

STEEL STRAIN POLE NOTES

- 1) Designed in accordance with FDOT Structures Manual and the 2001 (4th) Edition AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and Interims.
- 2) Perform all welding in accordance with the American Welding Society Structural Welding Code (Aluminum) ANSI/AWS D1.2 (current edition). No Field welding is permitted on any part of the pole.
- 3) See Standard Index No. 17727 for grounding and span wire details.
- 4) Foundation Materials:

a. Reinforcing Steel: ASTM A615 Grade 60.

b. Concrete: Class IV, (Drilled Shaft) 4,000 psi (f'c) minimum Compressive Strength at 28-days for all environmental classifications.

c. Anchor Bolts: ASTM F1554 Grade 55 with ASTM A563 Grade A heavy-hex nuts and ASTM F436 Type 1 washers (all galvanized in accordance with ASTM F2329)

d. Grout: 5,000 psi compressive strength at 28-days and meeting the requirements of Section 934.
- 5) Strain Pole Specifications:

a. Poles: ASTM A1011 Grade 50, 55, 60 or 65 (less than 1/4") or ASTM A572 Grade 50, 60, or 65 (1/4" and over) or ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield).

b. Steel Plates: ASTM A36.

c. Weld Metal: E70XX.

d. Bolts: A325, Type 1. Hole Diameter: Bolt diameter plus 1/16".

e. Base Plate: Hole Diameter; anchor bolt diameter plus 1/2".

f. Handhole: Frame: ASTM A709 Grade 36 or ASTM A36, Cover: ASTM A1011 Grade 50, 55, 60 or 65.

g. Aluminum Caps and Covers: ASTM B-26 (319-F).

h. Stainless Steel Screws: AISI Type 316.

i. Galvanization: All nuts, bolts and washers; ASTM F2329-05, All other steel; ASTM A123.
- 6) Pole Notes:

a. See the Signalization Plans for clamp spacing, cable sizes and forces, signal and sign mounting locations and details.

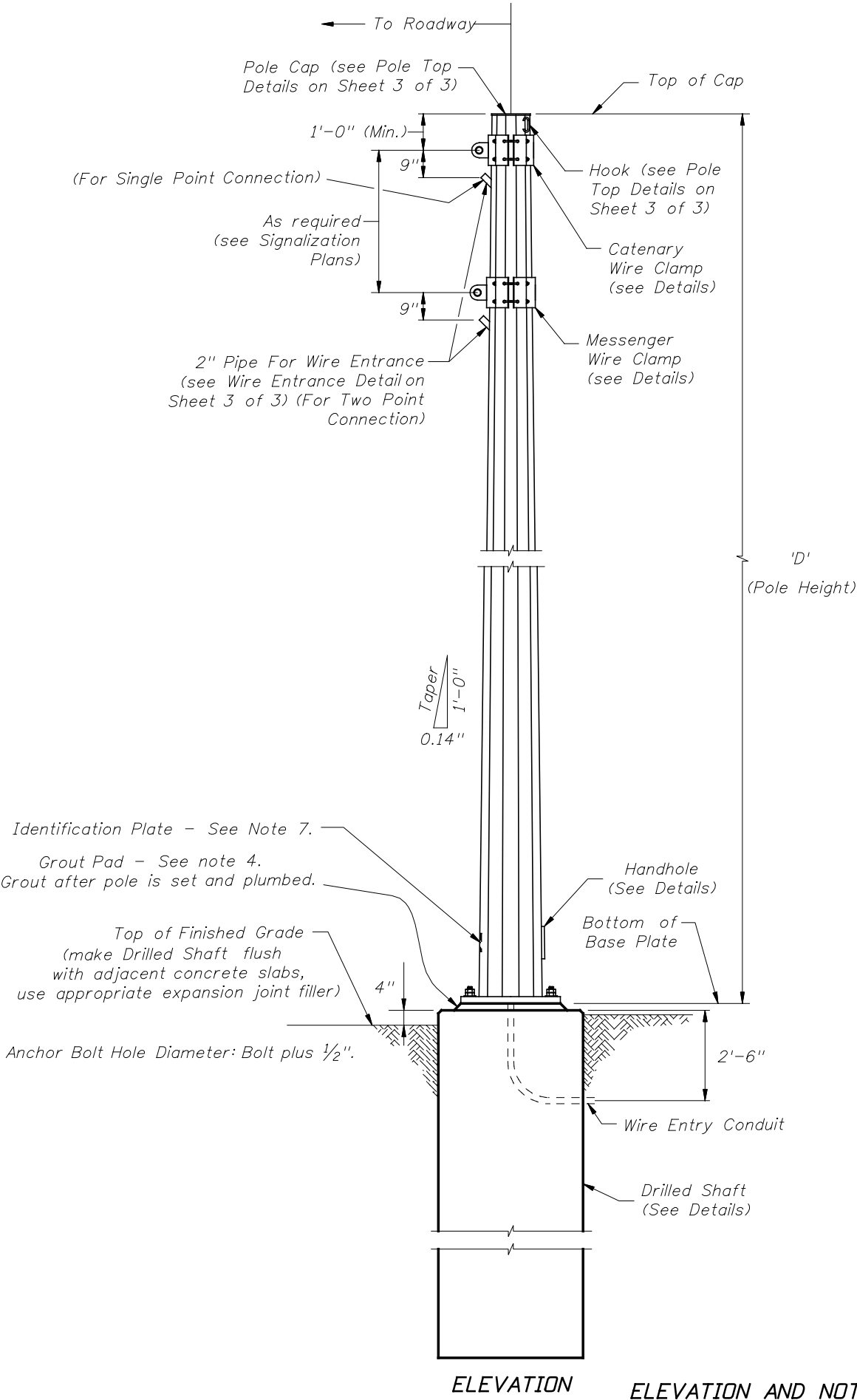
b. Tapered with the diameter changing at a rate of 0.14 inch per foot.


c. Transverse welds are allowed only at the base.

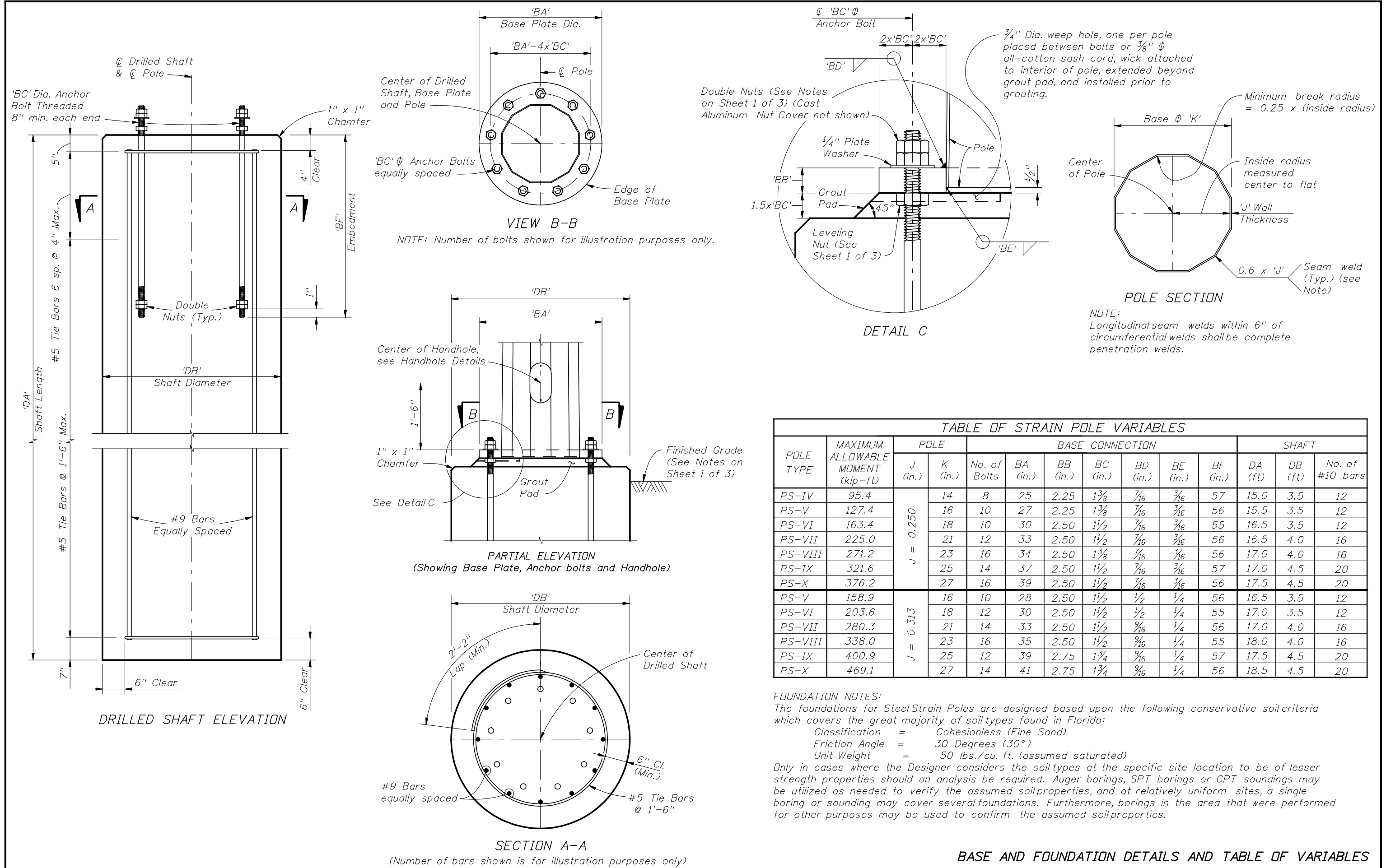
d. Poles constructed out of two or more sections with overlapping splices are not permitted.

e. Locate the handhole 180 degrees from 2-inch wire entrance pipe.

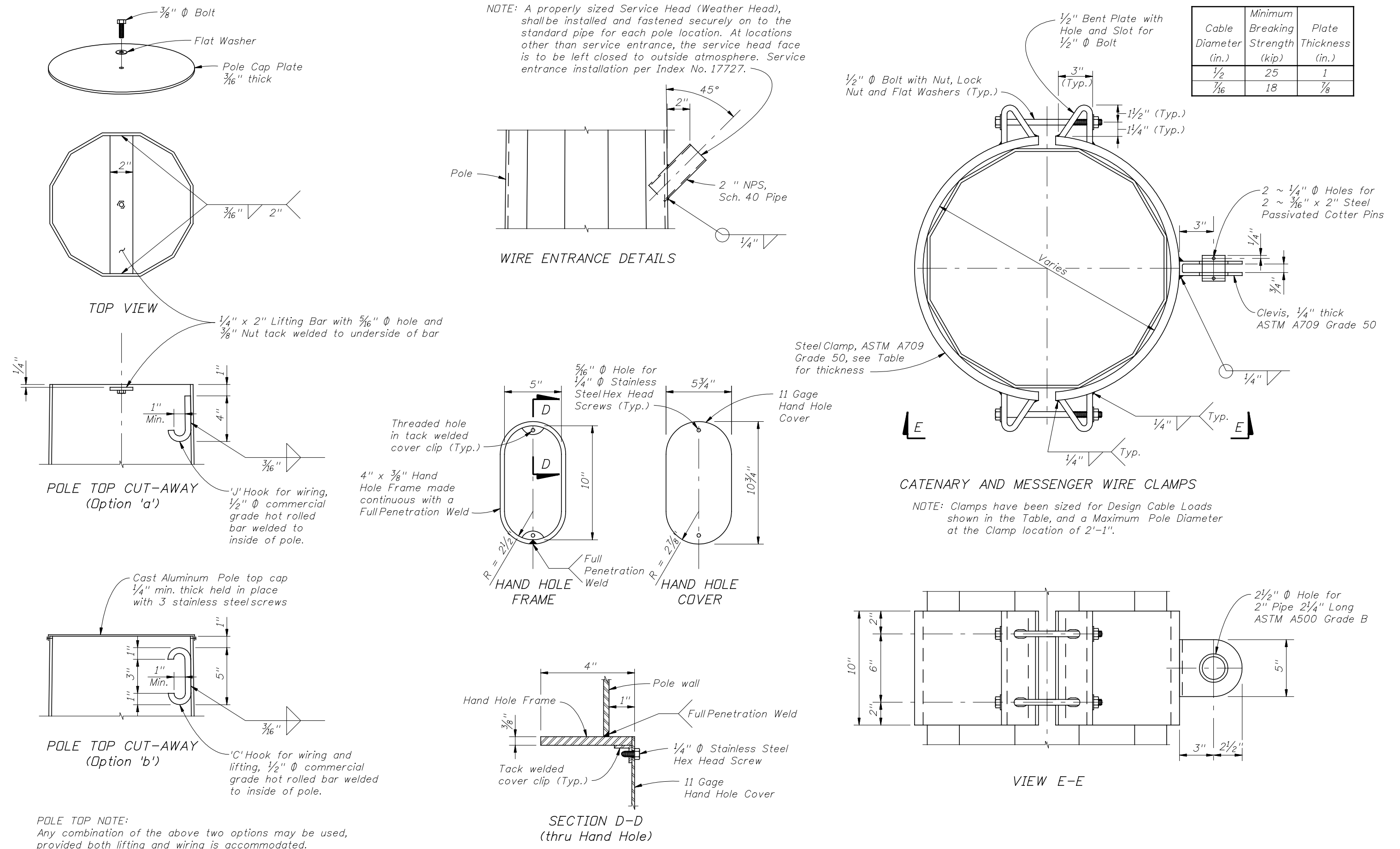
f. Furnish each pole with a 2"x4" (max) aluminum identification tag. Submit details for approval. Secure to pole with 0.125" stainless steel rivets or screws. Locate Identification Tag on the inside of pole and visible from handhole. Include the following information: Financial Project ID, Pole Type, Pole Height, Manufacturer's Name & Certification number, Pay Item number.
- 7) If a grout pad is not installed, place wire cloth screen vertically between the base plate and top of foundation, wrap horizontally around the base plate with a 3" min. lap. Use standard grade, plain weave, 2x2 mesh, galvanized steel wire-cloth with 0.063" dia. wire. Attach the screen to the base plate with stainless steel self-tapping 1/4" screws and washers (spaced at 9" centers).
- 8) Manufacturers seeking approval of a steel strain pole assembly for inclusion on the Qualified Products List must submit a QPL Product Evaluation Application along with drawings showing the product meets all specified requirements of this Standard.



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07/01/07	DYW	AASHTO 2001 LTS-4 Specifications updates. Designed new Standard Steel Strain Pole Assemblies.					STEEL STRAIN POLE		Index No. 17723	



FOUNDATION NOTES:
The foundations for SteelStrain Poles are designed based upon the following conservative soil criteria which covers the great majority of soil types found in Florida:
Classification = Cohesionless (Fine Sand)
Friction Angle = 30 Degrees (30°)
Unit Weight = 50 lbs./cu. ft. (assumed saturated)
Only in cases where the Designer considers the soil types at the specific site location to be of lesser strength properties should an analysis be required. Auger borings, SPT borings or CPT soundings may be utilized as needed to verify the assumed soil properties, and at relatively uniform sites, a single boring or sounding may cover several foundations. Furthermore, borings in the area that were performed for other purposes may be used to confirm the assumed soil properties.



Cable Diameter (in.)	Minimum Breaking Strength (kip)	Plate Thickness (in.)
1/2	25	1
7/16	18	7/8

POLE TOP NOTE:
Any combination of the above two options may be used, provided both lifting and wiring is accommodated.

ATTACHMENT DETAILS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
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