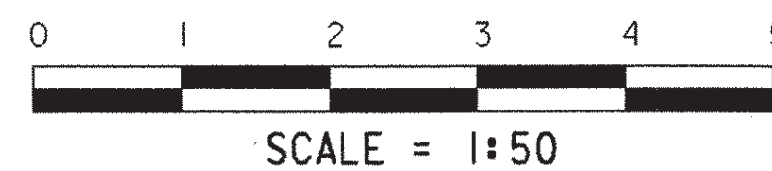
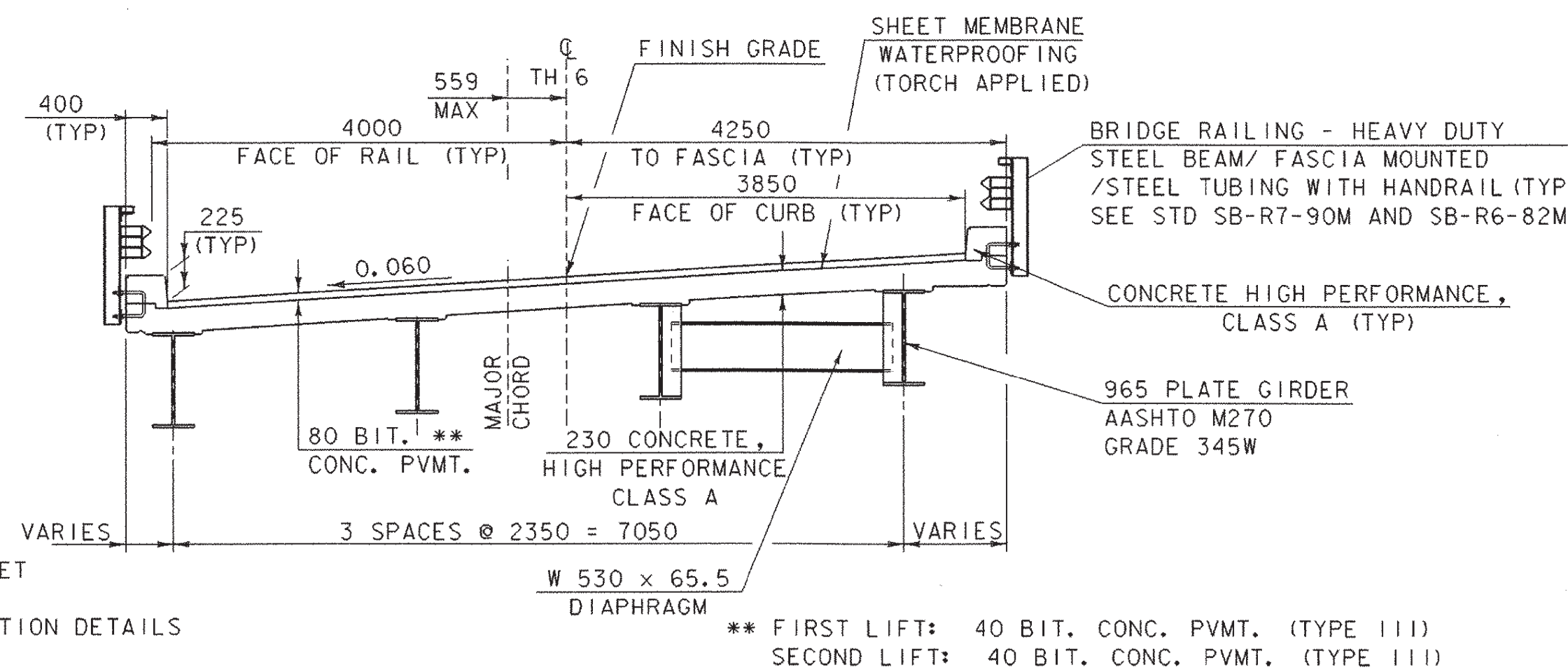


ROADWAY TYPICAL

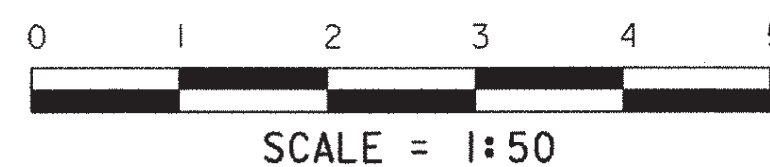


INDEX OF SHEETS

1. TITLE SHEET
2. PRELIMINARY INFORMATION SHEET
- 3-4. QUANTITY SHEETS
5. RIGHT-OF-WAY DETAIL SHEET
- 6-7. RIGHT-OF-WAY PLAN SHEETS
8. TIE SHEET
9. LAYOUT SHEET 1
10. LAYOUT SHEET 2
- 11-12. MAINLINE PROFILE
13. TRAFFIC DETOUR SHEET #1
14. TRAFFIC DETOUR SHEET #2
15. TRAFFIC DETOUR SIGNING SHEET
16. PLAN AND ELEVATION SHEET
17. EROSION CONTROL SHEET 1
18. EROSION CONTROL SHEET 2
19. GENERAL NOTES
20. DECK REINFORCING PLAN
21. FRAMING PLAN
22. BEARING DETAILS
23. CURB DETAILS
24. APPROACH SLAB DETAILS
25. ABUTMENT NUMBER 1
26. WINGWALL 1 & 2 DETAILS
27. ABUTMENT NUMBER 2
28. WINGWALL 3 & 4 DETAILS
29. REINFORCING STEEL SCHEDULE
30. PRECAST BOX DETAILS
31. BOX PLAN AND ELEVATION SHEET
32. HEADWALL NUMBER 1
33. HEADWALL NUMBER 2
34. PAVEMENT MARKING AND SIGN SHEET
35. BANKING DIAGRAM
36. SUBBASE TRANSITION AND EXCAVATION DETAILS
- 37-43. MAINLINE CROSS SECTIONS
- 44-48. CHANNEL LINE CROSS SECTIONS
- 49-53. BOX CULVERT CROSS SECTIONS

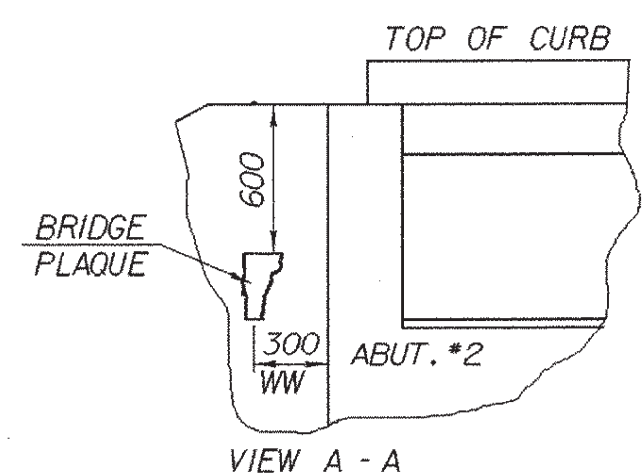


BRIDGE TYPICAL



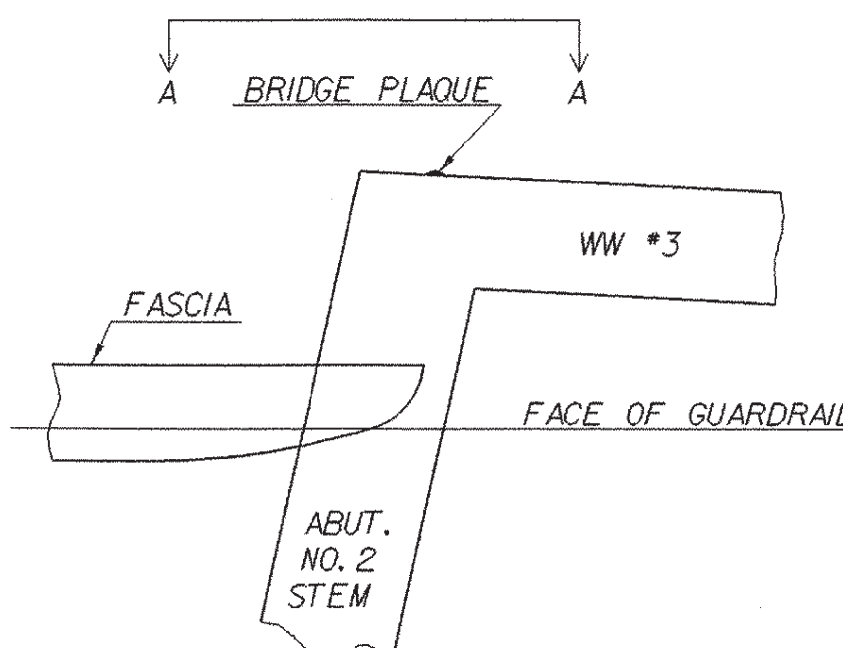
LIST OF STANDARDS

- | | |
|-----------|----------|
| A-61M | 6-13-97 |
| B-5M | 1-03-00 |
| D-2M | 6-13-97 |
| E-100aM | 2-02-98 |
| E-100M | 6-13-97 |
| E-102aM | 6-13-97 |
| E-102M | 6-13-97 |
| E-107aM | 6-13-97 |
| E-107M | 6-13-97 |
| E-193M | 6-13-97 |
| G-1dM | 1-03-00 |
| G-1M | 1-03-00 |
| G-19M | 10-21-98 |
| SB-R6-82M | 7-10-97 |
| SB-R7-90M | 7-10-97 |
| T-1M | 6-13-97 |
| T-2M | 6-13-97 |



LOCATE BRIDGE PLAQUE

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #2 ON THE LEFT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER. (DETAILS ABOVE ARE NOT MEANT TO BE SITE SPECIFIC.)



PLAN

HYDROLOGIC DATA

DRAINAGE AREA= 453 sq. km
 CHARACTER OF TERRAIN: ROLLING, AGRICULTURAL AND MIXED COVER
 CHARACTER & TYPE OF STREAM: MODERATE RELIEF, NARROW AND CONFINED
 CHANNEL IN IMMEDIATE VICINITY OF BRIDGE
 NATURE OF STREAMBED: AT BRIDGE, LEDGE ON BOTH BANKS AND CHANNEL BOTTOM

02.33= 153 cms	050= 252 cms
010= 202 cms	0100= 269 cms
025= 232 cms	0500= 325 cms

DATE OF FLOOD OF RECORD: NOVEMBER 1927
 WATER SURFACE ELEV.: 92.6 m ESTIMATED DISCHARGE: UNKNOWN
 NATURAL STREAM VELOCITY @ Q25 = 4.83 m/s
 ICE CONDITIONS: MODERATE DEBRIS: MODERATE
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? NO
 IS ORDINARY RISE RAPID? NO
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
 IF YES, DESCRIBE.

WATERSHED STORAGE 1% HEADWATERS UNIFORM THROUGHOUT WATERSHED X IMMEDIATELY ABOVE SITE

PROPOSED STRUCTURE

STRUCTURE TYPE: SINGLE SPAN, PLATE GIRDER
 CLEAR SPAN (NORMAL TO STREAM): 24 m (17 m EFFECTIVE)
 VERTICAL CLEARANCE ABOVE STREAMBED: 5.8 m
 WATERWAY OF FULL OPENING: 90 sq. m

WATER SURFACE ELEV. @ Q2.33= 91.20m*	VELOCITY= 4.44 m/s*
010= 91.81m*	" = 4.84 m/s*
025= 92.13m*	" = 5.07 m/s*
050= 92.40m*	" = 5.20 m/s*
0100= 92.62m*	" = 5.31 m/s*

* WITHOUT ROADWAY OVERFLOW
 IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q10 (EST.)
 RELIEF ELEVATION: 90.8 m DISCHARGE OVER ROAD @ Q100: UNKNOWN

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 92.6 m
 VERTICAL CLEARANCE @ Q25 = 0.93 m

SCOUR: NONE ANTICIPATED DUE TO LEDGE
 REQUIRED CHANNEL PROTECTION: NONE

EXISTING STRUCTURE

STRUCTURE TYPE: SINGLE SPAN, STEEL BEAM - CONC. DECK YEAR BUILT: UNKNOWN
 CLEAR SPAN (NORMAL TO STREAM): 24 m (17 m EFFECTIVE)
 VERTICAL CLEARANCE ABOVE STREAMBED: 5.8 m
 WATERWAY OF FULL OPENING: 90 sq. m +/-
 DISPOSITION OF STRUCTURE: REMOVE SUPERSTRUCTURE & ABUTMENT NO. 2 REHABILITATE ABUTMENT #1
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: LEDGE UNDER EACH ABUTMENT

WATER SURFACE ELEV. @ Q2.33= 91.16m*	VELOCITY= 4.44 m/s*
010= 91.79m*	" = 4.84 m/s*
025= 92.11m*	" = 5.07 m/s*
050= 92.39m*	" = 5.20 m/s*
0100= 92.61m*	" = 5.31 m/s*

* WITHOUT ROADWAY OVERFLOW
 LONG TERM STREAM BED CHANGES: NONE

IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q10 (EST.)
 RELIEF ELEVATION: 90.8 m DISCHARGE OVER ROAD @ Q100: UNKNOWN

PERMIT INFORMATION

AVERAGE DAILY FLOW: 10.3 cms
 ORDINARY LOW WATER: 4.5 cms DEPTH: 0.9 m
 ORDINARY HIGH WATER: 65.6 cms DEPTH: 3.2 m

ADDITIONAL COMMENTS

SURVEY DATA IS INADEQUATE TO ACCURATELY MODEL OVERFLOW ON THE WESTERN APPROACH. WATER SURFACE ELEVATIONS AND VELOCITIES REPRESENT THE MOST CONSERVATIVE, NO OVERFLOW CASE. THE Q10 OVERFLOW FREQUENCY VALUE IS AN ESTIMATE ONLY, ASSUMING THERE IS SOME OVERFLOW. REAL WATER SURFACE ELEVATIONS WILL BE LOWER. THE HYDRAULIC CONDITIONS OF THE NEW BRIDGE WILL BE NEARLY IDENTICAL TO THOSE OF THE EXISTING.

LOAD FACTOR LOAD RATING (METRIC TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	M	MS	3S2	6 AXLE	3A.STR.	4A.STR.	5A.SEMI
INVENTORY A=2.17; B=1.00	36	49					
POSTED A=1.55; B=1.40	51	69	82		63	64	75
OPERATING A=1.30; B=1.67		82	97	116	75	77	

STRENGTH RF = $\frac{0.85 M_N - 1.3 M_{DL}}{A \times M_{LL+1}}$ SERVICEABILITY RF = $\frac{0.95 F_y S_{LL+1} - M_{DL} \frac{S_{LL+1}}{S_{DL}} - M_{SDL} \frac{S_{LL+1}}{S_{SDL}}}{1.67 M_{LL+1}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	% ADTT
1997	490	70	55	6	5
2017	670	95	55	7	7

20 year ESAL for flexible pavement from 1997 to 2017: 241,000
 40 year ESAL for flexible pavement from 2017 to 2037: 643,000
 Design speed: 50km/h

DESIGN CRITERIA:

1. DESIGN LIVE LOAD AASHTO MS 22.5
2. DESIGN SPAN 25 m @ BRG TO Q BRG
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE 480 kPa (ASSUMED)
4. ALLOWABLE LOAD FOR PILING N/A TYPE ESTIMATED LENGTH N/A
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270 GRADE 345W TENSION
6. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 420 TENSION
7. ALLOWABLE STRESS FOR CONCRETE HIGH PERFORMANCE CLASS A f'_c 30 MPa HIGH PERFORMANCE CLASS B f'_c 25 MPa

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? NO
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A

MATERIAL ITEM	TOLERANCE
PAVEMENT	±5 mm TOTAL THICKNESS
AGGREGATE SURFACE COURSE	±10 mm
SUBBASE	±30 mm
SAND BORROW	±30 mm
GRANULAR BORROW	±30 mm

SHEET NAME: PRELIMINARY INFORMATION SHEET

PROJECT NAME: FAIR HAVEN-HAMPTON HIGHWAY NO.: TH 6
 PROJECT NUMBER: BRO I443(32) BRIDGE NO.: 6
 OVER: POULTNEY RIVER

FILE NAME: /str1/93j021/sj021pi.dgn PLOT DATE: 28-JAN-2003
 PROJECT MANAGER: G.S. ROGERS DRAWN BY: STRI
 DESIGNED BY: C. MEUNIER IPARM NAME: sj021pi.1
 BRIDGE SHEET NUMBER: SHEET 2 OF 53