

GENERAL NOTES:

1. Work these Index Sheets with the Strain Pole Schedule in the Plans. See Index 634-001 for corresponding signal cable and span wire installation details.

2. Shop Drawings:

This Index is considered fully detailed and no shop drawing are necessary. Submit shop drawings only for minor modifications not detailed in the Plans.

3. Materials:

- A. Concrete: Class V Special with 4 ksi minimum strength at transfer or Class VI with 6.5 ksi minimum strength at transfer
- B. Prestress Strands & Spiral Reinforcing: Specification 641
- C. Hand and coupler cover plates: Non-corrosive material
- D. Screws: Round headed, chrome plated

4. Fabrication:

- A. Pole Total Taper shown is for pole width, strands, reinforcing and void (0.081 in/ft per face).
- B. Concrete Cover: 1" minimum.
- C. Spiral Reinforcing: Place as shown, and add one turn for splices and two turns at both the tip and butt ends of the pole.
- D. The design dimensions for Front Face (FF) and Back Face (BF) of the poles may vary transversely from the section shown by $\pm 1/4"$ to assist with removal from forms. Balance addition and subtraction of the face widths to maintain section areas shown.
- E. Tie ground wires to the interior of reinforcing steel to prevent displacement during concreting operations.
- F. Cut the tip end of the prestressed strand either first or simultaneously with the butt end.
- G. Provide cover plates and screws for hand hole and couplers. Attach cover plates to the poles using lead anchors or embedded threaded inserts.
- H. Provide Aluminum Identification Tag on the pole with the following information:
 - a. Financial Project ID.
 - b. Pole Manufacturer
 - c. Standard Pole Type Number
 - d. Pole Length (L)

5. Support Points:

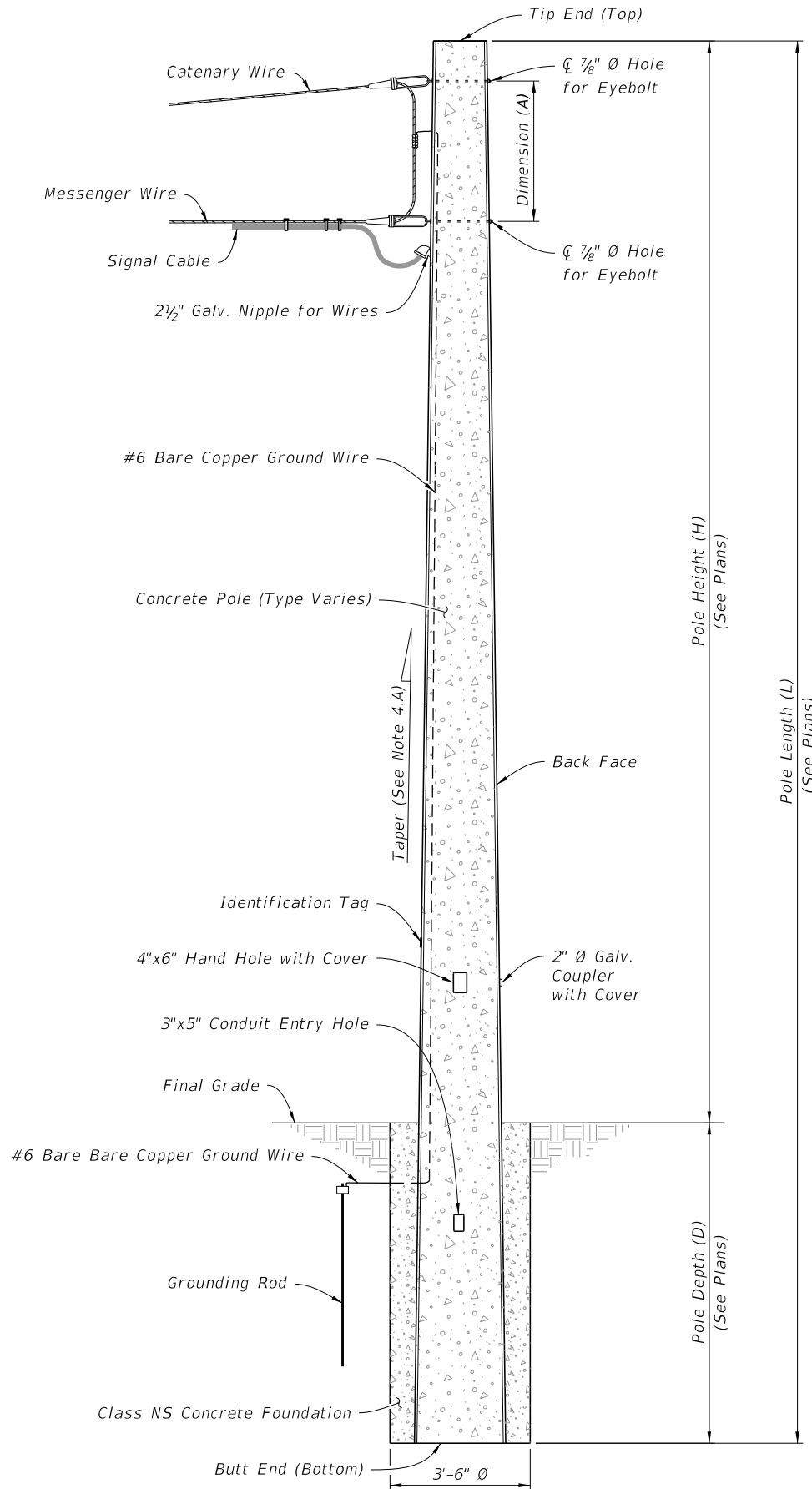
Support Points shown may vary within a tolerance of $\pm 3"$.

Horizontal Pole Support Points shown are for strand release, storage, handling and transport of the horizontal pole. Keep Back Face oriented downward until final erection.

6. Two point attachment: Provide an eye bolt hole for the messenger wire.

7. Tether Wire: When required, field-drill the eyebolt hole prior to installation.

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4	Pedestal Pole - Type P-IIC (12 Ft.)
5	Pole - Type P-III
6	Strain Pole - Type P-IV
7	Strain Pole - Type P-V
8	Strain Pole - Type P-VI
9	Strain Pole - Type P-VII
10	Strain Pole - Type P-VIII



CONCRETE POLE ASSEMBLY
(Type P-VII Shown, Others Similar)

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9/22/2021

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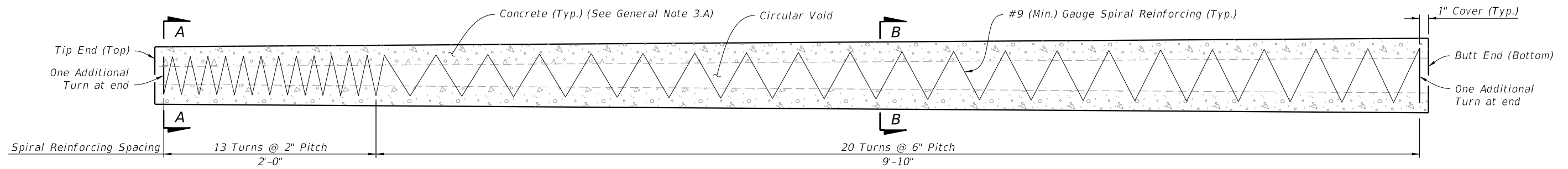


FY 2022-23
STANDARD PLANS

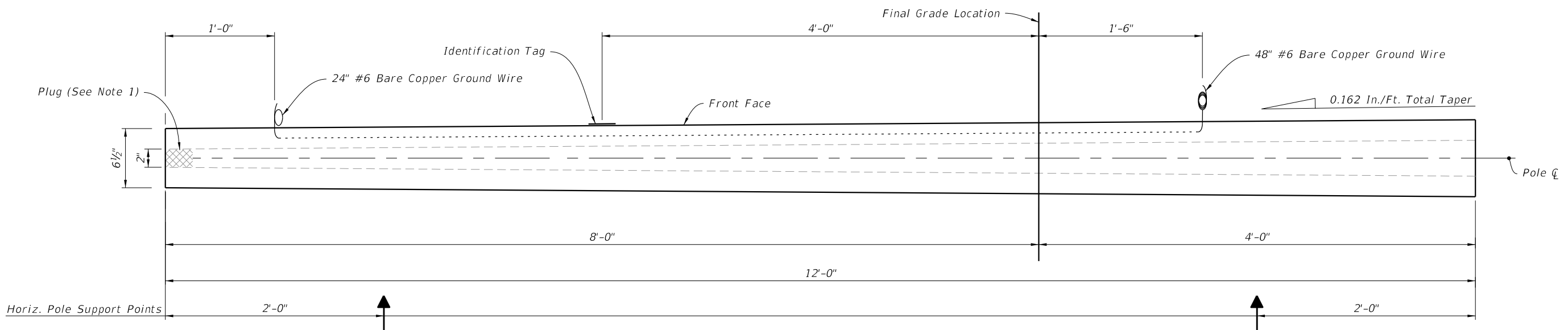
CONCRETE POLES

INDEX
641-010

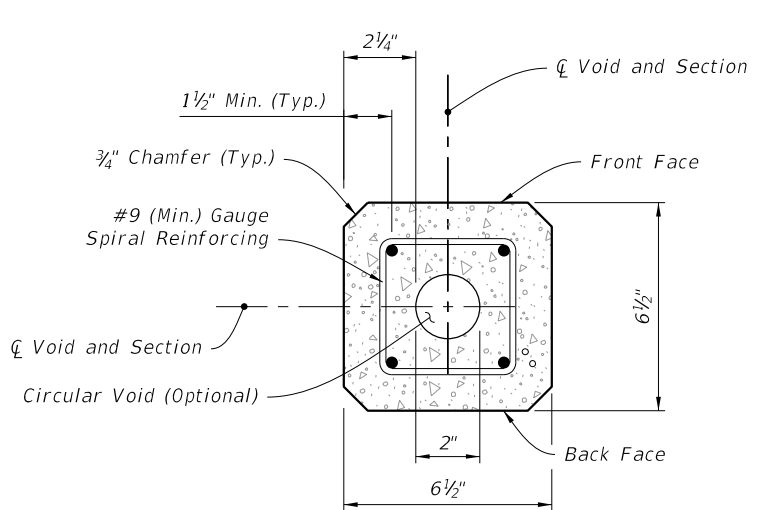
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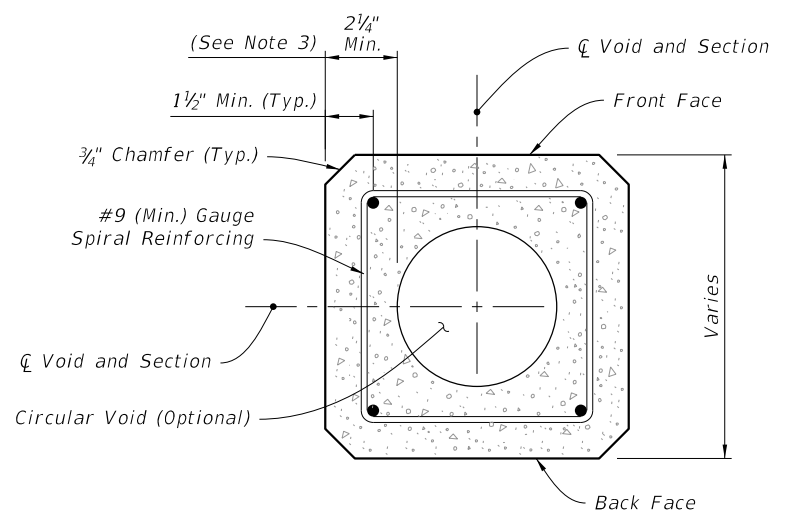
SPIRAL REINFORCING ELEVATION
(Strands and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION A-A - (Tip End)



SECTION B-B (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

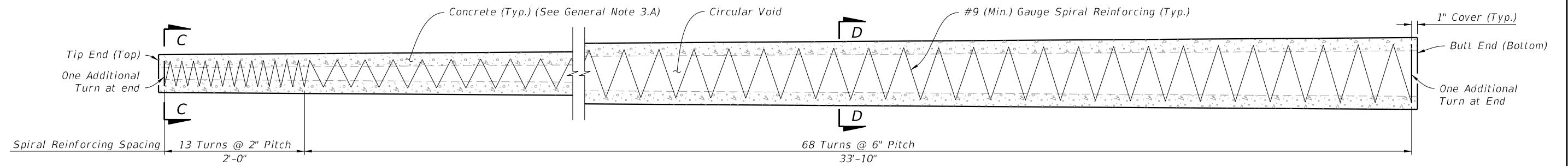
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- Prestressed Strand:
0.5 in. ~ 24 kips before transfer or
0.375 in. ~ 14 kips before transfer (4 strands total)

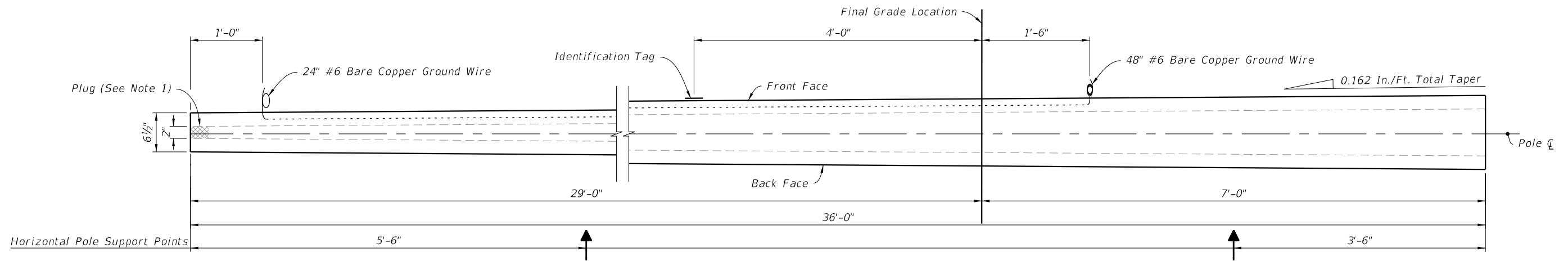
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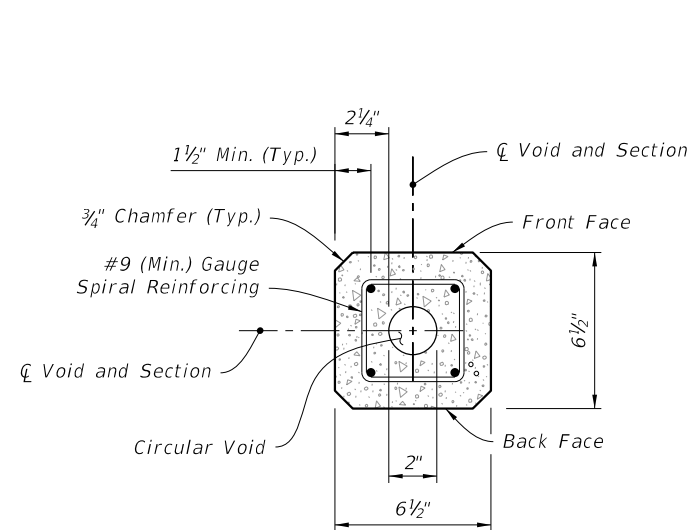
SERVICE POLE - TYPE P-IIA (12 Ft.)



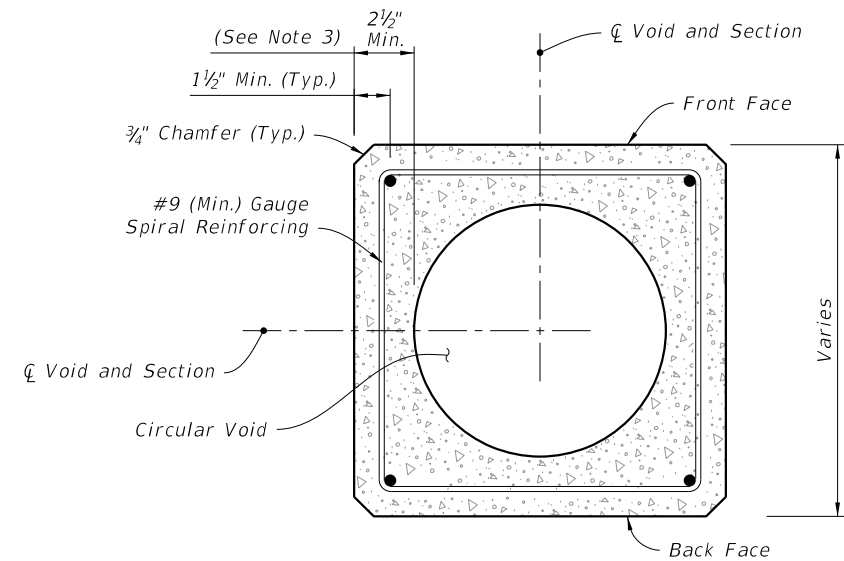
SPIRAL REINFORCING ELEVATION
(Strands and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION C-C (Tip End)



SECTION D-D (Typical Square Section)

NOTES:


1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

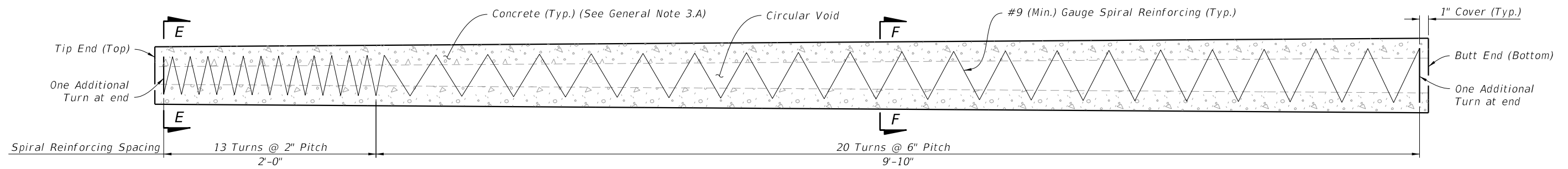
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0.375 in. ~ 14 kips before transfer
(4 strands total)

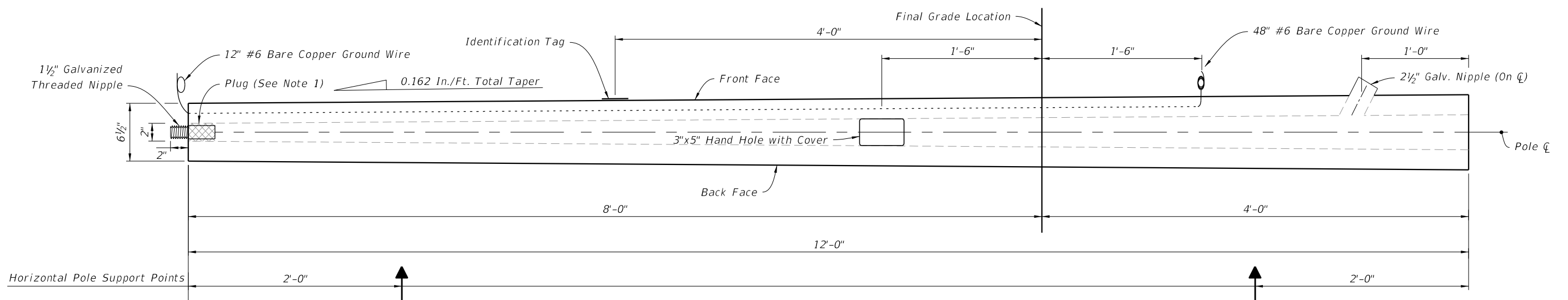
SERVICE POLE TYPE P-IIB (36 Ft.)

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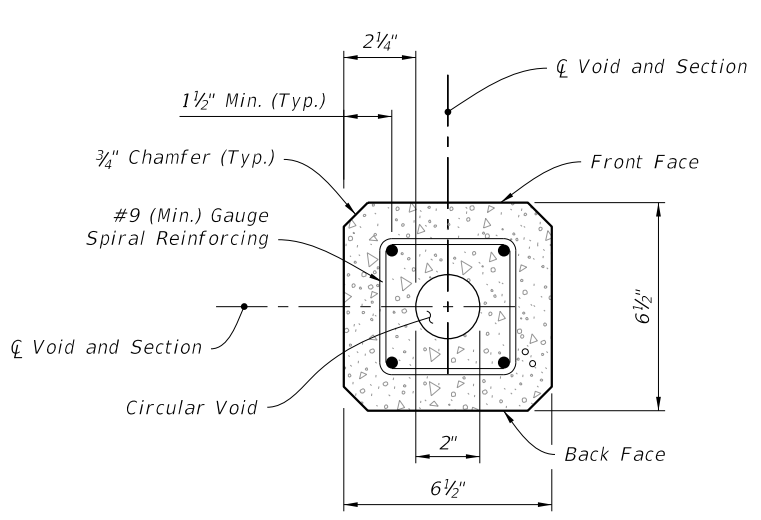
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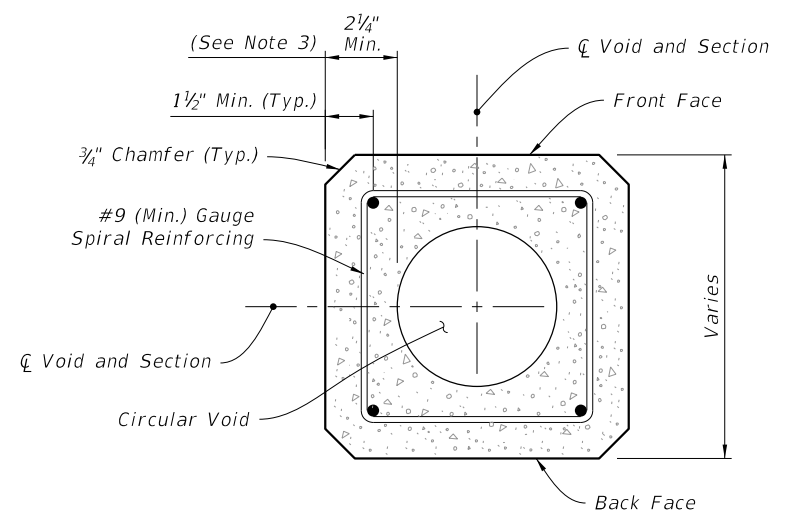
SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION E-E (Tip End)



SECTION F-F (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

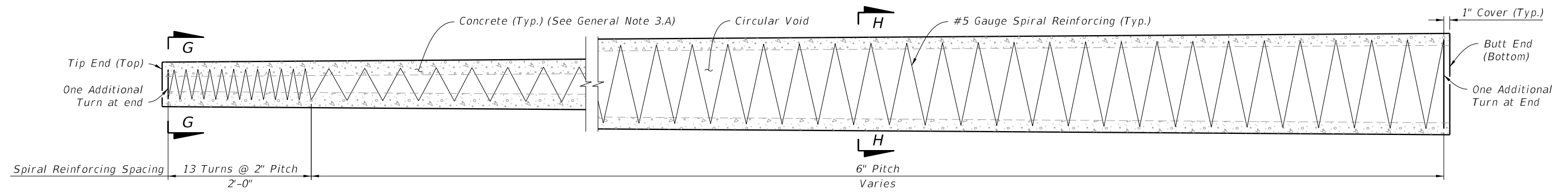
LEGEND:

- Prestressed Strand:
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0.375 in. ~ 14 kips before transfer
(4 strands total)

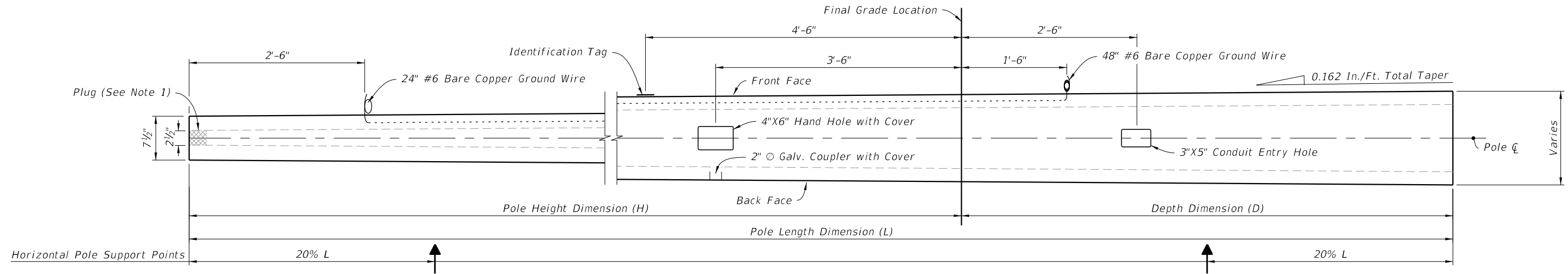
PEDESTAL - TYPE P-IIC (12 Ft.)

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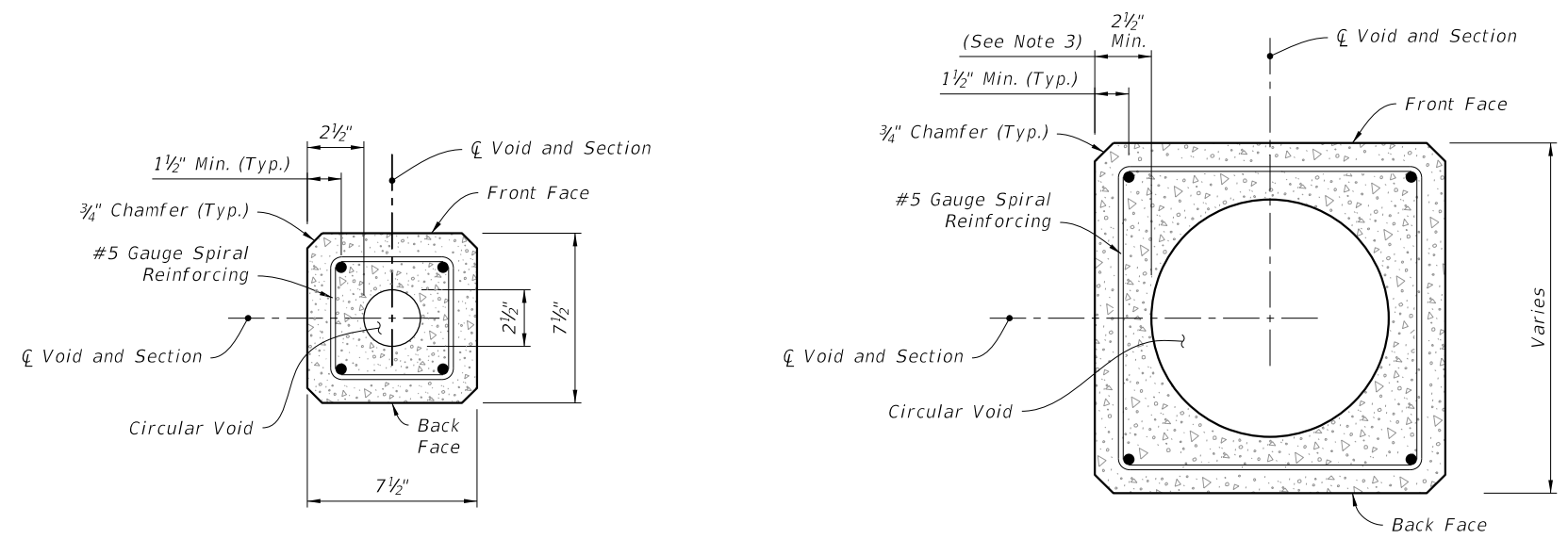
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SPIRAL REINFORCING ELEVATION
(Strands, Holes and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION G-G (Tip End)

SECTION H-H (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 33% L from the Tip End.
3. Dimension may vary from 2 1/2" to 3 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

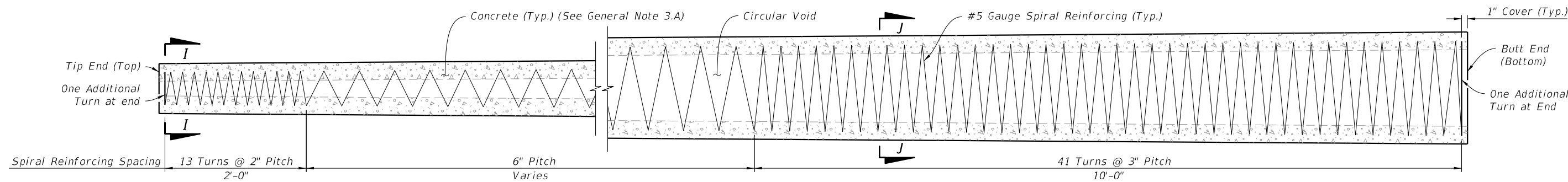
LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (4 strands total)

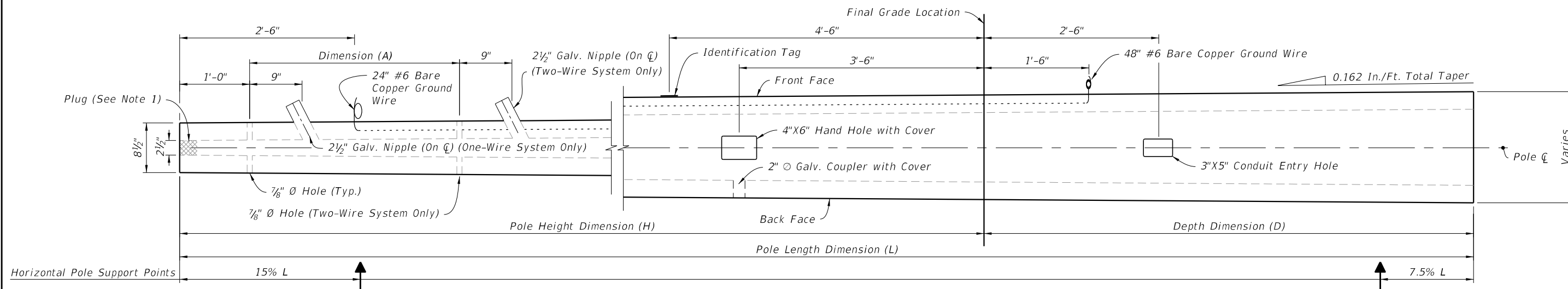
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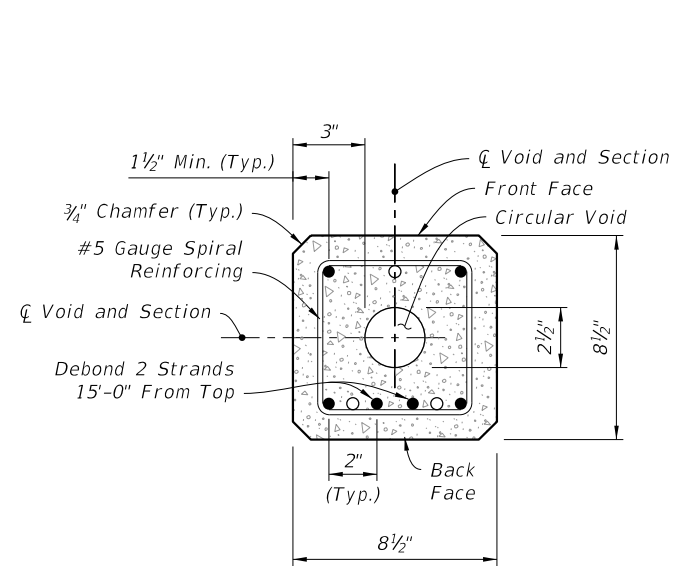
POLE TYPE P-III



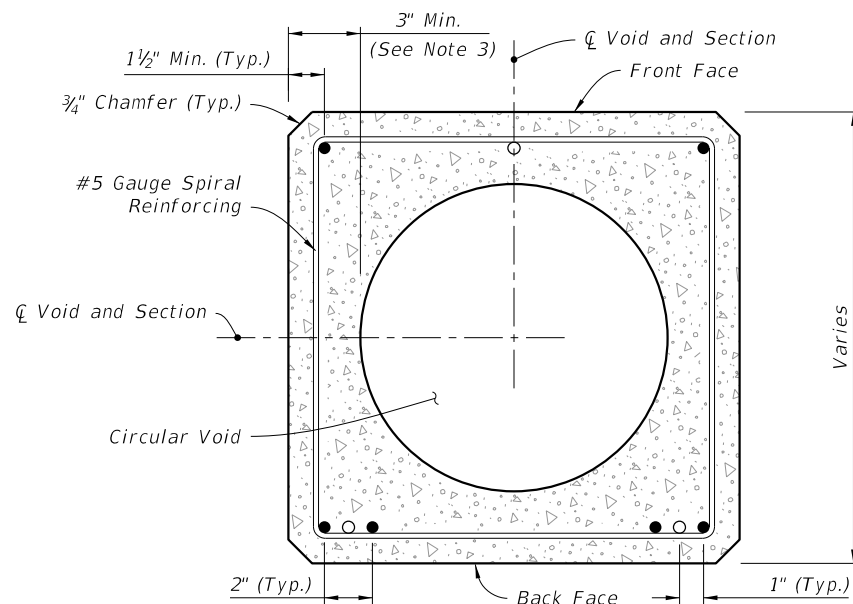
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(Strands, Holes and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION I-I (Tip End)



SECTION J-J (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 20% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

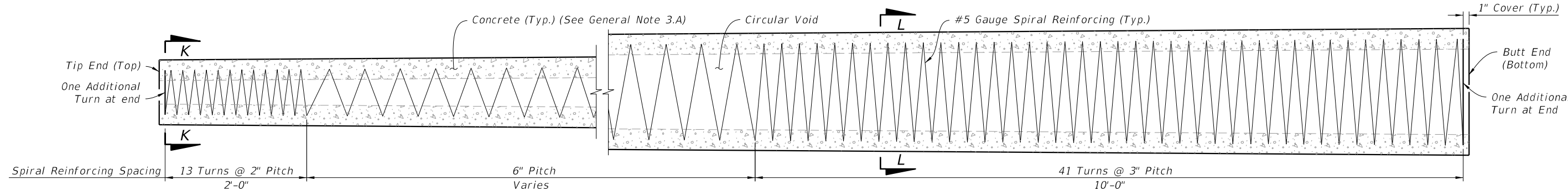
LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (6 strands total)
- Dormant Strand:
0.5 in. (3 strands total) One 24" splice allowed per strand

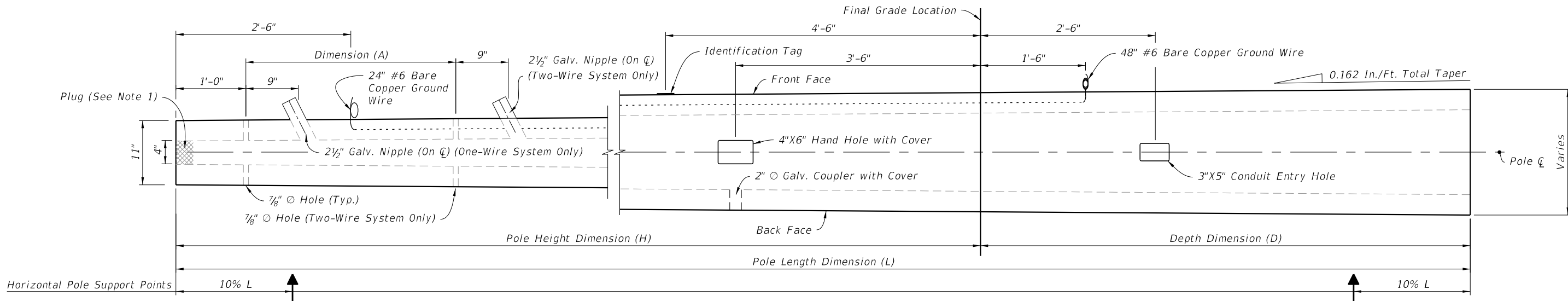
STRAIN POLE TYPE P-IV

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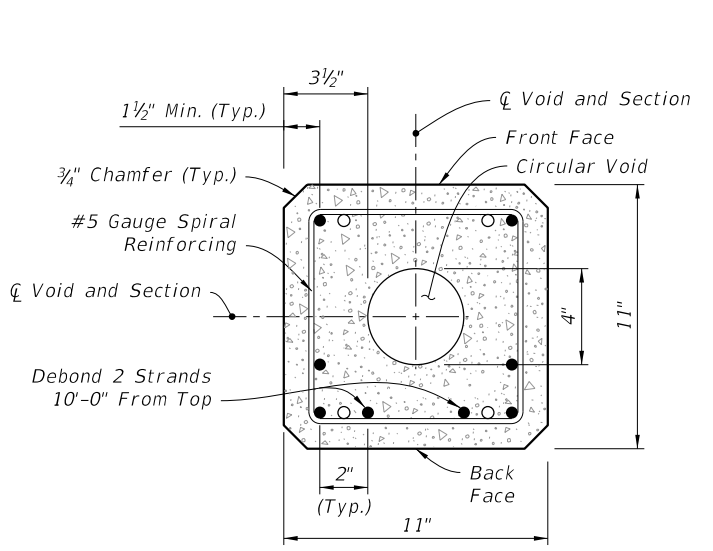
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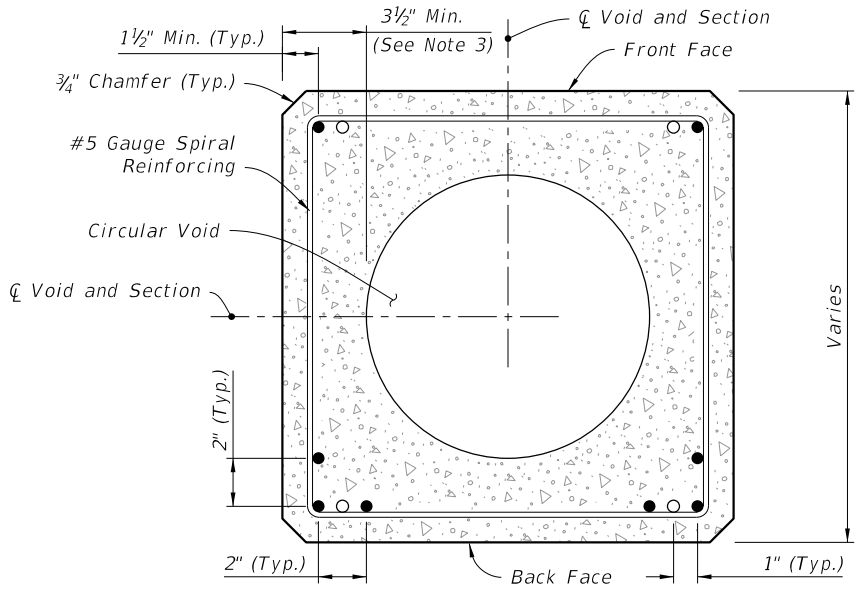
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(Strands, Holes, and Fixtures Not Shown)



POLE ELEVATION
(Strands and Reinforcing Not Shown)



SECTION K-K (Tip End)



SECTION L-L (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 12.5% L from the Tip End.
3. Dimension may vary from 3 1/2" to 4 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 4".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

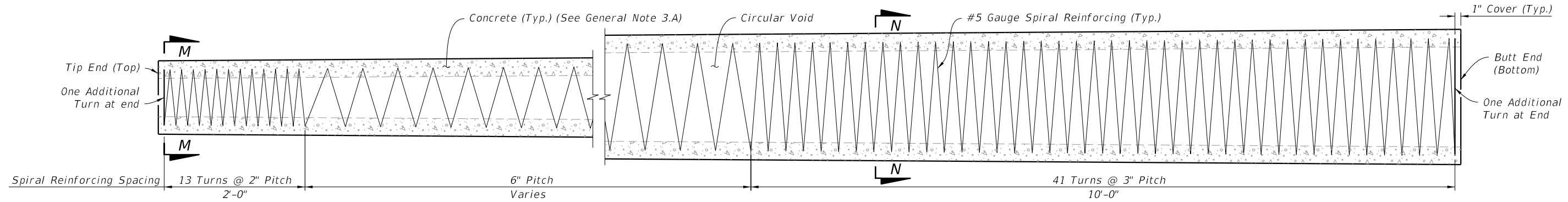
LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:
0.5 in. (4 strands total) One 24" splice allowed per strand

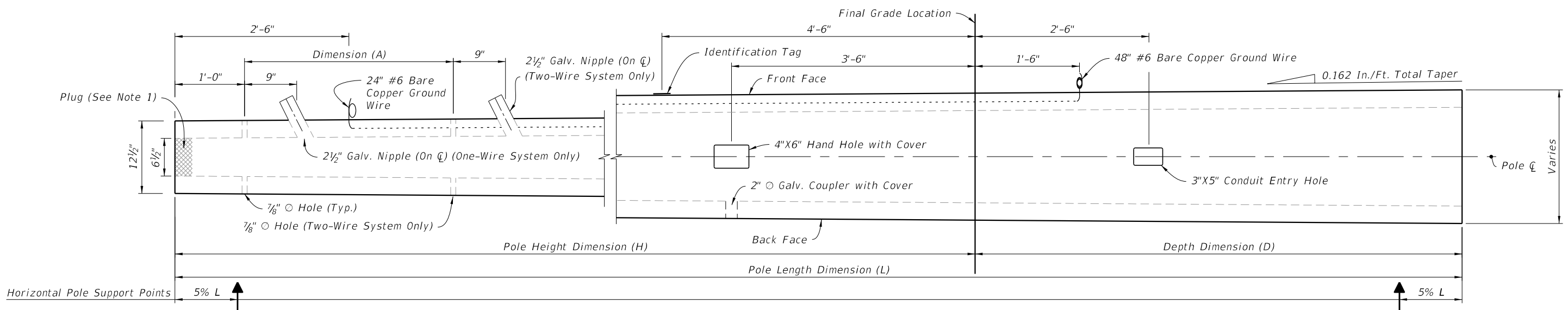
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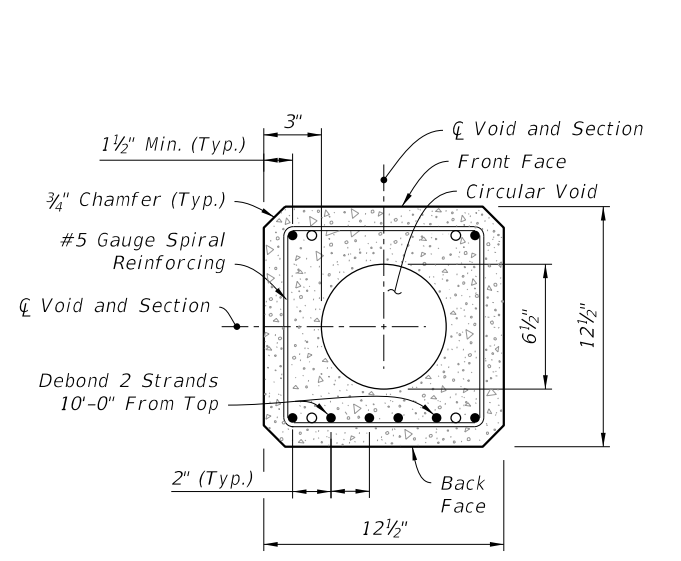
STRAIN POLE TYPE P-V



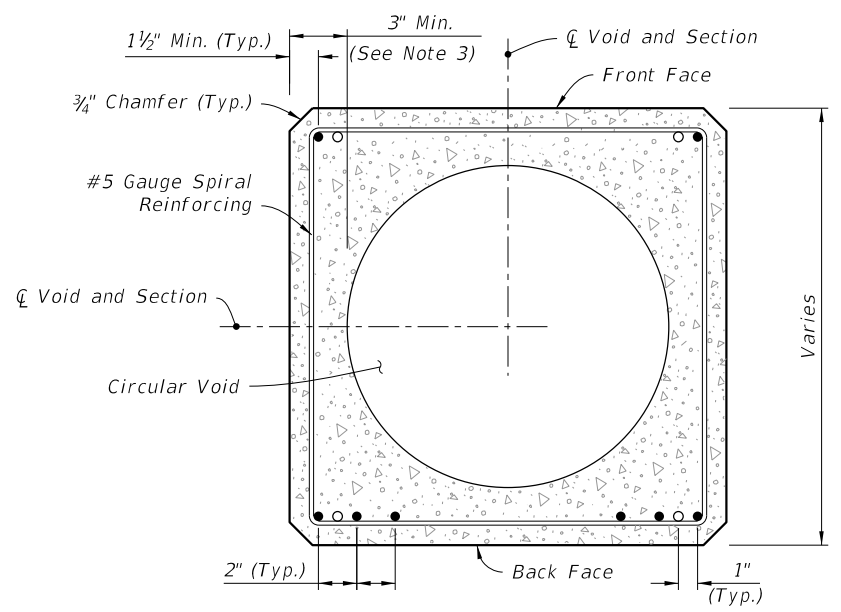
SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



POLE ELEVATION
(Strands And Reinforcing Not Shown)



SECTION M-M (Tip End)



SECTION N-N (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:
0.5 in. (4 strands total) One 24" splice allowed per strand

STRAIN POLE TYPE P-VI

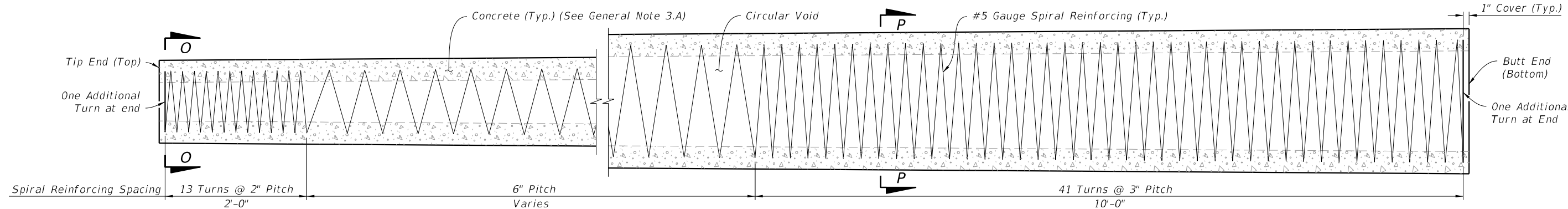
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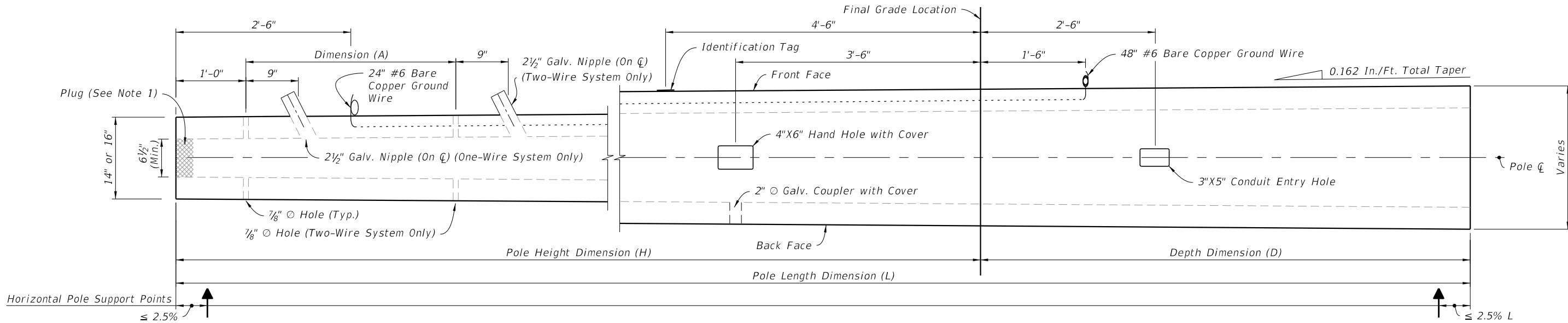

**FY 2022-23
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CONCRETE POLES

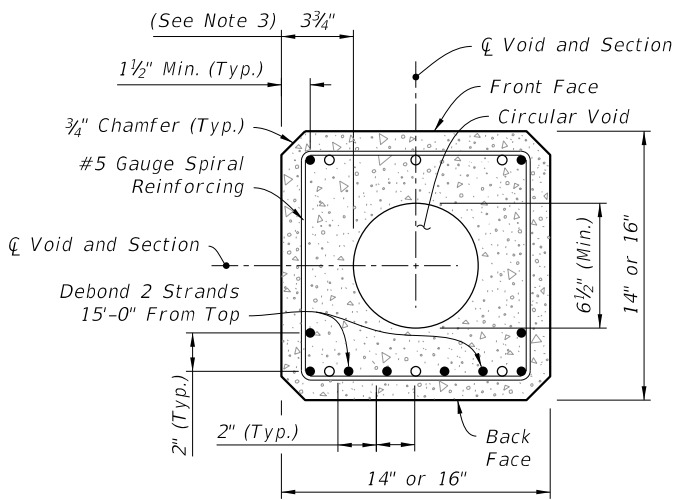
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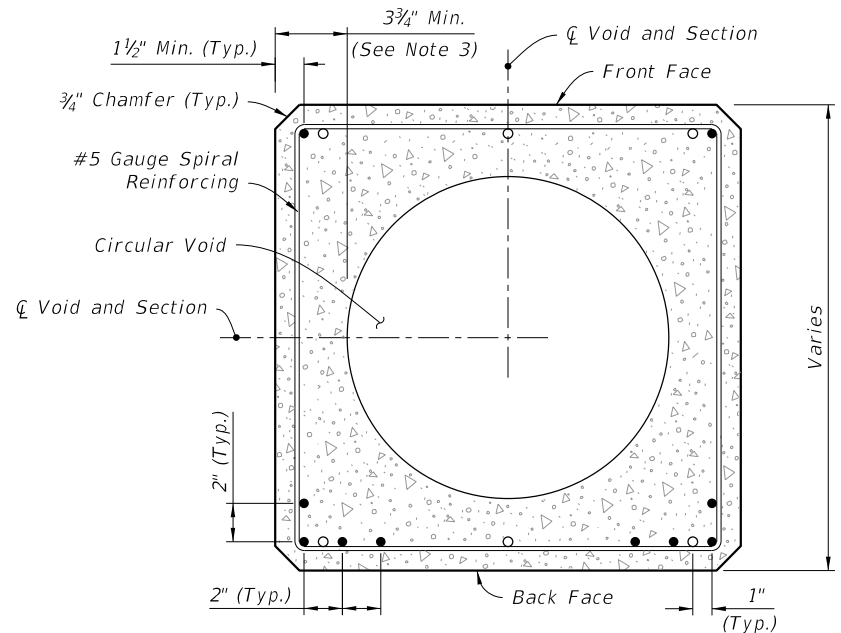
SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



POLE ELEVATION
(Strands And Reinforcing Not Shown)



SECTION O-O (Tip End)



SECTION P-P (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (10 strands total)
- Dormant Strand:
0.5 in. (6 strands total) One 24" splice allowed per strand

STRAIN POLE TYPE P-VII

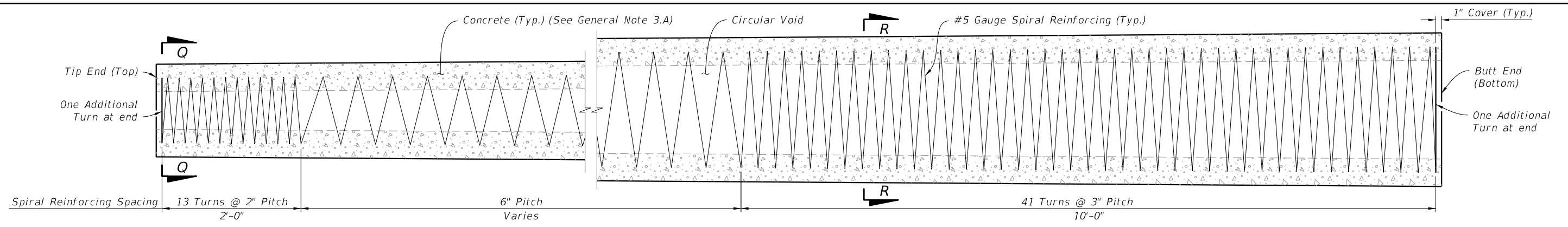
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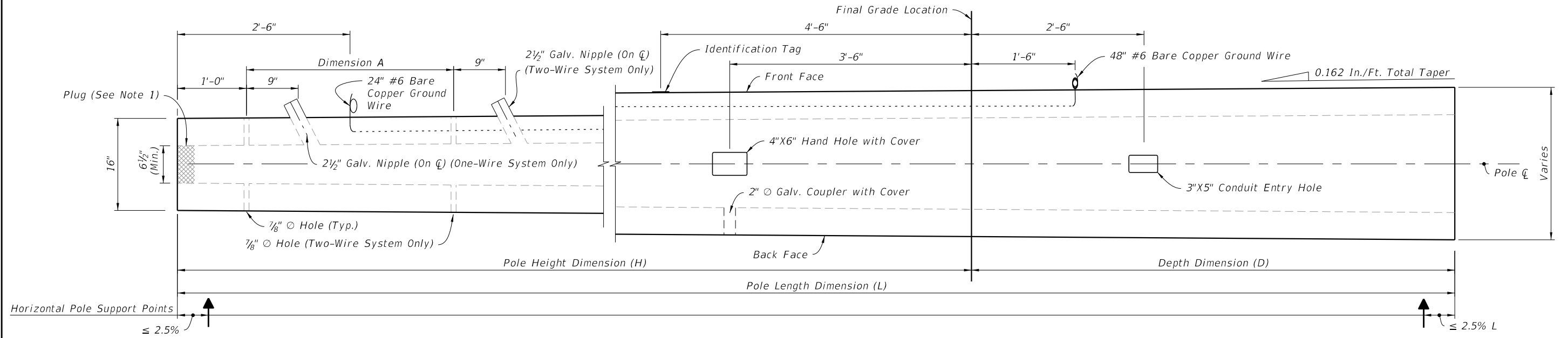

**FY 2022-23
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CONCRETE POLES

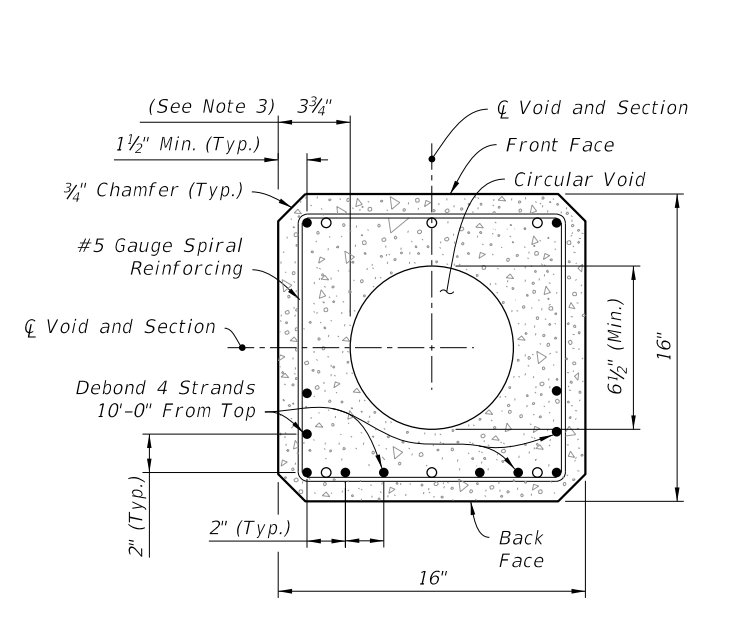
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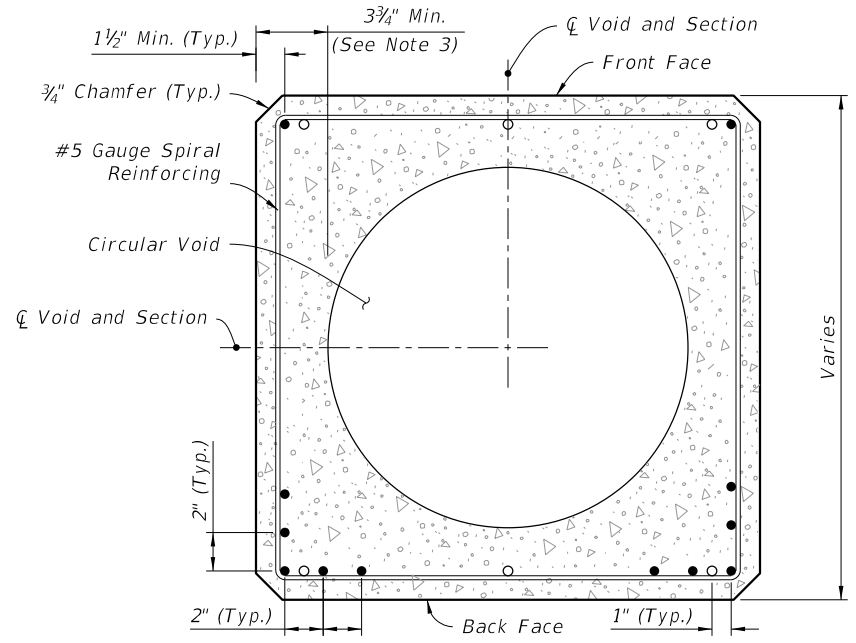
SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



POLE ELEVATION
(Strands And Reinforcing Not Shown)



SECTION Q-Q (Tip End)



SECTION R-R (Typical Square Section)

NOTES:

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

LEGEND:

- Prestressed Strand:
0.5 in. ~ 31 kips before transfer (12 strands total)
- Dormant Strand:
0.5 in. (6 strands total) One 24" splice allowed per strand

STRAIN POLE TYPE P-VIII

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LAST REVISION 11/01/21	DESCRIPTION:
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**FY 2022-23
STANDARD PLANS**

CONCRETE POLES

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