



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

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

BETWEEN:

The Minister of Transportation and Transit

Sechelt Area Office
5710 Teredo
Sechelt, British Columbia V0N 3A3
Canada

(“The Minister”)

AND:

Sunshine Coast Regional District
1975 Field Road
Sechelt, British Columbia V0N 3A1
Canada

(“The Permittee”)

WHEREAS:

- A. The Minister has the authority to grant permits for the auxiliary use of highway right of way, which authority is pursuant to both the Transportation Act and the Industrial Roads Act, the Motor Vehicle Act, as defined in the Nisga'a Final Agreement and the Nisga'a Final Agreement Act;
B. The Permittee has requested the Minister to issue a permit pursuant to this authority for the following purpose:
The installation, operation, and maintenance of South Pender Watermain Replacement Project, within Francis Peninsula Road, Rondeview Road, and Rondeview Walk, as shown on drawing 723-9, sheets 1 to 11.
C. The Minister is prepared to issue a permit on certain terms and conditions;

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

- 1. That the construction and maintenance of the said works is carried out to the satisfaction of the Regional Executive Director.
2. That, before opening up any highway or interfering with any public work, intimation in writing of the intention to do so must be given to the District Official at least seven days before the work is begun.
3. That any person appointed by the Regional Executive Director for the purpose shall have free access to all parts of the works for the purpose of inspecting the same.
4. That the construction of the said works shall be commenced on or before March 13, 2025 and shall be prosecuted with due diligence and to the satisfaction of the Regional Executive Director and shall be completed on or before October 31, 2025.
5. (a) The highway must at all times be kept open to traffic. The roadway must be completely restored for traffic as soon as possible. At all times the permittee must safeguard the traveling public.
(b) That, unless with the consent of the Regional Executive Director no more than forty-five (45) metres of pipe-track or other excavation in any public highway is to be kept open at one time.



(c) All excavation work must be carried out in accordance with the BC Occupational Health and Safety Regulation. Care shall be taken to protect adjacent property.

(d) That all excavations shall be carefully back-filled with suitable material, which is to be tamped into place, and that the permittee shall restore the surface of the road and shoulders and ditches at their own expense. All surplus material is to be removed from the Provincial Crown lands or deposited where and as required by the District Official of the Ministry of Transportation and Transit. The permittee is financially responsible for any maintenance works required on said ditch for a period of one year. The Ministry will carry out the necessary remedial work and invoice the permittee monthly.

(e) The pipeline crossing installation is to be placed by drilling and (or) jacking in such a manner as to afford minimum grade settlement. No water jetting will be permitted. That where, in the opinion of the District Official, an excavation or opening for a pipeline crossing installation could be made which would not be detrimental to the highway or its users, permission will be granted for said works. On throughways, freeways, and main highways no open cuts will be allowed.

(f) That all pipelines in excess of a nominal diameter of 5 cm., whether gas, oil, water, pressure sewers, conduits, etc., shall be installed where indicated by the District Official, encased in a steel casing-pipe or conduit-pipe of sufficient strength to withstand all stresses and strains resulting from the location, such casing to extend the full width of the highway right-of-way if deemed necessary to the District Official. The ends of the casing-pipe shall be suitably sealed and, if required, properly vented above the ground with vent-pipes not less than 5 cm. in diameter and extending not less than 1.2 metres above ground surface. Vent-pipes shall be connected 30 cm. from the ends of the casing-pipe, and the top of each vent shall be fitted with a turn-down elbow, properly screened and equipped with identification markers.

All pipelines of non-rigid material, i.e., plastic or copper, of any diameter, shall be cased, or embedded in sand.

The inside diameter of the casing-pipe shall be at least 25 percent larger than the outside diameter of the pipeline. The casing-pipe shall be installed with an even bearing throughout its length, and in such a manner so as to prevent leakage, except through the vents.

The top of the casing-pipe, or the pipeline where casing is not required, shall be located as directed by the District Official, and shall in no case be less than 1.2 metres below the surface of the highway and not less than 1.0 metres below the highway ditches. Pipelines must not obstruct drainage structures or ditches or interfere with traffic on the highway or with highway maintenance.

6. That where the work for which permission is hereby granted comes in contact with any bridge, culvert, ditch, or other existing work, such existing work must be properly maintained and supported in such manner as not to interfere with its proper function during the construction of the new work, and on the completion of the new work the bridge, culvert, ditch, or other existing work interfered with shall be completely restored to its original good condition.
7. That when necessary, all excavations, materials, or other obstructions are to be efficiently fenced, lit, and watched, and at all times every possible precaution is to be taken to ensure the safety of the public.
8. The Permittee shall indemnify and save harmless the Ministry, its agents and employees, from and against all claims, liabilities, demands, losses, damages, costs and expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Ministry, its agents and employees, or any of them at any time or times, whether before or after the expiration or termination of this permit, where the same or any of them are based upon or arise out of or from anything done or omitted to be done by the Permittee, its employees, agents or Subcontractors, in connection with the permit.
9. That the permission herein granted to use and maintain the works is only granted for such times as the land or public work in, upon, or over which the said works are constructed is under the jurisdiction of the Minister of Transportation and Transit. This permission is not to be construed as being granted for all time and shall not be deemed to vest in the permittee any right, title or interest whatsoever in or to the lands upon which the works are constructed. Should the lands affected at any time be included within that of an incorporated municipality or city, this permission shall become void, unless the works are on a highway duly classified as an arterial highway pursuant to Section 45 of the Transportation Act.
10. That after receiving notice in writing of the intention on the part of the Provincial Government to construct, extend, alter, or improve any public work, the person or persons responsible for the maintenance of the works for which permission is hereby granted shall within six weeks move or alter such work at their own expense to such new positions or in such manner as may be necessitated by the construction, extension, alteration, or improvement proposed to be carried out by the Provincial Government.
11. That while reasonable care will be taken on the part of the Provincial Government to do as little damage as possible to any private work in the carrying-out of the construction, extension, alterations, improvement, repair, or maintenance of any public work adjacent thereto, the Provincial Government can accept no responsibility for any kind of such damage.
12. That the permission hereby granted to construct, use, and maintain work is granted without prejudice to the provisions of the Transportation Act, or other Acts governing Crown lands and public works or their use by the public.



13. That this permission shall be in force only during such time as the said works are operated and maintained by the applicants, to the entire satisfaction of the Regional Executive Director.
14. That the Ministry will not be responsible for grade changes on accesses caused by reconstruction of any Provincial highway.
15. This permit is valid only for the specific works stated herein. Any alterations or additions must be covered by a separate permit.
16. This permit may be canceled, at the discretion of the Minister, without recourse, should the permittee fail to comply with all the terms of the permit. Thirty days' notice will be given before cancellation.
17. When the requirements of the Ministry necessitate use of the said lands for Provincial purposes, at the discretion of the Minister, this permit may be canceled.
18. That these works shall be identified with this permit number in a manner satisfactory to the District Official of the Ministry of Transportation and Transit.
19. As a condition of this permit, the permittee unconditionally agrees with the Ministry of Transportation and Transit that the permittee is the prime contractor or will appoint a qualified prime contractor, as described in Section 24 of the Workers Compensation Act, for the purposes of the work described by this permit, at the work location described in this permit, and that the permittee or designated prime contractor will observe and perform all of the duties and obligations which fall to be discharged by the prime contractor pursuant to the Workers Compensation Act and the Occupational Health and Safety Regulation.
20. The permittee is advised and acknowledges that the following hazards may be present at the work location and need to be considered in coordinating site safety: overhead hazards, particularly electrical or telecommunications lines; buried utilities, particularly electrical, telecommunication, and gas lines; traffic, danger trees, falling rocks, and sharp or infectious litter.
21. Any works within the Ministry right-of-way that fall within the scope of "practice of professional engineering" or "practice of professional geoscience" under the Professional Governance Act and the Engineers and Geoscientists Regulation will be performed by a Professional and shall comply with this Ministry's "Professional Assurance Guidelines". The Guidelines can be viewed on the Ministry's website at <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2023/t01-23.pdf>
22. The permittee is responsible for preventing the introduction and spread of noxious weeds on the highway right-of-way as defined by the British Columbia Weed Control Act and Weed Control Regulation.
23. GENERAL
24. **Provincial records indicate that the works associated with this application may encounter archaeological sites protected under the Heritage Conservation Act.**

In accordance with Sections 000.03 Non-Ministry Developments on Ministry Land or That are Intended to Become Ministry Assets and 165.20 Archaeological and Paleontological Discoveries of the Design Build Standard Specification for Highway Construction - In the event that any item of archaeological, heritage, historical, cultural or scientific interest is found on the project site, the following Chance Find Procedure shall apply:

Such item(s) shall remain the property of the Province and the Permittee shall, on making or being advised of such a find, immediately cease operations in the affected area, minimize activities which create ground disturbance in and adjacent to the affected area, and notify the District Official and the Archaeology Branch of the British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development [Ministry of Forests]. Work shall not resume within 30 m of the discovery site until an appropriate directive has been received from that agency.

To protect archaeological and paleontological sites that are situated within or adjacent to a project site, the Permittee may be required to use a variety of mitigative measures, including but not limited to drainage or erosion control, slope stabilization measures, or erecting fences or other suitable barriers to protect archaeological or paleontological sites that are situated within or adjacent to a project site. These measures, with any negotiated extensions of time for completion of the Works they require, will be determined and adopted at the discretion of the District Official. The costs associated with such mitigative measures will be borne by the Permittee.

A buffer zone, in which no land alteration or other activity is permitted, may be required to ensure adequate site protection. The width of this buffer zone shall be determined by the District Official in consultation with a representative of the Archaeology Branch of the British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development [Ministry of Forests]. The Permittee shall be responsible for the actions of employees and subcontractors with respect to site vandalism and the unlicensed collection of artifacts from Designated archaeological sites in and around the work location.

The Permittee shall ensure that all workers and Subcontractors are fully aware of these requirements and processes.



25. A copy of the permit is to be kept by the field supervisor(s), in order that they are aware of all permit conditions.
26. At the applicant's expense, the Ministry reserves the right to appoint an Inspector, as deemed advisable by the Operations Manager, and said Inspector's costs shall be chargeable to the applicant.
27. If, in the opinion of the District Operations Manager, measures should be taken to ensure compliance with the permit, the District Operations Manager may immediately arrange for such measures and charge all costs whether labour and/or materials, to the applicant.
28. Removal - The Minister may order the removal or alteration of utility installations, if necessary, for the protection of the highway or highway users.

If the utility owner does not respond to an order to remove or alter a utility installation, the Minister may carry out that work and recover costs from the utility.
29. Protection of Roads - The Permittee shall ensure all equipment working on or hauling material on to and from the Site does not damage or deposit material onto any part of an existing roadway. Materials spilled onto the public roadways or driveways opened to public traffic shall be cleaned up immediately. The Permittee has full responsibility to repair any damage to existing highways, local roads and driveways caused by its construction equipment and/or operations.
30. Care must be taken where heavy rubber-tired units are turning to the travelled portion of the pavement not to cause scarring to the pavement. No track equipment permitted on pavement.
31. The Permittee is responsible for ensuring that all works are contained to the highway right of way. Any works located within private property must have the owner's permission.
32. It shall be the responsibility of the applicant to ascertain the location of all existing works on Crown land and to take all necessary precautions for their original condition of usefulness on completion of the project, having particularly in mind utilities, including underground and property entrances.
33. Protection of Survey Monuments

The Permittee shall be responsible for the preservation during construction of all geodetic benchmarks, survey monuments and property markers on the right-of-way. The Permittee shall use, at no expense to the Ministry, a British Columbia Land Surveyor to replace any survey monuments destroyed or damaged as a result of the Permittee's negligence. At locations where construction work will cover or destroy such markers, the Permittee shall not move or remove them until written direction is received from the Ministry Representative.
34. Service connections may be used at the time of construction, but these must be referred to the Operations Manager before the work commences.
35. SAFETY
36. All open cuts in the travelled portion, driveways, or sidewalks of the road are to be steel-plated and warning signs erected.
37. No excavated materials will be stockpiled on the travelled portion of the pavement at any time.
38. The work shall not commence during a period of poor visibility, i.e., fog/heavy rain/snow.
39. INVASIVE PLANT MANAGEMENT
40. The permittee is responsible for preventing the introduction and spread of noxious weeds on the highway right-of-way as defined by the British Columbia Weed Control Act and Weed Control Regulation.
41. Revegetation Seeding - Sites are to be reseeded to standards set out in Section 757, Standard Specifications for Highway Construction.
42. BONDING & INSURANCE
43. The Permittee shall obtain and maintain Commercial General Liability insurance including non-owned automobile and contractual liability insurance in an amount of not less than \$2,000,000.00. The insurance shall comply with all terms and conditions of the Ministry Certificate of Insurance (H0111) and evidence of such insurance shall be given by way of a duly completed H0111. All insurance coverage shall be issued with insurers acceptable to the Ministry and issued by companies licensed to transact business in the Province of British Columbia and Canada.
44. TRAFFIC MANAGEMENT
45. The Permittee shall take all reasonable precautions to attempt to ensure the safety of the public in connection with the Use. In particular, but not so as to limit this obligation, the Permittee shall, if so required by the Designated Ministry Official on



reasonable grounds, prepare and implement a traffic control plan. The contents of the plan and the manner in which it is implemented must meet the reasonable satisfaction of the Designated Ministry Official.

46. Accommodation of Traffic - The Permittee shall, at their cost, supply, erect, and maintain standard traffic control devices in accordance with the Ministry of Transportation and Infrastructure Traffic Control Manual for Works on Roadways and WCB Regulation, Part 18.
47. Two-way traffic is to be maintained at all times.
48. Two-way traffic must be fully restored by 1200 pm (Noon) on the last weekday prior to a statutory long weekend.
49. DESIGN & PRE-CONSTRUCTION
50. Highest Standards Apply - Where the Ministry and a regulator both set a standard or requirement in a particular area, the highest or most stringent of the two will apply to any installation on highway right-of-way.
51. **A variance for depth of cover is acceptable only in locations where bedrock requires blasting in order to meet the required standard depths of cover as per the Utility Policy Manual. The depth of cover shall not be less than 1.0 metres at any location.**
52. The applicant shall be responsible for the repair of any damage to roads, culverts, ditches, drainage, or any other public works attributable to this work for a period of one year from completion of this project.
53. The Permittee is to inform Jeremy Waksel, MOTI Area Manager, at Jeremy.Waksel@gov.bc.ca of the projected commencement of the permitted Works by submitting a Work Notification/Lane Closure Form (H1080) at least ten (10) business days in advance.
54. The Permittee is to notify Capilano Highway Services at 1-800-665-3135 (24-hour number) at least 48 hours in advance of commencing work.
55. EXCAVATION
56. Pipe bedding must conform to industry standards.

Trenches must be backfilled with granular material that meets Ministry standards as set out in Section 202.02 (Table 202-C), 2009 Standard Specifications for Highway Construction and all subsequent interim revisions and updates, in accordance with the following minimum requirements:

 - (a) Sub-base material must meet or exceed specified requirements for Select Granular Sub-Base aggregates.
 - (b) Crushed Base Course depth is to match existing depth but must not be less than 300 mm compacted thickness and consist of "25 mm minus" WGB (or IGB) crushed aggregate.

Backfill must be placed in layers not exceeding 150 mm compacted thickness and shall be compacted with approved tamping equipment to a minimum of 95 percent Proctor density to within 300 mm of the surface and 100 percent for the final 300 mm.
57. No excavated materials will be stockpiled on the travelled portion of the pavement at any time.
58. **Asbestos Cement (AC) pipe that is abandoned in place must be drained and sealed with concrete.**
59. **If any abandoned Asbestos Cement (AC) pipe is exposed during excavation, the Permittee shall make a reasonable effort to remove the abandoned pipe and dispose of it in an appropriate manner.**
60. **The Permittee shall be responsible for the safe removal and disposal of Asbestos Cement (AC) pipe if encountered during any future excavations permitted by the Ministry.**
61. PAVEMENT & SURFACE RESTORATION
62. Temporary Patching - As soon as any portion of the highway can be re-opened to traffic, a temporary asphalt patch must be applied.
63. Permanent Patching - Pavement edges must be cut, made true and straight, cleaned, and primed before installing a final patch.

Asphalt concrete must be restored to the same thickness as the existing surface or to a minimum of 75 mm thickness, whichever is greater. Asphaltic concrete must meet Ministry standards as set out in Section 502, Standard Specifications for Highway Construction.

Asphalt concrete is to be laid in two or more lifts or layers. Each lift is to be thoroughly compacted before successive lifts are applied.

The Permittee will ensure that the permanent pavement patch is to Ministry standards for one year from the date that the patch is installed.



- 64. **All pavement restoration must be to the full lane width including pre-existing shoulders. Where both lanes are affected, pavement restoration must be to the full width of the road, shoulder to shoulder.**
- 65. Final permanent pavement shall be completed after the following Spring/Summer to allow for any settlement to occur.
- 66. **The Permittee shall arrange a pre-con meeting with MOTT to establish pavement extents. Pavement restoration must be done to the Ministry's satisfaction.**
- 67. Eradication of existing lane markings, placement of temporary markings and final line painting shall be the responsibility of the permittee. All materials and procedures must comply with Ministry specifications and our Manual of Standard Traffic Signs & Pavement Markings. The permittee shall arrange a final inspection of the installation with Ministry personnel upon completion. Any deficiencies identified during the inspection must be repaired by the permittee within two weeks (weather permitting).
- 68. DRIVEWAYS
- 69. Excavations across entrances, whether private or commercial, must be backfilled and thoroughly compacted by the end of the current working day. The surface must be restored, whether paved or gravel, to its original condition within 48 hours.
Affected property owners must be notified at least 48 hours in advance before excavating a driveway.
- 70. The finished grade of the access at the ditch-line shall be 15cm below the highway shoulder elevation.
- 71. END OF PROJECT
- 72. All unsuitable material and inorganic debris shall be removed from the project area. All surplus or unsuitable organic waste and debris shall be removed from the site.
- 73. The area is to be left in a neat and tidy condition and landscaping is to be carried out as necessary.
- 74. Within two months of completion of the project, the Operations Manager shall be supplied with two prints, showing as-constructed plans of all work, including all connections installed. Please identify the Ministry file number on your submission.

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

Dated at Sechelt, British Columbia, this 13 day of March, 2025

On Behalf of the Minister



Open Cut Requirements

1. Traffic Control

Normal traffic patterns on the highway are to be maintained throughout the construction area at all times, unless a lane closure has been granted by the District Manager, Transportation or their designate. Lane closures may be permitted, if deemed necessary, over short sections only during periods of lower traffic volumes. A Work Notification/Lane Closure Request and Approval Form (H1080) must be submitted to the local Area Manager for review a minimum of ten (10) working days prior to the works occurring. Normal traffic patterns must be reinstated for the morning and afternoon peak periods or as specified by the District Manager, Transportation or their designate.

Traffic signs, devices and signing methods must conform to the most current edition of the Ministry of Transportation Traffic Management Manual for Work on Roadways.

Properly equipped, trained and experienced traffic control personnel are required to control traffic during periods of alternating traffic or at any time where equipment, work crews, or materials interfere with the traffic flow.

When a gravel shoulder is used as a traffic lane, the shoulder must be maintained in a smooth, dust free condition at all times. Use of the gravel shoulder as a traffic lane shall be restricted to the work day only and shall not continue over weekends or at night without specific approval from the District Manager, Transportation.

2. Trenching

A minimum of seven (7) days prior to the start of construction, the Contractor shall lay out all pavement cut lines and areas of pavement removal for review and acceptance by the District Manager, Transportation or their designate.

The Contractor shall perform full depth pavement cutting using a saw or other equipment satisfactory to the District Manager, Transportation or their designate that will leave a straight edge with a neat vertical face and will not distort the remaining pavement.

The Contractor shall be responsible for maintaining the cut face in good condition or provide an additional saw cut if the vertical face becomes damaged, at the discretion of the District Manager, Transportation or their designate.

WorkSafe BC approved shoring must be used throughout the entire length of the trench. Extreme care must be taken to avoid sloughing of the trench sides to minimize damage to the road sub-grade beyond the limits of the excavation. Should sloughing of the trench sides occur and undermine the asphalt, the pavement must be removed from the damaged area and the voids properly filled and compacted.

Except where the utility is in a boulevard area outside of clear zone requirements, excavated materials must be removed from the site immediately. Stockpiling of native material adjacent to the trench is not permitted. An open trench at the end of the work day is not permitted.

3. Backfilling

The following backfill requirements apply to any trench, or portion thereof, within 4.0 meters of the edge of pavement.

The trench shall be backfilled with granular material in accordance with Section 202 of the current edition of the Ministry of Transportation Standard Specifications for Highway Construction and constructed to the following minimum specifications:

- a) Sub-base material shall consist of select granular sub-base.
- b) Base gravel shall be a minimum compacted thickness of 300mm and consist of 75mm minus crushed gravel or
- c) Surface gravel shall be a minimum compacted thickness of 150mm and consist of 25mm minus crushed gravel.

Backfill shall be placed in 150mm thick layers and compacted with approved mechanical tamping equipment to a minimum 100% of the laboratory density obtained by the current ASTM test method D698 and documentation shall be provided showing compaction results. Shoring must be lifted as the backfill is placed.

Backfill within boulevard areas more than 4.0 meters from the edge of pavement can be with native material unless otherwise specified. The moisture content shall be adjusted to the optimum for compaction. All disturbed areas of the boulevard are to be restored with topsoil (minimum depth of 150mm) and hydro-seed or sod, at the discretion of the District Manager, Transportation or their designate.

4. Asphalt Surface Restoration

Temporary Patch

As soon as any portion of the highway occupied by the utility can be open to traffic, a temporary hot mix asphalt surface must be applied. The patch shall be free from all deformations, raked and tight joints and placed using proper paving techniques to satisfaction of the District Manager, Transportation or their designate.

The temporary patch will be left in a condition that will not impede the free flow of traffic until the permanent fix is completed.

Permanent Patch

Asphalt concrete pavement shall be restored to a minimum depth of 100mm and there should be no lifts placed more than 50mm. The asphalt concrete is to be Class 1 medium mix or fine mix, whichever is specified by the District Manager, Transportation, and must be in accordance with the current edition of the Ministry of Transportation Standard Specifications for Highway Construction, Section 502 and 952.

All edges of the excavation area shall be made true and straight using a concrete saw, and a bituminous cementing material shall be applied to the sawed edge.

The asphalt concrete will be laid in lifts of a maximum depth of 60mm per lift. Each lift is to be thoroughly compacted before successive lifts are applied. Where sufficient width and length exists, the paving shall be done by machine.

After a minimum of three (3) months, or when the temporary patch has settled, the trench plus an additional three (3) meters on either side is to be scarified to a 50mm depth and repaved to create a smooth seam and surface. The permittee will be held responsible for the repair of any failure and/or settlement of the pavement within the area of excavation for a year from the final patch.

Asphalt cuts will not be accepted within the wheel paths. Any asphalt cut which has encroached in to a travelled lane must have the full lane restored up to the paint lines.

5. Culvert Headwall Restoration

Culvert headwalls damaged and/or removed during construction shall be re-instated using a pre-cast concrete headwall to industry standards or as specified on the design drawings.

6. Additional Conditions

Excavations across driveways, private or commercial, are to be backfilled and thoroughly compacted within two (2) hours and have the surface restored to its original condition within 48 hours. The property owner must be notified at least 24 hours prior to the excavation of an existing driveway.

Machines with steel tracks or flat steel pads are not permitted on any portion of the paved surface of the highway at any time. Any damage created by the Contractor's equipment shall be repaired to the satisfaction of the District Manager, Transportation or their designate.

Only rubber-tired equipment may be used on the pavement or on shoulders of paved highways.

The Ministry reserves the right to have a full time inspector on site for the duration of the work, the cost of which will be charged to the permittee.

The permittee shall be responsible for the repair of any damage to access roads, culverts, ditches, or any other public works that are attributable to this work for a period of five (5) years from the completion date.

The permittee is responsible for maintaining all affected drainage courses during this work and for restoring them to their original condition upon completion.

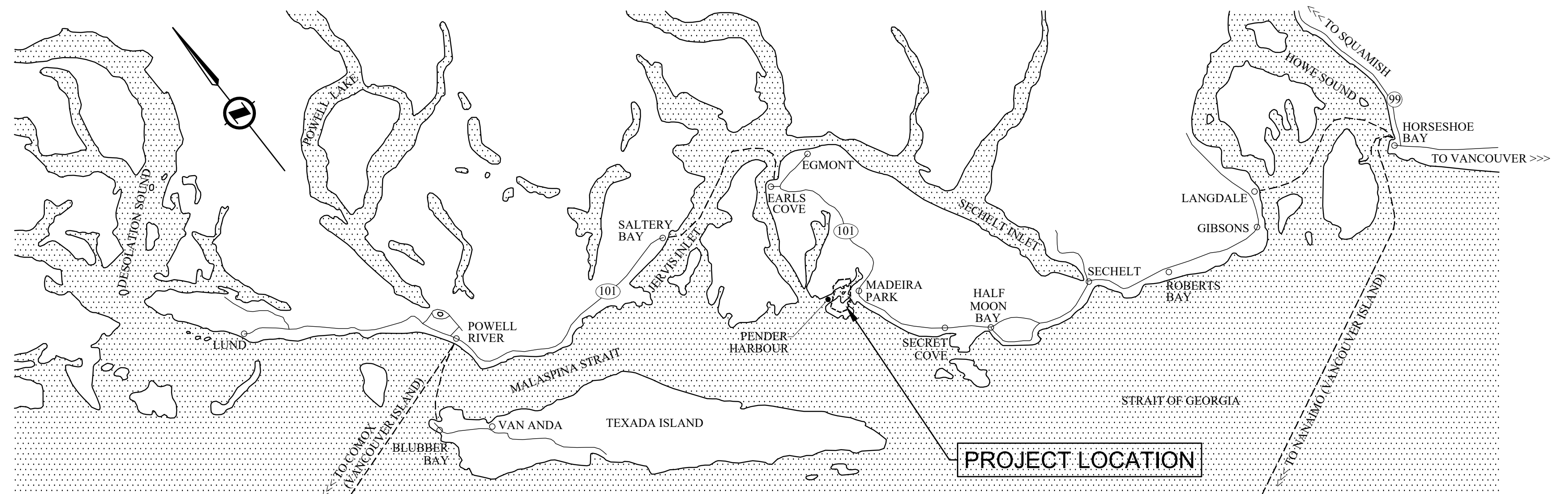
CLIENT. **SUNSHINE COAST REGIONAL DISTRICT**

DESCRIPTION. **SOUTH PENDER HARBOUR WATER MAIN REPLACEMENT**

OEL Project No. **723-9**

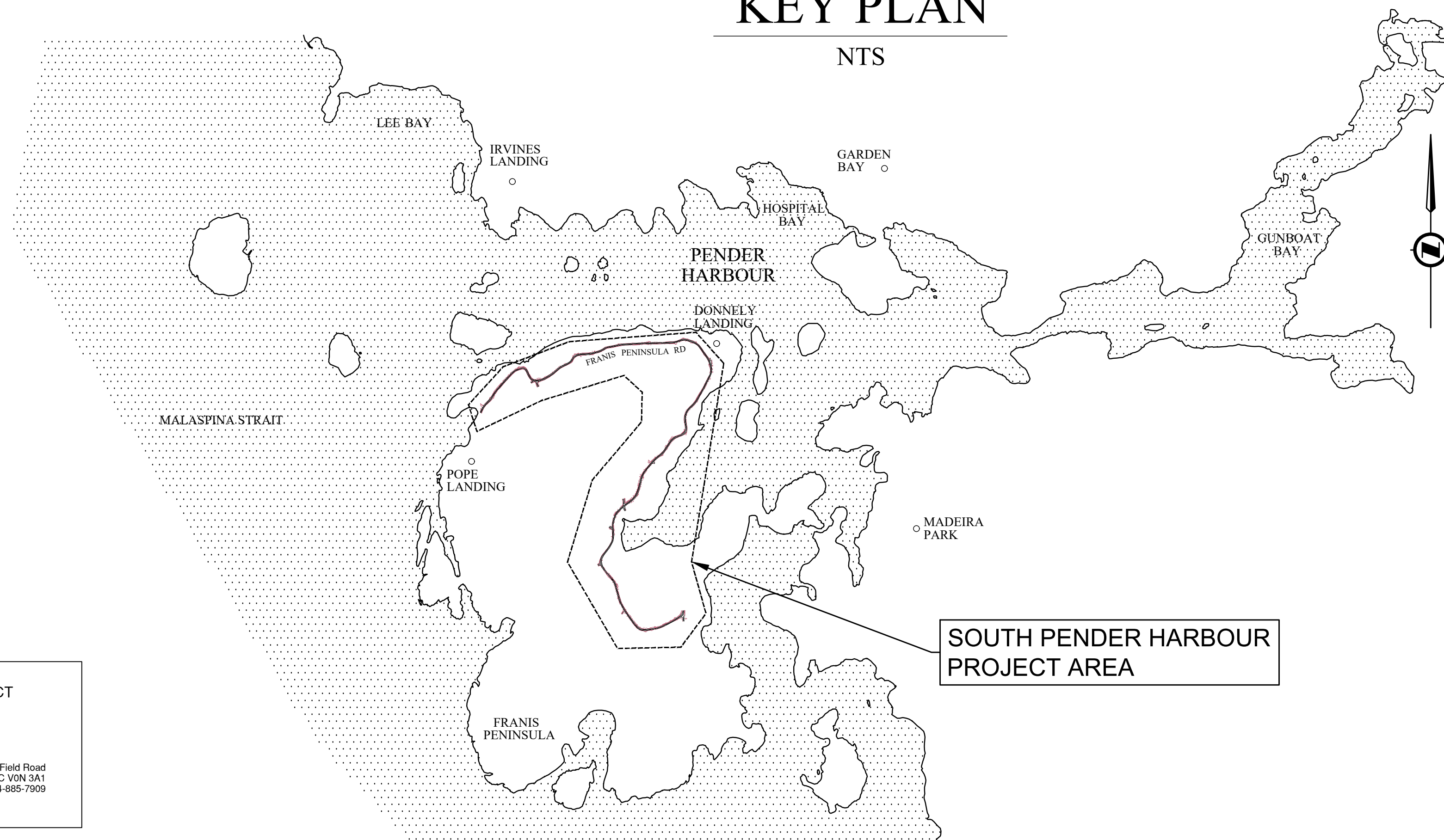
DRAWING INDEX

- 723-9-001 OVERALL SITE - EXISTING CONDITIONS - PLAN
- 723-9-002 DETAILS & NOTES
- 723-9-003 DETAILS & NOTES
- 723-9-100 LOCATION KEY - PLAN & PROFILE
- 723-9-101 FRANCIS PENINSULA RD - STA 2+240-2+620 - PLAN & PROFILE
- 723-9-102 FRANCIS PENINSULA RD - STA 2+620-3+000 - PLAN & PROFILE
- 723-9-103 FRANCIS PENINSULA RD - STA 3+000-3+380 - PLAN & PROFILE
- 723-9-104 FRANCIS PENINSULA RD - STA 3+380-3+700 - PLAN & PROFILE
- 723-9-105 RONDEVIEW RD - STA 3+700-3+785 - PLAN & PROFILE
- 723-9-106 RONDEVIEW RD - STA 3+785-3+900 - PLAN & PROFILE



KEY PLAN

NTS



LOCATION PLAN


NTS

ONSITE
Engineering Ltd.

NORTH VANCOUVER OFFICE
#2 - 252 1ST ST EAST
NORTH VANCOUVER, BC, V7L 1B3
PH.: 778-628-4968
FAX: 866-235-6943

EGBC PERMIT TO PRACTICE No.: 1002678

SUNSHINE COAST REGIONAL DISTRICT
WATER WORKS



1975 Field Road
Sechelt, BC V0N 3A1
Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

ISSUED FOR TENDER

NOT FOR CONSTRUCTION

LEGEND

EXISTING	
	PROPERTY BOUNDARY
	ROAD CENTERLINE
	EDGE OF ASPHALT
	TOP OF SLOPE
	TOE OF SLOPE
	DITCHLINE
	EDGE OF BEDROCK
	FENCELINE
	RETAINING WALL
	TREELINE
	WATER MAIN
	WATER VALVE
	HYDRANT
	CURB STOP
	TREE - CONFIFER
	TREE - BROAD LEAF
	UTILITY POLE
	GUY WIRE
	LAMP STANDARD
	BOLLARD/POST
	ROAD SIGN
	FOUND IRON PIN
	SURVEY HUB
	CULVERT
	CONCRETE NO-POST BARRIERS
	BUILDING

NOTES

- SITE SURVEY WAS PERFORMED JULY 6-7 & 10-17, 2017 BY ONSITE ENGINEERING LTD. A.BRABANDT, N.CVENKEL, J.WAGNER & F.PELLETIER.
- SITE COORDINATES/ELEVATIONS BASED ON "ACTIVE" G.P.S. CONTROL 100
N: 5497207.920 m
E: 426242.057 m
ELEV. 62.199 m
- COORDINATES SCALED AROUND HUB100 WITH AN AVERAGE COMBINED SCALE OF 0.9996597.
- CONTOUR INTERVAL: MAJOR 5.0m MINOR 1.0m
- LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

*GCM, HUB100, & HUB150 LOCATED OUTSIDE PLAN LIMITS

CONTROL TABLE			
DESCRIPTION	NORTHING	EASTING	ELEVATION
OIP	5496660.887	424266.764	15.058
OIP	5496755.284	424336.479	17.111
OIP	5496776.255	424360.368	17.461
OIP	5496923.905	424467.764	27.290
OIP	5496956.104	424500.666	29.404
OIP	5496988.108	424494.342	35.048
OIP	5497032.200	424529.516	37.985
OIP	5497038.163	424537.585	37.013
OIP	5497066.984	424593.401	37.249
OIP	5497066.234	424616.632	33.028
OIP	5497318.573	424726.527	17.299
OIP	5497374.354	424752.732	19.194
OIP	5497581.787	424584.915	38.642
OIP	5497571.941	424260.391	39.251
OIP	5497410.267	423879.079	36.421
OIP	5497347.893	423556.036	12.483
GCM	5499134.165	423793.386	231.883

CONTROL TABLE			
DESCRIPTION	NORTHING	EASTING	ELEVATION
HUB100	5497207.920	426242.057	62.199
HUB150	5496492.961	425149.113	4.452
HUB313	5496651.836	424264.865	13.836
HUB314	5496701.271	424329.437	16.166
HUB315	5496812.807	424358.140	15.756
HUB316	5496893.403	424416.930	21.727
HUB317	5496948.051	424477.480	31.135
HUB318	5497019.387	424526.902	35.834
HUB319	5497043.319	424579.560	37.385
HUB320	5497078.667	424616.478	32.174
HUB321	5497172.162	424609.559	23.578
HUB322	5497253.499	424674.333	21.082
HUB323	5497332.370	424718.611	19.052
HUB324	5497416.305	424759.641	23.905
HUB325	5497471.379	424749.126	27.507
HUB326	5497576.142	424667.185	35.548
HUB327	5497596.518	424601.341	36.032
HUB328	5497576.204	424546.789	37.347
HUB329	5497576.647	424414.239	27.964
HUB330	5497568.428	424249.653	41.520
HUB331	5497554.735	424173.130	40.425
HUB332	5497512.270	424073.129	46.238
HUB333	5497506.052	423982.183	44.697
HUB334	5497467.781	423955.371	42.479
HUB335	5497418.469	423868.177	32.632
HUB336	5497345.719	423760.831	31.987
HUB337	5497355.954	423735.300	30.924
HUB338	5497435.768	423685.619	16.900
HUB339	5497415.362	423628.556	11.649
HUB340	5497382.091	423595.611	15.948
HUB341	5497272.172	423509.402	15.642
HUB342	5497196.949	423443.128	11.967

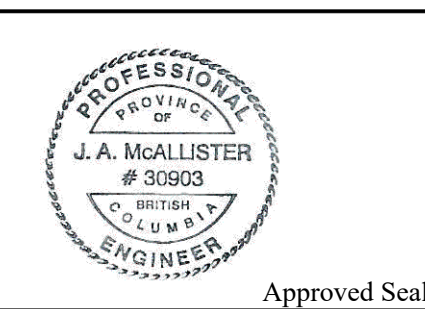


No.	Date	Revision	Drw./Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG/JM

SUNSHINE COAST REGIONAL DISTRICT
WATER WORKS

1975 Field Road
Sechelt, BC V0N 3A1
Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



SCALE
1:3000

Designed:	JM
Drawn:	SD
Checked:	JM
Surveyed:	JW/FP
Date:	FEB 2018

ONSITE
Engineering Ltd.

NORTH VANCOUVER OFFICE
#2-252 1511 ST EAST
NORTH VANCOUVER, BC, V7L 1B3
PH: 778-628-4968
FAX: 866-235-6943
EGBC PERMIT TO PRACTICE No. 1002878

SUNSHINE COAST REGIONAL DISTRICT

**SOUTH PENDER HARBOUR
OVERALL SITE
EXISTING CONDITIONS - PLAN**

Client Project No.	
OEL Project No.	723-9
Drawing No.	723-9-001
Sheet:	2 of 11
Revision	A

SCRD STANDARD DETAIL DRAWINGS

1. ALL WORK SHALL CONFORM TO THE MOST RECENT EDITION OF THE SUNSHINE COAST REGIONAL DISTRICT (SCRD) DESIGN AND CONSTRUCTION SPECIFICATIONS AND STANDARD DRAWINGS, AS WELL AS THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS. SCR D SPECIFICATIONS TAKE PRECEDENCE.

2. ALL NEW HIGH DENSITY POLYETHYLENE WATERMANS SHALL BE DR 11.

3. ALL NEW DUCTILE IRON WATERMANS SHALL BE PRESSURE CLASS 300.

4. WATERMAIN SHALL BE INSTALLED WITH 120mm MINIMUM COVER UNDER ROADWAYS AND 120mm MINIMUM COVER UNDER EXISTING GROUND CONDITIONS. HOLES AND PVC WATERMANS ARE TO BE LINED WITH TRACER WIRE.

5. EXISTING WATER SERVICE LOCATIONS AND SIZES TO BE DETERMINED PRIOR TO CONSTRUCTION. INSTALL THE NEW WATER SERVICES. COMPLETE WITH NEW CURB STOP AND METER BOX AS REQUIRED. AT THE SAME ELEVATION AS THE EXISTING CONNECTION.

6. ALL EXISTING UNDERGROUND UTILITIES (INCLUDING STORM, SANITARY, WATERMANS, GAS MAINS, ELECTRICAL, TELEPHONE, STREET LIGHTING, ETC.) CROSSING ALONG THE COMPLETE PROPOSED WATERMAIN ALIGNMENT, INCLUDING TIE-IN LOCATIONS, SHALL BE LOCATED AND EXPOSED AND DEPTHS OF ALL UTILITIES RECORDED. THIS WORK TO PRECEDE WATERMAIN INSTALLATION BY THE DISTANCE REQUIRED TO ENSURE THAT THE LINE AND GRADE OF THE PROPOSED WATERMAIN CAN BE ADJUSTED TO SUIT FIELD CONDITIONS AS REQUIRED AND TO ENSURE THAT THE TEMPORARY ENDS OF THE WATERMAIN ARE SET TO ACCEPTABLE TIE-IN ELEVATIONS. END PROPOSED WATERMAIN 3.0m FROM TIE-IN LOCATIONS. ALL TIE-INS TO EXISTING WATERMANS WILL BE COMPLETED AFTER TESTING AND FLUSHING.

7. PROTECTION OF THE WATERMAIN:
PARALLEL LINES: WATERMANS SHALL BE LAID AT LEAST 3m HORIZONTALLY FROM ANY SANITARY OR STORM SEWER WHERE THIS HORIZONTAL SEPARATION IS NOT POSSIBLE. THE BOTTOM OF THE WATERMAIN SHALL BE AT LEAST 0.45m ABOVE THE TOP OF THE SEWER AND SUFFICIENT TO ONE SIDE OF THE SEWER TO ALLOW FOR SEWER REPAIRS WITHOUT DISTURBING THE WATERMAIN. IF THIS VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER SHALL BE OF THE SAME SERVICE CAPABILITY AS THE WATERMAIN WITH PRESSURE CLASS JOINTS DESIGNED TO REMAIN WATER TIGHT IF THE GROUNDWATER TABLE PERIODICALLY RISES ABOVE THE SEWER, AND ARE PRESSURE TESTED BEFORE BACKFILLING. A CONTINUOUS HYDRAULIC BARRIER (e.g. CLAY SOIL, GEOMEMBRANE) OR EQUIVALENT WILL BE PRESENT BETWEEN PIPES. ALL JOINTS WITHIN 2m OF THE SANITARY OR STORM SEWER SHALL BE EITHER WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLIUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANSIAWWA STANDARDS C209 AND C217 OR INCREASED IN ACCORDANCE WITH MMCD STANDARDS 06 AND 07.

8. CROSSINGS: WHERE A WATERMAIN CROSSES A SANITARY OR STORM SEWER, THE LINES SHALL BE LAID WITH THE WATERMAIN CROSSING OVER THE SEWER AND WITH THE MIDDLE OF PIPE LENGTHS LOCATED AT THE CROSSING POINT. TO MAXIMIZE THE SEPARATION BETWEEN JOINTS, WHERE A MINIMUM 3m JOINT SEPARATION AND OR MINIMUM 0.3m CLEAR VERTICAL SEPARATION IS NOT POSSIBLE AT THE CROSSING, PRECAUTIONS TO IMPROVE WATER TIGHTNESS OF THE SEWER JOINTS AND STRUCTURAL IMPROVEMENTS SUCH AS HIGHER STRENGTH WATERMAIN AND/OR SEWER AT THE CROSSING AREA ARE REQUIRED. ALL JOINTS WITHIN 2m OF THE CROSSING SHALL BE EITHER WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLIUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANSIAWWA STANDARDS C209 AND C217 OR INCREASED IN ACCORDANCE WITH SCR D STANDARD 06 OR 07.

9. ALL WATER SERVICE CONNECTIONS TO BE 25mm DIAMETER TYPE K COPPER SERVICING PIPE FROM PROPERTY LINE TO THE NEW WATERMAIN UNLESS NOTED OTHERWISE.

10. THRUST BLOCKS TO BE PROVIDED AT ALL TIE-INS AND CHANGES IN DIRECTION UNLESS NOTED OTHERWISE. WHERE CONDUIT DOES NOT REQUIRE THRUST BLOCKS, JOINT RESTRAINTS ARE TO BE USED.

11. THE SUNSHINE COAST REGIONAL DISTRICT WILL REMOVE AND RETURN TO THE SUNSHINE COAST REGIONAL DISTRICT WORKS YARD ALL EXISTING FIRE HYDRANTS ASSEMBLIES, GATE VALVES, ETC. CO-INCIDENT WITH TIE-IN OF WATERMAIN.

12. ALL PRESSURE TESTING CHLORINATION AND FLUSHING TO BE PERFORMED TO THE MINISTRY OF HEALTH AND AWWA STANDARDS. SEE SCR D DRAWING STANDARD N2.

13. RECORD DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR THAT ACCURATELY DOCUMENT LOCATION AND DEPTH OF INSTALLED WORKS FOR SUBMISSION TO THE SCR D.

14. CONTRACTOR TO SUPPORT HYDRO POLES AS REQUIRED.

15. CONTRACTOR TO CONFIRM LOCATION OF TIE-IN LOCATIONS PRIOR TO CONSTRUCTION. WATERMAIN LOCATION APPROX.

DRAWING NUMBER: **N1**

SCRD STANDARD DETAIL DRAWINGS

THE FOLLOWING IS COMPLEMENTARY TO THE SCR D BYLAWS AND DOES NOT NULLIFY THEM IN PART OR WHOLE.

1. THE SUNSHINE COAST REGIONAL DISTRICT ENGINEER, OR DAILY AUTHORIZED REPRESENTATIVES, HENCEFORTH REFERRED TO AS "SCR D ENGINEER" MAY BE SCHEDULED TO INSPECT WATERWORKS PROJECTS, GIVEN FORTY-EIGHT HOURS NOTICE, BETWEEN 9:30 AND 15:30, MONDAY TO FRIDAY, SUBJECT TO AVAILABILITY.

2. IN ACCORDANCE WITH BYLAW 200, SECTION 1, PAGE 2, ARTICLE 6, THE OWNER'S REPRESENTATIVE SHALL ARRANGE TO MEET WITH THE SCR D ENGINEER PRIOR TO THE START OF CONSTRUCTION. AT THIS TIME, THE SCR D ENGINEER WILL INFORM THE OWNER'S REPRESENTATIVE OF THE REQUIRED STAGES OF INSPECTION.

3. QUALIFIED INSPECTORS FROM THE PRIVATE SECTOR (I.E. THIRD PARTY ENGINEERS) MAY BE USED AS AN ALTERNATIVE TO THE SCR D ENGINEER FOR THE PURPOSES OF LEAKAGE TESTING AND DRAINAGE PROCEDURES. PROVIDED THAT THE SCR D HAS APPROVED OF THE USE OF THEIR SERVICES, AND THAT A QUALIFIED PROFESSIONAL ENGINEER PROVIDES A SIGNED AND SEALED LETTER, CONFIRMING THAT THE TESTS WERE COMPLETED TO MMCD, VCI, AWWA, AND SCR D STANDARDS.

4. THE SCR D ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT AND WITNESS THE LEAKAGE TESTING AS DESCRIBED IN BYLAW 200, SECTION 1, PAGE 2, ARTICLE 11.8. THE SCR D ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT WHEN THE MAIN IS FULLY PRESSURIZED AND AGAIN FOLLOWING TWENTY-FOUR HOURS OF CHLORINATION.

5. PRIOR TO DISINFECTION OF THE WATERWORKS, THE SCR D MUST RECEIVE WRITTEN NOTIFICATION OF THE DE-CHLORINATION METHOD THAT WILL BE USED FOLLOWING THE FLUSHING OF THE WATERWORKS. THE SCR D ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT AND WITNESS THE DISINFECTION AS DESCRIBED IN BYLAW 200, SECTION 1, PAGE 10, ARTICLE 13.1.9. THE SCR D ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT WHEN THE MAIN IS FULLY PRESSURIZED AND AGAIN FOLLOWING TWENTY-FOUR HOURS OF CHLORINATION.

6. THE COLLECTION OF SAMPLES FOR COLIFORM BACTERIA TESTING WILL BE PERFORMED BY THE SUNSHINE COAST REGIONAL DISTRICT SENIOR WATER TECHNICIAN, OR DAILY AUTHORIZED REPRESENTATIVE. THIRD PARTY PERSONNEL WILL NOT BE PERMITTED TO COLLECT SAMPLES FOR COLIFORM TESTING. SAMPLES FOR COLIFORM TESTING WILL NOT BE TAKEN UNTIL THE DISINFECTION AND FLUSHING OF THE WATERWORKS HAS BEEN COMPLETED TO THE SATISFACTION OF THE SCR D ENGINEER.

7. THE SCR D UTILITIES COORDINATOR WILL BE ASKED TO PROCEED WITH THE FINAL TIE-IN UPON THE COMPLETION OF THE ABOVE MENTIONED TESTING AND DISINFECTION, AND COLIFORM BACTERIA TESTING TO THE SATISFACTION OF THE SCR D ENGINEER.

CROSSINGS: WHERE A WATERMAIN CROSSES A SANITARY OR STORM SEWER, THE LINES SHALL BE LAID WITH THE WATERMAIN CROSSING OVER THE SEWER AND WITH THE MIDDLE OF PIPE LENGTHS LOCATED AT THE CROSSING POINT. TO MAXIMIZE THE SEPARATION BETWEEN JOINTS, WHERE A MINIMUM 3m JOINT SEPARATION AND OR MINIMUM 0.3m CLEAR VERTICAL SEPARATION IS NOT POSSIBLE AT THE CROSSING, PRECAUTIONS TO IMPROVE WATER TIGHTNESS OF THE SEWER JOINTS AND STRUCTURAL IMPROVEMENTS SUCH AS HIGHER STRENGTH WATERMAIN AND/OR SEWER AT THE CROSSING AREA ARE REQUIRED. ALL JOINTS WITHIN 2m OF THE CROSSING SHALL BE EITHER WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLIUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANSIAWWA STANDARDS C209 AND C217 OR INCREASED IN ACCORDANCE WITH SCR D STANDARD 06 OR 07.

9. ALL WATER SERVICE CONNECTIONS TO BE 25mm DIAMETER TYPE K COPPER SERVICING PIPE FROM PROPERTY LINE TO THE NEW WATERMAIN UNLESS NOTED OTHERWISE.

10. THRUST BLOCKS TO BE PROVIDED AT ALL TIE-INS AND CHANGES IN DIRECTION UNLESS NOTED OTHERWISE. WHERE CONDUIT DOES NOT REQUIRE THRUST BLOCKS, JOINT RESTRAINTS ARE TO BE USED.

11. THE SUNSHINE COAST REGIONAL DISTRICT WILL REMOVE AND RETURN TO THE SUNSHINE COAST REGIONAL DISTRICT WORKS YARD ALL EXISTING FIRE HYDRANTS ASSEMBLIES, GATE VALVES, ETC. CO-INCIDENT WITH TIE-IN OF WATERMAIN.

12. ALL PRESSURE TESTING CHLORINATION AND FLUSHING TO BE PERFORMED TO THE MINISTRY OF HEALTH AND AWWA STANDARDS. SEE SCR D DRAWING STANDARD N2.

13. RECORD DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR THAT ACCURATELY DOCUMENT LOCATION AND DEPTH OF INSTALLED WORKS FOR SUBMISSION TO THE SCR D.

14. CONTRACTOR TO SUPPORT HYDRO POLES AS REQUIRED.

15. CONTRACTOR TO CONFIRM LOCATION OF TIE-IN LOCATIONS PRIOR TO CONSTRUCTION. WATERMAIN LOCATION APPROX.

DRAWING NUMBER: **N2**

MOTI STANDARD DETAIL DRAWINGS

ASPHALT CONCRETE PAVEMENT TYPE B TO COMPLY WITH MOTI DBSS 502 MOTI UPM V1.0 (2019) 25.4 SEE DETAIL G5 FOR ADDITIONAL SPECIFICATIONS

SHOULDER TO BE REFINISHED TO AS GOOD OR BETTER THAN EXISTING CONDITION, SHOULDERING TO COMPLY WITH MOTI DBSS 200.04, 202.05, 202.07 AND MOTI UPM V1.0 (2019) 26.4.3

GRANULAR BASE MOTI 2016 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 2020.06

TRENCH BACKFILL SHALL BE PIT-RUN GRAVEL MOTI 2016 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 2020.06 & UPM 2019, SECTION 20.3.5

GRANULAR PIPE BEDDING AND SURROUND TYPE 1 MMCD STANDARD 31 05 17 2.1

NOTE: 1. MOTI STANDARDS AND PROCEDURES ARE TO BE FOLLOWED FOR ANY TRENCHES BELOW THE PAVEMENT OR WITHIN 4.0m OF MOTI PAVEMENT EDGE.
2. ALL FILL MATERIALS EXCEPT ASPHALT AND BEDDING MATERIAL TO BE COMPACTED TO 200mm MAXIMUM LIFTS TO 100% STANDARD PROCTOR DENSITY (UNDER LABORATORY CONDITIONS) IN COMPLIANCE WITH ASTM D698.
3. TRENCHING TO COMPLY WITH ALL REQUIREMENTS OF THE WORKERS COMPENSATION BOARD.
4. REFER TO MMCD SECTIONS 31 20 01 AND 31 11 01 FOR DETAILED SPECIFICATIONS.
5. TRENCHING MUST COMPLY WITH THE MOTI UTILITY POLICY MANUAL, UPM V1.0 (2019), SECTION 25.3 AND BC MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION VOLUME 1, SECTION 202.
6. ASPHALT RESTORATION TO COMPLY WITH BC MOTI UTILITY POLICY MANUAL, UPM V1.0 (2019), SECTION 25.4 AND BC MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION VOLUME 1, SECTION 502.

SPECIAL NOTES:
7. ON CONSTRUCTION PROJECTS, THAT ARE BEING CARRIED OUT ON 'MOTIS' ROW CORRIDOR, MOTI STANDARDS AND SPECIFICATIONS SUPERSEDES SCR D AND/OR MMCD STANDARDS AND SPECIFICATIONS. PLEASE REFER TO MOTI 'OPEN CUT' REQUIREMENTS: 'MOTI 2016, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 2020.06 & UPM 2019, SECTION 25.3.5 & 25.3.4' FOR DETAILS

DRAWING NUMBER: **MOTI4**

SCRD STANDARD DETAIL DRAWINGS

TEMPORARY RESTORATION PERMANENT RESTORATION

WHERE THICKNESS OF EXISTING A.C. PERMITS, GRIND, TACK COAT AND OVERLAY OR APPROVED ALTERNATIVE

GRANULAR SUBBASE 300mm MIN

IMPORTED GRANULAR BACKFILL

NOTE: 1. REFER TO MMCD CONTRACT DRAWINGS, SECTIONS 31 20 01 AND 31 11 01 FOR DETAILED SPECIFICATIONS.
2. BASE, SUBBASE AND BACKFILL, COMPACTED TO 90% MODIFIED PROCTOR DENSITY.
3. REFER TO MMCD STANDARD DETAIL G5 BASED ON MMCD STANDARD DETAIL G5, ANY UPDATES TO MMCD AFFECTING MMCD STANDARD DETAIL G5 MADE AFTER 2014-04-10 TAKES PRECEDENCE OVER SCR D STANDARD DETAIL G5

DRAWING NUMBER: **G5**

SCRD STANDARD DETAIL DRAWINGS

MAXIMUM SPACING OF ANCHOR BLOCKS (SEE NOTE 4)

SANITARY AND STORM GRAVITY SEWERS	WATERMANS AND FORCEMANS		
SLOPE	SLOPE		
15% - 25%	25m	10% OR GREATER	15m
20% - 30%	20m		
35% - 50%	15m		
50% - OVER	10m		

NOTE: 1. APPLICABLE TO ALL PIPE MATERIALS.
2. USE ALTERNATIVES 1 OR 2 AS SPECIFIED ON CONTRACT DRAWINGS.
3. USE 20 MPa CONCRETE UNLESS SPECIFIED OTHERWISE ON CONTRACT DRAWINGS.
4. REFER TO CONTRACT DRAWINGS FOR SPECIFIED SPACING OF OTHER THAN MAXIMUM SHOWN IN TABLE.

DRAWING NUMBER: **G8**

SCRD STANDARD DETAIL DRAWINGS

25mm Ø TO 50mm Ø CONNECTION

NOTE: 1. METER BOX TO BE ASSEMBLED AS UTILITY BOX OR APPROVED EQUIVALENT
2. ALL MEASUREMENTS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE
3. ALL AIR VALVES TO BE OF THE DOUBLE ACTING TYPE. TERMINAL CITY IRONWORKS, A 24 OR EQUIVALENT

DRAWING NUMBER: **W1-S**

SCRD STANDARD DETAIL DRAWINGS

CONCRETE BLOCKING

DRAWING NUMBER: **W8**

SCRD STANDARD DETAIL DRAWINGS

THRUST BLOCK LOCATIONS

DRAWING NUMBER: **W9**

MMCD STANDARD DETAIL DRAWINGS

GATE VALVE INSTALLATION

DRAWING NUMBER: **W3**

MMCD STANDARD DETAIL DRAWINGS

FIRE HYDRANT INSTALLATION

DRAWING NUMBER: **W4**

MMCD STANDARD DETAIL DRAWINGS

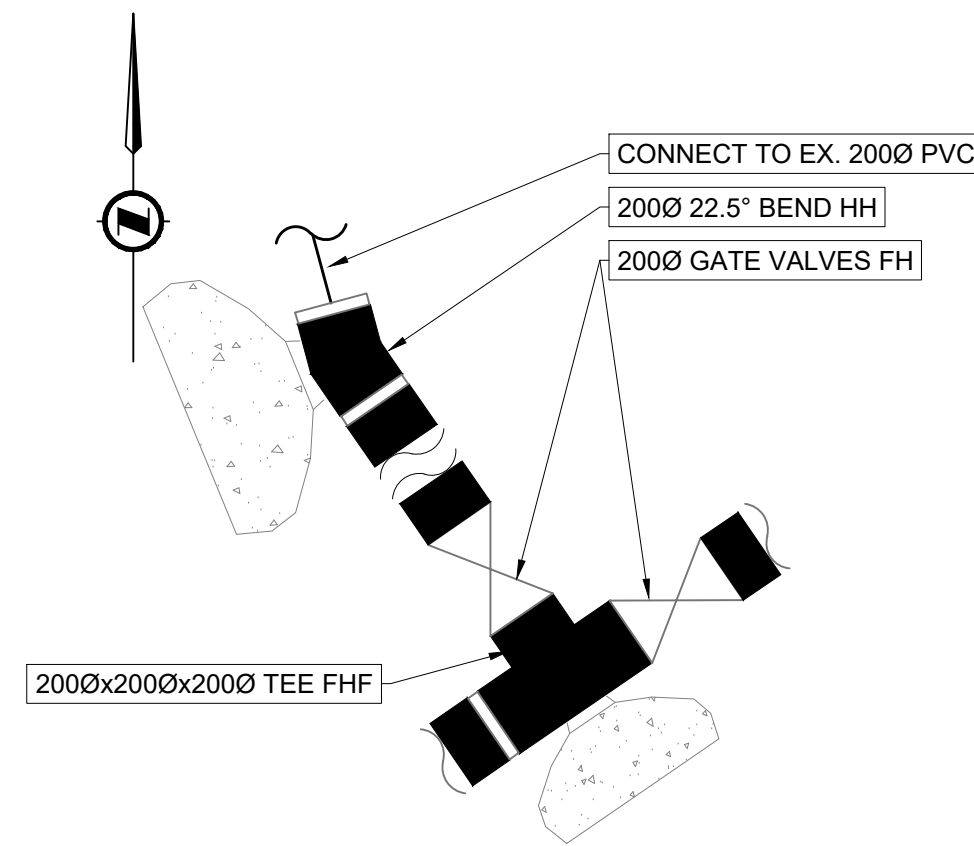
BLOW-OFF FOR WATERMAIN

DRAWING NUMBER: **W8**

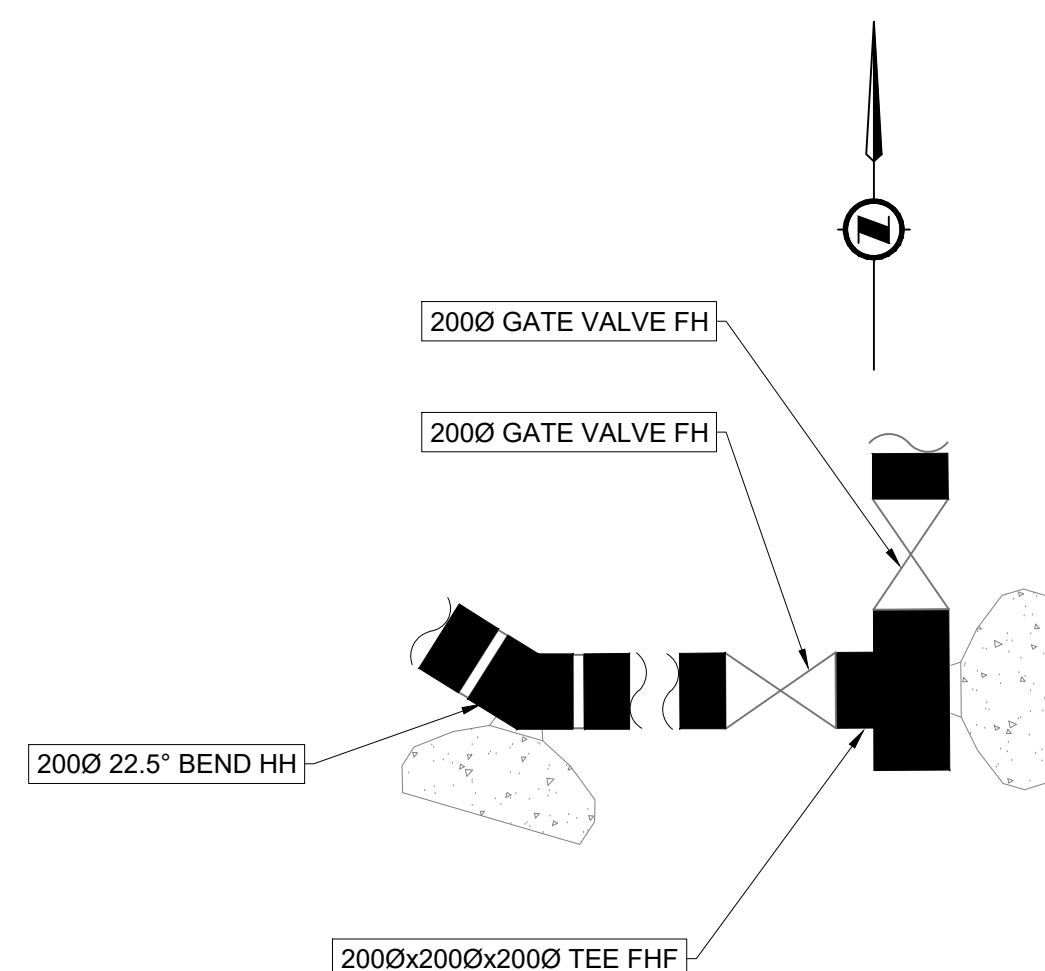
SCRD STANDARD DETAIL DRAWINGS

AIR VALVE ASSEMBLY

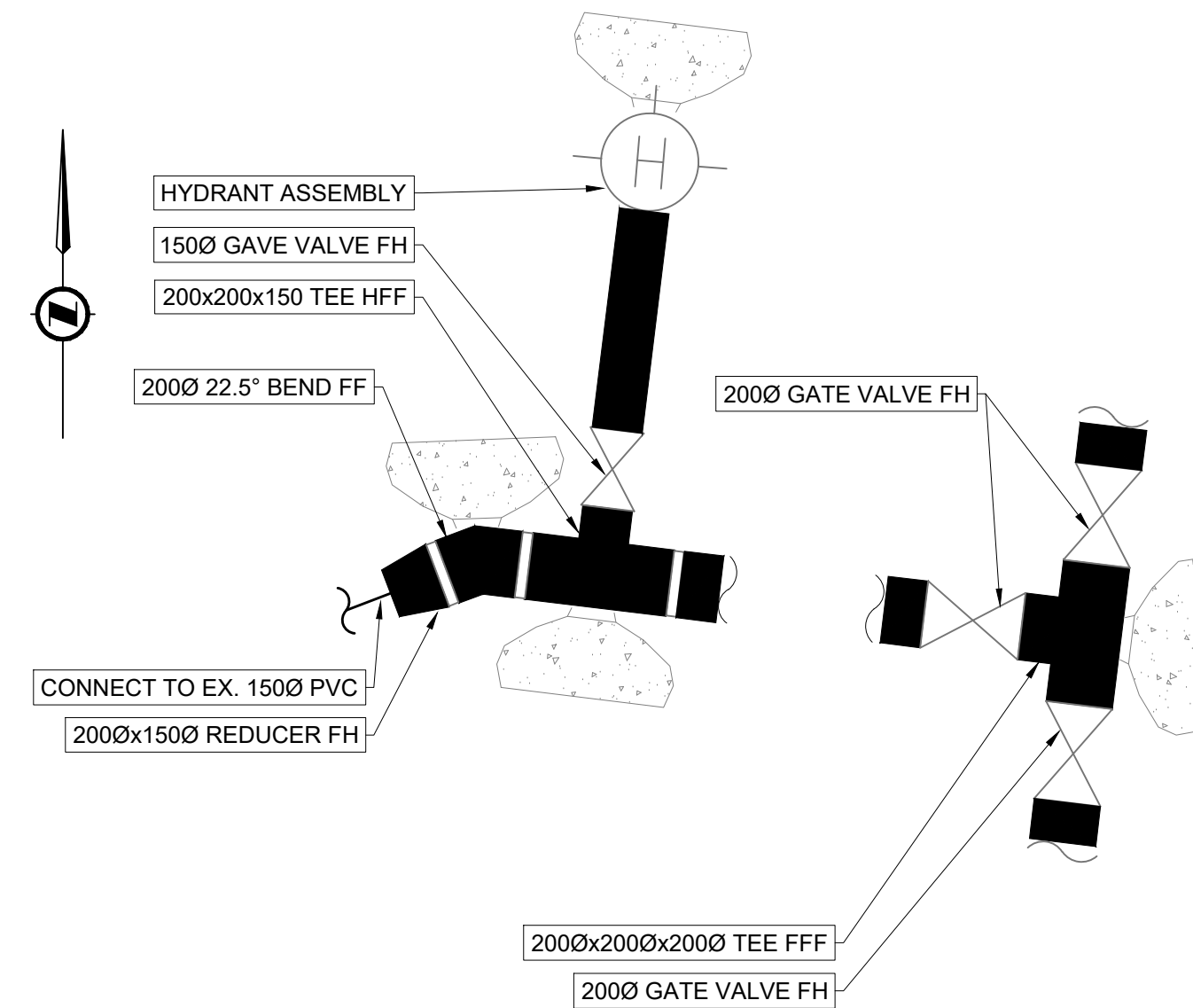
DRAWING NUMBER: **W6**



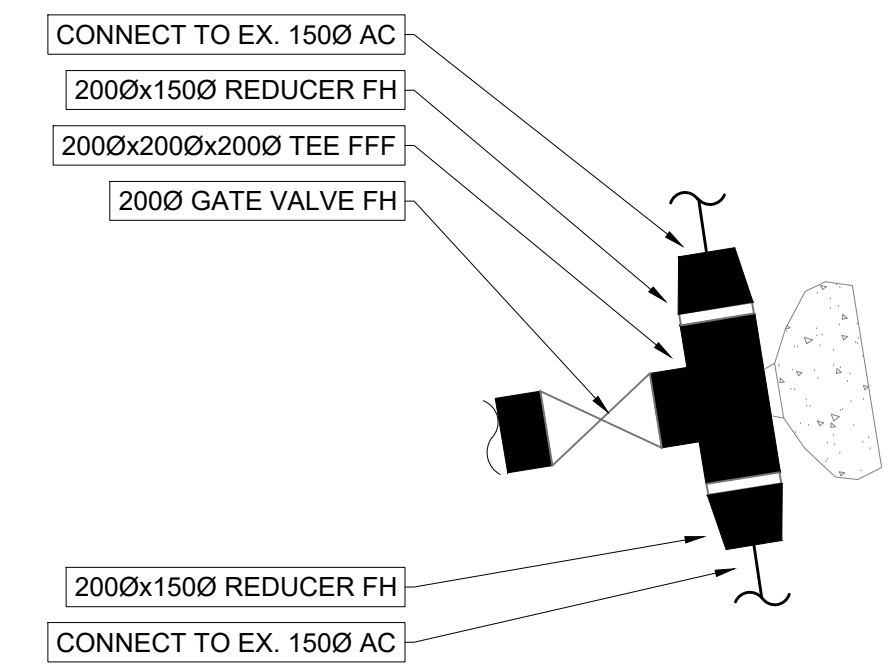
MURDOCH ROAD S
WATERMAIN TIE-IN DETAIL "A"
N.T.S. 101



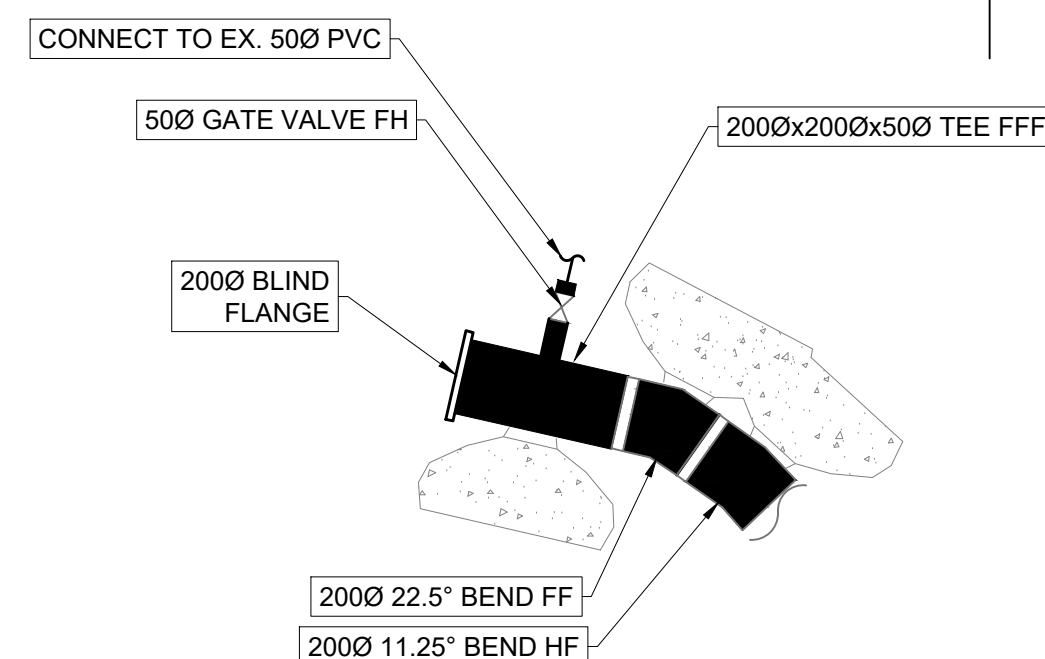
RONDEVUE ROAD EAST
WATERMAIN TIE-IN DETAIL "B"
N.T.S. 102



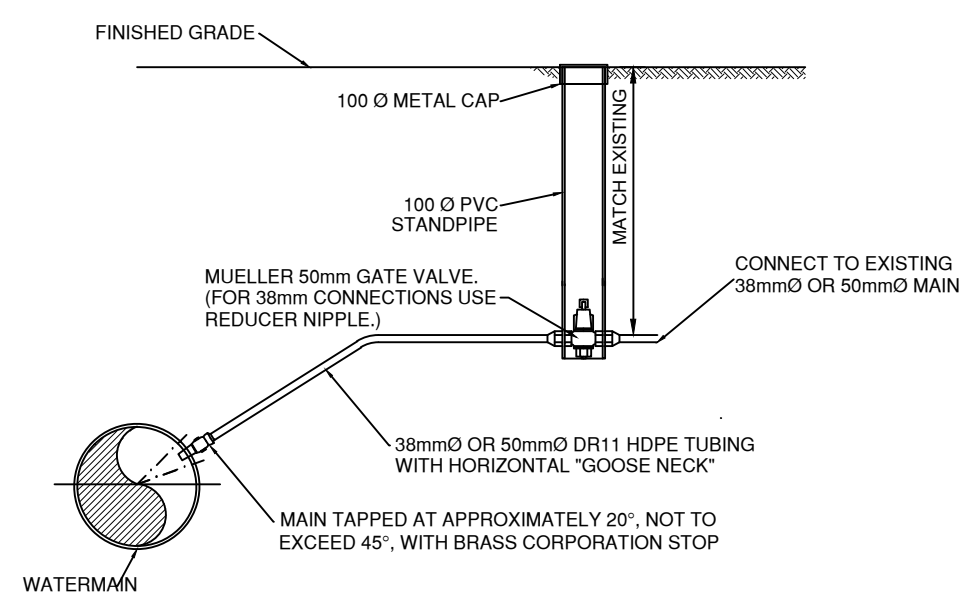
MERRILL ROAD
WATERMAIN TIE-IN DETAIL "C"
N.T.S. 102



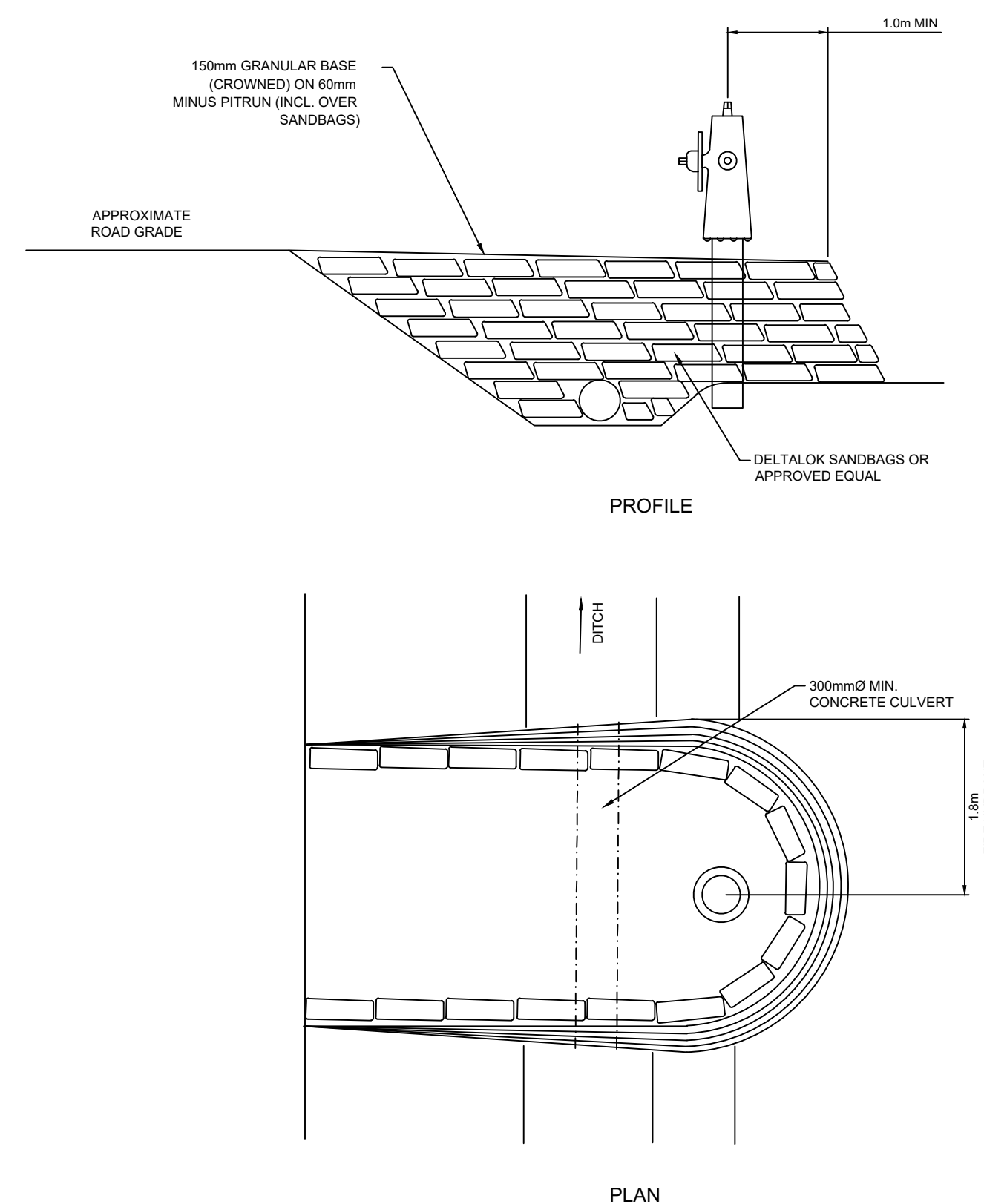
WARNOCK ROAD
WATERMAIN TIE-IN DETAIL "D"
N.T.S. 104



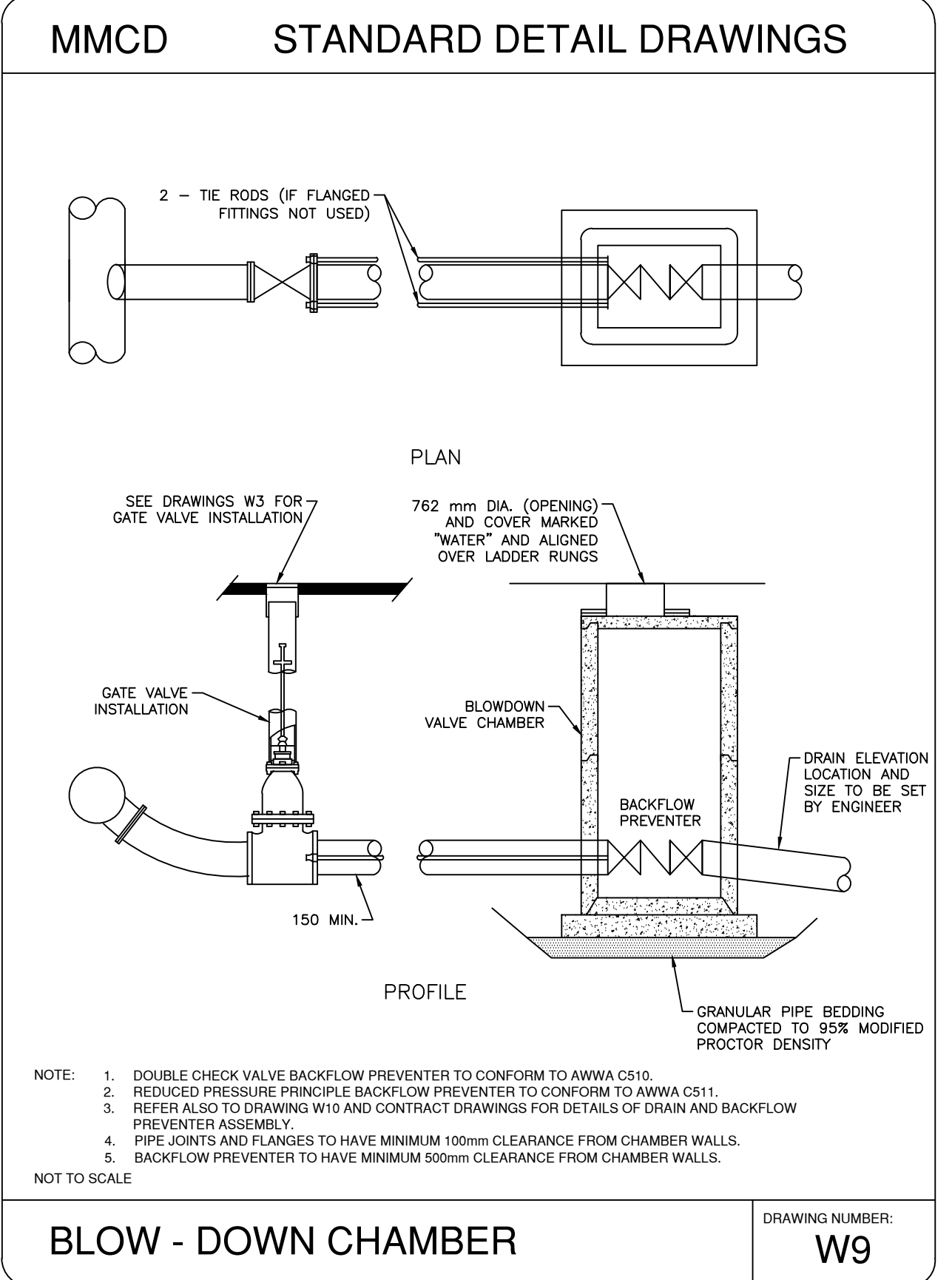
RONDEVUE ROAD WEST
WATERMAIN TIE-IN DETAIL "E"
N.T.S. 105



SMALL MAIN CONNECTION DETAIL
FOR 38mm Ø AND 50mm Ø CONNECTIONS
NOT TO SCALE



HYDRANT PAD AND ACCESS DETAIL
NOT TO SCALE



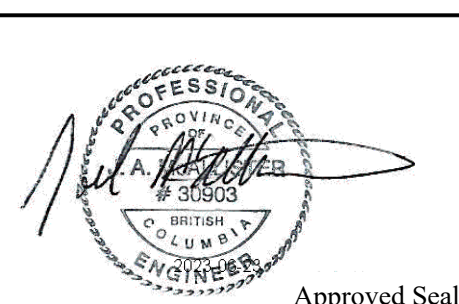
BLOW - DOWN CHAMBER
DRAWING NUMBER: W9

No.	Date	Revision	Drw.	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
WATER WORKS

1975 Field Road
Scheffle, BC V0N 2A1
Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



SCALE AS SHOWN

Designed:	JM
Drawn:	SD
Checked:	JM
Surveyed:	-
Date:	FEB 2018

ONSITE
Engineering Ltd.
NORTH VANCOUVER OFFICE
#2 - 252 1ST ST EAST
NORTH VANCOUVER, BC V7L 1B3
Ph: 778-628-4988
Fax: 866-235-6943
EGBC PERMIT TO PRACTICE No.: 1002878

SUNSHINE COAST REGIONAL DISTRICT
SOUTH PENDOR HARBOUR
WATER MAIN REPLACEMENT
DETAILS & NOTES

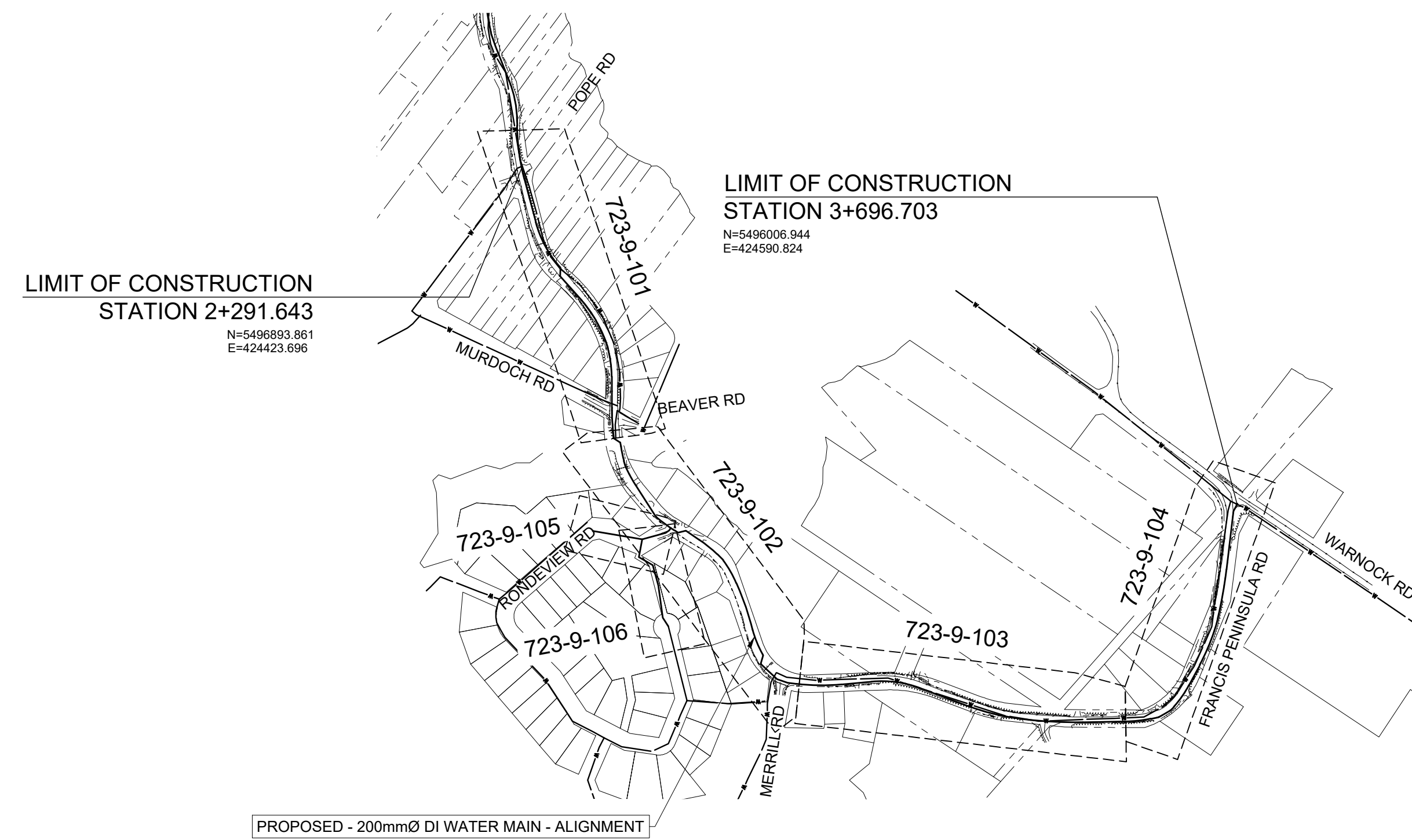
Client Project No.	723-9
OEL Project No.	723-9
Drawing No.	723-9-003
Sheet:	4 of 11
Revision:	A

NOT FOR CONSTRUCTION

LEGEND

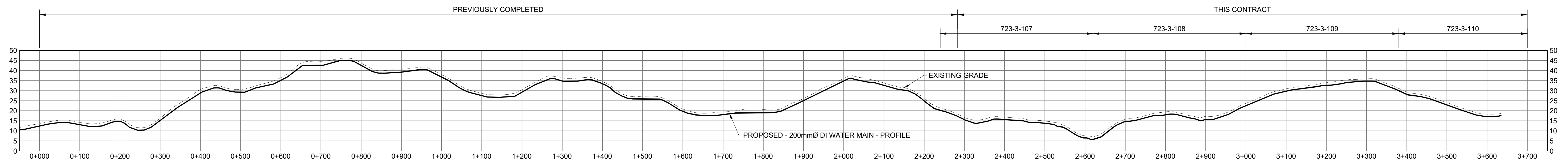
PROPOSED

- WATER MAIN
- ⊕ WATER VALVE
- ⊕ HYDRANT
- ⊕ AIR RELEASE VALVE
- * BLOW-DOWN ASSEMBLY



PRIORITY:


1. MERRILL ROAD TO RONDEVIEW ROAD
2. RONDEVIEW ROAD
3. RONDEVIEW ROAD TO MURDOCH ROAD
4. MURDOCH ROAD TO POPE ROAD



NOT FOR CONSTRUCTION

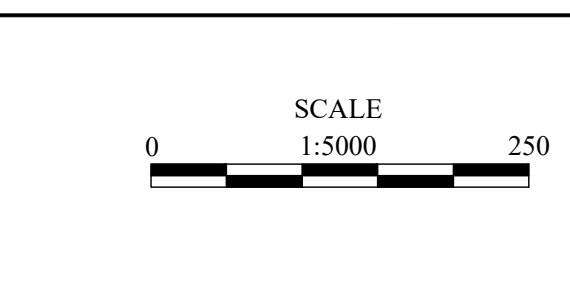
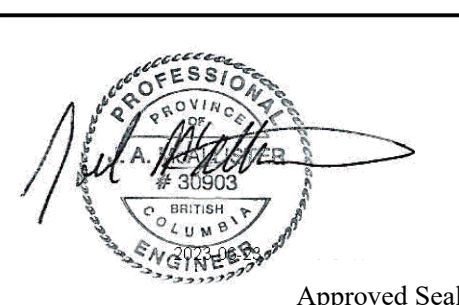
No.	Date	Revision	Drw.	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
WATER WORKS



1975 Field Road
Sechelt, BC V0N 3A1
Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



Designed:	JM
Drawn:	SD
Checked:	JM
Surveyed:	JW/FP
Date:	FEB 2018

ONSITE
Engineering Ltd.

NORTH VANCOUVER OFFICE
#2-252 1ST ST EAST
NORTH VANCOUVER, BC, V7L 1B3
PH: 778-628-4968
FAX: 866-235-6943
EGBC PERMIT TO PRACTICE No. 1002878

SUNSHINE COAST REGIONAL DISTRICT
SOUTH PENDER HARBOUR
LOCATION KEY
PLAN & PROFILE

Client Project No.	723-9
OEL Project No.	723-9
Drawing No.	723-9-100
Sheet:	5 of 11
Revision	A

NOTES:
 LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

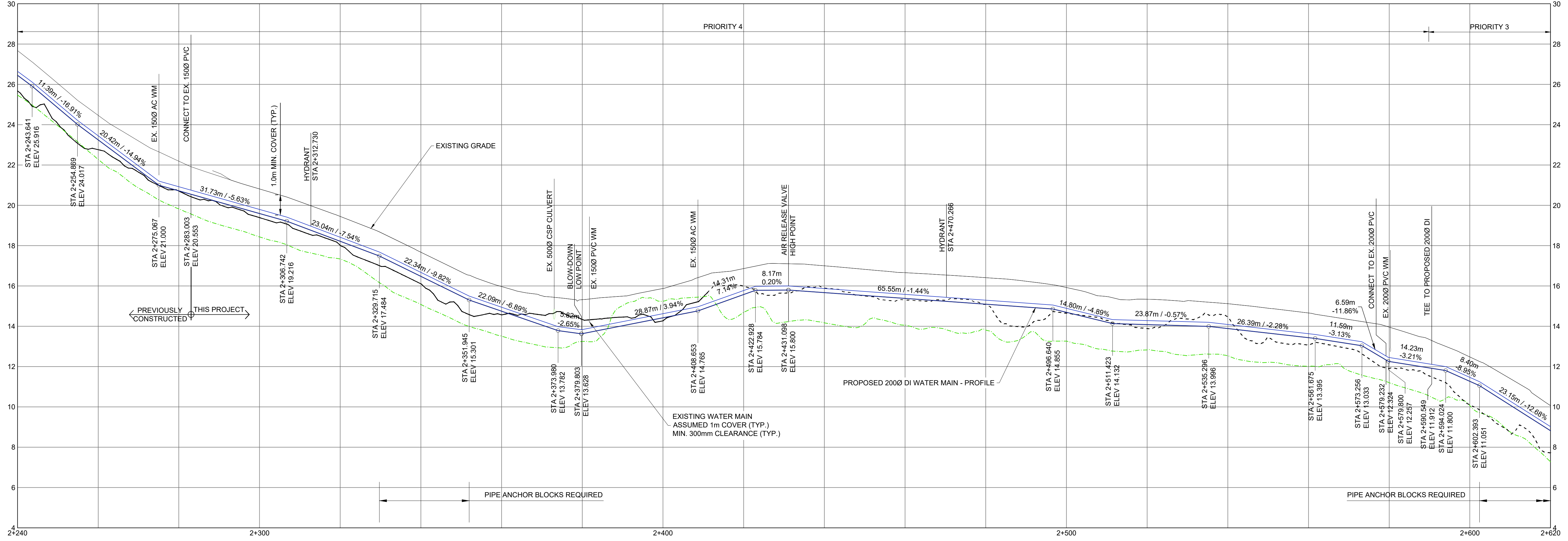
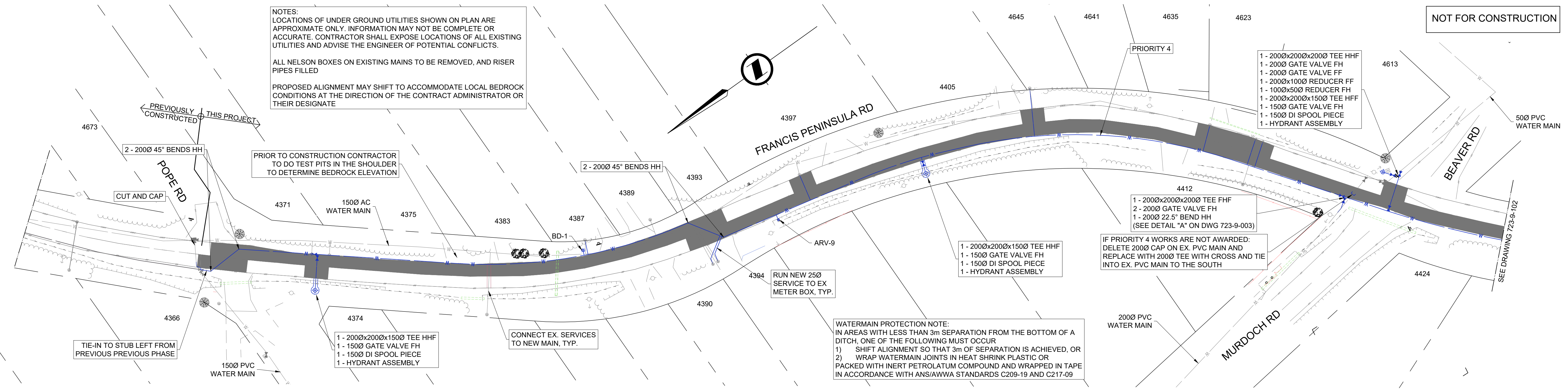
ALL NELSON BOXES ON EXISTING MAINS TO BE REMOVED, AND RISER PIPES FILLED

PROPOSED ALIGNMENT MAY SHIFT TO ACCOMMODATE LOCAL BEDROCK CONDITIONS AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR THEIR DESIGNATE

PRIOR TO CONSTRUCTION CONTRACTOR TO DO TEST PITS IN THE SHOULDER TO DETERMINE BEDROCK ELEVATION

WATERMAIN PROTECTION NOTE:
 IN AREAS WITH LESS THAN 3m SEPARATION FROM THE BOTTOM OF A DITCH, ONE OF THE FOLLOWING MUST OCCUR
 1) SHIFT ALIGNMENT SO THAT 3m OF SEPARATION IS ACHIEVED, OR
 2) WRAP WATERMAIN JOINTS IN HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209-19 AND C217-09

NOT FOR CONSTRUCTION

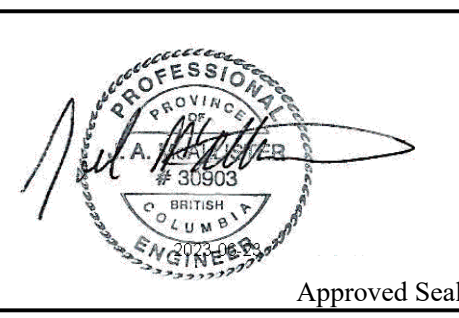


No.	Date	Revision	Drawn	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
 WATER WORKS

1975 Field Road
 Sechelt, BC V0N 3A1
 Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



SCALE
 H 1:500
 V 1:50

Designed: JM
 Drawn: SD
 Checked: JM
 Surveyed: JW/FP
 Date: FEB 2018

ONSITE
 Engineering Ltd.
 NORTH VANCOUVER OFFICE
 #2-252 151 ST EAST
 NORTH VANCOUVER, BC, V7L 1B3
 PH: 778-628-4968
 FAX: 866-235-6943
 EGBC PERMIT TO PRACTICE No. 1002878

SUNSHINE COAST REGIONAL DISTRICT
 SOUTH PENDER HARBOUR
 WATER MAIN REPLACEMENT
 FRANCIS PENINSULA RD
 STA 2+240 - 2+620 - PLAN & PROFILE

Client Project No. 723-9

OEL Project No. 723-9

Drawing No. 723-9-101

Sheet: 6 of 11 Revision A

NOTES:
 LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

ALL NELSON BOXES ON EXISTING MAINS TO BE REMOVED, AND RISER PIPES FILLED

PROPOSED ALIGNMENT MAY SHIFT TO ACCOMMODATE LOCAL BEDROCK CONDITIONS AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR THEIR DESIGNATE

IF PRIORITY 3 WORKS NOT AWARDED TIE INTO EX. 1500 AC AS FOLLOWS:
 1 - 2000x2000x1500 TEE FFF
 1 - 1500 GATE VALVE FH
 1 - 1500 DI SPOOL PIECE ACROSS ROAD
 1 - 1500 TEE ON EX. AC PIPE
 2 - 1500 DI SPOOL PIECES ON AC PIPE
 2 - ROBAR COUPLINGS

SEE SHEET 105 & 106 FOR RONDEVUE ROAD WATERMAIN DESIGN

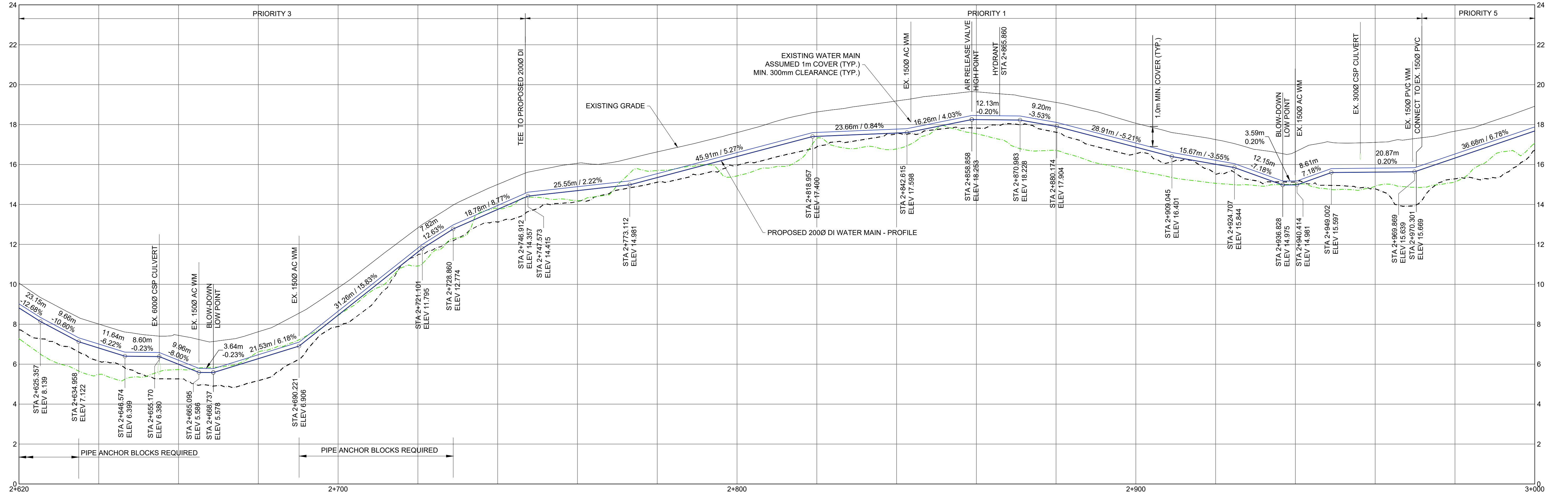
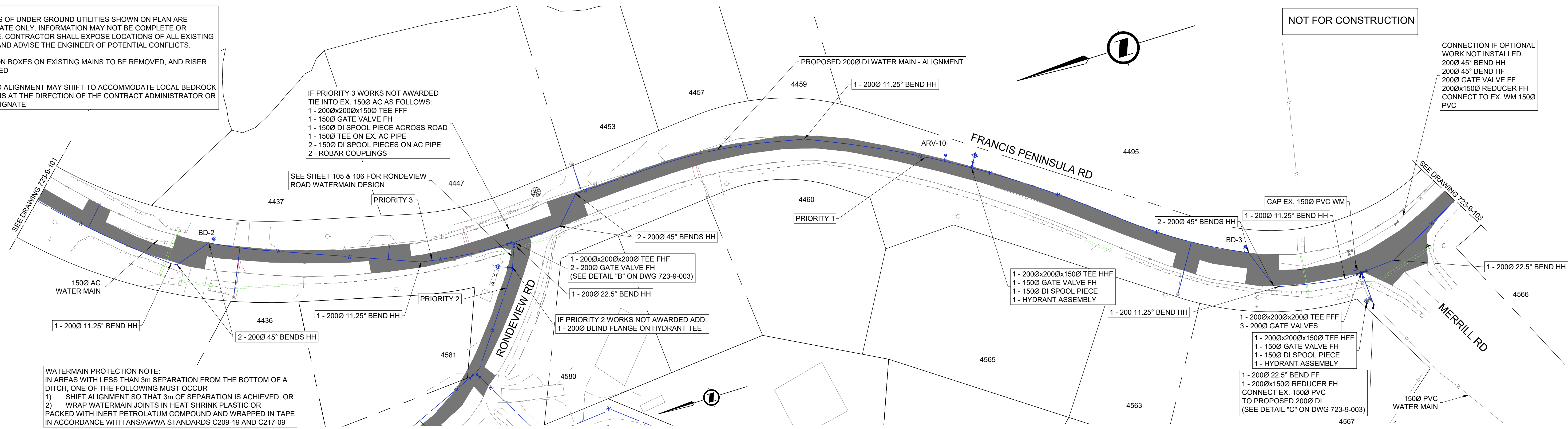
1 - 2000x2000x2000 TEE FHF
 2 - 2000 GATE VALVE FH
 (SEE DETAIL "B" ON DWG 723-9-003)

IF PRIORITY 2 WORKS NOT AWARDED ADD:
 1 - 2000 BLIND FLANGE ON HYDRANT TEE

WATERMAIN PROTECTION NOTE:
 IN AREAS WITH LESS THAN 3m SEPARATION FROM THE BOTTOM OF A DITCH, ONE OF THE FOLLOWING MUST OCCUR
 1) SHIFT ALIGNMENT SO THAT 3m OF SEPARATION IS ACHIEVED, OR
 2) WRAP WATERMAIN JOINTS IN HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANSIAWWA STANDARDS C209-19 AND C217-09

NOT FOR CONSTRUCTION

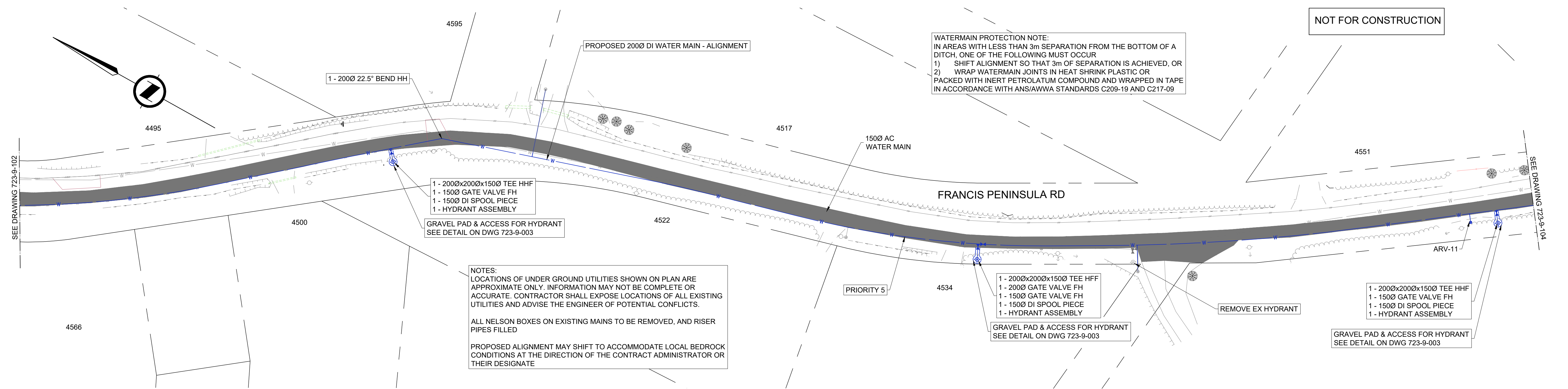
CONNECTION IF OPTIONAL WORK NOT INSTALLED.
 2000 45° BEND HH
 2000 45° BEND FH
 2000 GATE VALVE FF
 2000x1500 REDUCER FH
 CONNECT TO EX. WM 1500 PVC



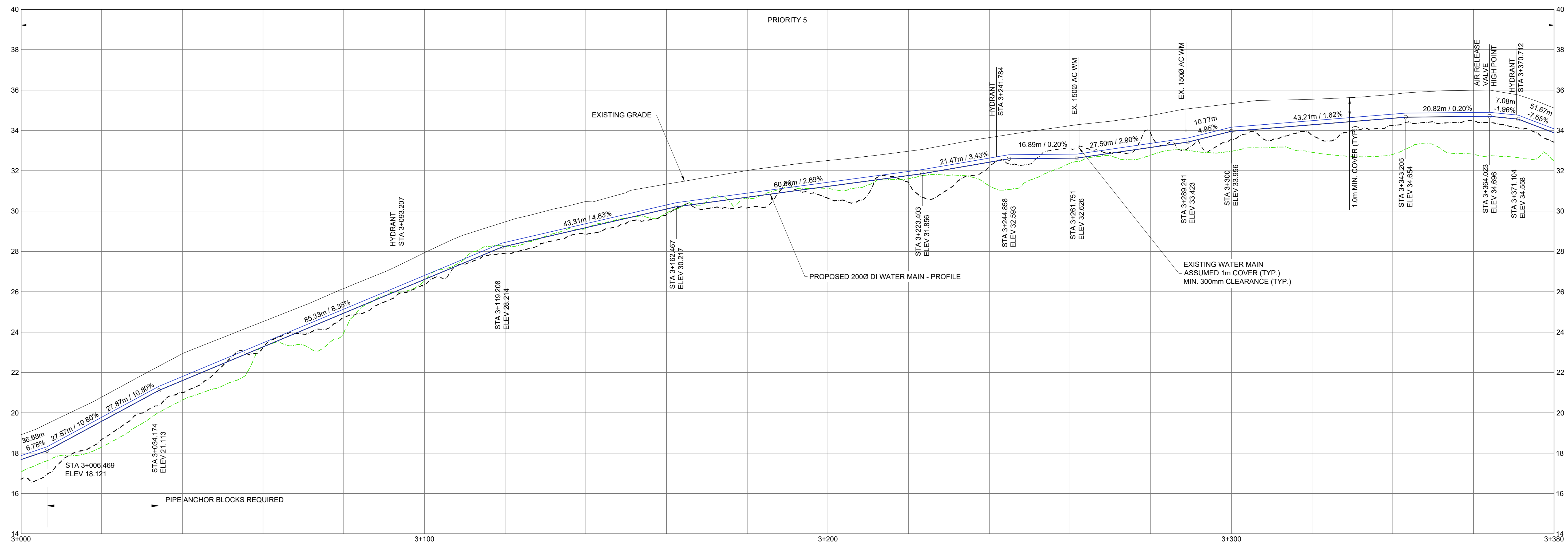
<p>SUNSHINE COAST REGIONAL DISTRICT WATER WORKS</p>		<p>REFERENCE DRAWINGS</p>	<p>Approved Seal</p>	<p>SCALE H 1:500 V 1:50</p>	<p>Designed: JM Drawn: SD Checked: JM Surveyed: JW/FP Date: FEB 2018</p>	<p>ONSITE Engineering Ltd. NORTH VANCOUVER OFFICE #2-252 1ST ST EAST NORTH VANCOUVER, BC, V7L 1B3 PH: 778-628-4968 FAX: 866-235-6943 EGCBC PERMIT TO PRACTICE No. 1002978</p>	<p>SUNSHINE COAST REGIONAL DISTRICT SOUTH PENDER HARBOUR WATER MAIN REPLACEMENT FRANCIS PENINSULA RD STA 2+620 - 3+000 - PLAN & PROFILE</p>	<p>Client Project No. OEL Project No. 723-9 Drawing No. 723-9-102 Sheet: 7 of 11</p>
<p>A JUNE 23/2023 ISSUED FOR TENDER</p>	<p>SG JM</p>							<p>Revision A</p>

WATERMAIN PROTECTION NOTE:
 IN AREAS WITH LESS THAN 3m SEPARATION FROM THE BOTTOM OF A DITCH, ONE OF THE FOLLOWING MUST OCCUR
 1) SHIFT ALIGNMENT SO THAT 3m OF SEPARATION IS ACHIEVED, OR
 2) WRAP WATERMAIN JOINTS IN HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209-19 AND C217-09

NOT FOR CONSTRUCTION



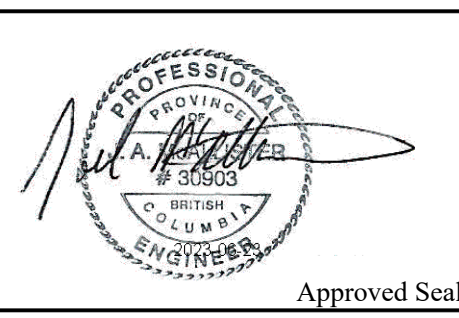
NOTES:
 LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.
 ALL NELSON BOXES ON EXISTING MAINS TO BE REMOVED, AND RISER PIPES FILLED
 PROPOSED ALIGNMENT MAY SHIFT TO ACCOMMODATE LOCAL BEDROCK CONDITIONS AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR THEIR DESIGNATE



No.	Date	Revision	Drawn	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
 WATER WORKS
 1975 Field Road
 Sechelt, BC V0N 3A1
 Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



SCALE
 H 1:500
 V 1:50

Designed: JM
 Drawn: SD
 Checked: JM
 Surveyed: JW/FP
 Date: FEB 2018

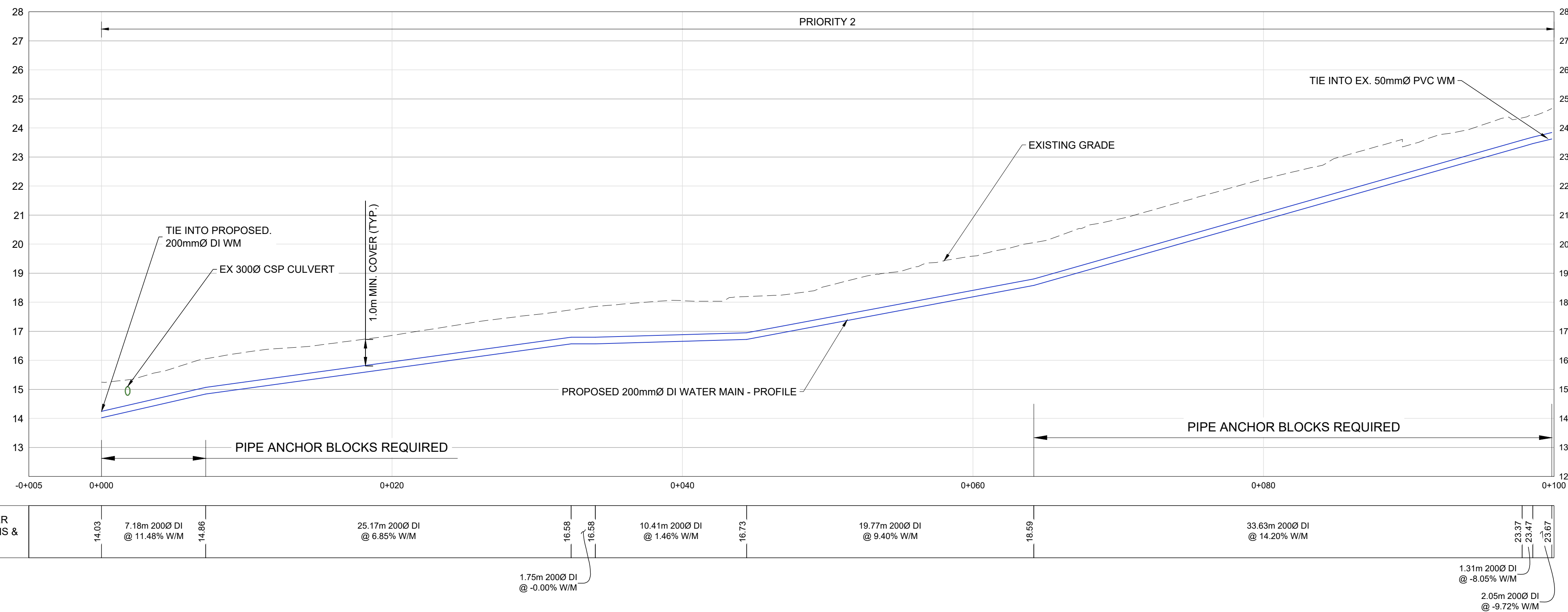
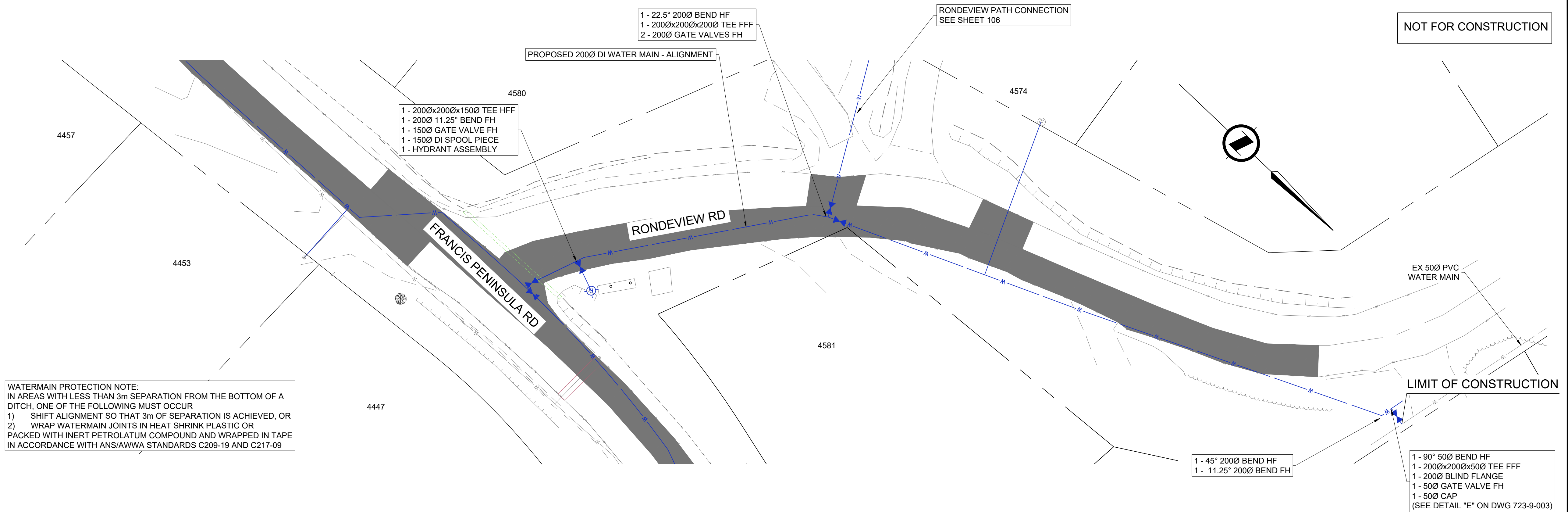
ONSITE Engineering Ltd.
 NORTH VANCOUVER OFFICE
 #2-252 1ST ST EAST
 NORTH VANCOUVER, BC, V7L 1B3
 PH: 778-628-4968
 FAX: 866-235-6943
 EGBC PERMIT TO PRACTICE No. 1002978

SUNSHINE COAST REGIONAL DISTRICT
 SOUTH PENDER HARBOUR
 WATER MAIN REPLACEMENT
 FRANCIS PENINSULA RD
 STA 3+000 - 3+380 - PLAN & PROFILE

Client Project No. 723-9
 OEL Project No. 723-9
 Drawing No. 723-9-103
 Sheet: 8 of 11
 Revision A

NOTES:
 LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.
 ALL NELSON BOXES ON EXISTING MAINS TO BE REMOVED, AND RISER PIPES FILLED
 PROPOSED ALIGNMENT MAY SHIFT TO ACCOMMODATE LOCAL BEDROCK CONDITIONS AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR THEIR DESIGNATE

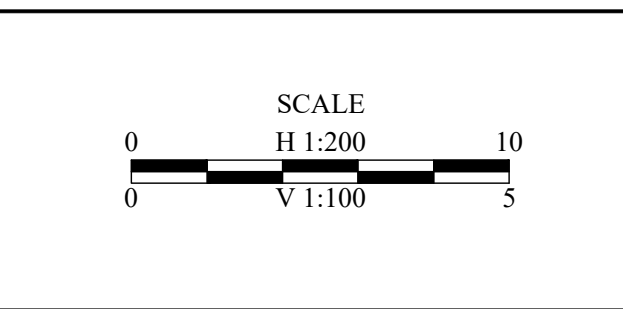
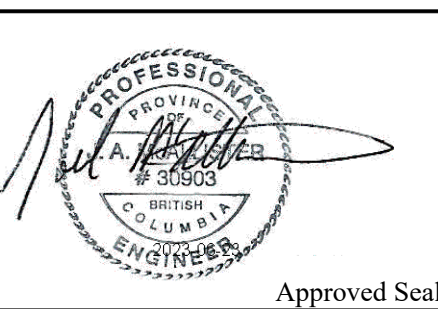
WATERMAIN PROTECTION NOTE:
 IN AREAS WITH LESS THAN 3m SEPARATION FROM THE BOTTOM OF A DITCH, ONE OF THE FOLLOWING MUST OCCUR
 1) SHIFT ALIGNMENT SO THAT 3m OF SEPARATION IS ACHIEVED, OR
 2) WRAP WATERMAIN JOINTS IN HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209-19 AND C217-09



No.	Date	Revision	Drw.	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
 WATER WORKS
 1975 Field Road
 Sechelt, BC V0N 3A1
 Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



Designed: JM
 Drawn: SD
 Checked: JM
 Surveyed: JW/FP
 Date: FEB 2018

ONSITE Engineering Ltd.
 NORTH VANCOUVER OFFICE
 #2-252 1ST ST EAST
 NORTH VANCOUVER, BC, V7L 1B3
 PH: 778-628-4968
 FAX: 866-235-6943
 EGC PERMIT TO PRACTICE No. 1002878

SUNSHINE COAST REGIONAL DISTRICT
 SOUTH PENDER HARBOUR
 WATER MAIN REPLACEMENT
 RONDEVUE RD
 STA 3+700 - 3+785 - PLAN & PROFILE

Client Project No.	
OEL Project No.	723-9
Drawing No.	723-9-105
Sheet: 10 of 11	Revision A

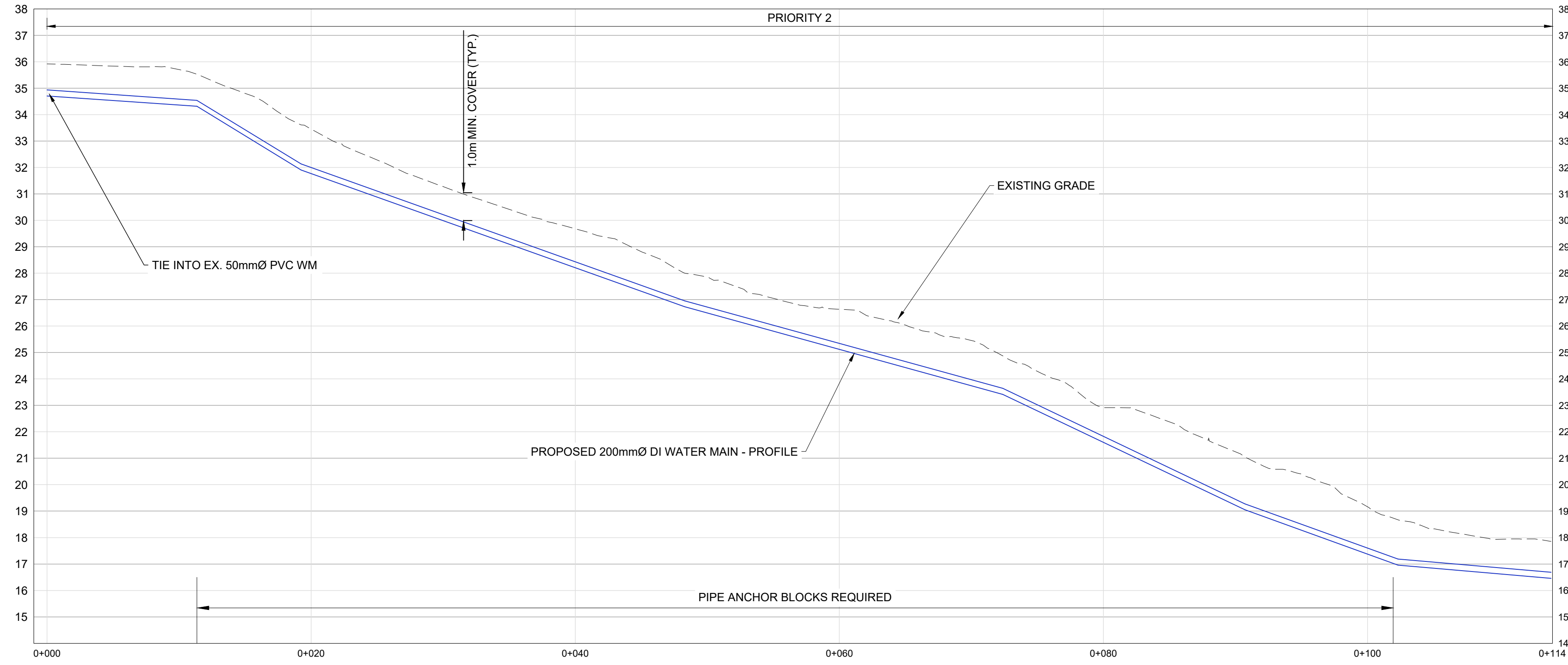
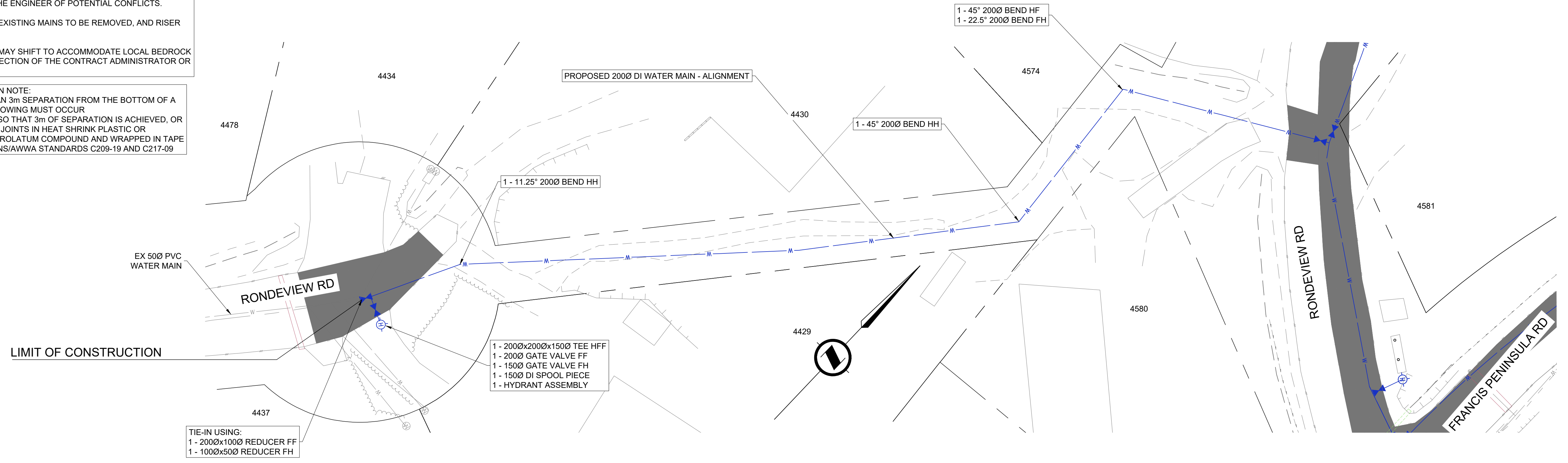
NOTES:
 LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY. INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

ALL NELSON BOXES ON EXISTING MAINS TO BE REMOVED, AND RISER PIPES FILLED.

PROPOSED ALIGNMENT MAY SHIFT TO ACCOMMODATE LOCAL BEDROCK CONDITIONS AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR THEIR DESIGNATE

WATERMAIN PROTECTION NOTE:
 IN AREAS WITH LESS THAN 3m SEPARATION FROM THE BOTTOM OF A DITCH, ONE OF THE FOLLOWING MUST OCCUR
 1) SHIFT ALIGNMENT SO THAT 3m OF SEPARATION IS ACHIEVED, OR
 2) WRAP WATERMAIN JOINTS IN HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209-19 AND C217-09

NOT FOR CONSTRUCTION

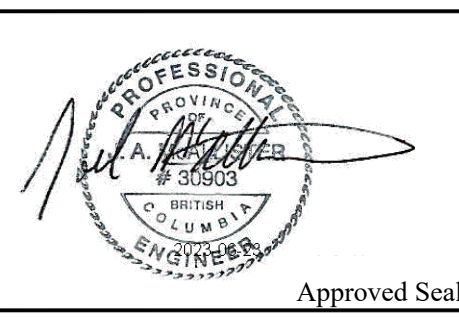


PROPOSED WATER INVERTS, LENGTHS & GRADES	34.72	11.35m 2000 DI @ -3.46% W/M	34.33	7.89m 2000 DI @ -30.55% W/M	31.02	29.05m 2000 DI @ -17.82% W/M	26.74	24.08m 2000 DI @ -13.76% W/M	23.43	18.34m 2000 DI @ -23.82% W/M	10.06	11.58m 2000 DI @ -18.05% W/M	16.97	11.58m 2000 DI @ -4.32% W/M	16.47
--	-------	-----------------------------	-------	-----------------------------	-------	------------------------------	-------	------------------------------	-------	------------------------------	-------	------------------------------	-------	-----------------------------	-------

No.	Date	Revision	Drw.	Chk.
A	JUNE 23/2023	ISSUED FOR TENDER	SG	JM

SUNSHINE COAST REGIONAL DISTRICT
 WATER WORKS
 1975 Field Road
 Sechelt, BC V0N 3A1
 Ph: 604-885-6800 1-800-687-5753 Fax: 604-885-7909

REFERENCE DRAWINGS



SCALE
 H 1:200
 V 1:125

Designed: JM
 Drawn: SD
 Checked: JM
 Surveyed: JW/FP
 Date: FEB 2018

ONSITE Engineering Ltd.
 NORTH VANCOUVER OFFICE
 #2-252 1ST ST EAST
 NORTH VANCOUVER, BC, V7L 1B3
 PH: 778-628-4968
 FAX: 866-235-6943
 EGCBC PERMIT TO PRACTICE No. 1002878

SUNSHINE COAST REGIONAL DISTRICT
 SOUTH PENDER HARBOUR
 WATER MAIN REPLACEMENT
 RONDEVUE RD
 STA 3+785 - 3+900 - PLAN & PROFILE

Client Project No. 723-9
 OEL Project No. 723-9
 Drawing No. 723-9-105
 Sheet: 11 of 11 Revision A