



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

December 11, 2017

Mr. Mark A. Cook, PE
Engineering & Operations Division
Charlotte Department of Transportation
700 East 4th Street, 7th Floor
Charlotte, NC 28202

REFERENCE : CDOT Standard Pedestrian Pole 10'-0" and 15'-0" Tall Pole Foundation
Drawing Update.
Foundation drawing No. : CDOT-STD-DIV10-1F Rev. 1 and
CDOT-STD-DIV10-2F Rev. 1

On November 28, 2017 our office received a request to review and revise the foundation drawing due to the addition of 2-2" dia. conduit. The foundation drawings were prepared by NCDOT for the City of Charlotte before.

After the review, both the revised Pedestal Pole Foundation drawings were stamped "Approved December 11, 2017". I am returning only electronic copy for distribution.

If you have any other questions or comments, please contact me at (919) 814-4929 or e-mail me at <dsarkar@ncdot.gov>.

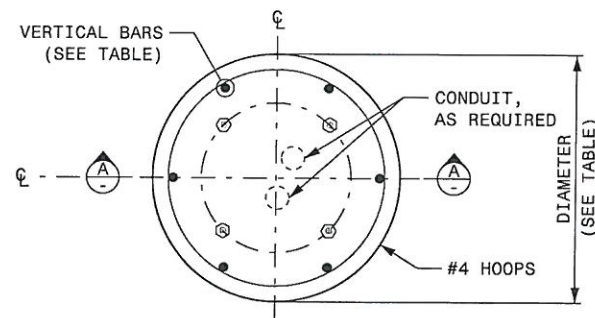
Yours Truly,


Debesh Sarkar

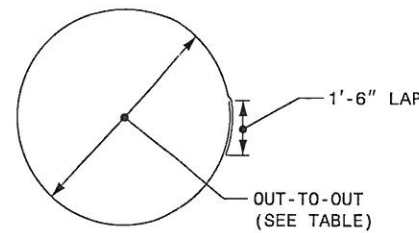
DCS

Enclosures

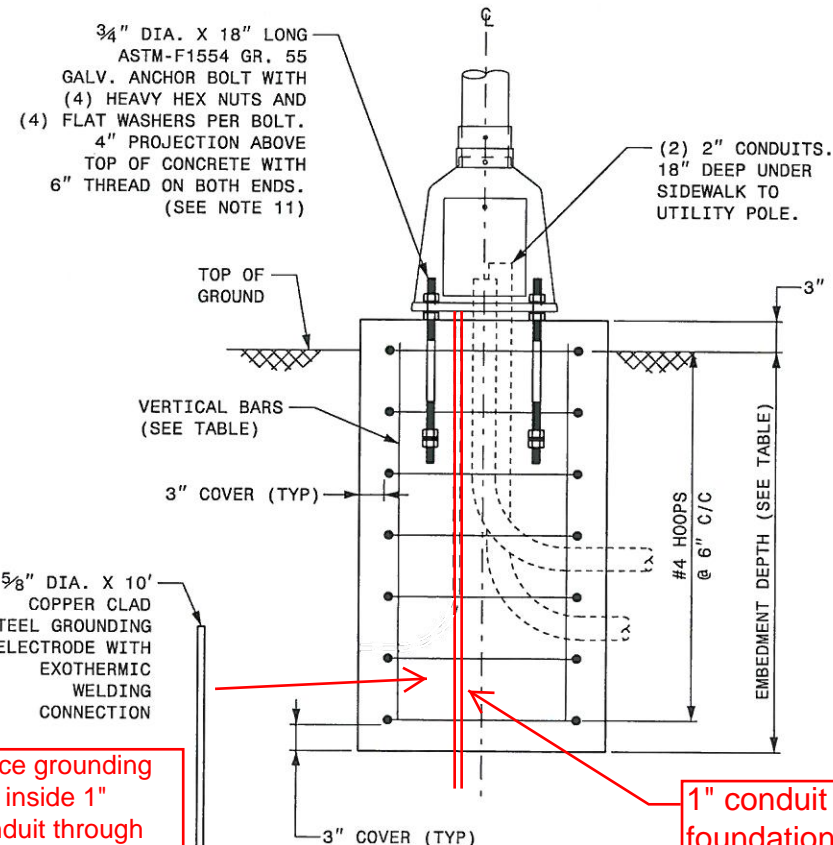
CC: Timothy J. Williams, PE; Western Region Signals Engineer
R. Nicholas Zinser, PE; Western Region Signal Project Engineer
Anthony Tagliaferri, PE; Division 10
File: Signal Inv. No.: 10-1941 STR; Folder No.: 077185



PLAN



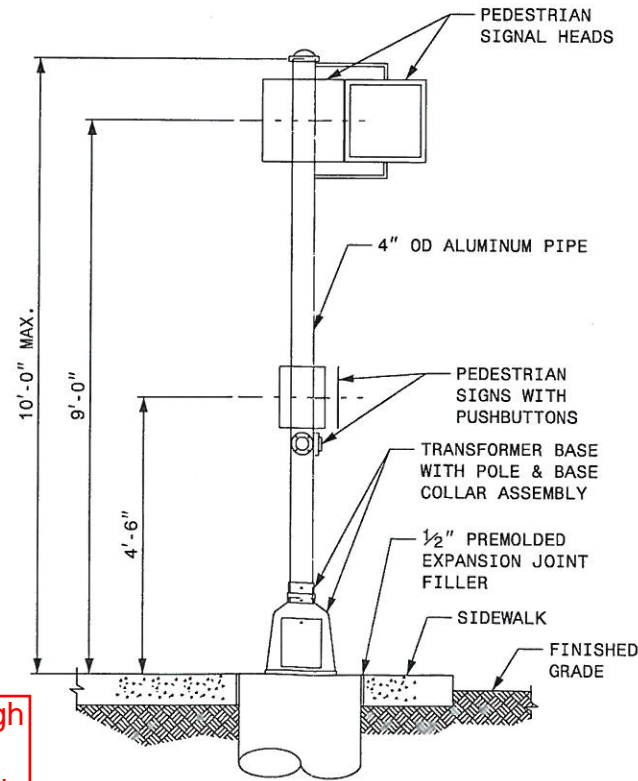
CLOSED HOOPS
(#4 HOOPS)



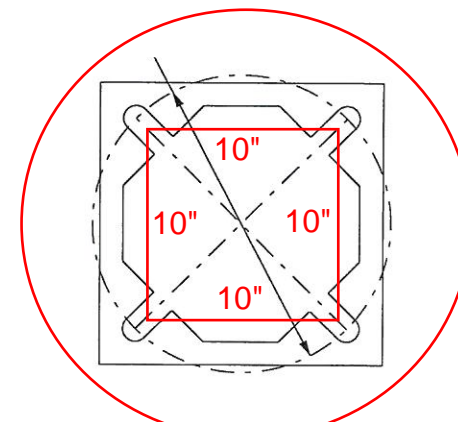
SECTION A-A

Place grounding rod inside 1" conduit through foundation and leave 6" above top of foundation.

1" conduit through foundation for copper clad steel grounding rod



LOADING DIAGRAM
(ALTERNATIVE SIDEWALK DETAIL SHOWN)



TRANSFORMER BASE
(BOTTOM VIEW)

GENERAL NOTES:

1. THE FOLLOWING PEDESTAL BASE REACTIONS USING 4" OD SCHEDULE 80 ALUMINUM PIPE WERE USED IN THE DESIGN OF THE FOUNDATION:

AXIAL LOAD: 190 LBS
SHEAR LOAD: 180 LBS
MOMENT LOAD: 1,250 FT-LBS
2. BASE REACTIONS ARE BASED ON A DESIGN LOADING FOR 2-PEDESTRIAN SIGNALS, 2-PUSHBUTTONS AND 2-PEDESTRIAN SIGNS. DO NOT EXCEED DESIGN LOADING WITHOUT APPROVAL.
3. FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL OR WITHIN PERMANENT STEEL CASING.
4. USE AIR ENTRAINED CONCRETE WITH A COMPRESSIVE STRENGTH OF $f'_c = 3000$ PSI (MIN.) AFTER 28 DAYS.
5. ALL REINFORCING TO BE ASTM A615 GRADE 60 DEFORMED BARS.
6. ANY NECESSARY CONDUIT LAYOUT IS NOT SHOWN.
7. FOUNDATION DESIGN IS BASED ON SATURATED SOIL CONDITIONS WITH NON-SLOPING LEVEL GROUND SURFACE.
8. IF ACTUAL SITE CONDITIONS VARY SIGNIFICANTLY FROM ABOVE INFORMATION, FOUNDATION REDESIGN IS REQUIRED.
9. PLEASE REFER TO NCDOT STANDARD CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
10. REFER TO STANDARD PEDESTAL FOUNDATION DRAWINGS 1743.02 AND 1743.04 FOR ADDITIONAL NOTES AND DETAILS.
11. EACH ANCHOR BOLT SHALL HAVE (4) ASTM-A563 NUTS AND (4) ASTM-F436 CIRCULAR WASHERS.

FOUNDATION TABLE

PIER DIAMETER (FT)	OUT-TO-OUT (FT)	EMBEDMENT DEPTH (FT)	VERTICAL BARS QTY/SIZE	HOOPS QTY/SIZE/SPA
2'-0"	1'-6"	3'-3"	6-#8	7-#4 @ 6"



WIND ZONE 04-90 mph

	Standard Foundation for 10' Pedestal Pole for the City of Charlotte		SEAL NORTH CAROLINA PROFESSIONAL SEAL 028094 ENGINEER DEBESH C. SARKAR 12.11.17
	Division 10 Mecklenburg County Charlotte		
	CONTRACTOR:		
	PLAN DATE: July 2015 PREPARED BY: K. Durigon	DESIGNED BY: K. Durigon REVIEWED BY: D. Sarkar	
SCALE 0 N/A N/A	REVISIONS INITIAL ISSUE: 0 KCD 7/29/15 ADDED 2" CONDUITS ON DS PLAN AND SECTION A-A 1 TFS 12/6/17		FOUNDATION DRAWING NO. COOT-STD-DIVIO-IF REV. I




FOUNDATION TABLE				
PIER DIAMETER (FT)	OUT-TO-OUT (FT)	EMBEDMENT DEPTH (FT)	VERTICAL BARS QTY/SIZE	HOOPS QTY/SIZE/SPA
2'-6"	2'-0"	4'-9"	6-#8	10-#4 @ 6"

WIND ZONE 04-90 mph

Prepared in the Offices of:  750 N. Greenfield Pkwy, Corner, NC 27529	<h2 style="margin: 0;">Standard Foundation for 15' Pedestal Pole for the City of Charlotte</h2>	SEAL  SEAL 028094 ENGINEER DEBESH C. SARKAR
Division 10 Mecklenburg County Charlotte		
CONTRACTOR:		
PLAN DATE: July 2015	DESIGNED BY: K. Durigon	
PREPARED BY: K. Durigon	REVIEWED BY: D. Sarkar	
REVISIONS	REV.	INIT. DATE
INITIAL ISSUE:	0	KCD 7/20/15
ADDED 2" CONDUITS ON 05 PLAN AND SECTION A-A	1	IFS 12/6/17

SCALE



N/A

D. Sarkar 12.11.17

SIGNATURE DATE

FOUNDATION DRAWING NO. CDDT-STD-DIVIO-2F REV. I

1. THE FOLLOWING PEDESTAL BASE REACTIONS USING 4" OD SCHEDULE 80 ALUMINUM PIPE WERE USED IN THE DESIGN OF THE FOUNDATION:

AXIAL LOAD: 290 LBS
SHEAR LOAD: 315 LBS
MOMENT LOAD: 3,175 FT-LBS
2. BASE REACTIONS ARE BASED ON A DESIGN LOADING FOR 2-PEDESTRIAN SIGNALS, 2-PUSHBUTTONS, 2-PEDESTRIAN SIGNS AND 1-CAMERA. DO NOT EXCEED DESIGN LOADING WITHOUT APPROVAL.
3. FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL OR WITHIN PERMANENT STEEL CASING.
4. USE AIR ENTRAINED CONCRETE WITH A COMPRESSIVE STRENGTH OF $f'c = 3000$ PSI (MIN.) AFTER 28 DAYS.
5. ALL REINFORCING TO BE ASTM A615 GRADE 60 DEFORMED BARS.
6. ANY NECESSARY CONDUIT LAYOUT IS NOT SHOWN.
7. FOUNDATION DESIGN IS BASED ON SATURATED SOIL CONDITIONS WITH NON-SLOPING LEVEL GROUND SURFACE.
8. IF ACTUAL SITE CONDITIONS VARY SIGNIFICANTLY FROM ABOVE INFORMATION, FOUNDATION REDESIGN IS REQUIRED.
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10. REFER TO STANDARD PEDESTAL FOUNDATION DRAWINGS 1743.02 AND 1743.04 FOR ADDITIONAL NOTES AND DETAILS.
11. EACH ANCHOR BOLT SHALL HAVE (4) ASTM-A563 NUTS AND (4) ASTM-F436 CIRCULAR WASHERS.

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