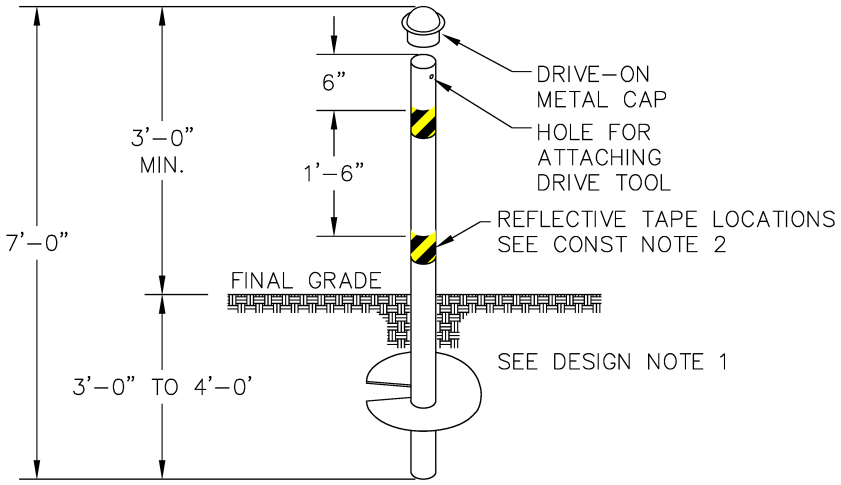
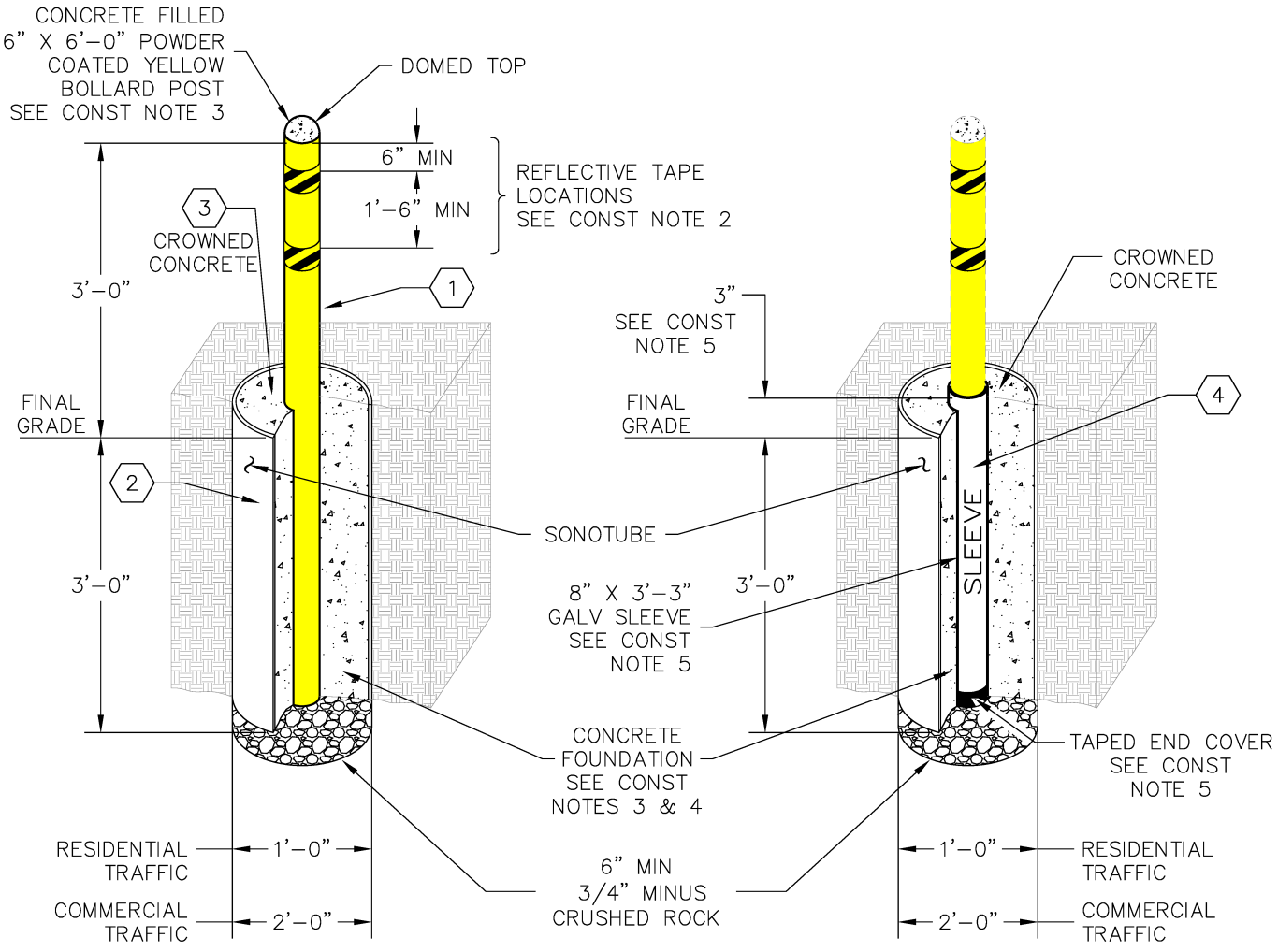


EC5–9.2601



EC5–9.2602 – EC5–9.2604

STEEL BOLLARD POST

EC5–9.2606

SLEEVE FOR REMOVABLE
GALVANIZED STEEL BOLLARD POST

DISTRIBUTION CONSTRUCTION STANDARD
EUGENE WATER & ELECTRIC BOARD - EUGENE, OREGON

3 1/2" OD X 7'- 0" SCREW TYPE BOLLARD POST 8" HELIX, 6.625" OD X 6'- 0" POWDER COATED SAFETY YELLOW, STEEL BOLLARD POST, SLEEVE FOR REMOVABLE BOLLARD POST

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EC5-9.2600
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REV.
3

ASSEMBLY EC5-9.2601
3 1/2" X 7'- 0" SCREW TYPE BOLLARD POST, 8" HELIX

1.	406-0000724	1	EA	POSTBUMPERSCREW84"

ASSEMBLY NOTES:

1. For Assembly EC5-9.2601, see design note 1.

ASSEMBLY EC5-9.2602
6.625 OD X 6'- 0" POWDER COATED SAFETY YELLOW, STEEL BOLLARD POST, RESIDENTAL TRAFFIC

1.	406-0000727	1	EA	POST BOLLARD POWDER COAT YELLOW 6" X 6'
2.	406-0000725	1	EA	FORM SONOTUBE 12" X 3'
3.	343-0000441	8	EA	CONCRETE PREMIX 60LB

ASSEMBLY NOTES:

1. For a removable bollard post sleeve, refer to assembly EC5-9.2606.
2. Assembly EC5-9.2602 includes the required (8) 60 lb. bags or .12 yds. of concrete premix per bollard installation.

ASSEMBLY EC5-9.2604
6.625 OD X 6'- 0" POWDER COATED SAFETY YELLOW, STEEL BOLLARD POST, COMMERCIAL TRAFFIC

1.	406-0000727	1	EA	POST BOLLARD POWDER COAT YELLOW 6" X 6'
2.	406-0000726	1	EA	FORM SONOTUBE 24" X 3'

ASSEMBLY NOTES:

1. For a removable bollard post sleeve, refer to assembly EC5-9.2606.
2. Assembly EC5-9.2604 does not include the required concrete mix, the amount of concrete needed is (21) 60 lb. bags or approx .4 yds. per bollard installation.

ASSEMBLY EC5-9.2606
8" X 3'- 3" SCH. 40 GALVANIZED STEEL BOLLARD SLEEVE

4.	406-0000728	1	EA	SLEEVE BOLLARD GALV 8" X 3'-3"

ASSEMBLY NOTES:

1. Nominal inside diameter of 8" Sch. 40 Galvanized steel pipe is 7.981" and is the required sleeve for assemblies EC5-9.2602 and EC5-9.2604 when a removable bollard is required.

CONSTRUCTION NOTES:

1. EWEB to install bollard post EC5-9.2601 with a kelly bar which will fit directly in the shaft of the post. The post can then be pinned to the kelly bar with a through bolt and installed with a power-auger. See design note 1.

2. EWEB Line crew shall install (2) minimum 4" x 16" strips of Black/Yellow reflective "CAUTION" tape, on any Customer or EWEB installed bollard, as shown on page 1 of 3.
The Reflective Black/Yellow "CAUTION" tape (Stock code # 150-0000170) has been identified to be carried by Electric crews as a truck stock item.

3. The 6" x 6'- 0" Schedule 40 powder coated safety yellow steel bollard post shall be concrete filled, with a rounded or domed top. Concrete foundation shall be a minimum of 1'- 0" x 1'- 0" surrounding the bollard post in residental traffic areas, and 2'- 0" x 2'- 0" surrounding the bollard post in commercial truck traffic areas. The concrete foundation shall be crowned at top to limit the pooling of water. Concrete shall have a minimum compressive strength of 3000 psi after 28 days.

4. No portion of the concrete foundation surrounding the bollard post or sleeve shall come in contact or encase the vault grounding mat, a separation of the two must be maintained.

5. For the removable bollard post "sleeve", refer to assembly EC5-9.2606. The 8" Sch. 40 galvanized steel sleeve shall extend 3" above final grade, be embedded into the concrete and remain a minimum of 1" above the crowned concrete foundation. The bottom of post shall be covered securely with tape to limit concrete from entering the sleeve. The sleeve has a 1.356" larger inside diameter than the 6" bollard post, this void will require sand be poured around the circumference of the bollard post, between the bollard post and sleeve. The sand will allow for easier removal of the post and keeps post vertical in appearance. ONLY a 6" diameter bollard post shall be installed in a removal sleeve to minimize the weight of the bollard.

DESIGN NOTES:

1. Assembly EC5-9.2601 is used as a "VISUAL DETERRENT" only, not as a protective barrier. This bollard post should only be installed where underground facilities are not at risk of a dig in.
The installation of this post will require pre locating of utilities prior to a final design and/or installation.

2. For customer installed substructure, the customers shall provide, install and maintain protective bollards, refer to this standard for bollard post installation and ED5-1.0800 for bollard post placement and customer bollard requirements.

REFERENCE STANDARDS:

A) Refer to ED5-1.0100 for electrical equipment placement clearances at a street corner, maximum size and setback requirements.

B) Refer to ED5-1.0500 for padmount transformer placement clearances.

C) Refer to ED5-1.0800 for bollard post placement requirements for Padmounted equipment.

D) Refer to EC5-A.0500 for customer requirements for vegetation management for underground systems.