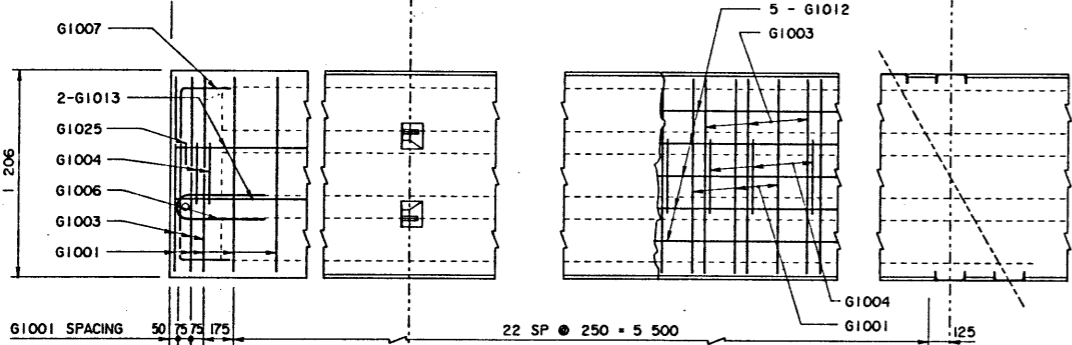


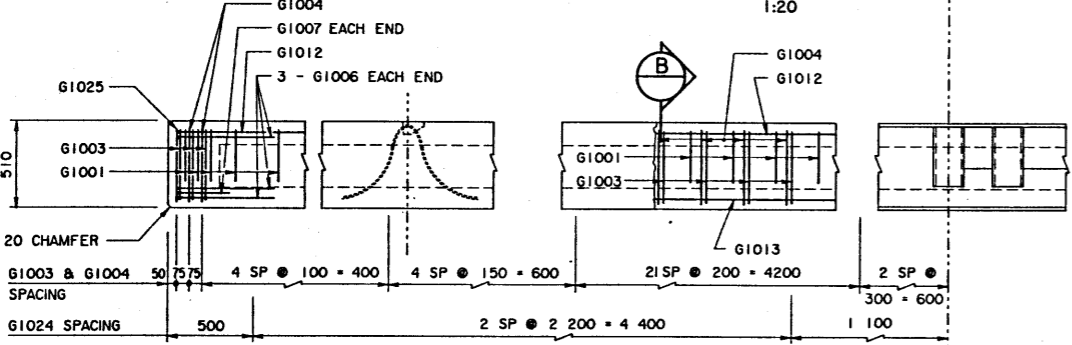
BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
G1001	10	52	A	1 125	300	1 725	70
G1003	10	67	B	1 125		2 220	117
G1004	10	65	B	420		1 520	76
G1006	10	6	D			1 020	5
G1007	10	2	A	1 000	300	1 600	3
G1012	10	5	STR			11 900	47
G1013	10	2	STR			11 800	19
G1024	10	6	STR			1 100	5
G1025	10	2	C			670	1
G2502	25	4	A	1 1 850	350	12 550	197
TOTAL							kg : 540

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

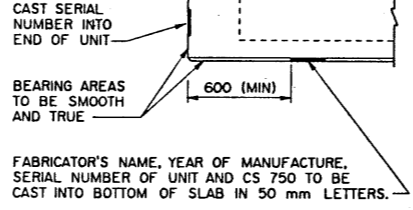
PLAN VIEW
1:20



REINFORCEMENT PLAN
1:20



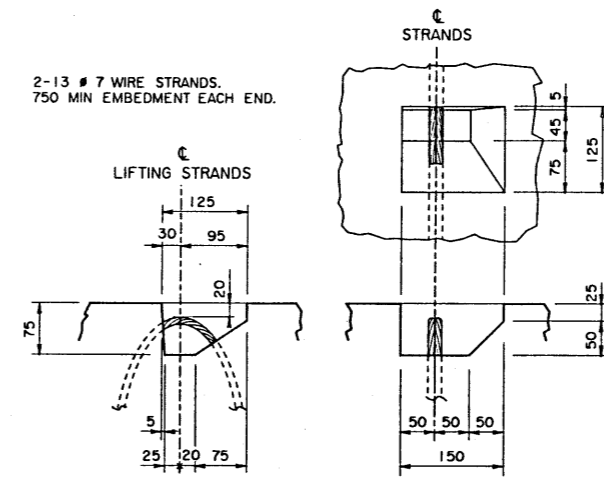
ELEVATION
1:20



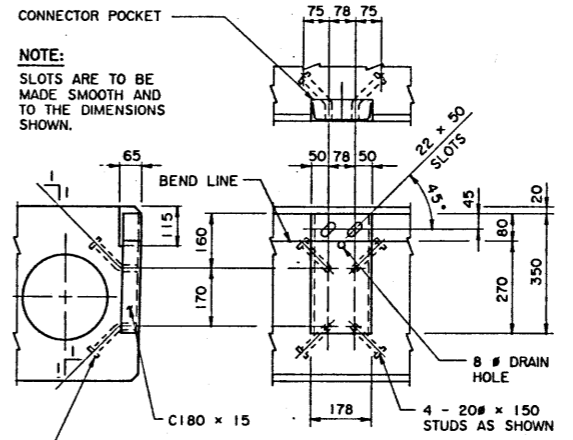
GIRDER FINISHES
(BY FABRICATOR) 1:20

BY
S-1544
REV. A
94-04-05

P BUFFER ANGLE
1:5



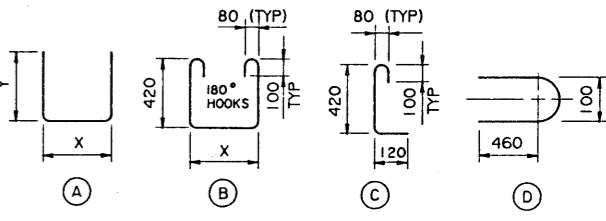
R LIFTING HOOK POCKET
1:5



S GIRDER CONNECTORS
1:10

BAR TYPES

(ALL BAR DIMENSIONS ARE OUT TO OUT)



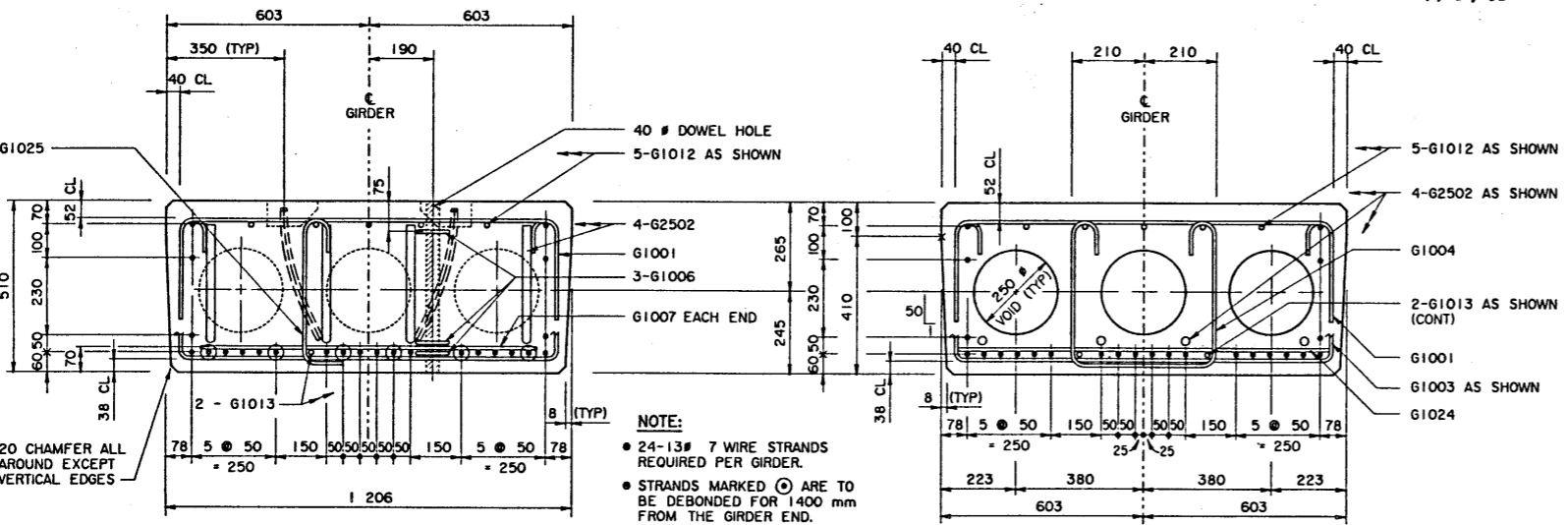
GENERAL NOTES

- ALL DRAWING REFERENCES ARE TO CURRENT DRAWINGS.
- CAN/CSA-S6-88 SPECIFICATIONS EXCEPT AS MODIFIED BELOW:
 - ALLOWABLE TENSION AT MIDSPAN IS 40% OF MODULUS OF RUPTURE WITH 50 mm WEARING SURFACE (52% WITH 90 mm WEARING SURFACE).
 - NO TENSION ALLOWED IN DECK SURFACE.
- **LOADING:**
 - LIVE LOAD - CAN/CSA-S6-88: CS-750
ONE WHEEL LINE PER GIRDER
 - DEAD LOAD - GIRDER = 0.93 1/m
 - WEARING SURFACE = 0.24 1/m

- **MATERIALS**
 - CONCRETE SHALL CONTAIN SILICA FUME AND BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES. UNIT WEIGHT OF SEMI-LIGHT CONCRETE SHALL BE 1920 kg/m³.
 - 28 DAY CONCRETE STRENGTH - 35 MPa
 - RELEASE STRENGTH - 28 MPa
 - PRESTRESSING STEEL SHALL BE 13 # 7 WIRE LOW RELAXATION STRAND (f_{pu} = 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 = 104 kN/STRAND.
 - ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123.
 - BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING IS TO BE MAINTAINED.

- **ERECTION**
 - ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH DROP-IN WASHERS.
 - CALCULATED MASS OF THE GIRDER IS 1.34 t
- WORK THESE DRAWINGS TOGETHER : S-1544, S-1545 AND S-1546



A SECTION
1:10

B SECTION
1:10

APPROVED				Albarta TRANSPORTATION AND UTILITIES BRIDGE ENGINEERING BRANCH			
 EXECUTIVE/DIRECTOR BRIDGE ENGINEERING				PRESTRESSED CONCRETE 12 m TYPE SC-510 INTERIOR GIRDER			
REV	DATE	REVISIONS	BY	DATE	STREAM	LOCATION	HIGHWAY
92-01-10		CONCRETE MATERIALS NOTE	DHQ	DATE 7/15/23, 1950			
DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	FILE
LEA	VMV	90-07-02					
SHEET							DRAWING
1 of 4							S-1544

SUPERSEDED
① ②