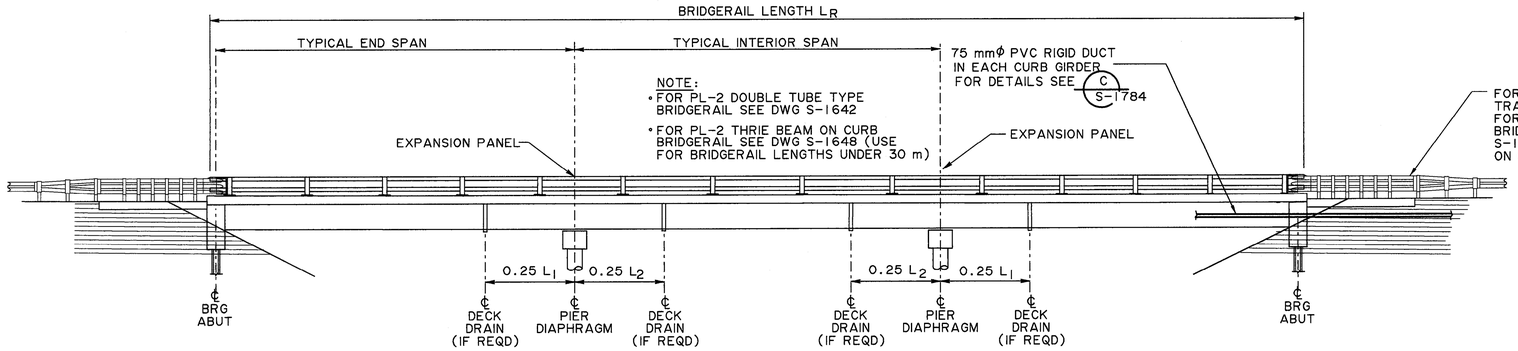
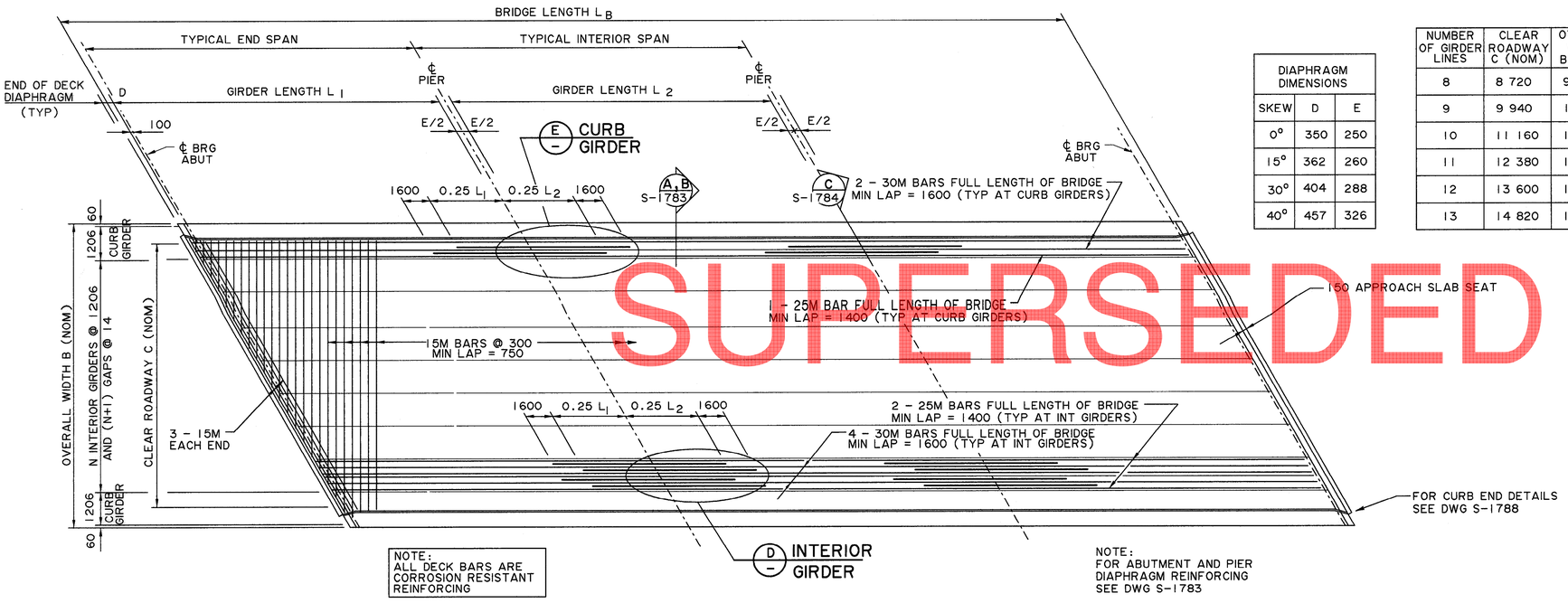



## BRIDGE RAIL POST AND DECK DRAIN LAYOUT

1:100




NOTE:
ALL DECK BARS ARE CORROSION RESISTANT REINFORCING

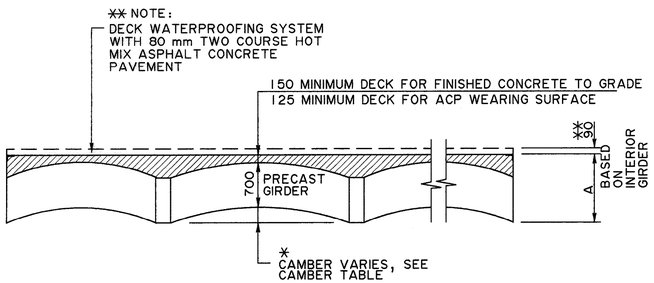
NOTE:
FOR ABUTMENT AND PIER DIAPHRAGM REINFORCING SEE DWG S-1783

## DECK REINFORCING PLAN

1:100

| DIAPHRAGM DIMENSIONS | | |
|---|---|---|
| SKEW | D | E |
| 0° | 350 | 250 |
| 15° | 362 | 260 |
| 30° | 404 | 288 |
| 40° | 457 | 326 |

| NUMBER OF GIRDER LINES | CLEAR ROADWAY C (NOM) | OVERALL WIDTH B (NOM) |
|---|---|---|
| 8 | 8 720 | 9 870 |
| 9 | 9 940 | 11 090 |
| 10 | 11 160 | 12 310 |
| 11 | 12 380 | 13 530 |
| 12 | 13 600 | 14 750 |
| 13 | 14 820 | 15 970 |




## CAMBER DIAGRAM

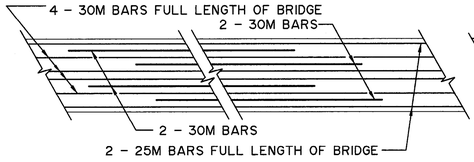
NTS

USE THESE VALUES TO ADJUST PROFILE

| CAMBER TABLE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEFLECTION (-) OR CAMBER (+) | 14 m GIRDER | | 16 m GIRDER | | 18 m GIRDER | | 20 m GIRDER | |
| | INTERIOR | CURB | INTERIOR | CURB | INTERIOR | CURB | INTERIOR | CURB |
| AT TRANSFER | 5 | 8 | 6 | 11 | 13 | 19 | 18 | 25 |
| CURB | – | -4 | – | -7 | – | -12 | – | -18 |
| CAMBER GROWTH BEFORE DECK | 1 | 0 | 2 | 0 | 4 | 1 | 7 | 2 |
| 150 DECK | -3 | -1 | -5 | -1 | -8 | -2 | -12 | -4 |
| 125 DECK+90 ACP | -4 | -2 | -7 | -3 | -11 | -3 | -17 | -5 |
| ACCUMULATIVE CAMBER (125+90ACP) | 2 | 2 | 1 | 1 | 6 | 5 | 8 | 4 |

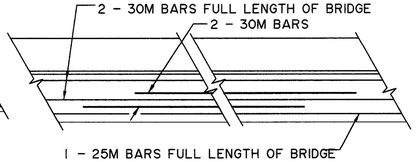
* NOTES:

- NET CAMBER VALUES ARE ESTIMATED VALUES ONLY. ACTUAL VALUES MAY VARY ACCORDING TO VARIATIONS IN PRESTRESS LOSSES AND PROPERTIES OF CONCRETE
- FIELD ADJUST AS REQUIRED BY RAISING OR LOWERING GRADE LINE TO MAINTAIN MINIMUM DECK THICKNESS




D INTERIOR GIRDER

1:10




E CURB GIRDER

1:10



## GENERAL NOTES

- ALL DRAWINGS ARE DIMENSIONED IN MILLIMETRES
- THIS DESIGN IS APPLICABLE FOR BOTH FINISHED CONCRETE TO GRADE AND ACP WEARING SURFACE ON ASPHALT MEMBRANE WATERPROOFING
- FOR DETAILS OF DECK WATER PROOFING SYSTEM WITH 80 mm TWO COURSE HOT MIX ASPHALTIC CONCRETE PAVEMENT SEE DWG. S-1443
- ALL REFERENCES TO OTHER STANDARD DRAWINGS REFER TO THE LATEST REVISION
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR BRIDGE CONSTRUCTION LATEST VERSION

### DESIGN

- THIS DESIGN IS APPLICABLE TO SPAN ARRANGEMENTS BASED ON THE FOLLOWING COMBINAATIONS OF GIRDER LENGTHS:

| SPAN ARRANGEMENT TABLE | | | |
|---|---|---|---|
| 14-18-14 m | 16-18-16 m | 18 m | 20 m |
| 14-20-14 m | 16-20-16 m | 18-18-18 m | 20-20-20 m |
| | | 18-20-18 m | |

- STANDARD SKEW ANGLES: 0°, 15°, 30° & 40°
  CAN/CSA-S6-06 SPECIFICATIONS
- LIVE LOAD - CAN/CSA-S6-06 CL-800 WHEEL LINES PER GIRDER
  SLS/ULS - MID SPAN=0.66 SUPPORT=0.73
  FLS - MID SPAN=0.35 SUPPORT=0.38
- DEAD LOAD
  -SEE DWG S-1785 FOR DEAD LOAD TABLE

### SITE SPECIFIC REQUIREMENTS

- THIS SET OF STANDARD DRAWINGS ARE TO BE WORKED TOGETHER WITH THE FOLLOWING SITE SPECIFIC DRAWINGS, WHICH SHALL BE PREPARED BY A CONSULTANT PRE-QUALIFIED BY THE DEPARTMENT TO DESIGN MAJOR BRIDGE STRUCTURES
  - GENERAL LAYOUT INCLUDING BRIDGE RAIL LAYOUT
  - SITE INFORMATION SHEET(S)
  - DECK REINFORCING PLAN, PIER AND ABUTMENT ELEVATIONS
  - DESIGN CONSULTANT SHALL BE RESPONSIBLE FOR CHECKING GIRDER SHOP DRAWINGS

### DECK

- CAST-IN-PLACE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION SECTION 4, CAST-IN-PLACE CONCRETE
- ALL CONCRETE SHALL BE CLASS HPC
- ⚠1 REINFORCING STEEL SHALL BE IN ACCORDANCE WITH SECTION 5 OF THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION AND SITE SPECIFIC DRAWINGS
- ALL CONCRETE CORNERS SHALL HAVE A 20 mm CHAMFER OR FILLET UNLESS NOTED OTHERWISE
- DECK CONCRETE SHALL BE PLACED CONTINUOUSLY WITHIN A 4-HOUR MAXIMUM TIME PERIOD. DECK INCLUDES DIAPHRAGMS
- ALL REINFORCING STEEL SHALL HAVE A 50 mm CLEAR COVER UNLESS NOTED OTHERWISE
- ⚠1 GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A123/A123M AND ASTM F2329
- FOR CONCRETE TO GRADE, DECK CONCRETE FINISH SHALL BE CLASS 6. CURB BLOCKOUT AND PIER DIAPHRAGM FINISHES TO MATCH PRECAST GIRDERS. SILANE SEALER SHALL BE APPLIED TO THE SURFACES SHOWN ON DWG S-1784
- FOR ACP WEARING SURFACE, DECK CONCRETE FINISH SHALL BE CLASS 4. CURB BLOCKOUT AND PIER DIAPHRAGM FINISHES TO MATCH PRECAST GIRDERS. SILANE SEALER SHALL BE APPLIED TO THE SURFACES SHOWN ON DWG S-1784
- STEEL FOR ANCHOR DOWELS AND MISCELLANEOUS IRON SHALL CONFORM TO CSA G40.21M-300W

ISL Engineering and Land Services

**PERMIT TO PRACTICE**
*ISL Engineering and Land Services Ltd.*
ORIGINAL STAMPED AND SIGNED
Signature P.J.K. FAIRBRIDGE
Date 2008-08-15
PERMIT NUMBER: P 4741
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

DESIGNER — PROFESSIONAL ENGINEER ALBERTA — ORIGINAL STAMPED AND SIGNED BY WARREN PARK ON 2008-08-15 — DATE

CHECKER — PROFESSIONAL ENGINEER ALBERTA — ORIGINAL STAMPED AND SIGNED BY P.J.K. FAIRBRIDGE ON 2008-08-15 — DATE

| REV | DATE | REVISIONS | BY |
|---|---|---|---|
| 6 | | | |
| 5 | | | |
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | 2012-06-28 | GENERAL NOTES | CM |

RECOMMENDED
DIRECTOR BRIDGE ENGINEERING
TOM LOO

APPROVED
EXECUTIVE DIRECTOR
TECHNICAL STANDARDS BRANCH
ALLAN KWAN
DATE 2008-08-22

Alberta Transportation

# STANDARD SLC COMPOSITE BRIDGES SLC700 PRESTRESSED CONCRETE GIRDERS SUPERSTRUCTURE LAYOUT

| DEPARTMENT BAR CODE | DATE | SHEET | DRAWING |
|---|---|---|---|
| – | 2008-06-30 | 1 OF 7 | S-1782-08 |

S-1782-08.RVI.DGN -DRAWN-BY-RWK- 2012-02-27 NH