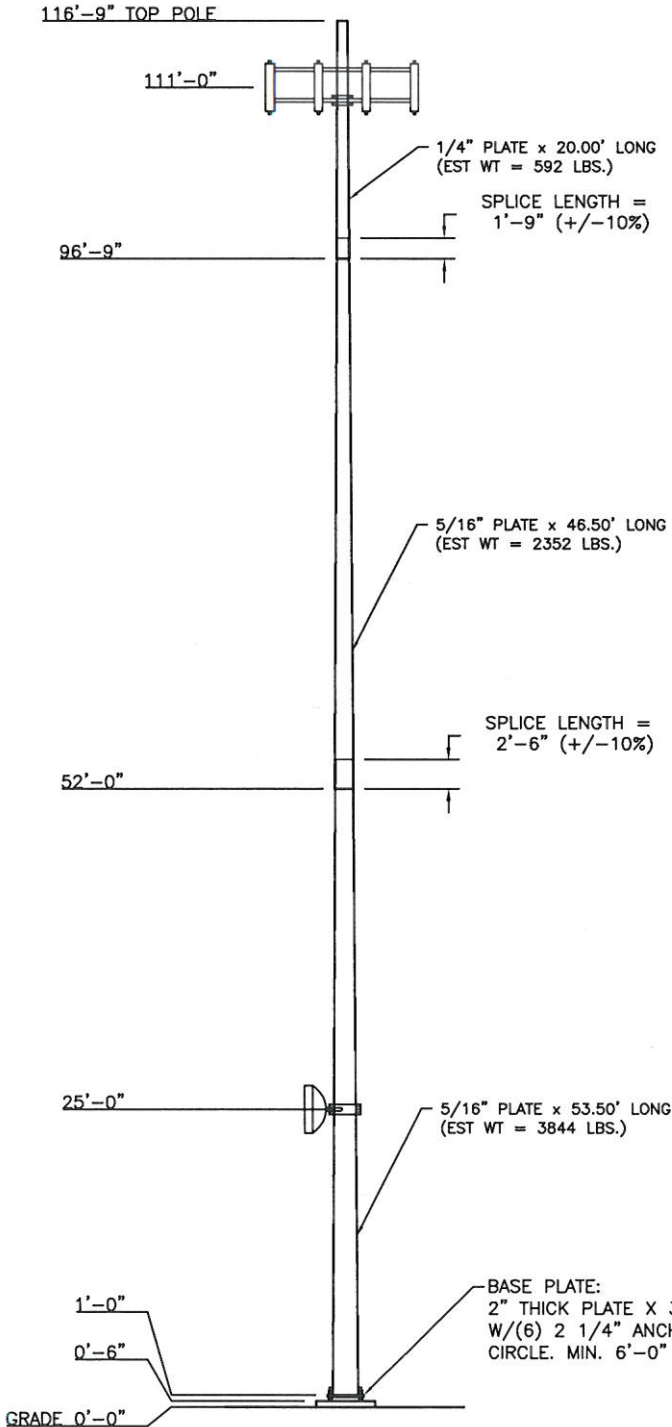


# DAVINCI Engineering, Inc.

PO BOX 1966 SANTA MARIA, CALIFORNIA 93456  
PHONE: (805) 922-5221 FAX: (805) 880-0402



DESIGN SPECIFICATIONS					
DESIGNED ACCORDING TO: ANSI/TIA-222-G-2					
COMPLIES WITH: 2006 INTERNATIONAL BUILDING CODE					
EARTHQUAKE DESIGN DATA					
(PER THE EQUIVALENT LATERAL FORCE PROCEDURE; SECTION 1613)					
IMPORTANCE FACTOR (I): 1		OCCUPANCY CATEGORY: Group I			
S <sub>ss</sub> : 0.840	S <sub>01</sub> : 0.486	S <sub>s</sub> : 1.260	S <sub>i</sub> : 0.480		
SEISMIC DESIGN CATEGORY: E; SITE CLASS D					
DESIGN BASE SHEAR = 10K (WIND)					
SEISMIC RESPONSE COEFFICIENT (C <sub>s</sub> ): 0.46					
RESPONSE MODIFICATION FACTOR (R): 1.50					
Wind Speed Load Cases: (According to the ANSI/TIA-222-G-2)					
STRUCTURE CLASS	EXPOSURE CATEGORY	TOPOGRAPHIC CATEGORY	CREST HEIGHT		
II	C	1	0.0		
LOAD CASE 1: 90 MPH DESIGN WIND SPEED					
LOAD CASE 2: 60 MPH OPERATIONAL WIND SPEED					
POLE STEEL SPECIFICATIONS					
POLE SHAFT SHAPE: 18-SIDED TAPERED POLYGON					
POLE SHAFT TAPER: 0.14579 inches/ft.					
POLE SHAFT STEEL: ASTM A572 GR. 50 (F <sub>y</sub> = 50 ksi)					
BASE PLATE STEEL: ASTM A572 GR. 50 (F <sub>y</sub> = 50 ksi)					
ANCHOR RODS: 2 1/4" ∅ #18J A615 GR. 75 x 7 FT LONG					
MONOPOLE BASE REACTIONS: (Maximum Factored Reactions)					
MOMENT:	691 ft-kips				
SHEAR:	8.1 kips				
AXIAL:	12.6 kips				
POLE SHAFT SECTION DIMENSIONS					
Bottom ↑ Top	SECTION LENGTH (FT)	WALL THK. (INCHES)	SPLICE LENGTH (FT)	TOP DIA. (INCHES)	BOT. DIA. (INCHES)
	20.00	0.2500	1.75	9.750	12.666
	46.50	0.3125	2.50	11.911	18.690
	53.50	0.3125	0.00	17.700	25.500
	90 MPH WIND SPEED		60 MPH WIND SPEED		
ELEVATION	DEFLECTION	ROTATION	DEFLECTION	ROTATION	
116 ft	154.23"	11.6"	37.45"	2.8"	
25 ft	9.05"	2.5"	2.22"	0.6"	
Appurtenance List:					
Elev.(FT)	Equipment Description:				
TOP	LIGHTNING ROD (OPTIONAL)				
111.0	(12) AIRMAX 5G-90-20 PANEL ANTENNA				
111.0	STD. 12-FT PLATFORM				
25.0	(1) 3-FT MICROWAVE DISH				
25.0	STD. 4-FT MW MOUNT				



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POLE: 117-FT MONOPOLE	DATE: 10/10/11
OWNER: HIGHLAND WIRELESS	
SITE NAME: WIRELESS TOWER	SITE #:
LOCATION: STAGECOACH, NV	
CLIENT: USED TOWERS	DESIGN #: 5085
REV. #: -	REV. DATE: -
REV. COMMENT: -	
DESIGNED BY: SWL	CHECKED BY: <i>[Signature]</i>
DAVINCI JOB#: 9911256-133	PAGE 1 OF 2

## POLE ELEVATION

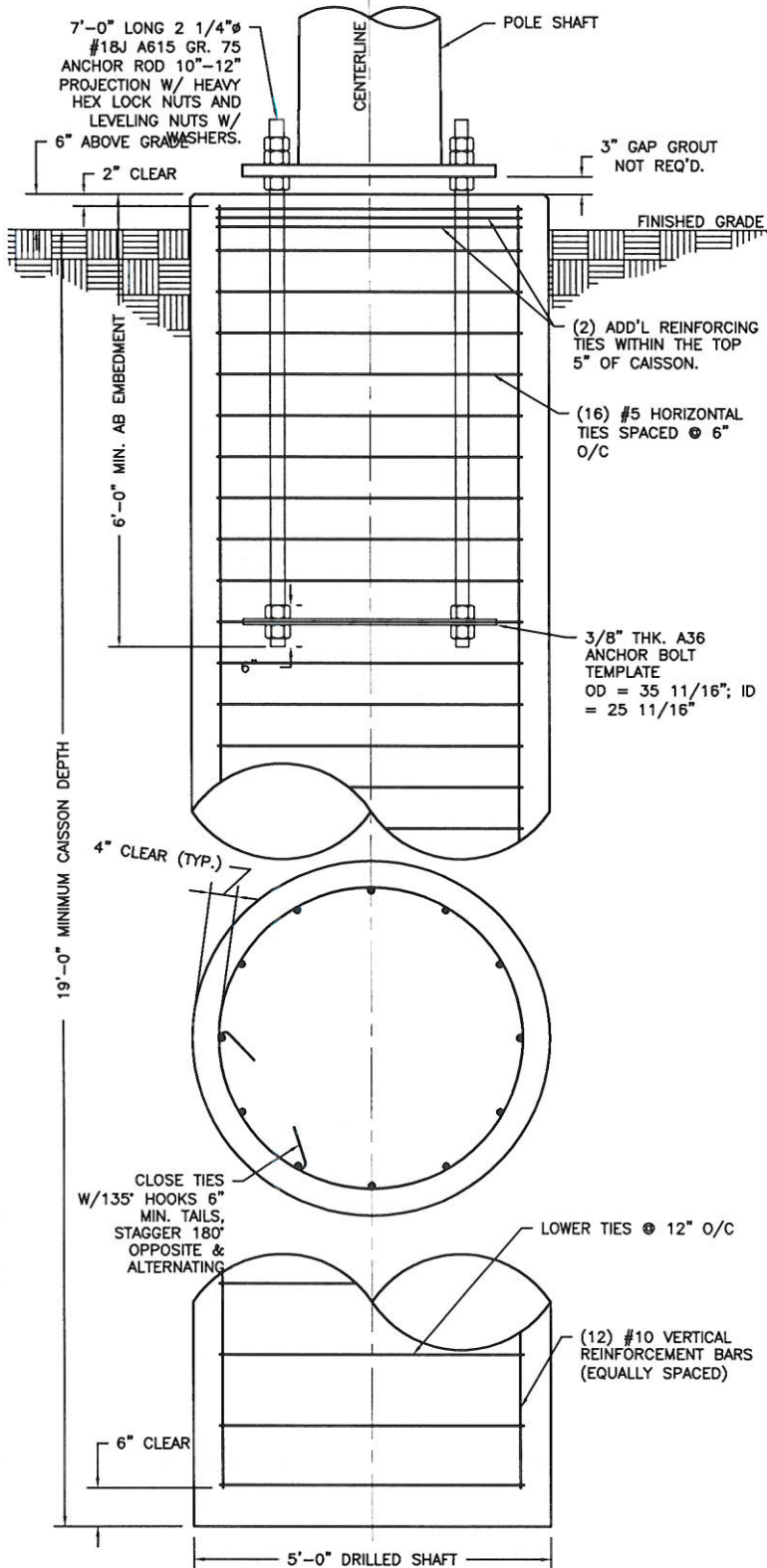
SCALE: NTS  
NOTES: ANTENNA COAX CABLES ROUTED INSIDE POLE SHAFT

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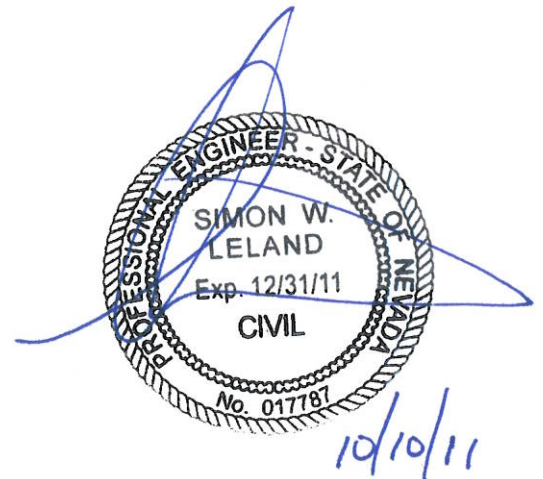
## FOUNDATION NOTES:

1. THE GEOTECHNICAL ENGINEER (OR THE APPROPRIATE INSPECTOR) SHALL INSPECT THE EXCAVATION PRIOR TO PLACING REINFORCING STEEL OR FORMS. THE GEOTECHNICAL ENGINEER (OR INSPECTOR) SHALL PROVIDE A NOTICE OF INSPECTION FOR THE BUILDING INSPECTOR FOR REVIEW AND RECORDS PURPOSE.
2. THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS TO SUPPORT THE EXCAVATION DURING CONSTRUCTION. REFER TO THE GEOTECHNICAL REPORT FOR RECOMMENDATIONS.
3. THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
4. FOUNDATION DESIGN IS BASED ON SITE SPECIFIC GEOTECHNICAL REPORT AS PROVIDED BY: NORTECH; REPORT # 2207-08N; DATED MAY 27, 2011.
5. ALL FOUNDATION CONCRETE SHALL USE TYPE II CEMENT AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI WITHIN 28 DAYS OF PLACEMENT. PROPORTIONING OF THE CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. COPIES OF EACH MIX SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND COMMENTS PRIOR TO PLACING ANY CONCRETE. CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.46 AND SHALL BE AIR ENTRAINED 4.5% ( $\pm 1.5\%$ ). ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION. CEMENT SHALL BE LOW ALKALI, CONFORMING TO ASTM C-150. ALL AGGREGATE USED IN THE CONCRETE SHALL CONFORM TO ASTM C-33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. MAXIMUM AGGREGATE SIZE TO BE 1 1/2 INCH."
6. CAISSON FOUNDATION INSTALLATION SHALL BE IN ACCORDANCE WITH ACI 336, "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF DRILLED PIERS", LATEST EDITION. CONCRETE CYLINDERS SHALL BE MADE AND TESTED. A MINIMUM OF ONE (1) SET SHALL BE TAKEN FROM CONCRETE IN FOUNDATION. EACH SET SHALL CONSIST OF THREE (3) CYLINDERS. ONE SHALL BE TESTED AT SEVEN (7) DAYS, THE SECOND SHALL BE TESTED AT TWENTY EIGHT (28) DAYS AND THE LAST CYLINDER SHALL BE A HOLD. ALL CYLINDERS SHALL BE TAKEN, PREPARED AND TESTED BY A TESTING LAB IN ACCORDANCE WITH ASTM STANDARDS C172, C31 AND C39.
7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615. PRIMARY REINFORCING BARS SHALL BE GRADE 60, AND TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. THE PLACEMENT OF ALL REINFORCEMENT SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION, UNLESS OTHERWISE DETAILED ON THIS SHEET.
8. ESTIMATED CONCRETE VOLUME = 14 CUBIC YARDS.
9. THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS: MOMENT: 705 FT\*KIPS; SHEAR: 10 KIPS; AXIAL: 15 KIPS



## CAISSON FOUNDATION

SCALE: NTS



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