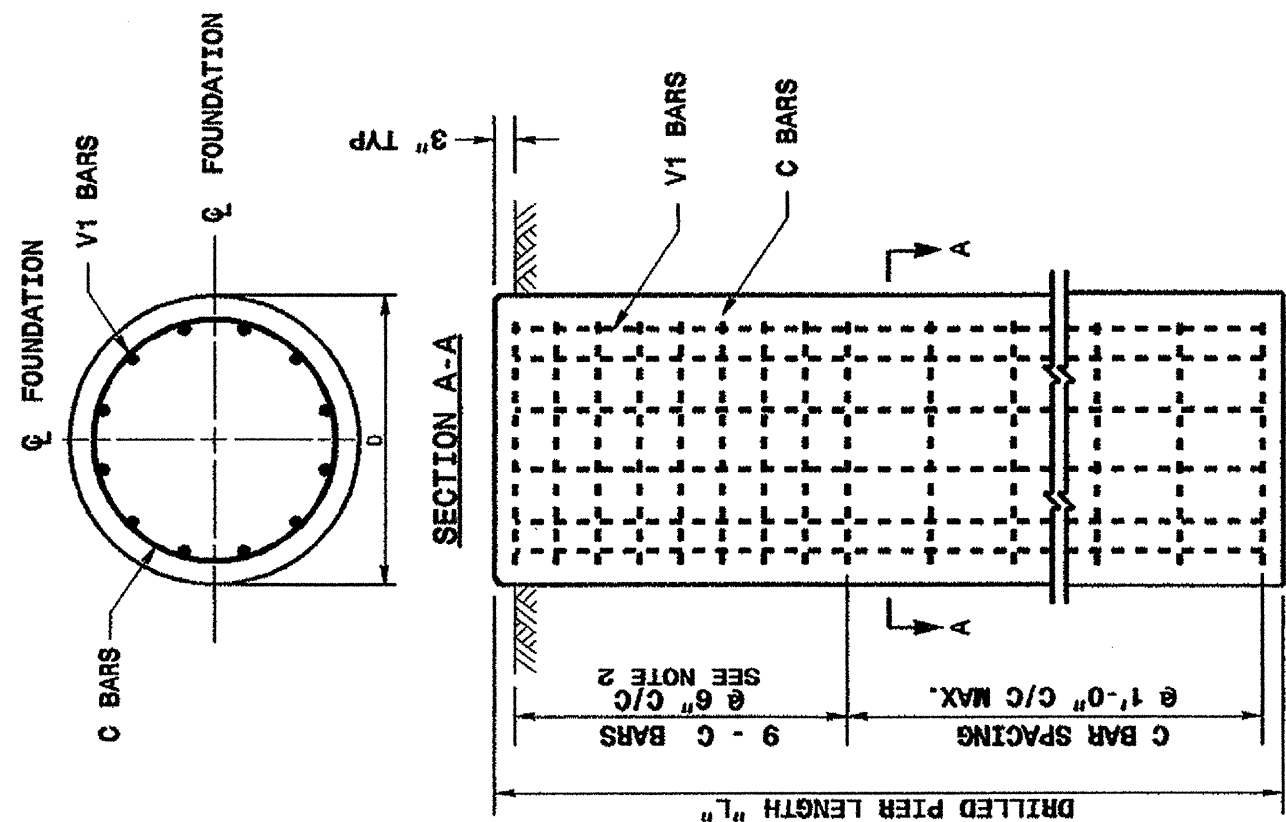


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STATE OF  
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 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
**METAL POLE FOUNDATIONS**  
**REINFORCING CAGE DETAILS**

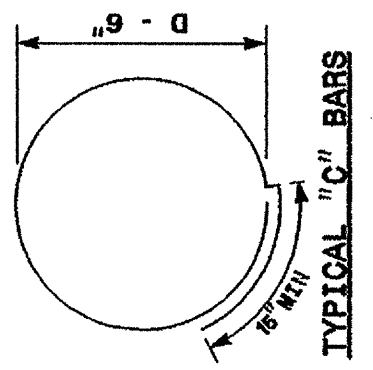
SHEET 1 OF 2  
**1742.01**



**REINFORCING STEEL TABLE FOR STANDARD DRILL PIER SHAFT (42" & 48" DIAMETER)**

SHAFT DIA. (in.)	BAR NO.	BAR SIZE	TYPE	LENGTH
42"	V1	#8	STR.	33"
	C	#4	CTR.	10'-9"
48"	V1	#8	STR.	33"
	C	#4	CTR.	12'-6"

\* See Construction Note No. 1.  
 \*\* See Construction Note No. 2.



**REINFORCING STEEL TABLE FOR STANDARD 42" and 48" DRILL PIER SHAFT WITH TYPE 1 AND TYPE 2 WING WALLS**

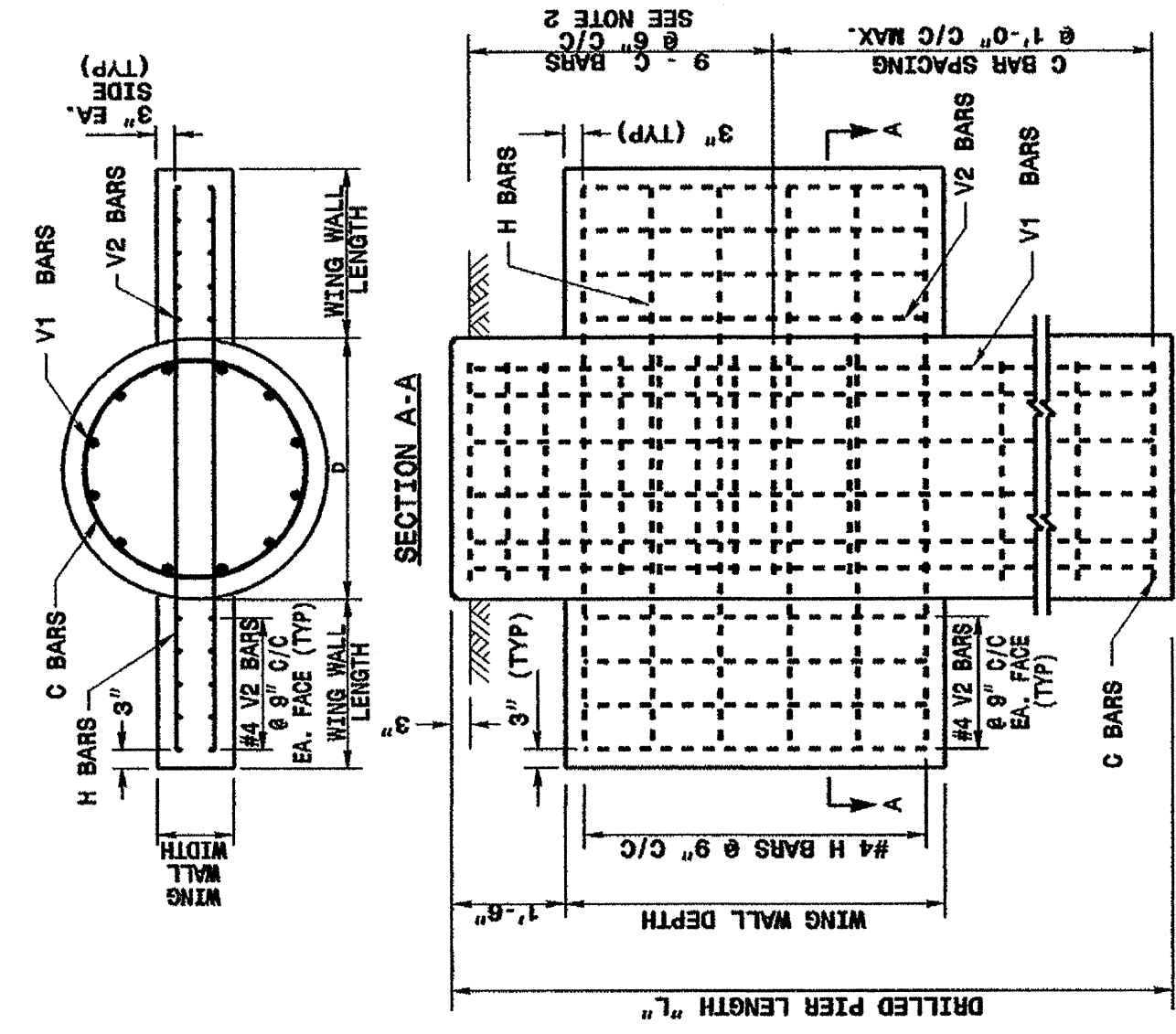
Wing Wall Type	Wing Wall Shaft Dia. (in.)	Bar No.	Bar Size	Type	Length
TYPE 1	42"	V1	#8	STR.	33"
		H	#4	STR.	2'-8"
TYPE 2	42"	V1	#8	STR.	33"
		C	#4	CTR.	10'-9"
TYPE 2	48"	V1	#8	STR.	33"
		H	#4	STR.	9'-0"
TYPE 2	48"	V1	#8	STR.	33"
		C	#4	CTR.	10'-9"

\* See Construction Note No. 1.  
 \*\* See Construction Note No. 2.

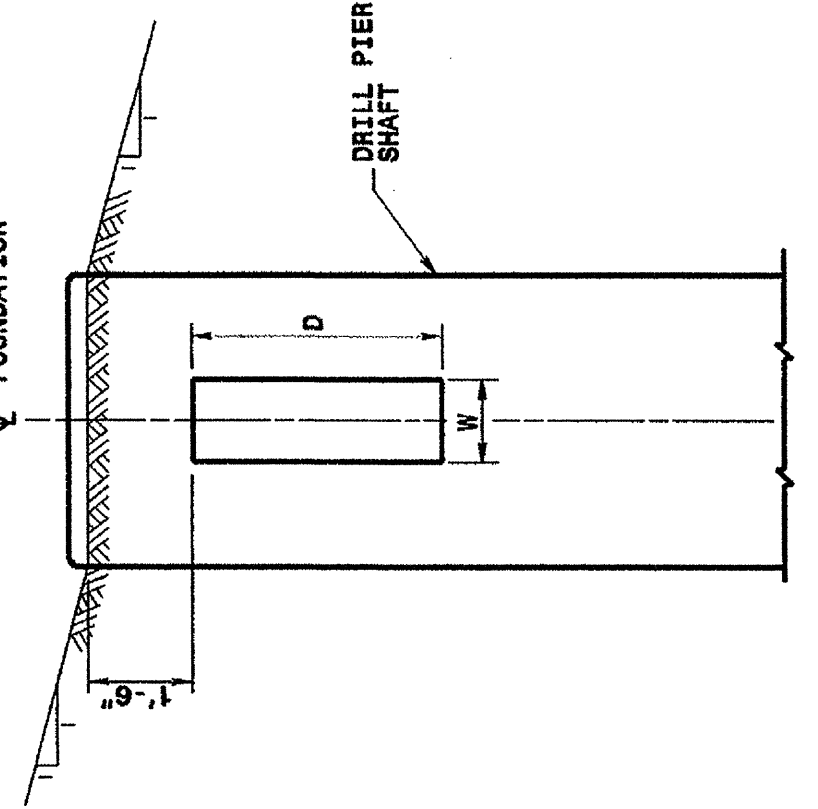
**WING WALL DETAILS**

Wing Wall Type	Wing Wall Shaft Dia. (in.)	Wing Wall Width (ft.)	Concrete Volume (Cu. Yds.)
TYPE 1	1'-6"	1'-0"	3'-0"
TYPE 2	8'-0"	1'-0"	8'-0"

See Construction Note No. 3.



- NOTES**
1. THE NUMBER OF C-BARS IS BASED ON FOUNDATION DEPTH. SEE FOUNDATION SELECTION TABLES.
  2. CIRCULAR TIE REINFORCING RINGS MAY BE VERTICALLY ADJUSTED BY +/- 3" AT A DEPTH BETWEEN 2'-0" AND 3'-0" TO FACILITATE THE INSTALLATION OF ELECTRICAL CONDUIT ENTERING IN THE CAGE.
  3. THE LENGTH OF V1-BARS IS BASED ON FOUNDATION DEPTH. SEE FOUNDATION SELECTION TABLES.
  4. THE QUANTITIES FOR STEEL AND CONCRETE SHOWN IN THE WING WALL DETAILS CHART REFLECT THE AMOUNT OF MATERIAL FOR 1 PAIR OF WING WALLS (2 WING WALLS PER DRILL PIER SHAFT.)
  5. CONCRETE DRILL PIER SHAFT VOLUME (CU. YDS.): FOR 42" DIA. = .363KL FOR 48" DIA. = .468KL
  6. DEFORM REINFORCING STEEL TO CONFORM TO ASTM A615 GRADE 60. TIES MAY BE DEFORMED OR PLAIN.
  7. CAST CONCRETE AGAINST UNDISTURBED SOIL.
  8. DO NOT ERECT TRAFFIC SIGNAL STRUCTURES BEFORE THE CONCRETE IN THE FOUNDATION HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
  9. MAKE PROVISIONS FOR DRAINAGE OF WATER FROM INSIDE OF THE METAL SUPPORT.
  10. FOR OTHER DETAILS REGARDING CONSTRUCTION OF CONCRETE FOUNDATION SEE PROJECT SPECIAL PROVISIONS.
  11. IN CASE OF ANY CROSS SLOPES, GRADE AROUND THE FOUNDATION AS FOLLOWS:



ENGLISH STANDARD DRAWING FOR  
**METAL POLE FOUNDATIONS**  
**REINFORCING CAGE DETAILS**

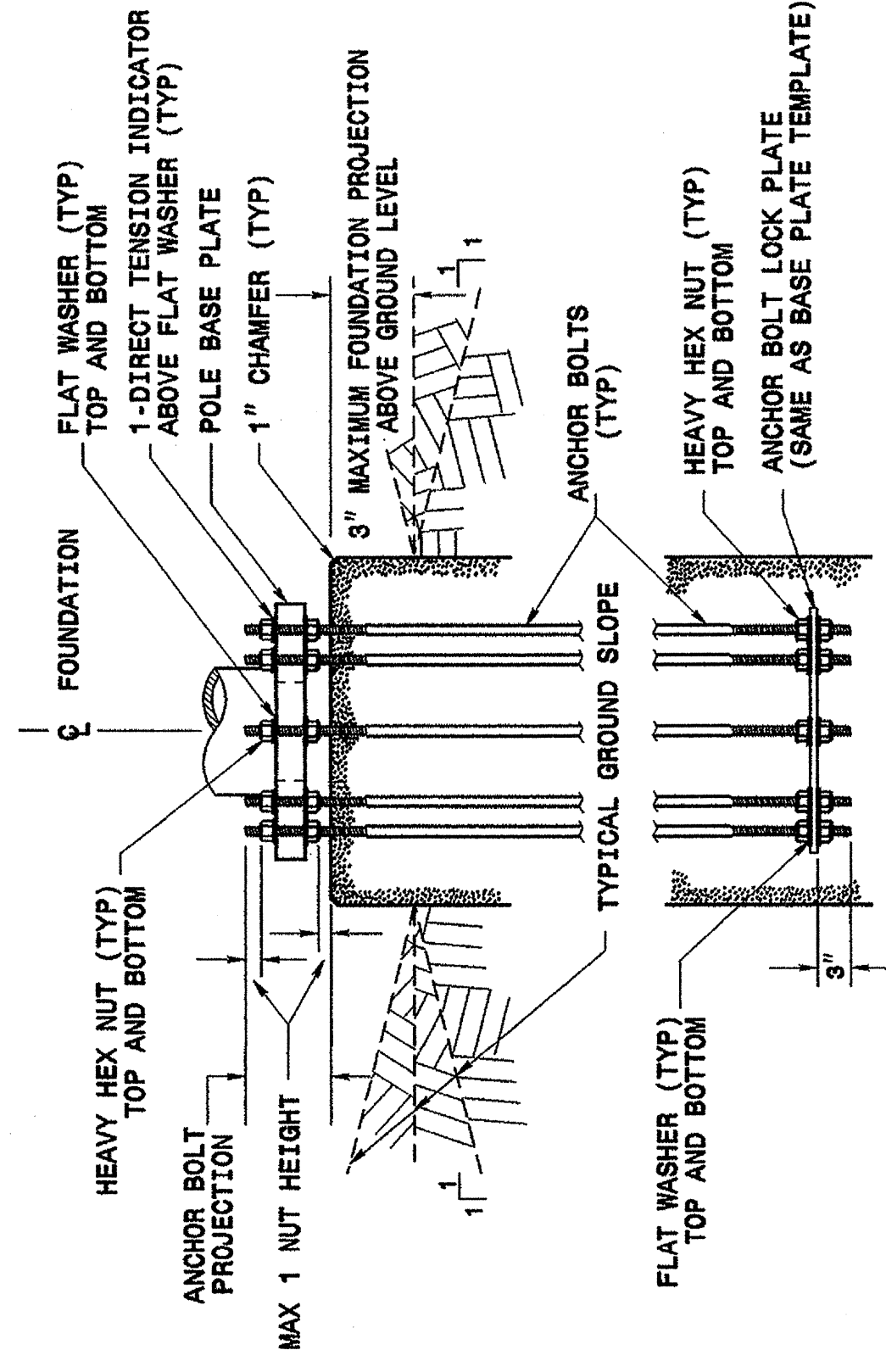
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SHEET 1 OF 2  
**1742.01**

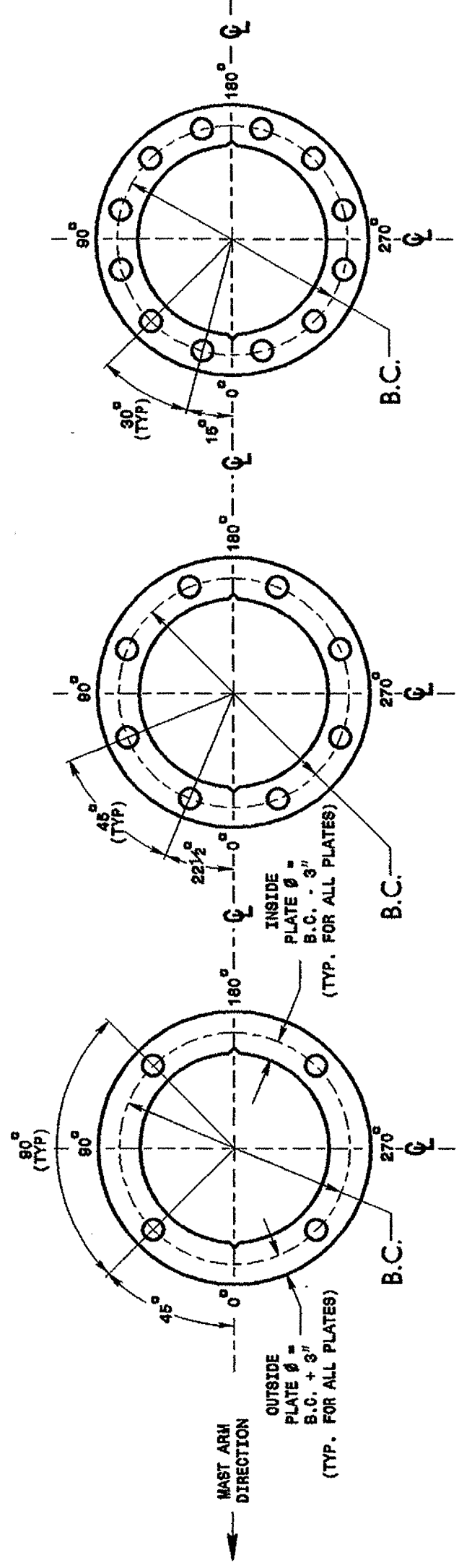
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ENGLISH STANDARD DRAWING FOR  
**METAL POLE FOUNDATIONS**  
**INSTALLATION DETAILS**

SHEET 2 OF 2  
**1742.01**



**TYPICAL FOUNDATION ANCHOR BOLT DETAILS**  
 REINFORCING CAGE NOT SHOWN FOR CLARITY



FOR 4 BOLT BASE PLATE  
 CONSTRUCT TEMPLATES AND PLATES FROM 3/8" THICK STEEL. GALVANIZING IS NOT REQUIRED.  
 BASE PLATE TEMPLATE AND ANCHOR BOLT LOCK PLATE DETAILS

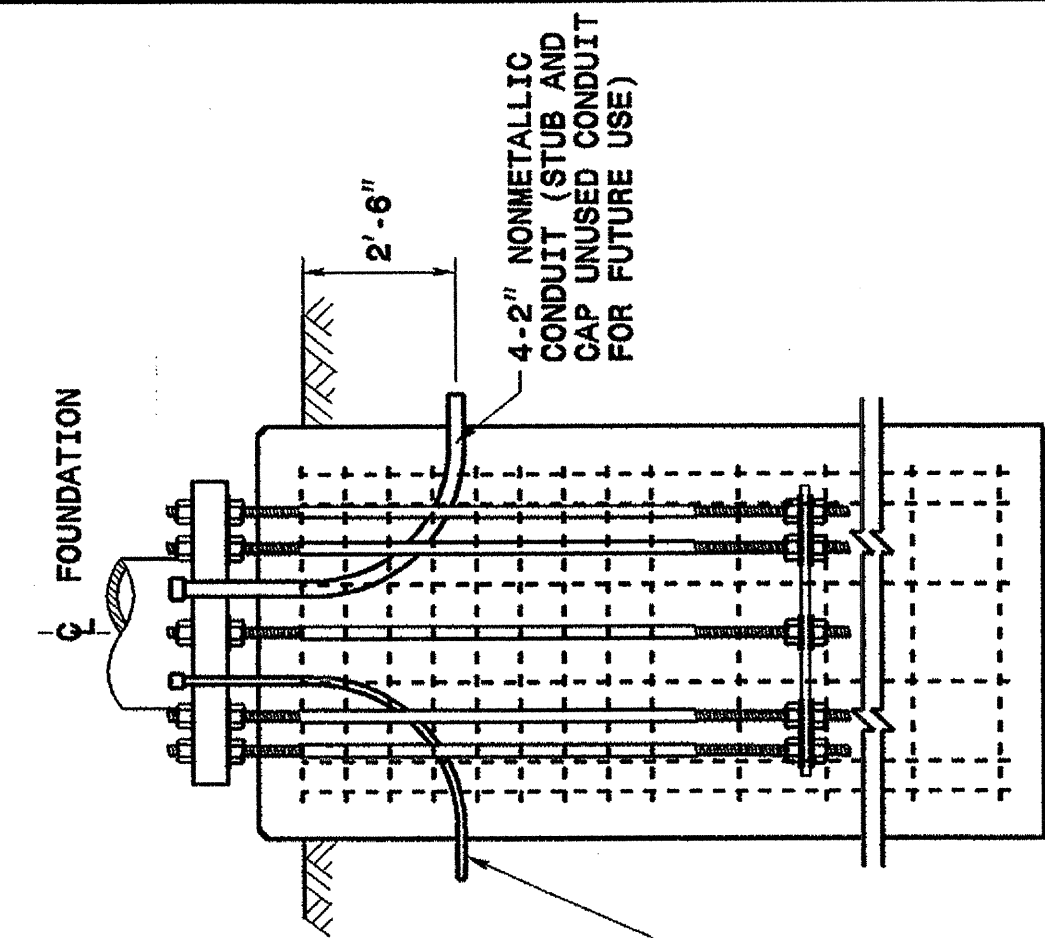
FOR 8 BOLT BASE PLATE

FOR 12 BOLT BASE PLATE

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ENGLISH STANDARD DRAWING FOR  
**METAL POLE FOUNDATIONS**  
**INSTALLATION DETAILS**

SHEET 2 OF 2  
**1742.01**



**TYPICAL FOUNDATION CONDUIT DETAILS**

Structural Engineer      Electrical Engineer

**NORTH CAROLINA PROFESSIONAL SEAL 028034**  
 DEEESH C. SARKAR

**NORTH CAROLINA PROFESSIONAL SEAL 16286**  
 ENGINEER MILTON I. DEAN

*D. Sarkar* 9.12.03      *Milton I. Dean* 9/18/03  
 SIGNATURE      DATE      SIGNATURE      DATE

Standard Drawings  
 Traffic Management and Signal Systems Unit  
 122 N. McDowell St., Raleigh, NC 27603

**See Plate for Title**

Original: 2002 Standards