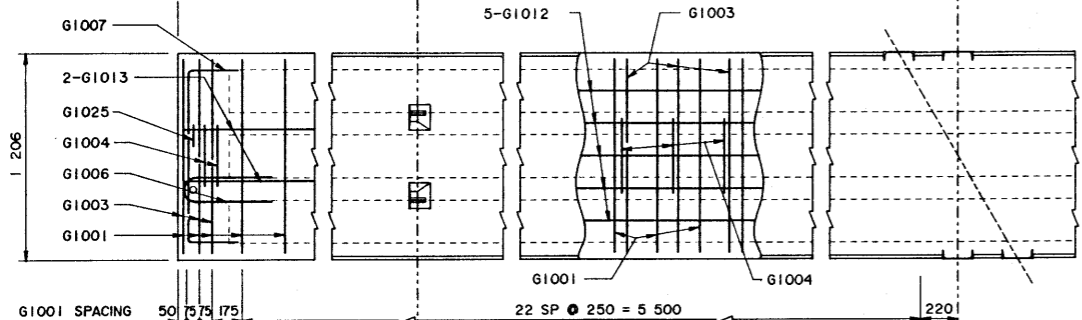
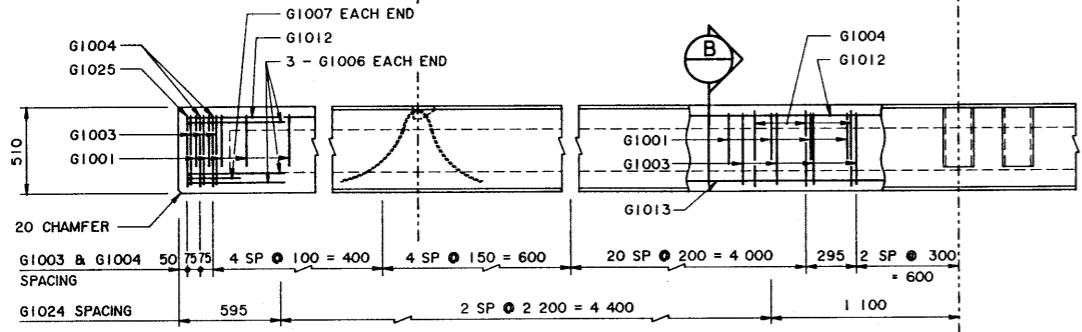


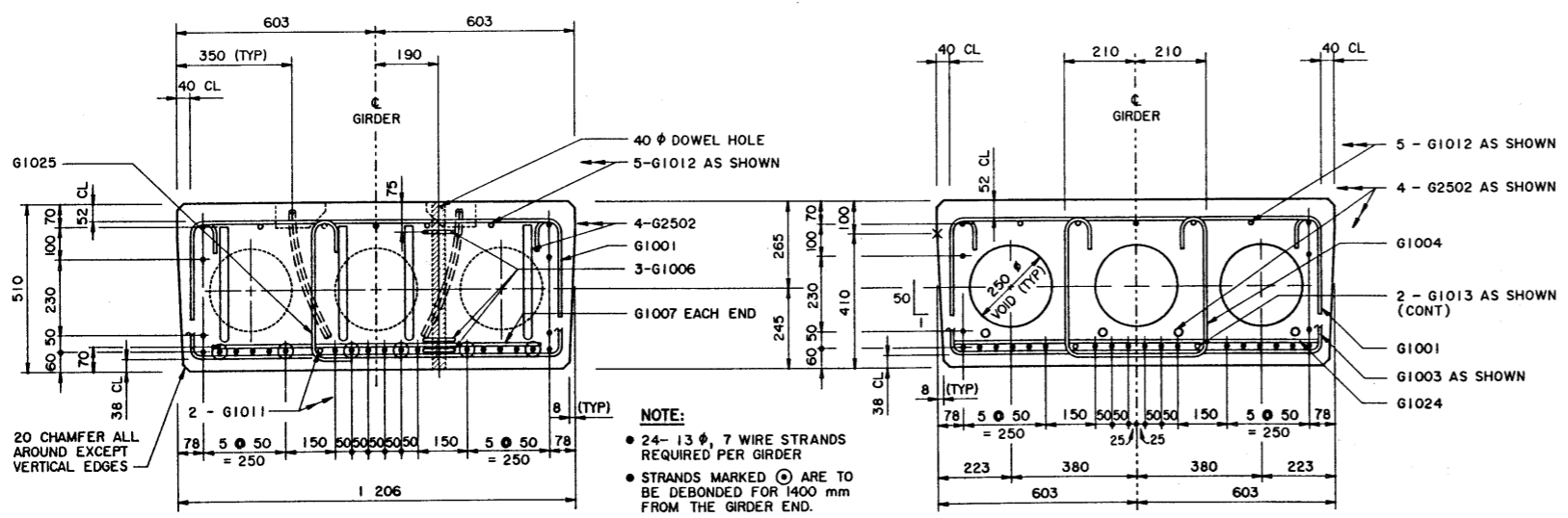
**PLAN VIEW**  
1:20



**REINFORCEMENT PLAN**  
1:20



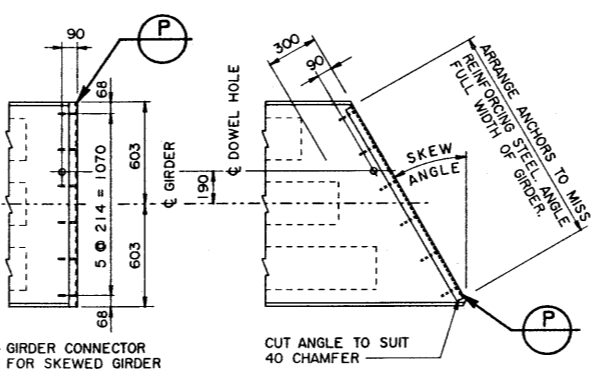
**ELEVATION**  
1:20



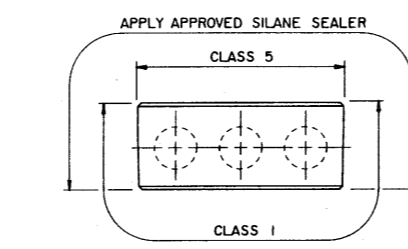
**SECTION A**  
1:10

**SECTION B**  
1:10

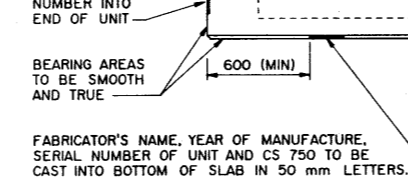
**NOTE:**  
FOR SKEWED END REINFORCING BAR DETAILS SEE DWG S-1579



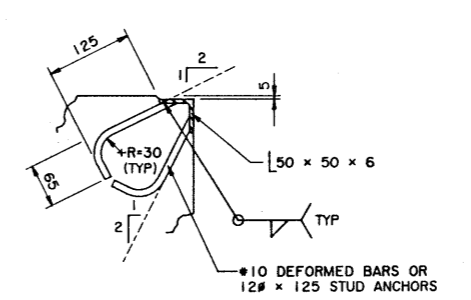
**GIRDER CONNECTORS**  
FOR SQUARE GIRDER  
FOR SKEWED GIRDER



**GIRDER FINISHES**  
(BY FABRICATOR) 1:20

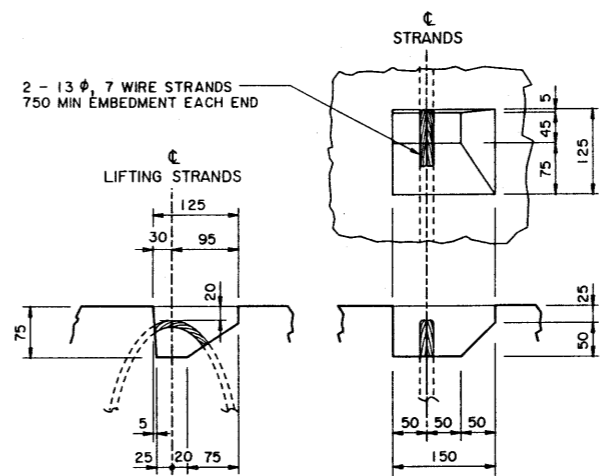


**LIFTING HOOK POCKET**  
1:5

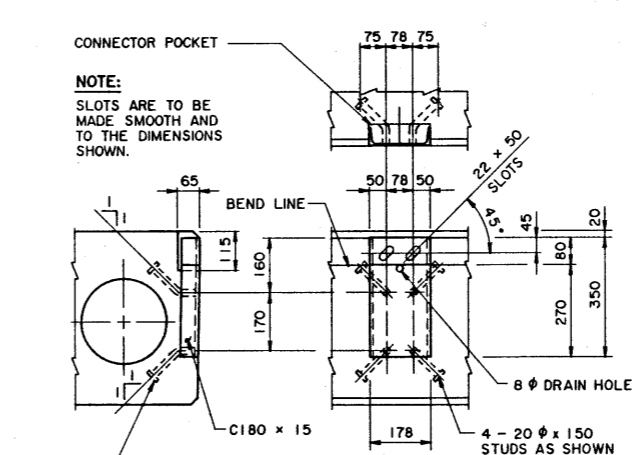


**NOTE:**  
ASSEMBLY TO BE HOT DIP GALVANIZED AFTER FABRICATION.

**BUFFER ANGLE**  
1:5



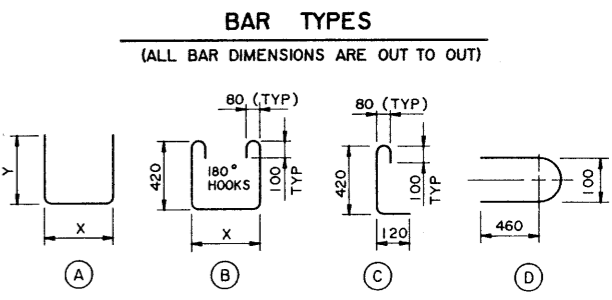
**LIFTING STRANDS**  
1:5



**NOTE:**  
ALTERNATE SYSTEM OF ANCHORING CHANNEL, WHICH FACILITATES THE PLACING OF THE CIRCULAR VOID, WILL BE CONSIDERED BY THE DEPARTMENT

**GIRDER CONNECTORS**  
1:10

BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
G1001	10	53	A	1 125	300	1 725	72
G1003	10	67	B	1 225		2 220	117
G1004	10	65	C	420		1 520	78
G1006	10	6	D			1 020	5
G1007	10	2	A	1 000	300	1 600	3
G1012	10	5	STR			12 090	47
G1013	10	2	STR			11 990	19
G1024	10	6	STR			1 100	5
G1025	10	2	C			670	1
G2502	25	4	A	12 040	350	12 740	200
<b>TOTAL kg :</b>							<b>547</b>



**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 54% OF MODULUS OF RUPTURE WITH 50 mm WEARING SURFACE (66% 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 t/m
    - WEARING SURFACE = 0.24 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/m<sup>3</sup>.
  - 28 DAY CONCRETE STRENGTH - 40 MPa
  - RELEASE STRENGTH - 28 MPa
  - PRESTRESSING STEEL SHALL BE 13 φ, 7 WIRE LOW RELAXATION STRAND (f<sub>pu</sub> = 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 CONNECTIONS AND LIFTING HOOK ASSEMBLIES. STIRRUP ANCHORS TO BE MAIN ANCHORS FOR CONNECTOR AND LIFTING HOOK LOADS. SEE DWG S-1579.

- ERECTION**
- ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH DROP-IN WASHERS.
  - CALCULATED MASS OF ONE GIRDER IS 11.52 t.

**SUPERSEDED**

APPROVED				Albarta TRANSPORTATION AND UTILITIES BRIDGE ENGINEERING BRANCH			
EXECUTIVE DIRECTOR BRIDGE ENGINEERING				PRESTRESSED CONCRETE 12.19 m TYPE SC-510 INTERIOR GIRDER			
PRELIM				DATE			
DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY
LEA	VMV	93-09-16					
FILE	SHEET	DRAWING					
	1 of 4	S-1577					

AT & U - RECORDS CENTRE  
2284181