

Geographic Location:
 Latitude 43° 20' 29"
 Longitude 72° 31' 18"
 Airport Elevation:
 575' M.S.L. Datum
 Airline Distance From
 Town of Springfield = 3.75 Mi. N.W.
 Road Distance From Springfield
 Post Office to Airport = 5.9 Mi.

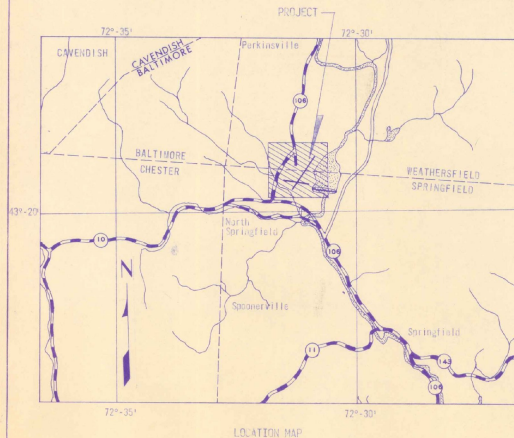
PLANS FOR EXTENSION AND WIDENING OF RUNWAY 5-23 AND MODIFICATIONS TO AIRPORT LIGHTING

SPRINGFIELD STATE AIRPORT (HARTNESS)

NORTH SPRINGFIELD, VERMONT

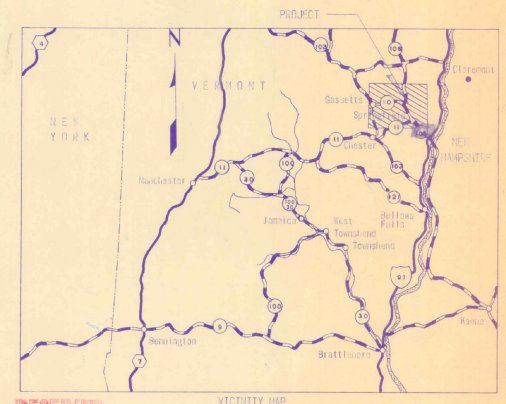
INDEX OF SHEETS	
SHEET	TITLE
1	TITLE PAGE
2	SCOPE OF WORK
3	TYPICAL SECTIONS
4	GRADING & DRAINAGE PLAN & PROFILE
5	GRADING & DRAINAGE PLAN & PROFILE
6	INTERSECTION OF RUNWAYS
7	DRAINAGE DETAILS
8	48" X 304" REINFORCED CONCRETE PIPE
9-20	RUNWAY CROSS SECTIONS
21	RUNWAY LIGHTING
22	OBSTRUCTION LIGHTING & POWER POLE DETAILS
23	OBSTRUCTION LIGHTING
24-28	OBSTRUCTION REMOVAL - RUNWAY & ENROUTE'S
29	OBSTRUCTION REMOVAL - NORTHERLY CLEAR ZONE

F.A.A.P. PROJ. NO. 9-43-004-C906



JOB PROJECT NO. 1				
ITEM	DESCRIPTION	UNIT	EST. QUANT.	FINAL QUANT.
1-1	Clearing	Acre	27	34
1-2	Clearing & Grading	Acre	3	4.6
1-3	Isolated Trees (20'-25') Estimated	Each	10	3
1-4	Isolated Trees (Over 30') Estimated	Each	10	1
1-5	Common Excavation	C.Y.	123,545	131,867
1-6	Gravel Back Excavation	C.Y.	9,307	786
1-7	Borrow	C.Y.	15,975	48,337
1-8	Surface Course	C.Y.	1,900	1,900
1-9	Crushed Stone Aggregate	C.Y.	4,800	4,800
1-10	Continuous Prime Coat	Sq. Ft.	14,000	13,733
1-11	Artisanous Surface Course	Tons	4,298	4,208.5
1-12	Runway Painting	L.S.	1	1
1-13	48" Reinforced Concrete Pipe	L.F.	304	304
1-14	12" Asbestos-Bonded Corr. Steel Pipe	L.F.	218	218
1-15	Brick Catch Basin	Each	6	6
1-16	Reinforced Concrete Headwalls	C.Y.	9.7	9.7
1-17	Excavation for Structures	C.Y.	225	225
1-18	Heavy Jute Mesh	S.Y.	2,250	2,250
1-19	Artisanous Paved Gutters	S.Y.	75	56
1-20	Excavation, Lining, & Felt. Area "A"	M.S.F.	315	288
1-21	Excavation, Lining, & Felt. Area "B"	M.S.F.	256	363
1-22	Mulching	S.Y.	23,500	42,556
1-23	Underground Electric Duct, Two-Bay	L.F.	133	133
1-24	Roadway as C.D. No. 1	L.S.	1	1
1-25	Additional Clearing as C.D. No. 3	Acre	20	19.9

JOB PROJECT NO. 2				
ITEM	DESCRIPTION	UNIT	EST. QUANT.	FINAL QUANT.
2-1	L-802 Light, Clear - Relocate	Each	22	22
2-2	L-802 Light, Clear - New	Each	15	15
2-3	L-802 Light, Green - Relocate	Each	11	11
2-4	L-802 Light, Green - New	Each	5	5
2-5	Relocating Stroussman	L.S. Each	2	1
2-6	Gravel Trench	L.F.	7,500	7,500
2-7	No. 8 Underground Cables 8000 V - In Trench	L.F.	8,000	8,000
2-8	No. 6 Underground Cables 3000 V - In Duct	L.F.	310	310
2-9	Obstruction Lights - Double	Each	3	3
2-10	Obstruction Lights - Single	Each	5	5
2-11	Power Line From Transformers	L.F.	1,327	1,927



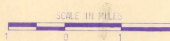
I hereby certify that all construction required by this set of Drawings has been accomplished as indicated herein.

DUFRESNE HENRY ENGINEERING CORP.

by *Robert J. Dufresne* Date *6/17/70*

AS BUILT PLANS

RECEIVED
 JUN 23 1970
 Vermont Aeronautics Board



- LEGEND
- STATE HIGHWAY
 - OTHER ROADS
 - COUNTY LINES
 - TOWN LINES
 - RIVERS
 - STATE LINES
 - U.S. HIGHWAY
 - INTERSTATE HWY.

DATE	REVISION	BY
6-17-70	Final Quantities Added	W.J.R.

U. S. DEPT. OF TRANSPORTATION
 FEDERAL AVIATION ADMINISTRATION

Approved: _____
 Chief, Airport Branch

VERMONT AERONAUTICS BOARD

Approved: _____
 Commissioner

Approved: _____
 Engineer

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont

TITLE PAGE

DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL CIVIL & SANITARY ENGINEERS

SUPPLY OFFICE: 100 N. MAIN ST., SPRINGFIELD, VT. 05156

DESIGN OFFICE: 100 N. MAIN ST., SPRINGFIELD, VT. 05156

PROJECT NO. 9-43-004-C906

DESIGNED BY: R. J. DUFRESNE

CHECKED BY: W. J. RAY

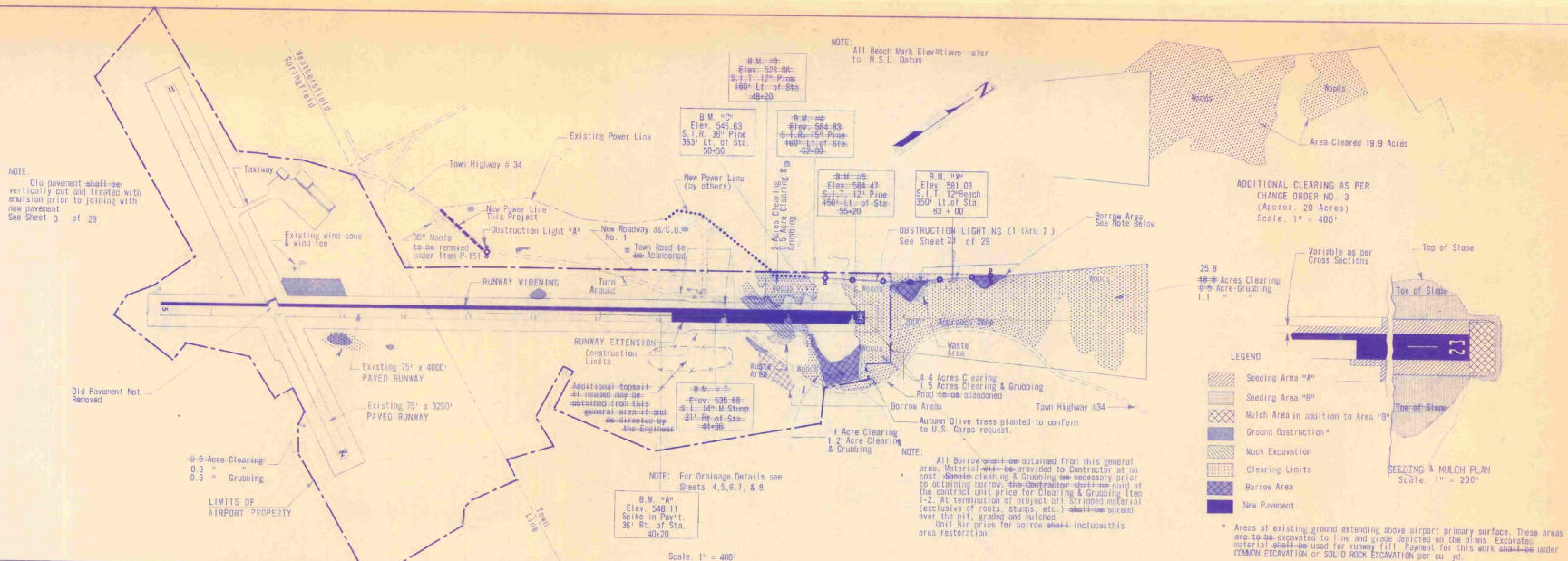
DATE: 6/17/70

PLAN
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

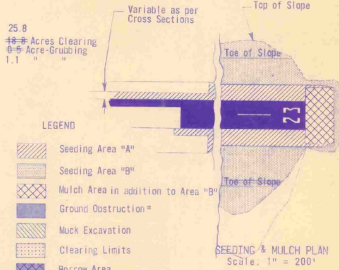
PROFILE
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

NOTE: Old pavement shall be vertically cut and treated with emulsion prior to joining with new pavement. See Sheet 3 of 29.

NOTE: All Bench Mark Elevations refer to W.S.L. Datum.



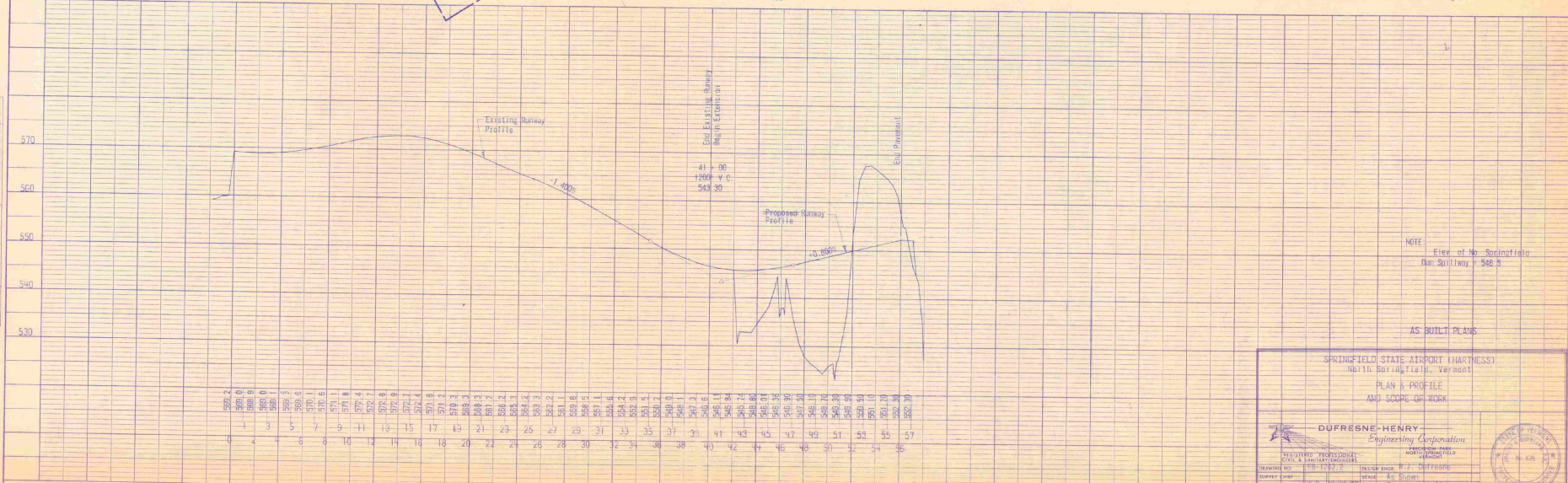
ADDITIONAL CLEARING AS PER CHANGE ORDER NO. 3 (Approx. 20 Acres) Scale: 1" = 400'



* Areas of existing ground extending above airport primary surface. These areas are to be excavated to line and grade depicted on the plans. Excavated material shall be used for runway fill. Payment for this work shall be under COMMON EXCAVATION or SOLID ROCK EXCAVATION per cu. yd.

NOTE: For Drainage Details see Sheets 4, 5, 6, 7, & 8.

NOTE: All Borrow shall be obtained from this general area. Material shall be provided to Contractor at no cost. Before clearing & grubbing use necessary prior to obtaining borrow. The Contractor shall be paid at the contract unit price for Clearing & Grubbing, Item 1-2. At termination of project all stripped material (exclusive of rocks, stumps, etc.) shall be spread over the cut, graded and finished. Unit bid price for borrow shall include this area restoration.



NOTE: Elev. of No. Springfield Dr. on Taxiway = 546.5

AS BUILT PLANS

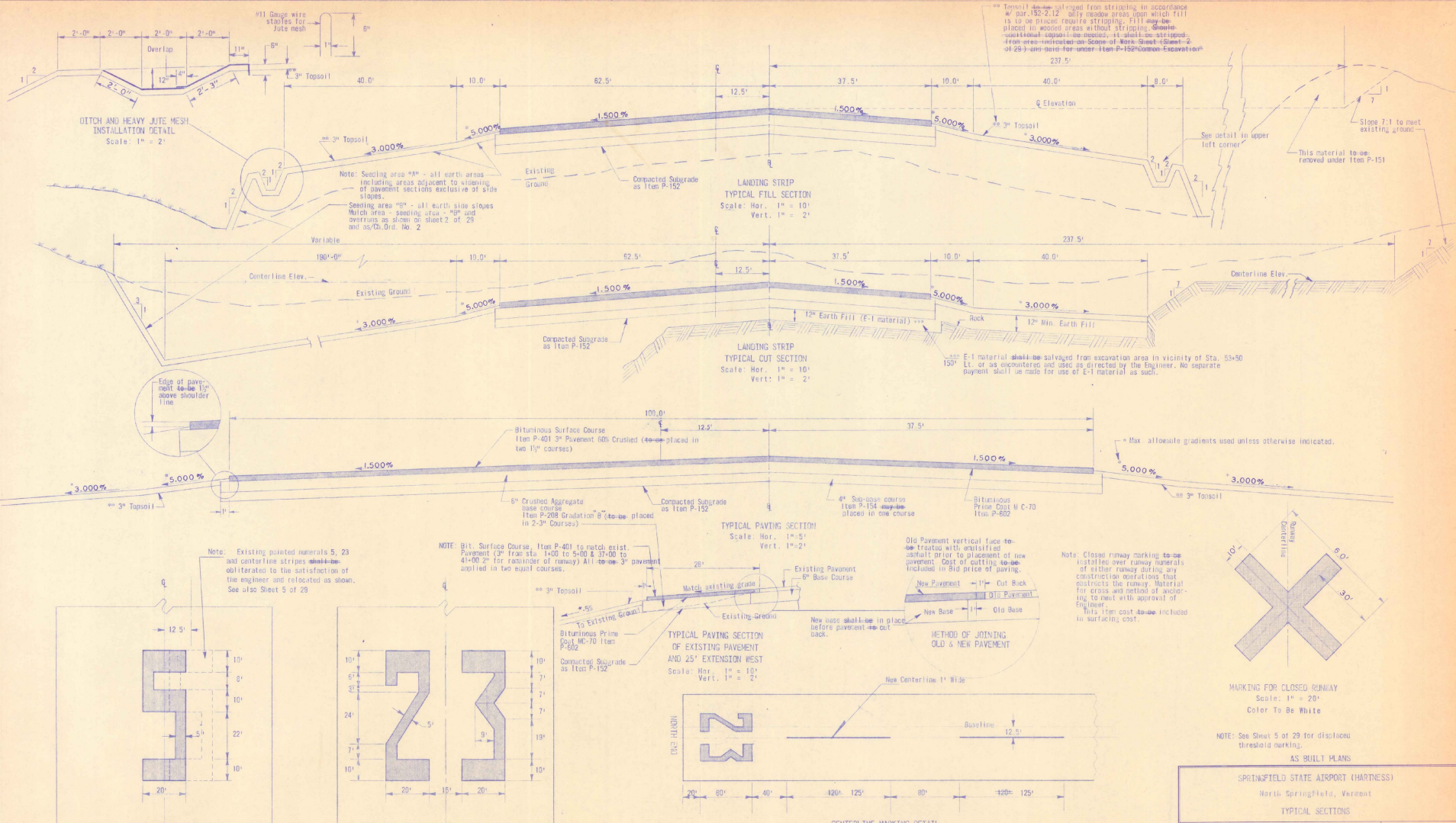
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
PLAN & PROFILE AND SCOPE OF WORK

DUFRESNE HENRY
 Engineering Corporation
 100 North Main Street
 Springfield, Vermont

DESIGNED BY: [Blank] DRAWN BY: [Blank]
 CHECKED BY: [Blank] DATE: [Blank]

PLANNED BY: [Blank] PLOTTED BY: [Blank]
 CHECKED BY: [Blank] DATE: [Blank]

SCALE: 1" = 400'



SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

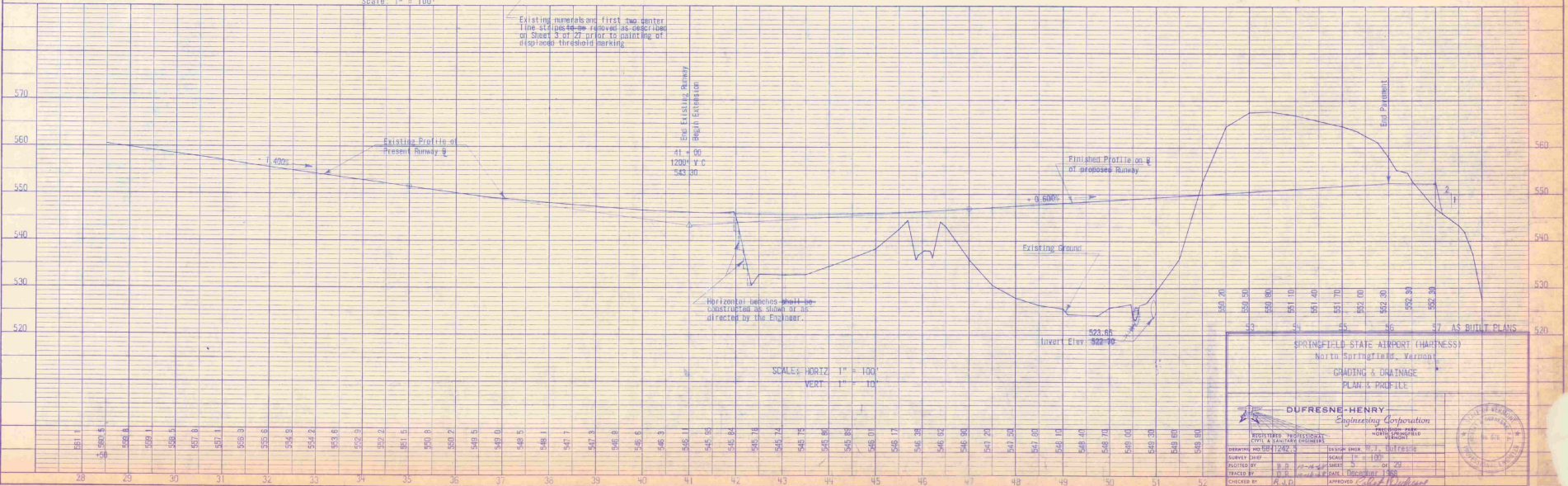
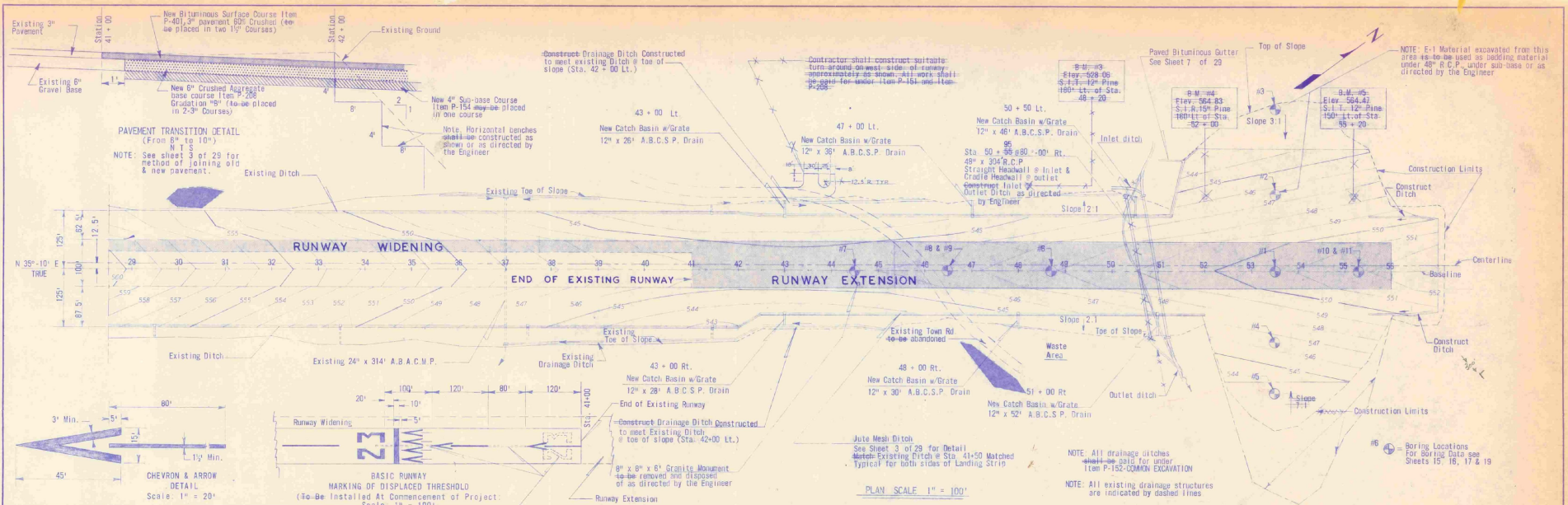
TYPICAL SECTIONS

DUPRESNE-HENRY
Engineering Corporation
REGISTERED PROFESSIONAL
CIVIL & SURVEY ENGINEERS
No. 58

DRAWING NO.	108-1222-3	DESIGN SHEET	3 of 3
DATE	10-28-54	SCALE	As Shown
PROJECT BY	W. H. DUNN	SHEET	OF 28
TRACED BY	W. H. DUNN	DATE	December 1954
CHECKED BY	W. H. DUNN	APPROVED	W. H. DUNN

PLAN
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

PROFILE
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

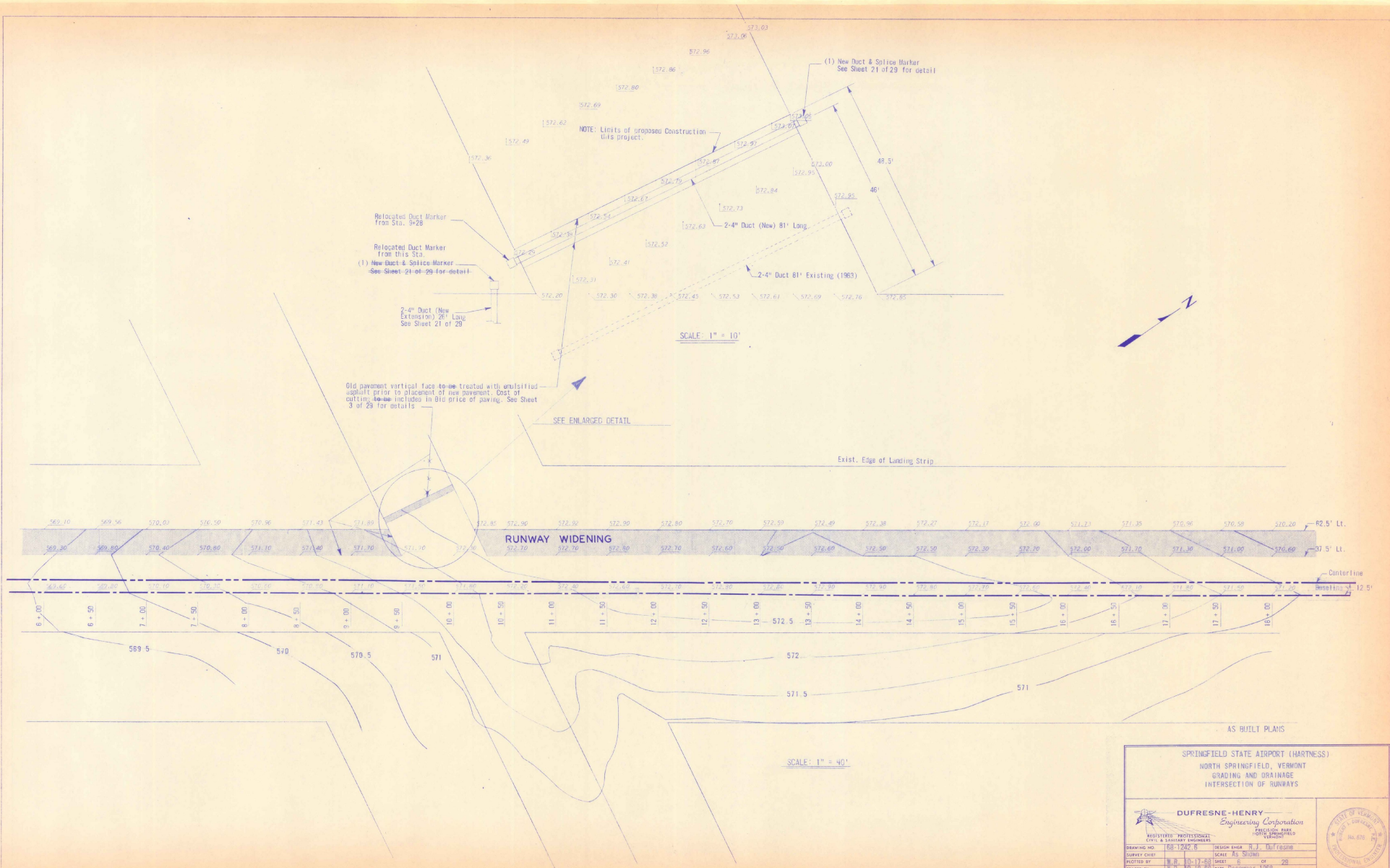


SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 GRADING & DRAINAGE
 PLAN & PROFILE

DUFRESNE HENRY
 Engineering Corporation

DESIGNED BY: [Blank]
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

SCALE: 1" = 100'
 DATE: [Blank]



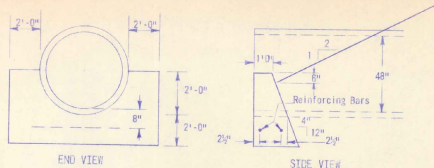
SPRINGFIELD STATE AIRPORT (HARTNESS)
 NORTH SPRINGFIELD, VERMONT
 GRADING AND DRAINAGE
 INTERSECTION OF RUNWAYS

DUFRESNE-HENRY
 Engineering Corporation

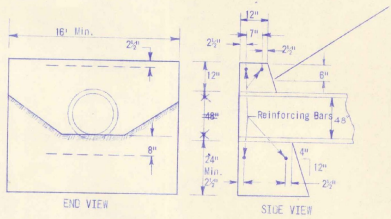
REGISTERED PROFESSIONAL CIVIL & SANITARY ENGINEERS

DRAWING NO. 168-1242-B DESIGN ENGINEER R.J. DUFRESNE
 SURVEY CHIEF SCALE AS SHOWN
 PLOTTED BY H.H. 10-1-68 SHEET 5 OF 20
 TRACKED BY H.H. 10-18-68 DATE DECEMBER 1968
 CHECKED BY T.M.D. APPROVED *[Signature]*

STATE OF VERMONT
 CIVIL ENGINEER
 No. 476

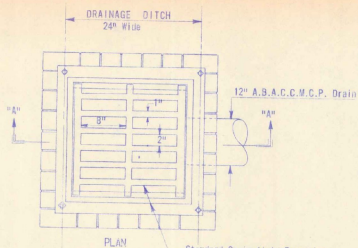


CRADLE CONCRETE HEADWALL DETAIL
CRN = 1.7 c. y.

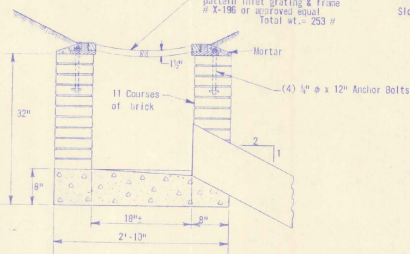


STRAIGHT CONCRETE HEADWALL DETAIL
CRN = 8.0 c. y.

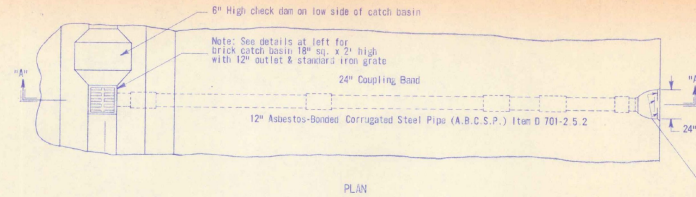
NOTE: All reinforcing steel to be 5/8" diameter deformed bars.



PLAN
Standard Springfield Foundries pattern inlet grating & frame # X-196 or approved equal total wt. = 253 #

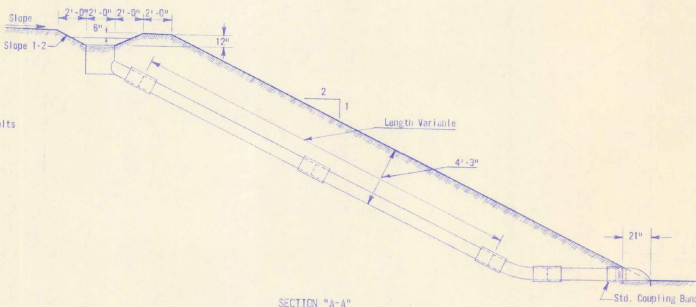


SECTION "A-A"
BRICK CATCH BASIN
Not to Scale



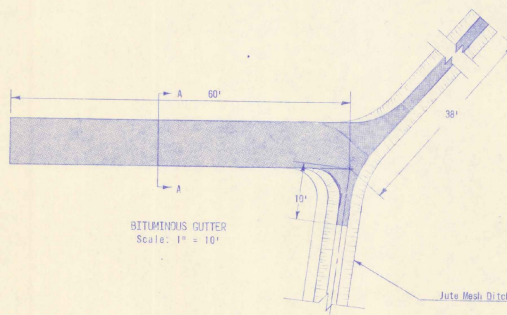
PLAN

18 Ga. Standard metal outlet end section with 4" high metal baffles welded in place as shown.



SECTION "A-A"
TYPICAL DRAIN DETAIL
Scale: 1/4" = 1'-0"

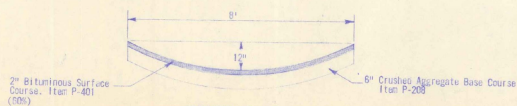
Slope Drain Location		
ST.	L1	R1
43 + 00	26'	28'
47 + 00	36'	0
48 + 00	0	30'
50 + 50	45'	0
51 + 00	0	50'



BITUMINOUS GUTTER
Scale: 1" = 10"

NOTE:

All ditch cut slopes 2:1. Bituminous gutters shall receive two coats of an asphalt seal tar base sealer such as "Jambite" or "Flint Tar" or equal. Sealer shall be applied after pavement has cured for at least 5 days. Method and rate of application shall be as recommended by the product manufacturer. The cost of this work shall be included in the bid price for "Bituminous Gutter".



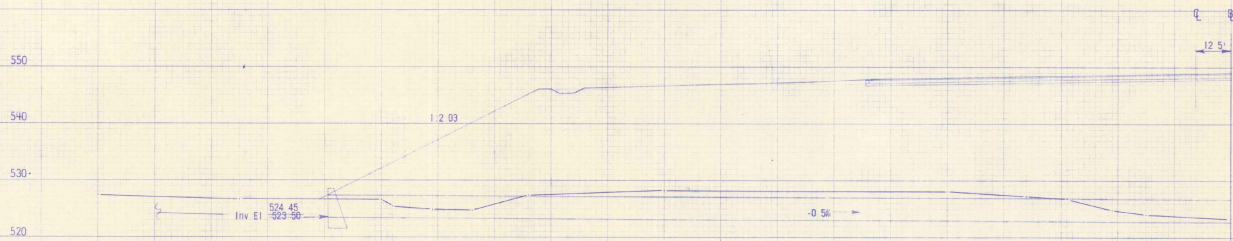
BITUMINOUS GUTTER
SECTION A-A
Scale: 1" = 2"

AS BUILT PLANS

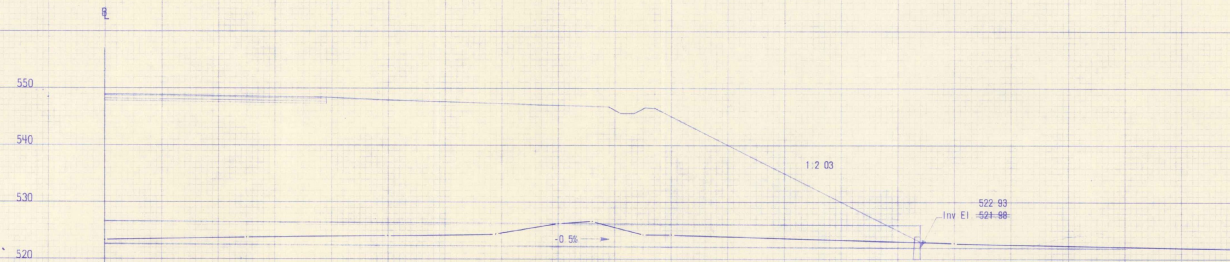
SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

DRAINAGE DETAILS

DRAWING NO. 105-1297 SURVEY CODE PLOTTED BY CHECKED BY	DESIGN YEAR 11 SCALE AS SHOWN SHEET 29 DATE 11-30-88	APPROVED [Signature]



STA 50 + 95
 Slope = 80'-100' Rt
 48" x 304' RCP
 Grade = -0.5%
 St. Headwall at Inlet
 Cr. Headwall at Outlet
 Construct Inlet and Outlet Ditches

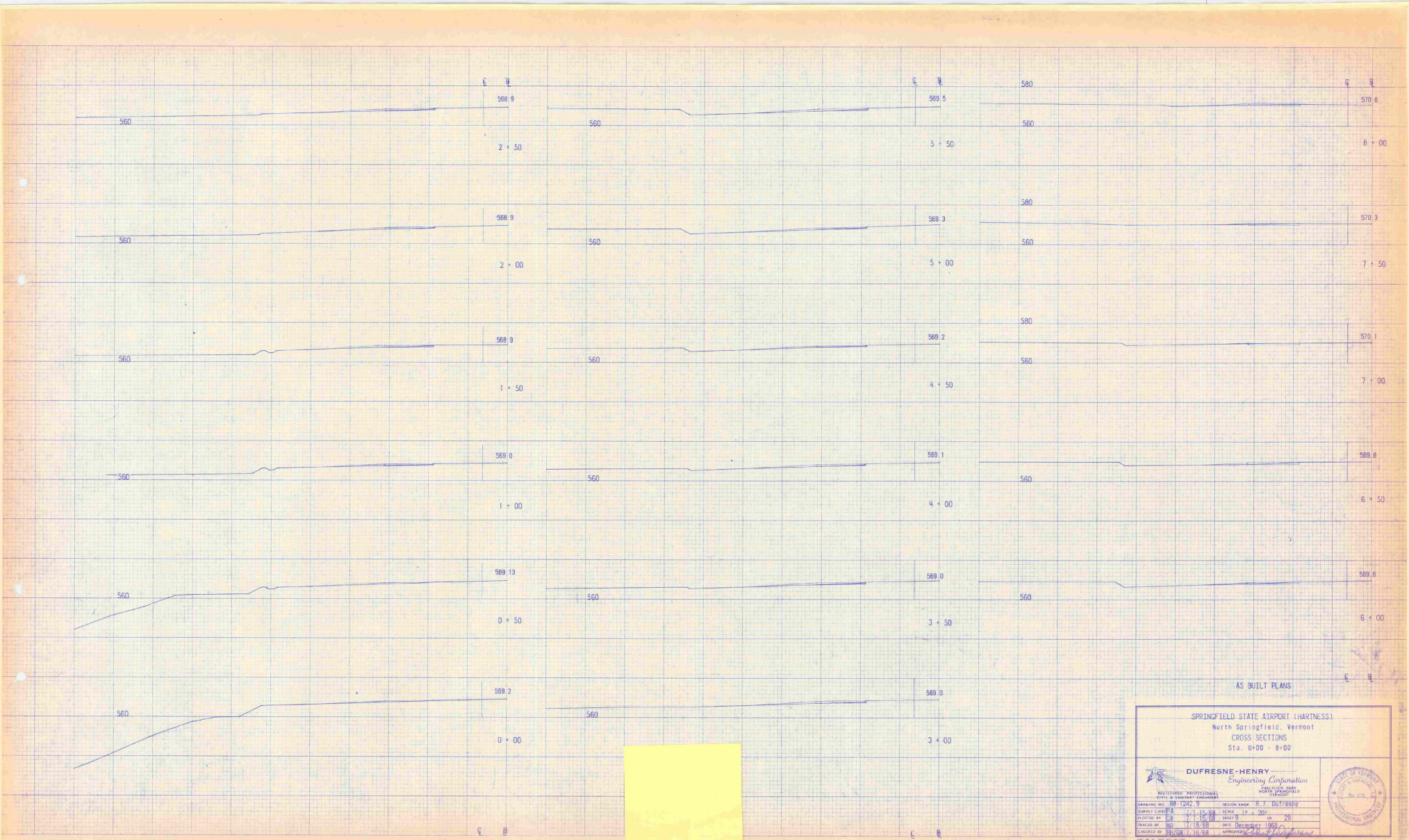


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 No. Springfield, Vermont
 48" x 304' RCP
 STA 50 + 95

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS
 STATE OF VERMONT
 No. 676

DRAWING NO.	88-1242-8	DESIGN ENGINEER	R. J. Duff-Henry
CURVE CENTER	11-25-88	SCALE	1" = 10'
PLOTTED BY	11-25-88	SHEET	8 OF 28
PROJECT NO.	11-25-88	DATE	February, 1988
CHECKED BY	11-25-88	APPROVED	<i>[Signature]</i>



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 0+00 - 8+00

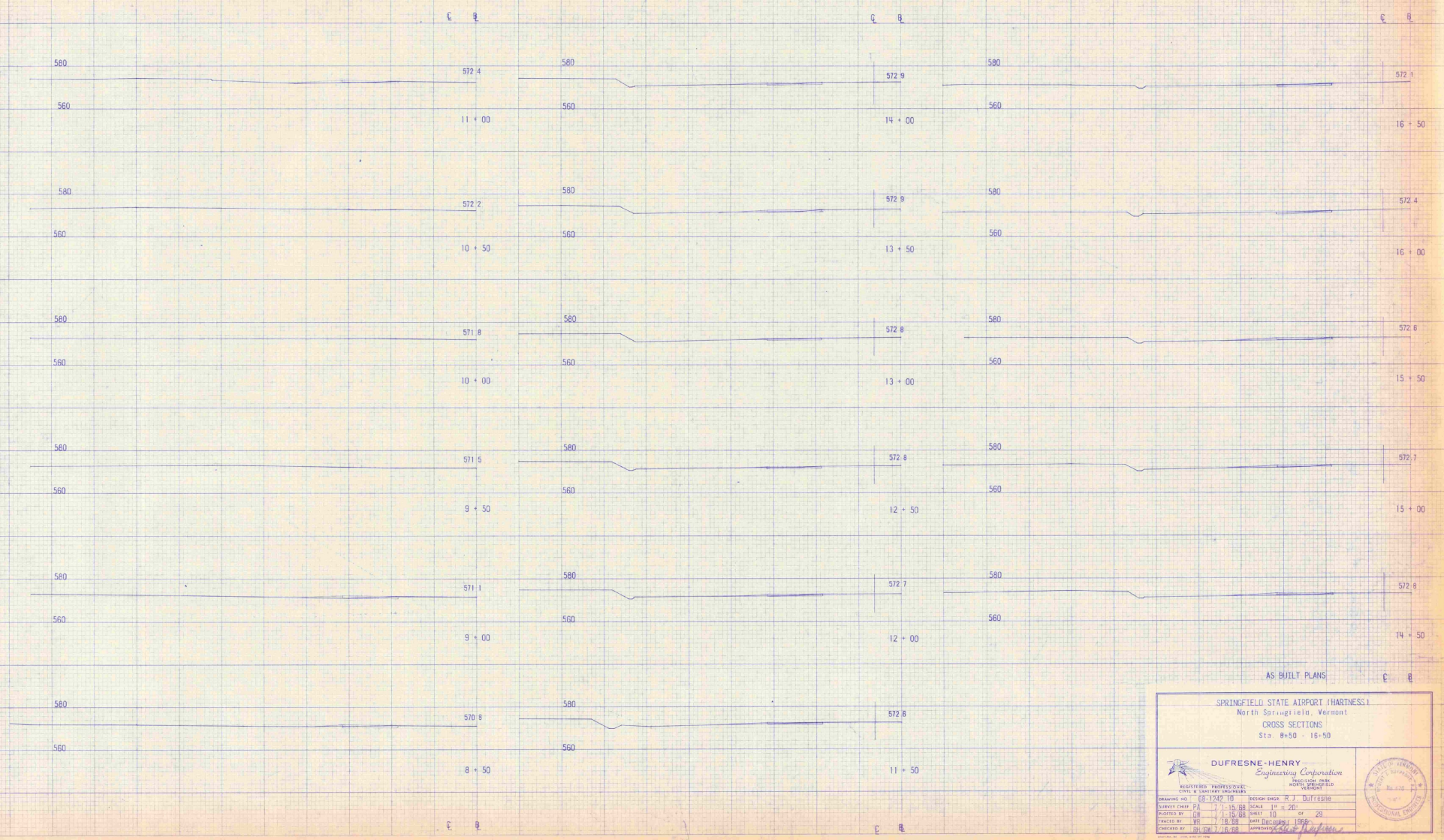
DUFRESNE-HENRY
Engineering Corporation
INCORPORATED

MULTI-TYPE PROFESSIONAL
ENGINEER & SURVEYOR

DRAWING NO. 68-1242	DATE 7-15-68	DESIGN ENGINEER R. J. DUFRESNE
CHECKED BY J. H. 7-18-68	SCALE 1" = 20'	
PLOTTED BY J. H. 7-18-68	SHEET 9	OF 28
DESIGNED BY J. H. 7-18-68	DATE DEDUCTED 1968	
CHECKED BY J. H. 7-18-68	APPROVED <i>[Signature]</i>	


STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 1274

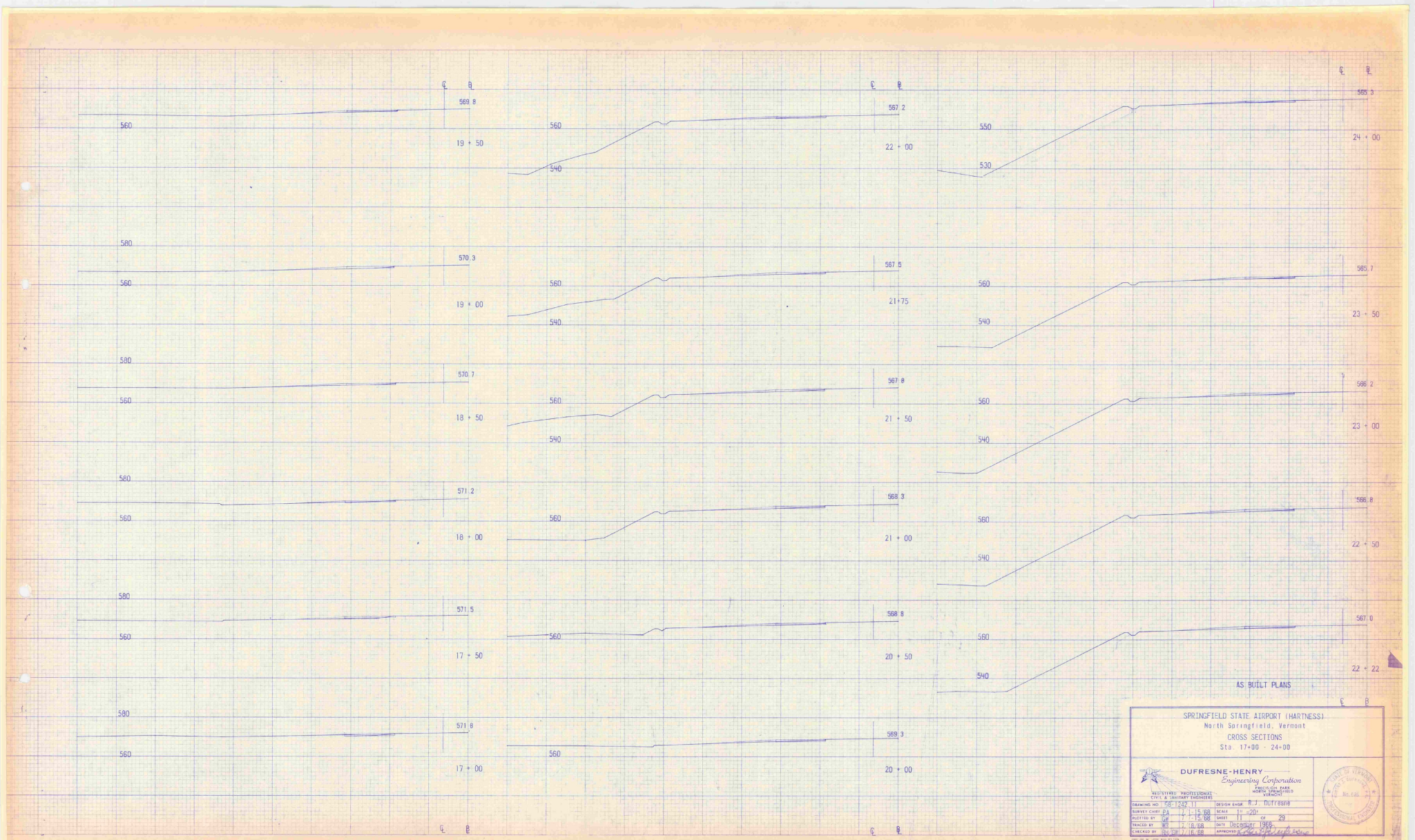
407,600



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 8+50 - 16+50

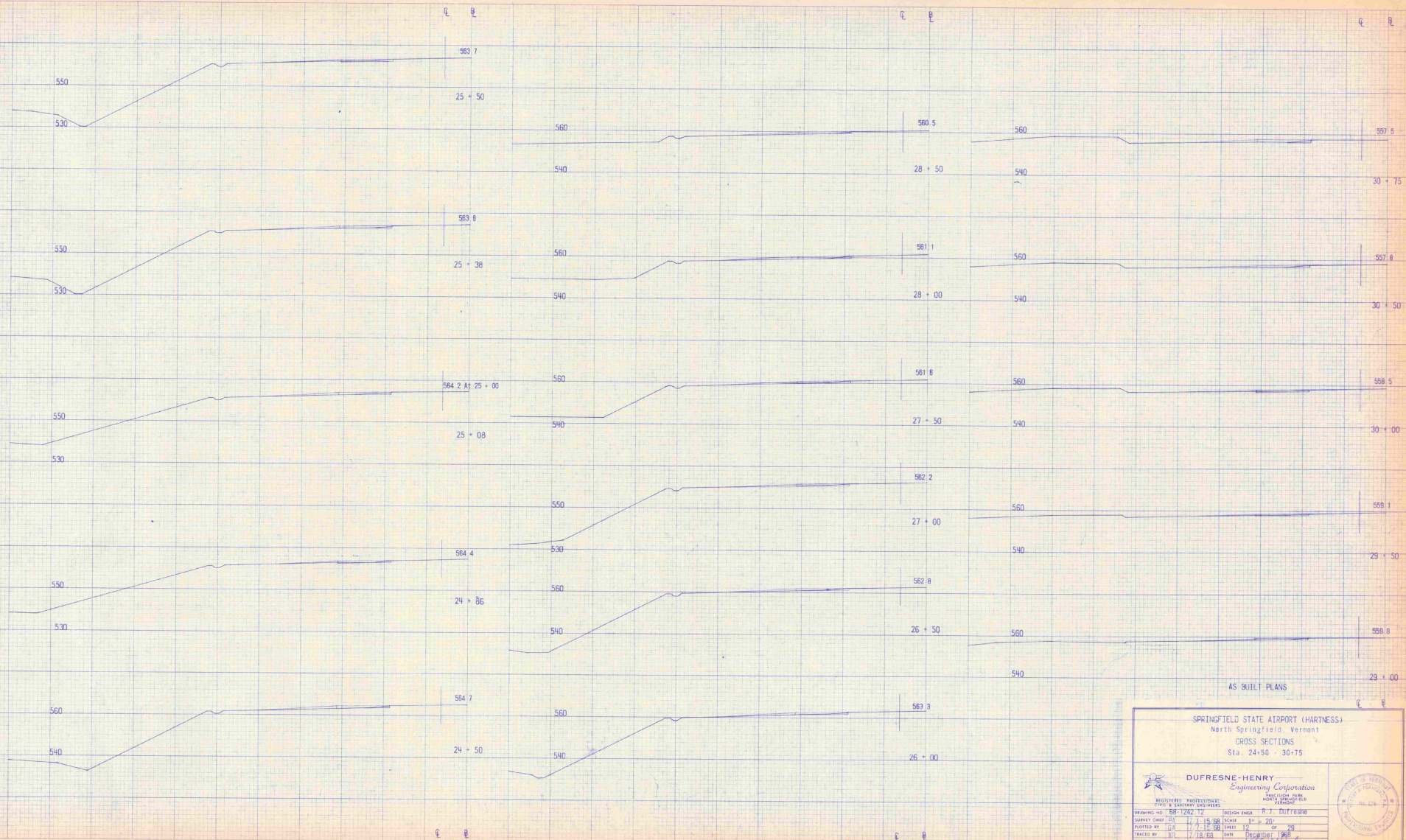
 DUFRESNE-HENRY Engineering Corporation <small>INCORPORATED IN VERMONT</small>		
<small>REGISTERED PROFESSIONAL ENGINEERS CIVIL & SURVEYING ENGINEERS VERMONT LICENSE NO. 10000</small>		
<small>DRAWING NO. 05-1942-10</small> <small>SURVEY CHIEF: P.A.</small> <small>DRAWN BY: G.H.</small> <small>CHECKED BY: B.J. CH. 7/18/68</small>	<small>DESIGN SHEET: N.J.</small> <small>SCALE: 1" = 20'</small> <small>SHEET: 10</small> <small>DATE: 7/18/68</small> <small>APPROVED BY: [Signature]</small>	



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 17+00 - 24+00

DUFRESNE-HENRY Engineering Corporation		
REGISTERED PROFESSIONAL ENGINEERS CITY OF MONTPELIER, VERMONT		
DRAWING NO. 58-1249-11	DESIGN ENGINEER R. J. Dufresne	
PROJECT START DATE 1-15-68	SCALE 1" = 20'	
DRAWN BY J. L. B. 4-15-68	SHEET 11 OF 20	
CHECKED BY J. L. B. 7-18-68	DATE 10/20/68	
APPROVED BY J. L. B. 11-18-68	APPROVED [Signature]	



AS BUILT PLANS

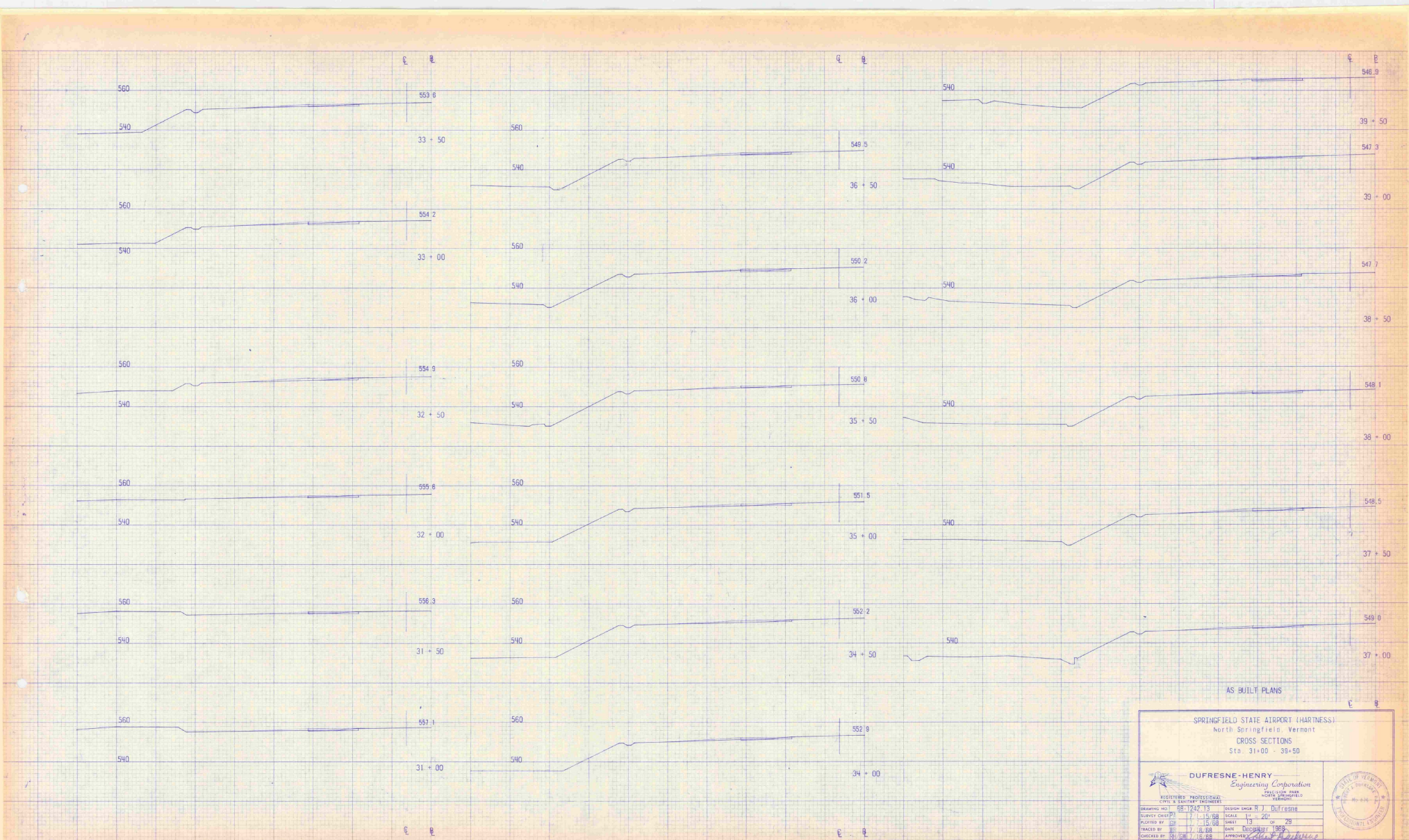
SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield Vermont
CROSS SECTIONS
Sta. 24+50 - 30+75

DUFRESNE-HENRY
Engineering Corporation
1505 W. 10th St.
Burlington, Vermont

REGISTERED PROFESSIONAL ENGINEER & SURVEYOR
No. 1242 T-2

DESIGN ENGINEER: R. J. DUFRESNE
SURVEY CHIEF: J. A. HENRY
CHECKED BY: J. A. HENRY
DATE: 11/15/68

SCALE: 1" = 20'
SHEET: 12 OF 26
APPROVED: [Signature]
DATE: 11/18/68

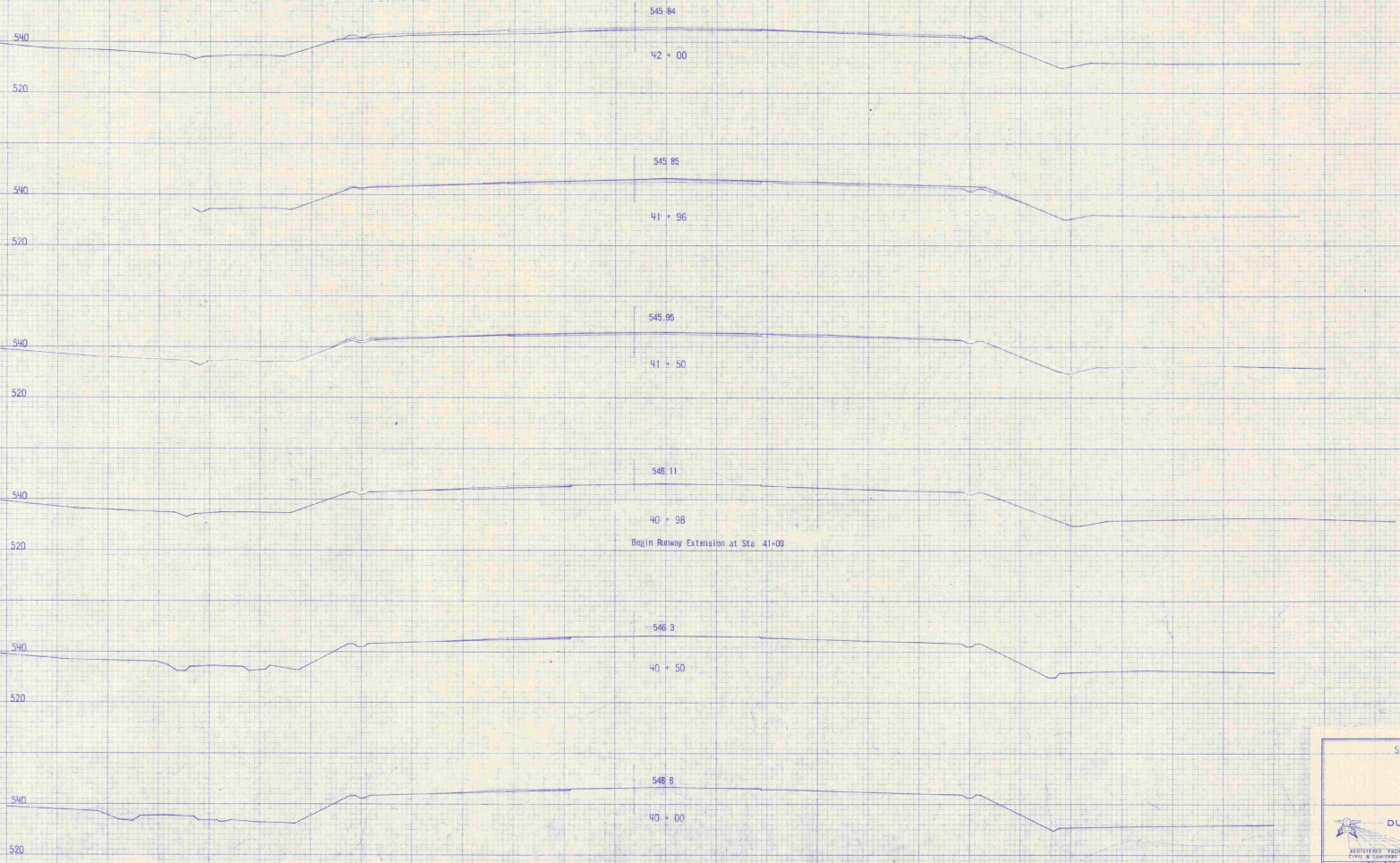


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 31+00 - 39+50

DUPRESNE-HENRY Engineering Corporation		
REGISTERED PROFESSIONAL ENGINEERS VERMONT		
DRAWING NO. 88-1242-13	DESIGNER (S. H.) DUFRESNE	SCALE 1" = 20' SHEET 13 OF 29 DATE NOVEMBER 1955 APPROVED <i>[Signature]</i>
CHECKED BY S. H. DUFRESNE	DATE NOVEMBER 1955	
DRAWN BY S. H. DUFRESNE	DATE NOVEMBER 1955	
PROJECTED BY S. H. DUFRESNE	DATE NOVEMBER 1955	
SUPERVISOR BY S. H. DUFRESNE	DATE NOVEMBER 1955	

E 8



AS BUILT PLANS

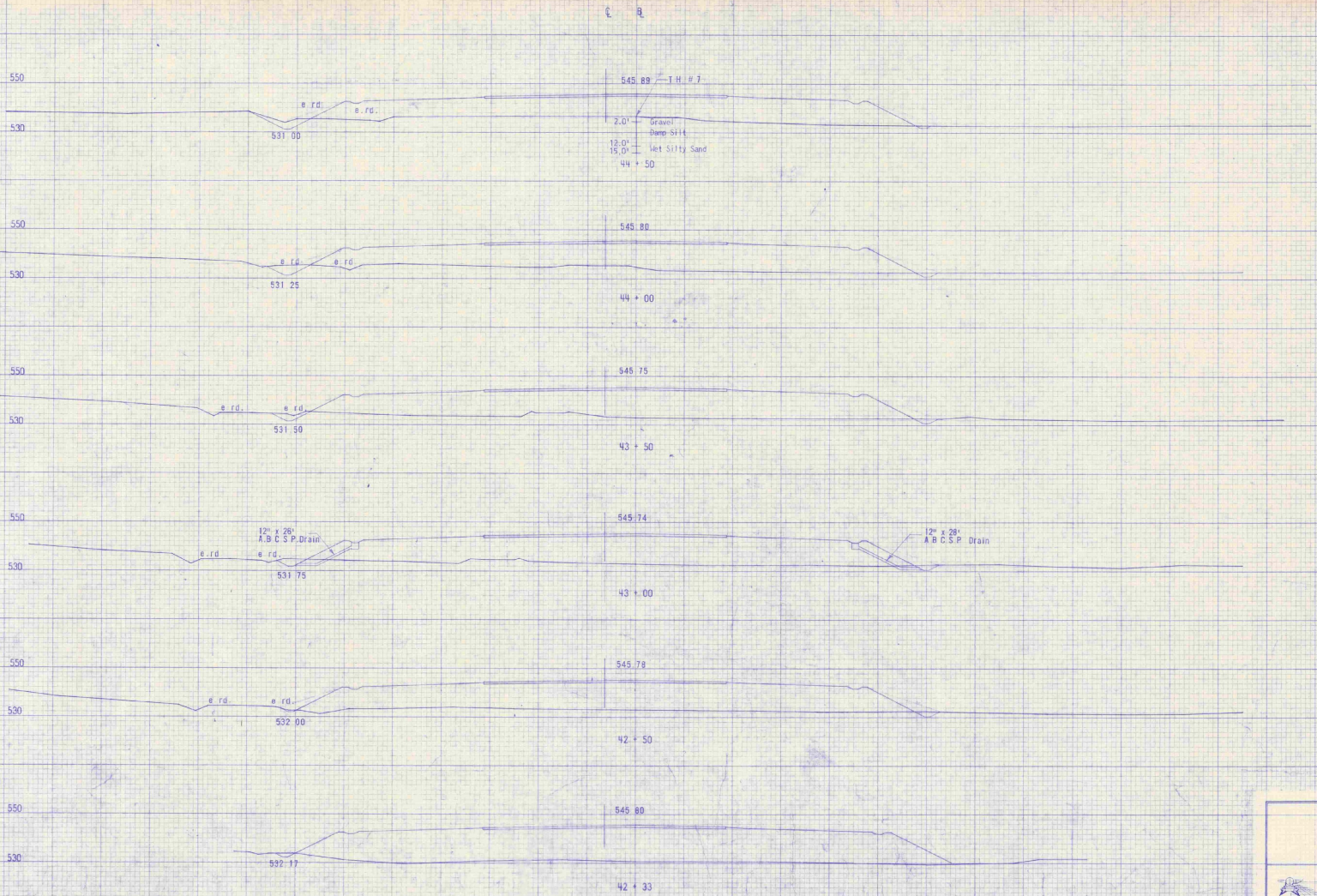
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 40+00 - 42+00

DUFRESNE-HENRY
 Engineering Corporation
 CIVIL & SURVEY ENGINEERS
 100 STATE STREET
 SPRINGFIELD, VERMONT




DESIGNED BY	7/1/58	DESIGNED BY	H. J. Dufresne
DRAWN BY	7/1/58	SCALE	1" = 20'
CHECKED BY	7/7/58	DATE	7/15/58
APPROVED BY	7/15/58	DATE	7/15/58

E 8

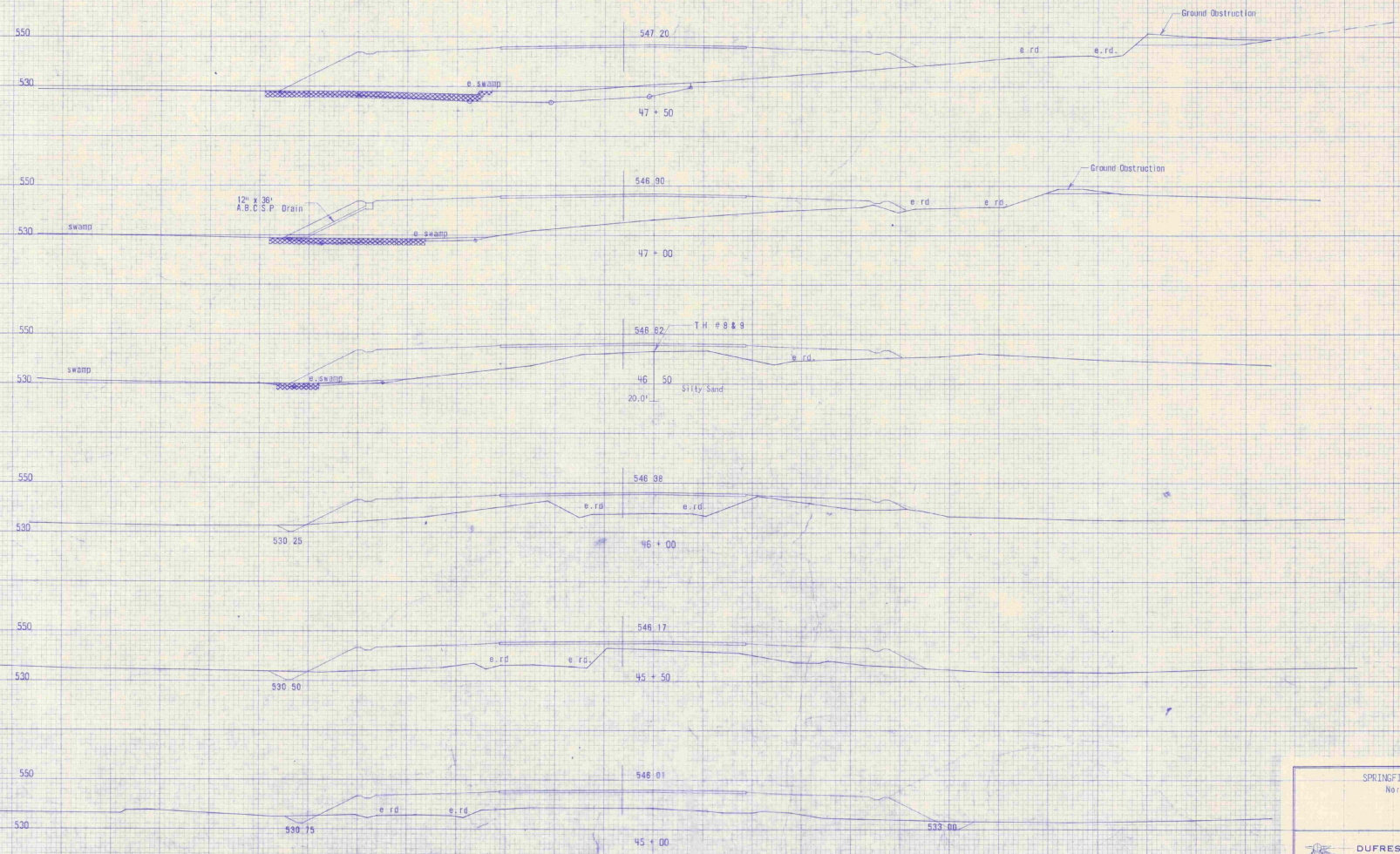


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield Vermont
 CROSS SECTIONS
 Sta. 42+32 - 44+50

 DUFRESNE-HENRY Engineering Corporation <small>CIVIL & SANITARY ENGINEERS</small>		
<small>DESIGNED BY</small> R.J. Dufresne <small>DATE</small> 7-1-58 <small>CHECKED BY</small> J.L. Dufresne <small>DATE</small> 7-1-58	<small>DESIGNED BY</small> R.J. Dufresne <small>DATE</small> 7-1-58 <small>CHECKED BY</small> J.L. Dufresne <small>DATE</small> 7-1-58	<small>SCALE</small> 1" = 20' <small>SHEET</small> 15 <small>OF</small> 25 <small>APPROVED</small> <i>[Signature]</i>

E R



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 45+00 - 47+50

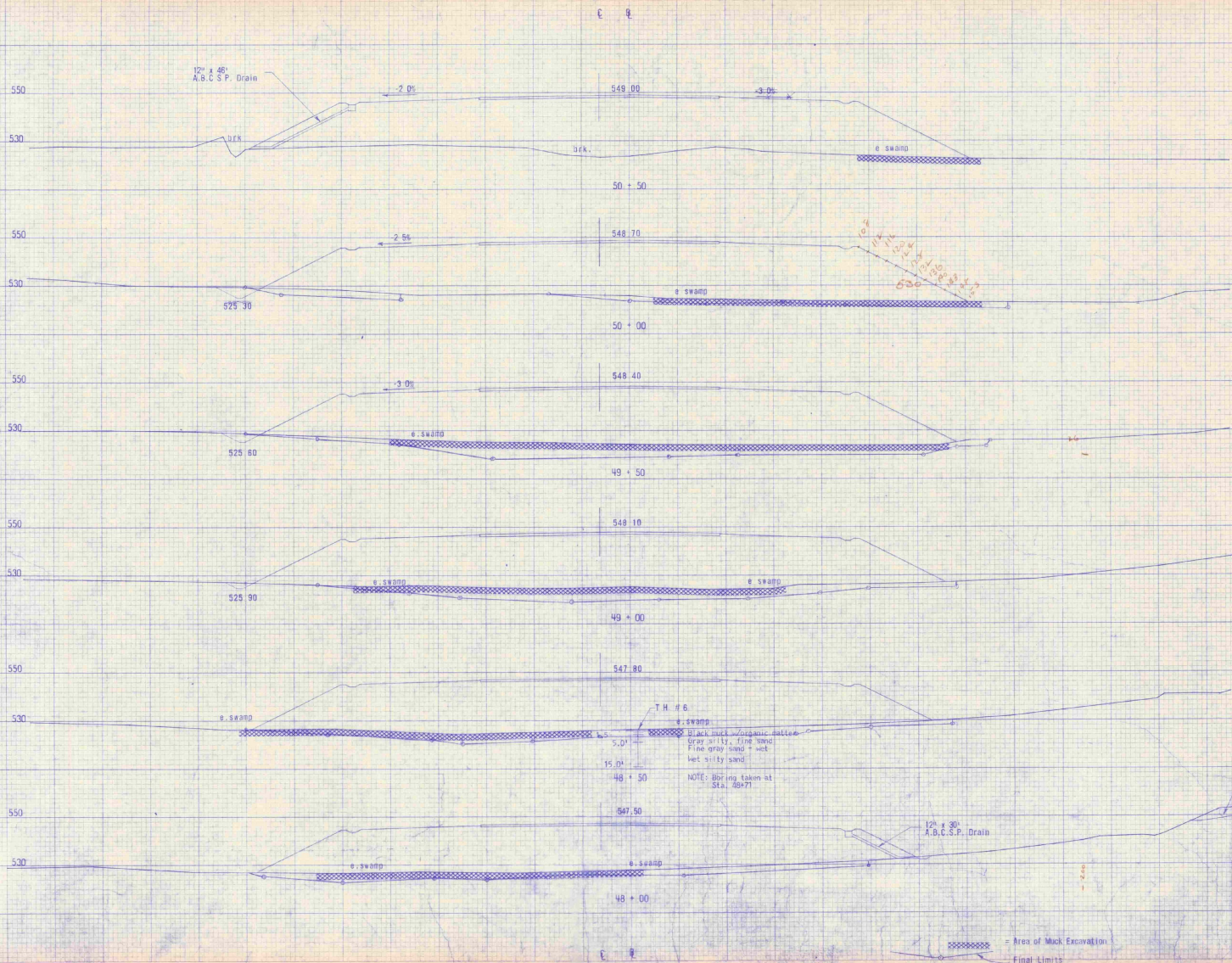
DUFRESNE-HENRY
Engineering Corporation
100 STATE STREET
MONTPELIER, VERMONT

REGISTERED PROFESSIONAL ENGINEER
STATE OF VERMONT LICENSE NO. 1078

PROJECT NO.	1242-76	DESIGN ENGINEER	R. J. DUFRESNE
CLIENT	VT. DEPT. OF TRANSPORTATION	SCALE	1" = 20'
DESIGNED BY	1/7/58	SHEET	16 OF 20
CHECKED BY	1/16/58	DATE	DECEMBER 1958
CONTRACT NO.	17-16-58	APPROVED BY	<i>[Signature]</i>

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER

Area of Muck Excavation Final Limits



Handwritten note in red ink: 500

T.H. # 6
 5.0'
 15.0'
 48 + 50
 NOTE: Boring taken at Sta. 48+71

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT - (HARTNESS) -
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 48+00 - 50+50

DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEER
 STATE OF VERMONT
 No. 1000

DESIGNER: R. J. DUFRESNE
 SURVEY CHIEF: P. A. 7/1-15/68
 CHECKED BY: H. B. 7/15/68
 DATE: December 1968
 APPROVED BY: [Signature]

DRAWING NO. 100-1242-17
 SHEET NO. 11 OF 28

12" x 30" A.B.C.S.P. Drain

Ground Obstruction

Area of Muck Excavation

Final Limits



C R

580

560

540

-1.0%

559.50

53+00

NOTE SEE SHEET 18A OF 29 FOR RIGHT HALF OF THESE SECTIONS

560

540

-1.0%

559.20

52+50

570

0. WGS

0. WGS

550

530

-1.0%

549.90

52+00

-1.5%

550

0. WGS

-1.0%

549.80

51+50

-2.0%

0. WGS

0. WGS

550

530

510

-1.5%

549.30

51+00

-3.5%

12" x 50" A.B.C.S.P. Drain

0. WGS

DRK

0. SWARD

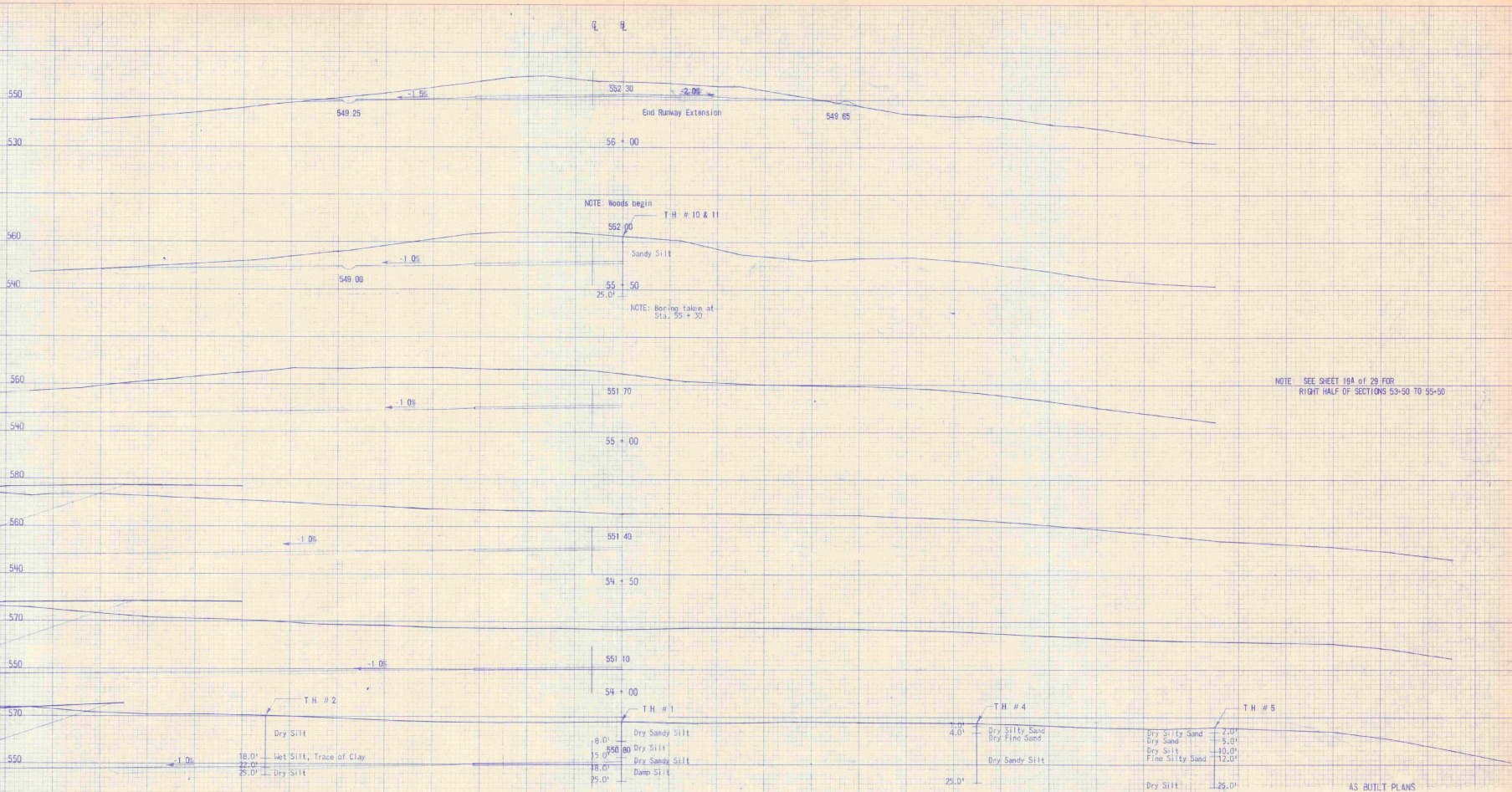
AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 51+00 - 53+00

DUFRESNE-HENRY
Engineering Corporation
INCORPORATED IN VERMONT
100 STATE STREET
SPRINGFIELD, VERMONT



DESIGNED BY: J. J. DUFRESNE
DRAWN BY: J. J. DUFRESNE
CHECKED BY: J. J. DUFRESNE
DATE: 7-18-58
SCALE: 1" = 20'
SHEET: 18 OF 29



NOTE: Woods begin
T.H. # 10 & 11
Sandy Silt
NOTE: Boring taken at
Sta. 55 + 30

NOTE: SEE SHEET 19A of 29 FOR
RIGHT HALF OF SECTIONS 53+50 TO 55+50

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

CROSS SECTIONS
Sta. 53+50 - 56+00

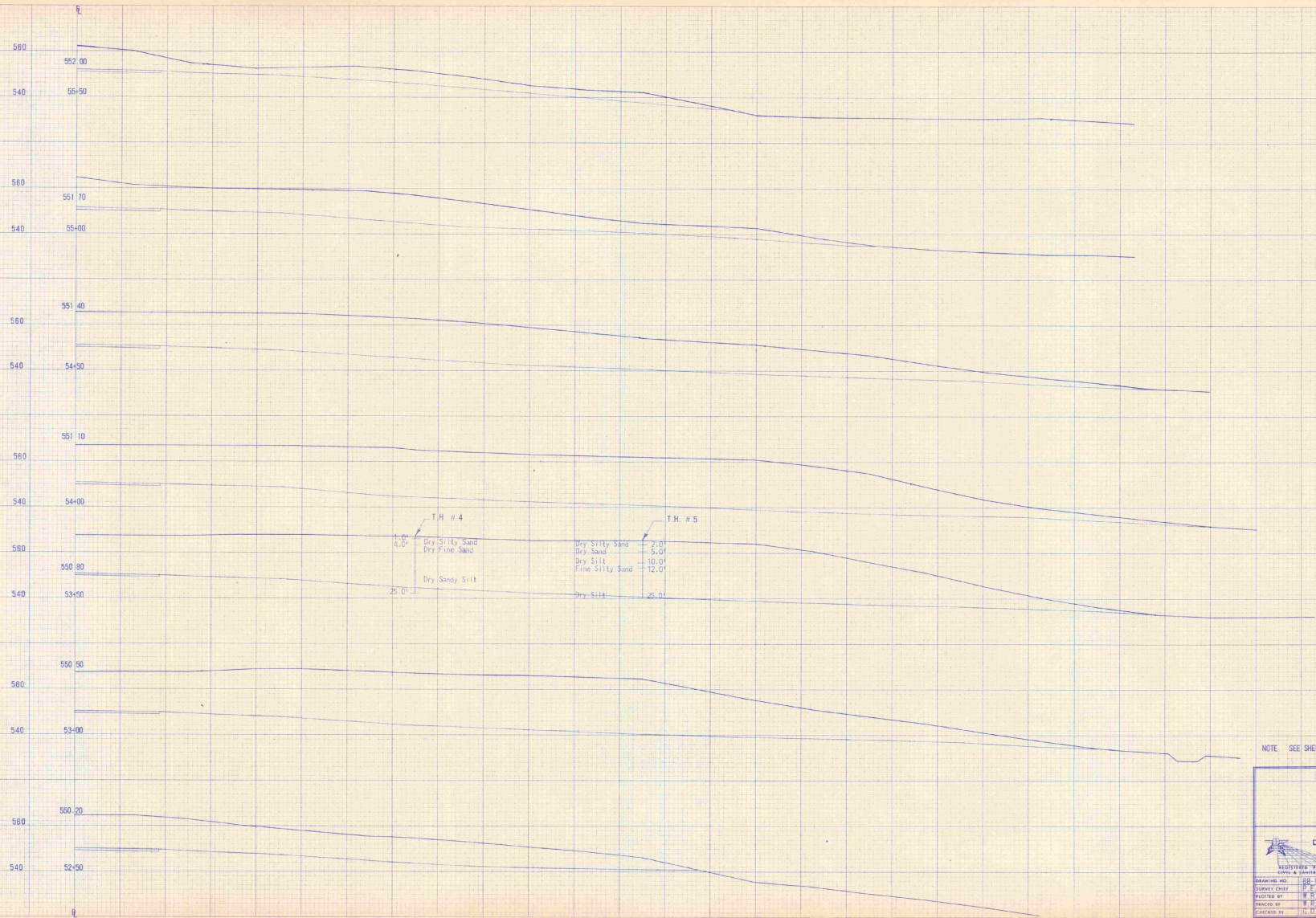
DUPRESNE-HENRY
Engineering Corporation

REGISTERED PROFESSIONAL
CIVIL & SANITARY ENGINEERS
VERMONT STATE NO. 1216

DESIGNED BY: T.H. # 1-5
DRAWN BY: J.H. # 1-5
CHECKED BY: J.H. # 1-5

DATE: 7/15/68
SCALE: 1" = 20'
SHEET: 19 OF 29
PROJECT: 7-18-68
APPROVED: [Signature]



STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 1216

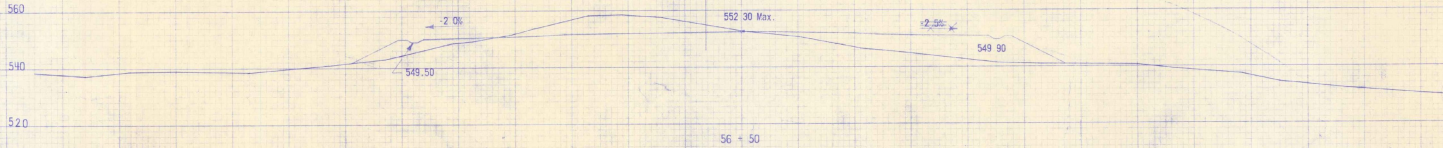
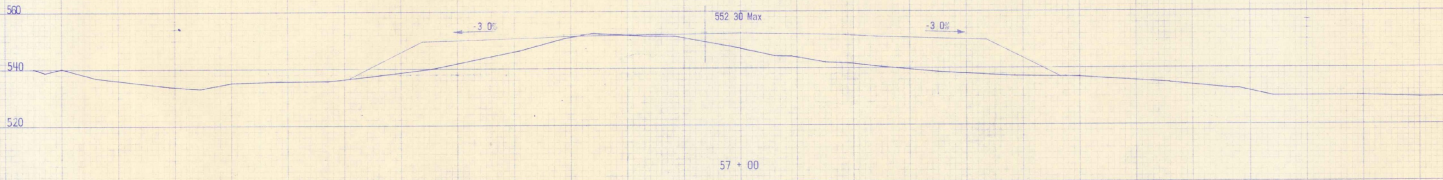
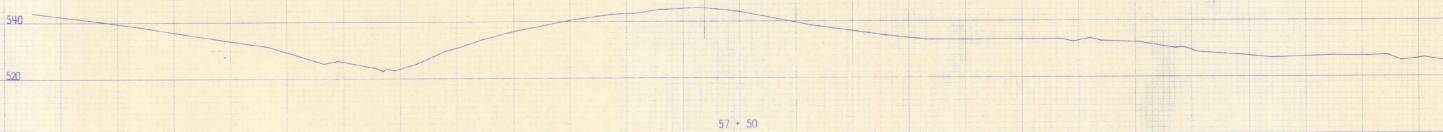
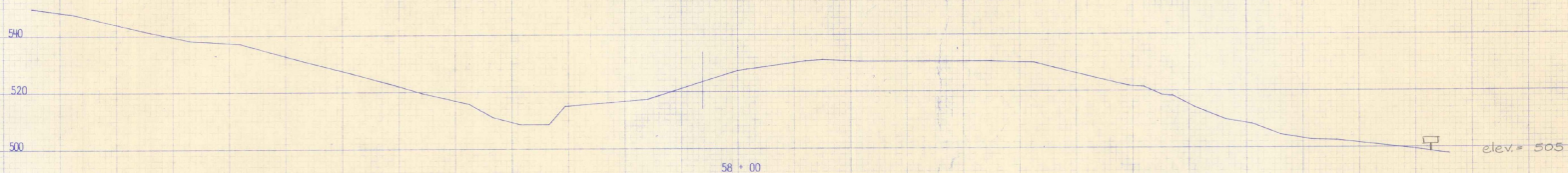


AS BUILT PLANS

NOTE SEE SHEETS 18 & 19 OF 29 FOR LEFT HALF OF SECTIONS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 Sta. 52+50 - 55+50 Lt. (only)

 DUFRESNE-HENRY Engineering Corporation CIVIL & SANITARY ENGINEERS		
DRAWING NO. 186-1242-19A DESIGNED BY H. R. 1170 CHECKED BY D. D. R. 1170	DESIGN SCALE 1" = 20' SHEET 18 OF 29 DATE JUNE 1960 APPROVED <i>[Signature]</i>	



AS BUILT PLANS

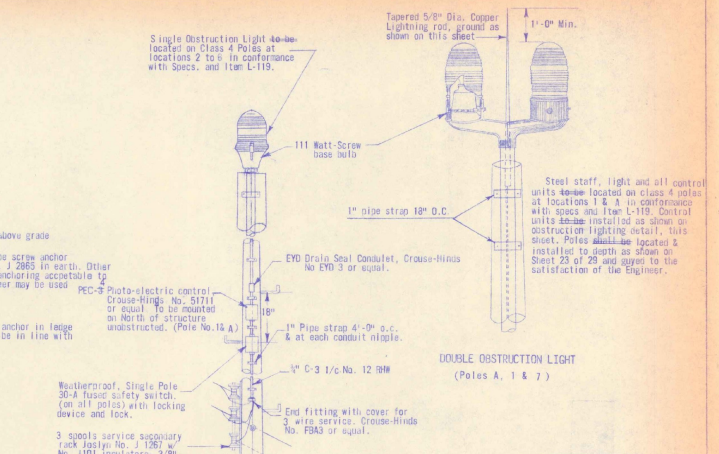
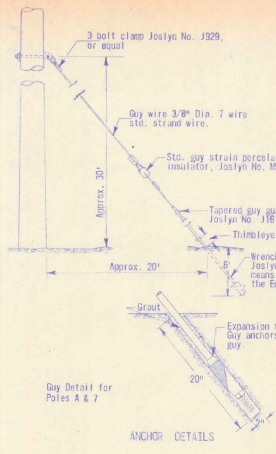
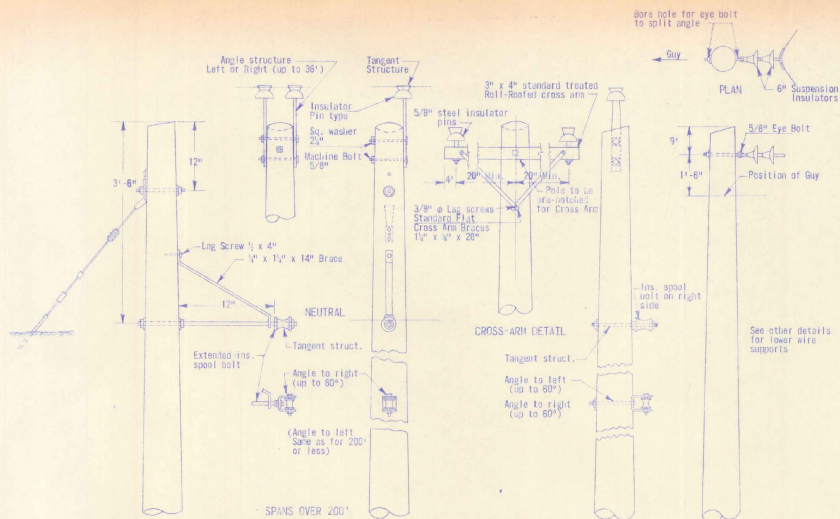
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 56+50 - 58+00

DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEER
 CIVIL & SURVEYING ENGINEER
 LICENSE NO. 88 1282 29 DESIGN ENGINEER N.J. DUFRESNE

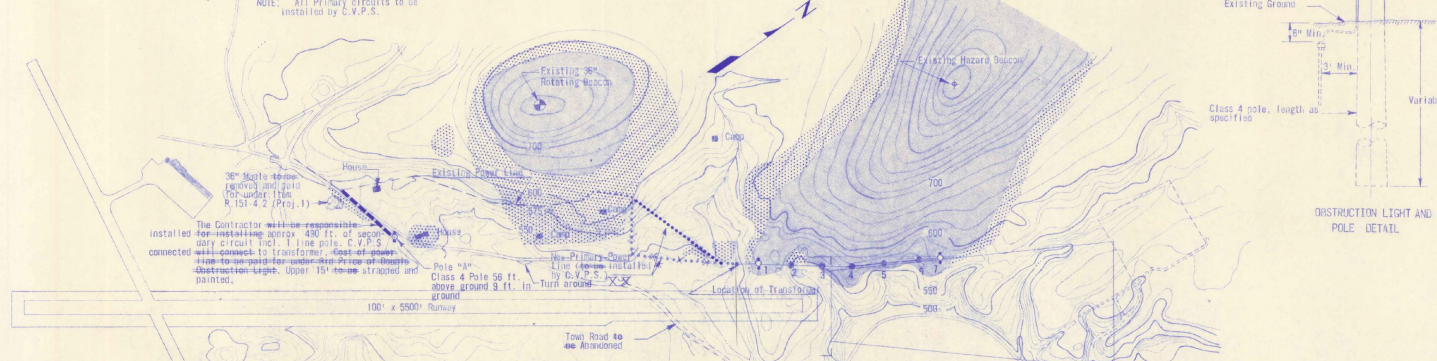
PROJECT NO. 17-15-88 SCALE 1" = 20'
 DRAWN BY J.M. DATE 1/15/88 SHEETS 20 OF 29
 CHECKED BY J.M. DATE 1/16/88 DATE DISCREPANCY 1988
 APPROVED BY J.M. DATE 1/16/88

STATE OF VERMONT
 PROFESSIONAL ENGINEER
 No. 88-1282-29



TYPICAL POWER POLES (Class 4)
For Detail of Obstruction Light Poles See Right Side of This Sheet

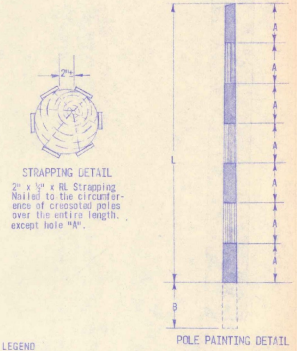
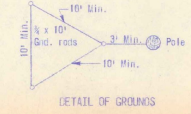
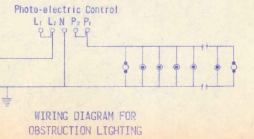
NOTE: All Primary circuits to be installed by C.V.P.S.



LAYOUT SHOWING AREAS OF OBSTRUCTIONS AND LOCATIONS OF OBSTRUCTION LIGHTS
Scale: 1" = 400'

- LEGEND:
- Areas of Ground Extending Above Limitations of part 77
 - Areas Having Trees and/or Buildings Extending Above Limitations of part 77
 - Double Obstruction Light
 - Single Obstruction Light

NOTE: For Ground Obstruction Limitations, see sheets 24 thru 29.



LEGEND
A = 1/7 L (L=Length of Strapped Portion of Pole) (4 Straps At Least 2'-0")
 White (TTP - 102)
 International Orange (TTP - 95A)

NOTE:
For dimensions "L" and "B" See Sheet 23 of 29
General notes:
Vertical Strapping shall be 2" x 1/2" x 1/2" Finished Lumber.
All obstruction lights shown on sheet 23 of 29 shall be provided with all necessary appurtenant equipment in accordance with details on this sheet and the specifications.

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

OBSTRUCTION LIGHTING
and
POWER POLE DETAILS

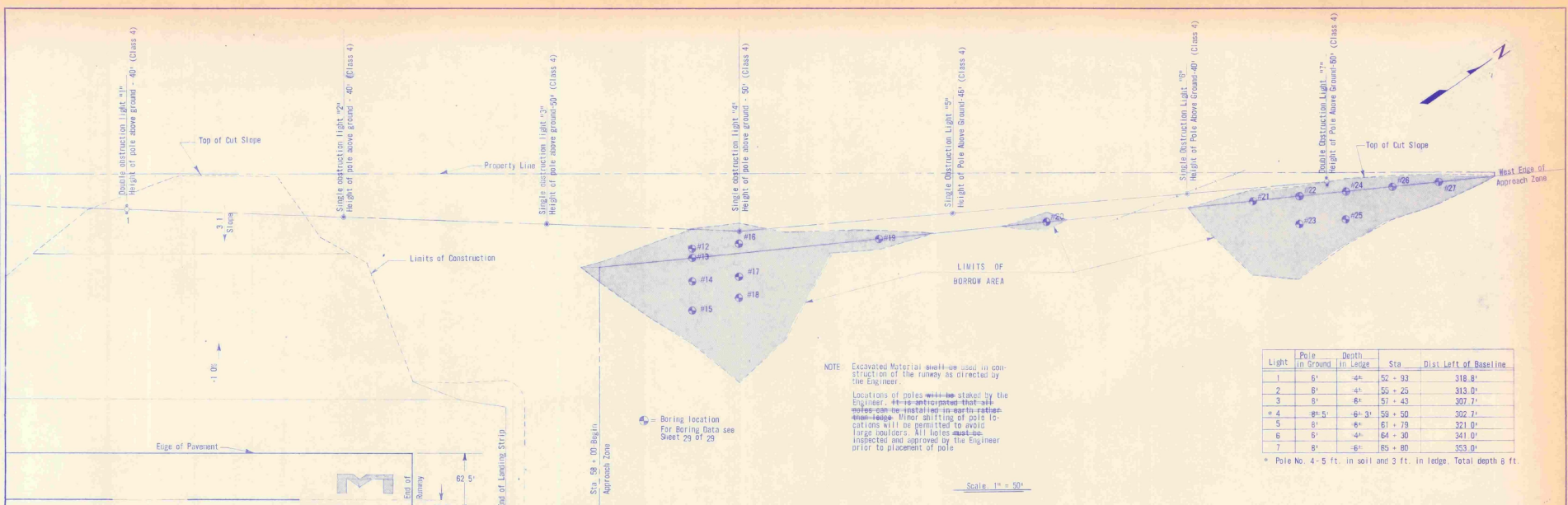
DUFRESNE-HENRY
Engineering Corporation
INCORPORATED
100 W. WASHINGTON ST.
MONTPELIER, VERMONT

DRAWING NO. 88-1249-22	DESIGN ENGINEER R. J. Dufresne
PLANNED BY W. B. (P-B-88)	CHECKED BY J. S. (S-88)
TRACED BY W. B. (P-B-88)	DATE December 1988
CHECKED BY J. S. (S-88)	APPROVED <i>[Signature]</i>

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 676

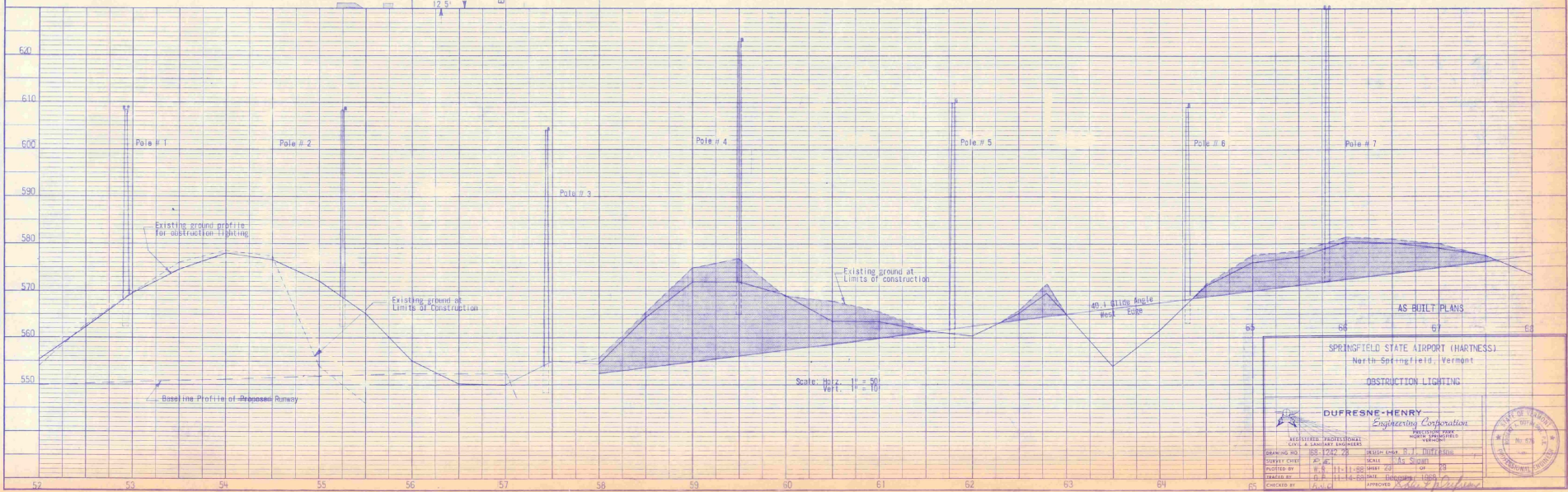
PLAN
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

PROFILE
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

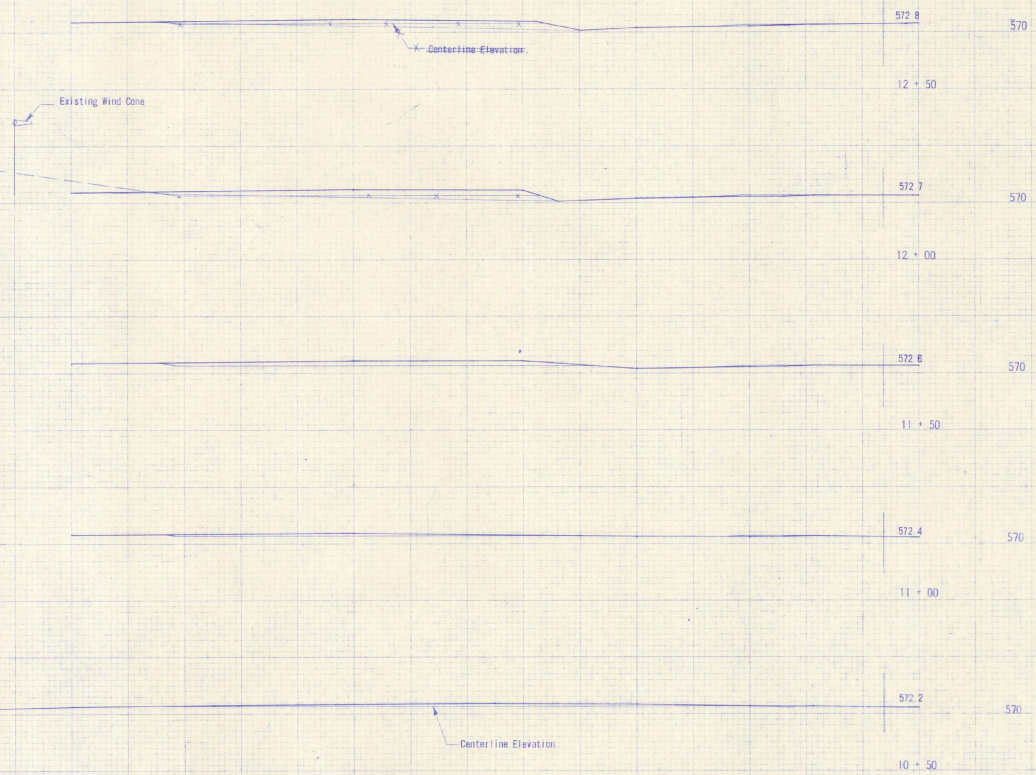


Light	Pole in Ground	Depth in Ledge	Sta.	Dist Left of Baseline
1	9'	4'	52 + 93	318.0'
2	6'	4'	55 + 25	318.0'
3	9'	6'	57 + 43	307.2'
4	81.5'	6 + 31	59 + 50	302.2'
5	6'	6'	61 + 79	321.0'
6	8'	4'	64 + 30	341.0'
7	8'	6'	65 + 80	353.0'

* Pole No. 4 - 5 ft. in soil and 3 ft. in ledge. Total depth 8 ft.



E B



AS BUILT PLANS

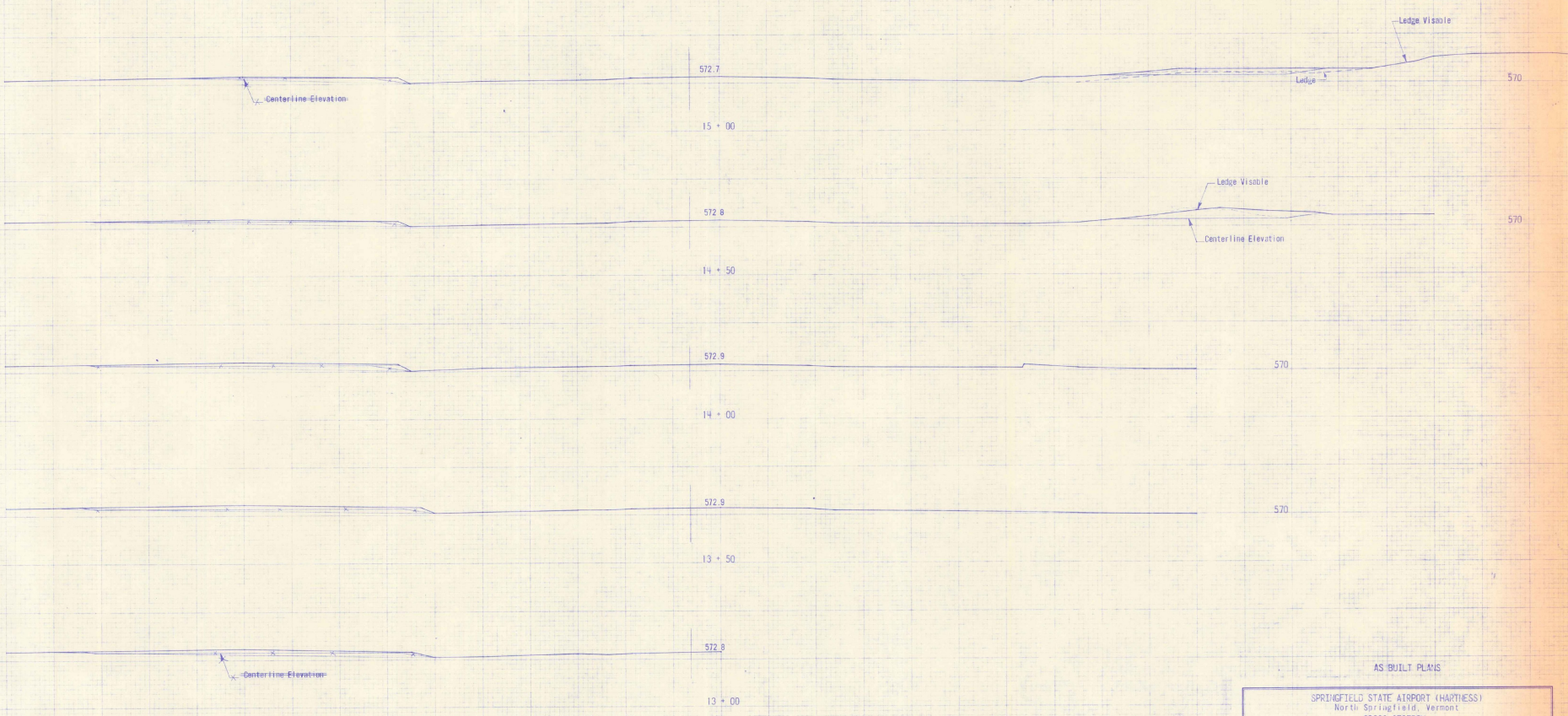
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS

DRAWING NO.	BS 1262-24	DESIGNER	R. J. DUFFES
SURVEY DATE	11-15-58	SCALE	1" = 20'
PLOTTED BY	B. S. 8-22-58	SHEET	24 OF 28
CHECKED BY	B. S. 8-24-58	DATE	10/20/58
DATE	11-18-58	APPROVED	<i>[Signature]</i>

STATE OF VERMONT
 REGISTERED PROFESSIONAL ENGINEER
 No. 676

C B



AS BUILT PLANS

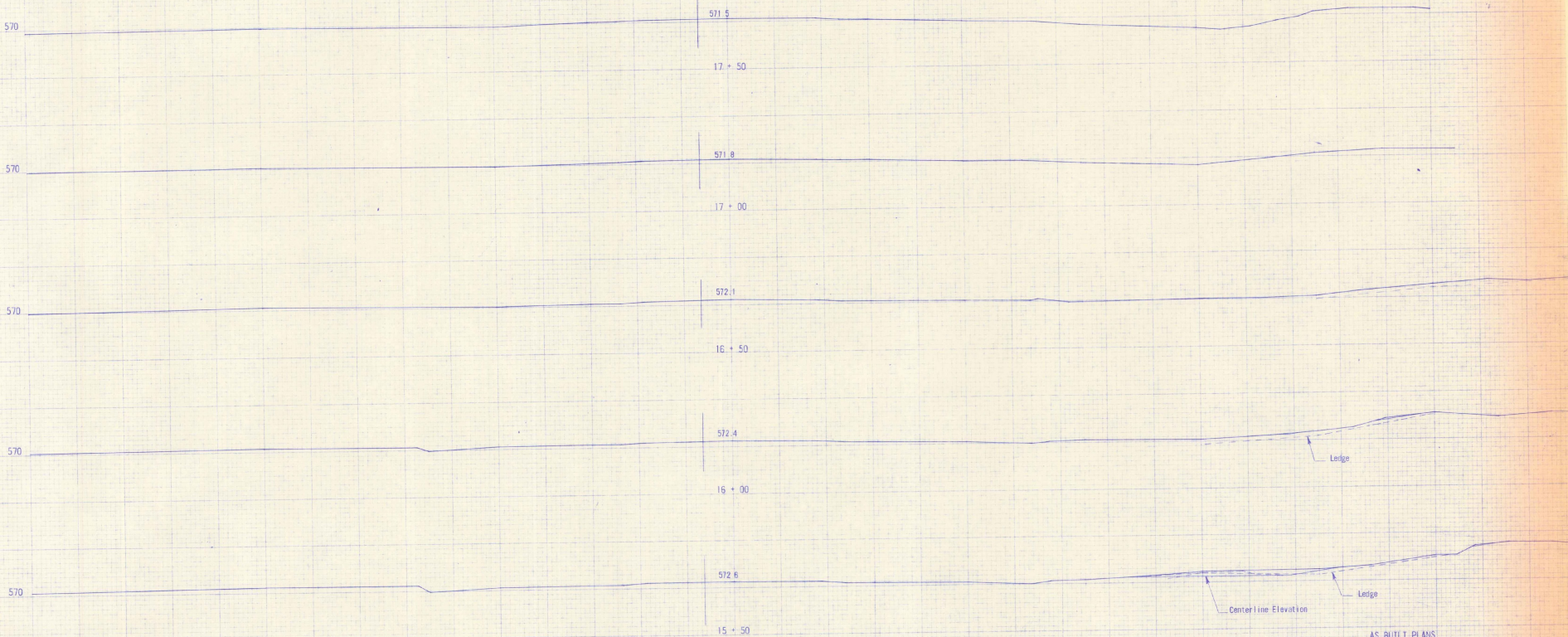
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY

DUFRESNE-HENRY
 Engineering Corporation
 CIVIL & SANITARY ENGINEERS

DRAWING NO.	FD-1247-25	DESIGN ENGR.	R. J. DUFRESNE
CHECKED BY	P. E. B. 15-88	SCALE	1" = 20'
DESIGNED BY	W. R. B. 22-88	SHEET	25 OF 28
TRACED BY	W. R. B. 24-88	DATE	December, 1989
CHECKED BY	W. R. B. 25-88	APPROVED	<i>[Signature]</i>

STATE OF VERMONT
 PROFESSIONAL ENGINEER
 No. 827

CE



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND CONSTRUCTION REMOVAL
 RUNWAY

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS
 CIVIL & SURVEY ENGINEERS

DESIGNER: R. J. DUFRESNE
 CHECKED BY: R. J. DUFRESNE
 DATE: 12-23-88

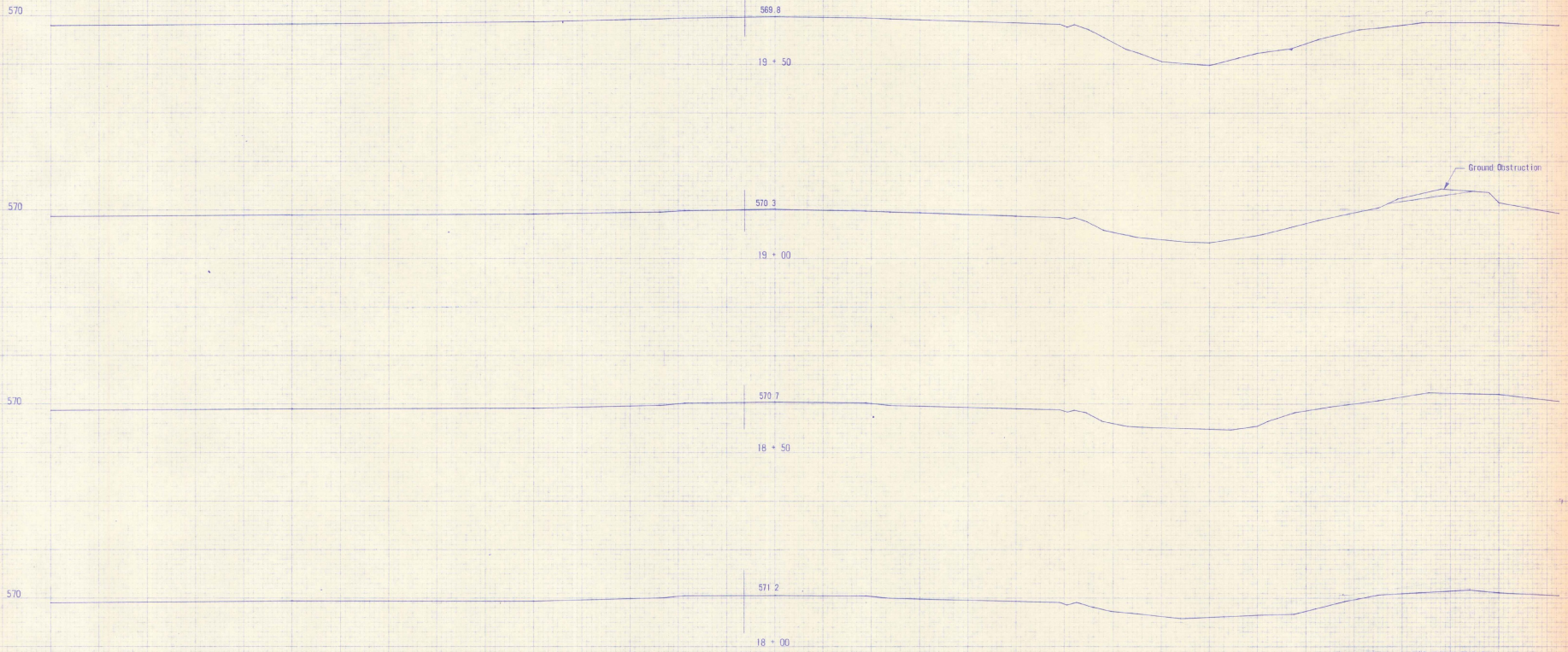
DRAWING NO.	BB 1222 28	DESIGN ENGINEER	R. J. DUFRESNE
SURVEY CODE	H. E. 88-15-88	SCALE	1" = 20'
PROJECT BY	H. D. 18-22-88	SHEET	26 OF 28
TRACED BY	H. D. 18-24-88	DATE	December, 1988
CHECKED BY	H. D. 18-23-88	APPROVED	<i>R. J. Dufresne</i>

STATE OF VERMONT
 PROFESSIONAL ENGINEER

CE



PERFECT COPY

C B

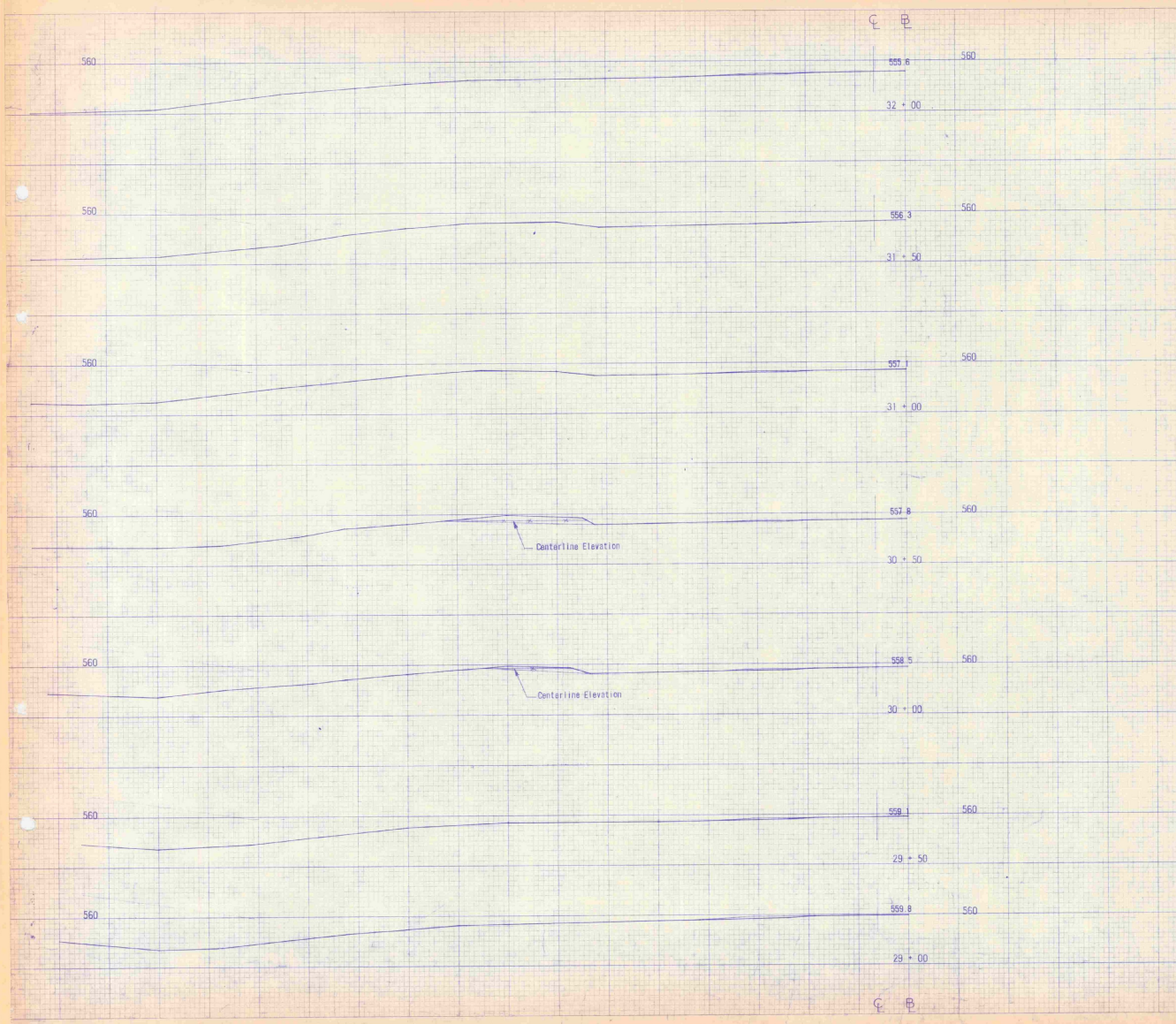


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY

 DUFRESNE-HENRY Engineering Corporation			
<small>REGISTERED PROFESSIONAL CIVIL & SANITARY ENGINEERS VERMONT STATE BOARD OF ENGINEERS</small>			
<small>DRAWING NO.</small> TRS-1292-01	<small>DESIGN ENGINEER</small> H. J. McLeslie	<small>SCALE</small> 1" = 20'	
<small>SUPPLY CHIEF</small> P. E. B. 15-58	<small>DATE</small> 8-22-58		<small>SHEET</small> 21 OF 23
<small>TRACKED BY</small> H. K. B. 21-58	<small>DATE</small> September 1958		<small>APPROVED</small>
<small>CHECKED BY</small> H. K. B. 23-58	<small>APPROVED</small>		<small>DATE</small>

C B



EARTHWORK SHEET

VC	% GRADE	STATION	GRADES			CORR V.C.	DIST	TOTAL EXCAVATION		MUCK EXCAVATION		EMBANKMENT		BASE	
			ELEVATION ON TANGENT	ELEVATION ON CURVES				AREA	CU YDS	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS
		41	543.30	546.11	-2.81										
	+50	543.60	545.95	-2.35		50									
		42	543.90	545.84	-1.94					0		2415			
	+50	544.20	545.78	-1.58		50				2609		4744			
		43	544.50	545.74	-1.24						2515	4585			
	+50	544.80	545.75	-0.95		50					2437	4389			
		44	545.10	545.80	-0.70							2303	4036		
	+50	545.40	545.88	-0.48		50					2056	3545			
		45	545.70	546.01	-0.31							1773	3056		
	+50	546.00	546.17	-0.17		50						1527	2682		
		46	546.30	546.38	-0.08							1370			
	+25					25			0			2733			
	+50	546.60	546.62	-0.02		25			80	28		1611			
		47	546.90		0				117	194		2806			3805
	+50	547.20				50				565		6098			
		48	547.50						492	1103		3978			
	+50	547.80				50				698		5007			8322
		49	548.10							1386		5893			9908
	+50	548.40				50				798		6687			11074
		50	548.70							1018		6687			12026
	+50	549.00				50				1267		6722			13383
		51	549.30							148		5572			10608
	+50	549.60				50				452		5886			9776
		52	549.90						0	163		4672			6860
	+50	550.20				50			176	2904		2520			2445
		53	550.50							2990		119			110
	+50	550.80				50				7338		9536			0
		54	551.10							10951		18387			
	+50	551.40				50				11369		20668			
		55	551.70							10929		18882			
	+50	552.00				50				9464		14011			
		56	552.30							5688		7462			
	+50	552.60				50				2390		3212			19
		57	552.90							1079		1314			21
	+50	553.20				50				340		736			701
		58	553.50							0		315			2298
	+50	553.80				50				0		1747			1133
		59	554.10							35		0			0

HARTNESS EARTHWORK SUMMARY

Total Earth & Rock	(A) 122,306 c.y.
Total Rock	768 c.y.
Total Earth	121,540 c.y.
Planimeted Fill	128,653 c.y.
Less Factored Rock (1.5)	149 c.y.
Net Plan Fill	127,504 c.y.
Fact. = 1.25	x 1.25
Factored Fill	159,380 c.y.
Less Avail. Fill	121,540 c.y.
Require	(B) 37,840 c.y.

NOTE

(A) A summary of 6156 c.y. of Earth & Rock for the first 4000' has been added to this figure of which 687 c.y. is Rock.

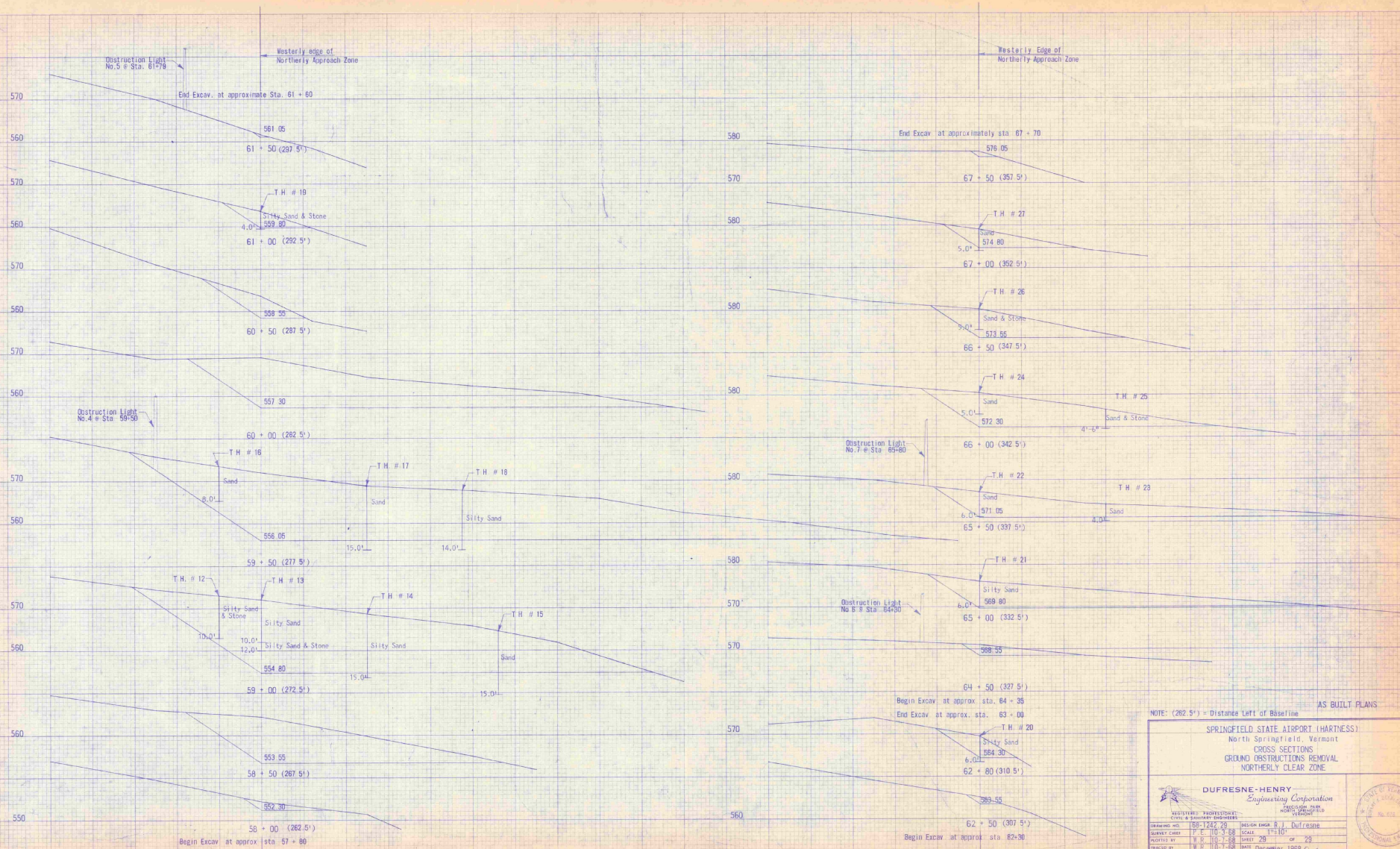
(B) Total Ballon used was 48,307 b.y. - A variation of 10.87 c.y. due to loss from washouts caused by rain.

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY & EARTHWORKS

DUFRESNE-HENRY
 Engineering Corporation
 CIVIL & LANDSCAPE ARCHITECTS

DRAWING NO. 66-1242-28 DESIGN ENGINEER R.J. Dufresne
 CHECKED BY W.R. 10-15-68 SCALE 1" = 20'
 PLOTTED BY W.R. 10-22-68 SHEET 28 OF 29
 MADE BY H.R. 10-24-68 DATE Dec. 1963
 CHECKED BY H.R. 11-23-68 APPROVED

Earthworks Revised 10-7-69 G.D.



NOTE: (282.5') = Distance Left of Baseline

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 GROUND OBSTRUCTIONS REMOVAL
 NORTHERLY CLEAR ZONE

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL
 CIVIL & SANITARY ENGINEERS

DESIGN ENGINEER: J. Dufresne
 SURVEY CHIEF: P. E. 110-3-88
 SCALE: 1"=10'
 DRAWN BY: P. E. 110-3-88
 SHEET: 20
 CHECKED BY: P. E. 110-3-88
 DATE: December 1988
 OF 29

APPROVED: [Signature]

PROJECT: [Signature]

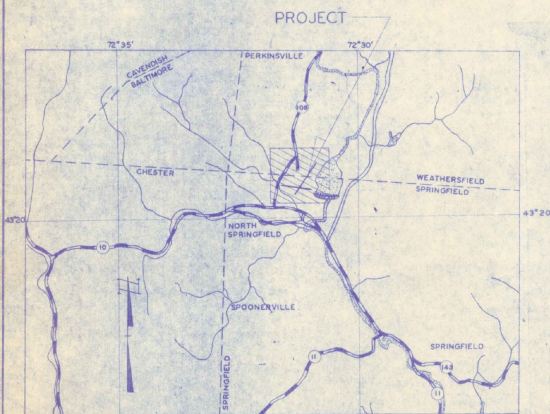
GEOGRAPHIC LOCATION
 LATITUDE 43°20'29"
 LONGITUDE 72°31'18"
 AIRPORT ELEVATION
 575' M.S.L. DATUM
 AIRLINE DISTANCE FROM
 TOWN OF SPRINGFIELD=3.75 MI. NW
 ROAD DISTANCE FROM SPRINGFIELD
 POST OFFICE TO AIRPORT = 5.8 MI.

PLANS FOR EXPANSION OF EXISTING TERMINAL APRON HARTNESS MUNICIPAL AIRPORT

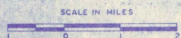
TOWN OF SPRINGFIELD, VERMONT

F.A.A.P. PROJ. NO. 9-43-004-C805

INDEX OF SHEETS	
SHEET	TITLE
1	TITLE PAGE
2	PLAN OF THE PROJECT
3	SECTIONAL ELEVATIONS



LOCATION MAP



LEGEND

- STATE HIGHWAY
- OTHER ROADS
- COUNTY LINES
- TOWN LINES
- RIVERS
- STATE LINES
- U.S. HIGHWAY

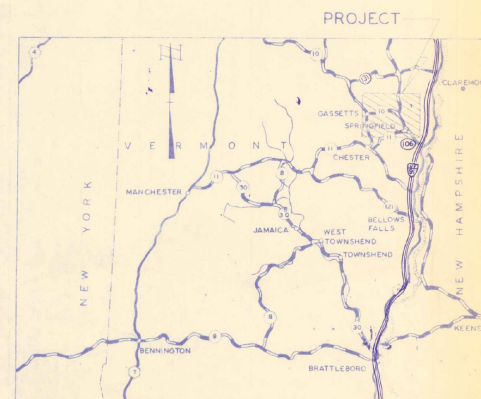
QUANTITIES OF MAJOR ITEMS			
ITEM	DESCRIPTION	UNIT	EST. QUANT./FINAL QUANT.
1	COMMON EXCAVATION	C.Y.	1200 / 1225
2	POLISHED COARSE AGGREGATE	C.Y.	750 / 725
3	BIT. PRIME DIRT	CY.	1000 / 1050
4	BIT. SURFACE COURSE CLASS 100	TONS	800 / 845
5	10% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	118 / 118
6	15% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	328 / 328
7	24% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	400 / 404
8	BRICK INLET	EA.	4 / 4
9	TYPING	2156	6.2 / 6.2
10	REWORKING	2000	0.2 / 0.2
11	UNDERGROUND ELECTRIC DUCT-400V RAY	L.F.	200 / 200
12	CAUSE TRENCH	L.F.	235 / 233
13	NO. 10 UNDERGROUND CABLE 3000V-IN TRENCH	L.F.	300 / 300
14	NO. 20 UNDERGROUND CABLE 3000V-IN TRENCH	L.F.	340 / 340
15	NO. 12 UNDERGROUND CABLE 600V-IN TRENCH	L.F.	405 / 427
16	NO. 12 UNDERGROUND CABLE 600V-IN EXCT	L.F.	324 / 326
17	NO. 2 UNDERGROUND CABLE 600V-IN EXCT	L.F.	125 / 125

AS BUILT PLANS

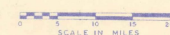
I HEREBY CERTIFY THAT ALL CONSTRUCTION
 REQUIRED BY THIS SET OF DRAWINGS HAS BEEN
 ACCOMPLISHED AS INDICATED HEREIN.

DUFRESNE-HENRY ENGR. CORP.

Robert J. Dufresne PROJECT ENGINEER
 DATE 11/19/67



VICINITY MAP



NOTE: SCALE SAME AS THOSE WITH LOCATION MAP

DATE	REVISION DESCRIPTION	BY

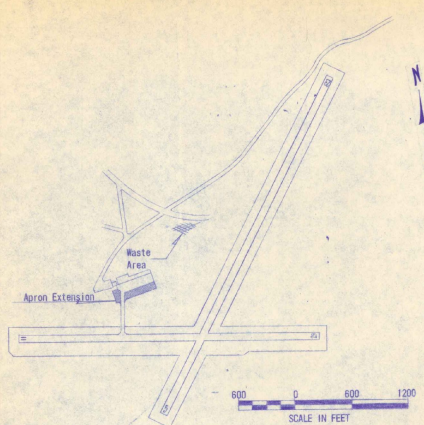
FEDERAL AVIATION ADMINISTRATION
 VERMONT AERONAUTICS BOARD
 APPROVED DATE DISTAIPORT ENGR. DATE

VERMONT AERONAUTICS BOARD
 APPROVED DATE COMMISSIONER
 APPROVED DATE ENGINEER

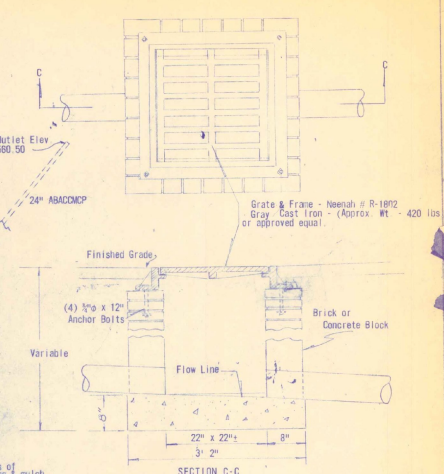
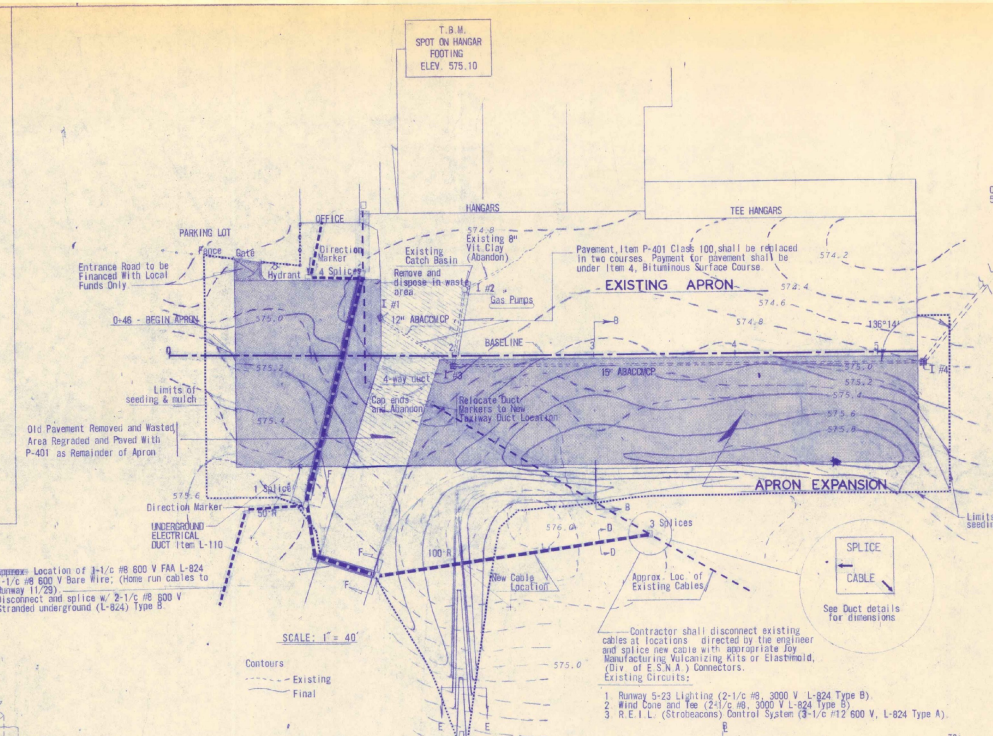
SPRINGFIELD VERMONT
 APPROVED DATE DATE 11/16/67
 CHAIRMAN, BOARD OF SELECTMEN
 SPRINGFIELD, VERMONT

HARTNESS MUNICIPAL AIRPORT
 NORTH SPRINGFIELD, VERMONT
 TITLE PAGE

DUFRESNE-HENRY Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS
 CIVIL ENGINEERS
 675 NO. 67-487-1 DRAWN BY RACHITSKI DATE MAY 16, 1967
 SCALE AS SHOWN SHEET 1 OF 4 CHECKED BY DUFRESNE
 APPROVED *Robert J. Dufresne*



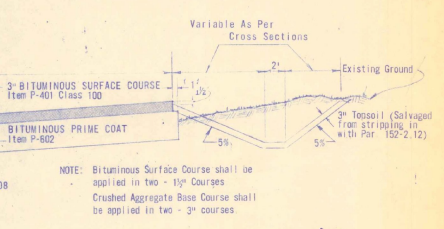
GENERAL LAYOUT SHOWING SCOPE OF PROJECT



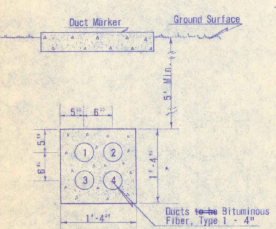
DRAINAGE SCHEDULE

No.	Inv. El. *	Grate El.	Dist. To	In.-At (Grade)	Pipe (ABACOMP)
1	570.51	574.60	64'	to 3	1.250"
2	570.39	574.40	54'	to 3	1.250"
3	568.71	574.50	328'	to 4	0.510"
4	568.06	575.00	404'	to out.	1.875"

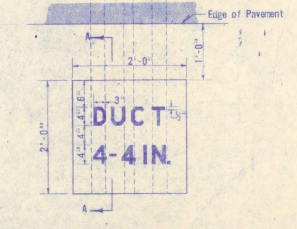
* Center of D.I. - Construct flow line to match pipe gradient



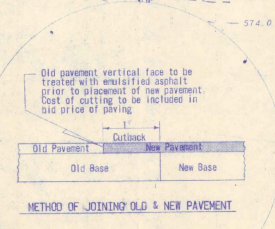
SECTION B-B APRON TYPICAL
Scale: 1" = 10'-0" Horiz.
1" = 1'-0" Vert.



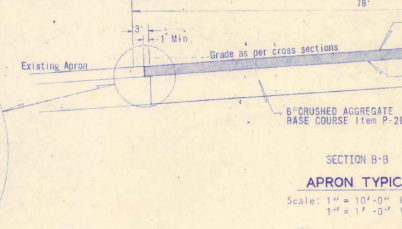
SECTION Y-F UNDERGROUND ELECTRICAL DUCT
Scale: 1" = 1'-0"



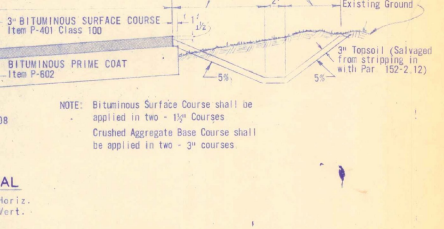
SECTION A-A UNDERGROUND ELECTRICAL DUCT MARKER
Scale: 1" = 1'-0"



METHOD OF JOINING OLD & NEW PAVEMENT



SECTION D-D CABLE TRENCH
Not To Scale



SECTION E-E SHALLOW DRAINAGE DITCH
Not To Scale

AS BUILT PLANS

I HEREBY CERTIFY THAT ALL CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

DUFRESNE-HENRY ENGR. CORP.

BY: *[Signature]* PROJECT ENGINEER

HARTNESS MUNICIPAL AIRPORT
NORTH SPRINGFIELD, VERMONT

SCOPE OF WORK - DETAILS - TYPICAL SECTIONS

DUFRESNE-HENRY
Engineering Corporation

NEW YORK, MASSACHUSETTS, VERMONT, CONNECTICUT, CALIFORNIA

DWG. NO. 67-497-2 DRAWN BY: H. R. CHITSKI DATE: Mar. 16, 1967
SCALE: AS SHOWN SHEET 2 OF 4 C.E.O. R. J. DUFRESNE
APPROVED: *[Signature]*

NOTE:
One end of Duct to be three inches (3") lower than the other end for drainage.

Duct No. 1 shall contain cables to Runway 5-23 and to Wind Tee.

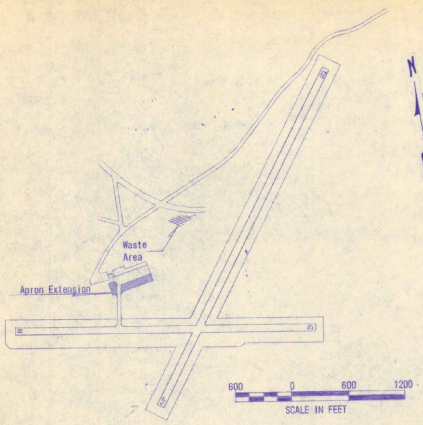
Duct No. 2 shall contain cables to Runway 11-29 (long duct only) and REIL control circuit. Pull Wires shall be left in Ducts 3 and 4.

Tel. Cable installed in Duct 3 during construction.

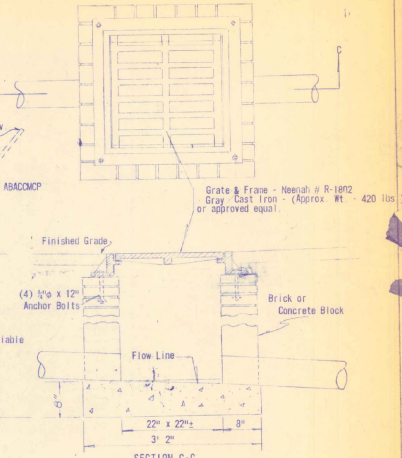
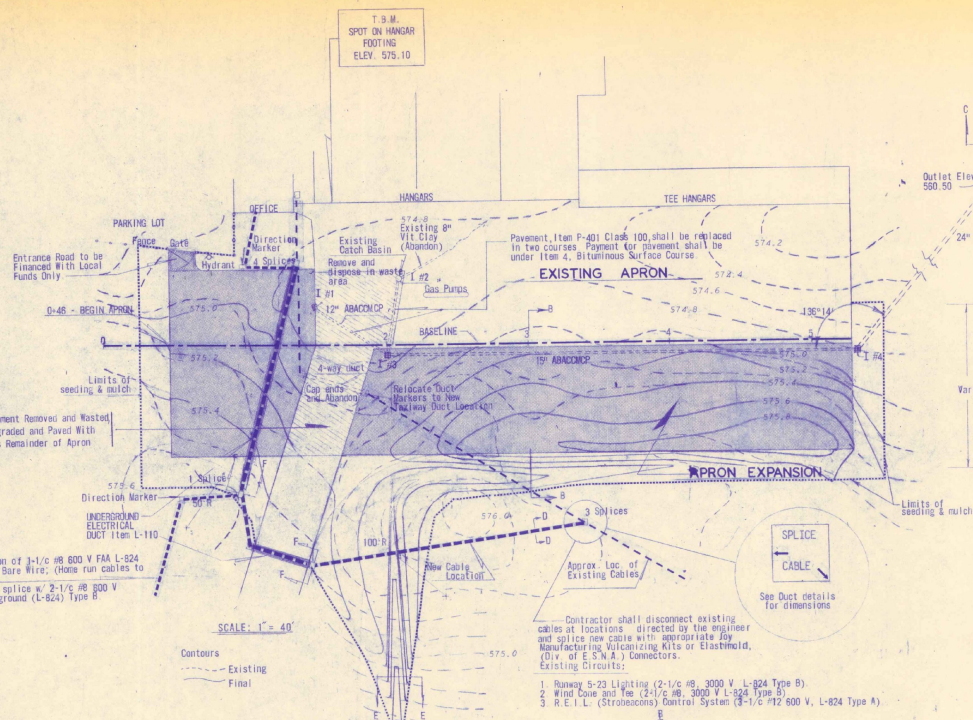
2 Duct markers & 1 Direction marker required, cost of these 3 markers is to be included in bid price per lin. ft. of UNDERGROUND ELECTRICAL DUCT.

Contractor shall disconnect existing cables at locations directed by the engineer and splice new cables with appropriate Manufacturing Vulcanizing Kits or Elastomold, (DIV. of E.S.N.A.) Connectors, Existing Circuits.

- Runway 5-23 Lighting (2-1/2" #6, 3000 V, L-824 Type B)
- Wind Cone and Tee (2-1/2" #6, 3000 V, L-824 Type B)
- R.E.I.L. (Strobeacons) Control System (3-1/2" #12 600 V, L-824 Type A)



GENERAL LAYOUT SHOWING SCOPE OF PROJECT



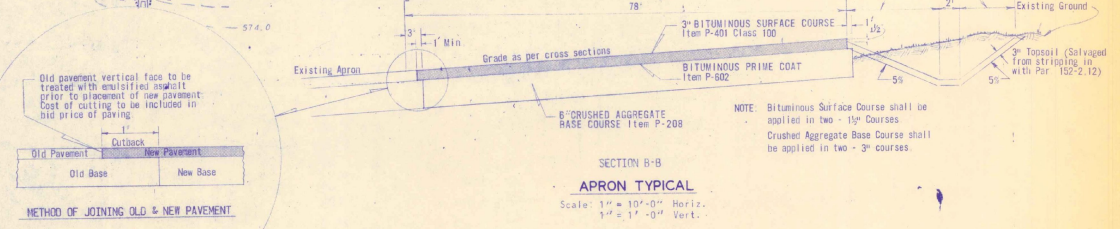
SECTION C-C
BRICK INLET
Not To Scale

DRAINAGE SCHEDULE

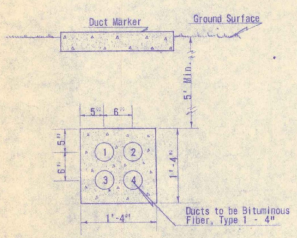
I. No.	Inv. El.*	Grate El.	Dist. To	I. No. - At (Grade)	Pipe (ABAD/CP)
1	570.51	574.60	64'	to 3	1200
2	570.39	574.40	54'	to 3	1200
3	569.77	574.50	328'	to 4	0.800
4	568.06	575.00	404'	to out.	1.875

* Center of D. I. - Construct flow line to match pipe gradient

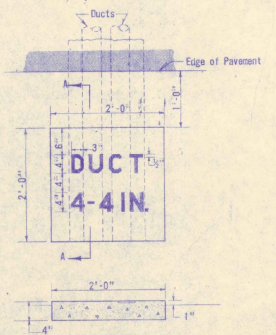
- Contractor shall disconnect existing cables at locations directed by the engineer and splice new cables with appropriate Joy Manufacturing Vulcanizing Kits or Elastimold, (Div. of E.S.W.A.) Connectors.
- Existing Circuits:
- Runway 5-23 Lighting (2-1/2 #8, 3000 V, L-824 Type B)
 - Wind Cone and Tee (2-1/2 #8, 3000 V L-824 Type B)
 - R.E.L.L. (Stromboski) Control System (3-1/2 #12, 500 V, L-824 Type A)



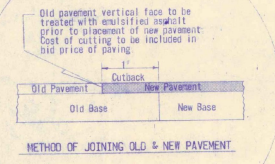
SECTION B-B
APRON TYPICAL
Scale: 1/2" = 10'-0" Horiz.
1/4" = 1'-0" Vert.



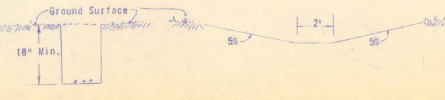
SECTION Y-F
UNDERGROUND ELECTRICAL DUCT
Scale: 1" = 1'-0"



SECTION A-A
UNDERGROUND ELECTRICAL DUCT MARKER
Scale: 1/2" = 1'-0"



METHOD OF JOINING OLD & NEW PAVEMENT



SECTION D-D
CABLE TRENCH
Not To Scale

SECTION E-E
SHALLOW DRAINAGE DITCH
Not To Scale

NOTE:
One end of Duct to be three inches (3") lower than the other end for drainage.

Duct No. 1 shall contain cables to Runway 5-23 and to Wind Tee.

Duct No. 2 shall contain cables to Runway 11-29 (Along duct only) and RETL control circuit.

Pull Wires shall be left in Ducts 3 and 4.

Tot. Cable installed in Duct 3 during construction.

AS BUILT PLANS

I HEREBY CERTIFY THAT ALL CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

DUPRESNE-HENRY ENGR. CORP.

BY _____ PROJECT ENGINEER

DATE _____

HAGNESS MUNICIPAL AIRPORT
NORTH SPRINGFIELD, VERMONT
SCOPE OF WORK - DETAILS - TYPICAL SECTIONS

DUPRESNE-HENRY
Engineering Corporation
INCORPORATED
1000 WASHINGTON ST.
VERMONT, U.S.A.

ENG. NO. BT-497-2
SCALE: AS SHOWN
DRAWN BY: HATCHET
DATE: MAY 18, 1967
SHEET 2 OF 2
CHECKED BY: [Signature]
APPROVED: [Signature]

**VERMONT AGENCY OF TRANSPORTATION
PLANNING DIVISION**

Vermont Agency of
Transportation
Phase III- Interstate
#090303-01

INITIALS
Hanger 5045

HADNESS
★ 9-43-004-C805 1967
★ 9-43-004-C906 1970