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LONG BEACH
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ENGINEERING DESIGN DIVISION

POLB CADD STANDARDS MANUAL 2.1

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Port of Long Beach

CADD Standards Manual

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1 INTRODUCTION

A. Introduction

The Port of Long Beach (POLB) Computer-Aided Design and Drafting (CADD) Standards Manual outlines the required standards for all CADD projects performed for the Port. This manual provides detailed guidance on software requirements, drawing templates and related resources, project organization, file naming conventions, drafting standards, layer assignments, and printing procedures. CADD deliverables are expected to support downstream GIS integration and long-term data management.

It is intended to serve as a key resource for both POLB design staff and consultants engaged in CADD-related work. This manual is to be used in conjunction with, and is intended to complement, other published POLB documents such as the *Guidelines for Professional Consulting Services* and the *Project Delivery Manual* to ensure consistency and quality in project delivery.

B. Purpose

The purpose of this manual is to establish specific requirements and standards for the development of CADD based files and hard copy prints for all POLB design, construction, and mapping projects. Adherence to this standard ensures that both internal staff and consultants involved will receive and produce graphic and tabular data in a consistent format. This consistency will improve the compatibility of these drawings internally and the efficient exchange of data.

C. Compliance

Compliance with these standards is required by the terms and conditions of each project contract. All groups shall adhere to these standards for all electronic and hard copy deliverables during and at the conclusion of a project. These requirements apply to all POLB personnel, and consultants (including sub-consultants) who provide CADD data and drawings. All submitted CADD files that fail to conform to these standards will be returned for resubmission. The prime consultant is responsible for adherence to these standards and for all CADD deliverables including those deliverables provided by their sub-consultants. All electronic files and hard copies will be checked for compliance with these standards. Any modification of the standards herein shall only be done with the express written permission of the POLB Engineering Design Division.

For bridge and freeway projects, POLB will conform to California Department of Transportation (Caltrans) CADD standards unless otherwise approved by POLB.

Configurations and standards are available directly from Caltrans and will not be provided by POLB.

D. Request for Variance

When a variance from POLB CADD Standards is desired, a request for variance shall be submitted in writing to POLB Engineering Design Division Attn: CADD Standards prior to committing the changes.

E. Procedures for Proposing Changes to This Manual

POLB staff and consultant proposed changes to the CADD Standards Manual shall be submitted to the Engineering Design Division, using the form provided below [CADD Standards Change Request Form](#).

If there is a need to adjust the settings in the standard POLB template, all adjustments must be submitted to the POLB Engineering Design Division for review and approval. When submitting the adjustments for approval, please document what was changed and the reason for the change. If there is a change to a style or additional styles are needed, add a prefix of "NS_" to the name. If approved, the changes may be implemented as part of the next scheduled update.

F. CADD Standards Change Request Form

Requestor:

Date:
Requestor:
Company/Department:
Phone:
Email:

CADD Standards Manual:

Subject:
Section:
Sub-section:
Page:

Justification for Change:

Existing Provisions are:

☐ Incomplete ☐ Inaccurate ☐ Redundant ☐ Conflicting ☐ Obsolete ☐ Other

Or

☐ New provision not covered in the current manual

Detailed Justification:

Description of Change(s):

Send Request to: **Port of Long Beach**
Engineering Design Division Attn: CADD Standards
415 W. Ocean Blvd.
Long Beach, CA 90802

Reviewed by:

Circle decision:

Engineering Design Division: _____

Approved / Disapproved / Need more information

Date: _____

Comments: _____

2 SOFTWARE REQUIREMENTS

A. Introduction

This chapter identifies the software packages and file formats used at POLB in the production and maintenance of project documentation.

B. Compatibility

All electronic files (construction documents, as-builts, specifications, etc.) delivered to POLB must be in the applicable format listed below.

C. Software

Type	Product	Manufacturer	Format
Document Mgmt. Software	ProjectWise Connect Edition	Bentley Systems, Inc.	
CADD Software	Autodesk Civil 3D 2023/2025	Autodesk, Inc.	dwg*
Word Processing	Word 2016 or above	Microsoft, Inc.	doc, docx
Spreadsheet	Excel 2016 or above	Microsoft, Inc.	xls, xlsx
PDF	Adobe Reader 9.x or above Bluebeam Revu 2017 or above	Adobe Systems, Inc. Bluebeam Inc.	pdf

* For future use and record-keeping, the Port of Long Beach (POLB) requires all design submittals—including as-builts, calculations, reports, cost estimates, and any other requested documents—to be provided in DWG and PDF formats for CADD related deliverables. All submittals must also include PDF versions and native file formats as applicable (e.g., DWG, Word, PowerPoint, Excel, or others).

At the close-out phase of the project, as-builts or record drawings must be submitted in DWG (native), PDF, and hardcopy/vellum formats. These will be used for obtaining official POLB signatures and will be formally filed with POLB's Records Center.

See [Deliverables](#) section for more information.

D. Version Use

Consultants and design firms are required to confirm the version to be used with POLB Engineering Design Division prior to beginning project work.

3 COORDINATE SYSTEM

A. Primary Coordinate System

POLB's primary coordinate system is based on California State Plane Coordinate System, NAD83 using the 2007 NGS Adjustment. Detailed information on this coordinate system is provided below. Consultants must ensure the universal identifier is embedded in all drawing properties to facilitate accurate cross-platform data migration.

Coordinate System	Name Description Projection: Longitude of Origin: Latitude of Origin: Standard Parallel 1 Standard Parallel 2 False Easting False Northing	POLB based data NSRS07.CA-VF NSRS 2007, California State Plane, Zone V, US Foot Lambert Conformal Conic 118°00'00" W 33°30'00" N 35°28'00" N 34°02'00" N 6,561,666.667 feet 1,640,416.667 feet
Geodetic Datum Ellipsoid	North American 1983 Name Equatorial Radius Polar Radius Eccentricity	Epoch 2007.0 GRS1980 6,378,137 meters 6,356,752.3141 meters 0.081 819 191 042 83
Units and Format	Latitude and Longitude Northing and Easting Height Source	Degrees-Minutes-Seconds U.S. Feet U.S. Feet State Plane Coordinate System of 1983 Current POLB Standard
Description		
Vertical Datum		National Geodetic Vertical Datum of 1929 MLLW (<i>1924-1932 Epoch</i>)

B. Other Coordinate Systems

The current standard coordinate system used at the Port of Long Beach (POLB) is the California Coordinate System (CCS), NAD 83 2007 Epoch, in U.S. Survey Feet. However, various coordinate systems and epochs have been used historically for Port projects, including GIS90, NAD27, the 1991.35 Epoch, USACE's DMG, project specific coordinates, and others. As a result, legacy files and documents, particularly as-built records or CADD files, may reference these older systems. Designers must carefully account for any differences and ensure alignment with POLB's current coordinate standard. If data is received in a different coordinate system, contact the POLB Design Manager to coordinate with Survey staff, if necessary, before proceeding.

4 DRAWING TEMPLATE FILE

The basic philosophy for the Drawing Template files at the POLB is to define common parameters for Civil 3D settings and styles, text styles, layers, filters, line, and dimension styles. POLB will be using the following Template file in its configuration and setup. POLB Standard template file shall not be altered without prior consent of the POLB Engineering Design Division.

A Civil 3D Drawing Template (DWT) is provided. This template file shall be used on all CADD design files for POLB to ensure compatibility with POLB base maps and design files.

A. Civil 3D Template File – POLB_C3D_Standard.dwt

Since the Civil 3D template includes all the AutoCAD and Civil 3D settings, it is the preferred template to use when creating files for a project.

Drawing Units

Within AutoCAD and Civil 3D, the unit definitions imply a system of measurement by inferring a base unit according to the chart shown below. Engineering and Architectural units imply a base unit of inch, and decimal units imply a base unit of foot. Engineering or Architectural units shall be selected for all projects based on the readout differences shown in the chart below. Civil projects requiring a base unit of foot will use decimal units.

The DWT files are set to support Civil projects with the following settings.

Default Drawing Unit Definitions

Parameter	Default Model Value
Length Type	Decimal
Length Precision	0.00
Angle Type	DD°MM'SS.SS"
Angle Precision	0.00
Insertion Scale	Unitless

5 WORKSPACE AND GENERAL STANDARDS

A. The POLB Workspace

A workspace is a custom Civil 3D environment or configuration. The POLB workspace has been designed to work externally or within the POLB network. The POLB workspace provides styles and tools that will automate the placement of symbols and drawing components.

A deliverable version of the POLB workspace is provided and includes block libraries, font resource files, linetype configuration files, plot styles, and other settings files.

Below is an example of the typical workspace folders included in the zip file available on the POLB website for consultants to download, <https://polb.com/business/business-opportunities#rfp-rfq-resources>.

- POLB Workspace:
 - Blocks
 - Borders
 - File Conversion
 - Linetypes
 - Printing
 - Survey Settings
 - Template
 - Samples

Sample Files

Sample files provided as part of the POLB Workspace are intended to serve as starting-point examples for project setup and development. These files shall be reviewed and modified, as needed, to reflect the specific project scope, discipline requirements, sheet

content, title block information, and applicable POLB standards. Consultants and project teams are responsible for customizing the sample files for each project and verifying that the final content is appropriate for the submitted plan set.

Examples of sample files include:

- POLB_Abbreviations_Sample
- POLB_Legend & Symbols_Sample

B. Folder / File Information

Files will maintain the same name both internally and externally for all Civil 3D files. These names should use the naming conventions identified in the [File Naming Convention \(Model Files and Sheet Files\)](#) section of this document whenever possible.

Internal Civil 3D naming requirements such as design feature names, alignment names, names of typical sections, and names of roadway corridors are left to the discretion of the user; however descriptive intuitive naming is required. If a simplistic naming convention is used, please incorporate a description that adds value to the overall identification of the data for the other users. It is suggested that the naming convention that is used be synchronized with any naming convention contained in the drawing set. For example: an alignment named RR-B1 in the drawing package should have the Civil 3D alignment called RR-B1.

Please refer to the folder structure in the [Folder Structure](#) section of this document for the precise placement of the Civil 3D data files, along with other support files either imported into or exported from Civil 3D.

6 CIVIL 3D OBJECT AND LABEL STYLES

In Civil 3D, object and label styles control the visual appearance and information displayed for different elements in the drawing. Object styles define the display of Civil 3D objects such as surfaces and alignments. Label styles control how the annotation of the object will be displayed. All these styles are managed under the Settings tab in Toolspace.

If any additional styles are needed, please refer to the [Procedures for Proposing Changes to This Manual](#) for more information.

To maximize compatibility between Civil 3D and GIS, any and all intelligent Civil 3D objects should remain 'live' (unexploded) in the final DWG submittal.

A. Points

Point, Label, and Point Table styles define how points and labels are visualized in Civil 3D drawings. These styles use system defaults or custom blocks to stylize the points in the drawing. There are multiple point, label, and table styles in the POLB Template to support points that will be imported into projects.

Description Key Set

The Civil 3D Description Key Set contains several key pieces of information for survey points and linework.

1. The survey field codes
2. Point/Marker Styles associated with each code
3. Label Styles and formats
4. Layer assignments
5. Scale and rotation settings

The **POLB DescKeys** Description Key Set is configured to assign point styles, label styles/format, layers, and automatically set scale and rotation based off the point code used. Each survey code has all of these defined and configured in the Description Key Set. This Description Key Set allows for automatic stylization and labeling when applied.

The Description Key Set should be used in conjunction with the "Survey Division Coding Handbook and Field Collection Guide" for any survey work performed at POLB.

Point Styles

Point styles are used to symbolize the various survey nodes and points in the drawing. For more information refer to the "Survey Division Coding Handbook and Field Collection Guide"

Point Label Styles

Name	Description
POLB Description Only	Style that displays full description only
POLB Description Only (with Field Note)	Style that displays full description and field notes
POLB Elevation and Description	Style that displays full description and elevation
POLB Elevation Only	Style that displays point elevation only

Name	Description
POLB Northing and Easting	Style that displays northing and easting for point
POLB Northing and Easting-Arrow	Style that displays northing and easting for point. Arrow terminator in dragged state.
POLB Point Number Only	Style that displays point number only
POLB Point#-Elevation-Description	Style that displays point number, point elevation, and full description
POLB Point# and Description	Style that displays point number and full description

Point Table Styles

Name	Description
POLB Coordinate Table	Table style with columns for point number, northing, and easting
POLB Latitude and Longitude	Table style with columns for point number, elevation, latitude, longitude, and description
POLB PNEZD format	Table style with columns for point number, northing, easting, elevation, and description

B. Surfaces

A surface is a three-dimensional geometric representation of an area of land, or, in the case of volume surfaces, is a difference or composite between two surface areas. Surfaces are made up of triangles or grids, which are created when Civil 3D connects the points that make up the surface data. Surface, label, and table styles help define how the data is displayed. POLB has provided the following styles for this use.

Surface Styles

Name	Description
_POLB No Display	Turns off all surface entities
POLB Border Only	Only shows Border
POLB Contours 1' and 5' (Design)	Surface contours at 1' and 5' intervals (Design)
POLB Contours 1' and 5' (Existing)	Surface contours at 1' and 5' intervals existing
POLB Contours 2' and 10' (Background)	Surface contours at 2' and 10' intervals (Background)
POLB Contours 2' and 10' (Design)	Surface contours at 2' and 10' intervals (Design)
POLB Contours 5' and 25' (Background)	Surface contours at 5' and 25' intervals (Background)
POLB Contours 5' and 25' (Design)	Surface contours at 5' and 25' intervals (Design)
POLB Editing - Contours Triangles & Points	Contours triangles and points surface style for editing
POLB Elevation Banding (2D)	Elevation banding surface style
POLB Elevation Banding 2' Interval (2D)	Cut and fill banding 2' interval surface style
POLB Elevation Banding 10' Interval (2D)	Cut and fill banding 10' interval surface style
POLB Elevation Banding Cut and Fill 1' Interval (2D)	Cut and fill banding 1' interval surface style
POLB Slope Banding (2D)	Slope banding surface style

Surface Label Styles

Name	Use	Description
POLB Existing Major Labels	Contour	Style for existing major contours
POLB Existing Minor Labels		Style for existing minor contours
POLB Existing User Labels		Style for existing user contours

Name	Use	Description
POLB Proposed Major Labels	Contour	Style for proposed major contours
POLB Proposed Minor Labels		Style for proposed minor contours
POLB Percent	Slope	Style that displays percentage (example: 2.0%)
POLB Rise over Run		Style that displays rise over run (example: 1:2.0)
POLB Run over Rise		Style that displays run over rise (example: 2.0:1)
POLB EL:100.00	Spot Elevation	Style with EL: before value
POLB Elevation Only		Style with elevation value only
_POLB No Display	Watersheds	Style that turns off all watershed label entities
POLB Watershed		Style that shows the ID, type, and area (sf)

Surface Table Styles

Name	Use	Columns
POLB Directions	Direction	Number, minimum direction, maximum direction, and color
POLB Elevations	Elevation	Number, minimum elevations, maximum elevations, 2D area, and color
POLB Slope	Slope	Number, minimum slope, maximum slope, 2D area, and color
POLB Slope Arrow		Number, minimum slope, maximum slope, and color
POLB Contour	Contour	Number, minimum elevation, and maximum elevation
POLB Watershed	Watershed	ID, type, drains into, description, segment display, area display, and area
POLB User Defined Contours	User Defined Contours	Number, description, and elevation

C. Parcels

In Civil 3D, parcels are typically used to represent items like lots in a subdivision. They are basically closed polygons that can be created from existing AutoCAD objects or through layout tools. POLB has provided the following styles to help visualize these objects.

Parcel Styles

Name	Description
POLB Basic	Style used for internal right-of-way use
POLB Open Space	Style for space that is open and landscaped
POLB Property	Primary property boundary style. Use this style to define the boundary of the entire property.
POLB Road	Style for local roads
POLB Single-Family	Single-family detached property style intended for a single-family unit

Parcel Label Styles

Name	Use	Description
POLB Name Area & Perimeter	Area	Style with parcel name, acres, and perimeter in a square border.
POLB Name Square Foot & Acres		Style with parcel name, square foot, and acres
POLB Parcel Name		Style with parcel name only
POLB Parcel Number		Style with parcel number only
POLB (Span) Bearing and Distance with Crows Feet	Line	Style with parcel line number, bearing, distance (ft), direction arrow, and crow's feet. Bearing Only and Distance Only Substyles also provided.
POLB Bearing over Distance		Style with parcel line number, bearing, and distance (ft). Bearing Only and Distance Only Substyles also provided.
POLB Iron Pipe Node Label		Style with parcel line number, iron pipe start and end, and direction arrow
POLB Overall Distance and Bearing		Style with parcel line number, distance (ft), and bearing
POLB Delta over Length and Radius	Curve	Style with parcel curve number, distance, radius, and delta

Parcel Table Styles

Name	Use	Columns
POLB Length & Direction	Line	Line number, length (ft), and direction
POLB Length Radius & Delta	Curve	Curve number, length (ft), radius (ft), delta, chord direction, chord length (ft)
POLB Length & Bearing or Delta & Radius	Segment	Line/curve number, length (ft), bearing/delta, radius (ft)
POLB Area Perimeter Length and Bearing	Area	Parcel number, area (ft), perimeter (ft), segment lengths (ft), and segment bearings

D. Grading

Grading tools and commands in Civil 3D are used to design finished ground surfaces. Users create grading projections by applying grading criteria to a footprint. The grading is grouped into named collections to create your final surface designs and compute volumes.

Grading Styles

Name	Description
POLB Cut Slope Display	Style for cut slopes
POLB Fill Slope Display	Style for fill slopes
POLB Residential Grading Display	Style for residential grading

Grading Criteria Sets

In Civil 3D, grading criteria sets define the rules for how grading objects are created and modified, allowing for consistent and automated grading design. These sets contain specific parameters, like target surfaces, projection types (slope, distance, elevation), and slope/grade values, which dictate how the grading will be applied. The **POLB Basic Set** will be used for this purpose.

E. Alignments

Alignment objects can represent roads, pipe networks or other required baselines. Other Civil 3D objects, such as profiles or corridors, are also dependent on alignments. For these uses, POLB has provided the following styles.

Alignment Styles

Name	Description
POLB Basic	Style that inherits the properties of any layer that is selected
POLB Existing	Style for use with existing features
POLB Intersection Basic	Style for use with intersections features
POLB Layout	Style with different layers for each alignment component

Name	Description
POLB Offsets	Style for use with offset alignments
POLB Proposed	Style for use with proposed features

Alignment Label Sets

Alignment label sets are predefined groups of label types, such as major stations, minor stations, or geometry points, and their associated styles. POLB has provided the following label sets to be used on projects.

Name	Description
POLB _No Labels	Set displays no labels
POLB Major and Minor only	Set includes the major station values and minor ticks
POLB Major Minor and Geometry Points	Set displays major station values, minor ticks, and horizontal geometry points
POLB Major Minor H+V Geometry and Superelevation Points	Set displays major station values, minor ticks, geometry, and superelevation points
POLB Major Minor H+V Geometry Points	Set displays major station values, minor ticks, horizontal, and vertical geometry points
POLB All Labels	Set displays all labels

Alignment Table Styles

Name	Use	Columns
POLB Length Direction Start and End Point	Line	Line number, length, direction, start point, and end point
POLB Curve Data	Curve	Curve number, radius, delta, tangent, length, BC, EC, and PI
POLB Length Radius Delta & Tangent		Curve number, radius, length, delta, and tangent
POLB A Value Radius Length Direction Start and End Point	Spiral	Spiral number, A value, radius, length, start direction, start point, and end point
POLB Radius Length Direction and A Value	Segment	Segment number, radius, length, line/chord direction, and A value

Alignment Design Checks

Alignment Design Checks in Civil 3D verify design parameters meet the criteria for items such as lines, curves, spirals, superelevation, and tangent intersections. POLB has provided two separate ones, **POLB Basic** and **POLB Subdivision** for this purpose.

F. Corridors

Civil 3D corridors are used for modeling design features such as roads, highways, and railways dynamically. A corridor model builds on and needs various Civil 3D objects and data to function, including subassemblies, assemblies, surfaces, feature lines, alignments, and profiles. The POLB template includes the following styles to be used when working with corridors.

Object and Label Styles

Use	Name	Description
Corridors	POLB Corridor	Corridor Objects
Assemblies	POLB Assembly	Assembly Objects
Intersections	POLB Intersection Marker	Intersection Objects
	POLB Basic	Intersection Location Label

G. Quantity Takeoff

In Civil 3D, quantity takeoff (QTO) involves calculating the quantities of materials needed for a project, such as earthworks or structures. This is achieved by comparing existing and proposed surfaces or using sample line groups to calculate volumes, areas, or counts of materials.

POLB has included three different quantity takeoff criteria based on what needs to be calculated. **POLB Cut and Fill** is for cut and fill calculations, **POLB Earthworks** is for earthwork calculations, and **POLB Material List** is for materials such as pavement.

To visualize these quantities, POLB has provided the **POLB Cut and Fill** table style for total volume and **POLB Area and Volume** table style for materials.

7 CIVIL 3D PROFILES AND SECTIONS

A. Profiles

Profiles show surface elevations along a horizontal alignment. These profiles can then be projected into Profile Views. Profile views are used to visualize surface profiles or design elements along a horizontal alignment. POLB has provided numerous styles to help with the display of this information.

Profile Styles

Name	Description
POLB Design Profile	Style for use with design (proposed) elements and alignments
POLB Existing Ground Profile	Style for use with existing ground surfaces
POLB Intersection Basic	Style for use with intersection features
POLB Sample Profile [Left]	Style for use with left sample features
POLB Sample Profile [Right]	Style for use with right sample features

Profile Label Sets

Like alignment label sets, profile label sets are predefined groups of label types, such as lines, grade breaks, sag curves, crest curves, and their associated styles. POLB has provided the following label sets for use.

Name	Description
_POLB No Labels	Set displays no labels
POLB Complete Label Set	Set displays labels for lines, grade breaks, sag curves, and crest curves.

Profile Design Checks

Similar to Alignment Design Checks, Profile Design Checks verify profiles. POLB has provided two separate ones, **POLB Basic** and **POLB Subdivision** for use.

Profile View Styles

Name	Description
POLB Default Profile View	Style with elevations on both the right and left vertical axes
POLB First View	Style with elevations on right axis only
POLB Intermediate View	Style with elevations on left and right
POLB Last View	Style with elevations on the right side only
POLB Profile View to Edit Pressure Pipe	Style with elevations on both the right and left vertical axes
POLB Profile View with Curve Data	Style with elevations on both the right and left vertical axes
POLB Stacked View (Bottom)	Style with elevations on both the right and left vertical axes for use in stacked profiles, no axis titles
POLB Stacked View (Middle)	Style with elevations on both the right and left vertical axes
POLB Stacked View (Top)	Style with elevations on both the right and left vertical axes for use in stacked profiles, no axis titles

Profile View Label Styles

Name	Use	Description
POLB Station and Elevation	Station Elevation	Style that displays station and elevation
POLB Depth	Depth Elevation	Style that displays depth between two points (ft)
POLB Grade %		Style that displays grade between two points (%)
POLB Slope 1 in X		Style that displays slope between two points
POLB Basic	Projection	Style that displays station and source elevation
POLB Projection Dimension Above		Style with station and source elevation text above the projection object
POLB Projection Dimension Below		Style with station and source elevation text below the projection object

Name	Use	Description
POLB Name Elevation and Station	Crossing	Style that displays the name and elevation of the crossing, plus the station of the alignment being crossed

Profile View Band Sets

Name	Description
_POLB No Bands	Set has no bands displayed
POLB Cut and Fill	Set that displays cut band on top of profile and fill band on bottom of profile
POLB EG-FG Elevations and Stations	Set that displays existing elevations, proposed elevations, and stations
POLB Full Band Set	Set that displays data with right and left sample offsets
POLB Pipe Data	Set that displays pipe data in 4 different bands
POLB Plan Profile Sheets - Elevations and Stations	Set that displays existing and proposed elevations and stations, with an empty band at the bottom to help place view centered.
POLB Profile Data with Geometry and Superelevation	Set that displays profile data, horizontal, vertical geometry, and superelevation bands. All bands are located on the top of the profile except for the profile data.
POLB Section Sample Lines	Set that displays location of the sample lines
POLB Standard Band Set	Set that displays existing and proposed elevations
POLB Stations Only	Set that displays only the stations

B. Sections

In Civil 3D, section data is defined and displayed using sample lines, sections, and section views. All these items are then managed through a sample line group. Sections are used to provide a view of the terrain across a linear feature at an angle. Typically, sections are cut perpendicular to horizontal alignments at a specified station interval and length. POLB has provided the following styles to help visualize these objects.

Sample Line Style

POLB has provided **POLB Road Sample Line** to be used when creating sample lines.

Sample Line Label Styles

Name	Description
POLB Section Marks #-#	Style that displays section name inside of section marks at each end of sample line
POLB Section Name	Style that displays section name
POLB Section Name and Marks	Style that displays section name and arrows at each end of sample line
POLB Section Station	Style that displays station of sample line

Section Styles

Name	Description
POLB Corridor Datum	Style for corridor datum
POLB Existing Ground	Style for existing ground
POLB Finished Ground	Style for finished ground

Section Label Sets

Name	Description
POLB _No Labels	Set that displays no labels
POLB Corridor Points	Set containing corridor point codes, offset, and elevation. Point codes that have a label style specified in the section's code set style will be drawn using the corridor points label style in this set.
POLB EG Section Labels	Set for EG sections that displays offset and elevation at grade breaks
POLB FG Section Labels	Set for FG sections that displays % grade for each segment and offset and elevation at grade breaks
POLB Major and Minor Offsets	Set that displays offset and elevation at major and minor offsets

Section View Styles

Name	Description
POLB Road Section	Style that displays items important to road sections
POLB Sections	Style that displays left and right axis annotation

Group Plot Styles and Sheet Styles

If group plotting is required, POLB has provided the group plot style **POLB Basic** for use.

The sheet style **POLB Basic** has also been provided for use if needed.

Section View Label Styles

Name	Use	Description
POLB Offset over Elevation	Offset Elevation	Style that displays offset (ft) and elevation
POLB Grade	Grade	Style that displays grade between two points (%) and direction
POLB Projection Dimension Above	Projection	Style that displays offset and source elevation either above the projection object marker
POLB Projection Dimension Below		Style that displays offset and source elevation either below the projection object marker

Section View Band Sets

Name	Description
POLB_No Bands	Band set that displays no bands
POLB Major Stations Offset and Elevations	Band set that displays EG and FG elevations and offsets at major stations
POLB Offsets Only	Band set that displays offsets
POLB Sections	Band set that displays EG and FG elevations at alignment/stationing and offsets

8 CIVIL 3D PIPE AND PRESSURE NETWORKS

In Civil 3D, pipe networks and pressure networks are used to model utility systems like storm sewers, sanitary sewers, and water distribution systems. Pipe networks are for gravity systems (storm and sanitary sewers), while pressure networks are for systems under pressure, such as water distribution. The following sections outline the POLB styles associated with these items.

A. Pipe Networks (Gravity)

Pipe Network Parts Lists

POLB has provided parts lists for both sanitary sewer and storm sewer. **POLB Sanitary Sewer (Proposed)** will be used for sanitary and **POLB Storm Sewer (Proposed)** for storm.

Pipe Styles

Name	Description
POLB Drainage Centerline Plan-ID Profile (Proposed)	Style that displays a single line in plan and a double line (inner diameter) in profile view
POLB Drainage Crossing Pipe in Profile (Proposed)	Style that displays drainage pipe as crossing in profile view
POLB Sanitary Centerline Plan-ID profile (Proposed)	Style that displays a single line in plan and a double line (inner diameter) in profile view
POLB Sanitary Crossing Pipe in Profile (Proposed)	Style that displays sanitary pipe as crossing in profile view

Pipe Label Styles

Name	Use	Description
POLB Null	Plan Profile	Style that is empty
POLB Plan_Length Description and Slope		Style that displays length, size, material, and slope. For use in plan views.
POLB Plan_Name Only		Style that displays the pipe name. For use in plan views.
POLB Profile_Length Description and Slope		Style that displays length, size, material, and slope. For use in profile views.
POLB Profile_Slope Only w/ Flow Arrow		Style that displays pipe slope and flow arrow. For use in profile views.
POLB Name Only	Crossing Section	Style that displays pipe name only
POLB Name Only	Crossing Profile	Style that displays name only
POLB Name Station and Top-Bottom Elevations		Style that displays name, station, top elevation, and bottom elevation
POLB Null		Style that is empty
POLB Standard		Style that displays description only

Pipe Table Styles

Name	Columns
POLB Basic	Pipe name, size, length, and slope
POLB Name Size Length Slope Material	Pipe name, size, length, slope, and material

Structure Styles

Name	
POLB Catch Basin (Inlet)	POLB Headwall
POLB CatchBasin Manhole (Inlet)	POLB Null
POLB Drainage Manhole	POLB Sanitary Sewer Manhole
POLB Flared End Section	

Structure Label Styles

Name	Description
POLB Plan_Data with Connected Pipes (Sanitary)	Style that displays structure name, station, offset, rim, sump, inverts in/out, pipe diameters, and pipe materials. For use with sanitary pipes in plan view.
POLB Plan_Data with Connected Pipes (Storm)	Style that displays structure name, station, offset, rim, sump, inverts in/out, pipe diameters, and pipe materials. For use with storm pipes in plan view.
POLB Plan_Name Only (Sanitary)	Style that displays structure name only. For use with sanitary pipes in plan view.
POLB Plan_Name Only (Storm)	Style that displays structure name only. For use with storm pipes in plan view.
POLB Profile_Data with Connected Pipes (Storm)	Style that displays structure name, station, rim, and inverts in/out, pipe sizes, and pipe direction. For use with storm pipes in profile view.
POLB Profile_Name Station & Rim (Storm)	Style that displays structure name, station, and rim. For use with storm pipes in profile view.

Structure Table Styles

Name	Columns
POLB Basic	Structure name and details that include rim and sump
POLB Structure with Pipes	Structure name, details (inner diameter), and pipes in/out information

Pipe and Structure Rule Sets

Much like design checks, rule sets check that the pipe and structures are following certain guidelines that are defined in the rule set. For this purpose, POLB has provided **POLB Sanitary Sewer** and **POLB Storm Sewer** for both pipes and structures.

B. Pressure Networks

Pressure Network Parts Lists

POLB has provided **POLB Water (Proposed)** parts list for use with pressure networks.

Pressure Pipe Styles

Name	Description
POLB Water Centerline Plan-ID Profile (Proposed)	Style displays single in plan view and double line (inner diameter (ID) in profile view
POLB Water Crossing Pipe in Profile	Style that displays water pipe as crossing in profile view

Pressure Pipe Label Styles

Name	Use	Description
POLB Plan_Name Only	Plan Profile	Style that displays the pipe name
POLB Nominal Diameter and Material		Style that displays nominal diameter and material
POLB Name Only	Crossing Section	Style that displays pipe name only

Name	Use	Description
POLB Name Only	Crossing Profile	Style that displays name only
POLB Name Station and Top-Bottom Elevations		Style that displays name, station, top elevation, and bottom elevation

Pressure Pipe Table Style

Name	Columns
POLB Name Size Length Material	Pressure pipe name, size, length, and material

Pressure Fitting Styles

Name	
POLB Centerline (Water)	POLB Water Cross
POLB Fitting	POLB Water Plug
POLB Water Bend	POLB Water Reducer
POLB Water Cap	POLB Water TEE

Pressure Fitting Label Styles

Name	Description
POLB Name Only	Style that displays fitting name
POLB Nominal Diameter Bend Angle and Material	Style that displays nominal diameter, angle, and type

Pressure Appurtenance Styles

Name	
POLB Hydrant	POLB Water Butterfly Valve
POLB Standard	POLB Water Check Valve
POLB Water Air Valve	POLB Water Gate Valve

Pressure Appurtenance Label Styles

Name	Description
POLB Name Only	Style that displays fitting name
POLB Nominal Diameter Valve Type	Style that displays nominal diameter and type
POLB Standard	Style that displays name, description, and layer name

9 PROJECT ORGANIZATION

A. Introduction

This chapter outlines the folder structure for each project, the file naming convention to be used for the files within the project, and information on how the CADD files are to be assembled.

Files will maintain the same name both internally and externally for Civil 3D files. These names should use the naming convention defined below whenever possible.

Internal Civil 3D naming requirements such as Design Feature names, horizontal and vertical alignment names, names of typical sections and names of roadway corridors are left to the discretion of the user' however descriptive intuitive naming is required. If a simplistic naming convention is used, please incorporate the description that adds value to the overall identification of the data for other users. It is suggested that the naming convention that is used be synchronized with any naming convention contained in the drawing set. For example: an alignment named RR-B1 in the drawing package should have the Civil 3D horizontal alignment called RR-B1.

B. Folder Structure

The project folder will be named according to the project number and will contain the following subfolders (Using ProjectWise, these will be created automatically from the POLB Project Template):

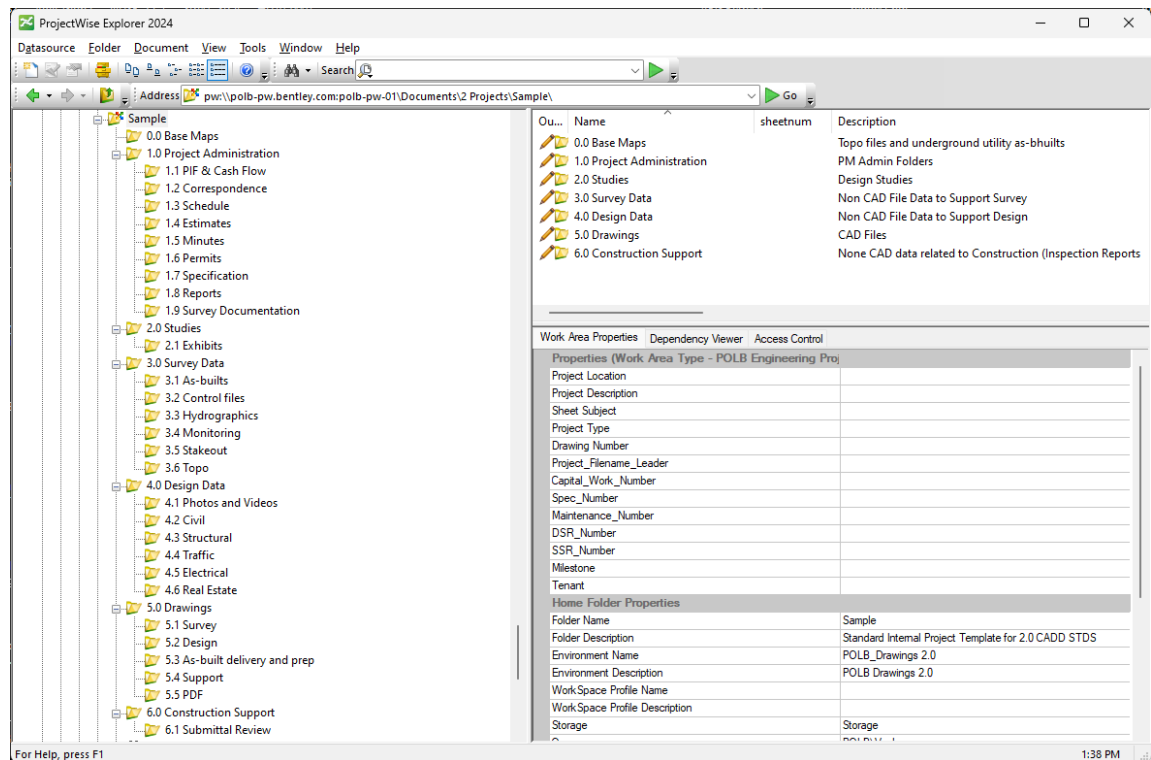
0.0 Base Maps

At the beginning of the project, the base map files must be copied into this folder from the GIS Base Maps. (POLB stores these files in 0 Base Maps folder in ProjectWise).

1.0 Project Administration	The Project Administration folder will contain all documents pertaining to project management including the contract, meeting minutes, agendas, and cost estimates
1.1 PIF & Cash Flow	Project Initiation Form and Project Budgets
1.2 Correspondence	Email, Transmittals, Memos, Faxes, DSR Requests, Notes & Letters
1.3 Schedule	Project Schedules
1.4 Estimates	Cost Estimates
1.5 Minutes	Meeting Minutes
1.6 Permits	Permit related data (Harbor Department, City of Long Beach, etc.)
1.7 Specification	Project Specifications
1.8 Reports	Geotechnical, Design, Project & Status Reports
1.9 Survey Documentation	Survey Requests, Work Authorizations and Transmittals
2.0 Studies	The Studies folder contain Design Studies
2.1 Exhibits	Drawings, Images and PDFs to support an Exhibit
3.0 Survey Data	The Survey folder will include all raw survey data and survey deliverables.
3.1 As-builts	Files related to As-Builts including Utility
3.2 Control files	Files related to Survey Control
3.3 Hydrographics	Files related to Hydrographic Survey
3.4 Monitoring	Files related to Monitoring
3.5 Stakeout	Files related to Stakeout
3.6 Topo	Files related to Topo
4.0 Design Data	The Design Data folder will contain supporting documents, information, and working files used in design such as spreadsheets, calculations, photos, MathCAD files, AutoTURN files, etc. No model or sheet files should be stored in these folders.
4.1 Photos and Videos	Project field pictures and videos
4.2 Civil	Design related files – Tables, calculations, hydraulic calculations

4.3 Structural	Design related files – SAP or other structural analysis software, and Wharf information
4.4 Traffic	Design related files – Tables, AutoTURN, Signal files
4.5 Electrical	Design related files – Calculations, Tables
4.6 Real Estate	Property and Lease related files
5.0 Drawings	The Drawings folder will contain all CADD design files and reference files that are used in the creation and output of project deliverables
5.1 Survey	Survey related CADD files
5.2 Design	Model and sheet files for every milestone of the design
5.3 As-built delivery and prep	For use by-Drafting to prepare as-built drawings
5.4 Support	Other supporting documents that need to be referenced by the project. Examples: Legacy Data, Record Center Data, and Scanned Data.
5.5 PDF	PDF output of design files and plot sets
6.0 Construction Support	The Construction Support folder will contain documents pertaining to construction management, such as RFI's initiated by the Design group.
6.1 Submittal Review	The Design Manager and team can use this folder to store documentation related to reviewing RFI's and Submittals.

Example of a typical project folder structure:



Base Maps

The POLB Utility **Base Maps** generated by the POLB GIS/Mapping Group represent the most current set of as-built plans at POLB. Each Base Map represents one of the various utility types located within POLB, such as the Water Base Map. Within the POLB file organization structure inside of ProjectWise, the Base Maps are copied from the root folder **0 Base Maps** into the project's **0.0 Base Maps** folder when the project is initiated. These Base Maps are then subsequently attached as references into the Model Files to represent the existing conditions.

Consultants can obtain a current copy of the POLB Utility Base Map files by requesting them from the Design Manager.

Model Files

The POLB **Model Files** are CAD files that consist of design geometry drawn at real world size (1:1).

Sheet Files

The POLB **Sheet Files** are used to produce the final construction drawings.

C. File Naming Convention (Model Files and Sheet Files)

There are six defined file name data fields which make up a file name:

- Project Designator (P) – Project Number provided by POLB – 5 numeric Characters - Required
- Facility Code (F) – 1 numeric Character – Required
- Major Discipline Code (M) – 2 Characters – Required
- Minor Discipline Code (N) – 2 Characters - Required
- CADD File Type designator (C) – 1 Character - Required
- Sequence Code (U) – 3 Characters – Required

To help make this clear, we will build the file name based on an example project. The Project Designator (Records Center Drawing Number) will be 01234 and the file will be a water main network design so the facility will be 0. The major code is Water, minor code is a Plan, and the CADD file type is a sheet. The resulting CADD file name would be:

01234-0-WT-PL-S001.dwg

All data fields, except for the CADD File Type (C) and the Sequence Code (U) are separated from adjacent fields by a dash ("-") for clarity. All characters shall be capitalized. The layout is as follows:

P	P	P	P	P	-	F	-	M	M	-	N	N	-	C	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Project Designator, Character 1-5

The Project Designator field provides five (5) characters allocated for the numeric Drawing Number as designated by the POLB Records Center. The project number must fill all the fields and be pre-pended with zeros, but the HD number will not be used. For instance, if the Project Number provided is HD10-1234, then the project number field would look like:

0	1	2	3	4	-	F	-	M	M	-	N	N	-	C	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Facility Code, Character 7

Each facility in the project will have a project specific code. Examples include individual buildings, roads, and bridges. The codes will be numeric such as **1, 2, 3, 4, 5**, etc. If the model file or sheet file spans all facilities, use the facility code of **0**.

0	1	2	3	4	-	0	-	M	M	-	N	N	-	C	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Major Discipline Code, Characters 9 and 10

The major discipline code designates the category of files that the DWG represents. The following table displays the Major Discipline codes per Discipline. The Discipline IDs are only used to order the sheets in a plan set; they are not used in the file name and not all ID's listed will be used in every plan set. Continuing in building our example, we show the Major Discipline as Water.

0	1	2	3	4	-	0	-	W	T	-	N	N	-	C	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Discipline	Discipline ID	Major Discipline Code	Description
G (General)	010	GN	General Plans, Title Sheets, Sheet Indexes, Legends, Abbreviations, Site Plans, Key Maps, Fire Access Plans, Traffic Access Plans, Construction Phasing Plans, Coordinate Control Maps
C (Civil)	100	EC	Erosion Control
C (Civil)	110	BL	Boring Logs / Pot Hole
C (Civil)	120	CO	Contaminated Soil
C (Civil)	130	HZ	Hazmat
C (Civil)	140	DM	Demolition
C (Civil)	150	DR	Dredging/Excavation/Fill/Land Reclamation
C (Civil)	160	SD	Storm Drain

Discipline	Discipline ID	Major Discipline Code	Description
C (Civil)	170	SS	Sanitary Sewer
C (Civil)	180	WT	Water
E (Electrical Site)	190	EL	Electrical
E (Electrical Site)	200	TL	Telecommunication
A (Architectural)	210	AA	Floor Plans, Reflected Ceiling Plans, Finish Plans, Furniture/Equipment Plans, Demolition Plans, Details, Elevations
A (Architectural)	220	AS	Structural Plans, Foundation Plans, Framing Plans, Roof Plans
A (Architectural)	230	AM	Mechanical Plans, HVAC Plans, Heating Plans, Ventilation Plans, Air Conditioning Plans, Ductwork
A (Architectural)	240	AF	Fire Protection Plans, Sprinkler Plans, Fire Suppression Plans
A (Architectural)	250	AP	Plumbing Plans
A (Architectural)	260	AE	Electrical Plans, Power Plans, Lighting Plans, Instrumentation Plans, Panel Schedules, Single Line Diagrams
A (Architectural)	270	AT	Telecommunication Plans, Security Plans, Intercom Plans
C (Civil)	290	UT	For use on smaller projects, when multiple utilities are shown together on the same plan
S (Structural)	300	ST	Bridges, Wharves, and other Miscellaneous Structures
R (Railroad)	330	RR	Railroad
R (Railroad)	340	TM	Train in Motion
R (Railroad)	350	CA	Compressor Air

Discipline	Discipline ID	Major Discipline Code	Description
R (Railroad)	360	RS	Railroad Signalization
C (Civil)	370	RD	Roadway
C (Civil)	380	GP	Grading/Paving
C (Civil)	390	GR	Grading
C (Civil)	400	PV	Paving
C (Civil)	410	SR	Striping
C (Civil)	420	SP	Striping and Signage
C (Civil)	430	FN	Fencing
C (Civil)	440	SF	Striping/Fencing
C (Civil)	450	SN	Traffic Sign
C (Civil)	460	TC	Traffic Control
C (Civil)	470	TD	Detour
C (Civil)	480	TS	Traffic Signal
C (Civil)	490	TE	Traffic Electrical
C (Civil)	500	LP	Landscape
C (Civil)	510	IR	Irrigation
V (Survey/Mapping)	590	SV	Survey
X (Miscellaneous)	600	ZZ	Contractor/Shop Drawing
X (Miscellaneous)	610	PR	Process

Minor Discipline Code, Characters 12 and 13

The minor discipline code designates the sub-category of the file that the DWG represents. The following table displays the Minor Discipline codes. The Minor Discipline

codes are available for all Major Discipline categories. Continuing in building our example, we show the Minor Discipline as Plan.

0	1	2	3	4	-	0	-	W	T	-	P	L	-	C	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Minor Discipline Code	Minor Discipline	Description
AB	Abbreviations	POLB Standard Abbreviations Sheets. May also contain legends and/or general notes
AL	Alignments	Railroad, Road, or Utility Alignments
CC	Coordinate Control Maps	Maps that show the Survey Control used on the project
CP	Construction Phasing	Plans to illustrate how the construction work will be phased or sequenced
DI	Diagrams – Single Line & Others	Electrical Single Line Diagrams, Power Riser Diagrams, etc.
DT	Details	Sheets with Details; may also contain some sections and/or elevations
EL	Elevations	Drawings that show the vertical face of the subject matter. May also contain some sections and/or details
FA	Fire Access Plans	Plans that show the proposed routes for emergency vehicles to use to reach critical infrastructure such as fire hydrants
IN	Index Sheets	Index of Plans in the current drawing set
IS	Isometric	3D Perspective views
KY	Key Maps	Key Maps show the general location and size of the more detailed plan sheets. Typically, a large scale such as 1" = 100'

Minor Discipline Code	Minor Discipline	Description
MD	Multi Discipline	For use on smaller projects, when a sheet contains a plan view, a profile view, and also a detail
MS	Miscellaneous	Any other drawing that does not fall into the other minor discipline categories
NO	General Notes	General or Discipline-Specific Note Sheets
PF	Profiles	Sheets showing the subject matter (road, pipe, etc.) in profile
PL	Plans	Sheets that show existing and proposed information from a top-down perspective. In some cases, it may also contain some details, sections, or elevations
PP	Plan and Profile	Sheets that show the subject matter in both plan and profile on the same sheet
SC	Schedules – Panel, Conduit, etc.	Detailed information on sizes, locations, and connection types, etc., in tabular form
TP	Access and Traffic Plans	Access and Traffic Plans show the general flow of traffic into and out of the site, such as for emergency vehicles or construction vehicles. Typically, these are done at a scale of 1" = 100' or larger
TT	Title Sheets	Sheets that show the general location of the project. May also contain the index of sheets that make up the project
XS	Cross Section	Sheets that show the subject matter (road, pipe, etc.) in section view, to indicate sizes, materials, or other design information

CADD File Type Designator, Character 15

The CADD file type designator will be either a value of '**M**' for a model file or '**S**' for a sheet file. Continuing in building our example, we show the CADD File Type Designator as a Sheet File.

0	1	2	3	4	-	0	-	W	T	-	P	L	-	S	U	U	U	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

Sequence Number, Characters 16-18

For Sheet Files, the sequence number represents the number of a sheet within a set of similar sheets (i.e., a series of consecutive Water plan sheets). **The sequence number is for CADD file identification only and is not related to the overall sheet number for the entire project set.**

0	1	2	3	4	-	0	-	W	T	-	P	L	-	S	0	0	1	.dwg
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------

D. Drawing Number Convention

The final drawing number as shown on the lower right corner of the title block is a shortened version of the file name. The Project Number is included (along with any prepended zeros), followed by a dash, then the major discipline code and finally the three-digit sequence number. The resulting drawing number in this case would be:

01234-WT001

E. Sheet Set Layout

The primary scale for POLB plan sheets is 1" = 40'. The sheets shall be organized within the plan set by Discipline ID as described earlier in this section. The individual sheet number listed in the title block shall be padded with zeros as necessary to match the overall sheet count. For example, if the set contains 175 sheets, then the title block should read "Sheet 001 of 175", not "Sheet 1 of 175".

F. File Naming Convention (Base Maps)

The following table shows the standard file naming convention to be used on Base Map files. Most are extracted from the POLB Enterprise GIS or other sources which are

defined in the table below. All files are to be stored in folder 0.0 Base Maps of the project folder structure.

File Name	Description
POLB_CONTOURS_2024.dwg	Aerial Photogrammetry - Contours
POLB_PLAN_2024.dwg	Aerial Photogrammetry – Above Ground Features
POLB_STRIPING_2024.dwg	Aerial Photogrammetry - Striping
Lease_Boundary_NAD83_2007.dwg	Leases, Preferential Area Assignments, Area Assignments, Revocable Permits, Oil Areas, Resolution Areas, Right of Entry
Railroad Centerline_NAD83_2007.dwg	Railroad Centerlines
Utility_Communication_NAD83_2007.dwg	Communication lines
Utility_Electric_NAD83_2007.dwg	Electric lines
Utility_Fiber_Optic_NAD83_2007.dwg	SECURE DATA – NOT FOR GENERAL USE
Utility_Gas_LBGO_NAD83_2007.dwg	Natural Gas lines – Obtained from Long Beach Utilities (Previously LB Gas and Oil)
Utility_Sewer_NAD83_2007.dwg	Sanitary sewer lines
Utility_Stormwater_NAD83_2007.dwg	Storm water lines
Utility_Water_NAD83_2007.dwg	Water lines
Vicinity_Map_2007.dwg	Port Vicinity Map for Project Location

The Base Maps will be copied, not referenced, from **\Documents\0 Base Maps** into the project folder **\2 Projects\xxxxx\0.0 Base Maps** at the kick-off of each project.

G. Deliverables

POLB requires that all submittals be delivered in accordance with the folder structure defined in the Project Organization section of this manual to ensure consistency, usability, and long-term data management.

File naming shall comply with the conventions defined in this manual. Consultants shall coordinate with POLB to ensure that duplicate file names and duplicate content are not included in the submittal.

All submittals shall include native DWG files and all associated references (XREF) packaged within a single compressed (ZIP) folder. This includes all required sheet, model, reference, and configuration files necessary to fully reproduce the design.

The AutoCAD eTransmit command is the preferred method to assemble submittal packages and shall be used to collect all referenced files and maintain relative paths.

Drawings shall be audited and purged to remove unused or orphaned data prior to submittal.

The TXT report file generated by the eTransmit command shall be included in the final ZIP package for POLB reference.

The final ZIP package shall maintain a clear and consistent folder structure. At a minimum, the following structure is recommended:

All referenced files shall be included and maintain relative paths to ensure full functionality when extracted and opened by POLB.

Failure to include all referenced files or maintain proper folder structure may result in broken references and rejection of the submittal.

Quality Control Prior to Submission

Before submitting deliverables, consultants shall:

- Audit drawings
- Purge unused objects
- Rebuild corridors and surfaces
- Verify all XREF references
- Verify all XREF paths are set to relative
- Confirm no Data Shortcuts (DREFs) exist in any drawing
- Confirm no duplicate or redundant design elements are present (e.g., overlapping surfaces, alignments, or corridors)
- Confirm drawings open without warnings or errors

10 DRAFTING STANDARDS

A. Introduction

This chapter identifies basic drafting standards used in creating construction documents for POLB projects. When possible, these standards have been pre-established in POLB Template File and/or the POLB Workspace.

B. Graphic Attributes

In general, the graphic attributes of POLB standard layers are defined as "ByLayer" or "ByBlock" attributes and include line weight, line style and color. There are some exceptions to this rule, which are covered in the various Discipline Layer Lists (Appendix B). Appendix B offers additional information regarding the typical printed output of the POLB standard layers based on their ByLayer attributes.

C. Annotation Scale / Drawing Scale

POLB uses Annotation Scale (also known as Drawing Scale) to control the size of certain scale-dependent features of the DWG file. POLB Linetypes, Text Styles, Dimension Styles, and some POLB standard blocks are all tied into the Annotation Scale of the current file, and therefore it is important that the Annotation Scale be set correctly prior to adding elements to the file for best results. The POLB Standard Drawing Scale for plan and/or profile sheets is 1" = 40'.

D. Linetypes

The POLB delivered Civil 3D template includes the majority of the standard linetypes. If a linetype cannot be found, the POLB also provides a linetype definition file (POLB.lin), which contains all the standard linetype definitions.

Some of the linetypes reference shapes from the POLB_ltypeshp.shx file. The shapes contained in this file are the only approved shapes to be used.

E. Blocks

The blocks included in the POLB standards provide symbols for POLB drawings. The blocks can be found in the delivered workspace folders (...POLB_Workspace_2.0\Blocks\), are organized by type in the following folders:

Block Folder				
POLB Electrical	POLB General	POLB Landscape	POLB Leases	POLB Piping
POLB Rail	POLB Sheets	POLB Signs	POLB Structural	POLB Traffic

For more detailed information on the blocks, refer to Appendix C, for a list of POLB blocks.

F. Text Attributes

The following are guidelines for the application of text strings and text nodes on all construction documents. POLB DWT files contain the standard AutoCAD Text Styles needed to maintain consistency within POLB projects.

Fonts

The standard fonts that are used to define the Text Styles are:

Font	Font Type
Arial	Windows True Type
Wingdings	Windows True Type
Wingdings 2	Windows True Type
Wingdings 3	Windows True Type
Simplex	AutoCAD SHX

Text Styles

Font	Font Type
POLB	Standard text style
POLB – 0.8	Same as the POLB text style but a width factor of 0.8 has been applied. To be used in tight spaces
POLB - Italic	Same as the POLB text style but an oblique angle of 20 has been applied
POLB - Simplex	Used in the POLB AutoCAD blocks and to represent existing features
POLB - Wingdings	Custom symbols used on the line type definitions

Font	Font Type
POLB – Wingdings2	Custom symbols used on the line type definitions
POLB – Wingdings3	Custom symbols used on the line type definitions
Standard	Do not use standard and use POLB text style instead. (AutoCAD requires a text style named Standard)

Text Sizes

AutoCAD utilizes annotative text to make text strings and text nodes consistent across multiple scales. Text height is set to define the desired paper height text size. AutoCAD then automatically adjusts the text to the correct size based off the scale set. Text sizes will be set as defined below.

Font	Text Height
POLB	0.125 (1/8) in
POLB Title 1	0.1875 (3/16) in
POLB Title 2	0.25 (1/4) in
POLB Title 3	0.40 (2/5) in

G. Multileaders

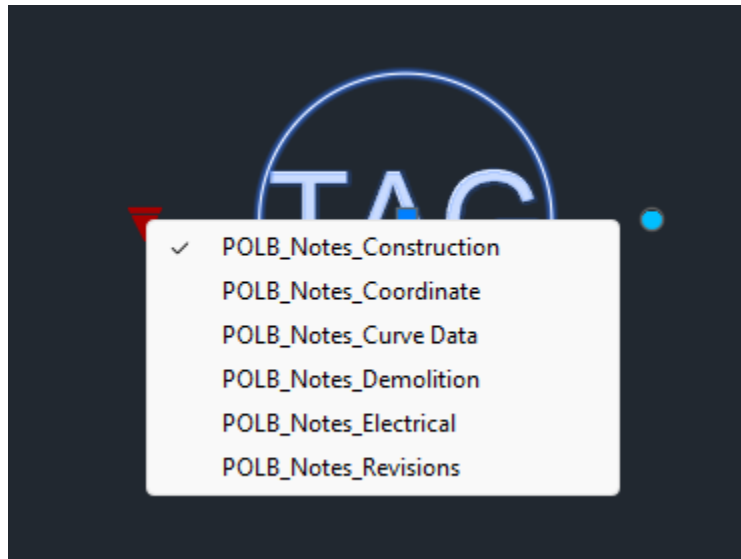
When placing multileaders in AutoCAD, the POLB plan documents shall have a consistent look and feel. To achieve this consistency, the following conventions shall be followed.

Multileader Styles

Name	Description
POLB_Notes_Construction	Tag outlined by circle with arrow terminator
POLB_Notes_Coordinate	Tag outlined by diamond with arrow terminator
POLB_Notes_Curve Data	Tag outlined by hexagon with arrow terminator
POLB_Notes_Demolition	Tag outlined by square with arrow terminator
POLB_Notes_Electrical_Frame	Tag outlined by rounded rectangle with loop terminator
POLB_Notes_Electrical_Text	Text with loop terminator
POLB_Notes_General	Text with arrow terminator

Name	Description
POLB_Notes_Revisions	Tag outlined by triangle with arrow terminator
Standard	Do not use standard and use POLB multileader style instead. (AutoCAD requires a multileader style named Standard)

For occasions when just the tag and outline need to be placed, without the leader, there is also a block in drawing named **POLB_Notes** that can be used. This is an annotative dynamic block with a drop down that will transform the block into the correct shape based on the type of note being referenced.



Multileader Placement

Multileaders will be placed using the Multileader command in Civil 3D. Select the appropriate dimension style as described in the Multileader Styles table.

When placing multileaders in areas where space is limited, it is often necessary or convenient to place notes that contain two or more lines of text. When this happens, the POLB Standard is to have the leader line aligned with the center of the top line if the text is justified to the left. When the text is justified to the right, the leader line shall be aligned with the center of the bottom line of text. By default, the multileader style "POLB_Notes_General" is set up to work this way.

Text Justification

When notes containing multiple lines of text are being placed, the note shall be justified to the same side as the leader line.

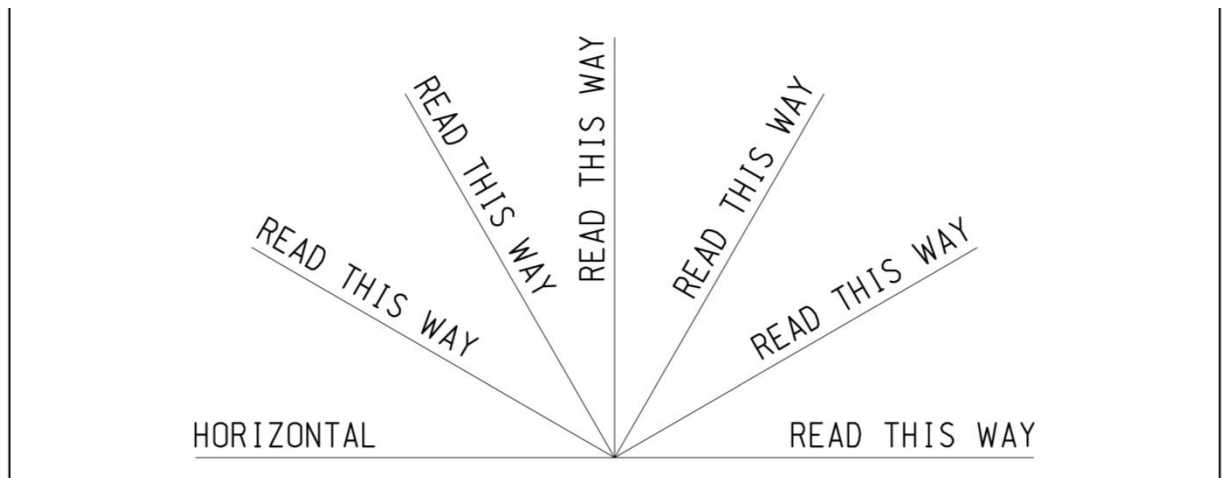
Terminators

The approved line terminators for multileaders on all construction documents is the close filled arrowhead or loop. The size of the terminators will be 0.125.

Text Case

All POLB Plan notes and general notes shall be placed in the drawing using upper case letters.

Text Orientation



Multileader Style Modifications

Similar to POLB Text Styles, there are valid reasons for modifying POLB Multileader Styles to fit a particular need. There are also modifications that should never be done. The following list details what is considered an acceptable modification and what is not considered an acceptable modification. This list is not exhaustive; if you are considering a modification that is not covered here, please contact the POLB Engineering Design Division for guidance, or submit a CADD Standards Change Request Form.

Acceptable Multileader Style Modifications

- Other terminator types are allowed as needed, such as a dot or circle.

- The layer of the multileaders should be set to C-ANNO-NOTE. The layer for the multileader may be changed based on discipline but should always follow the naming convention. For example, structural multileaders should be placed on S-ANNO-NOTE.
- When space for notes is limited, the horizontal attachment of the leader line may be set to Left or Right as needed.

Unacceptable Multileader Style Modifications

- The size of terminators should not be modified.
- Do not modify any multileader style so that it looks or behaves like another provided dimension style. For example, do not modify POLB_Notes_Demolition to change the block symbol from a square to a circle. The circle is meant for construction notes and therefore should be placed with the style POLB_Notes_Construction.
- Do not use Standard Multileader Style.
- Do not create dimension styles without prior approval of the POLB Engineering Design Division.
- Do not explode multileader styles.

H. Dimensions

The following are guidelines for the application of dimensions on all construction documents. POLB uses AutoCAD Dimension Styles to maintain consistency within POLB projects.

Notes on Dimension Style Use

All POLB Dimension styles are configured to have certain common characteristics. Linear Dimension Text is configured to be center justified above the dimension line. Lower Margin spacing is configured to be at least 1/2 of the overall height of the capitalized font. Text will always be placed above the dimension line. After placing the dimension, editing, or overriding the value of the dimension is highly discouraged.

Dimension Styles

POLB provides several dimension styles, all of which are tied to POLB Text Styles. The following tables list some of the key features of the POLB Dimension Styles.

Name	Description
POLB_DIMS_ARCH	0'-0 1/8" format and precision with architectural tick terminator
POLB_DIMS_FT.XX	0.00' format and precision with closed filled terminator
POLB_DIMS_FT_IN	0'-0 1/8" format and precision with closed filled terminator
Standard	Do not use standard and use POLB text style instead. (AutoCAD requires a text style named Standard)

Dimension Style Modifications

Like other POLB Styles, there are valid reasons for modifying POLB Dimension Styles to fit a particular need. There are also modifications that should never be made. The following list details what is considered an acceptable modification and what is not considered an acceptable modification. This list is not exhaustive; if you are considering a modification that is not covered here, please contact the POLB Engineering Design Division for guidance, or submit a CADD Standards Change Request Form.

Acceptable Dimension Style Modifications

- When space for the dimension text is limited, changing the Text/Terminator Fit options is allowed in order to force the text and/or terminators to the inside of the dimension
- Other terminator types are allowed as needed, such as dot or circle
- The layer of the dimension styles should be set to be C-ANNO-DIMS for linear dimensions. The layer of the dimension style may be changed based on discipline but should always follow the same naming convention. For example, structural dimensions should be placed on S-ANNO-DIMS.
- If two lines of text are required on the dimension, the second line of text may be placed below the dimension line with the text modified as needed.

Unacceptable Dimension Style Modifications

- The size of terminators should not be modified.
- Do not modify any dimension style so that it looks or behaves like another provided dimension style. For example, do not modify POLB_DIMS_ARCH style to change the terminator from architectural ticks to closed filled.
- Do not use Standard Dimension Style.

- Do not create your own dimension styles without prior approval of the POLB Engineering Design Division.
- Do not explode dimensions.

I. Project Datum

Consultants and designers must include the Horizontal and Vertical Project Datum information on the Title Page, as illustrated in the example below. This example is for reference only; designers must use the specific Project Datum applicable to their project. Additionally, the Project Datum must match the Horizontal Control and Vertical Control information shown on the Title Block.

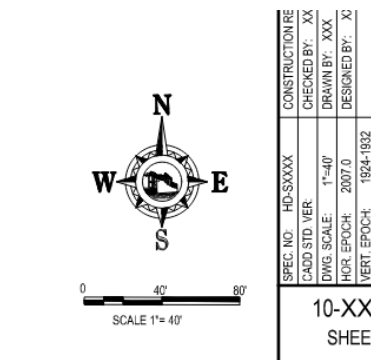
PROJECT DATUM	
<u>HORIZONTAL DATUM</u>	<u>VERTICAL DATUM</u>
NORTH AMERICAN DATUM 1983 (NAD83) (2007.0 EPOCH) COORDINATES, CALIFORNIA COORDINATE SYSTEM (CCS '83), ZONE 5 IN U.S. SURVEY FEET. REFERENCE LBHD MAP NO. 10-1974 AND LBHD FB 3056.	NATIONAL GEODETIC VERTICAL DATUM OF 1929, (NGVD' 29) (1924 - 1932 EPOCH) POLB NOV '06 ADJUSTMENT, EL 0.00 EQUALS MEAN LOWER LOW WATER (MLLW) IN FEET.

J. North Arrow and Scale Bar

Use POLB Standard Symbols for North Arrow and Scale Bar.

The North Arrow on a plan shall be rotated to match the orientation on the drawing with the range up to either northwest or northeast, it shall not point in the southwest or southeast direction.

Placement of the North Arrow and Scale Bar is typically placed in the bottom right corner, near the title block and should not overlay other drawing elements.



K. Data Tables

On POLB Plan documents, it is often necessary to provide a table containing curve and/or coordinate data regarding the geometry of pipes, roads, or other facilities being constructed. Use the following section as a guide to determine the layout of the tables that contain this kind of data. Consultants and designers must use CADD tools to generate coordinate and curve data tables, rather than inserting images or screenshots.

Coordinate Tables

Tables of coordinate pairs shall contain a point number enclosed in a diamond symbol to match the POLB standard multileader style for coordinates (POLB_Notes_Coordinates). The values for the northings and eastings should be listed with 2 significant digits. A point table style named "POLB Coordinate Table" has been provided for this purpose. The elements that make up the table shall reside on the layer C-ALGN-PONT-TABL. Please note that the diamond enclosing the point number will need to be added once the table is created and placed in the drawing file.

Curve Data Tables

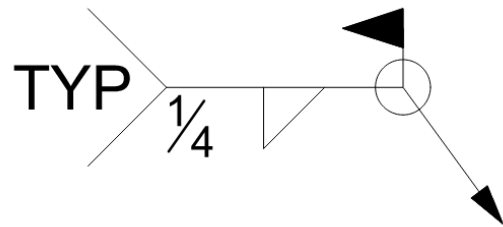
Tables that show curve data shall contain a point number enclosed in a hexagon symbol to match the POLB standard dimension style for placing curve data (POLB_Notes_Curve Data). At a minimum, the values for Radius, Delta, Tangent, and Length shall be provided for each curve. All of these values shall be rounded to 2 significant digits, with the exception of the delta value which should be rounded to the nearest second. An alignment curve data table style called "POLB Curve Data" has been provided for this purpose. The elements that make up the table shall reside on the layer C-ALGN-ELMT-TABL. Please note that the hexagon symbol will need to be added once the table is created and placed in the drawing file.

L. Coordinate Notes

On smaller projects, it may be desirable to place individual Coordinate Notes directly on a plan sheet in lieu of using a table. The POLB Standard is to draw these notes without an arrowhead. There are Point and Note Label Styles in the template for this purpose.

M. Welding Symbols

On structural details, POLB uses standard welding symbol notes to indicate length, pitch spacing, size, and other important weld symbol information. Weld symbols should reside on the S-ANNO-SYMB layer and utilize the Text Style POLB. You can find the POLB_WELDING_SYMBOL block in the POLB Block Library under POLB Structural.



N. Border Files

Use the following guidelines for Border Files on all construction documents:

Attaching Border Files to Sheets

Borders are referenced to the Sheet File using the appropriate POLB Standard Border File, as shown on the chart below. Use the D size borders that are listed below for work performed for POLB. The Border File references are scaled per the print scale of the Sheet File. For a full-size example of the POLB Standard Borders, see Appendix E.

ANSI Letter	ANSI Inches	ARCH Letter	ARCH Inches	File Name
A	8.5 X 11.0	A	9.0 X 12.0	
B	11.0 X 17.0	B	12.0 X 18.0	
C	17.0 X 22.0	C	18.0 X 24.0	
D	22.0 X 34.0	D	24.0 X 36.0	POLBBDR2234.dwg POLBCNSTBDR2234.dwg

Title Blocks

Title blocks contain attributes linked to ProjectWise and are set up in the border. The title block fields are scaled to the same value as the referenced border file with the insertion point being the lower right corner of the border sheet. Once placed, title blocks are automatically updated as properties are changed inside ProjectWise.

Title blocks may be updated two ways:

1. If using ProjectWise – Select the file and then press the spacebar to open the Properties dialog. Go to the Attributes tab and update the title block information. Click Save, then Close. The title block information will be updated in the DWG the next time the DWG is opened.
2. Inside AutoCAD or Civil 3D– double-click the block that needs updating. In the pop-up window, update the attribute information and then click 'OK'

Title Block Seal Frame

The diagram below shows the standard title block seal frame configuration. This area should be used when placing a seal in the title block.

MONIQUE L. LEBLANC, P.E. NO. C-15645 SENIOR DIRECTOR / CHIEF HARBOR ENGINEER						
CLINT C. HERRERA, P.E. NO. C-81471 DIRECTOR OF ENGINEERING DESIGN	DATE					
 Port of LONG BEACH THE PORT OF CHOICE						
XX% SUBMITTAL			MARK	DATE	BY	REVISION DESCRIPTION

Consultant Border Sheet

The Consultant border file contains the same basic layout as the internal POLB border with the addition of a location for the Consultant's logos. The space in the upper-right corner of the title block is reserved for the Consultant's logo. All consultant logos must fit inside this designated location indicated by the figure on this page. Place the logos on one of the three POLB-supplied layers.

MARK DATE BY REVISION DESCRIPTION				

Inserting and Updating the Title Block

Consultants must use the same POLB_TTLB block inserted into the lower right-hand corner of the border sheet to place the title block tags in the drawing. It is important that only one of these blocks be placed, and its related Tag Set "POLB Project Data" not

be duplicated or renamed. The automatic updating of title block attributes will not be available if the drawing is not in ProjectWise. However, the fields in Civil 3D can be updated to edit the values of the title block attributes.

10-XXXXX-XXXXX SHEET 01 OF 01	SPEC. NO: HD-SXXXX	CONSTRUCTION REV: XXX	DATE: XX/XX/XX	 Port of LONG BEACH THE PORT OF CHOICE
	CADD STD. VER: 2.0	CHECKED BY: XXX	DATE: XX/XX/XX	
	DWG. SCALE: 1"=1200'	DRAWN BY: XXX	DATE: XX/XX/XX	
	HOR. EPOCH: 2007.0	DESIGNED BY: XXX	POLB DM: XXX	
	VERT. EPOCH:		POLB PM: XXX	
	HORIZONTAL CONTROL: NAD83-VF	VERTICAL CONTROL: NGVD 29 MLLW		
PROJECT NAME PROJECT NAME 2 SHEET SUBJECT SHEET SUBJECT 2			CLINT C. HERRERA, P.E. NO. C-61471 DIRECTOR OF ENGINEERING DESIGN	
				 Port of LONG BEACH THE PORT OF CHOICE

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O. Official Project Name/Title, Spec Number, and Drawing Number

The Title Block must include the official Project Name, Specification Number, and Drawing Number, which are assigned by POLB and can be obtained from the Design Manager (DM).

Consultants and engineering designers must use the "PROJECTLOCATION" and "PROJECTDESCRIPTION" attribute tags of the Title Block to enter the project's official name/title as it will appear in the bid set. This same official project name must be consistent across all bid package documents, which includes the plans, specifications documents, and other related materials.

Title Block Tag Placement / Order	Sample 1	Sample 2
PROJECTLOCATION	FIREBOAT STATION NO. 20	PIER J, BERTH J243-247
PROJECTDESCRIPTION	AT PIER D, BERTHS D50-51	WHARF CONCRETE REPAIR
SHEET SUBJECT	SITE PLAN - OVERALL	PROJECT LOCATION & SHEET INDEX
SHEET SUBJECT 2	(Left blank on this example)	(Left blank on this example)

FIREBOAT STATION NO. 20 AT PIER D, BERTHS D50-51 SITE PLAN - OVERALL
PIER J, BERTH J243-247 WHARF CONCRETE REPAIR PROJECT LOCATION & SHEET INDEX

The Specification Number is assigned to all projects that will go through a formal bid process. This number appears on the specification documents package, which includes the bidding requirements, construction contract forms, and all other contract documents in effect as of the first publication date of the advertisement for bids. Consultants and engineering designers are required to enter the assigned Specification Number in the "SPECIFICATIONNUMBER" attribute tag of the plans' Title Block. The Specification Number shown on the plans must match the number listed in the specification documents. The Specification Number format includes the letter "S" followed by four digits: SXXXX.

The Record Drawing Number is the official number assigned to the plan set and will be used to file the completed as-built drawings with POLB's Records Center at the completion of the project. Consultants and engineering designers are required to enter the assigned Drawing Number in the "DRAWINGNUMBER" attribute tag of the plans' Title Block. The Drawing Number format includes the prefix "10-" followed by five digits: 10-XXXXX.

The Specification Number and Record Drawing Number serve different purposes and are not interchangeable. Designers must ensure each number is entered in its designated location within the plan set.

Projects that do not undergo a formal bid process may not have a project-specific Specification Number. For guidance on completing the "SPECIFICATIONNUMBER" attribute tag of the plans' Title Block for these types of projects, including Portwide Construction Services contracts and Job Order Contracting (JOC), refer to the following section.

P. Specification Number Requirements for Bid and Non-Bid Construction Work

Capital Work Order (CWO) projects are typically associated with "1XXX" series work order numbers. Maintenance, Repair, and Rehabilitation (Expense Work Order or EWO) projects are typically associated with "5XXX" series work order numbers.

Bid packages for CWO and EWO projects that are expected to advertise and proceed through a formal bid process in the PlanetBids solicitation system must include the applicable Specification Number in the "SPECIFICATIONNUMBER" attribute tag of the plans' Title Block. The Specification Number shown on the plans must match the Specification Number identified in the official specifications documents.

For design plans that do not require a formal bid or advertisement process, POLB may deliver construction work through Portwide Construction Services contracts, formerly known as On-Call construction contracts, or through JOC. These projects may not be assigned a project-specific Specification Number and are generally associated with EWO projects.

When Portwide Construction Services contracts or JOC are used for construction, designers must identify the applicable official Specification Number(s) or JOC Number(s) and Contract Title(s) relevant to the project work. Since these types of projects may include multiple contracts, all applicable contract information must be listed on the titlesheet of the plan set. Designers are responsible for verifying that all contract identifiers included on the plans are current and directly applicable to the project scope, as contract references may be revised, consolidated, supplemented or superseded over time. Designers shall exclude contracts that are not applicable to the project scope. An example list of contracts on the title sheet is shown below:

PORTWIDE CONSTRUCTION SERVICES SAMPLE:

SXXXX - PORT-WIDE EMERGENCY WET UTILITIES SERVICES
SXXXX - PORT-WIDE WATERBORNE CONSTRUCTION EQUIPMENT RENTAL SERVICES
SXXXX - PORT-WIDE UNDERGROUND WET UTILITY SERVICES
SXXXX - DEMOLITION AND GENERAL SERVICES
SXXXX - MARINE CONCRETE REPAIR SERVICES
SXXXX - ELECTRICAL CONSTRUCTION SERVICES PORTWIDE
SXXXX - RECYCLE ASPHALT, CONCRETE MATERIAL AND OTHER SERVICES
SXXXX - ASPHALT PAVING, TRAFFIC STRIPING AND RELATED SERVICES PORTWIDE

JOB ORDER CONTRACTS SAMPLE:

SXXXX - JOB ORDER CONTRACT at THE PORT OF LONG BEACH, CALIFORNIA

For projects without an assigned Specification Number, the "SPECIFICATIONNUMBER" attribute tag on the Title Block must be entered as "N/A" to indicate that a project-specific Specification Number is not applicable. An example Title Block is shown in the image below:

10-XXXXX-XXXXX SHEET 01 OF 01	SPEC. NO: N/A	CONSTRUCTION REV: XXX	DATE: XX/XX/XX	 Port of LONG BEACH THE PORT OF CHOICE
	CADD STD. VER: 2.0	CHECKED BY: XXX	DATE: XX/XX/XX	
	DWG. SCALE: 1"=1200'	DRAWN BY: XXX	DATE: XX/XX/XX	
	HOR. EPOCH: 2007.0	DESIGNED BY: XXX	POLB DM: XXX	
	VERT. EPOCH:		POLB PM: XXX	
	HORIZONTAL CONTROL: NAD83-VF	VERTICAL CONTROL: NGVD 29 MLLW		
PROJECT NAME PROJECT NAME 2 SHEET SUBJECT SHEET SUBJECT 2			MONIQUE I. LEBRUN, P.E. NO. C-70448 SENIOR DIRECTOR / CHIEF HARBOR ENGINEER	
			CLINT C. HERRERA, P.E. NO. C-61471 DIRECTOR OF ENGINEERING DESIGN	
			DATE	

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Q. Reference Attachment Settings

Model files and border files will be attached to a sheet file without saving the full path to the reference, for maximum portability.

- Xref Type: Overlay
- Path Type: Relative

All xrefs should be placed on the 0-XREF layer.

R. Raster and PDF Attachments

Raster files and PDFs may be attached to DWGs via External References Manager. POLB Aerials are available in the folder "1 Rasters" for reference and background usage. All raster attachments shall be placed on the G-RAST layer for added flexibility.

S. Sheet Symbols

Sheet symbols such as North Arrows, Seals (if allowed by profession), and Graphic Scales are to be placed in the Sheet File. Standard symbols are stored in POLB block libraries, as listed in Appendix C.

T. OLE Object Links

OLE Links from Excel and other Microsoft Office products are not supported by the POLB Workspace and should not be used. Instead, import the data as simple text and/or geometry and format it in Civil 3D according to POLB CADD Standards.

U. Digital Signatures / Digital Rights

Electronic Stamps, digital signatures and digital rights for Drawings/plans and other official documents are acceptable upon approval of a formal request to POLB's Design Manager prior to submittal.

11 LAYER ASSIGNMENTS

A. Introduction

This chapter explains the use of layers in both the model and the sheet files, the conventions used to name layers, and the content of the available layer filters.

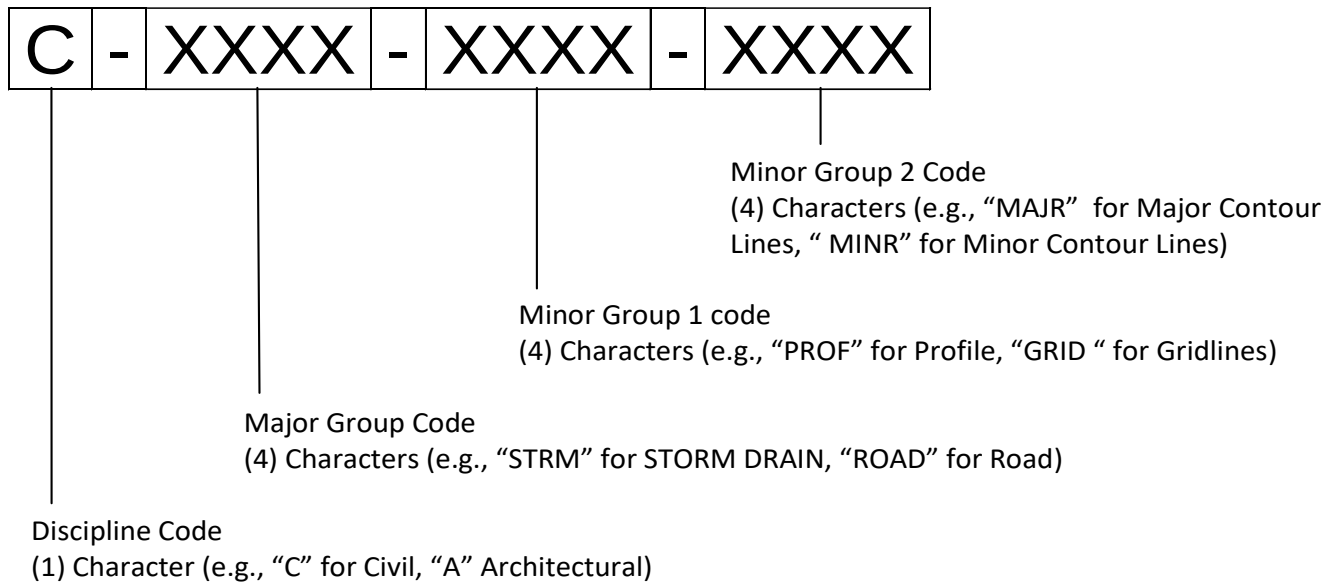
B. Layers Defined

The information represented by individual layers are grouped into two primary types: model-specific information and sheet-specific information.

- Model-specific information includes sites, roads, buildings, or other objects depicting existing and/or proposed conditions. This information is often shared among drawings. Examples include utilities, roads, retaining walls, bridges, illumination, drainage, signing, rail yard layouts, etc. Model-specific information may be either literal (e.g., curbs, walls) or symbolic (e.g., manholes, light poles).
- Sheet-specific information may include notes, annotative symbols, and titles. This type of information is usually not shared between drawings.

C. Layer Naming Conventions

The layer is the basic tool used in CADD for managing graphic information. The layers defined within these standards are based on the recommendations set forth by the American Institute of Architects (AIA), with modifications for use on POLB projects. This manual is similar to the AIA method of layer naming, and consists of the following:



D. Layer Filters

Layer Filters are a method of grouping layers together to make it easier to view only those layers related to a specific purpose or discipline.

Custom Layer Filters have been created by POLB, but others may be added to individual DWG files as needed.

12 PRINTING

A. Introduction

This chapter identifies the requirements for producing acceptable printed output from POLB electronic files. One of the primary functions of the POLB CADD Standards is to produce electronic drawings that can be printed with a high degree of consistency, regardless of which project is being printed or who created the drawings.

POLB has established plot styles to define how the contents of the CADD file are processed at print time.

Name	File Extension	Purpose
POLB_FULL_BW	.ctb	Full-size black and white
POLB_HALF_BW	.ctb	Half-size black and white

B. Plot Styles in AutoCAD

Assign AutoCAD line weights ByLayer in the Layer Manager. POLB's plot styles are color dependent, meaning each color from 1-255 has a matching line weight. The line weights assigned to the colors in the CTBs repeat in increments of 10. Please refer to Appendix D for a breakdown of the plot styles.

13 GLOSSARY

1991.35 Epoch

NAD83 (1991.35) is a realization of the NAD83 datum resulting from statewide geodetic network upgrades performed by the US National Geodetic Survey (NGS) between 1989 and 1997 called High Precision Geodetic Network (HPGN) or High Accuracy Reference Network (HARN). The HPGN in California was observed by Caltrans and NGS as a statewide GPS control network. The network was first visited in 1991 and again in 1992 in response to the Landers earthquake. NAD83 coordinates resulting from the adjustment of the statewide GPS measurements refer to an epoch of 1991.35 (equivalent to May 8, 1991).

2007 Epoch

NAD83 (NSRS2007) is a more recent realization of the NAD83 datum resulting from a nationwide readjustment of GPS networks including CORS, FBN, CBN, UDN and Airport survey stations – about 69,117 control stations across the U.S. The NAD83 (NSRS2007) was released by the NGS in February 2007.

AIA

American Institute of Architects.

Annotation Scale

A general scale factor applicable to text dimensions, and linetypes in an AutoCAD or Civil 3D file. Applying the annotation scale will ensure that when the scaled print is created, annotations are at the correct physical size.

ANSI A/B/D

Standard paper sizes, in inches, as established by the American National Standards Institute.

ANSI A

8 ½ x 11

ANSI B

11 x 17

ANSI D

22 x 34

<i>As-Builts</i>	A set of drawings which depict the actual as-built conditions of the completed construction.
<i>AutoCAD Attribute</i>	A method of storing non-graphical attributes to elements in an AutoCAD or Civil 3D file.
<i>AutoTURN</i>	Vehicle turn simulation software from Transoft Solutions. AutoTURN runs on both AutoCAD and MicroStation CADD platforms.
<i>Base Maps</i>	Base Maps are AutoCAD and Civil 3D files generated by POLB GIS/Mapping Group and represent the most current set of as-built plans at POLB.
<i>Bearing</i>	A method of displaying angle measurements in AutoCAD and Civil 3D based upon the angle's rotation from an axis.
<i>BIM</i>	Building Information Model. A Building Information Model is a digital representation of the physical and functional characteristics of a facility. A BIM can represent viewpoints – graphically and in text and table form, of a building from any practitioner perspective – Architect, Specifier, Engineers, Fabricators, Leasing Agents, General Contractors and so on. As such, it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life cycle from inception onward.
<i>Block</i>	A collection of objects that are combined into a single named object. Blocks are used to create repeated content, such as drawing symbols, common components, and standard details.
<i>Border</i>	The graphical elements that represent the outside boundary of a printed CADD file and contain elements such as the title block, revision block, and information related to the project participants. In POLB workflow the border is typically a reference file.

<i>CADD Standards</i>	A set of standards that have been created to improve productivity and interchange of Computer-aided design documents between different organizations and CADD programs, especially in architecture and engineering.
<i>CAD/CADD</i>	Computer Aided Design/Computer Aided Drafting and Design.
<i>Caltrans</i>	California Department of Transportation.
<i>CCS</i>	California Coordinate System
<i>Certificates</i>	A digital certificate is an electronic document which uses a digital signature to bind together a public key with an identity — information such as the name of a person or an organization, their address, and so forth. The certificate can be used to verify that a public key belongs to an individual.
<i>COGO</i>	A program that is aimed at coordinate geometry problems in civil engineering and surveying. COGO also relates to Civil 3D geometry and specifically refers to the points and tools that manipulate or work with geometry point data.
<i>Content Management System</i>	Refers to a class of software solutions that allow for the management of data in a collaborative environment.
<i>Custom Linetypes</i>	User defined linetypes stored in a LIN resource file.
<i>Datasource</i>	A ProjectWise container for folders and documents. The POLB datasource is named POLB ProjectWise.
<i>DWG</i>	A file format used for storing two-and three-dimensional design data and metadata. It is the native format for both AutoCAD and Civil 3D.
<i>Digital Signatures</i>	A technology that demonstrates the authenticity of a digital file.

<i>Dimension Style</i>	A group of dimension settings such as terminators, units, formats, and symbology that are typically stored in a DWG template for shared usage.
<i>DMG</i>	A rectangular survey system established by the US Engineers in 1859 using monument "Deadman Island".
<i>Documentum</i>	An Enterprise Document Management System by EMC. Documentum has been chosen as the Enterprise Content Management System at POLB.
<i>Drawing Template</i>	A file, with file extension *.dwt, which is used by AutoCAD and Civil 3D as a template for new files.
<i>DSR</i>	Design Service Request.
<i>Ellipsoid</i>	A reference ellipsoid is a mathematically defined surface that approximates the geoid, the truer figure of the Earth, or other planetary body.
<i>Free</i>	A file management command in ProjectWise which cancels the check out of a document. Documents can only be freed by the user who originally checked the document out or a ProjectWise Administrator.
<i>GIS</i>	Geographic Information System.
<i>GIS90</i>	A local adjustment of Port control based on the NAD27 datum. GIS90 coordinates have been truncated by 4,000,000 in the Northing and 4,200,000 in the Easting. GIS90 values vary by only a few hundredths from NAD27.
<i>GRS80</i>	Geodetic Reference System of 1980.
<i>GUI</i>	Graphical User Interface. The elements of a computer application that allows people to interact in methods other than typing on a keyboard.

<i>Keyin</i>	A method of input in AutoCAD and Civil 3D using commands entered with a keyboard.
<i>Lambert Conformal Conic</i>	A method of map projection which superimposes a cone over the sphere of the earth.
<i>Layer</i>	A method of separating and organizing drawing objects.
<i>Layer Filters</i>	A capability of AutoCAD and Civil 3D to limit the list of layers displayed in the Layer Manager to only those that match a pre-determined criterion.
<i>LIDAR (Light Detection and Ranging)</i>	An optical remote sensing technology that measures the properties of scattered light to find range and/or other information of a distant target.
<i>LIN</i>	Linetype file. An AutoCAD & Civil 3D file which contains the definitions for linetypes.
<i>Lineweight</i>	An AutoCAD or Civil 3D element attribute that determines the thickness of the lines used to draw or print a graphic element. Each element in an AutoCAD or Civil 3D design file has its own weight.
<i>Link Sets</i>	A MicroStation feature which enables the linking of elements in a design file to other documents such as a Word document, PDF, and other design files. The Link Set is contained in a ProjectWise project.
<i>Local Document Organizer</i>	A utility in ProjectWise that displays the documents a user has checked out or copied out of ProjectWise.
<i>Model Space</i>	The 2D/3D drawing environment in AutoCAD or Civil 3D where geometry is created and modified. Objects are drawn at their true, full-scale dimensions.

<i>NAD27</i>	A Coordinate system that is based on the Clarke Ellipsoid of 1866; it was created by manual surveying of the entire continent of North America. The geodetic "center" of NAD27 is a base station located at Meades Ranch in Kansas. Locally at POLB, NAD27 control was provided by RBF Consulting and Johnson Frank and Associates.
<i>NAD83</i>	The North American Datum is the official datum used for the primary geodetic network in North America. NAD83 is a coordinate system that is based on the GRS80 Ellipsoid of 1980, an earth-centered (or "geocentric") datum having no initial point or initial direction.
<i>NCS</i>	The United States National CAD Standard. The National CAD Standard is published by the BuildingSmart Alliance and consists of the American Institute of Architect's CAD Layer Guidelines, the Construction Specification Institute's Uniform Drawing System, and the Plotting Guideline.
<i>OLE</i>	OLE refers to Object Linking and Embedding which is a technology developed by Microsoft that allows embedding and linking of information between documents created by different applications.
<i>Paper Space (Layout Tab)</i>	A 2D layout environment in AutoCAD or Civil 3D where drawings are prepared for printing or output. Page size, orientation, and viewports are defined in this location.
<i>PDF</i>	Portable Document Format. A file format developed by Adobe Systems for document exchange.
<i>Pen Tables</i>	Allow for the resymbolization of printed output based on a set of criteria. For example, a pen table can be used to determine the thickness of a printed line based upon the weight of an element in a design file. POLB utilizes CTB files.
<i>Photogrammetry</i>	The practice of determining the geometric properties of objects from photographic images tied to map coordinates.
<i>PIF</i>	Project Initiation Form.

<i>Plotting / Printing</i>	The process of creating a hard copy or electronic file output of data stored in a digital file. Example output formats include a standard printer for A and B size prints, a large format plotter for D size sheets, and a PDF for electronic output.
<i>POLB</i>	Port of Long Beach.
<i>Positional Units</i>	See Units of Resolution.
<i>Projection</i>	The process of reprojecting design data from one Geographic coordinate system to another.
<i>ProjectWise</i>	A Content Management System developed by Bentley which is used at POLB to manage documents related to survey, engineering, and GIS data.
<i>ProjectWise Document</i>	An item in a ProjectWise folder which represents an electronic file or is a placeholder for information that may not be stored in ProjectWise such as a physical file.
<i>ProjectWise Folder</i>	A container for documents and other folders in a ProjectWise datasource.
<i>Raster References</i>	AutoCAD and Civil 3D have the capability of attaching image files in a variety of raster file formats as background information.
<i>Records Center</i>	The POLB Records Center facilitates the retention and management of crucial documents and media for the entire Harbor Department.
<i>Reference Clipping</i>	A method to control what part of a reference file will display in an AutoCAD or Civil 3D view by using a boundary to define the limits of its display.
<i>SAP 2000</i>	Structural Analysis program by Computers and Structures Inc.
<i>SDB</i>	SAP 2000 model File.

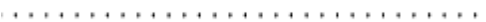
<i>Solids</i>	A type of complex element in a design file specific to 3D files.
<i>SSR</i>	Survey Service Request.
<i>Survey Feet / International Feet</i>	An international foot is defined as 0.3048 meters. The United States survey foot is defined as exactly 1200/3937meters, approximately 0.3048006m.
<i>Text Styles</i>	A named group of text attributes such as font, text width, and text height that are typically stored in a DWG or DWT file for shared usage.
<i>Title Block</i>	The area of a design file border that contains textual information that describes the printed sheet. The standard Port title block is linked to document attributes which are stored in ProjectWise.
<i>Title Block Attributes</i>	The document attributes stored in ProjectWise which are linked to title block attributes in an AutoCAD or Civil 3D file.
<i>Turning Template</i>	Produced using AutoTURN software, turning templates are used in the design of roadway facilities for vehicle access evaluation.
<i>Update Server Copy</i>	A ProjectWise file management command which saves the latest changes to a file from the user's workstation to the ProjectWise server.
<i>Versioning</i>	A ProjectWise feature which allows for the creation of multiple versions of a document.
<i>Viewport</i>	Rectangular areas that display a view of the ModelSpace on the layout tab.
<i>XREF</i>	A model attached to and displayed within another DWG for printing or construction purposes.

APPENDIX A - LINETYPE TABLES

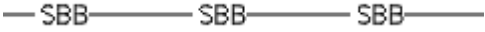
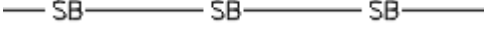
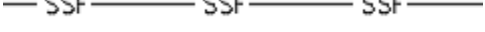
A. Linetype Tables

The tables included in Appendix A show the linetypes included in the POLB Workspace, including the layer(s) which they are applied to as the ByLayer linetype. The linetype "ut_remove" is unique in that it is designed to be placed on the same layer as the utility being depicted as abandoned/removed in the current project.

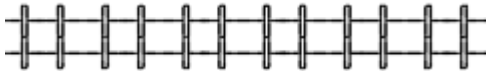
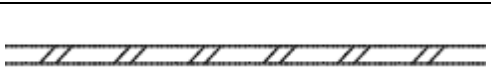
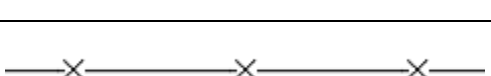
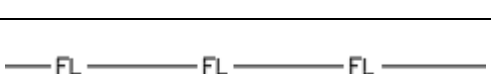
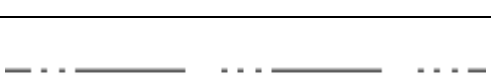
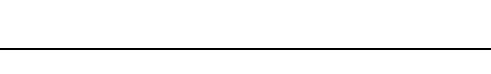
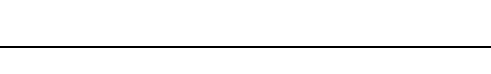
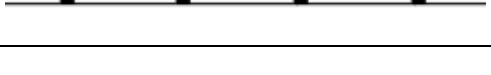
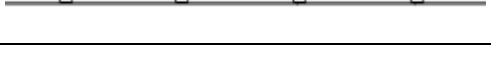
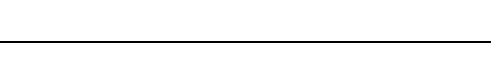
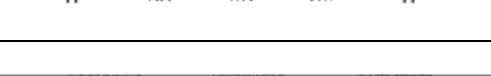
Name	Applied to Layer(s)	Sample
BORDER	NONE	— · — — · — — —
BORDER2	NONE	— — · — — · — — · — — · —
BORDERX2	NONE	———— — — · —————
CENTER	CENTERLINE LAYERS	— — ————— — — —
CENTER2	CENTERLINE LAYERS	———— — — — — — — — — —
CENTERX2	NONE	———— — — —————
CONTINUOUS	MULTIPLE	—————
DASHDOT	C-SOIL-EXBR-NNHZ	— · — — · — — · — — · —
DASHDOT2	NONE	— · — — · — — · — — · — — · —
DASHDOTX2	NONE	· ————— · —————

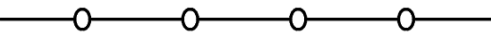
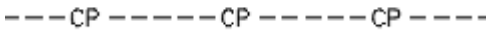
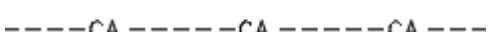
Name	Applied to Layer(s)	Sample
DASHED	C-ANNO-MATC C-ROAD-PROF C-ROAD-SGHT-OBST-AREA C-ROAD-SGHT-OBST-PATH V-TOPO-BRKL	
DASHED2	C-ROAD-SECT-BUFR C-SOIL-EXBR-TSCA C-SOIL-VOC-CNTM-VAPR G-MARK-GRID V-ROAD-CURB-AorE-FLOW V-ROAD-DIRT-UNMPVD V-STRC-TUNL V-TOPO-WATR	
DASHEDX2	V-RAIL-TIE~	
DIVIDE	NONE	
DIVIDE2	NONE	
DIVIDEX2	NONE	
DOT	NONE	
DOT2	NONE	
DOTX2	V-WARF-FOTG-MARK	
HIDDEN	NONE	
HIDDEN2	C-SOIL-EXBR-CAL~	

Name	Applied to Layer(s)	Sample
HIDDENX2	NONE	_____
PHANTOM	NONE	— — ————— — —
PHANTOM2	NONE	· — — — — — — — — — ·
PHANTOMX2	NONE	_____
Building_Outline_Face	NONE	_____
ec_berm	C-EROS-TEB~	— EB ———— EB ———— EB ————
ec_checkdam	C-EROS-CHEK	————— CD ———— CD ———— (
ec_csm	C-EROS-CSM~	— CSM ———— CSM ———— CSM ————
ec_curing	C-EROS-CURE	————— CC ———— CC ———— (
ec_cwm	C-EROS-CWM~	— CWM ———— CWM ———— CWM ————
ec_fence	C-EROS-FENC	— TF ———— ● ———— ● ———— ● ———— ● ———— ● ———— ● ————
ec_fiber_roll	C-EROS-TFR~	— FR ———— FR ———— FR ————
ec_gbb	NONE	— GBB ———— GBB ———— GBB ————
ec_hydroseed	C-EROS-HYDR	— HYS ———— HYS ———— HYS ————
ec_mulch	C-EROS-MLCH	— SM ———— SM ———— SM ————

Name	Applied to Layer(s)	Sample
ec_sbb	C-EROS-TSBB	
ec_silt	C-EROS-SILT	
ec_soilbind	C-EROS-BIND	
ec_stockpile	C-EROS-STOK	
ec_supersilt	C-EROS-SSLT	
ec_swale	C-EROS-TDS~	
ec_tlb1	C-EROS-TLB1	
ec_tlb2	C-EROS-TLB2	
ec_tlb3	C-EROS-TLB3	
ec_vec	C-EROS-VEC~	
ec_vef	C-EROS-VEF~	
ec_veg	C-EROS-VEGE	
ec_vem	C-EROS-VEM~	
ec_wind	C-EROS-WIND	
fa_hydrant	C-FIRE-ACCS	

Name	Applied to Layer(s)	Sample
fa_terminal	NONE	
map_berm	V-OIL~WELL-RTNG-BERM-LINE V-ROAD-BERM-CNTR	
map_blockwl	S-WALL-FENC-BLOC V-STRC-FENC-BLOC-WALL	
map_bndy_cnst	C-BNDY-CNST	
map_bndy_proj	C-BNDY-PROJ	
map_bridgerl	NONE	
map_brush	V-TOPO-VEGE-BRSL	
map_concrete	L-PVMT-CONC V-RAIL-TIE~-CONC V-ROAD-GUTT V-ROAD-SWLK V-STRC-CONC	
map_crane_rail	S-CRAN-RAIL V-RAIL-CRAN	
map_dike	V-TOPO-DIKE	
map_leascirc	C-PROP-LEAS	
map_leaseline	V-PROP-LEAS V-PROP-RES~	
map_port_bndy_line	C-PROP-BNDY-POLB V-PROP-PORT-BNDY	
map_rail	R-RAIL-TRAK V-RAIL-TOP~ V-RAIL-TRAK	

Name	Applied to Layer(s)	Sample
map_railroads	V-RAIL-LINE V-RAIL-TIE~WOOD	
map_railroads2	V-RAIL-CNTR	
map_treeline	V-TOPO-VEGE-BRSH V-TOPO-VEGE-TRLN	
map_wall	S-WALL-HIGH V-STRC-WALL-HIGH	
pp_match	G-ANNO-MATC	
rd_fence	C-FENC	
rd_flow	V-ROAD-CURB-FLOW	
rd_flow_line	C-SITE-FLOW	
rd_krail	C-ROAD-TEMP-KRAL V-TOPO-KRAL-FENC-LINE V-TOPO-KRAL-LINE	
rd_LnStrpDsh	C-ROAD-MRKG-DASH V-ROAD-MRKG-DASH	
rd_mbgr_p	C-ROAD-GRAL	
rd_mbgr_x	V-ROAD-GDRL	
rd_slope	V-TOPO-SLOP-TOP~	
rd_temp_fence	NONE	
rd_wall	S-WALL-CNTN V-STRC-WALL-CNTN	

Name	Applied to Layer(s)	Sample
rd_wall_fence	S-WALL-RTWL-FENC V-STRC-RTWL-FENC	
rd_wall_p	S-WALL-RTWL	
rd_wall_x	V-STRC-RTWL V-STRC-WALL	
soil-class_stnd-odor	C-SOIL-EXBR-STND-ODOR	
st_chain	NONE	
st_sheet_piles	S-WALL-SEWL V-STRC-SEWL V-STRC-SHT~-PILE	
tr_delineator	C-ROAD-TEMP-DELN	
tr_delineator_long	NONE	
ut_abnd_cath	V-CATH-LINE-NEG~-ABND V-CATH-LINE-POS~-ABND	
ut_abnd_cath_neg	NONE	
ut_abnd_cath_pos	NONE	
ut_abnd_comm	V-COMM-LINE-ABND	
ut_abnd_comm_secure	V-COMM-FIBR-ABND	
ut_abnd_comp_air	V-CMPA-LINE-ABND	
ut_abnd_elec	V-ELEC-LINE-ABND	

Name	Applied to Layer(s)	Sample
ut_abnd_fiber_optic	NONE	---FQ-----FQ-----FQ----
ut_abnd_fire_alarm	NONE	---FA-----FA-----FA----
ut_abnd_gas	V-GAS~LINE-ABND	--G-----G-----G-----G----
ut_abnd_irrigation	C-WATR-IRRG-LINE V-WATR-IRRG-LINE-ABND	---IRR-----IRR-----IRR-----
ut_abnd_lng	NONE	---LNG-----LNG-----LNG----
ut_abnd_methane_gas	NONE	---MG-----MG-----MG----
ut_abnd_oil	V-CHEM-LINE-ABND V-OIL~GAS~LINE-ABND V-OIL~LINE-ABND V-OIL~MISC-LINE-ABND V-OIL~WATR-LINE-ABND	-----O-----O-----O-----
ut_abnd_outfall	V-STRM-OUTF-LINE-ABND	---OUTF-----OUTF-----OUTF----
ut_abnd_power	V-ELEC-LINE-POWR-ABND	-----P-----P-----P-----
ut_abnd_pub_add	NONE	-----PA-----PA-----PA----
ut_abnd_reclaimed	V-WATR-RECL-LINE-ABND	---RW-----RW-----RW----
ut_abnd_sewer	V-SSWR-LINE-ABND	--S-----S-----S-----S----
ut_abnd_sprinkler	NONE	---SPR-----SPR-----SPR-----
ut_abnd_stdrain	NONE	---SD-----SD-----SD-----

Name	Applied to Layer(s)	Sample
ut_abnd_stlight	NONE	--- SL ----- SL ----- SL -----
ut_abnd_storm_drain	V-STRM-LINE-ABND	--- SD ----- SD ----- SD -----
ut_abnd_tv	NONE	---- TV ----- TV ----- TV -----
ut_abnd_water	V-WATR-LINE-ABND	--- W ----- W ----- W -----
ut_cath	C-CATH-LINE-NEG~ C-CATH-LINE-POS~ V-CATH-LINE-NEG~ V-CATH-LINE-POS~ V-ELEC-CATH-LINE-NEG	--- CP ----- CP ----- CP -----
ut_cath_neg	NONE	--- CPN ----- CPN ----- CPN ----- CPN -----
ut_cath_pos	NONE	--- CPP ----- CPP ----- CPP ----- CPP -----
ut_comm	C-COMM-LINE V-COMM-LINE	--- COM ----- COM ----- COM ----- COM -----
ut_comm_secure	C-COMM-FIBR V-COMM-FIBR	--- COM --- COM --- COM ---
ut_compair	C-CMPA-LINE V-CMPA-LINE	--- CA ----- CA ----- CA -----
ut_elec	C-ALGN-ELEC V-ELEC-LINE	--- E ----- E ----- E -----
ut_fiber_optic	NONE	--- FO ----- FO ----- FO -----
ut_fire_alarm	C-COMM-ALRM	--- FA ----- FA ----- FA -----
ut_gas	C-ALGN-GAS~ C-GAS~LINE V-GAS~LINE	--- G ----- G ----- G -----

Name	Applied to Layer(s)	Sample
ut_ground	C-ELEC-GRND V-ELEC-GRND	—— GR —— GR —— GR ——
ut_irrigation	V-WATR-IRRG-LINE	—— IRR —— IRR —— IRR ——
ut_lng	NONE	—— LNG —— LNG —— LNG ——
ut_methane_gas	NONE	—— MG —— MG —— MG ——
ut_oh_elec	C-ELEC-LINE-OVHD V-ELEC-LINE-OVHD	—— EOH —— EOH —— EOH ——
ut_oh_tele	C-COMM-LINE-OVHD V-COMM-LINE-OVHD	—— TOH —— TOH —— TOH ——
ut_oil	V-CHEM-LINE V-OIL~GAS~LINE V-OIL~LINE V-OIL~LINE-ABOV-GRND V-OIL~MISC-LINE V-OIL~WATR-LINE	— O ——— O ——— O ——— O —
ut_outfall	V-STRM-OUTF-LINE	—— OUTF —— OUTF —— OUTF ——
ut_power	V-ELEC-LINE-POWR	—— P —— P —— P ——
ut_pubadd	C-COMM-PUBL	—— PA —— PA —— PA ——
ut_reclaimed	C-WATR-RECL-LINE V-WATR-RECL-LINE	—— RW —— RW —— RW ——
ut_remove	NONE	/ / / / / / / / /
ut_sewer	C-ALGN-SSWR C-SSWR-LINE V-SSWR-LINE	—— S —— S —— S ——

Name	Applied to Layer(s)	Sample
ut_slptoe	V-TOPO-SLOP-TOE~	—— TOE —— TOE —— TOE ——
ut_sprinkler	V-WATR-SPNKLR-LINE	—— SPR —— SPR —— SPR ——
ut_stdrain	C-ALGN-STRM C-STRM-LINE V-STRM-LINE	—— SD —— SD —— SD ——
ut_stlight	NONE	—— SL —— SL —— SL ——
ut_tv	C-COMM-CATV C-COMM-NODE-FIBR	—— TV —— TV —— TV ——
ut_unknown	V-GUTL-UNKN V-GUTL-UNKN-LINE V-UTIL-TRNCH-UNKN-LINE V-UTIL-XING-UNKN-LINE	—— UNK —— UNK —— UNK ——
ut_water	C-ALGN-WATR C-WATR-LINE V-WATR-LINE	—— W —— W —— W ——
ut_water_bcf	C-WATR-BCFL V-WATR-BCFL-LINE V-WATR-RECL-BCFL-LINE	—— BF —— BF —— BF ——
v_building_outline	V-BLDG-OTLN	
v_channel_line	C-CHAN-LIMT V-CHAN-LIMT	—— - - - - - ——
v_depression_line	C-DTM~MAJR-DEPR C-DTM~MINR-DEPR V-TOPO-MAJR-DEPR V-TOPO-MINR-DEPR	

Name	Applied to Layer(s)	Sample
v_fence	V-STRC-FENC V-STRC-FENC-CHAN-LINK V-TOPO-FENC	—X ———X ———X ———X —
v_fence_gate	V-STRC-FENC-GATE	———FG ———FG ———FG ———
v_pier_head_line	V-CTRL-PHL~ V-WARF-PIER-FACE	- - - - -
v_property_line	C-PROP-BNDY-OWNR V-PROP	——— - - - ——
v_right_of_way	C-PROP-ESMT C-PROP-RWAY	——— - - - ——
v_rock_dike_ref_line	V-SURV-SOUN	——— - - - ——
v_slurry	V-TOPO-SLUR	- - - SLRY - - - SLRY - - - SLRY - - -
v_storm_flow	V-ROAD-FLOW V-STRM-FLOW	- - - FL - - - - FL - - - - FL - - - -
v_trench_drain	V-STRM-DRAN-TRCH V-STRM-TRCH-DRAN	——— TD ——— TD ——— TD ———

APPENDIX B - DISCIPLINE LAYERS LIST

1 GENERAL LAYER PROPERTIES

A. Introduction

This chapter includes General layer assignments that support the development of sheet files and base files for POLB. For more information, please refer to Chapter 10 – Drafting Standards.

B. Layer Assignments

Name	Description
0-XREF	External References (Non-Raster)
G-ANNO-DIMS	Annotation: Witness/extension lines, dimension terminators, dimension text
G-ANNO-GRID	Annotation: Discipline-specific text without leaders
G-ANNO-GRID-MAJR	Annotation: Grid: Major
G-ANNO-GRID-MINR	Annotation: Grid: Minor
G-ANNO-KEYN	Annotation: Reference Keynotes
G-ANNO-LOGO	Annotation: Logos
G-ANNO-MATC	Annotation: Match lines
G-ANNO-NOTE	Annotation: Framed callouts with or without associated leaders, and plan notes with leaders
G-ANNO-NPLT	Annotation: Non-plotting graphic information
G-ANNO-PATT	Annotation: Patterning, Shading, and Hatching
G-ANNO-RDME	Annotation: Non-plotting Read-me information
G-ANNO-REV~	Annotation: Revision Deltas and Clouds

Name	Description
G-ANNO-SYMB	Annotation: Discipline-specific symbols
G-ANNO-TEXT	Annotation: Discipline-specific text without leaders
G-ANNO-TICK	Annotation: Tick marks
G-ANNO-TTLB	Annotation: Border: Titleblock
G-ANNO-TTLB-FRM1 (Construction)	Annotation: Border: Single Engineering Seal Frame (Construction)
G-ANNO-TTLB-FRM2	Annotation: Border: Double Engineering Seal Frame
G-ANNO-TTLB-FRM2 (Construction)	Annotation: Border: Double Engineering Seal Frame (Construction)
G-ANSIA	Annotation: Border: ANSI A Sheet Limits
G-ANSID	Annotation: Border: ANSI D Sheet Limits
G-ARCHD	Annotation: Border: ARCH D Sheet Limits
G-AXIS-LABL-BOTM	Cross-section/Profile Axis Lines: Labels: Bottom
G-AXIS-LABL-LEFT	Cross-section/Profile Axis Lines: Labels: Left
G-AXIS-LABL-RGHT	Cross-section/Profile Axis Lines: Labels: Right
G-AXIS-LINE	Cross-section/Profile Axis Lines: Lines
G-AXIS-TITL-BOTM	Cross-section/Profile Axis Lines: Drawing or detail titles: Bottom
G-AXIS-TITL-LEFT	Cross-section/Profile Axis Lines: Drawing or detail titles: Left
G-AXIS-TITL-RGHT	Cross-section/Profile Axis Lines: Drawing or detail titles: Right
G-BACK	Background shapes
G-LOGO-PRIM	Border: Prime Consultant Logo
G-LOGO-SUB1	Border: Sub Consultant Logo 1

Name	Description
G-LOGO-SUB2	Border: Sub Consultant Logo 2
G-MARK-GRID	Border: Grid for Markup Usage
G-RAST	Raster Images and PDFs

2 ARCHITECTURAL LAYER PROPERTIES

A. Introduction

This chapter includes Architectural layer assignments that support the development of sheet files and base files for POLB.

B. Layer Assignments

Name	Description
A-BLDG	Architectural: Building
A-BLDG-FPRT	Architectural: Building: Footprint
A-BLDG-SITE	Architectural: Building: Site
A-BLDG-UTIL	Architectural: Building: Utility Connections
A-PROP-LINE	Architectural: Property Lines

3 CIVIL LAYER PROPERTIES

A. Introduction

This chapter includes Civil layer assignments that support the development of sheet files and base files for POLB.

B. Layer Assignments

Name	Description
C-ALGN-COMM	Alignment: Telecommunications
C-ALGN-ELEC	Alignment: Electrical
C-ALGN-ELMT-TABL	Alignment: Element: Data Tables
C-ALGN-EVNT	Alignment: Event
C-ALGN-GAS~	Alignment: Gas
C-ALGN-HORZ	Alignment: Horizontal
C-ALGN-LINE	Alignment: Lines
C-ALGN-PONT-TABL	Alignment: Point: Data Tables
C-ALGN-SSWR	Alignment: Sanitary Sewer
C-ALGN-STAN-MAJR	Alignment: Stationing: Major
C-ALGN-STAN-MINR	Alignment: Stationing: Minor
C-ALGN-STAN-TICK	Alignment: Stationing: Tick Marks
C-ALGN-STRM	Alignment: Storm Sewer
C-ALGN-SYMB	Alignment: Reference Symbols
C-ALGN-TEXT	Alignment: Text
C-ALGN-VERT	Alignment: Vertical
C-ALGN-VERT-ANNO	Alignment: Vertical: Annotation

Name	Description
C-ALGN-WATR	Alignment: Water Supply
C-ANNO	Annotation
C-ANNO-DIMS	Annotation: Witness/Extension Lines, Dimension Terminators, Dimension Text
C-ANNO-GRID-COOR	Annotation: Grid: Coordinates
C-ANNO-GRID-DATM	Annotation: Grid: Datum
C-ANNO-GRID-ELEV	Annotation: Grid: Elevation
C-ANNO-KEYN	Annotation: Reference Keynotes
C-ANNO-MATC	Annotation: Matchline
C-ANNO-MATC-PATT	Annotation: Matchline: Patterning, Shading, and Hatching
C-ANNO-MATC-TEXT	Annotation: Matchline: Text
C-ANNO-NOTE	Annotation: Framed Callouts with or without Associated Leaders, and Plan Notes with Leaders
C-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
C-ANNO-PATT	Annotation: Patterning, Shading, and Hatching
C-ANNO-RDME	Annotation: Non-Plotting Read-Me Information
C-ANNO-SYMB	Annotation: Discipline-Specific Symbols
C-ANNO-TABL	Annotation: Table
C-ANNO-TABL-PATT	Annotation: Table: Patterning, Shading, and Hatching
C-ANNO-TABL-TEXT	Annotation: Table Text
C-ANNO-TABL-TITL	Annotation: Table Title
C-ANNO-TABL-TTBL	Annotation: Table Borders
C-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
C-ANNO-VFRM	Annotation: View Frames

Name	Description
C-ANNO-VFRM-TEXT	Annotation: View Frames: Text
C-BNDY-AREA	Boundaries: Area/Zone Limits
C-BNDY-CNST	Boundaries: Construction Limits
C-BNDY-PHAS	Boundaries: Phase Limits
C-BNDY-PROJ	Boundaries: Project Limits
C-BORE	Borings
C-CATH-LINE-NEG~	Cathodic Protection: Negative Lines
C-CATH-LINE-POS~	Cathodic Protection: Positive Lines
C-CATH-NODE-LAND	Cathodic Protection: Anodes: Landside
C-CATH-NODE-WATR	Cathodic Protection: Anodes: Waterside
C-CATH-PONT	Cathodic Protection: Point
C-CHAN-CNTR	Navigable Channels: Center
C-CHAN-LIMT	Navigable Channels: Limit
C-CHAN-SLOP-LINE	Navigable Channels: Slope: Lines
C-CHAN-TOE~	Navigable Channels: Toe of Channel
C-CHAN-TOPB	Navigable Channels: Top of Bank
C-CMPA-LINE	Compressed / Processed Air Systems: Lines
C-CMPA-PONT	Compressed / Processed Air Systems: Points
C-COMM-ALRM	Telecommunications: Alarm
C-COMM-CATV	Telecommunications: Cable Television
C-COMM-DEVC	Telecommunications: Devices
C-COMM-DUCT-CNTR	Telecommunications: Ductbanks: Centerlines

Name	Description
C-COMM-DUCT-EDGE	Telecommunications: Ductbanks: Edges
C-COMM-FIBR	Telecommunications: Fiber Optics Cable
C-COMM-LINE	Telecommunications: Lines
C-COMM-LINE-OVHD	Telecommunications: Overhead Lines
C-COMM-NODE-FIBR	Telecommunications: Node: Fiber
C-COMM-PUBL	Telecommunications: Public Address
C-DTCH-BOTM	Ditches or Washes: Bottom
C-DTCH-CNTR	Ditches or Washes: Center
C-DTCH-LIMT	Ditches or Washes: Limit
C-DTCH-SLOP-LINE	Ditches or Washes: Slope: Lines
C-DTCH-TOE~	Ditches or Washes: Toe of Channel
C-DTCH-TOPB	Ditches or Washes: Top of Bank
C-DTM~-ANNO	Digital Terrain Model: Annotation
C-DTM~-BNDY-COOR	Digital Terrain Model: Boundary: Coordinate
C-DTM~-BRKL	Digital Terrain Model: Break Lines
C-DTM~-BRKL-INFD	Digital Terrain Model: Break Lines: Inferred
C-DTM~-COOR	Digital Terrain Model: Coordinate
C-DTM~-CTUR	Digital Terrain Model: Contour Breakline
C-DTM~-CTUR-COOR	Digital Terrain Model: Contour Breakline: Coordinate
C-DTM~-EXTR	Digital Terrain Model: Exterior
C-DTM~-FTUR-COOR	Digital Terrain Model: Feature: Coordinate
C-DTM~-GRND-EXST	Digital Terrain Model: Ground: Existing to Remain

Name	Description
C-DTM~-GRND-PROP	Digital Terrain Model: Ground: New Work
C-DTM~-HGL~	Digital Terrain Model: Hydraulic Grade Line
C-DTM~-HING	Digital Terrain Model: Hinge Point
C-DTM~-INTR	Digital Terrain Model: Interior
C-DTM~-MAJR	Digital Terrain Model: Major
C-DTM~-MAJR-ANNO	Digital Terrain Model: Major: Annotation
C-DTM~-MAJR-DEPR	Digital Terrain Model: Major: Depression
C-DTM~-MINR	Digital Terrain Model: Minor
C-DTM~-MINR-ANNO	Digital Terrain Model: Minor: Annotation
C-DTM~-MINR-DEPR	Digital Terrain Model: Minor: Depression
C-DTM~-MMTC	Digital Terrain Model: Mismatched Elevation
C-DTM~-NULL	Digital Terrain Model: Null Point
C-DTM~-PMTR	Digital Terrain Model: Perimeter
C-DTM~-PONT	Digital Terrain Model: Point
C-DTM~-RIDG	Digital Terrain Model: Ridgeline
C-DTM~-RTWL	Digital Terrain Model: Retaining Wall
C-DTM~-SCUT	Digital Terrain Model: Sawcut
C-DTM~-SLOP	Digital Terrain Model: Two Point Slope
C-DTM~-SLOP-ANNO	Digital Terrain Model: Two Point Slope: Annotation
C-DTM~-SLOP-BNCH	Digital Terrain Model: Slope: Bench
C-DTM~-SLOP-CUT~	Digital Terrain Model: Slope: Cut Line
C-DTM~-SLOP-FILL	Digital Terrain Model: Slope: Fill and Cover Material

Name	Description
C-DTM~-SLOP-TOPT	Digital Terrain Model: Slope: Top or Toe of Slope
C-DTM~-SLOP-TRAV	Digital Terrain Model: Slope: Transverse
C-DTM~-SPOT	Digital Terrain Model: Spot Elevations
C-DTM~-TRGL	Digital Terrain Model: Triangle
C-DTM~-XBRK	Digital Terrain Model: Crossing Breaklines
C-DTM~-XING	Digital Terrain Model: Crossing Point
C-ELEC-DEVC	Electrical (600V or Lower): Devices
C-ELEC-DUCT-CNTR	Electrical (600V or Lower): Ductbanks: Centerlines
C-ELEC-DUCT-EDGE	Electrical (600V or Lower): Ductbanks: Edges
C-ELEC-DUCT-IDEN	Electrical and Communications: Ductbanks: Identification Tags
C-ELEC-FEED-IDEN	Electrical and Communications: Feeders: Identification Tags
C-ELEC-GRND	Electrical: Ground Conductors
C-ELEC-LINE	Electrical (600V or Lower): Lines
C-ELEC-LINE-OVHD	Electrical (600V or Lower): Overhead Lines
C-ELEC-POWR-DEVC	Electrical (Above 600V): Devices
C-ELEC-POWR-DUCT-CNTR	Electrical (Above 600V): Ductbanks: Centerlines
C-ELEC-POWR-DUCT-EDGE	Electrical (Above 600V): Ductbanks: Edges
C-ELEC-POWR-LINE	Electrical (Above 600V): Lines
C-ELEC-SLDG	Electrical: Single Line Diagrams
C-EROS	Erosion Control: Erosion and Sediment Protection
C-EROS-BIND	Erosion Control: Soil Binder
C-EROS-CHEK	Erosion Control: Check Dams

Name	Description
C-EROS-CIPR	Erosion Control: Culvert Inlet Protection
C-EROS-CNTE	Erosion Control: Construction Entrances
C-EROS-CSM~	Erosion Control: Contaminated Soil Management
C-EROS-CURE	Erosion Control: Concrete Curing
C-EROS-CWM~	Erosion Control: Concrete Waste Management
C-EROS-DDIV	Erosion Control: Drainage Divides
C-EROS-DVDK	Erosion Control: Diversion Dikes
C-EROS-FENC	Erosion Control: Temporary Fencing
C-EROS-HYDR	Erosion Control: Hydroseeding
C-EROS-INPR	Erosion Control: Inlet Protection
C-EROS-MLCH	Erosion Control: Straw Mulch
C-EROS-SILT	Erosion Control: Silt Fence
C-EROS-SSLT	Erosion Control: Super Silt Fence
C-EROS-STOK	Erosion Control: Stockpile Management
C-EROS-TDS~	Erosion Control: Temporary Ditch Swale
C-EROS-TEB~	Erosion Control: Temporary Earth Berm
C-EROS-TFR~	Erosion Control: Temporary Fiber Roll
C-EROS-TGBB	Erosion Control: Temporary Gravel Bag Barrier
C-EROS-TLB1	Erosion Control: Temporary Linear Barrier (Type 1)
C-EROS-TLB2	Erosion Control: Temporary Linear Barrier (Type 2)
C-EROS-TLB3	Erosion Control: Temporary Linear Barrier (Type 3)
C-EROS-TSBB	Erosion Control: Temporary Straw Bale Barrier

Name	Description
C-EROS-TSDP	Erosion Control: Temporary Slope Drain Flex Pipe
C-EROS-VEC~	Erosion Control: Vehicle Cleaning
C-EROS-VEF~	Erosion Control: Vehicle Fueling
C-EROS-VEGE	Erosion Control: Preserve Vegetation
C-EROS-VEM~	Erosion Control: Vehicle Maintenance
C-EROS-WIND	Erosion Control: Wind Erosion
C-ESMT-ROAD	Easements: Roadway
C-FENC	Fences
C-FENC-TEMP	Fences: Temporary Chain Link
C-FIRE-ACCS	Fire Access Routes
C-GAS~-CAPS	Gas: Cap
C-GAS~-DEVC	Gas: Devices
C-GAS~-LINE	Gas: Lines
C-GAS~-METR	Gas: Meter
C-GAS~-RDCR	Gas: Reducer
C-GAS~-RISR	Gas: Risers
C-GAS~-TANK	Gas: Storage tanks
C-GAS~-TSTB	Gas: Tee stub out
C-GAS~-VALV	Gas: Valves
C-GAS~-VENT	Gas: Vents
C-GAS~-VERT-BEND	Gas: Vertical: Bend
C-GAS~-XING	Gas: Crossing Point

Name	Description
C-GUTL-CASE	General Utilities: Casing
C-HYDR-CTCH	Hydrology: Catchments
C-HYDR-CTCH-BNDY	Hydrology: Catchments: Boundary
C-HYDR-CTCH-DSPT	Hydrology: Downstream Point
C-HYDR-CTCH-FPTH	Hydrology: Catchments: Flow Path
C-HYDR-CTCH-FPTH-TEXT	Hydrology: Catchments: Flow Path: Text
C-HYDR-CTCH-FSPT	Hydrology: Flow Stream Point
C-HYDR-CTCH-HDPT	Hydrology: High Drainage Point
C-HYDR-CTCH-TEXT	Hydrology: Catchments: Text
C-HYDR-TEXT	Hydrology: Text
C-LEVE-CNTR	Levee: Center
C-LEVE-OTLN	Levee: Outline
C-LEVE-TOE~	Levee: Toe of Channel
C-LEVE-TOPB	Levee: Top of Bank
C-LIQ~-WAST-LOC	Liquid Waste
C-PRKG	Parking Lots
C-PROP-BNDY	Property: Boundary
C-PROP-BNDY-OWNR	Property: Boundary: Owner
C-PROP-BNDY-POLB	Property: Boundary: Boundary: Port of Long Beach
C-PROP-BRNG	Property: Bearing
C-PROP-ESMT	Property Boundary: Easement
C-PROP-LEAS	Property Boundary: Lease

Name	Description
C-PROP-LINE	Property: Parcel Lines
C-PROP-LINE-TEXT	Property: Parcel Lines: Text
C-PROP-LOTS	Property: Lots
C-PROP-PATT	Property: Parcel Patterning, Shading, and Hatching
C-PROP-RSRV	Property: Reserved
C-PROP-RWAY	Property Boundary: Right-of-Way
C-PROP-TEXT	Property: Label
C-RAIL-CANT-VIEW-CNTR	Railways: Cant View: Centerline
C-RAIL-CANT-VIEW-EQLB	Railways: Cant View: Equilibrium
C-RAIL-CANT-VIEW-LEFT	Railways: Cant View: Left
C-RAIL-CANT-VIEW-RGHT	Railways: Cant View: Right
C-RAIL-CANT-VIEW-TEXT	Railways: Cant View: Text
C-RAIL-CANT-VIEW-TICK	Railways: Cant View: Tick
C-RAIL-CANT-VIEW-TITL	Railways: Cant View: Title
C-RAIL-CANT-VIEW-TTLB	Railways: Cant View: Labels
C-ROAD	Roadways
C-ROAD-ASPH	Roadways: Asphalt
C-ROAD-ASSM	Roadways: Assemblies and Subassemblies
C-ROAD-ASSM-BLIN	Roadways: Assembly Baseline
C-ROAD-ASSM-OFFS	Roadways: Assembly Offset
C-ROAD-ASSM-TEXT	Roadways: Assembly Text
C-ROAD-BARR	Roadways: Barrier

Name	Description
C-ROAD-BASE	Roadways: Base Course
C-ROAD-BRNG	Roadways: Bearings
C-ROAD-CNTR	Roadways: Centerline
C-ROAD-CNTR-N	Roadways: Centerline: New Work
C-ROAD-CONC	Roadways: Concrete
C-ROAD-CORR	Roadways: Corridor
C-ROAD-CORR-BNDY	Roadways: Corridor: Boundary
C-ROAD-CORR-PATT	Roadways: Corridor: Patterning, Shading, and Hatching
C-ROAD-CORR-TEST	C-ROAD-CORR-TEST Corr
C-ROAD-CRSH	Roadways: Crash Cushions
C-ROAD-CURB	Roadways: Curb
C-ROAD-CURB-BACK	Roadways: Curb: Back of Curb
C-ROAD-CURB-FLOW	Roadways: Curb: Flowline of Curb
C-ROAD-CURB-GUTR-LIP~	Roadways: Curb: Lip of Gutter
C-ROAD-CURB-TOP~	Roadways: Curb: Top of Curb
C-ROAD-CURV	Roadways: Curves
C-ROAD-DRAN	Roadways: Drainage Slope Indications
C-ROAD-ELEC	Roadways: Electrical Lighting
C-ROAD-EOP~	Roadways: Edge of Pavement
C-ROAD-FEAT	Roadways: Feature Line
C-ROAD-GRAL	Roadways: Guard Rail
C-ROAD-GRVL	Roadways: Gravel

Name	Description
C-ROAD-INTS	Roadways: Intersection
C-ROAD-INTS-TEXT	Roadways: Intersection: Text
C-ROAD-LABL	Roadways: Labels
C-ROAD-LINE	Roadways: Tangent Lines
C-ROAD-LINE-EXTN	Roadways: PVI Extension Lines
C-ROAD-LINK	Roadways: Corridor and Section Links
C-ROAD-LINK-TEXT	Roadways: Corridor and Section Link Text
C-ROAD-MARK	Roadways: Corridor and Section Marks
C-ROAD-MASS-LINE	Roadways: Mass Haul: Line
C-ROAD-MASS-LINE-FREE	Roadways: Mass Haul: Free Haul Line
C-ROAD-MASS-LINE-N	Roadways: Mass Haul: New
C-ROAD-MASS-LINE-OVER	Roadways: Mass Haul: Overhaul Area
C-ROAD-MASS-VIEW	Roadways: Mass Haul: View
C-ROAD-MASS-VIEW-GRID-MAJR	Roadways: Mass Haul View Gridlines @ Major Stations
C-ROAD-MASS-VIEW-GRID-MINR	Roadways: Mass Haul View: Gridlines @ Minor Station
C-ROAD-MASS-VIEW-TEXT	Roadways: Mass Haul View: Text
C-ROAD-MASS-VIEW-TITL	Roadways: Mass Haul View: Title
C-ROAD-MASS-VIEW-TTLB	Roadways: Mass Haul View: Labels
C-ROAD-MRKG	Roadways: Pavement Markings and Striping
C-ROAD-MRKG-DASH	Roadways: Striping (Dashed)
C-ROAD-PROF	Roadways: Profiles
C-ROAD-PROF-ASMC	Roadways: Profile: Asymmetrical Curves

Name	Description
C-ROAD-PROF-CURV	Roadways: Profile: Vertical Curves
C-ROAD-PROF-DIAG	Roadways: Profile: Band Diagrams
C-ROAD-PROF-GRID	Roadways: Profile: Grid
C-ROAD-PROF-GRID-GEOM	Roadways: Profile: Gridlines @ Geometry Points
C-ROAD-PROF-GRID-MAJR	Roadways: Profile: Gridlines @ Major Stations
C-ROAD-PROF-GRID-MINR	Roadways: Profile: Gridline @ Minor Stations
C-ROAD-PROF-LABL	Roadways: Profile: Label
C-ROAD-PROF-LINE	Roadways: Profile: Vertical Lines
C-ROAD-PROF-LINE-EXTN	Roadways: Profile: Centerline Extension
C-ROAD-PROF-LTOF	Roadways: Profile: Left Offset Sample Lines
C-ROAD-PROF-PARB	Roadways: Profile: Parabolic Curves
C-ROAD-PROF-PNTS	Roadways: Profile: Geometry Points
C-ROAD-PROF-PROJ	Roadways: Profile: Projection
C-ROAD-PROF-PROP	Roadways: Profile: New
C-ROAD-PROF-RTOF	Roadways: Profile: Right Offset Sample Lines
C-ROAD-PROF-STAN-GEOM	Roadways: Profile: Geometry Point Labels
C-ROAD-PROF-STAN-MAJR	Roadways: Profile: Major Station Labels
C-ROAD-PROF-STAN-MINR	Roadways: Profile: Minor Station Labels
C-ROAD-PROF-TEXT	Roadways: Profile: Text
C-ROAD-PROF-TICK	Roadways: Profile: Tick Marks
C-ROAD-PROF-TITL	Roadways: Profile: Title
C-ROAD-PROF-TTLB	Roadways: Profile: Border

Name	Description
C-ROAD-PROF-VIEW	Roadways: Profile View
C-ROAD-SAMP	Roadways: Sample Lines
C-ROAD-SAMP-TEXT	Roadways: Sample Lines Text
C-ROAD-SCTN	Roadways: Section
C-ROAD-SCTN-TEXT	Roadways: Section Text
C-ROAD-SCTN-VIEW	Roadways: Section View
C-ROAD-SECT	Roadways: Sections
C-ROAD-SECT-BUFR	Roadways: Section: Buffer
C-ROAD-SECT-DIAG	Roadways: Section: Diagram
C-ROAD-SECT-GRID	Roadways: Section: Grid
C-ROAD-SECT-LABL	Roadways: Section: Labels
C-ROAD-SECT-N	Roadways: Section: New Work
C-ROAD-SECT-PROJ	Roadways: Section: Projection
C-ROAD-SECT-SHET	Roadways: Section: Sheets
C-ROAD-SECT-TABL	Roadways: Section: Tables
C-ROAD-SECT-TEXT	Roadways: Section: Text
C-ROAD-SECT-TICK	Roadways: Section: Tick Marks
C-ROAD-SECT-TITL	Roadways: Section: Title
C-ROAD-SECT-TTLB	Roadways: Section: Border
C-ROAD-SELV-VIEW	Roadways: Superelevation View
C-ROAD-SELV-VIEW-TEXT	Roadways: Superelevation View: Text
C-ROAD-SELV-VIEW-TICK	Roadways: Superelevation View: Tick

Name	Description
C-ROAD-SELV-VIEW-TITL	Roadways: Superelevation View: Title
C-ROAD-SELV-VIEW-TTLB	Roadways: Superelevation View: Labels
C-ROAD-SGHT-EYE~PATH	Roadways: Sight Distance Eye Path
C-ROAD-SGHT-LIMT-LINE	Roadways: Sight Distance Sight Limitation Line
C-ROAD-SGHT-OBST-AREA	Roadways: Sight Distance Obstructed Area
C-ROAD-SGHT-OBST-LINE	Roadways: Sight Distance Obstructed Sight Line
C-ROAD-SGHT-OBST-PATH	Roadways: Sight Distance Obstructed Eye Path
C-ROAD-SGHT-VIS~-LINE	Roadways: Sight Distance Visible Sight Lines
C-ROAD-SGNL	Roadways: Signals
C-ROAD-SHAP	Roadways: Corridor and Section Shapes
C-ROAD-SHAP-PATT	Roadways: Corridor and Section Shapes: Patterning, Shading, and Hatching
C-ROAD-SHLD	Roadways: Shoulder
C-ROAD-SIGN	Roadways: Signage
C-ROAD-SPIR	Roadways: Spirals
C-ROAD-STAN	Roadways: Stationing
C-ROAD-STAN-MAJR	Roadways: Major Stationing Labels
C-ROAD-STAN-MINR	Roadways: Minor Stationing Labels
C-ROAD-SUBB	Roadways: Subbase
C-ROAD-SWLK	Roadways: Sidewalks: Back of Sidewalk
C-ROAD-TABL	Roadways: Tables
C-ROAD-TEMP	Roadways: Temporary Pavement Markings and Traffic Control Devices
C-ROAD-TEMP-DELN	Roadways: Temporary Pavement Markings and Traffic Control Devices: Delineators

Name	Description
C-ROAD-TEMP-KRAL	Roadways: Temporary Pavement Markings and Traffic Control Devices: K-Rail
C-ROAD-TEXT	Roadways: Text
C-ROAD-UPVD	Roadways: Unpaved Surface
C-SITE-BLDG	Site: Building Edge or Points
C-SITE-BLDG-FNDN	Site: Building Foundations
C-SITE-BLDG-FTNG	Site: Building Footings
C-SITE-BOTB	Site: Bottom of Bank or Slope
C-SITE-BRKL	Site: Breaklines
C-SITE-EDGE-ASPH	Site: Edge of Asphalt Pavement
C-SITE-EDGE-CONC	Site: Edge of Concrete Pavement
C-SITE-FLOW	Site: Flowline
C-SITE-MISC	Site: Miscellaneous Site Features
C-SITE-PADS-ASPH	Site: Asphalt Pads
C-SITE-PADS-CONC	Site: Concrete Pads
C-SITE-PAVR	Site: Unit Pavers
C-SITE-POND	Site: Top/Bottom of Detention or Retention Ponds
C-SITE-RAMP	Site: Structural Loading Ramp
C-SITE-SLAB	Site: Structural Slab
C-SITE-SWLK	Site: Sidewalks and Steps
C-SITE-TOPB	Site: Top of Bank or Slope
C-SOIL-EXBR-CAL~	Non-RCRA California-Hazardous Waste
C-SOIL-EXBR-CAL~-PATT	Non-RCRA California-Hazardous Waste

Name	Description
C-SOIL-EXBR-NNHZ	Non-Hazardous Waste
C-SOIL-EXBR-NNHZ-PATT	Non-Hazardous Waste
C-SOIL-EXBR-RCRA	RCRA California-Hazardous Waste
C-SOIL-EXBR-RCRA-PATT	RCRA California-Hazardous Waste
C-SOIL-EXBR-STND-ODOR	Stained or Odorous Material
C-SOIL-EXBR-TSCA	TSCA-Hazardous Waste
C-SOIL-EXBR-TSCA-PATT	TSCA-Hazardous Waste
C-SOIL-VOC~-CNTM-LOC~	VOC-Contaminated Soil
C-SOIL-VOC~-CNTM-VAPR	VOC-Contaminated Soil
C-SSWR-CAPS	Sanitary Sewer: Cap
C-SSWR-CLNO	Sanitary Sewer: Cleanout
C-SSWR-CNTR	Sanitary Sewer: Centerline
C-SSWR-LIFT	Sanitary Sewer: Lift Station
C-SSWR-LINE	Sanitary Sewer: Lines
C-SSWR-MHOL	Sanitary Sewer: Manhole
C-SSWR-MHOL-NVRT	Sanitary Sewer: Manhole: Invert
C-SSWR-PIPE	Sanitary Sewer: Piping
C-SSWR-PIPE-PATT	Sanitary Sewer: Piping: Patterning, Shading, and Hatching
C-SSWR-PROF	Sanitary Sewer: Profile
C-SSWR-PUMP	Sanitary Sewer: Pump Station
C-SSWR-PWAL	Sanitary Sewer: Pipe Walls
C-SSWR-SCTN	Sanitary Sewer: Section

Name	Description
C-SSWR-STRC	Sanitary Sewer: Structures
C-SSWR-STRC-PATT	Sanitary Sewer: Structures: Patterning, Shading, and Hatching
C-SSWR-TANK	Sanitary Sewer: Storage Tanks
C-SSWR-TEXT	Sanitary Sewer: Text
C-SSWR-TSTB	Sanitary Sewer: Tee Stub Out
C-SSWR-VERT-BEND	Sanitary Sewer: Vertical: Bend
C-SSWR-WSTB	Sanitary Sewer: Wye Stub Out
C-SSWR-XING	Sanitary Sewer: Crossing Point
C-STRM-BMP~	Storm Sewer: Permanent BMPs
C-STRM-CLNO	Storm Sewer: Cleanout
C-STRM-CLRF	Storm Sewer: Clarifier
C-STRM-CNTR	Storm Sewer: Centerline
C-STRM-CULV	Storm Sewer: Culvert
C-STRM-HWAL	Storm Sewer: Headwall, Flood Walls, Wing Walls
C-STRM-INLT	Storm Sewer: Inlet
C-STRM-LINE	Storm Sewer: Lines
C-STRM-MHOL	Storm Sewer: Manhole
C-STRM-OUTF	Storm Sewer: Outfall Point
C-STRM-PIPE	Storm Sewer: Piping
C-STRM-PIPE-PATT	Storm Sewer: Piping: Patterning, Shading, and Hatching
C-STRM-PIPE-TEXT	Storm Sewer: Piping: Text
C-STRM-PROF	Storm Sewer: Profile

Name	Description
C-STRM-PUMP	Storm Sewer: Pump Station
C-STRM-PWAL	Storm Sewer: Pipe Walls
C-STRM-SCTN	Storm Sewer: Section
C-STRM-STRC	Storm Sewer: Structures
C-STRM-STRC-PATT	Storm Sewer: Structures: Patterning, Shading, and Hatching
C-STRM-SUBD	Storm Sewer: Subdrains, Underdrains
C-STRM-SUMP	Storm Sewer: Sump
C-STRM-TABL	Storm Sewer: Table
C-STRM-TEXT	Storm Sewer: Text
C-STRM-XING	Storm Sewer: Crossing Point
C-TINN	Triangulated Irregular Network
C-TINN-BNDY	Triangulated Irregular Network: Boundary
C-TINN-VIEW	Triangulated Irregular Network: Triangle View
C-TOPO-CONT-TEXT	Topography: Contour Labels
C-TOPO-CONT-TEXT-N	Topography: Contours Labels: New Work
C-TOPO-FEAT	Topography: Feature
C-TOPO-GRAD	Topography: Grading
C-TOPO-GRAD-CUTS	Topography: Grading: Cut Material
C-TOPO-GRAD-FILL	Topography: Grading: Fill and Cover Material
C-TOPO-GRAD-TEXT	Topography: Grading: Text
C-TOPO-MAJR	Topography: Major Gridlines
C-TOPO-MAJR-N	Topography: Major Contours: New Work

Name	Description
C-TOPO-MINR	Topography: Minor Gridlines
C-TOPO-MINR-N	Topography: Minor Contours: New Work
C-TOPO-TEXT	Topography: Text
C-TOPO-USER	Topography: User Contours
C-TOPO-WDRP	Topography: Waterdrop
C-TOPO-WSHD	Topography: Watershed
C-TOPO-WSHD-TEXT	Topography: Watershed: Text
C-TRAL-CNTR	Trails Or Paths: Center
C-TRAL-EDGE	Trails Or Paths: Edge
C-TRCH-CNTR	Trench: Center
C-TRCH-TOE~	Trench: Toe of Channel
C-TRCH-TOP~	Trench: Top
C-UTIL-PIPE	Utility: Piping
C-UTIL-PIPE-TEXT	Utility: Piping: Text
C-UTIL-PROF	Utility: Profile
C-UTIL-SCTN	Utility: Section
C-UTIL-STRC	Utility: Structure
C-UTIL-TABL	Utility: Table
C-UTIL-TEXT	Utility: Text
C-WATR-APPT	Water Supply: Appurtenances
C-WATR-APPT-PATT	Water Supply: Appurtenances: Patterning, Shading, and Hatching
C-WATR-BCFL	Water Supply: Back of Flow

Name	Description
C-WATR-CAPS	Water Supply: Cap
C-WATR-CNTR	Water Supply: Centerline
C-WATR-FITT	Water Supply: Fittings
C-WATR-FITT-PATT	Water Supply: Fittings: Patterning, Shading, and Hatching
C-WATR-HYDT	Water Supply: Hydrants and Connections
C-WATR-IRRG-LINE	Water Supply: Irrigation Lines
C-WATR-LINE	Water Supply: Lines
C-WATR-METR	Water Supply: Meter
C-WATR-MHOL	Water Supply: Manhole
C-WATR-MHOL-NVRT	Water Supply: Manhole: Invert
C-WATR-PIPE	Water Supply: Pressure Pipe
C-WATR-PIPE-PATT	Water Supply: Pressure Pipes: Patterning, Shading, and Hatching
C-WATR-POST	Water Supply: Posts
C-WATR-PROF	Water Supply: Profile
C-WATR-PWAL	Water Supply: Pipe Walls
C-WATR-RDCR	Water Supply: Reducer
C-WATR-RECL-BCFL	Water Supply: Reclaimed Water: Backflow
C-WATR-RECL-CAPS	Water Supply: Reclaimed Water: Cap
C-WATR-RECL-HYDT	Water Supply: Reclaimed Water: Hydrants and Connections
C-WATR-RECL-LINE	Water Supply: Reclaimed Water: Lines
C-WATR-RECL-METR	Water Supply: Reclaimed Water: Meter
C-WATR-RECL-MHOL	Water Supply: Reclaimed Water: Manhole

Name	Description
C-WATR-RECL-MHOL-NVRT	Water Supply: Reclaimed Water: Manhole: Invert
C-WATR-RECL-POST	Water Supply: Reclaimed Water: Posts
C-WATR-RECL-RDCR	Water Supply: Reclaimed Water: Reducer
C-WATR-RECL-RISR	Water Supply: Reclaimed Water: Risers
C-WATR-RECL-TRST	Water Supply: Reclaimed Water: Thrust Block
C-WATR-RECL-TSTB	Water Supply: Reclaimed Water: Tee Stub Out
C-WATR-RECL-VALT	Water Supply: Reclaimed Water: Vault
C-WATR-RECL-VALV	Water Supply: Reclaimed Water: Valves
C-WATR-RECL-VERT-BEND	Water Supply: Reclaimed Water: Vertical Bend
C-WATR-RECL-XING	Water Supply: Reclaimed Water: Crossing Point
C-WATR-RISR	Water Supply: Risers
C-WATR-SCTN	Water Supply: Section
C-WATR-SHSV	Water Supply: Ship To Shore Service
C-WATR-TABL	Water Supply: Table
C-WATR-TEXT	Water Supply: Text
C-WATR-TRST	Water Supply: Thrust Block
C-WATR-TSTB	Water Supply: Tee Stubout
C-WATR-VALT	Water Supply: Vault
C-WATR-VALV	Water Supply: Valves
C-WATR-VERT-BEND	Water Supply: Vertical: Bend
C-WATR-XING	Water Supply: Crossing Point

4 DETAIL LAYER PROPERTIES

A. Introduction

This chapter includes Detail layer assignments that support the development of sheets for POLB. These layers should only be used when no discipline-specific layers are available for the subject matter being detailed.

B. Layer Assignments

Name	Description
D-ANNO-DIMS	Annotation: Witness/Extension Lines, Dimension Terminators, Dimension Text
D-ANNO-KEYN	Annotation: Reference Keynotes
D-ANNO-MISC	Annotation: Miscellaneous
D-ANNO-NOTE	Annotation: Framed callouts with or without associated leaders, and plan notes with leaders
D-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
D-ANNO-PATT	Annotation: Patterning, Shading, and Hatching
D-ANNO-PATT-CONC	Annotation: Patterning, Shading, and Hatching: Concrete
D-ANNO-PATT-ERTH	Annotation: Patterning, Shading, and Hatching: Earth
D-ANNO-PATT-GRVL	Annotation: Patterning, Shading, and Hatching: Gravel
D-ANNO-PATT-SOIL	Annotation: Patterning, Shading, and Hatching: Soil
D-ANNO-PATT-STEL	Annotation: Patterning, Shading, and Hatching: Steel
D-ANNO-RDME	Annotation: Non-Plotting Read-Me Information
D-ANNO-SYMB	Annotation: Discipline-Specific Symbols
D-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
D-LINE-CENT	Lines: Centerlines
D-LINE-GEOM	Lines: Geometry

Name	Description
D-LINE-HIDD	Lines: Hidden Lines
D-LINE-SECT	Lines: Section Lines
D-REIN-RBAR	Reinforced: Rebar
D-ROAD-MRKG	Roadways: Striping
D-TABL-LINE	Table: Lines
D-TABL-TEXT	Table: Text

5 LANDSCAPE LAYER PROPERTIES

A. Introduction

This chapter includes Landscape layer assignments that support the development of sheet files and base files for POLB.

B. Layer Assignments

Name	Description
L-ANNO-DIMS	Annotation: Witness/extension lines, dimension terminators, dimension text
L-ANNO-KEYN	Annotation: Reference Keynotes
L-ANNO-NOTE	Annotation: Framed callouts with or without associated leaders, and plan notes with leaders
L-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
L-ANNO-PATT	Annotation: Patterning, Poche, Shading, And Hatching
L-ANNO-RDME	Annotation: Non-Plotting Read-Me Information
L-ANNO-SYMB	Annotation: Discipline-Specific Symbols
L-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
L-IRRG	Irrigation
L-IRRG-COVR	Irrigation: Coverage
L-IRRG-DRIP	Irrigation: Drip Irrigation Tubing
L-IRRG-EQPM	Irrigation: Equipment (Pumps, Valves, and Controllers)
L-IRRG-LTRL	Irrigation: Lateral Pipe
L-IRRG-PIPE	Irrigation: Piping
L-IRRG-SLVE	Irrigation: Pipe Sleeve
L-IRRG-SPKL	Irrigation: Sprinklers (Rotors, Heads)
L-IRRG-VALV	Irrigation: Valves

Name	Description
L-PLNT	Plant and Landscape Material
L-PLNT-BEDS	Plant and Landscape Material: Perennial and Annual Beds
L-PLNT-BUSH	Plant and Landscape Material: Bushes and Shrubs
L-PLNT-CONI	Plant and Landscape Material: Coniferous Trees
L-PLNT-CTNR	Plant and Landscape Material: Container or Planter
L-PLNT-EDGR	Plant and Landscape Material: Planting Bed Edger
L-PLNT-EVGR	Plant and Landscape Material: Evergreen Trees - Broadleaf
L-PLNT-GCVR	Plant and Landscape Material: Ground Cover
L-PLNT-MLCH	Plant and Landscape Material: Mulches - Organic and Inorganic
L-PLNT-PALM	Plant and Landscape Material: Palm Trees
L-PLNT-PLNT	Plant and Landscape Material: Plants
L-PLNT-SEED	Plant and Landscape Material: Seeding Areas
L-PLNT-TREE	Plant and Landscape Material: Trees
L-PLNT-TURF	Plant and Landscape Material: Lawn Areas
L-PLNT-VINE	Plant and Landscape Material: Vines
L-PVMT	Pavement
L-PVMT-ASPH	Pavement: Asphalt
L-PVMT-BRCK	Pavement: Brick
L-PVMT-CONC	Pavement: Concrete
L-PVMT-CONC-AGGR	Pavement: Concrete: Exposed Aggregate
L-PVMT-GRVL	Pavement: Gravel
L-PVMT-JNTC	Pavement: Control Joint

Name	Description
L-PVMT-JNTE	Pavement: Expansion Joint (For Concrete Only)
L-PVMT-PAVR	Pavement: Unit Pavers
L-PVMT-RAMP	Pavement: Accessible Ramp
L-PVMT-STRS	Pavement: Stair Treads

6 RAILROAD LAYER PROPERTIES

A. Introduction

This chapter includes Railroad layer assignments that support the development of sheet files and base files for POLB.

B. Layer Assignments

Name	Description
R-ALGN-HORZ	Alignments: Horizontal
R-ANNO-DIMS	Annotation: Witness/Extension Lines, Dimension Terminators, Dimension Text
R-ANNO-KEYN	Annotation: Reference Keynotes
R-ANNO-NOTE	Annotation: Framed Callouts with or without Associated Leaders, and Plan Notes with Leaders
R-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
R-ANNO-PATT	Annotation: Patterning, Shading, and Hatching
R-ANNO-RDME	Annotation: Non-Plotting Read-Me Information
R-ANNO-SYMB	Annotation: Discipline-Specific Symbols
R-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
R-RAIL-BUMP	Railway: Bumpers
R-RAIL-CNTR	Railway: Centerlines
R-RAIL-DXPT	Railway: Diamond Crossing Point
R-RAIL-LINE	Railway: Single Line Diagrams and Miscellaneous Signal
R-RAIL-SGNL	Railway: Signal Equipment
R-RAIL-SWCH	Railway: Switches and Switch Parts
R-RAIL-TOUT	Railway: Switch Points
R-RAIL-TRAK	Railway: Track Top of Rail

Name	Description
R-RAIL-XING-ARMB	Railway: Crossing Arm Base

7 STRUCTURAL LAYER PROPERTIES

A. Introduction

This chapter includes Structural layer assignments that support the development of sheet files and base files for POLB.

B. Layer Assignments

Name	Description
S-ACCS-ADIT	Access: Adits In Galleries and Passages
S-ACCS-CHAM	Access: Chambers
S-ACCS-EVTR	Access: Elevators
S-ACCS-GLRY	Access: Galleries, Crossovers, Trenches, etc.
S-ACCS-HTCH	Access: Hatches
S-ACCS-LADD	Access: Ladders And Ladder Safety Devices
S-ACCS-MHOL	Access: Manholes
S-ACCS-MISC	Access: Miscellaneous
S-ACCS-STRS	Access: Stairs
S-ACCS-STRS-FRMG	Access: Stairs: Framing
S-ACCS-TUNL	Access: Tunnels
S-ANNO-DIMS	Annotation: Witness/Extension Lines, Dimension Terminators, Dimension Text
S-ANNO-KEYN	Annotation: Reference Keynotes
S-ANNO-NOTE	Annotation: Framed Callouts with or without Associated Leaders, and Plan Notes with Leaders
S-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
S-ANNO-PATT	Annotation: Patterning, Poche, Shading, And Hatching
S-ANNO-RDME	Annotation: Non-Plotting Read-Me Information

Name	Description
S-ANNO-SYMB	Annotation: Discipline-Specific Symbols
S-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
S-ARMR-CRNR	Armor: Corner Protection, Corner Cap Casting
S-ARMR-LINR	Armor: Protective Liner (Used for Walls, Culverts, etc.)
S-ARMR-MISC	Armor: Miscellaneous
S-ARMR-WALL	Armor: Wall
S-BDNG	Bedding
S-BEAM-CNTR	Beam: Centerlines
S-BEAM-PRIM	Beam: Continuous or Primary Beams of Two-Way Beam System
S-BEAM-RBAR	Beam: Rebar
S-BEAM-SECD	Beam: Girders or Secondary Beams of Two-Way Beam System
S-BLDG-OTLN	Buildings and Primary Structures: Outline
S-BRCG-DIA~	Bracing: Diagonal
S-BRCG-HORZ	Bracing: Horizontal
S-BRCG-VERT	Bracing: Vertical
S-BRDG-CNTR	Bridge: Center
S-BRDG-OTLN	Bridge: Outline
S-COLS-CNTR	Columns: Centerlines/Working Lines
S-COLS-PRIM	Columns: Primary
S-COLS-RBAR	Columns: Rebar
S-COLS-SECD	Columns: Secondary
S-CONC-0001	Concrete: Elements

Name	Description
S-CONC-0002	Concrete: Elements
S-CONC-0003	Concrete: Elements
S-CONC-MASN	Concrete: Masonry
S-CRAN-HORN	Crane: Horn
S-CRAN-RAIL	Crane: Rail
S-CRAN-STOP	Crane: Stop
S-CRAN-TRCH	Crane: Trench
S-CRAN-VALT	Crane: Vault
S-CURB	Curb
S-DECK-FLOR	Deck: Floor
S-DECK-ROOF	Deck: Roof
S-DRAN	Subdrains
S-EROS-BARR	Erosion Control: Vapor/Capillary Water Barriers
S-EROS-GABN	Erosion Control: Gabions
S-EROS-PVMT	Erosion Control: Slope Paving
S-EROS-RRAP	Erosion Control: Riprap, Stone Protection, Jetties, Breakwaters
S-FABR-EMBD	Fabricated: Embedded Metals (Framing Around Openings)
S-FABR-HOIS	Fabricated: Hoist Structures
S-FABR-HOOK	Fabricated: Line Hooks, Lifting Hooks, Check Posts etc.
S-FABR-MOOR	Fabricated: Mooring Bits, Chocks, Rings
S-FABR-PLAT	Fabricated: Plates
S-FABR-TRSH	Fabricated: Trash Racks, Intake Screens

Name	Description
S-FNDN-ANCH	Foundation: Anchor Piles, Blocks, Strands, Deadmen, Soil/Rock Anchors
S-FNDN-CNTR	Foundation: Centerlines
S-FNDN-DRAIN	Foundation: Drainage Features and Objects
S-FNDN-FTNG	Foundation: Footings
S-FNDN-FTNG-RBAR	Foundation: Footings: Rebar
S-FNDN-GRBM	Foundation: Grade Beams
S-FNDN-PCAP	Foundation: Pile Caps
S-FNDN-PEDS	Foundation: Pedestals/Pads
S-FNDN-PIER	Foundation: Piers, Drilled Shafts, Caissons
S-FNDN-PILE	Foundation: Piles
S-FNDN-PILE-GRID	Foundation: Piles: Grid
S-FNDN-RIBS	Foundation: Ribbed Mat Foundation
S-FNDN-TRMT	Foundation: Treatment (Grouting)
S-FNDN-TUNL	Foundation: Service Tunnel/Duct Banks
S-FSTN-ABLT	Fasteners and Connections: Anchor Bolts
S-FSTN-MISC	Fasteners and Connections: Miscellaneous
S-GATE	Gates
S-GATE-AXIS	Gates: Axis and Centerlines
S-GATE-MISC	Gates: Incidental to Structure
S-GRID-HORZ	Grid: Horizontal Lines
S-GRID-HORZ-IDEN	Grid: Horizontal Column I.D. Tags
S-GRID-VERT	Grid: Vertical

Name	Description
S-GRID-VERT-IDEN	Grid: Vertical Column I.D. Tags
S-HYDR-BAFL	Hydrology: Baffle Blocks, Splash Pads
S-HYDR-BASN	Hydrology: Stilling And Settling Basins
S-HYDR-CHAN	Hydrology: Channel (Does Not Include Earthen Structures)
S-HYDR-COFF	Hydrology: Cofferdam
S-HYDR-COND	Hydrology: Diversionary/Bypass Conduits and Culverts
S-HYDR-DAM~	Hydrology: Dam
S-HYDR-FISH	Hydrology: Fish Ladder or Passage
S-HYDR-FLUM	Hydrology: Flume
S-HYDR-INTK	Hydrology: Intake, Outlet
S-HYDR-NOVR	Hydrology: Non-Overflow Structures
S-HYDR-STRC-POWR	Hydrology: Powerhouse
S-HYDR-SWAY	Hydrology: Spillway
S-HYDR-WEIR	Hydrology: Weirs and Sluiceways
S-JNTS-CNTJ	Joints: Construction/Lift
S-JNTS-CTLJ	Joints: Control/Contraction (Saw Cut)
S-JNTS-EXPJ	Joints: Expansion Joints, Joint Materials (E.G., Felt)
S-JNTS-STUC	Joints: Stuccos
S-JNTS-WTRS	Joints: Water Stops
S-JOIS-BRDG	Joist: Bridging
S-JOIS-GIRD	Joist: Girders
S-JOIS-PMTR	Joist: Perimeter channel or rim joist

Name	Description
S-JOIS-PRIM	Joist: Primary
S-JOIS-SECD	Joist: Secondary
S-JOIS-TRIM	Joist: Partial Length or Trimmer Floor
S-METL-MISC	Metal: Miscellaneous
S-OTLN-BLDG	Outline: Building
S-OTLN-FLOR	Outline: Floor
S-OTLN-OPNG	Outline: Openings
S-OTLN-ROOF	Outline: Roof
S-OTLN-STRC	Outline: Miscellaneous Structures
S-PADS-EQPM	Pads: Equipment
S-PIPE-CULV	Pipe: Precast/Manufactured Culverts
S-PLAT-FRMG	Platform: Frame/Stringers
S-PLAT-GRTG	Platform: Grating
S-PLAT-WALK	Platform: Walkway
S-REIN-RBAR-0001	Reinforced: Steel Reinforcing, Welded Wire Fabric
S-REIN-RBAR-0002	Reinforced: Steel Reinforcing, Welded Wire Fabric
S-REIN-RBAR-0003	Reinforced: Steel Reinforcing, Welded Wire Fabric
S-REIN-TEND-HORZ	Reinforced: Horizontal Tendons
S-REIN-TEND-VERT	Reinforced: Vertical Tendons
S-SAFE-FENC	Safety: Fencing Rails, Fabric, Supports, and Gates
S-SAFE-GRAL	Safety: Guardrails
S-SAFE-HRAL	Safety: Handrails, Railings

Name	Description
S-SAFE-PARA	Safety: Parapet/Jersey Barrier
S-SAFE-PARA-RBAR	Safety: Parapet/Jersey Barrier Rebar
S-SAFE-WATR	Safety: Waterway Safety Barriers
S-SIGN-EXTN	Signage: Extrusions
S-SIGN-FRMG	Signage: Framing & Connections
S-SIGN-GAGE	Signage: Staff Gages
S-SIGN-PANL	Signage: Sign Panels
S-SIGN-SPRT	Signage: Supports
S-SIGN-TEXT	Signage: Text
S-SLAB-APPR	Slab: Approach
S-SLAB-APPR-RBAR	Slab: Approach Rebar
S-SLAB-EDGE	Slab: Edge
S-SLAB-JOIN	Slab: Control Joints
S-SLAB-RBAR	Slab: Rebar
S-SLAB-SECD	Slab: Second Pour, Slab Cap
S-SLAB-SILL	Slab: Sill
S-STEL-0001	Structural Steel: Elements
S-STEL-0002	Structural Steel: Elements
S-STEL-0003	Structural Steel: Elements
S-STEL-BEAM	Structural Steel: Beams
S-STEL-PLAT	Structural Steel: Plates
S-STEL-STUD	Structural Steel: Studs

Name	Description
S-STIF-LONG	Stiffeners: Longitudinal
S-STIF-TRAN	Stiffeners: Transverse
S-TRCH	Trench
S-TRUS-PRIM	Trusses: Primary
S-TRUS-SECD	Trusses: Secondary
S-WALL-ABUT	Wall: Abutments
S-WALL-CELL	Wall: Cell
S-WALL-CNTN	Wall: Containment
S-WALL-COFF	Wall: Cutoff
S-WALL-CURT	Wall: Curtain / Breast
S-WALL-FENC-BLOC	Wall: Fence Block
S-WALL-FULL	Wall: Full (Going to the Top of the Structure)
S-WALL-GARD	Wall: Guard / Guide
S-WALL-HIGH	Wall: High
S-WALL-LOAD	Wall: Load Bearing
S-WALL-MONO	Wall: Monoliths
S-WALL-MSE~	Wall: Mechanically Stabilized Earth (MSE)
S-WALL-NONL	Wall: Non-Load Bearing
S-WALL-PCST	Wall: Pre-Cast Concrete
S-WALL-PRHT	Wall: Partial Height (Does Not Reach to the Top of the Structure)
S-WALL-RBAR	Wall: Rebar
S-WALL-RTWL	Wall: Retaining

Name	Description
S-WALL-RTWL-FENC	Wall: Retaining with Fences
S-WALL-SEWL	Wall: Sea
S-WALL-SHEA	Wall: Shear
S-WALL-STUD	Wall: Stud
S-WARF	Wharf
S-WARF-BOLL	Wharf: Bollard
S-WARF-CABL	Wharf: Cable
S-WARF-CONC	Wharf: Concrete
S-WARF-CRAN	Wharf: Crane
S-WARF-DLPH	Wharf: Dolphin
S-WARF-DOCK	Wharf: Decks, docks, floats, piers
S-WARF-DOCK-MISC	Wharf: Decks, docks, floats, piers: Miscellaneous
S-WARF-DOCK-STEP	Wharf: Decks, docks, floats, piers: Steps & Ladders
S-WARF-FNDR	Wharf: Fenders
S-WARF-MISC	Wharf: Miscellaneous
S-WARF-PILE	Wharf: Piling
S-WARF-PONT	Wharf: Point
S-WARF-SEIS-VALT	Wharf: Seismic Vault
S-WARF-TIBK	Wharf: Tieback
S-WARF-TIDN	Wharf: Tiedown
S-WARF-TIDN-CVR~	Wharf: Tiedown Cover
S-WARF-TRAN-RNWX	Wharf: Trans-runway

Name	Description
S-WOOD-0001	Wood: Elements
S-WOOD-0002	Wood: Elements
S-WOOD-0003	Wood: Elements
S-WWAY-DLPH	Waterway: Dolphins (Associated with but not Part of Bridges, Locks and Guide Walls)
S-WWAY-MOOR	Waterway: Mooring Cells

8 SURVEYING/MAPPING LAYER PROPERTIES

A. Introduction

This chapter includes Survey/Mapping layer assignments that support the development of sheet files and base files for POLB. The color, linetypes, and line weights are included in Appendix A-Linetypes and Appendix D-Plot Styles.

B. Layer Assignments

Name	Description
V-ALGN-LINE	Alignment: Lines
V-ALGN-SYMB	Alignment: Reference Symbols
V-ALGN-TEXT	Alignment: Text
V-ANNO	Annotation
V-ANNO-DIMS	Annotation: Witness/Extension Lines, Dimension Terminators, Dimension Text
V-ANNO-KEYN	Annotation: Reference Keynotes
V-ANNO-NOTE	Annotation: Framed Callouts with or without Associated Leaders, and Plan Notes with Leaders
V-ANNO-NPLT	Annotation: Non-Plotting Graphic Information
V-ANNO-PATT	Annotation: Patterning, Poche, Shading, And Hatching
V-ANNO-RDME	Annotation: Non-Plotting Read-Me Information
V-ANNO-RDME-2BD~	Annotation: Non-Plotting Read-Me Information: To Be Determined
V-ANNO-SYMB	Annotation: Discipline-Specific Symbols
V-ANNO-TEXT	Annotation: Discipline-Specific Text without Leaders
V-BLDG	Buildings
V-BLDG-LINE	Buildings: Lines
V-BLDG-OTLN	Buildings: Outlines

Name	Description
V-BRDG	Bridge
V-BSLN-CNST-LINE	Baseline: Construction Lines
V-BSLN-MON~	Baseline: Monument
V-BSLN-SNDG-LINE	Baseline: Sounding
V-CATH-LINE-NEG~	Cathodic Protection: Negative Lines
V-CATH-LINE-NEG~-ABND	Cathodic Protection: Negative Lines: Abandoned
V-CATH-LINE-NEG~-REMV	Cathodic Protection: Negative Lines: Removed
V-CATH-LINE-POS~	Cathodic Protection: Positive Lines
V-CATH-LINE-POS~-ABND	Cathodic Protection: Positive Lines: Abandoned
V-CATH-LINE-POS~-REMV	Cathodic Protection: Positive Lines: Removed
V-CHAN-BANK-TOP~	Navigable Channels: Top
V-CHAN-BNCH	Navigable Channels: Bench
V-CHAN-CNTR	Navigable Channels: Center
V-CHAN-LIMT	Navigable Channels: Limit
V-CHAN-SLOP-LINE	Navigable Channels: Slope: Lines
V-CHAN-TOE~	Navigable Channels: Toe of Channel
V-CHEM-LINE	Chemical Lines
V-CHEM-LINE-ABND	Chemical Lines: Abandoned
V-CMPA-LINE	Compressed / Processed Air Systems: Lines
V-CMPA-LINE-ABND	Compressed / Processed Air Systems: Lines: Abandoned
V-CMRA-LINE	Camera: Lines (Box and Pedestal)
V-CNTN-WALL-CNTR-LINE	Containment Wall: Center

Name	Description
V-COMM-FIBR	Telecommunications: Fiber Optics Cable
V-COMM-FIBR-ABND	Telecommunications: Fiber Optics Cable: Abandoned
V-COMM-LINE	Telecommunications: Lines
V-COMM-LINE-ABND	Telecommunications: Lines: Abandoned
V-COMM-LINE-OVHD	Telecommunications: Overhead Lines
V-COMM-STRC-LINE	Telecommunications: Structure Line
V-CTRL-INST	Control Points: Instrumentation
V-CTRL-LINE	Control Points: Lines
V-CTRL-LINE-DIRC	Control Points: Traverse Lines
V-CTRL-LINE-NETW	Control Points: Traverse Network
V-CTRL-LINE-SHOT	Control Points: Traverse Side Shot
V-CTRL-PHL~	Control Points: Pier Head Line
V-CTRL-TRAV-ERRO	Control Points: Traverse Errors
V-DTCH-LINE	Ditches Or Washes: Lines
V-DTM~-DRED-FAZ1	Digital Terrain Model: Dredging Surface: Phase Number 1
V-DTM~-DRED-FAZ2	Digital Terrain Model: Dredging Surface: Phase Number 2
V-DTM~-DRED-FAZ3	Digital Terrain Model: Dredging Surface: Phase Number 3
V-DTM~-DRED-FAZ4	Digital Terrain Model: Dredging Surface: Phase Number 4
V-DTM~-DRED-FAZ5	Digital Terrain Model: Dredging Surface: Phase Number 5
V-DTM~-EXTR	Digital Terrain Model: Boundary: Exterior
V-DTM~-INTR	Digital Terrain Model: Boundary: Interior
V-DTM~-MMTC	Digital Terrain Model: Mismatched Elevation

Name	Description
V-DTM~-SPOT	Digital Terrain Model: Spot Elevations
V-DTM~-TRGL	Digital Terrain Model: Triangle
V-DTM~-XBRK	Digital Terrain Model: Crossing Breaklines
V-ELEC-CATH-LINE-NEG~	Electrical And Communications: Cathodic Protection: Negative Lines
V-ELEC-DUCT-CNTR	Electrical And Communications: Ductbanks: Centerlines
V-ELEC-DUCT-EDGE	Electrical And Communications: Ductbanks: Edges
V-ELEC-GRND	Electrical and Communications: Ground Conductors
V-ELEC-LINE	Electrical (600V Or Lower): Lines
V-ELEC-LINE-ABND	Electrical (600V Or Lower): Abandoned Lines
V-ELEC-LINE-OVHD	Electrical (600V Or Lower): Overhead Lines
V-ELEC-LINE-POWR	Electrical (Above 600V): Lines
V-ELEC-LINE-POWR-ABND	Electrical (Above 600V): Abandoned Lines
V-ELEC-STRC-LINE	Electrical: Structures Line
V-ELEC-TOWR-FOTG	Electrical and Communications: Tower Footing
V-GAS~-LINE	Gas: Lines
V-GAS~-LINE-ABND	Gas: Lines: Abandoned
V-GUTL	General Utilities
V-GUTL-CASE	General Utilities: Casing
V-GUTL-UNKN	General Utilities: Unknown
V-GUTL-UNKN-LINE	General Utilities: Unknown Line
V-GUTL-UNKN-XING-SYMB	General Utilities: Unknown Crossing Point
V-NO~~~PCOD-LINE	V-NO~~~PCOD-LINE

Name	Description
V-NODE	Survey Node
V-NODE-BLDG	Survey Node: Building
V-NODE-BNDY	Survey Node: Baseline
V-NODE-BORE	Survey Node: Borehole
V-NODE-BRDG	Survey Node: Bridge
V-NODE-BRDG-CNTR	Survey Node: Bridge: Center
V-NODE-BRDG-RAIL	Survey Node: Bridge: Rail
V-NODE-BRDG-SIGN	Survey Node: Bridge: Signage
V-NODE-BRSH	Survey Node: Natural Brush Line
V-NODE-CATH	Survey Node: Cathodic Protection
V-NODE-CATH-ABND	Survey Node: Cathodic Protection: Abandoned
V-NODE-CATH-LAND	Survey Node: Cathodic Protection: Anodes: Landside
V-NODE-CATH-WATR	Survey Node: Cathodic Protection: Anodes: Waterside
V-NODE-CHEM	Survey Node: Chemical Systems: Points
V-NODE-CHEM-CSNG	Survey Node: Chemical Systems: Lines
V-NODE-CMPA	Survey Node: Compressed / Processed Air Systems: Points
V-NODE-CMPA-CSNG	Survey Node: Compressed / Processed Air Systems: Lines
V-NODE-CMPA-RISR	Survey Node: Compressed / Processed Air Systems: Risers
V-NODE-CMRA-BOX~	Survey Node: Camera: Lines (Box and Pedestal)
V-NODE-CMRA-PED~	Survey Node: Camera: Node (Box and Pedestal)
V-NODE-COMM	Survey Node: Telecommunications: Point
V-NODE-COMM-CATV	Survey Node: Telecommunications: Cable Television

Name	Description
V-NODE-COMM-FIBR	Survey Node: Telecommunications: Fiber Optics Cable
V-NODE-COMM-MHOL	Survey Node: Telecommunications: Manhole
V-NODE-COMM-OVHD	Survey Node: Telecommunications: Overhead Lines
V-NODE-COMM-PANL-BOX~	Survey Node: Telecommunications: Panel Box
V-NODE-COMM-PED~	Survey Node: Telecommunications: Box or Pedestal
V-NODE-COMM-POLE	Survey Node: Telecommunications: Pole
V-NODE-COMM-PULL-BOX~	Survey Node: Telecommunications: Pull Box
V-NODE-COMM-RISR	Survey Node: Telecommunications: Risers
V-NODE-COMM-STRC	Survey Node: Telecommunications: Structures
V-NODE-COMM-STUB	Survey Node: Telecommunications: Stub Out
V-NODE-COMM-TELE-MHOL	Survey Node: Telecommunications: Telephone: Manhole
V-NODE-COMM-TELE-RISR	Survey Node: Telecommunications: Telephone: Risers
V-NODE-COMM-VALT	Survey Node: Telecommunications: Vault
V-NODE-CTRL	Survey Node: Control Points
V-NODE-CTRL-BMRK	Survey Node: Control Points: Benchmarks
V-NODE-CTRL-HCPT	Survey Node: Control Points: Horizontal
V-NODE-CTRL-KNOW	Survey Node: Control Points: Known Points
V-NODE-CTRL-MON~	Survey Node: Control Points: Monuments
V-NODE-CTRL-SCTN	Survey Node: Control Points: Section
V-NODE-CTRL-SHOT	Survey Node: Control Points: Side Shots
V-NODE-CTRL-SYMB	Survey Node: Control Points: Reference Symbols
V-NODE-CTRL-TRAV	Survey Node: Control Points: Traverse

Name	Description
V-NODE-CTRL-UNKN	Survey Node: Control Points: Unknown Points
V-NODE-CTRL-VCPT	Survey Node: Control Points: Vertical
V-NODE-DIKE	Survey Node: Dikes
V-NODE-ELEC	Survey Node: Electrical: Point
V-NODE-ELEC-BOX~-SHIP-SERV	Survey Node: Electrical Box: Ship Service
V-NODE-ELEC-CATH	Survey Node: Cathodic Protection: Point
V-NODE-ELEC-CATH-TEST	Survey Node: Cathodic Protection: Test
V-NODE-ELEC-DMAN	Survey Node: Electrical: Guy Deadman Anchor (Guy Wire)
V-NODE-ELEC-LITE	Survey Node: Electrical: Lights, Lighting
V-NODE-ELEC-OVHD	Survey Node: Electrical: Overhead Lines
V-NODE-ELEC-PBOX	Survey Node: Electrical: Pullbox
V-NODE-ELEC-POLE	Survey Node: Electrical: Pole
V-NODE-ELEC-RFRG-REFR	Survey Node: Electrical: Refrigerated Reefer
V-NODE-ELEC-SGNL	Survey Node: Electrical: Traffic Signal
V-NODE-ELEC-STRC	Survey Node: Electrical: Structures
V-NODE-ELEC-TOP~-SLUR	Survey Node: Electrical: Top of Slurry
V-NODE-ELEC-TOWR-FOTG	Survey Node: Electrical: Tower Footing
V-NODE-ELEC-VENT	Survey Node: Electrical: Vents
V-NODE-ELEC-XING	Survey Node: Electrical: Crossing
V-NODE-GAS~	Survey Node: Gas: Point
V-NODE-GAS~-CAP~	Survey Node: Gas: Cap
V-NODE-GAS~-METR	Survey Node: Gas: Meter

Name	Description
V-NODE-GAS~-RDCR	Survey Node: Gas: Reducer
V-NODE-GAS~-RISR	Survey Node: Gas: Riser
V-NODE-GAS~-STUB	Survey Node: Gas: Stub Out
V-NODE-GAS~-VALV	Survey Node: Gas: Valve
V-NODE-GAS~-VENT	Survey Node: Gas: Vent
V-NODE-GAS~-XING	Survey Node: Gas: Crossings
V-NODE-GEN~-UTIL-UNKN	Survey Node: General Utilities: Unknown
V-NODE-GURD-POST	Survey Node: Guard Post
V-NODE-GUY~	Survey Node: Guy Wire
V-NODE-HYDR	Survey Node: Hydrographic
V-NODE-KRAL	Survey Node: K-Rail
V-NODE-MBOX	Survey Node: Mailbox
V-NODE-NGAS	Survey Node: Gas Line & Appurtenances: Points
V-NODE-NOPC	Survey Node: No Point Code
V-NODE-OIL~	Survey Node: Oil: Points
V-NODE-OIL~-CAP~	Survey Node: Oil: Cap
V-NODE-OIL~-FBOX	Survey Node: Oil: Fuel Box
V-NODE-OIL~-MHOL	Survey Node: Oil: Manhole
V-NODE-OIL~-RDCR	Survey Node: Oil: Reducer
V-NODE-OIL~-RISR	Survey Node: Oil: Riser
V-NODE-OIL~-STUB	Survey Node: Oil: Stub Out
V-NODE-OIL~-VALV	Survey Node: Oil: Valve

Name	Description
V-NODE-OIL~-VENT	Survey Node: Oil: Vent
V-NODE-OIL~-WSTM	Survey Node: Oil: Well Stem
V-NODE-OIL~-XING	Survey Node: Oil: Crossing
V-NODE-PILE	Survey Node: Piles
V-NODE-POLE	Survey Node: Pole Points (Power, Telephone, etc.)
V-NODE-POLE-FLAG	Survey Node: Flagpole
V-NODE-POLE-GUY~	Survey Node: Guy Pole
V-NODE-POLE-MISC	Survey Node: Misc. Pole
V-NODE-POST	Survey Node: General Post
V-NODE-POST-GURD	Survey Node: Guard Post
V-NODE-RAIL	Survey Node: Railway
V-NODE-RAIL-BLST	Survey Node: Railway: Ballast
V-NODE-RAIL-BMPR	Survey Node: Railway: Bumper
V-NODE-RAIL-CNTR	Survey Node: Railway: Centerlines
V-NODE-RAIL-CURB-STOP	Survey Node: Railway: Curb Stop
V-NODE-RAIL-EQPM	Survey Node: Railway: Equipment
V-NODE-RAIL-LINE	Survey Node: Railway: Lines
V-NODE-RAIL-SGNL	Survey Node: Railway: Signals
V-NODE-RAIL-TIE~	Survey Node: Railway: Tie
V-NODE-RAIL-TIE~-CONC	Survey Node: Railway: Concrete Tie
V-NODE-RAIL-TIE~-WOOD	Survey Node: Railway: Wood Tie
V-NODE-RAIL-TOP~	Survey Node: Railway: Top

Name	Description
V-NODE-RAIL-TOUT	Survey Node: Railway: Turnout
V-NODE-RAIL-WHEL-STOP	Survey Node: Railway: Wheel Stop
V-NODE-RAIL-XING	Survey Node: Railway: Crossing
V-NODE-ROAD-AC~~	Survey Node: Roadways: Asphalt Concrete
V-NODE-ROAD-BERM-CNTR	Survey Node: Roadways: Berm: Center
V-NODE-ROAD-BERM-EDGE	Survey Node: Roadways: Berm Edge
V-NODE-ROAD-BLUE-TOP~	Survey Node: Roadways: Blue Top Stake
V-NODE-ROAD-BRDG-DECK	Survey Node: Roadways: Bridge: Deck
V-NODE-ROAD-BRDG-SLAB	Survey Node: Roadways: Bridge: Slab
V-NODE-ROAD-CONC	Survey Node: Roadways: Concrete
V-NODE-ROAD-CONC-TRTD-BASE	Survey Node: Roadways: Concrete: Treated Base
V-NODE-ROAD-CURB	Survey Node: Roadways: Curb
V-NODE-ROAD-CURB-BACK	Survey Node: Roadways: Back of Curb
V-NODE-ROAD-CURB-DWY~-RAMP	Survey Node: Roadways: Driveway Ramp
V-NODE-ROAD-CURB-FACE	Survey Node: Roadways: Curb Face
V-NODE-ROAD-CURB-FLOW	Survey Node: Roadways: Curb Flow
V-NODE-ROAD-CURB-FLOW-ETYP	Survey Node: Roadways: Curb Flow: Type E
V-NODE-ROAD-CURB-GUTR-LIP~	Survey Node: Roadways: Lip of Gutter
V-NODE-ROAD-CURB-TOP~-ETYP	Survey Node: Top of Curb: Type E
V-NODE-ROAD-DIRT-UPVD	Survey Node: Roadways: Unimproved Dirt
V-NODE-ROAD-EDGE	Survey Node: Roadways: Edge
V-NODE-ROAD-EDGE-AC~~	Survey Node: Roadways: Edge: Asphalt Composite

Name	Description
V-NODE-ROAD-EDGE-CONC	Survey Node: Roadways: Edge: Concrete
V-NODE-ROAD-EDGE-PCC~	Survey Node: Roadways: Edge: PCC
V-NODE-ROAD-GRND-LCB~	Survey Node: Roadways: Ground: LCB
V-NODE-ROAD-GRND-SUBG	Survey Node: Roadways: Ground: Subgrade
V-NODE-ROAD-MEDN	Survey Node: Roadways: Median
V-NODE-ROAD-MISC-CRSH-BASE	Survey Node: Roadways: Miscellaneous Crushed Base
V-NODE-ROAD-MRKG	Survey Node: Roadways: Pavement Markings
V-NODE-ROAD-MRKG-DASH	Survey Node: Roadways: Pavement Markings: Dashed
V-NODE-ROAD-SIGN	Survey Node: Roadways: Signage
V-NODE-ROAD-SWLK	Survey Node: Roadways: Sidewalks
V-NODE-ROCK	Survey Node: Rock
V-NODE-ROCK-BLST	Survey Node: Rock Ballast
V-NODE-SIGN	Survey Node: Signage
V-NODE-SIGN-LRGE-POST	Survey Node: Signage: Large Posts
V-NODE-SSWR	Survey Node: Sanitary Sewer and Appurtenances Points
V-NODE-SSWR-CAP~	Survey Node: Sanitary Sewer: Cap
V-NODE-SSWR-CHMY	Survey Node: Sanitary Sewer: Chimney
V-NODE-SSWR-CLNO	Survey Node: Sanitary Sewer: Point
V-NODE-SSWR-MHOL	Survey Node: Sanitary Sewer: Manhole
V-NODE-SSWR-STRC-STUB	Survey Node: Sanitary Sewer: Structure: Stub Out
V-NODE-SSWR-WYE~	Survey Node: Sanitary Sewer: Wye
V-NODE-STRC	Survey Node: Structural

Name	Description
V-NODE-STRC-CONC	Survey Node: Structural: Concrete
V-NODE-STRC-FENC	Survey Node: Structural: Fence
V-NODE-STRC-FENC-BLOC-WALL	Survey Node: Structural: Fence Block Wall
V-NODE-STRC-GRAL	Survey Node: Structural: Guard Rail
V-NODE-STRC-PILE	Survey Node: Structural: Piles
V-NODE-STRC-RTWL	Survey Node: Structural: Retaining Walls
V-NODE-STRC-STRM-CULV	Survey Node: Structural: Storm: Culvert
V-NODE-STRC-STRM-DRAN-EDGE	Survey Node: Structural: Storm: Drain Edge
V-NODE-STRC-STRM-DRAN-FLOW	Survey Node: Structural: Storm: Drain Flowline
V-NODE-STRC-TANK	Survey Node: Structural: Storage Tanks
V-NODE-STRC-WALL	Survey Node: Structural: Walls, Flood Walls, Wing Walls
V-NODE-STRC-WEEP	Survey Node: Structural: Weep Hole
V-NODE-STRM	Survey Node: Storm Sewer and Appurtenances Points
V-NODE-STRM-DRAN	Survey Node: Storm Sewer: Drain
V-NODE-STRM-DRAN-AREA	Survey Node: Storm Sewer: Drainage Area
V-NODE-STRM-DRAN-CLNO	Survey Node: Storm Sewer: Drain: Point
V-NODE-STRM-INLT	Survey Node: Storm Sewer: Inlet
V-NODE-STRM-INLT-DROP	Survey Node: Storm Sewer: Inlet: Drop
V-NODE-STRM-INLT-GRAT	Survey Node: Storm Sewer: Inlet: Grate
V-NODE-STRM-MHOL	Survey Node: Storm Sewer: Manhole
V-NODE-STRM-RDCR	Survey Node: Storm Sewer: Reducer
V-NODE-TEXT	Survey Node: Text

Name	Description
V-NODE-TOPO	Survey Node: Topographic Feature: Point
V-NODE-TOPO-BRKL	Survey Node: Topographic Feature: Breakline
V-NODE-TOPO-DIRT	Survey Node: Topographic Feature: Edge of Dirt
V-NODE-TOPO-DIRT-TOP~	Survey Node: Topographic Feature: Top of Dirt
V-NODE-TOPO-GRND-SUBG	Survey Node: Topographic Feature: Ground: Subgrade
V-NODE-TOPO-SIGN	Survey Node: Topographic Feature: Signage
V-NODE-TOPO-SLOP-TOE~	Survey Node: Topographic Feature: Toe of Slope
V-NODE-TOPO-SLOP-TOP~	Survey Node: Topographic Feature: Top of Slope
V-NODE-TOPO-STRC	Survey Node: Topographic Feature: Structure
V-NODE-TOPO-TRLR	Survey Node: Topographic Feature: Trailer
V-NODE-TOPO-VEGE-TREE	Survey Node: Topographic Feature: Trees, Shrubs, and Other Vegetation
V-NODE-TOPO-WATR	Survey Node: Topographic Feature: Water Edge Pond/Lake
V-NODE-UTIL-CORR	Survey Node: Utilities: Corridor
V-NODE-UTIL-CSNG	Survey Node: Utilities: Lines
V-NODE-UTIL-MHOL-UNKN	Survey Node: Utilities: Unknown Manhole
V-NODE-UTIL-PIPE-ABOV-GRND-HORZ	Survey Node: Utilities: Piping: Above Ground: Horizontal
V-NODE-UTIL-PIPE-RACK-SPRT	Survey Node: Utilities: Piping: Rack Support
V-NODE-UTIL-PMRK-UNKN	Survey Node: Utilities: Unknown Paint Mark
V-NODE-UTIL-PULL-BOX~-UNKN	Survey Node: Utility: Unknown Pullbox
V-NODE-UTIL-RISR-UNKN	Survey Node: Utility: Unknown Riser
V-NODE-UTIL-UNKN	Survey Node: Utility: Unknown
V-NODE-UTIL-VALV-UNKN	Survey Node: Utility: Unknown Valve

Name	Description
V-NODE-VEGE-TREE	Survey Node: Tree points
V-NODE-WARF	Survey Node: Wharf: Point shot
V-NODE-WARF-BLRD	Survey Node: Wharf: Bollard
V-NODE-WARF-CLET	Survey Node: Wharf: Cleat
V-NODE-WARF-CRNE-STOP	Survey Node: Wharf: Crane Stop
V-NODE-WARF-DKLD-SIDE	Survey Node: Wharf: Deckland Side
V-NODE-WARF-DLPH	Survey Node: Wharf: Dolphin
V-NODE-WARF-DOCK	Survey Node: Wharf: Decks, docks, floats, piers
V-NODE-WARF-FOTG-MARK	Survey Node: Wharf: Footage Mark
V-NODE-WARF-MOOR	Survey Node: Wharf: Mooring Point
V-NODE-WARF-PIER-BMPR	Survey Node: Wharf: Pier: Bumper
V-NODE-WARF-PIER-FACE	Survey Node: Wharf: Pier: Face
V-NODE-WARF-PIER-FNDR	Survey Node: Wharf: Pier: Fender
V-NODE-WARF-RAIL-TOP~	Survey Node: Wharf: Top of Rail
V-NODE-WARF-TIBK-CABL	Survey Node: Tieback Cable
V-NODE-WARF-TIBK-DMAN	Survey Node: Wharf: Tieback Deadman
V-NODE-WATR	Survey Node: Water Line and Appurtenances Points
V-NODE-WATR-2BD~	Survey Node: Water Supply: Survey Point: To Be Determined
V-NODE-WATR-CAP~	Survey Node: Water Supply: Cap
V-NODE-WATR-HYD~	Survey Node: Water Supply: Hydrant
V-NODE-WATR-METR	Survey Node: Water Supply: Meter
V-NODE-WATR-MHOL	Survey Node: Water Supply: Manhole

Name	Description
V-NODE-WATR-RDCR	Survey Node: Water Supply: Reducer
V-NODE-WATR-RECL	Survey Node: Water Supply: Reclaimed Water
V-NODE-WATR-RISR	Survey Node: Water Supply: Riser
V-NODE-WATR-SHIP-SERV	Survey Node: Water Supply: Ship Service
V-NODE-WATR-SPKL	Survey Node: Water Supply: Sprinkler
V-NODE-WATR-SPKL-HEAD	Survey Node: Water Supply: Sprinkler Head
V-NODE-WATR-SPKL-PIT~	Survey Node: Water Supply: Sprinkler Pit
V-NODE-WATR-SPKL-PULL-BOX~	Survey Node: Water Supply: Sprinkler Pullbox
V-NODE-WATR-STUB	Survey Node: Water Supply: Stub Out
V-NODE-WATR-VALV	Survey Node: Water Supply: Valve
V-NODE-WATR-VALV-CHEK	Survey Node: Water Supply: Water Check Valve
V-NODE-WELL	Survey Node: Well
V-NODE-WELL-MNTR	Survey Node: Monitoring Well
V-NOPCODE-LINE	No Point Code: Lines
V-OIL~	Oil: Point
V-OIL~-COOR-LINE	Oil: Corridor: Lines
V-OIL~-GAS~-LINE	Oil: Wet Gas: Lines
V-OIL~-GAS~-LINE-ABND	Oil: Wet Gas: Lines: Abandoned
V-OIL~-LINE	Oil: Lines
V-OIL~-LINE-ABND	Oil: Lines: Abandoned
V-OIL~-LINE-ABOV-GRND	Oil: Lines: Above Ground
V-OIL~-MISC-LINE	Oil: Miscellaneous Lines

Name	Description
V-OIL~-MISC-LINE-ABND	Oil: Miscellaneous Lines: Abandoned
V-OIL~-STRC	Oil: Structure
V-OIL~-VALV-BOX~-LINE	Oil: Valve Box Lines
V-OIL~-VULT-LINE	Oil: Vault Lines
V-OIL~-WATR-LINE	Oil: Water Injection Line
V-OIL~-WATR-LINE-ABND	Oil: Water Injection Line: Abandoned
V-OIL~-WELL-CURB-LINE	Oil: Well: Curb Line
V-OIL~-WELL-MAT~-LINE	Oil: Well: Mat Line
V-OIL~-WELL-RTNG-BERM-LINE	Oil: Well: Retaining Berm
V-PROP	Property Boundary
V-PROP-ANNO	Property Boundary: Annotation
V-PROP-LEAS	Property Boundary: Lease Line
V-PROP-OSA~	Property Boundary: Oil Set Aside
V-PROP-OSA~-ANNO	Property Boundary: Oil Set Aside: Annotation
V-PROP-PORT-BNDY	Property Boundary: Port
V-PROP-RES~	Property Boundary: Residential
V-PUBL-ADRS-DUCT-LINE	Public Address Duct
V-PUBL-ADRS-DUCT-LINE-ABND	Public Address Duct: Abandoned
V-RAIL	Railway
V-RAIL-BLST	Railway: Ballast
V-RAIL-BMPR	Railway: Bumper
V-RAIL-CNTR	Railway: Centerlines

Name	Description
V-RAIL-CRAN	Railway: Crane Rail: Top of Rail
V-RAIL-EQPM	Railway: Equipment
V-RAIL-LINE	Railway: Lines
V-RAIL-ROCK-BLST	Railway: Rock Ballast
V-RAIL-TIE~	Railway: Tie
V-RAIL-TIE~-CONC	Railway: Tie: Concrete
V-RAIL-TIE~-WOOD	Railway: Tie: Wood
V-RAIL-TOP~	Railway: Top
V-RAIL-TOUT	Railway: Turnout
V-RAIL-TRAK	Railway: Track Top of Rail
V-RAIL-WHEL-STOP-LINE	Railway: Wheel Stop
V-ROAD	Roadways
V-ROAD-AC~~	Roadways: Asphalt Composite
V-ROAD-BARR	Roadways: Barrier
V-ROAD-BERM-CNTR	Roadways: Berm Center
V-ROAD-BERM-EDGE	Roadways: Berm Edge
V-ROAD-BRDG-DECK	Roadways: Bridge: Deck
V-ROAD-BRDG-SLAB	Roadways: Bridge: Slab
V-ROAD-CNTR	Roadways: Centerline
V-ROAD-CONC	Roadways: Concrete
V-ROAD-CURB	Roadways: Curb
V-ROAD-CURB-BACK	Roadways: Back of Curb

Name	Description
V-ROAD-CURB-DWY~-RAMP	Roadways: Curb: Driveway Ramp
V-ROAD-CURB-FACE	Roadways: Curb Face
V-ROAD-CURB-FLOW	Roadways: Curb Flowline
V-ROAD-CURB-FLOW-ETYP	Roadways: Curb Flow Type E
V-ROAD-CURB-GUTR-LIP~	Roadways: Lip of Gutter
V-ROAD-CURB-TOP~-ETYP	Roadways: Top of Curb: Type E
V-ROAD-DIRT-UNPV	Roadways: Unimproved Dirt
V-ROAD-EDGE	Roadways: Edge
V-ROAD-EDGE-AC~~	Roadways: Edge: Asphalt Composite
V-ROAD-EDGE-CONC	Roadways: Edge: Concrete
V-ROAD-EDGE-PCC~	Roadways: Edge: PCC
V-ROAD-FLOW	Roadways: Flowline
V-ROAD-GRAL	Roadways: Guardrails
V-ROAD-GUTT	Roadways: Gutter
V-ROAD-LINE	Roadways: Centerlines
V-ROAD-MEDN	Roadways: Median
V-ROAD-MRKG	Roadways: Pavement Markings
V-ROAD-MRKG-DASH	Roadways: Pavement Markings Dashed
V-ROAD-SIGN	Roadways: Signage
V-ROAD-SWLK	Roadways: Sidewalks
V-ROAD-UPVD	Roadways: Unpaved
V-SITE-SCAN	Site: Scan Data

Name	Description
V-SITE-VEGE	Site: Vegetation
V-SSWR-LINE	Sanitary Sewer: Lines
V-SSWR-LINE-ABND	Sanitary Sewer: Lines: Abandoned
V-STRC-CONC	Structural: Concrete
V-STRC-FENC	Structural: Fences
V-STRC-FENC-BLOC-WALL	Structural: Fence Block Wall
V-STRC-FENC-CHAN-LINK	Structural: Fences: Chain Link
V-STRC-FENC-GATE	Structural: Fences: Fence Gate
V-STRC-GRAL	Structural: Guardrail
V-STRC-MASN	Structural: Existing Features for Concrete Masonry Elements
V-STRC-MISC	Structural: Miscellaneous
V-STRC-MISC-UNDR	Structural: Miscellaneous Underground
V-STRC-PILE	Structural: Piles
V-STRC-PILE-STEL	Structural: Piles: Steel
V-STRC-PILE-TMBR	Structural: Piles: Timber
V-STRC-PILE-WARF	Structural: Piles: Wharf
V-STRC-RTWL	Structural: Retaining Walls
V-STRC-RTWL-FENC	Structural: Retaining Walls with Fences
V-STRC-SCAL	Structural: Truck or Rail Scale
V-STRC-SEWL	Structural: Seawalls
V-STRC-SHT~-PILE	Structural: Sheet Pile
V-STRC-STEL	Structural: Existing Features for Structural Steel Elements

Name	Description
V-STRC-STEP	Structural: Steps
V-STRC-STRM-CULV	Structural: Storm Sewer: Culver
V-STRC-STRM-DRAN-EDGE	Structural: Storm Sewer: Drain Edge
V-STRC-STRM-DRAN-FLOW	Structural: Storm Sewer: Drain Flowline
V-STRC-STRM-DRAN-SUMP	Structural: Storm Sewer: Drain Sump
V-STRC-TANK	Structural: Storage Tanks
V-STRC-TRLR	Structural: Trailer
V-STRC-TRNT-RUNW	Structural: Transtainer Runway
V-STRC-TUNL	Structural: Tunnel
V-STRC-UNKN	Structural: Unknown
V-STRC-WALL	Structural: Walls, Flood Walls, Wing Walls
V-STRC-WALL-CNTN	Structural: Containment Wall
V-STRC-WALL-HIGH	Structural: High Wall
V-STRC-WOOD	Structural: Wood
V-STRM-DRAN-AREA	Storm: Drain - Area
V-STRM-DRAN-TRCH	Storm: Drain: Trench
V-STRM-FLOW	Storm: Flow
V-STRM-LINE	Storm: Lines
V-STRM-LINE-ABND	Storm: Lines: Abandoned
V-STRM-OUTF-LINE	Storm: Outfall
V-STRM-OUTF-LINE-ABND	Storm: Abandoned Outfall
V-STRM-POND	Storm: Retention Pond

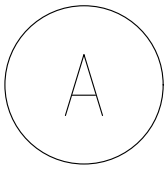
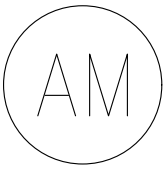
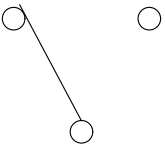
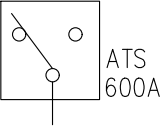
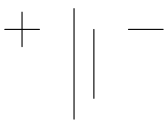
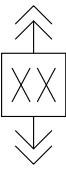
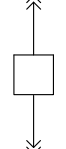
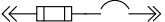
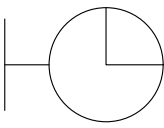
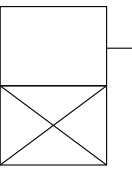
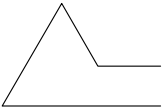
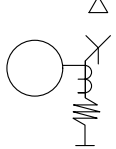
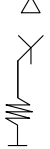
Name	Description
V-STRM-STRC-LINE	Storm: Structure Line
V-STRM-TRCH-DRAIN	Storm: Trench Drain
V-SURV-ANNO	Survey: Annotation
V-SURV-AREA	Survey: Area
V-SURV-FIGR	Survey: Figure
V-SURV-LABL	Survey: Text
V-SURV-LINE	Survey: Lines
V-SURV-MISC	Survey: Miscellaneous
V-SURV-NPCD	Survey: No Point Code
V-SURV-NTWK	Survey: Network
V-SURV-SOUN	Survey: Baseline Sounding
V-TOPO	Topographic Feature
V-TOPO-BRKL	Topographic Feature: Break Lines
V-TOPO-BRKL-INFD	Topographic Feature: Break Lines: Inferred
V-TOPO-DIKE	Topographic Feature: Dike
V-TOPO-DIRT	Topographic Feature: Dirt
V-TOPO-DTCH	Topographic Feature: Ditches or Washes
V-TOPO-EDGE	Topographic Feature: Edge
V-TOPO-FENC	Topographic Feature: Fences
V-TOPO-KRAL-FENC-LINE	Topographic Feature: K-Rail: Fenceline
V-TOPO-KRAL-LINE	Topographic Feature: K-Rail: Lines
V-TOPO-MAJR	Topographic Feature: Major

Name	Description
V-TOPO-MAJR-ANNO	Topographic Feature: Major: Annotation
V-TOPO-MAJR-DEPR	Topographic Feature: Major: Depression
V-TOPO-MINR	Topographic Feature: Minor
V-TOPO-MINR-ANNO	Topographic Feature: Minor: Annotation
V-TOPO-MINR-DEPR	Topographic Feature: Minor: Depression
V-TOPO-SIGN	Topographic Feature: Signage
V-TOPO-SLOP-TOE~	Topographic Feature: Toe of Slope
V-TOPO-SLOP-TOP~	Topographic Feature: Top of Slope
V-TOPO-SLUR	Topographic Feature: Slurry
V-TOPO-SPOT	Topographic Feature: Spot Elevations
V-TOPO-STRS-NPVD-LINE	Topographic Feature: Stairs: Non Paved
V-TOPO-STRS-PVD~-LINE	Topographic Feature: Stairs: Paved
V-TOPO-SURF-PMTR	Topographic Feature: Surface Areas: Perimeter
V-TOPO-TEXT	Topographic Feature: Text
V-TOPO-TMBR-TOP~-LINE	V-TOPO-TMBR-TOP~-LINE
V-TOPO-TRLR-LINE	Topographic Feature: Trailer Lines
V-TOPO-VEGE-BRSH	Topographic Feature: Vegetation, Trees, Shrubs
V-TOPO-VEGE-BRSL	Topographic Feature: Brush Line
V-TOPO-VEGE-TREE	Topographic Feature: Trees, Shrubs, And Other Vegetation
V-TOPO-VEGE-TRLN	Topographic Feature: Tree Line
V-TOPO-WATR	Topographic Feature: Water Edge Pond/Lake
V-UTIL-CNDIT-LRGE-LINE	Utilities: Large Conduit

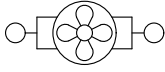
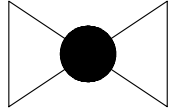
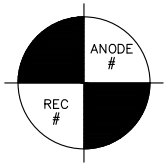
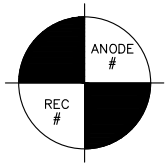
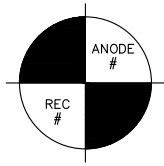
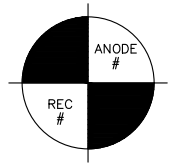
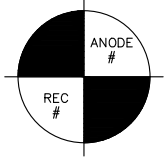
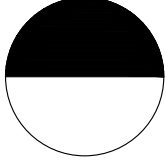
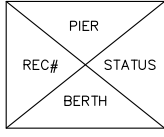
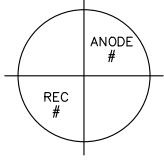
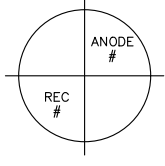
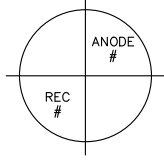
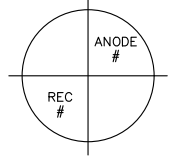
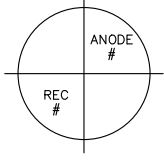
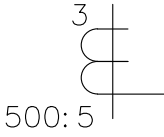
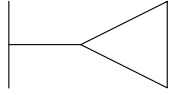
Name	Description
V-UTIL-CORR-LINE	Utilities: Corridor Lines
V-UTIL-CSNG	Utilities: Lines
V-UTIL-PANL-BOX~-UNKN-LINE	Utilities: Panel Box: Unknown Line
V-UTIL-PIPE-ABOV-GRND-HORZ-LINE	Utilities: Piping: Above Ground: Horizontal
V-UTIL-PIPE-RACK-SPRT-LINE	Utilities: Piping: Rack Support
V-UTIL-PMRK-UNKN-LINE	Utilities: Unknown Paint Mark
V-UTIL-TRCH-UNKN-LINE	Utilities: Trench: Unknown Line
V-UTIL-VALT-UNKN-LINE	Utilities: Vault: Unknown Line
V-UTIL-XING-UNKN-LINE	Utilities: Crossing: Unknown Line
V-WARF-BERT-ANNO	Wharf: Berth: Annotation
V-WARF-CABL	Wharf: Cable
V-WARF-CONC	Wharf: Concrete
V-WARF-DKLD-SIDE	Wharf: Deckland Side
V-WARF-DLPH	Wharf: Dolphin
V-WARF-DOCK	Wharf: Decks, Docks, Floats, Piers
V-WARF-DOCK-MISC	Wharf: Decks, Docks, Floats, Piers: Miscellaneous
V-WARF-DOCK-STEP	Wharf: Decks, Docks, Floats, Piers: Steps
V-WARF-FOTG-MARK	Wharf: Footage Mark
V-WARF-MISC	Wharf: Miscellaneous
V-WARF-PIER-BMPR	Wharf: Pier Bumper
V-WARF-PIER-FACE	Wharf: Pier Face
V-WARF-PIER-FNDR	Wharf: Pier Fender

Name	Description
V-WARF-TIBK-CABL	Wharf: Tieback: Cable
V-WATR-BCFL-LINE	Water Supply: Backflow Line
V-WATR-IRRG-LINE	Water Supply: Irrigation Lines
V-WATR-IRRG-LINE-ABND	Water Supply: Irrigation Lines: Abandoned
V-WATR-LINE	Water Supply: Lines
V-WATR-LINE-ABND	Water Supply: Lines: Abandoned
V-WATR-RECL-BCFL-LINE	Water Supply: Reclaimed Water Backflow Lines
V-WATR-RECL-LINE	Water Supply: Reclaimed Water Lines
V-WATR-RECL-LINE-ABND	Water Supply: Reclaimed Water Lines: Abandoned
V-WATR-SPNKLR-LINE	Water Supply: Sprinkler Line
V-WETL	Survey Control Points: Traverse Lines

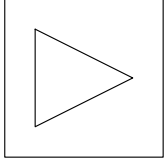
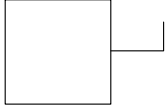
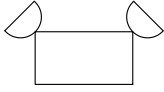
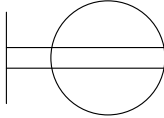
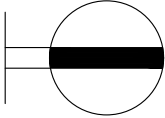
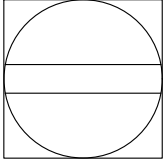
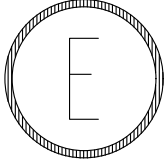
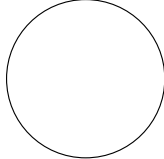
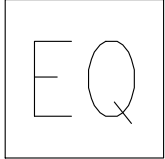
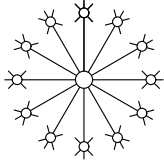
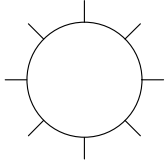
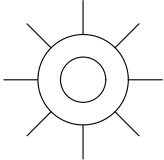
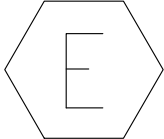
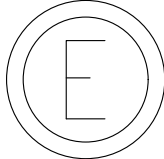
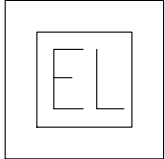
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_AMMETER	POLB_AMP METER AMP METER	POLB_ATS	POLB_AUTOMATIC TRANSFER SWITCH RATING AS INDICATED
			
POLB_BATTERY	POLB_BREAKER_DO DRAW OUT TYPE CIRCUIT BREAKER	POLB_BY-PASS SWITCH +46" UON	POLB_CAPCTR
			
POLB_CB_DRAWOUT_AIR_LV	POLB_CB_DRAWOUT_AIR_MV	POLB_CB_DRAWOUT_FUSED	POLB_CIRCUIT BREAKER RATING AS INDICATED
			
POLB_CLOCK HANGER RECEPTACLE	POLB_COMBINATION MOTOR STARTER SIZE AS INDICATED	POLB_CONN_DELTA_BROKEN	POLB_CONN_DELTA_WYE
			
POLB_CONN_DELTA_WYE_G	POLB_CONN_DELTA_WYE_G_GFR	POLB_CONN_DELTA_WYE_G_RESISTOR	POLB_CONTACT_CLOSED NORMALLY CLOSED CONTACT

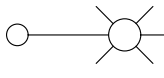
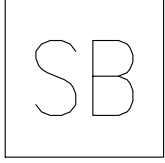
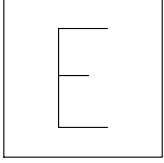
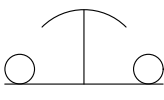
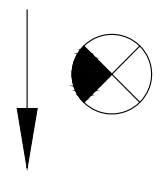
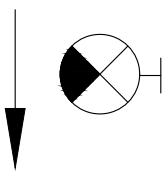
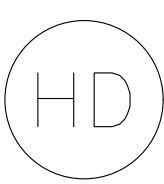
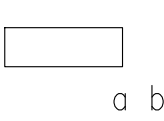
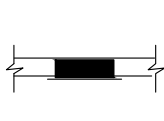
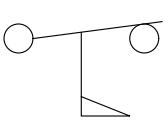
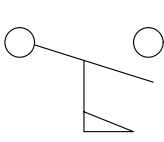
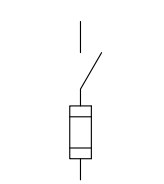
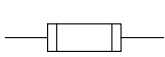
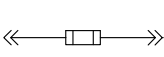
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_CONTACT_OPEN NORMALLY OPEN CONTACT	POLB_COOLING_FAN ELECTRICAL	POLB_CP_CDWELD CAD WELD	POLB_CP_GAS_CON CP GAS CONNECTION
			
POLB_CP_LAND_AL LANDSIDE ALUMINUM	POLB_CP_LAND_MG LANDSIDE MAGNESIUM	POLB_CP_LAND_PT LANDSIDE PLATINUM	POLB_CP_LAND_TI LANDSIDE TITANIUM
			
POLB_CP_LAND_ZN LANDSIDE ZINC	POLB_CP_NEG CP NEGATIVE CONNECTION	POLB_CP_REC CP RECTIFIER	POLB_CP_TBOX CP TEST BOX
			
POLB_CP_WATR_AL WATERSIDE ALUMINUM	POLB_CP_WATR_MG WATERSIDE MAGNESIUM	POLB_CP_WATR_PT WATERSIDE PLATINUM	POLB_CP_WATR_TI WATERSIDE TITANIUM
			
POLB_CP_WATR_ZN WATERSIDE ZINC	POLB_CRNBUS CRANE BUS	POLB_CURRENT TRANSFORMER RATIO AND NUMBER OF CTS AS INDICATED	POLB_DATA OUTLET_A WALL MOUNT W/STUB-UP TO CEILING

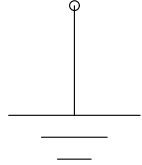
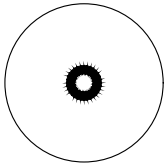
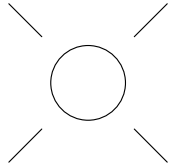
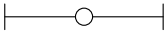
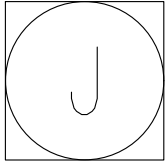
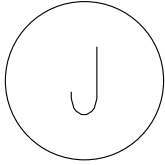
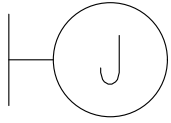
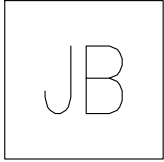
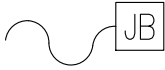
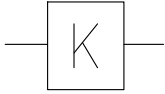
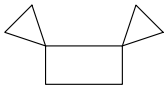
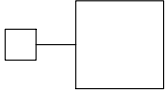
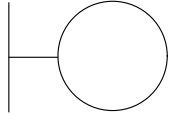
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_DATA OUTLET_B IN FLUSH FLOOR BOX	POLB_DIMMER SWITCH +46" UON	POLB_DISCONNECT SWITCH SIZE AS INDICATED	POLB_DRAWOUT DRAW OUT ASSEMBLY
			
POLB_DUAL HEAD EMERGENCY LIGHT FIXTURE ELECTRICAL	POLB_DUPLEX RECEPTACLE_A WALL MOUNTED	POLB_DUPLEX RECEPTACLE_B WALL MOUNTED - ISOLATED GROUND	POLB_DUPLEX RECEPTACLE_C IN FLUSH FLOOR BOX
			
POLB_E_RISER ELECTRICAL RISER	POLB_EANODE EXIST CATH ANODE	POLB_EEQ ELECTRICAL EQUIPMENT	POLB_EGEN ELECTRICAL GENERATOR
			
POLB_EHML EXIST HIGH MAST LIGHT	POLB_EHML2 EXIST HIGH MAST FLOOD LIGHT	POLB_ELP EXIST LIGHT POLE	POLB_ELTSTR EXIST LIGHT ON STRUCTURE OR WALL
			
POLB_EMETER ELEC METER	POLB_EMH ELEC MANHOLE	POLB_EPANBX ELEC PANEL BOX	POLB_EPP POWER POLE

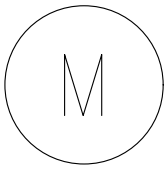
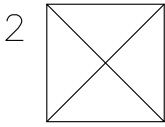
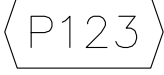
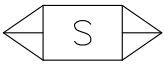
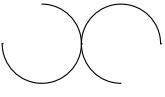
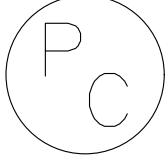
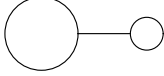
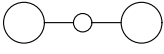
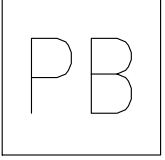
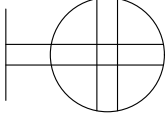
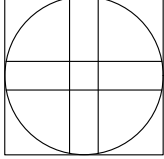
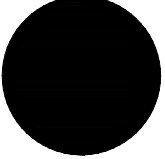
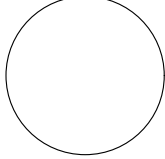
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_EPPL POWER LIGHT NO POLE	POLB_EPPLP POWER LIGHT POLE	POLB_ESBSTN ELECTRICAL SUBSTATION	POLB_ESSB ELEC SHIP SERV BOX
			
POLB_ESTOP1	POLB_EXISTING FEEDER CALLOUT	POLB_EXIT LIGHT – CEILING MOUNTED ARROW INDICATES DIRECTION OF EGRESS	POLB_EXIT LIGHT – WALL MOUNTED ARROW INDICATES DIRECTION OF EGRESS
			
POLB_FA_STATION_HEAT_DETECTOR	POLB_FIRE ALARM CONTROL PANEL	POLB_FLUORESCENT FIXTURE (DBL) WITH EMERGENCY_ BALLAST	POLB_FLUORESCENT FIXTURE (SNGL) WITH EMERGENCY_ BALLAST
			
POLB_FLUORESCENT FIXTURE WITH DUAL LEVEL SWITCHING SWITCH	POLB_FLUSH MOUNTED PANELBOARD VOLTAGE & PHASING PER SLD	POLB_FOUR-WAY SWITCH +46" UON	POLB_FSNC
			
POLB_FSNO	POLB_FSS1	POLB_FUSE	POLB_FUSE_DRAWOUT

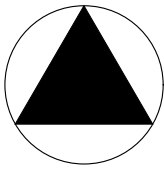
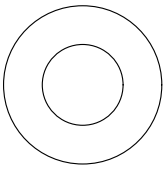
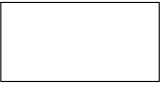
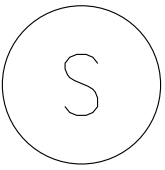
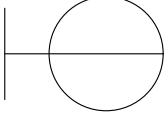
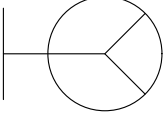
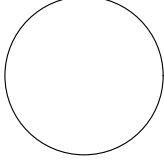
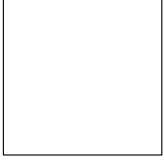
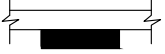
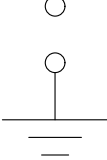
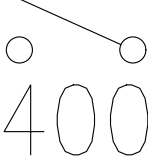
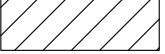
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_FUSED_DISCONNECT	POLB_FUSED_DISCONNECT_SWITCH 3 PHASES UON, SIZE AS INDICATED	POLB_GROUND GROUNDING ELECTRODE	POLB_GROUND_FAULT_INTERRUPTER
			
POLB_GROUND_WELL_WITH_GROUND_ROD	POLB_ID_DUCTBANK DUCT BANK IDENTIFICATION TAG	POLB_ID_FEEDER FEEDER IDENTIFICATION TAG	POLB_IND_LIGHT INDICATOR LIGHT
			
POLB_INDUSTRIAL_FLUORESCENT_FIXTURE W/ WIRE GUARD - 4'	POLB_JUNCTION_BOX_A FLUSH FLOOR MOUNTED	POLB_JUNCTION_BOX_B RECESSED OR SURFACE CEILING MOUNTED	POLB_JUNCTION_BOX_C WALL MOUNTED
			
POLB_JUNCTION_BOX_D FLUSH FLOOR MOUNTED	POLB_JUNCTION_BOX_FLEX JUNCTION BOX WITH FLEXIBLE CONNECTION	POLB_KEY_INTERLOCK	POLB_KEY_OPERATED_SWITCH + 46" UON
			
POLB_LGT_EMBPR	POLB_LIGHTING_FIXTURE_ID_SYMBOL	POLB_LUMINAIRE_SQ_AND_POLE	POLB_LUMINAIRE_WALLMT_MD

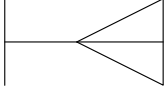
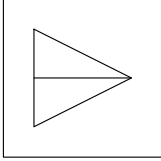
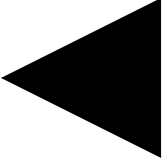
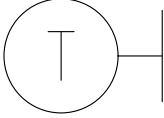
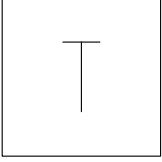
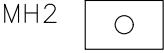
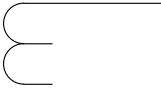
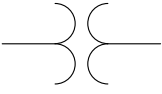
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_METER MOTOR	POLB_MOTOR HP RATING AS INDICATED	POLB_MOTOR RATED SWITCH 1 DIA. W/ THERMAL OVERLOADS	POLB_MOTOR STARTER SIZE AS INDICATED
			
POLB_NEW FEEDER CALLOUT	POLB_NFS	POLB_NOCT	POLB_OCCUPANCY SENSOR ONE-WAY CEILING MOUNTED
			
POLB_OCCUPANCY SENSOR or SWITCH WALL MOUNTED, + 46" UON	POLB_OCCUPANCY SENSOR TWO-WAY CEILING MOUNTED	POLB_OL_HEATER	POLB_PHOTOELECTRIC SWITCH
			
POLB_POLE MOUNTED CUTOFF LUMINAIRE LUMINAIRE	POLB_POLE MOUNTED TWIN CUTOFF LUMINAIRE	POLB_PULLBOX ELECTRICAL PULL BOX	POLB_QUAD RECEPTACLE (DOUBLE DUPLEX)_A WALL MOUNTED
			
POLB_QUAD RECEPTACLE (DOUBLE DUPLEX)_B IN FLUSH FLOOR BOX	POLB_RACEWAY_CAP RACEWAY CAP	POLB_RACEWAY_DOWN TURNED DOWN OR AWAY FROM VIEWER	POLB_RACEWAY_UP TURNED UP OR TOWARDS VIEWER

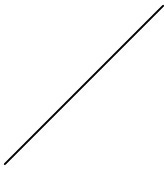
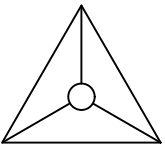
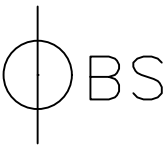
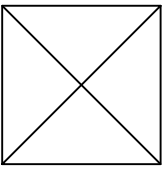
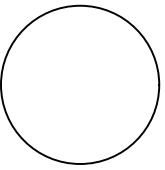
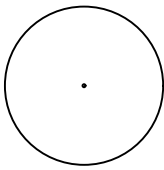
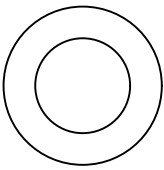
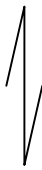
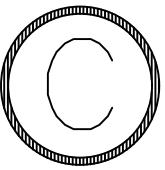
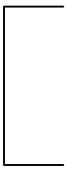
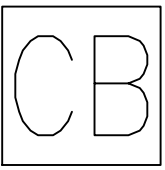
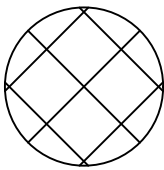
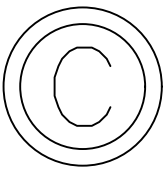
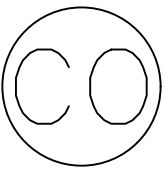
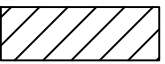
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

			
POLB_RECEPTACLE POWER OUTLET RECEPTACLE	POLB_RECESSED DOWNLIGHT	POLB_RECESSED MTD FLUORESCENT FIXTURE 1X4	POLB_RECESSED MTD FLUORESCENT FIXTURE 2X4
			
POLB_RECESSED STEPLIGHT	POLB_SEP_CON SEPARABLE CONNECTOR	POLB_SHUNT TRIP	POLB_SINGLE POLE SWITCH + 46" UON
			
POLB_SINGLE RECEPTACLE WALL MOUNTED	POLB_SPECIAL RECEPTACLE AS NOTED ON PLANS	POLB_SPLICE SPLICE	POLB_STUB_FLEX STUB-UP WITH FLEXIBLE CONNECTION
			
POLB_SURFACE MOUNTED FIXTURE	POLB_SURFACE MOUNTED FIXTURE - HID	POLB_SURFACE MOUNTED PANELBOARD VOLTAGE AND PHASING PER SINGLE LINE	POLB_SURGE SURGE ARRESTER
			
POLB_SWITCH RATING AS INDICATED	POLB_SWITCH THAT CONTROLS FIXTURES MARKED WITH SUBSCRIPT INDICATED	POLB_SWITCH WITH PILOT LAMP + 46" UON	POLB_SWITCHBOARD OR DISTRIBUTION PANELBOARD

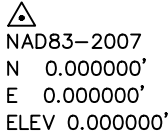
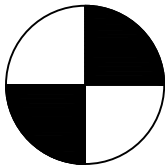
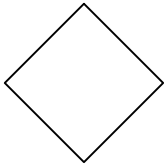
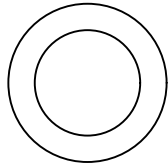
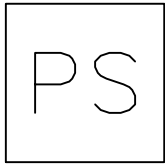
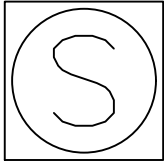
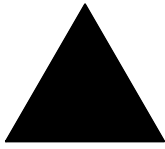
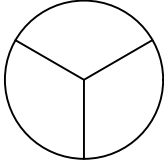
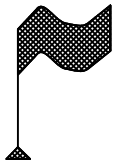
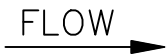
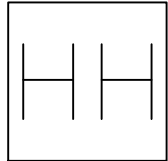
APPENDIX C - BLOCKS - 1 POLB ELECTRICAL

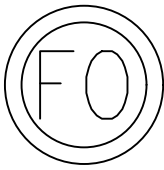
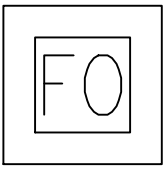
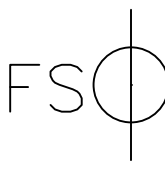
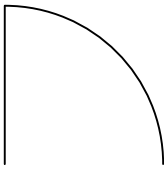
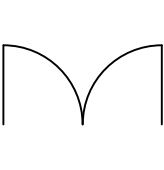
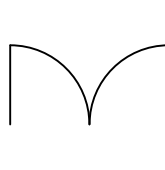
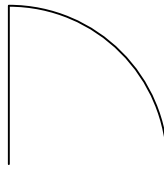
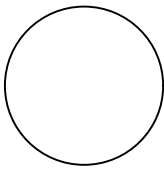
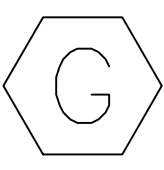
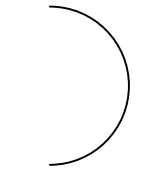
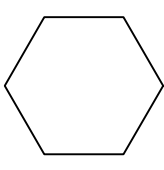
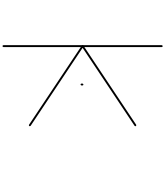
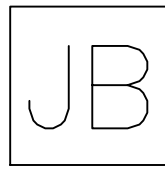
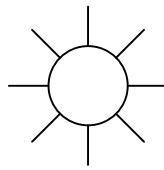
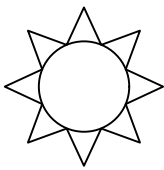
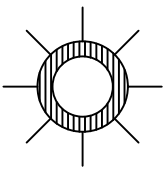
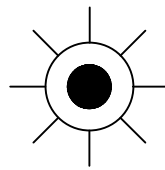
			
POLB_TELEPHONE OUTLET_A WALL MOUNT W/STUB-UP TO CEILING	POLB_TELEPHONE OUTLET_B IN FLUSH FLOOR BOX	POLB_TERM TERMINATION	POLB_THERMOSTAT OUTLET VERIFY MOUNTING HT W/MECHANICAL
			
POLB_THREE-WAY SWITCH + 46" UON	POLB_TIME SWITCH	POLB_TRANSFORMER SIZE, VOLTAGE, & PHASING PER SINGLE LINE	POLB_UNDERGROUND COMMUNICATIONS PULLBOX SEE SCHEDULE FOR DESIGNATION
			
POLB_UNDERGROUND POWER MANHOLE SEE SCHEDULE FOR DESIGNATION	POLB_UNDERGROUND POWER PULLBOX SEE SCHEDULE FOR DESIGNATION	POLB_VOLTMETER VOLTMETER	POLB_WEATHERPROOF SWITCH
			
POLB_XFMR TRANSFORMER WITH KVA RATING	POLB_XFMR_CURRENT CURRENT TRANSFORMER	POLB_XFMR_POTENTIAL POTENTIAL TRANSFORMER	

APPENDIX C - BLOCKS - 2 POLB GENERAL

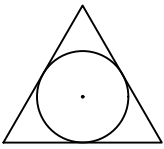
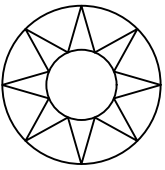
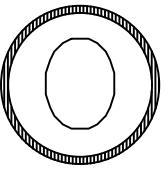
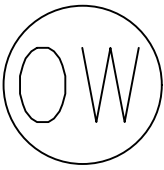
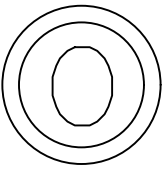
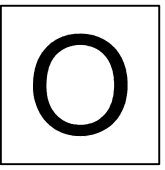
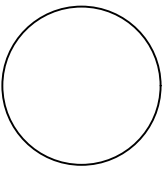
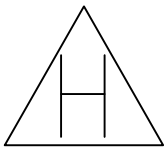
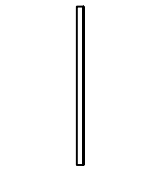
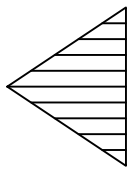
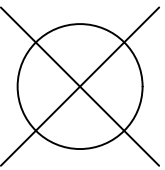
			
POLB_25_GRID_ANNO 25' GRID ANNOTATION	POLB_A_RISER RISER FOR COMPRESSED AIR	POLB_ANTENNA	POLB_AREATERM TERMINATOR FOR AREAS
			
POLB_ARROWTERM TERMINATOR ARROW	POLB_BACKSTA BACKSIGHT STATION	POLB_BCHMRK BENCHMARK	POLB_BDGCOL BRIDGE COLUMN
			
POLB_BORECORE BORING CORE	POLB_BOREPROBE BORING PROBE	POLB_BREAK LINE BREAK SYMBOL	POLB_C_RISER RISER FOR COMMUNICATIONS
			
POLB_CA COMP AIR	POLB_CAP STANDARD CAP	POLB_CB CATCH BASIN	POLB_CHIMNEY SEWER CHIMNEY
			
POLB_CLAR DRAIN CLARIFIER - INTERCEPTOR	POLB_CMH COMM MANHOLE	POLB_CO CLEAN OUT	POLB_COMMDISTBOX COMM DISTRIBUTION BOX

APPENDIX C - BLOCKS - 2 POLB GENERAL

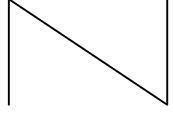
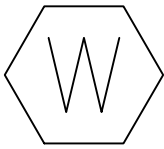
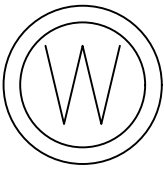
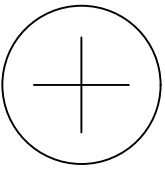
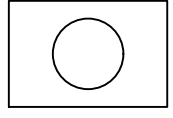
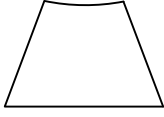
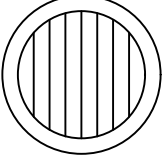
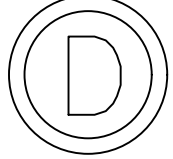
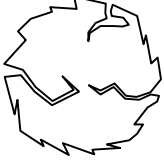
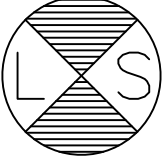
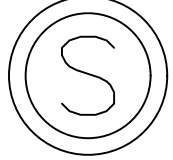
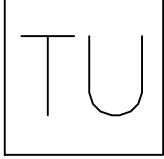
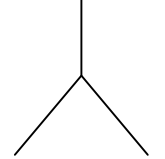
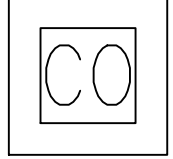
		 NAD83-2007 N 0.000000' E 0.000000' ELEV 0.000000'	
POLB_COMMVLT COMMUNICATION VAULT	POLB_COMP_AIR_PRS COMP AIR PRS	POLB_COORD NAD83-2007 NAD83-2007 COORDINATE MARKER	POLB_CTLPNT ROUND CONTROL POINT
			
POLB_DIAMOND COORDINATE NOTES	POLB_DKBMPR	POLB_DOF DRAIN OUTFALL POINT	POLB_DPS DRAINAGE PUMP STATION
			
POLB_DSUMP DRAIN SUMP	POLB_ERFR EXIST REEFER	POLB_FA_FIRE FIRE ACCESS PLANS - FIRE STATION	POLB_FA_POLICE FIRE ACCESS PLANS - POLICE STATION
			
POLB_FENTS FENCE TURNSTYLE	POLB_FIRE_ACCESS DOUBLE HEADED ARROW	POLB_FLAGGER FLAGGER SYMBOL	POLB_FLAGPL
			
POLB_FLOW_LT FLOW ARROW - LEFT	POLB_FLOW_RT FLOW ARROW - RIGHT	POLB_FOHH FIBER OPTIC HAND HOLE	POLB_FOHUB FIBER OPTIC HUB

			
POLB_FOMH FIBER OPTIC MANHOLE	POLB_FOPAN FIBER OPTIC PANEL	POLB_FORESTA FORESIGHT STATION	POLB_G_RISER RISER FOR GAS
			
POLB_GATE_12 12' SWINGING GATE	POLB_GATE_24 24' DOUBLE SWINGING GATE ANSI31 AREA	POLB_GATE_30 30' DOUBLE SWINGING GATE	POLB_GATE_4 4' SWINGING GATE
			
POLB_GDPOST GUARD POST	POLB_GMETER GAS METER	POLB_GUY GUY POST	POLB_GUYPL GUY POLE
			
POLB_HEXAGON CURVE OR LINE DATA	POLB_INSTRSTA INSTRUMENT STATION	POLB_JBOX JUNCTION BOX	POLB_LPC
			
POLB_LTBB LIGHT BELOW BRIDGE	POLB_LTGND GROUND LIGHT	POLB_LTOHD OVERHEAD LIGHT	POLB_MAILBX

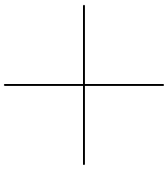
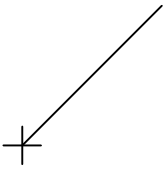
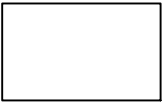
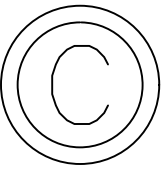
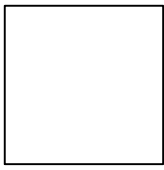
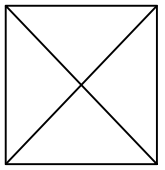
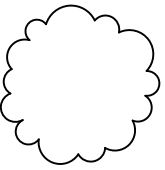
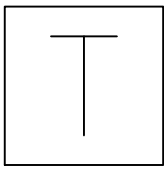
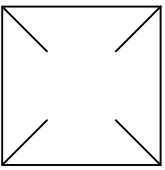
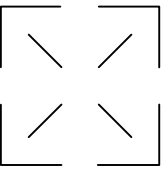
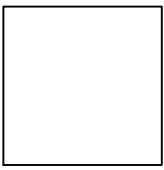
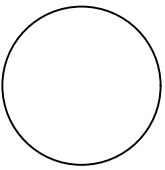
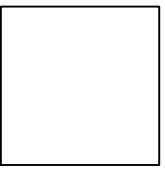
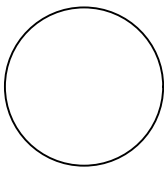
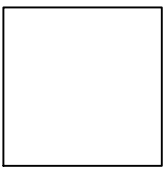
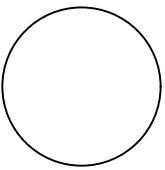
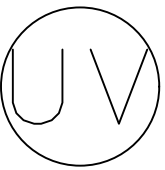
APPENDIX C - BLOCKS - 2 POLB GENERAL

			
POLB_MNWELL	POLB_MONUMT MONUMENT	POLB_NAVB NAVIG BEACON	POLB_O_RISER RISER FOR OIL
			
POLB_OIL VALVE BOX OIL VALVE BOX	POLB_OIL WELL STEM OIL WELL STEM	POLB_OMH OIL MANHOLE	POLB_OSSB OIL SH SER BOX FUEL
			
POLB_PATREE	POLB_PLUG CAP AND PLUG	POLB_POLE POLE	POLB_POST POST
			
POLB_PTHOR POINT HORIZONTAL CONTROL	POLB_PTVERT POINT VERTICAL CONTROL	POLB_PULLBOX COMMUNICATIONS PULL BOX	POLB_PVM_1
			
POLB_PVM_7	POLB_REDUCER STANDARD REDUCER CELL	POLB_RMETER REMEDIATION METER	POLB_RRSW1

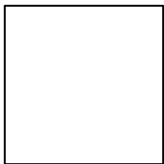
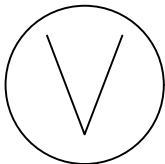
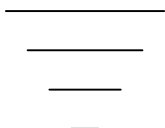
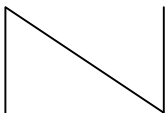
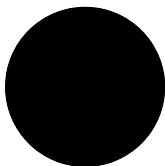
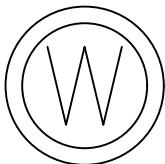
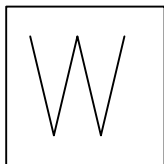
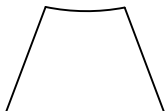
APPENDIX C - BLOCKS - 2 POLB GENERAL

			
POLB_RVENT REMEDATION VENT	POLB_RW_RISER RISER FOR RECLAIMED WATER	POLB_RWBF RECLAIMED WATER BACKFLOW	POLB_RWCKV RECLAIMED WATER CHECK VALVE
			
POLB_RWMETER RECLAIMED WATER METER	POLB_RWMH RECLAIMED WATER MANHOLE	POLB_RWSPKLHEAD SPRINKLER	POLB_RWSPFIT SPRINKLER PIT
			
POLB_RWTBLK RECLAIMED WATER THRUST BLOCK	POLB_SAMPLE_PT SAMPLE POINT FOR SEWER AND WATER	POLB_SD_AD AREA DRAIN	POLB_SDMH STORMDRAIN MANHOLE
			
POLB_SEPTIC_TANK SEPTIC TANK UNIT	POLB_SHRUB2	POLB_SLS SEWER LIFT STATION	POLB_SMH SEWER MH
			
POLB_STU SEWER TREATMENT UNIT	POLB_STUB OUT STUB OUT STANDARD	POLB_STUB OUT SEWER WYE SEWER WYE STUB OUT	POLB_TEL PANEL BOX TELE PANEL BOX

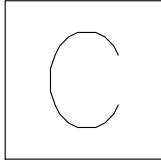
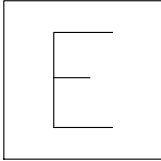
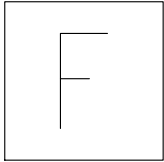
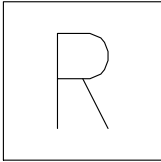
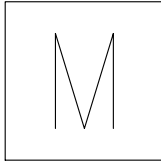
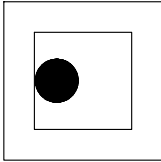
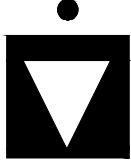
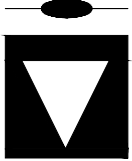
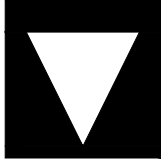
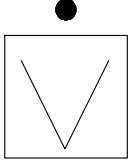
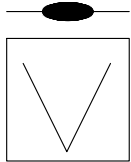
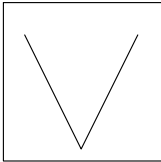
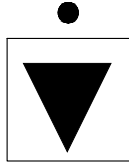
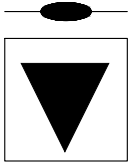
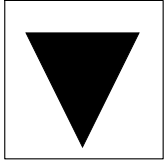
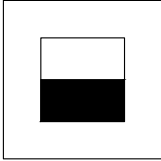
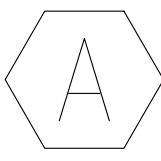
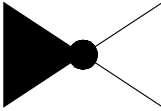
APPENDIX C - BLOCKS - 2 POLB GENERAL

			
POLB_TIC GRID TIC	POLB_TIC_LDR GRID TIC WITH 45 DEGREE LEADER	POLB_TIEBCK TIEBACK DEADMAN	POLB_TMH TELE VAULT MANHOLE
			
POLB_TPED COMM PEDESTAL	POLB_TPOLE TELE POLE	POLB_TRANS TOWER TRANSMISSION TOWER	POLB_TREE
			
POLB_TSSB TELE SHIP SERV BOX	POLB_U_RISER RISER FOR UNKNOWN UTILITY	POLB_UB	POLB_UDOBJ
			
POLB_UMH UNKNOWN MANHOLE	POLB_UTIL_ABND_DUCT UTILITY ABAND DUCT BANK-XSEC & PROF	POLB_UTIL_ABND_PIPE UTILITY ABANDONED PIPE-XSEC & PROFILE	POLB_UTIL_EXST_DUCT UTILITY EXIST DUCT BANK-XSEC & PROF
			
POLB_UTIL_EXST_PIPE UTILITY EXISTING PIPE - XSEC & PROFILE	POLB_UTIL_PROP_DUCT UTILITY PROP DUCT BANK-XSEC & PROF	POLB_UTIL_PROP_PIPE UTILITY PROPOSED PIPE-XSEC & PROFILE	POLB_UVALVE UNKNOWN VALVE

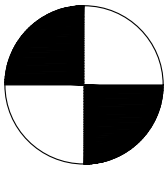
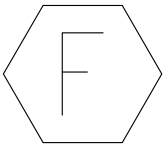
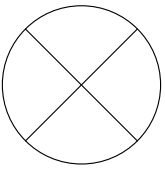
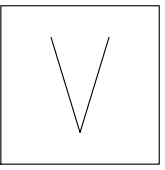
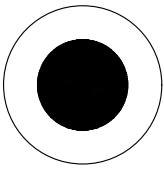
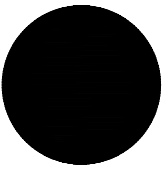
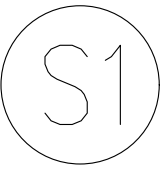
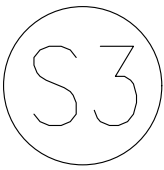
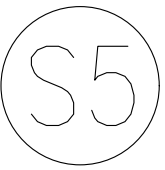
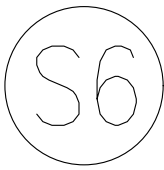
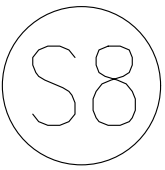
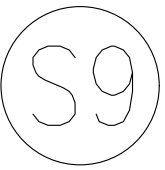
APPENDIX C - BLOCKS - 2 POLB GENERAL

			
POLB_VB	POLB_VENT STANDARD VENT CELL	POLB_W_RISER RISER FOR WATER	POLB_WATER_LEVEL WATER LEVEL SYMBOL
			
POLB_WBF WATER BACKFLOW	POLB_WCKV WATER CHECK VALVE	POLB_WFH WATER FIRE HYDRANT	POLB_WH
			
POLB_WMETER WATER METER	POLB_WMH	POLB_WSSB SHORE TO SHIP SERVICE WATER BOX	POLB_WTB RECLAIMED WATER THRUST BLOCK

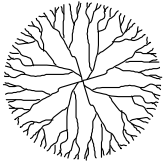
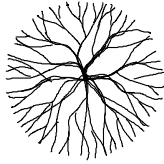
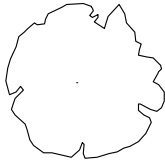
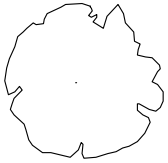
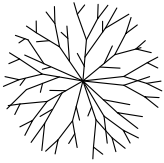
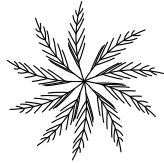
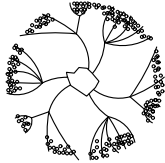
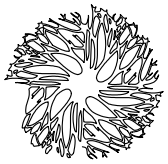
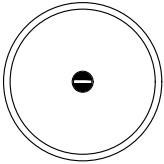
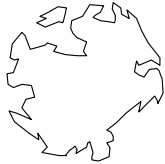
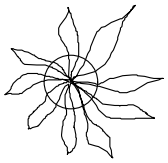
APPENDIX C - BLOCKS - 3 POLB LANDSCAPE

			
POLB_IRRG_EQPM_AC IRRIGATION AUTOMATIC CONTROLLER	POLB_IRRG_EQPM_BF IRRIGATION BACKFLOW DEVICE	POLB_IRRG_EQPM_C IRRIGATION CONTROLLER	POLB_IRRG_EQPM_EL IRR ELEC POWER SOURCE FOR CONTROLLER
			
POLB_IRRG_EQPM_FS IRRIGATION FLOW SENSOR ASSEMBLY	POLB_IRRG_EQPM_RS IRRIGATION RAIN SENSOR	POLB_IRRG_EQPM_WM IRRIGATION WATER METER	POLB_IRRG_SPKL_ES IRRIGATION SPRINKLER END STRIP
			
POLB_IRRG_SPKL_HED1 IRRIGATION SPRINKLER HEAD 1	POLB_IRRG_SPKL_HED2 IRRIGATION SPRINKLER HEAD 2	POLB_IRRG_SPKL_HED3 IRRIGATION SPRINKLER HEAD 3	POLB_IRRG_SPKL_HED4 IRRIGATION SPRINKLER HEAD 4
			
POLB_IRRG_SPKL_HED5 IRRIGATION SPRINKLER HEAD 5	POLB_IRRG_SPKL_HED6 IRRIGATION SPRINKLER HEAD 6	POLB_IRRG_SPKL_HED7 IRRIGATION SPRINKLER HEAD 7	POLB_IRRG_SPKL_HED8 IRRIGATION SPRINKLER HEAD 8
			
POLB_IRRG_SPKL_HED9 IRRIGATION SPRINKLER HEAD 9	POLB_IRRG_SPKL_SS IRRIGATION SPRINKLER SIDE STRIP	POLB_IRRG_VALV_ARV IRRIGATION AUTOMATIC AIR RELIEF VALVE	POLB_IRRG_VALV_BV IRRIGATION BALL VALVE

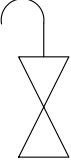
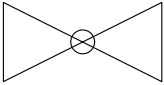
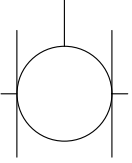
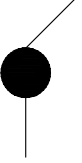
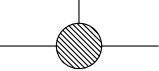
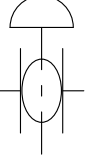
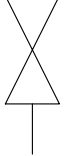
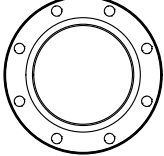
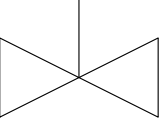
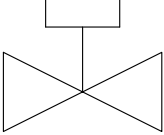
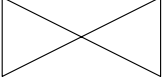
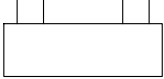
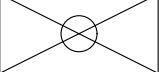
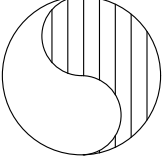
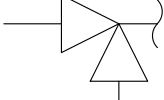
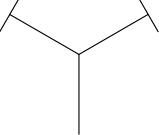
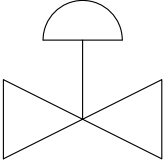
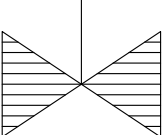
APPENDIX C - BLOCKS - 3 POLB LANDSCAPE

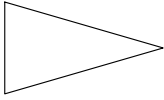
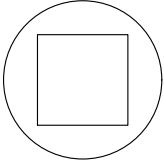
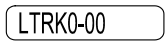
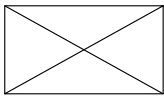
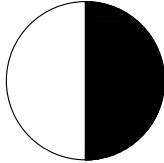
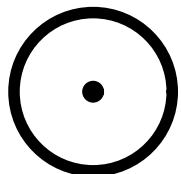
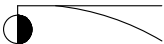
			
POLB_IRRG_VALV_DV IRRIGATION DRIP VALVE ASSEMBLY	POLB_IRRG_VALV_FV IRRIGATION AUTOMATIC FLUSH VALVE	POLB_IRRG_VALV_GV IRRIGATION GLOBE VALVE	POLB_IRRG_VALV_MCV IRRIGATION MASTER CONTROL VALVE
			
POLB_IRRG_VALV_PRV IRRIGATION PRESSURE REDUCING VALVE	POLB_IRRG_VALV_QCV IRRIGATION QUICK COUPLER VALVE	POLB_IRRG_VALV_RCV IRRIGATION REMOTE CONTROL VALVE	POLB_SHRUB_1 SHRUB 1 – PLAN VIEW
			
POLB_SHRUB_2 SHRUB 2 – PLAN VIEW	POLB_SHRUB_3 SHRUB 3 – PLAN VIEW	POLB_SHRUB_4 SHRUB 4 – PLAN VIEW	POLB_SHRUB_5 SHRUB 5 – PLAN VIEW
			
POLB_SHRUB_6 SHRUB 6 – PLAN VIEW	POLB_SHRUB_7 SHRUB 7 – PLAN VIEW	POLB_SHRUB_8 SHRUB 8 – PLAN VIEW	POLB_SHRUB_9 SHRUB 9 – PLAN VIEW
			
POLB_TREE_ELEV1 TREE – ELEVATION VIEW	POLB_TREE_ELEV2 TREE – ELEVATION VIEW	POLB_TREE_ELEV3 TREE – ELEVATION VIEW	POLB_TREE_ELEV4 TREE – ELEVATION VIEW

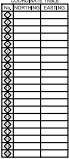
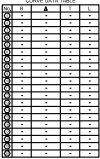
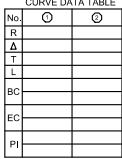
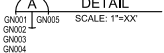
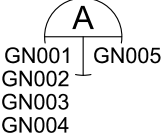
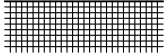
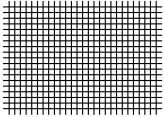
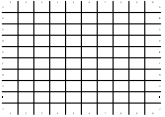
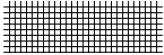
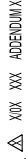
APPENDIX C - BLOCKS - 3 POLB LANDSCAPE

			
POLB_TREE_ELEV5 TREE - ELEVATION VIEW	POLB_TREE_ELEV6 TREE - ELEVATION VIEW	POLB_TREE_ELEV7 TREE - ELEVATION VIEW	POLB_TREE_ELEV8 TREE - ELEVATION VIEW
			
POLB_TREE_ELEV9 TREE - ELEVATION VIEW	POLB_TREE_PLAN1 TREE PLAN VIEW	POLB_TREE_PLAN10 TREE PLAN VIEW	POLB_TREE_PLAN11 LANDSCAPE
			
POLB_TREE_PLAN12 LANDSCAPE	POLB_TREE_PLAN2 TREE - PLAN VIEW	POLB_TREE_PLAN3 TREE - PLAN VIEW	POLB_TREE_PLAN4 TREE - PLAN VIEW
			
POLB_TREE_PLAN5 TREE - PLAN VIEW	POLB_TREE_PLAN6 TREE - PLAN VIEW	POLB_TREE_PLAN7 LANDSCAPE	POLB_TREE_PLAN8 LANDSCAPE
			
POLB_TREE_PLAN9 LANDSCAPE			

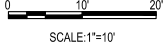
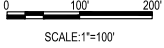
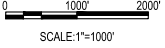
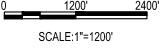
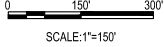
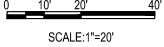
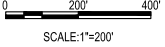
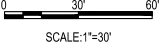
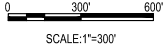
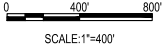
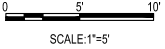
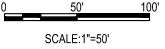
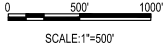
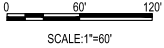
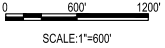
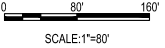
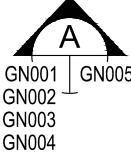
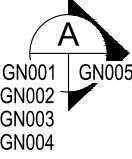
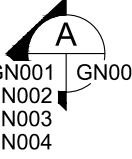
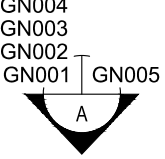
APPENDIX C - BLOCKS - 4 POLB PIPING

			
POLB_Air_V MANUAL AIR VENT	POLB_Balance_V BALANCING VALVE	POLB_Ball_V BALL VALVE	POLB_BlowOff_Detail BLOW-OFF/AIR RELEASE VALVE DETAILS
			
POLB_BlowOff_Plan BLOW-OFF/AIR RELEASE VALVE FOR PLAN	POLB_Bypass_V PNEUMATIC BYPASS VALVE	POLB_Drain_V DRAIN VALVE	POLB_Flange PIPE FLANGE
			
POLB_Gas_C GAS COCK	POLB_Gas_V GAS SOLENOID VALVE W/H1-LO FIRE	POLB_Gate_V GATE VALVE	POLB_GFC_V GRISWOLD FLOW CONTROL VALVE
			
POLB_Globe_V GLOBE VALVE	POLB_PipeBreak PIPE BREAK SYMBOL	POLB_PipeCut EXISTING PIPE CUTAWAY	POLB_Relief_V RELIEF VALVE
			
POLB_Siamese FIRE DEPARTMENT CONNECTION	POLB_TwoWay_V TWO WAY CONTROL VALVE	POLB_Valve STANDARD VALVE CELL	

			
POLB_CRNSTOP CRANE STOP	POLB_CRSG_ARM CROSSING ARM STANDARD	POLB_DERAIL LEFT HAYES DERAIL	POLB_DERAIL RIGHT HAYES DERAIL
			
POLB_ERRSIG EXIST RR SIGNAL	POLB_FROG	POLB_RAIL NOTE A	POLB_RAIL NOTE B
			
POLB_RRBUMP RAILROAD BUMPER	POLB_RRCPP	POLB_RRSW RAILROAD SWITCH	POLB_RRSWP ELECTRICAL
			
POLB_SPDLH SWITCH POINT DERAIL LEFT HAND	POLB_SPDRH SWITCH POINT DERAIL RIGHT HAND		

			
POLB_COORD_TABLE	POLB_CURVE_TABLE	POLB_CURVE_TABLE_2	POLB_DET_TITLE_LONG
			
POLB_DET_TITLE_MEDIUM	POLB_DET_TITLE_SHORT	POLB_DETAIL1 DETAIL BUBBLE	POLB_DIALERT
			
POLB_GRID_BOTTOM GRID	POLB_GRID_FULL GRID FULL	POLB_GRID_MARKUP GRID MARKUP	POLB_GRID_TOP GRID
			
POLB_LOGO	POLB_NORTHARROW	POLB_NORTHARROW_Alt	POLB_PLAN_TITLE_LONG
			
POLB_PLAN_TITLE_MEDIUM	POLB_PLAN_TITLE_SHORT	POLB_REVISION DATA TAG SET	POLB_REVISION DATA NO CHANGES TAG SET

APPENDIX C - BLOCKS - 6 POLB SHEETS

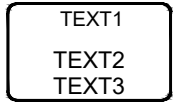
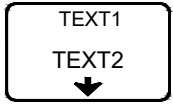
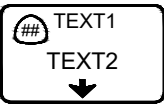
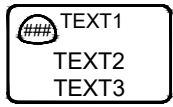
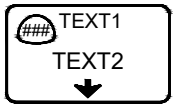
			
POLB_SCALE BAR 10 SCALE 1IN EQ 10FT	POLB_SCALE BAR 100 SCALE 1IN EQ 100FT	POLB_SCALE BAR 1000 SCALE 1IN EQ 1000FT	POLB_SCALE BAR 1200 SCALE 1IN EQ 1200FT
			
POLB_SCALE BAR 150 SCALE 1IN EQ 150FT	POLB_SCALE BAR 20 SCALE 1IN EQ 20FT	POLB_SCALE BAR 200 SCALE 1IN EQ 200FT	POLB_SCALE BAR 30 SCALE 1IN EQ 30FT
			
POLB_SCALE BAR 300 SCALE 1IN EQ 300FT	POLB_SCALE BAR 400 SCALE 1IN EQ 400FT	POLB_SCALE BAR 5 SCALE 1IN EQ 5FT	POLB_SCALE BAR 50 SCALE 1IN EQ 50FT
			
POLB_SCALE BAR 500 SCALE 1IN EQ 500FT	POLB_SCALE BAR 60 SCALE 1IN EQ 60FT	POLB_SCALE BAR 600 SCALE 1IN EQ 600FT	POLB_SCALE BAR 80 SCALE 1IN EQ 80FT
			
POLB_SEC1 SECTION CALLOUT UP	POLB_SEC2 SECTION CALLOUT RIGHT	POLB_SEC3 SECTION CALLOUT LEFT	POLB_SEC4 SECTION CALLOUT DOWN

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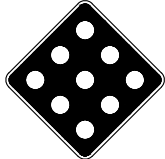
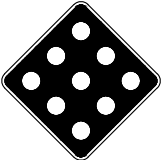
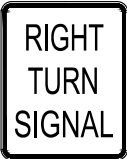
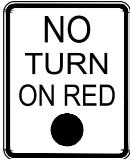
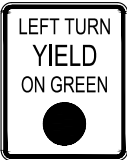
APPENDIX C - BLOCKS - 7 POLB SIGNS

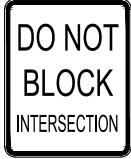
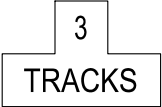
																																											
POLB_C12(CA) NARROW LANE	POLB_C19 CA ROAD CLOSED AHEAD	POLB_C20(CA) L 2 LEFT LANES CLOSED AHEAD	POLB_C20(CA) R 2 RIGHT LANES CLOSED AHEAD																																								
																																											
POLB_C23(CA) RAMP WORK AHEAD	POLB_C30(CA) LANE CLOSED	POLB_C45(CA) RUMBLE STRIPS	POLB_C46(CA) UNEVEN PAVEMENT																																								
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POLB_C46P(CA) UNEVEN PAVEMENT	POLB_C9(CA) FLAGGER WITH STOP SIGN	POLB_CMS ELECTRICAL	POLB_D11-1 BIKE ROUTE																																								
																																											
POLB_D9-14 POLICE	POLB_D9-16 TRUCK PARKING	POLB_D9-6 HANDICAPPED	POLB_EM-1 EVACUATION ROUTE																																								
																																											
POLB_EM-1a TSUNAMI EVACUATION ROUTE	POLB_FIRE_EXIT (1) FIRE EXIT SIGN	POLB_FIRE_EXIT (2) DISABLED EGRESS SIGN	POLB_G20-1 ROAD WORK NEXT ? MILES																																								

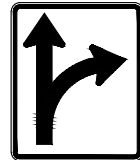
APPENDIX C - BLOCKS - 7 POLB SIGNS

			
POLB_G20-2 END ROAD WORK	POLB_G20-4 PILOT CAR FOLLOW ME	POLB_G24-5(CA)-1	POLB_G24-5(CA)-1A
			
POLB_G24-5(CA)-2D	POLB_G24-5(CA)-2D-A	POLB_G24-5(CA)-3D	POLB_G24-5(CA)-3D-A
			
POLB_G27-1(CA)-2D	POLB_G27-1(CA)-3D	POLB_G28-1(CA)-2D	POLB_G28-1(CA)-3D
			
POLB_HANDIC HANDICAP SYMBOL	POLB_M1-8 BICYCLE ROUTE 1 OR 2 DIGITS	POLB_M1-9 BICYCLE ROUTE 1 OR 2 DIGITS	POLB_M3-1 NORTH
			
POLB_M3-2 EAST	POLB_M3-3 SOUTH	POLB_M3-4 WEST	POLB_M4-1 ALTERNATE AUXILIARY

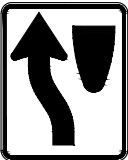
			
POLB_M4-10L DETOUR ARROW, LEFT	POLB_M4-10R DETOUR ARROW, RIGHT	POLB_M4-1a ALT auxiliary	POLB_M4-2 BY-PASS AUXILIARY
			
POLB_M4-3 BUSINESS auxiliary	POLB_M4-4 TRUCK AUXILIARY	POLB_M4-5 TO AUXILIARY	POLB_M4-6 END AUXILIARY
			
POLB_M4-7a TEMP AUXILIARY	POLB_M4-8 DETOUR	POLB_M4-8a END DETOUR	POLB_M4-8b END
			
POLB_M4-9L DETOUR W/ARROW, LEFT	POLB_M4-9R DETOUR W/ARROW, RIGHT	POLB_M5-1 ADVANCE 90° TURN ARROW	POLB_M5-2 ADVANCE 45° TURN ARROW
			
POLB_M6-1 90° DIRECTION ARROW	POLB_M6-2 45° DIRECTION ARROW	POLB_M6-3 0° DIRECTION ARROW	POLB_M6-4 DUAL 90° DIRECTION ARROW

			
POLB_M6-5 DUAL 45° DIRECTION ARROW	POLB_M6-6 0° AND 90° DIRECTION ARROW	POLB_M6-7 0° AND 45° DIRECTION ARROW	POLB_OM1-1 OBJECT MARKER - YELLOW
			
POLB_OM4-1 OBJECT MARKER - RED	POLB_R1-1 STOP	POLB_R1-2 YIELD	POLB_R1-2a TO ONCOMING TRAFFIC
			
POLB_R1-3p ALL WAY	POLB_R10-10L LEFT TURN SIGNAL	POLB_R10-10R RIGHT TURN SIGNAL	POLB_R10-11 NO TURN ON RED (WITH RED BALL)
			
POLB_R10-11a NO TURN ON RED	POLB_R10-11b NO TURN ON RED	POLB_R10-12 LT TURN YIELD ON GREEN (W/GREEN BALL)	POLB_R10-13 EMERGENCY SIGNAL
			
POLB_R10-3e(CA)	POLB_R10-5 LEFT ON GREEN ARROW ONLY	POLB_R10-6 STOP HERE ON RED	POLB_R10-6a STOP HERE ON RED

			
POLB_R10-7 DO NOT BLOCK INTERSECTION	POLB_R10-8 USE LANE WITH GREEN ARROW	POLB_R11-1 KEEP OFF MEDIAN	POLB_R11-2 ROAD CLOSED
			
POLB_R11-2a RAMP CLOSED	POLB_R11-3a ROAD CLOSED 10 MILES LOCAL TRAFF ONLY	POLB_R11-4 ROAD CLOSED TO THRU TRAFFIC	POLB_R13A(CA) NO RIGHT TURN ON RED
			
POLB_R13B(CA) NO LEFT TURN OR RED	POLB_R15-1 RAILROAD CROSSING	POLB_R15-2 NUMBER OF TRACKS	POLB_R15-3 EXEMPT
			
POLB_R16-1 SEATBELT	POLB_R2-1 SPEED LIMIT XX	POLB_R2-2 TRUCKS SPEED LIMIT	POLB_R2-3 NIGHT SPEED LIMIT
			
POLB_R2-4 MINIMUM SPEED LIMIT	POLB_R2-4a SPEED LIMIT 55 MINIMUM 30	POLB_R26(CA) NO PARKING ANY TIME	POLB_R26(S) (CA) NO STOPPING ANY TIME

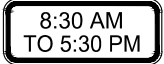
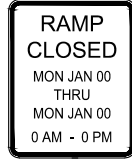
			
POLB_R26L(CA) NO STOPPING ANY TIME - TOW ZONE	POLB_R28(CA) NO PARKING ANY TIME - LEFT ARROW	POLB_R28(S) (CA) NO STOPPING ANY TIME - TWO ARROWS	POLB_R28(S) (CA) Lt NO STOPPING ANY TIME - LEFT ARROW
			
POLB_R28(S) (CA) Rt NO STOPPING ANY TIME - RIGHT ARROW	POLB_R3-1 NO RIGHT TURN	POLB_R3-17 BIKE LANE	POLB_R3-18 COMBINATION NO U-TURN AND LEFT TURN
			
POLB_R3-2 NO LEFT TURN	POLB_R3-3 NO TURNS	POLB_R3-4 NO U-TURN	POLB_R3-5a ONLY with symbol
			
POLB_R3-5L LEFT TURN ONLY	POLB_R3-5R RIGHT TURN ONLY	POLB_R3-6L AHEAD OR TURN LEFT	POLB_R3-6R AHEAD OR TURN RIGHT
			
POLB_R3-7L LEFT LANE MUST TURN LEFT	POLB_R3-7R RIGHT LANE MUST TURN RIGHT	POLB_R3-8a 3 LANE, OPTIONAL MIDDLE	POLB_R3-8b 3 LANE, MANDATORY MIDDLE

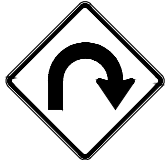
APPENDIX C - BLOCKS - 7 POLB SIGNS

			
POLB_R3-8L DOUBLE TURN LEFT	POLB_R3-8R DOUBLE TURN RIGHT	POLB_R3-9a TWO-WAY LEFT TURN ONLY	POLB_R3-9b CENTER LANE ONLY
			
POLB_R30B(CA) STREET SWEEPING	POLB_R39(CA) NO PARKING OF COMMERCIAL VEH.	POLB_R4-1 DO NOT PASS	POLB_R4-2 PASS WITH CARE
			
POLB_R4-3 SLOWER TRAFFIC KEEP RIGHT	POLB_R4-5 TRUCKS USE RIGHT LANE	POLB_R4-6 TRUCK LANE 500 FEET	POLB_R4-7 KEEP RIGHT
			
POLB_R4-7a KEEP RIGHT W/SYMBOL	POLB_R4-7b KEEP RIGHT W/SYMBOL	POLB_R4-8 KEEP LEFT	POLB_R4-9 STAY IN LANE
			
POLB_R44A-1(CA) BIKE PATH NO MOTOR VEHICLES	POLB_R5-1 DO NOT ENTER	POLB_R5-10a PEDS AND MOTORCYCLES PROHIBITED	POLB_R5-1a WRONG WAY

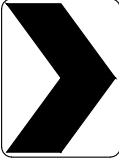
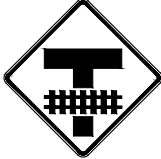
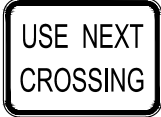
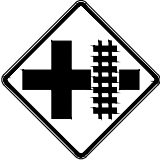
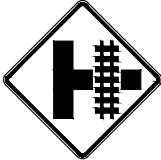
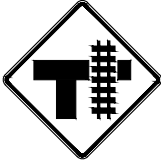
APPENDIX C - BLOCKS - 7 POLB SIGNS

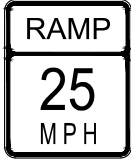
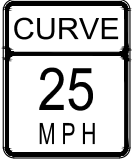
			
POLB_R5-2 NO TRUCKS	POLB_R5-2a NO TRUCKS	POLB_R5-3 NO MOTOR VEHICLES	POLB_R5-4 COMMERCIAL VEHICLES PROHIBITED
			
POLB_R5-5 VEHICLES WITH LUGS PROHIBITED	POLB_R5-6 NO BICYCLES	POLB_R5-7 NON-MOTORIZED TRAFFIC PROHIBITED	POLB_R5-8 MOTOR-DRIVEN CYCLES PROHIBITED
			
POLB_R6-1L ONE WAY (LEFT)	POLB_R6-1R ONE WAY (RIGHT)	POLB_R6-2L ONE WAY LEFT	POLB_R6-2R ONE WAY RIGHT
			
POLB_R6-4aL DIRECTIONAL CHEVRONS 3 LT	POLB_R6-4aR DIRECTIONAL CHEVRONS 3 RT	POLB_R6-4L DIRECTIONAL CHEVRONS 2 LT	POLB_R6-4R DIRECTIONAL CHEVRONS 2 RT
			
POLB_R61-19(CA) DOUBLE LANE CONTROL RT AND LT	POLB_R73-3(CA) LEFT TURN NO U TURN	POLB_R8-8 DO NOT STOP ON TRACKS	POLB_R8-9 TRACKS OUT OF SERVICE

			
POLB_R9-3a NO PEDESTRIANS	POLB_R99C(CA) HANDICAPPED PARKING ONLY \$250 FINE	POLB_RS-016 Pedestrian crossing	POLB_RS-034 Parking
			
POLB_RW-080 Boat Launch	POLB_S4-1 X:XX AM TO X:XX PM	POLB_S4-4 WHEN FLASHING	POLB_S4-6 MON-FRI
			
POLB_SC3 (CA) DETOUR - STRAIGHT	POLB_SC5 (CA) SPECIAL EVENT AHEAD	POLB_SC6-3 (CA) RAMP CLOSED ONE DAY ONLY	POLB_SC6-4 (CA) RAMP CLOSED MORE THAN ONE DAY
			
POLB_SC10 (CA) LANE CLOSED AHEAD	POLB_SC11 (CA) LANE CLOSED	POLB_SC13 (CA) DO NOT PASS	POLB_SC15 (CA) CAUTION
			
POLB_SC18 (CA) EXIT RIGHT	POLB_SP-1 PICO BLVD DETOUR RIGHT	POLB_SP-2 PICO BLVD DETOUR LEFT	POLB_SP-3 PICO BLVD DETOUR STRAIGHT

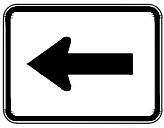
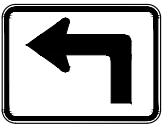
			
POLB_SP-4 2ND OFF RAMP CLOSED AHEAD	POLB_SP-5 PICO AVE	POLB_SP-6 SPECIAL - NO TRUCK STOPPING	POLB_SP-7 SPECIAL - NO FISHING
			
POLB_SP-8 SPECIAL - NO TRAILER DROP	POLB_T50 LOCAL ACCESS ONLY	POLB_W1-1 TURN	POLB_W1-11 HAIRPIN CURVE
			
POLB_W1-13 TRUCK ROLLOVER WARNING	POLB_W1-15 270° LOOP	POLB_W1-1a RIGHT TURN W/SPEED	POLB_W1-1aL LEFT TURN W/SPEED
			
POLB_W1-2 CURVE	POLB_W1-2a RIGHT CURVE SYMBOL W/SPEED	POLB_W1-2aL LEFT CURVE SYMBOL W/SPEED	POLB_W1-3 REVERSE TURN
			
POLB_W1-4 REVERSE CURVE	POLB_W1-5 WINDING ROAD	POLB_W1-6 ONE-DIRECTION LARGE ARROW	POLB_W1-7 TWO-DIRECTION LARGE ARROW

APPENDIX C - BLOCKS - 7 POLB SIGNS

			
POLB_W1-8 CHEVRON	POLB_W10-1 HIGHWAY-RAIL GRADE CROSSING	POLB_W10-10 NO SIGNAL	POLB_W10-11 HIGHWAY-RAIL GRADE CROSSING
			
POLB_W10-11a FEET BETWEEN TRACKS & HIGHWAY	POLB_W10-11b FEET BETWEEN HIGHWAY & TRACKS BEHIND	POLB_W10-12 SKEWED CROSSING	POLB_W10-13 NO GATES OR LIGHTS
			
POLB_W10-14 NEXT CROSSING	POLB_W10-14a USE NEXT CROSSING	POLB_W10-15 ROUGH CROSSING	POLB_W10-1a EXEMPT
			
POLB_W10-2 HIGHWAY-RAIL GRADE CROSSING	POLB_W10-3 HIGHWAY-RAIL GRADE CROSSING	POLB_W10-4 HIGHWAY-RAIL GRADE CROSSING	POLB_W10-5 LOW GRND CLEARANCE HWY-RAIL CROSSING
			
POLB_W10-9 NO TRAIN HORN	POLB_W11-1 BICYCLE	POLB_W11-10 TRUCK	POLB_W11-12p EMERGENCY SIGNAL AHEAD

			
POLB_W11-2 PEDESTRIAN	POLB_W11-8 FIRE STATION	POLB_W11-9 HANDICAPPED CROSSING	POLB_W12-1 FORK IN ROAD
			
POLB_W12-2 LOW CLEARANCE	POLB_W12-2p LOW CLEARANCE, PLAQUE	POLB_W13-1P ADVISORY SPEED PLAQUE	POLB_W13-2 ADVISORY EXIT SPEED
			
POLB_W13-3 ADVISORY RAMP SPEED	POLB_W13-5 ADVISORY CURVE SPEED	POLB_W14-1 DEAD END	POLB_W14-1aL DEAD END DIRECTIONAL, LT
			
POLB_W14-1aR DEAD END DIRECTIONAL, RT	POLB_W14-2 NO OUTLET	POLB_W14-2aL NO OUTLET DIRECTIONAL, LT	POLB_W14-2aR NO OUTLET DIRECTIONAL, RT
			
POLB_W14-3 NO PASSING ZONE PENNANT	POLB_W16-1 SHARE THE ROAD	POLB_W16-12p TRAFFIC CIRCLE	POLB_W16-13 WHEN FLASHING

APPENDIX C - BLOCKS - 7 POLB SIGNS

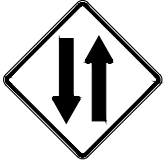
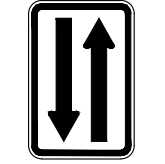
			
POLB_W16-2 DISTANCE AHEAD PLAQUE	POLB_W16-2a DISTANCE PLAQUE, FEET (1 LINE)	POLB_W16-3 DISTANCE PLAQUE, MILES (2 LINES)	POLB_W16-3a DISTANCE PLAQUE, MILES (1 LINES)
			
POLB_W16-4 NEXT DISTANCE PLAQUE	POLB_W16-5p ARROW PLAQUE	POLB_W16-6p ARROW PLAQUE, AHEAD	POLB_W16-7p CROSSING LOCATION ARROW
			
POLB_W16-8 ADVANCE STREET NAME PLAQUE	POLB_W16-9p AHEAD PLAQUE	POLB_W17-1 SPEED HUMP	POLB_W18-1 NO TRAFFIC SIGNS
			
POLB_W2-1 CROSS ROAD	POLB_W2-2 SIDE ROAD	POLB_W2-3 SKEWED SIDE ROAD	POLB_W2-4 T-INTERSECTION
			
POLB_W2-5 Y-INTERSECTION	POLB_W2-6 CIRCULAR INTERSECTION	POLB_W20-2 DETOUR AHEAD	POLB_W20-2a CARS DETOUR AHEAD

APPENDIX C - BLOCKS - 7 POLB SIGNS

			
POLB_W20-4 ONE LANE ROAD AHEAD	POLB_W20-5 CENTER LANE CLOSED AHEAD	POLB_W20-5a RIGHT TWO LANES CLOSED AHEAD	POLB_W20-5L LEFT LANE CLOSED AHEAD
			
POLB_W20-5R RIGHT LANE CLOSED AHEAD	POLB_W20-7 FLAGGER AHEAD	POLB_W20-8(1) STOP PADDLE	POLB_W20-8(2) SLOW PADDLE
			
POLB_W21-1 WORKERS	POLB_W21-1a WORKERS SYMBOL	POLB_W21-2 FRESH OIL	POLB_W21-3 ROAD MACHINERY AHEAD
			
POLB_W21-5 SHOULDER WORK	POLB_W21-5aL LEFT SHOULDER CLOSED	POLB_W21-5aR RIGHT SHOULDER CLOSED	POLB_W21-5bL LEFT SHOULDER CLOSED AHEAD
			
POLB_W21-5bR RIGHT SHOULDER CLOSED AHEAD	POLB_W21-6 SURVEY CREW	POLB_W21-7 UTILITY WORK AHEAD	POLB_W22-1 BLASTING ZONE AHEAD

			
POLB_W23-1 SLOW TRAFFIC AHEAD	POLB_W25-1 ONCOMING TRAFFIC HAS EXTENDED GREEN	POLB_W25-2 ONCOMING TRAFF MAY HAVE EXTEND GREEN	POLB_W3-1 STOP AHEAD
			
POLB_W3-1a STOP AHEAD	POLB_W3-2 YIELD AHEAD	POLB_W3-2a YIELD AHEAD	POLB_W3-3 SIGNAL AHEAD
			
POLB_W3-3a SIGNAL AHEAD	POLB_W3-4 BE PREPARED TO STOP	POLB_W3-5 SPEED REDUCTION	POLB_W3-5a XX MPH SPEED ZONE AHEAD
			
POLB_W4-1 MERGE	POLB_W4-2 LANE ENDS	POLB_W4-3 ADDED LANE	POLB_W4-4 CROSS TRAFFIC DOES NOT STOP
			
POLB_W4-4a TRAFFIC FROM LEFT DOES NOT STOP	POLB_W4-4b ONCOMING TRAFFIC DOES NOT STOP	POLB_W4-5 TRAFFIC ENTERING	POLB_W4-6 ENTERING ROADWAY ADDED LANE

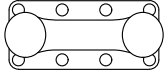
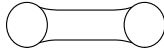
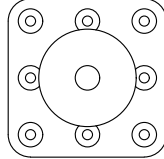
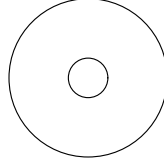
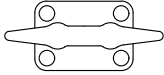
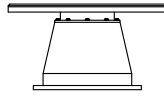
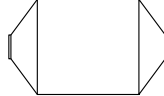
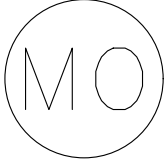
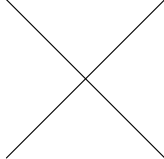
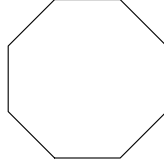
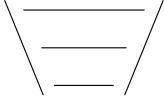
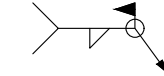
APPENDIX C - BLOCKS - 7 POLB SIGNS

			
POLB_W4-7L THRU TRAFFIC MERGE LEFT	POLB_W4-7R THRU TRAFFIC MERGE RIGHT	POLB_W5-1 ROAD NARROWS	POLB_W5-2 NARROW BRIDGE
			
POLB_W5-3 ONE LANE BRIDGE	POLB_W5-4a BIKEWAY NARROWS	POLB_W51(CA) SLOW TRUCKS	POLB_W6-1 DIVIDED HIGHWAY
			
POLB_W6-1a DIVIDED HIGHWAY	POLB_W6-1b DIVIDED ROAD	POLB_W6-2 DIVIDED HIGHWAY ENDS	POLB_W6-2a DIVIDED HIGHWAY ENDS
			
POLB_W6-2b DIVIDED ROAD ENDS	POLB_W6-3 TWO WAY TRAFFIC	POLB_W6-4 TWO WAY TRAFFIC PLATE	POLB_W7-1 Hill
			
POLB_W7-1a HILL	POLB_W7-1b HILL WITH GRADE	POLB_W7-3a NEXT __ MILES	POLB_W7-5 BICYCLE HILL

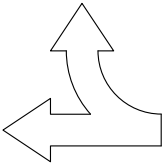
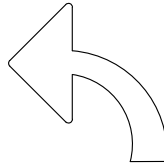
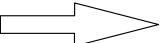
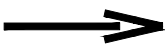
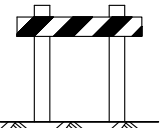
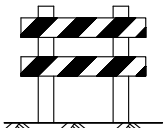
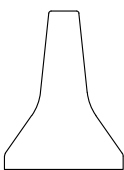
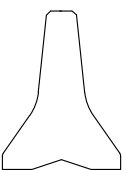
			
POLB_W7-5a HILL (PLAQUE)	POLB_W7-6 HILL BLOCKS VIEW	POLB_W73A (CA) RIGHT LANE TURNS RIGHT AHEAD	POLB_W8-1 BUMP
			
POLB_W8-10 BICYCLE SURFACE CONDITION	POLB_W8-10p SLIPPERY WHEN WET	POLB_W8-11 UNEVEN LANES	POLB_W8-12 NO CENTER STRIPE
			
POLB_W8-13 BRIDGE ICES BEFORE ROAD	POLB_W8-2 DIP	POLB_W8-3 PAVEMENT ENDS	POLB_W8-4 SOFT SHOULDER
			
POLB_W8-5 SLIPPERY WHEN WET	POLB_W8-6 TRUCK CROSSING	POLB_W8-7 LOOSE GRAVEL	POLB_W8-8 ROUGH ROAD
			
POLB_W8-9 LOW SHOULDER	POLB_W8-9a SHOULDER DROP-OFF	POLB_W86(CA) FLOODING AHEAD	POLB_W9-1L LEFT LANE ENDS

			
POLB_W9-1R RIGHT LANE ENDS	POLB_W9-3 CENTER LANE CLOSED AHEAD	POLB_W9-3L LEFT LANE CLOSED AHEAD	POLB_W9-3R RIGHT LANE CLOSED AHEAD
			
POLB_W90(CA) EMERGENCY SCENE AHEAD			

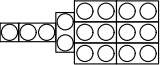
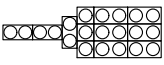
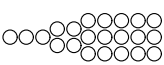
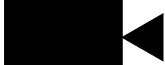
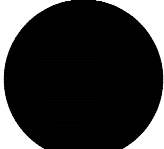
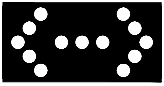
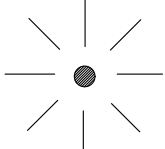
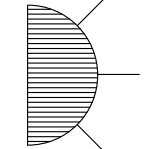
APPENDIX C - BLOCKS - 8 POLB STRUCTURAL

			
POLB_BOLLRD_DBL1 DOUBLE HORN BOLLARD WITH BASE	POLB_BOLLRD_DBL2 DOUBLE HORN BOLLARD WITHOUT BASE	POLB_BOLLRD_SNG1 SINGLE HORN BOLLARD WITH BASE	POLB_BOLLRD_SNG2 SINGLE HORN BOLLARD WITHOUT BASE
			
POLB_CLEAT1 CLEAT WITH BASE	POLB_CLEAT2 CLEAT WITHOUT BASE	POLB_FENDER1 WHARF FENDER	POLB_FENDER2 WHARF FENDER
			
POLB_MOOR MOORING	POLB_PILE_INDICATOR INDICATOR PILE	POLB_PILE_OCTAGON 24" PRESTRESSED OCTAGONAL PILE	POLB_PILING DOCK PILING
			
POLB_SAF_LAD EXISTING SAFETY LADDER	POLB_SENSOR SEISMIC SENSOR	POLB_STRUCT_GRID STRUCTURAL GRID BUBBLE	POLB_WELDING_SYMBOL ELECTRICAL

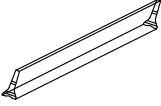
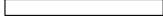
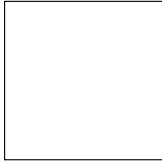
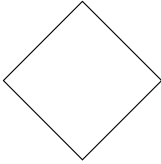
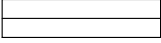
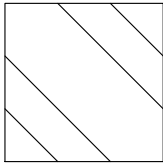
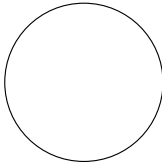
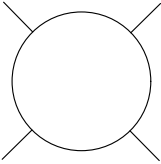
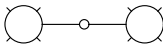
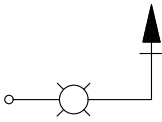
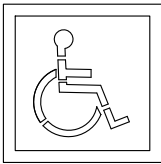
APPENDIX C - BLOCKS - 9 POLB TRAFFIC

			
POLB_AREATERM TERMINATOR FOR AREAS	POLB_ARR_DIR_1 STRAIGHT AND TURN ARROW	POLB_ARR_DIR_2 LEFT TURN ARROW	POLB_ARR_DIR_3 TRAFFIC DIRECTION ARROW
			
POLB_ARR_MRK_1 PAINT PVMT ARR TYP 1	POLB_ARR_MRK_2 PAINT PVMT ARR TYP 2	POLB_ARR_MRK_3 PAINT PVMT ARR TYP 3	POLB_ARR_MRK_4 PAINT PVMT ARR TYP 4
			
POLB_ARR_MRK_5 PAINT PVMT ARR TYP 5	POLB_ARR_MRK_6 PAINT PVMT ARR TYP 6	POLB_ARR_MRK_7 PAINT PVMT ARR TYP 7	POLB_ARR_MRK_8 PAINT PVMT ARR TYP 8
			
POLB_ARROWTERM TERMINATOR ARROW	POLB_BARRICADE BARRICADE TYPE III	POLB_BARRICADE AND SIGN BARRICADE AND SIGN	POLB_BARRICADE_TYPE I BARRICADE TYPE I - ELEVATION
			
POLB_BARRICADE_TYPE II BARRICADE TYPE II - ELEVATION	POLB_BARRICADE_TYPE III BARRICADE TYPE III - ELEVATION	POLB_BARRIER_TKPRO1 KRAIL PROFILE 1	POLB_BARRIER_TKPRO2 KRAIL PROFILE 2

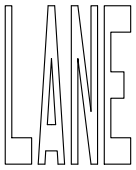
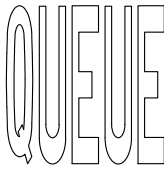
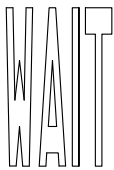
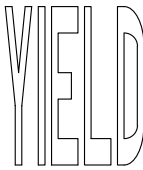
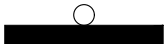
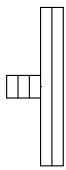
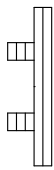
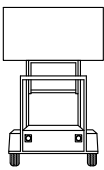
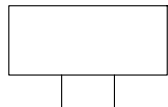
APPENDIX C - BLOCKS - 9 POLB TRAFFIC

			
POLB_BREAK LINE BREAK SYMBOL	POLB_CC_B14 CRASH CUSHION B14	POLB_CC_TB11 TEMP ARRAY TB11	POLB_CC_TB14 TEMP ARRAY TB14
			
POLB_CC_TS11 TEMP ARRAY TS11	POLB_CC_TS14 TEMP ARRAY TS14	POLB_CC_TU11 TEMP ARRAY TU11	POLB_CC_TU14 TEMP ARRAY TU14
			
POLB_CC_TU17 TEMP ARRAY TU17	POLB_CC_TU21 TEMP ARRAY TU21	POLB_CC_U11 CRASH CUSHION U11	POLB_CC_U14 CRASH CUSHION U14
			
POLB_CC_U16 CRASH CUSHION U16	POLB_CC_U21 CRASH CUSHION U21	POLB_CCTV CLOSED CIRCUIT TV	POLB_DELINEATOR TRAFFIC DELINEATOR
			
POLB_FAS — ONE WAY FLASHING ARROW SIGN	POLB_FAS — TWO WAY FLASHING ARROW SIGN	POLB_FLBCN FLASHING BEACON	POLB_FLBCN2 NEW FLASHING BEACON

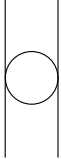
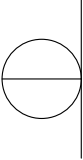
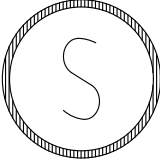
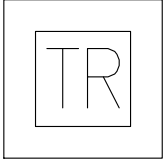
APPENDIX C - BLOCKS - 9 POLB TRAFFIC

			
POLB_K-RAIL_SX TEMP RAIL SECTION VIEW	POLB_KRAIL TEMP RAIL TYPE_K PLAN VIEW	POLB_LOOP_1 NEW TYPE_A DET_LOOP_20	POLB_LOOP_2 NEW TYPE_B DET_LOOP_20
			
POLB_LOOP_3 NEW TYPE_C DET_LOOP_20	POLB_LOOP_4 NEW TYPE_D DET_LOOP_20	POLB_LOOP_5 NEW TYPE_E DET_LOOP_20	POLB_LOOP_6 NEW TYPE_Q DET_LOOP_20
			
POLB_LUM MASTARM LUMINAIRE	POLB_LUM2 DUAL ARM LUMINAIRE	POLB_MASTARM_20 NEW 20FT MASTARM_20_SCALE	POLB_MASTARM_40 NEW 40FT MASTARM
			
POLB_PVM_25 PAVEMENT MARKING-25 MILES PER HOUR	POLB_PVM_35 PAVEMENT MARKING-35 MILES PER HOUR	POLB_PVM_40 PAVEMENT MARKING-40 MILES PER HOUR	POLB_PVM_ACCESSIBILITY PAVEMENT MARKING-ACCESSIBILITY
			
POLB_PVM_AHEAD PAVEMENT MARKING - AHEAD	POLB_PVM_BIKELANE PAVEMENT MARKING-BIKE LANE SYMBOL	POLB_PVM_CLEAR PAVEMENT MARKING - CLEAR	POLB_PVM_KEEP PAVEMENT MARKING - KEEP

APPENDIX C - BLOCKS - 9 POLB TRAFFIC

			
POLB_PVM_LANE PAVEMENT MARKING - LANE	POLB_PVM_PED PAVEMENT MARKING - PED	POLB_PVM_QUEUE PAVEMENT MARKING - QUEUE	POLB_PVM_RAILROAD RR CROSSING W/ 10' WIDE STOP BARS
			
POLB_PVM_STOP PAVEMENT MARKING - STOP	POLB_PVM_THRU PAVEMENT MARKING - THRU	POLB_PVM_TRUCK PAVEMENT MARKING - TRUCK	POLB_PVM_WAIT PAVEMENT MARKING - WAIT
			
POLB_PVM_XING PAVEMENT MARKING - XING	POLB_PVM_YIELD PAVEMENT MARKING - YIELD	POLB_SGOHD_BMS OVERHEAD SIGN - BRIDGE MOUNTED	POLB_SGOHD_CDIS OVERHD SIGN-CENTERED DUAL ILLUMINATED
			
POLB_SGOHD_CMIS OVERHEAD SIGN - CENTERED ILLUMINATED	POLB_SGOHD_DPIS OVERHEAD SIGN - DUAL POST ILLUMINATED	POLB_SGOHD_SSMS OVERHEAD SIGN - SIDE POST ILLUMINATED	POLB_SGOHD_SWL OVERHEAD SIGN - WITH ELECTROLIER
			
POLB_SIGN_1POST SIGN WITH 1 POST	POLB_SIGN_2POST SIGN WITH 2 POSTS	POLB_SIGN_CMS_1 CHANGEABLE MESSAGE SIGN TRAILER ELEV	POLB_SIGN_CMS_2 CHANGEABLE MESSAGE SIGN TRAILER

APPENDIX C - BLOCKS - 9 POLB TRAFFIC

			
POLB_SIGN_CMS_EMS CHANGEABLE OR EXTINGUISHABLE SIGN	POLB_SIGN_DM SIGN - DUAL MOUNTED	POLB_SIGN_EXISTING1 SIGN - EXISTING 1 POST	POLB_SIGN_EXISTING2 SIGN - EXISTING 2 POST
			
POLB_SIGN_MASTARM ROAD SIGN ON MAST ARM	POLB_SIGN_POLE SIGN ON TRAFFIC POLE	POLB_SIGNAL_INT SIGNALIZED INTERSECTION	POLB_TPANBX TRAFFIC PANEL BOX
			
POLB_TRSIGPL TRAFFIC SIGNAL POLE			

APPENDIX D – PLOT STYLES

A. Plot Style Tables

The tables included in Appendix C show a breakdown of the line weights assigned to each color in the plot styles (CTB) that are included in the POLB Workspace.

Plotted Weight (inch)		Type	Color																			
Full-scale	Half-scale																					
0.0060	0.0030	Extra Fine	1	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	2
			1	1	1	1	1	1	1	1	1	1	0	1	2	3	4	5	6	7	8	0
0.0120	0.0060	Fine	2	9	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1
			2	2	2	2	2	2	2	2	2	2	2	0	1	2	3	4	5	6	7	9
0.0200	0.0100	Thin	3	8	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1
			3	3	3	3	3	3	3	3	3	3	3	8	3	8	3	8	3	8	3	3
0.0300	0.0150	Medium	4	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	2
			4	4	4	4	4	4	4	4	4	4	0	1	2	3	4	5	6	7	8	0

0.0400	0.0200	Wide	5	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	2
			5	5	5	5	5	5	5	5	5	5	0	1	2	3	4	5	6	7	8	9	0
0.0500	0.0250	Extra Wide	2	2	2	3	2																
			1	2	2	4	5																
0.0600	0.0300	XX Wide	5	5	5	5	3																
			5	5	5	5	3																
0.0800	0.0400	XXX Wide	7	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	2
			7	7	7	7	7	7	7	7	7	7	0	1	2	3	4	5	6	7	8	9	0
0.100	0.0600	XXXX Wide	2	2	2	2																	
			2	2	2	2																	
			1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	2	2
			0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	9	0	1
			2	2	2	2																	
			2	2	2	2																	
			0	0	0	0																	
			0	0	0	0																	

Gray fill denotes screened color. See table below for more information.

Notes:

- Color 149 will be used in replacement of the Microstation linetype map_casing in Civil 3D.
- Color 255 plots as true color white.

B. Screening Methodology

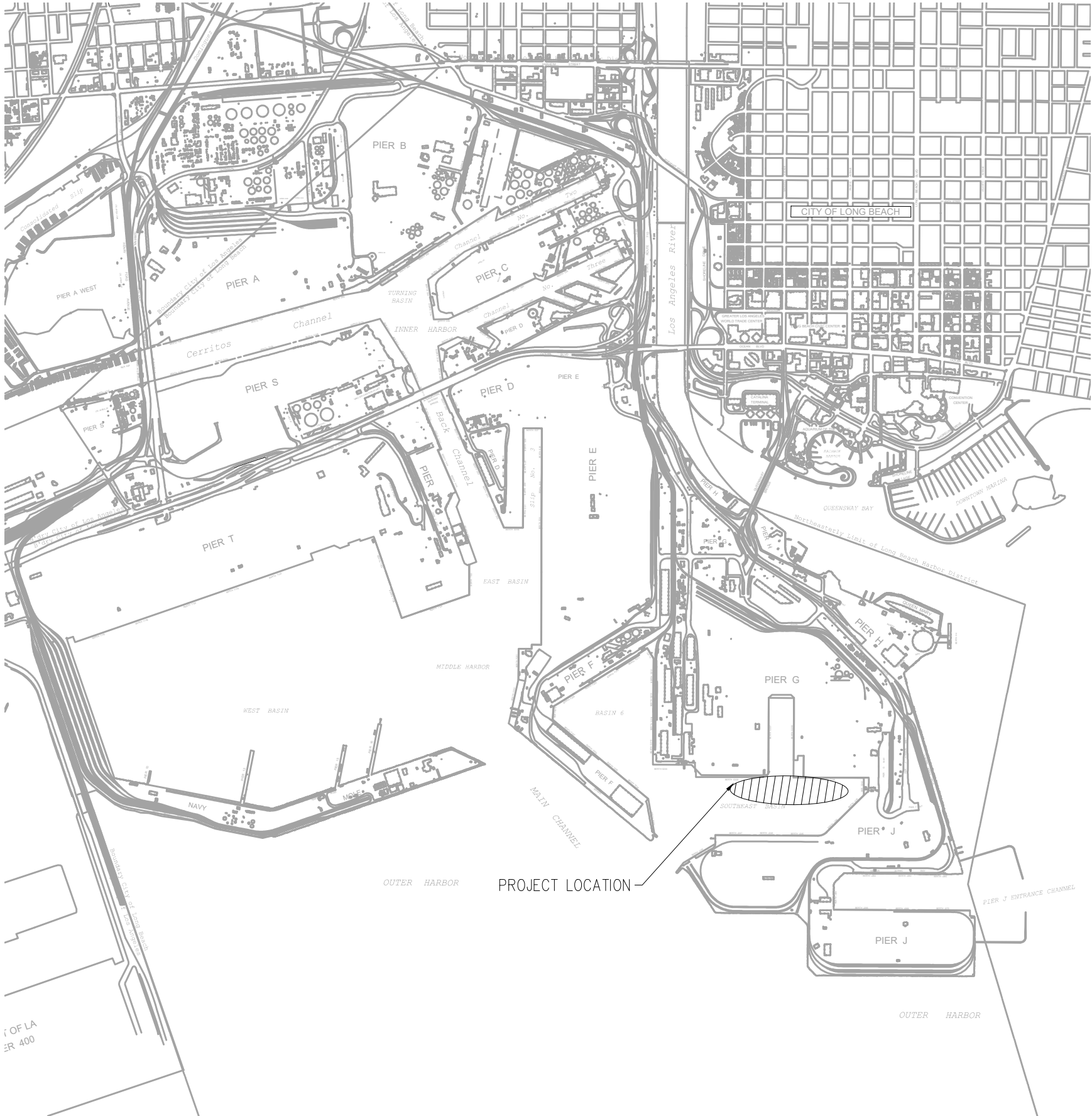
Screening or halftoning line work graphics may be necessary to emphasize certain aspects of a design. POLB has provided the following colors for this purpose.

AutoCAD Color Number	RGB Color Value	Line Width Name (Width)
8	R: 192 G: 192 B: 192	Thin (0.0200 in)
9	R: 192 G: 192 B: 192	Fine (0.0120 in)
251	R: 189 G: 189 B: 189	Fine (0.0120 in)
252	R: 165 G: 165 B: 165	Medium (0.0300 in)
253	R: 135 G: 135 B: 135	Wide (0.0400 in)
254	R: 105 G: 105 B: 105	Extra Wide (0.0500 in)

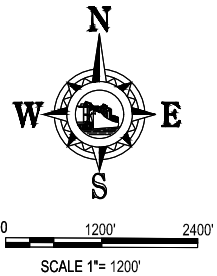
APPENDIX E – SAMPLES

A. Samples

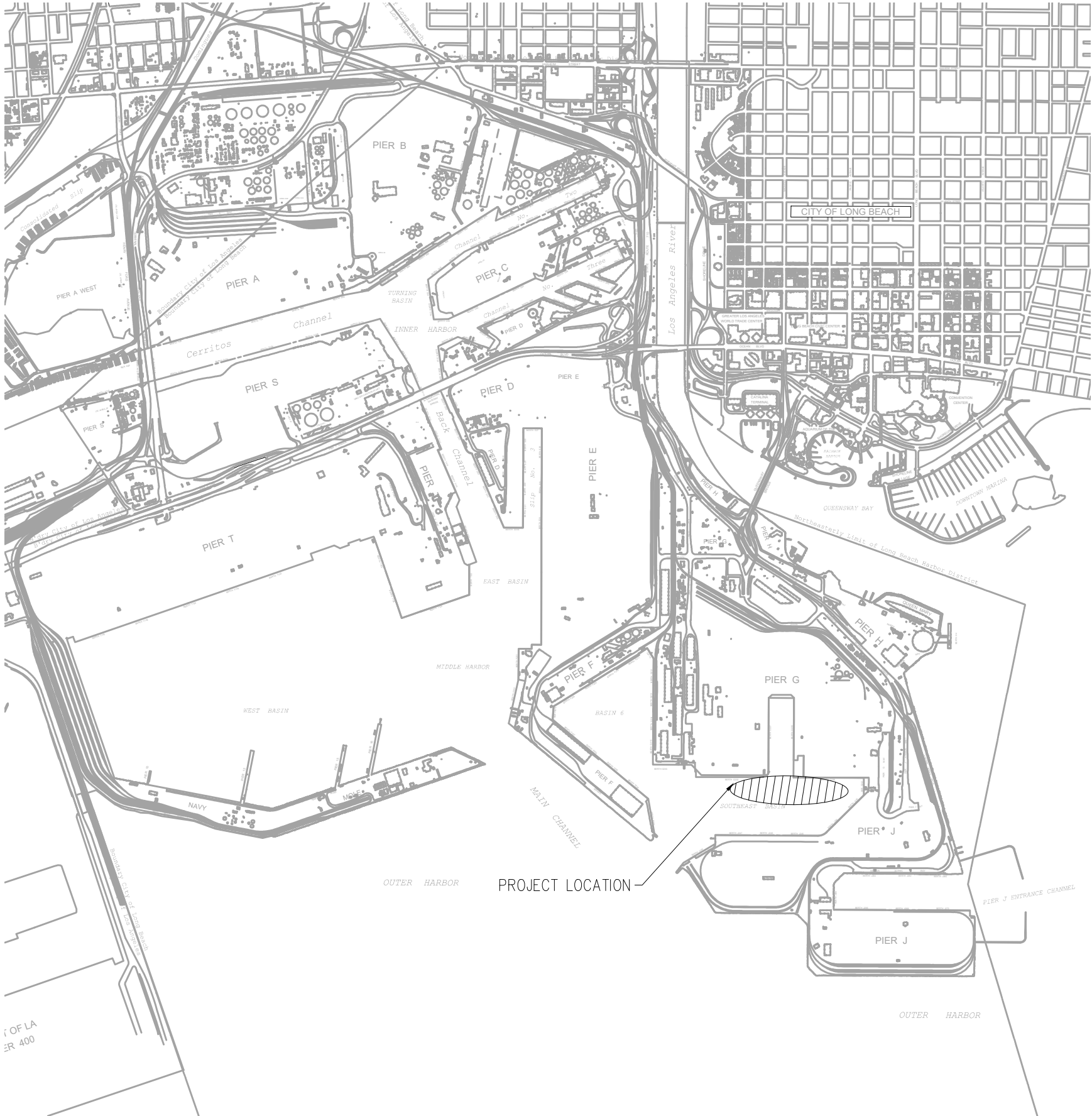
Appendix E includes sample POLB plan sheets that illustrate how the Port’s drafting standards should be applied to support the consistent development of project plans. These reference drawings are provided to promote consistency, clarity, and compliance with Port drafting standards across all project deliverables. The CADD files included in the POLB workspace provide the foundation for developing these sheets. For additional information, refer to Chapter 10, Drafting Standards.



DRAWING NUMBER	SHEET NUMBER	SHEET TITLE
XXXXX-GN001	01	PROJECT LOCATION / SHEET INDEX
XXXXX-GN002	02	ABBREVIATION
XXXXX-GN003	03	NOTES, LEGEND & SYMBOLS
XXXXX-GN004	04	SITE PLAN



10-XXXXX-XXXXX	
SHEET 01 OF 01	
PROJECT NAME PROJECT NAME 2 SHEET SUBJECT SHEET SUBJECT 2	
SPEC. NO.: HD-SXXXX CONSTRUCTION REV.: XXX DATE: XXXXXXXX CADD STD. VER.: 2.1 CHECKED BY: XXX DATE: XXXXXXXX DWG. SCALE: 1"=1200' DRAWN BY: XXX DATE: XXXXXXXX HOR. EPOCH: 2007.0 DESIGNED BY: XXX POLB DM: XXX VERT. EPOCH: VERTICAL CONTROL: NAD83-VF POLB PM: XXX HORIZONTAL CONTROL: NGVD 29 MLLW	
MONIQUE L. LEBRUN, P.E. NO. C-7048 SENIOR DIRECTOR / CHIEF HARBOR ENGINEER	
CLINT C. HERRERA, P.E. NO. C-61471 DIRECTOR OF ENGINEERING DESIGN	
Port of LONG BEACH THE PORT OF CHOICE	
XX% SUBMITTAL	
MARK DATE BY REVISION DESCRIPTION	



DRAWING NUMBER	SHEET NUMBER	SHEET TITLE
XXXXX-GN001	01	PROJECT LOCATION / SHEET INDEX
XXXXX-GN002	02	ABBREVIATION
XXXXX-GN003	03	NOTES, LEGEND & SYMBOLS
XXXXX-GN004	04	SITE PLAN

PORTWIDE CONSTRUCTION SERVICES SAMPLE:

XXXX - PORT-WIDE EMERGENCY WET UTILITIES SERVICES
XXXX - PORT-WIDE WATERBORNE CONSTRUCTION EQUIPMENT RENTAL SERVICES
XXXX - PORT-WIDE UNDERGROUND WET UTILITY SERVICES
XXXX - DEMOLITION AND GENERAL SERVICES
XXXX - MARINE CONCRETE REPAIR SERVICES
XXXX - ELECTRICAL CONSTRUCTION SERVICES PORTWIDE
XXXX - RECYCLE ASPHALT, CONCRETE MATERIAL AND OTHER SERVICES
XXXX - ASPHALT PAVING, TRAFFIC STRIPING AND RELATED SERVICES PORTWIDE

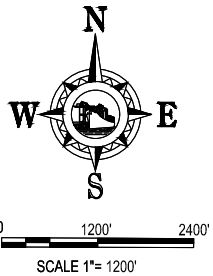
JOB ORDER CONTRACTS SAMPLE:

XXXX - JOB ORDER CONTRACT at THE PORT OF LONG BEACH, CALIFORNIA

INSTRUCTIONS:

THESE INSTRUCTIONS ARE INTENDED TO SUPPORT PLANS FOR PROJECTS THAT DO NOT REQUIRE A FORMAL BID. PROJECTS THAT ARE NOT FORMALLY BID WILL REQUIRE THE USE OF PORTWIDE CONSTRUCTION SERVICES CONTRACTS OR JOB ORDER CONTRACTS (JOC) TO PERFORM CONSTRUCTION WORK. IF THE PROJECT WORK WILL GO THROUGH A FORMAL BID PROCESS, DISREGARD THESE INSTRUCTIONS.

THE LIST SHOWN ABOVE IS PROVIDED AS A SAMPLE FOR REFERENCE ONLY AND MAY NOT REPRESENT CURRENT CONTRACTS AVAILABLE FOR USE. CONTRACT REFERENCES ARE SUBJECT TO CHANGE, CONSOLIDATION, EXPIRATION, REPLACEMENT, OR ADDITION OVER TIME. POLB DESIGNERS MUST CONFIRM THE CURRENT SPECIFICATION NUMBER, OFFICIAL CONTRACT TITLE, OR JOC NUMBER BEFORE INCLUDING THIS INFORMATION ON THE PLANS. DESIGNERS MUST USE ONLY THE OFFICIAL SPECIFICATION NUMBER, CONTRACT TITLE, OR JOC NUMBER FOR CONTRACTS THAT ARE DIRECTLY RELATED TO THE PROJECT WORK. THE TITLESHEET FOR THE PROJECT'S PLAN SET MUST ONLY LIST CONTRACTS THAT ARE RELEVANT TO THE PROJECT CONSTRUCTION WORK.



SPEC. NO.: N/A		CONSTRUCTION REV.: XXX	DATE: XXXXXXXX	Port of LONG BEACH THE PORT OF CHOICE	
CADD STD. VER.: 2.1	CHECKED BY: XXX	DATE: XXXXXXXX	MONIQUE L. LEBRUN, P.E. NO. C-7048 SENIOR DIRECTOR / CHIEF HARBOR ENGINEER		
DWG. SCALE: 1"=1200'	DRAWN BY: XXX	DATE: XXXXXXXX	CLINT C. HERRERA, P.E. NO. C-61471 DIRECTOR OF ENGINEERING DESIGN		
HOR. EPOCH: 2007.0	DESIGNED BY: XXX	POLB DM: XXX			
VERT. EPOCH:		POLB PM: XXX			
HORIZONTAL CONTROL: NAD83-VF		VERTICAL CONTROL: NGVD 29 MLLW	PROJECT NAME PROJECT NAME 2 SHEET SUBJECT SHEET SUBJECT 2		
10-XXXXXX-XXXXX SHEET 01 OF 01				XX% SUBMITTAL	

EXISTING UTILITIES

PROPOSED UTILITIES

TOPOGRAPHY

KEY NOTES

SYMBOLS

SECTION CUT

LETTER OF SECTION REFERENCED
CONSECUTIVELY ON EACH SHEET.

XXXXX - DRAWING NUMBER WHERE SECTION
ORIGINATED. TYPICALLY ORIGINATES
FROM A PLAN, PROFILE, OR ELEVATION.

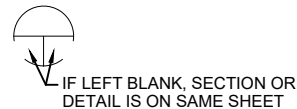
YYYYY - DRAWING NUMBER WHERE SECTION
IS DRAWN. TYPICALLY SHOWN ON
A SEPARATE DETAIL SHEET.

DETAIL

NUMBER OF DETAIL REFERENCED
CONSECUTIVELY ON EACH SHEET.

XXXXX - DRAWING NUMBER WHERE DETAIL
ORIGINATED. TYPICALLY ORIGINATES
FROM A PLAN, PROFILE, OR ELEVATION.

YYYYY - DRAWING NUMBER WHERE DETAIL IS DRAWN. TYPICALLY SHOWN ON A SEPARATE DETAIL SHEET.



PLAN, ELEVATION, SECTION AND DETAIL TITLE



- 1.
- 2.
- 3.

SPEC. NO: HD-SXXXX				CONSTRUCTION REV: XXX		DATE: XX/XX/XXXX	
CADD STD. VER: 2.1				CHECKED BY: XXX		DATE: XX/XX/XXXX	
DWG. SCALE: 1"=1200'				DRAWN BY: XXX		DATE: XX/XX/XXXX	
HOR. EPOCH: 2007.0				DESIGNED BY: XXX		POL.B DIM: XXX	
VERT. EPOCH:						POL.B PIM: XXX	
HORIZONTAL CONTROL:				NAD83-VF		VERTICAL CONTROL: NGVD 29 MLLW	
PROJECT NAME							
PROJECT NAME 2							
SHEET SUBJECT							
SHEET SUBJECT 2							
10-XXXXXX-XXXXXX							
SHEET 01 OF 01							

A	
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AB	AGGREGATE BASE
ABAN/ABND	ABANDON(ED)
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABUT	ABUTMENT
AC	ASPHALT(IC) CONCRETE; ASBESTOS CEMENT
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASBESTOS CEMENT PIPE
ACTA	ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY
APPROX	APPROXIMATE
AP	ANGLE POINT; ACCESS PANEL
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
B	
Bx/Bx	BELL - BELL - BELL
BC	BEGINNING OF CURVE
BCR	BEGIN CURB RETURN
BEG	BEGIN(NING)
BFP	BACKFLOW PREVENTER
BG	BELOW GROUND
BK	BACK
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK; BEAM
BMP	BEST MANAGEMENT PRACTICE
BOP	BOTTOM OF PIPE
BOW	BOTTOM OF WALL; BACK OF WALK
BRG	BEARING; BRIDGE
BS	BOLT SPACING
BVC	BEGIN VERTICAL CURVE
C	
C.O.	CONDUIT ONLY
C&G	CURB & GUTTER
C/W	COMBINED WITH
CA	COMPRESSED AIR; CALIFORNIA
CALCS	CALCULATIONS
CALTRANS	CALIFORNIA DEPARTMENT OF TRANSPORTATION
CB	CATCH BASIN; CIRCUIT BREAKERS
CBC	CALIFORNIA BUILDING CODE
CBP	U.S. CUSTOMS AND BORDER PROTECTION
CC	CENTER TO CENTER; CENTER OF CIRCULAR CURVE
CCM	CONCRETE CROSSING MODULES
CCS	CALIFORNIA COORDINATE SYSTEM
CF	CURB FACE
CFS	CUBIC FEET PER SECOND
CGP	CONSTRUCTION GENERAL PERMIT
CI	CAST IRON
CISS	CAST IN STEEL SHELL
CIP	CAST-IN-PLACE; CAST IRON PIPE
CJ	CONSTRUCTION JOINT; CONTROL JOINT
CL or C _l or CL	CENTERLINE
CLB	CITY OF LONG BEACH
CLF or CLFS	CHAIN LINK FENCE(S)
CLG	CEILING
CLR	CLEARANCE; CLEAR; CLEAR DISTANCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CM	CONSTRUCTION MANAGEMENT
CMB	CRUSHED MISCELLANEOUS BASE
CMC	CEMENT MORTAR COATING
CMLC	CEMENT MORTAR LINED & COATED
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COLA	CITY OF LOS ANGELES
COMM	COMMUNICATION
CONC or CONC.	CONCRETE
CONST	CONSTRUCTION; CONSTRUCT
CONT or CONT.	CONTINUE
COORD	COORDINATE
CP	CONTROL POINT; CATHODIC PROTECTION
CPVC	CHLORINATED POLY(VINYL) CHLORIDE
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
CSFM	CA STATE FIRE MARSHAL
CSG	CASING
CTS	CASING TEST STATION
CWR	CONTINUOUS WELDED RAIL
CWW	COMMERCIAL WELDED WIRE

d/4	QUARTER DELTA
DB	DUCT BANK
DC	DIRECT CURRENT
DEG or °	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL(S); DETOUR
DG	DRY GAS
DI or D.I.	DUCTILE IRON
DIA, DIA. or Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTANCE, DISTRIBUTION
DL	DEAD LOAD

DM	DESIGN MANAGER
DN	DOWN
DR	DRIVE; DOWEL ROD
DRWY	DRIVEWAY
DU	DRY UTILITY
DWGS or DWG	DRAWING(S)

E	EAST; EASTING
EA	EACH
EB	END OF BRIDGE; EASTBOUND
EC	END OF CURVE
ECR	END OF CURB RETURN
ELEC	ELECTRICAL; ELECTRIC
ELEV or EL	ELEVATION
EMH	ELECTRICAL MANHOLE
ENC	ENCASEMENT
EOH	OVERHEAD ELECTRIC
EPA	ENVIRONMENTAL PROTECTION AGENCY
EP	EDGE OF PAVEMENT
EQ	EQUAL; EQUAL DISTANCE
ET	END TRACK
ETAF	ESTIMATED TOTAL ADJUSTMENT FACTOR
ETO	EVAPOTRANSPIRATION
ETWU	ESTIMATED TOTAL WATER USE
EVC	END OF VERTICAL CURVE
EXCV or EXCAV	EXCAVATE; EXCAVATION
EXIST or EX	EXISTING
EXT	EXTERIOR

FAAP	FIRE ALARM ANNUNCIATOR PANEL
FB	FEEDBACK
FD	FRENCH DRAIN
FE	FIRE EXTINGUISHER
FF	FINISHED FLOOR
FG	FINISHED GRADE; FENCE GATE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FL	FLOW LINE
FLG	FLANGE
FN	FENCING
FNPT	FEMALE NATIONAL PIPE TAPER
FO	FIBER OPTIC
FOC	FACE OF CURB
PPM	FEET PER MINUTE
FS	FINISHED SURFACE
FT	FEET
FTG	FOOTING
FWY	FREEWAY

GA.	GAUGE
GAL	GALLON(S)
GALV	GALVANIZED
GB	GRADE BREAK
GEN	GENERAL: GENERATOR
GMP	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
GV	GATE VALVE
GW	GROUNDWATER

H	HALF
HDG	HOT DIP GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HI	HIGH POINT
HM	HOLLOW METAL
HMAC	HOT MIX ASPHALT CONCRETE
HMLP	HIGH MAST LIGHT POLE
HOR OR HORZ	HORIZONTAL
HP	HIGH PRESSURE; HORSEPOWER
HPG	HIGH PRESSURE GAS
HR	HOUR
HT or H	HEIGHT
HTC	HIGH-TEMPERATURE CHIMNEY
HTTO	HAND THROWN TURNOUT
HV	HIGH VOLTAGE
HVY	HEAVY
HS	HIGH STRENGTH
HW	HEADWALL
HWL	HIGH WATER LINE
H _z	HERTZ

IBC	INTERNATIONAL BUILDING CODE
ID	IDENTIFICATION; INNER DIAMETER
IE	INVERT ELEVATION; IRRIGATION EFFICIENCY
IF	INSIDE FACE
IG	ISOLATED GROUND
IJ or I.J.	INSULATED JOINT
INCL	INCLUDE(D); INCLUSIVE; INCLUDING
INV	INVERT
IRR or IRR1	IRRIGATION

JCT	JUNCTION
K	
K KV	KIPS; DISTANCE FROM TS TO PC ALONG TANGENT KIL OVOI T

L	LENGTH; LINE; LENGTH OF CURVE;
LA	PILE LENGTH; LOW
LACSD	LANDSCAPE AREA
LACFCD	LOS ANGELES COUNTY SANITATION DISTRICT
LADWP	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
LADWP-WS	LOS ANGELES DEPARTMENT OF WATER & POWER
	LOS ANGELES DEPARTMENT OF WATER & POWER
	-WATER SYSTEM
LAFD	LOS ANGELES FIRE DEPARTMENT
LBDS	LONG BEACH DEVELOPMENT SERVICES
LBER	LONG BEACH ENERGY RESOURCES
LBFD	LONG BEACH FIRE DEPARTMENT
LBS	POUNDS
LBUD	LONG BEACH UTILITIES DEPARTMENT
LF	LINEAR FOOT/FEET
LG	LARGE; LONG
LH	LEFT HAND
LIN	LINEAR
LL	LIVE LOAD
LO	LOW POINT
LOL	LAYOUT LINE
LS	TOTAL LENGTH OF SPIRAL CURVE
LT	LONG TANGENT; LEFT
LVR	LOUVER(ED)

M	MEDIUM
MATL	MATERIAL
MAWA	MAXIMUM ALLOWED WATER ALLOWENCE
MAX	MAXIMUM
MC	MECHANICAL COUPLING
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MG	MILLION GALLONS
MH	MANHOLE, MAINTENANCE HOLE
MILS	THOUSANDS OF AN INCH
MIN	MINIMUM
MJ	MECHANICAL JOINT
MKR	MARKER
MLLW	MEAN LOWER LOW WATER
MPH	MILES PER HOUR
MT	MAIN TRACK
MWEL0	MODEL WATER EFFICIENT LANDSCAPE ORDINANCE

N	NORTH; NORTHING
(N)	NEW
N/A	NOT APPLICABLE
NB	NORTHBOUND
NIC	NOT IN CONTRACT
NO, or #	NUMBER
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE

OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	OIL GATHERING; ORIGINAL GROUND
OH	OVERHEAD
OPR	OPERATING; OPERABLE
OTM	OTHER TRACK MATERIAL
OWS	OIL/WATER SEPARATOR

PB	PULL BOX
PBRY	PIER B RAIL YARD
PC	POINT OF CURVATURE; PAINT COLOR
POC	PORTLAND CEMENT CONCRETE; POINT OF COMPOUND CURVE
PCMC	PACIFIC CRANE MAINTENANCE COMPANY
PCVC	POINT OF COMPOUND VERTICAL CURVE
PERP	PERPENDICULAR
PE	PLAIN END
PF	POINT OF FROG; PLANT FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PG	PROPOSED GRADE
PH	POTHOLE
PHL	PACIFIC HARBOR LINES
PIP	PROTECT IN PLACE
PITO	POINT OF INTERSECTION TURNOUT
PL	PROPERTY LINE
PLC	PROGRAMMABLE LOGIC CONTROLLER; PROGRAMMABLE LIGHTING CONTROLLER; POLISHED CONCRETE
PM	PROJECT MANAGER
PP	POWER POLE
PPS	PACIFIC PIPE SYSTEMS
POC	POINT OF CONNECTION

POLB	PORT OF LONG BEACH
POT	POINT ON TANGENT
PR	PAIR
PRC	POINT OF REVERSE CURVE
PREFAB	PREFABRICATED
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PS	POINT OF SWITCH
PSF	POUNDS PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT	POINT OF TANGENCY; PAINTED; POST TENSIONED
PVC	POLYVINYL CHLORIDE PIPE; POINT OF VERTICAL CURVATURE
PVG	PAVING
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
PW	PORTABLE WATER

Q	QUARTER
QC	QUICK COUPLER VALVE
Qs	CENTRAL ANGLE OF SPIRAL or SPIRAL ANGLE

R	RADIUS
RA	RUN AROUND
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCV	REMOTE CONTROL VALVE
RD	ROAD
RELO or REL	RELOCATION; RELOCATE(D)
REQ'D	REQUIRED
REV	REVISED; REVISION
RFSO	RAISED FACE SLIP-ON
RH	RIGHT HAND
RND	ROUND(ED)
ROW or R/W	RIGHT-OF-WAY
RPDA	REDUCED PRESSURE DETECTOR ASSEMBLY
RPM	ROTATIONS PER MINUTE
RR	RAILROAD
RRWP	RAILROAD WORK PLAN
RT	RIGHT
RWQCB	REGIONAL WATER QUALITY CONTROL BOARD

S	SOUTH; SLOPE; STORAGE
SB	SOUTHBOUND
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SCE	SOUTHERN CALIFORNIA EDISON
SCG	SOUTHERN CALIFORNIA GAS
SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SDHM	STORM DRAIN & MANHOLE
SEC	SECTION
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SI	INTERNATIONAL SYSTEM OF UNITS
SIM	SIMILAR
SLP	STREET LIGHT POLE
SPEC	SPECIFICATION
SPWP/C	STANDARD PLANS FOR PUBLIC WORK CONSTRUCTION
SOFT	SQUARE FEET
SR	STATE ROUTE
SS	SANITARY SEWER; STRUCTURAL STEEL; POINT OF CHANGE FROM SPIRAL TO SPIRAL; STAINLESS STEEL

ST	PUBLIC WORK CONSTRUCTION STREET, STONE, POINT OF CHANGE FROM SPIRAL TO TANGENT
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
SURF	SURFACE
SW	SIDEWALK; SWITCH; SOUTHWEST
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SWRCB	STATE WATER RESOURCE CONTROL BOARD
SYMM	SYMMETRICAL

T	TOP; TREAD; TOTAL CURVE TANGENT DISTANCE OF COMPLETE CURVE
T/	TOP OF
TBA	TO BE ABANDONED
TBD	TO BE DETERMINED
TBODP	TEMPORARY BLOW OFF & DISINFECTION POINT
TCB	TRAFFIC CONTROL BOX
TCL	TEMPORARY CONSTRUCTION LIMIT
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TF	TRACK FOOT
TG	TOP OF GRADE
THK	THICK

THRU	THROUGH
TILT	TERMINAL ISLAND LEAD TRACK
TL	TOTAL LENGTH OF CURVE (SPIRAL & CIRCULAR PORTIONS)
TO	TURNOUT
TOC	TOP OF CURB; TOP OF CONCRETE; TOP OF CONDUIT
TOG	TOP OF GRATE
TOP	TOP OF PIPE
TOPO	TOPOGRAPHY MAP
TOR	TOP OF RAIL
TOT	TOTAL
TOW	TOP OF WALL
TP	TELEPHONE POLE; TOP OF PIPE
TR	TRENCH
TRANS	TRANSMISSION
TRK	TRACK
Ts	TANGENT DISTANCE FROM TS or ST TO PI
TS	TRAFFIC SIGNAL; POINT OF CHANGE FROM TANGENT TO SPIRAL
TW	TWISTED
TYP or TYP.	TYPICAL

UC	UNDERCOAT
UD	UNDERDRAIN
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISHED
UNK	UNKNOWN
UNO or U.N.O.	UNLESS NOTED OTHERWISE
UPRR	UNION PACIFIC RAILROAD
UPS	UNINTERRUPTED POWER SUPPLY
UTIL	UTILITY

V	VALVE; VOLTS; VOLT; VENT
VAR	VARIABLE; VARIES
VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VL	VERY LOW
VULT	ULTIMATE DESIGN WIND SPEED

W	WATER; WEST; WIDTH
W	WITH
WG	WET GAS
WI	WATER INJECTION
WM	WATER METER
WS	WATER SERVICE
WT	WEIGHT; WATER
WUCOLS	WATER USE CLASSIFICATION OF LANDSCAPE SPECIES
WWM	WELED WIRE MESH
WY	WAY

X0	CROSSOVER
----	-----------

Ys	TANGENT OFFSET AT SC or CS
YD	YARD
YRS	YEARS

@	AT
#	NUMBER
%	PERCENT
&	AND
"	INCH(ES)
'	FOOT; FEET
Ø	DIAMETER
±	PLUS OR MINUS
°	DEGREE

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DIRECTOR OF ENGINEERING DESIGN

