



GENESEE COUNTY ROAD COMMISSION
Purchasing Office
Invitation to Bid
ITEM #23 – ANCHOR BASE STEEL STRAIN POLES

ADDENDUM I

FROM: Genesee County Road Commission – Purchasing Office

SENT: Tuesday, August 13, 2019 @ 1:00 p.m.

Genesee County Road Commission Purchas Office has issued an addendum for **Item #23 – Anchor Base Steel Strain Poles.**

DEADLINE: August 22, 2019 @ 1:00 p.m. (local time)

Please review the attached information and take this information into account if you are responding to this solicitation.

Please indicate this Addendum I in your Bid. Failure to acknowledge all addenda may be cause for rejection of bid.

CLARIFICATION – Change in Specification – See Attached.

Company Name

Date

Name

Signature



GENESEE COUNTY ROAD COMMISSION
Purchasing Office
Invitation to Bid
ITEM #23 – ANCHOR BASE STEEL STRAIN POLES

SPECIFICATIONS AND SCOPE OF WORK

TERM OF CONTRACT & CONTRACT RENEWAL: The term of the contract shall be awarded for two (2) years beginning on the effective date of the contract. **The cost shall remain the same for two (2) years.** For administrative purposes, Genesee County Road Commission will issue a renewal purchase order annually over two (2) years. By agreement of both parties, this bid can be extended for an additional one (1) year

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

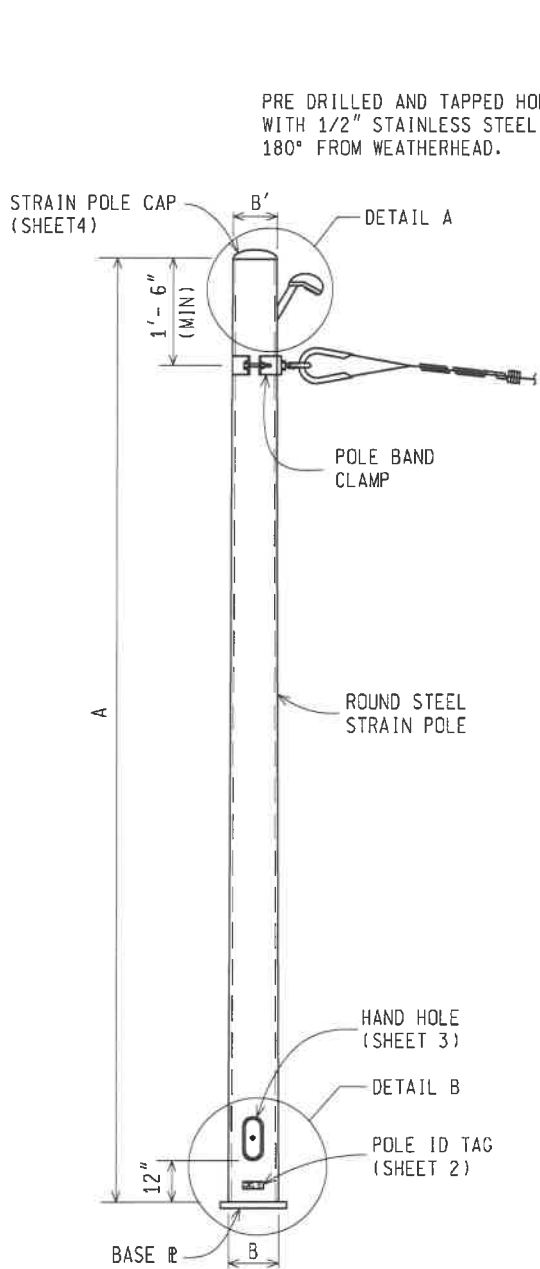
DESCRIPTION OF WORK: Below are the specification requirements for furnishing **ITEM #23 – ANCHOR BASE STEEL STRAIN POLES on an as needed basis.** The Contractor shall meet **the following specifications and requirements, and all related, required materials and accessories.**

Proposals shall be for items as specified on attached Specifications and Proposal Form. A Manufacturer Specification Sheet for each model or style of item to be supplied shall accompany the bid.

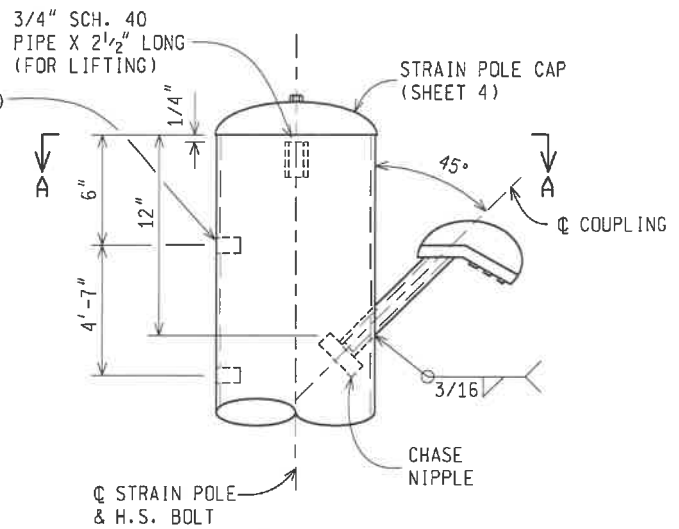
BRAND NAME: If and wherever, in the specifications a brand name, make, name of any manufacturer, trade name or vendor catalog number is mentioned it is for the purpose of establishing a grade or quality of material only. However, if a product other than that specified is bid, it is the vendor's responsibility to name such a product within his bid and to prove to the Genesee County Road Commission that said product is equal to that specified. Evidence in the form of samples may be requested if brand is other than specified. Such samples are to be furnished after the date of bid opening only upon request of the Road Commission. If samples should be requested, such samples must be received by the Genesee County Road Commission no later than seven (7) days after formal request is made.

The Genesee County Road Commission reserves the right to reject or accept any or all proposals, in whole or in part, and waive any irregularities or formalities therein.

REQUIREMENTS: This specification is for an anchor base type steel pole, including anchor bolts and other associated hardware, suitable for supporting span wire mounted traffic signals. **Must be in compliance with MDOT Statewide Details for 6 Anchor Strain Pole & Foundation. Reference Plan SIG-020-B (see attachment).**

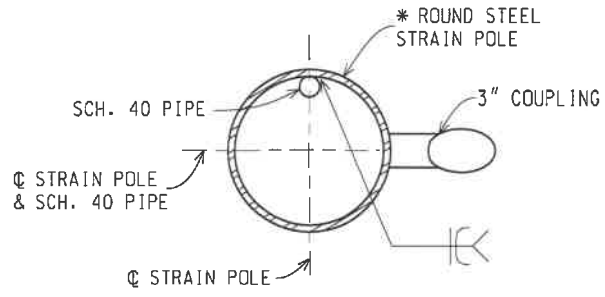


STEEL STRAIN POLE



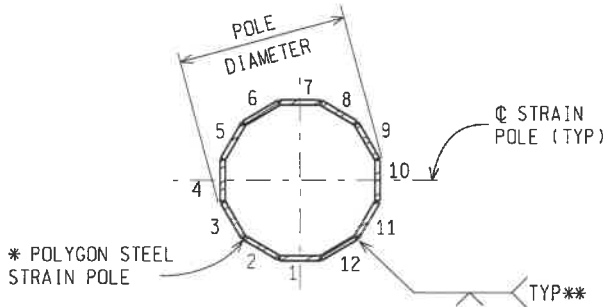
DETAIL A

ORIENTATION OF 3" COUPLING 90° OR 270° FROM POLE HAND HOLE



SECTION A-A

SCH. 40 PIPE ORIENTED 180° TO POLE HAND HOLE
* SINGLE PLY SHOWN, BUT MULTI-PLY IS ALLOWED



OPTIONAL POLYGON CROSS SECTION

* SINGLE PLY SHOWN, BUT MULTI-PLY IS ALLOWED
** LONGITUDINAL WELD JOINT

NOT TO SCALE

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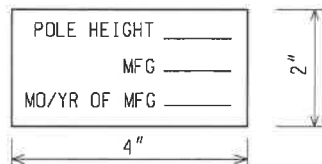
<p>PREPARED BY TRAFFIC AND SAFETY</p>	<p>ENGINEER OF DELIVERY</p>	<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR</p> <p>6 ANCHOR BOLT STRAIN POLE AND FOUNDATION</p>	
	<p>ENGINEER OF DEVELOPMENT</p>		
<p>DRAWN BY:</p>	<p>(SPECIAL DETAIL)</p>	<p>SIG-020-B</p>	
<p>CHECKED BY:</p>	<p>FHWA APPROVAL DATE</p>		

STRAIN POLE REQUIREMENTS					
POLE LENGTH (FT)	A	30 FT	36 FT	40 FT	
MIN. POLE WALL THICKNESS (IN)	W	0.429	0.625	0.625	
* POLE DIAMETER (IN)	AT TOP	B'	8 (MIN) ± 1/2	8 (MIN) ± 1/2	8 1/2 (MIN) ± 1/2
	AT BOTTOM	B	13 ± 1/2	13 ± 1/2	14 ± 1/2
FULL LENGTH TAPER (IN/FT)		+0.002 0.14 -0.000	+0.002 0.14 -0.000	+0.002 0.14 -0.000	
POLE BASE FILLET WELD (IN)	E	5/16	1/2	1/2	
POLE BASE LANDING (IN)	F	3/8	5/8	5/8	
ANCHOR BOLT DIAMETER (IN)		1 1/2	1 3/4	1 3/4	
ANCHOR BOLT HOLE DIAMETER (IN)		1 13/16	2 1/16	2 1/16	
ANCHOR BOLT CIRCLE DIAMETER (IN)		18	21	21	
ANCHOR BOLT CHORD (IN)	C	9	10 1/2	10 1/2	
BASE PLATE EDGE (IN)	D	12 1/4	14 1/4	14 1/4	
BASE PLATE THICKNESS (IN)	T	2	2 1/4	2 1/4	
POLE BAND (SPAN CLAMP)	8 1/2"	P.O.C.H. 25'-6" TO 28'-6"	P.O.C.H. 32'-6" TO 34'-6"	P.O.C.H. 36'-0" TO 38'-6"	
	9 1/2"	P.O.C.H. 20'-6" TO 25'-0"	P.O.C.H. 25'-0" TO 32'-0"	P.O.C.H. 29'-0" TO 35'-6"	

* DIAMETERS GIVEN ARE O.D.

NOTES:

1. THE DESIGN OF THIS STRUCTURE IS BASED ON THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, FIFTH EDITION, 2009.
2. S.S. DENOTES STAINLESS STEEL. GA. DENOTES GAUGE. D.D. DENOTES OUTSIDE DIAMETER. I.D. DENOTES INSIDE DIAMETER. H.S. DENOTES HIGH STRENGTH. SCH. DENOTES SCHEDULE.
3. P.O.C.H. IS THE POINT OF CONTACT HEIGHT OF THE POLE BAND CLAMP FROM THE BOTTOM OF THE STRAIN POLE.

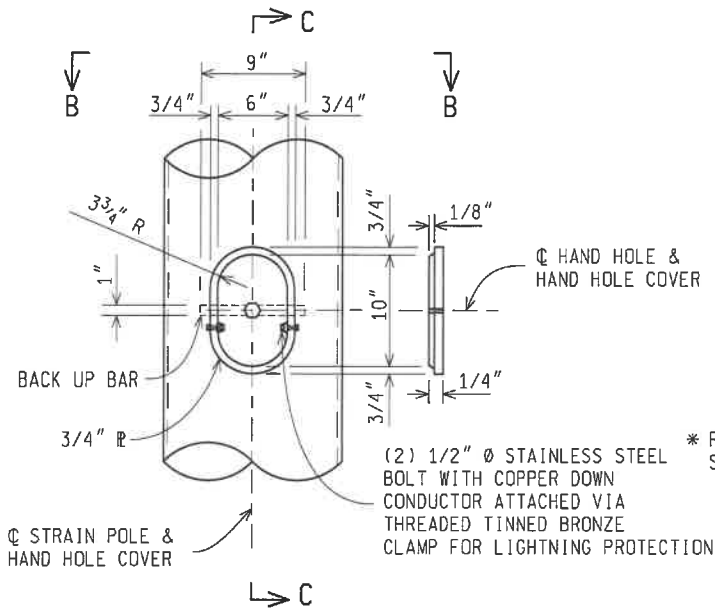


STRAIN POLE STAINLESS STEEL ID TAG DETAIL

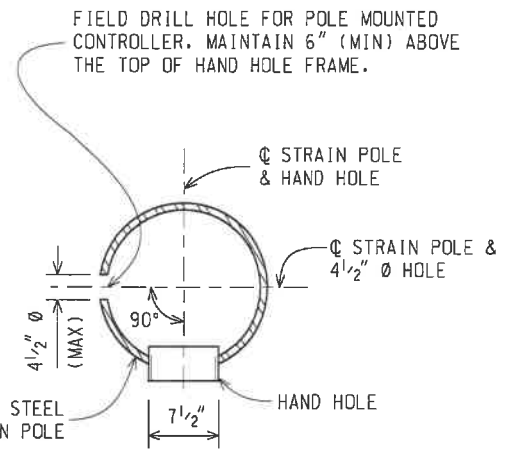
TO BE ATTACHED TO STRAIN POLE AT LOCATIONS SHOWN 4" FROM BASE OF TUBE BELOW HANDHOLE WITH (4) #8 X 3/8" S.S. TYPE U DRIVE SCREWS. (LETTERS STAMPED IN 3/8" CHARACTERS)

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	FHWA APPROVAL DATE	PLAN DATE	SIG-020-B	SHEET 2 of 7
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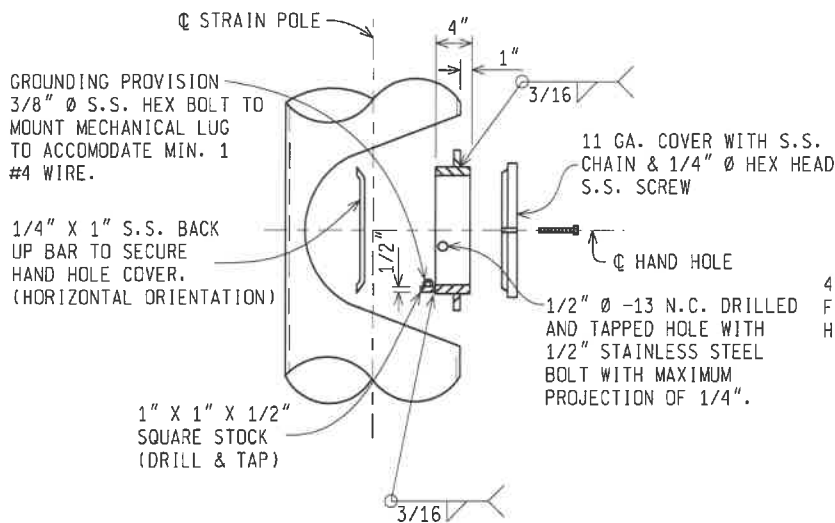


HAND HOLE DETAIL

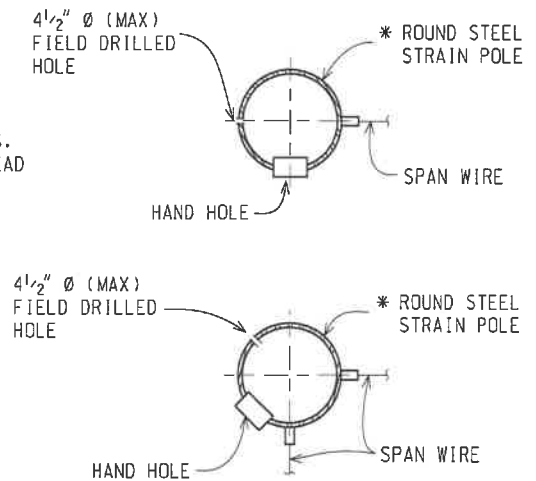


SECTION B-B

SEE ORIENTATION OF STRAIN POLE BELOW
 * SINGLE PLY SHOWN, BUT MULTI-PLY IS ALLOWED



SECTION C-C



STRAIN POLE ORIENTATION

* SINGLE PLY SHOWN, BUT MULTI-PLY IS ALLOWED

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

FHWA APPROVAL DATE

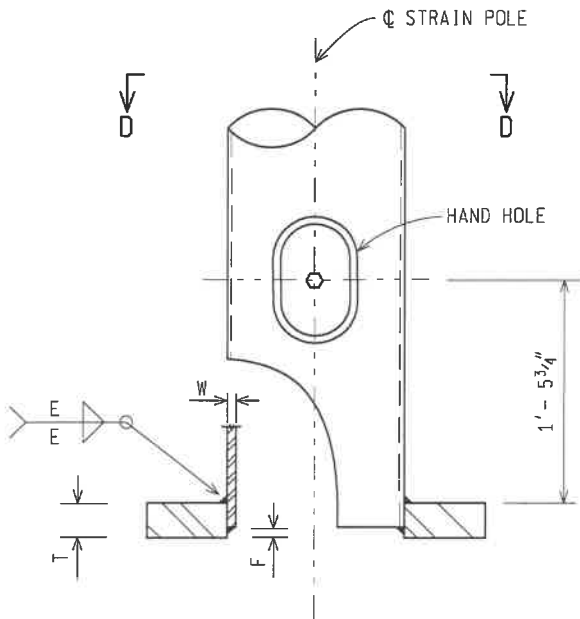
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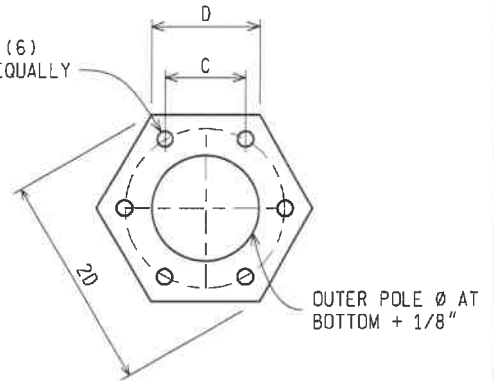
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DETAIL B

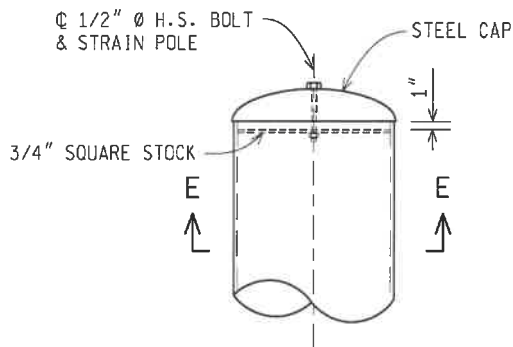
ANCHOR BOLTS NOT SHOWN FOR CLARITY

(6) HOLES FOR (6) ANCHOR BOLTS EQUALLY SPACED AT 60°.

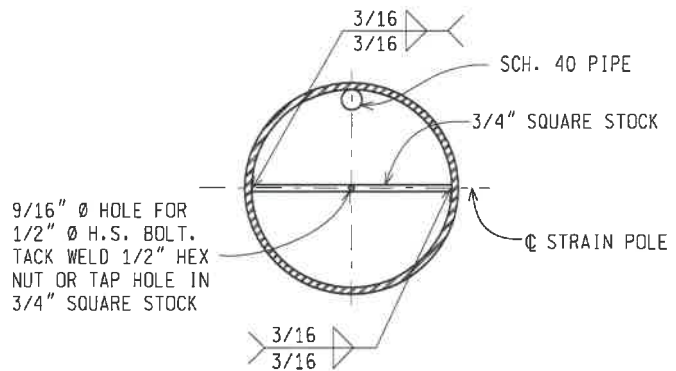


SECTION D-D - BASE PLATE

SEE CHART ON PAGE 2 FOR ANCHOR BOLT CIRCLE Ø, ANCHOR BOLT HOLE Ø, AND ANCHOR BOLT Ø. (STRAIN POLE NOT SHOWN FOR CLARITY)



STRAIN POLE CAP DETAIL



SECTION E-E

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

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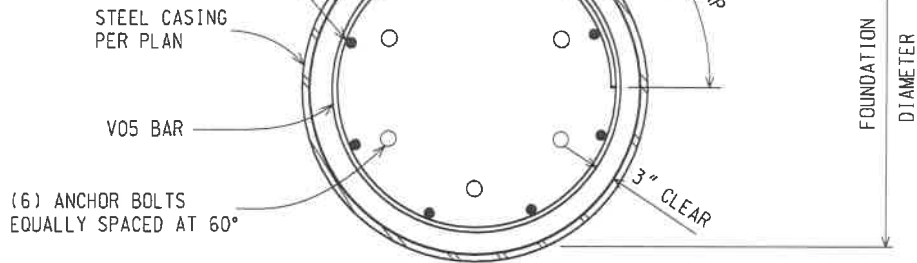
STRAIN POLE FOUNDATION REQUIREMENTS				
POLE LENGTH (FT)	30 FT		36 FT	40 FT
ANCHOR BOLT DIAMETER (IN)	1 ¹ / ₂	1 ³ / ₄	1 ³ / ₄	1 ³ / ₄
ANCHOR BOLT CIRCLE DIAMETER (IN)	18	21	21	21
ANCHOR BOLT LENGTH (IN)	72		72	72
FOUNDATION DIAMETER (IN)	36	42	42	42

NOTES:

1. ALL WORK AND MATERIALS MUST BE IN ACCORDANCE WITH THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONSTRUCT STRAIN POLE FOUNDATIONS ACCORDING TO SECTION 718.03 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. IF SOIL CONDITIONS INDICATE THERE IS NO NEED FOR A CASING PAY ITEM AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL REQUEST PERMISSION OF THE ENGINEER TO INSTALL THE FOUNDATION WITHOUT CASING.
3. WHEN THE CASING PAY ITEM IS INCLUDING ON THE PLANS FOR A FOUNDATION (DUE TO GRANULAR SOILS OR A WET HOLE), STEEL CASING (SMOOTH WALLED) IS TO BE INSTALLED TO ENABLE THE FOUNDATION TO BE POURED. THE THICKNESS OF THE STEEL CASING IS TO BE DETERMINED BY THE CONTRACTOR. THE STEEL MUST BE LEFT IN PLACE. SMOOTH WALLED STEEL CASING OUTSIDE DIAMETER TO MEET OR EXCEED FOUNDATION DIAMETER. A SUITABLE METHOD OF COMPACTION MUST BE EMPLOYED TO ENSURE THE SOIL IMMEDIATELY OUTSIDE THE CASING IS COMPACTED PROPERLY.
4. WHEN THE CASING PAY ITEM IS CALLED FOR ON THE PLANS, THE STEEL CASING MAY STOP AT THE CONDUIT ENTRANCE TO FOUNDATION. TOP OF FOUNDATION MUST THEN BE FORMED SEPARATELY, EVEN THOUGH THE STEEL CASING STOPS AT THE CONDUIT ENTRANCE. THE CASING PAY ITEM QUANTITY WILL BE PAID FOR BASED ON ACTUAL LINEAR FEET INSTALLED.
5. DEWATERING OF WET SHAFTS IS NOT ALLOWED. A WET SHAFT IS DEFINED AS HAVING MORE THAN 3" OF STANDING WATER OR AS HAVING WATER INFILTRATING AT A RATE EQUAL TO OR EXCEEDING 12" PER HOUR. FOR WET SHAFTS, CONCRETE IS TO BE PLACED IN ACCORDANCE WITH SECTION 705 (WET CONSTRUCTION METHOD) WITH A TREMIE TUBE OR CONCRETE PUMP BEGINNING AT THE SHAFT BOTTOM. GRADE T CONCRETE MUST BE USED FOR UNDERWATER PLACEMENT. GRADE S2 MAY BE USED IN DRY EXCAVATIONS ONLY. SEE MDOT STANDARD SPECIFICATIONS TABLE 701-1 (CONCRETE STRUCTURE MIXTURES)
6. PER MDOT STANDARD SPECIFICATIONS 718.02, THE GRADE S2 ACCEPTABLE SLUMP RANGE IS 4-6 INCHES THE GRADE T ACCEPTABLE SLUMP RANGE IS 8-10 INCHES.
7. CONSTRUCT STRAIN POLE FOUNDATIONS, CASED OR UNCASD, ACCORDING TO SUBSECTION 810.03.J AND 705 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL WORK AND MATERIALS MUST BE IN ACCORDANCE WITH THE MDOT STANDARD SPECIFICATION FOR CONSTRUCTION.
8. STEEL REINFORCEMENT MUST CONFORM TO SECTION 921 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
9. EXPOSED CONCRETE SURFACES MUST BE CAST IN FORMS
10. STEEL REINFORCEMENT MUST HAVE A CLEAR COVER OF 3.00 INCHES UNLESS OTHERWISE NOTED. STEEL REINFORCEMENT MAY BE ADJUSTED TO ENSURE PROPER CLEAR COVER.
11. CONDUITS AND ANCHOR BOLTS MUST BE RIGIDLY INSTALLED BEFORE CONCRETE IS PLACED. ANCHOR BOLTS MUST BE SPACED BY MEANS OF A TEMPLATE. THE CENTER OF THE TEMPLATE MUST COINCIDE WITH THE CENTER OF THE FOUNDATION.
12. GROUNDING OF POLE INCLUDES ADDING #4 BARE COPPER GROUND WIRE BONDED BY LISTED MECHANICAL CONNECTION TO FOUNDATION REINFORCING STEEL AND HAVING 24" OF SLACK ABOVE THE TOP OF FOUNDATION.
13. INSTALL COPPER CLAD GROUND ROD(S) AS DIRECTED BY ENGINEER AND IN ACCORDANCE WITH CURRENT N.E.C. ALL GROUNDS MUST PROVIDE LESS THAN 10 OHM RESISTANCE TO GROUND.
14. REFER TO THE FOLLOWING SPECIAL PROVISIONS FOR 6 ANCHOR BOLT STRAIN POLES:
 STEEL STRAIN POLE
 STRAIN POLE FOUNDATION AND ANCHOR BOLTS
 CASING USED WITH STRAIN POLES AND MAST ARM POLES

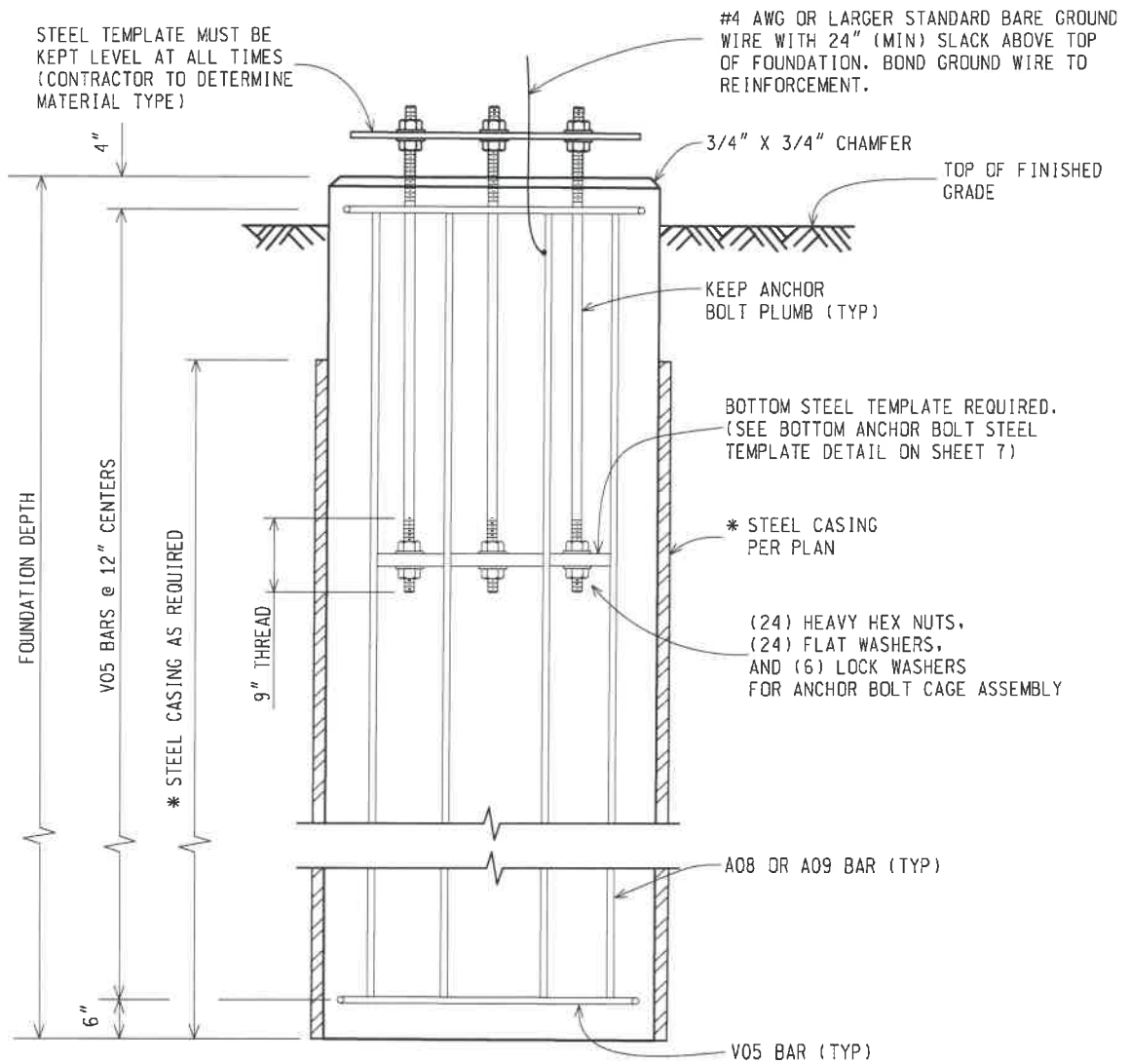
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(8) A08 BARS (36" Ø FOUNDATION)
OR (8) A09 BARS (42" Ø FOUNDATION)
EQUALLY SPACED



PLAN VIEW - FOUNDATION DETAIL

SEE CHART ON PAGE 5 FOR ANCHOR BOLT CIRCLE Ø,
ANCHOR BOLT Ø, AND FOUNDATION Ø.



ELEVATION VIEW - FOUNDATION DETAIL

* SEE FOUNDATION NOTES AND PLANS FOR STEEL CASING PAY ITEM

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

FHWA APPROVAL DATE

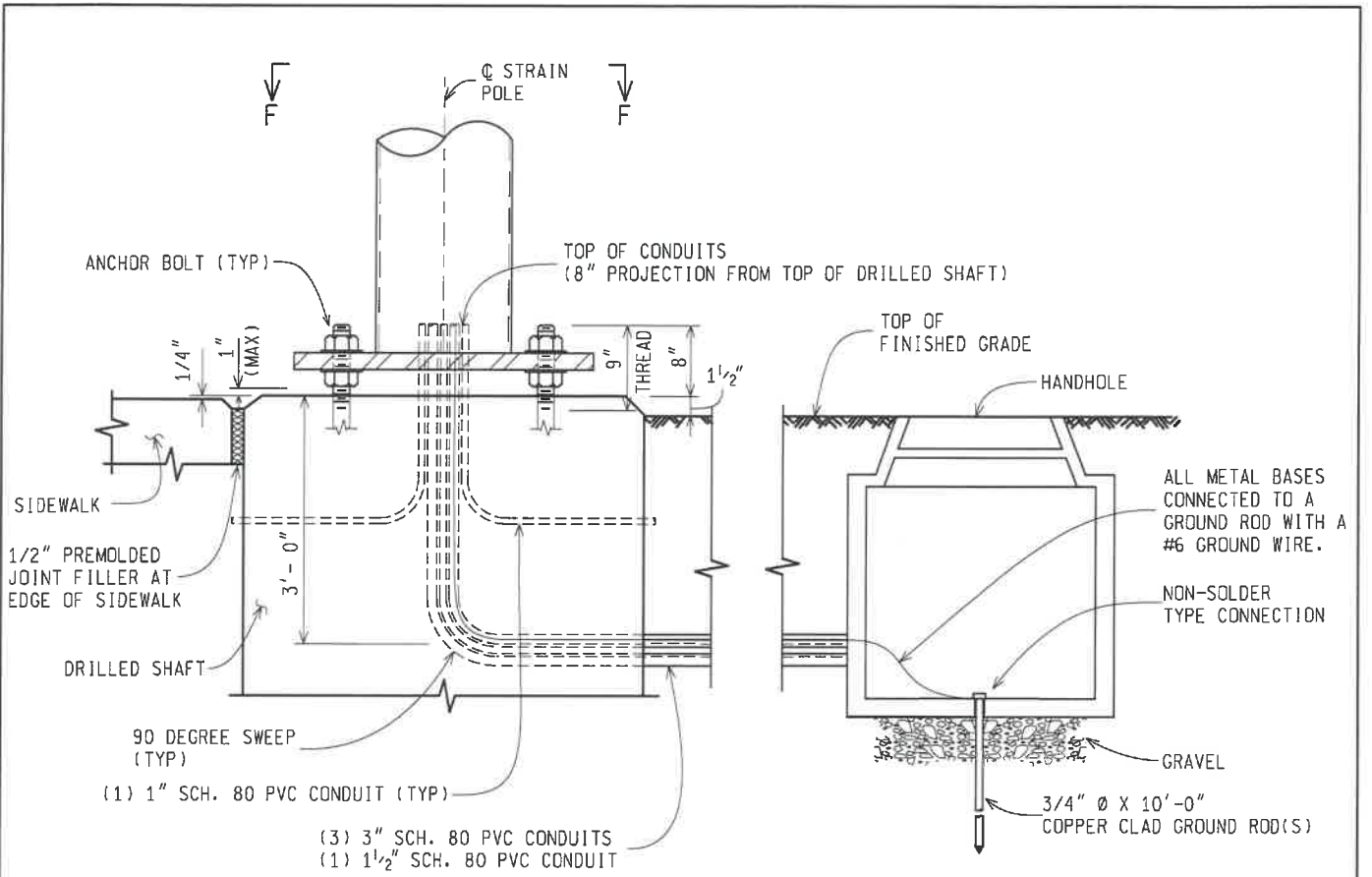
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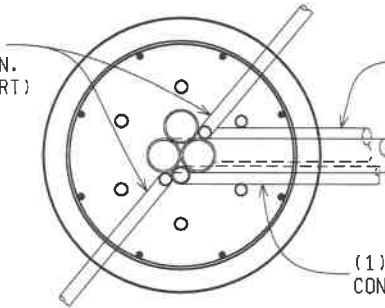
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CONDUIT LAYOUT

(2) 1" SCH. 80 PVC CONDUITS (90° SWEEP) FOR LIGHTNING PROTECTION. (APPROXIMATELY 180° APART)



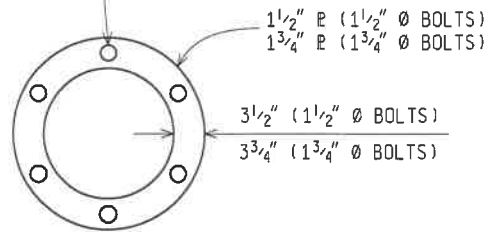
(3) 3" SCH. 80 PVC CONDUITS (90° SWEEP)

(1) 1 1/2" SCH. 80 PVC CONDUIT (90° SWEEP)

SECTION F-F

SECURE CONDUITS TOGETHER WITH SUITABLE BANDING TO ENSURE PLACEMENT PRIOR TO CONCRETE POUR.

(6) 1 3/16" Ø HOLES FOR 1 1/2" Ø BOLTS OR
(6) 2 1/16" Ø HOLES FOR 1 3/4" Ø BOLTS
EQUALLY SPACED



BOTTOM ANCHOR BOLT STEEL TEMPLATE DETAIL

SEE CHART ON PAGE 5 FOR ANCHOR BOLT CIRCLE Ø, ANCHOR BOLT HOLE Ø, AND FOUNDATION Ø

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

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