ANCHOR BASE

HANDHOLE

HANDBOLE REQUIRED IF SPAN WIRE CLAMP IS GREATER THAN 3' BELOW TOP OF POLE.

POLE HEIGHT

12"  2"/3" BLIND HALF COUPLING (SEE NOTE 1 & 6)

4" x 6" NOM. HANDHOLE

3/4" R MIN.

2"/3" BLIND HALF COUPLING (SEE NOTE 1 & 6)

3"x5" HANDHOLE

J HOOK

COMBINATION POLE

2"/3" BLIND HALF COUPLING (SEE NOTE 11)

J HOOK

SPAN WIRE CLAMP

HANDHOLE

12"

3/4" 1-9/16"

5/8" 2-25/32"

1-1/16"

ANCHOR TYPE SHACKLE

TAPERED TUBE

REOUIRED IF SPAN WIRE CLAMP IS GREATER THAN 3' BELOW TOP OF POLE.
POLE DETAILS

- Pole cap with 3 set screws (min.)
- J hook (see note 7)
- Span wire clamp (see note 2)
- Anchor bolts with std. steel hex nuts and plain washers (see note 5)

1/4" min.

(See note 4)

See sheet 4 of 5

City of Columbus, Ohio
Department of Public Service
Division of Design and Construction

10/01/2018

CITY ENGINEER

STD DWG 4170

SHT 2 OF 7
STRAIN POLE

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION

STEEL BASE COVER

ID = POLE OD + 1/4"

CORNER RADIUS TO MATCH POLE BASE PLATE RADIUS

PRE-DRILLED THREADED HOLE W/ S.S. BOLT

POLE PLATE WIDTH +1/4"

SECTION A-A
POLE PLATE SKIRT

TOP VIEW

COVER GUIDE AND SECTION ATTACHMENT

RADIUS

ID = POLE OD + 1/4"

1/4" STEEL PLATE

1"

POLE PLATE

K

1/4" STEEL PLATE

1"

FOUNDATION

POLE

A

A

A
BOLT CIRCLE

S

BASE PLATE

H (DIA.)

F

S

NO. 12 STAINLESS STEEL SINGLE JACK CHAIN
SECURED WITH 0.19" X 0.50" POP RIVETS

5" MIN

UPPER HANDHOLE
MINIMUM SIZE IS 4" x 6"

8" MIN

LOWER HANDHOLE

0.50" TAPPED HOLE IN THE RIM
FOR A GROUND WIRE LUG BOLT

12 GA. H.R.M.S. COVER
SECURED WITH 0.25" x 0.50"
STAINLESS STEEL CAP SCREWS

POLE TUBE

WALL

COVER MOUNTING CLIP

LESS THAN 7 GA. = .19
7 GA. THRU 3 GA. = .25

SECTION A-A

STRAIN POLE

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION

STD DWG 4170

10/01/2018

SHT 4 OF 7
### Design Specifications

<table>
<thead>
<tr>
<th>Design No.</th>
<th>Base Moment at Yield (ft. kips)</th>
<th>Tapered (Note A)</th>
<th>Tapered (Note B)</th>
<th>Anchor Base</th>
<th>Plate Skirt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Base Dia.</td>
<td>Min. Wall Thickness</td>
<td>Base Dia.</td>
<td>Min. Wall Thickness</td>
</tr>
<tr>
<td>5</td>
<td>121.0</td>
<td>12</td>
<td>.239</td>
<td>12.00</td>
<td>.239</td>
</tr>
<tr>
<td>6</td>
<td>149.0</td>
<td>12</td>
<td>.299</td>
<td>12.00</td>
<td>.250</td>
</tr>
<tr>
<td>7</td>
<td>176.0</td>
<td>13</td>
<td>.299</td>
<td>13.00</td>
<td>.250</td>
</tr>
<tr>
<td>8</td>
<td>206.0</td>
<td>14</td>
<td>.299</td>
<td>15.00</td>
<td>.219</td>
</tr>
<tr>
<td>9</td>
<td>228.0</td>
<td>12</td>
<td>.478 (2 PLY)</td>
<td>14.75</td>
<td>.250</td>
</tr>
<tr>
<td>10</td>
<td>270.0</td>
<td>13</td>
<td>.478 (2 PLY)</td>
<td>16.00</td>
<td>.250</td>
</tr>
<tr>
<td>11</td>
<td>316.0</td>
<td>14</td>
<td>.478 (2 PLY)</td>
<td>15.50</td>
<td>.313</td>
</tr>
<tr>
<td>12</td>
<td>385.0</td>
<td>14</td>
<td>.598 (2 PLY)</td>
<td>17.25</td>
<td>.313</td>
</tr>
<tr>
<td>13</td>
<td>590C</td>
<td>18</td>
<td>.626</td>
<td>18.00</td>
<td>.500</td>
</tr>
<tr>
<td>14</td>
<td>900C</td>
<td>23</td>
<td>.563</td>
<td>22.00</td>
<td>.500</td>
</tr>
</tbody>
</table>

**Notes:**

A. Tapered tube shall be steel with a minimum of 55,000 psi yield stress after galvanizing.

B. Design 5 shall be ASTM A595M steel with a minimum of 55,000 psi yield strength after galvanizing. Designs 6 thru 14 shall be ASTM A572M Grade 55 or 65 steel with a minimum of 55,000 or 65,000 psi yield strength after galvanizing, respectively.

C. Max. design base moment; design 13 and 14 strain poles are AASHTO 1994 compliant.
NOTES:

1. SIGNAL CABLE ENTRANCE SHALL BE A 2" MINIMUM BLIND HALF COUPLING PROVIDED IN EACH POLE ON CORNERS WITHOUT CABINET. MINIMUM OF 3" BLIND HALF COUPLING ON CORNER WITH CABINET OR AS SPECIFIED ON THE PLANS.

2. SPAN WIRE CLAMP SHALL BE GALVANIZED STEEL, CAPABLE OF RESISTING A LOAD OF 12,500 POUNDS MINIMUM WITHOUT PERMANENT DISTORTION.

3. FOR FOUNDATION DETAILS, INCLUDING ANCHOR BOLT DETAILS, SEE CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4160.

4. THE BASE PLATE SHALL BE WELDED TO TWO PLY POLES WITH AWS PREQUALIFIED WELDS IN CONFORMANCE WITH 730.04.

5. A MINIMUM OF ONE FULL BOLT THREAD SHALL REMAIN ABOVE THE ANCHOR NUT.

6. ALL UNUSED COUPLINGS SHALL BE PROVIDED WITH A REMOVABLE GALVANIZED CAST IRON PLUG.

7. PROVIDE 1 OR 2 WELDED CABLE SUPPORT HOOKS ('J' OR 'C' HOOKS) LOCATED ON THE INSIDE OF THE POLE.

8. STRAIN POLES SHALL BE COATED IN ACCORDANCE WITH THE PLANS.

9. PROVIDE 1, 2 OR 3 HANDHOLES, AS PER PLAN DESIGN, EACH COMPLETE WITH A COVER, A RECTANGULAR OR ELLIPTICAL REINFORCED FRAME, AND A STAINLESS STEEL FASTENER FOR THE COVER. THE FASTENER SHALL BE FLUSH WITH THE HANDHOLE SURFACE. THE HANDHOLES SHALL BE LOCATED 180 DEGREES FROM THE RESULTANT FORCE UNLESS SPECIFIED OTHERWISE.
   A.) THE HAND HOLE NEAR THE BRACKET ARM SHALL HAVE A MINIMUM INSIDE OPENING OF 3" X 5" AND BE SIMILAR IN DESIGN TO THE BOTTOM HAND HOLE EXCEPT THAT NO GROUNDING PROVISION IS REQUIRED.
   B.) THE HAND HOLE NEAR THE SPAN WIRE ATTACHMENT POINT SHALL HAVE A MINIMUM INSIDE OPENING OF 4" X 6" AND BE SIMILAR IN DESIGN TO THE BOTTOM HAND HOLE EXCEPT THAT NO GROUNDING PROVISION IS REQUIRED.
   C.) THE BOTTOM HAND HOLE SHALL HAVE A MINIMUM INSIDE OPENING OF 5" X 8". A GROUNDING PROVISION CAPABLE OF ACCEPTING 4 - #4 AWG COPPER GROUNDING WIRES SHALL BE PROVIDED AND SHALL BE ATTACHED TO THE FRAME.

10. PROVIDE A REMOVABLE POLE CAP ATTACHED EITHER BY A MINIMUM OF 3 STAINLESS STEEL SET SCREWS OR BY A STAINLESS STEEL THROUGH BOLT.

11. FOR BRACKET ARM DETAILS SEE CITY OF COLUMBUS STANDARD DRAWING 4110.