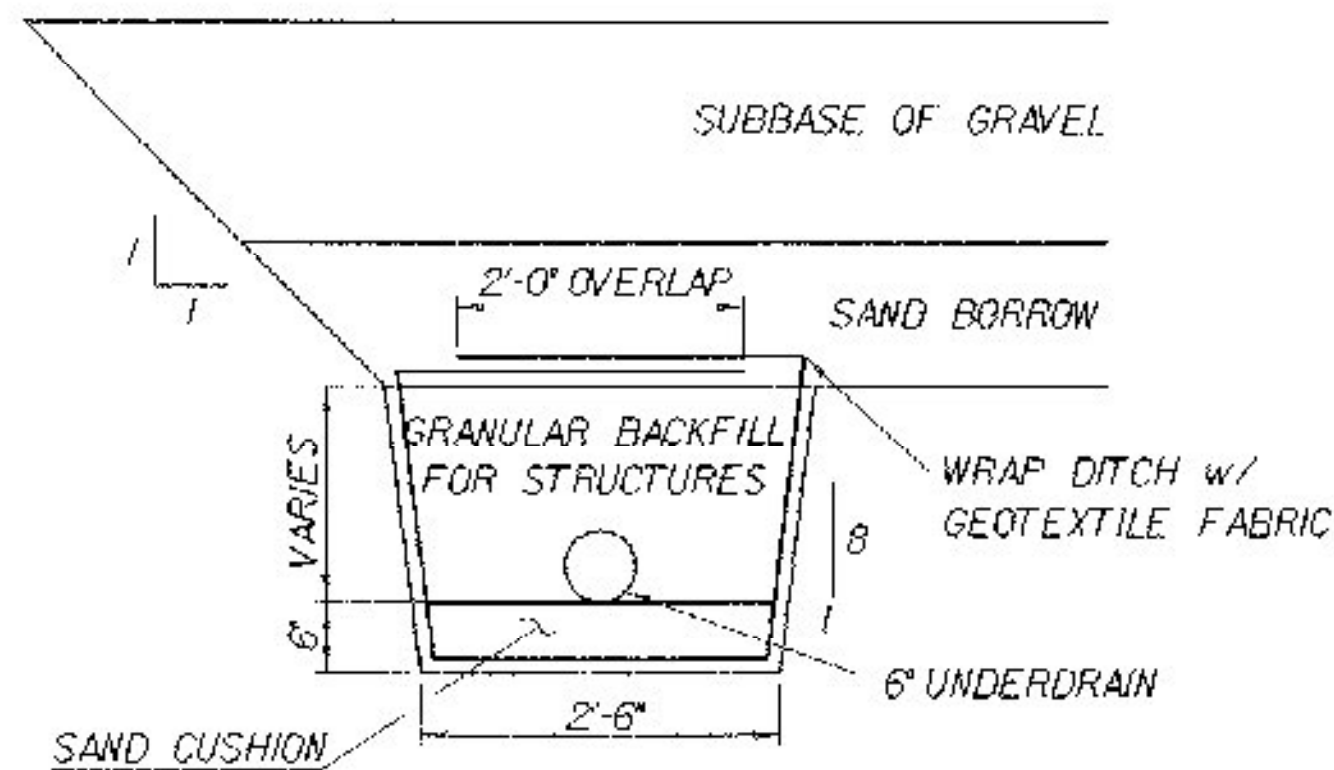


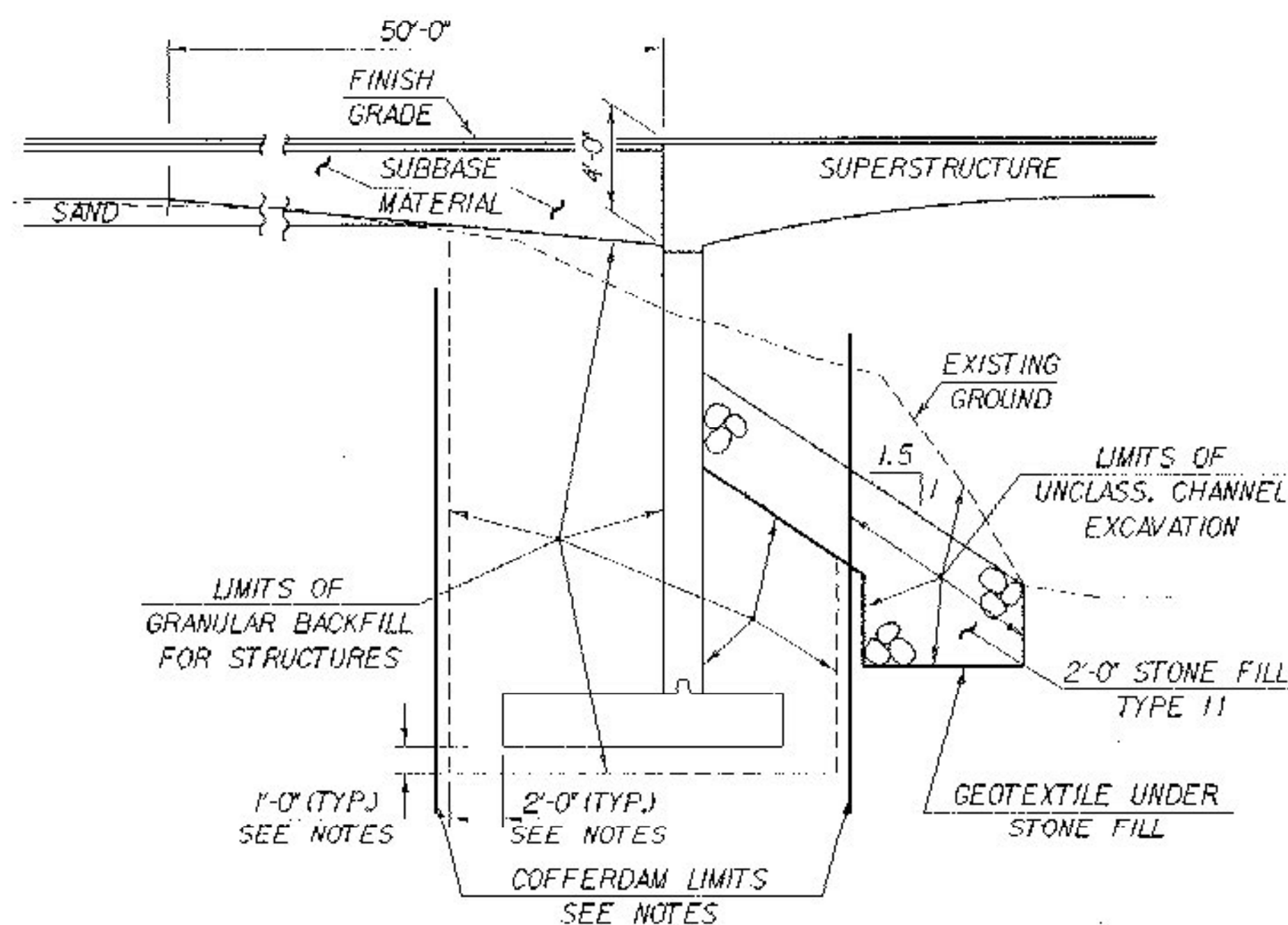
WINGWALL EARTHWORK TYPICAL
(NOT TO SCALE)



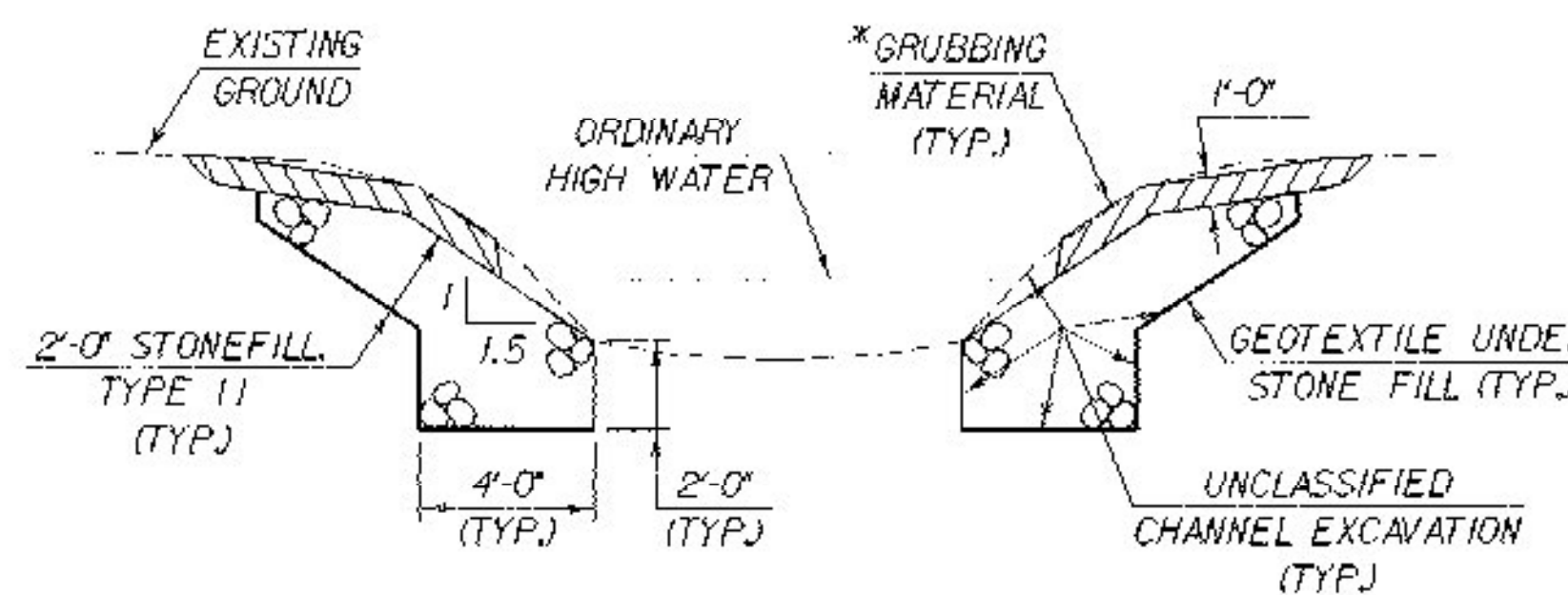
UNDERDRAIN TRENCH DETAIL
SCALE: 3/4" = 1'-0"

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			34 FT		
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM			27.9 FT		
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)	202 SQ FT	VERTICAL CLEARANCE ABOVE STREAMBED	8 FT		
5. WATER SURFACE ELEVATION @ 0.2, 33		WATER SURFACE ELEVATION @ 0			
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?					
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL	UNKNOWN				
9. DISPOSITION OF STRUCTURE			REMOVE		

NEW STRUCTURE

STRUCTURE GEOMETRY:	SINGLE SPAN CONCRETE SLAB	OVERALL LENGTH	34 FT
1. STRUCTURE TYPE			
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

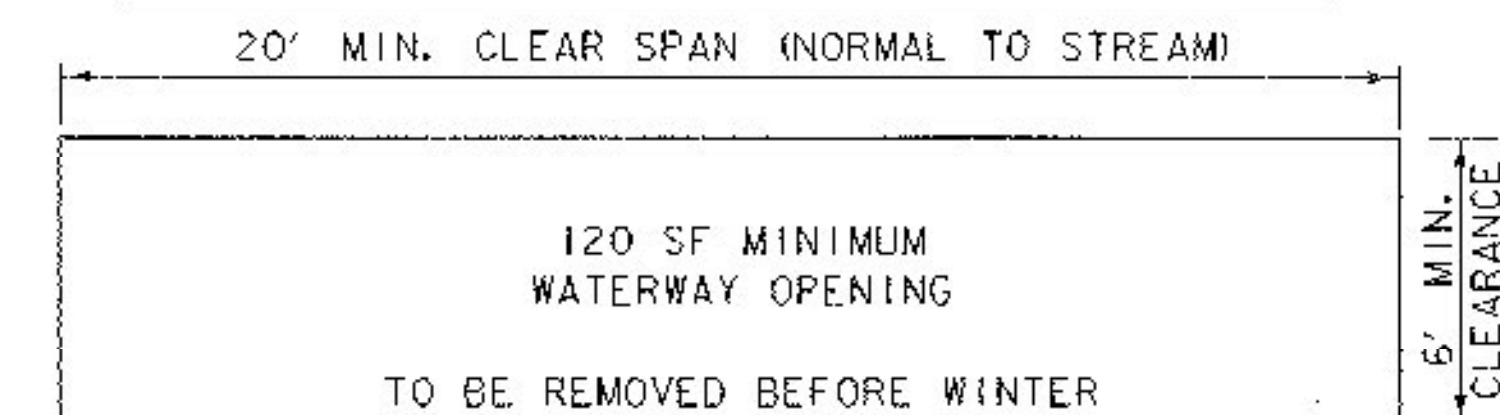
HYDRAULIC DATA:					
1. Q 2.33	350 CFS	WATER ELEVATION	148.8	VELOCITY	
0 10	700 CFS	WATER ELEVATION	149.7	VELOCITY	
0 25	1025 CFS	WATER ELEVATION	150.5	VELOCITY	8.7 FPS
0 50	1250 CFS	WATER ELEVATION	151.1	VELOCITY	
0 100	1500 CFS	WATER ELEVATION	151.7	VELOCITY	
2. DRAINAGE AREA	5.0 SQ MI	CHARACTER OF 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? IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR?					
8. VERTICAL CLEARANCE ABOVE PROVIDED BY RELIEF	0'00" 10'				
9. ALLOWABLE WATER SURFACE ELEVATION	152.7	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
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-20-44				
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL	# 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	20,000 PSI
6. ALLOWABLE STRESS FOR CONCRETE CLASS A	f _c HPC				
	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	
		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.

LOADING LEVELS (LOAD FACTOR)	LOAD FACTOR LOAD RATING (TONS)					
	H	HS	SS2	6 AXLE	SA STR.	SA SEMI
INVENTORY A-2, 17	39	59				
POSTED A-1, 55	54	83	107		63	66
OPERATING A-1, 30		99	127	119	75	78

STRENGTH REF: $W_{18} \times 1.3 M_{18}$ $A \times W_{18}$					
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: 50 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. **891092Structures\1092pl1.dgn** **61092pl1**
Bridge Sheet No. Sheet **2** of **33**