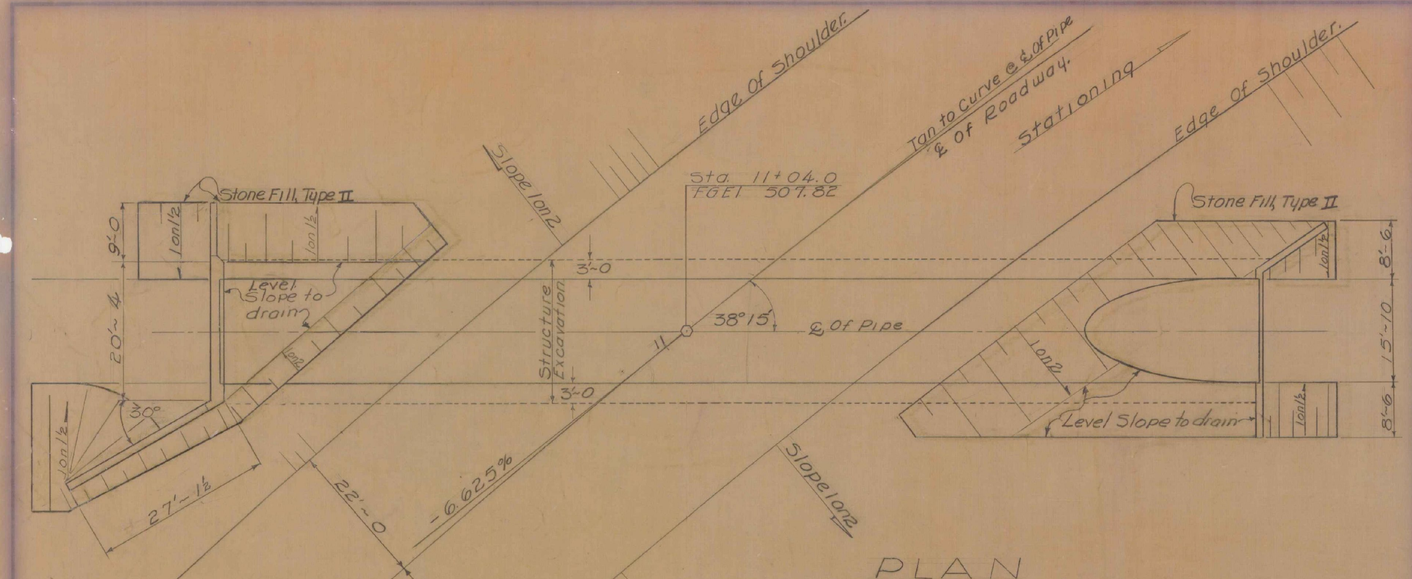
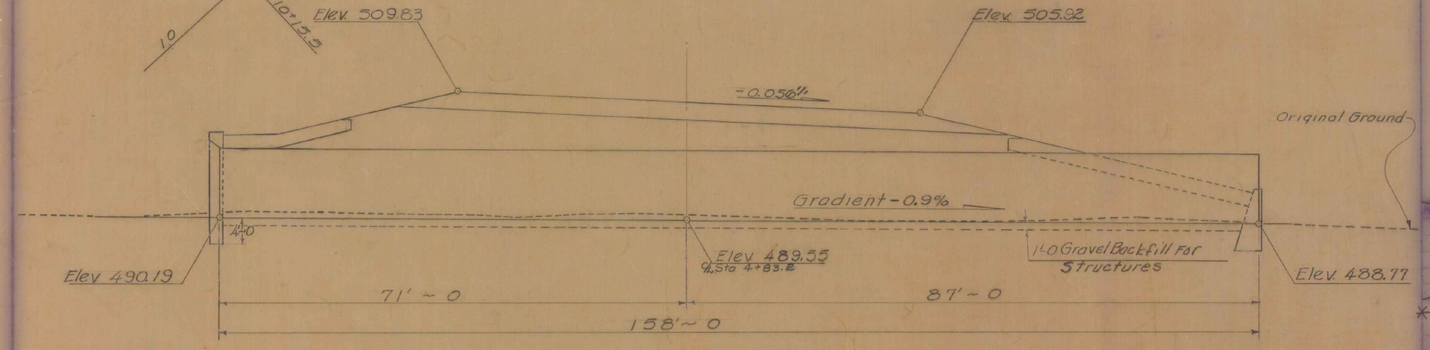


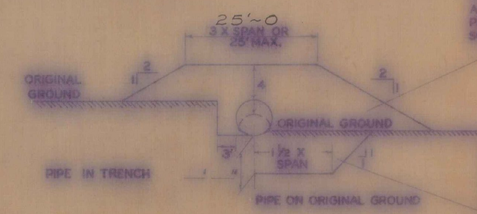
PLAN
Scale: 1"=10'-0



ELEVATION ALONG ℄ OF PIPE
Scale: 1"=10'-0

NOTES

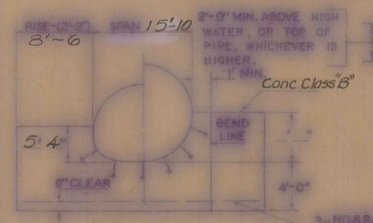
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED MAR. 1976 AND THE A.A.S.H.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1973 AND ITS LATEST REVISIONS. DESIGN IS FOR H8-20 LIVE LOADING.
2. UNLESS OTHERWISE INDICATED FOUR (4) BOLTS PER LINEAR FOOT FOR STEEL PLATES AND FIVE AND ONE THIRD ($5\frac{1}{3}$) BOLTS FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH GALVANIZED ASTM A-325 BOLTS (AASHO M164).
3. WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 4 FEET OF COMPACTED MATERIAL.
4. ALUMINUM PIPE THAT IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH ZINC CHROMATE, OR BITUMINOUS, OR ASPHALTIC PAINT.
5. PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
6. Removal Of Existing Superstructure. To be paid for under Item 202.20
7. Remove Abutments Four (4) feet below Finish Grade as Solid Rock Excavation; Item 203.16



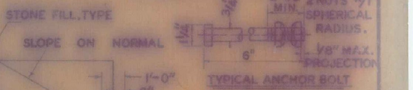
GRANULAR BORROW
ALL MATERIAL WITHIN 4' OF THE PIPE SHALL PASS A 3" SQUARE SCREEN OPENING.

EXCAVATE POOR MATERIAL TO DEPTH SHOWN OR AS DIRECTED BY THE ENGINEER AND REPLACE WITH GRANULAR BACKFILL FOR STRUCTURES OR SAND BORROW. IF LEDGE OR OTHER UNYIELDING MATERIAL IS ENCOUNTERED IT SHALL BE REMOVED TO A DEPTH OF TWELVE (12) INCHES BELOW BOTTOM OF PIPE AND REPLACED WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER.

TYPICAL BACKFILL SECTION



OUTLET CRADLE HEADWALL DETAILS



TYPICAL ANCHOR BOLT

BOLT MATERIAL SHALL CONFORM TO ASTM-A307 & NUTS TO ASTM-A563.

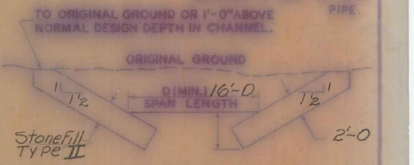
INVERT INLET 490.19
OUTLET 488.77

ONE ROW 3/4"ø GALVANIZED BOLTS, SPACED IN ALTERNATE CIRCUMFERENTIAL SEAM HOLES (19.2" C/C) AND TO BE FURNISHED WITH AND INCLUDED IN COST OF PLATE PIPE.

REINFORCING STEEL SCHEDULE

SQ.FEET	SIZE	LENGTH	MARK	TYPE

* Roadway Quantity

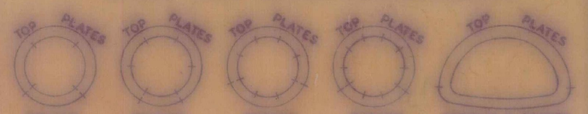


TYPICAL CHANNEL SECTION

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
202.20	Removal Of Existing Superstructure	Ea	1	1
*203.16	Solid Rock Excavation	C.Y.	10	0
203.21	Unclassified Channel Excavation	C.Y.	280	336
*203.32	Granular Borrow	C.Y.	1790	1790
204.25	Structure Excavation	C.Y.	590	383
204.30	Gravel Backfill for Structures	C.Y.	130	124
501.25	Concrete Class "B"	C.Y.	94	3550
507.15	Reinforcing Steel	Lbs.	5610	5610
511.15	15'-10x10'-8 x 158' CGMP.P.A. (t=0.168" Wt=68,256#)	L.S.	1	1
613.11	Stone Fill, Type II	C.Y.	190	219
306.10	OVERHAUL (5.2 MILES)	CY/MI	1196	0

STEEL PIPE PLATE ARRANGEMENTS



DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

PIPE DATA:	STEEL	ALUMINUM
CORRUGATIONS	6 x 2	
DIAMETER OF PIPE	15'-10x10'-8	
PIPE ARCH		
PLATE THICKNESS	0.168" (COATED) THICKNESS	
BOLT SIZE	3/4	
WT. LIN. FT.	432#	
TOTAL WEIGHT	68,256#	

HYDRAULIC DATA		
DRAINAGE AREA	5.1	SQ. MI.
DESIGN FREQUENCY-Q	50	
DESIGN FLOW & HEADW. DEPTH	1000 CFS	8.6 FT.
CHECK DISCHARGE & HEADW. DEPTH	1200 CFS	9.8 FT.
TAILWATER DEPTH AT DESIGN FLOW	5.2	FT.
OUTLET VELOCITY AT DESIGN FLOW	12.9	FT/SEC
WATERWAY AREA	133	SQ. FT.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF DUXBURY	Bridge No. 193
HIGHWAY NO. VT. 100	Top Sta. 293+94
	Surv. Sta. 11+04

VT100 OVER CROSSETT BROOK
15'-10x10'-8 C.G.M.P.P.A. DETAILS

Designed by G.E. Hopkins	Drawn by G.E. Hopkins
Checked by PEABODY date 1-10-76	Bridge Design Supervisor J. Wood date
PROJECT DUXBURY-MORETOWN	PROJECT NO. RS-0213(3)
Bridge Sheet No. BR100	Sheet 25 of 120