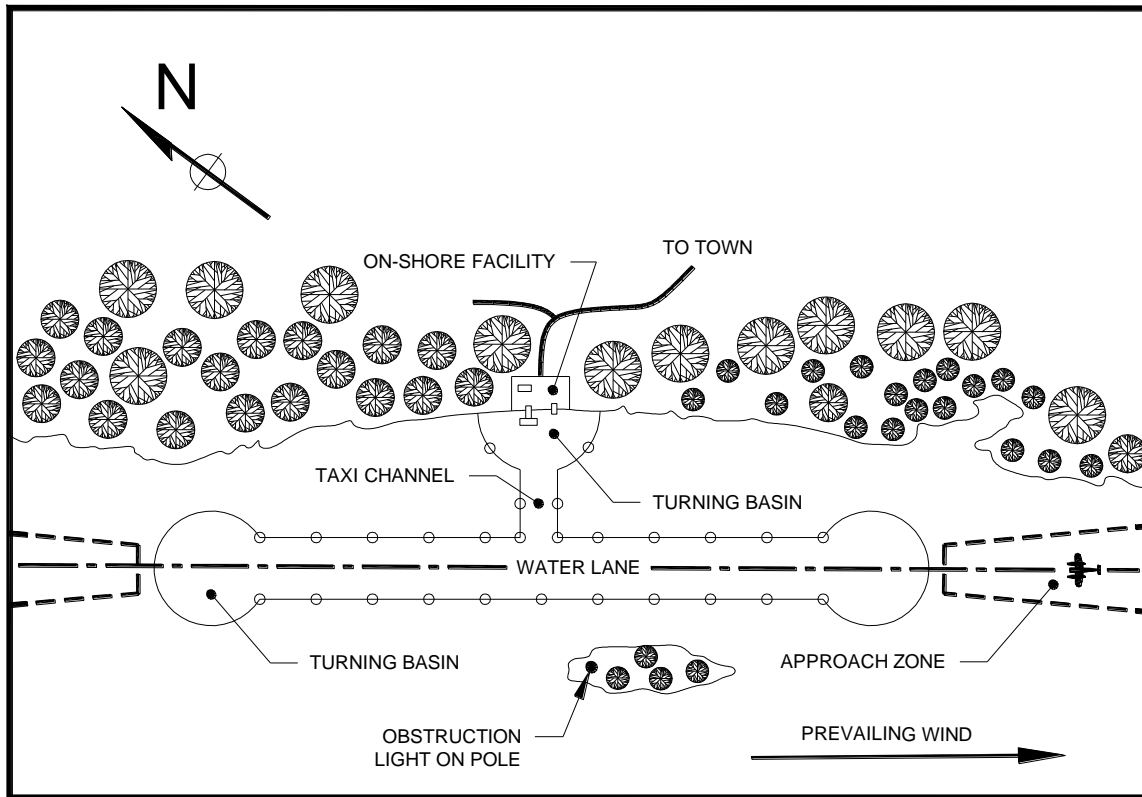
Resolution	Geographic Coordinates	Distances and Elevations
	Five hundredth of arc second	Nearest foot
Feature Attributes		
Attribute (Datatype)	Description	
name (VARCHAR2 (50))	Name of the feature water body (river/lake).	
description (VARCHAR2 (255))	Description of the feature.	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
surfaceMaterial (Enumeration: CodeSurfaceMaterial)	Code used to indicate the type of water the water operating area is on or planned to use.	
length (Integer)	Specify the overall length of the WaterOperatingArea to the nearest 5 feet	
width (Integer)	Specify the overall width of the waterOperatingArea to the nearest 5 feet	
currentFlowRate (Integer)	Measure and specify the rate of the current flow in the WaterOperatingArea in miles per hour	
compassLocation (Enumeration: CodeCompassLocation)	Specify the magnetic bearing of the current flow direction	
tidalRange (Integer)	Specify (in feet) the height difference in height from mean low mean high tide	
coordinatedUseType (Enumeration: CodeCoordinatedUseType)	Specify the primary coordinated use of the waterway. If no single activity comprises the majority of the coordinated use then specify multiple.	
coordinatedUseActivityLevel (Integer)	Provide the amount of activity based on percentage of daily use of the primary coordinated use type. If coordinated use type is multiple provide the largest activity level of the single most expected activity.	
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.	

5.11.2. Water Lane End

Definition: The end of the water lane (typically located at the furthest end of a turning basin) suitable for landing or takeoff runs of aircraft. WaterLaneEnds define the water lane and describe the approach/departure procedure characteristics of a water lane.				
Feature Group	SeaPlane			
Feature Class Name	WaterLaneEnd			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-LNDA-	Seaplane landing area			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1 MM	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Restricted			

Equivalent Standards	AIXM	None
	FGDC	None
	SDSFIE	None
Documentation and Submission Requirements	None	
Related Features		

Data Capture Rules: Collect a point on the turning basin boundary identifying the point where aeronautical activity is expected to occur. Typically, markers or buoys define the area, locate the WaterLaneEnd at least 10 feet inside the markers or buoys.



Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature.
description (VARCHAR2 (255))	Description of the feature.
magneticBearing	Compute and specify the magnetic bearing of the primary water lane to the nearest degree based on the location of the reciprocal WaterLaneEnd points. This is similar to the runway magnetic bearing for a land based airport.

compassLocation (Enumeration: CodeCompassLocation)	Code indicating the cardinal compass location of the turning basin from centroid of the WaterLaneEnd. This feature is similar to the land based airport RunwayEnd.
restriction (String 240)	Any restrictions or cautions associated with the sea plane landing area.
airMarker (Boolean)	Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location.
type (Boolean)	Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N
color (Enumeration: CodeColor)	The color of the air marker at the location (if any)
lightingType (Enumeration: CodeLightingConfigurationType)	Type of lighting available at the location (if any)
approachGuidance (Enumeration: CodeApproachGuidance)	Identifies the type of approach guidance in use or planned for the water operating area.
Length (Number 10)	Specify the overall length of the primary water lane
width (Number 10)	Specify the overall width of the primary water lane
depth (Number 10)	Specify the depth of the primary water lane with respect to mean lowest low tide
centroid	The geographic location of the primary water centroid, used to determine the primary and alternate water lanes within the water operating area.
status (Enumeration: codeStatus)	Describes the operational status of the feature.
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.11.3. Taxi Channel

Definition: A water channel used for the movement of aircraft between on shore facilities and the water lane. [Source AC 150/5395-1]				
Feature Group	SeaPlane			
Feature Class Name	TaxiChannel			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-TAXI-	Seaplane landing area			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1 MM	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	None		
	FGDC	None		
	SDSFIE	None		

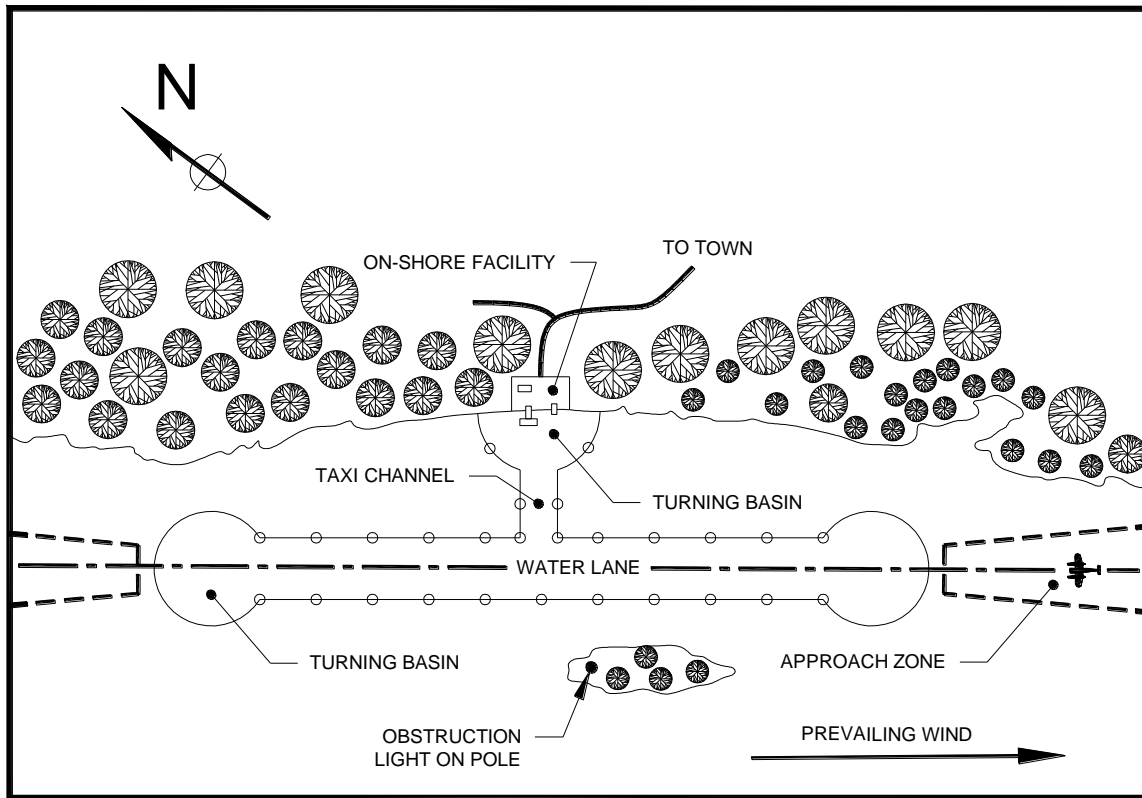
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the taxi channel at its greatest horizontal extents. Existing markers or buoys may define the width. In the instance the taxi channel is not marked for width, refer to width published by FAA in the U.S. Terminal Procedures.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Any commonly used name associated with the taxi channel.		
description (VARCHAR2 (255))		Description of the feature.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
restriction (String 240)		Any restrictions or cautions associated with the taxi channel		
length (Number 10)		Specify the overall length of the taxi channel		
width (Number 10)		Specify the overall width of the taxi channel		
depth (Number 10)		Specify the depth of the taxi channel with respect to mean lowest low tide		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.		

5.11.4. Turning Basin

Definition: A water area used for the maneuvering of aircraft where the use of water surface is restricted. Turning basins should be located adjacent to shoreline facilities and at each end of the water operating area.[Source AC 150/5395-1]				
Feature Group	SeaPlane			
Feature Class Name	TurningBasin			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level		Description		
C-SEAP-TBSN-		Seaplane landing area		
		Color	Linetype	Line Weight
AutoDesk Standards	4	Continuous	1 MM	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Restricted			

Equivalent Standards	AIXM	None
	FGDC	None
	SDSFIE	None
Documentation and Submission Requirements	None	
Related Features		

Data Capture Rules: *Collect the turning basin at its greatest horizontal extents. Existing markers or buoys may define the boundary; if so collect the boundary inside the buoys.*



Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 5 ft		Orthometric
			± 20 ft
Resolution	Geographic Coordinates		Distances and Elevations
	Five hundredth of arc second		Nearest foot

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	A commonly used name for the turning basin
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
restriction (String 240)	Any restrictions or cautions associated with the turning basin
length (Number 10)	Specify the overall length of the turning basin to the nearest 5 feet.
width (Number 10)	Specify the overall width of the turning basin to the nearest 5 feet

depth (Number 10)	Specify the depth of the turning basin with respect to mean lowest low tide to the nearest 0.5 foot.
diameter (Number 10)	The diameter of the turning basin available for use by aircraft to the nearest 5 feet.
compassLocation (Enumeration: CodeCompassLocation)	Code indicating the cardinal compass location of the turning basin from centroid of the WaterLaneEnd
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.11.5. Navigation Buoy

Definition: A floating marker which is moored to the bottom at a specific known location, which is used as an aid to navigation or for other special purpose.				
Feature Group	SeaPlane			
Feature Class Name	NavigationBuoy			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-BUOY-	Seaplane navigation buoy			
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	2	Continuous	1 MM	User Defined
MicroStation Standards	4		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>NavigationBuoy</i>		Core
	FGDC	<i>NavigationBuoy</i>		
	SDSFIE	<i>marine navigation buoy point</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect at the center and highest point on the buoy regardless of water level at time of data collection.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Any commonly used name associated with the buoy.		

description (VARCHAR2 (255))	A description or other unique information concerning the buoy limited to 255 characters. Use this to describe navigational requirements or warnings.
designator (String 20)	The official number of the buoy.
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
type (Enumeration: CodeBuoyType)	Discriminator - The type of the buoy or marker.
lightingType (Enumeration: CodeLightingConfigurationType)	Type of lighting available at the location (if any)
color (Enumeration: CodeColor)	Code used to indicate the navigational color of the buoy.
owner (Enumeration: CodeOwner)	Code indicating the owner of the navigation buoy.
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.11.6. Seaplane Ramp Centerline

Definition: The centerline of ramps specifically designed to transit seaplanes to or from land or water				
Feature Group	SeaPlane			
Feature Class Name	SeaplaneRampCenterline			
Feature Type	Line			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-RAMP-CNTR	Seaplane ramp centerline			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	2	Continuous	1 MM	User Defined
MicroStation Standards	4		7	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>SeaplaneRampSite</i>		Core
	FGDC	<i>SeaplaneRampCenterline</i>		
	SDSFIE	<i>sea plane ramp centerline</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect centerline of ramp from edge of pavements or other surface type utilized for entering and exiting water. Line extends from edge of water to apron or taxiway.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A

Resolution	Geographic Coordinates	Distances and Elevations
		Five hundredth of arc second
Feature Attributes		
Attribute (Datatype)	Description	
name (VARCHAR2 (50))	Name of the feature.	
description (VARCHAR2 (255))	Description of the feature.	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
length (Integer)	Specify the length of the seaplane ramp centerline from the water to the shoreline	
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.	

5.11.7. Seaplane Ramp Site

Definition: Ramps specifically designed to transit seaplanes to or from land to water.				
Feature Group	SeaPlane			
Feature Class Name	SeaplaneRampSite			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-RAMP-	Seaplane ramp site			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	3	Continuous	1 MM	User Defined
MicroStation Standards	2		7	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>SeaplaneRampSite</i>		Core
	FGDC	<i>SeaplaneRampSite</i>		
	SDSFIE	<i>sea plane ramp site</i>		
Documentation and Submission Requirements	No documentation is required for this feature.			
Related Features				
Data Capture Rules: <i>Collect the ramp width at its greatest horizontal limits.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			

status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
width (Integer)	Identify the width of the seaplane ramp site
slope (integer)	The slope of the ramp specified as an integer value.
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.11.8. Docking Area

Definition: A defined area on a seaplane base either fixed or floating, intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.				
Feature Group	SeaPlane			
Feature Class Name	DockArea			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-DOCK-	Seaplane dock			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	3	Continuous	1 MM	User Defined
MicroStation Standards	2		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>FloatingDockSite</i>		Core
	FGDC	<i>FloatingDockSite</i>		
	SDSFIE	<i>floating dock site</i>		
Documentation and Submission Requirements	None			

Related Features		
Data Capture Rules: <i>Collect the dockArea at its greatest horizontal extents.</i>		
<p>The top diagram is a plan view showing a dock structure with a dashed line indicating the 'greatest horizontal extents' of the dock area. The middle diagram is a side elevation showing a dock structure with a ramp and a curved support. The bottom diagram is a 3D perspective view of a dock structure with a ramp and a curved support.</p>		
Monumentation	No monumentation required.	
Survey Point Location	Horizontal	Vertical
	N/A	N/A

Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 5 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Five hundredth of arc second	Nearest foot	
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR (50))	Name of the feature.		
description (VARCHAR (255))	Description of the feature.		
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
pier (Boolean)	Specify if a pier is available in the dockArea		
pierLength (Integer)	Specify the overall length available for the pier		
pierWidth (Integer)	Specify the overall length available for the pier		
pierMaterial (Enumeration: CodeVerticalStructureMaterial))	Specify the materials used in the construction of the pier.		
hoistingCapability (Integer)	Specify the hoisting capability in pounds		
marineRailwayPlatformLength (Integer)	Specify the length of the marine railway platform		
marineRailwayPlatformWidth (Integer)	Specify the width of the marine railway platform		
marineRailwayPlatformCapacity (Integer)	Specify the capacity of the marine railway platform in pounds		
gangway (Boolean)	Specify if a gangway is available		
gangwayLength (Integer)	Specify the overall length available for the gangway		
gangwayWidth (Integer)	Specify the overall length available for the gangway		
floatingDock (Boolean)	Specify if a floating dock is available		
gangwayMaterial (Enumeration: CodeVerticalStructureMaterial)	Specify the material used to construct the gangway		
floatingDockLength (Integer)	Specify the overall length available for the floating dock		
floatingDockWidth (Integer)	Specify the overall length available for the floating dock		
floatingDockMaterial (Enumeration: CodeVerticalStructureMaterial)	Specify the material used in constructing the dockArea		
floatingBarge (Boolean)	Specify if a floating barge is available		
floatingBargeLength (Integer)	Specify the overall length available for the floating barge		
floatingBargeWidth (Integer)	Specify the overall length available for the floating barge		
floatingBargeMaterial Enumeration: CodeVerticalStructureMaterial)	Specify the material used in constructing the floatingBarge		
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.		

5.11.9. Anchorage Area

Definition: An area designated specifically for the parking of seaplanes.
Feature Group SeaPlane

Feature Class Name	AnchorageArea			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SEAP-ANCH-	Seaplane dock			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	3	Continuous	1 MM	User Defined
MicroStation Standards	2		7	
Information Assurance Level	Unclassified			
Equivalent Standards	AIXM	<i>None</i>		
	FGDC	<i>None</i>		
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			

Related Features			
Data Capture Rules: <i>Collect the anchorage area at its greatest horizontal extents.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Vertical	
	N/A	N/A	
Accuracy Requirements (in feet)	Horizontal	Vertical	
	± 5 ft	Orthometric	Ellipsoidal
Resolution	Geographic Coordinates	Distances and Elevations	
	Five hundredth of arc second	Nearest foot	
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature.	
description (VARCHAR2 (255))		Description of the feature.	
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	

userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
mooringLocations (Integer)	Specify the number of mooring locations provided in the AnchorageArea.
length (Integer)	Specify the overall length available for the AnchorageArea
width (Integer)	Specify the overall length available for the floating dock
depth (Integer)	Specify the depth of the turning basin with respect to mean lowest low tide to the nearest 0.5 foot.
bottomConditions (String 240)	Specify the type of bottom conditions in the AnchorageArea.
restriction (String 240)	Any restrictions or cautions associated with the AnchorageArea
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.12. Group: SECURITY

5.12.1. Security Area

Definition: An area of the airport in which security measures required by 49 CFR 1542.201 must be carried out [Source: 49 CFR 1542]				
Feature Group	Security			
Feature Class Name	SecurityArea			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C- SECR-SECA	An area of the airport in which security measures required by 49 CFR 1542.201			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	6	Continuous	1 MM	User Defined
MicroStation Standards	5		7	
Information Assurance Level	Secret			
Equivalent Standards	AIXM	<i>SecurityElement</i>		Extension
	FGDC	<i>SecurityArea</i>		Extension
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect outline of security area at its greatest horizontal extents. Extents can be defined by fences, paint lines, or specific limits defined by airport authorities.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredths of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.			

5.12.2. Security Identification Display Area

Definition: Portions of an airport, specified in the airport security program, in which security measures required by regulation must be, carried out. This area includes the security area and may include other areas of the airport. [Source: DHS]				
Feature Group	Security			
Feature Class Name	SecurityIdDisplayArea			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-AIRF-SECR-SIDA	Security Identification Display Area			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	6	Continuous	1 MM	User Defined
MicroStation Standards	5		7	
Information Assurance Level	Secret			
Equivalent Standards	AIXM	<i>SecurityElement</i>		Extension
	FGDC	<i>SecurityIdentificationDisplayArea</i>		Extension
	SDSFIE	<i>none</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect outline of security area at its greatest horizontal extents. Extents can be defined by fences, paint lines, or specific limits defined by airport authorities.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.			

5.12.3. Security Perimeter Line

Definition: Any type of perimeter, such as barbed wire, high fences, motion detectors and armed guards at gates, that ensure no unauthorized visitors can gain entry.	
Feature Group	Security
Feature Class Name	SecurityPerimeterLine

Feature Type	Polygon		
CADD Standard Requirements			
Layer/Level	Description		
C-DETL-FENC-SECU	Security Fencing		
	Color	Linetype	Line Weight
AutoDesk Standards	4	None	1 MM
MicroStation Standards	7		7
Information Assurance Level	Confidential		
Equivalent Standards	AIXM	<i>SecurityElement</i>	Extension
	FGDC	<i>SecurityPerimeterLine</i>	Extension
	SDSFIE	<i>security perimeter line</i>	
Documentation and Submission Requirements	None		
Related Features			
Data Capture Rules: <i>Collect outline of security area at its greatest horizontal extents. Extents can be defined by fences, paint lines, or specific limits defined by airport authorities.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 5 ft		Orthometric
			Ellipsoidal
± 5 ft		± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations
	Five hundredth of arc second		Nearest foot
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature.		
description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters. [Source: SDSFIE Attribute Table]		
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.		

5.12.4. Sterile Area

Definition: Portions of an airport defined in the airport security program that provide passengers access to boarding aircraft and to which the access is generally controlled by TSA, an aircraft operator, or a foreign air carrier. [Source: DHS]	
Feature Group	Security
Feature Class Name	SterileArea
Feature Type	Polygon

CADD Standard Requirements				
Layer/Level	Description			
C-AFLD-SECR-STER	Airfield sterile area			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	6	Continuous	1 MM	User Defined
MicroStation Standards	5		7	
Information Assurance Level	Secret			
Equivalent Standards	AIXM	<i>SecurityElement</i>		Extension
	FGDC	<i>SterileArea</i>		Extension
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect outline of security area at its greatest horizontal extents. Extents can be defined by fences, paint lines, or specific limits defined by airport authorities.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255))		Description of the feature.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.		

5.13. Group: SURFACE TRANSPORTATION

5.13.1. Bridge

Definition: A structure used by vehicles that allows passage over or under an obstacle such as a river, chasm, mountain, road or railroad.				
Feature Group	Surface Transportation			
Feature Class Name	Bridge			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-STRC-OTLN-	Bridges, piers, breakwaters, docks, floats, etc. - outlines			
L-SITE-BRDG-	Bridges			
M-MATL-CRAN-	Bridge cranes, jib cranes, and monorails			
V-SITE-STRC-	Structures (bridges, sheds, foundation pads, footings, etc.)			
V-STRC-OTLN-	Bridges, piers, breakwaters, docks, floats, etc. – outlines			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4 (all)	Continuous (all)	1 (all)	User Defined
MicroStation Standards	7 (all)		7 (all)	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>Bridge</i>		Extension
	FGDC	<i>Bridge</i>		Extension
	SDSFIE	<i>road bridge area</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Capture the outline of bridge at its greatest horizontal extents.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255))		Description of the feature.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
surfaceMaterial (Enumeration: CodeSurfaceMaterial)		The material used as a surface for the bridge.		

bridgeType (Enumeration: CodeBridgeType)	
verticalStructureMaterial Enumeration: CodeVerticalStructureMaterial)	
directionality (Enumeration: CodeDirectionality)	Code indicating the traffic flow of the bridge being classified.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.13.2. Driveway Area

Definition: An access to a building or other vehicle parking lot or storage area.			
Feature Group	Surface Transportation		
Feature Class Name	DrivewayArea		
Feature Type	Polygon		
CADD Standard Requirements			
Layer/Level	Description		
C-ROAD-DRIV-	Driveway edge of pavement		
	Color	Linetype	Line Weight
AutoDesk Standards	4	Continuous	1
MicroStation Standards	7		7
Information Assurance Level	Restricted		
Equivalent Standards	AIXM	<i>DrivewayArea</i>	Extension
	FGDC	<i>DrivewayArea</i>	Extension
	SDSFIE	<i>driveway area</i>	
Documentation and Submission Requirements	None		
Related Features			
Data Capture Rules: <i>Capture the outline of driveway at its greatest horizontal extents.</i>			
Monumentation	No monumentation required.		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
			Orthometric
	± 5 ft		± 5 ft
Resolution	Geographic Coordinates		Distances and Elevations
	Five hundredth of arc second		Nearest Foot
Feature Attributes			
Attribute (Datatype)	Description		
name (VARCHAR2 (50))	Name of the feature.		
description (VARCHAR2 (255))	Description of the feature.		
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		

surfaceMaterial (enumeration: CodeSurfaceMaterial)	The material used as a surface for the driveway.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.13.3. Driveway Centerline

Definition: The center of the driveway as measured from the edge of the paved surface. The segments of a driveway centerline will coincide with the road segments in order to provide network connectivity.				
Feature Group	Surface Transportation			
Feature Class Name	DrivewayCenterline			
Feature Type	Line			
CADD Standard Requirements				
Layer/Level	Description			
C-ROAD-DRIV-CNTR	Driveway centerline			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>DrivewayCenterline</i>	Extension	
	FGDC	<i>DrivewayCenterline</i>	Extension	
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect in the horizontal plane at the center of driveway, and to intersect with centerline of road/drive/ramp.</i>				
Monumentation	No monumentation required.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.			

5.13.4. Parking Lot

Definition: An area of an airport used for parking of automobiles, buses, etc.				
Feature Group	Surface Transportation			
Feature Class Name	ParkingLot			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-PKNG-ISLD-	Parking islands			
C-PKNG-OTLN-	Parking lots			
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	84 (all)	Dashed-Spaced (all)	1 mm (all)	User Defined
MicroStation Standards	256 (all)		7 (all)	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>ParkingLot</i>		Extension
	FGDC	<i>ParkingLot</i>		Extension
	SDSFIE	<i>vehicle parking area</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect outline of parking lot at its greatest horizontal extents.</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Any commonly used name for the parking area.		
description (VARCHAR2 (255))		A description of the parking lot.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
parkingLotUse (String 16)		The primary use of the parking area.		
totalNumberSpaces (Integer)		The total parking spaces available in the area including handicapped or reserved spaces.		
numberHandicapSpaces (Integer)		The total number of spaces marked as being handicapped parking.		
owner (Enumeration: CodeOwner)		The owner of the parking lot		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
surfaceType (Enumeration: codeSurfaceType)		Type of different materials used to construct the surface.		
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.		

5.13.5. Railroad Centerline

Definition: Represents the centerline of each pair of rails [Source: ANSI: Data Content Standards For Transportation Networks: Roads]				
Feature Group	Surface Transportation			
Feature Class Name	RailroadCenterline			
Feature Type	Line			
CADD Standard Requirements				
Layer/Level	Description			
C-RAIL-CNTR-	Centerlines			
C-RAIL-TRAK-	Railroads			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	91 (all)	Continuous (all)	1 (all)	User Defined
MicroStation Standards	106 (all)		7 (all)	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>RailroadCenterline</i>		Extension
	FGDC	<i>RailroadCenterline</i>		Extension
	SDSFIE	<i>railroad centerline</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>In the horizontal plane, collect a line along the centerline of each pair of rails. In the vertical plane, collect the height at the top of highest rail.</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Any commonly used name for the railroad.		
description (VARCHAR2 (255))		Any narrative remarks concerning the railroad.		
Status (Enumeration codeStatus)		The current status as to whether the railroad segment is being used.		
numberOfTracks (Integer)		The number of tracks present		
owner (Enumeration: CodeOwner)		The owner of the rail track		
isBridge (Boolean)		Indicates given railroad segment is bridge (Y- a is bridge, N- is not a bridge).		
istunnel (Boolean)		Indicates given railroad segment is tunnel (Y- is a tunnel, N- is not a tunnel).		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		

directionality (Enumeration: CodeDirectionality)	Code indicating the traffic flow of the railroad segment being classified.
segmentType (Enumeration: CodeSegmentType)	Code indication the sequence or position of the segment being classified by the feature.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.13.6. Railroad Yard

Definition: Represents a railroad yard [Source: ANSI: Data Content Standards For Transportation Networks: Roads]				
Feature Group	Surface Transportation			
Feature Class Name	RailroadYard			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-RAIL-YARD-	Railroad Yard			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>RailroadYard</i>	Extension	
	FGDC	<i>RailroadYard</i>	Extension	
	SDSFIE	<i>railroad yard area</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect outline of the yard area its greatest horizontal extents. Represented by fences, road or change in ground surfaces.</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	A name that represent the railroad yard.			
description (VARCHAR2 (255))	Any brief description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
owner (Enumeration: CodeOwner)	The owner of the rail track			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			

Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.
-------------------------	---

5.13.7. Road Centerline

Definition: The center of the roadway as measured from the edge of the paved surface. The segments of a road centerline will coincide with the road segments in order to have similar characteristics.				
Feature Group	Surface Transportation			
Feature Class Name	RoadCenterline			
Feature Type	Line			
CADD Standard Requirements				
Layer/Level	Description			
C-ROAD-CNTR-	Centerlines			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	6	Continuous	1	User Defined
MicroStation Standards	5		7	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>RoadCenterline</i>		Extension
	FGDC	<i>RoadCenterline</i>		Extension
	SDSFIE	<i>road centerline</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the centerline of road by splitting the edge of pavement or painted centerline, which ever is better defined.</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
			Orthometric	Ellipsoidal
	± 5 ft		± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Any commonly used name for the road centerline.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
Color (Enumeration: CodeColor)	The color of the centerline marking.			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.			

5.13.8. Road Point

Definition: A point along the roadway system which has some special significance either for starting or ending a road segment or for representing a significant position along the roadway system such as the start or center of a bridge or the center of an intersection [Source: ANSI: Data Content Standards For Transportation Networks: Roads]				
Feature Group	Surface Transportation			
Feature Class Name	RoadPoint			
Feature Type	Point			
CADD Standard Requirements				
Layer/Level	Description			
C-ROAD-POIN-	Road Point			
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	2	Continuous	1 mm	User Defined
MicroStation Standards	4		7	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>RoadPoint</i>		Extension
	FGDC	<i>RoadPoint</i>		Extension
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect point at desired location using the technique necessary to achieve accuracy</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.			
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.			

5.13.9. Road Segment

Definition: Represents a linear section of the physical road system designed for, or the result of, human or vehicular movement; must be continuous (no gaps) and cannot branch; no mandates are provided on how to segment the road system except that data providers adopt a consistent method [Source: ANSI: Data Content Standards For Transportation Networks: Roads]				
Feature Group	Surface Transportation			
Feature Class Name	RoadSegment			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-PROF-ROAD-	Roads			
C-ROAD-CURB-	Curbs			
C-ROAD-OTLN-	Roads			
V-PROF-ROAD-	Roads			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	1 (all)	Continuous (all)	1 mm (all)	User Defined
MicroStation Standards	3 (all)		7 (all)	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>RoadSegment</i>	Extension	
	FGDC	<i>RoadSegment</i>	Extension	
	SDSFIE	<i>road site</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect all road segments as individual polygon objects. Where two or more roadway segments intersect, collect as separate polygons depicting beginning, intersection and end. Collect roadway at the outer edge of pavement or defined paint line (excluding shoulder).</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		A common name or street name used to refer to the stretch of road.		
description (VARCHAR2 (255))		A general description of the road.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
alternateName (String 30)		The alternate name or second name for the road.		
route1Name (String 30)		The route number or other identifier that is affiliated with the first route type		
route1Type (Enumeration: CodeRouteType)		The first route type for the road (Interstate, US, State, etc.)		

route2Name (String 30)	The route number or other identifier that is affiliated with the second route type
route2Type (Enumeration: CodeRouteType)	The second route type for the road (Interstate, US, State, etc.)
route3Name (String 30)	The number or other identifier that is affiliated with the third route type
route3Type (Enumeration: CodeRouteType)	The third route type for the road (Interstate, US, State, etc.)
numberOfLanes (Integer)	The total number of lanes of traffic, counting both directions, not including turning lanes. [Source: SDSFIE Feature Table]
length (Real)	The length of the road segment measured at the centerline. [Source: SDSFIE Feature Table]
width (Real)	The average width of the road segment. [Source: SDSFIE Feature Table]
isBridge (Boolean)	Indicates given road segment is bridge (Y- a is bridge, N- is not a bridge). [Source: SDSFIE Feature Table]
isTunnel (Boolean)	Indicates given road segment is tunnel (Y- is a tunnel, N is not a tunnel). [Source: SDSFIE Feature Table]
directionality (Enumeration: CodeDirectionality)	Code indicating the traffic flow on the road segment.
segmentType (Enumeration: CodeSegmentType)	Code indicating the type of segment being classified.
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
surfaceType (Enumeration: codeSurfaceType)	Type of material used to construct the surface.
surfaceMaterial (Enumeration: CodeSurfaceMaterial)	Material used to construct the surface of the road.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.13.10.Sidewalk

Definition: A paved or concrete pad used as a pedestrian walkway. Usually is composed of one or more SideWalkSegments.				
Feature Group	Surface Transportation			
Feature Class Name	Sidewalk			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SITE-WALK-	Walks, trails and bicycle paths			
L-SITE-WALK-	Walks and steps			
V-SITE-WALK-	Walks, trails, and bicycle paths			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	8 (all)	Continuous (all)	1 mm (all)	User Defined
MicroStation Standards	9 (all)		7 (all)	
Information Assurance Level	Restricted			

Equivalent Standards	AIXM	<i>Sidewalk</i>	Extension
	FGDC	<i>Sidewalk</i>	Extension
	SDSFIE	<i>pedestrian sidewalk area</i>	
Documentation and Submission Requirements	None		
Related Features			
Data Capture Rules: <i>Collect all sidewalks as individual polygon objects. Where two or more sidewalks intersect, collect as separate polygons depicting beginning, intersection and end. Collect sidewalk at the outer edge of pavement.</i>			
Monumentation	None		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
	± 5 ft		Orthometric Ellipsoidal
			± 5 ft N/A
Resolution	Geographic Coordinates		Distances and Elevations
	Five hundredth of arc second		Nearest Foot
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature.	
description (VARCHAR2 (255))		A brief description of any special characteristics of the sidewalk.	
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
walkUse (String 26)		A short description of the primary use of the sidewalk.	
AmericanDisabilitiesAct (Boolean)		Boolean indicating whether or not the walkway is in compliance with the American Disabilities Act.	
length (Real)		The overall length of the sidewalk section.	
width (Real)		The mean width of the sidewalk section.	
surfaceMaterial (Enumeration: CodeSurfaceMaterial)		Primary material used in the sidewalk and/or trail.	
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
segmentType (Enumeration: CodeSegmentType)		Code indicating the type of segment being classified.	
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.	

5.13.11. Tunnel

Definition: The area of a transportation passage, open at both ends, used to provide access through or under a natural obstacle.	
Feature Group	Surface Transportation
Feature Class Name	Tunnel
Feature Type	Polygon

CADD Standard Requirements				
Layer/Level	Description			
L-SITE-TUNL-	Tunnels			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	7	Continuous	1 MM	User Defined
MicroStation Standards	0		7	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>Tunnel</i>		Extension
	FGDC	<i>Tunnel</i>		Extension
	SDSFIE	<i>tunnel area</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the tunnel extending between the entrance points with a width defined by edge of pavement at either entrance.</i>				
Monumentation	None			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	± 5 ft		Orthometric	Ellipsoidal
			± 5 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255))		Description of the feature.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
type (String 16)		The code that represents the type of tunnel		
verticalClearance (Real)		Indicates the actual vertical clearance to the top of the tunnel imposed by any restrictions.		
averageHeight (Real)		The average height of the tunnel.		
averageWidth (Real)		The average width of the tunnel.		
length (Real)		The length of the tunnel.		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
directionality (Enumeration:CodeDirectionality)				
segmentType (Enumeration: CodeSegmentType)		Code indicating the type of segment being classified.		
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.		

5.14. Group: UTILITIES

5.14.1. Tank Site

Definition: An above or below grade receptacle or chamber for holding anything (e.g., fuels, water, waste, etc.) on a temporary basis prior to transfer, use, or disposal. Tanks are typically located on TankSites.				
Feature Group	Utilities			
Feature Class Name	TankSite			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
L-DETL-TKST-	Tank Site			
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1 MM	User Defined
MicroStation Standards	7		7	
Information Assurance Level	Confidential			
Equivalent Standards	AIXM	<i>VerticalStructure</i>		Core
	FGDC	<i>TankSite</i>		
	SDSFIE	<i>undefined tank site</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Outer limits of tank outline.</i>				
Monumentation	As required by local, State, or national standards for this type of data.			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
	+/- 3 ft		Orthometric	Ellipsoidal
			+/- 3 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations	
	Five hundredths of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255))		A description or other unique information concerning the subject item, limited to 255 characters. [Source: SDSFIE Feature Table]		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
tankType (String 40)		A brief description of the type of tank.		
topElevation (Real)		The dimension indicating the elevation of exterior top surface of the tank's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum, if it is known. [Source: SDSFIE Feature Table]		
lightCode (Boolean)		A code indicating that the obstacle is lighted [Source: AIXM]		
verticalStructureMaterial (Enumeration: CodeVerticalStructureMaterial)		Classifies the predominant material of the vertical object		

lightingType (Enumeration: codeLightingConfigurationType)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
markingFeatureType (Enumeration: codeMarkingFeatureType)	The type of the marking(s)
color (Enumeration: codeColor)	The color of the marking(s)
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.14.2. Utility Line

Definition: Any utility feature typically represented as a line.			
Feature Group	Utilities		
Feature Class Name	UtilityLine		
Feature Type	Line		
CADD Standard Requirements			
Layer/Level	Description	Layer/Level	Description
C-FUEL-ABND-	Abandoned piping	M-HTCW-LTPL-	Main low temperature piping
C-FUEL-DEFL-	Defueling piping	M-HTCW-LTPS-	Low temperature service piping
C-FUEL-MAIN-	Main fuel piping	M-HTCW-STML-	Main steam piping
C-FUEL-SERV-	Service piping	M-HTCW-STMS-	Steam service piping
C-FUEL-TRCH-	Fuel line trench	M-HVAC-RETN-	Return ductwork
C-NGAS-ABND-	Abandoned piping	M-HVAC-SUPP-	Supply ductwork
C-NGAS-MAIN-	Main natural gas piping	M-HYDR-PIPE-	Hydraulic system piping
C-NGAS-SERV-	Service piping	M-INSL-PIPE-	Insulating oil piping
C-PROF-PIPE-	Piping	M-LUBE-PIPE-	Lubrication oil piping
C-SSWR-ABND-	Abandoned piping	M-PROC-PIPE-	Process piping
C-SSWR-MAIN-	Sanitary sewer piping	M-RCOV-PIPE-	Piping (includes fittings, valves)
C-SSWR-SERV-	Sanitary sewer service piping	M-REFG-PIPE-	Piping (includes fittings, valves)
C-STRM-ABND-	Abandoned piping	M-RWTR-PIPE-	Raw water piping
C-STRM-HDWL-	Headwalls and endwalls	M-STEM-PIPE-	Steam piping
C-STRM-MAIN-	Storm sewer piping	P-CMPA-PIPE-	Piping
C-STRM-ROOF-	Roof drain line	P-FUEL-FGAS-	Fuel gas piping
C-STRM-SERV-	Storm sewer service piping	P-FUEL-FOIL-	Fuel oil piping
C-STRM-SUBS-	Subsurface drain piping	P-LGAS-PIPE-	Piping
E-AIRF-DUCT-	Ductbanks	P-MDGS-PIPE-	Piping
E-CABL-COAX-	Coax cable	P-SANR-COND-	Condensate piping
E-CABL-FIBR-	Fiber optics cable	P-SANR-PIPE-	Piping

E-CABL-MULT-	Multi-conductor cable	P-SANR-VENT-	Vent piping
E-CABL-TRAY-	Cable trays and wireways	P-STRM-PIPE-	Storm drain piping
E-CIRC-CTRL-	Control and monitoring circuits	T-CABL-TRAY-	Cable trays and wireways
E-CIRC-MULT-	Multiple circuits	V-AIRF-DUCT-	Ductbanks
E-CIRC-SERS-	Series circuits	V-CIRC-CTRL-	Control and monitoring circuits
E-COMM-OVHD-	Overhead communications/telephone lines	V-CIRC-MULT-	Multiple circuits
E-COMM-UNDR-	Underground communications/telephone lines	V-CIRC-SERS-	Series circuits
E-DUCT-MULT-	Ductbank	V-COMM-OVHD-	Overhead communications/telephone lines
E-GRND-CIRC-	Circuits	V-COMM-UNDR-	Underground communications/telephone lines
E-LITE-CIRC-	Lighting circuits (including crosslines and homeruns)	V-DUCT-MULT-	Ductbank
E-POWR-CIRC-	Power circuits (including crosslines and homeruns)	V-ELEC-VALT-	Vaults
E-PRIM-OVHD-	Overhead electrical utility lines	V-FUEL-ABND-	Abandoned piping
E-PRIM-UNDR-	Underground electrical utility lines	V-FUEL-DEFL-	Defueling piping
E-SECD-OVHD-	Overhead electrical utility lines	V-FUEL-MAIN-	Main fuel piping
E-SECD-UNDR-	Underground electrical utility lines	V-FUEL-SERV-	Service piping
F-AFFF-PIPE-	Piping	V-FUEL-TRCH-	Fuel line trench
F-CO2S-PIPE-	CO2 piping or CO2 discharge nozzle piping	V-GTHP-PIPE-	Piping (includes fittings, valves)
F-HALN-PIPE-	Halon piping	V-HTCW-ABND-	Abandoned piping
F-IGAS-PIPE-	Inert gas piping	V-HTCW-CHLL-	Main chilled water piping
F-PROT-HOSE-	Fire hoses	V-HTCW-CHLS-	Chilled water service piping
F-SPRN-PIPE-	Sprinkler piping	V-HTCW-HTPL-	Main high temperature piping
F-WATR-PIPE-	Piping	V-HTCW-HTPS-	High temperature service piping
L-DETL-WIRE-	Wiring	V-HTCW-LTPL-	Main low temperature piping
L-IRRG-PIPE-	Piping	V-HTCW-LTPS-	Low temperature service piping

M-ACID-PIPE-	Acid, alkaline, and oil waste piping	V-HTCW-STML-	Main steam piping	
M-ACID-VENT-	Acid, alkaline, and oil waste vent piping	V-HTCW-STMS-	Steam service piping	
M-AFRZ-PIPE-	Anti-freeze piping	V-NGAS-ABND-	Abandoned piping	
M-AFRZ-WAST-	Waste anti-freeze piping	V-PRIM-OVHD-	Overhead electrical utility lines	
M-BRIN-PIPE-	Brine system piping	V-PRIM-UNDR-	Underground electrical utility lines	
M-CHEM-PIPE-	Piping (includes fittings, valves)	V-PROF-PIPE-	Piping	
M-CNDW-PIPE-	Condenser water piping	V-SECD-OVHD-	Overhead electrical utility lines	
M-COND-PIPE-	Condensate piping (includes fittings, valves)	V-SECD-UNDR-	Underground electrical utility lines	
M-CONT-WIRE-	Low voltage wiring	V-SSWR-ABND-	Abandoned piping	
M-CWTR-PIPE-	Piping (includes fittings, valves)	V-SSWR-MAIN-	Sanitary sewer piping	
M-DETL-PIPE-	Piping	V-SSWR-SERV-	Sanitary sewer service piping	
M-DETL-WIRE-	Electrical wiring	V-STRM-ABND-	Abandoned piping	
M-DUAL-PIPE-	Piping (includes fittings, valves)	V-STRM-MAIN-	Storm sewer piping	
M-GTHP-PIPE-	Piping (includes fittings, valves)	V-STRM-SUBS-	Subsurface drain piping	
M-HTCW-ABND-	Abandoned piping	V-UTIL-ELEC-	Power lines, lights, telephone poles, communication lines	
M-HTCW-CHLL-	Main chilled water piping	V-UTIL-STEM-	Steam lines	
M-HTCW-CHLS-	Chilled water service piping	V-UTIL-STRM-	Storm sewer lines, culverts, manholes, and headwalls	
M-HTCW-HTPL-	Main high temperature piping	V-UTIL-WATR-	Water lines, hydrants, tanks	
M-HTCW-HTPS-	High temperature service piping			
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	6 (all)	Continuous (all)	1 MM (all)	User Defined
MicroStation Standards	5 (all)		7 (all)	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>VerticalStructure</i>		Core
	FGDC	<i>Utility</i>		
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: Capture feature using technique as required to meet accuracies below. Collect in line segments.				

Monumentation	As required by local, State, or national standards for this type of data.		
Survey Point Location	Horizontal		Vertical
	N/A		N/A
Accuracy Requirements (in feet)	Horizontal		Vertical
			Orthometric
	A	± 1 ft	± 0.25 ft
	B	± 3 ft	± 10 ft
	C	± 5 ft	± 10 ft
D	± 10 ft	± 20 ft	N/A
Resolution	Geographic Coordinates		Distances and Elevations
A	Hundredth of arc second		Nearest Tenth of a foot
B	Five Hundredths of arc second		Nearest Foot
C	Five Hundredths of arc second		Nearest Foot
D	Tenth of arc second		Nearest Foot
Feature Attributes			
Attribute (Datatype)		Description	
name (VARCHAR2 (50))		Name of the feature.	
description (VARCHAR2 (255))		Description of the feature.	
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.	
utilityType (Enumeration: CodeUtilityType)		The type of utility represented by the feature.	
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
directionality (Enumeration: CodeDirectionality)		Code indicating the flow of the utility being classified.	
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.	

5.14.3. Utility Point

Definition: Any utility feature typically represented as a point.			
Feature Group	Utilities		
Feature Class Name	UtilityPoint		
Feature Type	Point		
CADD Standard Requirements			
Layer/Level	Description	Layer/Level	Description
C-DETL-TANK-	Tanks	V-STRM-INLT-	Inlets (curb, surface, and catch basins)
C-FUEL-DEVC-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves	V-STRM-MHOL-	Manholes
C-FUEL-FTTG-	Caps, crosses, and tees	V-STRM-PUMP-	Pump stations
C-FUEL-HYDR-	Hydrant control pits	V-TRAN-PADM-	Pad mounted transformers
C-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes	V-TRAN-POLE-	Pole mounted transformers

C-FUEL-METR-	Meters	V-UTIL-LINE-	Utilities
C-FUEL-PUMP-	Booster pump stations	V-UTIL-NGAS-	Gas lines, features, and valves
C-FUEL-TANK-	Fuel tanks	V-UTIL-SSWR-	Sanitary lines and manholes
C-FUEL-VENT-	Vent pits	E-SPCL-SRFS-	Surface Sensor System
C-FUEL-VLVE-	Valve pits	T-COMM-ANTN-	Telecommunications antennae
C-NGAS-DEVC-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves	C-SITE-SECU-	CMRA Security camera locations outside of buildings
C-NGAS-FTTG-	Caps, crosses, and tees	E-LITE-PANL-	Main distribution panels, switchboards, lighting panels
C-NGAS-METR-	Meters	E-LITE-SPCL-	Special fixtures
C-NGAS-PUMP-	Compressor stations	E-LITE-SWCH-	Lighting contactors, photoelectric controls, low-voltage lighting controls, etc.
C-NGAS-REDC-	Reducing stations	E-LITE-WALL-	Wall mounted fixtures
C-NGAS-VENT-	Vent pits	E-LTNG-COND-	Lightning protection conductors
C-NGAS-VLVE-	Valve pits/boxes	E-LTNG-TERM-	Lightning protection terminals
C-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves	E-POLE-UTIL-	Utility poles
C-SSWR-FILT-	Filtration beds	E-POWR-BUSW-	Busways and wireways
C-SSWR-FTTG-	Caps and cleanouts	E-POWR-CABL-	Cable trays
C-SSWR-JBOX-	Junction boxes and manholes	E-POWR-FEED-	Feeders
C-SSWR-PUMP-	Booster pump stations	E-POWR-GENR-	Generators and auxiliary equipment
C-SSWR-TANK-	Septic tanks	E-POWR-JBOX-	Junction boxes
C-STRM-CULV-	Culverts	E-POWR-PANL-	Panelboards, switchboards, MCC, unit substations
C-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates	E-POWR-SWCH-	Disconnect switches, motor starters, contactors, etc.
C-STRM-EROS-	Erosion control (riprap)	E-SERT-BURD-	Buried sensors
C-STRM-FMON-	Flow monitoring station	E-SERT-UNDR-	Buried sensors
C-STRM-FTTG-	Caps and cleanouts	E-SPCL-JBOX-	Junction boxes
C-STRM-INLT-	Inlets (curb, surface, and catch basins)	E-SPCL-PANL-	Panelboards, backing boards, patch panel racks
C-STRM-MHOL-	Manholes	E-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)
C-STRM-PUMP-	Pump stations	E-TRAN-PADM-	Pad mounted transformers

C-STRM-STRC-	Storm drainage, headwalls, inlets, manholes, culverts, and drainage structures	E-TRAN-POLE-	Pole mounted transformers
E-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	F-AFFF-EQPM-	Equipment
E-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	F-ALRM-INDC-	Indicating appliances
E-CATH-ANOD-	Sacrificial anode system	F-ALRM-MANL-	Manual fire alarm pull stations
E-CATH-CURR-	Impress current system	F-ALRM-PHON-	Fire service or emergency telephone stations
E-CATH-TEST-	Test stations	F-CO2S-EQPM-	Equipment
E-COMM-EQPM-	Other communications distribution equipment	F-CTRL-PANL-	Control panels
E-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	F-HALN-EQPM-	Halon equipment
E-ELEC-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	F-IGAS-EQPM-	Inert gas equipment
E-ELEC-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	F-LITE-EMER-	Emergency fixtures
E-ELEC-SUBS-	Other substation equipment	F-LITE-EXIT-	Exit fixtures
E-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	F-LSFT-EGRE-	Egress requirements designator
E-ELEC-VALT-	Vaults	F-LSFT-OCCP-	Occupant load for egress capacity
E-GRND-EQUI-	Equipotential ground system	F-WATR-CONN-	Fire department connections
E-GRND-REFR-	Reference ground system	F-WATR-HYDR-	Hydrants
E-LITE-EMER-	Emergency fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)	F-WATR-PUMP-	Fire pumps
E-LITE-EXIT-	Exit fixtures (outline of light (if ceiling mounted) should go on	H-DECN-EQPM-	Decontamination equipment
E-LITE-CLNG-	Ceiling Fixtures	H-DISP-TANK-	Spill containment tanks
E-LITE-EXTR-	Exterior lights	L-DETL-VLVE-	Valves, fittings
E-LITE-JBOX-	Junction boxes	L-IRRG-SPKL-	Sprinklers
E-LITE-PANL-	Main distribution panels, switchboards, lighting panels	M-ACID-EQPM-	Acid, alkaline, and oil waste equipment
E-LITE-SPCL-	Special fixtures	M-BRIN-EQPM-	Brine system equipment

E-LITE-SWCH-	Lighting contactors, photoelectric controls, low-voltage lighting controls, etc.	M-CHEM-EQPM-	Equipment
E-LITE-WALL-	Wall mounted fixtures	M-CNDW-EQPM-	Condenser water equipment
E-LTNG-COND-	Lightning protection conductors	M-CONT-THER-	Thermostats, controls, instrumentation, and sensors
E-LTNG-TERM-	Lightning protection terminals	M-CWTR-EQPM-	Equipment
E-POLE-UTIL-	Utility poles	M-DETL-BOIL-	Boilers
E-POWR-BUSW-	Busways and wireways	M-DETL-COIL-	Coils and fin tubes
E-POWR-CABL-	Cable trays	M-DETL-DUCT-	Ducts
E-POWR-FEED-	Feeders	M-DETL-EQPT-	Equipment and fixtures
E-POWR-GENR-	Generators and auxiliary equipment	M-DETL-FANS-	Fans
E-POWR-JBOX-	Junction boxes	M-DETL-PUMP-	Pumps and compressors
E-POWR-PANL-	Panelboards, switchboards, MCC, unit substations	M-DETL-TANK-	Tanks
E-POWR-SWCH-	Disconnect switches, motor starters, contactors, etc.	M-DETL-TRAP-	Traps and drains
E-SERT-BURD-	Buried sensors	M-DETL-VENT-	Vents
E-SERT-UNDR-	Buried sensors	M-DETL-VLVE-	Valves and fittings
E-SPCL-JBOX-	Junction boxes	M-DUAL-EQPM-	Equipment
E-SPCL-PANL-	Panelboards, backing boards, patch panel racks	M-DUST-DUCT-	Dust and fume ductwork
E-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)	M-DUST-EQPM-	Dust and fume collection equipment
E-TRAN-PADM-	Pad mounted transformers	M-GTHP-EQPM-	Equipment
E-TRAN-POLE-	Pole mounted transformers	M-HTCW-CHLP-	Chilled water plant
F-AFFF-EQPM-	Equipment	M-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
F-ALRM-INDC-	Indicating appliances	M-HTCW-FTTG-	Caps and flanges
F-ALRM-MANL-	Manual fire alarm pull stations	M-HTCW-HTPP-	High temperature water plant
F-ALRM-PHON-	Fire service or emergency telephone stations	M-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes
F-CO2S-EQPM-	Equipment	M-HTCW-PITS-	Valve pits/vaults, steam pits
F-CTRL-PANL-	Control panels	M-HTCW-PUMP-	Pump stations
F-HALN-EQPM-	Halon equipment	M-HTCW-RTRN-	Return for all HTCW lines
F-IGAS-EQPM-	Inert gas equipment	M-HVAC-DAMP-	Fire and smoke dampers
F-LITE-EMER-	Emergency fixtures	M-HVAC-EQPM-	Air system equipment
F-LITE-EXIT-	Exit fixtures	M-HVAC-ROOF-	Roof mounted HVAC equipment
F-LSFT-EGRE-	Egress requirements designator	M-HWTR-EQPM-	Equipment

F-LSFT-OCCP-	Occupant load for egress capacity	M-HWTR-PIPE-	Piping (includes fittings, valves)
F-WATR-CONN-	Fire department connections	M-HYDR-EQPM-	Hydraulic system equipment
F-WATR-HYDR-	Hydrants	M-INSL-EQPM-	Insulating oil equipment
F-WATR-PUMP-	Fire pumps	M-LUBE-EQPM-	Lubrication oil equipment
H-DECN-EQPM-	Decontamination equipment	M-MACH-BASE-	Machinery bases
H-DISP-TANK-	Spill containment tanks	M-MATL-LIFT-	Miscellaneous lifting equipment
L-DETL-VLVE-	Valves, fittings	M-PROC-EQPM-	Equipment
L-IRRG-SPKL-	Sprinklers	M-RCOV-EQPM-	Equipment
M-ACID-EQPM-	Acid, alkaline, and oil waste equipment	M-REFG-EQPM-	Equipment
M-BRIN-EQPM-	Brine system equipment	M-RWTR-EQPM-	Raw water equipment
M-CHEM-EQPM-	Equipment	M-STEM-EQPM-	Equipment
M-CNDW-EQPM-	Condenser water equipment	P-CMPA-EQPM-	Equipment
M-CONT-THER-	Thermostats, controls, instrumentation, and sensors	P-FUEL-EQPM-	Equipment
M-CWTR-EQPM-	Equipment	P-LGAS-EQPM-	Equipment
M-DETL-BOIL-	Boilers	P-MDGS-EQPM-	Equipment
M-DETL-COIL-	Coils and fin tubes	P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)
M-DETL-DUCT-	Ducts	P-SANR-FLDR-	Floor drains, sinks, and cleanouts
M-DETL-EQPT-	Equipment and fixtures	S-BRAC-VERT-	Vertical bracing
M-DETL-FANS-	Fans	S-GRAT-SUBS-	Subsurface grating
M-DETL-PUMP-	Pumps and compressors	S-PIPE-GATE-	Gates (flap gates, sluice gates, other)
M-DETL-TANK-	Tanks	T-CABL-COAX-	Coax cable
M-DETL-TRAP-	Traps and drains	T-CABL-FIBR-	Fiber optics cable
M-DETL-VENT-	Vents	T-CABL-MULT-	Multi-conductor cable
M-DETL-VLVE-	Valves and fittings	T-COMM-JBOX-	Junction boxes
M-DUAL-EQPM-	Equipment	T-EQPM-COPP-	Distribution equipment for copper
M-DUST-DUCT-	Dust and fume ductwork	T-EQPM-FIBR-	Distribution equipment for fiber optic
M-DUST-EQPM-	Dust and fume collection equipment	T-EQPM-OTHR-	Other telecommunications equipment
M-GTHP-EQPM-	Equipment	T-JACK-DATA-	Data/LAN jacks
M-HTCW-CHLP-	Chilled water plant	T-JACK-PHON-	Telephone jacks

M-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	V-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
M-HTCW-FTTG-	Caps and flanges	V-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices
M-HTCW-HTPP-	High temperature water plant	V-CATH-ANOD-	Sacrificial anode system
M-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes	V-CATH-CURR-	Impress current system
M-HTCW-PITS-	Valve pits/vaults, steam pits	V-CATH-TEST-	Test stations
M-HTCW-PUMP-	Pump stations	V-COMM-EQPM-	Other communications distribution equipment
M-HTCW-RTRN-	Return for all HTCW lines	V-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices
M-HVAC-DAMP-	Fire and smoke dampers	V-ELEC-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
M-HVAC-EQPM-	Air system equipment	V-ELEC-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices
M-HVAC-ROOF-	Roof mounted HVAC equipment	V-ELEC-SUBS-	Other substation equipment
M-HWTR-EQPM-	Equipment	V-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches
M-HWTR-PIPE-	Piping (includes fittings, valves)	V-FUEL-DEVC-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves
M-HYDR-EQPM-	Hydraulic system equipment	V-FUEL-FTTG-	Caps, crosses, and tees
M-INSL-EQPM-	Insulating oil equipment	V-FUEL-HYDR-	Hydrant control pits
M-LUBE-EQPM-	Lubrication oil equipment	V-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes
M-MACH-BASE-	Machinery bases	V-FUEL-METR-	Meters
M-MATL-LIFT-	Miscellaneous lifting equipment	V-FUEL-PUMP-	Booster pump stations
M-PROC-EQPM-	Equipment	V-FUEL-TANK-	Fuel tanks
M-RCOV-EQPM-	Equipment	V-FUEL-VENT-	Vent pits

M-REFG-EQPM-	Equipment	V-FUEL-VLVE-	Valve pits
M-RWTR-EQPM-	Raw water equipment	V-GTHP-EQPM-	Equipment
M-STEM-EQPM-	Equipment	V-HTCW-CHLP-	Chilled water plant
P-CMPA-EQPM-	Equipment	V-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
P-FUEL-EQPM-	Equipment	V-HTCW-FTTG-	Caps and flanges
P-LGAS-EQPM-	Equipment	V-HTCW-HTPP-	High temperature water plant
P-MDGS-EQPM-	Equipment	V-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes
P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)	V-HTCW-PITS-	Valve pits/vaults, steam pits
P-SANR-FLDR-	Floor drains, sinks, and cleanouts	V-HTCW-PUMP-	Pump stations
S-BRAC-VERT-	Vertical bracing	V-HTCW-RTRN-	Return for all HTCW lines
S-GRAT-SUBS-	Subsurface grating	V-LITE-FIXT-	Exterior Lights
S-PIPE-GATE-	Gates (flap gates, sluice gates, other)	V-NGAS-DEVC-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves
T-CABL-COAX-	Coax cable	V-NGAS-FTTG-	Caps, crosses, and tees
T-CABL-FIBR-	Fiber optics cable	V-NGAS-METR-	Meters
T-CABL-MULT-	Multi-conductor cable	V-NGAS-PUMP-	Compressor stations
T-COMM-JBOX-	Junction boxes	V-NGAS-REDC-	Reducing stations
T-EQPM-COPP-	Distribution equipment for copper	V-NGAS-VENT-	Vent pits
T-EQPM-FIBR-	Distribution equipment for fiber optic	V-NGAS-VLVE-	Valve pits/boxes
T-EQPM-OTHR-	Other telecommunications equipment	V-POLE-UTIL-	Utility poles
T-JACK-DATA-	Data/LAN jacks	V-PROF-MHOL-	Manholes
T-JACK-PHON-	Telephone jacks	V-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)
V-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	V-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves
V-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-SSWR-FILT-	Filtration beds
V-CATH-ANOD-	Sacrificial anode system	V-SSWR-FTTG-	Caps and cleanouts
V-CATH-CURR-	Impress current system	V-SSWR-JBOX-	Junction boxes and manholes

V-CATH-TEST-	Test stations	V-SSWR-PUMP-	Booster pump stations
V-COMM-EQPM-	Other communications distribution equipment	V-SSWR-TANK-	Septic tanks
V-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-STRM-CHUT-	Chutes and concrete erosion control structures
V-ELEC-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	V-STRM-CULV-	Culverts
V-ELEC-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates
V-ELEC-SUBS-	Other substation equipment	V-STRM-EROS-	Erosion control (riprap)
V-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	V-STRM-FMON-	Flow monitoring station
V-FUEL-DEVC-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves	V-STRM-FTTG-	Caps and cleanouts
V-FUEL-FTTG-	Caps, crosses, and tees	V-STRM-HDWL-	Headwalls and endwalls
V-FUEL-HYDR-	Hydrant control pits	V-STRM-INLT-	Inlets (curb, surface, and catch basins)
V-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes	V-STRM-MHOL-	Manholes
V-FUEL-METR-	Meters	V-STRM-PUMP-	Pump stations
V-FUEL-PUMP-	Booster pump stations	V-TRAN-PADM-	Pad mounted transformers
V-FUEL-TANK-	Fuel tanks	V-TRAN-POLE-	Pole mounted transformers
V-FUEL-VENT-	Vent pits	V-UTIL-LINE-	Utilities
V-FUEL-VLVE-	Valve pits	V-UTIL-NGAS-	Gas lines, features, and valves
V-GTHP-EQPM-	Equipment	V-UTIL-SSWR-	Sanitary lines and manholes
V-HTCW-CHLP-	Chilled water plant	E-SPCL-SRFS-	Surface Sensor System
V-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	T-COMM-ANTN-	Telecommunications antennae
V-HTCW-FTTG-	Caps and flanges	C-SITE-SECU-	CMRA Security camera locations outside of buildings
V-HTCW-HTPP-	High temperature water plant	F-IGAS-EQPM-	Inert gas equipment
V-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes	F-LITE-EMER-	Emergency fixtures
V-HTCW-PITS-	Valve pits/vaults, steam pits	F-LITE-EXIT-	Exit fixtures
V-HTCW-PUMP-	Pump stations	F-LSFT-EGRE-	Egress requirements designator

V-HTCW-RTRN-	Return for all HTCW lines	F-LSFT-OCCP-	Occupant load for egress capacity
V-LITE-FIXT-	Exterior Lights	F-WATR-CONN-	Fire department connections
V-NGAS-DEVC-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves	F-WATR-HYDR-	Hydrants
V-NGAS-FTTG-	Caps, crosses, and tees	F-WATR-PUMP-	Fire pumps
V-NGAS-METR-	Meters	H-DECN-EQPM-	Decontamination equipment
V-NGAS-PUMP-	Compressor stations	H-DISP-TANK-	Spill containment tanks
V-NGAS-REDC-	Reducing stations	L-DETL-VLVE-	Valves, fittings
V-NGAS-VENT-	Vent pits	L-IRRG-SPKL-	Sprinklers
V-NGAS-VLVE-	Valve pits/boxes	M-ACID-EQPM-	Acid, alkaline, and oil waste equipment
V-POLE-UTIL-	Utility poles	M-BRIN-EQPM-	Brine system equipment
V-PROF-MHOL-	Manholes	M-CHEM-EQPM-	Equipment
V-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)	M-CNDW-EQPM-	Condenser water equipment
V-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves	M-CONT-THER-	Thermostats, controls, instrumentation, and sensors
V-SSWR-FILT-	Filtration beds	M-CWTR-EQPM-	Equipment
V-SSWR-FTTG-	Caps and cleanouts	M-DETL-BOIL-	Boilers
V-SSWR-JBOX-	Junction boxes and manholes	M-DETL-COIL-	Coils and fin tubes
V-SSWR-PUMP-	Booster pump stations	M-DETL-DUCT-	Ducts
V-SSWR-TANK-	Septic tanks	M-DETL-EQPT-	Equipment and fixtures
V-STRM-CHUT-	Chutes and concrete erosion control structures	M-DETL-FANS-	Fans
V-STRM-CULV-	Culverts	M-DETL-PUMP-	Pumps and compressors
V-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates	M-DETL-TANK-	Tanks
V-STRM-EROS-	Erosion control (riprap)	M-DETL-TRAP-	Traps and drains
V-STRM-FMON-	Flow monitoring station	M-DETL-VENT-	Vents
V-STRM-FTTG-	Caps and cleanouts	M-DETL-VLVE-	Valves and fittings
V-STRM-HDWL-	Headwalls and endwalls	M-DUAL-EQPM-	Equipment
V-STRM-INLT-	Inlets (curb, surface, and catch basins)	M-DUST-DUCT-	Dust and fume ductwork
V-STRM-MHOL-	Manholes	M-DUST-EQPM-	Dust and fume collection equipment
V-STRM-PUMP-	Pump stations	M-GTHP-EQPM-	Equipment
V-TRAN-PADM-	Pad mounted transformers	M-HTCW-CHLP-	Chilled water plant

V-TRAN-POLE-	Pole mounted transformers	M-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
V-UTIL-LINE-	Utilities	M-HTCW-FTTG-	Caps and flanges
V-UTIL-NGAS-	Gas lines, features, and valves	M-HTCW-HTPP-	High temperature water plant
V-UTIL-SSWR-	Sanitary lines and manholes	M-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes
E-SPCL-SRFS-	Surface Sensor System	M-HTCW-PITS-	Valve pits/vaults, steam pits
T-COMM-ANTN-	Telecommunications antennae	M-HTCW-PUMP-	Pump stations
C-SITE-SECU-	MRA Security camera locations outside of buildings	M-HTCW-RTRN-	Return for all HTCW lines
C-STRM-FTTG-	Caps and cleanouts	M-HVAC-DAMP-	Fire and smoke dampers
C-STRM-INLT-	Inlets (curb, surface, and catch basins)	M-HVAC-EQPM-	Air system equipment
C-STRM-MHOL-	Manholes	M-HVAC-ROOF-	Roof mounted HVAC equipment
C-STRM-PUMP-	Pump stations	M-HWTR-EQPM-	Equipment
C-STRM-STRC-	Storm drainage, headwalls, inlets, manholes, culverts, and drainage structures	M-HWTR-PIPE-	Piping (includes fittings, valves)
E-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	M-HYDR-EQPM-	Hydraulic system equipment
E-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	M-INSL-EQPM-	Insulating oil equipment
E-CATH-ANOD-	Sacrificial anode system	M-LUBE-EQPM-	Lubrication oil equipment
E-CATH-CURR-	Impress current system	M-MACH-BASE-	Machinery bases
E-CATH-TEST-	Test stations	M-MATL-LIFT-	Miscellaneous lifting equipment
E-COMM-EQPM-	Other communications distribution equipment	M-PROC-EQPM-	Equipment
E-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	M-RCOV-EQPM-	Equipment
E-ELEC-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	M-REFG-EQPM-	Equipment
E-ELEC-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	M-RWTR-EQPM-	Raw water equipment
E-ELEC-SUBS-	Other substation equipment	M-STEM-EQPM-	Equipment

E-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	P-CMPA-EQPM-	Equipment
E-ELEC-VALT-	Vaults	P-FUEL-EQPM-	Equipment
E-GRND-EQUI-	Equipotential ground system	P-LGAS-EQPM-	Equipment
E-GRND-REFR-	Reference ground system	P-MDGS-EQPM-	Equipment
E-LITE-EMER-	Emergency fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)	P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)
E-LITE-EXIT-	Exit fixtures (outline of light (if ceiling mounted) should go on	P-SANR-FLDR-	Floor drains, sinks, and cleanouts
E-LITE-CLNG-		S-BRAC-VERT-	Vertical bracing
E-LITE-EXTR-	Exterior lights	S-GRAT-SUBS-	Subsurface grating
E-LITE-JBOX-	Junction boxes	S-PIPE-GATE-	Gates (flap gates, sluice gates, other)
E-LITE-PANL-	Main distribution panels, switchboards, lighting panels	T-CABL-COAX-	Coax cable
E-LITE-SPCL-	Special fixtures	T-CABL-FIBR-	Fiber optics cable
E-LITE-SWCH-	Lighting contactors, photoelectric controls, low-voltage lighting controls, etc.	T-CABL-MULT-	Multi-conductor cable
E-LITE-WALL-	Wall mounted fixtures	M-DUAL-EQPM-	Equipment
E-LTNG-COND-	Lightning protection conductors	M-DUST-DUCT-	Dust and fume ductwork
E-LTNG-TERM-	Lightning protection terminals	M-DUST-EQPM-	Dust and fume collection equipment
E-POLE-UTIL-	Utility poles	M-GTHP-EQPM-	Equipment
E-POWR-BUSW-	Busways and wireways	M-HTCW-CHLP-	Chilled water plant
E-POWR-CABL-	Cable trays	M-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
E-POWR-FEED-	Feeders	M-HTCW-FTTG-	Caps and flanges
E-POWR-GENR-	Generators and auxiliary equipment	M-HTCW-HTPP-	High temperature water plant
E-POWR-JBOX-	Junction boxes	M-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes
E-POWR-PANL-	Panelboards, switchboards, MCC, unit substations	M-HTCW-PITS-	Valve pits/vaults, steam pits
E-POWR-SWCH-	Disconnect switches, motor starters, contactors, etc.	M-HTCW-PUMP-	Pump stations
E-SERT-BURD-	Buried sensors	M-HTCW-RTRN-	Return for all HTCW lines
E-SERT-UNDR-	Buried sensors	M-HVAC-DAMP-	Fire and smoke dampers
E-SPCL-JBOX-	Junction boxes	M-HVAC-EQPM-	Air system equipment
E-SPCL-PANL-	Panelboards, backing boards, patch panel racks	M-HVAC-ROOF-	Roof mounted HVAC equipment

E-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)	M-HWTR-EQPM-	Equipment
E-TRAN-PADM-	Pad mounted transformers	M-HWTR-PIPE-	Piping (includes fittings, valves)
E-TRAN-POLE-	Pole mounted transformers	M-HYDR-EQPM-	Hydraulic system equipment
F-AFFF-EQPM-	Equipment	M-INSL-EQPM-	Insulating oil equipment
F-ALRM-INDC-	Indicating appliances	M-LUBE-EQPM-	Lubrication oil equipment
F-ALRM-MANL-	Manual fire alarm pull stations	M-MACH-BASE-	Machinery bases
F-ALRM-PHON-	Fire service or emergency telephone stations	M-MATL-LIFT-	Miscellaneous lifting equipment
F-CO2S-EQPM-	Equipment	M-PROC-EQPM-	Equipment
F-CTRL-PANL-	Control panels	M-RCOV-EQPM-	Equipment
F-HALN-EQPM-	Halon equipment	M-REFG-EQPM-	Equipment
F-IGAS-EQPM-	Inert gas equipment	M-RWTR-EQPM-	Raw water equipment
F-LITE-EMER-	Emergency fixtures	M-STEM-EQPM-	Equipment
F-LITE-EXIT-	Exit fixtures	P-CMPA-EQPM-	Equipment
F-LSFT-EGRE-	Egress requirements designator	P-FUEL-EQPM-	Equipment
F-LSFT-OCCP-	Occupant load for egress capacity	P-LGAS-EQPM-	Equipment
F-WATR-CONN-	Fire department connections	P-MDGS-EQPM-	Equipment
F-WATR-HYDR-	Hydrants	P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)
F-WATR-PUMP-	Fire pumps	P-SANR-FLDR-	Floor drains, sinks, and cleanouts
H-DECN-EQPM-	Decontamination equipment	S-BRAC-VERT-	Vertical bracing
H-DISP-TANK-	Spill containment tanks	S-GRAT-SUBS-	Subsurface grating
L-DETL-VLVE-	Valves, fittings	S-PIPE-GATE-	Gates (flap gates, sluice gates, other)
L-IRRG-SPKL-	Sprinklers	T-CABL-COAX-	Coax cable
M-ACID-EQPM-	Acid, alkaline, and oil waste equipment	T-CABL-FIBR-	Fiber optics cable
M-BRIN-EQPM-	Brine system equipment	T-CABL-MULT-	Multi-conductor cable
M-CHEM-EQPM-	Equipment	P-CMPA-EQPM-	Equipment
M-CNDW-EQPM-	Condenser water equipment	P-FUEL-EQPM-	Equipment
M-CONT-THER-	Thermostats, controls, instrumentation, and sensors	P-LGAS-EQPM-	Equipment
M-CWTR-EQPM-	Equipment	P-MDGS-EQPM-	Equipment
M-DETL-BOIL-	Boilers	P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)
M-DETL-COIL-	Coils and fin tubes	P-SANR-FLDR-	Floor drains, sinks, and cleanouts
M-DETL-DUCT-	Ducts	S-BRAC-VERT-	Vertical bracing

M-DETL-EQPT-	Equipment and fixtures	S-GRAT-SUBS-	Subsurface grating
M-DETL-FANS-	Fans	S-PIPE-GATE-	Gates (flap gates, sluice gates, other)
M-DETL-PUMP-	Pumps and compressors	T-CABL-COAX-	Coax cable
M-DETL-TANK-	Tanks	T-CABL-FIBR-	Fiber optics cable
M-DETL-TRAP-	Traps and drains	T-CABL-MULT-	Multi-conductor cable
M-DETL-VENT-	Vents	T-COMM-JBOX-	Junction boxes
M-DETL-VLVE-	Valves and fittings	T-EQPM-COPP-	Distribution equipment for copper
M-DUAL-EQPM-	Equipment	T-EQPM-FIBR-	Distribution equipment for fiber optic
M-DUST-DUCT-	Dust and fume ductwork	T-EQPM-OTHR-	Other telecommunications equipment
M-DUST-EQPM-	Dust and fume collection equipment	T-JACK-DATA-	Data/LAN jacks
M-GTHP-EQPM-	Equipment	T-JACK-PHON-	Telephone jacks
M-HTCW-CHLP-	Chilled water plant	V-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
M-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	V-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices
M-HTCW-FTTG-	Caps and flanges	V-CATH-ANOD-	Sacrificial anode system
M-HTCW-HTPP-	High temperature water plant	V-CATH-CURR-	Impress current system
M-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes	V-CATH-TEST-	Test stations
M-HTCW-PITS-	Valve pits/vaults, steam pits	V-COMM-EQPM-	Other communications distribution equipment
M-HTCW-PUMP-	Pump stations	V-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices
M-HTCW-RTRN-	Return for all HTCW lines	V-ELEC-SUBS-	Other substation equipment markers, oil/water separators, reducers, regulators, and valves
M-HVAC-DAMP-	Fire and smoke dampers	V-FUEL-FTTG-	Caps, crosses, and tees
M-HVAC-EQPM-	Air system equipment	V-FUEL-HYDR-	Hydrant control pits
M-HVAC-ROOF-	Roof mounted HVAC equipment	V-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes
M-HWTR-EQPM-	Equipment	V-FUEL-METR-	Meters

M-HWTR-PIPE-	Piping (includes fittings, valves)	V-FUEL-PUMP-	Booster pump stations
M-HYDR-EQPM-	Hydraulic system equipment	V-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches
M-INSL-EQPM-	Insulating oil equipment	V-FUEL-DEVC-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves
M-LUBE-EQPM-	Lubrication oil equipment	V-FUEL-FTTG-	Caps, crosses, and tees
M-MACH-BASE-	Machinery bases	V-FUEL-HYDR-	Hydrant control pits
M-MATL-LIFT-	Miscellaneous lifting equipment	V-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes
M-PROC-EQPM-	Equipment	V-FUEL-METR-	Meters
M-RCOV-EQPM-	Equipment	V-FUEL-PUMP-	Booster pump stations
M-REFG-EQPM-	Equipment	V-FUEL-TANK-	Fuel tanks
M-RWTR-EQPM-	Raw water equipment	V-FUEL-VENT-	Vent pits
M-STEM-EQPM-	Equipment	V-FUEL-VLVE-	Valve pits
P-CMPA-EQPM-	Equipment	V-GTHP-EQPM-	Equipment
P-FUEL-EQPM-	Equipment	V-HTCW-CHLP-	Chilled water plant
P-LGAS-EQPM-	Equipment	V-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
P-MDGS-EQPM-	Equipment	V-HTCW-FTTG-	Caps and flanges
P-SANR-EQPM-	Equipment (e.g., sand/oil/water separators)	V-HTCW-HTPP-	High temperature water plant
P-SANR-FLDR-	Floor drains, sinks, and cleanouts	V-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes
S-BRAC-VERT-	Vertical bracing	V-HTCW-PITS-	Valve pits/vaults, steam pits
S-GRAT-SUBS-	Subsurface grating	V-HTCW-PUMP-	Pump stations
S-PIPE-GATE-	Gates (flap gates, sluice gates, other)	V-HTCW-RTRN-	Return for all HTCW lines
T-CABL-COAX-	Coax cable	V-LITE-FIXT-	Exterior Lights
T-CABL-FIBR-	Fiber optics cable	V-NGAS-DEVC-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves
T-CABL-MULT-	Multi-conductor cable	V-NGAS-FTTG-	Caps, crosses, and tees

T-COMM-JBOX-	Junction boxes	V-NGAS-METR-	Meters
T-EQPM-COPP-	Distribution equipment for copper	V-NGAS-PUMP-	Compressor stations
T-EQPM-FIBR-	Distribution equipment for fiber optic	V-NGAS-REDC-	Reducing stations
T-EQPM-OTHR-	Other telecommunications equipment	V-NGAS-VENT-	Vent pits
T-JACK-DATA-	Data/LAN jacks	V-NGAS-VLVE-	Valve pits/boxes
T-JACK-PHON-	Telephone jacks	V-POLE-UTIL-	Utility poles
V-AIRF-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	V-PROF-MHOL-	Manholes
V-AIRF-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)
V-CATH-ANOD-	Sacrificial anode system	V-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves
V-CATH-CURR-	Impress current system	V-SSWR-FILT-	Filtration beds
V-CATH-TEST-	Test stations	V-SSWR-FTTG-	Caps and cleanouts
V-COMM-EQPM-	Other communications distribution equipment	V-SSWR-JBOX-	Junction boxes and manholes
V-COMM-JBOX-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-SSWR-PUMP-	Booster pump stations
V-ELEC-DEVC-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	V-SSWR-TANK-	Septic tanks
V-ELEC-JBOX-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	V-STRM-CHUT-	Chutes and concrete erosion control structures
V-ELEC-SUBS-	Other substation equipment	V-STRM-CULV-	Culverts
V-ELEC-SWCH-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	V-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates
V-FUEL-DEVC-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves	V-STRM-EROS-	Erosion control (riprap)
V-FUEL-FTTG-	Caps, crosses, and tees	V-STRM-FMON-	Flow monitoring station
V-FUEL-HYDR-	Hydrant control pits	V-STRM-FTTG-	Caps and cleanouts
V-FUEL-JBOX-	Junction boxes, manholes, handholes, test boxes	V-STRM-HDWL-	Headwalls and endwalls

V-FUEL-METR-	Meters	V-STRM-INLT-	Inlets (curb, surface, and catch basins)
V-FUEL-PUMP-	Booster pump stations	V-STRM-MHOL-	Manholes
V-FUEL-TANK-	Fuel tanks	V-STRM-PUMP-	Pump stations
V-FUEL-VENT-	Vent pits	V-TRAN-PADM-	Pad mounted transformers
V-FUEL-VLVE-	Valve pits	V-TRAN-POLE-	Pole mounted transformers
V-GTHP-EQPM-	Equipment	V-UTIL-LINE-	Utilities
V-HTCW-CHLP-	Chilled water plant	V-UTIL-NGAS-	Gas lines, features, and valves
V-HTCW-DEVC-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	V-UTIL-SSWR-	Sanitary lines and manholes
V-HTCW-FTTG-	Caps and flanges	E-SPCL-SRFS-	Surface Sensor System
V-HTCW-HTPP-	High temperature water plant	T-COMM-ANTN-	Telecommunications antennae
V-HTCW-JBOX-	Junction boxes, manholes, handholes, test boxes	C-SITE-SECU-	CMRA Security camera locations outside of buildings
V-HTCW-PITS-	Valve pits/vaults, steam pits	V-NGAS-VLVE-	Valve pits/boxes
V-HTCW-PUMP-	Pump stations	V-POLE-UTIL-	Utility poles
V-HTCW-RTRN-	Return for all HTCW lines	V-PROF-MHOL-	Manholes
V-LITE-FIXT-	Exterior Lights	V-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)
V-NGAS-DEVC-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves	V-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves
V-NGAS-FTTG-	Caps, crosses, and tees	V-SSWR-FILT-	Filtration beds
V-NGAS-METR-	Meters	V-SSWR-FTTG-	Caps and cleanouts
V-NGAS-PUMP-	Compressor stations	V-SSWR-JBOX-	Junction boxes and manholes
V-NGAS-REDC-	Reducing stations	V-SSWR-PUMP-	Booster pump stations
V-NGAS-VENT-	Vent pits	V-SSWR-TANK-	Septic tanks
V-NGAS-VLVE-	Valve pits/boxes	V-STRM-CHUT-	Chutes and concrete erosion control structures
V-POLE-UTIL-	Utility poles	V-STRM-CULV-	Culverts
V-PROF-MHOL-	Manholes	V-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates
V-SPCL-SYST-	Special systems (UMCS, EMCS, CATV, etc.)	V-STRM-EROS-	Erosion control (riprap)
V-SSWR-DEVC-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves	V-STRM-FMON-	Flow monitoring station
V-SSWR-FILT-	Filtration beds	V-STRM-FTTG-	Caps and cleanouts

V-SSWR-FTTG-	Caps and cleanouts	V-STRM-HDWL-	Headwalls and endwalls	
V-SSWR-JBOX-	Junction boxes and manholes	V-STRM-INLT-	Inlets (curb, surface, and catch basins)	
V-SSWR-PUMP-	Booster pump stations	V-STRM-MHOL-	Manholes	
V-SSWR-TANK-	Septic tanks	V-STRM-PUMP-	Pump stations	
V-STRM-CHUT-	Chutes and concrete erosion control structures	V-TRAN-PADM-	Pad mounted transformers	
V-STRM-CULV-	Culverts	V-TRAN-POLE-	Pole mounted transformers	
V-STRM-DEVC-	Downspouts, flumes, oil/water separators, and flap gates	V-UTIL-LINE-	Utilities	
V-STRM-EROS-	Erosion control (riprap)	V-UTIL-NGAS-	Gas lines, features, and valves	
V-STRM-FMON-	Flow monitoring station	V-UTIL-SSWR-	Sanitary lines and manholes	
V-STRM-FTTG-	Caps and cleanouts	E-SPCL-SRFS-	Surface Sensor System	
V-STRM-HDWL-	Headwalls and endwalls	T-COMM-ANTN-	Telecommunications antennae	
		C-SITE-SECU-	CMRA Security camera locations outside of buildings	
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	6 (all)	Continuous (all)	1 MM (all)	User Defined
MicroStation Standards	5 (all)		7 (all)	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>Utility</i>		Core
	FGDC	<i>VerticalStructure</i>		
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the center of the object at the highest point.</i>				
Monumentation	N/A			
Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
			Orthometric	Ellipsoidal
	A	± 1ft	± 0.25ft	
	B	± 3 ft	± 10 ft	
	C	± 5 ft	± 10 ft	
D	± 10 ft	± 20 ft		
Resolution	Geographic Coordinates		Distances and Elevations	
A	Hundredth of arc second		Nearest Tenth of a foot	
B	Five Hundredths of arc second		Nearest Foot	
C	Five Hundredths of arc second		Nearest Foot	
D	Tenth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		

description (VARCHAR2 (255))	Description of the feature.
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
utilityType (Enumeration: CodeUtilityType)	The type of utility the feature represents.
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
Alternative (Number(2))	Discriminator used to tie features of a plan or proposal together into a version.

5.14.4. Utility Polygon

Definition: Any utility feature typically represented as a polygon, or hydro vaults.				
Feature Group	Utilities			
Feature Class Name	UtilityPolygon			
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level	Description			
C-SSWR-LAGN-	Lagoons			
C-SSWR-LEAC-	Leach field			
C-SSWR-NITF-	Nitrification drain fields			
C-SSWR-PLNT-	Treatment plants			
C-STRM-AFFF-	AFFF lagoon/detention pond			
C-STRM-CHUT-	Chutes and concrete erosion control structures			
C-STRM-LAGN-	Lagoons, ponds, watersheds, and basins			
E-AIRF-VALT-	Airfield lighting vaults			
V-STRM-LAGN-	Lagoons, ponds, watersheds, and basins			
E-COMM-VALT-	Communications vault			
V-COMM-VALT-	Communications vault			
V-SSWR-LAGN-	Lagoons			
V-SSWR-LEAC-	Leach field			
V-SSWR-NITF-	Nitrification drain fields			
V-SSWR-PLNT-	Treatment plants			
V-STRM-AFFF-	AFFF lagoon/detention pond			
	Color	Line type	Line Weight	Symbol
AutoDesk Standards	6 (all)	Continuous (all)	1 MM (all)	User Defined
MicroStation Standards	5 (all)		7 (all)	
Information Assurance Level	Restricted			
Equivalent Standards	AIXM	<i>Utility</i>		Core
	FGDC	<i>VerticalStructure</i>		
	SDSFIE	<i>None</i>		
Documentation and Submission Requirements	None			
Related Features				
Data Capture Rules: <i>Collect the outline of utility feature to its greatest horizontal extents.</i>				
Monumentation	N/A			

Survey Point Location	Horizontal		Vertical	
	N/A		N/A	
Accuracy Requirements (in feet)	Horizontal		Vertical	
			Orthometric	Ellipsoidal
	A	± 1 ft	± 0.25ft	N/A
	B	± 3 ft	± 10 ft	
	C	± 5 ft	± 10 ft	
D	± 10 ft	± 20 ft		
Resolution	Geographic Coordinates		Distances and Elevations	
A	Hundredth of arc second		Nearest Tenth of a foot	
B	Five Hundredths of arc second		Nearest Foot	
C	Five Hundredths of arc second		Nearest Foot	
D	Tenth of arc second		Nearest Foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255))		Description of the feature.		
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
utilityType (Enumeration: CodeUtilityType)		The type of utility the feature represents.		
userFlag (String 254)		An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject Item's data.		
Alternative (Number(2))		Discriminator used to tie features of a plan or proposal together into a version.		

5.15. ATTRIBUTE ENUMERATIONS

The following tables contain the expected values in fields that are of type enumeration.

5.15.1. CodeAcquisitionType

Value	Description
FEE_SIMPLE	Purchased real property; absolute ownership
EASEMENT	Rights given to use land in a specific manner
LEASED	Restricted use of land for a specific period of time

5.15.2. CodeAirportFacilityType

Value	Description
AD	Airport only
AH	Airport with helicopter landing area
H	Helicopter (the stall speed method of calculating aircraft category does not apply)
HP	Heliport only
LS	Landing Site

5.15.3. CodeApproachCategory

Value	Description
A	Speed less than 91 knots
B	Speed 91 knots or more but less than 121 knots
C	Speed 121 knots or more but less than 141 knots
D	Speed 141 knots or more but less than 166 knots
E	Speed 166 knots or more

5.15.4. CodeApproachGuidance

Value	Description
NON_VERTICAL	Runway is used for or planned use is for Non-Vertically Guided operations
PRECISION_CAT_I	Runway is used for or planned use is for Precision Category 1 operations
PRECISION_CAT_II	Runway is used for or planned use is for Precision Category II operations
PRECISION_CAT_IIIA	Runway is used for or planned use is for Precision Category IIIa operations.
PRECISION_CAT_IIIB	Runway is used for or planned use is for Precision Category IIIb operations
PRECISION_CAT_IIIC	Runway is used for or planned use is for Precision Category IIIc operations
VERTICAL	Runway is used for or planned use is for Vertically Guided (other than precision) operations
VISUAL	Runway is used for or planned use is for visual operations only

5.15.5. CodeApronType

Value	Description
CARGO	Cargo loading area used for the loading/unloading of cargo
DE_ICING	Area used for deicing of aircraft
FUEL	Area used for aircraft fueling

Value	Description
HARDSTAND	Area used for parking a single aircraft. More temporary than parking
LOADING	Passenger loading area used for the loading/unloading of passengers
MAINT	Area used for maintenance of aircraft
MILITARY	Apron used by military
NORMAL	Apron
OTHER	Other
PARKING	Area used to park aircraft
RAMP	Access pavement between maintenance hangars opening to the apron and the apron edge
STAIRS	Stairs
TAXILANE	Area where plane is still under terminal control (airline dispatched) as opposed to tower control.
TEMPORARY	Temporary
TURNAROUND	Area used for aircraft to turn around

5.15.6. CodeBridgeType

Value	Description
ROAD	Road or highway bridge
RR	Railroad or Monorail Bridge
RWY	Runway Bridge
TWY	Taxiway Bridge

5.15.7. CodeBuoyType

Value	Description
Bn	Beacon
C	Can Buoy
F	Fixed
J	Junction (S or T Dayboard)
K	Rectangular (Range Dayboard)
Lb	Lighted buoy
M	Octagonal Dayboard
N	Nun Buoy
O	Other marking
S	Square Dayboard
T	Triangle Dayboard

5.15.8. CodeClassAirspace

Name	Definition
A	Class of Airspace per ICAO Annex 11, Appendix 4
B	Class of Airspace per ICAO Annex 11, Appendix 4
C	Class of Airspace per ICAO Annex 11, Appendix 4
D	Class of Airspace per ICAO Annex 11, Appendix 4
E	Class of Airspace per ICAO Annex 11, Appendix 4
F	Class of Airspace per ICAO Annex 11, Appendix 4
G	Class of Airspace per ICAO Annex 11, Appendix 4
other	Other

5.15.9. CodeColor

Value	Description
AMBER	Amber [U.S. CADD]
BLACK	Black [U.S. CADD]
BLUE	Blue [U.S. CADD]
BROWN	Brown [U.S. CADD]
GREEN	Green [U.S. CADD]
GREEN-GREEN	Bidirectional (Source AC 150/5345-46C)
GREEN-RED	Bidirectional (Source AC 150/5345-46C)
GREEN-YELLOW	Bidirectional (Source AC 150/5345-46C)
GREY	Grey [U.S. CADD]
LIGHTGREY	LightGrey [U.S. CADD]
MAGENTA	Magenta [U.S. CADD]
ORANGE	Orange [U.S. CADD]
OTHER	Other [U.S. CADD]
PINK	Pink [U.S. CADD]
PURPLE	Purple [AIXM]
RED	Red [U.S. CADD]
RED-GREEN	Bidirectional (Source AC 150/5345-46C)
RED-RED	Bidirectional (Source AC 150/5345-46C)
TBD	To be determined
VIOLET	Violet [U.S. CADD]
WHITE	White [U.S. CADD]
WHITE-RED	Bidirectional (Source AC 150/5345-46C)
WHITE-WHITE	Bidirectional (Source AC 150/5345-46C)
WHITE-YELLOW	Bidirectional (Source AC 150/5345-46C)
YELLOW	Yellow [U.S. CADD]
YELLOW-GREEN	Bidirectional (Source AC 150/5345-46C)
YELLOW-RED	Bidirectional (Source AC 150/5345-46C)
YELLOW-YELLOW	Bidirectional (Source AC 150/5345-46C)

5.15.10. CodeCompassLocation

Value	Description
E	East (076 to 105° magnetic)
ESE	East Southeast (106 to 135° magnetic)
N	North (346 to 015° magnetic)
NE	Northeast (046 to 075° magnetic)
NNE	North Northeast (016 to 045° magnetic)
NW	Northwest (316 to 345° magnetic)
S	South (166 to 195° magnetic)
SE	Southeast (136 to 165° magnetic)
SSW	South Southwest (196 to 225° magnetic)
SW	Southwest (226 to 255° magnetic)
W	West (256 to 285° magnetic)
WNW	West NorthWest (286 to 315° magnetic)

5.15.11.CodeCoordinatedUseType

Value	Description
A	Aeronautical
M	Multiple
R	Recreational boating/fishing
S	Commercial Shipping/Fishing

5.15.12.CodeCoordinateZone

Value	Description
AK-1	NAD27 Alaska State Planes- Zone 1- US Foot (EPSG #26731)
AK-10	NAD27 Alaska State Planes- Zone 10- US Foot (EPSG #26740)
AK-2	NAD27 Alaska State Planes- Zone 2- US Foot (EPSG #26732)
AK-3	NAD27 Alaska State Planes- Zone 3- US Foot (EPSG #26733)
AK-4	NAD27 Alaska State Planes- Zone 4- US Foot (EPSG #26734)
AK-5	NAD27 Alaska State Planes- Zone 5- US Foot (EPSG #26735)
AK-6	NAD27 Alaska State Planes- Zone 6- US Foot (EPSG #26736)
AK-7	NAD27 Alaska State Planes- Zone 7- US Foot (EPSG #26737)
AK-8	NAD27 Alaska State Planes- Zone 8- US Foot (EPSG #26738)
AK83-1	NAD83 Alaska State Planes- Zone 1- Meter (EPSG #26931)
AK83-10	NAD83 Alaska State Planes- Zone 10- Meter (EPSG #26940)
AK83-10F	NAD83 Alaska State Planes- Zone 10- US Foot
AK83-1F	NAD83 Alaska State Planes- Zone 1- US Foot
AK83-2	NAD83 Alaska State Planes- Zone 2- Meter (EPSG #26932)
AK83-2F	NAD83 Alaska State Planes- Zone 2- US Foot
AK83-3	NAD83 Alaska State Planes- Zone 3- Meter (EPSG #26933)
AK83-3F	NAD83 Alaska State Planes- Zone 3- US Foot
AK83-4	NAD83 Alaska State Planes- Zone 4- Meter (EPSG #26934)
AK83-4F	NAD83 Alaska State Planes- Zone 4- US Foot
AK83-5	NAD83 Alaska State Planes- Zone 5- Meter (EPSG #26935)
AK83-5F	NAD83 Alaska State Planes- Zone 5- US Foot
AK83-6	NAD83 Alaska State Planes- Zone 6- Meter (EPSG #26936)
AK83-6F	NAD83 Alaska State Planes- Zone 6- US Foot
AK83-7	NAD83 Alaska State Planes- Zone 7- Meter (EPSG #26937)
AK83-7F	NAD83 Alaska State Planes- Zone 7- US Foot
AK83-8	NAD83 Alaska State Planes- Zone 8- Meter (EPSG #26938)
AK83-8F	NAD83 Alaska State Planes- Zone 8- US Foot
AK83-9	NAD83 Alaska State Planes- Zone 9- Meter (EPSG #26939)
AK83-9F	NAD83 Alaska State Planes- Zone 9- US Foot
AK-9	NAD27 Alaska State Planes- Zone 9- US Foot (EPSG #26739)
AL83-E	NAD83 Alabama State Planes- Eastern Zone- Meter (EPSG #26929)
AL83-EF	NAD83 Alabama State Planes- Eastern Zone- US Foot
AL83-W	NAD83 Alabama State Planes- Western Zone- Meter (EPSG #26930)
AL83-WF	NAD83 Alabama State Planes- Western Zone- US Foot
AL-E	NAD27 Alabama State Planes- Eastern Zone- US Foot (EPSG #26729)
ALHP-E	HPGN Alabama State Planes- Eastern Zone- Meter (EPSG #2759)
ALHP-EF	HPGN Alabama State Planes- Eastern Zone- US Foot
ALHP-W	HPGN Alabama State Planes- Western Zone- Meter (EPSG #2760)
ALHP-WF	HPGN Alabama State Planes- Western Zone- US Foot
AL-W	NAD27 Alabama State Planes- Western Zone- US Foot (EPSG #26730)

Value	Description
AR83-N	NAD83 Arkansas State Planes- Northern Zone- Meter (EPSG #26951)
AR83-NF	NAD83 Arkansas State Planes- Northern Zone- US Foot
AR83-S	NAD83 Arkansas State Planes- Southern Zone- Meter (EPSG #26952)
AR83-SF	NAD83 Arkansas State Planes- Southern Zone- US Foot
ARHP-N	HARN (HPGN) Arkansas State Planes- Northern Zone- Meter (EPSG #2764)
ARHP-NF	HARN (HPGN) Arkansas State Planes- Northern Zone- US Foot
ARHP-S	HARN (HPGN) Arkansas State Planes- Southern Zone- Meter (EPSG #2765)
ARHP-SF	HARN (HPGN) Arkansas State Planes- Southern Zone- US Foot
AR-N	NAD27 Arkansas State Planes- Northern Zone- US Foot (EPSG #26751)
AR-S	NAD27 Arkansas State Planes- Southern Zone- US Foot (EPSG #26752)
AZ83-C	NAD83 Arizona State Planes- Central Zone- Meter (EPSG #26949)
AZ83-CCM	NAD83 Arizona State Planes- Central Zone- Centimeter
AZ83-CF	NAD83 Arizona State Planes- Central Zone- US Foot
AZ83-CIF	NAD83 Arizona State Planes- Central Zone- Intl Foot (EPSG #2223)
AZ83-E	NAD83 Arizona State Planes- East Zone- Meter (EPSG #26948)
AZ83-EF	NAD83 Arizona State Planes- East Zone- US Foot
AZ83-EIF	NAD83 Arizona State Planes- East Zone- Intl Foot (EPSG #2222)
AZ83-W	NAD83 Arizona State Planes- West Zone- Meter (EPSG #26950)
AZ83-WF	NAD83 Arizona State Planes- West Zone- US Foot
AZ83-WIF	NAD83 Arizona State Planes- West Zone- Intl Foot (EPSG #2224)
AZ-C	NAD27 Arizona State Planes- Central Zone- US Foot (EPSG #26749)
AZ-E	NAD27 Arizona State Planes- East Zone- US Foot (EPSG #26748)
AZHP-C	HPGN Arizona State Planes- Central Zone- Meter (EPSG #2762)
AZHP-CF	HPGN Arizona State Planes- Central Zone- US Foot
AZHP-CIF	HPGN Arizona State Planes- Central Zone- Intl Foot (EPSG #2868)
AZHP-E	HPGN Arizona State Planes- East Zone- Meter (EPSG #2761)
AZHP-EF	HPGN Arizona State Planes- East Zone- US Foot
AZHP-EIF	HPGN Arizona State Planes- East Zone- Intl Foot (EPSG #2867)
AZHP-W	HPGN Arizona State Planes- West Zone- Meter (EPSG #2763)
AZHP-WF	HPGN Arizona State Planes- West Zone- US Foot
AZHP-WIF	HPGN Arizona State Planes- West Zone- Intl Foot (EPSG #2869)
AZ-W	NAD27 Arizona State Planes- West Zone- US Foot (EPSG #26750)
CA83-I	NAD83 California State Planes- Zone I- Meter (EPSG #26941)
CA83-IF	NAD83 California State Planes- Zone I- US Foot (EPSG #2225)
CA83-II	NAD83 California State Planes- Zone II- Meter (EPSG #26942)
CA83-IIF	NAD83 California State Planes- Zone II- US Foot (EPSG #2226)
CA83-III	NAD83 California State Planes- Zone III- Meter (EPSG #26943)
CA83IIIF	NAD83 California State Planes- Zone III- US Foot (EPSG #2227)
CA83-IV	NAD83 California State Planes- Zone IV- Meter (EPSG #26944)
CA83-IVF	NAD83 California State Planes- Zone IV- US Foot (EPSG #2228)
CA83-V	NAD83 California State Planes- Zone V- Meter (EPSG #26945)
CA83-VF	NAD83 California State Planes- Zone V- US Foot (EPSG #2229)
CA83-VI	NAD83 California State Planes- Zone VI- Meter (EPSG #26946)
CA83-VIF	NAD83 California State Planes- Zone VI- US Foot (EPSG #2230)
CAHP-I	HPGN California State Planes- Zone I- Meter (EPSG #2766)
CAHP-IF	HPGN California State Planes- Zone I- US Foot (EPSG #2870)
CAHP-II	HPGN California State Planes- Zone II- Meter (EPSG #2767)

Value	Description
CAHP-IIF	HPGN California State Planes- Zone II- US Foot (EPSG #2871)
CAHP-III	HPGN California State Planes- Zone III- Meter (EPSG #2768)
CAHP-IIIIF	HPGN California State Planes- Zone III- US Foot (EPSG #2872)
CAHP-IV	HPGN California State Planes- Zone IV- Meter (EPSG #2769)
CAHP-IVF	HPGN California State Planes- Zone IV- US Foot (EPSG #2873)
CAHP-V	HPGN California State Planes- Zone V- Meter (EPSG #2770)
CAHP-VF	HPGN California State Planes- Zone V- US Foot (EPSG #2874)
CAHP-VI	HPGN California State Planes- Zone VI- Meter (EPSG #2771)
CAHP-VIF	HPGN California State Planes- Zone VI- US Foot (EPSG #2875)
CA-I	NAD27 California State Planes- Zone I- US Foot (EPSG #26741)
CA-II	NAD27 California State Planes- Zone II- US Foot (EPSG #26742)
CA-III	NAD27 California State Planes- Zone III- US Foot (EPSG #26743)
CA-IV	NAD27 California State Planes- Zone IV- US Foot (EPSG #26744)
CA-V	NAD27 California State Planes- Zone V- US Foot (EPSG #26745)
CA-VI	NAD27 California State Planes- Zone VI- US Foot (EPSG #26746)
CA-VII	NAD27 California State Planes- Zone VII- US Foot (EPSG #26747)
CO83-C	NAD83 Colorado State Planes- Central Zone- Meter (EPSG #26954)
CO83-CF	NAD83 Colorado State Planes- Central Zone- US Foot (EPSG #2232)
CO83-N	NAD83 Colorado State Planes- Northern Zone- Meter (EPSG #26953)
CO83-NF	NAD83 Colorado State Planes- Northern Zone- US Foot (EPSG #2231)
CO83-S	NAD83 Colorado State Planes- Southern Zone- Meter (EPSG #26955)
CO83-SF	NAD83 Colorado State Planes- Southern Zone- US Foot (EPSG #2233)
CO-C	NAD27 Colorado State Planes- Central Zone- US Foot (EPSG #26754)
COHP-C	HPGN Colorado State Planes- Central Zone- Meter (EPSG #2773)
COHP-CF	HPGN Colorado State Planes- Central Zone- US Foot (EPSG #2877)
COHP-N	HPGN Colorado State Planes- Northern Zone- Meter (EPSG #2772)
COHP-NF	HPGN Colorado State Planes- Northern Zone- US Foot (EPSG #2876)
COHP-S	HPGN Colorado State Planes- Southern Zone- Meter (EPSG #2774)
COHP-SF	HPGN Colorado State Planes- Southern Zone- US Foot (EPSG #2878)
CO-N	NAD27 Colorado State Planes- Northern Zone- US Foot (EPSG #26753)
CO-S	NAD27 Colorado State Planes- Southern Zone- US Foot (EPSG #26755)
CT	NAD27 Connecticut State Plane Zone- US Foot (EPSG #26756)
CT83	NAD83 Connecticut State Plane Zone- Meter (EPSG #26956)
CT83F	NAD83 Connecticut State Plane Zone- US Foot (EPSG #2234)
CTHP	HPGN/HARN Connecticut State Plane Zone- Meter (EPSG #2775)
CTHPF	HPGN/HARN Connecticut State Plane Zone- US Foot (EPSG #2879)
DE	NAD27 Delaware State Planes- US Foot (EPSG #26757)
DE83	NAD83 Delaware State Planes- Meter (EPSG #26957)
DE83F	NAD83 Delaware State Planes- US Foot (EPSG #2235)
DEHP	HPGN Delaware State Planes- Meter (EPSG #2776)
DEHPF	HPGN Delaware State Planes- US Foot (EPSG #2880)
FL83-E	NAD83 Florida State Planes- Eastern Zone- Meter (EPSG #26958)
FL83-EF	NAD83 Florida State Planes- Eastern Zone- US Foot (EPSG #2236)
FL83-N	NAD83 Florida State Planes- Northern Zone- Meter (EPSG #26960)
FL83-NF	NAD83 Florida State Planes- Northern Zone- US Foot (EPSG #2238)
FL83-W	NAD83 Florida State Planes- Western Zone- Meter (EPSG #26959)
FL83-WF	NAD83 Florida State Planes- Western Zone- US Foot (EPSG #2237)

Value	Description
FL-E	NAD27 Florida State Planes- Eastern Zone- US Foot (EPSG #26758)
FLHP-E	HPGN Florida State Planes- Eastern Zone- Meter (EPSG #2777)
FLHP-EF	HPGN Florida State Planes- Eastern Zone- US Foot (EPSG #2881)
FLHP-N	HPGN Florida State Planes- Northern Zone- Meter (EPSG #2779)
FLHP-NF	HPGN Florida State Planes- Northern Zone- US Foot (EPSG #2883)
FLHP-W	HPGN Florida State Planes- Western Zone- Meter (EPSG #2778)
FLHP-WF	HPGN Florida State Planes- Western Zone- US Foot (EPSG #2882)
FL-N	NAD27 Florida State Planes- Northern Zone- US Foot (EPSG #26760)
FL-W	NAD27 Florida State Planes- Western Zone- US Foot (EPSG #26759)
GA83-E	NAD83 Georgia State Planes- Eastern Zone- Meter (EPSG #26966)
GA83-EF	NAD83 Georgia State Planes- Eastern Zone- US Foot (EPSG #2239)
GA83-W	NAD83 Georgia State Planes- Western Zone- Meter (EPSG #26967)
GA83-WF	NAD83 Georgia State Planes- Western Zone- US Foot (EPSG #2240)
GA-E	NAD27 Georgia State Planes- Eastern Zone- US Foot (EPSG #26766)
GAHP-E	HARN (HPGN) Georgia State Planes- Eastern Zone- Meter (EPSG #2780)
GAHP-EF	HARN (HPGN) Georgia State Planes- Eastern Zone- US Foot (EPSG #2884)
GAHP-W	HARN (HPGN) Georgia State Planes- Western Zone- Meter (EPSG #2781)
GAHP-WF	HARN (HPGN) Georgia State Planes- Western Zone- US Foot (EPSG #2885)
GA-W	NAD27 Georgia State Planes- Western Zone- US Foot (EPSG #26767)
HI-1	NAD27 Hawaii State Planes- Zone 1- US Foot
HI-2	NAD27 Hawaii State Planes- Zone 2- US Foot
HI-3	NAD27 Hawaii State Planes- Zone 3- US Foot
HI-4	NAD27 Hawaii State Planes- Zone 4- US Foot
HI-5	NAD27 Hawaii State Planes- Zone 5- US Foot
HI83-1	NAD83 Hawaii State Planes- Zone 1- Meter (EPSG #26961)
HI83-1F	NAD83 Hawaii State Planes- Zone 1- US Foot
HI83-2	NAD83 Hawaii State Planes- Zone 2- Meter (EPSG #26962)
HI83-2F	NAD83 Hawaii State Planes- Zone 2- US Foot
HI83-3	NAD83 Hawaii State Planes- Zone 3- Meter (EPSG #26963)
HI83-3F	NAD83 Hawaii State Planes- Zone 3- US Foot
HI83-4	NAD83 Hawaii State Planes- Zone 4- Meter (EPSG #26964)
HI83-4F	NAD83 Hawaii State Planes- Zone 4- US Foot
HI83-5	NAD83 Hawaii State Planes- Zone 5- Meter (EPSG #26965)
HI83-5F	NAD83 Hawaii State Planes- Zone 5- US Foot
HIHP-1	NAD83(HARN) / Hawaii zone 1 (EPSG #2782)
HIHP-2	NAD83(HARN) / Hawaii zone 2 (EPSG #2783)
HIHP-3	NAD83(HARN) / Hawaii zone 3 (EPSG #2784)
HIHP-4	NAD83(HARN) / Hawaii zone 4 (EPSG #2785)
HIHP-5	NAD83(HARN) / Hawaii zone 5 (EPSG #2786)
IA83-N	NAD83 Iowa State Planes- Northern Zone- Meter (EPSG #26975)
IA83-NF	NAD83 Iowa State Planes- Northern Zone- US Foot
IA83-S	NAD83 Iowa State Planes- Southern Zone- Meter (EPSG #26976)
IA83-SF	NAD83 Iowa State Planes- Southern Zone- US Foot
IAHP-N	HARN (HPGN) Iowa State Planes- Northern Zone- Meter (EPSG #2794)
IAHP-NF	HARN (HPGN) Iowa State Planes- Northern Zone- US Foot
IAHP-S	HARN (HPGN) Iowa State Planes- Southern Zone- Meter (EPSG #2795)
IAHP-SF	HARN (HPGN) Iowa State Planes- Southern Zone- US Foot

Value	Description
IA-N	NAD27 Iowa State Planes- Northern Zone- US Foot (EPSG #26775)
IA-S	NAD27 Iowa State Planes- Southern Zone- US Foot (EPSG #26776)
ID83-C	NAD83 Idaho State Planes- Central Zone- Meter (EPSG #26969)
ID83-CF	NAD83 Idaho State Planes- Central Zone- US Foot (EPSG #2242)
ID83-E	NAD83 Idaho State Planes- Eastern Zone- Meter (EPSG #26968)
ID83-EF	NAD83 Idaho State Planes- Eastern Zone- US Foot (EPSG #2241)
ID83-W	NAD83 Idaho State Planes- Western Zone- Meter (EPSG #26970)
ID83-WF	NAD83 Idaho State Planes- Western Zone- US Foot (EPSG #2243)
ID-C	NAD27 Idaho State Planes- Central Zone- US Foot (EPSG #26769)
ID-E	NAD27 Idaho State Planes- Eastern Zone- US Foot (EPSG #26768)
IDHP-C	HARN (HPGN) Idaho State Planes- Central Zone- Meter (EPSG #2788)
IDHP-CF	HARN (HPGN) Idaho State Planes- Central Zone- US Foot (EPSG #2887)
IDHP-E	HARN (HPGN) Idaho State Planes- Eastern Zone- Meter (EPSG #2787)
IDHP-EF	HARN (HPGN) Idaho State Planes- Eastern Zone- US Foot (EPSG #2886)
IDHP-W	HARN (HPGN) Idaho State Planes- Western Zone- Meter (EPSG #2789)
IDHP-WF	HARN (HPGN) Idaho State Planes- Western Zone- US Foot (EPSG #2888)
ID-W	NAD27 Idaho State Planes- Western Zone- US Foot (EPSG #26770)
IL83-E	NAD83 Illinois State Planes- Eastern Zone- Meter (EPSG #26971)
IL83-EF	NAD83 Illinois State Planes- Eastern Zone- US Foot
IL83-W	NAD83 Illinois State Planes- Western Zone- Meter (EPSG #26972)
IL83-WF	NAD83 Illinois State Planes- Western Zone- US Foot
IL-E	NAD27 Illinois State Planes- Eastern Zone- US Foot (EPSG #26771)
ILHP-E	HARN (HPGN) Illinois State Planes- Eastern Zone- Meter (EPSG #2790)
ILHP-EF	HARN (HPGN) Illinois State Planes- Eastern Zone- US Foot
ILHP-W	HARN (HPGN) Illinois State Planes- Western Zone- Meter (EPSG #2791)
ILHP-WF	HARN (HPGN) Illinois State Planes- Western Zone- US Foot
ILLIMAP	NAD27 Illinois Survey Mapping System- US Foot
IL-W	NAD27 Illinois State Planes- Western Zone- US Foot (EPSG #26772)
IN83-E	NAD83 Indiana State Planes- Eastern Zone- Meter (EPSG #26973)
IN83-EF	NAD83 Indiana State Planes- Eastern Zone- US Foot (EPSG #2244)
IN83-W	NAD83 Indiana State Planes- Western Zone- Meter (EPSG #26974)
IN83-WF	NAD83 Indiana State Planes- Western Zone- US Foot (EPSG #2245)
IN-E	NAD27 Indiana State Planes- Eastern Zone- US Foot (EPSG #26773)
INHP-E	HARN (HPGN) Indiana State Planes- Eastern Zone- Meter (EPSG #2792)
INHP-EF	HARN (HPGN) Indiana State Planes- Eastern Zone- US Foot (EPSG #2889)
INHP-W	HARN (HPGN) Indiana State Planes- Western Zone- Meter (EPSG #2793)
INHP-WF	HARN (HPGN) Indiana State Planes- Western Zone- US Foot (EPSG #2890)
IN-W	NAD27 Indiana State Planes- Western Zone- US Foot (EPSG #26774)
KS83-N	NAD83 Kansas State Planes- Northern Zone- Meter (EPSG #26977)
KS83-NF	NAD83 Kansas State Planes- Northern Zone- US Foot
KS83-S	NAD83 Kansas State Planes- Southern Zone- Meter (EPSG #26978)
KS83-SF	NAD83 Kansas State Planes- Southern Zone- US Foot
KSHP-N	HARN (HPGN) Kansas State Planes- Northern Zone- Meter (EPSG #2796)
KSHP-NF	HARN (HPGN) Kansas State Planes- Northern Zone- US Foot
KSHP-S	HARN (HPGN) Kansas State Planes- Southern Zone- Meter (EPSG #2797)
KSHP-SF	HARN (HPGN) Kansas State Planes- Southern Zone- US Foot
KS-N	NAD27 Kansas State Planes- Northern Zone- US Foot (EPSG #26777)

Value	Description
KS-S	NAD27 Kansas State Planes- Southern Zone- US Foot (EPSG #26778)
KY83-N	NAD83 Kentucky State Planes- Northern Zone- Meter (EPSG #26979)
KY83-NF	NAD83 Kentucky State Planes- Northern Zone- US Foot (EPSG #2246)
KY83-S	NAD83 Kentucky State Planes- Southern Zone- Meter (EPSG #26980)
KY83-SF	NAD83 Kentucky State Planes- Southern Zone- US Foot (EPSG #2247)
KYHP-N	HPGN Kentucky State Planes- Northern Zone- Meter (EPSG #2798)
KYHP-NF	HPGN Kentucky State Planes- Northern Zone- US Foot (EPSG #2891)
KYHP-S	HPGN Kentucky State Planes- Southern Zone- Meter (EPSG #2799)
KYHP-SF	HPGN Kentucky State Planes- Southern Zone- US Foot (EPSG #2892)
KY-N	NAD27 Kentucky State Planes- Northern Zone- US Foot (EPSG #26779)
KY-S	NAD27 Kentucky State Planes- Southern Zone- US Foot (EPSG #26780)
LA83-N	NAD83 Louisiana State Planes- Northern Zone- Meter (EPSG #26981)
LA83-NF	NAD83 Louisiana State Planes- Northern Zone- US Foot
LA83-O	NAD83 Louisiana State Planes- Offshore- Meter (EPSG #32199)
LA83-OF	NAD83 Louisiana State Planes- Offshore- US Foot
LA83-S	NAD83 Louisiana State Planes- Southern Zone- Meter (EPSG #26982)
LA83-SF	NAD83 Louisiana State Planes- Southern Zone- US Foot
LAHP-N	HPGN Louisiana State Planes- Northern Zone- Meter (EPSG #2800)
LAHP-NF	HPGN Louisiana State Planes- Northern Zone- US Foot
LAHP-O	HPGN Louisiana State Planes- Offshore- Meter
LAHP-OF	HPGN Louisiana State Planes- Offshore- US Foot
LAHP-S	HPGN Louisiana State Planes- Southern Zone- Meter (EPSG #2801)
LAHP-SF	HPGN Louisiana State Planes- Southern Zone- US Foot
LA-N	NAD27 Louisiana State Planes- Northern Zone- US Foot (EPSG #26781)
LA-O	NAD27 Louisiana State Planes- Offshore- US Foot (EPSG #32099)
LA-S	NAD27 Louisiana State Planes- Southern Zone- US Foot (EPSG #26782)
LL-83	NAD83 Latitude/Longitude- Degrees
LL84	WGS84 Lat/Long- Degrees- -180 ==> +180 (EPSG #4326)
MA	NAD27 Massachusetts State Planes- Mainland Zone- US Foot (EPSG #26786)
MA27-IS	NAD27 Massachusetts State Planes- Island Zone- US Foot (EPSG #26787)
MA83	NAD83 Massachusetts State Planes- Mainland Zone- Meter (EPSG #26986)
MA83F	NAD83 Massachusetts State Planes- Mainland Zone- US Foot (EPSG #2249)
MA83-IS	NAD83 Massachusetts State Planes- Island Zone- Meter (EPSG #26987)
MA83-ISF	NAD83 Massachusetts State Planes- Island Zone- US Foot (EPSG #2250)
MAHP	HPGN/HARN Massachusetts State Planes- Mainland Zone- Meter (EPSG #2805)
MAHPF	HPGN/HARN Massachusetts State Planes- Mainland Zone- US Foot (EPSG #2894)
MAHP-IS	HPGN/HARN Massachusetts State Planes- Island Zone- Meter (EPSG #2806)
MAHP-ISF	HPGN/HARN Massachusetts State Planes- Island Zone- US Foot (EPSG #2895)
MD	NAD27 Maryland State Plane Zone- US Foot (EPSG #26785)
MD83	NAD83 Maryland State Plane Zone- Meter (EPSG #26985)
MD83F	NAD83 Maryland State Plane Zone- US Foot (EPSG #2248)
MDHP	HPGN Maryland State Plane Zone- Meter (EPSG #2804)
MDHPF	HPGN Maryland State Plane Zone- US Foot (EPSG #2893)

Value	Description
ME83-E	NAD83 Maine State Planes- Eastern Zone- Meter (EPSG #26983)
ME83-EF	NAD83 Maine State Planes- Eastern Zone- US Foot
ME83-W	NAD83 Maine State Planes- Western Zone- Meter (EPSG #26984)
ME83-WF	NAD83 Maine State Planes- Western Zone- US Foot
ME-E	NAD27 Maine State Planes- Eastern Zone- US Foot (EPSG #26783)
MEHP-E	HPGN Maine State Planes- Eastern Zone- Meter (EPSG #2802)
MEHP-EF	HPGN Maine State Planes- Eastern Zone- US Foot
MEHP-W	HPGN Maine State Planes- Western Zone- Meter (EPSG #2803)
MEHP-WF	HPGN Maine State Planes- Western Zone- US Foot
ME-W	NAD27 Maine State Planes- Western Zone- US Foot (EPSG #26784)
MI27-C	NAD27 Michigan State Planes- Central Zone- US Foot (EPSG #26812)
MI27-N	NAD27 Michigan State Planes- Northern Zone- US Foot (EPSG #26811)
MI27-S	NAD27 Michigan State Planes- Southern Zone- US Foot (EPSG #26813)
MI83-C	NAD83 Michigan State Planes- Central Zone- Meter (EPSG #26989)
MI83-CF	NAD83 Michigan State Planes- Central Zone- US Foot
MI83-CIF	NAD83 Michigan State Planes- Central Zone- Intl Foot (EPSG #2252)
MI83-N	NAD83 Michigan State Planes- Northern Zone- Meter (EPSG #26988)
MI83-NF	NAD83 Michigan State Planes- Northern Zone- US Foot
MI83-NIF	NAD83 Michigan State Planes- Northern Zone- Intl Foot (EPSG #2251)
MI83-S	NAD83 Michigan State Planes- Southern Zone- Meter (EPSG #26990)
MI83-SF	NAD83 Michigan State Planes- Southern Zone- US Foot
MI83-SIF	NAD83 Michigan State Planes- Southern Zone- Intl Foot (EPSG #2253)
MIHP-C	HARN (HPGN) Michigan State Planes- Central Zone- Meter (EPSG #2808)
MIHP-CF	HARN (HPGN) Michigan State Planes- Central Zone- US Foot
MIHP-CIF	HARN (HPGN) Michigan State Planes- Central Zone- Intl Foot (EPSG #2897)
MIHP-N	HARN (HPGN) Michigan State Planes- Northern Zone- Meter (EPSG #2807)
MIHP-NF	HARN (HPGN) Michigan State Planes- Northern Zone- US Foot
MIHP-NIF	HARN (HPGN) Michigan State Planes- Northern Zone- Intl Foot (EPSG #2896)
MIHP-S	HARN (HPGN) Michigan State Planes- Southern Zone- Meter (EPSG #2809)
MIHP-SF	HARN (HPGN) Michigan State Planes- Southern Zone- US Foot
MIHP-SIF	HARN (HPGN) Michigan State Planes- Southern Zone- Intl Foot (EPSG #2898)
MN83-C	NAD83 Minnesota State Planes- Central Zone- Meter (EPSG #26992)
MN83-CF	NAD83 Minnesota State Planes- Central Zone- US Foot
MN83-N	NAD83 Minnesota State Planes- Northern Zone- Meter (EPSG #26991)
MN83-NF	NAD83 Minnesota State Planes- Northern Zone- US Foot
MN83-S	NAD83 Minnesota State Planes- South Zone- Meter (EPSG #26993)
MN83-SF	NAD83 Minnesota State Planes- South Zone- US Foot
MN-C	NAD27 Minnesota State Planes- Central Zone- US Foot (EPSG #26792)
MNHP-C	HARN (HPGN) Minnesota State Planes- Central Zone- Meter (EPSG #2811)
MNHP-CF	HARN (HPGN) Minnesota State Planes- Central Zone- US Foot
MNHP-N	HARN (HPGN) Minnesota State Planes- Northern Zone- Meter (EPSG #2810)
MNHP-NF	HARN (HPGN) Minnesota State Planes- Northern Zone- US Foot
MNHP-S	HARN (HPGN) Minnesota State Planes- South Zone- Meter (EPSG #2812)
MNHP-SF	HARN (HPGN) Minnesota State Planes- South Zone- US Foot

Value	Description
MN-N	NAD27 Minnesota State Planes- Northern Zone- US Foot (EPSG #26791)
MN-S	NAD27 Minnesota State Planes- South- US Foot (EPSG #26793)
MO83-C	NAD83 Missouri State Planes- Central Zone- Meter (EPSG #26997)
MO83-CF	NAD83 Missouri State Planes- Central Zone- US Foot
MO83-E	NAD83 Missouri State Planes- Eastern Zone- Meter (EPSG #26996)
MO83-EF	NAD83 Missouri State Planes- Eastern Zone- US Foot
MO83-W	NAD83 Missouri State Planes- Western Zone- Meter (EPSG #26998)
MO83-WF	NAD83 Missouri State Planes- Western Zone- US Foot
MO-C	NAD27 Missouri State Planes- Central Zone- US Foot (EPSG #26797)
MO-E	NAD27 Missouri State Planes- Eastern Zone- US Foot (EPSG #26796)
MOHP-C	HARN (HPGN) Missouri State Planes- Central Zone- Meter (EPSG #2816)
MOHP-CF	HARN (HPGN) Missouri State Planes- Central Zone- US Foot
MOHP-E	HARN (HPGN) Missouri State Planes- Eastern Zone- Meter (EPSG #2815)
MOHP-EF	HARN (HPGN) Missouri State Planes- Eastern Zone- US Foot
MOHP-W	HARN (HPGN) Missouri State Planes- Western Zone- Meter (EPSG #2817)
MOHP-WF	HARN (HPGN) Missouri State Planes- Western Zone- US Foot
MO-W	NAD27 Missouri State Planes- Western Zone- US Foot (EPSG #26798)
MS83-E	NAD83 Mississippi State Planes- Eastern Zone- Meter (EPSG #26994)
MS83-EF	NAD83 Mississippi State Planes- Eastern Zone- US Foot (EPSG #2254)
MS83-TM	NAD83 Mississippi Transverse Mercator Projection (meters)
MS83-W	NAD83 Mississippi State Planes- Western Zone- Meter (EPSG #26995)
MS83-WF	NAD83 Mississippi State Planes- Western Zone- US Foot (EPSG #2255)
MS-E	NAD27 Mississippi State Planes- Eastern Zone- US Foot (EPSG #26794)
MSHP-E	HPGN Mississippi State Planes- Eastern Zone- Meter (EPSG #2813)
MSHP-EF	HPGN Mississippi State Planes- Eastern Zone- US Foot (EPSG #2899)
MSHP-W	HPGN Mississippi State Planes- Western Zone- Meter (EPSG #2814)
MSHP-WF	HPGN Mississippi State Planes- Western Zone- US Foot (EPSG #2900)
MS-W	NAD27 Mississippi State Planes- Western Zone- US Foot (EPSG #26795)
MT83	NAD83 Montana State Plane Zone- Meter (EPSG #32100)
MT83F	NAD83 Montana State Plane Zone- US Foot
MT83IF	NAD83 Montana State Planes- Intl Foot (EPSG #2256)
MT-C	NAD27 Montana State Planes- Central Zone- US Foot (EPSG #32002)
MTHP	HPGN Montana State Plane Zone- Meter (EPSG #2818)
MTHPF	HPGN Montana State Plane Zone- US Foot
MTHPIF	HPGN Montana State Planes- Intl Foot (EPSG #2901)
MT-N	NAD27 Montana State Planes- Northern Zone- US Foot (EPSG #32001)
MT-S	NAD27 Montana State Planes- Southern Zone- US Foot (EPSG #32003)
NB83	NAD83 Nebraska State Planes- Meter (EPSG #32104)
NB83F	NAD83 Nebraska State Planes- US Foot
NBHP	HPGN/HARN Nebraska State Planes- Meter (EPSG #2819)
NBHPF	HPGN/HARN Nebraska State Planes- US Foot
NB-N	NAD27 Nebraska State Planes- Northern Zone- US Foot (EPSG #32005)
NB-S	NAD27 Nebraska State Planes- Southern Zone- US Foot (EPSG #32006)
NC	NAD27 North Carolina State Planes- US Foot (EPSG #32019)
NC83	NAD83 North Carolina State Planes- Meter (EPSG #32119)
NC83F	NAD83 North Carolina State Planes- US Foot (EPSG #2264)
NCHP	HARN (HPGN) North Carolina State Planes- Meter

Value	Description
NCHPF	HARN (HPGN) North Carolina State Planes- US Foot
ND83-N	NAD83 North Dakota State Planes- Northern Zone- Meter (EPSG #32120)
ND83-NF	NAD83 North Dakota State Planes- Northern Zone- US Foot
ND83-S	NAD83 North Dakota State Planes- Southern Zone- Meter (EPSG #32121)
ND83-SF	NAD83 North Dakota State Planes- Southern Zone- US Foot
NDHP-N	HARN (HPGN) North Dakota State Planes- Northern Zone- Meter (EPSG #2832)
NDHP-NF	HARN (HPGN) North Dakota State Planes- Northern Zone- US Foot
NDHP-S	HARN (HPGN) North Dakota State Planes- Southern Zone- Meter (EPSG #2833)
NDHP-SF	HARN (HPGN) North Dakota State Planes- Southern Zone- US Foot
ND-N	NAD27 North Dakota State Planes- Northern Zone- US Foot (EPSG #32020)
ND-S	NAD27 North Dakota State Planes- Southern Zone- US Foot (EPSG #32021)
NE83	NAD83 Nebraska State Planes- Meter
NE83F	NAD83 Nebraska State Planes- US Foot
NE-N	NAD27 Nebraska State Planes- Northern Zone- US Foot
NE-S	NAD27 Nebraska State Planes- Southern Zone- US Foot
NH	NAD27 New Hampshire State Planes- US Foot (EPSG #32010)
NH83	NAD83 New Hampshire State Planes- Meter (EPSG #32110)
NH83F	NAD83 New Hampshire State Planes- US Foot
NHHP	HPGN/HARN New Hampshire State Planes- Meter (EPSG #2823)
NHHPF	HPGN/HARN New Hampshire State Planes- US Foot
NJ	NAD27 New Jersey State Planes- US Foot (EPSG #32011)
NJ83	NAD83 New Jersey State Planes- Meter (EPSG #32111)
NJ83F	NAD83 New Jersey State Planes- US Foot
NJHP	HARN (HPGN) New Jersey State Planes- Meter (EPSG #2824)
NJHPF	HARN (HPGN) New Jersey State Planes- US Foot
NM83-C	NAD83 New Mexico State Planes- Central Zone- Meter (EPSG #32113)
NM83-CF	NAD83 New Mexico State Planes- Central Zone- US Foot (EPSG #2258)
NM83-E	NAD83 New Mexico State Planes- Eastern Zone- Meter (EPSG #32112)
NM83-EF	NAD83 New Mexico State Planes- Eastern Zone- US Foot (EPSG #2257)
NM83-W	NAD83 New Mexico State Planes- Western Zone- Meter (EPSG #32114)
NM83-WF	NAD83 New Mexico State Planes- Western Zone- US Foot (EPSG #2259)
NM-C	NAD27 New Mexico State Planes- Central Zone- US Foot (EPSG #32013)
NM-E	NAD27 New Mexico State Planes- Eastern Zone- US Foot (EPSG #32012)
NMHP-C	HPGN New Mexico State Planes- Central Zone- Meter (EPSG #2826)
NMHP-CF	HPGN New Mexico State Planes- Central Zone- US Foot (EPSG #2903)
NMHP-E	HPGN New Mexico State Planes- Eastern Zone- Meter (EPSG #2825)
NMHP-EF	HPGN New Mexico State Planes- Eastern Zone- US Foot (EPSG #2902)
NMHP-W	HPGN New Mexico State Planes- Western Zone- Meter (EPSG #2827)
NMHP-WF	HPGN New Mexico State Planes- Western Zone- US Foot (EPSG #2904)
NM-W	NAD27 New Mexico State Planes- Western Zone- US Foot (EPSG #32014)
NV83-C	NAD83 Nevada State Planes- Central Zone- Meter (EPSG #32108)
NV83-CF	NAD83 Nevada State Planes- Central Zone- US Foot
NV83-E	NAD83 Nevada State Planes- Eastern Zone- Meter (EPSG #32107)
NV83-EF	NAD83 Nevada State Planes- Eastern Zone- US Foot
NV83-W	NAD83 Nevada State Planes- Western Zone- Meter (EPSG #32109)

Value	Description
NV83-WF	NAD83 Nevada State Planes- Western Zone- US Foot
NV-C	NAD27 Nevada State Planes- Central Zone- US Foot (EPSG #32008)
NV-E	NAD27 Nevada State Planes- Eastern Zone- US Foot (EPSG #32007)
NVHP-C	HARN (HPGN) Nevada State Planes- Central Zone- Meter (EPSG #2821)
NVHP-CF	HARN (HPGN) Nevada State Planes- Central Zone- US Foot
NVHP-E	HARN (HPGN) Nevada State Planes- Eastern Zone- Meter (EPSG #2820)
NVHP-EF	HARN (HPGN) Nevada State Planes- Eastern Zone- US Foot
NVHP-W	HARN (HPGN) Nevada State Planes- Western Zone- Meter (EPSG #2822)
NVHP-WF	HARN (HPGN) Nevada State Planes- Western Zone- US Foot
NV-W	NAD27 Nevada State Planes- Western Zone- US Foot (EPSG #32009)
NY83-C	NAD83 New York State Planes- Central Zone- Meter (EPSG #32116)
NY83-CF	NAD83 New York State Planes- Central Zone- US Foot (EPSG #2261)
NY83-E	NAD83 New York State Planes- Eastern Zone- Meter (EPSG #32115)
NY83-EF	NAD83 New York State Planes- Eastern Zone- US Foot (EPSG #2260)
NY83-LI	NAD83 New York State Planes- Long Island- Meter (EPSG #32118)
NY83-LIF	NAD83 New York State Planes- Long Island- US Foot (EPSG #2263)
NY83-W	NAD83 New York State Planes- Western Zone- Meter (EPSG #32117)
NY83-WF	NAD83 New York State Planes- Western Zone- US Foot (EPSG #2262)
NY-C	NAD27 New York State Planes- Central Zone- US Foot (EPSG #32016)
NY-E	NAD27 New York State Planes- Eastern Zone- US Foot (EPSG #32015)
NYHP-C	HARN (HPGN) New York State Planes- Central Zone- Meter (EPSG #2829)
NYHP-CF	HARN (HPGN) New York State Planes- Central Zone- US Foot (EPSG #2906)
NYHP-E	HARN (HPGN) New York State Planes- Eastern Zone- Meter (EPSG #2828)
NYHP-EF	HARN (HPGN) New York State Planes- Eastern Zone- US Foot (EPSG #2905)
NYHP-LI	HARN (HPGN) New York State Planes- Long Island- Meter (EPSG #2831)
NYHP-LIF	HARN (HPGN) New York State Planes- Long Island- US Foot (EPSG #2908)
NYHP-W	HARN (HPGN) New York State Planes- Western Zone- Meter (EPSG #2830)
NYHP-WF	HARN (HPGN) New York State Planes- Western Zone- US Foot (EPSG #2907)
NY-LI	NAD27 New York State Planes- Long Island- US Foot (EPSG #32018)
NY-W	NAD27 New York State Planes- Western Zone- US Foot (EPSG #32017)
OH83-N	NAD83 Ohio State Planes- Northern Zone- Meter (EPSG #32122)
OH83-NF	NAD83 Ohio State Planes- Northern Zone- US Foot
OH83-S	NAD83 Ohio State Planes- Southern Zone- Meter (EPSG #32123)
OH83-SF	NAD83 Ohio State Planes- Southern Zone- US Foot
OHHP-N	HARN (HPGN) Ohio State Planes- Northern Zone- Meter (EPSG #2834)
OHHP-NF	HARN (HPGN) Ohio State Planes- Northern Zone- US Foot
OHHP-S	HARN (HPGN) Ohio State Planes- Southern Zone- Meter (EPSG #2835)
OHHP-SF	HARN (HPGN) Ohio State Planes- Southern Zone- US Foot
OH-N	NAD27 Ohio State Planes- Northern Zone- US Foot (EPSG #32022)
OH-S	NAD27 Ohio State Planes- Southern Zone- US Foot (EPSG #32023)
OK83-N	NAD83 Oklahoma State Planes- Northern Zone- Meter (EPSG #32124)
OK83-NF	NAD83 Oklahoma State Planes- Northern Zone- US Foot (EPSG #2267)
OK83-S	NAD83 Oklahoma State Planes- Southern Zone- Meter (EPSG #32125)
OK83-SF	NAD83 Oklahoma State Planes- Southern Zone- US Foot (EPSG #2268)

Value	Description
OKHP-N	HPGN Oklahoma State Planes- Northern Zone- Meter (EPSG #2836)
OKHP-NF	HPGN Oklahoma State Planes- Northern Zone- US Foot (EPSG #2911)
OKHP-S	HPGN Oklahoma State Planes- Southern Zone- Meter (EPSG #2837)
OKHP-SF	HPGN Oklahoma State Planes- Southern Zone- US Foot (EPSG #2912)
OK-N	NAD27 Oklahoma State Planes- Northern Zone- US Foot (EPSG #32024)
OK-S	NAD27 Oklahoma State Planes- Southern Zone- US Foot (EPSG #32025)
OR83-N	NAD83 Oregon State Planes- Northern Zone- Meter (EPSG #32126)
OR83-NF	NAD83 Oregon State Planes- Northern Zone- US Foot
OR83-NIF	NAD83 Oregon State Planes- Northern Zone- Intl Foot (EPSG #2269)
OR83-S	NAD83 Oregon State Planes- Southern Zone- Meter (EPSG #32127)
OR83-SF	NAD83 Oregon State Planes- Southern Zone- US Foot
OR83-SIF	NAD83 Oregon State Planes- Southern Zone- Intl Foot (EPSG #2270)
OR83-SSCGIS	NAD83 Oregon GIS- International Foot (EPSG #2992)
ORHP-N	HPGN Oregon State Planes- Northern Zone- Meter (EPSG #2838)
ORHP-NF	HPGN Oregon State Planes- Northern Zone- US Foot
ORHP-NIF	HPGN Oregon State Planes- Northern Zone- Intl Foot (EPSG #2913)
ORHP-S	HPGN Oregon State Planes- Southern Zone- Meter (EPSG #2839)
ORHP-SF	HPGN Oregon State Planes- Southern Zone- US Foot
ORHP-SIF	HPGN Oregon State Planes- Southern Zone- Intl Foot (EPSG #2914)
OR-N	NAD27 Oregon State Planes- Northern Zone- US Foot (EPSG #32026)
OR-S	NAD27 Oregon State Planes- Southern Zone- US Foot (EPSG #32027)
PA83-N	NAD83 Pennsylvania State Planes- Northern Zone- Meter (EPSG #32128)
PA83-NF	NAD83 Pennsylvania State Planes- Northern Zone- US Foot (EPSG #2271)
PA83-S	NAD83 Pennsylvania State Planes- Southern Zone- Meter (EPSG #32129)
PA83-SF	NAD83 Pennsylvania State Planes- Southern Zone- US Foot (EPSG #2272)
PAHP-N	HARN (HPGN) Pennsylvania State Planes- Northern Zone- Meter
PAHP-NF	HARN (HPGN) Pennsylvania State Planes- Northern Zone- US Foot
PAHP-S	HARN (HPGN) Pennsylvania State Planes- Southern Zone- Meter
PAHP-SF	HARN (HPGN) Pennsylvania State Planes- Southern Zone- US Foot
PA-N	NAD27 Pennsylvania State Planes- Northern Zone- US Foot (EPSG #32028)
PA-S	NAD27 Pennsylvania State Planes- Southern Zone- US Foot (EPSG #32029)
PR-1	NAD27 Puerto Rico and Virgin Islands- Zone 1- US Foot
PR-2	NAD27 Puerto Rico- St Croix Virgin Island- Zone 2- US Foot
PR83	NAD83 Puerto Rico and Virgin Islands- Meter (EPSG #32161)
PR83F	NAD83 Puerto Rico and Virgin Islands- US Foot
PRHP	HPGN Puerto Rico and Virgin Islands- Meter (EPSG #2866)
PRHPF	HPGN Puerto Rico and Virgin Islands- US Foot
RI	NAD27 Rhode Island State Planes- US Foot (EPSG #32030)
RI83	NAD83 Rhode Island State Planes- Meter (EPSG #32130)
RI83F	NAD83 Rhode Island State Planes- US Foot
RIHP	HPGN/HARN Rhode Island State Planes- Meter (EPSG #2840)
RIHPF	HPGN/HARN Rhode Island State Planes- US Foot
SC83	NAD83 South Carolina State Planes- Meter (EPSG #32133)
SC83F	NAD83 South Carolina State Planes- US Foot
SC83IF	NAD83 South Carolina State Planes- Intl Foot (EPSG #2273)
SCHP	HARN (HPGN) South Carolina State Planes- Meter

Value	Description
SCHPF	HARN (HPGN) South Carolina State Planes- US Foot
SCHPIF	HARN (HPGN) South Carolina State Planes- Intl Foot
SC-N	NAD27 South Carolina State Planes- Northern Zone- US Foot (EPSG #32031)
SC-S	NAD27 South Carolina State Planes- Southern Zone- US Foot (EPSG #32033)
SD83-N	NAD83 South Dakota State Planes- Northern Zone- Meter (EPSG #32134)
SD83-NF	NAD83 South Dakota State Planes- Northern Zone- US Foot
SD83-S	NAD83 South Dakota State Planes- Southern Zone- Meter (EPSG #32135)
SD83-SF	NAD83 South Dakota State Planes- Southern Zone- US Foot
SDHP-N	HARN (HPGN) South Dakota State Planes- Northern Zone- Meter (EPSG #2841)
SDHP-NF	HARN (HPGN) South Dakota State Planes- Northern Zone- US Foot
SDHP-S	HARN (HPGN) South Dakota State Planes- Southern Zone- Meter (EPSG #2842)
SDHP-SF	HARN (HPGN) South Dakota State Planes- Southern Zone- US Foot
SD-N	NAD27 South Dakota State Planes- Northern Zone- US Foot (EPSG #32034)
SD-S	NAD27 South Dakota State Planes- Southern Zone- US Foot (EPSG #32035)
TN	NAD27 Tennessee State Plane Zone- US Foot (EPSG #2204)
TN83	NAD83 Tennessee State Plane Zone- Meter (EPSG #32136)
TN83F	NAD83 Tennessee State Plane Zone- US Foot (EPSG #2274)
TNHP	HPGN Tennessee State Plane Zone- Meter (EPSG #2843)
TNHPF	HPGN Tennessee State Plane Zone- US Foot (EPSG #2915)
TX83-C	NAD83 Texas State Planes- Central Zone- Meter (EPSG #32139)
TX83-CF	NAD83 Texas State Planes- Central Zone- US Foot (EPSG #2277)
TX83-N	NAD83 Texas State Planes- Northern Zone- Meter (EPSG #32137)
TX83-NC	NAD83 Texas State Planes- North Central Zone- Meter (EPSG #32138)
TX83-NCF	NAD83 Texas State Planes- North Central Zone- US Foot (EPSG #2276)
TX83-NF	NAD83 Texas State Planes- Northern Zone- US Foot (EPSG #2275)
TX83-S	NAD83 Texas State Planes- Southern Zone- Meter (EPSG #32141)
TX83-SC	NAD83 Texas State Planes- South Central Zone- Meter (EPSG #32140)
TX83-SCF	NAD83 Texas State Planes- South Central Zone- US Foot (EPSG #2278)
TX83-SF	NAD83 Texas State Planes- Southern Zone- US Foot (EPSG #2279)
TX-C	NAD27 Texas State Planes- Central Zone- US Foot (EPSG #32039)
TXHP-C	HPGN/HARN Texas State Planes- Central Zone- Meter (EPSG #2846)
TXHP-CF	HPGN/HARN Texas State Planes- Central Zone- US Foot (EPSG #2918)
TXHP-N	HPGN/HARN Texas State Planes- Northern Zone- Meter (EPSG #2844)
TXHP-NC	HPGN/HARN Texas State Planes- North Central Zone- Meter (EPSG #2845)
TXHP-NCF	HPGN/HARN Texas State Planes- North Central Zone- US Foot (EPSG #2917)
TXHP-NF	HPGN/HARN Texas State Planes- Northern Zone- US Foot (EPSG #2916)
TXHP-S	HPGN/HARN Texas State Planes- Southern Zone- Meter (EPSG #2848)
TXHP-SC	HPGN/HARN Texas State Planes- South Central Zone- Meter (EPSG #2847)
TXHP-SCF	HPGN/HARN Texas State Planes- South Central Zone- US Foot (EPSG #2919)
TXHP-SF	HPGN/HARN Texas State Planes- Southern Zone- US Foot (EPSG #2920)
TX-N	NAD27 Texas State Planes- Northern Zone- US Foot (EPSG #32037)
TX-NC	NAD27 Texas State Planes- North Central Zone- US Foot (EPSG #32038)

Value	Description
TX-S	NAD27 Texas State Planes- Southern Zone- US Foot (EPSG #32041)
TX-SC	NAD27 Texas State Planes- South Central Zone- US Foot (EPSG #32040)
UT83-C	NAD83 Utah State Planes- Central Zone- Meter (EPSG #32143)
UT83-CF	NAD83 Utah State Planes- Central Zone- US Foot
UT83-CIF	NAD83 Utah State Planes- Central Zone- Intl Foot (EPSG #2281)
UT83-N	NAD83 Utah State Planes- Northern Zone- Meter (EPSG #32142)
UT83-NF	NAD83 Utah State Planes- Northern Zone- US Foot
UT83-NIF	NAD83 Utah State Planes- Northern Zone- Intl Foot (EPSG #2280)
UT83-S	NAD83 Utah State Planes- Southern Zone- Meter (EPSG #32144)
UT83-SF	NAD83 Utah State Planes- Southern Zone- US Foot
UT83-SIF	NAD83 Utah State Planes- Southern Zone- Intl Foot (EPSG #2282)
UT-C	NAD27 Utah State Planes- Central Zone- US Foot (EPSG #32043)
UTHP-C	HARN (HPGN) Utah State Planes- Central Zone- Meter (EPSG #2850)
UTHP-CF	HARN (HPGN) Utah State Planes- Central Zone- US Foot
UTHP-CIF	HARN (HPGN) Utah State Planes- Central Zone- Intl Foot (EPSG #2922)
UTHP-N	HARN (HPGN) Utah State Planes- Northern Zone- Meter (EPSG #2849)
UTHP-NF	HARN (HPGN) Utah State Planes- Northern Zone- US Foot
UTHP-NIF	HARN (HPGN) Utah State Planes- Northern Zone- Intl Foot (EPSG #2921)
UTHP-S	HARN (HPGN) Utah State Planes- Southern Zone- Meter (EPSG #2851)
UTHP-SF	HARN (HPGN) Utah State Planes- Southern Zone- US Foot
UTHP-SIF	HARN (HPGN) Utah State Planes- Southern Zone- Intl Foot (EPSG #2923)
UTM27-1	NAD27 UTM- Zone 1 North- Meter
UTM27-10	NAD27 UTM- Zone 10 North- Meter (EPSG #26710)
UTM27-10F	NAD27 UTM- Zone 10 North- US Foot
UTM27-10IF	NAD27 UTM- Zone 10 North- Intl Foot
UTM27-11	NAD27 UTM- Zone 11 North- Meter (EPSG #26711)
UTM27-11F	NAD27 UTM- Zone 11 North- US Foot
UTM27-11IF	NAD27 UTM- Zone 11 North- Intl Foot
UTM27-12	NAD27 UTM- Zone 12 North- Meter (EPSG #26712)
UTM27-12F	NAD27 UTM- Zone 12 North- US Foot
UTM27-12IF	NAD27 UTM- Zone 12 North- Intl Foot
UTM27-13	NAD27 UTM- Zone 13 North- Meter (EPSG #26713)
UTM27-13F	NAD27 UTM- Zone 13 North- US Foot
UTM27-13IF	NAD27 UTM- Zone 13 North- Intl Foot
UTM27-14	NAD27 UTM- Zone 14 North- Meter (EPSG #26714)
UTM27-14F	NAD27 UTM- Zone 14 North- US Foot
UTM27-14IF	NAD27 UTM- Zone 14 North- Intl Foot
UTM27-15	NAD27 UTM- Zone 15 North- Meter (EPSG #26715)
UTM27-15F	NAD27 UTM- Zone 15 North- US Foot
UTM27-15IF	NAD27 UTM- Zone 15 North- Intl Foot
UTM27-16	NAD27 UTM- Zone 16 North- Meter (EPSG #26716)
UTM27-16F	NAD27 UTM- Zone 16 North- US Foot
UTM27-16IF	NAD27 UTM- Zone 16 North- Intl Foot
UTM27-17	NAD27 UTM- Zone 17 North- Meter (EPSG #26717)
UTM27-17F	NAD27 UTM- Zone 17 North- US Foot
UTM27-17IF	NAD27 UTM- Zone 17 North- Intl Foot
UTM27-18	NAD27 UTM- Zone 18 North- Meter (EPSG #26718)

Value	Description
UTM27-18F	NAD27 UTM- Zone 18 North- US Foot
UTM27-18IF	NAD27 UTM- Zone 18 North- Intl Foot
UTM27-19	NAD27 UTM- Zone 19 North- Meter (EPSG #26719)
UTM27-19F	NAD27 UTM- Zone 19 North- US Foot
UTM27-19IF	NAD27 UTM- Zone 19 North- Intl Foot
UTM27-1N	NAD27 / UTM zone 1N (EPSG #26701)
UTM27-2	NAD27 UTM- Zone 2 North- Meter
UTM27-20	NAD27 UTM- Zone 20 North- Meter (EPSG #26720)
UTM27-20F	NAD27 UTM- Zone 20 North- US Foot
UTM27-20IF	NAD27 UTM- Zone 20 North- Intl Foot
UTM27-21	NAD27 UTM- Zone 21 North- Meter (EPSG #26721)
UTM27-21F	NAD27 UTM- Zone 21 North- US Foot
UTM27-21IF	NAD27 UTM- Zone 21 North- Intl Foot
UTM27-22	NAD27 UTM- Zone 22 North- Meter (EPSG #26722)
UTM27-22F	NAD27 UTM- Zone 22 North- US Foot
UTM27-22IF	NAD27 UTM- Zone 22 North- Intl Foot
UTM27-23	NAD27 UTM- Zone 23 North- Meter
UTM27-23F	NAD27 UTM- Zone 23 North- US Foot
UTM27-23IF	NAD27 UTM- Zone 23 North- Intl Foot
UTM27-2N	NAD27 / UTM zone 2N (EPSG #26702)
UTM27-3	NAD27 UTM- Zone 3 North- Meter (EPSG #26703)
UTM27-3F	NAD27 UTM- Zone 3 North- US Survey Foot
UTM27-3IF	NAD27 UTM- Zone 3 North- Intl Foot
UTM27-4	NAD27 UTM- Zone 4 North- Meter (EPSG #26704)
UTM27-4F	NAD27 UTM- Zone 4 North- US Survey Foot
UTM27-4IF	NAD27 UTM- Zone 4 North- Intl Foot
UTM27-5	NAD27 UTM- Zone 5 North- Meter (EPSG #26705)
UTM27-58	NAD27 UTM- Zone 58 North- Meter
UTM27-59	NAD27 UTM- Zone 59 North- Meter
UTM27-5F	NAD27 UTM- Zone 5 North- US Foot
UTM27-5IF	NAD27 UTM- Zone 5 North- Intl Foot
UTM27-6	NAD27 UTM- Zone 6 North- Meter (EPSG #26706)
UTM27-60	NAD27 UTM- Zone 60 North- Meter
UTM27-6F	NAD27 UTM- Zone 6 North- US Foot
UTM27-6IF	NAD27 UTM- Zone 6 North- Intl Foot
UTM27-7	NAD27 UTM- Zone 7 North- Meter (EPSG #26707)
UTM27-7F	NAD27 UTM- Zone 7 North- US Foot
UTM27-7IF	NAD27 UTM- Zone 7 North- Intl Foot
UTM27-8	NAD27 UTM- Zone 8 North- Meter (EPSG #26708)
UTM27-8F	NAD27 UTM- Zone 8 North- US Foot
UTM27-8IF	NAD27 UTM- Zone 8 North- Intl Foot
UTM27-9	NAD27 UTM- Zone 9 North- Meter (EPSG #26709)
UTM27-9F	NAD27 UTM- Zone 9 North- US Foot
UTM27-9IF	NAD27 UTM- Zone 9 North- Intl Foot
UTM83-1	NAD83 UTM- Zone 1 North- Meter (EPSG #26901)
UTM83-10	NAD83 UTM- Zone 10 North- Meter (EPSG #26910)
UTM83-10F	NAD83 UTM- Zone 10 North- US Foot

Value	Description
UTM83-10IF	NAD83 UTM- Zone 10 North- Intl Foot
UTM83-11	NAD83 UTM- Zone 11 North- Meter (EPSG #26911)
UTM83-11F	NAD83 UTM- Zone 11 North- US Foot
UTM83-11IF	NAD83 UTM- Zone 11 North- Intl Foot
UTM83-12	NAD83 UTM- Zone 12 North- Meter (EPSG #26912)
UTM83-12F	NAD83 UTM- Zone 12 North- US Foot
UTM83-12IF	NAD83 UTM- Zone 12 North- Intl Foot
UTM83-13	NAD83 UTM- Zone 13 North- Meter (EPSG #26913)
UTM83-13F	NAD83 UTM- Zone 13 North- US Foot
UTM83-13IF	NAD83 UTM- Zone 13 North- Intl Foot
UTM83-14	NAD83 UTM- Zone 14 North- Meter (EPSG #26914)
UTM83-14F	NAD83 UTM- Zone 14 North- US Foot
UTM83-14IF	NAD83 UTM- Zone 14 North- Intl Foot
UTM83-15	NAD83 UTM- Zone 15 North- Meter (EPSG #26915)
UTM83-15F	NAD83 UTM- Zone 15 North- US Foot
UTM83-15IF	NAD83 UTM- Zone 15 North- Intl Foot
UTM83-16	NAD83 UTM- Zone 16 North- Meter (EPSG #26916)
UTM83-16F	NAD83 UTM- Zone 16 North- US Foot
UTM83-16IF	NAD83 UTM- Zone 16 North- Intl Foot
UTM83-17	NAD83 UTM- Zone 17 North- Meter (EPSG #26917)
UTM83-17F	NAD83 UTM- Zone 17 North- US Foot
UTM83-17IF	NAD83 UTM- Zone 17 North- Intl Foot
UTM83-18	NAD83 UTM- Zone 18 North- Meter (EPSG #26918)
UTM83-18F	NAD83 UTM- Zone 18 North- US Foot
UTM83-18IF	NAD83 UTM- Zone 18 North- Intl Foot
UTM83-19	NAD83 UTM- Zone 19 North- Meter (EPSG #26919)
UTM83-19F	NAD83 UTM- Zone 19 North- US Foot
UTM83-19IF	NAD83 UTM- Zone 19 North- Intl Foot
UTM83-2	NAD83 UTM- Zone 2 North- Meter (EPSG #26902)
UTM83-20	NAD83 UTM- Zone 20 North- Meter (EPSG #26920)
UTM83-20F	NAD83 UTM- Zone 20 North- US Foot
UTM83-20IF	NAD83 UTM- Zone 20 North- Intl Foot
UTM83-21	NAD83 UTM- Zone 21 North- Meter (EPSG #26921)
UTM83-21F	NAD83 UTM- Zone 21 North- US Foot
UTM83-21IF	NAD83 UTM- Zone 21 North- Intl Foot
UTM83-22	NAD83 UTM- Zone 22 North- Meter (EPSG #26922)
UTM83-22F	NAD83 UTM- Zone 22 North- US Foot
UTM83-22IF	NAD83 UTM- Zone 22 North- Intl Foot
UTM83-23	NAD83 Universal Transverse Mercator- Zone 23 North- Meter
UTM83-3	NAD83 UTM- Zone 3 North- Meter (EPSG #26903)
UTM83-3F	NAD83 UTM- Zone 3 North- US Survey Foot
UTM83-4	NAD83 UTM- Zone 4 North- Meter (EPSG #26904)
UTM83-4F	NAD83 UTM- Zone 4 North- US Survey Foot
UTM83-5	NAD83 UTM- Zone 5 North- Meter (EPSG #26905)
UTM83-58	NAD83 UTM- Zone 58 North- Meter
UTM83-59	NAD83 UTM- Zone 59 North- Meter
UTM83-5F	NAD83 UTM- Zone 5 North- US Survey Foot

Value	Description
UTM83-5IF	NAD83 UTM- Zone 5 North- Intl Foot
UTM83-6	NAD83 UTM- Zone 6 North- Meter (EPSG #26906)
UTM83-60	NAD83 UTM- Zone 60 North- Meter
UTM83-6F	NAD83 UTM- Zone 6 North- US Foot
UTM83-6IF	NAD83 UTM- Zone 6 North- Intl Foot
UTM83-7	NAD83 UTM- Zone 7 North- Meter (EPSG #26907)
UTM83-7F	NAD83 UTM- Zone 7 North- US Foot
UTM83-7IF	NAD83 UTM- Zone 7 North- Intl Foot
UTM83-8	NAD83 UTM- Zone 8 North- Meter (EPSG #26908)
UTM83-8F	NAD83 UTM- Zone 8 North- US Foot
UTM83-8IF	NAD83 UTM- Zone 8 North- Intl Foot
UTM83-9	NAD83 UTM- Zone 9 North- Meter (EPSG #26909)
UTM83-9F	NAD83 UTM- Zone 9 North- US Foot
UTM83-9IF	NAD83 UTM- Zone 9 North- Intl Foot
UTM84-10N	WGS 1984 UTM- Zone 10 North- Meter (EPSG #32610)
UTM84-10S	WGS 1984 UTM- Zone 10 South- Meter (EPSG #32710)
UTM84-11N	WGS 1984 UTM- Zone 11 North- Meter (EPSG #32611)
UTM84-11S	WGS 1984 UTM- Zone 11 South- Meter (EPSG #32711)
UTM84-12N	WGS 1984 UTM- Zone 12 North- Meter (EPSG #32612)
UTM84-12S	WGS 1984 UTM- Zone 12 South- Meter (EPSG #32712)
UTM84-13N	WGS 1984 UTM- Zone 13 North- Meter (EPSG #32613)
UTM84-13S	WGS 1984 UTM- Zone 13 South- Meter (EPSG #32713)
UTM84-14N	WGS 1984 UTM- Zone 14 North- Meter (EPSG #32614)
UTM84-14S	WGS 1984 UTM- Zone 14 South- Meter (EPSG #32714)
UTM84-15N	WGS 1984 UTM- Zone 15 North- Meter (EPSG #32615)
UTM84-15S	WGS 1984 UTM- Zone 15 South- Meter (EPSG #32715)
UTM84-16N	WGS 1984 UTM- Zone 16 North- Meter (EPSG #32616)
UTM84-16S	WGS 1984 UTM- Zone 16 South- Meter (EPSG #32716)
UTM84-17N	WGS 1984 UTM- Zone 17 North- Meter (EPSG #32617)
UTM84-17S	WGS 1984 UTM- Zone 17 South- Meter (EPSG #32717)
UTM84-18N	WGS 1984 UTM- Zone 18 North- Meter (EPSG #32618)
UTM84-18S	WGS 1984 UTM- Zone 18 South- Meter (EPSG #32718)
UTM84-19N	WGS 1984 UTM- Zone 19 North- Meter (EPSG #32619)
UTM84-19S	WGS 1984 UTM- Zone 19 South- Meter (EPSG #32719)
UTM84-1N	WGS 1984 UTM- Zone 1 North- Meter (EPSG #32601)
UTM84-1S	WGS 1984 UTM- Zone 1 South- Meter (EPSG #32701)
UTM84-20N	WGS 1984 UTM- Zone 20 North- Meter (EPSG #32620)
UTM84-20S	WGS 1984 UTM- Zone 20 South- Meter (EPSG #32720)
UTM84-21N	WGS 1984 UTM- Zone 21 North- Meter (EPSG #32621)
UTM84-21S	WGS 1984 UTM- Zone 21 South- Meter (EPSG #32721)
UTM84-22N	WGS 1984 UTM- Zone 22 North- Meter (EPSG #32622)
UTM84-22S	WGS 1984 UTM- Zone 22 South- Meter (EPSG #32722)
UTM84-23N	WGS 1984 UTM- Zone 23 North- Meter (EPSG #32623)
UTM84-23S	WGS 1984 UTM- Zone 23 South- Meter (EPSG #32723)
UTM84-24N	WGS 1984 UTM- Zone 24 North- Meter (EPSG #32624)
UTM84-24S	WGS 1984 UTM- Zone 24 South- Meter (EPSG #32724)
UTM84-25N	WGS 1984 UTM- Zone 25 North- Meter (EPSG #32625)

Value	Description
UTM84-25S	WGS 1984 UTM- Zone 25 South- Meter (EPSG #32725)
UTM84-26N	WGS 1984 UTM- Zone 26 North- Meter (EPSG #32626)
UTM84-26S	WGS 1984 UTM- Zone 26 South- Meter (EPSG #32726)
UTM84-27N	WGS 1984 UTM- Zone 27 North- Meter (EPSG #32627)
UTM84-27S	WGS 1984 UTM- Zone 27 South- Meter (EPSG #32727)
UTM84-28N	WGS 1984 UTM- Zone 28 North- Meter (EPSG #32628)
UTM84-28S	WGS 1984 UTM- Zone 28 South- Meter (EPSG #32728)
UTM84-29N	WGS 1984 UTM- Zone 29 North- Meter (EPSG #32629)
UTM84-29S	WGS 1984 UTM- Zone 29 South- Meter (EPSG #32729)
UTM84-2N	WGS 1984 UTM- Zone 2 North- Meter (EPSG #32602)
UTM84-2S	WGS 1984 UTM- Zone 2 South- Meter (EPSG #32702)
UTM84-30N	WGS 1984 UTM- Zone 30 North- Meter (EPSG #32630)
UTM84-30S	WGS 1984 UTM- Zone 30 South- Meter (EPSG #32730)
UTM84-31N	WGS 1984 UTM- Zone 31 North- Meter (EPSG #32631)
UTM84-31S	WGS 1984 UTM- Zone 31 South- Meter (EPSG #32731)
UTM84-32N	WGS 1984 UTM- Zone 32 North- Meter (EPSG #32632)
UTM84-32S	WGS 1984 UTM- Zone 32 South- Meter (EPSG #32732)
UTM84-33N	WGS 1984 UTM- Zone 33 North- Meter (EPSG #32633)
UTM84-33S	WGS 1984 UTM- Zone 33 South- Meter (EPSG #32733)
UTM84-34N	WGS 1984 UTM- Zone 34 North- Meter (EPSG #32634)
UTM84-34S	WGS 1984 UTM- Zone 34 South- Meter (EPSG #32734)
UTM84-35N	WGS 1984 UTM- Zone 35 North- Meter (EPSG #32635)
UTM84-35S	WGS 1984 UTM- Zone 35 South- Meter (EPSG #32735)
UTM84-36N	WGS 1984 UTM- Zone 36 North- Meter (EPSG #32636)
UTM84-36S	WGS 1984 UTM- Zone 36 South- Meter (EPSG #32736)
UTM84-37N	WGS 1984 UTM- Zone 37 North- Meter (EPSG #32637)
UTM84-37S	WGS 1984 UTM- Zone 37 South- Meter (EPSG #32737)
UTM84-38N	WGS 1984 UTM- Zone 38 North- Meter (EPSG #32638)
UTM84-38S	WGS 1984 UTM- Zone 38 South- Meter (EPSG #32738)
UTM84-39N	WGS 1984 UTM- Zone 39 North- Meter (EPSG #32639)
UTM84-39S	WGS 1984 UTM- Zone 39 South- Meter (EPSG #32739)
UTM84-3N	WGS 1984 UTM- Zone 3 North- Meter (EPSG #32603)
UTM84-3S	WGS 1984 UTM- Zone 3 South- Meter (EPSG #32703)
UTM84-40N	WGS 1984 UTM- Zone 40 North- Meter (EPSG #32640)
UTM84-40S	WGS 1984 UTM- Zone 40 South- Meter (EPSG #32740)
UTM84-41N	WGS 1984 UTM- Zone 41 North- Meter (EPSG #32641)
UTM84-41S	WGS 1984 UTM- Zone 41 South- Meter (EPSG #32741)
UTM84-42N	WGS 1984 UTM- Zone 42 North- Meter (EPSG #32642)
UTM84-42S	WGS 1984 UTM- Zone 42 South- Meter (EPSG #32742)
UTM84-43N	WGS 1984 UTM- Zone 43 North- Meter (EPSG #32643)
UTM84-43S	WGS 1984 UTM- Zone 43 South- Meter (EPSG #32743)
UTM84-44N	WGS 1984 UTM- Zone 44 North- Meter (EPSG #32644)
UTM84-44S	WGS 1984 UTM- Zone 44 South- Meter (EPSG #32744)
UTM84-45N	WGS 1984 UTM- Zone 45 North- Meter (EPSG #32645)
UTM84-45S	WGS 1984 UTM- Zone 45 South- Meter (EPSG #32745)
UTM84-46N	WGS 1984 UTM- Zone 46 North- Meter (EPSG #32646)
UTM84-46S	WGS 1984 UTM- Zone 46 South- Meter (EPSG #32746)

Value	Description
UTM84-47N	WGS 1984 UTM- Zone 47 North- Meter (EPSG #32647)
UTM84-47S	WGS 1984 UTM- Zone 47 South- Meter (EPSG #32747)
UTM84-48N	WGS 1984 UTM- Zone 48 North- Meter (EPSG #32648)
UTM84-48S	WGS 1984 UTM- Zone 48 South- Meter (EPSG #32748)
UTM84-49N	WGS 1984 UTM- Zone 49 North- Meter (EPSG #32649)
UTM84-49S	WGS 1984 UTM- Zone 49 South- Meter (EPSG #32749)
UTM84-4N	WGS 1984 UTM- Zone 4 North- Meter (EPSG #32604)
UTM84-4S	WGS 1984 UTM- Zone 4 South- Meter (EPSG #32704)
UTM84-50N	WGS 1984 UTM- Zone 50 North- Meter (EPSG #32650)
UTM84-50S	WGS 1984 UTM- Zone 50 South- Meter (EPSG #32750)
UTM84-51N	WGS 1984 UTM- Zone 51 North- Meter (EPSG #32651)
UTM84-51S	WGS 1984 UTM- Zone 51 South- Meter (EPSG #32751)
UTM84-52N	WGS 1984 UTM- Zone 52 North- Meter (EPSG #32652)
UTM84-52S	WGS 1984 UTM- Zone 52 South- Meter (EPSG #32752)
UTM84-53N	WGS 1984 UTM- Zone 53 North- Meter (EPSG #32653)
UTM84-53S	WGS 1984 UTM- Zone 53 South- Meter (EPSG #32753)
UTM84-54N	WGS 1984 UTM- Zone 54 North- Meter (EPSG #32654)
UTM84-54S	WGS 1984 UTM- Zone 54 South- Meter (EPSG #32754)
UTM84-55N	WGS 1984 UTM- Zone 55 North- Meter (EPSG #32655)
UTM84-55S	WGS 1984 UTM- Zone 55 South- Meter (EPSG #32755)
UTM84-56N	WGS 1984 UTM- Zone 56 North- Meter (EPSG #32656)
UTM84-56S	WGS 1984 UTM- Zone 56 South- Meter (EPSG #32756)
UTM84-57N	WGS 1984 UTM- Zone 57 North- Meter (EPSG #32657)
UTM84-57S	WGS 1984 UTM- Zone 57 South- Meter (EPSG #32757)
UTM84-58N	WGS 1984 UTM- Zone 58 North- Meter (EPSG #32658)
UTM84-58S	WGS 1984 UTM- Zone 58 South- Meter (EPSG #32758)
UTM84-59N	WGS 1984 UTM- Zone 59 North- Meter (EPSG #32659)
UTM84-59S	WGS 1984 UTM- Zone 59 South- Meter (EPSG #32759)
UTM84-5N	WGS 1984 UTM- Zone 5 North- Meter (EPSG #32605)
UTM84-5S	WGS 1984 UTM- Zone 5 South- Meter (EPSG #32705)
UTM84-60N	WGS 1984 UTM- Zone 60 North- Meter (EPSG #32660)
UTM84-60S	WGS 1984 UTM- Zone 60 South- Meter (EPSG #32760)
UTM84-6N	WGS 1984 UTM- Zone 6 North- Meter (EPSG #32606)
UTM84-6S	WGS 1984 UTM- Zone 6 South- Meter (EPSG #32706)
UTM84-7N	WGS 1984 UTM- Zone 7 North- Meter (EPSG #32607)
UTM84-7S	WGS 1984 UTM- Zone 7 South- Meter (EPSG #32707)
UTM84-8N	WGS 1984 UTM- Zone 8 North- Meter (EPSG #32608)
UTM84-8S	WGS 1984 UTM- Zone 8 South- Meter (EPSG #32708)
UTM84-9N	WGS 1984 UTM- Zone 9 North- Meter (EPSG #32609)
UTM84-9S	WGS 1984 UTM- Zone 9 South- Meter (EPSG #32709)
UTM89-30N	WGS 1984 UTM- Zone 30 North- Meter
UTMHP-10	HPGN UTM- Zone 10 North- Meter
UTMHP-10F	HPGN UTM- Zone 10 North- US Foot
UTMHP-10IF	HPGN UTM- Zone 10 North- Intl Foot
UTMHP-11	HPGN UTM- Zone 11 North- Meter
UTMHP-11F	HPGN UTM- Zone 11 North- US Foot
UTMHP-11IF	HPGN UTM- Zone 11 North- Intl Foot

Value	Description
UTMHP-12	HPGN UTM- Zone 12 North- Meter
UTMHP-12F	HPGN UTM- Zone 12 North- US Foot
UTMHP-12IF	HPGN UTM- Zone 12 North- Intl Foot
UTMHP-13	HPGN UTM- Zone 13 North- Meter
UTMHP-13F	HPGN UTM- Zone 13 North- US Foot
UTMHP-13IF	HPGN UTM- Zone 13 North- Intl Foot
UTMHP-14	HPGN UTM- Zone 14 North- Meter
UTMHP-14F	HPGN UTM- Zone 14 North- US Foot
UTMHP-14IF	HPGN UTM- Zone 14 North- Intl Foot
UTMHP-15	HPGN UTM- Zone 15 North- Meter
UTMHP-15F	HPGN UTM- Zone 15 North- US Foot
UTMHP-15IF	HPGN UTM- Zone 15 North- Intl Foot
UTMHP-16	HPGN UTM- Zone 16 North- Meter
UTMHP-16F	HPGN UTM- Zone 16 North- US Foot
UTMHP-16IF	HPGN UTM- Zone 16 North- Intl Foot
UTMHP-17	HPGN UTM- Zone 17 North- Meter
UTMHP-17F	HPGN UTM- Zone 17 North- US Foot
UTMHP-17IF	HPGN UTM- Zone 17 North- Intl Foot
UTMHP-18	HPGN UTM- Zone 18 North- Meter
UTMHP-18F	HPGN UTM- Zone 18 North- US Foot
UTMHP-18IF	HPGN UTM- Zone 18 North- Intl Foot
UT-N	NAD27 Utah State Planes- Northern Zone- US Foot (EPSG #32042)
UT-S	NAD27 Utah State Planes- Southern Zone- US Foot (EPSG #32044)
VA83-N	NAD83 Virginia State Planes- Northern Zone- Meter (EPSG #32146)
VA83-NF	NAD83 Virginia State Planes- Northern Zone- US Foot (EPSG #2283)
VA83-S	NAD83 Virginia State Planes- Southern Zone- Meter (EPSG #32147)
VA83-SF	NAD83 Virginia State Planes- Southern Zone- US Foot (EPSG #2284)
VAHP-N	HPGN/HARN Virginia State Planes- Northern Zone- Meter (EPSG #2853)
VAHP-NF	HPGN/HARN Virginia State Planes- Northern Zone- US Foot (EPSG #2924)
VAHP-S	HPGN/HARN Virginia State Planes- Southern Zone- Meter (EPSG #2854)
VAHP-SF	HPGN/HARN Virginia State Planes- Southern Zone- US Foot (EPSG #2925)
VA-N	NAD27 Virginia State Planes- Northern Zone- US Foot (EPSG #32046)
VA-S	NAD27 Virginia State Planes- Southern Zone- US Foot (EPSG #32047)
VT	NAD27 Vermont State Planes- US Foot (EPSG #32045)
VT83	NAD83 Vermont State Planes- Meter (EPSG #32145)
VT83F	NAD83 Vermont State Planes- US Foot
VTHP	HPGN/HARN Vermont State Planes- Meter (EPSG #2852)
VTHPF	HPGN/HARN Vermont State Planes- US Foot
WA83-N	NAD83 Washington State Planes- Northern Zone- Meter (EPSG #32148)
WA83-NF	NAD83 Washington State Planes- Northern Zone- US Foot (EPSG #2285)
WA83-S	NAD83 Washington State Planes- Southern Zone- Meter (EPSG #32149)
WA83-SF	NAD83 Washington State Planes- Southern Zone- US Foot (EPSG #2286)
WAHP-N	HPGN Washington State Planes- Northern Zone- Meter (EPSG #2855)
WAHP-NF	HPGN Washington State Planes- Northern Zone- US Foot (EPSG #2926)
WAHP-S	HPGN Washington State Planes- Southern Zone- Meter (EPSG #2856)
WAHP-SF	HPGN Washington State Planes- Southern Zone- US Foot (EPSG #2927)
WA-N	NAD27 Washington State Planes- Northern Zone- US Foot (EPSG #32048)

Value	Description
WA-S	NAD27 Washington State Planes- Southern Zone- US Foot (EPSG #32049)
WI83-C	NAD83 Wisconsin State Planes- Central Zone- Meter (EPSG #32153)
WI83-CF	NAD83 Wisconsin State Planes- Central Zone- US Foot (EPSG #2288)
WI83-N	NAD83 Wisconsin State Planes- Northern Zone- Meter (EPSG #32152)
WI83-NF	NAD83 Wisconsin State Planes- Northern Zone- US Foot (EPSG #2287)
WI83-S	NAD83 Wisconsin State Planes- Southern Zone- Meter (EPSG #32154)
WI83-SF	NAD83 Wisconsin State Planes- Southern Zone- US Foot (EPSG #2289)
WI-C	NAD27 Wisconsin State Planes- Central Zone- US Foot (EPSG #32053)
WIHP-C	HPGN Wisconsin State Planes- Central Zone- Meter (EPSG #2860)
WIHP-CF	HPGN Wisconsin State Planes- Central Zone- US Foot (EPSG #2929)
WIHP-N	HPGN Wisconsin State Planes- Northern Zone- Meter (EPSG #2859)
WIHP-NF	HPGN Wisconsin State Planes- Northern Zone- US Foot (EPSG #2928)
WIHP-S	HPGN Wisconsin State Planes- Southern Zone- Meter (EPSG #2861)
WIHP-SF	HPGN Wisconsin State Planes- Southern Zone- US Foot (EPSG #2930)
WI-N	NAD27 Wisconsin State Planes- Northern Zone- US Foot (EPSG #32052)
WI-S	NAD27 Wisconsin State Planes- Southern Zone- US Foot (EPSG #32054)
WV83-N	NAD83 West Virginia State Planes- Northern Zone- Meter (EPSG #32150)
WV83-NF	NAD83 West Virginia State Planes- Northern Zone- US Foot
WV83-S	NAD83 West Virginia State Planes- Southern Zone- Meter (EPSG #32151)
WV83-SF	NAD83 West Virginia State Planes- Southern Zone- US Foot
WVHP-N	HARN (HPGN) West Virginia State Planes- Northern Zone- Meter (EPSG #2857)
WVHP-NF	HARN (HPGN) West Virginia State Planes- Northern Zone- US Foot
WVHP-S	HARN (HPGN) West Virginia State Planes- Southern Zone- Meter (EPSG #2858)
WVHP-SF	HARN (HPGN) West Virginia State Planes- Southern Zone- US Foot
WV-N	NAD27 West Virginia State Planes- Northern Zone- US Foot (EPSG #32050)
WV-S	NAD27 West Virginia State Planes- Southern Zone- US Foot (EPSG #32051)
WY83-E	NAD83 Wyoming State Planes- Eastern- Meter (EPSG #32155)
WY83-EC	NAD83 Wyoming State Planes- East Central Zone- Meter (EPSG #32156)
WY83-ECF	NAD83 Wyoming State Planes- East Central Zone- US Foot
WY83-EF	NAD83 Wyoming State Planes- Eastern- US Foot
WY83-W	NAD83 Wyoming State Planes- Western- Meter (EPSG #32158)
WY83-WC	NAD83 Wyoming State Planes- West Central Zone- Meter (EPSG #32157)
WY83-WCF	NAD83 Wyoming State Planes- West Central Zone- US Foot
WY83-WF	NAD83 Wyoming State Planes- Western- US Foot
WY-E	NAD27 Wyoming State Planes- Eastern Zone- US Foot (EPSG #32055)
WY-EC	NAD27 Wyoming State Planes- East Central Zone- US Foot (EPSG #32056)
WYHP-E	HPGN/HARN Wyoming State Planes- Eastern- Meter (EPSG #2862)
WYHP-EC	HPGN/HARN Wyoming State Planes- East Central Zone- Meter (EPSG #2863)
WYHP-ECF	HPGN/HARN Wyoming State Planes- East Central Zone- US Foot
WYHP-EF	HPGN/HARN Wyoming State Planes- Eastern- US Foot
WYHP-W	HPGN/HARN Wyoming State Planes- Western- Meter (EPSG #2865)
WYHP-WC	HPGN/HARN Wyoming State Planes- West Central Zone- Meter (EPSG #2864)
WYHP-WCF	HPGN/HARN Wyoming State Planes- West Central Zone- US Foot
WYHP-WF	HPGN/HARN Wyoming State Planes- Western- US Foot

Value	Description
WY-W	NAD27 Wyoming State Planes- Western Zone- US Foot (EPSG #32058)
WY-WC	NAD27 Wyoming State Planes- West Central Zone- US Foot (EPSG #32057)

5.15.13.CodeDesignGroup

Group #	Tail Height (ft)	Wingspan (ft)
I	<20	<49
II	20 - <30	49 - <79
III	30 - <45	79 - <118
IV	45 - <60	118 - <171
V	60 - <66	171 - <214
VI	66 - <80	214 - <262

5.15.14.CodeDesignSurfaceType

Value	Description
BRL	Building restriction line (not a standard)
FATO	Final Approach and Takeoff Clearance Surface
HAS	Helicopter Safety Area
HPZ	Helicopter Protection Zone
IAOFZ	Inner Approach Obstacle Free Zone
ITOFZ	Inner Transitional Obstacle Free Zone
OFZ	Obstacle Free Zone
POFZ	Precision obstacle free zone (See AC 150/5300-13)
PRSFVR	Parallel Runway Separation Simultaneous IFR Operations
PRSVFR	Parallel Runway Separation Simultaneous VFR Operations
ROFA	Runway Object Free Area
RPZ	Runway protection zone (See AC 150/5300-13)
RSA	Runway safety area
RWYPTX	Runway to Parallel Taxiway and Taxiline Separation
TOFA	Taxiway and taxilane object free area (See AC 150/5300-13)
TSA	Threshold sighting area
TSS	Threshold Siting Surface (See AC 150/5300-13)
TXSA	Taxiway safety area (See AC 150/5300-13)

5.15.15.CodeDirectionality

Value	Description
BI	Bidirectional
ES	One way from end-to-startpoint
SE	One way from start-to-endpoint

5.15.16.CodeFaaRegion

Value	Description
AAL	Alaska
ACE	Central
AEA	Eastern
AGL	Great Lakes
ANE	New England
ANM	Northwest Mountain
ASO	Southern

Value	Description
ASW	Southwest
AWP	Western Pacific

5.15.17.CodeFuel

Value	Description
A	Jet A, without icing inhibitor
A+	Jet A+, Kerosene fuel, Type A, Jet A or JP-1 With icing inhibitor.
A1	Jet A1, without icing inhibitor
A1+	Jet A1+, Jet A1 with icing inhibitor.
B	Jet B, Wide cut turbine fuel, Without icing inhibitor.
B+	Jet B+, wide cut turbine fuel with icing inhibitor.
C	91/96 octane gasoline, leaded, No MIL Spec.
F	80 octane gasoline, unleaded, No MIL Spec.
G	Aviation Gasoline (AVGAS), octane unknown
H	108/135 octane gasoline, leaded, No MIL Spec
J	Jet fuel available but type is unknown
J4	JP-4, Wide cut turbine fuel MIL Spec T-5624
J5	JP-5, Kerosene MIL Spec T-5624
J8	JP-8, Semi Kerosene MIL Spec T-83133, without icing inhibitor
K	73 octane gasoline, unleaded, No MIL Spec
X	Storage tanks available and fuel type unknown or the tanks were used at one time for aviation products but may now store other products
7	JP-7, Jet Propellant type 7 (Glass Tank Fuel)
80	80/87 octane gasoline, leaded, MIL-L-5572F (RED)
100	100/130 octane gasoline, leaded, MIL-L-5572F (GREEN)
100LL	100/130 MIL Spec, low lead, aviation gasoline (BLUE)
115	115/145 octane gasoline, leaded, MIL-L-5572F (PURPLE)

5.15.18.CodeGateStandType

Name	Definition
ANG-NI	Angled nose-in parking position
ANG-NO	Angled nose-out parking position
HS	Hard stand
ISO	Isolated parking position.
JB	Jet bridge
NI	Nose-in parking position.
OTHER	Other
PR	Portable ramp
RMT	Remote parking position.
SR	Stairs
TM	Temporary
UNK	unknown

5.15.19.CodeGridType

Name	Definition
ed50	European Datum 1950
gaussKruger	Gauss Kruger
GEOREF	World Geographic Reference System

Name	Definition
ING	Irish National Grid Reference Survey
LCC	Lambert Conformal Conic
LL	Latitude, longitude
MIL	Military
OTHER	Other
RT90	Swedish Coordinate System
SPCS	State Plane Coordinate System
UPS	Universal Polar Stereographic
USNG	United States National Grid for Spatial Addressing
UTM	Universal Transverse Mercator

5.15.20.CodeHazardCategory

Class	Division	Description
1		Explosives are any substance or article, including a device, which is designed to function by explosion or which, by chemical reaction within itself is able to function in a similar manner even if not designed to function by explosion (unless the article is otherwise classed under a provision of 49CFR).
	1.1	Explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire load instantaneously
	1.2	Explosives that have a projection hazard but not a mass explosion hazard
	1.3	Explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard or, both but not a mass explosion hazard.
	1.4	Explosives that present a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package.
	1.5	Blasting agents consist of very insensitive explosives. This division comprises substances which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport.
	1.6	Consists of extremely insensitive articles which do not have a mass explosive hazard. This division comprises articles which contain only extremely insensitive detonating substances and which demonstrate a negligible probability of accidental initiation or propagation.
2		HazMat Class 2 includes all gases which are compressed and stored for transportation. Class 2 has three divisions: Flammable (also called combustible), Non-Flammable/Non-Poisonous, and Poisonous.
	2.1	Flammable Gas - 454 kg (1001 lb) of any material which is a gas at 20 °C (68 °F) or less and 101.3 kPa (14.7 psi) of pressure (a material which has a boiling point of 20 °C (68 °F) or less at 101.3 kPa (14.7 psi)) which- <ol style="list-style-type: none"> 1. Is ignitable at 101.3 kPa (14.7 psi) when in a mixture of 13 percent or less by volume with air; or 2. Has a flammable range at 101.3 kPa (14.7 psi) with air of at least 12 percent regardless of the lower limit.

Class	Division	Description
	2.2	<p>Non-Flammable, Non-Poisonous Gas - This division includes compressed gas, liquefied gas, pressurized cryogenic gas, compressed gas in solution, asphyxiant gas and oxidizing gas. A non-flammable, nonpoisonous compressed gas (Division 2.2) means any material (or mixture) which:</p> <ol style="list-style-type: none"> 1. Exerts in the packaging an absolute pressure of 280 kPa (40.6 psia) or greater at 20 °C (68 °F), and 2. Does not meet the definition of Division 2.1 or 2.3.
	2.3	<p>Poison Gas - Gas poisonous by inhalation means a material which is a gas at 20 °C or less and a pressure of 101.3 kPa (a material which has a boiling point of 20 °C or less at 101.3kPa (14.7 psi)) and which:</p> <ol style="list-style-type: none"> 1. Is known to be so toxic to humans as to pose a hazard to health during transportation, or 2. In the absence of adequate data on human toxicity, is presumed to be toxic to humans because when tested on laboratory animals it has an LC50 value of not more than 5000 ml/m³. See 49CFR 173.116(a) for assignment of Hazard Zones A, B, C or D. LC50 values for mixtures may be determined using the formula in 49 CFR 173.133(b)(1)(i)
3		HazMat Class 3 are flammable liquids. They are liquids with flash point of not more than 60.5°C (141°F), or any material in a liquid phase with a flash point at or above 37.8°C (100°F).
4		HazMat Class 4 are Flammable solids. Flammable Solids are any materials in the solid phase of matter that can readily undergo combustion in the presence of a source of ignition under standard circumstances, i.e. without: Artificially changing variables such as pressure or density; or Adding accelerants.
	4.1	Flammable Solid
	4.2	Spontaneously Combustible
	4.3	Dangerous When Wet - Dangerous when wet material is material that, by contact with water, is liable to become spontaneously flammable or to give off flammable or toxic gas at a rate greater than 1 liter per kilogram of the material, per hour, when tested in accordance with the UN Manual of Tests and Criteria.
5		HazMat Class 5 Oxidizing Agents and Organic Peroxides - An oxidizer is a chemical that readily yields oxygen in reactions, thereby causing or enhancing combustion
	5.1	Oxidizers - An oxidizer is a material that may, generally by yielding oxygen, cause or enhance the combustion of other materials
	5.2	Organic Peroxides - An organic peroxide is any organic compound containing oxygen (O) in the bivalent -O-O- structure and which may be considered a derivative of hydrogen peroxide, where one or more of the hydrogen atoms have been replaced by organic radicals (with some exceptions)

Class	Division	Description
6		HazMat Class 6 is Toxic and Infectious Substances. Poisonous material is a material, other than a gas, known to be so toxic to humans that it presents a health hazard during transportation
	6.1	Poisonous material is a material, other than a gas, which is known to be so toxic to humans as to afford a hazard to health during transportation, or which, in the absence of adequate data on human toxicity:
	6.2	Biohazards
7		HazMat Class 7 is Radioactive substances. Radioactive substances are materials that emit radiation.
8		Hazmat Class 8 is Corrosive Substances. A corrosive material is a liquid or solid that causes full thickness destruction of human skin at the site of contact within a specified period of time. A liquid that has a severe corrosion rate on steel or aluminum based on the criteria in 49CFR 173.137(c)(2) is also a corrosive material.
9		HazMat Class 9 is Miscellaneous Substances. The miscellaneous hazardous materials category encompasses all hazardous materials that do not fit one of the definitions listed in Class 1 through Class 8.

5.15.21.CodeHazardType

Value	Description
BASH	Bird Aircraft Strike Hazard
DEER STRIKE	
TBD	Hazard yet to be determined
TORTOISE PITFALL	
UNKNOWN	

5.15.22.CodeHowAcquired

Value	Description
AIP DEVELOPMENT	Land acquired using AIP funds for airport development
AIP APPROACH PROTECTION	Land acquired using AIP funds for approach protection
AIP NOISE	Land acquired using AIP funds for noise
DONATION	Land acquired by donation
PFC DEVELOPMENT	Land acquired using PFC funds for airport development
PFC APPROACH PROTECTION	Land acquired using PFC funds for approach protection
PFC NOISE	Land acquired using PFC funds for noise
SURPLUS PROPERTY	Land acquired as surplus property

5.15.23.CodeLandmarkType

Value	Description
AERIAL CABLEWAY	
AGRICULTURE AREA	
AIRPORT	
ATHLETIC FIELD	
BOAT RAMP	
BREAKWATER	
CANAL	
CEMETERY	
CREEK	

Value	Description
DAM	
FENCE	
GOLF COURSE	
LEVEE	
MILITARY AREA	
MOUNTAIN PASS	
OTHER	
PIER	
POWERPLANT	
QUARRY	
QUAY	
RACECOURSE OR TRACK	
RAILROAD	
RIVER	
ROAD	
SHORELINE	
STADIUM	
STREAM	
TANK TRAP	
TRENCH	
URBAN AREA	
UTILITY LINE	
WALL	
WHARF	

5.15.24.CodeLandUseType

Value	Description
1000	Residential activities (Source: APA LBCS)
1100	Household activities (Source: APA LBCS)
1200	Transient living (Source: APA LBCS)
1300	Institutional living (Source: APA LBCS)
2000	Shopping, business, or trade activities (Source: APA LBCS)
2100	Shopping (Source: APA LBCS)
2110	Goods-oriented shopping (Source: APA LBCS)
2120	Service-oriented shopping (Source: APA LBCS)
2200	Restaurant-type activity (Source: APA LBCS)
2210	Restaurant-type activity with drive-through (Source: APA LBCS)
2300	Office activities (Source: APA LBCS)
2310	Office activities with high turnover of people (Source: APA LBCS)
2320	Office activities with high turnover of automobiles (Source: APA LBCS)
3000	Industrial, manufacturing, and waste-related activities (Source: APA LBCS)
3100	Plant, factory, or heavy goods storage or handling activities (Source: APA LBCS)
3110	Primarily plant or factory-type activities (Source: APA LBCS)
3120	Primarily goods storage or handling activities (Source: APA LBCS)
3200	Solid waste management activities (Source: APA LBCS)
3210	Solid waste collection and storage (Source: APA LBCS)
3220	Landfilling or dumping (Source: APA LBCS)
3230	Waste processing or recycling (Source: APA LBCS)

Value	Description
3300	Construction activities (grading, digging, etc.) (Source: APA LBCS)
4000	Social, institutional, or infrastructure-related activities (Source: APA LBCS)
4100	School or library activities (Source: APA LBCS)
4110	Classroom-type activities (Source: APA LBCS)
4120	Training or instructional activities outside classrooms (Source: APA LBCS)
4130	Other instructional activities including those that occur in libraries (Source: APA LBCS)
4200	Emergency response or public-safety-related activities (Source: APA LBCS)
4210	Fire and rescue-related activities (Source: APA LBCS)
4220	Police, security, and protection-related activities (Source: APA LBCS)
4230	Emergency or disaster-response-related activities (Source: APA LBCS)
4300	Activities associated with utilities (water, sewer, power, etc.) (Source: APA LBCS)
4310	Water-supply-related activities (Source: APA LBCS)
4311	Water storing, pumping, or piping (Source: APA LBCS)
4312	Water purification and filtration activities (Source: APA LBCS)
4313	Irrigation water storage and distribution activities (Source: APA LBCS)
4314	Flood control, dams, and other large irrigation activities (Source: APA LBCS)
4320	Sewer-related control, monitor, or distribution activities (Source: APA LBCS)
4321	Sewage storing, pumping, or piping (Source: APA LBCS)
4322	Sewer treatment and processing (Source: APA LBCS)
4330	Power generation, control, monitor, or distribution activities (Source: APA LBCS)
4331	Power transmission lines or control activities (Source: APA LBCS)
4332	Power generation, storage, or processing activities (Source: APA LBCS)
4340	Telecommunications-related control, monitor, or distribution activities (Source: APA LBCS)
4350	Natural gas or fuels-related control, monitor, or distribution Activities (Source: APA LBCS)
4400	Mass storage, inactive (Source: APA LBCS)
4410	Water storage (Source: APA LBCS)
4420	Storage of natural gas, fuels, etc. (Source: APA LBCS)
4430	Storage of chemical, nuclear, or other materials (Source: APA LBCS)
4500	Health care, medical, or treatment activities (Source: APA LBCS)
4600	Interment, cremation, or grave digging activities (Source: APA LBCS)
4700	Military base activities (Source: APA LBCS)
4710	Ordnance storage (Source: APA LBCS)
4720	Range and test activities (Source: APA LBCS)
5000	Travel or movement activities (Source: APA LBCS)
5100	Pedestrian movement (Source: APA LBCS)
5200	Vehicular movement (Source: APA LBCS)
5210	Vehicular parking, storage, etc. (Source: APA LBCS)
5220	Drive-in, drive through, stop-n-go, etc. (Source: APA LBCS)
5400	Trains or other rail movement (Source: APA LBCS)
5410	Rail maintenance, storage, or related activities (Source: APA LBCS)
5500	Sailing, boating, and other port, marine and water-based Activities (Source: APA LBCS)
5510	Boat mooring, docking, or servicing (Source: APA LBCS)
5520	Port, ship-building, and related activities (Source: APA LBCS)
5600	Aircraft takeoff, landing, taxiing, and parking (Source: APA LBCS)

Value	Description
5700	Spacecraft launching and related activities (Source: APA LBCS)
6000	Mass assembly of people (Source: APA LBCS)
6100	Passenger assembly (Source: APA LBCS)
6200	Spectator sports assembly (Source: APA LBCS)
6300	Movies, concerts, or entertainment shows (Source: APA LBCS)
6400	Gatherings at fairs and exhibitions (Source: APA LBCS)
6500	Mass training, drills, etc. (Source: APA LBCS)
6600	Social, cultural, or religious assembly (Source: APA LBCS)
6700	Gatherings at galleries, museums, aquariums, zoological parks, etc. (Source: APA LBCS)
6800	Historical or cultural celebrations, parades, reenactments, etc. (Source: APA LBCS)
7000	Leisure activities (Source: APA LBCS)
7100	Active leisure sports and related activities (Source: APA LBCS)
7110	Running, jogging, bicycling, aerobics, exercising, etc. (Source: APA
7120	Equestrian sporting activities (Source: APA LBCS)
7130	Hockey, ice skating, etc. (Source: APA LBCS)
7140	Skiing, snowboarding, etc. (Source: APA LBCS)
7150	Automobile and motorbike racing (Source: APA LBCS)
7160	Golf (Source: APA LBCS)
7180	Tennis (Source: APA LBCS)
7190	Track and field, team sports (baseball, basketball, etc.), or other sports (Source: APA LBCS)
7200	Passive leisure activity (Source: APA LBCS)
7210	Camping (Source: APA LBCS)
7220	Gambling (Source: APA LBCS)
7230	Hunting (Source: APA LBCS)
7240	Promenading and other activities in parks (Source: APA LBCS)
7250	Shooting (Source: APA LBCS)
7260	Trapping (Source: APA LBCS)
7300	Flying or air-related sports (Source: APA LBCS)
7400	Water sports and related leisure activities (Source: APA LBCS)
7410	Boating, sailing, etc. (Source: APA LBCS)
7420	Canoeing, kayaking, etc. (Source: APA LBCS)
7430	Swimming, diving, etc. (Source: APA LBCS)
7440	Fishing, angling, etc. (Source: APA LBCS)
7450	Scuba diving, snorkeling, etc. (Source: APA LBCS)
7460	Water-skiing (Source: APA LBCS)
8000	Natural resources-related activities (Source: APA LBCS)
8100	Farming, tilling, plowing, harvesting, or related activities (Source: APA)
8200	Livestock related activities (Source: APA LBCS)
8300	Pasturing, grazing, etc. (Source: APA LBCS)
8400	Logging (Source: APA LBCS)

5.15.25. CodeLightingConfigurationType

Value	Description
ALSF-1	High Intensity Approach Lighting System - Configuration 1
ALSF-2	High Intensity Approach Lighting System - Configuration 2
APAP	Alignment of Element Systems

Value	Description
APBN	Airport Rotating Beacon
CLRBAR	Taxiway Clearance Bar Lights
CODEBEACON	Code Beacon
COURSE	Course Lights
F	Fixed
FL	Flashing (Sea Plane Navigation Buoy use only)
FL (2)	Group Flashing (Sea Plane Navigation Buoy use only)
FL (2+1)	Composite Group-Flashing (Sea Plane Navigation Buoy use only)
HLL	Hover Lane Light
HLLL	Hover Lane Limit Light
HPIL	Helipad Perimeter Inset Light
HPPEL	Helipad Perimeter Light (Elevated)
HPPLSF	Helipad Perimeter Light (Semiflush)
ISO	Isophase (Sea Plane Navigation Buoy use only)
L-804	Unidirectional elevated runway guard lights
L-850A	Bi directional or unidirectional runway in pavement light used for runway centerline, Land and Hold Short Operations (LAHSO).
L-850B	Unidirectional runway in pavement light used for runway touchdown zone and medium intensity approach light system applications.
L-850C	Bi directional runway in pavement light used for runway edge lights and displaced threshold applications.
L-850D	Bi directional or unidirectional runway in pavement lights used for runway threshold or runway end light applications.
L-850E	Unidirectional runway in pavement light used for runway threshold light and Medium Intensity Approach Light System applications
L-850F	Unidirectional runway in pavement lights white flashing lights used for LAHSO
L-852A	Bi directional or unidirectional taxiway centerline in pavement lights used for the straight sections of taxiways where operations are permitted when the Runway Visual Range (RVR) is greater than or equal to 1200 feet.
L-852B	Bi directional or unidirectional taxiway centerline in pavement lights for curved sections of taxiways where operations are permitted when the Runway Visual Range (RVR) is greater than or equal to 1200 feet.
L-852C	bi directional or unidirectional taxiway centerline in pavement lights for straight portions of taxiways where operations are permitted when the Runway Visual Range (RVR) is less than 1200 feet.
L-852D	Bi directional or unidirectional taxiway centerline in pavement lights used for curved portions of taxiways where operations are permitted when the Runway Visual Range is less than 1200 feet.
L-852E	Omni directional taxiway intersection in pavement lights where operations are permitted when the Runway Visual Range is greater than or equal to 1200 feet.
L-852E/F	Runway Guard Light in-pavement
L-852F	Omni directional taxiway intersection in pavement lights where operations are permitted when the Runway Visual Range is less than 1200 feet.
L-852G	Unidirectional Runway Guard in pavement lights

Value	Description
L-852G/S	Combination Runway Guard/Stop bar light in-pavement
L-852J	Bi directional taxiway centerline in pavement lights for the curved portions of taxiways where operations are permitted when the Runway Visual Range is greater than or equal to 1200 feet.
L-852K	Bi directional taxiway centerline in pavement lights for the curved portions of taxiway where operation are permitted when the Runway Visual Ranger is less than 1200 feet.
L-852S	Unidirectional in pavement Stop Bar lights
L-852T	Omni directional in pavement taxiway edge and Apron edge lights
L-853	Reflective Marker
L-854	Radio Controller (Pilot Controlled Lights)
L-860	Omni directional elevated runway edge lights for Visual Flight Rules (VFR) operations.
L-860E	Bi directional or unidirectional elevated runway threshold or runway end lights for Visual Flight Rules operations.
L-861	Omni directional or bi directional elevated runway edge or displaced threshold lights for non-precision Instrument Flight Rules (IFR) operations.
L-861E	Bi directional or unidirectional elevated runway threshold or runway end lights for non-precision Instrument Flight Rule operations.
L-861SE	Bi directional and unidirectional elevated runway threshold, runway end, and displaced threshold lights for non-precision Instrument Flight Rule operations
L-861T	Omni directional elevated taxiway and apron edge lights.
L-862	Bi directional elevated runway edge, threshold, and displaced threshold lights for precision Instrument Flight Rule operations.
L-862E	Bi directional or unidirectional elevated runway threshold, runway end, and displaced threshold lights for precision Instrument Flight Rule operations.
L-862S	Unidirectional elevated stop bar lights
L-880/L881	Precision Approach Path Indicator
LDIN	Lead In Lighting System
MALS	Medium Intensity Approach Lighting System
MALSF	Medium Intensity Approach Lighting System with Sequenced Flashing Lights
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (RAIL)
MO (A)	Morse Code (Sea Plane Navigation Buoy use only)
NONE	No lights
OBSCAT	Catenary Lighting
OBSDUAL	A combination of OBSRED and OBSWHT
OBSRED	Aviation red Obstruction Lights
OBSWHITE	Flashing White Obstruction Lights
OC	Occluding (Sea Plane Navigation Buoy use only)
ODALS	Omnidirectional Approach Lighting System
OTHER	Other
PAPI2	Precision Approach Path Indicator with 2 lights
PAPI4	Precision Approach Path Indicator with 4 lights

Value	Description
PORTABLE	Portable Lights
PVASI	Pulsating visual Approach Slope Indicator
Q	Quick (Flashing) (Sea Plane Navigation Buoy use only)
RAIL	Runway Alignment Indicator Lights
REIL	Runway End Identifier Lights
RWSL	Runway Status Lights
SALS	Short Approach lighting System
SMGCS	Surface Movement Guidance Control System
SSALF	Short Simplified Approach Light System with Sequenced Flashing Lights
SSALR	Simplified Short Approach Lighting System with Runway Alignment Indicator
TRCV	TriColor VASI
T-VASI	“T” Visual Approach Slope Indicator
TWYON_OFFLGT	Taxiway Lead on/off lights
VASI-12	Visual Approach Slope Indicator with 2 bars and 12 boxes
VASI-16	Visual Approach Slope Indicator with 3 bars and 16 boxes
VASI-2	Visual Approach Slope Indicator with 2 bars
VASI-2-2	Visual Approach Slope Indicator with 2 bars and 2 boxes
VASI-3	Visual Approach Slope Indicator with 3 bars

5.15.26.CodeLoadingBridgeType

Value	Description
ARM	Moveable Arm
PORTABLE_RAMP	Portable Ramp
PORTABLE_STAIRS	Portable Stairs
OTHER	Other

5.15.27.CodeLowVisibilityCategory

Value	Description
0	No low visibility operation supported
1	Supports ILS CAT I low visibility operations
2	Supports ILS CAT II III low visibility operations

5.15.28.CodeMarkingFeatureType

Value	Description
AIMING_POINT	Runway Aiming Point (Geometry Type: Polygon) [Source: AC 150/5340-1]
ALTBAND	Alternating bands of aviation orange and white [Source AC 70/7640-1]
APRON_SIGN	Surface painted apron position/entrance sign (Geometry Type: Polygon) [Source: AC 150/5340-1]
ARROW	Arrows identify the displaced threshold area to provide centerline guidance for takeoffs and rollouts (Geometry Type: Line) [Source: AC 150/5340-1]
ARROW_HEAD	Arrow heads are used in conjunction with a threshold bar to further highlight the beginning of a runway (Geometry Type: Line) [Source: AC 150/5340-1]

Value	Description
CHECKERBOARD	Checkerboard obstruction marking pattern [Source AC 70/7640-1]
CHEVRON	A marking used to designate blast pads and other areas that are not suitable for aircraft (Geometry Type: Line) [Source: AC 150/5340-1]
DEMARICATION	Demarcation Bar (Geometry Type: Line) [Source: AC 150/5340-1]
DIR_SIGN	Surface painted taxiway direction signs (Geometry Type: Polygon) [Source: AC 150/5340-1]
GATE_LINE	All painted taxilines covering a parking stand area are regarded as stand guidance lines and will be individual objects in the database. There may be several stand guidance taxilines leading to an aircraft stand to accommodate different aircraft types.
GATE_SIGN	Surface painted gate position signs (Geometry Type: Polygon) [Source: AC 150/5340-1]
HOLD_SIGN	Surface painted holding position signs (Geometry Type: AC 150/5340-1)
ILS_HOLD	Holding position markings for Instrument Landing Systems (Geometry Type: Polygon) [Source: AC 150/5340-1]
INTERSECTION_HOLD	Holding position marking for taxiway/taxiway intersections (Geometry Type: Line) [Source: AC 150/5340-1]
LAHSO	Marking associated with a Land And Hold Short Operations (LAHSO)
LOCATION_SIGN	Surface painted taxiway location signs (Geometry Type: Polygon) [Source: AC 150/5340-1]
NON_MOVE_AREA	Non-movement area marking (Geometry Type: Line) [Source: AC 150/5340-1]
NONE	No marking(s)
OTHER	Other markings not listed
OTHER_LINE	Other markings suitable for representation as a line
OTHER_POLYGON	Other markings suitable for representation as a polygon
PERM_CLOSED	Markings for permanently closed runways and taxiways (Geometry Type: Polygon) [Source: AC 150/5340-1]
POS_SIGN	Geographic position markings (Geometry Type: Polygon) [Source: AC 150/5340-1]
RWY_CL	Runway Centerline (Geometry Type: Line) [Source: AC150/5340-1]
RWY_HOLD	Runway holding position markings on Runways (Geometry Type: Polygon) [Source: AC 150/5340-1]
RWY_ID	Runway Designation Marking (Geometry Type: Polygon) [Source: AC 150/5340-1]
RWY_SHD	Runway shoulder markings (Geometry Type: Line) [Source: AC 150/5340-1]
RWY_THRSH	Runway Threshold Marking (Geometry Type: Polygon) [Source: AC 150/5340-1]
SIDE_STRP	Runway Side Stripe Marking (Geometry Type: Line) [Source: AC 150/5340-1]
SOLID	Solid pattern obstruction marking [Source AC 70/7640-1]
TDZ_MARK	Runway Touchdown Zone Marking (Geometry Type: Polygon) [Source: AC 150/5340-1]

Value	Description
TEMP_CLOSED	Markings for temporarily closed runways and taxiways (Geometry Type: Line) [Source: AC 150/5340-1]
THRSH_BAR	Runway Threshold Bar (Geometry Type: Polygon) [Source: AC 150/5340-1]
TIEDOWN	Aircraft tiedown
TWY_CL	Taxiway Centerline (Geometry Type: Line) [Source: AC 150/5340-1]
TWY_EDGE	Taxiway edge marking (Geometry Type: Line) [Source: AC 150/5340-1]
TWY_HOLD	Runway hold position markings on taxiways (Geometry Type: Polygon) [Source: AC 150/5340-1]
TWY_SHD	Taxiway shoulder marking (Geometry Type: Line) [Source: AC 150/5340-1]
VEHICLE	Vehicle roadway markings (Geometry Type: Line) [Source: AC 150/5340-1]

5.15.29.CodeMonumentType

Value	Description
1ST_ORDER_CLASS_I	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
1ST_ORDER_CLASS_II	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
2ND_ORDER_CLASS_I	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
2ND_ORDER_CLASS_II	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
3RD_ORDER_NO_TABLET	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
3RD_ORDER_WITH_TABLET	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [NGS]
A_Order	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [FGCS]
B_Order	Meets the standards and specifications for geodetic control network accuracy according to the Federal Geodetic Control Subcommittee [FGCS]
BM	Benchmark is a location whose elevation and horizontal position has been surveyed as accurately as possible. Benchmarks are designed for use as reference points, and are usually marked by small brass plates

Value	Description
FOUND_CLOSING_CORNER	A found corner is a corner whose original or restored monument or mark is recovered, or whose position is definitely established by one or more witness corners or monuments
FOUND_SECTION_CORNER	A found corner is a corner whose original or restored monument or mark is recovered, or whose position is definitely established by one or more witness corners or monuments
MEANDER_CORNER	A corner established where a township line, section line, or other survey intersects the bank of a navigable stream or other meanderable body of water [USGS, 1996, Part 5: Public Land Survey System]
SPOT	A point with a measured vertical position of less than third order accuracy, measured relative to a reference datum [USGS, 2001, Part 7: Hypsography]
UNMONUMENTED	Indicates that no permanent marker has been placed
WEAK_CORNER	Corners established by the USDA Forest Service that have been found but their location has not been tied to their true ground position [USGS, 2003]
WITNESS_CORNER	A monumented station on a line of the survey that is used to perpetuate an important location more or less remote from and without special relation to any regular corner [USGS, 1996, Part 5: Public Land Survey System]

5.15.30.CodeNavaidEquipmentType

Value	Description
ARSR	Air Route Surveillance Radar
ASR	Airport Surveillance Radar
DF	Direction Finding Equipment
DME ¹	Distance Measuring Equipment
FM	Fan Marker
FMH	Fan Marker located with a radio beacon
GS CE	Glide Slope Capture Effect
GS EF	Glide Slope End Fire
GS NR	Glide Slope Null Reference
GS SB	Glide Slope Side Band
LOC	Localizer
MLSAZ	Microwave Landing System Azimuth Antenna
MLSDME	Microwave Landing System DME
MLSEL	Microwave Landing System Elevation Antenna
MSBLS-AZ	Microwave Scan Beam Landing System Azimuth
MSBLS-DME	Microwave Scan Beam Landing System Distance Measuring Equipment
MSBLS-EL	Microwave Scan Beam Landing System Elevation
MTI	Moving Target Indicator Reflector
NDB/C	Nondirectional Radio Beacon -- Compass Locator
NDB/H	Nondirectional Radio Beacon -- High Frequency
NDB/M	Nondirectional Radio Beacons/Medium HF

Value	Description
NDB/U	Nondirectional Radio Beacons/Ultra HF
PAR	Precision Approach Radar
SDF	Simplified Direction Finding Equipment
SECRA	Secondary Radar Antenna
TACAN	Tactical Air Navigation
TDR	Touchdown Reflector
TLS-APGS	Transponder Landing System Approach Glideslope
TLS-LOC	Transponder Landing System – Localizer
VISUAL	Used to identify the navaid as a visual system
VOR ¹	VHF Omnidirectional Range
VORTAC	VOR and collocated TACAN
VOT	VOR Test Facility
VOR/DME ¹	VHF Omnidirectional Range collocated with Distance Measuring Equipment

¹ For information about collocating the DME and VOR, see paragraph 2.6.10.3.2.

5.15.31.CodeNavaidSystemType

Value	Description
ILS	Instrument Landing System
MLS	Microwave Landing System
MSBLS	Microwave Scan Beam Landing System
TLS	Transponder Landing System
VOR/DME ¹	VHF Omnidirectional Range collocated with Distance Measuring Equipment

¹ For information about collocating the DME and VOR, see paragraph 2.6.10.3.2.

5.15.32.CodeObstacleSource

Value	Description
AD	Airport Design and Planning
AF	FAA Tech Ops Field Survey
AO	Airports Field Office
DD	Digital Terrain Elevation Data
DI	U.S. Department of Interior Maps
DM	USGS Digital Elevation Model
EO	Estimated by Airport Owner
F77	Part 77 Analysis
FI	Flight Inspection
NV	Non-Vertically Guided Airport Airspace Analysis
OF	Digital Obstacle File (FAA)
OR	Other Source not named
RS	Remote Sensed
SE	Spot Elevations
SR	Shuttle Radar Terrain Model
ST	State Coded
SV	Field Survey
TE	TERPS Analysis
VG	Vertically Guided Airport Airspace Analysis

Value	Description
WW	Worldwide DoD

5.15.33.CodeObstacleType

Value	Description
AERIAL CABLEWAY	
AERIAL CABLEWAY PYLON	
AGRICULTURE EQUIPMENT	Generic for any agricultural equipment
AIRCRAFT	Generic for a parked or moving aircraft
AMUSEMENT PARK STRUCTURE	
ANTENNA	
AQUEDUCT	
ARCH	
ATHLETIC FIELD	Generic for any type of athletic field or stadium
BILLBOARD	
BLAST FURNACE	
BLEACHERS	
BRIDGE SUPERSTRUCTURE	Generic for larger bridges such as cable stayed bridges etc.
BRIDGE TOWER	
BRIDGE/OVERPASS/VIADUCT	Generic for any type of bridge
BUILDING	Generic for any type of building
BUSH	Generic for bushes and other low growing vegetation
CABLE CAR/RAILWAY	
CATALYTIC CRACKER	An oil refinery unit in which the cracking of petroleum takes place in the presence of a catalyst
CATENARY	The curve formed by a perfectly flexible, uniformly dense, and inextensible cable suspended from its endpoints.
CHIMMNEY/SMOKESTACK	
CHURCH	Generic for houses of worship
COMMUNICATION BUILDING	
COMMUNICATION TOWER	
CONTROL TOWER	
CONVEYOR	
COOLING TOWER	A large tower or similar structure typically attached to a power plant through which water is circulated to lower its temperature by partial evaporation
CRANE	
DAM	
DEBRIS/RUINS	
DIRT PILE	
DOME	
DREDGE/POWERSHOVEL /DRAG	
ELEVATOR	
FLAGPOLE	
FLARE PIPE	
FORTIFICATION OR FORT	
GRAIN BIN/SILO	

Value	Description
GRAIN ELEVATOR	
HOPPER	
HORIZONTAL POINT	Point of known horizontal position
INTERSTATE	Interstate highways with 17 foot vehicle allowance added to the features elevation
LAUNCHPAD	
LIGHT RAILWAY	Generic for people mover systems serving airports
LIGHT SUPPORT STRUCTURE	
LIGHT VESSEL/LIGHTSHIP	
LIGHTHOUSE	
MONUMENT	Generic for historical or cultural monuments
NATURAL HIGH POINT	Generic for high terrain features
NAVAID	Used when defined as an obstacle
NUCLEAR REACTOR	
OFF-SHORE PLATFORM	
PARKING LOT	
PLANT	Generic for manufacturing facilities
POLE	Generic for utility or light poles providing local service
POWER PLANT	
POWER TRANSMISSION LINE	Larger Tower high power Utility lines
POWER TRANSMISSION PYLON	Larger tower high power utility structures
PRIMARY ROAD	Non-Interstate roads with 15 foot vehicle allowance added to the features elevation
PROCESING/TREATMENT PLANT	
RAILROAD	Railroad track with 23 foot vehicle allowance added to the features elevation.
REFINERY	
RIG/SUPERSTRUCTURE	
ROAD SIGN	Interstate highway overhead signs
SCRUB	
SECONDARY ROAD	Local city, county state roads with 10 foot vehicle allowance added to the features elevation
SHIP	Ship underway
SHIP STORAGE	Ship manufacturing or storage facilities
SIGN	Generic for any type of sign other than interstate or street signs
SKI JUMP	
SKI LIFT	
SKI PYLON	
SKYSCRAPER	
SPIRE	
STACK	
STADIUM	
STEEPLE	
STORAGE DEPOT	
STREET SIGN	Signs used to control traffic or provide direction information other than interstate signs

Value	Description
SUBSTATION/TRANSFORMER	
TANK	Generic for other types of tanks
TELEPHONE LINE	
TELEPHONE PYLON/POLE	
TETHERED BALLOON	
TOWER (NON-COMMUNICATON TOWERS)	
TRAFFIC LIGHT/SIGNAL	
TRAMWAY	
TREE	Generic for a single or small group of trees
TREE OUTLINE	Dense area of trees
UTILITY LINE	Generic for local utility service
VEGETATION	
VEHICLE	Generic for any type of vehicle
VERTICAL POINT	Point of known elevation
VERTICAL STRUCTURE	Generic for items not classified otherwise in this list
WALL	
WATER TOWER	Generic for water towers
WIND MOTOR	
WINDMILL	Single windmill
WINDMILL FARMS	Multiple Windmills located close together

5.15.34.CodeObstructionAreaType

Value	Description
AG EQUIP	Agricultural equipment
BUILDING	
GROUND	
MOBILE CRANE	
OTHER	
TREE	
URBAN	
VESSEL	

5.15.35.CodeOffsetDirection

Value	Description
CL	On centerline
L	Offset to the left
R	Offset to the right

5.15.36.CodeOisSurfaceCondition

Value	Description
PRIMARY	Identifies an obstructing area solely within a single surface.
SUPPLEMENTARY	Used to identify when an obstructing area covers more than a single OIS.

5.15.37.CodeOisSurfaceType

Value	Description
AAAA	Approach Surfaces
AAAC	Conical Surface
AAAH	Horizontal Surface
AAAP	Primary Surfaces
AAAT	Transitional Surfaces
AAAV	Vertical Guidance Protection Surface
APRC77	14 CFR Part 77 Approach Surfaces
CONL77	14 CFR Part 77 Conical Surface
DEPT	Departure Analysis
HORZ 77	14 CFR Part 77 Horizontal Surface
OEIA	One Engine Inoperative Analysis
PRIM77	14 CFR Part 77 Primary Surface
TERP	TERPS Surfaces
TRNS77	14 CFR Part 77 Transitional Surfaces

5.15.38.CodeOisZoneType

Value	Description
APPROACH	
CONICAL	
HORIZONTAL	
PRIMARY	
TRANSITION	

5.15.39.CodeOperationsType

Value	Description
CIVIL	Civil operations only
JOINT	Joint military and civil operations
MIL	Military operations only

5.15.40.CodeOwner

Value	Description
A	Air Force
B	Public
C	Coast Guard
E	FAA F&E Projects
F	FAA (Other Than F&E)
H	International Public
I	International
J	International Private
K	International Military
L	International (U.S. Aid Funds)
N	Navy
O	Other (Specify In Metadata)
P	Private
R	Army
S	State
X	Special

5.15.41.CodePointType

Value	Description
AIRPORT_ELEVATION	Indicates the point of highest elevation on the landing surface of the airport.
ARP	Point identified is computed as the Airport reference point for the airport
ASOS	Location of the Automated Surface Observing System
AWOS	Location of the Aviation Weather Observing System
CENTERLINE_POINT	A point collected along the runway centerline whose location is variable based on collection method etc. Typically this point is used for runway profile points.
DISPLACED_THRESHOLD	Point provides the location of the displaced threshold for a runway
HELIPAD_REFERENCE_POINT	The point defined as the HelipadReferencePoint
IMAGERY	Imagery Control Point
OTHER	
PACS	Point referenced is the airport's Primary Airport Control Station
RUNWAY_CONTROL_POINT	Point provides the location and elevation of a specific point on the runway such as the point abeam an offset navaid or the intersection point of two runways defined in this standard as required information.
SACS	Point referenced is the airport's Secondary Airport Control Station
SAWS	Location of the Stand Alone Weather System
SEGMENTED_CIRCLE	Location of the airport segmented circle
SPOT_ELEVATION	Spot Elevation Point
STOPWAY_END	Point provides the end point for the stopway
TDZE	Touchdown Zone Elevation (TDZE) - Indicates the highest point along the runway centerline within the first 3000 feet from the threshold.
TEMPORARY_SURVEY_MARK	Temporary Survey Mark
VERTICAL_OBJECT	Point reference is a VerticalPointObject not classified by another feature but of possible significance
WIND_CONE	Location of the wind cone

5.15.42.CodeProjectStatus

Value	Description
IN_PROGRESS	In progress
PLAN_ON_FILE	Indicates a project that is part of a long term (11 + years) plan
PLANNED	Indicates a project that is a part of a short term (0 - 5 year) plan
PROPOSED	Indicates a project that is part of a midterm (6 - 10 year) plan

5.15.43.CodeRecoveredCondition

Value	Description
Disturbed but not missing	Surface mark destroyed (do not classify a mark as destroyed unless the actual disk is found and returned to the setting agency).
Good	Mark recovered in good condition
Other	

Value	Description
Poor	Mark recovered in poor condition and should be considered for replacement
Set now (for a first time description)	To identify a condition not available in the list.
Surface mark destroyed	Underground mark destroyed (do not classify a mark as destroyed unless the actual disk is found and returned to the setting agency).
Underground mark destroyed	Newly established mark

5.15.44.CodeRouteType

Value	Description
ALLEY	Hard-surface or loose-surface narrow street or passageway primarily found between or behind buildings
CITY	City or subdivision streets
COUNTY	Hard-surface roads not included in a higher class and improved, loose-surface roads passable in all kinds of weather. These roads are adjuncts to the primary and secondary highway systems. These roads are under the jurisdiction and maintained by county authorities
FIFTHCLASS	Fifth Class Unimproved roads passable only with 4-wheel-drive vehicles [USGS, 2001, Part 3: Transportation]
FIRSTCLASS	
FOURTHCLASS	Unimproved roads which are generally passable only in fair weather and used mostly for local traffic. Also included are driveways, regardless of construction [USGS, 2001, Part 3: Transportation]
INTERSTATE	First Class - Hard-surface highways including Interstate and U.S. numbered highways (including alternates), primary State routes, and all controlled access highways [USGS, 2001, Part 3: Transportation]
JEEPTRAIL	Unimproved roads passable only with 4-wheel-drive vehicles
LOCAL	Local jurisdiction roads
NATIONAL	First Class - Hard-surface highways including Interstate and U.S. numbered highways (including alternates), primary State routes, and all controlled access highways [USGS, 2001, Part 3: Transportation]. E.g. U.S. 66
OTHER	Other class of road
SECONDCLASS	Second Class Hard-surface highways including secondary State routes, primary county routes, and other highways that connect principal cities and towns, and link these places with primary highway system [USGS, 2001, Part 3: Transportation]
STATE	Hard-surface State routes under the control and jurisdiction of State authorities
THIRDCLASS	Hard-surface roads not included in a higher class and improved, loose-surface roads passable in all kinds of weather. These roads are adjuncts to the primary and secondary highway systems. Also included are important private roads such as main logging or industrial roads which serve as connecting links to the regular road network [USGS, 2001, Part 3: Transportation]
TRAIL	Unimproved roads passable only with 4-wheel-drive vehicles, snowmobiles, motocross bikes, and so forth

5.15.45.CodeRunwayProtectionAreaType

Value	Description
CWY	Clearway
ILS	ILS protection area. Protects ILS signal distortion by forbidding large objects in the area.
LIGHT	Light Plane Surface
OTHER	Other
SNOW	Area protected from snow accumulation
STOPWAY	A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.
VGSI	Visual Glide Slope Indicator (VGSI) protection area. Protects VGSI signal coverage by forbidding objects in the area.

5.15.46.CodeSamplePointLocation

Value	Description
AS	Air sample
BH	Borehole
BIO	Biological sample
GWS	Ground water sample
OTHER	Other
SEDS	Sediment sample
SOIL	Soil sample
SOLM	Solid material sample
SURF	Surface water sample
WAS	Waste water sample
WL	Well

5.15.47.CodeSegmentType

Value	Description
BEGIN	Beginning section of the segment
CONNECTING	Intermediate segments connecting beginning and ending, beginning and intersection, or intersection and end.
END	Ending section of the segment
INTERSECTION	Defined intersection of multiple segments

5.15.48.CodeShorelineType

Value	Description
APPARENT	Apparent edge of vegetation. Representation of the vegetative border is considered approximate because this line cannot be accurately identified on the ground, due to intricate growth patterns and change over time
INDEFINITE	Conditions prevent the feature from being confidently positioned. Horizontal data are confidently positioned within 0.02", at map scale, of the true ground position. Vertical data are confidently positioned within one-half contour interval of true ground position
MEAN_HIGH_LEVEL	The average limit of dry land during periods of highest water level (for example, high tide)
MEAN_LOW_LEVEL	The average limit of dry land during periods of lowest water level (for example, low tide)

Value	Description
MEAN_SEA_LEVEL	The arithmetic mean of hourly heights observed over some specified time

5.15.49.CodeShoulderType

Value	Description
O	Other airfield pavement with a shoulder
R	Runway
T	Taxiway

5.15.50.CodeSignTypeCode

Value	Description
CARGO	Inbound Destination Sign - areas set aside for cargo handling
FBO	Inbound Destination Sign - fixed base operator
FUEL	Inbound Destination Sign - areas where aircraft are fueled or serviced
HOLD_INSTRUMENT_LANDING_SYSTEM	Holding Position Sign for ILS Critical Areas
HOLD_RUNWAY_APPROACH	Holding Position Sign for Runway Approach Areas
HOLD_RUNWAY_INTERSECTION	Holding Position Sign for Runway/Runway Intersections
INFO	Signs installed on the airside of an airport, other than taxiway guidance signs or runway distance remaining signs.
MIL	Inbound Destination Sign - areas set aside for military aircraft
NO_ENTRY	No Entry Sign
OUTBOUND_DESTINATION	Outbound Destination Sign
PAX	Inbound Destination Sign - areas set aside for passenger handling
ROAD_STOP	Stop sign in areas where vehicle roadways intersect runways or taxiways
ROAD_YIELD	Yield sign in areas where vehicle roadways intersect runways or taxiways
RSA_RUNWAY_APPROACH	Runway Safety Area/OFZ and Runway Approach Boundary Sign
RUNWAY_DISTANCE_REMAINING	Sign that designates the remaining runway distance to pilots during takeoff and landing operations
RUNWAY_EXIT	Runway Exit Sign
RUNWAY_LOCATION	Runway Location Sign
TAXIWAY_DIRECTION	Taxiway Direction Sign
TAXIWAY_END	Taxiway Ending Marker
TAXIWAY_LOCATION	Taxiway Location Sign
TERMINAL	Inbound Destination Sign - gate positions at which aircraft are loaded and unloaded

5.15.51.CodeStatus

Value	Description
ABANDONED	Abandoned
ACTIVE	Active surface
AIRSPACED	A favorable airspace determination has been issued
AS_BUILT	
BROKEN	Broken or rough surface
CLOSED	Closed surface
CONDEMNED	
DEMOLISHED	
ENV_CLEARED	All required environmental actions and documentation described in FAAO 5050.4 "National Environmental Policy Act (NEPA) have been satisfied
FAILED_AID	Failure or irregular operation of visual aides
INACTIVE	
LIMITED	Limited operations]
LONG_TERM	Indicates the feature is part of a long term (11 + years) plan
MEDIUM_TERM	Indicates the feature is part of a midterm (6 - 10 year) plan
NON_OPERATIONAL	Non-operational
OCCUPIED	
OPERATIONAL	Operational (fully)
OTHER	
PARKED	Parked or disabled aircraft
PERMANENT	
PORTABLE	
RELEASED	Used to track land released by the airport
S_POWER	Secondary power supply in operation
SEMI_PERMANENT	
SHORT_TERM	Indicates the feature is part of a short term (0 - 5 year) plan
TBD	To be determined
TEMPORARY	
TERMINATED	Terminated no longer used
UNDER_CONSTRUCTION	Planned or under construction
UNKNOWN	
UNOCCUPIED	
WORK_IN_PROGRESS	Construction or work in progress

5.15.52.CodeStructureType

Value	Description
APARTMENT	Apartment building
APM_STATION	Automated People Mover station
APM_TRACK	Automated People Mover tracks
ARENA	Sports Arena or facility
ARFF_STATION	Aircraft Rescue and Firefighting station
ATC_FACILITY	Combined or Single (other than the airport control tower) Air Traffic Control Facility
ATC_TOWER	Air Traffic Control Tower
BANK	Bank
BARN	barn

Value	Description
CAPITOL	Capitol
CHURCH	church/temple
CITY HALL	City Hall
COMMUNITY CENTER	Community Center
CONCERT HALL	Concert Hall
CONDO	condominium
COURT HOUSE	Court House
DRY STORAGE DOCK	Dry Storage Dock
DUPLEX	house, duplex
DWELLING	dwelling
EARTHWORKS	Earthworks
FBO	Fixed Base operator
GARAGE	A structure used for the maintenance, storage, and display of motor vehicles
GRAIN ELEVATOR	Grain Elevator
HANGAR	A structure used for the maintenance, storage, and display of aircraft
HIGHRISE	A multi-story structure with at least 12 floors or 35 meters (115 feet) in height
HOSPITAL	Hospital
HOUSE	house, single family
JAIL OR PRISON	Jail or Prison
MEDICAL CENTER	Medical Center
MEMORIAL	Memorial
MOBILE HOME	Mobile home or trailer
MUSEUM	Museum.
OFFICE	office building
OFFSHORE PLATFORM	Offshore Platform
OTHER	Other
PARKING GARAGE	Parking garage or facility
POLICE	Police Station
POST OFFICE	Post Office
POWER PLANT	A facility used in the production and distribution of electrical power
PUBLIC TRANSPORTATION	Public transportation facility (buses, taxi, etc.)
RADIO FACILITY	Radio Facility
RAILROAD STATION	Railroad Station
RAIN SHED	Rain Shed
RENTAL FACILITY	Rental Car facility
SCHOOL	Any building or structure whose primary purpose is education
SECURITY	Security Office
SKYSCRAPER	Office or housing where the building clearly stands out above its surrounding built environment and significantly changes the overall skyline of that particular city
SNOW SHED	A structure used for the storage, maintenance of Snow removal equipment
STORAGE FACILITY	A structure used for any type of storage

Value	Description
TBD	to be determined
TERMINAL	Airport Terminal building
THEATER	Theater (any type)
TOWER	Tower
TOWN HALL	Town Hall
TOWNHOUSE	townhouse
WATER TANK	Water Tank

5.15.53.CodeSurfaceCondition

Value	Description
FAIR	Fair condition
GOOD	Good condition
POOR	Poor condition
UNSAFE	Surface is deemed unsafe for operations
OTHER	

5.15.54.CodeSurfaceMaterial

Value	Description
AG	Asphalt grooved
Ags	Asphalt and turf
ANG	Asphalt ungrooved
BE	Bare earth
CA	Concrete and asphalt
CG	Concrete grooved
CGS	Concrete and turf
CNG	Concrete ungrooved
DS	Desert/Sand
DT	Dirt
EMAS	Engineered Material Arresting System
FW	Fresh Water
GR	Gravel
GS	Turf
SI	Snow/Ice
SW	Salt Water
W	Water

5.15.55.CodeSurfaceType

Value	Description
P	Specially prepared hard surface—Paved
S	Specially prepared hard surface—Unpaved
U	Not a specially prepared hard surface

5.15.56.CodeTaxiwayType

Value	Description
AIR TAXIWAY	Air taxiway
AIR TLANE	Air taxilane
APRON	Apron taxiway
BYPASS	Bypass holding bay

Value	Description
CROSS_OVER	Crossover taxiway
EAT	End Around Taxiway
ENTER_EXIT TAXIWAY	Entrance and Exit taxiway
EXIT	Exit/turnoff taxiway
FASTEXIT	Rapid exit/turnoff taxiway
GATE_TLANE	Gate/stand taxilane
GND	Ground taxiway
HOLDING	Holding bay
INLINE	Inline taxiway
OTHER	Those not listed here
PARALLEL	Parallel taxiway
STUB	Stub taxiway
TLANE	Taxilane
TURN_AROUND	Turn around taxiway

5.15.57.CodeThresholdType

Value	Description
Displaced	An indication that the landing threshold is located at a point other than the runway end
Normal	An indication that the landing threshold corresponds to the end of the runway

5.15.58.CodeUseCode

Value	Description
C	Compass Locator
H	High Altitude for VOR/VORTAC/TACAN; All Altitudes for NDB at 50–90 watts
HH	All Altitudes for NDB; 2000 watts or more
L	Low Altitude
MH	All Altitudes for NDB; Under 50 watts
T	Terminal

5.15.59.CodeUtilityType

Value	Description
COMMUNICATION_SYSTEM	Telephone, telegraph, cable, video and voice transmission lines
COMPRESSED_AIR_SYSTEM	The components of a compressed air system.
CONTROL_MONITORING_SYSTEM	The components of an electronic monitoring and control system (EMCS) including cables, devices, etc.
ELECTRICAL_EXT_LIGHT	The components of an electrical exterior lighting system including cables, switches, devices, transformers, etc. Does not include airfield, NAVAID or approach lighting.
ELECTRICAL_SYSTEM	The components of an electrical distribution system including cables, switches, devices, motors, transformers, etc.
FUEL_SYSTEM	The components of a fuel distribution system consisting of pipes, fittings, fixtures, pumps, tanks, etc.

Value	Description
GENERAL_UTILITY	The components of utility system which are universal in use and purpose and do not belong to a specific utility.
HEAT_COOL_SYSTEM	The components of a heating and cooling distribution system consisting of pipes, fittings, fixtures, etc.
INDUSTRIAL_SYSTEM	The components of an industrial waste collection system including pipes, fittings, fixtures, tanks, lagoons, etc.
NATURAL_GAS_SYSTEM	The components of a natural gas distribution system consisting of pipes, fittings, fixtures, etc.
NUCLEAR_REACTOR	The components of a nuclear system such as nuclear fuel, Nuclear research, nuclear waste, and nuclear weapons.
POWER_SYSTEM	Power transmission lines
SALTWATER_SYSTEM	The components of a salt water collection system.
STORM_SYSTEM	The components of a storm drainage collection system including pipes, fittings, fixtures, etc.
TRANSMISSION_LINE	Objects related to the long distance transmission of gas, oil, or hazardous liquid.
WASTEWATER_SYSTEM	The components of a wastewater collection system including pipes, fittings, fixtures, treatment plants, collection locations, etc.
WATER_SYSTEM	The components of a water system including pipes, fittings, fixtures, treatment plants, etc.

5.15.60.CodeVerticalStructureMaterial

Value	Description
COMPOSITION	Composition
CONCRETE	Concrete
METAL	Metal
ROCK	Rock
STONE_BRICK	Stone/brick
WOOD	Wood

5.15.61.CodeZoneType

Value	Description
5_YEAR	Areas subject to 5 year flooding.
10_YEAR	Areas subject to 10 year flooding.
15_YEAR	Areas subject to 15 year flooding.
25_YEAR	Areas subject to 25 year flooding.
50_YEAR	Areas subject to 50 year flooding.
100_YEAR	Areas subject to 100 year flooding.
500_YEAR	Areas subject to 500 year flooding.
GENERAL	Areas prone to flooding in general.
PROJECTED	Areas expected to be subject to flooding in the future.
OTHER	Other

5.15.62.CodeZoningClass

Value	Description
COMMERCIAL	Areas which are zoned for merchandising, shopping, or other commercial development. (Source SDSFIE)
INDUSTRIAL	Areas which are zoned for factory, manufacturing, or other industrial development. (Source SDSFIE)
QUASI_PUBLIC	Areas which are zoned public although under private ownership or control. (Source SDSFIE)
RESIDENTIAL	Areas which are zoned for housing or residential development. (Source SDSFIE)
OTHER	Other Zoning

Intentionally left blank.