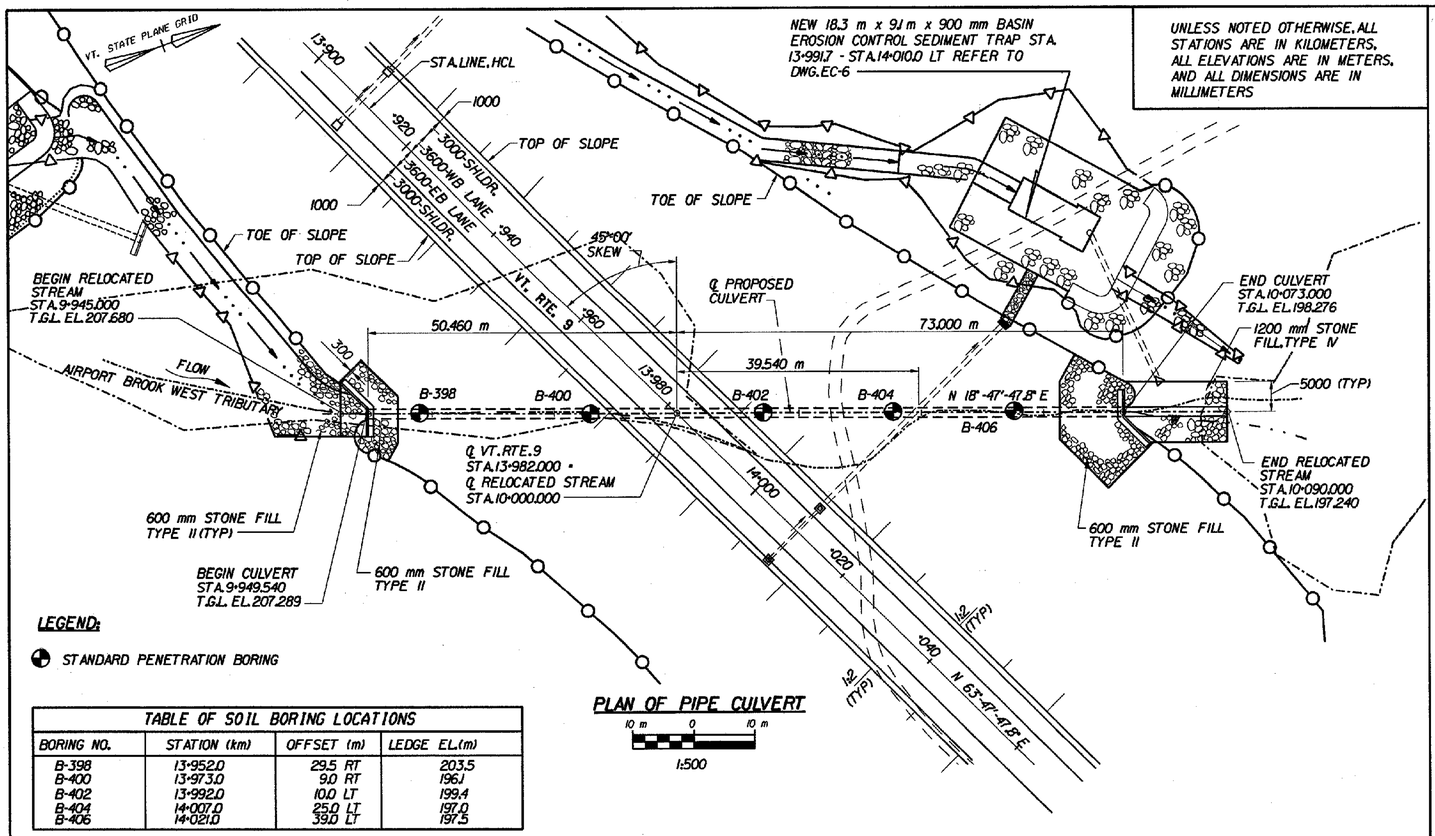


LEGEND:

● STANDARD PENETRATION BORING

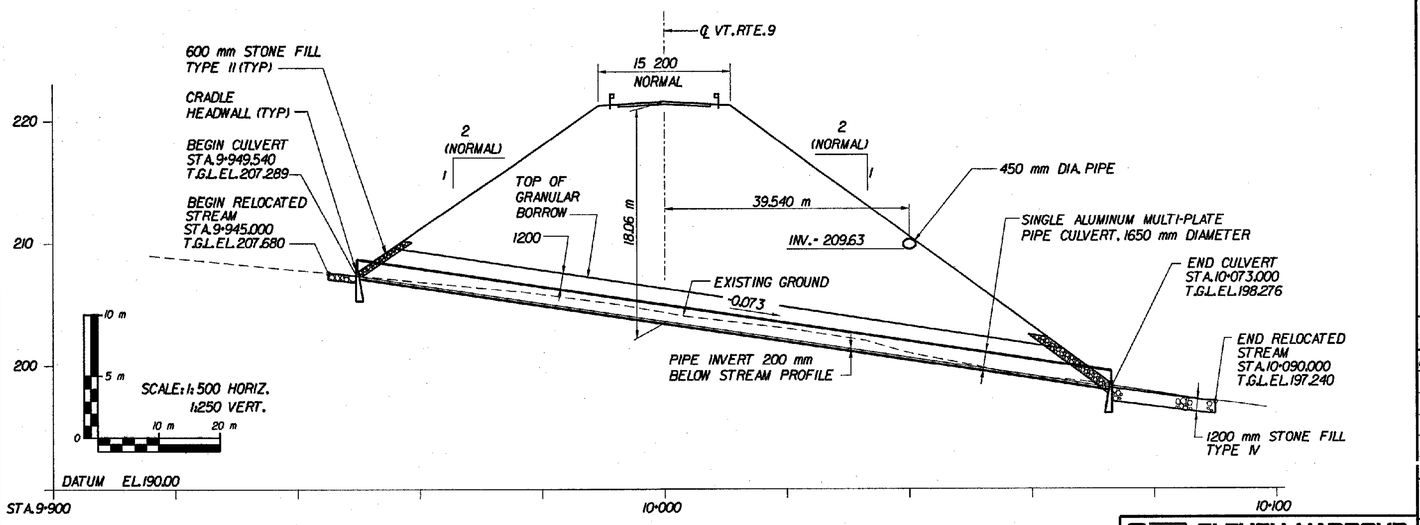
PLAN OF PIPE CULVERT

10 m 0 10 m

1:500

UNLESS NOTED OTHERWISE, ALL STATIONS ARE IN KILOMETERS, ALL ELEVATIONS ARE IN METERS, AND ALL DIMENSIONS ARE IN MILLIMETERS

TABLE OF SOIL BORING LOCATIONS			
BORING NO.	STATION (km)	OFFSET (m)	LEDGE EL.(m)
B-398	13+952.0	29.5 RT	203.5
B-400	13+973.0	9.0 RT	196.1
B-402	13+992.0	10.0 LT	199.4
B-404	14+007.0	25.0 LT	197.0
B-406	14+021.0	39.0 LT	197.5



LONGITUDINAL PIPE CULVERT SECTION

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
3 WINNERS CIRCLE ALBANY, NEW YORK 12205

HYDROLOGIC DATA

DRAINAGE AREA 64.8 ha DESIGN FLOW Q 50

DESIGN OUTLET VELOCITY @ Q50 = 4.4 m/sec.

DESIGN TAILWATER DEPTH @ Q50 = 0.68 m ELEVATION 198.83

ORDINARY HIGH WATER DEPTH = 100 mm

Q 10	FLOW = 2.44 m^3/SEC.	HEADWATER ELEVATION = 208.48
Q 25	FLOW = 2.98 m^3/SEC.	HEADWATER ELEVATION = 208.63
Q 50	FLOW = 3.40 m^3/SEC.	HEADWATER ELEVATION = 208.74
Q 100	FLOW = 3.83 m^3/SEC.	HEADWATER ELEVATION = 208.86

COMMENTS

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

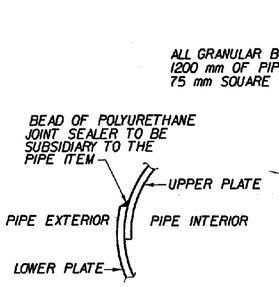
ALUMINUM

CORRUGATIONS	225 mm x 62.5 mm
SIZE OF PIPE	1650 mm
WATERWAY AREA	2.0 m^2
PLATE THICKNESS (COATED)	5.7 mm
BOLT SIZE	M20 AASHTO M219M
MASS PER LINEAR METER	336.3 kg/m
TOTAL MASS	41.630.1 kg

FILE NAME = u:\3573\15\br-300\prpsele1.plt
DATE/TIME = 10/1/2001
USER = 664

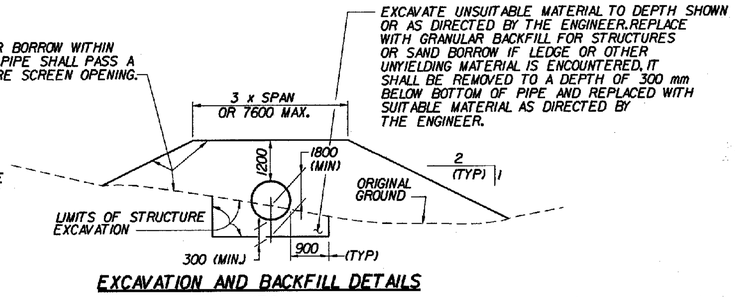
LADOT **Metric**

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001 & THE LATEST AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. DESIGN IS FOR MS-22.5 LIVE LOAD.
2. UNLESS OTHERWISE INDICATED, 16 BOLTS PER 900 mm ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH BOLTS MEETING AASHTO M219M (GALVANIZED AFTER FABRICATION).
3. IN LONGITUDINAL JOINTS LOCATED WITHIN 20 DEGREES OF HORIZONTAL ON PIPES, THE BOLT NEAREST EDGE OF LAPPED JOINTS, AS VIEWED FROM INSIDE THE PIPE, SHALL BE PLACED IN THE VALLEY OF THE CORRUGATIONS.
4. PIPES SHALL BE FACTORY ELONGATED 5%.
5. THE ENDS OF THE PIPE SHALL NOT BE CUT.
6. THE CONTRACTOR SHALL INCLUDE AT THE OUTLET END A 3000 mm PIECE OF 150 mm UNDERDRAIN EACH SIDE OF THE CULVERT AND ON SAME GRADIENT AS THE CULVERT CONFORMING TO SUBSECTIONS 711.01. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CULVERT PIPE.
7. WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE PIPE, THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 900 mm OF COMPACTED MATERIAL.



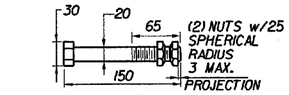
LAP DETAIL

N.T.S.



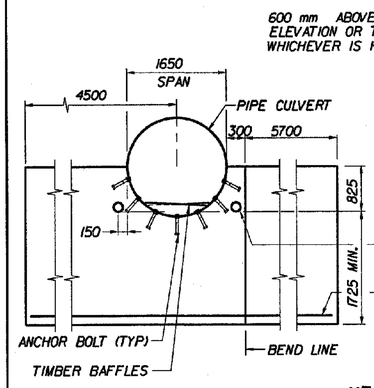
EXCAVATION AND BACKFILL DETAILS

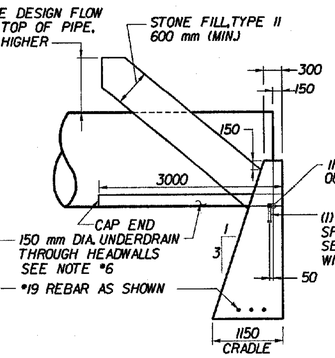
N.T.S.



ANCHOR BOLT DETAIL

N.T.S.



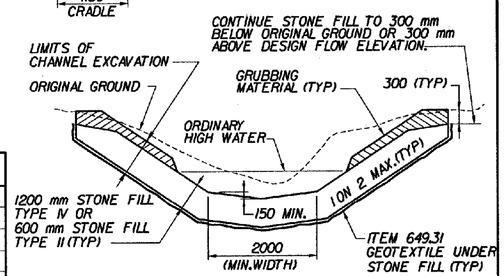


HEADWALL DETAILS

1m 0 1m

1:50

HEADWALL



TYPICAL CHANNEL SECTION

REINFORCING STEEL SCHEDULE

NO. PCS.	SIZE	LENGTH	MARK	TYPE							
6	19	11 175	CH1901	STR	FIELD BEND AS REQUIRED						

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.25	CHANNEL EXCAVATION OF EARTH	m^3	280	275.6
204.25	STRUCTURE EXCAVATION	m^3	480	657
204.30	GRANULAR BACKFILL FOR STRUCTURES	m^3	350	404.5
501.25	CONCRETE CLASS B	m^3	35	42.42
507.15	REINFORCING STEEL	kg	150	150
511.25	CORRUGATED ALUMINUM ALLOY PLATE PIPE (5.7mm)	EA	1	1
613.11	STONE FILL TYPE II	m^3	115	135
613.13	STONE FILL TYPE IV	m^3	204	196.1
649.31	GEOTEXTILE UNDER STONE FILL	m^2	354	578
651.40	GRUBBING MATERIAL	m^2	210	0
	*FINAL QUANTITY			
	JFW 2/2/06			

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BENNINGTON	Bridge No. BR300
Highway No. VT. RTE. 9	Log Sta.
	Surv. Sta. 13+982

PROPOSED VT. RTE. 9 OVER AIRPORT BROOK WEST TRIBUTARY

PRELIMINARY INFORMATION

Designed By M. GOGUEN	Drawn By B. WEATHERBY
Checked By P. PERKINS Date 11/01	Bridge Design Supervisor M. OLSTAD Date 11/01
PROJECT BENNINGTON-HOOSICK	PROJECT NO. D.P.I. 0146 (1)
I.G.C. Info.	
Bridge Sheet No. BR300	Sheet 186 of 473