

SEE SHEET 2 FOR INDEX OF SHEETS

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWNS OF WATERBURY AND MORETOWN
COUNTY OF WASHINGTON
BRIDGE MEMBRANE & JOINT PROJECT

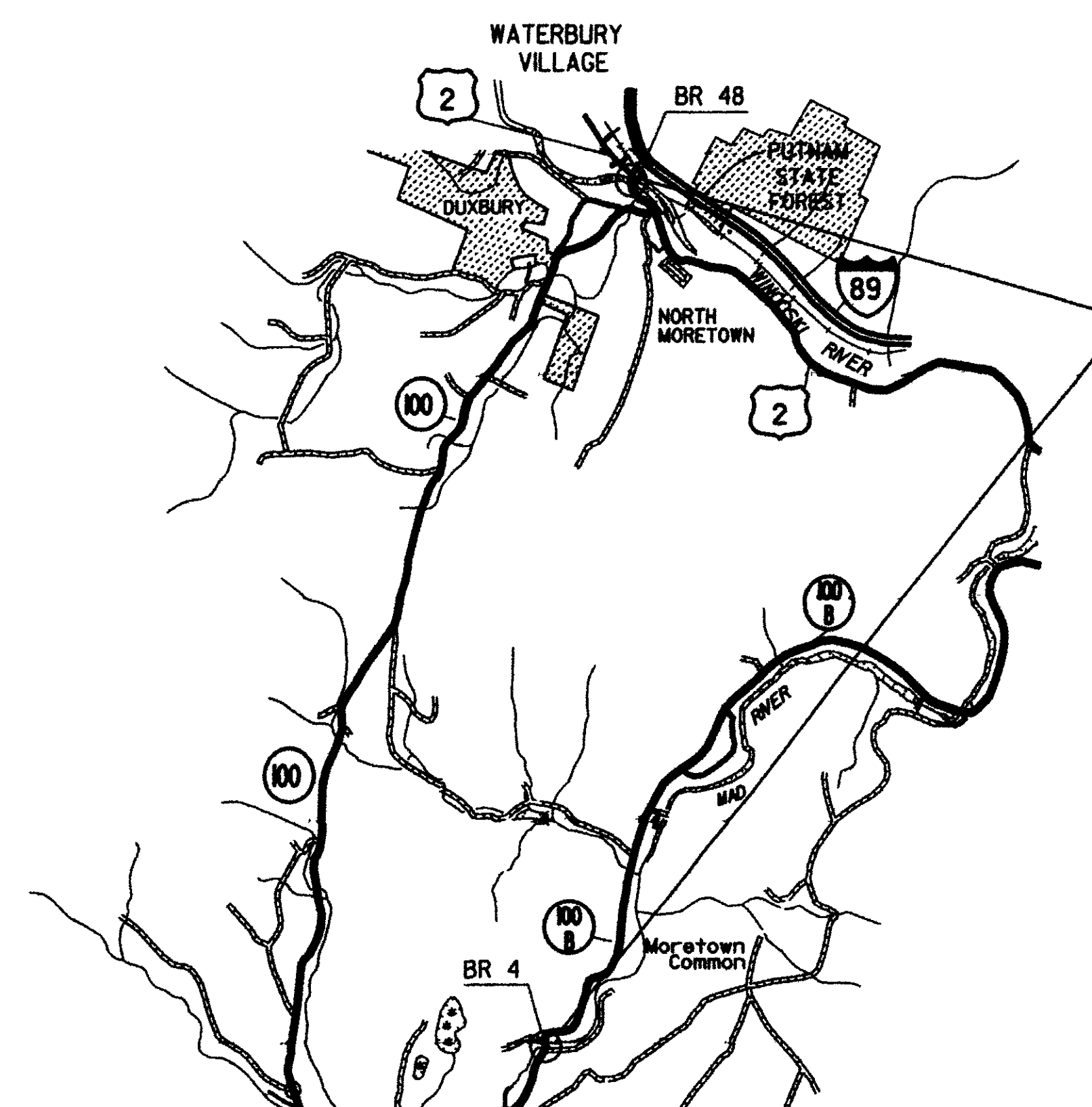
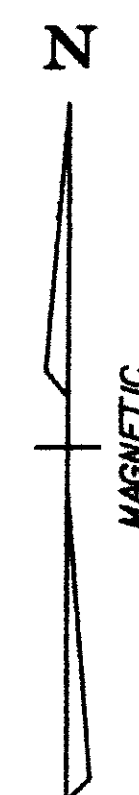
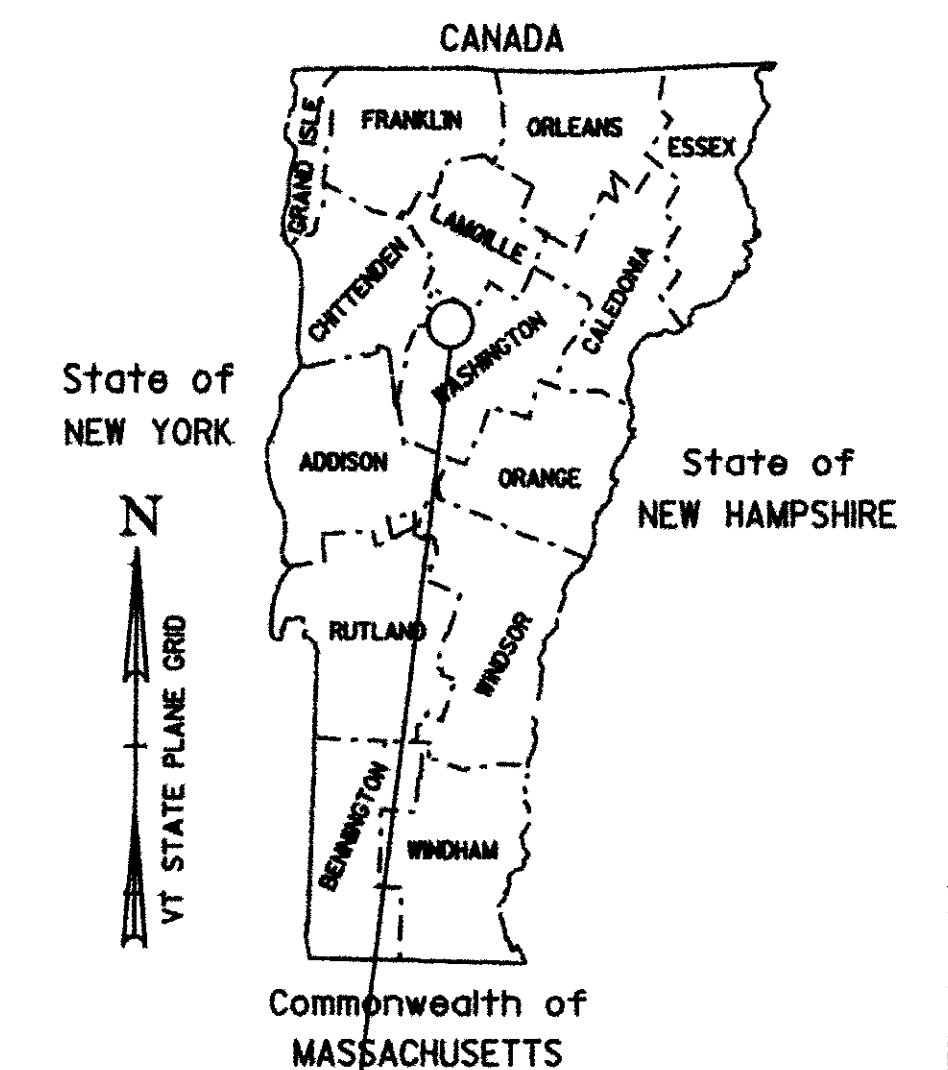
RECORD PLANS	
CONTRACTOR	A.C. PAVING CORP. - SO. BURLINGTON, VT
RESIDENT ENGINEER	TOM MANCINI
CONSTRUCTION BEGAN	MAY 27, 2009
CONSTRUCTION COMPLETE	JULY 20, 2009
RECORD PLANS BY	TOM MANCINI
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN	
BY <i>Tom Mancini</i>	RESIDENT ENGINEER
DATE 11/11/09	
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives	

PROJECT LOCATION: ROUTE US 2 BR 48 : 0.2 MILES WEST OF JUNCTION OF VT 100 AND US 2
ROUTE VT 100B BR 4 : 1.6 MILES NORTH OF JUNCTION OF VT 100 AND VT 100B

PROJECT DESCRIPTION: COLD PLANING, MEMBRANE REPLACEMENT, JOINT REHABILITATION, AND PAVING OF BRIDGE AND APPROACH SLABS.

LENGTH OF STRUCTURES: ROUTE US 2 BR 48: 277.45' ROUTE VT 100B BR 4: 198.41'

TOTAL LENGTH OF STRUCTURES: 475.86'



PROJECT LOCATION
WATERBURY-MORETOWN
BHF MEMB(12)



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PLOTTED 19-FEB-2009

BUILT AS DESIGNED

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 2/20/09
PROJECT MANAGER : C.P. WILLIAMS	
PROJECT NAME : WATERBURY-MORETOWN	
PROJECT NUMBER : BHF MEMB (12)	
SHEET 1 OF 28 SHEETS	

CONVENTIONAL SYMBOLS

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	

SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

INDEX OF SHEETS

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- 5. TRAFFIC CONTROL SHEET 2
- 6. BITUMINOUS CONCRETE REMOVAL PLAN
- 7. BITUMINOUS CONCRETE DETAILS
- 8. PAVEMENT JOINT DETAILS
- 9.-12. REFERENCE PLANS - BRIDGE 58N
- 13.-16. REFERENCE PLANS - BRIDGE 86N
- 17.-22. REFERENCE PLANS - BRIDGE 94S
- 23.-25. REFERENCE PLANS - BRIDGE 98S
- 26.-29. REFERENCE PLANS - BRIDGE 100N&S

VAOT STANDARD SHEETS

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E-100A	01/02/04
E-101	05/30/03
E-102	06/30/03
E-102A	05/01/04
E-106	03/01/04
E-107	06/30/03
E-107A	08/08/95
E-110	08/08/95
E-120	08/08/95

PROJECT NOTES

GENERAL

- 1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2006 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002, AND ITS LATEST REVISIONS.
- 2. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS.
- 3. ALL COSTS ASSOCIATED WITH PROTECTION OF TRAFFIC DURING REMOVAL OF THE BRIDGE PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10.
- 4. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE PIERS AND THE UNDERSIDE OF THE DECK. THIS WORK WILL BE PAID FOR UNDER ITEM 514.10, "WATER REPELLENT, SILANE".
- 5. FOLLOWING THE COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ALL FABRIC DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE BITUMINOUS CONCRETE REMOVAL PLAN, SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR. COST FOR FLUSHING THE FABRIC DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WILL BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.

TRAFFIC CONTROL

- 6. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON SHEETS 4 & 5 AND FOR TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING TRAFFIC BARRIERS, RETROREFLECTIVE DRUMS, SIGNS, AND SIGN POSTS WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL, ITEM 641.10.
- 7. TRAFFIC SHALL BE ALLOWED TO DRIVE ON THE BARE CONCRETE BRIDGE DECK AFTER THE REMOVAL OF THE BARRIER MEMBRANE, BUT PRIOR TO THE DECK BEING CLEANED AND PREPARED FOR THE NEW SHEET MEMBRANE. ONCE THE CONCRETE BRIDGE DECK IS PREPARED FOR THE NEW SHEET MEMBRANE, NO TRAFFIC SHALL BE ALLOWED ON THE DECK UNTIL THE FIRST LIFT OF BITUMINOUS CONCRETE PAVEMENT IS IN PLACE OVER THE ENTIRE LENGTH OF THE BRIDGE.

PAVEMENT REMOVAL NOTES

- 8. THE FINAL ONE HALF INCH OF PAVEMENT ON THE CONCRETE BRIDGE DECK AND APPROACH SLABS SHALL BE REMOVED BY LOADER, GRADER OR EQUIPMENT APPROVED BY THE ENGINEER. COLD PLANING TO REMOVE BRIDGE PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
- 9. DURING BRIDGE AND APPROACH SLAB PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING CONCRETE BRIDGE DECK AND THE EXISTING APPROACH SLABS. ANY DAMAGE TO THE CONCRETE BRIDGE DECK OR APPROACH SLABS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 580.
- 10. CARE SHALL BE TAKEN TO PROTECT ANY SCUPPERS OR DROP INLETS AT ALL STAGES OF CONSTRUCTION. ANY DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.

- 11. AFTER THE REMOVAL OF THE BRIDGE PAVEMENT, THE BARRIER MEMBRANE SHALL BE REMOVED AND THE CONCRETE BRIDGE DECK SHALL BE CLEANED AND PREPARED IN ACCORDANCE WITH SUBSECTION 580.04 AND TO THE SATISFACTION OF THE ENGINEER. REMOVAL OF THE BARRIER MEMBRANE AND THE CLEANING AND PREPARATION OF THE CONCRETE BRIDGE DECK WILL BE PAID FOR UNDER ITEM 580.16, "SURFACE PREPARATION FOR MEMBRANE".
- 12. ONCE THE BARRIER MEMBRANE IS REMOVED, ANY AREAS ON THE CONCRETE BRIDGE DECK THAT ARE FOUND TO BE UNSOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO HOW TO REPAIR THE DETERIORATED PORTION OF THE CONCRETE BRIDGE DECK AND THE LIMITS OF THE REPAIR.
- 13. UPON THE ENGINEER'S APPROVAL OF THE CONCRETE BRIDGE DECK'S CONDITION, ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 519.

PAVEMENT NOTES

- 14. FOLLOWING THE INSTALLATION OF THE NEW SHEET MEMBRANE WATERPROOFING ON THE CONCRETE BRIDGE DECK, THE CONCRETE BRIDGE DECK AND THE AT-GRADE APPROACH SLABS SHALL BE PAVED WITH ITEM 406.27, MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT IN TWO 1 1/4" LIFTS (SEE TYPICAL APPROACH SECTION ON SHEET 7). THE PAVEMENT SHALL BE TYPE IVS FOR BOTH LIFTS, NO EXCEPTIONS.
- 15. CARE SHALL BE EXERCISED TO SMOOTHLY TRANSITION THE NEW BRIDGE PAVEMENT INTO THE EXISTING PAVEMENT. ANY COLD PLANING NECESSARY FOR SHAPING BRIDGE APPROACHES SHALL BE PAID FOR UNDER ITEM 210.10, "COLD PLANING, BITUMINOUS PAVEMENT".
- 16. TESTING FOR PAVEMENT DENSITY WILL REQUIRE CORES OF THE PAVEMENT ON THE BRIDGE. THE COST FOR THIS WORK WILL BE INCIDENTAL TO ITEM 406.27, MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT. ANY DAMAGE TO THE NEW SHEET MEMBRANE CAUSED BY CORING THE PAVEMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.

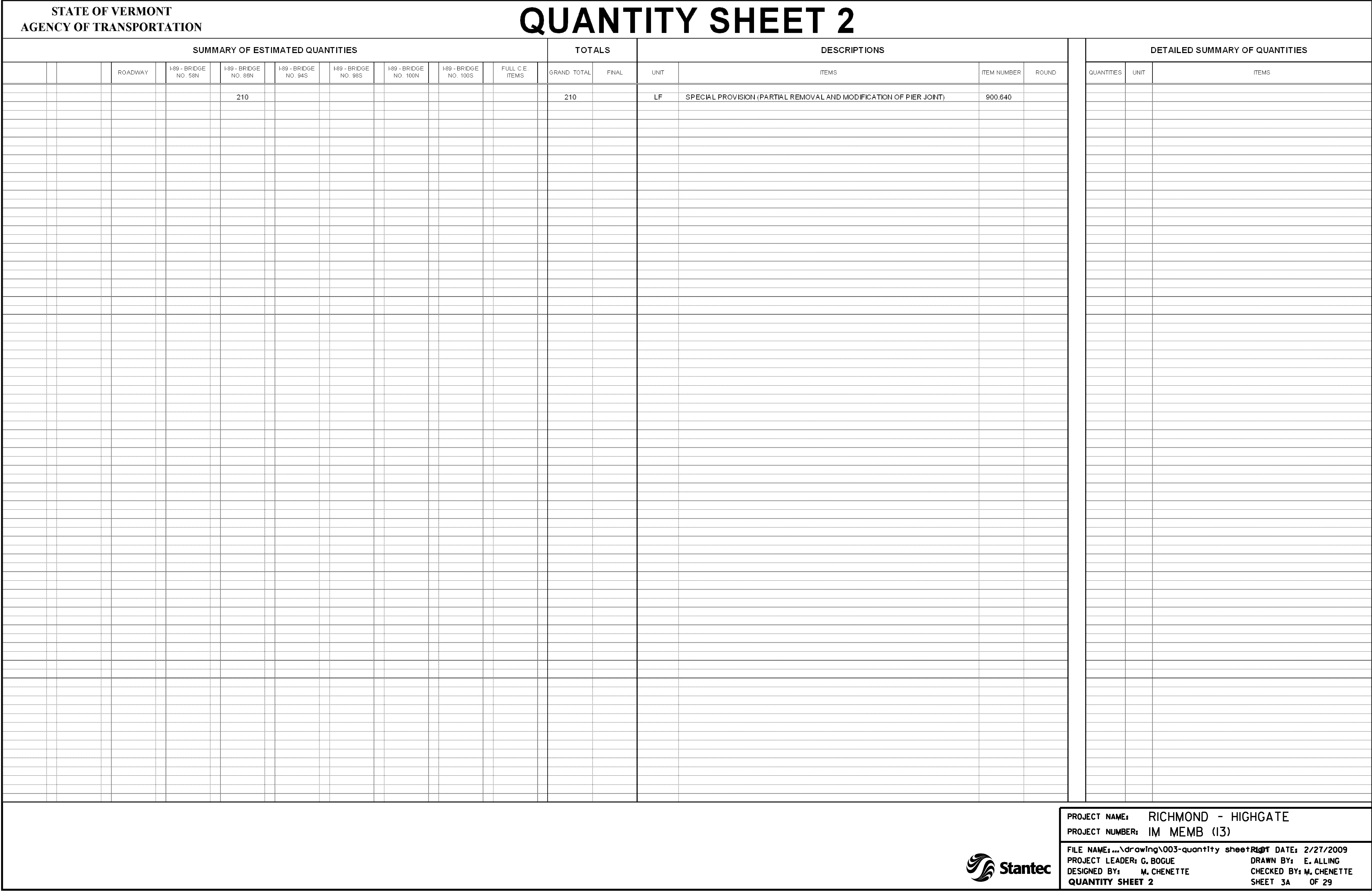
WORK AROUND RAILROAD TRACKS

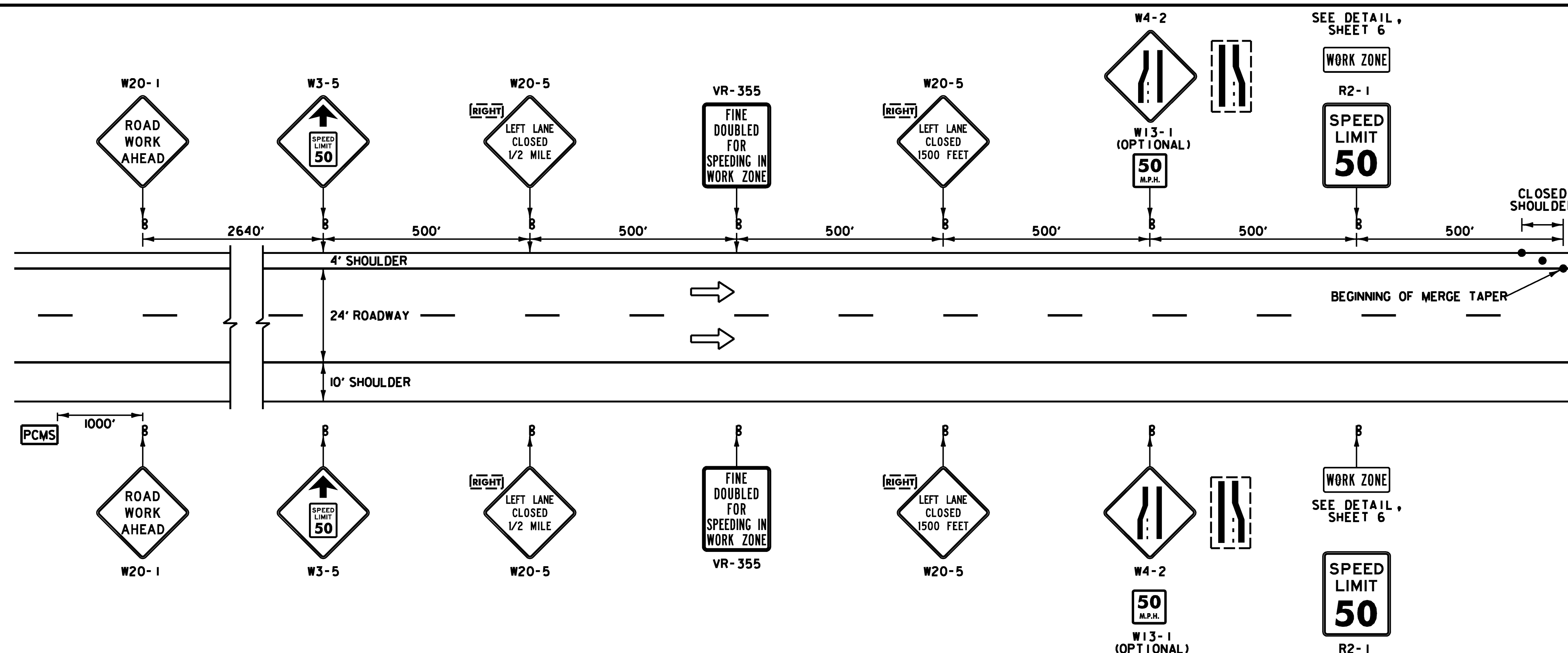
- 17. THE CONTRACTOR MUST KEEP ALL EQUIPMENT OVER 25 FEET HORIZONTALLY AWAY FROM THE CENTERLINE OF THE RAILROAD TRACKS, EXCEPT EQUIPMENT THAT IS TRAVELING ON THE BRIDGE DECK.
- 18. THE CONTRACTOR SHALL NOT APPLY SILANE TO THE FASCIA AREAS OF SPAN NO. 4 (SPAN OVER THE RAILROAD) ON BRIDGE NO. 86 NORTH.



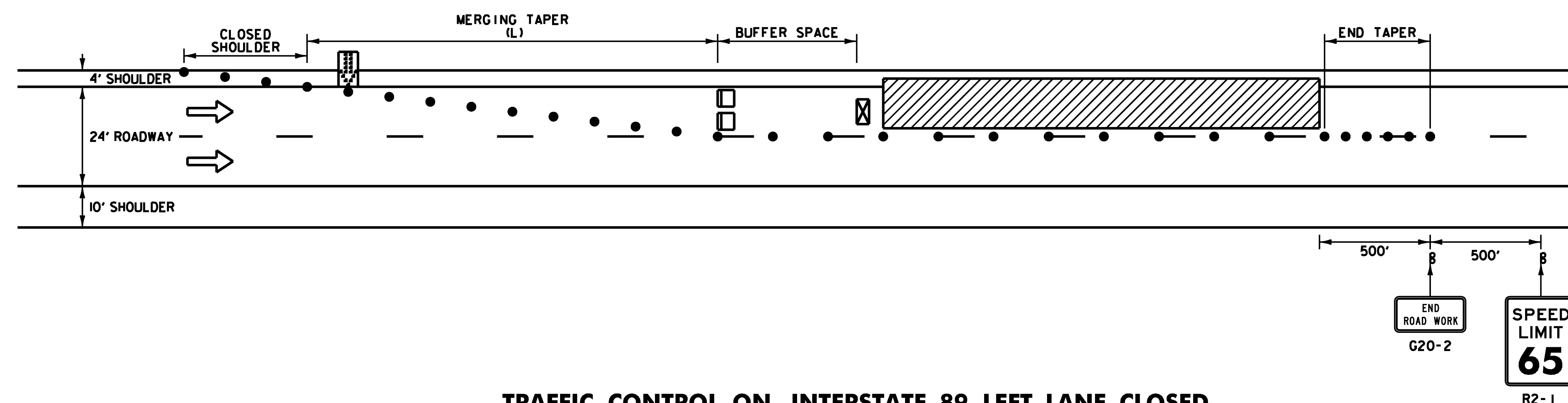
PROJECT NAME:	RICHMOND - HIGHGATE
PROJECT NUMBER:	IM MEMB (13)
FILE NAME:	...\\drawing\\002-Br Notes.dgn
PROJECT LEADER:	G. BOGUE
DESIGNED BY:	M. CHENETTE
INDEX OF SHEETS AND PROJECT NOTES	SHEET 2 OF 29
PLOT DATE:	2/27/2009
DRAWN BY:	E. ALLING
CHECKED BY:	M. CHENETTE

STATE OF VERMONT AGENCY OF TRANSPORTATION												QUANTITY SHEET 1									
SUMMARY OF ESTIMATED QUANTITIES												TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
			ROADWAY	I-89 - BRIDGE NO. 58N	I-89 - BRIDGE NO. 86N	I-89 - BRIDGE NO. 94S	I-89 - BRIDGE NO. 98S	I-89 - BRIDGE NO. 100N	I-89 - BRIDGE NO. 100S	FULL C.E. ITEMS		GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	
			1									1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22					
				145	406	259	175	87	87			1159		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10					
				3	5	2	2	2	2			16		CWT	EMULSIFIED ASPHALT	404.65					
				296	423	126	118	168	168			1299		TON	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT	406.27					
				1	1	1	1	1	1			6		LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	406.29					
			1									1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50					
				53	55	20	16	26	26			196		GAL	WATER REPELLENT, SILANE	514.10					
					270	38	120	90	90			608		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10					
				1860	2507	490	540	990	990			7377		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20					
				60	60	76	60	60	60			376		LF	JOINT SEALER, HOT POURED	524.11					
				1924	2571	566	604	1054	1054			7773		SY	REMOVAL OF BRIDGE PAVEMENT	529.10					
							27					27		SY	REMOVAL OF CONCRETE OR MASONRY	529.26					
				10	10	2	2	2	2			28		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I	580.10					
				10	10	2	2	2	2			28		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II	580.11					
				1	2				1			4		CY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III	580.12					
				16740	22560	4408	4860	8910	8910			66388		SF	SURFACE PREPARATION FOR MEMBRANE	580.16					
				10	10	10	10	10	10			60		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20					
				120	180	60	60	60	60			540		HR	TRUCK-MOUNTED ATTENUATOR	608.45					
				150	150	150	150	150	150			900		LF	TEMPORARY TRAFFIC BARRIER	621.90					
				150	150	150	150	150	150			900		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95					
				120	180	60	60	60	60			540		HR	UNIFORMED TRAFFIC OFFICERS	630.10					
										1		1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17					
			1									1		LS	MOBILIZATION/DEMOBILIZATION	635.11					
								1				1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 100N)	641.10					
									1			1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 100S)	641.10					
				1								1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 58N)	641.10					
					1							1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 86N)	641.10					
						1						1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 94S)	641.10					
							1					1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 98S)	641.10					
				1	1	1	1	1	1			6		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15					
				1	1	1	1	1	1			6		EACH	PORTABLE ARROW BOARD	641.16					
				785	1165	295	328	434	434			3441		LF	6 INCH WHITE LINE	646.214					
				628	932	241	262	347	347			2757		LF	6 INCH YELLOW LINE	646.215					
				785	1165	295	328	434	434			3441		LF	TEMPORARY 6 INCH WHITE LINE	646.620					
				1175	1175	1175	1175	1175	1175			7050		LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621					
				628	932	241	262	347	347			2757		LF	TEMPORARY 6 INCH YELLOW LINE	646.630					
				1175	1175	1175	1175	1175	1175			7050		LF	TEMPORARY 6 INCH YELLOW LINE, TYPE II TAPE	646.631					
				59	88	23	25	33	33			261		EACH	LINE STRIPING TARGETS	646.76					
				75	75	75	75	75	75			450		SF	PAVEMENT MARKING MASK	646.86					
			1									1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50					
																PROJECT NAME: RICHMOND - HIGHGATE PROJECT NUMBER: IM MEMB (13) FILE NAME: ...drawing\003-quantity sheet1.dwg PROJECT LEADER: G. BOGUE DESIGNED BY: M. CHENETTE QUANTITY SHEET 1					
																DRAWN BY: E. ALLING CHECKED BY: M. CHENETTE SHEET 3 OF 29					

[illegible][illegible][illegible][illegible]



CONSTRUCTION APPROACH SIGNING ON INTERSTATE 89 LEFT LANE CLOSED



TRAFFIC CONTROL ON INTERSTATE 89 LEFT LANE CLOSED

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- PORTABLE ARROW BOARD
- TYPE III BARRICADE
- WORK AREA
- TRUCK/TRAILOR MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15)

POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	320	160	1:9	305	40	80
45	150	540	270	1:9	360	45	90
50	170	600	300	1:11	425	50	100
55	185	660	330	1:13	495	55	110
60	200	720	360	1:13	570	60	120
65	215	780	390	1:13	645	65	130

TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$ FOR POSTED SPEEDS OF 45 MPH OR GREATER
 $L = WS^2/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS

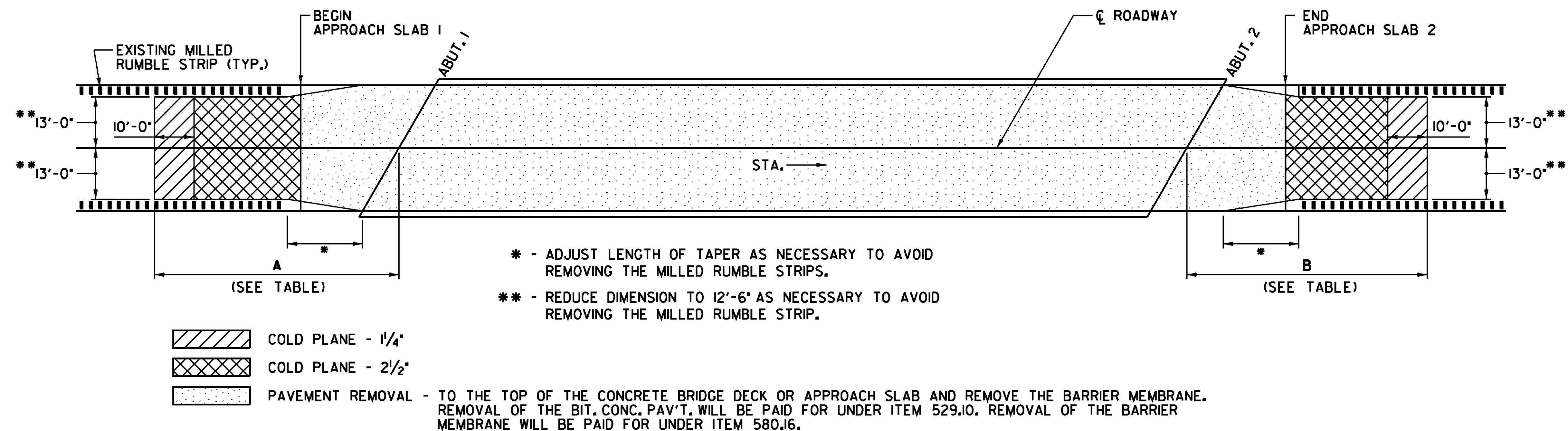
L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET, (TYPICAL)
S = POSTED SPEED IN MPH

TRAFFIC CONTROL NOTES:

- THE LEFT LANE CLOSURE IS SHOWN. THE RIGHT LANE APPROACH SIGNING IS SIMILAR. THE RIGHT LANE CLOSURE IS SHOWN ON TRAFFIC CONTROL SHEET 2.
- THE EXISTING SPEED LIMIT IS 65 MPH. THE SPEED LIMIT WILL BE REDUCED TO 50 MPH IN THE WORK ZONE FOR THIS PROJECT. ANY EXISTING SPEED LIMIT SIGNS WITHIN THE SPEED REDUCTION AREA SHALL BE COMPLETELY COVERED.
- SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
- ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM TYPE VI.
- SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES. DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK, EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL.
- PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
- WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
- THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF RIGHT AND LEFT LANES ON PROJECT BEFORE WORK COMMENCES.
- THE NUMBER OF CHANNELIZING DEVICES, TYPE THREE BARRICADE AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
- PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY AND THEN START THE END TAPER. THE END TAPER SHALL BE CONSTRUCTED OF 5 ADDITIONAL RETROREFLECTIVE DRUMS SPACED AT 10 FEET ON CENTER.
- THE ARROW BOARD SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, OR IF PRACTICAL FURTHER FROM THE TRAVELED LANE AT THE END OF THE SHOULDER TAPER.
- THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.55 OF THE MUTCD. THE PCMS SHALL READ "LEFT (OR RIGHT) LANE CLOSED AHEAD, PLEASE MERGE EARLY".
- TRAVEL LANE SHALL BE 12 FEET WIDE.
- THE CONTRACTOR SHALL REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH THIS SHEET. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS DURING NON-WORK PERIODS, AND PROTECTED BY BARRELS OR CONES.

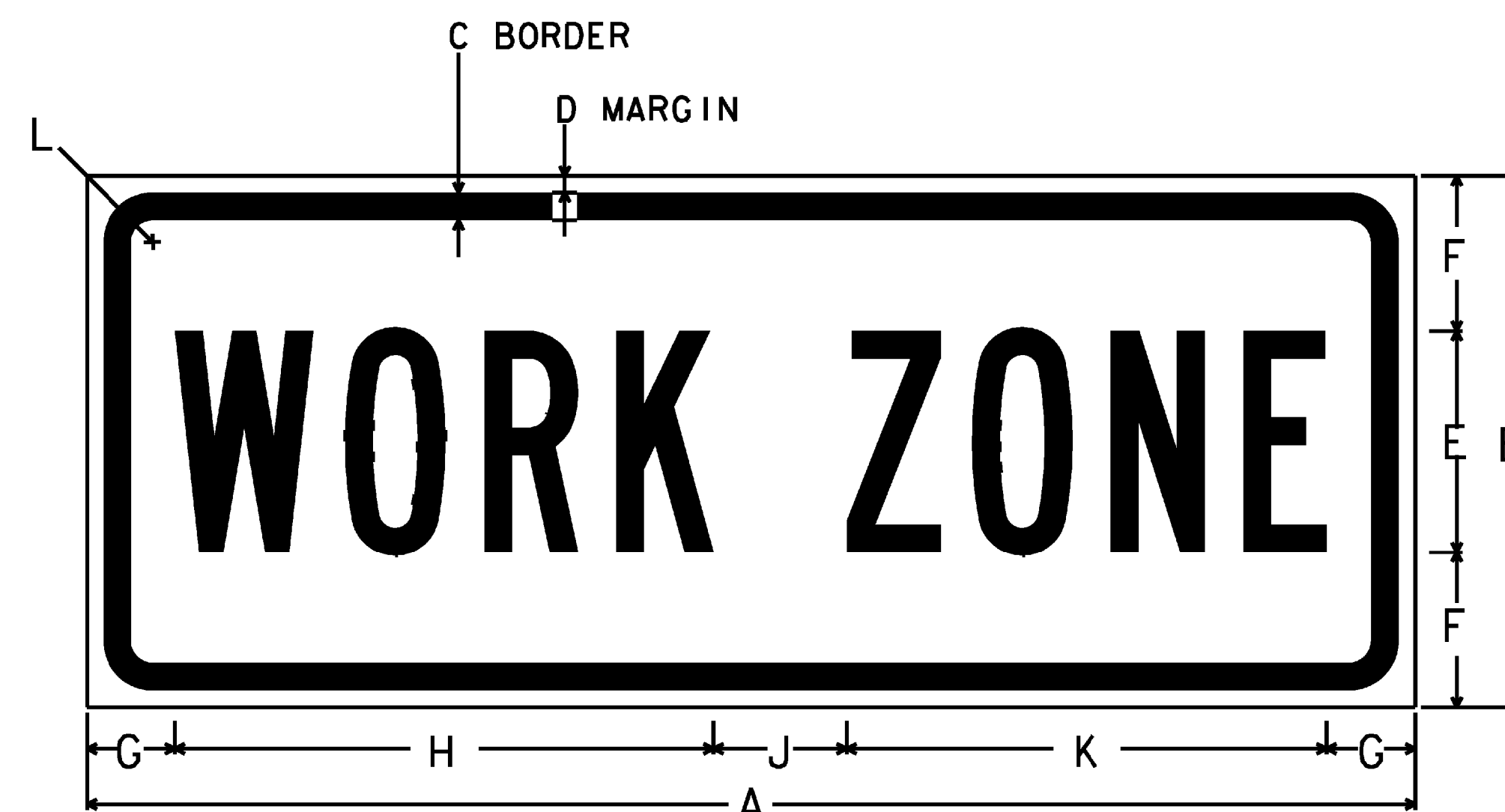


PROJECT NAME:	RICHMOND - HIGHGATE	
PROJECT NUMBER:	IM MEMB (13)	
FILE NAME:	...drawing\004-TCS 1.dgn	PLOT DATE: 2/26/2009
PROJECT LEADER:	G. BOGUE	DRAWN BY: E. ALLING
DESIGNED BY:	M. CHENETTE	CHECKED BY: M. CHENETTE
TRAFFIC CONTROL SHEET 1		SHEET 4 OF 29



BITUMINOUS CONCRETE REMOVAL PLAN

NOT TO SCALE



DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L
MIN.	24	8	0.375	0.375	4B	2	2	9.5	2	8.5	1.5
SPEC.	30	12	0.375	0.625	5B	3.5	2	12.2	3	8.5	1.5
EXPWY.	36	12	0.50	0.75	6B	3	2.5	14.8	3	8.5	1.875
FWY.	48	18	0.625	0.875	8B	4	3.5	19.1	4	8.5	2.25

WORK ZONE SIGN DETAIL

NOT TO SCALE

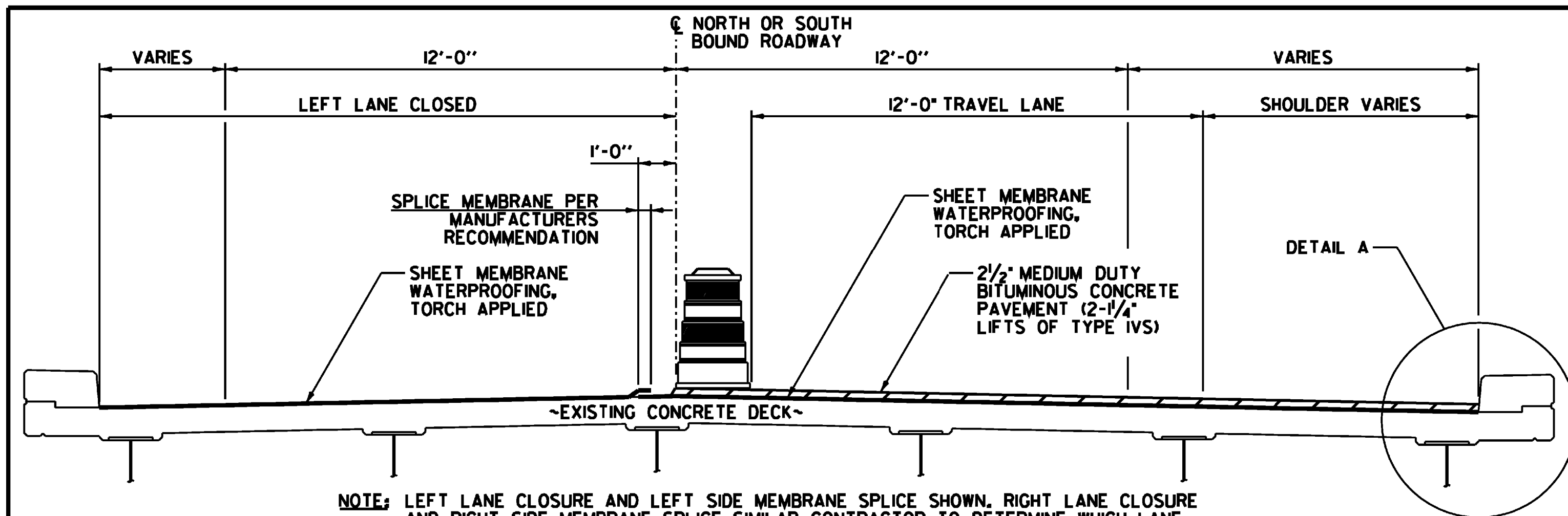
NOTE:

THE SIGN IS TO HAVE A BLACK LEGEND ON AN ORANGE BACKGROUND RETROFLECTIVE THAT IS ASTM TYPE 7, 8 OR 9. THE TEXT IS TO BE "B-TYPE".

BRIDGE NO.	A (FT)	B (FT)
58N	0	70.0
86N	114.0	80.0
94S	75.0	50.0
98S	60.0	50.0
100N	60.0	0
100S	60.0	0

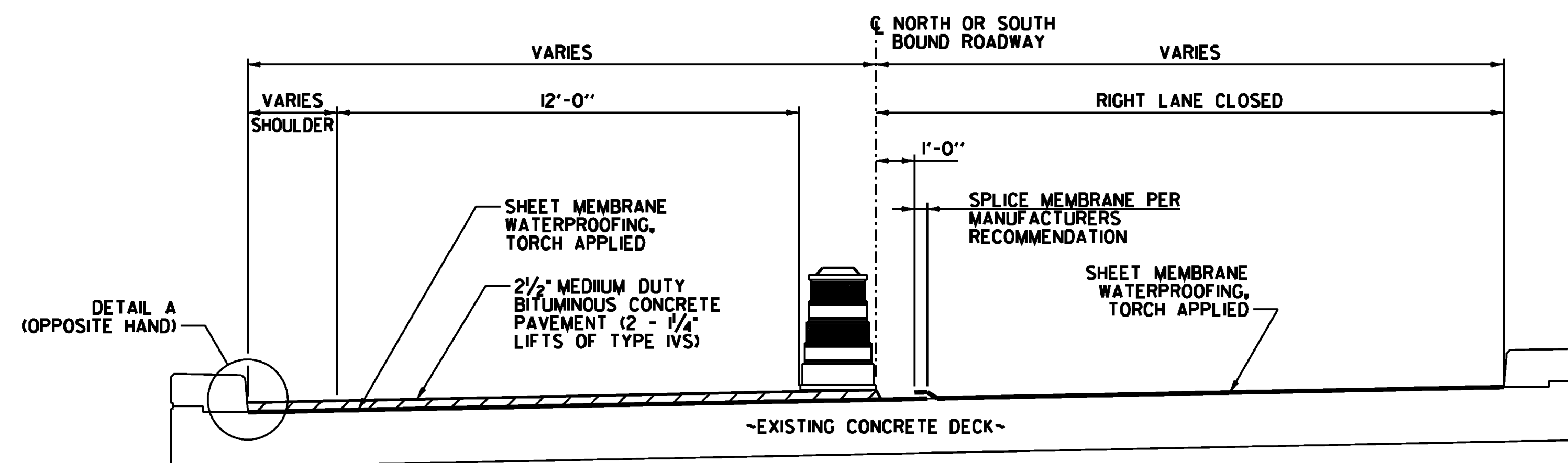


PROJECT NAME:	RICHMOND - HIGHGATE	
PROJECT NUMBER:	IM MEMB (I3)	
FILE NAME:	...006-Conc Remov Plan.dgn	PLOT DATE: 2/26/2009
PROJECT LEADER:	G. BOGUE	DRAWN BY: E. ALLING
DESIGNED BY:	M. CHENETTE	CHECKED BY: M. CHENETTE
BITUMINOUS CONCRETE REMOVAL PLAN		SHEET 6 OF 29



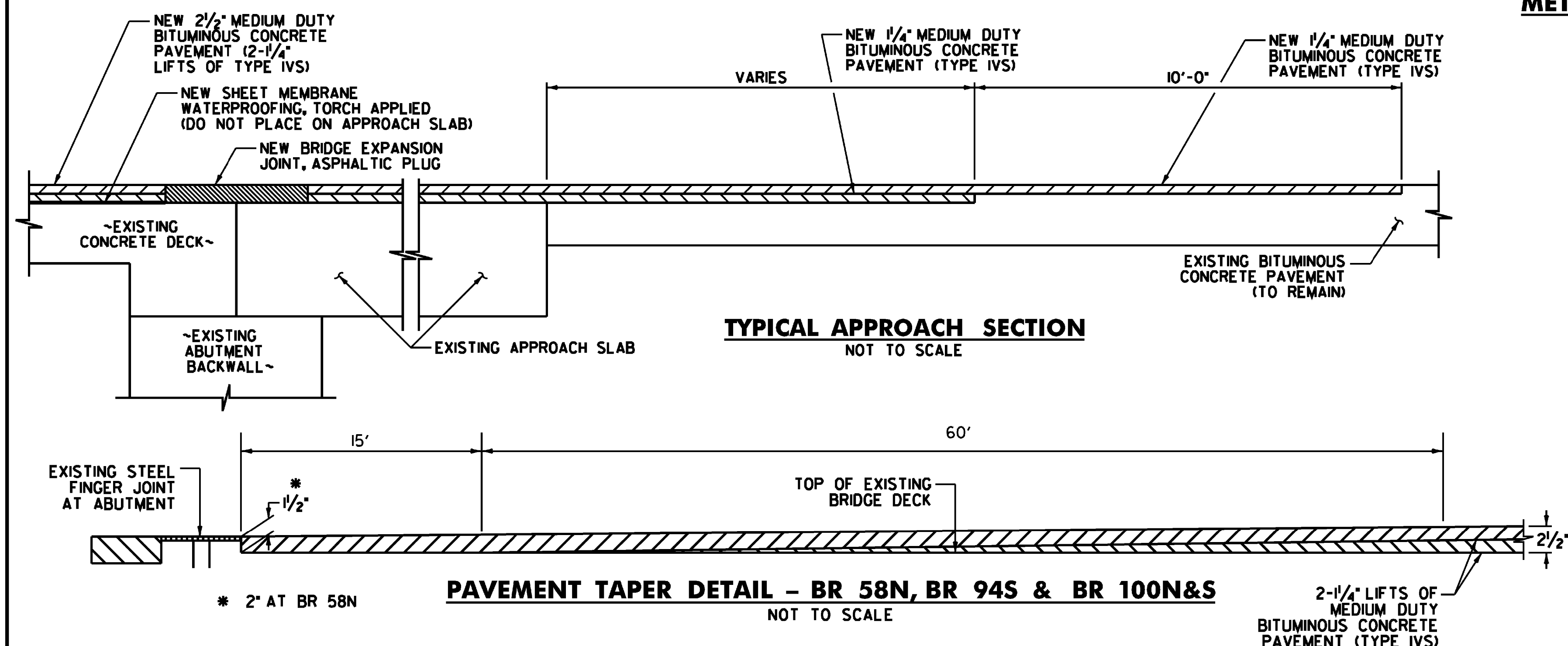
NOTE: LEFT LANE CLOSURE AND LEFT SIDE MEMBRANE SPICE SHOWN. RIGHT LANE CLOSURE AND RIGHT SIDE MEMBRANE SPICE SIMILAR. CONTRACTOR TO DETERMINE WHICH LANE THE MEMBRANE SPICE SHALL OCCUR IN UNLESS THE BRIDGE IS SUPERELEVATED. BRIDGES WITH SUPERELEVATION SHALL HAVE THE MEMBRANE PLACED AS SHOWN ON THE SUPERELEVATED DETAIL.

MEMBRANE SPICE DETAIL - NORMAL CROWN ROADWAY
NOT TO SCALE

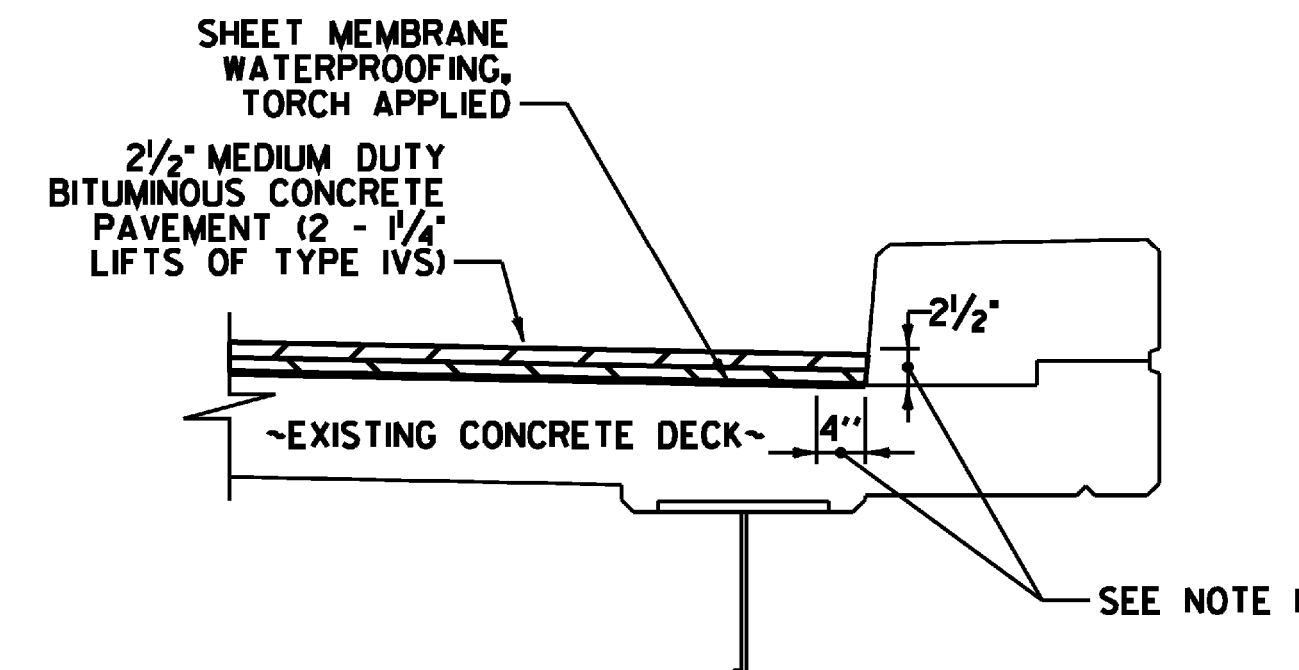


NOTE: RIGHT LANE CLOSURE AND RIGHT SIDE MEMBRANE SPICE SHOWN. LEFT LANE CLOSURE AND LEFT SIDE MEMBRANE SPICE SIMILAR. PLACEMENT OF THE MEMBRANE SHALL START AT THE LOW SIDE OF THE BRIDGE. THE SPICE SHALL BE AS SHOWN ABOVE, WITH THE HIGH SIDE OVERLAPPING THE LOW SIDE.

MEMBRANE SPICE DETAIL - SUPERELEVATED ROADWAY
NOT TO SCALE



PAVEMENT TAPER DETAIL - BR 58N, BR 94S & BR 100N&S
NOT TO SCALE

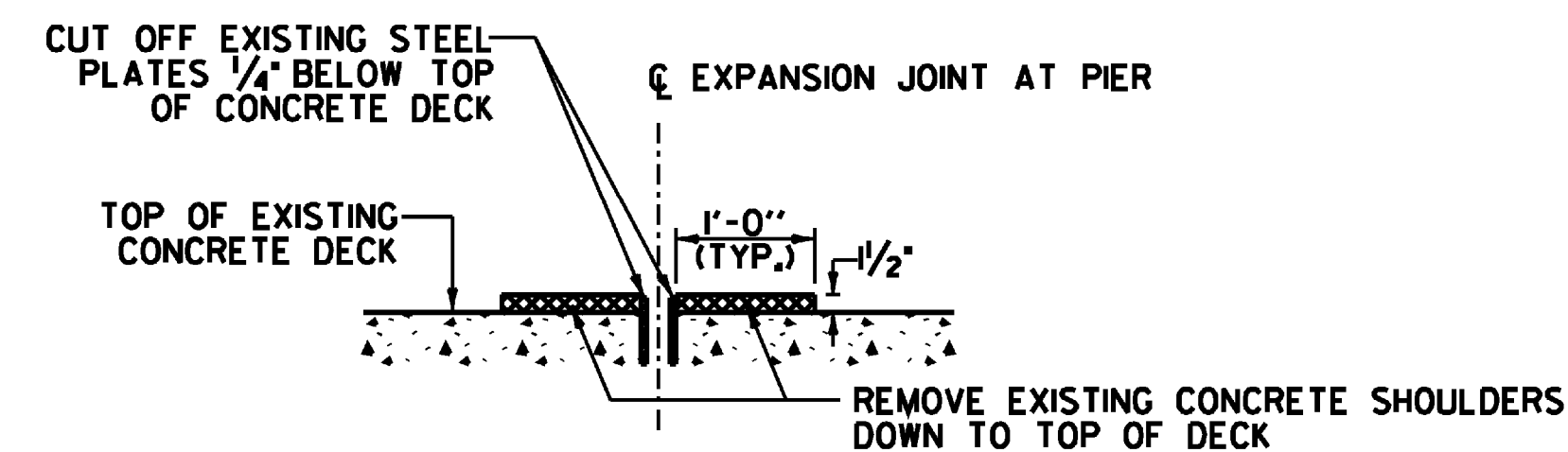


DETAIL A
NOT TO SCALE

DETAIL A NOTES:

- INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.
- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.
- SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
- IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 519.04, BLAST CLEAN 2 1/2" UP THE FACE OF CURB PRIOR TO PLACING THE MEMBRANE.
- REMOVE EXISTING CONCRETE SHOULDER, APPROXIMATELY 1 1/2" HIGH BY 1'-6" WIDE, LOCATED ON THE EAST SIDE OF BRIDGE BR 98S, PRIOR TO INSTALLING MEMBRANE. PAYMENT WILL BE MADE UNDER ITEM 529.26 "REMOVAL OF CONCRETE OR MASONRY".

NOTE: FOR PG BINDER GRADE SEE SECTION 406 OF THE GENERAL SPECIAL PROVISIONS.



NOTE:

- DETAIL TYPICAL FOR JOINTS OVER PIERS AT BRIDGE BR 86N.
- STEEL PLATE AND CONCRETE REMOVAL WORK WILL BE PAID FOR UNDER ITEM 900.640 SPECIAL PROVISION (PARTIAL REMOVAL AND MODIFICATION OF PIER JOINT).
- INSTALL NEW EXPANSION JOINT, ASPHALTIC PLUG TYPE, AT MODIFIED JOINT LOCATIONS.

METAL PLATE JOINT MODIFICATION DETAIL - BR 86N
NOT TO SCALE

BRIDGE LENGTH AND WIDTH (CURB TO CURB)

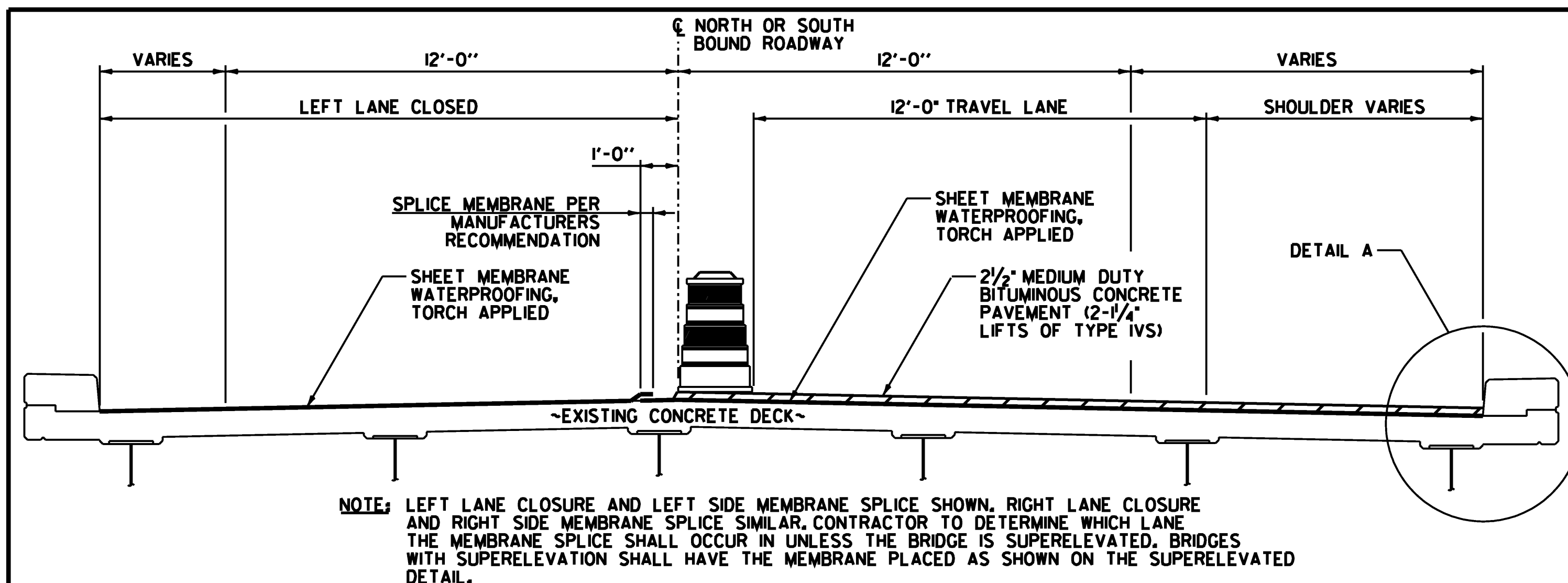
	WIDTH (CURB TO CURB) (FEET)	LENGTH (FEET)
58 NORTH	30.0	558
86 NORTH	30.0	752-754.9
94 SOUTH	38.0	116
98 SOUTH	30.0	162
100 NORTH	30.0	297
100 SOUTH	30.0	297

ASPHALTIC PLUG JOINT REPLACEMENT SCHEDULE

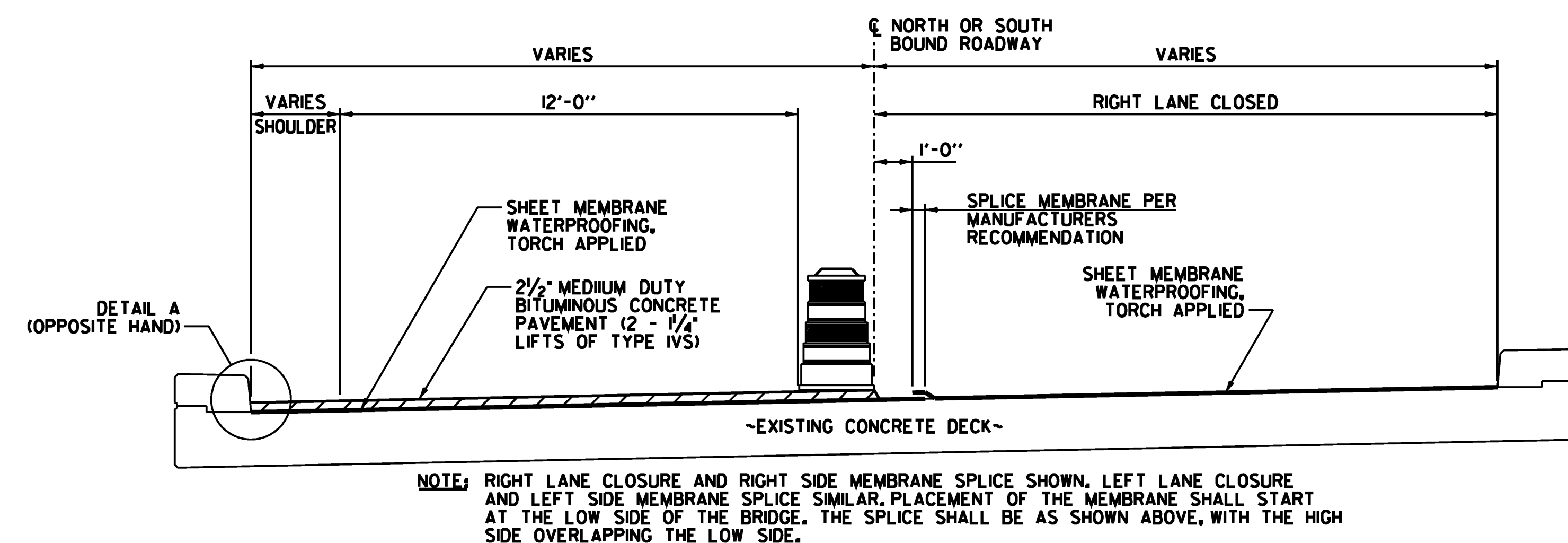
BRIDGE NO.	ABUT. 1	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	ABUT. 2
58 NORTH	--	30.1--	30.3--	--	30.1--	--	--	--	--
86 NORTH	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF
94 SOUTH	29.67--	28.75	28.42	--	--	--	--	37.9	38.0 LF
98 SOUTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	30.0 LF
100 NORTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	--
100 SOUTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	--



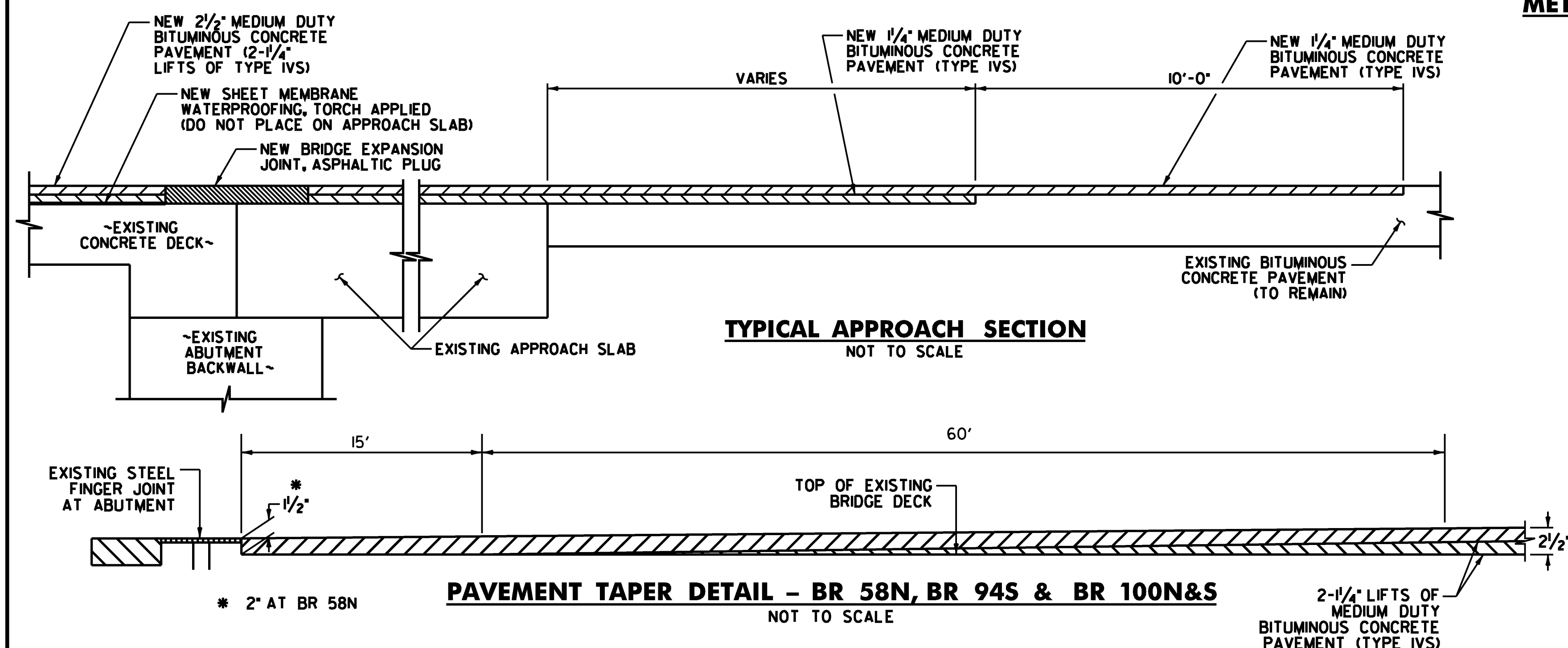
PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM MEMB (13)
FILE NAME: ...drawing\007-Bit Conc Dets.dwg
PROJECT LEADER: G. BOGUE
DESIGNED BY: M. CHENETTE
BITUMINOUS CONCRETE DETAILS
DRAWN BY: E. ALLING
CHECKED BY: M. CHENETTE
SHEET 7 OF 29



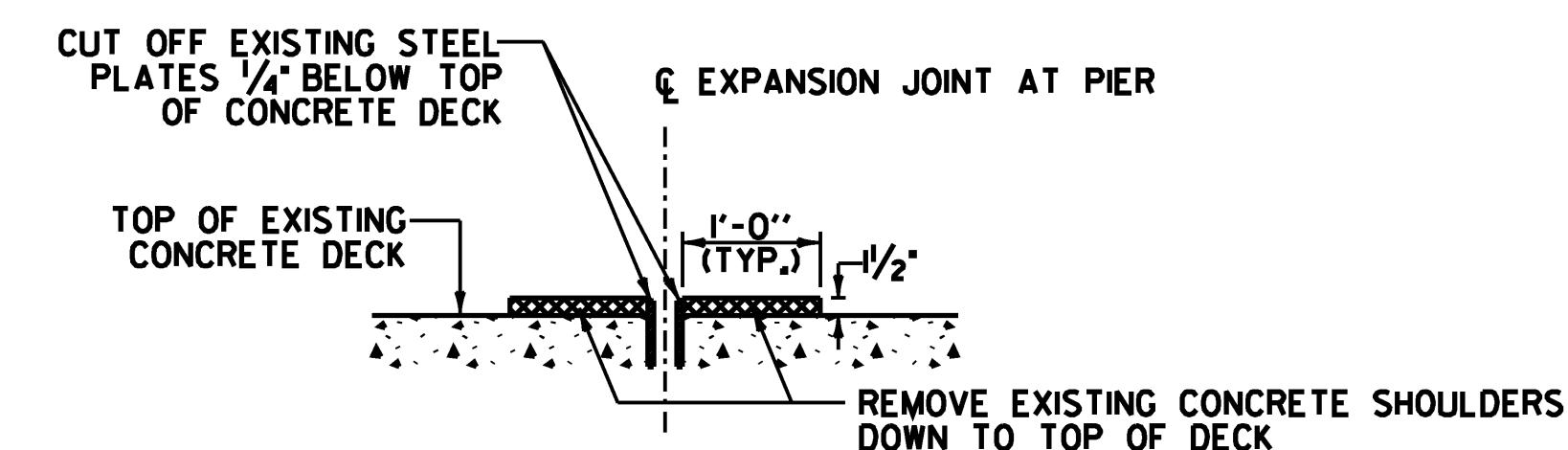
MEMBRANE SPLICE DETAIL - NORMAL CROWN ROADWAY
NOT TO SCALE



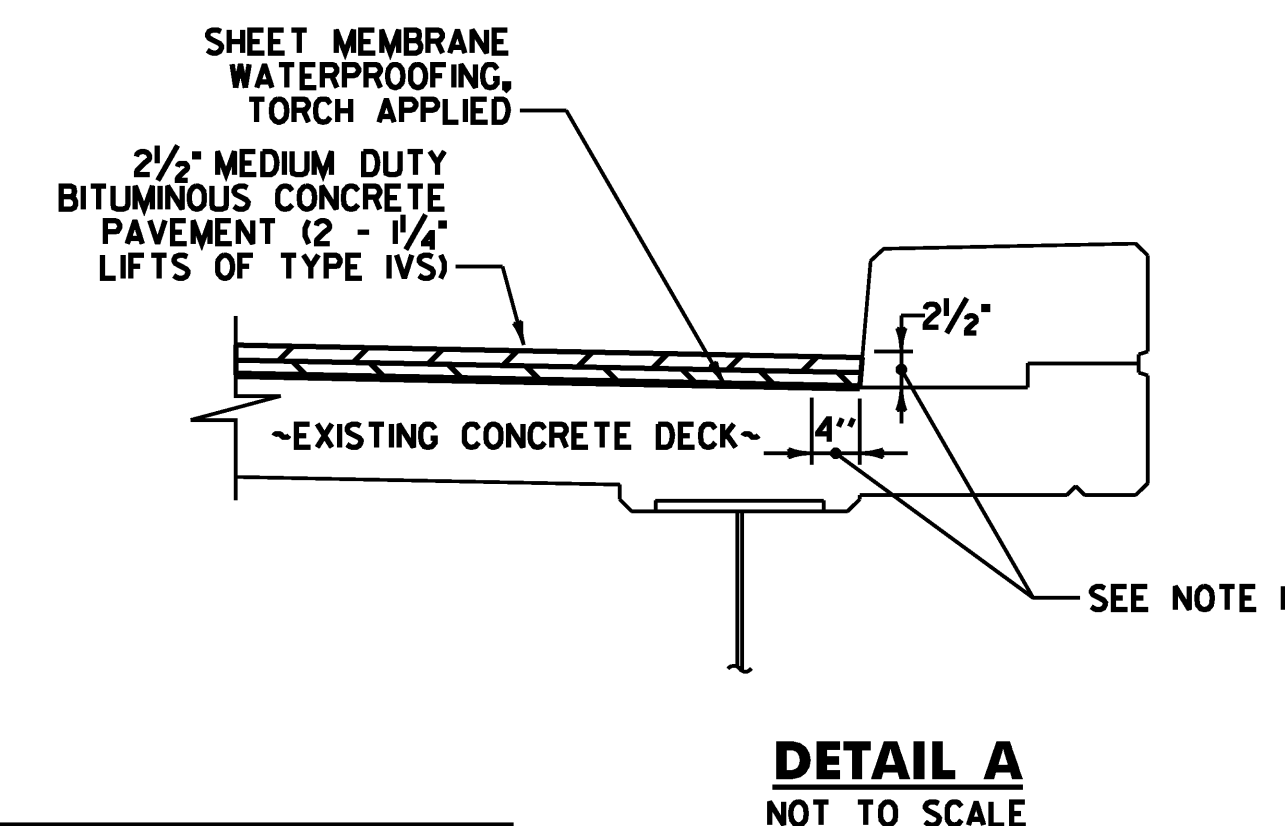
MEMBRANE SPLICE DETAIL - SUPERELEVATED ROADWAY
NOT TO SCALE



NOTE: FOR PG BINDER GRADE
SEE SECTION 406 OF
THE GENERAL SPECIAL
PROVISIONS.



METAL PLATE JOINT MODIFICATION DETAIL - BR 86N
NOT TO SCALE



DETAIL A NOTES:

- INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.
- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.
- SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
- IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 519.04, BLAST CLEAN 2 1/2" UP THE FACE OF CURB PRIOR TO PLACING THE MEMBRANE.
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**BRIDGE LENGTH AND WIDTH
(CURB TO CURB)**

	WIDTH (CURB TO CURB) (FEET)	LENGTH (FEET)
58 NORTH	30.0	558
86 NORTH	30.0	752
94 SOUTH	38.0	116
98 SOUTH	30.0	162
100 NORTH	30.0	297
100 SOUTH	30.0	297

**ASPHALTIC PLUG JOINT
REPLACEMENT SCHEDULE**

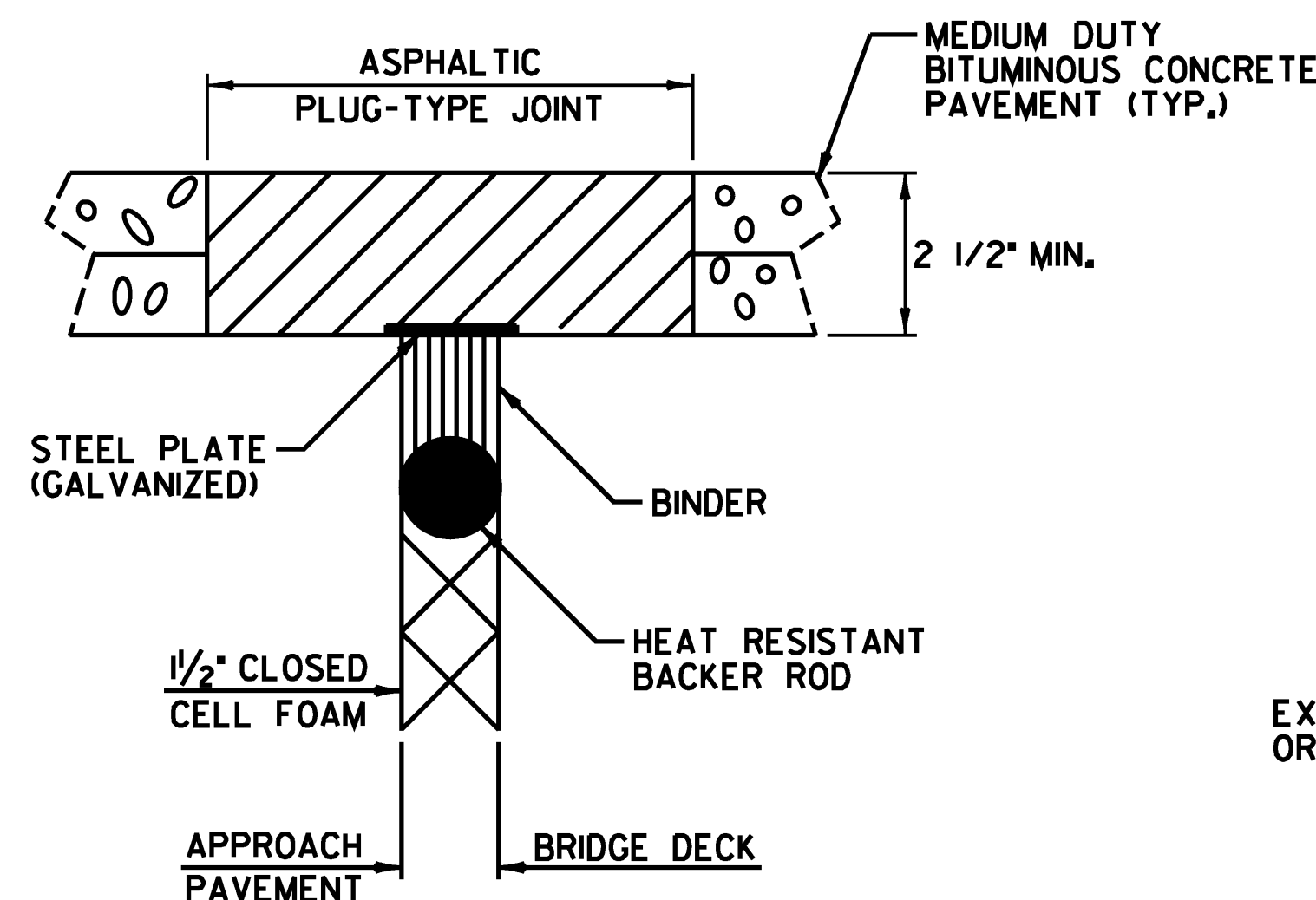
BRIDGE NO.	ABUT. 1	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	ABUT. 2
58 NORTH	--	--	--	--	--	--	--	--	--
86 NORTH	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF	30.0 LF
94 SOUTH	--	--	--	--	--	--	--	--	38.0 LF
98 SOUTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	30.0 LF
100 NORTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	--
100 SOUTH	30.0 LF	30.0 LF	30.0 LF	--	--	--	--	--	--

PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM MEMB (13)

FILE NAME: ...drawing\007-Bit Conc Dets.dwg
PROJECT LEADER: G. BOGUE
DESIGNED BY: M. CHENETTE
BITUMINOUS CONCRETE DETAILS

DATE: 2/26/2009
DRAWN BY: E. ALLING
CHECKED BY: M. CHENETTE
SHEET 7 OF 29





ASPHALTIC PLUG-TYPE JOINT DETAIL

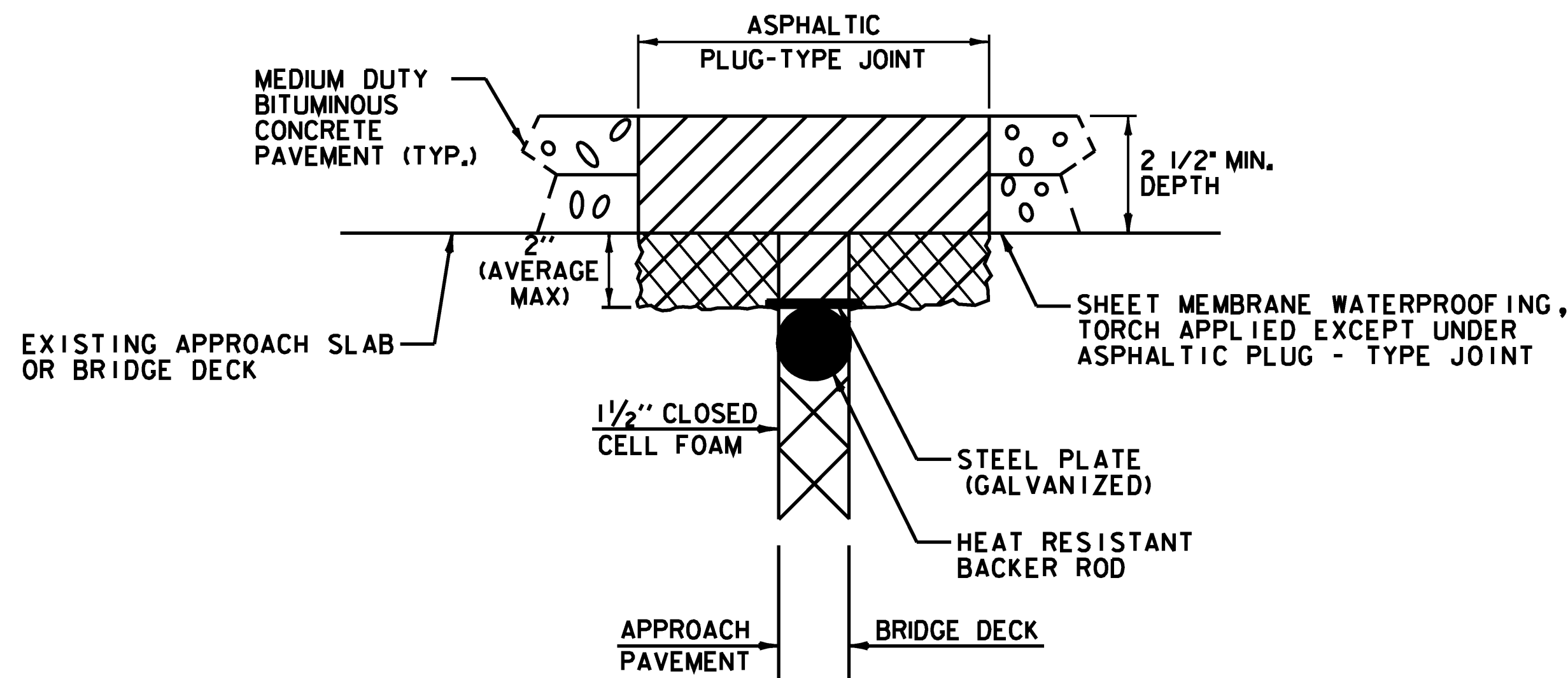
NOTES:

1. THE JOINT SHALL BE LOCATED CENTRALLY OVER THE DECK EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. THE JOINT SHALL BE EXCAVATED AS SHOWN ON THE PLANS BY USE OF SAWS AND PNEUMATIC HAMMER OR A HAMMER AND CHISEL.
3. THE JOINT AREA SHALL BE BLAST CLEANED OF DEBRIS AND ASPHALT. THE JOINT AREA SHALL BE THOROUGHLY DRIED USING HOT COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. SPALLED AND DEFECTIVE CONCRETE SHALL BE REPAIRED WITH AN APPROVED MATERIAL AS AGREED UPON BY THE RESIDENT ENGINEER.
5. PROPERLY SIZED HEAT RESISTANT BACKER ROD SHALL BE PLACED IN THE MOVEMENT GAP ALLOWING FOR 1 INCH +/- OF BINDER ABOVE THE ROD.
6. THE BINDER MATERIAL SHALL BE HEATED AND PLACED AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE 1/4 INCH THICK BY 8 INCH WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRESTAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.
 - A. THE STEEL PLATES MAY BE OMITTED WHERE THE APPROACH SLAB IS COVERED WITH A STONE BASE OR BITUMINOUS PAVEMENT AND VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.
8. THE BINDER MATERIAL AND AGGREGATE SHALL BE HEATED AND MIXED AS RECOMMENDED BY THE MANUFACTURER.
9. THE INSTALLATION OF MATERIAL, COMPACTION, AND TOPCOATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOPCOATING, AN ANTI-SKID MATERIAL SHALL BE CAST OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. JOINT SHALL BE PROTECTED FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 125°F ±.

WEATHER LIMITATIONS

BINDER MATERIAL SHALL BE APPLIED ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL:

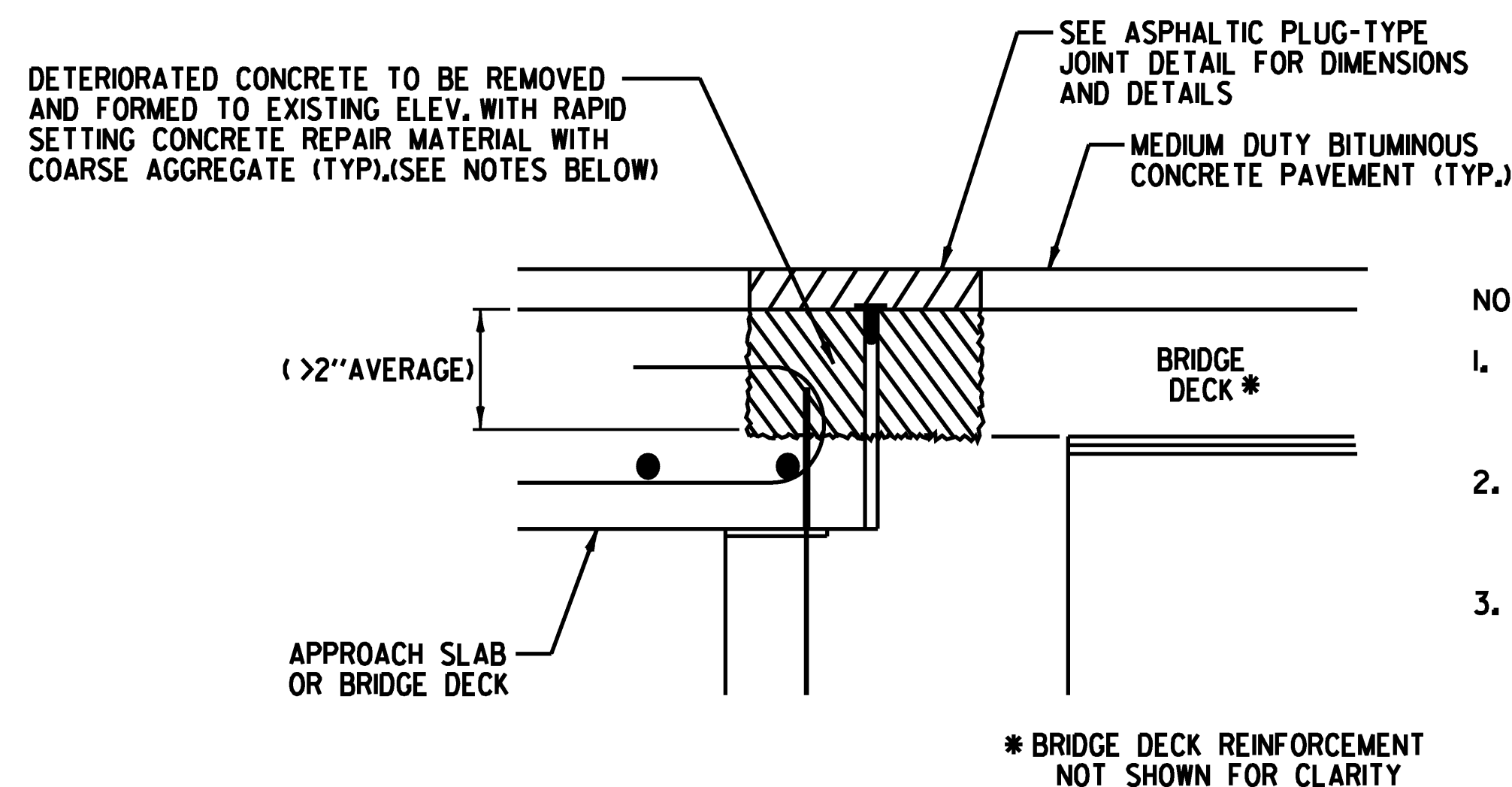
- A. THE AMBIENT AIR TEMPERATURE IS AT LEAST 50°F AND RISING.
- B. THE ROAD SURFACE IS SUFFICIENTLY DRY.
- C. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



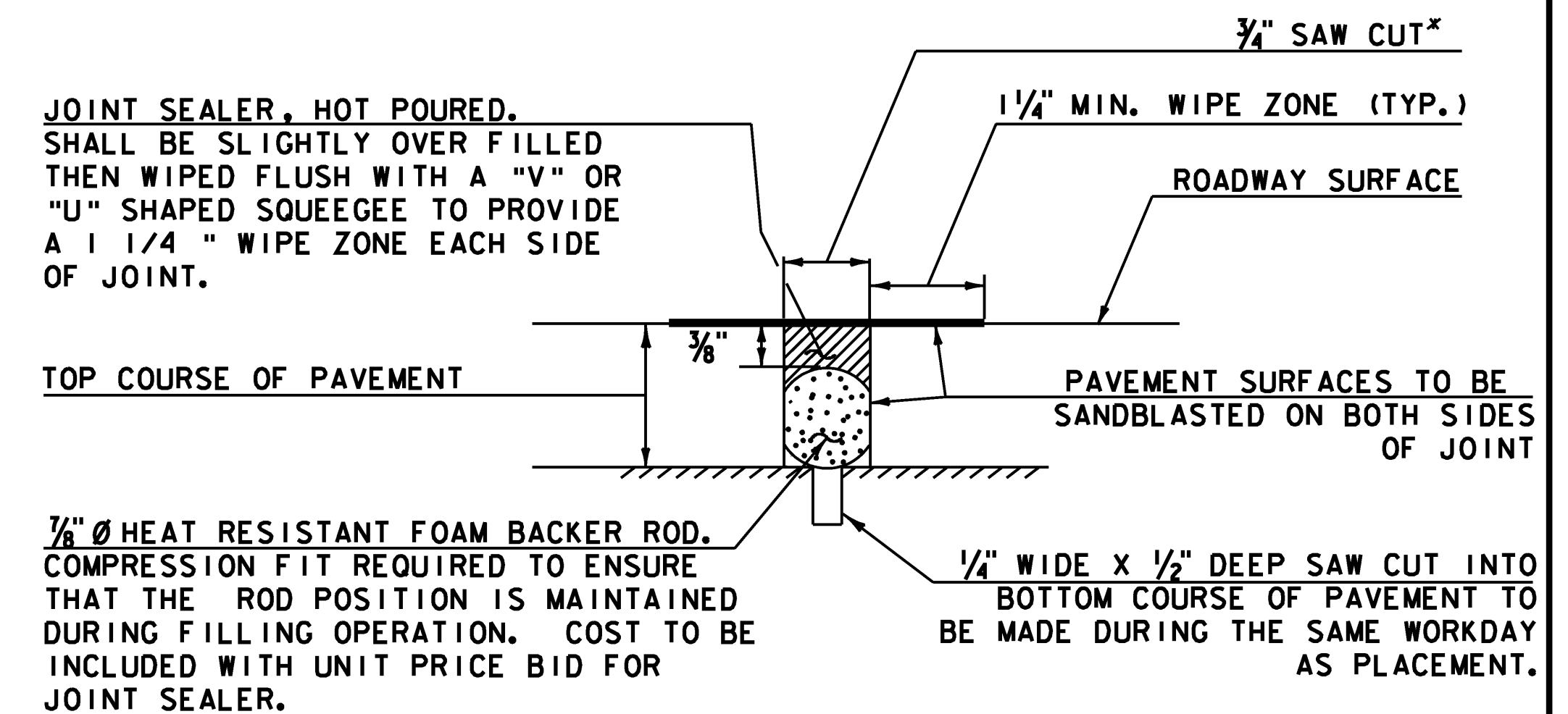
ASPHALTIC PLUG-TYPE JOINT DETAIL REMOVAL OF UP TO 2" DETERIORATED CONCRETE

NOTES:

1. UPON ENCOUNTERING UP TO 2" AVERAGE OF DETERIORATED CONCRETE, THE CONTRACTOR SHALL REMOVE THE DETERIORATED MATERIAL AND REPLACE IT WITH THE ASPHALTIC PLUG JOINT MATERIAL AS DIRECTED BY THE RESIDENT ENGINEER.
2. REMOVAL OF THE DETERIORATED CONCRETE WILL NOT BE PAID SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR ITEM 516.10. THE ADDITIONAL PLUG JOINT MATERIAL BELOW THE DESIGN DEPTH REQUIRED TO REPLACE THE DETERIORATED CONCRETE WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR THE ITEM 516.10.
3. THE STEEL PLATE IN THE ASPHALTIC PLUG JOINT MAY BE OMITTED ONLY IF THE REPAIRED SURFACE IS SO IRREGULAR IT WILL CAUSE VERTICAL MOVEMENT AND IT IS DIRECTED BY THE RESIDENT ENGINEER.



ASPHALTIC PLUG-TYPE JOINT DETAIL REMOVAL OF >2" DETERIORATED CONCRETE



NOTE: PLACE JOINT SEALER, HOT POURED AT THE BEGINNING OF APPROACH SLABS.

SAWED PAVEMENT JOINT DETAIL N. T. S.

* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. 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.

NOTES:

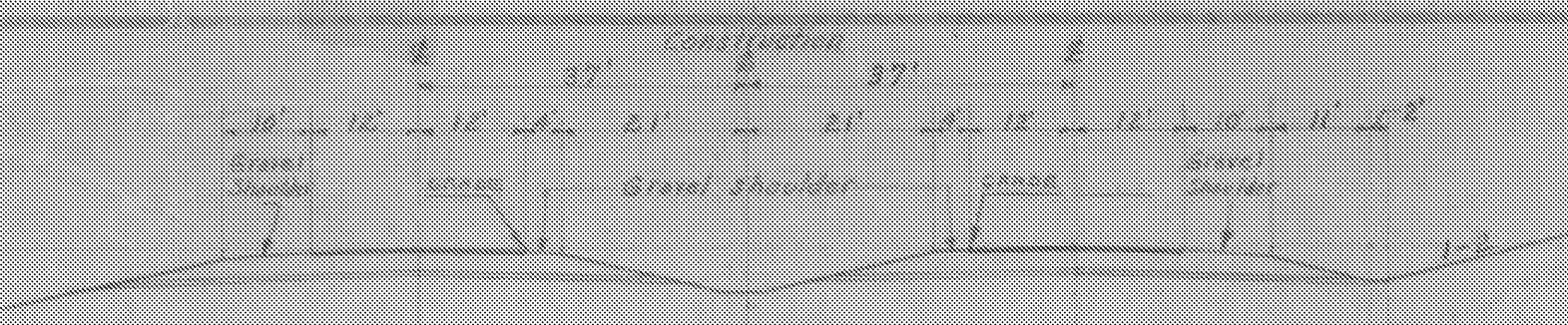
1. UPON ENCOUNTERING GREATER THAN 2" AVERAGE OF DETERIORATED CONCRETE, THE CONTRACTOR SHALL REMOVE THE DETERIORATED MATERIAL AND REPLACE IT WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
2. REMOVAL OF THE DETERIORATED CONCRETE WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
3. THE STEEL PLATE IN THE ASPHALTIC PLUG JOINT MAY BE OMITTED ONLY IF THE REPAIRED SURFACE IS SO IRREGULAR IT WILL CAUSE VERTICAL MOVEMENT AND IT IS DIRECTED BY THE RESIDENT ENGINEER.



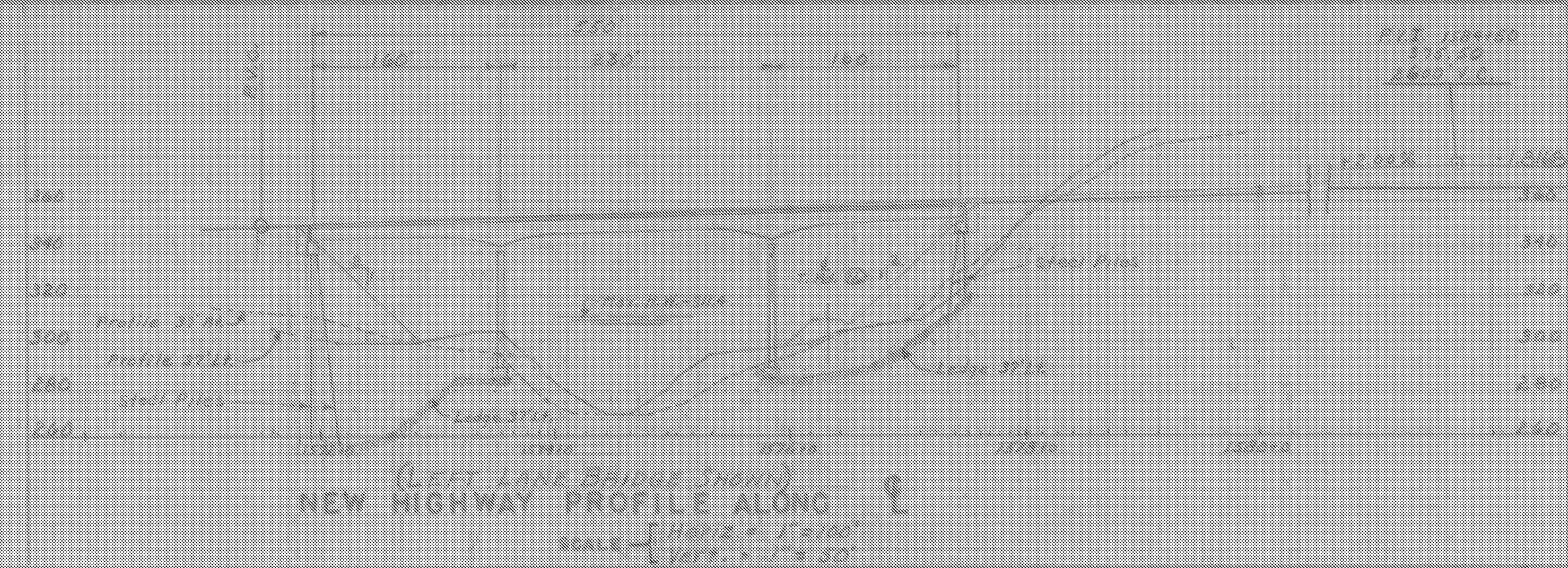
PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM MEMB (13)

FILE NAME: ...drawing\008-Pvmt Jt Dets.dwg
PROJECT LEADER: G. BOGUE
DESIGNED BY: M. CHENETTE
PAVEMENT JOINT DETAILS

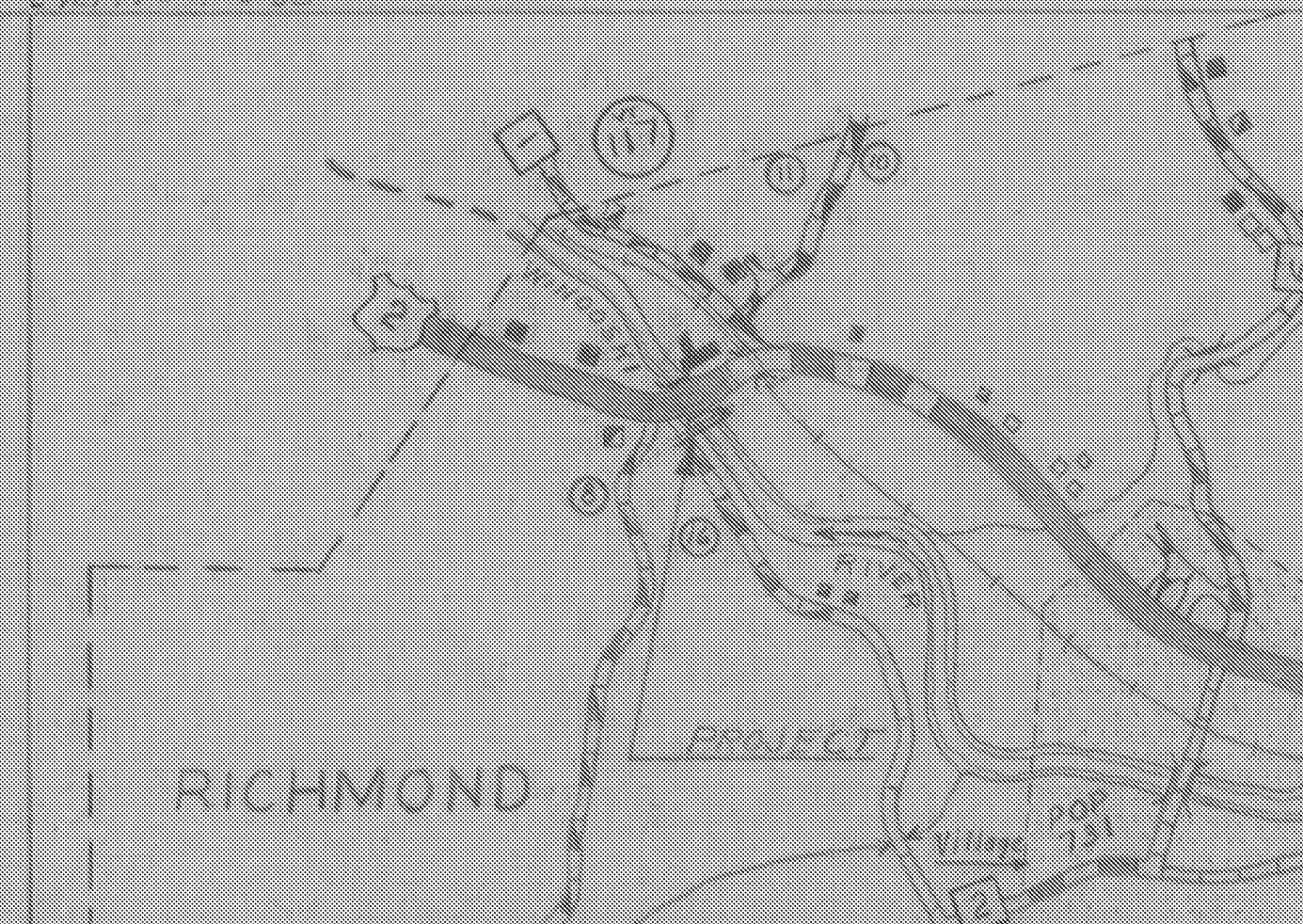
DATE: 2/26/2009
DRAWN BY: E. ALLING
CHECKED BY: M. CHENETTE
SHEET 8 OF 29



NEW HIGHWAY SECT. STA. 1570 TO STA. 1578
SCALE 1" = 20'



(LEFT LANE BRIDGE SHOWN)
NEW HIGHWAY PROFILE ALONG C
SCALE - Horiz. 1" = 100'
Vert. 1" = 50'



HIGHWAY NO.	NAME OF HIGHWAY
STRUCTURE NO.	COUNTY CHITTENDEN TOWN RICHMOND
PROJECT NO. I-83-2(1)	LOCATION Windock River, 2 miles downstream from Richmond village.

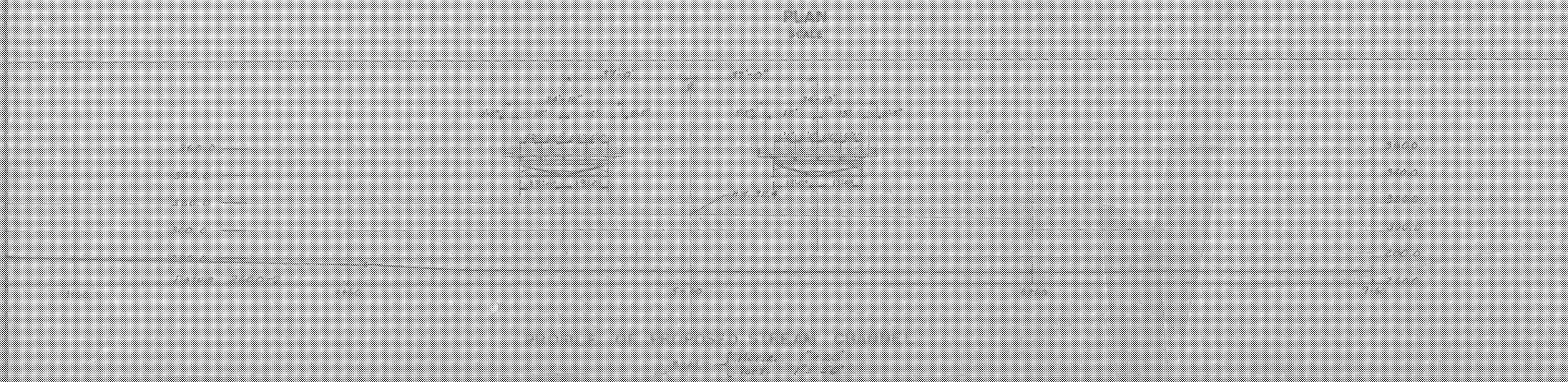
EXISTING STRUCTURE	
1. RATED LOADING OF EXISTING STRUCTURE	
2. TYPE OF EXISTING STRUCTURE	None
3. UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE	
4. WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE	COST OF REMOVAL
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE	
6. SHOULD NEW TEMPORARY STRUCTURE BE BUILT	
7. ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE	WATERWAY TO ORDINARY H.W.
8. EXTREME HIGH WATER AT EXISTING STRUCTURE	
9. SPAN OF EXISTING BRIDGE UPSTREAM 232' (Clear)	WATERWAY TO EXTREME H.W. 7,200'
SPAN OF EXISTING BRIDGE DOWNSTREAM 346' (Clear)	WATERWAY TO EXTREME H.W. 12,500'
10. TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS	
11. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE	
12. IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED	
13. ADDITIONAL WATERWAY AREA PROVIDED	

NEW STRUCTURE	
1. RECOMMENDED TYPE OF STRUCTURE	3 span continuous, riveted plate girder.
2. RECOMMENDED CLEAR SPAN OR SPANS	
MEASURED PARALLEL TO NEW HIGHWAY	160' - 250' - 160'
MEASURED AT RIGHT ANGLES TO STREAM	
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO	Yes
4. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE	300.0
5. EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE	311.4 SOURCE OF INFORMATION 1927 Flood Plan.
6. IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE?	Yes
7. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? No	IS ORDINARY RISE RAPID? No
8. LOW WATER ELEVATION AT NEW STRUCTURE	288.0
9. DRAINAGE AREA IN ACRES ABOVE STRUCTURE	98.5 CHARACTER OF TERRAINE Mountainous
10. IS STREAM EVER DRY?	No
11. VELOCITY OF STREAM AT HIGH WATER STAGE	14.6 cfs ESTIMATED DISCHARGE 110,000 cfs
12. AREA FULL OPENING	24,700' AREA BELOW ORDINARY H.W. 4430'
13. CHARACTER OF SCOUR	Slight DRIFT Medium
14. ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE	215 Sq. Mi.
15. VERTICAL CLEARANCE ABOVE FLOOD ELEVATION	29'±
16. ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE	No BOTH SIDES
17. RECOMMENDED TYPE OF PAVEMENT	Gravel Concrete with 24" Bit. Wearing Surface
18. TRAFFIC TO BE MAINTAINED UNDER ITEM NO.	ONE OR TWO WAYS PROBABLE COST
19. PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE	500
20. SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES	No
21. ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS	10,000 lbs. SHOULD PILES BE USED? Yes EST. LBN. 35'± (Min. only)

FOUNDATION INFORMATION
OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

SEE SHEETS B-3, B-4, & B-5

(See 30' scale layout for bridge plan)

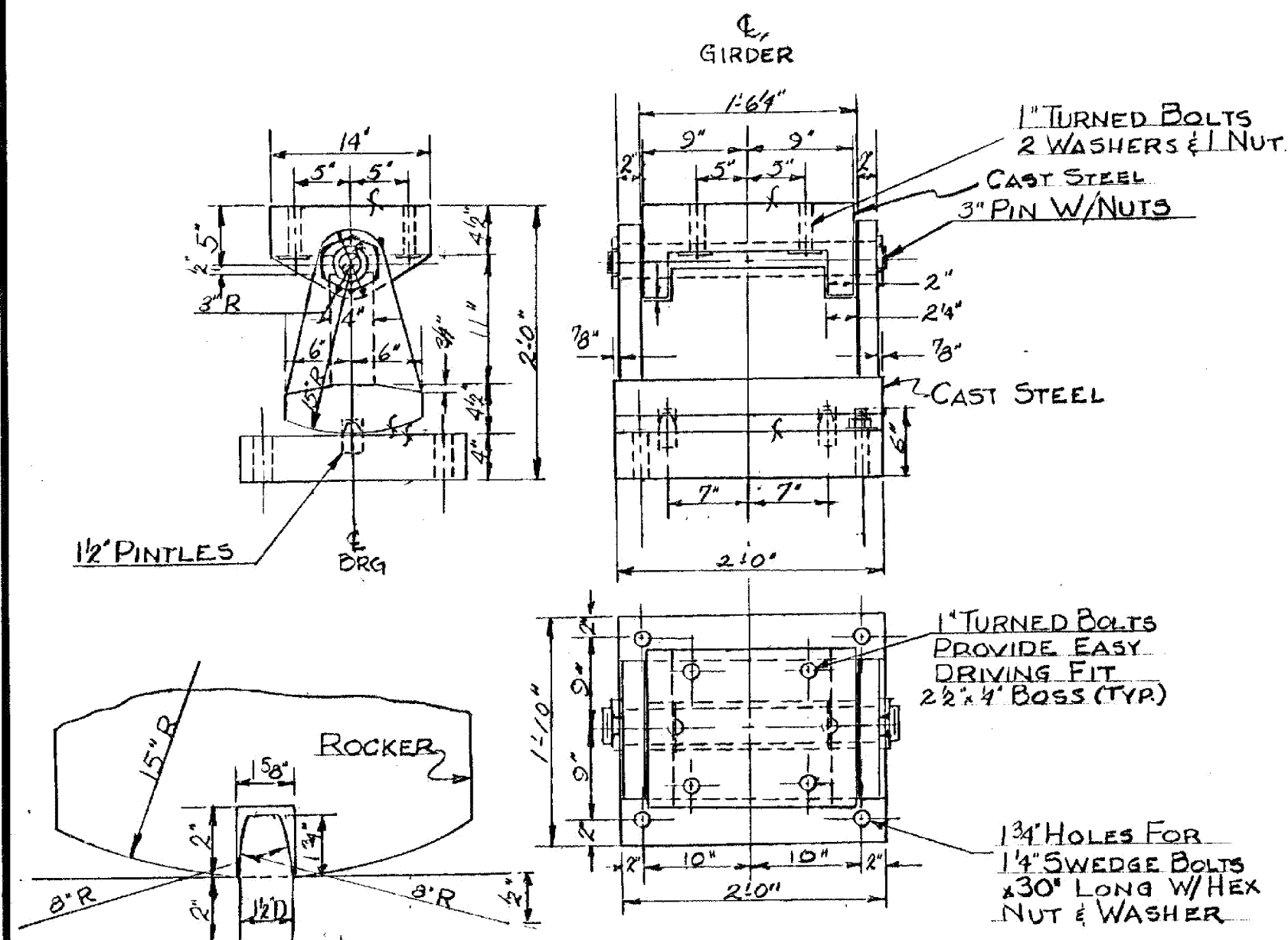


PROFILE OF PROPOSED STREAM CHANNEL
SCALE - Horiz. 1" = 20'
Vert. 1" = 50'

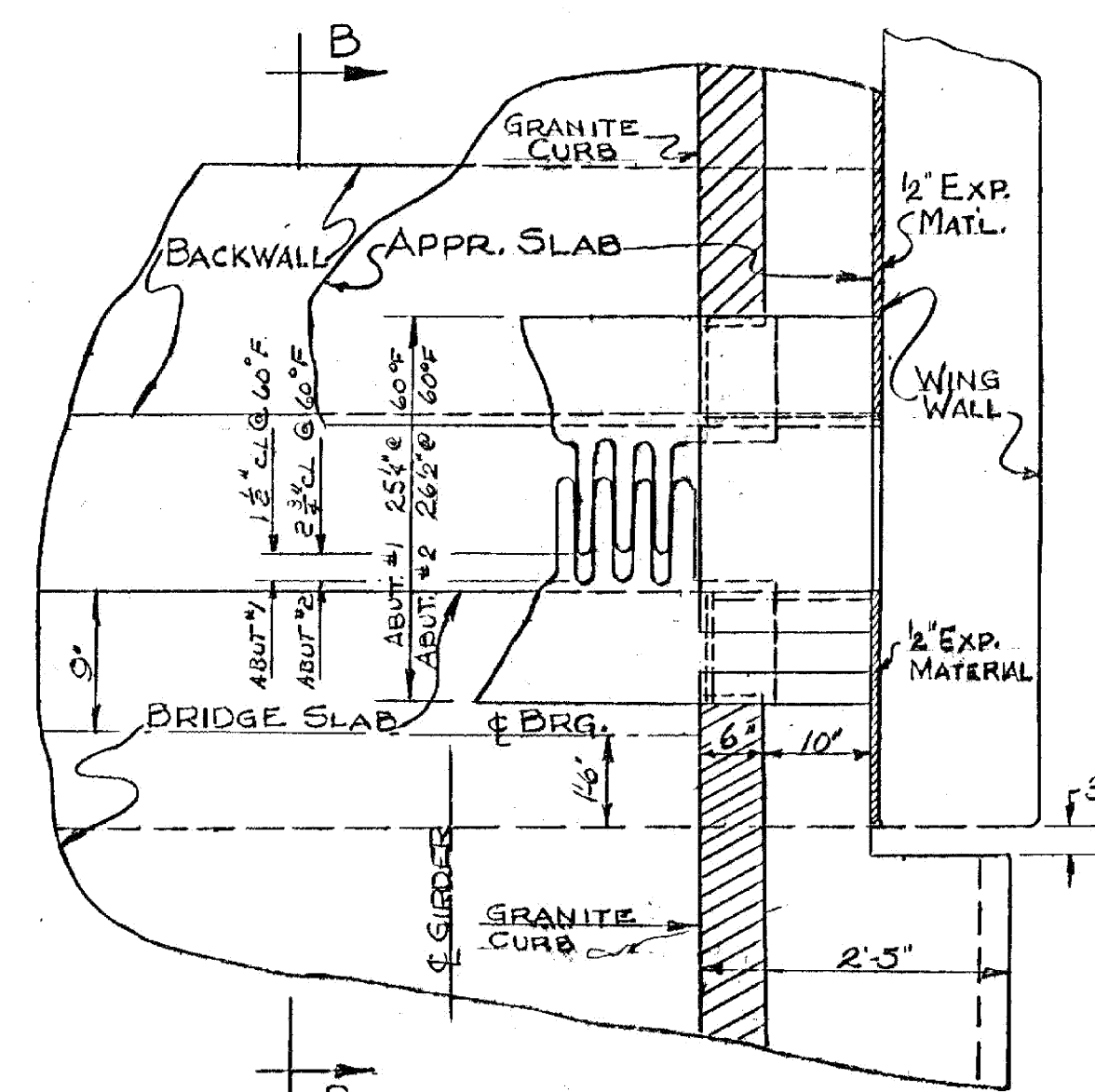
RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 9 OF 29
BRIDGE 58N
FOR REFERENCE ONLY

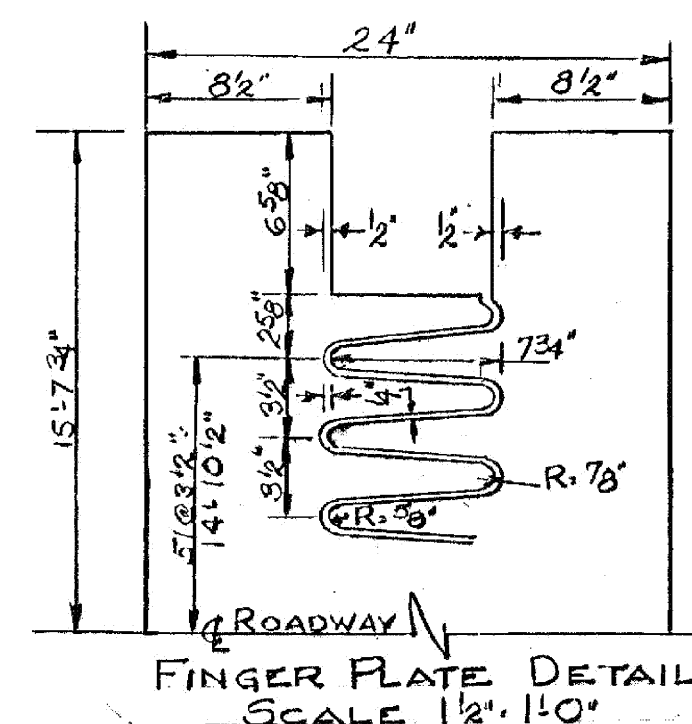
FR 58 NTS	
STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
IN THE TOWNS OF RICHMOND	
ROUTE NO.	LOG STA.
DESIGNED BY: E. J. VAUGHAN CHECKED BY: E. J. VAUGHAN PROJECT NO. I-83-2(9) SHEET 35 OF 116	
DATE: Feb 2, 1959	APPROVED: E. J. VAUGHAN
DESIGN ENGINEER: E. J. VAUGHAN	CHECK ENGINEER: E. J. VAUGHAN
Cont: 91	



EXPANSION BEARING @ ABUTMENTS



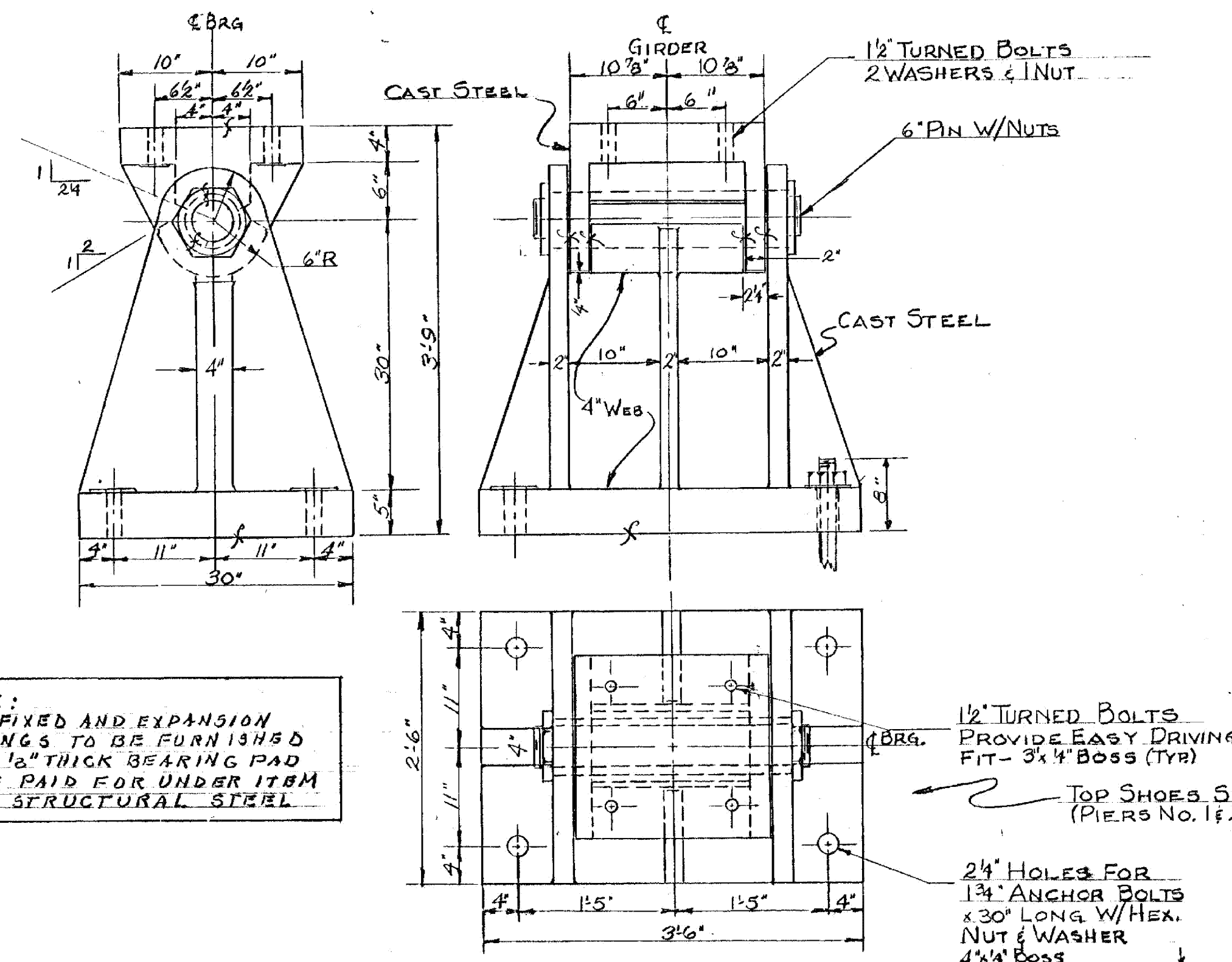
PLAN VIEW- EXPANSION JOINT



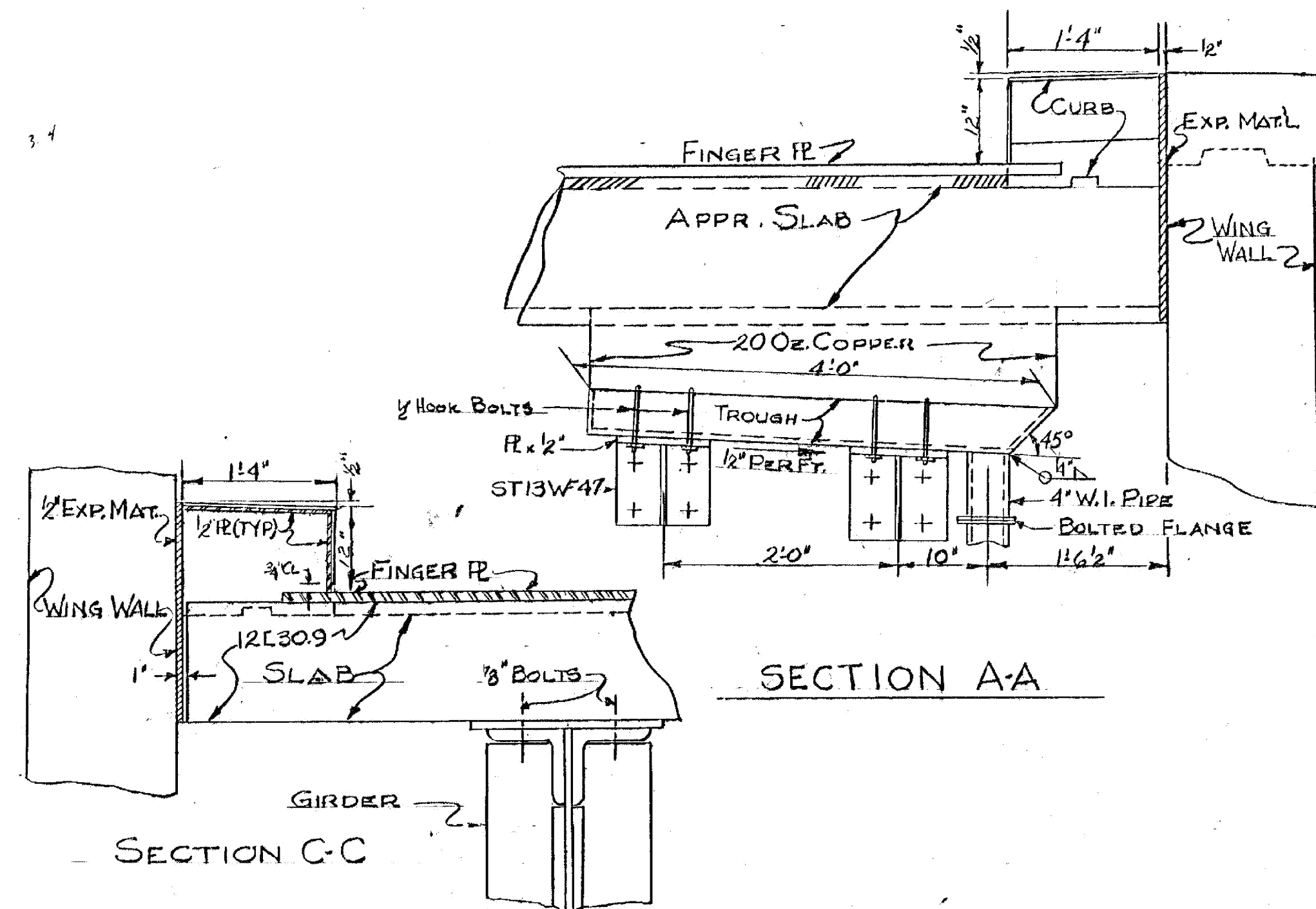
FINGER PLATE DETAIL
SCALE 1/2\"/>

MAKE FROM
2 1/2\"/>

NOTE:
ALL FIXED AND EXPANSION
BEARINGS TO BE FURNISHED
WITH 1/2\"/>

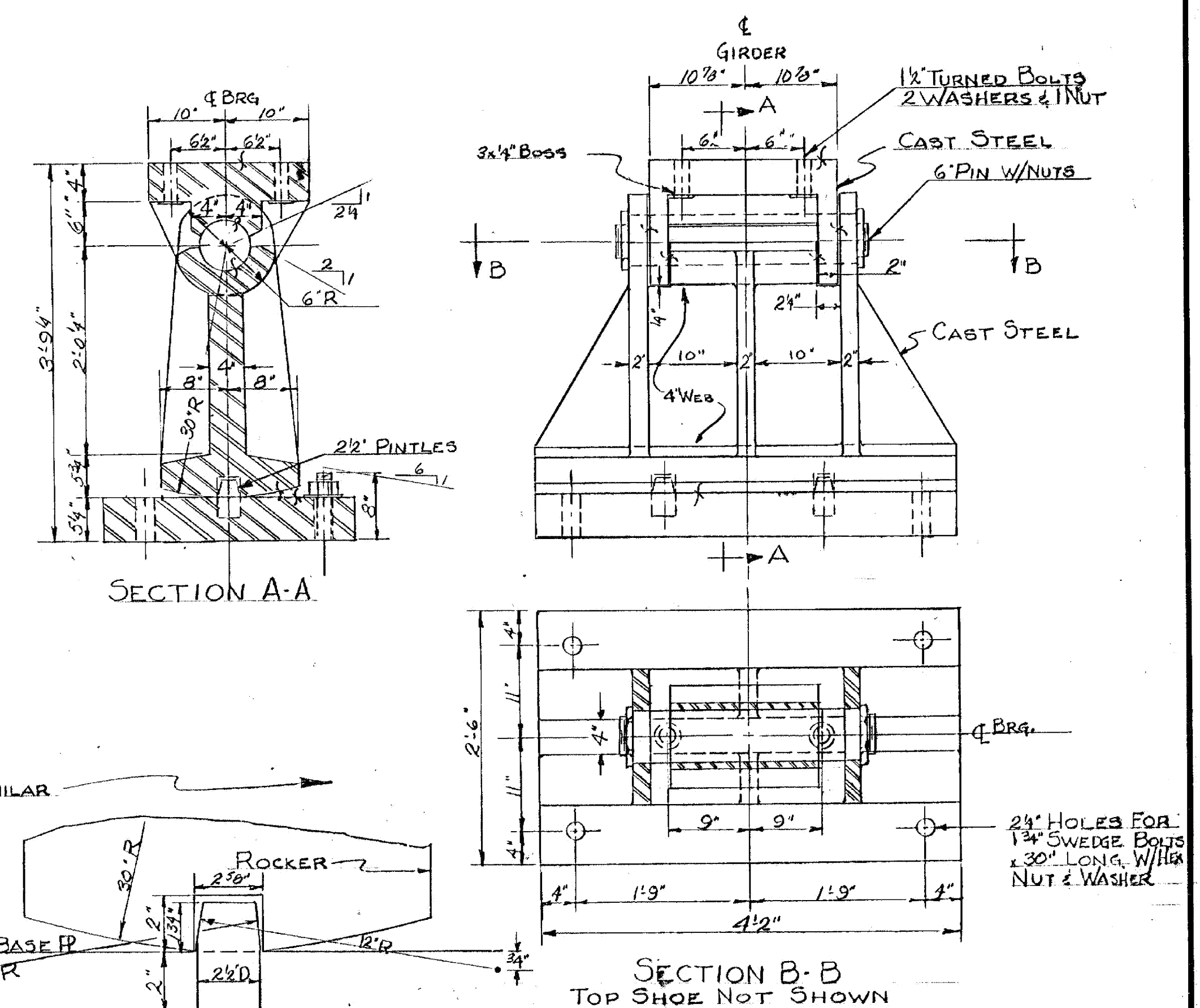


FIXED BEARING @ PIER #1

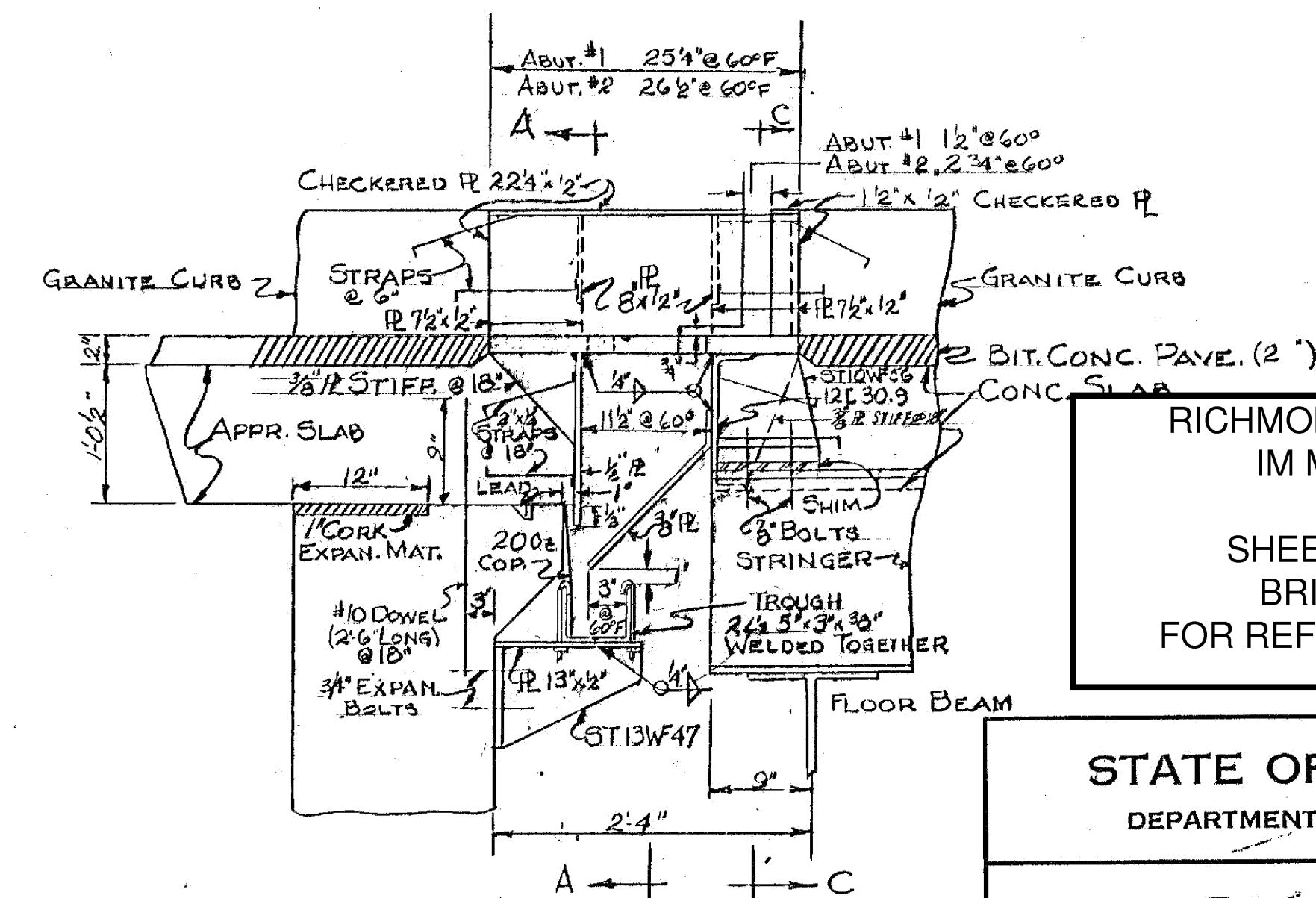


SECTION A-A

SECTION C-C



EXPANSION BEARING @ PIER #2



EXP. JT. DETAIL
BOTH ABUTMENTS

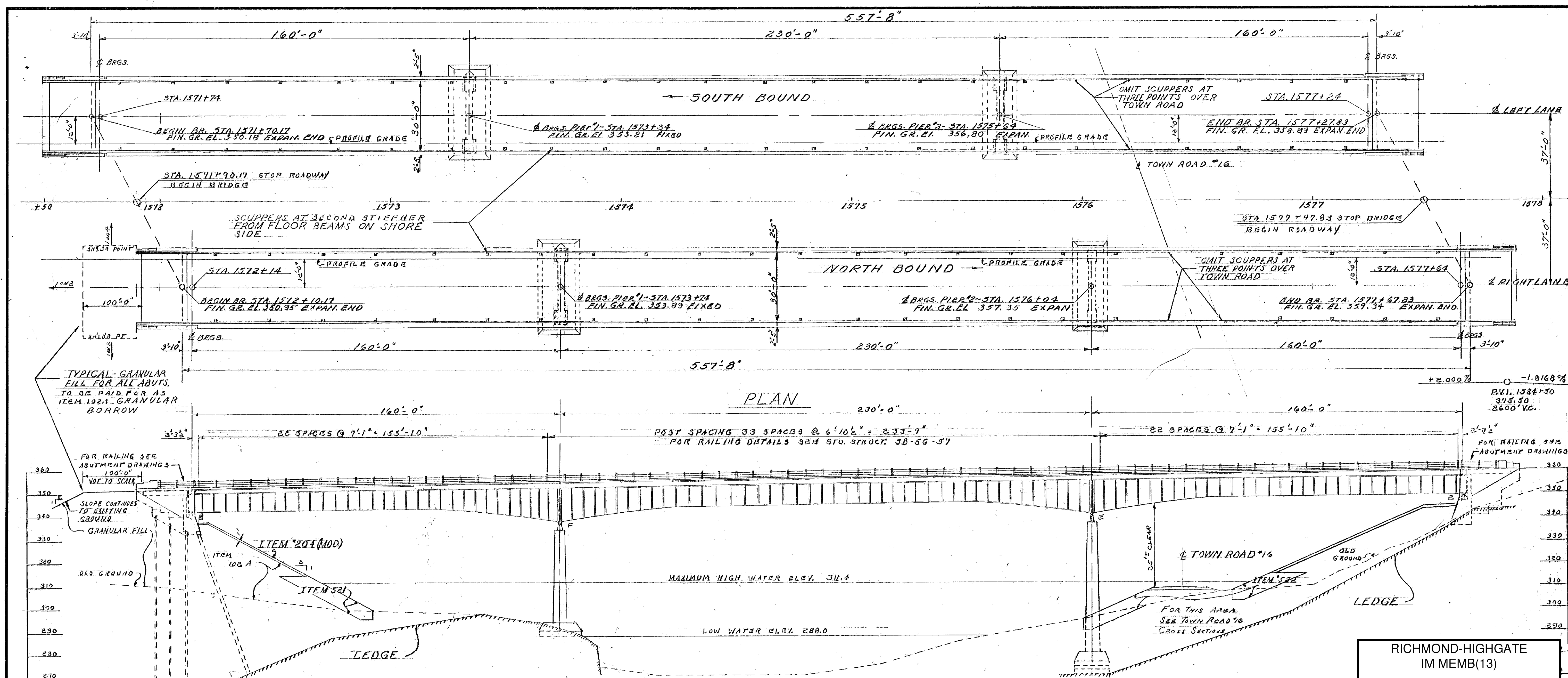
SECTION B-B

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 10 OF 29
BRIDGE 58N
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF RICHMOND-WILLISTON
ROUTE No. 189 LOG STA.
DETAILS OF BEARING DEVICES
EXPANSION DEVICES & DRAIN TROUGHS
SCALE 1/2\"/>



PLAN

ESTIMATED QUANTITIES for TWO BRIDGES

ITEM	DESCRIPTION	UNIT	TOTAL	ITEM	DESCRIPTION	UNIT	TOTAL
222	Gravel Backfill	C.Y.	308	501	Furnishing Equip. for Driving Piles	L.S.	14
106-C	Unclass. Channel Excav.	C.Y.	192	501-A	Preparing Substr. for Driving Piles	L.S.	14
107	Structure Excavation	C.Y.	107	503	Splices for Steel Piling	Ea	40
204	Sub-base of Cr. Rock Mod.	C.Y.	400	504	Steel Piling	L.F.	3780
318	Tar Emulsion for Br. Floors	Gal.	1200	521	Stone Fill (Heavy Type)	C.Y.	3716
361-B	Bituminous Conc. Pav't (Mod)	TONS	100	522	Stone Fill for Slope Protection	C.Y.	8015
401-B	Concrete Class B (Mod.)	C.Y.	1176	556-C	Granite Bridge Curb (Mod.)	L.F.	2348
401-D	Concrete Class D (Mod.)	C.Y.	1838	572	Bridge Railing	L.F.	2320
402	Reinforcing Steel	Lbs.	227400				
404-A	Structural Steel	Lbs.	3533000				
404-B	Steel Superstructure (Sup. Apr. 6-8-82)	L.S.	0				
407	Asphaltic-Asbestos Coating	S.Y.	70				

* Included in Roadway Quantities

LIST of SHEETS

Bridge Sheet No.	Postage Sheet No.	Description
1	35	Preliminary Information
2	36	Plan & Elevation Scale 1"=20'
3	37	Plan View Scale 1"=30'
4	38	Boring Sheet #2
5	39	Boring Sheet #2
6	40	Plan View 5' Contours
7	41	Framing Plan & Girder Details
8	42	Typical Bridge Cross Section
9	43	Max. Moment & Shear Diag.
10	44	Left Bracing Def. Jk. of Curb Details
11	45	Details of Bearing Devices
12	46	Deck & App. Slab Relat. Details
13	47	Details of Abut #1 N.B. & S.B.
14	48	Details of Abut #2 N.B.
15	49	Details of Abut #2 S.B.
16	50	Details of Pier #1 N.B. & S.B.
17	51	Details of Pier #2 N.B. & S.B.
18	52	Details of Pier #2 S.B.
19	53	Steel Struck 50-50-60 (142)
20	54	Reinforcing - Superstr. & Abuts.
21	55	Reinforcing - Pier #1 N.B. & S.B.
22	56	Reinforcing - Pier #2 N.B. & S.B.
23	57	Bridge Curbwork Sheet
24-25	111-112	Channel Baseline Cross Sections

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 11 OF 29
BRIDGE 58N
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF RICHMOND-WILLISTON
ROUTE No. 1-89 LOG STA.
Windsor River Bridge 151120 PLAN
N.B. & S.B., PROFILE N.B.

SCALE 1"=20'

SURVEYED BY
DRAWN BY A.C.C. CHECKED BY W.M.S.

PROJECT No. 1-89-2(2)
SHEET 130 OF 118 Cont.



K-E PHOENIX RISE **B. L. M. INC.**
 @ TROSBACH CULLEN RISE

SHEET NO.	
1.	Title Page
2.	Alignment Sheet
3.	Typical
4-5.	Quantity Sheets
6-7.	Item Detail and Drainage Sheets
8-10.	Earthwork Sheets
11.	R.O.W. Detail Sheet
12-17.	Plan and Profile Sheets
18.	Blank
19.	Drilling and Blasting of Solid Rock Subgrade, Item 115
20.	A-61 Banking Tables
21.	B-5 Typical Slope Grading
22.	B-6 Muck Excavation, Item 117
23.	B-10 Embankment on a Slope
24.	B-11 Methods of Slope Stabilization
25.	D-2 Cement Rubble Masonry
26.	D-4 Underdrain Flushing Basin
27.	D-8 Drop Inlets
28.	D-10 Top for a Drop Inlet w/Bituminous Concrete Curb
29.	D-11 Grates
30.	D-12 Tops for Asph.Ctd.Corr.Galv.Met.Pipe Drop Inlets
31.	D-16 Prec.Reinf.Conc.Curb Drop Inlet, Item 531
32.	D-17 Asph.Ctd.Corr.Galv.Met.Pipe Vertical Riser
33.	E-1 Barricades, Signs and Lights
34.	E-31 Federal Aid Construction Identification Signs
35.	F-1 Property Line Fence
36.	J-1 Boundary Markers
37.	Blank
38-79.	Bridge Sheets
80.	SCB-30-65 Typical Section, Plan view and Quantities
81.	SCB-D1-65 Details A, B & C
82.	SCB-D2-65 Details A, B, C & D
83.	SCB-D3-65 Details A, B, C, D & E
84.	SCB-D4-65 Details A, B, D & F
85.	SCB-D5-65 Details A, B, C & D
86.	SCB-D6-65 Details A & B
87.	SCB-D7-65 Detail A, Details of WF Beam Bridges
88.	SCB-D8-65 Sheet 1
89.	SCB-D9-65 Sheet 2
90.	SB-R1-64 Details of Bridge Railing
91.	SB-R2-65 Dead End Anchorage & Bridge Approach
92.	Blank
93.	G-3a
94.	Blank
95-116.	Cross Sections

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROPOSED IMPROVEMENT

INTERSTATE PROJECT
TOWNS OF GEORGIA-FAIRFAX-
FAIRFIELD-ST. ALBANS
COUNTY OF FRANKLIN
INTERSTATE ROUTE 89
BURLINGTON-ST. ALBANS ROAD

CONTRACT NO. 1

BEGINNING AT A POINT 3.973 MILES SOUTHERLY OF
GEORGIA-FAIRFAX TOWN LINE AND EXTENDING NORTHERLY
0.681 MILES.

LENGTH OF ROADWAY 2800.67 FEET = 0.530 MILES (AVE.)
LENGTH OF BRIDGE 799.33 FEET = 0.151 MILE (AVE.)
LENGTH OF CONTRACT 3,600.00 FEET = 0.681 MILES (AVE.)

A.D.T. 1956	2440
A.D.T. 1975	5400
D.H.V.	825
D	54
T	8
V	60 M.P.H.

PROJECT NAME & NUMBER	TYPE PAVEMENT	AREA - SQ.
Georgia-Fairfax-Fairfield-St. Albans, I 89-3(25) Grading & Drainage Stage 1		
RECORD PLANS		
MATERIALS		
SUB-BASE OF GRAVEL CRUSHED ROCK	Danvers Quarry, Newbury, & Swanton Lime Works, Swanton, VT.	
SUB-BASE OF SAND	Swanton Pk., Milton, VT.	
GRAVEL BACKFILL	Self pit, Fairfax, VT.	
CRUSHED GRAVEL		
REFINED TAR		
CUTBACK ASPHALT		
SA-GRAV. OR PEASTONE		
OR SEAL		
CONCRETE CLASS 'B'	A. G. Anderson, St. Albans, VT.	
REINFORCING STEEL	Bendixson Steel Corp., Bethlehem, Pa.	
METAL PIPE CULVERT	N.E. Metal Pipe Co.	
R.C.P.		
CAST IRON GRATE	N.E. Metal Culvert Co.	
DROP INLETS	A. T. Saward & Co., Inc.	
GUARD RAIL ITEMS		
STRUCTURAL STEEL		
CAST IRON COVER FOR F.B.		
SHEAR CONNECTORS	The Welding and Fabrication Products Corp.	
BRIDGE PAINT	Amesbury, Color Works, N.Y., N.Y.	
WATER REPELLENT	Spencer Kelley Div. of Tecton, Inc., Kibby Equipment Co.	

CONTRACTOR	Curran-Lavoie	CONTRACT DATED	22 March, 1966
RESIDENT ENGINEER	Littleton, N.H.	STARTED	28 March, 1966
INSPECTORS	R. F. Duba	COMPLETED	11 Aug., 1967
RECORD PLANS	R.F.W.G.	ACCEPTED	18 Aug., 1967

FOR ROW DETAILS, SEE
ROW PLANS FOR THIS PROJECT.

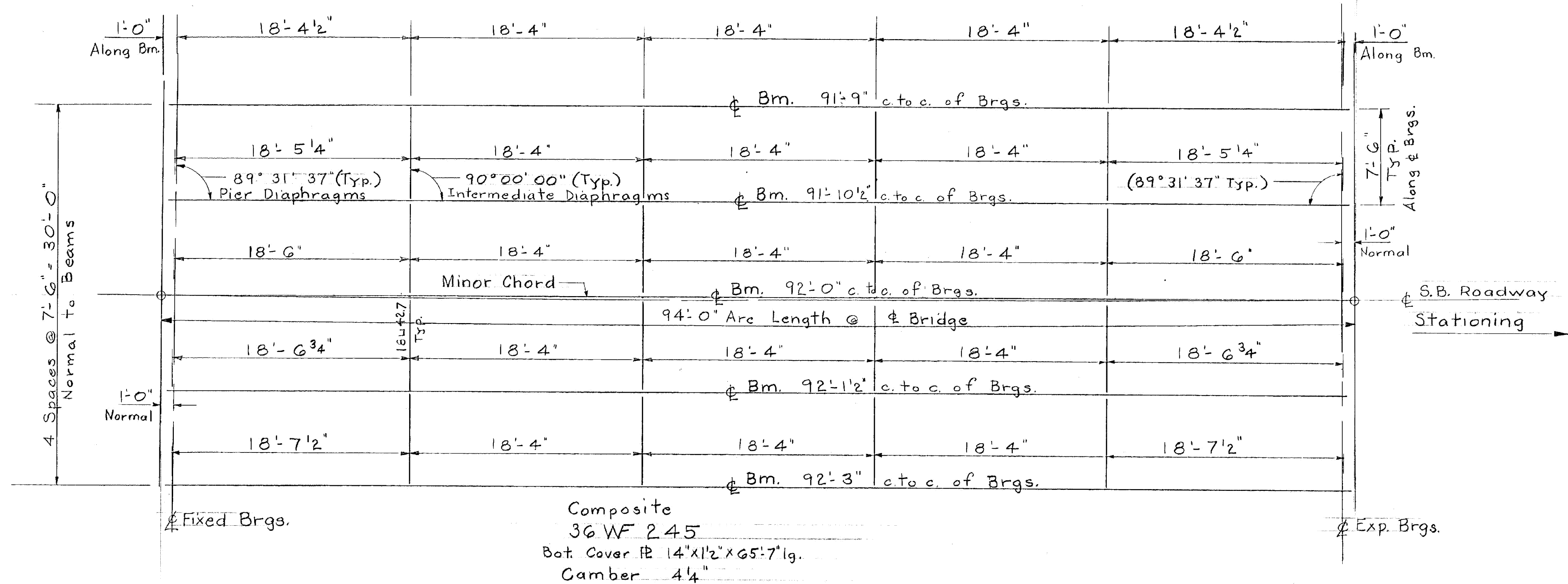
THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE
REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER
OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH
THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE
CONSTRUCTION DATED APRIL, 1964, AS APPROVED BY THE BUREAU OF
PUBLIC ROADS ON OCTOBER 12, 1964, INCLUDING ALL SUBSEQUENT
APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL
PROVISIONS AS ARE INCORPORATED IN THESE PLANS

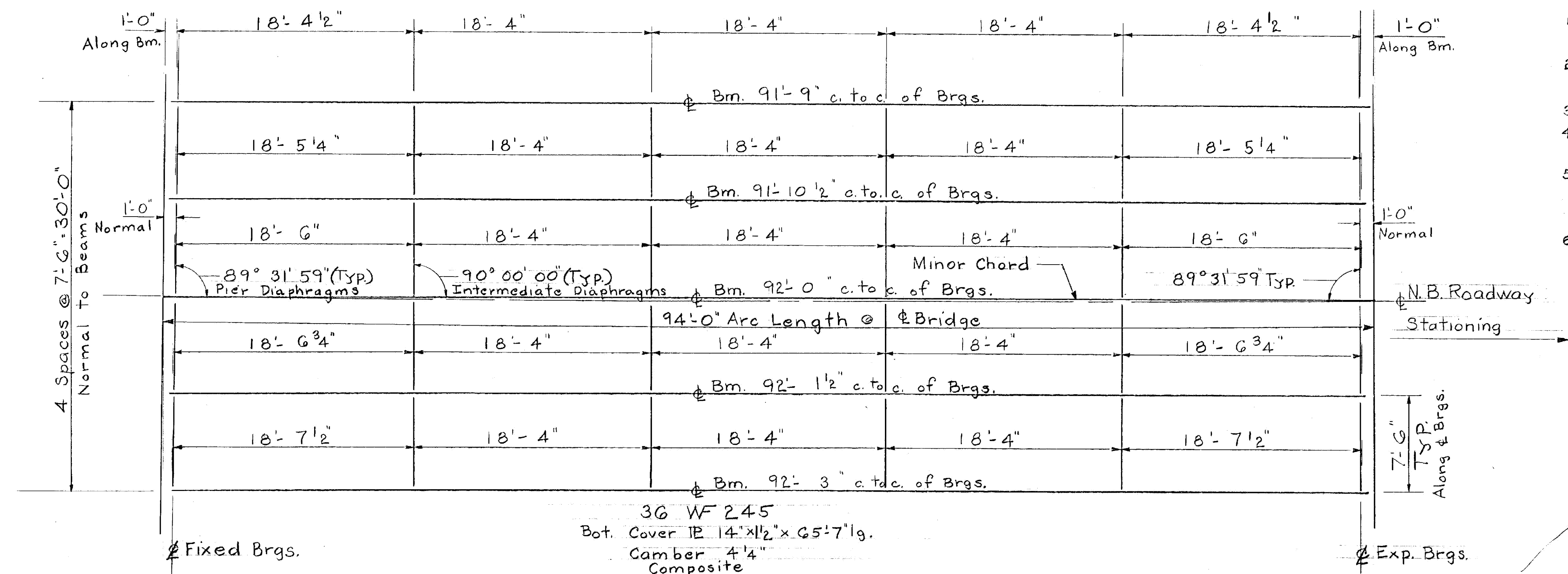
RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 13 OF 29
BRIDGE 86N
FOR REFERENCE ONLY

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS



TYPICAL SOUTHBOUND SPAN



TYPICAL NORTHBOUND SPAN

Notes

1. For cover plate details and diaphragm details see Std. Sh. SCB-D7-G5, details A, B, C & D.
2. For details of beam haunch and shear connectors see Std. Sh. SCB-D2-G5, details B & C.
3. All diaphragms are to be 18'42.7
4. For General Notes and Design stresses see Std. Dwg. SCB-D1-65.
5. For Details of pier expansion plates and drainage details A, B, C.
6. For typical section and Std. Dwg.

RICHMOND-HIGHGATE
IM MEMB(13)

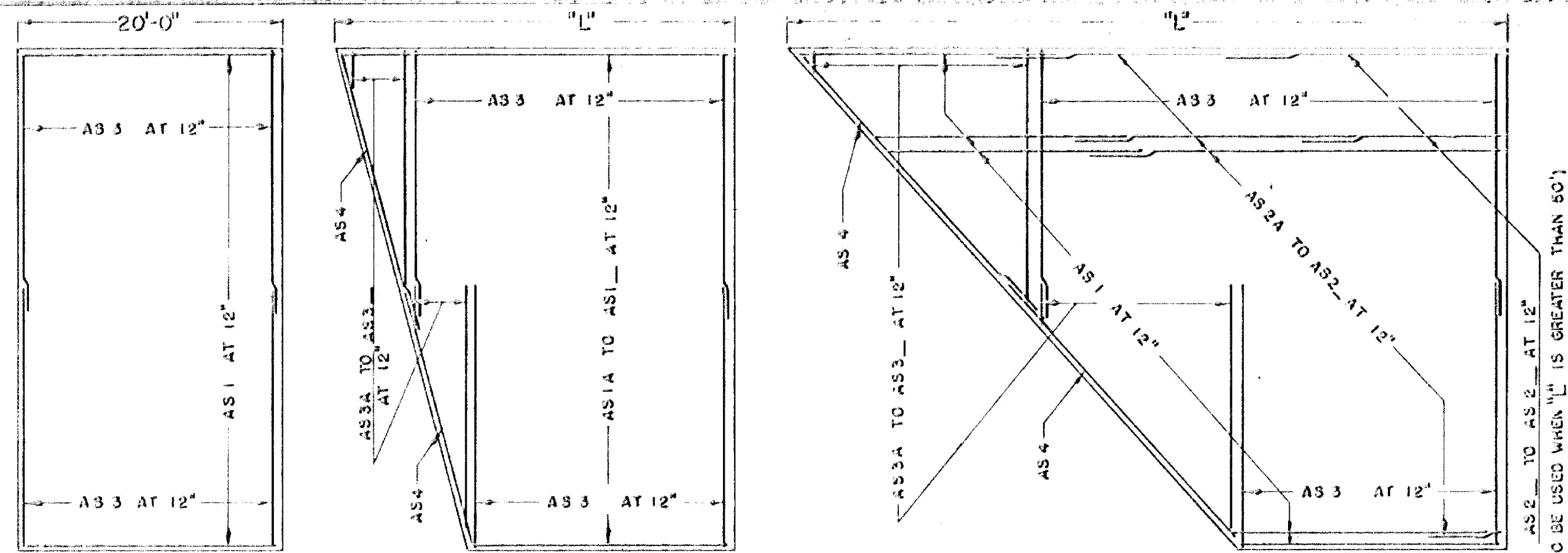
SHEET 14 OF 29
BRIDGE 86N
FOR REFERENCE ONLY

CONTRACT 1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Georgia - Fairfax
TOWN OF Fairfield - St. Albans
ROUTE No. 129 Log Sta. ---
Typical Framing Plan ---
129 over C.V. Ry ---
SCALE 1" = 5'

DRAWN BY A.J.C. CHECKED BY R.P.B.
PROJECT No. 129-3(35) Cont #1
SHEET 36 OF 116

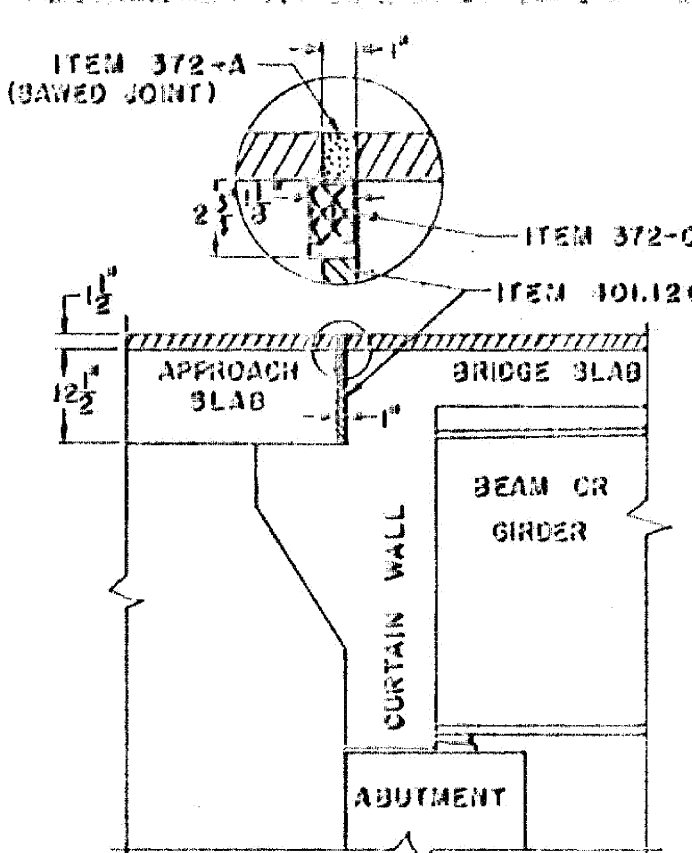


DETAIL "A" - SQUARE

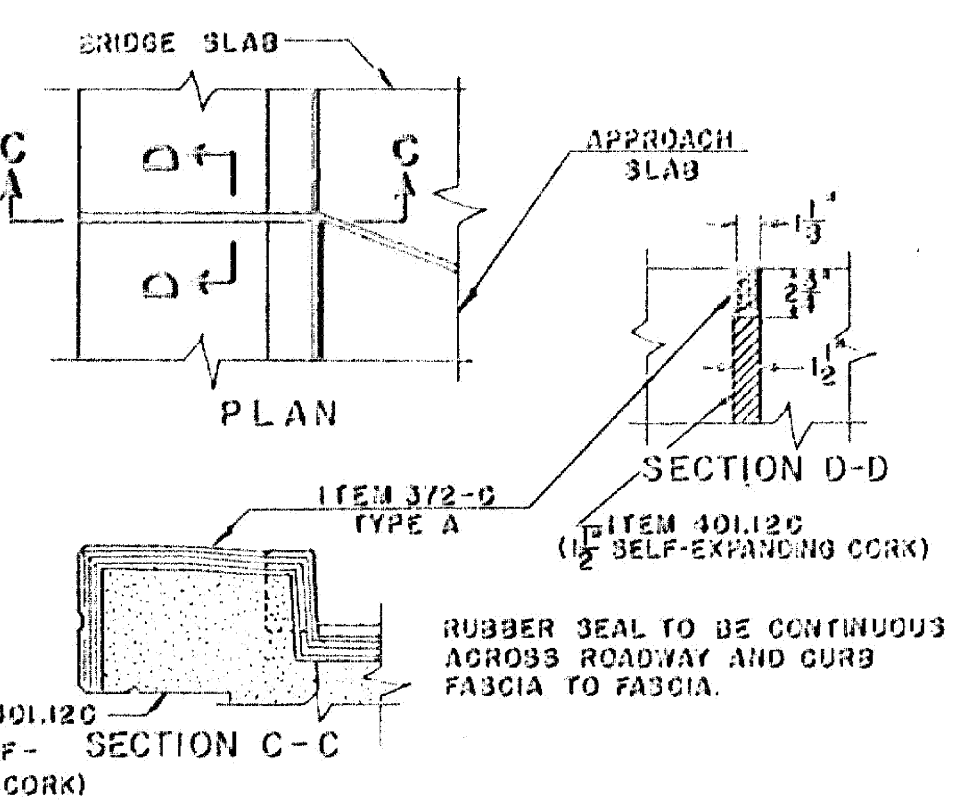
DETAIL "B" - "L" LESS THAN 35'

DETAIL "C" - "L" GREATER THAN 35'

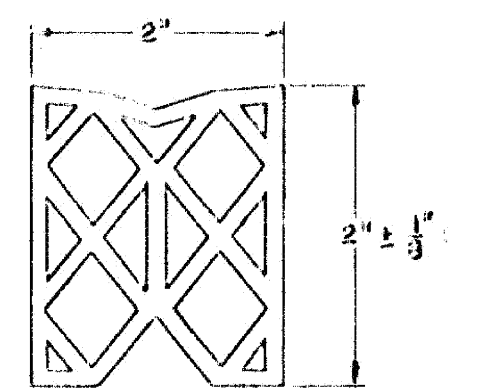
(TO BE USED WHEN "L" IS GREATER THAN 50')



SECTION B-B

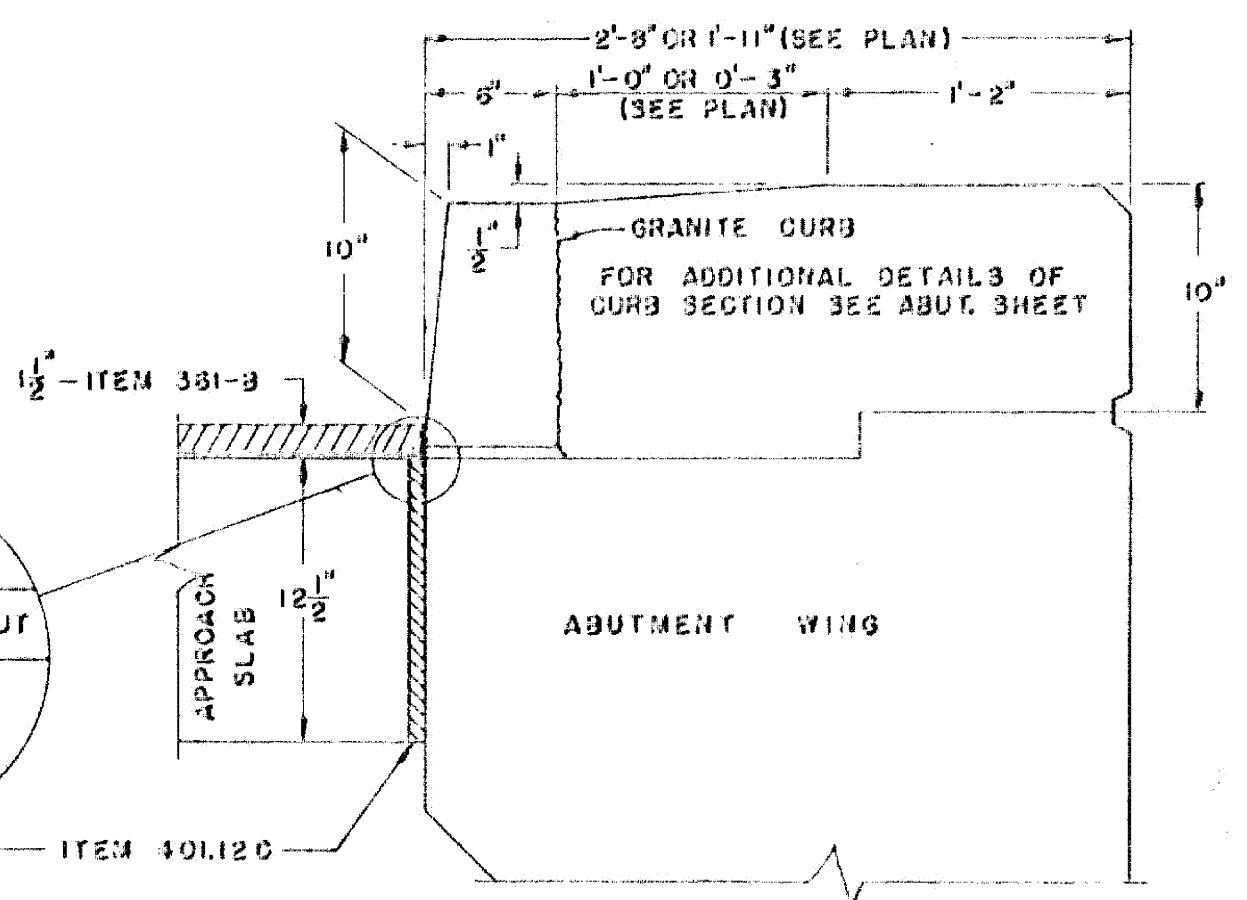


CURB JOINT DETAIL



TYPE A

DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREFORMED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY
SPECIFICATIONS MAY BE USED.)



SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1984, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 15 OF 29
BRIDGE 86N
FOR REFERENCE ONLY

Stage 1/2 Construction

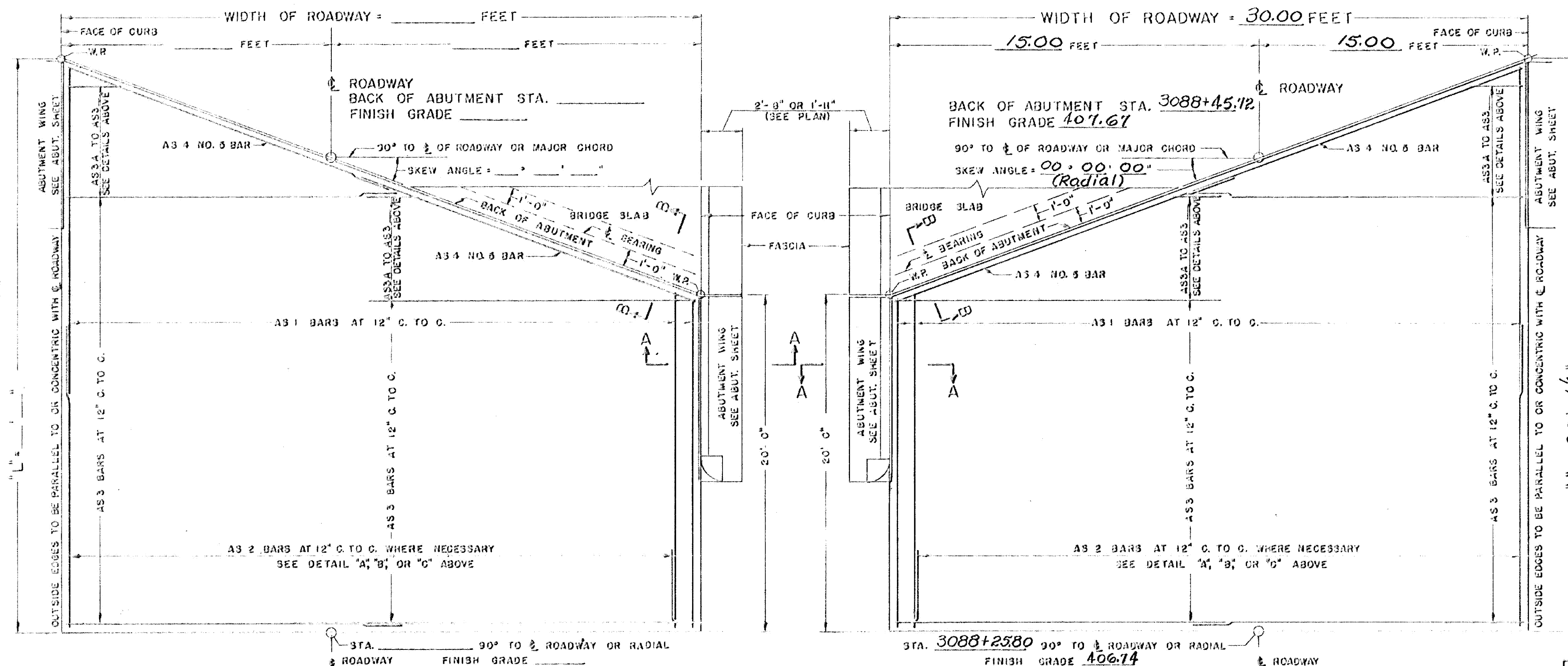
CONTRACT 1

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
381-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

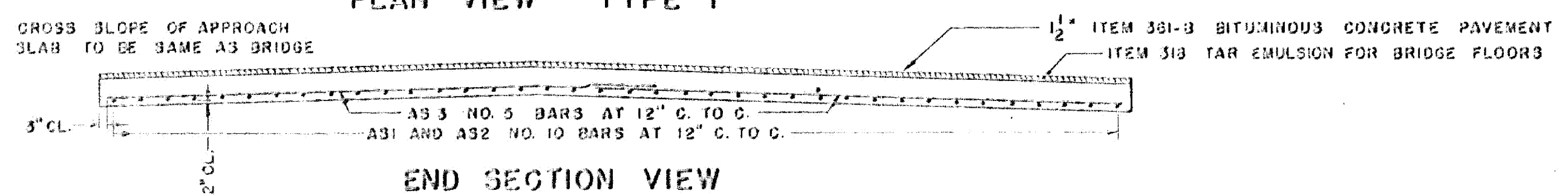
REINFORCING BENDING DETAILS

		$A = 1' - 1"$ $J = 0' - 9"$	
B = 1' - 6" OR VARIOUS			
DETAIL SHOWN IS FOR A31 BAR ALL OTHER BARS ARE TO BE STRAIGHT			
REINFORCING		STEEL	
A	B	C	A X B X C
BAR NO.	LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
AS 1	SEE SCHEDULE	4.303	
AS 2		4.303	
AS 3		1.043	
AS 4		1.043	
TOTAL WEIGHT			



PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW

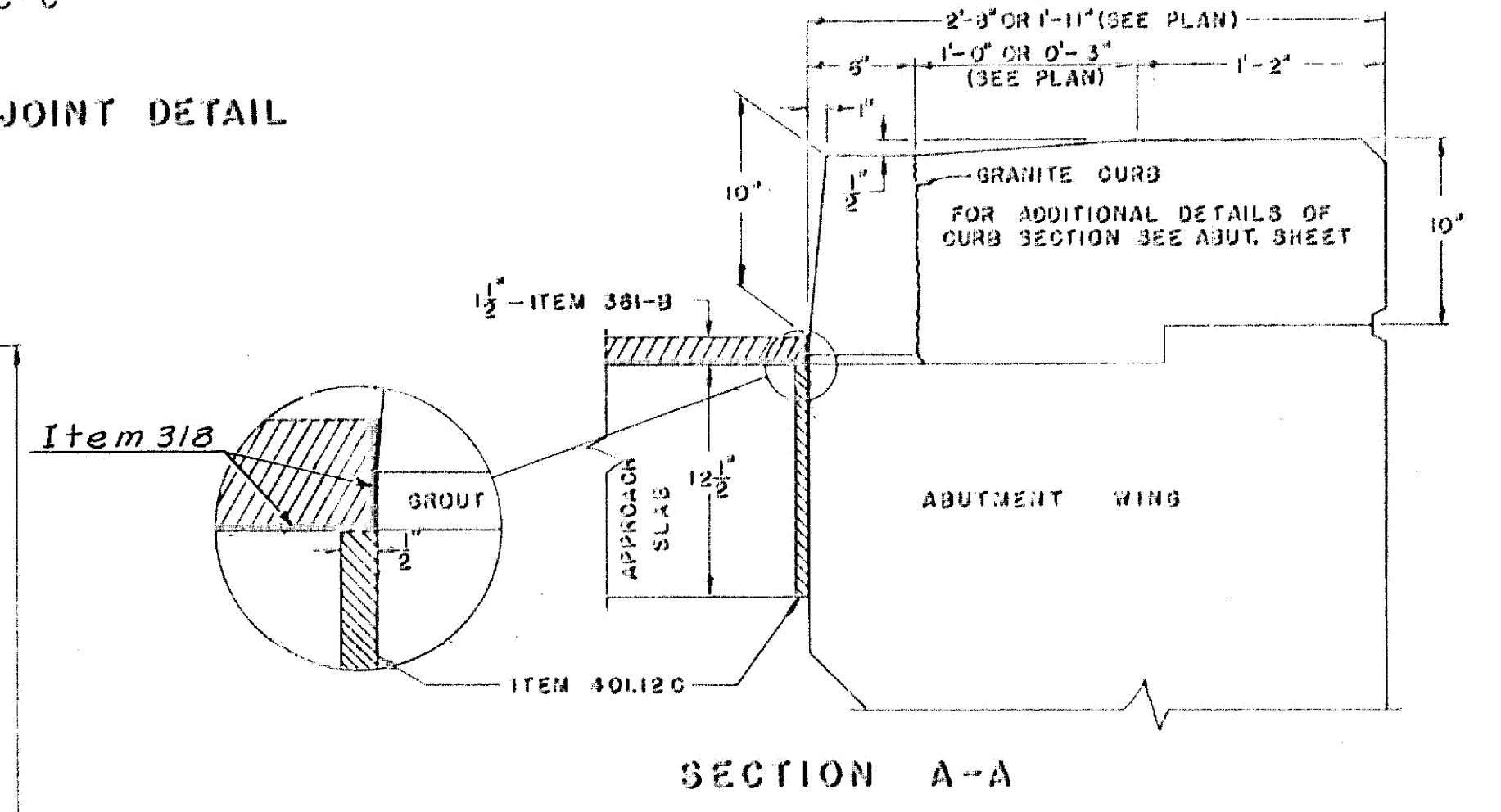
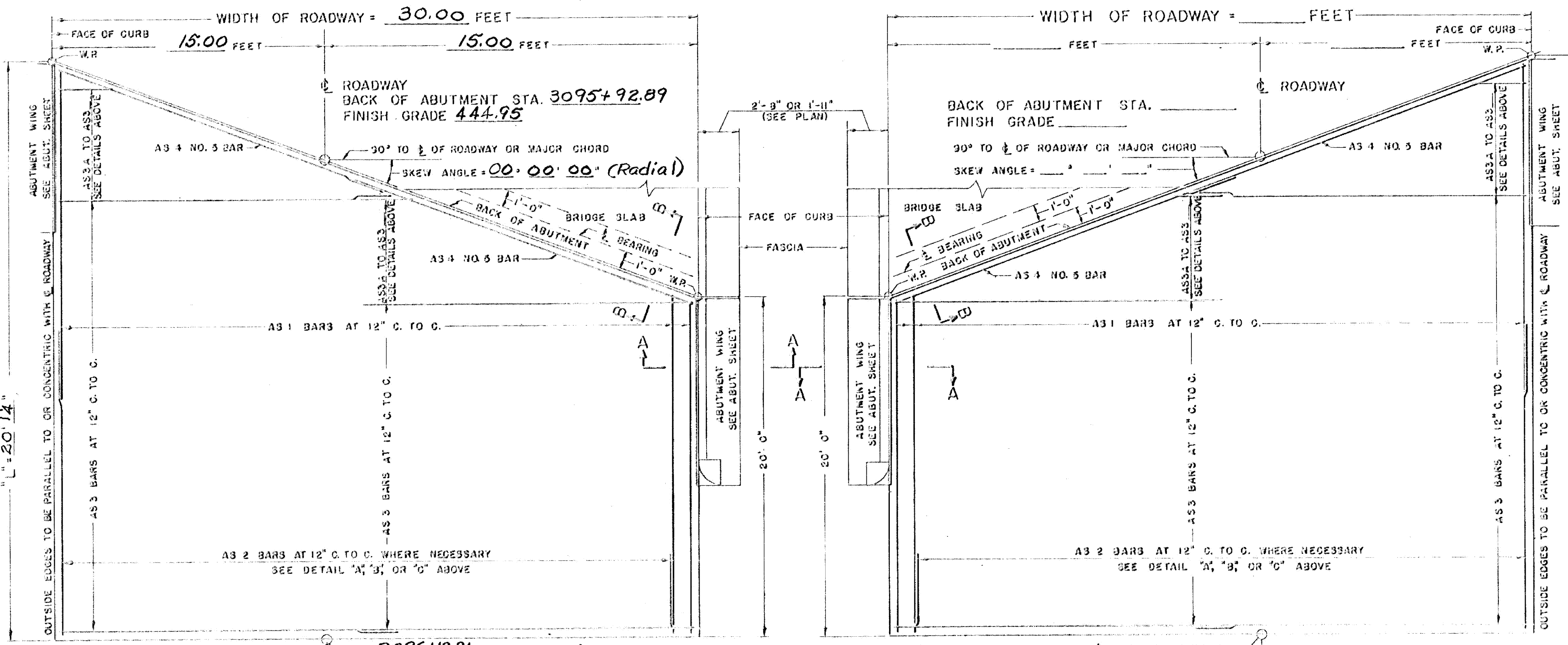
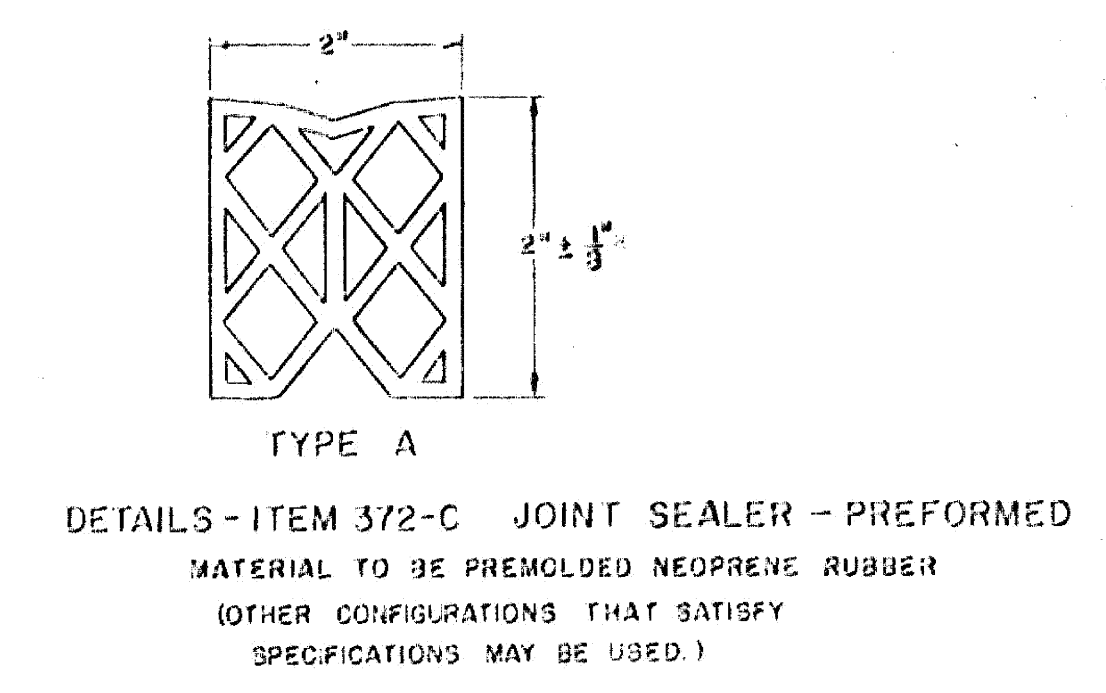
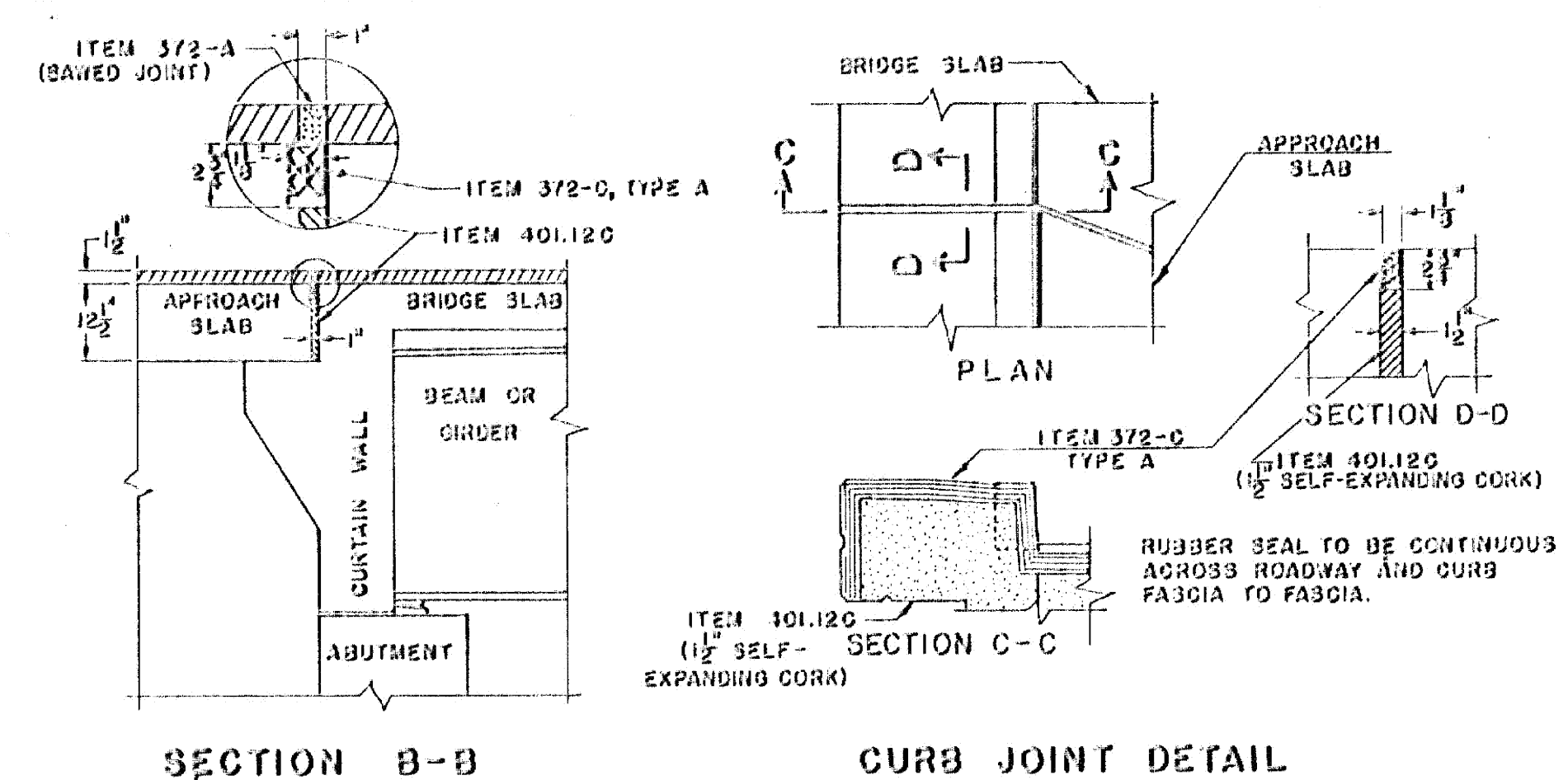
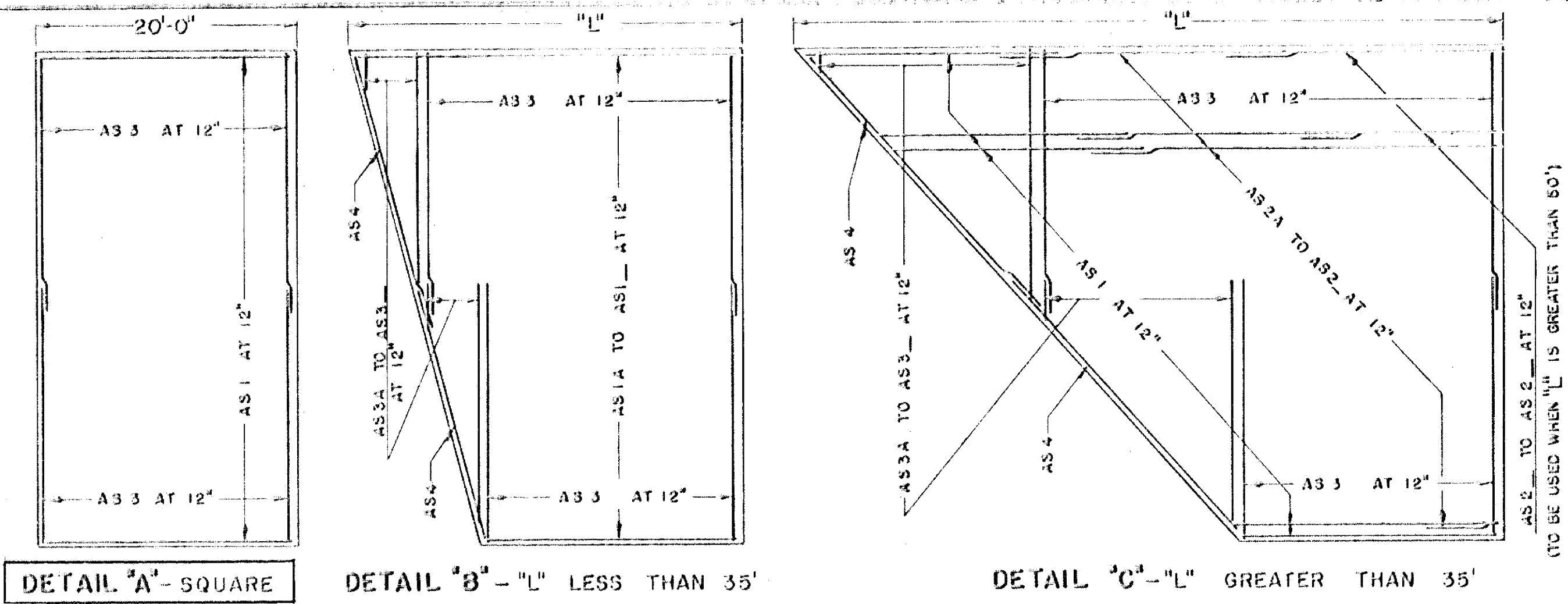
REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED 1/15/85 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED 8/23/85 W.B.T.

DRAWN BY: W.B.T. Jan. 1985
TRACED BY: W.B.T. Jan. 1985
CHECKED BY: W.M.S. Feb. 1985
RECOMMENDED FOR APPROVAL: [Signature] 2/4/85
RECOMMENDED FOR APPROVAL: [Signature] 2/4/85
APPROVED BY: [Signature] 2/4/85

DETAILS OF APPROACH SLAB #3 N.B.
FOR 30.00 FOOT BRIDGE
(WIDTH)
TO BE USED FOR BRIDGE AT STATION 3092±
LOCATION 189 over C.V.R.R.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65

TOWN OF Georgia-Fairfax
Fairfield-St Albans
ROUTE NO. 189
LOG STA.
DESIGNED BY J.J.C. CHECKED BY A.J.C.
PROJECT NO. 189-3(351) 1/1
BR OF SHEET 21 OF 116
BR-130



GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1984, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 10 BAR DIAMETERS.

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 16 OF 29
BRIDGE 86N
FOR REFERENCE ONLY

Stage 1/2 Construction
CONTRACT 1

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
351-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

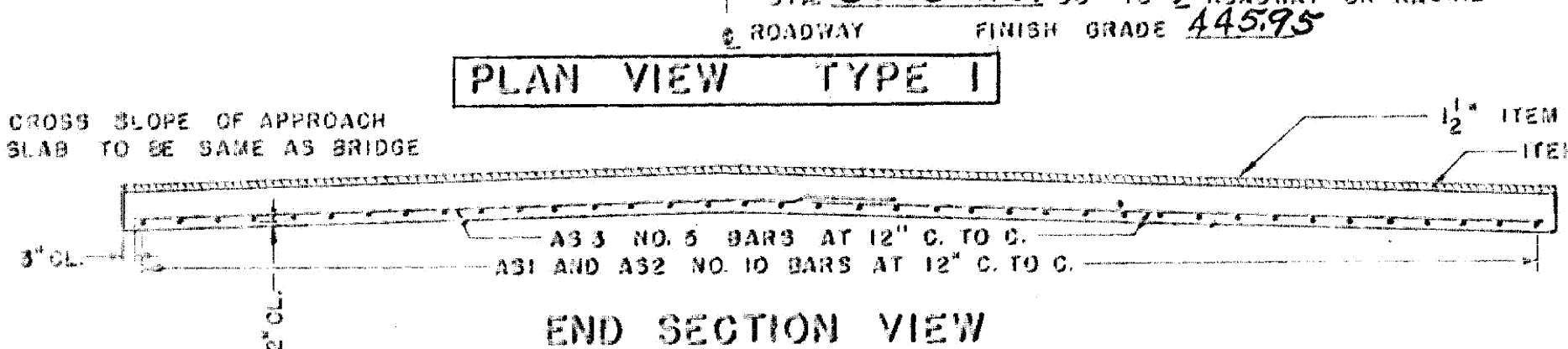
REINFORCING BENDING DETAILS

DETAIL SHOWN IS FOR A31 BAR. ALL OTHER BARS ARE TO BE STRAIGHT.

BAR NO.	LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
A31		4.303	
A32		4.303	
A33		1.043	
A34		1.043	

REINFORCING STEEL

TOTAL WEIGHT =



REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 1/13/85 W.B.T.

2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 2/23/85 W.B.T.

DRAWN BY: W.B.T. Jan. 1985

TRACED BY: W.B.T. Jan. 1985

CHECKED BY: W.M.S. Feb. 1985

RECOMMENDED FOR APPROVAL: [Signature] 2/4/85

RECOMMENDED FOR APPROVAL: [Signature] 2/4/85

APPROVED BY: [Signature] 2/4/85

DETAILS OF APPROACH SLAB # 4 N.B.

FOR 30.00 FOOT BRIDGE

(WIDTH)

TO BE USED FOR BRIDGE AT STATION 3092 ±

LOCATION 189 over C.V.R.R.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65

TOWN OF Georgia-Fairfax
Fairfield-St. Albans

ROUTE NO. 189

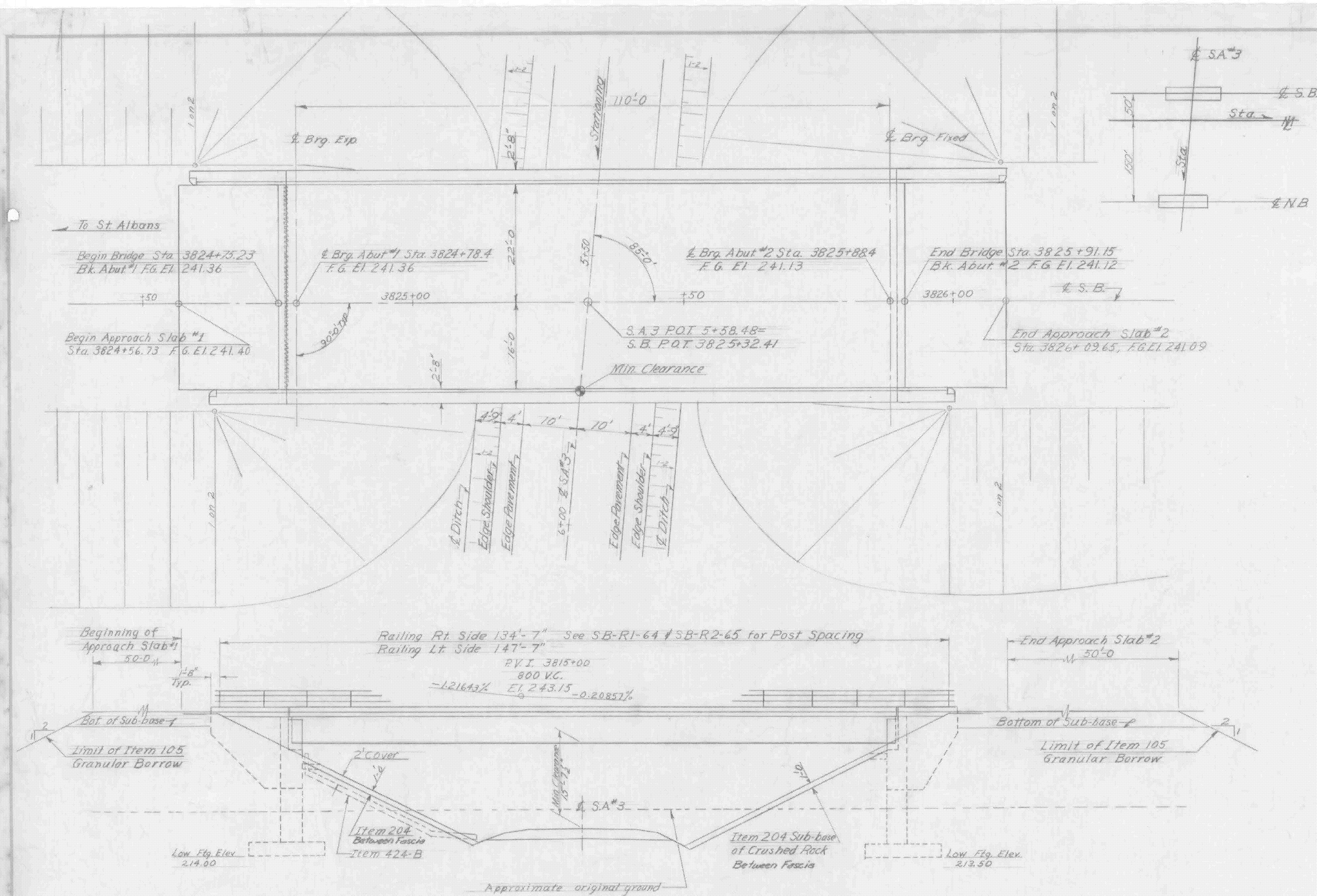
LOG STA.

DESIGNED BY J.J.G. **CHECKED BY** A.J.G.

PROJECT NO. 189-3(35) Con A #1

BR OF **SHEET** 16 OF 29

BR-131



GENERAL NOTES

1. Elevation datum sea level based on nearest U.S. Government Vertical Control.
2. Footings are designed for 4 k.s.f. bearing on earth.
3. For additional General Notes see Standard SCB-DI-65

LIST OF BRIDGE SHEETS

- Br.200 S.B. Plan and Elevation
 Br.201 N.B. Plan and Elevation, Approach Slab and Joint Details
 Br.202 Bridge Quantity Sheet
 Br.203 Preliminary Information Sheet
 Br.204-205 Borings
 Br.206 Superstructure and Girder Details
 Br.207 Typical Cross Section and Details of Bearing Devices
 Br.208 Expansion Dam Details
 Br.209-212 Abutments No. 1-4 Details
 Br.213-214 Reinforcing Steel Schedule

BRIDGE STANDARDS

- SCB-38-65
 SCB-DI-65
 SCB-D2-65, Det. A & B
 SCB-D4-65
 SCB-D6-65
 SB-R1-65 Sheets 1 & 2
 SB-R2-65
 Std Sheet G 3a.

REFERENCE SHEETS

- I-89 Roadway Plan Sheet Sta.
 I-89 Roadway Profile Sheet Sta.
 I-89 Roadway Sections S.B. #1
 S.A.3 Roadway Plan & Profile
 S.A.3 Roadway Sections Sta.

RICHMOND-HIGHGATE
 IM MEMB(13)

SHEET 18 OF 29
 BRIDGE 94S
 FOR REFERENCE ONLY

BR.200 OF 214

Revised Footings
 and Notes
 W.B.T. 5-13-60

ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.			
	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
	CONC. CLASS AA (MOD.)	C.Y.			
	CONC. CLASS B (MOD.)	C.Y.			
	REINF. STEEL	LBS.			
	ASPHALTIC-ASB. COATING	S.Y.			
	TREATED TIMBER PILING	L.F.			
	SPICES FOR STEEL PILING	EA.			
	STEEL PILING	L.F.			
	UNTREATED TIMBER PILING	L.F.			

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS

PROJECT NAME: ST. ALBANS-SWANTON
 TOWN OF SWANTON

ROUTE No. I-89 LOG STA.
 I-89 OVER S.A.3 @ SB STA. 3825+32.41

SOUTHBOUND PLAN & ELEVATION

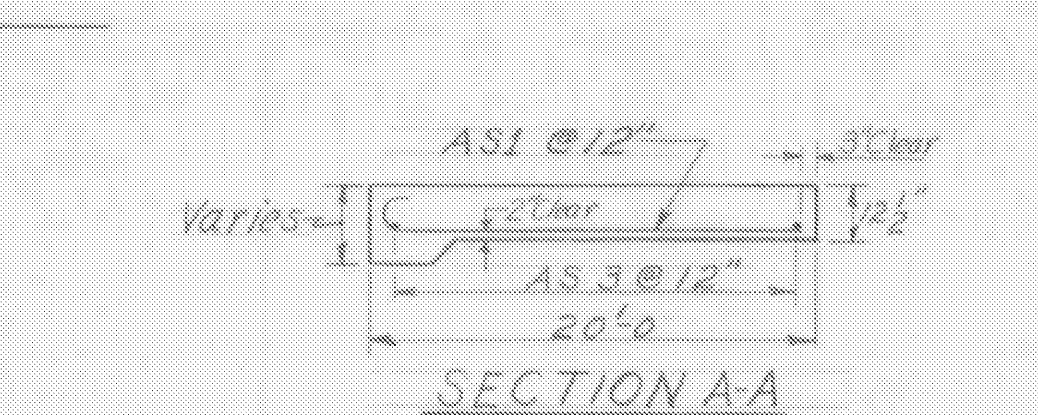
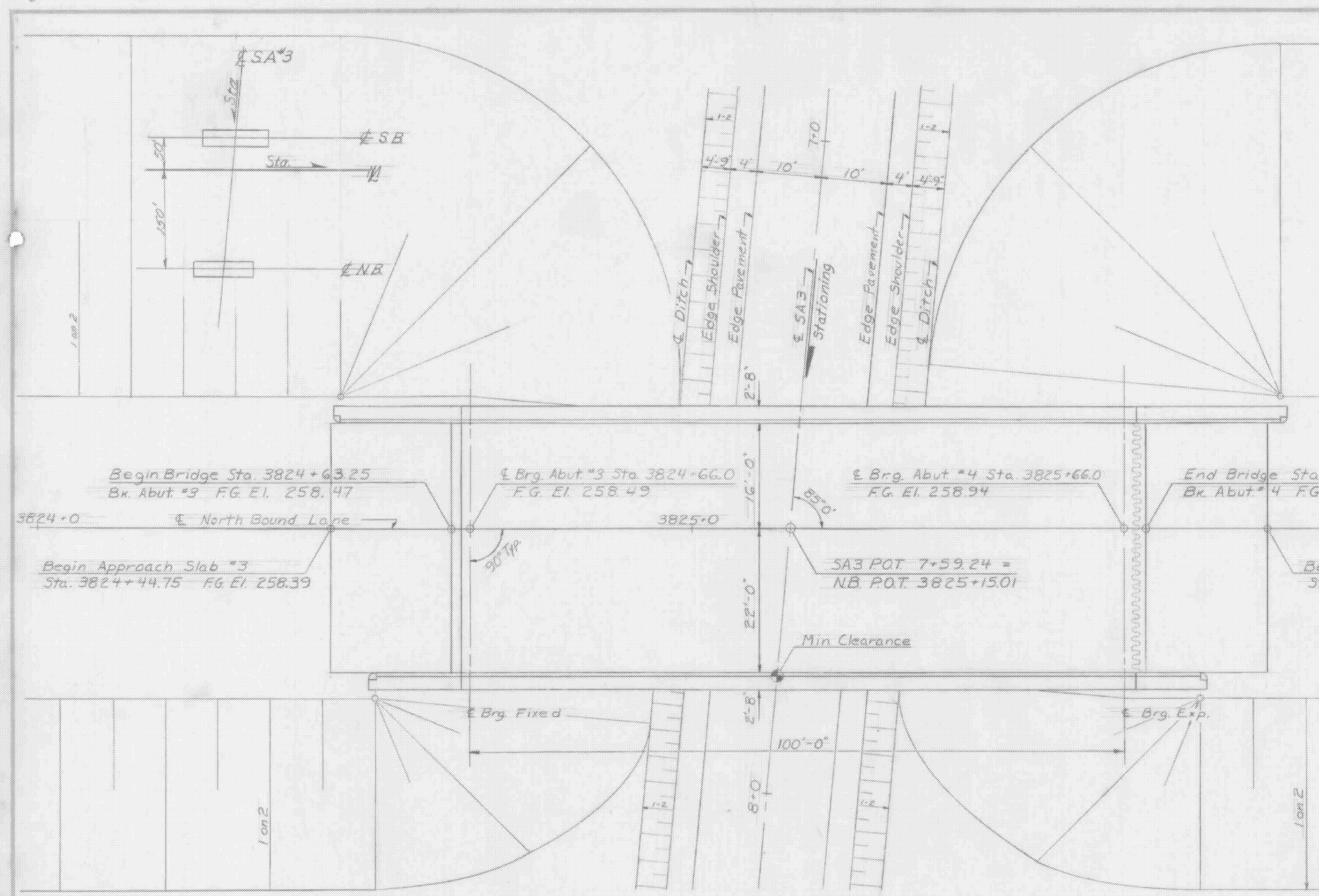
SCALE 1"=10'-0"

SURVEYED BY Spaulding

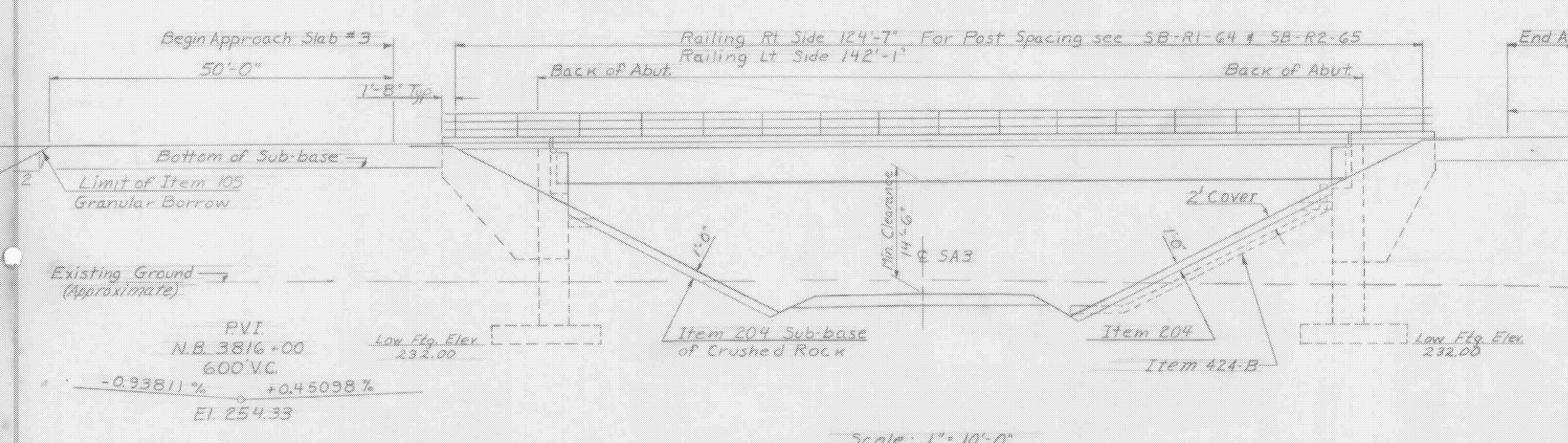
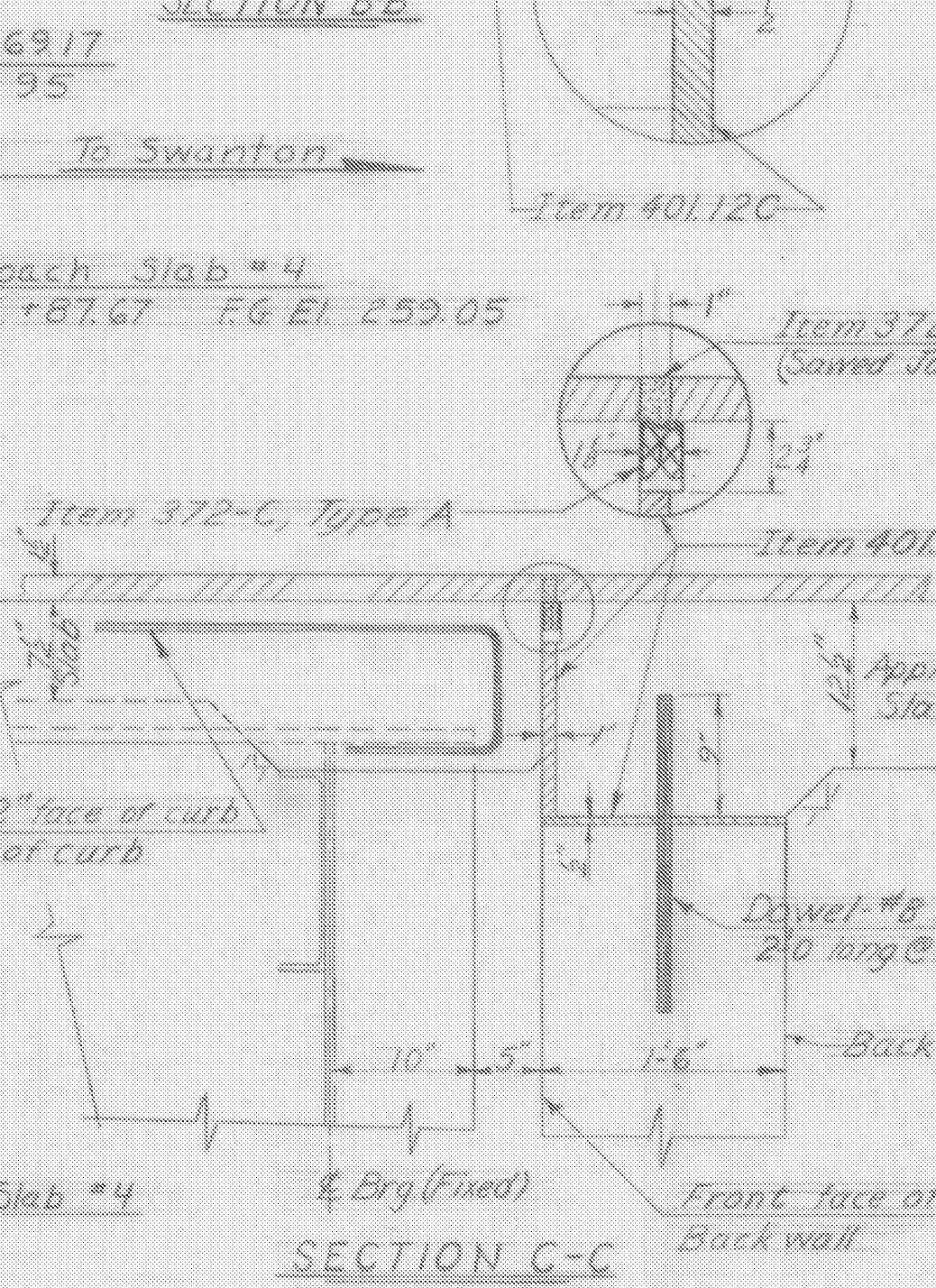
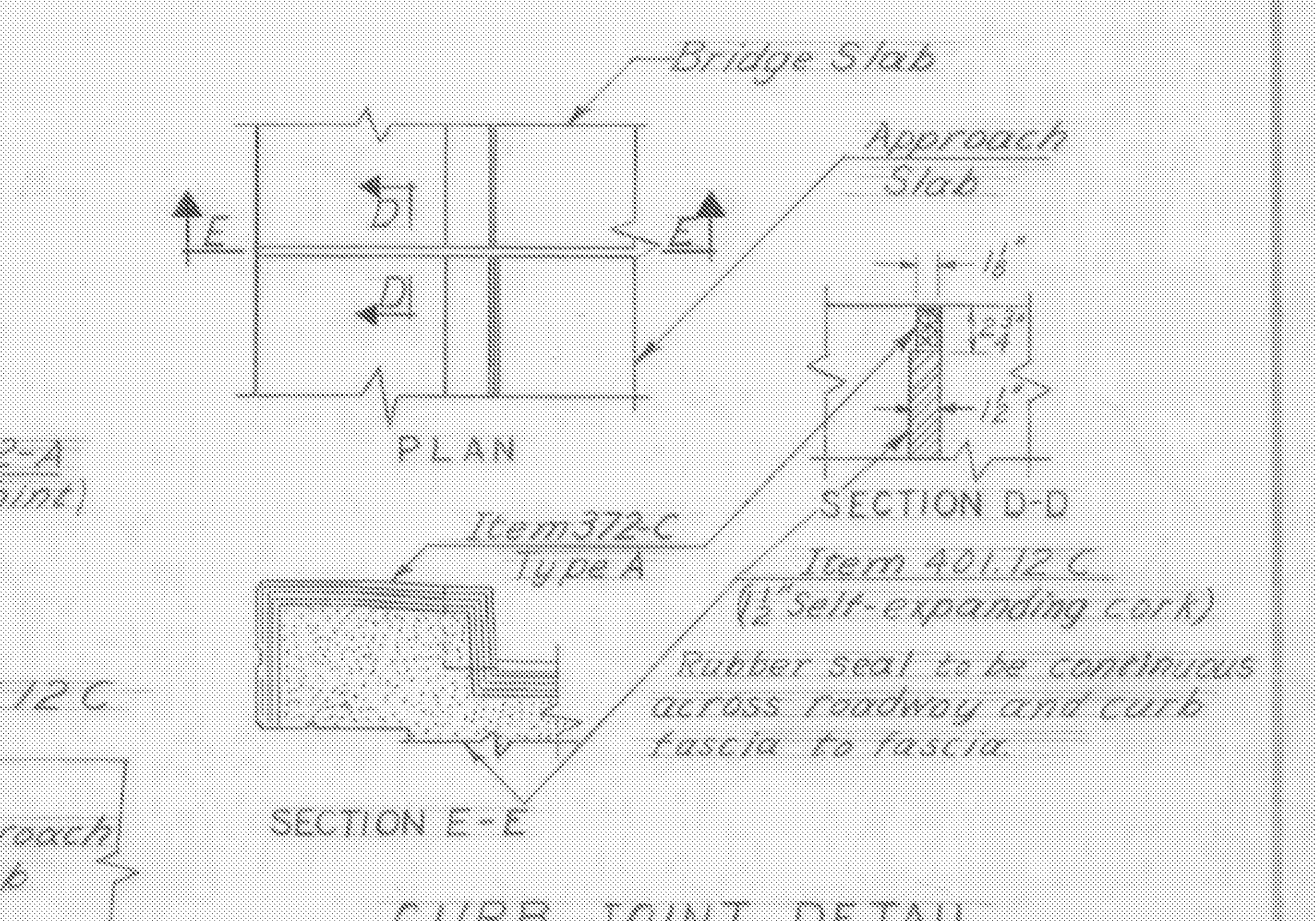
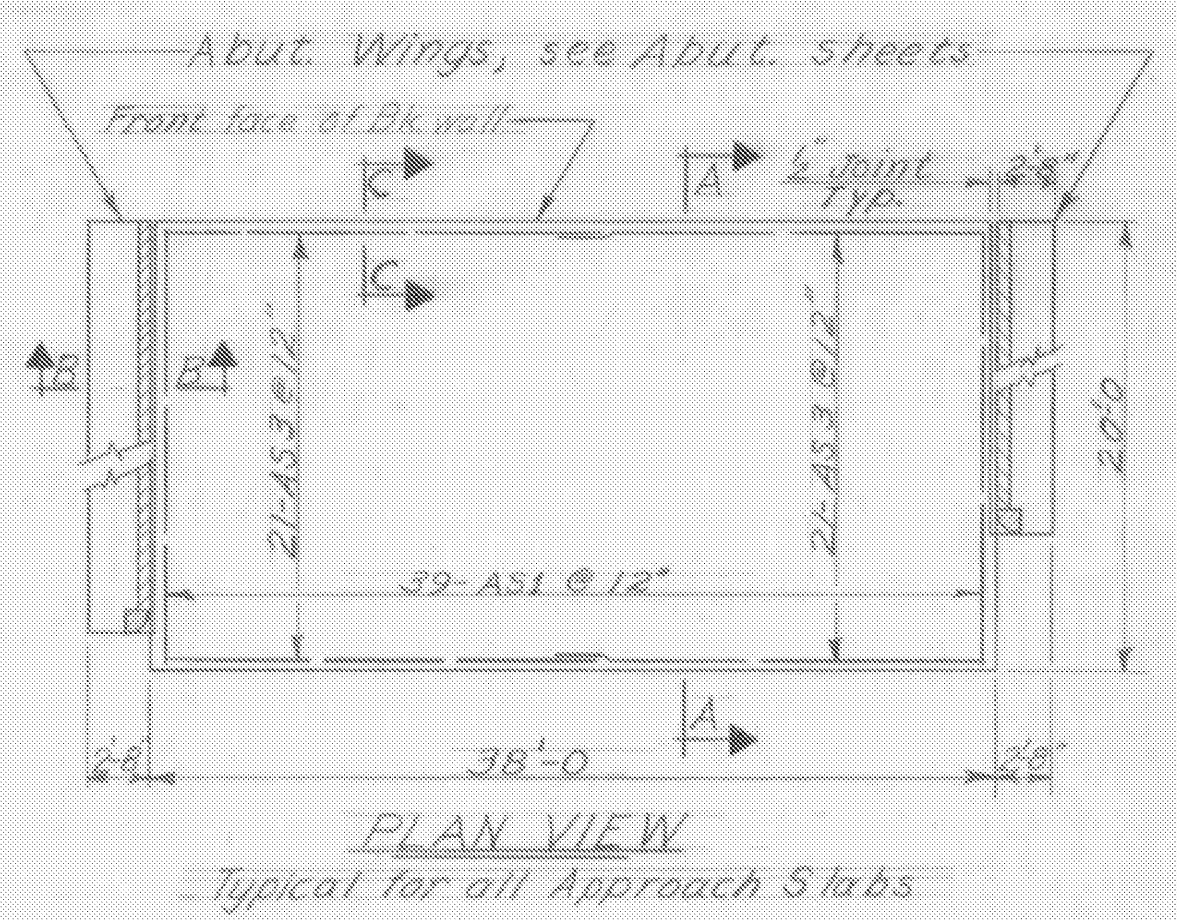
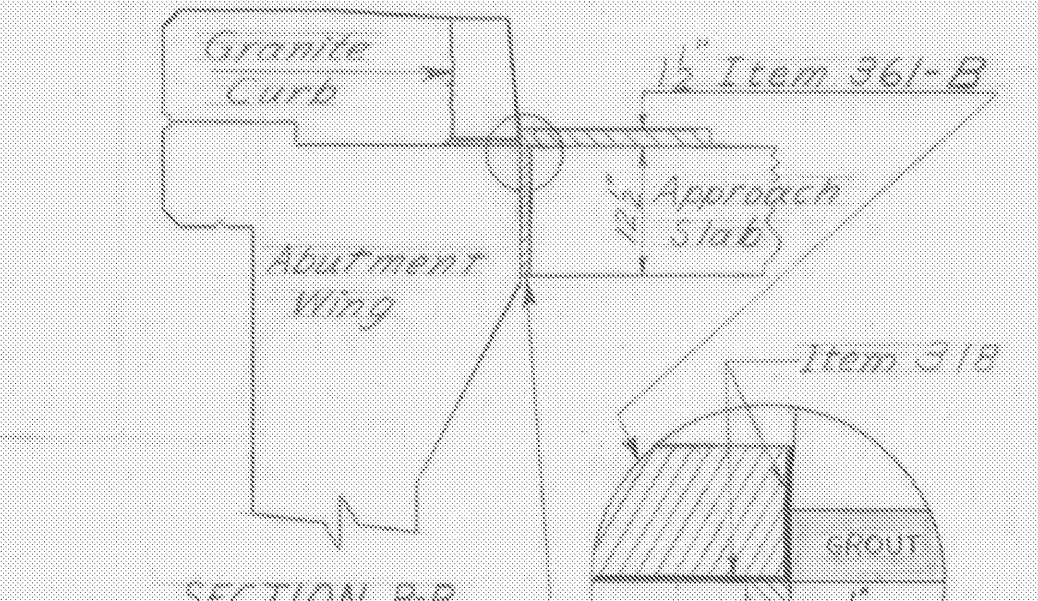
DRAWN BY H. CHECKED BY RMTS: DB

PROJECT No. I-89-3-153 (42)

SHEET 18 OF 29



For additional details of curb section see Abut. sheets # SCB-D6-63, Detail A.



ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
1	CHAN. EXCAV. OF EARTH	C.Y.			
2	CHAN. EXCAV. OF ROCK	C.Y.			
3	UNCLASS. CHAN. EXCAV.	C.Y.			
4	STRUCT. EXCAV.	C.Y.			
5	CONC. CLASS A (MOD.)	C.Y.			
6	CONC. CLASS B (MOD.)	C.Y.			
7	REIN. STEEL	LBS.			
8	ASPHALTIC ASD. COATING	S.Y.			
9	TREATED TIMBER PILING	L.F.			
10	SPLICES FOR STEEL PILING	EA.			
11	STEEL PILING	L.F.			
12	UNTREATED TIMBER PILING	L.F.			

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 19 OF 29
BRIDGE 94S
FOR REFERENCE ONLY

BR 201 OF 214

Revised Footings
W.B.T. 5-13-66

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME: ST. ALBANS-SWANTON
TOWN OF: SWANTON

ROUTE No. I-89 LOG STA.
I-89 OVER SA3 @ NB STA. 3825+15.01

NB PLAN ELEV. APPROACH SLAB & JOINT DETAILS

SCALE: AS SHOWN

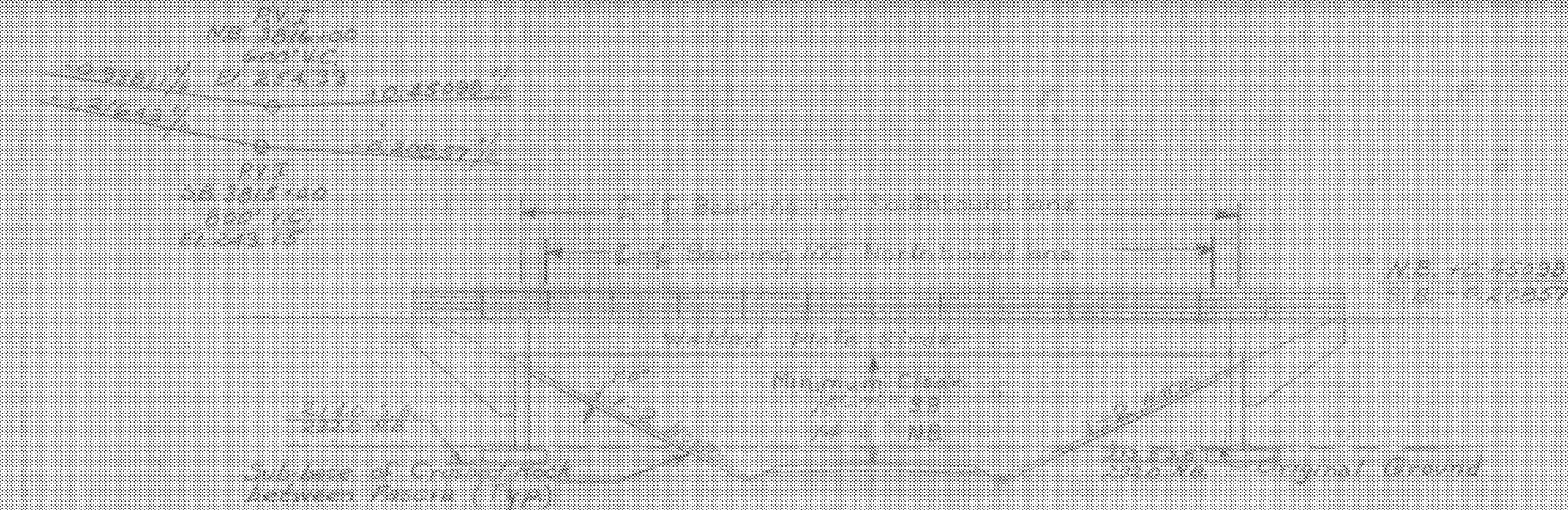
SURVEYED BY: SPAULDING

DRAWN BY: DGLN CHECKED BY: RMTS

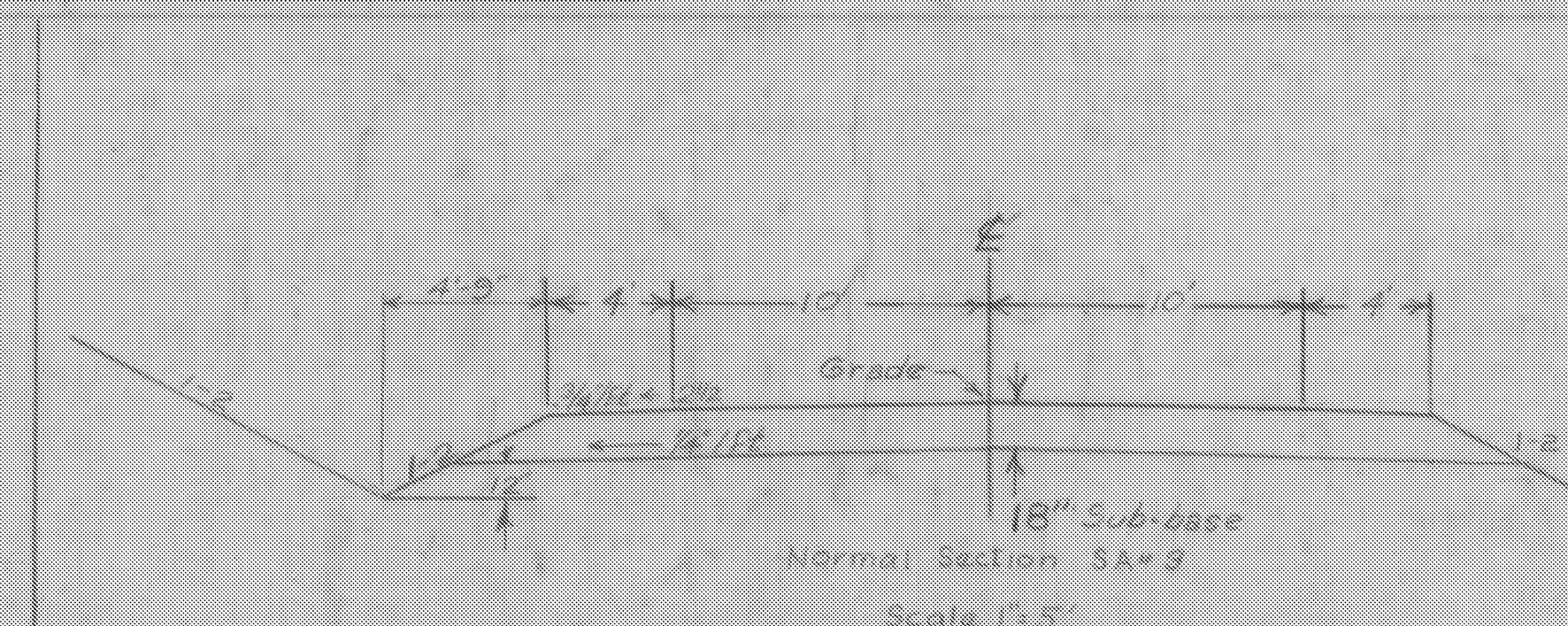
PROJECT NO. I-89-3 (42)

SHEET 19 OF 153

Scale: 1" = 10'-0"

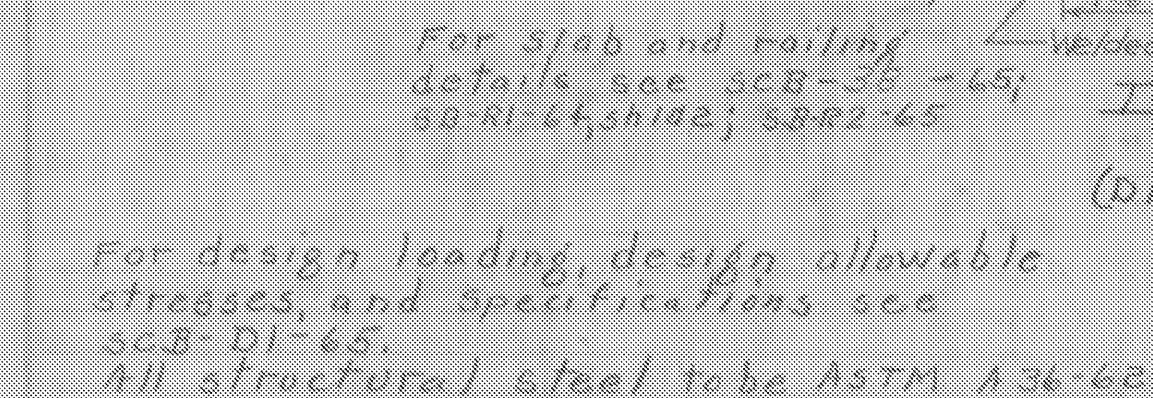


NEW HIGHWAY PROFILE ALONG RIGHT ESCAPE SOUTHBOUND LANE



1	EXISTING BRIDGE	EXISTING STRUCTURE	
2	TYPE OF EXISTING STRUCTURE		
3	UNDERSTANDING ELEVATION OF EXISTING STRUCTURE		
4	HIGH POSITIONED SURROUND BASE OF EXISTING STRUCTURE		DOES EXIST
5	SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE		
6	SHOULD NEW TO EXISTING STRUCTURE BE USED		
7	SHOULD NEW WATERWAY BE USED AT EXISTING STRUCTURE		WATERWAY TO ORDNANCE
8	SHOULD NEW WATER AT EXISTING STRUCTURE		
9	SPAN OF EXISTING BRIDGE UPSTREAM		WATERWAY TO EXISTING R.M.
10	SPAN OF EXISTING BRIDGE DOWNSTREAM		WATERWAY TO EXISTING R.M.
11	TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS		
12	DOES ALL WATER FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE		
13	IF NOT, WHAT ELEVATION IS RELIEF AFFORDED		
14	CONDITIONAL WATERWAY AREA PROVIDED		

1	PERMISSIBLE TYPE OF STRUCTURE	Single Span Welded Plate Girder, Composite
2	RECOMMENDED CLEAR SPAN OR SPANS	Northbound lane 100' span Southbound lane 110' span
3	MEASURED PARALLEL TO & NEW HIGHWAY	N.A.
4	MEASURED AT RIGHT ANGLES TO & STREAM	N.A.
5	ARE THERE OBJECTIONS TO A BRIDGE IN THE STREAM, EITHER YES OR NO	N.A.
6	ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE	N.A.
7	EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE	N.A. SOURCE OF INFORMATION N.A.
8	IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE	N.A.
9	DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY	N.A. IS ORDINARY ONE ABOVE N.A.
10	LOW WATER ELEVATION AT NEW STRUCTURE	N.A.
11	DRAINAGE AREA IN ACRES ABOVE STRUCTURE	N.A. CHARACTER OF TERRAIN N.A.
12	IS STREAM EVER DRY	N.A.
13	VELOCITY OF STREAM AT HIGH WATER STAGE	N.A. ESTIMATED DISCHARGE N.A.
14	AREA FILL OPERATIONS	N.A. AREA BELOW ORDINARY H.W. N.A.
15	CHARACTER OF SOIL	N.A. GRAIN N.A.
16	ESTIMATED GRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORM	N.A.
17	VERTICAL CLEARANCE ABOVE FLOODED ELEVATION	N.A.
18	AND SURROUNDING NEIGHBORS, IF OF OR	No N.A.
19	RECOMMENDED TYPE OF PAVEMENT	1 1/2 inch Bituminous Concrete Pavement
20	TRAFFIC TO BE MAINTAINED UNDER IT	No ONE OR TWO LANE N.A. PROPOSED N.A.
21	IS PROBABLE COST OF CARRYING AND MAINTAINING STREAM CHANNEL AT STRUCTURE SITE	N.A.
22	SHOULD FLOODWAYS BE MADE FOR FLOOD UTILITIES	No
23	ESTIMATED ALLOWABLE LOADS OR OPERATIONS	2 Tons/c/s WHILE FLOOD IS UP No



RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 20 OF 29
BRIDGE 94S
FOR REFERENCE ONLY

BR. 203 OF 214

Revised Footings
W. B. T. 5-13-66

STATE OF VERMONT 894
J. DEPARTMENT OF REVENUE

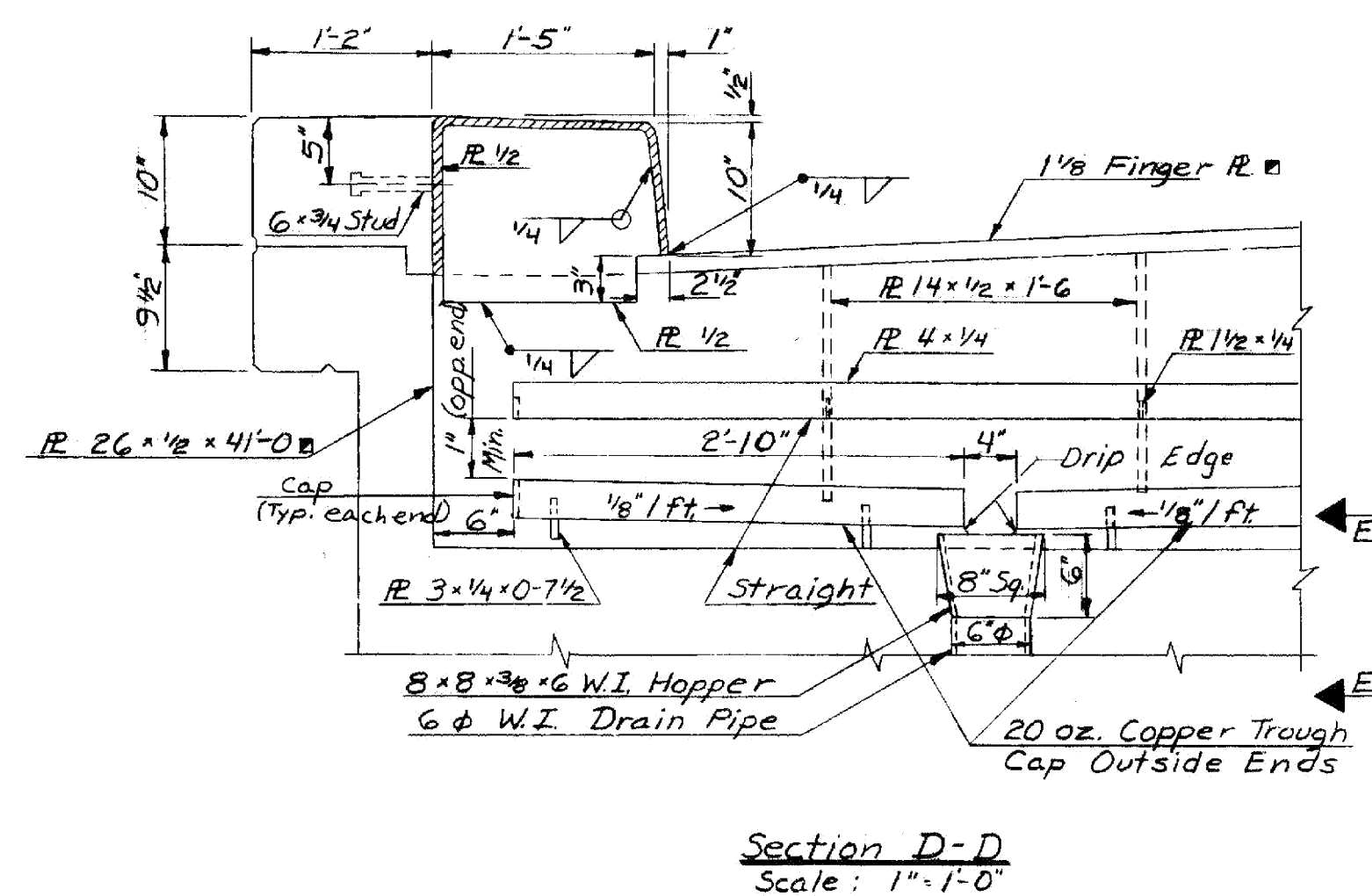
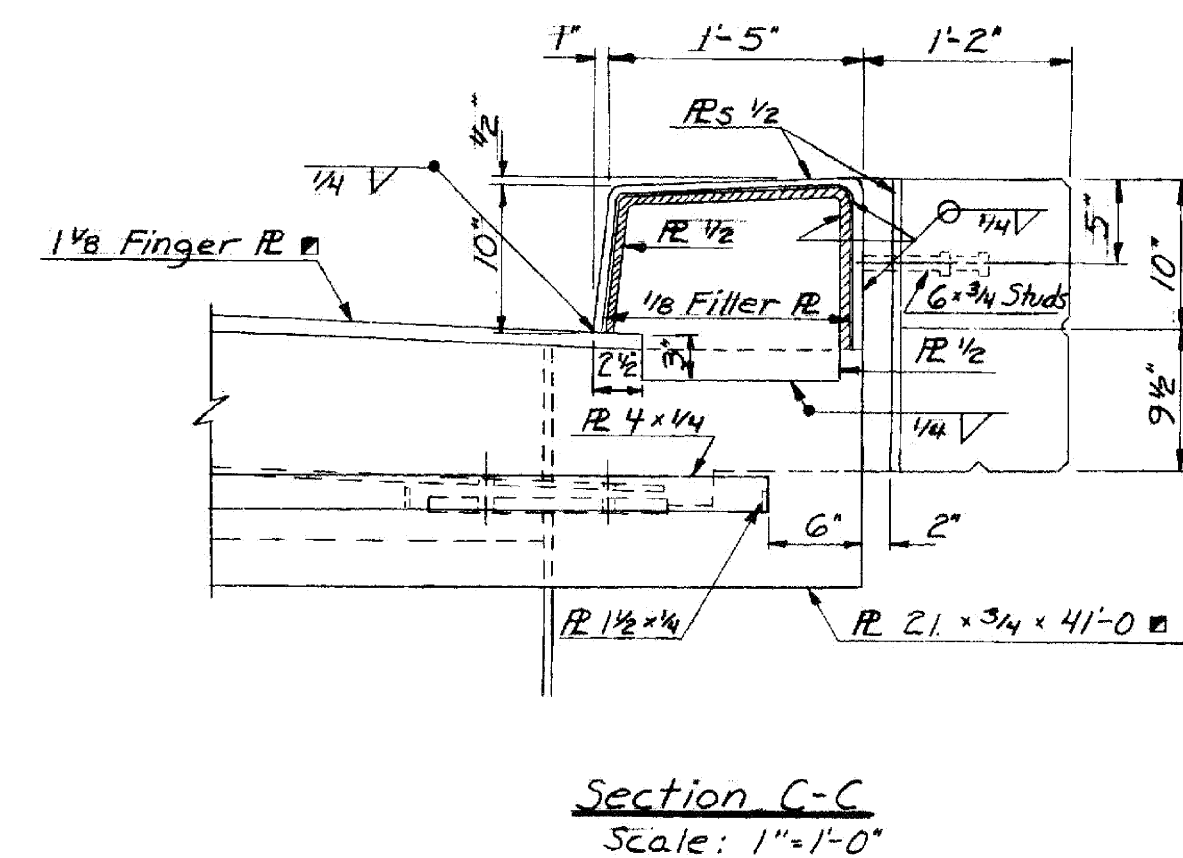
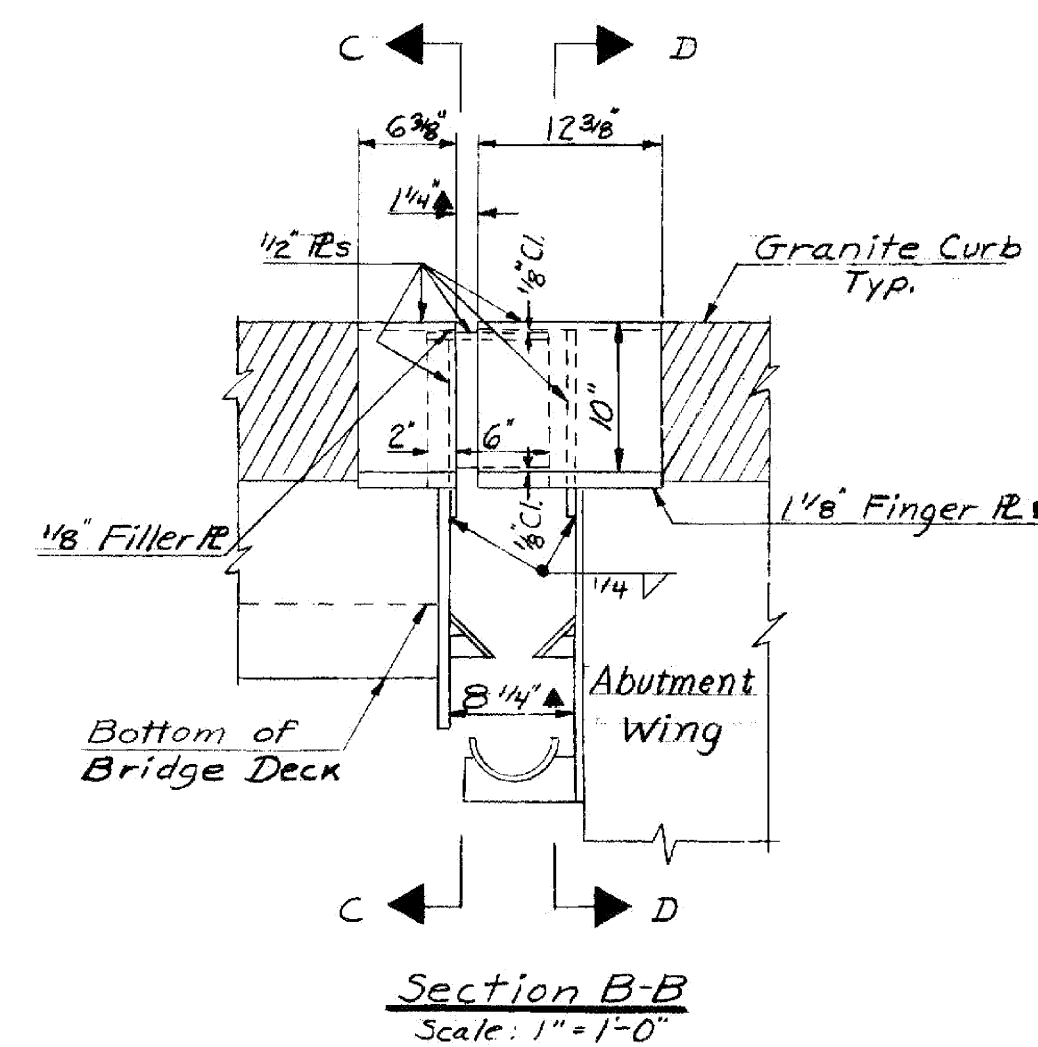
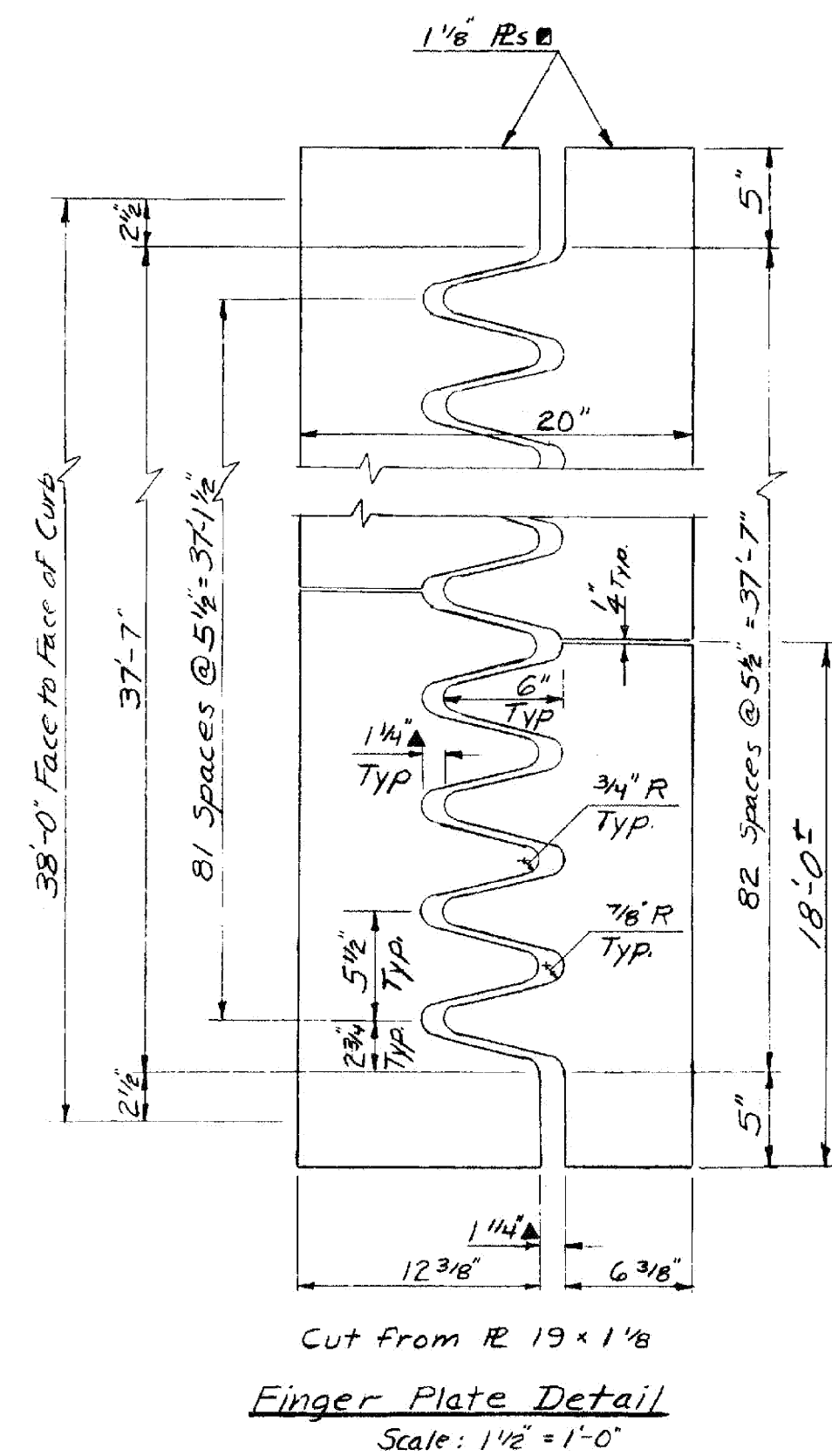
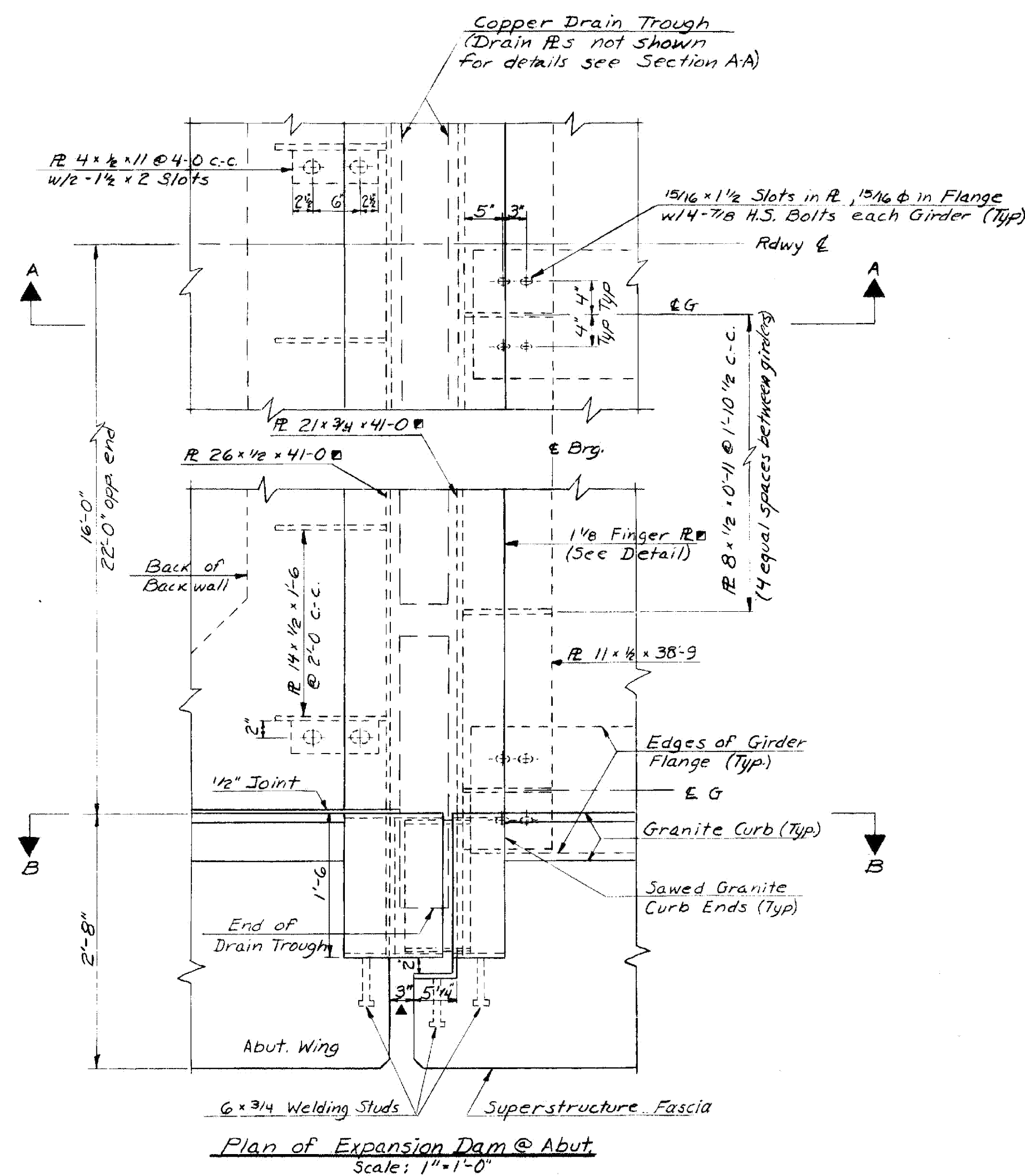
Interstate is the name of

St. Albans - Swanton
ROUTE NO. I-89 100 ST. 11/4

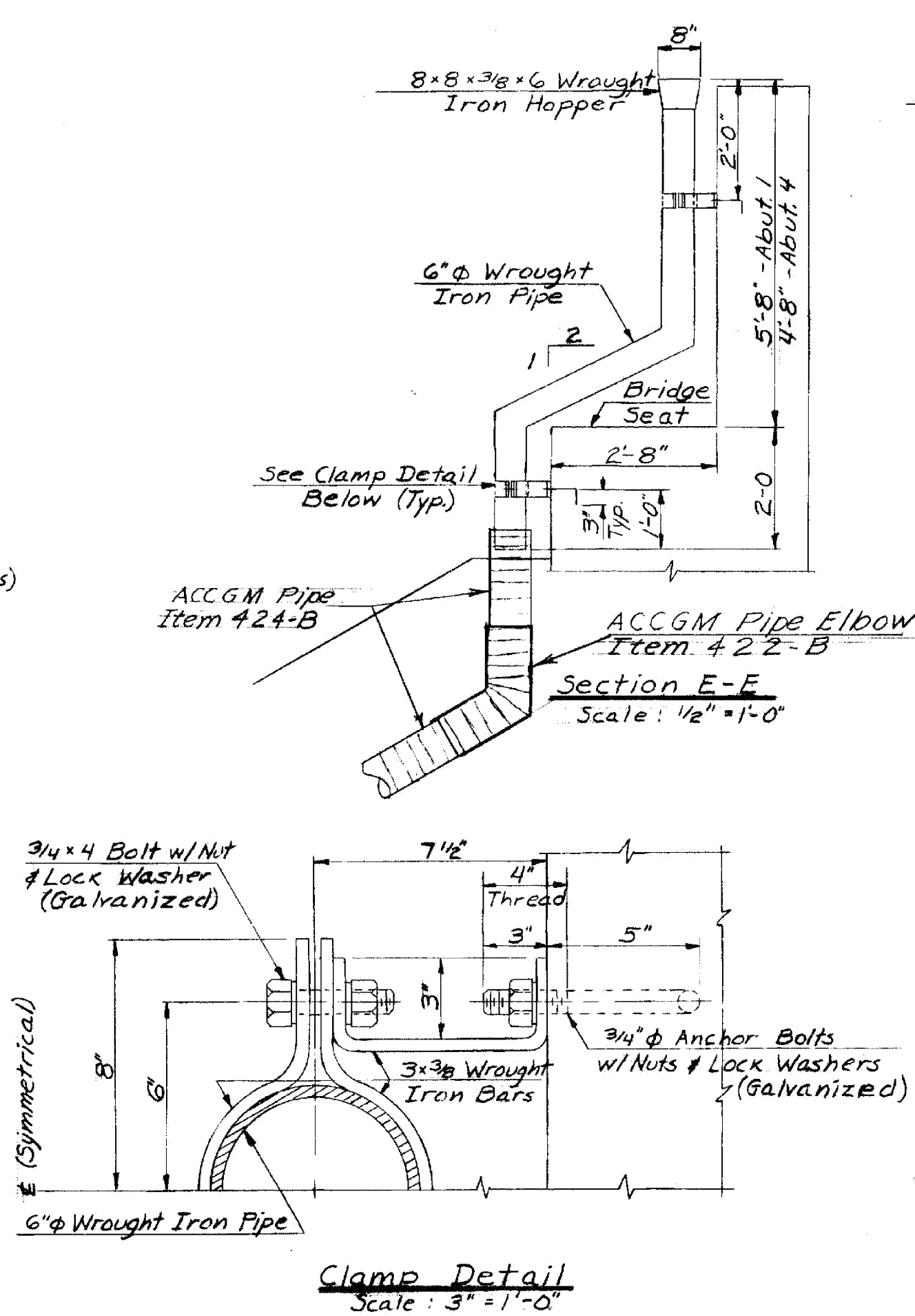
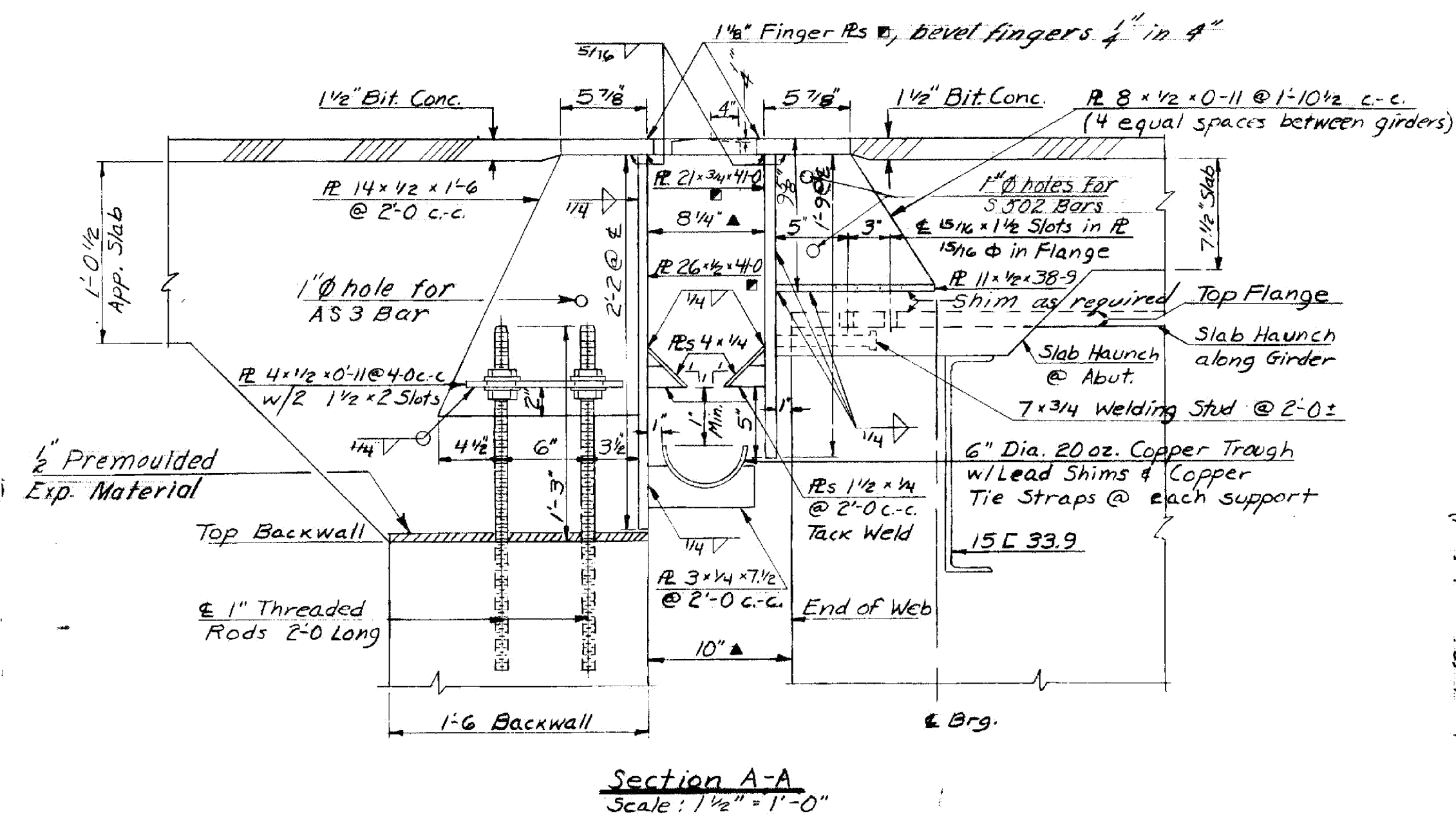
189 over S.A.^u3

DATE	COPIES	WMS	DATE
PROJECT	189.3		
	(4)		

114 153



- Notes
1. Plates marked ■ shall conform to the roadway grade and parabolic crown.
 2. All clear dimensions marked ▲ are for 68°F
 3. All steel for the Expansion Dam shall be ASTM A-242 unless otherwise noted, except plates completely embedded in concrete may be A-36 Steel.
 4. See Br. 200 for General Notes.
 5. See Br. 201 for details of Fixed End Joint.
 6. There shall be one drain @ each Exp. Abut. At Abut #1 the drain shall be located between Girders #1 and #2; at Abut #2 the drain shall be located between Girders #5 & #6.
- Br. 208 of 214



ITEM NO	ITEM	UNIT	QTY	TOTAL	FINAL
	CHAN EXCAV. OF EARTH	C Y			
	CHAN EXCAV. OF ROCK	C Y			
	UNCLAS. CHAN EXCAV	C Y			
	STRUCT. EXCAV	C Y			
	CONC. CLASS AA WOOD	C Y			
	CONC. CLASS B WOOD	C Y			
	REIN. STEEL	LBS			
	ASPHALT/GR. COATING				
	TREATED TIMBER PILING				
	SPICES FOR STEEL PILING				
	STEEL PILING				
	UNTREATED TIMBER PILING				

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 22 OF 29
BRIDGE 94S
FOR REFERENCE ONLY

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 22 OF 29
BRIDGE 94S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT ST. ALBANS - SWANTON
TOWN OF SWANTON

ROUTE No. I-89 LOG STA. _____

I-89 OVER S.A. 3

EXPANSION DAM DETAILS

SCALE: AS SHOWN

SURVEYED BY_____

DRAWN BY DB

8... CHECKED BY...

PROJECT No. I 89-3 (42)

SHEET 116 OF 153

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INDEX OF SHEETS

SHEET NO.	TITLE
1	IMPROVEMENT (INTERSTATE)
2	IMPROVEMENT (INTERSTATE)
3	TYPICAL CROSS SECTIONS (DRAIN)
4	TYPICAL CROSS SECTIONS (S.A. ROAD #1)
5-7	ALIGNMENT DATA SHEETS
8	TEMPORARY APPROACH TRANSITION SHEET
9-10	QUANTITY SHEETS (ITEMS)
11-12	QUANTITY SHEETS (DRAINAGE)
13-18	GRADE SHEETS
19-22	EARTHWORK SHEETS
23	BLANK
24-70	PLAN AND PROFILE SHEET
71	BLANK
72	BLANK
73	B-1 (DRILLING AND BLASTING OF SOLID ROCK, SUBGRADE)
74	B-1 (BANKING TABLES)
75	B-5 (TYPICAL SLOPE GRADINGS)
76	B-6 (MUCK EXCAVATION)
77	BLANK
78	B-15 (ENTRANCE AND EXIT TERMINALS)
79	BLANK
80	B-17 (DETAILS OF U-TURNS)
81	D-1 (UNDERDRAIN AND HEADWALLS)
82	D-3 (LAITE MATINGS AND BUTTERS)
83	D-4 (ELBOWS AND FLUSHING BASINS)
84	BLANK
85	D-8 (DROP INLETS)
86	D-10 (DROP INLET TOPS)
87	D-11 (DROP INLET GRATES AND COVERS)
88	D-16 (PRECAST REINFORCED CONCRETE CURB DROP INLETS)
89	E-1 (BARRICADES, SIGNS AND LIGHTS) ROADWAY
90	E-2 (BARRICADES, SIGNS AND LIGHTS) BRIDGE
91	E-3 (CONSTRUCTION IDENTIFICATION SIGNS)
92	G-3 (THREE CABLE GUARD RAIL WITH STEEL POSTS)
93	G-4 (PLANK GUARD RAIL)
94	J-1 (BOUNDARY MARKERS)
95	J-6 (FIELD OFFICE)
96	BLANK
97	SB-20-60
98	SB-21-36
99-102	SCB-30-62
103-104	SB-55-62
105	SCB-30-62
106-114	SCB-D1 THIRTEEN IN-62
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118	SCB-D1 THIRTEEN IN-62
119	SCB-D1 THIRTEEN IN-62
120	SCB-D1 THIRTEEN IN-62
121	SCB-D1 THIRTEEN IN-62
122	SCB-D1 THIRTEEN IN-62
123	SCB-D1 THIRTEEN IN-62

SHEET NO.

104	BR 206 DETAILS OF ABUTMENT NO. 2
105	BR 207 DETAILS OF PIER NO. 1
106	BR 208 DETAILS OF PIER NO. 2
107	BR 209 APPROACH SLAB NO. 1 (STD STR. SB-AS-62)
108	BR 210 APPROACH SLAB NO. 2 (STD STR. SB-AS-62)
109	BR 211 REINFORCING STEEL SCHEDULE
110-114	BR 212-216 CHANNEL SECTIONS
115	INTERSTATE BRIDGE OVER ST. J. AND L.C. RR
116	BR 301 PLAN ELEVATION
117	BR 302 BRIDGE QUANTITY SHEET
118	BR 303 PRELIMINARY INFORMATION SHEET
119	BR 304 BORING LOGS
120	BR 305 APPROACH SLAB NO. 3 AND NO. 4
121	BR 306 ABUTMENTS NO. 3 AND NO. 4
122	BR 307 PIERS NO. 3 AND NO. 4
123	BR 308 REINFORCING STEEL SCHEDULE
124	INTERSTATE BRIDGE OVER VT. RR. 78
125	BR 400 PRELIMINARY INFORMATION SHEET
126	BR 401 PLAN AND ELEVATION
127	BR 402 BORINGS
128	BR 403 DETAILS OF ABUTMENTS (NORTH AND SOUTH)
129	BR 404 DETAILS OF PIERS NO. 1 AND NO. 2
130	BR 405 REINFORCING STEEL SCHEDULE
131	BR 406 APPROACH SLAB NO. 1 (STD STR. SB-AS-62)
132	BR 407 APPROACH SLAB NO. 2 (STD STR. SB-AS-62)
133	BR 408 OVER INTERSTATE RR
134	BR 500 PLAN AND ELEVATION
135	BR 501 PRELIMINARY INFORMATION SHEET
136-140	BR 502-505 BORINGS
141	BR 506 DETAILS OF ABUTMENT NO. 1
142	BR 507 DETAILS OF ABUTMENT NO. 2
143	BR 508 REINFORCING STEEL SCHEDULE
144	BLANK
145-146	CROSS SECTIONS

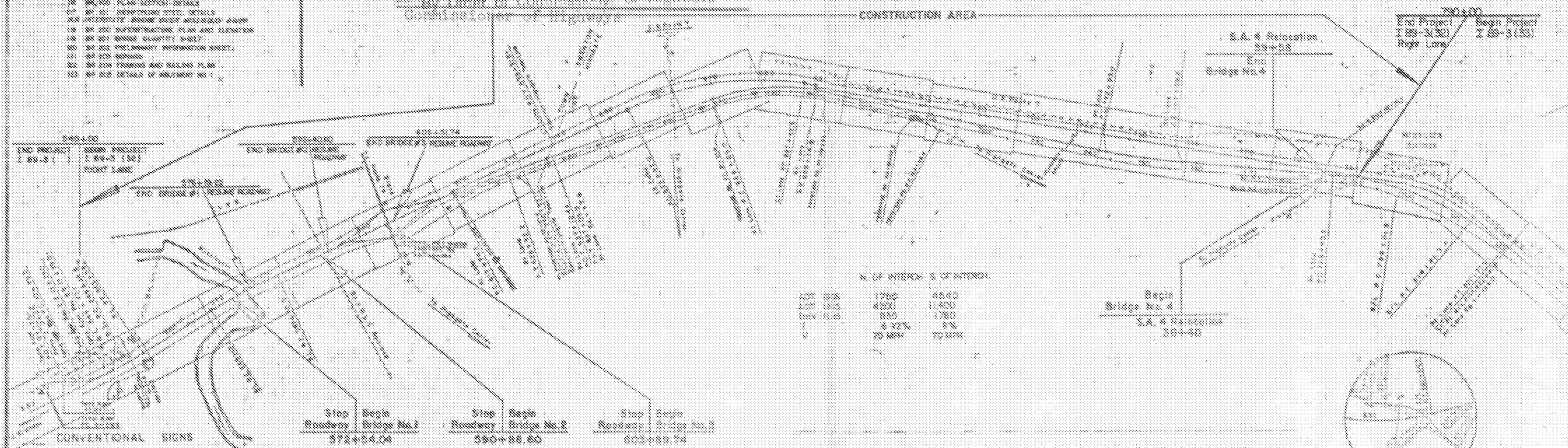
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
Proposed Improvement

TOWNS OF SWANTON & HIGHGATE

ST. ALBANS, VT-PHILIPSBURG, QUE ROAD
PROJECT I 89-3 (32)

Dated FEBRUARY 27 1964
Colangelo Land Gravel Co. Inc.
Contractor
By Order of Commissioner of Highways
Commissioner of Highways

Beginning at a point 1.824 miles southerly of the
Swanton-Highgate Town Line and extending northerly 4.736 miles
Length of Roadway 24,328.22 Feet = 4.606 Miles
Length of Bridge 679.18 Feet = 0.126 Miles
Length of Project 25,007.40 Feet = 4.736 Miles



- CONVENTIONAL SIGNS
- COUNTY LINE
 - TOWN LINE
 - FENCE LINE
 - STONE WALL
 - UNFENCED PROPERTY
 - GUARD RAIL
 - TRAVELED WAY
 - RAILROAD
 - RETAINING WALL
 - CENTER LINE
 - SURVEY LINE
 - CULVERT
 - DROP INLET
 - TELEPHONE POLE
 - POWER POLE
 - ACCESS CONTROL LINE
 - R.O.W. FENCE
 - R.O.W. LINE
 - SLOPE RIGHTS

- CONSTRUCTION IDENTIFICATION SIGNS
- CURVE DATA
 - DEFLECTION OF ANGLE
 - DEGREE OF CURVE
 - RADIUS OF CURVE
 - TANGENT DISTANCE
 - LENGTH OF CURVE
 - EXTERNAL DISTANCE
 - POINT OF INTERSECTION
 - POINT OF CURVE
 - POINT OF TANGENT
 - POINT-ON-TANGENT
 - POINT-ON-SUB-TANGENT

ALL ELEVATIONS ARE U.S. ELEVATIONS



LEGEND
X DESIGNATES ACCESS POINTS

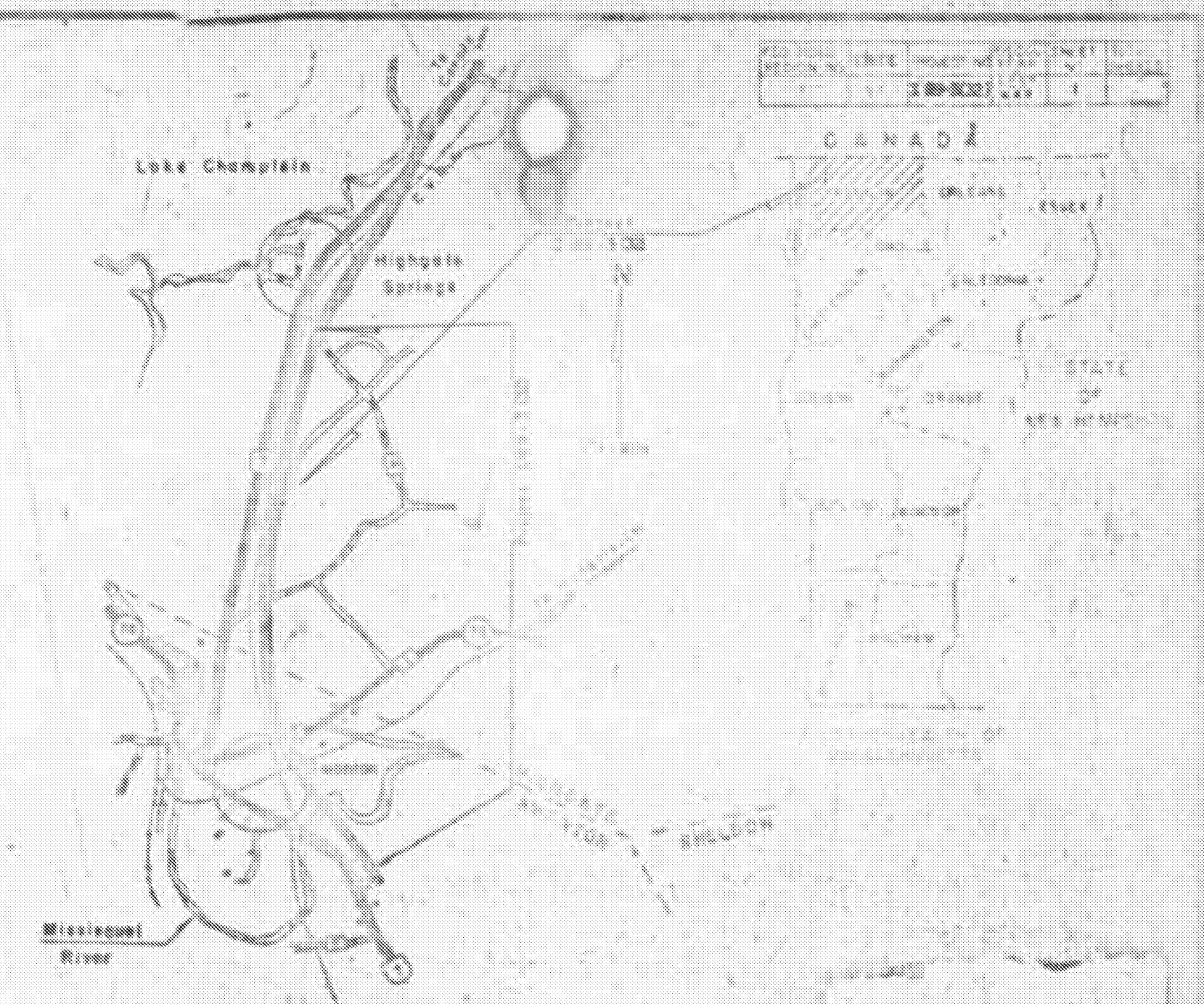
APPROVED R.H. Arnold ASSIST. CHIEF ENGINEER DATE 11/7/63
APPROVED E.H. Blumhage CHIEF ENGINEER DATE 11/4/63
APPROVED L.M. Ginn CHIEF ENGINEER DATE 11/4/63
APPROVED B.M. Blumhage CHIEF ENGINEER DATE 11/6/63
APPROVED L.M. Lane CHIEF ENGINEER DATE 11/4/63
APPROVED A.D. Blumhage CHIEF ENGINEER DATE 11/5/63

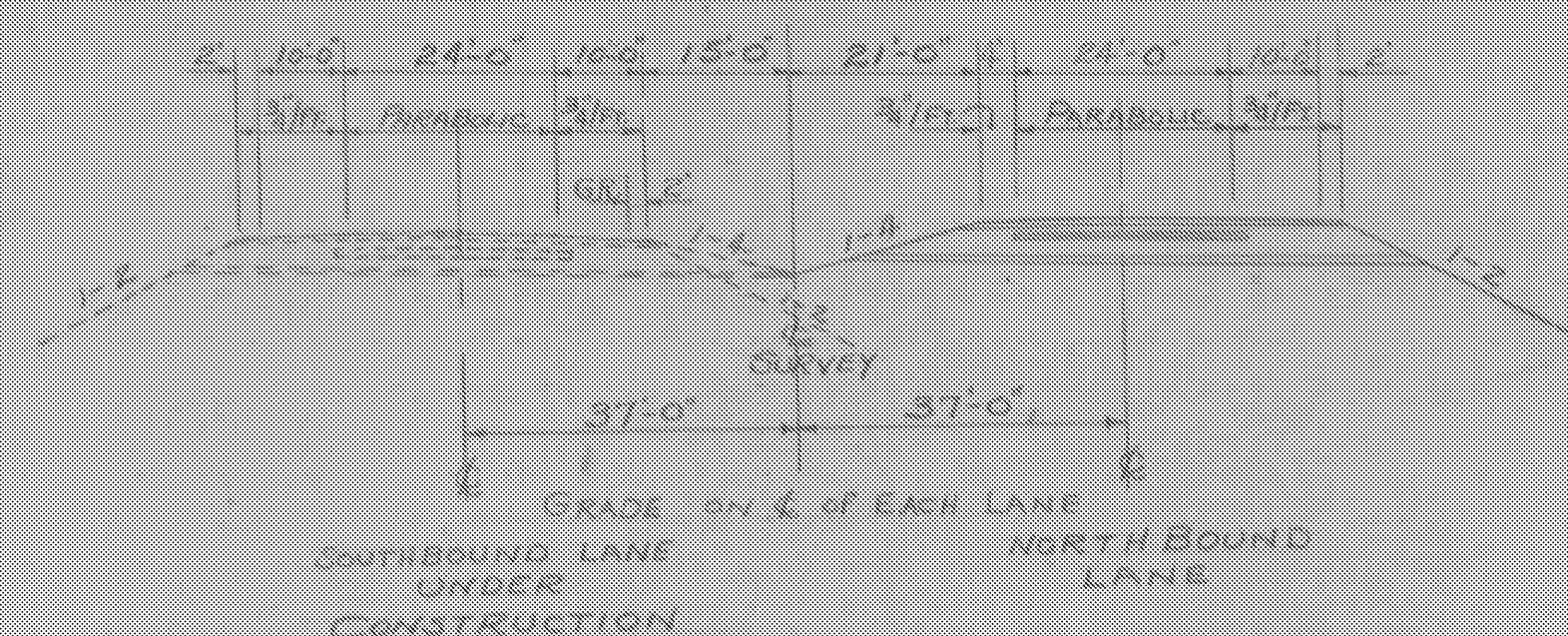
WEBSTER-MARTIN, INC.
E. O. Martin
Submitted March 5, 1962
Date

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE DEPARTMENT OF HIGHWAYS.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BUREAU OF PUBLIC ROADS, JANUARY 1958, SUBMITTED TO THE BUREAU OF PUBLIC ROADS FOR APPROVAL ON SEPTEMBER 1959, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE SUBMITTED WITH THE PLANS.

RICHMOND-HIGHGATE
IM MEMB(13)
SHEET 23 OF 29
BRIDGE 98S
FOR REFERENCE ONLY

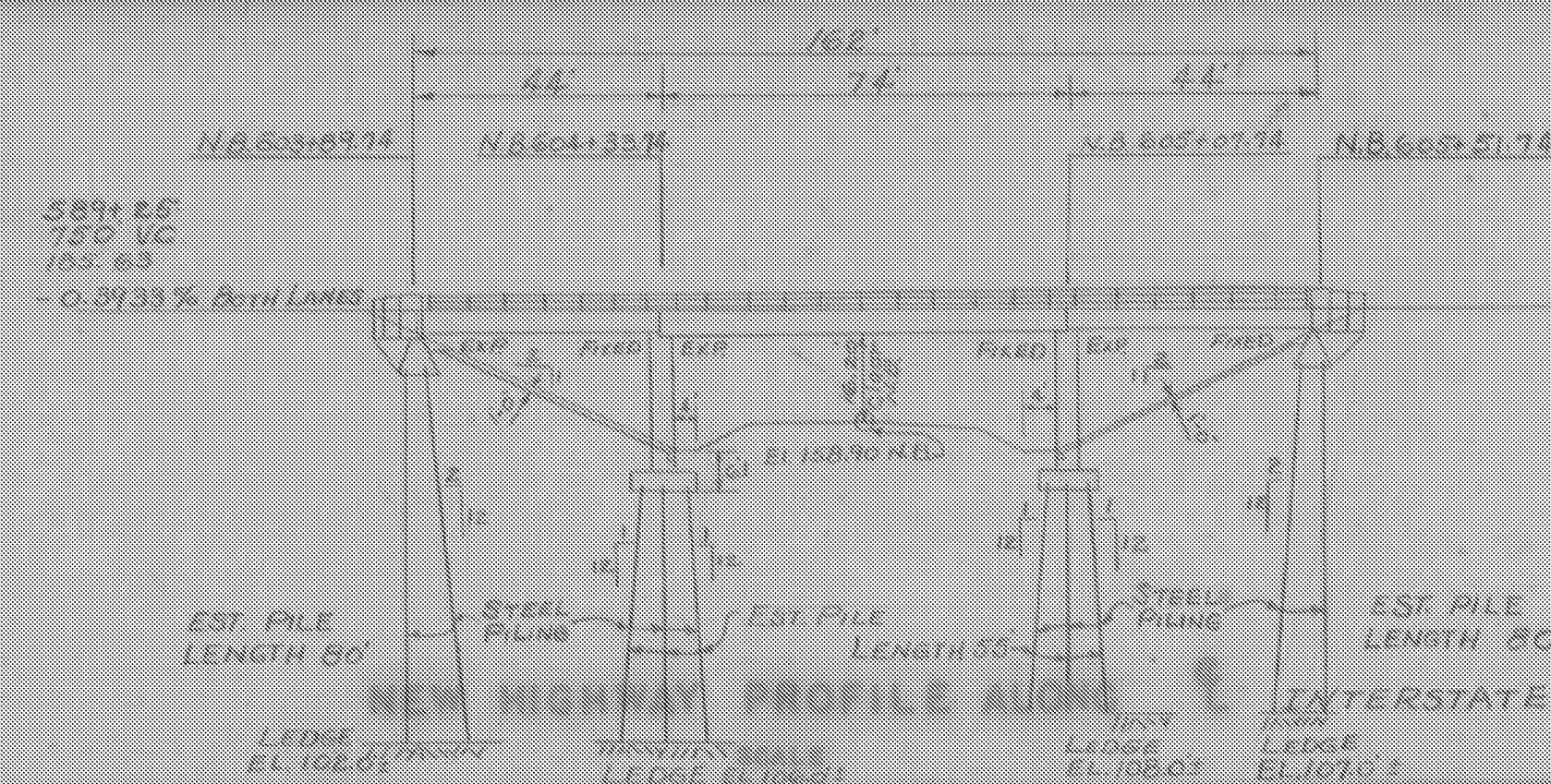
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
PROJ/ECV I NO. 89-3 (32)
RIGHT LANE - STAGE I CONSTRUCTION
SHEET 1 OF 245 SHEETS





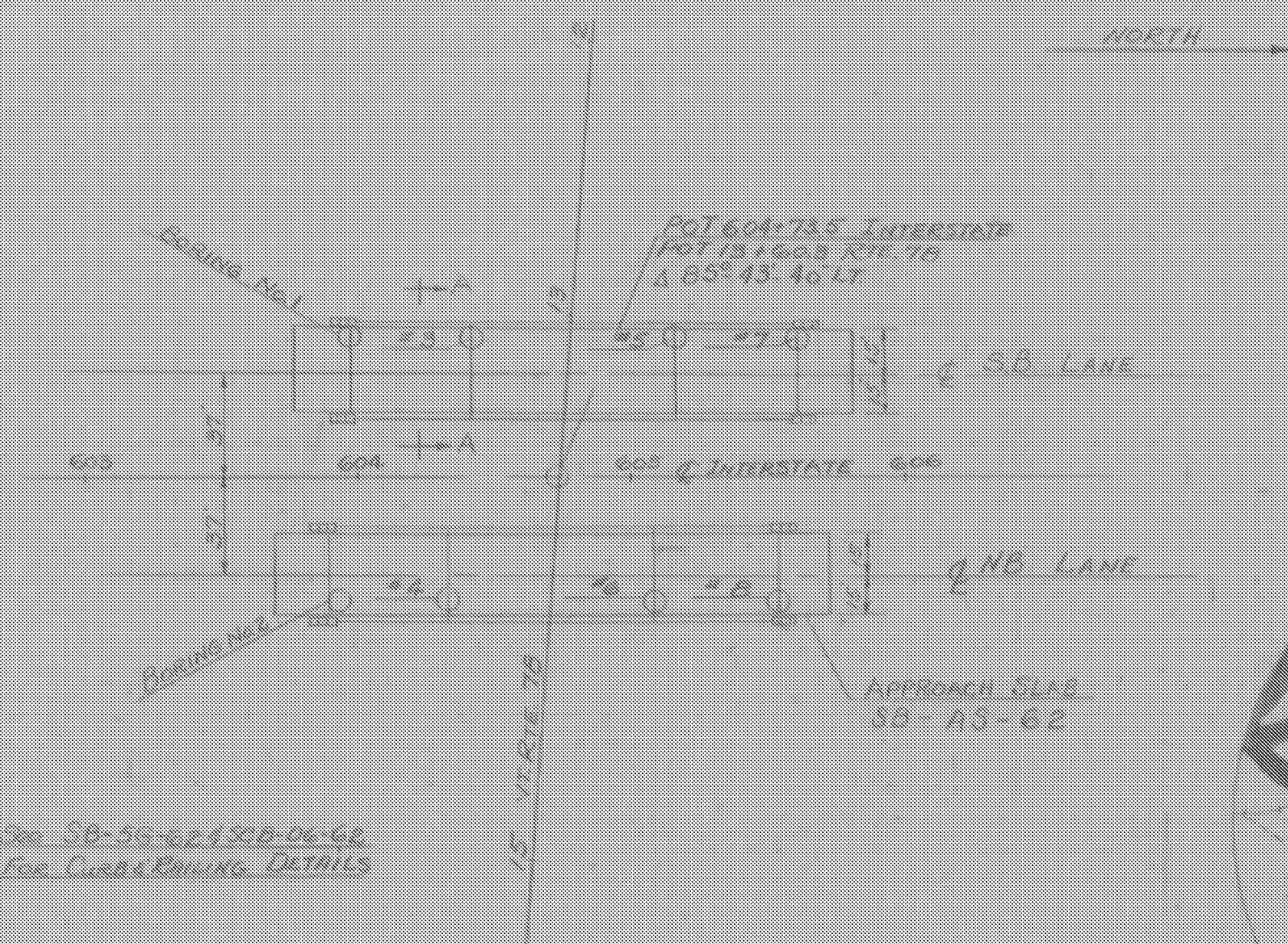
NEW HIGHWAY SECT. STA. 602 TO STA. 607

SCALE 1"=20'

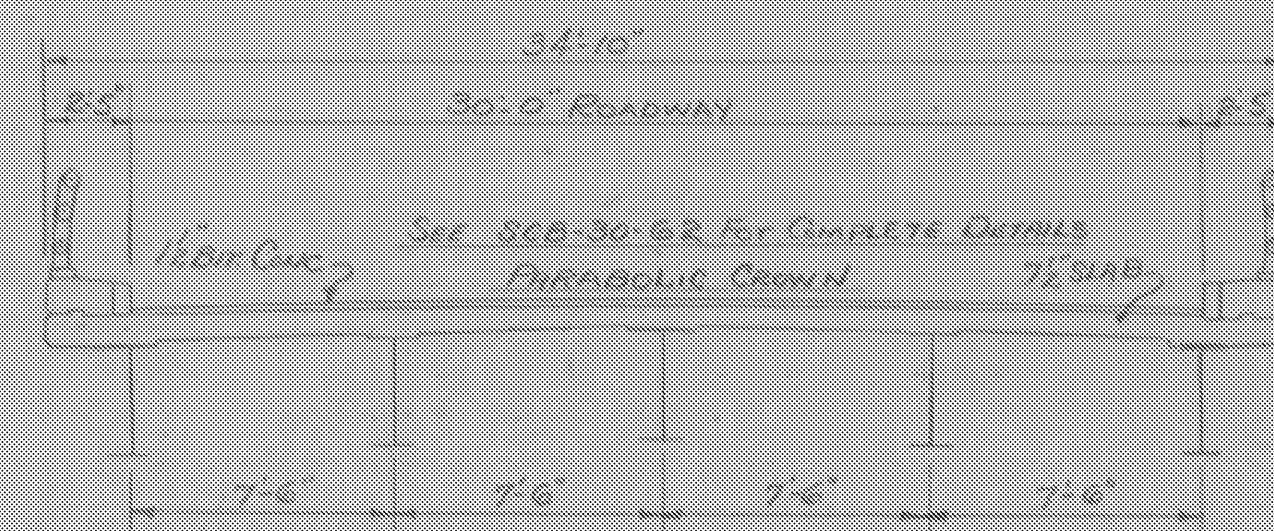


NEW HIGHWAY PROFILE ALONG INTERSTATE

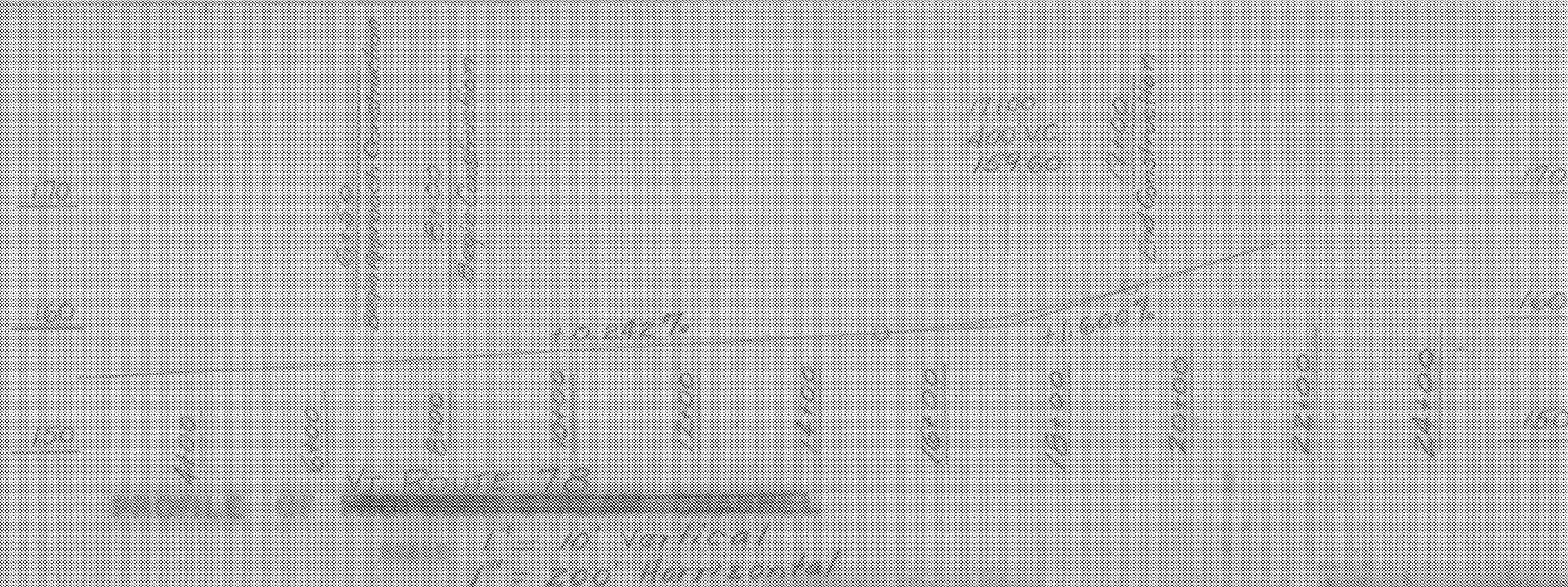
PVI-BOTH LANES
601+25
400 V.C.
178.55
-1.000%
180' BOTH LANES
160
140
120
100



PLAN
SCALE 1"=50'



SECTION A-A (Typ)
SCALE 1"=3'



PROFILE OF VT. ROUTE 78
SCALE 1"=10' Vertical
1"=200' Horizontal

ROUTE NO. INTERSTATE NAME OF HIGHWAY SWANTON-HIGHGATE
STRUCTURE NO. BRIDGE 98S COUNTY FRANKLIN TOWN SWANTON
PROJECT NO. 1-89-3(32) LOCATION 3/4 Mile east from intersection of Route 7

EXISTING STRUCTURE

1. RATED LOADING OF EXISTING STRUCTURE NA
2. TYPE OF EXISTING STRUCTURE NA
3. UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE NA
4. HIGHEST EXISTING STRUCTURE NA COST OF REMOVAL NA
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE NA
6. SHOULD NEW TEMPORARY STRUCTURE BE BUILT NA
7. ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE NA WATERWAY TO ORDINARY H.W. NA
8. EXTREME HIGH WATER AT EXISTING STRUCTURE NA WATERWAY TO EXTREME H.W. NA
9. SPAN OF EXISTING BRIDGE UPSTREAM NA WATERWAY TO EXTREME H.W. NA
10. SPAN OF EXISTING BRIDGE DOWNSTREAM NA WATERWAY TO EXTREME H.W. NA
11. TYPE OF FOUNDATION UNDER EXISTING STRUCTURE NA
12. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE NA
13. IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED NA
14. ADDITIONAL WATERWAY AREA PROVIDED NA

NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE VE COMPOSITE
2. RECOMMENDED CLEAR SPAN OR SPANS 40' 70'-40'
3. MEASURED PARALLEL TO NEW HIGHWAY 40' 70' 40'
4. MEASURED AT RIGHT ANGLES TO STREAM 40' 70' 40'
5. ARE THERE OBJECTIONS TO A PIER IN THE STREAM, WHEN YES OR NO NA
6. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE NA SOURCE OF INFORMATION NA
7. EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE NA
8. IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? NA
9. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY NA IS ORDINARY SIDE RAPID? NA
10. LOW WATER ELEVATION AT NEW STRUCTURE NA
11. DRAINAGE AREA IN ACRES ABOVE STRUCTURE NA CHARACTER OF TERRAINE NA
12. IS STREAM EVER DRY? NA
13. VELOCITY OF STREAM AT HIGH WATER STAGE NA ESTIMATED DISCHARGE NA
14. AREA FULL OPENING NA AREA BELOW ORDINARY H.W. NA
15. CHARACTER OF SOIL NA SHIFT NA
16. ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE NA
17. ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO BOTH SIDES NA
18. RECOMMENDED TYPE OF PAVEMENT BIT. CONCRETE
19. TRAFFIC TO BE MAINTAINED UNDER ITEN NO. NA ONE OR TWO LANE PROBABLE COST
20. PROBABLE COST OF CLEANING AND BRUSHING STREAM CHANNEL AT STRUCTURE SITE NA
21. SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NA
22. ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 35 TONS SHOULD PILES BE USED STEEL PILE LENGTH 31' 80"

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. SOULERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

FOR BORINGS SEE BR SHEET 402

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 24 OF 29
BRIDGE 98S
FOR REFERENCE ONLY

STAGE I & II CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

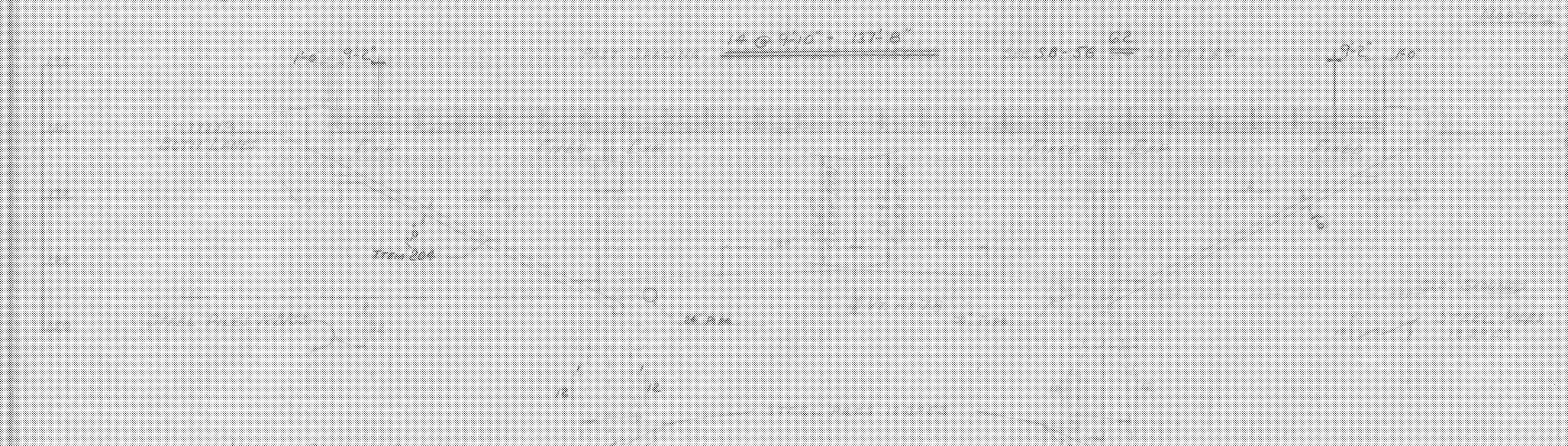
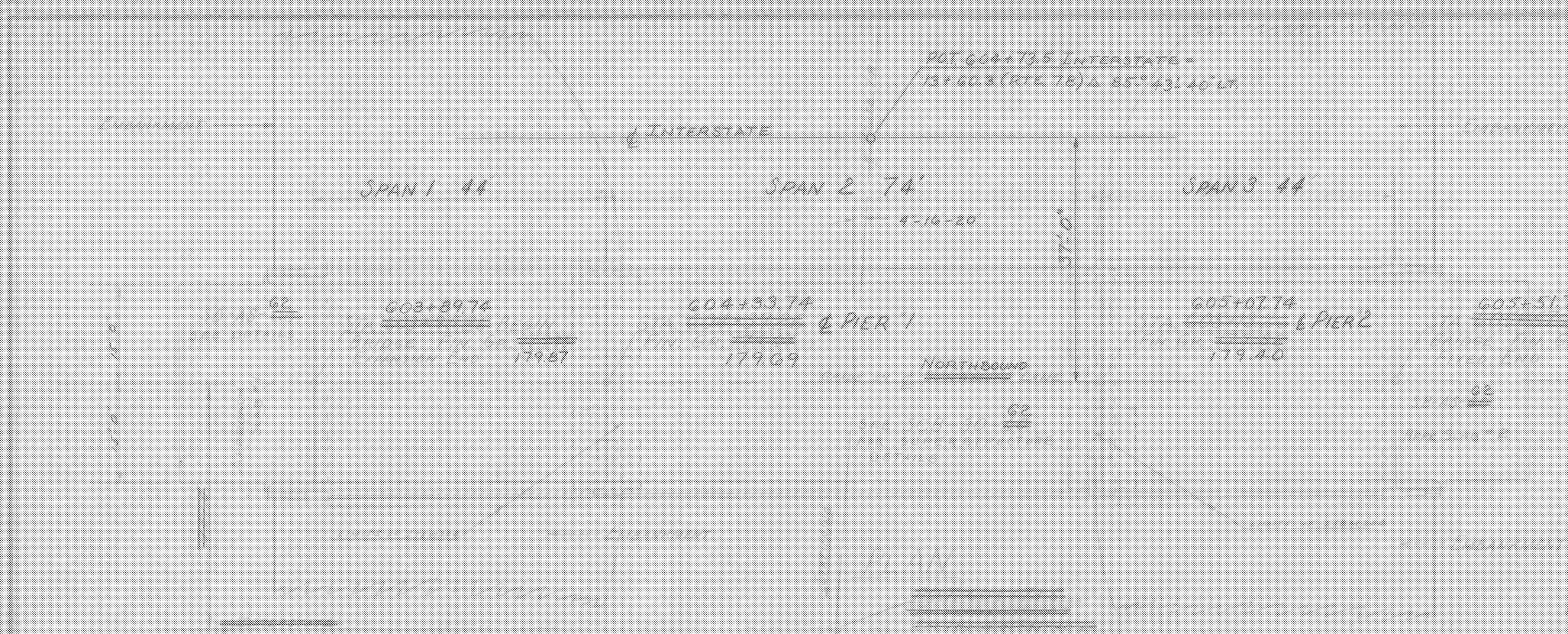
INTERSTATE BRIDGE IN THE TOWNS OF
SWANTON - HIGHGATE
ROUTE NO. 189-3(32) ST. 604+73.5
INTERSTATE OVER VT. 78

PRELIMINARY INFORMATION SHEET

DESIGNED BY J. C. WMS CHECKED BY J. C. WMS DATE 10-25-88
PROJECT NO. 189-3 SHEET 143 OF 246

(30) BR 400 of 407

Sheet 119 of 122



ESTIMATED QUANTITIES (BRIDGE ONLY)

ITEM	ITEM	UNIT	NET	TOTAL STAGE I	TOTAL STAGE II	FINAL
107	STRUCTURE EXCAVATION	C.Y.	130			130
204	SUB-BASE OF GRAVEL ROCK MOD. UNDER STRUCTURE	C.Y.	109			109
222	Gravel Backfill	C.Y.	0			0
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	270			270
373	RUBBER JOINT MATERIAL	L.F.	122			122
361-B	BIT CONC. PAV'T.	TON	66			66
401-B	CONCRETE CLASS B, MOD.	C.Y.	245			245
402	REINFORCING STEEL	LB.	66,499			66,499
403	SPIRAL REINFORCEMENT @ 3040	LB.	1			1
404-A	STRUCTURAL STEEL	LB.	156,172			156,172
407	ASPHALTIC-ASBESTOS COATING	S.Y.	36			36
501	FURNISHING EQUIPMENT FOR DRIVING PILES	L.S.	14			14
401-AA	CONCRETE CLASS AA, MOD. C.Y.	C.Y.	183			183
503	SPICES FOR STEEL PILING	E.A.	20			20
504	STEEL PILING (UPRDS)	L.F.	3,297			3,297
556-C	GRANITE BRIDGE CURB MOD.	L.F.	355			355
572	BRIDGE RAILINGS (GALVANIZED METAL)	L.F.	315			315
372-A	JOINT SEALER HOT-BURED	L.F.	60			60
594	UNIFORMED TRAFFIC OFFICERS	MAN HR.	0			0
102-A	GRANULAR BORROW	C.Y.	2160			2160
Note: These items to be included in roadway quantities						
Cut-offs @ 50% Unit Price						
		L.F.	0			333

- GENERAL NOTES**
- All materials and construction shall conform to the State of Vermont Department of Highway Standard Specifications for Road and Bridge Construction dated Jan. 1956 and the AASHTO Standard Specs. dated 1957, designed for the best loading modified for National System of Interstate Highways applied in accordance with the provision of the AASHTO Standard Specifications, Article 1.0.5.
 - Where rock is encountered no testing shall be required until all blasting in an area 300 feet from the structure has been completed.
 - Final coat of field paint shall be green, unless otherwise directed by the Engineer.
 - All dimensions given are measured horizontally or vertically unless otherwise noted.
 - All dimensions given at 45°F.
 - All reinforcing steel to have a clearance of 3" unless otherwise noted.
 - All exposed edges of concrete shall be chamfered 1" x 1" unless otherwise noted.
 - Borings indicated on the drawings have been made for design purposes only and are not warranted to show actual subsurface conditions.
 - El. datum sea level based on nearest U.S. Government Vertical Control.
 - Steel bearing piles shall be driven to large rock unless otherwise approved by the Engineer. When piles are driven in fill the material should be such as to have no stones large enough to interfere with the driving of piles.
 - Cross slope of approach shall conform with the cross slope of bridge.
 - The top surfaces of all piers and abutments from the front edge of abutment curtain except for bearing pads projecting 1" or in which surfaces shall be later. The entire end and piers shall be coated with asphaltic A-10 from 40% of the specs. The application of all painting and incidental items are complete.
 - Unless otherwise called for all beams shall be on standard structures.
 - All expansion material shall be premoised cork.

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 25 OF 29
BRIDGE 98S
FOR REFERENCE ONLY

LIST OF BRIDGE SHEETS

SHEET No.	TITLE
BR # 400	PRELIMINARY INFORMATION
BR # 401	PLAN & ELEVATION
BR # 402	SPRINGS
BR # 403	DETAILS OF ABUTTS (N.B.)
BR # 404	DETAILS OF PIER 1 & 2
BR # 405	REINFORCING STEEL SCHEDULE
BR # 406-407	SCB-AS G2
	SCB-30- G2
	SCB-D1-G2 THRU SCB-D9-G2
	SB-56- G2 SHEET 1 & 2
	SB-57- G2

Std. E-C Barricades, Signs & Lights (for Bridges)

ESTIMATED SUPERSTRUCTURE QUANTITIES

ITEM	ITEM	UNIT	NET	FINAL
361-A	BIT CONC. PAVEMENT	TON	54	
401-AA	CONCRETE CLASS AA, MOD.	C.Y.	183	
402	REINFORCING STEEL @ 3040	LB.	SEE REINF. SCHEDULE	
403	SPIRAL REINFORCEMENT @ 3040	LB.	1	
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	216	
404-A	STRUCTURAL STEEL	LB.	156,172	
556-C	GRANITE BRIDGE CURB MOD.	L.F.	324	
572	BRIDGE RAILINGS (GALVANIZED METAL)	L.F.	315	
372-A	JOINT SEALER HOT-BURED	L.F.	60	
373	RUBBER JOINT MATERIAL	L.F.	122	
APPROACH SLAB QUANTITIES				
361-B	BIT CONC. PAVE.	TON	12	
401-B	CONCRETE CLASS B, MOD.	C.Y.	49	
402	REINFORCING STEEL	LB.	SEE REINF. SCHEDULE	
556-C	GRANITE BRIDGE CURB MOD.	L.F.	32	
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	54	

* Note: These items to be included in roadway quantities

STAGE I & II CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SIMMONS - HIGHGATE

ROAD No. I-89 BRIDGE No. _____

INTERSTATE OVER ROUTE 78

PLAN & ELEVATION (N.B.)

SCALE 1" = 40'

SURVEYED BY J. J. C. (N.B.) J. J. C. (N.B.)

DRAWN BY J. J. C. (N.B.) CHECKED BY J. J. C. (N.B.)

PROJECT No. I-89-3 (32)

SHEET 25 OF 29

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INDEX OF SHEETS

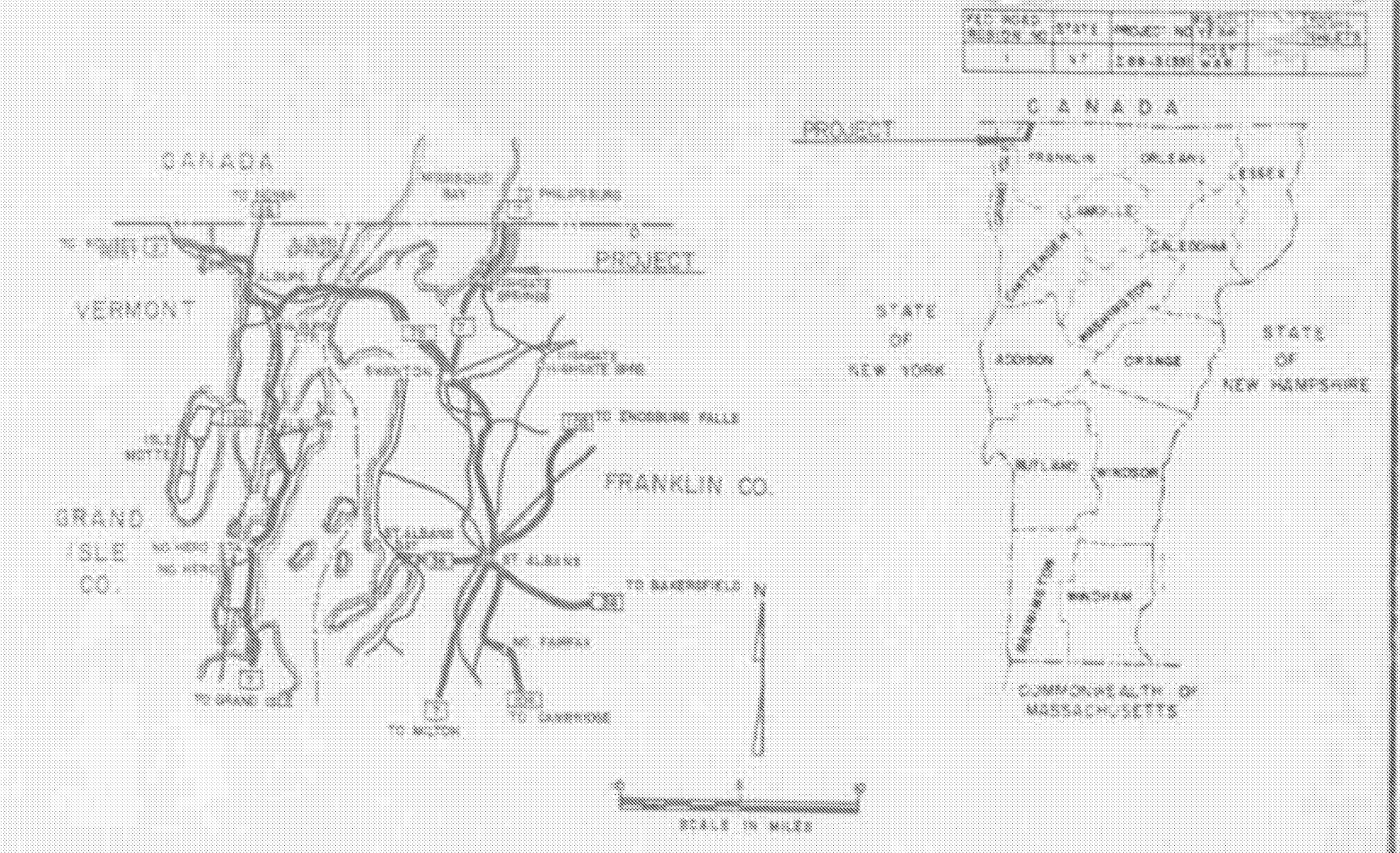
1. TITLE SHEET	75. D-1 CUTTERS & JUTE MATTING
2-3 ALIGNMENT DATA SHEETS	76. D-2 ELBOWS & FLUENTING BASINS
4-5 TYPICAL SECTIONS (MAINLINE)	77. PLANK
6-7 TYPICAL SECTIONS (RAMP & FRONTAGE RD.)	78. D-3 DROP INLETS
8-9 QUANTITY SHEETS (ITEM)	79. D-10 DROP INLET TOPS
10-11 DRAINAGE SHEETS	80. D-11 DETAILS OF GRATES & COVER
12-13 GRADE SHEETS	81. D-16 CURB D.I., GRATES
14-22 EARTHWORK SHEETS	82. E-1 PARADES, SIGNS & LIGHTS
23. PLANK	83. PLANK
24-26 PLANK	84. PLANK
27-55 PLAN AND PROFILE SHEETS	85. E-31 CONSTRUCTION IDENTIFICATION SIGNS
56. PLANK	86. F-1 PROPERTY LINE FENCE
57. PLANK	87. BLANK
58-61 DETAIL OF ENTRANCE AND EXIT TERMINALS	88. U-1 PROJECT & BOUNDARY MARKERS
INTERSECTIONS	
62. PLANK	89. BLANK
63. A-61 DRILLING & PLASTING OF SOLID ROCK	90. BLANK
SUBGRADE	91. SCB-30-62
64. P-1 PAVING TABLES	92 A-1 SCB-D1 THRU D9-62 (9 SHEETS)
65. P-5 TYPICAL SLOPE GRADING	93 A-8 SCWPG-30-62 SHEETS 1,4
66. P-6 PAVED EXCAVATION	94 A-8 SB-50-62 SHEETS 1,2
67. PLANK	95. BLANK
68. BLANK	96. BLANK
69. BLANK	97. BLANK
70. BLANK	98. BR 100 SERIES (1 SHEET)
71. B-15 ENTRANCE & EXIT TERMINAL	99-109 BR 200 SERIES (11 SHEETS)
72. PLANK	110-122A BR 300 SERIES (14 SHEETS)
73. B-17 DETAILS OF U-TURN	123-170 CROSS SECTIONS, MAINLINE
74. C-2 UNDERDRAIN & HEADWALLS	191-192 CROSS SECTIONS, RAMP
	193-203 CROSS SECTIONS, FRONTAGE ROAD
	204. PLANK

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Proposed Improvement

TOWN OF HIGHGATE
COUNTY OF FRANKLIN
INTERSTATE ROUTE 89
ST. ALBANS, VT. - PHILIPSBURG, QUE. ROAD
RT. LANE CONSTRUCTION

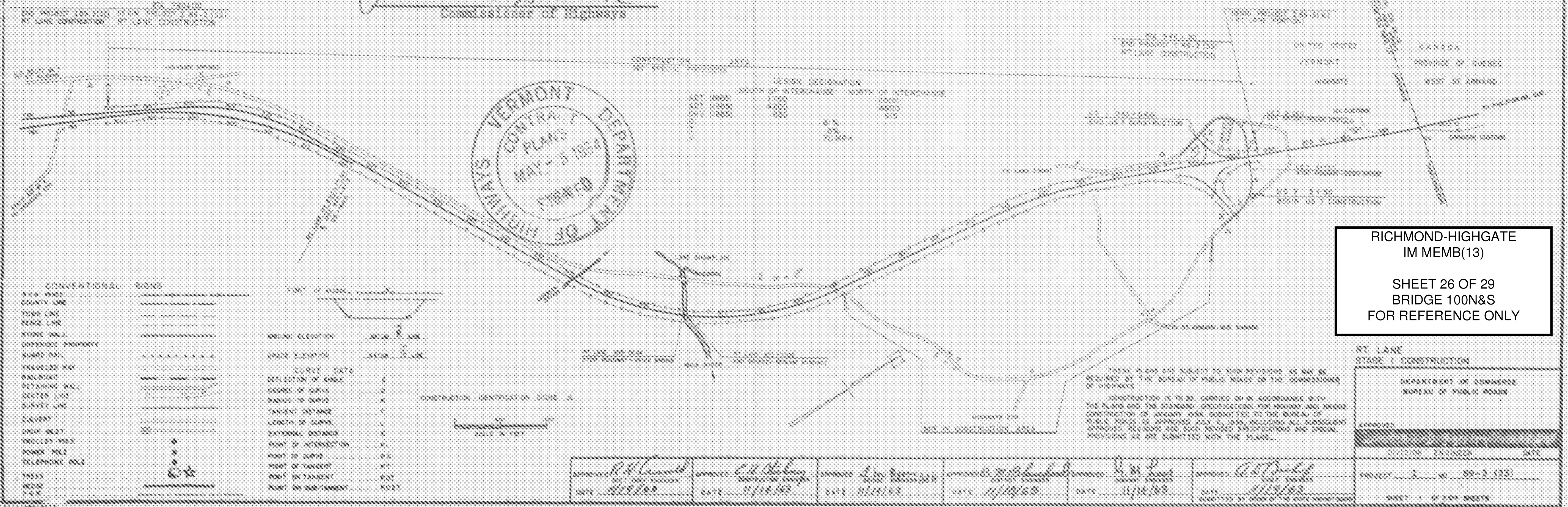
BEGINNING AT A POINT 2.912 MILES NORTHERLY OF THE
SWANTON-HIGHGATE TOWN LINE AND EXTENDING NORTHERLY
2.971 MILES.
LENGTH OF ROADWAY 15,391.88 FEET = 2.915 MI.
LENGTH OF BRIDGE 294.12 FEET = 0.536 MI.
LENGTH OF PROJECT 15,686.00 FEET = 2.971 MI.



Dated MAY 4, 1964
Colonie Sand & Gravel Co. Inc.
Chaplin, Vermont
Beck & Bellevue
Arthur M. Bellum partner
Contractor

Russell A. Haden
Commissioner of Highways

THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY
TO APPROXIMATELY 1/2 SCALE



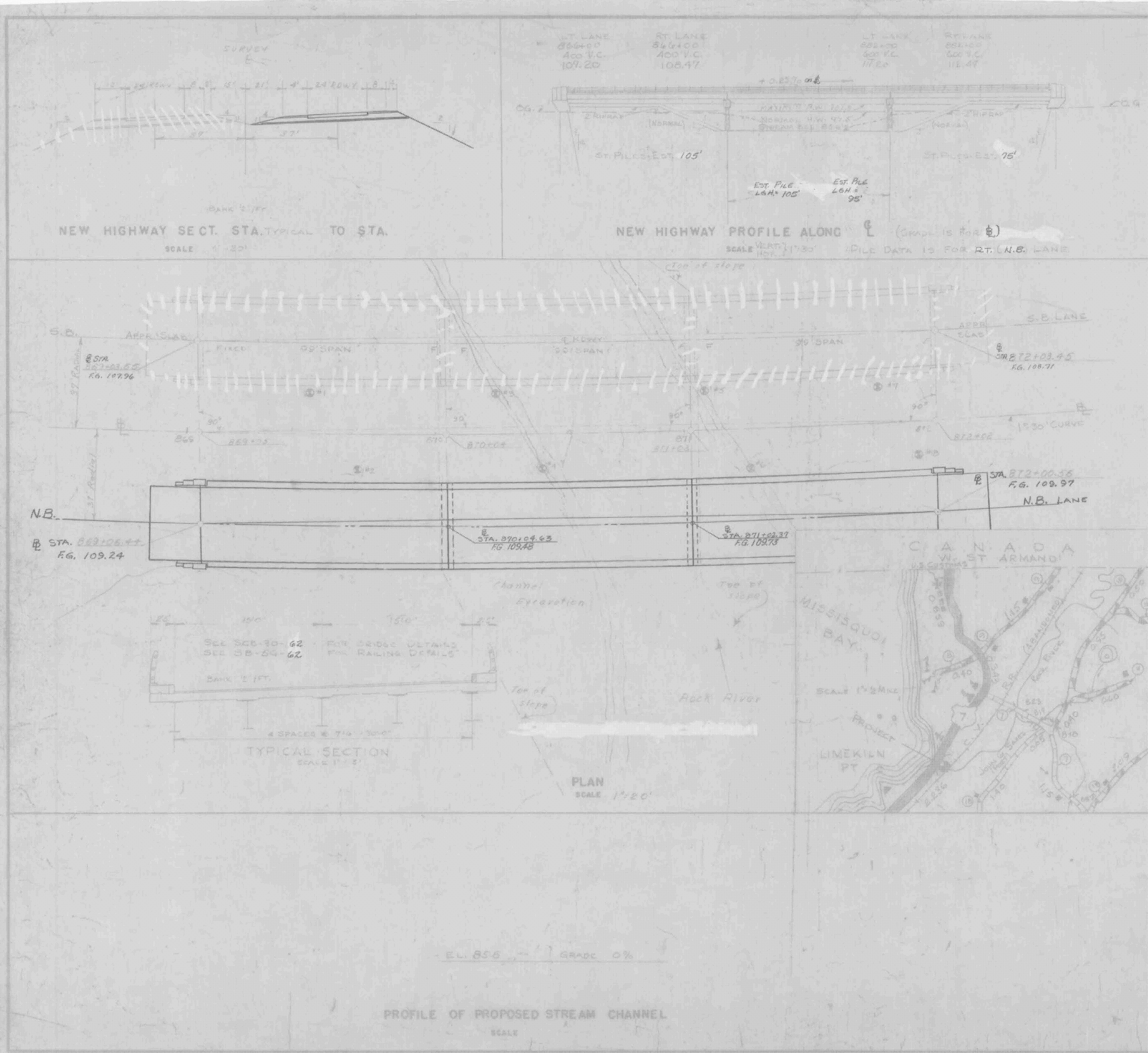
RICHMOND-HIGHGATE
IM MEMB(13)
SHEET 26 OF 29
BRIDGE 100N&S
FOR REFERENCE ONLY

RT. LANE
STAGE 1 CONSTRUCTION

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	DATE
DIVISION ENGINEER	DATE
PROJECT I NO. 89-3 (33)	
SHEET 1 OF 204 SHEETS	

APPROVED <u>R.H. Carroll</u> DIST. ENG. ENGINEER DATE <u>11/19/63</u>	APPROVED <u>E.H. Stebbins</u> CONSTRUCTION ENGINEER DATE <u>11/14/63</u>	APPROVED <u>L.J. Brown</u> DIST. ENGINEER DATE <u>11/14/63</u>	APPROVED <u>A.M. Blanchard</u> DIST. ENGINEER DATE <u>11/15/63</u>	APPROVED <u>D.M.P.</u> DIST. ENGINEER DATE <u>11/14/63</u>	APPROVED <u>G.D. Bickel</u> DIST. ENGINEER DATE <u>11/19/63</u>
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ROUTE NO. 22	NAME OF HIGHWAY INTERSTATE
STRUCTURE NO.	COUNTY FRANKLIN TOWN HIGGATE
PROJECT NO.	LOCATION 4.8 Miles North Of Swanton, HIGGATE TOWN, Vt.

EXISTING STRUCTURE

1. RATED LOADING OF EXISTING STRUCTURE
2. TYPE OF EXISTING STRUCTURE
3. UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4. WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE COST OF REMOVAL
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6. SHOULD NEW TEMPORARY STRUCTURE BE BUILT NO
7. ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
8. EXTREME HIGH WATER AT EXISTING STRUCTURE
9. SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
10. SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W. 800'
11. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE YES
12. IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED
13. ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE 22 SPAN BRIDGE S.C.B. 22-62
2. RECOMMENDED CLEAR SPAN OR SPANS 3 SPANS
3. MEASURED PARALLEL TO NEW HIGHWAY 92'-29'-99"
4. MEASURED AT RIGHT ANGLES TO STREAM 215'-23'-71"
5. ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO NO
6. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE 27.5'
7. EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE 108.8' SOURCE OF INFORMATION LAKE LEVEL
8. IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? YES
9. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO IS ORDINARY RISE RAPID? NO
10. LOW WATER ELEVATION AT NEW STRUCTURE 24.5'
11. DRAINAGE AREA IN ACRES ABOVE STRUCTURE 28.2 AC CHARACTER OF TERRAINE ROLLING
12. IS STREAM EVER DRY? NO
13. VELOCITY OF STREAM AT HIGH WATER STAGE 4.75 ESTIMATED DISCHARGE 500 CFS
14. AREA FILL OPENING 100' AREA BELOW ORDINARY H.W. 1400 sq ft
15. CHARACTER OF SOIL DRIFT
16. ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE NONE
17. VERTICAL CLEARANCE ABOVE FLOOD ELEVATION 4'-6" ABOVE ORD. H.W.
18. ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO BOTH SIDES
19. RECOMMENDED TYPE OF PAVEMENT BIT. CRK
20. TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE COST
21. PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE \$7500.00
22. SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NO
23. ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 100 K SHOULD PILES BE USED? YES EST. LENGTH 105'-105" 95'-75"

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

SEE BORING SHEET

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 27 OF 29
BRIDGE 100N&S
FOR REFERENCE ONLY

BR 201

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

BRIDGE IN THE TOWNS OF HIGGATE

ROUTE NO. 22 STA. 920+00

ROCK RIVER

NORTHBOUND LANE

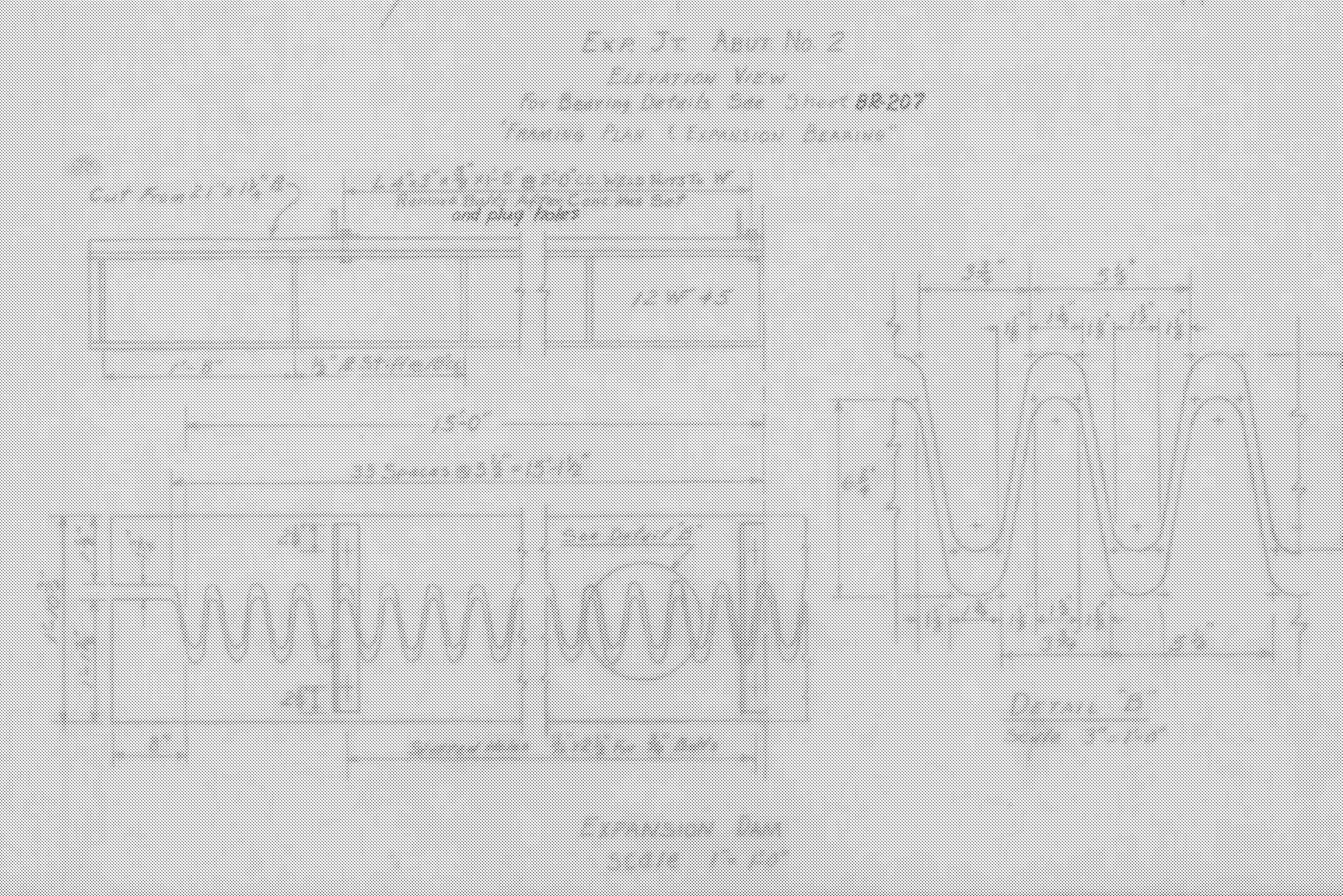
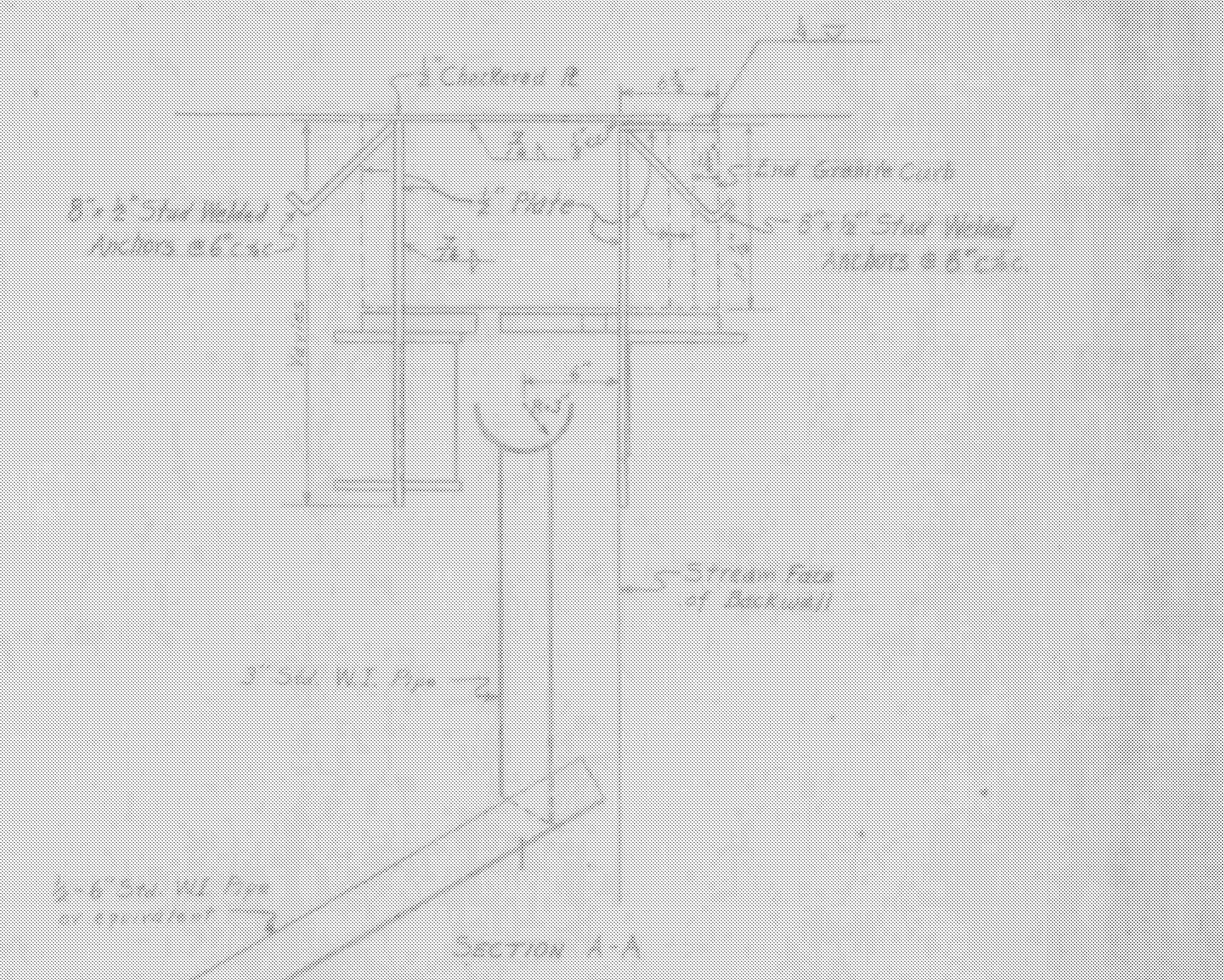
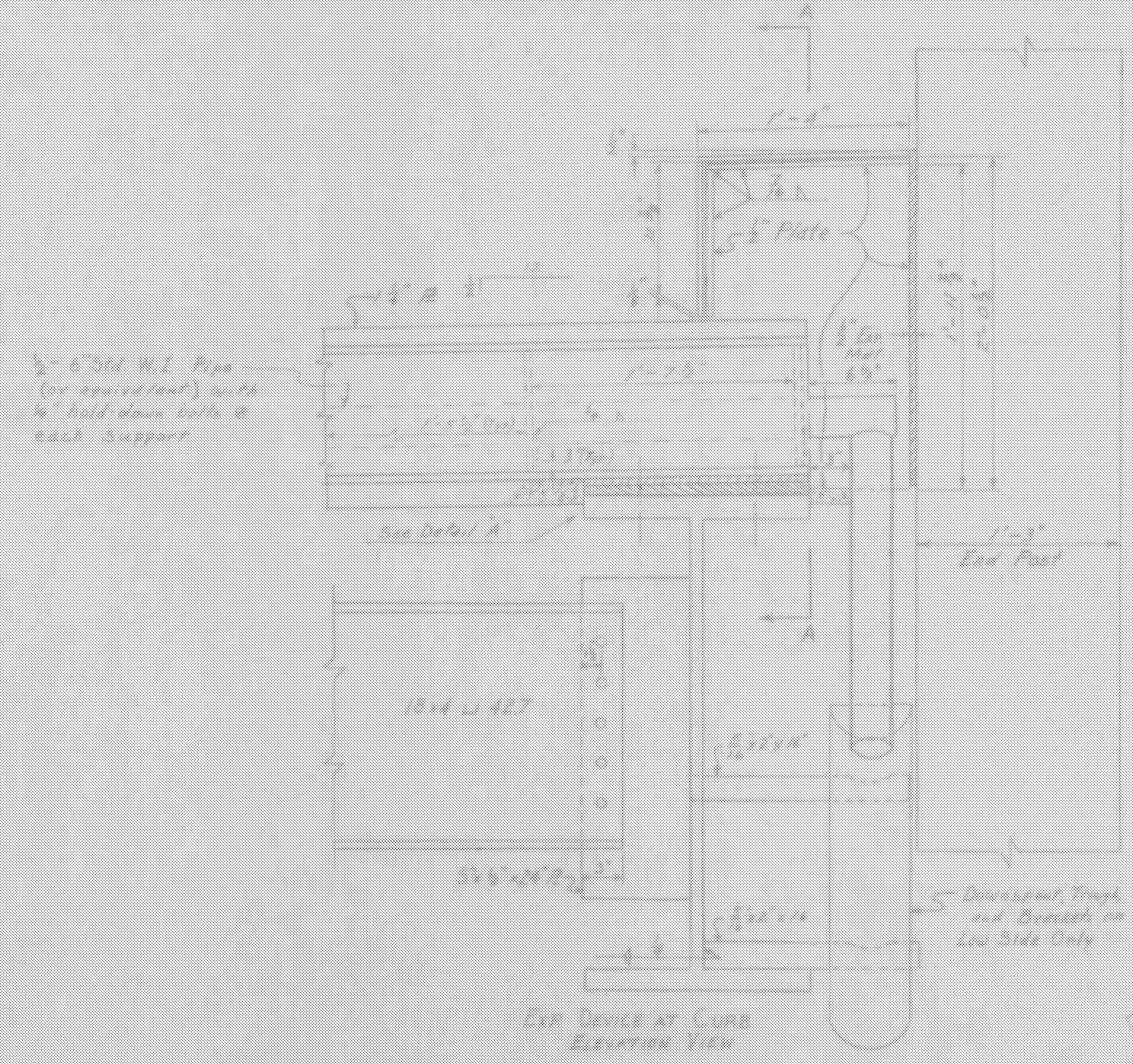
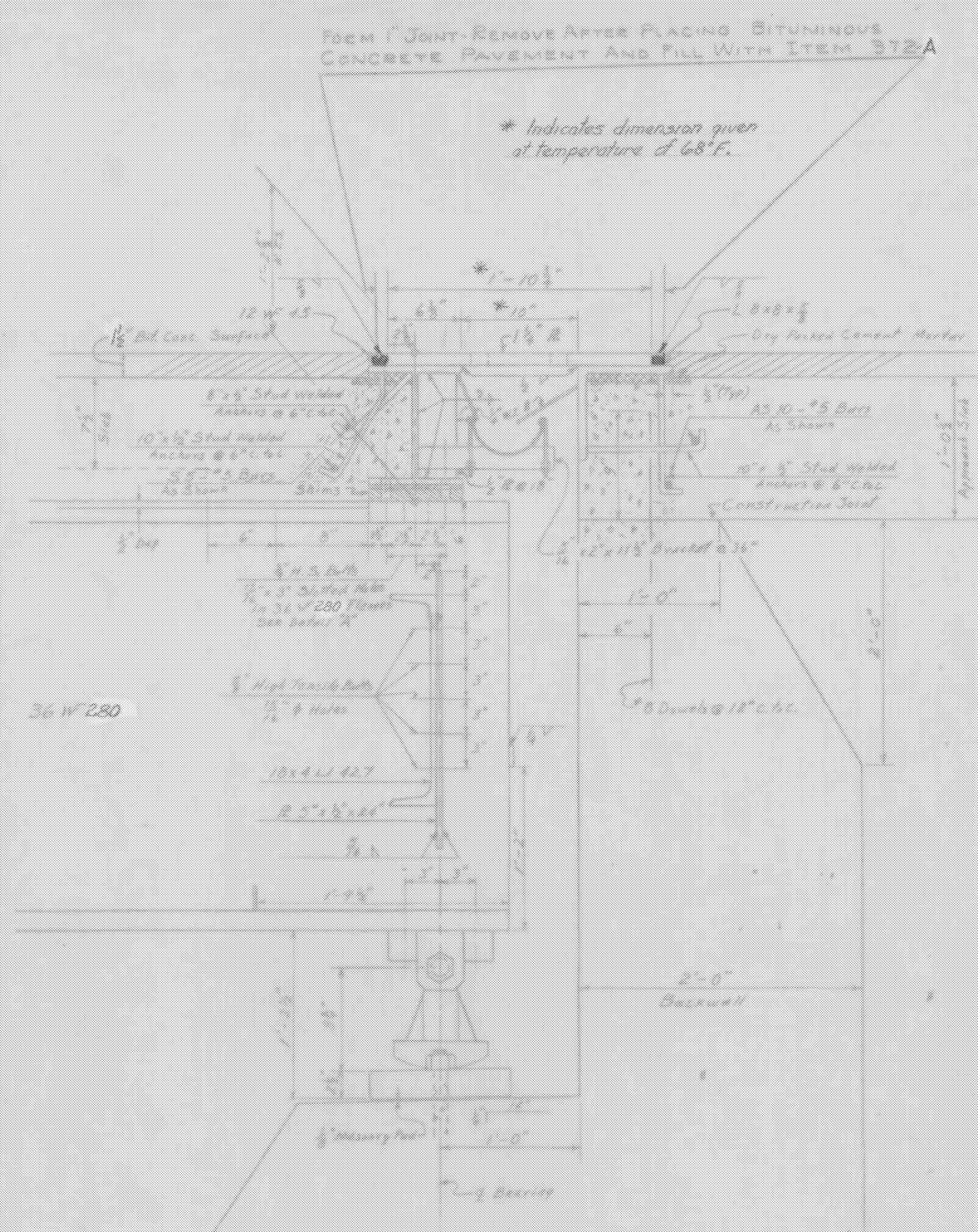
FILED IN THE TOWN OF HIGGATE

JAB

PROJECT NO. 1-89-3(33)

APPROVED

ASST. CHIEF ENGINEER



- Notes:
- The finger plate assembly is to be completely fabricated upon delivery at site. This assembly to include the 12W45 with all welded attachments including trough and apron, the finger plates with temporary 1/2" and 1/4" L6x8-1/2 with all welded attachments including apron. All weather surfaces are to receive three coats of shop paint (Section 404.03-B State of Vermont Dept. of Highways Standard Specifications).
 - The initial 1 1/2" clearance of the finger plates is for a temperature of 68°F at the time of installation. Clearance shall be adjusted 1/8" for each 5% difference in temperature.
 - All costs involved in furnishing and erecting the Expansion device shall be paid for as Structural Steel, Item 404-A.

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
105-A	CHAN. EXCAV. OF EARTH	C.Y.				
105-B	CHAN. EXCAV. OF ROCK	C.Y.				
105-C	UNCLAS. CHAN. EXCAV.	C.Y.				
167	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
406	REINF. STEEL	LBS.				
407	ASPHALTIC-ARB. COATING	S.Y.				
502-B	TREATED TIMBER PILING					
503	SPLICES FOR STEEL PILING					
504	STEEL PILING					
502-A	UNTREATED TIMBER PILING					
372-A	Joint Sealer-Hot Poured					

RICHMOND-HIGHGATE
IM MEMB(13)

SHEET 29 OF 29
BRIDGE 100N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HIGHGATE

ROUTE No. 109 STA. 870+50

EXPANSION END DETAILS

ROCK RIVER

SCALE 1/2"=1'-0"

SURVEYED BY

DRAWN BY RWD CHECKED BY JAB

PROJECT No. I-89-3(33)

SHEET 104 OF 204

BR 205

STAGE II PROJECT No. I-89-3(24)

SHEET 87 OF 127