REGIONAL DISTRICT OF NANAIMO

REQUEST FOR TENDER No. 20-062

Meadowood Community Centre Construction

Addendum 4 (17 pages)
Issued: December 3, 2020

Closing Date & Time: on or before 3:00 PM Pacific Time on December 8, 2020

This addendum shall be read in conjunction with and considered as an integral part of the Request for Tender. Revisions supersede the information contained in the original Tender or previously issued Addendum. No consideration will be allowed for any extras due to any Vendor not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

Enclosed is Addendum 4 (16 pages) from the Project Engineer, Herold Engineering Ltd.

End of Addendum 4

HEROLD ENGINEERING

Addendum

DATE: December 3, 2020 **PROJECT No.:** 0837-052

Attn: Kurtis Felker
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo BC V9T 6N2

PROJECT NAME:
Meadowood Community Centre
1830 Galvin Place, Qualicum BC

From: Erich Streit, Arch HTL, Project Manager

Pages Following

ADDENDUM – 04

1. *This Addendum shall be read in conjunction with and considered as an integral part of the Contract Documents; revisions supersede the information contained in the original drawings, specifications or previously issued Addendum.*
2. *Tender Price submitted shall include all items of this Addendum.*
3. *No consideration will be allowed for any extras due to any bidder not being familiar with the contents of this Addendum.*

Addendum Information:

1. **Project Manual – Tender Specifications:**
   - .1 Stipulated Price Bid – Appendix E - Separate Prices - Clarification:
     Item 1: Exterior insulated wall and roof panels as specified in Section 05 12 25 Pre-engineered Steel Building Para. 2.4 Separate Prices is not to be included in the base bid tender price, but listed as a separate price item.
     Items 2, 3 and 4: Separate prices for Door Canopies, Main Entrance Canopy and concrete sidewalks are to be included in the base bid tender price, but identified as a separate price for future evaluation to suit project budget
     Item 5: Concrete pedestrian access pad from Galvin Place to gravel parking area has been changed to gravel surface in the updated civil drawings (dwg. C04) – no separate price required.
   - .2 Refer to Section 08 36 13 Sectional Metal Overhead Doors attached to this Addendum for specifications of Door D105.

2. **Updated drawings from MSR Solutions Inc. for updated well and water storage tank information:**
   - .1 Updated MSR drawing C02 dated 2020.11.23 is attached.
   - .2 The electrical duct can be installed in the common trench to the well head location

3. **Architectural Drawings:**
   - .1 Architectural Kitchen drawings in dwg format can be requested directly from the Architect for measurement take-off etc. if necessary: Alfred Korpershoek MSc.Arch. B.BE ask@dhk.ca
   - .2 Lockable aluminum plate shutters at ground floor windows to be pre-manufactured units or custom made units to suit; shop drawing submittal required for either option.
   - .3 The following products are acceptable alternatives to the flooring material specified in the architectural drawings:
     - .1 Washrooms: Polyflor – Classic Mystique Quarz 1400
     - .2 Storage Rooms: Polyflor – Classic Mystique Quarz 1400
     - .3 Main floor: Polyflor – Classic Mystique Silent Dove 1540
     - .4 065 Aria Fazed Grey CG (indicated as 605 Aria Fazed Grey in Addendum-03)

4. **Structural Drawings/Questions:**
   - .1 Knife plates shall be CSA G40.21 grade 300W. They shall be hot-dip galvanized to CAN/CSA G164 specifications.
   - .2 As there is no exposed concrete slabs within the building perimeter, there is no requirement for concrete sealer
   - .3 Structural drawings identified as Structural Addendum 1 are attached to this Addendum.

5. Civil Drawings:

.1 River rock to be 150 mm minus, 300 mm deep

6. Mechanical Addendum No. 03:

.1 Refer to content of Mechanical Addendum No. 03 as per attached respective pages.

7. Electrical Addendum No, E1

.1 Refer to content of Electrical Addendum No. E1 as per attached respective pages.

Per: _____Erich Streit, Arch HTL_____

CC: Dean Banman - RDN
Mark Dobbs - RDN
BC Bid & RDN Website
All Sub-Consultants

3701 Shenton Rd. Nanaimo, BC V9T 2H1
mail@heroldengineering.com
(250)751-8558

Part 1 General

1. SUMMARY

1. Work of this section includes provision of:
    1. General Overhead Door Materials.
    2. Sectional Overhead Insulated Doors.
    3. Commercial Duty Hardware.
    4. Electrical operator.

2. RELATED REQUIREMENTS

.1 Section 26: Electrical power supply.

3. REFERENCES

1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.

2. ASTM D523 - Standard Test Method for Specular Gloss; 2014.

3. ASTM D822/D822M - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings; 2013.

4. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).

5. CAN/CSA G164 M92 - Hot Dip Galvanizing of Irregularly Shaped Articles; 2003.

6. American Society for Testing and Materials International, (ASTM)
    1. ASTM A653/A653M-15e1, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
    2. ASTM A1008/A1008M-15, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
    3. ASTM D523-14, Standard Test Method for Specular Gloss.

7. Canadian Standards Association (CSA International)
    .1 CAN/CSA G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.

4. SUBMITTALS

1. Provide submittals in accordance with Section 01 33 00 - Submittals.

2. Submit product data:
    1. Submit manufacturer's printed product literature, specifications and datasheet.
    2. Door operator motor information indicating nameplate data and ratings, characteristics, and mounting arrangements.

3. Submit shop drawings:
    .1 Indicate sizes, service rating, types, materials, operating mechanisms, glazing locations and details, hardware and accessories, required clearances and electrical connections.

4. Manufacturer's Instructions:
    .1 Submit manufacturer's installation instructions.

5. Manufacturers' Field Reports: submit copies of manufacturers field reports.

5. CLOSEOUT SUBMITTALS

.1 Provide operation and maintenance data for overhead door hardware for incorporation into Operations and Maintenance Manual.

6. QUALITY ASSURANCE

1. Installer Qualifications: Company or person specializing in installation of sectional overhead doors with 5 years documented experience and approved by door manufacturer.

2. Manufacturer: Obtain sectional overhead doors and component materials through one source from single manufacturer and as follows:
   1. Obtain operators from sectional overhead door manufacturer.
   2. Obtain controls from sectional overhead door manufacturer.

7. DELIVERY, STORAGE AND HANDLING

.1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 – Common Product Requirements.

8. WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for recycling and disposal in accordance with Section 01 74 21 Construction Waste Management And Disposal.

9. WARRANTY

.1 Provide manufacturers 10 year warranty against delamination of panels.

10. MAINTENANCE SERVICE

1. Provide complete service and maintenance of door system for 12 months commencing from date of Occupancy Permit issue

2. Provide emergency call back service regular working hours.
3. Perform maintenance work using competent personnel, under supervision and in direct employ of door manufacturer.

Part 2 Products

1. MANUFACTURERS

1. Acceptable manufacturers:
   1. Atlas Roll-Lite Overhead Doors.
   2. Creative Door Services Ltd.
   3. Overhead Door Company.
   4. Richards-Wilcox Canada Inc.
   5. Steel-Craft Door Products Ltd.

2. PERFORMANCEIDESIGN CRITERIA

1. Design Requirements:
   1. Design exterior door assembly to withstand wind load in accordance with loads prescribed in the BC Building Code for geographic area of project with a maximum horizontal deflection of 1/240 of opening width.
   2. Air Infiltration: Maximum rate not more than 0.025 L/s/m2 at 25 kph and 0.04 L/s/m2 at 40 kph when tested in accordance with ASTM E283.

3. Design door assembly to withstand minimum 50,000 cycles per annum, and 5 years total life cycle.

3. MATERIALS

1. Overhead Door Panels: galvanized steel sheet to ASTM A653/A653M commercial quality Z180 zinc coating.

2. Tracks and Accessories: coated (galvanized), cold rolled, commercial steel (CS) sheet, in accordance with ASTM A653/A653M, Z180 coating designation.

3. Cable: multi-strand galvanized steel aircraft cable.

4. SECTIONAL OVERHEAD INSULATED DOORS

1. Sectional door materials:
   1. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and weather-tight ship-lap design meeting joints.
   2. Panel Thickness: 2 inches (51 mm).
   3. Exterior Surface: Flush, textured.
   4. Exterior Steel: .015 inch (.38 mm), hot-dipped galvanized.
   5. End Stiles: 16 gauge with thermal break.
   6. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
   7. Thermal Values: U-value of 0.31 (I-P)

5. COMMERCIAL DUTY HARDWARE

1. Track: standard hardware with 50 mm size minimum 1.9 mm core thickness galvanized steel track.

2. Lift type: refer to drawings.

3. Track Supports: 2.3 mm core thickness continuous galvanized steel angle track supports.

4. Spring counter balance: heavy duty oil tempered torsion spring with manufacturers standard brackets.
   1. Drum: 100 mm diameter die cast aluminum.
   2. Shaft: 25 mm diameter galvanized steel.

5. Top roller carrier: galvanized steel minimum 2.28 mm thick adjustable.

6. Rollers: polyurethane, full floating, grease packed, ball bearing minimum 50 mm diameter.

7. Roller brackets: adjustable, galvanized steel, minimum 2.5 mm thick.

8. Hinges: commercial duty minimum 1.9 mm thick, as recommended by manufacturer.

9. Cable: minimum 3 mm diameter galvanized steel aircraft cable.

6. ACCESSORIES

1. Overhead horizontal track and operator supports: galvanized steel, type and size to suit installation.

2. Track guards: 5 mm thick formed sheet 1500 mm high track guards.

3. Finish ferrous hardware items with minimum zinc coating of 300 g/m2 to CAN/CSA G164 M92.

7. DOOR PANEL FINISH

1. Prefinished steel with factory applied polyvinyl chloride.
    1. Colour: selected by Consultant from manufacturer's standard range.
    2. Specular gloss: 30 units +/-5 in accordance with ASTM D523
    3. Coating thickness: not less than 200 micrometres.
    4. Resistance to accelerated weathering for chalk rating of 8, colour fade 5 units or less and erosion rate less than 20% to ASTM D822/D822M as follows:
        1. Outdoor exposure period 5000 hours.
        2. Humidity resistance exposure period 5000 hours.

8. ELECTRICAL OPERATOR

1. Electrical jack shaft type operator.

2. Electrical motors, controller units, remote pushbutton stations, relays and other electrical components: to CSA approval.

3. Motor: Medium Duty ½ HP, 115 Volt Single Phase; with automatic reset thermal overload protection, high starting torque, continuous duty motor; separate from reduction mechanism; factory pre-wired motor controls, starter; rated for door size and usage classification.

4. Entrapment Protection: pneumatic safety reverse and photo electric beams.

5. Operation:
    1. Remote pushbutton stations: surface mounted inside garage.
    2. Radio Control Station: Frequency Operated Button. Provide two for each unit.

6. Safety switch: combination roll rubber with limit switches for full length of bottom rail of bottom section of door, to reverse door to open position when coming in contact with object on closing cycle.

7. For jack shaft operators:
    1. Provide floor level disconnect device to allow for manual operation in event of power failure.
    2. Equip Operator with:
        1. Electrical interlock switch to disconnect power to operator when in manual operation.
        2. Built-in chain hoist for manual operation in event of power failure.

8. Automatic illumination complete with time delay, self-extinguishing.

9. Door speed: 300 mm per second.

10. Control transformer: for 24 VAC control voltage.

11. Mounting brackets: galvanized steel, size and gauge to suit conditions.

12. Acceptable materials:
    1. Chamberlain Lift-Master, Inc.
    2. Doorlec Corporation.
    3. Lynx Commercial Operators.
    4. Manaras Commercial Operators.

Part 3 Execution

1. MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

2. INSTALLATION

1. Install doors and hardware in accordance with manufacturer's instructions.

2. Rigidly support rail and operator and secure to supporting structure. Provide steel/metal support components to connect to structure shown on detailed drawings.

3. Install operator including electrical motors, controller units, pushbutton stations, relays and other electrical equipment required for door operation.

4. Lubricate and adjust door operating components to ensure smooth opening and closing of doors.

5. Adjust weather-stripping to form a weather tight seal.

6. Adjust doors for smooth operation.

3. CLEANING

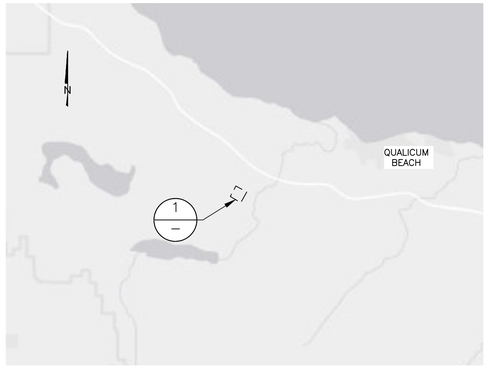
1. Perform cleaning after installation to remove construction and accumulated environmental dirt.

2. Remove traces of primer, caulking; clean doors and frames.

3. Clean glass and glazing materials with approved non-abrasive cleaner.

4. Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

End of Section



LOCATION PLAN
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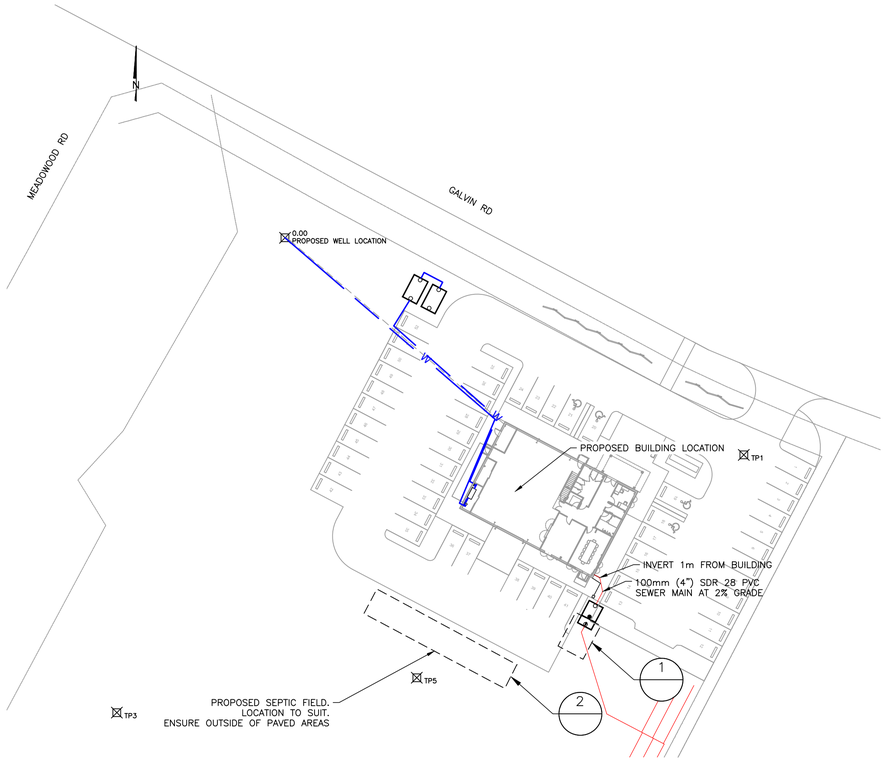

SITE PLAN
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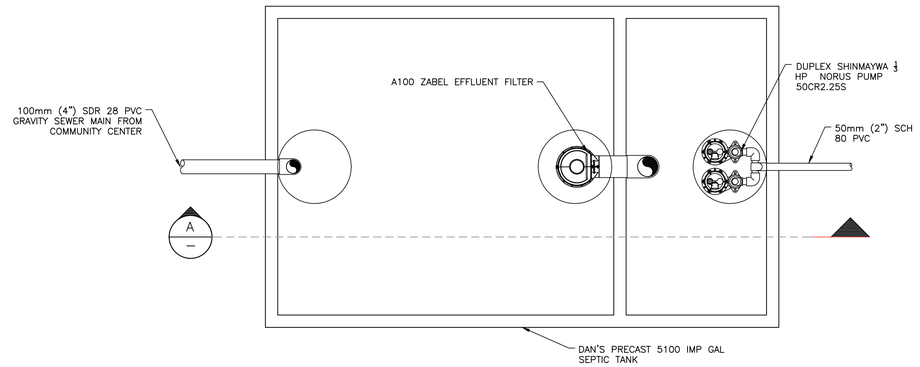
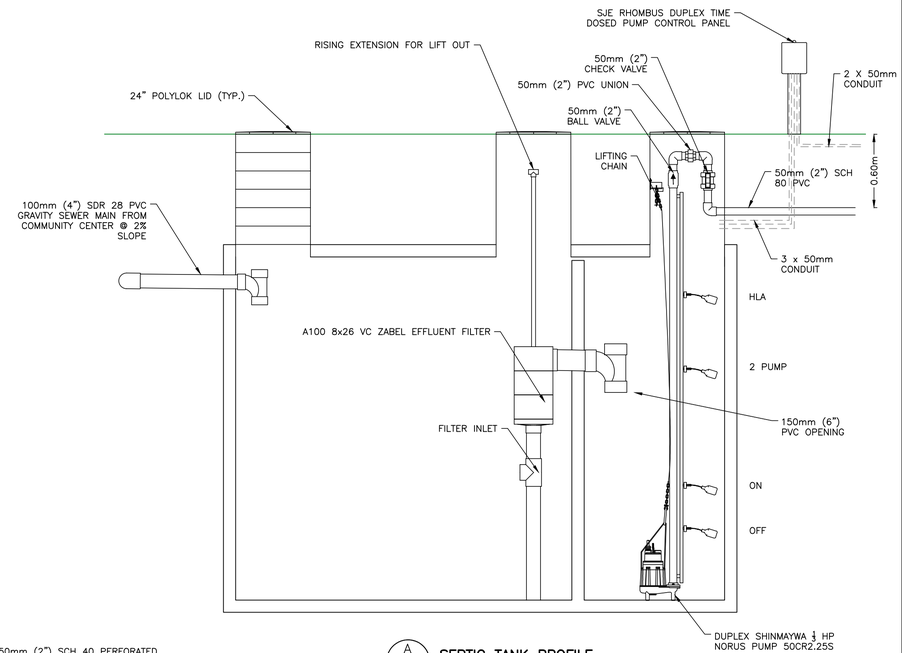


1 — SEPTIC TANK PLAN
SCALE:1:25



A — SEPTIC TANK PROFILE
SCALE:1:25

GENERAL NOTES

1. WORK TO BE COMPLETED DURING DRY WEATHER ONLY
2. CONTRACTOR TO ENSURE ALL SPECIAL USE PERMITS ARE IN PLACE PRIOR TO CONSTRUCTION
3. ALL WORKS TO BE COMPLETED AS PER CURRENT STANDARDS AS PER LATEST EDITION OF STANDARD PRACTICE MANUAL
4. ANY CONFLICTS BETWEEN THESE DRAWINGS AND SITE CONDITIONS TO BE REPORTED TO ENGINEER PRIOR TO CONSTRUCTION
5. ALL UTILITIES TO BE LOCATED PRIOR TO SYSTEM INSTALLATION. WATER LINE TO BE SLEEVED IF WITHIN 3.0m OF NEW DISPOSAL FIELD (OR RELOCATED)
6. ALL THE CONSTRUCTION TO BE IN ACCORDANCE WITH THE MANUFACTURER'S LITERATURE ON BACKFILL AND COMPACTION
7. ALL EQUIPMENT TO BE MADE SURFACE ACCESSIBLE WITH APPLICABLE RISERS AND LIDS. MINIMUM INSULATION TO BE 100mm RIGID STYROFOAM CUT TO SUIT

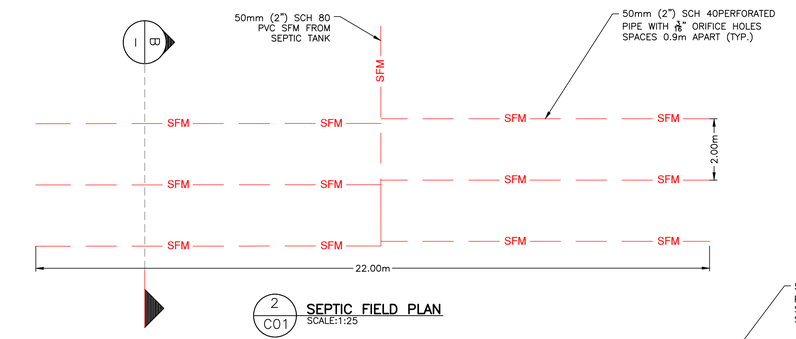
DISPOSAL FIELD NOTES

1. RECEIVING AREA TO BE PROPERLY PREPARED. CHAMBERS TO BE PLACED DIRECTLY ON SCARIFIED TRENCH BOTTOM.
2. SLOPE OF THE LONG AXIS OF ANY INDIVIDUAL LATERAL MUST BE WITHIN 1%. LATERALS TO BE INSTALLED PERPENDICULAR TO SLOPE.
3. SOIL BACKFILL TO BE MOUNDED TO ALLOW FOR SETTLING. DIRECT SURFACE RUNOFF AWAY FROM DISPOSAL AREA, SOME GRADING OF UPSLOPE AREAS MAY BE REQUIRED TO DIRECT SURFACE WATER AWAY FROM DISPOSAL FIELD.
4. INSULATE PIPE TO DISPOSAL FIELD WITH ALUMINIZED BUBBLE WRAP INSULATION.
5. ALL DISTRIBUTION BOXES TO BE INSTALLED WITH RISERS TO THE SURFACE.

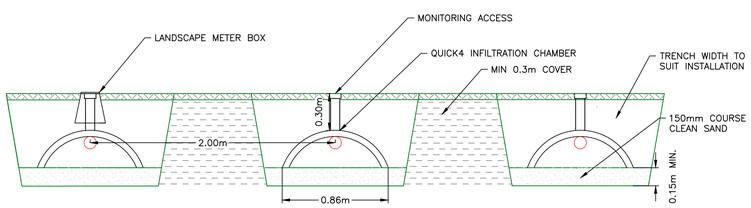
CONTRACTOR TO SELECT METHOD FOR INSTALLATION AND CONSTRUCT ON BOTH SIDES. TOTAL REQUIREMENT: 3 LATERALS, WITH 34 INFILTRATOR SEGMENTS AND ONE END CAP PER LATERAL.

LOADING RATE INFORMATION:
DESIGN DAILY FLOW = 3,000 LPD
PERCOLATION RATE =1.25 min/in
AREA OF INFILTRATIVE SURFACE = 67m²
LINEAR LOADING RATE = 140L/d/m
VERTICAL SEPARATION REQUIREMENT = N/A

GENERAL MINIMUM FIELD SETBACK REQUIREMENTS (TYPE 1)		
	FIELD	TANK
FROM PARCEL BOUNDARY, BUILDING, DOMESTIC WATERLINE, INTERCEPTOR DRAIN (UPSTREAM)	3m (10ft)	1m (3ft)
BREAK-OUT POINT - PERIMETER DRAIN MARINE WATER	15m (50ft)	10m (33ft)
FROM SOURCE OF DOMESTIC/FRESH WATER	30m (100ft)	15m (50ft)



2 / C01 — SEPTIC FIELD PLAN
SCALE:1:25



B — OPTION A SEPTIC FIELD PROFILE
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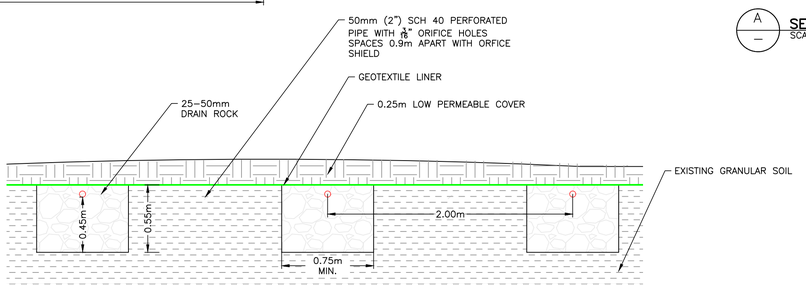


A — OPTION B SEPTIC FIELD PROFILE
SCALE:1:25

1:25 0 0.5 1.5m 1:500 0 10 30m

ISSUED FOR TENDER
OCTOBER 2020

CALL BEFORE YOU DIG! 1-800-474-6886 or by CELLULAR *6886 Vancouver Area 207-0440 — CALL AT LEAST TWO FULL WORKING DAYS BEFORE YOU PLAN TO DIG

NO.	DATE	BY	REVISIONS	ENG
	2020.11.30	C.S.	CHANGED FITTINGS AND ADDED FLOAT TREE	M.S.
1	2020.12.01	C.S.	ADDED PIPE THICKNESSES	M.S.

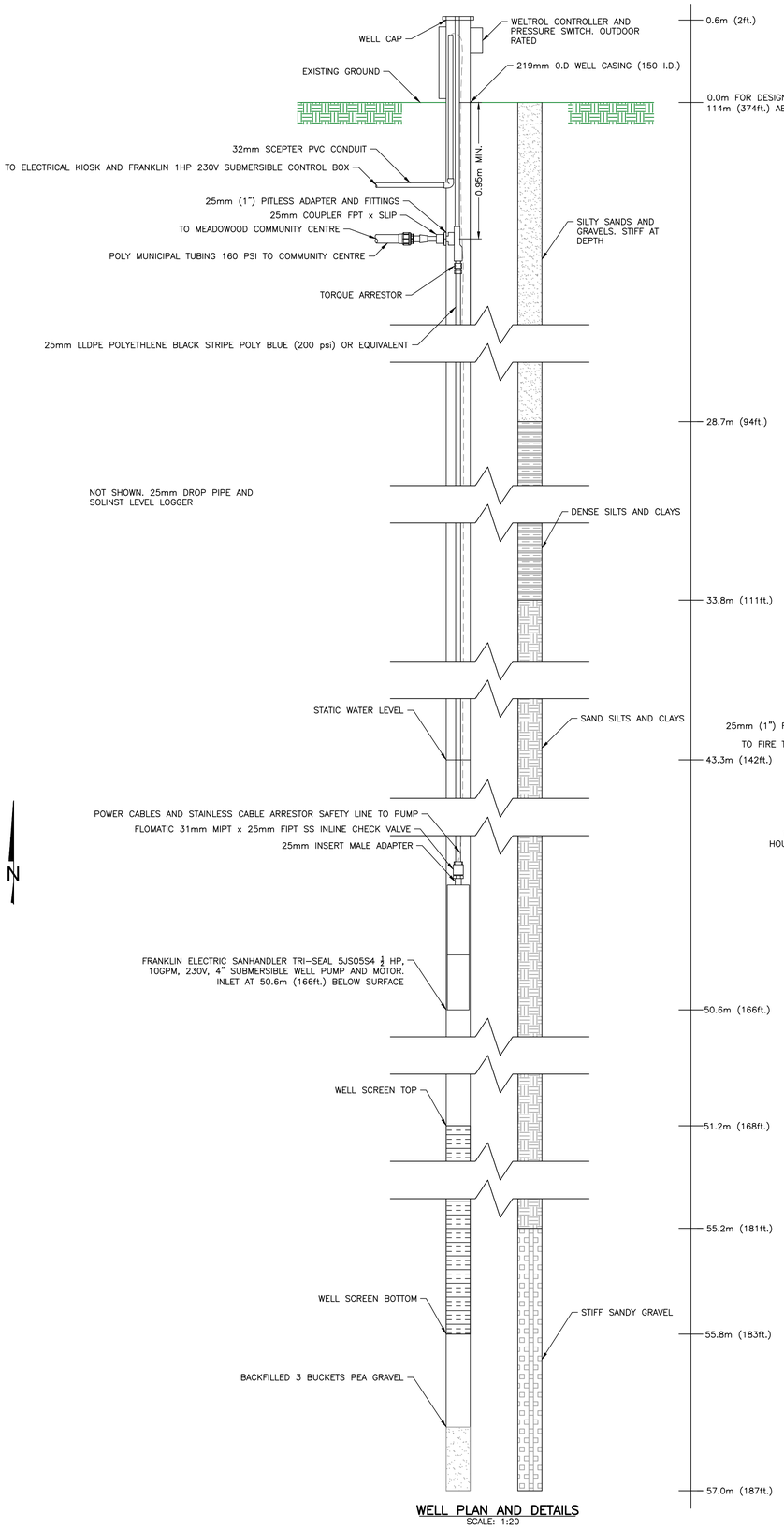
NO.	DATE	BY	ISSUED	ENG
1.	2020.10.29	C.S.	ISSUED FOR TENDER	M.S.

PROJECT:
MEADOWOOD COMMUNITY CENTRE
DESCRIPTION:
SITE PLAN AND DESIGN DRAWING

MSR SOLUTIONS INC.
INNOVATIVE ENGINEERING SERVICES
125 - 662 GOLDSTREAM AVENUE, VICTORIA B.C. V9B 0N8
OFFICE: (250) 479 - 5164
FAX: 888.277.2816
info@msrsolutions.ca
www.msrsolutions.ca

DESIGN BY: C.S.	DATE: 2020.10.26		
DRAWN BY: C.S.	DATE: 2020.10.27		
CHECKED BY: M.S.	DATE: 2020.10.29		
APPROVED BY: M.S.	DATE: 2020.10.29		

HORZ. SCALE:	AS SHOWN	DRAWING No.:	C01
VERT. SCALE:	AS SHOWN	PROJ No.:	20-539
SHEET	1 OF 1	VERSION No.:	1



WELL PLAN AND DETAILS
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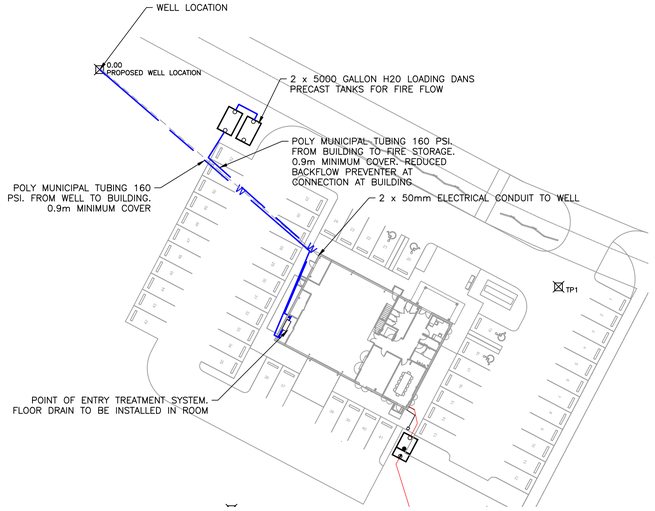

SITE PLAN
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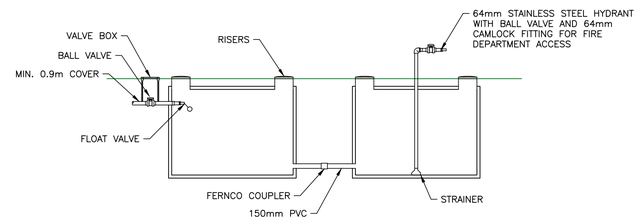

FIRE FLOW SYSTEM
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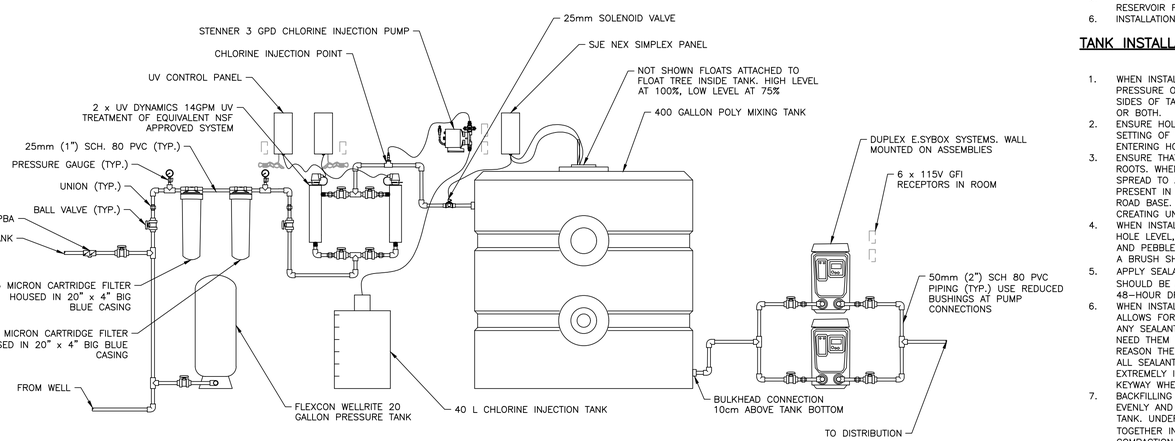

WATER TREATMENT SYSTEM
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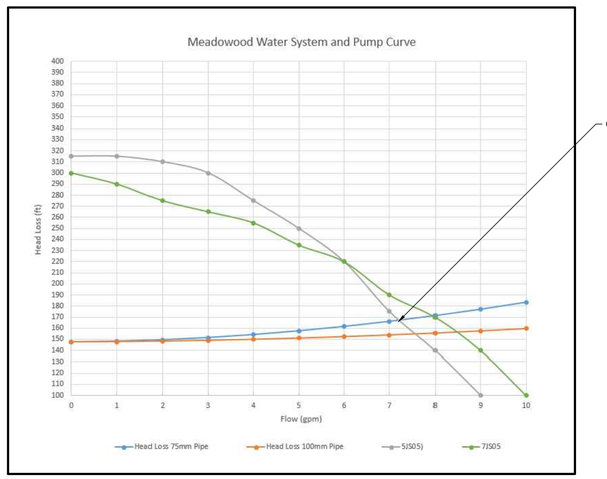

SYSTEM CURVE
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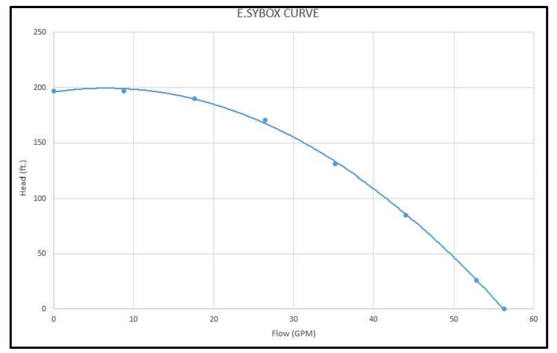

E.SYBOX CURVE
SCALE: N/A

NOTES:

1. COMMERCIALLY MANUFACTURED WELL CAP WITH SCREENED VENT AND GASKET TO PREVENT FOREIGN INTRUSIONS.
2. SECURE DIP TUBES AND CABLES TIES TO DROP PIPE AT 3M MINIMUM.
3. PROTECT SUBMERSIBLE MOTOR CABLES USING TORQUE ARRESTOR OR CABLE GUARD, AS APPROVED BY ENGINEER.
4. WELL PUMP SHALL BE INSTALLED BY A QUALIFIED PROFESSIONAL AS PER THE GROUNDWATER PROTECTION REGULATION (GPR) AND WELL SEAL REPAIRED UPON INSTALLATION OF PITLESS ADAPTOR AND PIPING.
5. PUMP OPERATION WILL HAVE ALARM SET UP FOR LOW FLOW WHEN CALLED BY RESERVOIR FLOAT.
6. INSTALLATION AS PER MANUFACTURERS GUIDELINES

TANK INSTALLATION:

1. WHEN INSTALLING SEPTIC TANKS, A SPREADER BAR SLING IS REQUIRED TO KEEP PRESSURE OFF SIDES OF TANK. CABLES SHOULD NEVER BE PULLED UP AND OVER SIDES OF TANK. WITH NO SPREADER BAR, DAMAGE MAY OCCUR TO THE TANK, KEYWAY OR BOTH.
2. ENSURE HOLE THAT TANK IS BEING PLACED IN IS LARGE ENOUGH TO ACCOMMODATE SETTING OF TANK WITH SPREADER BAR SLING. THIS PREVENTS UNWANTED MATERIAL FROM ENTERING HOLE.
3. ENSURE THAT THE BOTTOM OF HOLE IS CLEAR OF PROTRUSIONS SUCH AS ROCKS OR ROOTS. WHEN IN COMPLETELY DRY CONDITIONS A 2 INCH BED OF SAND SHOULD BE SPREAD TO AT LEAST 6 INCHES BEYOND THE DIMENSIONS OF THE TANK. IF WATER IS PRESENT IN THE HOLE YOU MUST HAVE A BED OF PEA GRAVEL, ¾ INCH DRAIN ROCK OR ROAD BASE. THIS ALSO PREVENTS VOIDS FROM OCCURRING UNDER BOTTOM AND CREATING UNNECESSARY PRESSURE AND STRESS ON BOTTOM OF THE TANK.
4. WHEN INSTALLING A CLAM SHELL TANK –ONCE THE BOTTOM OF THE TANK IS SET IN HOLE LEVEL, BE SURE BOTH TOP AND BOTTOM KEYWAYS ARE CLEAN OF DIRT, ROCK, AND PEBBLES OR ANY OTHER MATERIAL THAT MAY INTERFERE WITH THE SEAL OF TANK. A BRUSH SHOULD BE USED TO CLEAN CONCRETE SURFACE.
5. APPLY SEALANT CONSEAL CS665 (3/4 INCH IS RECOMMENDED). IN ADDITION CONSEAL SHOULD BE APPLIED TO TOP OF JOINT (1 INCH IS RECOMMENDED). ALLOW FOR A 48–HOUR DRYING PERIOD BEFORE WATER TEST OR VACUUM TEST IS PERFORMED.
6. WHEN INSTALLING TOP PIECE OF TANK ENSURE TOP IS HANGING LEVEL IN SLING. THIS ALLOWS FOR AN EVEN PLACEMENT OF TOP ON BOTTOM WITHOUT DRAGGING OR REMOVING ANY SEALANT FROM KEYWAY. ALSO BE SURE INLET AND OUTLET ARE THE DIRECTION YOU NEED THEM TO BE, BEFORE SETTING THE TOP OF TANK ON THE BOTTOM. IF FOR ANY REASON THE TOP MUST BE SEPARATED FROM BOTTOM, YOU MUST COMPLETELY REMOVE ALL SEALANT FROM BOTH TOP AND BOTTOM, RESEAL AND PUT BACK TOGETHER. IT IS EXTREMELY IMPORTANT TO GET IT RIGHT THE FIRST TIME, AS DAMAGE CAN OCCUR TO KEYWAY WHEN TRYING TO SEPARATE SEALED PIECES.
7. BACKFILLING OF TANK IN HOLE REQUIRES GENTLY PLACING MATERIAL BACK AROUND TANK EVENLY AND TAKING PRECAUTIONS NOT TO ALLOW ROCKS TO COLLIDE WITH ANY PORTION TANK. UNDER NO CIRCUMSTANCES SHOULD THE TANK BE ADJUSTED ONCE IT IS SEALED TOGETHER IN HOLE. (I.E. MOVED WITH BACKHOE OR NUDGED WITH BUCKET). IF COMPACTION IS REQUIRED, PLEASE FILL TANK WITH WATER EVENLY AS BACKFILL STAGES ARE BEING PERFORMED TO EQUALIZE PRESSURE ON BOTH SIDES OF TANK WALLS.
8. WHEN BACKFILLING MATERIAL BECOMES SATURATED WITH WATER BECAUSE OF WINTER CONDITIONS RAIN OR SNOW IT'S IMPORTANT TO USE DRY GRANULAR MATERIAL I.E. PEA GRAVEL, ¾ DRAIN ROCK OR ROAD BASE BE USED. NEVER USE DRY OR SATURATED CLAY MATERIAL. 1M MAXIMUM DEPTH OF BURIAL FOR DRY GRANULAR MATERIAL – NORMAL CONDITIONS
9. ONCE, BACKFILLED, FILL TANKS TO TOPSIDE OF LID AND ALLOW TO SITE FOR 24 HOURS. THEN REFILL AND VERIFY NO LEAKAGE AFTER ADDITIONAL 24 HOURS.

1:500 0 10 30m
1:100 0 2 6m
1:25 0 0.5 1.5m
1:20 0 0.4 1.2m

ISSUED FOR TENDER
NOVEMBER 2020

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1	2020.12.01	C.S.	POINT OF ENTRY SYSTEM AND FIRE RETURN	X.X.

NO.	DATE	BY	ISSUED	ENG
1.	2020.11.23	C.S.	ISSUED	M.S.

PROJECT:
MEADOWOOD COMMUNITY CENTRE
DESCRIPTION:
WELL PLAN AND DETAILS

MSR SOLUTIONS INC.
INNOVATIVE ENGINEERING SERVICES
125 – 662 GOLDSTREAM AVENUE, VICTORIA B.C. V9B 0N8
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DESIGN BY: C.S.	DATE: 2020.11.19
DRAWN BY: C.S.	DATE: 2020.11.19
CHECKED BY: M.S.	DATE: 2020.11.23
APPROVED BY: M.S.	DATE: 2020.11.23

HORZ. SCALE:	AS SHOWN
VERT. SCALE:	AS SHOWN
SHEET	1 OF 1
DRAWING No.:	C02
PROJ No.:	20–539
VERSION No.:	1

ARCHITECTURAL D 24" x 36"

GENERAL
HEL-001

1. ALL DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA.
2. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA, ALL REFERENCED CODES AND ALL FEDERAL AND MUNICIPAL REGULATIONS AND BY-LAWS.
3. ALL REFERENCED CODES AND STANDARDS SHALL BE AS REFERENCED IN THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE.
4. DESIGN CRITERIA: kPa (psf)

QUALICUM BEACH								
SNOW LOADS		WIND LOADS		SITE CLASS				
Ss	2.0 kPa (42.0 psf)	q10	0.41kPa (8.55 psf)	D	SEE GEOTECHNICAL REPORT			
Sr	0.4 kPa (8.40 psf)	q50	0.53kPa (11.10 psf)					
Is	ULS 1.15/SLS 0.90	Iw	ULS 1.15/SLS 0.75					

SEISMIC LOADS		SPECTRAL ACCELERATION							
Rd	3.0	Sa (0.2)	Sa (0.5)	Sa (1.0)	Sa (2.0)	Sa (5.0)	Sa (10.0)	PGA	PGV
Ro	1.7	0.888	0.838	0.517	0.323	0.108	0.038	0.395	0.629
Ie	ULS 1.15								

SPECIFIED MEZZANINE FLOOR LOADING	SPECIFIED CANOPY ROOF LOADING
SUITE DL = 0.72kPa (15psf) SUITE LL = 4.8kPa (100psf)	DEAD LOAD = 0.48kPa (10psf) SNOW LOAD = 2.0kPa (42psf) NET WIND UPLIFT = 1.0kPa (21psf)
DEFLECTION CRITERIA	DEFLECTION CRITERIA
LIVE LOAD = L/360 TOTAL LOAD = L/240	LIVE LOAD = L/360 TOTAL LOAD = L/240

SPECIFIED LOADS SHOWN ON PLAN DO NOT INCLUDE ANY IMPORTANCE FACTOR.

5. THESE DRAWINGS INCLUDING DIMENSIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER FOR CLARIFICATION PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL BE FAMILIAR WITH ALL PROJECT DRAWINGS INCLUDING THOSE OF OTHER DISCIPLINES AND SHALL MAKE ALLOWANCES FOR ALL ITEMS SHOWN ON OTHER DRAWINGS THAT AFFECT THIS CONTRACTOR'S WORK.
6. THESE DRAWINGS SHOW THE COMPLETED STRUCTURE ONLY. PROVIDE TEMPORARY BRACING AND SHORING FOR THE CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LOADS.
7. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO DESIGN AND TAKE RESPONSIBILITY FOR ANY TEMPORARY SHORING, BRACING OR OTHER DESIGNS REQUIRED TO COMPLETE CONSTRUCTION.
8. THE CONTRACTOR SHALL SUBMIT WRITTEN RECOMMENDATIONS FOR FLATWORK PERFORMED DURING COLD (BELOW +5°C) AND HOT (ABOVE +25°C) WEATHER. THE RECOMMENDATIONS SHALL BE PREPARED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. A SCHEDULE 'S' SHALL ALSO BE SUBMITTED UPON REQUEST. FLATWORK INCLUDES SLABS ON GRADE, SUSPENDED SLABS, TILT-UP PANELS, MASONRY AND CONCRETE TOPPING.
9. UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED.
10. CONTRACTOR AND ALL SUB-TRADES SHALL VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING FABRICATION.

REFERENCE PUBLICATIONS
HEL-002

THESE DRAWINGS REFER TO THE FOLLOWING PUBLICATIONS, AND WHERE SUCH REFERENCE IS MADE, IT SHALL BE TO THE EDITION LISTED BELOW, INCLUDING ALL AMENDMENTS PUBLISHED THERETO.

ACI SP-4-2005
ACI 355.4-11

ANSI/APA PRG 320-2012
ANSI/NAAMM MBG 531-17

ASTM 653/A653M-11

ASTM A53/A53M-18
ASTM A123/A123M-13JAE J429-1999
ASTM A193/A193M-17
ASTM A252-10 (2018)
ASTM A307-12
ASTM A325-10e1
ASTM A416/A416M-12a
ASTM A421/A421M-05
ASTM A497/A497M-07
ASTM A615/A615M-18e1
ASTM A722/A722M-12
ASTM A992/A992M-11 (2015)
ASTM A1011/A1011M-12b
ASTM A1064/A1064M-13
ASTM C957/C957M-14
ASTM D1751-18
ASTM D5055-13e1
ASTM D5456-13a
ASTM F1136-11
ASTM F1554-07ae1
ASTM G109-07 (2013)
ASTM G180-13

ASME B18.6.1-1981 (R2016)

CGSB 1.181-99
CGSB 19.24-M90
CGSB 27.50-M89
CGSB 37.50-M89

CISC/CPMA 1-73a (1975)
CISC/CPMA 2-75 (1975)

CSA 112.10-08 (R2017)

CSA A23.1-14
CSA A23.2-14
CSA A23.4-09
CSA A165-14
CSA A179-14
CSA A370-14
CSA A371-14
CSA A3000-13

CSA B111-1974 (R2003)
CSA B167-16

CSA G30.14-M1983 (R1998)
CSA G30.18-09 (R2014)
CSA G40.20/G40.21-13
CSA G164-M92 (R2003)

CSA 056-10(R2015)
CSA 080-08 (R2012)
CSA 086-14
CSA O112-M1977 (R2006)
CSA O112.7-M1977

CSA O112.9-10 (R2014)
CSA O121-08 (R2013)
CSA O122-06 (R2011)
CSA O122.6-M1977

CSA O141-05 (R2014)
CSA O151-09 (R2014)
CSA O153-13 (R2017)
CSA O177-06 (R2015)
CSA O325-07 (R2012)
CSA O437.0-93

CSA S6-14
CSA S16-14
CSA S136-12
CSA S269.1-1975
CSA S269.3-M92 (R2013)
CSA S413-14

CSA W47.1-09 (R2014)
CSA W48-14
CSA W55.3-08 (R2018)
CSA W59-13
CSA W178.1-14
CSA W178.2-14
CSA W186-M1990 (R2016)

CSSBI 10M-18/12M-18
CSSBI 101M-84

ULC S701-11

SUBMITTALS
HEL-003

1. WHERE SHOP DRAWINGS ARE REQUESTED IN THE GENERAL NOTES THE CONTRACTOR SHALL PROVIDE THEM IN EITHER HARD COPY OR DIGITAL FORMAT TO THE FOLLOWING REQUIREMENTS FOR THE ENGINEER'S REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL INDICATE DETAILS, DIMENSIONS, MATERIALS AND DESIGN LOADS.
2. IF HARD COPY FORMAT IS USED FIVE PAPER COPIES SHALL BE SUBMITTED. UNLESS NOTED OTHERWISE THEY SHALL BE SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
3. DRAWINGS NOT SEALED BY THE SPECIALTY ENGINEER SHALL BE ACCOMPANIED BY A LETTER WITH A DRAWING LIST IDENTIFYING ALL DRAWING NUMBERS, TITLES, MOST RECENT REVISION NUMBERS AND DATES. THE LETTER AND DRAWING LIST ARE TO BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
4. IF A DIGITAL SUBMISSION IS MADE THE FILES SHALL BE IN PDF FORMAT ON A DISC OR TRANSMITTED VIA E-MAIL. THE SUBMISSION SHALL CONTAIN A LETTER WITH A DRAWING LIST AS DESCRIBED ABOVE SIGNED AND SEALED BY THE SPECIALTY ENGINEER. THE FINAL SUBMISSION SHALL BE MADE AS A HARD COPY BEARING THE ORIGINAL SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
5. THE FOLLOWING SUBMISSIONS ARE REQUIRED FOR THIS PROJECT:
   - CONCRETE MIX DESIGNS
   - PRE-ENGINEERED STEEL BUILDING SHOP DRAWINGS*
   - PREFABRICATED WOOD JOIST SHOP DRAWINGS*
   - CORRUGATED METAL ROOFING*
   - STEEL PLATE SHOP DRAWINGS FOR TIMBER CONNECTION

   * INDICATES THE REQUIREMENT THAT SUBMISSION BE SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA AND PROVIDE A SCHEDULE 'S' UPON COMPLETION OF THE WORK.
6. SHOP DRAWINGS WHICH ARE REQUIRED TO, BUT DO NOT HAVE THE APPROPRIATE ENGINEERS SEAL AND SIGNATURE WILL NOT BE REVIEWED.
7. SHOP DRAWINGS WILL BE REVIEWED ONLY FOR GENERAL CONFORMITY WITH THE PROJECT DRAWINGS AND SPECIFICATIONS. QUANTITIES AND DETAILED DIMENSIONS ARE THE CONTRACTORS RESPONSIBILITY. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS INCLUDING COORDINATION WITH OTHER TRADES AND DISCIPLINES. THE CONTRACTOR IS RESPONSIBLE FOR ERRORS AND OMISSIONS ON THE SHOP DRAWINGS.
8. SHOP DRAWING SUBMISSIONS FOR THE WORK OF SPECIALTY ENGINEERS SHALL BE AS SET OUT IN THIS SECTION.
9. THE QUALITY ASSURANCE FOR MATERIALS, FABRICATION AND INSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SPECIALTY ENGINEER.
10. THE SPECIALTY ENGINEER OR HIS REPRESENTATIVE SHALL VISIT THE SITE AND REVIEW THE COMPLETED WORK DESIGNED AND DETAILED ON HIS SHOP DRAWINGS TO SATISFY HIMSELF THAT THE FINISHED COMPONENTS AND ASSEMBLIES ARE IN COMPLIANCE WITH THE ENGINEERED DESIGN. THE SPECIALTY ENGINEER SHALL THEN PROVIDE THE PROJECT ENGINEER OF RECORD WITH A COMPLETED SCHEDULE 'S' FOR THIS WORK ALONG WITH ANY SKETCHES SHOWING FIELD MODIFICATIONS. THESE SKETCHES SHALL BEAR THE SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER.

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FIELD REVIEWS
HEL-005

1. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A MINIMUM OF 48 HOURS (2 WORKING DAYS) ADVANCE NOTICE FOR FIELD REVIEWS.
2. THE FOLLOWING FIELD REVIEWS ARE CONSIDERED TO BE THE MINIMUM NUMBER OF STRUCTURAL FIELD REVIEWS REQUIRED FOR THE PROJECT:

   CONCRETE: REINFORCING STEEL SHALL BE REVIEWED PRIOR TO PLACING CONCRETE. REINFORCING IN CONCRETE WALLS SHALL BE REVIEWED PRIOR TO "BUTTONING UP" WALL FORMS.

   TIMBER: FRAMING SHALL BE REVIEWED PRIOR TO COVERING ANY FRAMING AND BEFORE ADDITIONAL LOADS SUCH AS CONCRETE TOPPING AND MECHANICAL EQUIPMENT ARE APPLIED.
3. IF THE ENGINEER IS NOT PROVIDED WITH THE OPPORTUNITY TO PERFORM THE REQUIRED FIELD REVIEWS, FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.

MECHANICAL AND ADHESIVE ANCHORS
HEL-046

1. ALL ANCHORS ARE TO BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF ANCHOR INSTALLATION, AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. ALL ANCHORS ARE TO BE THE ADHESIVE TYPE. MECHANICAL ANCHORS ARE ONLY TO BE USED WHEN SPECIFICALLY CALLED-UP ON THE DRAWINGS. SUBSTITUTIONS MUST BE APPROVED BY THE PROJECT ENGINEER PRIOR TO USE.
3. UNLESS NOTED OTHERWISE ADHESIVE ANCHORS SHALL BE ASTM F1554 GRADE 36 THREADED ROD. REFER TO DRAWINGS FOR ANCHOR LOCATIONS, SIZES, CENTRES AND EMBEDMENT LENGTH.

   USE HILTI HIT-HY200 WHEN:
   A QUICK CURE IS REQUIRED,
   CONDITIONS ARE DRY, OR SATURATED
   HOLES ARE HAMMER DRILLED,
   HOLES ARE NOT OVER-SIZED,
   BASE MATERIAL TEMPERATURE IS ABOVE MINUS 10° CELCIUS.

   NOTE; CONCRETE THAT HAS BEEN EXPOSED TO WATER IN THE PRECEEDING 14 DAYS IS ASSUMED TO BE STATURATED.

   USE HILTI HIT RE500-V3 WHEN:
   EXTENDED WORKING TIME IS REQUIRED AND CURE TIME IS NOT CRITICAL,
   HOLES ARE DRILLED USING DIAMOND CORE, PNEUMATIC OR HAMMER DRILLS,
   DEEP EMBEDMENT IS SPECIFIED,
   THE APPLICATION IS UNDERWATER, OR
   HOLES ARE OVERSIZED.
4. REFER TO DRAWINGS FOR MECHANICAL ANCHOR LOCATIONS, SIZES, CENTRES AND EMBEDMENT LENGTH.
5. HOLES FOR MECHANICAL ANCHORS SHALL BE CLEANED OUT WITH HIGH PRESSURE AIR OR BRUSH PRIOR TO ANCHOR INSTALLATION.
6. INSTALLERS OF HILTI PRODUCTS SHALL HAVE RECEIVED TRAINING BY HILTI (CANADA) CORP. IN THE USE OF THE SPECIFIED PRODUCTS. THE GENERAL CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A LETTER STATING THAT THIS TRAINING HAS BEEN COMPLETED.
7. ALL ADHESIVE ANCHORS ARE TO HAVE A PERIODIC SPECIAL INSPECTION PERFORMED IN ACCORDANCE WITH ACI 355.4. THE SPECIAL INSPECTION SHALL BE PERFORMED BY A CERTIFIED ACI/CRSI ADHESIVE ANCHOR INSTALLATION INSPECTOR, OR EQUIVALENT. THE SPECIAL INSPECTOR MUST BE HIRED BY THE OWNER, OR AN OWNER'S REPRESENTATIVE (THE CONTRACTOR IS NOT ALLOWED TO HIRE THE SPECIAL INSPECTOR THEMSELVES). THE SPECIAL INSPECTOR SHALL SUBMIT A REPORT TO THE ENGINEER OF RECORD THAT THE MATERIALS USED, AND THE INSTALLATION PROCEDURES USED CONFORM WITH THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

FOUNDATIONS
HEL-006

1. REFER TO GEOTECHNICAL REPORT PREPARED BY: LEWKOWICH ENGINEERING ASSOCIATES SEPTEMBER 3, 2015
2. DESIGN VALUES:

	FACTORED BEARING RESISTANCE	BEARING PRESSURE FOR SETTLEMENT
	200 kPa (3000 psf)	100 kPa (3000 psf)

3. CENTRE ALL FOOTINGS UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE.
4. FOUNDATION BEARING MATERIAL SHALL BE PROTECTED FROM RAIN, FROST, SNOW AND WATER INFILTRATION. NO FOUNDATIONS SHALL BE POURED BEFORE BEARING MATERIAL HAS BEEN REVIEWED AND APPROVED BY GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL BE PROVIDED WITH NOTICE PRIOR TO CONCRETE POURS AS DESCRIBED IN "FIELD REVIEWS".
5. FOOTING DEPTHS INDICATED ON THE DRAWINGS AND IN GEOTECHNICAL REPORT ARE GENERAL AND REPRESENT MINIMUM VALUES TO BE USED. FIRM BEARING DEPTHS FOR FOOTINGS AND FILL SHALL BE ESTABLISHED FROM THE GEOTECHNICAL REPORT AT THE TIME OF TENDERING. ANY QUERIES REGARDING THE ESTABLISHMENT OF THESE DEPTHS SHALL BE DIRECTED TO THE GEOTECHNICAL ENGINEER. VARIABLE SITE SOIL CONDITIONS, UNDERGROUND SERVICES AND EXISTING STRUCTURES MAY REQUIRE ADJUSTMENT OF FOOTING DEPTHS. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR MINOR VARIATIONS IN FOOTING DEPTHS IN HIS BID. CONTACT GEOTECHNICAL AND STRUCTURAL ENGINEER FOR INSTRUCTIONS REGARDING SITE CONDITIONS THAT DIFFER FROM WHAT IS SHOWN ON DRAWINGS AND INDICATED IN THE GEOTECHNICAL REPORT.
5. FOOTINGS ARE TO BE AT ELEVATIONS INDICATED ON THE DRAWINGS, AND ARE TO BEAR ON UNDISTURBED NATIVE SOILS OR ENGINEERED FILL. BOTH CONDITIONS ARE TO BE REVIEWED AND APPROVED BY THE GEOTECHNICAL ENGINEER. FIRM BEARING DEPTHS FOR FILL SHALL BE ESTABLISHED FROM THE GEOTECHNICAL REPORT AT THE TIME OF TENDERING. ANY QUERIES REGARDING THE ESTABLISHMENT OF THESE DEPTHS SHALL BE DIRECTED TO THE GEOTECHNICAL ENGINEER. VARIABLE SITE SOIL CONDITIONS, UNDERGROUND SERVICES AND EXISTING STRUCTURES MAY REQUIRE ADJUSTMENT OF THESE ELEVATIONS. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR MINOR VARIATIONS IN ELEVATIONS IN HIS BID. CONTACT GEOTECHNICAL AND STRUCTURAL ENGINEER FOR INSTRUCTIONS REGARDING SITE CONDITIONS THAT DIFFER FROM WHAT IS SHOWN ON DRAWINGS AND INDICATED IN THE GEOTECHNICAL REPORT.
6. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF FOUNDATIONS WITH UNDERGROUND SERVICES AS SHOWN ON CIVIL, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. CONFLICTS SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
7. UNLESS NOTED OTHERWISE, THE MINIMUM ASSUMED COMPACTION UNDER ALL FOOTINGS AND SLABS FOR COMPACTED GRANULAR FILLS IS 98% CORRECTED STANDARD PROCTOR DENSITY. GEOTECHNICAL ENGINEER OR TESTING AGENCY TO CONFIRM PRIOR TO PLACING CONCRETE.
8. THE BASE COURSE BELOW SLABS ON GRADE SHALL BE COMPOSED OF INERT, CLEAN, TOUGH, DURABLE CRUSHED AGGREGATE, UNIFORM IN QUALITY AND FREE FROM SOFT OR DISINTEGRATED PIECES. THE AGGREGATE PARTICLES SHALL BE UNIFORM IN QUALITY AND FREE FROM AN EXCESS OF FLAT OR ELONGATED PARTICLES. IN THE ABSENCE OF SATISFACTORY PERFORMANCE RECORDS OVER A 5 YEAR PERIOD OF THE PARTICLE SOURCE OF AGGREGATE, IT'S SOUNDNESS SHALL BE TESTED IN ACCORDANCE WITH ASTM C88 USING MAGNESIUM SULPHATE. MAXIMUM WEIGHTED AVERAGE LOSSES FOR COURSE AGGREGATE SHALL BE 20% AND FOR FINE AGGREGATE 25%. THE SAND EQUIVALENT VALUE WHEN TESTED IN ACCORDANCE WITH ASTM D2419 SHALL NOT BE LESS THAN 40. THE LOS ANGELES ABRASION VALUE WHEN TESTED IN ACCORDANCE WITH ASTM C131 SHALL HAVE A MAXIMUM LOSS BY MASS OF 25%. THE AGGREGATE GRADATION SHALL FALL WITHIN THE FOLLOWING LIMITS WHEN TESTED IN ACCORDANCE WITH ASTM C136;

SIEVE SIZE (US STD.)	25mm	19	9.5	4.75	2.36	1.18	0.3	0.075
% PASSING BY WEIGHT	100	80-100	50-100	35-70	25-50	15-35	5-20	0-5

   SUB-BASE BELOW THE BASE COURSE SHALL BE PIT RUN GRAVEL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

PRE-ENGINEERED STEEL BUILDINGS
HEL-045

1. FOUNDATIONS HAVE BEEN DESIGNED AS PER LOADS PROVIDED BY PRE-ENG MANUFACTURER JOB NO. -----
2. THE PRE-ENGINEERED STEEL BUILDING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO THE SITE SPECIFIC DESIGN CRITERIA FOR THE PROJECT.
3. THE BUILDING MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. ERECTION AND DETAIL DRAWINGS SHALL SHOW SIZE, CONFIGURATIONS AND LOCATIONS OF ALL STEEL BUILDING COMPONENTS AND BE MARKED "ISSUED FOR CONSTRUCTION". COLUMN REACTIONS SHALL BE INCLUDED.
4. UPON COMPLETION THE PRE-ENGINEERED STEEL BUILDING SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER REGISTERED IN BRITISH COLUMBIA. A SCHEDULE 'S' SHALL BE SUBMITTED TO THE PROJECT ENGINEER TO CERTIFY THAT THE BUILDING HAS BEEN SUPPLIED AND ERECTED IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS.
5. THE CONTRACTOR SHALL CONFIRM THE FOLLOWING WITH THE STEEL BUILDING SUPPLIERS SHOP DRAWINGS PRIOR TO POURING CONCRETE:
   - BASEPLATE SIZES
   - ANCHOR BOLT SIZE AND LOCATION
   - GENERAL ARRANGEMENT OF BUILDING FRAMES
6. VERIFY ALL DIMENSIONS WITH PRE-ENGINEERED STEEL BUILDING SHOP DRAWINGS, AS ISSUED FOR CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
7. CONFIRM ALL DOOR OPENING SIZES AND LOCATIONS WITH THE CLIENT PRIOR TO CONSTRUCTION.
8. GROUT BELOW BASEPLATES TO BE 48 MPa (7000 psi) AT 28 DAYS.

REINFORCING STEEL
HEL-014

1. REINFORCING STEEL SHALL BE DEFORMED STEEL 400 GRADE AND SHALL CONFORM TO CAN/CSA-G30.18
2. WELDABLE LOW ALLOY DEFORMED STEEL REINFORCING BARS, GRADE 400W, SHALL CONFORM TO CAN/CSA-G30.18. MILL CERTIFICATES SHALL BE SUPPLIED TO THE STRUCTURAL ENGINEER FOR ALL WELDABLE REINFORCING STEEL USED IN THE PROJECT.
3. WELDED WIRE FABRIC, DEFORMED, SHALL CONFORM TO ASTM 1064/1064M OR ASTM A497/A497M.
4. WELDING OF REINFORCING STEEL SHALL CONFORM TO CSA W186-M "WELDING OF REINFORCING BARS IN REINFORCED CONCRETE CONSTRUCTION". WELDING OF REINFORCING SHALL BE ALLOWED ONLY AS NOTED ON PLANS. WHERE WELDING OF REINFORCING IS REQUIRED MILL CERTIFICATES FOR WELDABLE REINFORCING SHALL BE PROVIDED PRIOR TO WELDING. WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER IS REQUIRED FOR ANY ADDITIONAL WELDING.
5. ALL REINFORCING BARS SHALL BE TIED SECURELY TO PREVENT DISPLACEMENT.
6. UNLESS NOTED OTHERWISE ON PLANS, LAP LENGTHS FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

REINFORCING BAR LAP LENGTHS						
CONCRETE MPa	BAR SIZE					
	10M	15M	20M	25M	30M	35M
20	430 (17")	635 (25")	840 (33")	1320 (52")	1575 (62")	1855 (73")
25	380 (15")	560 (22")	760 (30")	1195 (47")	1370 (54")	1650 (65")
30	355 (14")	510 (20")	710 (28")	1065 (42")	1295 (51")	1500 (59")
35	330 (13")	480 (19")	660 (26")	990 (39")	1195 (47")	1395 (55")
40	305 (12")	455 (18")	610 (24")	940 (37")	1120 (44")	1320 (52")
45	280 (11")	430 (17")	560 (22")	890 (35")	1040 (41")	1245 (49")

NOTES;
1. MULTIPLY VALUES BY 1.3 FOR HORIZONTAL REINFORCEMENT PLACED IN SUCH A WAY THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.
2. MULTIPLY VALUES BY 1.5 FOR EPOXY COATED REINFORCEMENT WITH CLEAR COVER LESS THAN 3 BAR DIAMETERS OR BAR SPACING LESS THAN 7 BAR DIAMETERS.
3. MUTLIPLY VALUES BY 1.2 FOR ALL EPOXY COATED REINFORCEMENT OTHER THAN IN 2. ABOVE.

7. NO SPLICES OTHER THAN THOSE NOTED ON THE DRAWINGS ARE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.
8. WHERE CONCRETE SURFACES ARE TO BE EXPOSED ONLY NON-CORROSIVE TYPE REINFORCING CHAIRS SHALL BE USED TO SUPPORT THE REINFORCING STEEL.
9. DOWELS ARE TO BE TIED IN PLACE PRIOR TO POURING CONCRETE - "WET DOWELING" OF ANY REINFORCING STEEL IS NOT PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
10. HOOKS ON ALL TIES SHALL BE BENT AT LEAST 135° AND HAVE A MINIMUM LEG OF 6 TIMES THE TIE BAR DIAMETER.
11. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REINFORCEMENT.
12. ALL VERTICAL REINFORCING TO FOUNDATION WALLS AND PIERS SHALL HAVE A STANDARD HOOK AND BE EMBEDDED IN THE FOOTING.
13. ALL BARS SHALL BE BENT AT TEMPERATURES GREATER THAN 10°C.
14. NO BARS WHICH ARE PARTIALLY EMBEDDED IN CONCRETE SHALL BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER.

CAST-IN-PLACE CONCRETE
HEL-015

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CSA A23.1 AND A23.2.
2. CONCRETE MIXES, AGGREGATES AND CEMENTITIOUS MATERIALS, INCLUDING PORTLAND CEMENT AND PORTLAND LIMESTONE CEMENT, SHALL CONFORM TO CAN/CSA A23.1 AND A23.2 AND CAN/CSA-A3000 AND SHALL HAVE THE FOLLOWING PROPERTIES BASED UPON PERFORMANCE CRITERIA PROPORTIONING:

CLASS	28 DAY STRENGTH	EXPOSURE	MAX AGGREGATE SIZE
FOOTINGS	25MPa (3500 psi)	F-2	19mm
FOUNDATION WALLS & PIERS	25 MPa (3500 psi)	F-2	19mm
EXT. SLAB ON GRADE	32 MPa (4600 psi)	C-2	19mm
INT. SLAB ON GRADE	30 MPa (4000 psi)	N	19mm

3. PORTLAND LIMESTONE CEMENT (PLC) SHALL MEET THE REQUIREMENTS OF CSA A3000 FOR LIMESTONE CEMENTS.
4. CONCRETE TESTING SHALL BE CARRIED OUT BY THE CONTRACTOR AND PAID FOR BY THE OWNER AND SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND A23.2. THE MINIMUM NUMBER OF TESTS PERFORMED SHALL BE AS PER CSA A23.2. ADDITIONAL TESTING SHALL BE PERFORMED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PROVIDE TESTING AGENCY WITH ADEQUATE NOTICE TO PROVIDE TESTING AS REQUIRED.
5. CHAMFER ALL EXPOSED EDGES OF CONCRETE WITH A 19mm (3/4") CHAMFER UNLESS NOTED OTHERWISE.
6. CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND AS FOLLOWS UNLESS NOTED OTHERWISE:

INTERIOR SLABS;	TROWELED FINISH
EXTERIOR SLABS;	BROOM FINISH
WALLS (TYPICAL);	FILL ALL DEFECTS LARGER THAN 25mm (1") DIAMETER AND GRIND RIDGES FLUSH WITH SURROUNDING SURFACES
EXPOSED AGGREGATE;	SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS

7. ALL CONCRETE CURING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1. SPECIAL PRECAUTIONS SHALL BE TAKEN PER CSA A23.1 FOR PLACING AND CURING CONCRETE AT OR ABOVE 27° C AND AT OR BELOW 5° C.
8. UNLESS NOTED OTHERWISE, OR REQUIRED FOR FIRE RESISTANCE RATING, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER DISTANCES:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75 mm (3")
EXTERIOR MEMBERS	40 mm (1.5")
INTERIOR BEAMS, GIRDERS, COLUMNS, AND PILES	30 mm (1.25")
INTERIOR SLABS, WALLS, JOISTS, SHELLS AND FOLDED PLATES	20 mm (0.75")

* IN ADDITION, COVER MUST BE AT LEAST 1.0x THE BAR DIAMETER FOR INTERIOR EXPOSURE, AND 1.5x THE BAR DIAMETER FOR EXTERIOR EXPOSURE

9. CONTROL JOINTS SHALL BE PROVIDED IN BOTH DIRECTIONS IN ALL SLABS-ON-GRADE AT A MAXIMUM SPACING OF 3660mm (12'-0") FOR UNREINFORCED SLABS AND 6100mm (20'-0") FOR REINFORCED SLABS, UNLESS NOTED OTHERWISE ON DRAWINGS.
10. WATER STOPS SHALL BE INSTALLED WHERE INDICATED, WITH ALL JOINTS WELDED, IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE STOPS SHALL BE RIGIDLY TIED IN PLACE. DO NOT DISTORT OR PUNCTURE WATER STOP. DO NOT DISPLACE REINFORCING BAR DURING PLACEMENT.
11. JOINT FILLER SHALL BE INSTALLED IN ALL EXPANSION AND CONSTRUCTION JOINTS.
12. EMBEDDED PLATES AND ANCHOR BOLTS FOR STRUCTURAL STEEL SHALL BE SECURELY TIED OR FASTENED IN PLACE PRIOR TO POURING CONCRETE. ALL ANCHOR BOLTS SHALL BE LAID OUT USING A TEMPLATE. "WET DOWELING" OF ANCHOR BOLTS AND EMBEDDED PLATES IS NOT PERMITTED.

LIST OF ABBREVIATIONS

ALT	---	ALTERNATE	LVL	---	LAMINATED VENEER LUMBER
ARCH	---	ARCHITECTURAL	LV	---	LENGTH VARIES
BCE	---	BOTTOM CHORD EXTENSION	MAX	---	MAXIMUM
B/S	---	BOTH SIDES	MECH	---	MECHANICAL
BLL	---	BOTTOM LOWER LAYER	MIN	---	MINIMUM
BUL	---	BOTTOM UPPER LAYER	NIC	---	NOT IN CONTRACT
C/W	---	COMPLETE WITH	NF	---	NEAR FACE
℄	---	CENTRE LINE	No	---	NUMBER
CLR	---	CLEAR	NTS	---	NOT TO SCALE
CIP	---	CAST IN PLACE	O/A	---	OVERALL
CONC	---	CONCRETE	o/c	---	ON CENTRE
COL	---	COLUMN	O/F	---	OUTSIDE FACE
CONT	---	CONTINUOUS	OPP	---	OPPOSITE
CJ	---	CONTROL JOINT	OWSJ	---	OPEN WEB STEEL JOIST
CP	---	COMPLETE PENETRATION	PL	---	PLATE
DJ	---	DRAG JOIST	PP	---	PARTIAL PENETRATION
DP	---	DEEP	PT	---	PRESSURE TREATED (LUMBER)
DL	---	DEAD LOAD	PSL	---	PARALLEL STRAND LUMBER
DS	---	DRAG STRUT	RD	---	ROOF DRAIN
DT	---	DRAG TRUSS	REINF	---	REINFORCE(MENT)
DWG	---	DRAWING	R/W	---	REINFORCE WITH
E/E	---	EACH END	SCL	---	STRUCTURAL COMPOSITE LUMBER
E/F	---	EACH FACE	SDL	---	SUPERIMPOSED DEAD LOAD
E/S	---	EACH SIDE	STIR	---	STIRRUP
ELEC	---	ELECTRICAL	STL	---	STEEL
ELEV	---	ELEVATION	SIM	---	SIMILAR
EM	---	EMBEDDED PLATE	S/W	---	SHORT WAY
E/W	---	EACH WAY	SWL	---	SAFE WORKING LOAD
EXT	---	EXTERIOR	THK	---	THICK
(E)	---	EXISTING	T&B	---	TOP AND BOTTOM
FD	---	FLOOR DRAIN	T&C	---	TENSION AND COMPRESSION
FF	---	FAR FACE	T&G	---	TONGUE AND GROOVE
GALV	---	GALVANIZED	TJ	---	TIE JOIST
GT	---	GIRDER TRUSS	THK	---	THICK
H.1.E.	---	HOOKED ONE END	TLL	---	TOP LOWER LAYER
H.2.E.	---	HOOKED TWO ENDS	TUL	---	TOP UPPER LAYER
HORIZ	---	HORIZONTAL	T.O.	---	TOP OF
INT	---	INTERIOR	TYP	---	TYPICAL
LG	---	LONG	U/S	---	UNDERSIDE
LL	---	LIVE LOAD	UNO	---	UNLESS NOTED OTHERWISE
LLH	---	LONG LEG HORIZONTAL	VERT	---	VERTICAL
LLV	---	LONG LEG VERTICAL	VIF	---	VERIFY IN FIELD
L/W	---	LONG WAY	W/	---	WITH
			WP	---	WORK POINT

SYMBOLS LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
SF1	NEW STRIP FOOTING	1 / S301	SECTION/ELEVATION SYMBOL: SECTION/ELEVATION NUMBER; SHEET WHERE DRAWN
PF1	NEW PAD FOOTING	1 / S402	PLAN DETAIL SYMBOL: DETAIL NUMBER; SHEET WHERE DRAWN
	NEW CONCRETE WALL	Z1	ZONE TYPE
	CONCRETE BLOCK WALL	CW1	CONCRETE WALL TYPE
	LOAD BEARING STUD WALL	CP1	CONCRETE PIER TYPE
	NON-LOAD BEARING STUD WALL	ST1	SLAB THICKENING
	WALL BELOW	BP1	BASE PLATE TYPE
WP	WORK POINT	SC1	STEEL COLUMN TYPE
PL	POINT LOAD	1	REVISION NUMBER
		100.000	TOP OF FOOTING ELEVATION (PLANS ONLY)
		100.00 T.O. SLAB	ELEVATION MARKER

STRUCTURAL DRAWING LIST

STRUCTURAL DRAWING ISSUE RECORD

ISSUE No.	ISSUE DATE (YYYY.MM.DD)	ISSUED FOR	S101	S102	S103	S201	S202	S301
01	2020.10.29	TENDER	●	●	●	●	●	●
02	2020.12.01	STRUCTURAL ADDENDUM 01	●		●	●		

ISSUES

No.	DATE YYYY.MM.DD	ISSUED FOR
01	2020.10.29	TENDER
02	2020.12.01	STRUCTURAL ADDENDUM 01

SUB CONSULTANT

ISSUED FOR TENDER

NOT FOR CONSTRUCTION

MEADOWOOD COMMUNITY CENTRE

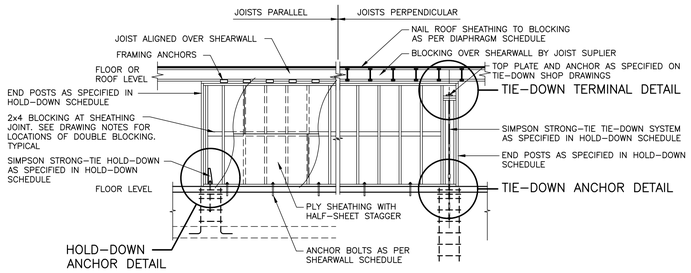
1830 GALVIN PLACE, QUALICUM BEACH, BC

HEROLD ENGINEERING
3701 Shenton Rd, Nanaimo, BC V9T 2H1
Tel: 250-751-8558 Fax: 250-751-8559
Email: mail@heroldengineering.com

GENERAL NOTES

DESIGNED: JV	ENGINEER'S SEAL
DESIGN REVIEW	
DRAFTED: NW	
DRAFTING REVIEW	
PROJECT No.: 0837-052	CLIENT DRAWING No.: n/a
SCALE: AS SHOWN	PERMIT No.: n/a
HEL DRAWING No.: S101	REVISION: 02

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION

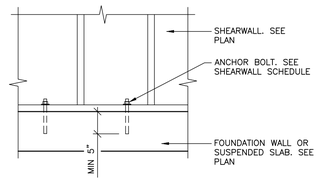


SHEARWALL KEY ELEVATION

NOT TO SCALE

DRAWING NOTES

1. DETAILS ON THIS SHEET SHOW CRITICAL CONNECTIONS TO TRANSFER LOADS THROUGH THE BUILDING. ANY VARIATION FROM THESE DETAILS MUST RECEIVE APPROVAL FROM THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DESIGN AND REMEDIATION IF FRAMING DOES NOT CONFORM TO THESE DETAILS,
2. SEE FRAMING PLANS FOR SHEAR WALL TYPES AND LOCATIONS,
3. PLACING PLYWOOD SHEETS VERTICALLY IS ACCEPTABLE,
4. NO PANEL JOINTS ARE TO OCCUR AT END POSTS,
5. SHEATHING TO BE D.FIR PLYWOOD OR OSB. SEE GENERAL NOTES FOR GRADE. OSB MAY ONLY BE USED ON INTERIOR SHEAR WALLS IN ACCORDANCE WITH THE GENERAL NOTES.
6. NAIL SPACING AT ALL PANEL EDGES IS TO BE AS PER THE SHEAR WALL SCHEDULE
7. SHEAR WALL INTERMEDIATE SUPPORT NAILS TO BE THE SAME AS EDGE NAILS BUT @ 12" o/c
8. FOR 2½" NAILS @ 2" o/c, AND 3" NAILS AT ANY SPACING, PROVIDE DOUBLE BLOCKING @ PANEL EDGES, TYPICAL.
9. 2½" NAILS TO BE 0.131" DIAMETER; 3" NAILS TO BE 0.148" DIAMETER.
10. PLACE PLYWOOD FOR SINGLE SIDED WALLS ON SAME SIDE AS SYMBOL ON PLAN
11. SHEATHING AND BLOCKING FOR DOUBLE SIDED SHEAR WALLS ARE SHOWN WITH BROKEN LINES. NAILING AND FRAMING ANCHORS SPECIFIED APPLY TO BOTH SIDES OF THE WALL.

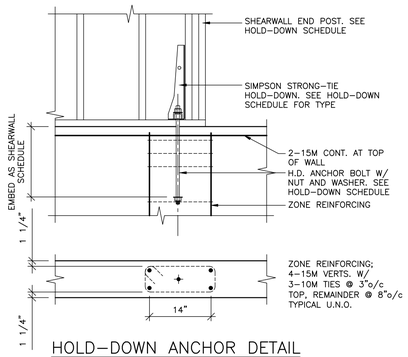


NOTE; ANCHOR BOLTS MAY BE CAST INTO THE CONCRETE OR DRILLED AND GROUTED LATER. IF DRILLED USE EPOXY ADHESIVE. MECHANICAL ANCHORS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE PROJECT ENGINEER. SEE GENERAL NOTES FOR ANCHOR AND ADHESIVE TYPE.

FOR SHEARWALLS WITH HOLD-DOWNS

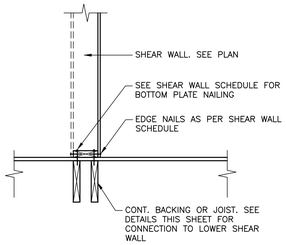
TYPICAL ANCHOR BOLT

SCALE 3/4"=1'-0"



HOLD-DOWN ANCHOR DETAIL

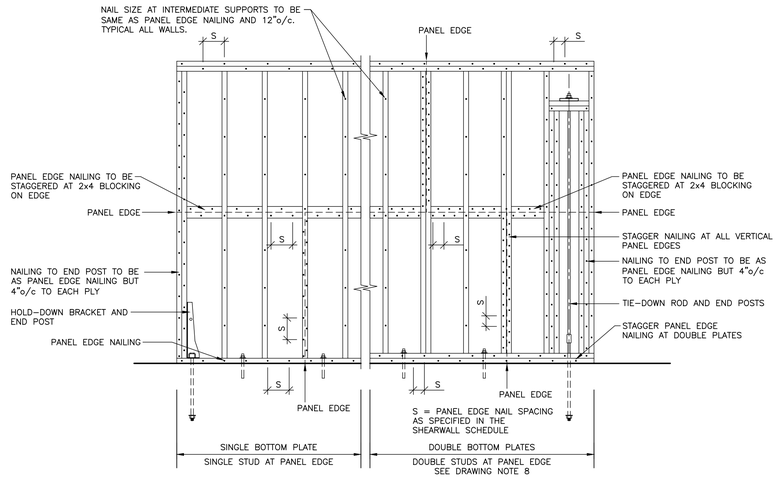
SCALE 3/4"=1'-0"



SHEAR WALLS TO FLOORS WITHOUT CONCRETE TOPPING

TYPICAL WALL PLATE NAILING

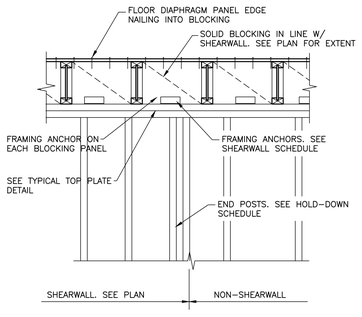
SCALE 3/4"=1'-0"



FOR SHEARWALL SHEATHING

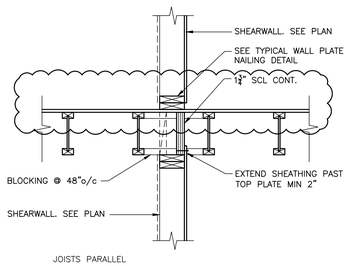
SHEARWALL NAILING PATTERNS

NOT TO SCALE



SHEARWALL DRAG STRUT DETAIL

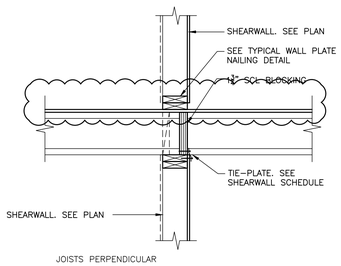
SCALE 3/4"=1'-0"



JOISTS PARALLEL

INTERIOR SHEARWALL

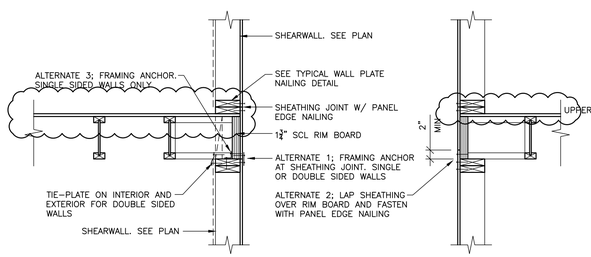
SCALE 3/4"=1'-0"



JOISTS PERPENDICULAR

INTERIOR SHEARWALL

SCALE 3/4"=1'-0"

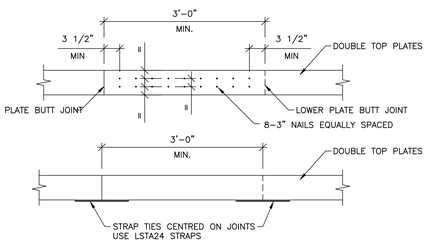


SHEARWALL TO FLOOR OR ROOF

ALTERNATE CONNECTIONS

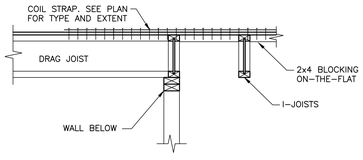
SCALE 3/4"=1'-0"

NOTE: THESE ALTERNATES CAN BE APPLIED TO ANY DETAIL SHOWING FLOOR OR ROOF CONNECTIONS TO A SHEARWALL.



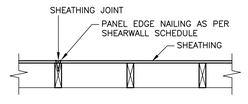
TOP PLATE SPLICE DETAIL

NOT TO SCALE



TYPICAL COIL STRAP DETAIL

NTS



2½" OR SHORTER NAILS AT 3"o/c AND MORE

FOR SHEARWALLS

PANEL JOINTS IN SINGLE SIDED WALL

SCALE 3/4"= 1'-0"

ISSUES

No.	DATE YYYY.MM.DD	ISSUED FOR
01	2020.10.29	TENDER
02	2020.12.01	STRUCTURAL ADDENDUM 01

SUB CONSULTANT

ISSUED FOR TENDER

NOT FOR CONSTRUCTION

MEADOWOOD COMMUNITY CENTRE

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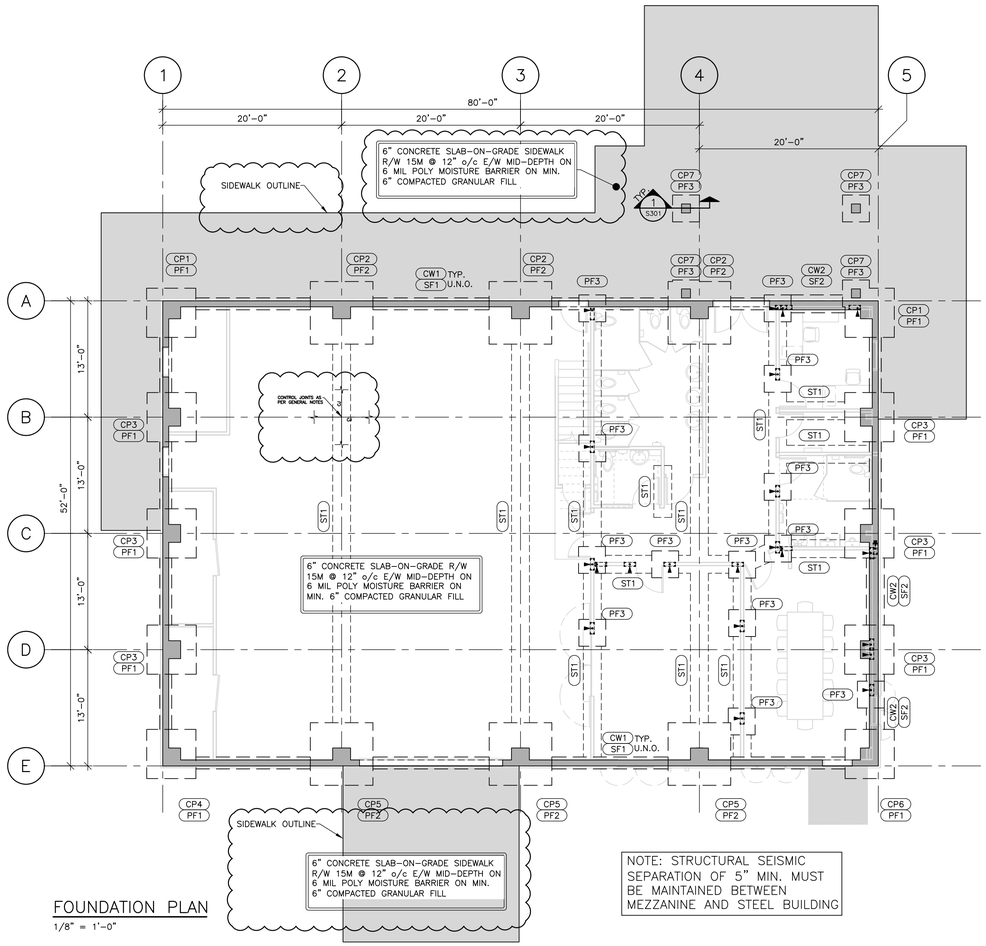
Tel: 250-751-8558 Fax: 250-751-8559
Email: mail@heroldengineering.com

TYPICAL SHEARWALL DETAILS

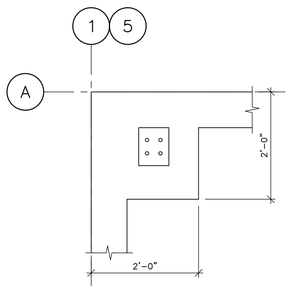
DESIGNED JV	ENGINEER'S SEAL
DESIGN REVIEW	
DRAFTED NW	
DRAFTING REVIEW	
PROJECT No. 0837-052	CLIENT DRAWING No. n/a
SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S103	REVISION 02

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION



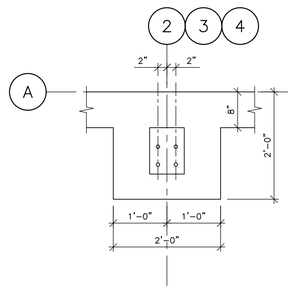
FOUNDATION PLAN
1/8" = 1'-0"

NOTE: STRUCTURAL SEISMIC SEPARATION OF 5" MIN. MUST BE MAINTAINED BETWEEN MEZZANINE AND STEEL BUILDING



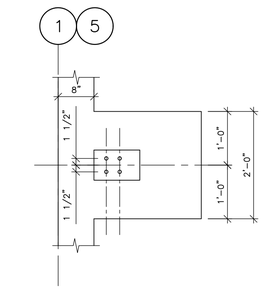
CP1
3/4" = 1'-0"

8-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



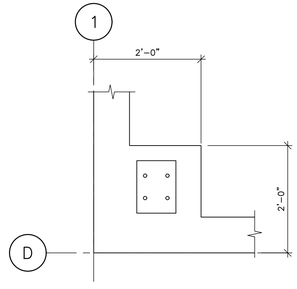
CP2
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



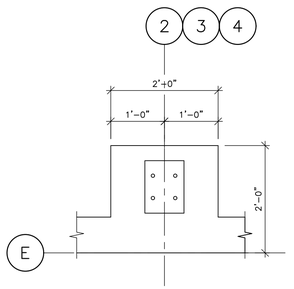
CP3
3/4" = 1'-0"

6-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



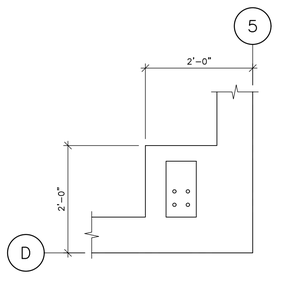
CP4
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



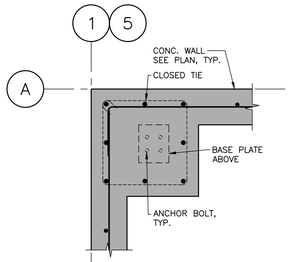
CP5
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



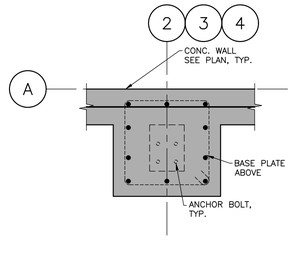
CP6
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



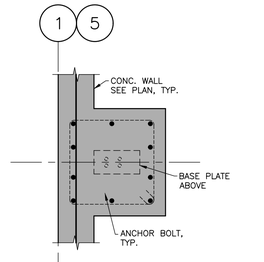
CP1
3/4" = 1'-0"

8-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



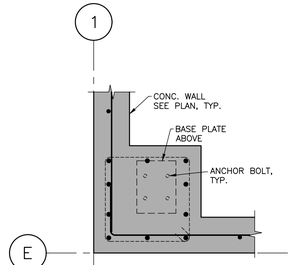
CP2
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



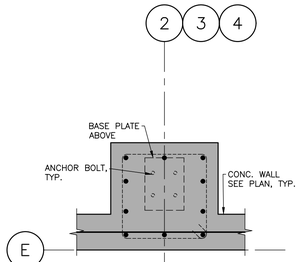
CP3
3/4" = 1'-0"

6-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



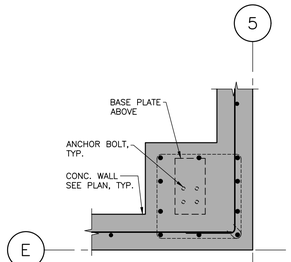
CP4
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



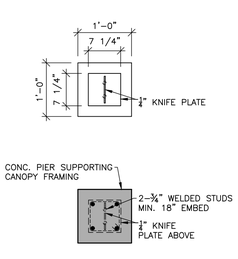
CP5
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



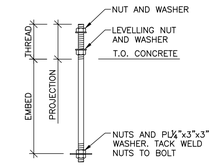
CP6
3/4" = 1'-0"

10-20M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 8" o/c



CP7
3/4" = 1'-0"

4-15M VERTS.
3-10M CLOSED TIES @ 3" o/c TOP
REMAINDER @ 10" o/c



ANCHOR BOLT DETAIL
NOT TO SCALE

ANCHOR BOLT SCHEDULE

DIAMETER	MINIMUM EMBED	PROJECTION
1/2"	AS PER DRAWING	4"
3/4"	16"	4"
1 1/4"	24"	4"
2"	44"	4"

NOTES: ALL BOLTS TO HAVE NUT AND WASHER TACK WELDED TO BOTTOM END

NOTE:
THESE PLANS HAVE BEEN PREPARED FROM ARCHITECTURAL BASE PLANS AND PRE-ENGINEERED STEEL BUILDING DRAWINGS. ALL DIMENSIONS ARE TO BE CONFIRMED WITH ARCHITECTURAL AND PRE-ENGINEERED STEEL BUILDING DRAWINGS MARKED 'ISSUED FOR CONSTRUCTION'. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION FOR EVALUATION.

CONCRETE WALL SCHEDULE

MARK	WIDTH	REINFORCING	LOCATION
CW1	8"	15M @ 16" o/c E/W	CENTRED
CW2	12"	15M @ 16" o/c E/W	BOTH FACES

NOTES: ALL UNLABELLED CONCRETE WALLS ARE CW1.

FOOTING SCHEDULE

MARK	SIZE	REINFORCEMENT	MIN. FTG DEPTH *
PF1	5'-6"x5'-6"x1'-0"	6-20M E/W T&B	4'-0"
PF2	7'-0"x7'-0"x1'-2"	7-20M E/W T&B	4'-0"
PF3	3'-0"x3'-0"x1'-0"	3-15M E/W T&B	2'-0"
SF1	1'-4"x8" DP	2-15M E/W BOT.	2'-0"
SF2	2'-0"x1'-0" DP	3-15M E/W BOT.	2'-0"
ST1	2'-0"x1'-0" DP	2-20M CONT. LAP BARS 48"	-

1. MINIMUM FOOTING DEPTHS ARE MEASURED TO BOTTOM OF FOOTING FROM FINISHED GRADE FOR EXTERIOR FOOTINGS AND FROM TOP OF SLAB ON GRADE FOR INTERIOR FOOTINGS. WHERE GRADE IS HIGHER THAN THE SLAB, MEASURE FROM THE TOP OF THE SLAB TO THE BOTTOM OF THE EXTERIOR FOOTING.
2. ANCHOR BOLTS AND EMBEDDED ITEMS ARE NOT TO EXTEND INTO FOOTINGS UNLESS DETAILED OTHERWISE. LOWER FOOTINGS IF REQUIRED TO HAVE THESE ITEMS COMPLETELY WITHIN PIERS OR FOUNDATION WALLS.
3. ALL UNLABELLED STRIP FOOTINGS ARE SF1

ISSUES

No.	DATE YYYY.MM.DD	ISSUED FOR
01	2020.10.29	TENDER
02	2020.12.01	STRUCTURAL ADDENDUM 01

SUB CONSULTANT

ISSUED FOR TENDER

NOT FOR CONSTRUCTION

MEADOWOOD COMMUNITY CENTRE

1830 GALVIN PLACE, QUALICUM BEACH, BC

HEROLD ENGINEERING
3701 Shenton Rd, Nanaimo, BC V9T 2H1
Tel: 250-751-8558 Fax: 250-751-8559
Email: mail@heroldengineering.com

FOUNDATION PLAN

DESIGNED JV	ENGINEER'S SEAL
DESIGN REVIEW	
DRAFTED NW	
DRAFTING REVIEW	
PROJECT No. 0837-052	CLIENT DRAWING No. n/a
SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S201	REVISION 02

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION

ROCKY POINT ENGINEERING LTD.

NANAIMO OFFICE
#102–3721 Shenton Road, Nanaimo, BC V9T 2H1 • Tel: 250.585.0222

MECHANICAL ADDENDUM

Project Name:	**Meadowood Community Hall**	**Date:**	December 1, 2020
Client:	Regional District of Nanaimo	**Project #:**	20437-N
Issued By:	Todd Backus	**No:**	ADD-**03**

This Addendum consists of 1 page, with 2 sheets attached.
Confirmation of consideration of this addendum with respect to final bid price must be indicated in submitted bid documents.

Refer to MECHANICAL DRAWINGS (2 Sheets Attached)

Refer to DRAWING M-1 (see attached)

REVISE:
1. Revise the location of rainwater leaders and associated storm piping.
2. Moved drawing note to coordinate with architectural plans for location and size of RWL.

ADD:
1. Add sanitary piping from Bev. Sink to kitchen sanitary main.
2. Add piping from mezzanine mechanical floor drain from level above to sanitary main.

Refer to DRAWING M-2 (see attached)

REVISE:
1. Revise sanitary piping from floor drain in mezzanine mechanical area.

END OF MECHANICAL ADDENDUM No. 03

PLUMBING SYMBOL SCHEDULE

- GATE VALVE
- PRESSURE REDUCING VALVE
- GLOBE VALVE
- VALVE CHECK
- BALANCING VALVE
- PIPE ELBOW DOWN
- PIPE ELBOW/TEE UP
- PIPE TEE DOWN
- PIPE CAP
- PIPE BREAK
- PIPE UNION
- PIPE FLOW DIRECTION ARROW
- PIPE TRAP
- PIPE CLEANOUT TO GRADE
- HOSE BIB
- FLOOR DRAIN
- PLUMBING VENT

HVAC SYMBOL SCHEDULE

- SUPPLY DUCT
- RETURN DUCT
- EXHAUST DUCT
- MITERED DUCT ELBOW W/ VANES
- ANGLED DUCT ELBOW W/ VANES
- DUCT ELBOW 1R
- DUCT ELBOW 1.5R
- DUCT WITH EXTERNAL INSULATION
- DUCT TRANSITION
- DUCT TAKEOFF
- RETURN GRILLE
- EXHAUST GRILLE
- SUPPLY AIR DIFFUSER SQUARE
- CIRCULAR / RECTANGULAR DUCT BREAK
- FLOW DIRECTION ARROW
- BALANCE DAMPER
- DOOR UNDERCUT

FIXTURES CONNECTION SCHEDULE

TAG	FIXTURE	TYPE	DOMESTIC COLD WATER		DOMESTIC HOT WATER		COMBINED	SANITARY		SANITARY VENT	
			FU	SIZE	FU	SIZE	FU	FU	SIZE	FU	SIZE
DW-1	DISHWASHER - DOMESTIC	PUBLIC	-	-	1.40	1/2"Ø	1.40	-	1-1/2Ø	-	-
FD-1	FLOOR DRAIN	-	-	-	-	-	-	-	3"Ø	-	-
HB-1	HOSE BIBB	PUBLIC	2.50	1/2"Ø	-	-	2.50	-	-	-	-
HD-1	HUB DRAIN	PUBLIC	-	-	-	-	-	-	1-1/2"Ø	-	-
JS-1	SINK - SERVICE	PUBLIC	2.25	1/2"Ø	2.25	1/2"Ø	3.00	3.00	1-1/2"Ø	3.00	1-1/2"Ø
LAV-1	LAVATORY - 8.3LPM OR LESS	PUBLIC	1.50	1/2"Ø	1.50	1/2"Ø	2.00	1.50	1-1/2Ø	1.50	1-1/2Ø
SK-1	SINK - KITCHEN DOMESTIC, 8.3LPM	PUBLIC	1.00	1/2"Ø	1.00	1/2"Ø	1.40	1.50	1-1/2Ø	1.50	1-1/2Ø
UR-1	URINAL - DIRECT FLUSH VALVE	PUBLIC	*	3/4"Ø	-	-	*	4.00	2"Ø	4.00	1-1/2Ø
WC-1	WATER CLOSET - FLUSH TANK	PUBLIC	2.20	1/2"Ø	-	-	2.20	4.00	4"Ø	4.00	-
WC--2	WATER CLOSET - FLUSH TANK	PUBLIC	2.20	1/2"Ø	-	-	2.20	4.00	4"Ø	4.00	-

GRILLE & DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL	SERVICE	FINISH	MOUNTING	REMARKS
DG-1	EH PRICE	530	TRANSFER	B-12	DOOR	-
E-1	EH PRICE	500	EXHAUST	B-12	SURFACE	-
L-1	AIROLITE	K6744	OUTDOOR	B-12	SURFACE	-
R-1	EH PRICE	530	RETURN	B-12	SURFACE	-
S-1	EH PRICE	500	SUPPLY	B-12	SURFACE	-
S-2	EH PRICE	RCD	SUPPLY	B-12	DUCT	-
T-1	EH PRICE	530	TRANSFER	B-12	SURFACE	-

STORM LOAD SUMMARY - BASED ON 10MM/15 MIN RAIN FALL

DESCRIPTION	AREA: m² (ft²)	LITERS
MAIN ROOF	395 (4230)	3,926
LARGE CANOPY	30 (320)	300
N.W. SMALL CANOPY	2 (19)	18
W. SMALL CANOPY	2 (19)	18
S. SMALL CANOPY	2 (19)	18
TOTAL	430 (4610)	4,280 - 6"Ø @ 1% SLOPE

BUILDING WATER SERVICE

DESCRIPTION	SPACE TYPE	DOMESTIC LOAD	PIPE SIZE REQ.
TOTAL LOAD	COMMERCIAL	125 FU	2"Ø

SANITARY LOAD SUMMARY

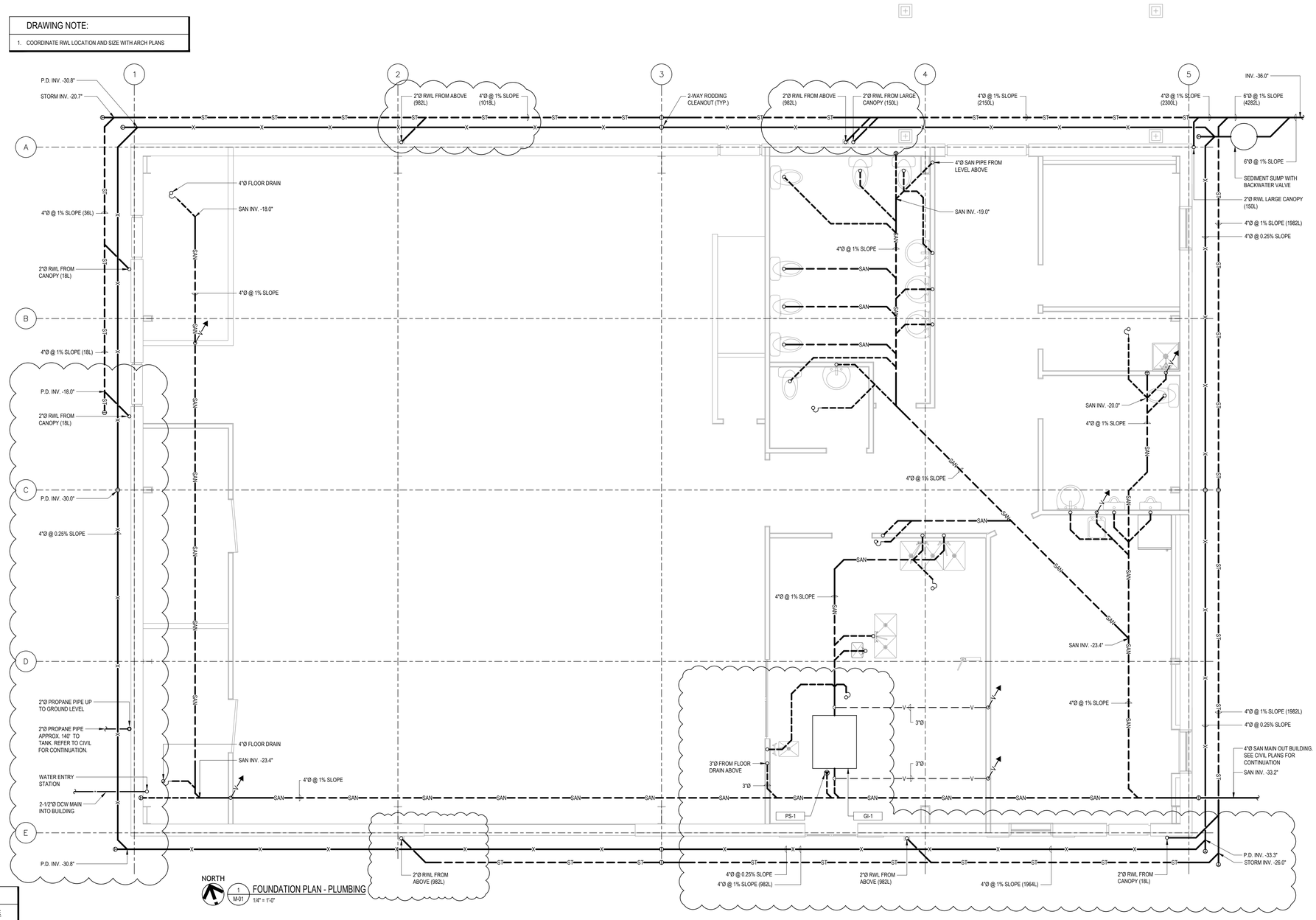
DESCRIPTION	SPACE TYPE	SANIARY LOAD	PIPE SIZE REQ.
TOTAL LOAD	COMMERCIAL	75 FU	4"Ø

PROPANE LOAD SUMMARY

DESCRIPTION	SPACE TYPE	LOAD (BTUH)	PIPE SIZE REQ.
TOTAL LOAD	COMMERCIAL	1,191,000	2"Ø

DRAWING NOTE:

1. COORDINATE RWL LOCATION AND SIZE WITH ARCH PLANS



1 / M-01 FOUNDATION PLAN - PLUMBING
1/4" = 1'-0"

DRAWING LIST

DWG #	TITLE	SCALE
M-01	FOUNDATION PLAN - PLUMBING	1/4" : 1'-0"
M-02	MAIN FLOOR PLAN - SANITARY	1/4" : 1'-0"
M-03	MAIN FLOOR PLAN - DOMESTIC WATER	1/4" : 1'-0"
M-04	MEZZANINE FLOOR PLAN - PLUMBING	1/4" : 1'-0"
M-05	MAIN FLOOR PLAN - HVAC	1/4" : 1'-0"
M-06	MEZZANINE FLOOR PLAN - HVAC	1/4" : 1'-0"
M-07	ROOF PLAN - MECHANICAL	1/4" : 1'-0"
M-08	MECHANICAL SCHEDULES	N.T.S.
M-09	MECHANICAL DETAILS	N.T.S.
M-10	MECHANICAL SPECIFICATIONS	N.T.S
M-11	MECHANICAL SPECIFICATIONS	N.T.S

12/1/2020 1:41 PM

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Mechanical Consulting Engineers
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102 - SENTON ROAD
NANAIMO, BC - V9T 2H1
ph. 250.585.0222

SUB-CONSULTANT:

KEYPLAN:

No.	DATE	DESCRIPTION	BY
7	01 DEC 2020	ADDENDUM - 03	TB
6	27 NOV 2020	ADDENDUM - 02	TB
5	13 NOV 2020	ADDENDUM - 01	TB
4	04 NOV 2020	ISSUED FOR TENDER	TB
3	03 NOV 2020	TENDER REVISION	TB
2	29 OCT 2020	TENDER COORDINATION	TB
1	22 SEP 2020	COORDINATION	TB

REVISIONS:

SEAL:

CLIENT:

REGIONAL DISTRICT OF NANAIMO

PROJECT:

MEADOWOOD COMMUNITY HALL

1830 GLAVIN PLACE
QUALICUM BEACH, BC

DRAWING NAME:

FOUNDATION PLAN - PLUMBING

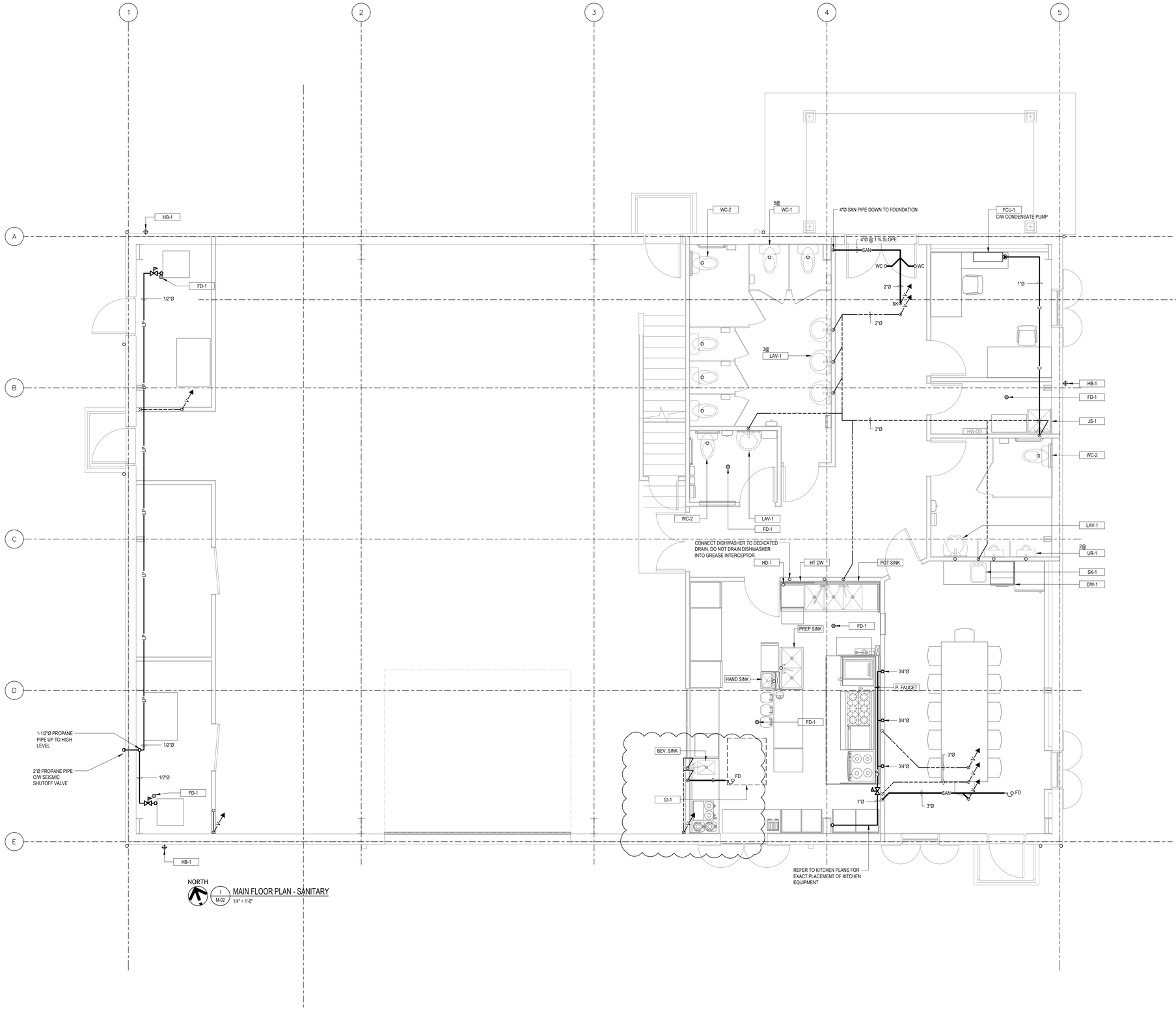
PROJECT NUMBER:

20437-N

DRAWN BY:	TB
DESIGNED BY:	TB
APPROVED BY:	AM
SCALE:	REFER TO VIEWS

DRAWING:

M-01



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REVISIONS:

SEAL:

CLIENT:

REGIONAL DISTRICT OF NANAIMO

PROJECT:

MEADOWOOD COMMUNITY HALL

1830 GLAVIN PLACE
QUALICUM BEACH, BC

DRAWING NAME:

MAIN FLOOR PLAN - SANITARY

PROJECT NUMBER:

20437-N

DRAWN BY:	TB
DESIGNED BY:	TB
APPROVED BY:	AM
SCALE:	REFER TO VIEWS

DRAWING:

M-02

12/7/2020 1:41 PM

RB ENGINEERING LTD
ELECTRICAL CONSULTING ENGINEERS

Electrical Addendum #E1

Project: **Meadowood Community Centre**
1860 Galvin Place,
Qualicum Beach, B.C.
18-2934

Addendum: **#E1**

Date: **December 02, 2020**

This Addendum forms part of the Contract Documents and is to be read, interpreted, and coordinated with all other parts. The cost of all work contained herein shall be included in the Contract Sum. The following revisions supersede the information contained in the original drawings and specifications issued for the above-named project to the extent referenced and shall become part thereof.

The following relates to the electrical requirements for the proposed on-site well
(Refer to MSR solutions site plan drawings for well location):

1. Electrical contractor to provide one power 2” underground conduit from panel board A and one communication 2” underground conduit from comm. board in main electrical room to proposed well location as shown on the MSR solutions drawings. Communication conduit to be empty and provided with pull string as per electrical specifications. Provide 15A-2P circuit breaker in panel board A, electrical power point connection to well pump controller, and 15A-2P-WP local disconnect switch at well pump controller.

2. Provide 6 new GFCI-protected duplex receptacles in “Storage room 7”. Locate duplex receptacles along back wall as shown on the MSR solutions drawings. Provide 3 dedicated 15A-1P circuit breakers in panel board A for receptacles. Provide 2 receptacles on each dedicated circuit.