

GENERAL NOTES

- CONTRACTOR TO VERIFY ALL DIMENSIONS FOR THE BRIDGE PRIOR TO COMMENCEMENT OF WORK AND NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCIES.
- STRUCTURAL DRAWINGS SHOW THE COMPLETED PROJECT. THEY DO NOT SHOW COMPONENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY. CONTRACTOR IS RESPONSIBLE FOR SAFETY ON AND ABOUT THE JOB SITE DURING CONSTRUCTION.
- CONTRACTOR TO ENSURE THAT ALL WORK IS CARRIED OUT BY THE RULES AND CUSTOMS OF THE BEST TRADE PRACTICES AND THEIR SPECIFICATIONS BY SKILLED TRADES PEOPLE KNOWLEDGEABLE OF THE TYPE OF CONSTRUCTION. THEY ARE TO BE PROPERLY EQUIPPED AND SUPERVISED.
- SURVEY AND HYDROTECHNICAL DATA PROVIDED BY McELHANNEY CONSULTING SERVICES LTD, REPORT DATED JANUARY 31, 2013 AND DRAWINGS DATED JANUARY 15, 2013.
- UNLESS OTHERWISE NOTED, DIMENSIONS ARE IN MILLIMETRES AND ELEVATIONS ARE IN METRES.
- ALL DESIGN CODES AND CSA AND ASTM STANDARDS REFERENCED ON THESE DRAWINGS SHALL BE THE CURRENT VERSIONS.

DESIGN NOTES

- STRUCTURAL DESIGN DATA.
  - ENGINEER OF RECORD: RANDALL EMERY, P.ENG.
  - DESIGN CODE - CANADIAN HIGHWAY BRIDGE DESIGN CODE 2006.
- PARKS CANADA - DIRECTIVE FOR DESIGN, CONSTRUCTION, AND INSPECTION OF VEHICULAR AND PEDESTRIAN BRIDGES - 2008.

DESIGN PARAMETERS

GRAVITY:	DEAD LOAD	=	SELF-WEIGHT
	LIVE LOAD	=	3.83 kPa
	SNOW LOAD	=	6.1 kPa
ICE ACCRETION: MODERATE (12mm ON ALL EXPOSED SURFACES)			
WIND:	q1/50	=	0.50 kPa
SEISMIC:	Zv	=	1.0
	V	=	0.05
	Za	=	0
	A	=	0.00
	SEISMIC PERFORMANCE ZONE 1		
	SOIL PROFILE III (ASSUMED)		
	S	=	1.5
	K	=	1.0

FOUNDATION NOTES

- CONTRACTOR IS RESPONSIBLE FOR RETAINING A PROFESSIONAL GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA FOR THE DESIGN AND FIELD REVIEW OF SOIL BEARING CAPACITIES AND MICRO-PILES. SOIL BEARING CAPACITIES AND MICRO-PILE DESIGN TO BE APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
- FOOTINGS HAVE BEEN DESIGNED FOR A SERVICEABILITY LIMIT STATE BEARING PRESSURE OF 150 kN/m<sup>2</sup> AND AN ULTIMATE LIMIT STATE BEARING PRESSURE OF 225 kN/m<sup>2</sup> TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER. FOOTINGS TO BEAR ON UNDISTURBED NATIVE SOILS OR COMPACTED STRUCTURAL FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- MICRO-PILE EMBEDMENT LENGTHS TO BE DESIGNED BY THE GEOTECHNICAL ENGINEER AND IN ACCORDANCE WITH DETAIL 6/S202.
- MICRO-PILE LOADS (PER PILE):

WORKING LOAD	=	180 kN
LOCK OFF LOAD	=	30 kN
TEST LOAD	=	180 kN
- BEARING SURFACES AND MICRO-PILE INSTALLATION MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO FOOTING CONCRETE BEING PLACED. GENIVAR IS NOT RESPONSIBLE FOR CONFIRMING BEARING CAPACITIES OF SOILS. CONTRACTOR RESPONSIBLE FOR NOTIFYING DEPARTMENTAL REPRESENTATIVE IN ADVANCE FOR CONSTRUCTION REVIEW OF THE WORK.
- GEOTECHNICAL ENGINEER TO PROVIDE OTHER SPECIFIC DESIGN REQUIREMENTS FOR FOOTINGS, SOIL SLOPES, FROST PROTECTION, MINIMUM COVER, ETC.
- UNLESS OTHERWISE SHOWN, CENTER FOOTINGS UNDER COLUMNS AND WALLS.
- DOWELS AND ANCHOR BOLTS SHALL BE PLACED BEFORE CONCRETE IS PLACED. USE TEMPLATES TO ENSURE CORRECT PLACEMENT OF DOWELS.
- PROVIDE 50mm GROUND SEAL UNDER FOOTINGS WHERE REQUIRED BY SOIL CONDITIONS.
- FOOTING ELEVATIONS, IF SHOWN, ARE FOR BIDDING PURPOSES ONLY. ARE NOT FINAL, AND MAY VARY ACCORDING TO SITE CONDITIONS. ALL FOOTINGS MUST BE TAKEN TO A BEARING LAYER APPROVED BY THE GEOTECHNICAL ENGINEER.
- PROTECT BEARING SURFACES FROM FREEZING BEFORE AND AFTER FOOTINGS ARE POURED.

CONCRETE AND REINFORCING NOTES

- CONCRETE TO BE READY MIX CONCRETE CONFORMING TO THE CURRENT STANDARD CSA A23.1/A23.2. CEMENT TO BE TYPE MS OR MSb HYDRAULIC CEMENT CONFORMING TO CSA A3000. USE ADMIXTURES ONLY WITH WRITTEN APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE.

LOCATION	28 DAY	CLASS
	STRENGTH	OF
ALL LOCATIONS	MPa	EXPOSURE
	30	S-3

REFER TO PROJECT SPECIFICATIONS FOR OTHER REQUIREMENTS.

- CONCRETE PROTECTION ON PRINCIPAL REINFORCING SHALL BE AS FOLLOWS:

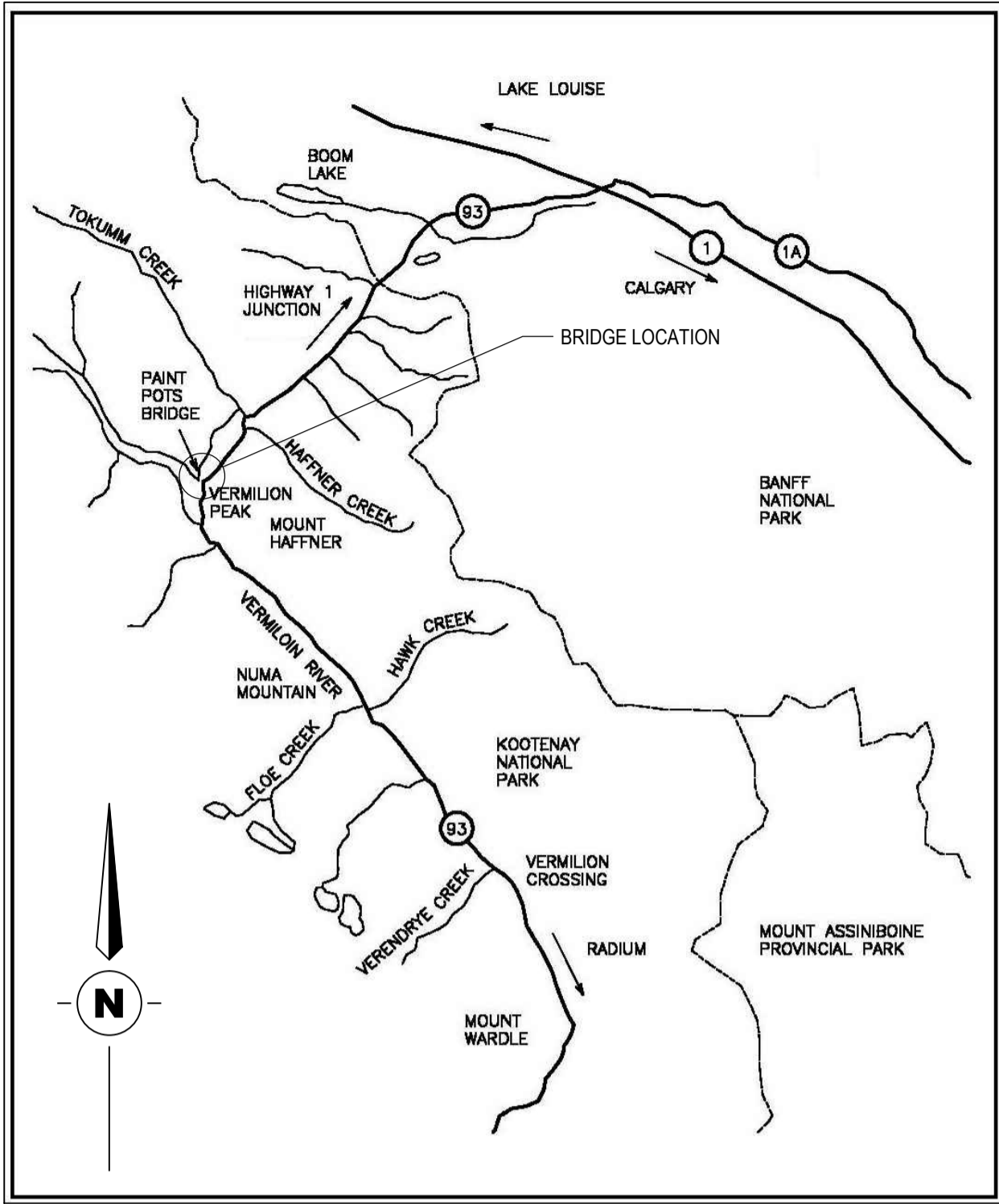
SURFACES PLACED IN CONTACT WITH GROUND:	75mm
FORMED SURFACES EXPOSED TO GROUND OR WEATHER:	60mm
- SINGLE CURTAIN WALL REINFORCING SHALL BE CENTERED IN WALLS UNLESS OTHERWISE SHOWN.
- HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS AROUND CORNERS AND HOOKED AT WALL INTERSECTIONS. ADD 2-15M CONT AT TOPS AND ENDS OF WALLS. UNLESS OTHERWISE NOTED, HOOK AND LAP LENGTHS AS FOLLOWS:

BAR SIZE	VERT LAP	HORL LAP	HOOK LENGTH
10M	430mm [17"]	500mm [20"]	180mm [7"]
15M	600mm [24"]	800mm [32"]	250mm [10"]
20M	750mm [30"]	1000mm [40"]	300mm [12"]
25M	1200mm [48"]	1550mm [60"]	400mm [16"]

STRUCTURAL STEEL NOTES

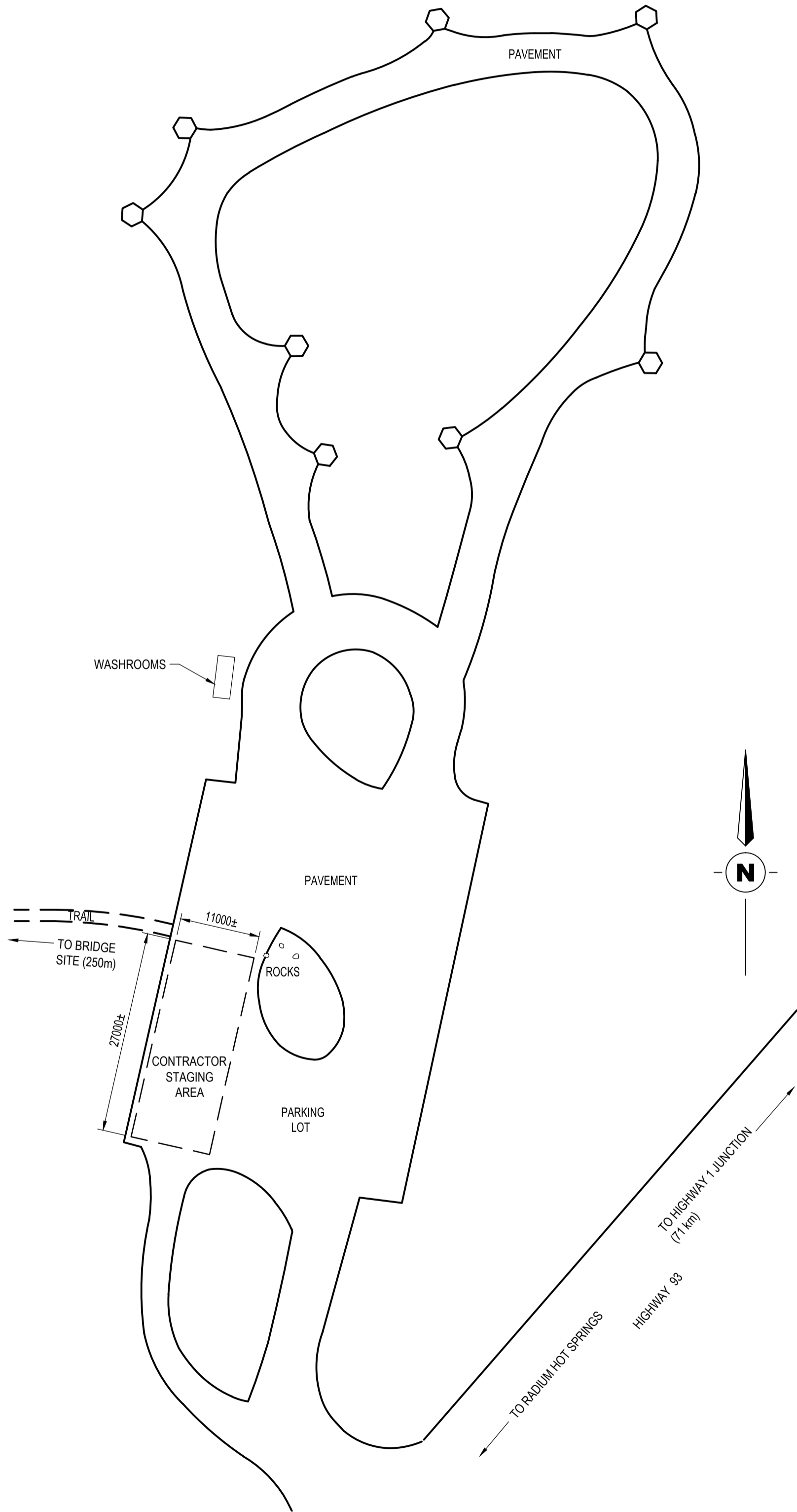
- STRUCTURAL STEEL TO CONFORM TO THE REQUIREMENTS OF THE FOLLOWING STANDARDS:

ROLLED SECTIONS:	ASTM	A588
PLATE:	G40.21	350AT
CHANNELS & ANGLES:	G40.21	300W
PIPE:	A53	Fy=240 MPa
HSS SECTIONS:	ASTM	A847
BOLTS:	ASTM	A325 TYPE 3, SELF-WEATHERING
ANCHOR BOLTS:	G40.21	300W (HDG)



LOCATION PLAN

SCALE: N.T.S.



1 PARKING AREA SITE PLAN

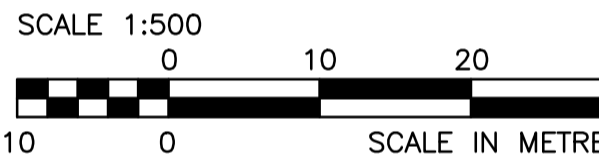
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ABBREVIATIONS:

CL	-	CLEAR
CP	-	COMPLETE PENETRATION
(E)	-	EXISTING
EL	-	ELEVATION
EF	-	EACH FACE
EW	-	EACH WAY
FTG	-	FOOTING
FS	-	FAR SIDE
HBE	-	HOOK BOTH ENDS
HDG	-	HOT-DIPPED GALVANIZED
LG	-	LONG
MAX	-	MAXIMUM
MIN	-	MINIMUM
NS	-	NEAR SIDE
OC	-	ON CENTER
OPP	-	OPPOSITE
PL	-	PLATE
PT	-	PRESSURE TREATED
SIM	-	SIMILAR
T&B	-	TOP AND BOTTOM
T/O	-	TOP OF
TYP	-	TYPICAL
UNO	-	UNLESS NOTED OTHERWISE
U/S	-	UNDERSIDE

DRAWING LIST

S101	-	PARKING AREA SITE PLAN, LOCATION PLAN, GENERAL NOTES
S102	-	BRIDGE AREA SITE PLAN
S201	-	GENERAL ARRANGEMENT
S202	-	NORTH AND SOUTH ABUTMENT PLANS, ELEVATIONS AND SECTIONS
S301	-	NORTH AND SOUTH ABUTMENT SECTIONS AND DETAILS
S302	-	STEEL CONNECTION SECTIONS AND DETAILS



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Revision/	Description/Description	Date/Date
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Client/client

PARKS CANADA AGENCY

Project title/Titre du projet  
KOOTENAY NATIONAL PARK

PAINT POTS TRAIL BRIDGE  
VERMILION RIVER

Consultant Signature Only

Designed by/Concept par  
RGE

Drawn by/Dessine par  
RCM

PWGC Project Manager/Administrateur de Projets TPSGC  
MARCI TONDER / JIMMY WONG

Regional Manager, Architectural and Engineering Services  
Gestionnaire régionale, Services d'architectural et de génie, TPSGC  
OREST KLUFAS (Acting)

Drawing title/Titre du dessin  
PARKING AREA SITE PLAN  
LOCATION PLAN  
GENERAL NOTES

Project No./No. du projet  
R.061077.001

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S101  
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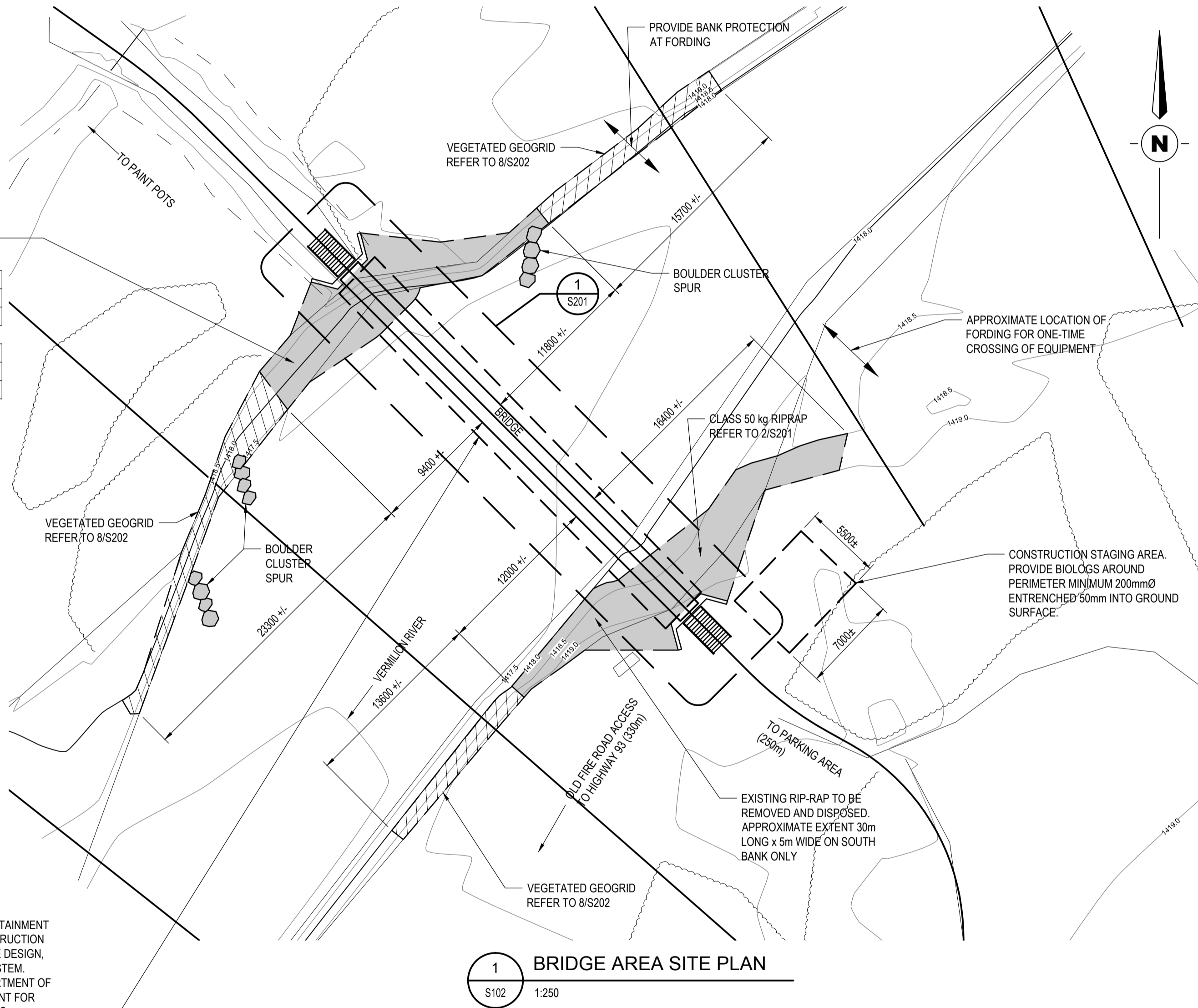
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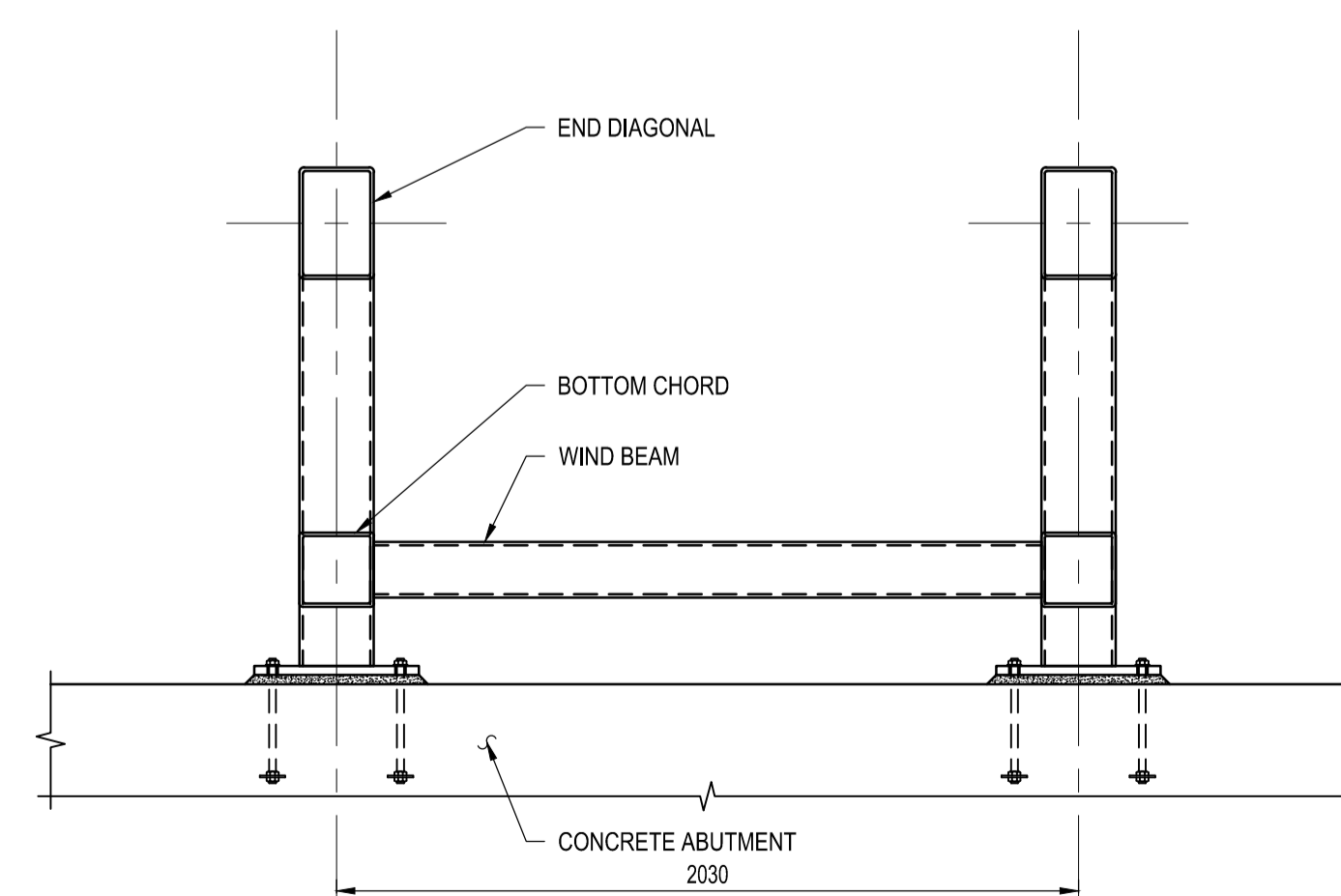
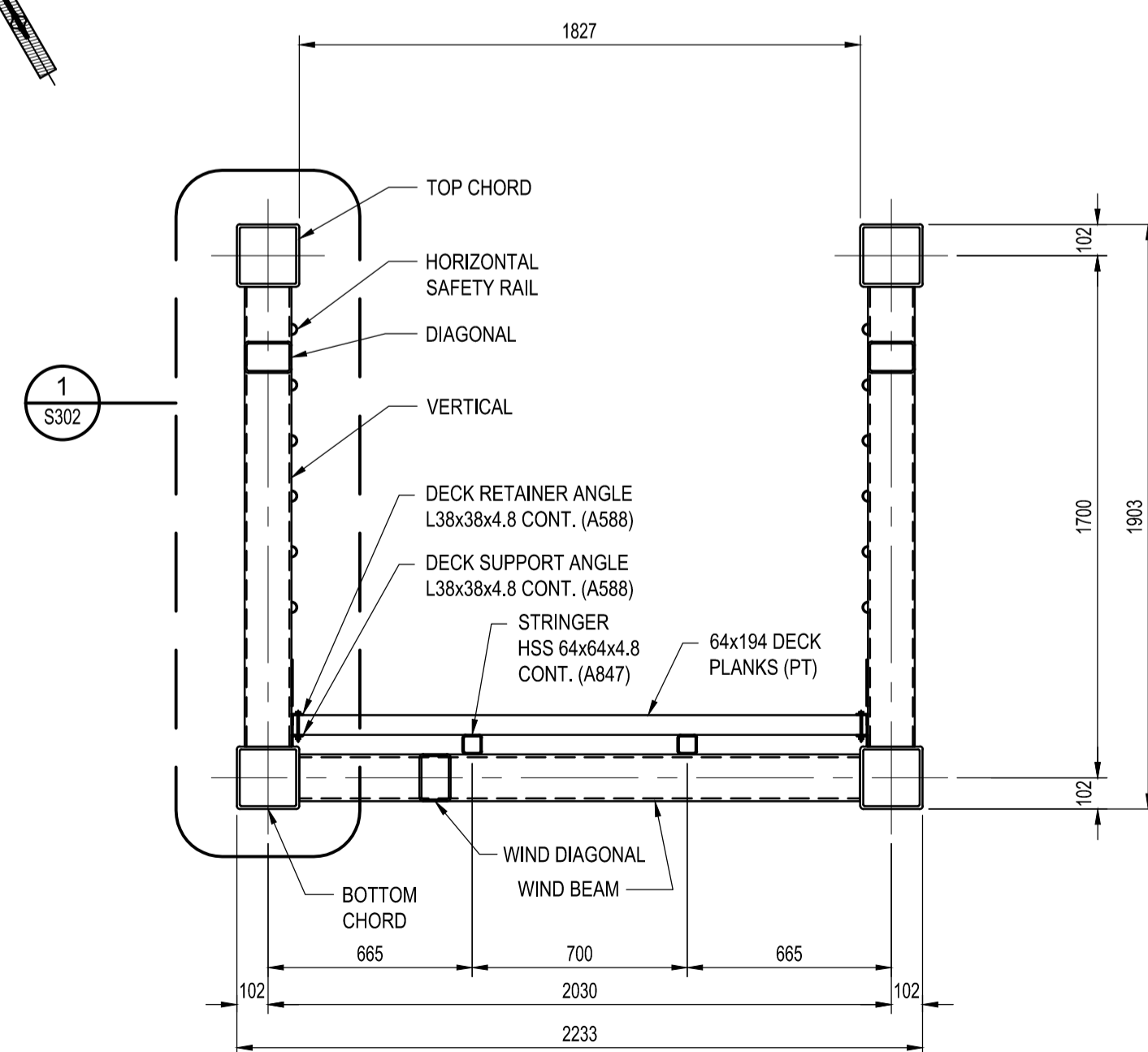
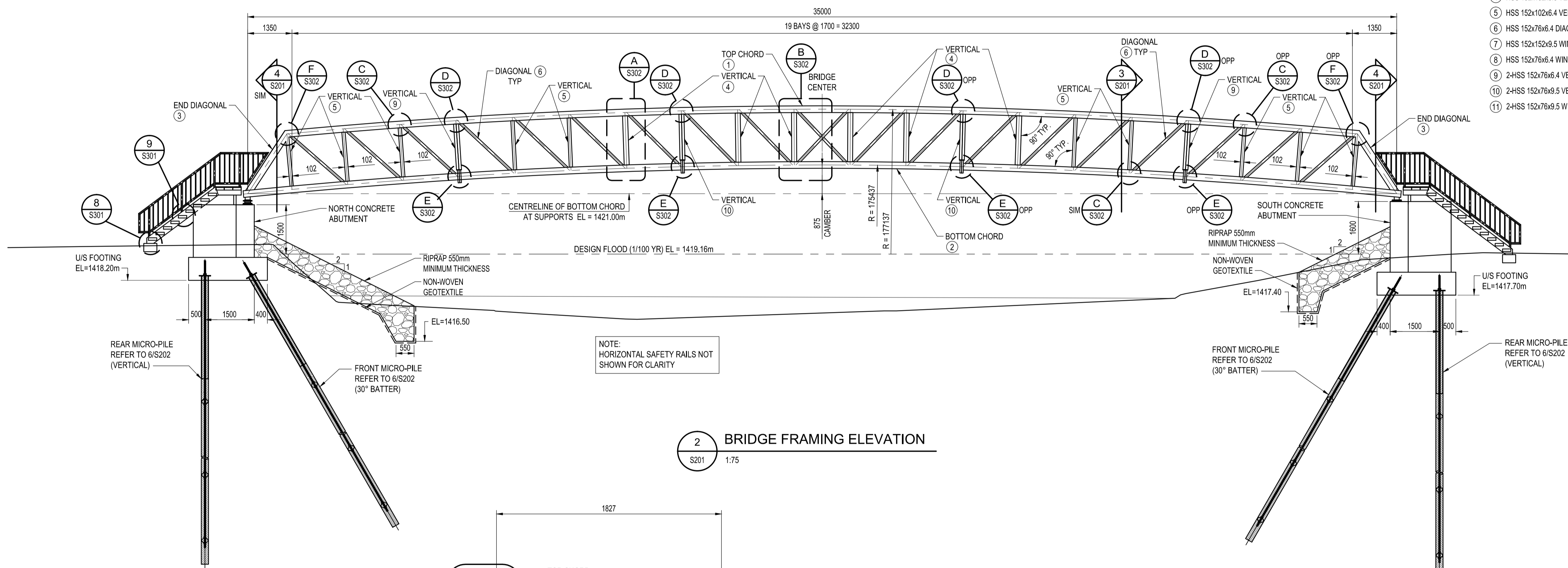
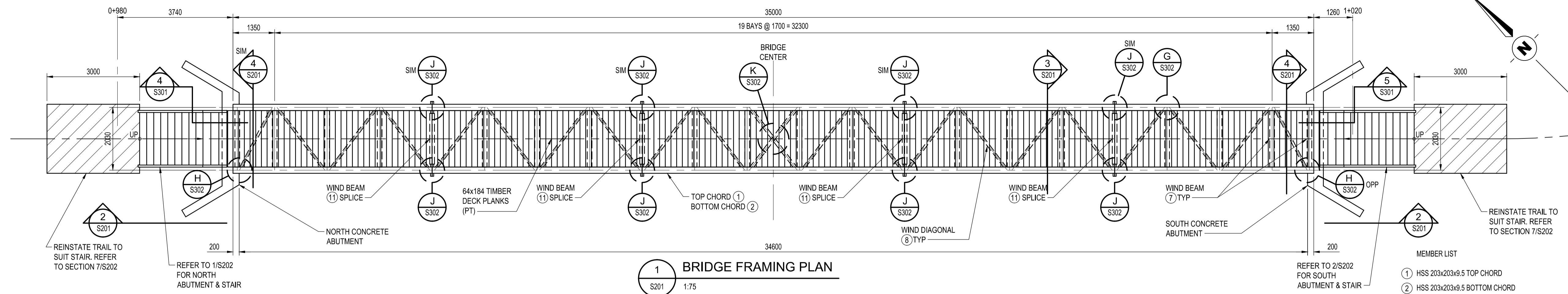
CLASS 50 kg RIPRAP REFER TO 2/S201  
RECOMMENDED GRADATION AND AVERAGE DIMENSIONS ARE:

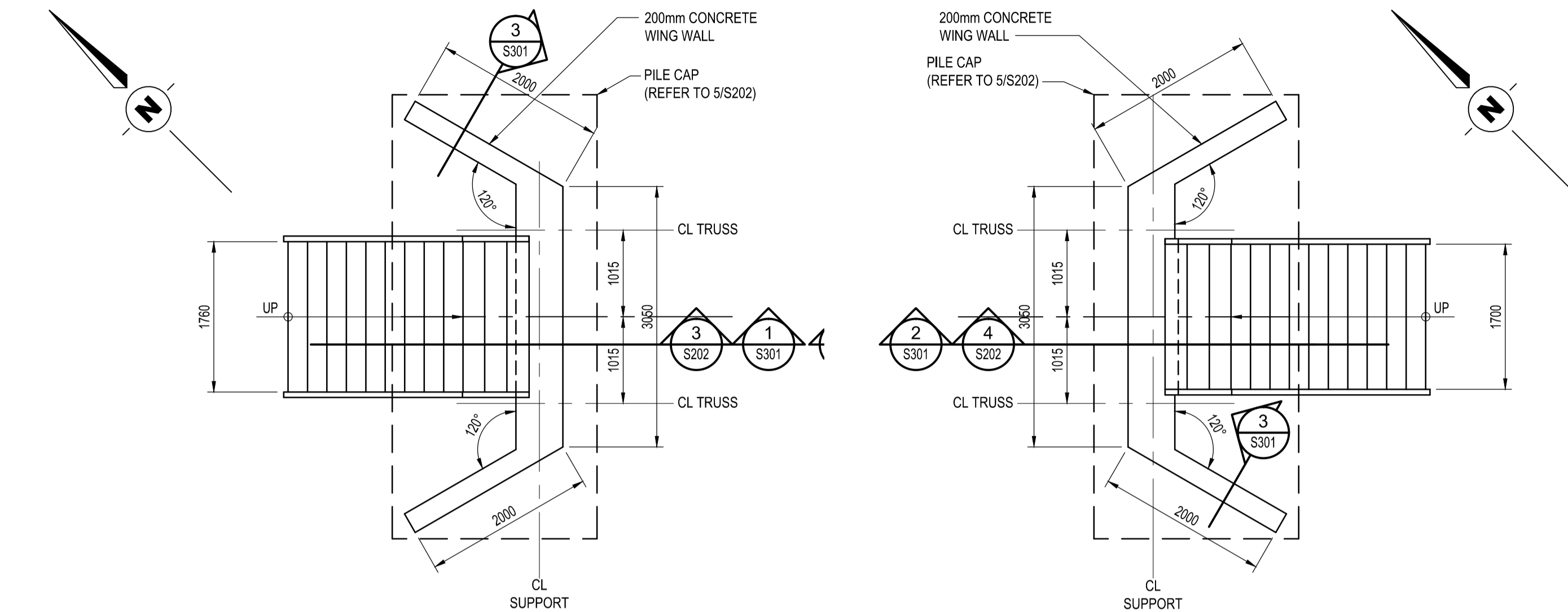
Class 50kg Rock Gradation - Percentage Smaller than Given Rock Mass (kg)		
15%	50%	85%
5	50	150

Approximate Average Dimension in mm for Class 50kg Rock (Specific gravity = 2.64)		
15%	50%	85%
155	330	475

PROVIDE NETTING OR OTHER APPROPRIATE CONTAINMENT SYSTEM BELOW BRIDGE TO CAPTURE ALL CONSTRUCTION DEBRIS. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, EXTENT, AND DETAILS OF THE CONTAINMENT SYSTEM. NETTING CONTAINMENT SYSTEM TO MEET DEPARTMENT OF FISHERIES AND OCEANS OPERATIONAL STATEMENT FOR BRIDGE MAINTENANCE TO PREVENT DELETERIOUS MATERIAL FROM ENTERING RIVER. SYSTEM TO BE INSPECTED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE. SYSTEM SHOULD BE PERMEABLE TO ALLOW RAIN TO PASS BUT BE CAPABLE OF TRAPPING HOT WELDING SOLDER.





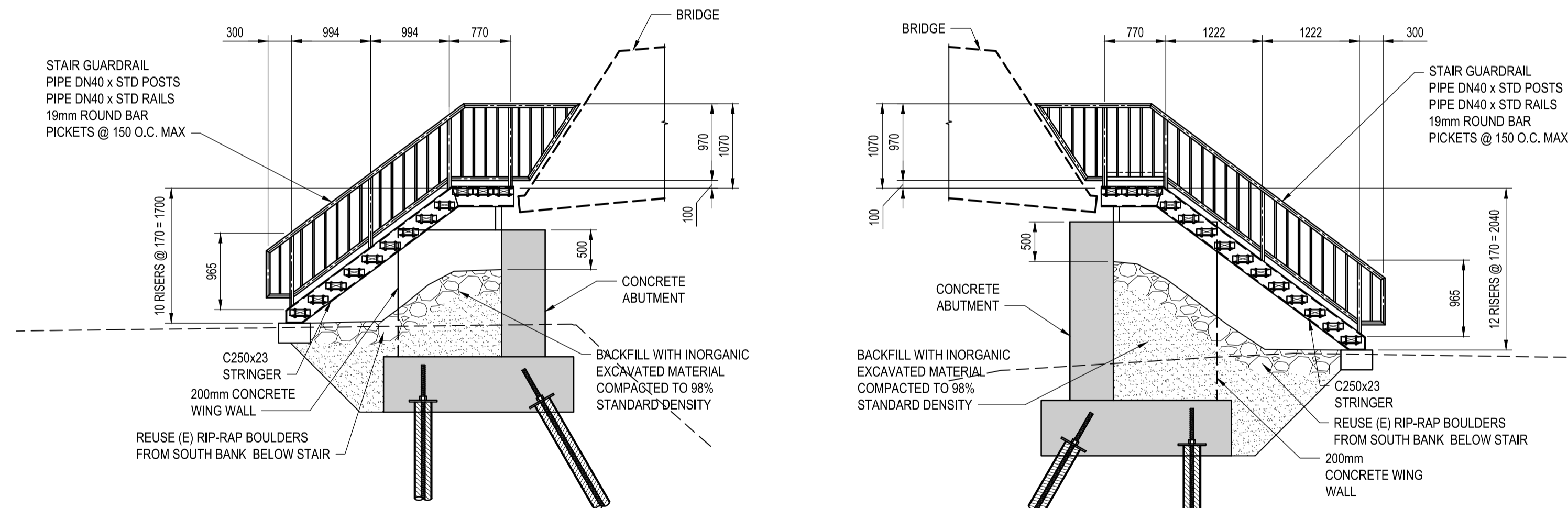


1 NORTH ABUTMENT AND STAIR PLAN  
S202 1:50

2 SOUTH ABUTMENT AND STAIR PLAN  
S202 1:50

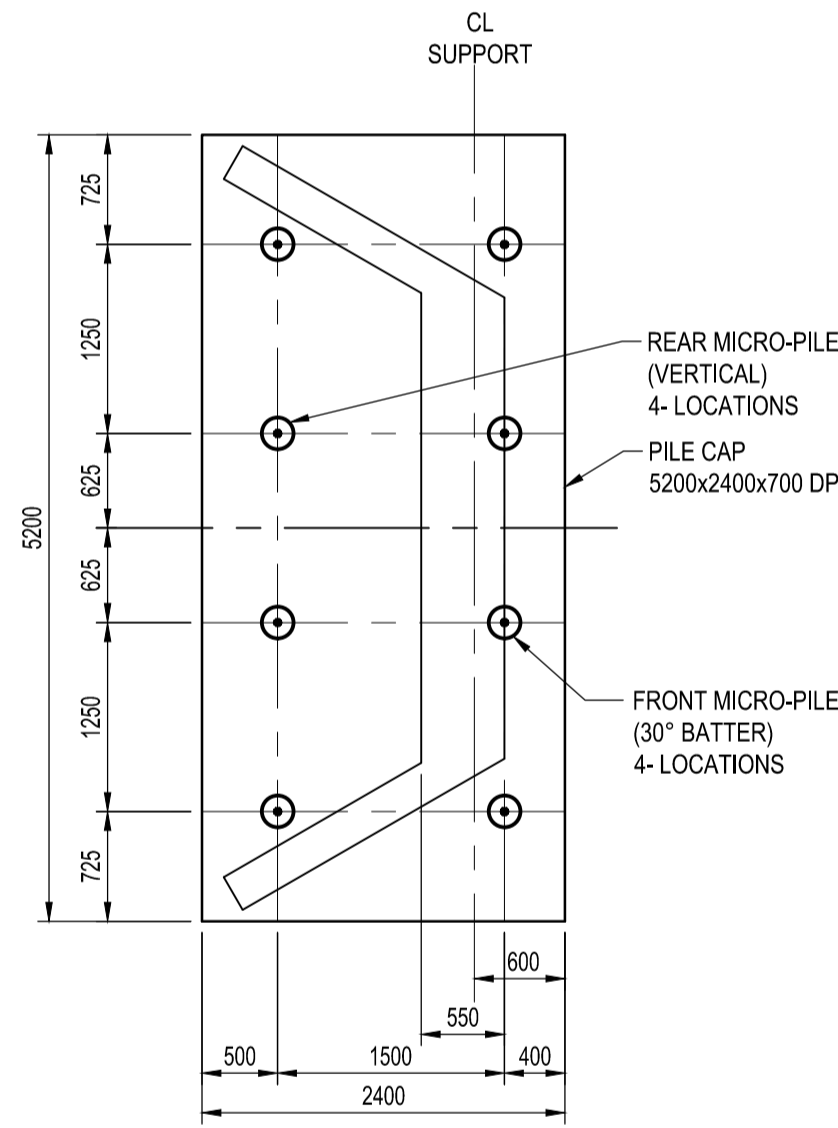
NOTE:

- STEEL STAIR ASSEMBLIES TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION AND TOP COATED (BLACK).
- SURFACE PREPARATION, PRIMER, AND TOP COAT TO MASTER PAINTERS INSTITUTE SYSTEM EXT 5.3C.
- ASSEMBLIES TO BE FABRICATED IN WHOLE COMPONENTS OFF-SITE AND SHOP FIT PRIOR TO INSTALLATION ON SITE.
- FIELD WELDING WILL NOT BE PERMITTED.

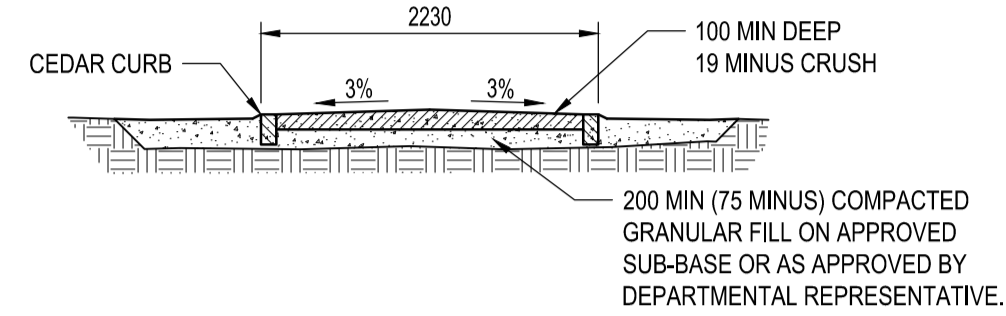


3 NORTH ABUTMENT AND STAIR ELEVATION  
S202 1:50

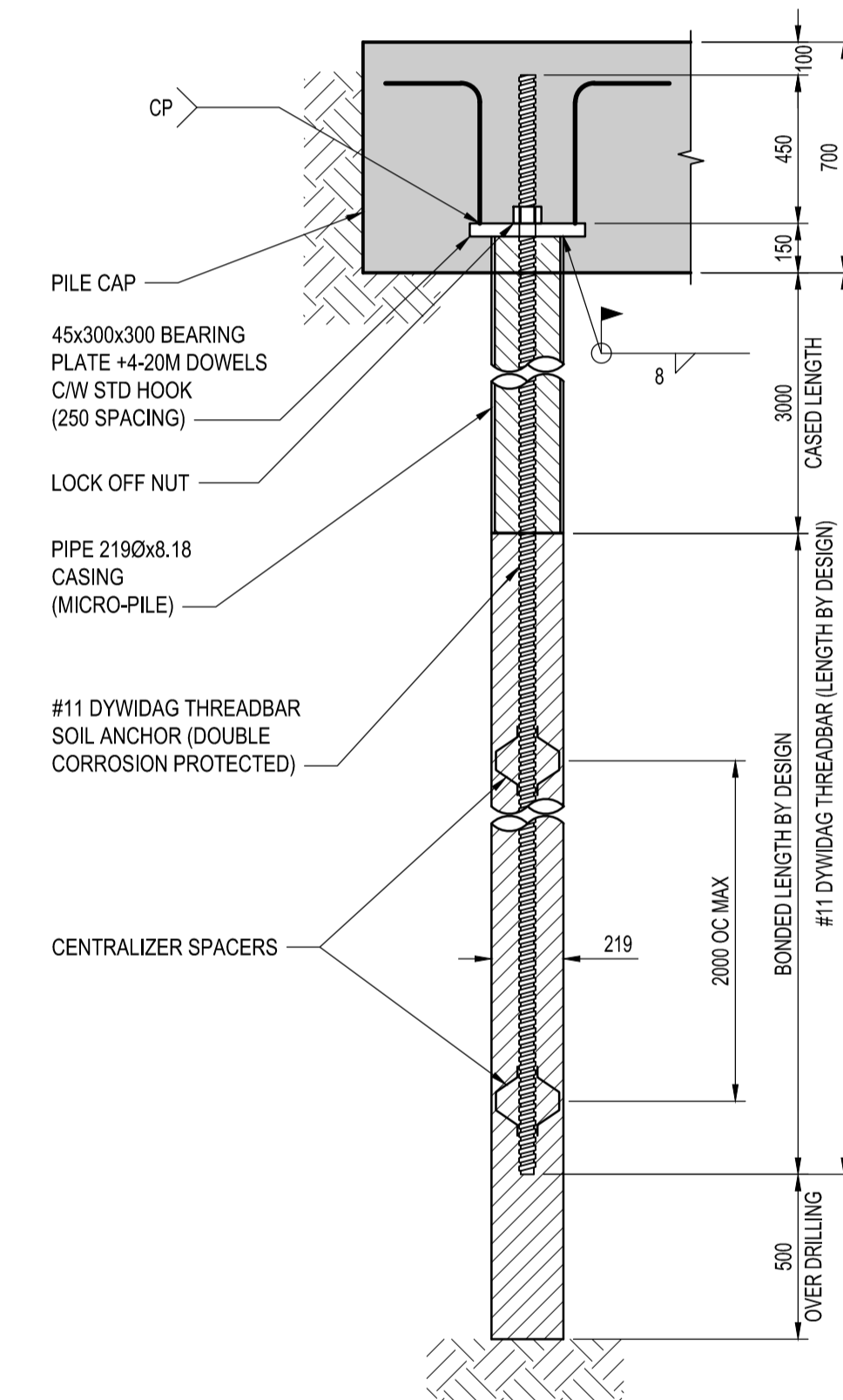
4 SOUTH ABUTMENT AND STAIR ELEVATION  
S202 1:50



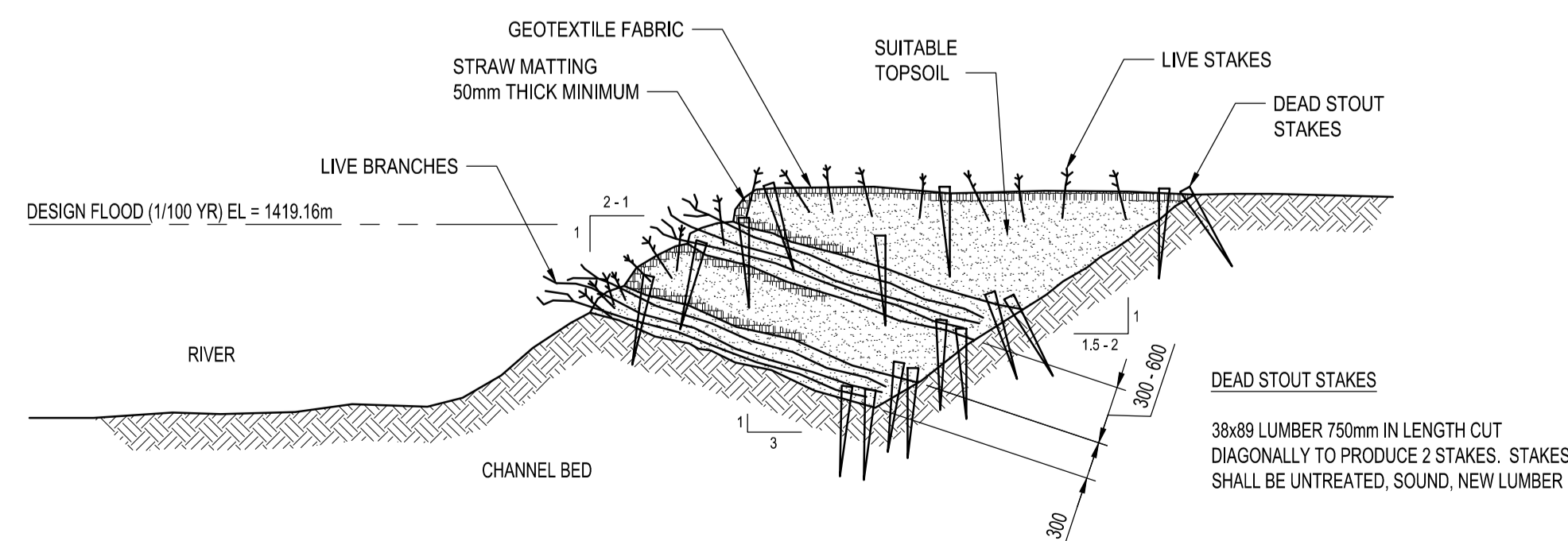
5 NORTH PILE CAP AS SHOWN SOUTH PILE CAP OPPOSITE  
PILE CAP PLAN  
S202 1:50



7 TRAIL SECTION  
S202 1:50



6 TYPICAL MICRO-PILE  
S202 1:20



8 TYPICAL VEGETATED GEOGRID SECTION  
S202 1:50

SCALE 1:20  
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SCALE IN MILLIMETRES

SCALE 1:50  
0 1000 2000 3000  
SCALE IN MILLIMETRES

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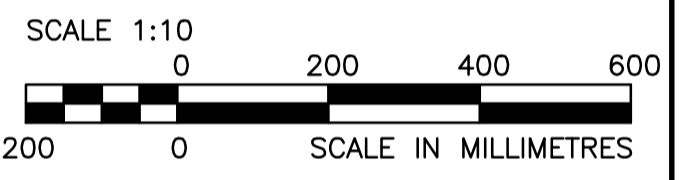
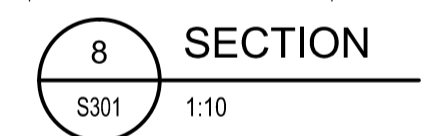
Drawing title/Titre du dessin

NORTH AND SOUTH  
ABUTMENT PLANS  
ELEVATIONS AND SECTIONS

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projet  
R.061077.001

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Client/client		

Revision no./  
La Révision  
no. 0

SCALE 1:10  
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Client/client		

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AGENCY**

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BRIDGE  
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**STEEL CONNECTION  
SECTIONS AND DETAILS**

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projet  
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La Révision  
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