COWICHAN VALLEY REGIONAL DISTRICT
ENGINEERING SERVICES

ADDENDUM NUMBER 2

REQUEST FOR PROPOSALS
ES-020-17 CVRD CONDITION ASSESSMENTS
April 26, 2017

This Addendum shall be read in conjunction with and considered as an integral part of the Proposal Documents; revisions supersede the information contained in the original drawings, specifications or previously issued Addendum. Proposal Price submitted shall include all items of this Addendum.

No consideration will be allowed for any extra due to any proponent not being familiar with the contents of this Addendum.

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON THE PROPOSAL SUMMARY SHEET (Page 2) AS BEING RECEIVED AND THE REQUIREMENTS INCLUDED IN SUBMISSIONS FOR PROPOSAL NO.ES-020-17.

The Addendum is as follows:

A. Clarifications

1. Will CVRD extend the proposal submission date?

   Answer: Yes, the proposal submission date has been extended to May 8, 2017 at 2:00pm.

2. Please confirm if all fixed furnishings are excluded in the scope (ex. stadium seating within the arena), with the exception of the E&F within the Optional Scope of work for the Cowichan Performing Arts Centre?

   Answer: Yes. Stadium seating and other fixed furnishing are excluded, with the exception of the optional scope for the Cowichan Performing Arts Centre.

3. Please confirm if security systems and IT systems are to be included within the scope of work?

   Answer: No. Security and IT Systems are not included in scope.

4. Does the CVRD expect the use of specialty services/ consultants for assessments related to marine structures?

   Answer: No. The CVRD is expecting a high level visual inspection.

5. For the pricing envelope: Does the CVRD require one Proposal Bid Sheet per building or for all buildings together? Should the Proposal Bid Sheet(s) include optional pricing?

6. Answer: The pricing envelope should include the following documents:
    i. One (1) Proposal Bid Sheet (page 11) – with all-inclusive price to provide minimum requirements for all CVRD sites (sum of column K in UPDATED Schedule A);
    ii. Hourly Rates (page 13);
    iii. List of Sub-contractors (page 14);
    iv. UPDATED Schedule A (Addendum 1); and
    v. Detailed Work Schedule **with fees**.

7. Does the CVRD still require a 'Detailed Work Schedule **with fees**'?

    Answer: Yes. A Detailed Work Schedule **without fees** must be included in the proposal submission, and a Detailed Work Schedule **with fees** must be included in the pricing envelope.

B. Additional Resources

Available resources for Parks structures are included in this addendum and include:
1. Site #17 Mill Bay Wharf – Underwater Survey (2014)
2. Site # 20 Shawnigan Hill Athletic Park – Washroom Building Drawings
3. Site # 35 Bright Angel Park – Washroom Building Drawings

WESTCOAST DIVING CONTRACTORS LTD.

June 17th 2014

Attention Michael Miller
CVRD Cowichan

Regarding Underwater Inspection of the Mill Bay Small Craft Dock

On June 16th 2014 Westcoast Diving Contractors Ltd conducted an underwater survey of the above mentioned dock facility. We recorded the dive with digital video and found some of the pilings completely rotten. We have listed the pilings below.

Floating dock pilings

East pile group
Pile 1 Rotten piling 0142 on DVD
Pile 4 Rotten piling 0410
Pile 6 Rotten Piling 0630
Pile 7 Rotten piling 0740

North group
Piling 2 Rotten Piling 1508

Main Dock
Row 2 piling 3 Holes in piling when probed and the pile is hollow in the center 4ft from bottom. 2800 on DVD

Box 4545 Stn A
Nanaimo, BC V9R 6E8
www.WestcoastDiving.ca

John Dekker
250-951-1875 / 250-954-1801
e: jbd@bcsupernet.com

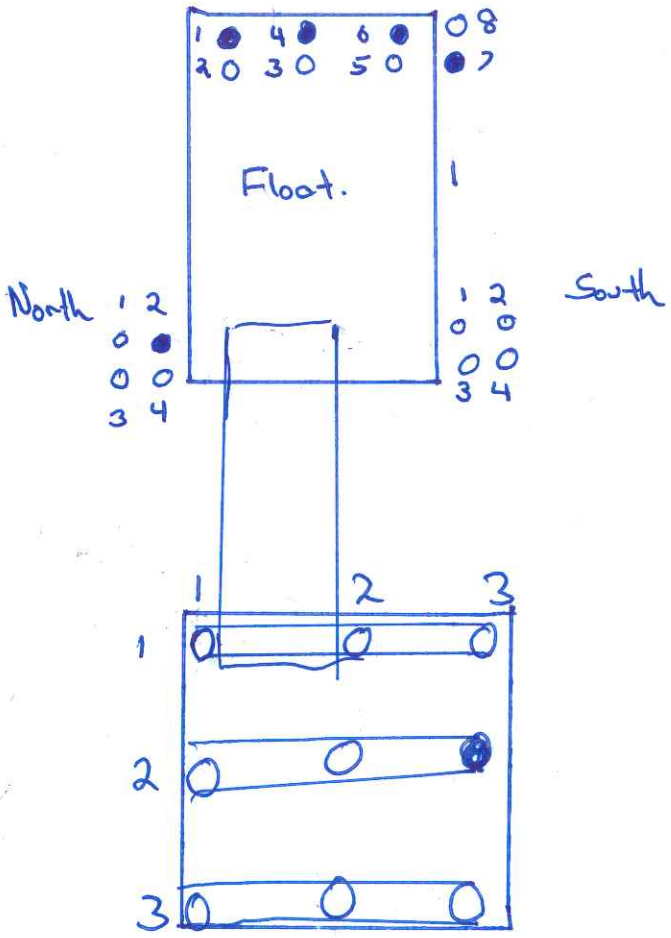
Small amounts of Teredo is present at the mud line of the all the pilings. The pilings on the approach were checked, and would be visible at low tide, but we found no damage to these. The dock is sitting low in the water due to damaged Styrofoam billets but all the timber framing appears to be in good shape.

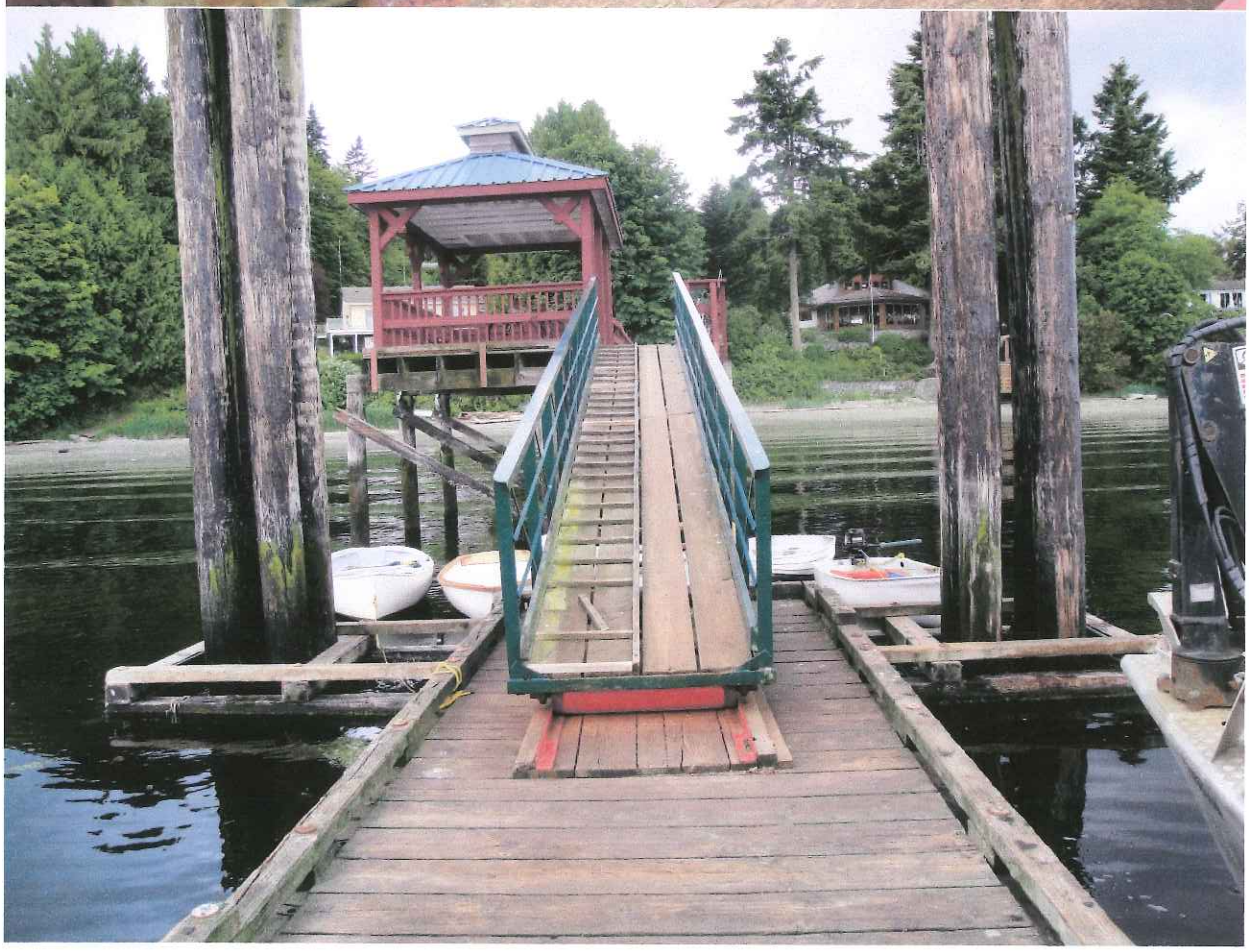
Some of the decking on the approach could use more nails to tighten up the boards. We also hammered the one bolt on the ramp hinge and we were able to move it. The threads were striped so we could not tighten it up. I hope we have answered your questions and if you have any more please call any time.

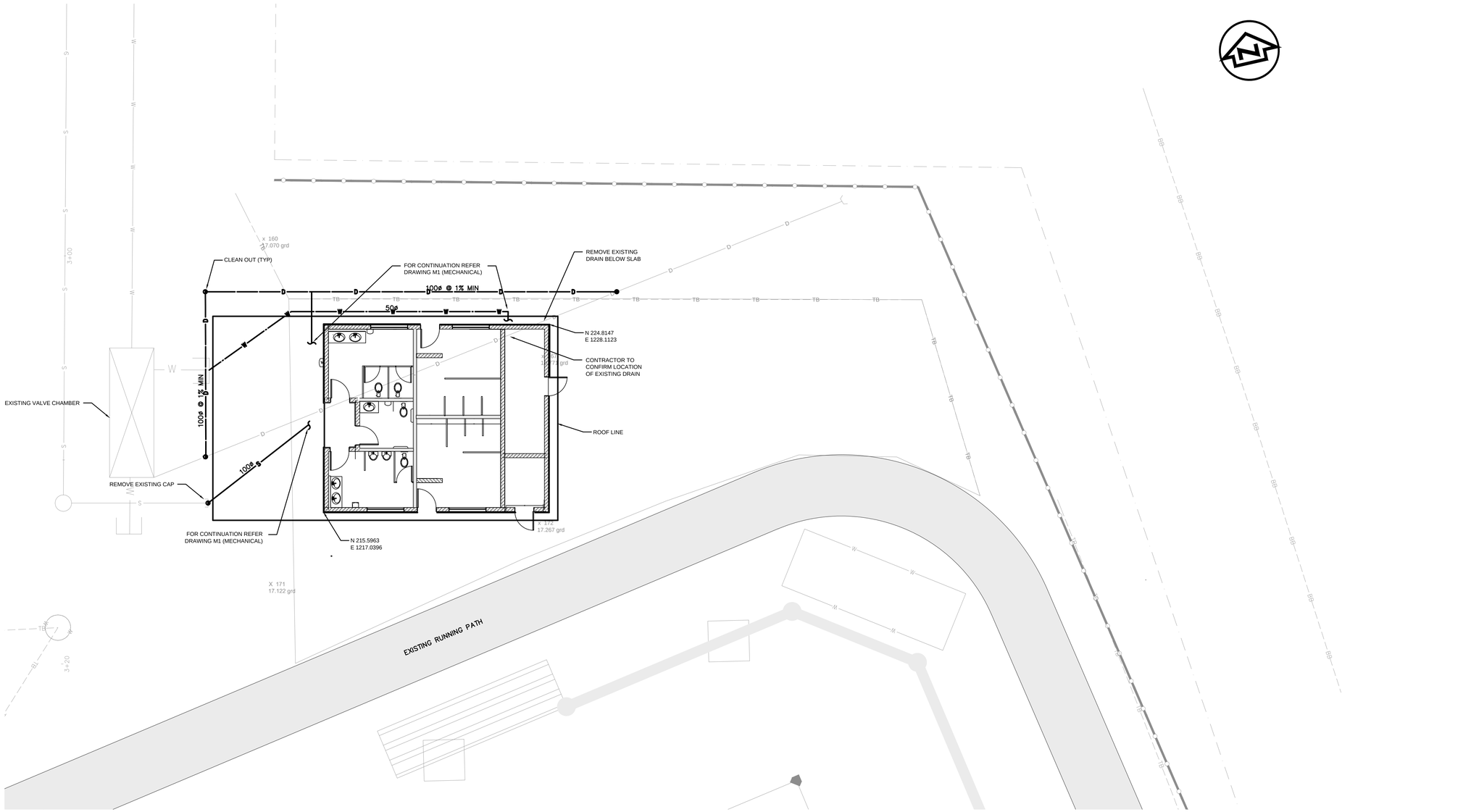
Yours Truly

Per

John Dekker







DELCAN Victoria: C:\Civil 3D Projects\As-Publish_4444\EV1322-WR-SK1-2.dwg Jul 22, 2011-4:23pm

No.	DATE	ISSUE
1	22 JULY 2011	ISSUED FOR TENDER

No.	REVISION DESCRIPTION	DATE	BY

DESIGN MH
DRAWN JW
CHECKED
APPROVED
DATE JULY 2011
SCALE 1:100
FIELD BOOK No.

SEAL

Delcan
4082 SHELBOURNE STREET, VICTORIA, B.C. V8N 4P6
TEL (250) 477-2206 FAX (250) 477-2207

COWICHAN VALLEY REGIONAL DISTRICT

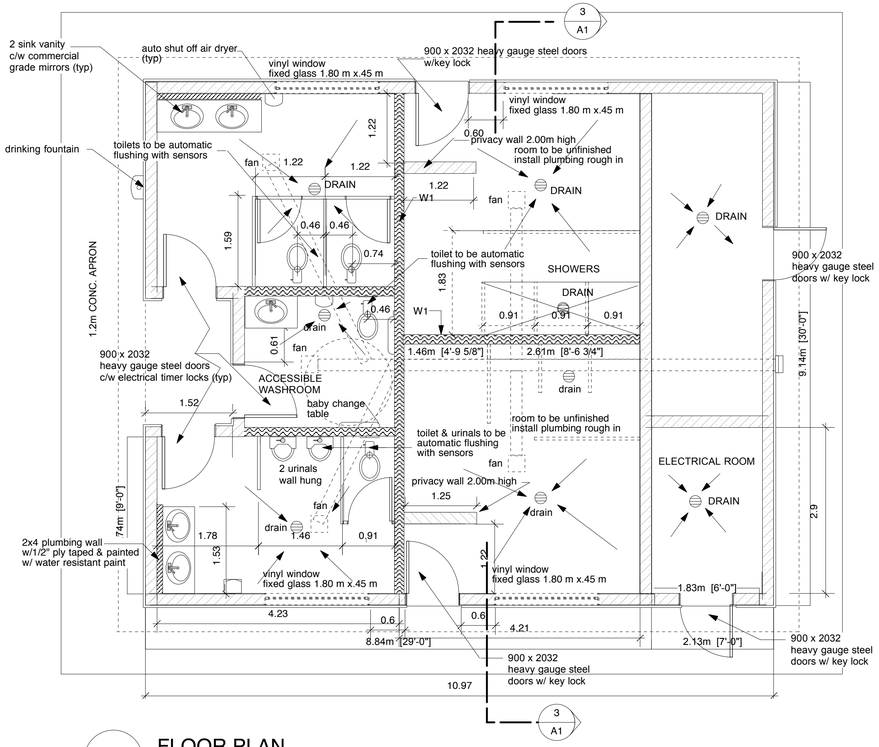
SHAWNIGAN HILLS ATHLETIC FIELDS - WASHROOM FACILITY

SITE PLAN

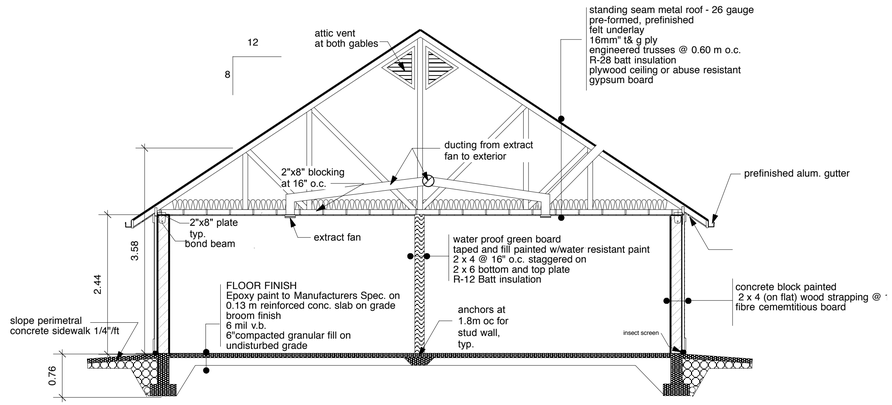
SHEET No. C1

SHEET 1 OF 1 REV.

DRAWING No. EV1322-2-C1



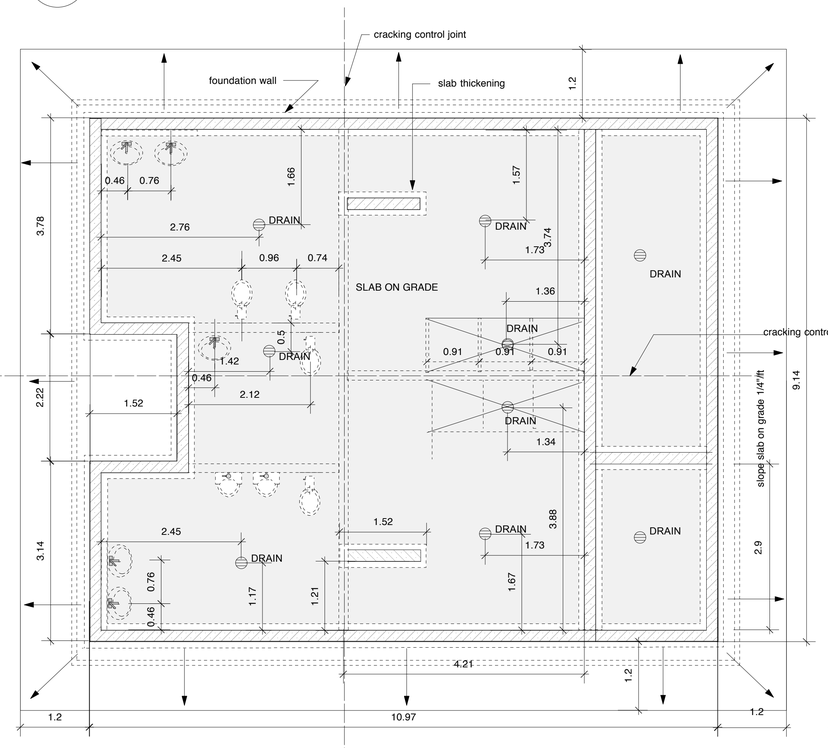
1 FLOOR PLAN
Scale: 1:50



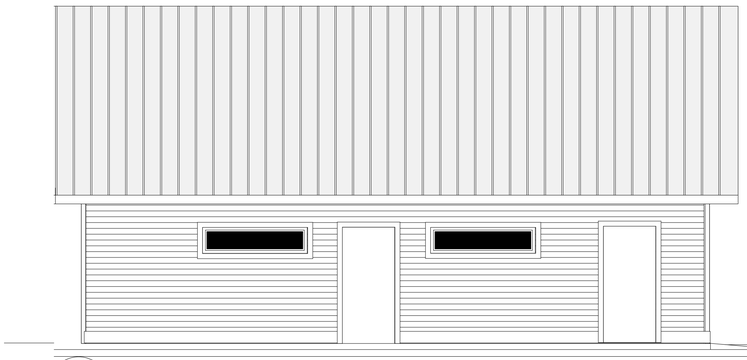
3 SECTION 2 - OPTION 1 & 2
Scale: 1:50

NOTE: Plastic Laminate up to 4'-0" on walls behind Urinals

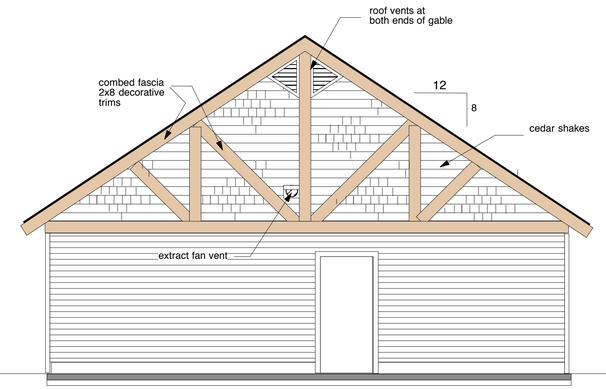
NOTE: All plumbing fixtures and fittings to comply with BCBC



2 FOUNDATION PLAN
Scale: 1:50



4 SOUTH ELEVATION
Scale: 1:50



6 EAST ELEVATION
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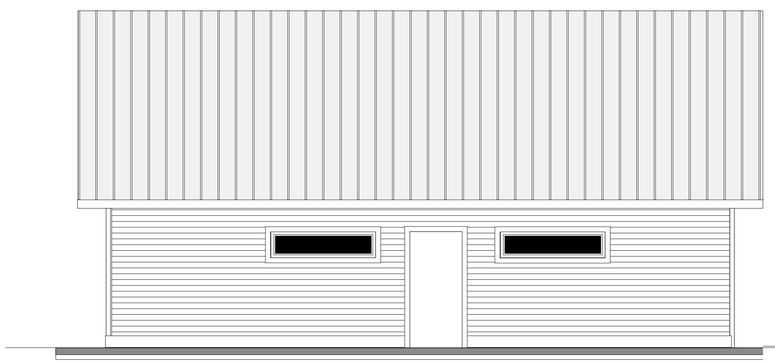

5 NORTH ELEVATION
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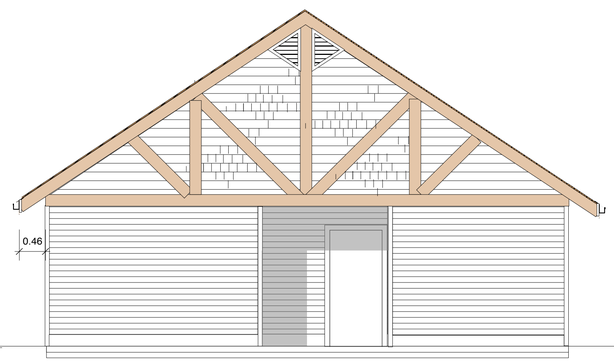


7 WEST ELEVATION
Scale: 1:50

DOOR LOCKS & CLOSERS

Doors w/ keylocks:
Schlage B560 Commercial Deadlock

Doors w/ Electrical timer Locks:
Prices Locks
Electrical timer locks w/ Electric strike,
Secure power supply in locked box
Seven day postal timer.

Installation not included in price of lock

Finlayson Bonet Architecture
#4 - 7855 East Saanich Rd.
Saanichton V8M 2B4
Phone: 250-656-2224
Fax. 250-656-2279
E-mail: art-ajf@shaw.ca
E-mail: silvia-ajf@shaw.ca

Revisions:

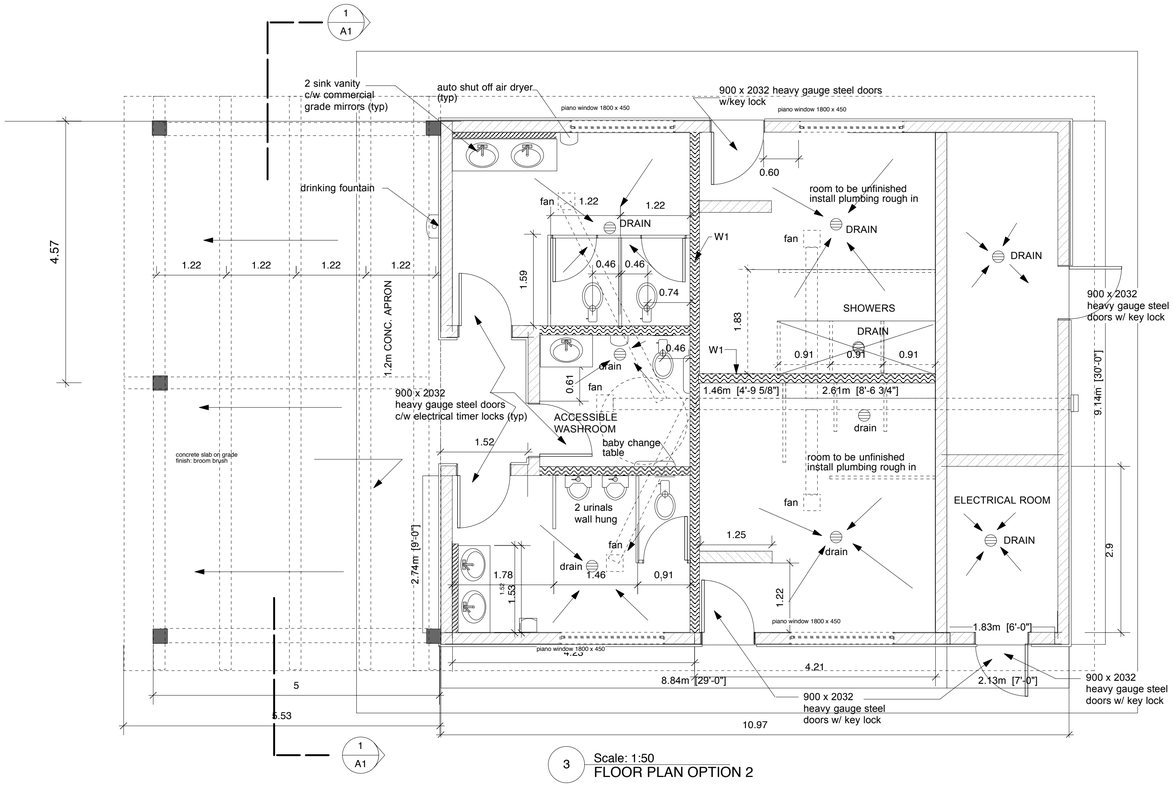
Drawing Title:
OPTION 1 FLOOR & FOUNDATION PLAN SECTION ELEVATIONS

Project Name:
SHAWNIGAN SPORT FACILITIES WASHROOM

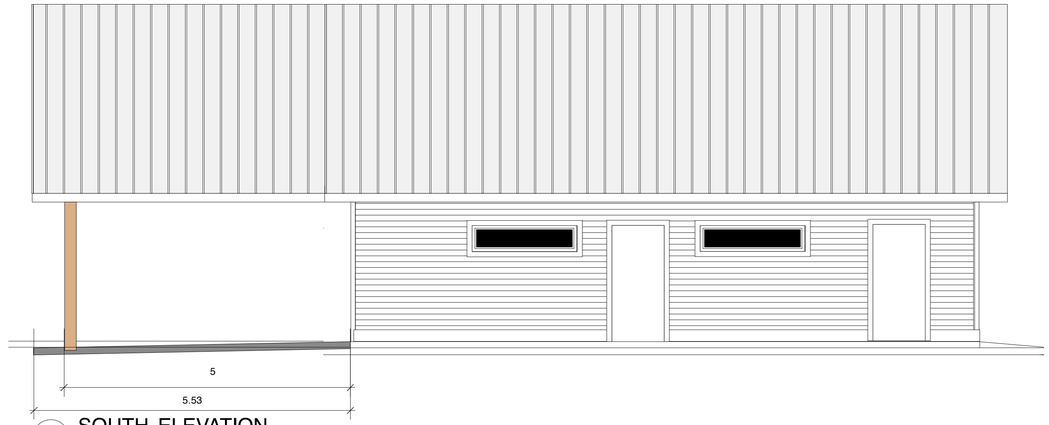
Date: May 20/11 | Date: June 29 2011
Scale: AS SHOWN | Drawn By: SMB

Drawing No.
A1

Project No.
L11779



3 Scale: 1:50
FLOOR PLAN OPTION 2



5 SOUTH ELEVATION
Scale: 1:50

DOOR LOCKS & CLOSERS

Doors w/ keylocks:
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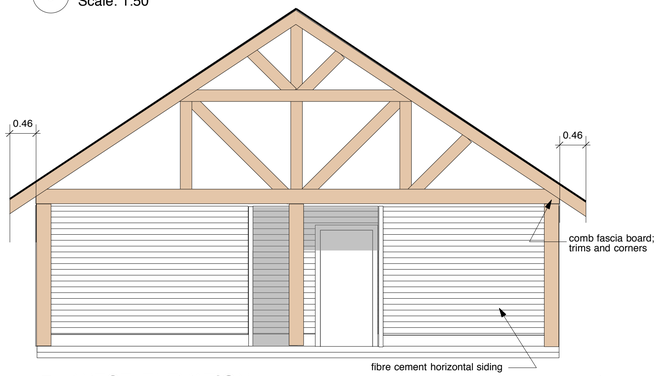

4 WEST ELEVATION
Scale: 1:50

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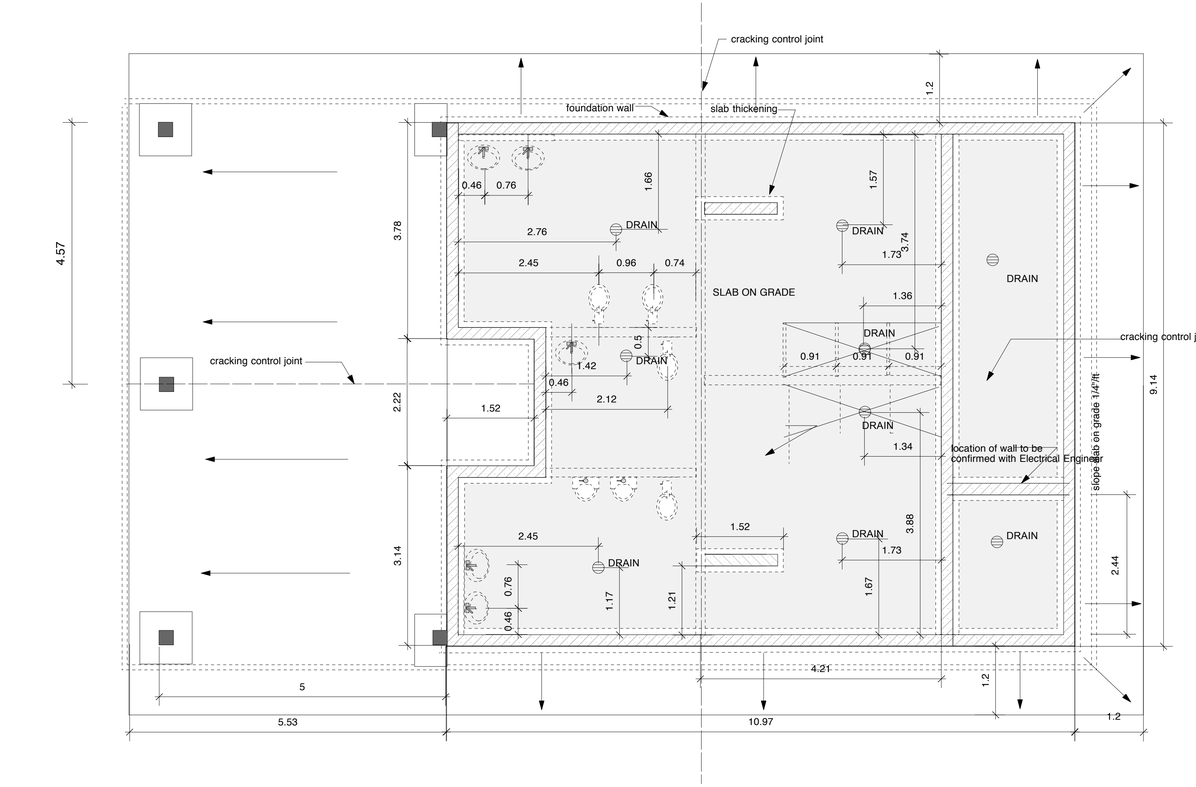
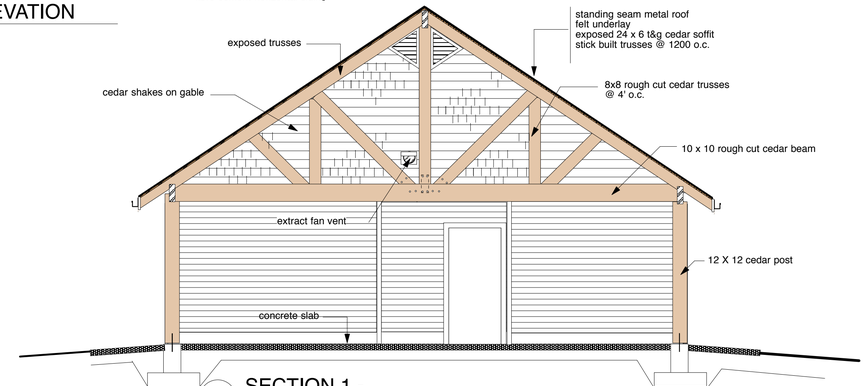
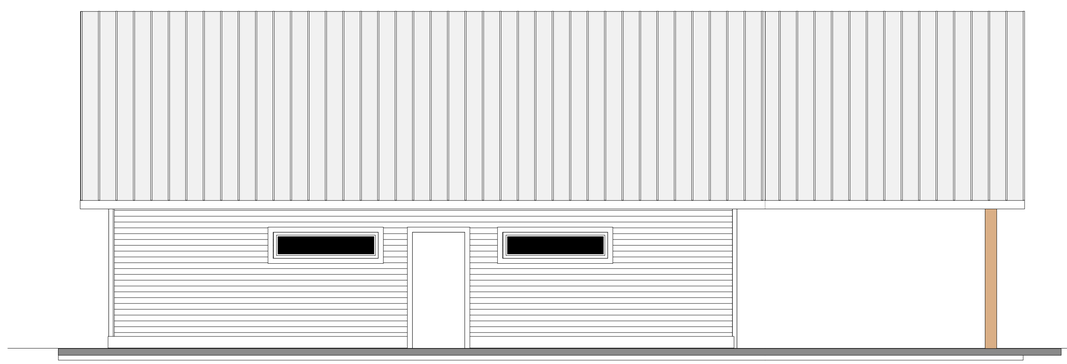




3 SECTION 1 -
Scale: 1:50



6 WEST ELEVATION OPTION OPTION 2
Scale: 1:50

Finlayson *Bonet*
Architecture

#4 - 7855 East Saanich Rd.
Saanichton V8M 2B4

Phone: 250-656-2224
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Revisions:

Drawing Title:
**OPTION 2
FLOOR &
FOUNDATION PLAN
SECTION
ELEVATIONS**

Project Name:
**SHAWNIGAN
SPORT FACILITIES
WASHROOM**

Date: May 20/11	Date: June 29 2011
Scale: AS SHOWN	Drawn By: SMB

Drawing No.
A2

Project No.
L11779

GENERAL

1. STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, ETC., FOR DETAILED DIMENSIONS OF DOORS, WINDOWS AND DUCT OPENINGS, REBATES, CHASES, NAILERS, ETC.

2. THE CONTRACTOR SHALL COMPARE ALL STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING WITH THE WORK. ANY DISCREPANCIES NOT REPORTED TO THE ARCHITECT FOR CLARIFICATION WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.

3. ATTACHMENTS FOR MECHANICAL, ELECTRICAL AND OTHER SERVICES SHALL BE MADE BY USING APPROVED CLAMPING DEVICES OR U-BOLT TYPE CONNECTORS. NO DRILLING OR CUTTING SHALL BE DONE UNLESS APPROVED BY THE ENGINEER.

4. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER FOR THE DESIGN AND INSPECTION OF SHORING AND CONCRETE FORM WORK AS PER W.C.B. REGULATION 34.28. UNDERPIN WHERE NECESSARY ANY EXISTING STRUCTURE AND PROVIDE ALL BRACING, SHORING, ETC., TO SUPPORT ADJOINING SOIL, FLOORS, WALLS, ETC., AS REQUIRED TO RETAIN ALL WORK IN PLACE AND PREVENT TEMPORARY OVER STRESSING OF THE STRUCTURE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY PROVIDING THE COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES.

6. THESE DRAWINGS CAN BE USED FOR CONSTRUCTION ONLY IF "ISSUED FOR CONSTRUCTION" IS MARKED IN THE REVISION COLUMN.

7. DESIGN LOADS — LIVE LOAD — SUPERIMPOSED LOAD

   -ROOF SNOW — 1.91 kPa — INCLUDES RAIN LOAD COMPONENT
   -FLOOR (SLAB) — 4.79 kPa

   -THE PROJECT HAS BEEN DESIGNED IN ACCORDANCE TO PART 9 OF THE 2006 BC BUILDING CODE.

   Ss=2.1kPa Sr=0.3kPa q 50 =0.61Kpa
   Sa(0.2)=1.20 Sa(0.5)=0.82 Sa(1.0)=0.38 Sa(2.0)=0.18 Pga=0.61
   Rd=1.5 R=1.5 (HCB)
   SITE CLASS: D Fa=1.0 Fv=1.0
   Ie=1.0

8. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION LOADS MUST NOT EXCEED THE ABOVE DESIGN LOADS.

9. SEE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATINGS AND LOCATIONS.

10. PRIOR TO POURING ANY CONCRETE OR OTHERWISE CONCEALING ANY STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL NOTIFY LONDON MAH AND ASSOCIATES IN REASONABLE TIME IN ORDER TO INSPECT THE CONDITIONS OF THE WORK.

FIELD REVIEW

LONDON MAH & ASSOCIATES (LMA) PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY LMA. THIS REVIEW IS A PERIODIC REVIEW AT THE PROFESSIONAL JUDGEMENT OF LMA. THE PURPOSE OF THIS REVIEW IS TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY LMA AND TO FACILITATE COMPLETION OF THE LETTERS OF ASSURANCE REQUIRED BY BUILDING CODE REQUIREMENTS. FIELD REVIEW BY LMA IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE LMA GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE HIS OWN QUALITY CONTROL AND TO PERFORM THE WORK WITH GOOD WORKMANSHIP AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

THE CONTRACTOR MUST PROVIDE SAFE ACCESS TO ALL AREAS REQUIRING INSPECTION IN ACCORDANCE WITH THE WCB OCCUPATIONAL HEALTH & SAFETY REGULATIONS 13.28 AND 13.29.

SITE PREPARATION

THE CONTRACTOR SHALL PERUSE THE GEOTECHNICAL REPORT IN CONJUNCTION WITH THE SITE PLANS IN ORDER TO ASCERTAIN THE WORK REQUIRED. CONSULT GEOTECHNICAL ENGINEER AS TO BACKFILLING MATERIALS ETC.

FOUNDATIONS

1. THE FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING AVERAGE ALLOWABLE BEARING PRESSURES IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY _____

   STRIP FOOTINGS 100 kPa
   PAD FOOTINGS 100 kPa

2. BEARING SURFACES MUST BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO FOOTING CONCRETE IS POURED.

3. NO BACK FILLING IS TO BE DONE UNTIL WALLS ARE 14 DAYS OLD AND GROUND FLOOR SLAB IS INSTALLED. BACK FILL EXTERIOR WALLS WITH A CLEAN, GRANULAR, FREE DRAINING MATERIAL.

4. ELEVATIONS SHOWN FOR FOUNDATIONS ARE TO THE TOP OF SLAB ON GRADE.

   NO EXCAVATION SHALL PROCEED BELOW THE LEVEL OF ADJACENT FOOTINGS WITHOUT THE APPROVAL OF THE ENGINEER.

CONCRETE AND REINFORCING

1. REFERENCE STANDARDS

CSA-A23.1-04.	CONC. MATERIALS AND METHOD OF CONC. CONST'N
CSA-A23.2-04.	METHODS OF TEST FOR CONCRETE
CSA-A23.3-04.	DESIGN OF CONCRETE STRUCTURES
G30.5-M1983(R1991).	WELDED STEEL WIRE FABRIC FOR CONC. REINF'T
G30.15-M1983(R1991).	WELDED DEF'D STEEL WIRE FABRIC FOR CONC. REINF'T
CAN/CSA-G30.18-M92.	BILLET-STEEL BARS FOR CONC. REINFOR'T.
ACI	MANUAL FOR STD PRACTICE FOR DETAILING.
CAN/CSA S269.3-M92.	CONCRETE FORMWORK. RECOMMENDED PRACTICE FOR CONC. FORMW'K

2. ALL CONCRETE WORK AND TESTING SHALL CONFORM TO THE REQUIREMENTS OF APPROPRIATE STANDARDS. CONCRETE DENSITY SHALL BE 2350 KG/M3 (150 P.C.F). CEMENT SHALL BE PORTLAND CEMENT TYPE 10, UNLESS NOTED OTHERWISE. CONCRETE FOR VARIOUS PURPOSES SHALL BE AS FOLLOWS:

	MINIMUM 28 DAY PRESSIVE STRENGTH	CLASS OF EXPO-SURE	MAX. SIZE AGGRE-GATE	SLUMP (mm)	AIR (%)
FOOTINGS, FDN WALLS,	25 MPa	-	20 mm	80±10	
EXTERIOR SLAB ON GRADE	32 MPa	C2	40 mm 20 mm	80±10 80±10	4-7 5-8
WALLS & MISC. CONCRETE	25 MPa	-	20 mm	80±10	

3. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF C.S.A. G30.12M AND SHALL BE NEW BILLET STOCK OF THE FOLLOWING STRENGTHS:

   SMALLER THAN 10M — MINIMUM YIELD POINT: 400 MPa
   10M AND LARGER — MINIMUM YIELD POINT: 400 MPa

4. CONTRACTOR SHALL ARRANGE FOR THE TAKING AND THE TESTING OF 100 x 200 mm CONCRETE CYLINDERS BY AN INDEPENDENT TESTING LABORATORY APPOINTED BY THE OWNER. COPIES OF ALL CONCRETE TEST REPORTS TO BE SENT TO LONDON MAH AND ASSOCIATES LTD.

5. ALL REINFORCING BARS SHALL BE TIED SECURELY TO PREVENT DISPLACEMENT.

   ALL REINFORCING SHALL BE FREE AND CLEAN OF ALL SUBSTANCES THAT WILL PREVENT PROPER BOND. OIL FORMS PRIOR TO THE PLACEMENT OF ALL REINFORCEMENT.

6. CONCRETE COVER TO REINFORCING AS FOLLOWS:

   SURFACES PLACED IN CONTACT WITH GROUND — 75mm
   FORMED SURFACES EXPOSED TO GND OR WEATHER — 50mm

7. ALL SUMPS, PITS, TRENCHES, ETC., TO HAVE 150mm WALLS AND BOTTOM. REINFORCE WITH 10M @ 400 EACH WAY UNLESS OTHERWISE NOTED.

8. NO CALCIUM CHLORIDE IS TO BE USED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

9. NOTIFY THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF PLACING CONCRETE TO INSPECT REINFORCING.

10. GENERAL CONTRACTOR TO SUPPLY A CLOSED BOX WITH LID TO STORE CONCRETE TEST CYLINDERS FOR A MINIMUM OF 24 HOURS AFTER FILLING THE CYLINDERS WITH THE CONCRETE TO BE TESTED.

MASONRY

1. ALL MASONRY WALLS SHALL BE REINFORCED AND ANCHORED TO THE STRUCTURE IN ACCORDANCE TO CAN3-S304.1-04. CONNECTORS FOR MASONRY SHALL CONFORM TO CSA-A370-04.

   HOLLOW CONCRETE MASONRY UNITS SHALL BE OF SIZES SHOWN ON DRAWINGS AND SHALL CONFORM TO CSA-A165.1-04 SPECIFICATIONS FOR HOLLOW MASONRY UNITS. ALL STANDARD BLOCK UNITS ARE OF H/15/A/M TYPE UNLESS NOTED OTHERWISE.

2. MORTAR FOR MASONRY UNITS SHALL CONFORM TO CAN3-S304.1-04 TYPE 'S' WITH A MINIMUM 28 DAY STRENGTH OF 12.5 MPa.

3. FILL CELLS CONTAINING VERTICAL REINFORCING WITH 30 MPa CONCRETE (9.5mm AGGREGATE AND 150mm SLUMP). ROD CONCRETE TO COMPLETELY FILL CELLS.

4. ANCHOR ALL MASONRY WALLS TO STRUCTURE AT TOP AND BOTTOM OF EACH WALL LIFT EITHER BY:

   A. 15M DOWELS @ 1200 O.C.

   B. 16mm DIAMETER THREADED INSERTS WITH 15M THREADED DOWELS.

   C. BY OTHER MEANS TO APPROVAL OF THE ENGINEER.

   DOWELS ANCHORING WALL TO BE EXTENDED 400mm INTO MASONRY WALL AND CELL CONTAINING DOWEL TO BE GROUTED OR CONCRETE FILLED TO DEPTH OF DOWEL.

5. UNLESS OTHERWISE NOTED, REINFORCE MASONRY WALLS AS FOLLOWS:

   A. HORIZONTAL: BOND BEAMS @ 1200 O.C. REINFORCED WITH ONE 15M BAR PLUS #9 GA. STANDARD LADDER TYPE JOINT REINFORCING @ 200 O.C. REBAR TO BE DRILLED AND GROUTED A MINIMUM OF 150mm INTO ABUTTING CONCRETE SURFACES.

   B. VERTICAL: ONE 15M BAR @ 1200 O.C. TO BE CONTINUOUS THROUGH BOND BEAMS AND LAPPED 400 WITH ANCHOR DOWELS.

6. PROVIDE TWO 20M VERTICAL REINFORCING AT THE EDGE OF ALL JAMBS AND DISCONTINUOUS WALLS, EACH CORNER AND INTERSECTIONS. FILL WITH CONCRETE.

7. PROVIDE 200mm BOND BEAMS OVER ALL OPENINGS 1200mm OR LESS IN WIDTH REINFORCED WITH TWO 15M BOTTOM, EXTENDING 200 MIN. PAST EACH SIDE OF OPENING. PROVIDE BOND BEAMS AT EACH UPPER FLOOR LEVEL WITH 2-15M HORIZ.

8. PROVIDE 400 LINTELS FOR OPENINGS LARGER THAN 1200 USING TWO 20M BOTTOM, AS ABOVE, UNLESS NOTED OTHERWISE.

9. FILL BOND BEAMS AND LINTELS WITH 25 MPa CONCRETE. ALL JOINTS SHALL BE FLUSH, FULL BED JOINT. CELLS TO BE REINFORCED AND GROUTED SHALL BE KEPT CLEAR OF ALL MORTAR.

10. CONTROL JOINTS SHALL BE INSTALLED AT MAXIMUM SPACING OF 9200mm UNLESS OTHERWISE NOTED ON DRAWINGS. HORIZONTAL REINFORCING WILL BE CONTINUOUS THROUGH JOINTS.

11. PROVIDE CLEAN-OUTS FOR CELLS WITH REINFORCING. PERFORM ALL CUTTING WITH POWER TOOLS.

12. NO MASONRY WORK SHALL BE PERMITTED WITH TEMPERATURE BELOW 4 Cø UNLESS PROVISIONS ARE MADE FOR HEATING THE MATERIALS AND PROTECTING THE WORK.

13. ALL JOINTS SHALL BE FLUSH, FULL BED JOINTS.

14. TEMPORARY BRACING SHALL BE INTRODUCED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE MASONRY MAY BE SUBJECTED. MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING OF THE MASONRY WALL UNDER CONSTRUCTION.

SAWN LUMBER

1. ALL SAWN LUMBER HAS BEEN DESIGNED TO CSA-086-01 AND THE CONTRACTOR MUST ENSURE THAT ALL MATERIALS COMPLY WITH THE MATERIAL STANDARDS REFERENCED IN THIS STANDARD.

2. FRAMING LUMBER SHALL BE WELL SEASONED AND TO BE OF THE FOLLOWING GRADES UNLESS NOTIFIED OTHERWISE:

   A. TOP & BOT. PLATES D.FIR NO.3 OR BETTER

3. ALL SHEATHING SHALL BE OF THE FOLLOWING TYPES OR BETTER UNLESS OTHERWISE NOTED:

   12.5mm D.FIR PLY EXT.GR.

   ALL PANELS TO BE LAID STAGGERED. FLOOR AND ROOF PANELS TO BE FASTENED TO SUPPORTS WITH 64mm COMMON NAILS AT 100 O.C. ALONG PANEL EDGES AND AT 300 o.c. ALONG INTERMEDIATE SUPPORTS. FOR WALL SHEATHING EDGE NAILING, SEE PLANS FOR NAILS AND NAILING PATTERNS (PROVIDE NAILS AT 300 o.c. ALONG INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE). PROVIDE SOLID BLOCKING ALONG SIDES OF EACH SHEET WHEN PANELS ARE LAID HORIZONTALLY.

4. APPROVED JOIST HANGERS TO BE USED AT FLUSH CONNECTIONS.

PRE-ENGINEERED WOOD TRUSSES

1. ALL TRUSSES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.

2. DESIGN SHALL CONFORM TO CSA-086.1-01. ALL TRUSSES SHALL BE DESIGNED TO CARRY THE SPECIFIED LOADS AND NOT EXCEED THE ALLOWABLE DEFLECTION. LIVE LOAD DEFLECTION TO BE LIMITED TO 1/240 FOR TOP CHORD AND 1/360 FOR BOTTOM CHORD.

3. CHORD AND WEB MEMBERS SHALL BE FIR, HEMLOCK OR SPRUCE TO THE SIZE AND STRENGTH REQUIRED BY DESIGN.

4. CONNECTOR PLATES SHALL BE PRIME COMMERCIAL QUALITY GALVANIZED SHEET STEEL OF 20 GAUGE OR MORE IN THICKNESS.

5. REPRODUCIBLE SEPIA SHOP DRAWINGS INDICATING DESIGN LOADS, WOOD SPECIES AND STRESS GRADE, ALL BRACING DETAILS (PERMANENT AND TEMPORARY), BEARING DETAILS, DIAPHRAGM DESIGN (C/W NAILING PATTERNS), AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION OF TRUSSES.

6. TRUSSES SHALL BE HANDLED, STORED AND ERECTED IN ACCORDANCE WITH THE FABRICATOR'S ERECTION DRAWINGS.

7. TRUSS FABRICATOR SHALL PROVIDE ALL BEARING HARDWARE, BLOCKING AND X-BRACING AT ALL BEARING LOCATIONS.

8. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOR THE PROCESS OF REVIEW OF TIMBER TRUSS SHOP DRAWINGS. TRUSSES SHALL NOT BE ERECTED UNTIL THE ARCHITECT HAS SUBMITTED REVIEWED COPIES (BY THE ENGINEER) OF THE SHOP DRAWINGS TO THE BUILDING INSPECTOR FOR HIS OWN PERUSAL.

9. ALLOWABLE LUMBER STRESSES USED IN THE DESIGN OF TRUSS MEMBERS SHALL BE IN ACCORDANCE TO TABLE 14 OF STANDARD GRADING RULES OF WEST COAST LUMBER.

10. THE FABRICATION OF TRUSSES SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA FOR CONFORMITY TO DESIGN AND FABRICATION.

11. PRIOR TO CONCEALING ANY TRUSS ELEMENTS, NOTIFY BOTH THE TRUSS ENGINEER AND LMA FOR THEIR FINAL APPROVALS OF TRUSS ERECTION.

GLUED-LAMINATED TIMBER

1. ALL GLUED-LAMINATED MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH CSA-086.1-01 AND FABRICATED IN ACCORDANCE WITH C.S.A. STANDARD CAN/CSA-O122-M89 BY MANUFACTURERS QUALIFIED UNDER CAN/CSA-O177-M89.
2. ALL GLUED-LAMINATED BEAMS SHALL BE DOUGLAS FIR (COAST REGION) SPECIES AND STRESS GRADE 24F-EX.
3. ALL GLUED-LAMINATED BEAMS SHALL BE MANUFACTURED WITH A CAMBER OF 1/4" IN 10'-0" UNLESS NOTED OTHERWISE.
4. GLUED-LAMINATED BEAMS SHALL BE MANUFACTURED UNDER THE PROVISION OF INTERIOR SERVICE GRADE AND INDUSTRIAL APPEARANCE GRADE AND SHALL BE WRAPPED BEFORE SHIPMENT FOR PROTECTION. BEAMS EXPOSED TO WEATHER SHALL BE EXTERIOR SERVICE GRADE. WRAPPING SHALL BE LEFT ON UNTIL THE STRUCTURE IS CLOSED IN.
5. END GRAIN SHALL BE SEALED WITH AN APPROVED END SEALER.
6. ALL ASSEMBLY SHALL BE CLAMPED FOR PRESSURE. NAILING OF LAMINATIONS IS NOT PERMITTED.

C:\LMA_3D_PROJECTS\ACPUBLISH_14441\JOC-08-S1,S2,S3,S4.DWG PLOTTED ON 2011/07/22 5:01pm BY jwade

LMA — LONDON MAH & ASSOCIATES LTD.
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FAX : 604-739-1468
E-MAIL : londonma@telus.net

SEAL

No.	REVISION DESCRIPTION	DATE (Y/M/D)	BY	CHECK
1	ISSUED FOR TENDER	22 JULY 2011		

DESIGN MH
DRAWN LK
CHECK MH
APPROVED
DATE JULY 2011
SCALE AS SHOWN
PROJECT No. EV-1322-2-1

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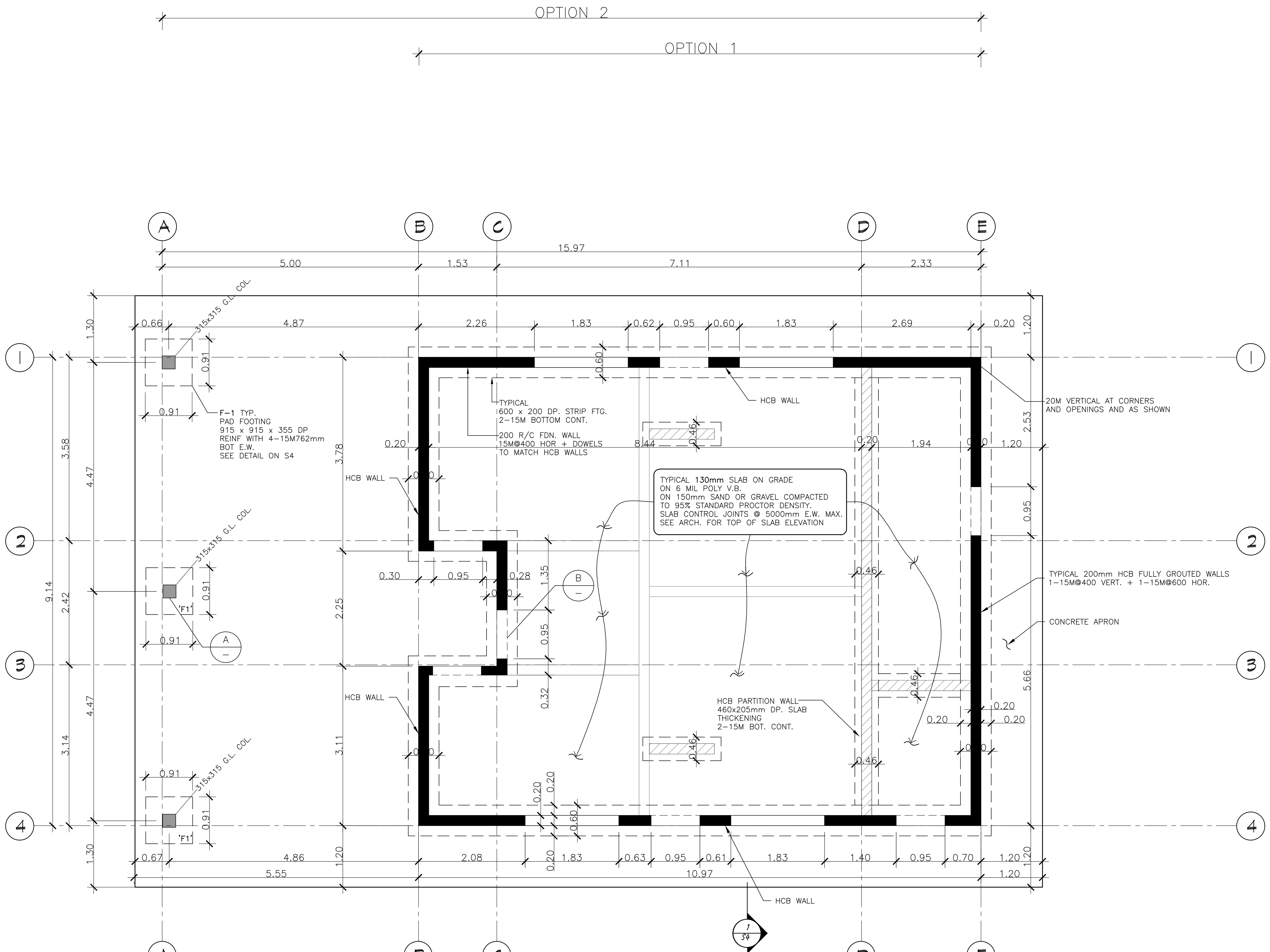
COWICHAN VALLEY REGIONAL DISTRICT

SHAWNIGAN HILLS ATHLETIC FIELDS
WASHROOM FACILITY

WASHROOM FACILITY BUILDING
GENERAL NOTES

SHEET No. S-01
OF 04 REV. C
DRAWING NO. EV1322-2-1



FOUNDATION PLAN
1:50

1:50 0 1 4m 1:25 0 500 2000mm

C:\CIVIL 3D PROJECTS\ACPUBLISH_4444\DLC-08-S1,S2,S3,S4.DWG PLOTTED ON 2011/07/22 5:01pm BY j.wiebe

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CHECK	MH
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SCALE	AS SHOWN
PROJECT No.	EV-1322-2-1

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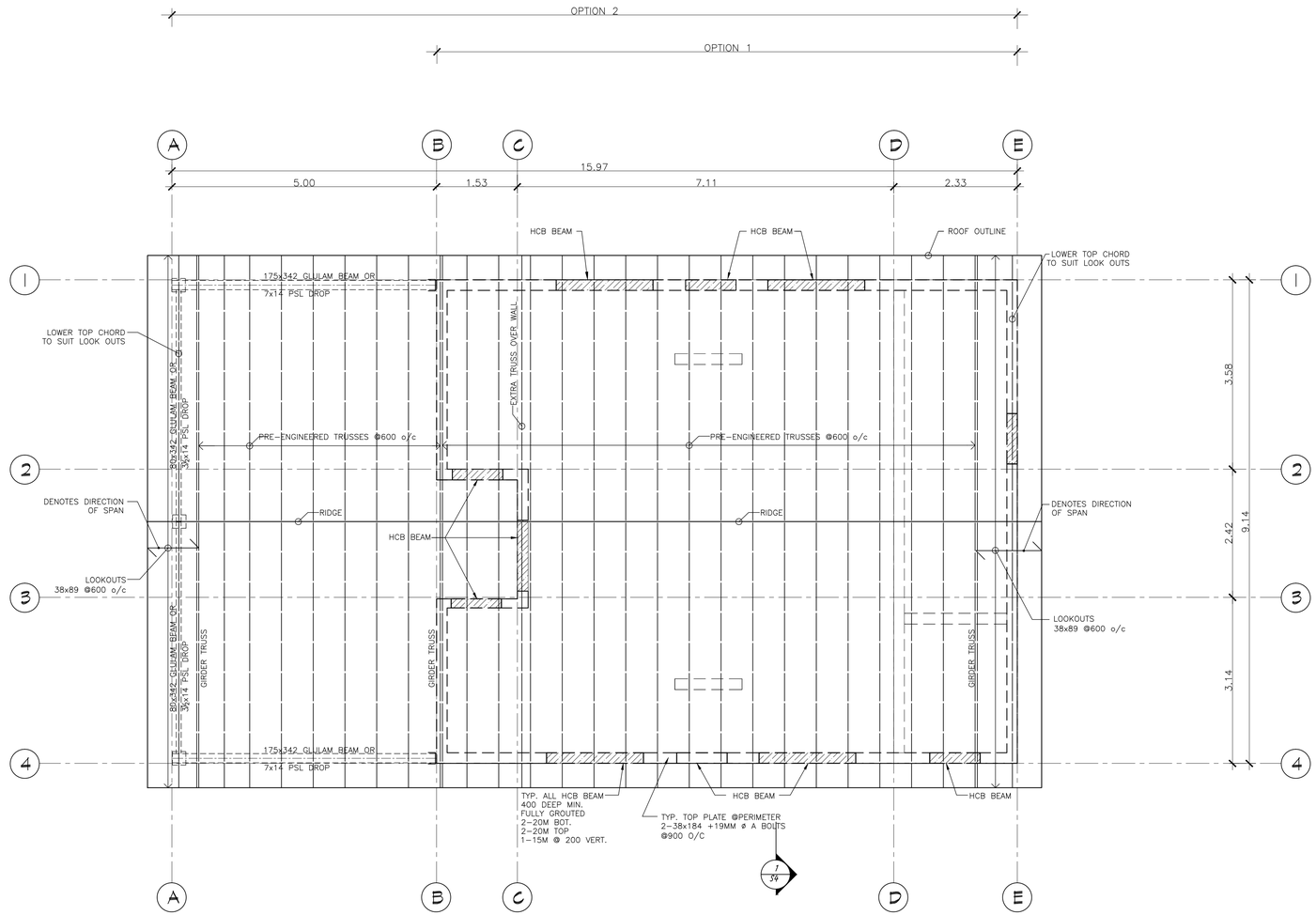
COWICHAN VALLEY REGIONAL DISTRICT

SHAWNIGAN HILLS ATHLETIC FIELDS
WASHROOM FACILITY

WASHROOM FACILITY BUILDING
FOUNDATION PLAN

SHEET No. S-02
OF 04
REV. C
DRAWING NO. EV1322-2-1



ROOF FRAMING PLAN
1:50

1:50 0 1 4m

1:25 0 500 2000mm

C:\CIVIL 3D PROJECTS\ACPUBLISH_4444\$A\C-09-S1,S2,S3,S4.DWG PLOTTED ON 2011/07/22 5:01pm BY jwebb

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DESIGN MH
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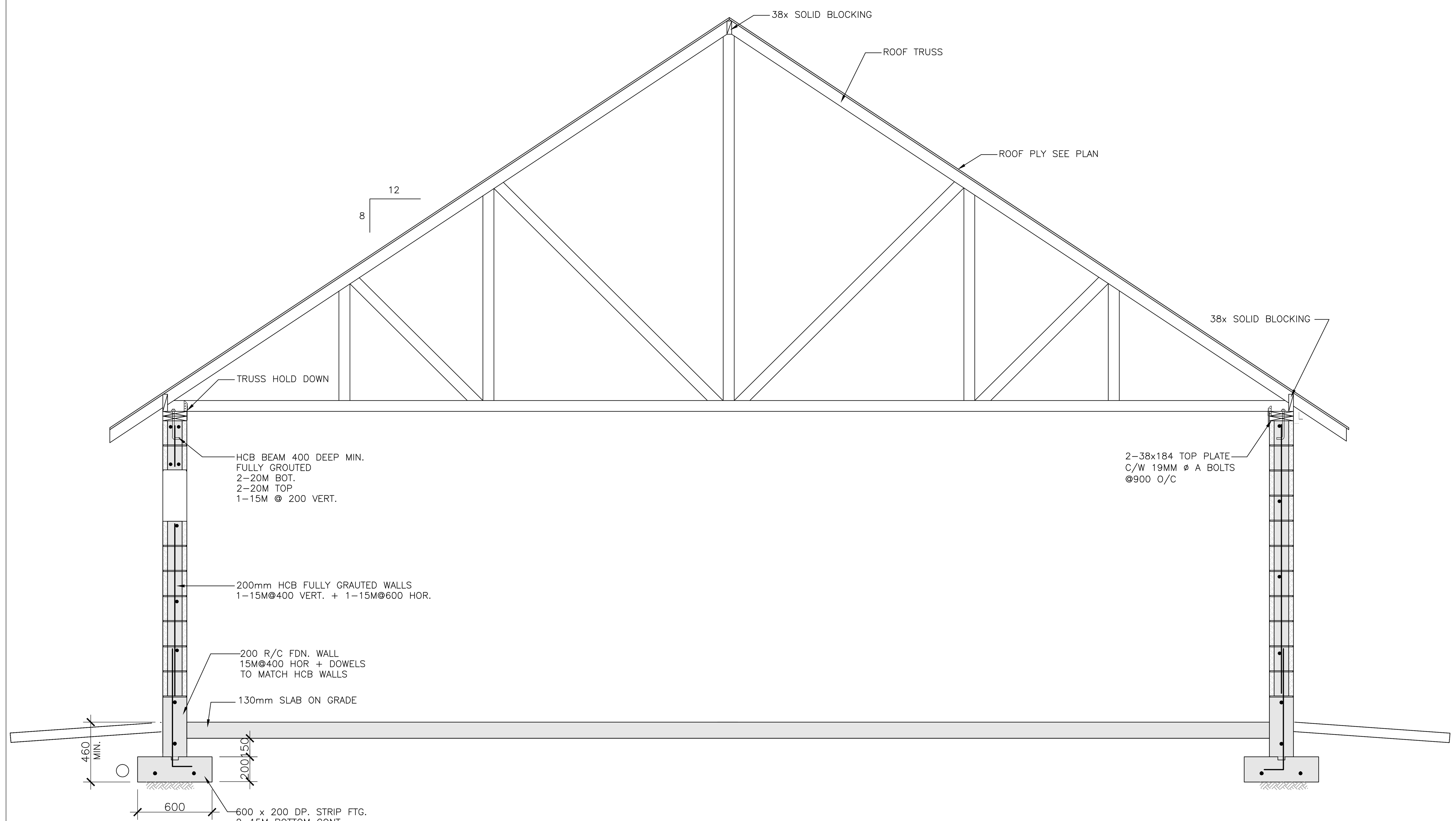
COWICHAN VALLEY REGIONAL DISTRICT

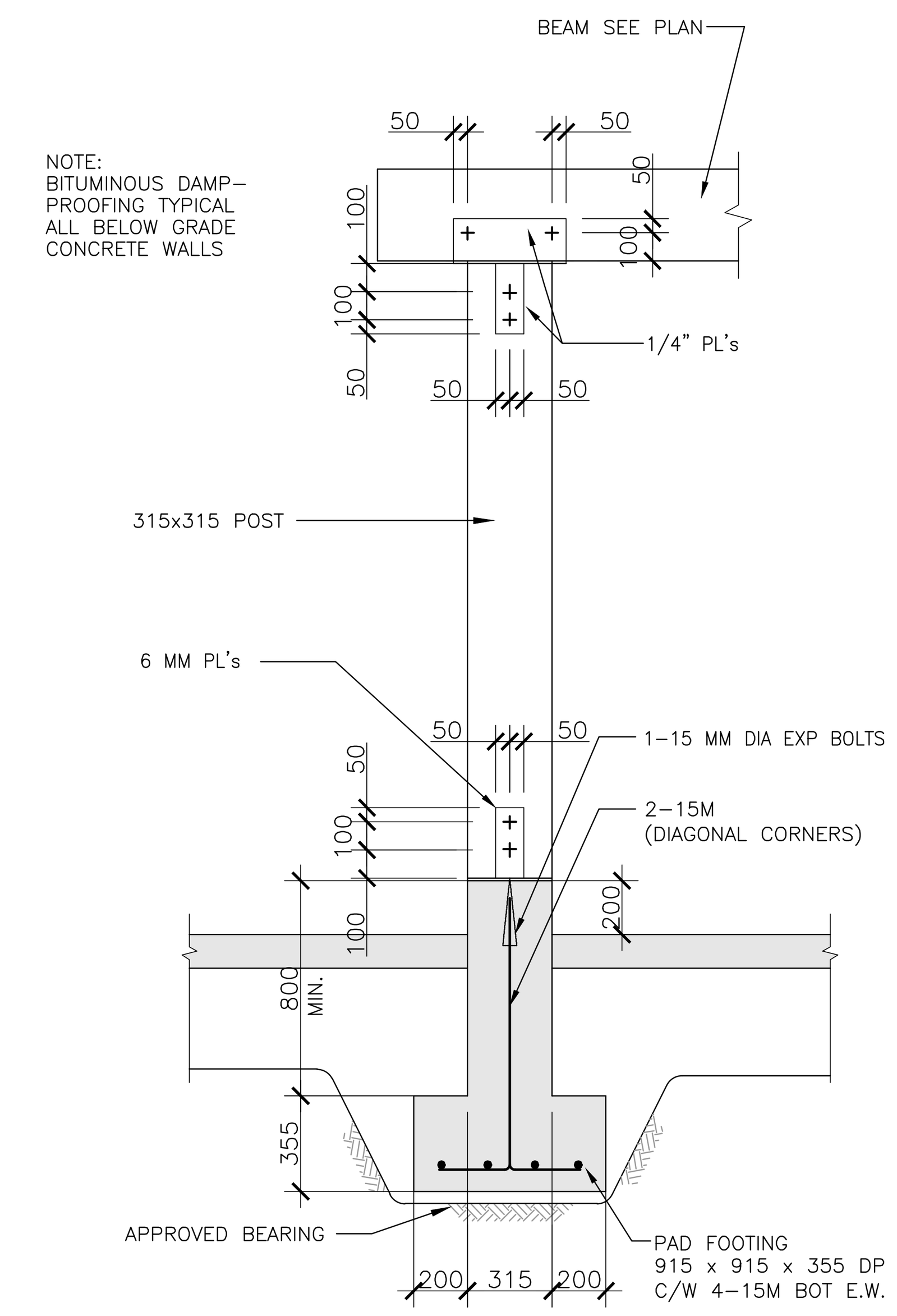
SHAWNIGAN HILLS ATHLETIC FIELDS
WASHROOM FACILITY

WASHROOM FACILITY BUILDING ROOF PLAN

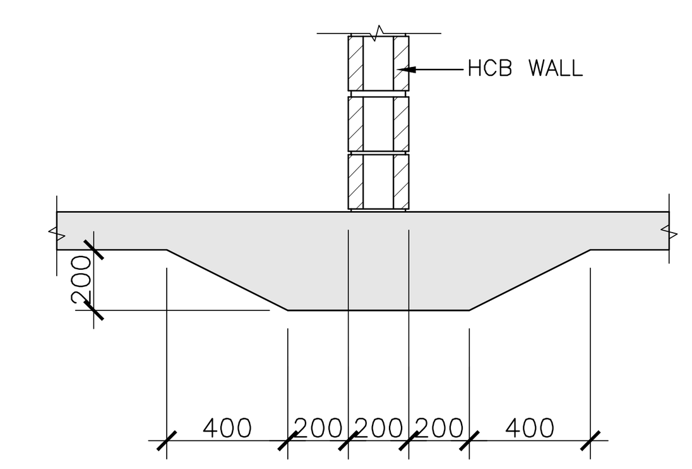
SHEET No. S-03
OF 04 REV. C
DRAWING NO. EV1322-2-1



1 / S2,S3 SECTION
1: 25



COLUMN DETAIL
1: 25



HCB PARTITION WALL FOOTING
1: 25

1:50 0 1 4m
1:25 0 500 2000mm

C:\CIVIL 3D PROJECTS\ACPUBLISH_4444\DLC-08-S1,S2,S3,S4.DWG PLOTTED ON 2011/07/22 5:01pm BY j.wiebe

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PROJECT No.	EV–1322–2–1

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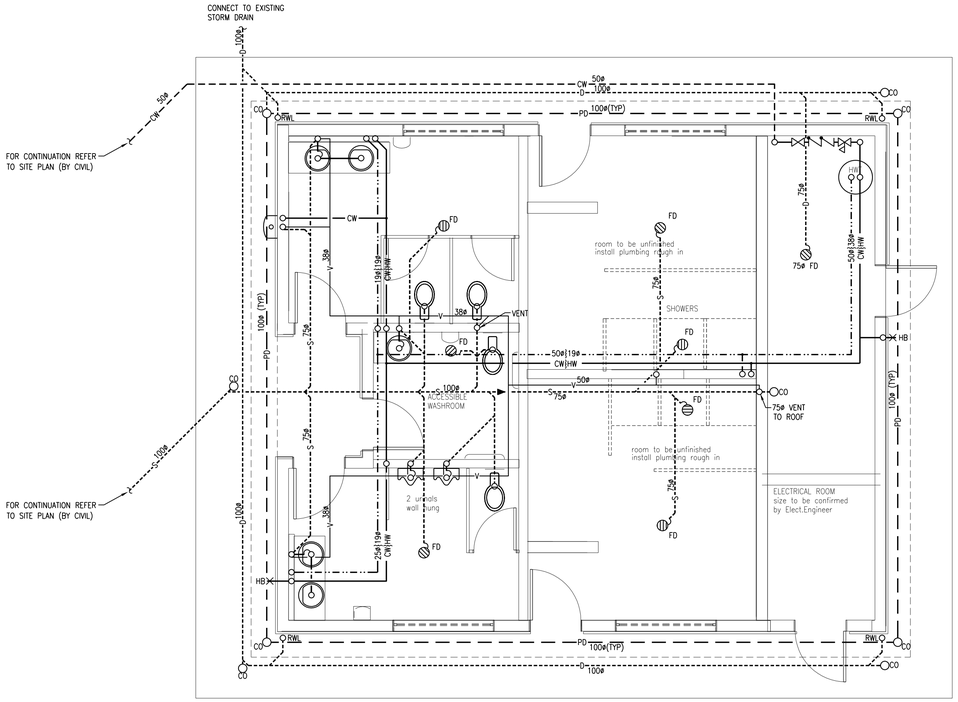
COWICHAN VALLEY REGIONAL DISTRICT

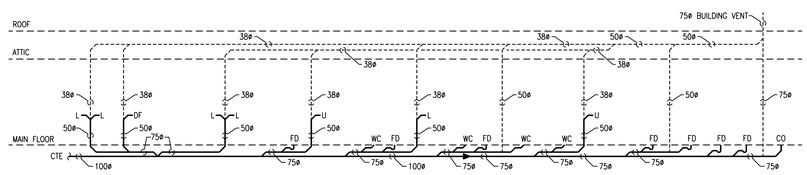
SHAWNIGAN HILLS ATHLETIC FIELDS
WASHROOM FACILITY

WASHROOM FACILITY BUILDING
TYPICAL SECTION AND DETAILS

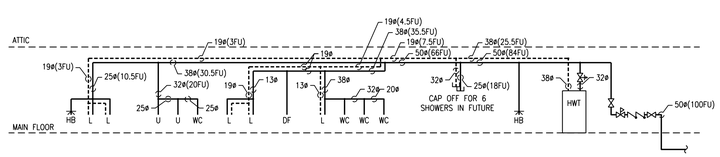
SHEET No. S–04
OF 04
REV. C
DRAWING NO. EV1322–2–1



MAIN FLOOR PLAN
SCALE 1:50



SEWER SCHEMATIC
NTS

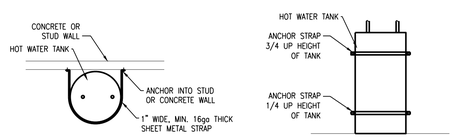


HOT & COLD WATER SCHEMATIC
NTS

LEGEND

——V——	VENT (IN CEILING SPACE)
— —PD— —	PERIMETER DRAIN (UNDERGROUND/FLOOR)
----D----	DRAIN (UNDERGROUND/FLOOR)
——S——	SEWER (ABOVE FLOOR)
----S----	SEWER (UNDERGROUND/FLOOR)
——CW——	WATER (ABOVE FLOOR)
— — CW — —	WATER (UNDERGROUND/FLOOR)
—·—HW—·—	DOMESTIC HOT WATER
⋈	VALVE
	DOUBLE CHECK VALVE
	PRESSURE REDUCING VALVE
	SHUT OFF VALVE WITH THERMAL EXPANSION DEVICE
CO	CLEANOUT
CW	COLD WATER
DF	DRINKING FOUNTAIN
FD	FLOOR DRAIN
HB	HOSE BIBB
HW	HOT WATER
HWT	HOT WATER TANK
RWL	RAIN WATER LEADER
L	LAVATORY
U	URINAL
WC	WATER CLOSET

NOTES:
1. SITE VERIFY EXISTING PIPING, EQUIPMENT, ETC.
2. ALL 100ø SEWER & STORM LINES ARE AT A MINIMUM 1% SLOPE, AND ALL 75ø AND UNDER ARE AT A MINIMUM 2% SLOPE UNLESS OTHERWISE INDICATED.



PLAN VIEW DETAIL — ELEVATION VIEW DETAIL

HWT SEISMIC RESTRAINT DETAIL
NTS

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NORTH

SEAL

DESIGNED	APPROVED
FS	MD
DRAWN	SCALE
NJM	AS NOTED

NO.	DATE	DESCRIPTION
1	???	ISSUED FOR BUILDING PERMIT

PROJECT

SHAWNIGAN SPORTS FACILITY WASHROOM

SHAWNIGAN, B.C.

SHEET TITLE

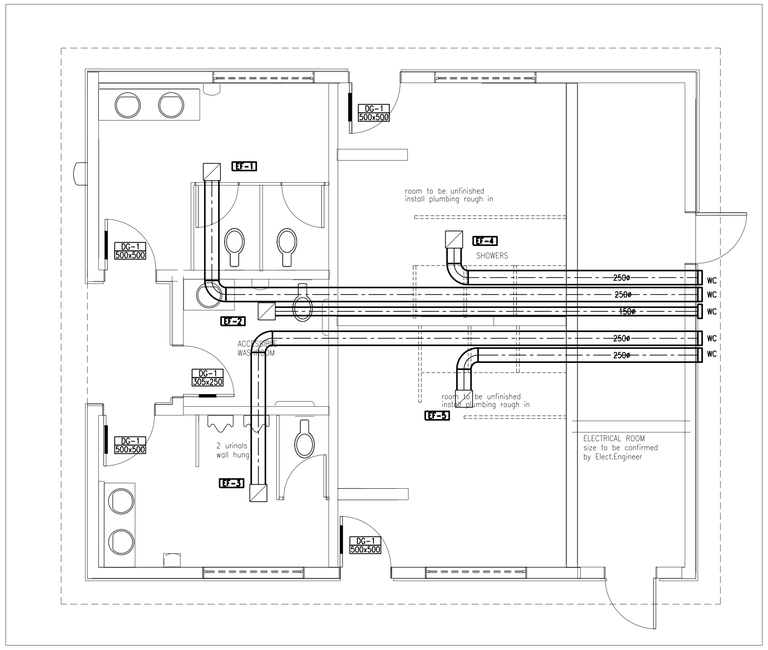
PLUMBING
MAIN FLOOR PLAN
SCHEMATICS

PROJECT START DATE: 30JUN11

SHEET: 1 OF 2

PROJECT NO.: 211160

DRAWING NO.: M1



MAIN FLOOR PLAN
SCALE 1:100

LEGEND

	ROUND SOLID DUCT
DG	DOOR GRILLE
EF	EXHAUST FAN
WC	WALL CAP

NOTE:

DUCTS TO RUN IN ATTIC SPACE AND TERMINATE IN GABLE END

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NORTH

SEAL

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
M. W. DEMIDOW
DDMMMYY

DESIGNED	APPROVED
CJP	MD
DRAWN	SCALE
CJP	AS NOTED

NO.	DATE	DESCRIPTION
1	??	ISSUED FOR

PROJECT

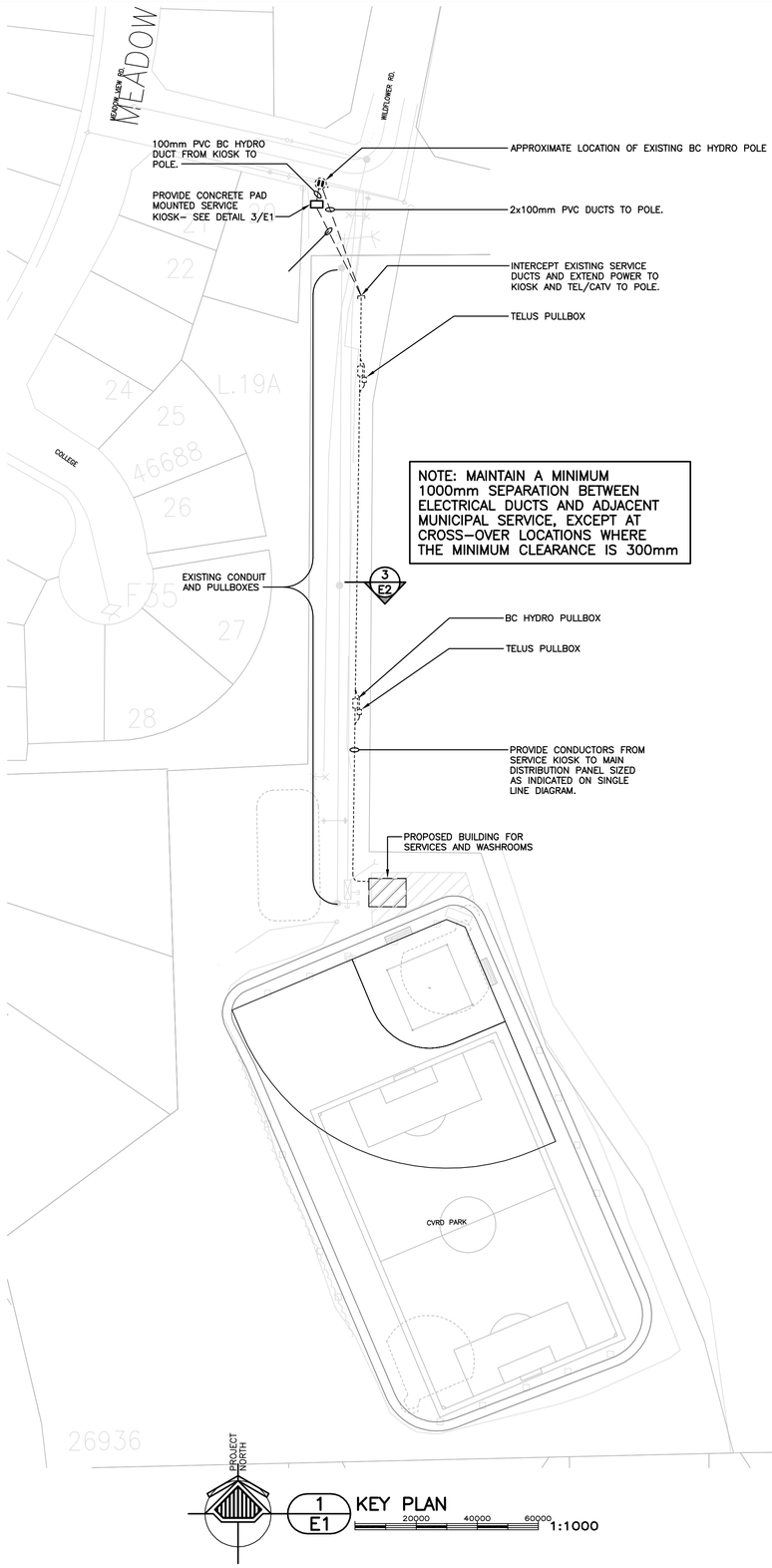
SHAWNIGAN SPORTS FACILITY WASHROOM

SHAWNIGAN, B.C.

SHEET TITLE

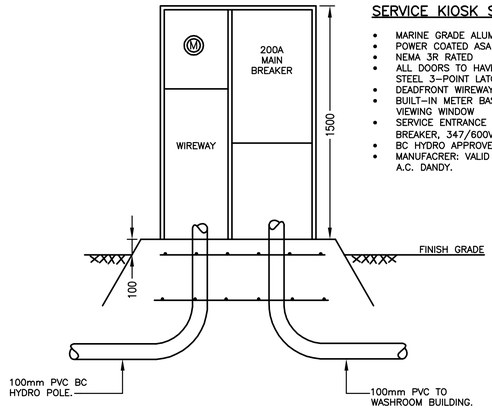
VENTILATION
MAIN FLOOR PLAN

PROJECT START DATE	SHEET
30JUN11	2 OF 2
PROJECT NO.	DRAWING NO.
211160	M2



1 E1 KEY PLAN
20000 40000 60000 1:1000

NOTE: RETAIN AND PAY FOR THE SERVICES OF A STRUCTURAL ENGINEER REGISTERED IN BC FOR THE DESIGN OF THE KIOSK CONCRETE PAD.



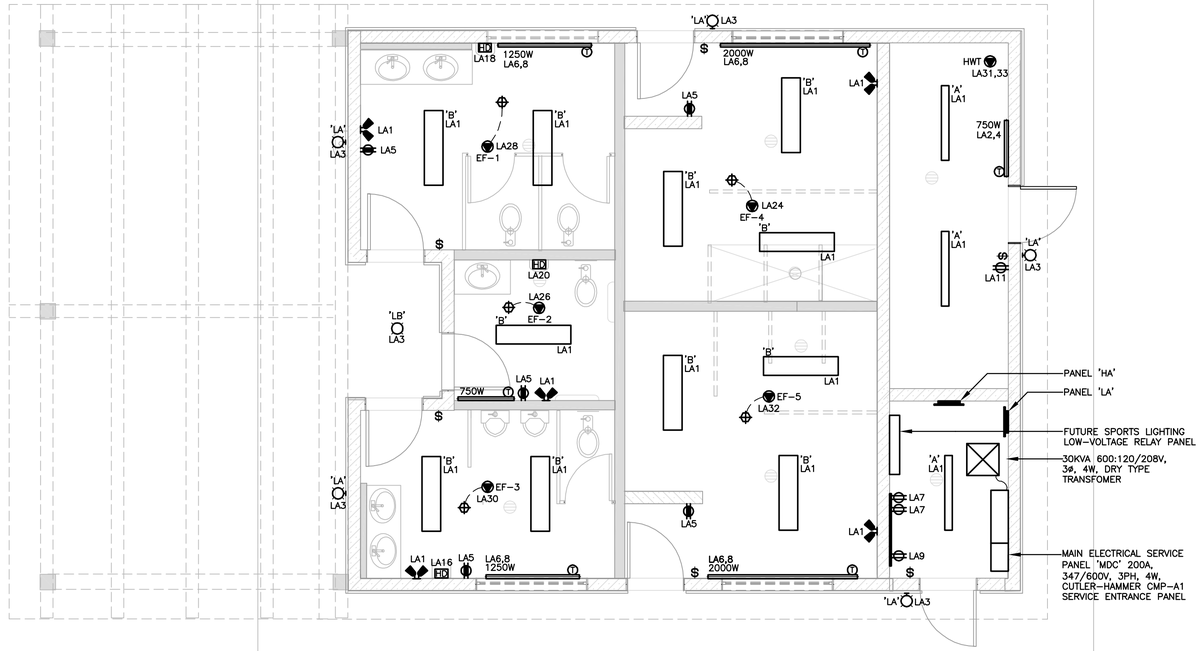
SERVICE KIOSK SPECIFICATIONS

- MARINE GRADE ALUMINUM CONSTRUCTION
- POWER COATED ASA 61 GREY
- NEMA 3R RATED
- ALL DOORS TO HAVE PADLOCKABLE STAINLESS STEEL 3–POINT LATCH MECHANISM
- DEADFRONT WIREWAYS
- BUILT–IN METER BASE WITH VANDAL RESISTANT VIEWING WINDOW
- SERVICE ENTRANCE RATED 200A–3P MAIN BREAKER, 347/600V, 22KA RATED
- BC HYDRO APPROVED
- MANUFACRER: VALID MANUFACTURING LTD OR A.C. DANDY.

3 E1 SERVICE KIOSK DETAIL NOT TO SCALE

LEGEND OF SYMBOLS

WP	WEATHERPROOF DEVICE OR EQUIPMENT
	SURFACE MOUNTED FLUORESCENT LUMINAIRE
	WALL MOUNTED LUMINAIRE
	SURFACE–CEILING MOUNTED LUMINAIRE
$	LIGHTING SWITCH
	OCCUPANCY SENSOR
	SELF–CONTAINED BATTERY PACK WITH TWO 12W LIGHTING HEADS
	120V, 15A DUPLEX RECEPTACLE
	120V, 15A GFCI DUPLEX RECEPTACLE
J	IN–GROUND JUNCTION BOX
	DISCONNECT SWITCH
	MOTOR STARTER
	MECHANICAL EQUIPMENT CONNECTION
	SPORTS FIELD LIGHTING POLE WITH 1500W METAL HALIDE SPORTS LIGHTING LUMINAIRES–QUANTITY OF LUMINAIRES INDICATED AS ARROWS
	POST TOP LUMINAIRE
	CONDUIT RUN DOWN
	CONDUIT RUN UP
	PANELBOARD
	CONTROL PANEL
	ELECTRIC BASEBOARD HEATER WATTAGE AS INDICATED
J10	ROUND PVC JUNCTION BOX –10 INDICATES BOX TYPE



2 E1 MAIN ELECTRICAL ROOM/SERVICE BUILDING
1000 2000 3000 1:50

Victoria Office
3rd Floor 1815 Blanshard St.
Victoria, B.C., V8T 5A4
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fax : 250 381 5811
AES APPLIED ENGINEERING SOLUTIONS LIMITED
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No.	DATE	ISSUE
1.	25 JULY 11	ISSUED FOR TENDER

No.	REVISION DESCRIPTION	DATE	BY

DESIGN	RTD
DRAWN	SD
CHECKED	RTD
APPROVED	RTD
DATE	JUNE 13, 2011
SCALE	AS NOTED
FIELD BOOK No.	

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA I.A. BARNES SEAL

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COWICHAN VALLEY REGIONAL DISTRICT

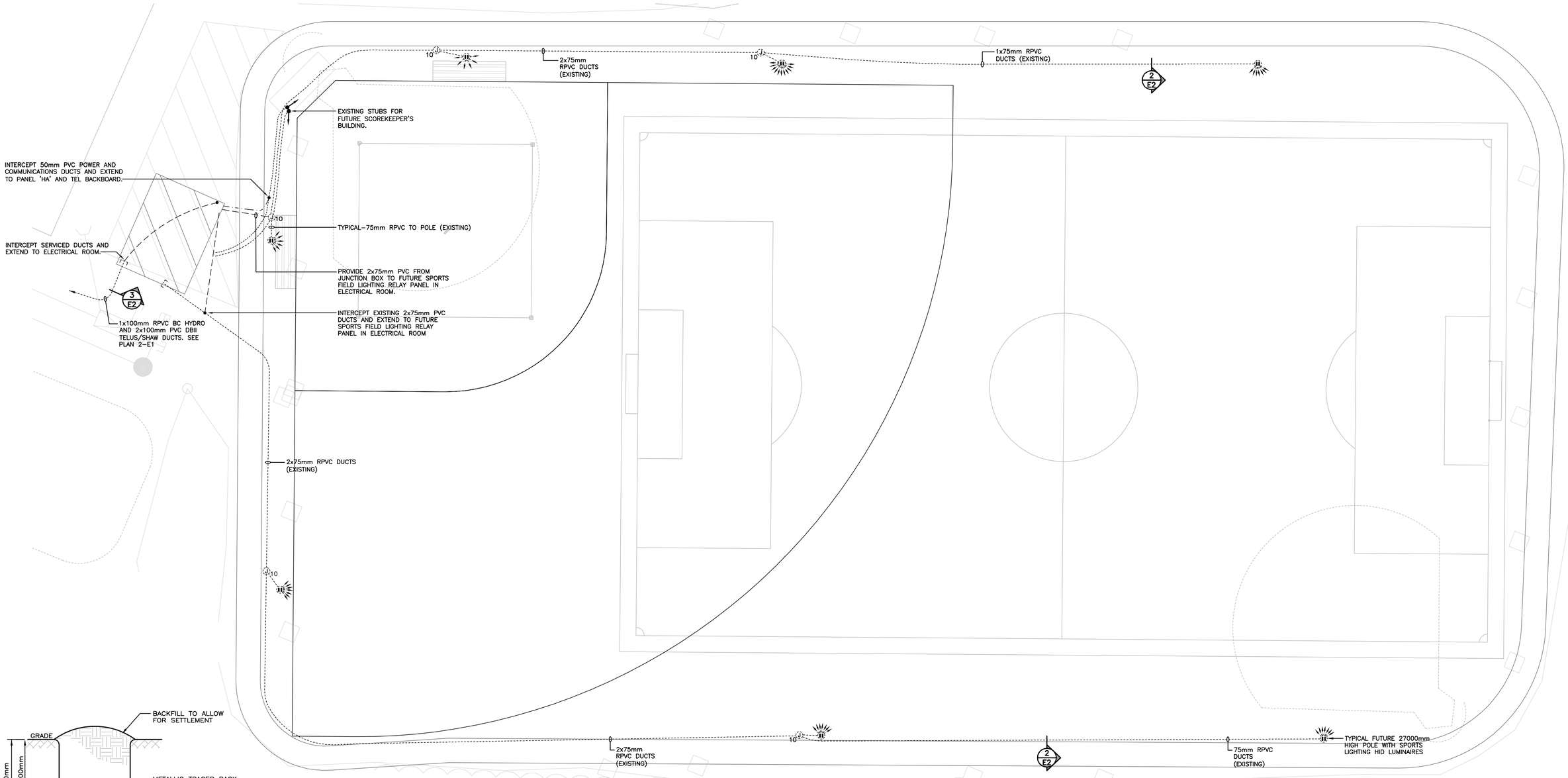
SHAWNIGAN HILLS ATHLETIC FIELDS

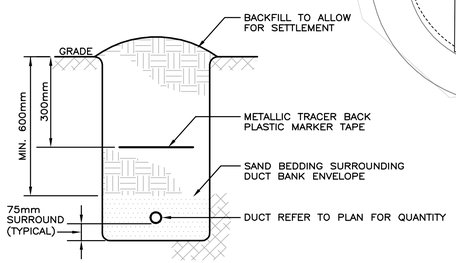
KEY PLAN, MAIN ELEC ROOM LAYOUT, LEGEND AND DETAILS

SHEET No. E1

SHEET 1 OF 3 REV.

DRAWING No. EV–1322–1–E1



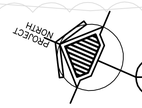


2/E2 TRENCH SECTION

NOT TO SCALE

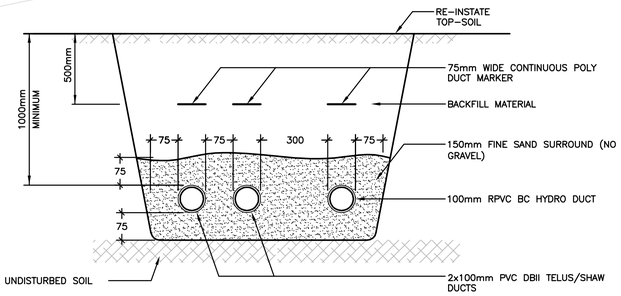
NOTES:

1. MAINTAIN 75mm SEPARATION BETWEEN POWER DUCTS AND 300mm SEPARATION BETWEEN POWER AND COMMUNICATIONS DUCTS.



1/E2 FIELD PLAN

5000 10000 15000 1:250



3/E2 HYDRO AND COMMUNICATIONS SERVICE DUCT BANK SECTION

NOT TO SCALE

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3rd Floor 1815 Blanshard St.
Victoria, B.C., V8T 5A4
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SCALE	AS NOTED
FIELD BOOK No.	

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PROVINCE OF BRITISH COLUMBIA
I.A. BARNES
SEAL

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COWICHAN VALLEY REGIONAL DISTRICT

SHAWNIGAN HILLS ATHLETIC FIELDS

ELECTRICAL SITE PLAN AND DETAILS

SHEET No. E2

SHEET 2 OF 3 REV.

DRAWING No. EV-1322-1-E2

1. GENERAL

.1 GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA HERETO FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THEM. WORK TO INCLUDE THE FURNISHING OF ALL LABOR AND MATERIALS, UNLESS SPECIFIED OTHERWISE, TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.

.2 IT IS THE INTENT OF THE WORK TO PROVIDE COMPLETE, NEATLY FINISHED, AND OPERATIONAL SYSTEMS AND ANY LABOR, MATERIAL, PERMITS, LICENSES, APPROVALS AND INSPECTIONS REQUIRED FOR COMPLETION OF THE WORK, WHETHER SPECIFICALLY MENTIONED IN THE DRAWINGS OR SPECIFICATIONS OR NOT, ARE TO BE INCLUDED IN THE TENDERED PRICE.

.3 RESPONSIBILITY AS TO WHICH TRADE PROVIDES REQUIRED ARTICLES OR MATERIALS RESTS SOLELY WITH THE GENERAL CONTRACT TRADE. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE OF INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.

.4 THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE WORKS, INCLUDING ALL OF THOSE RELATED TO OTHER TRADES ARE TO BE EXAMINED BEFORE SUBMITTING TENDERS. ALL ELECTRICAL AND COMMUNICATIONS REQUIREMENTS INDICATED ARE TO BE INCLUDED IN THE SCOPE OF THE WORK.

.5 CLEAN UP AND REMOVE ALL UNUSED WIRING AND CONDUITS.

.6 REMOVE AND REINSTALL EXISTING DEVICES TO FACILITATE CONSTRUCTION AS REQUIRED.

.7 CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHT WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.

.8 FIRE PROOF ALL FIRE RATED PENETRATIONS AFTER INSTALLATION TO COMPLY WITH CODES AND TO PROVIDE EQUAL FIRE SEPARATION RATINGS.

2. DRAWINGS AND SPECIFICATIONS

.1 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH.

.2 SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL TRADE IN DOUBT AS TO TRUE INTENT AND MEANING, OBTAIN RULING FROM THE ENGINEER BEFORE SUBMITTING TENDER, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.

3. EXAMINATION OF OTHER DRAWINGS

.1 THE ELECTRICAL CONTRACTOR IS TO EXAMINE CAREFULLY STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS, AND THE WORK OF OTHER TRADES AND SATISFY HIMSELF THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO THE BUILDING AS SHOWN ON THE PLANS. SHOULD ANY DIFFICULTY ARISE SHOWING CONFLICT WITH, OR REQUIRING ADDITIONAL WORK BEYOND THE WORK OF THESE DRAWINGS, BRING THIS MATTER TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING TENDER.

4. UNIFORMITY OF EQUIPMENT

.1 UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURE IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.

5. STANDARDS OF MATERIAL AND WORKMANSHIP

.1 ALL MATERIALS ARE TO BE NEW AND OF THE QUALITY SPECIFIED, AND SHALL BE APPROVED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN BRITISH COLUMBIA.

.2 ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER BY QUALIFIED TRADESMEN. THE ELECTRICAL CONTRACTOR SHALL KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ON THE SITE DURING THE PROGRESS OF THE WORK.

.3 ALL MATERIAL AND INSTALLATION SHALL MATCH BUILDING STANDARD UNLESS IT IS NOTED OTHERWISE ON THE DRAWINGS.

6. RECORD PLANS

.1 THE ENGINEER WILL FURNISH TO THE ELECTRICAL TRADE ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. THE ELECTRICAL TRADE IS TO ACCURATELY RECORD ON THESE PRINTS ALL REVISIONS TO THE ORIGINAL PLANS THAT ARE MADE ON SITE DURING CONSTRUCTION.

.2 THE ELECTRICAL TRADE IS TO PRODUCE AT HIS OWN EXPENSE A SET OF AUTOCAD 2004 (OR LATER) DRAWINGS, INCLUDING ALL CHANGES TO THE ORIGINAL TENDER DRAWINGS COVERED BY ADDENDA, CHANGE ORDERS, FIELD CHANGES, AND JOB CONDITIONS, AND TURN THESE OVER TO THE ENGINEER IN ELECTRONIC AND HARD COPY FORM. COMPLETED RECORD DRAWINGS ARE TO BE CLEARLY MARKED "RECORD DRAWINGS".

7. SHOP DRAWINGS

.1 THE ELECTRICAL CONTRACTOR IS TO SUBMIT TO THE ENGINEER, FOR REVIEW, SHOP DRAWINGS OF MAJOR ELECTRICAL EQUIPMENT. SUCH EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO SWITCHGEAR, PANELBOARDS, SERIES-RATED BREAKER COMBINATIONS, FIXTURES AND FITTINGS NOT PROVIDED BY THE OWNER.

.2 ALL DRAWINGS ARE TO BE SUBMITTED IN TRIPLICATE AND TWO COPIES WILL BE RETURNED TO THE ELECTRICAL TRADE. SUBMIT ADDITIONAL COPIES FOR APPROVAL AS MAY BE REQUIRED.

.3 THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS TO BE FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE THE ELECTRICAL TRADE OR SUPPLIERS FROM RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF WORK, AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. THE ELECTRICAL TRADE IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.

8. GUARANTEE WARRANTY

.1 THE ELECTRICAL TRADE SHALL FURNISH A WRITTEN GUARANTEE WARRANTY, SIGNED BY AUTHORIZED PERSONNEL, STATING:

.1 THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.
.2 THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK, AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE.
.3 THE PERIOD OF THE GUARANTEE SPECIFIED WILL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT BE BINDING ON WORK NOT OTHERWISE COVERED.

9. SETTING OUT OF THE WORK

.1 THE ELECTRICAL TRADE IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS. WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.

.2 THE ELECTRICAL TRADE IS TO GIVE WORK HIS PERSONAL SUPERVISION, LAY OUT HIS OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING OR EMPLOY A COMPETENT ENGINEER TO DO SO. FIGURES, FULL SIZE AND DETAIL DRAWINGS TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS.

.3 THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK.

.4 THE ELECTRICAL TRADE, IN THE SETTING OUT OF HIS WORK, IS TO MAKE REFERENCE TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS. HE SHALL CONSULT WITH ALL RELEVANT TRADES IN SETTING OUT LOCATIONS FOR CONDUIT RUNS, LIGHTING FIXTURES, PANEL ASSEMBLIES, AND ALL OTHER ELECTRICAL EQUIPMENT, SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL SPACING IS MAINTAINED.

.5 THE ELECTRICAL TRADE SHALL CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH THE PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.

.6 WHERE RECEPTACLES ARE MOUNTED ABOVE COUNTERS, BENCHES, SPLASHBACKS, OR OTHER FIXTURES, THEIR LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH THE BUILT-IN UNITS. REFER TO ARCHITECTURAL DETAILS. WHERE RECEPTACLES OCCUR IN OUTSIDE WALLS WHERE HEATING UNITS ALSO OCCUR, RECEPTACLE HEIGHT TO BE ADJUSTED TO COORDINATE WITH THE HEATING UNITS.

.7 SWITCH MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ARCHITECTURAL DETAILS AND SHALL BE ADJUSTED, IF REQUIRED, TO COORDINATE WITH PANELING, DADOS, MASONRY COURSE LINES, OR OTHER RELEVANT BUILDING FEATURES.

.8 WHERE OUTLET BOXES OCCUR IN EXTERIOR WALLS, THE ELECTRICAL TRADE IS TO ENSURE THAT THERE IS INSULATION BEHIND THE OUTLET BOXES TO PREVENT CONDENSATION THROUGH THE BOXES.

10. EXAMINATION OF THE SITE

.1 PRIOR TO SUBMITTING TENDER, THE ELECTRICAL TRADE SHALL CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH MAY AFFECT HIS TRADE. NO ADDITIONAL MONEY WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT SHOULD HAVE BEEN NOTICED AND ACCOUNTED FOR DURING A THOROUGH EXAMINATION OF THE SITE.

11. CUTTING AND PATCHING

.1 THE GENERAL TRADE WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL INSTALLATION. STRUCTURAL MEMBERS MUST NOT BE CUT WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

.2 WHERE WORK DONE BY THE ELECTRICAL TRADE DAMAGES THE WORK OF OTHER TRADES, THE ELECTRICAL TRADE SHALL REPAIR AND MAKE GOOD SUCH DAMAGE TO THE SATISFACTION OF EACH TRADE CONCERNED AND THE STRUCTURAL ENGINEER.

.3 ALL PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE STOP MATERIAL.

12. CLEANUP

.1 THE ELECTRICAL TRADE AND HIS SUBTRADES ARE TO KEEP THE SITE FREE DURING CONSTRUCTION OF DEBRIS, BOXES, PACKING, AND OTHER MATERIALS ASSOCIATED WITH THE WORK OF THIS TRADE. ALL WASTE MATERIAL IS TO BE DISPOSED OF IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE MANNER.

.2 UPON COMPLETION OF WORK, THE ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN AND FINISHED CONDITION TO THE SATISFACTION OF THE ENGINEER.

13. CODES, PERMITS AND INSPECTION

.1 THE ENTIRE INSTALLATION, INCLUSIVE OF MATERIAL AND LABOR, IS TO COMPLY WITH ALL THE REQUIREMENTS OF ALL BUILDING CODES AND AUTHORITIES HAVING JURISDICTION, THE CANADIAN ELECTRICAL CODE, AND REGULATIONS OF THE LOCAL INSPECTION DEPARTMENT.

.2 THE ELECTRICAL TRADE IS TO OBTAIN ALL PERMITS REQUIRED FOR EACH STAGE OF WORK, AND AFTER COMPLETION OF THE ENTIRE INSTALLATION FURNISH TO THE ENGINEER A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT.

13. MECHANICAL EQUIPMENT

.1 UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL REQUIRED CONDUIT, WIRING, ELECTRICAL FITTINGS AND CONNECTIONS FOR ALL MOTORS AND OTHER ELECTRICAL EQUIPMENT, EVEN THOUGH SUCH MOTORS AND OTHER ELECTRICAL EQUIPMENT MAY BE SUPPLIED BY OTHERS. WHERE REQUIRED BY THE DRAWINGS OR APPLICABLE REGULATIONS, DISCONNECT SWITCHES, STARTERS, OVERLOAD RELAYS AND OTHER NECESSARY PROTECTIVE DEVICES ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOTORS AND CONTROLS SHALL BE FURNISHED BY THE SUPPLIER OF THE DRIVEN EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS REQUIRED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL.

.2 THE ELECTRICAL EQUIPMENT MAY INCLUDE BUT NOT BE LIMITED TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS, STOREFRONT AND INTERIOR SIGNAGE, STARTING DEVICES, MOTOR CONTROLLERS, FLOAT SWITCHES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA SYSTEMS, INTERCOMS AND STEREO SYSTEMS.

.3 THE ELECTRICAL CONTRACTOR IS TO CONFIRM MOTOR (OR OTHER EQUIPMENT) LOCATION AND SIZES WITH THE TRADE SUPPLYING THE MOTOR (OR OTHER EQUIPMENT) BEFORE COMMENCING ANY ASSOCIATED ELECTRICAL WORK.

14. TESTS

.1 ALL PORTIONS OF ELECTRICAL WORK ARE TO BE TESTED FOR SATISFACTORY OPERATION.

.2 BEFORE ENERGIZING ANY PORTION OF THE ELECTRICAL SYSTEM, THE ELECTRICAL TRADE SHALL PERFORM MEGGER TESTS ON ALL FEEDERS AND BRANCH CIRCUITS. ANY PROBLEMS DISCOVERED BY SUCH TESTING ARE TO BE CORRECTED BY THE ELECTRICAL TRADE AND THE CIRCUITS IN QUESTION RETESTED. THE RESULTS OF ALL FINAL TESTING SHALL BE PROVIDED TO THE ENGINEER IN REPORT FORM.

.3 UPON PROJECT COMPLETION, AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, THE ELECTRICAL TRADE SHALL CHECK THE LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTRES, LOAD CENTRES, AND PANELS. THESE CHECKS ARE TO BE CARRIED OUT BY TURNING ON ALL LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15 %, THE CIRCUITS ARE TO BE RECONFIGURED AS NECESSARY TO BALANCE THE LOADS.

15. PAINTING AND FINISHES

.1 ALL ELECTRICAL FITTINGS, SUPPORTS, HANGER RODS, PULLBOXES, CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, AND CLAMPS ARE TO HAVE A GALVANIZED FINISH OR A PAINT FINISH OVER CORROSION-RESISTANT PRIMER.

.2 ALL PANELS ARE TO BE FACTORY-FINISHED WITH SPRAY-ON AIR DRY ENAMEL. ALL ENAMEL TO BE APPLIED OVER CORROSION-RESISTANT PRIMER. MATTE OR FLAT TYPE FINISH PAINT WILL NOT BE ACCEPTED. ALL PANELS OR SIMILAR FACTORY-FINISHED UNITS THAT ARE SCRATCHED OR MARKED DURING INSTALLATION ARE TO BE TOUCHED UP WITH MATCHING SPRAY-ON AIR DRY LACQUER AND, IF REQUIRED TO PROVIDE A SATISFACTORY JOB, TO BE COMPLETELY REFINISHED.

.3 ALL 120/208 V PANELBOARDS, PULLBOXES, AND OTHER ELECTRICAL CABINETS AND BOXES ARE TO BE FINISHED IN GREY ENAMEL.

16. CONDUIT AND EMT

.1 WHERE REQUIRED BY THE CANADIAN ELECTRICAL CODE, ALL WIRE AND CABLE IS TO BE INSTALLED IN CONDUIT OR EMT. WHERE APPROVED, AC90 OR TECK90 MAY BE USED. IN WOOD STUD CONSTRUCTION, NMD90 MAY BE USED FOR BRANCH CIRCUIT WIRING.

.2 UNLESS OTHERWISE NOTED, CONDUIT AND EMT ARE TO BE CONCEALED IN ALL FINISHED AREAS. IN SERVICE AREAS, CONDUIT AND EMT SHALL BE RUN ON SURFACE UNLESS INDICATED OTHERWISE.

.3 SURFACE MOUNTED CONDUIT AND EMT ARE TO BE INSTALLED PARALLEL TO STRUCTURAL LINES, AND, WHERE BENDS OCCUR IN PARALLEL RUNS, THEY SHALL BE CONCENTRIC.

.4 RACEWAYS ARE TO BE INSTALLED FREE FROM DENTS AND BRUISES AND SHALL HAVE THEIR ENDS CAPPED, PLUGGED, OR SEALED AS NECESSARY TO PREVENT ENTRANCE OF DIRT OR MOISTURE.

.5 IN ALL AREAS SUBJECT TO MOISTURE, WATERTIGHT FITTINGS MUST BE USED.

.6 ALL RACEWAY, EXCEPT WHERE OTHERWISE INDICATED, SHALL BE SIZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

.7 TECK90 OR SEAL TIGHT FLEXIBLE CONDUIT IS BE UTILIZED FOR CONNECTIONS TO MOTORS AND MOTOR CONTROLLERS.

.8 ALL UNDERGROUND CONDUIT SYSTEMS ARE TO BE OF APPROVED RPVC SCHEDULE 40 CONDUIT, COMPLETE WITH INSTALLED BONDING CONDUCTOR, AND INSTALLED AT OR BELOW THE DEPTH REQUIRED BY CODE. PROVIDE 150mm CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CONTINUOUS MARKING TAPE 300mm BELOW GRADE. PROVIDE SUITABLE BACKFILL AND COMPACTION.

17. EXPANSION JOINTS

.1 WHERE CONDUITS ARE INSTALLED IN CONCRETE SLABS OR CROSS STRUCTURAL EXPANSION JOINTS, AN APPROVED EXPANSION FITTING SHALL BE INSTALLED.

18. WIRE AND CABLE

.1 ALL BUILDING WIRING IS TO BE COPPER, EXCEPT WHERE NOTED OTHERWISE.

.2 A MINIMUM CONDUCTOR SIZE OF #12 AWG COPPER IS TO BE USED, EXCEPT WHERE NOTED OTHERWISE.

.3 ALL CONDUCTORS ARE TO BE COLOR CODED THROUGHOUT THE INSTALLATION AS FOLLOWS:
- EQUIPMENT GROUNDING CONDUCTOR – GREEN
- NEUTRAL CONDUCTOR – WHITE
- 120/208V PHASE WIRES – RED, BLACK, AND BLUE

20. WIRING DEVICES & BOXES

.1 ALIGN ALL DEVICES AND PLATES PLUMB AND LEVEL WITH BUILDING STRUCTURAL LINES.

.2 ALL OUTLET BOXES ARE TO BE FLUSH MOUNTED EXCEPT WHERE SPECIFIED OTHERWISE.

21. LOCATION OF OUTLETS

.1 THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS TO WITHIN 3 M OF POINTS INDICATED ON PLANS WITHOUT EXTRA CHARGE, PROVIDED THE ELECTRICAL CONTRACTOR IS ADVISED BEFORE INSTALLATION IS MADE.

22. PULL BOXES

.1 THE ELECTRICAL TRADE SHALL SUPPLY AND INSTALL PULLBOXES AS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES SHALL CONFORM TO CANADIAN ELECTRICAL CODE REQUIREMENTS. PULLBOXES TO BE BE FINISHED IN ENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HINGED COER. IN REMOVABLE CEILING AREAS, PULLBOXES ARE TO BE INSTALLED ABOVE THE CEILING.

23. SWITCHES AND RECEPTACLES

.1 ALL SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE IN WHITE DECORA STYLE UNLESS OTHERWISE NOTED.

.2 PROVIDE P-TOUCH LABELS FOR ALL RECEPTACLE LABELS.

.3 FOR ALL RECEPTACLES OTHER THAN STANDARD 15A DUPLEX RECEPTACLES, PROVIDE LAMACOID NAMETAGS GIVING AMP RATING, PHASE AND VOLTAGE.

24. SUPPORTS

.1 ALL CONDUIT, RACEWAYS, AND OTHER ELECTRICAL EQUIPMENT SHALL BE SECURELY AND ADEQUATELY SUPPORTED, IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

.2 WHERE INSERTS ARE REQUIRED IN CONCRETE, EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS ARE TO BE USED IN DRILLED HOLES. SHOT DRIVEN PINS MAY BE USED IN STRUCTURAL CONCRETE ONLY WITH THE PERMISSION OF THE ENGINEER.

25. GROUNDING AND BONDING

.1 A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND THE ELECTRICAL INSPECTION DEPARTMENT.

.2 ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, SECONDARY FEEDER CIRCUITS, EQUIPMENT AND PANELBOARD ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, SHALL BE PROPERLY GROUNDED. METAL RACEWAYS SHALL UTILIZE DOUBLE LOCKNUTS AND OTHER FITTINGS WHERE NECESSARY TO PROVIDE GROUND CONTINUITY.

.3 A SEPARATE GROUND CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS, FLEXIBLE CONDUIT, AND IN CONDUIT INSTALLED IN SLAB OR UNDERGROUND.

26. PANELS

.1 PROVIDE COMPLETE PANELBOARDS. UNLESS OTHERWISE INDICATED PANELBOARDS ARE TO BE 347/600V, 3PH, 4W OR 120/208V, 3ø, 4W SOLID NEUTRAL DESIGN WITH SEQUENCE STYLE BUSSING AND FULL CAPACITY NEUTRAL WITH BOLT-ON CIRCUIT BREAKERS.

.2 PROVIDE ALL CIRCUIT BREAKERS INDICATED INCLUDING SPARE BREAKERS INDICATED ON PANEL SCHEDULES. CIRCUIT BREAKERS TO BE RATED MINIMUM 10kA I.C. UNLESS OTHERWISE INDICATED.

.3 PANELS ARE TO BE SURFACE MOUNTED IN SERVICE ROOMS, ALL COMPLETE WITH ALL TRIM, LOCKABLE DOORS AND INSTALLATION HARDWARE.

.4 TYPEWRITTEN PANEL DIRECTORIES SHALL BE PROVIDED FOR ALL PANELS.

.5 BALANCE PANEL LOAD FOR EACH PHASE A, B, & C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD.

27. ELECTRIC HEATERS

.1 PROVIDE ELECTRIC BASEBOARD HEATERS COMPLETE WITH BUILT-IN THERMOSTAT.

.2 PROVIDE 19mm THICK PLYWOOD BACKING PAINTED WITH FIRE RESISTANT PAINT FOR ALL BASEBOARD HEATERS.

.3 BASEBOARD HEATERS SHALL BE OUELLET OFM SERIES, 208V SINGLE PHASE, WATTAGE AS SHOWN ON PLAN.

.4 PROVIDE HEAVY DUTY STEEL GUARD BARS, CUSTOM MADE TO PROTECT HEATERS FROM DAMAGE.

28. LIGHTING LUMINAIRES AND LIGHTING CONTROLS

.1 PROVIDE A NEW LIGHTING SYSTEM, COMPLETE AND FULLY OPERATIONAL AND IN CONFORMANCE WITH CODE AND ULC LISTING REQUIREMENTS. UNLESS NOTED OTHERWISE, ALL FIXTURES AND LAMPS ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE DRAWINGS.

.2 ELECTRICAL TRADE TO INSTALL ALL LIGHTING LUMINAIRES COMPLETE WITH LAMPS, MOUNTING BRACKETS, BALLASTS AND ALL NECESSARY ACCESSORIES IN ACCORDANCE WITH THE LUMINAIRE TYPES SHOWN ON THE DRAWINGS, OR OTHERWISE SPECIFIED.

.3 ALL LUMINAIRES SHALL BE ALIGNED, AS APPROPRIATE, WITH ONE ANOTHER AND WITH STRUCTURAL LINES.

.4 ALL LUMINAIRES SHALL BE CLEANED AND LAMPED UPON COMPLETION OF WORK AND PRIOR TO FINAL ACCEPTANCE. UTILIZE MANUFACTURER'S APPROVED OR RECOMMENDED CLEANING SOLUTIONS.

.5 SWITCHES SHALL HAVE A CURRENT RATING NOT LESS THAN THAT OF THE CIRCUIT TO WHICH THEY ARE CONNECTED.

.6 ELECTRICAL TRADE TO SUPPLY AND INSTALL ALL LIGHTING CONTROLS WITH LINE VOLTAGE SWITCHES, DIMMER SWITCHES (rATED 1500W), LOW VOLTAGE SWITCHES, LIGHTING RELAYS, BARRIER AND ALL CONTROL WIRING AND COMPONENTS TO SUIT THE LAYOUT. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER AND COMPLY WITH CODES.

.7 ALL FLUORESCENT LUMINAIRES SHALL BE COMPLETE WITH A FLUORESCENT DISCONNECT SWITCH AS PER CEC RULE 30-308(4). FLUORESCENT DISCONNECT SWITCH SHALL BE THOMAS AND BETTS MARRETTE FLUORESCENT LUMINAIRE DISCONNECT LD2C AND LD3C OR APPROVED EQUAL. FLUORESCENT DISCONNECT SWITCH SHALL BE FACTORY INSTALLED AND CSA APPROVED.

29. EXIT LIGHTING AND EMERGENCY LIGHTING

.1 EMERGENCY LIGHTING SHALL CONSIST OF SELF-CONTAINED BATTERY AND HEAD UNITS CONNECTED TO LOCAL LIGHTING CIRCUITS. READY LITE LES-18P.

.2 ALL EXIT AND EMERGENCY LIGHTING IS TO OPERATE AUTOMATICALLY AND IMMEDIATELY (FROM BATTERIES) UPON FAILURE OF NORMAL POWER SUPPLY.

30. SEISMIC PROTECTION

.1 THE ELECTRICAL TRADE SHALL PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE B.C. BUILDING CODE, AND ALL APPLICABLE BUILDING BYLAWS.

.2 PROVIDE CERTIFIED PROFESSIONALLY SEALED SHOP AND PLACEMENT DRAWINGS WHERE APPLICABLE FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT ASSEMBLIES SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY AND PROVIDE ANCHORAGE/ATTACHMENT DETAILS APPROVED AND SEALED BY A B.C. REGISTERED PROFESSIONAL ENGINEER.

.3 INCLUDE IN THE TENDERED PRICE ALL SERVICES OF THE PROFESSIONAL ENGINEER INCLUDING BUT NOT LIMITED TO PROVIDING LETTERS OF ASSURANCE FOR THE PROJECT IN RESPECT OF THE SEISMIC RESTRAINT OF ALL ELECTRICAL MATERIALS AND EQUIPMENT, CONDUCTING THE NECESSARY SITE REVIEWS AND PROVIDING A LETTER AT THE CONCLUSION OF THE PROJECT, CONFIRMING THAT ALL SEISMIC RESTRAINTS FOR THE ELECTRICAL WORKS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS.

31. COMMUNICATIONS (VOICE, DATA & TV) & SECURITY ROUGH-IN

.1 RUN 1"C RPVC CONDUIT IN SLAB FROM ELECTRICAL ROOM TO THE POSITIONS INDICATED ON THE DRAWINGS. IN ELECTRICAL ROOM, STUB UP CONDUIT BENEATH COMMUNICATIONS BACKBOARDS. ALL STUBBED CONDUITS ARE TO BE CAPPED.

.2 NO CONDUIT RUN SHALL EXCEED TWO 90 DEGREE BENDS AND ONE 45 DEGREE SWEEPING BEND.

.3 ALL COMMUNICATION BACKBOARDS ARE TO BE 21mm THICK, G1S, AND PAINTED WITH FIRE RETARDANT WHITE PAINT.

.4 THE INSTALLATION OF COMMUNICATIONS EQUIPMENT, AND CONDUIT TO BE USED FOR COMMUNICATION WIRES, SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF TELUS AND SHAW.

.5 PROVIDE DOUBLE GANG BOX C/W SINGLE GANG MUD RING, OUTLET BOXES AND EMPTY CONDUITS C/W PULL STRING FOR COMMUNICATIONS OUTLETS AS SHOWN ON THE DRAWINGS.

32. IDENTIFICATION

.1 IDENTIFY ALL MAJOR PIECES OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO PANELBOARDS, ELECTRICAL CABINETS, AND BREAKERS IN PANELBOARDS WITH ENGRAVED LAMACOID LABELS, BLACK LETTERING ON WHITE BACKGROUND.

.2 PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS.

.3 PROVIDE LAMACOID NAMEPLATE ON EACH PANEL COVER TO IDENTIFY PANEL NAME, NUMBER OF PHASES, VOLTAGE, CURRENT RATING AND SOURCE OF FEEDER.

.4 IDENTIFY BRANCH CIRCUIT WIRES TO MEET CODE REQUIREMENTS.

.5 FIRE ALARM BREAKER TO BE PAINTED RED AND CLEARLY IDENTIFIED.

33. POWER DISTRIBUTION

.1 INSTALL A COMPLETE POWER DISTRIBUTION SYSTEM INCLUDING UNDERGROUND CONDUIT, SERVICE CONNECTIONS, GROUNDING, DISTRIBUTION EQUIPMENT, AND PANELBOARDS.

34. UNDERGROUND SERVICES

.1 A POLEMOUNTED TRANSFORMER & POLE FOR THE SERVICE TO THE BUILDING WILL BE PROVIDED BY BC HYDRO.

.2 ELECTRICAL TRADE TO PROVIDE SECONDARY DUCT AND CONDUCTORS IN ACCORDANCE WITH BC HYDRO REGULATIONS.

.3 TWO 103mm SERVICE CONDUITS FROM TELEPHONE AND CABLE BACKBOARDS TO POLE AS INDICATED FOR TELEPHONE AND CABLE TV SERVICE.

.4 ALL COSTS FOR UTILITY CONNECTIONS CHARGES WILL BE PAID FOR BY THE OWNER.

.5 PROVIDE PILASTERS AND PROTECTION AT POLE FOR BC HYDRO, TELUS AND SHAW DIP SERVICES.

35. SERVICE ENTRANCE

.1 PULL BOX IN ACCORDANCE WITH BC HYDRO REQUIREMENTS.

.2 MAIN SWITCH AND FUSES TO BE RATED 347/600V, 400A, WITH MINIMUM 42kA INTERRUPTING CAPACITY.

36. DRY TYPE TRANSFORMER

.1 PROVIDE 600:120/208V, 3ø, 4W DRY TYPE TRANSFORMER AS INDICATED.

.2 MOUNT TRANSFORMER ON FLOOR.

.3 PROVIDE FIRE RESISTANT BACKING AROUND TRANSFORMER AS REQUIRED BY CANADIAN ELECTRICAL CODE.

.4 BOND TRANSFORMER TO GROUND AS REQUIRED BY CANADIAN ELECTRICAL CODE.

37. ELECTRIC HAND DRYERS

.1 PROVIDE ELECTRICAL HAND DRYERS AS INDICATED ON PLAN.

.2 PROVIDE 19mm THICK PLYWOOD BACKING PAINTED WITH FIRE RESISTANT PAINT FOR HAND DRYERS.

.3 HAND DRYERS SHALL BE EXCEL DRYER INC. MODEL XL-SB, 120 VOLT, 1500 WATT, 1 PHASE.

38. MECHANICAL EQUIPMENT

.1 PROVIDE OCCUPANTS SENSING CONTROLS FOR WASHROOM EXHAUST FANS. LEVITON ODC0S-I1W, CEILING MOUNT.

.2 PROVIDE 2 x #10 FOR HOT WATER TANK.

PANELBOARD SCHEDULE

JOB NO./NAME : 1-10-202/SHAWNIGAN HILLS ATHLETIC PARK
PANEL : 'HA'
SYSTEM : 347/600V, 3ø, 4W
TYPE : CDP
LOCATION : ELECTRICAL ROOM
MOUNTING : SURFACE
NO. CIRCUITS : 60
BUS SIZE : 225A
SYM. FAULT RATING : 22KAI

DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION
FUTURE SPORTS LIGHTING	20	1	01	02	3	40	30kVA TRANSFORMER AND PANEL
FUTURE SPORTS LIGHTING	20	1	03	04			
FUTURE SPORTS LIGHTING	20	1	05	06			
FUTURE SPORTS LIGHTING	20	1	07	08	3	50	FUTURE SCOREKEEPER'S BUILDING
FUTURE SPORTS LIGHTING	20	1	09	10			
FUTURE SPORTS LIGHTING	20	1	11	12			
FUTURE SPORTS LIGHTING	20	1	13	14			
FUTURE SPORTS LIGHTING	20	1	15	16			
FUTURE SPORTS LIGHTING	20	1	17	18			
FUTURE SPORTS LIGHTING	20	1	19	20			
FUTURE SPORTS LIGHTING	20	1	21	22			
FUTURE SPORTS LIGHTING	20	1	23	24			
FUTURE SPORTS LIGHTING	20	1	25	26			
FUTURE SPORTS LIGHTING	20	1	27	28			
FUTURE SPORTS LIGHTING	20	1	29	30			
FUTURE SPORTS LIGHTING	20	1	31	32			
FUTURE SPORTS LIGHTING	20	1	33	34			
FUTURE SPORTS LIGHTING	20	1	35	36			
FUTURE SPORTS LIGHTING	20	1	37	38			
FUTURE SPORTS LIGHTING	20	1	39	40			
FUTURE SPORTS LIGHTING	20	1	41	42			
FUTURE SPORTS LIGHTING	20	1	43	44			
FUTURE SPORTS LIGHTING	20	1	45	46			
			47	48			
			49	50			
			51	52			
			53	54			
			55	56			
			57	58			
			59	60			

* GFCI Breaker
** Isolated Ground Circuit

PANELBOARD SCHEDULE

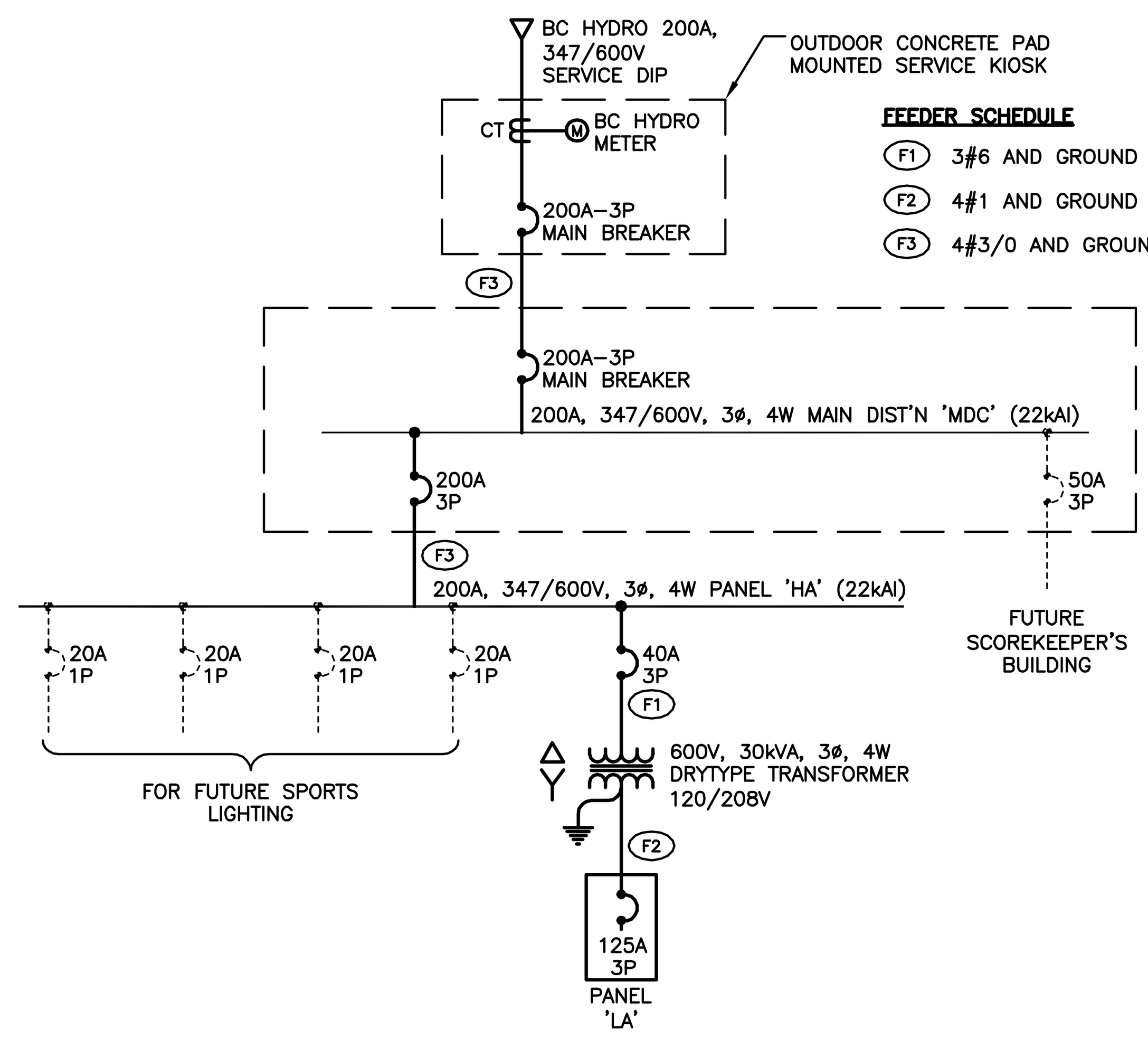
JOB NO./NAME : 1-10-202/SHAWNIGAN HILLS ATHLETIC PARK
PANEL : 'LA'
SYSTEM : 120/208V, 3ø, 4W
TYPE : COMBINATION WITH 125A-3P MAIN CIRCUIT BREAKER
LOCATION : ELECTRICAL ROOM
MOUNTING : SURFACE
NO. CIRCUITS : 42
BUS SIZE : 125A
SYM. FAULT RATING : 10KAI

	DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION
	INTERIOR LIGHTING	15	1	01	02	2	20	ELECTRIC HEAT
(TC)	EXTERIOR LIGHTING	15	1	03	04			
	RECEPTACLES	15	1	05	06	2	20	ELECTRIC HEAT
	RECEPTACLES	15	1	07	08			
	RECEPTACLE	15	1	09	10	2	15	ELECTRIC HEAT
	SPARE	15	1	11	12			
	SPARE	15	1	13	14	1	20	HAND DRYER
	SPARE	15	1	15	16	1	20	HAND DRYER
	SPARE	15	1	17	18	1	20	HAND DRYER
	SPARE	15	1	19	20	2	20	SPARE
	SPARE	15	1	21	22			
	SPARE	15	1	23	24	1	15	EXHAUST FAN 4
	SPARE	15	1	25	26	1	15	EXHAUST FAN 2
	SPARE	15	1	27	28	1	15	EXHAUST FAN 1
	SPARE	15	1	29	30	1	15	EXHAUST FAN 3
	HOT WATER TANK	30	2	31	32	1	15	EXHAUST FAN 5
				33	34			
				35	36			
				37	38			
				39	40			
				41	42			

* GFCI Breaker
(TC) Provide 7-day 24-hour programmable astrological timeclock with manual override switch for controlling exterior lighting circuits

LUMINAIRE SCHEDULE

TYPE	DISCRIPTION	LAMPS	BALLAST	MANUFACTURER
A	SURFACE MOUNTED FLUORESCENT STRIP, 4' LONG COMPLETE WITH WIRE GUARD	2x32W T8 3500°K	120V ELECTRONIC	LITHONIA, COPPER, LITHOLIER, COLUMBIA
B	SURFACE MOUNTED FLUORESCENT LUMINAIRE, RUGH-SERVICE RATED, SEALED AND RATED SERVICE RATED.	2x32W T8 3500°K	120V ELECTRONIC	LITHONIA, VSL232-SCE-MVOLT-GEB10IS
LA	EXTERIOR BUILDING MOUNTED, SEMI-RECESSED HIGH ABUSE, WET LOCATION RATED	32W PLT	120V ELECTRONIC	KENALL MS11ED-PIA-MB-32P-1-120
LB	EXTERIOR SOFFIT MOUNTED SURFACE HIGH ABUSE LUMINAIRE, DAMP LOCATION RATED.	32W PLT	120V ELECTRONIC	KENALL MS11FL-PIA-MB-32P-1-120



FEEDER SCHEDULE

(F1) 3#6 AND GROUND IN 27mm C.
(F2) 4#1 AND GROUND IN 41mm C.
(F3) 4#3/0 AND GROUND IN 103mm C.

1/E3 SINGLE LINE DIAGRAM
NOT TO SCALE

NOTE:

1. ALL FEEDERS SHOWN ARE COPPER. CONTRACTOR MAY SUBSTITUTE WITH ALUMINUM FOR FEEDERS EQUAL OR LARGER THAN 100 AMPS
2. PRIOR TO ROUGH-IN, COMFIRM ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT AND MAKE NECESSARY ADJUSTMENTS TO BRANCH CIRCUIT FEEDERS AND BREAKER AT NO ADDITIONAL COST TO THE OWNER.
3. PROVIDE LOCAL DISCONNECT SWITCH FOR HOT WATER TANK AND EXHAUST FANS.

Victoria Office
3rd Floor 1815 Blanshard St.
Victoria, B.C., V8T 5A4
tel : 250 381 6121
fax : 250 381 6811
AES
APPLIED ENGINEERING SOLUTIONS LIMITED
www.appliedengineering.ca

No.	DATE	ISSUE	No.	REVISION DESCRIPTION	DATE	BY
1.	25 JULY 11	ISSUED FOR TENDER				

DESIGN RTD
DRAWN SD
CHECKED RTD
APPROVED RTD
DATE JUNE 13, 2011
SCALE AS NOTED
FIELD BOOK No.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — I.A. BARNES
SEAL

Delcan
4082 SHELBOURNE STREET, VICTORIA, B.C. V8N 4P6
TEL (250) 477-2206 FAX (250) 477-2207

COWICHAN VALLEY REGIONAL DISTRICT

SHAWNIGAN HILLS ATHLETIC FIELDS

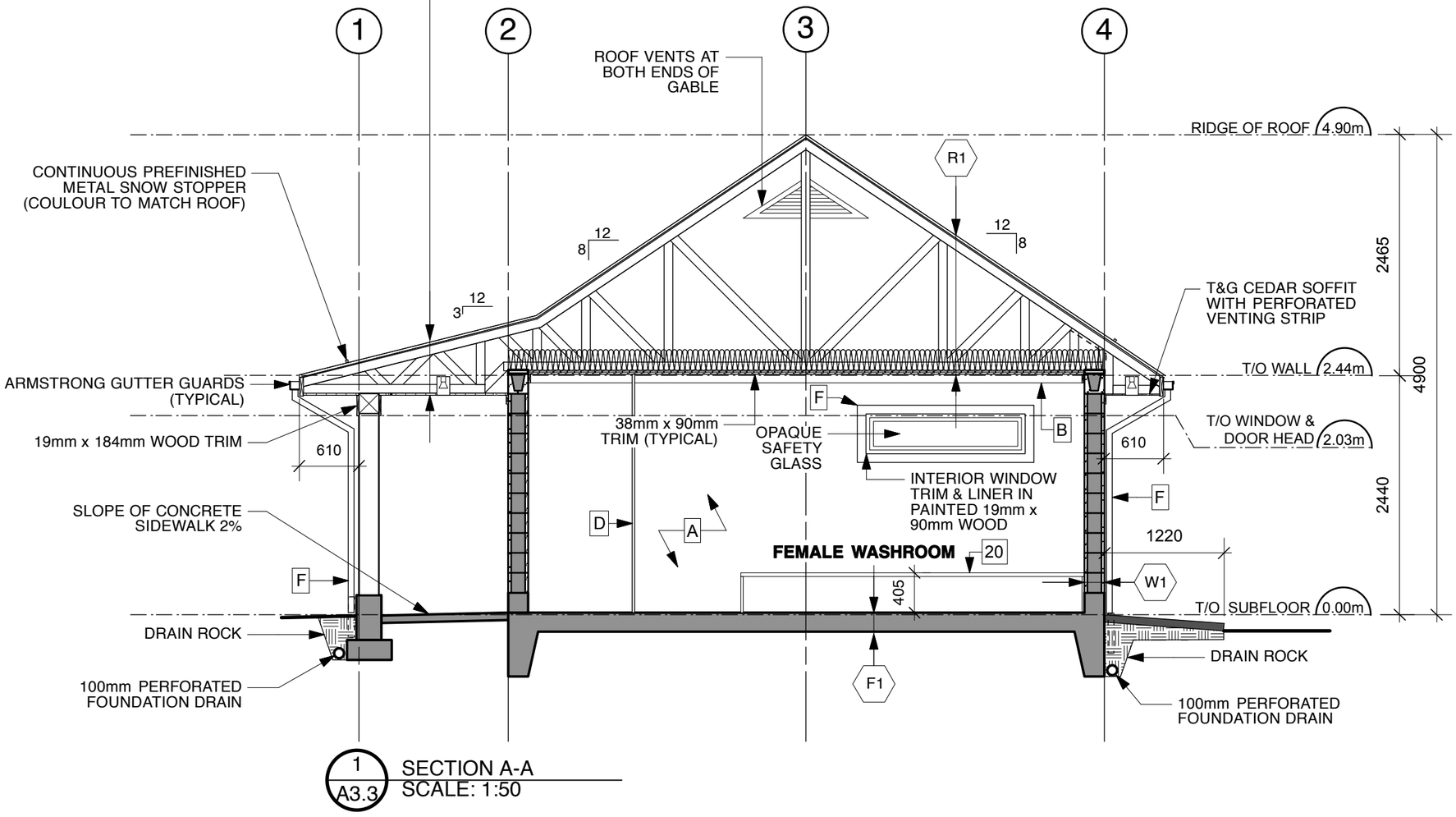
ELECTRICAL SPECIFICATONS, SCHEDULES AND SINGLE LINE DIAGRAM

SHEET No. E3
SHEET 3 OF 3 REV.
DRAWING No. EV-1322-1-E1

~AES2001~ 14-JUN-11 16:35 H:\PROJECTS\2010\1-10-202\DWGS\DWG\FIELD HOUSE\1-10-202-E3-SPEC-PH2.DWG SSEYMOUR

ROOF ASSEMBLY:
STANDING SEAM METAL ROOF - 26 GAUGE
PRE-FORMED, PREFINISHED
FELT UNDERLAY. PROVIDE 1M ICE DAM MEMBRANE @ EAVES
16mm TONGUE AND GROOVE PLYWOOD
ENGINEERED TRUSSES @ 600mm O.C.
T&G CEDAR SOFFIT WITH PERFORATED VENTING STRIP

NOTE: ROOF VENTING TO BE SIZED AT 1 : 300.



1 / A3.3 SECTION A-A
SCALE: 1:50

INTERIOR COLOUR SCHEME

A. WALLS: TO BE DETERMINED
B. TRIMS: SAME AS WALLS
C. INTERIOR SIDE OF EXTERIOR DOORS: SAME AS WALLS
D. TOILET PARTITIONS: TO BE DETERMINED
E. COUNTERTOPS: TO BE DETERMINED
F. WINDOW TRIM: SAME AS WALLS

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE FROM DRAWINGS!
3. INSTALL 19mm x 90mm CEDAR TRIM AROUND ALL WINDOWS AND DOORS COMPLETE WITH FLASHING. TRIM TO BE INSTALLED FLUSH WITH EXTERIOR SIDING.

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E-mail: silvia-ajf@shaw.ca

Revisions:

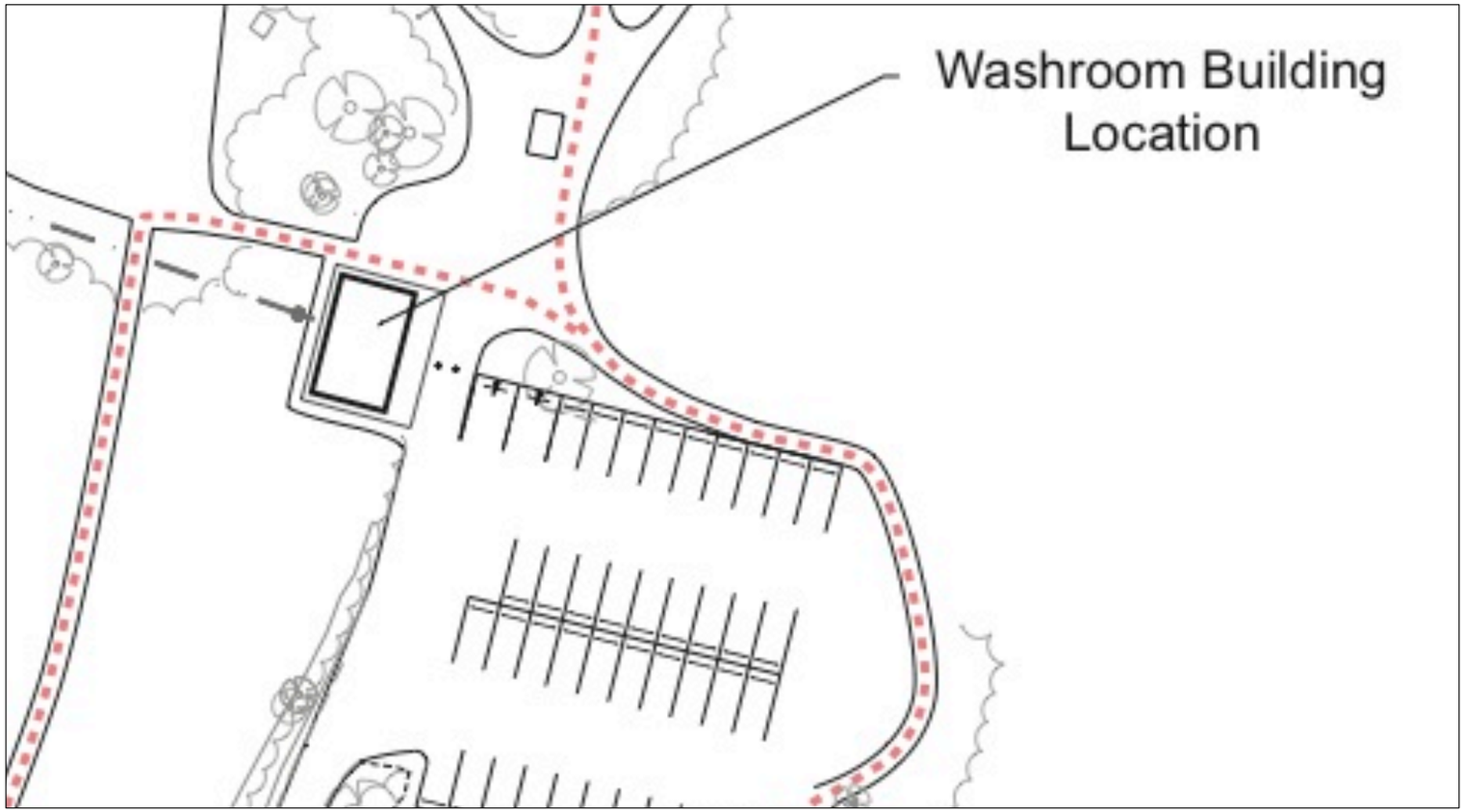
Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
BC V9L 6N2

Drawing Title:
SECTION A-A

Date: FEB 14, 2014	Date:
Scale: 1:50	Drawn By: RJC

Drawing No.
A3.3

Project No.
13933



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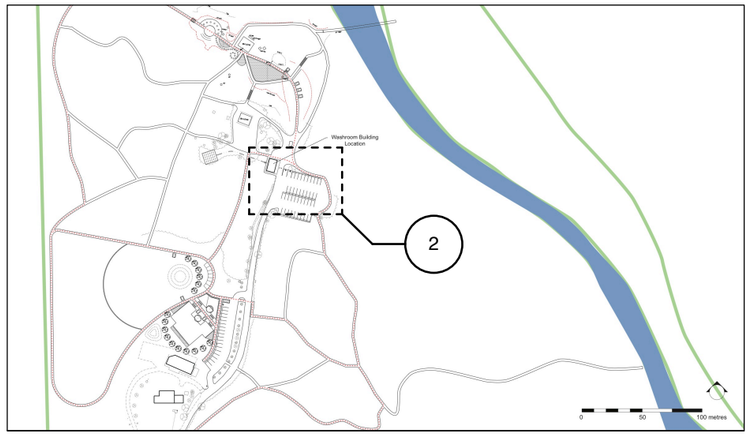
A1.0
SITE PLAN
Scale: N/A

PROJECT DATA

CIVIC ADDRESS:
BRIGHT ANGEL PARK
4528 TIGWELL RD, DUNCAN, BC V9L 6N2

DRAWING LIST



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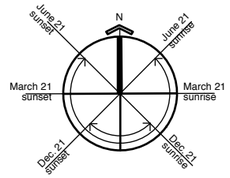
KEY PLAN
Scale: N/A



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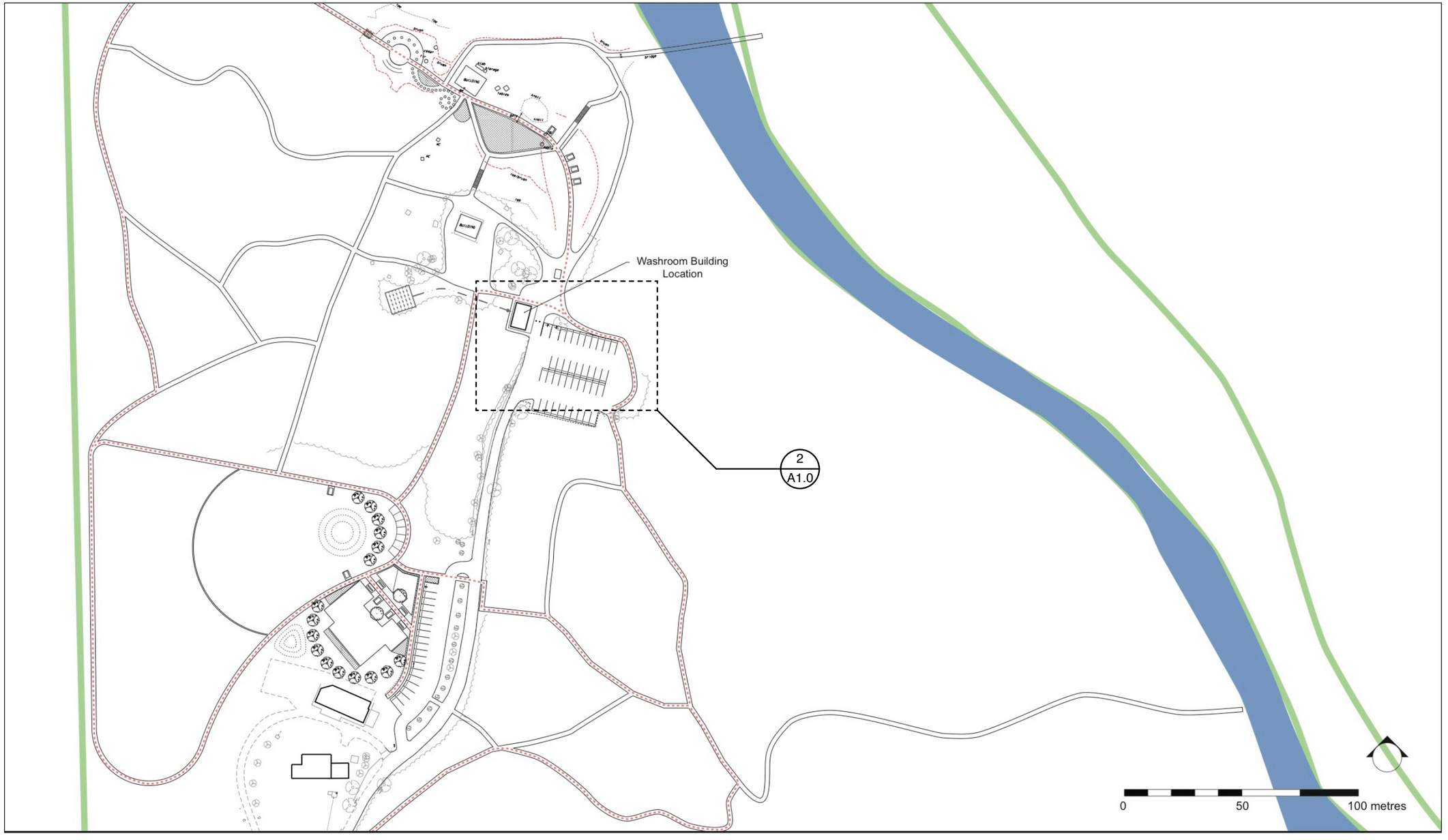
Rev	Date	Description
Checked		SMB
Drawn		RJC
Scale		N/A
Date		FEB 14, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD, DUNCAN, BC V9L 6N2

Project No.
13933

Drawing Title
KEY PLAN & SITE PLAN

Drawing No.
A1.0



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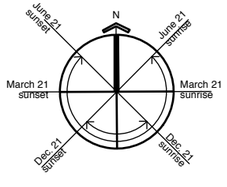
A1.1
LARGE SITE PLAN
Scale: N/A



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BONET
ARCHITECTURE

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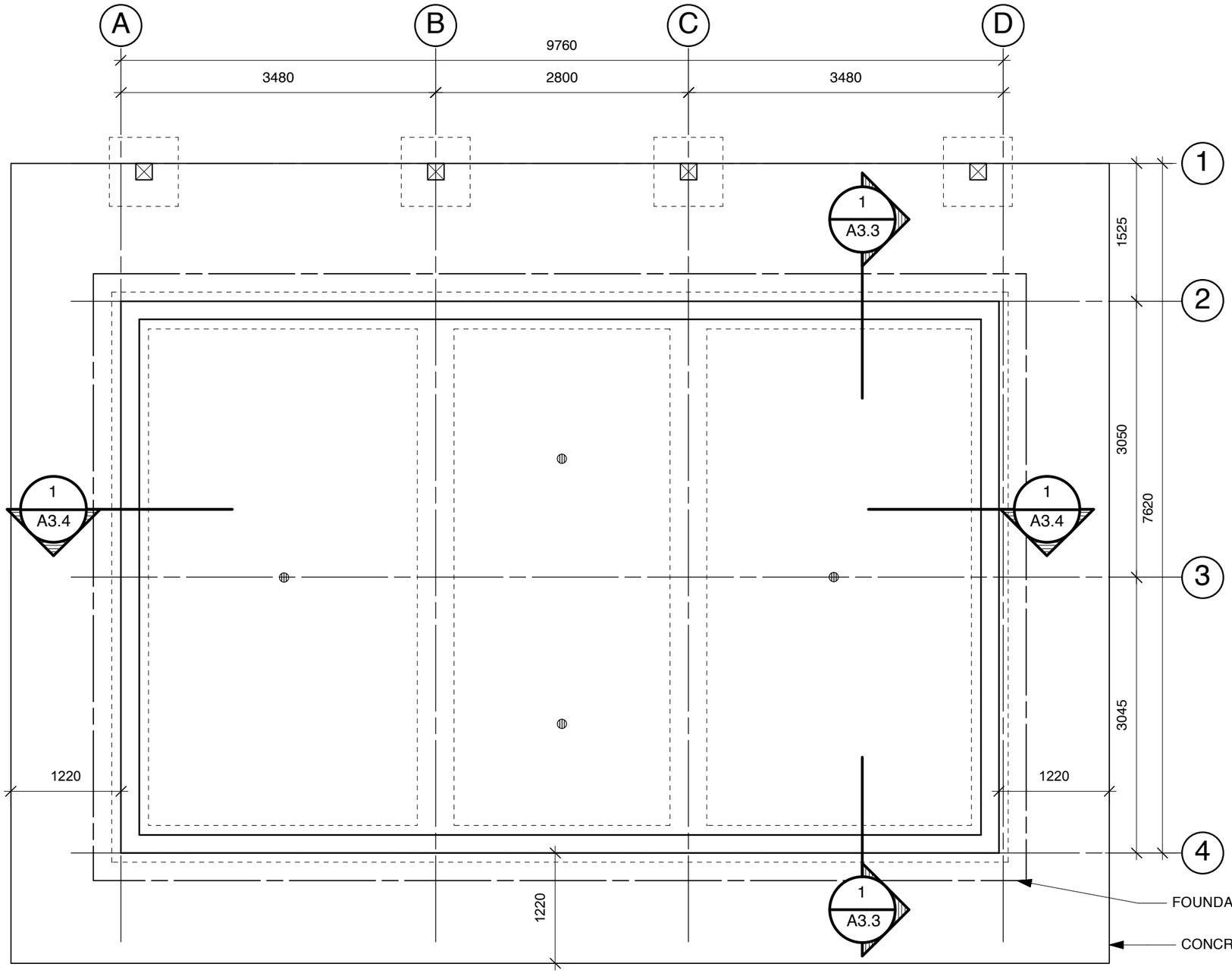
Drawn		RJC
Scale		N/A
Date		FEB 14, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
13933

Drawing Title
LARGE SITE PLAN

Drawing No.
A1.1



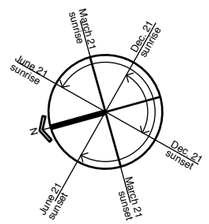
ASSEMBLIES

R1	TYPICAL ROOF ASSEMBLY: STANDING SEAM METAL ROOF - 26 GAUGE PRE-FORMED, PREFINISHED FELT UNDERLAY. PROVIDE 1M ICE DAM MEMBRANE @ EAVES 16mm TONGUE AND GROOVE PLYWOOD ENGINEERED TRUSSES @ 600mm O.C. R-28 BATT INSULATION 16mm TONGUE AND GROOVE PLYWOOD CEILING. PAINTED
W1	TYPICAL EXTERIOR WALL 200mm STACK BOND CONCRETE MASONRY UNIT (SPLIT & SMOOTH FACE REFER TO ELEVATIONS) WITH WELDED WIRE MESH REINFORCEMENT IN MORTAR JOINTS
P1	TYPICAL INTERIOR PARTITION 16mm PAINTED TONGUE AND GROOVE PLYWOOD 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. R18 ACOUSTIC BATT INSULATION 16mm PAINTED TONGUE AND GROOVE PLYWOOD
F1	TYPICAL FLOOR 150mm REINFORCED CONCRETE SLAB ON GRADE WITH SMOOTH FINISH 6 MIL POLYETHYLENE VAPOUR BARRIER 150mm COMPACTED GRANULAR FILL ON BEARING SOIL

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE FROM DRAWINGS!
3. INSTALL 19mm x 90mm CEDAR TRIM AROUND ALL WINDOWS AND DOORS COMPLETE WITH FLASHING. TRIM TO BE INSTALLED FLUSH WITH EXTERIOR SIDING.

1 / A2.0 FOUNDATION PLAN
SCALE: 1:50



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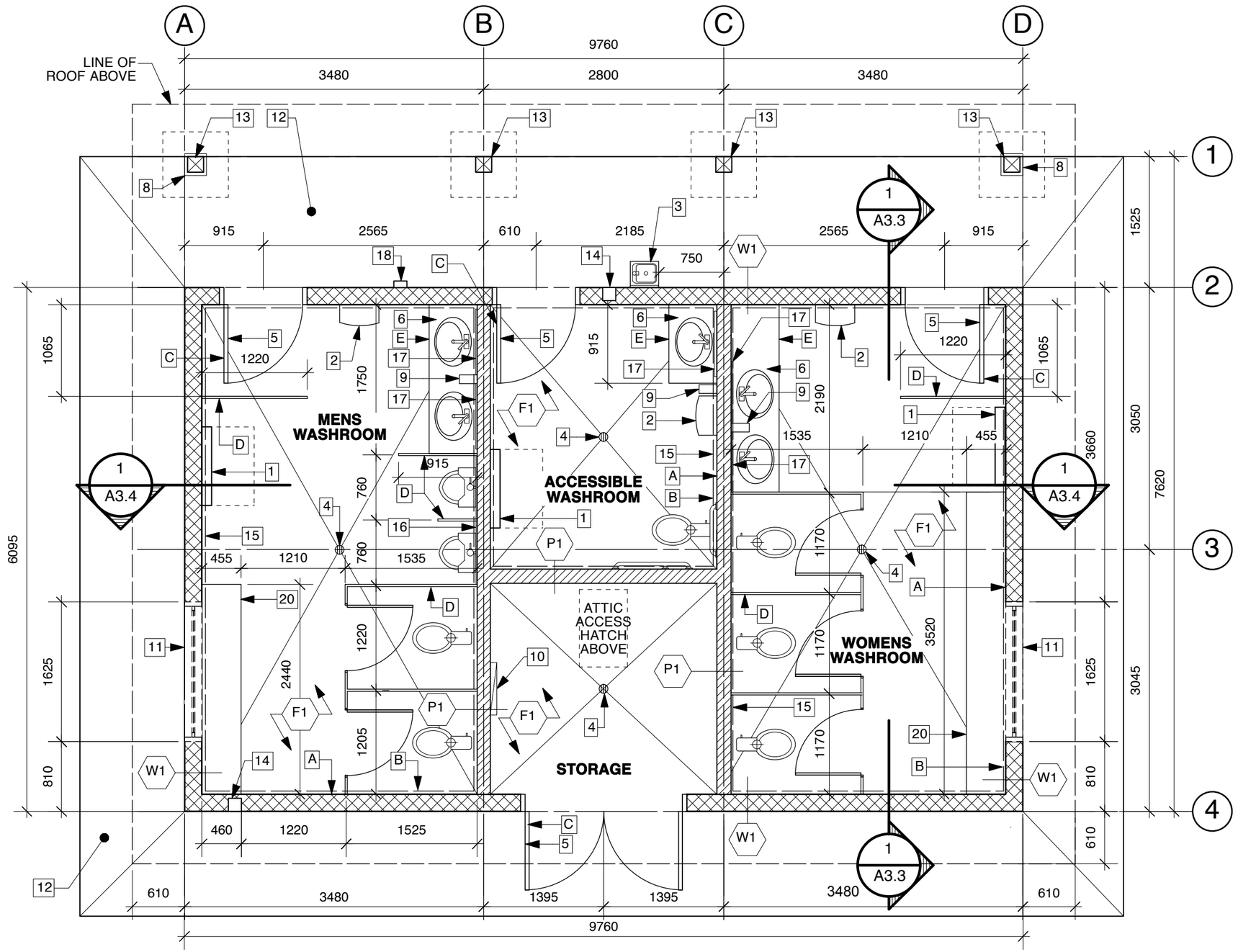
Rev	Date	Description
Checked		SMB
Drawn		KDS / RJC
Scale		1:50
Date		FEB 14, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
13933

Drawing Title
FOUNDATION PLAN

Drawing No.
A2.0



1 / A2.1 MAIN FLOOR PLAN

SCALE: 1:50

ASSEMBLIES

R1	TYPICAL ROOF ASSEMBLY: STANDING SEAM METAL ROOF - 26 GAUGE PRE-FORMED, PREFINISHED FELT UNDERLAY. PROVIDE 1M ICE DAM MEMBRANE @ EAVES 16mm TONGUE AND GROOVE PLYWOOD ENGINEERED TRUSSES @ 600mm O.C. R-28 BATT INSULATION 16mm TONGUE AND GROOVE PLYWOOD CEILING. PAINTED
W1	TYPICAL EXTERIOR WALL 200mm STACK BOND CONCRETE MASONRY UNIT (SPLIT & SMOOTH FACE REFER TO ELEVATIONS) WITH WELDED WIRE MESH REINFORCEMENT IN MORTAR JOINTS
P1	TYPICAL INTERIOR PARTITION 16mm PAINTED TONGUE AND GROOVE PLYWOOD 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. R18 ACOUSTIC BATT INSULATION 16mm PAINTED TONGUE AND GROOVE PLYWOOD
F1	TYPICAL FLOOR 150mm REINFORCED CONCRETE SLAB ON GRADE WITH SMOOTH FINISH 6 MIL POLYETHYLENE VAPOUR BARRIER 150mm COMPACTED GRANULAR FILL ON BEARING SOIL

FLOOR PLAN KEYNOTES

1. BABY CHANGE TABLE TO BE "KOALA CLASSIC HORIZONTAL BABY CHANGING STATION - KB100.
2. HAND DRYERS AS PER OWNER.
3. SURFACE MOUNTED WATER FOUNTAIN WITH WATER BOTTLE FILLING TAP
4. ALUMINUM FLOOR DRAIN. SLOPE FLOOR TO DRAIN
5. 915mm x 2135mm INSULATED HOLLOW METAL DOOR IN PRESSED STEEL FRAME WITH KEYED LOCKSET, KICK PLATE, GASKETS, CLOSER, AND WALL STOP DOOR HARDWARE.
6. PLASTIC LAMINATE ON 2 LAYERS 19mm PLYWOOD COUNTER TOP WITH SURFACE MOUNT VANITY W/ BACKSPLASH & ROLLED EDGE.
7. NOT USED
8. DOG TIE-UP RING MOUNTED TO WOOD COLUMNS
9. SURFACE MOUNTED SOAP DISPENSER
10. ELECTRICAL PANEL
11. 1625mm (W) x 405mm (H) VINYL FRAMED WINDOW. REBATE FRAME, DOUBLE GLAZED W/ LOW E COATING
12. 100mm CONCRETE SIDEWALK WITH BROOM FINISH. SLOPE SIDEWALK MINIMUM 2% AWAY FROM BUILDING. SAW CUT CONTROL JOINTS EVERY 1525mm.
13. 184mm x 184mm STAINED CEDAR STRUCTURAL COLUMN ON 255mm x 255mm REINFORCED CONCRETE PIER WITH EMBEDDED 'U' BRACKET. 610mm x 610mm x 200mm THICK REINFORCED CONCRETE FOOTING TYPICAL (REFER TO STRUCTURAL)
14. LOCKABLE HOSE BIB
15. 19mm x 90mm INTERIOR TRIM @ TOP OF WALL. COLOUR TO MATCH WALL.
16. PLASTIC LAMINATE BACKING. COLOUR TO MATCH WALL.
17. 760mm x 915mm MIRROR
18. SURFACE MOUNTED ELECTRICAL OUTLET BOX
19. NOT USED
20. WOOD BENCH BY OTHERS

INTERIOR COLOUR SCHEME

A. WALLS: TO BE DETERMINED
B. TRIMS: SAME AS WALLS
C. INTERIOR SIDE OF EXTERIOR DOORS: SAME AS WALLS
D. TOILET PARTITIONS: TO BE DETERMINED
E. COUNTERTOPS: TO BE DETERMINED
F. WINDOW TRIM: SAME AS WALLS

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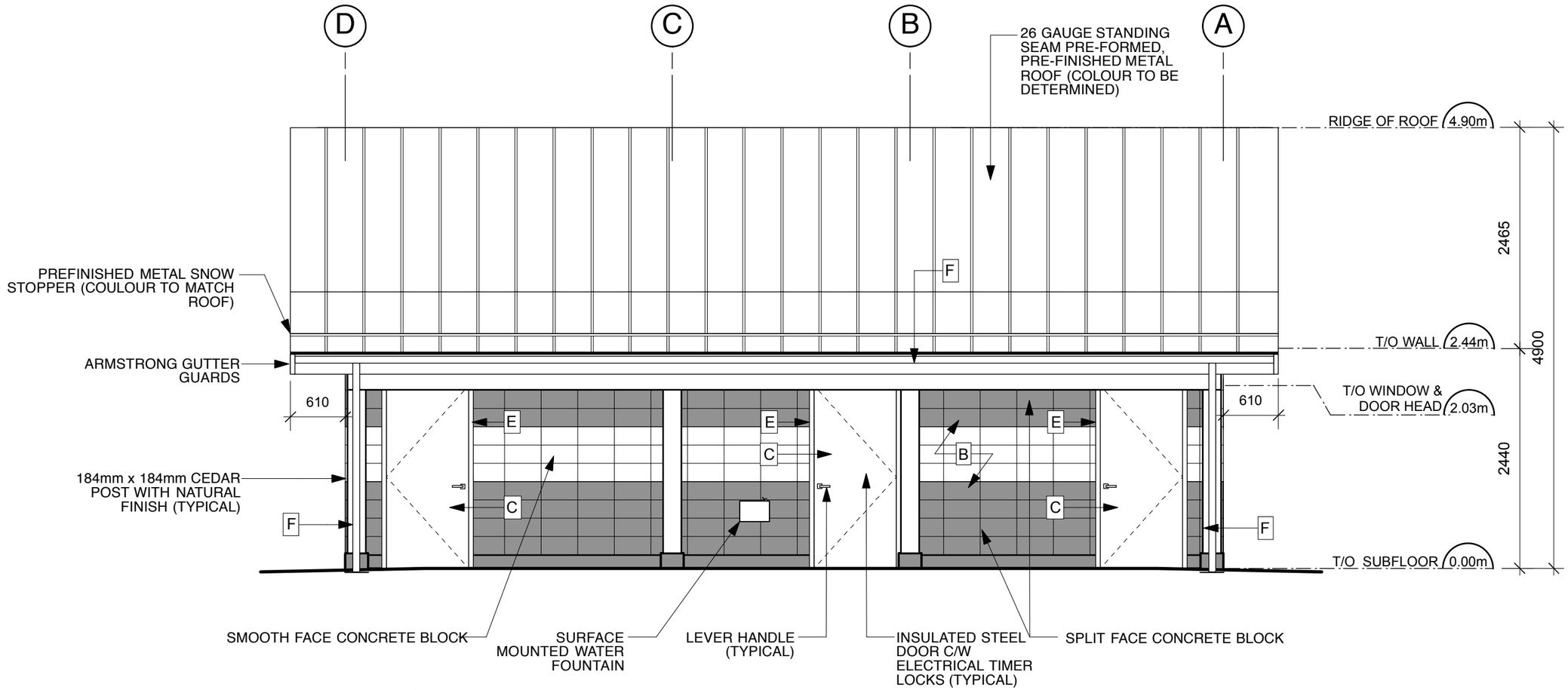
Rev	Date	Description
Checked		SMB
Drawn		KDS / RJC
Scale		1:50
Date		FEB 14, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
13933

Drawing Title
MAIN FLOOR PLAN

Drawing No.
A2.1R1



1 / A3.0 FRONT ELEVATION
SCALE: 1:50

EXTERIOR COLOUR SCHEME

A. CEDAR SHINGLES ON GABLES: CETOL - CLEAR COAT
B. EXTERIOR WALLS: BEHR PREMIUM ELASTOMERIC MASONRY PAINT. COLOUR TO BE DETERMINED
C. EXTERIOR SIDE OF EXTERIOR DOORS: TO BE DETERMINED
D. WOOD FASCIA: PAINTED TO MATCH ROOF COLOUR
E. EXTERIOR WINDOW & DOOR TRIM: TO BE DETERMINED
F. GUTTERS & DOWN SPOUTS: TO BE DETERMINED

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE FROM DRAWINGS!
3. INSTALL 19mm x 90mm CEDAR TRIM AROUND ALL WINDOWS AND DOORS COMPLETE WITH FLASHING. TRIM TO BE INSTALLED FLUSH WITH EXTERIOR SIDING.

FINLAYSON BONET ARCHITECTURE

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Revisions:

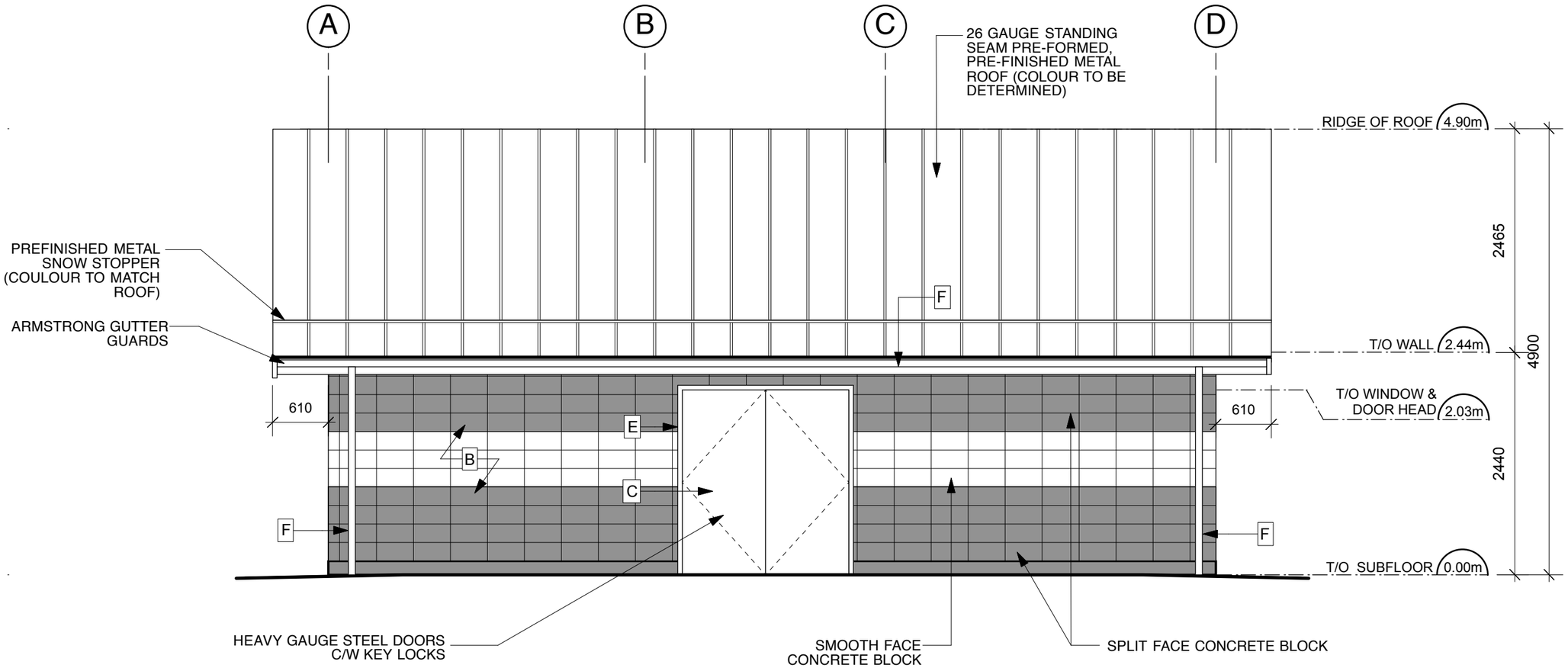
Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
BC V9L 6N2

Drawing Title:
FRONT ELEVATION

Date: FEB 14, 2014	Date:
Scale: 1:50	Drawn By: RJC

Drawing No.
A3.0

Project No.
13933



1 / A3.1 REAR ELEVATION
SCALE: 1:50

EXTERIOR COLOUR SCHEME

A. CEDAR SHINGLES ON GABLES: CETOL - CLEAR COAT
B. EXTERIOR WALLS: BEHR PREMIUM ELASTOMERIC MASONRY PAINT. COLOUR TO BE DETERMINED
C. EXTERIOR SIDE OF EXTERIOR DOORS: TO BE DETERMINED
D. WOOD FASCIA: PAINTED TO MATCH ROOF COLOUR
E. EXTERIOR WINDOW & DOOR TRIM: TO BE DETERMINED
F. GUTTERS & DOWN SPOUTS: TO BE DETERMINED

GENERAL NOTES:

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FINLAYSON BONET ARCHITECTURE

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Revisions:

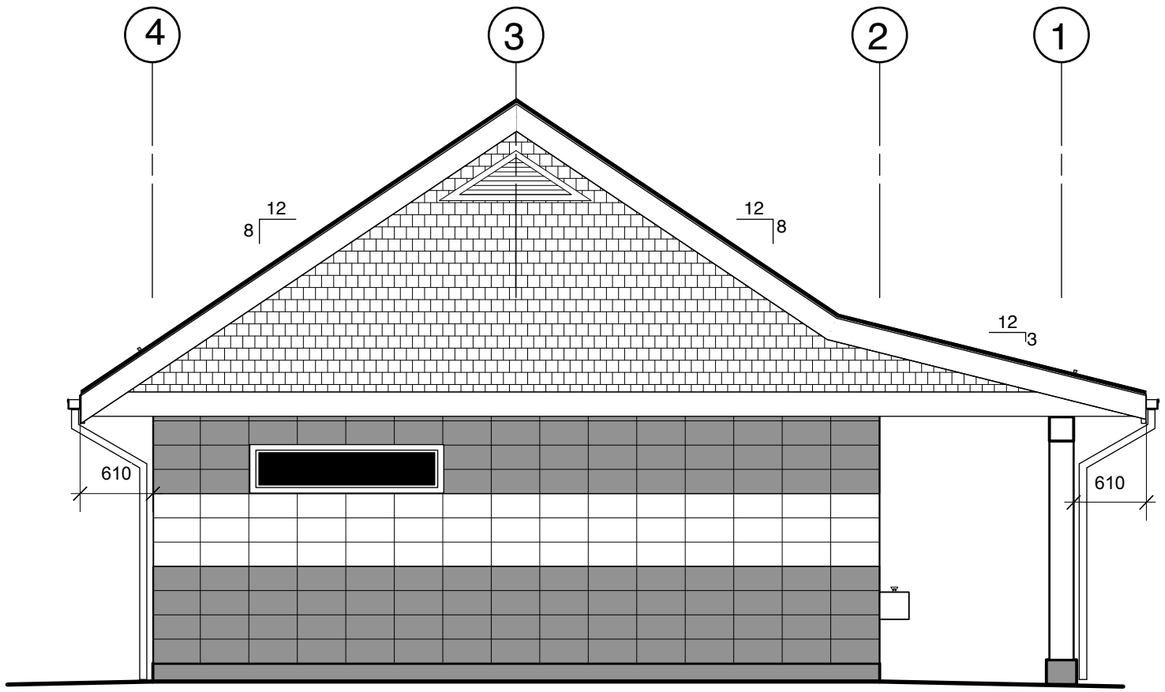
Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
BC V9L 6N2

Drawing Title:
REAR ELEVATION

Date: FEB 14, 2014	Date:
Scale: 1:50	Drawn By: RJC

Drawing No.
A3.1

Project No.
13933



EXTERIOR COLOUR SCHEME

A. CEDAR SHINGLES ON GABLES: CETOL - CLEAR COAT
B. EXTERIOR WALLS: BEHR PREMIUM ELASTOMERIC MASONRY PAINT. COLOUR TO BE DETERMINED
C. EXTERIOR SIDE OF EXTERIOR DOORS: TO BE DETERMINED
D. WOOD FASCIA: PAINTED TO MATCH ROOF COLOUR
E. EXTERIOR WINDOW & DOOR TRIM: TO BE DETERMINED
F. GUTTERS & DOWN SPOUTS: TO BE DETERMINED

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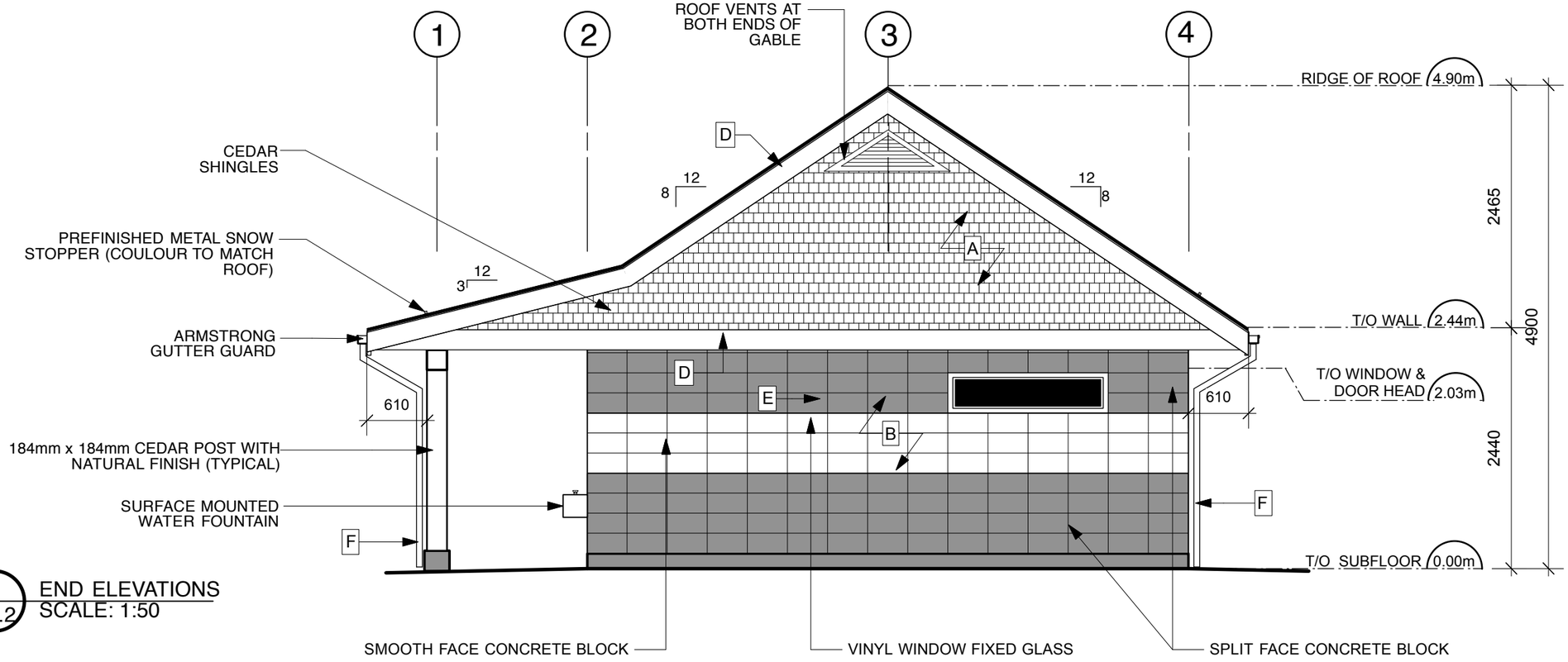

1 / A3.2 END ELEVATIONS
SCALE: 1:50

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Revisions:

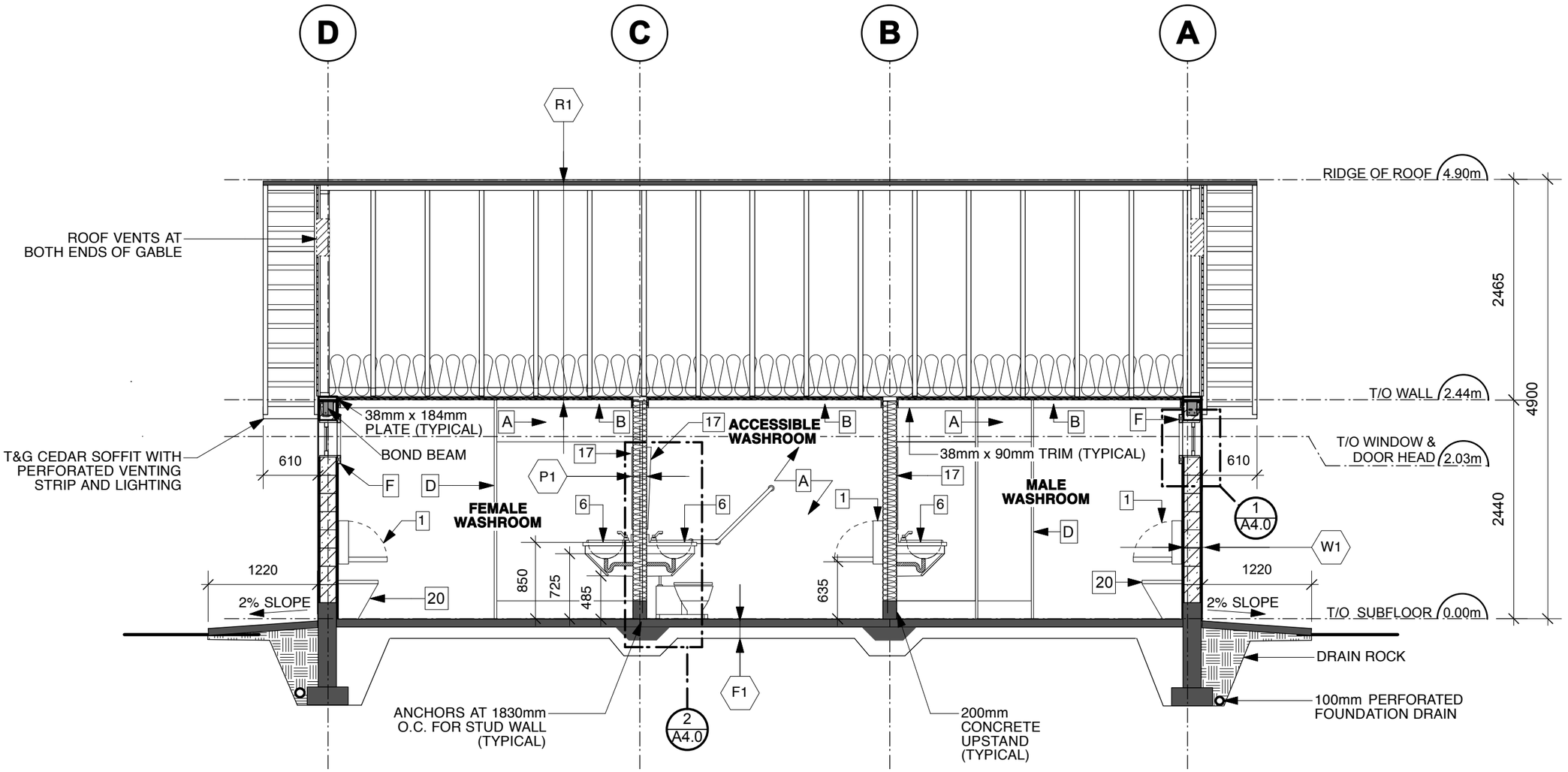
Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
BC V9L 6N2

Drawing Title:
END ELEVATIONS

Date: FEB 14, 2014	Date:
Scale: 1:50	Drawn By: RJC

Drawing No.
A3.2

Project No.
13933



1 A3.4 SECTION B-B
SCALE: 1:50

INTERIOR COLOUR SCHEME

A. WALLS: TO BE DETERMINED
B. TRIMS: SAME AS WALLS
C. INTERIOR SIDE OF EXTERIOR DOORS: SAME AS WALLS
D. TOILET PARTITIONS: TO BE DETERMINED
E. COUNTERTOPS: TO BE DETERMINED
F. WINDOW TRIM: SAME AS WALLS

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE FROM DRAWINGS!
3. INSTALL 19mm x 90mm CEDAR TRIM AROUND ALL WINDOWS AND DOORS COMPLETE WITH FLASHING. TRIM TO BE INSTALLED FLUSH WITH EXTERIOR SIDING.

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E-mail: art-ajf@shaw.ca
E-mail: silvia-ajf@shaw.ca

Revisions:

Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
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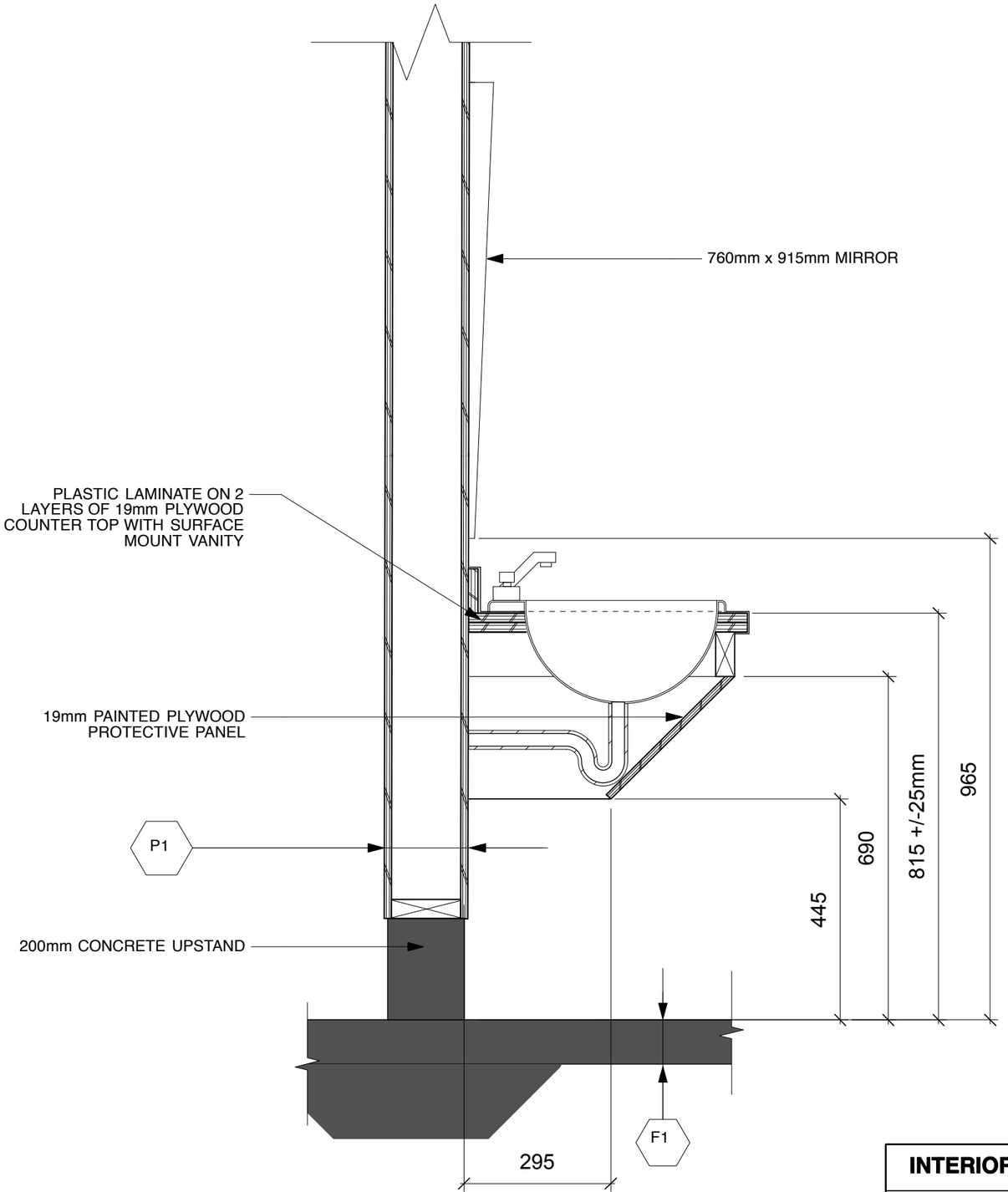
Drawing Title:
SECTION B-B

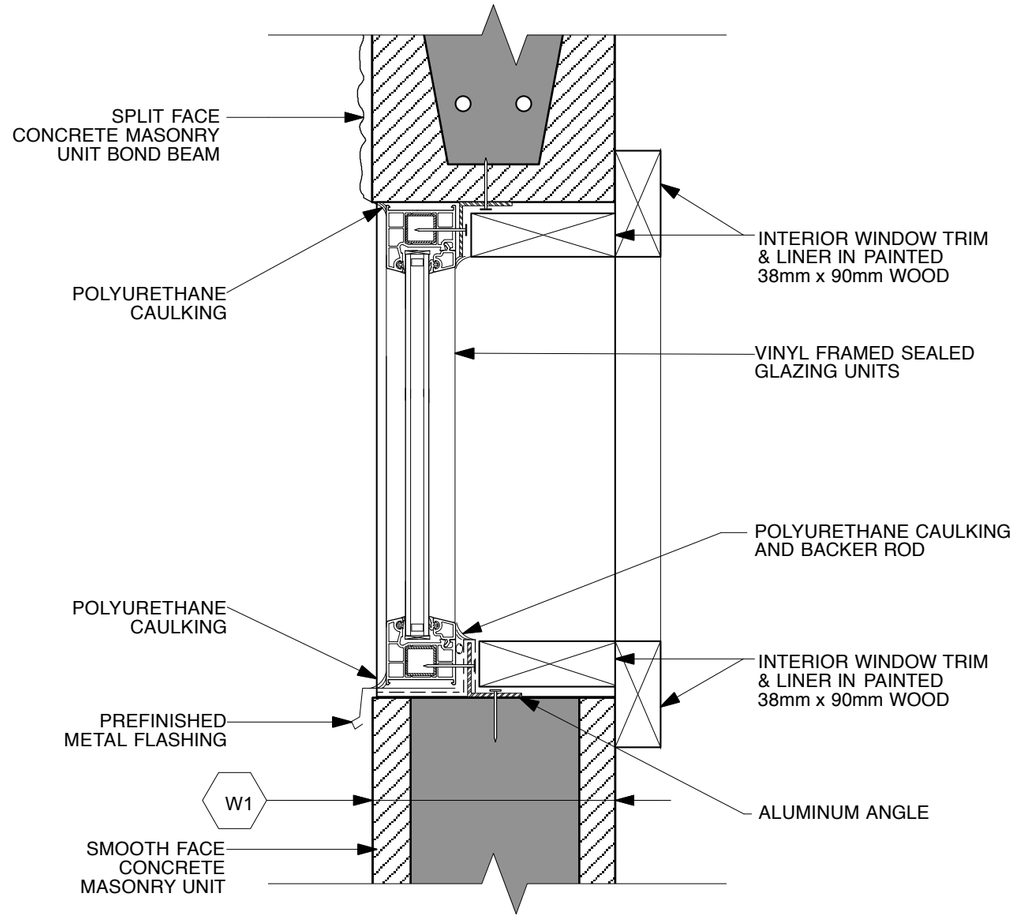
Date: FEB 14, 2014	Date:
Scale: 1:50	Drawn By: RJC

Drawing No.
A3.4

Project No.
13933



2 / A4.0 PROTECTIVE PANEL AT SINK
SCALE: 1:10



1 / A4.0 WINDOW DETAIL
SCALE: 1:5

INTERIOR COLOUR SCHEME

A. WALLS: TO BE DETERMINED
B. TRIMS: SAME AS WALLS
C. INTERIOR SIDE OF EXTERIOR DOORS: SAME AS WALLS
D. TOILET PARTITIONS: TO BE DETERMINED
E. COUNTERTOPS: TO BE DETERMINED
F. WINDOW TRIM: SAME AS WALLS

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DO NOT SCALE FROM DRAWINGS!
3. INSTALL 19mm x 90mm CEDAR TRIM AROUND ALL WINDOWS AND DOORS COMPLETE WITH FLASHING. TRIM TO BE INSTALLED FLUSH WITH EXTERIOR SIDING.

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Revisions:

Project Name:
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN,
BC V9L 6N2

Drawing Title:
DETAILS

Date: FEB 14, 2014	Date:
Scale: AS NOTED	Drawn By: RJC

Drawing No.
A4.0

Project No.
13933

1. GENERAL

.1 GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA HERETO FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THEM. WORK TO INCLUDE THE FURNISHING OF ALL LABOR AND MATERIALS, UNLESS SPECIFIED OTHERWISE, TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.

.2 IT IS THE INTENT OF THE WORK TO PROVIDE COMPLETE, NEATLY FINISHED, AND OPERATIONAL SYSTEMS AND ANY LABOR, MATERIAL, PERMITS, LICENSES, APPROVALS AND INSPECTIONS REQUIRED FOR COMPLETION OF THE WORK, WHETHER SPECIFICALLY MENTIONED IN THE DRAWINGS OR SPECIFICATIONS OR NOT, ARE TO BE INCLUDED IN THE TENDERED PRICE.

.3 RESPONSIBILITY AS TO WHICH TRADE PROVIDES REQUIRED ARTICLES OR MATERIALS RESTS SOLELY WITH THE GENERAL CONTRACT TRADE. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE OF INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.

.4 THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE WORKS, INCLUDING ALL OF THOSE RELATED TO OTHER TRADES ARE TO BE EXAMINED BEFORE SUBMITTING TENDERS. ALL ELECTRICAL AND COMMUNICATIONS REQUIREMENTS INDICATED ARE TO BE INCLUDED IN THE SCOPE OF THE WORK.

.5 CLEAN UP AND REMOVE ALL UNUSED WIRING AND CONDUITS.

.6 REMOVE AND REINSTALL EXISTING DEVICES TO FACILITATE CONSTRUCTION AS REQUIRED.

.7 CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHT WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.

.8 FIRE PROOF ALL FIRE RATED PENETRATIONS AFTER INSTALLATION TO COMPLY WITH CODES AND TO PROVIDE EQUAL FIRE SEPARATION RATINGS.

2. DRAWINGS AND SPECIFICATIONS

.1 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH.

.2 SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL TRADE IN DOUBT AS TO TRUE INTENT AND MEANING, OBTAIN RULING FROM THE ENGINEER BEFORE SUBMITTING TENDER, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.

3. EXAMINATION OF OTHER DRAWINGS

.1 THE ELECTRICAL CONTRACTOR IS TO EXAMINE CAREFULLY STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS, AND THE WORK OF OTHER TRADES AND SATISFY HIMSELF THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO THE BUILDING AS SHOWN ON THE PLANS. SHOULD ANY DIFFICULTY ARISE SHOWING CONFLICT WITH, OR REQUIRING ADDITIONAL WORK BEYOND THE WORK OF THESE DRAWINGS, BRING THIS MATTER TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING TENDER.

4. UNIFORMITY OF EQUIPMENT

.1 UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURE IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.

5. STANDARDS OF MATERIAL AND WORKMANSHIP

.1 ALL MATERIALS ARE TO BE NEW AND OF THE QUALITY SPECIFIED, AND SHALL BE APPROVED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN BRITISH COLUMBIA.

.2 ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER BY QUALIFIED TRADESMEN. THE ELECTRICAL CONTRACTOR SHALL KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ON THE SITE DURING THE PROGRESS OF THE WORK.

.3 ALL MATERIAL AND INSTALLATION SHALL MATCH BUILDING STANDARD UNLESS IT IS NOTED OTHERWISE ON THE DRAWINGS.

6. RECORD PLANS

.1 THE ENGINEER WILL FURNISH TO THE ELECTRICAL TRADE ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. THE ELECTRICAL TRADE IS TO ACCURATELY RECORD ON THESE PRINTS ALL REVISIONS TO THE ORIGINAL PLANS THAT ARE MADE ON SITE DURING CONSTRUCTION.

.2 THE ELECTRICAL TRADE IS TO PRODUCE AT HIS OWN EXPENSE A SET OF AUTOCAD 2004 (OR LATER) DRAWINGS, INCLUDING ALL CHANGES TO THE ORIGINAL TENDER DRAWINGS COVERED BY ADDENDA, CHANGE ORDERS, FIELD CHANGES, AND JOB CONDITIONS, AND TURN THESE OVER TO THE ENGINEER IN ELECTRONIC AND HARD COPY FORM. COMPLETED RECORD DRAWINGS ARE TO BE CLEARLY MARKED "RECORD DRAWINGS".

7. SHOP DRAWINGS

.1 THE ELECTRICAL CONTRACTOR IS TO SUBMIT TO THE ENGINEER, FOR REVIEW, SHOP DRAWINGS OF MAJOR ELECTRICAL EQUIPMENT. SUCH EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO SWITCHGEAR, PANELBOARDS, SERIES-RATED BREAKER COMBINATIONS, FIXTURES AND FITTINGS NOT PROVIDED BY THE OWNER.

.2 ALL DRAWINGS ARE TO BE SUBMITTED IN TRIPLICATE AND TWO COPIES WILL BE RETURNED TO THE ELECTRICAL TRADE. SUBMIT ADDITIONAL COPIES FOR APPROVAL AS MAY BE REQUIRED.

.3 THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS TO BE FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE THE ELECTRICAL TRADE OR SUPPLIERS FROM RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF WORK, AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. THE ELECTRICAL TRADE IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.

8. GUARANTEE WARRANTY

.1 THE ELECTRICAL TRADE SHALL FURNISH A WRITTEN GUARANTEE WARRANTY, SIGNED BY AUTHORIZED PERSONNEL, STATING:

.1 THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.
.2 THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK, AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE.
.3 THE PERIOD OF THE GUARANTEE SPECIFIED WILL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT BE BINDING ON WORK NOT OTHERWISE COVERED.

9. SETTING OUT OF THE WORK

.1 THE ELECTRICAL TRADE IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS. WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.

.2 THE ELECTRICAL TRADE IS TO GIVE WORK HIS PERSONAL SUPERVISION, LAY OUT HIS OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING OR EMPLOY A COMPETENT ENGINEER TO DO SO. FIGURES, FULL SIZE AND DETAIL DRAWINGS TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS.

.3 THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK.

.4 THE ELECTRICAL TRADE, IN THE SETTING OUT OF HIS WORK, IS TO MAKE REFERENCE TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS. HE SHALL CONSULT WITH ALL RELEVANT TRADES IN SETTING OUT LOCATIONS FOR CONDUIT RUNS, LIGHTING FIXTURES, PANEL ASSEMBLIES, AND ALL OTHER ELECTRICAL EQUIPMENT, SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL SPACING IS MAINTAINED.

.5 THE ELECTRICAL TRADE SHALL CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH THE PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.

.6 WHERE RECEPTACLES ARE MOUNTED ABOVE COUNTERS, BENCHES, SPLASHBACKS, OR OTHER FIXTURES, THEIR LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH THE BUILT-IN UNITS. REFER TO ARCHITECTURAL DETAILS. WHERE RECEPTACLES OCCUR IN OUTSIDE WALLS WHERE HEATING UNITS ALSO OCCUR, RECEPTACLE HEIGHT TO BE ADJUSTED TO COORDINATE WITH THE HEATING UNITS.

.7 SWITCH MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ARCHITECTURAL DETAILS AND SHALL BE ADJUSTED, IF REQUIRED, TO COORDINATE WITH PANELING, DADOS, MASONRY COURSE LINES, OR OTHER RELEVANT BUILDING FEATURES.

.8 WHERE OUTLET BOXES OCCUR IN EXTERIOR WALLS, THE ELECTRICAL TRADE IS TO ENSURE THAT THERE IS INSULATION BEHIND THE OUTLET BOXES TO PREVENT CONDENSATION THROUGH THE BOXES.

10. EXAMINATION OF THE SITE

.1 PRIOR TO SUBMITTING TENDER, THE ELECTRICAL TRADE SHALL CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH MAY AFFECT HIS TRADE. NO ADDITIONAL MONEY WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT SHOULD HAVE BEEN NOTICED AND ACCOUNTED FOR DURING A THOROUGH EXAMINATION OF THE SITE.

11. CUTTING AND PATCHING

.1 THE GENERAL TRADE WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL INSTALLATION. STRUCTURAL MEMBERS MUST NOT BE CUT WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

.2 WHERE WORK DONE BY THE ELECTRICAL TRADE DAMAGES THE WORK OF OTHER TRADES, THE ELECTRICAL TRADE SHALL REPAIR AND MAKE GOOD SUCH DAMAGE TO THE SATISFACTION OF EACH TRADE CONCERNED AND THE STRUCTURAL ENGINEER.

.3 ALL PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE STOP MATERIAL.

12. CLEANUP

.1 THE ELECTRICAL TRADE AND HIS SUBTRADES ARE TO KEEP THE SITE FREE DURING CONSTRUCTION OF DEBRIS BOXES, PACKING, AND OTHER MATERIALS ASSOCIATED WITH THE WORK OF THIS TRADE. ALL WASTE MATERIAL IS TO BE DISPOSED OF IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE MANNER.

.2 UPON COMPLETION OF WORK, THE ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN AND FINISHED CONDITION TO THE SATISFACTION OF THE ENGINEER.

13. CODES, PERMITS AND INSPECTION

.1 THE ENTIRE INSTALLATION, INCLUSIVE OF MATERIAL AND LABOR, IS TO COMPLY WITH ALL THE REQUIREMENTS OF ALL BUILDING CODES AND AUTHORITIES HAVING JURISDICTION, THE CANADIAN ELECTRICAL CODE, AND REGULATIONS OF THE LOCAL INSPECTION DEPARTMENT.

.2 THE ELECTRICAL TRADE IS TO OBTAIN ALL PERMITS REQUIRED FOR EACH STAGE OF WORK, AND AFTER COMPLETION OF THE ENTIRE INSTALLATION FURNISH TO THE ENGINEER A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT.

14. MECHANICAL EQUIPMENT

.1 UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL REQUIRED CONDUIT, WIRING, ELECTRICAL FITTINGS AND CONNECTIONS FOR ALL MOTORS AND OTHER ELECTRICAL EQUIPMENT, EVEN THOUGH SUCH MOTORS AND OTHER ELECTRICAL EQUIPMENT MAY BE SUPPLIED BY OTHERS. WHERE REQUIRED BY THE DRAWINGS OR APPLICABLE REGULATIONS, DISCONNECT SWITCHES, STARTERS, OVERLOAD RELAYS AND OTHER NECESSARY PROTECTIVE DEVICES ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOTORS AND CONTROLS SHALL BE FURNISHED BY THE SUPPLIER OF THE DRIVEN EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS REQUIRED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL.

.2 THE ELECTRICAL EQUIPMENT MAY INCLUDE BUT NOT BE LIMITED TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS, STOREFRONT AND INTERIOR SIGNAGE, STARTING DEVICES, MOTOR CONTROLLERS, FLOAT SWITCHES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA SYSTEMS, INTERCOMS AND STEREO SYSTEMS.

.3 THE ELECTRICAL CONTRACTOR IS TO CONFIRM MOTOR (OR OTHER EQUIPMENT) LOCATION AND SIZES WITH THE TRADE SUPPLYING THE MOTOR (OR OTHER EQUIPMENT) BEFORE COMMENCING ANY ASSOCIATED ELECTRICAL WORK.

15. TESTS

.1 ALL PORTIONS OF ELECTRICAL WORK ARE TO BE TESTED FOR SATISFACTORY OPERATION.

.2 BEFORE ENERGIZING ANY PORTION OF THE ELECTRICAL SYSTEM, THE ELECTRICAL TRADE SHALL PERFORM MEGGER TESTS ON ALL FEEDERS AND BRANCH CIRCUITS. ANY PROBLEMS DISCOVERED BY SUCH TESTING ARE TO BE CORRECTED BY THE ELECTRICAL TRADE AND THE CIRCUITS IN QUESTION RETESTED. THE RESULTS OF ALL FINAL TESTING SHALL BE PROVIDED TO THE ENGINEER IN REPORT FORM.

.3 UPON PROJECT COMPLETION, AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, THE ELECTRICAL TRADE SHALL CHECK THE LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTRES, LOAD CENTRES, AND PANELS. THESE CHECKS ARE TO BE CARRIED OUT BY TURNING ON ALL LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15 %, THE CIRCUITS ARE TO BE RECONFIGURED AS NECESSARY TO BALANCE THE LOADS.

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Rev	Date	Description
1	FEB.03,2014	TENDER
Checked		RTD
Drawn		NH
Scale		NTS
Date		FEBRUARY, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
1-14-013

Drawing Title
SPECIFICATIONS

Drawing No.
E4.0

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16. PAINTING AND FINISHES

.1 ALL ELECTRICAL FITTINGS, SUPPORTS, HANGER RODS, PULLBOXES, CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, AND CLAMPS ARE TO HAVE A GALVANIZED FINISH OR A PAINT FINISH OVER CORROSION-RESISTANT PRIMER.

.2 ALL PANELS ARE TO BE FACTORY-FINISHED WITH SPRAY-ON AIR DRY ENAMEL. ALL ENAMEL TO BE APPLIED OVER CORROSION-RESISTANT PRIMER. MATTE OR FLAT TYPE FINISH PAINT WILL NOT BE ACCEPTED. ALL PANELS OR SIMILAR FACTORY-FINISHED UNITS THAT ARE SCRATCHED OR MARKED DURING INSTALLATION ARE TO BE TOUCHED UP WITH MATCHING SPRAY-ON AIR DRY LACQUER AND, IF REQUIRED TO PROVIDE A SATISFACTORY JOB, TO BE COMPLETELY REFINISHED.

.3 ALL 120/240V PANELBOARDS, PULLBOXES, AND OTHER ELECTRICAL CABINETS AND BOXES ARE TO BE FINISHED IN GREY ENAMEL.

17. CONDUIT AND EMT

.1 WHERE REQUIRED BY THE CANADIAN ELECTRICAL CODE, ALL WIRE AND CABLE IS TO BE INSTALLED IN CONDUIT OR EMT. WHERE APPROVED, AC90 OR TECK90 MAY BE USED. IN WOOD STUD CONSTRUCTION, NMD90 MAY BE USED FOR BRANCH CIRCUIT WIRING.

.2 UNLESS OTHERWISE NOTED, CONDUIT AND EMT ARE TO BE CONCEALED IN ALL FINISHED AREAS. IN SERVICE AREAS, CONDUIT AND EMT SHALL BE RUN ON SURFACE UNLESS INDICATED OTHERWISE.

.3 SURFACE MOUNTED CONDUIT AND EMT ARE TO BE INSTALLED PARALLEL TO STRUCTURAL LINES, AND, WHERE BENDS OCCUR IN PARALLEL RUNS, THEY SHALL BE CONCENTRIC.

.4 RACEWAYS ARE TO BE INSTALLED FREE FROM DENTS AND BRUISES AND SHALL HAVE THEIR ENDS CAPPED, PLUGGED, OR SEALED AS NECESSARY TO PREVENT ENTRANCE OF DIRT OR MOISTURE.

.5 IN ALL AREAS SUBJECT TO MOISTURE, WATERTIGHT FITTINGS MUST BE USED.

.6 ALL RACEWAY, EXCEPT WHERE OTHERWISE INDICATED, SHALL BE SIZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

.7 TECK90 OR SEAL TIGHT FLEXIBLE CONDUIT IS BE UTILIZED FOR CONNECTIONS TO MOTORS AND MOTOR CONTROLLERS.

.8 ALL UNDERGROUND CONDUIT SYSTEMS ARE TO BE OF APPROVED RPVC SCHEDULE 40 CONDUIT, COMPLETE WITH INSTALLED BONDING CONDUCTOR, AND INSTALLED AT OR BELOW THE DEPTH REQUIRED BY CODE. PROVIDE 150mm CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CONTINUOUS MARKING TAPE 300mm BELOW GRADE. PROVIDE SUITABLE BACKFILL AND COMPACTION.

18. WIRE AND CABLE

.1 ALL BUILDING WIRING IS TO BE COPPER, EXCEPT WHERE NOTED OTHERWISE.

.2 A MINIMUM CONDUCTOR SIZE OF #12 AWG COPPER IS TO BE USED, EXCEPT WHERE NOTED OTHERWISE.

.3 ALL CONDUCTORS ARE TO BE COLOR CODED THROUGHOUT THE INSTALLATION AS FOLLOWS:
- EQUIPMENT GROUNDING CONDUCTOR - GREEN
- NEUTRAL CONDUCTOR - WHITE
- 120/208V PHASE WIRES - RED, BLACK, AND BLUE

19. WIRING DEVICES & BOXES

.1 ALIGN ALL DEVICES AND PLATES PLUMB AND LEVEL WITH BUILDING STRUCTURAL LINES.

.2 ALL OUTLET BOXES ARE TO BE FLUSH MOUNTED EXCEPT WHERE SPECIFIED OTHERWISE.

20. LOCATION OF OUTLETS

.1 THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS TO WITHIN 3 M OF POINTS INDICATED ON PLANS WITHOUT EXTRA CHARGE, PROVIDED THE ELECTRICAL CONTRACTOR IS ADVISED BEFORE INSTALLATION IS MADE.

21. PULL BOXES

.1 THE ELECTRICAL TRADE SHALL SUPPLY AND INSTALL PULLBOXES AS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES SHALL CONFORM TO CANADIAN ELECTRICAL CODE REQUIREMENTS. PULLBOXES TO BE BE FINISHED IN ENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HINGED COER. IN REMOVABLE CEILING AREAS, PULLBOXES ARE TO BE INSTALLED ABOVE THE CEILING.

22. SWITCHES AND RECEPTACLES

.1 ALL SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE IN WHITE DECORA STYLE UNLESS OTHERWISE NOTED.

.2 PROVIDE P-TOUCH LABELS FOR ALL RECEPTACLE LABELS.

.3 FOR ALL RECEPTACLES OTHER THAN STANDARD 15A DUPLEX RECEPTACLES, PROVIDE LAMACOID NAMETAGS GIVING AMP RATING, PHASE AND VOLTAGE.

23. SUPPORTS

.1 ALL CONDUIT, RACEWAYS, AND OTHER ELECTRICAL EQUIPMENT SHALL BE SECURELY AND ADEQUATELY SUPPORTED, IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

.2 WHERE INSERTS ARE REQUIRED IN CONCRETE, EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS ARE TO BE USED IN DRILLED HOLES. SHOT DRIVEN PINS MAY BE USED IN STRUCTURAL CONCRETE ONLY WITH THE PERMISSION OF THE ENGINEER.

24. GROUNDING AND BONDING

.1 A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND THE ELECTRICAL INSPECTION DEPARTMENT.

.2 ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, SECONDARY FEEDER CIRCUITS, EQUIPMENT AND PANELBOARD ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, SHALL BE PROPERLY GROUNDED. METAL RACEWAYS SHALL UTILIZE DOUBLE LOCKNUTS AND OTHER FITTINGS WHERE NECESSARY TO PROVIDE GROUND CONTINUITY.

.3 A SEPARATE GROUND CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS, FLEXIBLE CONDUIT, AND IN CONDUIT INSTALLED IN SLAB OR UNDERGROUND.

25. PANELS

.1 PROVIDE COMPLETE PANELBOARDS. UNLESS OTHERWISE INDICATED PANELBOARDS ARE TO BE 120/240V, 1Ø, 3W SOLID NEUTRAL DESIGN WITH SEQUENCE STYLE BUSSING AND FULL CAPACITY NEUTRAL WITH BOLT-ON CIRCUIT BREAKERS.

.2 PROVIDE ALL CIRCUIT BREAKERS INDICATED INCLUDING SPARE BREAKERS INDICATED ON PANEL SCHEDULES. CIRCUIT BREAKERS TO BE RATED MINIMUM 10kA I.C. UNLESS OTHERWISE INDICATED.

.3 PANELS ARE TO BE SURFACE MOUNTED IN SERVICE ROOMS, ALL COMPLETE WITH ALL TRIM, LOCKABLE DOORS AND INSTALLATION HARDWARE.

.4 TYPEWRITTEN PANEL DIRECTORIES SHALL BE PROVIDED FOR ALL PANELS.

.5 BALANCE PANEL LOAD FOR EACH PHASE A, B, & C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD.

26. LIGHTING LUMINAIRES AND LIGHTING CONTROLS

.1 PROVIDE A NEW LIGHTING SYSTEM, COMPLETE AND FULLY OPERATIONAL AND IN CONFORMANCE WITH CODE AND ULC LISTING REQUIREMENTS. UNLESS NOTED OTHERWISE, ALL FIXTURES AND LAMPS ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE DRAWINGS.

.2 ELECTRICAL TRADE TO INSTALL ALL LIGHTING LUMINAIRES COMPLETE WITH LAMPS, MOUNTING BRACKETS, BALLASTS AND ALL NECESSARY ACCESSORIES IN ACCORDANCE WITH THE LUMINAIRE TYPES SHOWN ON THE DRAWINGS, OR OTHERWISE SPECIFIED.

.3 ALL LUMINAIRES SHALL BE ALIGNED, AS APPROPRIATE, WITH ONE ANOTHER AND WITH STRUCTURAL LINES.

.4 ALL LUMINAIRES SHALL BE CLEANED AND LAMPED UPON COMPLETION OF WORK AND PRIOR TO FINAL ACCEPTANCE. UTILIZE MANUFACTURER'S APPROVED OR RECOMMENDED CLEANING SOLUTIONS.

.5 SWITCHES SHALL HAVE A CURRENT RATING NOT LESS THAN THAT OF THE CIRCUIT TO WHICH THEY ARE CONNECTED.

.6 ELECTRICAL TRADE TO SUPPLY AND INSTALL ALL LIGHTING CONTROLS WITH LINE VOLTAGE SWITCHES AND ALL CONTROL WIRING AND COMPONENTS TO SUIT THE LAYOUT. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER AND COMPLY WITH CODES.

27. EXIT LIGHTING AND EMERGENCY LIGHTING

.1 EMERGENCY LIGHTING SHALL BE SELF-CONTAINED WITH TWO MINI-TUNGSTEN 9W LAMPS, BATTERY CHARGER, BATTERY, 120VAC INPUT VOLTAGE, READY-LITE LES18P SERIES OR APPROVED EQUIVALENT.

.2 INSTALL EMERGENCY LIGHTING UNITS ON CEILING OR 12" BELOW CEILING ON WALLS TO PROVIDE BEST ILLUMINATION OF SPACE.

.3 CONNECT UNITS TO LOCAL UNSWITCHED LIGHTING CIRCUIT LEG.

28. SEISMIC PROTECTION

.1 THE ELECTRICAL TRADE SHALL PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE B.C. BUILDING CODE, AND ALL APPLICABLE BUILDING BYLAWS.

.2 PROVIDE CERTIFIED PROFESSIONALLY SEALED SHOP AND PLACEMENT DRAWINGS WHERE APPLICABLE FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT ASSEMBLIES SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY AND PROVIDE ANCHORAGE/ATTACHMENT DETAILS APPROVED AND SEALED BY A B.C. REGISTERED PROFESSIONAL ENGINEER.

.3 INCLUDE IN THE TENDERED PRICE ALL SERVICES OF THE PROFESSIONAL ENGINEER INCLUDING BUT NOT LIMITED TO PROVIDING LETTERS OF ASSURANCE FOR THE PROJECT IN RESPECT OF THE SEISMIC RESTRAINT OF ALL ELECTRICAL MATERIALS AND EQUIPMENT, CONDUCTING THE NECESSARY SITE REVIEWS AND PROVIDING A LETTER AT THE CONCLUSION OF THE PROJECT, CONFIRMING THAT ALL SEISMIC RESTRAINTS FOR THE ELECTRICAL WORKS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS.

29. IDENTIFICATION

.1 IDENTIFY ALL MAJOR PIECES OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO PANELBOARDS, ELECTRICAL CABINETS, AND BREAKERS IN PANELBOARDS WITH ENGRAVED LAMACOID LABELS, BLACK LETTERING ON WHITE BACKGROUND.

.2 PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS. UPDATE EXISTING MAIN PANEL DIRECTORY.

.3 PROVIDE LAMACOID NAMEPLATE ON EACH PANEL COVER TO IDENTIFY PANEL NAME, NUMBER OF PHASES, VOLTAGE, CURRENT RATING AND SOURCE OF FEEDER.

.4 IDENTIFY BRANCH CIRCUIT WIRES TO MEET CODE REQUIREMENTS.

30. HAND DRYERS

.1 PROVIDE ELECTRIC HAND DRYERS WHERE INDICATED. HAND DRYERS TO BE XLERATOR XL-SB, 1500 WATT, 240 VOLTS, 60Hz.

.2 CONNECT HAND DRYERS TO DEDICATED BRANCH CIRCUIT BREAKERS.

.3 TEST HAND DRYERS FOR CORRECT OPERATION.

31. DRY TYPE TRANSFORMERS

.1 PROVIDE 600:120/240V, 1Ø, 3W DRY TYPE TRANSFORMERS AS INDICATED.

.2 MOUNT STEP-DOWN TRANSFORMER ON FLOOR INSIDE NEW WASHROOM BUILDING.

.3 PROVIDE CONCRETE PAD AND MOUNT STEP-UP TRANSFORMER TO PAD AT EXISTING SITE MAIN SERVICE ENCLOSURE.

.4 PROVIDE FIRE RESISTANT BACKING AROUND TRANSFORMER AS REQUIRED BY CANADIAN ELECTRICAL CODE.

.5 BOND TRANSFORMER TO GROUND AS REQUIRED BY CANADIAN ELECTRICAL CODE.

.6 STEP-UP TRANSFORMER ENCLOSURE TO BE CSA 3 RATED AND STEP-DOWN TRANSFORMER TO BE CSA 1 RATED.

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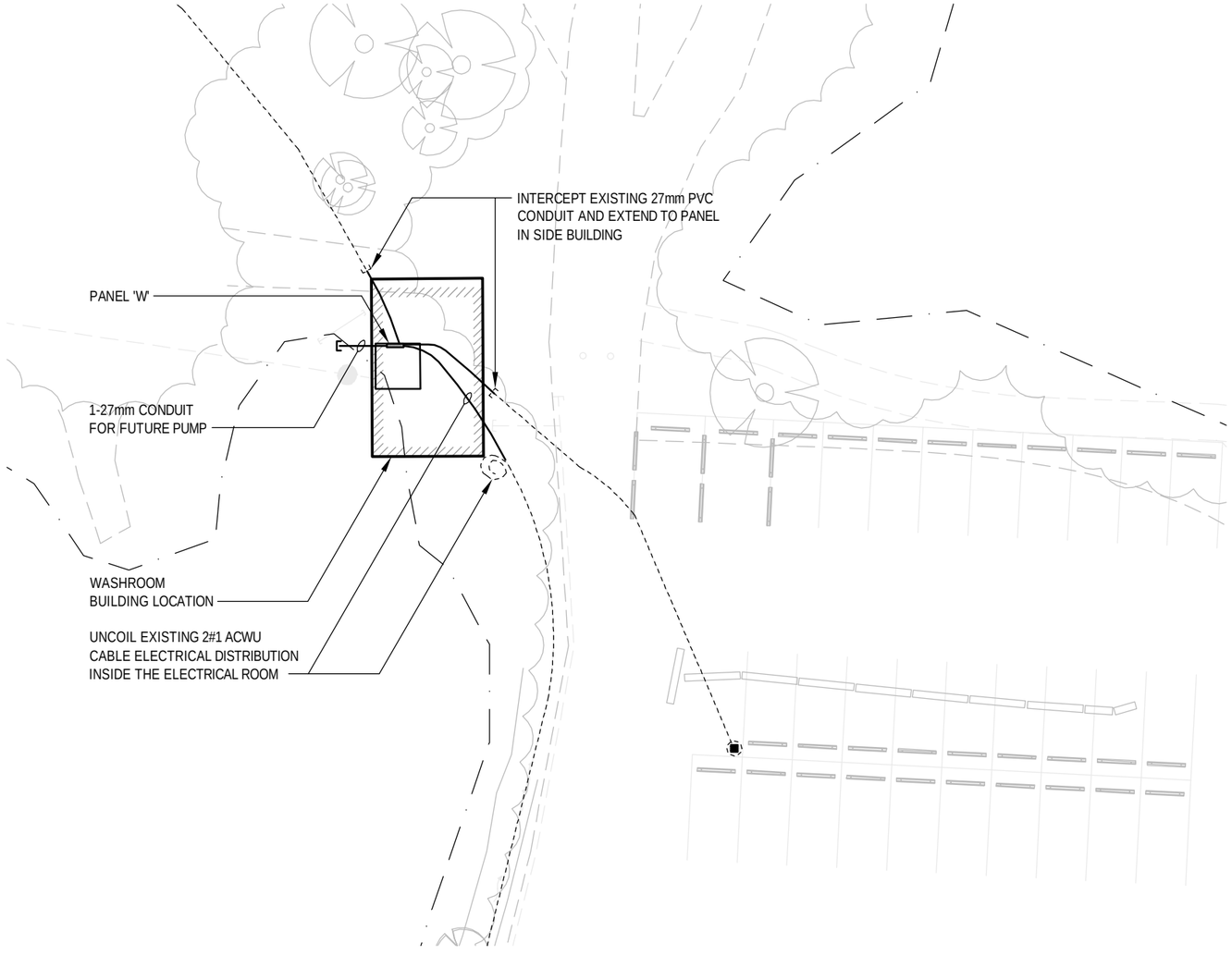
Rev	Date	Description
1	FEB.03,2014	TENDER
Checked		RTD
Drawn		NH
Scale		NTS
Date		FEBRUARY, 2014

Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
1-14-013

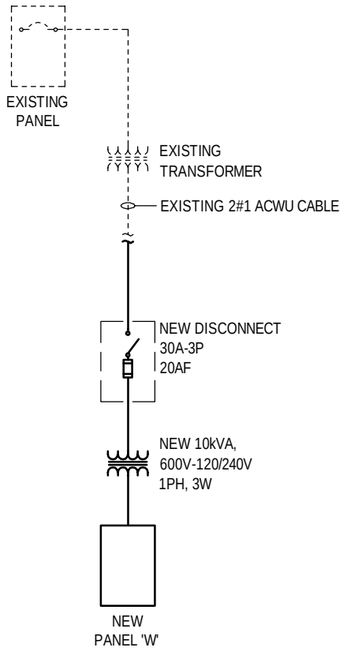
Drawing Title
SPECIFICATIONS

Drawing No.
E5.0



1 E1.0 PARTIAL SITE PLAN

0 6000 12000 18000 1:300



2 E1.0 SINGLE LINE DIAGRAM

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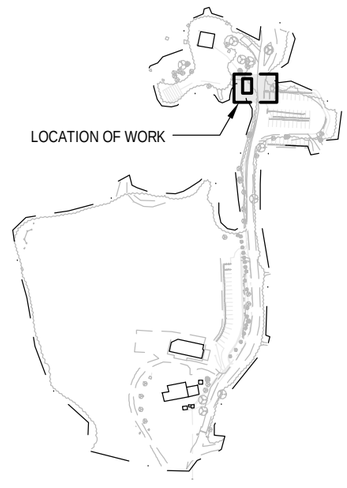
ELECTRICAL SYMBOL LEGEND	
ABBREVIATIONS	
WP	WEATHER PROOF
LIGHTING	
	SURFACE MOUNTED LUMINAIRE
	FLUORESCENT STRIP LIGHT
	RECESSED DOWN LIGHT
$	SINGLE POLE TOGGLE SWITCH
	OCCUPANCY SENSOR, CEILING MOUNTED
	DUAL EMERGENCY HEADS COMPLETE WITH SELF CONTAINED BATTERY PACK, WALL MOUNTED
POWER	
	DUPLEX RECEPTACLE
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
T	BASEBOARD HEATER C/W INTEGRAL THERMOSTAT, WATTAGE AS NOTED ON PLANS
	MECHANICAL EQUIPMENT DIRECT CONNECTION
	MECHANICAL MOTOR CONNECTION
	FORCE FLOW ELECTRIC HEATER C/W INTEGRAL THERMOSTAT, WATTAGE AS NOTED ON PLANS
HD	AUTOMATIC HAND DRYER
	PANEL BOARD



SITE PLAN

NTS

PROJECT NORTH

Victoria Office
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Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
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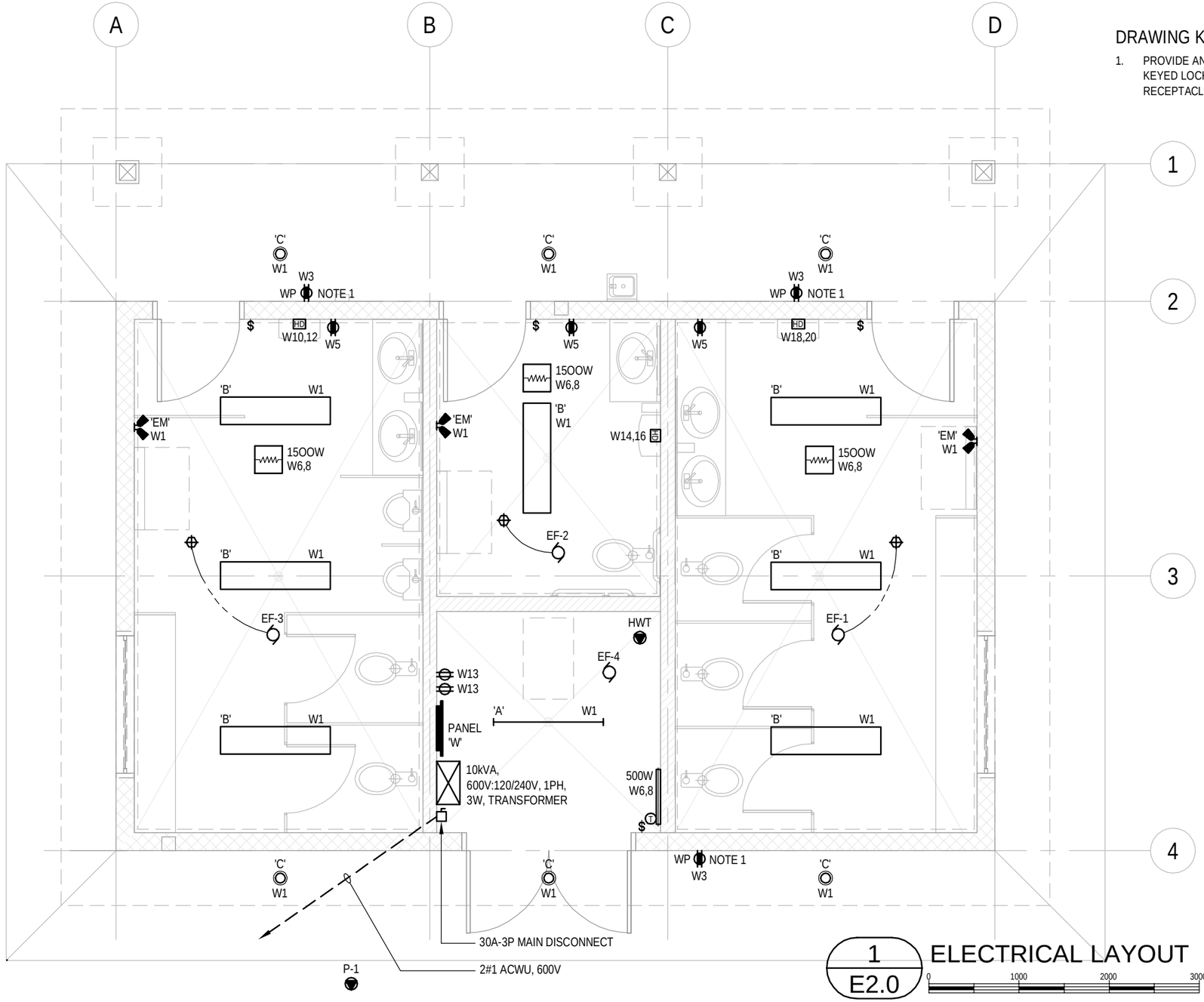
Project No.
1-14-013

Drawing Title
SITE PLAN AND LEGEND

Drawing No.
E1.0

DRAWING KEY NOTES:

1. PROVIDE AND INSTALL RECESSED 150mm x 150mm STAINLESS STEEL KEYED LOCKABLE BOX FOR ALL EXTERIOR WEATHERPROOF RECEPTACLES.



1 / E2.0 ELECTRICAL LAYOUT

0 1000 2000 3000 1:50

PROJECT NORTH

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4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

Project No.
1-14-013

Drawing Title
ELECTRICAL LAYOUT

Drawing No.
E2.0

~AES2001~ 03-FEB-14 17:09 H:\PROJECTS\2014\1-14-013\DWGS\DWG\1-14-013_E200_PLAN.DWG NHORVERS

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CAT. No.	LAMPS	BALLAST	REMARKS
A	LITHONIA	C 2 32 MVOLT GEB10IS	2x32W T8 35000°K	ELECTRONIC	4' LONG SURFACE MOUNTED FLUORESCENT STRIP COMPLETE WITH WIRE GUARD
B	LITHONIA	VSL 2 32 SCE MVOLT GEB10IS	2x32W T8 35000°K	ELECTRONIC	4' LONG SURFACE MOUNTED FLUORESCENT STRIP COMPLETE WITH WIRE GUARD
C	LYTECASTER	1001 LED SERIES	LED 35000°K	LED DRIVER	5" RECESSED POT LIGHT WITH 1076 BLACK BAFFLE
EM	LUMACELL	RM18P	6V, 9W MINI TUNGSTEN		SELF-CONTAINED EMERGENCY HEADS COMPLETE WITH BATTERY PACK

PANELBOARD SCHEDULE

JOB NO. / NAME : 1-14-013 / BRIGHT ANGEL PARK WASHROOM
PANEL : W
SYSTEM : 120/240V, 1PH, 3W
TYPE : -
LOCATION : MECHANICAL AND STORAGE
MOUNTING : SURFACE
NO. CIRCUITS : 30
BUS SIZE : 100A
SYM. FAULT RATING : -

DESCRIPTION	BRK	POLE	CCT	CCT	POLE	BRK	DESCRIPTION
LIGHTING	15	1	01	02	2	20	HEATERS
EXTERIOR RECEPTACLES	15	1	03	04			
RECEPTACLES	15	1	05	06	2	20	HEATERS
HWT	15	2	07	08			
			09	10	2	20	HAND DRYER
EF1, 2, 3, 4	15	1	11	12			
RECEPTACLES	15	1	13	14	2	20	HAND DRYER
SPARE	15	1	15	16			
SPARE	15	1	17	18	2	20	HAND DRYER
SPARE	15	1	19	20			
			21	22	2	15	P-1
			23	24			
			25	26			
			27	28			
			29	30			

MECHANICAL EQUIPMENT SCHEDULE

9#	DESCRIPTION	EQUIPMENT LOCATION	LOAD MCA	LOAD KW	LOAD HP	VOLTS	PHASE	UNIT SUPPLY	UNIT MOUNT	UNIT CONNECT	STARTER SUPPLY	STARTER MOUNT	STARTER CONNECT	STARTER TYPE	DISC. SUPPLY	DISC. MOUNT	DISC. CONNECT	CONTROL SUPPLY	CONTROL MOUNT	CONTROL CONNECT	CONTROL TYPE	CONTROL FIRE ALARM	SUPPLY PANEL PANEL #	SUPPLY PANEL PANEL LOCATION	BREAKER AMPS	BREAKER P	BREAKER CCT NO'S	WIRE & CONDUIT WIRE SIZE	WIRE & CONDUIT NO.	WIRE & CONDUIT CONDUIT SIZE (mm)	WIRE & CONDUIT TOTAL AMPS	NOTE
HWT	HOT WATER TANK	MECHANICAL/STORAGE		1.5		240	1	M	M	E	-	-	-	-	-	-	-	M	M	M	INT	-	W	ELECTRICAL ROOM	15	2	7,9	12	2			
EF-1	EXHAUST FAN	WOMEN'S WASHROOM			FR	120	1	M	M	E	-	-	-	-	-	-	-	E	E	E	OC	-	W	ELECTRICAL ROOM	15	1	11	12	2			
EF-2	EXHAUST FAN	ACCESSIBLE WASHROOM			FR	120	1	M	M	E	-	-	-	-	-	-	-	E	E	E	OC	-	W	ELECTRICAL ROOM	15	1	11	12	2			
EF-3	EXHAUST FAN	STORAGE			FR	120	1	M	M	E	-	-	-	-	-	-	-	E	E	E	OC	-	W	ELECTRICAL ROOM	15	1	11	12	2			
EF-4	EXHAUST FAN	WOMEN'S WASHROOM			FR	120	1	M	M	E	-	-	-	-	-	-	-	E	E	E	OC	-	W	ELECTRICAL ROOM	15	1	11	12	2			
P-1	GRINDER SUMP PUMP	OUTDOOR			2.0	240	1	M	M	M	M	M	E	-	E	E	E	M	M	M	OC	-	W	ELECTRICAL ROOM	15	2	22,24	10	2			

LEGEND

M = DENOTES BY MECHANICAL CONTRACTOR
E = DENOTES BY ELECTRICAL CONTRACTOR
OS = OCCUPANCY SENSOR
INT = INTEGRAL PART OF UNIT

NOTES

1. CONFIRM FINAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. MAKE ADJUSTMENTS AS REQUIRED AT NO ADDITIONAL COST.

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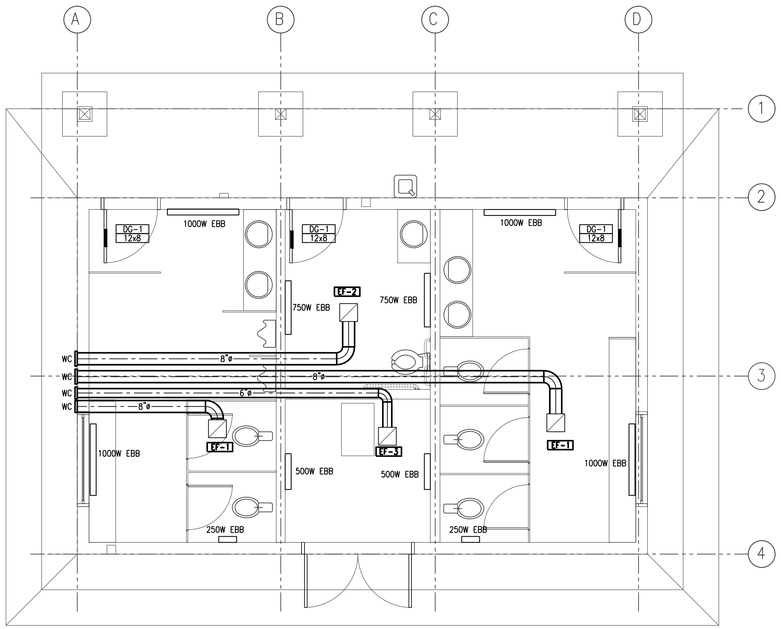
Project Name
BRIGHT ANGEL PARK WASHROOM
4528 TIGWELL RD,
DUNCAN, BC V9L 6N2

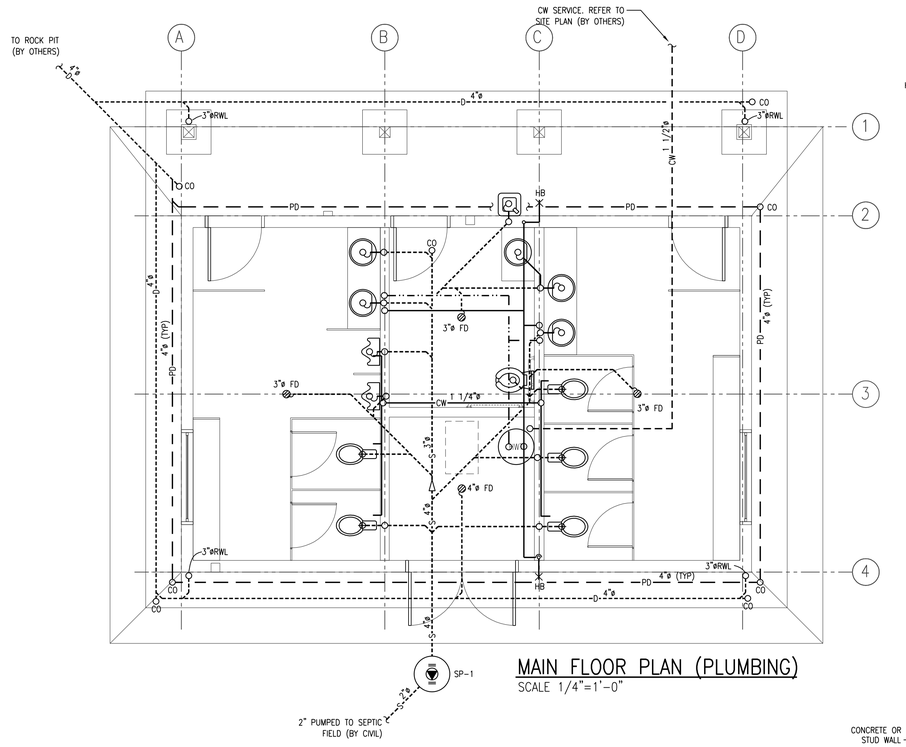
Project No.
1-14-013

Drawing Title
SCHEDULES

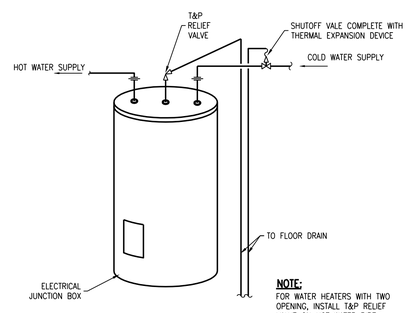
Drawing No.
E3.0



MAIN FLOOR PLAN (VENTILATION)
SCALE 1/4"=1'-0"



MAIN FLOOR PLAN (PLUMBING)
SCALE 1/4"=1'-0"



NOTE:
FOR WATER HEATERS WITH TWO OPENING, INSTALL T&P RELIEF VALVE ON HOT WATER PIPE.

TYPICAL DHW HEATER INSTALLATION
NTS

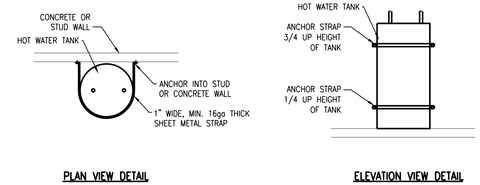
HVAC LEGEND

———	ROUND SOLID DUCT
SD-1 8"ø 190	LABEL SIZE CFM
DG	DOOR GRILLE
EF	EXHAUST FAN
WC	WALL CAP
EBB	ELECTRIC BASEBOARD HEATER

PLUMBING LEGEND

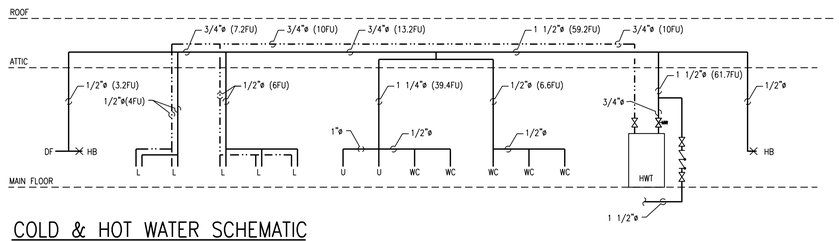
— —PD— —	PERIMETER DRAIN (UNDERGROUND/FLOOR)
-------D-------	DRAIN (UNDERGROUND/FLOOR)
———S———	SEWER (ABOVE FLOOR)
--------S--------	SEWER (UNDERGROUND/FLOOR)
———CW———	COLD WATER (ABOVE FLOOR)
—·—HW—·—	HOT WATER
- - -W- - -	WATER (UNDERGROUND/FLOOR)
⋈	VALVE, VALVE WITH PRESSURE RELIEF
	SHUT OFF VALVE WITH THERMAL EXPANSION DEVICE
	CHECK VALVE
	DOUBLE CHECK VALVE
	PUMP
◄	PIPE REDUCER
CO	CLEANOUT
CW	COLD WATER
FD	FLOOR DRAIN
FU	FIXTURE UNIT
HB	HOSE BIBB
HW	HOT WATER
HWT	HOT WATER TANK
SP	SUMP PUMP
DF	DRINKING FOUNTAIN
L	LAVATORY
U	URINAL
WC	WATER CLOSET

NOTES:
1. SITE VERIFY EXISTING PIPING, EQUIPMENT, ETC.
2. ALL 4"ø SEWER & STORM LINES ARE AT A MINIMUM 1% SLOPE, AND ALL 3"ø AND UNDER ARE AT A MINIMUM 2% SLOPE UNLESS OTHERWISE INDICATED.
3. WATER PIPE SIZES ARE BASED ON NUMBER OF FIXTURE UNITS USING THE METHOD FOR SMALL COMMERCIAL BUILDINGS (TABLE A-2.6.3.1(2)A) MATERIAL: PEX, AQUATHERM OR AQUARISE PIPE. WATER VELOCITY 8FT/S.

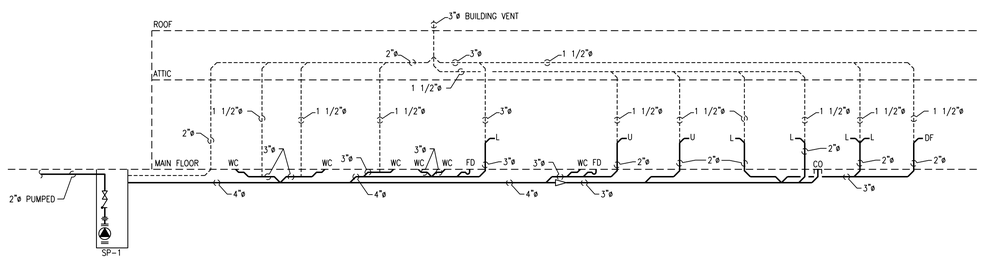


PLAN VIEW DETAIL **ELEVATION VIEW DETAIL**

HWT SEISMIC RESTRAINT DETAIL
NTS



COLD & HOT WATER SCHEMATIC
NTS



SEWER SCHEMATIC
NTS

AVALON MECHANICAL CONSULTANTS LTD.
#300 - 1245 Esquimalt Road, Victoria, BC, V9A 3P2
Email avalon@avalonmechanical.com
Phone (250) 384-4128
Fax (250) 384-4134

NORTH SEAL

DESIGNED	APPROVED
CJP/FS	MD
DRAWN	SCALE
CJP/SK	AS NOTED

NO.	DATE	DESCRIPTION
1	06FEB2014	ISSUED FOR BUILDING PERMIT

PROJECT

BRIGHT ANGEL PARK WASHROOM

4528 TIGWELL RD.
DUNCAN, BC

SHEET TITLE

VENTILATION, PLUMB DETAILS & SCHEM. FLOOR PLAN

PROJECT START DATE 10JAN2014
SHEET 1 OF 1
PROJECT NO. 214010
DRAWING NO. M1