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## ADDENDUM 3

### RFP: Project No. 6776 and 6777 Stormwater System

#### Replacement

**DATE OF ADDENDUM:** February 18, 2025

**DATE OF RFP ISSUE:** January 22, 2025

**RFP SUBMISSION:** Revised to **February 26, 2025, 3:00pm PST.**

#### Questions and Answers:

1. Q: On sheet C601 of the Plan of Construction Operations there is note regarding traffic control at Kittyhawk and Willingdon during construction hours in zones 1,2,3 and 4. Please confirm that traffic control is required throughout the duration of construction in these zones.

A: Traffic controller for C6777 zones 1 – 4 will be required only when there is construction traffic expected at Kittyhawk and Willingdon Road.
2. Q: On Sheet C601 of the Plan of Construction Operations note 9 states Contractor responsible for providing appurtenances for temporary works such as barricades and lighting, on sheet C604, section a transitional surface detail there is a note stating YYJ – Supplied low profile airport Barricade. Please clarify that the low-profile barricades with steady burn red lights will be provided by YYJ not the contractor. Please also confirm who is responsible for set-up and tear down the low-profile barriers. Assume the contractor is responsible for all other barricades and lighting required for the work excluding the low-profile barricades.

A: Victoria Airport Authority will supply low-profile airport barricades to contractor. The contractor is responsible for setting up and tearing down all barricades, including the low-profile barriers supplied by VAA. Note 9 refers to other barricades and lighting, which will be the responsibility of the contractor.

3. Q: Please refer to project 6777, sheet C202, Existing MH D2316 to Proposed manhole D2011 is connected by 250mm PVC. There does not appear to be a pay item for the 250mm PVC connection, please clarify how this will be paid.  
A: This is a typo. The pipe should be 300mm concrete as shown on project 6777, sheet C201. See revised 6777, sheet C202 Revision E under this addendum.
4. Q: If contaminated soils test results come back higher than acceptable at southern Vancouver Island disposal facilities and materials are required to be transported to the northern island or mainland for disposal will a change be issued to cover the cost for transport and disposal?  
A: See the revised Form of Tender Appendix 1 Schedule of Quantities and Prices that were issued under Addendum 2. Tenderers shall provide unit prices for allowance items under different contaminated soil categories.
5. Q: The soils test report by McElhanney has wording that suggests it is not suitable for offsite materials disposal, we will be required to complete our own testing for offsite disposal, this will delay the start of the project, will the owner or McElhanney consider supplying appropriate reporting and testing for off-site disposal prior to the award of the contract?  
A: The soil test report indicated was only in an area near the landfill. We will not supply any reports and testing for off-site disposal.
6. Q: What is included in SOQ items 1.03 - Miscellaneous removals?  
A: Miscellaneous removals will include removal for items not identified elsewhere in the SOQ, which can include culvert or pipe removal and disposal, fencing, etc., whether or not they are identified in the contract drawings. See Section 01 11 00 SS Item 1.3 Miscellaneous Removal.
7. Q: Will all trees noted for removal be left at stump height by YYJ crews?  
A: That is correct. The contractor will then clear and grub the stump and other remaining clearing that is needed for pipe installation.
8. Q: Do you have any additional information regarding the existing D2733X pipe (zone 2) to share? Pipe size, depth, pipe type (concrete or PVC), any manholes along the pipe that needs to be disposed?  
A: See CCTV inspection report that is attached to this Addendum 3.
9. Q: For concrete storm pipes, please confirm ASTM C67 class 3 reinforced concrete pipes are acceptable to be used on this project.  
A: All pipes shall be Class III ASTM C76, except for the pipes on the airside. See the revised Form of Tender (FoT) Appendix 1 - Schedule of Quantities and Prices and C6777 Drawings C201 - C203.
10. Q: Schedule of quantities for project no. 6776 & 6777 is calling for 40 LM of 750mm concrete pipe from headwall D2717 to headwall D2718. On drawing C203, this quantity is 10.15m. This only becomes 40 LM if pipe is being measured from manhole D2333 to headwall D2718. Please advise if the pipe quantity from manhole D2333 to headwall D2716 belongs to project no. 6776 and 6777 or needs to be added to the optional work?  
A: See the corrected Schedule of Quantities and Prices Category 6776 and 6777 (D2008X only) under Item 33.07 with the revised description.

11. Q: Since it was determined that VAA will perform tree removals prior to commencement of the works, could you please confirm that there will be no need to hire an arborist and prepare a tree management plan.

A: As part of the contract, the contractor will need to do tree protection, which would require arborist supervision.

12. Q: The shoring trench excavation on 6777 Drawing C502 shows a width of 2m for the 1050mm. The pipe OD is 1.3m. Mechanical compaction equipment (Jumping Jack) will be required to compact the pipe bedding due to the pipe size with requires 0.45m of space between the cage wall and the pipe the trench cage walls are 0.1m thick each and there need to be 0.1m of space outside each cage wall so that the cage can be installed this is a total trench width of 2.6m not 2m. Do we have to factor in restoration beyond the 2m into our pipe price or will we be paid for the additional asphalt tonnage under the pavement restoration unit rates? In our experience with this size and type of pipe this is the minimum width that is achievable.

A: See Revised 6777 Drawing C502 and Form of Tender Appendix 1 Schedule of Quantities and Prices for the impacted quantities.

13. Q: This is the same as question 12 above but for the 450mm pipe trench restoration due to the same reasons as above in our experience the minimum trench width for 450mm concrete pipe is 2.0m not 1.2m, do we have to factor in restoration beyond the 1.2m into our pipe price, or will we be paid for the additional asphalt tonnage under the pavement restoration unit rates?

A: See Revised 6777 Drawing C502 and Form of Tender Appendix 1 Schedule of Quantities and Prices for impacted quantities.

14. Q: Q9 in addendum 2 regarding the contaminated soils states that McElhanney QEP will be onsite for the landfill areas to take samples. But for the rest of the project, we do not have to adequate soil test data to take the soil to approved fill facilities, is the soil sampling to meet the requirements for the landfill facilities on the contractor? As we do not have soil data for pricing purposes are we to assume that the soil is considered clean fill "RDL – residential low-density land" that is what the local dump site considers clean fill.

A: That is correct. Contractor will be responsible for performing soil sampling for the remainder of the area. The intent is to reuse the existing material as much as we can as deemed suitable by geotechnical and QEP. See Environmental Management Plan Section 10.3. For the purpose of the pricing, the soil should be considered fill "RDL – residential low-density land".

15. Q: Can we propose an approved alternative product?

A: Yes, contractor is allowed to propose an alternative product. Please provide a description and unit rate cost saving as noted in the revised Form of Tender Appendix 1 - Schedule of Quantities and Prices. Bidders are allowed to submit product data with the tender submission. Products will be evaluated during tender evaluation.

16. Q: Could you please provide specs for the grout around the perimeter of Snaptite pipe (Slip lining)?

A: Successful contractor will provide Slip-Lining work plan as noted on 6777, C201 Note 2, which will include methodology and material submission (grout and snap-tite) for review and approval.

17. Q: Based on the soil & water management plan provided by McElhanney, the contractor needs to store, test and dispose of the contaminated water in the water treatment facilities. Under which pay item will this scope be paid?  
A: If contaminated water is encountered, this line item will be paid under an allowance Item 31.08.4.
18. Q: Could you please provide a connection detail for the 300mm CB lead tying into the proposed 450 storm main on drawing C203?  
A: Successful contractor will submit connection details for the tie-in from 300mm and 450mm for review and approval. Prefabricated material can be proposed.
19. Q: In the environmental management plan provided with McElhanney, section 3.4, it specifies that "Work within 30 m of TEN, TEN Creek will be completed pending DFO and provincial permits.". Also, section 8.2.1 for instream work specifies that "The least risk window for this region is August 15 to September 15, based on fish species present in TEN, TEN Creek. Proposed works that are to be completed above the HWM of TEN, TEN Creek (e.g., vegetation removal and excavation works) will likely not be required to adhere to the least risk timing window; however, scheduling will ultimately be determined through the permitting process (i.e., DFO RfR). Could you please provide the DFO permit?  
A: MLWRS and DFO approvals can be found under Reference Document noted as "Section 11 Notification Terms and Conditions" and "DFO Avoid and Mitigate Letter".
20. Q: Airside Asphalt Tack Coat – Section 32 12 13 SS: Asphalt tack coat has been requested to be placed on granular material, and heavy tack coat has been requested on granular base at a rate of 4.0l/m<sup>2</sup> with a second coat at 1.0l/m<sup>2</sup>. Not only is the tack coat not generally placed on granular base, but the rate of application is extremely excessive. In addition, Item 3.2.9 under this section suggests that tack coat surfaces are only to be overlaid on the same day which is not possible. Prime coat could be used on granular base as a substitution but would need 24 hours to set. I suggest we can delete this section and allow tack coat to remain between asphalt lifts only.  
A: See revised Section 32 12 13 Airside Asphalt Tack Coat. Prime coat is not required.
21. Q: Special Procedures for Airport Facilities - Section 01 35 13.13 Item 7. Can we have written confirmation that all three asphalt lifts for the taxiway can be completed in three days (one day for each lift)? One day (even in smaller sections), will not allow sufficient time for the asphalt to set and the completion of lap joints without complications. If the prime coat is substituted, we would need four days for completion. Please confirm.  
A: Item 7 pertains to obtaining Engineer's written permission if the excavated area cannot be backfilled and sealed within one working day. See Q22 below on clarification for temporary asphalt. The duration of placing permanent asphalt lifts is at contractor's discretion as long as it meets the specifications. The intent is to complete all work within each zone, including permanent paving restoration, before moving to the next zone. Prime coat is not required.
22. Q: Addendum 2 – Question 11. It is noted that temporary hot mix asphalt shall be placed until permanent restoration can be completed. Does this temporary asphalt need to be flush with the existing? Or will a thinner base lift suffice to prevent FOD. Please confirm the thickness of temporary asphalt.

A: The temporary asphalt is required to prevent FOD, and it does not have to be flush with existing as long as there is no aircraft or vehicle traffic is expected. The contractor shall place barriers along the trench to indicate height difference. A minimum of 40mm temporary asphalt is acceptable for airside, which will need to be milled prior to placing permanent asphalt restoration. Payment for temporary asphalt shall be incidental to supply and installation of storm pipes.

23. Q: The slip lining of culverts D2444X and D2455X is listed in the Schedule of Quantities, under MMCD 33 05 24 Cured In Place Pipe Liners. This specification is not applicable to slip lining; however, we understand there is not a current MMCD specification for this work. It is noted there are supplementary specifications listed in second column; however, we have been unable to locate these in the Supplementary Specifications provided in the tender documents. Please can you advise on the location of the specifications (if available), so we can ensure compliance?

A: See Supplementary Specifications for clarification to measurement and payment for this line item. See Q16 above what is expected for the slip-lining work.

24. Q: Are any condition reports, inspection data, photos or videos available for the existing culverts D2444X & D2455X?

A: See CCTV inspection reports that are attached as Reference Documents under Addendum 3.

25. Q: Could you please provide the water flow rates in Ten Ten creek during the month of August?

A: We have peak design flow rates for the month of August, which are: 2-year flow = 1.2 m<sup>3</sup>/s; 10-year flow = 3.6 m<sup>3</sup>/s; and 100-year flow = 4.7 m<sup>3</sup>/s.

26. Q: Not all contaminated dump sites accept IL+ contaminated soil containing metals. Hence, the unit rate for IL+ with metals will be different than IL+ with Hydrocarbon and Chloride. Which classification should be considered while pricing IL+ disposal on the tender form.

A: New classification for IL+ contaminated soil containing metals has been added under Section 31.08.1.1 on the Form of Tender Appendix 1 Schedule of Quantities and Prices.

### **Clarifications to RFP:**

**1. Replace** the following documents (changes are noted in **red** on the attachments):

- A. Table of Contents: adding a new reference document.
- B. Invitation to Tenders: change in tender closing date.
- C. Instruction to Tenderers: change in tender submission date.
- D. FoT Appendix 1 - Schedule of Quantities and Prices: changes to line items as responses to the Q&A above.
- E. Form of Agreement:
  - o Schedule 1: added document under Reference Files and new addenda
  - o Schedule 2: revised drawings submitted under Addendum 3
- F. Supplementary Specifications – adding measurement and payment information under Section 33 05 24
- G. Section 32 12 13 SS Airside Asphalt Tack Coat as response to Q20 above.

- Project No. 6777 C201 (Rev E): Revised pipe material as response to Q9 above.
- Project No. 6777 C202 (Rev E): Revised pipe material as response to Q3 and Q9 above.
- Project No. 6777 C203 (Rev E): Revised pipe material as response to Q9 above.
- Project No. 6777 C502 (Rev E): Revised trench detail as responses to Q12 and Q13 above.

**2. Add** the following documents under Reference Documents:

- I. CCTV inspection reports for D2733X, D2444X and D2455X.

**END OF ADDENDUM 3**

**Victoria Airport Authority**  
**PROJECT TENDER DOCUMENT**  
**Project No. 6776 and 6777**  
**Stormwater System Replacement**

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<sup>1</sup> Instruction to Tenderers Part II refers to Master Municipal Construction Document 2019 Edition

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Reference Documents

1. Geotechnical Report
2. PFAS Document
3. Soil and Water Management Plan
4. Environmental Management Plan
5. Plan of Construction Operation
6. Utility and Permit Information Package
7. Section 11 Notification Terms and Conditions
8. DFO Avoid and Mitigate Letter 24-HPAC-01129
9. NAV Canada Letter
10. YYJ EPP Review Checklist
11. Final Cultural Monitoring procedures
12. Parking and Laydown Areas
13. CCTV inspection reports for D2733X, D2444X and D2455X.



Owner: VICTORIA AIRPORT AUTHORITY  
(NAME OF OWNER)

Contract: STORMWATER SYSTEM REPLACEMENT  
(TITLE OF CONTRACT)

Reference No.: PROJECT No. 6776 and 6777  
(OWNER'S CONTRACT REFERENCE NO.)

The Owner invites tenders for: The supply of labour, materials, and equipment to replace roughly 480 metres of storm sewers and culvert rehabilitation with slip lining, including installation of new headwalls, catch basins and manholes, and treatment facility located airside and landside at Victoria International Airport.

(BRIEF DESCRIPTION OF THE WORK)

Digital (PDF) copies of the Tender Documents and Addenda are available to download at: <https://yyj.ca/partnering-with-us/requests-for-proposals/>

Tenders are scheduled to close:

**Tender Closing Time:** 3:00:00 p.m. local time  
**Tender Closing Date:** February 26, 2025

Email: admin@yyj.ca  
(ADDRESS WHERE TENDERS MUST BE SUBMITTED)

Name of Owner's Representative Valentino Tjia, P.Eng., McElhanney Ltd.  
604-551-6961 / vtjia@mcelhanney.com  
(PHONE)  
(E-Mail)

**1.0 Introduction.....IT - 1**

**2.0 Tender Documents .....IT - 1**

**3.0 Submission of Tenders .....IT - 2**

**4.0 Additional Instructions to Tenderers.....IT - 2**

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**UNIT**  
**PRICE**  
**CONTRACT**

**PROJECT No. 6776 AND 6777**  
**INSTRUCTIONS TO TENDERERS – PART I**

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**FEB 2025**

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(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

(TO BE READ WITH “INSTRUCTIONS TO TENDERERS – PART II”  
CONTAINED IN THE 2019 EDITION OF THE PUBLICATION  
“MASTER MUNICIPAL CONSTRUCTION DOCUMENTS” SPECIFIED IN ARTICLE 2.2 BELOW)

**Owner:** *VICTORIA AIRPORT AUTHORITY (VAA)*  
(NAME OF OWNER)

**Contract:** *STORMWATER SYSTEM REPLACEMENT*  
(TITLE OF CONTRACT)

**Reference No.:** *PROJECT No. 6776 and 6777*  
(OWNER'S CONTRACT REFERENCE NO.)

**1.0 Introduction** 1.1 These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:

The supply of labour, materials, and equipment to replace roughly 480 metres of storm sewers and culvert rehabilitation with slip lining, including installation of new headwalls, catch basins and manholes, and treatment facility located airside and landside at Victoria International Airport.

( BRIEF DESCRIPTION OF THE WORK )

1.2 Direct all inquiries regarding the *Contract*, to:

*Valentino Tjia, MSc., PE, P.Eng., Contract Administrator*

( NAME AND POSITION OF INDIVIDUAL WHO WILL ANSWER INQUIRIES )

**E-Mail:** [vtjia@mcelhanney.com](mailto:vtjia@mcelhanney.com) and  
cc: [alex.murray@yyj.ca](mailto:alex.murray@yyj.ca)

**2.0 Tender Documents** 2.1 The tender documents which a tenderer should review to prepare a tender consist of all of the *Contract Documents* listed in Schedule 1 entitled “Schedule of Contract Documents”. Schedule 1 is attached to the Agreement which is included as part of the tender package. The *Contract Documents* include the drawings listed in Schedule 2 to the Agreement, entitled “List of *Contract Drawings*”.

2.2 A portion of the *Contract Documents* are included by reference. Copies of these documents have not been included with the tender package. These documents are the Instructions to Tenderers – Part II, General Conditions, Specifications and Standard Detail Drawings. They are those contained in the publication entitled “Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings”. Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the *Tender Closing Date*. All

sections of this publication are by reference included in the *Contract Documents*.

2.3 Any additional information made available to tenderers prior to the *Tender Closing Time* by the *Owner* or representative of the *Owner*, such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the *Contract Documents*. Such additional information is made available only for the assistance of tenderers who must make their own judgment about its reliability, accuracy, completeness and relevance to the *Contract*, and neither the *Owner* nor any representative of the *Owner* gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.

**3.0 Submission of Tenders**

3.1 Emailed Tenders will only be accepted up to 3:00:00 p.m., Pacific Daylight Savings Time **Friday, February 26, 2025**. Late tenders may be rejected at the sole discretion of VAA.

**Electronic Copy** of tender submissions will be received at:

Email: [admin@yyj.ca](mailto:admin@yyj.ca)

Tenders are to be delivered in an email with email subject labelled “STORMWATER SYSTEM REPLACEMENT - Project No. 6776 and 6777”

Confirmation of receipt of email will be issued. Tenders that cannot be opened or viewed may be rejected. A Proponent bears all risk that the VAA’s receiving computer equipment functions properly so that the Tender is received by the Closing Time. The maximum file size that the VAA can receive is 10Mb. If sending large email attachments, Proponents should provide link to a shared drive in the email.

**4.0 Additional Instructions to Tenderers**

4.1 **Freedom of Information:** The Victoria Airport Authority (VAA) is subject to the provisions of the Freedom of Information and Protection of Privacy Act. As a result, while Section 21 of the Act does offer some protection for third party business interests, the VAA cannot guarantee that any information provided to the VAA can be held in confidence.

4.2 **Funding:** Proceeding with an award of this tender may be subject to VAA Board approval and available funding.

4.3 **Notice of Project:** The Contractor shall submit to Worksafe BC a completed Notice of Project, providing a copy to the VAA.

4.4 **Traffic Management Plan, Construction Staging Plan, and Plan of Construction Operation (Airside):** Within 15 days of receipt of the written Notice of Award, deliver to the VAA a Construction Traffic Management Plan, Construction Staging Plan, and Plan of

Construction Operations prepared by a qualified person that aligns with the supplementary specifications.

- 4.5 **Addenda:** Any and all addenda to this Tender will be posted to VAA's website at <https://yyj.ca/partnering-with-us/requests-for-proposals/>. It is the sole responsibility of the tenderer to make sure that they are in receipt of all addenda prior to the closing date and acknowledge receipt of the addenda on the Tender Form.
- 4.6 **Inquiries:** All questions must be received at least 5 business days prior to the closing time and date.
- 4.7 **Superintendent:** The *Owner* reserves the right to object to the *Superintendent* listed in the tender. If the *Owner* objects to the *Superintendent*, then the *Owner* will permit a tenderer to, within 5 days, propose a substitute *Superintendent* acceptable to the *Owner* provided that there is no resulting adjustment in the *Tender Price* or the completion date set out in paragraph 2.2 of the Form of Tender. A tenderer will not be required to make such a substitution and, if the *Owner* objects to a listed *Superintendent*, the tenderer may, rather than propose a substitute *Superintendent*, consider its tender rejected by the *Owner* and by written notice withdraw its tender. The *Owner* shall, in that event, return the tenderer's bid security.
- 4.8 **Schedule:** Refer to Supplemental General Conditions regarding schedule requirements.
- 4.9 **Supplemental Specifications and Conditions:** Tenderers are reminded to ensure that all trades, subcontractors, subconsultants, etc. have familiarized themselves with the conditions of the Contract, including all Supplementary General Conditions, Supplemental Specifications, Addenda, Supplemental Standard Drawings, etc.
- 4.10 **Hours of Work:** The Contractor shall comply working hours, being Monday to Friday, 7 AM to 6 PM, unless otherwise required under SGC 4.1.5 or as negotiated with VAA following contract award.
- 4.11 **Late Completion:** Liquidated damages for late completion shall apply, as per GC 13.9.
- 4.12 **Optional Pricing:** Optional prices, if applicable, will NOT form part of the base scope total tendered price.  
The base scope, total tendered prices shall be used for comparing prices between tenders received.  
Should the owner decide to proceed with the optional work, this will be undertaken by change order, based on the optional unit prices tendered, after award of contract.
- 4.13 **Tender Meeting:** A **mandatory** tender meeting has been scheduled for Thursday, February 6, 2025, at 10:00 AM. Tenderers are to meet

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**UNIT**  
**PRICE**  
**CONTRACT**

**PROJECT NO. 6776 AND 6777**  
**INSTRUCTIONS TO TENDERERS – PART I**

**IT – PART 1**  
**PAGE 4 OF 4**  
**FEB 2025**

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near the intersection of Kittyhawk and Willingdon Road.

**FORM OF TENDER - APPENDIX 1**

**SCHEDULE OF QUANTITIES AND PRICES**

(See paragraph 5.3.1 of the Instructions to Tenderers - Part II)

(All Prices and Quotations including the Contract Price shall include all taxes, but shall not include GST.)

Any work called for in these Contract Documents, shown on the plans, or which is necessary for the completion of the Work called for in these Contract Documents and which is not specifically listed as a separate payment item in this Appendix shall be deemed incidental to the performance of the Work and to the general purpose of the Contract; no separate payment will be made on account of any such Work, but the costs of any such incidental Work shall be included in the Unit and Lump Sum Prices.

**A. STORMWATER SYSTEM REPLACEMENT (6777, excluding D2008X)**

|  |       |
|--|-------|
| Division 01: General Requirements        | _____ |
| Division 31: Earthworks                  | _____ |
| Division 32: Roads and Site Improvements | _____ |
| Division 33: Utilities                   | _____ |
| <b>TOTAL TENDER PRICE:</b>               | _____ |
| <b>GST (5%)</b>                          | _____ |
| <b>TOTAL TENDER PRICE including GST:</b> | ===== |

**B. STORMWATER SYSTEM REPLACEMENT (6776 and 6777 (D2008X only))**

|  |       |
|--|-------|
| Division 01: General Requirements        | _____ |
| Division 31: Earthworks                  | _____ |
| Division 32: Roads and Site Improvements | _____ |
| Division 33: Utilities                   | _____ |
| <b>TOTAL TENDER PRICE:</b>               | _____ |
| <b>GST (5%)</b>                          | _____ |
| <b>TOTAL TENDER PRICE including GST:</b> | ===== |



**OPTIONAL WORK: Pipe D2762X Replacement**

Division 01: General Requirements

Division 31: Earthworks

Division 32: Roads and Site Improvements

Division 33: Utilities

**TOTAL OF OPTIONAL WORK**

**GST (5%)**

**TOTAL OPTIONAL PRICE including GST:**

**TOTAL A+B PRICE including GST:**

**TOTAL OPTIONAL PRICE including GST:**

| <b>A. STORMWATER SYSTEM REPLACEMENT (6777, excluding D2008X)</b> |                |   |              |                 |                   |               |
|--|----------------|---|--------------|-----------------|-------------------|---------------|
| <b>DIV 01</b>  |                | <b>GENERAL REQUIREMENTS</b>   |              |                 |                   |               |
| <i>Item No.</i>  | <i>Section</i> | <i>Specification Title</i>  | <i>Unit</i>  | <i>Quantity</i> | <i>Unit Price</i> | <i>Amount</i> |
|  | 01 10 00 SS    | <b>General</b>  |              |                 |                   |               |
| 1.01   | 1.1            | Quality Control Testing   | Lump Sum     | 1.00            |                   |               |
| 1.02   | 1.2            | Layout Survey, Quantity Survey, and Volume Calculations                       | Lump Sum     | 1.00            |                   |               |
| 1.03   | 1.3            | Miscellaneous Removals - e.g. Pipes and Manholes - Dispose Offsite            | Lump Sum     | 1.00            |                   |               |
|  | 01 52 01       | <b>Temporary Structures</b>   |              |                 |                   |               |
| 1.05   | 1.6.1 SS       | Mobilization & Demobilization   | Lump Sum     | 1.00            |                   |               |
|  | 01 55 00       | <b>Traffic Control, Vehicle Access and Parking</b>                            |              |                 |                   |               |
| 1.06   | 1.5.1 SS       | Traffic Control   | Lump Sum     | 1.00            |                   |               |
|  | 01 57 01       | <b>Environment Protection</b>   |              |                 |                   |               |
| 1.07   | 1.6.2 SS       | Environment Protection  | Lump Sum     | 1.00            |                   |               |
|  |                |   | Sub-Total    |                 |                   |               |
| <b>DIV 31</b>  |                | <b>EARTHWORKS</b>   |              |                 |                   |               |
| <i>Item No.</i>  | <i>Section</i> | <i>Specification Title</i>  | <i>Unit</i>  | <i>Quantity</i> | <i>Unit Price</i> | <i>Amount</i> |
|  | 31 11 01       | <b>Clearing and Grubbing</b>  |              |                 |                   |               |
| 31.01  | 1.4.1          | Remove Existing Trees and Dispose to Designated Area                          | Each         | 3.00            |                   |               |
| 31.02  | 1.4.1<br>1.4.2 | Clearing and Grubbing (Removal of Tree Stumps and Remaining of Clearing Area) | Square Metre | 15.00           |                   |               |
|  | 31 11 41       | <b>Shrub and Tree Preservation</b>  |              |                 |                   |               |
| 31.03  | 1.31           | Protection of Existing Tree   | Lump Sum     | 1.00            |                   |               |
|  | 31 23 23       | <b>Controlled Density Fill</b>  |              |                 |                   |               |
| 31.04  | 1.4.1          | For Abandoned Pipes   | Cubic Metre  | 70.00           |                   |               |
|  |                |   | Sub-Total    |                 |                   |               |

| DIV 32   |               | ROADS AND SITE IMPROVEMENTS                              |               |          |            |        |
|----------|---------------|--|---------------|----------|------------|--------|
| Item No. | Section       | Specification Title                                      | Unit          | Quantity | Unit Price | Amount |
|          | 32 11 16.1    | <b>Granular Sub-Base</b>                                 |               |          |            |        |
| 32.01    | 1.4.2         | 75mm Minus Granular Subbase                              | Tonne         | 350.0    |            |        |
|          | 32 11 23      | <b>Granular Base</b>                                     |               |          |            |        |
| 32.02    | 1.4.1         | 19mm Minus Granular Base                                 | Tonne         | 210.0    |            |        |
|          | 32 12 13 SS   | <b>Asphalt Tack Coat</b>                                 |               |          |            |        |
| 32.03    | 1.5.1         | Tack Coat  | Square Metre  | 680.0    |            |        |
|          | 32 12 16.1 SS | <b>Airside Hot-Mix Asphalt Concrete Paving</b>           |               |          |            |        |
| 32.04    | 1.5.1         | 16mm Class 1 Medium Asphalt Surface Course               | Tonne         | 60.0     |            |        |
| 32.05    | 1.5.1         | 19mm Class 1 Medium Asphalt Base Course                  | Tonne         | 110.0    |            |        |
|          | 32 17 23.1 SS | <b>Airside Painted Pavement Markings</b>                 |               |          |            |        |
| 32.06    | 1.5.2         | Airside Pavement Markings                                | Lump Sum      | 1.00     |            |        |
|          | 32 31 13      | <b>Chain Link Fences and Gates</b>                       |               |          |            |        |
| 32.07    | 1.5.1         | PSL Fence Reinstatement                                  | Lineal Metre  | 10.00    |            |        |
|          | 32 91 21      | <b>Topsoil and Finish Grading</b>                        |               |          |            |        |
| 32.08    | 1.4.1         | Imported Topsoil   | Tonne         | 50       |            |        |
|          | 32 92 19      | <b>Hydraulic Seeding</b>                                 |               |          |            |        |
| 32.09    | 1.8.2         | Native Mixed Hydraulic Seeding for Boulevard Restoration | Square Metres | 300      |            |        |
|          |               |  | Sub-Total     |          |            |        |

| DIV 33   |                            | UTILITIES  |              |           |            |        |
|----------|----------------------------|--|--------------|-----------|------------|--------|
| Item No. | Section                    | Specification Title  | Unit         | Quantity  | Unit Price | Amount |
|          | 33 01 30.1                 | <b>CCTV Inspection of Pipelines</b>  |              |           |            |        |
| 33.01    | 1.6.2<br>1.6.3<br>1.6.6 SS | Drainage Pipe Post-Inspection - Various Sizes                              | Lineal Metre | 270.0     |            |        |
|          | 33 40 01                   | <b>Storm Sewers</b>  |              |           |            |        |
| 33.02    | 1.6.1<br>1.6.2<br>1.6.3    | 300 mm dia. Reinforced Class IV Concrete Drainage Pipe                     | Lineal Metre | 11.0      |            |        |
| 33.03    | 1.6.1<br>1.6.2<br>1.6.3    | 450 mm dia. Reinforced Class IV Concrete Drainage Pipe                     | Lineal Metre | 74.0      |            |        |
| 33.04    | 1.6.1<br>1.6.2<br>1.6.3    | 1050 mm dia. Reinforced Class IV Concrete Drainage Pipe                    | Lineal Metre | 105.0     |            |        |
| 33.05    | 1.6.1<br>1.6.2<br>1.6.3    | 1050 mm dia. Reinforced Class III Concrete Drainage Pipe                   | Lineal Metre | 88.0      |            |        |
|          | 33 44 01                   | <b>Manholes and Catchbasins</b>  |              |           |            |        |
| 33.06    | 1.5.1 SS                   | Manhole 900 mm dia. Extra Heavy Duty Catchbasin, Frame, Grate, and/or Rim  | Each         | 2.0       |            |        |
| 33.07    | 1.5.1 SS                   | Manhole 1050 mm dia. Extra Heavy Duty Catchbasin, Frame, Grate, and/or Rim | Each         | 1.0       |            |        |
| 33.08    | 1.5.4 SS                   | Manhole 1800 mm dia. Manhole, Frame, Grate, and/or Rim                     | Each         | 2.0       |            |        |
| 33.09    | 1.5.1 SS                   | Manhole 1800 mm dia. Extra Heavy Duty Manhole, Frame, Grate, and/or Rim    | Each         | 2.0       |            |        |
| 33.10    | 1.5.1 SS                   | Oil and Grit Separator System  | Each         | 1.0       |            |        |
|          |                            |  |              | Sub-Total |            |        |

| <b>ALTERNATIVE PRODUCT</b> |                                  |  |      |           |                           |                       |
|----------------------------|----------------------------------|--|------|-----------|---------------------------|-----------------------|
| Item No.                   | Section<br>Put Section<br>Number | Specification Title<br>Put Alternative Product Description | Unit | Quantity  | Unit Price<br>Cost Saving | Amount<br>Cost Saving |
|                            |                                  |  |      |           |                           |                       |
|                            |                                  |  |      |           |                           |                       |
|                            |                                  |  |      |           |                           |                       |
|                            |                                  |  |      | Sub-Total |                           |                       |

| B. STORMWATER SYSTEM REPLACEMENT (6776 and 6777 (D2008X only)) |             |   |           |          |            |        |
|--|-------------|---|-----------|----------|------------|--------|
| DIV 01   |             | GENERAL REQUIREMENTS  |           |          |            |        |
| Item No.   | Section     | Specification Title   | Unit      | Quantity | Unit Price | Amount |
|  | 01 10 00 SS | <b>General</b>  |           |          |            |        |
| 1.01   | 1.1         | Quality Control Testing                                       | Lump Sum  | 1.00     |            |        |
| 1.02   | 1.2         | Layout Survey, Quantity Survey, and Volume Calculations       | Lump Sum  | 1.00     |            |        |
| 1.03   | 1.3         | Miscellaneous Removals - Dispose Offsite or Relocate as Noted | Lump Sum  | 1.00     |            |        |
|  | 01 52 01    | <b>Temporary Structures</b>                                   |           |          |            |        |
| 1.04   | 1.6.1 SS    | Mobilization & Demobilization                                 | Lump Sum  | 1.00     |            |        |
|  | 01 55 00    | <b>Traffic Control, Vehicle Access and Parking</b>            |           |          |            |        |
| 1.05   | 1.5.1 SS    | Traffic Control   | Lump Sum  | 1.00     |            |        |
|  | 01 57 01    | <b>Environment Protection</b>                                 |           |          |            |        |
| 1.06   | 1.6.2 SS    | Environment Protection  | Lump Sum  | 1.00     |            |        |
|  |             |   | Sub-Total |          |            |        |

| DIV 31           |                  | EARTHWORKS   |                 |                 |            |        |
|------------------|------------------|--|-----------------|-----------------|------------|--------|
| Item No.         | Section          | Specification Title  | Unit            | Quantity        | Unit Price | Amount |
|                  | 31 05 17         | <b>Aggregates and Granular Material</b>  |                 |                 |            |        |
| 31.01            | 1.4.1            | Compacted silts and clays  | Cubic Metre     | 5.00            |            |        |
| 31.02            | 1.4.1            | 100-200 mm Cobbles   | Cubic Metre     | 4.00            |            |        |
| 31.03            | 1.4.1            | Coho Fish Gravels  | Cubic Metre     | 5.00            |            |        |
|                  | 31 11 01         | <b>Clearing and Grubbing</b>   |                 |                 |            |        |
| <del>31.04</del> | <del>1.4.1</del> | <del>Remove Existing Trees</del>   | <del>Each</del> | <del>4.00</del> |            |        |
| 31.05            | 1.4.1<br>1.4.2   | Clearing and Grubbing (Removal of Tree Stumps and Remaining of Clearing Area)  | Square Metre    | 180.00          |            |        |
|                  | 31 11 41         | <b>Shrub and Tree Preservation</b>   |                 |                 |            |        |
| 31.06            | 1.31             | Protection of Existing Tree  | Lump Sum        | 1.00            |            |        |
|                  | 31 23 01         | <b>Excavating, Trenching and Backfilling</b>   |                 |                 |            |        |
| 31.07            | 1.10.4           | Common Excavation: Culvert and Headwall Removal - Reuse Native Soil for Backfill   | Cubic Metre     | 1,600.00        |            |        |
| 31.08.1          | 1.10.9           | ALLOWANCE: Common Excavation, Transport to Stockpile, and Off-Site Disposal for Contaminated Soil (Category IL+)                   | Tonne           | 120.00          |            |        |
| 31.08.1.1        | 1.10.9           | ALLOWANCE: Common Excavation, Transport to Stockpile, and Off-Site Disposal for Contaminated Soil (Category IL+ containing metals) | Tonne           | 120.00          |            |        |
| 31.08.2          | 1.10.9           | ALLOWANCE: Common Excavation, Transport to Stockpile and Off-Site Disposal for Contaminated Soil (Category RL+/IL-)                | Tonne           | 120.00          |            |        |
| 31.08.3          | 1.10.9           | ALLOWANCE: Common Excavation, Transport to Stockpile and Off-Site Disposal for Contaminated Soil (Category RL-)                    | Tonne           | 120.00          |            |        |
| 31.08.4          | 1.10.10          | ALLOWANCE: Common Excavation, Testing, Storing and Off-Site Disposal for Contaminated Water  | Litre           | 5,000.00        |            |        |

|       |          |  |             |           |  |  |
|-------|----------|--|-------------|-----------|--|--|
|       | 31 23 23 | <b>Controlled Density Fill</b>                       |             |           |  |  |
| 31.09 | 1.4.1    | For Abandoned Pipes                                  | Cubic Metre | 40.00     |  |  |
|       | 31 24 13 | <b>Roadway Excavation, Embankment and Compaction</b> |             |           |  |  |
| 31.10 | 1.8.7 SS | Embankment Fill<br>(Select Granular Sub-Base)        | Cubic Metre | 20.00     |  |  |
|       | 31 37 10 | <b>Riprap (for Outlet Pool)</b>                      |             |           |  |  |
| 31.11 | 1.4.2 SS | 600mm Boulders                                       | Each        | 30.00     |  |  |
| 31.12 | 1.4.2 SS | 900mm Boulders                                       | Each        | 6.00      |  |  |
|       |          |  |             | Sub-Total |  |  |

| DIV 32   |            | ROADS AND SITE IMPROVEMENTS   |               |           |            |        |
|----------|------------|---|---------------|-----------|------------|--------|
| Item No. | Section    | Specification Title   | Unit          | Quantity  | Unit Price | Amount |
|          | 32 11 16.1 | <b>Granular Sub-Base</b>  |               |           |            |        |
| 32.01    | 1.4.2      | 75mm Minus Crushed Gravel   | Tonne         | 50.00     |            |        |
| 32.02    | 1.4.2      | 75mm Pit Run Gravel   | Tonne         | 10.00     |            |        |
|          | 32 11 23   | <b>Granular Base</b>  |               |           |            |        |
| 32.03    | 1.4.1      | 19mm Minus Granular Base  | Tonne         | 30.00     |            |        |
|          | 32 12 13.1 | <b>Asphalt Tack Coat</b>  |               |           |            |        |
| 32.04    | 1.5.1      | Tack Coat   | Square Metre  | 90.00     |            |        |
|          | 32 12 16   | <b>Hot-Mix Asphalt Concrete Paving</b>                                  |               |           |            |        |
| 32.05    | 1.5.1      | Upper Course #2   | Tonne         | 20.00     |            |        |
| 32.06    | 1.5.1      | Lower Course #2   | Tonne         | 20.00     |            |        |
|          | 32 17 23   | <b>Painted Pavement Markings</b>  |               |           |            |        |
| 32.07    | 1.5.2      | Painted Pavement Markings   | Lump Sum      | 1.00      |            |        |
| 32.08    | 1.5.3      | Thermoplastic Pavement Markings   | Lump Sum      | 1.00      |            |        |
|          | 32 31 13   | <b>Chain Link Fences and Gates</b>                                      |               |           |            |        |
| 32.09    | 1.5.1      | PSL Fence Reinstatement   | Lineal Metre  | 40.00     |            |        |
| 32.10    | 1.5.1      | Wooden Fence and Stair Reinstatement                                    | Lump Sum      | 1.00      |            |        |
|          | 32 91 21   | <b>Topsoil and Finish Grading</b>                                       |               |           |            |        |
| 32.11    | 1.4.1      | Imported Topsoil  | Cubic Metre   | 110.00    |            |        |
|          | 32 92 19   | <b>Hydraulic Seeding</b>  |               |           |            |        |
| 32.12    | 1.8.2      | Native Mixed Hydraulic Seeding for Boulevard Restoration and Embankment | Square Metres | 720.00    |            |        |
|          |            |   |               | Sub-Total |            |        |

| DIV 33   |                            | UTILITIES   |              |           |            |        |
|----------|----------------------------|---|--------------|-----------|------------|--------|
| Item No. | Section                    | Specification Title   | Unit         | Quantity  | Unit Price | Amount |
|          | 33 01 30.1                 | <b>CCTV Inspection of Pipelines</b>   |              |           |            |        |
| 33.01    | 1.6.2<br>1.6.3<br>1.6.6 SS | Drainage Pipe Pre- and Post-Installation - Slip Lining (D2444X & D2455X)              | Lineal Metre | 88.0      |            |        |
| 33.02    | 1.6.2<br>1.6.3<br>1.6.6 SS | Drainage Pipe Post-Inspection - Various Sizes   | Lineal Metre | 205.0     |            |        |
|          | 33 01 30.2                 | <b>Cleaning of Sewers</b>   |              |           |            |        |
| 33.03    | 1.5.2<br>1.5.3<br>1.5.4 SS | Drainage Pipe Pre- and Post-Inspection - Slip Lining (D2444X & D2455X)                | Lineal Metre | 88.0      |            |        |
|          | 33 05 24                   | <b>Cured In Place Pipe Liners</b>   |              |           |            |        |
| 33.04    | 1.9.11                     | Slip Lining with 900mm HDPE Snap Tite (D2444X & D2455X)                               | Lump Sum     | 1.0       |            |        |
|          | 33 40 01                   | <b>Storm Sewers</b>   |              |           |            |        |
| 33.05    | 1.6.1<br>1.6.2<br>1.6.3    | 1050mm Ø Reinforced <b>Class III</b> Concrete Pipe (D2008X)                           | Lineal Metre | 40.0      |            |        |
| 33.06    | 1.6.1<br>1.6.2<br>1.6.3    | 900mm Ø Reinforced <b>Class III</b> Concrete Pipe (D42 to D2733 and D36 to D2812)     | Lineal Metre | 125.0     |            |        |
| 33.07    | 1.6.1<br>1.6.2<br>1.6.3    | 750mm Ø Reinforced <b>Class III</b> Concrete Pipe (D2333 to D2716 and D2717 to D2718) | Lineal Metre | 40.0      |            |        |
|          | 33 42 13                   | <b>Pipe Culverts</b>  |              |           |            |        |
| 33.08    | 1.5.3                      | Precast 1050mm Pipe Concrete Headwall with Handrails and Trash Racks (D2327)          | Each         | 1.0       |            |        |
| 33.09    | 1.5.3                      | Precast 900mm Pipe Concrete Headwall with Handrails and Trash Racks (D2733)           | Each         | 1.0       |            |        |
| 33.10    | 1.5.3                      | Precast 900mm Pipe Concrete Headwall (D2812)  | Each         | 1.0       |            |        |
| 33.11    | 1.5.3                      | Precast 750mm Pipe Concrete Headwall with Handrails and Trash Racks (D2717)           | Each         | 2.0       |            |        |
| 33.12    | 1.5.3                      | Precast 750mm Pipe Concrete Headwall (D2718)  | Each         | 1.0       |            |        |
|          | 33 44 01                   | <b>Manholes and Catchbasins</b>   |              |           |            |        |
| 33.13    | 1.5.1 SS                   | Manhole 1500 mm diameter, including frame, grate and/or rim                           | Each         | 7.0       |            |        |
| 33.14    | 1.5.4 SS                   | Removal of Existing Manholes  | Each         | 2.0       |            |        |
|          |                            |   |              | Sub-Total |            |        |

| <b>ALTERNATIVE PRODUCT</b> |                            |   |      |           |                        |                    |
|----------------------------|----------------------------|---|------|-----------|------------------------|--------------------|
| Item No.                   | Section Put Section Number | Specification Title Put Alternative Product Description | Unit | Quantity  | Unit Price Cost Saving | Amount Cost Saving |
|                            |                            |   |      |           |                        |                    |
|                            |                            |   |      |           |                        |                    |
|                            |                            |   |      |           |                        |                    |
|                            |                            |   |      | Sub-Total |                        |                    |

| OPTIONAL WORK: Pipe D2762X Replacement |             |   |           |          |            |        |
|--|-------------|---|-----------|----------|------------|--------|
| DIV 01                                 |             | GENERAL REQUIREMENTS  |           |          |            |        |
| Item No.                               | Section     | Specification Title   | Unit      | Quantity | Unit Price | Amount |
|  | 01 10 00 SS | <b>General</b>  |           |          |            |        |
| 1.01                                   | 1.1         | Quality Control Testing                                       | Lump Sum  | 1.00     |            |        |
| 1.02                                   | 1.2         | Layout Survey, Quantity Survey, and Volume Calculations       | Lump Sum  | 1.00     |            |        |
| 1.03                                   | 1.3         | Miscellaneous Removals - Dispose Offsite or Relocate as Noted | Lump Sum  | 1.00     |            |        |
|  | 01 52 01    | <b>Temporary Structures</b>                                   |           |          |            |        |
| 1.05                                   | 1.6.1 SS    | Mobilization & Demobilization                                 | Lump Sum  | 1.00     |            |        |
|  | 01 55 00    | <b>Traffic Control, Vehicle Access and Parking</b>            |           |          |            |        |
| 1.06                                   | 1.5.1 SS    | Traffic Control   | Lump Sum  | 1.00     |            |        |
|  | 01 57 01    | <b>Environment Protection</b>                                 |           |          |            |        |
| 1.07                                   | 1.6.2 SS    | Environment Protection  | Lump Sum  | 1.00     |            |        |
|  |             |   | Sub-Total |          |            |        |

| DIV 31   |                | EARTHWORKS                         |              |          |            |        |
|----------|----------------|------------------------------------|--------------|----------|------------|--------|
| Item No. | Section        | Specification Title                | Unit         | Quantity | Unit Price | Amount |
|          | 31 11 01       | <b>Clearing and Grubbing</b>       |              |          |            |        |
| 31.01    | 1.4.1<br>1.4.2 | Clearing and Grubbing              | Square Metre | 15.00    |            |        |
|          | 31 11 41       | <b>Shrub and Tree Preservation</b> |              |          |            |        |
| 31.01    | 1.4.2          | Protection of Existing Tree        | Lump Sum     | 1.00     |            |        |
|          |                |                                    | Sub-Total    |          |            |        |

| DIV 32   |            | ROADS AND SITE IMPROVEMENTS            |              |          |            |        |
|----------|------------|--|--------------|----------|------------|--------|
| Item No. | Section    | Specification Title                    | Unit         | Quantity | Unit Price | Amount |
|          | 32 11 16.1 | <b>Granular Sub-Base</b>               |              |          |            |        |
| 32.01    | 1.4.2      | 75mm Minus Crushed Gravel              | Tonne        | 24.00    |            |        |
|          | 32 11 23   | <b>Granular Base</b>                   |              |          |            |        |
| 32.02    | 1.4.1      | 19mm Granular Base                     | Tonne        | 12.00    |            |        |
|          | 32 12 13.1 | <b>Asphalt Tack Coat</b>               |              |          |            |        |
| 32.03    | 1.5.1      | Tack Coat                              | Square Metre | 80.00    |            |        |
|          | 32 12 16   | <b>Hot-Mix Asphalt Concrete Paving</b> |              |          |            |        |
| 32.04    | 1.5.1      | Upper Course #2                        | Tonne        | 4.00     |            |        |



|       |                 |  |               |           |  |  |
|-------|-----------------|--|---------------|-----------|--|--|
| 32.05 | 1.5.1           | Lower Course #2  | Tonne         | 5.00      |  |  |
|       | <b>32 17 23</b> | <b>Painted Pavement Markings</b>                         |               |           |  |  |
| 32.06 | 1.5.3           | Thermoplastic Pavement Markings                          | Lump Sum      | 1.00      |  |  |
|       | <b>32 91 21</b> | <b>Topsoil and Finish Grading</b>                        |               |           |  |  |
| 32.07 | 1.4.1           | Imported Topsoil   | Cubic Metre   | 2.00      |  |  |
|       | <b>32 92 19</b> | <b>Hydraulic Seeding</b>                                 |               |           |  |  |
| 32.08 | 1.8.2           | Native Mixed Hydraulic Seeding for Boulevard Restoration | Square Metres | 15.00     |  |  |
|       |                 |  |               | Sub-Total |  |  |

| DIV 33   |                            | UTILITIES                                     |              |           |            |        |
|----------|----------------------------|---|--------------|-----------|------------|--------|
| Item No. | Section                    | Specification Title                           | Unit         | Quantity  | Unit Price | Amount |
|          | <b>33 01 30.1</b>          | <b>CCTV Inspection of Pipelines</b>           |              |           |            |        |
| 33.01    | 1.6.2<br>1.6.3<br>1.6.6 SS | Drainage Pipe Post-Inspection - Various Sizes | Lineal Metre | 23.0      |            |        |
|          | <b>33 40 01</b>            | <b>Storm Sewers</b>                           |              |           |            |        |
| 33.02    | 1.6.1<br>1.6.2<br>1.6.3    | 600mm Ø PVC DR35                              | Lineal Metre | 23.0      |            |        |
|          |                            |   |              | Sub-Total |            |        |

| ALTERNATIVE PRODUCT |                            |   |      |           |                        |                    |
|---------------------|----------------------------|---|------|-----------|------------------------|--------------------|
| Item No.            | Section Put Section Number | Specification Title Put Alternative Product Description | Unit | Quantity  | Unit Price Cost Saving | Amount Cost Saving |
|                     |                            |   |      |           |                        |                    |
|                     |                            |   |      |           |                        |                    |
|                     |                            |   |      |           |                        |                    |
|                     |                            |   |      | Sub-Total |                        |                    |

(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

BETWEEN OWNER AND CONTRACTOR

This agreement made in duplicate this

\_\_\_\_\_ day of \_\_\_\_\_, 2025.

**Contract:** Stormwater System Replacement

( TITLE OF CONTRACT )

**Reference No.:** Project 6776 and 6777

(OWNER'S CONTRACT REFERENCE NO.)

BETWEEN:

The VICTORIA AIRPORT AUTHORITY

( NAME OF OWNER )

(the "Owner")

AND:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
( NAME AND OFFICE ADDRESS OF CONTRACTOR )

(the "Contractor")

**The Owner and the Contractor agree as follows:**

**Article 1 The Work -  
Start /  
Completion  
Dates**

- 1.1 The *Contractor* will perform all *Work* and provide all labour, equipment and material and do all things strictly as required by the *Contract Documents*.
- 1.2 The *Contractor* will commence the *Work* in accordance with the *Notice to Proceed*. The *Contractor* will proceed with the *Work* diligently, will perform the *Work* generally in accordance with the construction schedules as required by the *Contract Documents* and will achieve *Substantial Performance* of the *Work* on or before October 10, 2025 subject to the provisions of the *Contract Documents* for adjustments to the *Contract Time*
- 1.3 Time shall be of the essence of the *Contract*.

**Article 2 Contract Documents**

- 2.1 The "*Contract Documents*" consist of the documents listed or referred to in Schedule 1, entitled "Schedule of Contract Documents", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the *Contract Documents*. All of the *Contract Documents* shall constitute the entire *Contract* between the *Owner* and the *Contractor*.
- 2.2 The *Contract* supersedes all prior negotiations, representations or agreements, whether written or oral, and the *Contract* may be amended only in strict accordance with the provisions of the *Contract Documents*.

**Article 3 Contract Price**

- 3.1 The price for the *Work* ("*Contract Price*") shall be the sum in Canadian dollars of the following
- 3.1.1 the product of the actual quantities of the items of *Work* listed in the *Schedule of Quantities and Prices* which are incorporated into or made necessary by the *Work* and the unit prices listed in the *Schedule of Quantities and Prices*; plus
- 3.1.2 all lump sums, if any, as listed in the *Schedule of Quantities and Prices*, for items relating to or incorporated into the *Work*; plus
- 3.1.3 any adjustments, including any payments owing on account of *Changes* and agreed to *Extra Work*, approved in accordance with the provisions of the *Contract Documents*.
- 3.2 The *Contract Price* shall be the entire compensation owing to the *Contractor* for the *Work* and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the *Work*.

**Article 4 Payment**

- 4.1 Subject to applicable legislation and the provisions of the *Contract Documents*, the *Owner* shall make payments to the *Contractor*.
- 4.2 If the *Owner* fails to make payments to the *Contractor* as they become due in accordance with the terms of the *Contract Documents* then interest calculated at 2% per annum over the prime commercial lending rate of the Royal Bank of Canada on such unpaid amounts shall also become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.

**Article 5 Rights and Remedies**

- 5.1 The duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.
- 5.2 Except as specifically set out in the *Contract Documents*, no action or failure to act by the *Owner*, *Contract Administrator* or *Contractor* shall constitute a waiver of any of the parties' rights or duties afforded under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach under the *Contract*.

**Article 6 Notices**

- 6.1 Communications among the *Owner*, the *Contract Administrator* and the *Contractor*, including all written notices required by the *Contract Documents*, may be delivered by email, by hand or by pre-paid registered mail to the addresses as set out below:

The *Owner*:

VICTORIA AIRPORT AUTHORITY

Victoria International Airport

201-1640 Electra Boulevard, Sidney, BC. V8L 5V4

Attention: Alex Murray, P. Eng., PMP

The *Contractor*:

Email:

Attention:

The *Contract Administrator*:

McELHANNEY LTD.

200 – 858 BEATTY ST

VANCOUVER, BC V6B 1C1

e-mail: vtjia@mcelhanney.com

Attention: VALENTINO TJIA, MSc., PE, P.Eng.

- 6.2 A communication or notice that is addressed as above shall be considered to have been received
  - 6.2.1 immediately upon delivery, if delivered by hand; or

6.2.2 immediately upon transmission if sent by fax and received in hard copy; or

6.2.3 after 5 *Days* from date of posting if sent by registered mail.

6.3 The *Owner* or the *Contractor* may, at any time, change its address for notice by giving written notice to the other at the address then applicable. Similarly if the *Contract Administrator* changes its address for notice then the *Owner* will give or cause to be given written notice to the *Contractor*.

6.4 The sender of a notice by fax assumes all risk that the fax is received in hard copy.

**Article 7 General**

7.1 This *Contract* shall be construed according to the laws of British Columbia.

7.2 The *Contractor* shall not, without the express written consent of the *Owner*, assign this *Contract*, or any portion of this *Contract*.

7.3 The headings included in the *Contract Documents* are for convenience only and do not form part of this *Contract* and will not be used to interpret, define or limit the scope or intent of this *Contract* or any of the provisions of the *Contract Documents*.

7.4 A word in the *Contract Documents* in the singular includes the plural and, in each case, vice versa.

7.5 This agreement shall ensure to the benefit of and be binding upon the parties and their successors, executors, administrators and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first written above.

*Contractor:*

\_\_\_\_\_  
(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

\_\_\_\_\_  
(AUTHORIZED SIGNATORY)

\_\_\_\_\_  
(AUTHORIZED SIGNATORY)

*Owner:*

*THE VICTORIA AIRPORT AUTHORITY*

\_\_\_\_\_  
(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

\_\_\_\_\_  
(AUTHORIZED SIGNATORY)

\_\_\_\_\_  
(AUTHORIZED SIGNATORY)

### **SCHEDULE 1 – SCHEDULE OF CONTRACT DOCUMENTS**

The following is an exact and complete list of the *Contract Documents*, as referred to in Article 2.1 of the Agreement.

**NOTE:** The documents noted with “\*” are contained in the “Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings”, 2019 Edition. All sections of this publication are included in the *Contract Documents*.

1. Agreement, including all Schedules
2. Supplementary General Conditions
3. General Conditions\*
4. Supplementary Specifications
5. Specifications\*
6. *Contract Drawings* listed in Schedule 2 to the Agreement – “*List of Contract Drawings*”
7. Supplementary Standard Detail Drawings [if any]
8. Standard Detail Drawings\*
9. Executed Form of Tender, including all Appendices  
9a. VAA’s ‘Multiple Obligee Rider’.
10. Instructions to Tenderers – Part I
11. Instructions to Tenderers – Part II\*
12. Reference Files:
  1. Geotechnical Report
  2. PFAS Soil and Groundwater Memo Final
  3. Soil and Water Management Plan
  4. Environmental Management Plan
  5. Plan of Construction Operation
  6. Utility and Permit Information Package
  7. Section 11 Notification Terms and Conditions by MWLRS
  8. DFO Avoid and Mitigate Letter 24-HPAC-01129
  9. Nav Canada Land Use Submission Letter
  10. YYJ EPP Review Checklist
  11. Final Cultural Monitoring procedures
  12. Parking and Laydown Areas
  13. CCTV inspection reports for D2733X, D2444X and D2455X.

13. The following Addenda:  
Addendum 1  
Addendum 2  
Addendum 3

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( ADDENDA, IF ANY )

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(Complete listing of all drawings, plans and sketches which are to form a part of this Contract, other than Standard Detail Drawings and Supplementary Standard Detail Drawings.)

**SCHEDULE 2 – LIST OF CONTRACT DRAWINGS**

| DRAWING NO.                               | TITLE                              | REVISION NO. | REVISION DATE |
|---|------------------------------------|--------------|---------------|
| <b>6777 Stormwater System Replacement</b> |                                    |              |               |
| C000                                      | TITLE PAGE, LEGEND AND INDEX       | -            | 10 Jan 25     |
| C100                                      | KEY PLAN                           | E            | 10 Feb 25     |
| C201                                      | STORM PLAN AND PROFILE             | E            | 14 Feb 25     |
| C202                                      | STORM PLAN AND PROFILE             | E            | 14 Feb 25     |
| C203                                      | STORM PLAN AND PROFILE             | E            | 14 Feb 25     |
| C400                                      | DRAINAGE DETAILS                   | D            | 10 Jan 25     |
| C501                                      | PAVEMENT RESTORATION PLAN          | C            | 10 Jan 25     |
| C502                                      | PAVEMENT RESTORATION DETAILS       | E            | 14 Feb 25     |
| <b>6776 Stormwater System Replacement</b> |                                    |              |               |
| C000                                      | COVER                              | -            | 10 Jan 25     |
| C100                                      | KEY PLAN – 6776/6777               | E            | 10 Feb 25     |
| C101                                      | KEY PLAN – 6776                    | E            | 10 Feb 25     |
| C200                                      | PLAN AND PROFILE – 6777            | D            | 10 Jan 25     |
| C201                                      | PLAN AND PROFILE – ZONE 1          | D            | 10 Jan 25     |
| C202                                      | PLAN AND PROFILE – ZONE 2          | D            | 10 Jan 25     |
| C203                                      | PLAN AND PROFILE – ZONE 3          | D            | 10 Jan 25     |
| C300                                      | CONSTRUCTION STAGING – 6776/6777   | E            | 10 Feb 25     |
| C301                                      | CONSTRUCTION STAGING – ZONE 1      | D            | 10 Jan 25     |
| C302                                      | CONSTRUCTION STAGING – ZONE 2      | D            | 10 Jan 25     |
| C303                                      | CONSTRUCTION STAGING – ZONE 3      | D            | 10 Jan 25     |
| C400                                      | DRAINAGE DETAILS                   | D            | 10 Jan 25     |
| C500                                      | PAVEMENT RESTORATION PLAN - 6777   | C            | 10 Jan 25     |
| C501                                      | PAVEMENT RESTORATION PLAN – ZONE 1 | C            | 10 Jan 25     |
| C502                                      | PAVEMENT RESTORATION PLAN - ZONE 2 | C            | 10 Jan 25     |
| C503                                      | PAVEMENT RESTORATION PLAN - ZONE 3 | C            | 10 Jan 25     |



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**UNIT  
PRICE  
CONTRACT**

**PROJECT NO. 6776 AND 6777  
FORM OF AGREEMENT – SCHEDULE 2  
LIST OF CONTRACT DRAWINGS**

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| <b>DRAWING NO.</b> | <b>TITLE</b>                 | <b>REVISION NO.</b> | <b>REVISION DATE</b> |
|--------------------|------------------------------|---------------------|----------------------|
| C504               | PAVEMENT RESTORATION DETAILS | D                   | 10 Feb 25            |

In cases of conflict, the order of precedence for drawings, specifications and standards is as per the Supplementary General Conditions, Section 2.2.4, Document Hierarchy.



**Stormwater System Replacement**  
**Project No. 6776 and 6777**  
**SUPPLEMENTARY SPECIFICATIONS**  
*Victoria International Airport*

Section 01 10 00  
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Add the following Supplementary Specifications (attached at the end):

| SECTION        | TITLE   | SSP             |
|----------------|---|-----------------|
| 01 10 00 SS    | Measurement and Payment   | All subsections |
| 01 14 00 SS    | Work Restrictions   | All subsections |
| 01 35 13.13 SS | Special Procedure for Airport Facilities                          | All subsections |
| 01 43 00 SS    | Quality Assurance   | All subsections |
| 01 45 00 SS    | Quality Control   | All subsections |
| 01 74 10.1 SS  | Dust Control  | All subsections |
| 32 01 11.1 SS  | Airside Pavement Surface Cleaning and Removal of Pavement Marking | All subsections |
| 32 12 13 SS    | Airside Asphalt Tack Coat   | All subsections |
| 32 12 14 SS    | Corrected Maximum Dry Density                                     | All subsections |
| 32 12 15 SS    | Marshall Immersion Test   | All subsections |
| 32 12 16.2 SS  | Airside Hot-Mix Asphalt Concrete Paving                           | All subsections |
| 32 17 23.1     | Airside Painted Pavement Markings                                 | All subsections |

The following Supplementary Specifications included in this section of the *Contract Documents* are modifications or additions to the Specifications in the Master Municipal Construction Document Volume II (2019 Edition):

| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |                             |  |
|--|-----------------------------|--|
| SECTION                                | TITLE                       | SSP  |
| <b>01</b>                              | <b>GENERAL REQUIREMENTS</b> |  |
| 01 33 01                               | Project Record Documents    | <p><b>1.1 Section Includes</b></p> <p><b>Add clause 1.1.5:</b> <i>Pre-construction Inspection Record. Work shall include, but not limited to, contacting BC One Call, doing utility locates and hydrovac, prior of ordering the material. Provide record to Contract Administration within 3 business days after the inspection work has been conducted.</i></p> <p><b>1.7 Recording Site Conditions</b></p> <p><b>Add clause 1.7.5:</b> Prior to the commencement of any construction activities, the Contractor shall prepare a photographic and/or video record of the physical condition of landscaping, trees, driveways, and other facilities that may be impacted by the Work (the "Pre-Construction Inspection Record").</p> <p>Submit a complete copy of the Pre-Construction Inspection Record to the Contract Administrator prior to commencement</p> |



| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |                      |   |
|--|----------------------|---|
| SECTION                                | TITLE                | SSP   |
|  |                      | of construction, which shall become the record of the condition of the Place of Work prior to construction.   |
| 01 52 01                               | Temporary Structures | <p><b>1.6 Payment</b></p> <p><b>Replace clause 1.6.1 with the Following:</b></p> <p>Payment for mobilization and demobilization shall include all the Contractor costs of mobilization at the beginning of the project and the cost of demobilization at the end of the project.</p> <ol style="list-style-type: none"><li>.1 Included in the mobilization are such items as bonding, insurance, permits, moving personnel, equipment and materials to the site, setting up Site Office, temporary facilities and all preparation for performing the <i>Work</i>.</li><li>.2 Included in demobilization are preparation and submission of record drawings, operation and maintenance manuals, removal of all personnel, equipment and materials and cleanup of the <i>Site</i> and the <i>Work</i>.</li><li>.3 The lump sum price bid for this work shall be relative to the costs involved but shall not exceed ten percent of the <i>Tender Price</i>.</li><li>.4 Payment shall be made as follows, as approved by the Contract Administrator:<ol style="list-style-type: none"><li>.1 60% of the lump sum bid will be included in the first progress payment certificate.</li><li>.2 40% of the lump sum bid will be included in the final progress payment certificate.</li></ol></li><li>.5 The Contract Administrator may at his discretion authorize partial payment if mobilization or demobilization is not complete.</li><li>.6 The cost of other items specified under General Requirements shall be considered incidental to the work and separate payment will not be made for any other items in the General Requirements, unless specifically noted in the <i>Schedule of Quantities and Prices</i>.</li></ol> |



| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |   |  |
|--|---|--|
| SECTION                                | TITLE                                       | SSP  |
| 01 55 00                               | Traffic Control, Vehicle Access and Parking | <p><b>1.4 Traffic Control</b></p> <p><b>Add clause 1.4.15:</b> Provide a detailed Traffic Management Plan (TMP) and drawings with dedicated traffic control and pedestrian delineation for safety of motorists, pedestrians and bicycle traffic for all locations where roadways are affected by construction activities. The TMP shall be prepared by a qualified person and will be approved by the Contract Administrator in advance of implementation. This plan is to be submitted to the Contract Administrator a minimum of 14 calendar days prior to the Contractor's desired date of construction commencement. The plan shall be updated and modified as requested by the Contract Administrator, both as the construction project proceeds and traffic management needs warrant. The TMP is to contain sufficient details to allow the Contract Administrator and the Owner a clear understanding of how the Contractor will ensure the following minimum performance specifications will be achieved:</p> <ul style="list-style-type: none"><li>• Details of parking and laydown areas including temporary fencing or other measures to secure vehicles, equipment and/or materials. All parking and storage sites to be returned to existing condition at start of contract, at no cost to VAA. Contractor to ensure vehicles or other equipment do not track mud, gravel, dirt or other materials onto surrounding road network, and maintain public roadways clean and safe for public use.</li><li>• The TMP shall be prepared in accordance with the BC Ministry of Transportation and Infrastructure 2020 Traffic Management Manual for Work on Roadways.</li></ul> <p><b>1.5 Payment</b></p> <p><b>Revise clause 1.5.1:</b> Payment for all work performed under these Sections will be paid as lump sum.</p> |
| 01 57 01                               | Environmental Protection                    | <p><b>1.1 Section 01 57 01 Includes</b></p> <p><b>Add Clause 1.1.5:</b> Qualified Environmental Professional.</p> <p><b>1.2 Temporary Erosion and Sediment Control</b></p>   |

| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |       |  |
|--|-------|--|
| SECTION                                | TITLE | SSP  |
|  |       | <p><b>Modify clause 1.2.4.1.2:</b></p> <p><i>Change: "...as specified on Contract Drawings"</i></p> <p><i>To: "...shall be minimum 900 mm high, not including embedment depth."</i></p> <p><b>1.4 Environmental Protection</b></p> <p><b>Add clause 1.4.4:</b></p> <p>1.4.4 Disposal of Waste:</p> <ol style="list-style-type: none"> <li>1. Do not bury rubbish and waste materials on site.</li> <li>2. Do not dispose of waste or volatile materials such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.</li> <li>3. Dispose of waste materials off property, in accordance with applicable provincial and/or federal regulations.</li> <li>4. Removal and disposal of Asbestos Cement pipe, if required, shall follow current WCB requirements.</li> </ol> <p><b>Add clause 1.4.5:</b></p> <p>1.4.5 Concrete and Asphalt Cutting and Placing:</p> <ol style="list-style-type: none"> <li>1. Control and pick up all wet or dry residue from saw cutting, coring, grinding and milling operations by means of a vacuum device or street sweeper. Under no circumstances is any dust, debris or run-off to migrate into waterways, storm or sanitary sewers.</li> <li>2. Minimize the volume of wastewater produced by cutting tools by recycling and reusing wastewater whenever possible.</li> <li>3. Do not allow cement washout into the streets, driveways, gutters, storm drains, ditches or water courses.</li> <li>4. Set up and operate portable mixers on tarps or heavy drop cloths to contain spillage.</li> <li>5. When breaking up and milling pavement, remove broken pavement and sweep area clean.</li> </ol> |



| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |                       |   |
|--|-----------------------|---|
| SECTION                                | TITLE                 | SSP   |
|  |                       | <p><b>Add Clause 1.4.6:</b></p> <p>1.4.6 Soil Stabilization -</p> <ol style="list-style-type: none"><li>1. All ditches, swales and surface drainage features are to be protected from erosion to the end of the warranty period. Erosion and soil stabilization measures are the responsibility of the contractor and are incidental to construction of the feature.</li></ol> <p><b>1.6 Payment</b></p> <p><b>Add Clause 1.6.2:</b> Payment for Environmental Protection Plan shall be lump sum and includes all work to prepare, deliver and undertake all required documents under YYJ EPP Review Checklist. A Construction Environmental Management Plan (CEMP) prepared by a registered professional. The CEMP must address all aspects of the Environmental Management Plan and the YYJ EPP Review Checklist, Final Cultural Monitoring Procedures, and be submitted to and approved by Contract Administrator prior to the start of construction. The payment shall also include having a Qualified Environmental Professional onsite during construction activities as noted in the CEMP.</p> |
| <b>31</b>                              | <b>EARTHWORKS</b>     |   |
| 31 11 01                               | Clearing and Grubbing | <p><b>1.4 Measurement and Payment</b></p> <p><b>Replace Clause 1.4.1:</b> Payment for all tree removal will be measured for each tree with 300mm or more breast diameter. Payment shall include removal and disposal of all branches, stumps, timbers and vegetation remains, including cutting down timbers to a maximum of 1.5m long, transporting and storing these pieces onto the side of the access road via Airside Gate 282. For tree with 300mm or less breast diameter, payment will be based under Clause 1.4.2.</p> <p><b>Replace Clause 1.4.2:</b> Payment for all clearing and/or grubbing items include removal and disposal of all branches, stumps, timbers and vegetation remains. Payment shall include cutting down timbers to a maximum of 1.5m long, transporting and storing these pieces onto the side of the access road via Airside Gate 282. Payment for all clearing and grubbing items will be based on the areas or isolated trees to be cleared and/or</p>   |



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| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |   |  |
|--|---|--|
| SECTION                                | TITLE   | SSP  |
|  |   | grubbed as shown on Contract Drawings or as directed by Contract Administrator.  |
| 31 11 41                               | Shrub and Tree Preservation                   | <b>1.4 Inspection and Testing</b><br><br><b>Add Clause 1.4.2:</b> Engage and pay for the services of a Project Arborist who shall be an ISA Certified Arborist and Qualified Tree Risk Assessor to provide monitoring as required during construction. The Project Arborist shall apply the current generally accepted Standard of Care when performing the Work.  |
| 31 23 01                               | Excavation, Trenching and Backfill            | <b>1.10 Measurement and Payment</b><br><br><b>Add clause 1.10.9:</b><br><br>1.10.9 Measurement and payment for allowance in the event that contaminated soil is encountered during excavation. The measurement and payment shall include excavation of the contaminated soil and transport them to the stockpile indicated in the Contract Drawings. The price shall include requirement for handling and placing the stockpile as noted in the Soil and Water Management Plan. The price shall also include transporting and disposing to the designated off-site disposal based on testing done by McElhanney's QEP.<br><br><b>3.6 Surface Restoration</b><br><br><b>Add clause 3.6.7 (11):</b><br><br>3.6.7 (11) Saw-cuts and asphalt edges are to be in straight lines, minimizing the number of jogs, and generally parallel to the trench. Contractor is to review the proposed saw-cuts and extent of paving in the field with the Owner and Contract Administrator 48 hours prior to adjoining paving. |
| 31 24 13                               | Roadway Excavation, Embankment and Compaction | <b>1.8 Measurement and Payment</b><br><br><b>Modify clause 1.8.5 (4):</b><br><br><i>Change:</i> "...from loose truck box volume as determined by Contract Administrator"<br><br><i>To:</i> "...survey of OG and subgrade provided by contractor"   |



| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |                                    |  |
|--|------------------------------------|--|
| SECTION                                | TITLE                              | SSP  |
|  |                                    | <b>Clause 1.8.7 delete:</b> "will be based on weigh tickets provided to Contract Administrator as loads are" <b>replace with:</b> "will be based on cubic metres of compacted material "   |
| <b>32</b>                              | <b>ROADS AND SITE IMPROVEMENTS</b> |  |
| 32 91 21                               | Topsoil and Finish Grading         | <b>1.0 References</b><br><br><b>Revise Clause 1.0.2:</b> Replace the words "British Columbia Landscape Standard" with Canadian Landscape Standard, Current Edition".<br><br><b>1.1 Related Work</b><br><br><b>Add Clause 1.1.6:</b> Section 31 05 17 Aggregates and Granular Materials<br><br><b>Add Clause 1.1.7:</b> Section 33 40 01 Storm Sewers<br><br><b>1.2 References</b><br><br><b>Revise Clause 1.2.1:</b> Canadian Landscape Standard, Current Edition.   |
| <b>33</b>                              | <b>UTILITIES</b>                   |  |
| 33 01 30.1                             | CCTV Inspection of Pipelines       | <b>1.5 Measurement and Payment</b><br><br><b>Revise Clause 1.6.6:</b> ...as described in the Form of Tender will be made as incidental to the CCTV Inspection of Pipelines.  |
| 33 01 30.2                             | Cleaning of Sewers                 | <b>1.5 Measurement and Payment</b><br><br><b>Revise Clause 1.5.4:</b> Root cutting will be incidental to the cleaning of sewers.   |
| 33 05 24                               | Cured In Place Pipe Liners         | <b>1.9 Measurement and Payment</b><br><br><b>Add 1.9.11:</b> Payment for slip lining will be lump sum and shall include preparation of the work plan, management of storm flow system (by-pass pumping, isolation, blocking, diverting, etc.) including mobilization and demobilization, removal of intruding connections, and supply and installation of the pipes and grouting, including environmental control. CCTV inspection and cleaning (including root cutting) are paid separately under Sections 33.01 and 33.03. |





| SUPPLEMENTARY SPECIFICATIONS (PROJECT) |                          |  |
|--|--------------------------|--|
| SECTION                                | TITLE                    | SSP  |
| 33 44 01                               | Manholes and Catchbasins | <p><b>1.5 Measurement and Payment</b></p> <p><b>Revise Clause 1.5.1:</b> Payment for manholes will be made by items or components installed for each type and size as shown on Contract Drawings and specified in Schedule of Quantities and Prices, which includes excavation, and all other associated work required to accommodate manhole in new sewer system constructed under this Contract for which manhole forms a part.</p> <p><b>No change to Clause 1.5.1 (1)</b></p> <p><b>Revise Clause 1.5.1 (2):</b> Payment for manhole riser sections will be incidental for both standard or non-standard heights required to complete manhole from specified invert to finishing level.</p> <p><b>Revise Clause 1.5.4:</b> Payment for removal of existing manhole, catch basins, lawn drains, cleanouts, and inspection chambers include excavation, backfilling and, where applicable, temporary and permanent paving surface restoration.</p> |
| 33 42 13                               | Pipe Culverts            | <p><b>Measurement and Payment 1.5.3:</b></p> <p><i>Change: "end walls" to "headwalls"</i></p> <p><b>Add 1.7: Shop Drawings</b></p> <p><b>Add 1.7.1:</b> At least 14 days prior to installation, shop drawings of headwall(s) must be submitted for the contract administrator for approval.</p> <p><b>Add 3.11: Headwall(s)</b></p> <p><b>Add 3.11.2:</b> Install headwall(s) and shown in contract drawings.</p>  |

## **Part 1 – GENERAL**

### **1.1. DOCUMENTS**

- 1.1.1. This section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

### **1.2. REFERENCES**

- 1.2.1. CAN/CGSB-16.2-M, Emulsified Asphalts, Anionic Type, for Road Purposes
- 1.2.2. ASTM D140M, Practice for Sampling Bituminous Materials.
- 1.2.3. Master Municipal Construction Documents 2019 Edition.
- 1.2.4. National Building Code of Canada 2015.

### **1.3. SAMPLES**

- 1.3.1. Submit samples for review as required by the Contract Administrator.
- 1.3.2. Provide access on tank truck for Airport to sample asphalt material to be incorporated into work, in accordance with ASTM D140M.

### **1.4. ASPHALT MATERIAL CERTIFICATION**

- 1.4.1. Upon request by the Airport, submit manufacturer's test data and certification that asphalt tack coat material meets requirements of this section.

### **1.5. MEASUREMENT FOR PAYMENT**

- 1.5.1. Measurement of asphalt tack coat will be made in square metres based on the tack coated areas authorized by the Airport. This price shall include materials, applying and all work incidental thereto.

## **Part 2 - PRODUCTS**

### **2.1. MATERIAL**

- 2.1.1. Anionic emulsified asphalt: to CAN/CGSB-16.2, grade SS-1h.

## **Part 3 - EXECUTION**

### **3.1. EQUIPMENT**

- 3.1.1. Pressure distributor to be:
  - 3.1.1.1. Designed, equipped, maintained and operated so that asphalt material:
    - 3.1.1.1.1. Is maintained at even temperature.
    - 3.1.1.1.2. May be applied uniformly on variable widths of surface up to 5 m.

- 3.1.1.1.3. May be applied at readily determined and controlled rates from 0.2 to 5.4 L/m<sup>2</sup> with uniform pressure, and with an allowable variation from any specified rate not exceeding 0.1 L/m<sup>2</sup>. Higher rate shall be applied for heavy tack coat areas as per Section 32 12 16.1 Section 3.2.5.
- 3.1.1.2. Capable of distributing asphalt material in uniform spray without atomization at temperature required.
- 3.1.1.3. Equipped with meter registering metres of travel per minute, visibly located to enable truck driver to maintain constant speed required for application at specified rate.
- 3.1.1.4. Equipped with pump having flow meter graduated in units of 5 L or less per minute passing through nozzles and readily visible to operator. Pump power unit to be independent of truck power unit.
- 3.1.1.5. Equipped with an easily read, accurate and sensitive device which registers temperature of liquid in reservoir.
- 3.1.1.6. Equipped with accurate volume measuring device or calibrated tank.
- 3.1.1.7. Equipped with nozzles of same make and dimensions, adjustable for fan width and orientation.
- 3.1.2. Hand sprayer: for small and/or inaccessible areas, a pressurized hand-held spray wand may be used.

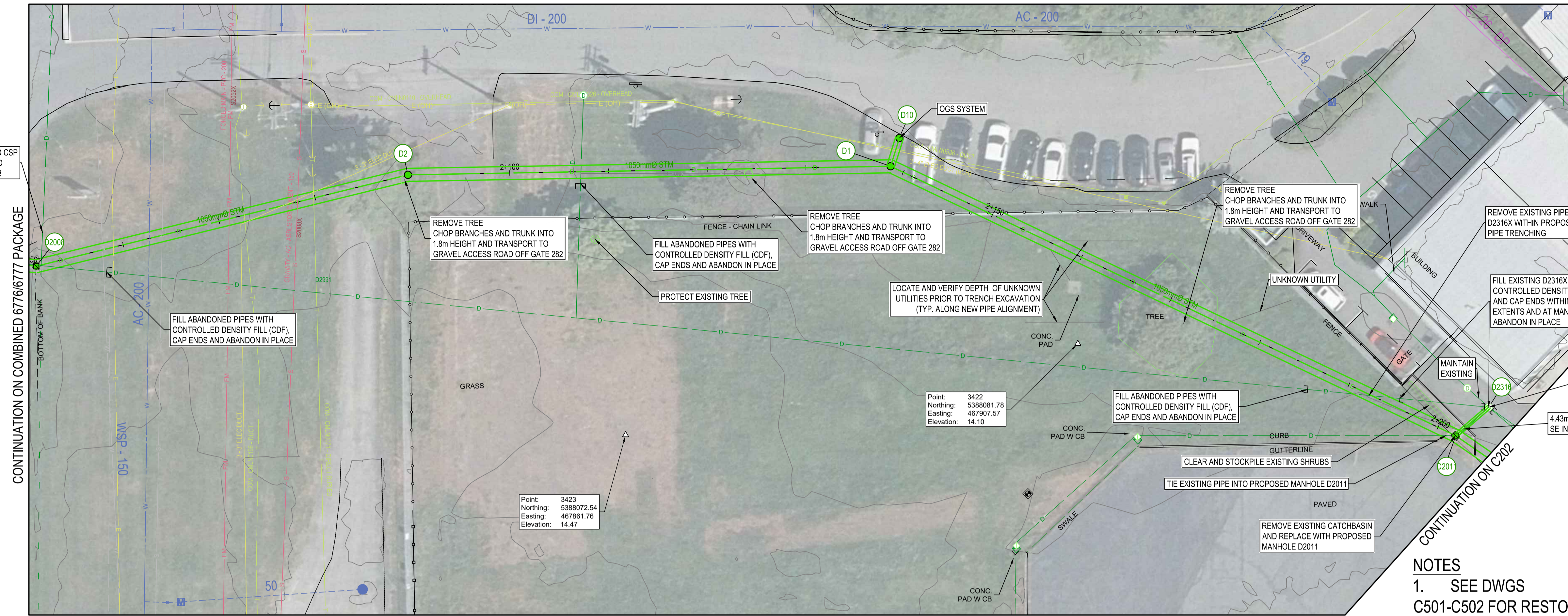
### 3.2. APPLICATION

- 3.2.1. Obtain Contract Administrator's approval of surface before applying asphalt tack coat.
- 3.2.2. Dilute asphalt emulsion with water at 1:1 ratio for application. Mix thoroughly by pumping or other method approved by Airport.
- 3.2.3. Apply tack coat evenly to existing pavement surface and granular material at rate not to exceed 0.7L/m<sup>2</sup> when diluted with water at 1:1 ratio.
- 3.2.4. Apply fog coat of emulsion between lifts of new asphalt paving at rate not to exceed 0.2L/m<sup>2</sup> when diluted with water at 1:1 ratio.
- ~~3.2.5. Heavy tack coat on granular surfaces adjacent to operational surfaces as indicated on Drawings or as required for dust control to be carried out in two applications:~~
  - ~~3.2.5.1. Apply first coat at rate of 4.0 L/m<sup>2</sup> when diluted with water at 1:1 ratio, and allow to penetrate and cure.~~
  - ~~3.2.5.2. Apply second coat at rate of 1.0 L/m<sup>2</sup> when diluted with water at 1:1 ratio to seal surface.~~
- 3.2.6. Apply only on dry surface.
- 3.2.7. Paint contact surfaces of manholes and like structures with thin, uniform coat of asphalt tack coat material.
- 3.2.8. Do not apply asphalt tack coat when air temperature is less than 5°C or when rain is forecast within 2 h of application.
- 3.2.9. Apply tack coat **only between asphalt lifts.**
- 3.2.10. Evenly distribute localized excessive deposits of tack coat by brooming as directed by the Contract Administrator.
- 3.2.11. Where traffic is to be maintained, treat no more than one half of width of surface in one application.

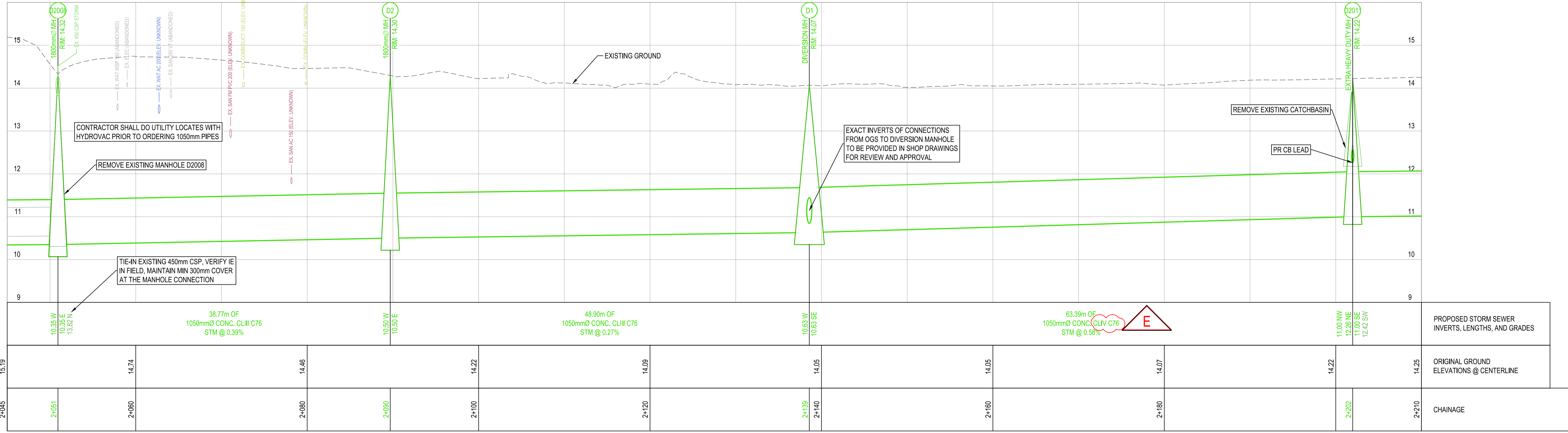


- 3.2.12. Keep traffic off tacked areas until tack coat has set as directed by Contract Administrator.
- 3.2.13. Re tack contaminated or disturbed areas as directed by Contract Administrator.
- 3.2.14. Permit tack coat to set before placing asphalt paving.

- END -



**NOTES**  
 1. SEE DWGS C501-C502 FOR RESTORATION WORKS  
 C601-C603 FOR PLAN OF CONSTRUCTION OPERATIONS (PCO)



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 T 604 683 8521

ORIGINAL DWG SIZE: A1 (594 x 841mm)

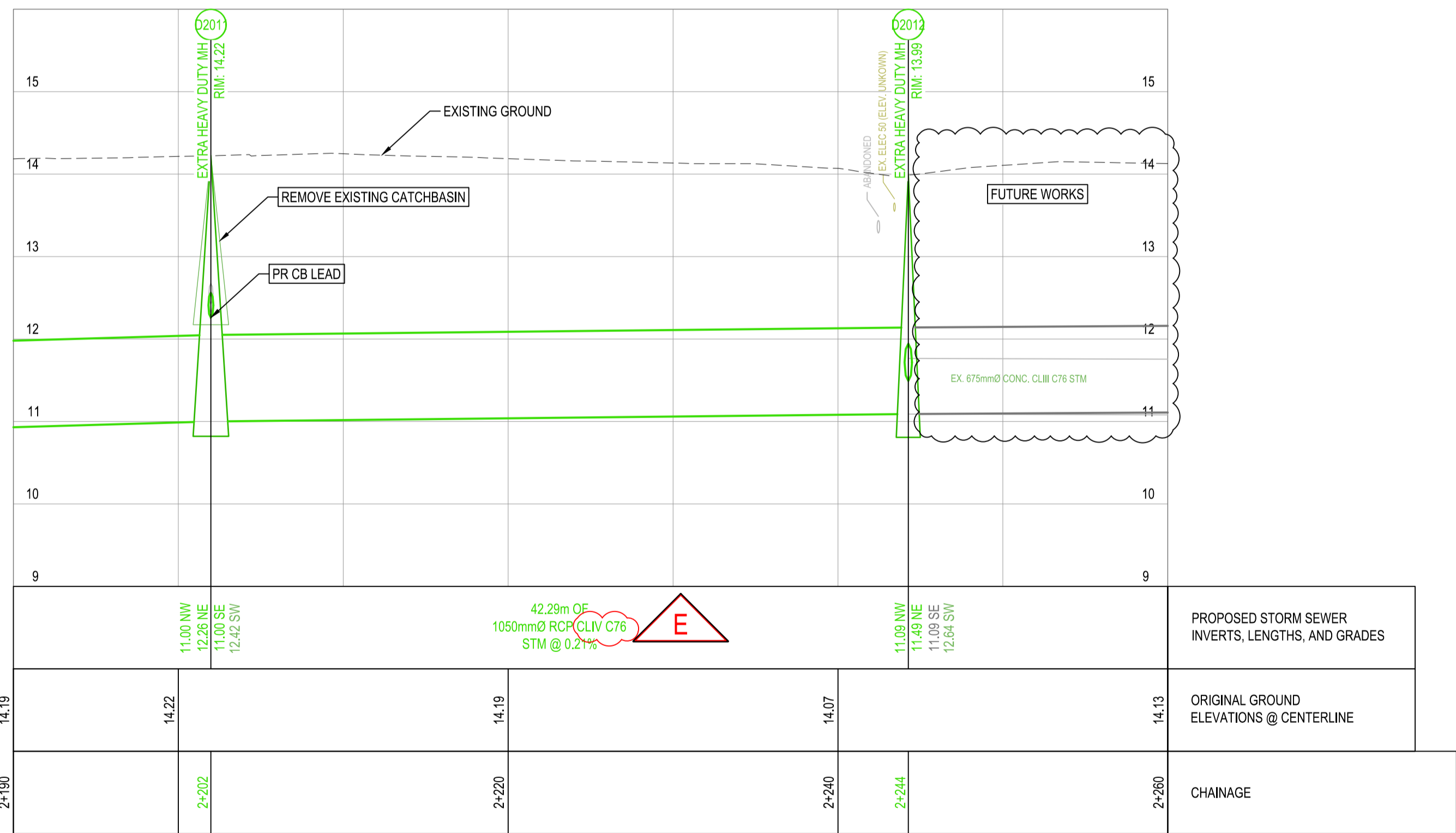
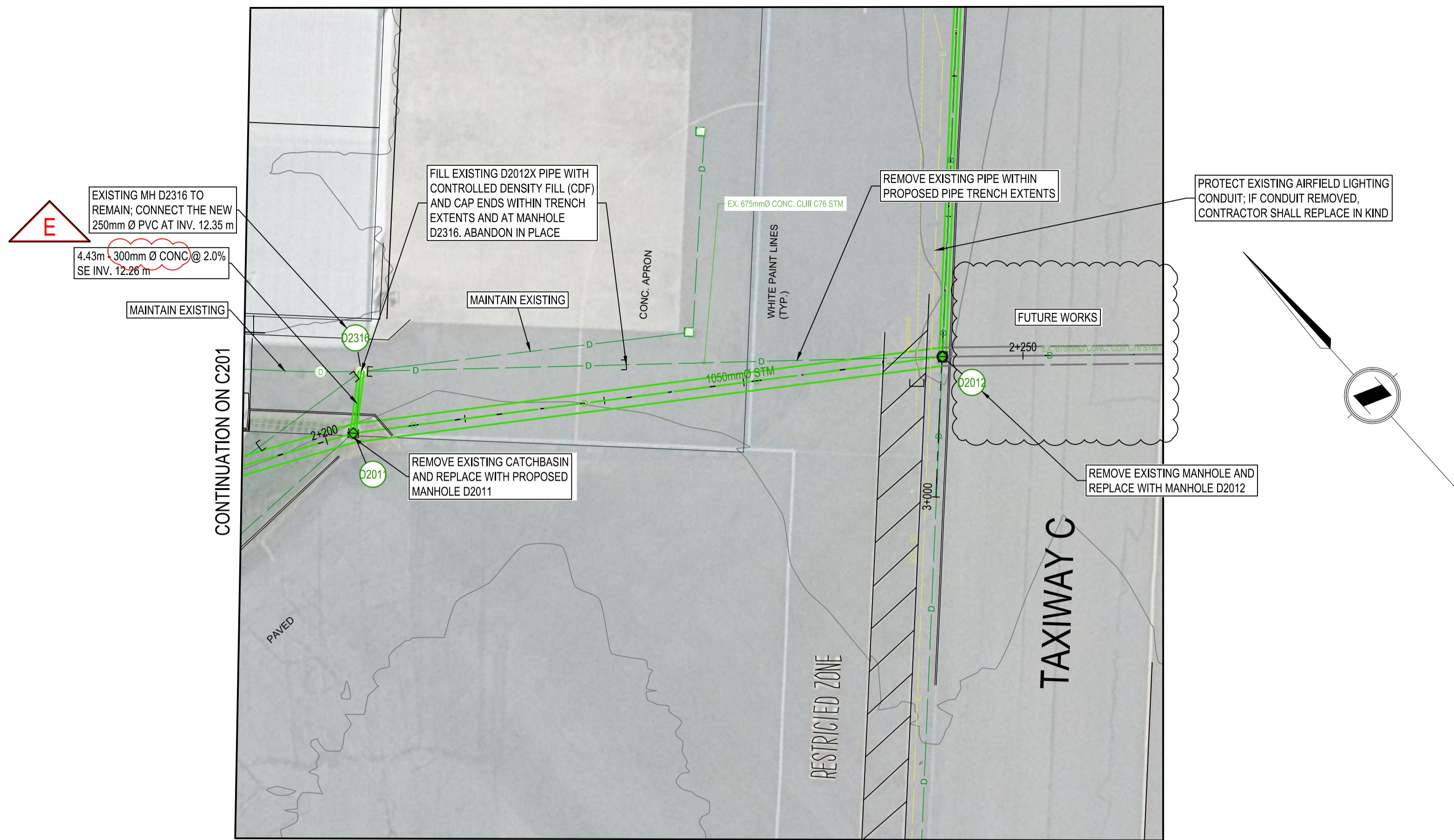
**YYJ**

0 H1:250 10  
 0 V1:50 2

VICTORIA AIRPORT AUTHORITY  
 STORMWATER SYSTEM REPLACEMENT  
 PLAN AND PROFILE

|                                      |                            |                            |
|--------------------------------------|----------------------------|----------------------------|
| Client Project Number<br><b>6777</b> | Client Drawing Number<br>- | Drawing No.<br><b>C201</b> |
| Project Number<br>2121-24006-00      | Rev.<br>E                  |                            |

CONTINUATION ON C203



- NOTES**
- SEE DWGS C501-C502 FOR RESTORATION WORKS  
C601-C603 FOR PLAN OF CONSTRUCTION OPERATIONS (PCO)

| Rev | Date       | Description           | Drawn | Design | App'd |
|-----|------------|-----------------------|-------|--------|-------|
| E   | 2025-02-14 | ISSUED FOR ADDENDUM 3 | KY    | HM     | BMW   |
| D   | 2025-01-10 | ISSUED FOR TENDER     | KY    | HM     | BMW   |
| C   | 2024-11-15 | 90% DESIGN SUBMISSION | BL    | HM     | BMW   |
| B   | 2024-07-05 | 50% DESIGN SUBMISSION | BL    | HM     | BMW   |
| A   | 2024-06-07 | 30% DESIGN SUBMISSION | BL    | HM     | BMW   |

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T 604 683 8521

ORIGINAL DWG SIZE: A1 (594 x 841mm)

**YYJ**

0 H1:250 10  
0 V1:50 2

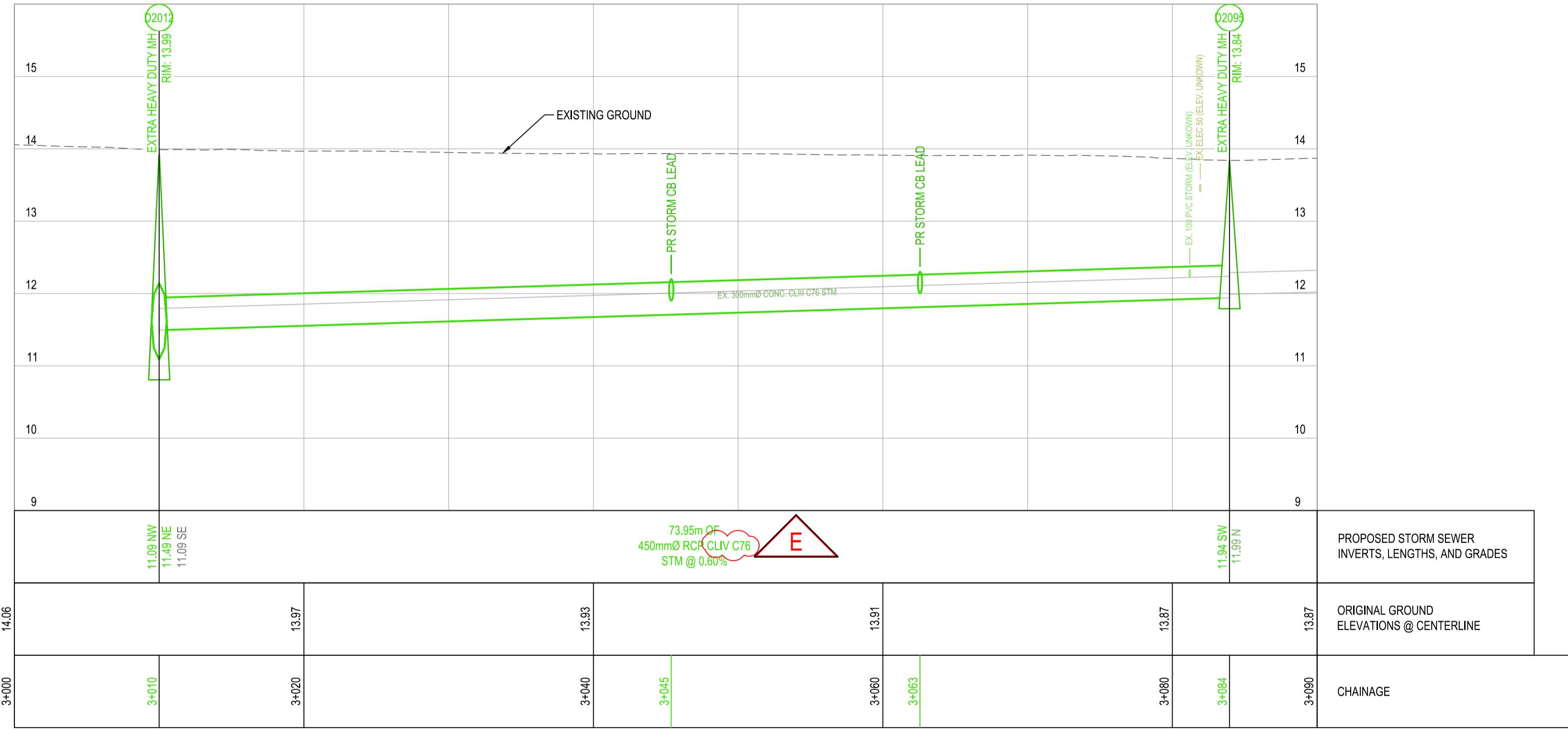
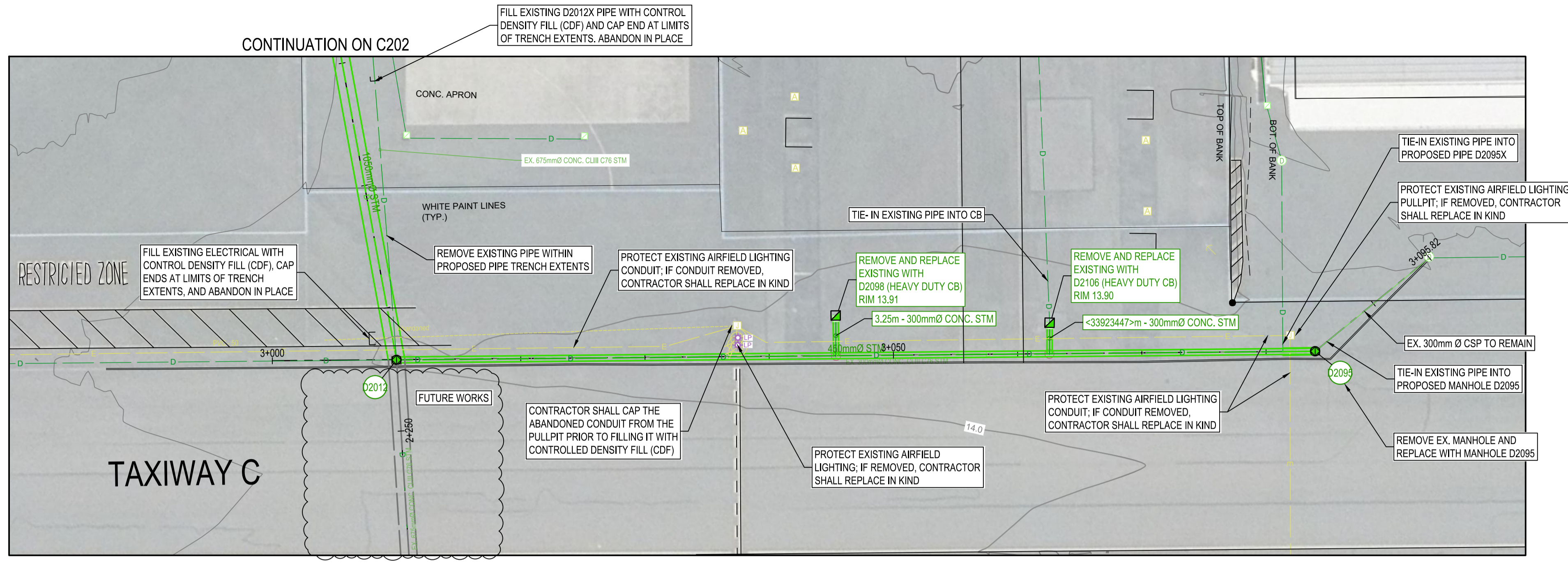
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VICTORIA AIRPORT AUTHORITY

STORMWATER SYSTEM REPLACEMENT

PLAN AND PROFILE

|                                      |
|--------------------------------------|
| Client Project Number<br><b>6777</b> |
| Client Drawing Number<br>-           |
| Drawing No.<br><b>C202</b>           |
| Project Number<br>2121-24006-00      |
| Rev.<br>E                            |



**NOTES**  
 1. SEE DWGS  
 C501-C502 FOR RESTORATION WORKS  
 C601-C603 FOR PLAN OF CONSTRUCTION OPERATIONS (PCO)

| Rev | Date       | Description           | Drawn | Design | App'd |
|-----|------------|-----------------------|-------|--------|-------|
| E   | 2025-02-14 | ISSUED FOR ADDENDUM 3 | KY    | HM     | BMW   |
| D   | 2025-01-10 | ISSUED FOR TENDER     | KY    | HM     | BMW   |
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ORIGINAL DWG SIZE: A1 (594 x 841mm)

**YYJ**

0 1:250 10  
 0 1:50 2

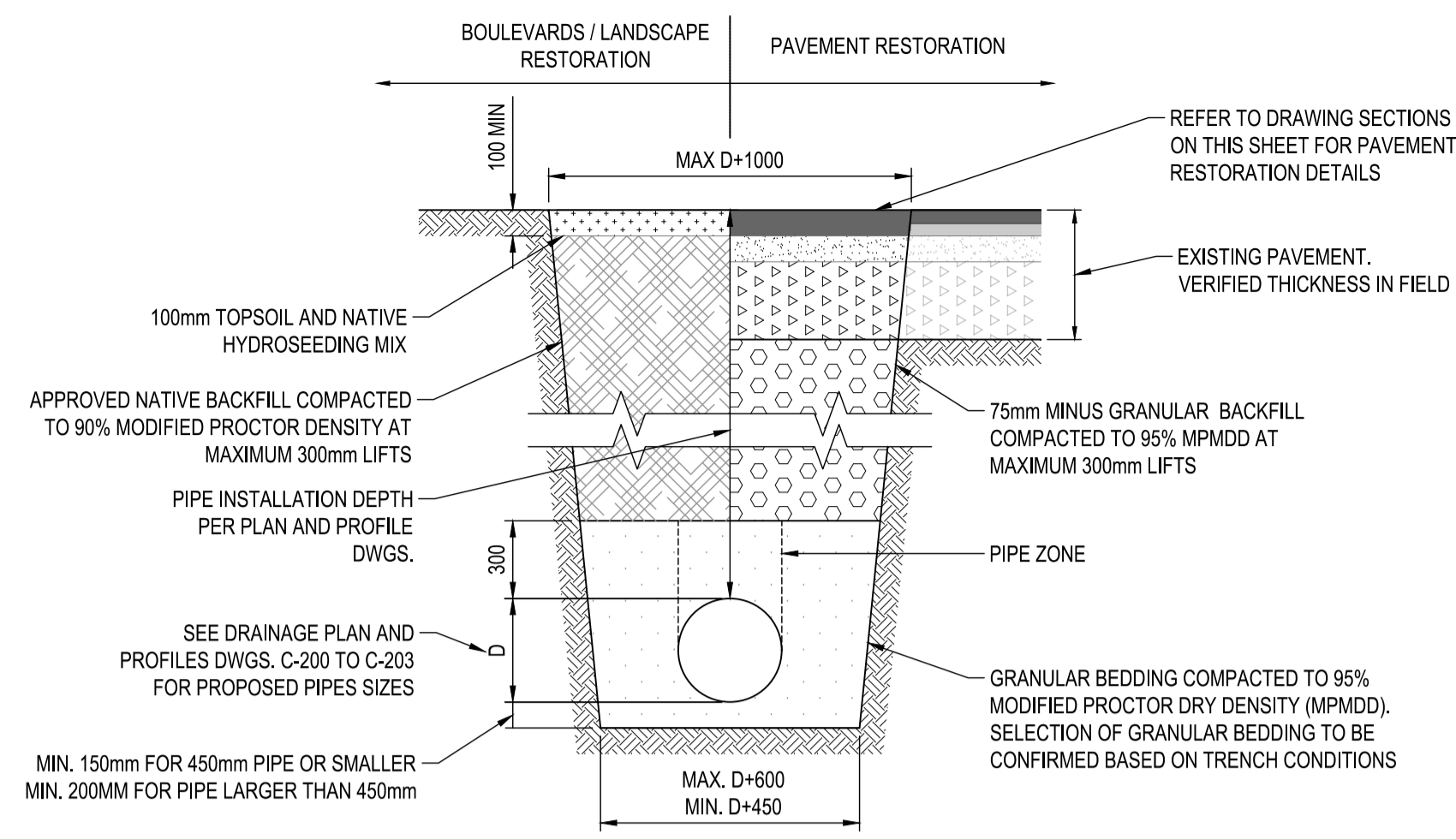
Approved Sealed

VICTORIA AIRPORT AUTHORITY

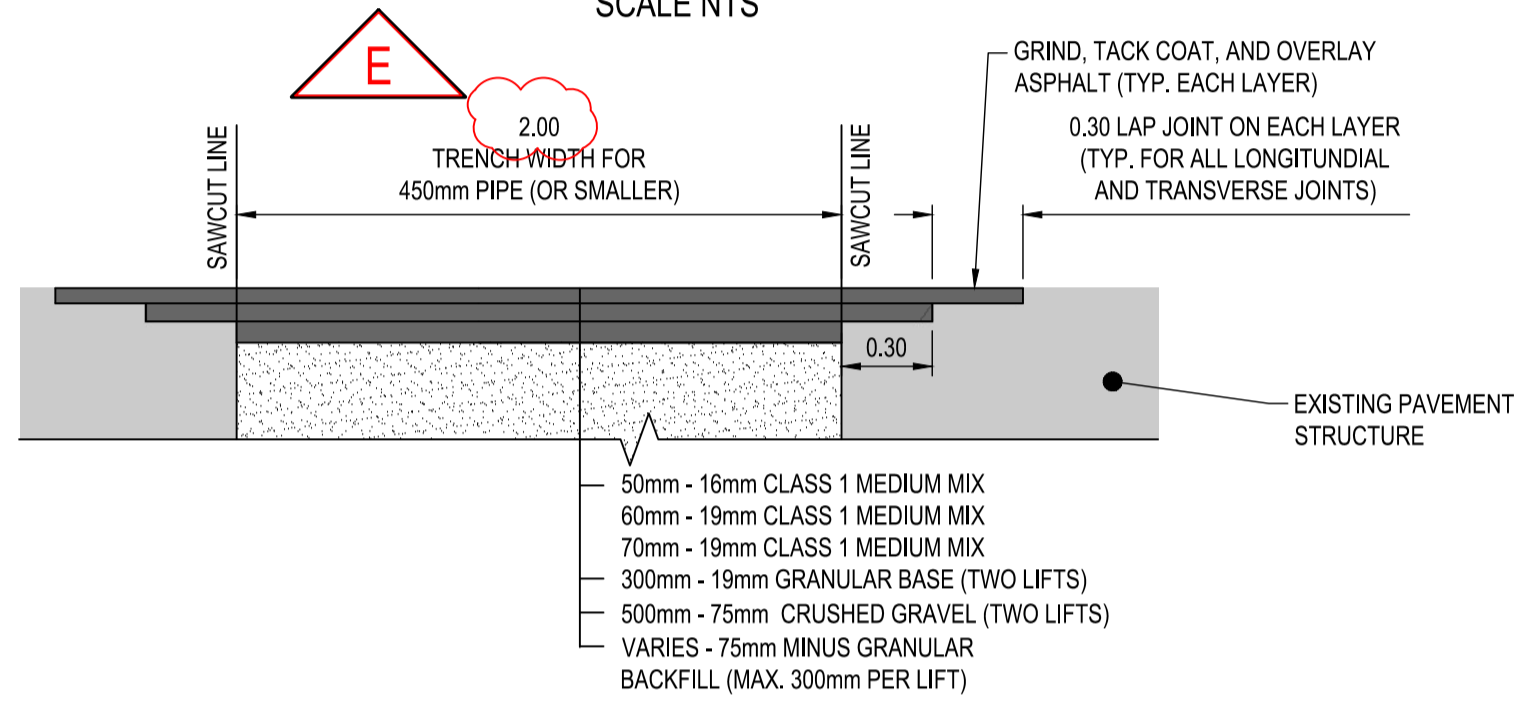
STORMWATER SYSTEM REPLACEMENT

PLAN AND PROFILE

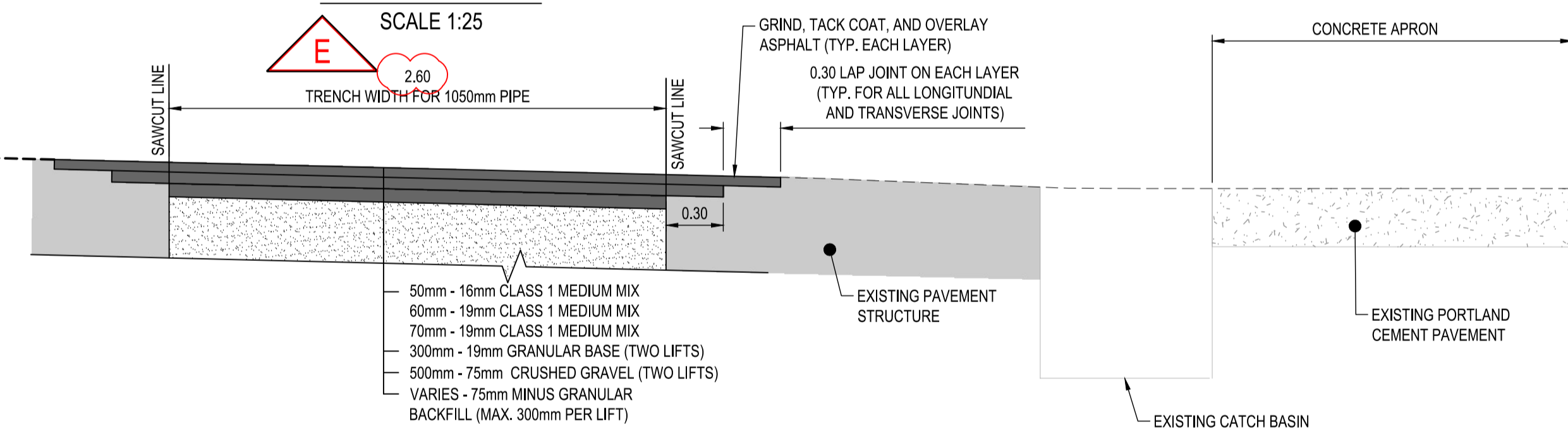
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| Client Project Number | 6777          |
| Client Drawing Number | -             |
| Drawing No.           | C203          |
| Project Number        | 2121-24006-00 |
| Rev.                  | E             |



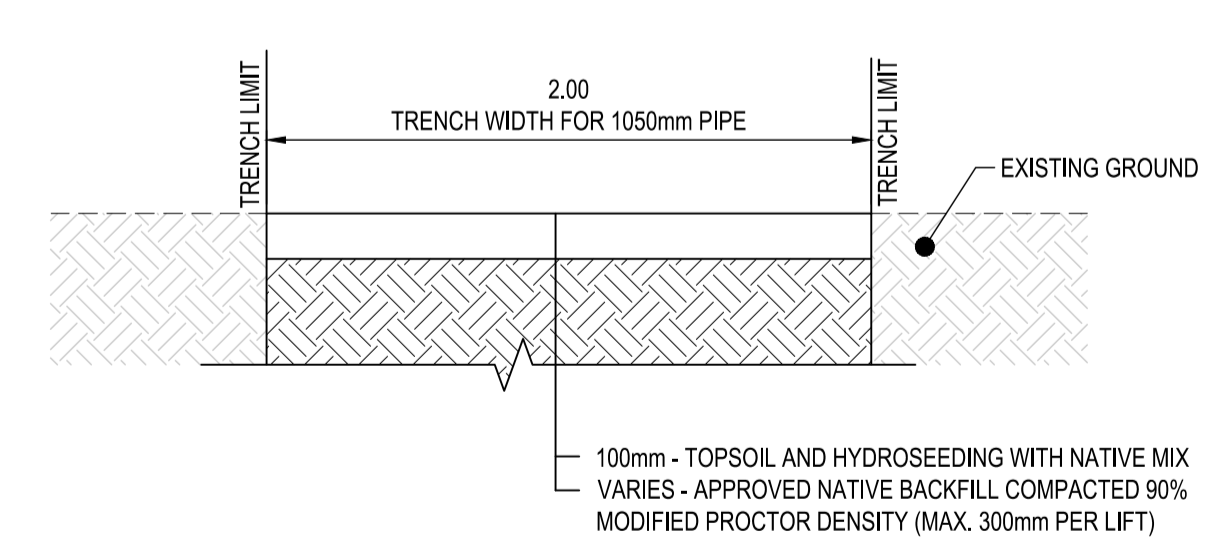
TYPICAL UTILITY TRENCH  
SCALE NTS



SECTION A - ASPHALT PAVEMENT RESTORATION  
FOR 450mm PIPE  
SCALE 1:25

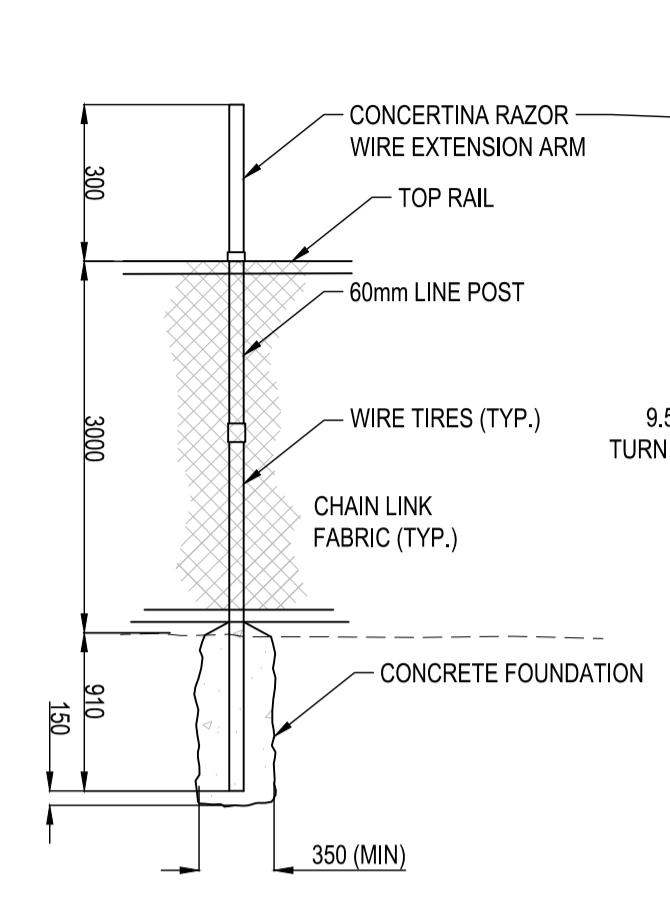


SECTION B - ASPHALT PAVEMENT RESTORATION  
FOR 1050mm PIPE  
SCALE 1:25

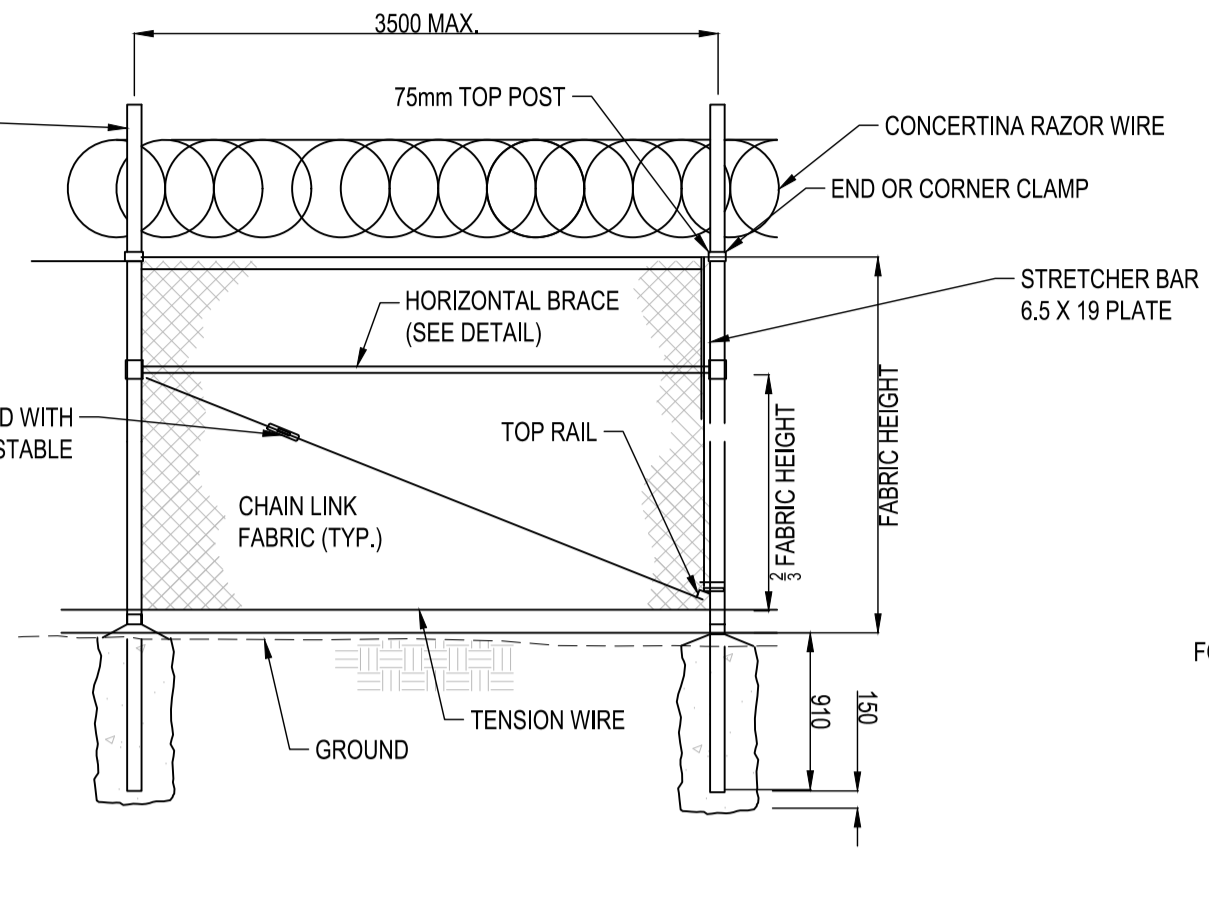


SECTION C - BOULEVARD RESTORATION  
SCALE 1:25

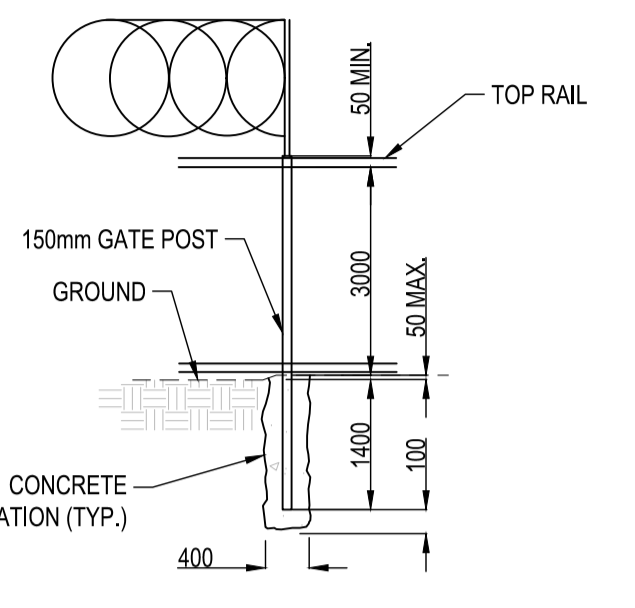
NOTES:  
1. TRENCHING TO COMPLY WITH ALL REQUIREMENTS OF WORKSAFE BC.



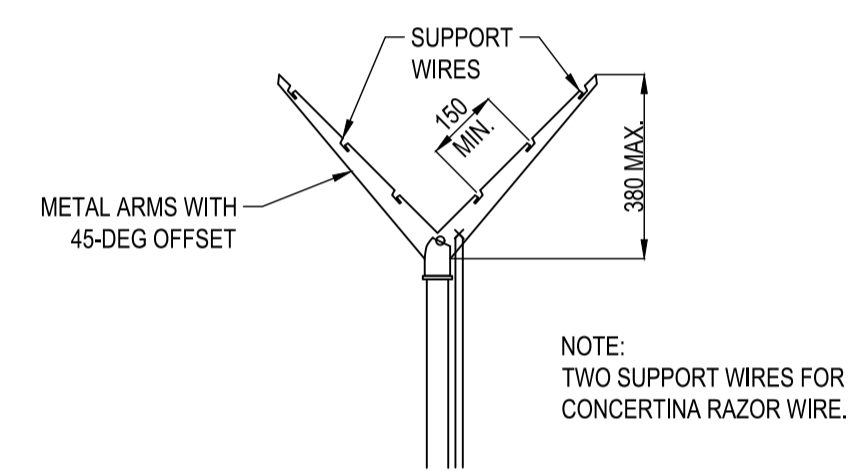
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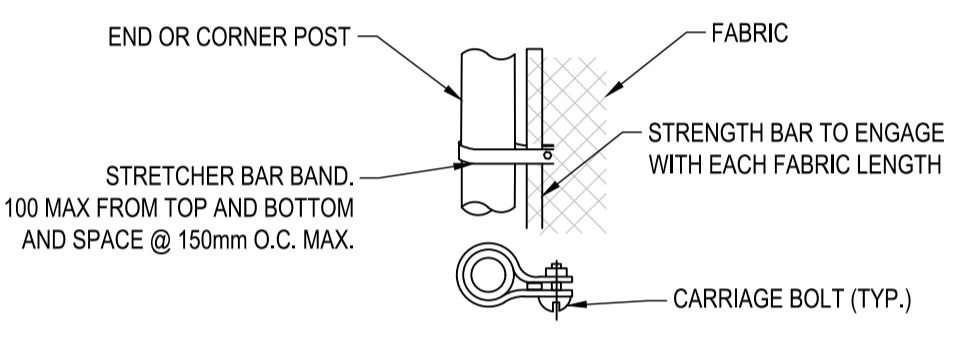
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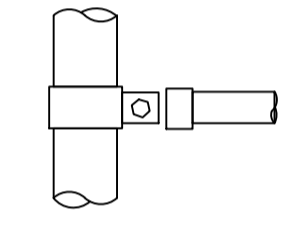
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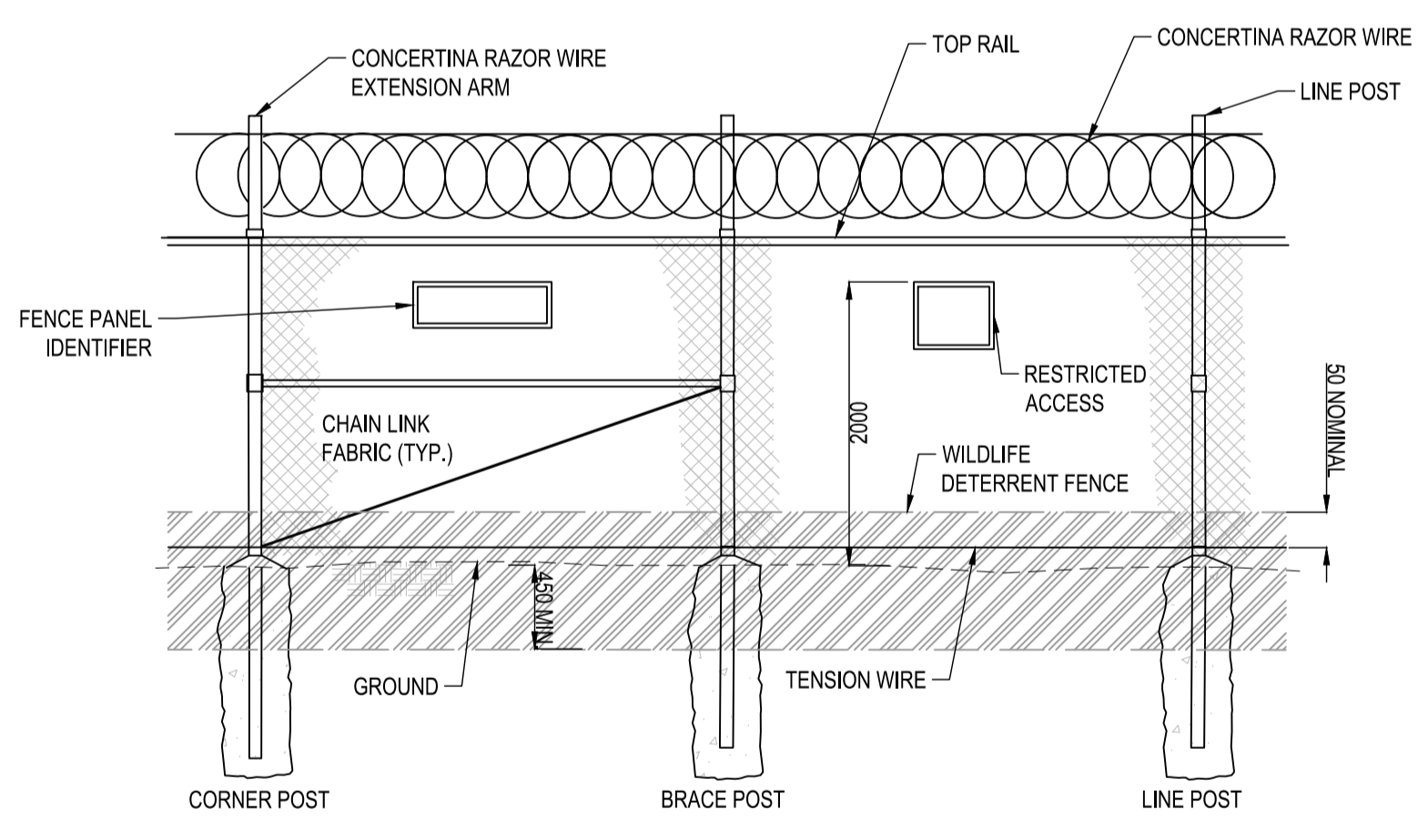
TYPE No.1  
RAZOR WIRE EXTENSION - DETAIL No.1  
SCALE:NTS



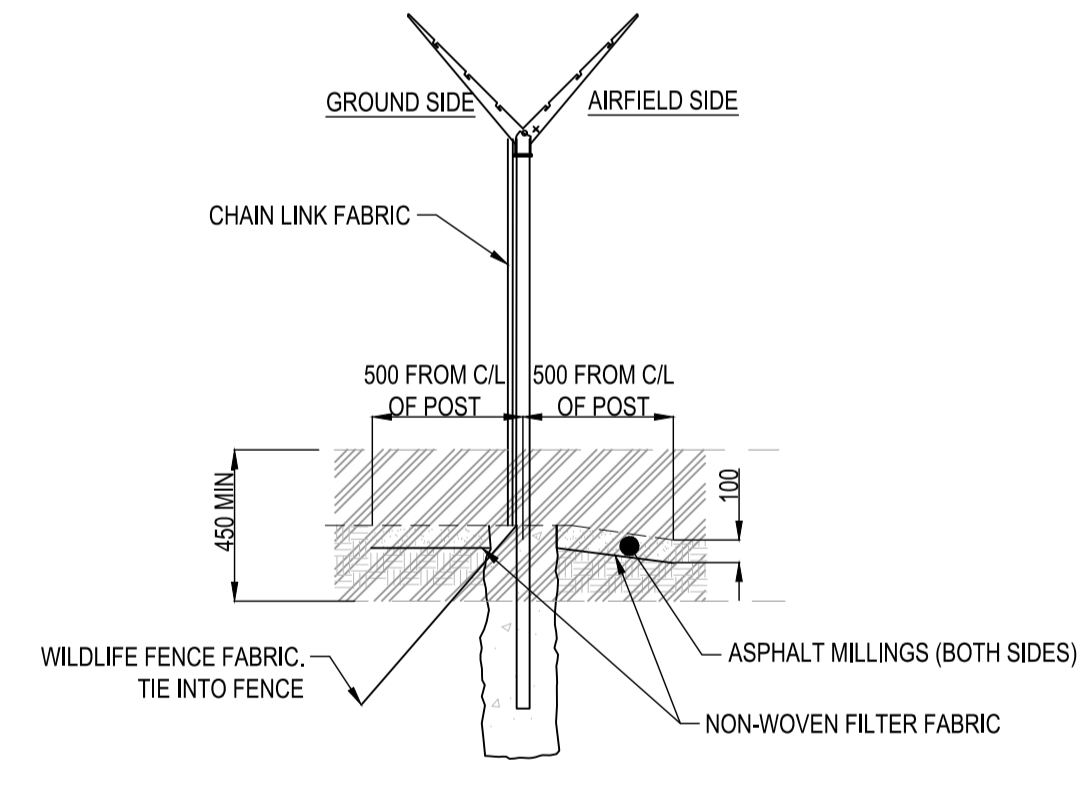
END OR GATE POST DETAIL



END BAND FOR BRACE OR TOP RAIL



TYPICAL FENCE TYPE 'A' AND 'E' WITH  
WILDLIFE DETERRENT FENCE



SECURITY FENCE WITH WILDLIFE DETERRENT FENCE  
SECTION

PSL FENCE DETAIL  
SCALE NTS

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T 604 683 8521

ORIGINAL DWG SIZE: A1 (594 x 841mm)

**YYJ**

0 1:25 1

VICTORIA AIRPORT AUTHORITY  
STORMWATER SYSTEM REPLACEMENT  
RESTORATION DETAILS

Client Project Number  
**6777**

Client Drawing Number  
-

Drawing No.  
**C502**

Project Number  
2121-24006-00

Rev.  
E



# LAUNCH VIDEO



## PACP Sewer Report

|                                 |                                 |                                      |  |                              |                        |
|---------------------------------|---------------------------------|--------------------------------------|--|------------------------------|------------------------|
| Surveyed by:<br>Thomas          | Certificate No:<br>U-1013-17814 | Owner:<br>Victoria Airport Authority | Survey Customer:<br>Victoria Airport Authority | Drainage area:<br>DOS        | Sheet number:          |
| Work order:                     | Pipeline segment ref:<br>D2733X | Start date/time:<br>2017/06/22 14:33 | Street:<br>Willington Road.                    | City:<br>District of Saanich |                        |
| Location details:               | Upstream manhole No:<br>D2733   | Rim to invert:                       | Grade to invert:                               | Rim to grade:                |                        |
| Downstream manhole No:<br>D2812 | Rim to invert:                  | Grade to invert:                     | Rim to grade:                                  | Sewer use:<br>SW             | Direction:<br>D        |
| Width:                          | Shape:<br>C                     | Material:<br>CMP                     | Ln. method:                                    | Pipe joint length:<br>2.5    | Total length:<br>112.0 |
| Purpose:<br>F                   | Sewer category:                 | Pre-cleaning:<br>Z                   | Date cleaned:                                  | Weather:<br>5                | Location code:<br>D    |
| Starting access point:          | Easting:                        | Northing:                            | Elevation:                                     | Coordinate system:           | GPS accuracy:          |

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous Defect<br>S/M/L | Value<br>Inches (mm) |     | %  | Joint | Circumferential<br>Location |    | Image Ref. | Remarks |
|-----------------------------|------------|----------------------|-----------------------|----------------------------|----------------------|-----|----|-------|-----------------------------|----|------------|---------|
|                             |            |                      |                       |                            | 1st                  | 2nd |    |       | At/From                     | to |            |         |
| 0.0                         | 1          | AMH                  |                       |                            |                      |     |    |       |                             |    |            | D2733   |
| 0.0                         | 26         | MWL                  |                       |                            |                      |     | 5  |       |                             |    |            | 1-5%    |
| 0.0                         | 46         | DSG<br>V             |                       | S01                        |                      |     | 20 |       | 5                           | 9  |            |         |
| 12.2                        | 176        | DSG<br>V             |                       | F01                        |                      |     | 20 |       | 5                           | 9  |            |         |
| 12.2                        | 194        | MWL                  |                       |                            |                      |     | 5  |       |                             |    |            | 1-5%    |
| 17.4                        | 240        | DSG<br>V             |                       |                            |                      |     | 5  |       | 5                           | 7  |            |         |
| 17.4                        | 253        | LL                   |                       |                            |                      |     | 45 |       |                             |    |            |         |



Surveyed by: Thomas      Owner: Victoria Airport Authority      Start date/time: 2017/06/22      Upstream manhole No: D2733      Pipeline segment ref: D2733X      Sheet number: \_\_\_\_\_

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | %  | Joint | Circumferential<br>Location |    | Image Ref.   | Remarks                           |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|----|-------|-----------------------------|----|--|-----------------------------------|
|                             |            |                      |                       |                      |       | 1st   | 2nd |    |       | At/From                     | to |  |                                   |
| 20.5                        | 488        | D                    |                       |                      |       |       |     | 20 |       |                             |    | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 D at 20.5 m<br>(D).jpg    |                                   |
| 20.5                        | 499        | SCP                  |                       | S02                  |       |       |     |    |       | 3                           | 9  |  |                                   |
| 20.5                        | 522        | DSG<br>V             |                       |                      |       |       |     | 20 |       | 4                           | 8  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 DSGV at 20.5<br>m (D).jpg |                                   |
| 20.5                        | 563        | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.63M<br>MARKED ON SURFACE |
| 25.1                        | 622        | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.54M<br>MARKED ON SURFACE |
| 26.5                        | 653        | HSV                  |                       |                      |       |       |     |    |       | 6                           | 7  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HSV at 26.5<br>m (D).jpg  |                                   |
| 28.5                        | 713        | HSV                  |                       | S03                  |       |       |     |    |       | 6                           | 7  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HSV at 28.5<br>m (D).jpg  |                                   |
| 30.2                        | 754        | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.56M<br>MARKED ON SURFACE |
| 35.9                        | 1011       | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.67M<br>MARKED ON SURFACE |
| 40.6                        | 1093       | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.67M<br>MARKED ON SURFACE |
| 40.6                        | 1094       | D                    |                       | S04                  |       |       |     | 10 |       |                             |    | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 D at 40.6 m<br>(D).jpg    |                                   |
| 43.5                        | 1144       | HSV                  |                       | F03                  |       |       |     |    |       | 6                           | 7  |  |                                   |
| 45.3                        | 1186       | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.65M<br>MARKED ON SURFACE |
| 45.6                        | 1201       | D                    |                       |                      |       |       |     | 20 |       |                             |    |  |                                   |
| 47.5                        | 1222       | RFJ                  |                       |                      |       |       |     |    | J     | 9                           |    |  |                                   |



Surveyed by: Thomas      Owner: Victoria Airport Authority      Start date/time: 2017/06/22      Upstream manhole No: D2733      Pipeline segment ref: D2733X      Sheet number: \_\_\_\_\_

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | %  | Joint | Circumferential<br>Location |    | Image Ref.  | Remarks                           |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|----|-------|-----------------------------|----|---|-----------------------------------|
|                             |            |                      |                       |                      |       | 1st   | 2nd |    |       | At/From                     | to |   |                                   |
| 50.3                        | 1261       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.50M<br>MARKED ON SURFACE |
| 52.3                        | 1290       | RFJ                  |                       |                      |       |       |     |    | J     | 7                           | 9  |   |                                   |
| 55.2                        | 1338       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.40M<br>MARKED ON SURFACE |
| 56.0                        | 1359       | D                    |                       |                      |       |       |     | 20 |       |                             |    | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 D at 56.0 m<br>(D).jpg   |                                   |
| 57.2                        | 1388       | HSV                  |                       |                      |       |       |     |    |       | 6                           | 7  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HSV at 57.2<br>m (D).jpg |                                   |
| 60.2                        | 1431       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.45M<br>MARKED ON SURFACE |
| 65.6                        | 1486       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.45M<br>MARKED ON SURFACE |
| 67.8                        | 1513       | IS                   |                       |                      |       |       |     |    | J     | 1                           | 5  |   |                                   |
| 69.5                        | 1550       | D                    |                       | F04                  |       |       |     | 10 |       |                             |    |   |                                   |
| 69.5                        | 1560       | D                    |                       | S05                  |       |       |     | 20 |       |                             |    |   | 15-20%                            |
| 70.2                        | 1583       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.54M<br>MARKED ON SURFACE |
| 77.4                        | 1663       | IS                   |                       |                      |       |       |     |    | J     | 8                           | 10 |   |                                   |
| 77.5                        | 1705       | HSV                  |                       |                      |       |       |     |    |       | 6                           | 7  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HSV at 77.5<br>m (D).jpg |                                   |
| 77.5                        | 1745       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.40M<br>MARKED ON SURFACE |
| 80.7                        | 1773       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.40M<br>MARKED ON SURFACE |
| 89.5                        | 1862       | MGO                  |                       |                      |       |       |     |    |       |                             |    |   | DEPTH: 2.35M<br>MARKED ON SURFACE |



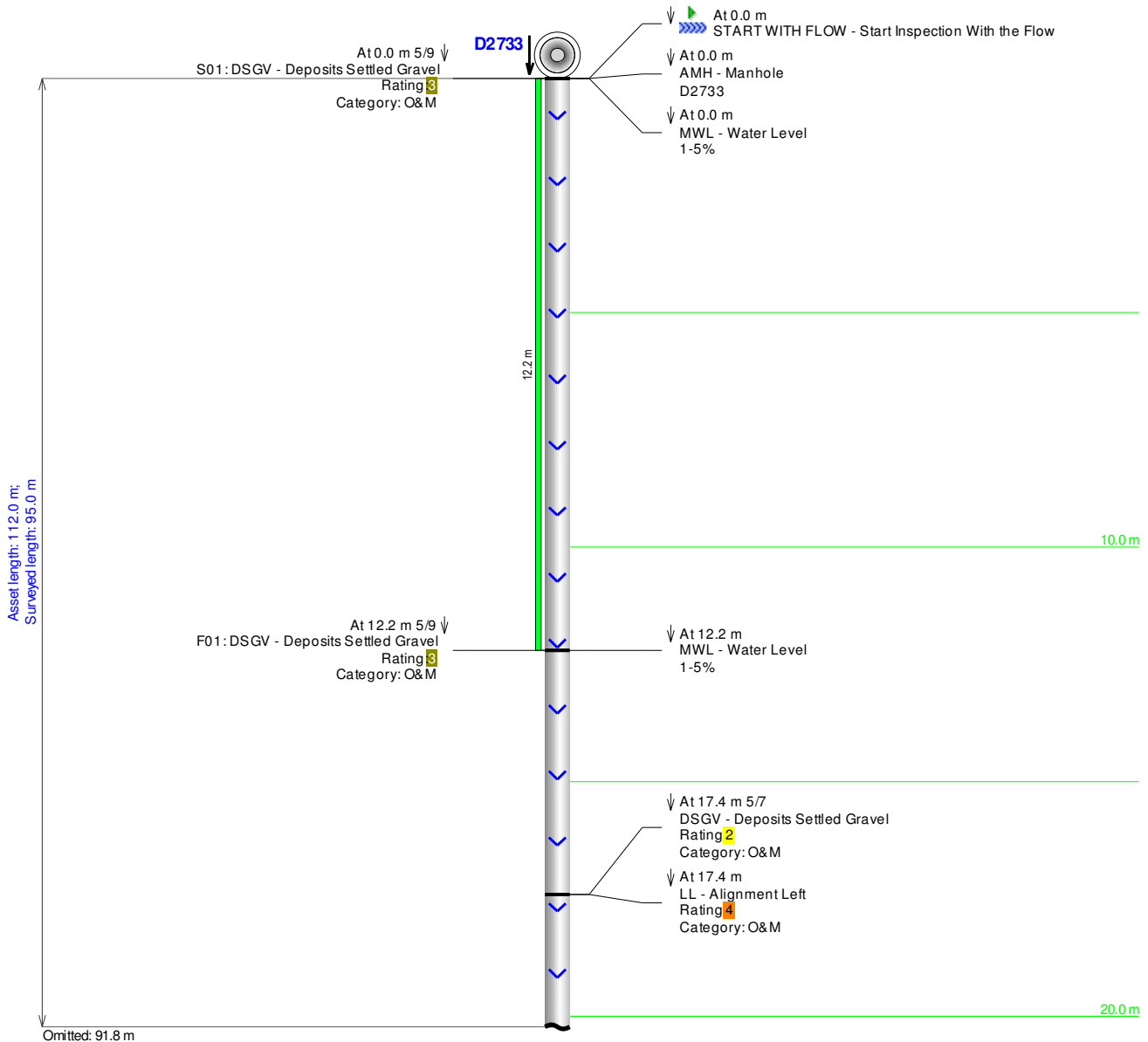
Surveyed by: Thomas      Owner: Victoria Airport Authority      Start date/time: 2017/06/22      Upstream manhole No: D2733      Pipeline segment ref: D2733X      Sheet number:           

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | %  | Joint | Circumferential<br>Location |    | Image Ref.   | Remarks                           |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|----|-------|-----------------------------|----|--|-----------------------------------|
|                             |            |                      |                       |                      |       | 1st   | 2nd |    |       | At/From                     | to |  |                                   |
| 91.3                        | 1878       | JSL                  |                       |                      | L     |       |     |    |       |                             |    | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 JSL at 91.3 m<br>(D).jpg  |                                   |
| 91.8                        | 1893       | HVV                  |                       |                      |       |       |     |    | J     | 3                           | 10 | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HVV at 91.8<br>m (D).jpg  |                                   |
| 92.8                        | 1960       | D                    |                       | F05                  |       |       |     | 20 |       |                             |    |  | 15-20%                            |
| 94.7                        | 2001       | JOL                  |                       |                      | L     |       |     |    |       |                             |    |  |                                   |
| 94.7                        | 2009       | DNG<br>V             |                       |                      |       |       |     | 5  | J     | 7                           | 12 | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 DNGV at 94.7<br>m (D).jpg |                                   |
| 95.0                        | 2051       | HSV                  |                       |                      |       |       |     |    |       | 5                           | 7  | Willingdon<br>Road-SD-June2017-D27<br>33-D2812 HSV at 95.0<br>m (D).jpg  |                                   |
| 95.0                        | 2087       | SCP                  |                       | F02                  |       |       |     |    |       | 3                           | 9  |  |                                   |
| 95.0                        | 2113       | MGO                  |                       |                      |       |       |     |    |       |                             |    |  | DEPTH: 2.30M<br>MARKED ON SURFACE |
| 95.0                        | 2148       | MSA                  |                       |                      |       |       |     |    |       |                             |    |  | BOTTOM OF PIPE ROTTED OUT         |



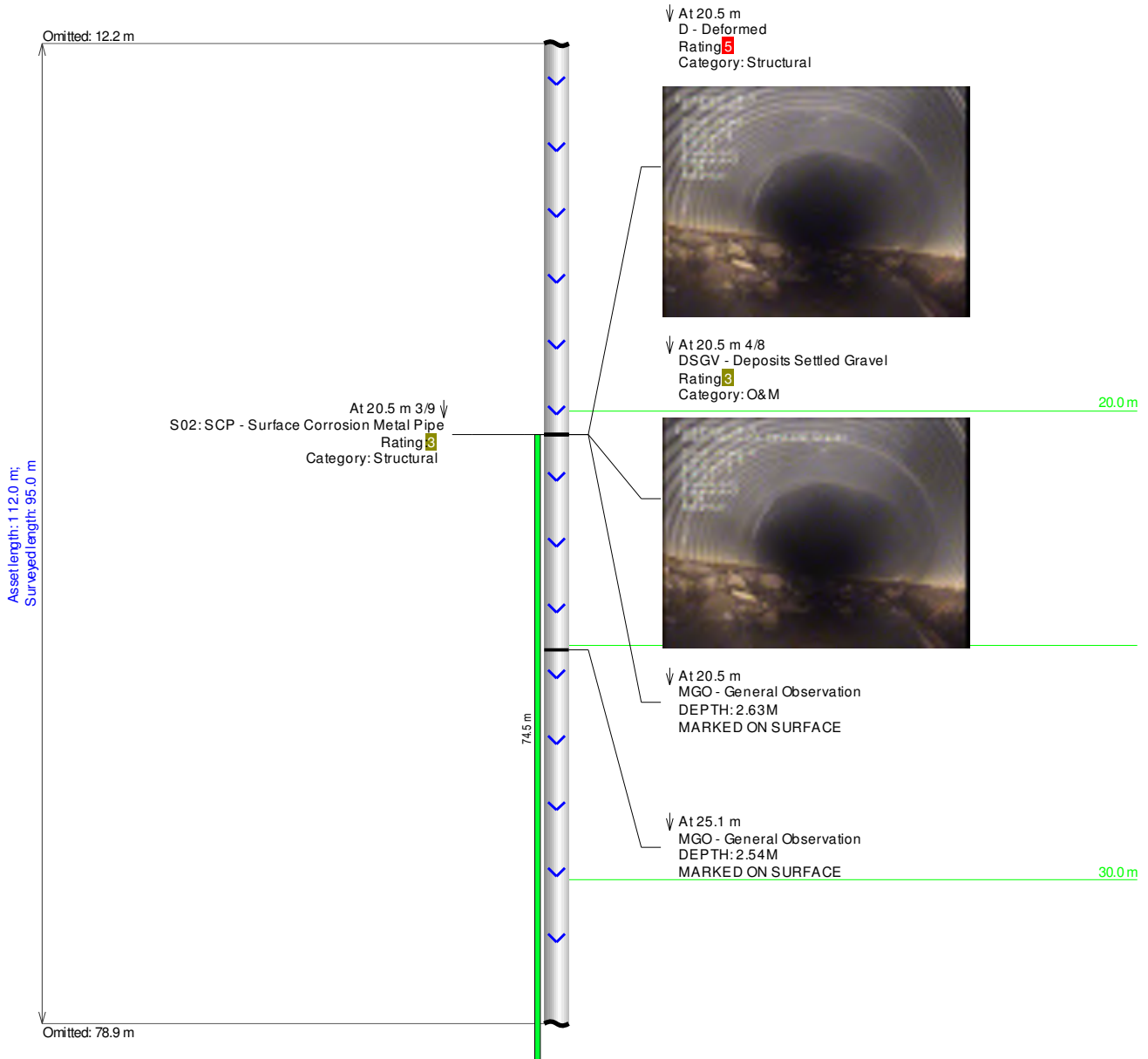
## Main Inspection with Pipe-Run Graph and Images

|   |  |  |                       |                                     |                            |                                    |                      |
|---|--|--|-----------------------|-------------------------------------|----------------------------|------------------------------------|----------------------|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                       | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |                      |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b> | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> |                                    | Weather:<br><b>5</b> |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        |                       | Surveyed by:<br><b>Thomas</b>       |                            | Additional info:                   |                      |



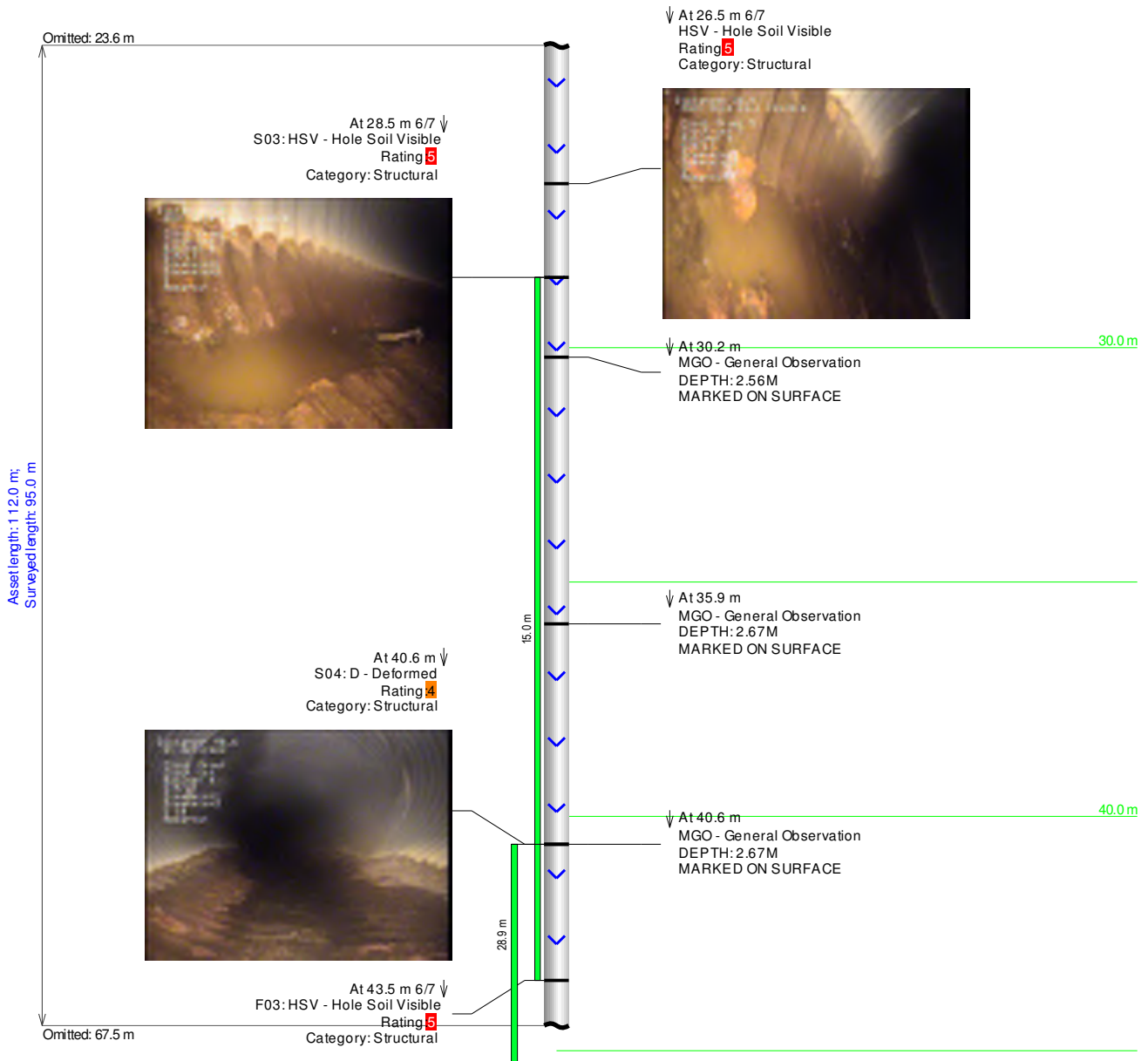


|   |  |  |                               |                                     |                            |                                    |  |
|---|--|--|-------------------------------|-------------------------------------|----------------------------|------------------------------------|--|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                               | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |  |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b>         | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> | Weather:<br><b>5</b>               |  |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b> |                                     | Additional info:           |                                    |  |



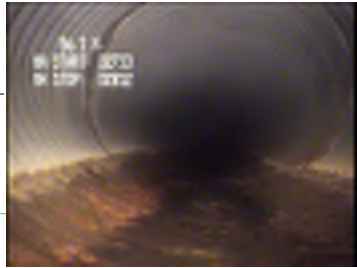
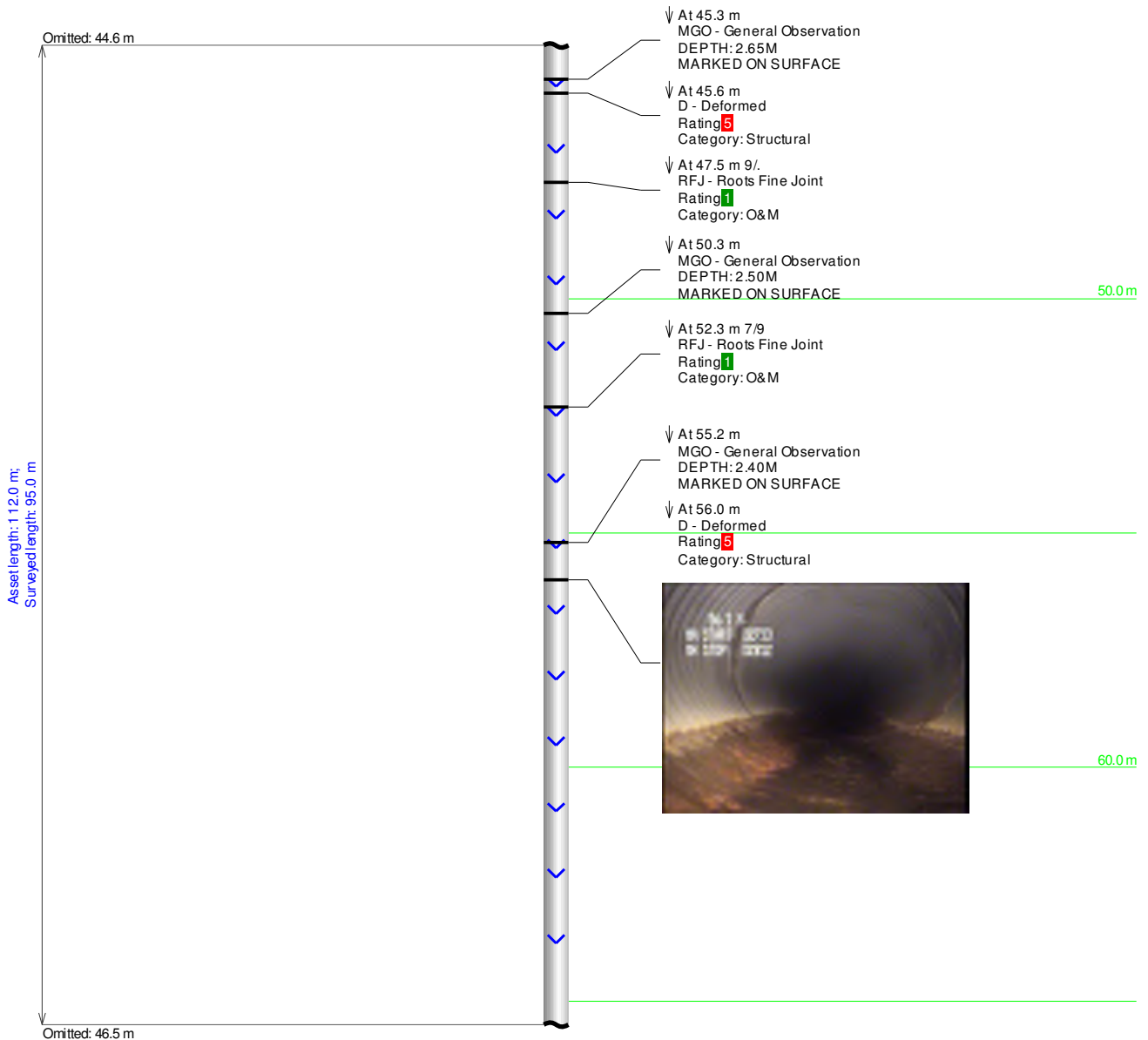


|   |  |  |                               |                                     |                            |                                    |  |
|---|--|--|-------------------------------|-------------------------------------|----------------------------|------------------------------------|--|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                               | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |  |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b>         | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> | Weather:<br><b>5</b>               |  |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b> |                                     | Additional info:           |                                    |  |





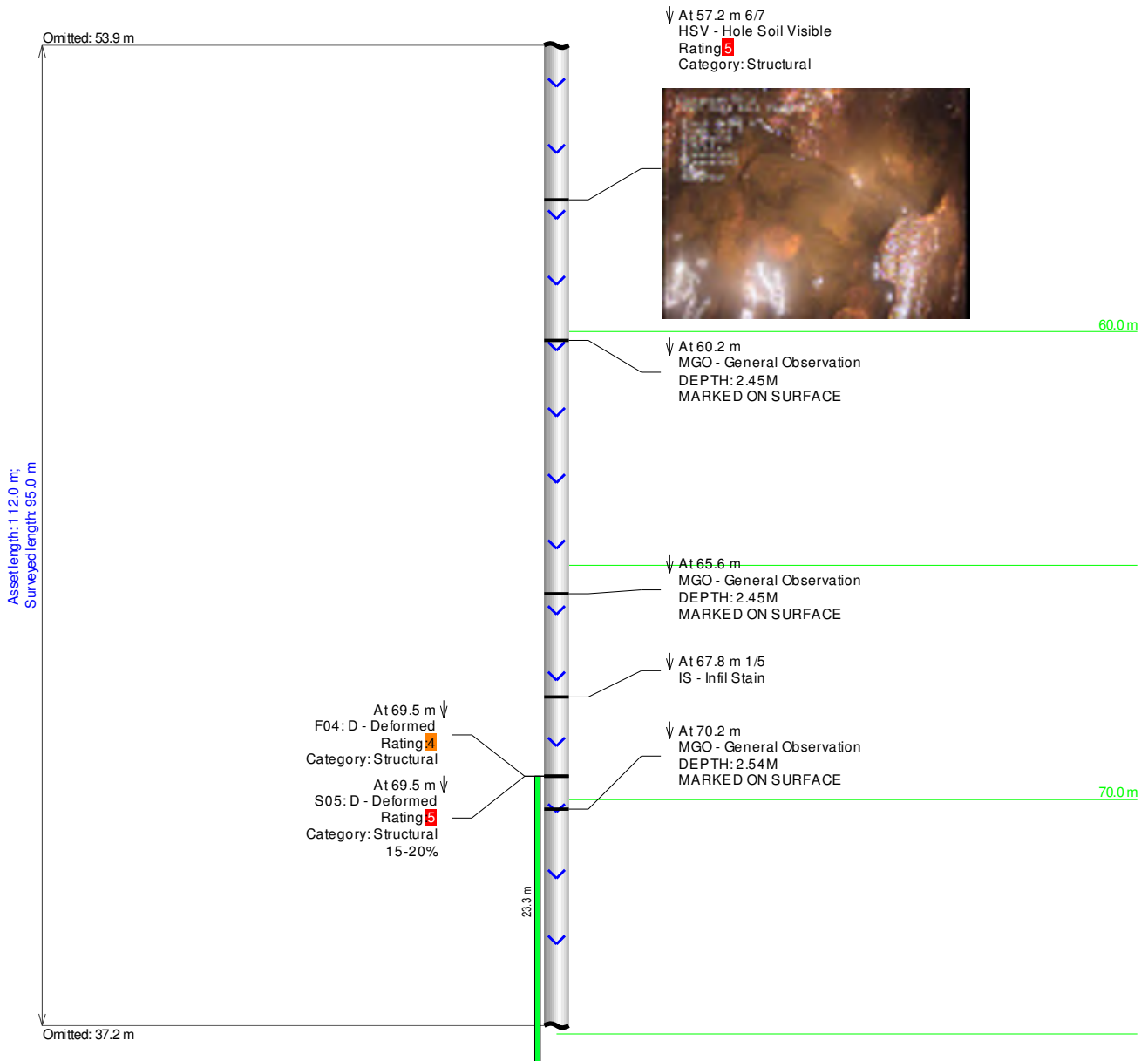
|   |  |  |                       |                                     |                            |                                    |                      |
|---|--|--|-----------------------|-------------------------------------|----------------------------|------------------------------------|----------------------|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                       | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |                      |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b> | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> |                                    | Weather:<br><b>5</b> |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        |                       | Surveyed by:<br><b>Thomas</b>       |                            | Additional info:                   |                      |





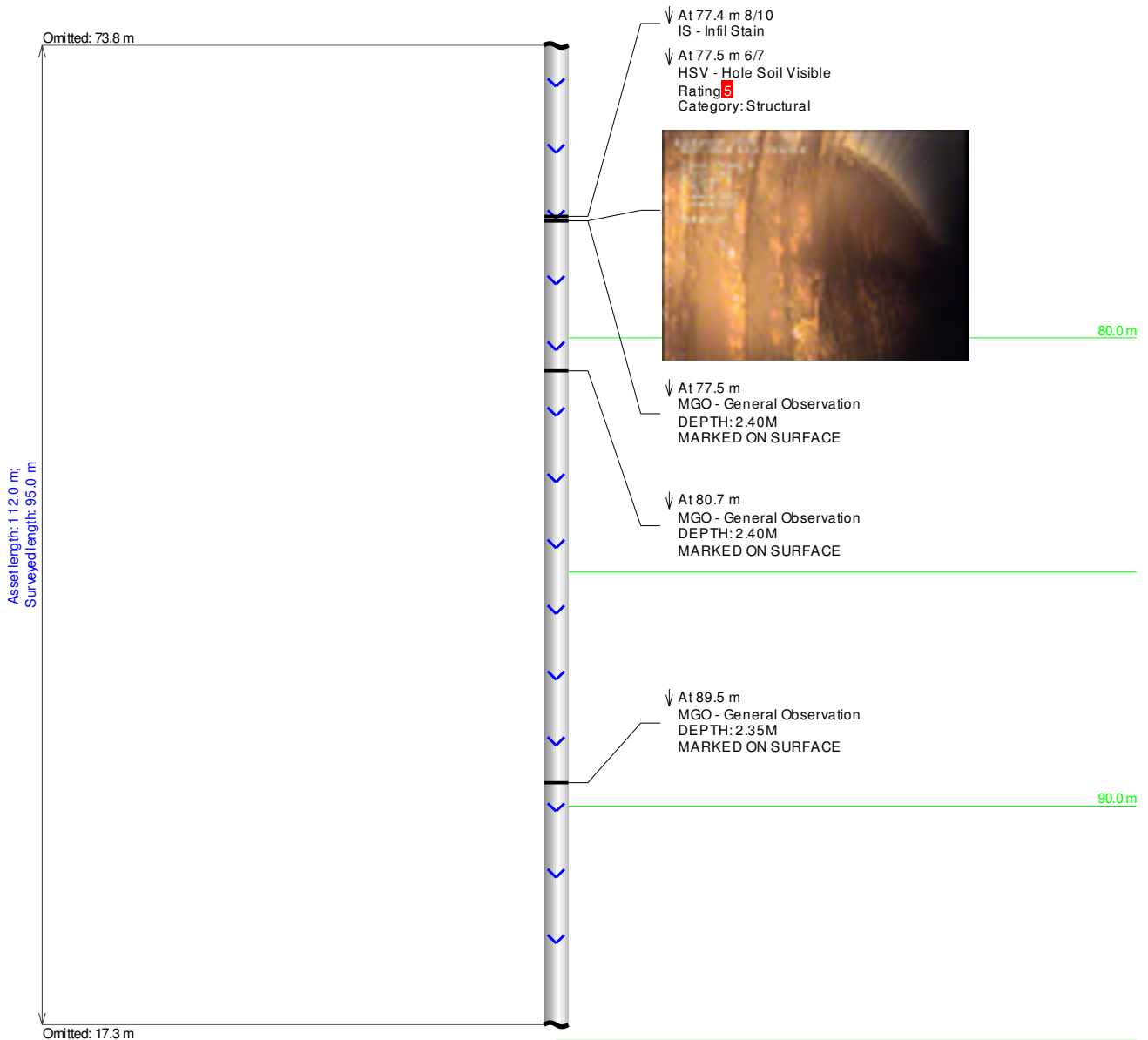


|   |  |  |                               |                                     |                            |                                    |  |
|---|--|--|-------------------------------|-------------------------------------|----------------------------|------------------------------------|--|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                               | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |  |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b>         | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> | Weather:<br><b>5</b>               |  |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b> |                                     | Additional info:           |                                    |  |



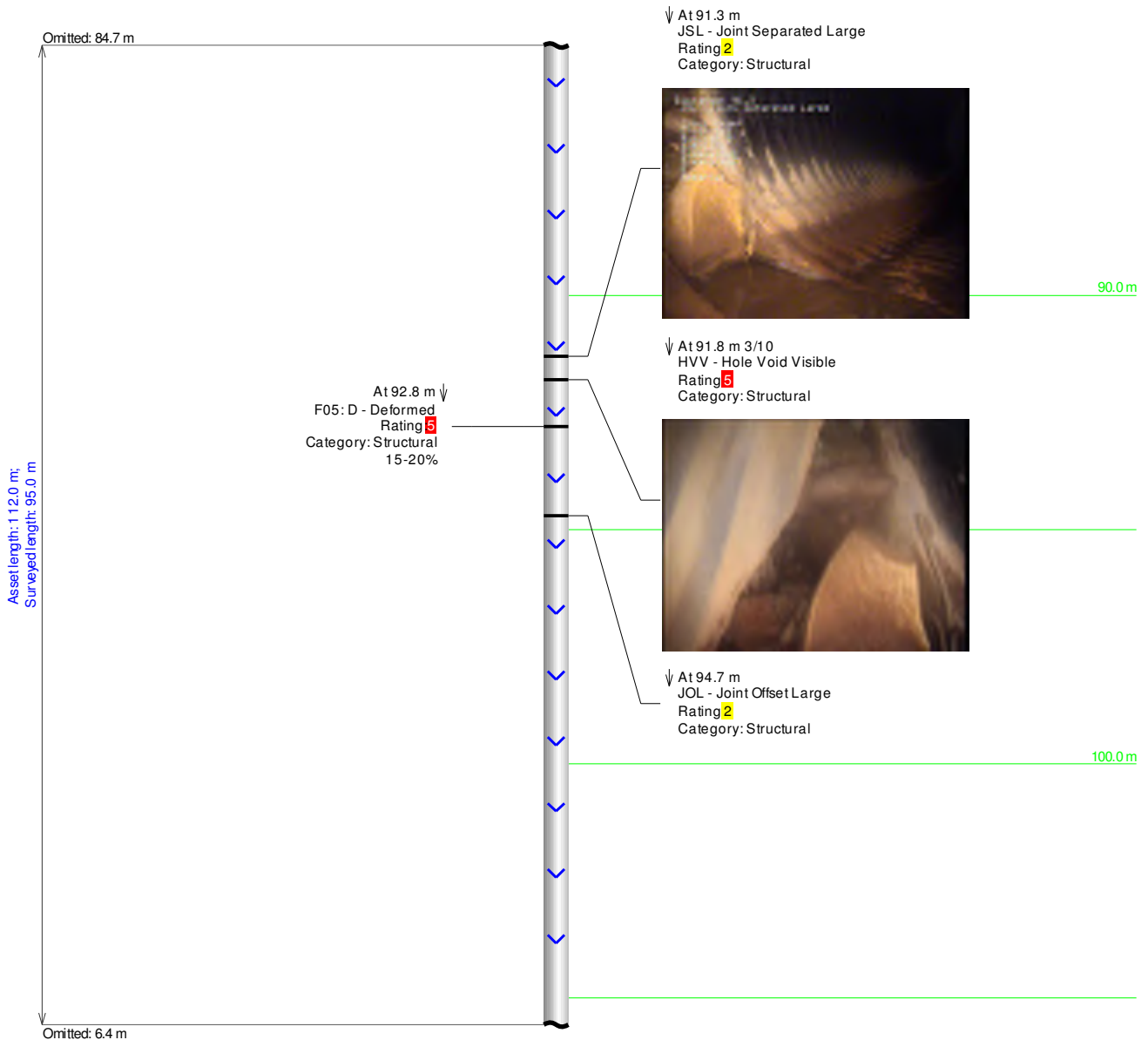


|   |  |  |                       |                                     |                            |                                    |                      |
|---|--|--|-----------------------|-------------------------------------|----------------------------|------------------------------------|----------------------|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                       | City:<br><b>District of Saanich</b> |                            | Street:<br><b>Willingdon Road.</b> |                      |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:                                 | Height:<br><b>900</b> | Material:<br><b>CMP</b>             | Location code:<br><b>D</b> |                                    | Weather:<br><b>5</b> |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        |                       | Surveyed by:<br><b>Thomas</b>       |                            | Additional info:                   |                      |



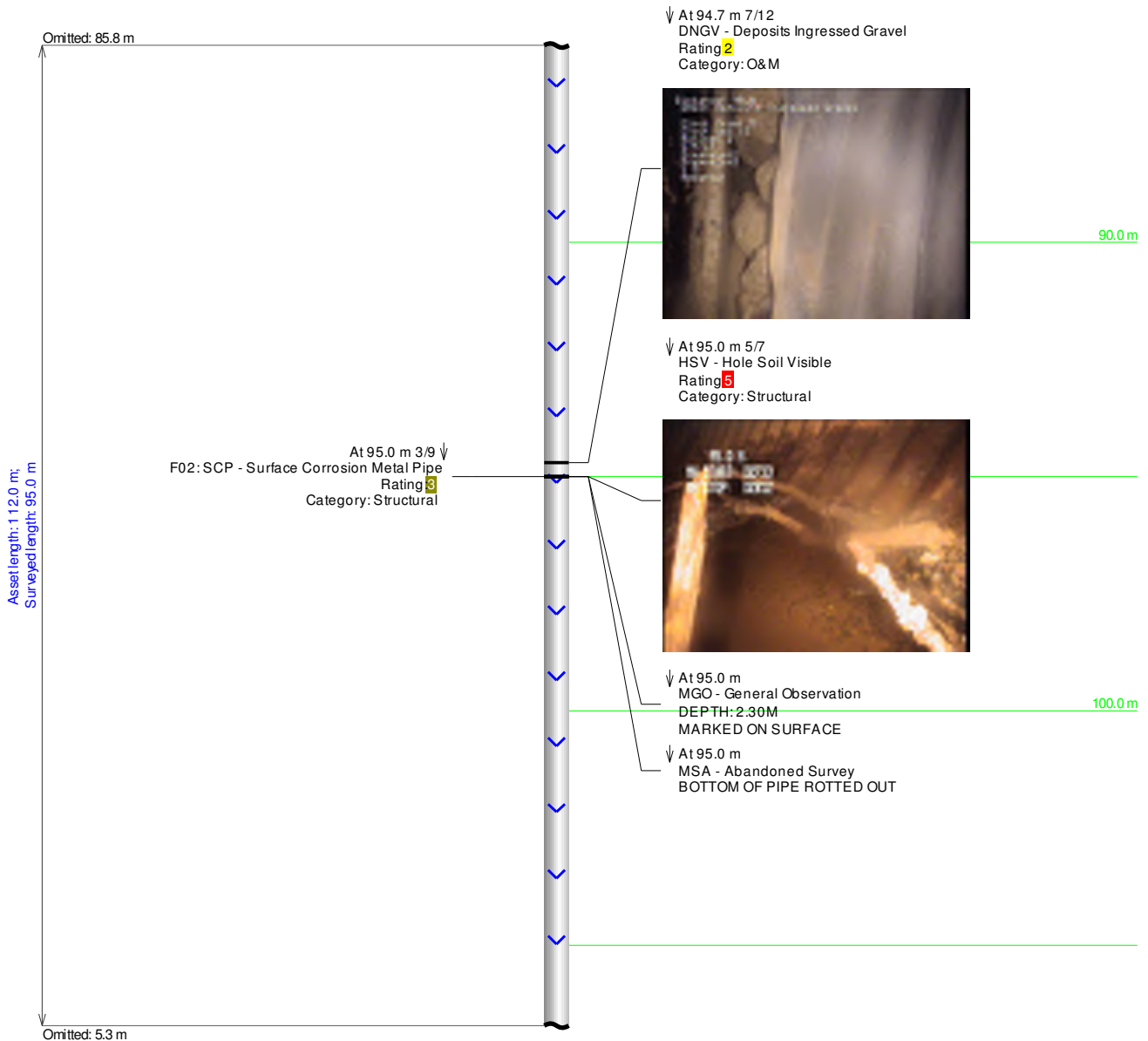


|   |  |  |                               |                                     |                             |                                    |  |
|---|--|--|-------------------------------|-------------------------------------|-----------------------------|------------------------------------|--|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                               | City:<br><b>District of Saanich</b> |                             | Street:<br><b>Willingdon Road.</b> |  |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:<br><b></b>                      | Height:<br><b>900</b>         | Material:<br><b>CMP</b>             | Location code:<br><b>D</b>  | Weather:<br><b>5</b>               |  |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b> |                                     | Additional info:<br><b></b> |                                    |  |





|   |  |  |                               |                                     |                             |                                    |  |
|---|--|--|-------------------------------|-------------------------------------|-----------------------------|------------------------------------|--|
| Project Name:<br><b>Willingdon Road-SD-June2017</b> |  | Pipeline segment ref:<br><b>D2733X</b> |                               | City:<br><b>District of Saanich</b> |                             | Street:<br><b>Willingdon Road.</b> |  |
| Start date/time:<br><b>6/22/2017</b>                |  | Width:<br><b></b>                      | Height:<br><b>900</b>         | Material:<br><b>CMP</b>             | Location code:<br><b>D</b>  | Weather:<br><b>5</b>               |  |
| Direction:<br><b>Downstream</b>                     |  | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b> |                                     | Additional info:<br><b></b> |                                    |  |





|   |  |                                     |                                    |                            |                      |
|---|--|-------------------------------------|------------------------------------|----------------------------|----------------------|
| Project Name:<br><b>Willingdon<br/>Road-SD-June2017</b> | Pipeline segment ref:<br><b>D2733X</b> | City:<br><b>District of Saanich</b> | Street:<br><b>Willingdon Road.</b> |                            |                      |
| Start date/time:<br><b>6/22/2017</b>                    | Width:                                 | Height:<br><b>900</b>               | Material:<br><b>CMP</b>            | Location code:<br><b>D</b> | Weather:<br><b>5</b> |
| Direction:<br><b>Downstream</b>                         | Length surveyed:<br><b>95.0</b>        | Surveyed by:<br><b>Thomas</b>       | Additional info:                   |                            |                      |

Asset length: 112.1  
Surveyed length: 95

Omitted: 111.9m



**D2812**

Distance: 20.5  
D: Deformed

Clock from:  
Clock to:  
Rating: 5  
S/M/L:  
Dimension1  
Dimension2  
% 20  
Remarks:



Distance: 40.6  
D: Deformed

Clock from:  
Clock to:  
Rating: 4  
S/M/L:  
Dimension1  
Dimension2  
% 10  
Remarks:

56.1 M.

MH START: D2733

MH STOP: D2812



Distance: 20.5

DSGU: Deposits Settled Gravel

Clock from: 4

Clock to: 8

Rating: 3

S/M/L:

Dimension1

Dimension2

% 20

Remarks:



Distance: 26.5  
HSU: Hole Soil Visible

Clock from: 5

Clock to: 7

Rating: 5

S/M/L:

Dimension 1

Dimension 2

%

Remarks:

Distance: 28.5  
HSU: Hole (01) Visible

Clock from: 6

Clock to: 7

Rating: 5

S/M/L:

Dimension1

Dimension2

%  
Remarks:

Distance: 28.5  
HSU: Hole Soil Visible

Clock from: 6

Clock to: 7

Rating: 5

S/M/L:

Dimension1

Dimension2

Remarks:



Distance: 28.5  
HSU: Hole Soil Visible

Clock from: 6

Clock to: 7

Rating: 5

S/M/L:

Dimension1

Dimension2

Remarks:

Distance: 57.2  
HSU: Hole Soil Visible

Clock from: 6

Clock to: 7

Rating: -5

S/M/L:

Dimension1

Dimension2

Remarks:

Distance: 77.5  
HSU: Hole Soil Visible

Clock from: 6

Clock to: 7

Rating: 5

M/L:

Dimension1

Dimension2

Remarks:





91.9 M.

MH START: D2733

MH STOP: D2812

91.9 M.

MH START: D2733

MH STOP: D2812

91.9 M.

MH START: D2733

MH STOP: D2812

Distance: 91.3  
JSL: Joint Separated Large

Clock from:  
Clock to:  
Rating: 2  
S/M/L: L  
Dimension1  
Dimension2  
%  
Remarks:

Distance: 95.0

DNLU: Deposits Ingressed Gravel

Clock from: 7

Clock to: 12

Rating: 2

S/M/L:

Dimension1

Dimension2

% 5

Remarks:

95.0 M.

MH START: 02733

MH STOP: 02812



95.0 M.

MH START: 02733

MH STOP: 02812



95.0 M.

MH START: D2733

MH STOP: D2812



95.0 M.

MH START: D2733

MH STOP: D2812

95.0 M.

MH START: 02738

MH STOP: 02812

95.0 M.

MH START: 02733

MH STOP: 02812





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 Orlando, FL 32805  
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## PACP Sewer Report

Operator: Grace Darling Certificate number: U-614-06018249 System Owner: Victoria Airport Authority Survey Customer: Victoria Airport Authority Drainage Area: \_\_\_\_\_ Sheet No. \_\_\_\_\_

Work order no.: \_\_\_\_\_ Mainline ID: D2444X Start date/time: 2016/10/11 13:22 Address: Willingdon Rd City: North Saanich

Further Location Details: \_\_\_\_\_ Upstream node: D2444 Depth: \_\_\_\_\_ Grade to Invert: \_\_\_\_\_ Rim to Grade: \_\_\_\_\_

Downstream node: D2020 Depth: \_\_\_\_\_ Grade to Invert: \_\_\_\_\_ Rim to Grade: \_\_\_\_\_ Use of Sewer: SW Direction: D Flow Control: N Pipe height: 1,000

Pipe width: \_\_\_\_\_ Pipe shape: C Pipe type: RCP Ln. Method: \_\_\_\_\_ Joint distance: \_\_\_\_\_ Asset length: 48.9 Surveyed footage: 47.9 Year laid: \_\_\_\_\_ Year Rehabilitated: \_\_\_\_\_ Tape/Media: VAA

Reason: A Sewer Category: \_\_\_\_\_ Pre-Cleaning: N Cleaned: \_\_\_\_\_ Weather: 1 Surface: \_\_\_\_\_ Comments: \_\_\_\_\_

**Starting access point:** Label for XCOORD: \_\_\_\_\_ Label for YCOORD: \_\_\_\_\_ Label for ZCOORD: \_\_\_\_\_ Label for COORDINATE\_SYSTEM: \_\_\_\_\_ Label for GPS\_ACCURACY: \_\_\_\_\_

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous Defect<br>S/M/L | Value<br>Inches (mm) |     | % | Joint | Circumferential<br>Location |    | Image Ref.   | Remarks              |
|-----------------------------|------------|----------------------|-----------------------|----------------------------|----------------------|-----|---|-------|-----------------------------|----|--|----------------------|
|                             |            |                      |                       |                            | 1st                  | 2nd |   |       | At/From                     | to |  |                      |
| 0.0                         | 2          | AE<br>P              |                       |                            |                      |     |   |       |                             |    |  | AT INLET D2455WEST   |
| 0.0                         | 20         | M<br>W<br>L          |                       |                            |                      |     | 0 |       |                             |    |  |                      |
| 1.3                         | 91         | IS                   |                       |                            |                      |     |   |       | 4                           | 8  | Willingdon Rd-SD-Oct2016-D2455WEST-D2002WEST IS at 1.3 m (D).jpg |                      |
| 1.5                         | 150        | M<br>W<br>L          |                       |                            |                      |     | 5 |       |                             |    |  |                      |
| 5.9                         | 316        | M<br>G<br>O          |                       |                            |                      |     |   |       |                             |    |  | LOCATION DEPTH 2.07M |

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Operator: Grace Darling System Owner: Victoria Airport Authority Start date/time: 2016/10/11 Upstream node: D2444 Mainline ID: D2444X Sheet No.         

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | % | Joint | Circumferential<br>Location |    | Image Ref.  | Remarks        |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|---|-------|-----------------------------|----|---|----------------|
|                             |            |                      |                       |                      |       | 1st   | 2nd |   |       | At/From                     | to |   |                |
| 8.0                         | 391        | M<br>W<br>L          |                       |                      |       |       |     | 5 |       |                             |    |   | 1%             |
| 15.6                        | 563        | IS                   |                       |                      |       |       |     |   |       | 4                           | 8  |   |                |
| 22.9                        | 718        | CL                   |                       |                      |       |       |     |   |       | 12                          |    | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST CL<br>at 22.9 m<br>(D).jpg  |                |
| 24.5                        | 846        | CL                   |                       |                      |       |       |     |   |       | 12                          |    |   |                |
| 27.8                        | 965        | M<br>W<br>L          |                       |                      |       |       |     | 0 |       |                             |    |   |                |
| 31.5                        | 1044       | CL                   |                       |                      |       |       |     |   |       | 10                          |    | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST CL<br>at 31.5 m<br>(D).jpg  |                |
| 31.5                        | 1078       | CL                   |                       |                      |       |       |     |   |       | 5                           |    | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST CL<br>at 31.5 m<br>(D)0.jpg |                |
| 32.5                        | 1136       | O<br>BJ              |                       |                      |       |       |     | 5 | J     | 5                           | 7  | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST OBJ<br>at 32.5 m<br>(D).jpg | STICK IN JOINT |
| 32.8                        | 1196       | CL                   |                       |                      |       |       |     |   |       | 10                          |    |   |                |
| 32.8                        | 1210       | CL                   |                       |                      |       |       |     |   |       | 5                           |    |   |                |

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Operator: Grace Darling System Owner: Victoria Airport Authority Start date/time: 2016/10/11 Upstream node: D2444 Mainline ID: D2444X Sheet No.         

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | %      | Joint | Circumferential<br>Location |    | Image Ref.  | Remarks   |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|--------|-------|-----------------------------|----|---|---|
|                             |            |                      |                       |                      |       | 1st   | 2nd |        |       | At/From                     | to |   |   |
| 32.8                        | 1228       | D                    |                       |                      |       |       |     | 5      |       |                             |    |   |   |
| 33.8                        | 1494       | FH<br>2              |                       |                      |       |       |     |        |       | 12                          | 6  | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST FH2<br>at 33.8 m<br>(D).jpg |   |
| 33.9                        | 1547       | JO<br>M              |                       |                      |       |       |     |        |       |                             |    | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST JOM<br>at 33.9 m<br>(D).jpg |   |
| 35.3                        | 1659       | FH<br>2              |                       |                      |       |       |     |        |       | 12                          | 6  |   |   |
| 35.4                        | 1679       | M<br>M<br>C          |                       |                      |       |       |     |        |       |                             |    |   | TO CMP  |
| 35.4                        | 1694       | M<br>W<br>L          |                       |                      |       |       |     | 5      |       |                             |    |   | 1.5%<br>WATER COMING FROM UNDER<br>PIPE                                     |
| 36.9                        | 1793       | SC<br>P              |                       |                      |       |       |     |        |       | 5                           | 7  |   |   |
| 44.9                        | 2013       | SC<br>P              |                       |                      |       |       |     |        |       | 1                           | 2  | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST SCP<br>at 44.9 m<br>(D).jpg |   |
| 46.9                        | 2089       | D                    |                       |                      |       |       |     | 3<br>0 |       |                             |    | Willingdon<br>Rd-SD-Oct2<br>016-D2455<br>WEST-D200<br>2WEST D at<br>46.9 m<br>(D).jpg   | TOP OF PIPE IS PUSHED IN<br>WHERE THIS LINE INTERSECT<br>WITH THE EAST PIPE |

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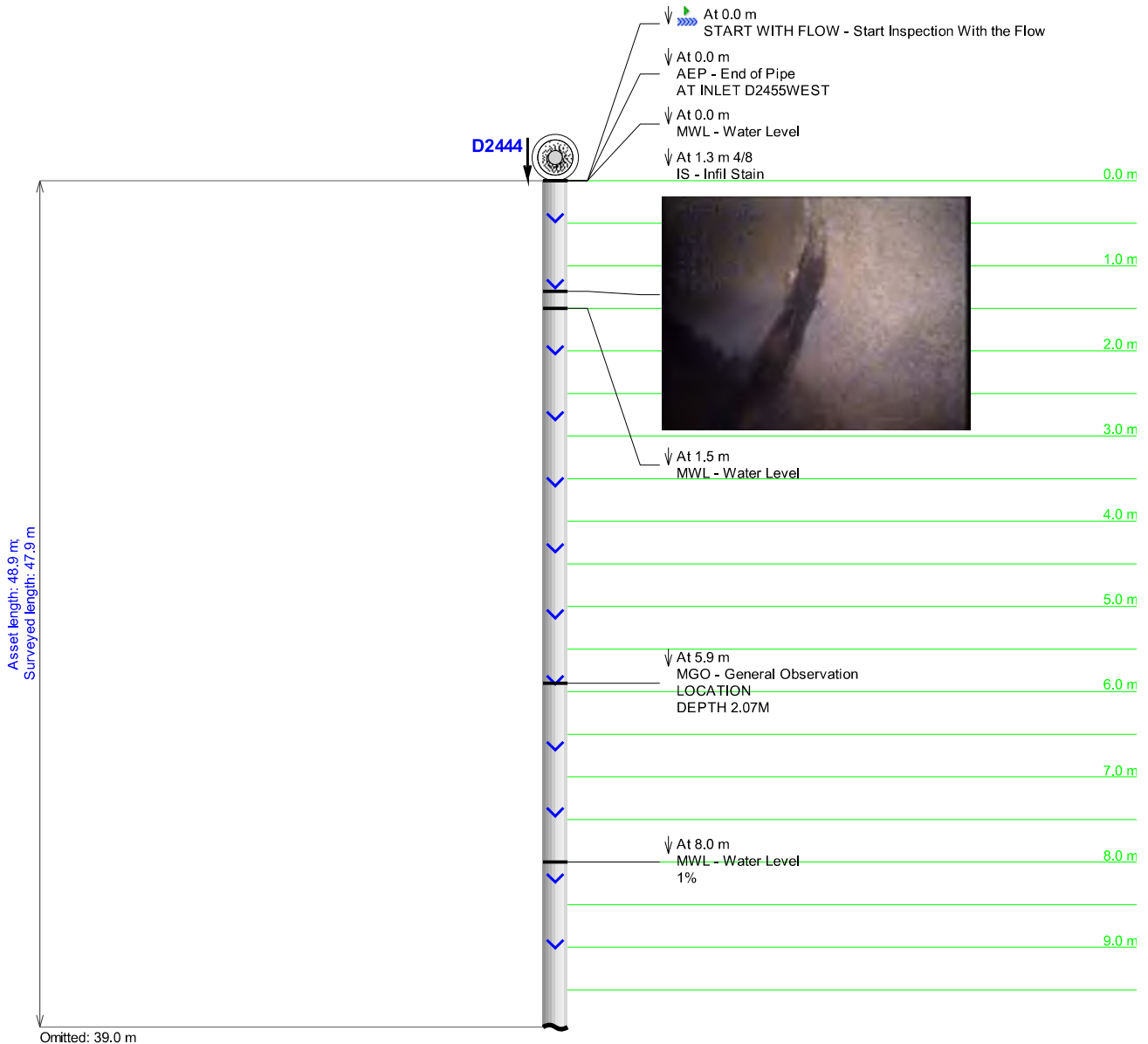
Operator: Grace Darling      System Owner: Victoria Airport Authority  
 Start date/time: 2016/10/11      Upstream node: D2444  
 Mainline ID: D2444X      Sheet No. \_\_\_\_\_

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | % | Joint | Circumferential<br>Location |    | Image Ref. | Remarks         |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|---|-------|-----------------------------|----|------------|-----------------|
|                             |            |                      |                       |                      |       | 1st   | 2nd |   |       | At/From                     | to |            |                 |
| 47.9                        | 2267       | A<br>M<br>H          |                       |                      |       |       |     |   |       |                             |    |            | JUST PAST D2002 |
| 47.9                        | 2301       | SC<br>P              |                       |                      |       |       |     |   |       | 5                           | 7  |            |                 |

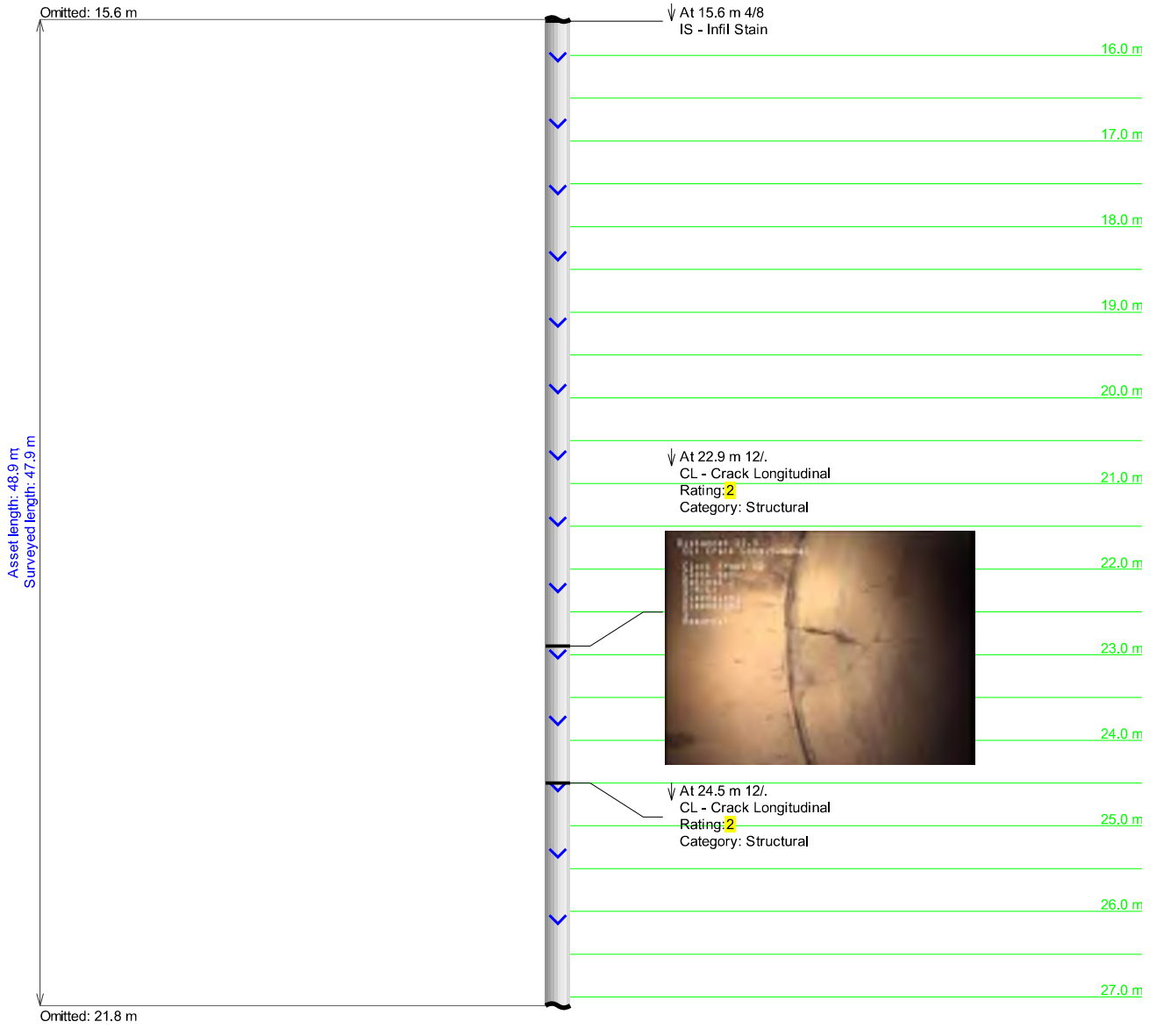


## Main Inspection with Pipe-Run Graph and Images

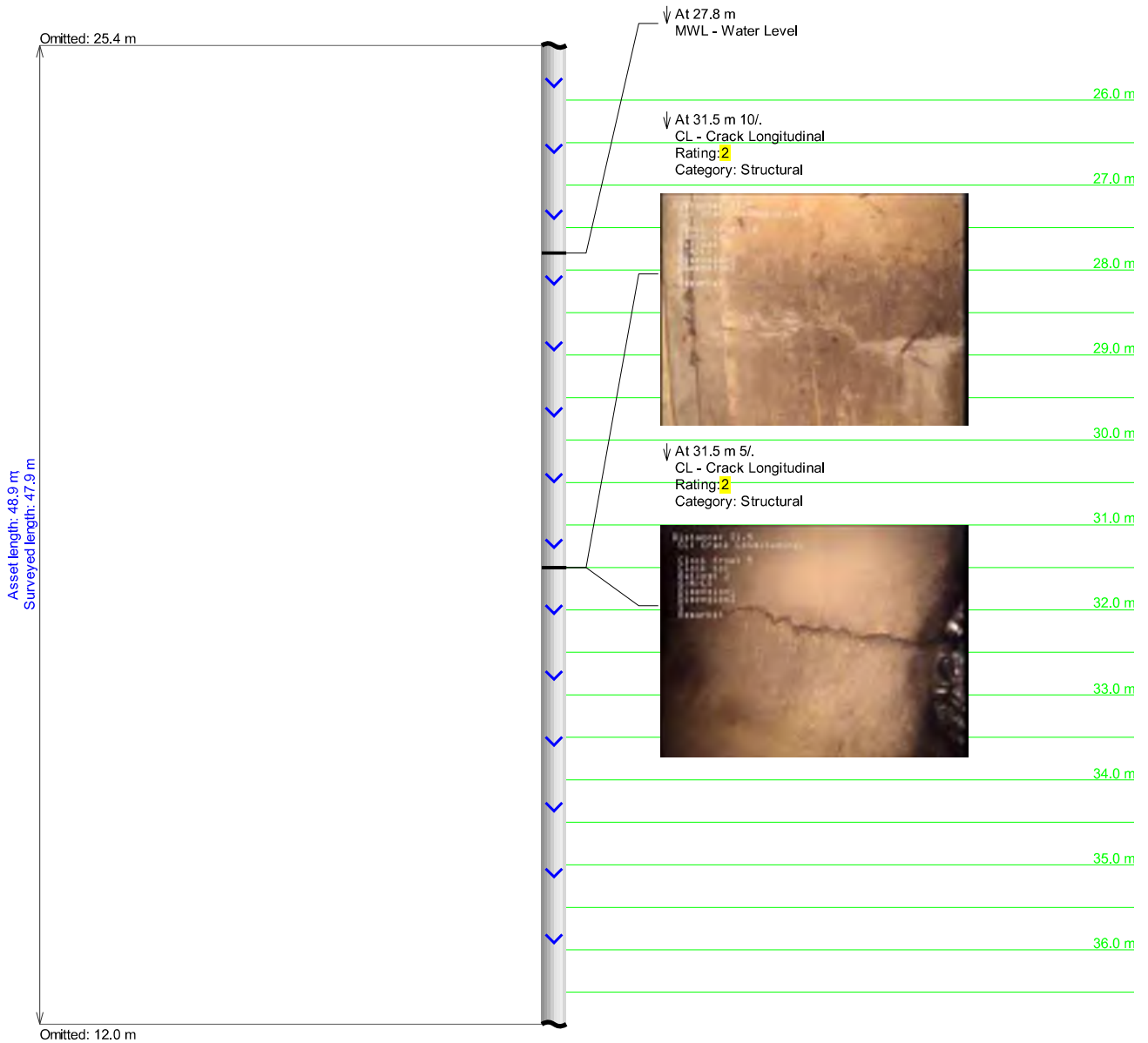
|  |  |                                  |                              |                                   |                               |                                  |                      |
|--|--|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |  | Mainline ID:<br><b>D2444X</b>    |                              | City:<br><b>North Saanich</b>     |                               | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            |  | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b> | Pipe type:<br><b>RCP</b>          | Surface condition:<br><b></b> |                                  | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  |  | Surveyed footage:<br><b>47.9</b> |                              | Operator:<br><b>Grace Darling</b> |                               | Comments<br><b></b>              |                      |



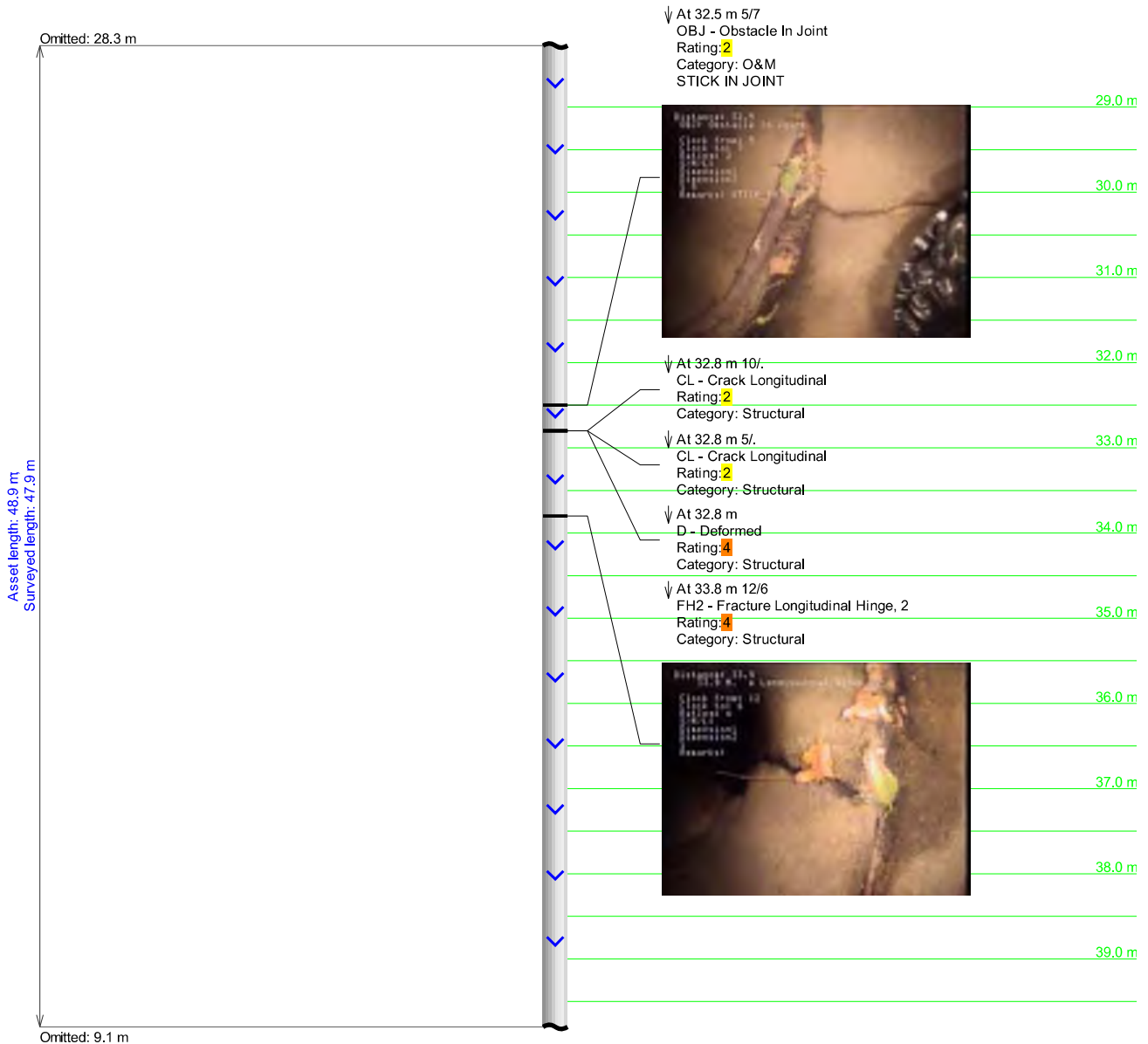
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|--|--|----------------------------------|-----------------------------------|-------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |  | Mainline ID:<br><b>D2444X</b>    |                                   | City:<br><b>North Saanich</b> |                               | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            |  | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b> |                                  | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  |  | Surveyed footage:<br><b>47.9</b> | Operator:<br><b>Grace Darling</b> |                               | Comments:<br><b></b>          |                                  |                      |



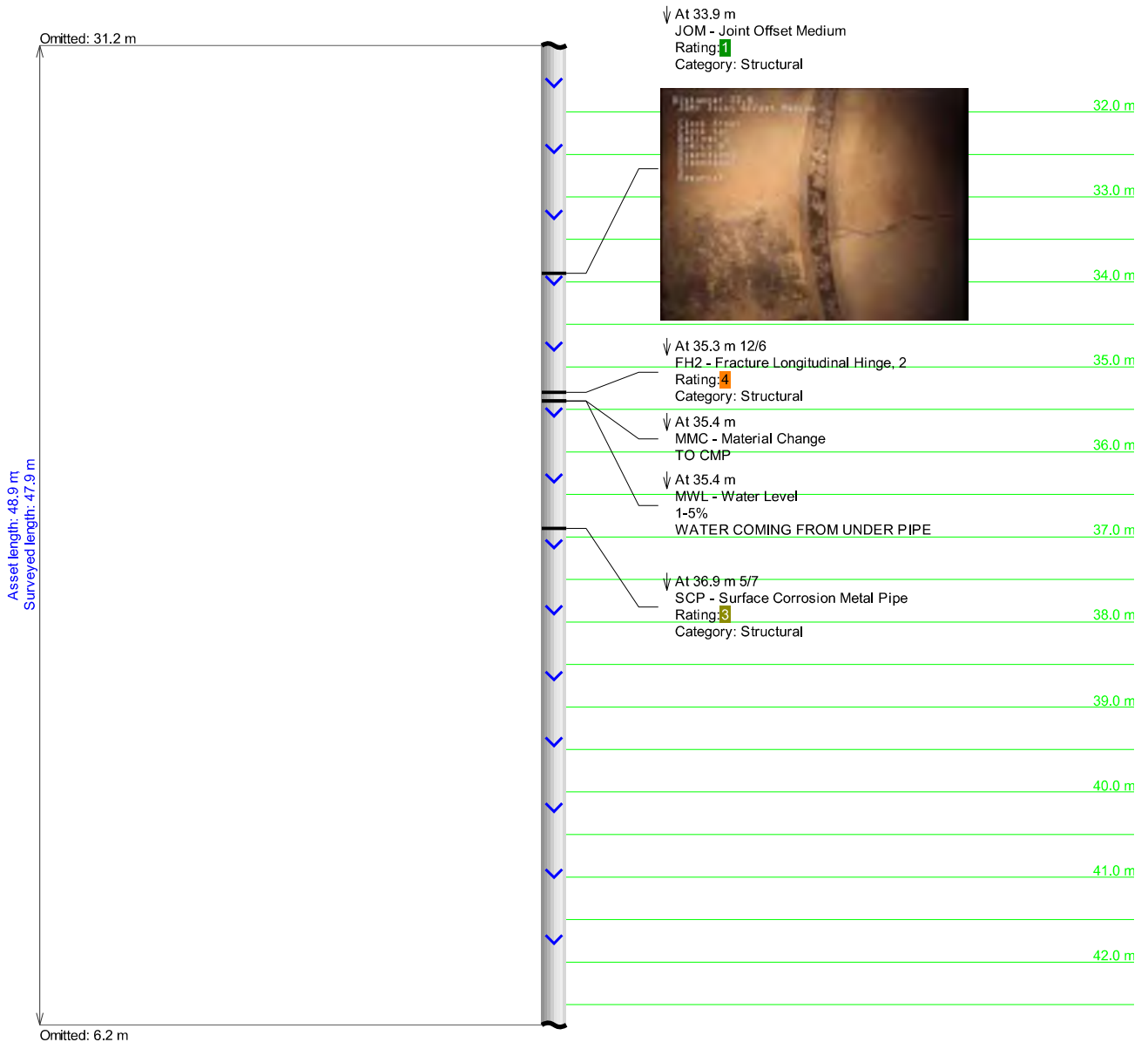
|  |                                  |                                   |                               |                                  |                      |
|--|----------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |                                  | Mainline ID:<br><b>D2444X</b>     | City:<br><b>North Saanich</b> | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b>    | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  | Surveyed footage:<br><b>47.9</b> | Operator:<br><b>Grace Darling</b> |                               | Comments:<br><b></b>             |                      |



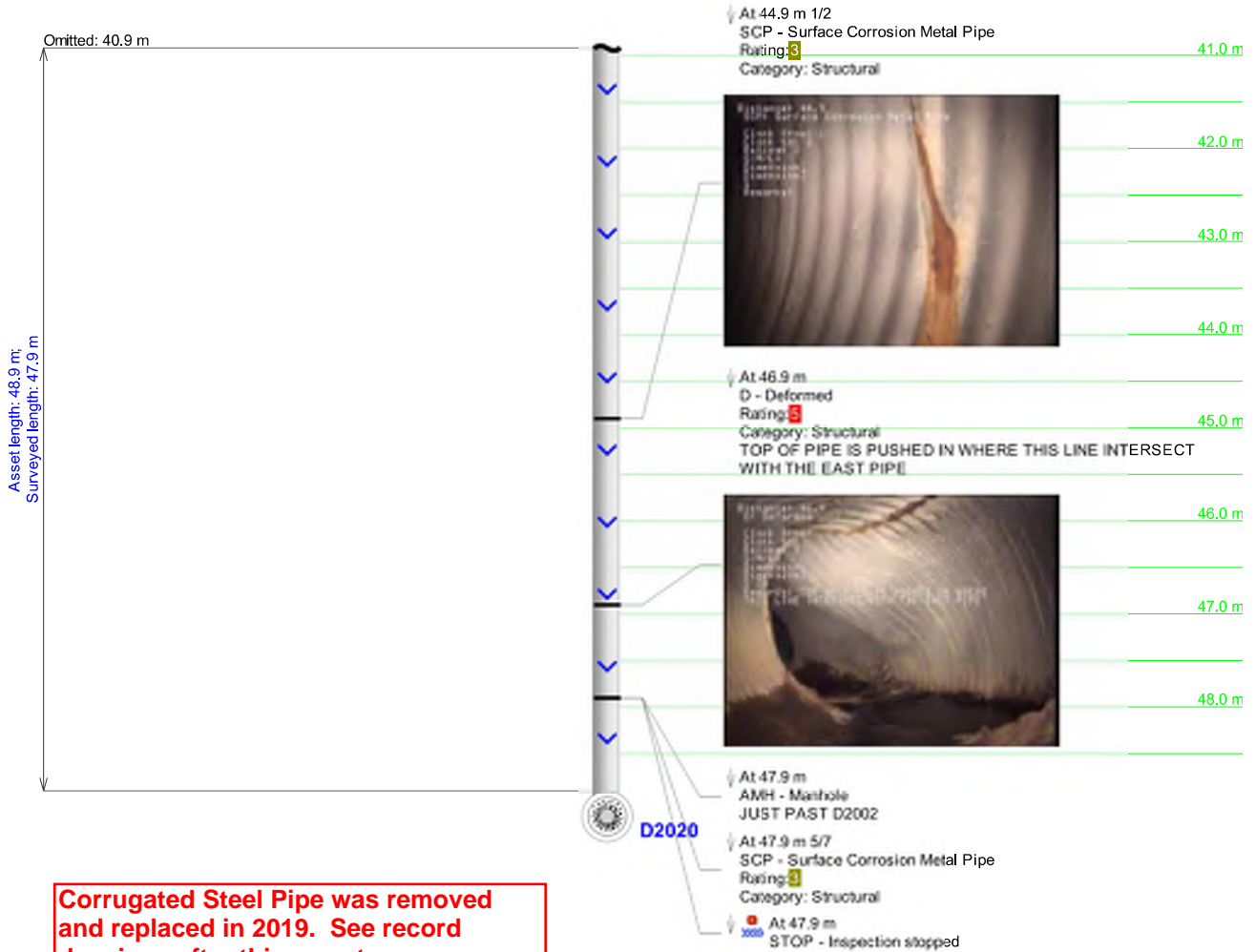
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|--|----------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |                                  | Mainline ID:<br><b>D2444X</b>     | City:<br><b>North Saanich</b> | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b>    | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  | Surveyed footage:<br><b>47.9</b> | Operator:<br><b>Grace Darling</b> |                               | Comments<br><b></b>              |                      |



|  |                                  |                                   |                               |                                  |                      |
|--|----------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |                                  | Mainline ID:<br><b>D2444X</b>     | City:<br><b>North Saanich</b> | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b>    | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  | Surveyed footage:<br><b>47.9</b> | Operator:<br><b>Grace Darling</b> |                               | Comments<br><b></b>              |                      |



|  |  |                                  |                              |                                   |                               |                                  |                      |
|--|--|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |  | Mainline ID:<br><b>D2444X</b>    |                              | City:<br><b>North Saanich</b>     |                               | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            |  | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b> | Pipe type:<br><b>RCP</b>          | Surface condition:<br><b></b> |                                  | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  |  | Surveyed footage:<br><b>47.9</b> |                              | Operator:<br><b>Grace Darling</b> |                               | Comments:<br><b></b>             |                      |



**Corrugated Steel Pipe was removed and replaced in 2019. See record drawings after this report**

1) 1000000 1 7  
1000000 1000000 1000000

1000000 1000000 4  
1000000 1000000 4

1000000  
1000000  
1000000  
1000000

1000000  
1000000

Distance: 22.9  
CL: Crack Lonsitudinal

Clock from: 12  
Clock to:  
Rating: 2  
S/M/L:  
Dimension1  
Dimension2  
%  
Remarks:



Distance: 31.5  
CL: Crack Longitudinal

Clock from: 10

Clock to:

Rating: 1

S/M/L:

Dimension1

Dimension2

✓

Remarks:

Distance: 31.5  
CL: Crack Longitudinal

Clock from: 5  
Clock to:  
Rating: 2  
S/M/L:  
Dimension1  
Dimension2  
:  
Remarks:

Distance: 32.5  
OBJ: Obstacle In Joint

Clock from: 5

Clock to: 7

Rating: 2

S/M/L:

Dimension1

Dimension2

% 5

Remarks: STICK IN JOINT



Distance: 33.9

33.9 M. e Longitudinal Rinse, 2

Clock from: 12

Clock to: 6

Rating: 4

S/M/L:

Dimension1

Dimension2

%

Remarks:



Distance: 33.9

JOM: Joint Offset Medium

Clock from:

Clock to:

Rating: 1

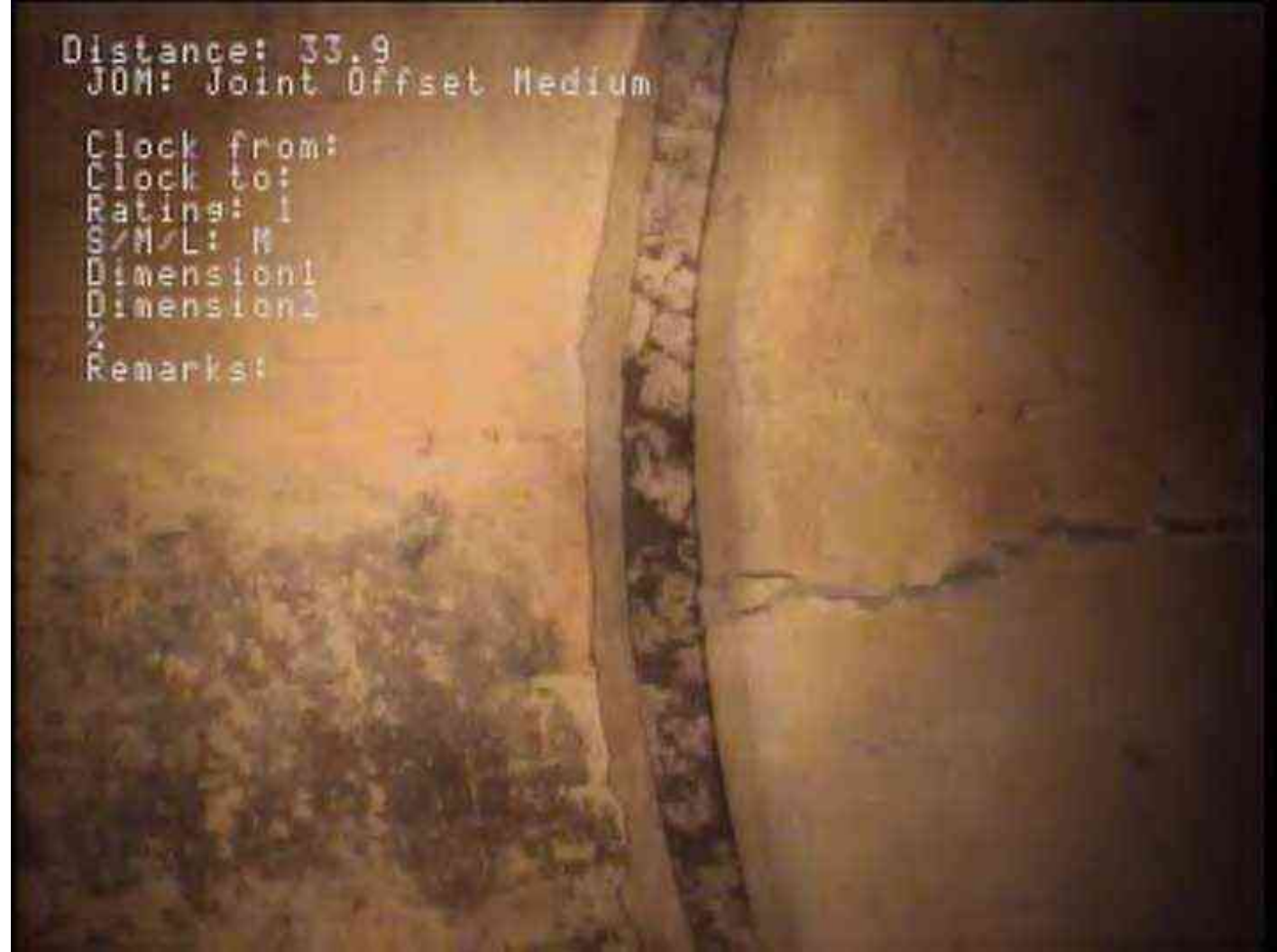
S/M/L: M

Dimension1

Dimension2

%

Remarks:



33.9 M.

MH START: 02455WEST

MH STOP: 02002WEST

Distance: 44.9

SCP: Surface Corrosion Metal Pipe

Clock from: 1

Clock to: 2

Rating: 3

S/M/L:

Dimension1

Dimension2

%

Remarks:



Distance: 46.9

D: Deformed ...

Clock from:

Clock to:

Rating: 5

S/M/L:

Dimension1

Dimension2

% 30

Remarks: TOP OF PIPE IS PUSHED IN WHERE  
THIS LINE INTERSECT WITH THE EAST PIPE



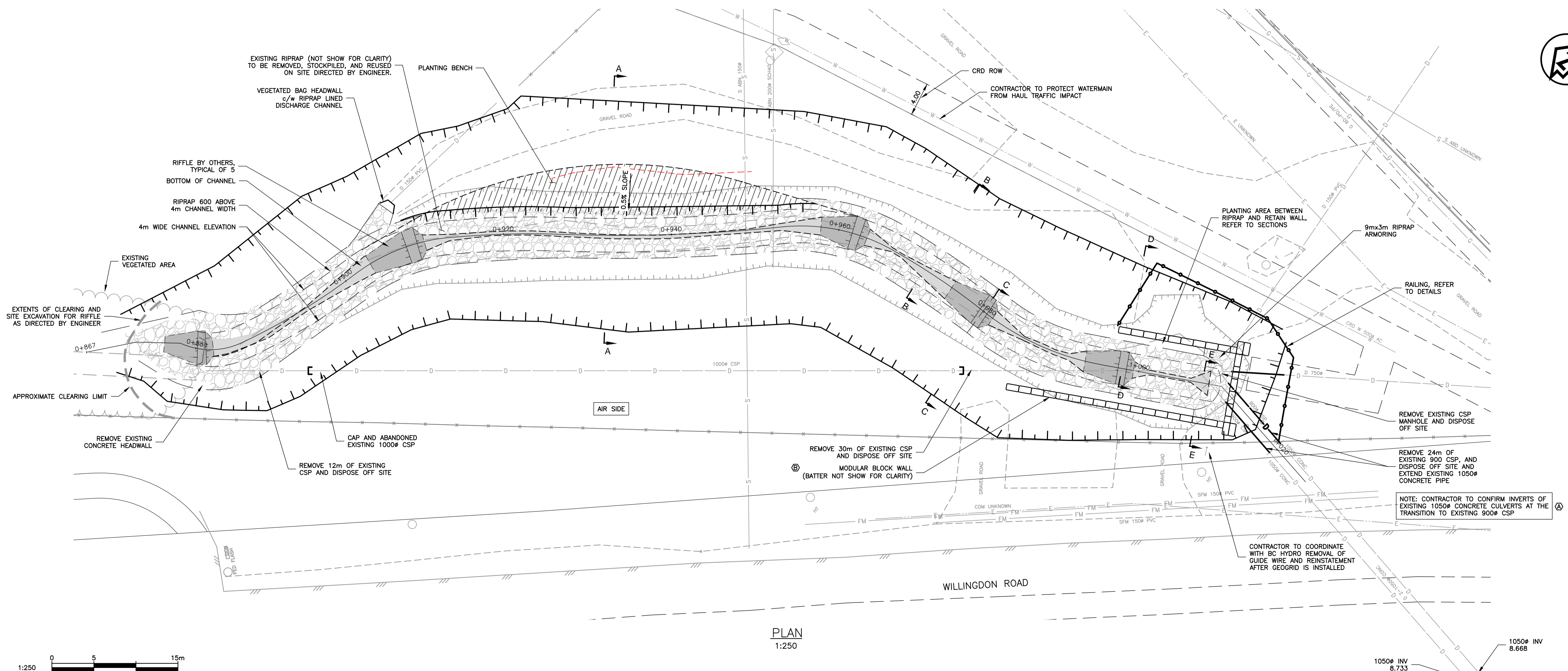
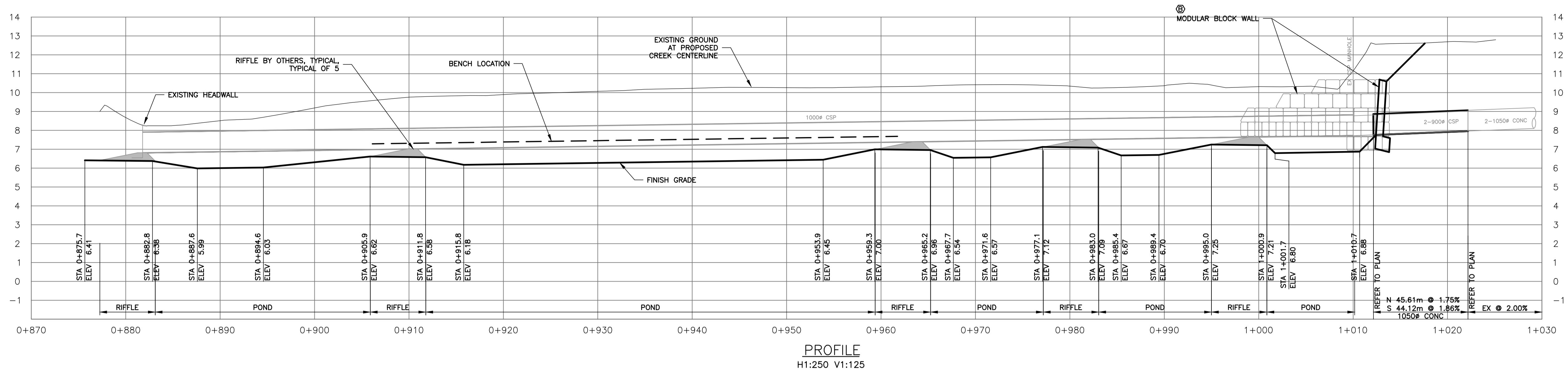


0.0 n.

NH START: 02455Z EST

NH STOP: 03009Z EST





| LEGEND     |                  |
|------------|------------------|
| DITCH      | BOTTOM BANK      |
| WATER      | TOP BANK         |
| DRAIN      | EDGE OF PAVEMENT |
| SEWER      | CURBS            |
| UTILITIES  | POLE             |
| TREE       | SILT TRAP        |
| MANHOLE    | CLEANOUT         |
| CATCHBASIN | CAP              |
| VALVE      | FLUSH VALVE      |
| HYDRANT    | SIGN             |

| No. | DATE        | ISSUE                   |
|-----|-------------|-------------------------|
| 3   | 17 APR 2019 | AS CONSTRUCTED          |
| 2   | 17 AUG 2017 | ISSUED FOR CONSTRUCTION |
| 1   | 26 JUL 2017 | ISSUED FOR TENDER       |

| No. | REVISION DESCRIPTION         |
|-----|------------------------------|
| Ⓢ   | AS CONSTRUCTED               |
| Ⓜ   | MODULAR BLOCK RETAINING WALL |
| Ⓐ   | REVISION A                   |

| DESIGN   | MH          |
|----------|-------------|
| DRAWN    | PB          |
| CHECKED  | JW          |
| APPROVED | MH          |
| DATE     | AUGUST 2017 |
| SCALE    | 1:250       |
| DATE     | 17 APR 2019 |
| DATE     | 3 OCT 2017  |
| DATE     | 17 AUG 2017 |
| BY       | JW          |

**PARSONS**  
DATE 101-3786 CAREY ROAD, VICTORIA, BC V8C 6T8  
TEL (250) 477-2206 FAX (250) 477-2207

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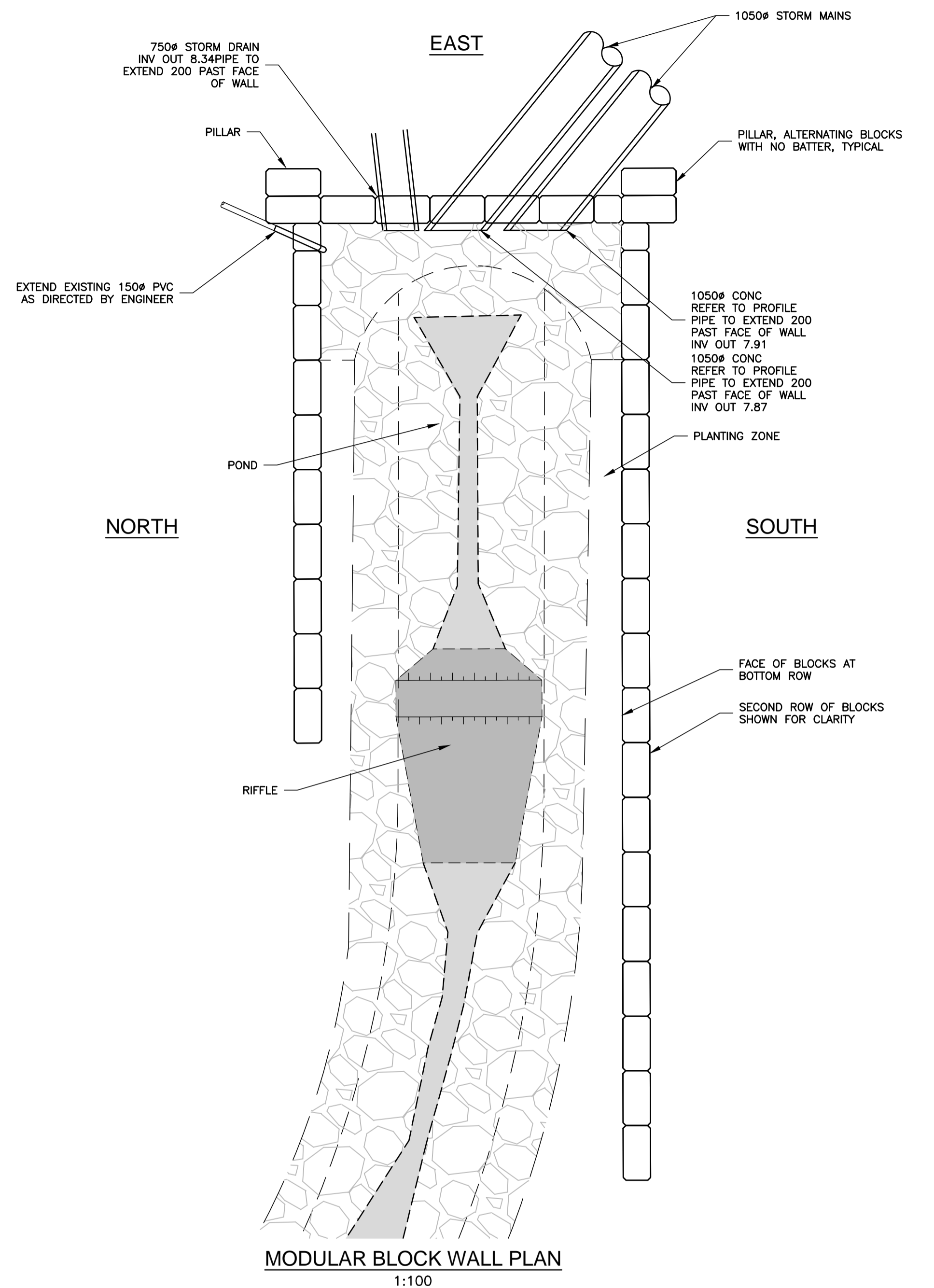
VICTORIA AIRPORT AUTHORITY  
MUNICIPAL INFRASTRUCTURE 2017  
WILLINGDON ROAD STORMWATER INFRASTRUCTURE IMPROVEMENTS

**PLAN AND PROFILE**

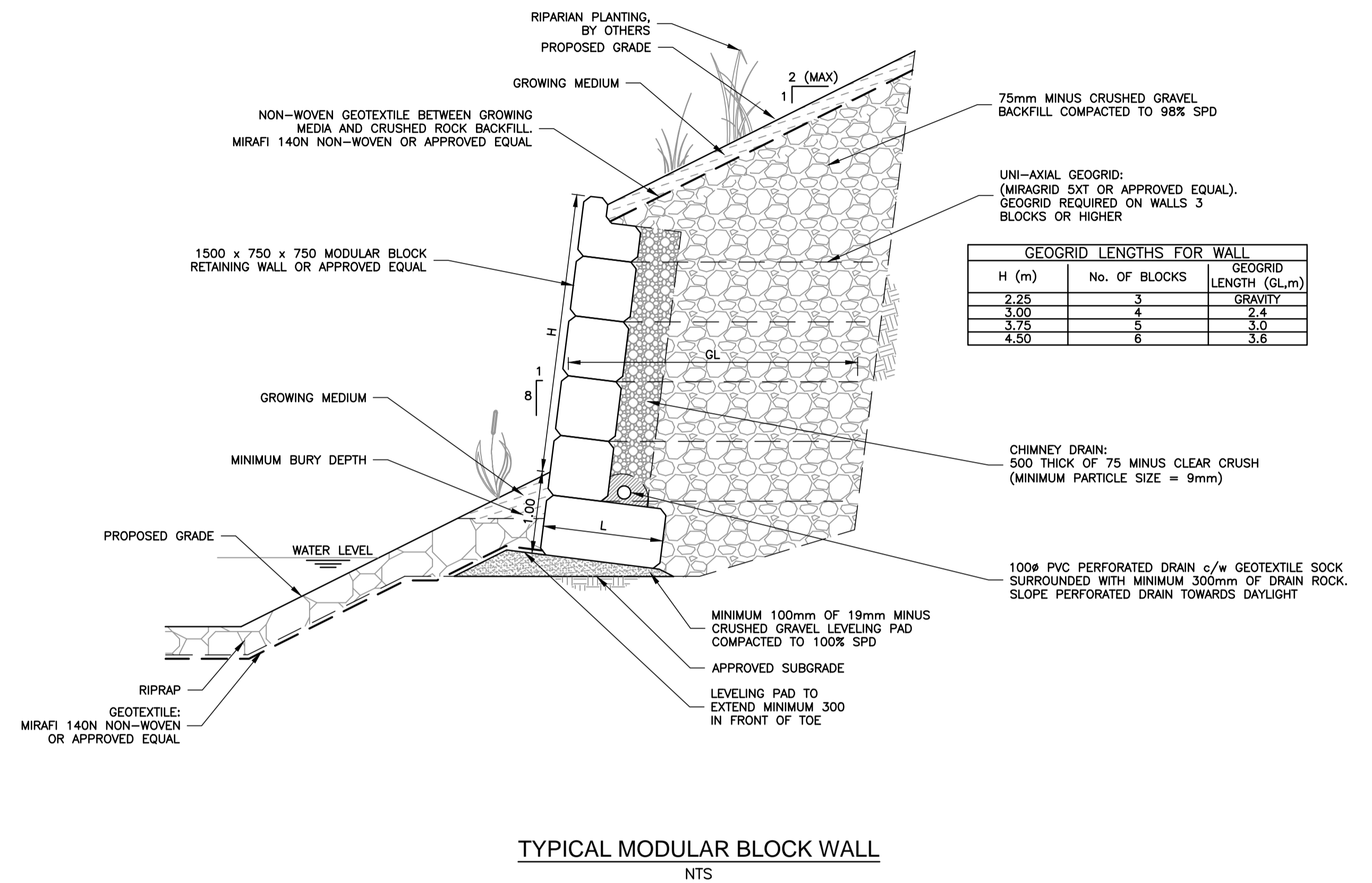
| SHEET No.    | 2        |
|--------------|----------|
| SHEET 2 OF 4 | REV. Ⓢ   |
| DRAWING No.  | 476340-2 |

PARSONS VICTORIA P:\476340 - VAA - STORMWATER UPGRADES\DWGS\476340\_TENTEN\_DRAINAGE\_AS\_CONSTI.DWG 23 Jul 2019 3:39PM

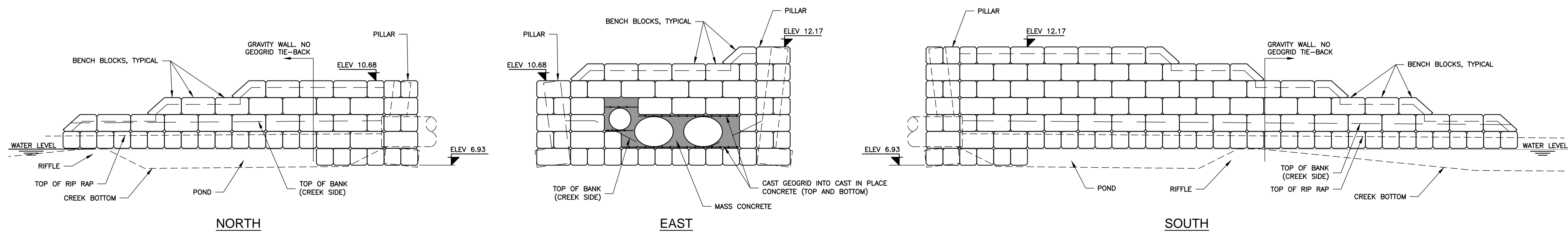
PARSONS VICTORIA P:\476340 - VAA - STORMWATER UPGRADES\DWGS\476340\_TENTEN\_DRAINAGE\_AS\_CONSTI.DWG 23 Jul 2019 - 3:35PM



**MODULAR BLOCK WALL PLAN**  
1:100



**TYPICAL MODULAR BLOCK WALL**  
NTS



**MODULAR BLOCK WALL PROFILES**  
1:100



VICTORIA AIRPORT AUTHORITY

| No. | DATE        | ISSUE                   |
|-----|-------------|-------------------------|
| 3   | 17 APR 2019 | AS CONSTRUCTED          |
| 2   | 17 AUG 2017 | ISSUED FOR CONSTRUCTION |
| 1   | 26 JUL 2017 | ISSUED FOR TENDER       |

AS CONSTRUCTED  
MODULAR BLOCK RETAINING WALL

17 APR 2019  
3 OCT 2017

PB  
JW

|          |             |
|----------|-------------|
| DESIGN   | MH          |
| DRAWN    | PB          |
| CHECKED  |             |
| APPROVED |             |
| DATE     | AUGUST 2017 |
| SCALE    |             |



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VICTORIA AIRPORT AUTHORITY  
MUNICIPAL INFRASTRUCTURE 2017  
WILLINGDON ROAD STORMWATER INFRASTRUCTURE IMPROVEMENTS

**MODULAR BLOCK RETAINING WALL**

SHEET No.

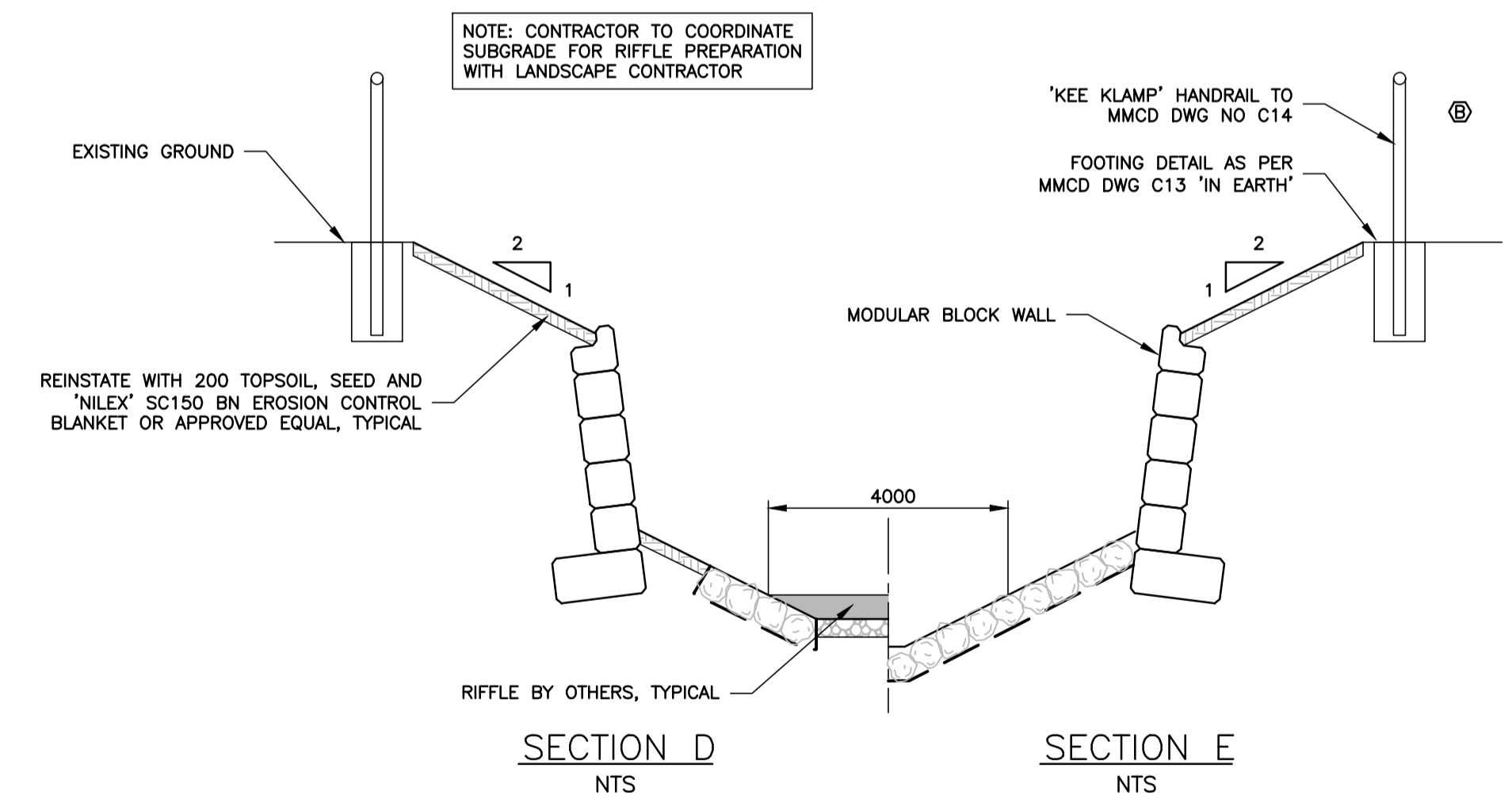
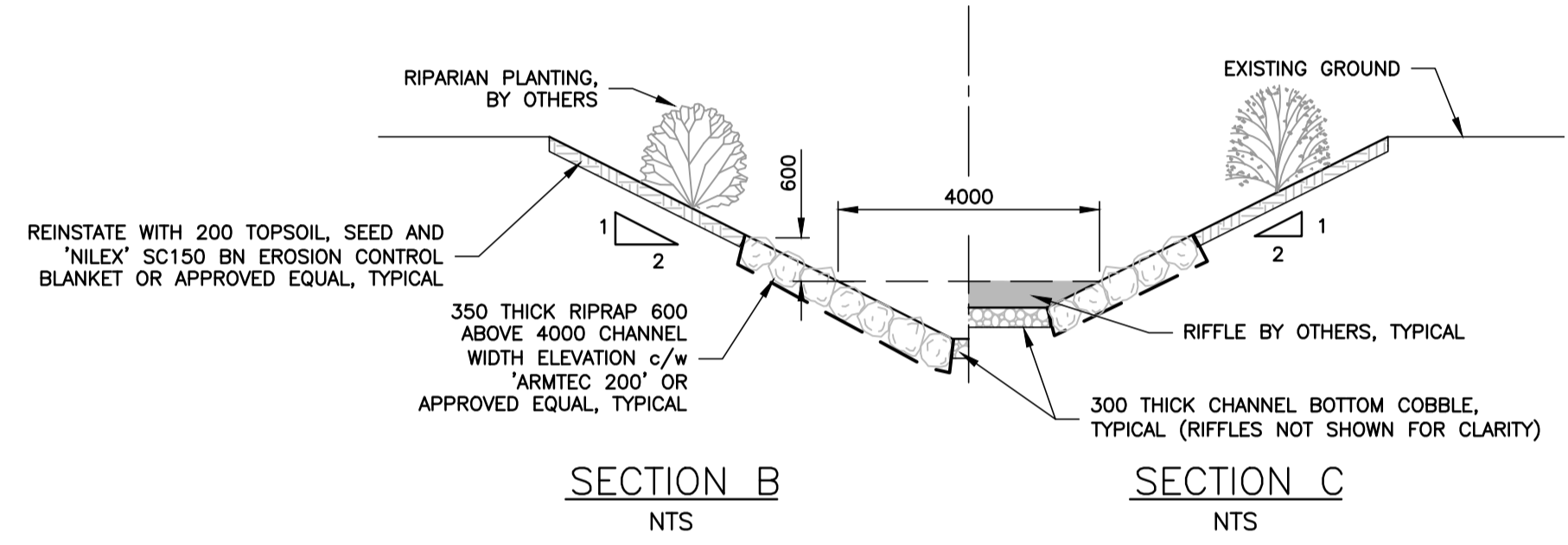
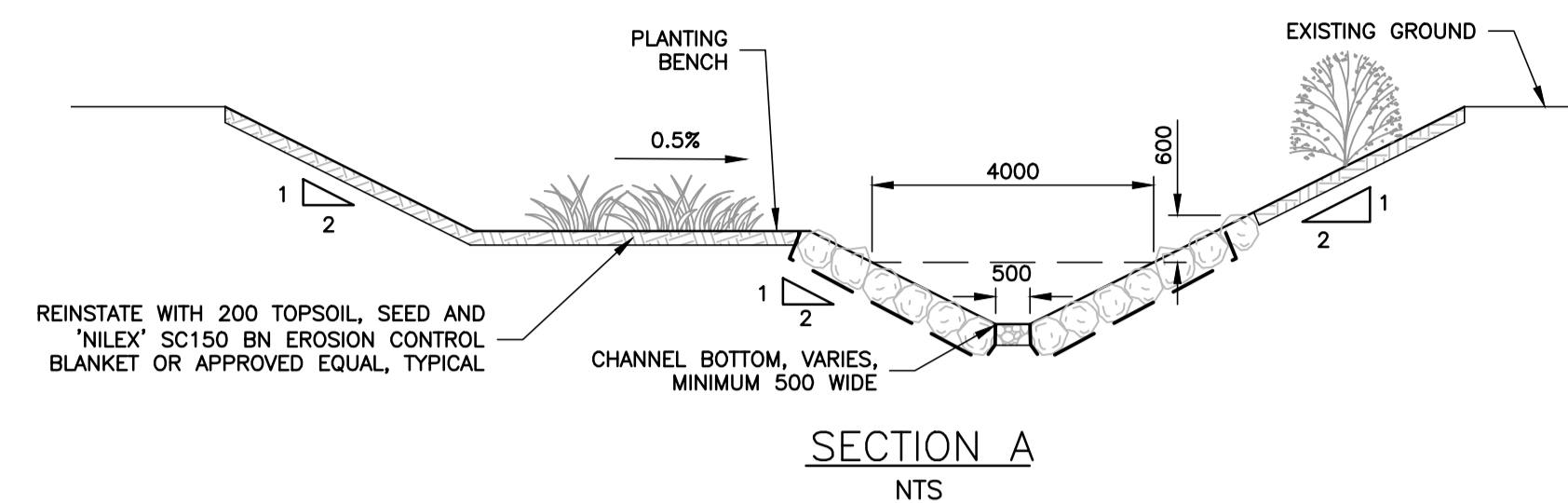
**3**

SHEET 3 OF 4 REV. A

DRAWING No.

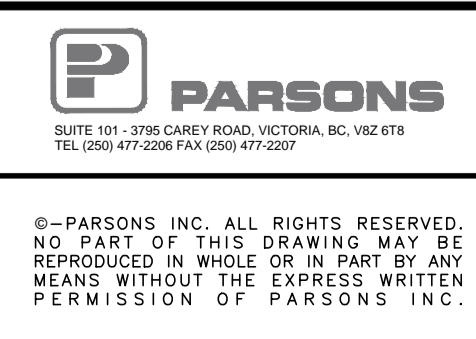
476340-3

PARSONS VICTORIA P:\476340 - VAA - STORMWATER UPGRADES\DWGS\476340\_TENTEN\_DRAINAGE\_AS\_CONSTI.DWG 23 Jul 2019 - 3:35PM



| No. | DATE        | ISSUE                   | No. | REVISION DESCRIPTION         | DATE        | BY |
|-----|-------------|-------------------------|-----|------------------------------|-------------|----|
| 3   | 17 APR 2019 | AS CONSTRUCTED          | ⊙   | AS CONSTRUCTED               | 17 APR 2019 | PB |
| 2   | 17 AUG 2017 | ISSUED FOR CONSTRUCTION | ⊙   | MODULAR BLOCK RETAINING WALL | 3 OCT 2017  | JW |
| 1   | 26 JUL 2017 | ISSUED FOR TENDER       | ⊙   | REVISION A                   | 17 AUG 2017 | JW |

|          |             |
|----------|-------------|
| DESIGN   | MH          |
| DRAWN    | PB          |
| CHECKED  | JW          |
| APPROVED | MH          |
| DATE     | AUGUST 2017 |
| SCALE    | AS NOTED    |



VICTORIA AIRPORT AUTHORITY  
 MUNICIPAL INFRASTRUCTURE 2017  
 WILLINGDON ROAD STORMWATER INFRASTRUCTURE IMPROVEMENTS

**SECTIONS AND DETAILS**

|              |          |  |
|--------------|----------|--|
| SHEET No.    | <b>4</b> |  |
| SHEET 4 OF 4 | REV. Ⓢ   |  |
| DRAWING No.  | 476340-4 |  |

CUES, Inc.  
 3600 Rio Vista Avenue  
 Orlando, FL 32805  
 Phone: 407-849-0190  
 Fax: 407-425-1569



## PACP Sewer Report

Operator: Grace Darling Certificate number: U-614-06018249 System Owner: Victoria Airport Authority Survey Customer: Victoria Airport Authority Drainage Area: \_\_\_\_\_ Sheet No. \_\_\_\_\_

Work order no.: \_\_\_\_\_ Mainline ID: D2455X Start date/time: 2016/10/11 14:42 Address: Willingdon Rd City: North Saanich

Further Location Details: \_\_\_\_\_ Upstream node: D2455 Depth: \_\_\_\_\_ Grade to Invert: \_\_\_\_\_ Rim to Grade: \_\_\_\_\_

Downstream node: D2002 Depth: \_\_\_\_\_ Grade to Invert: \_\_\_\_\_ Rim to Grade: \_\_\_\_\_ Use of Sewer: SW Direction: D Flow Control: N Pipe height: 1,000

Pipe width: \_\_\_\_\_ Pipe shape: C Pipe type: RCP Ln. Method: \_\_\_\_\_ Joint distance: \_\_\_\_\_ Asset length: 49.2 Surveyed footage: 47.2 Year laid: \_\_\_\_\_ Year Rehabilitated: \_\_\_\_\_ Tape/Media: VAA

Reason: A Sewer Category: \_\_\_\_\_ Pre-Cleaning: N Cleaned: \_\_\_\_\_ Weather: 1 Surface: \_\_\_\_\_ Comments: \_\_\_\_\_

**Starting access point:** Label for XCOORD: \_\_\_\_\_ Label for YCOORD: \_\_\_\_\_ Label for ZCOORD: \_\_\_\_\_ Label for COORDINATE\_SYSTEM: \_\_\_\_\_ Label for GPS\_ACCURACY: \_\_\_\_\_

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous Defect<br>S/M/L | Value |     | Joint | Circumferential<br>Location  | Image Ref. | Remarks         |
|-----------------------------|------------|----------------------|-----------------------|----------------------------|-------|-----|-------|--|------------|-----------------|
|                             |            |                      |                       |                            | 1st   | 2nd |       |  |            |                 |
| 0.0                         | 2          | AE<br>P              |                       |                            |       |     |       |  |            | INLET D2455EAST |
| 0.0                         | 21         | M<br>W<br>L          |                       |                            |       | 5   |       |  |            | 1-5%            |
| 1.0                         | 106        | M<br>W<br>LS         |                       |                            |       | 5   |       |  |            |                 |
| 6.9                         | 247        | IS                   |                       |                            |       |     | 4 5   | Willingdon Rd-SD-Oct2016-D2455E AST-D2002E AST IS at 6.9 m (D).jpg |            |                 |
| 8.0                         | 292        | M<br>W<br>L          |                       |                            |       | 5   |       |  |            | 1-5%            |

Operator: Grace Darling System Owner: Victoria Airport Authority Start date/time: 2016/10/11 Upstream node: D2455 Mainline ID: D2455X Sheet No.         

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value |     | %      | Joint | Circumferential<br>Location |    | Image Ref.  | Remarks                                 |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|-------|-----|--------|-------|-----------------------------|----|---|---|
|                             |            |                      |                       |                      |       | 1st   | 2nd |        |       | At/From                     | to |   |   |
| 8.0                         | 317        | IS                   |                       |                      |       |       |     |        |       | 5                           | 7  |   |   |
| 13.0                        | 536        | CL                   |                       |                      |       |       |     |        |       | 12                          |    | Willingdon Rd-SD-Oct2 016-D2455E AST-D2002E AST CL at 14.9 m (D).jpg  |   |
| 13.2                        | 406        | C<br>H2              |                       |                      |       |       |     |        |       | 12                          | 6  | Willingdon Rd-SD-Oct2 016-D2455E AST-D2002E AST CL at 13.2 m (D).jpg  |   |
| 14.9                        | 503        | C<br>H2              |                       |                      |       |       |     |        |       | 12                          | 6  |   |   |
| 15.7                        | 578        | CL                   |                       |                      |       |       |     |        |       | 12                          |    |   |   |
| 15.7                        | 620        | IS                   |                       |                      |       |       |     |        |       | 5                           | 7  |   |   |
| 35.0                        | 901        | JO<br>M              |                       |                      |       |       |     |        |       |                             |    | Willingdon Rd-SD-Oct2 016-D2455E AST-D2002E AST JOM at 35.0 m (D).jpg | OFFSET JOINT MIGHT BE FEEDING WEST LINE |
| 36.1                        | 964        | M<br>M<br>C          |                       |                      |       |       |     |        |       |                             |    |   | TO CMP                                  |
| 36.1                        | 977        | SC<br>P              |                       |                      |       |       |     |        |       | 5                           | 7  |   |   |
| 46.5                        | 1113       | O<br>BZ              |                       |                      |       |       |     | 1<br>0 |       | 5                           | 7  |   | SAND BAGS IN PIPE AT MH                 |
| 47.2                        | 1202       | SC<br>P              |                       |                      |       |       |     |        |       | 5                           | 7  |   |   |

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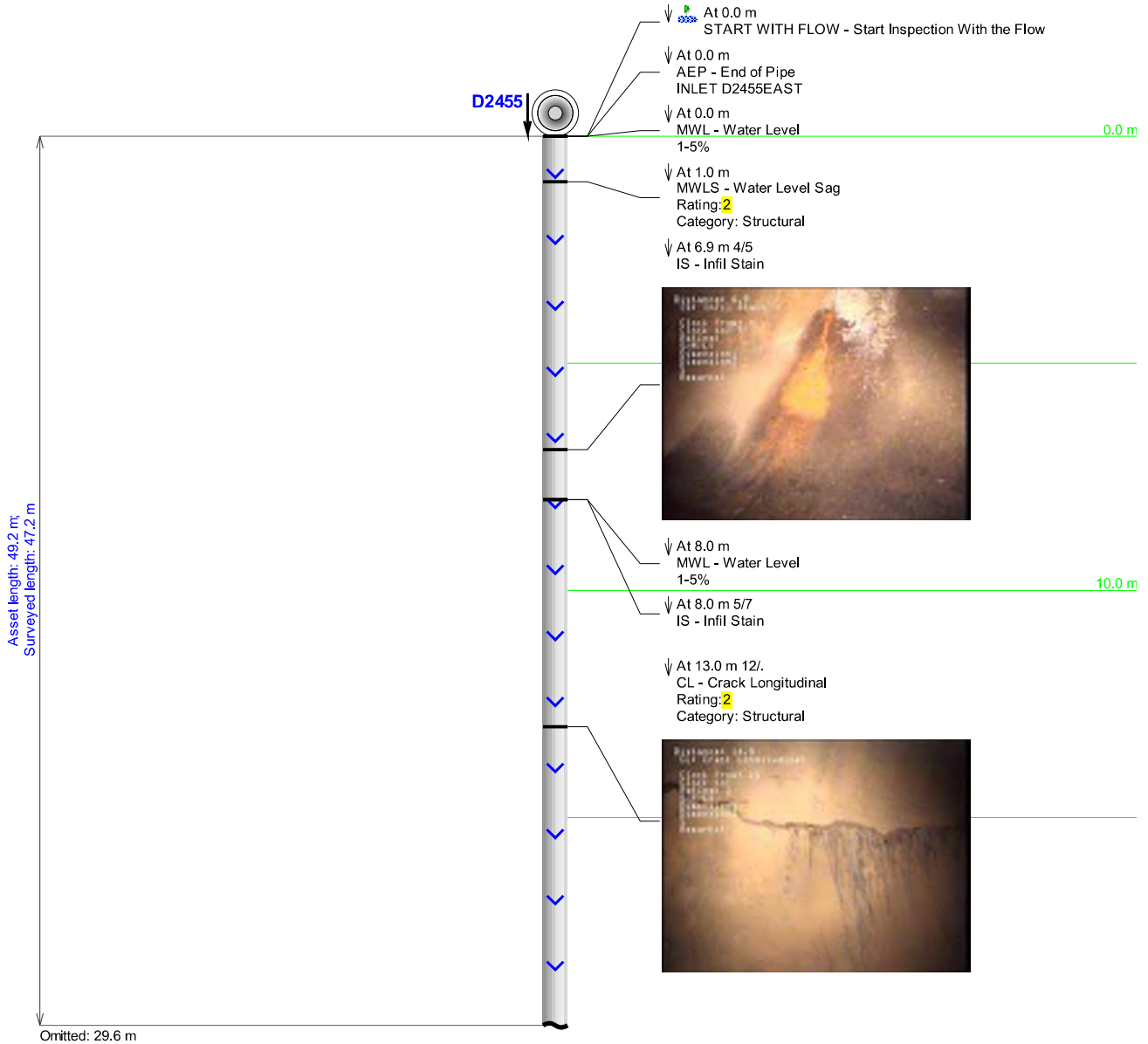


Operator: Grace Darling      System Owner: Victoria Airport Authority  
 Start date/time: 2016/10/11      Upstream node: D2455  
 Mainline ID: D2455X      Sheet No.           

| Distance (Feet)<br>(Meters) | Video Ref. | Group/<br>Descriptor | Modifier/<br>Severity | Continuous<br>Defect | S/M/L | Value<br>Inches (mm) |     | % | Joint | Circumferential<br>Location |    | Image Ref. | Remarks  |
|-----------------------------|------------|----------------------|-----------------------|----------------------|-------|----------------------|-----|---|-------|-----------------------------|----|------------|----------|
|                             |            |                      |                       |                      |       | 1st                  | 2nd |   |       | At/From                     | to |            |          |
| 47.2                        | 1215       | A<br>M<br>H          |                       |                      |       |                      |     |   |       |                             |    |            | AT D2002 |

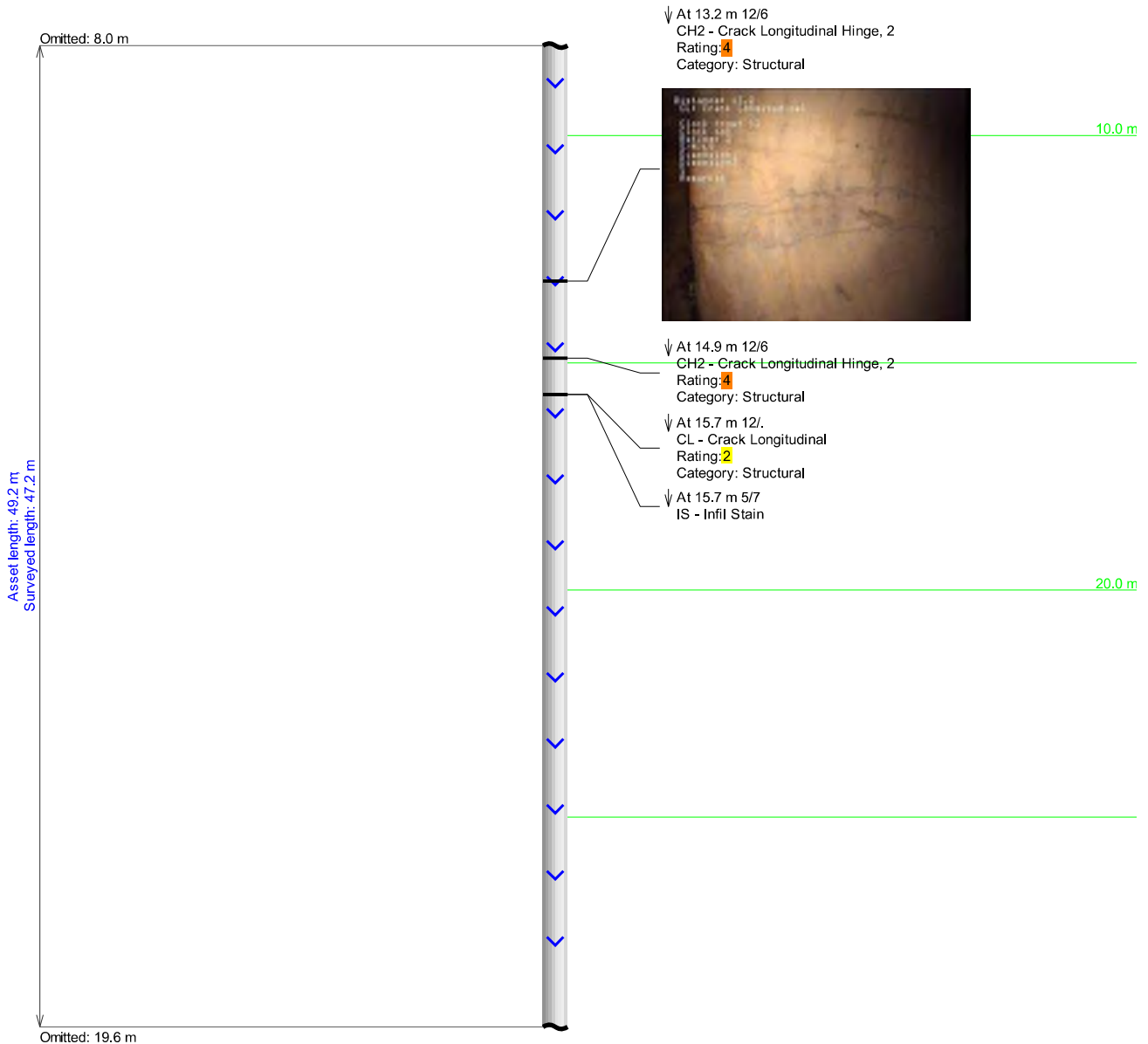
## Main Inspection with Pipe-Run Graph and Images

|  |  |                                  |                              |                                   |                               |                                  |                      |
|--|--|----------------------------------|------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |  | Mainline ID:<br><b>D2455X</b>    |                              | City:<br><b>North Saanich</b>     |                               | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            |  | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b> | Pipe type:<br><b>RCP</b>          | Surface condition:<br><b></b> |                                  | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  |  | Surveyed footage:<br><b>47.2</b> |                              | Operator:<br><b>Grace Darling</b> |                               | Comments<br><b></b>              |                      |

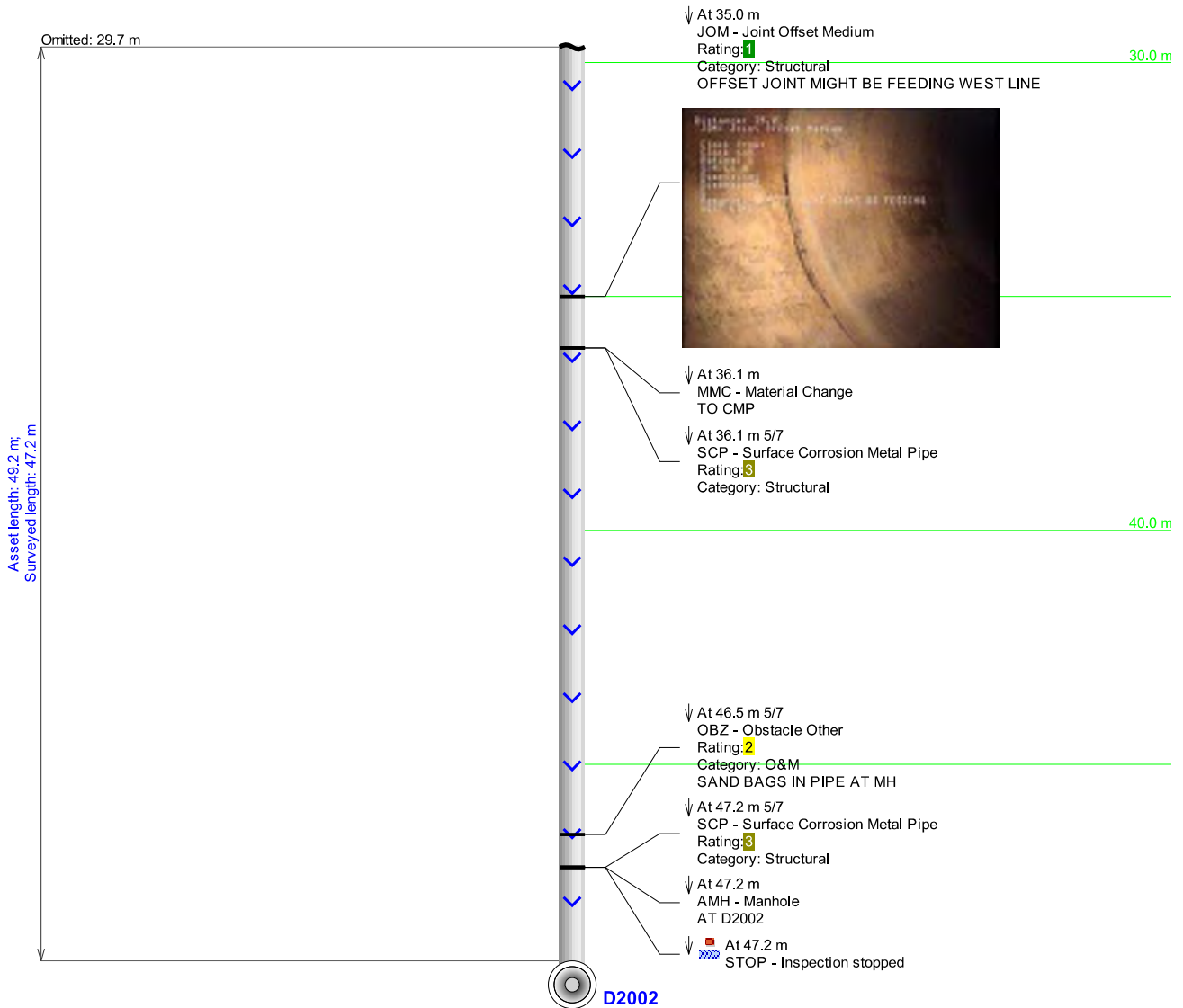




|  |                                  |                                   |                               |                                  |                      |
|--|----------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |                                  | Mainline ID:<br><b>D2455X</b>     | City:<br><b>North Saanich</b> | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b>    | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  | Surveyed footage:<br><b>47.2</b> | Operator:<br><b>Grace Darling</b> |                               | Comments:<br><b></b>             |                      |



|  |                                  |                                   |                               |                                  |                      |
|--|----------------------------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|
| Project Name:<br><b>Willingdon Rd-SD-Oct2016</b> |                                  | Mainline ID:<br><b>D2455X</b>     | City:<br><b>North Saanich</b> | Address:<br><b>Willingdon Rd</b> |                      |
| Start date/time:<br><b>11/10/2016</b>            | Pipe width:<br><b></b>           | Pipe height:<br><b>1,000</b>      | Pipe type:<br><b>RCP</b>      | Surface condition:<br><b></b>    | Weather:<br><b>1</b> |
| Direction:<br><b>Downstream</b>                  | Surveyed footage:<br><b>47.2</b> | Operator:<br><b>Grace Darling</b> |                               | Comments:<br><b></b>             |                      |



Distance: 6.9  
IS: Infil Stain

Clock from: 4  
Clock to: 5  
Rating:  
S/M/L:  
Dimension1  
Dimension2  
%  
Remarks:

Distance: 14.9  
CL: Crack Longitudinal

Clock from: 12

Clock to:

Rating: 2

S/M/L:

Dimension1

Dimension2

..

Remarks:



Distance: 13.2  
CL: Crack Longitudinal

Clock from: 12  
Clock to:  
Rating: 2  
S/M/L:  
Dimension1  
Dimension2  
%  
Remarks:

Distance: 35.0

JOM: Joint Offset Medium

Clock from:

Clock to:

Rating: 1

S/M/L: M

Dimension1

Dimension2

%

Remarks: OFFSET JOINT MIGHT BE FEEDING

WEST LINE

D.O.N.

IN START: 02455EAST

IN STOP: 02000EAST

