DRAWING NUMBER

REINFORCING STEEL:

- 1. ALL REINFORCING STEEL TO CONFORM TO CSA G30.18M, GRADE 400.
- 2. ALL REINFORCING STEEL TO BE DETAILED IN ACCORDANCE WITH THE LATEST RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE, CAN/CSA-A23.1 AND CAN/CSA-A23.3.
- 3. CONCRETE CLEAR COVER (UNLESS NOTED OTHERWISE):

PILES			75	mm
GRADE	BEAMS	(BOTTOM)	40	mm
GRADE	BEAMS	(SIDE & TOP)	40	mm
SLABS	(BOTTOI	M)	30	mm
SLABS	(TOP)	•	20	mm
WALLS	, ,		30	mm

- 4. SUBMIT TO THE CONTRACT ADMINISTRATOR SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, GRADE, SPACING, HOOKS, BENDS, AND SUPPORTING / SPACING DEVICES, ETC., FOR REVIEW PRIOR TO THE FABRICATION OF REINFORCING STEEL.
- 5. DO NOT PLACE REINFORCEMENT WITHOUT FIRST OBTAINING A COPY OF THE REVIEWED SHOP DRAWINGS FROM THE CONTRACT ADMINISTRATOR.
- 6. ALL REINFORCING SHALL BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUPPLIED BY THE REINFORCING STEEL FABRICATOR.
- 7. ALL REINFORCING STEEL SHALL BE CLEANED OF ALL DIRT, GREASE AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING
- 8. REINFORCING STEEL SHALL NOT BE WELDED OR HEATED UNLESS NOTED OTHERWISE.
- 9. EXTEND LONGITUDINAL STEEL IN GRADE BEAMS 450 MM AROUND CORNERS, OR USE 900 MM CORNER BARS UNLESS NOTED OTHERWISE.
- 10. IF REINFORCING STEEL IS LAPPED, BOTTOM STEEL SHALL ONLY BE LAPPED OVER SUPPORTS, TOP STEEL SHALL ONLY BE LAPPED AT MID-SPAN.

MASONRY:

- 1. ALL MASONRY WORK SHALL BE DONE IN ACCORDANCE WITH CAN3-A371.
- 2. CONFIRM AND COORDINATE DIMENSIONS, LOCATIONS AND FITMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT, SUPPORTS, PENETRATIONS AND ACCESSORIES WITH DISCIPLINE—SPECIFIC AND/OR CERTIFIED VENDOR DRAWINGS.
- 3. BRICKS TO BE BURNED CLAY TO CAN/CSA A82 REQUIREMENTS, GRADE EG, TYPE S, SMOOTH FACE AND BUFF COLOUR TO MATCH EXISTING. COLOUR AND TEXTURE ARE SUBJECT TO THE CONTRACT ADMINISTRATOR'S APPROVAL. SUPPLIER TO CONFIRM SUITABILITY FOR EXTERIOR USE IN WRITING PRIOR TO INSTALLATION.
- 4. MORTAR TO CONFORM TO CSA-A179, TYPES BASED ON PROPORTION SPECIFICATIONS FOR FIELD MIXED MORTAR. BRICK VENEER MORTAR = TYPE S. COLOURING ADMIXTURE NOT TO EXCEED 10% OF CEMENT MASS.
- 5. BRICK VENEER TO BE TIED TO BACKUP STRUCTURE WITH SLOTTED RAP—TIE SHEAR CONNECTORS AS MANUFACTURED BY FERRO HOLDINGS LTD. IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SPACE CONNECTORS AT 400mm ON CENTRE VERTICALLY AND STAGGERED AT 600mm ON CENTRE HORIZONTALLY. FASTEN SHEAR CONNECTORS TO BACKUP STRUCTURE USING 4.8mm DIAMETER STAINLESS STEEL TAPCON SCREWS HAVING A MINIMUM EMBEDMENT OF 32mm IN ACCORDANCE WIHT THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 6. SUPPORT OPENINGS IN BRICK VENEER UP TO A MAXIMUM OF 2000 MM WITH L 100 x 100 x 6.5 GALVANIZED STEEL ANGLE. PROVIDE MINIMUM 200 MM BEARING ON EACH SIDE.

ROUGH CARPENTRY:

- 1. WALL STUDS, PLATES, LINTELS TO BE SPF NO. 2 OR BETTER.
- 2. NAILING PATTERNS AND LENGTHS TO CONFORM TO THE REQUIREMENTS OF PART 9 OF THE NBBC.
- 3. ALL WOODEN TRUSSES TO BE DESIGNED IN ACCORDANCE WITH:

CAN3-086 ENGINEERING DESIGN IN WOOD THE NATIONAL BUILDING CODE OF CANADA. THE MANITOBA BUILDING CODE.

- 4. TRUSSES FRAMING INTO BEAMS OR OTHER TRUSSES SHALL BE CONNECTED WITH ENGINEERED FRAMING ACCESSORIES.
- 5. CONNECTION OF TRUSSES TO TOP PLATE SHALL BE ENGINEERED.
- 6. SECURE TOP PLATE WITH 12.7mm DIAMETER HILTI KWIK BOLT 3 EXPANSION ANCHORS SPACED AT 600mm ON CENTRE WITH MINIMUM 121mm EMBEDMENT AND IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

RIGID INSULATION:

- 1. MATERIAL: STYROFOAM CAVITYMATE.
- 2. FASTEN RIGID INSULATION WITH FLAT DISK CONCRETE ANCHORS, SPACING AS PER INSULATION MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 3. INSTALL INSULATION TO MAINTAIN CONTINUITY OF THERMAL BARRIER, FIT TIGHT TO PENETRATIONS. SEAL JOINTS AND JUNCTIONS.

BATT INSULATION:

- 1. MATERIAL: FIBREGLASS FRICTION FIT, UNFACED, MINIMUM R20.
- 2. VAPOUR BARRIER: MINIMUM 6 MIL POLYETHYLENE. TAPE SEAL ALL JOINTS AND JUNCTIONS.

REFERENCE DRAWINGS

- 3. INSTALL INSULATION TO MAINTAIN CONTINUITY OF THERMAL BARRIER, FIT TIGHT TO PENETRATIONS. SEAL JOINTS AND JUNCTIONS. DO NOT COMPRESS.
- 4. INSTALL VAPOUR BARRIER ON WARM SIDE OF INSULATION. COMPLETELY SEAL BY TAPING ALL JOINTS. PATCH ALL TEARS AND PENETRATIONS.

MINERAL FIBER INSULATION:

- 1. MATERIAL: ROXUL PROROX SL 960 NA.
- 2. FASTEN RIGID INSULATION AND SHEATHING WITH FLAT DISK CONCRETE ANCHORS, SPACING AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

METAL ROOFING:

- 1. PREFINISHED ROOF PANELS TO BE MINIMUM 24 GA. GALVANIZED STEEL SHEET CONFORMING TO ASTM A653M, GRADE 230, WITH Z275 COATING DESIGNATION. FINISH TO BE FACTORY PRECOATED, COLOUR COCOA BROWN (TO BE APPROVED BY THE CONTRACT ADMINISTRATOR).
- 2. DESIGN OF SYSTEM TO PROVIDE FOR THERMAL MOVEMENT CAUSED BY TEMPERATURE RANGE OF -40 TO + 40 C.
- 3. DESIGN OF SYSTEM TO PROVIDE FOR DIFFERENTIAL MOVEMENT BETWEEN THE NEW ROOFING SYSTEM OF THE EXISTING STRUCTURE AND THE NEW ROOFING SYSTEM OF THE ADDITION.
- 4. PROVIDE FOR MOISTURE DRAINAGE TO EXTERIOR.
- 5. LINER PANEL: 20 GAUGE GALVANIZED SHEET STEEL.
- 6. MEMBRANE TO BE COMPATIBLE WITH ALL ADJACENT MATERIALS, AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 7. FLASHING, TRIM, SOFFIT, SNOW DAM, RIDGE VENTING, GUTTERS, DOWNPIPES AND ACCESSORIES: OF SAME MATERIAL AND COLOUR AS CLADDING.
- 8. SCREWS: AS RECOMMENDED BY ROOFING SUPPLIER, GALVANIZED, LENGTH AND DIAMETER TO CONFORM TO ROOF SYSTEM DESIGN. HEAD COLOUR TO MATCH CLADDING.
- 9. SYSTEM TO BE FINISHED FREE FROM RATTLES, WIND WHISTLES, OR NOISE DUE TO THERMAL MOVEMENT.
- 10. SEALANTS: DOW CORNING 795 SILICONE SEALANT. SEALANT COLOUR TO MATCH ADJACENT SURFACES WHERE EXPOSED IN FINISHED ASSEMBLY.

DOORS:

- 1. EXTERIOR DOORS: 45 MM STEEL DOOR, 18 GAUGE, WITH POLYURETHANE INSULATION FILL. FINISH COLOUR TO MATCH ROOFING SYSTEM.
- 2. EXTERIOR FRAME: 16 GAUGE PRESSED STEEL FRAME, BATT INSULATION FILL, FIX TO WALL WITH A MINIMUM OF 4 ANCHORS PER JAMB (FINISH TO MATCH DOORS).
- 3. REFER TO SPECIFICATIONS FOR DOOR HARDWARE.

FINISH:

- 1. REFER TO SPECIFICATIONS FOR PAINT FINISHES AND FORMULAE.
- 2. PAINT SCHEDULE (OR AS APPROVED BY THE CONTRACT ADMINISTRATOR):

<u>MARK</u>	FORMULA	LOCATION
PT - 1	MPI EXT 6.4B-ALKYD GR	ALL INT. PLYWOOD
	(SEMI GLOSS) FINISH PREMIUM GRADE	
PT - 2	MPI EXT 5.1D-ALKYD G5	METAL FABRICATIONS, LIFTING DEVICES
	(SEMI GLOSS) FINISH PREMIUM GRADE	
PT - 3	MPI EXT 3.1A-LATEX G5	ALL INT. CONCRETE WALLS & CEILINGS
	(SEMI GLOSS) FINISH PREMIUM GRADE	
	,	

- 3. THE CONTRACTOR SHALL APPLY XYPEX E WATERPROOFING MATERIALS AS REQUIRED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS TO THE INTERIOR CONCRETE SURFACES OF THE EXISTING PUMPING STATION SPECIFIED.
- 4. THE CONTRACTOR SHALL APPLY FABRIKEM FABRISHIELD PAINT REPELLANT PR-61 TO THE EXTERIOR OF THE BRICK VENEER (NEW ADDITION AND THE EXISTING BUILDING) IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS

CAULKING:

- 1. CAULKING: CLEAR SILICON.
- 2. BACKER: ETHAFOAM SB, OVERSIZED 30%.

LIFTING DEVICES:

- 1. ALL WELDS SHALL BE INSPECTED AND CERTIFIED TO CSA W47.1 PRIOR TO USE, AND THE LETTER OF CERTIFICATION SHALL BE SUBMITTED UNDER SEAL OF THE INSPECTION AGENCY'S ENGINEER.
- 2. ALL LIFTING DEVICES SHALL BE LOAD TESTED TO CSA B167 PRIOR TO USE, WITNESSED BY THE INSPECTION AGENCY'S ENGINEER, WHO SHALL PREPARE A SEALED REPORT DESCRIBING THE RESULTS OF THE LOAD TEST.
- 3. NO CHANGE IN THE CONFIGURATION, USE, OR LOADING CONDITIONS OF ANY LIFTING DEVICE IS PERMITTED.
- 4. ALL LIFTING DEVICES SHALL BE PAINTED INTERNATIONAL SAFETY YELLOW. IF NOT ALREADY DISPLAYED, THE MAXIMUM STIPULATED SERVICE LOAD CAPACITY SHALL BE INDICATED PROMINENTLY ON OR IMMEDIATELY ADJACENT TO EACH LIFTING DEVICE IN 150MM BLOCK LETTERS IN A CONTRASTING COLOR.
- 5. LIFTING DEVICE SERVICE LOAD CAPACITIES SHALL NOT BE EXCEEDED.
- 6. ALL LOADS SHALL BE LIFTED VERTICALLY; NO LATERAL LOADS SHALL BE IMPOSED ON ANY LIFTING DEVICE.
- 7. IT IS THE SOLE RESPONSIBILITY OF THE CITY TO ENSURE THAT THE LIFTING DEVICES ARE USED IN A SAFE MANNER, AND ARE INSPECTED AND MAINTAINED ON A REGULAR BASIS. THE OPERATIONAL CONDITION OF THE LIFTING DEVICES SHOULD BE VERIFIED PERIODICALLY BY THE CITY TO ENSURE CONTINUED SAFE OPERATION.

APEGIN Certificate of Authorization
SNC-Lavalin Inc.
No. 4489

NO. REVISIONS

				SNC+LAVALIN	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	ENGINEER'S SEAL
				DESIGNED BY: T. DEGER	CHECKED BY: B. CLEVEN	PRELIMIN
				DRAWN BY: B. DICKSON	APPROVED BY: B. CLEVEN	NOT TO USED F
				SCALE: N.T.S.	ISSUED FOR CONSTRUCTION BY:	CONSTRUC
ISSUED FOR TENDER, BID OPP. 639–2017	2017-07-25	TD	BJC	DATE: 2017-05-16 CONSULTANT NO.:	DATE:	

DATE DESIGN CHECK

COMMUNITY ROW WASTEWATER PUMPING STATION
2017 UPGRADES
NOTES - SHEET 2

CITY DRAWING NUMBER
1-0130L-S0001.dwg

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT