

Addendum #2

Contract Title: Dore River – Bank Erosion Protection

Ref #: 2341-21107-01

Author: Ethan Hoffman, AScT, BCME

Date: March 20, 2024

Item #	Section	Description
Contract Amendments		
1.	31 37 10 SS Riprap	<p>Paragraph 3.1.5 Delete: <i>Stage construction of excavation and placement to ensure compliance with Environmental Protection Requirements. Do not excavate below the water surface.</i></p> <p>Replace with: <i>Stage construction of excavation and placement to ensure compliance with Environmental Protection Requirements and Permits.</i></p>
2.	Contract Drawing 401	<p>Restoration Guidelines – Maintenance section Delete: <i>Minimum 80% survival rate of planted stock is required. A 5-year maintenance and monitoring program must be conducted for the planted area with QEP guidance.</i></p> <p>Replace with <i>A 1-year maintenance and monitoring program must be conducted for the planted area with QEP guidance during planning and implementation. 100% survival rate of planted stock is required after 1 year. Survival survey to be completed and documented by the Contractor's QEP.</i></p>
Clarifications		
1	<p>MOTI has granted the permit for installation of the rip rap within their right of way. See attached permit.</p> <p>NOTE: MOTI has one outstanding permit to grant for use of ROW on Dorval Rd for river access and material staging.</p>	
2	<p>Note that the reference document <i>Environmental Management Plan, McElhanney Ltd. March 2022</i>, was written at a time when the work was planned to be completed during winter. As such, there are some outdated references relating to frozen water, winter conditions etc. Reminder that the information included in the Contract Documents relating to schedule takes precedence over the Environmental Management Plan.</p>	

Questions and Answers	
Q1	Can you clarify Supplementary Contract Specifications 3.1.5 "Do not excavate below the water surface".
A1	See contract modification above.
Q2	The majority of this project occurs along the alignment of the current river thalweg. Please clarify the river diversion and isolation requirements so proponents have a level bidding field.
A2	It is anticipated that site isolation will be required to complete the work. The work methods are to be determined by the Contractor and their Qualified Environmental Professional in compliance with the Environmental Management Plan (reference document), Contract Documents, applicable permits, and legislation. A river diversion is not anticipated.
Q3	Does excavation within the current river thalweg need to occur in the dry?
A3	No. It is anticipated that the Authorization from the Department of Fisheries and Oceans will not require all work to be done in the dry, so long as work methods are in compliance with the Environmental Management Plan (reference document), Contract Documents, applicable permits, and legislation.
Q4	Please confirm the 5-year planting maintenance timeframe and 80% survival rate as noted on Drawing No. 401. A typical planting maintenance program is 1 to maximum 2 years.
A4	<i>See contract clarification above</i>

List of attachments:

- 1) 2024-00974 Works Road Works
- 2) H1080-Work Notification and Lane Closure Request



PERMIT TO CONSTRUCT, USE, AND MAINTAIN WORKS WITHIN THE RIGHT-OF-WAY OF A PROVINCIAL PUBLIC HIGHWAY

PURSUANT TO TRANSPORTATION ACT AND/OR THE INDUSTRIAL ROADS ACT AND/OR THE MOTOR VEHICLE ACT AND/OR AS DEFINED IN THE NISGA'A FINAL AGREEMENT AND THE NISGA'A FINAL AGREEMENT ACT.

BETWEEN:

The Minister of Transportation and Infrastructure

Fort George District
360-1011 Fourth Avenue
Prince George, British Columbia V2L 3H9
Canada

("The Minister")

AND:

Regional District of Fraser - Fort George
155 George Street
Prince George, British Columbia V2L 1P8
Canada

("The Permittee")

WHEREAS:

- A. The Minister has the authority to grant permits for the auxiliary use of highway right of way, which authority is pursuant to both the Transportation Act and the Industrial Roads Act, the Motor Vehicle Act, as defined in the Nisga'a Final Agreement and the Nisga'a Final Agreement Act;
- B. The Permittee has requested the Minister to issue a permit pursuant to this authority for the following purpose:

For the use of the highway right of way for bank stabilization project along the Dore River near Dorval Road River Access (Site C Plan - Drawing No. 204) and Dyke Road (Site F Plan - Drawing No. 206) in McBride BC, as shown on drawing titled Dore River - Bank Erosion Protection (Project #2341-21107-01) attached.
- C. The Minister is prepared to issue a permit on certain terms and conditions;

ACCORDINGLY, the Minister hereby grants to the Permittee a permit for the Use (as hereinafter defined) of highway right of way on the following terms and conditions:

- 1. That the construction and maintenance of the said works is carried out to the satisfaction of the Regional Executive Director.
- 2. That, before opening up any highway or interfering with any public work, intimation in writing of the intention to do so must be given to the District Official at least seven days before the work is begun.
- 3. That any person appointed by the Regional Executive Director for the purpose shall have free access to all parts of the works for the purpose of inspecting the same.
- 4. That the construction of the said works shall not be commenced on or before **March 14, 2024**, and shall be prosecuted with due diligence and to the satisfaction of the Regional Executive Director and shall be completed on or before **March 14, 2025**.



5. (a) The highway must at all times be kept open to traffic. The roadway must be completely restored for traffic as soon as possible. At all times the permittee must safeguard the traveling public.
- (b) That, unless with the consent of the Regional Executive Director no more than forty-five (45) metres of pipe-track or other excavation in any public highway is to be kept open at one time.
- (c) All excavation work must be carried out in accordance with the BC Occupational Health and Safety Regulation. Care shall be taken to protect adjacent property.
- (d) That all excavations shall be carefully backfilled with suitable material, which is to be tamped into place, and that the permittee shall restore the surface of the road and shoulders and ditches at their own expense. All surplus material is to be removed from the Provincial Crown lands or deposited where and as required by the District Official of the Ministry of Transportation and Infrastructure. The permittee is financially responsible for any maintenance works required on said ditch for a period of one year. The Ministry will carry out the necessary remedial work and invoice the permittee monthly.
- (e) The pipeline crossing installation is to be placed by drilling and (or) jacking in such a manner as to afford minimum grade settlement. No water jetting will be permitted. That where, in the opinion of the District Official, an excavation or opening for a pipeline crossing installation could be made which would not be detrimental to the highway or its users, permission will be granted for said works. On throughways, freeways, and main highways no open cuts will be allowed.
- (f) That all pipelines in excess of a nominal diameter of 5 cm., whether gas, oil, water, pressure sewers, conduits, etc., shall be installed where indicated by the District Official, encased in a steel casing-pipe or conduit-pipe of sufficient strength to withstand all stresses and strains resulting from the location, such casing to extend the full width of the highway right-of-way if deemed necessary to the District Official. The ends of the casing-pipe shall be suitably sealed and, if required, properly vented above the ground with vent-pipes not less than 5 cm. in diameter and extending not less than 1.2 metres above ground surface. Vent-pipes shall be connected 30 cm. from the ends of the casing-pipe, and the top of each vent shall be fitted with a turn-down elbow, properly screened and equipped with identification markers.
- All pipelines of non-rigid material, i.e., plastic or copper, of any diameter, shall be cased, or embedded in sand.
- The inside diameter of the casing-pipe shall be at least 25 percent larger than the outside diameter of the pipeline. The casing-pipe shall be installed with an even bearing throughout its length, and in such a manner so as to prevent leakage, except through the vents.
- The top of the casing-pipe, or the pipeline where casing is not required, shall be located as directed by the District Official, and shall in no case be less than 1.2 metres below the surface of the highway and not less than 75 cm below the highway ditches. Pipelines must not obstruct drainage structures or ditches or interfere with traffic on the highway or with highway maintenance.
6. That where the work for which permission is hereby granted comes in contact with any bridge, culvert, ditch, or other existing work, such existing work must be properly maintained and supported in such manner as not to interfere with its proper function during the construction of the new work, and on the completion of the new work the bridge, culvert, ditch, or other existing work interfered with shall be completely restored to its original good condition.
7. That, when necessary, all excavations, materials, or other obstructions are to be efficiently fenced, lit, and watched, and at all times every possible precaution is to be taken to ensure the safety of the public.
8. The Permittee shall indemnify and save harmless the Ministry, its agents and employees, from and against all claims, liabilities, demands, losses, damages, costs and expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Ministry, its agents and employees, or any of them at any time or times, whether before or after the expiration or termination of this permit, where the same or any of them are based upon or arise out of or from anything done or omitted to be done by the Permittee, its employees, agents or Subcontractors, in connection with the permit.
9. That the permission herein granted to use and maintain the works is only granted for such times as the land or public work in, upon, or over which the said works are constructed is under the jurisdiction of the Minister of Transportation and Infrastructure. This permission is not to be construed as being granted for all time and shall not be deemed to vest in the permittee any right, title or interest whatsoever in or to the lands upon which the works are constructed. Should the lands affected at any time be included within that of an incorporated municipality or city, this permission shall become void, unless the works are on a highway duly classified as an arterial highway pursuant to Section 45 of the Transportation Act.
10. That after receiving notice in writing of the intention on the part of the Provincial Government to construct, extend, alter, or improve any public work, the person or persons responsible for the maintenance of the works for which permission is hereby granted shall within six weeks move or alter such work at their own expense to such new positions or in such manner as may be necessitated by the construction, extension, alteration, or improvement proposed to be carried out by the Provincial Government.
11. That while reasonable care will be taken on the part of the Provincial Government to do as little damage as possible to any private work in the carrying-out of the construction, extension, alterations, improvement, repair, or maintenance of any public work adjacent thereto, the Provincial Government can accept no responsibility for any kind of such damage.



12. That the permission hereby granted to construct, use, and maintain work is granted without prejudice to the provisions of the Transportation Act, or other Acts governing Crown lands and public works or their use by the public.
13. That this permission shall be in force only during such time as the said works are operated and maintained by the Permittee, to the entire satisfaction of the Regional Executive Director.
14. That the Ministry will not be responsible for grade changes on accesses caused by reconstruction of any Provincial highway.
15. This permit is valid only for the specific works stated herein. Any alterations or additions must be covered by a separate permit.
16. This permit may be canceled, at the discretion of the Minister, without recourse, should the permittee fail to comply with all the terms of the permit. Thirty days notice will be given before cancellation.
17. When the requirements of the Ministry necessitate use of the said lands for Provincial purposes, at the discretion of the Minister, this permit may be cancelled.
18. That these works shall be identified with this permit number in a manner satisfactory to the District Official of the Ministry of Transportation and Infrastructure.
19. As a condition of this permit, the permittee unconditionally agrees with the Ministry of Transportation and Infrastructure that the permittee is the prime contractor or will appoint a qualified prime contractor, as described in Section 118 of the Workers Compensation Act, for the purposes of the work described by this permit, at the work location described in this permit, and that the permittee or designated prime contractor will observe and perform all of the duties and obligations which fall to be discharged by the prime contractor pursuant to the Workers Compensation Act and the Occupational Health and Safety Regulation.
20. The permittee is advised and acknowledges that the following hazards may be present at the work location and need to be considered in coordinating site safety: overhead hazards, particularly electrical or telecommunications lines; buried utilities, particularly electrical, telecommunication, and gas lines; traffic, danger trees, falling rocks, and sharp or infectious litter.
21. Any works within the Ministry right-of-way that fall within the scope of "engineering" under the Engineers and Geoscientists Act will be performed by a Professional Engineer, and shall comply with this Ministry's "Professional Assurance Guidelines". The Guidelines can be viewed on the Ministry's website at <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2023/t01-23.pdf>
22. The permittee is responsible for preventing the introduction and spread of noxious weeds on the highway right-of-way as defined by the British Columbia Weed Control Act and Weed Control Regulation.
23. The field supervisor for the Permittee and Contractor is to have a copy of this permit on-site during field operations and be aware of and adhere to all Permittee conditions.
24. Prior to the commencement of works, a Work Notification/Lane Closure Request and Approval form (H1080) must be submitted to and approved by the Ministry.

The Permittee is to contact Mitch Lamming, Area Roads Manager (250 649-7818) Mitch.Lamming@gov.bc.ca a minimum of ten (10) days prior to the commencement of the work to notify the start date.

Necessary lane or road closures shall require Ministry approval prior to public advertisement. All necessary traffic control shall be the responsibility of the Permittee and all works covered by this permit shall conform to the requirements of the Ministry of Transportation and Infrastructure Traffic Control Manual for Works on Roadways and Occupational Health and Safety Regulation.

The Permittee shall, at their cost, supply, erect, and maintain standard traffic control devices in accordance with the Ministry of Transportation and Infrastructure Traffic Control Manual for Works on Roadways.

Properly equipped trained and experienced traffic control person(s) are required to control traffic during periods of alternating traffic or at any time where equipment, work crews, or materials interfere with the traffic flow.
25. Permittee is to call BC OneCall at 1-800-474-6886 or by cellular at *6886 prior to the commencement of work.
26. This permit in no way grants exclusive use to the Permittee for any portion of the right of way.
27. Permittee is responsible for ensuring that all works are contained to the highway right of way. Any works located within private property must have the owner's permission.
28. Reinstatement in a timely and professional manner of drainage, roadway, and roadside facilities is required within two (2) days of disturbing the facilities.
29. The Permittee must ensure that the appropriate insurance for the proposed works and equipment is in place prior to beginning construction on the site.
30. The permittee will be responsible to notify and gain the approval of utility companies in advance of works and ensure that no damage is done to any existing utilities.



31. This Permit in no way relieves the owner or occupier of the responsibility from adhering to all other legislation, including zoning, and other land use bylaws of a municipality or regional district.
32. Sites are to be reseeded to standards set out in the current version of Standard Specifications for Highway Construction.
33. If any BCLS survey posts are removed, moved, or damaged during construction they must be replaced by a registered B.C. Land Surveyor at the expense of the Permittee.
34. The Permittee must ensure that the most current editions of the following standards and specifications, manuals, and guides are utilized and complied with during the installation, operation, and maintenance of the works:
- Ministry Standard Specifications For Highway Construction
 - Ministry Interim Traffic Management Manual for Work on Roadways
35. The Permittee will ensure that the works do not, impair, impede or otherwise interfere with;
- I. public passage on the Highways;
 - II. the provision of highway maintenance services by the Province, or by its servants, contractors, agents or authorized representatives of the Province in connection with the Highways; or
 - III. the operation of the Highways.
36. Machines with steel tracks or flat steel pads are not allowed within the public road right of way at any time. Only rubber tired equipment may be used on the pavement or on shoulders of paved public roads.
37. It is the responsibility of the Permittee to ensure that all equipment and vehicles crossing Provincial highways or side roads have the proper approvals and insurance as required and issued by the Commercial Vehicle Safety and Enforcement Division. For permits or inquiries please contact the Provincial Permit Centre at 1-800-559-9688.
38. Permittee is to adhere to all seasonal load restrictions, where applicable. Current seasonal load restrictions can be viewed at <http://www.th.gov.bc.ca/bchighways/loadrestrictions/loadrestrictions.htm>
39. In accordance with Sections 000.03 Non-Ministry Developments on Ministry Land or That are Intended to Become Ministry Assets and 165.20 Archaeological and Paleontological Discoveries of the Design Build Standard Specification for Highway Construction - In the event that any item of archaeological, heritage, historical, cultural or scientific interest is found on the project site, the following Chance Find Procedure shall apply:
- Such item(s) shall remain the property of the Province and the Permittee shall, on making or being advised of such a find, immediately cease operations in the affected area, minimize activities which create ground disturbance in and adjacent to the affected area, and notify the District Official and the Archaeology Branch of the British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development. Work shall not resume within 30 m of the discovery site until an appropriate directive has been received from that agency.
- To protect archaeological and paleontological sites that are situated within or adjacent to a project site, the Permittee may be required to use a variety of mitigative measures, including but not limited to drainage or erosion control, slope stabilization measures, or erecting fences or other suitable barriers to protect archaeological or paleontological sites that are situated within or adjacent to a project site. These measures, with any negotiated extensions of time for completion of the Works they require, will be determined and adopted at the discretion of the District Official. The costs associated with such mitigative measures will be borne by the Permittee.
- A buffer zone, in which no land alteration or other activity is permitted, may be required to ensure adequate site protection. The width of this buffer zone shall be determined by the District Official in consultation with a representative of the Archaeology Branch of the British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The Permittee shall be responsible for the actions of employees and subcontractors with respect to site vandalism and the unlicensed collection of artifacts from Designated archaeological sites in and around the work location.
- The Permittee shall ensure that all workers and Subcontractors are fully aware of these requirements and processes.
40. All work is to be done during daylight hours. No work shall occur during hours of darkness or during periods of inclement weather. Public road must be clear of any equipment or activity that may impede winter road maintenance on Ministry maintained roads during winter snowstorms or inclement weather.
41. This permit does not allow for an open cut trench or bored crossing under public road right of way. No work shall impact the travelled portion of the highway.
42. No frozen material or clay shall be used in the backfill.
43. Material excavated out of the embankment is to be replaced with clean granular material that has less than 5% fines (25mm IGB



or WGB). A compaction report is to be provided, compacted to 100% of standard proctor.

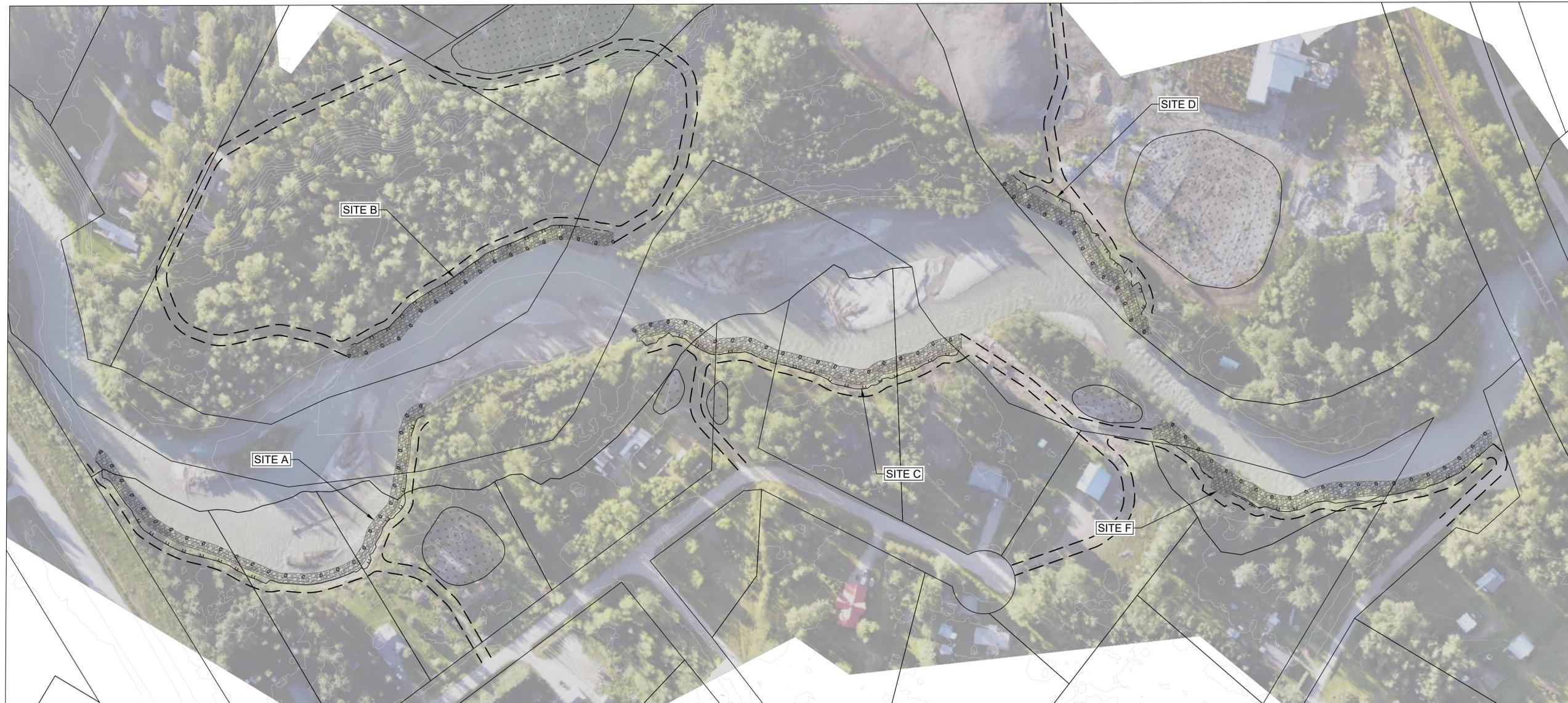
- 44. The Permittee shall be held responsible for any damage to the highway resulting from the permitted work. All highway drainage works are to be restored to their original or better condition.
- 45. All work is to be carried out to the satisfaction of the District Manager, Ministry of Transportation and Infrastructure. The Ministry reserves the right to have repairs carried out (if the Permittee fails to comply with the clauses above) and to bill the Permittee for the full cost of any such repairs or clean-up if found necessary.
- 46. Some of the permit activities may take place within areas with the potential to contain archaeological sites protected by the Heritage Conservation Act. The applicant should be aware of the possibility that previously unrecorded archaeological material that is protected under the Heritage Conservation Act may be encountered. This would most likely be indicated by the presence of areas of dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artifacts such as arrowheads and other stone tools, or even buried human remains. If such material is encountered during the course of fuel treatment activities, a Heritage Conservation Act Permit may be needed before further activity is undertaken. This may involve the need to hire a qualified archaeologist to monitor the work. Please contact the Archaeology Branch immediately at (250) 953-3334 if archaeological site deposits are encountered on the treatment areas.

The rights granted to the Permittee in this permit are to be exercised only for the purpose as defined in Recital B on page 1.

Dated at Prince George, British Columbia, this 14 day of March, 2024

Terrell Balan
Development Officer
On Behalf of the Minister

REGIONAL DISTRICT OF FRASER-FORT GEORGE DORE RIVER - BANK EROSION PROTECTION MCBRIDE, BC



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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ORIGINAL DWG SIZE: ANS D (22" x 34")

McElhanney

Suite 12
566 North Nechako Road
Prince George BC
Canada V2K 1A1
T 250 561 2229

DRAFT

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REGIONAL DISTRICT OF FRASER-FORT GEORGE
MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
COVER PAGE**

Project Number
2341-21107-01

Rev.
PC

Drawing No.
000

Project Number
2341-21107-01

Rev.
PC

1. HYDROTECHNICAL DESIGN PARAMETERS

1.1. Q200 DESIGN FLOW: 186 m³/s

2. GENERAL INSTRUCTIONS TO CONTRACTOR

- 2.1. THE LOCATION AND SIZE OF EXISTING UTILITIES AND SERVICES, AS SHOWN ON THE DRAWINGS IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL EXPOSE AND VERIFY THE EXACT LOCATION AND SIZE OF THESE INSTALLATIONS AND SHALL NOTIFY THE CONSULTANTS OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS.
- 2.2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SERVICES. ANY DAMAGES SUFFERED BY THESE UTILITIES WHICH MAY BE ATTRIBUTED TO THE CONTRACTORS OPERATIONS, SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
- 2.3. WHEN WORKING ON EXISTING PAVEMENT WHICH WILL BE RETAINED FOR FUTURE USE, THE CONTRACTOR SHALL EXERCISE CARE NOT TO CAUSE ANY DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE RETURNED TO EQUIVALENT CONDITION TO THAT EXISTING PREVIOUS AT THEIR EXPENSE AND TO THE SATISFACTION OF THE CONSULTANT.
- 2.4. THE CONTRACTOR SHALL USE ONLY NEW AND APPROVED MATERIALS AND SHALL NOT SUBSTITUTE ANY MATERIALS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CONSULTANT
- 2.5. ALL SURVEY MONUMENTS, PROPERTY PINS, AND PROJECT PRIMARY SURVEY CONTROL PINS, SHALL BE PROTECTED DURING ALL STAGES OF CONSTRUCTION. ANY DAMAGE SUFFERED BY THE MONUMENTS OR PINS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- 2.6. EXISTING PARKING AREAS, ON-SITE AND OFF-SITE ROADS MUST BE KEPT CLEAN. STREET, ROAD AND PARKING AREA CLEANING SHALL BE DONE BY THE CONTRACTOR AT HIS EXPENSE.
- 2.7. DISTURBANCE TO EXISTING LANDSCAPING OR SURFACE IMPROVEMENT, ATTRIBUTABLE TO THE CONTRACTOR'S OPERATION SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE. SUCH REPAIR SHALL BE CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT AND THE REGIONAL DISTRICT OF FRASER-FORT GEORGE.
- 2.8. THE CONTRACTOR SHALL NOT ENTER UPON ADJACENT PROPERTIES DURING THE COURSE OF CONSTRUCTION WITHOUT THE PRIOR APPROVAL OF THE PROPERTY OWNER. IF THE CONTRACTOR DOES CAUSE DAMAGE TO ADJOINING PROPERTY THEY SHALL IMMEDIATELY REPAIR IT TO THE SATISFACTION OF THE OWNER. THEY SHALL OBTAIN A LETTER OF CLEARANCE FROM THE OWNER AND SUBMIT IT TO THE CONSULTANT. SUBSTANTIAL COMPLETION SHALL NOT BE GRANTED UNTIL ALL SUCH LETTERS HAVE BEEN RECEIVED BY THE CONSULTANT. THE OWNER HAS SECURED CONSENT FROM ALL LAND OWNERS ON WHICH WORKS ARE PLANNED FOR CONTRACTOR ACCESS AND MATERIAL LAYDOWN. REFER TO SHEET 102 FOR DETAILS. IF ADDITIONAL AREAS OF PRIVATE LAND ARE REQUIRED TO BE DISTURBED DURING CONSTRUCTION THE CONTRACTOR SHALL COORDINATE WITH THE LAND OWNERS AS REQUIRED AND INFORM THE CONSULTANT OF ALL CHANGES.
- 2.9. CONSTRUCTION AND EXCAVATION WASTES, OVERBURDEN, SOIL, OR OTHER SUBSTANCES DELETERIOUS TO THE AQUATIC LIFE SHALL BE DISPOSED OF OR PLACED IN SUCH A MANNER SO AS TO PREVENT THEIR ENTRY INTO ANY WATERCOURSE, RAVINE OR STORM SEWER SYSTEM.
- 2.10. ALL WORK SHALL BE UNDERTAKEN IN A MANNER THAT PREVENTS THE RELEASE OF SEDIMENT-LADEN WATER INTO ANY DITCH, WATERCOURSE OR STORM SEWER.

3. SURVEY

- 3.1. GEODETIC INFORMATION IS IN UTM ZONE 10 CVD2013.
- 3.2. CONSTRUCTION LAYOUT SURVEY IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COINSIDERED INCIDENTAL TO THE WORK.
- 3.3. SURVEY CONTROL BENCHMARKS WILL BE PROVIDED BY THE CONSULTANT FOR THE CONTRACTOR'S USE.

DRAWING INDEX

22107-C-001	GENERAL NOTES
22107-C-102	OVERALL SITE PLAN
22107-C-201	SITE A PLAN AND PROFILE
22107-C-202	SITE A PLAN AND PROFILE
22107-C-203	SITE B PLAN AND PROFILE
22107-C-204	SITE C PLAN AND PROFILE
22107-C-205	SITE D PLAN AND PROFILE
22107-C-206	SITE F PLAN AND PROFILE
22107-C-207	SITE F PLAN AND PROFILE
22107-C-301	TYPICAL CROSS SECTION
22107-C-400	PROPOSED RIPARIAN RESTORATION
22107-C-401	RESTORATION DETAILS
22107-C-1001	CROSS SECTIONS SITE A
22107-C-1002	CROSS SECTIONS SITE B
22107-C-1003	CROSS SECTIONS SITE C
22107-C-1004	CROSS SECTIONS SITE D
22107-C-1005	CROSS SECTIONS SITE F

LEGEND

PROPOSED TOP OF BANK	
PROPOSED BOTTOM OF BANK	
PROPOSED TOP OF RIPRAP BANK	
PROPOSED BOTTOM OF RIPRAP BANK	
PROPOSED RIPRAP	
PROPOSED ACCESS ROAD	
PROPOSED LAYDOWNS	
PROPOSED 1m CONTOURS	
EXISTING 1m CONTOURS	
EXISTING PROPERTY LINE	

Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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556 North Nechako Road
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Canada V2K 1A1
T 250 561 2229

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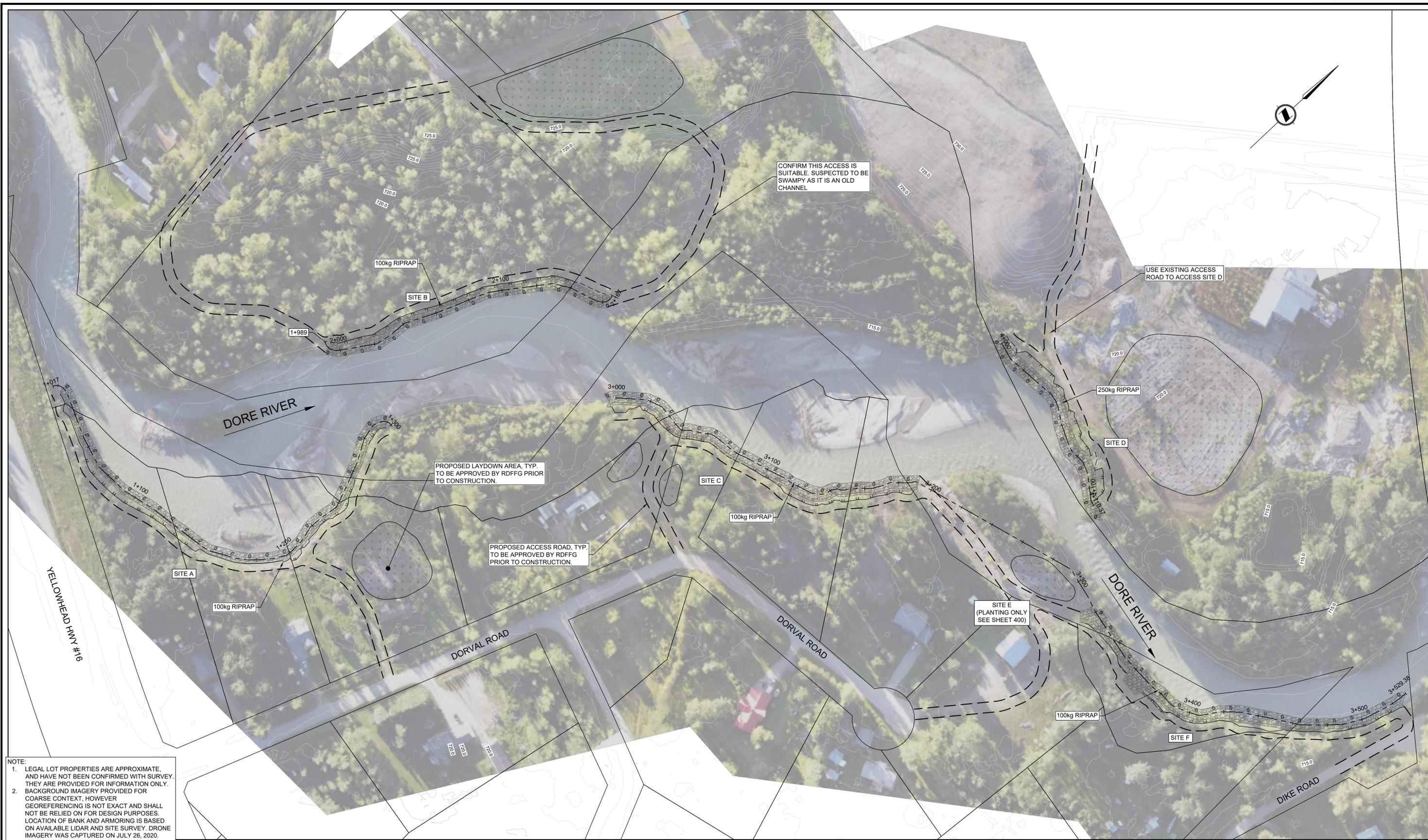
REGIONAL DISTRICT OF FRASER-FORT GEORGE
MCBRIDE BC

DORE RIVER PROPOSED BANK ARMORING

NOTES

Drawing No.	
001	
Project Number	Rev.
2341-21107-01	PC

DATE: 2024-01-12 10:12 FILE: X:\2341\Projects\2341-21107-00\RDFFG - Dore River Phase 2\100 Drawings\10.5 Sheets\21107-C-102.dwg



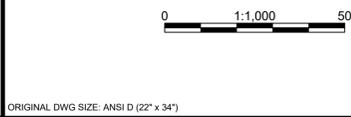
NOTE:
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 2. BACKGROUND IMAGERY PROVIDED FOR COARSE CONTEXT, HOWEVER GEOREFERENCING IS NOT EXACT AND SHALL NOT BE RELIED ON FOR DESIGN PURPOSES. LOCATION OF BANK AND ARMORING IS BASED ON AVAILABLE LIDAR AND SITE SURVEY. DRONE IMAGERY WAS CAPTURED ON JULY 26, 2020.

Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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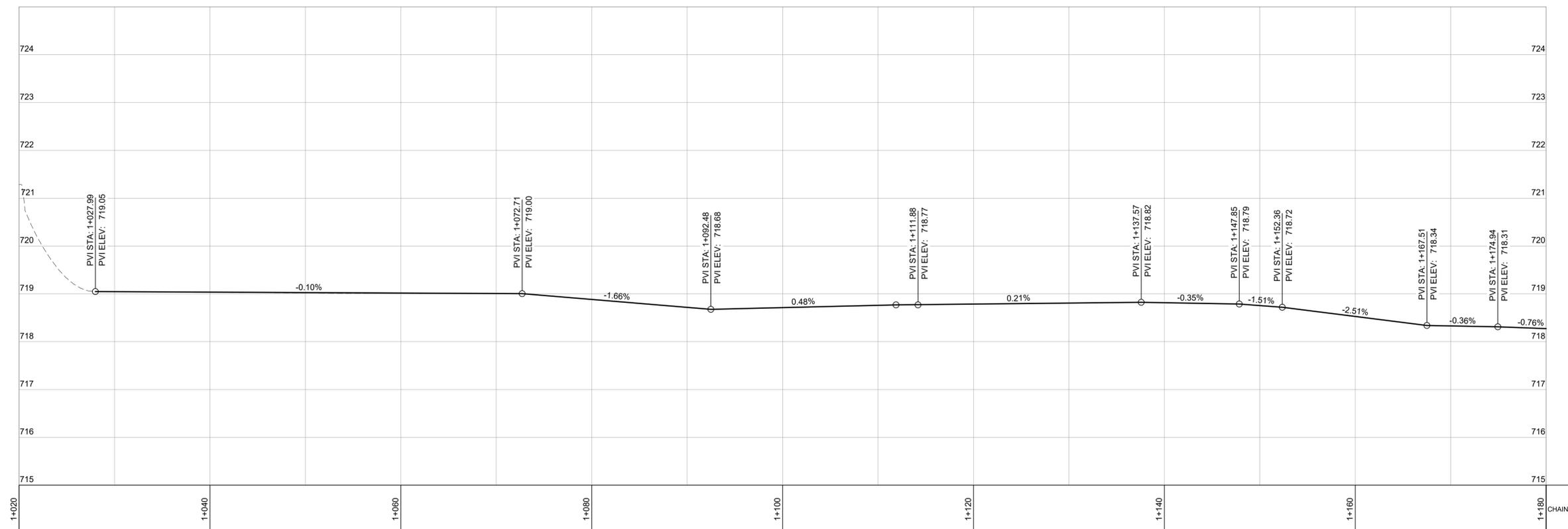
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**DORE RIVER PROPOSED BANK ARMORING
 OVERALL SITE PLAN**

Project Number: 2341-21107-01
 Rev: PC

Drawing No. **102**

DESTROY ALL PRINTS BEARING PREVIOUS REVISION



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
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PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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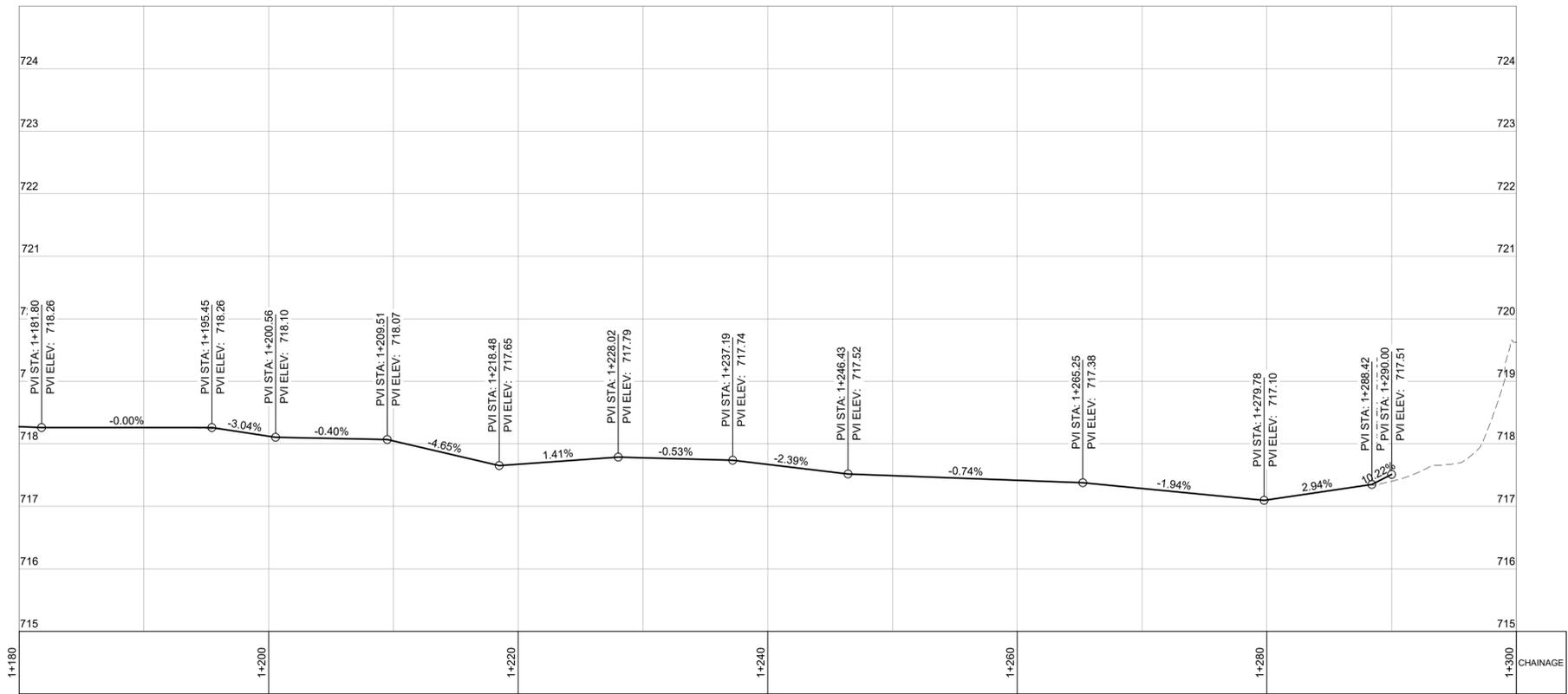
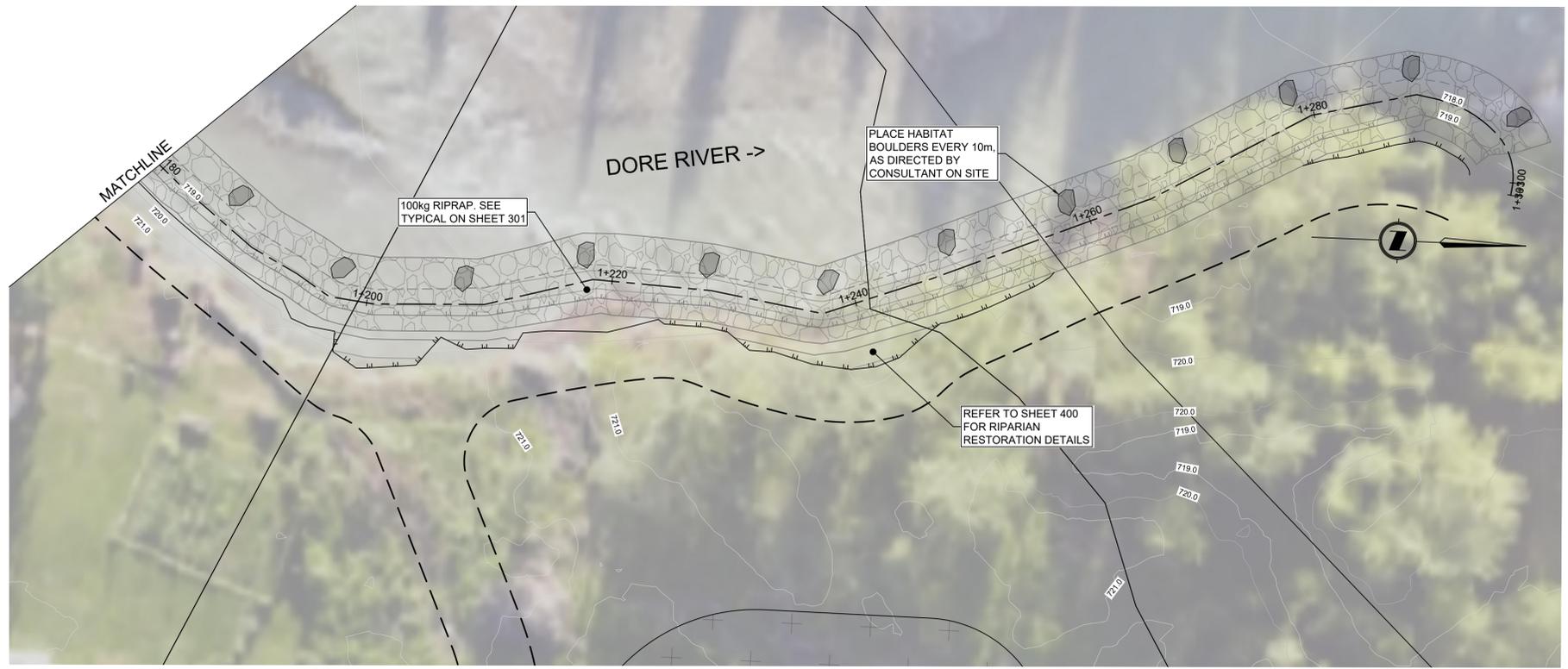
REGIONAL DISTRICT OF FRASER-FORT GEORGE
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**DORE RIVER PROPOSED BANK ARMORING
SITE A PLAN AND PROFILE**

Drawing No. **201**

Project Number 2341-21107-01

Rev. **PC**



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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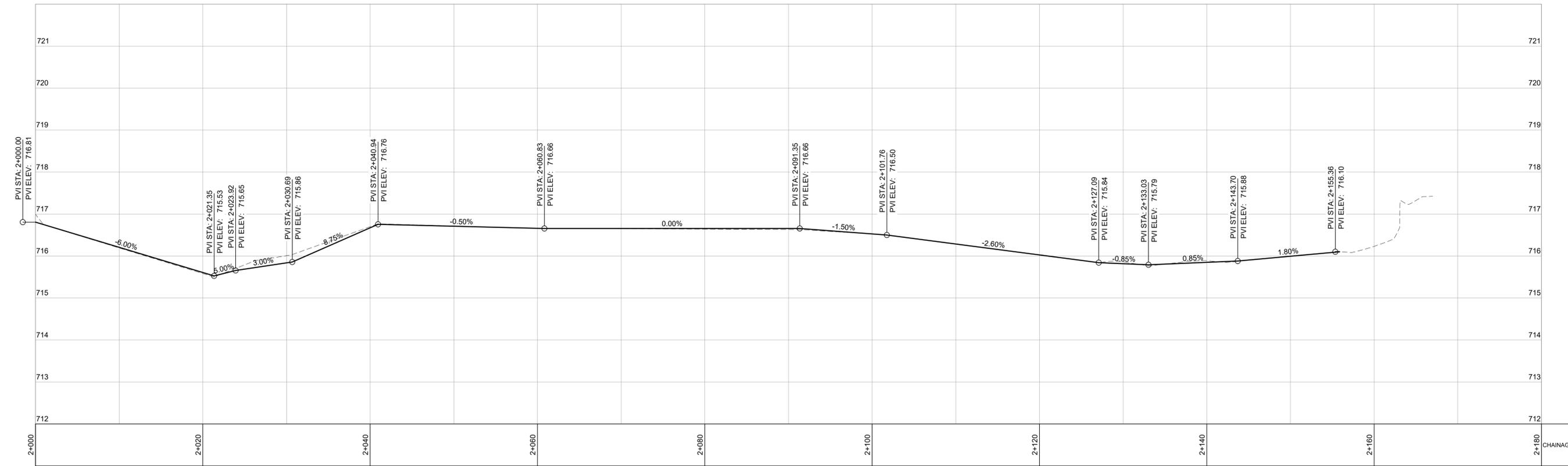
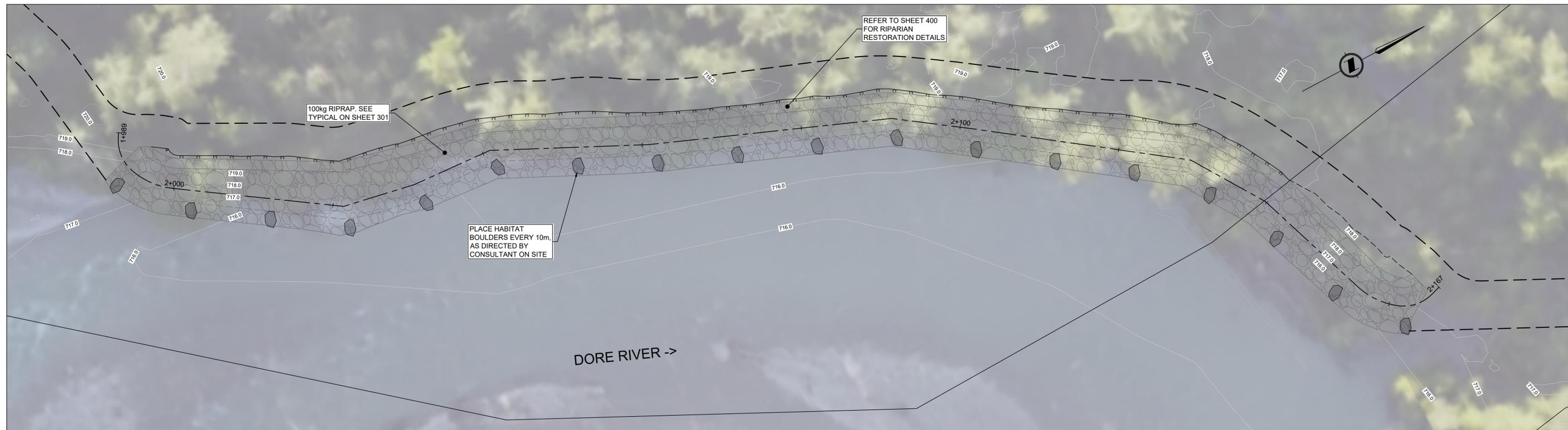
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**DORE RIVER PROPOSED BANK ARMORING
SITE A PLAN AND PROFILE**

Drawing No.	202
Project Number	2341-21107-01
Rev.	PC

DATE: 2024-01-12 10:13 FILE: X:\2341\Projects\2341-21107-00\RD\DFG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-2005.dwg



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
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**DORE RIVER PROPOSED BANK ARMORING
SITE B PLAN AND PROFILE**

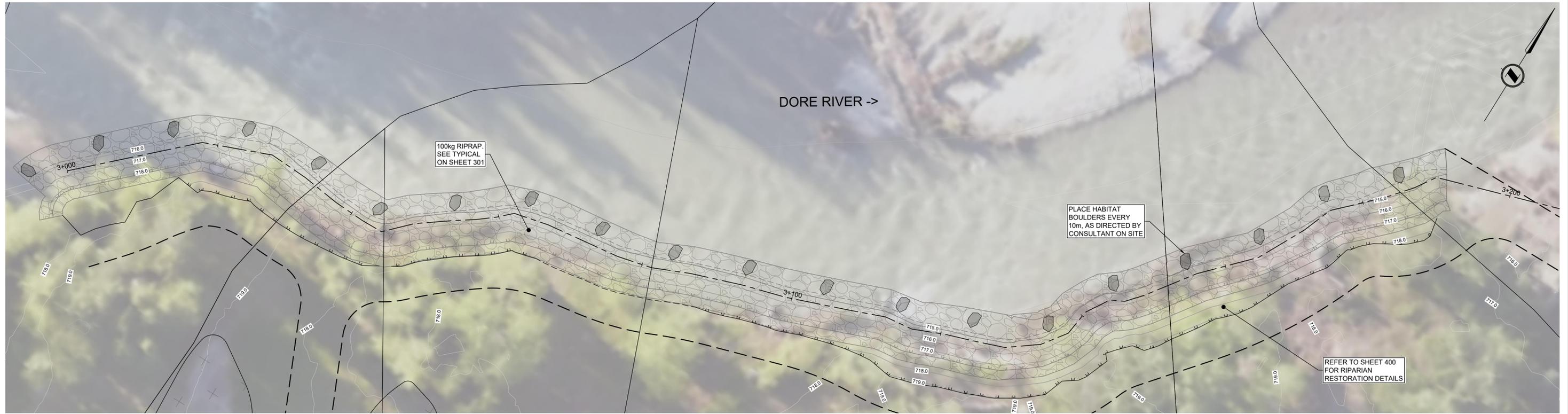
Drawing No. **203**

Project Number 2341-21107-01

Rev. **PC**

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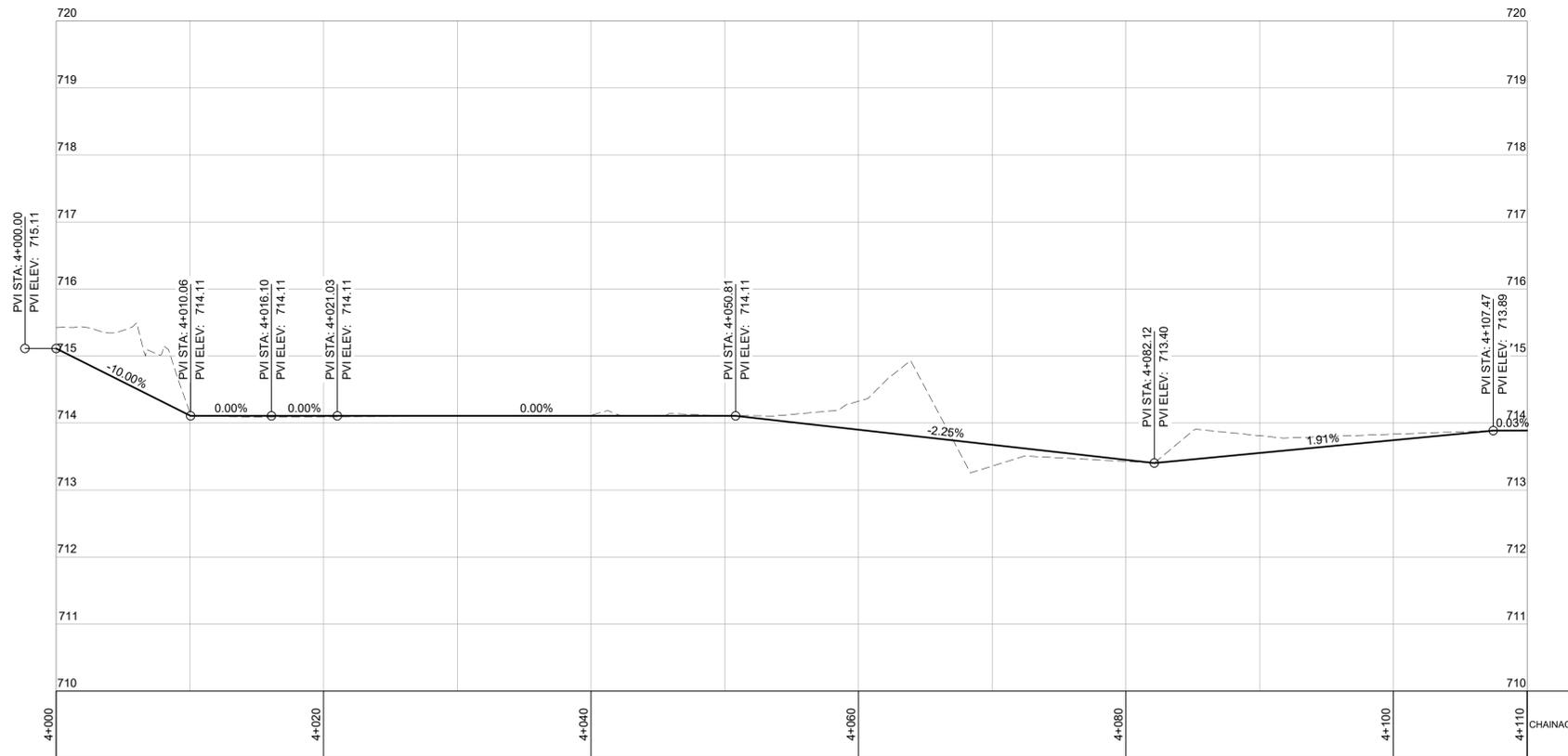
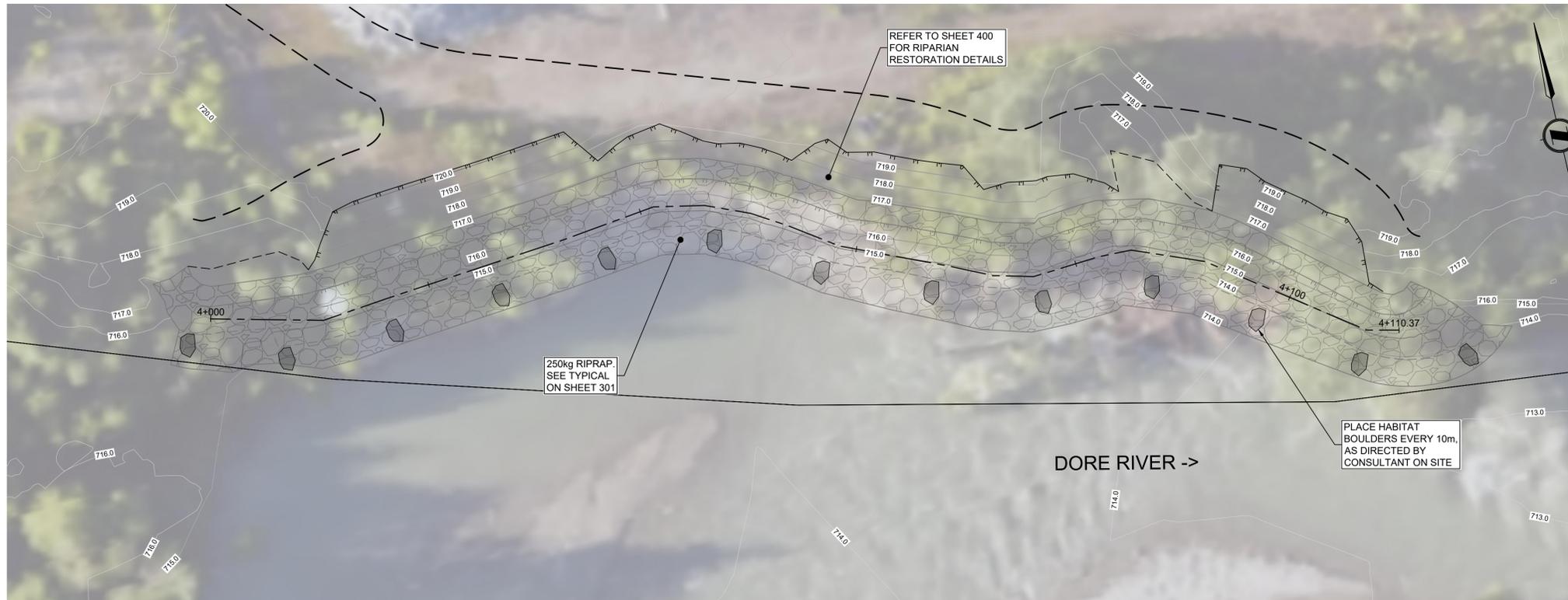
**DORE RIVER PROPOSED BANK ARMORING
SITE C PLAN AND PROFILE**

Drawing No. **204**

Project Number 2341-21107-01 Rev. PC

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

DATE: 2024-01-12 10:14 FILE: X:\2341\Projects\2341-21107-00\RD\FG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-2005.dwg



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
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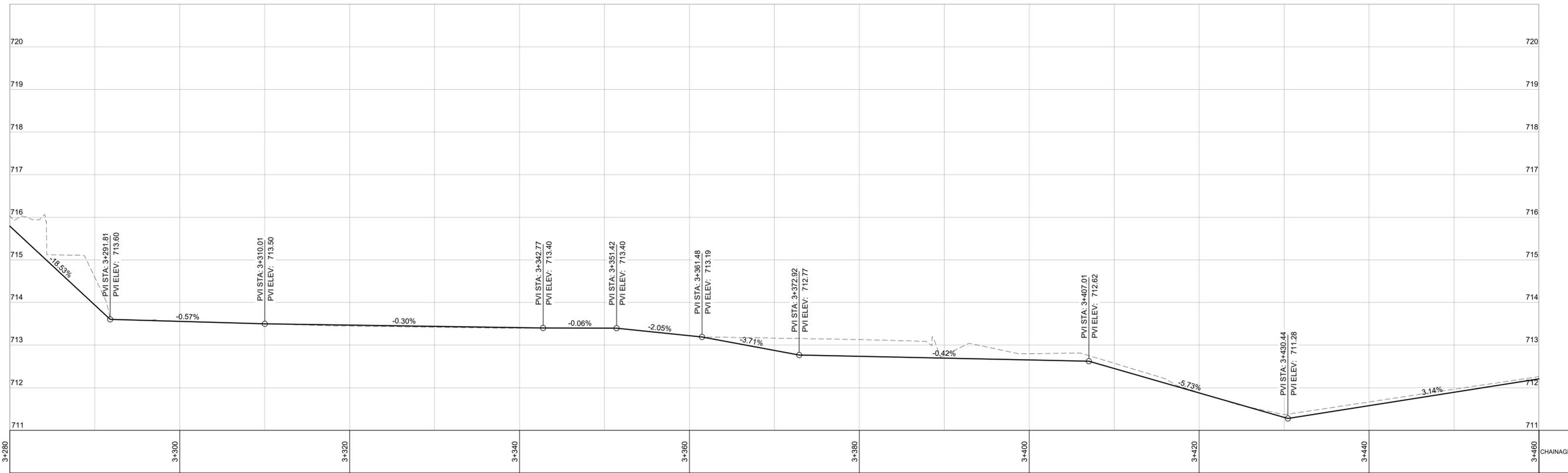
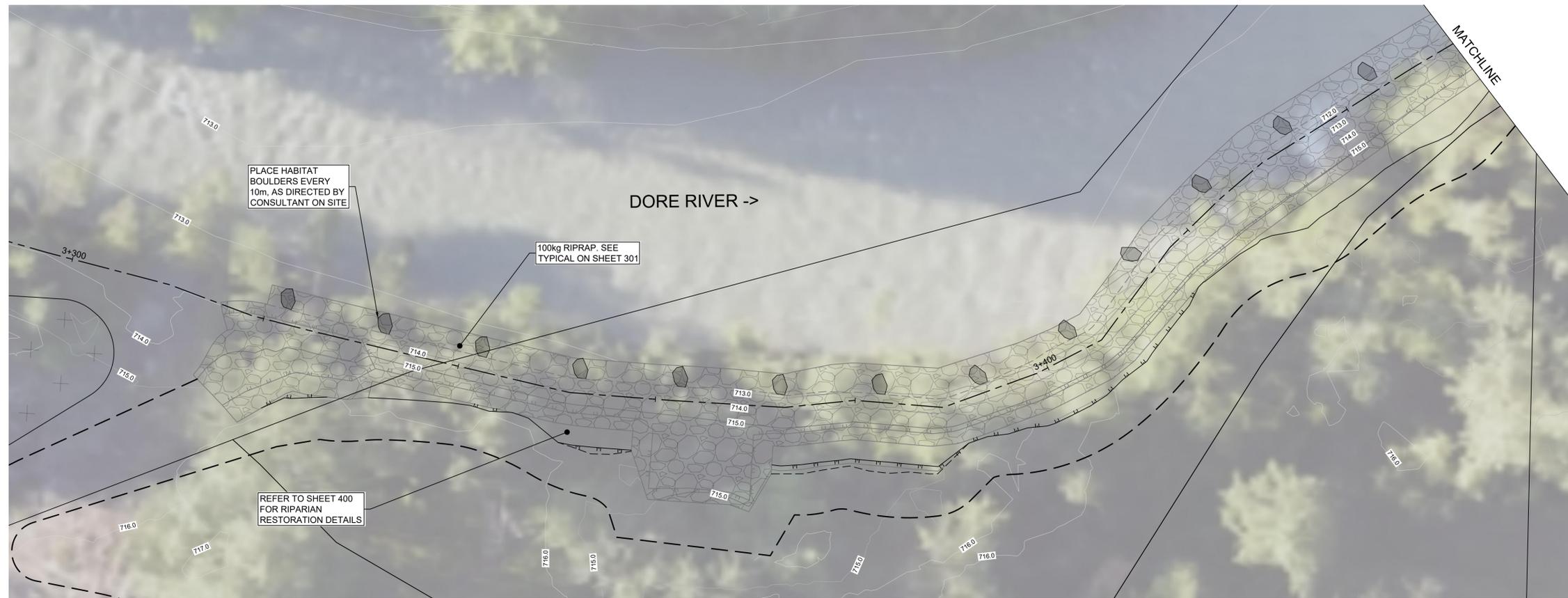
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**DORE RIVER PROPOSED BANK ARMORING
SITE D PLAN AND PROFILE**

Project Number	2341-21107-01
Rev.	PC
Drawing No.	205

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

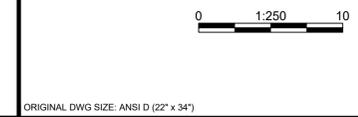


Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
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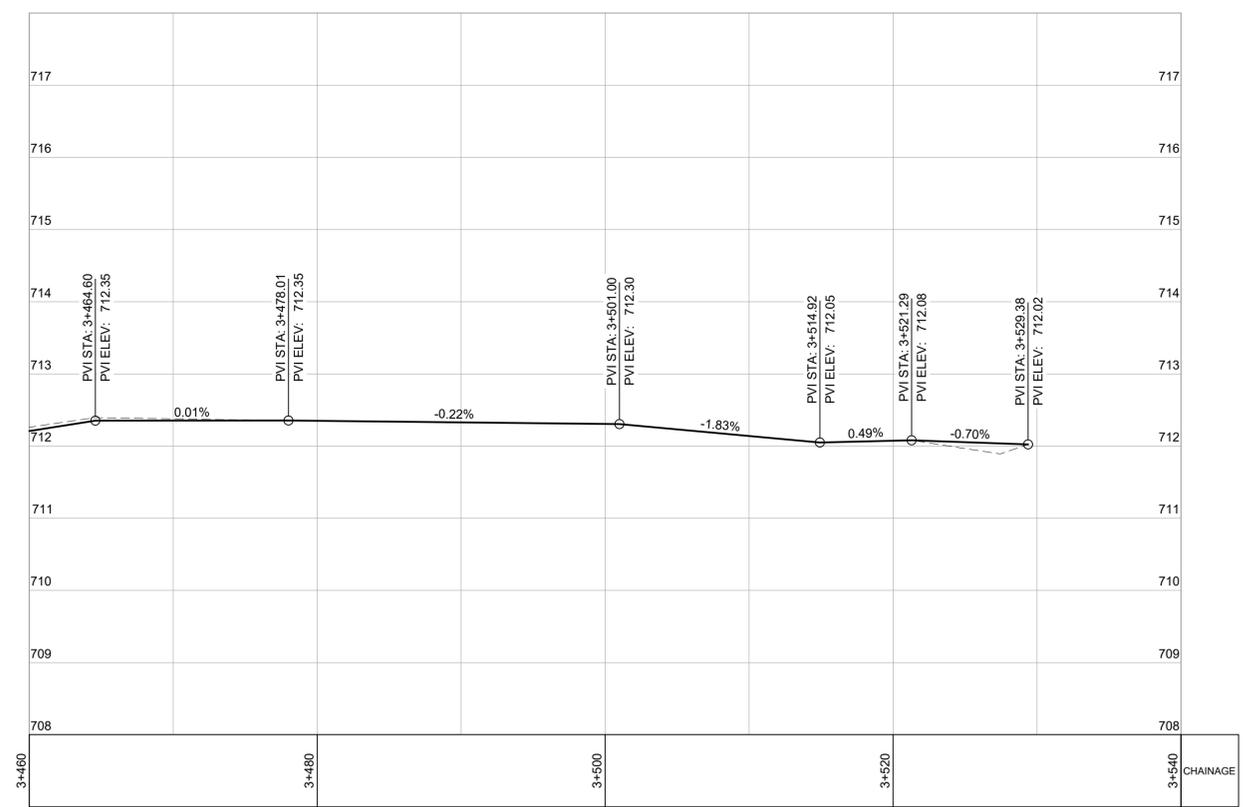
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**DORE RIVER PROPOSED BANK ARMORING
SITE F PLAN AND PROFILE**

Drawing No.	206
Project Number	2341-21107-01
Rev.	PC



Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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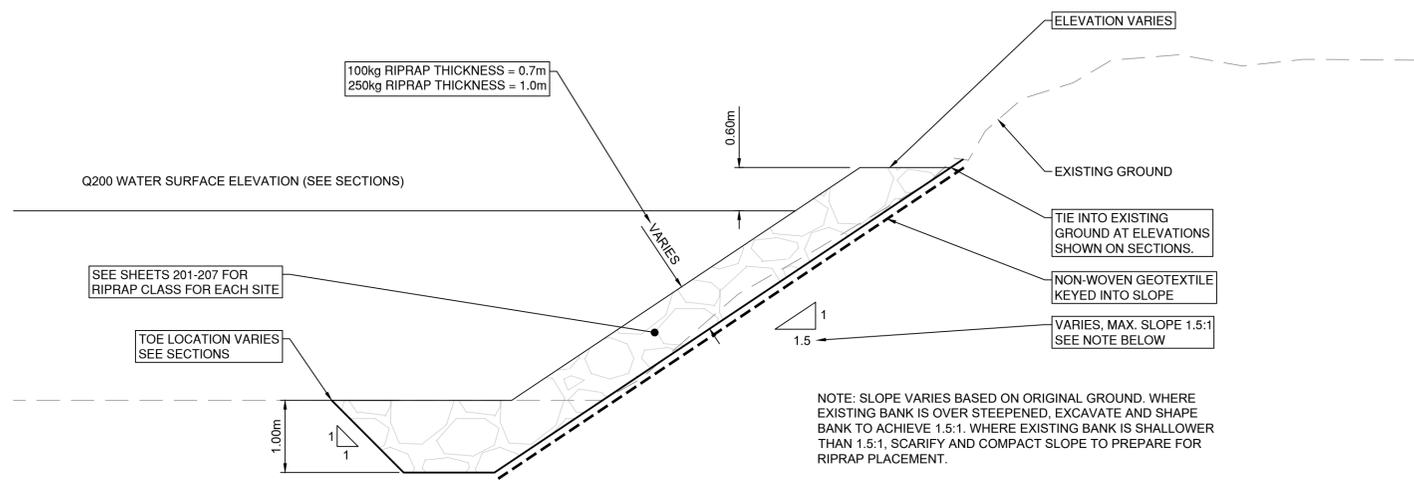
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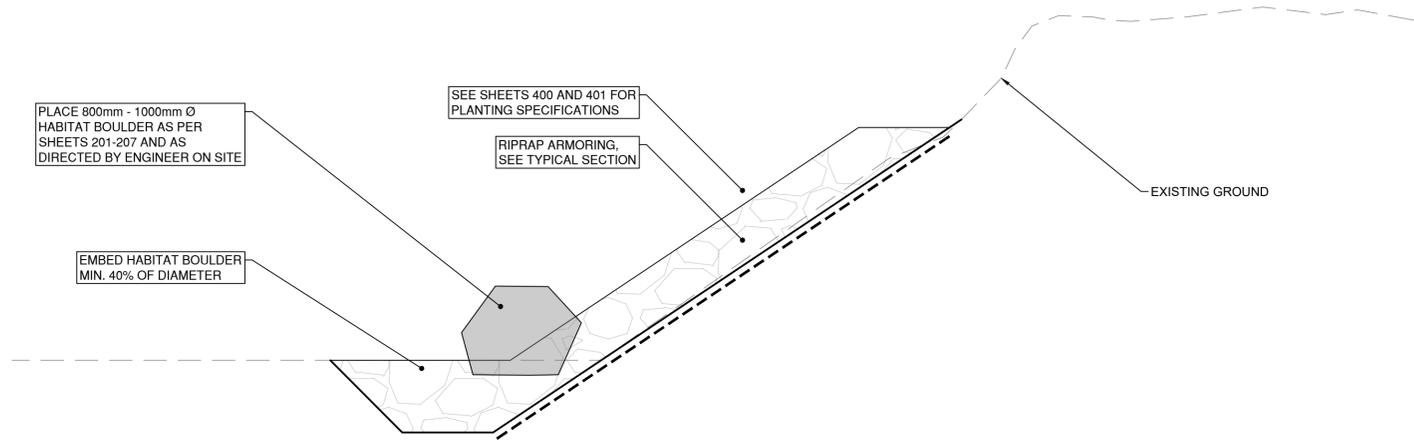
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**DORE RIVER PROPOSED BANK ARMORING
SITE F PLAN AND PROFILE**

Drawing No.	207
Project Number	2341-21107-01
Rev.	PC



RIPRAP BANK ARMORING
SCALE: 1:50

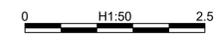


HABITAT FEATURES TYPICAL DETAIL
SCALE: 1:50

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**DORE RIVER PROPOSED BANK ARMORING
TYPICAL CROSS SECTION**

Drawing No.	
301	
Project Number	Rev.
2341-21107-01	PC

Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ



Legend

- 1 plant per 1 sq m replanting
- 1 plant per 3 sq m replanting
- Concrete debris removal
- Live staking in riprap

Legend

APPROXIMATE EXTENTS OF PREVIOUSLY INSTALLED RIPRAP

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 1. LEGAL LOT PROPERTIES ARE APPROXIMATE, AND HAVE NOT BEEN CONFIRMED WITH SURVEY. THEY ARE PROVIDED FOR INFORMATION ONLY.
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PA	Date	Description	EO	JP	GB
PA	01-12-2024	ISSUED FOR TENDER - REVIEW			
Rev			Drawn	Design	App'v

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

Scale: 1:1,000

0 1:1,000 50

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REGIONAL DISTRICT OF FRASER-FORT GEORGE
 MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
 PROPOSED RIPARIAN RESTORATION**

Drawing No.	400
Project Number	2341-21107-01
Rev.	PA

DATE: 2024-01-12, 05:51 FILE: K:\2024\Projects\2341-21107-00-RDFFG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-400.dwg

Bed Type A: Live Stakes (1 Per 1 sq.m.)

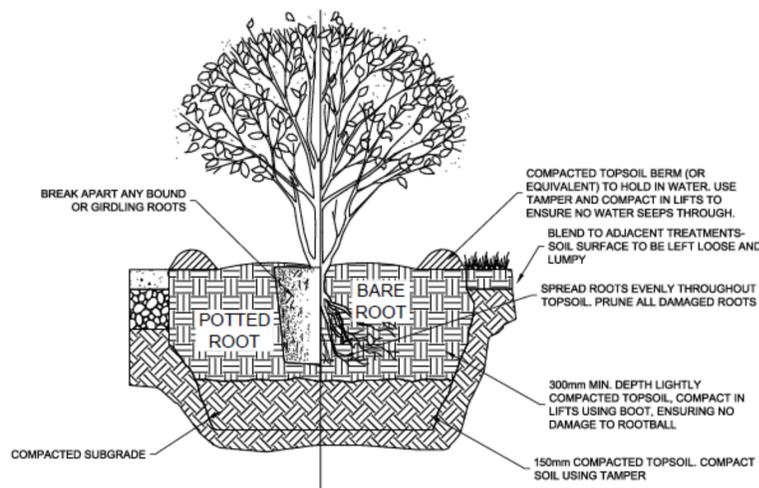
BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	B	
Live Stakes				%	No.
<i>Populus balsamifera</i>	balsam poplar	0.5-0.75 m	Plant at 1 per 1 sq.m. Follow all specifications in Details and Guidelines.	25%	1510
<i>Salix bebbiana</i>	Bebb's willow	length.		35%	2114
<i>Salix exigua</i>	narrowleaf willow	Min 1.5		25%	1510
<i>Cornus stolonifera</i>	red-osier dogwood	cm caliper		15%	906
LIVE STAKES TOTAL				100%	6040

Bed Type B: Tree & Shrub (1 Per 3 sq.m.)

BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	B	
Trees				%	No.
<i>Picea mariana</i>	black spruce	#1 Pot	Plant at 1 per 3 sq.m. Maintain 1 m spacing from retained trees. Follow all specifications in Details and Guidelines.	20%	261
<i>Picea engelmannii</i>	Engelmann spruce	#1 Pot		5%	65
<i>Populus balsamifera</i>	balsam poplar	#1 Pot		10%	131
<i>Pinus contorta</i>	Lodgepole pine	#1 Pot		15%	196
<i>Acer glabrum</i>	Douglas maple	#1 Pot		5%	65
TREES TOTAL				55%	327
Shrubs & Herbs				%	No.
<i>Rosa acicularis</i>	prickly rose	#1 Pot	Plant at 1 per 1 sq.m. Maintain 1 m distance from existing retained trees/shrubs. Follow all specifications in Details and Guidelines.	10%	131
<i>Rubus parviflorus</i>	thimbleberry	#1 Pot		15%	196
<i>Viburnum edule</i>	highbush cranberry	#1 Pot		5%	65
<i>Symphoricarpos albus</i>	snowberry	#1 Pot		15%	196
SHRUBS TOTAL				45%	588

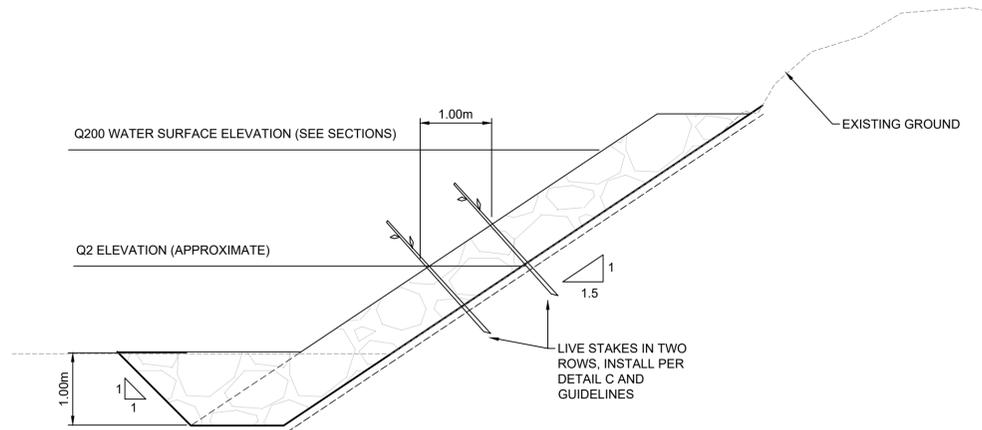
Bed Type C: Live Stakes in Riprap

BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	B	
Live Stakes				%	No.
<i>Populus balsamifera</i>	balsam poplar	1.0-1.5 m	Plant at 1 per 2 m linear distance in two rows spaced 1 m vertical distance apart. Plant using 2 stakes per hole. Follow all specifications in Details and Guidelines.	25%	447
<i>Salix bebbiana</i>	Bebb's willow	length.		35%	625
<i>Salix exigua</i>	narrowleaf willow	Min 2.0		25%	447
<i>Cornus stolonifera</i>	red-osier dogwood	cm caliper		15%	268
LIVE STAKES TOTAL				100%	1786



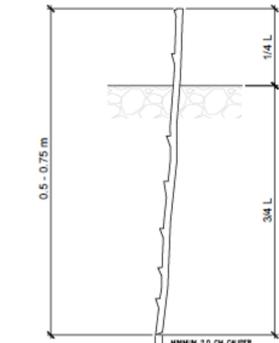
DETAIL A. SHRUB PLANTING ON LEVEL SITES

NTS



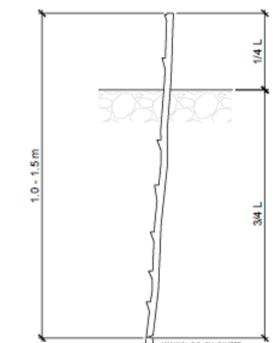
Restoration Guidelines

GENERAL	TOPSOIL & MULCH	LIVE STAKING	LIVE STAKING IN RIPRAP	MAINTENANCE
1 All work and materials to conform to the latest edition of the Canadian Landscape Standard unless specifically otherwise noted.				
2 Soil disturbance shall be minimized where possible in all riparian areas. Conduct close-cut clearing of shrubs instead of grubbing, where possible. The Contractor shall be responsible for installing additional plants per the prescribed planting mix, if necessary to restore any additional disturbed areas.				
3 If invasive plant species are observed in the work area, machinery must avoid contact with the plant to prevent spread. Species identification to be deferred to the QEP if/as needed.				
4 All instream activities including riprap placement must be conducted under QEP guidance.				
	5 Any disturbed soil surfaces in planting areas, including new topsoil installations, are to be finished "rough and loose" prior to planting, ie avoid both compaction and smooth grading.			
	6 Apply a 300 mm layer of imported organic topsoil throughout tree and shrub planting areas prior to plant installations.			
	7 Provide fertility and particle size analysis test for imported organic topsoil prior to starting work.			
	8 After topsoil and shrub installations, planting area shall be finished with hydraulic application of prescribed seed with mulch plus tackifier. Application rate to follow supplier recommendation.			
		9 Live stakes must be kept moist, using wetted towels or similar, during transport and storage including onsite prior to planting. Store live stakes in a cool, moist, dark environment for no longer than 1 week, if necessary.		
		10 Installation: use rebar to pilot a planting hole, then insert the live stake. Stake must be approximately 75% length below topsoil surface, with minimum 2 live buds above the surface. Lightly pack the topsoil around top of live stake to ensure soil contact and stability.		
		11 Live stakes to be installed at approximately 1 per square metre.		
		12 Ensure all live stakes are installed with bottom/larger end buried and buds pointing upward.		
		13 Live stakes for riparian planting areas shall be between 0.5-0.75 m length. Minimum 1.5 cm caliper at large end.		
		14 Live stakes for instream/riprap shall be between 1.0 to 1.5 m length. Minimum 2.0 cm caliper at large end.		
		15 Apply topsoil to pockets and open spaces in the riprap live staking areas. Fill pockets with topsoil until flush with riprap slope face, then insert live stake into planting hole piloted with rebar pole (or similar tool).		
		16 Live stakes to be installed in 2 rows spaced 1 metre vertically, at approximately 1 live stake per 2 metre linear distance along each row.		
		17 Irrigation is required as needed during the growing season (May 1st through September 30th) to maintain survival of planted stock. Water as frequently as necessary to maintain healthy plants.		
		18 Minimum 80% survival of planted stock is required. A 5-year maintenance and monitoring program must be conducted for the planted area with QEP guidance.		



DETAIL B. LIVE STAKE PLANTING: GENERAL

NTS



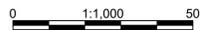
DETAIL C. LIVE STAKE PLANTING: RIPRAP

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REGIONAL DISTRICT OF FRASER-FORT GEORGE
MCBRIDE, BC

**DORE RIVER PROPOSED BANK ARMORING
PROPOSED RIPARIAN RESTORATION**

DETAIL

Drawing No.
401

Project Number
2341-21107-01

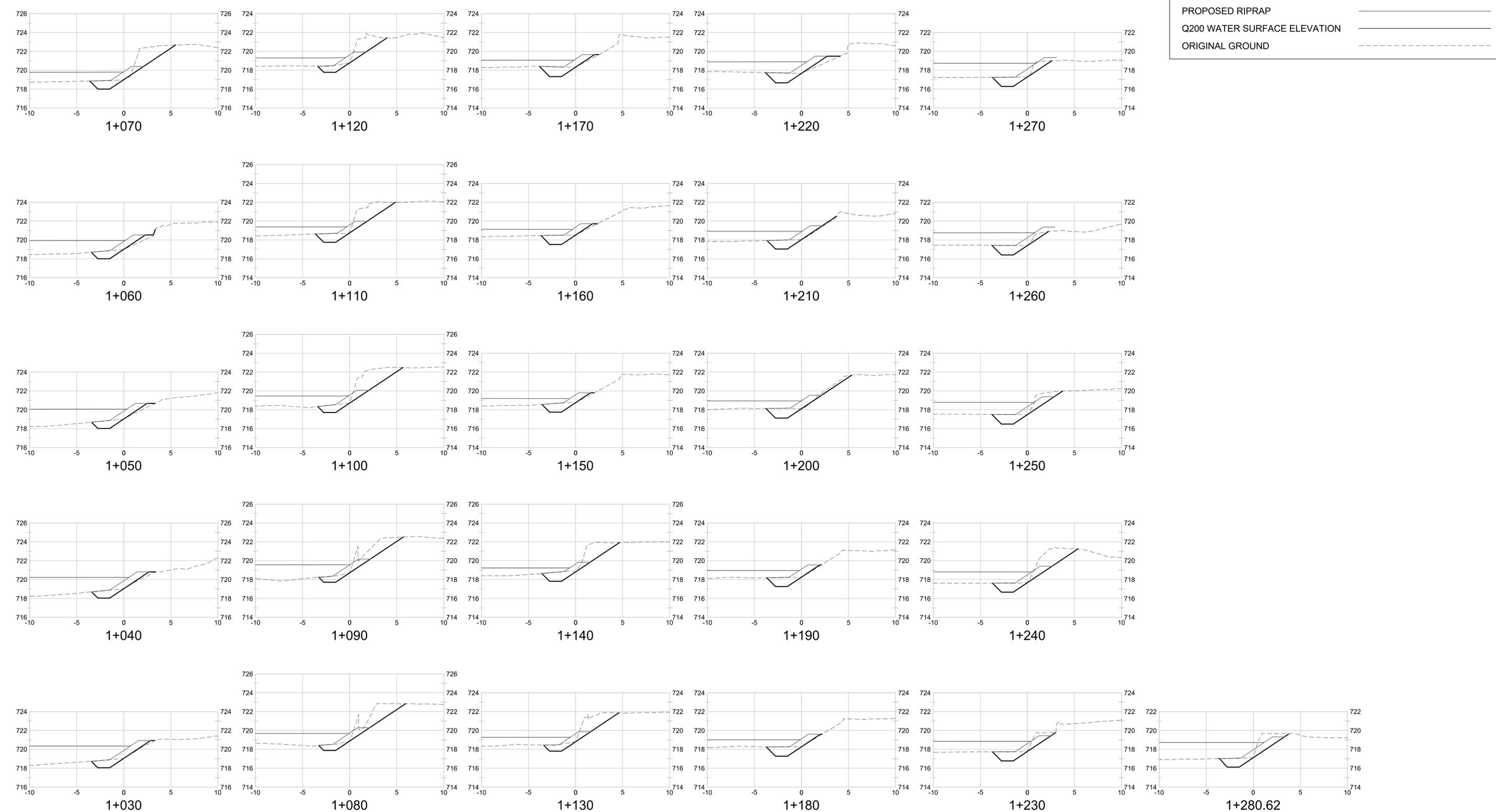
Rev.
PA

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

DATE: 2024-01-12, 10:16 FILE: X:\2024\Projects\2341-21107-00\PDF\FG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-1000.dwg

LEGEND

PROPOSED EXCAVATION	
PROPOSED RIPRAP	
Q200 WATER SURFACE ELEVATION	
ORIGINAL GROUND	

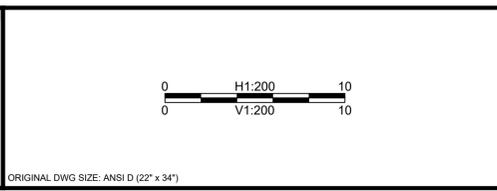


Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

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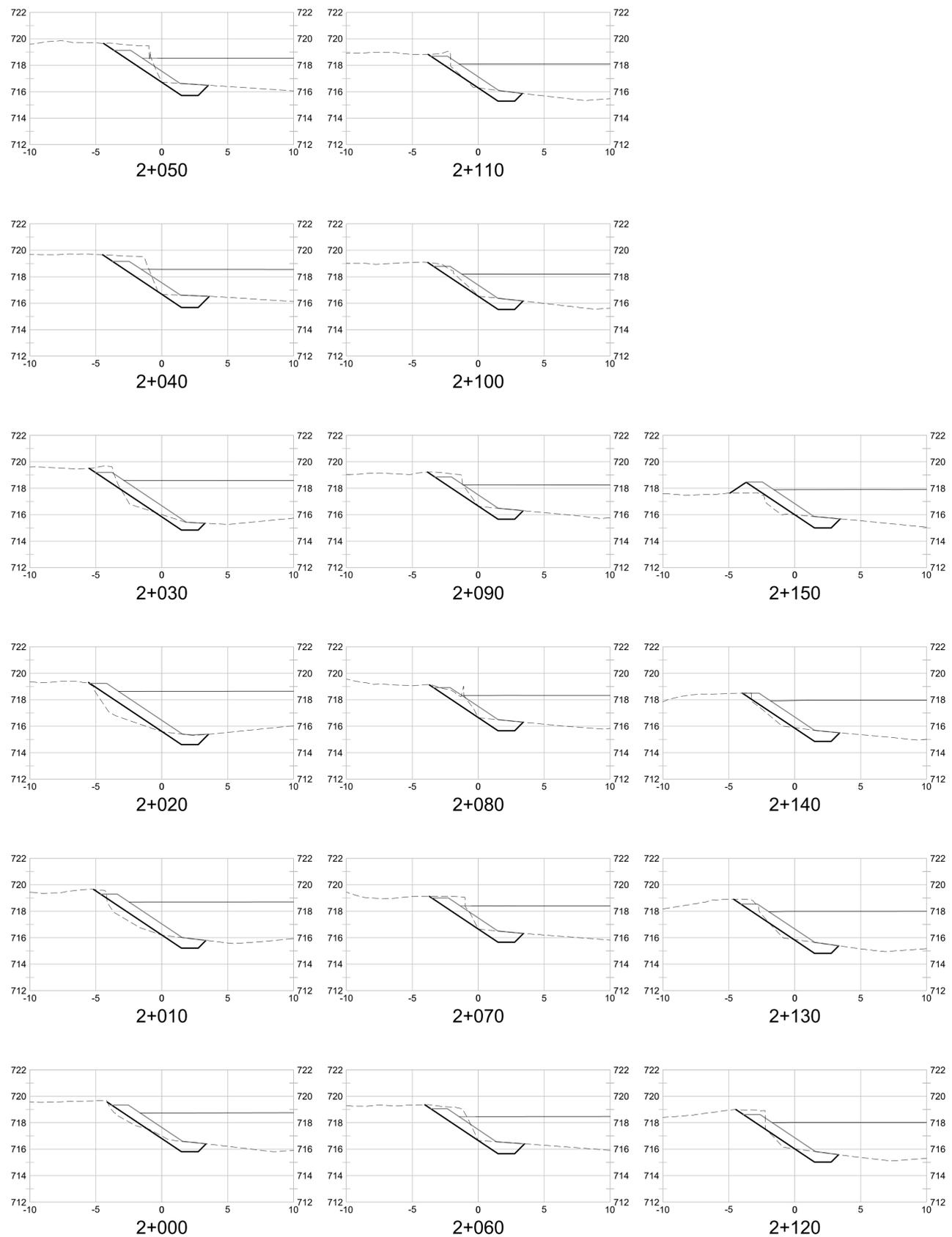
REGIONAL DISTRICT OF FRASER-FORT GEORGE
MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
CROSS SECTIONS SITE A**

Project Number	2341-21107-01
Rev.	PC

Drawing No. **1001**

DATE: 2024-01-12 10:16 FILE: X:\2024\Projects\2341-21107-00\PDF\FG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-1000.dwg



LEGEND	
PROPOSED EXCAVATION	
PROPOSED RIPRAP	
Q200 WATER SURFACE ELEVATION	
ORIGINAL GROUND	

Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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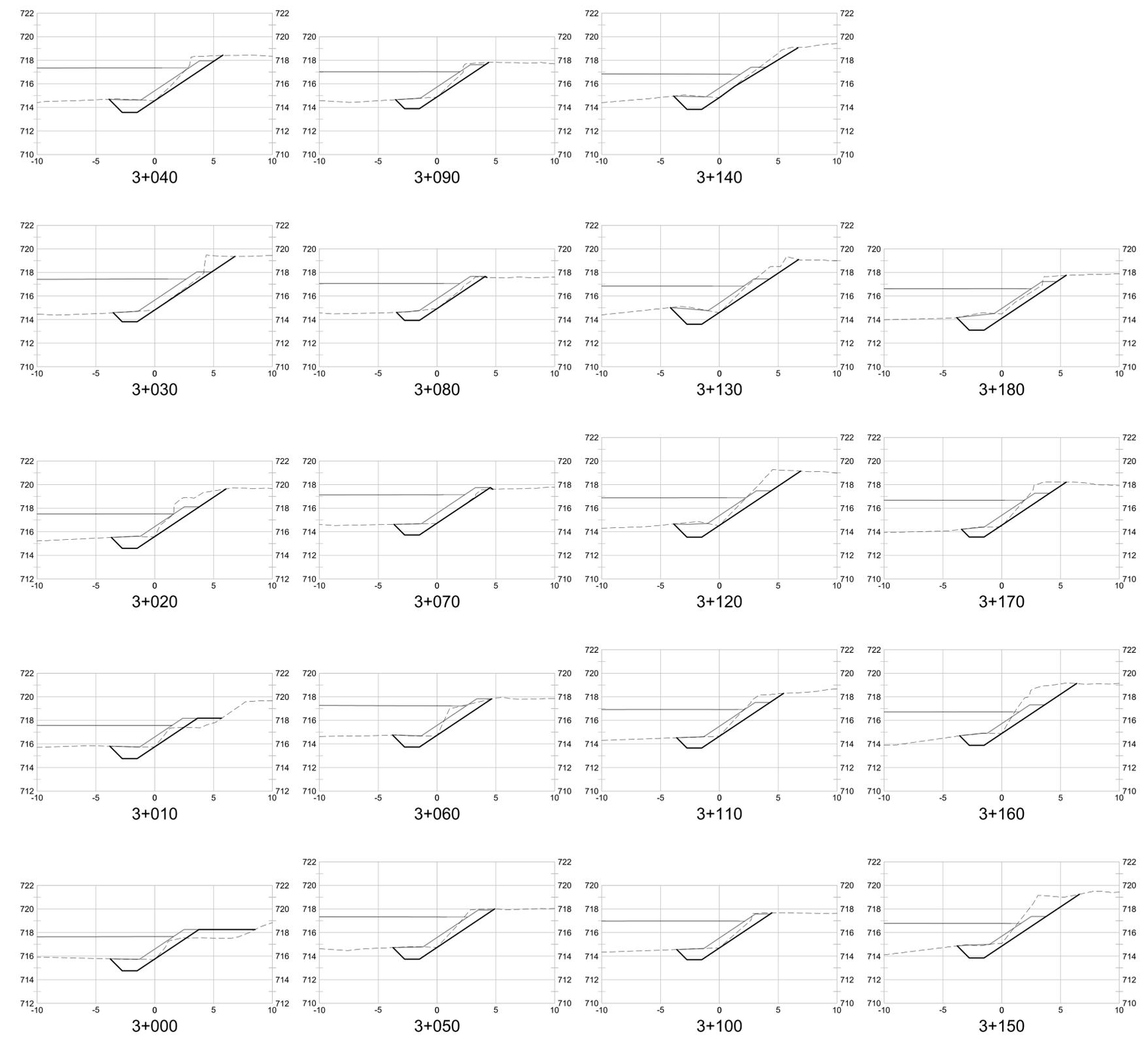
**DORE RIVER PROPOSED BANK ARMORING
CROSS SECTIONS SITE B**

Drawing No.	
1002	
Project Number	Rev.
2341-21107-01	PC

DATE: 2024-01-12 10:16 FILE: X:\2341\Projects\2341-21107-00\PDF\G - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-1000.dwg

LEGEND

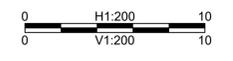
PROPOSED EXCAVATION	
PROPOSED RIPRAP	
Q200 WATER SURFACE ELEVATION	
ORIGINAL GROUND	



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REGIONAL DISTRICT OF FRASER-FORT GEORGE
MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
CROSS SECTIONS SITE C**

Project Number	2341-21107-01
Rev.	PC

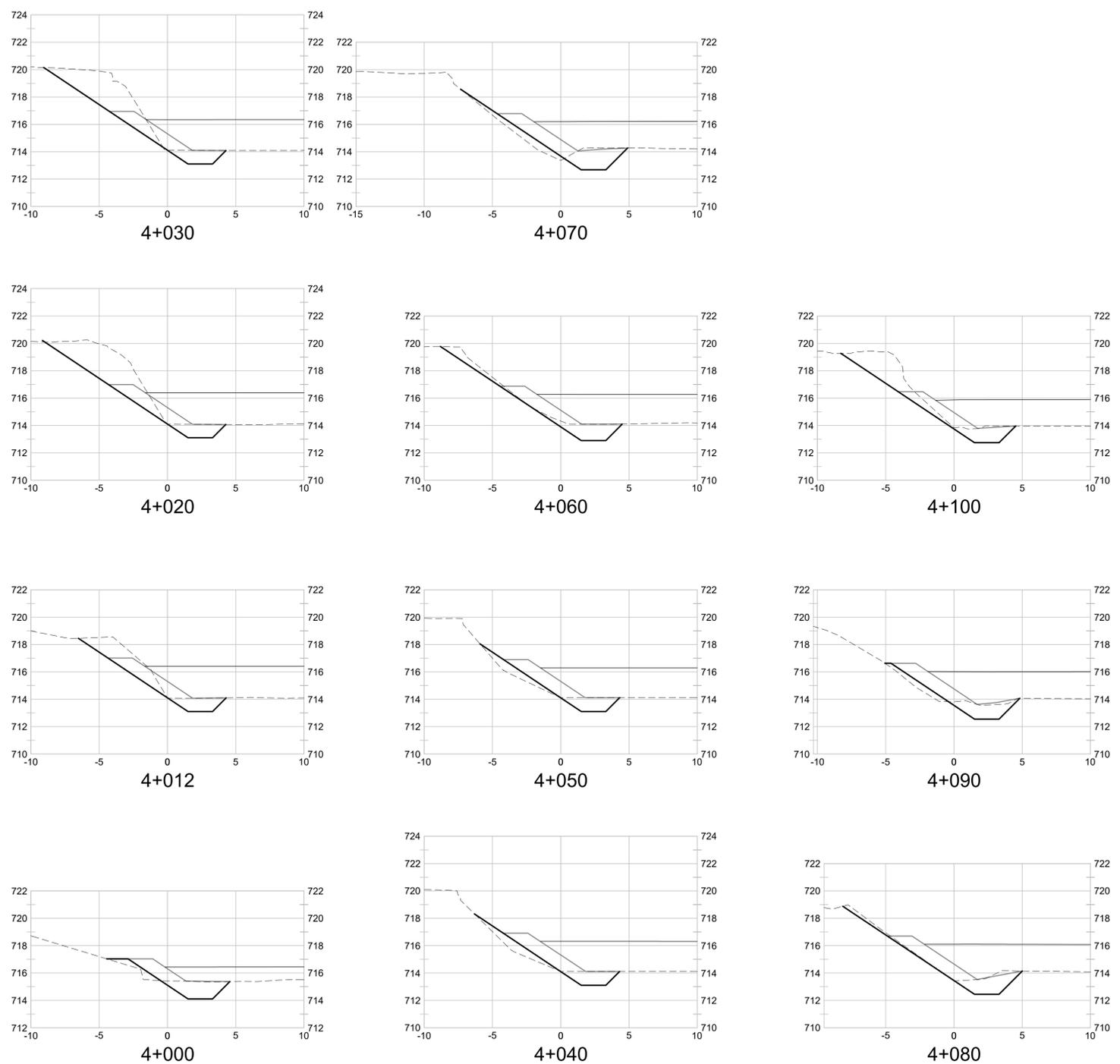
Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ

Drawing No. **1003**

DATE: 2024-01-12 10:16 FILE: X:\2024\Projects\2341-21107-00\PDF\G - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-1000.dwg

LEGEND

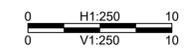
PROPOSED EXCAVATION	
PROPOSED RIPRAP	
Q200 WATER SURFACE ELEVATION	
ORIGINAL GROUND	



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MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
CROSS SECTIONS SITE D**

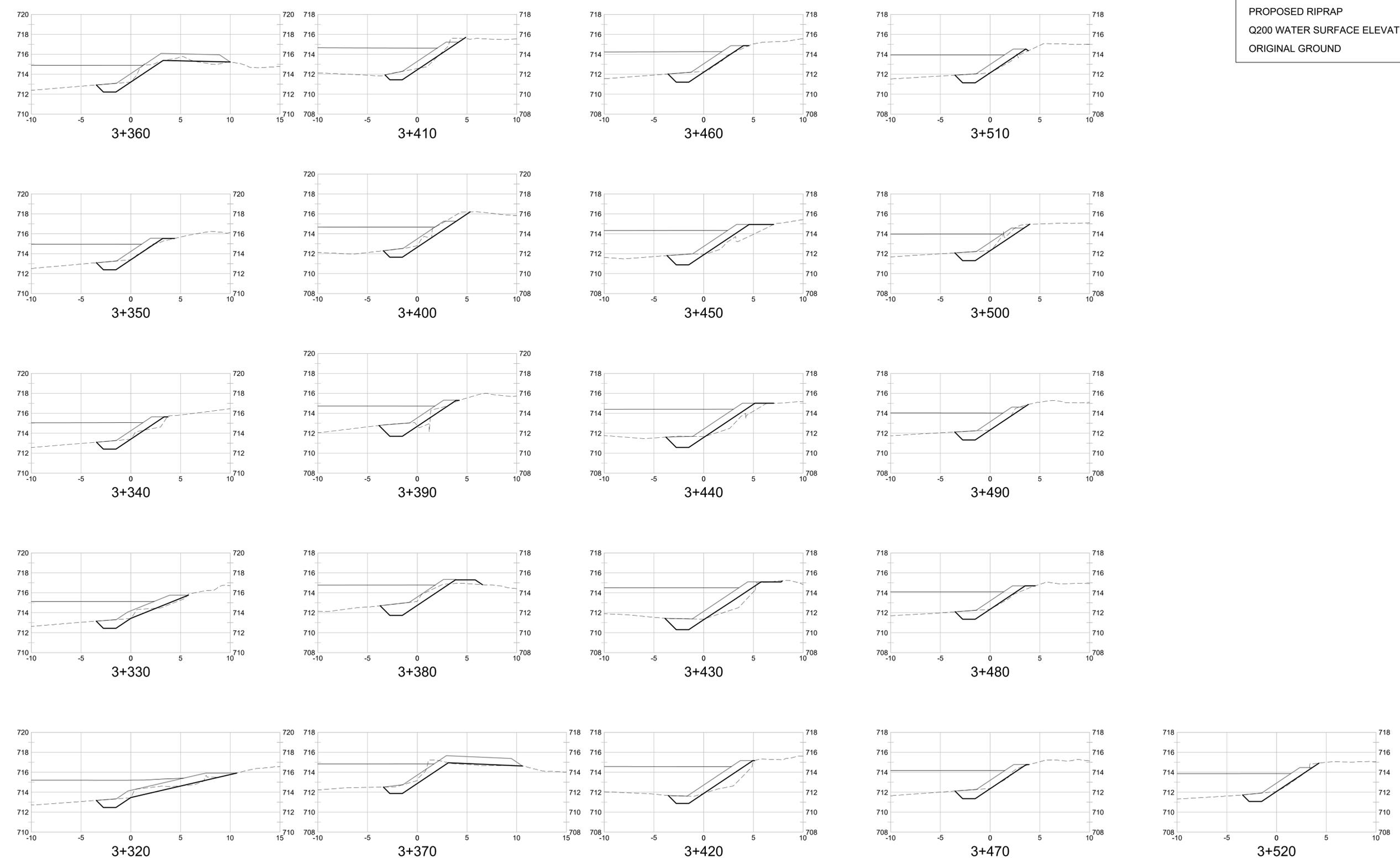
Project Number	2341-21107-01
Rev.	PC

Drawing No. **1004**

DATE: 2024-01-12, 10:16 FILE: X:\2024\Projects\2341-21107-00\PDF\FG - Dore River Phase 2\10.0 Drawings\10.5 Sheets\21107-C-1005.dwg

LEGEND

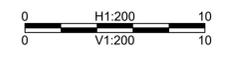
PROPOSED EXCAVATION	
PROPOSED RIPRAP	
Q200 WATER SURFACE ELEVATION	
ORIGINAL GROUND	



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MCBRIDE BC

**DORE RIVER PROPOSED BANK ARMORING
CROSS SECTIONS SITE F**

Drawing No.	1005
Project Number	2341-21107-01
Rev.	PC

Rev	Date	Description	Drawn	Design	App'd
PC	01-12-2024	ISSUED FOR TENDER - REVIEW	EO	KB	DJ
PB	08-16-2021	ISSUED FOR REVIEW	EO	LS	DJ
PA	07-19-2021	ISSUED FOR DISCUSSION	EO	LS	DJ



WORK NOTIFICATION/LANE CLOSURE REQUEST AND APPROVAL

NOTE: This form is to be submitted ten (10) working days prior to start of work or closure.

To _____ Telephone _____
District Manager Transportation District Office
Fax _____

From _____ Telephone _____
(Organization) (Contact Person)
Fax _____

I request approval to **work** within the Ministry right-of-way (check as many boxes below as required):
 North Bound South Bound East Bound West Bound

I request approval to **close** the Ministry right-of-way indicated below (check as many boxes below as required):
 North Bound South Bound East Bound West Bound

Indicate all lanes affected: Right Turn Lane Middle Lane Left Turn Lane Work on Shoulder
 Curb/Outside Lane Centre/Inside Lane All Lanes No Lane Closure

on Highway _____ between _____ and _____
(Number) (Landmark) (Landmark)
from _____ a.m./ p.m. to _____ a.m./ p.m. on the following dates (yyyy/mm/dd) 20 / /
to 20 / / ; for the purpose of constructing the following works: _____

In the above noted directions, the highway is one (1) / two (2) / three (3) or more lanes wide and
 zero (0) / one (1) / two (2) lanes of traffic will be maintained in the same directions as the closure.

PLEASE ATTACH THE FOLLOWING:

- a) Traffic control diagram figure number _____ as per "[Traffic Management Manual for Work on Roadways \(Interim\)](#)";
- b) A detailed [Traffic Management Plan](#) (format available at the Highways District Office)

APPROVAL SECTION

Request denied Request approved as submitted Request approved with the following changes:

This approval is granted subject to traffic queues being monitored continuously by the Ministry or Project Representative while lane closures or traffic diversions are under way. Delays are not to exceed _____ minutes over the normal travel time.

This approval is granted subject to traffic queues being monitored continuously by the Ministry or Project Representative while lane closures or traffic diversions are under way. Standards will be set as to what delays are acceptable to the public in the Traffic Management Plan and then work will commence until these standards are not met, at which time the Traffic Management Plan will be adjusted and re-approved accordingly.

The Ministry's Regional Transportation Management Centre 1-866-707-7862 must be contacted as follows:

- **At the installation of the lane closure,** **Upon removal of the lane closure.**
- This approval must be kept on-hand at the work site. Traffic Data Program can be accessed from [here](#)**

District Manager Transportation (or Designate)

Date (yyyy/mm/dd)

Once approved, if you have a DriveBC account, you can enter this data directly into DriveBC through the Web Input Utility (WIU). Otherwise, please submit prior to 6:30 a.m. or 24 hours in advance to: [Ministry of Transportation and Infrastructure District Office](#), and cc the Regional Transportation Management Centre (RTMC) at RTMC@gov.bc.ca. The RTMC requires 24/7 emergency phone numbers for all projects.