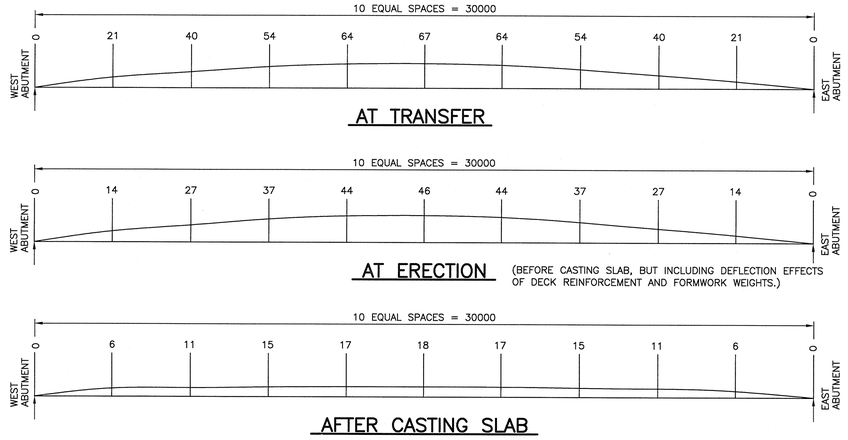


AT TRANSFER

AT ERECTION

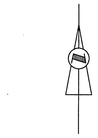
(BEFORE CASTING SLAB, BUT INCLUDING DEFLECTION EFFECTS OF DECK REINFORCEMENT AND FORMWORK WEIGHTS.)

AFTER CASTING SLAB

NOTE:
VALUES SHOWN ARE FOR GUIDANCE ONLY. CONDUCT OWN INDEPENDENT CALCULATIONS/ESTIMATES OF GIRDER CAMBER AND DETERMINE THE REQUIRED STIRRUP PROJECTIONS ABOVE THE TOP SURFACE OF THE GIRDER.

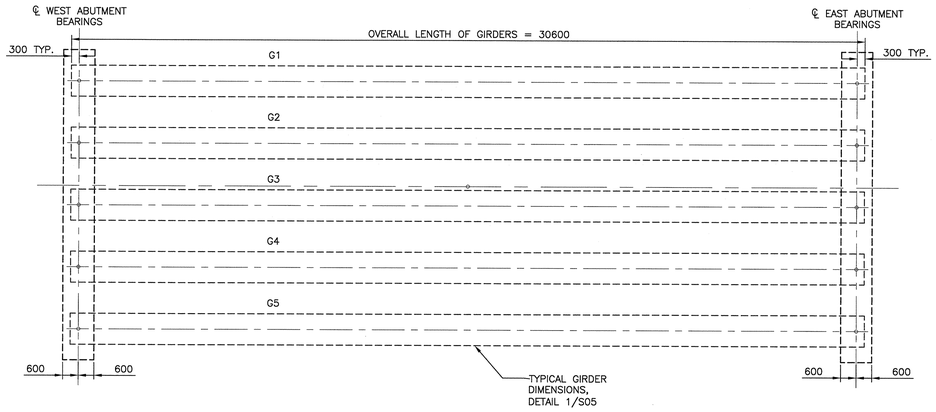
CAMBER PROFILES

SCALE : N.T.S.



BEARING SCHEDULE:

LOCATION	SIZE(mm)	No. REQ'D	SLS LOADING (kN) PERM.	SLS LOADING (kN) TOTAL	ULS LOADING (kN) PERM.	ULS LOADING (kN) TOTAL
EAST ABUTMENT	500x400x30	5	500	NA	650	NA
WEST ABUTMENT	500x400x30	5	500	NA	650	NA



GIRDER LAYOUT PLAN

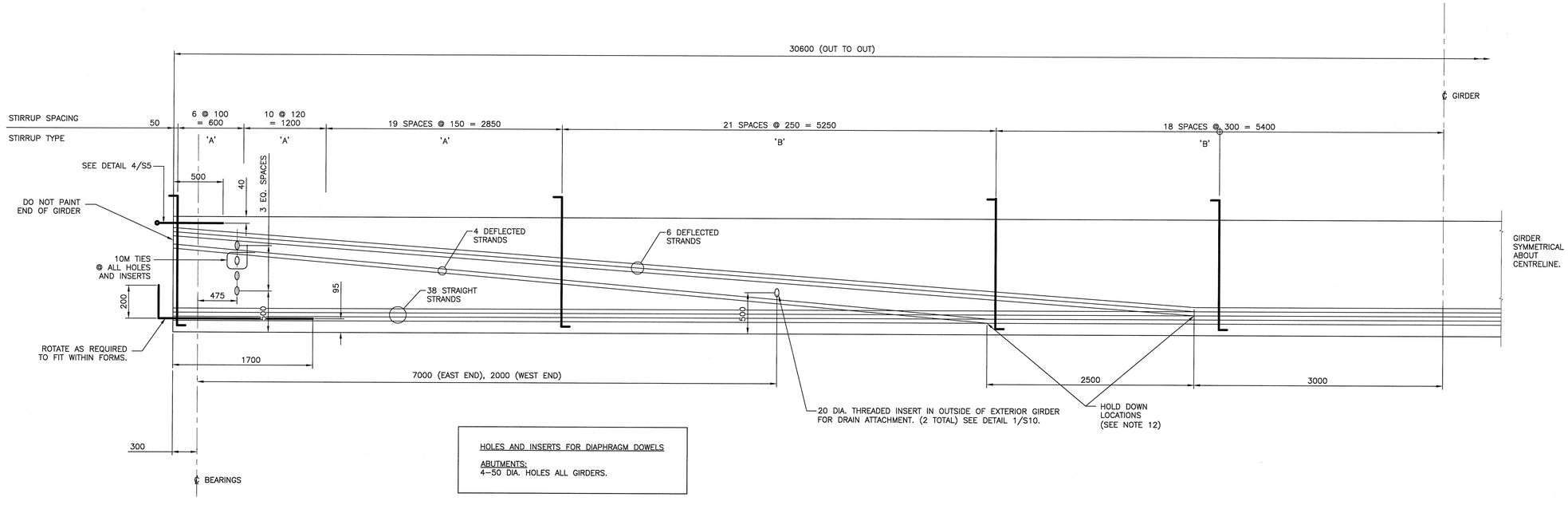
SCALE : 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

PRE-STRESSED GIRDER NOTES:

1. REFER TO SHEET S01 FOR GENERAL NOTES AND SHEET S02 FOR GENERAL CONCRETE NOTES. REFER TO DRAWING S11 FOR REINFORCING NOTES. REFER TO DRAWING S10 FOR BRIDGE DECK FORMWORK & GIRDER STABILITY SYSTEM DETAILS.
2. DESIGN AND FABRICATION: TO CAN/CSA S6-14.
3. CONCRETE COMPRESSIVE STRENGTH
   -28 DAYS 45MPa (HIGH PERFORMANCE CONCRETE)
   -AT TRANSFER 40MPa
   -AT SHIPPING 45MPa

   ADDITIONAL MIX REQUIREMENTS:
   -HIGH PERFORMANCE CONCRETE (HPC) AS SPECIFIED
   -MAX AGGREGATE SIZE: 20mm
   -AIR CONTENT: 6% +/- 1%
   -MAX WATER/CEMENT RATIO: 0.35
   -MIN. CEMENT CONTENT, SLUMP, AIR SPACING, PLASTICIZIER, CHLORIDE ION PENETRABILITY AND TEMPERATURE REQUIREMENTS: AS SPECIFIED
4. PRE-STRESSING STEEL:
   -12.7mm DIA. 7-WIRE EXTRA HIGH STRENGTH GRADE 1860, STABILIZED STRAND TO ASTM A416/A416M-06
   -MINIMUM ULTIMATE STRAND STRENGTH: 184kN
   -FORCE PER STRAND BEFORE TRANSFER: 131kN
   -FORCE PER STRAND AFTER ALL LOSSES: 112kN
5. COVER TO REINFORCEMENT:
   -TO STRANDS: 50
   -TO REINF. STEEL 40 UNO
6. PRE-STRESS TRANSFER:
   -SEQUENCE OF RELEASE OF PRE-STRESSED STRAND AND HOLD-DOWN DEVICES DETERMINED BY PRE-STRESSING CONTRACTOR AND APPROVED BY DEPARTMENTAL REPRESENTATIVE.
7. ROUGHEN SIDES OF GIRDER (AT ENDS) IN CONTACT WITH CAST-IN-PLACE CONCRETE. ROUGHEN TOP OF GIRDER. ROUGHEN TO 5mm AMPLITUDE AND REMOVE LAITANCE.
8. HANDLING:
   -SUPPORT GIRDERS AT ENDS AND MAINTAIN UPRIGHT
9. DO NOT APPLY BITUMINOUS PAINT TO ENDS OF GIRDERS.
10. THREADED INSERTS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH CAN/CSA G164-M92 (R2003). ALL THREADED COMPONENTS OF FASTENER ASSEMBLY SHALL BE GALVANIZED BY THE SAME PROCESS BY THE SAME SUPPLIER, SHIPPED PRE-ASSEMBLED. CO-ORDINATE WITH DRAIN ASSEMBLY.
11. DOWEL INSERTS SHALL BE CAPABLE OF DEVELOPING A FORCE TENSION THAT EQUALS OR EXCEEDS THE CAPACITY OF THE REBAR THREADED INTO INSERT.
12. ANCHOR STRANDS FOR MINIMUM UN-FACTORED HOLD-DOWN FORCE OF 120kN.
13. STIRRUP PROJECTION HEIGHT VARIES ALONG LENGTH. ACCOUNT FOR SHAPE "AT ERECTION". VALUES SHOWN ARE FOR GUIDANCE ONLY. CONDUCT OWN INDEPENDENT CALCULATIONS/ESTIMATES OF GIRDER CAMBER AND DEFLECTION AND DETERMINE THE REQUIRED STIRRUP PROJECTIONS ABOVE THE TOP SURFACE OF THE GIRDER. STIRRUP HOOK SHALL BE MIN. 40mm CLEAR ABOVE BOTTOM TRANSVERSE MAT OF DECK REINFORCEMENT, BUT BELOW TOP MAT OF DECK REINFORCING.

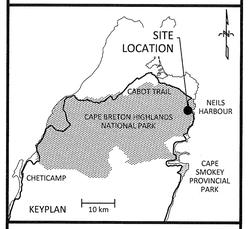


HOLES AND INSERTS FOR DIAPHRAGM DOWELS

ABUTMENTS:
4-50 DIA. HOLES ALL GIRDERS.

HALF ELEVATION OF GIRDER

Public Works and Government Services Canada / Travaux Publics et Services gouvernementaux Canada



SNC·LAVALIN

SNC·LAVALIN Inc.
Halifax, Nova Scotia, Canada
Member of the SNC·LAVALIN Group

Certified ISO 9001

revisions		date
C01	ISSUED FOR TENDER	JAN 13 2016

project / projet

NEILS BROOK BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK, NS

drawing / dessin

GIRDER LAYOUT PLAN AND ELEVATION

designed TDB / conçu
date
drawn TMB / dessiné
date
approved NDL / approuvé
date
Tender / Soumission
PWGSC Project Manager / Administrateur de projets TPSGC
2016 i 21

project number / no. du projet
R.074443.001

drawing no. / no. du dessin
S04

627102-0001-D-43-DWG-000-0004-01

PWGSC B1 (2004)

E-DRM/GDD-E: 100063 VERSION 1