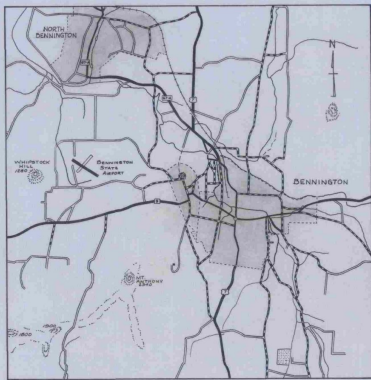


# BENNINGTON STATE AIRPORT BENNINGTON, VERMONT

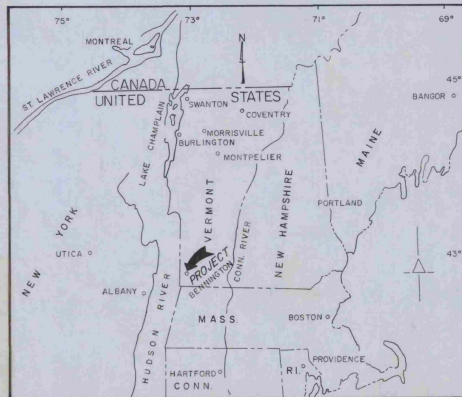
## LIGHTING SYSTEM

(INCLUDES RUNWAY LIGHTS, VASI-II, REILS, LIGHTED WIND CONE,  
HAZARD BEACONS, AND A 36" AIRPORT ROTATING BEACON)

## TAXIWAY CONSTRUCTION



LOCATION MAP



VICINITY MAP

INDEX OF SHEETS	
PAGE	DESCRIPTION
1	TITLE SHEET
2	RUNWAY LIGHTING AND BEACON LOCATIONS
3	POWER LINE AND BEACON LOCATIONS
4	POWER LINE AND BEACON POLE DETAILS
5	BEACON TOWER AND WIRING DETAILS
6	VASI-2 SYSTEM AND SEGMENTED CIRCLE
7	RUNWAY END IDENTIFIER LIGHTS AND MISCELLANEOUS

### ESTIMATED QUANTITIES OF MAJOR ITEMS

SCHEDULE "A"	ITEM	QUANTITY	FINAL QUANTITIES
	LIGHTING SYSTEM		
I-1	RUNWAY LIGHTS (STAKE MOUNTED)	30 EACH	30 EACH
I-2	RUNWAY LIGHTS (BASE MOUNTED)	4 EACH	4 EACH
I-2	THRESHOLD LIGHTS	12 EACH	12 EACH
I-3	TAXIWAY LIGHTS	16 EACH	16 EACH
I-4	CABLE TRENCH	8,040 L.F.	8355 L.F.
I-5	1/2" # 8, SKV L-824-"C"	12,250 L.F.	12463 L.F.
I-6	1/2" # 6, SKV L-824-"C"	12,000 L.F.	12918 L.F.
I-7	# 8, BARE COUNTERPOISE	8,820 L.F.	9201 L.F.
I-8	VAULT EQUIPMENT	LS	LUMP SUM
I-9	LIGHTED EIGHT FOOT WIND CONE	1 EACH	1 EACH
I-10	SEGMENTED CIRCLE	L.SUM	L.SUM
I-11	REILS	L.SUM	L.SUM
I-12	VASI-2	L.SUM	L.SUM
I-13	36" AIRPORT ROTATING BEACON	L.SUM	L.SUM
I-14	HAZARD BEACON II	L.SUM	L.SUM
I-15	HAZARD BEACON III	L.SUM	L.SUM
I-16	HAZARD BEACON VI	L.SUM	L.SUM

### U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
CHIEF AIRPORTS BRANCH  
AIRPORTS DIVISION

BENNINGTON STATE AIRPORT  
BENNINGTON, VERMONT

VERMONT AERONAUTICS BOARD  
APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
COMMISSIONER  
APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
AIRPORT ENGR.

PREPARED BY  
VERMONT AERONAUTICS BOARD  
MONTPELIER, VERMONT

VAIL O. LEACH - ENGR.  
DATE: SEPT, 1973



### AS-BUILT PLANS

I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.  
By: \_\_\_\_\_ Project Engineer  
Date: August 12, 1975

REVISIONS	
DESCRIPTION	DATE



**TRANSFORMERS**  
 INSTALLED 10KVA TRANSFORMERS 120/240 V TO 2300V ON NEW POLE ON TR 152 AND POLE 143 PER C.C.O. I.

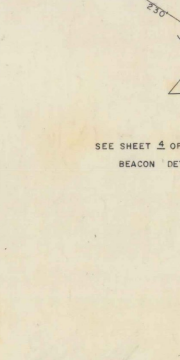
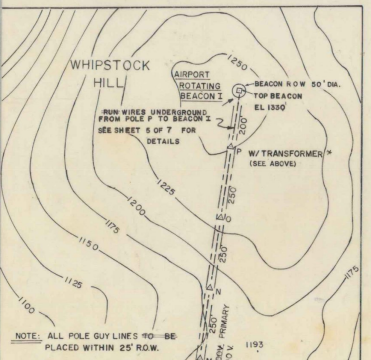
**WHIPSTOCK HILL**  
 USE-7900/12,470Y TO 120/240 V W/TAPS (2.5%) 5KVA, 60HZ, T<sub>0</sub> GENERAL ELECTRIC CATALOG # 9614C2506 OR APPROVED EQUIVALENT

**MOUNT ANTHONY**

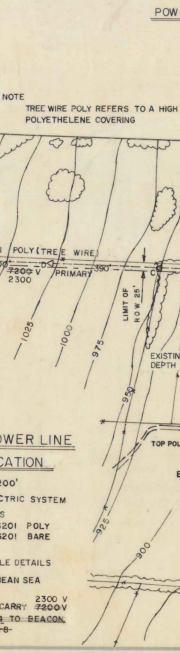
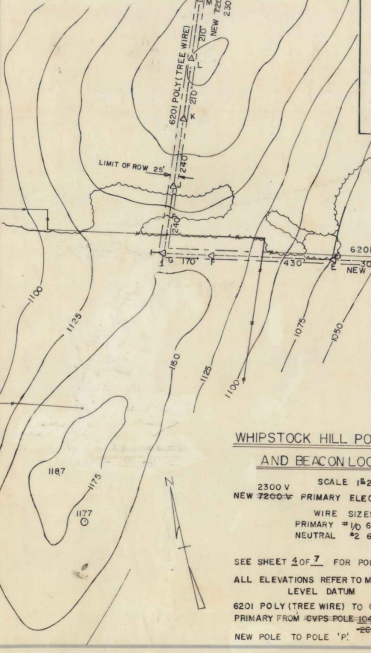
BEACON IX - USE 480/240 TO 120/240V, 10, 60HZ, 5KVA GE CATALOG # 9173B1004 OR APPROVED EQUIVALENT

BEACON X - USE 480/240 TO 120/240V, 10, 60HZ, 5KVA GE CATALOG # 9128B1004 OR APPROVED EQUIVALENT

- NOTES**
1. ELECTRIC METER SUPPLIED BY CVPS, HOOKUP BY CONTRACTOR
  2. (H) INDICATES HENDRIX EXTENSION
  3. ALL GUYS SHOWN ARE NEW AND SHOULD BE INSTALLED SPECIFICALLY FOR THE NEW TRIPLEX. EXISTING GUYS NOT SHOWN. (NEW GUYS D/L = 22/125) SEE SHEET 4 OF 7.
  4. ALL ELEVATIONS REFER TO MEAN SEA LEVEL DATUM



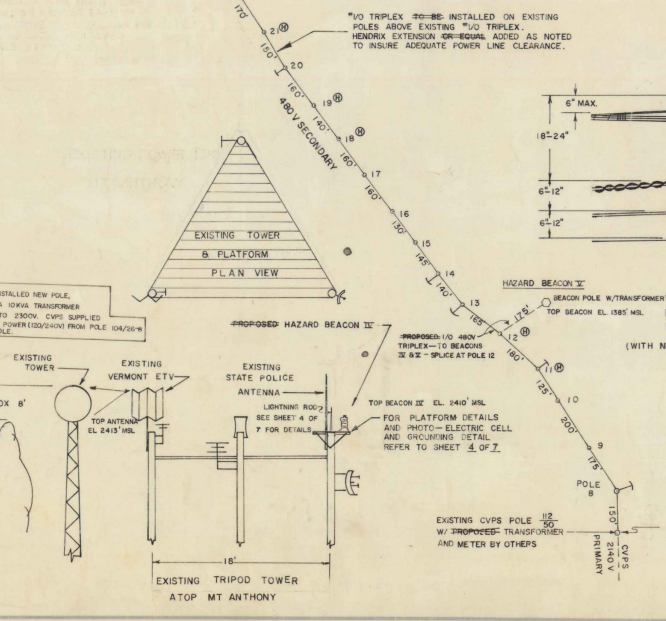
**MOUNT ANTHONY  
 POWER LINE & BEACONS IX & X**



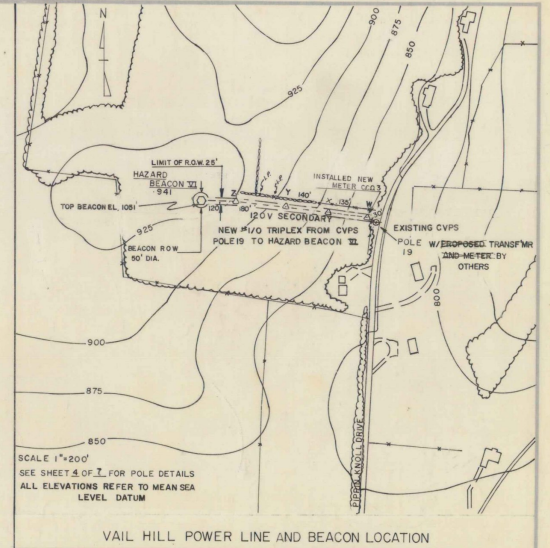
**WHIPSTOCK HILL POWER LINE  
 AND BEACON LOCATION**

SCALE 1"=200'  
 2300 V PRIMARY ELECTRIC SYSTEM  
 WIRE SIZES  
 PRIMARY #10 6201 POLY  
 NEUTRAL #2 6201 BARE

SEE SHEET 4 OF 7 FOR POLE DETAILS  
 ALL ELEVATIONS REFER TO MEAN SEA LEVEL DATUM  
 2300 V 6201 POLY (TREE WIRE) TO CARRY 7200V PRIMARY FROM CVPS POLE 108 TO BEACON  
 NEW POLE TO POLE 108

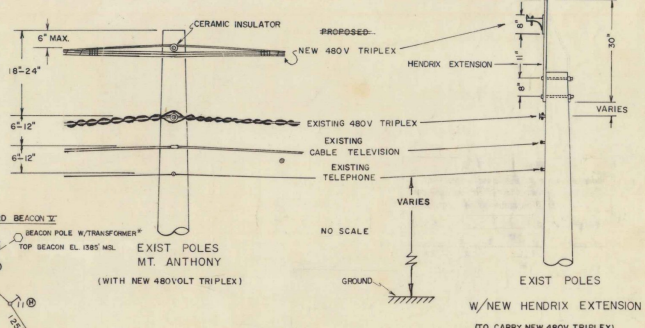


**AS BUILT PLANS**  
 I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.  
 By *[Signature]* Project Engineer  
 Date *August 12, 1975*



**VAIL HILL POWER LINE AND BEACON LOCATION**

NOTE: CERAMIC INSULATOR ON TANGENT USED AN INSULATED SPOOL BOLT GREYBAR CAT. NO. 225, AT ANGLES USE CURVED BACKED CLEAR GHEYBAR CAT. NO. 0327 AND INSULATED SPOOL BOLT OR APPROVED EQUAL



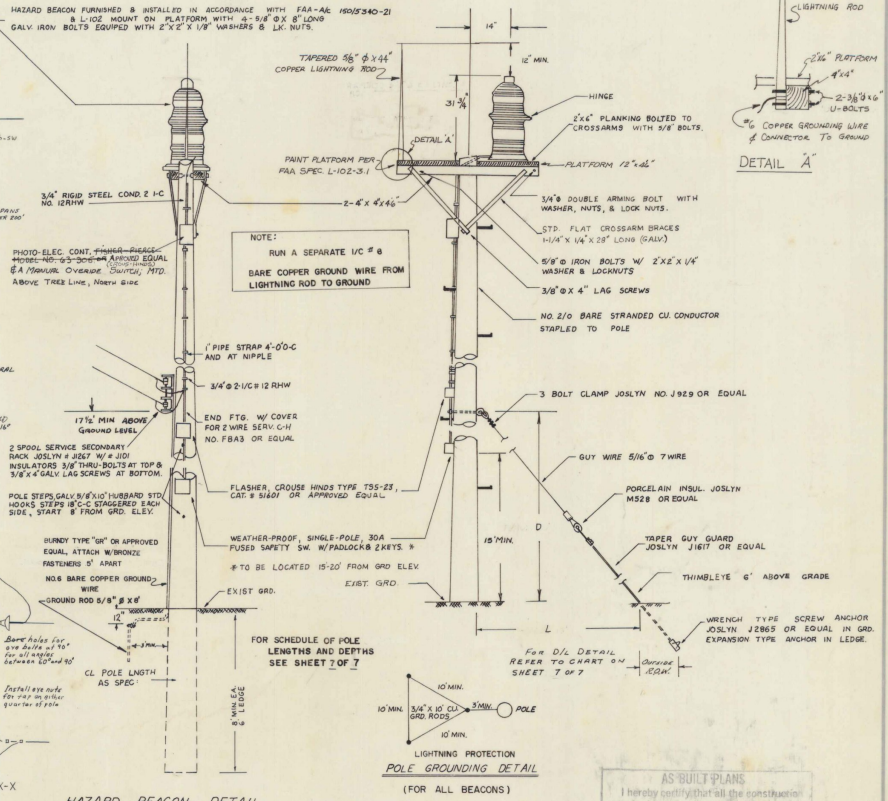
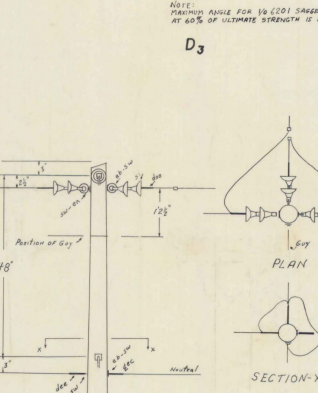
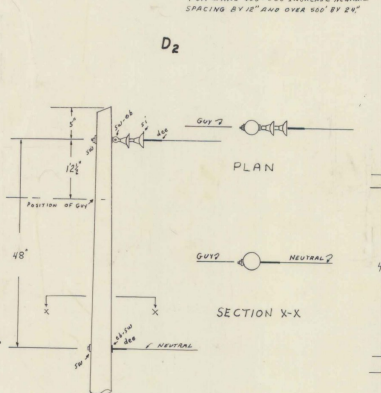
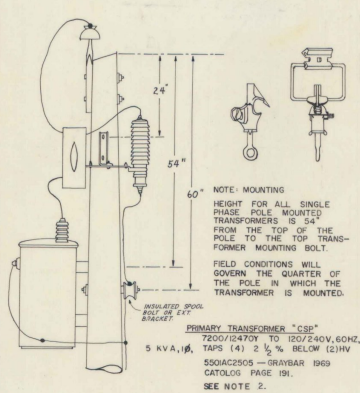
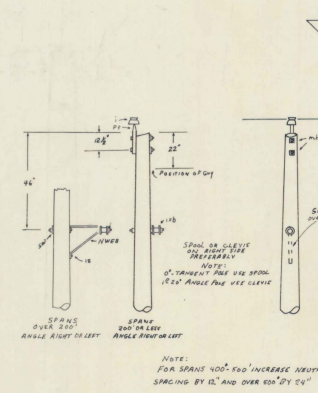
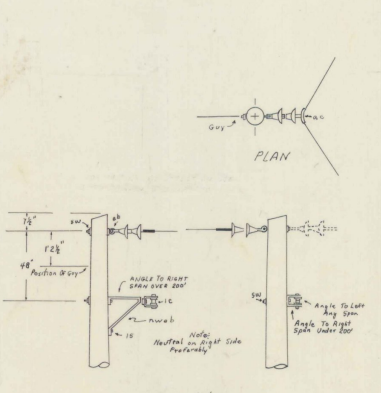
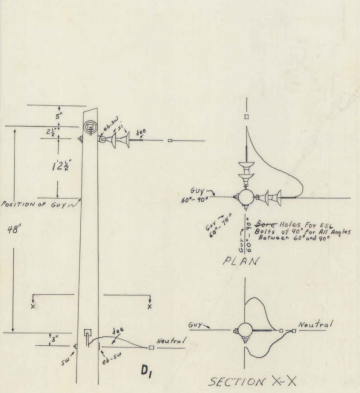
**LEGEND**

- △ NEW POWER POLES
- EXISTING POWER POLES
- STONE WALL
- FENCE
- EXISTING TREE OR TREE LINE

BENNINGTON STATE AIRPORT  
 BENNINGTON, VERMONT

POWER LINE AND BEACON  
 LOCATIONS

VERMONT AERONAUTICS BOARD  
 VAIL O. LEACH AIRPORT ENGINEER



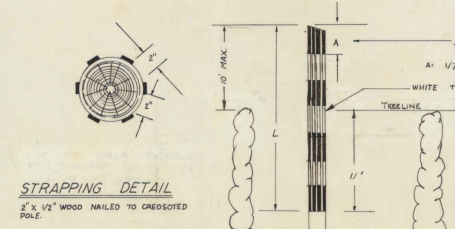
**LEGEND**

S1	Suspension insulator 4 1/2"
Eb	Eye bolt 3/8"
SW	Square washer 2 1/2" x 2 1/2"
d&c	Buffed dead end clamp
En	Eye nut
I	Insulator pin type
Pt	Pole top pin 20"
mb	Machine bolt 5/8"
ISB	Insulated spool bolt or clevis (see note)
NWB	Neutral wire extension bracket (span over 200')
IS	Log screw 2 1/2" x 4" (see note)
GC	Angle clevis
IC	Insulated clevis

As required use double coil spring washers.

- NOTES**
- FOR SCHEDULE OF GUY DETAILS SEE SHEET 7 OF 7.
  - PRIMARY TRANSFORMERS ON WHIPSTOCK HILL POLES 1&P
  - SECONDARY TRANSFORMERS ON MOUNT ANTHONY POLES FOR HAZARD BEACONS IX, B, X, SEE NOTES ON SHEET 3 OF 7
  - ALL OTHER TRANSFORMERS, I, E ON EXISTING CVPs POLES 12, 19, & 13 BY OTHERS
  - POLE SPECIFICATIONS CLASS 5 AND SMALLER (TO 45') USE SOUTHERN YELLOW PINE AVAILABLE FROM KOPPERS, INC. OR APPROVED-EQUAL CLASS 4 AND LARGER (OVER-45') USE WESTERN RED CEDAR AVAILABLE FROM BELL LUMBER AND POLE OR RT HALEY, INC. OR APPROVED-EQUAL. (AS PER LOCAL PRACTICE)

**POLE STRAPPING & PAINTING DETAIL**



**AS BUILT PLANS**  
I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.  
By Charles D. Deane Project Engineer  
Date 12/28/72

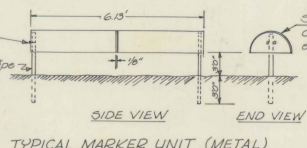
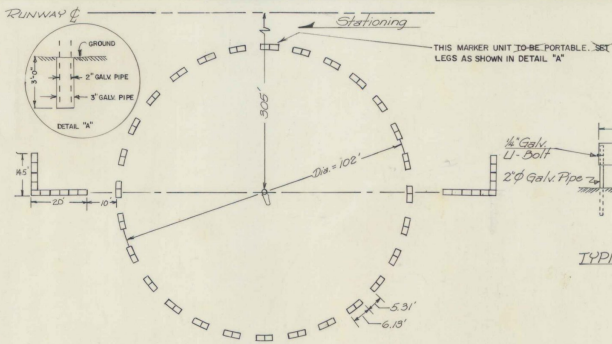
BENNINGTON STATE AIRPORT  
BENNINGTON, VERMONT

POWER LINE AND  
BEACON POLE DETAILS

VERMONT AERONAUTICS BOARD  
WILL O. LEACH AIRPORT ENGINEER

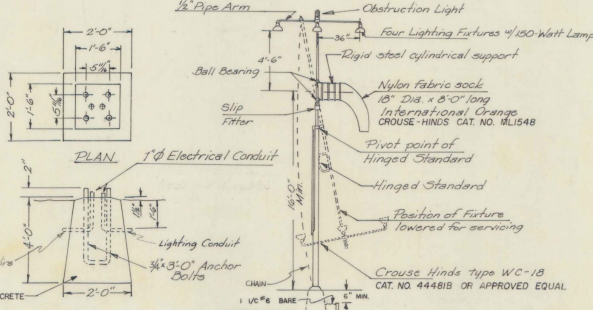
ADAP PROJECT NO. 7-50-0033-02  
SHEET 4 OF 7





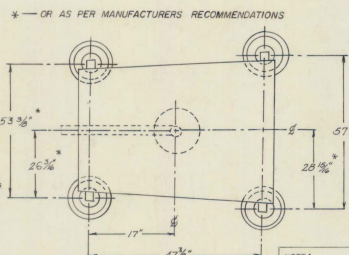
Standard 55 gal metal drum cut in half and welded to end and painted as follows:  
 1st Coat White undercoat  
 2nd Coat Aviation Acrylic Lacquer Oxidizer Bros. "Fire Orange" # 202-14 or equal.  
 3rd Coat "Filter Ray" or equal prior to painting. The surfaces should be thoroughly cleaned of all rust, scale, dirt, oil and other foreign substances to the satisfaction of the Engineer.

SEGMENTED CIRCLE LAYOUT

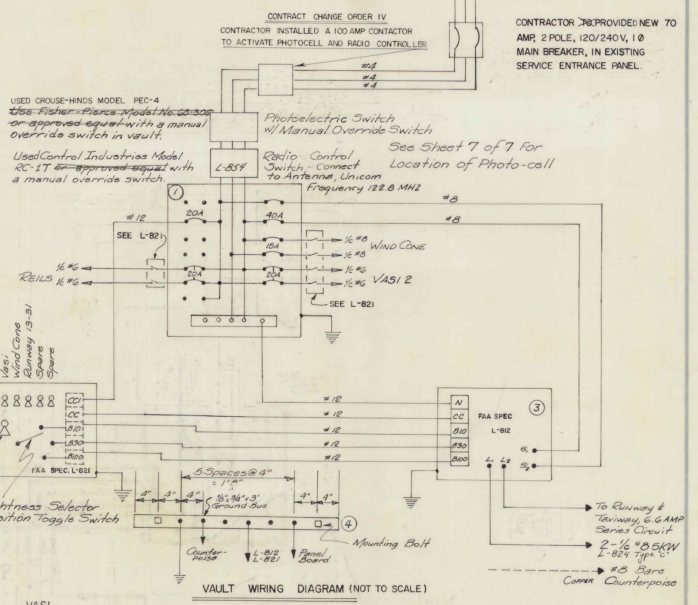


EIGHT FOOT WIND CONE ASSEMBLY  
 TYPE I FAA SPEC NO L-807

AS BUILT PLANS  
 I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.  
 By: \_\_\_\_\_ Project Engineer  
 Date: \_\_\_\_\_

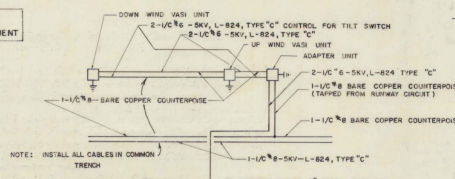
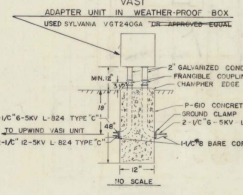


VASI LIGHT UNIT AND FOUNDATION PLAN



VAULT WIRING DIAGRAM (NOT TO SCALE)

- 1  $\phi$  3W, 120/240 Volts, 12 Circuit Panel Board (NEW)
- 2 Airport Control Panel L-821 (New), Used Crouse Hinds Type CPS-1
- 3 Constant Current Regulator with Brightness Control 7 1/2 KW, L-822 Heavy Duty Electric Cat. # D-52640 (Size 1) or approved equal
- 4 Mount New Ground Bus on Vault Wall as shown on Page 7 of 7



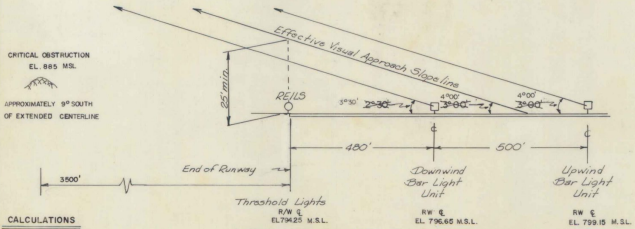
VASI-2 WIRING DIAGRAM NO SCALE

FOR VAULT LAYOUT PLAN  
 SEE SHEET 7 OF 7

AS BUILT PLANS  
 I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.  
 By: \_\_\_\_\_ Project Engineer  
 Date: \_\_\_\_\_

BENNINGTON STATE AIRPORT  
 Bennington, Vermont  
 VASI-2 SYSTEM  
 SEGMENTED CIRCLE

VERMONT AERONAUTICS BOARD  
 Vail O. Leach - Airport Engineer



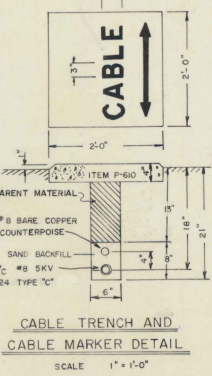
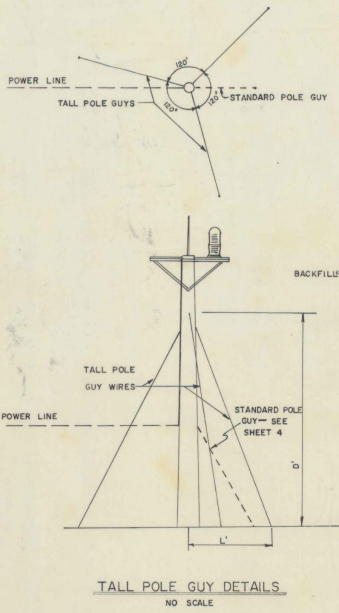
CALCULATIONS  
 $\frac{885 - 80 - 727}{3500 + 480} = \tan \theta$   
 $\theta = 1.33^\circ$   
 $45^\circ - \theta = 2^\circ 18'$   
 VASI-2 ALIGNMENT SET AT 30' N & 400' DOWNWIND AND UPWIND UNIT RESPECTIVELY JULY 21, 1975, AT THE DIRECTION OF THE ENGINEER  
 885 ± 30 - 727  
 3500 + 480  
 TAN  $\theta$   
 $\theta = 1.33^\circ$   
 $45^\circ - \theta = 2^\circ 18'$   
 RUNWAY OFF TO 23' 30"  
 AS PER AC 150/5340-14B

NEW POWER POLE INFORMATION

POLE	HEIGHT	CLASS	DEPTH IN EARTH	DEPTH IN LEDGE	GUY DETAIL*	REMARKS
WHIPSTOCK HILL						
BEACON I						
A	3 5'	6	6'	4'		
B	3 5'	6	6'	4'	D-1	D/L = 27/12.5*
C	3 5'	6	6'	4'		
D	3 5'	6	6'	4'		
E	4 0'	5	6'	4'		
F	4 0'	5	6'	4'		
G	4 0'	5	6'	4'	D-5	D/L = 27/12.5*
VAIL HILL						
BEACON VII						
I 9						
W	3 0'	6	5.5'	4'	D-2	W/TRANSFORMER, CVPS POLE D/L = 22/12.5*
X	3 0'	6	5.5'	4'		
Y	3 0'	6	5.5'	4'		
Z	3 0'	6	5.5'	4'	D-2	DA = 22/12.5*
BEACON POLES						
I	6 2'					SEE SHEET 5/9 STEEL TOWER **
IV						SEE SHEET 3/9 W/TRANSFORMER*
V	100'	I	11'	9'	TPD *** D-3	W/TRANSFORMER* DA=22/12.5* D/L=50/25
VI	125'	I	12'	10'	TPD *** D-4	D/L = 22/12.5* D/L=50/25

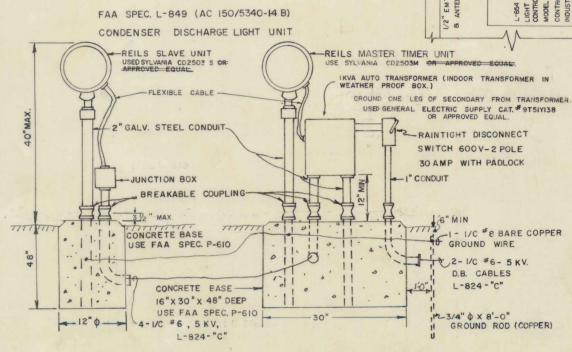
\* SEE SHEETS 3 OF 7 & 4 OF 7 FOR POLE DETAILS  
 \*\* SEE SHEET 5 OF 7 FOR TOWER DETAILS  
 \*\*\* SEE TALL POLE DETAILS ON THIS SHEET

NOTE: TRANSFORMERS ARE NOT A SEPARATE PAY ITEM.



TALL POLE GUY DETAILS  
NO SCALE

CABLE TRENCH AND CABLE MARKER DETAIL  
SCALE 1" = 1'-0"



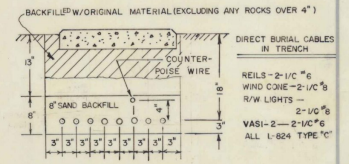
RUNWAY END IDENTIFIER LIGHTS  
NO SCALE

TABLE OF TRENCH WIDTHS

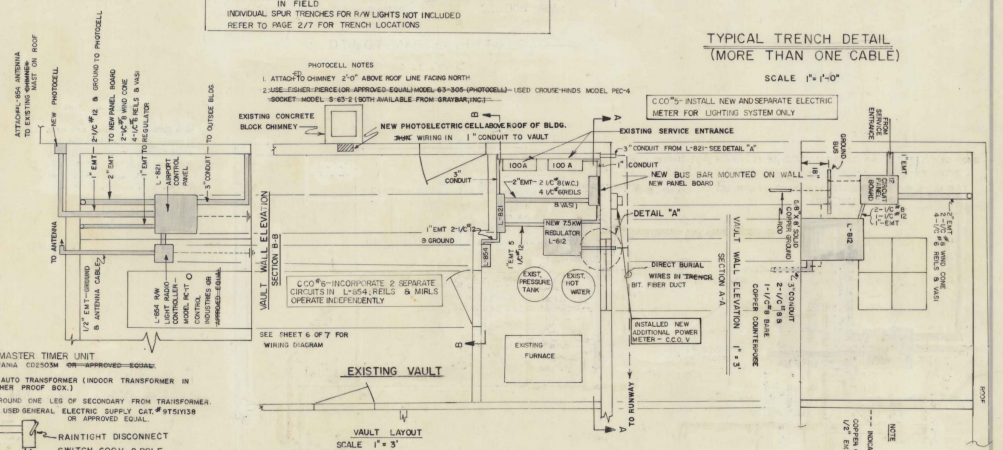
TRENCH WIDTH	FROM	TO	DISTANCE
27"	VAULT	T 13	230'
9"	T 4	T 8	330'
18"	T 4	R 11	1000'
12"	R 11	R 6	910'
18"	MASTER REELS	SLAVE REELS	230'
6"	R 1	DOWNWIND VASI	500'
24"	DOWNWIND VASI	UPWIND VASI	500'
6"	UPWIND VASI	R 20	3070'
9"	R 20	WIND CONE	250'
12"	R 20	T 13	580'

NOTES:  
 DISTANCES ARE APPROXIMATE, FINAL QUANTITIES WILL BE DETERMINED IN FIELD.  
 INDIVIDUAL SPUR TRENCHES FOR R/W LIGHTS NOT INCLUDED. REFER TO PAGE 2/7 FOR TRENCH LOCATIONS.

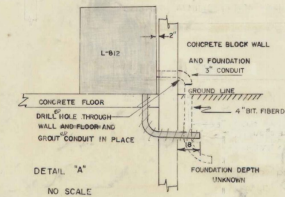
NOTES  
 LETTERING TO BE 1/2" STROKE AND 1/4" DEEP FOR ALL MARKERS  
 HAND LETTERING NOT ALLOWED ON CABLE MARKERS



TYPICAL TRENCH DETAIL (MORE THAN ONE CABLE)  
SCALE 1" = 1'-0"



EXISTING VAULT VAULT LAYOUT  
SCALE 1" = 3"



DETAIL 'A'  
NO SCALE

NOTE: ALL OPEN CONDUIT ENDS TO BE DUCT SEALED.

AS BUILT PLANS  
 I hereby certify that all the construction shown on these drawings has been accomplished as indicated herein.  
 B. Ouellet, Project Engineer  
 Date: August 12, 1958

BENNINGTON STATE AIRPORT  
 BENNINGTON, VERMONT  
 RUNWAY END IDENTIFIER LIGHTS  
 AND MISCELLANEOUS DETAILS

VERMONT AERONAUTICS BOARD  
 WAIL O. LEACH AIRPORT ENGINEER