

Anchor rods 2" dia. equally spaced at 45° on a 30" dia. rod circle. see anchor rod on (sheet 4 of 4) for other dimensions and specifications.

MDOT
Michigan Department of Transportation

PREPARED BY
ANCILLARY
STRUCTURES

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MICHIGAN DEPARTMENT OF TRANSPORTATION

**CANTILEVER FOUNDATION
SPREAD TYPE E**

(SPECIAL DETAIL)
F.H.W.A. APPROVAL

08/08/23
PLAN DATE

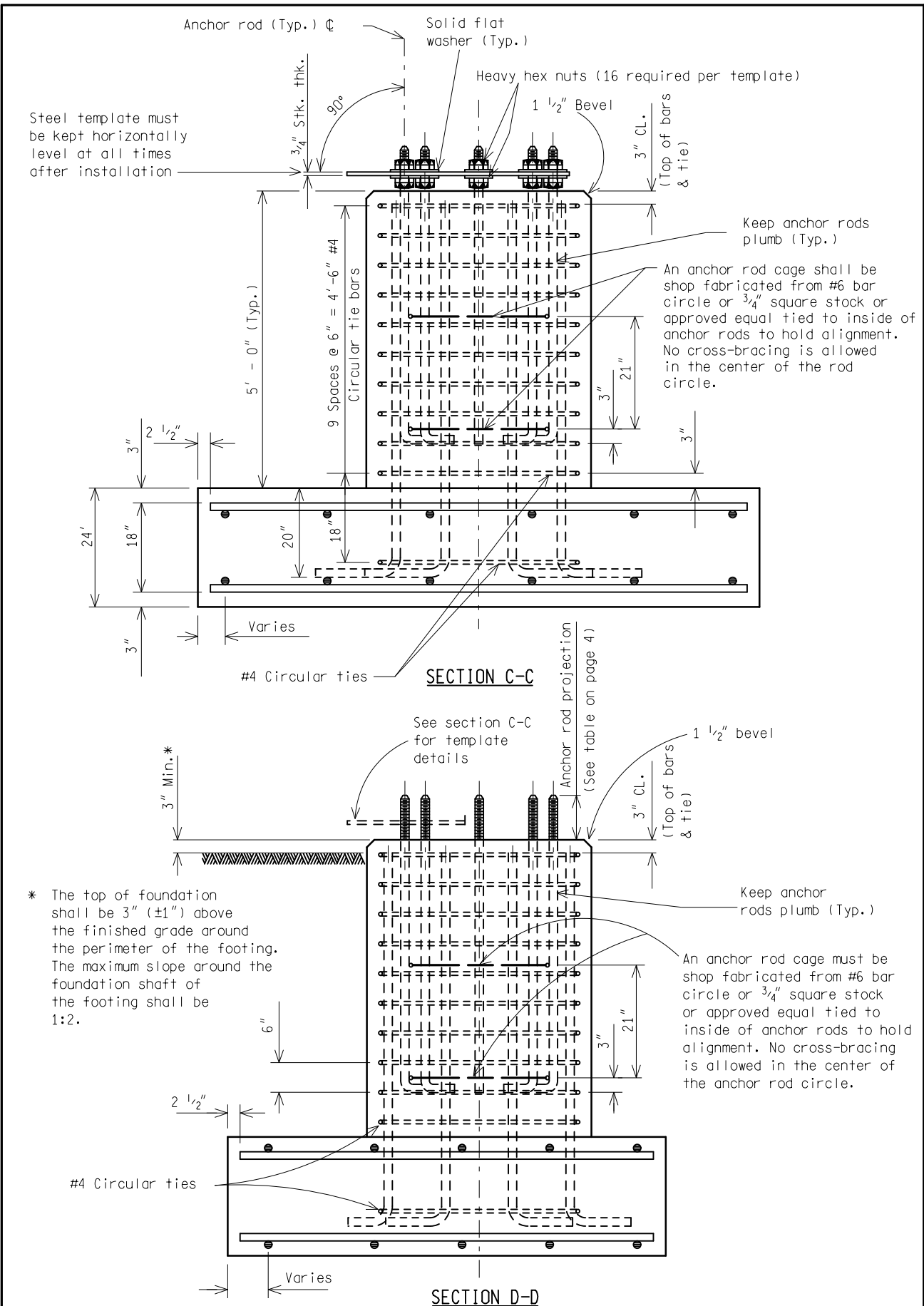
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SHEET
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Cantilever Type	Soil Type	Soil Condition		Footing Length	Anchor Rod (Dia.)	Longitudinal Footing Reinforcement Top & Bottom	Transverse Footing Reinforcement Top & Bottom	Concrete Cu. Yd. (Footing & Pedestal)	Reinforcement Steel Weight (Footing & Pedestal)
		*Su	**N60						
E-1	Sand		N60 ≥ 15	11'		#5 BARS 8 SPA @ 1'-1/2" = 8'-4"	#5 BARS 21 SPA @ 0'-6" = 10'-6"	9.2	992 lbs
	Clay	2000 ≥ Su							
E-2	Sand		10 ≤ N60 < 15	11'	2"	#4 BARS 11 SPA @ 0'-9" = 8'-3"	#4 BARS 18 SPA @ 0'-7" = 10'-6"	9.2	787 lbs
	Clay	1000 ≤ Su < 2000							
E-3	Sand		5 ≤ N60 < 10	15'		#4 BARS 13 SPA @ 0'-7 3/4" = 8'-4 3/4"	#6 BARS 35 SPA @ 0'-5" = 14'-7"	11.8	2392 lbs
	Clay	500 ≤ Su < 1000							

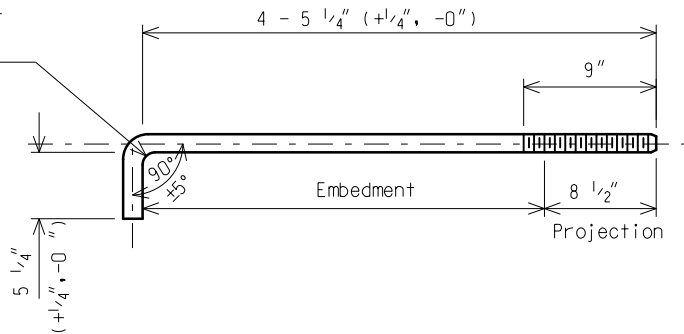
*Su = Undrained shear strength of cohesive soils. (lbs/ft²)
 **N60 = SPT blow count corrected for hammer efficiency. (blows/ft)
 (ASTM D1856 testing procedure)

NOT TO SCALE



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1" Min., 3" Max. radius (heat before bending) (heat bend @ 1300° f Max., 1100° f Min.)



Anchor rods: 8 per foundation
 Nuts: 2 per anchor rod
 Washers: 2 per anchor rod, standard flat galvanized

Anchor rods, nuts, and washers must be per Section 908.14 of the MDOT Standard Specifications for Construction.

ANCHOR ROD INFORMATION

NOTES:

1. Bar reinforcement and spirals, if used for foundation, shall be per Section 905 of the MDOT Standard Specifications for Construction.
2. A template and anchor rod cage shall be shop fabricitated and assembled.
3. Diameter of rod holes in template shall be 1/16" larger than anchor rod diameter.
4. The template and handles shall be well supported, horizontally level and firmly anchored in place a minimum of 24 hours after the concrete placement is completed.
5. Care shall be taken during the concrete placement to avoid displacing the anchor rods.
6. No hammering on the anchor rods or template will be allowed.
7. After template is removed, thread nuts on to the rod flush with the rod end to protect threads until sign support is erected.
8. Anchor Rod template may be fabricated from multiple parts using CJP welds located a minimum of 2" clear of anchor rod holes.
9. Anchor rod cage bar reinforcement shall meet the requirements of ASTM A706.

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