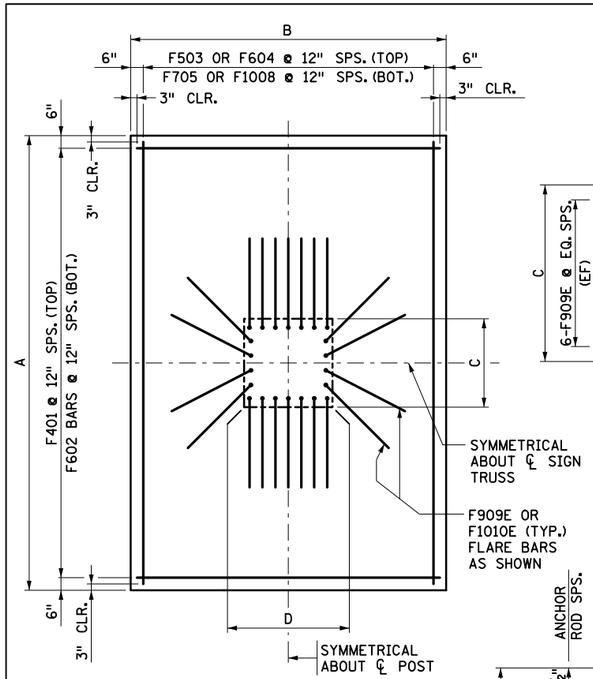
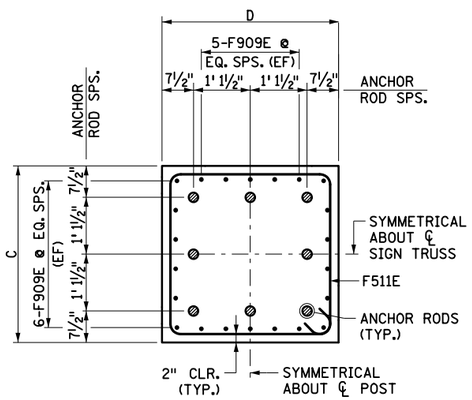
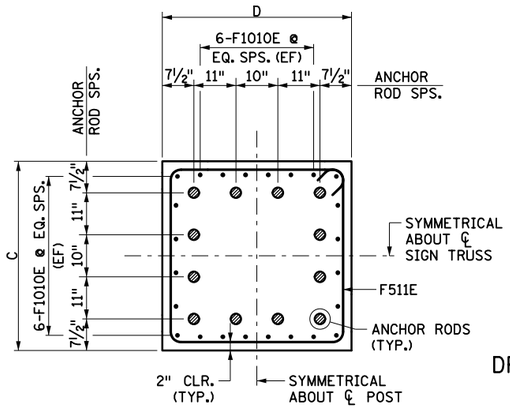


SPREAD FOOTING PLAN

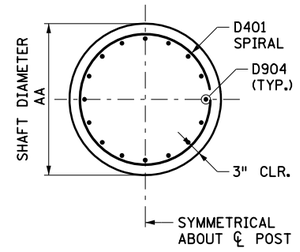


POST TYPE 1 THRU 4



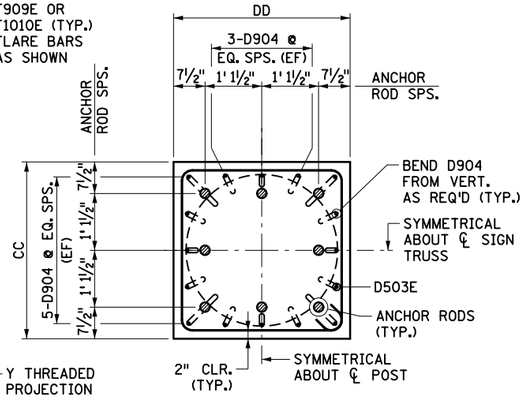
POST TYPE 5 THRU 6

SPREAD FOOTING SECTION A-A



DRILLED SHAFT SECTION C-C

SECTION FOR POST TYPE 1-4 SHOWN
SECTION FOR POST TYPE 5-6 SIMILAR



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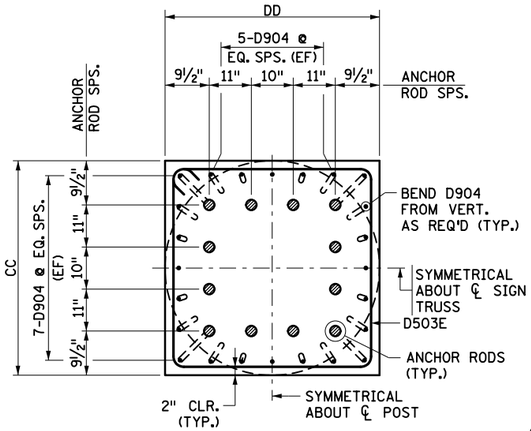

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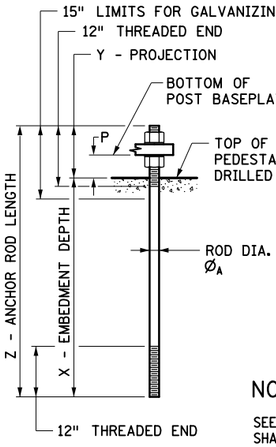
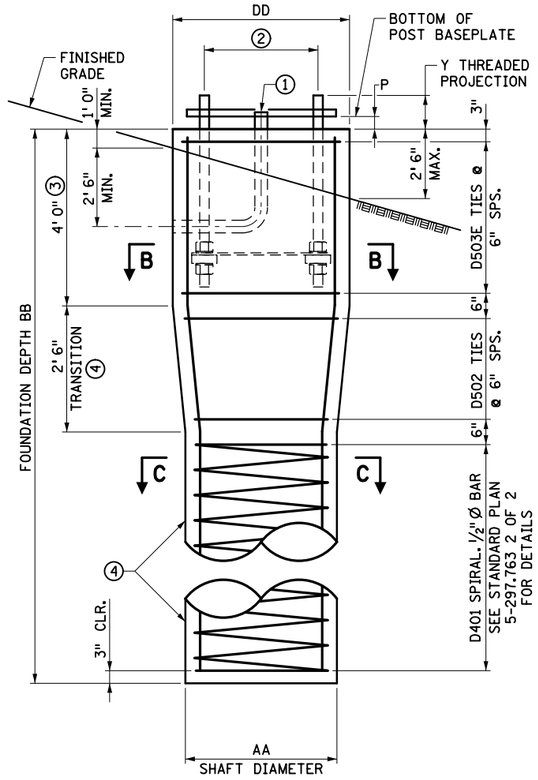
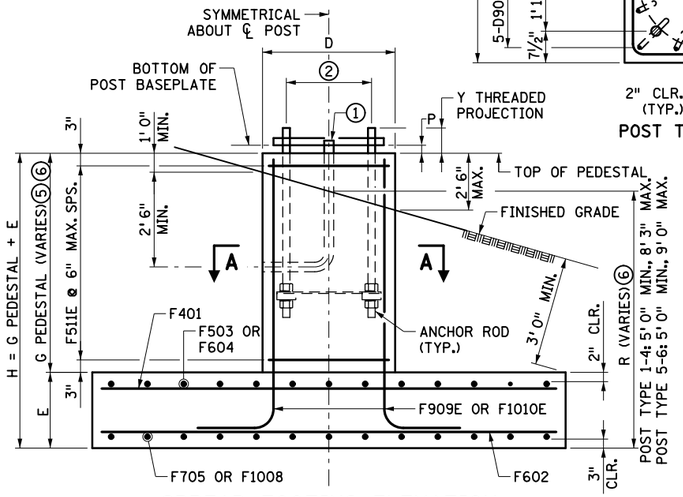


ANCHOR ROD DETAIL

ROD MATERIAL IS SPEC. 3385 TYPE B



DRILLED SHAFT ELEVATION



SPREAD FOOTING ELEVATION

DRILLED SHAFT SECTION B-B

FOUNDATION DATA														
POST TYPE	SPREAD FOOTING DIMENSIONS					DRILLED SHAFT DIMENSIONS				ANCHOR RODS				
	A	B	C	D	E	AA	BB	CC	DD	P	X	Y	Z	ROD DIA. ØA
1-4	14' 0"	9' 0"	3' 6"	3' 6"	2' 0"	3' 6"	23' 0"	3' 6"	3' 6"	3.875"	38.5"	9.5"	48.0"	2.25"
5-6	18' 0"	12' 6"	3' 11"	3' 11"	2' 0"	4' 3"	29' 0"	4' 3"	4' 3"	3.875"	37.0"	11.0"	48.0"	2.50"

SOIL PARAMETERS:

A SUBSURFACE INVESTIGATION SHOULD BE PERFORMED WITHIN 30' HORIZONTALLY FROM EACH POST FOUNDATION. THE SOIL BORING OR CONE SOUNDING SHOULD PENETRATE A MINIMUM DEPTH OF 35'.

FOR SPREAD FOOTINGS, THE WATER TABLE SHALL BE AT THE BOTTOM OF FOOTING ELEVATION OR LOWER.

FOR DRILLED SHAFTS, THE WATER TABLE SHALL BE 1.5' BELOW FINISHED GRADE OR LOWER.

THE FOUNDATION DIMENSIONS SHOWN ON THIS SHEET HAVE BEEN DESIGNED WITH THE FOLLOWING ASSUMED SOIL PROPERTIES:

DRILLED SHAFTS:

COHESIVE SOILS:

MIN. SHEAR STRENGTH:	C = 1.0 ksf
UNIT WEIGHT OF SOIL:	γ = 125±10 pcf

GRANULAR SOILS:

MIN. ANGLE OF FRICTION:	Ø = 30°
UNIT WEIGHT OF SOIL:	γ = 125 pcf
MAX. COEFFICIENT OF FRICTION:	μ = 0.70

SPREAD FOOTINGS:

SERVICE LIMIT STATE:

MAXIMUM BEARING PRESSURE:	2.50 KSF
BEARING RESISTANCE FACTOR:	1.0
MAXIMUM SETTLEMENT:	1.0"

STRENGTH LIMIT STATE:

MAXIMUM BEARING PRESSURE:	5.55 KSF
BEARING RESISTANCE FACTOR:	0.45

A SPECIAL FOUNDATION DESIGN IS REQUIRED IN CASES WHERE THE REQUIRED VALUES AND/OR CONDITIONS LISTED ABOVE ARE NOT MET.

NOTES:

SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION REGARDING DRILLED SHAFT FOUNDATIONS.

PERMANENT CASINGS ARE NOT ALLOWED FOR DRILLED SHAFT FOUNDATIONS.

USE PREFORMED JOINT FILLER BETWEEN THE FOUNDATION AND SIDEWALK OR OTHER CONCRETE AREAS.

COLD CONCRETE CONSTRUCTION JOINTS ARE NOT PERMITTED FOR DRILLED SHAFTS.

CURE CONCRETE FOUNDATIONS A MINIMUM OF SEVEN DAYS PRIOR TO PLACING POST AND TRUSS.

ALL CONCRETE SHALL CONFORM TO CONCRETE MIX 3G52 (SPEC. 2461).

(EF) DENOTES EACH FACE.

① 1½" AND 3" SERVICE CONDUITS. HOWEVER, IF DMS IS MOUNTED ON THE SPAN, F&I CONDUIT PER PLAN.

② SEE STANDARD PLAN 5-297.763 2 OF 2 FOR ANCHOR ROD ASSEMBLY DETAIL. GALVANIZE ANCHOR RODS IN ACCORDANCE WITH SPEC. 3392.

③ FORM A MINIMUM OF 6" BELOW THE GROUND SURFACE. COMPACT TO THE QUALITY COMPACTION REQUIREMENTS PER SPEC. 2106.3. BACKFILL MATERIAL AND COMPACTION TO BE EQUIVALENT TO THE SURROUNDING MATERIAL.

④ EXCAVATE TO NEAT LINES AND PLACE CONCRETE AGAINST UNDISTURBED SOIL.

⑤ POST TYPE 1-4: 4' 0" MINIMUM, 8' 0" MAXIMUM.
POST TYPE 5-6: 4' 0" MINIMUM, 8' 9" MAXIMUM.

⑥ THE FINISHED GRADE SLOPE MAY VARY FROM LEVEL TO THAT GENERATED BY THE COMBINATION OF 12" MINIMUM AND 30" MAXIMUM PEDESTAL PROJECTIONS. AS SUCH, DIMENSIONS G AND R WILL VARY. DETERMINE G AND R DIMENSIONS FOR A SPECIFIC SITE BY INTERPOLATING BETWEEN THE MINIMUM AND MAXIMUM VALUES PROVIDED FOR THE ACTUAL SLOPE CONDITION.

LEAD EXPERT OFFICE	KEVIN WESTERN STATE BRIDGE ENGINEER	STANDARD OVERHEAD SIGN STRUCTURES - DESIGN D FOUNDATION DETAILS	APPROVED: 03-05-2020 REVISED: 02-14-2022	THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.763	1 OF 2
	DEPARTMENT OF TRANSPORTATION	STANDARD PLAN	STATE PROJ. NO.	SHEET NO.		
			TRUNK HWY.	TOTAL SHEETS		

BAR BENDING DIAGRAMS

BILL OF REINFORCEMENT - SPREAD FOOTING						
BAR	POST TYPE 1-4 QTY.	POST TYPE 1-4 LENGTH	POST TYPE 5-6 QTY.	POST TYPE 5-6 LENGTH	SHAPE	LOCATION
F401	14	8'6"	18	12'0"	———	FOOTING TOP TRANSVERSE
F602	14	8'6"	18	12'0"	———	FOOTING BOTTOM TRANSVERSE
F503	9	13'6"	-	-	———	FOOTING TOP LONGITUDINAL
F604	-	-	13	17'6"	———	FOOTING TOP LONGITUDINAL
F705	9	13'6"	-	-	———	FOOTING BOTTOM LONGITUDINAL
F1008	-	-	13	17'6"	———	FOOTING BOTTOM LONGITUDINAL
(1) F909E	22	H + 23"	-	-	⌊	PEDESTAL VERTICAL
(1) F1010E	-	-	24	H + 26"	⌊	PEDESTAL VERTICAL
(1)(3) F511E	2G	13'7"	2G	15'3"	▭	PEDESTAL TIES

BILL OF REINFORCEMENT - DRILLED SHAFTS						
BAR	POST TYPE 1-4 QTY.	POST TYPE 1-4 LENGTH	POST TYPE 5-6 QTY.	POST TYPE 5-6 LENGTH	SHAPE	LOCATION
D401	1	16'0"	1	22'0"	SPIRAL	DRILLED SHAFT SPIRAL
(2) D502	5	14'1"	5	17'1"	———	TRANSITION TIES
D503E	8	13'7"	8	16'7"	▭	PEDESTAL TIES
D904	16	22'7"	24	28'7"	———	DRILLED SHAFT VERTICALS

REINFORCEMENT NOTES:

BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301.

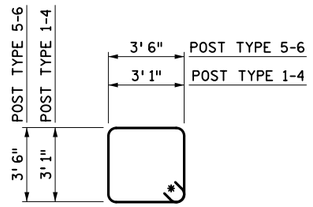
(1) G AND H ARE IN FEET.

(2) BEND AS REQUIRED TO FORM A CLOSED LOOP.

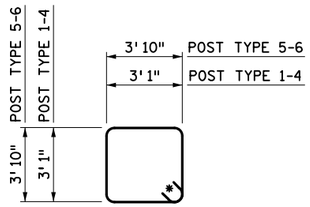
(3) TO DETERMINE QUANTITY, ROUND G DIMENSION UP TO THE NEAREST WHOLE NUMBER.
FOR EXAMPLE: IF G = 4.10 FT.; 2(G) = 8.2; QTY. REQ'D = 9.

BENT BAR DIMENSIONS GIVEN ARE OUT-TO-OUT. DETERMINE ACTUAL BAR LENGTHS BASED ON THE DETAIL DIMENSIONS SHOWN IN THE BAR BENDING DIAGRAMS.

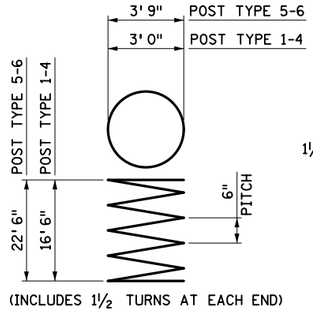
* DENOTES STANDARD STIRRUP HOOK.



F511E

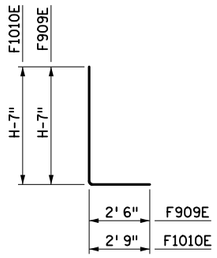


D503E

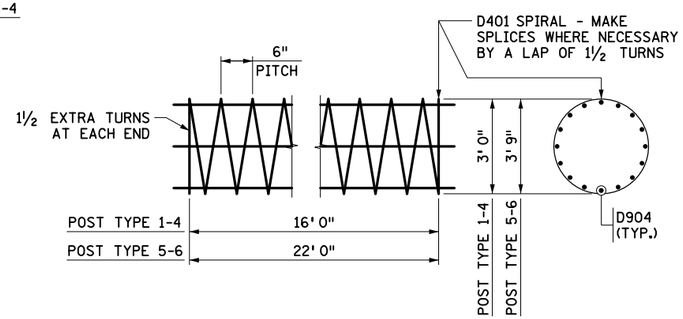


(INCLUDES 1½ TURNS AT EACH END)

D401



F909E & F1010E



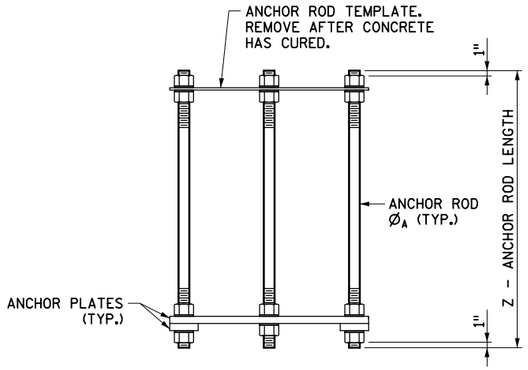
DRILLED SHAFT REINFORCEMENT

SUMMARY OF ESTIMATED QUANTITIES - SPREAD FOOTING			
ITEM DESCRIPTION	UNIT	QUANTITIY	
		POST TYPE 1-4	POST TYPE 5-6
(4) STRUCTURAL CONCRETE (3G52)	CU YD	9.3 + 0.46G	16.7 + 0.57G
(4) REINFORCEMENT BARS	POUND	930 + 103G	2220 + 134G
ANCHORAGE ASSEMBLY	POUND	799	1392
(4) STRUCTURE EXCAVATION	CU YD	7.4R	12.1R

SUMMARY OF ESTIMATED QUANTITIES - DRILLED SHAFTS			
ITEM DESCRIPTION	UNIT	QUANTITIY	
		POST TYPE 1-4	POST TYPE 5-6
STRUCTURAL CONCRETE (3G52)	CU YD	9.1	15.9
REINFORCEMENT BARS	POUND	1660	2940
ANCHORAGE ASSEMBLY	POUND	799	1392

QUANTITY NOTE:

(4) G AND R ARE IN FEET. SEE STANDARD PLAN 5-297.763 1 OF 2 FOR DETAILS.

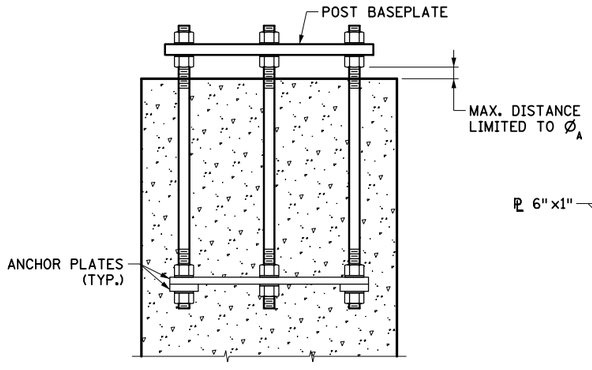


EACH ANCHOR ROD TO BE PROVIDED WITH FOUR HEAVY HEX NUTS AND FOUR HARDENED FLAT WASHERS. TWO ANCHOR PLATES TO BE PROVIDED PER ASSEMBLY. GALVANIZE ALL EXPOSED HEX NUTS AND WASHERS. GALVANIZE ANCHOR RODS TO THE LIMITS SHOWN ON STANDARD PLAN 5-297.763 1 OF 2. DO NOT GALVANIZE ANCHOR ROD TEMPLATES AND HARDWARE EMBEDDED IN CONCRETE.

ANCHOR ROD ASSEMBLY

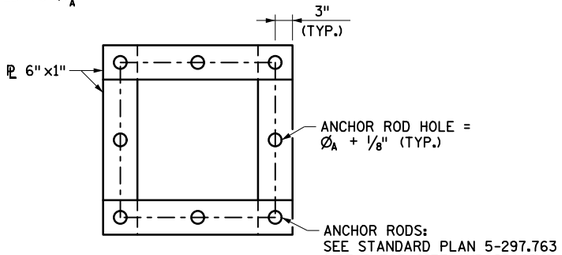
ROD MATERIAL IS SPEC. 3385 TYPE B

REMOVE ANCHOR ROD TEMPLATE IN PREPARATION FOR THE POST PLACEMENT.
PLACE POST BASE PLATE LEVEL.
TIGHTEN HEX NUTS PER THE SPECIAL PROVISIONS.



PARTIAL ELEVATION

SHOWING BASE PLATE & ANCHOR ROD ASSEMBLY



ANCHOR PLATE PLAN

ANCHOR PLATE SHOWN SIMILAR FOR ALL ANCHOR ROD SPACING

ANCHOR ROD DETAILS

LEAD EXPERT OFFICE: KEVIN WESTERN, STATE BRIDGE ENGINEER		STANDARD OVERHEAD SIGN STRUCTURES - DESIGN D FOUNDATION DETAILS	APPROVED: 03-05-2020 REVISED: 02-14-2022	THOMAS STYRBICKI, STATE DESIGN ENGINEER	STANDARD PLAN 5-297.763	2 OF 2
	DEPARTMENT OF TRANSPORTATION	STANDARD PLAN	STATE PROJ. NO.	SHEET NO.		
			TRUNK HWY.	TOTAL SHEETS		