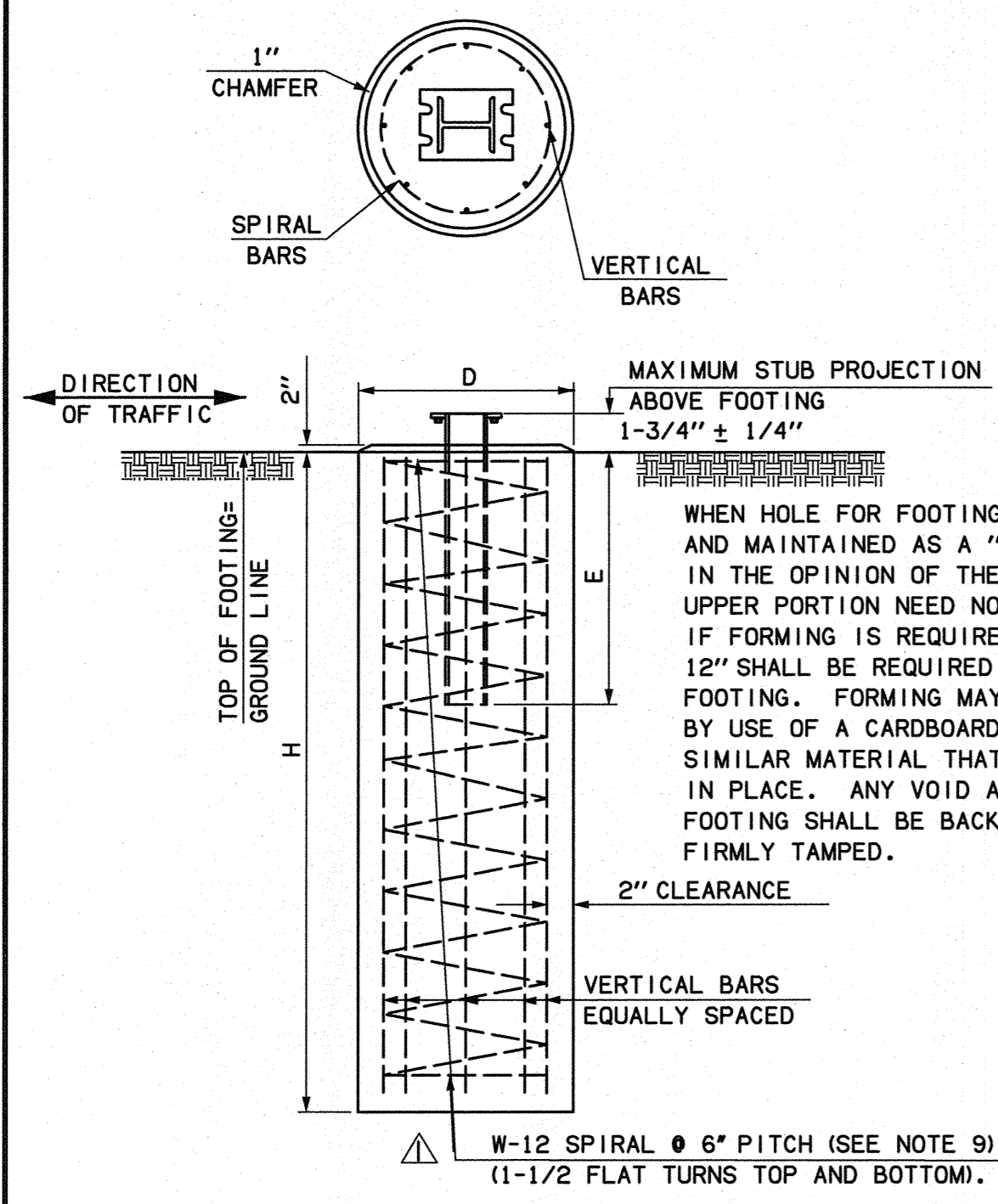


DESCRIPTION	REVISIONS	DATE
UPDATED NOTE		11/8/13



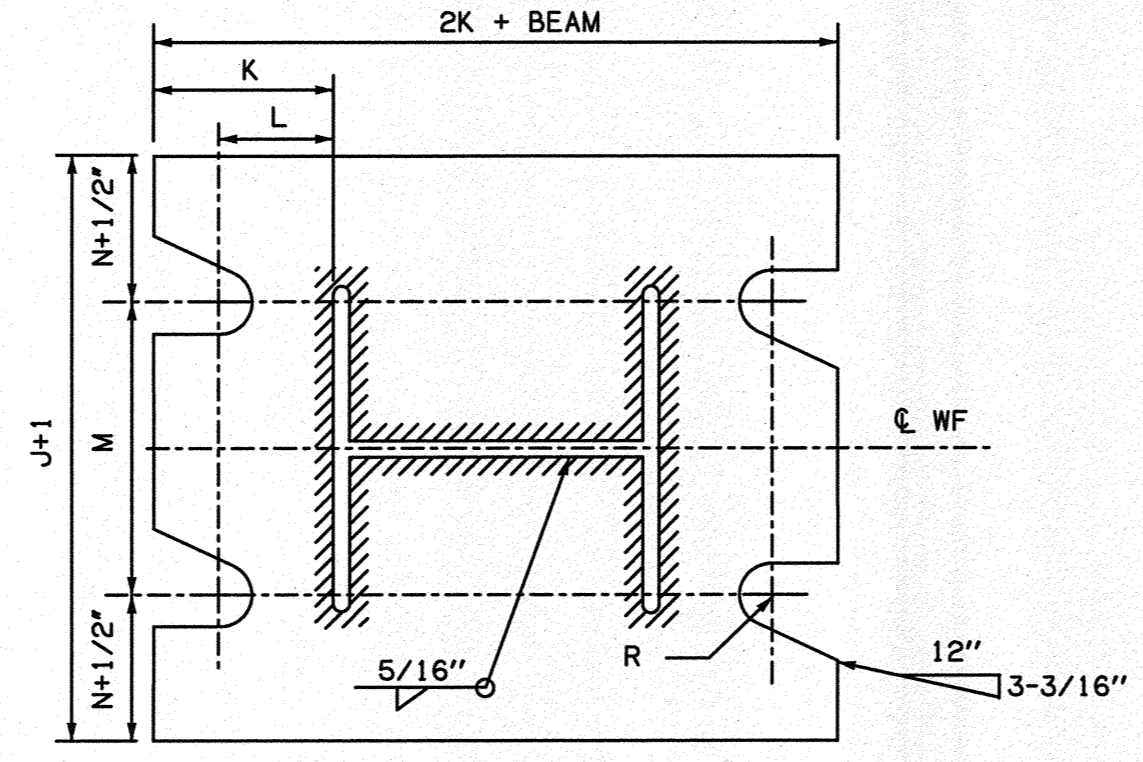
TYPICAL "KC" FOOTING DETAILS WITH LEVEL GROUND LINE

ALL FUSE PLATE NUTS SHALL BE TIGHTENED IN THE SHOP TO PRODUCE THE REQUIRED MINIMUM BOLT TENSION IN CONFORMANCE WITH ASTM-A325 OR THE EQUIVALENT TORQUE AS SHOWN IN THE TABLE BELOW. AFTER POSTS ARE SHIPPED AND ERECTED AT THEIR SITES, THE NUTS SHALL BE LOOSENEED AND RE-TORQUED TO THEIR PROPER VALUE.

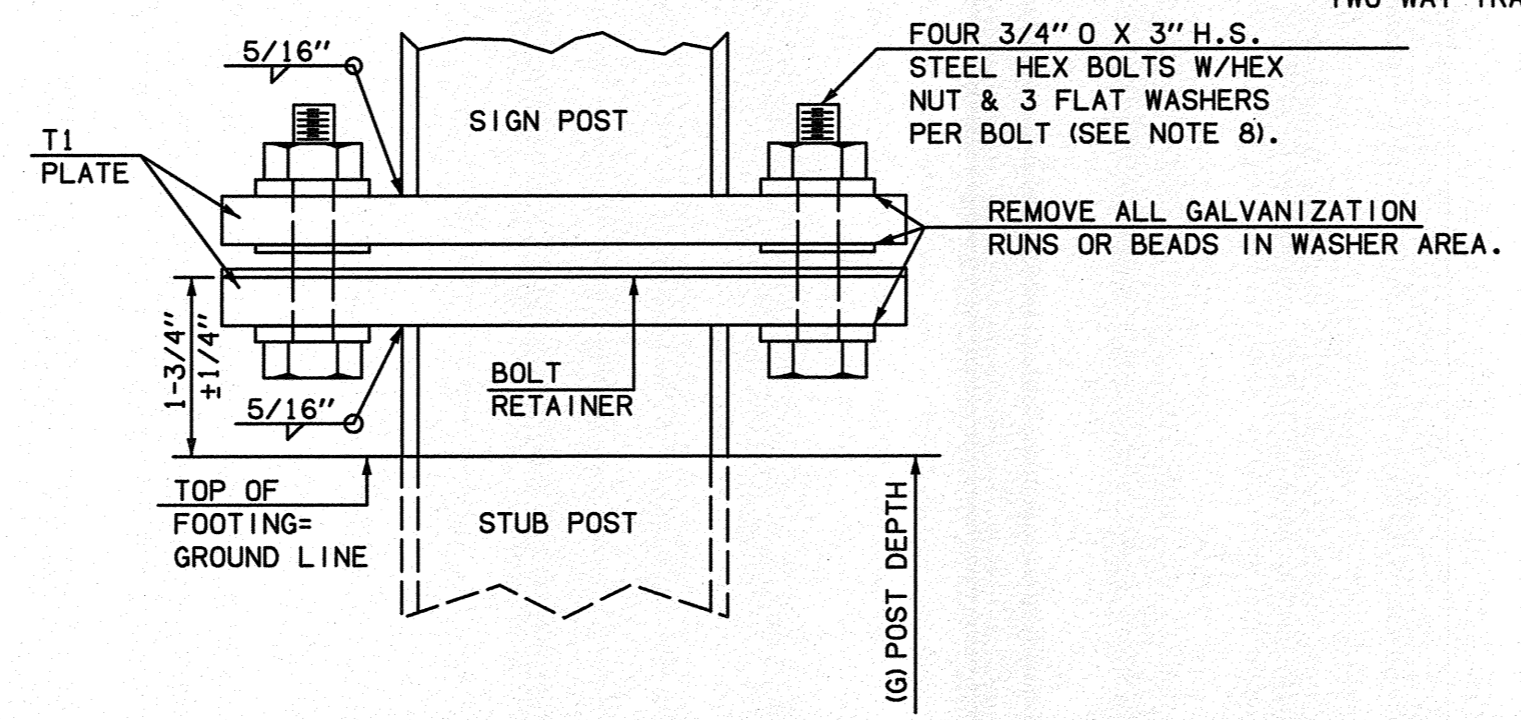
AFTER BEING RE-TORQUED TO THE SATISFACTION OF THE ENGINEER, THE NUTS, BOLTS AND WASHERS SHALL BE FREED OF RUST, CLEANED AND GIVEN A HEAVY AND THOROUGH COAT OF ZINC-RICH PAINT.

BOLT SIZE	TORQUE	MINIMUM RESIDUAL TENSION
1/2"	100 FT LBS	12,050 LBS
5/8"	200 FT LBS	19,200 LBS
3/4"	355 FT LBS	28,400 LBS
7/8"	526 FT LBS	39,250 LBS
1"	789 FT LBS	51,500 LBS
1-1/8"	1,350 FT LBS	56,450 LBS.

FOOTING DESIGN NO.	SIZE OF POST REQUIRED	FOOTING DIMENSIONS			HORIZONTAL BARS	VERTICAL BARS	STRUCTURAL CONCRETE	REIN-FORCING STEEL
		D	H	E				
KC-0	4" WF @ 13	18"	5'-6"	2'-6"	SPIRAL W-12 (48'-6" LONG)	6 # 6	.36 CU.YD.	65 LBS
KC-1	6" WF @ 15	24"	6'-6"	2'-6"	SPIRAL W-12 (79'-3" LONG)	6 # 7	.76 CU.YD.	106 LBS
KC-1A	6" WF @ 20	24"	6'-6"	2'-6"	SPIRAL W-12 (79'-3" LONG)	8 # 7	.76 CU.YD.	129 LBS
KC-2	6" WF @ 25	24"	7'-0"	2'-6"	SPIRAL W-12 (84'-4" LONG)	8 # 8	.82 CU.YD.	174 LBS
KC-3	8" WF @ 31	24"	8'-6"	3'-0"	SPIRAL W-12 (100'-3" LONG)	8 # 10	.99 CU.YD.	316 LBS
KC-4	8" WF @ 35	24"	9'-0"	3'-0"	SPIRAL W-12 (106'-0" LONG)	8 # 10	1.05 CU.YD.	338 LBS
KC-5	8" WF @ 40	24"	9'-6"	3'-0"	SPIRAL W-12 (111'-4" LONG)	8 # 11	1.11 CU.YD.	428 LBS
KC-6	10" WF @ 45	30"	10'-0"	3'-6"	SPIRAL W-12 (151'-3" LONG)	8 # 11	1.82 CU.YD.	465 LBS
KC-7	10" WF @ 49	30"	10'-6"	3'-6"	SPIRAL W-12 (158'-0" LONG)	8 # 11	1.91 CU.YD.	490 LBS

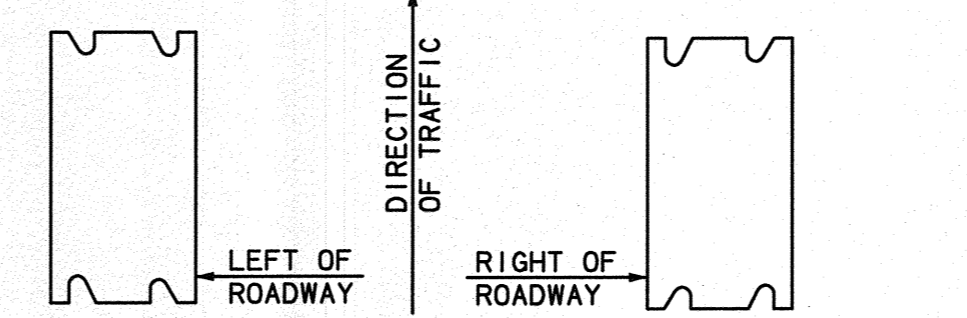


STEEL WF POST BASE PLATE FOR FOOTING DESIGN "KC"



STEEL WF POST BASE CONNECTION FOR FOOTING DESIGN "KC"

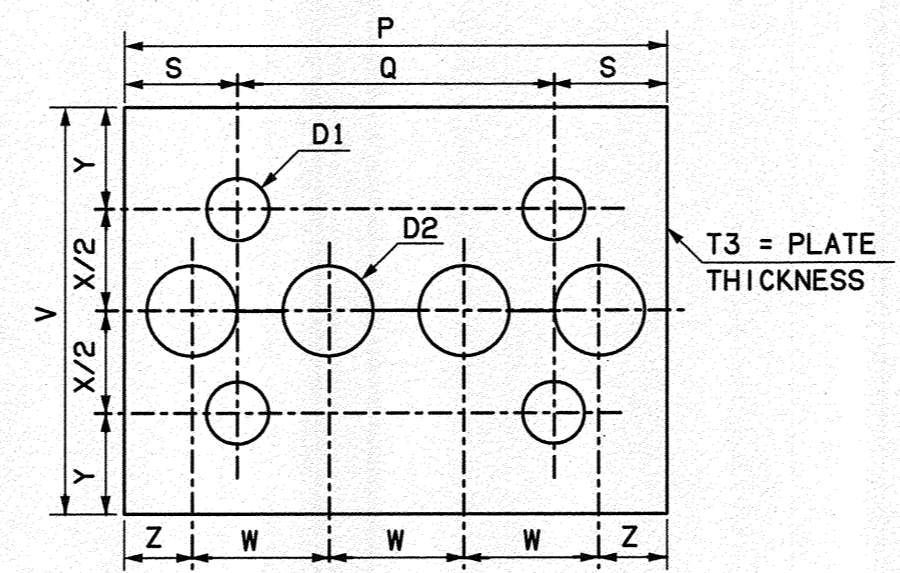
SHEET METAL BOLT RETAINER



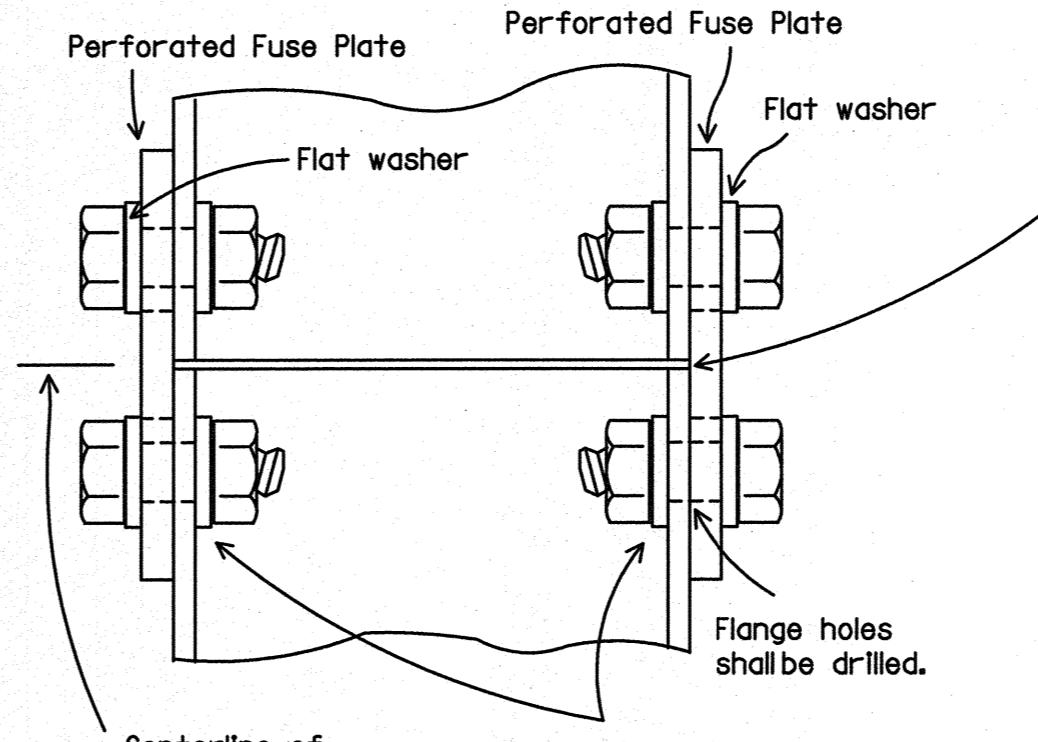
FOR EITHER SIDE OF ONE-WAY TRAFFIC LANES, USE RIGHT HAND SLOTS ONLY FOR TWO WAY TRAFFIC LANES.

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

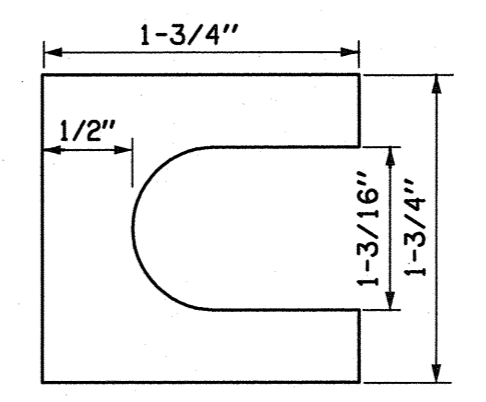
1. ASSEMBLE POST TO STUB WITH BOLTS AND WASHERS AND WITH ONE FLAT WASHER ON EACH BOLT AND BOLT RETAINER BETWEEN BASE PLATES.
2. SHIM AS REQUIRED TO PLUMB AND ALIGN POST(S) BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
3. TIGHTEN ALL BOLTS, IN A SYSTEMATIC ORDER, TO THE PRESCRIBED TORQUE TO BED WASHERS AND SHIMS AND CLEAN BOLT THREADS.
4. LOOSEN AND RETIGHTEN TO PRESCRIBED TORQUE IN THE SAME ORDER AS INITIAL TIGHTENING. DO NOT OVER TIGHTEN.



FUSE PLATE DETAIL



DETAIL "A"



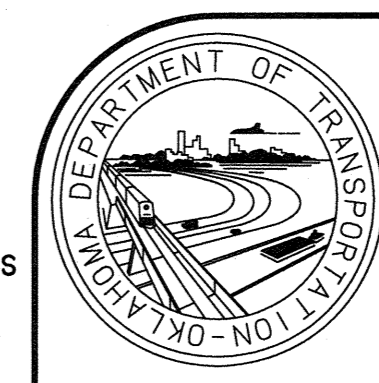
SHIM DETAIL

FURNISH 2 @ 0.012 THICK AND 2 @ 0.032 THICK SHIMS FOR POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OF STRIP CONFORMING TO ASTM-836.

CONSTRUCTION NOTES:

1. ALL PIPE AND WIDE FLANGE BEAM POSTS SHALL CONFORM TO REQUIREMENTS OF THE 2009 STANDARD SPECIFICATIONS.
2. FUSE PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A441, A572 GRADE 50 OR A588. ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL BE PREFERABLY SAW CUTS, HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE TOLERATED.
3. ALL BOLTS, NUTS, AND WASHERS SHALL NOT BE GALVANIZED OR PLATED, BUT SHALL BE PAINTED AFTER INSTALLATION, WITH A ZINC RICH PAINT.
4. STRUCTURAL STEEL TO BE GALVANIZED AFTER FABRICATION, EXCEPT AS NOTED, IN ACCORDANCE WITH THE 2009 STANDARD SPECIFICATIONS.
5. POST LENGTHS AS SHOWN ON THE PLANS INCLUDE BOTH SIGN POST & STUB POST WHICH IS SET IN THE CONCRETE FOOTING.
6. ALL WELDING MATERIALS AND METHODS, INCLUDING QUALIFICATION OF WELDERS, SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 STANDARD SPECIFICATIONS.
7. STRUCTURAL EXCAVATION TO BE PAID FOR IN OTHER ITEMS OF WORK.
8. TOP AND BOTTOM WASHERS ON BASE PLATE SHALL BE 1/4" THICK. WASHERS MAY BE ROUND OR SQUARE. USE STANDARD ROUND WASHERS BETWEEN BASE PLATES. REMOVE ALL GALVANIZING RUNS OR BEADS IN THE WASHER AREA.
9. USE W-12 SPIRAL BAR IN ACCORDANCE WITH 723.07 OF THE STANDARD SPECIFICATIONS, CONTRACTOR MAY SUBSTITUTE #3 SPIRAL BAR IN ACCORDANCE WITH AASHTO M31

ITEM NO.	ITEM	UNIT
804(A)	STRUCTURAL CONCRETE	CY
804(B)	REINFORCING STEEL	LB
851(A)	GALV. STEEL WIDE FLANGE BEAM POST	LF



APPROVED BY: *[Signature]* DATE: 11/17/2012
TRAFFIC ENGINEER:

TRAFFIC STANDARD
STANDARD FOOTINGS FOR
GROUND MOUNTED SIGNS
(GALVANIZED WIDE FLANGE)

2009 SPECIFICATIONS