INDEX OF SHEETS

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2. Quantity Sheet
3. Plan
4. Profile
5. Abutment Details
6. Reinforcing Schedule
7. Roadway Sections
8. Channel Sections

STANDARD SHEETS

D-6	April 4, 1973 (R)
E-3	Dec. 15, 1978 (R)
E-7A	June 8, 1977 (R)
G-1	May 28, 1979 (R)
G-1d	May 29, 1979 (R)
G-16	Feb. 15, 1978 (R)
SCB-D1-75	April 25, 1977 (R)

RECORD PLANS & MATERIAL SUPPLIERS

CONTRACTOR- R.E. MOULTON & SONS, INC. P.O. BOX 276 HARDWICK, VT.
CONTRACT DATED- 5-27-80 CONSTRUCTION BEGAN- 5-28-80
CONSTRUCTION COMPLETED- 10-10-80 ACCEPTED 12-12-80
RESIDENT ENGINEER- DONALD W. HALE JR. RECORD PLANS CERT. JABAIR
GRANULAR BACKFILL FOR STRUCTURES- H.A. MANOSH PIT HYDE PARK, VT.
SUBBASE OF GRAVEL - H. A. MANOSH PIT HYDE PARK, VT
TAR EMULSION - JAMIESON, INC. MONTPELIER, VT.
BITUMINOUS CONCRETE PAVEMENT- PIKE INDUSTRIES, INC. COVENTRY, VT.
CONCRETE CLASS "A" ANDERSON CONCRETE CO, INC. JOHNSON, VT.
CONCRETE CLASS "B" " " " " " "
REINF. STEEL - K-ROSS BUILDING SUPPLY CENTER, INC. LEBANON, NH.
18" ACCGMP - LAFAYETTE & SHELDON, INC. KELLOGG RD. ESSEX JCT, VT.
CAST IRON GRATE TYPE "A" - E.L. LEBARON FOUNDRY CO. P.O. BOX 746 BROCKTON, MA.
ALL GUARD RAIL ITEMS - LAFAYETTE & SHELDON, INC. KELLOGG RD. ESSEX JCT, VT.

NOTE: ANY FURTHER INFORMATION CONCERNING FINAL QUANTITIES, AMOUNTS OR OTHER DETAILS RELATIVE TO THIS PROJECT MAY BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

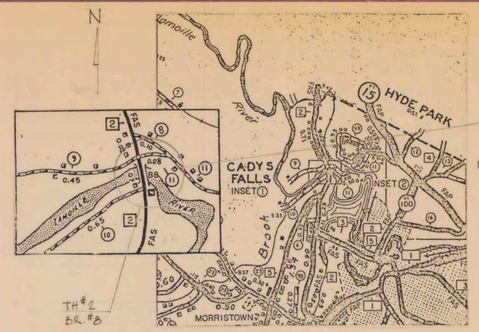
TOWN OF MORRISTOWN
COUNTY OF LAMOILLE

ROUTE NO: TH 2 (FAS 2) CL. 2 **BRIDGE NO:** 8

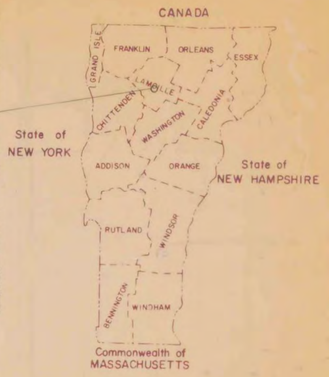
PROJECT LOCATION: BEGINNING AT A POINT 1.7 MILES NORTHERLY OF THE INTERSECTION OF VT. ROUTE 100 AND TOWN HIGHWAY 2 AND PROCEEDING NORTHERLY 0.009 MILES.

PROJECT DESCRIPTION: THE PROJECT CONSISTS OF REFORBISHING THE SOUTH ABUTMENT BY CAPPING THE FACE OF THE EXISTING ABUTMENT, AND REMOVING & REPLACING A PORTION OF THE WEST WING WALL ALONG WITH ASSOCIATED ROADWAY WORK.

LENGTH OF STRUCTURE:	FEET
LENGTH OF PARTICIPATION ROADWAY:	FEET
LENGTH OF NON-PARTICIPATION ROADWAY:	FEET
LENGTH OF PROJECT:	110.0 FEET



LOCATION MAP
(TRACED FROM COUNTY MAP)



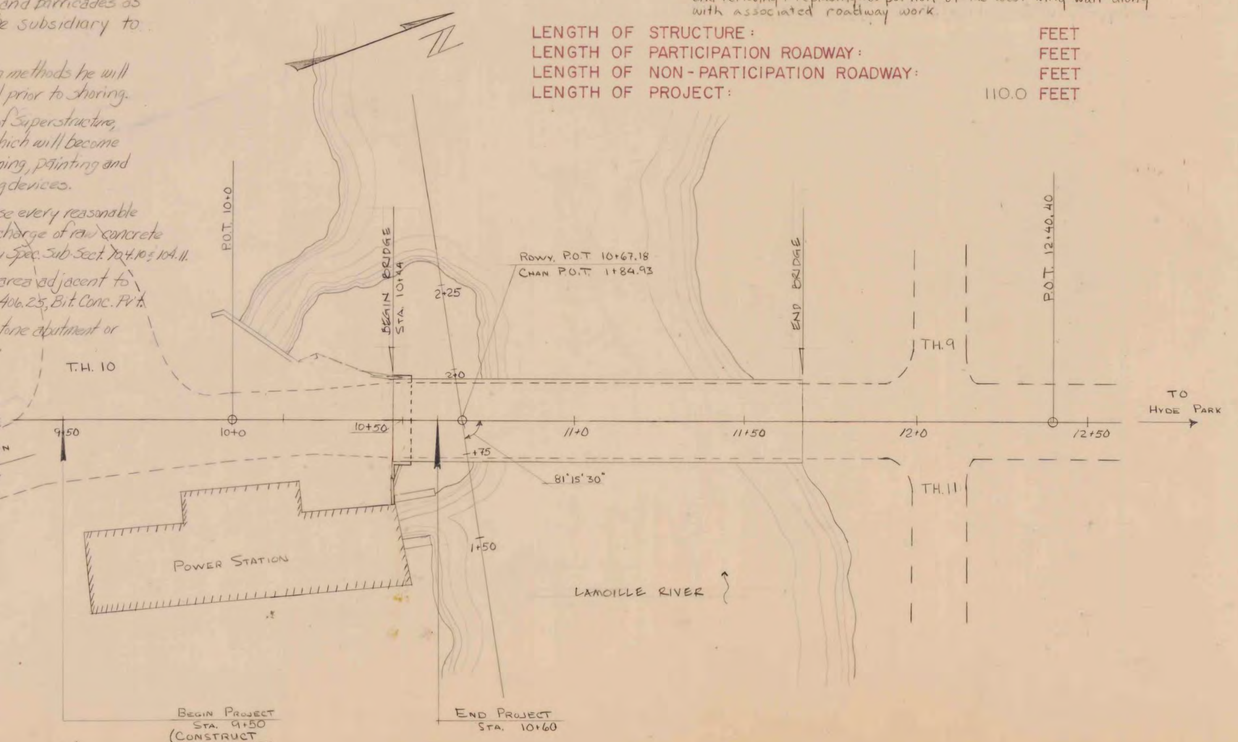
GENERAL NOTES

1. Work to be included under Item 202.35, Removal of Existing Concrete or Masonry, shall be the removal of a concrete trough, a section of concrete deck and the temporary concrete support pad as detailed on the plans.
2. The contractor shall furnish and maintain signs and barricades as shown on Std. Shts. E-3 & E7A. Payment shall be subsidiary to other items.
3. The contractor shall submit details of shoring methods he will employ to the Structures Division for approval prior to shoring.
4. Work to be included under Item 502.10, Shoring of Superstructure, shall be the removal of 2-I Beam supports which will become the property of the town. Also the removing, cleaning, painting and resetting of fixed end anchor bolts and bearing devices.
5. During construction the contractor shall exercise every reasonable precaution to prevent pollution, siltation or discharge of raw concrete or debris into the Lamoille River as directed by Spec. Sub-Sect. 104.10 & 104.11.
6. Payment for grading and shaping of slopes in area adjacent to Power Sta. building shall be subsidiary to Item 406.25, Bit. Conc. Pvt.
7. If during construction the contractor disturbs a stone abutment or wingwall which is to be retained, he shall relay the wall to it's original or better condition, as directed by the engineer, at his own expense.
8. Turf establishment shall be subsidiary to other items. (See Special Provisions)
9. For additional general notes see Std. SCB-D1-75

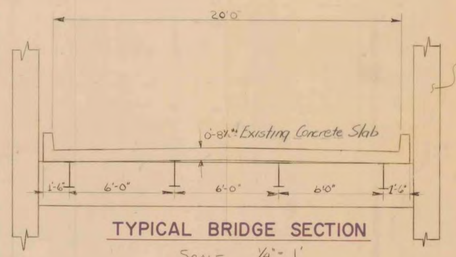
CONVENTIONAL SIGNS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

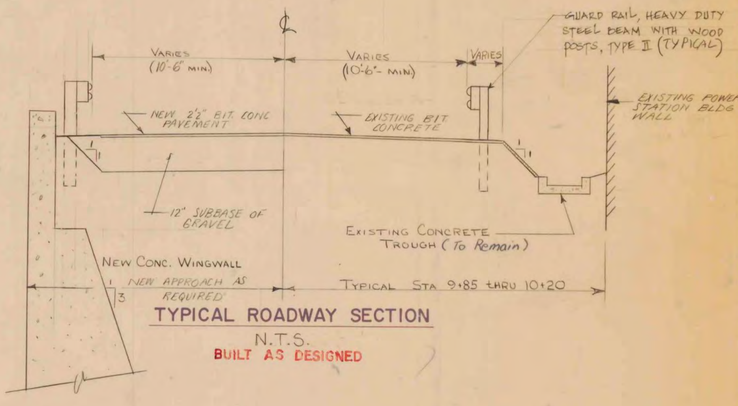
DATUM
VERTICAL
HORIZONTAL



PLAN.
(1" = 20'-0")



TYPICAL BRIDGE SECTION
SCALE 1/4" = 1'



TYPICAL ROADWAY SECTION
N.T.S.
BUILT AS DESIGNED

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED [signature] DATE JAN 24 1980
DIR. OF ENGINEERING AND CONSTRUCTION

PROJECT No. TH 2018
MORRISTOWN
SHEET 1 OF 8 SHEETS

EARTHWORK

V.C.	% GRD	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

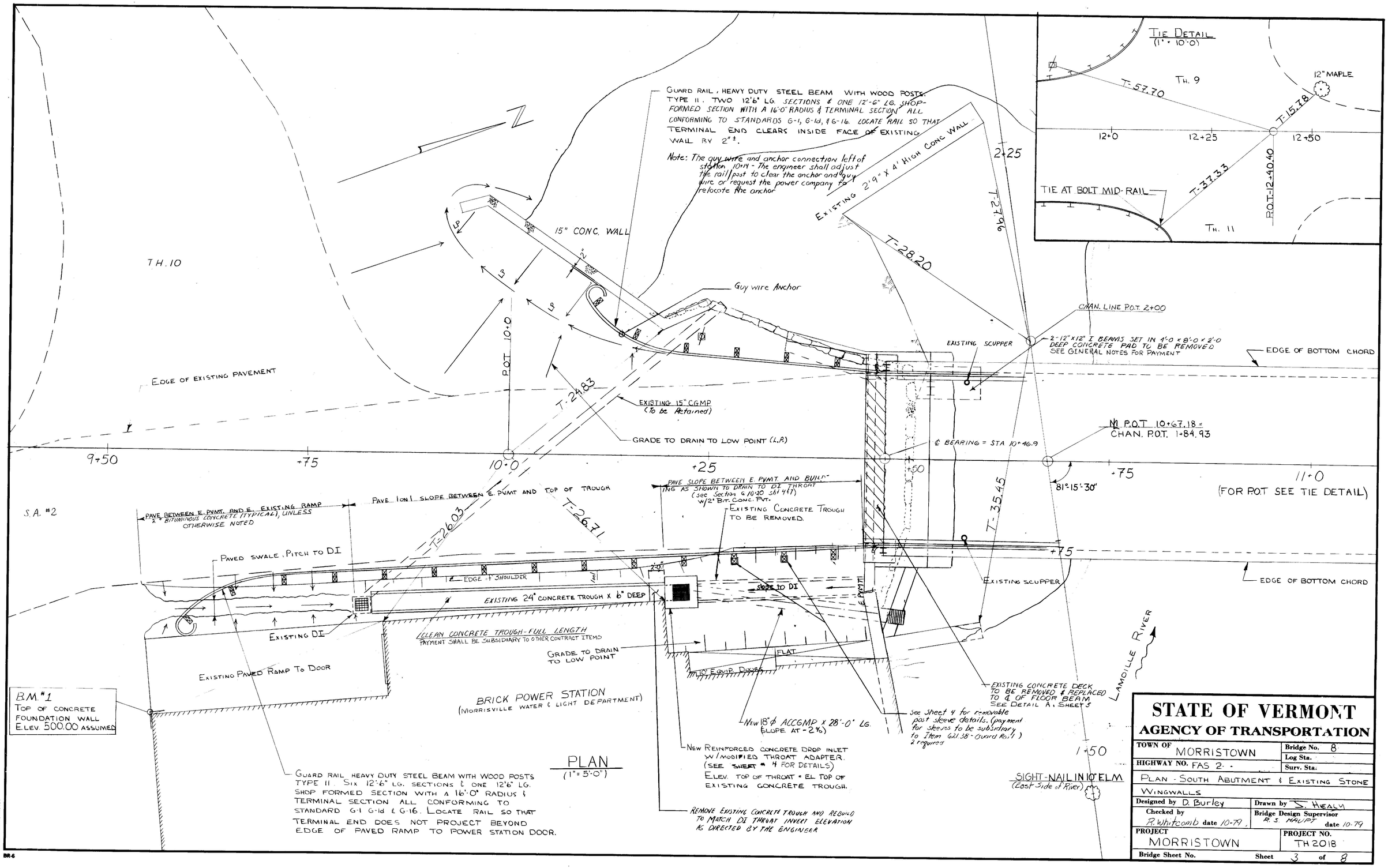
NO.	ITEM	UNIT	QUANTITY BREAKDOWN Abutment	Bridge Deck	Roadway	TOTAL	FINAL
202.35	Removal of Existing Conc. or Masonary	CY		1.5	4.5	6	7.76
203.15	Common Excavation	CY			20	20	3.2
204.20	Trench Excavation	CY			18	18	16.6
204.25	Structure Excavation	CY	100			100	95
204.30	Granular Backfill for Structure	CY	45			45	35
301.15	Subbase of Gravel	CY			20	20	38
406.25	Bituminous Concrete Pavement	Ton		1	19	20	95.77
501.20	Concrete Class A	CY		2		2	5.17
501.25	Concrete Class B	CY	122		3	125	124.01
502.10	Shoring of Superstructure	L.S.	1			1	1
507.15	Reinforcing Steel	Lb.	4150	200	266	4616	5177
601.1553	18" ACCGMP .064 Th.	L.F.			28	28	28
604.45	Cast-Iron Grate w/Frame, Type A	EA.			1	1	1
621.38	Guard-Rail-Heavy Duty Steel Beam w/Wood Posts, Type II	LF			160	160	0
202.16	Removal of Bridge Pavement	SY				0	47.5
406.3	Tar Emulsion	GAL				0	65
621.36	Guard Rail Heavy Duty Steel Beam W/Steel Posts Type II	LF				0	165.5

BRIDGE ($) AT STATION ($) 10+46.9 to 11+66.9
LOCATION ($) 1.7 MILES NORTHERLY OF Vt. Rt 100 ON TH "2.

Prepared by: J. Healy
Checked by: D. Burley
SUPERVISOR: R.S. Haupt

MORRISTOWN
BR ___ OF ___
PROJECT NO. TH 2018
SHEET NO. 2 OF 8

BR-1

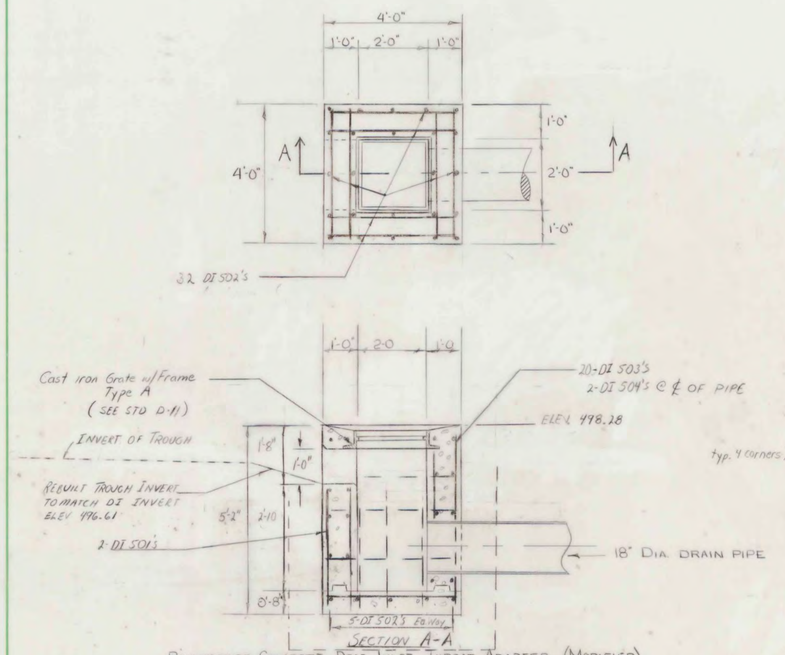


STATE OF VERMONT
AGENCY OF TRANSPORTATION

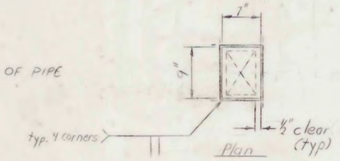
TOWN OF MORRISTOWN	Bridge No. 8
	Log Sta.
HIGHWAY NO. FAS 2 -	Surv. Sta.
PLAN - SOUTH ABUTMENT & EXISTING STONE WINGWALLS	
Designed by D. Burley	Drawn by J. HEALY
Checked by R. Whitcomb date 10-79	Bridge Design Supervisor R. S. HAUPT date 10-79
PROJECT MORRISTOWN	PROJECT NO. TH 2018
Bridge Sheet No.	Sheet 3 of 8

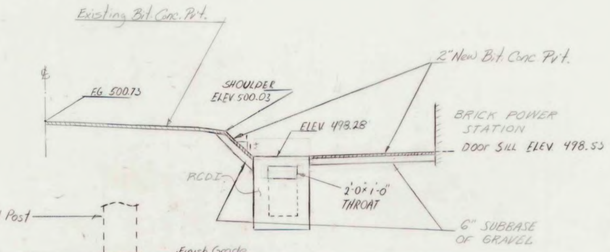
BRUNING 44-131 40151

BR-6

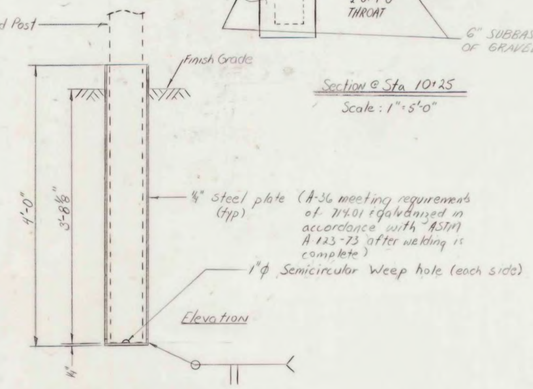


REINFORCED CONCRETE DROP INLET THROAT ADAPTER (MODIFIED)
ST. SH. NO. D6 - SCALE 1/2" = 1'

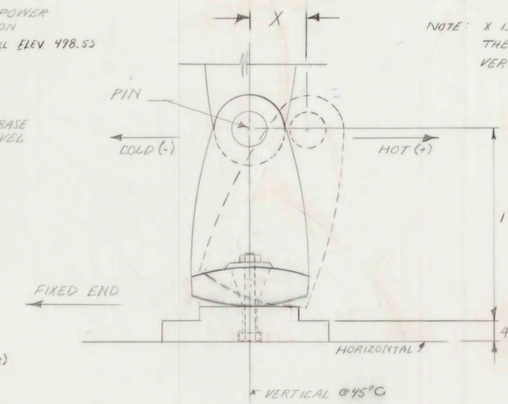




Section @ Sta. 10+25
Scale: 1" = 5'-0"



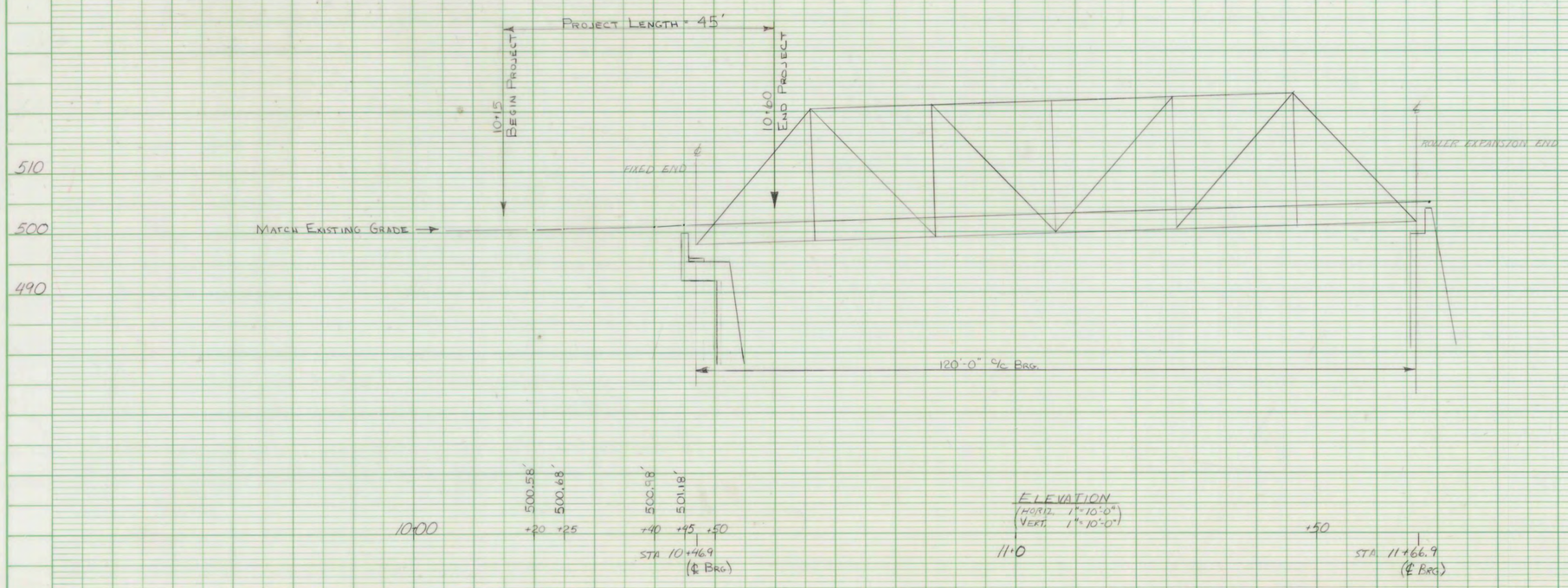
Removable Post Sleeve Detail (2 Req'd)
Scale 1" = 1'-0"



NOTE: X IS THE DISTANCE THE ℄ OF THE PIN MOVES FROM THE VERTICAL

EXPANSION PEDESTAL DETAIL
(N.T.S.)

TEMP. (°F)	X (IN.)
25°	-3/16
35°	-3/32
45°	0.0
55°	3/32
65°	3/16



ELEVATION
(HORIZ. 1" = 10'-0")
(VERT. 1" = 10'-0")

MORRISTOWN
TH 2018

Designed by D. Burley
Drawn by J. Healy
Checked by R. Whitcomb

SHEET #4 OF 8

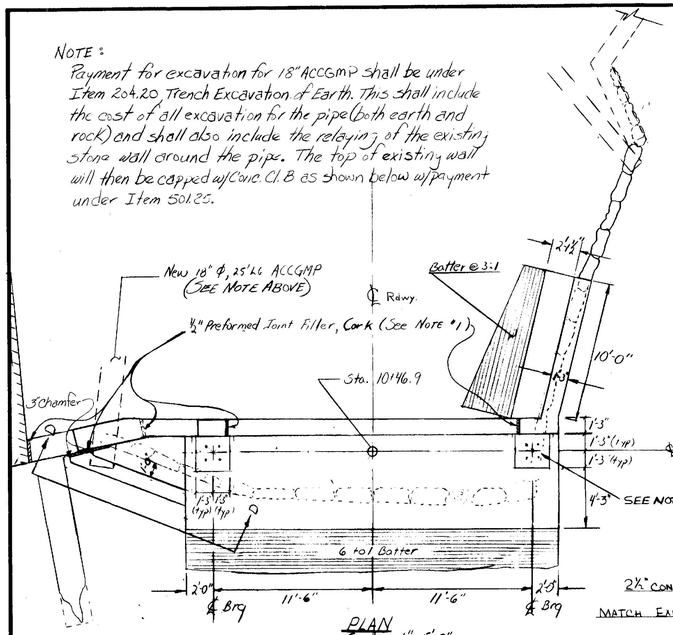
PLAN NOTE BOOK No. SURVEYED PLOTTED ALIGNMENT CHECKED RT. OF WAY CHECKED BY DATE

PROFILE NOTE BOOK No. SURVEYED PLOTTED GRADES CHECKED B. M.'s NOTED STRUCTURE NOTATIONS CHECKED BY DATE

K+E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO.

BR-3

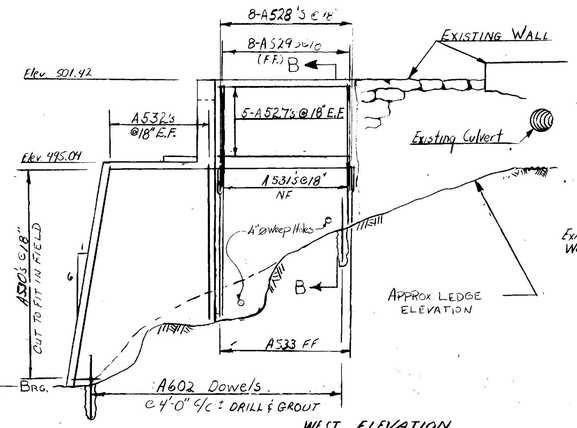
NOTE:
Payment for excavation for 18" ACCGMP shall be under Item 204.20, Trench Excavation of Earth. This shall include the cost of all excavation for the pipe (both earth and rock) and shall also include the relaying of the existing stone wall around the pipe. The top of existing wall will then be capped w/Conc. Cl. B as shown below w/payment under Item 501.25.



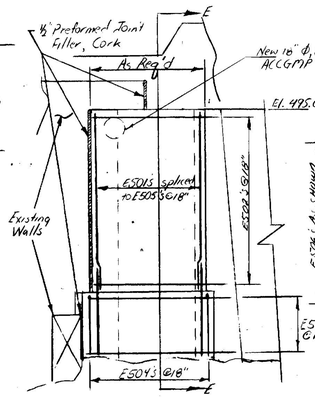
PLAN
Scale: 1" = 5'-0"

NOTE: 1) ½" PREFORMED JOINT FILLER, CORK SHALL MEET THE REQUIREMENTS OF SUBSECTION 707.21 PAYMENT WILL BE INCLUDED IN UNIT BID PRICE FOR CONCRETE CLASS B.

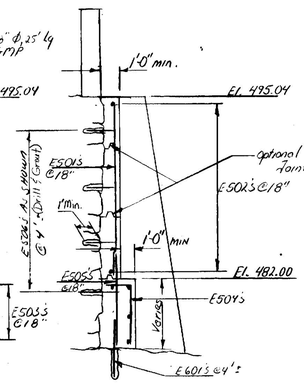
2) ANCHOR BOLT LOCATION AND PROJECTION TO BE FIELD DETERMINED.



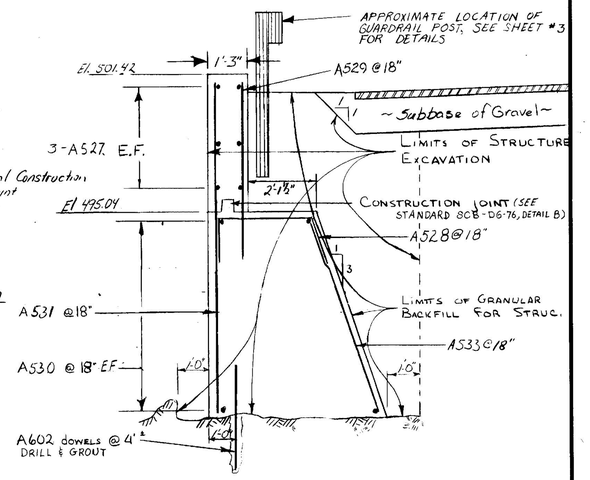
WEST ELEVATION
Scale 1" = 5'-0"



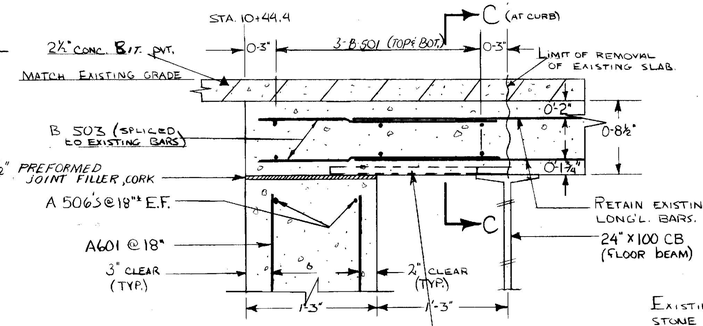
Elevation D-D
East Facing
Scale 1" = 5'-0"



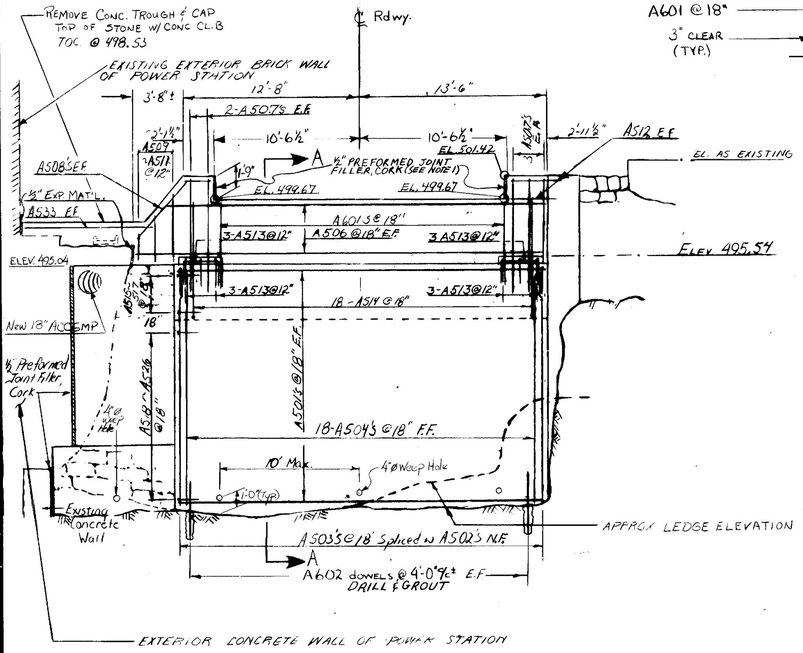
Section E-E
Scale 1" = 5'-0"



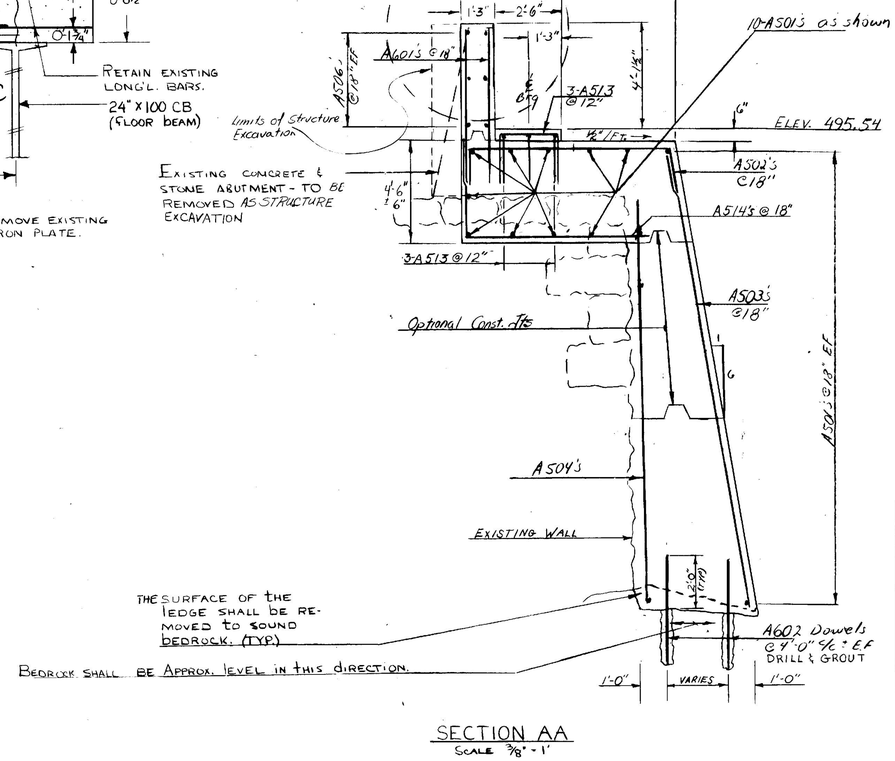
SECTION BB
NTS



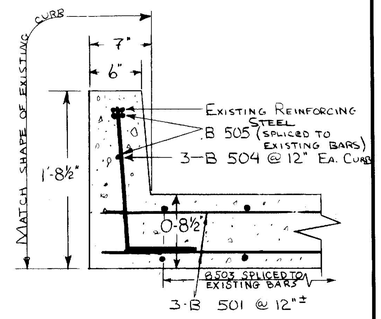
DETAIL A
Scale 1½" = 1'
(Bridge Deck)



NORTH ELEVATION
SCALE: 1" = 5'-0"



SECTION AA
Scale 3/8" = 1'



SECTION CC
Scale 1½" = 1'
(Bridge Deck)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF MORRISTOWN	Bridge No. 8
	Log Sta.
HIGHWAY NO. FAS 2	Surv. Sta.
REINFORCING DETAILS - SOUTH ABUTMENT	
T.H. 2 BB OVER LAMOILLE RIVER	
Designed by D. Burley	Drawn by D. Burley
Checked by D.R. LANDRY date 10/14/79	Bridge Design Supervisor R.S. HAUPT date
PROJECT MORRISTOWN	PROJECT NO. TH 2018
Bridge Sheet No.	Sheet 5 of 8

BRUNING 44-131-40151
BR-6

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				ABUTMENT													
1	33	5	26-8	A501	STR												
2	19	↓	11-7	A502	16	/	2-0	7-7	2-0				0-4		1-11½		
3	19		18-0	A503	STR												
4	18		16-0	A504	STR												
5				A505	NOT USED												
6	6		30-0	A506	STR		Cut to fit in field										
7	10		8-3	A507	STR												
8	2		7-6	A508	16	/	/	1-9	5-9				3-9		4-3		
9	2		4-9	A509	STR												
10				THRU													
11	2		2-3	A511	STR												
12	4		4-7	A512	17		2-7	2-0	/								
13	12		6-10	A513	17		2-4	2-2	2-4								
14	18		11-0	A514	17		4-0	7-0	/								
15	1		11-3	A515	17		2-0	7-3	2-0								
16				THRU			Vary C equally										
17	1		11-9	A517	17		2-0	7-9	2-0								
18	1		7-0	A518	17		2-0	3-0	2-0								
19				THRU			Vary C equally										
20	1		10-0	A526	17		2-0	6-0	2-0								
* 21	11		10-0	A527	STR												
22	8		6-11	A528	16	/	2-0	2-11	2-0				0-6		1-11		
23	8		8-3	A529	STR												
24	8		20-0	A530	STR		cut to fit in field & bend as req'd										
25	7		20-0	A531	STR		cut to fit in field										
26	14	↓	16-0	A532	STR		CUT TO FIT IN FIELD										
27	9	5	11-0	A533	STR		CUT TO FIT IN FIELD										
28	30	6	6-0	A601	STR		6-0										
29	18	6	4-0	A602	STR												
30				BRIDGE DECK													
31	6	5	20-6	B501	STR												
32				B502	NOT USED												
33	18	5	2-0	B503	STR												
34	6	5	1-8	B509	17		1-3	0-8	/				—		—		
35	10	5	2-3	B505	STR												
36																	
37																	
38				Drop Inlet													
39	2	5	3-5	DI 501	STR												
40	42	5	3-8	DI 502	STR												
41	20	5	4-8	DI 503	STR												
42	2	5	2-6	DI 504	STR												
43																	
44				East Facing													
45	6	5	12-8	E501	Str												
46	9		10-0	E502	Str												
47	4		12-0	E503	Str	(cut to fit)											
48	7		8-0	E504	17		4-0	4-0	(cut to fit)								
49	6		6-6	E505	Str												
50	8	5	2-8	E506	Str												
51																	
52																	
53	3	6	4-0	E601	Str												
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ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
81																	
82																	
83																	
84																	
85																	
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ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
161																	
162																	
163																	
164																	
165																	
166																	
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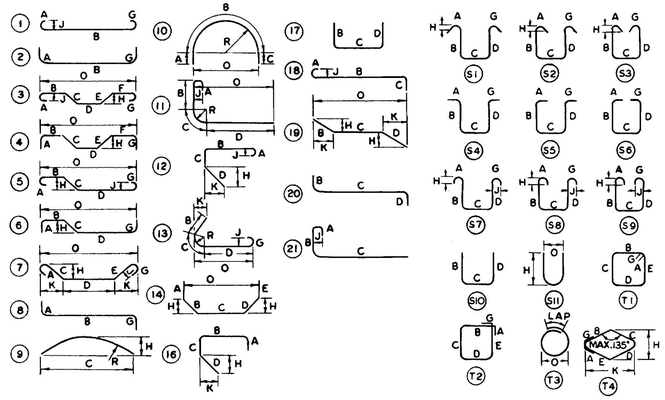
174																	
175																	
176																	
177																	
178																	
179																	
180																	

ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

TYPICAL BAR BENDS



NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," AASHTO M 31 (ASTM A 615), GRADE 60.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE."
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
5. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.

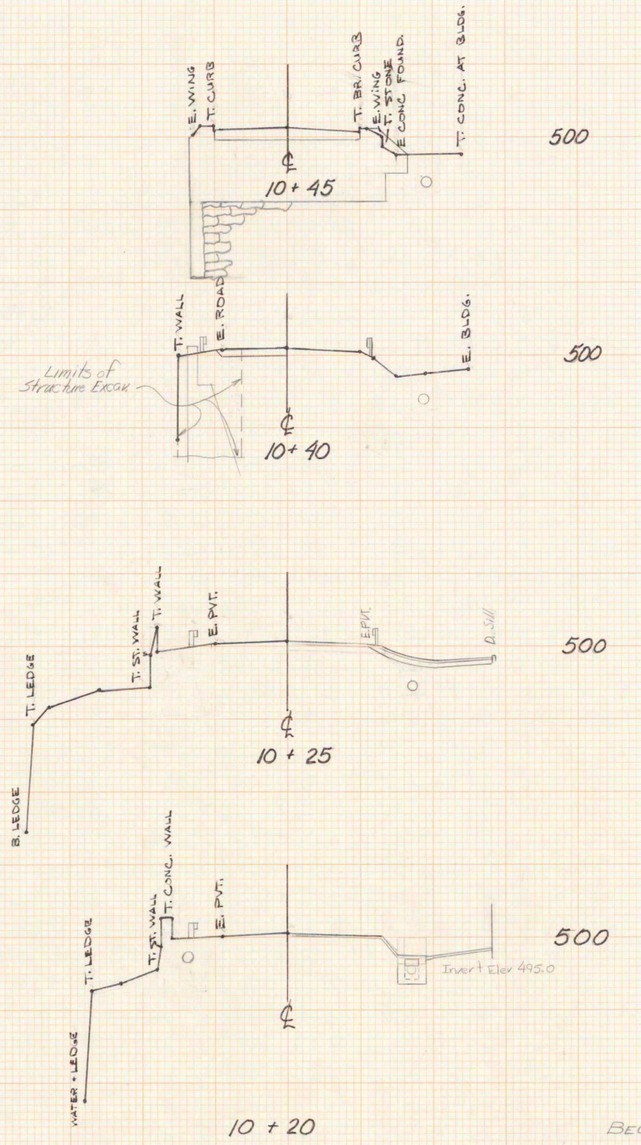
* DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.

REV. NO.	MADE BY	DATE	DESCRIPTION
1	J. WOOD	8/11/75	AASHO. CHANGED TO AASHTO. AND GRADE 40 CHANGED TO GRADE 60.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF MORRISTOWN	BRIDGE NO. 8
	LOG STA.
HIGHWAY NO. TH.2, CL.2, (FAS 2)	SURV. STA. 10+46.7
T.H.2, B8 OVER LAMOILLE RIVER	
REINFORCING STEEL SCHEDULE	
DESIGNED BY	DRAWN BY J. HEALY
CHECKED BY D. R. LANDRY DATE 10/4/74	BRIDGE DESIGN SUPERVISOR R.S. Haupt DATE 9/5/74
PROJECT MORRISTOWN	PROJECT NO. TH 2018
BRIDGE SHEET NO.	SHEET 6 OF 8

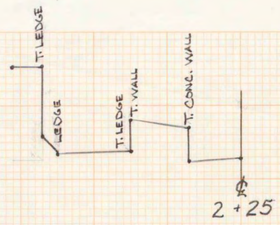
END PROJECT STA 10+60



BEGIN PROJECT - STA. 10+15

FROM STA. - 10+20 - TO - 10+45
PROJ. MORRISTOWN
PLOTTED BY: BARNHART - 6-25-79
~~CHANNEL~~ RDWY. SECTIONS
SCALE: 1"=10'

CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.
STANDARD CROSS SECTION
BOUND TO THE RIGHT
KEUFFEL & ESSER CO.
MADE IN U.S.A.



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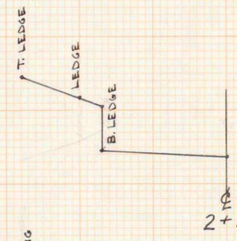

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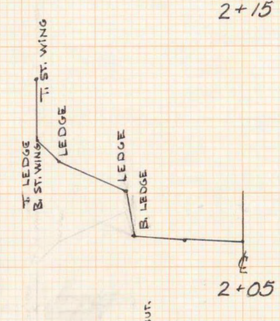

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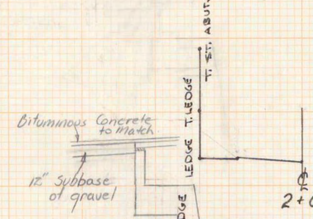

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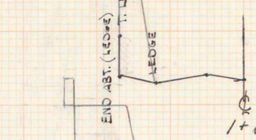

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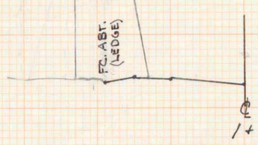

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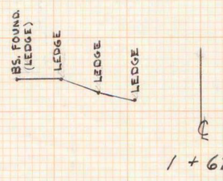
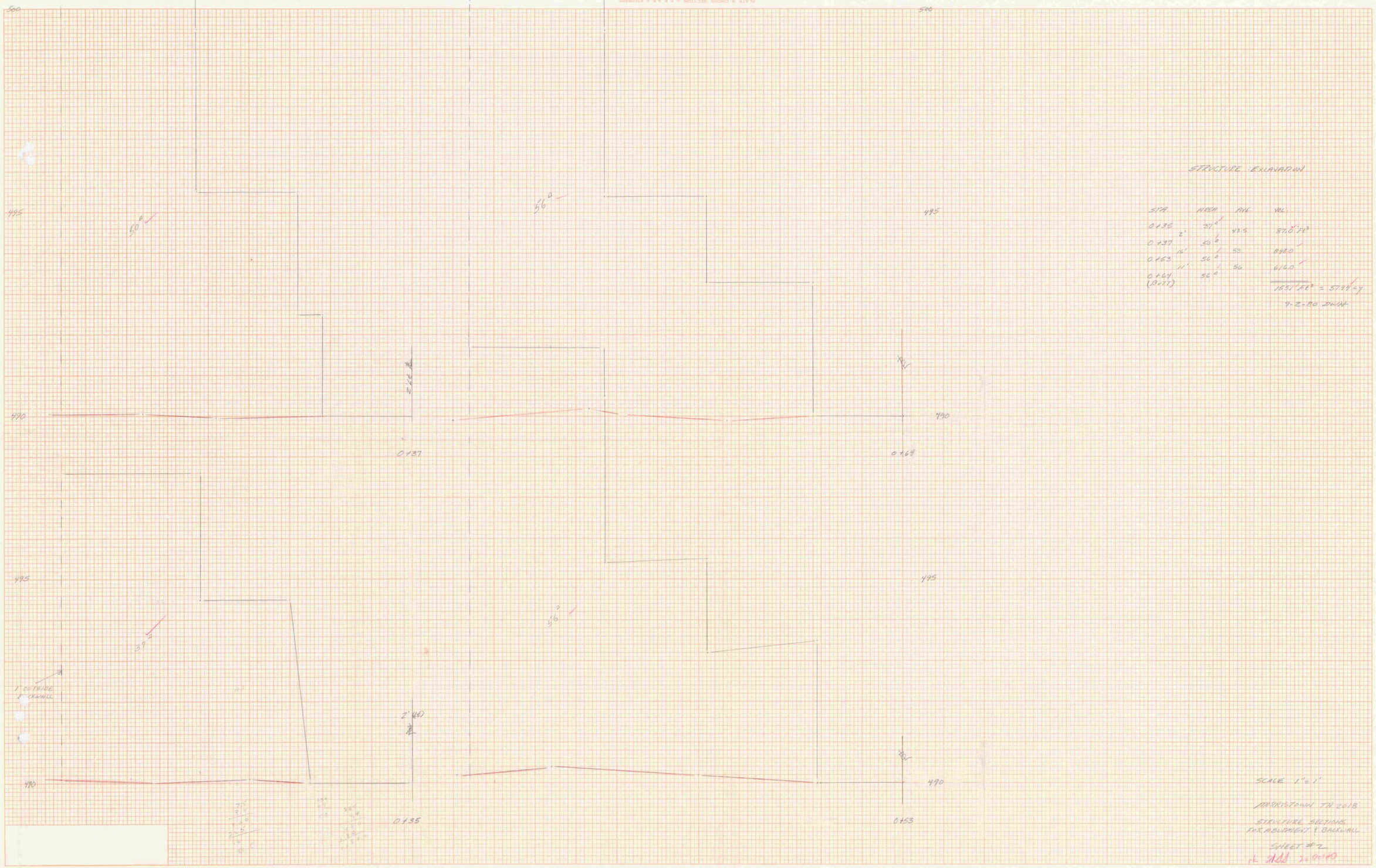


475

FROM STA. - 1+62 - TO STA. 2+25
PROJ. - MORRISTOWN
PLOTTED - 6-25-79 - BY BARNHART
CHANNEL SECTIONS
SCALE : 1" = 10'

KEUFFEL & ESSER CO
MADE IN U.S.A.
K&E STANDARD @ CROSS SECTION
KEUFFEL & ESSER CO
MADE IN U.S.A.



STRUCTURE EXCAVATION

STA.		AREA	AVE.	VOL.
0+35		37°		
	2'		43.5	87.0 Ft³
0+37		50°		
	16'		53	848.0
0+53		56°		
	11'		56	616.0
0+64 (BOTT)		56°		

1551 Ft³ = 57.44 cy

9-2-80 DWH

SCALE 1" = 1'

MORRISTOWN TH 2018

STRUCTURE SECTIONS
FOR ABUTMENT & BACKWALL

SHEET #2

ck 2/4/80 20-0140

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

TRENCH EARTH (0–5')

DI 6' × 6' × 4.8' = = 172.8 ✓

PIPE $\frac{3.6+5.0}{2}$ × 22.5' × ~~3.6'~~ 3.6' = ~~335.6~~ 346.8

~~311.4~~ 351.1 FT³ = ~~18.9~~ 19.8 cy

(MINUS) CONC TROUGH (BK#3 P.16) = 27 cy

T.E. = ~~16.2~~ 16.6 cy

GRAN. BACKFILL FOR STRUCT. (FOR 6" UNDERCUT)

0.5 × ~~3.5'~~ 3.6' × 22.5' × 1/27 = 1.5 cy

7-8-80 DWH

DEPTH OF DI (4.5') FIELD MEAS. 10-1-80 DWH

STANDARD D-6

CONCRETE CLASS B 2.3 cy

REINF. STEEL 200#

SCALE 1" = 1'

MORRISTOWN TH 2018

DRAINAGE SHEET #1

~~SH~~ 200-80 Ckd 16.6 cy

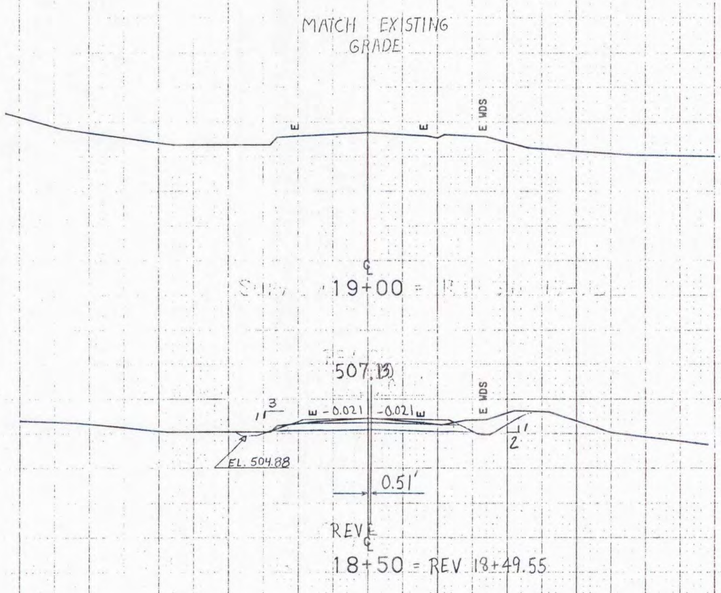
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

Rev. P.T. 19+85.02 =
Sur STA 19+85.46
EQ = +0.44

510

500



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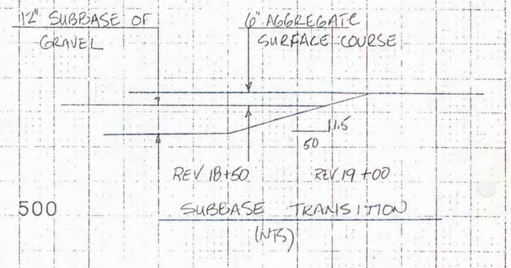

500

FROM STA. 18+50		TO STA. 20+00	
PROJECT NAME	RUPERT MAIN1		
NO.	BRZ1441 (22)		PLOTTED 04/23/91
SURVEYED BY	GILMAN	04/91	0343

10 FEET