June 18, 2025

ADDENDUM # 1

RFT-SM-006-25 – Glencoe Wastewater System Upgrades – Victoria Street Sewage Pump Station Upgrade

Revise Closing Date and Time from:

2:00:00 p.m. LOCAL TIME, Wednesday, June 25, 2025

To:

12:00:00 p.m. LOCAL TIME, Thursday, July 3, 2025

The location of the closing remains unchanged.

Revised Question Deadline:

The revised question deadline date and time has been revised from Wednesday, June 18, 2025 at 2:00 pm EST, to **Wednesday, June 25, 2025 at 2:00 pm EST**.

Note of Clarification:

With respect to the List of References to be provided by each bidder at the time of tender close, the Municipality reserves the right to perform reference checks of the listed projects in addition to other known projects the Contractor has performed for other Municipality's when assessing the overall performance and acceptance of the Contractor to perform this work.

Drawing Revision:

Drawing DI-102:

- FIT-001: remove signal going to SCADA from existing flow meter in existing valve chamber.
- All tags related to the new flow meter in the valve chamber shall read “FIT-101 and FE-101”.
- LIC-102 has been removed. No transmitter is required to tie in interlock from float switches.

Drawing E-111

Delete reference to “bedrock” on Section A. Bedrock is not anticipated in this area. Refer to the geotechnical report that was provided for information only as part of the tender package for information on expected subsoil conditions.

Drawing E-111

Revise finish elevation of generator slab from 121.75m to 219.20m.

Drawings E-101, EI-621, EI-632, EI-601:

All references of flow meter shall be updated to read “FIT-101”.

Questions

Question 1: Section 16900 2.2 Magnetic Flow Meters

Confirm if flanges are stainless steel or carbon steel.
Will 4-20mA be acceptable or ethernet required
Confirm two flow meters are required- tags FIT-001 & FIT-101

Answer 1: Refer to revised pages of Specification 16900 which notes options for 316L stainless steel or carbon steel as described.

Ethernet is required. Only one (1) flow meter is required. Note that FIT-001 refers to the existing flow meter in the valve chamber that will be removed.

Question 2: Section 16900 2.5 Pressure Transmitters

Isolation ring is specified but not shown on drawing DI-102. Please confirm isolation ring is required

Answer 2: Refer to revised pages of Specification 16900.

Question 3: Section 16900 2.3 Hydrostatic Level

The Siemens LH100 model specified does not have HART please confirm 4-20mA is acceptable.

Answer 3: Connection from level transmitter to CP-1 will be through ethernet as indicated on EI-601.

Question 4: Section 16900 2.4 Radar Level Transmitters

There is a specification for radar but don't see one on the drawings. Please confirm if required.

Answer 4: Refer to revised pages of Specification 16900, Sections 2.3, 2.4 and 2.6 (new) which provides additional details and clarification on tagging.

Question 5: Please provide specifications for tags TSH1131 and LSH1131 on drawing DI-102. Are these to be provided by section 16900.

Answer 5: These are the temperature and leak sensors installed in the pump and are to be free issued by the pump supplier.

Question 6: Drawing E-101:

- Light fixture , switch , and GFI receptacle within the Valve Chamber, are these pieces of equipment to be explosion proof (note 1 states that this area has a class 1 and div 2 rating)
- Light fixture and switch within the wet well, are they to be explosion proof? (note 1 states that this area has a class 1 div 1 rating)
- Do you have specific part numbers you are looking for, for the above-mentioned areas?

Answer 6:

- Yes, light fixture, and switch are to be explosion proof. To support provision of power to the sump pump and clarification of sump pump requirements as provided in this addendum, the following electrical and I&C changes are to be added:
    - Provide two (2) new conduits PVC-27 from the electrical room/building to JBX next to the valve chamber (in same trench as the other 5-PVC-27 conduits).

    - Power wiring in one conduit, 2#12AWG, Cu, RW90 to new JBX-10. SOW cable from JBX-10 to sump pump.
    - Control wiring in the other conduit, 8#14AWG, Cu, RW90 to JBX-7. SOW cable from JBX-7 to sump pump.
    - Pump manufacturer to supply control panel in electrical room and shall be mounted next to MCP-102.
- Yes, light fixture and switch inside wet well are to be explosion proof.
- No specific part number for the light fixture and switch.

Question 7: Drawing E-611. Line items 15,17,20,22,24, & 26 all state that the wiring is to be installed in 27mm PVC conduit. These conduits are within the wet well, should they be installed with rigid aluminum conduit and associated explosion proof EYS's?

Answer 7: Please refer to the attached updated cable schedule, Drawing E-611.

Question 8: Specification Section 11216 2.11 – what is this referring to? The pump base elbow? There is no "mounting platform" show or referenced on the contract drawings.

Answer 8: The pump base elbows are what is being referred to here. They are installed into the base slab of the wet well and the pump hooks onto it.

Question 9: 11216 2.1.4 – Please clarify the need for the pumps to be supplied with a pump removal system when there is a pump removal system supplied under 14600 2.2?

Answer 9: This includes Flygt chain sling & grip eye or Dock Lock, mounting hooks to secure the chain or cable for pump retrieval without physically going down to the pumps. Division 14 details equipment to be used in conjunction with the Flygt submersible pump lifting system and shall be compatible.

Question 10: 11216 2.1.4 – Please clarify the need for the pumps to be supplied with a pump removal system when there is a pump removal system supplied under 14600 2.2?

Answer 10: This includes Flygt chain sling & grip eye or Dock Lock, mounting hooks to secure the chain or cable for pump retrieval without physically going down to the pumps. Division 14 details equipment to be used in conjunction with the Flygt submersible pump lifting system and shall be compatible.

Question 11: Provide specification for sump pump SMP-101.

Answer 11: Please refer to the attached Specification 11222 Sump Pumps.

Question 12: 11216 Submersible Pumps – please advise static head and system curve for pumps in parallel operation.

Answer 12: Refer to Table 11211-1 in Specification 11216 which notes target flow and pressure head with two pumps operating in parallel (119.7 L/s at 26.7m TDH).

Question 13: Would it be possible to remove the liquidated damages clause from this project?

Answer 13: No, the liquidated damages clause cannot be removed. It is the Municipality's intent to only leverage this clause where delays are directly caused by the Contractor and their sub-trades.

Question 14: Would it be possible for the above project to close electronically? Also, would it be possible to make this project a two-part closing? There is a lot of information/breakdowns requested for time of tender.

Answer 14: Unfortunately, the Municipality is not set up to receive electronic bid submissions and therefore only a hard copy submission is possible at this time. Refer to the response to Question 20 of this addendum for revisions to the required submittals at time of tender. In addition, note the following:

> On Page 10 of Section C under Schedule of Items and Prices:
>
> Delete:
>
> The 16 Division Price Summary Form is to be completed and submitted at time of tender close.
>
> And replace with:
>
> The 16 Division Price Summary Form is to be completed by the two lowest tenders following the bid submission upon request.

Only the Summary Form is required to summarize the divisions. With exception to the response to Question 20, all other requirements at time of tender as indicated remain in place.

Question 15: Kindly, we would like to request a copy of the list of registered bidders for this project.

Answer 15: Refer to the attached bidders list as of June 11, 2025. The Municipality has also edited the Biddingo site which should allow bidders to see the current bidders list.

Question 16: Would it be acceptable to offer a slightly larger chamber?

Answer 16: The chamber dimensions shown represent the anticipated minimum size required to accommodate the process piping, valves, and related appurtenances. The Municipality would accept a larger chamber, however the Contractor shall factor in all related impacts of incorporating a larger chamber including, but not limited to, additional process piping lengths within the chamber, clearances from existing utilities, structures, property fencing and vegetation.

Question 17: We are requesting the validity be changed to 30 days due to current market instability and suppliers not holding their pricing typically past 30 days.

Answer 17: The validity period will remain at 60 days.

Question 18: We are requesting a 2-week extension to the question period deadline and closing dates.

Answer 18: Refer to the updated question deadline and closing date.

Question 19: We are writing to respectfully request the consideration of an email submission option for tender RFT-SM-006-2025: Glencoe Wastewater System Upgrades – Victoria Street Sewage Pump Station Upgrade

We believe that offering an online submission alternative would encourage broader vendor participation, foster competition and potentially improve value.

We understand the importance of maintaining a fair and transparent bidding process. We are confident that an email submission, with encrypted bids and the Bid Bond and Agreement to Bond will be “electronically verifiable” which has become a norm across the industry, can incorporate the necessary safeguards to ensure confidentiality, integrity, and auditability.

Answer 19: Unfortunately, the Municipality is not set up to receive electronic bid submissions and therefore only a hard copy submission is possible at this time.

Question 20: We are requesting the removal of the Subcontractor’s Experience and Supervisory Personnel form at the time of bid submission. With several suppliers and subcontractors quotes coming in such last minute, it is not feasible to provide this with our tender. This form can be provided by the awarded contractor prior to the project kick-off meeting.

Answer 20: The requirement to provide Statement “A” – Contractor’s and Subcontractor’s Experience and Statement “B” – Supervisory Personnel to be Employed at time of tender close is not required. However, the two lowest and compliant bids will be required to provide this information as part of the 24-hour information request prior to award recommendation. Bidders inability to provide this information as part of the 24-hour request or insufficient experience noted in the completed forms may be cause for the bid not being accepted by the Municipality.

With respect to this response, and the response to Question 14, the following documents are required to be provided at time of tender close:

- Completed and signed/initialed Form of Tender
- Bid Summary Form (Page 14 of Section C)
- Tender Document Privilege Clause
- List of Contractor References
- Agreement to Bond
- Bid Bond (10%)
- Addendum/Addenda

The following documents are required as part of the 24-hour request (of the two lowest bidders):

- 24-Hour Breakdown Pricing Form
- List of Subcontractors to be Employed
- Statement “A” – Contractor’s Experience and Subcontractor’s Experience
- Statement “B” – Supervisory Personnel to be Employed
- Proposed Schedule of Construction

Documents required prior to commencement of work as noted in Section C, Page 1 remain unchanged.

Question 21: Is the temporary generator the GC’s responsibility or the owners? If the GC’s is a concrete pad required for the generator?

Answer 21: There is no temporary generator for this project, unless a temporary generator is required as part of the Contractor’s temporary bypass pumping operation depending on their approach to this work. The proposed temporary pumping system assumed diesel pumps which would not require a temporary generator. There is a permanent generator which requires a concrete pad which is noted in the tender drawings.

Question 22: Is a concrete pad required at the base of the new precast valve chamber?

Answer 22: No, a concrete pad is not required. The intent is that the precast valve chamber is provided complete with a pre-cast base with sump as noted.

Question 23: On Page DP-103, there is note on the existing Wet well for the platform and ladder etc., are these to be replaced?

Answer 23: Correct, the platform/lid and ladder are to be replaced. Please refer to additional drawings S-101, S-201, and S-501.

RFT-SM-006-25 Glencoe Wastewater System Upgrades - Victoria Street SPS Upgrade
Bidders List: As of June 11, 2025

Company Name	Address
McLean Taylor Construction	100 Water Street South P.O. Box 190
OZA Inspections Ltd.	202, 400 Jones Road
HDR Corporation	100 York Blvd. Suite 300
Wessuc Inc.	1693 Colborne St. E.
Maple Reinders Constructors Ltd	2660 Argentia road
Straightline Group Inc	3030 Balmoral Avenue
McRae Integration Ltd.	401 - 1875 Buckhorn Gate
SCG Process	15 Connie Cres Unit #3
Devine & Associates	1 Valleywood Dr Suite 101
Selectra Inc.	750 Douro Street
ACG Envirocan	131 Whitmore Road Unit 7
GFL Environmental Services Inc	220 Superior Blvd
Franklin Empire	550 Braidwood Ave Unit #4
H2Ontario	71 Webster Street
C & M Environmental Technologies Inc	PO Box 424
Kingdom Construction Limited	3172 Alps Road
A. vanEgmond Construction (2005) Ltd	PO Box 520 2914 Regional Road 12
ENV Treatment Systems Inc.	83 Nuggett Court, Unit #1
Bre-Ex Construction Inc.	247 Exeter rd
BGL Contractors Corp	608 Colby Dr
Sheridan Electric Services Ltd.	966 Pantera Dr Unit 34
Algoma Contractors Inc.	4914 Union Rd.
All Season Excavating	8513 Churchill Line
FM Sylvan Canada	3260 Odessa Dr
North America Construction (1993) Ltd.	21 Queen Street
Milestone Environmental Contracting Inc	200-1550 Laperriere Avenue
Finnbilt General Contracting Ltd	3785 Line 29, R R # 2
WSC Lighting Systems	4172 Raney Cr
J-AAR Excavating Limited	3003 Page Street
PV-EX Construction Ltd.	4769 Woodhull Road.
Birnam Excavating Ltd.	7902 Birnam Line
VFD SOLUTIONS INC.	165 LEXINGTON COURT, UNIT 4
Nevtro Sales (2004) Ltd.	90 Charterhouse Crescent, Unit 3
Dielco Industrial Contractors Ltd	80 Enterprise Drive South
Schouten Excavating Inc.	7908 Jariott Street
SPD Sales Limited	6470 Viscount Road
Dielco Industrial Contractors Ltd.	61 Enterprise Drive
Stone Town Construction Limited	100 Water St. S
Dielco Industrial Contractors	61 Enterprise Drive
ASG Excavating Inc	710 Wright Street Unit C
Rockwell Automation	40 Bramtree Crt
Construct Connect	3760 14th Ave 6th floor
Conval Process Solutions Inc	3375 North Service Road, Unit D 1-3
Ritestart Limited	4475 N Service Rd, 5th Floor Suite 500
Spand Construction Ltd	2054 Highway 6
Allyant Design and Construction	21-603 MIllway Avenue
Elite Textile Trading LLC	30021 Tomas street, suite 110
Valley Integration Inc.	12-3170 Ridgeway Drive
Blastek Engineering Group	4043 Carling Avenue suite 114
5004657 Ontario Inc.	29 Connell Crt. Unit # 19

2.2 Magnetic Flow Transmitters

Summary of Standard Ratings and Characteristics	
Tag	FIT-101, Discharge Flow Meter
Approvals	CSA
Hazardous Area Approvals	CSA, cUL: Div 1 / Class 1 or Div 1 / Class 2 as indicated
Ambient Temperature	-20 to 40°C
Humidity	0 to 100%
Sensor (FE)	
Fluid	Wastewater with some grit (raw or treated),
Connection	ANSI B16.5 Class 150, 316L SS flanges, alternatively carbon steel to match process piping where indicated
Tube	250mm, 316LSS
Liner Material	Polyurethane (-20 / 50°C) for wastewater, hard rubber (0 / 80°C) for raw water, drinking water approval unless otherwise specified; PFA compatible with chemical solutions for chemical systems
Electrode	Bullet nose 316L SS, alternatively, standard where indicated
Housing	CSA/NEMA 4X IP66/67, CSA/NEMA 6P IP68 where indicated, polycarbonate, alternatively coated die-cast aluminum for non-chemical process areas, 316L SS where indicated
Grounding Rings	Yes, unless otherwise indicated
Empty Pipe Detection	Yes
Bidirectional	As required
Sensor Cable Length	As required for remote version, without splices, with additional protection for area classification
Min/Max Velocity Range	0.1 to 10m/s
Transmitter (FIT)	
Enclosure	CSA 4/4X enclosure; Remote version: polycarbonate, alternatively die-cast aluminum; Comact version: CSA/NEMA 4X/6P, IP68
Display / Operation	Backlit LCD display with touch control, and operational software for communicating version
Primary Process Units	Flow [l/s]
Secondary Process Units	Total flow [m3] or [l]
Process Unit Range	0-400L/s
Accuracy	0.5%
Rangeability	100:1
Response Time	0.5s
Full Scale Flow	~2.5m/s, unless specified otherwise
Low Cut-off Flow	~0.04m/s, unless specified otherwise
Power Supply	120 Vac, 60 Hz

Analog Outputs	4 - 20 mA (1)
Pulsed Outputs	Yes (1), 1 pulse / m3
Relay Outputs	Form C (1)
Communications	EtherNetIP /w integrated web server, where indicated
Manufacturers	Endress+Hauser Promag W 400, /w Proline 400; Siemens Sitrans F M MAG5100W, /w MAG 6000

2.3 Hydrostatic Level Transmitter

Summary of Standard Ratings and Characteristics	
Tag	LE-101A, Wetwell level measurement
Approvals	CSA, NSF61 for drinking water approval
Hazardous Area Approvals	CSA, cUL: Div 1 / Class 1 as indicated
Ambient Temperature	-20 to 40°C
Humidity	0 to 100%
Transmitter (LT)	
Fluid	Wastewater with some grit (raw or treated), raw water, drinking water, as indicated
Body Material/Size	316SS / 42mm (wastewater);
Face Material, Seals	FKM Viton (wastewater);
Process Connection	Mounting clamp
Mounting	PVC Guide Pipe
Additional Weight	Yes
Level Range	10m
Temperature Range	-21 to 70°C
Enclosure Rating	CSA/NEMA 6P, IP68
Power Supply	Loop
Analog Output	4-20mA (1)
Temperature Sensor	N/A
Temperature Transmitter	Remote, where indicated
Communication	Hart
Transmitter Cable	SOW, length as required
Termination Box	Yes
Transmitter	Refer to 16900.2.6 Level Controller
Manufacturer/Model	Endress+Hauser FMX21, Siemens LH300

2.4 Radar Level Transmitters

Summary of Standard Ratings and Characteristics	
Tag	LE-101B, Wetwell level measurement
Approvals	CSA
Hazardous Area Approvals	CSA, cUL: Div 1 / Class 1 IS as indicated (sensor)
Ambient Temperature	-40 to 130°C
Humidity	0 to 100%
Sensor (LE):	
Fluid	Wastewater with some grit
Body Material	AL, polyester coated.
Face Material	PP cladded plastic
Process Connection	SS Wall mounted bracket
Submergence	Yes 24h @ 1.00m
Housing	CSA/NEMA 6P, IP68
Process Unit Range	0-15m
Linearity	3-point
Radar Frequency	26GHz
Horn Size	mm
Horn Material	PP Cladded
Beam Angle	8°
Analog Outputs	4-20mA HART (Loop Powered)
Communications	N/A
Accessories	316SS wall mounting bracket
Transmitter	Refer to 16900.2.6 Level Controller
Manufacturers/Models:	Endress+Hauser, Micropilot FMR50; Siemens, LR120

2.5 Pressure Transmitters

Summary of Standard Ratings and Characteristics	
Tag	PIT-101, Discharge Pressure
Approvals	CSA, NSF61 for drinking water approval
Hazardous Area Approvals	CSA, cUL: Div 1 / Class 1 or Div 1 / Class 2 as indicated
Ambient Temperature	-20 to 40°C
Humidity	0 to 100%
Transmitter (PE)	
Media	Wastewater with some grit (raw or treated), raw water, drinking water, as indicated, chemical solution, pressurised air
Measurement Type	Gauge pressure, differential where indicated
Process Connection	316SS 3-valve block and bleed manifold, 5-way for differential pressure, isolation valve, or flange as indicated on drawings
Process Connection WW	
Transmitter (PIT)	
Enclosure	Compact version or blind, CSA/NEMA 4X, IP66 enclosure; alternatively die-cast aluminum
Display / Operation	Backlit LCD display with touch control, and operational software for communicating version
Process Units	[kPa]
Process Unit Range	200, 400, 1,000, 2,000, 4,000kPa (absolute or diff.)
Temperature Range	-20 / 80°C
Accuracy	0.1%
Rangeability	100:1
Response Time	0.5s
Power Supply	Loop
Analog Output	4-20mA (1)
Communication	Hart;
Manufacturer	Endress+Hauser PMP71; Siemens P320; Rosemount, 3051T;
Manufacturer (Threaded diaphragm seal)	Ashcroft 100 series, 316LSS including hardware, or approved equal

2.6 Level Controller

Summary of Standard Ratings and Characteristics	
Tag	LIC-101, Wetwell Level Controller
Approvals	CSA
Hazardous Area Approvals	N/A
Ambient Temperature	-20 to 40°C
Humidity	0 to 100%
Transmitter (LIC)	
Enclosure	Remote, polycarbonate, CSA/NEMA 3
Display / Operation	Backlit LCD display with remote controller, and programming software
Process Units	[m]
Accuracy	0.25%
Resolution	0.1%
Linearity	0.5%
Response Time	0.5 sec
Power Supply	120Vac, 60 Hz
Sensor Inputs	2
Sensor Type	mA
Analog Inputs	4-20mA (1)
Analog Outputs	4-20mA (2)
Relay Outputs	Form A (2), Form C (4)
Communications	Ethernet/IP
Manufacturers/Models	Siemens LT500

2.7 Level Switches

Summary of Standard Ratings and Characteristics	
Tag	LSH-102, LSL-102, Wetwell level switches
Approvals	CSA
Hazardous Area Approvals	CSA, cUL: Div 1 / Class 1 or Div 1 / Class 2 as indicated
Ambient Temperature	-20 / 40°C
Humidity	0 / 100%
Primary Element (LS)	
Fluid	Wastewater with some grit
Type	Mechanical Switch
Body Material	Polypropylene
Degree of Protection	CSA/NEMA 6, IP68
Min/Max Temperature	0 / 60°C
Min/Max Density	0.65 / 1.5 g/cm3
Mounting	Wall bracket & rings
Mounting height	See drawings and schedules
Contacts	Form C (1)
Cable	3c, PVC jacket, SOW, 13m
Local JBX	Yes
EX-isolating Barrier	Yes
Manufacturer/Models	Xylem Flygt, ENM-10

1 General

1.1 Summary

This section includes the requirements for furnishing and installing a submersible pump system suitable for residential or light commercial water supply applications.

1.2 References

- ANSI/NSF 61 – Drinking Water System Components
- UL 778 – Motor-Operated Water Pumps
- NEMA MG1 – Motors and Generators
- CSA C22.1:24 – Canadian Standards Association Safety Standard for Electrical Installations
- NFPA 820

1.3 Submittals

- Product data including performance curves, dimensions, materials of construction, and electrical characteristics.
- Installation instructions and operation manuals.
- Manufacturer's certification of compliance with applicable standards.
- Warranty documentation.

1.4 Quality Assurance

- Pumps shall be manufactured by a company with a minimum of 10 years of experience in submersible pump design and production.
- All equipment shall be factory-tested prior to shipment.
- The pump shall be manufactured in an ISO 9001 certified Facility

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2 Products

2.1 Acceptable Manufacturers

- **Design Basis**: **Design Basis**: Liberty Pumps XFL51M-2 Series Submersible Sewage Pump. The submersible pump shall have a shut-off head of 11.58m (38 feet) and a maximum flow of 6.05 L/s @ 1.52m (96 GPM @ 5 feet) of total dynamic head.
- Equivalent products by other manufacturers may be submitted for approval, provided they meet or exceed the specified performance and material requirements.

2.2 Pump Construction

- **Type**: Submersible, multi-stage centrifugal pump
- **Casing**: Class 30 Cast Iron
- **Impellers**: 7 VANE, SEMI-OPEN CLASS 25 CAST IRON OR BRONZE

- **Discharge**: 2" NPT
- **Suction**: Integral with pump body
- **Bearings**: Upper and lower ball bearings shall be required. The bearings shall be a single ball / race type bearing. Both bearings shall be permanently lubricated by the oil that fills the motor housing. The motor shaft shall be made of 300 series stainless steel and have a minimum diameter of 0.625”
- **Seals**: - The pump shall have two shaft seals with an oil chamber between them. A leak detection probe is positioned in the oil chamber and continuously monitors for water that would indicate the lower seal has failed. The lower seal is a two piece design and can be serviced in the field. The upper is a unitized graphite impregnated silicon carbide hard face seal design. The lower seal is silicon carbide / silicon carbide seal face with stainless steel housings and spring. All other seals are of an O-ring design of Buna-N material

2.3 Motor

- **Type**: Single-phase motors shall be oil-filled, permanent split capacitor, class F insulated, NEMA B design, and rated for continuous duty. Three-phase motors shall be oil-filled, class F insulated, NEMA B design, and rated for continuous duty. At maximum load, the winding temperature shall not exceed 130°C unsubmerged. Since air-filled motors are not capable of dissipating heat, they shall not be considered equal. Single-phase pump motors shall have an integral thermal / current overload switch in the windings for protecting the motor. A capacitor is required and shall be mounted in the control panel. Three-phase motors shall have a thermal overload device mounted on the windings that is connected to a motor control relay located in the control panel.
- **Horsepower**: 1/2 HP
- **Voltage**: 115V single-phase
- **Thermal Protection**: Built-in overload protection
- **Enclosure**: NEMA-rated for submersible operation

2.4 Accessories

- Control box: All XFL50-Series pumps require a control panel. Single-phase units utilize a permanent split capacitor (PSC) type motor and require a specific run capacitor. Three-phase motors are equipped with a thermal overload that must be connected in the control panel to protect against overheating. Control panels must include intrinsically safe float circuits when pumps are installed in hazardous locations. Panels themselves shall be located outside of the hazardous location, and installed according to all local, and federal codes.
- Check valve (integral or in discharge line)
- Splice kit for submersible cable
- The submersible pump shall be supplied with 25 of a multi-conductor cord of type SOOW, as per Electrical Data table. The power cord shall be sized for the rated full load amps of the pump in accordance with the CSA. A separate SOOW control cord of equal length will also exit the pump. Both cords are located within a casting configured for 1-1⁄2” conduit if the application requires. The cords shall be secured with a rubber seal ring and potted thus preventing any wicking through the conductors.

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3 Execution

3.1 Installation

- Install pump and motor assembly per manufacturer’s instructions and local code requirements.

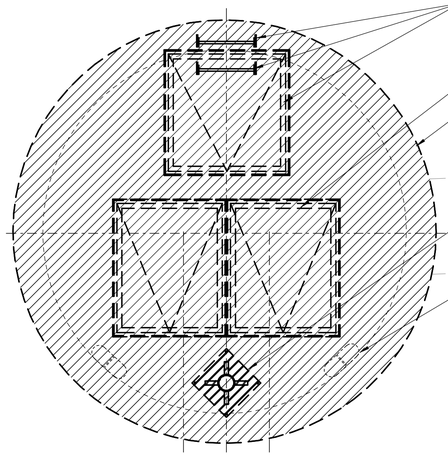
- Ensure vertical alignment and secure anchoring of pump in well casing.
- Electrical connections shall be made by a licensed electrician.
- Protect cable from abrasion and sharp edges during installation.

3.2 Field Quality Control

- Perform insulation resistance test on motor windings before energizing.
- Verify correct rotation and amperage draw.
- Test system for proper flow rate and pressure.
- The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for electrical integrity, moisture content and insulation defects. The motor and volute housing shall be pressurized, and an air leak decay test is performed to ensure integrity of the motor housing. The pump shall be run, voltage/current monitored, and the tester checks for noise or other malfunction.

3.3 Startup and Training

- Provide startup services including system flushing and performance verification.
- Provide training to owner/operator on routine maintenance and troubleshooting.



REMOVE AND REPLACE ACCESS HATCH, LADDER AND GRAB BARS

REMOVE EXISTING PUMP ACCESS HATCH

EXCAVATE AROUND EXISTING 3050 DIA. CONCRETE ROOF SLAB OF WET WELL. CAREFULLY EXPOSE AND REMOVE EXISTING CONCRETE TOP CAP IN ITS ENTIRETY

CONTRACTOR TO REMOVE AND REINSTALL LIFTING DAVIT AND BASE PLATES SECURED TO NEW PRECAST CONCRETE ROOF TOP AS PER MANUFACTURER'S INSTRUCTIONS

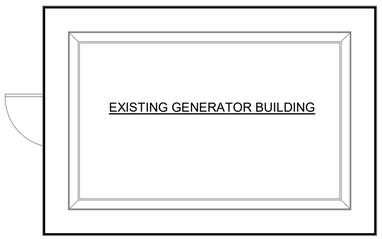
REMOVE EXISTING VENT PIPES AND REPLACE WITH NEW

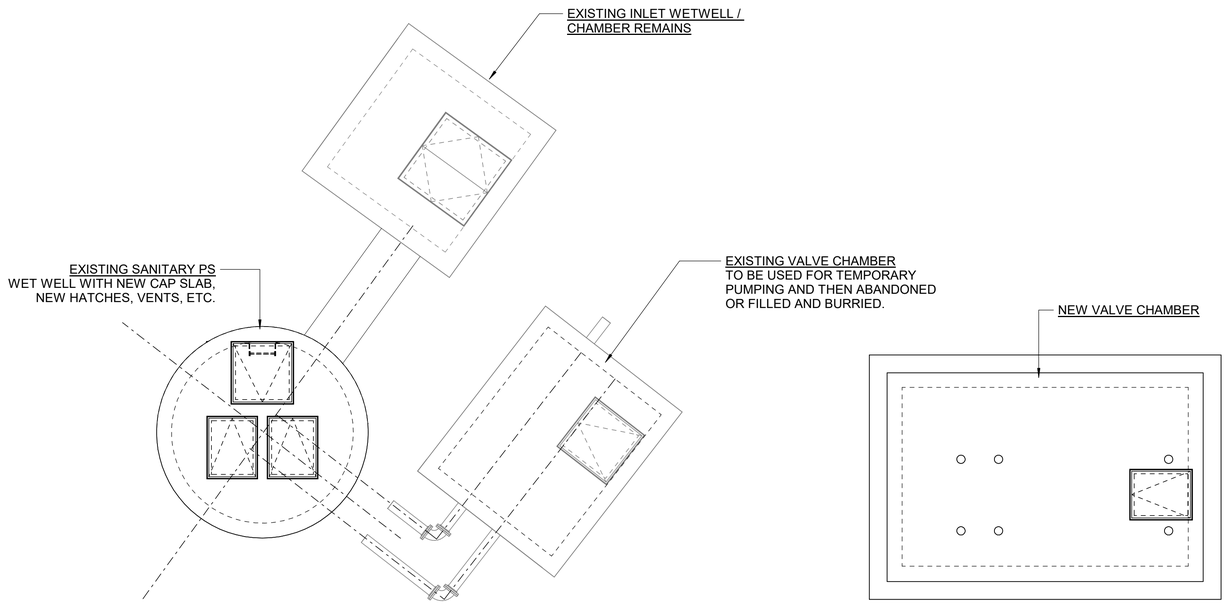
NOTES:

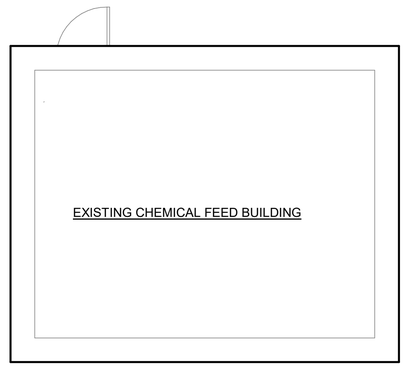
1. RECORD DRAWINGS FOR ALL EXISTING ELEMENT DRAWN/IDENTIFIED WERE FROM BY MIG ENGINEERING LTD.
2. ALL ELEMENTS AND DIMENSIONS TO BE VERIFIED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
3. DISPOSE OF REMOVED MATERIAL OFF-SITE.

EXISTING PUMPING STATION ROOF PLAN - DEMOLITION

SCALE: 1 : 25







PLAN ABOVE EL 219.320

SCALE: 1 : 50

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No.	Issued	By	YYYY.MM.DD
A	ISSUED FOR TENDER	LZ	2025.06.17

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
2025.06.17
L. ZHANG
100088234
PROVINCE OF ONTARIO

Client/Project
SOUTHWEST MIDDLESEX

WWTP INFRASTRUCTURE DESIGN - VICTORIA ST. SPS UPGRADES

Glencoe ON Canada

Project No.:165630252

File Name: N/A

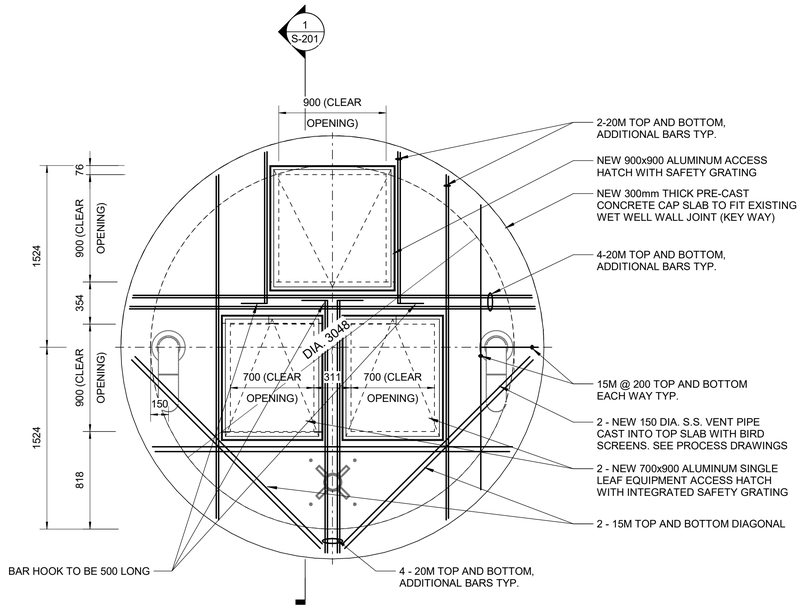
Scale: As indicated

SP	LZ	SA	2025.06.17
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title
OVERALL PLAN - NEW AND REMOVAL STRUCTURES PLAN

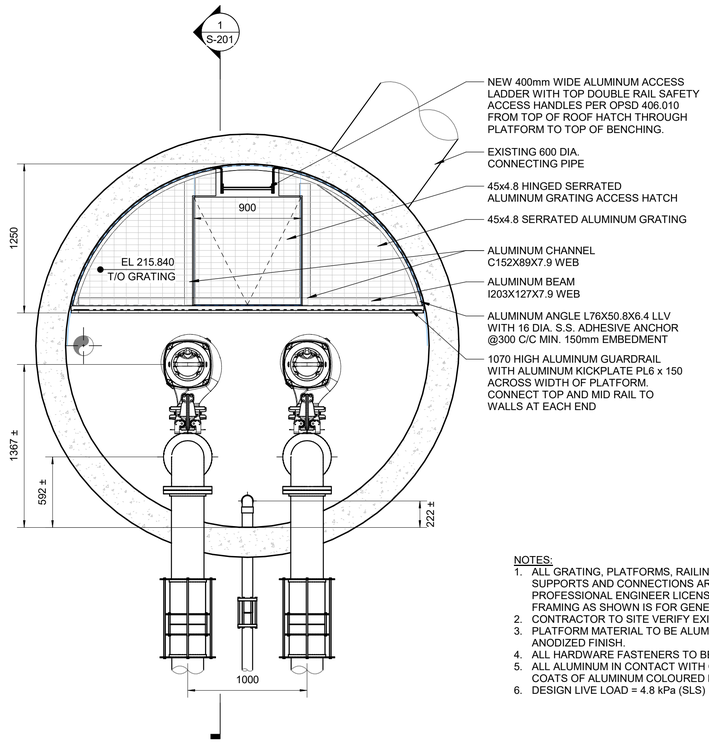
Revision: Sheet: of

Drawing No.
S-101



NEW WETWELL PRE-CAST CAP SLAB TOP PLAN

SCALE: 1 : 25

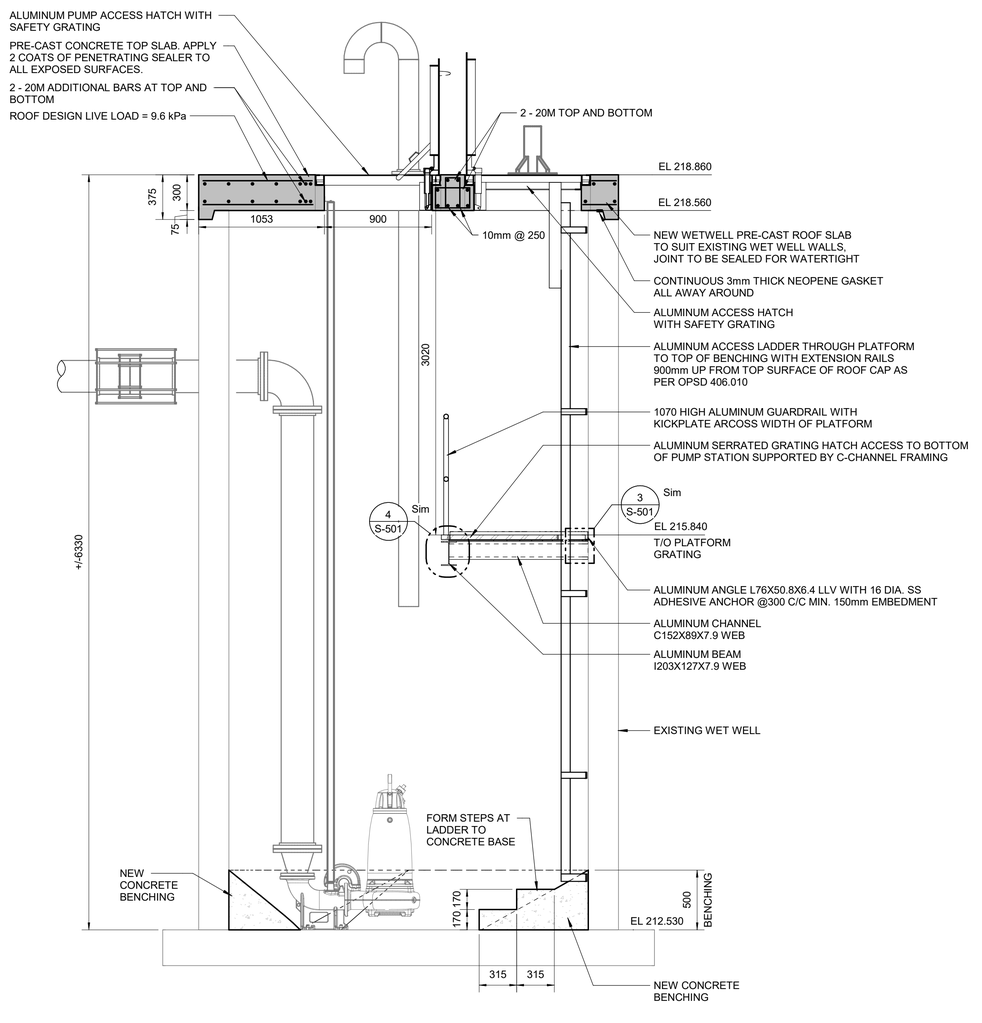


NOTES:

1. ALL GRATING, PLATFORMS, RAILINGS AND ASSOCIATED STRUCTURAL SUPPORTS AND CONNECTIONS ARE TO BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. THE FRAMING AS SHOWN IS FOR GENERAL ARRANGEMENT ONLY.
2. CONTRACTOR TO SITE VERIFY EXISTING WET WELL DIMENSIONS.
3. PLATFORM MATERIAL TO BE ALUMINUM 6063-T6 OR 6351-T6 WITH CLEAR ANODIZED FINISH.
4. ALL HARDWARE FASTENERS TO BE S.S. TYPE 316.
5. ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL HAVE A MINIMUM OF 2 COATS OF ALUMINUM COLOURED BITUMINOUS PAINT.
6. DESIGN LIVE LOAD = 4.8 kPa (SLS)

NEW PLATFORM FRAMING PLAN AT EL 215.84

SCALE: 1 : 25



1 S-201 SECTION

SCALE: 1 : 25

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L. ZHANG
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SOUTHWEST MIDDLESEX

WWTP INFRASTRUCTURE
DESIGN - VICTORIA ST. SPS
UPGRADES

Glencoe ON Canada

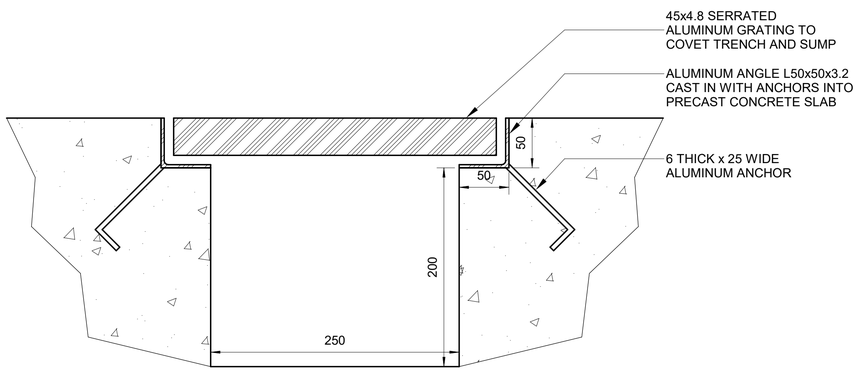
Project No.: 165630252
File Name: N/A
Scale: 1 : 25

SP	LZ	SA	2025.06.17
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

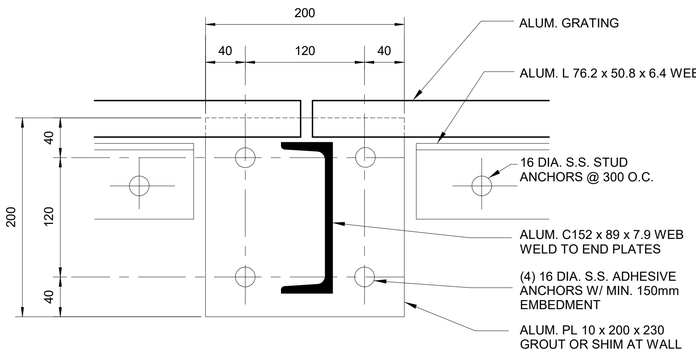
Title
NEW WETWELL PLANS
AND SECTION

Revision: Sheet: of

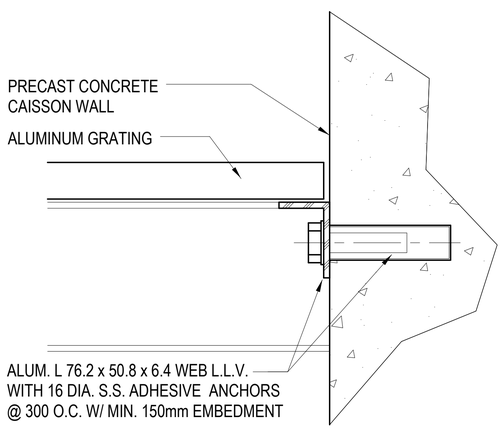
Drawing No.
S-201



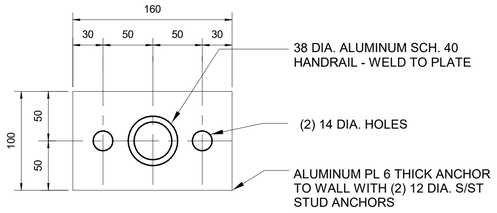
1 SUMP GRATING DETAIL
SCALE: 1 : 3



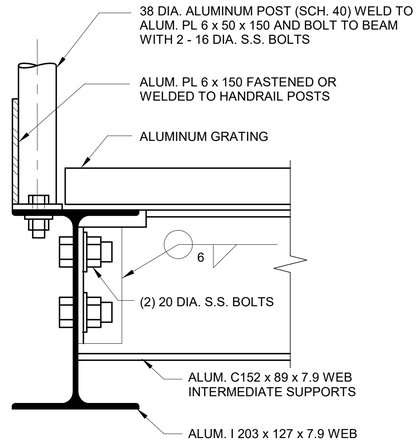
2 PLATFORM DETAIL - 1
SCALE: 1 : 3



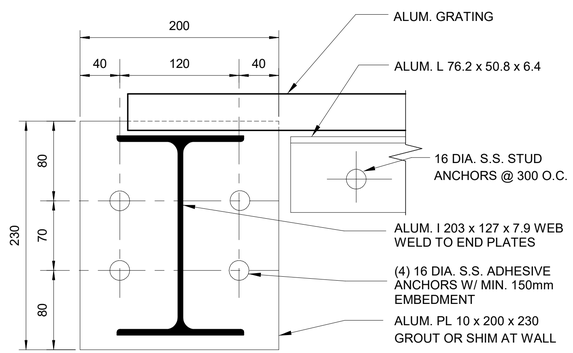
3 S-201 PLATFORM DETAIL - 2
SCALE: 1 : 3



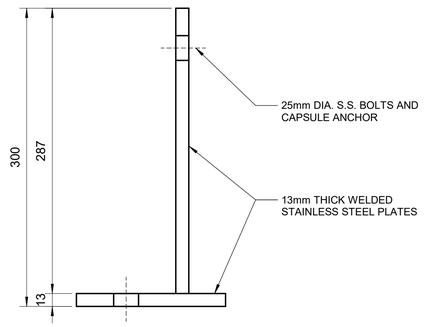
HANDRAIL DETAIL

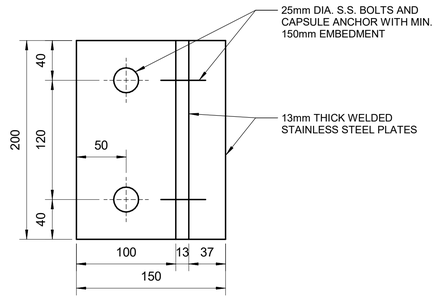


4 S-201 PLATFORM DETAIL - 3
SCALE: 1 : 3

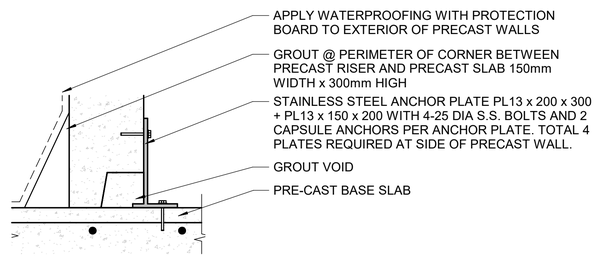


5 S-202 PLATFORM DETAIL - 4
SCALE: 1 : 3





6 S-202 ANCHOR BASE PLATE
SCALE: 1 : 3



7 S-202 Section 10 - Callout 1
SCALE: 1 : 10

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LICENSED PROFESSIONAL ENGINEER
2025.06.17
L. ZHANG
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PROVINCE OF ONTARIO

Client/Project
SOUTHWEST MIDDLESEX

WWTP INFRASTRUCTURE DESIGN - VICTORIA ST. SPS UPGRADES
Glencoe ON Canada

Project No.:165630252
File Name: N/A

Scale: As indicated

SP	LZ	SA	2025.06.17
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title
STRUCTURAL TYPICAL DETAILS

Revision: Sheet: of

Drawing No.
S-501

4/17/2025 2:41:27 PM
ORIGINAL SHEET - ANSI D

	Service	From	To	Cable Type	Bonding	Wireway
1	Power	Utility	Main	4#3/0AWG, Cu, RWU90		PVC-78
2	Power	Main	UM	4#3/0AWG, Cu, RW90	#6AWG, Cu, RW90G	PVC-78
3	Power	UM	ATS-1	3#3/0AWG, Cu, RW90	#6AWG, Cu, RW90G	PVC-53
4	Power	GEN-1	ATS-1	3#1/0AWG, Cu, RW90	#6AWG, Cu, RW90G	PVC-53
5	Power	ATS-1	SBX-1	3#3/0AWG, Cu, RW90	#6AWG, Cu, RW90G	PVC-53
6	Control	ATS-1	JIT-1	3#3/0AWG, Cu, RW90	#6AWG, Cu, RW90G	PVC-53
7	Power	SBX-1	T-A	3#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
8	Power	T-A	LP-A	4#6AWG, Cu, RW90	#8AWG, Cu, RW90G	PVC-35
9	Power	SBX-1	MCP-101	3#8AWG, Cu, RW90	#10AWG, Cu, RW90G	PVC-27
10	Power	SBX-1	MCP-102	3#8AWG, Cu, RW90	#10AWG, Cu, RW90G	PVC-27
11	Power	SBX-1	EUH-101	3#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
12	Power	SBX-1	T-B	3#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
13	Power	SBX-1	SPD	3#10AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
14	Power	LP-A	JBX-5	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
15	Power	JBX-5	Wet Well	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	RAC-27
16	Power	LP-A	JBX-1	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
17	Power	JBX-8	Valve Chamber	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	RAC-27
18	Power	LP-A	JIT-1	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
19	Power	LP-A	Sump Pump CP	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
20	Power	Sump Pump CP	JBX-10	2#12AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
21	Power	JBX-10	Sump Pump	Vendor Cable		
22	Control	Sump Pump CP	JBX-7	8#14AWG, Cu, RW90		PVC-27
23	Control	JBX-7	Sump Pump	Vendor Cable		
24	Power	MCP-101	JBX-1	3#8AWG, Cu, RWU90	#10AWG, Cu, RW90G	PVC-35
25	Power	JBX-1	RSP-101	Vendor Cable		
26	Power	MCP-102	JBX-2	3#8AWG, Cu, RWU90	#10AWG, Cu, RW90G	PVC-35
27	Power	JBX-2	RSP-102	Vendor Cable		
28	Control	MCP-101	JBX-1	2#14AWG, Cu, RW90		PVC-27
29	Control	JBX-1	RSP-101	Vendor Cable		
30	Control	MCP-102	JBX-2	2#14AWG, Cu, RW90		PVC-27
31	Control	JBX-2	RSP-102	Vendor Cable		
32	Control	CP-1	MCP-101	4#14AWG, Cu, RW90		PVC-27
33	Control	CP-1	MCP-102	4#14AWG, Cu, RW90		PVC-27
34	Control	CP-1	WWL1	4#14AWG, Cu, RW90		PVC-27
35	Power	CP-1	LIT-103	2#14AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
36	Power	CP-1	FIT-101	2#14AWG, Cu, RW90	#14AWG, Cu, RW90G	PVC-27
37	Signal	CP-1	MCP-101	CAT6, 600V, Shielded		PVC-27
38	Signal	CP-1	MCP-102	CAT6, 600V, Shielded		PVC-27
39	Signal	CP-1	FIT-101	CAT6, 600V, Shielded		PVC-27
40	Signal	CP-1	LIT-101	CAT6, 600V, Shielded		PVC-27
41	Signal	CP-1	JIT-1	CAT6, 600V, Shielded		PVC-27
42	Signal	CP-1	GEN-CP	CAT6, 600V, Shielded		PVC-27
43	Control	CP-1	Autodialer	18#14AWG, Cu, RW90		PVC-27
44	Control	LE-103B	JBX-3	1/P#16AWG, Cu, CIC		RAC-27
45	Control	JBX-3	LIT-103	1/P#16AWG, Cu, CIC		PVC-27
46	Control	LT-103A	JBX-3	Vendor Cable		
47	Control	JBX-3	CP-1	1/P#16AWG, Cu, CIC		PVC-27
48	Control	CP-1	LIT-103	1/P#16AWG, Cu, CIC		PVC-27
49	Control	FIT-001	JBX-8	Vendor Cable		PVC-27
50	Control	JBX-8	FE-001	Vendor Cable		RAC-27
51	Control	CP-1	JBX-6	1/P#16AWG, Cu, CIC		PVC-27
52	Control	JBX-6	PT-001	1/P#16AWG, Cu, CIC		RAC-27
53	Control	CP-1	JBX-4	2#14AWG, Cu, RW90		PVC-27
54	Control	JBX-4	LSH-104	Vendor Cable		
55	Control	CP-1	JBX-4	2#14AWG, Cu, RW90		PVC-27
56	Control	JBX-4	LSL-105	Vendor Cable		
57	Control	CP-1	JBX-7	2#14AWG, Cu, RW90		PVC-27
58	Control	JBX-7	LSH-003	Vendor Cable		

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Client/Project
SOUTHWEST MIDDLESEX

GLENCOE WW SYSTEM - VICTORIA STREET SPS UPGRADE
Glencoe ON Canada

Project No.: 165630252
File Name: 165630252-E611
Scale: NTS

M.E.	M.E.	S.S.S.	2025/05/23
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title
CABLE SCHEDULE

Revision: Sheet: of

Drawing No.
E-611

ORIGINAL SHEET - ANSI D