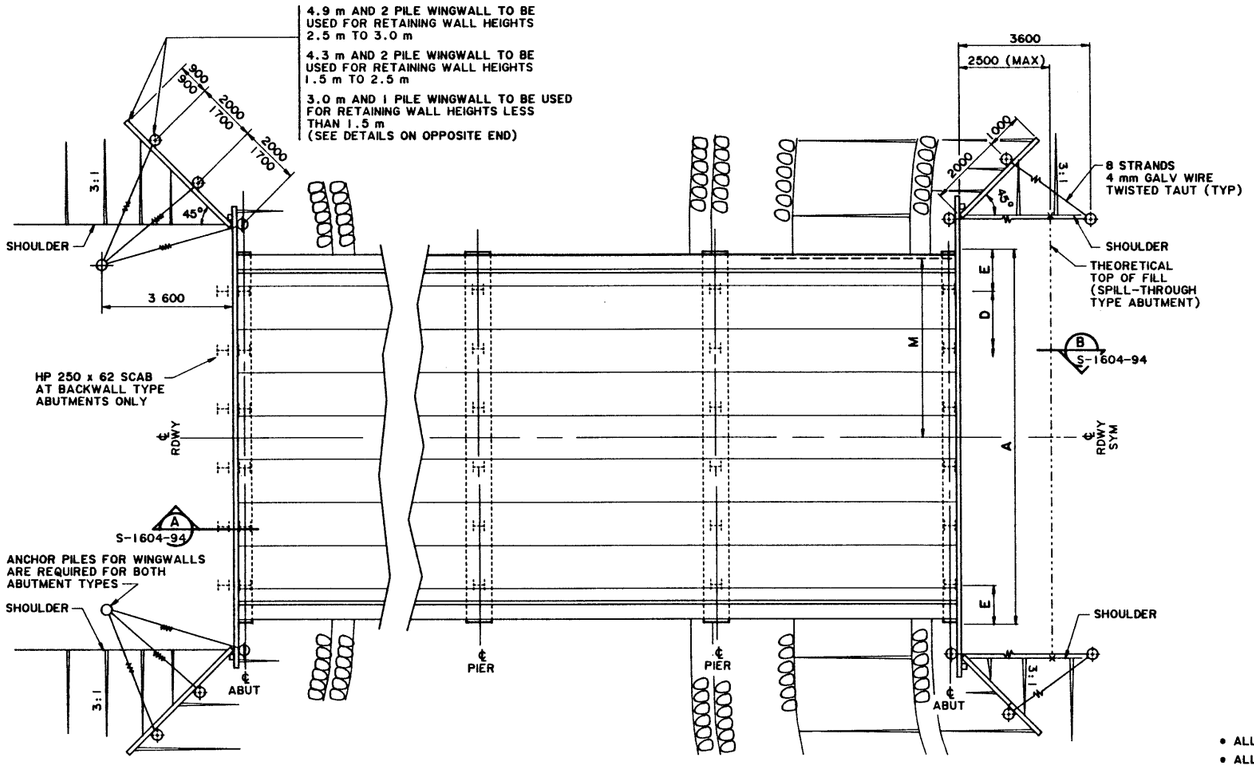
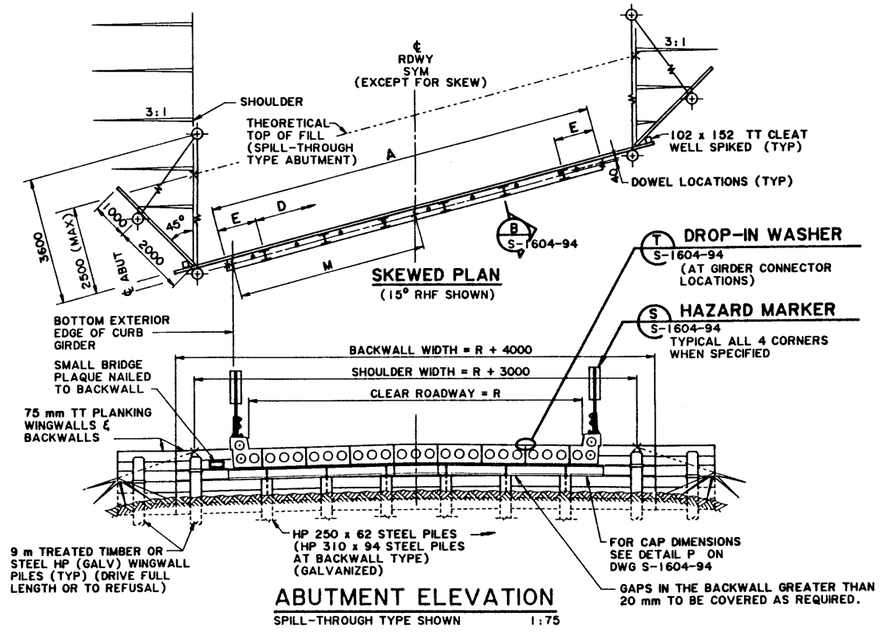


BRIDGE PLAN

1:75

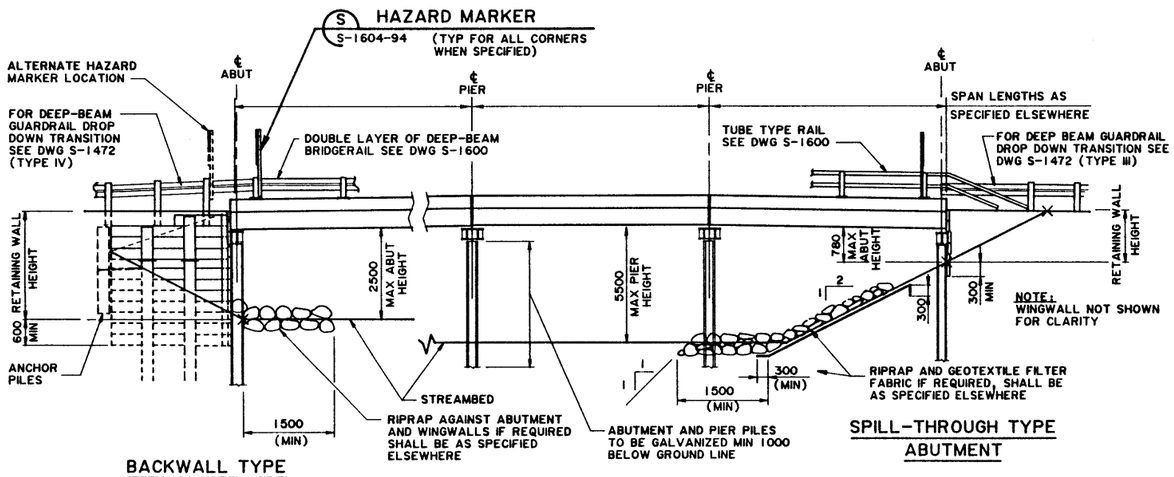


SKEWED PLAN

(15° RHF SHOWN)

ABUTMENT ELEVATION

SPILL-THROUGH TYPE SHOWN 1:75



BACKWALL TYPE ABUTMENT

SPILL-THROUGH TYPE ABUTMENT

NOTE:
BACKWALL TYPE ABUTMENTS ARE TO BE USED **ONLY** AT SINGLE SPAN, 0° SKEW BRIDGE SITES

BRIDGE ELEVATION

1:75

GENERAL NOTES

- ALL DRAWING REFERENCES REFER TO CURRENT DRAWINGS.
- ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ROADWAY ELEVATIONS SPECIFIED ELSEWHERE ARE GIVEN TO TOP OF THEORETICAL CROWN ON CENTRELINE ROADWAY.

DESIGN

- DESIGN SPECIFICATION: CAN/CSA-S6-88
- DESIGN LIVE LOAD: CS750
- ASSUMED SOIL PARAMETERS
  - UNIT WEIGHT OF SOIL = 20 kN/m³
  - FACTORED ka = 0.65
  - FACTORED kp = 1.80
- THE FOLLOWING LIMITS SHALL NOT BE EXCEEDED IN USING THIS PLAN:
  - ICE LOADING – USUAL VALUE FOR SMALL STREAMS – (0.3 m THICK ICE, SITUATION a)
  - HEIGHT OF DECK ABOVE STREAMBED – 6 m
  - SKEW – 45° MAX FOR SPILL-THROUGH TYPE ABUTMENTS
    - 0° MAX FOR BACKWALL TYPE ABUTMENTS
  - MAXIMUM ABUTMENT HEIGHT
    - BACKWALL TYPE = 2.5 m
    - SPILL THROUGH TYPE = 0.78 m

CONSTRUCTION

- 3 ALL REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR BRIDGE CONSTRUCTION SHALL BE MET.
- GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATIONS A123 OR A153 AS APPLICABLE.
- 3 STRUCTURAL STEEL SHALL CONFORM TO CSA G40.21 M-300W.
- ALL WELDING SHALL CONFORM TO CURRENT AWS SPECIFICATION D1.5.
- WHEN THE AIR TEMPERATURE IS BELOW 0°C, ALL MATERIAL TO BE WELDED SHALL BE PREHEATED TO 95°C AND SHALL BE SHELTERED FROM WIND BY A SUITABLE HOARDING APPROVED BY THE ENGINEER.
- GALVANIZED SURFACES DAMAGED BY FIELD WELDING SHALL BE THOROUGHLY CLEANED AND PAINTED WITH TWO COATS OF GALVACON.
- SCABS, PIER AND ABUTMENT CAPS SHALL BE BLAST CLEANED AND PAINTED. CLEANING SHALL BE APPROVED BY THE ENGINEER PRIOR TO PAINTING. PAINTING SHALL CONFORM TO THE REQUIREMENTS OF THE 3 ENGINEER.
- TREATED TIMBER (TT) SHALL BE HANDLED TO AVOID BRUISING, BREAKING OR PENETRATION OF OUTER FIBRES. LIFTING TOOLS SHALL BE APPLIED ONLY ON ENDS OF TT PIECES. ALL CUTS AND BRUISES SHALL BE CAREFULLY TRIMMED AND SHALL RECEIVE 2 APPLICATIONS OF CREOSOTE FOLLOWED BY A THOROUGH COVERING WITH HOT ROOFING PITCH.
- WHEN PILE TIP ELEVATIONS AND BEARING VALUES ARE SPECIFIED, PILES SHALL BE DRIVEN TO THOSE ELEVATIONS EXCEPT THAT WHEN REQUIRED BY THE ENGINEER, PILES SHALL BE DRIVEN TO THE SPECIFIED BEARING VALUES BASED ON A BEARING VALUE FORMULA. WHEN PILE TIP ELEVATIONS OR BEARING VALUES ARE NOT SPECIFIED ELSEWHERE, PILES SHALL BE DRIVEN TO THE FOLLOWING BEARING VALUES BASED ON A BEARING VALUE FORMULA:

ABUT PILES (kN)		PIER PILES (kN)			
	SPANS	12m	10m	8m	6m
210	6m	370	340	310	260
240	8m	410	380	340	
280	10m	450	410		
320	12m	480			

NOTWITHSTANDING THE ABOVE, PIER PILES SHALL PENETRATE AT LEAST 5 m BELOW STREAMBED IN IRRIGATION CANALS OR OTHER LOCATIONS WHERE FROST HEAVING CAN OCCUR, AND 3 m BELOW STREAMBED IN STREAMS. BACKWALL TYPE ABUTMENT PILES SHALL PENETRATE AT LEAST 5 m BELOW STREAMBED.

GIRDER & ERECTION DETAILS

- TYPE SC-510 GIRDER DWGS:
  6 m S-1535 TO S-1537 | 8 m S-1538 TO S-1540 | 10 m S-1541 TO S-1543 | 12 m S-1544 TO S-1546 | S-1547
- GIRDERS SHALL BE CONNECTED TOGETHER WITH 20 mmϕ A325 BOLTS (GALV), C/W DROP-IN WASHERS TO FILL GAP BETWEEN GIRDERS, TORQUED TO 400 N-m. GIRDERS SHALL NOT TOUCH EXCEPT THROUGH DROP-IN WASHERS.
- 2 CONNECTOR AND LIFTING HOOK POCKETS SHALL BE FILLED WITH AN APPROVED LTH CONCRETE PATCHING MATERIAL.
- WORK DWGS S-1603-94 AND S-1604-94 TOGETHER WITH A SITE SPECIFIC GENERAL LAYOUT OR A BRIDGE AUTHORIZATION. (4)

REV	DATE	DESCRIPTION	BY
5			
4			
3			
2	95-07-12	SPEC. REFERENCES & STEEL GRADE	ka LEA
1	94-04-27	GIRDER & ERECTION DETAILS NOTE	LEA
0	94-03-15	REDRAWN FROM S-1603 & S1604	LEA

REVISIONS

APPROVED
EXECUTIVE DIRECTOR BRIDGE ENGINEERING
DATE March 28/94

Alberta TRANSPORTATION AND UTILITIES
BRIDGE ENGINEERING BRANCH

SC PRECAST GIRDER BRIDGES WITH STEEL SUBSTRUCTURES SHEET 1

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
KST LEA	MIK	94-03-15							1 OF 2	S-1603-94

FILE BBNEIL: s1603s94.dgn UPDATE MAR 25, 1994