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LIST OF STANDARDS	
E-100	5/26/99 R
E-101	10/30/97
E-102	1/23/99 R
E-103	1/23/99 R
E-107	4/29/98 R
E-107A	9/10/97
E-107B	3/01/98 R
Q-1	10/31/85 R
Q-1d	12/13/84 R
SB-R6-82	
T-1	12/01/76 R
T-2	7/05/72
G-18	11/19/88

RECORD PLANS

CONTRACTOR: Meunier Const. Inc.
Troy, VT
RESIDENT ENGINEER: C. Craig
CONSTRUCTION BEGAN: 6/1/11
CONSTRUCTION COMPLETED: 11/4/11
RECORD PLANS BY: J. Marsceill
I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.
By: [Signature] Resident Engineer
Date: 3-13-92

NOTE: Any further information concerning final quantities or other details relative to this project may be found on microfiche in Central Files.

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF ST. ALBANS
COUNTY OF FRANKLIN

ROUTE NO. TH 20 (CLASS 3) BRIDGE NO. 9

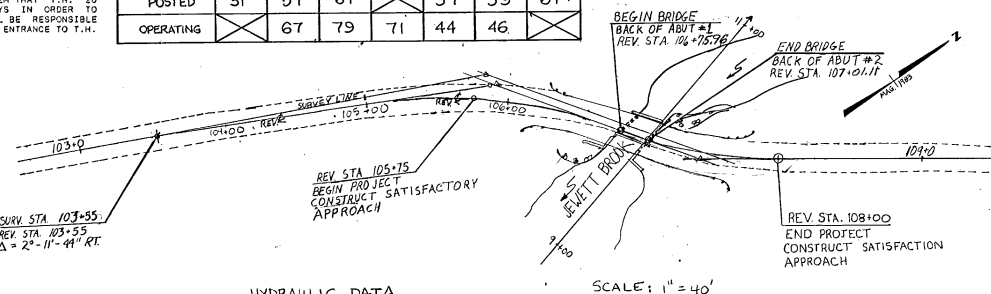
LOCATION: BEGINNING 1.717 MILES FROM THE INTERSECTION OF VT. 36 AND TH 20 AND HEADING NORTHERLY 0.043 MILES (225.0 FT) ALONG TH 20.
PROJECT DESCRIPTION: REMOVE EXISTING SUPERSTRUCTURE, WIDEN ABUTMENTS ON DOWNSTREAM SIDE, ADD NEW CONCRETE SLAB, RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE: 25.15 FEET = 0.005 MILES
LENGTH OF PARTICIPATION ROADWAY: 179.85 FEET = 0.038 MILES
LENGTH OF PROJECT: 225.0 FEET = 0.043 MILES

STRESS LEVELS		LOAD RATING (TONS)					
		TRUCK					
		H	H9	352	8 AXLE	3A. STR.	4A. STR.
INVENTORY		21	38				
POSTED		31	57	67		37	39
OPERATING			67	79	71	44	46

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



SCALE: 1" = 40'

HYDRAULIC DATA

DRAINAGE AREA = 7.0 SQ. MI.
Q10 = 400 CFS
Q25 = 550 CFS
Q50 = 675 CFS
Q100 = 800 CFS

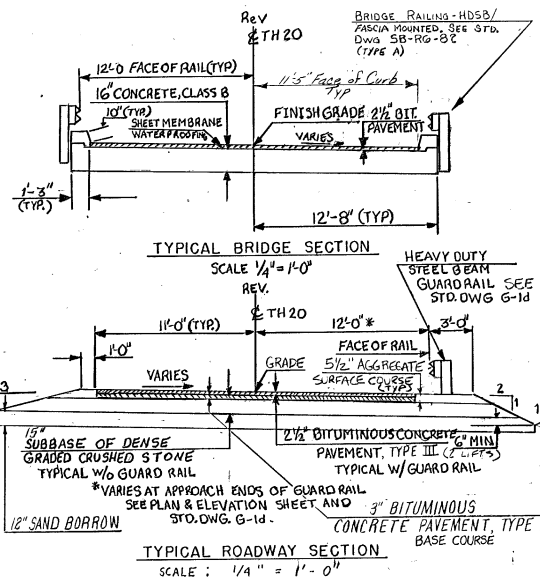
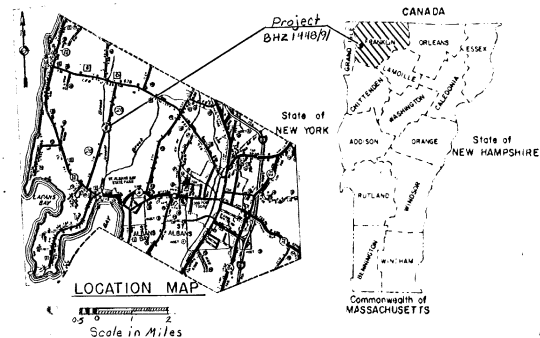
TAILWATER @ Q25 = EL 101.6
OUTLET VELOCITY @ Q25 = 5.4 FPS

HEADWATER ELEVATIONS** (AFFECTED BY LAKE CHAMPLAIN)

Lake Champlain at:		Q10(101.0)	Q25(101.6)	Q50(101.8)	Q100(102.0)
Stream Flow @	Q10	101.4	102.0	102.2	102.4
	Q25	101.8	102.4	102.6	102.8
	Q50	102.2	102.8	103.0	103.3
	Q100	102.6	103.3	103.3	103.4

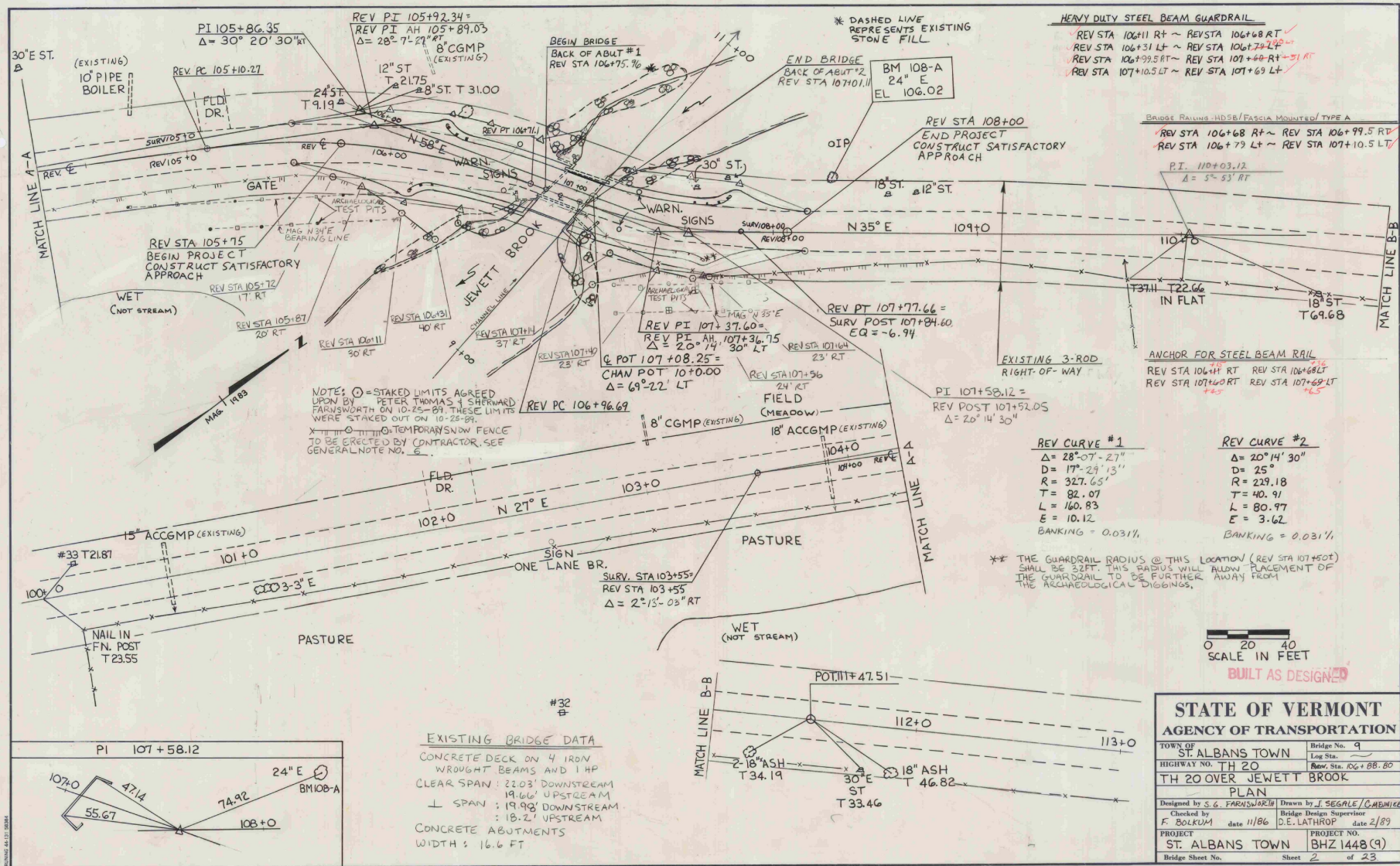
TRAFFIC DATA

1986 ADT = 440
2006 ADT = 590
1986 DHV = 60
2006 DHV = 85
T = 21%
T(ADT) = 23%
D = 63%



BUILT AS DESIGNED

SUBMITTED BY: ORDER OF THE STATE TRANSPORTATION BOARD	
APPROVED: [Signature]	DATE: 2/14/87
DIRECTOR OF PLANNING	
PROJECT: ST. ALBANS	PROJECT NO. BHZ 1448/91
SHEET 1 OF 23	SHEETS 5/8 7/2/76



STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	LUNEAU, ROGER N. & CAROL A.	3	REV. 105 + 65 RT. REV. 106 + 00 RT. REV. 106 + 38 RT. REV. 106 + 93 RT. REV. 107 + 14 RT.	REV. 108 + 12 RT. REV. 106 + 31 RT. REV. 106 + 64 RT. REV. 107 + 13 RT. REV. 107 + 35 RT.	0.02 A±		EASE. TO INSTALL (T) CHANNEL (P) (110 S.F.±) CHANNEL (P) (50 S.F.±) EASE. TO INSTALL (T)	WDOE		ST. ALBANS			770 S.F.± ARCHAEOLOGICAL FENCE ARCHAEOLOGICAL FENCE	1	3,4	Parcel No 1 Delete const. ease (T) & added archaeological fencing per Co. # 7834 Mykars to Structures 10-9-90	11-16-89	JDP	JDP
2	BOURBEAU, PAUL C. & BONNIE M.	3	REV. 105 + 86 LT. REV. 106 + 79 LT.	REV. 108 + 00 LT. REV. 106 + 89 LT.			CONST. EASE. (T) (0.03 A±) CHANNEL (P) (25 S.F.±)	WDOE		ST. ALBANS			1153 S.F.±						

NOTE:

THIS SHEET IS FOR R.O.W. LIMIT DETAILS ONLY. REFER TO THE REMAINING PLAN SHEETS FOR ALL OTHER CONTRACT DETAILS.

MADE BY: A.S.J. DATE 5/6/87
CHECKED BY: J.D.P. DATE 5/6/87

DR. RT.- DRAINAGE RIGHT
DIT. RT.- DITCHING RIGHT
CH. RT.- CHANNEL RT.
DRIVE RT.- DRIVE RIGHT
CUL. RT.- CULVERT RIGHT
(D) - DEMOLITION OR REMOVAL
(W) - WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS

TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND

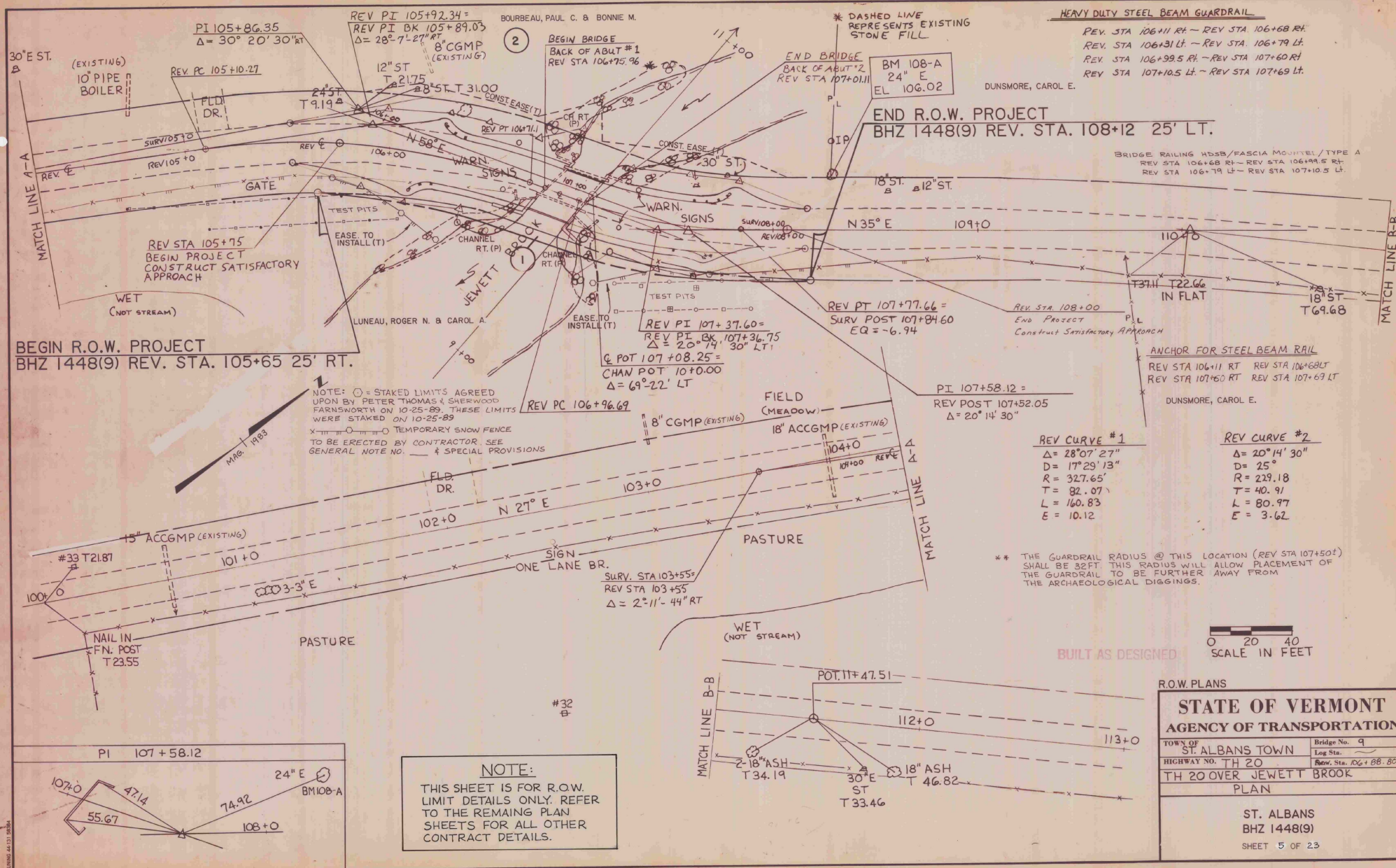
--- CONST. EASE. ---
SR SR
P
L
△ △ △
○ ○ ○

SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

R.O.W. PLANS

APPROVED: [Signature] DATE: 5/6/87
AGENT D. PLANS & TITLES

ST. ALBANS
BHZ 1448 (9)
SHEET 4 OF 23



EARTHWORK

VERT CUR	STATION	GRADES		CORR. V.C.	DIST.	COMMON EXCAVATION		SUBBASE OF DENSE GRADED CRUSHED STONE		AREA	CU. YDS.
		ON TAN.	ON V.C.			AREA	CU. YDS.	AREA	CU. YDS.		
	105+50	104.80									
	105+75	104.23									
	105+80	104.11									
	105+92.26	103.85	103.85	0.07	17.35	6.8	2.0	3.8	1.2		
	106+00	103.65	103.70	0.05	50.75	13.9	7.6				
	106+43.01	102.66	103.16	0.50		8.0	4.3				
	106+50	102.50	103.11	0.61	25.03	6.4	4.0				
	106+68.04	102.72	103.05	0.34	7.92	5.9	4.3	1.3			
	106+75	102.80	103.05	0.25							
	106+75.96	102.81	103.05	0.24	BRIDGE	5.9	4.3				
	107+00	103.10	103.15	0.05							
	107+01.11	103.11	103.16	0.05	BRIDGE	5.9	4.3				
	107+01.89	103.12	103.16	0.04							
	107+19.07	103.32	103.32		16.96	8.8	4.3	2.7			
	107+25	103.34			25.30	5.2	4.1				
	107+43.57	103.62				8.8	4.5				
	107+50	103.70			56.63	8.7	4.7				
	107+93.07	104.22									
	108+00	104.30			END PROJECT	0	0				
					SUB-TOTAL	400	256				
					ROUNDING	0	4				
					TOTAL	400	260				

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

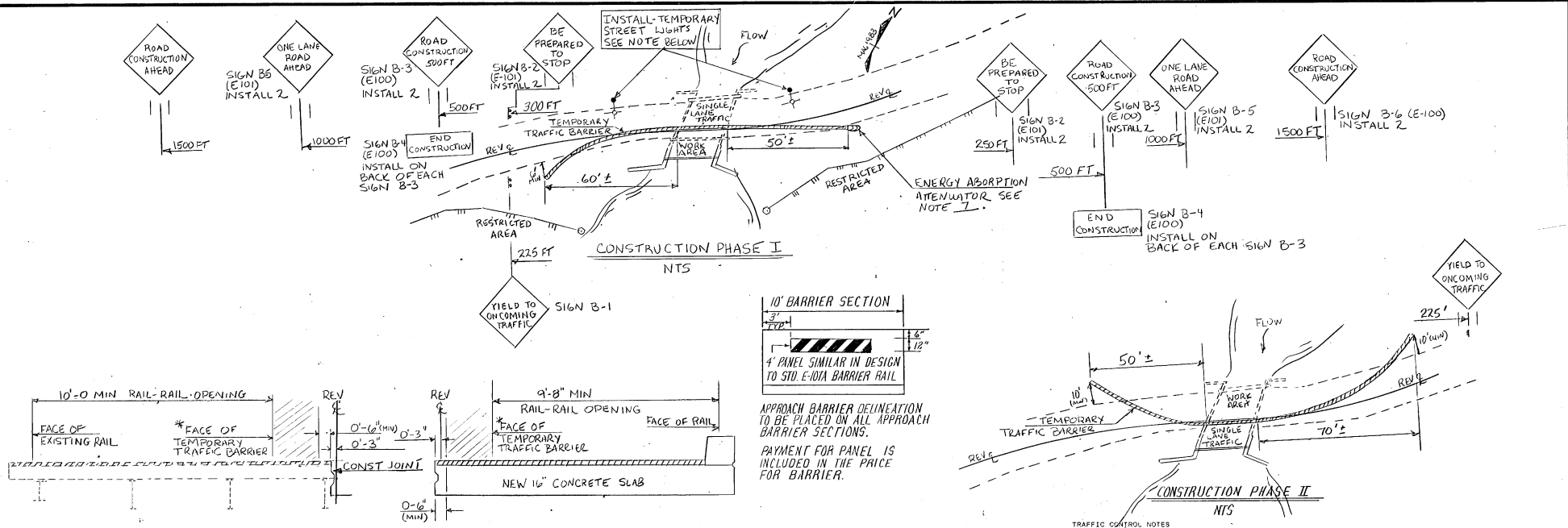
ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN							TOTAL	FINAL
			SUPER- STRUCTURE	ABUT #1	ABUT #2	ROADWAY	CHANNEL				
203.15	COMMON EXCAVATION	CY				400				400	
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY					80			80	
203.31	SAND BORROW	CY				220				220	
204.25	STRUCTURE EXCAVATION	CY		60	40					100	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY		40	50					90	
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CY				260				260	
401.10	AGGREGATE SURFACE COURSE	CY				30				30	
406.25	BITUMINOUS CONCRETE PAVEMENT	TON	9			150				159	
501.25	CONCRETE, CLASS B	CY	35	39	31					105	
507.15	REINFORCING STEEL	LB	5540	3440	2750					11780	
507.16	DRILLING AND GROUTING DOWELS	LF		36	36					72	
514.10	WATER REPELLENT	GAL	2	2	2					6	
519.20	SHEET MEMBRANE WATERPROOFING	SY	70							70	
524.11	JOINT SEALER, HOT POURED	LF	60							60	
525.41	BRIDGE RAILING - HD STEEL BEAM /FASCIA MOUNTED	LF	63							63	
527.10	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS	LS				1				1	
529.20	PARTIAL REMOVAL OF STRUCTURE	EACH	1							1	
608.25	ALL PURPOSE EXCAVATOR RENTAL, TYPE I (EST)	HR				10				10	
613.11	STONE FILL, TYPE II	CY					70			70	
620.50	REMOVING & RESETT FENCE (MOD)	LF				240				240	
620.60	BARBED WIRE FENCE	LF				240				240	
620.70	SNOW FENCE (MOD)	LF				330				330	
621.21	HEAVY DUTY STEEL BEAM GUARD RAIL	LF				256				256	
621.57	ENERGY ABSORPTION ATTENUATOR	EA				1				1	
621.60	ANCHOR FOR STEEL BEAM RAIL	EACH				4				4	
621.90	TEMPORARY TRAFFIC BARRIER	LF				280				280	
630.15	FLAGGERS	HRS				100				100	
631.16	TESTING EQUIPMENT - CONCRETE	LS				1				1	
631.17	TESTING EQUIPMENT - GRANULAR	LS				1				1	
633.10	MOBILIZATION	LS				1				1	
649.10	GEOTEXTILE FABRIC FOR FILTERS	SY					100			100	
651.40	GRUBBING MATERIAL	SY					50			50	

BRIDGE(S) AT STATION(S) 106+88.80
LOCATION(S) TH 20 OVER THE JEWETT BROOKPREPARED BY: J. W. LATHROP
SUPERVISOR: D. E. LATHROP

CHECKED BY: J. W. LATHROP

PROJECT: ST. ALBANS TOWN

PROJECT NO: BHZ 1448 (7)
SHEET NO: 6 OF 23

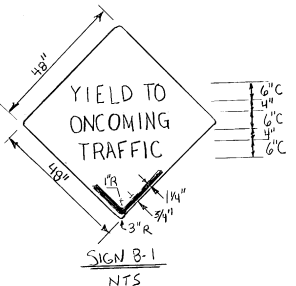


CONSTRUCTION PHASE I
SCALE: 1/2" = 1'-0"

CONSTRUCTION PHASE II
SCALE: 1/2" = 1'-0"

* THE CONTRACTOR WILL NOT BE ALLOWED TO USE CONCRETE TEMPORARY TRAFFIC BARRIER ON THE BRIDGE. AN ALTERNATIVE RAIL SYSTEM MUST BE DEVELOPED. THE CONTRACTOR SHOULD SUBMIT THE ALTERNATE TEMPORARY TRAFFIC BARRIER DETAILS TO THE STRUCTURE ENGINEER FOR APPROVAL.

IF CONCRETE BARRIER IS USED OFF THE BRIDGE AN ADEQUATE CONNECTION (APPROVED BY THE ENGINEER) BETWEEN THE TWO TYPES OF BARRIER SHALL BE PROVIDED.



- IN ORDER TO MAINTAIN ONE-WAY TRAFFIC AT ALL TIMES ON THIS PROJECT, THE ABUTMENTS AND BRIDGE SLAB MUST BE BUILT IN TWO PHASES.
- PHASE I**
- PLACE TEMPORARY TRAFFIC BARRIER AND ROUTE TRAFFIC AS DETAILED FOR CONSTRUCTION PHASE I.
 - EXCAVATE, FORM AND POUR DOWNSTREAM HALF OF ABUTMENTS.
 - STRIP FORMS AND BACKFILL TO TOP OF ABUTMENT STEM. SHEETING MAY BE REQUIRED SO THAT REMAINING ABUTMENT STEMS CAN BE EXCAVATED. COST OF SHEETING SHALL BE SUBSIDIARY TO "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS".
 - FORM AND POUR DOWNSTREAM HALF OF BRIDGE SLAB.
 - DURING SLAB CURE PERIOD, POUR RIGHT SIDE CURB AND PLACE BRIDGE RAIL. PLACE ROADWAY SUBBASE MATERIAL TO TOP OF NEW SLAB.
- PHASE II**
- MOVE TEMPORARY TRAFFIC BARRIER TO NEW LOCATION AS DETAILED IN CONSTRUCTION PHASE II. SHIFT TRAFFIC PATTERN TO NEW SLAB BRIDGE WITH MINIMUM 2'-0" CLEAR WIDTH BETWEEN NEW TRAFFIC RAIL AND TEMPORARY TRAFFIC BARRIER.
 - REMOVE REMAINING EXISTING BRIDGE.
 - EXCAVATE, FORM AND POUR ABUTMENT AND WINGWALL CAPS.
 - STRIP FORMS AND BACKFILL TO TOP OF ABUTMENT CAP. REMOVE ANY TEMPORARY SHEETING.
 - FORM AND POUR UPSTREAM HALF OF BRIDGE SLAB.
 - DURING SLAB CURE PERIOD, POUR CURB AND PLACE BRIDGE RAIL.
 - PLACE ROADWAY SUBBASE MATERIALS TO TOP OF NEW SLAB FOR LEFT SIDE OF ROADWAY.
 - SEE GENERAL NOTE #9 REGARDING PLACEMENT OF SHEET MEMBRANE AND PAVEMENT.

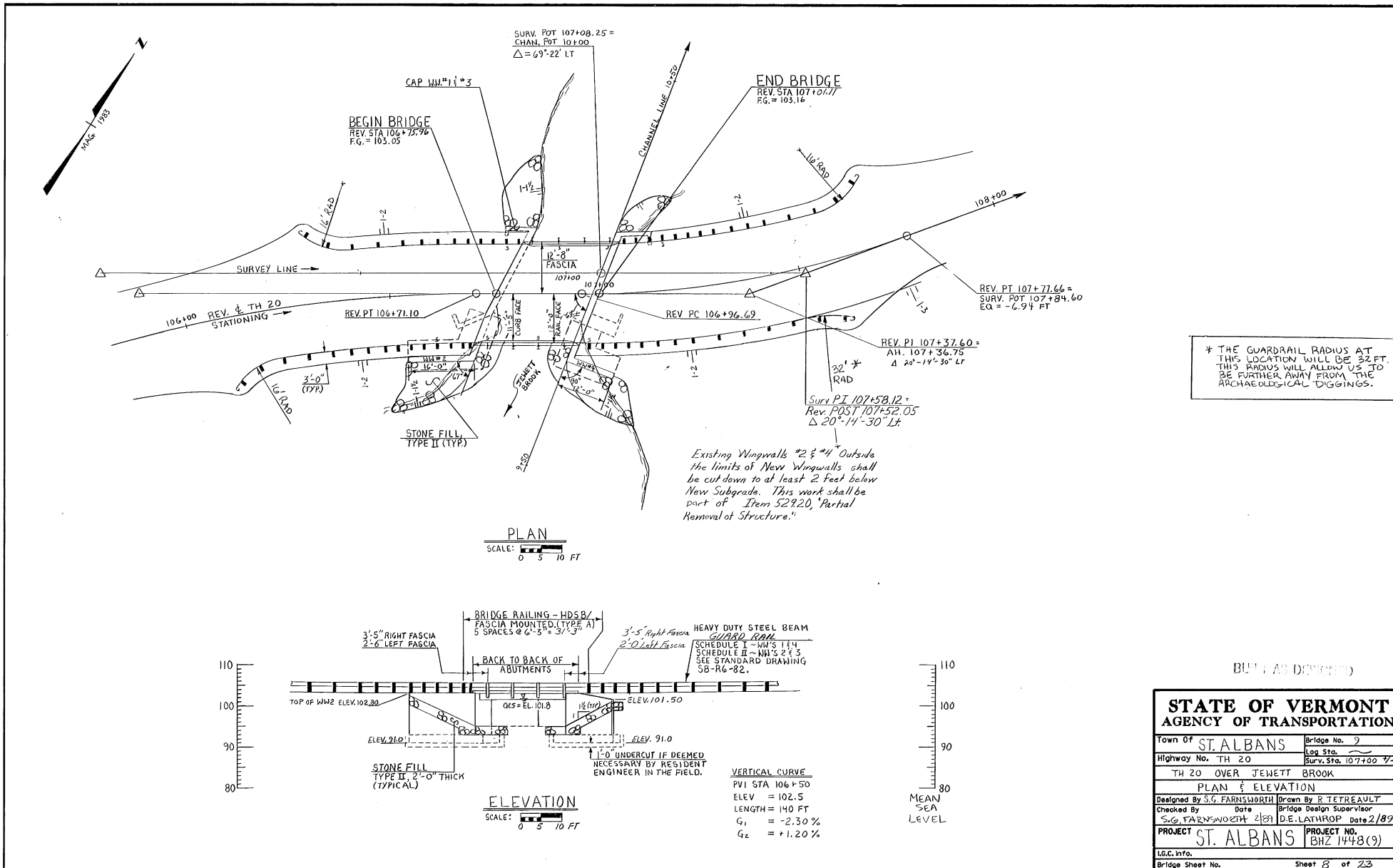
TRAFFIC CONTROL SEQUENCE

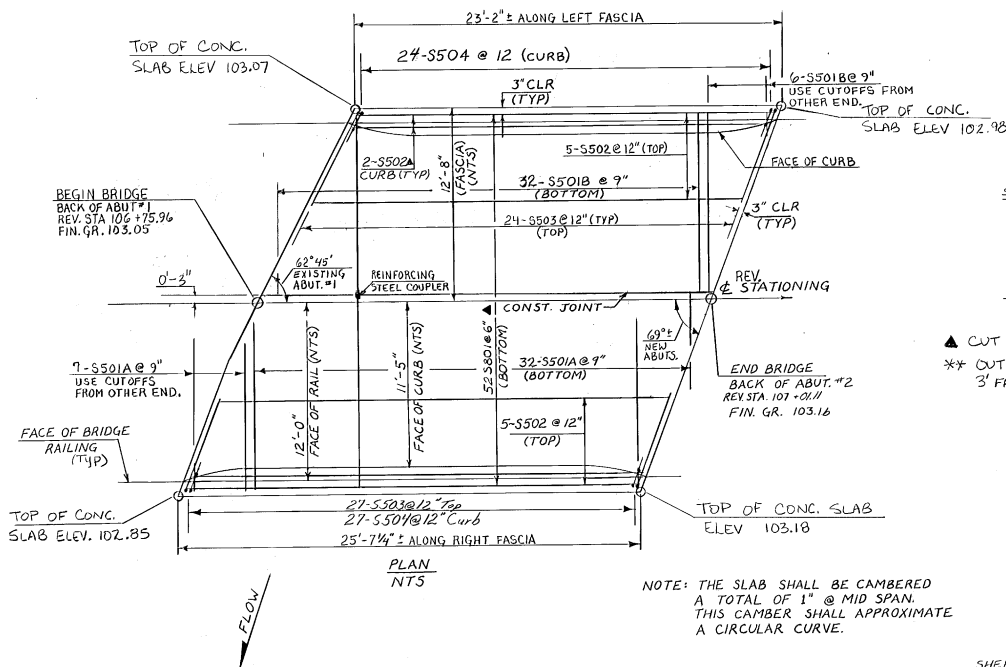
- THIS IS THE SUGGESTED CONTRACTOR'S CONSTRUCTION SIGNING PACKAGE FOR TRAFFIC CONTROL ON THE PROJECT. OTHER SIGNS MAY BE REQUIRED BY THE ENGINEER.
 - THE RESIDENT ENGINEER MAY DIRECT THE CONTRACTOR TO MODIFY THE PLAN TO CONFORM TO FIELD CONDITIONS AND ALSO ACCOMMODATE CHANGING CONDITIONS DURING THE CONSTRUCTION PERIOD.
 - THE CONTRACTOR SHALL FURNISH FLAG PERSONS AT THE DIRECTION OF THE ENGINEER, AND SUPPLY AND ERECT APPROPRIATE SIGNING FOR THEIR PROTECTION. ANY SUCH SIGNING SHALL BE COVERED OR REMOVED WHEN PERSONNEL ARE NOT CONTROLLING TRAFFIC.
 - ATTENTION IS DIRECTED TO STANDARD SHEETS E-100, E-102, E-106, E-107, E-107A AND E-110 FOR THESE AND OTHER SIGNS, BARRICADES, ETC., AND FOR MATERIALS, COLORS, SIZES AND LOCATIONS.
 - "PAVEMENT ENDS" SIGNS SHALL BE ERECTED BY THE CONTRACTOR WHEN EXISTING PAVEMENT IS REMOVED FROM AREAS OPEN TO TRAFFIC.
 - TEMPORARY STREET LIGHTS ARE TO BE INSTALLED APPROXIMATELY WHERE SHOWN. LIGHTS ARE TO BE INSTALLED ON WOOD POLES OF SUFFICIENT LENGTH TO OBTAIN A 30 FOOT MOUNTING HEIGHT. THE LUMINAIRE SHALL BE A 150 WATT, HIGH PRESSURE SODIUM LIGHT WITH TYPE II DISTRIBUTION ON A 5 FOOT ARM. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE POWER COMPANY FOR A POWER SOURCE THROUGH A METER FOR THE STREET LIGHTS, AND PAY ALL COSTS INCURRED UNTIL REMOVAL OF THE LIGHTS. POLES AND POWER SOURCE UPON COMPLETION OF THE PROJECT. PAYMENT TO BE SUBSIDIARY TO THE ITEM "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS".
 - TO ALLOW THE CONTRACTOR ACCESS TO THE WORK AREA, THE NORMAL BARRIER TAPER CANNOT BE INSTALLED. AN ENERGY ABSORPTION ATTENUATOR SHALL BE INSTALLED ON THE END OF THE TEMPORARY BARRIER RAIL IF CONCRETE TEMPORARY RAIL BARRIER IS USED. THE ATTENUATOR UNIT SHALL BE PAID FOR UNDER THE ITEM 921.57. THE UNIT SHALL BE SUITABLE FOR A NARROW WIDTH APPLICATION.
- THESE ENERGY ABSORPTION ATTENUATORS SHALL MEET THE REQUIREMENTS OF THE 1977 AASHTO PUBLICATION "GUIDE FOR SELECTING, LOCATING AND DESIGNING TRAFFIC BARRIERS" AND SHALL BE DESIGNED FOR A 40 MPH DESIGN SPEED AND 4500 LBS. VEHICLE.
- THE REPLACEMENT OF ANY PORTION OF AN ATTENUATOR DAMAGED BY AN ERRANT VEHICLE WHILE IN PLACE SHALL BE AN EXTRA WORK ITEM.
8. SEE STANDARD DET G-1B FOR CONCRETE TRAFFIC BARRIER DETAILS IF USED.

NOTE: THE CONSTRUCTION SIGNS REMAIN THE SAME AS DETAILED IN PHASE I, EXCEPT FOR THE YIELD SIGN WHICH IS SWITCHED TO THE EAST END OF BRIDGE.

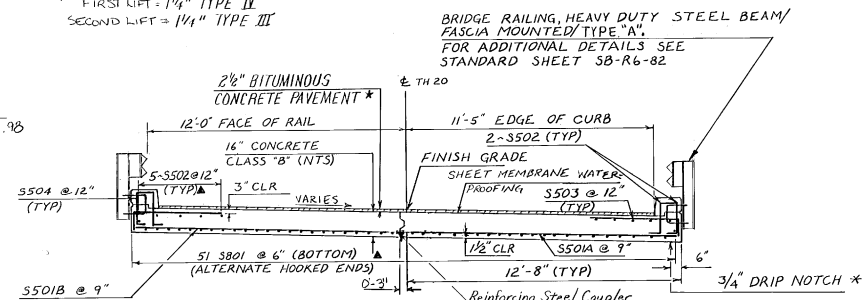
BUILT AS DISCLOSED

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	ST. ALBANS TOWN	Bridge No.	9
Highway No.	TH 20	Log Sta.	REV STA. 10760.2
TH 20 OVER JEWETT'S BROOK			
TRAFFIC CONTROL SHEET			
Designed By	C. MEUNIER	Drawn By	C. MEUNIER
Checked By	R. WHITCOMB	Date	12/89
PROJECT	ST. ALBANS TOWN	Bridge Design Supervisor	D.E. LATHROP
LOC. INFO.		PROJECT NO.	D12.1118(9)
Bridge Sheet No.		Sheet	7 of 23





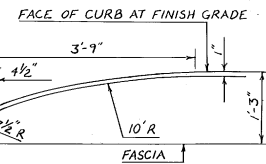
★ FIRST LIFT = 1 1/4" TYPE IV
SECOND LIFT = 1 1/4" TYPE III



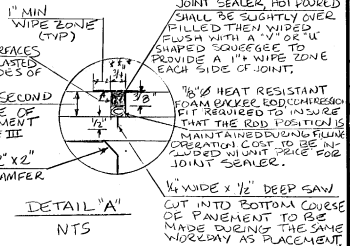
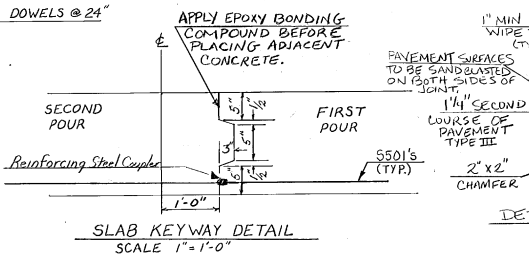
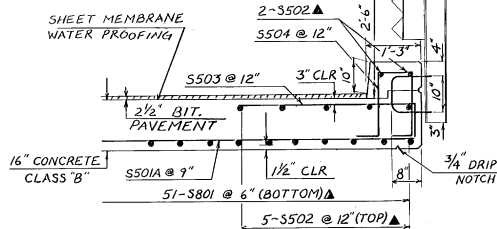
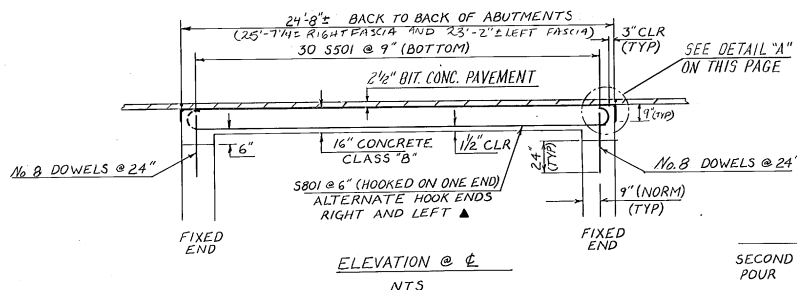
▲ CUT TO FIT, IN FIELD
** OUTLET DRIP NOTCHES
3' FROM FACE OF ABUTMENTS.

TYPICAL SECTION
SCALE 3/8" = 1'-0"

BRIDGE RAILING HEAVY DUTY STEEL BEAM/FASCIA MOUNTED TYPE "A".
FOR ADDITIONAL DETAILS SEE STANDARD SHEET SB-R6-82

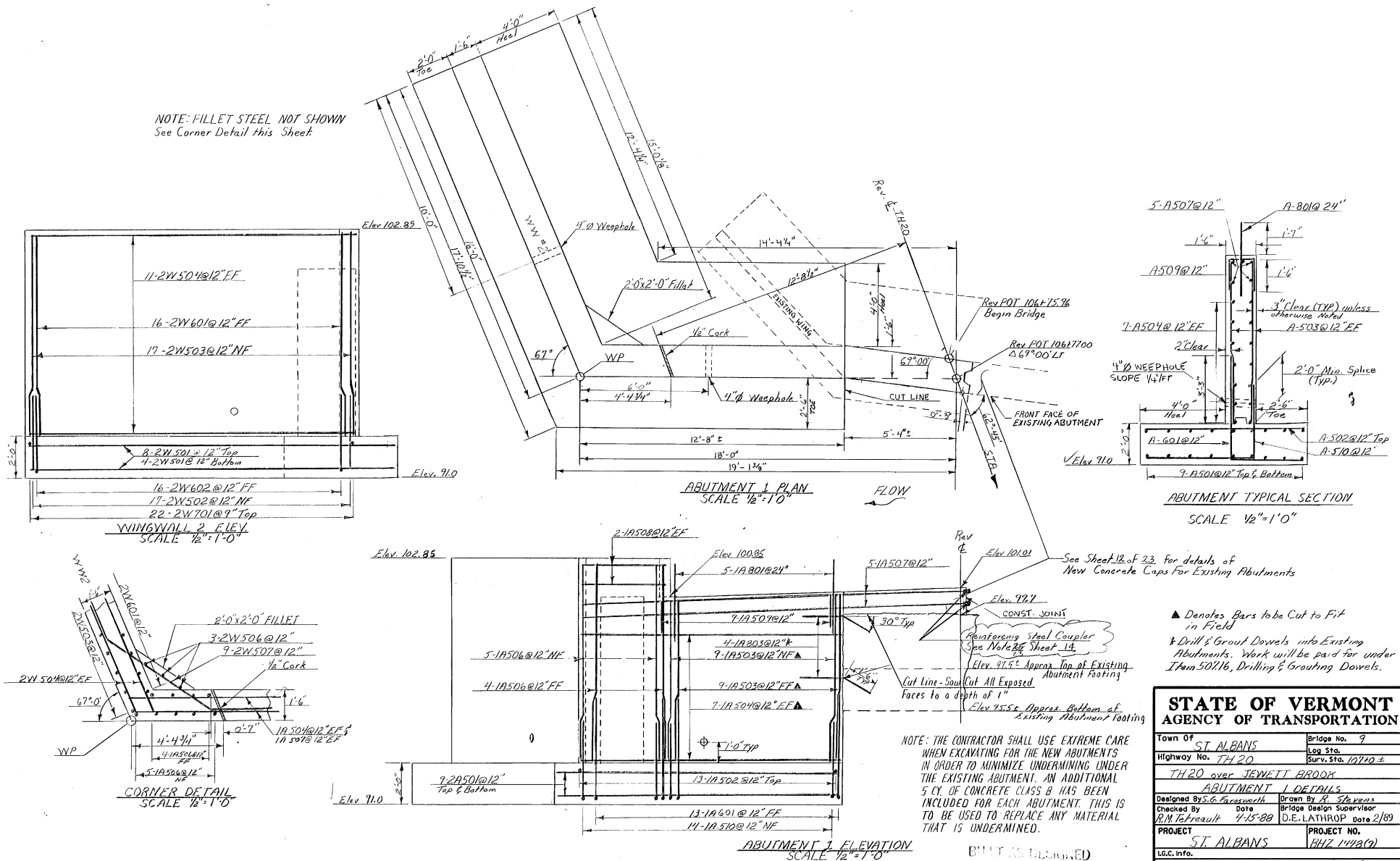


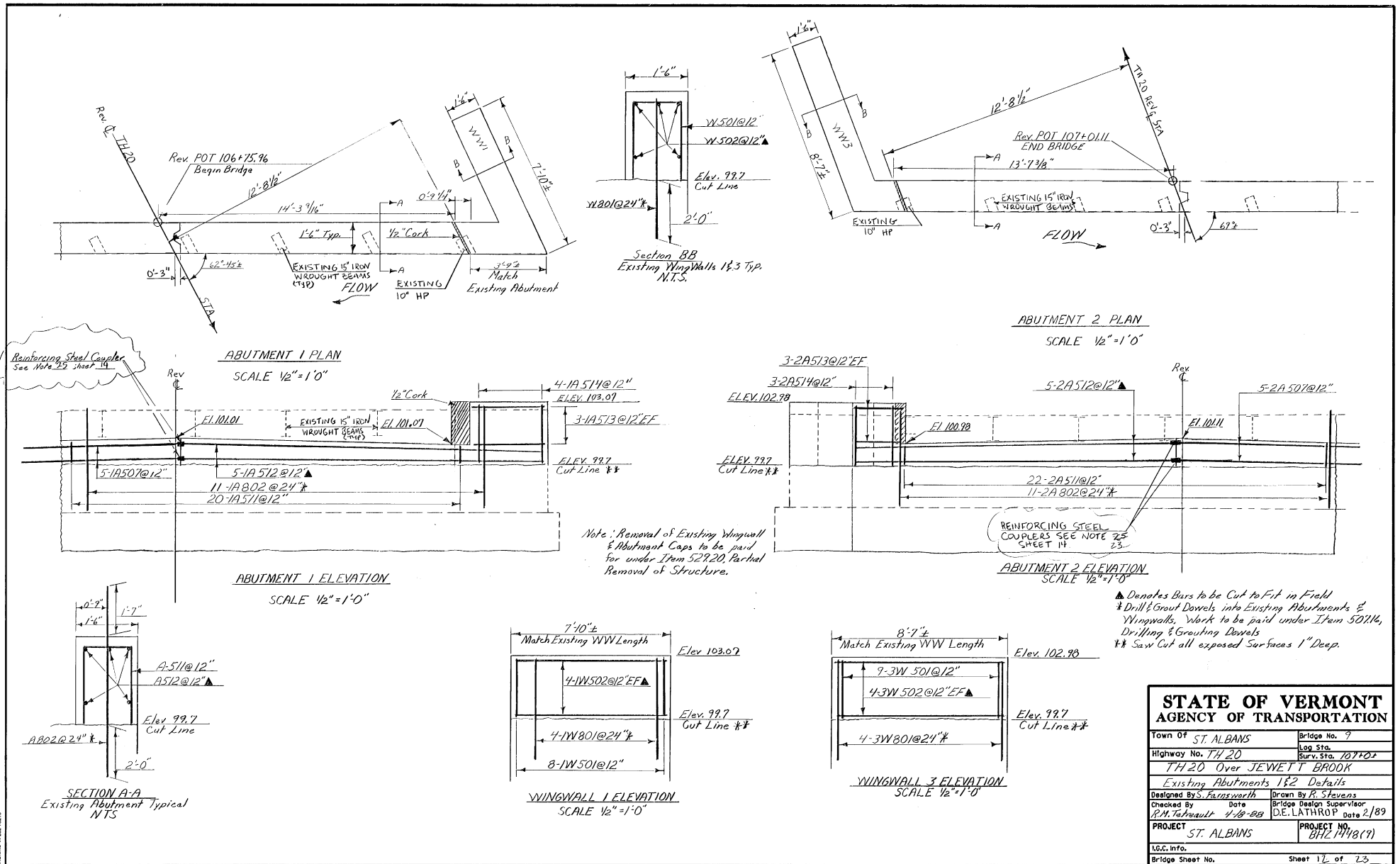
*** JOINT IS TO BE LOCATED APPROXIMATELY BY STRING LINING OR OTHER MEANS PRIOR TO PAVING SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE SLAB. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER. SEE VT. SPECIFICATION 524 AND SPECIAL PROVISIONS.



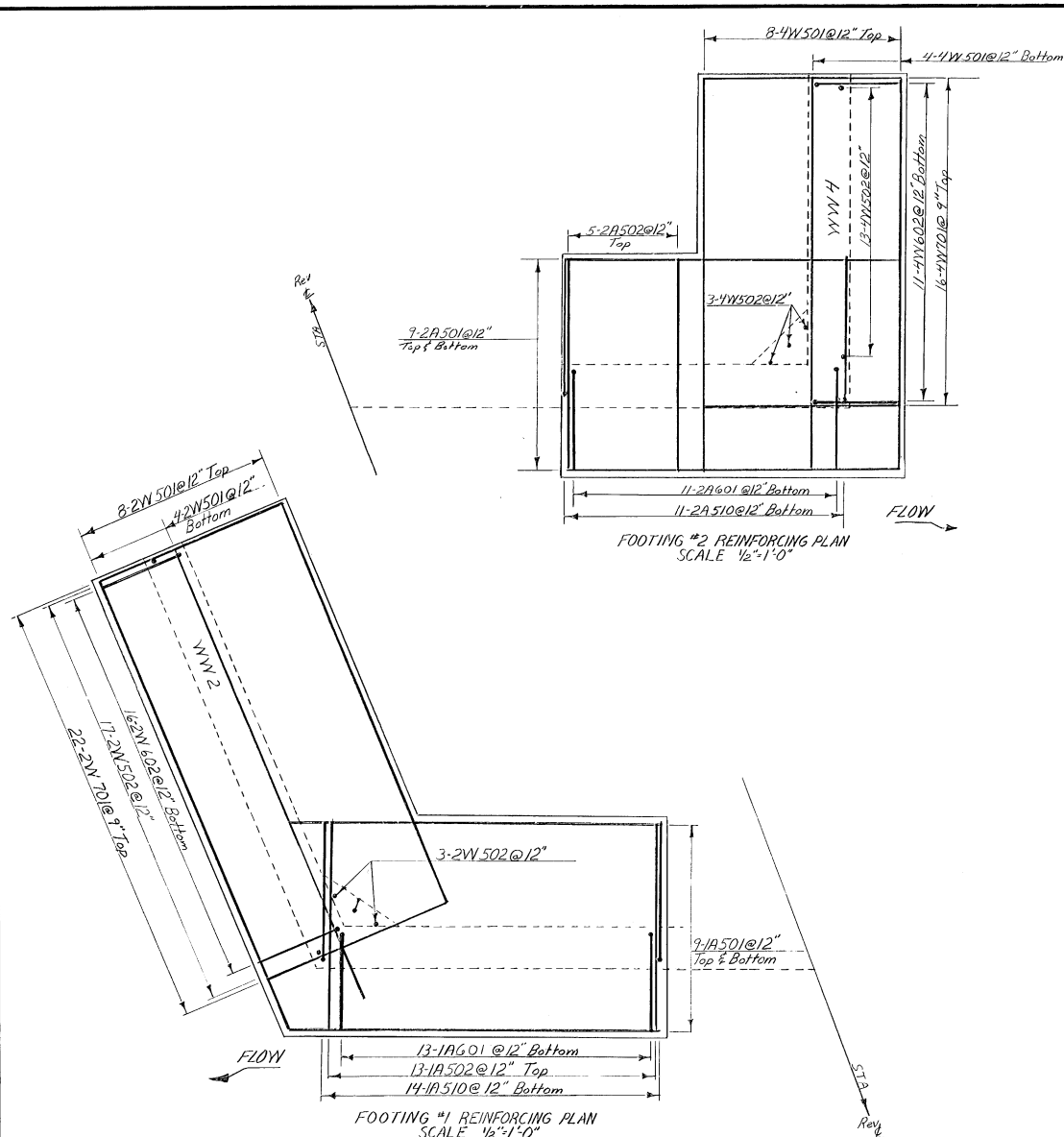
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town of ST. ALBANS	Bridge No. 9	Log Site	
Highway No. TH 20	REV. STA. 106+28.50	Project No.	
TH 20 OVER JEWETT BROOK			
SLAB DETAIL SHEET			
Designed By S.G. FARNSWORTH	Drawn By C.S. PECOR	Date	
Checked By S.G. FARNSWORTH	Bridge Design Supervisor	2/19	2/189
PROJECT ST. ALBANS	PROJECT NO.	01Z 1448 (9)	
LOC. INFO.	Bridge Sheet No.	Sheet 9 of 23	

NOTE: FILLET STEEL NOT SHOWN
See Corner Detail this Sheet





STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	ST. ALBANS	Bridge No.	9
Highway No.	TH 20	Log Sta.	
		Surv. Sta.	107+01
TH 20 Over JEWETT BROOK			
Existing Abutments 182 Details			
Designed By	S. Farnsworth	Drawn By	R. Stevens
Checked By	R.M. Tetreault	Bridge Design Supervisor	D.E. LATHROP
	4/18/88	Date	2/89
PROJECT	ST. ALBANS	PROJECT NO.	BHZ 1448(9)
I.G.C. Info.		Bridge Sheet No.	
		Sheet 17 of 23	

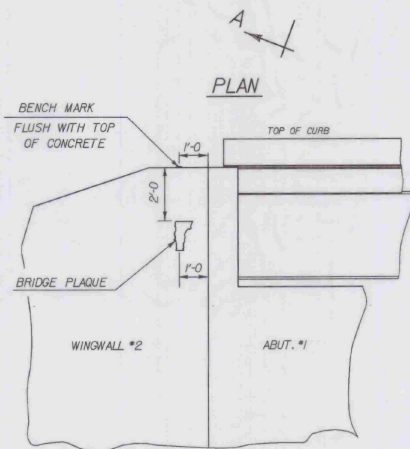
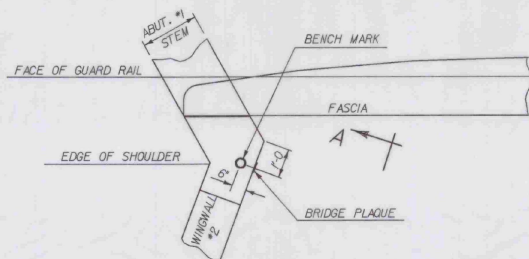


BUILT & DESIGNED

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	ST ALBANS	Bridge No.	9
Highway No.	TH 20	Low Sta.	
		Surv. Sta.	101+02
TH 20 over JEWETT BROOK			
FOOTING DETAILS			
Designed By	S. Farnsworth	Drawn By	P. Stevens
Checked By	A.M. LaFrance	Bridge Design Supervisor	D.E. LATHROP
Date	2/89	Date	2/89
PROJECT	ST. ALBANS	PROJECT NO.	BH2 1448(9)
I.D.C. Info.		Sheet 13 of 23	
Bridge Sheet No.			

GENERAL NOTES CONTINUED



VIEW "A - A"

LOCATE BENCH MARK AND BRIDGE PLAQUE

THE BRIDGE PLAQUE AND BENCH MARK WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

THE BRIDGE PLAQUE WAS NOT INSTALLED BY THE CONTRACTOR BECAUSE IT WAS NOT SUPPLIED BY THE VAPT UNTILL AFTER CONSTRUCTION WAS COMPLETED. CUC

10. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITS LATEST REVISIONS. DESIGN IS FOR HS-20 LIVE LOAD.

11. THE HEIGHT OF FILL BEHIND ABUTMENTS WILL BE LIMITED TO BRIDGE SEAT ELEVATION UNTIL THE SLAB HAS BEEN POURED AND CURED.

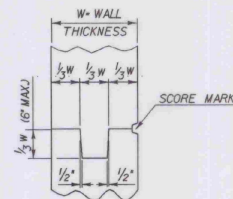
12. IN ALL HORIZONTAL CONSTRUCTION JOINTS, SHEAR KEYS SHALL BE FORMED, AS DETAILED BELOW, AND THEY SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY MALE KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

13. TRAFFIC SHALL NOT BE ALLOWED ON THE NEW BRIDGE UNTIL THE SPECIFIED CURE PERIOD OF 10 DAYS HAS EXPIRED.

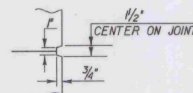
14. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE 'CONCRETE REINFORCING STEEL INSTITUTE'.

15. MINIMUM COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG BACK FACES OF WALLS AGAINST EARTH, AND THREE (3) INCHES ELSEWHERE, EXCEPT AS NOTED IN THE TYPICAL SLAB DETAILS ON SHEET 9 OF 23.

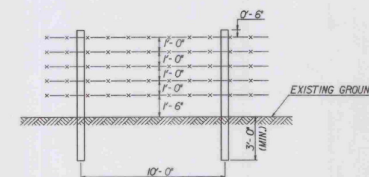
16. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING $\pm 1"$
CLEARANCE $\pm 1/4"$



TYPICAL CONCRETE CONSTRUCTION JOINT



SCORE MARK DETAIL



BARBED WIRE FENCE TYPICAL

NTS

17. NO BORINGS WERE TAKEN ON THIS PROJECT. SUBSURFACE CONDITIONS MAY VARY FROM THE CONDITIONS ASSUMED FOR DESIGN.

18. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.

19. THE FOLLOWING TABLE OF ALLOWABLE STRESSES AND WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:

CONCRETE: $f'_c = 3500$ PSI	$f_c = 1400$ PSI
REINFORCING STEEL: $F_t = 24,000$ PSI	Grade 60
SOIL: UNIT WEIGHT	140 PCF

20. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 60 DEGREES F.

21. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".

22. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

23. COUPLERS FOR REINFORCING STEEL SHALL PROVIDE A MINIMUM YIELD STRENGTH EQUAL TO 125% OF THAT OF THE REINFORCING STEEL. COST OF THE COUPLERS AND THEIR INSTALLATION SHALL BE SUBSIDIARY TO THE ITEM 'REINFORCING STEEL'.

24. ALL STONE FILL ABOVE NORMAL WATER LEVEL SHALL BE COVERED WITH NATIVE TURF AS DETAILED ON THE CHANNEL SECTIONS. TURF SHALL CONSIST OF GRUBBED OR STRIPPED EARTH MATERIAL CONTAINING ROOTS OF NATIVE STREAMBANK VEGETATION. PROVIDE FOR TEMPORARY EROSION CONTROL BY APPLYING GRASS SEED AND HAY MULCHING. THIS WORK IS TO BE PAID FOR UNDER THE ITEM 'GRUBBING MATERIAL'.

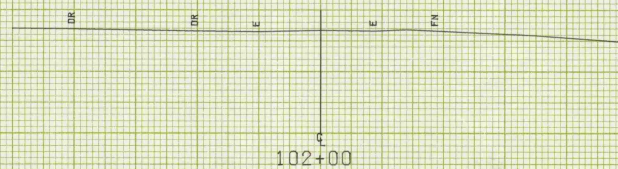
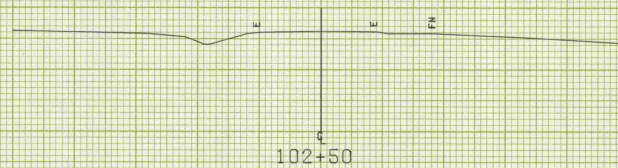
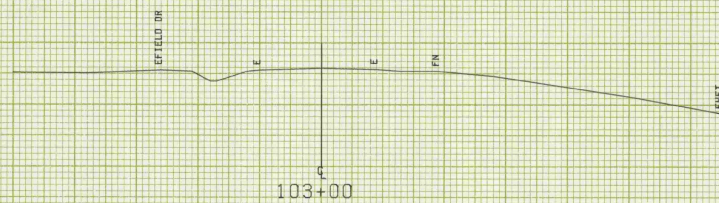
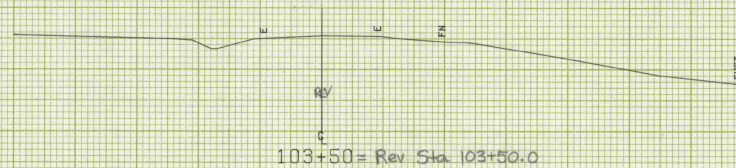
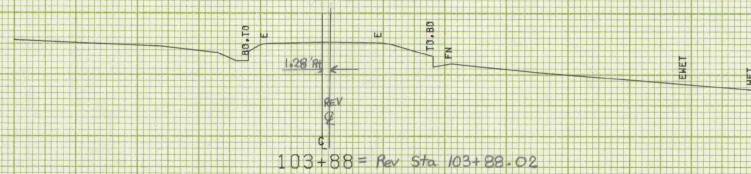
25. EXISTING FENCE LOCATED IN CONSTRUCTION AREA SHALL BE REMOVED AND RESET ON THE PASTURE SIDE 6' FROM THE SNOW FENCE UNDER THE ITEM 'REMOVING AND RESETTING FENCE (MOD)'.

26. AFTER THE BRIDGE / ROADWAY IS COMPLETED, NEW FENCING SHALL BE PLACED BETWEEN REVISED STATIONS 108+50.2 RIGHT AND 108+10.2 RIGHT. THE NEW FENCING WILL CONSIST OF FIVE STRANDS OF BARBED WIRE WITH PROPER TENSION. THE POSTS WILL BE PRESSURE TREATED WOOD AND PLACED 10 FEET ON CENTER AND INSERTED INTO THE GROUND AT LEAST 36 INCHES. SEE DETAILS ON THIS SHEET. THE POSTS WILL BE INSTALLED ON THE NEW R-O-W LINE FOR TH 20. PAYMENT WILL BE MADE UNDER THE ITEM 'BARBED WIRE FENCE'.

27. THE FINAL REMOVAL OF TEMPORARY FENCING WILL BE SUBSIDIARY TO THE ITEM 'REMOVING AND RESETTING FENCE (MOD)'.

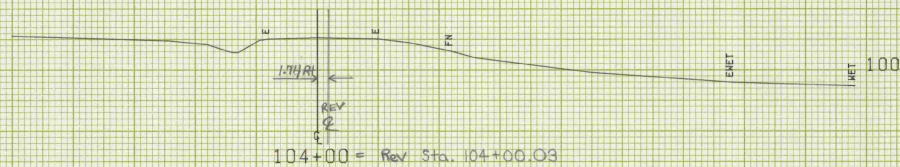
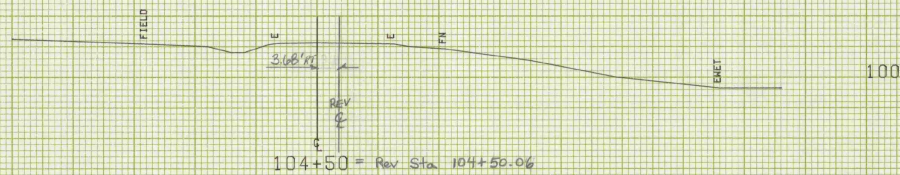
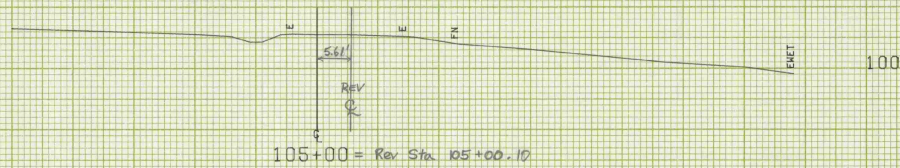
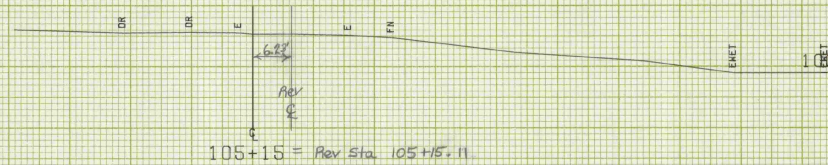
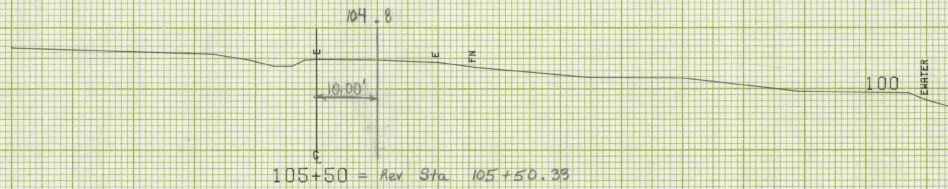
STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	ST. ALBANS	Bridge No.	9
Highway No.	TH 20	Log Sta.	
		Surv. Sta.	107 + 00 +/-
TH 20 OVER JEWETT BROOK			
CONCRETE DETAILS AND GENERAL NOTES CONT			
Designed By	S. FARNSWORTH	Drawn By	R. JETREAU
Checked By	S. FARNSWORTH	Bridge Design Supervisor	
Date	2/89	Date	12/89
PROJECT	ST. ALBANS	PROJECT NO.	BHZ 1448(9)
LOG. INFO.	ZFAL3054363C509DGN		63C509PRF
Bridge Sheet No.		Sheet	14 of 23

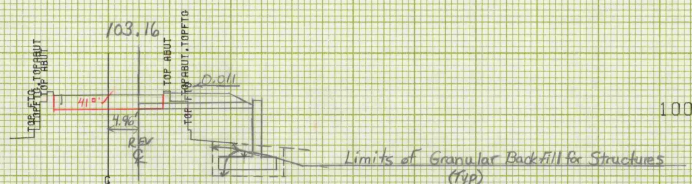


SCALE 1" = 10 FEET

FROM STA.	102+00	TO STA.	103+88
PROJECT NAME	ST ALBANS TOWN MAIN		
NO.	BH21448(8)	PLOTTED	07/19/84
SURVEYED BY	BRADY	MARCH	1983
SHEET	16	OF	20 SHEETS



Rev Sta 107+10.5 Lt, End Bridge Rail
Begin Heavy Duty Steel Beam Guard Rail



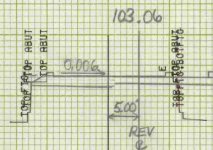
107+08.25 = Rev Sta 107+01.26 + Rev Sta 107+06.7 - Ixx= 203.15-

Rev Sta 106+78.6 = Section - Ixx= 203.15-

Rev Sta 106+83.7 = Section - Ixx= 203.15-

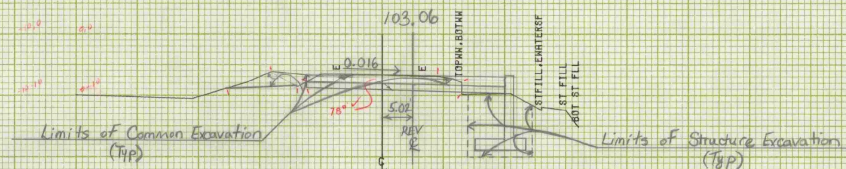
Rev Sta 107+01.11 End Bridge

Rev Sta 106+99.5 RT End Bridge Rail/ Begin
Heavy Duty Steel Beam Guard Rail



106+87.30 = Rev Sta 106+80.31

Rev Sta 106+79 Lt End Guard Rail
Begin Bridge Railing - RD Steel Beam/Fascia
Mounted

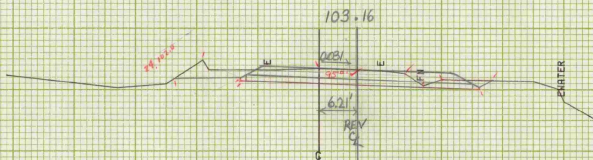


106+75 = Rev Sta 106+68.03

Rev Sta 106+75.96 Begin Bridge

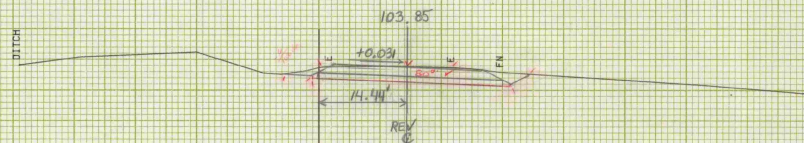
Rev Sta 106+68 Rt End Guard Rail
Begin Bridge Railing - HD Steel Beam/
Fascia Mounted

Rev Sta 106+31 Lt Begin Heavy
Duty Steel Beam Guard Rail



106+50 = Rev Sta 106+42.95, Same Rev Sta's 106+41 & 106+31 - Ixx= 203.15-

Rev Sta 106+11 Rt Begin Heavy Duty
Steel Beam Guard Rail



106+00 = Rev Sta 105+42.26, Same Rev Sta's 105+42 (Begin) - Ixx= 203.15-

Rev Sta 105+75 Begin Project
Construct Satisfactory Approach



FROM STA. 106+00 TO STA. 107+08.25
PROJECT NAME ST ALBANS TOWN MAIN
NO. SH21448(9) PLATTED 07/19/84
SURVEYED BY BRADY
SHEET 18 OF 23 SHEETS MARCH 1983

SCALE 10 FEET

Item 203.15

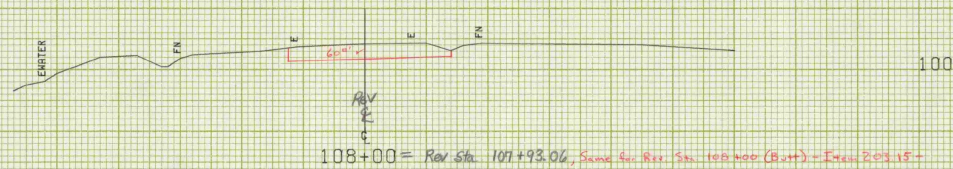
Common Excavation:

Sta	Area	Dist	Vol
105+75	80' x 1'		
106+16	15' x 1'	36' ✓	3150' cu yd
106+31	15' x 1'	24' ✓	1900' cu yd
106+58	20' x 1'	37' ✓	3200' cu yd
106+83.3	0' ✓	18' x 1'	612' cu yd
106+93.6	0' ✓		
107+06.7	47' x 1'	13' ✓	267' cu yd
107+18	57' x 1'	11.3' ✓	554' cu yd
107+50	101' x 1'	32' ✓	2528' cu yd
107+63	101' x 1'	19' ✓	1917' cu yd
108+00	60' x 1'	31' ✓	2496' cu yd

10620 (25) = 616' x 1' x 25' = 15400' cu yd
 15400' cu yd = 15400' cu yd



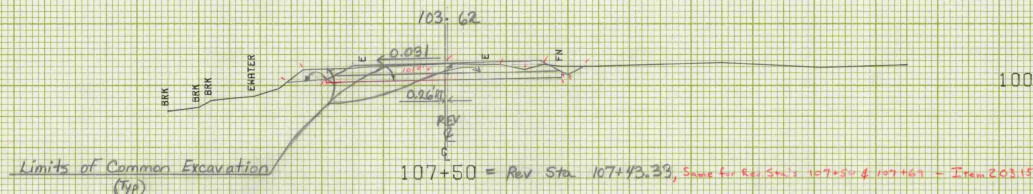
Rev Sta 108+00 End Project
 Construct Satisfactory Approach



108+00 = Rev Sta 107+93.06, Same as Rev Sta 108+00 (Butt) - Item 203.15 -

Rev Sta 107+69 Lt, End Guard Rail

Rev Sta 107+45 Rt, End Guard Rail



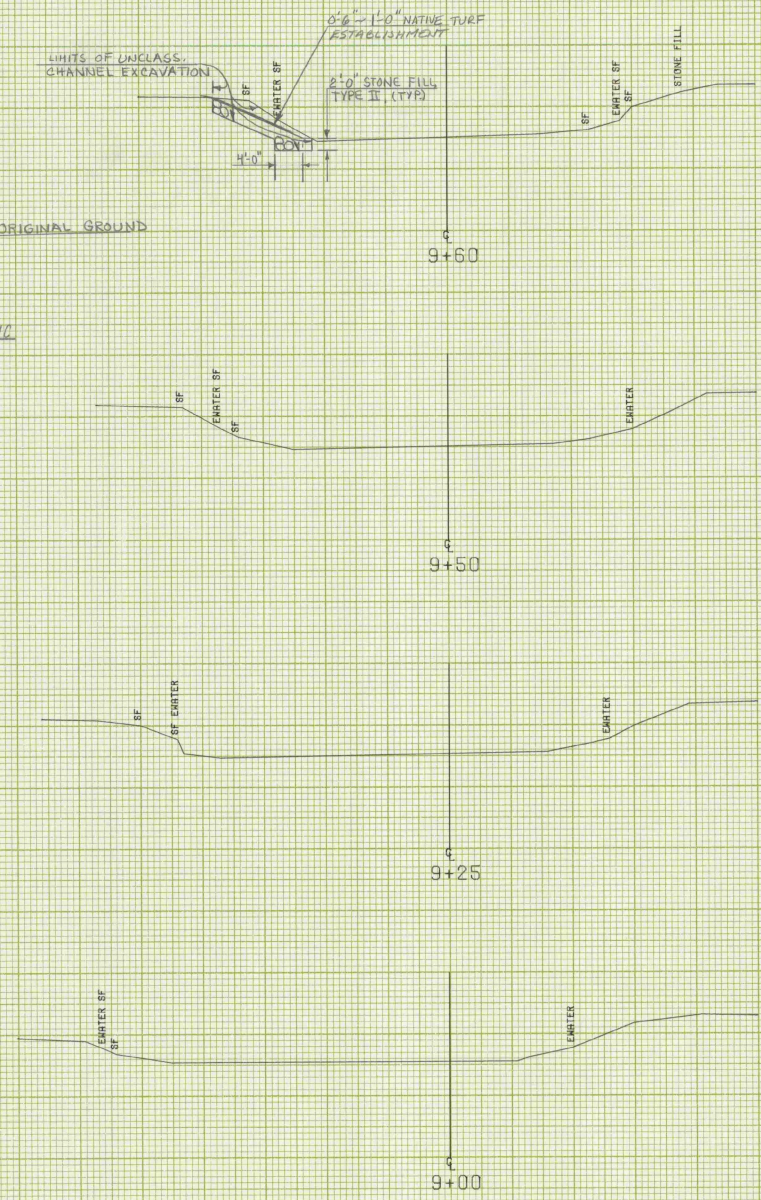
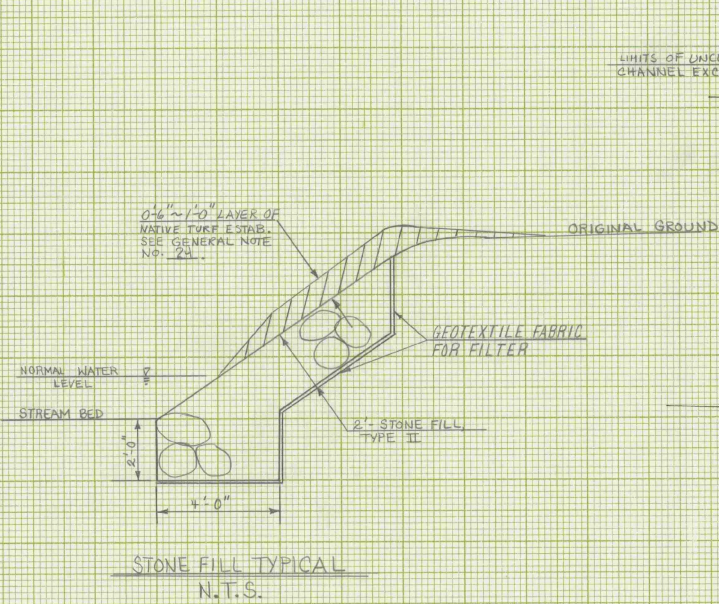
107+50 = Rev Sta 107+43.33, Same as Rev Sta 107+50 - Item 203.15 -



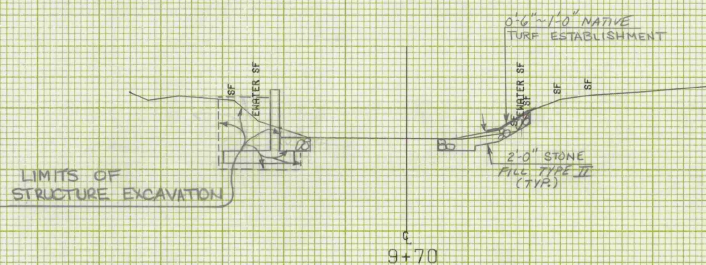
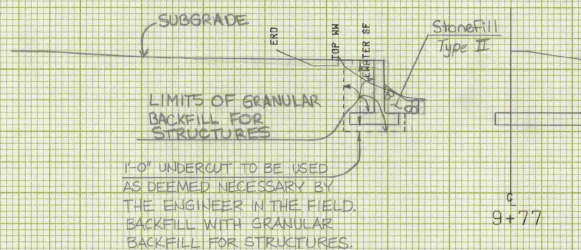
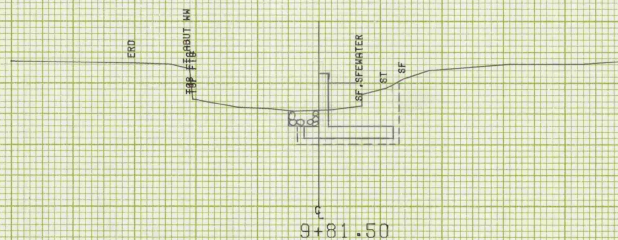
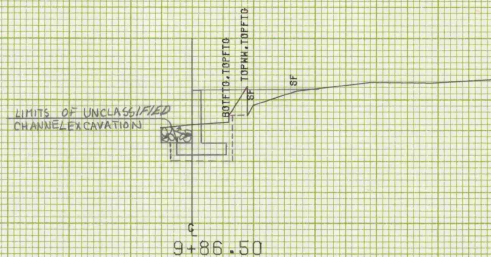
107+25 = Rev Sta 107+18.04

FROM STA. 107+25 TO STA. 109+00
 PROJECT NAME ST ALBANS TOWN MAIN
 NO. 211448(9) PLOTTED 07/19/84
 SURVEYED BY BRADY MARCH 1983
 SHEET 17 OF 23 SHEETS

SCALE 1" = 10 FEET

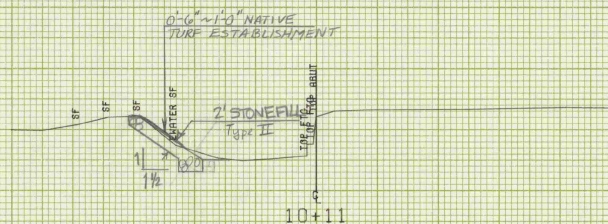


STA 9+50 L+. BEGIN STONEFILL AND UNCLASSIFIED CHANNEL EXCAVATION SEE STONE FILL TYPICAL AT LEFT, THIS SHEET.



FROM STA.	9+70	TO STA.	9+86.50
PROJECT NAME	ST ALBANS TOWN	CHAN	
NO.	BH21448(9)	PLOTTED	07/19/84
SURVEYED BY	BRADY	MARCH	1983
SHEET	24	OF	23 SHEETS

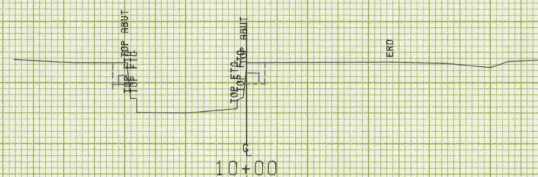
STA 10+11 RT BEGIN STONEFILL
TYPE II



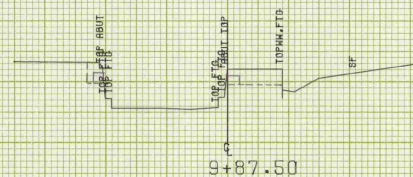
100



90
STA 10+03 LT BEGIN STONEFILL
TYPE II



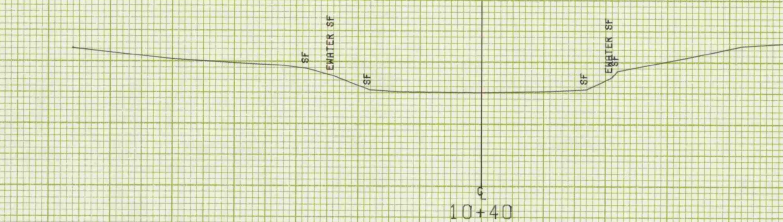
100



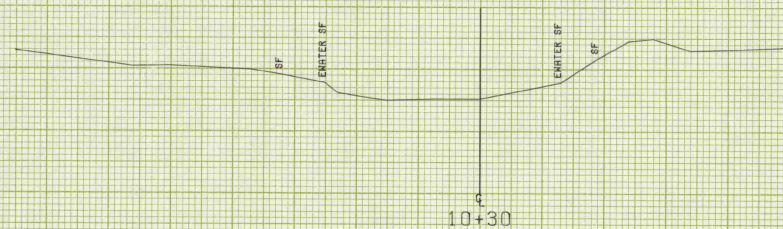
100

FROM STA. 9+87.50 TO STA. 10+11
PROJECT NAME ST ALBANS TOWN CHAN
NO. 821448(9) PLOTTED 07/19/84
SURVEYED BY BRADY
SHEET 22 OF 23 SHEETS MARCH 1983

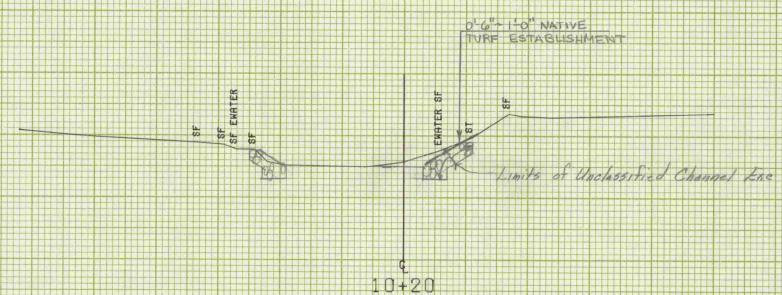
SCALE 1" = 10 FEET



90

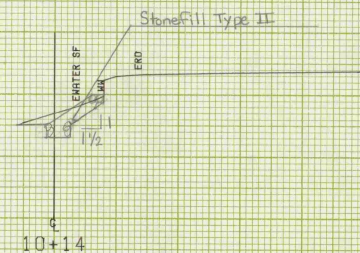


90



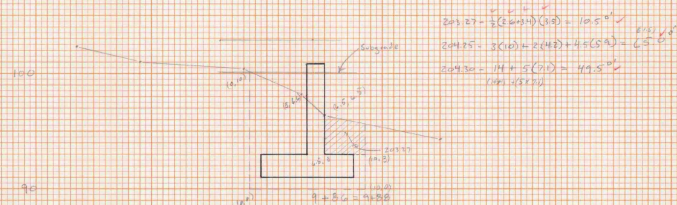
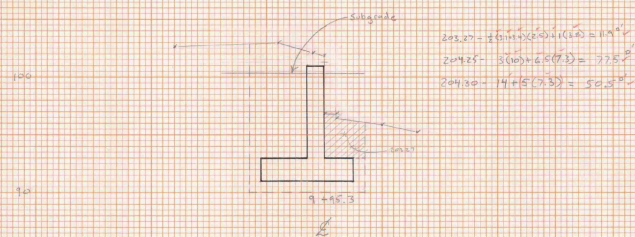
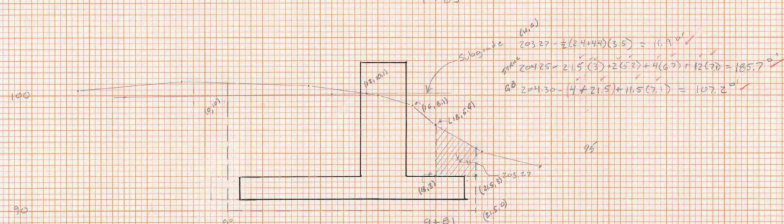
STA 10+23 LT & RT END STONEFILL
TYPE II

90



90

ORIG	SUBMITTED	BY	DATE
SURV.	PLOTTED		
	TEMPLATE		
	MAGAS		
	AIRAS CHECKER		



From 203.27 -

Unpaired (Red Channel) Excitation

Site	Dir	Area	Vol
94B1 (Blue)	5	11.9 ✓	5.6 ✓
94B6	9.3	10.5 ✓	10.1 ✓
94B3 (Blue)		11.9 ✓	160 (V_{E_2}) = 5.9 ✓

Time	Topic	Gravimetric	Redox	Vol	Stoichiometry
2:20					
4:42			0		
4:47		2	33.2	33.2	
4:48		7	127.2	491.4	
4:48.5		2		210.8	
4:49.3		3	103.0	228.0	
4:49.6			49.5		
4:49.8		9.3	505	405.4	
4:49.8.5					
					1780.0 (50) = 529.4

Jim Smith:

STANDARD EQUATION

Seq.	Size	Area	Vol.
91426	6	0	
91424	6	42.4	42.4
91421	7	79.4	79.4
91420	5	185.7	265.1
91422	7.3	650.9	662.6
91423		77.5	

$2.802 \left(\frac{1}{100} \right) = 2.78\%$

22.94% 22.94% 22.94%

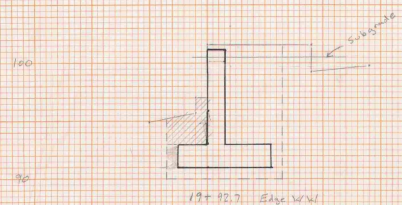
St Albans 8/22/1949

Structural X-Sectioning

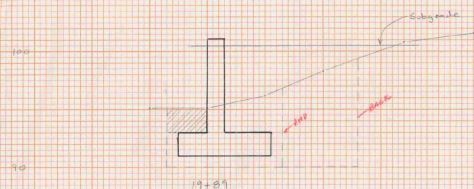
Sheet #1 of 2

DATE	
BY	
CHECKED	
APPROVED	
PROJECT	
ROUTE	
NO.	

DATE	
BY	
CHECKED	
APPROVED	
PROJECT	
ROUTE	
NO.	

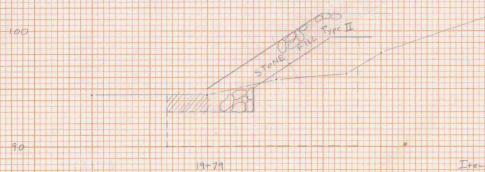


$$\begin{aligned} 203.27 &= 10.2 \text{ ft} \\ 204.25 &= 3(10) + 6(7.5) = 78.0 \text{ ft} \\ 204.30 &= 14 + 5(7.5) = 51.5 \text{ ft} \end{aligned}$$



$$\begin{aligned} 203.27 &= 7.5 \text{ ft} \\ 204.25 &= (Area) = 3(10) + \frac{1}{2}(10+5)(6.5) = 49.25 \text{ ft} \\ (Back) &= 9.12 + \frac{1}{2}(25+14)(6.5) = 101.75 \text{ ft} \\ 204.30 &= (Area) = 14 + 5(7.5) = 51.5 \text{ ft} \\ (Back) &= 51.5 + 6.5(10.5) = 119.8 \text{ ft} \end{aligned}$$

Extra Setbacks for 204.30



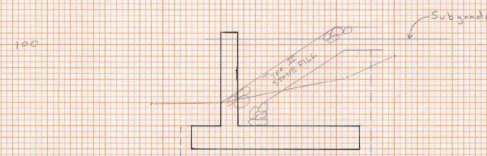
$$\begin{aligned} 203.27 &= 5.3 \text{ ft} \\ 204.25 &= 5(10) + \frac{1}{2}(10+5)(6.5) + 1(6.5) = 84.3 \text{ ft} \\ 204.30 &= 1(6.5) + \frac{1}{2}(10+6.5)(6.5) + 6.5(10.5) = 72.9 \text{ ft} \end{aligned}$$

From 204.25 Structure Excavation

Sta	Dist	Area	Vol
19+79	10	84.3	931.6
+89 (B)		101.9	
+89 (A)	49.2		237.4
+92.7	3.7	78.8	

$$11.68 \left(\frac{1}{100} \right) = 43 \text{ ft} \quad \text{COR 11.68 ft}$$

Structure
Backfill
7.5 ft



$$\begin{aligned} 19+83.5 &= 10.2 \text{ ft} \\ 204.30 &= 10.2 + 11(7.5) = 106.8 \text{ ft} \end{aligned}$$

$$\begin{aligned} 19+83.5 &= 10.2 \text{ ft} \\ 204.30 &= 10.2 + \frac{1}{2}(10+6.5)(6.5) + 6.5(10.5) = 106.8 \text{ ft} \end{aligned}$$

From 204.25 Structure Excavation

Sta	Dist	Area	Vol
19+79	10	84.3	931.6
+82		64.6	236.1
+83.5		106.8	
+89 (B)	5.8	117.9	683.2
+89 (A)		68.5	
+92.7	3.7	57.8	1.91

$$1000 \left(\frac{1}{100} \right) = 30 \text{ ft by COR 10.0 ft}$$

DECA 11.14 ft

From 203.27 Structure Excavation

Sta	Dist	Area	Vol
19+79	10	84.3	931.6
+89 (B)		78	
+89 (A)	3.7		82.7
19+92.7	10.2		10.7(10.2) = 3.64

DECA 11.14 ft

ABUTMENT # 2 - 6x5 10x79.50 = 8x10 20'00' 8'69" 4'

INDEX OF SHEETS

R.O.W. PLANS

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF ST. ALBANS
COUNTY OF FRANKLIN

ROUTE NO TH 20 BRIDGE NO. 9

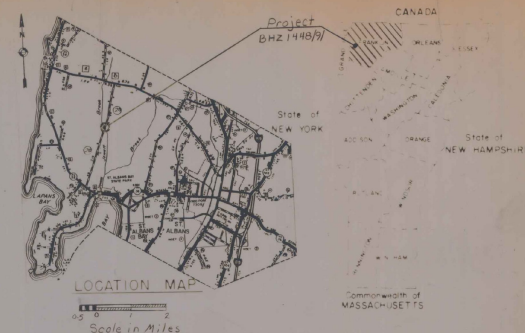
PROJECT LOCATION: BEGINNING 1.177 MILES FROM THE INTERSECTION OF VT 36 AND TH 20 AND HEADING NORTHERLY 0.043 MILES (225.0 FT) ALONG TH 20.
PROJECT DESCRIPTION: REMOVE EXISTING SUPERSTRUCTURE, WIDEN ABUTMENTS ON DOWNSTREAM SIDE, ADD NEW CONCRETE SLAB, RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE
LENGTH OF PARTICIPATION ROADWAY

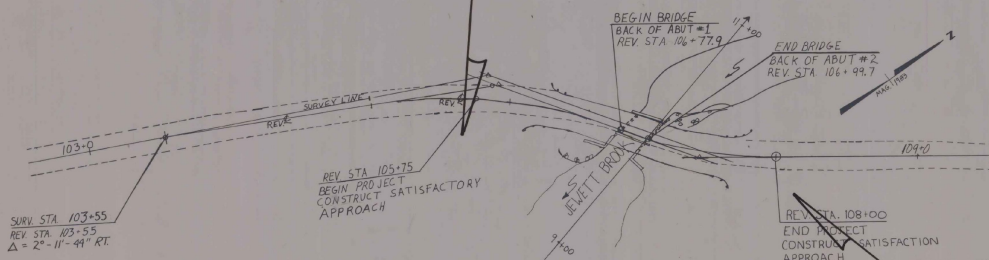
21.8 FEET = 0.004 MILES
203.2 FEET = 0.039 MILES

LENGTH OF R.O.W. PROJECT

247.0 FEET = 0.047 MILES



BEGIN R.O.W. PROJECT
BHZ 1448(9) REV. STA. 105+65 25'RT.



CONVENTIONAL SIGNS

COUNTY LINE	---
TOWN LINE	---
LIMITS OF ACCESS	---
POINT OF ACCESS	---
FENCE LINE	---
STONE WALL	---
TRAVELED AID	---
RAILROAD	---
SURVEY LINE	---
CULVERT	---
POWER POLE	---
TELEPHONE POLE	---
TREES	---
CONTROL OF ACCESS	---
PROPERTY LINE	---
ROW TAKING LINE	---
SLOPE RIGHTS	---
TOP OF CUT	---
TOE OF SLOPE	---

** Table shows headwater elevations of the structure based on various flow frequencies occurring with Lake Champlain at several flood elevations.

HYDRAULIC DATA

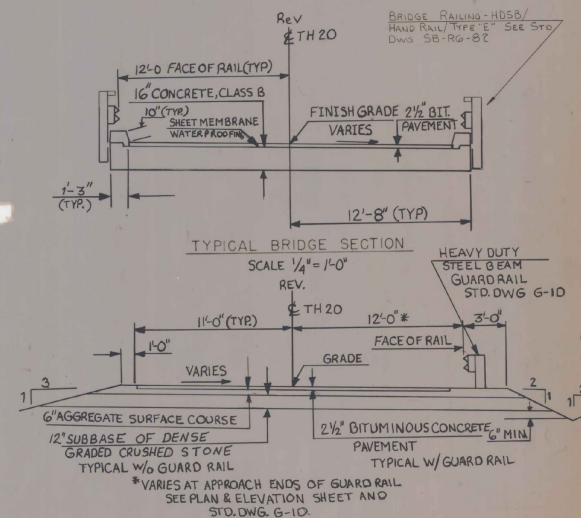
DRAINAGE AREA = 7.0 SQ. MI.
Q10 = 400 CFS
Q25 = 550 CFS
Q50 = 675 CFS
Q100 = 800 CFS

TAILWATER @ Q25 = EL101.6
OUTLET VELOCITY @ Q25 = 5.4 FPS

HEADWATER ELEVATIONS** (AFFECTED BY LAKE CHAMPLAIN)

Lake Champlain at: Q10(101.0) Q25(101.6) Q50(101.8) Q100(102.0)

Stream Flow @	Q10	Q25	Q50	Q100
101.4	102.0	102.2	102.4	
Q25	101.8	102.4	102.6	102.8
Q50	102.2	102.8	103.0	103.3
Q100	102.6	103.3	103.3	103.4



END R.O.W. PROJECT

BHZ 1448(9) REV. STA. 108 + 12 25'RT.

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1988, FOR USE ON THESE PROJECTS, INCLUDING ALL SUBSEQUENT PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED: [Signature] DATE: 4/2/97
By: Dept. of Planning & Preconstruction

APPROVED: [Signature] DATE: 4/1/97
Chief Property Administration

ST. ALBANS
BHZ 1448(9)
SHEET 1 OF 5

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	LUNEAU, ROGER N. & CAROL A.	3	REV. 105 + 65 RT. REV. 106 + 00 RT. REV. 106 + 38 RT. REV. 106 + 93 RT. REV. 107 + 14 RT.	REV. 108 + 12 RT. REV. 106 + 31 RT. REV. 106 + 64 RT. REV. 107 + 13 RT. REV. 107 + 35 RT.	0.02 A±		EASE. TO INSTALL (T) CHANNEL (P) (110 S.F±) CHANNEL (P) (50 S.F±) EASE. TO INSTALL (T)	WDOE	8-28-91	ST. ALBANS	67	644-646	770 S.F± ARCHAEOLOGICAL FENCE ARCHAEOLOGICAL FENCE	1	3,4	Parcel No 1 Delete const. ease (T) & added archaeological fencing per Co. # 7834 Mylands to Structures 10-9-90	11-16-89	JDP	JDP
2	BOURBEAU, PAUL C. & BONNIE M.	3	REV. 105 + 88 LT. REV. 106 + 79 LT.	REV. 108 + 00 LT. REV. 106 + 89 LT.			CONST. EASE. (T) (0.03 A±) CHANNEL (P) (25 S.F±)	WDOE	1-29-91	ST. ALBANS	65	347-348	1153 S.F±						

MADE BY: A.S.J. DATE 5/6/97
CHECKED BY: J.D.P. DATE 5/6/97

DR. RT.- DRAINAGE RIGHT
DIT. RT.- DITCHING RIGHT
CH. RT.- CHANNEL RT.
DRIVE RT.- DRIVE RIGHT
CUL. RT.- CULVERT RIGHT
(D)- DEMOLITION OR REMOVAL
(W)- WATER SOURCES

--- P ---
--- L ---
(P)
(T)

PRESENT R.O.W.
TAKING WITHOUT ACCESS

TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND

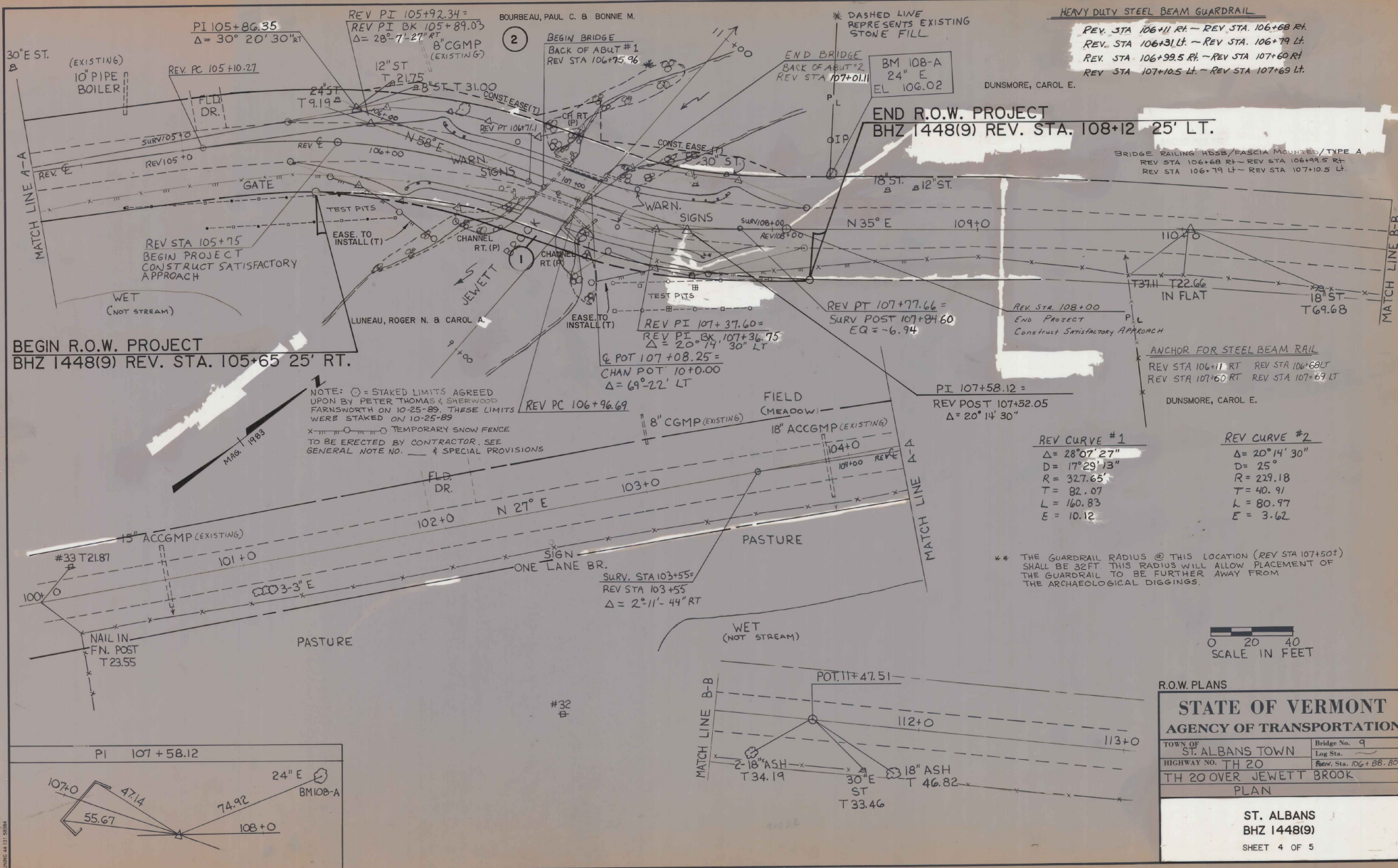
--- CONST. EASE ---
SR SR
P
L
O O O

SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

R.O.W. PLANS

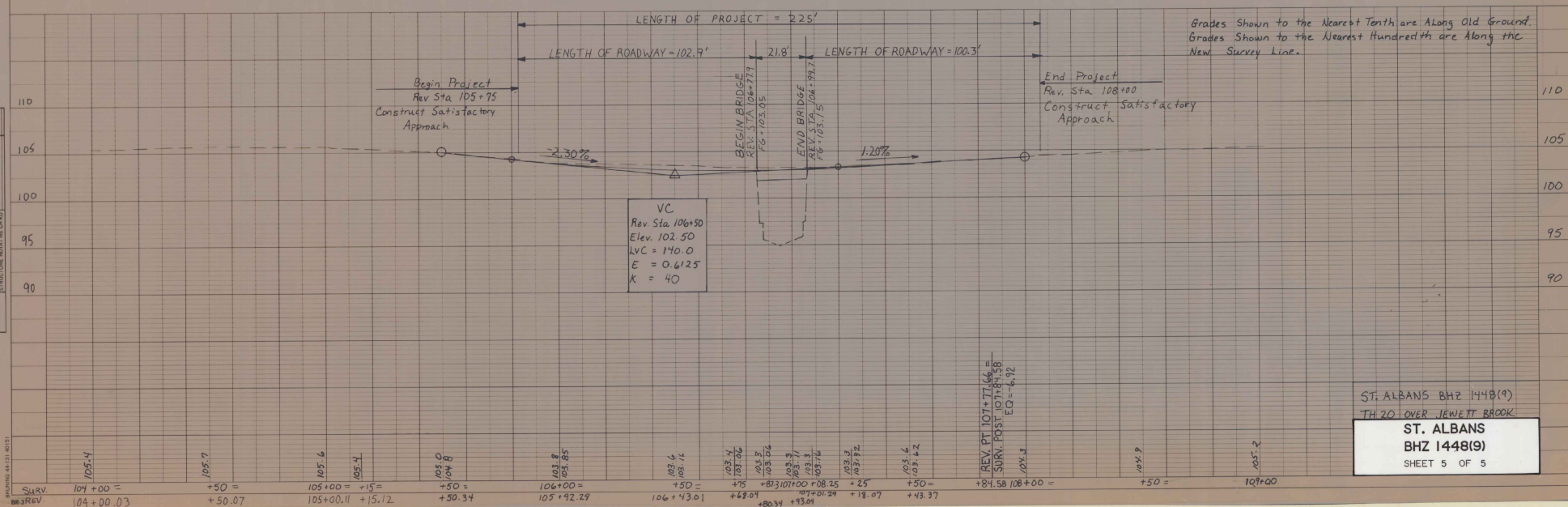
APPROVED: [Signature] DATE: 5-6-97
AGENT D. PLANS & TITLES

ST. ALBANS
BHZ 1448 (9)
SHEET 3 OF 5



PLAN	DATE	BY
DESIGNED	DATE	BY
CHECKED	DATE	BY
APPROVED	DATE	BY

PROFILE	DATE	BY
DESIGNED	DATE	BY
CHECKED	DATE	BY
APPROVED	DATE	BY



Vermont Agency of
Transportation
Phase III- Interstate
#090303-01
INITIALS ☐
Hanger 3889 NONE

ST. ALBANS
BHZ 1448(9)

1991

1991

VERMONT AGENCY OF
TRANSPORTATION
PHASE III-INTERSTATE
HANGER 3936

R.O.W.
1987

ST. Albans
B.H.Z. 1448 (9)

R.O.W.
1987