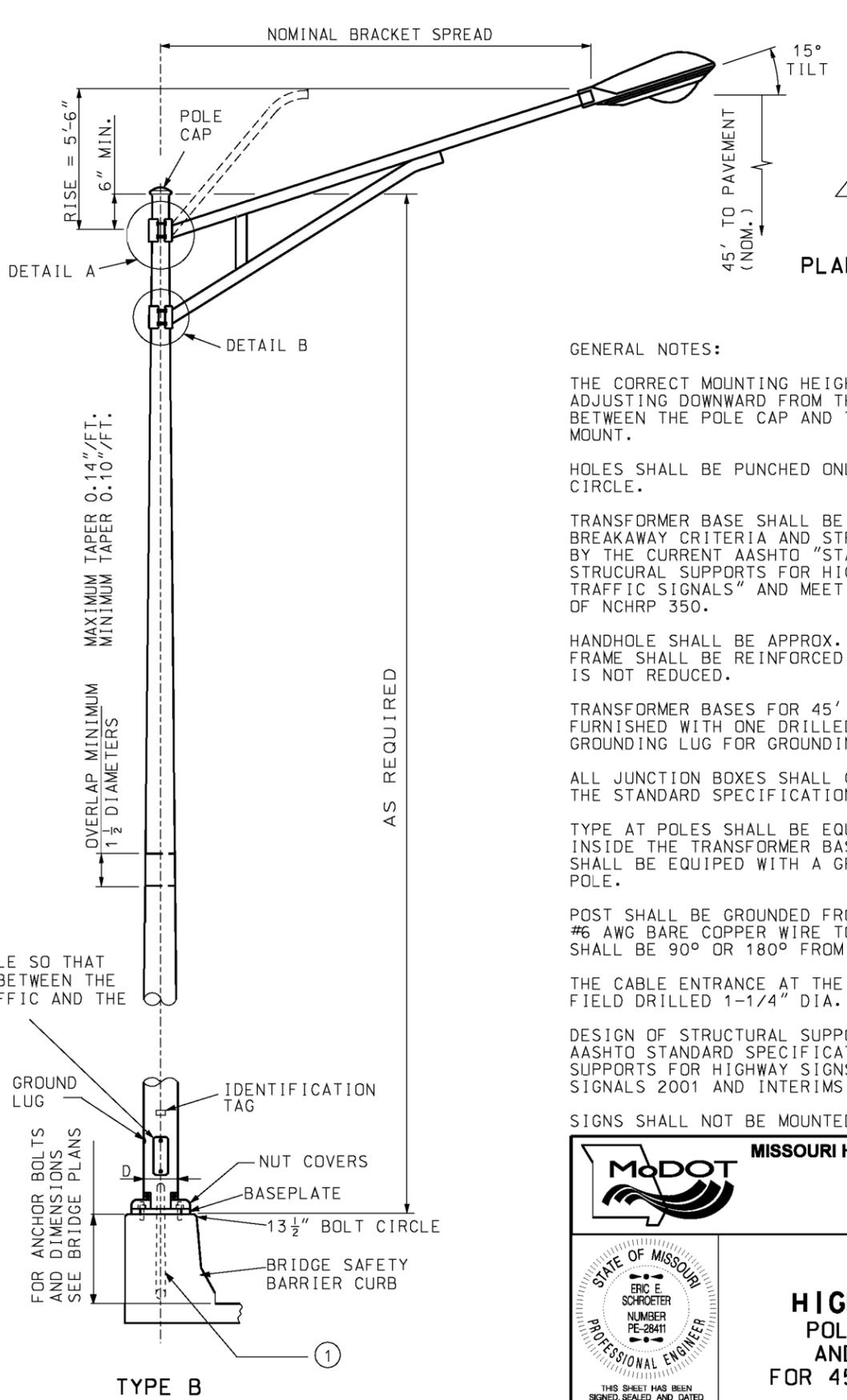


**DETAIL A  
SINGLE MOUNT AND UPPER MOUNT  
FOR TRUSSED**

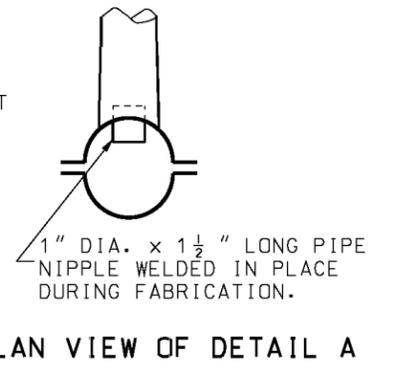
**DETAIL B  
LOWER MOUNT FOR TRUSSED**

**TYPICAL BRACKET  
ARM MOUNTING**

ALIGN HANDHOLE SO THAT  
THE POLE IS BETWEEN THE  
ONCOMING TRAFFIC AND THE  
HANDHOLE.



**TYPE B**



**GENERAL NOTES:**

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 6" MINIMUM CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 4" X 6-1/2". HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

TRANSFORMER BASES FOR 45' MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1-1/4" DIA. HOLE.

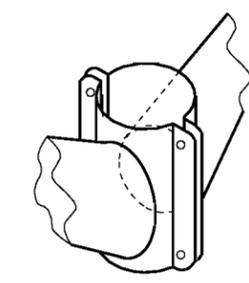
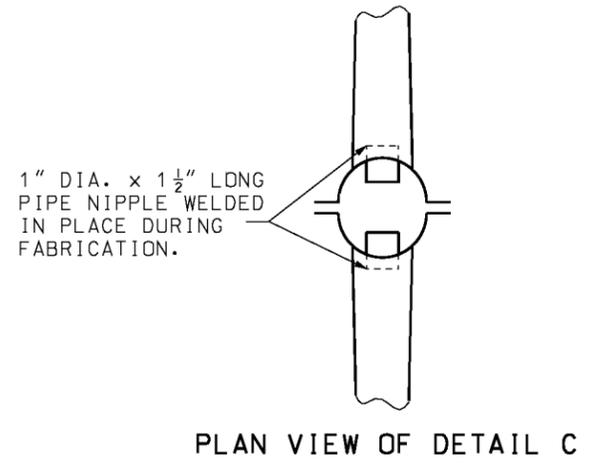
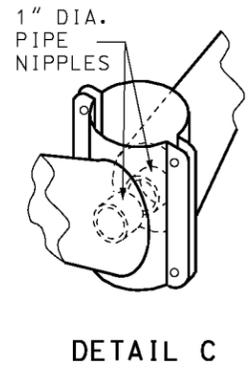
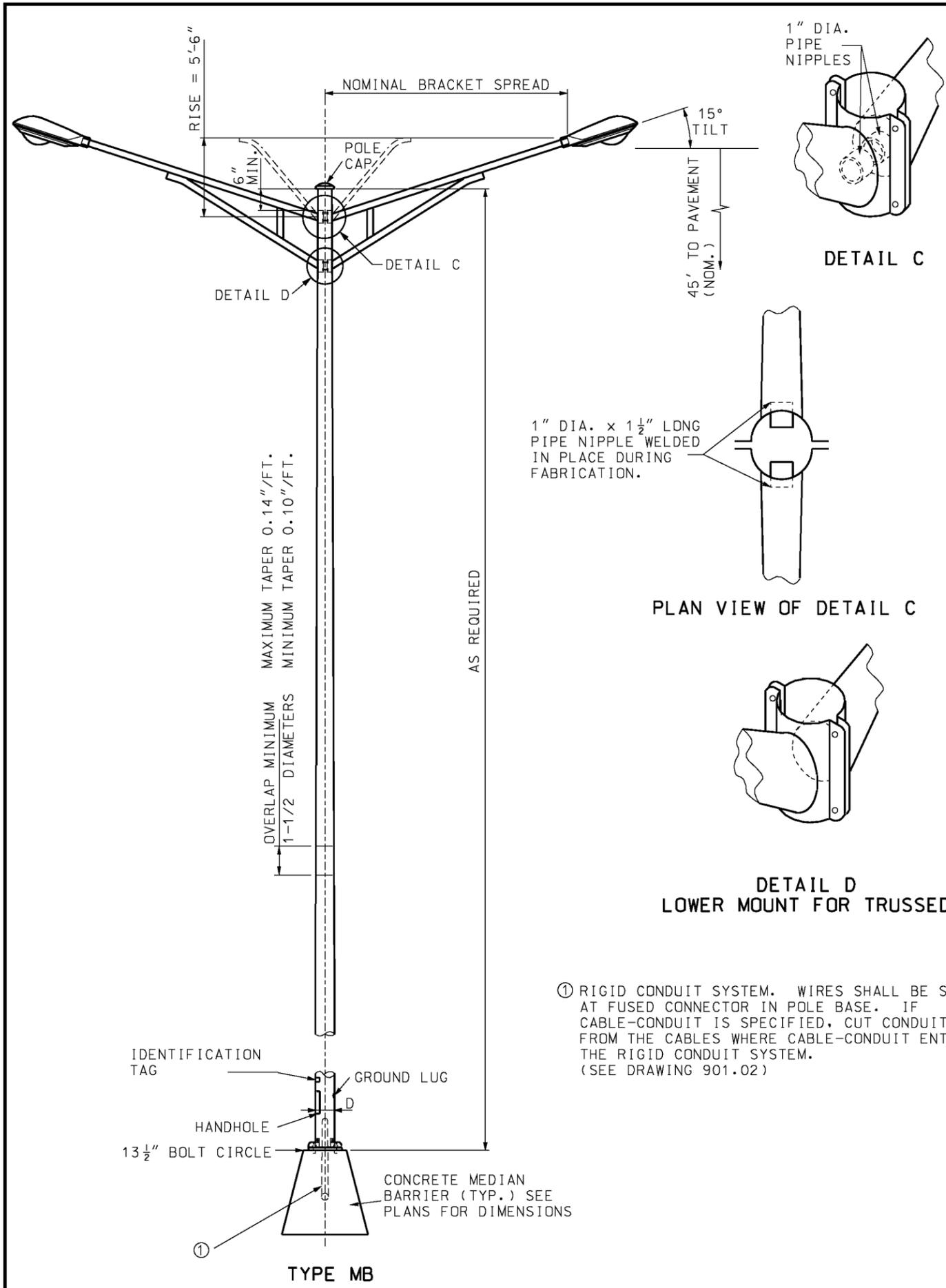
DESIGN OF STRUCTURAL SUPPORTS SHALL COMPLY WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS 2001 AND INTERIMS THROUGH 2003.

SIGNS SHALL NOT BE MOUNTED ON LIGHTING POLES.

① RIGID CONDUIT SYSTEM. WIRES SHALL BE SPLICED AT FUSED CONNECTOR IN POLE BASE. IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM THE CABLES WHERE CABLE-CONDUIT ENTERS THE RIGID CONDUIT SYSTEM. (SEE DRAWING 901.02)

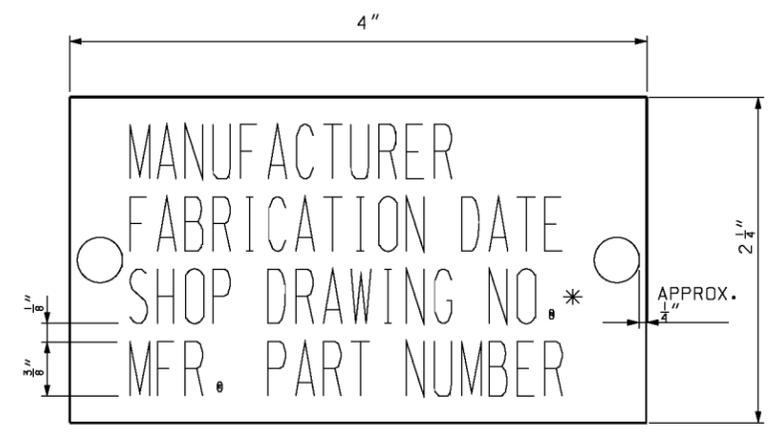
	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b>	
	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<b>HIGHWAY LIGHTING POLES, FOUNDATIONS AND APPURTENANCES FOR 45' MOUNTING HEIGHT</b>	
DATE EFFECTIVE: 12/01/2013 DATE PREPARED: 10/22/2013	<b>901.01AH</b>	SHEET NO. 1 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



**DETAIL D  
LOWER MOUNT FOR TRUSSED**

① RIGID CONDUIT SYSTEM. WIRES SHALL BE SPLICED AT FUSED CONNECTOR IN POLE BASE. IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM THE CABLES WHERE CABLE-CONDUIT ENTERS THE RIGID CONDUIT SYSTEM. (SEE DRAWING 901.02)



**IDENTIFICATION TAG**

ID TAG NOTE:  
TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS. ID TAG HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.

\* INCLUDING REVISION

**GENERAL NOTES:**

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 6" MINIMUM CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 4" X 6-1/2". HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

TRANSFORMER BASES FOR 45' MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1-1/4" DIA. HOLE.

SIGNS SHALL NOT BE MOUNTED ON LIGHTING POLES.

 <b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
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DATE EFFECTIVE: 12/01/2013 DATE PREPARED: 10/22/2013	<p><b>901.01AH</b></p>
SHEET NO. 2 OF 6	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TYPE AT POLE				
BRACKET SPREAD		6' OR 15'		
MAX. LUMINAIRE WEIGHT		60 LB		
MAX. PROJECTED AREA		3.3 SQ. FT.		
AT-45 DESIGN NO.	X	A	B	D* (NOMINAL)
1	50'	VAR.	6" MIN.	10"
2	45'	VAR.	6" MIN.	10"
3	40'	VAR.	6" MIN.	10"
4	35'	VAR.	6" MIN.	10"
5	30'	VAR.	6" MIN.	10"

\* THE MINIMUM ALTERNATE DIAMETER SHALL BE 10" FOR A 50' POLE, 9-1/2" FOR A 45' POLE, 9" FOR A 40' POLE, 8-1/2" FOR A 35' POLE AND 8" FOR A 30' POLE.

ANSI LAMPS			
FUSE RATING	DESIGNATION HPS	WATTS	INITIAL LUMENS
3A	S55	150	16,000
5A	S50	250	27,500
7A	S51	400	50,000
TYPE III MEDIUM DISTRIBUTION SEMI-CUTOFF UNLESS OTHERWISE SPECIFIED ON PLANS			

**GENERAL NOTES:**

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 6" MINIMUM CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

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POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1 1/4" DIA. HOLE.

TYPE B POLE			
BRACKET SPREAD		6' OR 15'	
MAX. LUMINAIRE WEIGHT		60 LB	
MAX. PROJECTED AREA		3.3 SQ. FT.	
SINGLE BRACKET ARM			
LOCATION	BRACKET SPREAD	D NOM.	ANCHOR BOLT DIA.
BRIDGE SAFETY BARRIER CURB	6'	10"	1-1/4"
TRUSSED BRACKET ARM			
LOCATION	BRACKET SPREAD	D NOM.	ANCHOR BOLT DIA.
BRIDGE SAFETY BARRIER CURB	15'	10"	1-1/4"

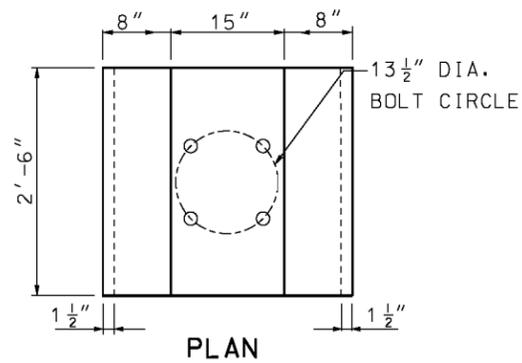
TYPE MB POLE		
BRACKET SPREAD		6' OR 15'
MAX. LUMINAIRE WEIGHT		60 LB
MAX. PROJECTED AREA		3.3 SQ. FT.
DOUBLE BRACKET ARM		
LOCATION	BRACKET SPREAD	D NOM.
MEDIAN BARRIER CURB	6'	10"
DOUBLE TRUSSED BRACKET ARM		
LOCATION	BRACKET SPREAD	D NOM.
MEDIAN BARRIER CURB	15'	10"

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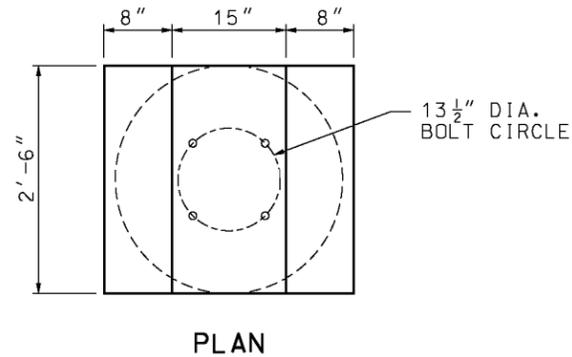


**HIGHWAY LIGHTING  
 POLES, FOUNDATIONS  
 AND APPURTENANCES  
 FOR 45' MOUNTING HEIGHT**

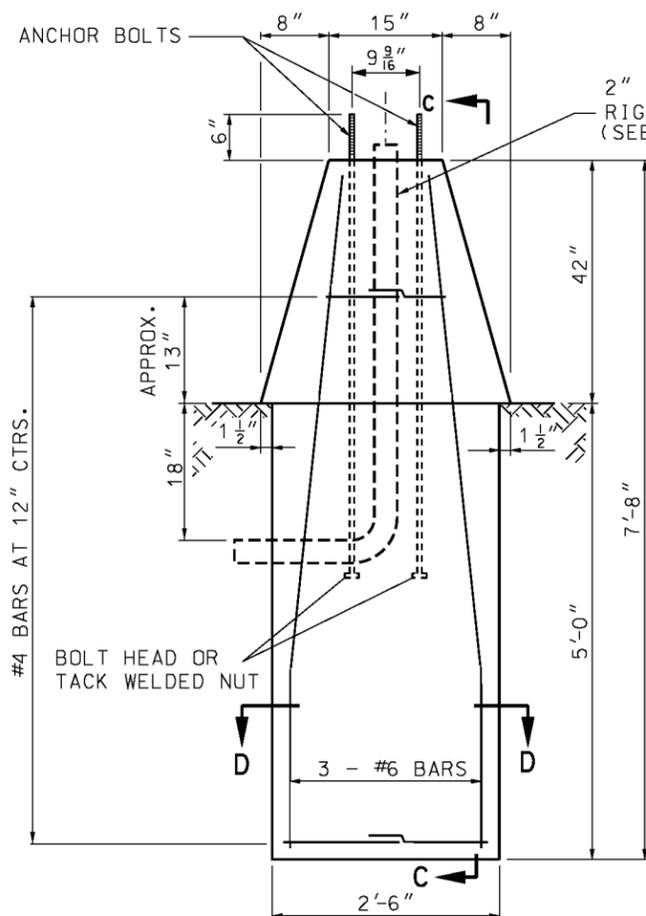
DATE EFFECTIVE: 12/01/2013	<b>901.01AH</b>	SHEET NO.
DATE PREPARED: 10/22/2013		3 OF 6



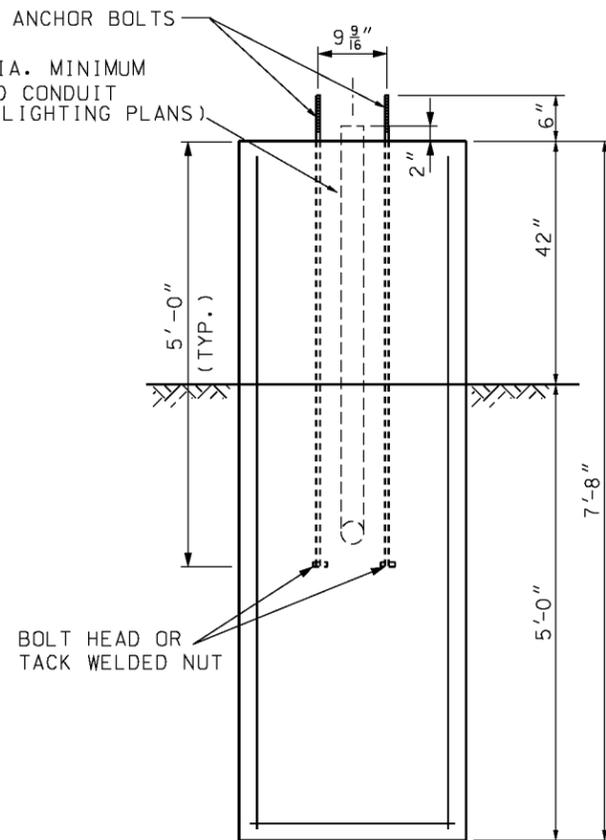
PLAN



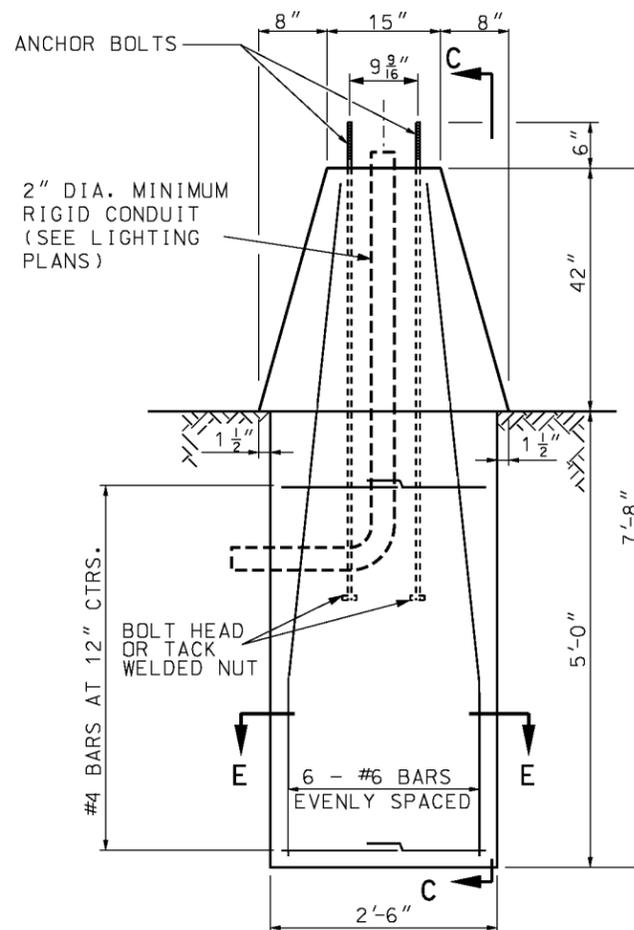
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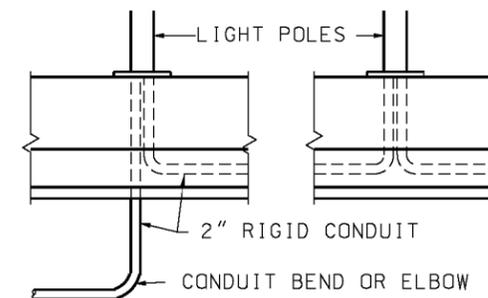
ELEVATION ALTERNATE 1



SECTION C-C



ELEVATION ALTERNATE 2



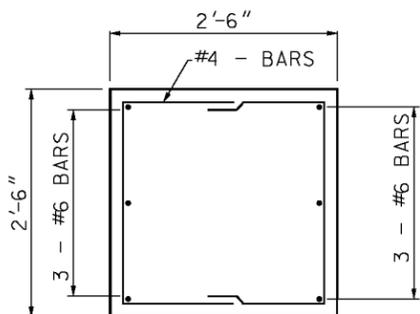
CONDUIT DETAIL FOR ALTERNATE 1 & 2

GENERAL NOTES:

ALL FOUNDATIONS SHALL INCLUDE 4 ANCHOR BOLTS AND NUTS PLACED AS SHOWN.

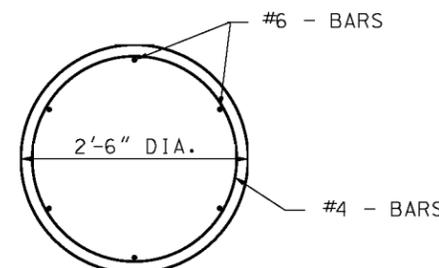
ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1 1/4" DIAMETER HIGH STRENGTH ANCHOR BOLTS.

TOUNGE AND GROOVE REQUIRED ON MEDIAN BARRIER SECTION FOR TYPE MB POLES WHEN ADJACENT MEDIAN BARRIER IS PRECAST, FOR DETAILS, SEE STANDARD PLANS.



SECTION D-D

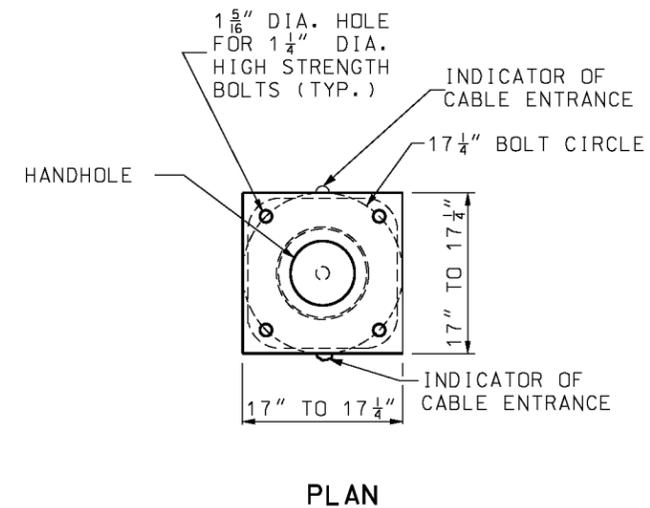
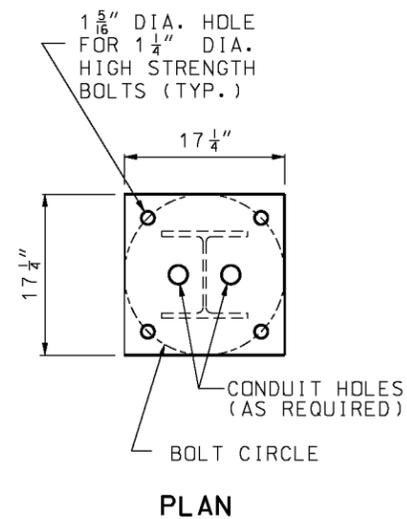
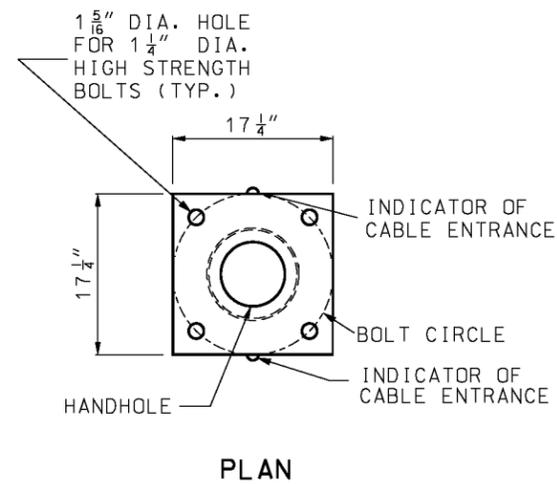
CONCRETE MEDIAN BARRIER AND FOUNDATION DESIGN FOR TYPE MB LIGHT POLE



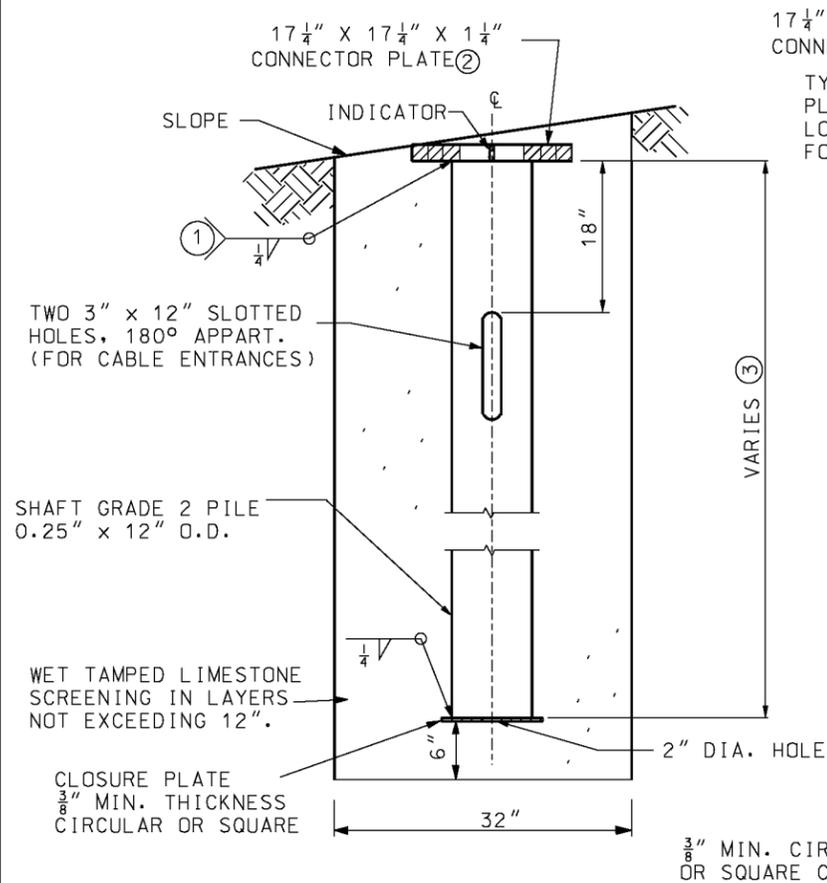
SECTION E-E

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	<p><b>HIGHWAY LIGHTING POLES, FOUNDATIONS AND APPURTENANCES FOR 45' MOUNTING HEIGHT</b></p>
DATE EFFECTIVE: 12/01/2013 DATE PREPARED: 10/22/2013	<p><b>901.01AH</b></p>
SHEET NO. 4 OF 6	

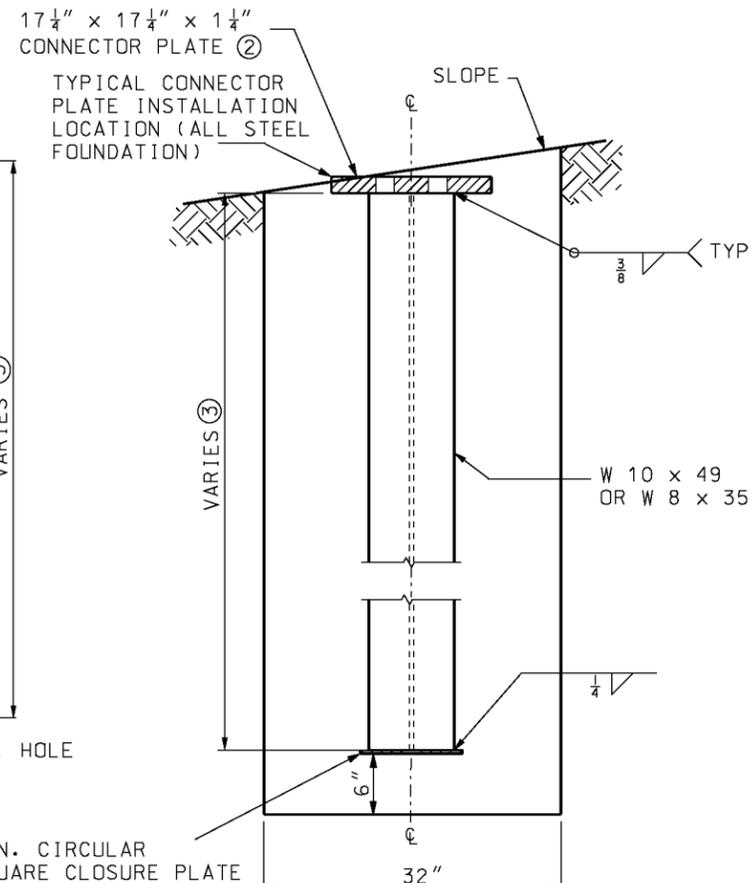
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



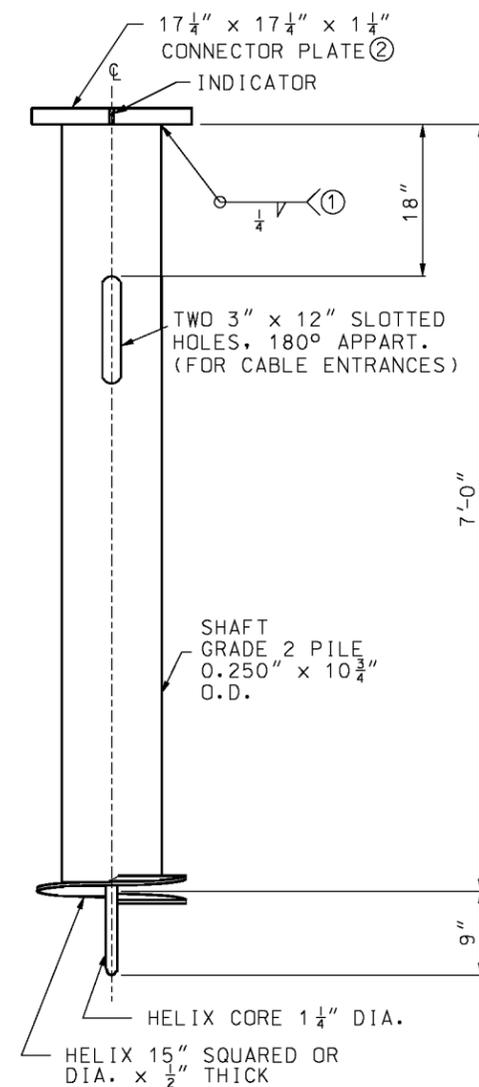
NOTE:  
DRIVE HOLES WILL BE PERMITTED PROVIDED THEY DO NOT CONFLICT WITH OR COMPROMISE THE STRUCTURAL INTEGRITY OF THE PLATE, THE WELD BETWEEN THE PLATE AND SHAFT, OR THE BOLT HOLES.



ELEVATION  
DETAILS OF CIRCULAR  
STEEL PILE FOUNDATION



ELEVATION  
DETAILS OF STEEL "H"  
PILE FOUNDATION



ELEVATION  
DETAILS OF  
SCREW ANCHOR FOUNDATION

- ① GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.
- ② FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.
- ③ PILE LENGTHS FOR STEEL PILE FOUNDATIONS:

AT-45 DESIGN NO.	PILE LENGTH
4 & 5	8'-0"
2 & 3	9'-0"
1	10'-0"

GENERAL NOTES:

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL BOLT CIRCLES FOR 45' MOUNTING HEIGHT SHALL BE 17 1/4".

ALL CONECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1 1/4" DIAMETER HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI  
ERIC E. SCHROETER  
NUMBER PE-28411  
PROFESSIONAL ENGINEER

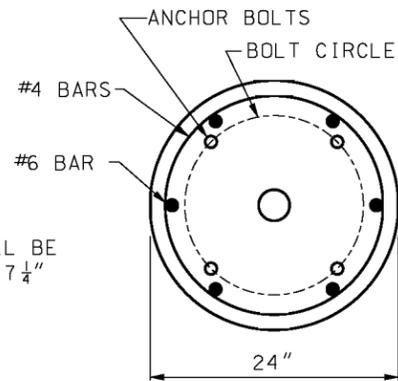
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING  
POLES, FOUNDATIONS  
AND APPURTENANCES  
FOR 45' MOUNTING HEIGHT

DATE EFFECTIVE: 12/01/2013  
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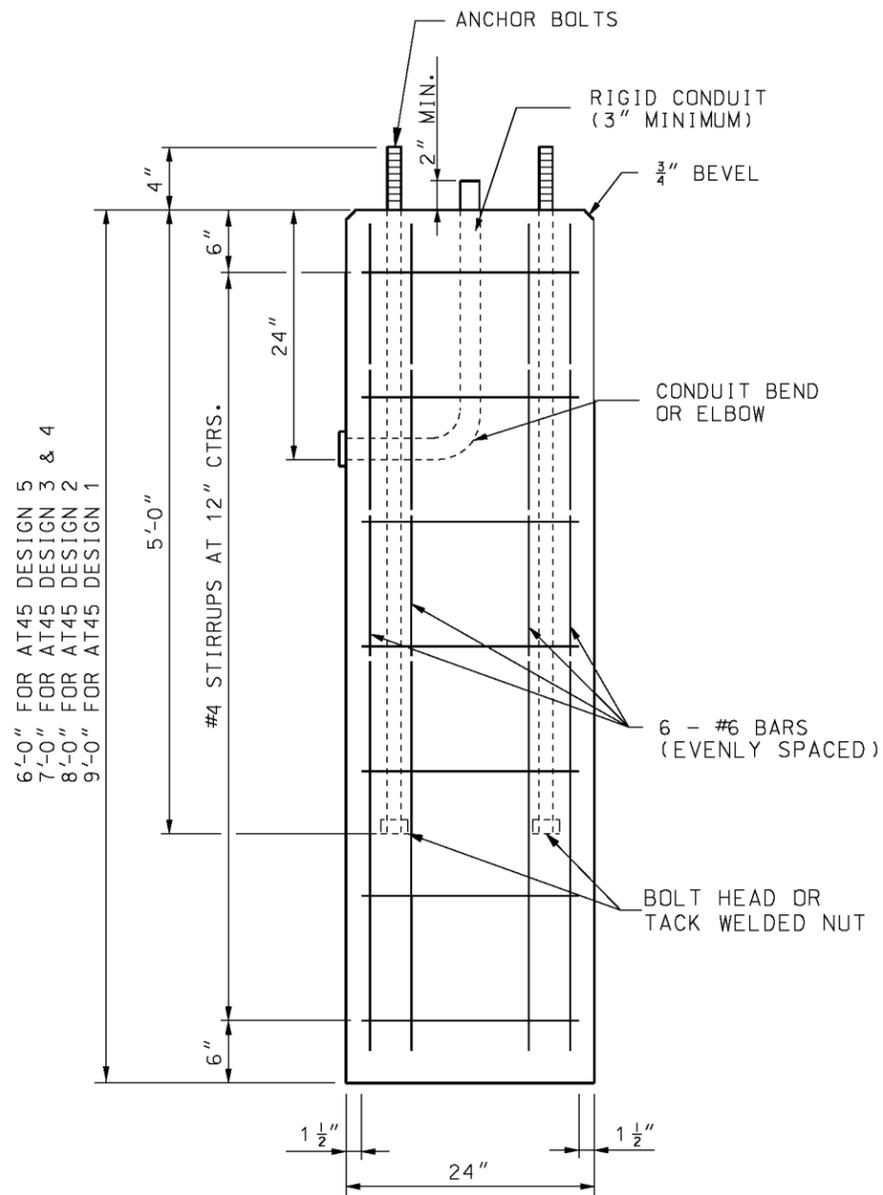
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NOTE:  
ANCHOR BOLTS SHALL BE  
PLACED ONLY FOR 17 1/4"  
BOLT CIRCLE

PLAN

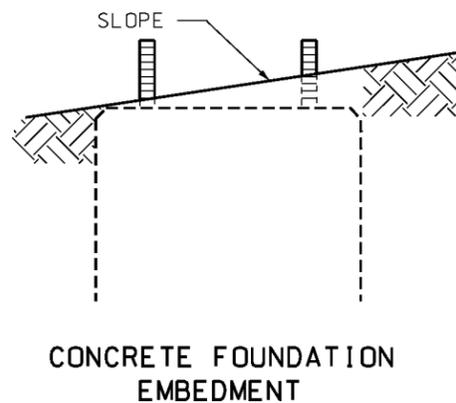


ELEVATION

DETAILS OF CONCRETE  
FOUNDATION ④

④ AT THE OPTION OF THE CONTRACTOR THE CONCRETE FOUNDATIONS MAY BE PRECAST. IF PRECAST, THEY SHALL BE SET IN DRILLED HOLES 3 FEET IN DIAMETER AND 6 INCHES DEEPER THAN THE BOTTOM OF THE CONCRETE FOUNDATION. THE BOTTOM 6 INCHES OF THE HOLE AND THE REMAINING SPACE AROUND THE FOUNDATION SHALL BE BACKFILLED WITH WET TAMPED LIMESTONE SCREENINGS IN LAYERS NOT EXCEEDING 12 INCHES.

HEIGHT	QUANTITIES	
	CONC. CU. YD.	REINF. LBS.
6'-0"	.70	80
7'-0"	.81	90
8'-0"	.93	104
9'-0"	1.05	120



CONCRETE FOUNDATION  
EMBEDMENT

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ERIC E. SCHROETER  
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**HIGHWAY LIGHTING  
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