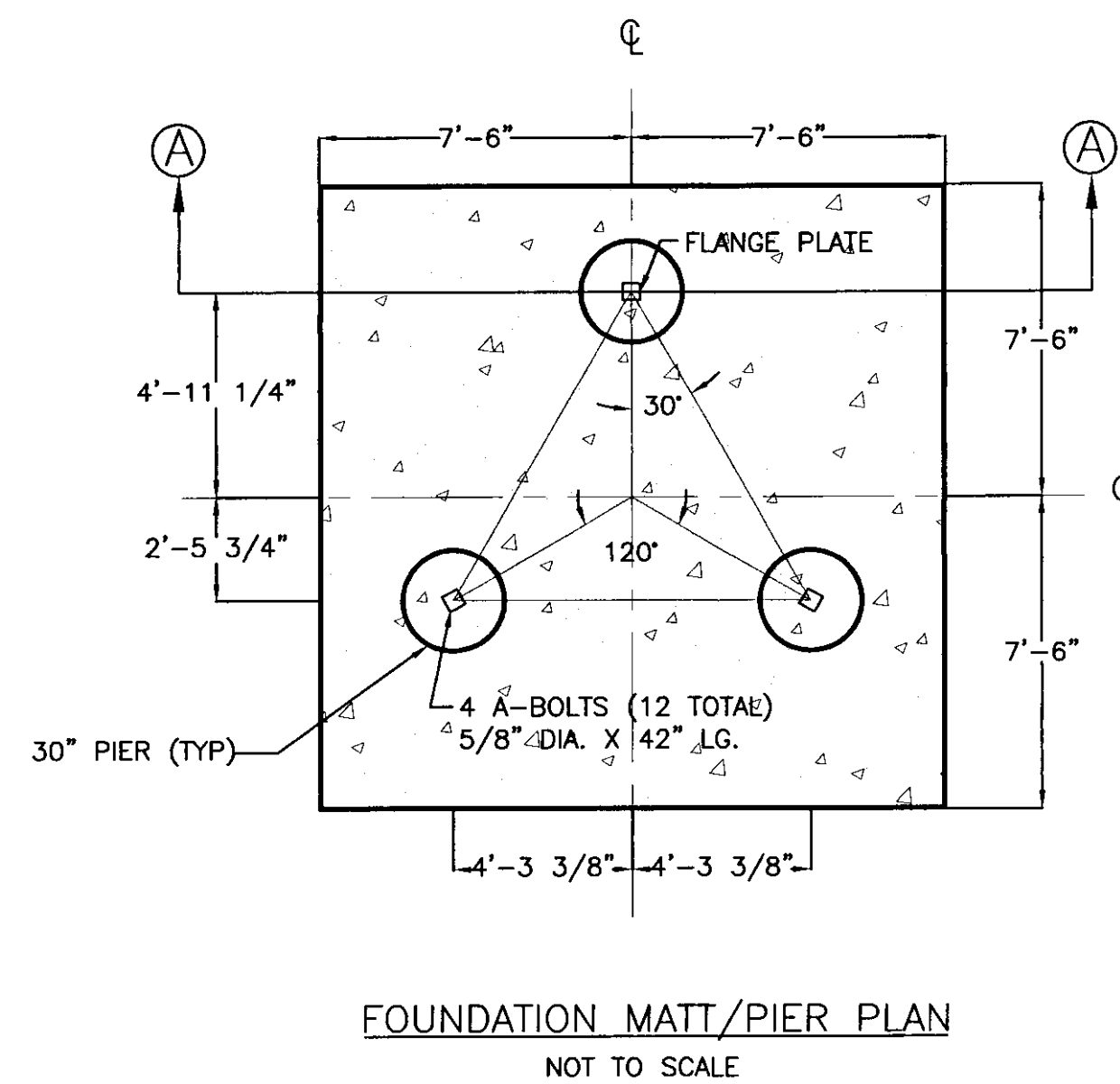
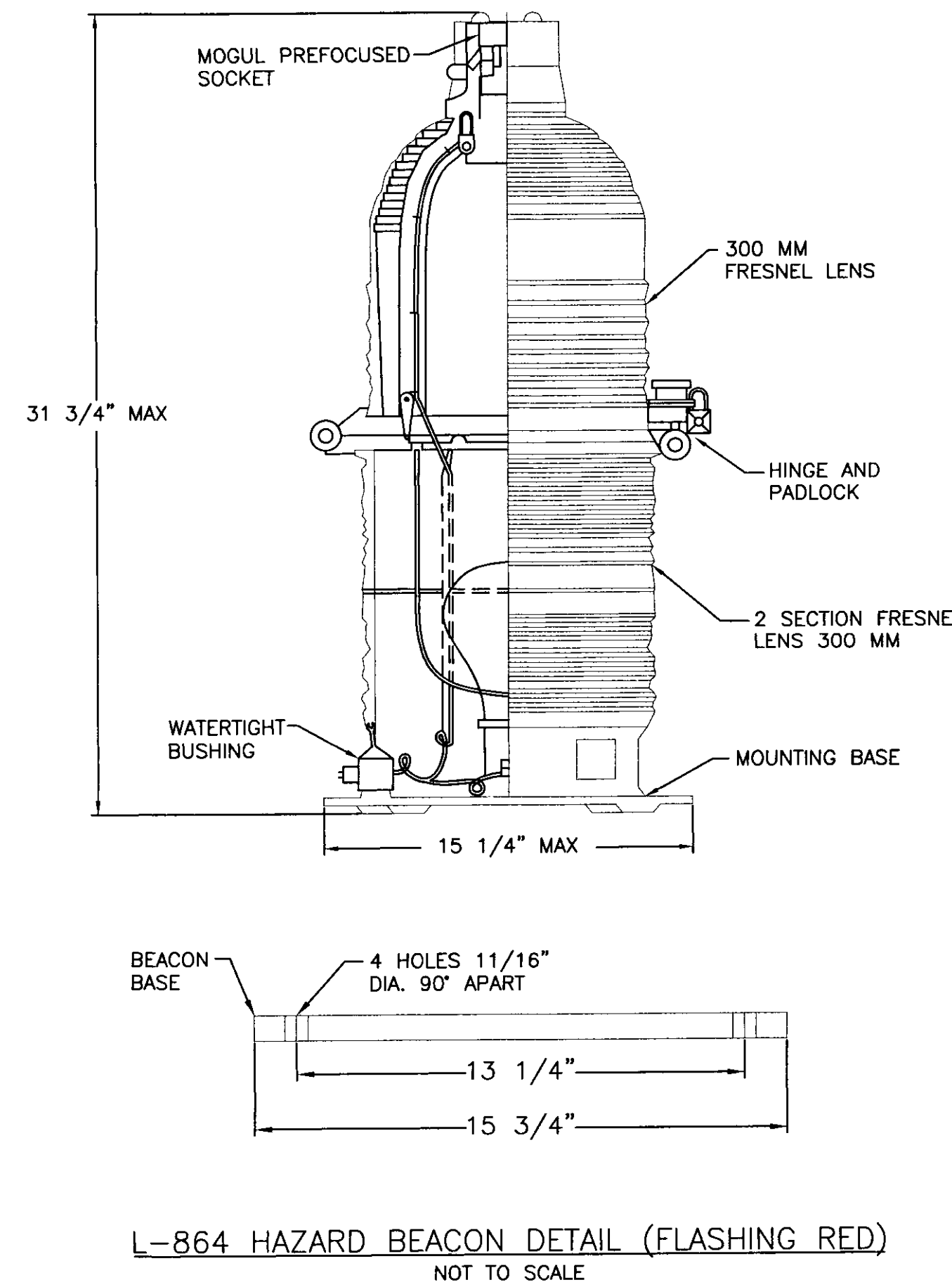
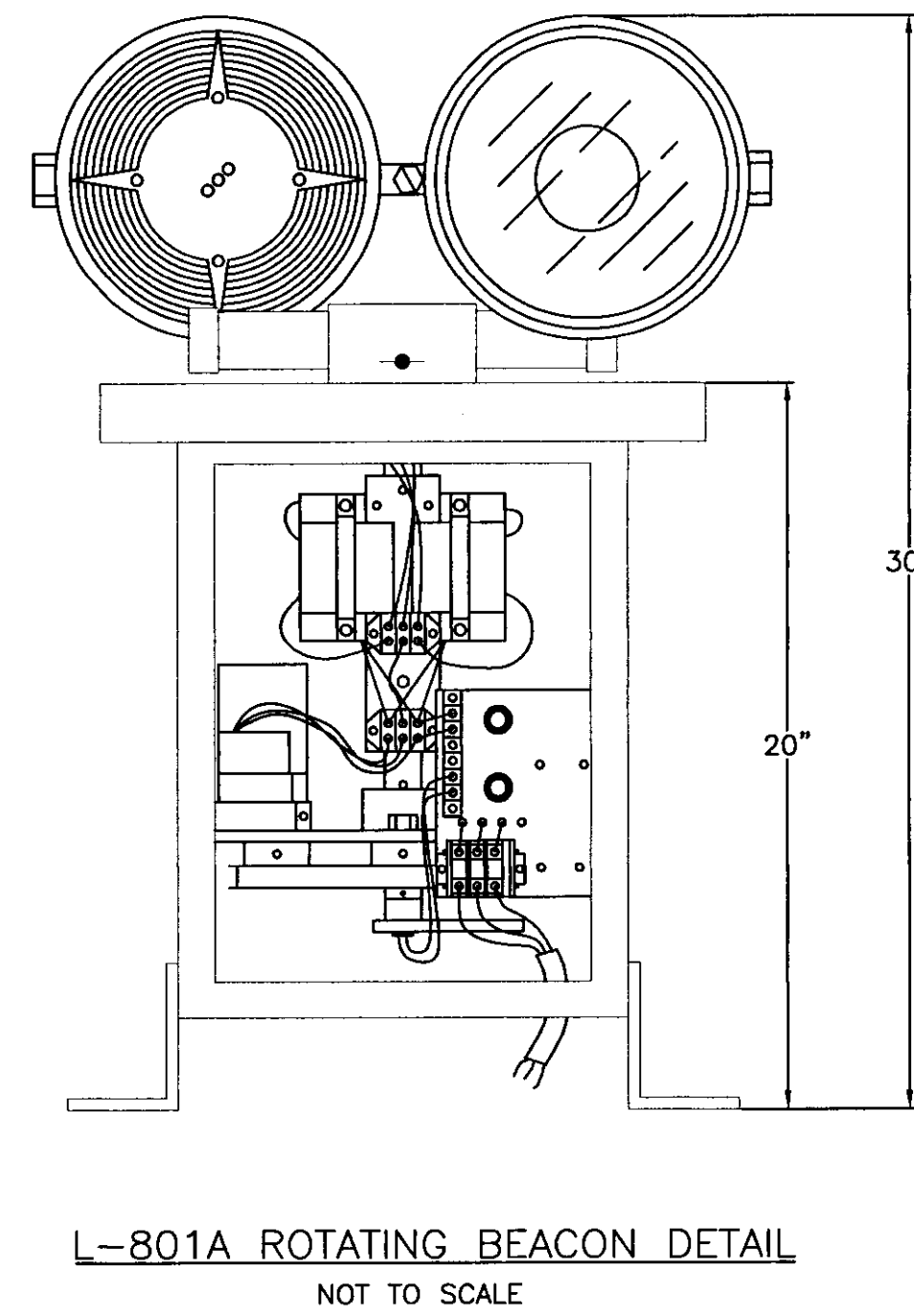
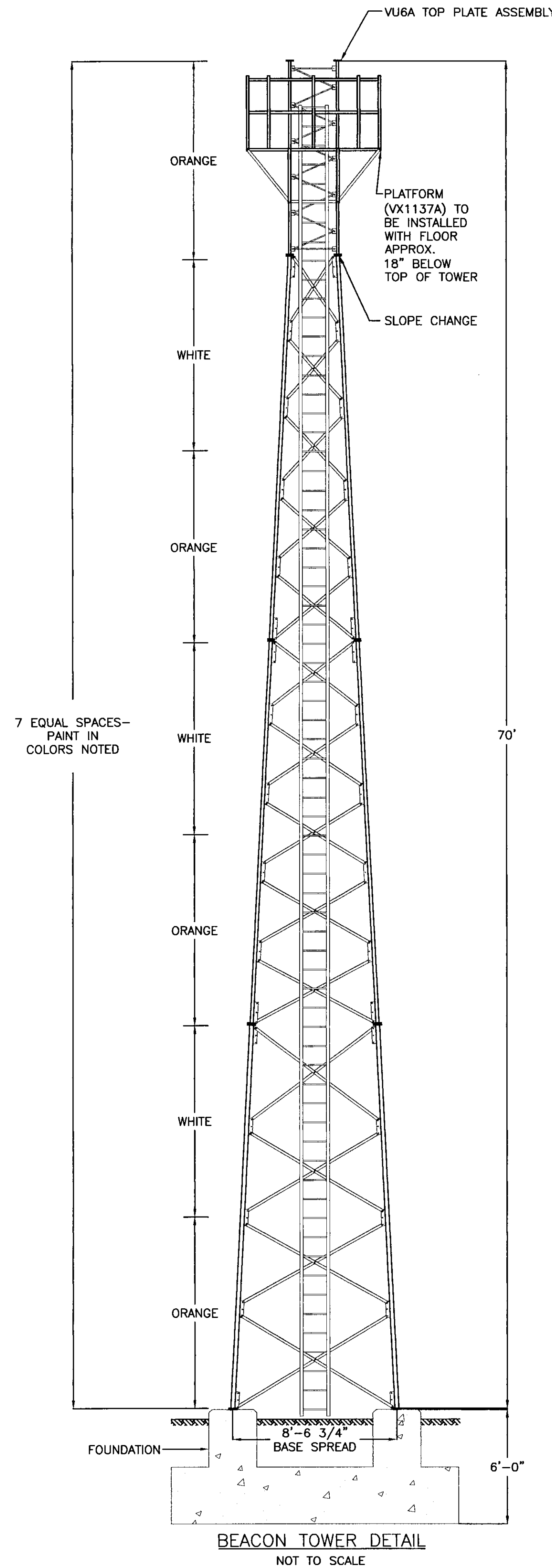


GENERAL STRUCTURAL NOTES FOR CONSTRUCTION OF TOWER FOUNDATION

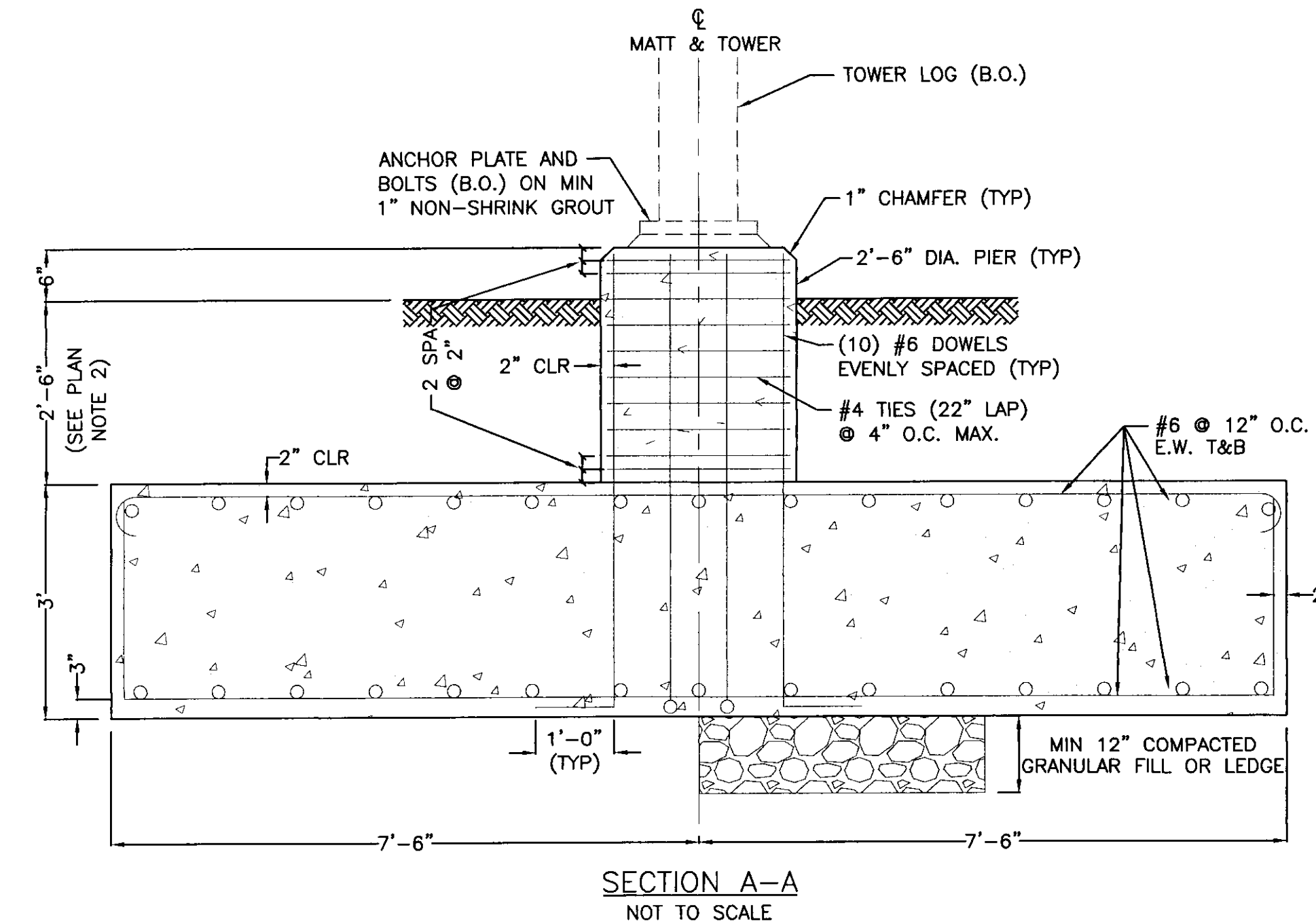
- CONTRACTOR TO VISIT SITE; TO VERIFY EXISTING CONDITIONS AFFECTING WORK SHOWN (INCLUDING BUT NOT LIMITED TO POSSIBLE OBSTRUCTIONS, EXISTING UTILITIES, SITE RESTRICTIONS, ETC...).
- CONTRACTOR SHALL WORK WITH OWNER AND APPLICABLE PRIVATE/PUBLIC ENTITIES TO LOCATE UNDERGROUND UTILITY LINES BEFORE CONSTRUCTION BEGINS. CARE SHALL BE TAKEN TO AVOID DISRUPTION OF EXISTING SERVICES EXCEPT AS APPROVED BY THE OWNER. REPAIR OF SERVICE LINES DISRUPTED BY CONTRACTOR SHALL BE AT CONTRACTOR'S EXPENSE.
- DISPOSE OF ALL EXCESS FILL AND DEMOLITION MATERIALS AT A SUITABLE LOCATION IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS AND AS DIRECTED BY THE OWNER.
- ALL AREAS DISTURBED (DIRECTLY OR INDIRECTLY) AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR RESTORED BY CONTRACTOR, AT NO COST TO OWNER.
- CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH INDUSTRY PRACTICES AND THE REQUIREMENTS OF BOCA 1999 (BUILDING CODE), ASTM C94 (SPECIFICATION FOR READY MIX CONCRETE) AND ACI 301 (SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS) AND WITH ACI RECOMMENDATIONS FOR CONCRETE FORM WORK, PLACEMENT (INCLUDING HOT/COLD WEATHER PROCEDURES), FINISHING, CURING AND PROTECTION.
- MATERIALS:
 - BEARING MATERIAL (NATIVE UNDISTURBED MATERIAL, FILL OR LEDGE): ALLOWABLE SOIL BEARING = 3000 PSF
 - CONCRETE STRENGTH: (F'C) = 4000 PSI, W/C RATIO = .50 (MAX), SLUMP = 4" (MAX), AIR = 5% - 7%, CALCIUM CHLORIDE NOT PERMITTED IN ACCELERATOR OR OTHER ADDITIVE.
 - REBAR: ASTM 615, GRADE 60
 - NON-SHRINK GROUT: COMPLYING WITH CRD-C 621, NON-METALLIC GROUT WITH MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI
- STRUCTURAL FILL BELOW FOOTINGS SHALL MEET GRADATION AND COMPACTION REQUIREMENTS AS FOLLOWS:
 - GRANULAR FILL SHALL BE AN APPROVED, WELL GRADED BANK RUN OR CRUSHED RUN GRAVEL MEETING THE FOLLOWING REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
2"	100
NO. 4	40-70
NO. 100	5-20
NO. 200	4-8
 - THE MATERIAL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557, MODIFIED PROCTOR.
- THE MATT FOOTING IS DESIGNED TO BEAR ON COMPACTED GRANULAR FILL, AT A DEPTH OF 5'-6" (FROST) BELOW GRADE. IF LEDGE IS ENCOUNTERED AT A DEPTH LESS THAN 5'-6", THEN THE SOIL COVER REQUIREMENT SHOWN ON SECTION 1 (2'-6" COVER) MAY BE REDUCED TO 1'-0" PROVIDED THE MATT BEARS COMPLETELY ON LEDGE. UNDER NO CIRCUMSTANCES MAY THE MATT BE PLACED SUCH THAT IT BEARS PARTLY ON FILL AND PARTLY ON LEDGE. WHERE THIS MIGHT OCCUR, FILL CONCRETE (2000 PSI CONCRETE) MAY BE PLACED TO OBTAIN A CONSISTANT TOP OF LEDGE ELEVATION PRIOR TO PLACING THE FOUNDATION MATT. WHERE MATT IS TO BEAR ON LEDGE, THOROUGHLY CLEAN THE SURFACE OF THE LEDGE (I.E. REMOVE ALL DIRT AND DEBRIS) PRIOR TO PLACING CONCRETE.
- EXCAVATION BOTTOM AND STRUCTURAL FILL PLACEMENT/COMPACTION PROCEDURES SHALL BE MONITORED BY DUBOIS & KING OR OTHER QUALIFIED INSPECTION AGENCY, TO INSURE THAT FOUNDATION SUB-BASE IS PROPERLY PLACED AND PREPARED TO OBTAIN MINIMUM SOIL BEARING PRESSURES.
- HARDWARE, FOR BEACON TOWER ANCHORAGE TO CONCRETE FOUNDATION, IS TO BE FURNISHED AND INSTALLED (INCLUDING DESIGN AND DETAILING) BY THE VENDOR. REQUIRED HARDWARE MAY INCLUDE, BUT IS NOT LIMITED TO, TEMPLATES, ANCHOR BOLTS, BOLT HARNESSSES, ETC.
- OWNER MAY RETAIN SERVICES OF TESTING/INSPECTION AGENCY TO PROVIDE QUALITY ASSURANCE DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO THE WORK AREA TO PERMIT AGENCY TO PERFORM TESTS AND INSPECTIONS REQUESTED BY THE OWNER. NOTIFY AGENCY SUFFICIENTLY IN ADVANCE (GENERALLY 24 HOURS) FOR ANY WORK THAT IS TO BE INSPECTED OR TESTED.
- DESIGN LOADS (UNFACTORED) APPLIED TO TOP OF PIER:
 - COMPRESSION = 48 KIPS/LEG
 - TENSION = 45 KIPS/LEG
 - BASE SHEAR = 6 KIPS (2 KIPS/LEG)
 - OVERTURNING MOMENT = 337 FOOT KIPS



- NOTES:
- PIERS ARE TO BE CENTERED BELOW TOWER LEGS. CONFIRM PIER AND TOWER CENTERLINE LOCATIONS WITH ROHN PRIOR TO SETTING CONCRETE FORMWORK.
 - PROVIDE MINIMUM 24" OF SOIL COVER OVER MATT FOUNDATION EXCEPT THAT COVER MAY BE REDUCED TO 1'-0" MINIMUM WHERE ENTIRE MATT BEARS ON LEDGE.

TOWER REACTIONS	
COMPRESSION	48 KIPS/LEG
TENSION	45 KIPS/LEG
TOTAL SHEAR	16 KIPS/LEG SHARED
O.T.M.	337 FT-KIPS



- NOTES:
- TOWER TO BE 70' ROHN MODEL SSV BEACON TOWER ASSEMBLY.
 - BEACON TOWER ARE TO INCLUDE PLATFORM AND FACE-MOUNTED CLIMBING LADDER AS SHOWN ON DETAIL.
 - TOWER IS TO BE USED FOR ROTATING BEACON AND BOTH HAZARD BEACONS.

NO.	DATE	REVISIONS	BY	CK'D

engineering planning management development

DuBois & King inc.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CALEDONIA COUNTY STATE AIRPORT

BEACON TOWER DETAILS

DRAWN BY	DATE
MDL	JULY 2001
CHECKED BY	PROJ. NO.
JAA	N17151
PROJ. ENG.	DRAW. NO.
JAA	C171510014
SHEET 11 OF 13	

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