

DESCRIPTION	REVISIONS	DATE

STRUCTURAL DESIGN

THE DESIGN SHALL COMPLY WITH AASHTO'S "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AND SHALL BE FABRICATED ACCORDING TO THE SHOP DRAWINGS, APPROVED BY THE ENGINEER.

FOR INFORMATION CONCERNING THE INTERPRETATION OF THE AASHTO'S DESIGN CRITERIA, CONTACT THE BRIDGE DIVISION OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION.

THE CALCULATED STRESSES FROM THE DESIGN LOADING ON POLES AND MAST ARMS SHALL NOT EXCEED 50,000 PSI OR 85% OF THE ASTM YIELD STRENGTH, WHICHEVER IS SMALLER. A TYPE "A" CERTIFICATION SHALL BE FURNISHED SEE SECTION 106.4C OF THE 2009 STANDARD SPECIFICATIONS WHICH INDICATES THAT THE MATERIALS FURNISHED MEETS THE APPLICABLE ASTM SPECIFICATION FOR THE STRESS RANGE THAT THE POLE AND MAST ARM ARE TO OPERATE WITHIN.

MAXIMUM DESIGN DEFLECTION SHALL NOT EXCEED 10% OF THE POLE HEIGHT.

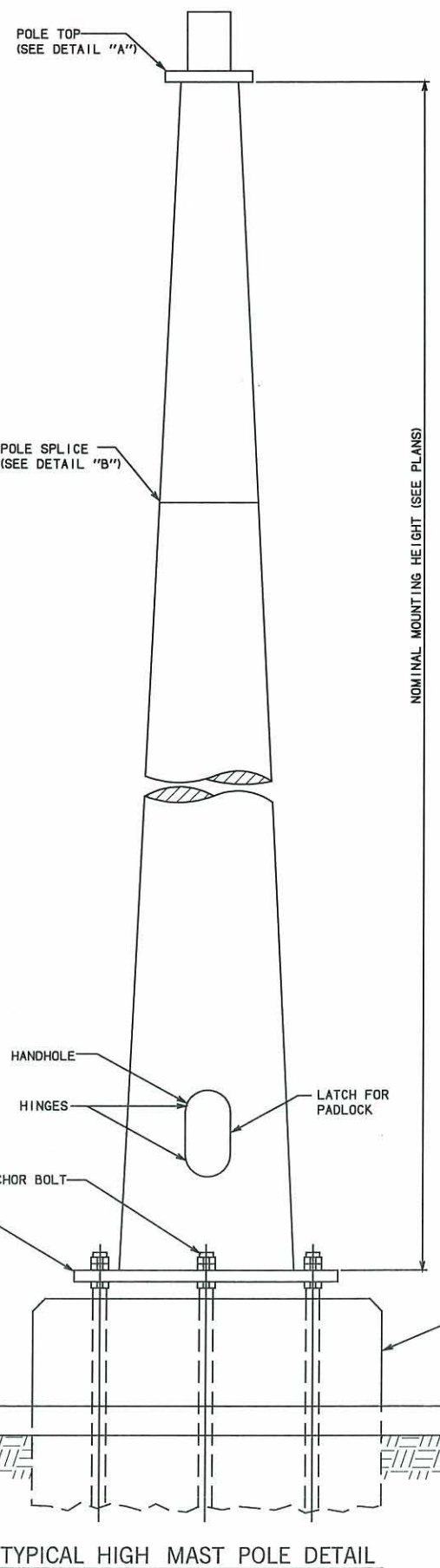
THE EFFECTIVE PROJECTED AREA (EPA) OF THE LUMINAIRES AND LOWERING DEVICE USED IN DESIGNING THE POLE SHALL BE CALCULATED AS FOLLOWS:
 $(EPA) = (ACTUAL PROJECTED AREA) \times (SHAPE FACTOR)$

MATERIAL SPECIFICATIONS

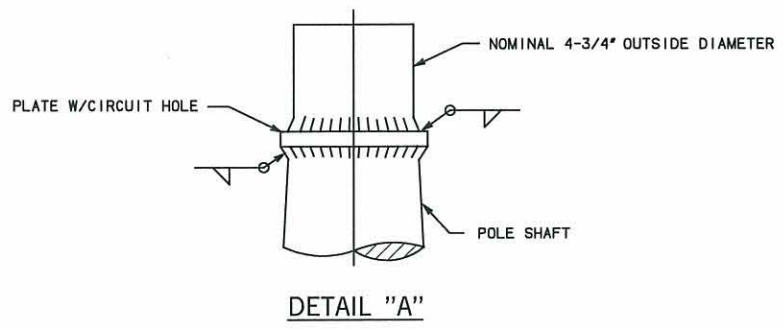
- (A) POLE SHAFT - HIGH STRENGTH STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 40,000 PSI AND MEET THE NOTCH TOUGHNESS REQUIREMENTS OF CHARPY "V" NOTCH TEST FOR 15 FOOT POUNDS AT + 40 DEG. F.
- (B) BASE PLATES, BRACKETS, ETC... - STEEL PLATES AND MISCELLANEOUS HARDWARE SHALL BE FABRICATED OF PLATE HAVING A MINIMUM YIELD STRENGTH OF 36,000 PSI.
- (C) ANCHOR BOLTS - EACH POLE SHALL HAVE A MINIMUM OF SIX (6) ANCHOR BOLTS. EACH COMPLETE WITH THREE (3) HEX NUTS. ANCHOR BOLTS SHALL BE FABRICATED OF MATERIAL WITH A MINIMUM YIELD STRENGTH OF 55,000 PSI. ANCHOR BOLTS SHALL BE CAGED PRIOR TO INSTALLATION AND SHALL BE TORQUED AS SPECIFIED BY THE POLE MANUFACTURER.
- (D) FINISH - THE SHAFT, BASE AND MISCELLANEOUS BRACKETS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 (AASHTO M-111). ANCHOR BOLTS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153 (AASHTO M-232).

GENERAL NOTES

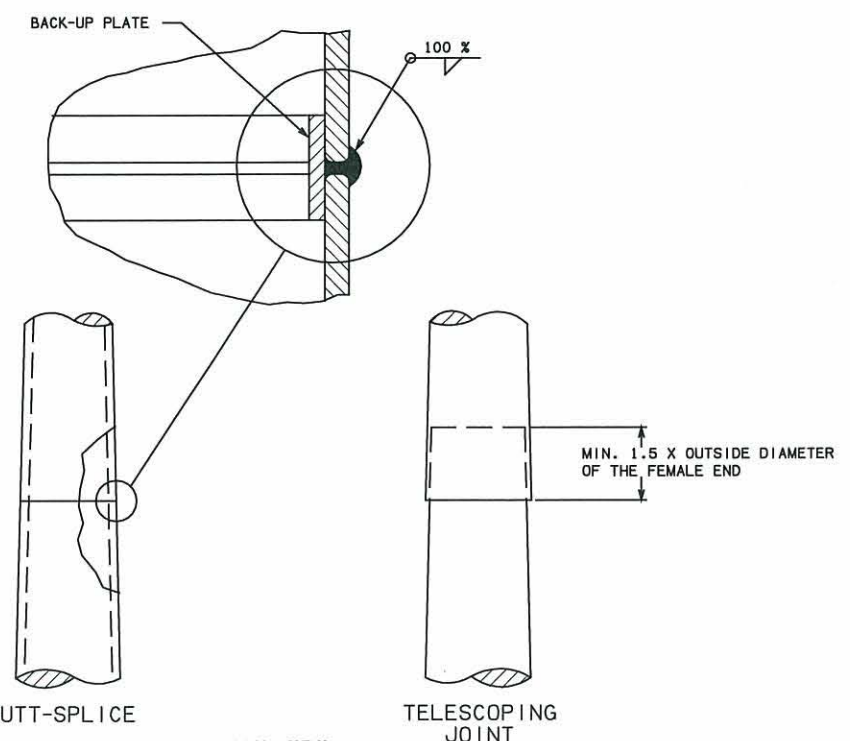
1. THE ANCHOR BOLTS SHALL BE CAGED PRIOR TO INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND SPECIFICATIONS FOR HIGH MAST POLES. THE ANCHOR BOLTS AND CAGE SHALL PROVIDE THE MINIMUM 3" CLEARANCES SHOWN ON THE HIGH MAST FOOTING DETAILS, SEE STD. HMP1-1-(LATEST REV.). IN THE EVENT A CONFLICT OCCURS BETWEEN THE ANCHOR BOLTS CAGE AND THE REINFORCING STEEL OR IF THE MINIMUM CLEARANCES CANNOT BE ACHIEVED, THE CONTRACTOR SHALL INSTALL A LARGER DIAMETER DRILLED SHAFT COMPLETE WITH ADDITIONAL CONCRETE AND REINFORCING STEEL. IF THE SIZE OF THE DRILLED SHAFT IS MODIFIED AS A RESULT OF THE ABOVE, IT SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR THE EXTRA MATERIALS OR WORK REQUIRED.
2. THE ANCHOR BASE OF THE POLE SHALL NOT EXTEND PAST THE OUTSIDE DIAMETER OF THE FOOTING.
3. FOR TYPICAL LOWERING DEVICE DETAILS, SEE STD. HMLD1-1-(LATEST REVISION).
4. THE WINCH & BREAKER SUPPORT PLATE SHALL BE COMPATIBLE WITH THE HIGH MAST LOWERING DEVICE TO BE INSTALLED.
5. FOR ADDITIONAL SPECIFICATION DATA, SEE THE "SPECIAL PROVISIONS FOR HIGH MAST POLES".
6. THE MAXIMUM HANDHOLE INSIDE DIMENSIONS SHALL BE 10" WIDE X 30" HIGH. THE MAXIMUM HANDHOLE OUTSIDE WIDTH SHALL BE AT LEAST 3" LESS THAN THE OUTSIDE DIAMETER OF ROUND SHAFTS OR THE FLAT TO DISTANCE OF MULTI-SIDED SHAFTS. BOTH MEASURED AT THE CENTER OF THE HANDHOLE.
7. THE HANDHOLE COVER SHALL BE CONNECTED TO THE POLE SHAFT WITH HINGES AND SHALL BE CAPABLE OF BEING PADLOCKED. HANDHOLE COVER TO HAVE NEOPRENE GASKET.



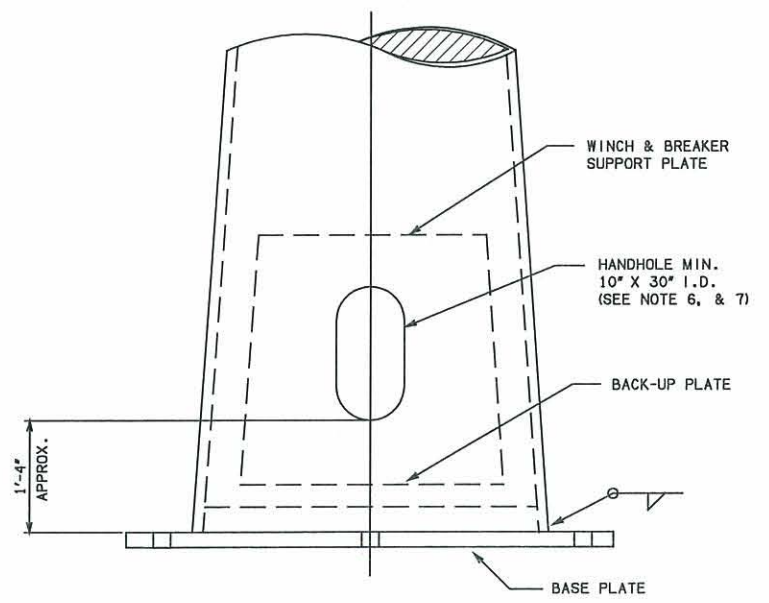
TYPICAL HIGH MAST POLE DETAIL



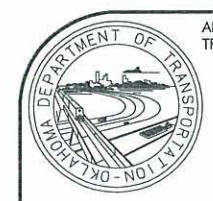
DETAIL "A"



DETAIL "B"



TYPICAL BASE PLATE AND HAND HOLE DETAILS



APPROVED BY
 TRAFFIC ENGINEER *David Smith* DATE: 8/1/10
 TRAFFIC STANDARD

TYPICAL HIGH MAST POLE DETAILS