

GENERAL NOTES:

1.0 GENERAL

- 1.1 DESIGN LOADS
- LIVE LOAD: PEDESTRIAN: 4.0 KPa
- 1.2 READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND DOCUMENTS. REPORT ANY CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
- 1.3 VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- 1.4 NOTIFY ENGINEER 48 HOURS IN ADVANCE FOR INSPECTION OF STRUCTURAL CONNECTIONS OR REINFORCEMENT BEFORE COVERING UP.
- 1.5 THESE DRAWINGS SHOW COMPLETED STRUCTURAL COMPONENTS OF THE BRIDGE. THE REQUIRED TEMPORARY BRACING AND SHORING TO PERFORM THE WORK SAFELY IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 1.6 ENVIRONMENTAL WORK PROCEDURES, TIMING, AND SPECIAL PRECAUTIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND LIMITATIONS OF THE FEDERAL DEPARTMENT OF FISHERIES AND OCEANS, AND THE PROVINCIAL MINISTRY OF ENVIRONMENT.
- 1.7 QUALITY ASSURANCE QUALIFICATION OF CONTRACTOR AND SUPERINTENDENT: THE CONTRACTOR SHALL BE FULLY CONVERSANT WITH ALL SAFETY PROCEDURES AND REGULATIONS RELATING TO CONSTRUCTION, AND SHALL EMPLOY STAGING AND OTHER SAFETY PROVISIONS AS SPECIFIED ELSEWHERE AND REQUIRED BY THE WORKSAFE B.C. REGULATIONS.
- 1.8 DIMENSIONS ARE IN MILLIMETRES AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

2.0 STEEL

- 2.1 ALL FABRICATED AND MISCELLANEOUS METAL TO BE GRADE 350W. UNLESS NOTED OTHERWISE.
- 2.2 STEEL TO STEEL BOLTED CONNECTIONS SHALL UTILIZE ASTM A325 TYPE 1 BOLTS COMPLETE WITH NUTS AND WASHERS, UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 2.3 WELDING SHALL BE IN ACCORDANCE WITH CSA W59.
- 2.4 6mm FILLET WELD, UNLESS NOTED OTHERWISE
- 2.5 ALL STEEL SHALL BE HOT DIP GALVANIZED TO ASTM A123M OR SPRAY METALIZED TO ANSI/AWS C2.18
- 2.6 TOUCH UP GALVANIZED SURFACES WITH MULTIPLE COATS OF ORGANIC ZINC RICH PAINT (DOD-P-21035) TO FORM A DRY FIRM THICKNESS OF 8 MILS (IN ACCORDANCE WITH ASTM-A780).

3.0 WELDING INSPECTIONS

- 3.1 ALL INSPECTIONS SHALL BE PERFORMED BY A CERTIFIED WELDING INSPECTOR REGISTERED IN THE PROVINCE OF B.C. AND PAID FOR BY THE CONTRACTOR. INSPECTION PROCEDURES SHALL BE AS OUTLINED BELOW.
- 3.2 ALL WELDS ARE TO BE VISUALLY INSPECTED. ADDITIONALLY, AT LEAST 25% OF WELDS SHALL BE ASSESSED IN DETAIL BY NON-DESTRUCTIVE METHODS CONTRACTOR SHALL BE RESPONSIBLE FOR CO-ORDINATING INSPECTIONS AND PROVIDING SUITABLE AND SAFE ACCESS TO THE WORK
- 3.3 ALL FAILURES IDENTIFIED BY THE TESTING AND INSPECTIONS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COST OF ADDITIONAL TESTING TO CONFIRM CONFORMANCE WITH SPECIFICATIONS SHALL BE BORNE BY THE CONTRACTOR.
- 3.4 SUBMIT ALL TEST REPORTS TO HEROLD ENGINEERING FOR REVIEW. DO NOT COVER MEMBERS AND THEIR CONNECTIONS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

4.0 PRECAST CONCRETE

- 4.1 PRECAST MEMBERS SHALL BE MANUFACTURED IN ACCORDANCE WITH CSA A23.4 "PRECAST CONCRETE MATERIALS AND CONSTRUCTION".
- 4.2 FIRMS MUST BE CERTIFIED IN ACCORDANCE WITH CSA A25 "QUALIFICATION CODE FOR ARCHITECTURAL AND STRUCTURAL PRECAST CONCRETE PRODUCTS".
- 4.3 REINFORCING STEEL SHALL CONFORM TO CSA SPECIFICATION G30.18, GRADE 400. IF 400R GRADE REINFORCEMENT IS USED, IT SHALL HAVE A MINIMUM ELONGATION AT RUPTURE OF 12%, FOR A 200mm GAUGE LENGTH.
- 4.4 LIFTING DEVICES SATISFACTORY TO THE ENGINEER SHALL BE PROVIDED. ONLY VERTICAL LIFTS SHALL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT SUDDEN IMPACT LOAD ON LIFTED COMPONENTS.
- 4.5 THE CONTRACTOR SHALL ENSURE THAT ALL PRECAST MEMBERS ARE CHECKED FOR SHIPPING AND HANDLING STRESSES.
- 4.6 ALL PRECAST MEMBERS SHALL BE CAST A MINIMUM OF 30 DAYS PRIOR TO ERECTION OR AT AN EARLIER STAGE SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.
- 4.7 PROVIDE A 20mm CHAMFER ON ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE.
- 4.8 MINIMUM CONCRETE COVER TO REINFORCING SHALL BE 50mm, UNLESS NOTED OTHERWISE.
- 4.9 PRECAST MEMBERS SHALL BE SUPPORTED ONLY AT POINTS DIRECTLY BELOW LIFTING INSERTS WHILE BEING STORED OR TRANSPORTED.
- 4.10 ALL PRECAST MEMBERS SHALL BE CAST A MINIMUM OF 30 DAYS PRIOR TO ERECTION OR AT AN EARLY STAGE SUBJECT TO APPROVAL BY THE ENGINEER.

5.0 CAST IN PLACE CONCRETE

- 5.1 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA A23.1 AND A23.2
- 5.2 CONCRETE MIXES SHALL CONFORM TO CAN/CSA A23.1 AND A23.2 AND SHALL HAVE THE FOLLOWING PROPERTIES:

CLASS	28 DAY STRENGTH	MAXIMUM AGGREGATE SIZE	MAXIMUM SLUMP	AIR CONTENT	EXPOSURE
ABUTMENT	30 MPa	20mm	75mm	4% TO 7%	C-1
BRIDGE DECK	35 MPa	20mm	75mm	4% TO 7%	C-1

- 5.3 CONCRETE TESTING SHALL BE CARRIED OUT BY THE CONTRACTOR IN ACCORDANCE WITH CAN/CSA A23.1 AND A23.2. THE MINIMUM NUMBER OF TESTS PERFORMED SHALL BE AS PER CSA A23.2. ADDITIONAL TESTING SHALL BE PERFORMED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PROVIDE TESTING AGENCY WITH ADEQUATE NOTICE TO PROVIDE TESTING AS REQUIRED. COST OF TESTING BY CONTRACTOR.
- 5.4 PROVIDE A 20mm CHAMFER ON ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE.
- 5.5 CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1.
- 5.6 ALL CONCRETE CURING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1. SPECIAL PRECAUTIONS SHALL BE TAKEN AS NOTED IN CSA A23.1 FOR PLACING AND CURING CONCRETE ABOVE 30°C AND BELOW 5°C.
- 5.7 MINIMUM CONCRETE COVER TO REINFORCING SHALL BE 70mm, UNLESS NOTED OTHERWISE.
- 5.8 REINFORCING STEEL SHALL CONFORM TO C.S.A. SPECIFICATION G30.18-M, GRADE 400.
- 5.9 LAP OF BARS FOR SPLICES TO BE AS FOLLOWS, UNLESS NOTED OTHERWISE: 10M BARS 300mm 15M 400. BARS TO BE STAGGERED SO THAT NOT MORE THAN EVERY THIRD BAR IS SPLICED AT ANY CROSS SECTION.
- 5.10 TOP OF EXPOSED CONCRETE SHALL HAVE A TRANSVERSE BROOM FINISH.
- 5.11 TOP OF DECK SLAB SHALL BE ROUGHENED TO THE EQUIVALENT OF ICRI CSP 8.

<u>6.0 GROUT</u>

6.1 GROUT TO BE NON SHRINK, 50MPa.

7.0 ADHESIVE ANCHORS

- 7.1 ALL ANCHORS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 7.2 UNLESS NOTED OTHERWISE ADHESIVE ANCHORS SHALL BE HILTI 'HAS' ROD. REFER TO DRAWINGS FOR ANCHOR LOCATIONS, SIZES, CENTRES AND EMBEDMENT LENGTH. USE HILTI HY200 MAX OR HILTI HIT RE500 ADHESIVE AS NOTED BELOW.

USE HILTI HIT HY200 MAX WHEN; A QUICK CURE IS REQUIRED, CONDITIONS ARE DRY, HOLES ARE HAMMER DRILLED,

HOLES ARE NOT OVER-SIZED, BASE MATERIAL TEMPERATURE IS ABOVE 5° CELSIUS.

USE HILTI HIT RE500 WHEN; EXTENDED WORKING TIME IS REQUIRED AND CURE TIME IS NOT CRITICAL, HOLES ARE DRILLED USING DIAMOND CORE, PNEUMATIC OR HAMMER DRILLS,

DEEP EMBEDMENT IS SPECIFIED, THE APPLICATION IS UNDERWATER, OR HOLES ARE OVERSIZED.

- 7.3 HOLES FOR ADHESIVE ANCHORS SHALL BE CLEANED OUT WITH HIGH PRESSURE AIR AND THEN A BRUSH PRIOR TO ANCHOR INSTALLATION.
- 7.4 INSTALLERS OF HILTI PRODUCTS SHALL HAVE RECEIVED TRAINING BY HILTI (CANADA) CORP. IN THE USE OF THE SPECIFIED PRODUCTS. THE GENERAL CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A LETTER STATING THAT THIS TRAINING HAS BEEN COMPLETED.
- 7.5 STEEL HARDWARE (BOLTS, WASHERS, NUTS, ANCHOR RODS) SHALL BE ASTM A325 TYPE 1 AND ARE TO BE GALVANIZED WITH 610 gm/m MINIMUM ZINC COATING IN ACCORDANCE WITH ASTM A123M.

8.0 ABBREVIATIONS

C.I.P. - CAST IN PLACE CLEAR CENTRELINE COMPLETE PENETRATION C/W - COMPLETE WITH DRAWING DWG. ELEVATION REV. – REVISION I.D. – INSIDE DIAMETER LONG LEG HORIZONTAL LLV – LONG LEG VERTICAL MAX. – MAXIMUM MINIMUM M.o.T. - MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE N.T.S. - NOT TO SCALE OPPOSITE PLATE RADIUS SIMILAR S.S. – STAINLESS STEEL TOP OF TYPICAL U/S - UNDERSIDE

U.N.O. – UNLESS NOTED OTHERWISE

WP - WORK POINT

DRAWING LIST

DRAWING No.	<u>DESCRIPTION</u>
1473-010-S01	GENERAL NOTES
1473-010-S02	SITE PLAN
1473-010-S03	GENERAL ARRANGEMENT SHEET 1
1473-010-S04	GENERAL ARRANGEMENT SHEET 2
1473-010-S05	STEEL GIRDERS
1473-010-S06	CAST-IN PLACE DECK & BALLAST WALL
1473-010-S07	CAST-IN PLACE ABUTMENT & MISCELLANEOUS DETAILS

SUB CONSULTANT ISSUES No. DATE YYY.MM.DD ISSUED FOR No. DATE YYY.MM.DD ISSUED FOR ต็No. DATE ΥΥΥ.ΜΜ.DD ISSUED FOR A 2018.01.15 40% REVIEW g B | 2018.01.24 | 90% REVIEW C 2018.02.20 INFORMATION ONLY © Copyright reserved. This drawing remains the exclusive property of Herold Engineering Limited and may not be reused or reproduced without written consent of Herold Engineering Limited

ADS DRAFTING REVIEW DESIGNED DESIGN REVIEW

ENGINEERING

3701 Shenton Rd, Nanaimo, BC V9T 2H1

Tel: 250-751-8558 Fax: 250-751-8559

Email: mail@heroldengineering.com

GENERAL NOTES

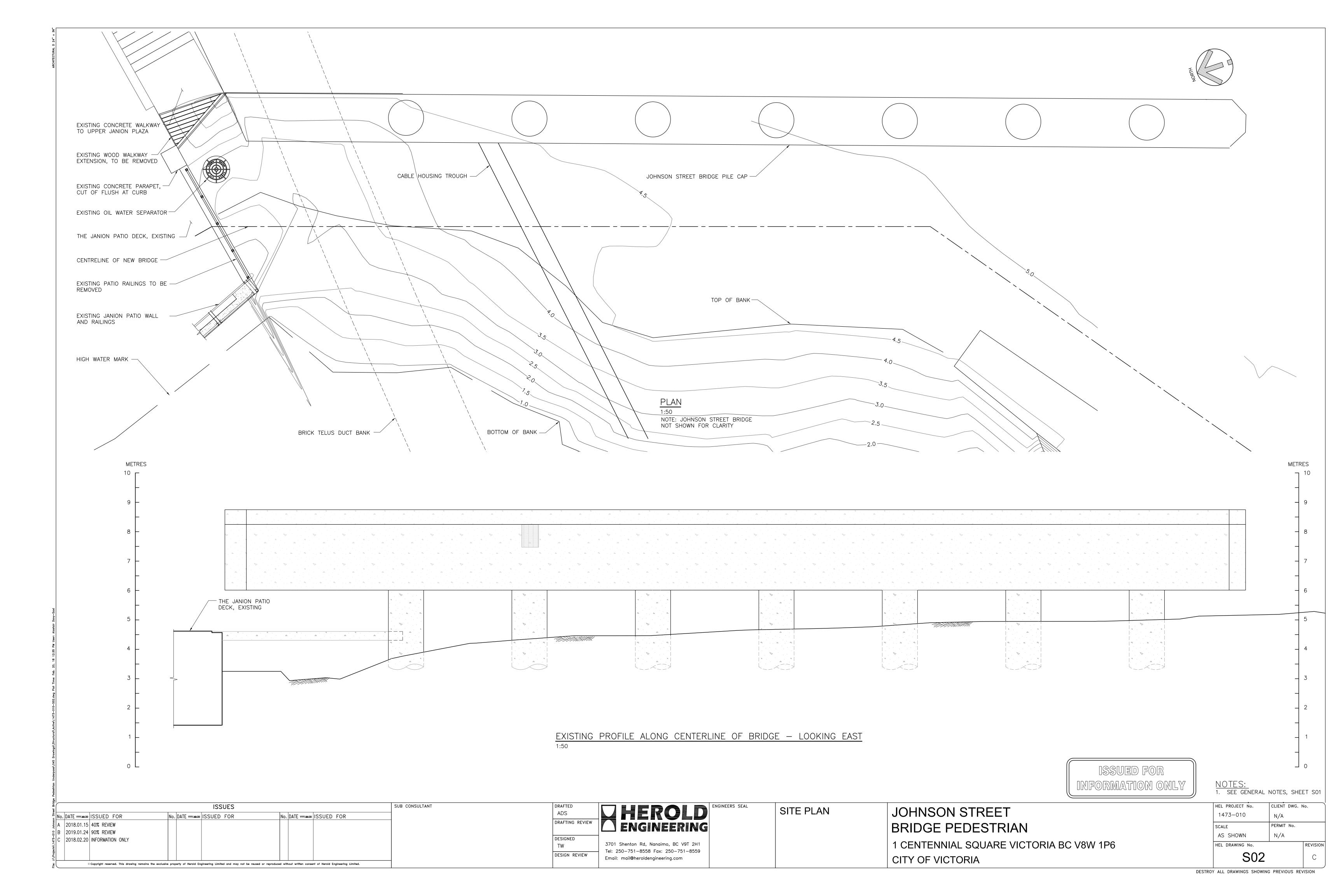
JOHNSON STREET **BRIDGE PEDESTRIAN**

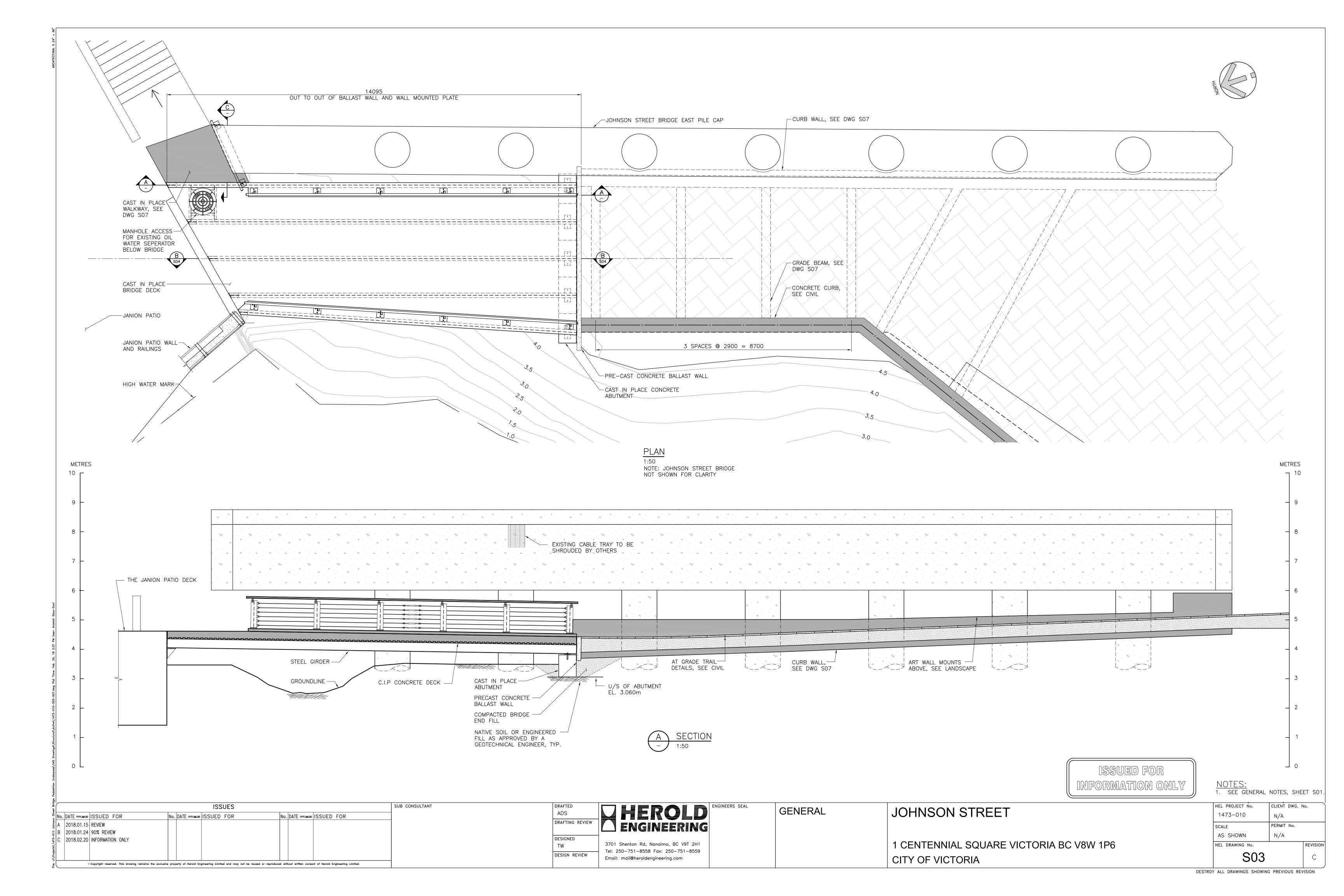
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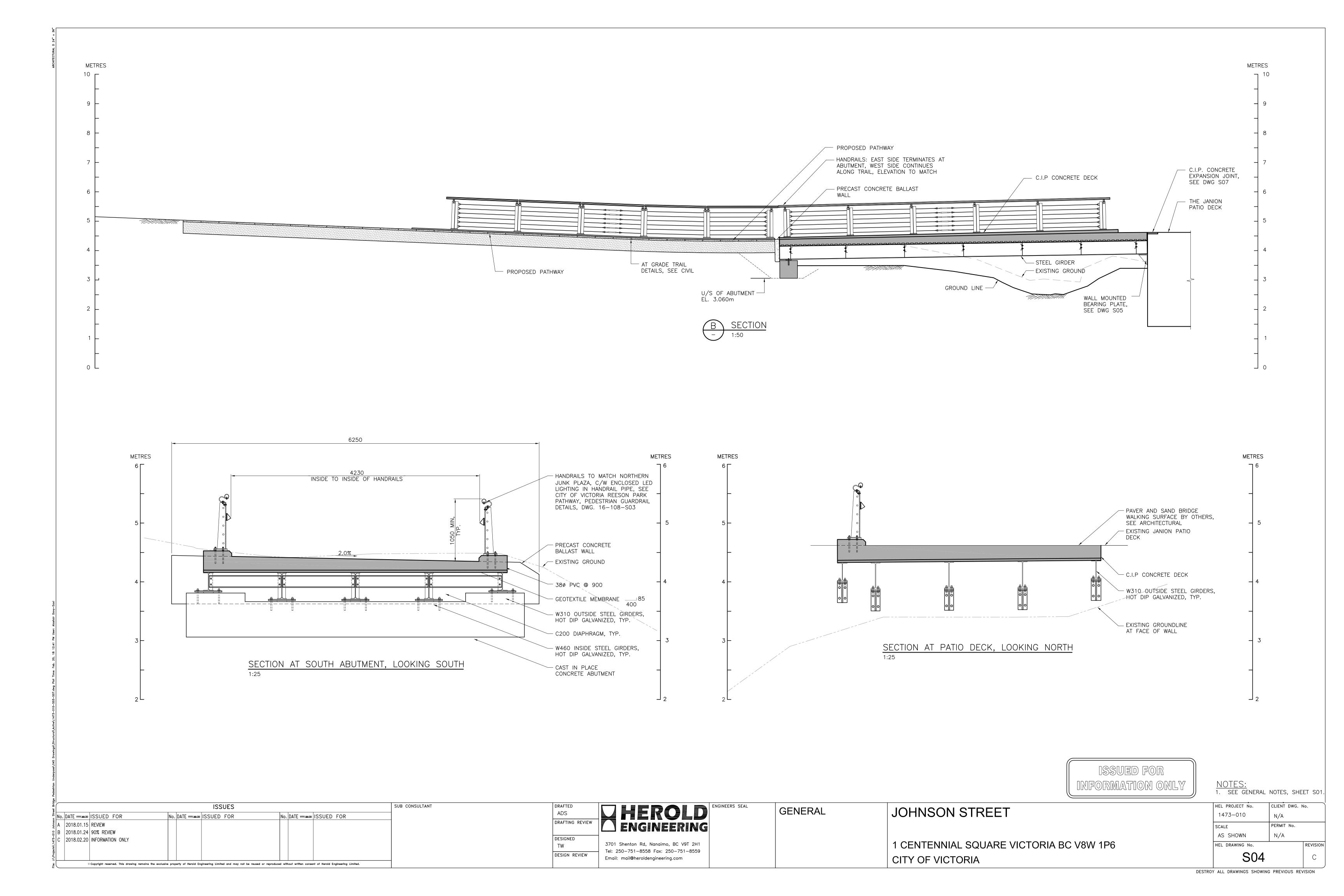
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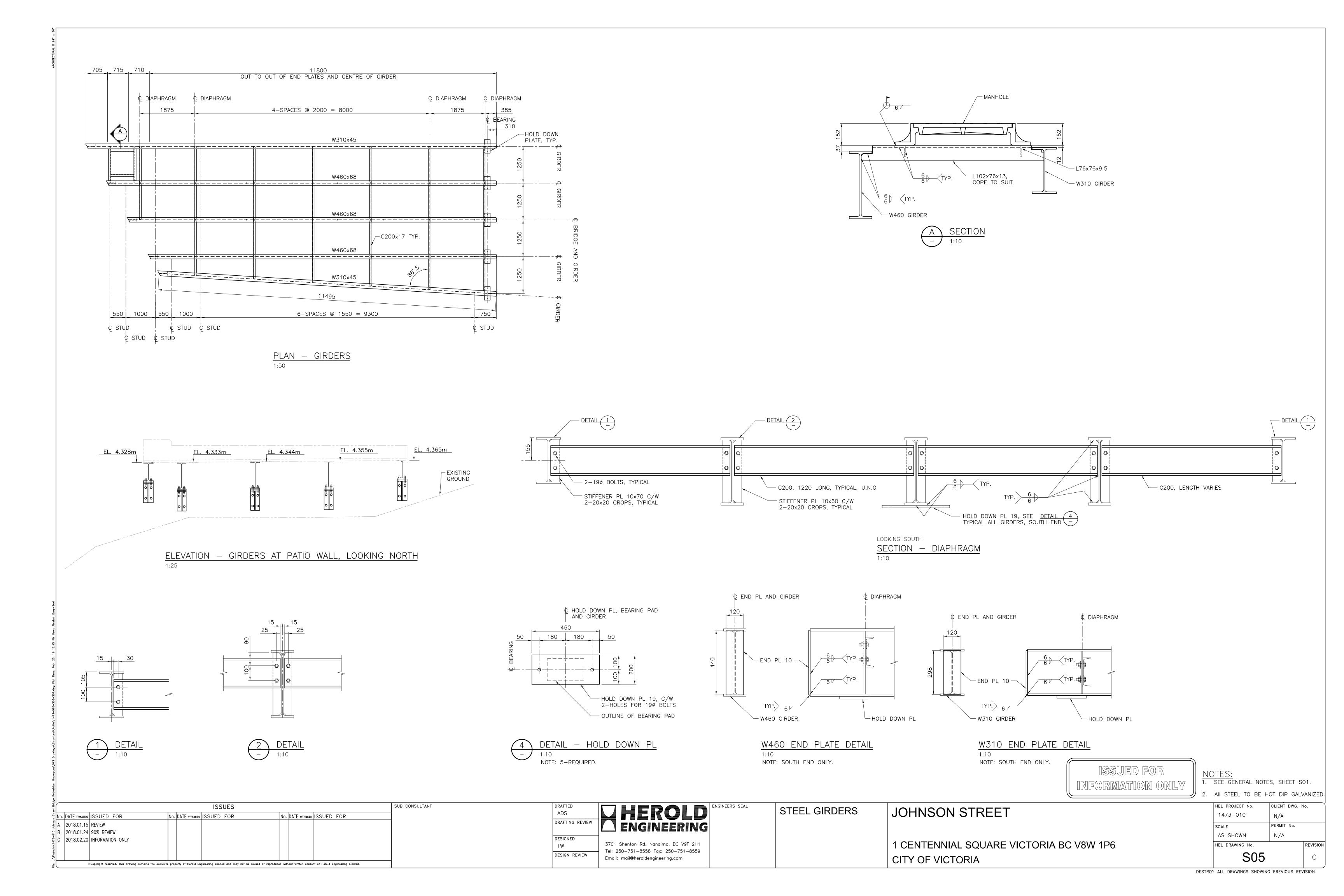
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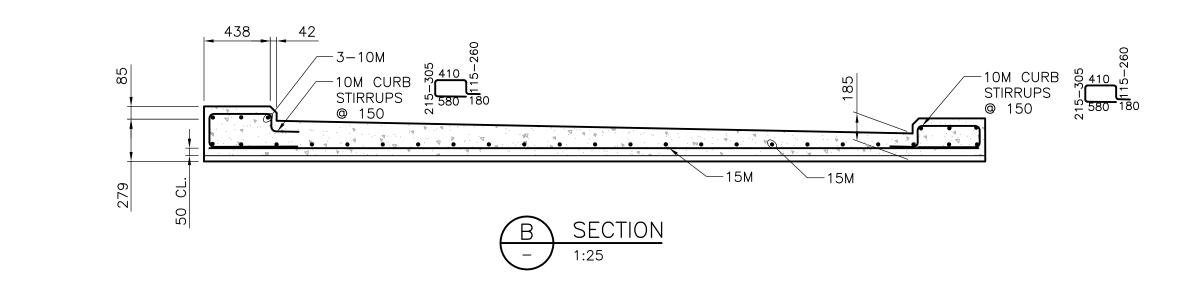
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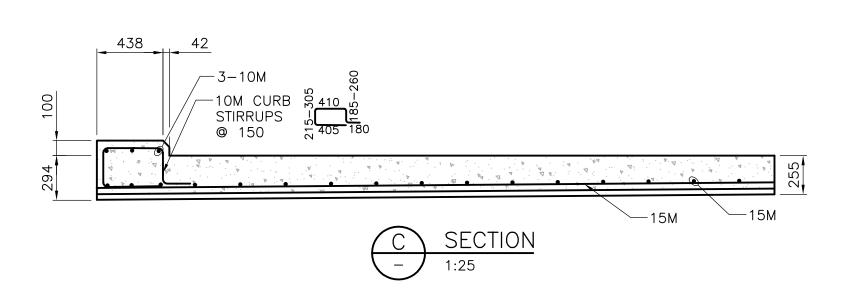


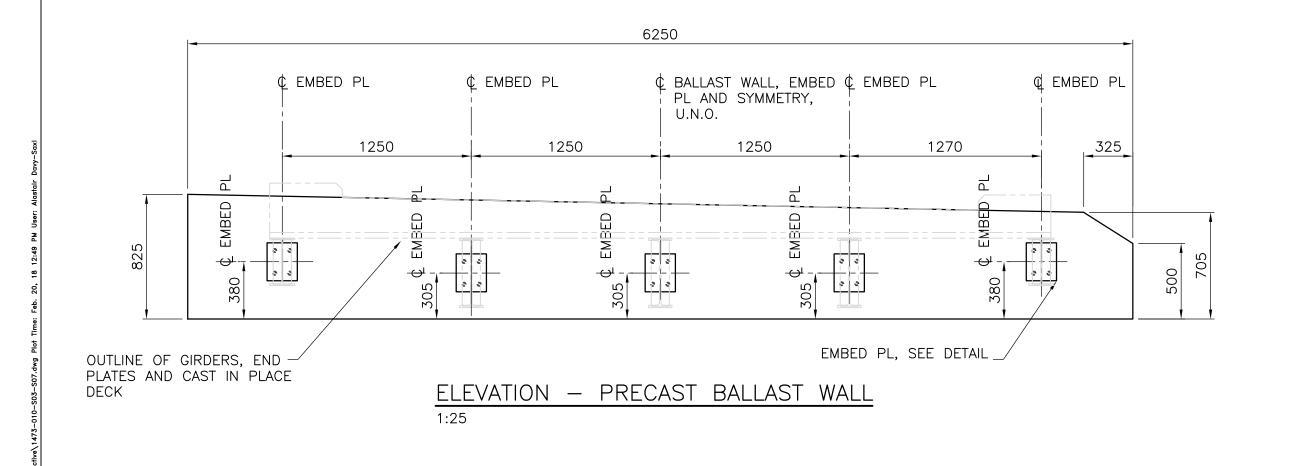


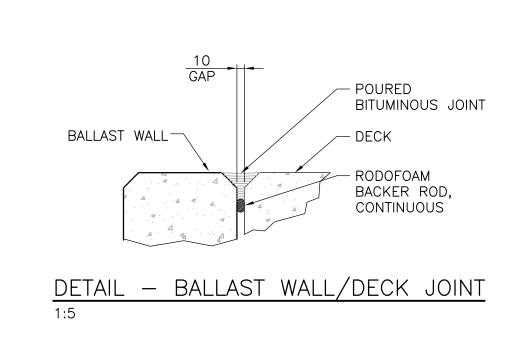


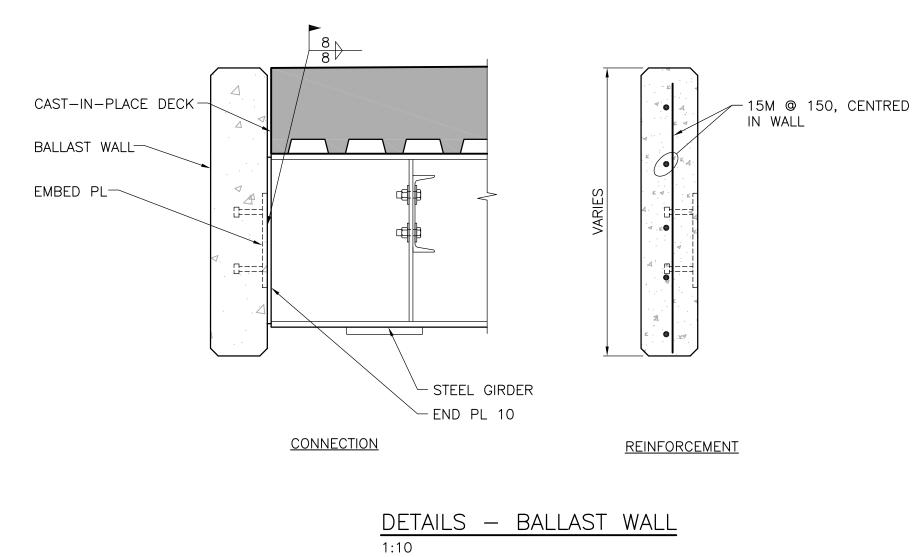


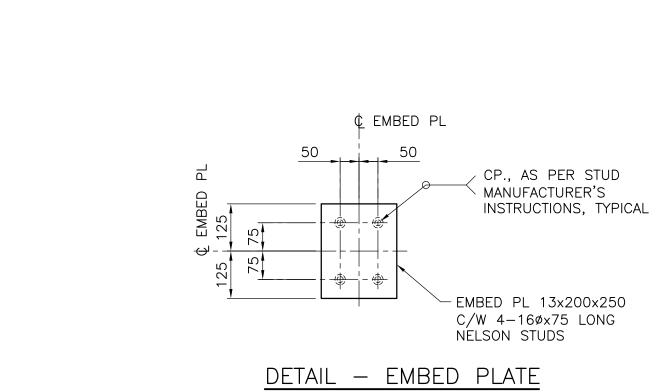












DETAIL — EMBED PLATE

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NOTE: 5-REQUIRED.

NOTES: 1. see general notes, sheet so1.

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DRAFTED	
ADS	MHEROL
DRAFTING REVIEW	ENGINEER
DESIGNED	
TW	3701 Shenton Rd, Nanaimo, BC V9 ⁻
DESIGN REVIEW	Tel: 250-751-8558 Fax: 250-751-
DESIGN REVIEW	Email: mail@heroldengineering.com

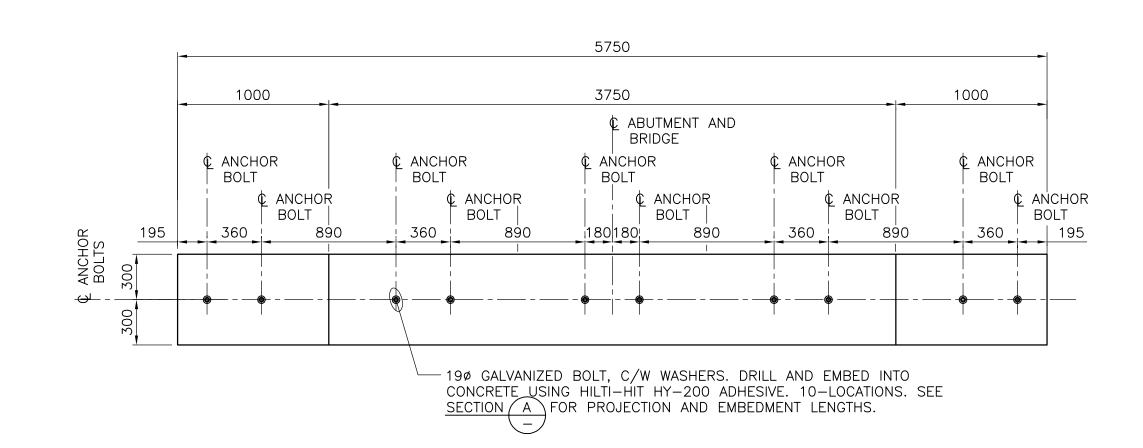
ROLD ENGINEERS SEAL Nanaimo, BC V9T 2H1 8 Fax: 250-751-8559

CAST IN PLACE DECK | JOHNSON STREET 1 CENTENNIAL SQUARE VICTORIA BC V8W 1P6

CITY OF VICTORIA

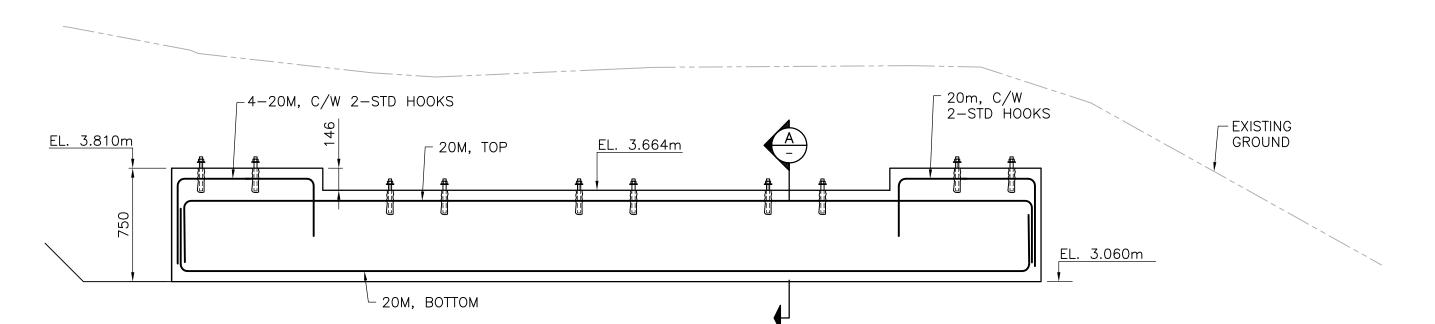
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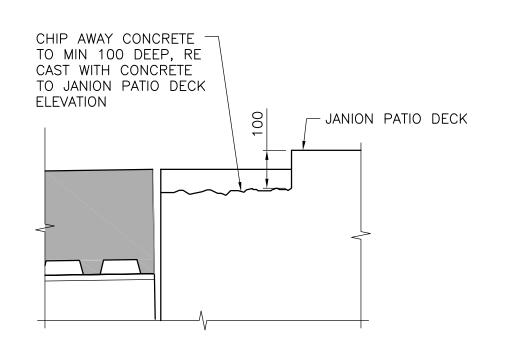
PLAN — CAST IN PLACE ABUTMENT
1:25

— ADHESIVE ANCHOR, EMBED 150 MIN, PROJECT 45 MIN 60 CL. — 4—20M TOP, HOOK BOTH ENDS 450 -15M @ 300 2-15M EACH SIDE — 15M @ 300, 15M @ 200 WHERE LAP LESS THAN 400 _ 500 — 4—20M BOTTOM, HOOK BOTH ENDS 450 SECTION - SOUTH ABUTMENT



ELEVATION - CAST IN PLACE ABUTMENT, LOOKING SOUTH

NOTE: STANDARD REINFORCEMENT NOT SHOWN.



DETAIL — C.I.P EXPANSION JOINT
1:25

INFORMATION ONLY

NOTES:

1. SEE GENERAL NOTES, SHEET SO1.

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ADS DRAFTING REVIEW DESIGNED TW DESIGN REVIEW Email: mail@heroldengineering.com

HEROLD
ENGINEERING 3701 Shenton Rd, Nanaimo, BC V9T 2H1 Tel: 250-751-8558 Fax: 250-751-8559

CAST-IN PLACE

JOHNSON STREET

1 CENTENNIAL SQUARE VICTORIA BC V8W 1P6 CITY OF VICTORIA

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