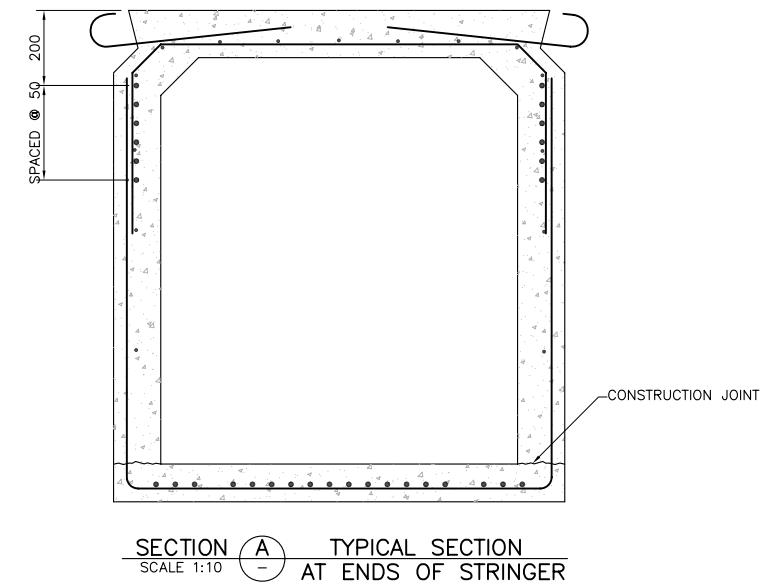


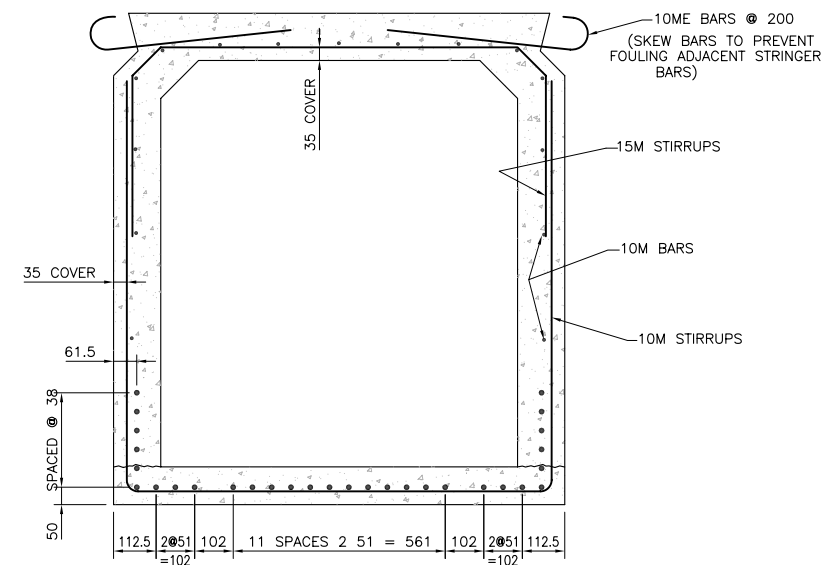
STRINGER TYPE	1	2	3	4
SPAN RANGE	20 000 TO 25 000 mm	25 000 TO 30 000 mm	30 000 TO 35 000 mm	35 000 TO 40 000 mm
CONCRETE AT RELEASE	25 MPa	25 MPa	25 MPa	26 TO 34 MPa
CONCRETE AT 28 DAYS	30 MPa TO 32 MPa	30 MPa TO 32 MPa	30 MPa TO 36 MPa	36 MPa TO 47 MPa
No. OF DRAPED STRANDS	4 TO 10	6 TO 10	10 TO 18	10 TO 12
MAX. No. STRAIGHT STRANDS	18	18	18	36
HOLD DOWN POINT FROM \bar{C}	3 000 mm	3 000 mm	3 000 mm	3 000 mm
SECTION PROPERTITES	A = 0.4327 m ²	A = 0.4827 m ²	A = 0.5327 m ²	A = 0.5704 m ²
	I = 0.0469 m ⁴	I = 0.0777 m ⁴	I = 0.1181 m ⁴	I = 0.1286 m ⁴
	y _b = 462 mm	y _b = 565 mm	y _b = 667 mm	y _b = 631 mm
	y _t = 438 mm	y _t = 535 mm	y _t = 633 mm	y _t = 669 mm
	S _b = 0.1015 m ³	S _b = 0.1375 m ³	S _b = 0.1770 m ³	S _b = 0.2039 m ³
	St = 0.1072 m ³	St = 0.1452 m ³	St = 0.1865 m ³	St = 0.1922 m ³
	WEIGHT = 10.86 kN/m	WEIGHT = 12.12 kN/m	WEIGHT = 13.37 kN/m	WEIGHT = 14.32 kN/m

NOTES:

- DESIGN SPECIFICATIONS:
CAN/CSA-S6-06.
BC MoT SUPPLEMENT TO S6-06.
- DESIGN LOAD:
LIVE LOAD: CL-625
DEAD LOAD: DESIGNED FOR 100mm CONCRETE OVERLAY.
50 ALLOWANCE FOR FUTURE WEARING SURFACE.
- STRINGERS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE M.O.T. STANDARD SPECIFICATION 415: MANUFACTURE OF PRECAST AND PRESTRESSED CONCRETE MEMBERS.
- INTERMEDIATE DIAPHRAGMS SHALL BE PROVIDED.
- LATERAL POSTENSIONING SHALL BE PROVIDED AT DIAPHRAGM LOCATIONS.
- PRESTRESSING STRANDS SHALL BE 13# (7 WIRE) UNCOATED LOW RELAXATION STRANDS, C.S.A. G279M-1982, 1862 MPa GRADE OR EQUIVALENT. MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND. STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136.2 kN/STRAND.
- CONCRETE: THE FOLLOWING CONCRETE STRENGTHS SHALL BE USED AS A GUIDELINES:
NORMAL CONCRETE $f_{ci} = 32 \text{ MPa}$, $f_c = 45 \text{ MPa}$
HIGH STRENGTH CONCRETE $f_{ci} = 35 \text{ MPa}$, $f_c = 48 \text{ MPa}$
- REINFORCING STEEL SHALL CONFORM TO C.S.A. SPECIFICATION G30.18M GRADE 400R LAP OF BARS FOR SPLICES TO BE 40 X d. SPLICES TO BE STAGGERED.
- REINFORCING BARS SHALL HAVE 35 mm MINIMUM COVER UNLESS OTHERWISE NOTED.
- BOTTOM EDGES OF STRINGERS TO BE CHAMFERED 20 mm.
- LIFTING DEVICES SATISFACTORY TO THE ENGINEER SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS WILL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT SUDDEN IMPACT LOADS ON THE STRINGERS.
- ENDS OF PRESTRESSING STRANDS SHALL BE TREATED AS FOLLOWS:
EMBEDDED IN CONCRETE: PAINTED WITH A GALVANIZING AGENT.
EXPOSED: A MINIMUM 3mm COAT OF THIXOTROPIC EPOXY AS SHOWN.
MANUFACTURERS INSTRUCTIONS TO BE STRICTLY ADHERED TO.
- TOP OF BOXES SHALL HAVE A RAKED FINISH.
- THE CONCRETE IMMEDIATELY SURROUNDING ALL LIFTING DEVICES SHALL HAVE A FORMED RECESS 65mm DEEP. THE RECESS SHALL BE THOROUGHLY SANDBLASTED IN THE SHOP. AFTER ERECTION, THE LIFTING DEVICE SHALL BE BURNT OFF AT THE BOTTOM OF THE RECESS AND THE RECESS SHALL BE PATCHED WITH AN APPROVED NON-SHRINK GROUT.



SECTION A TYPICAL SECTION
SCALE 1:10 AT ENDS OF STRINGER



SECTION B TYPICAL SECTION
SCALE 1:10 AT CENTER OF STRINGER

Rev	Date	Description	Init
A	01/04/98	REDRAWN	
B	JUNE 2007	GENERAL REVISIONS	WHK

REVISIONS



BRITISH COLUMBIA
Ministry of Transportation
Bridge Engineering

STANDARD SINGLE CELL
CONCRETE BOX STRINGERS

PREPARED UNDER THE DIRECTION OF		DESIGNED _____ DATE _____
ENGINEER OF RECORD CHIEF BRIDGE ENGINEER		CHECKED _____ DATE _____
DATE _____	FILE No. _____	DRAWN BGD/C DATE 01/04/98
PROJECT No. _____	REG. _____	SCALE AS NOTED
		NEGATIVE No. _____
		DRAWING No. D205