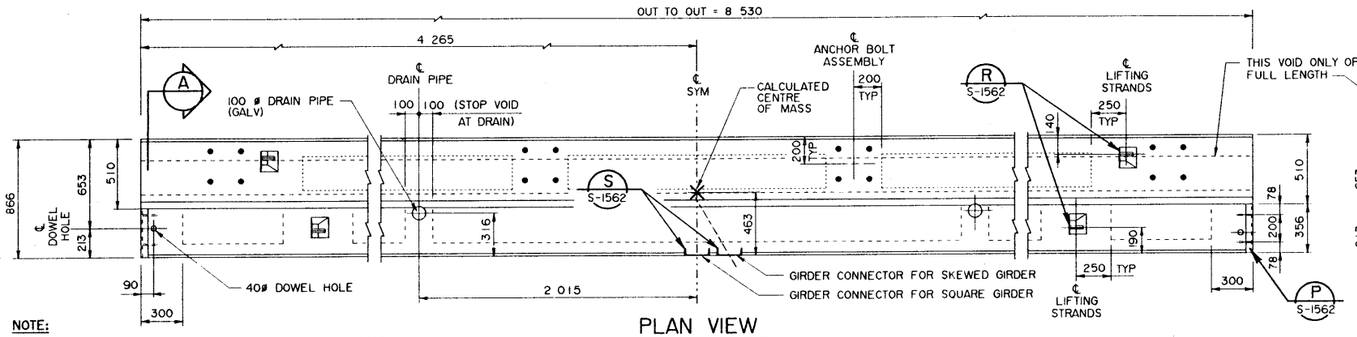
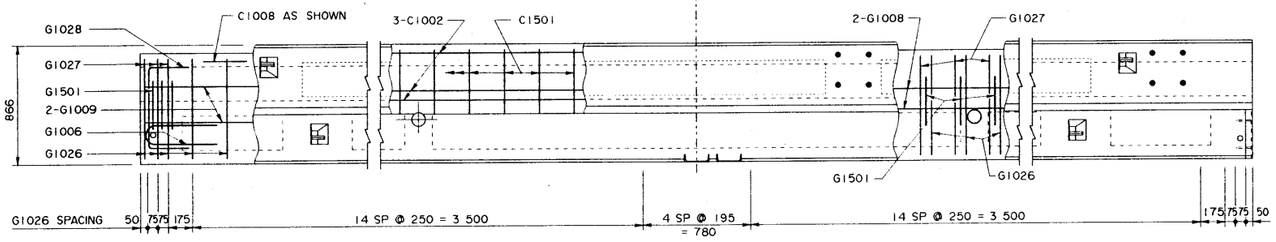
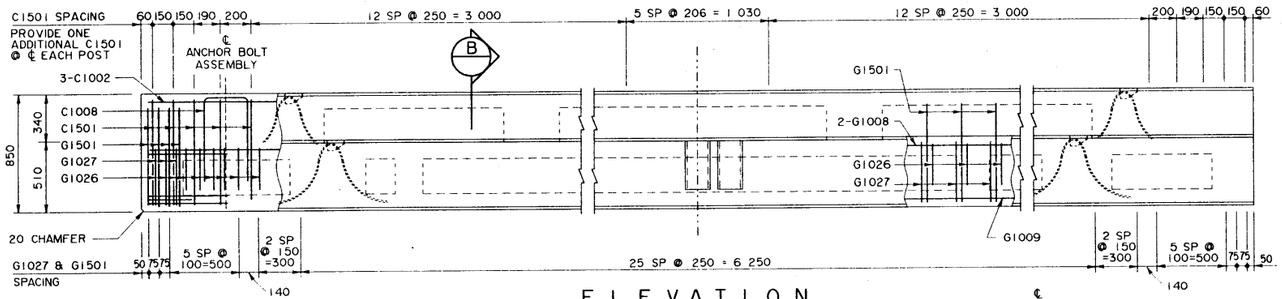


PLAN VIEW
1:20

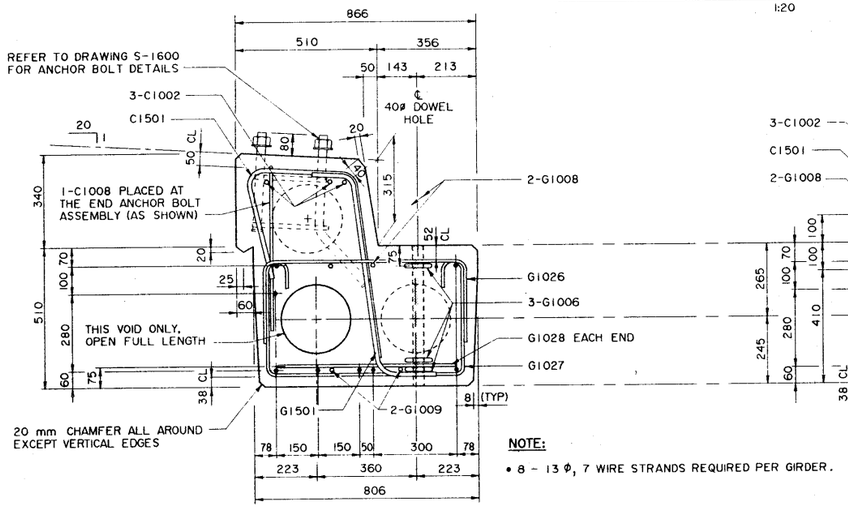
NOTE:
BEND REINFORCING BAR WHERE NECESSARY TO ACCOMMODATE CHANNEL CONNECTORS. STIRRUP SPACING TO BE MAINTAINED.



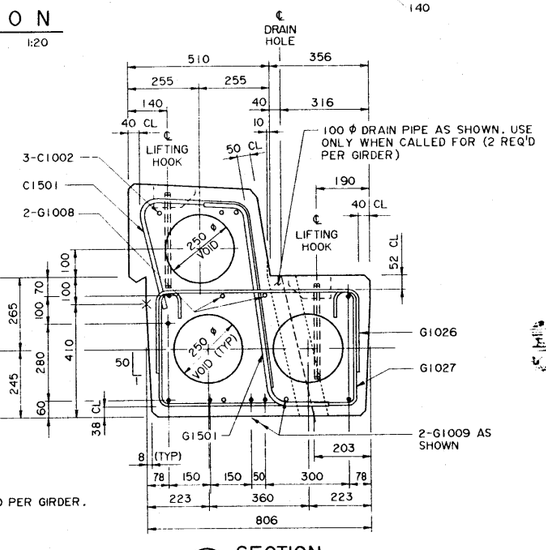
REINFORCEMENT PLAN
1:20



ELEVATION
1:20



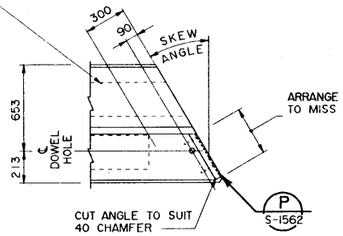
A SECTION
1:10

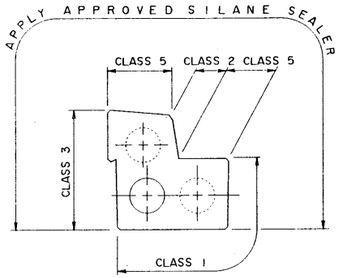


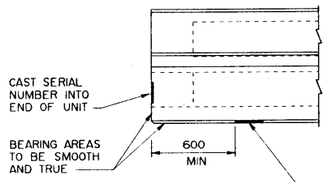
B SECTION
1:10

NOTE:
- 8 - 13 ϕ, 7 WIRE STRANDS REQUIRED PER GIRDER.

NOTE:
FOR SKEWED END REINFORCING BAR DETAILS SEE DWG S-1584.







GIRDER FINISHES
(BY FABRICATOR) 1:20

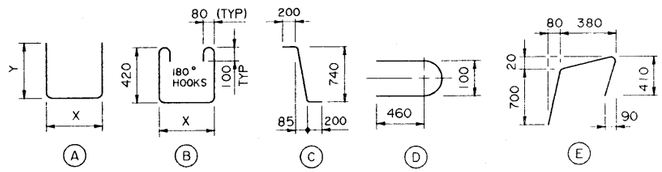
BAR LIST: FOR SQUARE GIRDER

	MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
	C1002	10	3	STR			8 430	20
	C1008	10	2	A	310	600	1 510	2
	C1501	15	42	E			1 455	48
2	G1006	10	6	D			1 080	5
	G1008	10	2	STR			8 430	13
	G1009	10	2	STR			8 330	13
	G1026	10	39	A	725	300	1 325	41
1	G1027	10	46	B	725		1 820	66
	G1028	10	2	A	600	300	1 200	2
1	G1501	15	46	C			1 140	82

TOTAL kg : 292 1

BAR TYPES

(ALL BAR DIMENSIONS ARE OUT TO OUT)



GENERAL NOTES

- ALL DRAWING REFERENCES ARE TO CURRENT DRAWINGS.

DESIGN
- CAN/CSA-S6-88 SPECIFICATIONS EXCEPT AS MODIFIED BELOW:
  - ALLOWABLE TENSION AT MIDSPAN IS 40% OF MODULUS OF RUPTURE (SEVERE EXPOSURE CONDITIONS).
  - NO TENSION ALLOWED IN DECK SURFACE.
- LOADING:
  LIVE LOAD - CAN/CSA-S6-88; CS-750 0.8 WHEEL LINES PER GIRDER
  DEAD LOAD - GIRDER = 0.86 t/m
  - WEARING SURFACE = 0.09 t/m

MATERIALS
- CONCRETE SHALL CONTAIN SILICA FUME AND BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES. UNIT WEIGHT OF SEMI-LIGHTWEIGHT CONCRETE SHALL BE 1920 kg/m³.
- 28 DAY CONCRETE STRENGTH — 35 MPa
- RELEASE STRENGTH ——— 28 MPa
- PRESTRESSING STEEL SHALL BE 13 ϕ, 7 WIRE LOW RELAXATION STRAND (fpu = 1860 MPa).
- REINFORCING STEEL SHALL BE GRADE 400W (YIELD STRENGTH OF GRADE 300 USED IN DESIGN TO ALLOW TACK WELDING OF SHEAR REINFORCEMENT).

FABRICATION
- GIRDERS SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE BRIDGE MATERIALS SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED CONCRETE BRIDGE UNITS (SPEC B190).
- FORCE IN PRESTRESSING STEEL:
  INITIAL TENSIONING LOAD = 129 kN/STRAND
  DESIGN LOAD AFTER LOSSES = 113 kN/STRAND
- CURB SHALL BE CAST MONOLITHICALLY WITH GIRDER.
- ANCHOR BOLT ASSEMBLIES SHALL BE CAST IN GIRDER AT SPACINGS SHOWN ON DRAWING S-1563.
- ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123 OR AS1214 AS APPLICABLE.
- 1 BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING SHALL BE MAINTAINED. SEE CONNECTOR AND LIFTING HOOK LOCATIONS SEE DWG S-1564.

ERECTION
- ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH DROP-IN WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 7.8t.

SUPERSEDED 1

REV	DATE	REVISIONS	BY
2	93-12-13	BAR LENGTH REVISED	SBD
1	93-08-27	CONNECTOR AND LIFTING HOOK LOCATION NOTE, BAR LIST REVISED	LEA

APPROVED
EXECUTIVE DIRECTOR BRIDGE ENGINEERING
DATE PRELIM

Alberta TRANSPORTATION AND UTILITIES
BRIDGE ENGINEERING BRANCH

PRESTRESSED CONCRETE 8.53 m TYPE SC-510 CURB GIRDER

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
LEA	VMV	93-08-19	SBD						2 of 4	S-1563

AR 1.8 MICROFILM 7981168