

SUMMARY OF AIR QUANTITIES

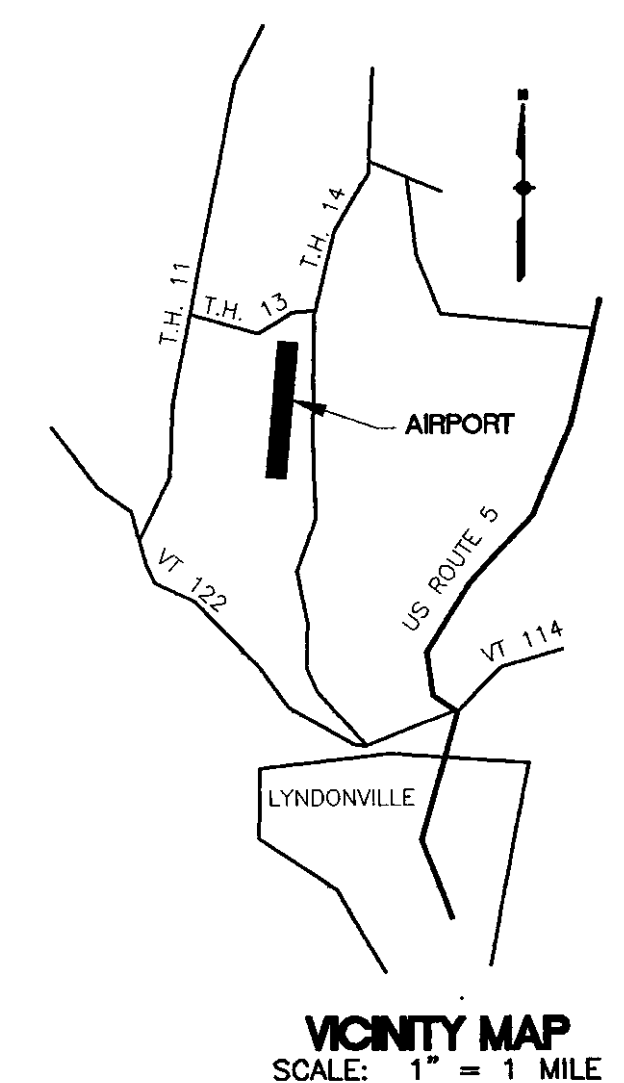
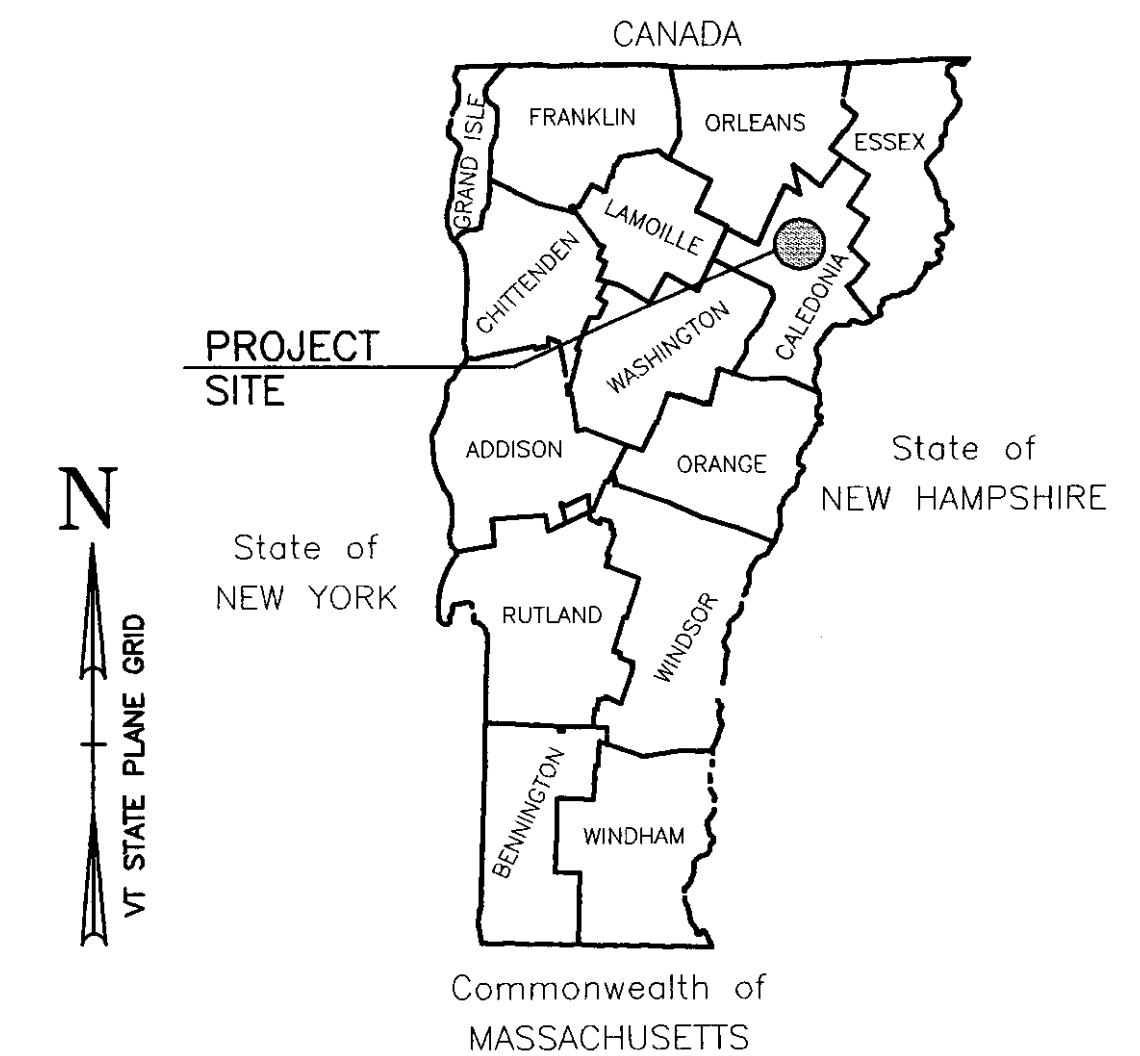
VAOT ITEM#	DESCRIPTION	UNIT	QUANTITIES	
			EST.	AS BUILT
201.10	CLEARING & GRUBBING (PLUS INV. TREES & STUMPS)	AC	13.25	
203.15	COMMON EXCAVATION	CY	145	
204.20	TRENCH EXCAVATION	CY	1,315	
631.10	FIELD OFFICE - ENGINEERS	LS	1	
631.25	FIELD OFFICE TELEPHONE (N.A.B.I)	LU	1	
635.10	MOBILIZATION	LS	1	
649.20	SILT FENCE	SY	960	
651.15	SEED	LB	1155	
651.18	FERTILIZER	LB	2410	
651.25	MULCH	TON	26.5	
651.35	TOPSOIL	CY	7125	
	OVERHEAD ELECTRICAL SERVICE	LF	4680	
	L-101 ROTATING BEACON	EACH	1	
	L-102 HAZARD BEACON	EACH	2	
	L-103 BEACON TOWERS	EACH	3	
	L-107 WIND CONE	LS	1	
	L-108 UNDERGROUND CABLE, IN CONDUIT	LF	17,750	
	L-108 CABLE TRENCH (MOD)(SAWCUTTING P-410)	LF	463	
	L-108 COUNTERPOISE WIRE, IN CONDUIT	LF	17,750	
	L-109 ELECTRIC ROOM & EQUIPMENT	LS	1	
	L-110 2-WAY X 4" DIA. U.G. ELECTRICAL DUCT	LF	80	
	L-110 4-WAY X 4" DIA. U.G. ELECTRICAL DUCT	LF	310	
	L-110 6-WAY X 4" DIA. U.G. ELECTRICAL DUCT	LF	110	
	L-110 ELECTRICAL HANDHOLE	EACH	1	
	L-110A 2" SCHEDULE 40 PVC CONDUIT	LF	17,250	
	L-125 GUIDANCE SIGNS 1-PANEL	EACH	7	
	L-125 GUIDANCE SIGNS 2-PANEL	EACH	4	
	L-125 GUIDANCE SIGNS 3-PANEL	EACH	2	
	L-125 RUNWAY END IDENTIFIER LIGHTS	EACH	4	
	L-125 RUNWAY END/THRESHOLD LIGHTS	EACH	12	
	L-125 MEDIUM INTENSITY R/W LIGHTS, BASE MOUNTED	EACH	30	
	L-125 MEDIUM INTENSITY T/W LIGHTS, BASE MOUNTED	EACH	54	
	L-125 PRECISION APPROACH PATH INDICATOR	EACH	2	

# STATE OF VERMONT AGENCY OF TRANSPORTATION



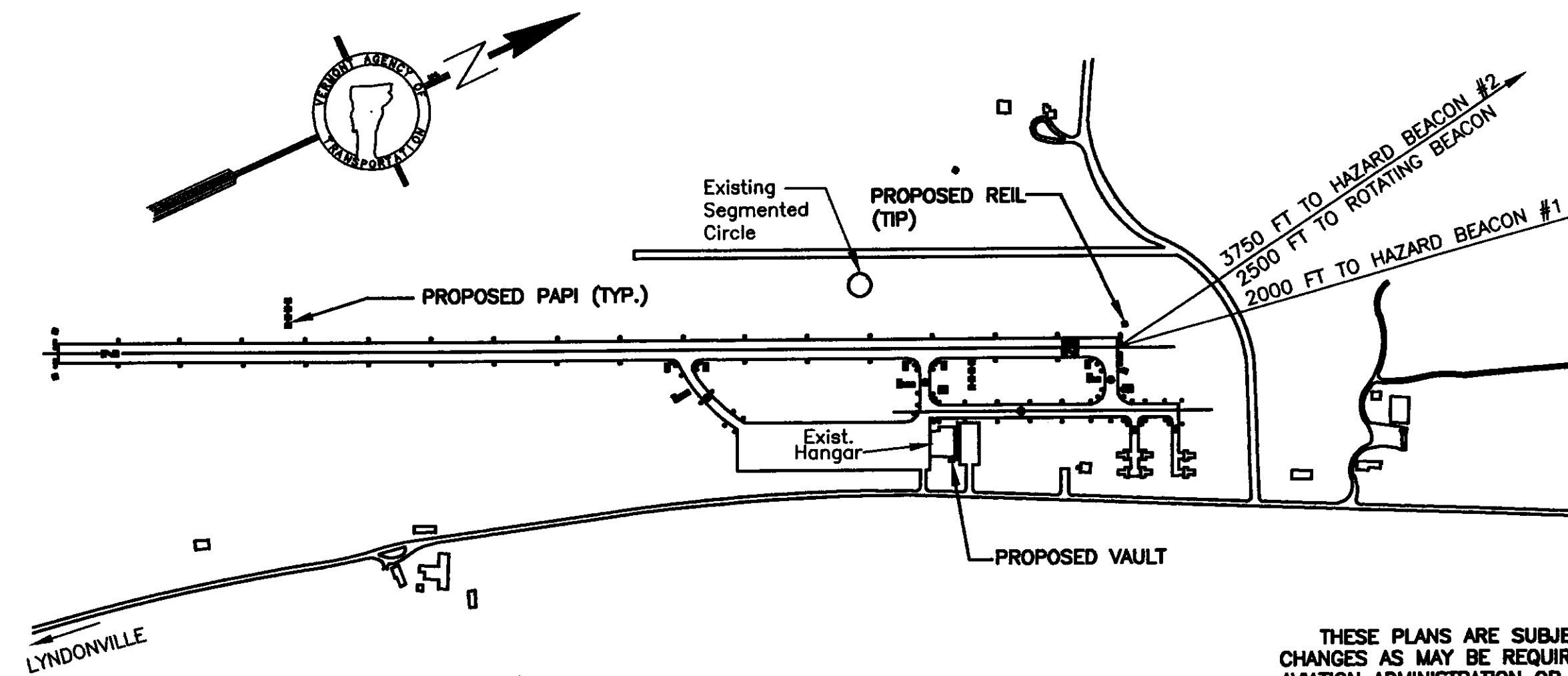
## PROPOSED IMPROVEMENT TOWN OF LYNDON COUNTY OF CALEDONIA CALEDONIA COUNTY STATE AIRPORT AIR No. 04-3032

MEDIUM INTENSITY RUNWAY LIGHTING SYSTEM (MIRLS),  
MEDIUM INTENSITY TAXIWAY LIGHTING SYSTEM (MITLS),  
RUNWAY END IDENTIFICATION LIGHT SYSTEM (REILS),  
OFF-AIRPORT ROTATING BEACON, TWO HAZARD BEACONS  
AND OBSTRUCTION REMOVAL



CONVENTIONAL SIGNS

COUNTY LINE	---
TOWN LINE	----
LIMITS OF ACCESS	—o—o—
POINT OF ACCESS	X
FENCE LINE	—x—x—
STONE WALL	oooooo
TRAVELED WAY	—o—o—
GUARD RAIL	—o—o—
RAILROAD	—+—+—
SURVEY LINE	—+—+—
CULVERT	—x—x—
POWER POLE	o
TELEPHONE POLE	o
TREES	o
CONTROL OF ACCESS	—/—/—
PROPERTY LINE	—+—+—
R.O.W. TAKING LINE	—SR—
SLOPE RIGHTS	—o—o—
TOP OF CUT	—+—+—
TOE OF SLOPE	—o—o—



**PRELIMINARY**

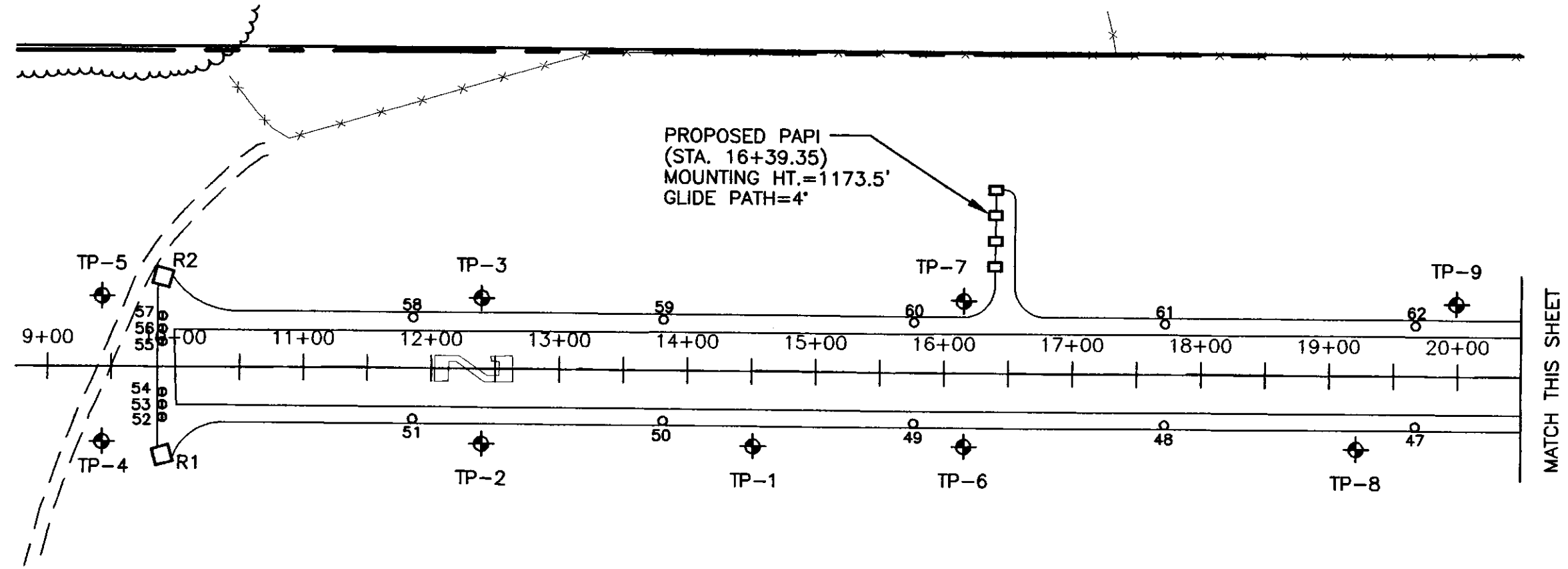
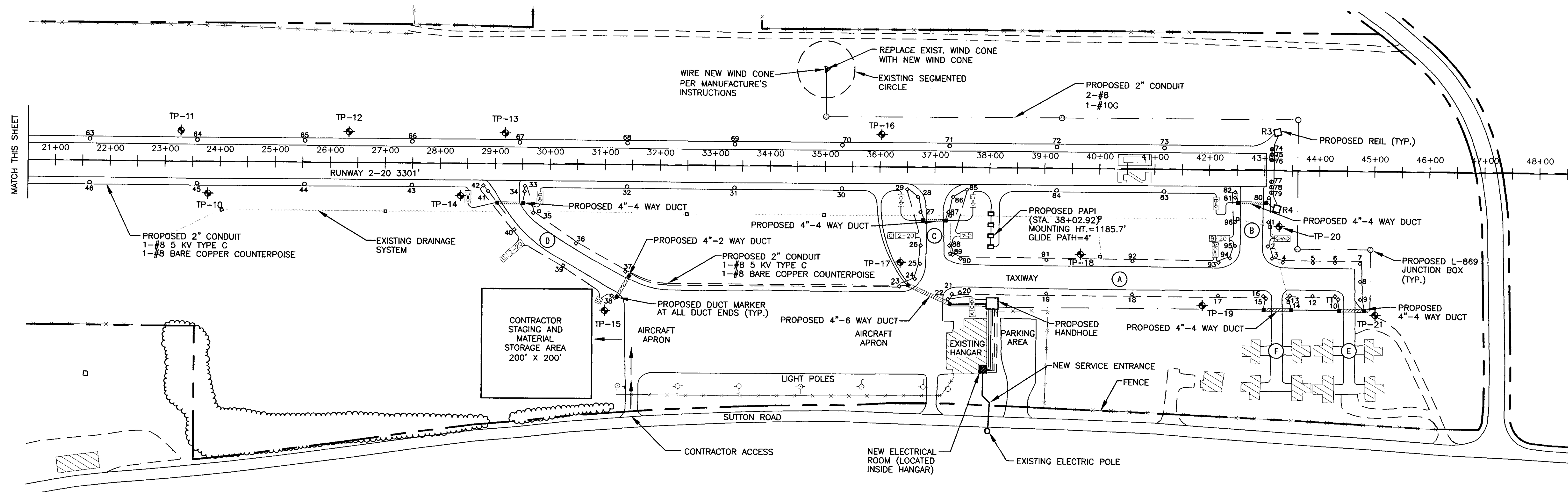
THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION OR THE CHIEF ENGINEER. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED JULY 1, 1999, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS AND SPECIFICATIONS ARE IN PLANS, ACCORDANCE WITH CRITERIA IN CURRENT FAA ADVISORY CIRCULARS AS OF JULY 1, 1999.

INDEX OF SHEETS

1. COVER SHEET
2. LIGHTING AND ELECTRICAL SITE PLAN
3. ELECTRICAL PLANS AND DETAILS
4. LIGHTING DETAILS
5. CONSTRUCTION DETAILS
6. PAPI MOUNTING PLAN SECTIONS AND FOUNDATION DETAILS
7. PAPI GENERAL INSTALLATION DETAILS
8. ELECTRICAL PLAN AND PROFILE HAZARD BEACON 1 PLAN ROTATING BEACON
9. PLAN AND PROFILE HAZARD BEACON 2
10. ELECTRICAL DETAILS
11. BEACON TOWER DETAILS
12. APPROACH CLEARING PLAN RUNWAY 2
13. APPROACH CLEARING PLAN RUNWAY 20

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FEDERAL AVIATION ADMINISTRATION	PREPARED BY <b>DuBois &amp; King</b> engineering    planning    management    development 100 PERIMETER ROAD NASHUA N.H. 03063 TEL. (603)883-0463    FAX (603)595-7877	SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD APPROVED _____ DATE _____ DIRECTOR DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION APPROVED _____ DATE _____ DIVISION ADMINISTRATOR PROJECT _____ SHEET 1 OF 13
APPROVED: CHIEF, AIRPORTS BRANCH    DATE: _____	APPROVED _____    DATE _____	



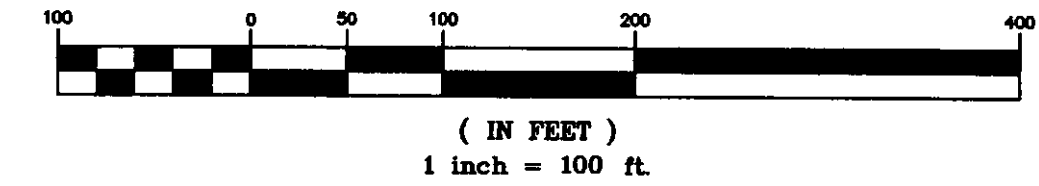
**ELECTRICAL NOTES**

- No. 8 BARE COPPER STRANDED COUNTERPOISE WIRE TO BE INSTALLED ABOVE CONDUIT. SEE LIGHTING DETAIL SHEET.
- ALL RUNWAY AND TAXIWAY LIGHTING ELECTRICAL CABLES SHALL BE No. 8, 5KV, FAA L-824, TYPE C, UNLESS OTHERWISE NOTED.
- RUNWAY & TAXIWAY LIGHTS ARE TO BE INSTALLED 10' BACK FROM EDGE OF PAVEMENT, CABLE IS TO BE INSTALLED 13' BACK FROM EDGE OF PAVEMENT. (UNLESS SPECIFICALLY SHOWN OTHERWISE ON PLANS.)
- RUNWAY HOLD SIGNS (DESIGNATED WITH NUMERALS AND LETTERS) ARE TO BE INSTALLED 20' OFF THE TAXIWAY EDGE OF PAVEMENT AND IN-LINE WITH THE RUNWAY HOLD PAVEMENT MARKINGS. FACE OF SIGN IS TO BE PERPENDICULAR TO TAXIWAY CENTERLINE. SEE LIGHTING DETAIL SHEET.
- TAXIWAY DIRECTIONAL SIGNS (DESIGNATED WITH LETTERS AND ARROWS) ARE TO BE INSTALLED 20' OFF THE TAXIWAY EDGE OF PAVEMENT. SIGNS ARE TO BE INSTALLED 6± PRIOR TO CENTERLINE OF DESIGNATED TAXIWAY AND PERPENDICULAR TO RUNWAY CENTERLINE. SEE LIGHTING DETAIL SHEET.
- DIRECTION SIGNS, RUNWAY & TAXIWAY LIGHTS AND WIND CONE ARE DESCRIBED IN THE SPECIFICATIONS.
- ALL CABLE CONNECTIONS ARE TO FOLLOW FAA L-823 REQUIREMENTS, AND SHALL BE MADE AT THE NEAREST LIGHT OR SIGN.
- ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS WHICH ARE DISTURBED BY THE INSTALLATION OF ANY ELECTRICAL ITEM SHALL BE REPAIRED TO ORIGINAL CONDITION, OR BETTER, AT NO COST TO THE OWNER. THIS WORK INCLUDES, BUT IS NOT LIMITED TO, REGRADING, SEEDING, MULCHING, AND FERTILIZER, AND IS TO BE SUBSIDIARY TO ITEM L-108 - CABLE TRENCH.
- STATION AND OFFSET CALL-OUTS ON THE RUNWAY & TAXIWAY LIGHTS ARE FROM THE RUNWAY CENTERLINE.
- ALL EXCESS ELECTRICAL COMPONENTS WILL BE STORED OR DISPOSED OF AS DIRECTED BY THE ENGINEER.

**OPERATIONAL NOTES**

- RUNWAY 2-20 MUST BE CLOSED DURING WORK WITHIN 5' OF EDGE OF RUNWAY. THIS CONSISTS OF WORK ASSOCIATED WITH PLACEMENT OF THE RUNWAY DUCTS AND ASSOCIATED LIGHTING.
- NOTAM'S MUST BE ISSUED AT LEAST 48 HOURS IN ADVANCE OF ANY AIRPORT STATUS CHANGE. THERE CAN BE NO EXCEPTIONS. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE WITH THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.
- THE CONTRACTOR WILL BE REQUIRED TO SUBMIT AND ABIDE BY A SCHEDULE OF WORK APPROVED BY THE ENGINEER PRIOR TO STARTING ANY CONSTRUCTION. ANY PROPOSED DEVIATION FROM THIS SCHEDULE WILL REQUIRE ANOTHER SUBMISSION AND APPROVAL PRIOR TO ANY CHANGE.
- WORK WITHIN 75' OF EDGE OF RUNWAY WILL REQUIRE SPECIAL COORDINATION WITH AIRPORT OPERATIONS THRU DIRECT COMMUNICATION WITH THE AIRPORT MANAGER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE EQUIPMENT FROM THIS AREA WITHIN A 15 MINUTE NOTICE FROM THE AIRPORT MANAGER TO ENABLE ARRIVING AND DEPARTING AIRCRAFTS TO OPERATE. THIS WORK SHALL CONSIST OF PLACEMENT OF RUNWAY LIGHTS AND SIGNS.
- WORK ADJACENT TO AND ON TAXIWAYS SHALL BE LIMITED TO ONE TAXIWAY SEGMENT AT A TIME. CLOSURE OF TAXIWAYS E AND F SHALL BE LIMITED TO THE VERY MINIMUM TIME.
- IT IS EXPECTED ALL AIRCRAFT SURFACES WILL BE AVAILABLE FOR USE AT THE CONCLUSION OF CONSTRUCTION EACH DAY. THE CONTRACTOR MUST RETURN THE WORK AREA TO SAFE OPERATIONAL AT THE END OF EACH WORK SHIFT.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPLYING AND PLACING "X" ON THE RUNWAY NUMERALS TO SIGNIFY RUNWAY CLOSURE. SEE LIGHTING DETAIL FOR REQUIRED MARKING DIMENSIONS.
- CONSTRUCTION EQUIPMENT SHALL BE MOVED TO STAGING AND MATERIAL STORAGE AREAS AFTER EACH WORK DAY. NO CONSTRUCTION EQUIPMENT SHALL BE STORED ON PAVED AIRPORT SURFACES DURING NON-WORK HOURS.
- CONSTRUCTION STAGING AND MATERIAL STORAGE AREAS SHALL BE CONFINED TO THOSE AREAS INDICATED ON THE PLANS. SILT FENCE AND/OR EROSION CONTROL MEASURES SHALL BE ESTABLISHED FOR ALL STOCKPILED MATERIAL.
- CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO ACTUAL CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER.

GRAPHIC SCALE



**LEGEND**

- PROPERTY LINE
- - - - - EXISTING FENCE LINE
- (A) PROPOSED TAXIWAY DESIGNATION
- (2-20) PROPOSED HOLD SIGN
- (R) PROPOSED TAXIWAY LOCATION SIGN
- (R) PROPOSED RUNWAY EXIT/TAXIWAY DIRECTION SIGN
- PROPOSED RUNWAY END IDENTIFICATION LIGHT (REIL)
- PROPOSED PRECISION APPROACH PATH INDICATOR (PAPI)
- PROPOSED RUNWAY EDGE LIGHT
- ◇ PROPOSED TAXIWAY EDGE LIGHT
- PROPOSED RUNWAY END LIGHT
- PROPOSED DUCT MARKER
- PROPOSED JUNCTION BOX
- RUNWAY LIGHTING CIRCUIT
- - - TAXIWAY LIGHTING CIRCUIT
- WIND CONE LIGHTING CIRCUIT

RUNWAY AND TAXIWAY LIGHTING SCHEDULE								
(STATION AND OFFSET REFER TO SURVEY BASELINE)								
LIGHT #	STA.	OFFSET	LIGHT #	STA.	OFFSET	LIGHT #	STA.	OFFSET
1	43+07.57	93.97'	35	29+70.08	89.08'	69	33+35.43	-40.00'
2	43+07.10	137.95	36	30+48.51	143.89'	70	35+30.86	-40.00'
3	43+14.95	160.03'	37	31+35.56	184.91'	71	37+26.29	-40.00'
4	43+34.63	167.26'	38	31+14.27	239.38'	72	39+21.72	-40.00'
5	43+88.92	167.49'	39	30+25.25	184.82'	73	41+17.15	-40.00'
6	44+29.09	167.48'	40	29+35.73	119.58'	74	43+12.82	-40.00'
7	44+74.52	167.88'	41	28+87.37	50.00'	75	43+12.62	-30.00'
8	44+75.30	200.73'	42	28+78.58	40.00'	76	43+12.62	-20.00'
9	44+76.08	233.52'	43	27+49.14	40.00'	77	43+12.62	20.00'
10	44+35.58	233.51'	44	25+53.71	40.00'	78	43+12.62	30.00'
11	44+29.81	228.07'	45	23+58.28	40.00'	79	43+12.62	40.00'
12	43+88.92	227.92'	46	21+82.85	40.00'	80	43+08.05	50.00'
13	43+48.03	227.74'	47	19+67.42	40.00'	81	42+46.68	50.00'
14	43+43.57	232.94'	48	17+71.99	40.00'	82	42+46.68	40.00'
15	43+04.81	233.32'	49	15+78.58	40.00'	83	41+17.15	40.00'
16	42+99.85	229.00'	50	13+61.13	40.00'	84	39+21.72	40.00'
17	42+17.31	228.93'	51	11+85.70	40.00'	85	37+58.71	40.41'
18	40+61.15	228.64'	52	09+80.27	40.00'	86	37+33.81	54.45'
19	39+04.66	228.35'	53	09+80.27	30.00'	87	37+25.34	81.75'
20	37+47.82	228.07'	54	09+80.27	20.00'	88	37+27.52	142.32'
21	37+32.71	230.80'	55	09+80.27	-20.00'	89	37+33.49	158.59'
22	37+25.73	240.28'	56	09+80.27	-30.00'	90	37+48.16	166.28'
23	36+36.81	217.46'	57	09+80.27	-40.00'	91	39+04.66	167.12'
24	36+84.89	203.70'	58	11+85.70	-40.00'	92	40+61.15	167.99'
25	36+74.53	176.21'	59	13+81.13	-40.00'	93	42+17.64	168.85'
26	36+75.53	142.32'	60	15+76.58	-40.00'	94	42+38.24	160.48'
27	36+74.46	81.74'	61	17+71.99	-40.00'	95	42+47.55	137.85'
28	36+69.55	54.45'	62	19+67.42	-40.00'	96	42+47.12	93.97'
29	36+49.81	40.41'	63	21+62.85	-40.00'	97		
30	35+30.86	40.00'	64	23+58.28	-40.00'	R1	09+80.27	70.00'
31	33+35.43	40.00'	65	25+53.71	-40.00'	R2	09+80.27	-70.00'
32	31+40.00	40.00'	66	27+48.14	-40.00'	R3	43+22.82	-70.00'
33	29+54.27	40.00'	67	29+44.57	-40.00'	R4	43+22.82	70.00'
34	29+54.10	50.00'	68	31+40.00	-40.00'			

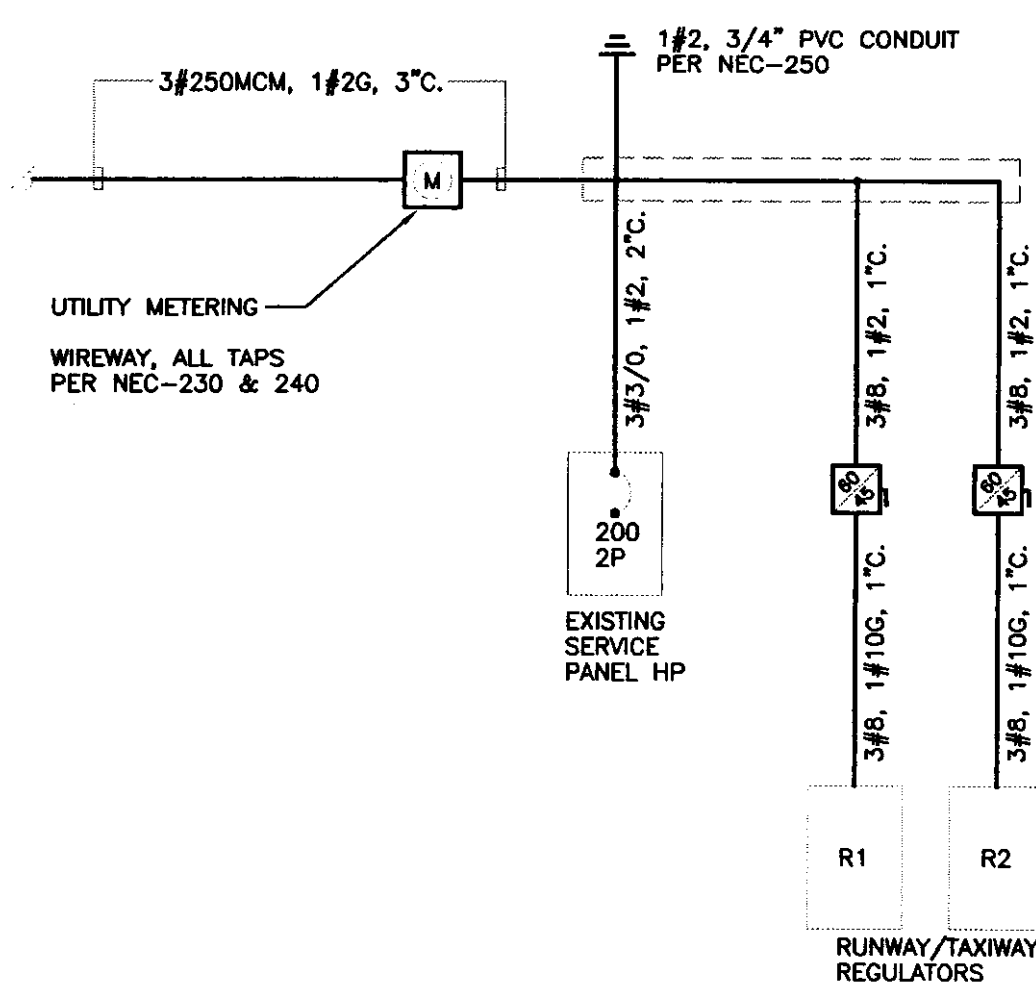
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STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
 CALEDONIA COUNTY STATE AIRPORT  
 LIGHTING AND ELECTRICAL  
 SITE PLAN

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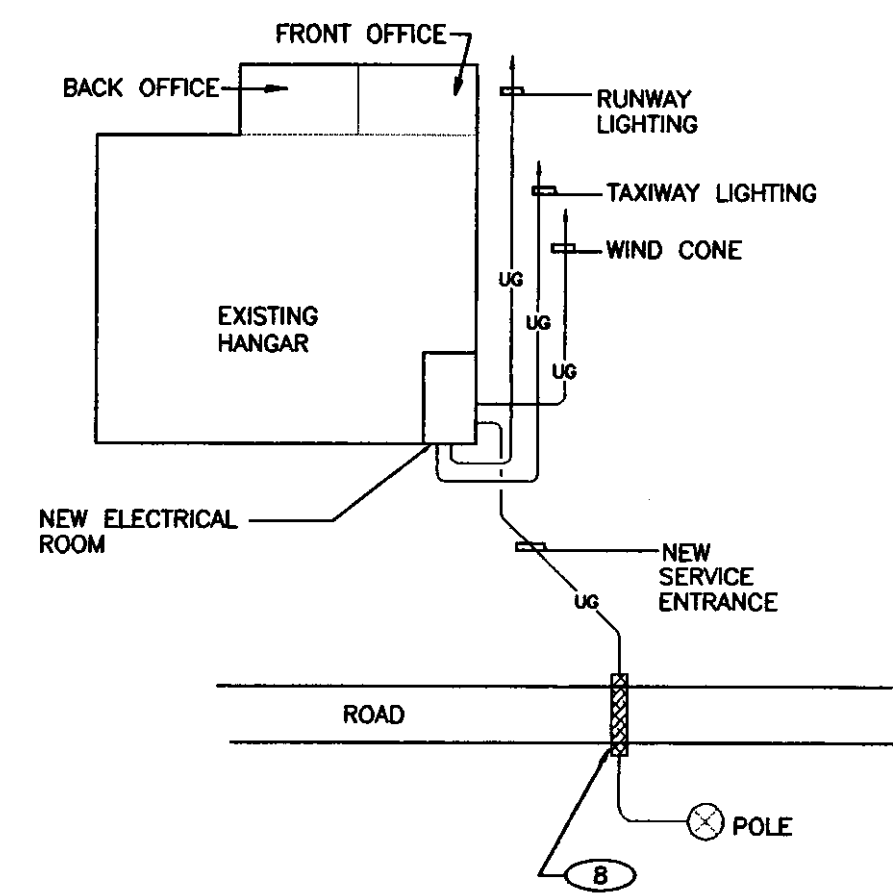
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### ONE LINE DIAGRAM

NOT TO SCALE

- NOTES:  
1. ALL CONDUCTORS ARE CU 600V INSULATED EXCEPT BONDING AND GROUND CONDUCTORS MAY BE BARE.



### ELECTRICAL SITE PLAN

NOT TO SCALE

### ELECTRICAL LEGEND

- Ⓚ ALARM BELL - TEL=TELEPHONE, SEW=SEWAGE PUMP STATION
- Ⓛ CONTACTOR, MH=6"-0" TO TOP
- ⓁⓂ AUTO-TRANSFORMER, MH=6"-0" TO TOP
- Ⓛ SINGLE POLE SWITCH W/ PILOT, LEVITON #5336-1 OR EQUIVALENT, MH=4"-0"
- Ⓛ DUPLEX RECEPTACLE (20A, 125 VOLTS), LEVITON #5896-1 OR EQUIVALENT, MH=3"-0" TO TOP
- Ⓛ LAMPHOLDER, LEVITON KEYLESS #9875 OR EQUIVALENT
- Ⓛ PHOTO CELL
- Ⓛ CONTROL PANEL INDICATOR LIGHT
- Ⓛ UNDERGROUND WIRING
- 200A-2P CIRCUIT BREAKER, TRIP AMPS AND POLES INDICATED
- Ⓛ FUSED SWITCH, FUSE AMPS/FRAME SIZE INDICATED
- Ⓛ EXISTING PANELBOARD, 120/240V, 1PH, 3W.

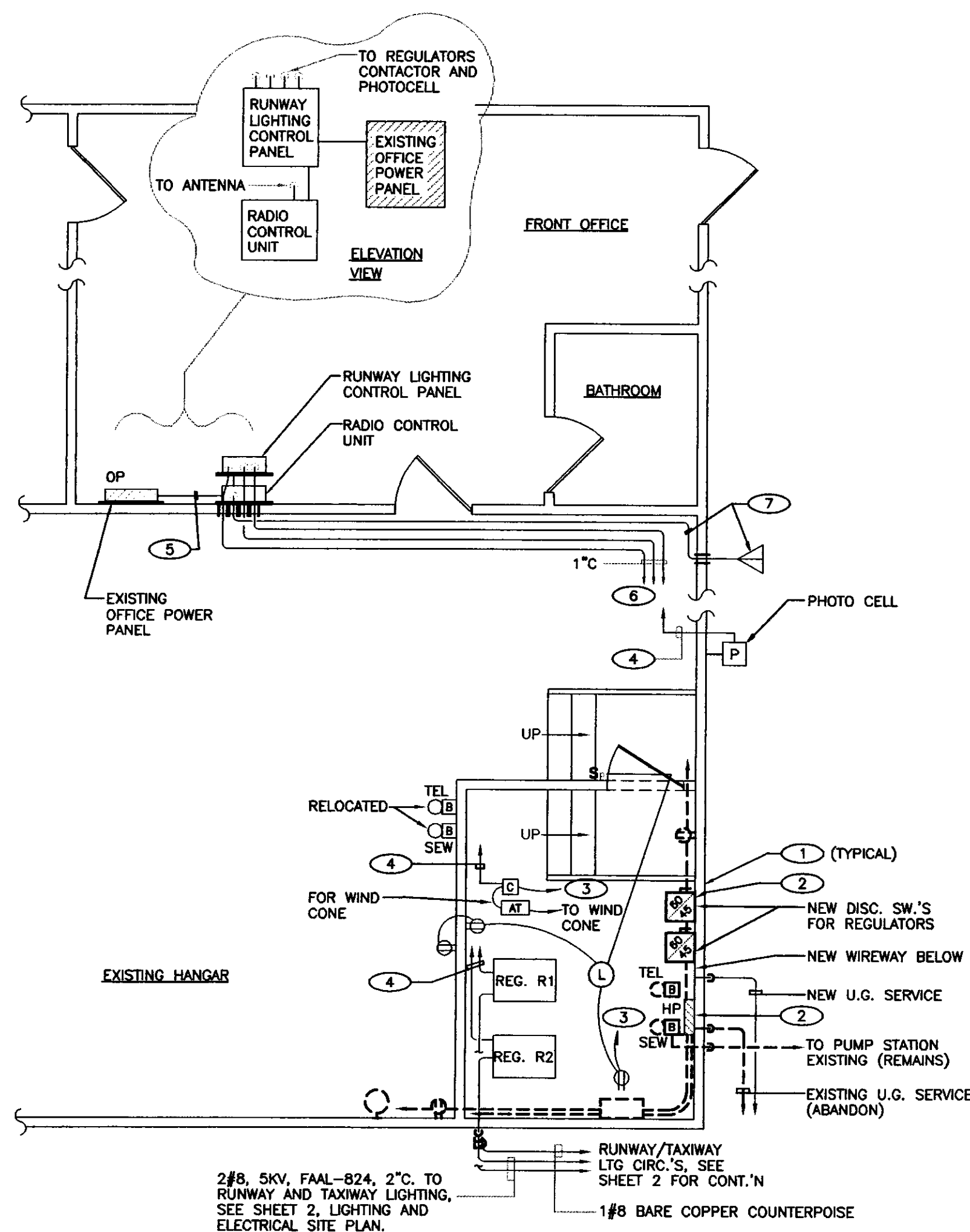
NOTE:  
ANY SYMBOL DRAWN DASHED INDICATES EXISTING EQUIPMENT.

### GENERAL NOTES

1. WALL MOUNT CONTROL PANEL (L-821). FIELD VERIFY LOCATION WITH AIRPORT MANAGER PRIOR TO ROUGH-IN.
2. RADIO CONTROL UNIT (L-854). FIELD VERIFY LOCATION WITH AIRPORT MANAGER PRIOR TO ROUGH-IN.
3. COORDINATE WITH ELECTRIC UTILITY FOR NEW METERING REQUIREMENTS AND SERVICE ENTRANCE HOOK-UP.
4. ALL CONDUIT SHALL BE SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED.
5. RADIO CONTROL UNIT (L-854). CUMULATIVE MODE OF PULSES -3, -5, AND -7 FOR CONTROLLING RUNWAY LIGHT BRIGHTNESS: 10, 30, 100 RESPECTIVELY. ONLY ONE BRIGHTNESS OUTPUT SHALL BE ENERGIZED AT ONE TIME.
6. RELOCATE THE TELEPHONE BELL AND THE SEWER ALARM, ON EXISTING HANGER PANEL BACKBOARD, TO NEW LOCATION AS INDICATED. VERIFY EXACT LOCATION WITH AIRPORT MANAGER.
7. SECURELY MOUNT THE RADIO CONTROL UNIT AND THE RUNWAY LIGHTING CONTROL PANEL TO THE WALL, IF NECESSARY USE A 3/4" P.T. PLYWOOD BACKBOARD, PAINTED GRAY.
8. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING HIS BID TO VERIFY ALL EXISTING CONDITIONS AFFECTING HIS WORK.
9. ALL INSTALLATIONS AND REMOVALS SHALL BE ACCOMPLISHED IN A NEAT AND WORKMAN LIKE MANNER.
10. INSTALL EQUIPMENT AND DEVICES PER MANUFACTURERS REQUIREMENTS AND COMPLY WITH THE 1993 NEC.
11. ELECTRICAL CONTRACTOR SHALL TEST ALL EQUIPMENT AND DEVICES HE INSTALLS FOR PROPER OPERATION. HE SHALL SUBMIT A NOTORIZED LETTER TO THE ENGINEER AND OWNER CONFIRMING PROPER OPERATION OF EQUIPMENT AND DEVICES.
12. LOCATE L-828 CONSTANT CURRENT REGULATORS A MINIMUM OF 6" FROM THE WALL.
13. MAINTAIN EXISTING SERVICE TO PANEL BOARD HP UNTIL NEW SERVICE IS COMPLETE AND ENERGIZED. COORDINATE SERVICE INTERRUPTION WITH AIRPORT MANAGER AT LEAST 1 WEEK PRIOR TO CHANGE OVER.

### KEYED NOTES

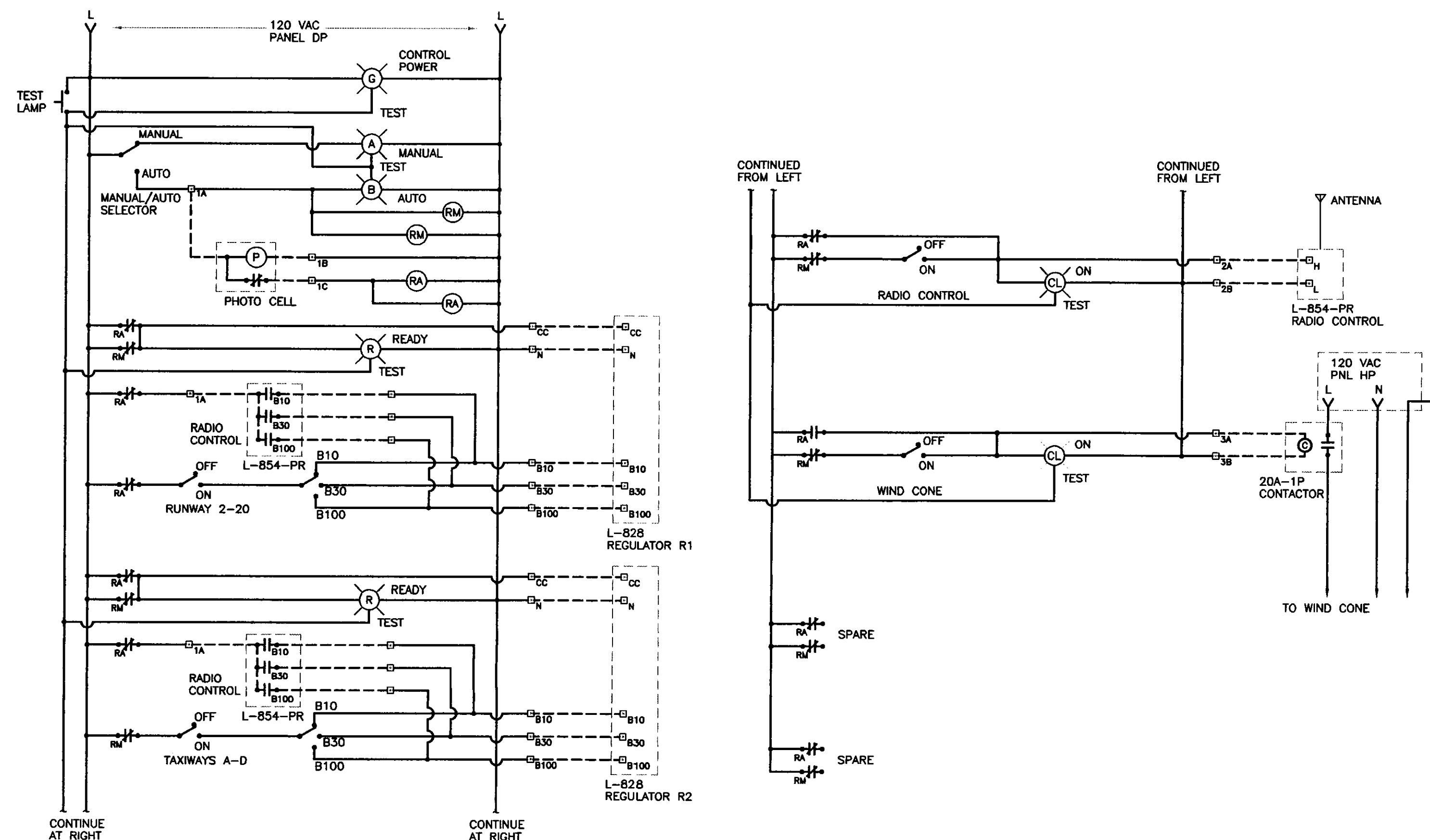
1. ELECTRICAL EQUIPMENT SHALL BE SECURELY MOUNTED ON 3/4" P.T. PLYWOOD BACKBOARD, PAINTED RED.
2. EXISTING 200A PANEL BOARD IN HANGAR (HP), REFEED FROM NEW SERVICE ENTRANCE AS INDICATED.
3. INSTALL NEW 120V, CIRCUIT (2-#12, 1-#12G, 1/2°C). CONNECT TO UNUSED 20A-1P CIRCUIT BREAKER IN HANGER PANEL OR PROVIDE NEW CIRCUIT BREAKER TO MATCH EXISTING AS REQUIRED.
4. TO CONTROL PANEL IN FRONT OFFICE.
5. FEED THE RUNWAY LIGHTING CONTROL PANEL, RADIO CONTROL UNIT, AND AUXILIARY RELAY CONTROL CABINET FROM THE OFFICE POWER PANEL WITH (2-#12, 1-#12G, 1/2°C). PROVIDE NEW 20AMP-1P CIRCUIT BREAKER TO MATCH EXISTING PANEL.
6. CONTROL WIRING TO THE 7 1/2 KW CONSTANT CURRENT REGULATORS. CONTACTOR PHOTO CELL, ETC.
7. REMOTE ANTENNA SHALL BE MOUNTED ON THE OUTSIDE OF THE HANGAR (AS INDICATED) IN A MANNER NOT TO INTERFERE WITH EXISTING STRUCTURES AND DEVICES SUCH THAT ANTENNA LEAD-IN CABLE (SUPPLIED AS PART OF THE RADIO CONTROL UNIT) DOES NOT EXCEED 50FT. FIELD VERIFY LOCATION WITH AIRPORT MANAGER.
8. INSTALL SCHEDULE 80 4" CONDUIT, ENCASED IN CONCRETE, BELOW ROAD, SEE DETAIL SHEET.



### ELECTRICAL ROOM FLOOR PLAN

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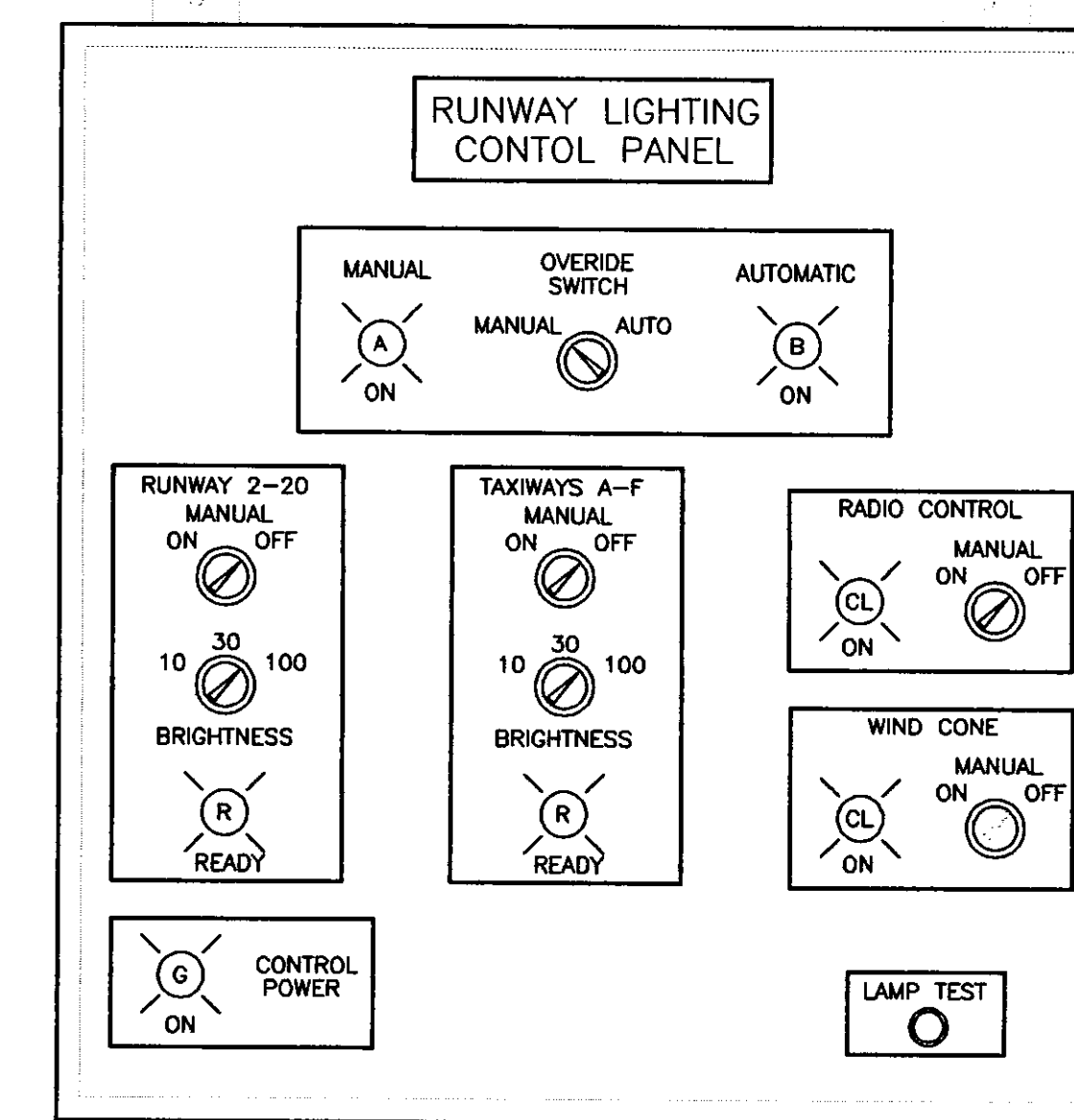
- NOTES:  
1. ALL WIRING IN ELECTRIC ROOM AND HANGER SHALL BE INSTALLED IN METAL RACEWAYS IN ACCORDANCE WITH NEC-513.



### RUNWAY LIGHTING CONTROL ONE-LINE DIAGRAM

NOT TO SCALE

- NOTES:  
1. BONDING CONDUCTORS ARE NOT SHOWN.  
2. ALL DEVICES ARE LOCATED IN L-821 CONTROL PANEL EXCEPT REMOTE DEVICES DESIGNATED BY [ ]  
3. FIELD WIRING DESIGNATED BY - - - - -  
4. RELAYS RA AND RM ARE 4PDT EACH UNUSED SIDE OF FORM C CONTACTS ARE NOT SHOWN.  
5. L-854 RADIO CONTROL PANEL SHALL HAVE 2 SPST OUTPUT CONTACTS FOR EACH BRIGHTNESS LEVEL. AT CONTRACTORS OPTION PROVIDE SPST OUTPUT CONTACTS IN L-854 RADIO CONTROL PANEL AND 3 DPST RELAYS IN L-821 CONTROL PANEL.



### RUNWAY LIGHTING CONTROL PANEL ELEVATION

- NOTES:  
1. PILOT LIGHTS, WITH DOMED PLASTIC COVER (COLORS: A=AMBER, B=BLUE, CL=CLEAR, G=GREEN, R=RED).  
2. ALL EQUIPMENT SHALL BE FAA APPROVED FOR USE IN L-821 PANELS FOR REMOTE CONTROL OF AIRPORT LIGHTING AND L-841 AUXILIARY RELAY CABINETS FOR PILOT CONTROL OF AIRPORT LIGHTING CIRCUITS. REFER TO FAA ADVISORY CIRCULARS 150/5345-13A AND 150/5345-3D.  
3. PANEL ENCLOSURES SHALL BE HOFFMAN (OR EQUAL), NEMA TYPE 12, WITH HINGED COVER AND METAL BACK PAN FOR MOUNTING EQUIPMENT. EACH ENCLOSURE SHALL BE CONSTRUCTED OF CODE GAUGE STEEL WITH ANSI #61 GREY BAKED ENAMEL FINISH OVER RUST INHIBITING TREATMENT.  
4. PROVIDE SPARE PARTS AND TOOL CONSISTING OF 6 SPARE LAMPS, 2 SPARE RELAYS, LAMP REMOVAL TOOL AND WRENCH FOR SWITCH/PUSHBUTTON/PILOT LIGHT/LOCKING RINGS.  
5. PROVIDE ENGRAVED LABELS FOR ALL CONTROL SWITCHES AND PILOT LIGHTS AS SHOWN.

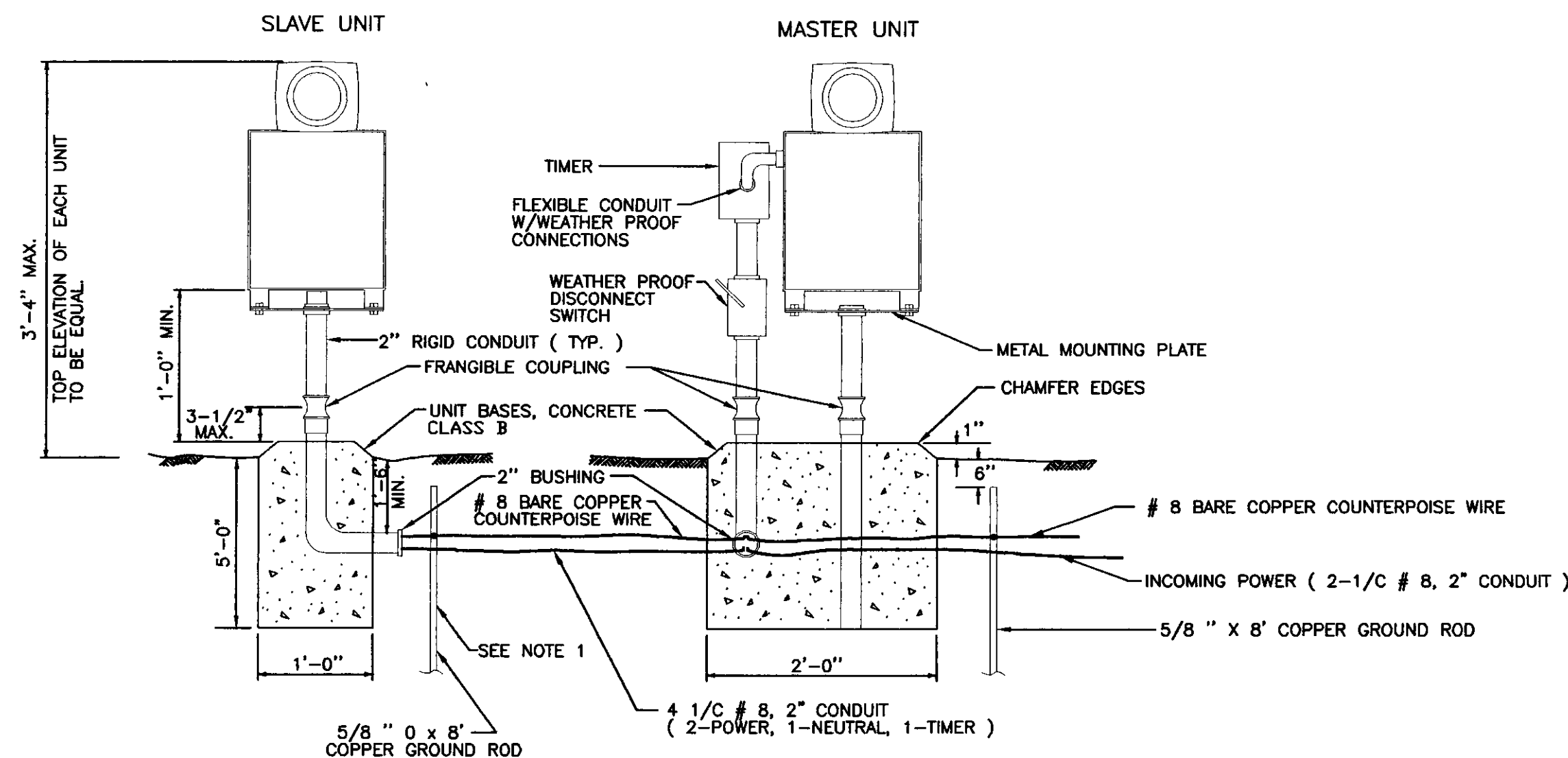
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**DuBois & King**  
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engineering planning management development

STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CALEDONIA COUNTY STATE AIRPORT  
ELECTRICAL PLANS AND DETAILS

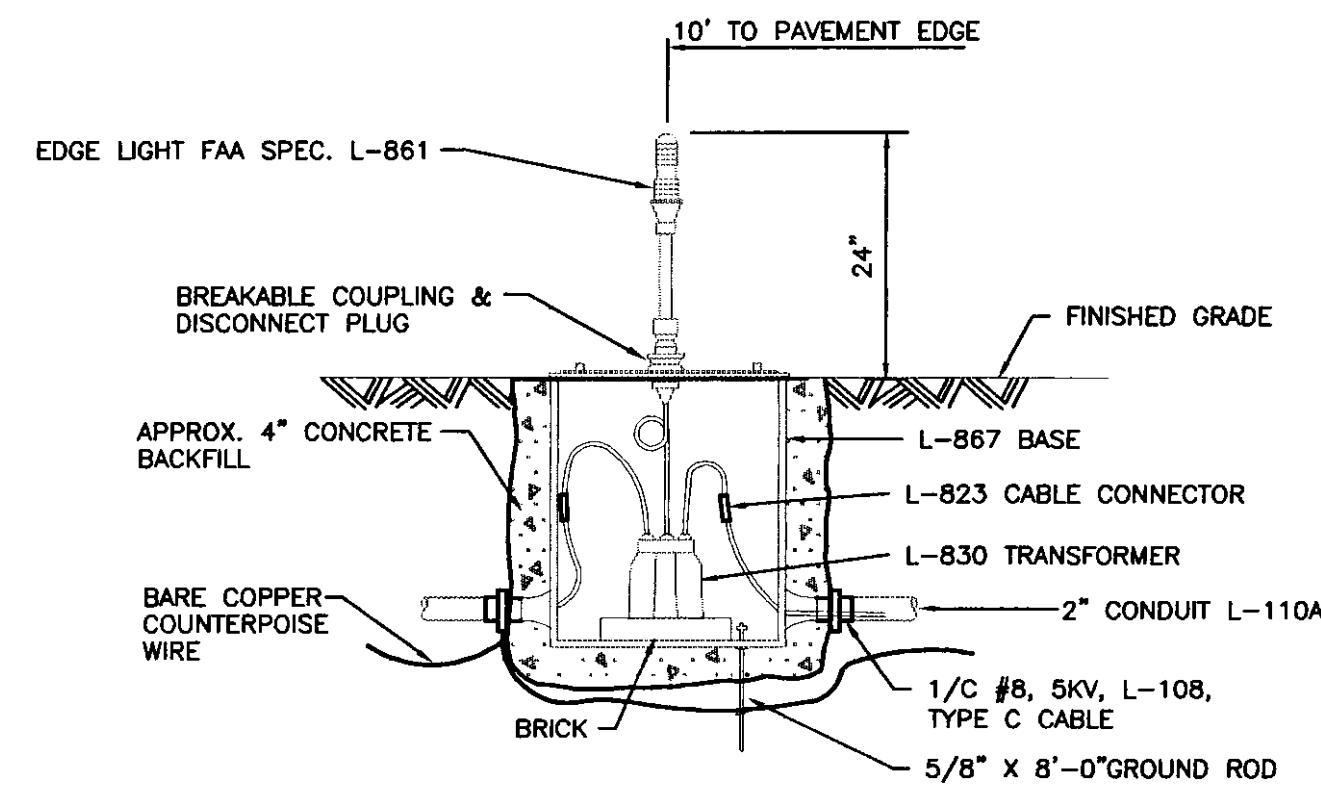
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CHECKED BY JAA	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510004
SHEET 3 OF 13	



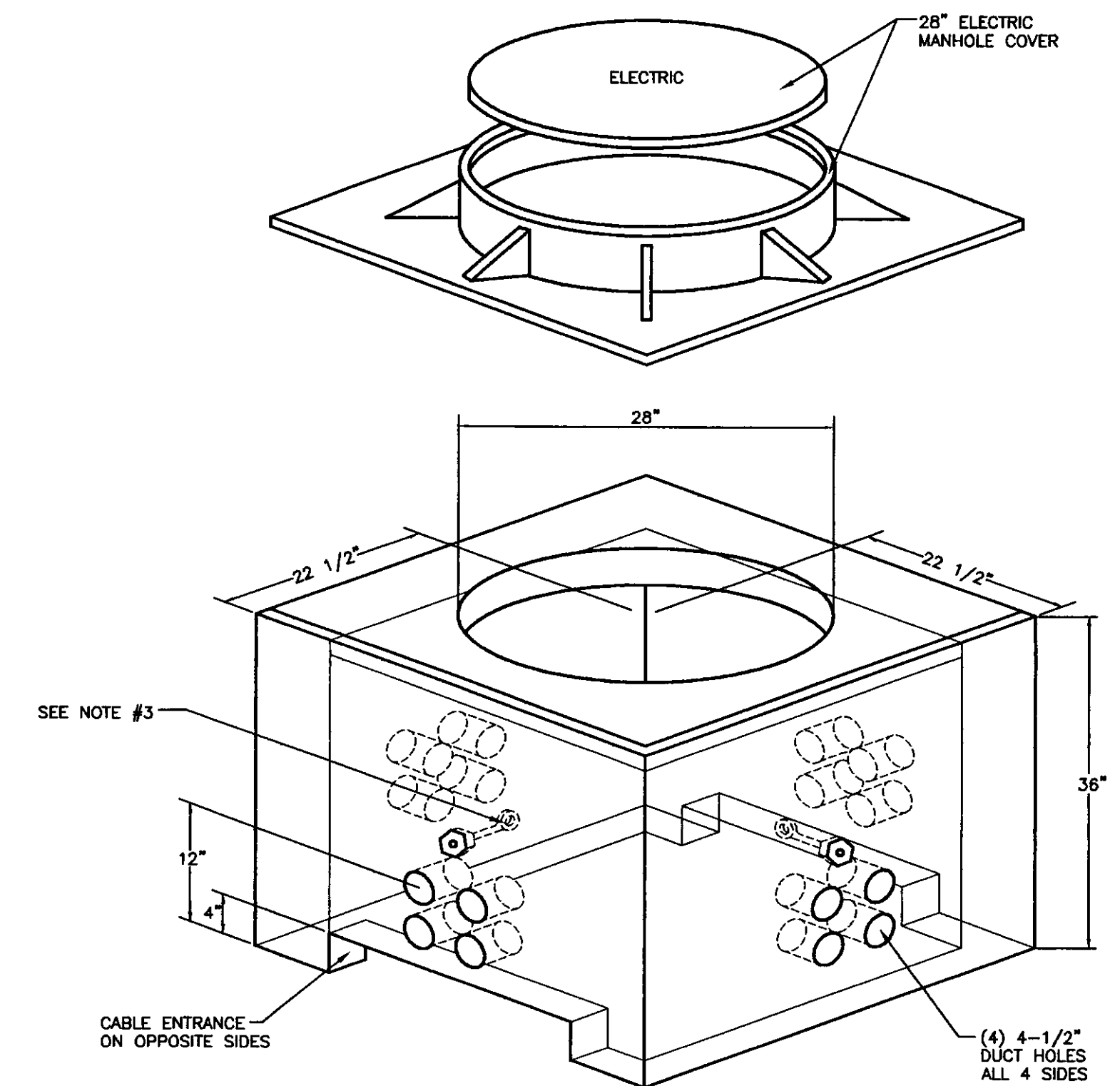
**RUNWAY END IDENTIFIER LIGHTS (REILS) L-849 E**  
NOT TO SCALE

**NOTES:**

1. TERMINATE GROUND WIRE INSIDE EQUIPMENT HOUSING. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING REIL UNITS



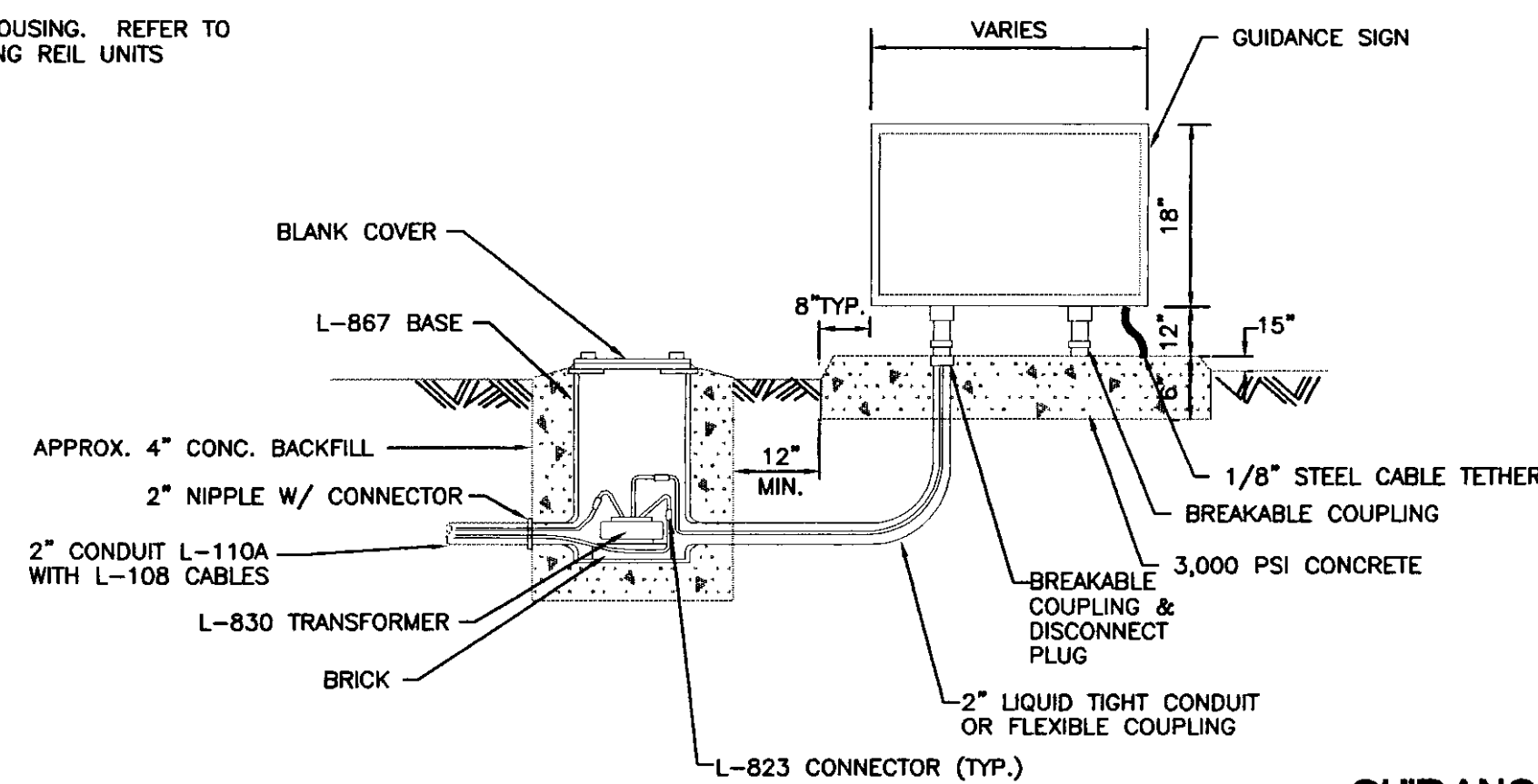
**BASE MOUNTED SERIES CIRCUIT**  
NOT TO SCALE



**NOTES:**

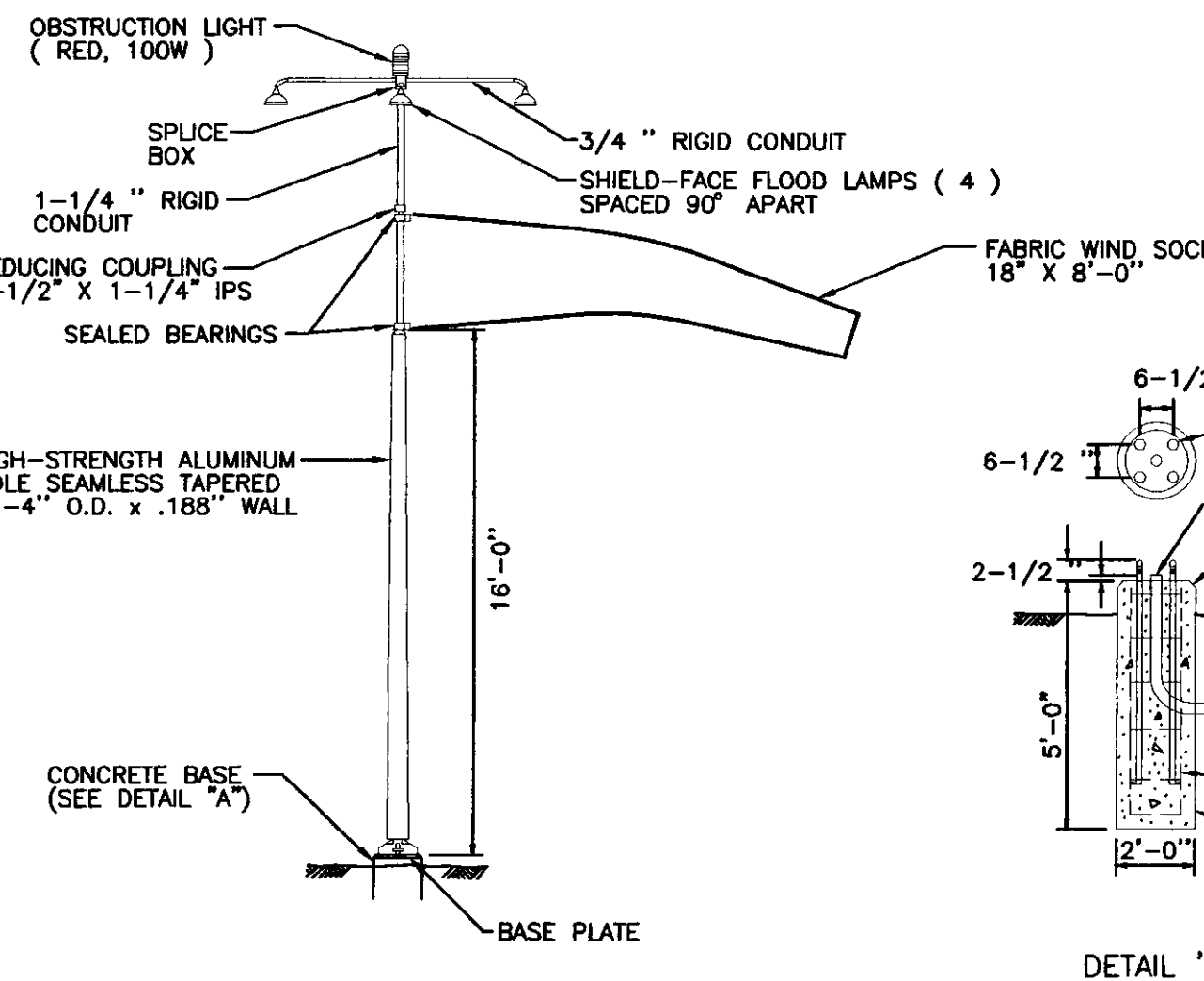
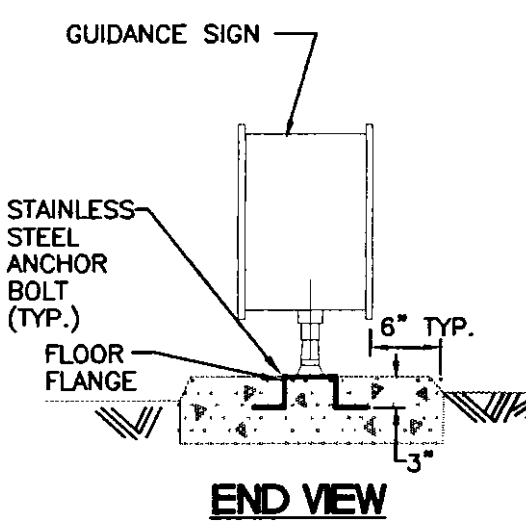
1. CONCRETE TO BE 5000# HIGH EARLY STRENGTH
2. CONCRETE TO BE COMPACTED WITH VIBRATOR
3. GALV. PULLING EYES SUPPLIED ON SPECIAL ORDER
4. OPT. DUCT OPENINGS

**HANDHOLE DETAIL**  
NOT TO SCALE



**GUIDANCE SIGN DETAIL**  
NOT TO SCALE

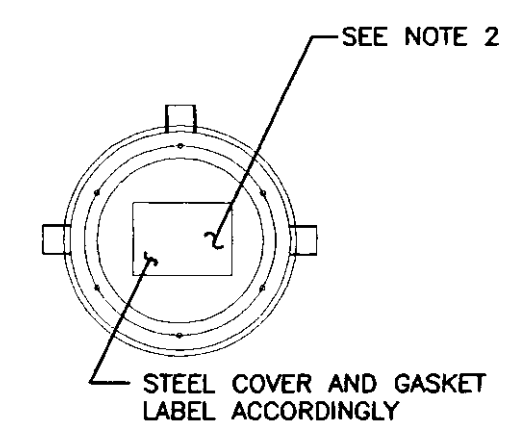
- NOTE:**  
GROUND ROD AND COUNTERPOISE NOT SHOWN, REFER TO BASE MOUNTED DETAIL ABOVE FOR REQUIREMENTS



**EIGHT FOOT ILLUMINATED WIND CONE L-806**  
NOT TO SCALE

**NOTE:**

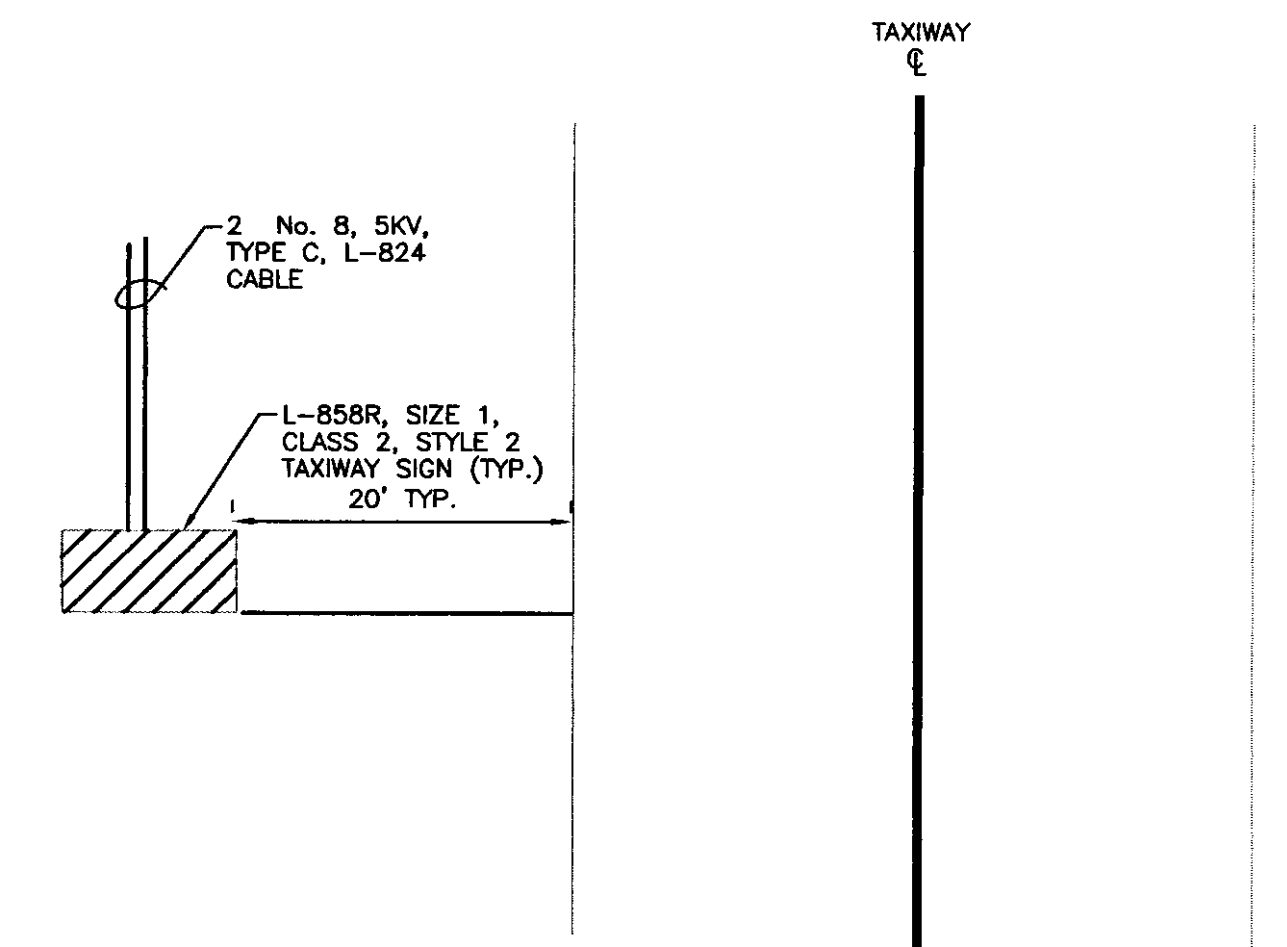
1. TERMINATE COUNTERPOISE WIRES INSIDE EQUIPMENT HOUSING.



**NOTES:**

1. CONTRACTOR SHALL VERIFY THAT GROUND LUGS HAVE BEEN INSTALLED ON BOTH INTERIOR AND EXTERIOR OF JUNCTION BOX. IF CLAMPS DO NOT EXIST, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION.
2. CONTRACTOR SHALL FURNISH AND INSTALL BRASS IDENTIFICATION PLATES. THESE PLATES SHALL BE 8" x 6" WITH THREE ROWS OF CHARACTERS (2 FOR WORDS, 1 FOR DIRECTION ARROW), AND 1" LETTERING.
3. CONTRACTOR SHALL DRILL 1 1/2" HOLE THROUGH THE BOTTOM OF JUNCTION BOX, AND SPRAY COLD GALV. ON CAN PRIOR TO INSTALLATION.

**L-869 JUNCTION BOX**  
NOT TO SCALE



**GUIDANCE SIGN LAYOUT DETAIL**  
NOT TO SCALE

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NO.	DATE	REVISIONS	BY	CK'D

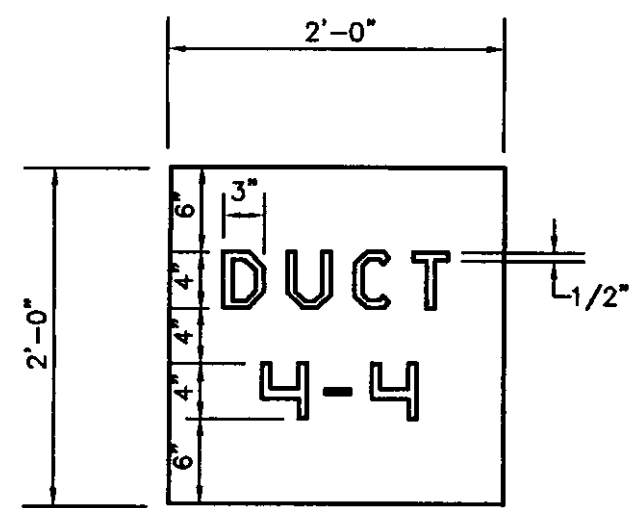
**DuBois & King**  
INC.

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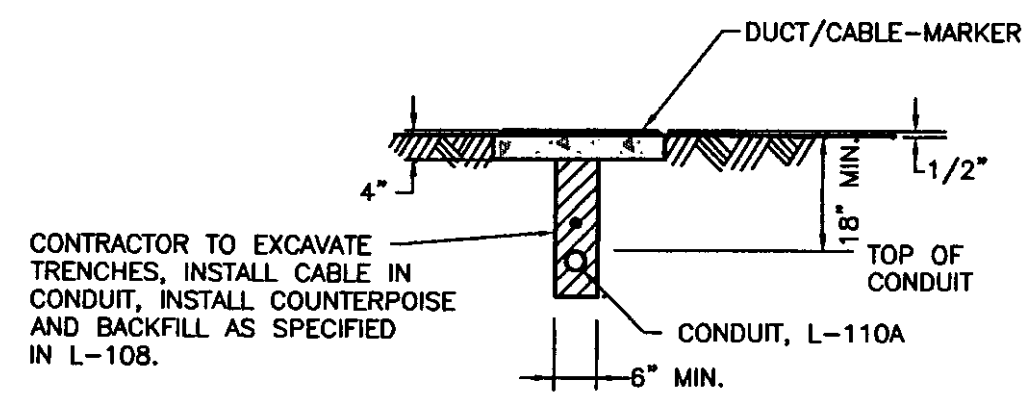
STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CALEDONIA COUNTY STATE AIRPORT

LIGHTING DETAILS

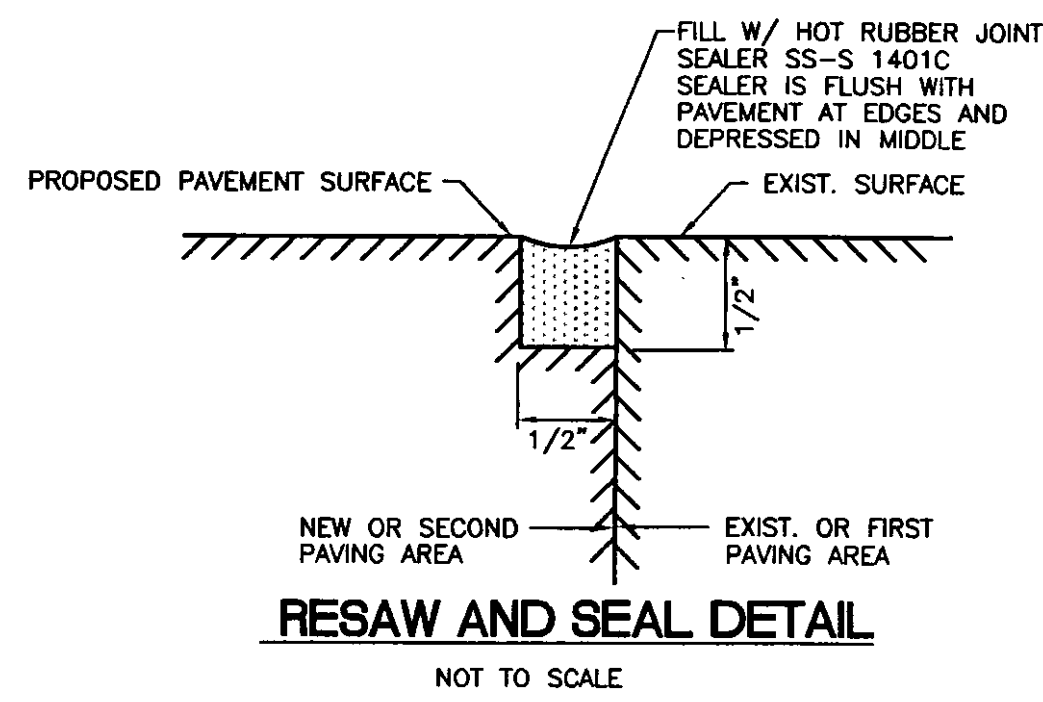
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CHECKED BY JAA	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510006
SHEET	4 OF 13



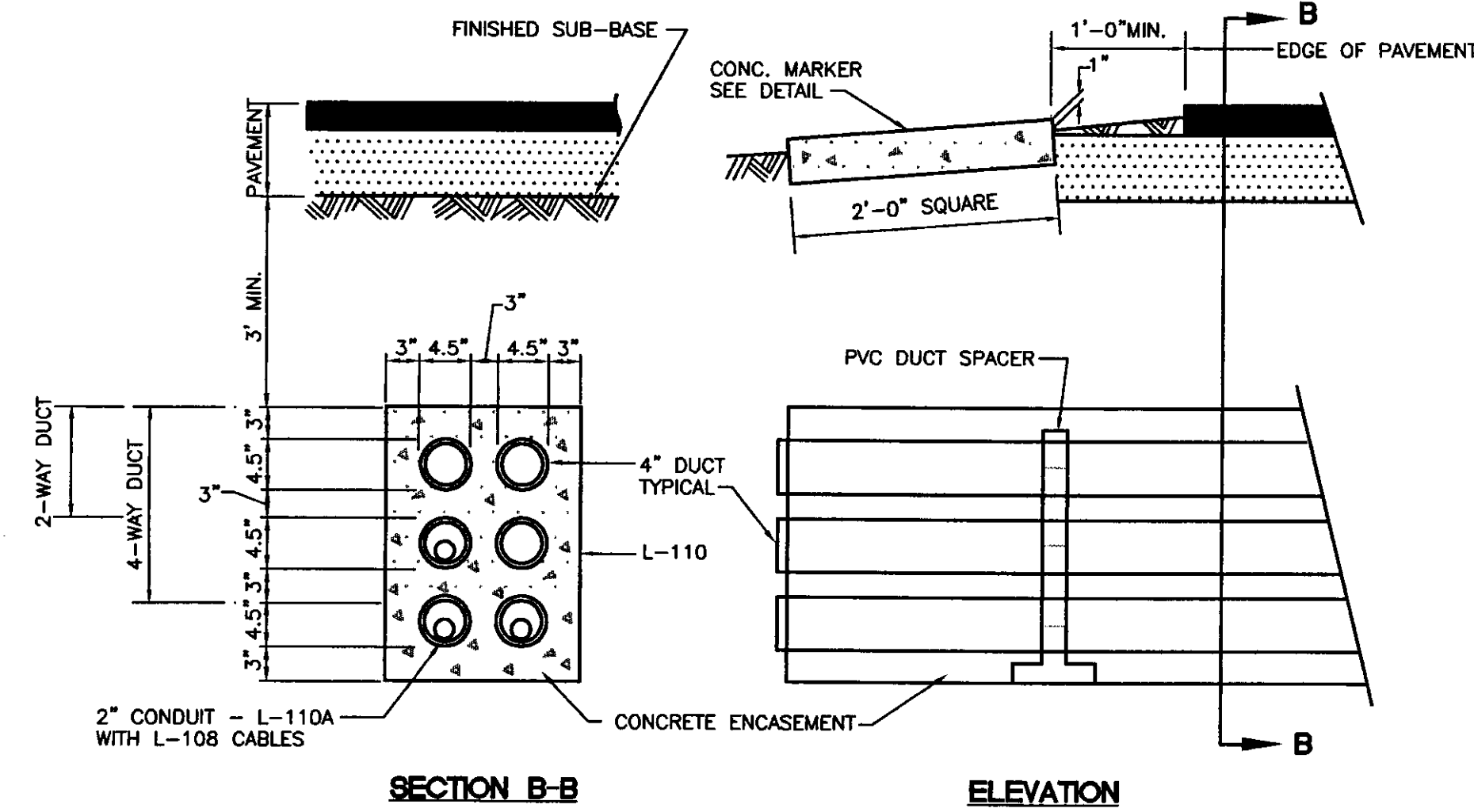
**CONCRETE DUCT MARKER**  
(CABLE MARKERS ARE SIMILAR)



**TYPICAL CABLE/DUCT-MARKER DETAIL**  
NOT TO SCALE

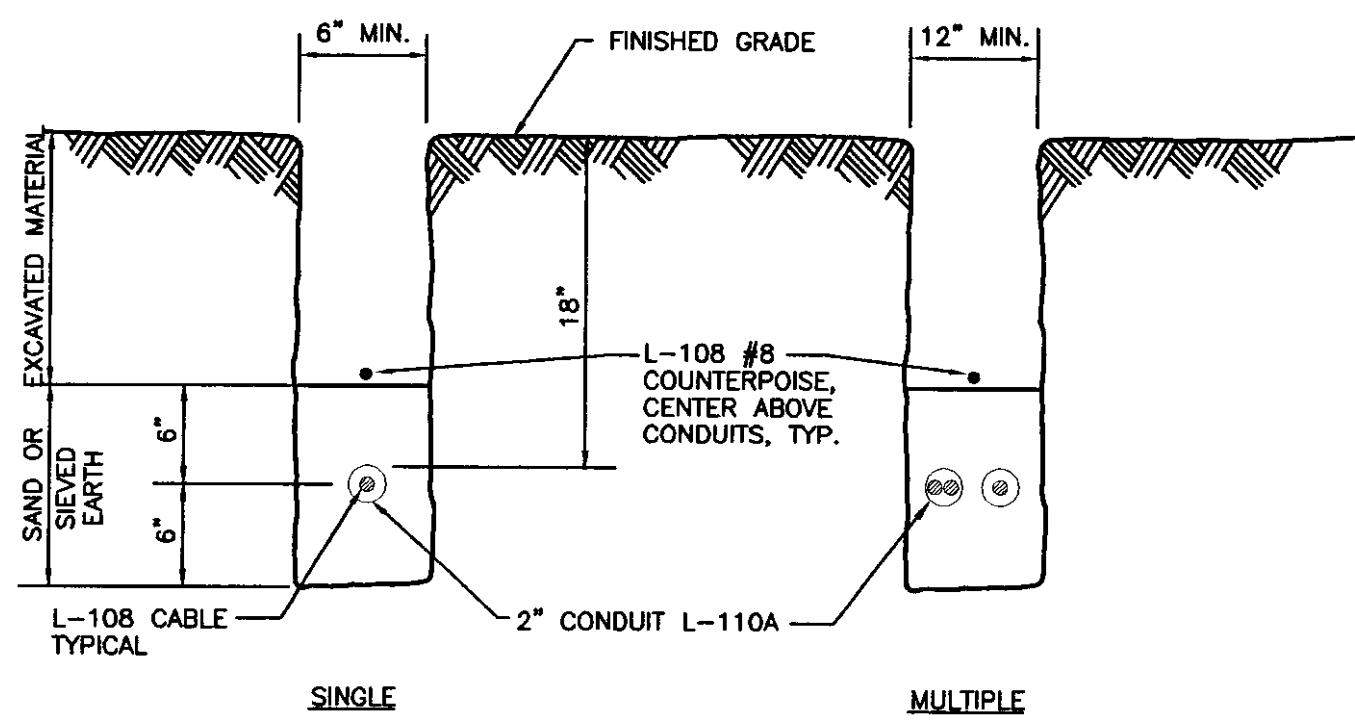


**RESAW AND SEAL DETAIL**  
NOT TO SCALE

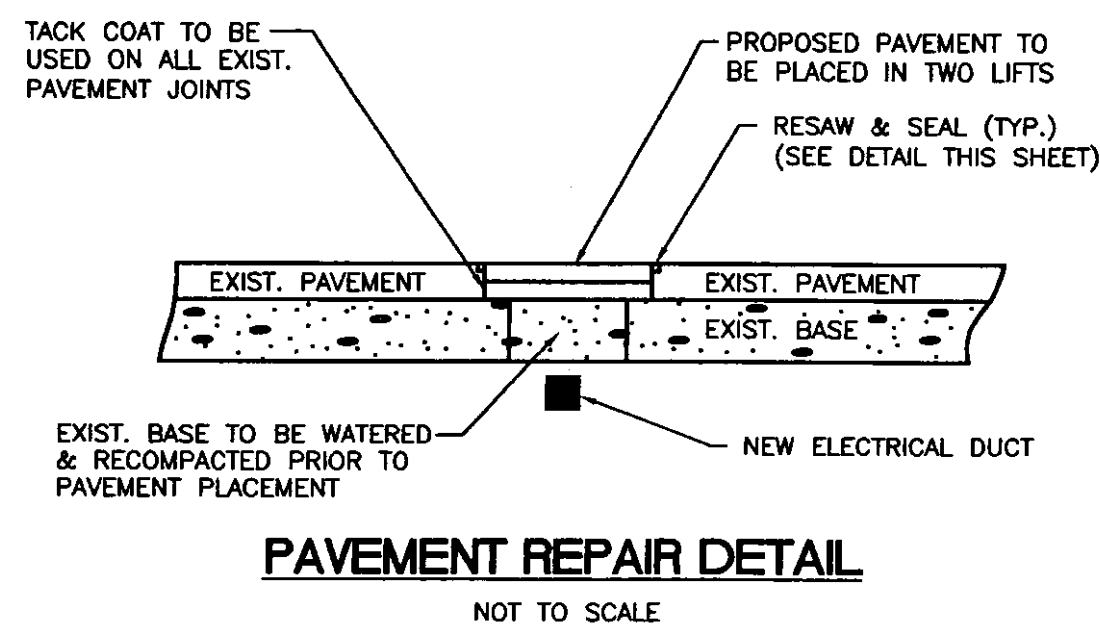


**DUCT (6-WAY) AND CONCRETE MARKER DETAILS**  
NOT TO SCALE

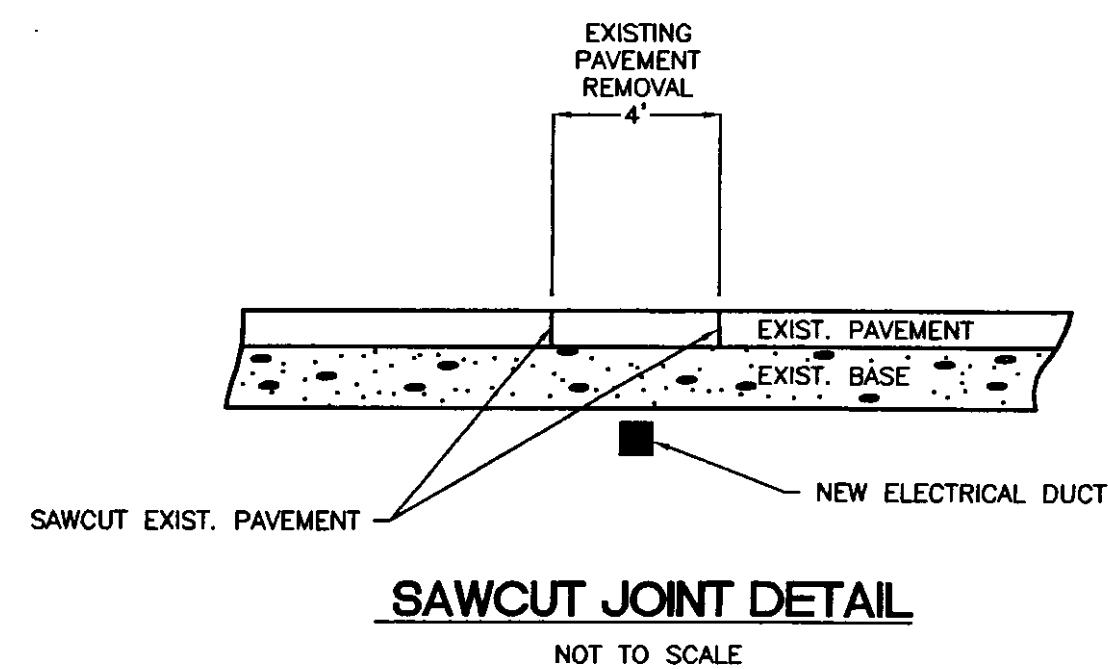
- NOTES:  
1. PROVIDE PVC DUCT SPACERS AT 5'-0" ON CENTER  
2. SLOPE DUCTS 3"/100 FT. FOR DRAINAGE  
3. PROVIDE FULL NYLON PULL WIRES



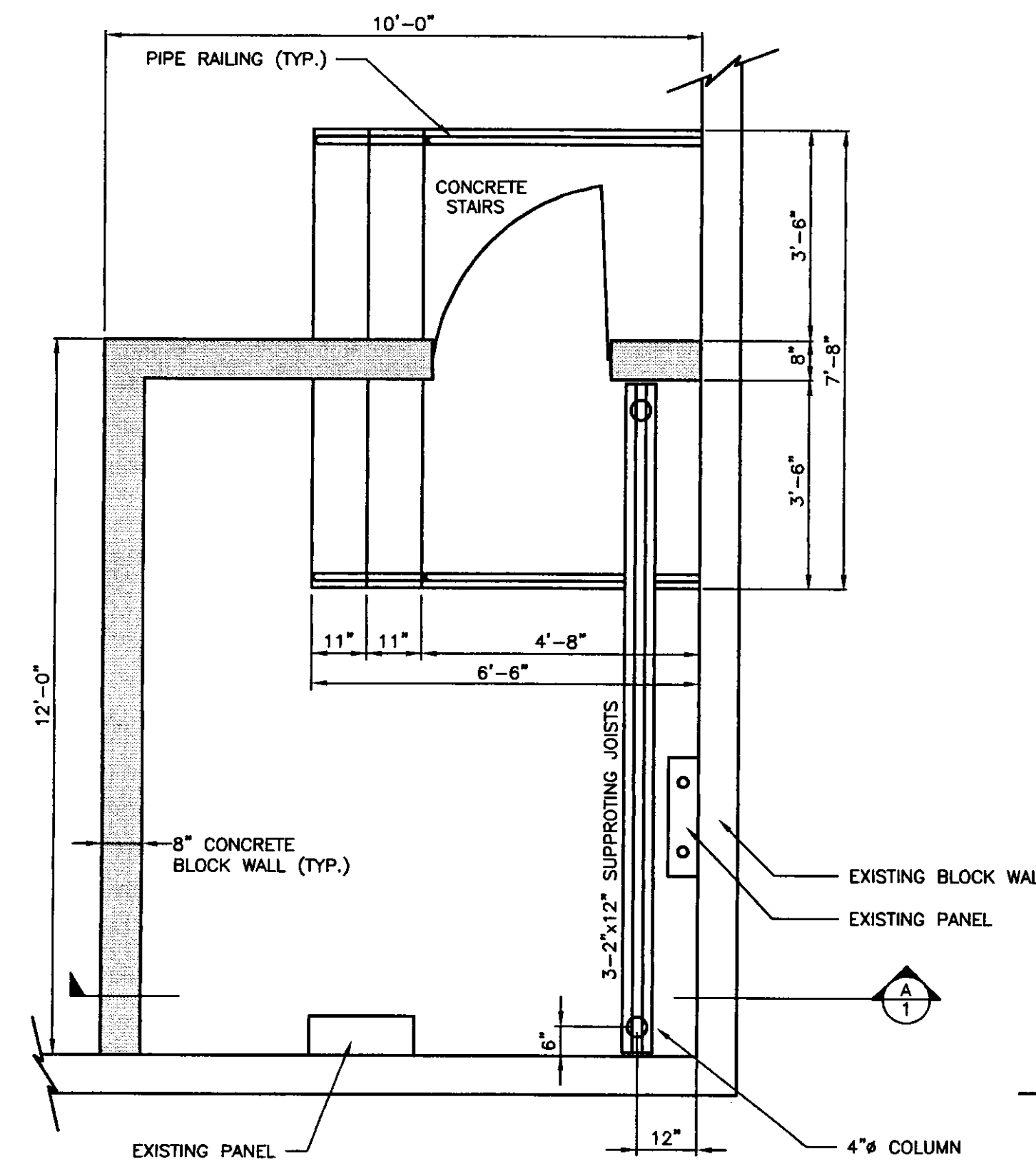
**CONDUIT INSTALLATION DETAILS**  
NOT TO SCALE



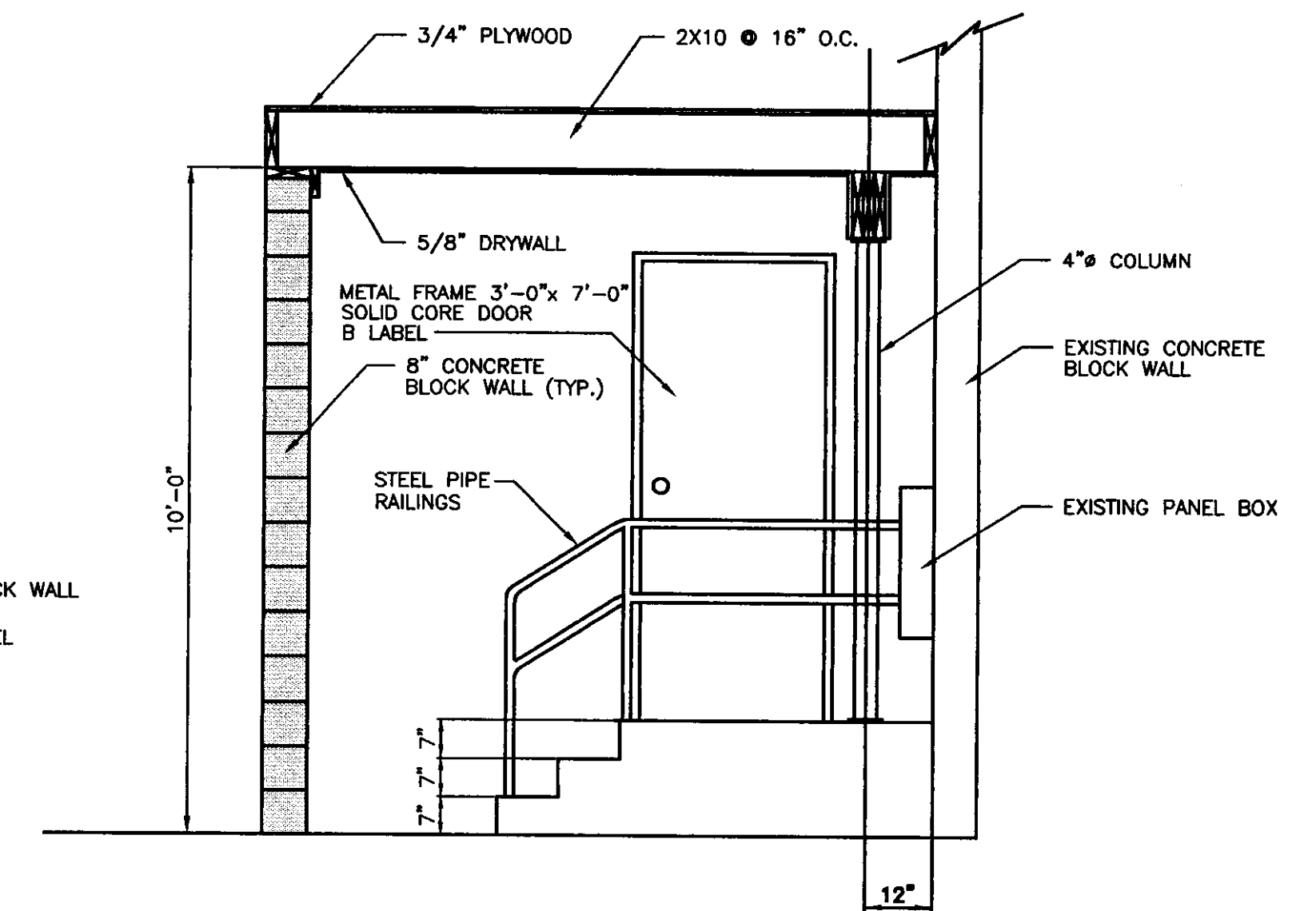
**PAVEMENT REPAIR DETAIL**  
NOT TO SCALE



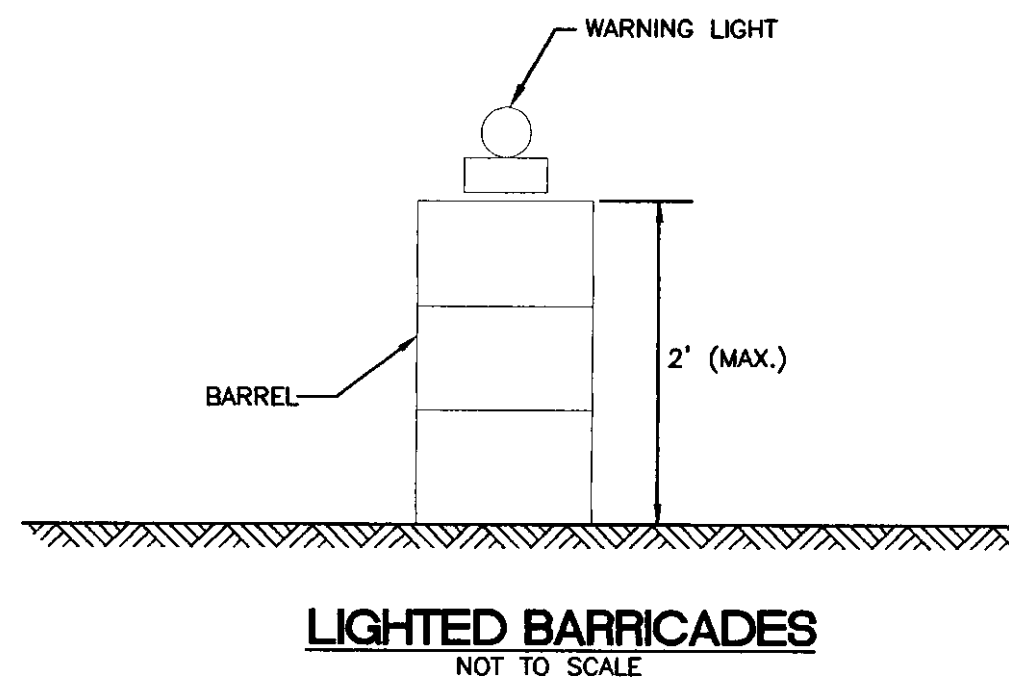
**SAWCUT JOINT DETAIL**  
NOT TO SCALE



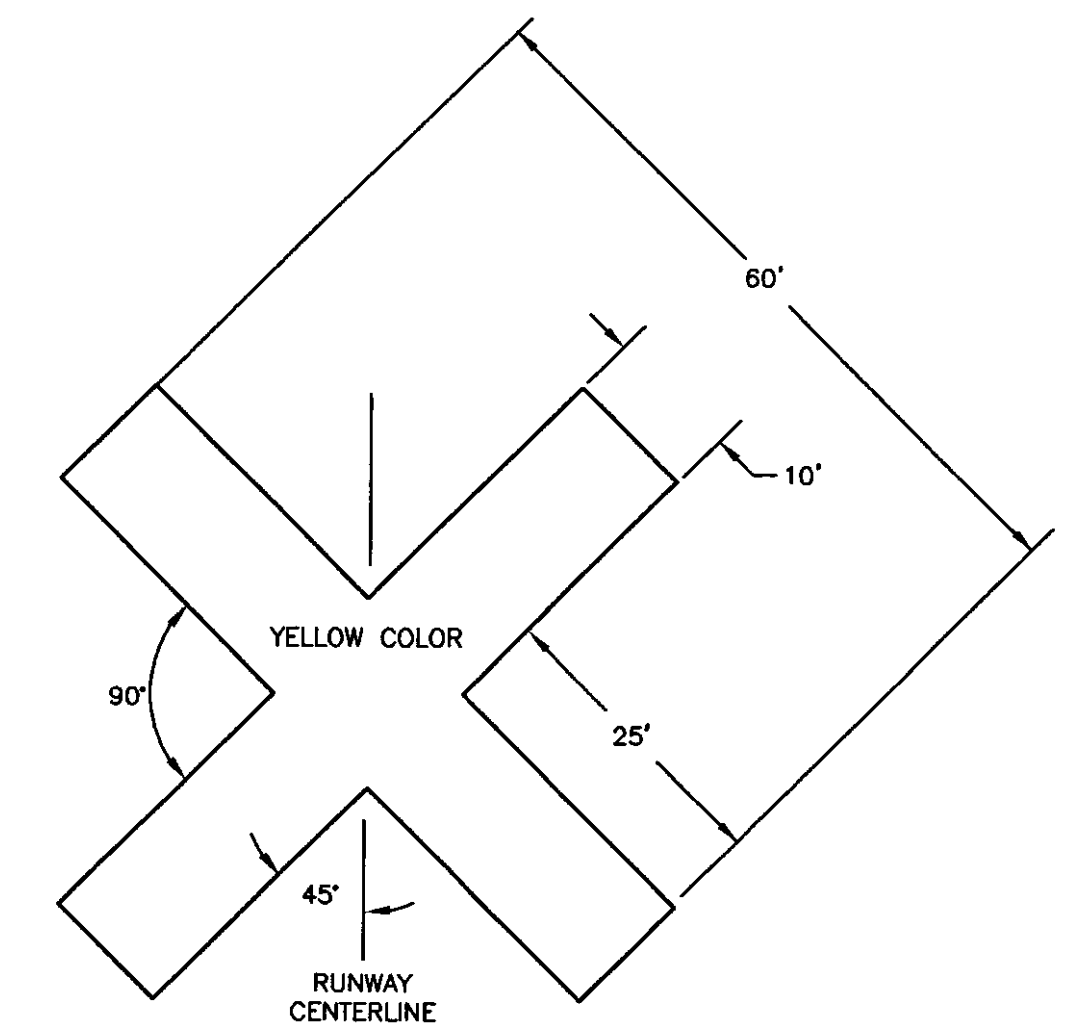
**ELECTRICAL ROOM STRUCTURAL PLAN**  
SCALE: 1/2" = 1'-0"



**SECTION 1**  
SCALE: 1/2" = 1'-0"



**LIGHTED BARRICADES**  
NOT TO SCALE



**CLOSED RUNWAY MARKINGS**  
NOT TO SCALE

- NOTES:  
1. CONTRACTOR WILL BE RESPONSIBLE FOR PLACING CLOSED RUNWAY MARKINGS ON RUNWAY NUMERALS TO SIGNIFY WHEN RUNWAY IS CLOSED.  
2. CLOSED RUNWAY MARKINGS SHALL BE YELLOW COLOR PREFORMED TAPE.

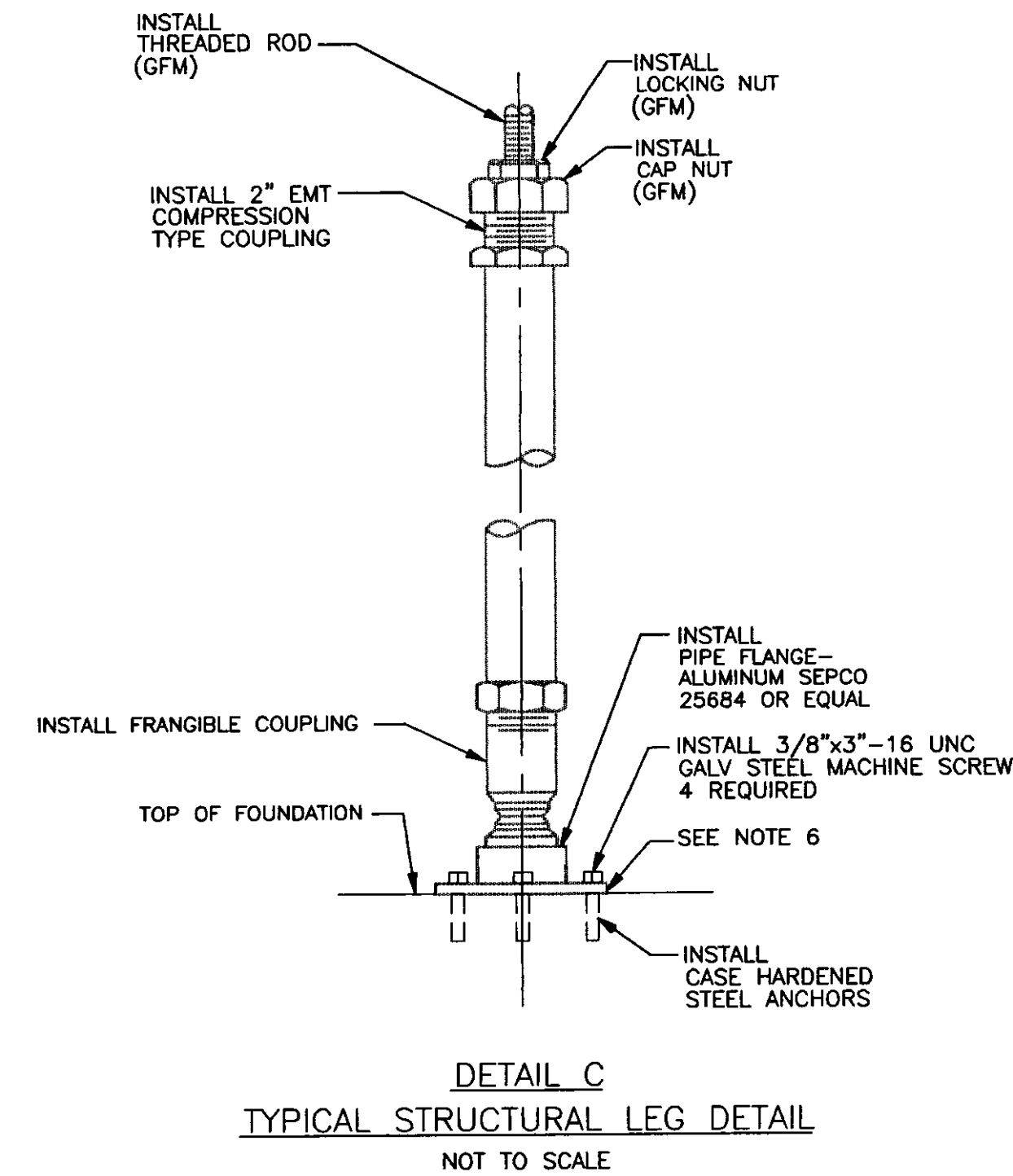
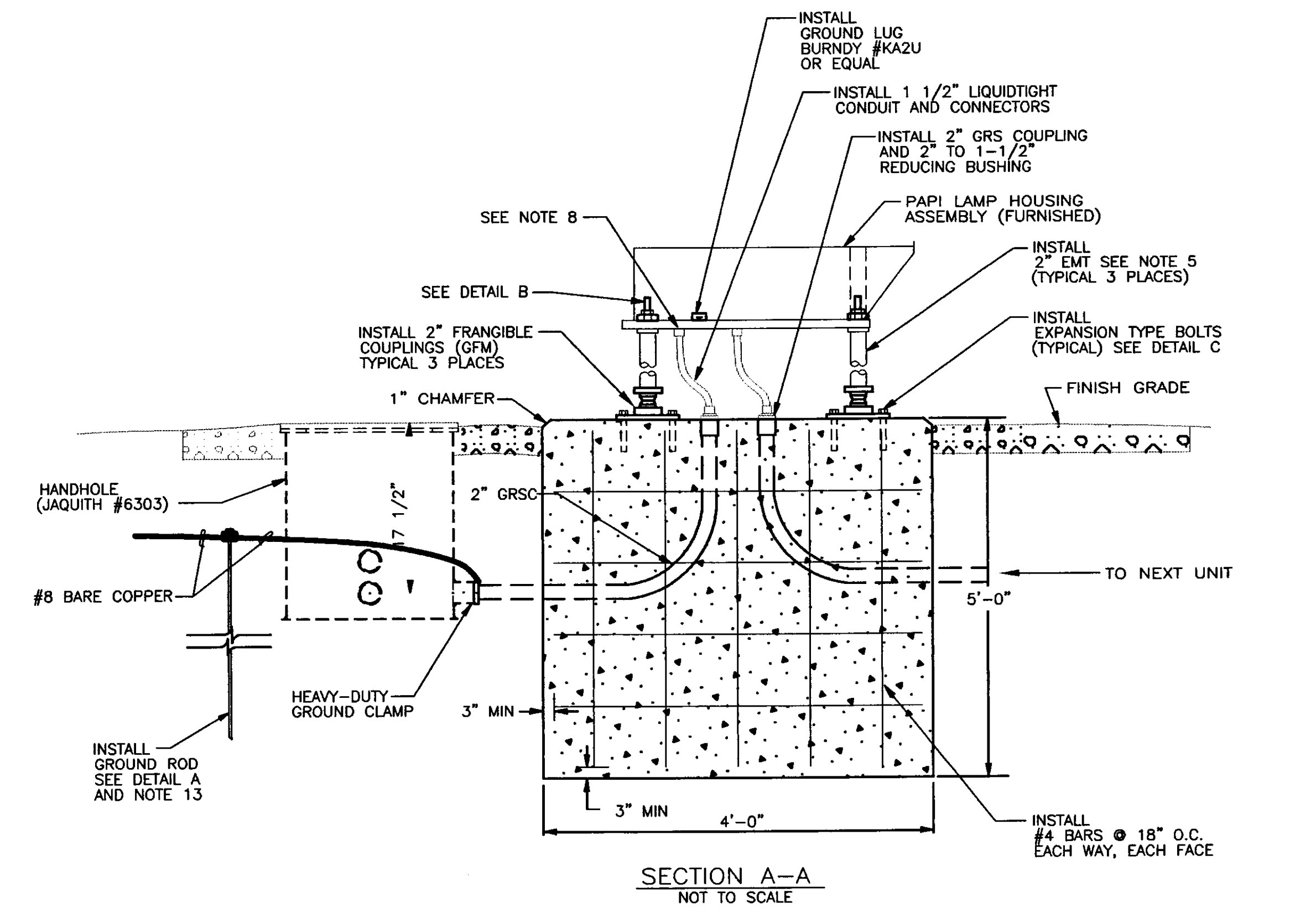
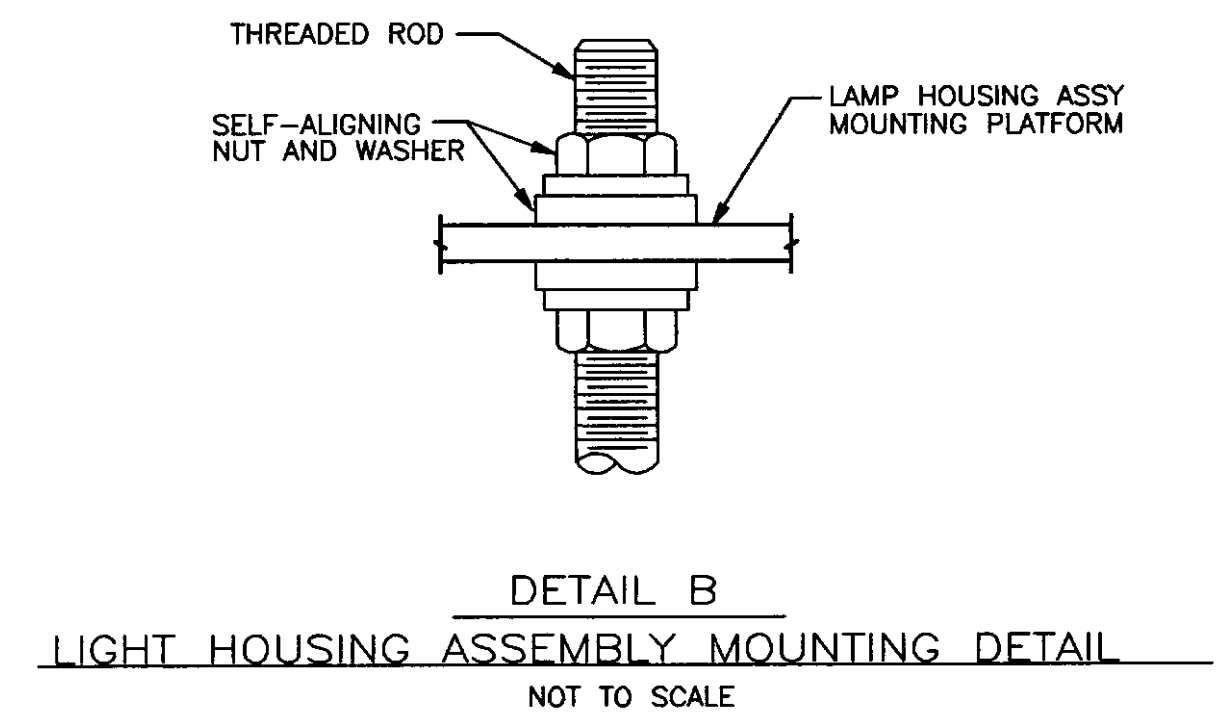
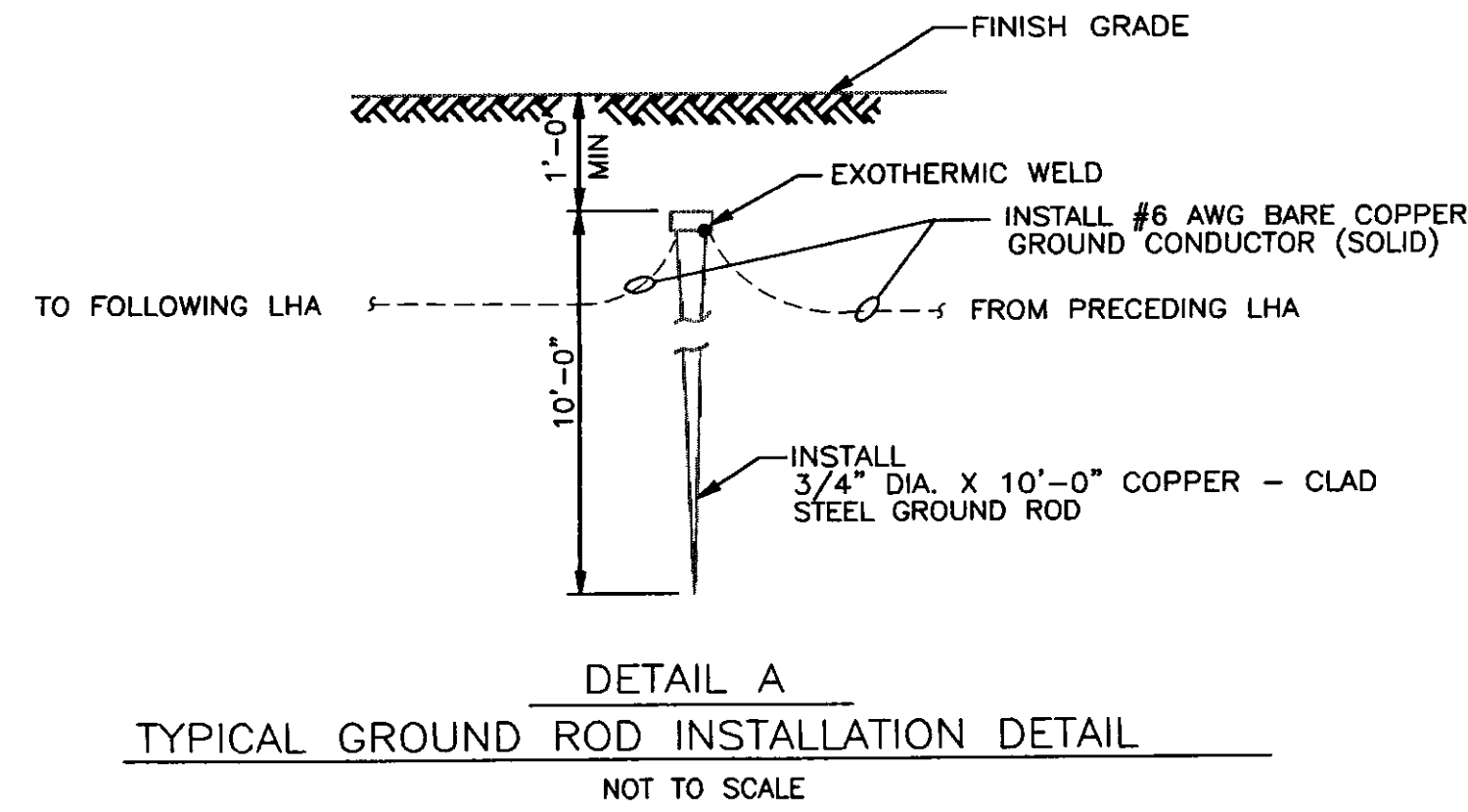
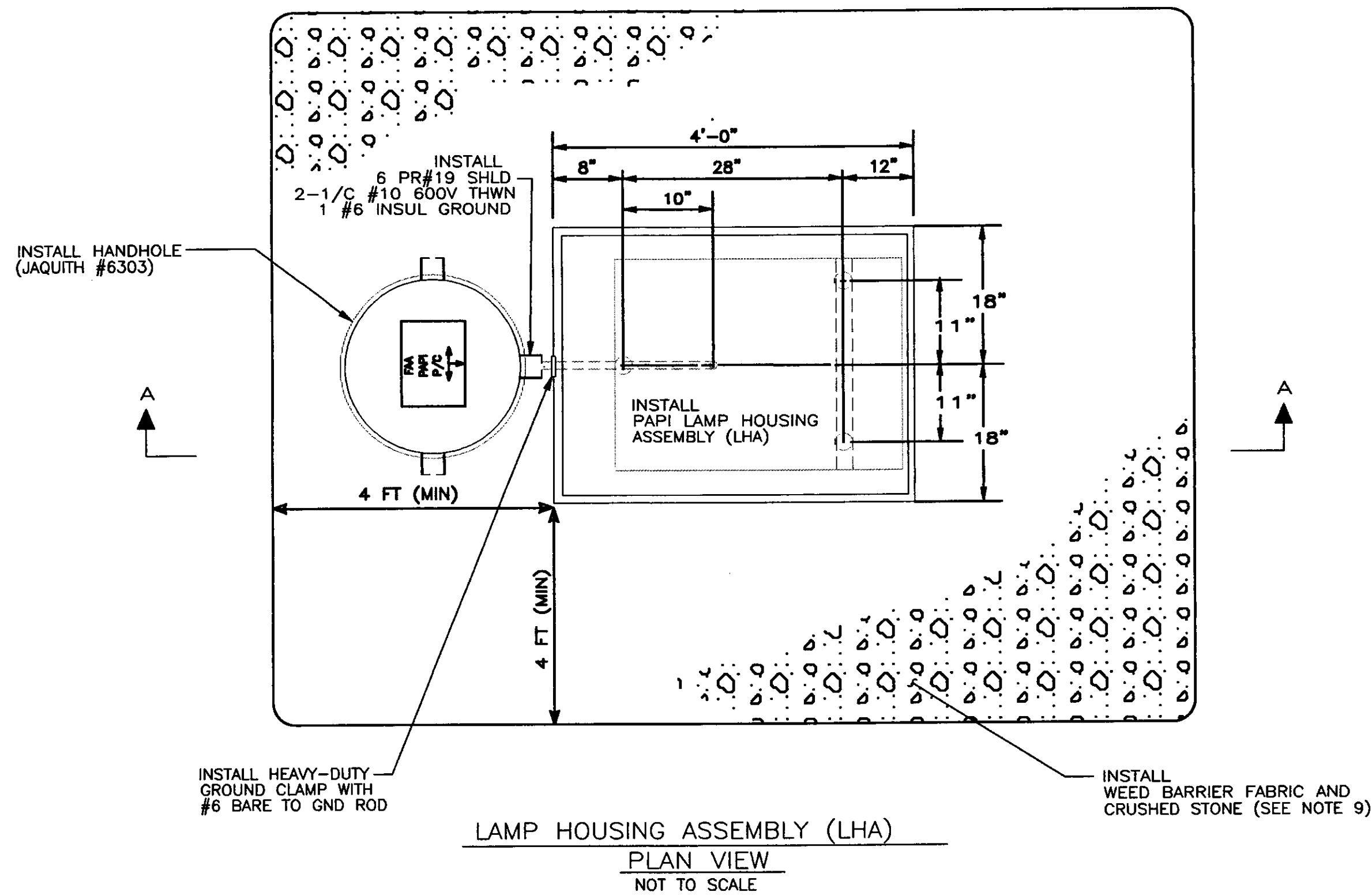
I:\17151\dwg\171510007.dwg Mon Oct 15 08:05:05 2001

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STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CALEDONIA COUNTY STATE AIRPORT  
CONSTRUCTION DETAILS

DRAWN BY MDL	DATE JULY 2001
CHECKED BY	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510007
SHEET 5 OF 13	



NOTES

- FOUNDATION DEPTH SHALL BE 5 FEET (MIN). THE BOTTOM OF ALL FOUNDATION EXCAVATIONS SHALL BE FREE OF WATER AND LOOSE EARTH AND SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS PER AASHTO T-99, PRIOR TO INSTALLING FOUNDATIONS.
- FORM FOUNDATIONS FULL DEPTH SUCH THAT VERTICAL SURFACES ARE SMOOTH AND RESISTANT TO FROST HEAVES.
- CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE CURRENT ISSUE OF ACI-318; BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. CONCRETE TO DEVELOP MINIMUM STRENGTH OF 3000 PSI IN 28 DAYS WITH MAXIMUM SLUMP OF 4 INCHES AND MAXIMUM AGGREGATE SIZE OF 3/4 INCH. CONCRETE SHALL BE PROTECTED FROM FREEZING DURING AND FOR 7 DAYS AFTER PLACEMENT.
- DRILL HOLES AND INSTALL EXPANSION TYPE ANCHOR BOLTS WHEN PAPI UNITS HAVE BEEN ACCURATELY LOCATED AND AFTER CONCRETE HAS HARDENED SUFFICIENTLY.
- 2" EMT LENGTH SHALL BE SET AS REQUIRED SO THAT THE BEAM CENTERS OF ALL LIGHT UNITS SHALL BE WITHIN +7/-1 INCH OF A HORIZONTAL PLANE. THIS HORIZONTAL PLANE SHALL BE 2'-0" ABOVE THE ELEVATION OF THE RUNWAY CROWN PERPENDICULAR TO THE PAPI UNITS.
- COAT THE FLANGE SURFACE RESTING ON THE CONCRETE WITH AN ASPHALTIC COMPOUND FOR METAL PROTECTION.
- WHERE REQUIRED AT PAPI FOUNDATIONS, FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 8 INCHES, EACH LAYER SHALL BE THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AASHTO-T99.
- FOLD BACK UNUSED SHIELDED PAIRS AND TAPE TO PREVENT WATER INFILTRATION; LEAVE IN THE LHA UNIT.
- WEED BARRIER COVERED WITH A 4 INCH LAYER OF 3/4" CRUSHED STONE SHALL BE PLACED IN THE AREA EXTENDING 4 FEET FROM EACH SIDE OF EACH LHA, POWER AND CONTROL STATION.
- A #6 SOLID BARE COPPER SHALL RUN THROUGH ALL CONDUITS AND SHALL BE ATTACHED TO GROUND BUSHINGS AT EACH CONDUIT END AND SHALL BE ATTACHED TO GROUND LUGS IN EACH LHA.
- ALL MATERIAL AND EQUIPMENT NOT LISTED UNDER "FURNISHED MATERIAL" SHALL BE SUPPLIED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL MATERIAL AND EQUIPMENT.
- ALL RIGID CONDUIT FITTINGS, NUTS, BOLTS AND STEEL WORK SHALL BE GALVANIZED, OR STAINLESS STEEL. ALL FITTINGS USED WITH RIGID CONDUIT SHALL BE THREADED TYPE.
- INSTALL GROUND RODS AT THE END OF ALL CABLE RUNS, EVERY 200' ALONG RUNS OR AS DIRECTED ON THE DRAWING.

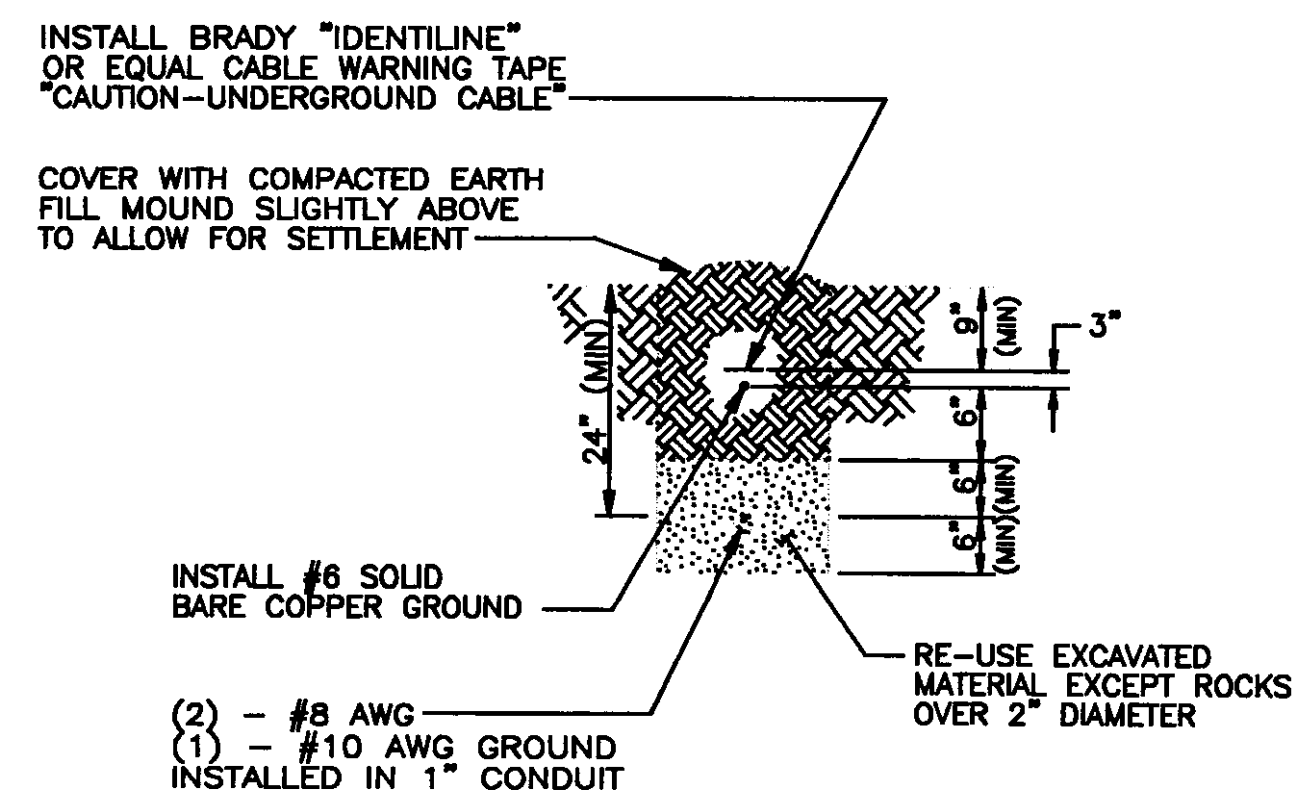
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NO.	DATE	REVISIONS	BY	CK'D

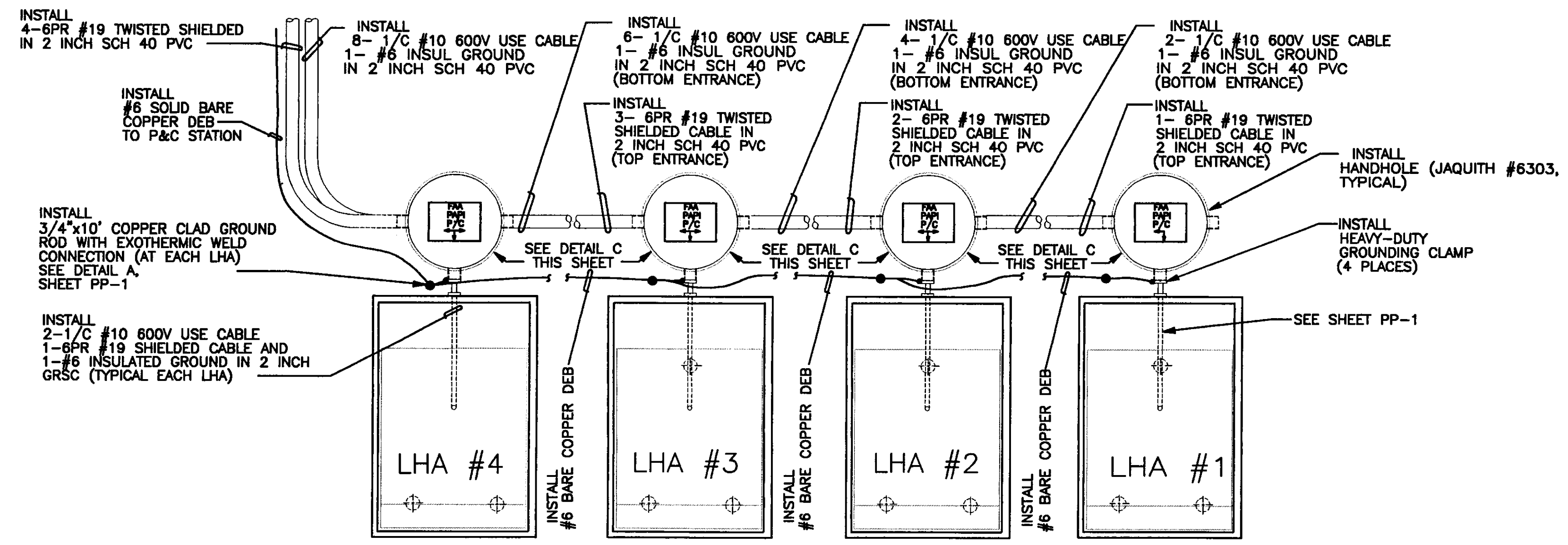
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STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
 CALEDONIA COUNTY STATE AIRPORT  
 PAPI MOUNTING PLAN  
 SECTIONS AND FOUNDATION DETAILS

DRAWN BY MDL	DATE JULY 2001
CHECKED BY N17151	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510008
SHEET	6 OF 13

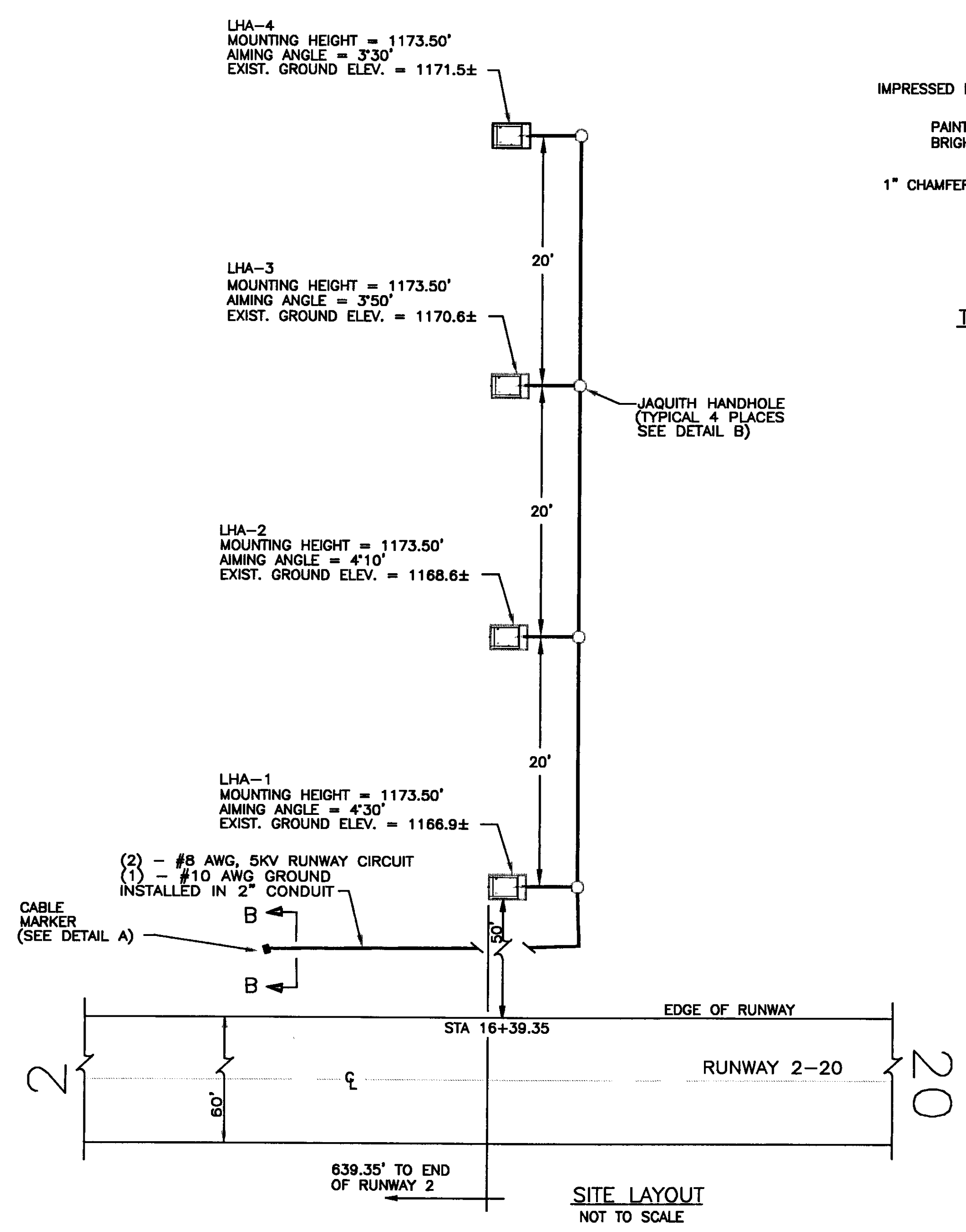


**SECTION B-B**  
**LOW VOLTAGE CABLE**  
**TRENCH SECTION**  
 NOT TO SCALE

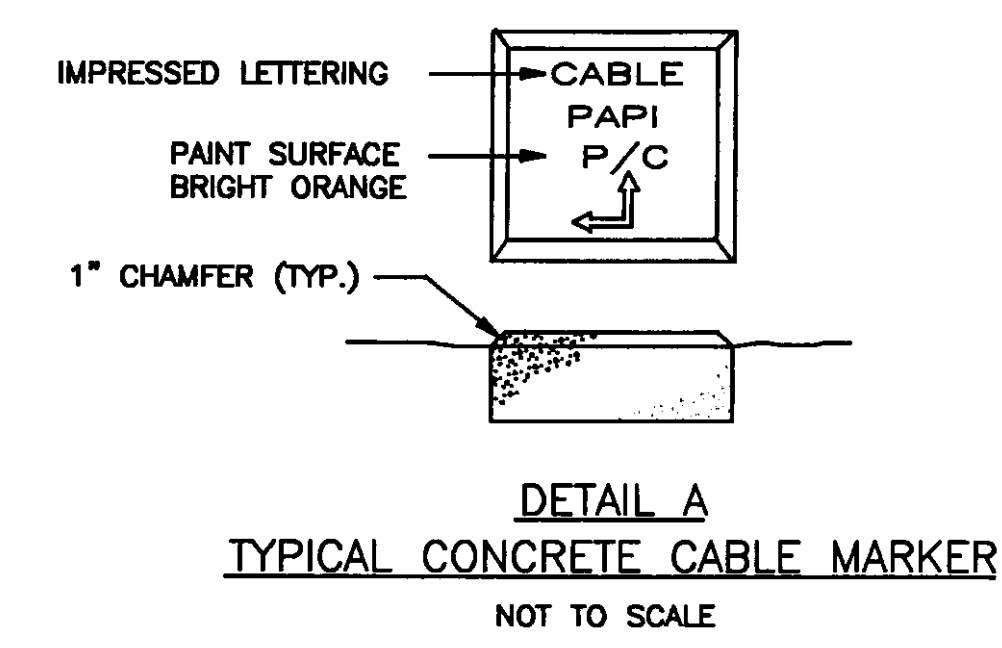


**CABLING AT LAMP HOUSING ASSEMBLY CONFIGURATION**  
 NOT TO SCALE

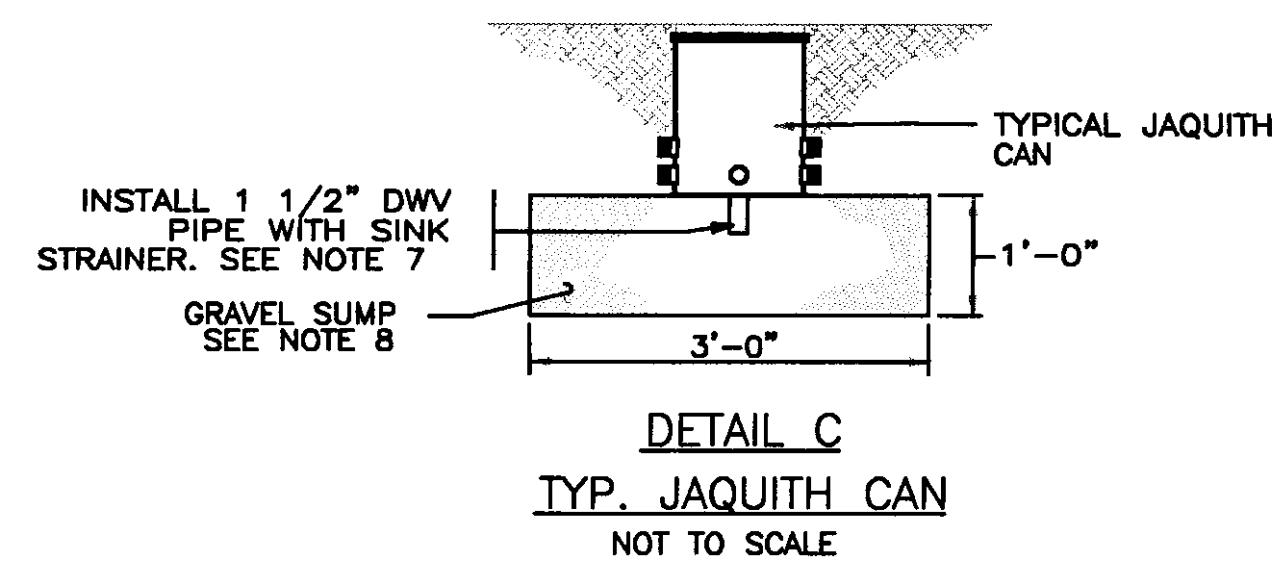
- NOTES:**
1. ALL GRSC SWEEPS SHALL HAVE GROUND CLAMPS AND BE CONNECTED TO A GROUND ROD VIA #6 SOLID BARE CU WIRE.
  2. CABLE MARKERS SHALL BE PLACED EVERY 200 FEET ALONG TRENCH AND AT ANY CHANGE IN DIRECTION.
  3. ALL TRENCHES SHALL BE FILLED IN LAYERS NOT EXCEEDING 6" AND EACH LAYER SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY. FILL SHALL BE OF STRUCTURAL NATURE ONLY.
  4. ALL INSULATED CABLE SHALL BE PROPERLY AND PERMANENTLY COLOR CODED AT EACH END PRIOR TO INSTALLATION.
  5. CONTRACTOR SHALL VERIFY THAT GROUND LUGS HAVE BEEN INSTALLED ON BOTH INTERIOR AND EXTERIOR OF JAQUITH CAN. IF CLAMPS DO NOT EXIST, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION.
  6. CONTRACTOR SHALL FURNISH AND INSTALL BRASS IDENTIFICATION PLATES. THESE PLATES SHALL BE 8" X 6" WITH THREE ROWS OF CHARACTERS (2 FOR WORDS, 1 FOR DIRECTION ARROW), AND 1" LETTERING.
  7. CONTRACTOR SHALL DRILL 1 1/2" HOLE THROUGH THE BOTTOM OF JAQUITH CAN, AND SPRAY GALV. ON CAN PRIOR TO INSTALLATION.
  8. INSTALL A 3'x3'x1', 3/4" CRUSHED STONE SUMP UNDER ALL JAQUITH CANS. THE CRUSHED STONE SHALL BE WRAPPED IN GEOTEXTILE FABRIC.



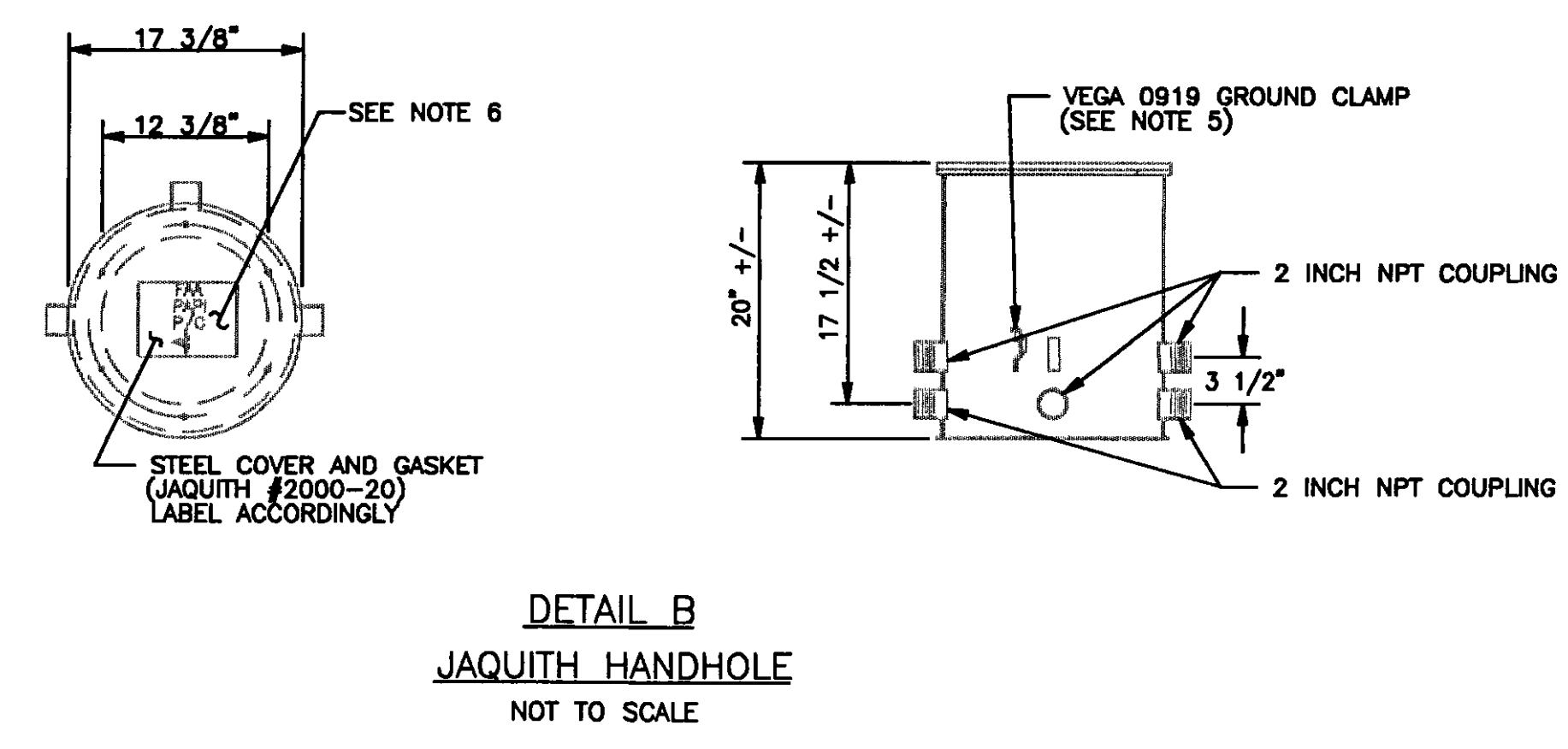
**SITE LAYOUT**  
 NOT TO SCALE



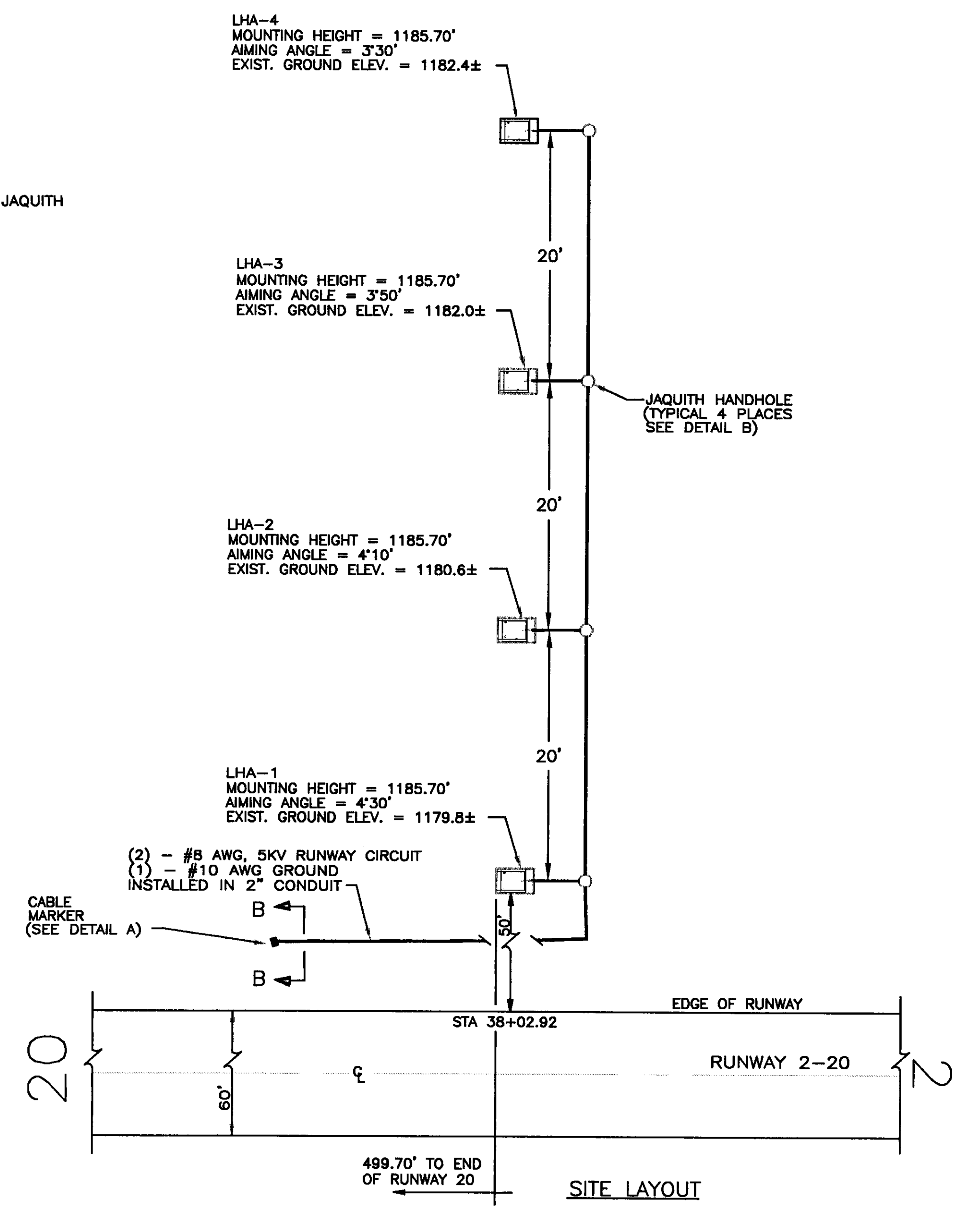
**DETAIL A**  
**TYPICAL CONCRETE CABLE MARKER**  
 NOT TO SCALE



**DETAIL C**  
**TYP. JAQUITH CAN**  
 NOT TO SCALE



**DETAIL B**  
**JAQUITH HANDHOLE**  
 NOT TO SCALE



**SITE LAYOUT**

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NO.	DATE	REVISIONS	BY	CK'D

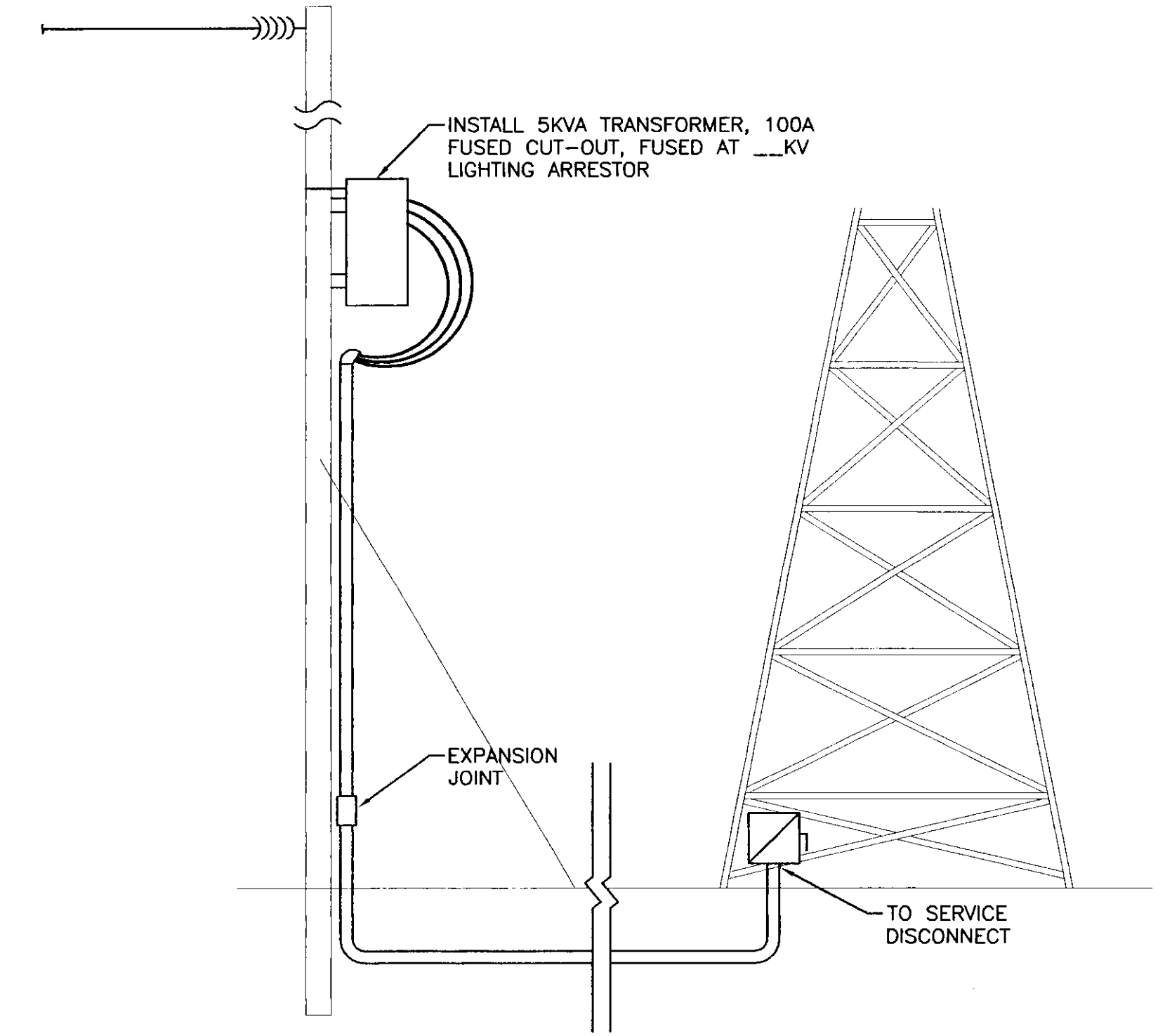
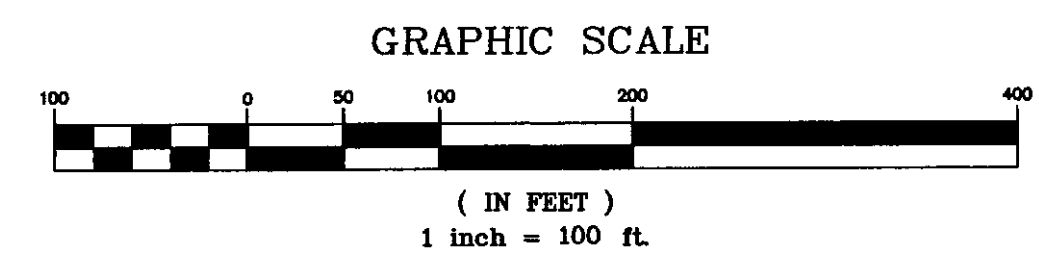
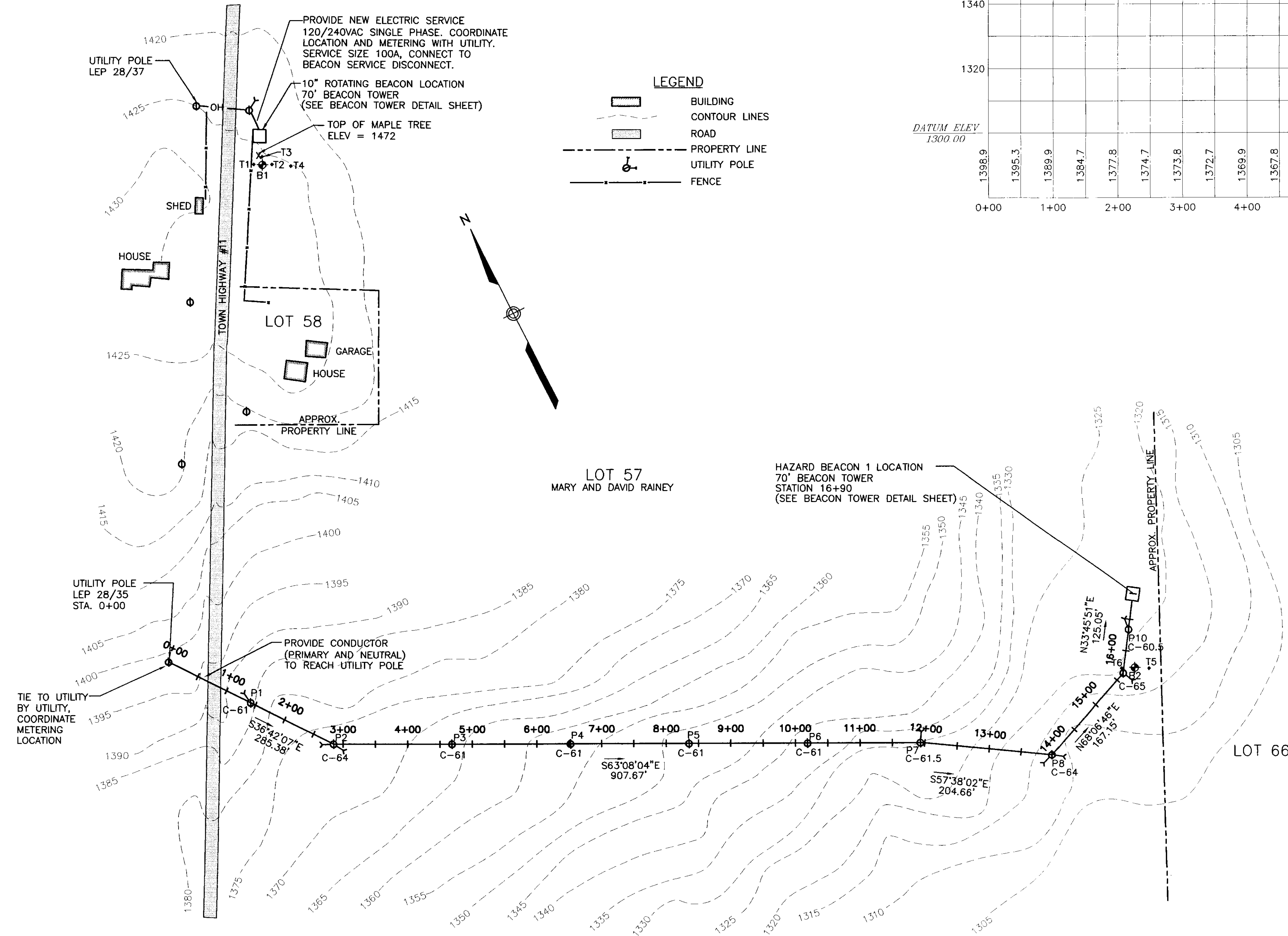
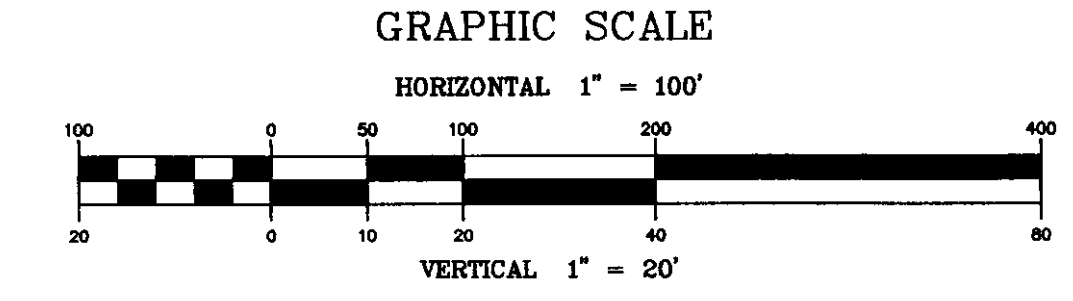
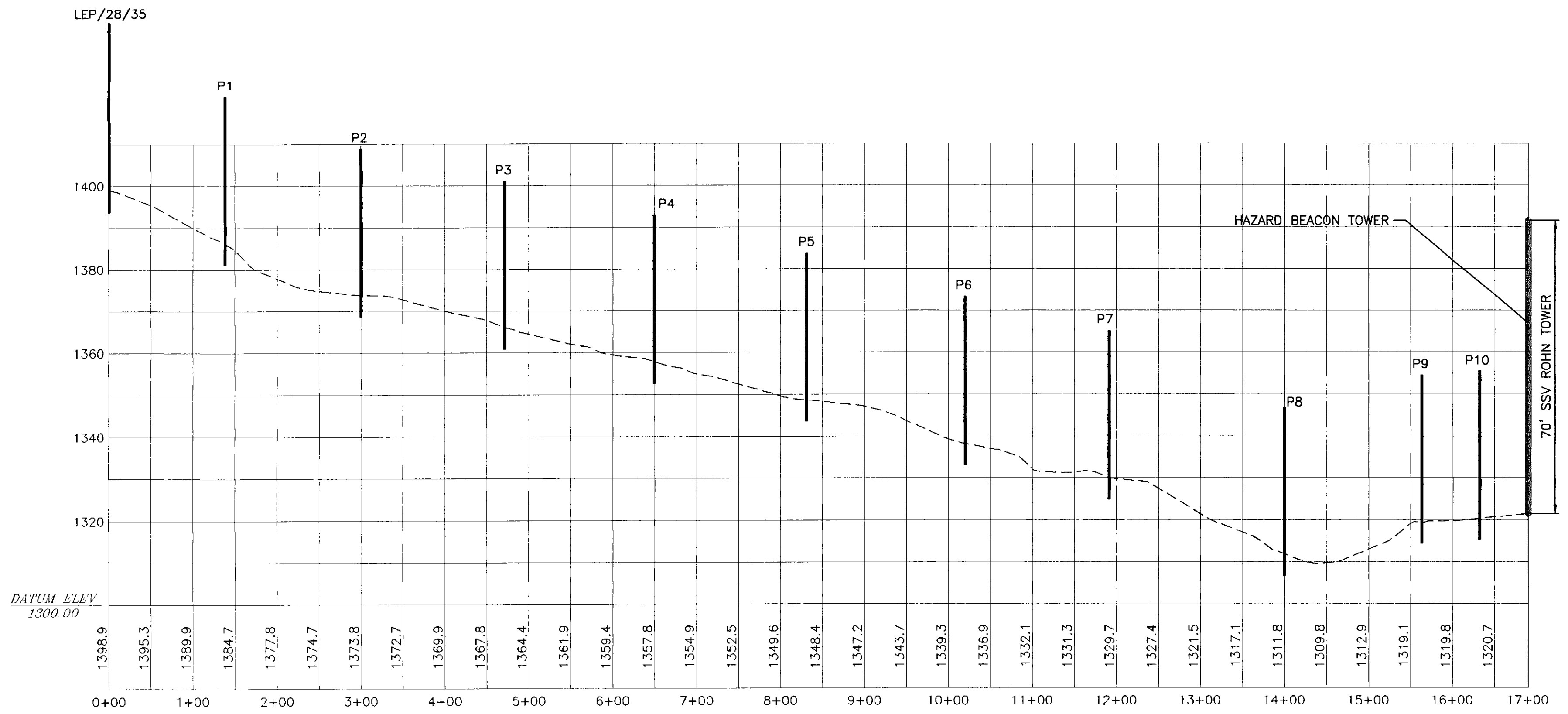
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STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
 CALEDONIA COUNTY STATE AIRPORT  
 PAPI GENERAL  
 INSTALLATION DETAILS

DRAWN BY MDL	DATE JULY 2001
CHECKED BY 	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510009
SHEET 7 OF 13	

**BORING B1**  
 5' - 7' SILTY SAND WITH STONES  
 REFUSAL WITH AUGER AT 7'  
 T1 = 8' WEST REFUSAL WITH AUGER AT 8"  
 T2 = 8' EAST REFUSAL WITH AUGER AT 6"  
 T3 = 8' NORTH REFUSAL WITH AUGER AT 7'-6"  
 T4 = 44' EAST REFUSAL WITH AUGER AT 5'

**BORING B2**  
 5' - 7' SILTY SAND WITH STONES  
 10' - 11'-6" SILTY SAND WITH STONES  
 REFUSAL WITH AUGER AT 11'-6"  
 T5 = 8' EAST REFUSAL WITH AUGER AT 7'-6"  
 T6 = 9' WEST REFUSAL WITH AUGER AT 7'



**TYPICAL RISER - SEE DETAILS 1 & 2 SHEET 10**  
 SCALE: 3/16"=1'-0"

**NOTE:**  
 1. CONTRACTOR TO PROVIDE TRANSFORMER FOR HAZARD BEACON SITES, UTILITY TO PROVIDE TRANSFORMER FOR ROTATING BEACON SITES.

NO.	DATE	REVISIONS	BY	CK'D

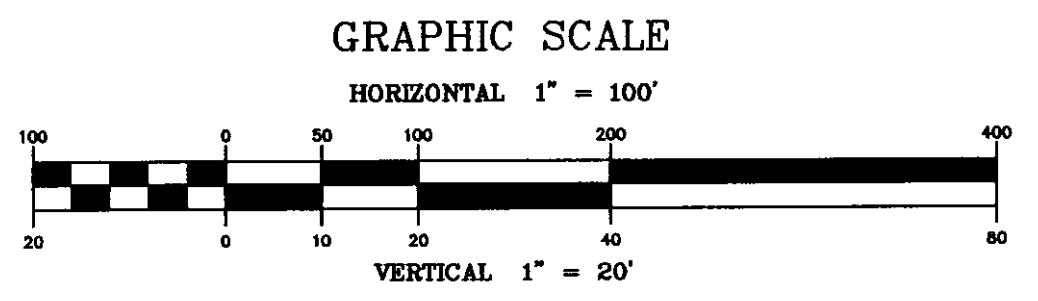
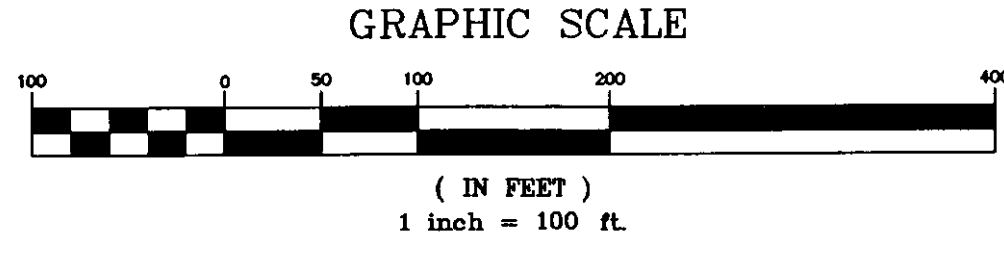
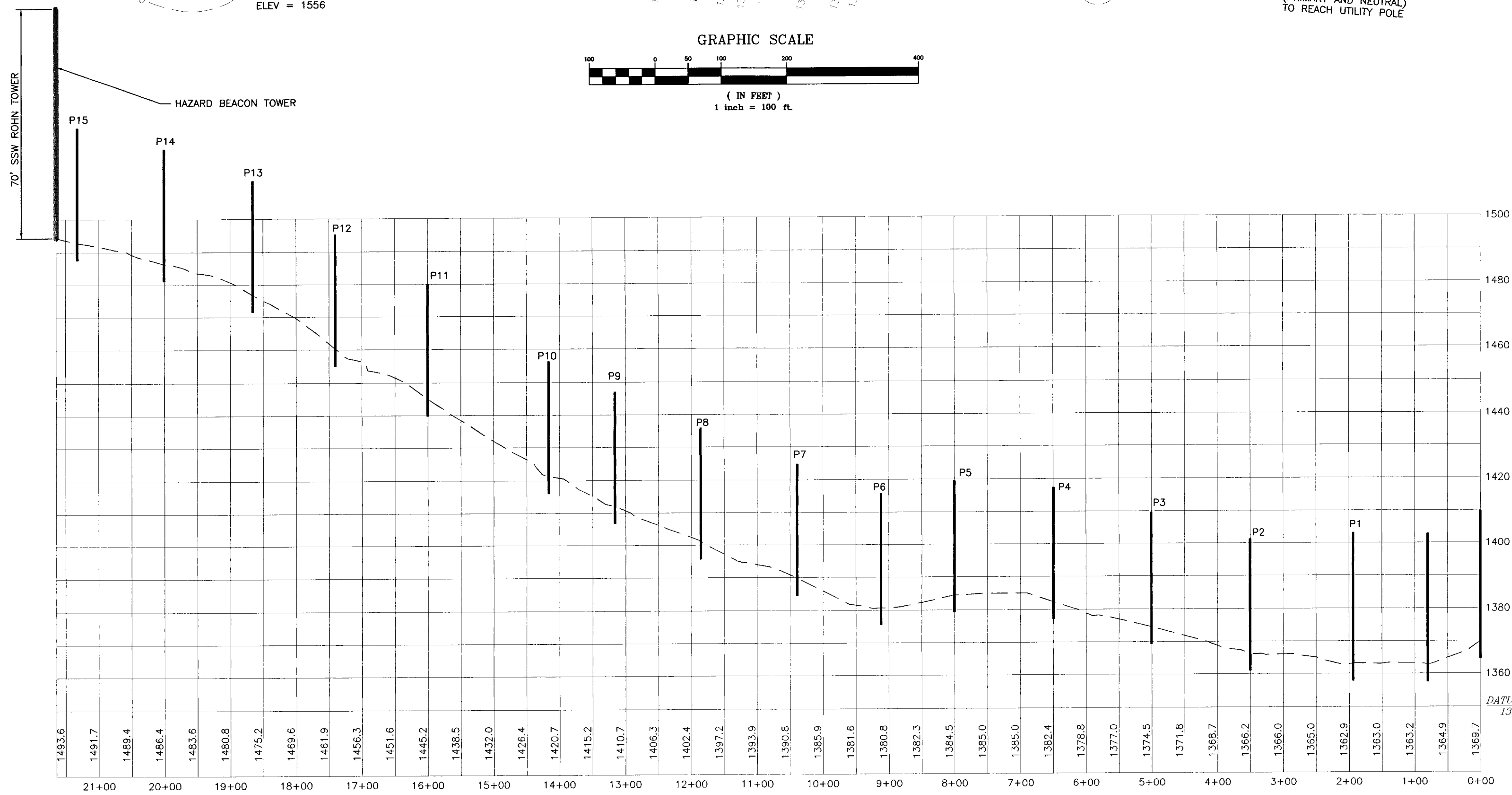
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 AGENCY OF TRANSPORTATION  
 CALEDONIA COUNTY STATE AIRPORT  
 ELECTRICAL PLAN AND PROFILE  
 HAZARD BEACON 1  
 PLAN ROTATING BEACON

DRAWN BY MDL	DATE JULY 2001
CHECKED BY N17151	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510015
SHEET 8	OF 13

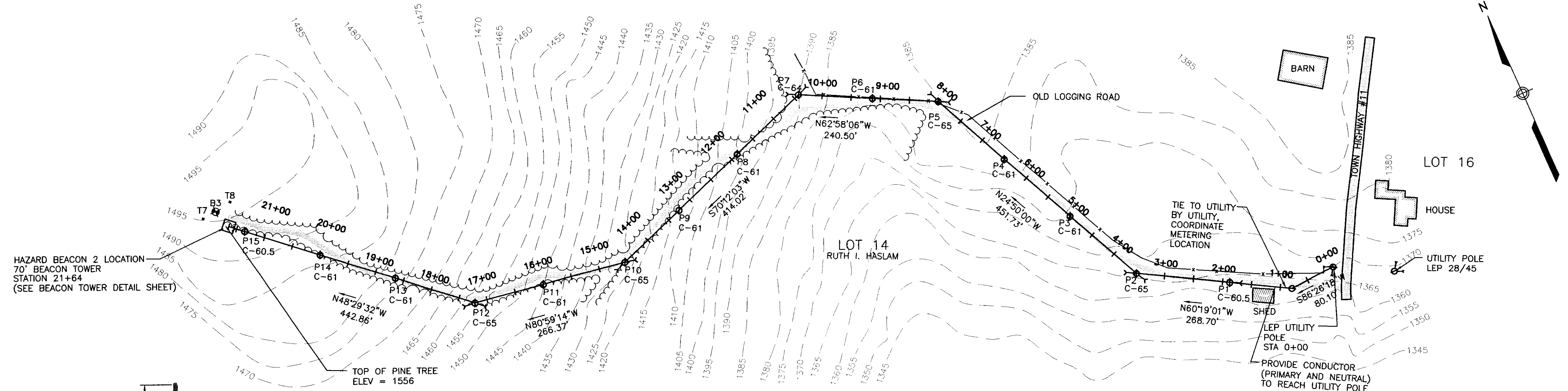
I:\v17151\dwg\C171510015.dwg Mon Oct 15 08:27:55 2001

HAZARD BEACON 2 LOCATION  
70' BEACON TOWER  
STATION 21+64  
(SEE BEACON TOWER DETAIL SHEET)



**BORING B3**  
5' - 6'-6" FINE SAND WITH SILT  
REFUSAL WITH AUGERS AT 6'-6"  
T7 = 8' WEST REFUSAL WITH AUGER AT 4'-6"  
T8 = 12' EAST REFUSAL WITH AUGER AT 6'

- LEGEND**
- BUILDING
  - CONTOUR LINES
  - ROAD
  - TREE LINE
  - UTILITY POLE
  - STONE WALL
  - FENCE



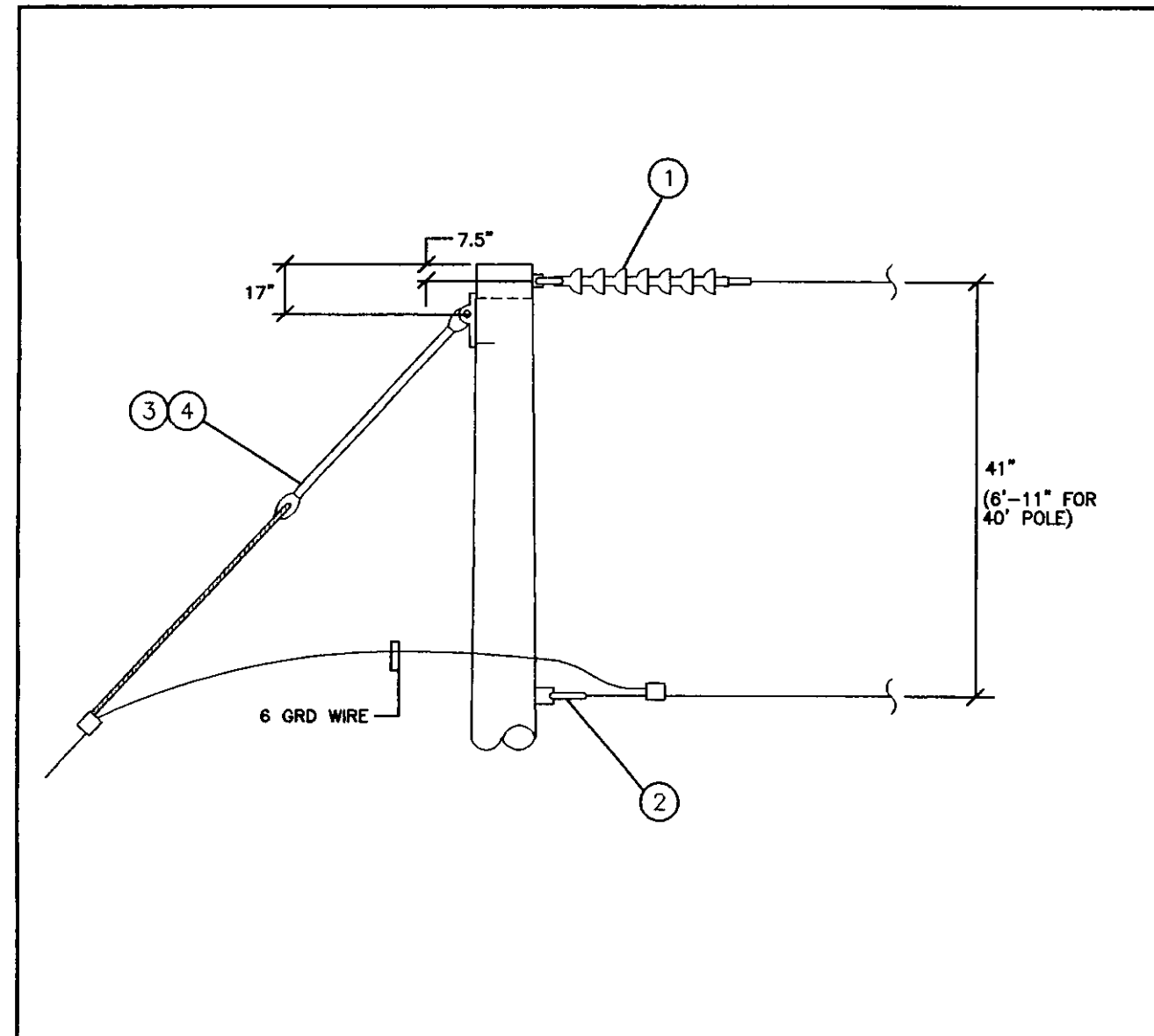
NO.	DATE	REVISIONS	BY	CK'D

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STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CALEDONIA COUNTY STATE AIRPORT  
PLAN AND PROFILE  
HAZARD BEACON 2

DRAWN BY MDL	DATE JULY 2001
CHECKED BY JAA	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510016
SHEET 9 OF 13	

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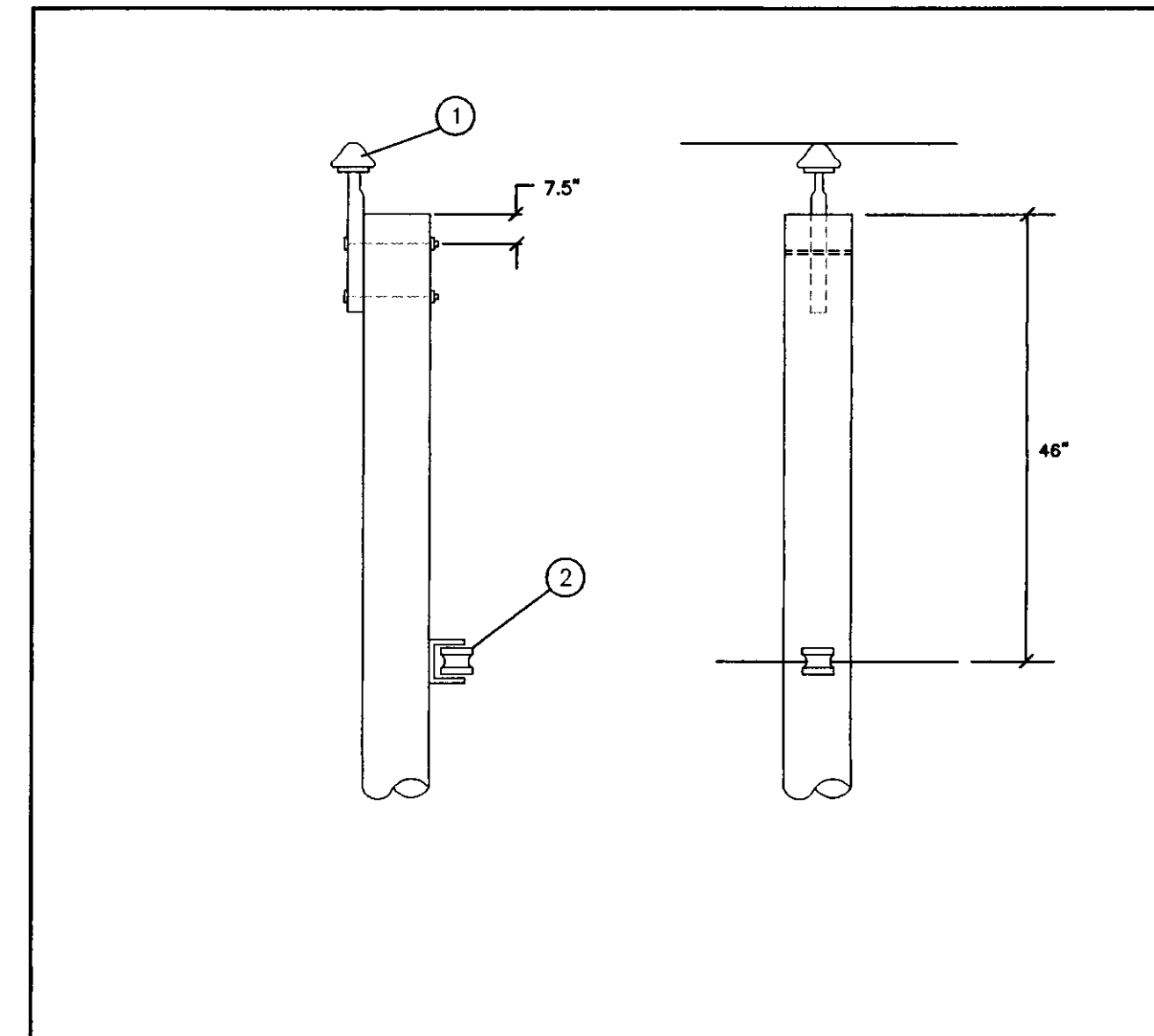


NOT TO SCALE

ITEM	DESCRIPTION	C.U. No.	REQ.	ITEM	DESCRIPTION	C.U. No.	REQ.
1	EPOXY DEADEND ASSEMBLY	EPOXY D.E.	1	8			
2	NEUTRAL DEADEND	D.E. NEUT.	1	9			
3	GUY, 7/16" ASSEMBLY	GUY 7/16"	1	10			
4	ANCHOR 10" HELIX x 3/4" ROD	ANCHOR	1	11			
5				12			
6				13			
7				14			

**DISTRIBUTION STANDARDS**      **SINGLE-PHASE DEADEND**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_ **C-60.5**

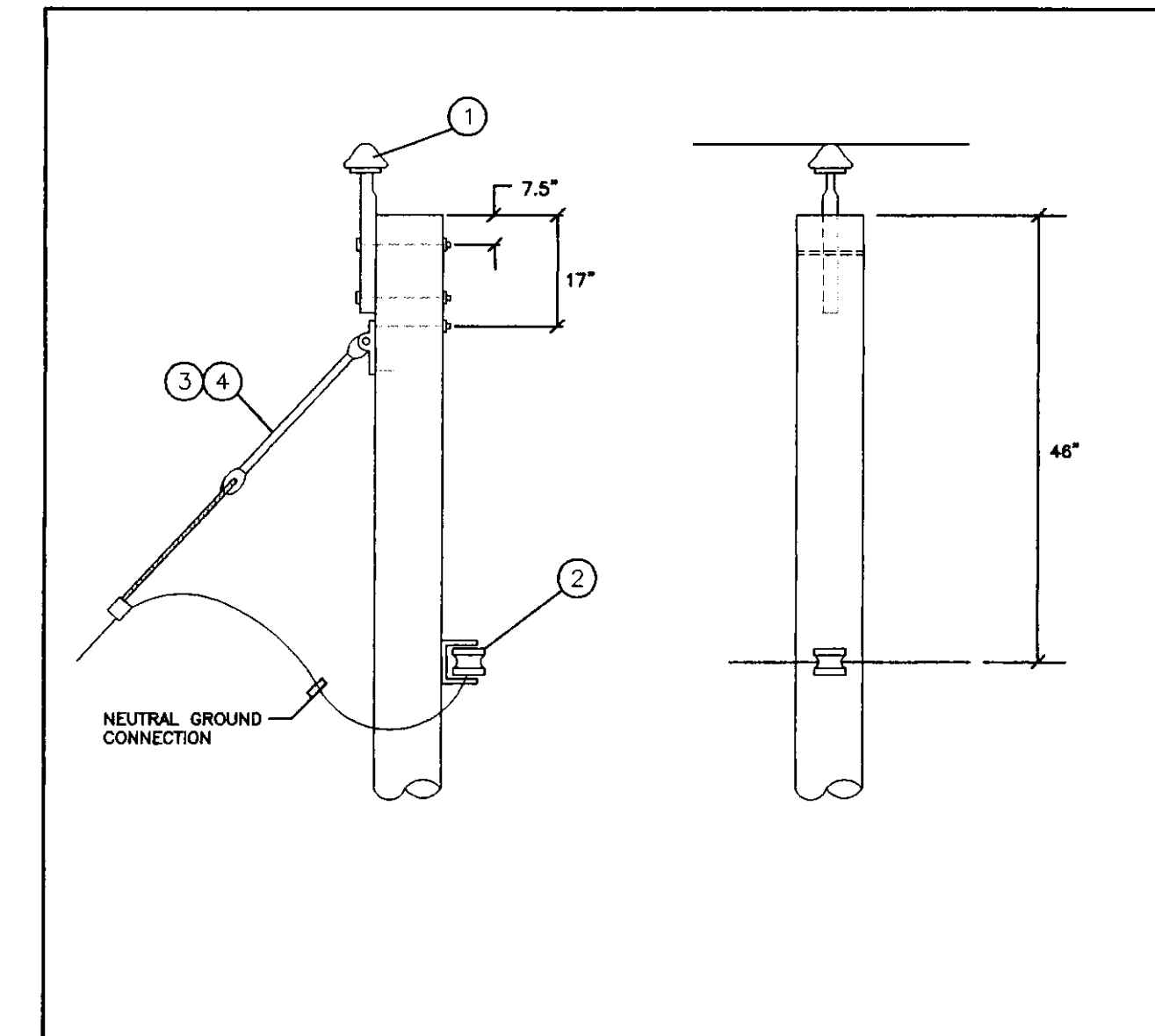


NOT TO SCALE

ITEM	DESCRIPTION	C.U. No.	REQ.	ITEM	DESCRIPTION	C.U. No.	REQ.
1	INSUL & POLE TOP PIN	PTP	1	8			
2	CLEVIS AND SPOOL INSUL.	CLEVIS-N.B.	2	9			
3				10			
4				11			
5				12			
6				13			
7				14			

**DISTRIBUTION STANDARDS**      **ARMLESS CONSTRUCTION**  
**1-PHASE, STRAIGHT LINE**  
**34.5 Y/15 KV**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_ **C-61**

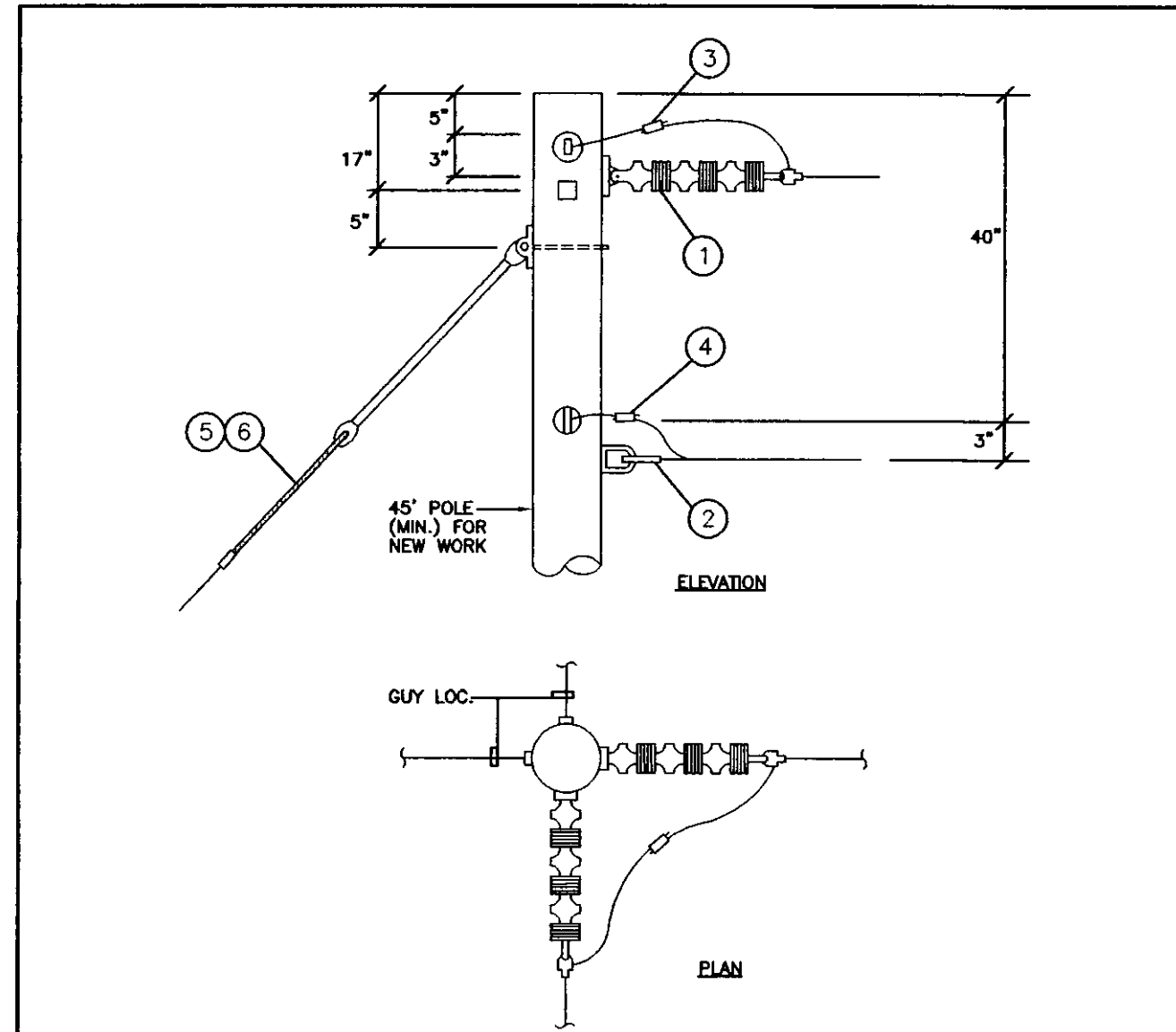


NOT TO SCALE

ITEM	DESCRIPTION	C.U. No.	REQ.	ITEM	DESCRIPTION	C.U. No.	REQ.
1	INSUL & POLE TOP PIN	PTP	1	8			
2	CLEVIS AND SPOOL INSUL.	CLEVIS-N.B.	2	9			
3	GUY ASSEMBLY, 7/16"	GUY7-16	1	10			
4	ANCHOR, 3/4" DIA. x 10" HELIX	ANCHOR	1	11			
5				12			
6				13			
7				14			

**DISTRIBUTION STANDARDS**      **ARMLESS CONSTRUCTION**  
**1-PHASE, DEV'N ANGLE 2'-20'**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_ **C-61.5**

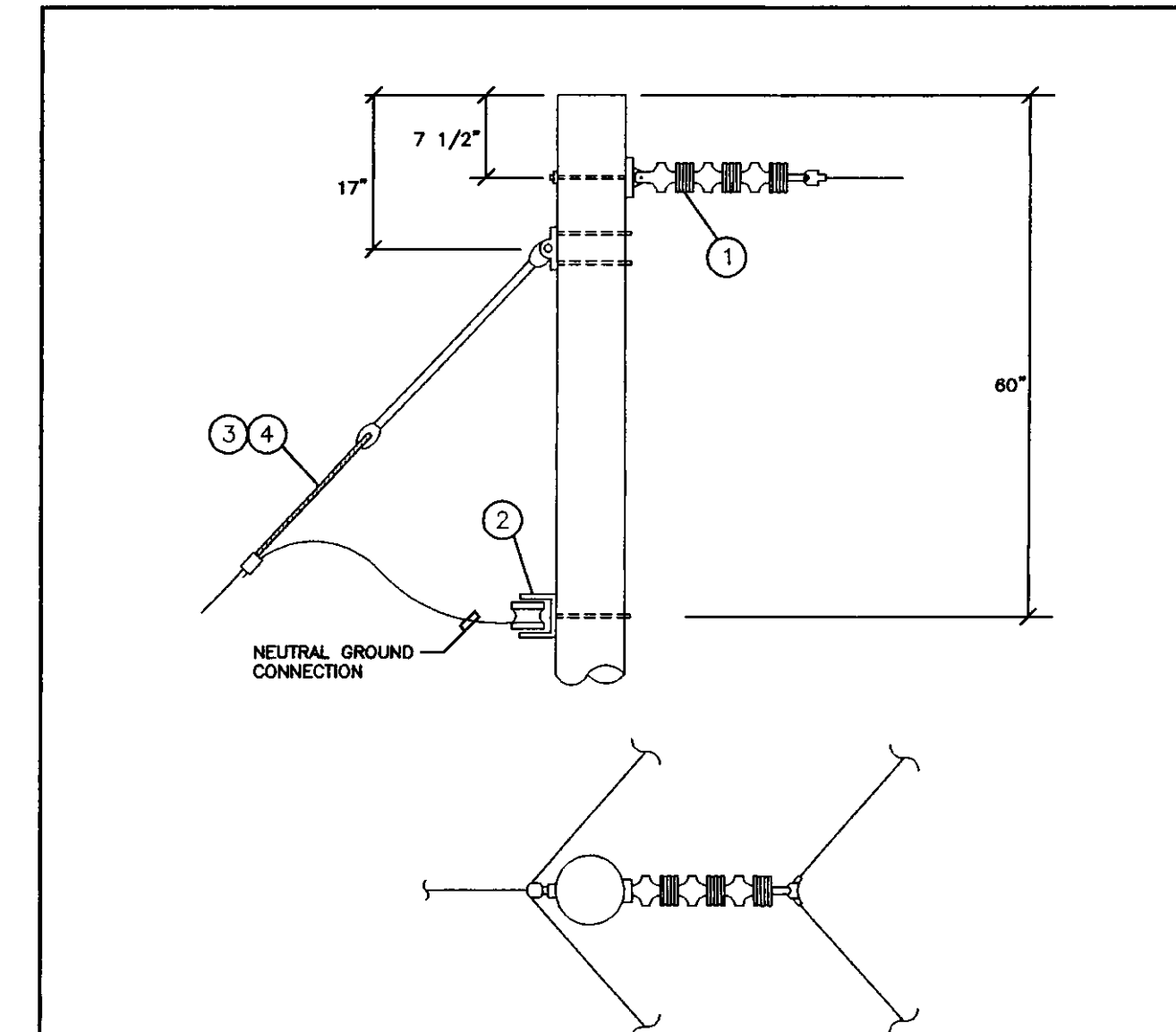


NOT TO SCALE

ITEM	DESCRIPTION	C.U. No.	REQ.	ITEM	DESCRIPTION	C.U. No.	REQ.
1	EPOXY DEADEND ASSEMBLY	EPOXY-DE	2	8			
2	NEUTRAL DEADEND	D.E.-NEUT.	2	9			
3	PHASE CONNECTOR	PH-COINL	1	10			
4	NEUTRAL CONNECTOR	NEUT-COINL	1	11			
5	GUY ASSEMBLY, 7/16"	GUY 7-16	2	12			
6	ANCHOR, 3/4" ROD X 10" HELIX	ANCHOR	2	13			
7				14			

**DISTRIBUTION STANDARDS**      **SINGLE-PHASE DEVIATION**  
**ANGLE 60° TO 90°**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_ **C-64**

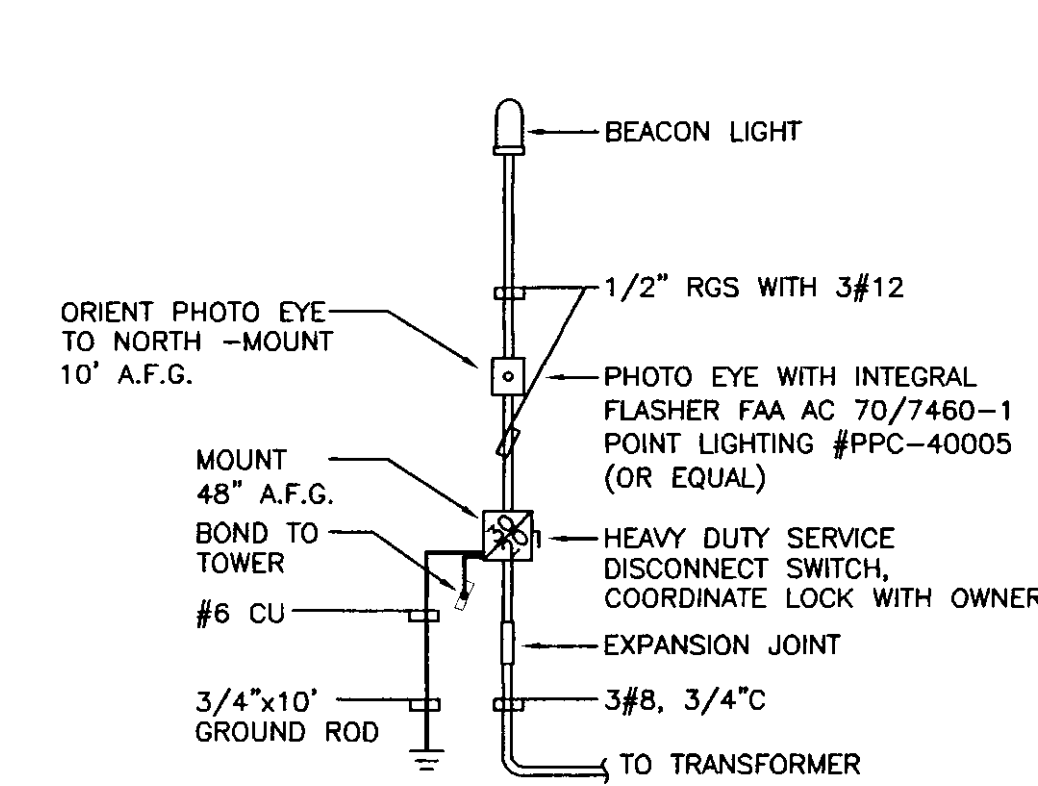


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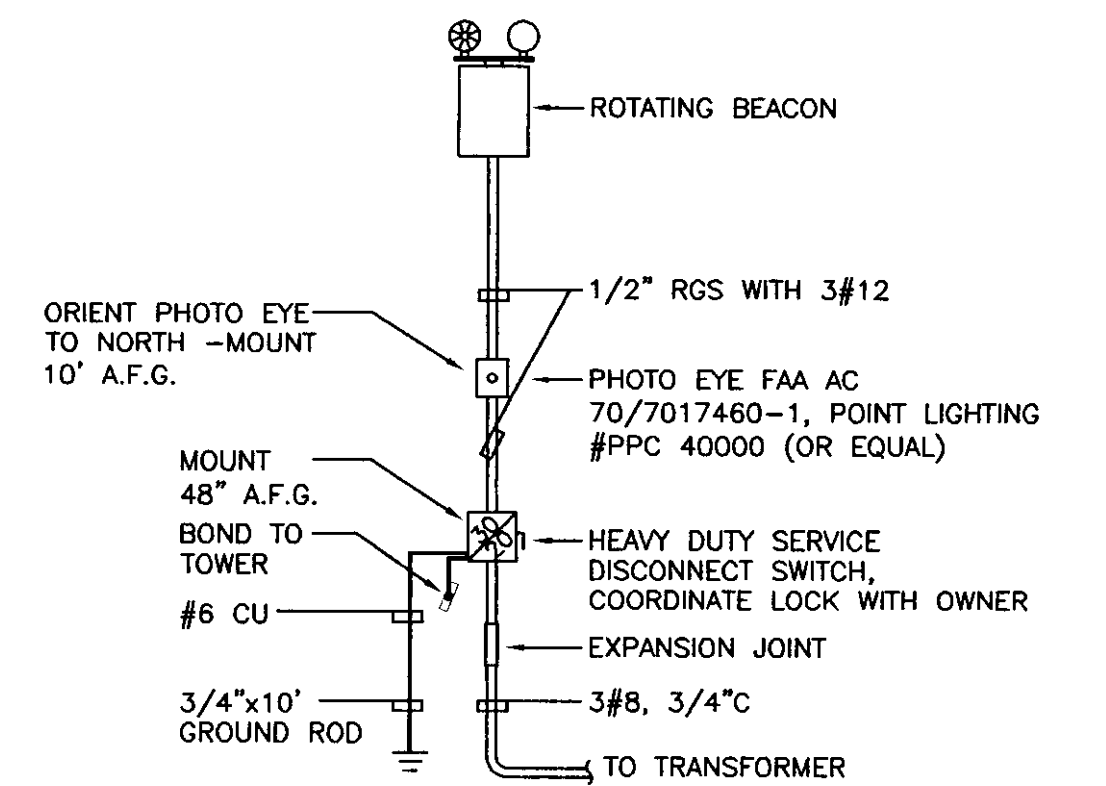
ITEM	DESCRIPTION	C.U. No.	REQ.	ITEM	DESCRIPTION	C.U. No.	REQ.
1	EPOXY DEADEND ASSEMBLY	EPOXY-DE	1	8			
2	CLEVIS & SPOOL INSUL.	CLEVIS-NB	1	9			
3	GUY ASSEMBLY, 7/16"	GUY 7-16	1	10			
4	ANCHOR, 3/4" ROD X 10" HELIX	ANCHOR	1	11			
5				12			
6				13			
7				14			

**DISTRIBUTION STANDARDS**      **ARMLESS CONSTRUCTION**  
**1-PHASE, DEV'N ANGLE 20°-60°**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_ **C-65**



**1** **POWER SERVICE DETAIL - HAZARD BEACON**  
NOT TO SCALE



**2** **POWER SERVICE DETAIL - ROTATING BEACON**  
NOT TO SCALE

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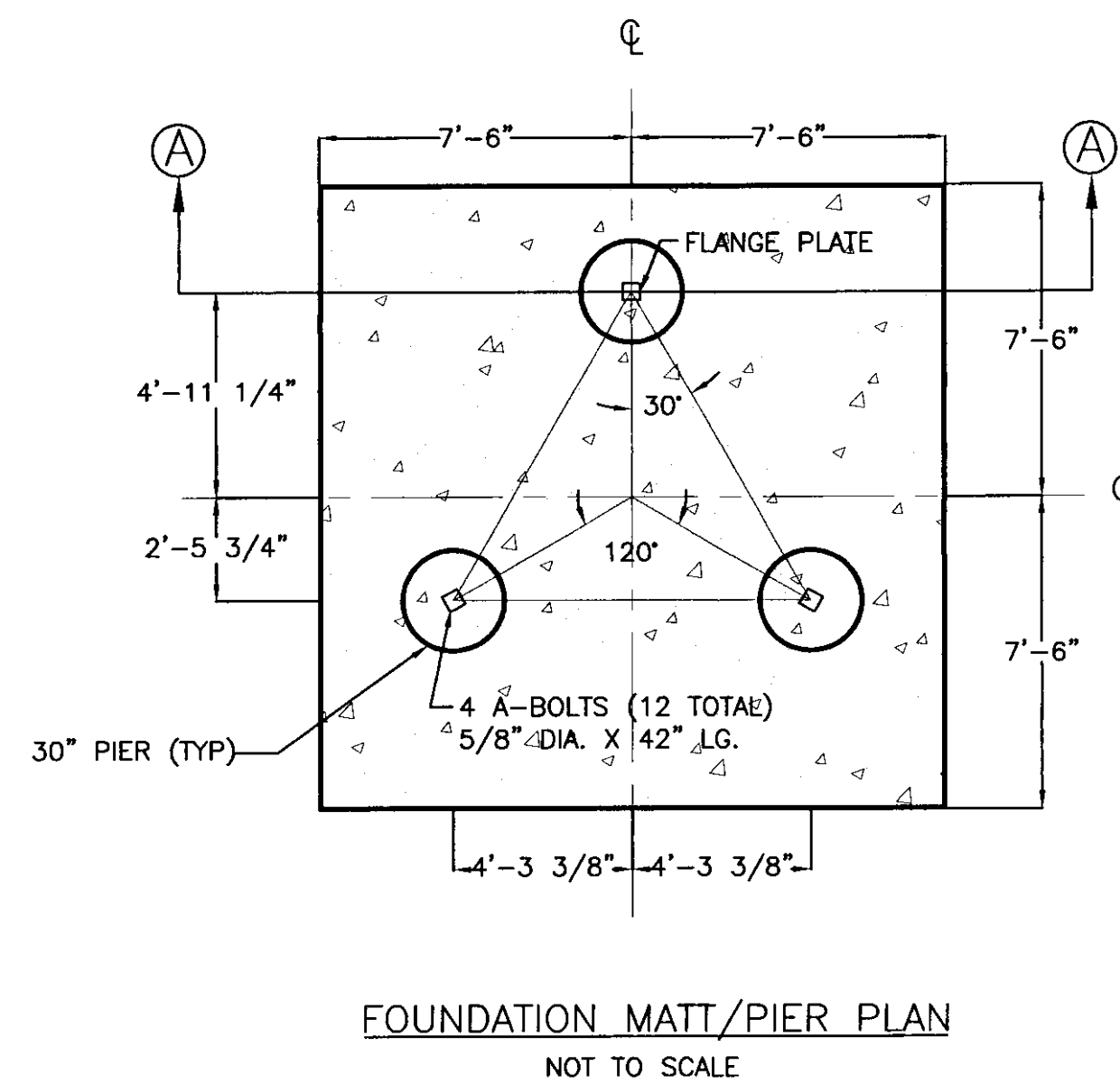
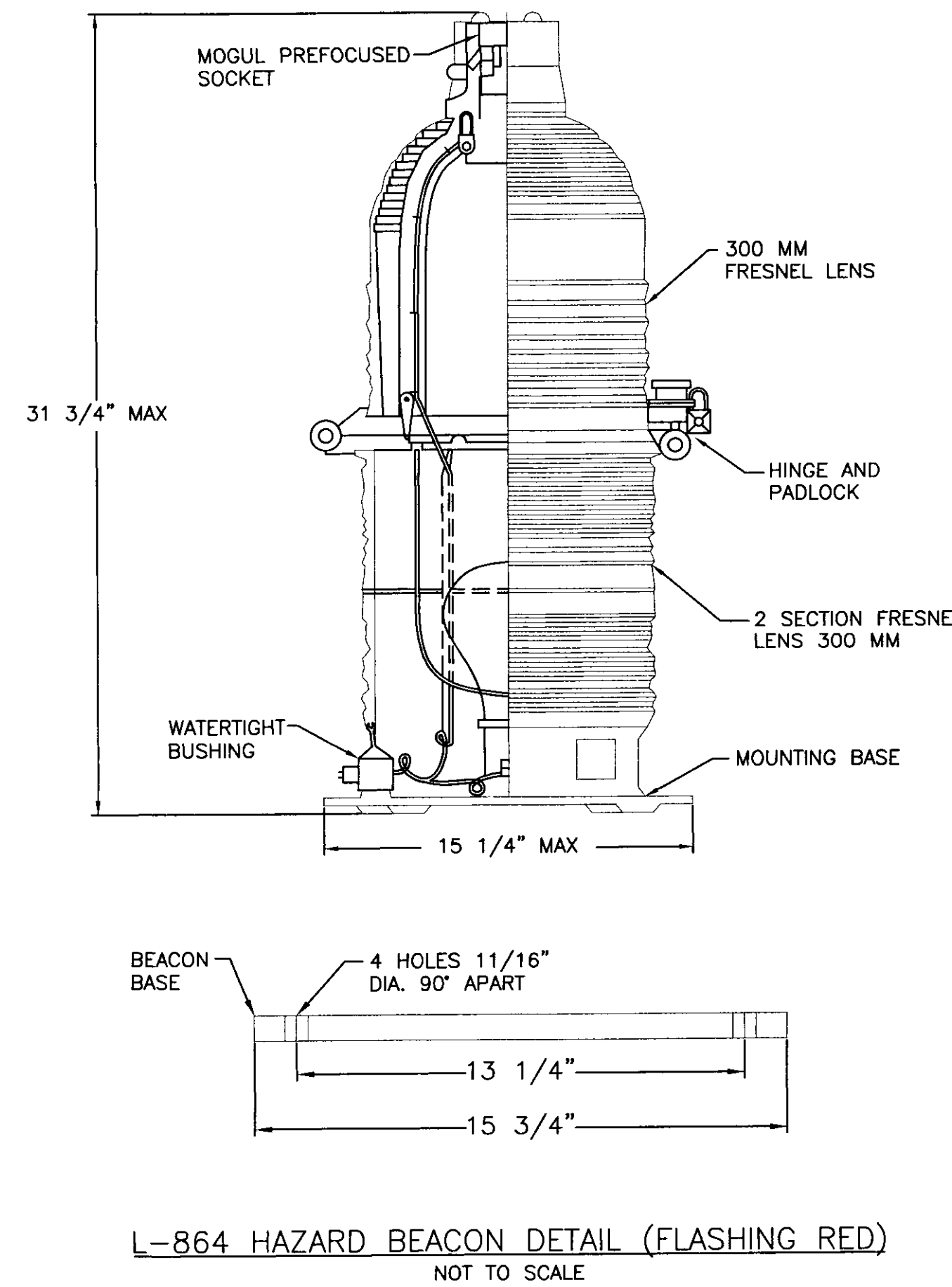
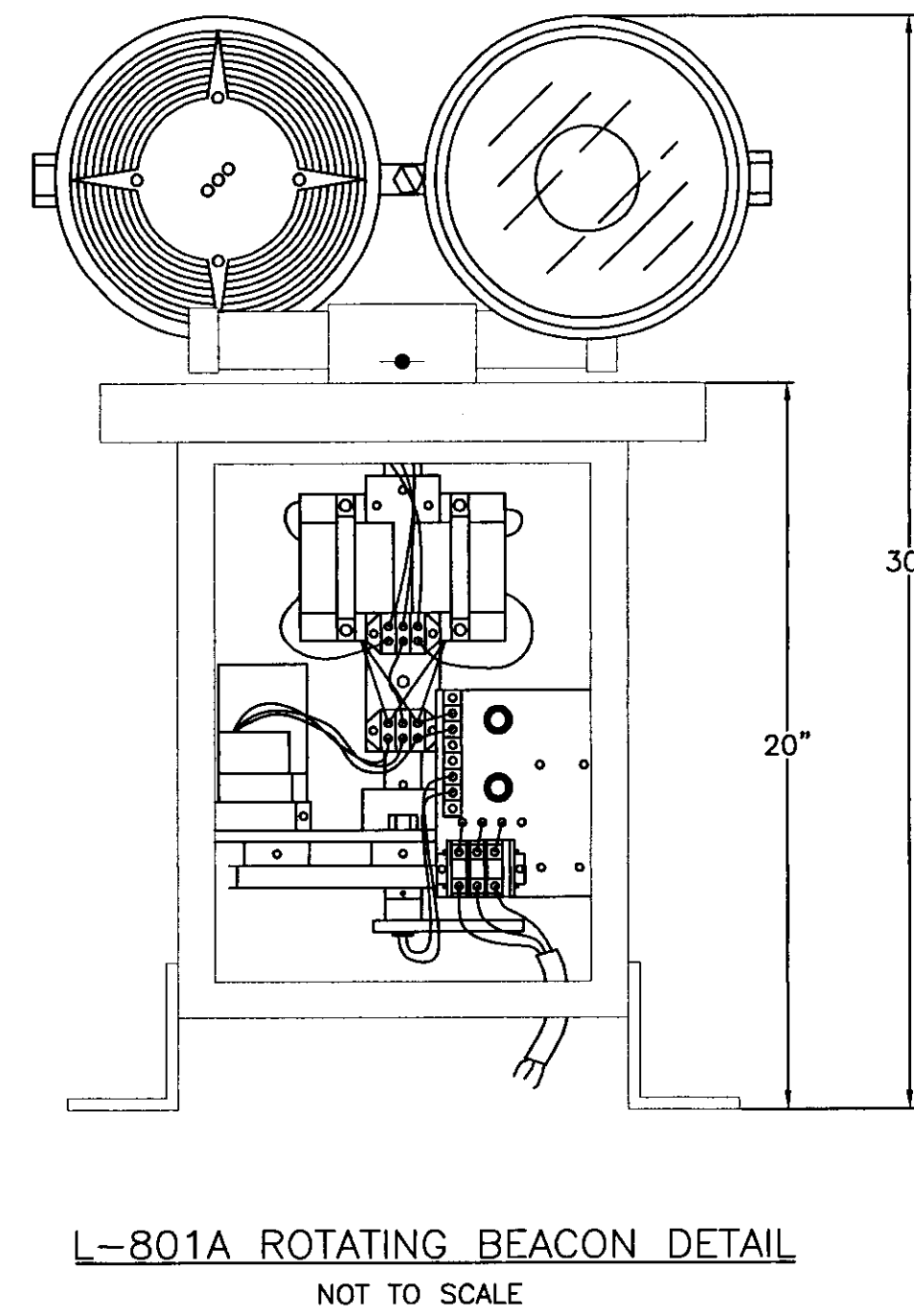
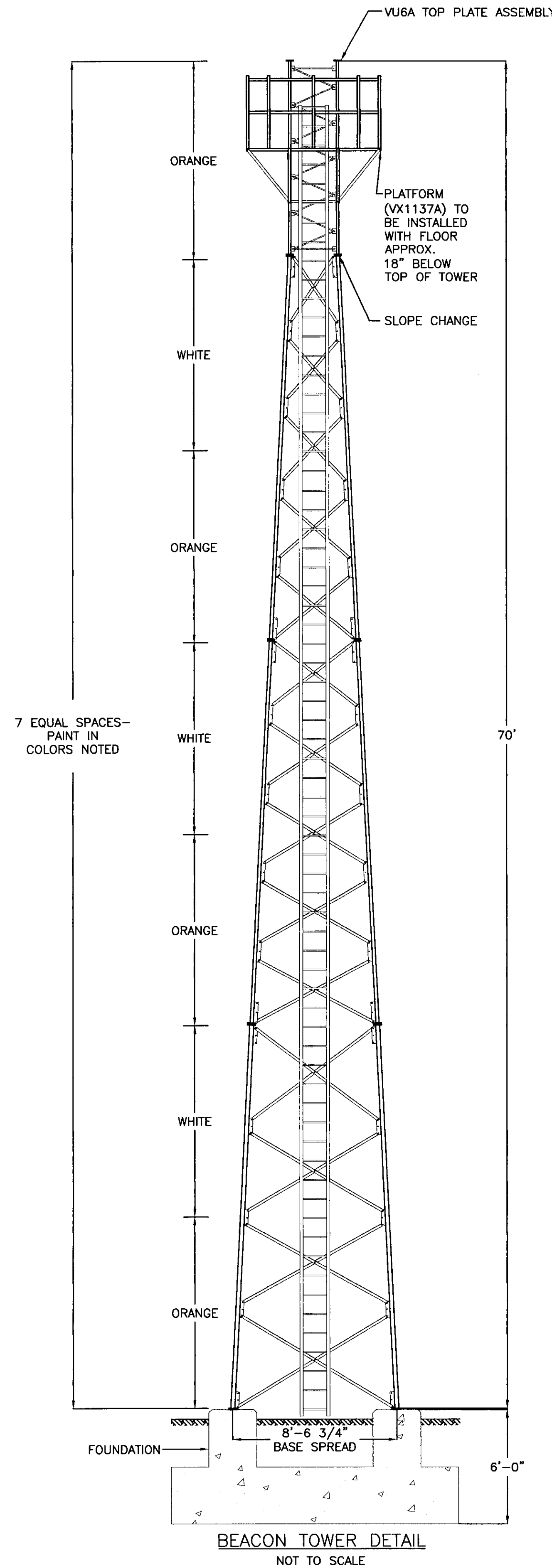
STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CALEDONIA COUNTY STATE AIRPORT  
**ELECTRICAL DETAILS**

DRAWN BY MDL	DATE JULY 2001
CHECKED BY	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510017
SHEET 10 OF 13	

GENERAL STRUCTURAL NOTES FOR CONSTRUCTION OF TOWER FOUNDATION

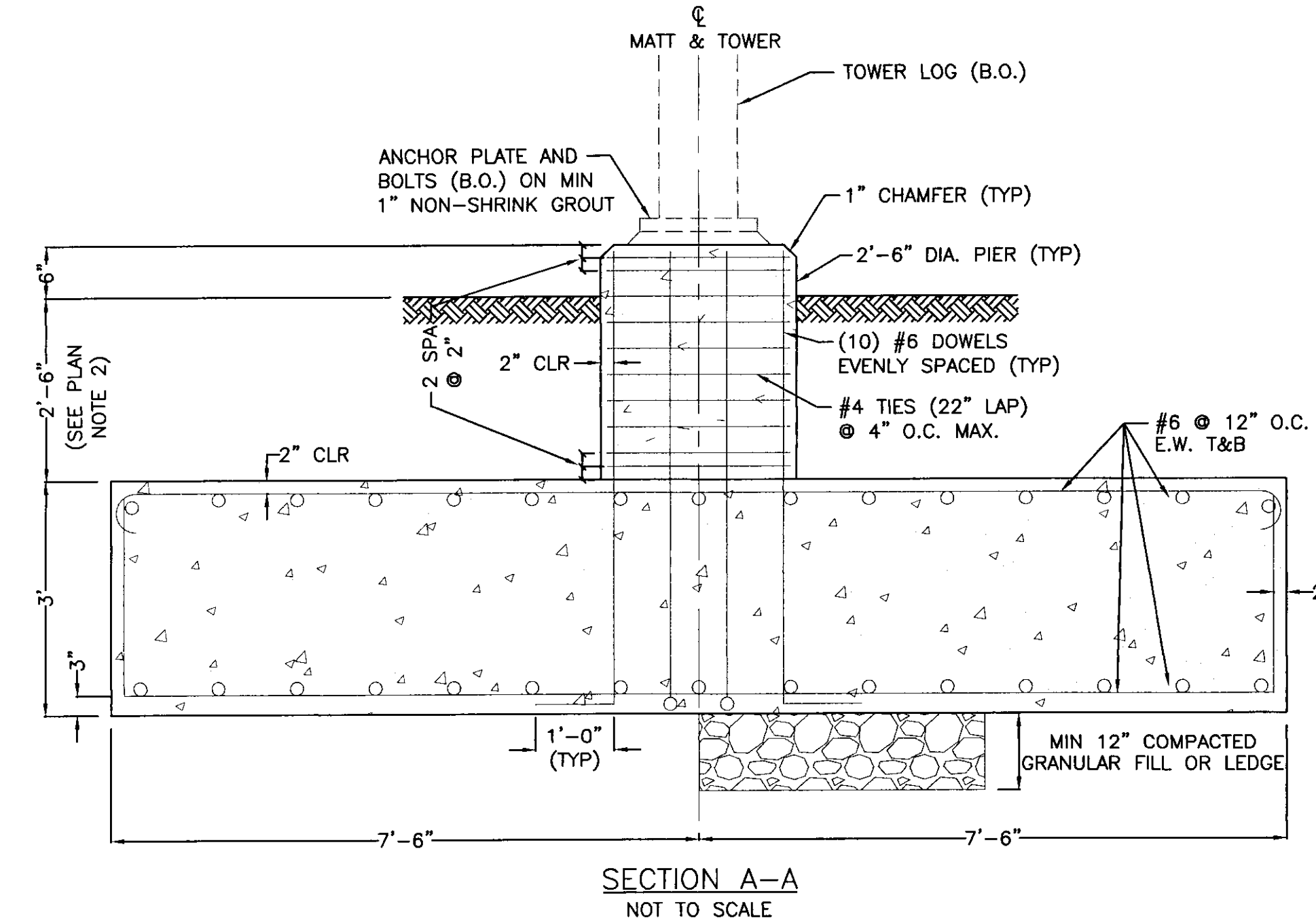
- CONTRACTOR TO VISIT SITE; TO VERIFY EXISTING CONDITIONS AFFECTING WORK SHOWN (INCLUDING BUT NOT LIMITED TO POSSIBLE OBSTRUCTIONS, EXISTING UTILITIES, SITE RESTRICTIONS, ETC...).
- CONTRACTOR SHALL WORK WITH OWNER AND APPLICABLE PRIVATE/PUBLIC ENTITIES TO LOCATE UNDERGROUND UTILITY LINES BEFORE CONSTRUCTION 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 1989 (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



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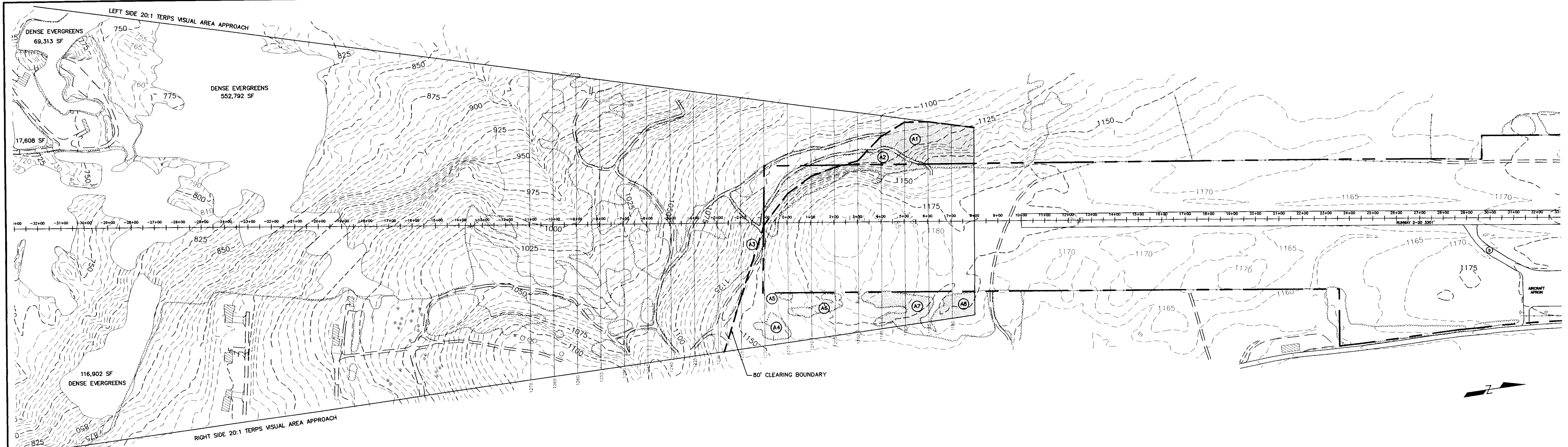
STATE OF VERMONT  
AGENCY OF TRANSPORTATION

CALEDONIA COUNTY STATE AIRPORT

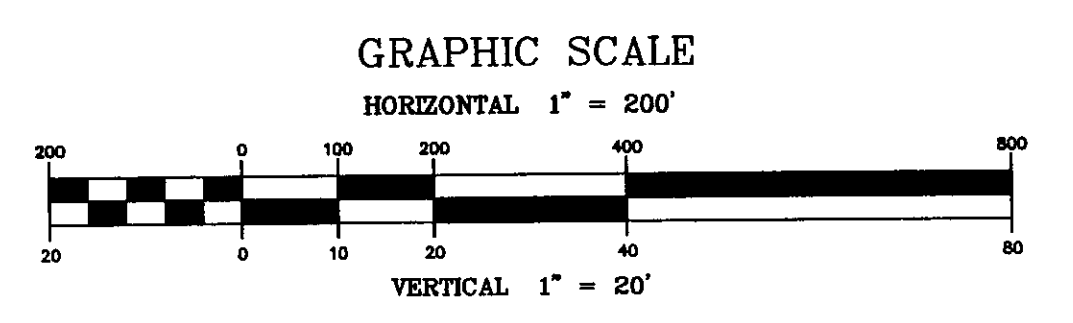
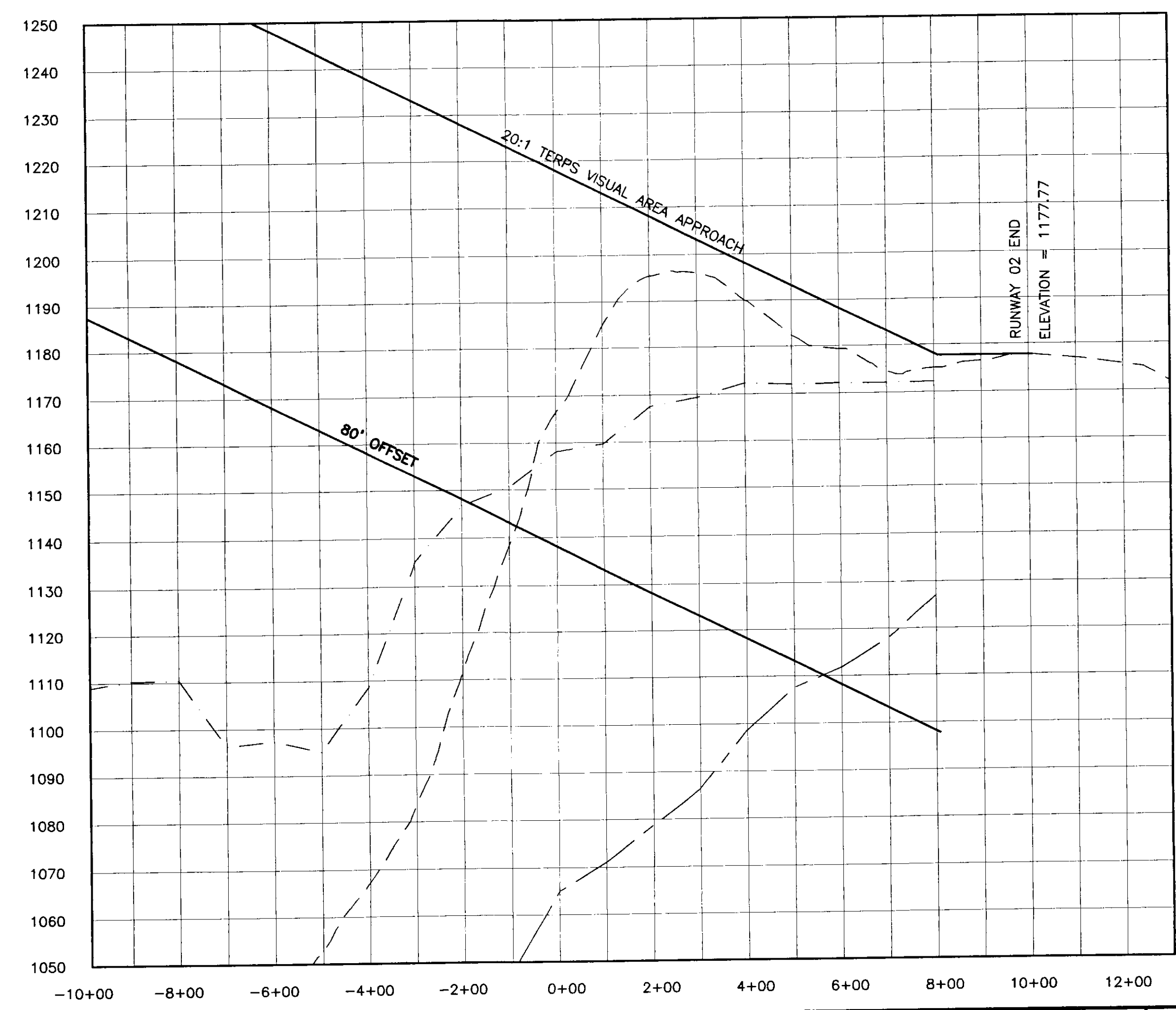
BEACON TOWER DETAILS

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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- A1 = APPROXIMATELY 1.55 ACRES CLEARING AND GRUBBING
- A2 = APPROXIMATELY 1.14 ACRES CLEARING AND GRUBBING
- A3 = APPROXIMATELY 0.13 ACRES CLEARING AND GRUBBING
- A4 = APPROXIMATELY 0.35 ACRES CLEARING AND GRUBBING
- A5 = APPROXIMATELY 0.12 ACRES CLEARING AND GRUBBING
- A6 = APPROXIMATELY 0.34 ACRES CLEARING AND GRUBBING
- A7 = APPROXIMATELY 0.78 ACRES CLEARING AND GRUBBING
- A8 = APPROXIMATELY 0.47 ACRES CLEARING AND GRUBBING
- TOTAL = APPROXIMATELY 4.88 ACRES



- LEGEND**
- PROPERTY LINE
  - - - CENTER OF EXISTING GROUND PROFILE
  - - - LEFT EDGE OF EXISTING GROUND PROFILE
  - - - RIGHT EDGE OF EXISTING GROUND PROFILE
  - ▨ CLEARING AND GRUBBING

**NOTE:**  
 AN 80' OFFSET FROM THE 20:1 TERPS VISUAL AREA APPROACH WAS USED TO DETERMINE THE OBSTACLE CLEARANCE FOR THE RUNWAY APPROACH. IT IS ASSUMED THAT THE HEIGHT OF THE TREES ARE NO MORE THAN 80 FEET.

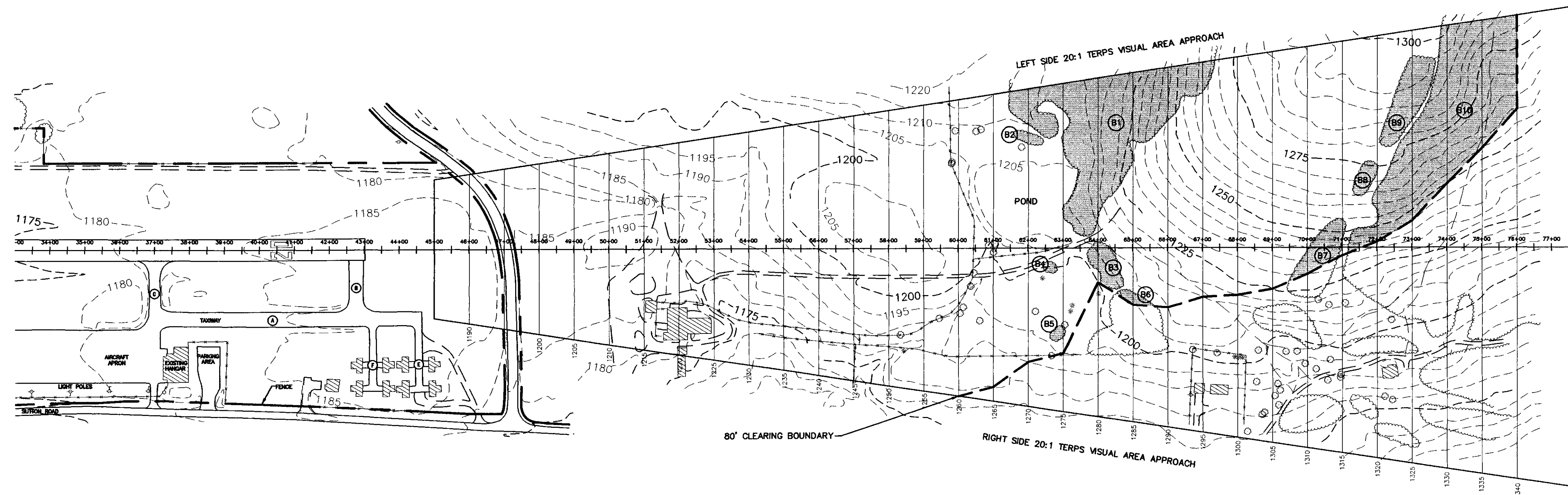
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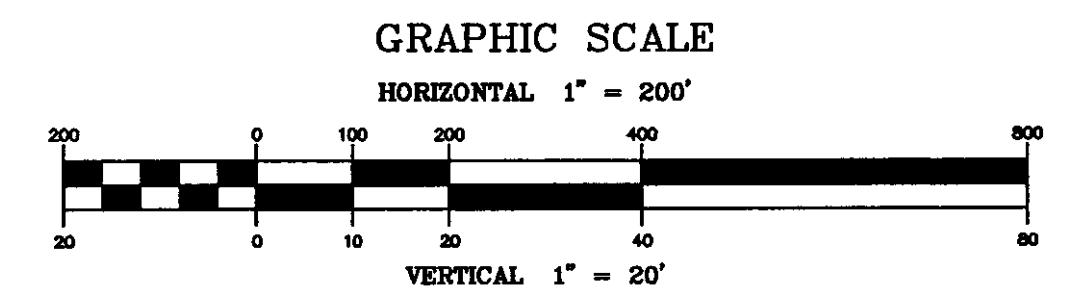
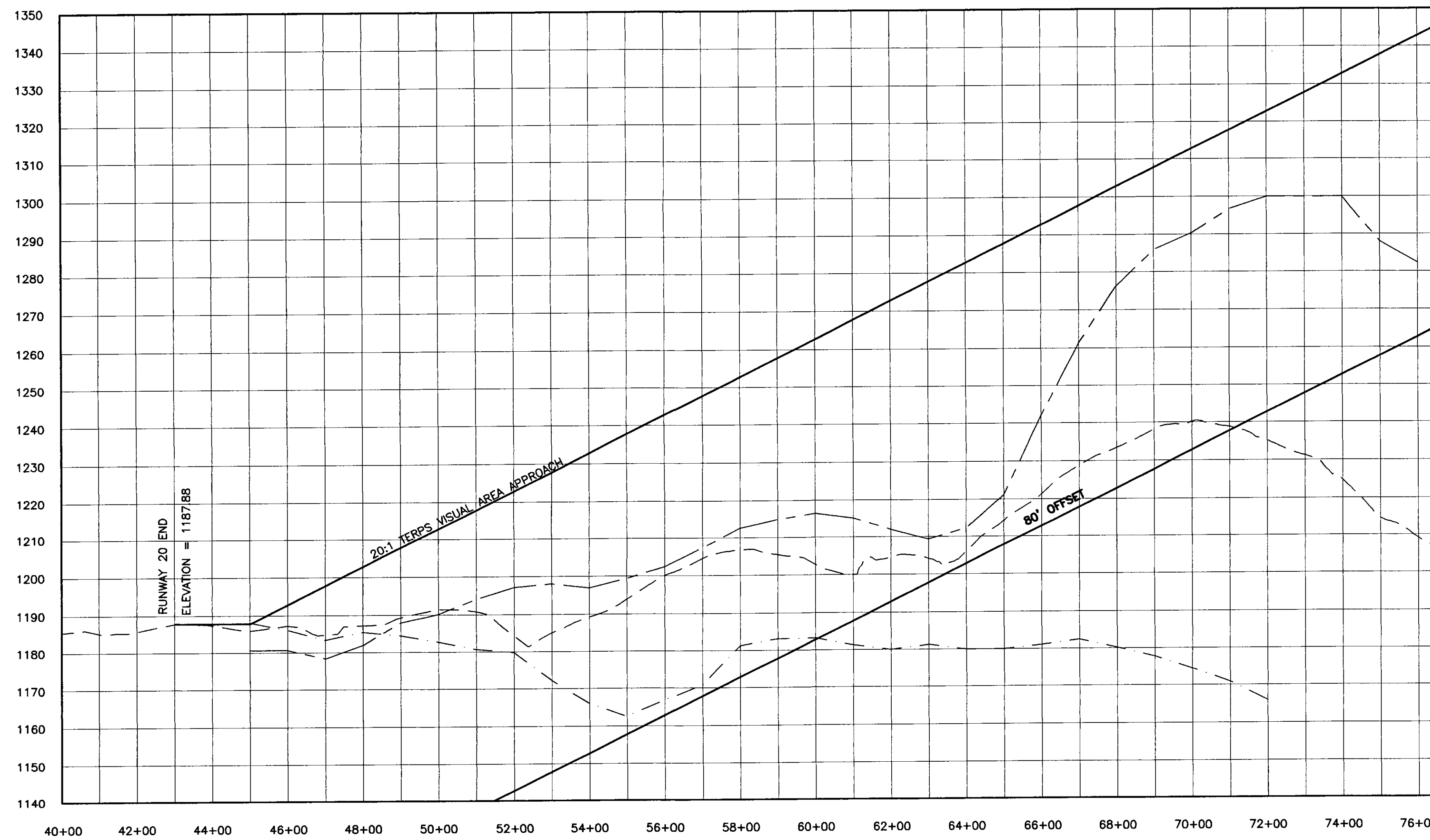
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STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
 CALEDONIA COUNTY STATE AIRPORT  
 APPROACH CLEARING PLAN  
 RUNWAY 2

DRAWN BY MDL	DATE JULY 2001
CHECKED BY	PROJ. NO. N17151
PROJ. ENG. JAA	DRAW. NO. C171510012
SHEET 12 OF 13	



- (B1) = APPROXIMATELY 2.84 ACRES CLEARING AND GRUBBING
  - (B2) = APPROXIMATELY 0.19 ACRES CLEARING AND GRUBBING
  - (B3) = APPROXIMATELY 0.33 ACRES CLEARING AND GRUBBING
  - (B4) = APPROXIMATELY 0.16 ACRES CLEARING AND GRUBBING
  - (B5) = APPROXIMATELY 0.16 ACRES CLEARING AND GRUBBING
  - (B6) = APPROXIMATELY 0.19 ACRES CLEARING AND GRUBBING
  - (B7) = APPROXIMATELY 0.43 ACRES CLEARING AND GRUBBING
  - (B8) = APPROXIMATELY 0.24 ACRES CLEARING AND GRUBBING
  - (B9) = APPROXIMATELY 0.60 ACRES CLEARING AND GRUBBING
  - (B10) = APPROXIMATELY 3.19 ACRES CLEARING AND GRUBBING
- TOTAL = APPROXIMATELY 8.33 ACRES



- LEGEND**
- PROPERTY LINE
  - - - CENTER OF EXISTING GROUND PROFILE
  - · · LEFT EDGE OF EXISTING GROUND PROFILE
  - - - RIGHT EDGE OF EXISTING GROUND PROFILE
  - ▨ CLEARING AND GRUBBING

**NOTE:**  
 AN 80' OFFSET FROM THE 20:1 TERPS VISUAL AREA APPROACH WAS USED TO DETERMINE THE OBSTACLE CLEARANCE FOR THE RUNWAY APPROACH. IT IS ASSUMED THAT THE HEIGHT OF THE TREES ARE NO MORE THAN 80 FEET.

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STATE OF VERMONT  
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 CALEDONIA COUNTY STATE AIRPORT  
 APPROACH CLEARING PLAN  
 RUNWAY 20

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PROJ. ENG. JAA	DRAW. NO. C171510013
SHEET 13 OF 13	