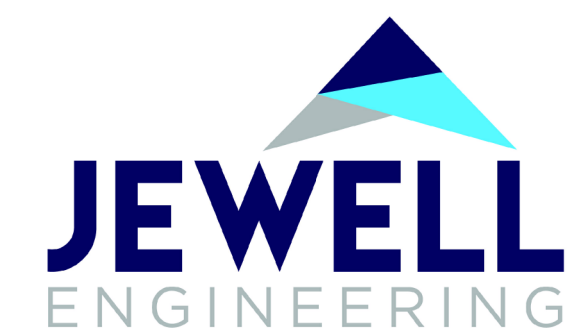
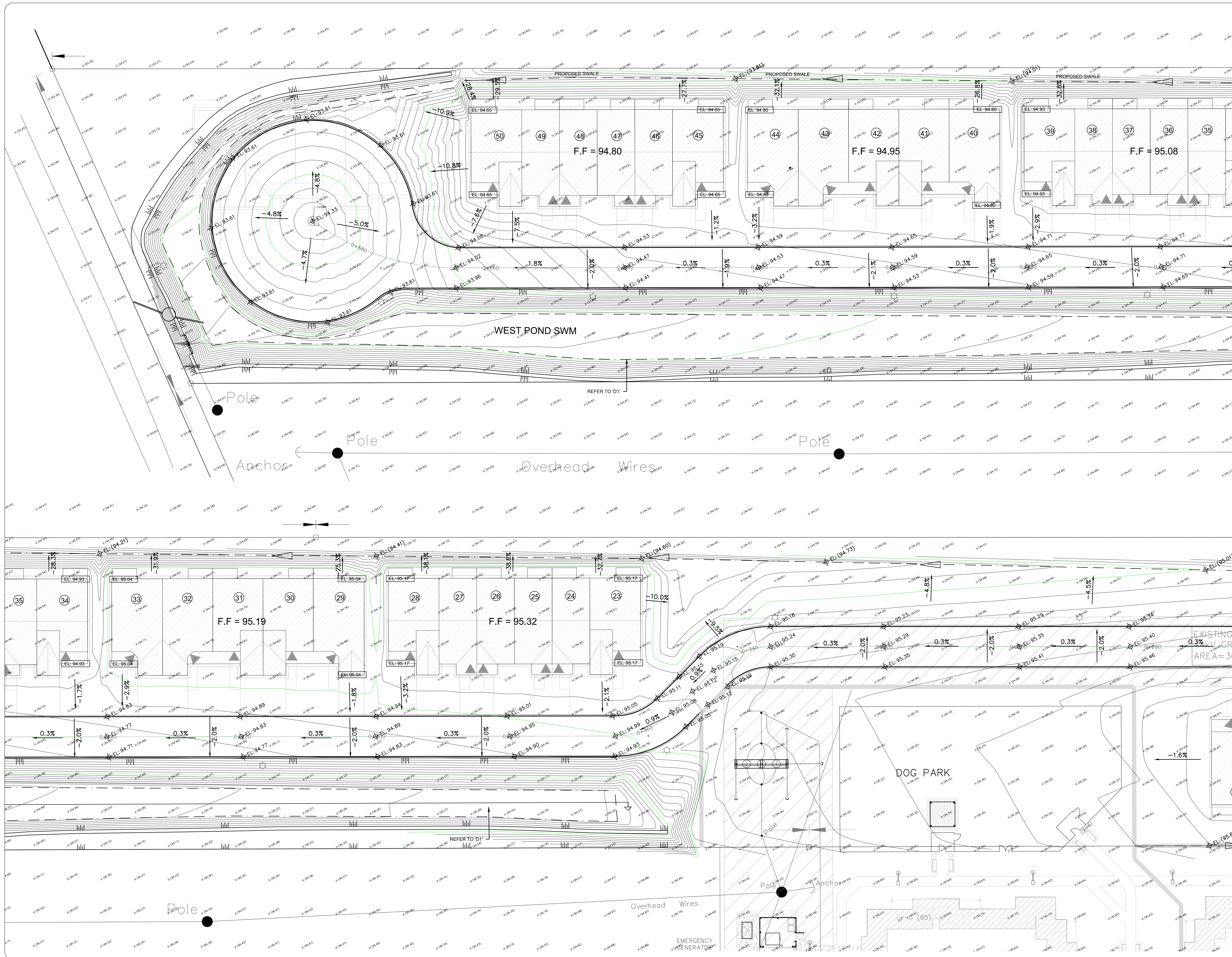


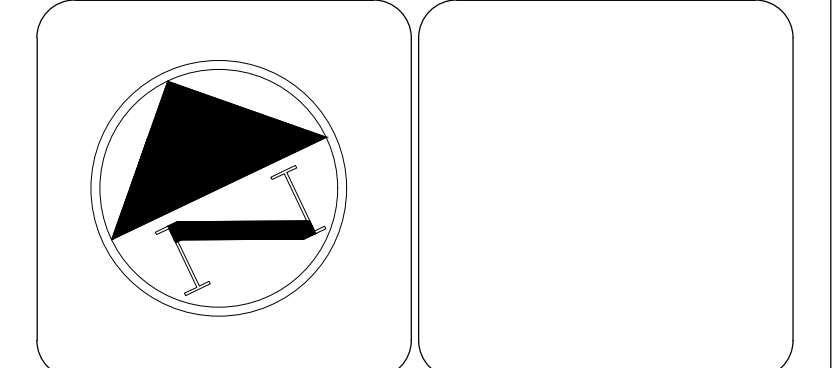
WELLINGS OF PICTON Inc.
COUNTY OF PRINCE EDWARD
RESIDENTIAL DEVELOPMENT
PHASE 2





GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

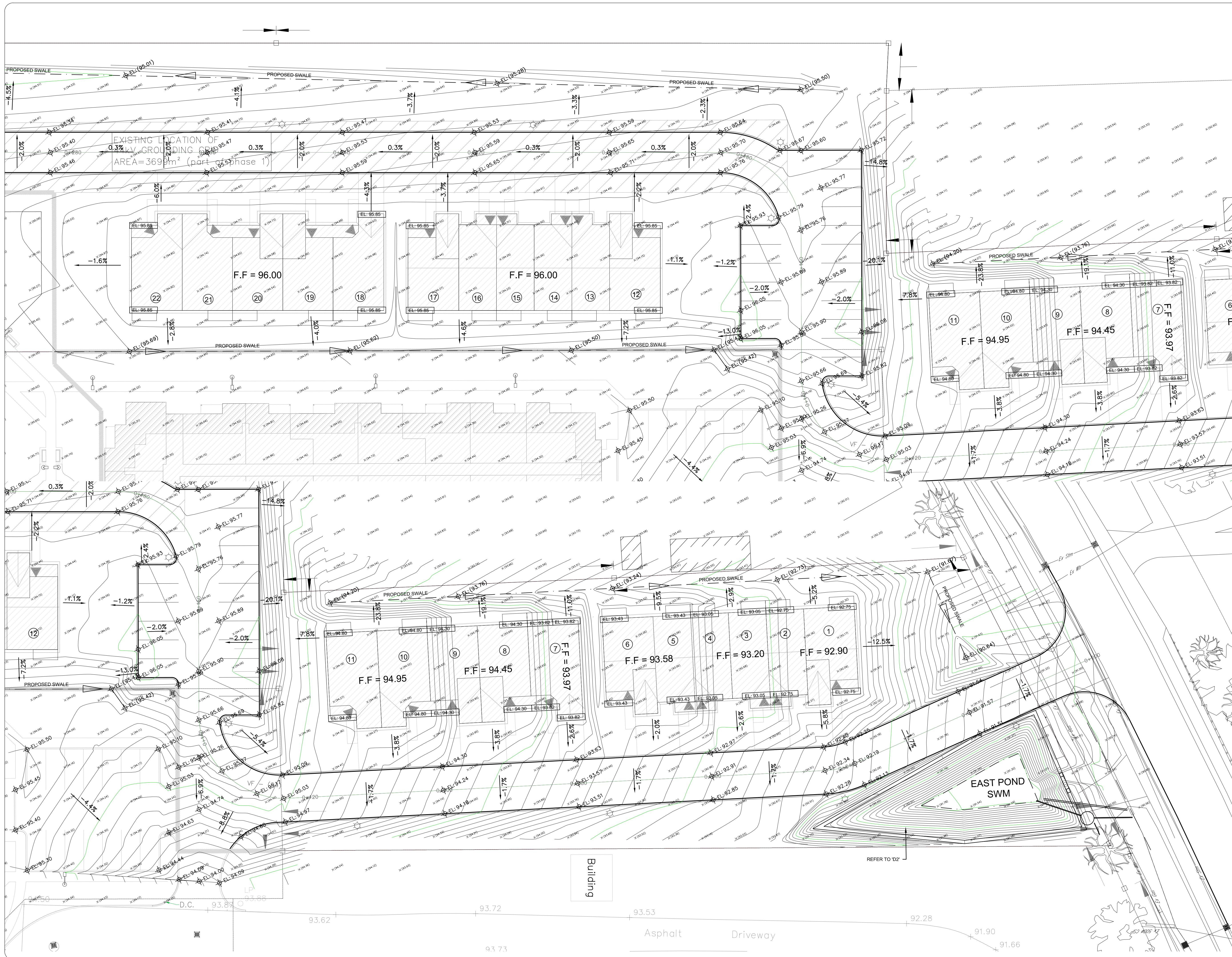
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL
 DEVELOPMENT
 PHASE 2

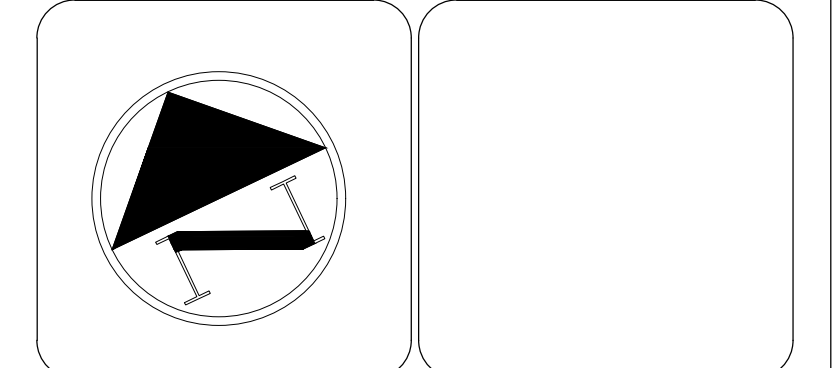
GRADING
 PLAN & PLAN

DRAWN BY: C.D.	PROJECT NO: 180-4466
DESIGNED BY: C.D. / S.S.	DATE: March 2019
CHECKED BY: S.S. / P.S.	SCALE: HORIZONTAL - 1:250 VERTICAL -
APPROVED BY: P.S.	CONTRACT NO: DRAWING NO: G1



GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

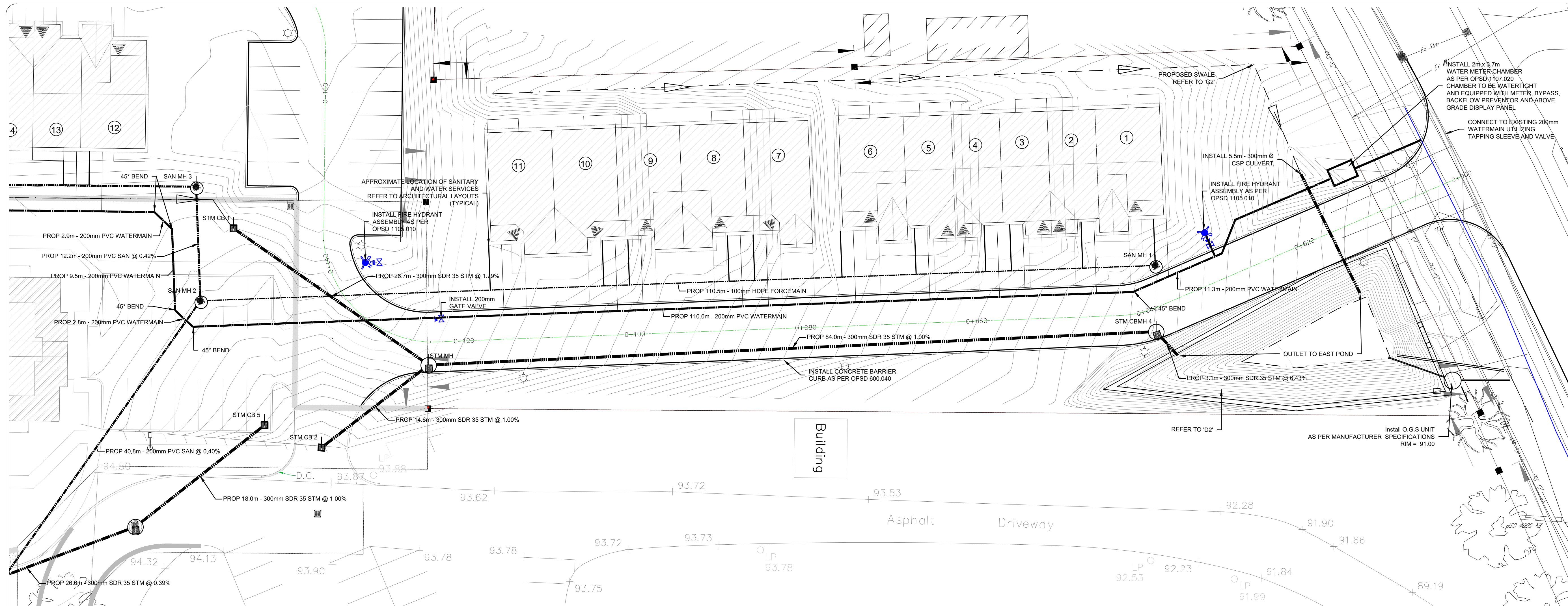
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL
 DEVELOPMENT
 PHASE 2

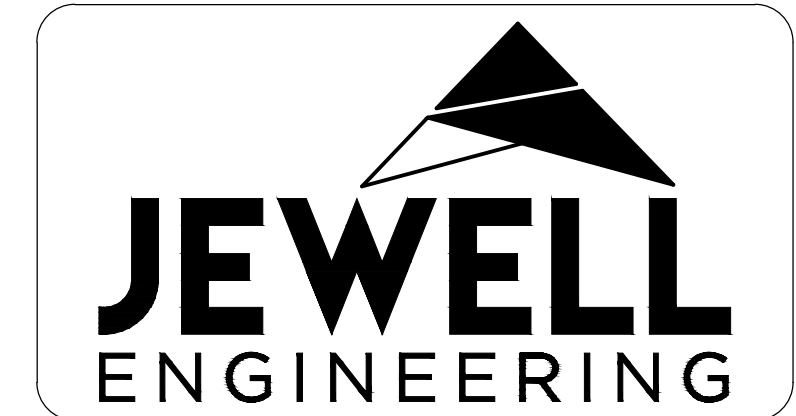
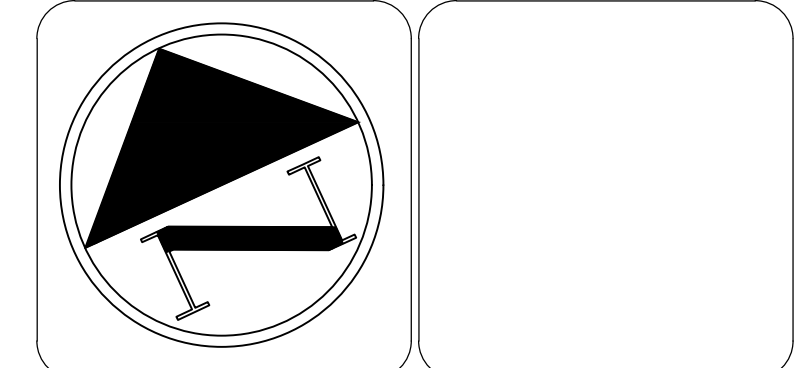
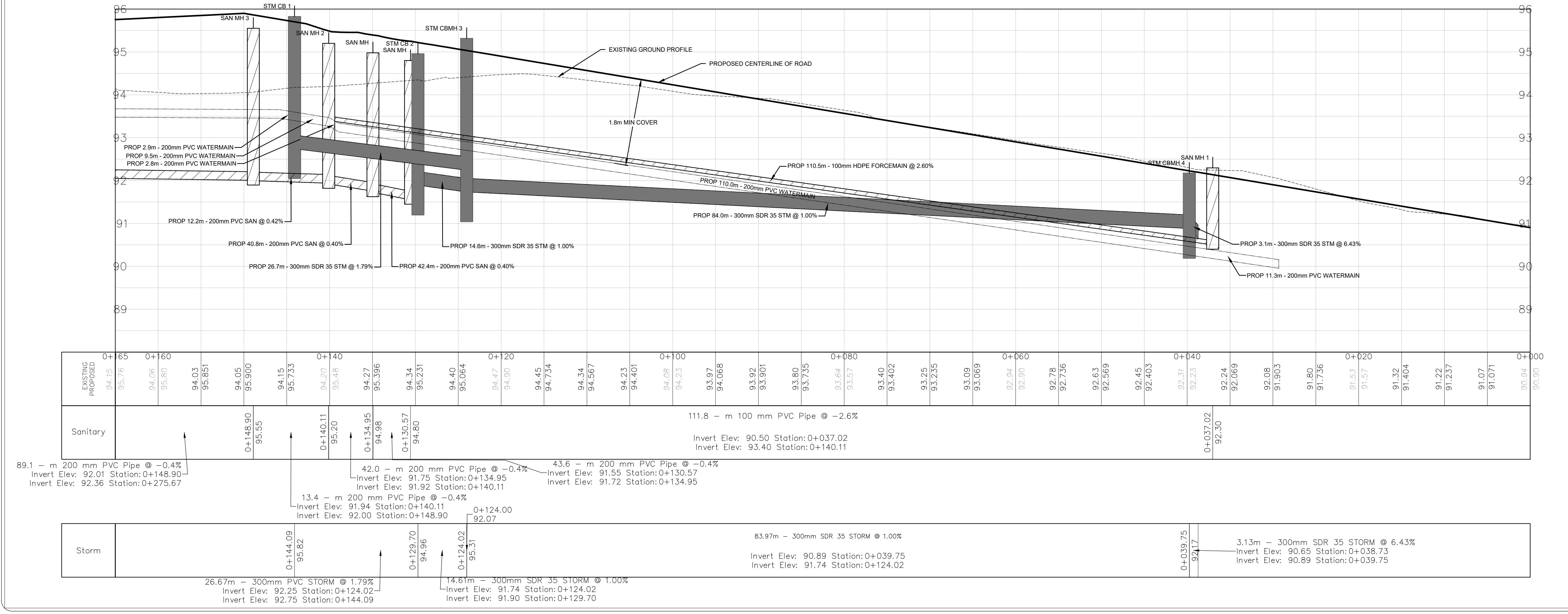
GRADING
 PLAN & PLAN

DRAWN BY: C.D	PROJECT NO: 180-4466
DESIGNED BY: C.D. / S.S.	DATE: March 2019
CHECKED BY: S.S. / P.S.	SCALE: HORIZONTAL - 1:250 VERTICAL -
APPROVED BY: P.S.	CONTRACT NO: DRAWING NO: G2



GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL
 DEVELOPMENT
 PHASE 2

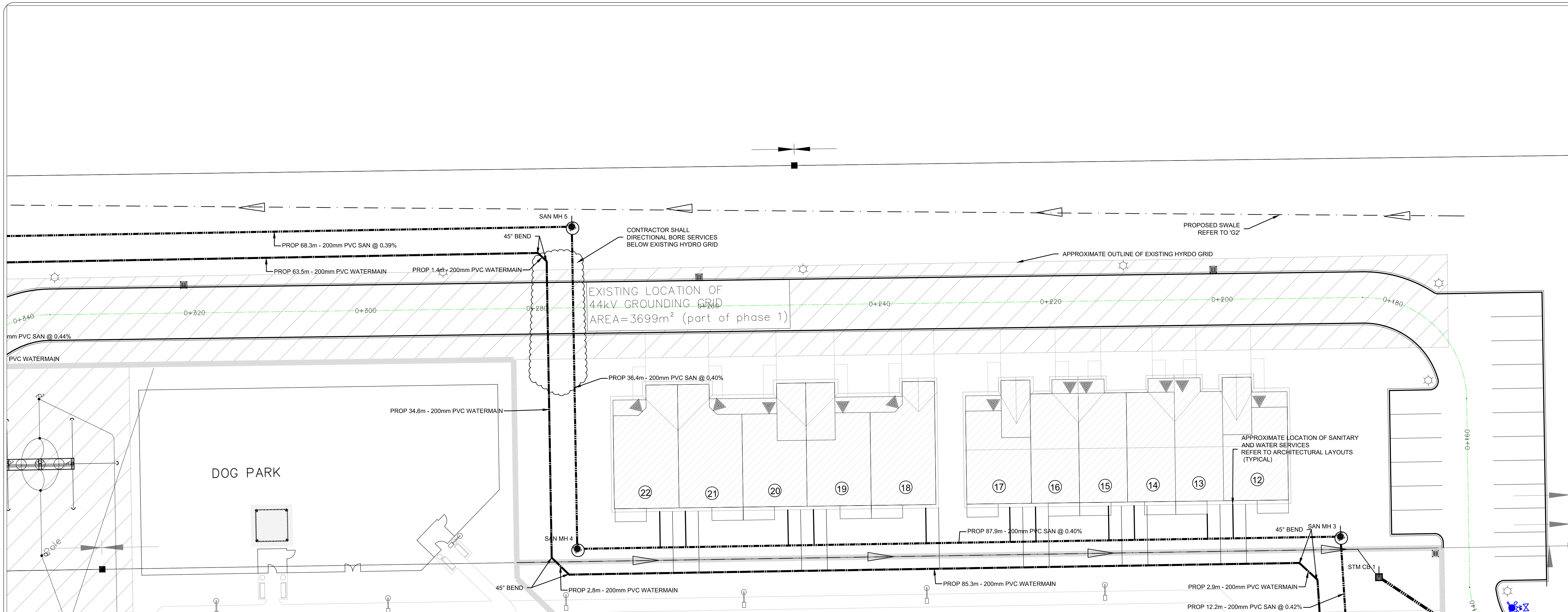
SITE SERVICING
 PLAN & PROFILE

DRAWN BY: PROJECT NO:
 C.D. 180-4466

DESIGNED BY: DATE:
 C.D. / S.S. March 2019

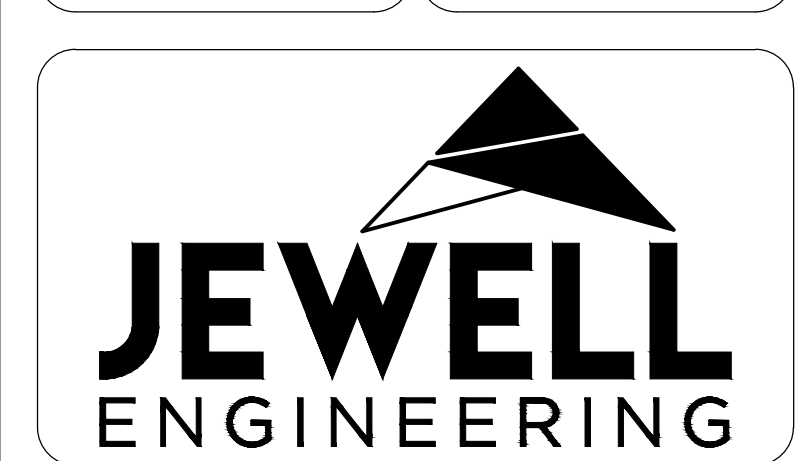
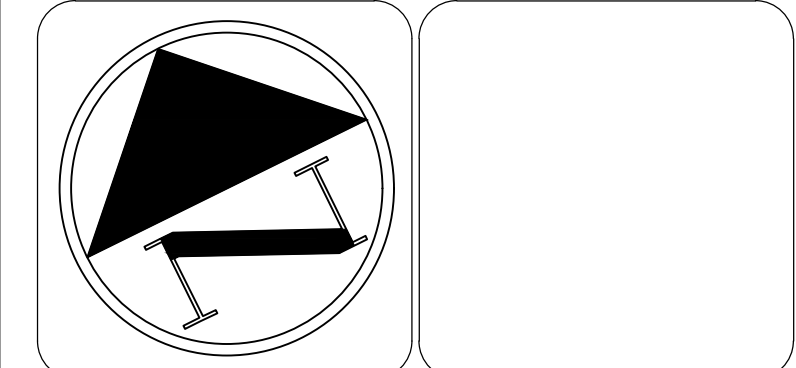
CHECKED BY: SCALE:
 P.S. / S.S. HORIZONTAL - 1:250
 VERTICAL - 1:50

APPROVED BY: CONTRACT NO: DRAWING NO:
 P.S. S1



GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

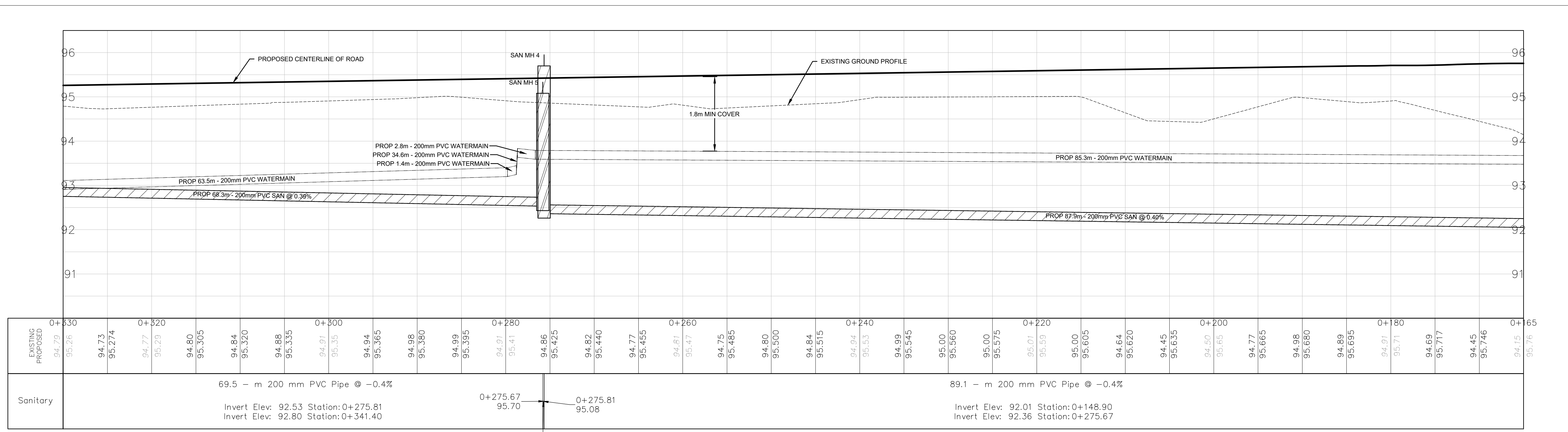
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19		

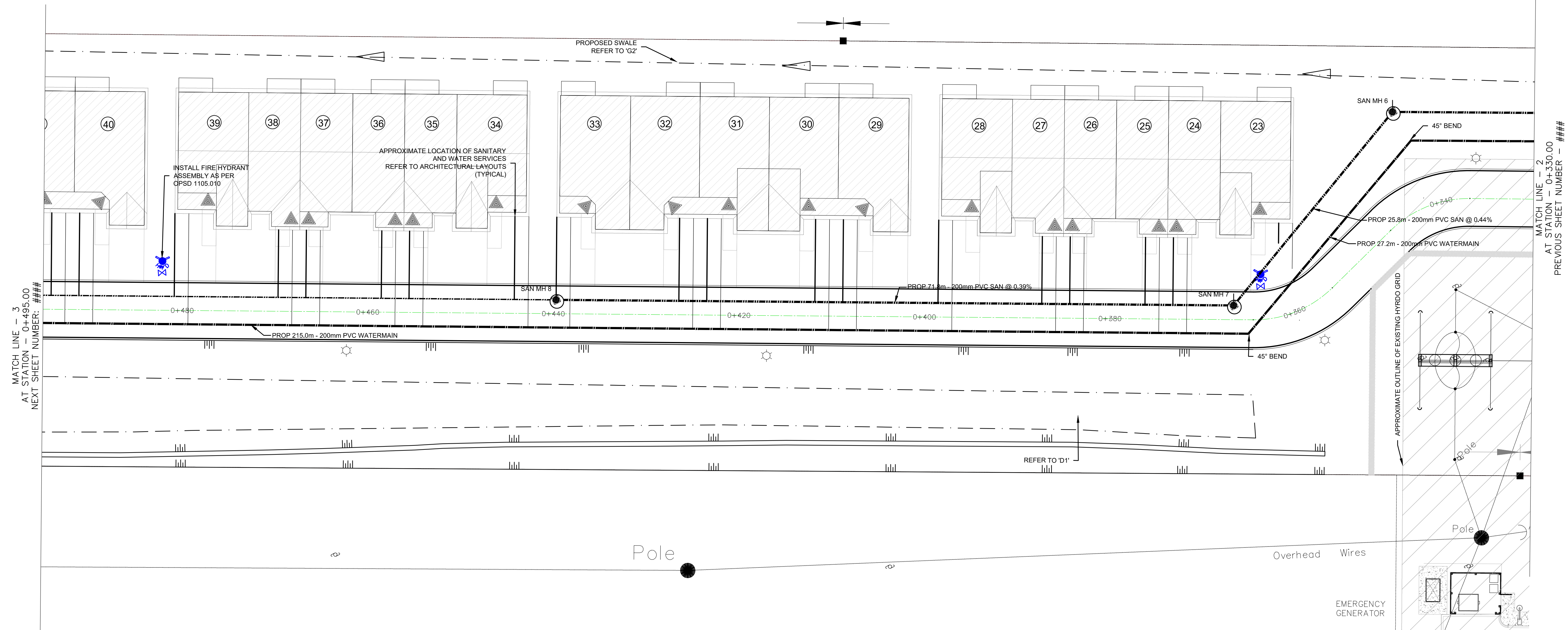


NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL DEVELOPMENT
 PHASE 2

SITE SERVICING
 PLAN & PROFILE

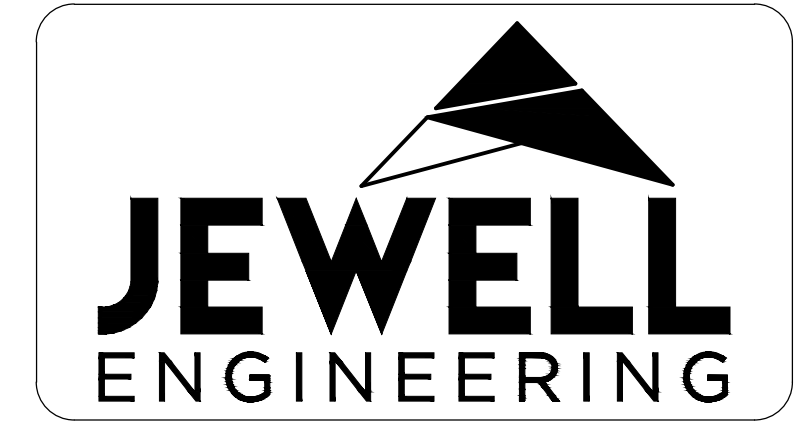
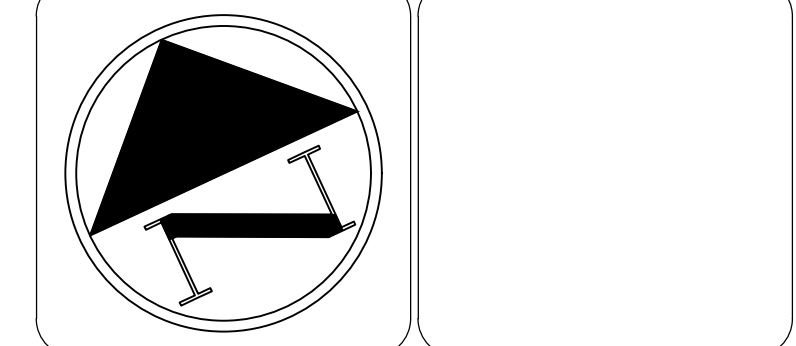
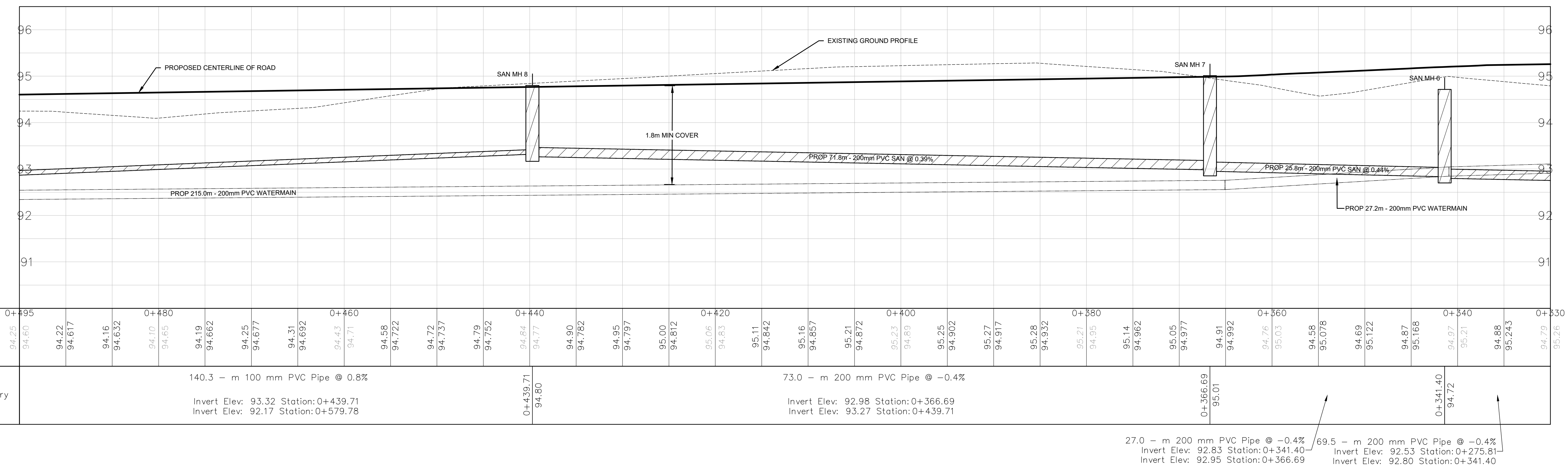
DRAWN BY: C.D. PROJECT NO: 180-4466
 DESIGNED BY: C.D. DATE: March 2019
 CHECKED BY: P.S. SCALE: HORIZONTAL - 1:250 VERTICAL - 1:50
 APPROVED BY: P.S. CONTRACT NO: DRAWING NO: S2





GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCED ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19		



NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL
 DEVELOPMENT
 PHASE 2

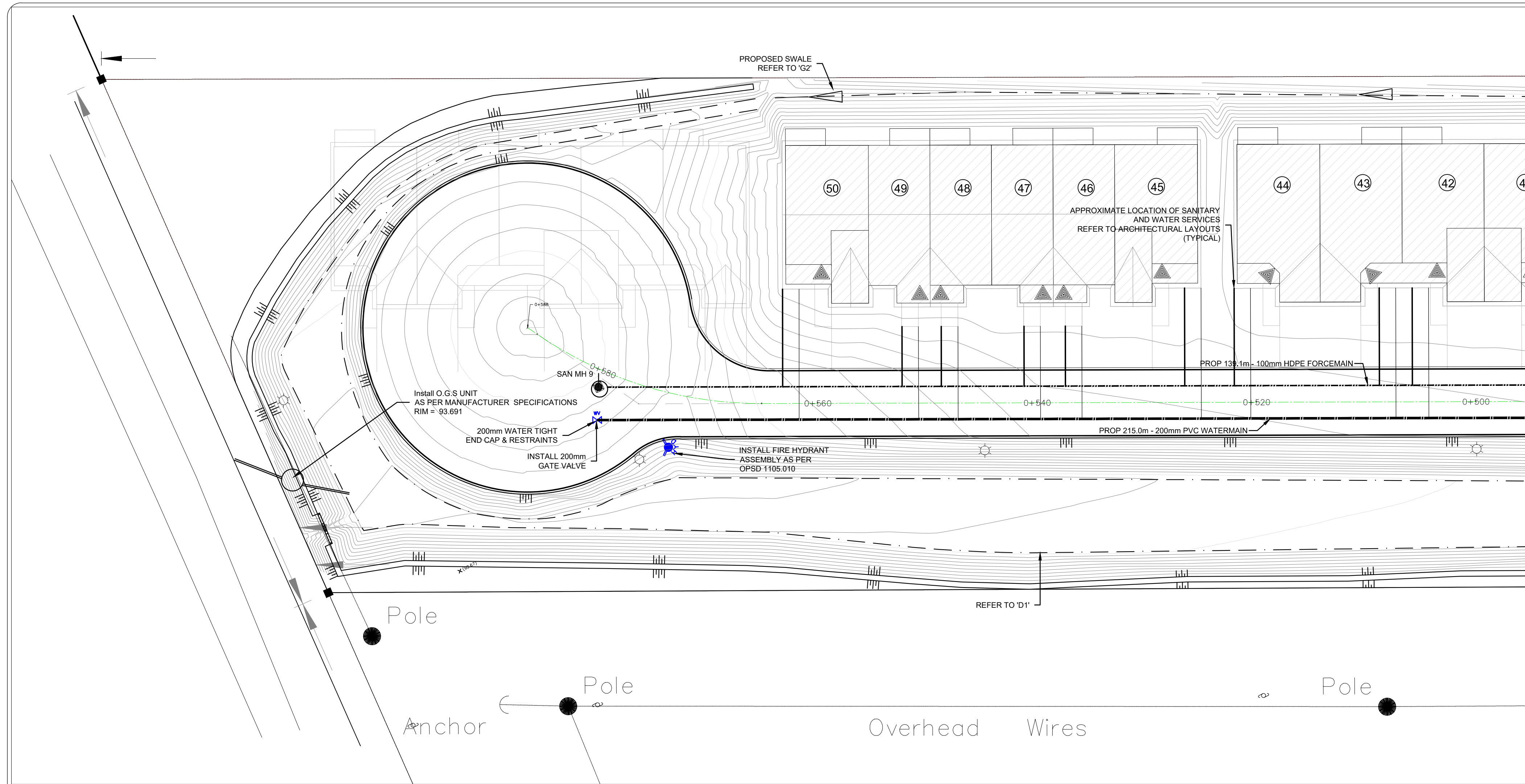
SITE SERVICING
 PLAN & PROFILE

DRAWN BY: PROJECT NO:
 C.D. 180-4466

DESIGNED BY: DATE:
 C.D. March 2019

CHECKED BY: SCALE:
 P.S. HORIZONTAL - 1:250
 VERTICAL - 1:50

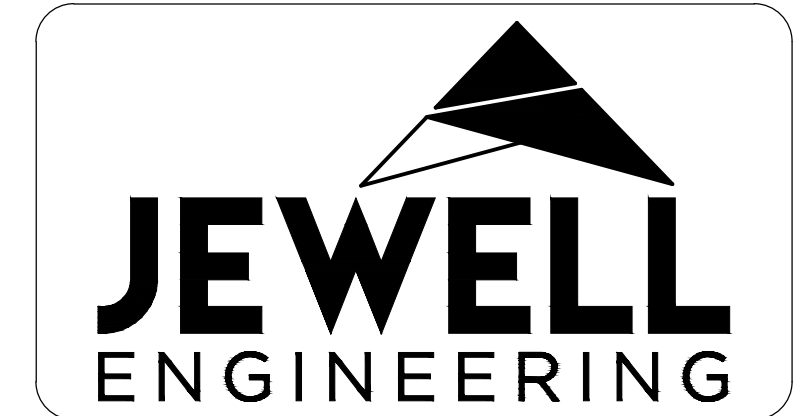
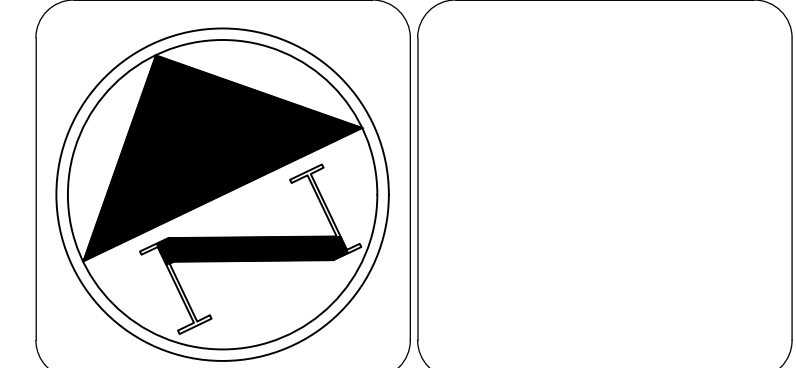
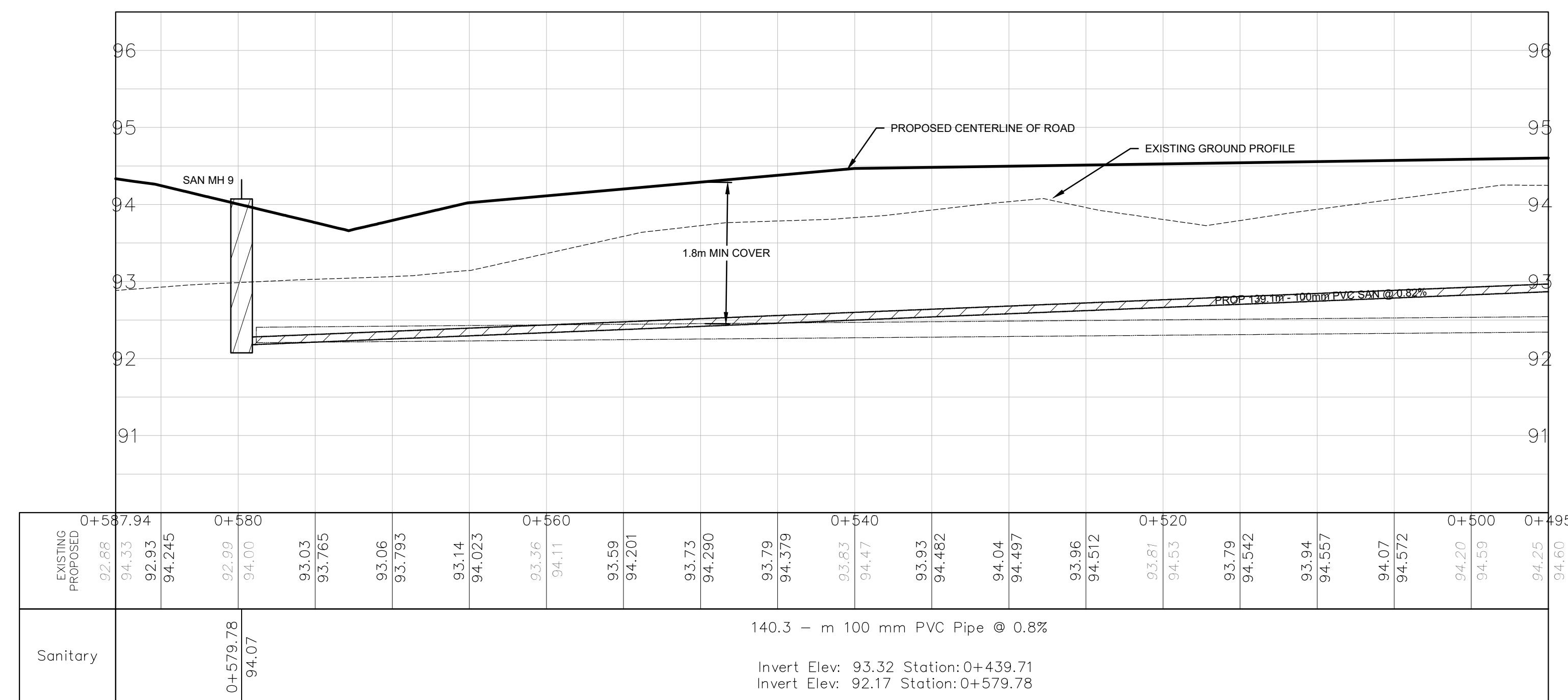
APPROVED BY: CONTRACT NO: DRAWING NO:
 P.S. S3



MATCH LINE - 3
AT STATION - 0+495.00
PREVIOUS SHEET NUMBER - ###

GENERAL NOTES:
ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
METRIC NOTE:
ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
** DRAWINGS ARE NOT TO BE SCALED **

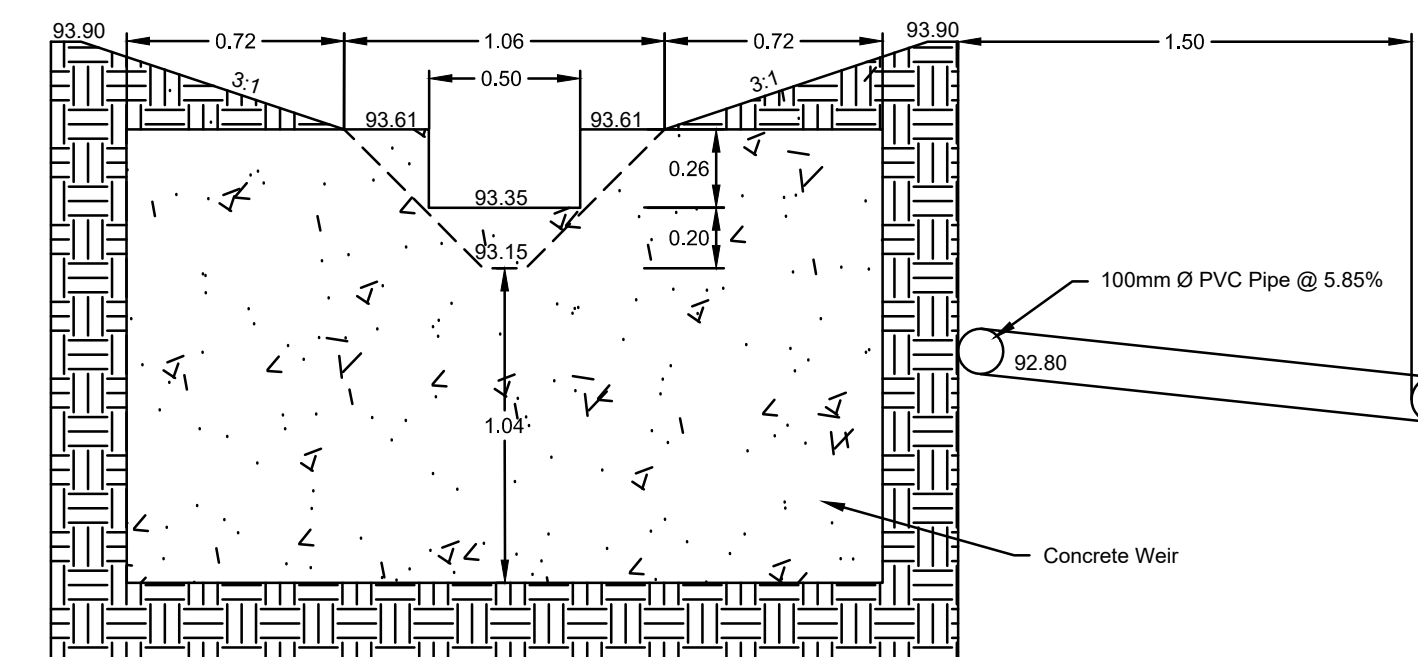
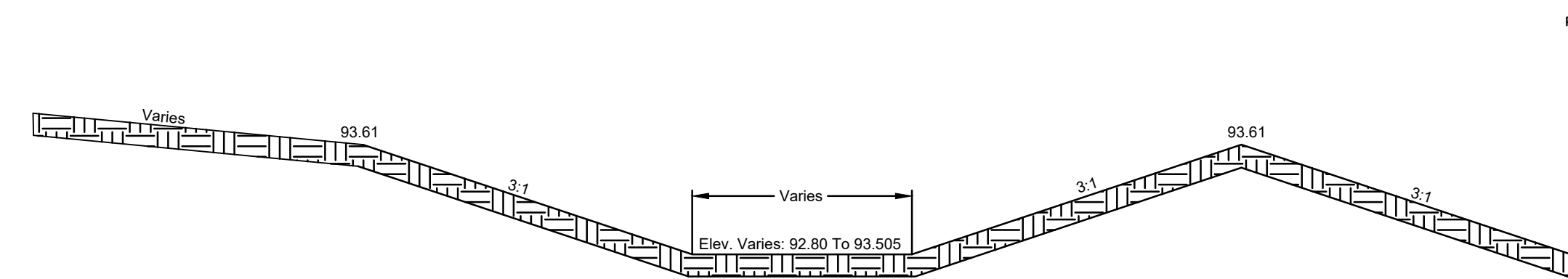
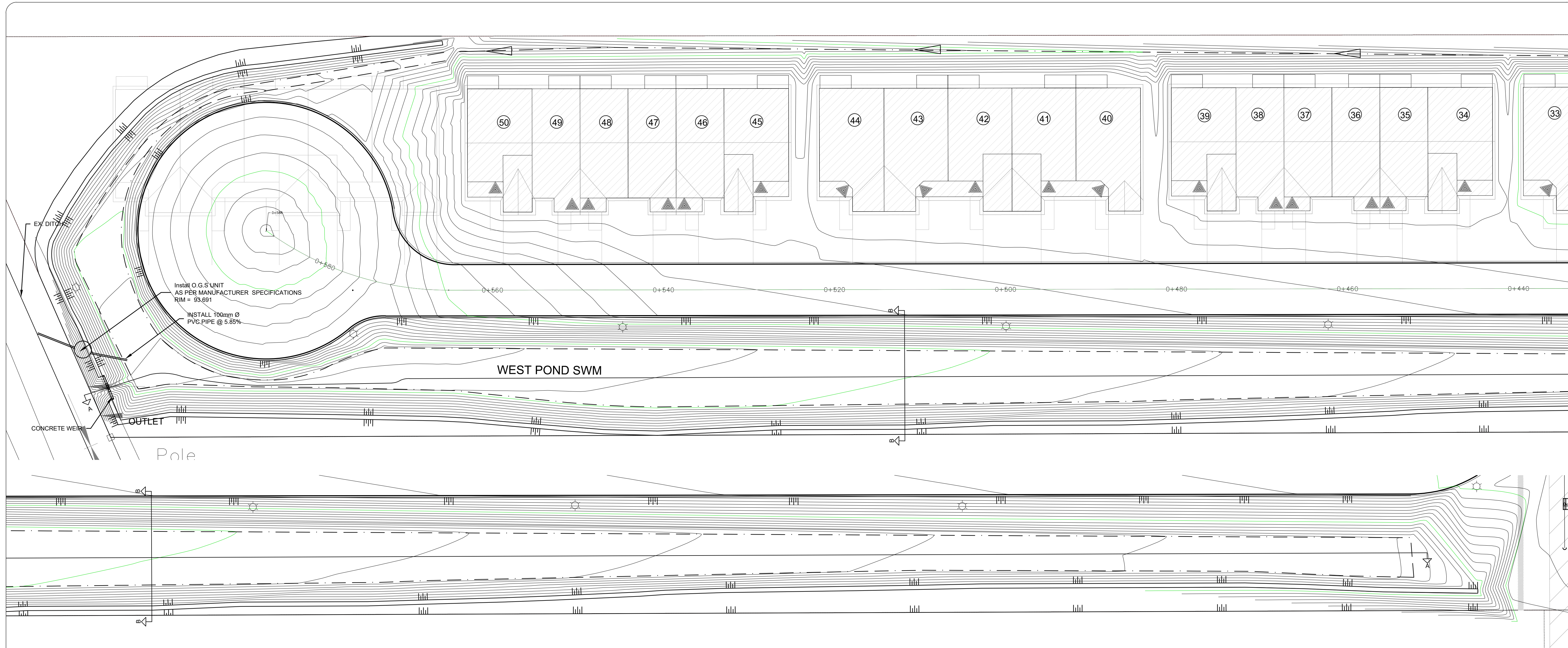
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19		



NAUTICAL LANDS GROUP
THE WELLINGS OF PICTON
PROPOSED RESIDENTIAL
PHASE 2

SITE SERVICING
PLAN & PROFILE

DRAWN BY: C.D. PROJECT NO: 180-4466
DESIGNED BY: C.D. DATE: March 2019
CHECKED BY: P.S. SCALE: HORIZONTAL - 1:250 VERTICAL - 1:50
APPROVED BY: P.S. CONTRACT NO: DRAWING NO: S4



GENERAL NOTES:
ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
METRIC NOTE:
ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
** DRAWINGS ARE NOT TO BE SCALED **

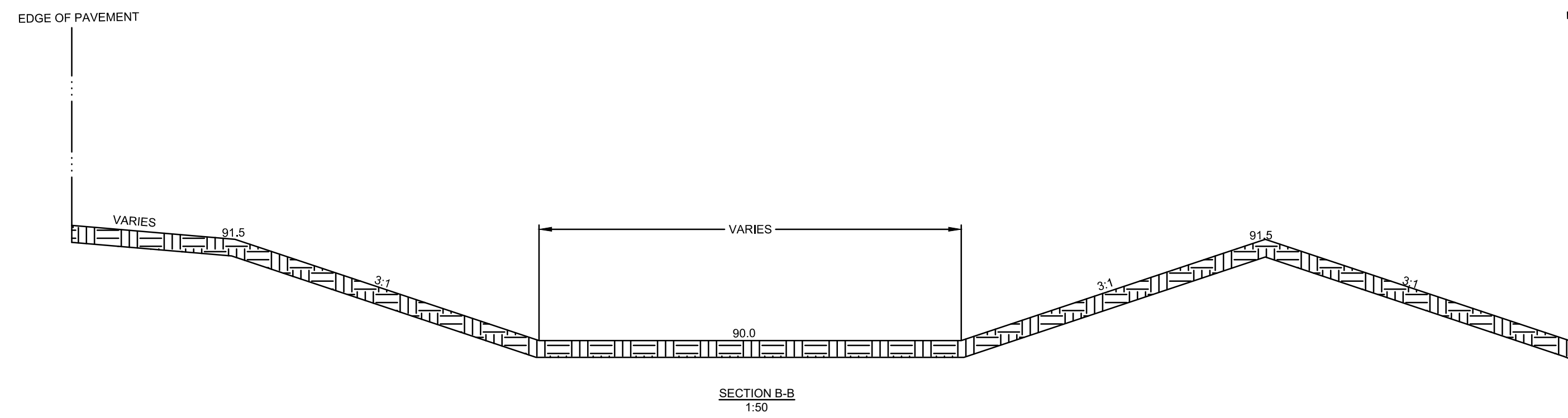
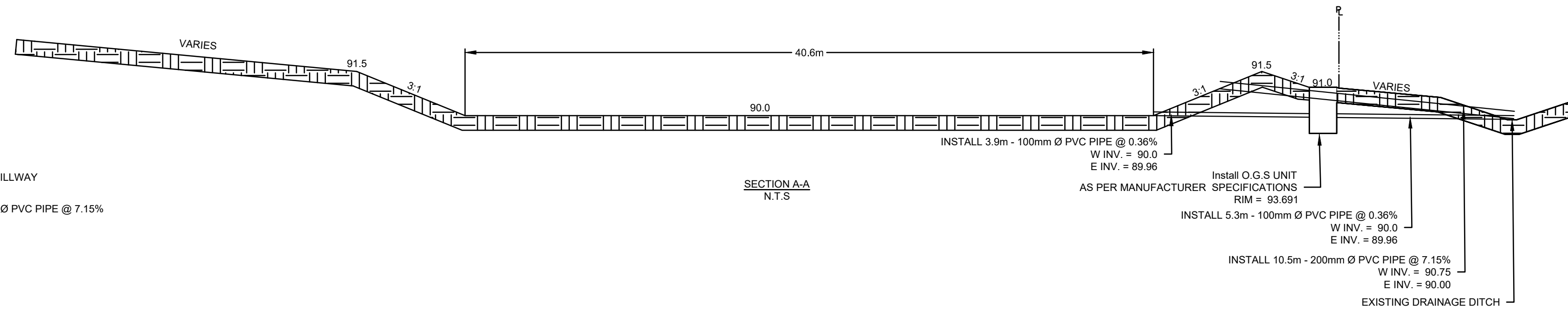
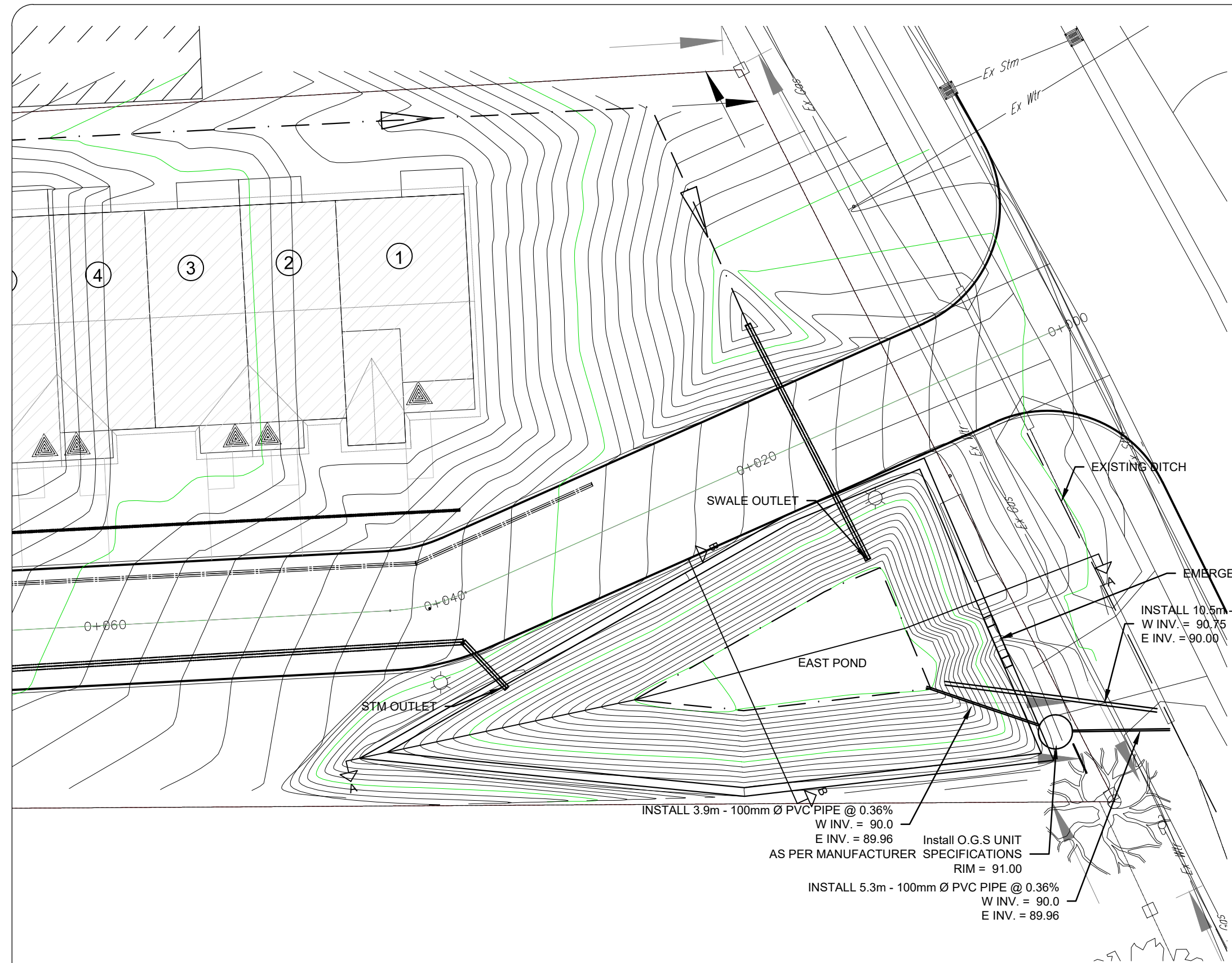
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
THE WELLINGS OF PICTON
PROPOSED RESIDENTIAL
DEVELOPMENT
PHASE 2

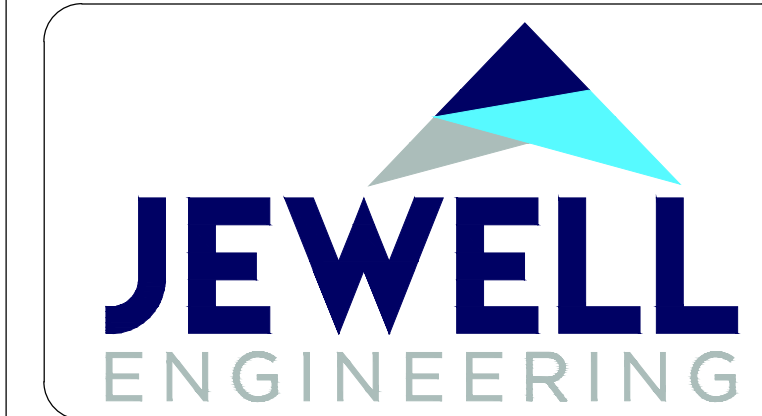
WEST POND DETAILS

DRAWN BY: C.D. PROJECT NO: 180-4466
DESIGNED BY: C.D. / S.S. DATE: March 2019
CHECKED BY: S.S. / P.S. SCALE: HORIZONTAL - 1:250
APPROVED BY: P.S. CONTRACT NO: DRAWING NO: D1



GENERAL NOTES:
ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
METRIC NOTE:
ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
** DRAWINGS ARE NOT TO BE SCALED **

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
THE WELLINGS OF PICTON
PROPOSED RESIDENTIAL
DEVELOPMENT
PHASE 2

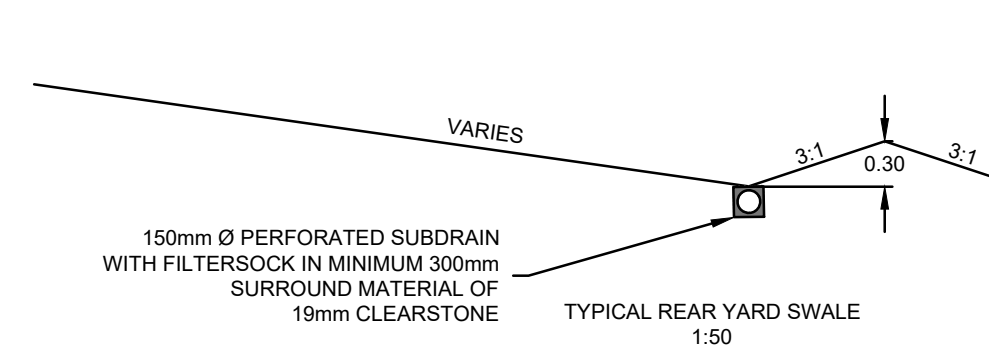
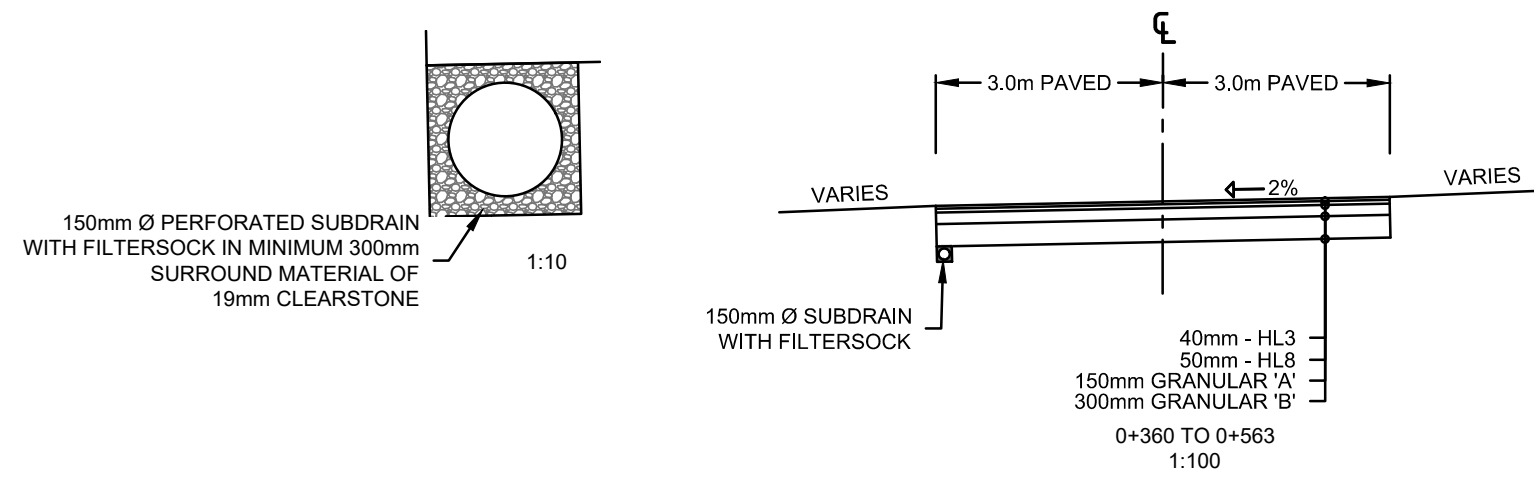
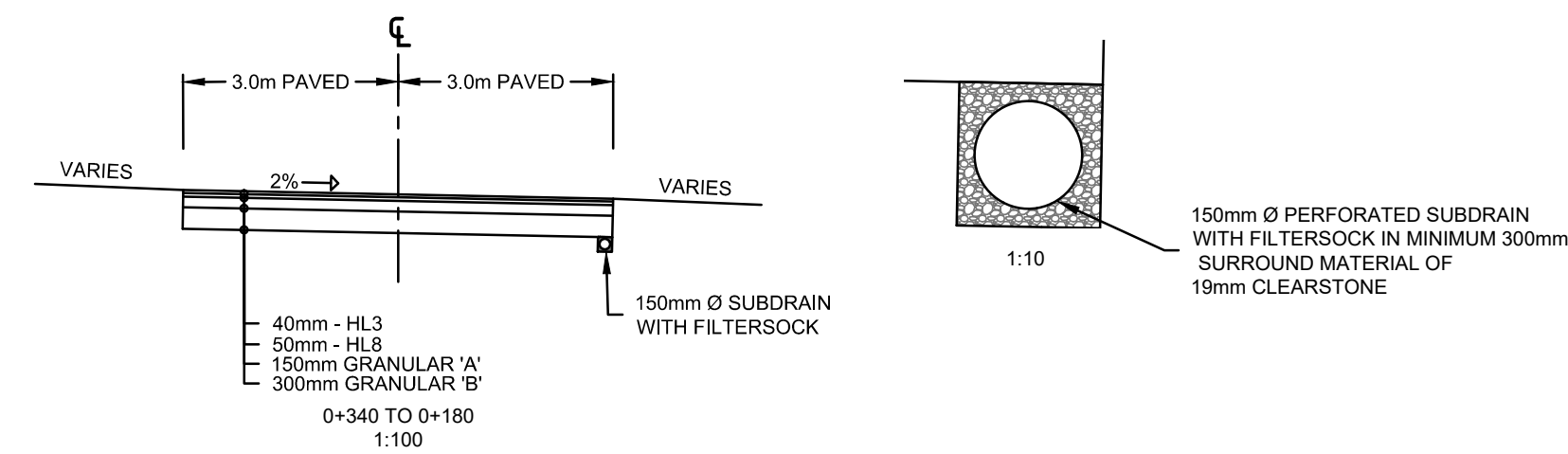
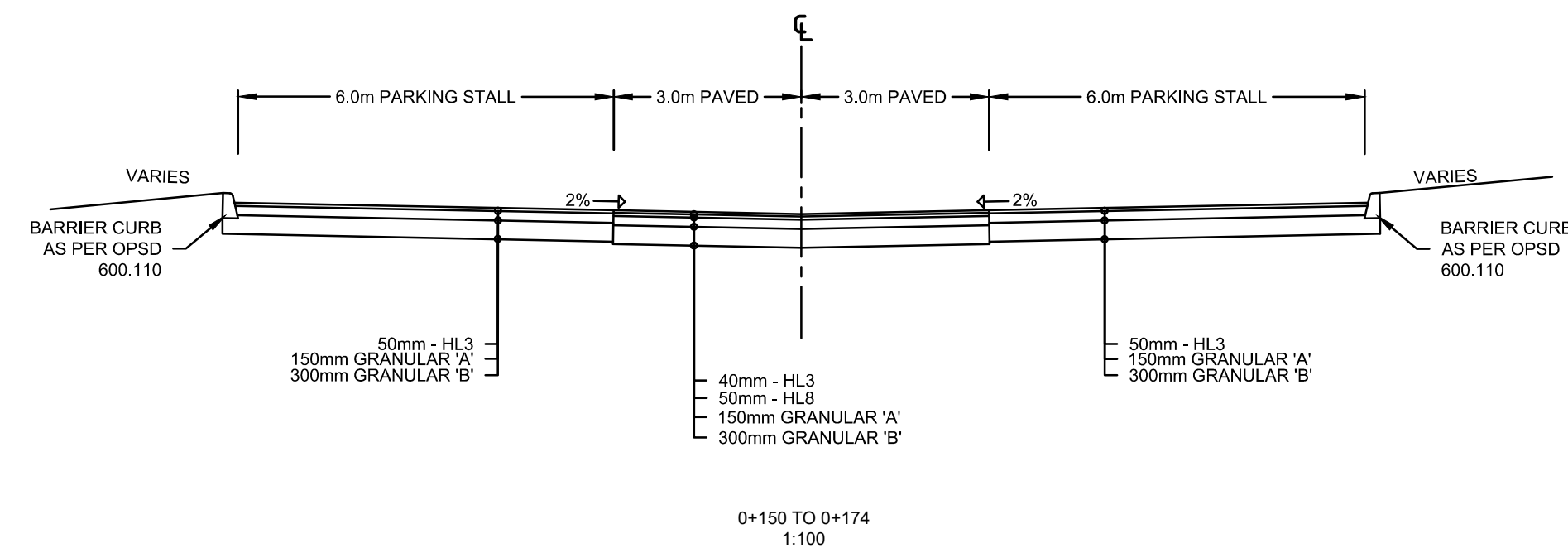
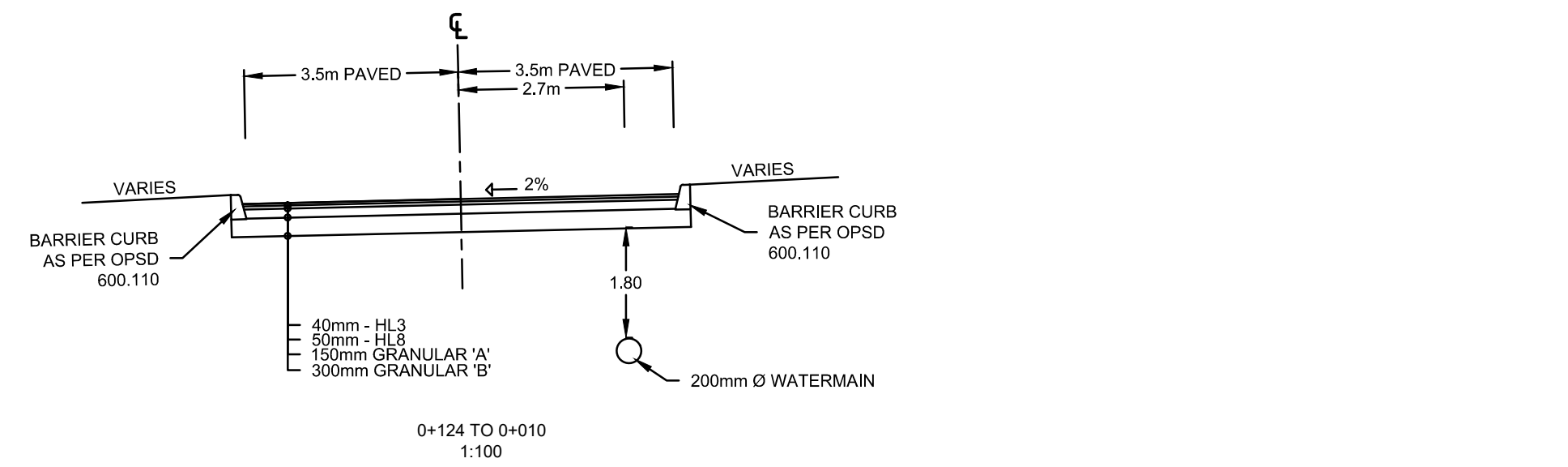
EAST POND DETAILS

DRAWN BY: PROJECT NO:
C.D. 180-4466

DESIGNED BY: DATE:
C.D. / S.S. March 2019

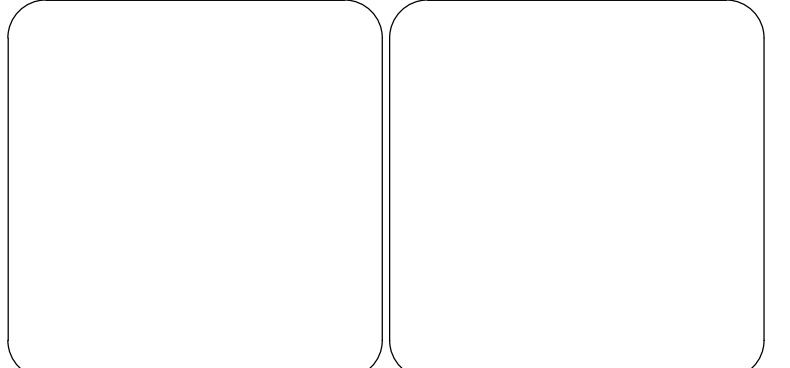
CHECKED BY: SCALE:
S.S. / P.S. HORIZONTAL - 1:250

APPROVED BY: CONTRACT NO: DRAWING NO:
P.S. D2



GENERAL NOTES:
 ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
 ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
 EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.
 METRIC NOTE:
 ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.
 ** DRAWINGS ARE NOT TO BE SCALED **

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/06/19	ISSUED FOR SITE PLAN	



NAUTICAL LANDS GROUP
 THE WELLINGS OF PICTON
 PROPOSED RESIDENTIAL
 DEVELOPMENT
 PHASE 2

DETAILS

DRAWN BY: C.D. PROJECT NO: 180-4466
 DESIGNED BY: C.D. / S.S. DATE: March 2019
 CHECKED BY: S.S. / P.S. SCALE: HORIZONTAL - VERTICAL -
 APPROVED BY: P.S. CONTRACT NO: DRAWING NO: D3

GENERAL CONSTRUCTION NOTES:

ALL WORK MUST HAVE COUNTY APPROVAL BEFORE COMMENCEMENT OF CONSTRUCTION AND WILL BE SUBJECT TO INSPECTION APPROVAL OF THE COUNTY.

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT.

THE OWNER CONSENTS AND AGREES NOT TO MAKE A MATERIAL SUBSTITUTION OR CAUSE A MATERIAL CHANGE TO THE APPROVED PLANS, WITHOUT NOTIFYING, FILING DETAILS, AND OBTAINING APPROVAL FROM THE ENGINEER / COUNTY.

ALL WATERMAIN / WATER SERVICE INSTALLATIONS SHALL BE DONE IN ACCORDANCE WITH OPSB, O.B.C. AND PRINCE EDWARD COUNTY UTILITIES STANDARDS AND SPECIFICATIONS.

WATERMAIN TO BE PVC DR18, COLOUR 'BLUE'.

ALL AREAS AS DISTURBED DURING CONSTRUCTION SHALL BE REINSTATED TO MATCH EXISTING CONDITIONS, AND TO THE SATISFACTION OF THE OWNER / ENGINEER.

CONTRACTOR SHALL INSTALL AND MAINTAIN HEAVY DUTY SILT FENCE BARRIER SYSTEM AS TO PREVENT EROSION AND SEDIMENTATION ENTERING THE ADJACENT PROPERTIES.

ON SITE BARRIER FREE PARKING SHALL BE PROVIDED SUBJECT TO THE COUNTY'S PARKING BY-LAWS REGULATING BARRIER FREE PARKING ON PRIVATE PROPERTY. THE OWNER AGREES TO INSTALL AT HIS EXPENSE, APPROPRIATE SIGNAGE FOR THE BARRIER FREE SPACES OF WHICH SHALL INCLUDE PAVEMENT MARKINGS, AND SIGNAGE INSTALLED A MINIMUM OF 1.0m AND A MAXIMUM OF 1.5m ABOVE GROUND LEVEL. THE OWNER SHALL BE RESPONSIBLE FOR INSTALLING SUCH SIGNAGE PRIOR TO OCCUPANCY OF THE BUILDING AND MAINTAINING OF SUCH.

SANITARY SEWERS

- OPSD - 701.010 PRECAST MANHOLE, 1200mm DIA.
- OPSD - 100L020 SEWER SERVICE CONNECTIONS
- OPSD - 802.010 BEDDING AND BACKFILL
- OPSD - 802.014 BEDDING AND BACKFILL
- OPSD - 401.040 MAINTENANCE HOLE FRAME AND COVER TYPE 'A' CLOSED COVER
- OPSD - 701.021 MAINTENANCE HOLE BENCHING
- OPSD - 704.010 MAINTENANCE HOLE AND CATCHBASIN ADJUSTMENT UNITS

PVC SANITARY SEWER PIPE SHALL BE 200mm PVC DR35, CSA SPECIFICATION B182.2 AND B182.4

ALL SANITARY SEWER MAINS SHALL BE INSPECTED BY CCTV PRIOR TO ASPHALT PLACEMENT

STORM SEWERS

- OPSD - 400.010 CB FRAME AND GRATE
- OPSD - 401.040 MAINTENANCE HOLE COVER AND FRAME TYPE 'A' CLOSED COVER
- OPSD - 701.010 PRECAST MAINTENANCE HOLE 1200mm²
- OPSD - 701.030 PRECAST MAINTENANCE HOLE 1200mm²
- OPSD - 704.010 MAINTENANCE HOLE AND CATCH BASIN ADJUSTMENT UNITS

- OPSD - 705.010 PRECAST CONCRETE CATCH BASIN
- OPSD - 705.020 PRECAST CONCRETE CATCH BASIN - TWIN INLET
- OPSD - 705.030 PRECAST CONCRETE DITCH INLET CATCH BASIN

- OPSD - 708.030 CATCH BASIN CONNECTION
- OPSD - 802.010 BEDDING AND BACKFILL
- OPSD - 802.014 BEDDING AND BACKFILL
- OPSD - 810.010 RP-RAP TREATMENT FOR SEWER AND CULVERT OUTLETS (TYPE 'B')

PVC STORM SEWER PIPE SHALL BE BELL AND SPOGOTED GASKET SEWER PIPE, CSA SPECIFICATION B182.4.

ALL STORM SEWER MAINS SHALL BE INSPECTED BY CCTV PRIOR TO ASPHALT PLACEMENT.

WATERMAINS

- OPSD - 802.010 BEDDING AND BACKFILL
- OPSD - 802.014 BEDDING AND BACKFILL
- OPSD - 1105.010 FIRE HYDRANT ASSEMBLY
- OPSD - 1108.011 CATHODIC PROTECTION FOR PVC WATERMAINS

PVC WATERMAIN SHALL BE 150mm DR18

ALL WATERMAINS SHALL BE PRESSURE TESTED AND CHLORINATED TO COUNTY OF PRINCE EDWARD STANDARDS.

PARKING LOT CONSTRUCTION

CONCRETE CURBS

- OPSD - 600.110 CONCRETE BARRIER CURB

SIDEWALKS

- OPSD - 310.010 CONCRETE SIDEWALK
- OPSD - 310.030 CONCRETE SIDEWALK RAMP

ASPHALT

- 40mm HL-3 HOTMIX ASPHALT, SURFACE COURSE
- 50mm HL-8 HOT MIX ASPHALT, BASE COURSE
- 150mm GRANULAR 'A'
- 300mm GRANULAR 'B' TYPE II

WATERMAIN NOTES

The requirements of OPSS 514 November 2007 shall apply inclusive as amended to include the following:

- (1) Clause 514.05.02 "Bedding Materials" is amended that granular bedding shall be Granular 'A' conforming to the requirements of OPSS 1010 at a minimum depth of 200 mm.
- (2) Clause 514.05.03 "Cover Materials" is amended in that cover shall be granular 'A' material conforming to the requirements of OPSS 1010 minimum depth of 300 mm above crown of pipe.
- (3) Backfill shall be selected native material.
- (4) Minimum installation depth shall be 1.6 m with 0.5 m separation.

OPSS 701 is amended to include the following:

1. Watermains and Fittings shall conform to the following:

Plastic Pipe

- (a) Plastic pipe shall conform to AWWA C900-Poly (Vinyl Chloride) (PVC) Specification, SDR 18 for pipe up to 300 mm in diameter, for larger pipe sizes and subject to the Contract Administrator's approval, a larger SDR number may be used, however, the minimum wall thickness allowed will be 28 mm.

- (b) The pipe shall be homogeneous throughout, free from voids, cracks, inclusions, and other defects. PVC Fittings will not be used.

- (c) The colour is to be "Blue Brute".

- (d) Service connections shall be by stainless steel saddle a minimum of 150 mm wide surrounding the PVC main or by pre-manufactured PVC tees as recommended by the pipe manufacturer.

2. Insulation required for water mains and services which are not buried 1800 mm or within 1.8 m of a storm structure shall be insulated with 50 mm rigid insulation approved by the Engineer.

3. All non-metallic pipes must have tracer wires, Type #12 - Stranded Copper Wire, strapped to the pipe every three meters. Where the existing system does not contain a tracer wire, the new wire shall be connected to a metallic fitting or grounded using a rod or plate as approved by the Municipality.

Watermains con'd

Laying and Jointing of Pipes

- 1) The open end of pipe shall be plugged whenever workers are not actively engaged in joining pipes to prevent entrance of dirt, water, small animals, etc. A water-tight sewer test plug shall be used for the purpose to prevent any water or other foreign materials from entering the new pipe.

- 3) The Contractor shall keep the trenches free of water while pipes are being laid and jointed, and during pressure testing and inspection.

- 4) Before the pipe, fittings, valves, and hydrants are installed, they shall be cleaned of all dirt, oil, grease, etc. and dried.

- 5) Where it is not possible to cross above or below existing infrastructure providing a minimum of 500 mm vertical separation between the invert of the existing infrastructure and the crown of the watermain, the length of water pipe shall be centered at the point crossing so that the joints are equal distance from the existing infrastructure. When a clearance of 300 mm cannot be avoided non-shrink grout shall be used extending one meter in either direction from the pipe.

- 6) Cathodic protection to meet Ontario Provincial Standard Drainage and Specifications refer to OPSS 1108.011 and OPSS 702.

- One 2.5 kg zinc anode for every 500 m of tracer wire
- One 7.7 kg magnesium anode on every valve, hydrant and fitting. All thermite weld connections shall be coated with Roybond 747 Primer and Royton "Hardy Cap" or approved equivalent.

Pipe and Joint Restraint

- 1) General

- a) Mechanical joint restraint shall be on all fittings as required and be used subject to the prior approval of the Engineer.
- b) The number of joints requiring mechanical thrust restraint shall be set by the Engineer.

- 2) Eye Bolts and Rods

Eyebolts shall be zinc coated ANSI/ASME B1J 19 mm. Rods shall be ANSI/ASME B1.1 19 mm Grade 316 stainless steel. The number of rods required will be as set out below:

Number of 19 mm Rods for Eye Bolt Restraint	Pipe Size	Dead End, Tee, & Dead End Valve	Fitting	600 Elbow Fitting	450 Elbow Fitting
22.00 Elbow	150 mm	2	2	2	2
	200 mm	2	2	2	2
	250 mm	3	3	2	2
	300 mm	4	4	2	2
	400 mm	Not permitted	Not permitted	Not permitted	3
	2				

Watermains con'd

- 3) PVC Pipe Restraint

- a) Mechanical joint restraint devices for PVC Pipe shall incorporate a series of machined serrations (cast serrations are not permitted) on the inside diameter to provide restraint, exact fit, and 350 degree contact and support of pipe walls. Restraint devices shall be manufactured of high strength ductile iron, ASTM A 536, Grade 65-45-12. Bolts and connecting hardware shall be of high strength low alloy material in accordance with ANSI/AWSA C111/AS11.

- b) All joint restraint devices for PVC shall carry a water working pressure rating equivalent to the full rated pressure of the PVC pipe on which they will be installed, with a minimum factor of safety of 2:1 in any nominal pipe size. In addition, they shall meet or exceed the requirements of Unit-B-13-94, Recommended Performance Specification For Joint Restraint Devices For Use with Polyvinyl Chloride (PVC) Pipe.

- c) Restraint Devices shall be Uni-Flange Series 1300, 1350, 1360, 1360 or approved equal.

- d) Series 1300 - For restraint of PVC pipe with D1 mechanical joint of D1 Push-on fittings with "ear tags".

- e) Series 1350 - For restraint of PVC pipe bell in spigot joints. (new installations).

- f) Series 1360 - For restraint of PVC pipe in PVC pressure fittings joint (AWWA C207 PVC Fittings or fabricated PVC pressure fittings)

- g) Series 1360 - For restraint of PVC pipe bell and spigot joints (new or existing installations).

- 4) Backflow Prevention

- a) The Contractor will provide all connection material and fittings for connection of the Contractor's backflow prevention connection for testing, disinfection and flushing

Marking of Mains and Services

- 1) All non-metallic mains and services shall have #12 tracer wire. The tracer wire shall be looped on the outside of each valve box. The loop shall have one lead thermo welded to the valve box and the top of the loop shall be extended to inside the valve box through an opening cut into the valve box 50 mm below the bottom of the bell.

- 2) All mains and services shall be marked with a 50 mm wide detachable metallic tape blue in colour with the wording "Buried Water Line Below". The tape shall be SETON PRODUCT #48302 or equivalent. The tape shall be laid 300 to 450 mm above the main or service.

- 3) The coats of tracer wire and marking tape shall be included in the cost of pipe.

Watermain Passing Under Culverts

- 1) Crosses or water mains passing under culverts shall clear the invert of the culvert by a minimum of 1 m and provide frost protection in accordance with OBC 7.3.5.4 to achieve 1.80 m of equivalent depth.

- 2) If bands are used to pass under the culvert, such bands shall have a maximum change in direction of 22 1/2 degree. Thrust restraints shall be mechanical.

- 3) The Unit price shall include all fittings, extra pipe, extra work and croses. If rock is encountered it shall be paid for as rock excavation.

Flushing of Mains

- 1) The disinfection procedure shall adhere to ANSI/AWWA specification C651-99 subject to the following changes:

- a) Two (2) soft foam swabs shall be sent through the water main, after the main is flooded and before chlorination.

- b) Disinfection/chlorination shall be by sodium hypochlorite. The concentration shall be at least 15 mg/L of free chlorine after twenty-four (24) hours.

- c) The initial bacteriological sample shall be taken at least four (4) hours after the main is flooded with distribution water.

- d) All sampling shall be under the direct supervision of a person qualified to sample in O. Reg. 170/03 using chain of custody procedures as practiced by the Municipality.

- e) Only licensed operators employed by the Municipality are authorized to operate valves, pressure reducing stations and hydrants.

Hydrant Assemblies

Hydrant Assembly as per OPSS 1105.010

OPSS Form 701 is amended by the following:

- i) In Clause 701.05.11 "Hydrants" add the following:

- a) Hydrants shall be Inverter 33(b) Century Hydrant, or as approved on Municipality suppliers list.

- b) Hydrant to be completed with two - 62 mm hose couplings CSA B89-2 Ontario Fire Marshal Standard Thread, and one 112 mm pumper nozzle, 31 mm square operating nut with CSA specified screw thread and mechanical joint lock to match watermain, damper nozzle must be shorts
- c) Colour - Metro Yellow. Hydrants shall be repainted with one finish paint coat, metro yellow, following installation.
- d) Direction of Opening - Counter Clockwise

- e) Hydrant to be supported with concrete blocking and thrust restraints as required and 19 mm clear crushed stone as shown on standard drawing.

- f) Hydrant loads shall be ductile iron cement mortar lined pressure Class 350 pipe in accordance with Clause 701.05.02.

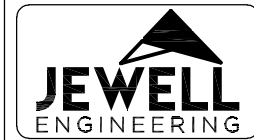
- ii) In Clause 701.05.10.01 "General" add the following: The valves shall open to turning in a counter-clockwise direction".

GENERAL NOTES
 ALL DIMENSIONS TO BE GIVEN UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS ARE TO BE REPORTED TO THE CONTRACT ADMINISTRATOR.
 ALL MATERIALS TO BE USED SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR. THE CONTRACTOR SHALL OBTAIN THE NECESSARY APPROVALS FOR CONSTRUCTION OF THE WORK.
 EXISTING UTILITIES AND OBSTRUCTIONS SHALL BE IDENTIFIED AND MARKED PRIOR TO CONSTRUCTION.
 ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

NO.	DATE	DESCRIPTION	BY

--	--



WELLINGS OF PICTON INC.
 COUNTY OF PRINCE EDWARD
 PHASE 2

GENERAL NOTES

DRAWN BY: C.D.	PROJECT NO: 180-4468
DESIGNED BY: C.D.	DATE: March 2019
CHECKED BY: P.S.	SCALE: HORIZONTAL: 1:250 VERTICAL: 1:50
APPROVED BY: P.S.	CONTRACT NO: DRAWING NO: GN1