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LIST OF STANDARDS

G-18	06-01-94
B-5	06-01-94
B-71	03-10-95
D-2	06-01-94
D-4	06-01-94
E-100	01-06-97
E-101	03-10-97
E-102	08-08-95
E-102A	08-08-95
E-106	08-08-95
E-107	08-08-95
E-107A	08-08-95
E-121	08-08-95
E-143	09-20-95
E-160	05-20-99
E-164	05-20-99
E-191	02-01-99
E-193	08-18-95
G-1	01-03-00
G1d	01-03-00
G-4	06-01-94
SB-R6-82	01-06-95
SB-R7-90	01-11-95
T-1	06-01-94
T-2	06-01-94

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

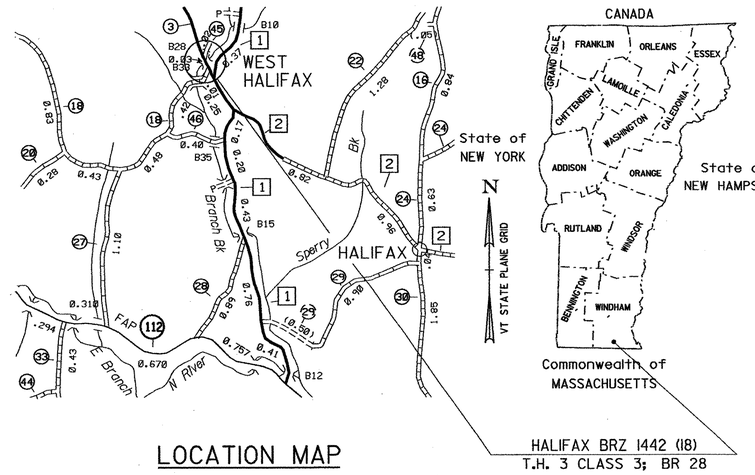
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF HALIFAX
COUNTY OF WINDHAM

ROUTE NO : T.H. 3 CLASS 3 BRIDGE NO : 28

PROJECT LOCATION : BEGINNING OF THE INTERSECTION OF T.H. 3 AND T.H. 18 AND EXTENDING NORTHERLY ALONG T.H. 3 FOR 0.066 MILES.

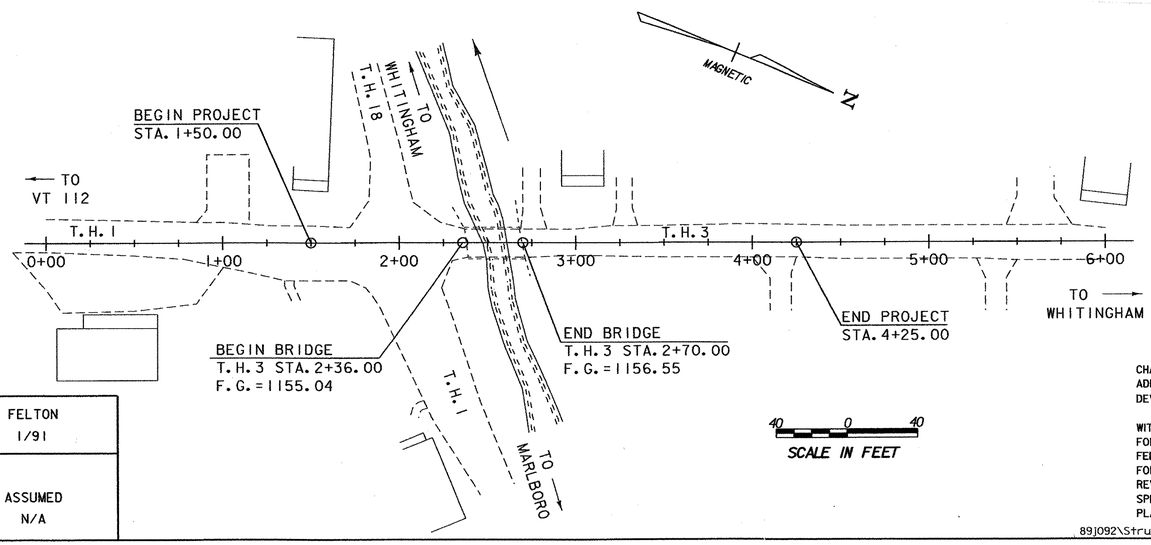
PROJECT DESCRIPTION : CONSTRUCTION OF A NEW STRUCTURE ALONG WITH RELATED ROADWAY APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE :	34.00 FEET.
LENGTH OF ROADWAY :	241.00 FEET.
LENGTH OF PROJECT :	275.00 FEET.



LOCATION MAP

HALIFAX BRZ 1442 (18)
T.H. 3 CLASS 3; BR 28



SURVEYED BY :	FELTON
SURVEYED DATE :	1/91
DATUM	
VERTICAL	ASSUMED
HORIZONTAL	N/A

RECORD PLANS

CONTRACTOR: F.W. WHITCOMB CONSTRUCTION – WALPOLE, NH
RESIDENT ENGINEER: FRED ROSS
CONSTRUCTION BEGAN: JULY 16, 2002
CONSTRUCTION COMPLETE: MAY 21, 2003
RECORD PLANS BY: F. ROSS, K. NORTH

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

BY _____ RESIDENT ENGINEER
DATE 2/2/04

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.

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

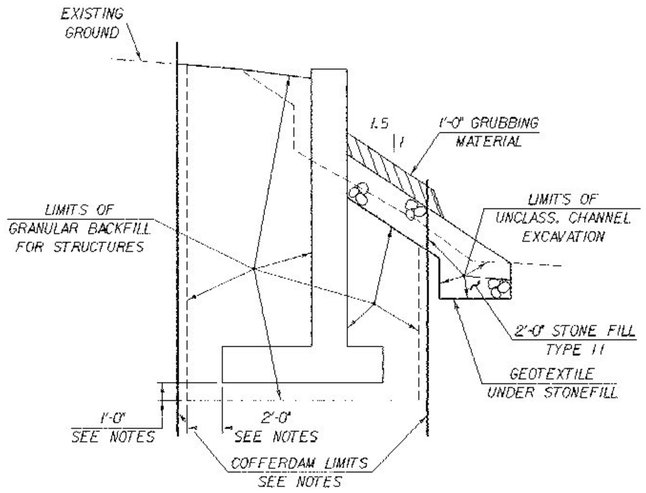
DIRECTOR OF PROJECT DEVELOPMENT
APPROVED _____ DATE 11/7/00

PROJECT MANAGER : R.R. WHITCOMB

PROJECT NAME : HALIFAX
PROJECT NUMBER : BRZ 1442 (18)

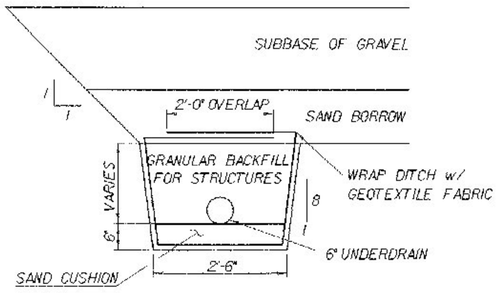
SHEET 1 OF 33 SHEETS

89J092\Structures\sj092bdr.dgn sj092tit.l 15-NOV-2000



WINGWALL EARTHWORK TYPICAL

(NOT TO SCALE)

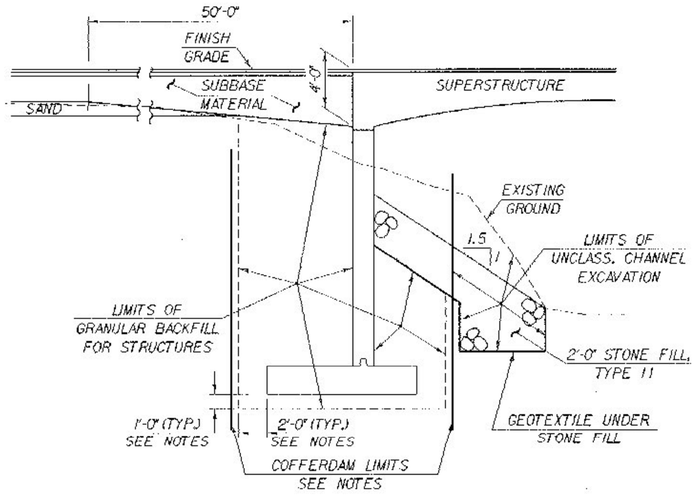


UNDERDRAIN TRENCH DETAIL

SCALE: 3/4" = 1'-0"

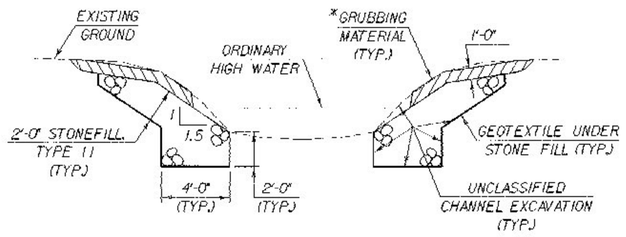
NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM," COFFERDAM EXCAVATION,EARTH" AND "COFFERDAM EXCAVATION,ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING.
3. ONE FOOT UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS MORE THAN THE INDICATED MINIMUM DISTANCE OUTSIDE THE FOOTING LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE MINIMUM COFFERDAM LIMITS SHOWN WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



TYPICAL ABUTMENT SECTION

(NOT TO SCALE)



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

EXISTING STRUCTURE

1. STRUCTURE TYPE CONCRETE DECK ARCH STRUCTURE OVERALL LENGTH 34 FT INVENTORY RATING H-5
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 31 FT
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 27.5 FT
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 200 SQ FT VERTICAL CLEARANCE ABOVE STREAMBED 8 FT
5. WATER SURFACE ELEVATION @ Q 2.33 WATER SURFACE ELEVATION @ Q
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD YEAR ESTIMATED DISCHARGE
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL UNKNOWN
9. DISPOSITION OF STRUCTURE REMOVE

NEW STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE SINGLE SPAN CONCRETE SLAB OVERALL LENGTH 54 FT
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 32 FT
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER 8.0 FT
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 30.0 FT
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM 210 SQ FT
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? YES

HYDRAULIC DATA:

1. Q 2.33 350 CFS WATER ELEVATION 1148.8 VELOCITY
   Q 10 700 CFS WATER ELEVATION 1149.7 VELOCITY
   Q 25 1025 CFS WATER ELEVATION 1150.5 VELOCITY 8.7 FPS
   Q 50 1350 CFS WATER ELEVATION 1151 VELOCITY
   Q 100 1500 CFS WATER ELEVATION 1151.7 VELOCITY
2. DRAINAGE AREA 5.0 SQ MI CHARACTER OF TERRAIN HILLY TO MOUNTAINOUS
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM?
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? IS ORDINARY RISE RAPID?
5. NATURE OF NATURAL STREAMBED GRAVEL, COBBLES, AND BOULDERS
6. ESTIMATED SCOUR DEPTH 5 FT COMMENT ON: DRIFT ICE
7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? YES IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF
8. VERTICAL CLEARANCE ABOVE Q 100 1.0
9. ALLOWABLE WATER SURFACE ELEVATION 1152.7 LIMITED BY BOTTOM OF SLAB
10. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? IF YES, DESCRIBE
11. ORDINARY LOW WATER 5 CFS DEPTH 0.5 FT ORDINARY HIGH WATER 150 CFS DEPTH 2.5 FT
12. AVERAGE DAILY FLOW 10 CFS STREAMBANK OR CHANNEL PROTECTION REQUIRED STONE FILL TYPE II
13. DISTANCE TO EXISTING UPSTREAM STRUCTURE SPAN WATERWAY AREA OF FULL OPENING 0
14. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE SPAN WATERWAY AREA OF FULL OPENING 0

ALLOWABLE STRESSES:

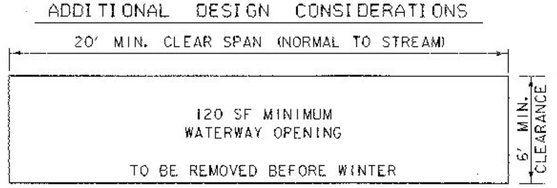
1. DESIGN LIVE LOAD AASHTO HS-25+44
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4 KSF (ASSUMED) ON LEDGE
3. ALLOWABLE LOAD FOR PILING TYPE ESTIMATED LENGTH
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO TENSION
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24,000 PSI COMPRESSION 24,000 PSI
6. ALLOWABLE STRESS FOR CONCRETE CLASS A f'_c HPC f_c
   CLASS B f'_c HPC 3500 PSI f_c 1400 PSI

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE OR ON TEMPORARY BRIDGE
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED
   MINIMUM CLEAR SPAN MINIMUM CLEAR HEIGHT MINIMUM WATERWAY AREA
   ARE SIDEWALKS REQUIRED? IF SO, ON WHAT SIDE?

HPC = HIGH PERFORMANCE CONCRETE

ADDITIONAL DESIGN CONSIDERATIONS



HYDRAULIC REQUIREMENTS FOR TEMPORARY PEDESTRIAN BRIDGE

(NOT TO SCALE)

NOTE: THE CONTRACTOR SHALL NOT CUT EXISTING STREAM BANKS TO PROVIDE THE MINIMUM WATERWAY OPENING. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY A=2.17	39	59					
POSTED A=1.55	54	83	107		63	66	107
OPERATING A=1.30		99	127	119	75	78	

STRENGTH I RF = $\frac{\phi M_n - 1.3\ M_{DL}}{A \times M_{LL+I}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
1996	280	40	-	<1	10
2016	390	55	62	<1	20

18 kip ESAL for flexible pavement from 1996 to 2016= 200,000
18 kip ESAL for flexible pavement from 1996 to 2036= 400,000
Design speed= 30 mph

STATE OF VERMONT
AGENCY OF TRANSPORTATION

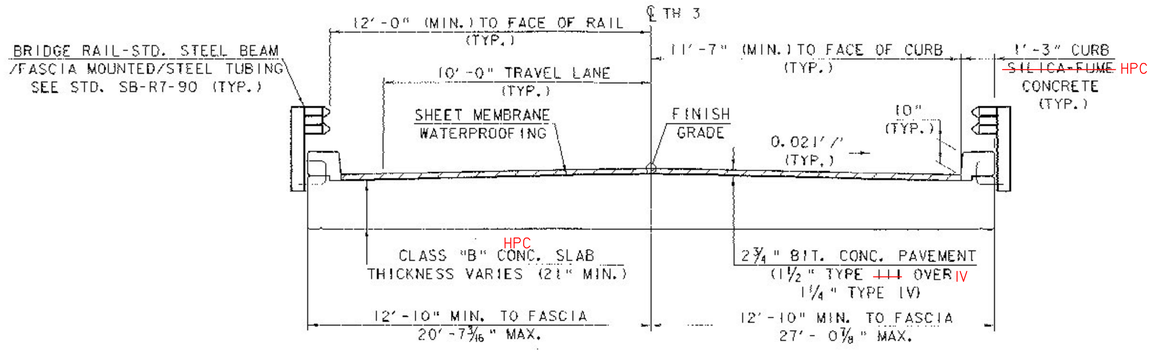
Town Of HALIFAX	Bridge No. 28
Highway No. T. H. 3	Log Sta. Surv. Sta. 2+53

T. H. 3 OVER THE BRANCH BROOK

PRELIMINARY INFORMATION

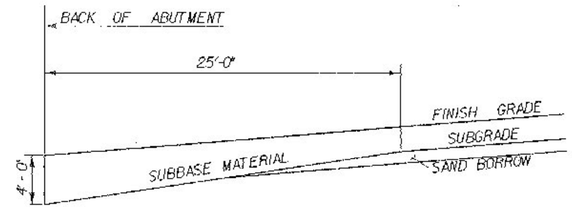
Designed By T. SUMNER	Drawn By G.ROY / J.ARMSTRONG
Checked By T. SUMNER Date 12/98	Project Manager R.R.WHITCOMB Date 12/98
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
I.G.C. Info. 89\1092\Structures\1092pli.dgn	s\1092pli
Bridge Sheet No.	Sheet 2 of 33

PLOTTED 17-NOV-2000



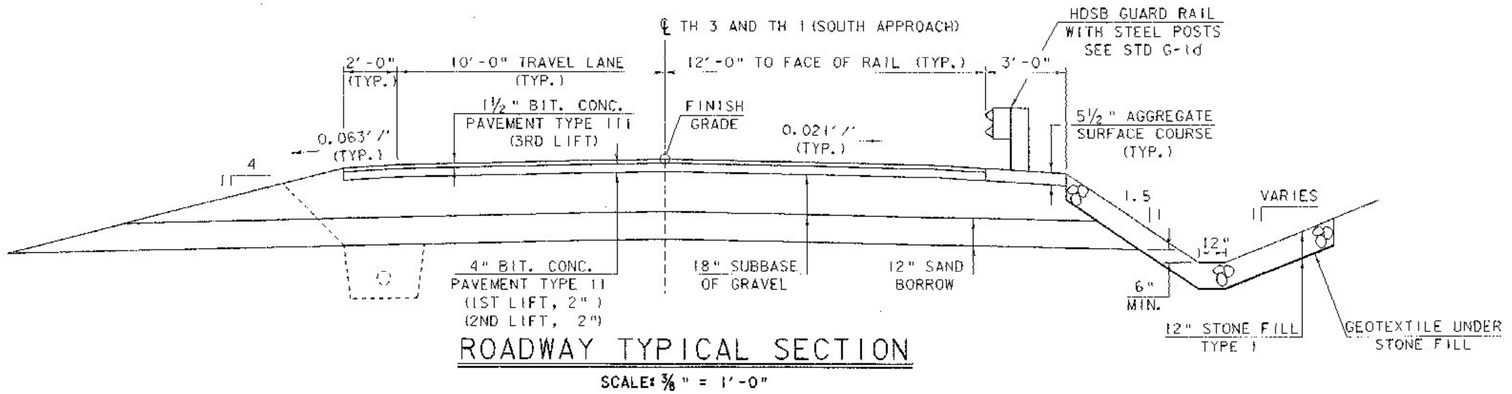
BRIDGE TYPICAL SECTION

SCALE: ⅜" = 1'-0"



SUBBASE DETAIL AT ABUTMENTS

(ELEVATION IN CUT AND FILL)
NOT TO SCALE



ROADWAY TYPICAL SECTION

SCALE: ⅜" = 1'-0"

MATERIAL ITEM	TOLERANCE
PAVEMENT	±¼" TOTAL THICKNESS
AGGREGATE SURFACE COURSE	±½"
BASE COURSE	±½"
SUBBASE	± 1"
SAND BORROW	± 1"
GRANULAR BORROW	± 1"

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HALIFAX	Bridge No. 28
Highway No. T.H. 3	Log Sta. / Surv. Sta. 2+53

T.H. 3 OVER THE BRANCH BROOK

BRIDGE & ROADWAY TYPICAL SECTIONS

Designed By T. SUMNER	Drawn By G. ROY/ J. ARMSTRONG
Checked By T. SUMNER Date 12/98	Project Manager R. R. WHITCOMB Date 12/98
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)

M.C. info. 89J092\structures\sj092pt1.dgn sj092typ. 1

Bridge Sheet No. Sheet 3 of 33

PLOTTED 17 NOV 2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES												TOTALS			DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
		FULL CAE ITEMS		EROSION CONTROL		CHANNEL		ROADWAY		ABUTMENT NO.2		ABUTMENT NO 1		SLAB		BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
								1										1		LS	CLEARING AND GRUBBING (INCLUDING INDIVIDUAL TREES AND STUMPS)	201.10			
								1490										1490		CY	COMMON EXCAVATION	203.15			* TEMPORARY EROSION CONTROL ITEMS *
						70										70		70		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27			(INCLUDED IN EROSION CONTROL QUANTITY)
								420										420		CY	SAND BORROW	203.31	30	CY	301.15 SUBBASE OF GRAVEL
				10				190										200		CY	TRENCH EXCAVATION OF EARTH	204.20	1	HR	608.25 ALL PURPOSE EXCAVATOR, TYPE 1 (N.A.B.I)
								60		320		230				550		610		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	10	CY	613.10 STONE FILL, TYPE I
										460		490				970		970		CY	COFFERDAM EXCAVATION, EARTH	206.30	200	CY	649.51 GEOTEXTILE FOR SILT FENCE
										40		30				70		70		CY	COFFERDAM EXCAVATION, ROCK	206.35	10	LBS	651.17 SEED - WINTER RYE
												1				1		1		LS	COFFERDAM (STA. 2 + 36)	206.40	64	EACH	651.28 HAY BALES FOR EROSION CONTROL
										1						1		1		LS	COFFERDAM (STA. 2 + 70)	206.40	10	CY	654.10 EROSION MATTING
								170										170		SY	COLD PLANING-BIT.PAVEMENT	210.10			
				30				820										850		CY	SUBBASE OF GRAVEL	301.15			
								40										40		CY	AGGREGATE SURFACE COURSE	401.10			* EARTHWORKS SUMMARY *
								4.7						0.3		0.3		5		CWT	EMULSIFIED ASPHALT	404.65	0	CY	FILL REQUIRED
								463						17		17		480		TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25			FILL AVAILABLE
								11		82		80		106		268		279		CY	CONCRETE, CLASS B	501.25	1480	CY	COMMON EXCAVATION
														4		4		4		CY	~~SILICA FUME CONCRETE~~ HPC CLASS A 501.22 ~~501.60~~		970	CY	COFFERDAM EXCAVATION, EARTH
								150		11260		11340		16800		39400		39550		LB	EPOXY COATED REINFORCING STEEL	507.17	190	CY	TRENCH EXCAVATION OF EARTH
										4		4		4		12		12		GAL	WATER REPELLENT	514.10	70	CY	UNCLASSIFIED CHANNEL EXCAVATION
														110		110		110		SY	SHEET MEMBRANE WATERPROOFING	519.20	2720		SUBTOTAL
														88		88		88		LF	BRIDGE RAILING-HDSB / FASCIA MOUNTED / STEEL TUBING	526.44	0		ROUNDING
														1		1		1		LS	TEMPORARY FOOT BRIDGE	528.12	2720		TOTAL
														64		64		64		SY	REMOVAL OF BRIDGE PAVEMENT	529.10	2720	CY	WASTE
														1		1		1		EACH	REMOVAL OF STRUCTURE	529.15			
																					*** BEGIN PIPE OPTIONS ***				
								36										36		LF	15" CSP .079 (2-2/3 X 1/2)	601.0011			
								1										1		EACH	15" CSPES.064 (2-2/3 X 1/2)	601.5010			
								36										36		LF	15" CPEP(SL)	601.2610			
								1										1		EACH	15" CPEPES	601.7010			
								52										52		LF	30" CAAP .105 (2-2/3 X 1/2)	601.0237			
								52										52		LF	30" PCCSP .109 (2-2/3 X 1/2)	601.0437			
																					*** END PIPE OPTIONS ***				
								113										113		LF	6" UNDERDRAIN	605.10			
								42										42		LF	6" UNDERDRAIN CARRIER PIPE	605.20			
								1										1		EACH	UNDERDRAIN FLUSHING BASINS	605.95			
		1																1		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE1 (N.A.B.I.)	608.25			
								60										60		MGAL	DUST CONTROL WITH WATER	609.10			
				10				60										70		CY	STONE FILL, TYPE I	613.10			
										80		70				150		150		CY	STONE FILL, TYPE II	613.11			
								4										4		EACH	WOOD MARKER POSTS	619.15			

PROJECT NAME:	HALIFAX
PROJECT NUMBER:	BRZ 1442 (18)
FILE NAME:	\89j092\structures\sj092qtx1s
PROJECT MANAGER:	R.R.WHITCOMB
DESIGNED BY:	T.A.SUMNER
QUANTITY SHEET #1	
PLOT DATE:	11/13/00
DRAWN BY:	K.CHISHOLM
CHECKED BY:	T.A.SUMNER
SHEET	4 OF 33

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES															TOTALS				DESCRIPTIONS			
		FULL C&E ITEMS		EROSION CONTROL		CHANNEL		ROADWAY		ABUTMENT NO.2		ABUTMENT NO 1		SLAB		BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER
								60										60		LF	SNOW FENCE	620.70
								208										208		LF	HVY DUTY STEEL BEAM GUARD RAIL	621.21
								4										4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60
								100										100		LF	TEMPORARY TRAFFIC BARRIER	621.90
								400										400		HR	FLAGGERS	630.15
		1																1		LS	FIELD OFFICE-ENGINEERS	631.10
		1																1		LS	TESTING EQUIPMENT - CONCRETE	631.16
		1																1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17
		1																1		LS	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25
														1		1		1		LS	MOBILIZATION	635.10
								56										56		LF	DURABLE 24" STOP BAR	646.46
								8										8		EACH	DURABLE LETTER OR SYMBOL	646.50
						200		200								200		400		SY	GEOTEXTILE UNDER STONE FILL	649.31
								210										210		SY	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	649.41
				200														200		SY	GEOTEXTILE FOR SILT FENCE	649.51
				100														100		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61
				10														10		LB	SEED	651.15
				10														10		LB	SEED-WINTER RYE	651.17
				50														50		LB	FERTILIZER	651.18
				0.5														0.5		TON	AGRICULTURAL LIMESTONE	651.20
				0.5														0.5		TON	HAY MULCH	651.25
				64														64		EACH	HAY BALES FOR EROSION CONTROL	651.26
				90														90		CY	TOPSOIL	651.35
				90														90		SY	GRUBBING MATERIAL	651.40
				10														10		SY	EROSION MATTING	654.10
								13										13		SF	TRAFFIC SIGNS, TYPE A	675.20
								28										28		LF	FLANGED CHANNEL SIGN POSTS	675.301
								4										4		EACH	REMOVING SIGNS	675.50

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: **HALIFAX**
PROJECT NUMBER: **BRZ 1442 (18)**

FILE NAME: \89j092\structures\sj092qt.xls
PROJECT MANAGER: R.R.WHITCOMB
DESIGNED BY: T.A.SUMNER
QUANTITY SHEET #2

PLOT DATE: 11/13/00
DRAWN BY: K.CHISHOLM
CHECKED BY: T.A.SUMNER
SHEET 5 OF 33

ITEM DETAIL AND DRAINAGE SHEET

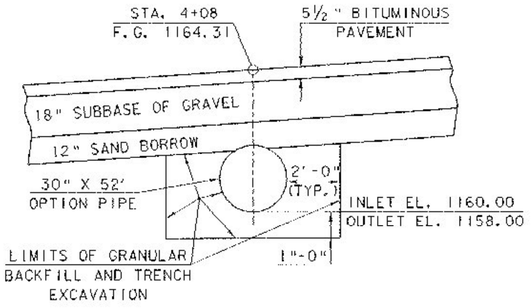
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP SL	PCCSP FI TH	PIPE ELBOW NO-DEG	ES EA	CB	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	REMARKS
3+92	4+24	RT-LT		HDWL	X	X				30	52	.109	.105	V		X						11	110				70					48			4	I	1	1	EXCAVATION OF HEADWALLS TO BE PAID AS TRENCH EXCAVATION
3+94	4+30	RT-LT		ES		X				15	36			IV	.079	X			1							14					12						2	SHARED CONCRETE HEADWALL OUTLET
																																						REMOVAL OF EXISTING 15" DRIVE CULVERT TO BE PAID AS TRENCH EXCAVATION
2+78	3+92	RT-RT																								56								56	I				CONSTRUCT DITCH
TOTALS										30 15	52 36								1			11	110			140					60			60		1	3	

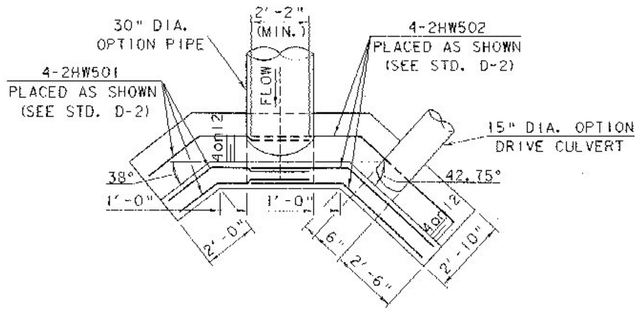
GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT



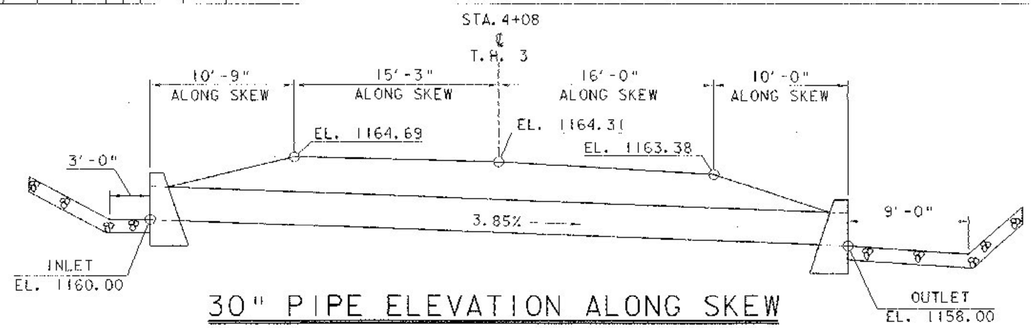
TYPICAL SECTION OF 30" PIPE AT CENTERLINE OF T.H. 3

SCALE: ⅜" = 1'-0"



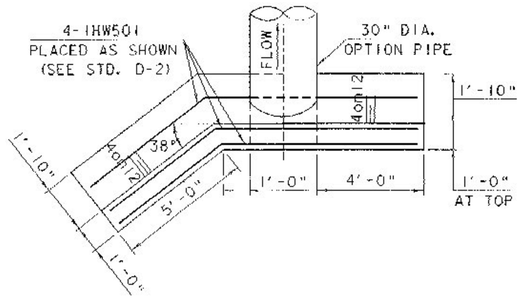
OUTLET HEADWALL PLAN

SCALE: ⅜" = 1'-0"



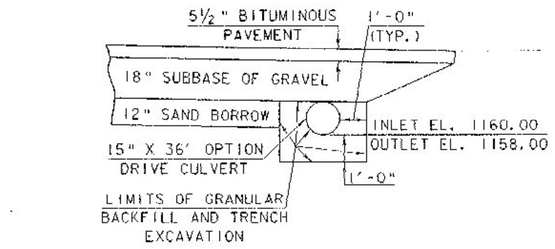
30" PIPE ELEVATION ALONG SKEW

SCALE: 3/16" = 1'-0"



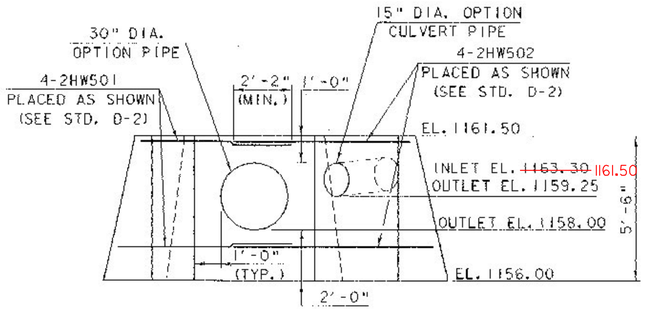
INLET HEADWALL PLAN

SCALE: ⅜" = 1'-0"



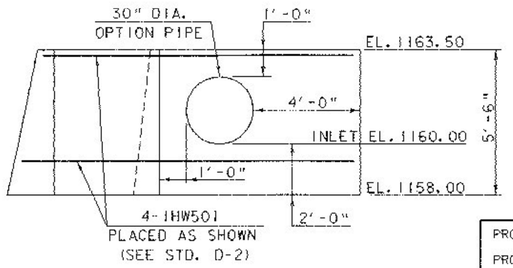
TYPICAL SECTION OF 15" PIPE

SCALE: ⅜" = 1'-0"



ELEVATION

SCALE: ⅜" = 1'-0"



ELEVATION

SCALE: ⅜" = 1'-0"

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH H	GRAN BKF	FB	MKR PST
2+56	2+87	C	LT	6	42	15				1
2+87	4+00	U	LT	6	113	35			1	1
TOTALS		C U		6 6	42 113	50			1	2

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRZ 1442 (18)

FILE NAME: 89J092\structures\sj092drn.i
PROJECT MANAGER: R.R.WHITCOMB
DESIGNED BY: T.A.SUMNER
DRAINAGE SHEET
PLOT DATE: 17-NOV-2000
DRAWN BY: K.CHISHOLM
CHECKED BY: T.A.SUMNER
SHEET 6 OF 33

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1A	COOK, LUCILLE W.	9	TH#3 2+22 LT.	TH#3 2+45 LT.	170 SF±			WD	07-27-00	HALIFAX	45	43-44	
			REV. TH#18 18+40 LT.	TH#3 2+42 LT.			CONST. (T) 475 SF±						
			REV. TH#18 18+50 LT.	TH#3 2+22 LT.			INSTALL (T) 385 SF±						EROSION CONTROL (SETTLING BASIN & FENCE)
2A	HALIFAX COMMUNITY CLUB, INC.	9	REV. TH#1 19+35 LT.	REV. TH#1 19+48 LT.	61 SF±					HALIFAX			
			REV. TH#1 19+48 LT.	REV. TH#1 19+52 LT.			CHANNEL (P) 24 SF±						
			REV. TH#1 19+52 LT.	REV. TH#1 19+59 LT.			DETOUR (T) 200 SF±						PEDESTRIAN BRIDGE
			REV. TH#1 19+64 LT.	REV. TH#3 2+55 RT.			INSTALL (T)						EROSION CONTROL
2B			TH#1 1+81 RT.	TH#1 19+58 RT.			SLOPE (T) 100 SF±						
3	WHITEHORNE, JEFFREY R. & ANNA C.	9	TH#3 2+42 LT.	TH#3 2+68 LT.	350 SF±			WDOE	05-05-00	HALIFAX	44	500-501	
			REV. TH#18 18+31 LT.	TH#18 18+76 LT.			CONST. (T) 45 SF±						
			TH#3 2+67 LT.	TH#3 2+73 LT.			CONST. (T) 87 SF±						
			TH#3 2+75 LT.				DRIVE (T)						12' GRAVEL
			TH#3 3+28 LT.				DRIVE (T)						10' GRAVEL
			TH#3 4+06 LT.	TH#3 4+18 LT.			CONST. (T) 145 SF±						
4	DANN, ROGER E. & BETTY J.	9	TH#3 2+57 RT.	TH#3 2+85 RT.			DETOUR (T) 170 SF±						
			TH#3 2+60 RT.	TH#3 3+24 RT.			INSTALL (T)						PEDESTRIAN BRIDGE
			TH#3 2+64 RT.	TH#3 2+80 RT.			CHANNEL (P) 45 SF±						EROSION CONTROL
			TH#3 2+79 RT.	TH#3 3+89 RT.			DITCH & DRAINAGE (P) 540 SF±						
			TH#3 3+24 RT.	TH#3 3+90 RT.			CONST. (T) 620 SF±						
5	WITTE, TRAUTMAN G. WITTE, WALTRAUT - LIFE ESTATE	9	TH#3 4+19 LT. TH#3 4+18 LT.	TH#3 4+31 LT. TH#3 4+48 LT.			DITCH (P) 35 SF± CONST. (T) 290 SF±						
6	NYNEX												UTILITY
7	VERMONT ELECTRIC CO-OPERATIVE												UTILITY
8	DELETED												FORMERLY HALIFAX FIRE CO., INC.

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	6, 7	PARCEL NO. 4 GLICKMAN. CHANGE NAME FROM "GLICKMAN, MAURICE & LILLIAN" TO "MAURICE GLICKMAN, M.D. OR LILLIAN GLICKMAN, TRUSTEES U/D/T DATED FEBRUARY 23, 1990, F/B/O THE GLICKMAN FAMILY". PER C.O. 8588.	08-12-94	C.C.P.	L.W.B.
2	6, 7	PARCEL NO. 4 RAFUS, NAME CHANGE (NEW OWNERSHIP)-FORMERLY GLICKMAN, NEW OWNER IS: RAFUS, THOMAS D. & BETTY E. PER C.O. 8638.	01-25-95	P.J.H.	L.W.B.
3	9	PARCEL NO. 3 WHITEHORN. ADD TREES, BUSHES AND FLOWER BED TO TOPO. PER C.O. 9061.	08-13-99	B.A.H.	L.W.B.
4	9	PARCEL NO. 4 PIKE. REMOVE THE FOLLOWING TOPO: 2-18" PINES. NOTE THAT WALL IS "BURIED." PER C.O. 9062.	08-13-99	B.A.H.	L.W.B.
5	8, 9	PARCEL NO. 8 HALIFAX FIRE COMPANY. REMOVE HYDRANT TOPO AND DELETE PARCEL. PER C.O. 9063.	08-13-99	B.A.H.	L.W.B.
6	8, 9	PARCEL NO. 3 WHITEHORNE. CHANGE "JEFFERY" TO "JEFFREY". PER C.O. 9085.	11-24-99	R.B.K.	L.W.B.
7	9	PARCEL NO. 3 WHITEHORNE. REMOVE PORTION OF CONSTRUCTION EASEMENT TO SAVE TWO MAPLE TREES. PER C.O. 9088.	12-23-99	R.B.K.	L.W.B.
8	8, 9	PARCEL NO. 5 WITTE. CHANGE OWNER TO TRAUTMAN G. WITTE AND WITTE, WALTRAUT - LIFE ESTATE. PER C.O. 9089.	01-28-00	M.J.R.	R.P.D.
9	8, 9	PARCEL NO. 4 PIKE. CHANGE TITLE TO DANN, ROGER E. & BETTY J. PER C.O. 9098.	03-03-00	M.J.R.	R.P.D
10	8, 9	PARCEL NO. 1A COOK. DELETE SLOPE(T) TH#1 1+62 LT.-REV. TH#18 18+61 RT. (96 SF). DELETE DRIVE(T) TH#1 1+03 LT. CHANGE PARCEL 1A TO PARCEL 1. MOVE THE RIGHTS ASSOCIATED WITH SUB-PARCEL 1B TO PARCEL 1. PER C.O. 9115.	05-31-00	R.B.K.	R.P.D.

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

APPROVED: LAWRENCE BLISS DATE: 03-12-99
AGENT D, PLANS & TITLES

R.O.W. PLANS
HALIFAX
BRZ 1442(18)
SHEET 7 OF 33

ACCT. SDesrochers
M:\89J092\RightOfWay\rJ092d.dgn
DATE PLOTTED 11-SEP-2000

SEP 11 2000

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

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			REV. TH#1 19+48 LT.	REV. TH#1 19+52 LT.			CHANNEL (P) 24 SF±						
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			TH#3 2+60 RT.	TH#3 3+24 RT.			INSTALL (T)					115	EROSION CONTROL
			TH#3 2+64 RT.	TH#3 2+80 RT.			CHANNEL (P) 45 SF±						
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5	WITTE, TRAUTMAN G. WITTE, WALTRAUT - LIFE ESTATE	9	TH#3 4+19 LT.	TH#3 4+31 LT.			DITCH (P) 35 SF±	WDOE	05-17-02	HALIFAX	47	52-53	
			TH#3 4+18 LT.	TH#3 4+48 LT.			CONST. (T) 290 SF±						
6	NYNEX												UTILITY
7	VERMONT ELECTRIC CO-OPERATIVE												UTILITY
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10	8, 9	PARCEL NO. 1A COOK. DELETE SLOPE(T) TH#1 1+62 LT.-REV. TH#18 18+61 RT. (96 SF). DELETE DRIVE(T) TH#1 1+03 LT. CHANGE PARCEL 1A TO PARCEL 1. MOVE THE RIGHTS ASSOCIATED WITH SUB-PARCEL 1B TO PARCEL 1. PER C.O. 9115.	05-31-00	R. B. K.	R. P. D.

DR. (P)- DRAINAGE RIGHT
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CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: LAWRENCE BLISS DATE: 03-12-99
CHIEF, PLANS & TITLES

R. O. W. PLANS
HALIFAX
BRZ 1442(18)
R. O. W. SHEET OF SHEETS
SHEET 8 OF 9

Jblanchard
M:\Archives\89J092\RightOfWay\rJ092d.dgn
23-AUG-2007

BRIDGE RAILING: HD STEEL BEAM/ FASCIA MOUNTED/STEEL TUBING
ML STA. 2+29 LT - ML STA. 2+67 LT
ML STA. 2+40 RT - ML STA. 2+77 RT

HD STEEL BEAM GUARD RAIL
REV. SL STA. 18+59 LT - ML STA. 2+29 LT
ML STA. 2+67 LT - ML STA. 2+68 LT
REV. SL STA. 19+87 LT - ML STA. 2+40 RT
ML STA. 2+77 RT - ML STA. 3+45 RT

ANCHOR FOR STEEL BEAM RAIL
REV. SL STA. 18+67 LT
REV. SL STA. 19+80 LT
ML STA. 3+37 RT

CONSTRUCT TYPE I STONE LINED DITCH w/ GEOTEXTILE UNDER STONE FILL
ML STA. 2+75 RT - ML STA. 3+92 RT

CONSTRUCT DITCH
~~ML STA. 4+33 RT - ML STA. 4+62 RT~~

REMOVE SMALL TREES
ML STA. 1+72, 18' LT, 24" MAPLE
ML STA. 2+24, 23' LT, 18" MAPLE
~~ML STA. 4+25, 6" MAPLE~~

WOOD MARKER POST
ML STA. 1+65 LT
ML STA. 1+73 LT
ML STA. 1+78 LT
ML STA. 1+82 LT

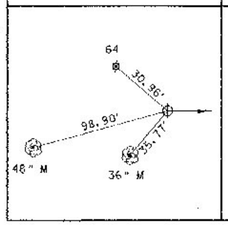
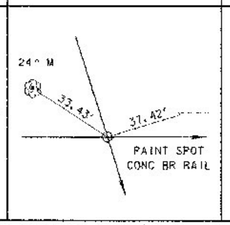
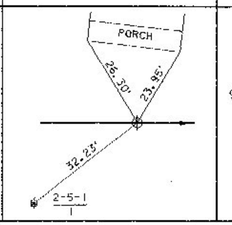
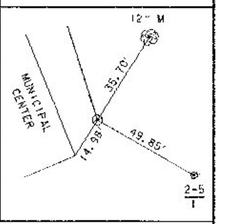
CONSTRUCT GRAVEL DRIVE WITH PAVED APRON
ML STA. 1+03 LT
ML STA. 2+75 LT
ML STA. 3+28 LT
ML STA. 4+16 RT

WOOD GUIDE POST
ML 3+92+/- RT (4)
ML 4+24+/- LT (4)

3+98

3+98

MAGNETIC N

T.H. 1 POT 0+00.00	T.H. 1 POT 2+00.00= SIDE LINE 19+00.00	T.H. 3 POT 6+00.00	SIDE LINE POT 20+50.00
			

BEGIN APPROACH
REV. S.L. STA. 18+00.00
OFFSET 10.43' LT FROM
SURV. S.L. STA. 18+00.00

BEGIN PROJECT
REV. S.L. STA. 18+50.00

EDGE OF PAVEMENT

PI NO. 1
REV. SL STA. 18+93.26
△ = 2°53'52" LT.

BEGIN PROJECT
STA. 1+50.00

BEGIN BRIDGE
T.H. 3 STA. 2+36.00
F.G. = 1155.04

NEW 6" x 42' UNDERDRAIN CARRIER PIPE
STA. 2+56 LT - 2+87 LT

TEMPORARY CONSTRUCTION LIMITS

END BRIDGE
T.H. 3 STA. 2+70.00
F.G. = 1156.55

NEW 6" x 113' UNDERDRAIN
STA. 2+87 LT - 4+00 LT
WITH FLUSHING BASIN @ INLET

EXISTING 30" x 36' CGMP
REPLACE w/ NEW 30" x 52' OPTION PIPE
△ = 52° LT ℄ T.H. 3 STA 4+08

END APPROACH
STA. ~~5+00.00~~ 4+75

NEW TYPE I STONE LINED INLET w/ GEOTEXTILE UNDER STONE FILL

EXISTING 3-ROD R.O.W.

CONSTRUCTION LIMITS

T.H. 3 POT
STA. 6+00.00

T.H. 1 POT
STA. 0+00.00

BEGIN APPROACH
STA. 0+75.00

TO VT 112

TO WHITINGHAM

TO MARLBORO

T.H. 1

T.H. 3

0+00 1+00 2+00 3+00 4+00 5+00 6+00

GRAVEL PARKING

NEW WOOD MARKER POSTS

REMOVE EXISTING PAVEMENT & CONCRETE SURFACE COURSE

2 RAIL WOOD FENCE

STONE WALL

TANNERY WALL REMAINS (BURIED)

EXIST. DITCH

℄ NEW DITCH

TEMP. CONST. LIMITS

STA. 2+74 TO 3+25 RT
LOCATION OF TEMPORARY SNOW FENCE TO PROTECT TANNERY WALL REMAINS

NEW 15" x 36' OPTION DRIVE CULVERT
WITH END SECTION @ INLET
T.H. 3 STA. 4+14, 20' RT

12" x 22' DRIVE CULVERT (REMOVE)

END PROJECT
STA. 4+25.00

END PROJECT
REV. S.L. STA. 19+50.12

POT
ML STA. 2+00.00 =
SL STA. 19+00.00
△ = 72°22'00" RT.

POT
ML STA. 2+06.00 =
REV. SL STA. 19+01.93
△ = 72°22'00" RT.

UNDERGROUND FACILITIES (2 DUCTS)
BELL ATLANTIC-NEW ENGLAND TELEPHONE

℄ TEMPORARY PEDESTRIAN BRIDGE

EXISTING AERIAL FACILITIES
VERMONT ELECTRIC COOPERATIVE, INC.
BELL ATLANTIC-NEW ENGLAND TELEPHONE

END APPROACH
REV. S.L. STA. 20+25.00
OFFSET 5.72' LT FROM
SURV. S.L. STA. 20+24.88

SIDE LINE POT
STA. 20+50.00

1½ STY WFHO (TOWN CLERK)

USGS BM TT 13K 1942
ASSUMED ELEV. 1154.12
NOTE FROM SURVEY NOTES:
BM HAS BEEN REMOVED AND RESET PER ROAD FOREMAN. LOCATION AND ELEVATION OF BM MAY BE QUESTIONABLE.

EXISTING BRIDGE DATA

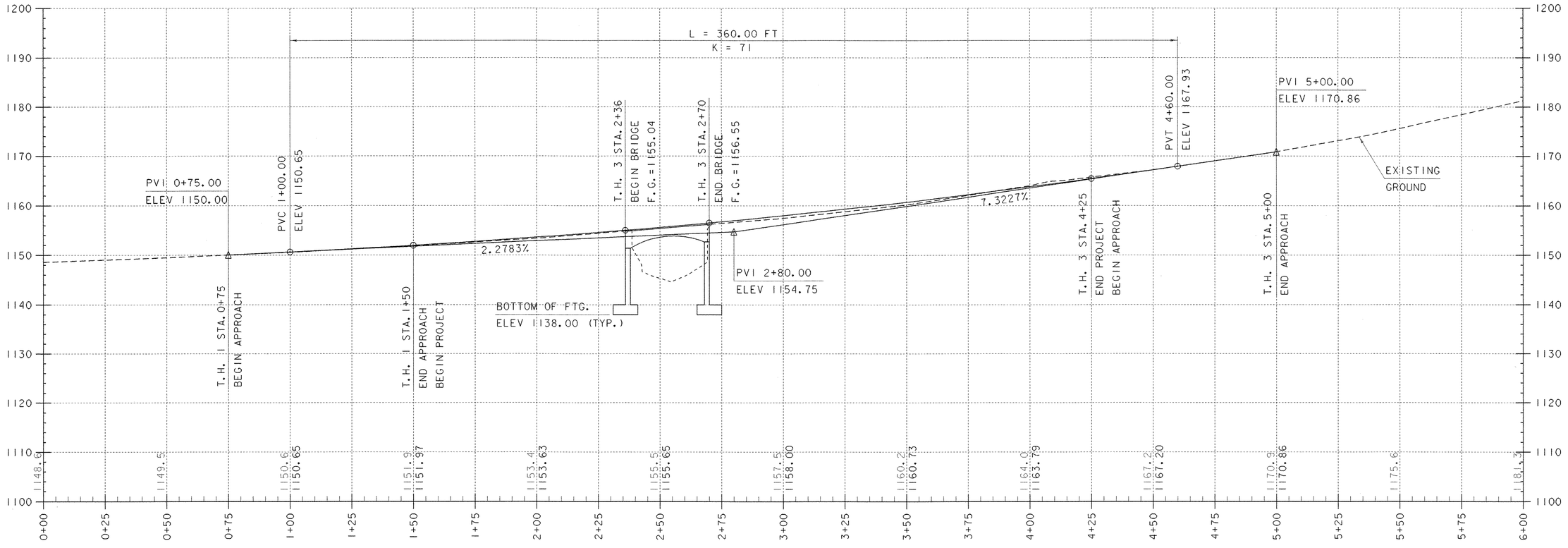
CONCRETE DECK ARCH STRUCTURE
SPAN LENGTH = 31'
OVERALL LENGTH OF STRUCTURE = 34'
TOTAL HORIZONTAL CLEARANCE = 16'
DECK WIDTH OUT TO OUT = 17'
CLEAR HEIGHT = 8.0'
CLEAR SPAN = 27.5'

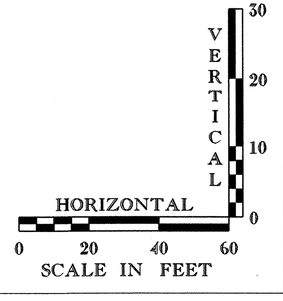
SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

PROJECT: HALIFAX	PROJECT NO.: BRZ 1442 (18)
DESIGN FILE NAME: 89J092\structures\sj092bdr.dgn	
IPARM FILE NAME: sj092101.i	PLOT DATE: 17-NOV-2000
SURVEYED BY: FELTON	SURVEY DATE: 1/91
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J. ARMSTRONG
LAYOUT SHEET	SHEET: 9 OF 33

MAINLINE PROFILE





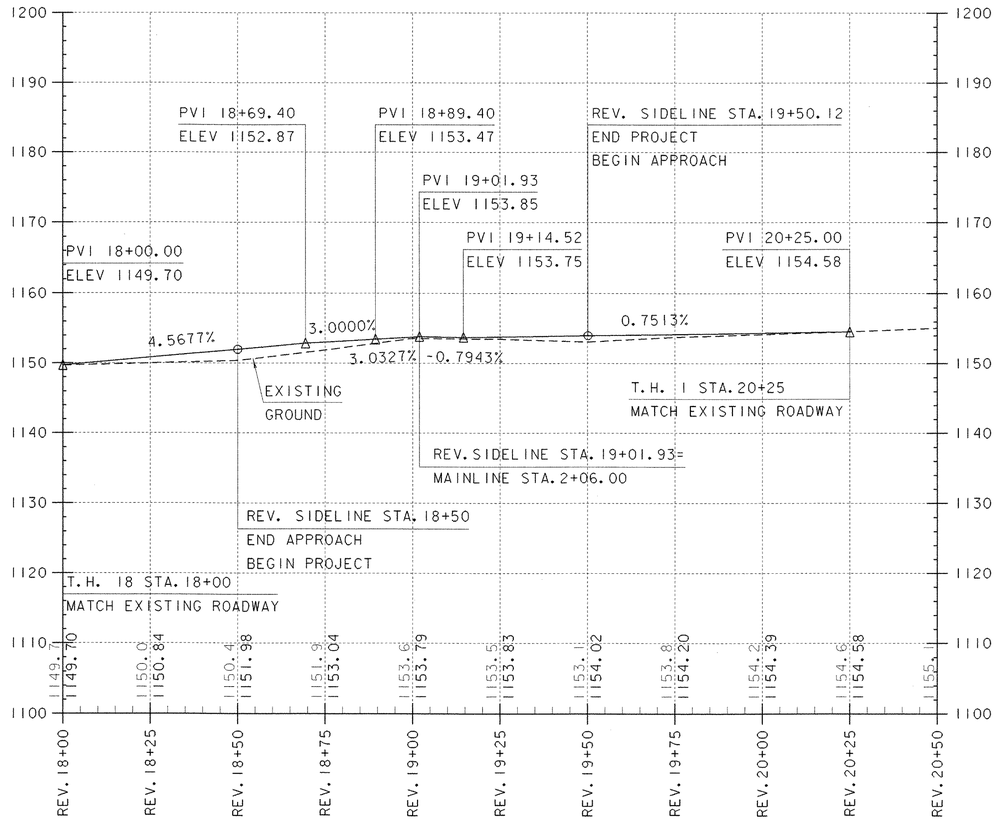
NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG REVISED CENTERLINE.
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG REVISED CENTERLINE.

DATUM

VERTICAL	ASSUMED
HORIZONTAL	N/A

PROJECT: HALIFAX	PROJECT NO.: BRZ 1442 (18)
DESIGN FILE NAME: 89J092\structures\sJ092xsl.dgn	
IPARM FILE NAME: sJ092pfl.i	PLOT DATE: 17-NOV-2000
SURVEYED BY: FELTON	SURVEY DATE: 1/91
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: G. ROY
MAINLINE PROFILE SHEET	SHEET: 10 OF 33

SIDELINE PROFILE



VERTICAL 0 10 20 30

HORIZONTAL 0 20 40 60

SCALE IN FEET

NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG REVISED CENTERLINE.
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG REVISED CENTERLINE.

DATUM

VERTICAL ASSUMED

HORIZONTAL N/A

PROJECT: HALIFAX	PROJECT NO.: BRZ 1442 (18)
DESIGN FILE NAME: 89J092\structures\sj092xsl.dgn	
IPARM FILE NAME: sj092pf2.I	PLOT DATE: 17-NOV-2000
SURVEYED BY: FELTON	SURVEY DATE: 1/91
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: G. ROY
SIDELINE PROFILE SHEET	SHEET: 11 OF 33

REMOVE SIGNS

ML STA. 2+23, 13' LT
ML STA. 2+30, 12' LT
REV. SL STA. 18+59, 14' RT
REV. SL STA. 19+28, 18' LT

TRAFFIC SIGNS, TYPE A

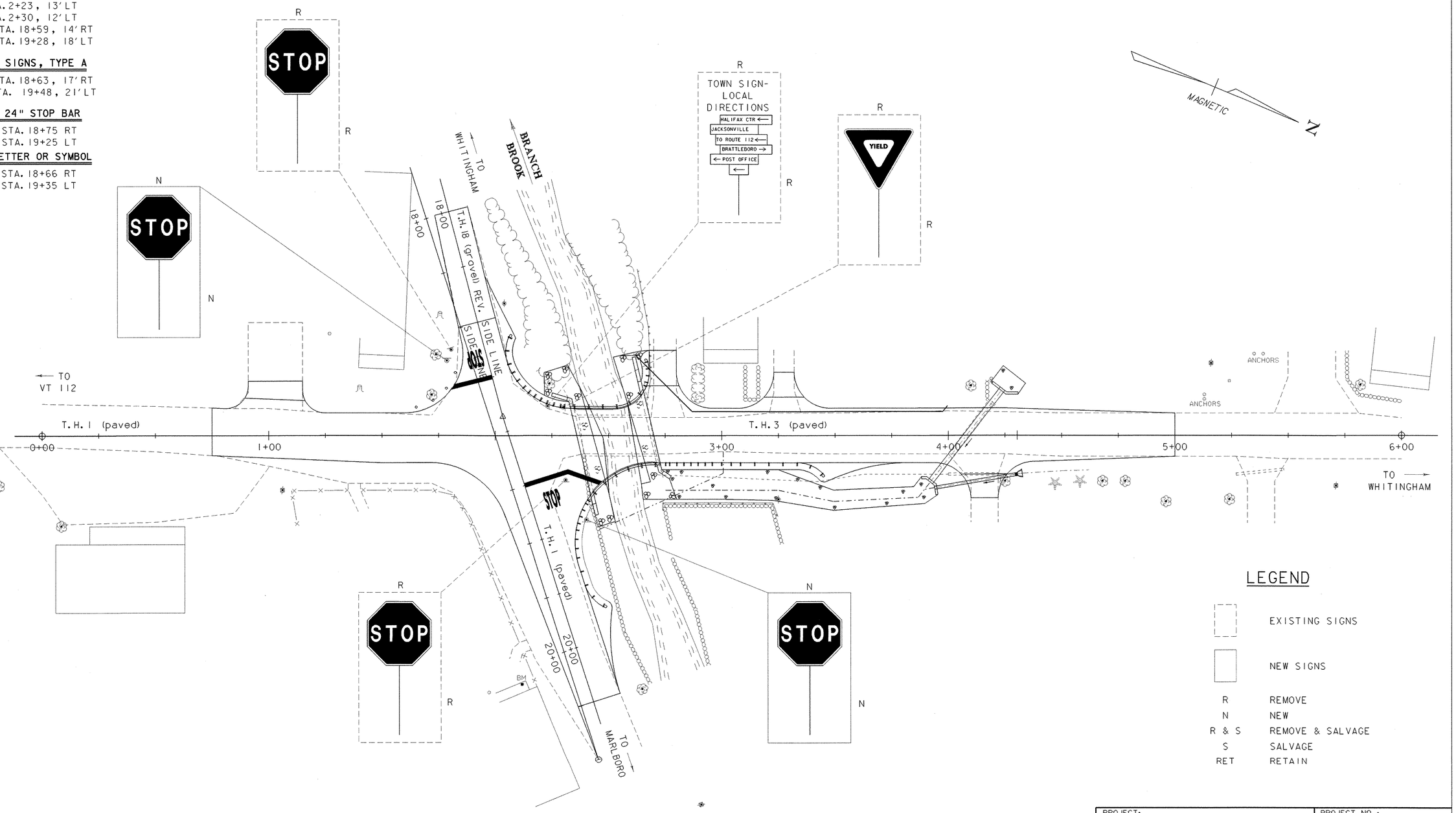
REV. SL STA. 18+63, 17' RT
REV. SL STA. 19+48, 21' LT

DURABLE 24" STOP BAR

REV. SL STA. 18+75 RT
REV. SL STA. 19+25 LT

DURABLE LETTER OR SYMBOL

REV. SL STA. 18+66 RT
REV. SL STA. 19+35 LT



LEGEND

	EXISTING SIGNS
	NEW SIGNS
R	REMOVE
N	NEW
R & S	REMOVE & SALVAGE
S	SALVAGE
RET	RETAIN

SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

PROJECT: HALIFAX
PROJECT NO.: BRZ 1442 (18)
DESIGN FILE NAME: 89J092\structures\sj092trf.dgn
IPARM FILE NAME: sj092trf.i
SURVEYED BY: FELTON
PROJECT MANAGER: R. R. WHITCOMB
TRAFFIC LAYOUT SHEET
PLOT DATE: 17-NOV-2000
SURVEY DATE: 1/91
DRAWN BY: J. ARMSTRONG
SHEET: 12 OF 33

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																				SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			TUBULAR STEEL Ø (in)					W-SHAPE STEEL				SIGN REQUIRED	REMARKS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
																							FOUND-ATION					FTG. SIZE		WEIGHT	POST SIZE				
																												24"	30"						
												1.12	2.0	3.0	1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
												OPTION ITEMS																							
18+63.0 RT	STOP	1	30"	30"	6.25						1			X																			R1-1		E-143
19+48.0 LT	STOP	1	30"	30"	6.25						1			X																			R1-1		E-143

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

											FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB							
													28																					
TOTALS	SF	SF	EA.	SF		FT		FT			LB		EA.		LB			EA.	EA.	LB														
	12.50					28																											

PROJECT NAME: HALIFAX
PROJECT NUMBER: BRZ 1442 (18)

FILE NAME: /str3/89j092/sj092tss.i
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: T.A.SUMNER
TRAFFIC SIGN SUMMARY SHEET

PLOT DATE: 17-NOV-2000
DRAWN BY: K.CHISHOLM
CHECKED BY: T.A.SUMNER
SHEET 13 OF 33

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊛	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler, 1 3/8" I.D. Sampler, Hammer Weight Of 140 Lbs., Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
ROD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR			
blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

BORING NO. B-1

ELEV. 1151.51

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
		R		DRY	BRN	A-1-b GrSa w/trace of Cl. W=7.9 Rec. 0.4 BOULDERS
		R		M	BRN	A-1-a SaGr W=8.9 Rec. 1.0
		R		DRY	BRN	A-1-b GrSa W=9.0 Rec. 0.9
10		79		DRY	BRN	A-2-4 GrSiSa W=12.9 Rec. 1.5
BOTTOM OF FOOTING ABUTMENT NO. 1 ELEV. 1138.00		R		DRY	BRN	A-2-4 SiSa W=13.7 Rec. 0.6
		R		M	BRN	A-1-b GrSa Rec. 0.3
		R		DRY	BRN	A-2-4 GrSa W=12.2 Rec. 0.4 NO REC.
20						BOULDERS Top of Bedrock @ 22.0'
						Run 1: BXMDC 22.0-27.0 Rec. 3.5
						Run 2: BXMDC 27.0-32.0 Rec. 1.5
						See Geologist's Report
30						Hole stopped @ 32.0' in Bedrock
						Geologist's Report:
						Core consists of medium biotite gneiss. Fractures are moderately weathered surrounded by competent rock. Lost core is probably from the weathered zones. Weathered zones are moderately soft and the fresh rock is hard.
40						RUN RECOV. ROD 1 70% 0 2 30% 0
50						

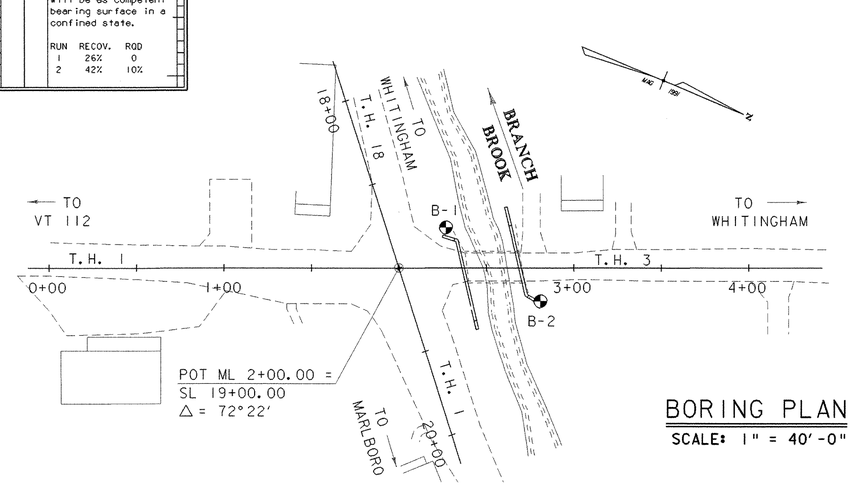
BORING NO. B-2

ELEV. 1153.90

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
		8		M	BRN	A-2-4 SiSa W=24.2 Rec. 0.6
10						BXDC 9.0-11.0 BOULDERS
BOTTOM OF FOOTING ABUTMENT NO. 2 ELEV. 1138.00		R				NO REC.
20		R		M	BRN	A-1-b SaGr W=11.5 Rec. 0.3 Top of Bedrock @ 23.0'
						Run 1: BXMDC 23.0-28.0 Rec. 1.3
						Run 2: BXMDC 28.0-33.0 Rec. 2.1
30						See Geologist's Report
						Hole stopped @ 33.0' in Bedrock
						Geologist's Report:
40						Core consists of medium grained biotite gneiss. The rock is moderately weathered, moderately soft but will be as competent bearing surface in a confined state.
						RUN RECOV. ROD 1 26% 0 2 42% 10%
50						

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-1	2+27	23' LT	1151.51	1129.51
B-2	2+81	19' RT	1153.90	1130.90



BORING PLAN

SCALE: 1" = 40'-0"

GENERAL NOTES

1. The subsurface explorations shown herein were made between 7-12-93 and 7-14-93 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

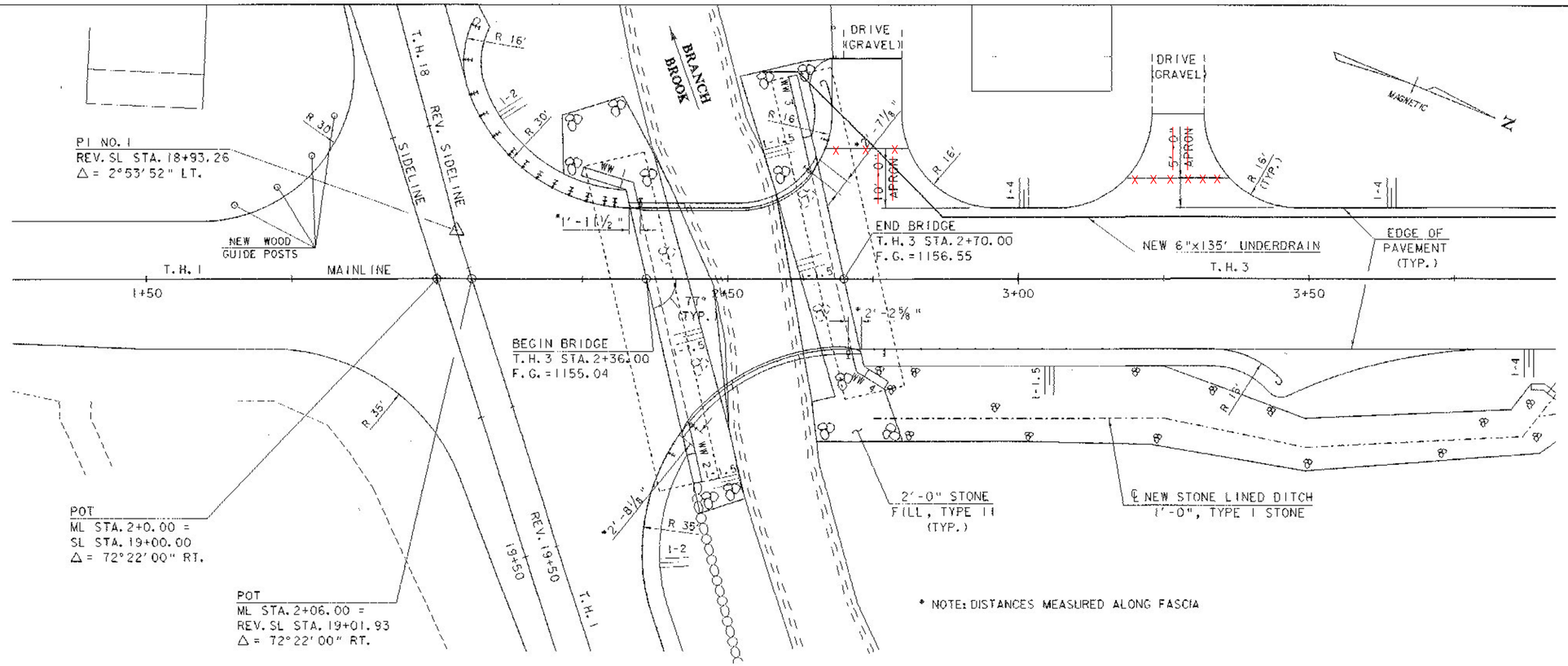
Town Of	HALIFAX	Bridge No.	28
		Log Sta.	
Highway No.	T. H. 3	Surv. Sta.	2+53

T. H. 3 OVER THE BRANCH BROOK

BORING INFORMATION SHEET

Designed By	S. BAKI	Drawn By	G. ROY
Checked By	Date	Bridge Design Supervisor	
T. SUMNER	8/00	R.R. WHITCOMB	Date 8/00
PROJECT	HALIFAX	PROJECT NO.	BRZ 1442 (18)
I.G.C. Info.	89J092\structures\sJ092bor.dgn		sJ092borJ
Bridge Sheet No.		Sheet 14 of 33	

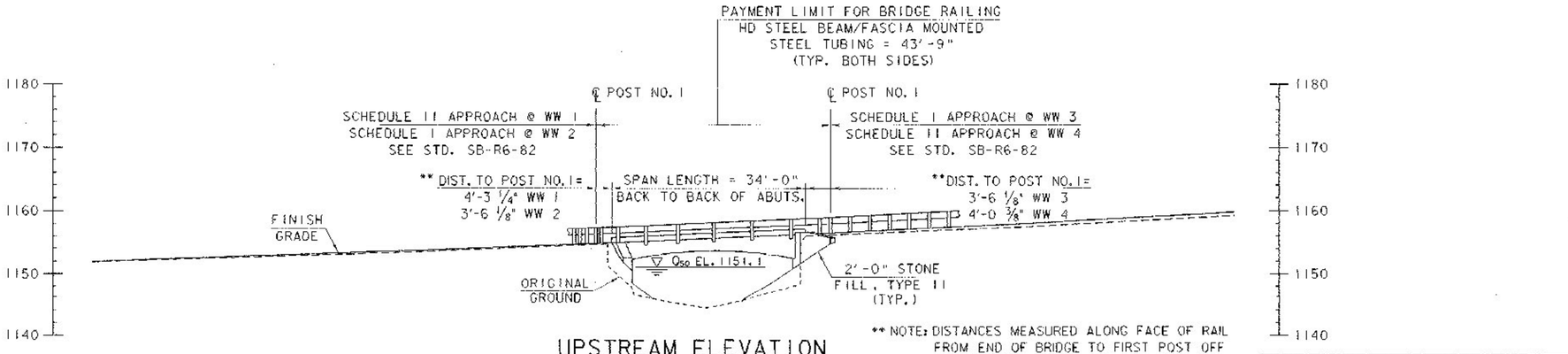
PLOTTED 17-NOV-2000



PLAN

SCALE 1" = 10'-0

10 0 10



UPSTREAM ELEVATION

SCALE 1" = 10'-0

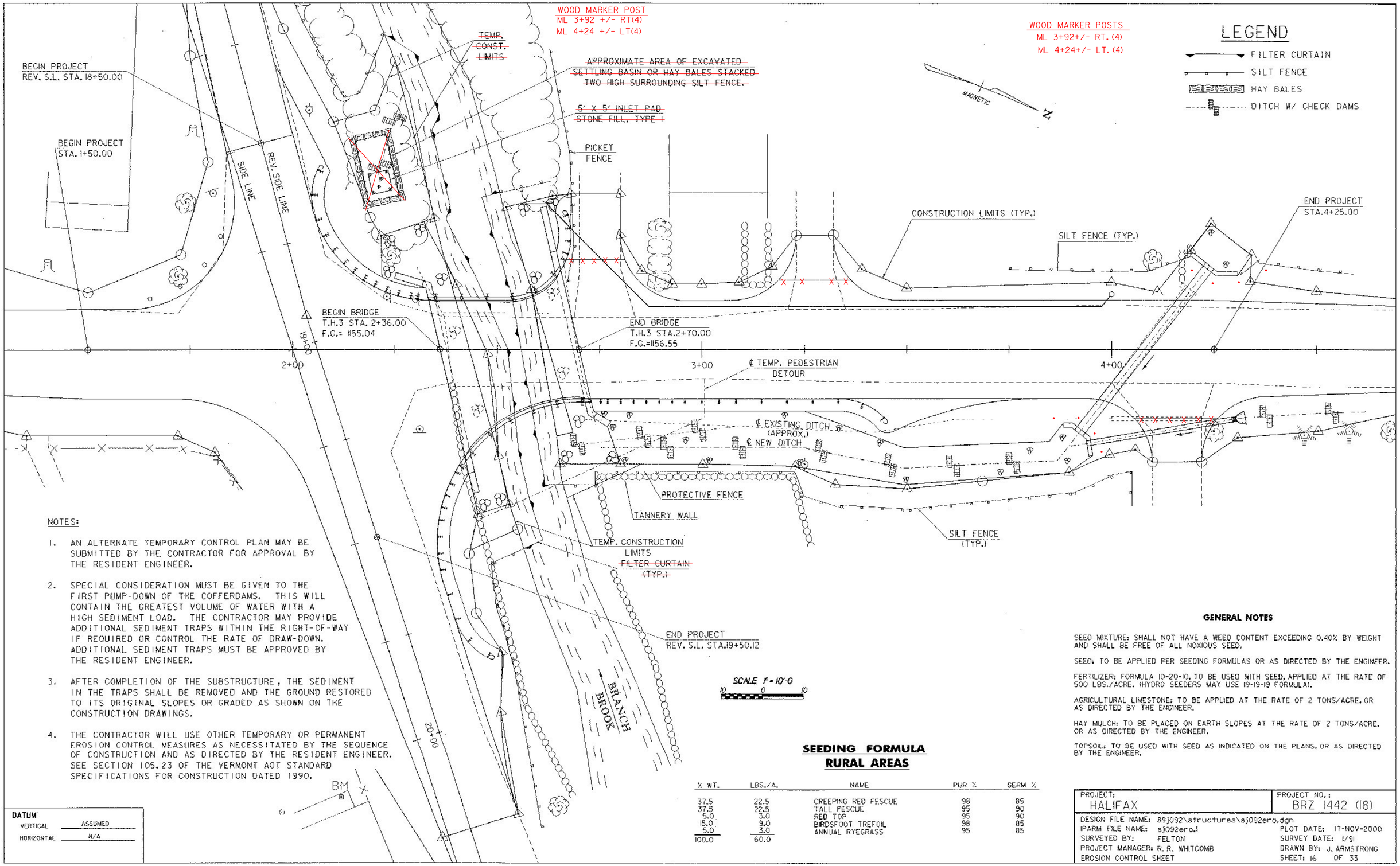
10 0 10

** NOTE: DISTANCES MEASURED ALONG FACE OF RAIL FROM END OF BRIDGE TO FIRST POST OFF BRIDGE. TRANSITION POST IS NOT CONSIDERED FIRST POST.

DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

PROJECT: HALIFAX
PROJECT NO.: BRZ 1442 (18)

DESIGN FILE NAME: 89j092\structures\sj092pe.dgn
IPARM FILE NAME: sj092pe.i
SURVEYED BY: FELTON
PROJECT MANAGER: R. R. WHITCOMB
PLAN AND ELEVATION
PLOT DATE: 17-NOV-2000
SURVEY DATE: 1/91
DRAWN BY: J. ARMSTRONG
SHEET: 15 OF 33



NOTES:

1. AN ALTERNATE TEMPORARY CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.
2. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FIRST PUMP-DOWN OF THE COFFERDAMS. THIS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY PROVIDE ADDITIONAL SEDIMENT TRAPS WITHIN THE RIGHT-OF-WAY IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ADDITIONAL SEDIMENT TRAPS MUST BE APPROVED BY THE RESIDENT ENGINEER.
3. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAPS SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
4. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990.

DATUM

VERTICAL — ASSUMED

HORIZONTAL — N/A

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

PROJECT: HALIFAX	PROJECT NO.: BRZ 1442 (18)
DESIGN FILE NAME: 89J092\structures\sj092ero.dgn	
IPARM FILE NAME: sj092ero.i	PLOT DATE: 17-NOV-2000
SURVEYED BY: FELTON	SURVEY DATE: 1/91
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J. ARMSTRONG
EROSION CONTROL SHEET	SHEET: 16 OF 33

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 1990, AND ITS LATEST REVSIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1992, AND ITS LATEST REVISIONS.

2. TOWN HIGHWAY NO.3 WILL BE CLOSED TO THROUGH VEHICULAR TRAFFIC DURING CONSTRUCTION. THE TOWN SHALL BE RESPONSIBLE FOR SELECTING, SIGNING AND MAINTAINING A DETOUR ROUTE. THE CONTRACTOR SHALL NOTIFY THE TOWN CLERK AT (802)368-7390, A MINIMUM OF TWO WEEKS PRIOR TO CLOSING TOWN HIGWAY NO.3.

3. ALL ON-PROJECT SIGNS AND BARRICADES AS REQUIRED BY THE RESIDENT ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBSIDIARY TO THE ITEM 635.10 "MOBILIZATION". ALL OFF-PROJECT SIGNING SHALL BE THE RESPONSIBILITY OF THE TOWN.

4. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED ON A TEMPORARY PEDESTRIAN BRIDGE LOCATED UPSTREAM OF THE EXISTING STRUCTURE AND MUST SPAN OVER THE BURIED TANNERY WALLS. PEDESTRIAN BRIDGE AND ITS APPROACHES MUST MEET AMERICAN DISABILITIES ACT REGULATIONS.

5. FULL ACCESS TO TOWN HIGHWAY NO.1, TOWN HIGHWAY NO.18 AND ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK WILL BE CONSIDERED TO BE SUBSIDIARY TO ITEM 635.10 "MOBILIZATION".

6. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F OR AS NOTED OTHERWISE.

7. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED FOR REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTIONS OF THE SUBSTRUCTURE NOT REMOVED UNDER THE ITEMS 208.35 "COFFERDAM EXCAVATION, ROCK" OR 203.27 "UNCLASSIFIED CHANNEL EXCAVATION".

8. THE STONE FILL TYPE II UNDER THE BRIDGE SHALL BE PLACED BEFORE THE CONCRETE SLAB IS FORMED AND POURED.

9. THE LOCAL DIRECTION SIGN LOCATED AT MAINLINE STATION 2+23 LEFT, WILL BE SALVAGED AND BECOME THE PROPERTY OF THE TOWN OF HALIFAX.

10. THE HEIGHT OF FILL BEHIND THE ABUTMENTS WILL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE CONCRETE SLAB HAS BEEN POURED AND THE CURING PERIOD IS UP.

11. THE MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURES SHALL BE TWO INCHES ALONG WALL FACES AGAINST EARTH, AND THREE INCHES ELSEWHERE UNLESS DETAILED OTHERWISE. MINIMUM REINFORCING STEEL COVER SHALL BE THREE INCHES AT TOP OF SLAB AND ONE AND A HALF INCHES AT THE BOTTOM OF SLAB.

12. NO TRAFFIC SHALL BE ALLOWED ON THE NEW CONCRETE SLAB UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.

13. TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.

14. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:

    SPACING +/- 1"
    CLEARANCE +/- 1/4"

15. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER THE ITEM 507.17.

16. WHEN EPOXY COATED REINFORCING STEEL IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.

17. THE CONCRETE SLAB AND SUBSTRUCTURES SHALL BE "CONCRETE CLASS HPC-B". CURBS SHALL BE ~~"SILICA FUME CONCRETE"~~. HPC- CLASS A

18. SURFACES OF BRIDGE SEATS UNDER THE CONCRETE SLAB SHALL BE LEVEL.

19. CONCRETE PORTIONS OF THE ABUTMENT AND WINGWALLS ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.

20. WHEN PLACING THE SLAB, THE CONCRETE SHALL BE DEPOSITED PARALLEL TO THE CENTERLINE OF BEARING.

21. THE ARCH IN THE BOTTOM OF THE CONCRETE SLAB WILL BE FORMED PERPENDICULAR TO THE CENTERLINE OF BEARING.

22. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

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

24. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1"X1".

25. IN STREAM CONSTRUCTION SHALL BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE DEPARTMENTS OF FISH AND WILDLIFE AND ENVIRONMENTAL CONSERVATION TO DO THE WORK OUTSIDE THE RESTRICTED PERIOD.

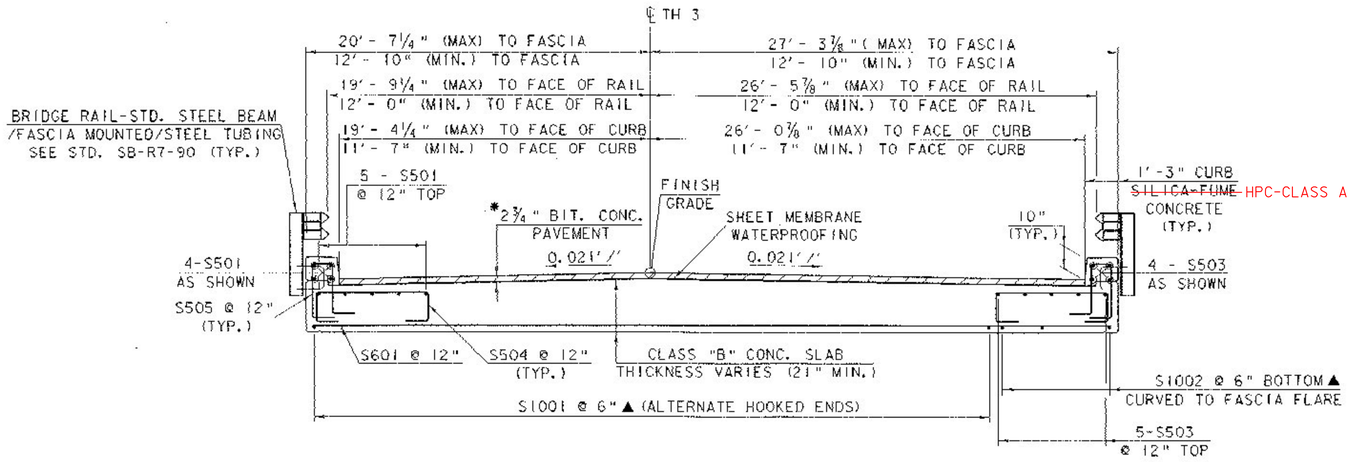
26. THE ITEM STONE FILL, TYPE I SHALL BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER TO PREVENT EROSION BEHIND THE WINGWALLS AND AS INDICATED ON THE PLANS.

27. CONTRACTOR WILL MINIMIZE IMPACTS TO LILACS, BRUSH AND TREES LOCATED AT STATION 2+60 LEFT. CONTRACTOR WILL TAKE CARE TO AVOID AND NOT DISTURB THE ROSE BUSHES LOCATED AT STATIONS 2+90 LEFT AND 3+12 LEFT. THE LILAC BUSH LOCATED AT STATION 4+10 LT WILL BE SAVED. DAMAGED VEGETATION WILL BE REPLACED IN KIND AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND PROPERTY OWNER.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HALIFAX	Bridge No. 28
Highway No. T.H.3	Leg Sta. / Surv. Sta.
T.H.3 OVER THE BRANCH BROOK	
GENERAL NOTES	
Designed By T. SUMNER	Drawn By K. CHISHOLM
Checked By T. SUMNER Date 8/00	Project Manager R.R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
I.G.C. Info. 89\1092\structures\s1092pnt.dgn	s1092pnt
Bridge Sheet No.	Sheet 17 of 33

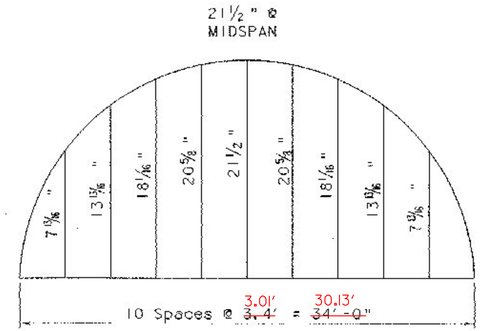
PLOTTED 17-NOV-2000



* 1½" TYPE ~~III~~ IV OVER
1¼" TYPE IV

BRIDGE TYPICAL SECTION

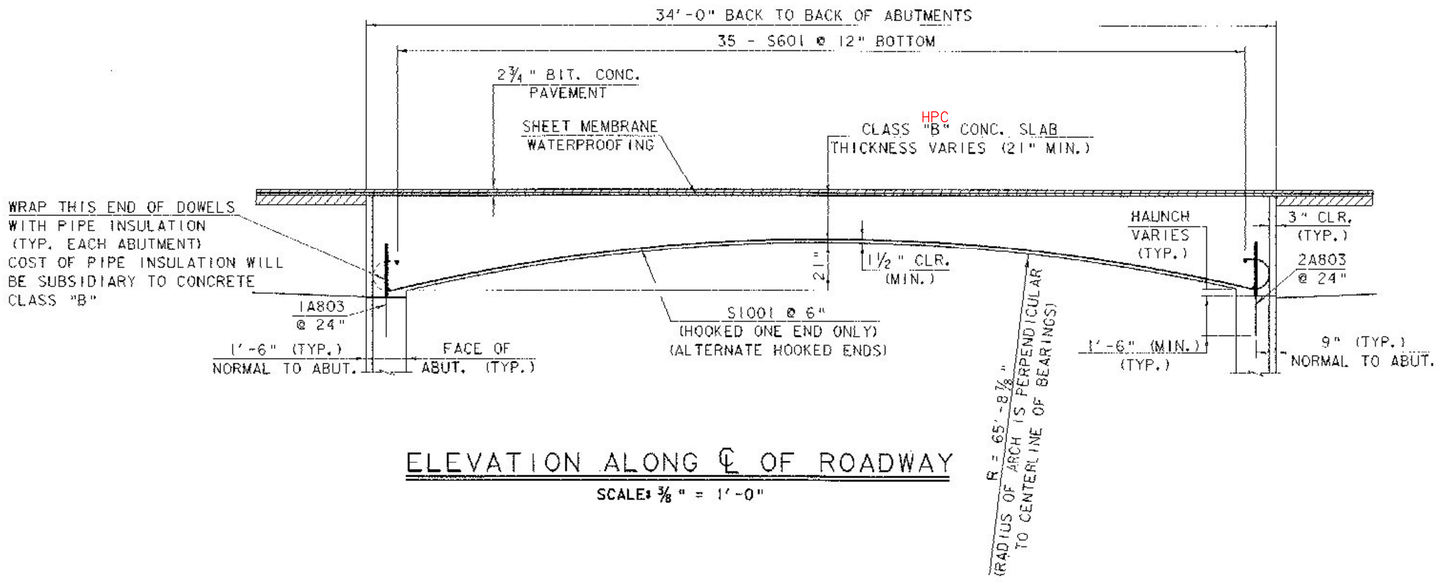
SCALE: ⅜" = 1'-0"
(SECTION IS PERPENDICULAR TO ℄ OF TH3)



SET CONSTRUCTION FORMS TO THIS CIRCULAR CURVE CAMBER.
CAMBER IS PERPENDICULAR TO ABUTMENTS.
½" ADDED FOR IMMEDIATE AND FORM DEFLECTION

CAMBER DIAGRAM

NTS



ELEVATION ALONG ℄ OF ROADWAY

SCALE: ⅜" = 1'-0"

STATE OF VERMONT
AGENCY OF TRANSPORTATION

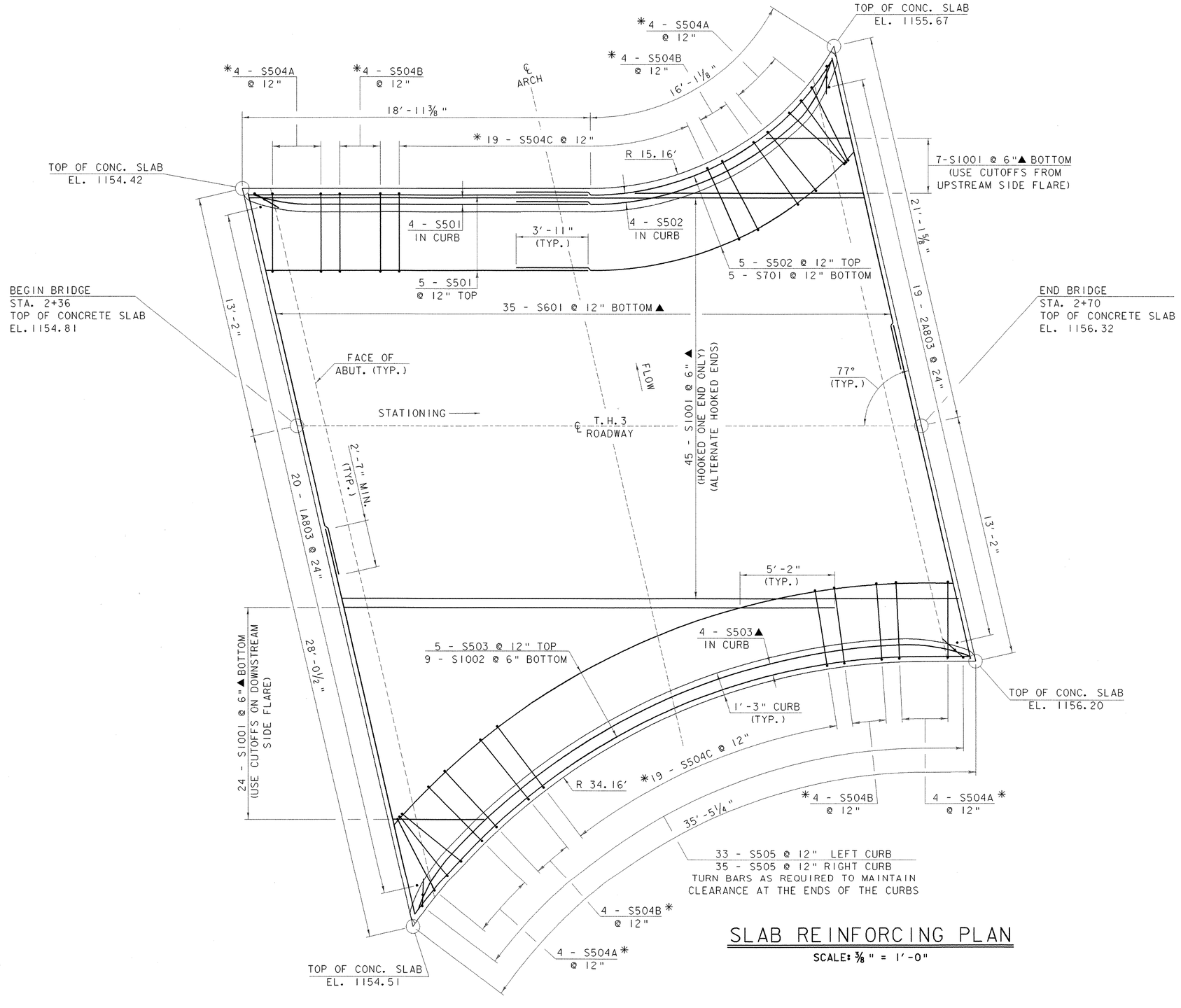
Town Of HALIFAX	Bridge No. 28
Highway No. T.H. 3	Log Sta. / Surv. Sta. 2+53

T.H. 3 OVER THE BRANCH BROOK

SLAB TYPICAL SECTIONS

Designed By T.A. SUMNER	Drawn By K. CHISHOLM
Checked By T.A. SUMNER Date 8/00	Project Manager R.R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
I.G.C. Info. 89]092/structures/sj092slb.dgn	sj092typ2.i
Bridge Sheet No.	Sheet 18 of 33

PLOTTED 17-NOV-2000



SLAB REINFORCING PLAN

SCALE: 3/8" = 1'-0"

*TILT BARS AS NECESSARY TO MAINTAIN CLEARANCE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

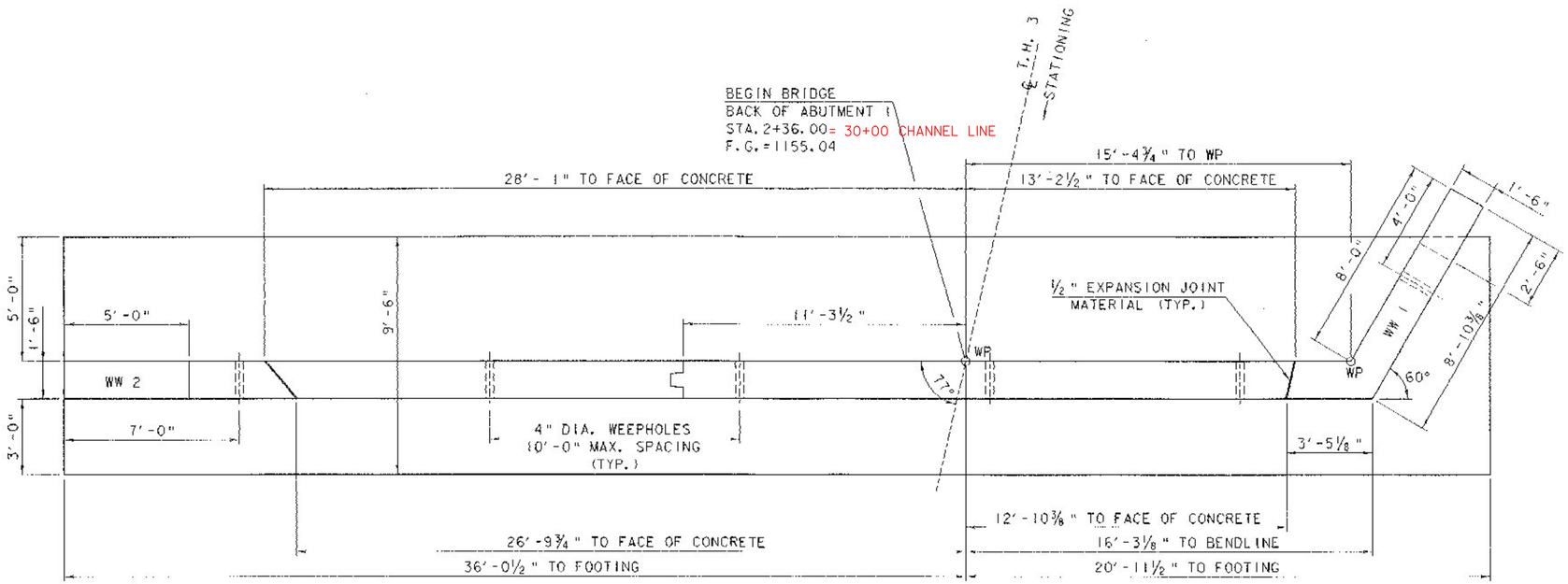
Town Of HALIFAX	Bridge No. 28
Highway No. T.H. 3	Log Sta.
	Surv. Sta. 2+53

T.H. 3 OVER THE BRANCH BROOK

SLAB REINFORCING PLAN

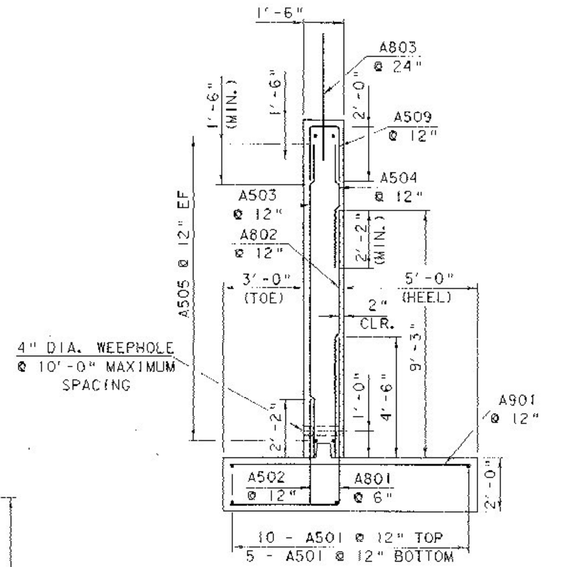
Designed By T. A. SUMNER	Drawn By K. CHISHOLM
Checked By T. A. SUMNER Date 8/00	Bridge Design Supervisor R. R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
I.G.C. info. 89j092/structures/sj092slb.dgn	sj092ref.i
Bridge Sheet No.	Sheet 19 of 33

PLOTTED 17-NOV-2000



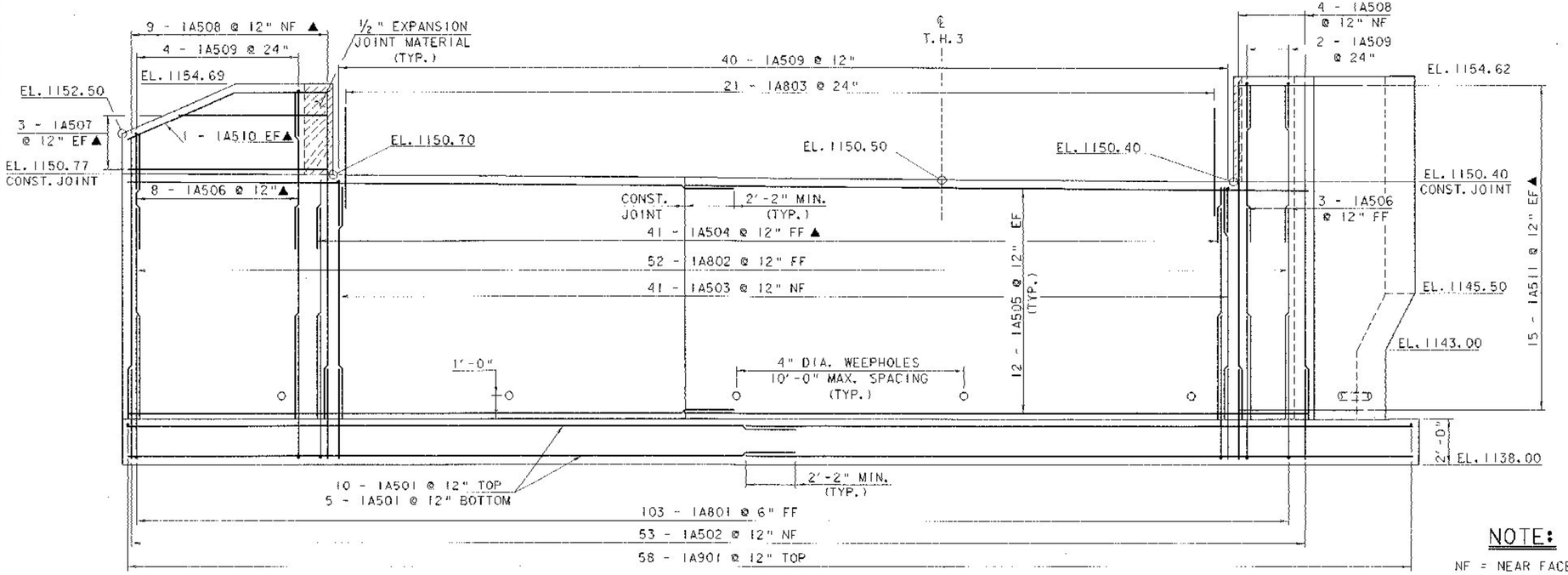
ABUTMENT NO. 1 PLAN

SCALE: ⅜" = 1'-0"



ABUTMENT TYPICAL

SCALE: ⅜" = 1'-0"



ABUTMENT NO. 1 ELEVATION

SCALE: ⅜" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	HALIFAX	Bridge No.	28
Highway No.	T.H. 3	Log Sta.	
		Surv. Sta.	

T.H. 3 OVER THE BRANCH BROOK

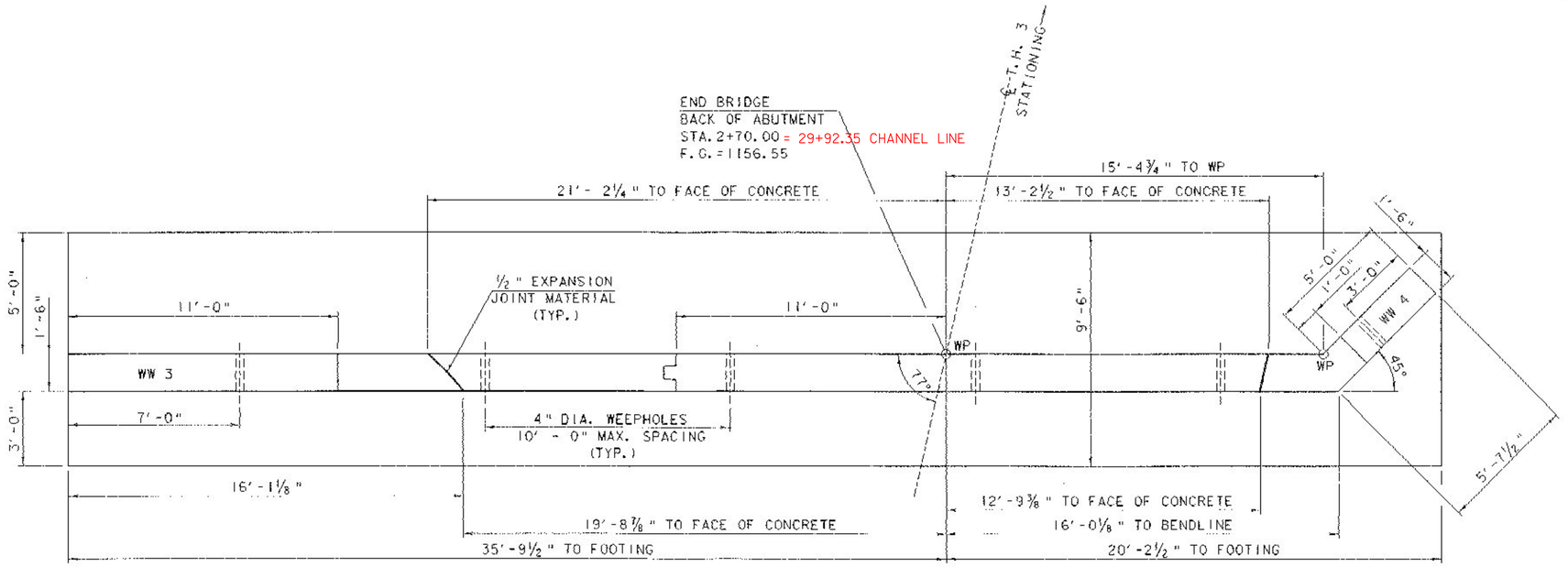
ABUTMENT NO. 1 DETAILS

Designed By T. SUMNER		Drawn By K. CHISHOLM	
Checked By	Date	Project Manager	
T.A.SUMNER	8/00	R. R. WHITCOMB	Date 8/00
PROJECT	HALIFAX	PROJECT NO.	BRZ 1442 (18)

I.G.C. Info. /str3/89j092/sj092ab.dgn sj092ab).1

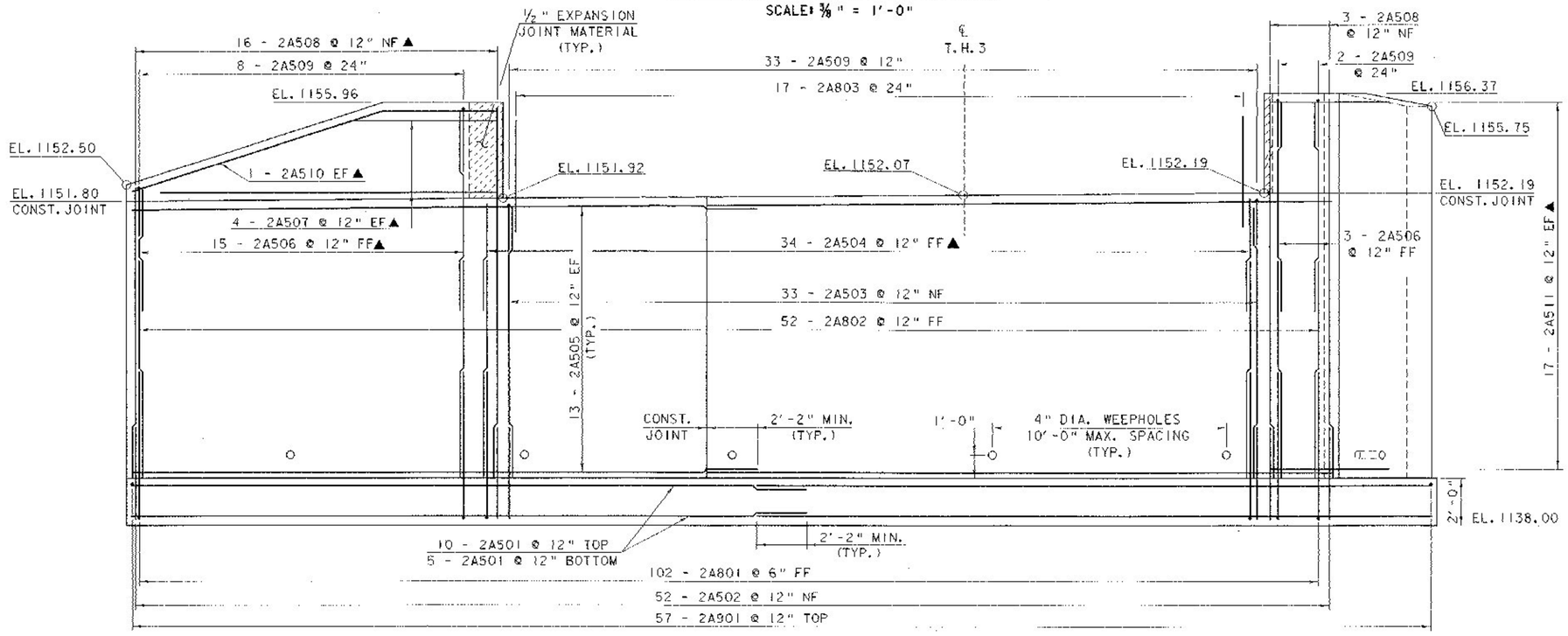
Bridge Sheet No. Sheet 20 of 33

PLOTTED 11-MAY-2000



ABUTMENT NO. 2 PLAN

SCALE: ⅜" = 1'-0"



ABUTMENT NO. 2 ELEVATION

SCALE: ⅜" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

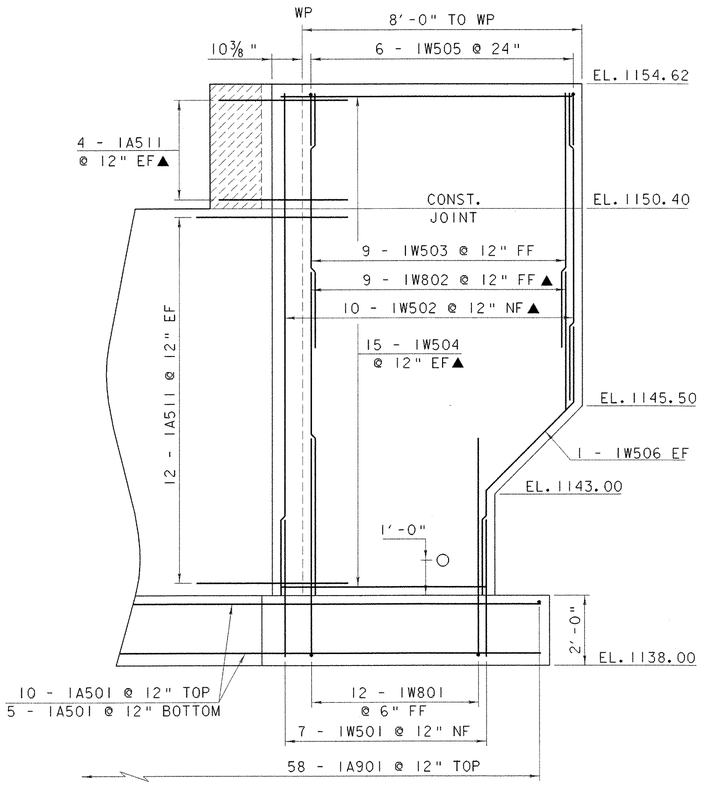
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HALIFAX	Bridge No. 28
Highway No. T. H. 3	Log Sta. / Surv. Sta.

T. H. 3 OVER THE BRANCH BROOK
ABUTMENT NO. 2 DETAILS

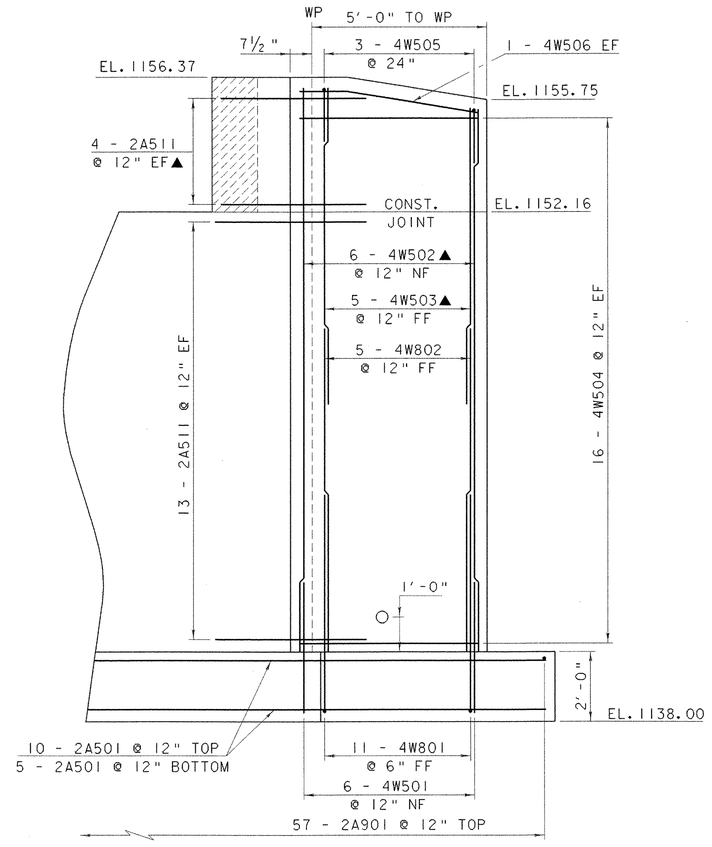
Designed By T. SUMNER	Drawn By K. CHISHOLM
Checked By T.SUMNER Date 8/00	Project Manager R. R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
LG.C. Info. /str3/89j092/sj092ab.dgn	sj092eb2. i
Bridge Sheet No.	Sheet 21 of 33

PLOTTED 17-NOV-2000



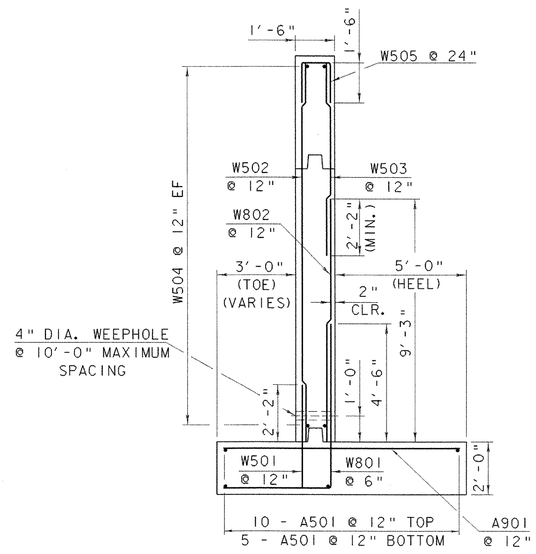
WINGWALL NO. 1 ELEVATION

SCALE: 1/2" = 1'-0"



WINGWALL NO. 4 ELEVATION

SCALE: 1/2" = 1'-0"



WINGWALL TYPICAL

SCALE: 3/8" = 1'-0"

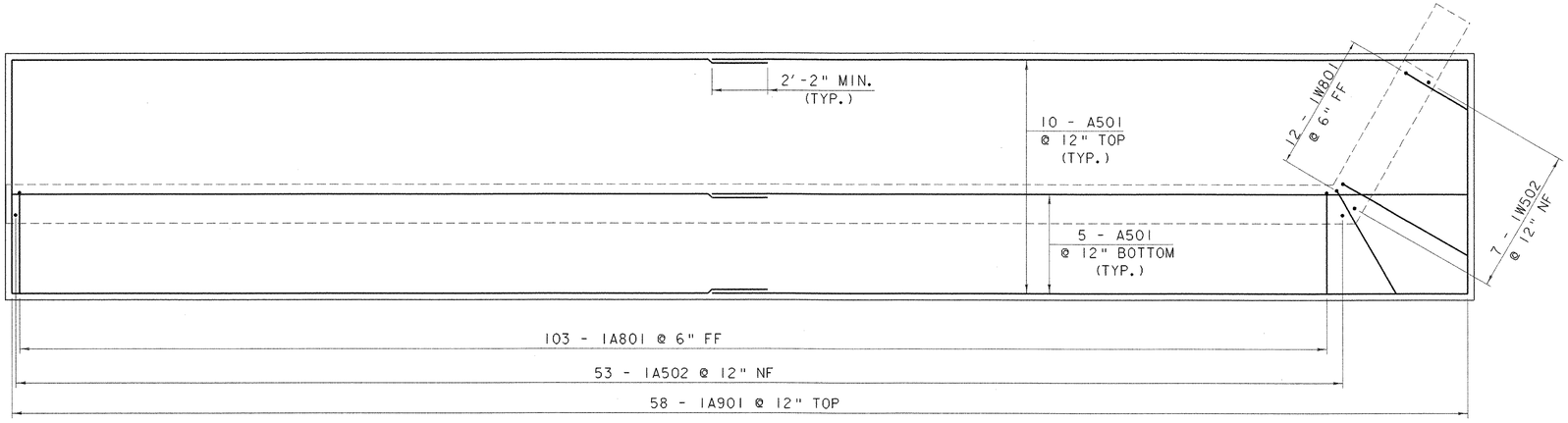
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

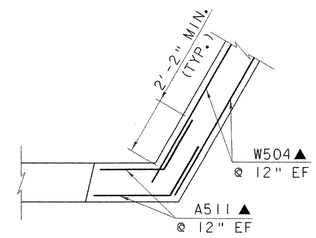
Town Of HALIFAX	Bridge No. 28
Highway No. T.H. 3	Log Sta. / Surv. Sta.
T.H. 3 OVER THE BRANCH BROOK	
WINGWALL DETAILS	
Designed By T. SUMNER	Drawn By K. CHISHOLM
Checked By T.ASUMNER Date 8/00	Project Manager R. R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)
I.G.C. Info. /str3/89j092/sj092ab.dgn	sj092ww.i
Bridge Sheet No.	Sheet 22 of 33

PLOTTED 17-NOV-2000



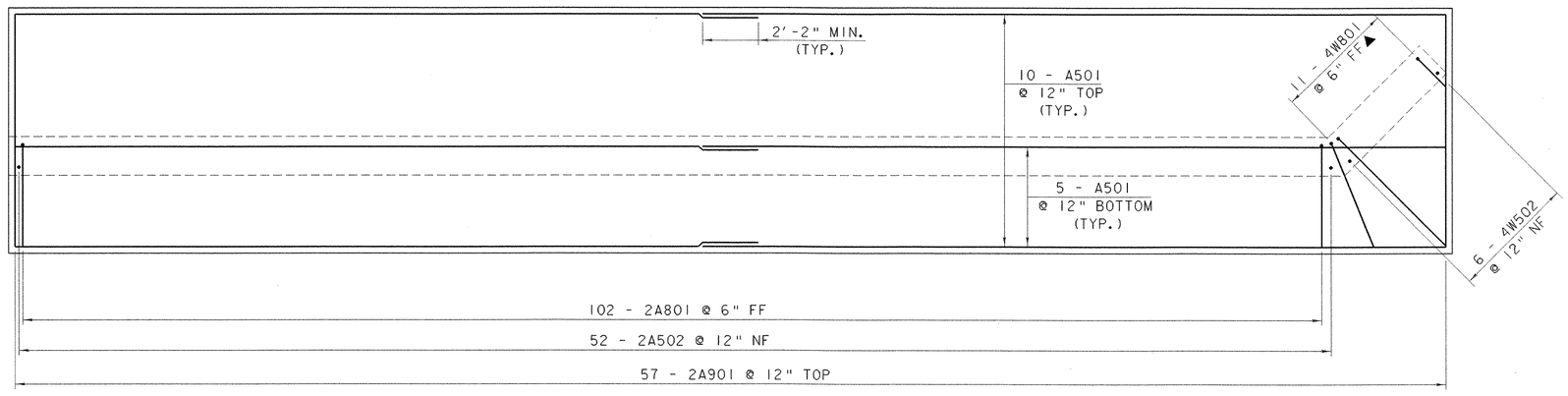
ABUTMENT NO. 1 FOOTING REINFORCING PLAN

SCALE: 3/8" = 1'-0"



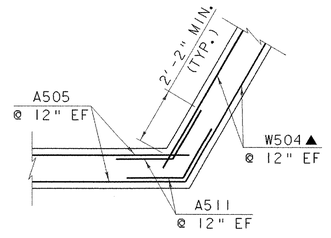
WINGWALL NO. 1 CORNER REINFORCING ABOVE BRIDGE SEAT

SCALE: 3/8" = 1'-0"
(WINGWALL NO. 4 SIMILAR)



ABUTMENT NO. 2 FOOTING REINFORCING PLAN

SCALE: 3/8" = 1'-0"



WINGWALL NO. 1 CORNER REINFORCING BELOW BRIDGE SEAT

SCALE: 3/8" = 1'-0"
(WINGWALL NO. 4 SIMILAR)

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HALIFAX	Bridge No. 28
Highway No. T.H. 3	Log Sta. / Surv. Sta.

T.H. 3 OVER THE BRANCH BROOK

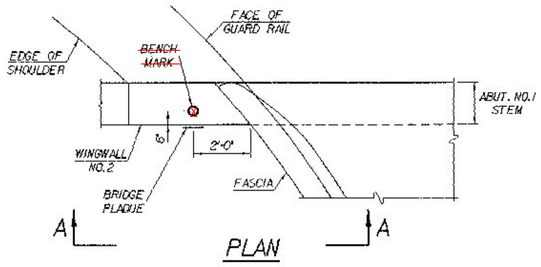
FOOTING REINFORCING DETAILS

Designed By T. SUMNER	Drawn By K. CHISHOLM
Checked By T.A.SUMNER Date 8/00	Project Manager R. R. WHITCOMB Date 8/00
PROJECT HALIFAX	PROJECT NO. BRZ 1442 (18)

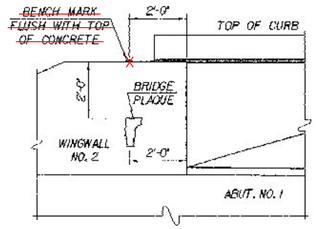
I.G.C. info. /str3/89j092/sj092ab.dgn sj092ftg.i

Bridge Sheet No. Sheet 23 of 33

PLOTTED 17-NOV-2000



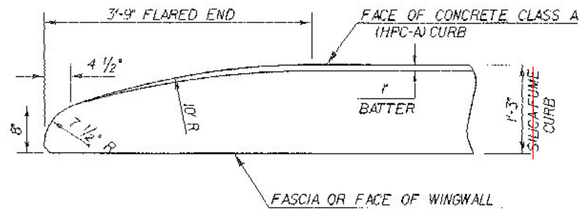
PLAN



VIEW "A - A"

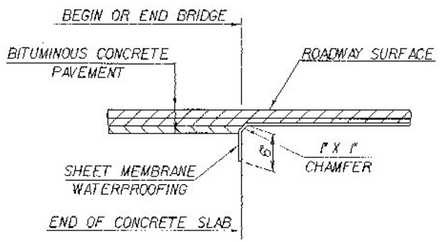
LOCATE ~~BENCH MARK~~ AND BRIDGE PLAQUE

THE ~~BENCH MARK AND~~ BRIDGE PLAQUE 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.



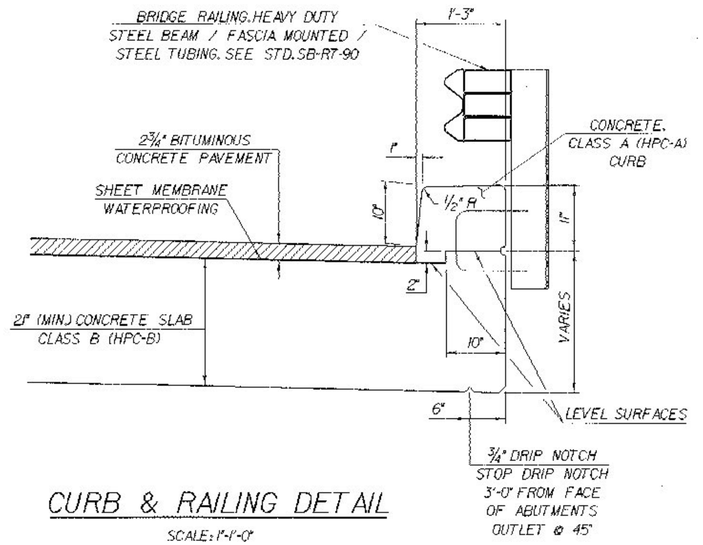
FLARED END DETAIL FOR 1'-3" CURB

CURB REINFORCING STIRRUP BARS SHALL BE TURNED AS REQUIRED TO FIT FLARED ENDS.



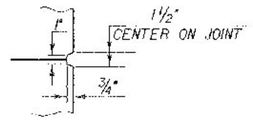
DETAIL FOR SHEET MEMBRANE AT END OF BRIDGE

SCALE : 1" = 1'-0"

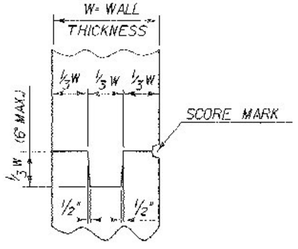


CURB & RAILING DETAIL

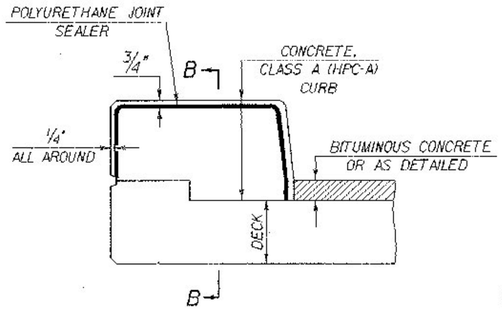
SCALE: 1"-1'-0"



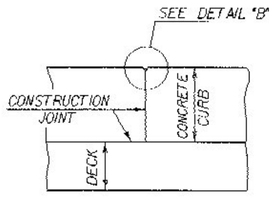
SCORE MARK DETAIL



TYPICAL CONCRETE CONSTRUCTION JOINT

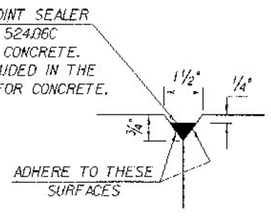


TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT



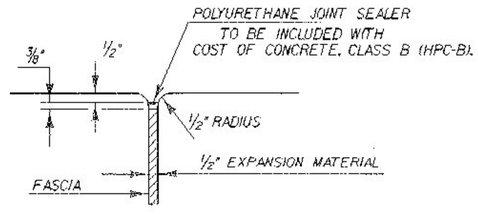
SECTION B - B

POLYURETHANE JOINT SEALER PER SUBSECTION 524.06C COLOR TO MATCH CONCRETE. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE, CLASS A (HPC-A).



DETAIL "B"

NOTES:
1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
3. CONSTRUCTION JOINTS THROUGH SIDEWALKS SHALL BE SIMILAR TO CONCRETE CURB CONSTRUCTION JOINTS.



JOINT BETWEEN FASCIA AND WINGWALL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	HALIFAX	Bridge No.	28
Highway No.	T.H.3	Log Sta. / Surv. Sta.	

T.H.3 OVER THE BRANCH BROOK

MISCELLANEOUS DETAILS

Designed By T. SUMNER		Drawn By K. CHISHOLM	
Checked By T. SUMNER	Date 8/00	Bridge Design Supervisor R.R. WHITCOMB	Date 8/00
PROJECT HALIFAX		PROJECT NO. BRZ 1442 (18)	

I.G.C. Info. 89J092\structures\sJ092mls.dgn sJ092mls.dgn

Bridge Sheet No. Sheet 24 of 33

PLOTTED 04-APR-2002

STATE OF VERMONT
AGENCY OF TRANSPORTATION

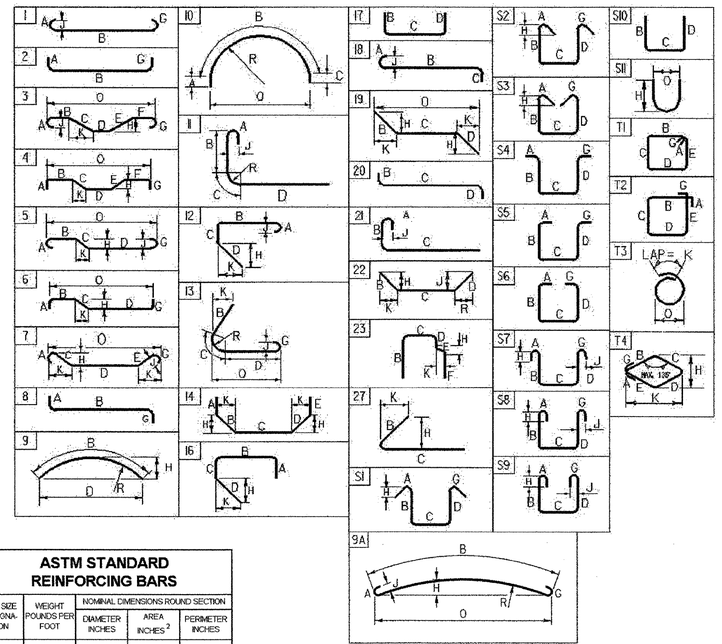
REINFORCING STEEL SCHEDULE

	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
SLAB																	
✳	10	5	18'- 8"	S501	STR												
✳	10	5	19'- 9"	S502	9		19'- 9"						2'- 9"			17'- 5"	18'- 9"
▲	9	5	34'- 9"	S503	9		34'- 9"						4'- 1"			36'- 5"	33'- 5"
	16	5	11'- 6"	S504A	S6	1'- 0"	2'- 8"	4'- 2"	2'- 8"			1'- 0"					
	16	5	10'- 4"	S504B	S6	1'- 0"	2'- 1"	4'- 2"	2'- 1"			1'- 0"					
	38	5	9'- 0"	S504C	S6	1'- 0"	1'- 5"	4'- 2"	1'- 5"			1'- 0"					
	68	5	7'- 5"	S505	S5	1'- 0"	2'- 4"	0'- 8"	2'- 5"			1'- 0"					
△ ▲	72	6	21'- 9"	S601	STR												
△	7	7	19'- 9"	S701	9		19'- 9"						2'- 9"			17'- 5"	18'- 9"
△ ▲	72	10	35'- 0"	S1001	9A	1'- 5"	33'- 7"					----	1'- 9"	1'- 1"		80'- 0"	33'- 4"
	9	10	34'- 9"	S1002	9		34'- 9"						4'- 1"			36'- 5"	33'- 5"
ABUTMENT NO. 1																	
	30	5	29'- 4"	1A501	STR												
	53	5	3'- 11"	1A502	STR												
	41	5	10'- 1"	1A503	STR												
	41	5	3'- 5"	1A504	STR												
	48	5	26'- 11"	1A505	STR												
✳ ▲	12	5	7'- 4"	1A506	STR												
▲	6	5	8'- 9"	1A507	STR												
▲	13	5	14'- 5"	1A508	STR												
	46	5	5'- 1"	1A509	S10		2'- 0"	1'- 1"	2'- 0"								
▲	2	5	8'- 11"	1A510	19		----	3'- 11"	5'- 0"				2'- 2"		4'- 5"		8'- 4"
▲	30	5	6'- 0"	1A511	19		----	3'- 0"	3'- 0"				2'- 7"		1'- 6"		4'- 6"
	52	8	9'- 3"	1A802	STR												
✳ ▲	24	8	5'- 2"	1A803	STR												
	103	8	10'- 4"	1A801	17		----	4'- 1"	6'- 3"								
△	60	9	9'- 0"	1A901	STR												
WINGWALL NO. 1																	
	7	5	3'- 11"	1W501	STR												
▲	10	5	14'- 4"	1W502	STR												
✳	10	5	7'- 4"	1W503	STR												
▲	30	5	8'- 5"	1W504	STR												
	6	5	4'- 1"	1W505	S10		1'- 6"	1'- 1"	1'- 6"								
	2	5	8'- 8"	1W506	19		3'- 0"	3'- 6"	2'- 2"								7'- 2"
✳ ▲	10	8	9'- 3"	1W802	STR												
	12	8	11'- 11"	1W801	17		----	5'- 8"	6'- 3"								
ABUTMENT NO. 2																	
	30	5	28'- 10"	2A501	STR												
	52	5	3'- 11"	2A502	STR												
	33	5	11'- 10"	2A503	STR												
▲	34	5	4'- 11"	2A504	STR												
	52	5	26'- 9"	2A505	STR												
✳ ▲	19	5	9'- 1"	2A506	STR												
▲	8	5	15'- 7"	2A507	STR												
▲	19	5	16'- 1"	2A508	STR												
	43	5	4'- 1"	2A509	S10		1'- 6"	1'- 1"	1'- 6"								
▲	2	5	16'- 1"	2A510	19		11'- 4"	4'- 9"	---				3'- 9"		10'- 7"		15'- 4"
▲	34	5	6'- 0"	2A511	19		----	3'- 0"	3'- 0"								4'- 6"
	52	8	9'- 3"	2A802	STR												
	17	8	5'- 2"	2A803	STR												
✳	103	8	10'- 4"	2A801	17		----	4'- 1"	6'- 3"								
△	59	9	9'- 0"	2A901	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
WINGWALL NO. 4																	
	6	5	3'- 11"	4W501	STR												
▲	6	5	16'- 1"	4W502	STR												
▲	5	5	9'- 1"	4W503	STR												
✳	33	5	5'- 1"	4W504	STR												
	3	5	4'- 1"	4W505	S10		1'- 6"	1'- 1"	1'- 6"								
	2	5	5'- 1"	4W506	19		1'- 4"	3'- 9"	----								5'- 1"
	5	8	9'- 3"	4W802	STR												
✳	12	8	12'- 2"	4W801	17			5'- 11"	6'- 3"								
INLET HEADWALL																	
✳ ▲	5	5	13'- 4"	1H501	19		----	7'- 11"	5'- 5"								
OUTLET HEADWALL																	
△ ▲	6	5	6'- 5"	2H501	19		----	4'- 0"	2'- 5"								
▲	4	5	8'- 9"	2H502	19		----	4'- 0"	4'- 9"								

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES^2	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

ALL STEEL DETAILED ON THIS SHEET TO BE EPOXY COATED

PROJECT NAME:	HALIFAX		
PROJECT NUMBER:	BRZ 1442 (18)		
FILE NAME:	\89j092\structures\sj092ref.xls	PLOT DATE:	11/13/00
PROJECT	R.R.WHITCOMB	DRAWN BY:	K.CHISHOLM
DESIGNED BY:	T.A.SUMNER	CHECKED BY:	T.A.SUMNER
REINFORCING STEEL SCHEDULE SHEET #1		SHEET 25	OF 33

BEGIN PROJECT

1+50

8" CONCRETE PAVEMENT TYPE III 6½" THICK

8" SUBBASE OF GRAVEL

2:1 SAND BORROW

TRANSITION OF SUBBASE DEPTH

SCALE: VER. 1" = 1'-0"
HOR. 1" = 10'-0"

1+00

0+75

BEGIN APPROACH

1150

1140

1150.92

PORCH LWR — LWN — LWN — E — CL (TYP) — E & E — PAV — CK. S.RD. — E GRAV E.P. — GRAV

1+50

END APPROACH
BEGIN PROJECT

1150.65

GRAV DR — GRAV DR — E & E — CL — E & E — E GRAV — LWN — LWN — LWN

1+00

STA. 0+75 MATCH EXISTING
BEGIN APPROACH

LWN — LWN — LWN — E — CL — E & E — GRAV — E GRAV — PORCH T S

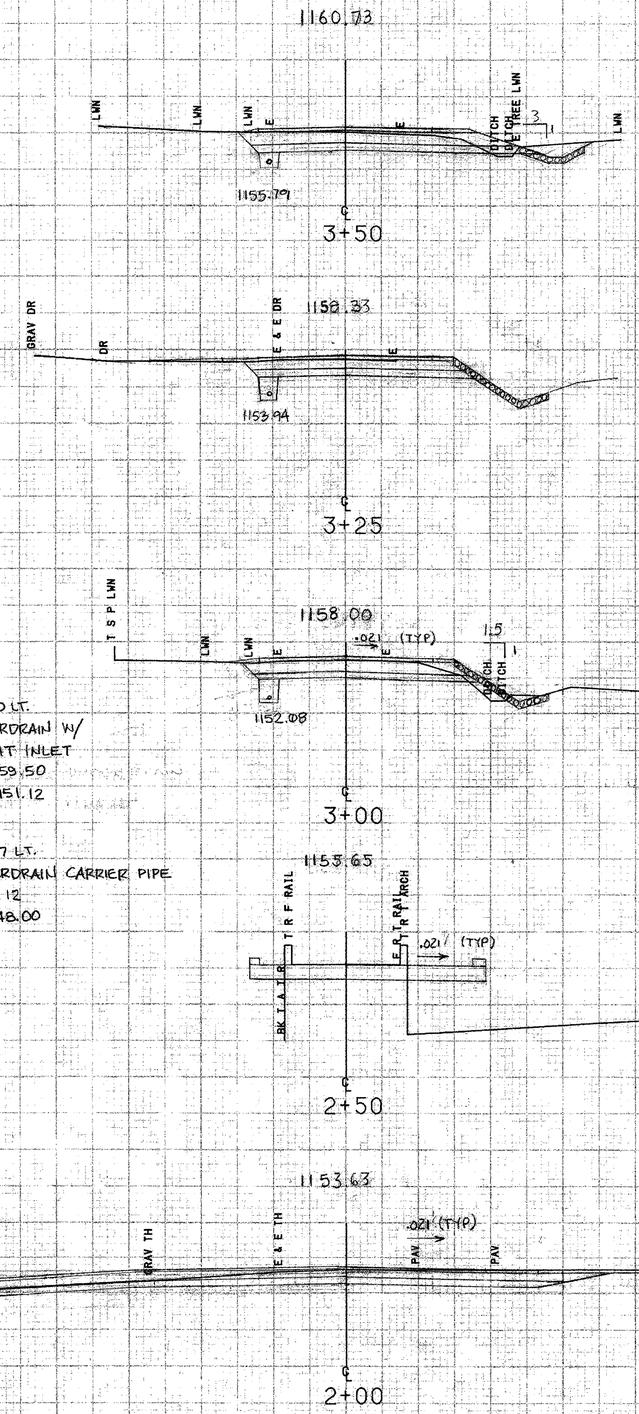
0+50

LWN — LWN — LWN — E — E & E — GRAV — E GRAV — WALK

0+00

SCALE 1" = 10 FEET

FROM STA. 0+00	TO STA. 1+50		
PROJECT NAME	HALIFAX MAIN		
NO.	BRZ 142(18)	PLOTTED	04/24/91
SURVEYED BY	FELTON	01/91	0340
SHEET 22 OF 33 SHEETS			



STA. 2+87 LT- 4+00 LT.
NEW 6"x113' UNDERDRAIN W/
FLUSHING BASIN AT INLET
INLET ELEV. = 1159.50
OUTLET ELEV. = 1151.12

STA. 2+56 LT - 2+87 LT.
NEW 6"x 42' UNDERDRAIN CARRIER PIPE
INLET ELEV. = 1151.12
OUTLET ELEV. = 1148.00

FROM STA.	2+00	TO STA.	3+50
PROJECT NAME		HALIFAX MAIN1	
NO.		BRZ1442(18)	PLOTTED 04/24/91
SURVEYED BY		FELTON	01/91 0340
SHEET 27	OF 33	SHEETS	

SCALE 10 FEET

END APPROACH
5+00
4+75
4+50
END PROJECT
4+25
BIT. CONCRETE PAVEMENT TYPE III
25' COLD PLANING AREA
BIT. CONCRETE PAVEMENT
SUBBASE OF GRAVEL
SAND BORROW
MATCH EXISTING
TRANSITION OF SUBBASE DEPTH TH.-3
SCALE: VERT. 1"=1'-0"
HOR. 1"=10'-0"
20
1

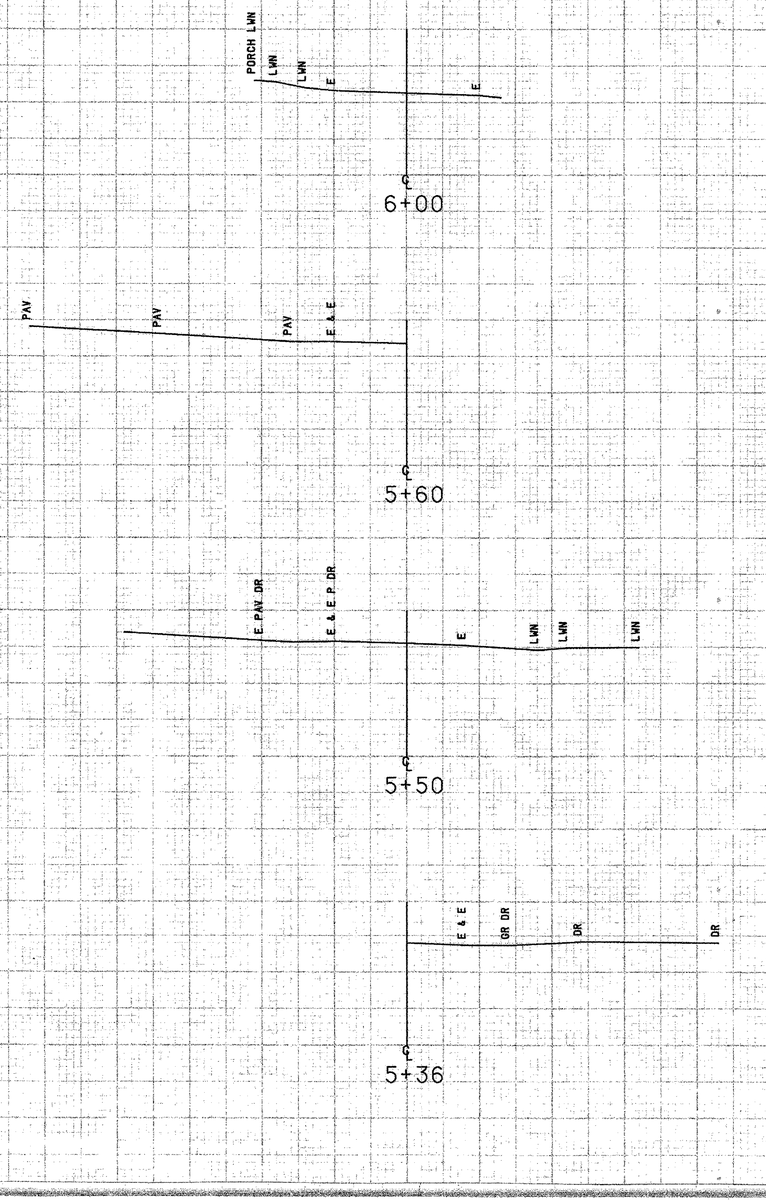
FLD FLD FLD FLD E E LWR LWR LWR LWR
MATCH EXISTING
5+00
4+75
END APPROACH
1167.28
FLD FLD FLD FLD E LWR TREE & LWR LWR
4+50
SEE LEFT
1164.11
E & E DR DR DR
NEW 15" X 36' CSP w/ END SECTION @ INLET
INLET ELEV. 1163.30
OUTLET ELEV. 1159.05
4+14
EXISTING PIPE
1164.51
FLD FLD DITCH DITCH T.P. E RIPRAP LWR
R.C. HEADWALL
TYPE I STONE (TYP.)
REINFORCED CONCRETE HEADWALL (TYP.) SEE I-D-2 STANDARD AND SHEET 6
4+08 (SKEWED)
NEW 36" X 52' CULVERT (OPTION PIPE)
INLET ELEV. 1160.00
OUTLET ELEV. 1158.00
1162.79
LWR DR DR E & E LWR LWR
1159.08
1159.00
1159.93
4+00

1170
1160
1160
1160
1160

STA. 4+25 END PROJECT
BEGIN APPROACH

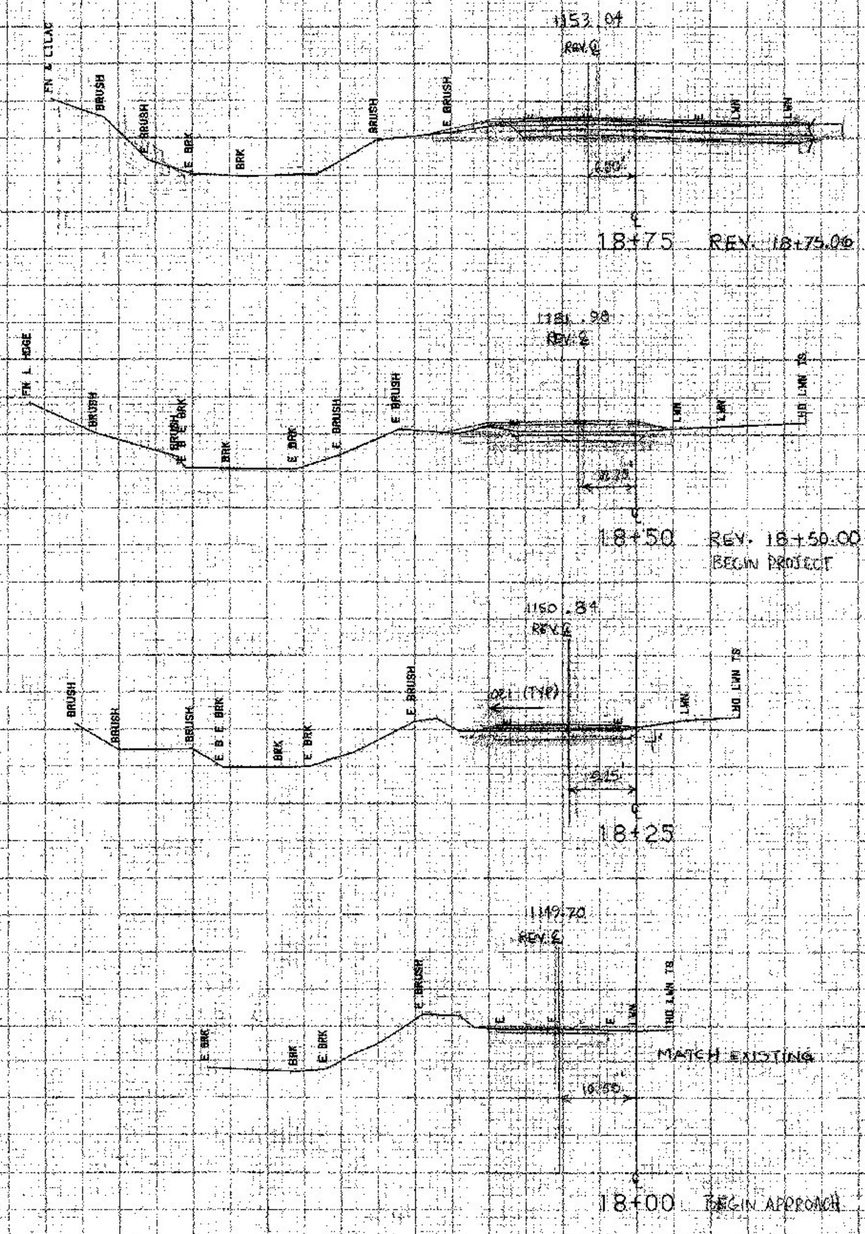
FROM STA. 4+00		TO STA. 5+00	
PROJECT NAME	HALIFAX MAIN		
NO.	BRZ1442(182)	PLOTTED	04/24/91
SURVEYED BY	FECTON	01/91	0240
SHEET 28	OF 33 SHEETS		

SCALE 10 FEET



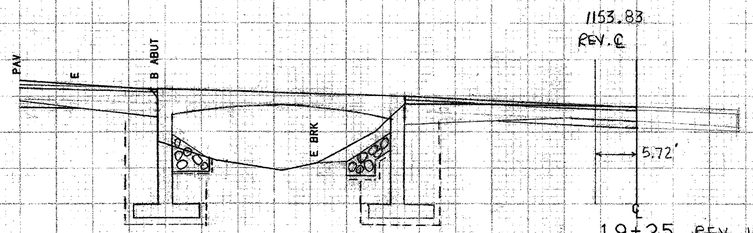
FROM STA.	5+36	TO STA.	6+00
PROJECT NAME	HALIFAX MAIN1		
NO.	BRZ1442(18)	PLOTTED	04/24/91
SURVEYED BY	FELTON	01/91	0340
SHEET 29	OF 33 SHEETS		

SCALE 10 FEET



FROM STA. 18+00		TO STA. 18+75	
PROJECT NAME	HALIFAX MAIN2		
NO.	BRZ-1442(98)	PLOTTED 04/24/91	
SURVEYED BY	FECTON	01791	0340
SHEET 30 OF 33 SHEETS			

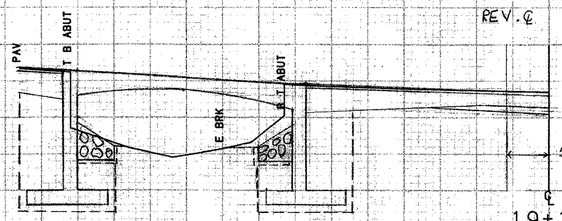
SCALE 1" = 10 FEET



1153.83
REV.℄

19+25 REV. 19+25.12

1150



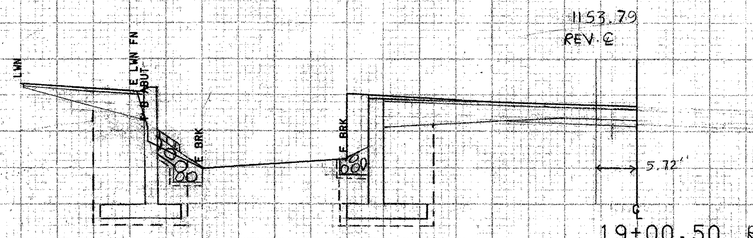
REV.℄

19+15.50 REV. 19+15.62

1150

* NOTE :

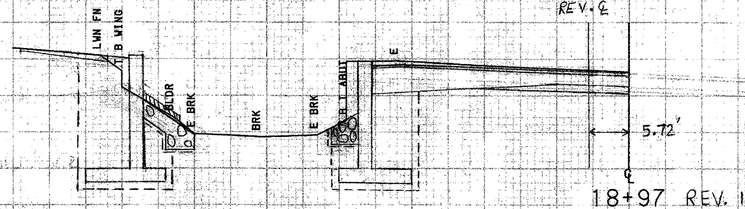
NO GRUBBING MATERIAL UNDER BRIDGE



1153.79
REV.℄

19+00.50 REV. 19+00.62

1150



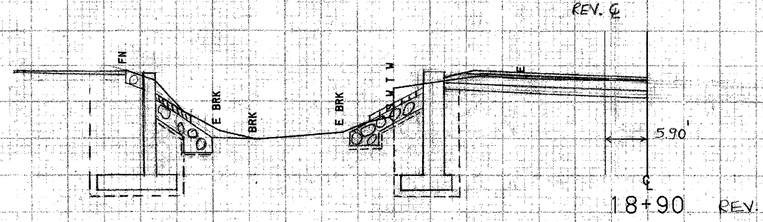
REV.℄

18+97 REV. 18+97.12

1150

SIDELINE STA. 18+82.5, ABUT. NO. 2
BEGIN UNCLASSIFIED CHAN. EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE II
GRUBBING MATERIAL

SIDELINE STA. 18+80, ABUT. NO. 1
BEGIN UNCLASSIFIED CHAN. EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE II
GRUBBING MATERIAL



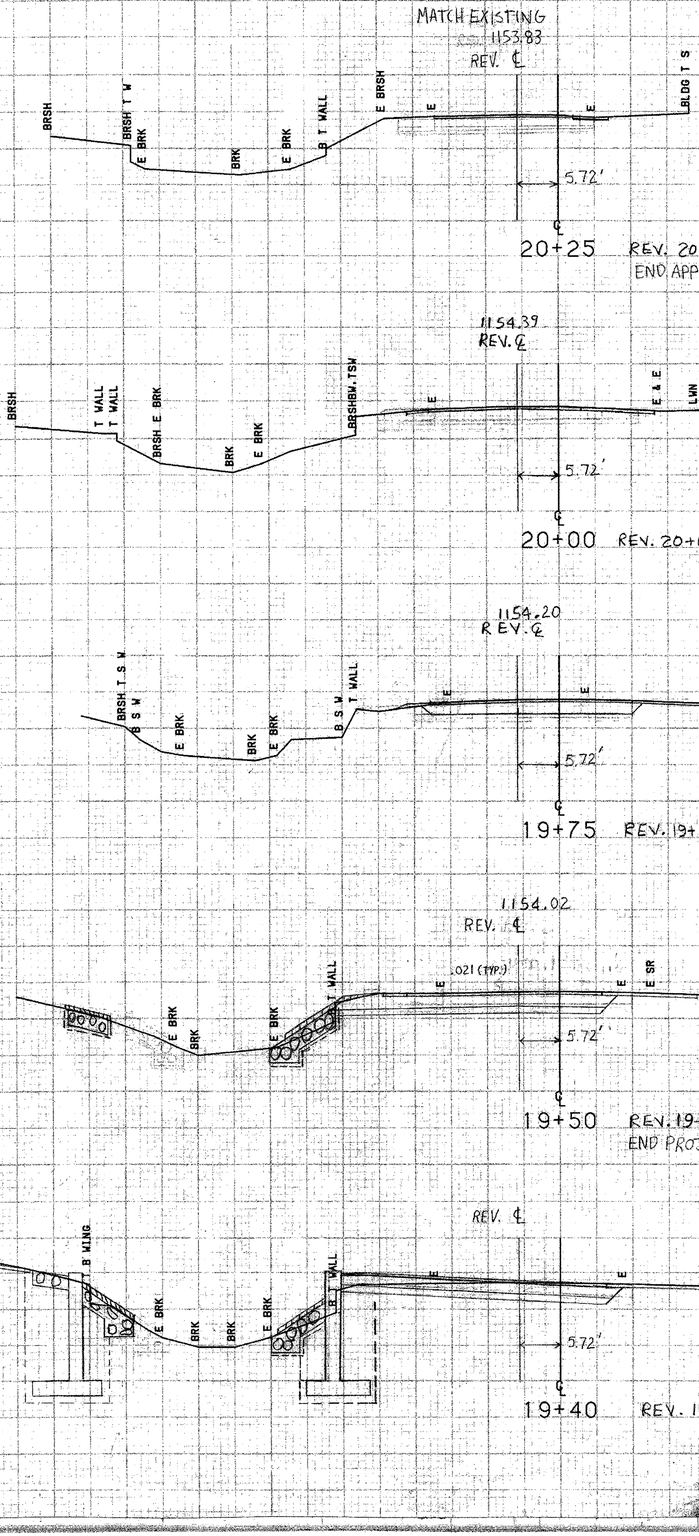
REV.℄

18+90 REV. 18+90.11

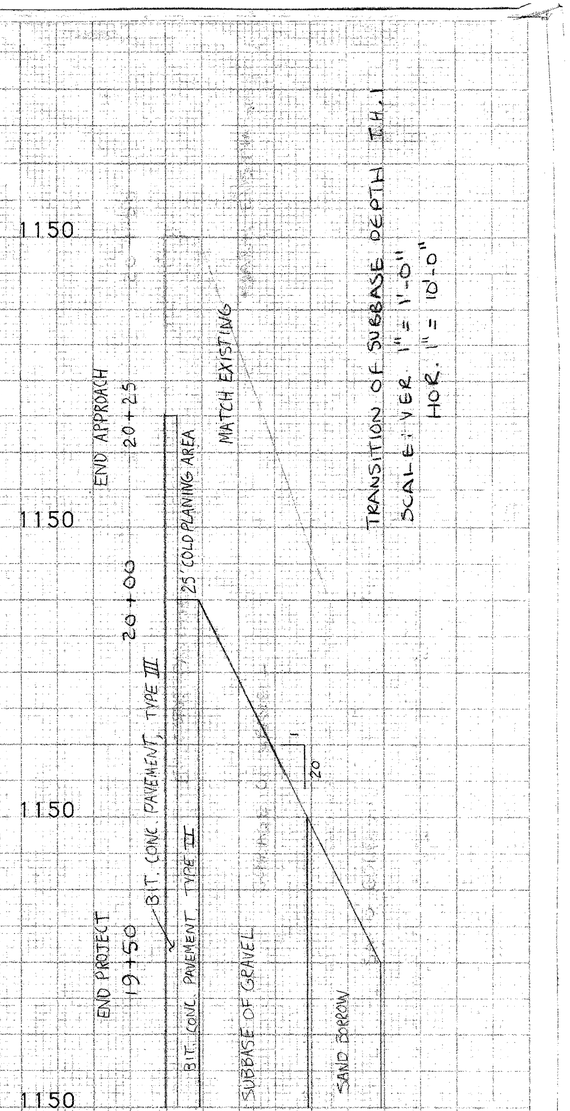
1150

FROM STA.	18+90	TO STA.	19+25
PROJECT NAME	HALIFAX MAIN2		
NO.	BRZ1442(18)	PLOTTED	04/24/91
SURVEYED BY	FELTON	01791	0340
SHEET 31	OF 33 SHEETS		

SCALE 10 FEET



SIDELINE STA. 19+59, ABUT. NO. 2
END UNCLASSIFIED CHAN. EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE II
GRUBBING MATERIAL



SIDELINE STA. 19+52, ABUT. NO. 1
END UNCLASSIFIED CHAN. EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE II
GRUBBING MATERIAL

FROM STA.	19+40	TO STA.	20+25
PROJECT NAME	HALIFAX MAIN2		
NO.	BRZ1442(18)	PLOTTED	04/24/91
SURVEYED BY	FELTON	01/91	0340
SHEET 32	OF 33 SHEETS		

SCALE 10 FEET



20+50 REV. 20+50.12

1150

FROM STA.	20+50	TO STA.	20+50
PROJECT NAME	HALIFAX MAIN2		
NO.	BRZ1442(18)	PLOTTED	04/24/91
SURVEYED BY	FELTON	01/91	0340
SHEET 33	OF 33 SHEETS		

SCALE 10 FEET