

7 Signal Plan

The signal plan shall be drawn showing:

- Edge of pavement or curb line
- Centerlines with stationing when available
- Lane markings
- Lane use arrows
- Crosswalks
- Sidewalks
- Sidewalk ramps
- Driveways
- Right-of-way lines
- Highway names
- Street names
- North arrow
- Other features as needed

All contract plans shall be plotted “B” size (11”x17”) Signal Plan sheets shall normally be drawn at a scale of 20:1. This is set with Annotation Scale. You can turn this on and off from many different locations including:

- The drawing scale toolbar
- The place active cell dialog
- The place text dialog

For additional information on using Annotation Scale click on the following link:

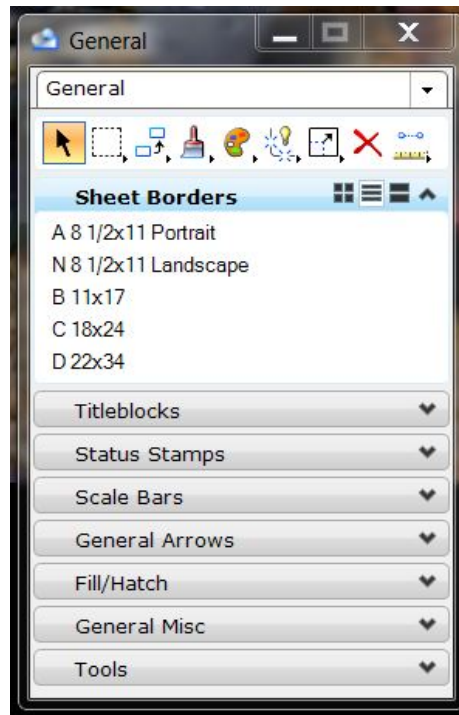
[MicroStation Users Guide](#).

NOTE: Under rare circumstances the scale may need to be modified to a smaller scale of 30:1 or 40:1. Use of these scales may be the only way to get the entire intersection on the plan sheet without match lines. Always use the largest scale possible to maximize the legibility of the finished plan sheet. Altering scales in this fashion is limited to the signal plan sheet, all other plan sheets, use break lines or match lines.

Sheet Borders are available in the Tasks & Workflows under the General & Sheet Borders tabs.

Each plan sheet shall be its own model within the TR.SG1 file.

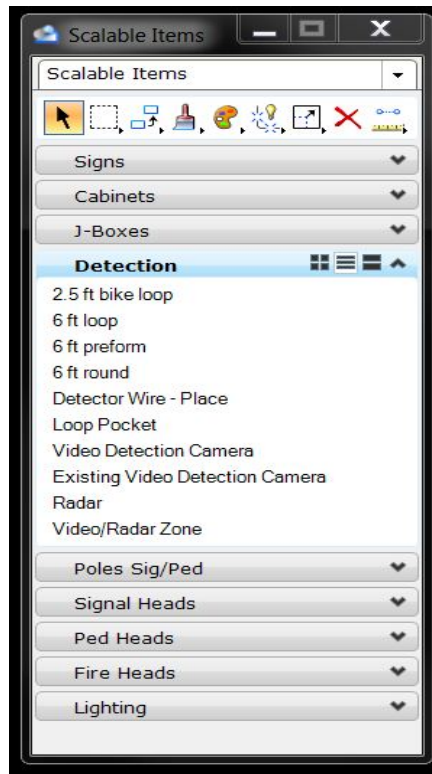
See Figure 7-1 for the “General” tab description.

Figure 7-1 | Sheet Borders, Tasks, and Workflows

The plan shall include:

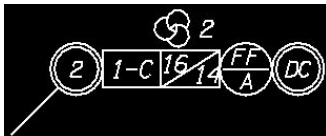
- Location of:
 - traffic signal poles
 - underground signal electrical conduits (show conduits at an arc to alleviate clutter)
 - detector and interconnect conduit bubbles added to the bubble string, DC, IC.
 - traffic signal wiring, junction boxes
 - vehicle signals, pedestrian signals
 - pedestrian pushbuttons
 - overhead signs (lane use)
 - traffic signal controller (332)
 - service equipment (BMC)
 - preemption devices
 - existing power sources
 - any other equipment needed to install the signal

These scalable items are found in the Tasks & Workflows under the Signal Plans, Scalable Items tab. See Figure 7-2.

Figure 7-2 | Sheet Borders, Tasks, and Workflows

The plan shall also include:

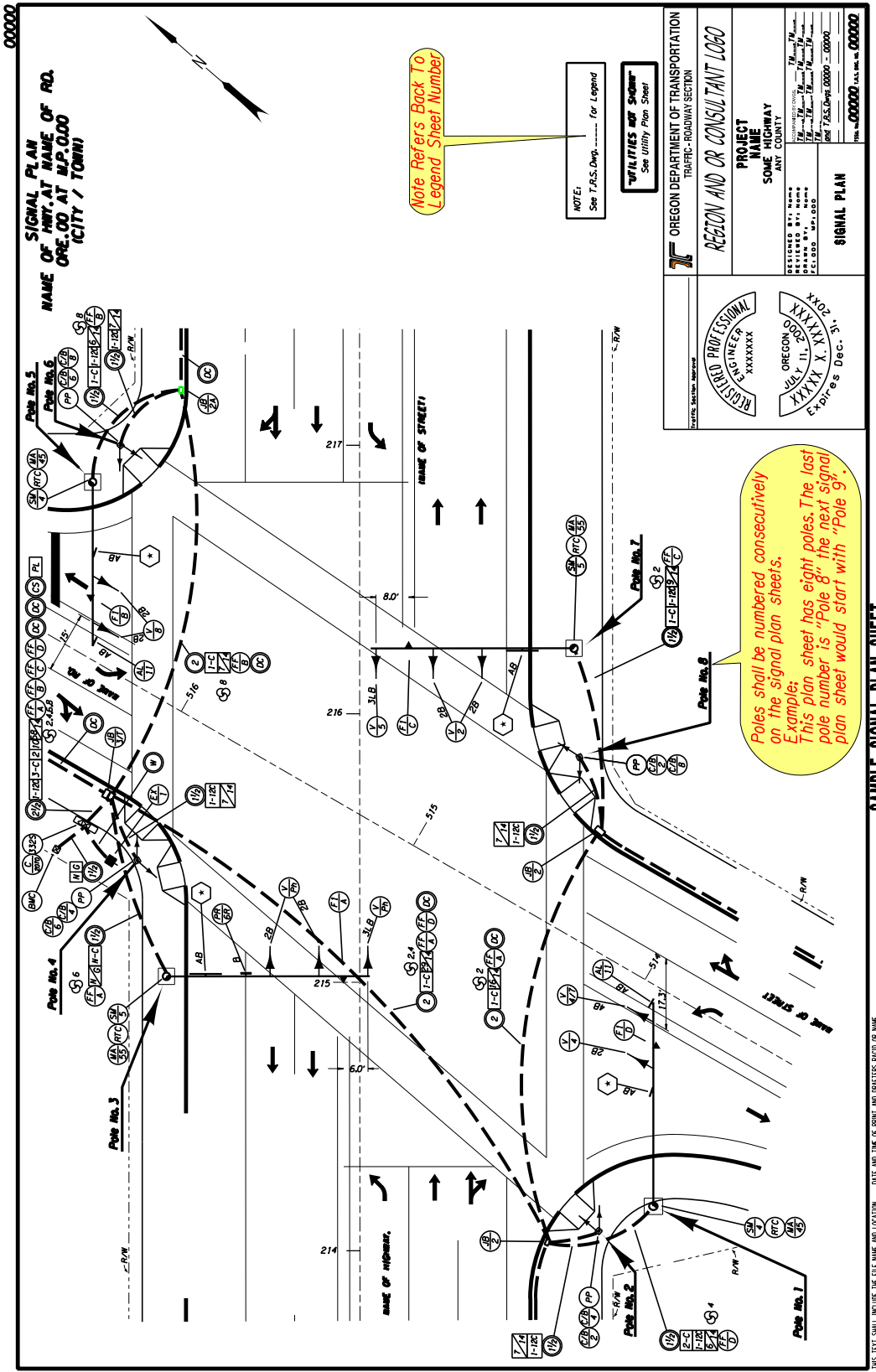
- Correct bubble and leader(s) for each installed, removed, abandoned or retained item. The Bubbles shall be arranged so the leader line attaches to the first bubble in the string. See example below:



- Pole arrows and pole arrow lines with pole numbers, (numbers shall be sequential and will not be repeated if there is more than one signal plan sheet in the project. Pole numbers shall start in the lower left quadrant of the plan sheet and be numbered clockwise.
- Signs. Show all standard lane use signs and all non-standard overhead signs, such as, street name signs or unique lane use signs mounted on mast arms. Signs shown on signal plans are normally limited to the signs mounted to the mast arm, suspended from the span wire or on the vertical signal pole. One exception to this is advance warning signs that have a flashing beacon wired to the controller. Details for non standard signs shall be shown in the signing plans. Use the octagon bubble and leader pointing to the sign. The bubble note for these signs should refer back to the sign plan sheet.
- The standard drawing area in the lower right hand title block area shall remain blank.

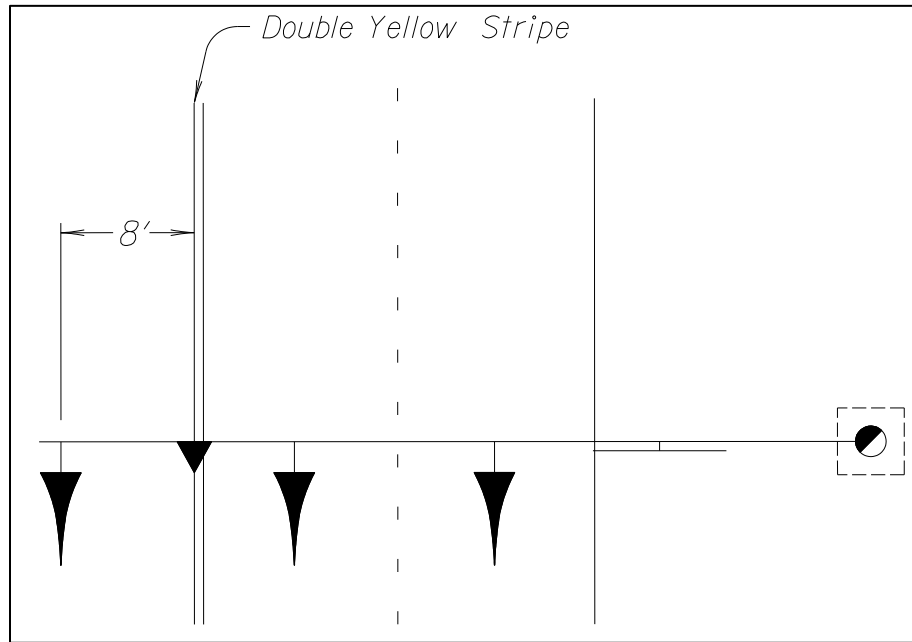
See Figure 7-3 signal plan example on the next page for all items that must be shown.

Figure 7-3 | Sample Completed Signal Plan Sheet



NOTE: One signal head on each mast arm or span wire will be dimensioned from a painted lane line shown on the Signal Plan Sheet (See Example Below). You may also dimension from a skip line or edge of pavement line, etc.

Figure 7-4 | Painted Line Dimension Example



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