"WHEN X" IS NOT EQUAL TO 180° OR AT A TERMINUS POINT A DOWN GUY IS REQUIRED.

**NOTES:**

1. FOR ANGLES OF 166° THROUGH 180° USE ATTACHMENT DETAILS SHOWN ON CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4330. MESSENER WIRE POLE ATTACHMENT SHALL BE BY A POLE CLAMP ON STEEL POLES AND BY A 5/8 INCH THRU-BOLT OR THIMBLEYE BOLT WITH 2" SQUARE WASHERS ON WOOD POLES.

2. POWER SERVICE MESSENER WIRE SHALL BE ELECTRICALLY GROUND ON THE FIRST AND LAST POLES IN A CABLE RUN AND AT INTERVALS NOT TO EXCEED 1200 FEET.

3. WHEN ATTACHED TO WOOD POLES, THE MESSENER WIRE SHALL BE GROUNDED BY BONDING TO EXISTING SIGNAL GROUND WIRE OR CONNECTION TO A GROUND BOLT. THE MESSENER WIRE SHALL BE BONDED TO GROUNDED STEEL POLES BY USE OF A 1/2" BOLT, DRILLED AND TAPPED INTO THE POLE.

4. LOOP DETECTOR LEAD-IN CABLE SHALL HAVE A SAG TO MATCH THE EXISTING UTILITY LINES OR WHEN NO EXISTING LINES A SAG OF 3% TO 5%.

5. GROUNDING OF POLES SHALL BE AS SHOWN ON CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4330.

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**MESSENGER WIRE DETAILS II**

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

STD DWG 4331

5/01/2014

CITY ENGINEER

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