



FOOTHILLS OKOTOKS REGIONAL WATER PROJECT MID-LINE PUMP STATION PRELIMINARY DESIGN DRAWINGS



SITE LOCATION
NOT TO SCALE

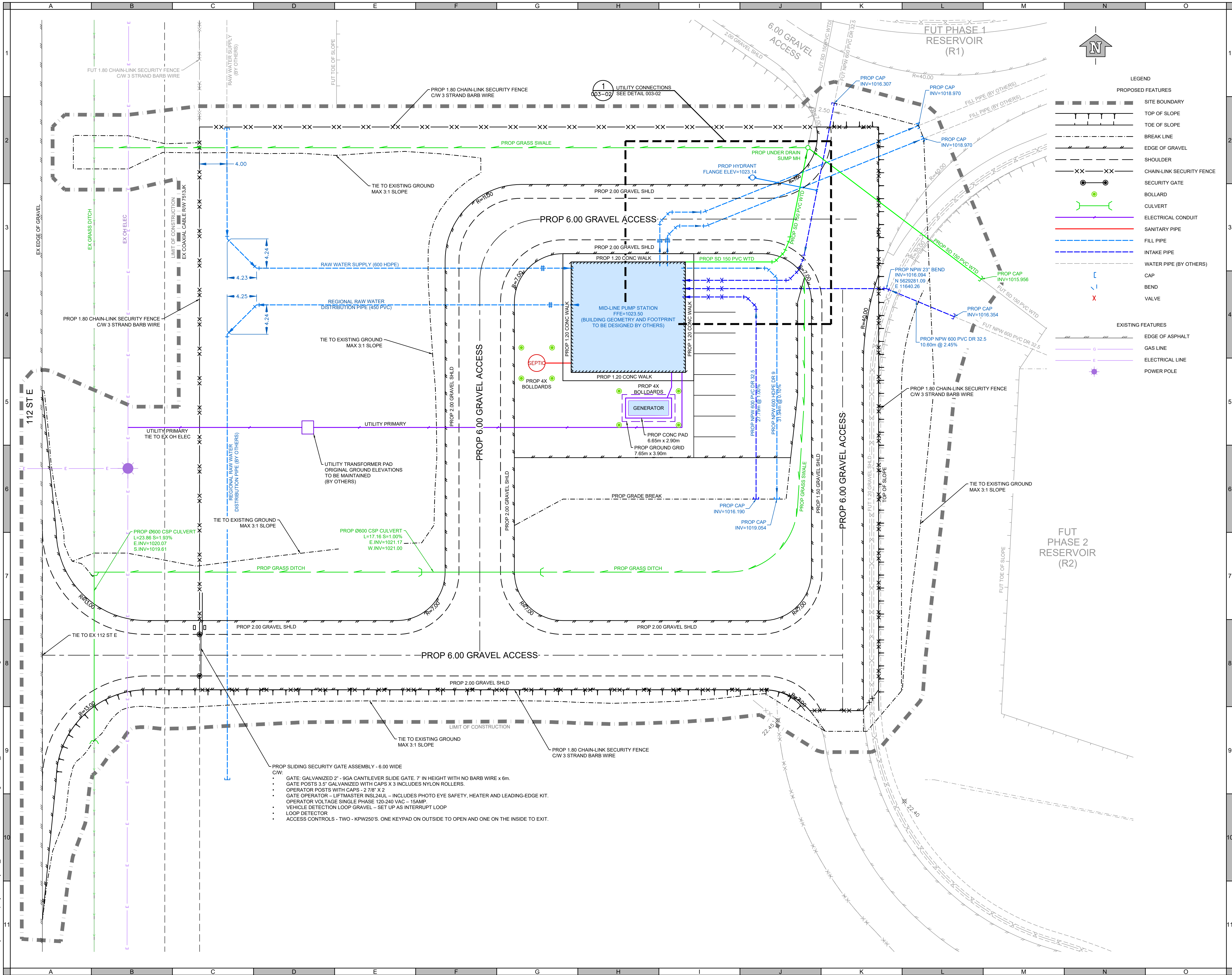
Issued for
75% DESIGN
NOVEMBER 29, 2024
urbansystems.ca

List of Drawings

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
CIVIL		PROCESS	
FORWP-02-C-SSP-001-01	SITE LAYOUT AND UTILITY PLAN	FORWP-02-P-PID-001	P&ID LEGEND
FORWP-02-C-SSP-001-01	SITE LAYOUT AND UTILITY PLAN	FORWP-02-P-PID-002	P&ID
FORWP-02-C-SGP-002-01	SITE LAYOUT AND GRADING PLAN	FORWP-02-P-PID-003	P&ID
FORWP-02-C-SDA-003-01	STORM DRAINAGE AREAS	FORWP-02-P-PID-004	P&ID
		FORWP-02-P-GA-001	PROCESS MECHANICAL LEGEND
		FORWP-02-P-GA-002	WET WELL PLAN
		FORWP-02-P-GA-003	PUMP ROOM PLAN
		FORWP-02-P-GA-004	PUMP ROOM SECTION
		FORWP-02-P-GA-005	PUMP ROOM SECTION
		FORWP-02-P-GA-006	PUMP ROOM SECTION
		FORWP-02-P-GA-007	MANHOLE PLAN AND SECTION
		FORWP-02-P-GA-008	ISOMETRIC VIEW
		FORWP-02-P-GA-009	ISOMETRIC RENDERING
ARCHITECTURAL		MECHANICAL	
FORWP-02-A-GE-001	STANDARTD NOTES	FORWP-02-M-GE-001	LEGEND AND GENERAL NOTES
FORWP-02-A-GE-002	CODE REVIEW	FORWP-02-M-SCH-001	SCHEDULES
FORWP-02-A-GE-003	ENERGY CODE	FORWP-02-M-SP-001	SITE PLAN
FORWP-02-A-LAY-001	WET WELL	FORWP-02-M-LAY-001	BELOW GRADE SANITARY PLAN
FORWP-02-A-LAY-002	FOUNDATION PLAN	FORWP-02-M-LAY-002	SANITARY AND VENTING PLAN
FORWP-02-A-LAY-003	MAIN FLOOR PLAN	FORWP-02-M-LAY-003	DOMESTIC WATER AND FIRE EXTINGUISHER PLAN
FORWP-02-A-LAY-004	REFLECTED CEILING PLAN	FORWP-02-M-LAY-004	HVAC PLAN
FORWP-02-A-LAY-005	ROOF PLAN	FORWP-02-M-DET-001	DETAILS AND SECTIONS
FORWP-02-A-GA-001-01	ELEVATIONS - SHEET 1	FORWP-02-M-DET-002	ISOMETRIC VIEWS
FORWP-02-A-GA-001-02	ELEVATIONS - SHEET 2		
FORWP-02-A-GA-002-01	BUIILDING SECTION - SHEET 1		
FORWP-02-A-GA-002-02	BUIILDING SECTION - SHEET 2		
FORWP-02-A-GA-003	WALL SECTIONS		
FORWP-02-A-DET-001	CONSTRUCTION TYPES		
FORWP-02-A-DET-002-01	EXTERIOR DETAILS - SHEET 1		
FORWP-02-A-DET-002-02	EXTERIOR DETAILS - SHEET 2		
FORWP-02-A-SCH-001	DOOR SCHEDULE		
STRUCTURAL		ELECTRICAL	
FORWP-02-S-GE-001	GENERAL NOTES	FORWP-02-E-PID-002	PROCESS AND INSTRUMENTATION DIAGRAM - MIDLINE PUMP STATION
FORWP-02-S-LAY-001	WET WELL PLAN	FORWP-02-E-PID-005	PROCESS AND INSTRUMENTATION DIAGRAM - AUXILIARIES PUMP ROOM
FORWP-02-S-LAY-002	SHALLOW FOUNDATION PLAN	FORWP-02-E-PID-006	PROCESS AND INSTRUMENTATION DIAGRAM - MISCELLANEOUS
FORWP-02-S-LAY-003	SLAB PLAN	FORWP-02-E-PID-007	PROCESS AND INSTRUMENTATION DIAGRAM - AUXILIARIES EXTERIOR
FORWP-02-S-LAY-004	ROOF PLAN	FORWP-02-E-LAY-001	FLOOR PLAN
FORWP-02-S-GA-001	ELEVATIONS	FORWP-02-E-LAY-002	MCC LAYOUT
FORWP-02-S-DET-001	SECTIONS	FORWP-02-E-LAY-003	GATE AREA SITE PLAN
FORWP-02-S-DET-002	TYPICAL DETAILS	FORWP-02-E-LAY-004	CONTROL PANEL LAYOUT
		FORWP-02-E-DET-001	GATE CARD READER PEDESTAL DETAILS
		FORWP-02-E-SLD-001-01	SINGLE LINE DIAGRAM 1 OF 2
		FORWP-02-E-SLD-001-02	SINGLE LINE DIAGRAM 2 OF 2
		FORWP-02-E-SCH-001	PANEL AND LIGHTING SCHEDULES
		FORWP-02-E-SCH-002	CONTROL PANEL BILL OF MATERIALS AND LABEL SCHEDULE
		FORWP-02-E-SCH-003	TBD
		FORWP-02-E-WD-001	PUMP VFD SCHEMATIC TYPICAL
		FORWP-02-E-CSA-001	CONTROL ARCHITECTURE
		FORWP-02-E-CSA-002	VIDEO MONITORING SYSTEM



\\usl-urban-systems.com\projects\Projects_CAL\130610120\7D-Design\CAD\20_PRODFORWP-02-C-SSP-001.dwg, 001-01-SERVICING, 2024-12-02 10:15 am Item



ATTENTION
This drawing is prepared for the sole use of Client Name.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

**ISSUED FOR
75% DESIGN**
NOVEMBER 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
1	2024-11-28	ISSUED FOR 50% DESIGN	MRC
2	2024-11-29	ISSUED FOR 75% DESIGN	MRC



**URBAN
systems**

Scale 2.5m 0 2.5 5 7.5

Quality Control by
Designed by
Drawn by

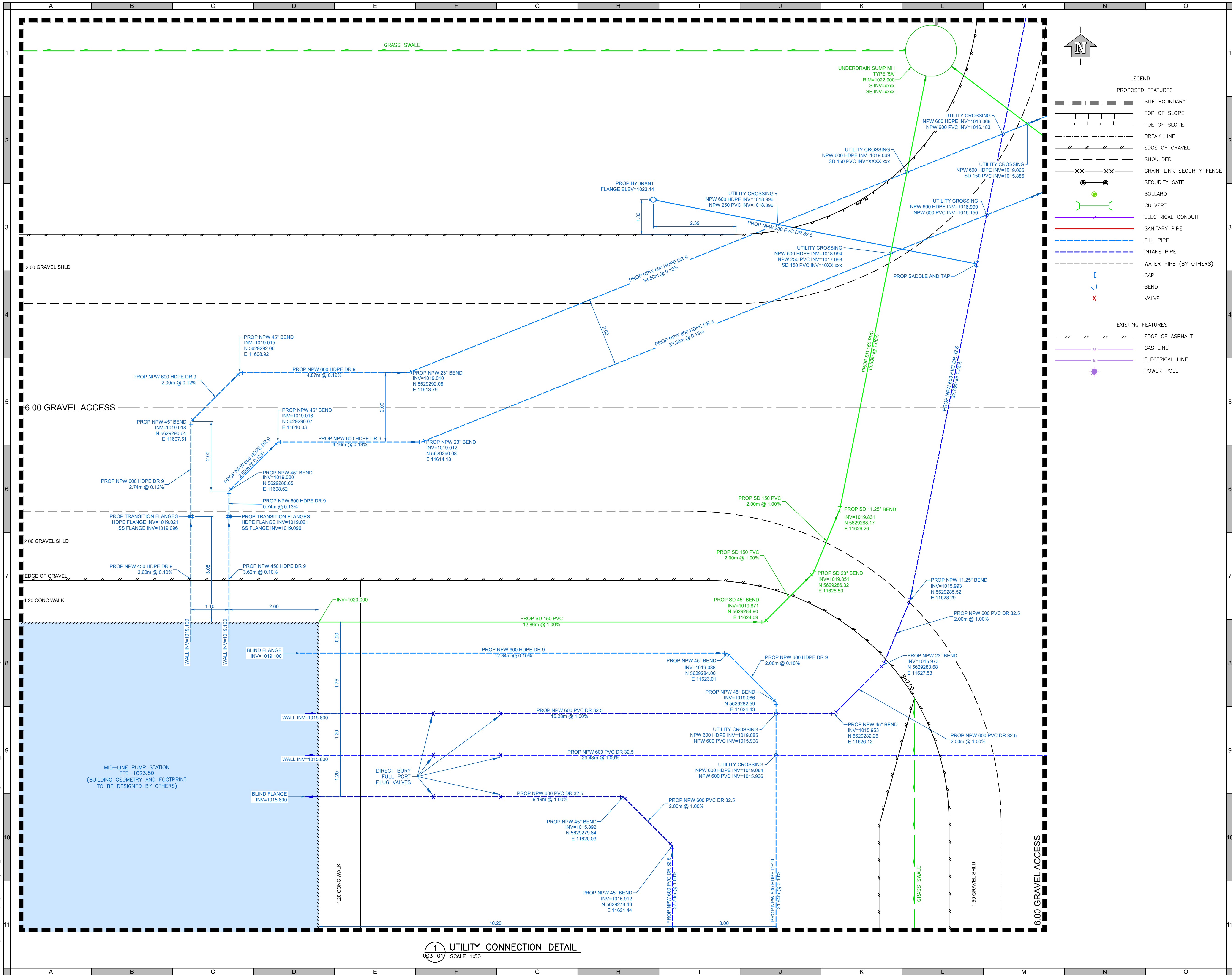
MRC/TL
TL

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
SITE LAYOUT AND UTILITY PLAN**

Sheet Number 1 of 4
Project Number
1306.0120.07
Drawing Number
FORWP-02-C-SSP-001-01

NOT FOR CONSTRUCTION

\\sls.urban-systems.com\projects\Projects_CAL\1306\1020\7D-Design\CAD\20_PRODFORWP-02-C-SSP-001.dwg, 2024-12-02 10:16 am Item



ATTENTION
This drawing is prepared for the sole use of Client Name.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

**ISSUED FOR
75% DESIGN**
NOVEMBER 25, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
1	2024-07-08	ISSUED FOR 50% DESIGN	MRC
2	2024-11-25	ISSUED FOR 75% DESIGN	MRC



**URBAN
systems**

Scale 0.5m 0 0.5 1 1.5

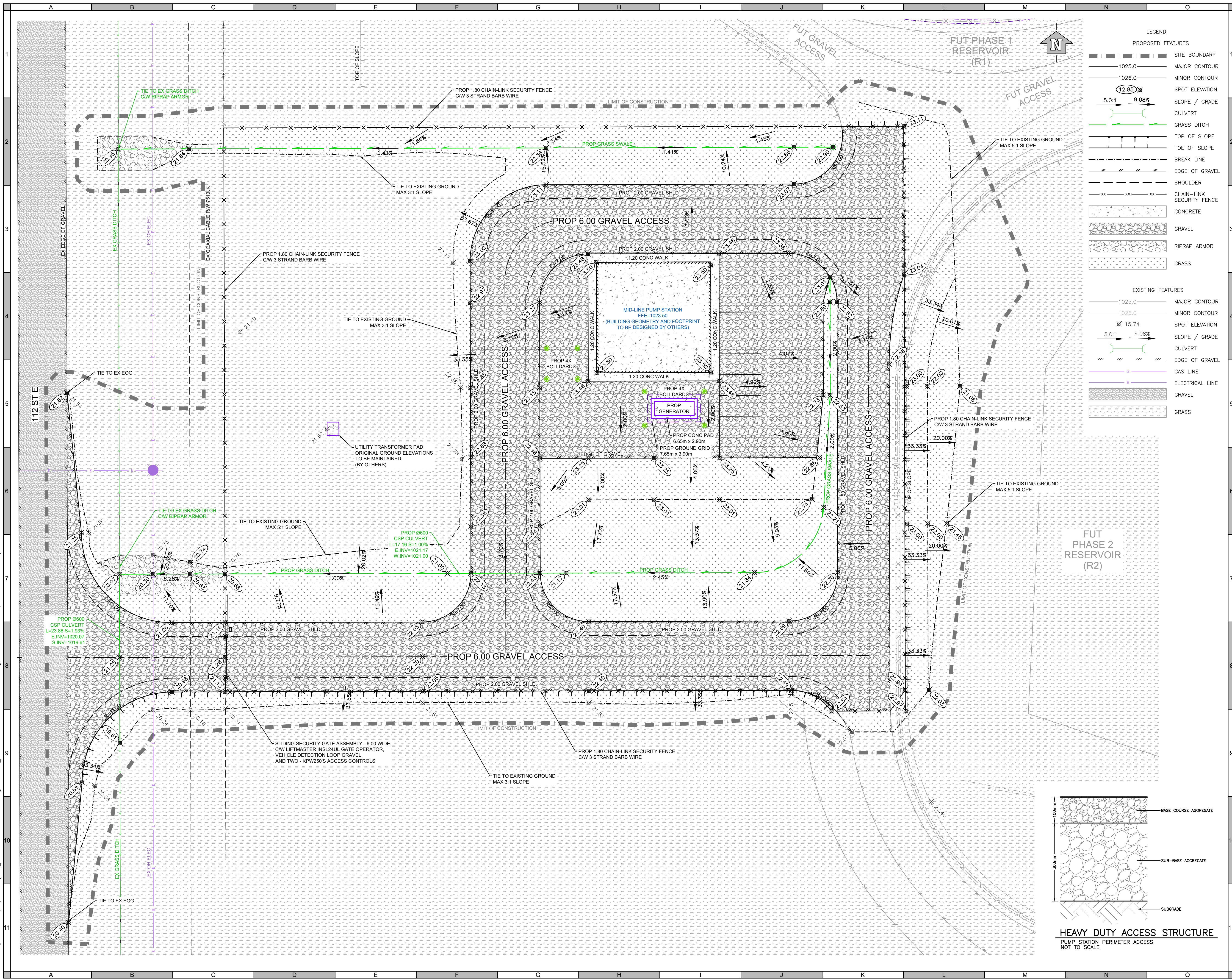
Quality Control by
Designed by
Drawn by

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT**
SITE LAYOUT AND UTILITY PLAN

Sheet Number 2 of 4
Project Number 1306.0120.07
Drawing Number
Revision
FORWP-02-C-SSP-001-02 2

NOT FOR CONSTRUCTION

\\slurban-systems.com\projects\Projects_Cal\13060120\7D-Design\CAD\20_PRODFORWP-02-C-SGP-002.dwg 002-01-GRADING (34x22-VERT PLAN), 2024-12-02 10:18 am lham



LEGEND

PROPOSED FEATURES

- SITE BOUNDARY
- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATION
- SLOPE / GRADE
- CULVERT
- GRASS DITCH
- TOP OF SLOPE
- TOE OF SLOPE
- BREAK LINE
- EDGE OF GRAVEL
- SHOULDER
- CHAIN-LINK SECURITY FENCE
- CONCRETE
- GRAVEL
- RIPRAP ARMOR
- GRASS

EXISTING FEATURES

- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATION
- SLOPE / GRADE
- CULVERT
- EDGE OF GRAVEL
- GAS LINE
- ELECTRICAL LINE
- GRAVEL
- GRASS

ATTENTION

This drawing is prepared for the sole use of Client Name. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

ISSUED FOR 75% DESIGN

NOVEMBER 29, 2024

urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
2	2024-11-29	ISSUED FOR 75% DESIGN	MRC

FOOTHILLS OKOTOKS

REGIONAL WATER PROJECT

SITE LAYOUT & GRADING PLAN

URBAN systems

Scale: 2.5m 0 2.5 5 7.5

Quality Control by: MRC/TL
Designed by: TL
Drawn by:

FOOTHILLS OKOTOKS

REGIONAL WATER PROJECT

SITE LAYOUT & GRADING PLAN

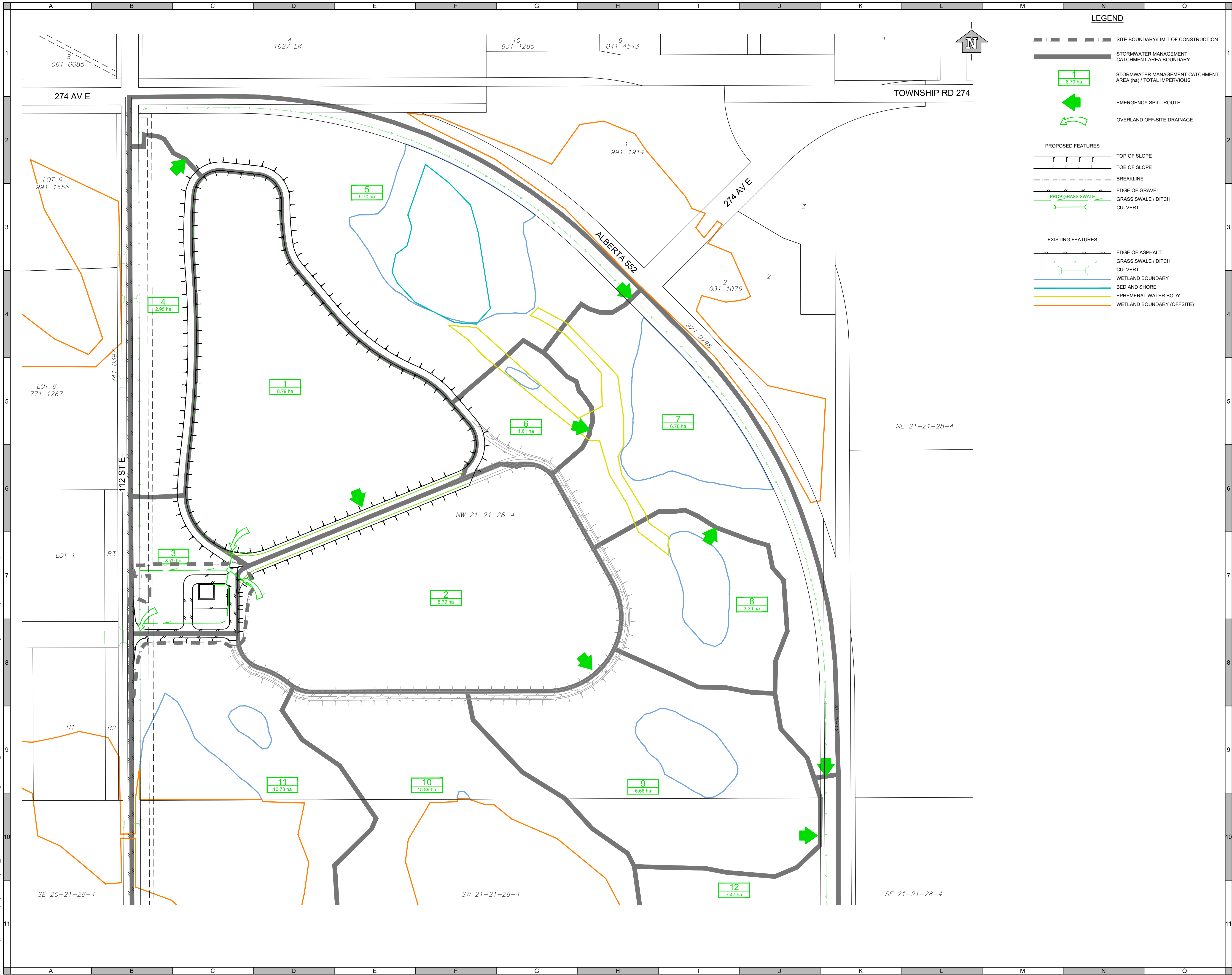
Sheet Number: 3 of 4
Project Number: 1306.0120.07
Drawing Number: FORWP-02-C-SGP-002
Revision: 2

HEAVY DUTY ACCESS STRUCTURE

PUMP STATION PERIMETER ACCESS
NOT TO SCALE

NOT FOR CONSTRUCTION

\\slurban-systems.com\projects\Projects_CAL\1306\0120\06D-Design\CAD\20_PROD\Phase1\FORWP-03-C-SDA-006.dwg, 02-C-SDA (PUMP STATION), 2024-12-02 10:19 am Item



ATTENTION
This drawing is prepared for the sole use of Client Name.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

ISSUED FOR 75% DESIGN
NOVEMBER 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
2	2024-11-29	ISSUED FOR 75% DESIGN	MRC



URBAN systems

Scale: 20m 0 20 40 60

Quality Control by: MRC/TL
Designed by: TL
Drawn by: TL

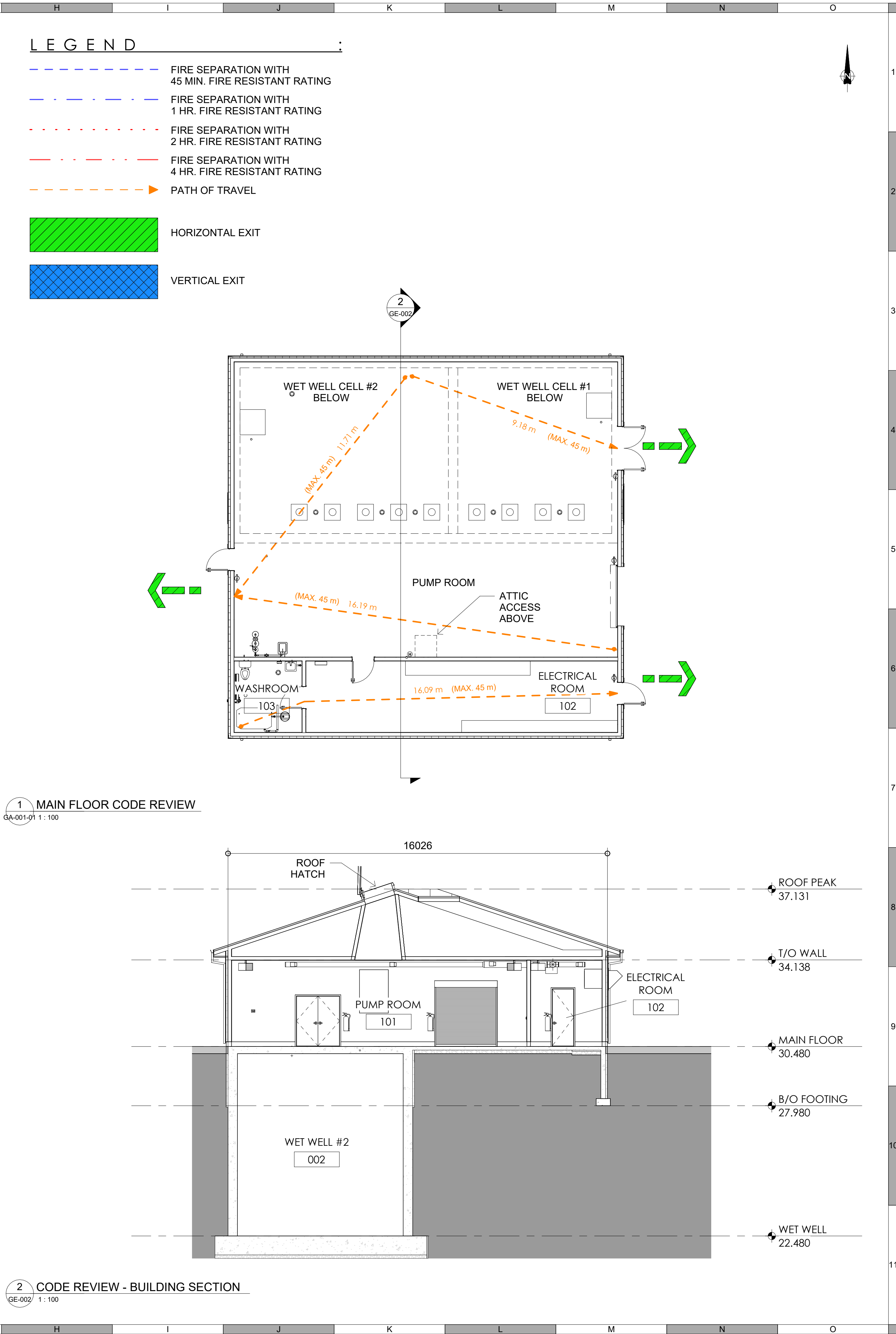
FOOTHILLS OKOTOKS REGIONAL WATER PROJECT
STORM DRAINAGE AREAS

Sheet Number: 4 of 4
Project Number: 1306.0120.07
Drawing Number: FORWP-02-C-SDA-003
Revision: 2

NOT FOR CONSTRUCTION

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
	WHEN SEPARATE SPECIFICATIONS ARE PROVIDED THOSE SPECIFICATIONS SUPERCEDE THE STANDARD NOTES															
1	FIRE STOPPING			: PRODUCT OPTIONS & SUBSTITUTIONS			: VAPOUR & AIR BARRIERS			: SHOP DRAWINGS			: FIELD REPORTS			1
	GENERAL REQUIREMENTS			PRODUCT OPTIONS AND SUBSTITUTIONS			VAPOUR BARRIER			1. Shop drawings provide technical data specially prepared for work of this Contract; including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form.			REGULAR FIELD PROGRESS REPORTS			
2	1. Provide firestopping systems to meet the requirements of the current building code referenced in code review.			1. Any proposed changes to the Contract / Construction documents by the contractor shall be submitted to the Architect for acceptance before being ordered or installed.			1. Polyethylene Film: to CAN/CGSB-51.34, 0.15 mm thick. Staples: to CAN/CSA B111, galvanized wire, minimum 6 mm leg.			2. Present shop drawings in a clear and thorough manner to appropriately illustrate the work.			1. The contractor is responsible to provide regular progress reports with record photographs to the prime coordinating professional. Reports shall include current progress and the anticipated construction progress up to the next progress report.			
	2. STANDARDS			2. In making a substitution Contractor represents that:			3. Sealing Tape: minimum 60 mm width, polypropylene sheathing tape with acrylic adhesive, or duct tape of same width.			3. Identify field dimensions on drawings.			CHANGES ON SITE			
	1. Underwriters Laboratories of Canada (ULC):			1. THEY have investigated substitute product or manufacturer, or both, and has determined that it meets this criteria:			4. Polyurethane Sealant: use one of the following:			4. Identify shop drawings by appropriate references to sheet, detail, schedule or room numbers.			1. Construction on site that is not detailed on the consultant's drawings or accepted by the local approving authorities (development permit and building permit) shall not proceed until reviewed by the owner and consultants.			
	1. CAN/ULC S115-05 STANDARD METHOD OF FIRE TESTS OF FIRESTOP SYSTEMS			1. substitute products shall be the same type as, be capable of performing the same functions as, and meet or exceed the standards of quality and performance of the named product or products. Substitutions shall not require revisions to Contract Documents nor to work of Other Contractors.			1. One component, to CAN/CGSB-19.13, class 2, low temperature and having VOC content less than the VOC limits of State of California's South Coast Air Quality Management District Rule #1168, June 2006.									
	2. ULC-FS-09 FIRESTOP SYSTEMS AND COMPONENTS 2009 EDITION			2. substitute manufacturers shall have capabilities comparable to those of the named Manufacturer(s). Substitutions shall not require revisions to Contract Documents nor to work of Other Contractors.			2. Multi-component, to CAN/CGSB-19.24, type 2 and having VOC content less than the VOC limits of State of California's South Coast Air Quality Management District Rule #1168, June 2006.									
	3. Warnock Hersey (WH) Certification Listings, current edition			3. THEY waive claims for additional costs and time caused by substitution which may subsequently become apparent.			INSTALLATION						FIELD REVIEWS GENERAL NOTES			
	1. Firestopping shall provide a rating EQUAL TO THE FIRE RATING OF THE ASSEMBLY, when tested to ULC S115, for a rating period applicable to the fire separation.			2. They will make any changes to the Work necessitated by the substitution as required for the Work to be complete in all respects, and			1. Install sheet polyethylene where indicated on drawings, as required to form a continuous vapour retarder on warm side of the building envelope directly beneath and supported by interior finish materials.			3. Coordinate each submittal with requirements of work and Contract documents. Individual drawings will not be reviewed until all related shop drawing and product data are available.			1. The intent of field reviews is to review the work at appropriate intervals in order to ensure the design will comply with the applicable Building Code and other regulations made pursuant to the Safety Codes Act and applicable codes.			
	2. Firestopping of electrical and communications cables shall be easily re-enterable and re-sealable with negligible risk of damage to cables, and shall not require de-rating of electrical cables.			3. Submission procedure:			2. Use sheets of largest practical size to minimize joints. Join sheets over solid, continuous backing, lapping sheets minimum 150 mm.			4. Notify the consultant, in writing, on the submittal and at the time of submission, of deviations from requirements of Contract Documents.			2. The conducting of field reviews does not relieve the contractor of the responsibility to construct the work in accordance with the requirements of the contract documents and all applicable codes.			
	3. Firestopping used to fill voids in floors having openings 100 mm diameter or larger, and which are accessible to the public, shall support floor design loading.			1. Contractor shall submit all information after contractor has reviewed all substitution information on the same basis as shop drawings.			3. Mechanically fasten or adhere polyethylene sheet to substrates.						3. Field reviews do not replace inspections by the authority having jurisdiction.			
	4. COORDINATION:			2. Contractor shall note all required modifications necessitated by the substitution.			4. Repair punctures and tears with sealing tape. Where punctures and tears are extensive replace entire damaged section, overlapping perimeter framing on all sides.						4. A minimum of 2 working days' notice is required and the work should be substantially complete at the time of inspection. Additional inspection costs required by incomplete work shall be borne by the contractor.			
	1. Coordinate construction of fire separations and penetrations through fire separations with work of this Section.			3. Submit the substitution in the same way as a Shop drawing are submitted, noting that it is a proposed substitution.			5. Seal sheet polyethylene to air/vapour hats installed over electrical boxes and other semi-recessed devices, using sealing tape or 15 mm diameter bead of polyurethane sealant.									
	2. Ensure penetrations have been completed prior to installing firestopping.						6. Seal penetrations through air/vapour hats using polyurethane sealant. Ensure sealant extrudes to both sides of penetrations.									
	3. Install firestopping prior to insulation of piping, unless insulation is part of a tested firestop system meeting requirements.						7. Seal along full perimeter and edges with polyurethane sealant.									
	5. Submit shop drawings of ALL firestopping systems and include manufacturer's printed product literature, specifications and data sheets for each firestopping system to be used Confirming the fire rating and testing standard.						8. Windows and storefront frame perimeters: Lap vapour retarder into all exterior rough openings and extend to at least 25mm past interior face of window and storefront frames. Maintain continuous barrier in all corners of rough opening. Seal with sealant and staples.									
	6. DELIVERY, STORAGE, AND HANDLING						9. Wall Roof Junction: Lap vapour retarder from wall to roof vapour retarder with minimum100mm lap. Seal with sealant and staple.									
	1. Deliver materials in original, unopened packaging bearing manufacturer's seals and labels intact.						10. Press steel frame perimeters: trim vapour retarder to the rough opening and seal to SBS membrane with vapour barrier tape. SBS membrane should have already been installed to the full perimeter of the rough opening and should be installed over the full depth of the wall studs.									
	2. Store materials off ground, under cover and away from moisture.															
	PRODUCTS												REQUIRED ARCHITECTURAL FIELD REVIEWS			
	1. SYSTEMS AND MATERIALS												1. Completion of foundations and foundation wall insulation prior to backfill.			
	1. Firestopping systems as listed under ULC-FS-09 Firestop Systems and Components 2009 Edition, or as listed in WH Listings under "Through-Penetration Firestopping Systems".												2. (Where a basement is part of a project) Completion of waterproofing membrane and weeping tile, prior to installing drainage or protection board over the waterproofing membrane and gravel over the weeping tile.			
	2. Firestopping materials, whether used in a tested system or not, shall be:												3. Completion of Radon membrane, cage, piping & venting prior to pouring main floor slab.			
	1. listed under ULC-FS-09 or under WH Listings,												4. One window installation mock-up prior to installing windows.			
	2. labeled with applicable ULC or WH label, and												1. Installation mock-up of window to show all required flashings, caulking detailing, air and vapour barrier components relationships for the approval by the Consultant.			
	3. compatible with applicable substrates and openings.												2. Mock-up may become part of the finished product.			
	3. Provided that all other specified requirements can be met, use any of the following products, either singly or in combination:												3. One (1) mock-up is required each phase of the project if construction ceases between completed phases or if installation crew changes.			
	1. Elastomeric sealant.												4. Window manufacturer must be present at window mock-up evaluation.			
	2. Elastomeric coating.												5. Completion of exterior wall framing with insulation and vapour barrier complete prior to applying gypsum board.			
	3. Mineral fibre.												6. Completion of exterior air barrier / rain resistive membrane and flashings prior to installation of exterior finishes.			
	4. Mortar.												7. Pre-Occupancy review prior and completion of any deficiencies.			
	5. Intumescent putty.												8. Unless deficiencies have been reviewed on site and confirmed to be completed in previous field reviews the contractor shall submit photographs of all completed deficiencies prior to the release of professional schedules.			
	6. Poured-in-place silicone foam.															
	7. Preformed silicone foam.															
	8. Multi-cable transit system.															
	9. Any other product which meets all other specified requirements.															
	4. Primer: as recommended by firestopping manufacturer for applicable substrate.															
	EXECUTION															
	1. VERIFICATION OF CONDITIONS															
	1. Examine condition of voids to be filled to ensure suitability for firestop systems.															
	2. Verify installation of service penetrations and adjacent construction has been completed.															
	2. PREPARATION															
	1. Prepare substrates and surfaces to a clean, dry, and frost free condition, ready to receive firestopping.															
	2. Prime substrates and surfaces to manufacturer's recommendations.															
	3. INSTALLATION															
	1. Provide tested firestopping systems meeting the fire rating of the assembly it is penetrating wherever the continuity of a fire separation is interrupted by mechanical, electrical or other service penetrations, or by any other openings, gaps or discontinuities.															
	2. Install tested firestopping systems in accordance with manufacturer's recommendations and in strict conformance with tested systems.															
	3. In locations for which there are no applicable tested firestopping systems, provide firestopping materials where indicated and as detailed on drawings. Install materials in accordance with manufacturer's recommendations.															
	4. Where applicable, neatly tool or trowel firestopping surfaces remaining exposed and make flush with surrounding exposed surfaces.															

NATIONAL BUILDING CODE - 2023 ALBERTA EDITION DATA										BUILDING CODE REFERENCE
PART 3 / 9										
PART 3 APPLIES PART 9 APPLIES										[A]1.1.2.
PROJECT DESCRIPTION: NEW ADDITION RENOVATION CHANGE OF USE ADDITION AND RENOVATION										
PROFESSIONAL DESIGN AND REVIEW: IS REQUIRED IS NOT REQUIRED										VOL 1, [C]2.4.2
MAJOR OCCUPANCY (S): GROUP F2										3.1.2.1.(1)/ 9.10.2.1
BUILDING CLASSIFICATION: MAJOR F2 3.2.2.80										3.2.2.20 - 92/ 9.10.2
BUILDING AREA (m²): ALLOWABLE: 1,000m² EXISTING: 0 m² NEW: 326 m² TOTAL: 326 m²										[A]1.4.1.2
GROSS AREA (m²): EXISTING: 1,000 m² NEW: 326 m² TOTAL: 326 m²										[A]1.4.1.2
MEZZANINE AREA (m²): EXISTING: 0 m² NEW: 0 m² TOTAL: 0 m²										3.2.1.1 / 9.10.4.1
AREA AFFECTED (m²): TOTAL: 326 m²										[A]1.4.1.2
NUMBER OF STOREYS: ABOVE GRADE: 1 BELOW GRADE: 4.64 m. HEIGHT ABOVE GRADE: 6.0 m.										[A]1.4.1.2 / 3.2.1.1
HIGH BUILDING: NO YES										3.2.6
NUMBER OF STREETS: 1 STREETS										3.2.2.10 & 3.2.5
SPRINKLER SYSTEM: REQUIRED NOT REQUIRED										3.2.5.12
SPRINKLER SYSTEM PROPOSED: ENTIRE BUILDING SELECTED FLOOR AREAS OF ROOF RATING SELECTED COMPARTMENTS BASEMENT NONE										3.2.5.12
STANDPIPE SYSTEM: REQUIRED NOT REQUIRED										3.2.5.8
FIRE ALARM SYSTEM: REQUIRED NOT REQUIRED PROPOSED: SINGLE STAGE TWO STAGE NONE										3.2.4 / 9.10.18
WATER SERVICE / SUPPLY IS ADEQUATE: NO YES										3.2.5.7
CONSTRUCTION TYPE: RESTRICTION: COMBUSTIBLE NON-COMBUSTIBLE ACTUAL: COMBUSTIBLE NON-COMBUSTIBLE HEAVY TIMBER CONSTRUCTION: COMBINATION NON-COMBUSTIBLE PERMITTED										3.2.2.20 - 92
IMPORTANCE CATEGORY: LOW NORMAL HIGH POST-DISASTER LOW HUMAN OCCUPANCY MINOR STORAGE BUILDING POST-DISASTER SHELTER EXPLOSIVE OR HAZARDOUS SUBSTANCES										4.1.2.1.(3) & T4.1.2.1.
SEISMIC HAZARD INDEX: (I _e Fa Sa (0.2)) = SEE SEISMIC DESIGN REQUIREMENTS FOR TABLE 4.1.8.18. ITEMS 6 TO 21: (I _e Fa Sa (0.2)) ≥ 0.35 OR POST-DISASTER NO YES										4.1.2.1.(3) 4.1.8.18.(2)
OCCUPANT LOAD FLOOR LEVEL/AREA MAIN FLOOR OCCUPANT TYPE - BASED ON USE OCCUPANT LOAD UP TO 10										3.1.17/ 9.9.1.3
BARRIER-FREE DESIGN: YES NO EXPLANATION: NOT REQUIRED BY CODE										3.8
HAZARDOUS SUBSTANCES: YES NO EXPLANATION:										3.3.1.2 & 3.3.1.26/ 9.10.1.3 (4)
REQUIRED FIRE RESISTANCE RATINGS: HORIZONTAL ASSEMBLY RATING SUPPORTED ASSEMBLY (H) NONCOMBUSTIBLE IN LIEU OF RATING? FLOORS OVER BASEMENT N/A N/A NO YES N/A FLOORS 45 MIN 45 MIN NO YES N/A MEZZANINE N/A N/A NO YES N/A ROOF N/A N/A NO YES N/A										3.2.2.20 - 92/ 9.10.8.1
LOAD BEARING WALLS, COLUMNS, AND ARCHES SUPPORTING AN ASSEMBLY REQUIRED TO HAVE A FIRE RESISTANCE RATING: RATING 45 MINS NONCOMBUSTIBLE IN LIEU OF RATING? NO YES N/A										3.2.2.20 - 92
SPATIAL SEPARATION:										3.2.3/ 9.10.14.4-5
WALL EBF AREA (m²) L.D. (m) L/H or H/L PERMITTED MAX. % OF OPENINGS PROPOSE D % OF OPENINGS REQUIRED FRR (H) CONSTRUCTION TYPE REQUIRED CLADDING REQUIRED NORTH - >9.0 - 100% - N/A NON-COMBUSTIBLE NON-COMBUSTIBLE SOUTH - >9.0 - 100% - N/A NON-COMBUSTIBLE NON-COMBUSTIBLE WEST - >9.0 - 100% - N/A NON-COMBUSTIBLE NON-COMBUSTIBLE EAST - >9.0 - 100% - N/A NON-COMBUSTIBLE NON-COMBUSTIBLE										
WATER CLOSETS: RATIO: MALE:FEMALE = 50:50 EXCEPT AS NOTED OTHERWISE FLOOR LEVEL/AREA OCCUPANT LOAD ABC REFERENCE FIXTURES REQUIRED FIXTURES PROVIDED MAIN FLOOR <10 3.7.2.2 1 1										3.7.2.2/ 9.31.4.1
NOTES:										



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	NATIONAL BUILDING CODE - 2020 NATIONAL ENERGY CODE DATA MATRIX						BUILDING CODE REFERENCE	NOTE: ALL SHOP DRAWINGS TO PROVIDE ENERGY CODE INFORMATION IN METRIC UNITS							
	3.12	AIR LEAKAGE:											3.2.4		
	3.12.1	THE BUILDING ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED WITH A CONTINUOUS AIR BARRIER SYSTEM TO CONTROL AIR LEAKAGE INTO AND OUT OF THE CONDITIONED SPACE AT A NORMALIZED RATE NOT MORE THAN 1.5 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa, OR AIR BARRIER ASSEMBLIES SHALL HAVE AN AIR LEAKAGE RATE OF NOT MORE THAN 0.20 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		FENESTRATIONS													
		1. METAL AND GLASS WALLS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 0.20 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		2. FIXED WINDOWS AND SKYLIGHTS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 0.20 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		3. OPERABLE WINDOWS AND SKYLIGHTS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 0.50 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		DOORS													
		1. UNLESS SPECIFIED IN (2. & 3.) ALL DOORS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 0.50 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		2. REVOLVING DOORS, AUTOMATIC COMMERCIAL SLIDING DOORS (INCLUDING RESPECTIVE FIXED SECTIONS) AND OVERHEAD DOORS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 5.0 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		3. MAIN EXTERIOR DOORS ARE PERMITTED TO HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 5.0 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa PROVIDED THAT THE TOTAL AREA OF SUCH DOORS DOES NOT EXCEED 2% OF THE GROSS WALL AREA.													
		4. LOADING DOCKS THAT INTERFACE WITH TRUCK BOXES SHALL HAVE WEATHER SEALS THAT SEAL THE TRUCK BOX TO THE BUILDING.													
		5. ROOF HATCHES TO COMPLY WITH DOOR AIR LEAKAGE RATE NOT GREATER THAN 0.50 L/(s*m ²) AT A PRESSURE DIFFERENTIAL OF 75Pa.													
		FIREPLACE DOORS													
		FIREPLACES SHALL BE EQUIPPED WITH DOORS OR ENCLOSURES TO RESTRICT AIR MOVEMENT THROUGH THE CHIMNEY WHEN THE FIREPLACE IS NOT IN USE.													
1	3.01	PROJECT DESCRIPTION:	☒ NEW ☐ ADDITION ☐ RENOVATION												
	3.02	COMPLIANCE PATH:	☒ PRESCRIPTIVE ☐ TRADE-OFF ☐ PERFORMANCE PATH			3.2 OR 3.3									
	3.03	LOCATION:	OKOTOKS			DIV B / TABLE C-1									
	3.04	ZONE:	6			DIV B / TABLE C-1									
2	3.05	FENESTRATION & DOOR AREA:	SEE DATA TABLE			3.2.1.4									
	3.06	ABOVE GROUND OPAQUE ASSEMBLIES:	WALL	0.240 W/(m2.K)	(4.17 RSI) MIN.	TABLE 3.2.2.2									
			ROOF	0.138 W/(m2.K)	(7.25 RSI) MIN.										
			FLOORS	0.156 W/(m2.K)	(6.41 RSI) MIN.										
	3.07	ASSEMBLIES IN CONTACT WITH THE GROUND:	WALL	0.284 W/(m2.K)	(3.52 RSI) MIN.	TABLE 3.2.3.1									
			ROOF	0.284 W/(m2.K)	(3.52 RSI) MIN.										
			FLOORS	0.757 W/(m2.K)	MIN. FOR 1.2M AROUND THE PERIMETER (1.32RSI)										
3	3.08	FENESTRATION:	1.73 W/(m2.K) (0.58 RSI) MIN.			TABLE 3.2.2.3									
	3.09	DOORS	1.90 W/(m2.K) (0.53 RSI) MIN.			TABLE 3.2.2.4									
	3.10	ACCESS HATCHES	1.90 W/(m2.K) (0.53 RSI) MIN.			TABLE 3.2.2.4									
	3.11	SKYLIGHTS	2.41 W/(m2.K) (0.41 RSI) MIN.												
4															
5															
6															
7															
8															
9															
10															
11															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O

ATTENTION

This drawing is prepared for the sole use of OWNER.

No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon

Architect

MPE

a division of Englobe

FOR DESIGN ASSIST RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
1	24/11/06	ISSUED FOR 75% IM	
2	24/11/29	FOR DESIGN ASSIST RFP IM	

FOOTHILLS COUNTY

Okotoks

Historic Road, Suburban Future

URBAN systems

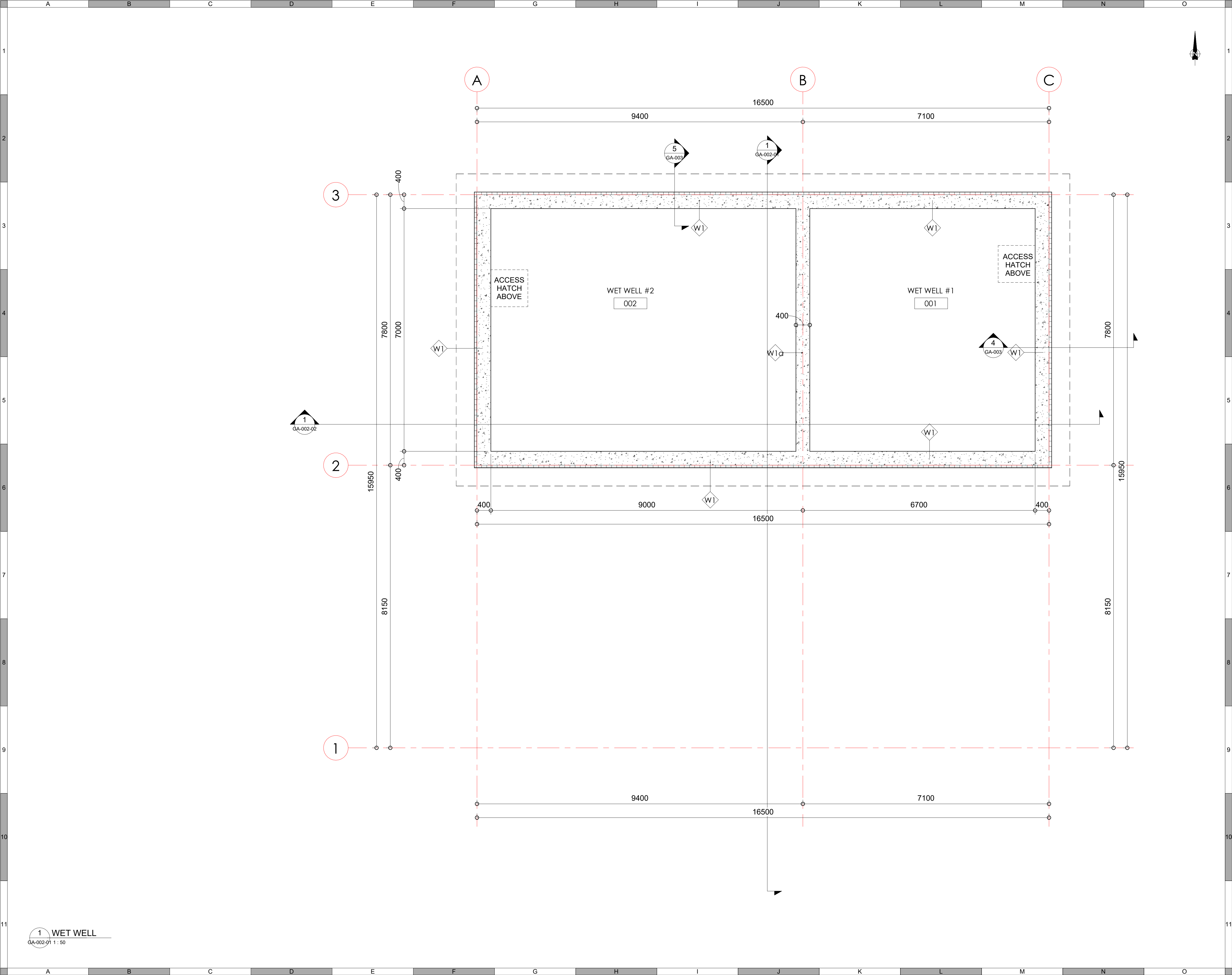
Scale 1 : 1

Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS MIDLINE PUMP STATION ENERGY CODE

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-A-GE-003 2

NOT FOR CONSTRUCTION



1 WET WELL
GA-002-01 1 : 50

ATTENTION
This drawing is prepared for the sole use of the OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



Scale
1 : 50

Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
WET WELL

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-A- LAY-001 2

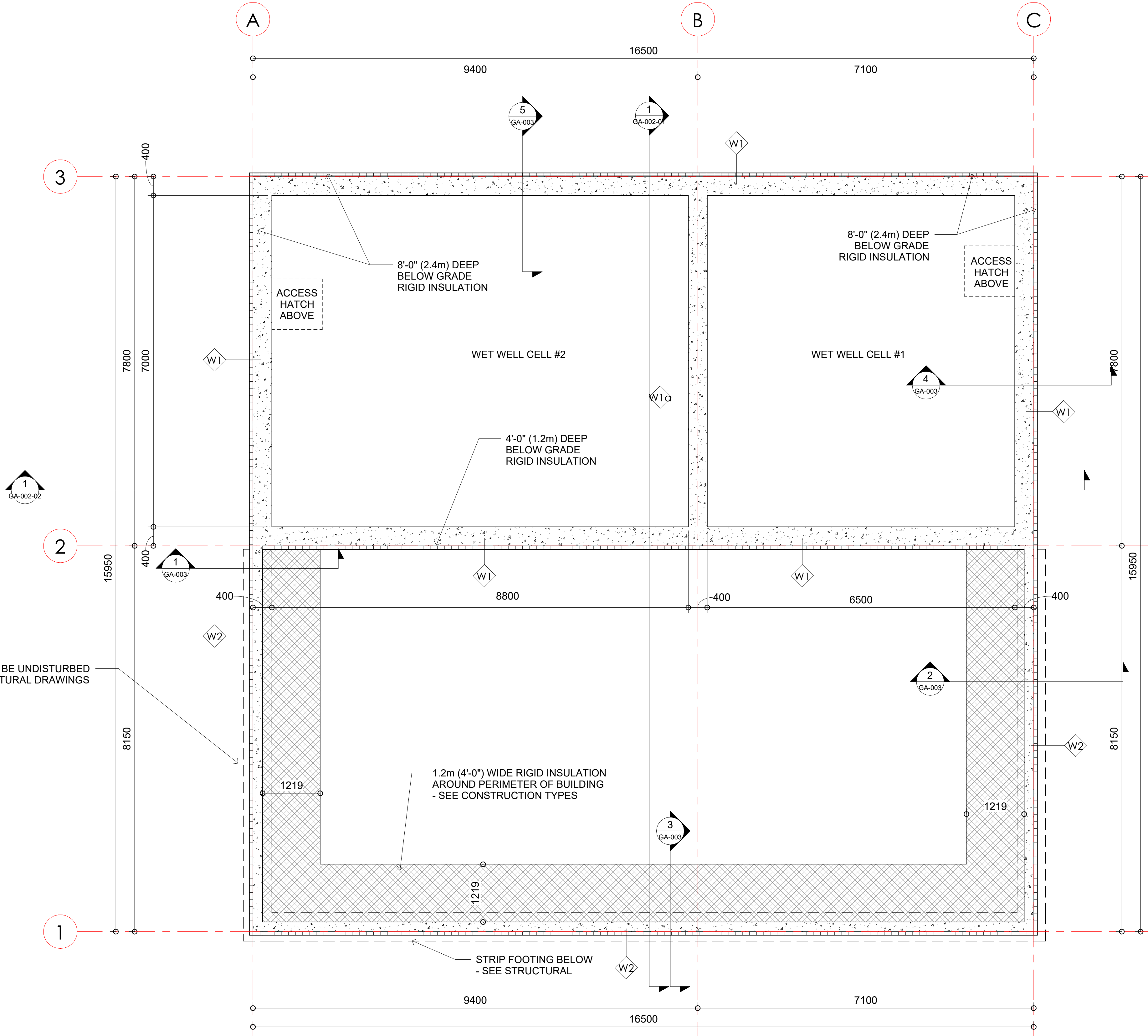
NOT FOR CONSTRUCTION

SOIL GAS CONTROL :

PROVIDE ROUGH-IN FOR SUBFLOOR
DEPRESSURIZATION CONSISTING OF:

1. A GAS-PERMEABLE LAYER INSTALLED BETWEEN THE AIR BARRIER AND GROUND TO ALLOW DEPRESSURIZATION OF THAT SPACE (CLEAN GRANULAR FILL). JOINTS IN THE FLEXIBLE SHEET SHALL BE LAPPED NOT LESS THAN 300mm (12") AND SEALED. MIN. 4" (100MM) (SEE STRUCTURAL FOR THICKNESS) COARSE CLEAN GRANULAR MATERIAL WITH NO MORE THAN 10% OF MATERIAL THAT WILL PASS A 4MM SIEVE. CONSOLIDATED TO THE MAX. CONSOLIDATION DENSITY USING VIBRATION COMPACTION MACHINE.
2. A 100MM DIA. PIPE SEALED WITH THE INLET LOCATED WITHIN THE GAS PERMEABLE LAYER. THE VENT PIPE SHALL RUN UNDER THE FLOOR SLAB DIRECTLY BELOW THE MEMBRANE AND THE OPEN END PIPE SHALL TERMINATE IN THE CENTER OF THE FLOOR SLAB.
3. A 100MM DIA. PIPE OUTLET IN THE CONDITIONED SPACE THAT PERMITS THE CONNECTION TO DEPRESSURIZATION EQUIPMENT, IS SEALED TO MAINTAIN IT IS SEALED TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER SYSTEM AND IS CLEARLY LABELED TO INDICATE THAT IT IS INTENDED ONLY FOR THE REMOVAL OF RADON FROM BELOW THE FLOOR-ON-GROUND. CLEARLY LABEL NEAR THE AIR TIGHT CAP AND IF APPLICABLE EVERY 1.8M AND AT EVERY CHANGE IN DIRECTION.

SOIL TO BE UNDISTURBED
- SEE STRUCTURAL DRAWINGS



ATTENTION
This drawing is prepared for the sole use of
OWNER.
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various
parties and may not be complete or accurate.
Expose and conclusively confirm the location in the
field all underground utilities and structures indicated
on this drawing, all underground utilities in the area
of the proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



URBAN
systems

Scale
As indicated

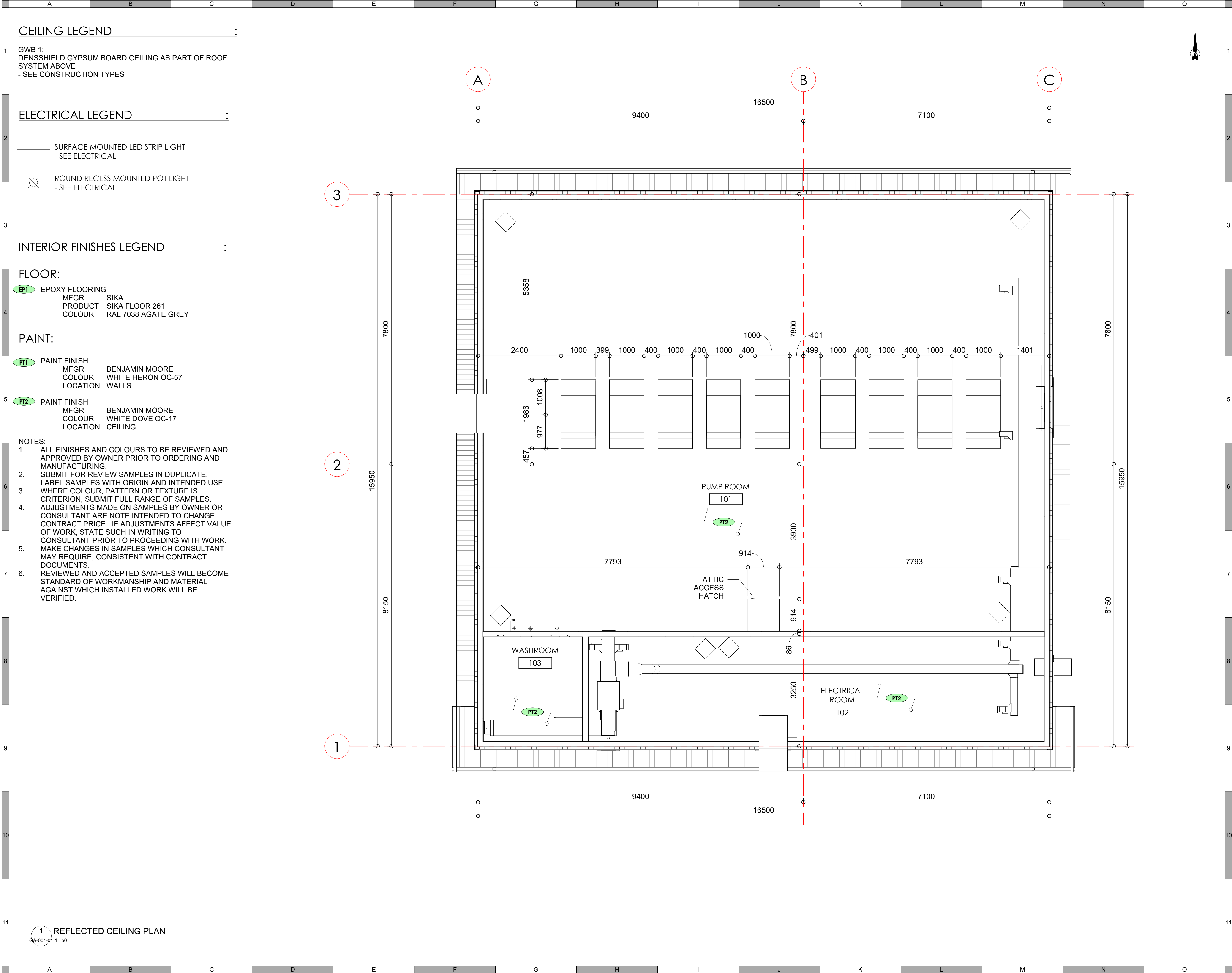
Quality Control by	IM
Designed by	IM
Drawn by	KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
FOUNDATION PLAN

Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-A- LAY-002	2

NOT FOR CONSTRUCTION

NOT FOR CONSTRUCTION



CEILING LEGEND :

GWB 1:
DENSSHIELD GYPSUM BOARD CEILING AS PART OF ROOF
SYSTEM ABOVE
- SEE CONSTRUCTION TYPES

ELECTRICAL LEGEND :

- SURFACE MOUNTED LED STRIP LIGHT
- SEE ELECTRICAL
- ROUND RECESS MOUNTED POT LIGHT
- SEE ELECTRICAL

INTERIOR FINISHES LEGEND _____ :

FLOOR:

- EP1** EPOXY FLOORING
MFRG SIKA
PRODUCT SIKA FLOOR 261
COLOUR RAL 7038 AGATE GREY

PAINT:

- PT1** PAINT FINISH
MFRG BENJAMIN MOORE
COLOUR WHITE HERON OC-57
LOCATION WALLS
- PT2** PAINT FINISH
MFRG BENJAMIN MOORE
COLOUR WHITE DOVE OC-17
LOCATION CEILING

NOTES:

- ALL FINISHES AND COLOURS TO BE REVIEWED AND APPROVED BY OWNER PRIOR TO ORDERING AND MANUFACTURING.
- SUBMIT FOR REVIEW SAMPLES IN DUPLICATE. LABEL SAMPLES WITH ORIGIN AND INTENDED USE.
- WHERE COLOUR, PATTERN OR TEXTURE IS CRITERION, SUBMIT FULL RANGE OF SAMPLES.
- ADJUSTMENTS MADE ON SAMPLES BY OWNER OR CONSULTANT ARE NOTE INTENDED TO CHANGE CONTRACT PRICE. IF ADJUSTMENTS AFFECT VALUE OF WORK, STATE SUCH IN WRITING TO CONSULTANT PRIOR TO PROCEEDING WITH WORK.
- MAKE CHANGES IN SAMPLES WHICH CONSULTANT MAY REQUIRE, CONSISTENT WITH CONTRACT DOCUMENTS.
- REVIEWED AND ACCEPTED SAMPLES WILL BECOME STANDARD OF WORKMANSHIP AND MATERIAL AGAINST WHICH INSTALLED WORK WILL BE VERIFIED.

1 REFLECTED CEILING PLAN
GA-001-01 1 : 50

ATTENTION
This drawing is prepared for the sole use of OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM

FOOTHILLS
COUNTY
Okotoks
Vibrant. Real. Sustainable. Future.

URBAN
systems

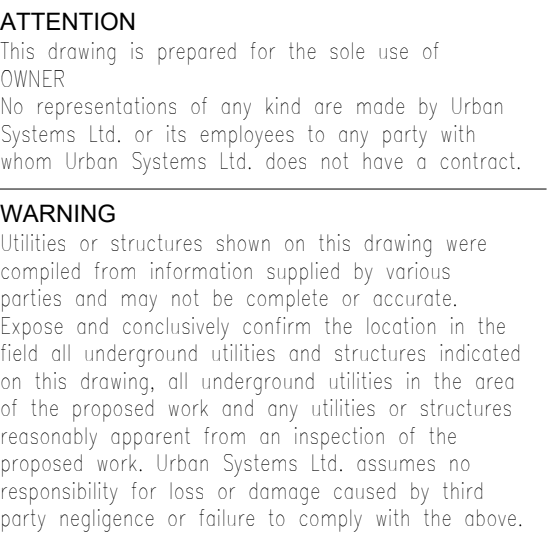
Scale
As indicated

Quality Control by	IM
Designed by	IM
Drawn by	KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
REFLECTED CEILING PLAN

Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-A- LAY-004	2

NOT FOR CONSTRUCTION



Ian Moxon
Architect



a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



URBAN
systems

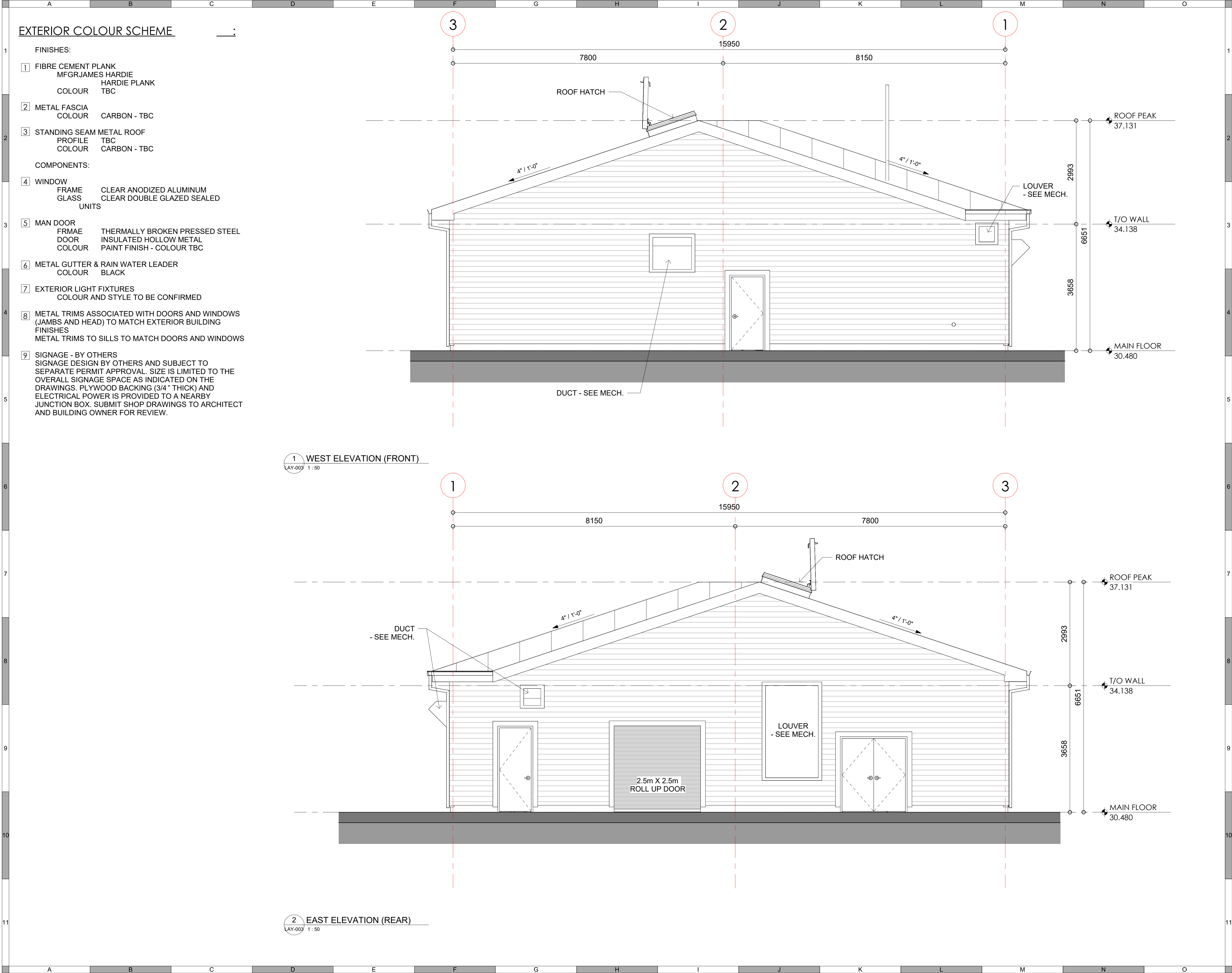
Scale 1 : 50

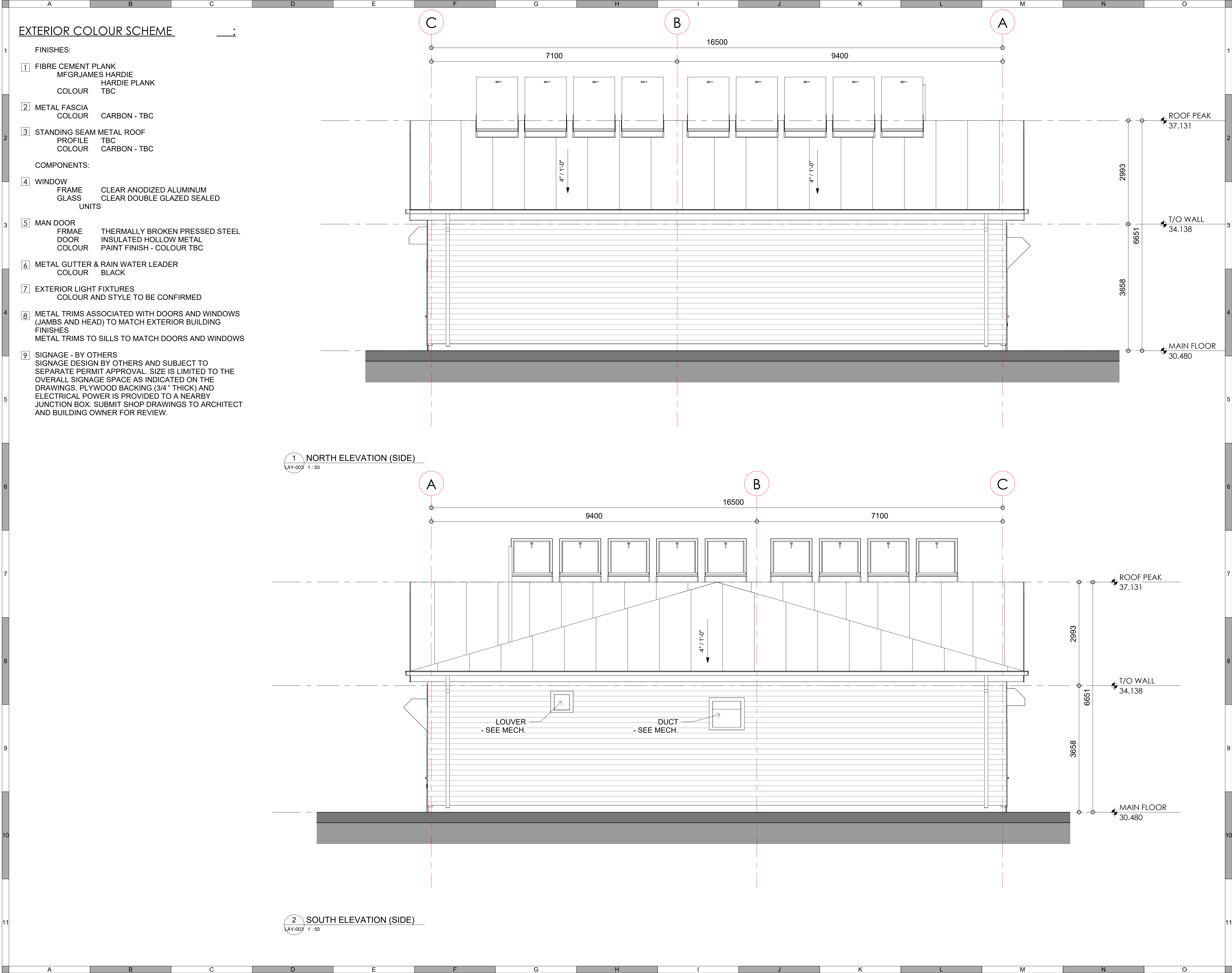
Quality Control by	II
Designed by	II
Drawn by	KP M

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ROOF PLAN

Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revis
FORWP-02-A-LAY-005	

NOT FOR CONSTRUCTION





ATTENTION
This drawing is prepared for the sole use of the OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP
urbansystems.ca

Professional Seals				
#	Date	Issue/ Revision	App.	
1	24/11/06	ISSUED FOR 75%	IM	
2	24/11/29	FOR DESIGN ASSIST RFP	IM	

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



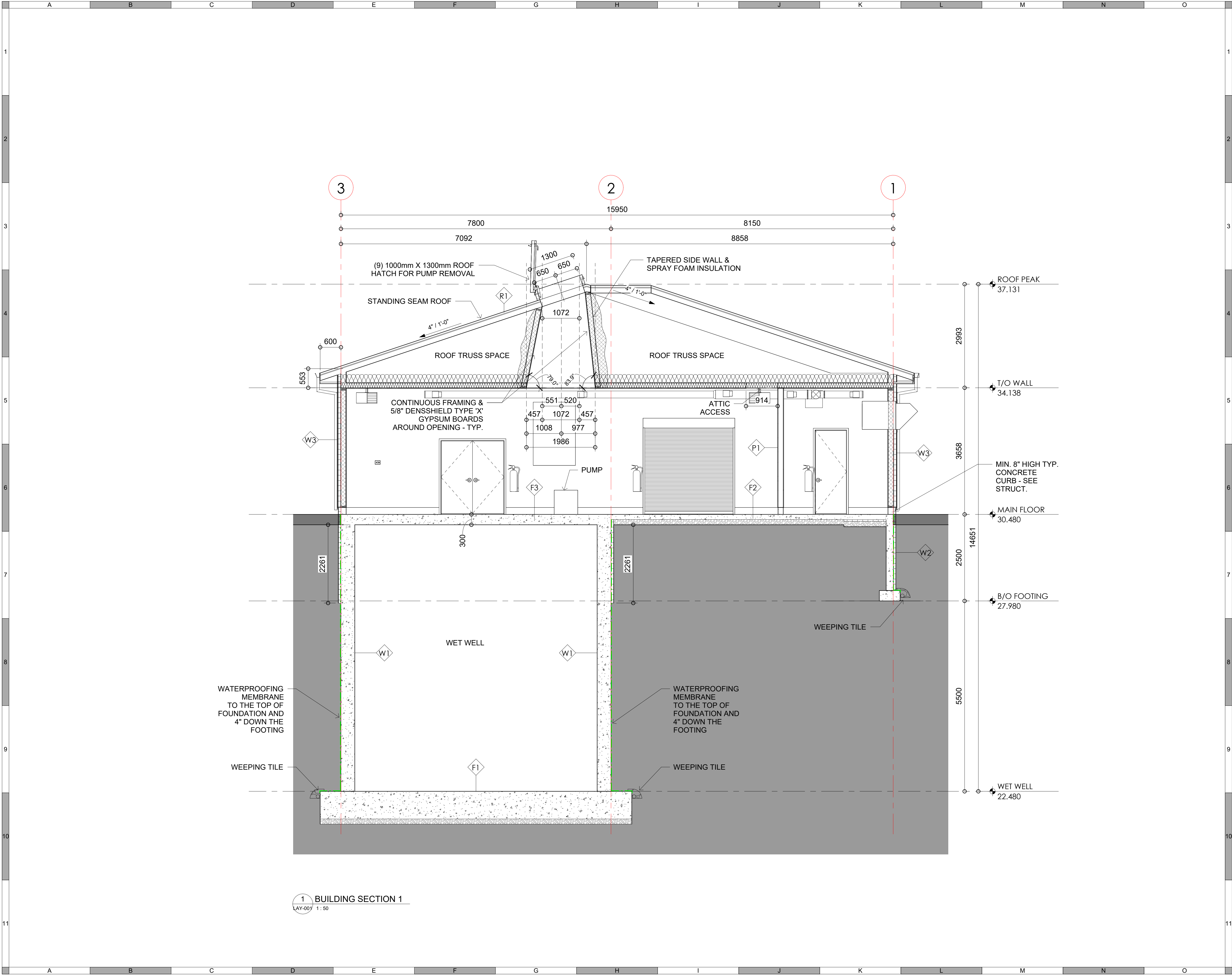
Scale: As indicated

Quality Control by: IM
Designed by: IM
Drawn by: KP ML

**FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ELEVATIONS**

Sheet Number: _____ of _____
Project Number: 29121-005-12
Drawing Number: FORWP-02-A- GA-001-02
Revision: 2

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



URBAN
systems

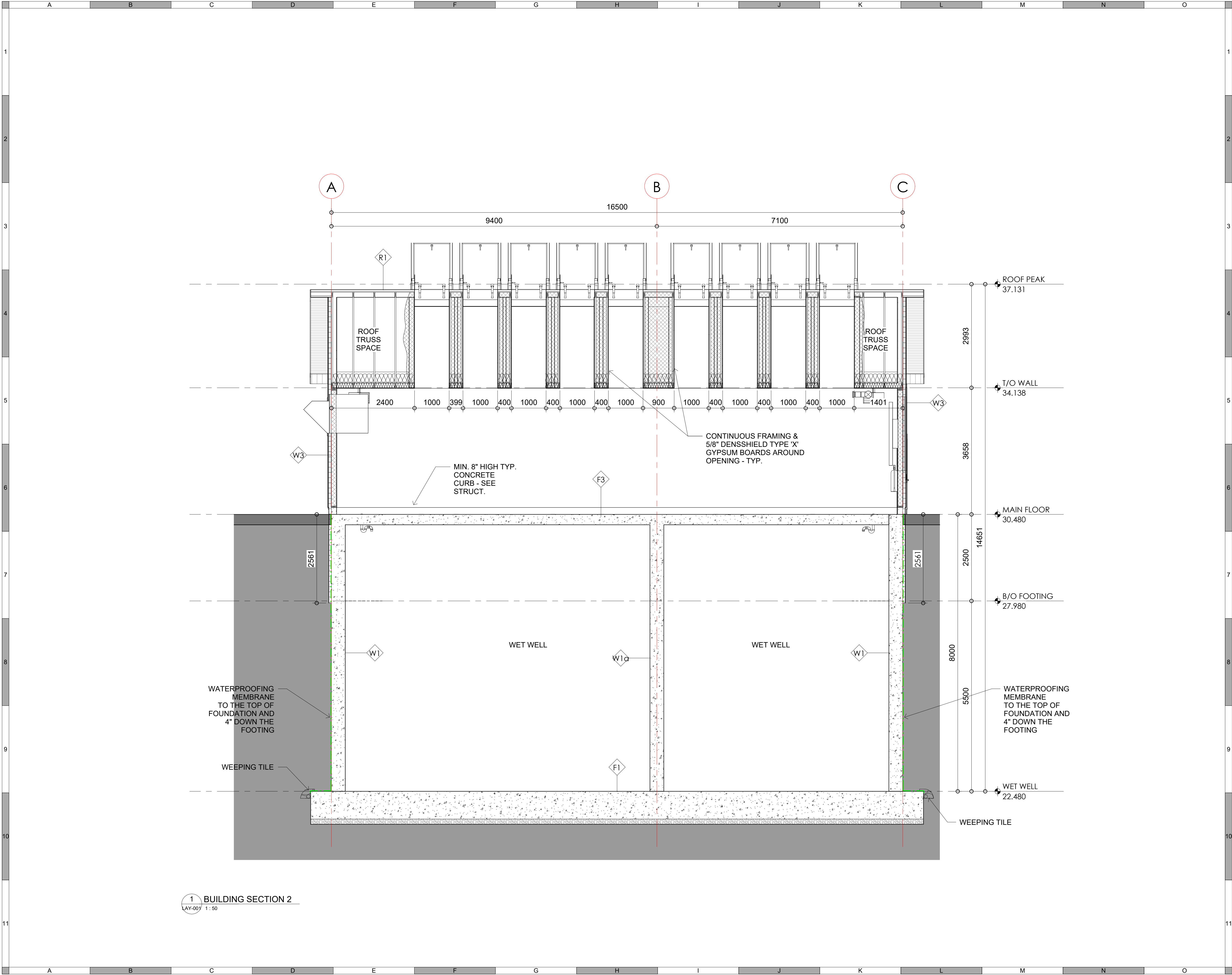
Scale
1 : 50

Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
BUILDING SECTION

Sheet Number of
Project Number
29121-005-12
Drawing Number
FORWP-02-A- GA-002-01
Revision
2

NOT FOR CONSTRUCTION



1 BUILDING SECTION 2
LAY-001 1:50

ATTENTION
This drawing is prepared for the sole use of OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM

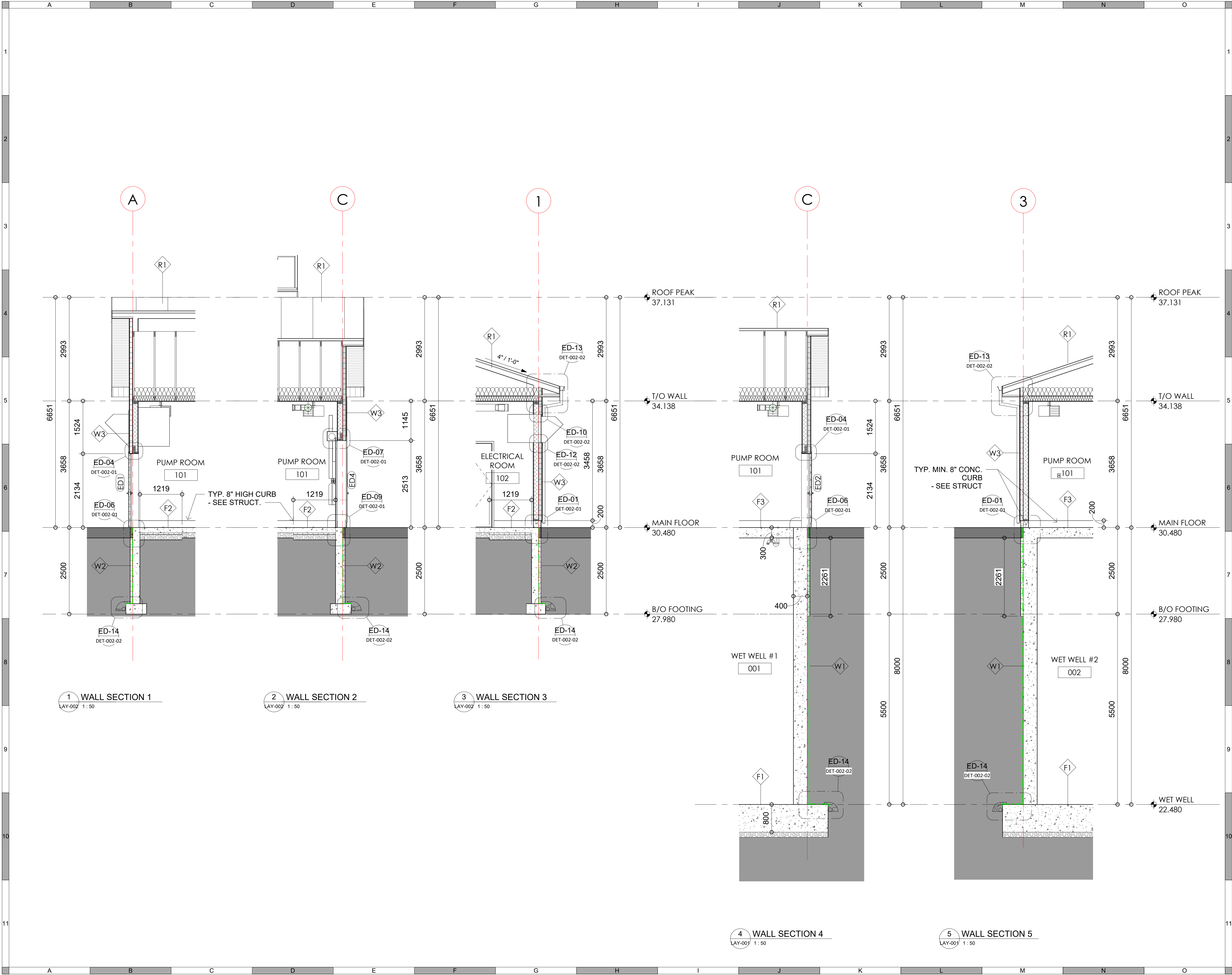


URBAN
systems

Scale 1:50
Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
BUILDING SECTION
Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-A- GA-002-02 2

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of the OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon Architect

MPE
a division of Englobe

FOR DESIGN ASSIST RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



URBAN systems

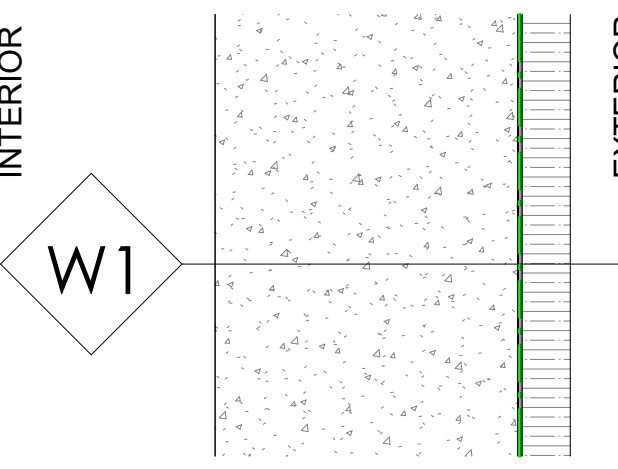
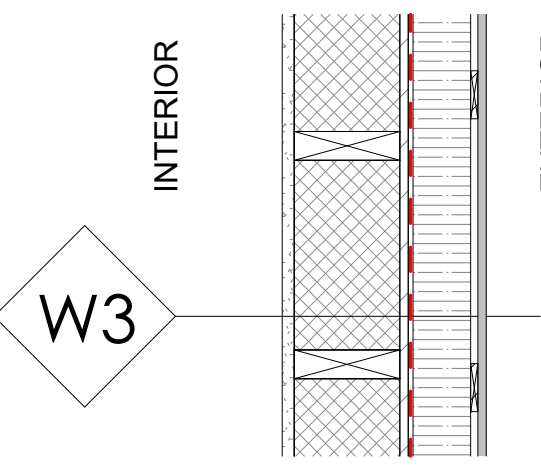
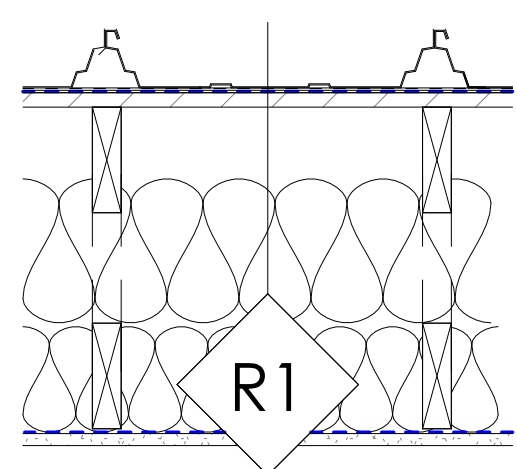
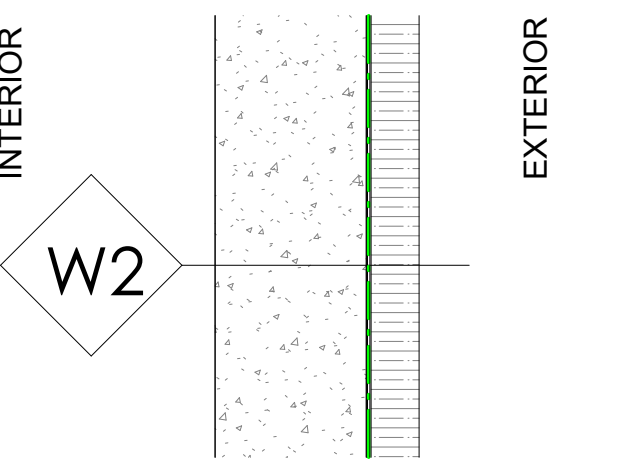
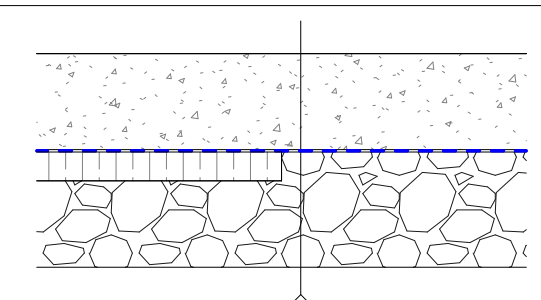
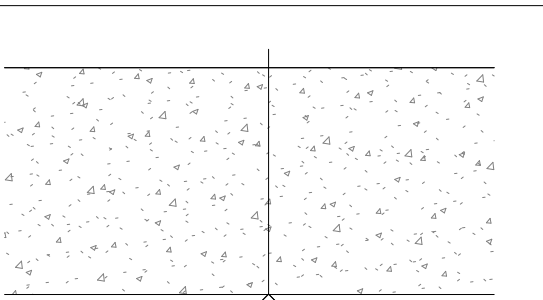
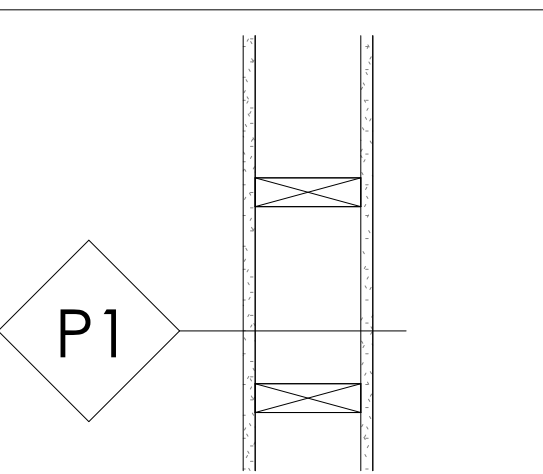
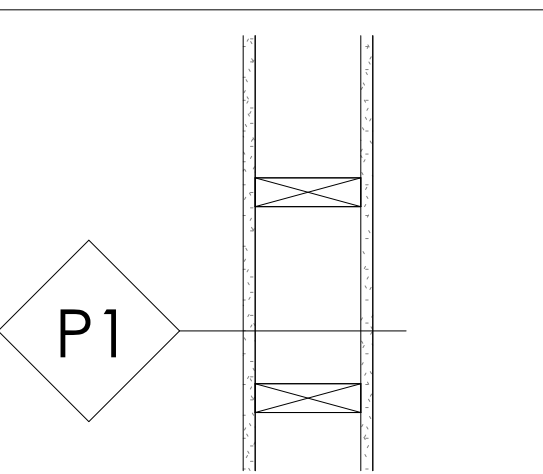
Scale 1 : 50

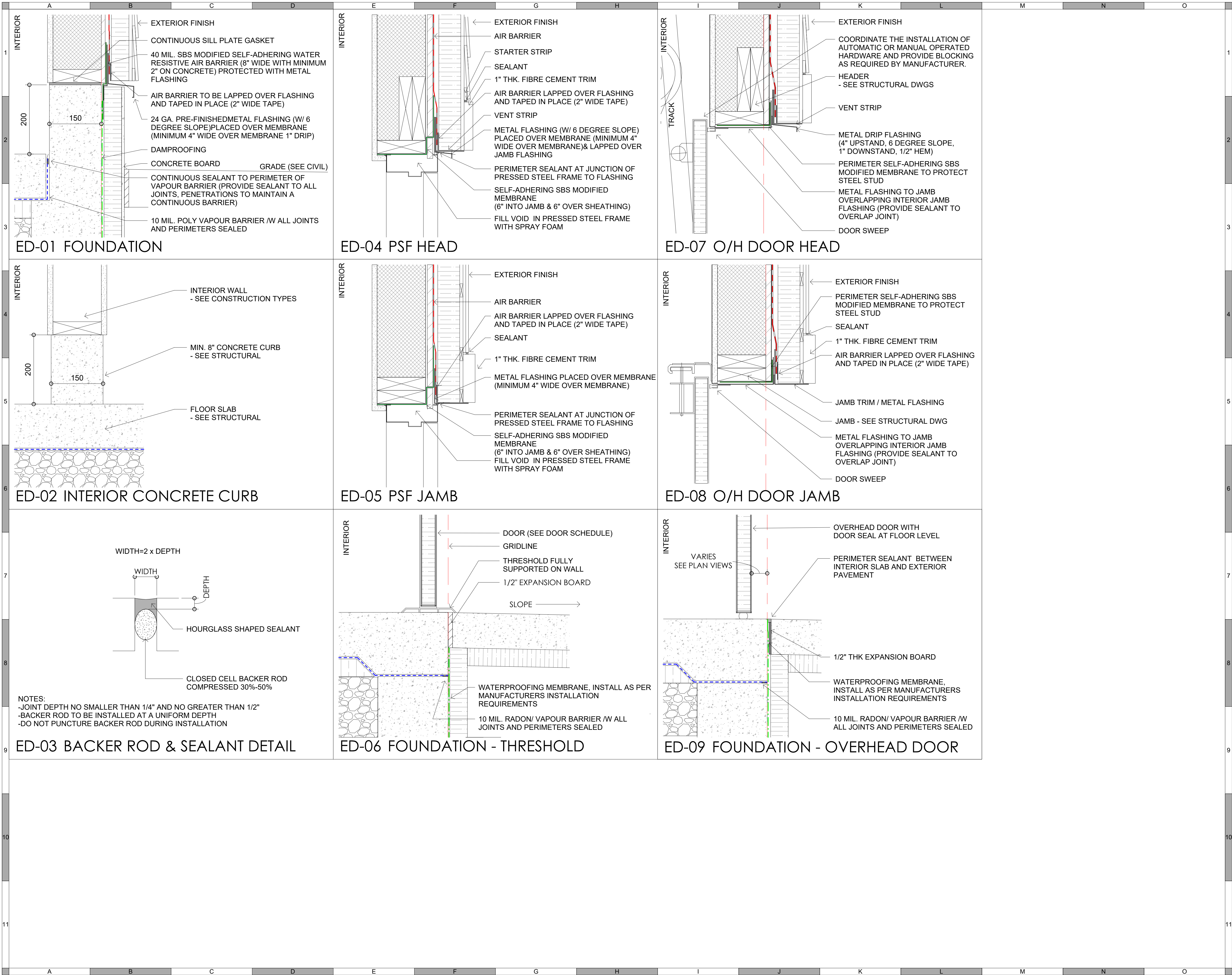
Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS MIDLINE PUMP STATION WALL SECTIONS

Sheet Number	of
Project Number	29121-005-12
Drawing Number	FORWP-02-A-GA-003
Revision	2

NOT FOR CONSTRUCTION

FND WALL - W1 (WET WELL)					WALL - W3					ROOF - R1				
(NOTE: GRIDLINES ARE TO THE OUTSIDE / EXTERIOR FACE OF CONCRETE)					(NOTE: GRIDLINES ARE TO THE OUTSIDE / EXTERIOR FACE OF STUDS)					(NOTE: DIMENSIONS ARE TO THE TOP OF ROOF DECK / SHEATHING)				
														
FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A LOADBEARING					FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: NA LOADBEARING/NON-LOADBEARING					FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A				
ASSEMBLY (EXTERIOR TO INTERIOR)					ASSEMBLY (EXTERIOR TO INTERIOR)					ASSEMBLY (TOP TO BOTTOM)				
THK (IN)					THK (IN)					TH (IN)				
THK (mm)					THK (mm)					THK (mm)				
RSI/mm					RSI/mm					RSI/mm				
RSI VALUE					RSI VALUE					RSI VALUE				
EPS INSULATION BOARD					EXTERIOR AIR FILM					EXTERIOR AIR FILM				
DAMPROOFING					FIBER CEMENT LAP SIDING					26 GA. STANDING SEAM METAL ROOF				
REINFORCED CONCRETE (SEE STRUCTURAL)					PLYWOOD FURRING STRIPS (AIR SPACE)					HI TEMP SELF-ADHERING MEMBRANE				
PROPOSED ASSEMBLY EFFECTIVE RSI =					RIGID INSULATION					SHEATHING (SEE STRUCTURAL)				
PROPOSED ASSEMBLY EFFECTIVE U VALUE =					AIR BARRIER					R31 BATT INSULATION ABOVE BOTTOM CHORD				
REQUIRED EFFECTIVE RSI =					OSB SHEATHING (SEE STRUCTURAL)					CALCULATION 1				
REQUIRED U VALUE =					CALCULATION 1					ENGINEERED RAISED HEEL TRUSS @ 600mm O.C.				
FND WALL - W2					2X6 WOOD STUDS @ 400mm O.C. (SEE STRUCT.)					R24 BATT INSULATION				
(NOTE: GRIDLINES ARE TO THE OUTSIDE / EXTERIOR FACE OF CONCRETE)					SPRAY FOAM INSULATION					6 MIL VAPOUR BARRIER				
					TYPE X DENSSHIELD TILE BACKER BOARD					TYPE X DENSSHIELD TILE BACKER BOARD				
FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A LOADBEARING					INTERIOR FINISH (SEE FINISHES SCHEDULE)					INT. CEILING FINISH (SEE FINISHES SCHEDULE)				
ASSEMBLY (EXTERIOR TO INTERIOR)					INTERIOR AIR FILM					INTERIOR AIR FILM				
THK (IN)					THK (IN)					THK (IN)				
THK (mm)					THK (mm)					THK (mm)				
RSI/mm					RSI/mm					RSI/mm				
RSI VALUE					RSI VALUE					RSI VALUE				
EPS INSULATION BOARD					PROPOSED ASSEMBLY EFFECTIVE RSI =					PROPOSED ASSEMBLY EFFECTIVE RSI =				
DAMPROOFING					PROPOSED ASSEMBLY EFFECTIVE U VALUE =					PROPOSED ASSEMBLY EFFECTIVE U VALUE =				
REINFORCED CONCRETE (SEE STRUCTURAL)					REQUIRED EFFECTIVE RSI =					REQUIRED EFFECTIVE RSI (NEBC 2011) =				
PROPOSED ASSEMBLY EFFECTIVE RSI =					REQUIRED U VALUE =					REQUIRED U VALUE (W/m2*K) =				
PROPOSED ASSEMBLY EFFECTIVE U VALUE =					CALCULATION 1 - EFFECTIVE RSI					CALCULATION 1 - EFFECTIVE RSI				
REQUIRED EFFECTIVE RSI =					2X6 WOOD STUD @ 400mm O.C. (SEE STRUCT.)					ENGINEERED RAISED HEEL TRUSS @ 600mm				
REQUIRED U VALUE =					WITH					WITH				
					SPRAY FOAM INSULATION					R24 BATT INSULATION				
					THK (IN)					THK (IN)				
					THK (mm)					THK (mm)				
					RSI/mm					RSI/mm				
					RSI VALUE					RSI VALUE				
					2X6 WOOD STUD @ 400mm O.C. (SEE STRUCT.)					ENGINEERED RAISED HEEL TRUSS @ 600mm O.C.				
					SPRAY FOAM INSULATION					R24 BATT INSULATION				
					5 1/2					5 1/2				
					140					140				
					0.0085					0.0085				
					5.03					4.23				
					EFFECTIVE RSI-VALUE CALCULATION					EFFECTIVE RSI-VALUE CALCULATION				
					$\frac{100}{\frac{23}{1.19} + \frac{77}{5.03}} = 2.88$					$\frac{100}{\frac{7}{1.19} + \frac{93}{4.23}} = 3.59$				
FLOOR - F2					FLOOR - F3									
(NOTE: DIMENSIONS ARE TO THE TOP OF THE FLOOR ASSEMBLY BEFORE INTERIOR FINISHES ARE APPLIED)					(NOTE: DIMENSIONS ARE TO THE TOP OF THE FLOOR ASSEMBLY BEFORE INTERIOR FINISHES ARE APPLIED)									
														
F2					F3									
FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A					FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A									
ASSEMBLY (TOP TO BOTTOM)					ASSEMBLY (TOP TO BOTTOM)									
THK (IN)					THK (IN)									
THK (mm)					THK (mm)									
RSI/mm					RSI/mm									
RSI VALUE					RSI VALUE									
INTERIOR AIR FILM					INTERIOR FINISH (SEE FINISHES SCHEDULE)									
INTERIOR FINISH (SEE FINISHES SCHEDULE)					REINFORCED CONCRETE (SEE STRUCTURAL)									
REINFORCED CONCRETE (SEE STRUCTURAL)					INTERIOR FINISH (SEE FINISHES SCHEDULE)									
10 MIL. VAPOUR BARRIER														
EPS INSULATION BOARD (1.2m AROUND PERIMETER)														
RADON ROCK*														
COMPACTED GRAVEL (SEE STRUCTURAL)*														
PROPOSED ASSEMBLY EFFECTIVE RSI =														
PROPOSED ASSEMBLY EFFECTIVE U VALUE =														
REQUIRED EFFECTIVE RSI =														
REQUIRED U VALUE =														
PARTITION - P1					PARTITION - P1									
(NOTE: DIMENSIONS ARE TO THE CENTERLINE OF PARTITIONS)					(NOTE: DIMENSIONS ARE TO THE CENTERLINE OF PARTITIONS)									
														
P1					P1									
FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A LOADBEARING/NON-LOADBEARING					FIRE RESISTANCE RATING: N/A STC RATING: N/A CODE REFERENCE: N/A LOADBEARING/NON-LOADBEARING									
ASSEMBLY (INTERIOR TO INTERIOR)					ASSEMBLY (INTERIOR TO INTERIOR)									
THK (IN)					THK (IN)									
THK (mm)					THK (mm)									
INTERIOR WALL FINISH					INTERIOR WALL FINISH									
TYPE X DENSSHIELD TILE BACKER BOARD					TYPE X DENSSHIELD TILE BACKER BOARD									
WOOD STUDS @ 400mm O.C.					WOOD STUDS @ 400mm O.C.									
TYPE X DENSSHIELD TILE BACKER BOARD					TYPE X DENSSHIELD TILE BACKER BOARD									
INTERIOR WALL FINISH					INTERIOR WALL FINISH									



ATTENTION
This drawing is prepared for the sole use of OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM



URBAN
systems

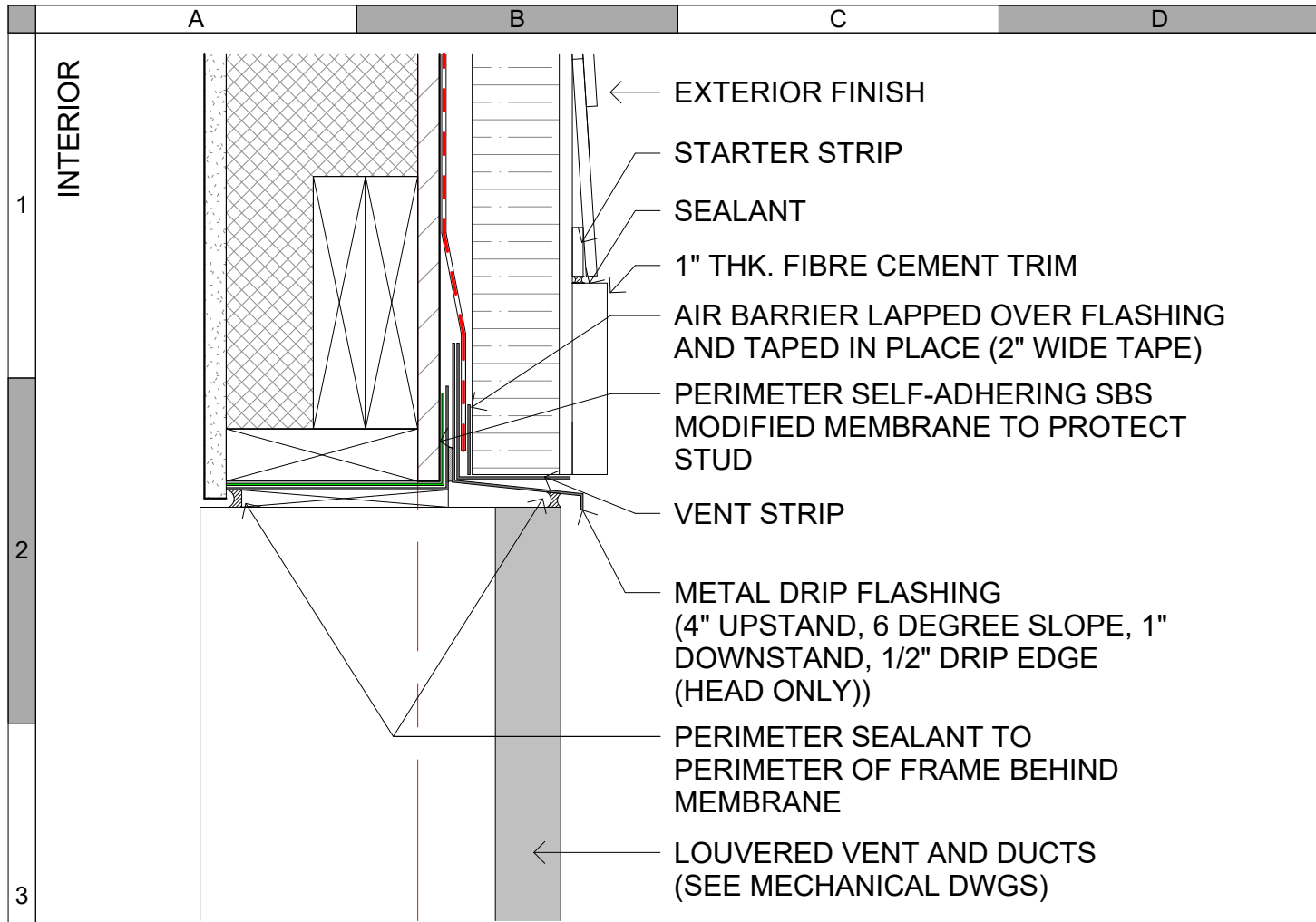
Scale
1 : 5

Quality Control by IM
Designed by IM
Drawn by KP ML

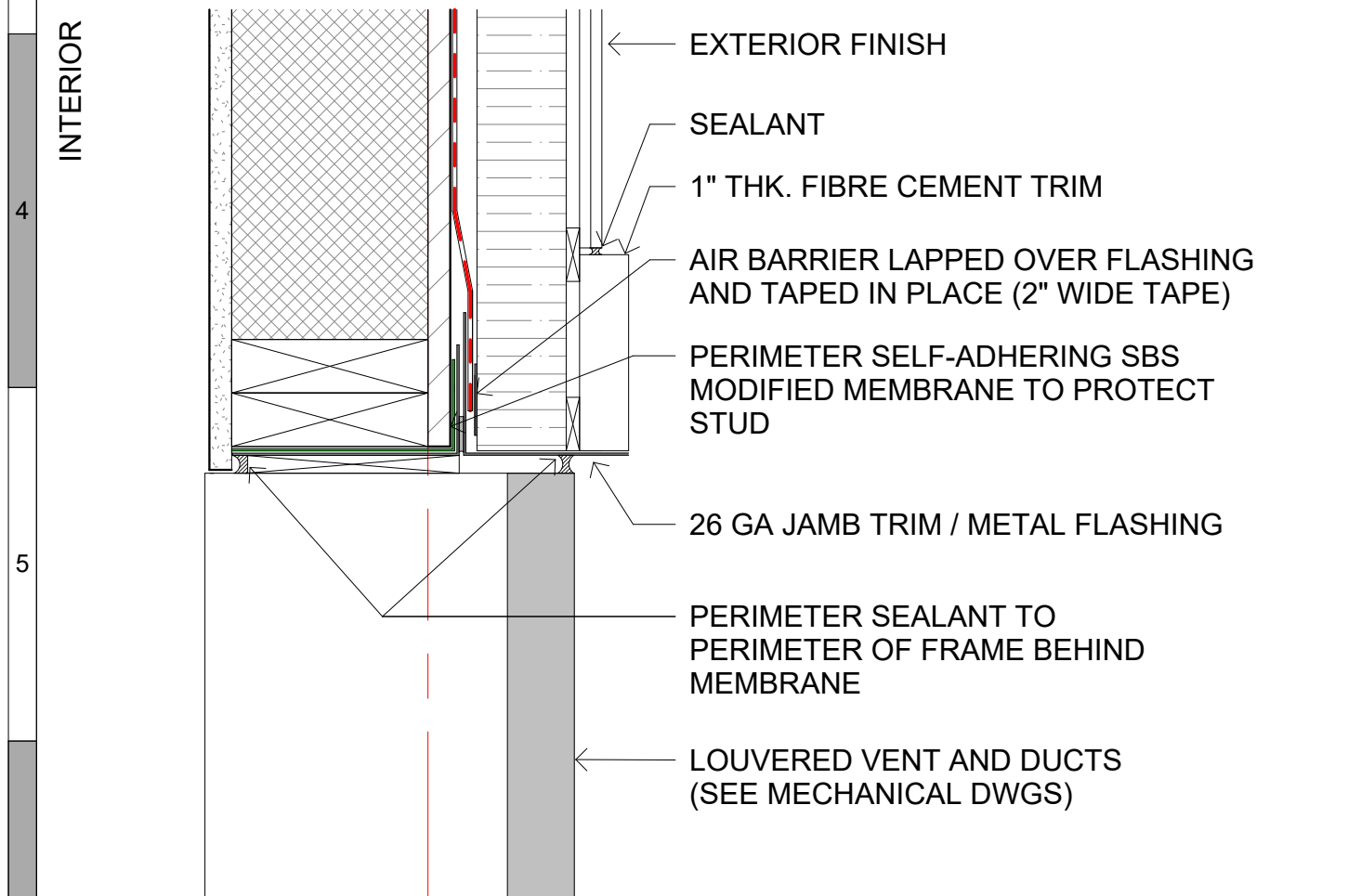
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
EXTERIOR DETAILS

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-A-DET-002-01 2

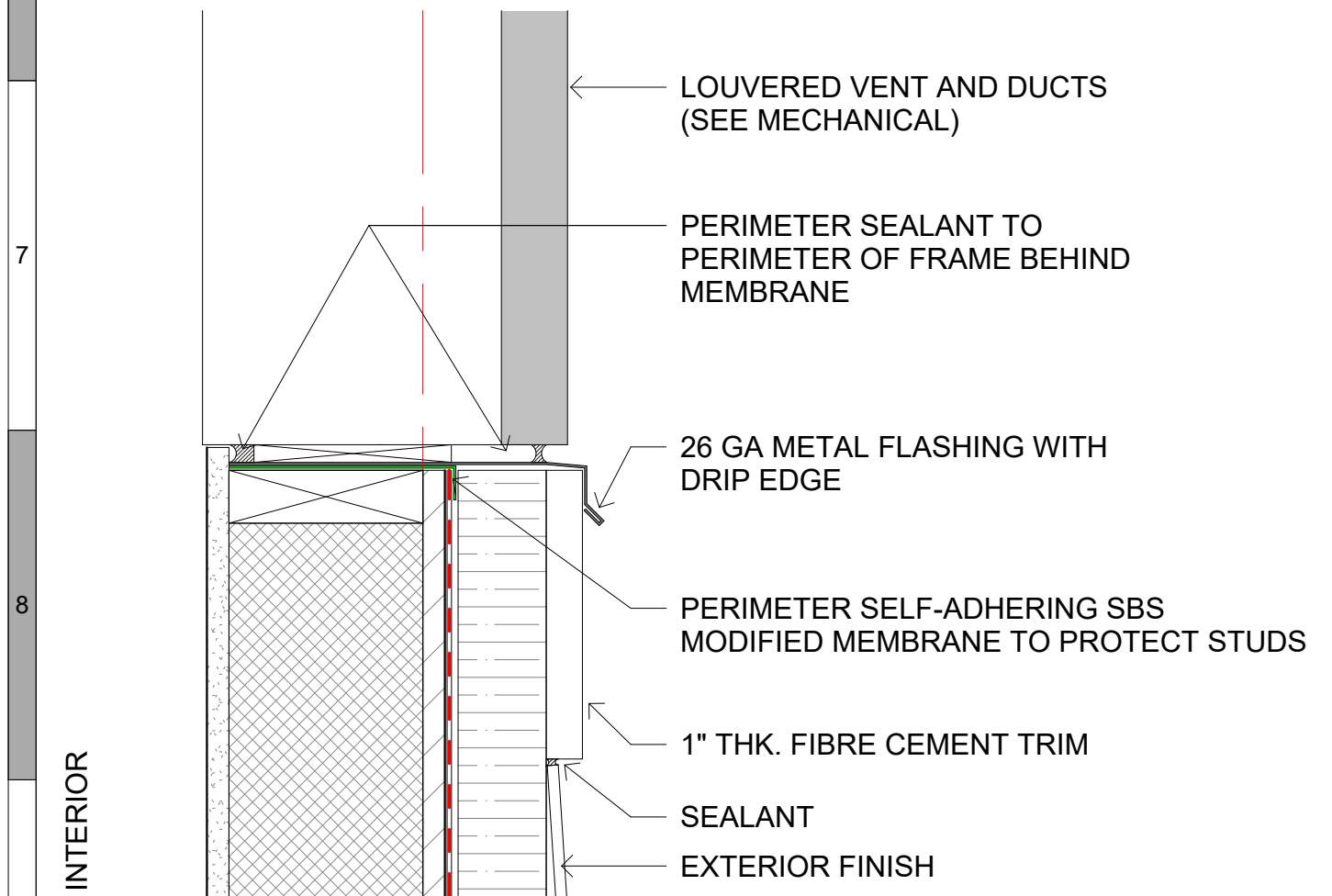
NOT FOR CONSTRUCTION



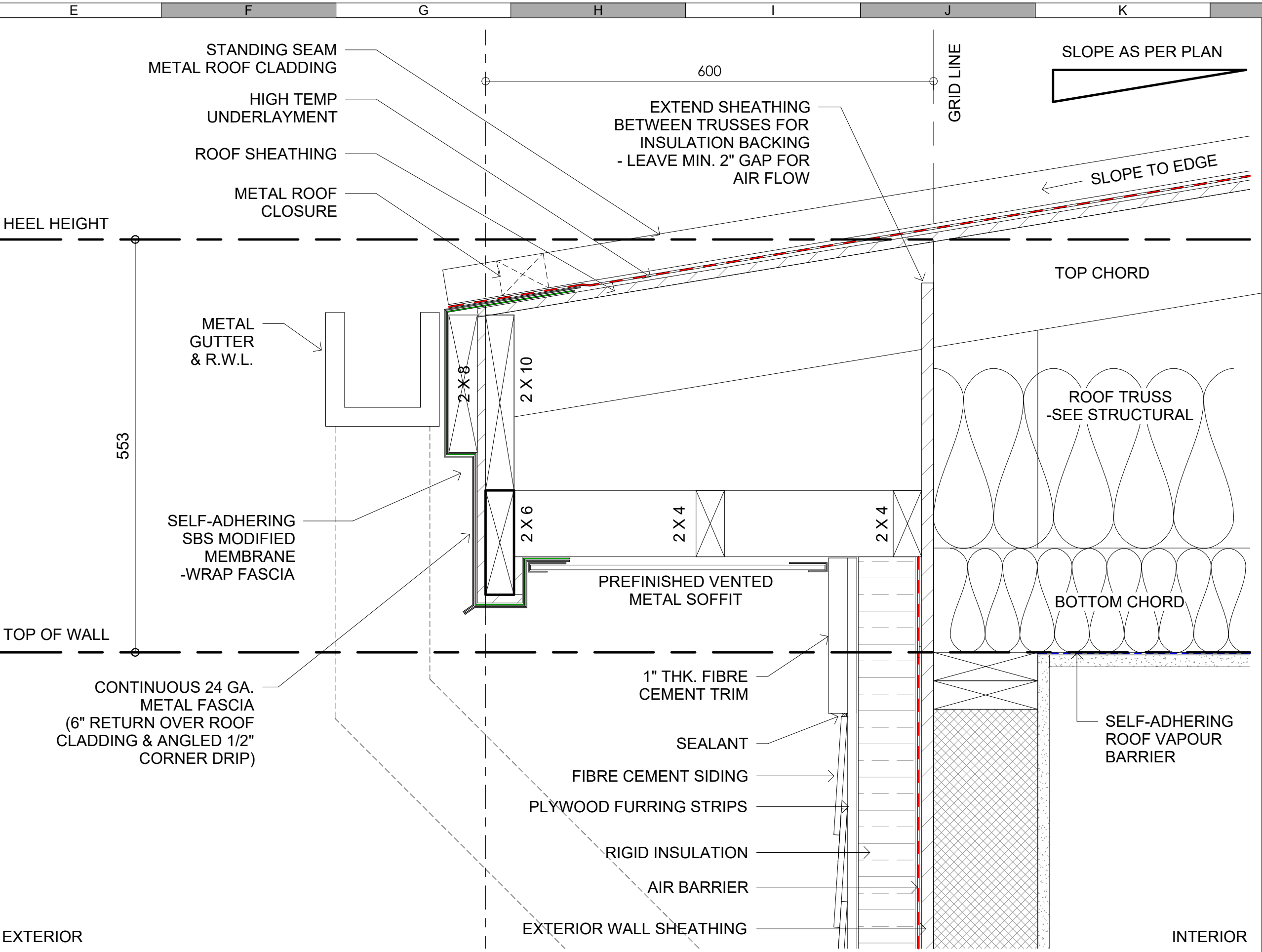
ED-10 LOUVER VENT HEAD



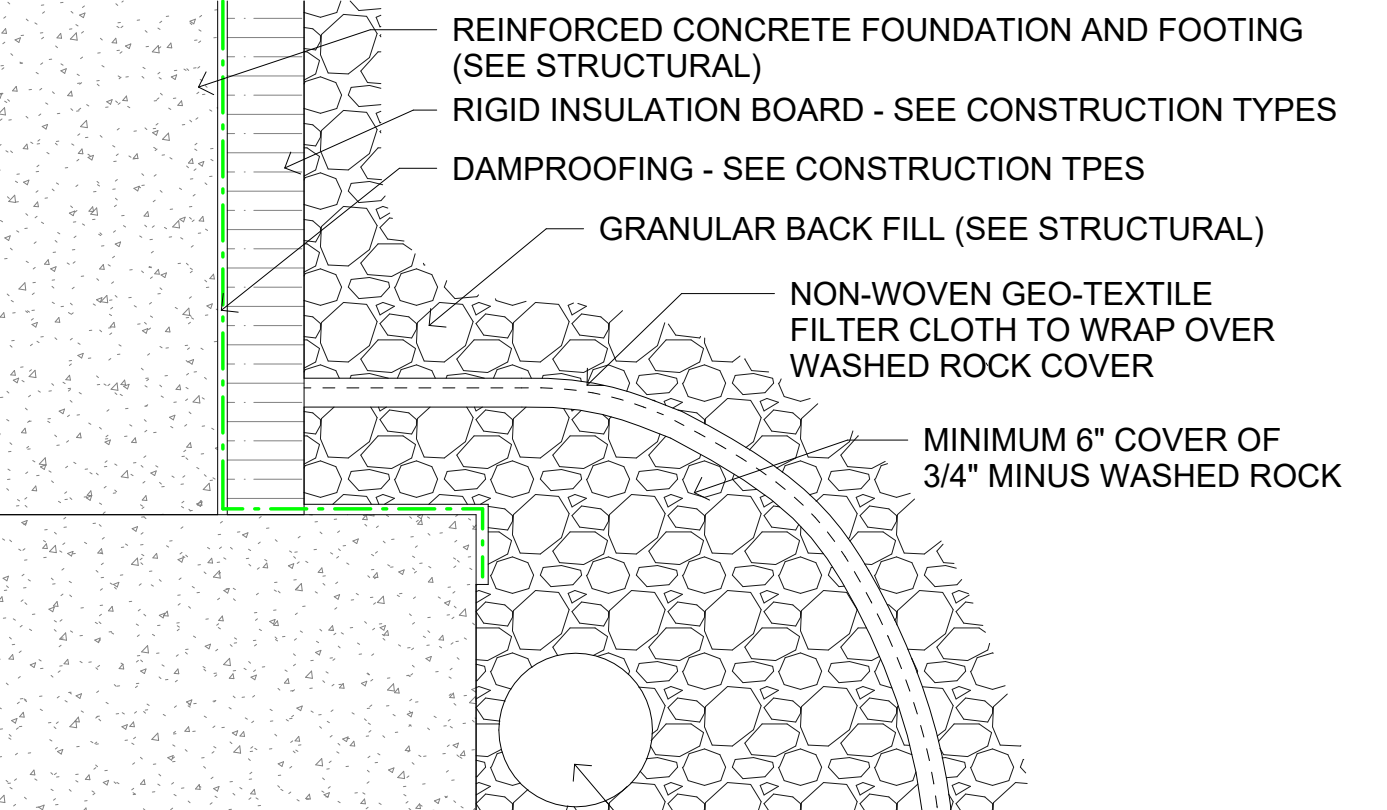
ED-11 LOUVER VENT JAMB



ED-12 LOUVER VENT SILL



ED-13 ROOF LOW EAVE



ED-14 FOOTING W/ WEEPING TILE

ATTENTION
This drawing is prepared for the sole use of OWNER.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App.
1	24/11/06	ISSUED FOR 75%	IM
2	24/11/29	FOR DESIGN ASSIST RFP	IM

FOOTHILLS COUNTY
Okotoks
Historic Rail Substation Plaza

URBAN
systems

Scale
1 : 5

Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
EXTERIOR DETAILS

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-A-DET-002-02 2

NOT FOR CONSTRUCTION

[illegible]

ATTENTION
This drawing is prepared for the sole use of
OWNER
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. This drawing does not, and is not intended to, expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect



FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	A
1	24/11/06	ISSUED FOR 75%	
2	24/11/29	FOR DESIGN ASSIST RFP	

URBAN
systems

Scale As indicated

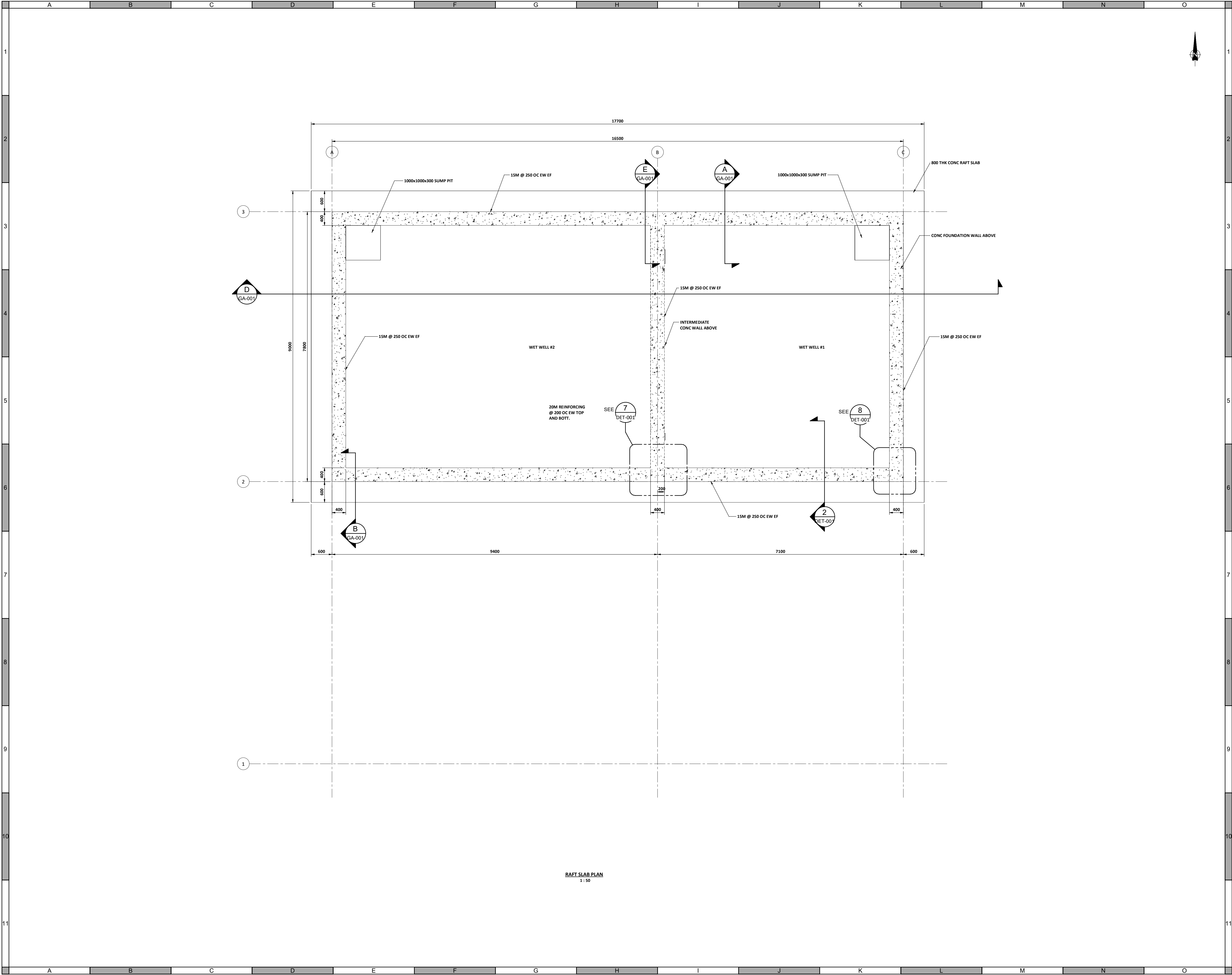
Quality Control by IM
Designed by IM
Drawn by KP ML

FOOTHILLS OKOTOKS MIDLINE PUMP STATION DOOR SCHEDULE

Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-A- SCH-001	2

NOT FOR CONSTRUCTION

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	GENERAL REQUIREMENTS														
1	1. THESE DRAWINGS ARE PREPARED TO GENERALLY ACCEPTED STANDARDS OF PROFESSIONAL CARE. THE DESIGN AND DRAWINGS ARE PREPARED FOR EXPERIENCED CONTRACTORS WHO ARE COMPETENT AND FOLLOW THE APPLICABLE CODES AND STANDARDS. ALL WORK NOT EXPLICITLY SHOWN OR OUTLINED IN THE APPLICABLE STANDARDS AND CODES SHALL BE COMPLETED TO GENERALLY ACCEPTED LEVELS OF GOOD PRACTICE.														
	2. DRAWING NOTES AND SPECIFICATIONS ARE INSTRUCTIONS TO THE CONTRACTOR AND APPLY GENERALLY TO ALL THE WORK UNLESS MORE SPECIFIC INFORMATION IS SHOWN ELSEWHERE ON THE DRAWINGS.														
	3. THESE DRAWINGS REPRESENT THE COMPLETED STRUCTURE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY (INCLUDING UTILITIES) DURING CONSTRUCTION. THE STRUCTURE SHALL NOT BE LOADED IN EXCESS OF THE DESIGN LOADS.														
2	4. VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS ON SITE AND IN THE DRAWINGS. INFORM THE ENGINEER OF RECORD (EOR) IN WRITING OF ANY DISCREPANCIES OR OMISSIONS. ANY DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED PRIOR TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMEDIATED, WHERE REQUIRED.														
	5. WHERE REFERENCES ARE MADE TO CODES OR STANDARDS, THESE SHALL BE THE EDITION REFERENCED IN THE GOVERNING BUILDING CODE OR LATEST RELEASE, WHICHEVER IS THE MOST STRINGENT.														
	6. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS. ANY DISCREPANCIES WITHIN THESE DOCUMENTS SHALL BE IDENTIFIED IN WRITING TO THE EOR PRIOR TO CONSTRUCTION WITH SUFFICIENT TIME FOR REMEDIATION.														
	7. THESE DRAWINGS SHALL NOT BE USED FOR PRICING, TENDERING OR CONSTRUCTION UNLESS SPECIFICALLY STATED IN THE REVISION COLUMN AND ARE STAMPED BY A PROFESSIONAL ENGINEER.														
4	8. THE STRUCTURE REQUIRES INSPECTIONS BY THE EOR AT KEY POINTS DURING CONSTRUCTION. THESE POINTS ARE NOT LIMITED TO THE FOLLOWING: 8.1. REINFORCING INSPECTIONS, PRIOR TO CONCRETE POURS. 8.2. WOOD FRAMING INSPECTIONS, PRIOR TO APPLICATIONS OF FINISHES. 8.3. FINAL BUILDING INSPECTIONS PRIOR TO OCCUPANCY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE EOR A MINIMUM OF 2 WORKING DAYS PRIOR TO THESE CRITICAL TIMES AND ACCOMMODATE THEIR, OR APPROVED DESIGNATES, INSPECTIONS.														
	9. DO NOT SCALE DRAWINGS. IF DIMENSION OR SIZES ARE NOT IDENTIFIED ON THE DRAWINGS, CONTRACTOR SHALL CONTACT EOR.														
5	ADHESIVE ANCHORS														
	1. ADHESIVE ANCHOR INSTALLERS TO BE TRAINED BY THE ANCHOR MANUFACTURER PRIOR TO INSTALLATION OF ANCHORS AND SHALL PROVIDE WRITTEN CONFIRMATION OF TRAINING.														
	WOOD CONSTRUCTION														
	1. WOOD DESIGN AND FRAMING SHALL BE IN ACCORDANCE WITH CSA O86 AND PART 9 OF THE BUILDING CODE, UNLESS NOTED OTHERWISE(UNO).														
6	2. LUMBER SHALL BE A MINIMUM OF SPRUCE-PINE-FIR (SPF) No. 2 OR BETTER, UNO.														
	3. ENGINEERED LUMBER SHALL BE AS FOLLOWS: 3.1. BEAMS: LVL 2.0E WITH Fb=2900 OR GREATER 3.2. COLUMNS: PSL 1.8E OR GREATER														
	4. BUILT-UP WOOD COLUMNS OR GANG STUDS SHALL BE CONSTRUCTED OF FULL-LENGTH MEMBERS, WITH NO SPLICES. FASTENING OF PLYS, UNO, SHALL BE AS FOLLOWS: 4.1. FOR 38X89 - A SINGLE STAGGERED COLUMN OF 76mm COMMON NAILS @ 200mm ON CENTRE(OC). 4.2. FOR 38X140 OR LARGER - 2 COLUMNS OF 76mm COMMON NAILS @ 200mm OC.														
7	5. COLUMNS SHALL BE CONSTRUCTED OF JACK STUDS AND AT LEAST 1 KING STUD.														
	6. COLUMNS AND POINT LOADS SHALL BE CONTINUOUS TO THE FOUNDATION OR TRANSFER BEAMS. WHERE FLOORS OR OTHER FRAMING INTERRUPT THE COLUMN, PROVIDE BLOCKING EQUAL TO THE COLUMN.														
	7. TRUSSES AND I-JOISTS ON THE DRAWINGS NOTED "AS PROVIDED BY MANUFACTURER", SHALL BE DESIGNED FOR THE LOADINGS EXPECTED AND MINIMUMS IDENTIFIED ON THE DRAWINGS. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER WITH A STAMP IN THE AREA OF THE PROJECT. COORDINATE MECHANICAL AND ELECTRICAL AFFECTING STRUCTURE WITH DRAWINGS AND CONSTRUCTION TEAM.														
8	8. EXCEPT WHERE DETAILED ON THE DRAWINGS, CUTTING, NOTCHING, DRILLING HOLES IN STRUCTURAL COMPONENTS IS NOT PERMITTED, UNO.														
	9. A MAXIMUM OF 4 ELECTRICAL WIRING HOLES THROUGH WALL STUDS, AND COLUMNS SHALL BE SMALLER THAN 20 DIAMETER, CENTERED IN THE WIDTH AND A MINIMUM 300 FROM THE TOP OR BOTTOM. HOLES SHALL BE SPACED MINIMUM 200 OC.														
	10. STUD SPACING: 38x140 AT 406 OC UNO.														
9	11. SHEATHING SHALL BE AS FOLLOWS: 11.1. ROOFS (SLOPED) - 12 THK EXTERIOR GRADE OSB OR PLYWOOD FASTENED WITH 64 LG. COMMON NAILS AT 150 OC AROUND PERIMETER AND 300 IN FIELD OF EACH SHEET. H-CLIPS FOR UNBLOCKED EDGES. 11.2. EXTERIOR AND SHEAR WALLS - 12 THK PLYWOOD FASTENED WITH 64 LG. COMMON NAILS AT 150 OC AROUND PERIMETER AND 300 IN FIELD OF EACH SHEET. BLOCKING OF EDGES, AS NOTED.														
	LIST OF ABBREVIATIONS														
	ALT ALTERNATE GL GRIDLINE														
	ARCH ARCHITECTURAL MAX MAXIMUM														
	BCE BOTTOM CHORD EXTENSION MECH MECHANICAL														
	BOT BOTTOM MIN MINIMUM														
	BRDG BRIDGING No NUMBER														
	C/W COMPLETE WITH OC ON CENTRE														
	CMU CONCRETE MASONRY UNIT WALL OPP OPPOSITE														
	CL CENTER LINE PL PLATE														
	CO CLEAR COVER REINF REINFORCEMENT														
	CONC CONCRETE R/W REINFORCE WITH														
	CONT CONTINUOUS SDL SUPERIMPOSED DEAD LOAD														
	CP COMPLETE PENETRATION SOG SLAB ON GRADE														
	DP DEEP STG STAGGERED														
	DBL DOUBLE TCE TOP CHORD EXTENSION														
	DWG DRAWING TYP TYPICAL														
	EF EACH FACE T/O TOP OF														
	EL ELEVATION UNO UNLESS NOTED OTHERWISE														
	ELEC ELECTRICAL U/S UNDERSIDE														
	ES EACH SIDE WWM WELDED WIRE MESH														
	EW EACH WAY W/ WITH														
	EX EXISTING @ AT														
	FTG FOOTING % PERCENT														
	GB GRADE BEAM ° DEGREE														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP

urbansystems.ca

Professional Seals

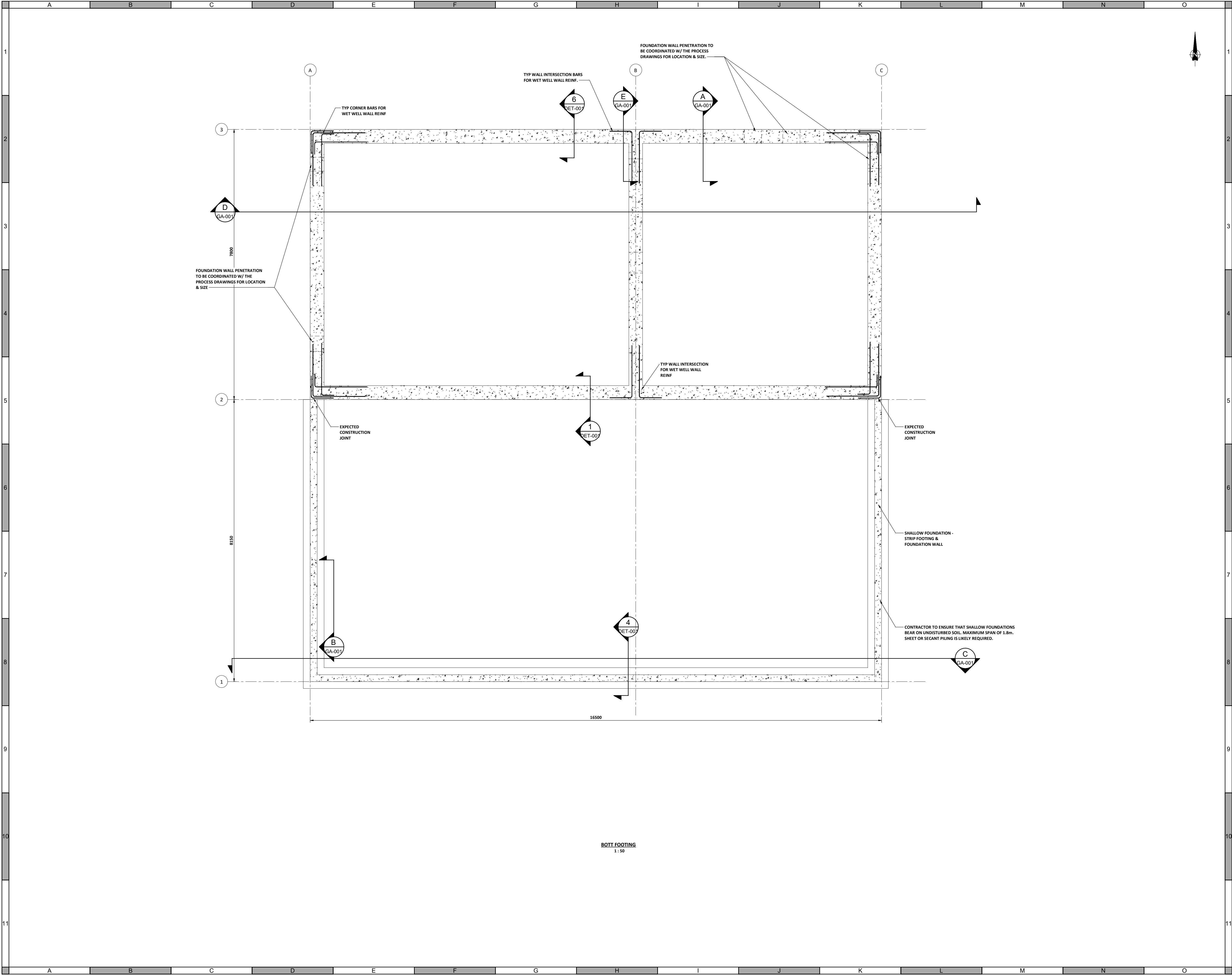
#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



URBAN systems	
Scale 1 : 50	
Quality Control by	SA
Designed by	BDL
Drawn by	BHG

FOOTHILLS OKOTOKS MIDLINE PUMP STATION WET WELL PLAN	
Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-S-LAY-001	D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP

urbansystems.ca

Professional Seals			

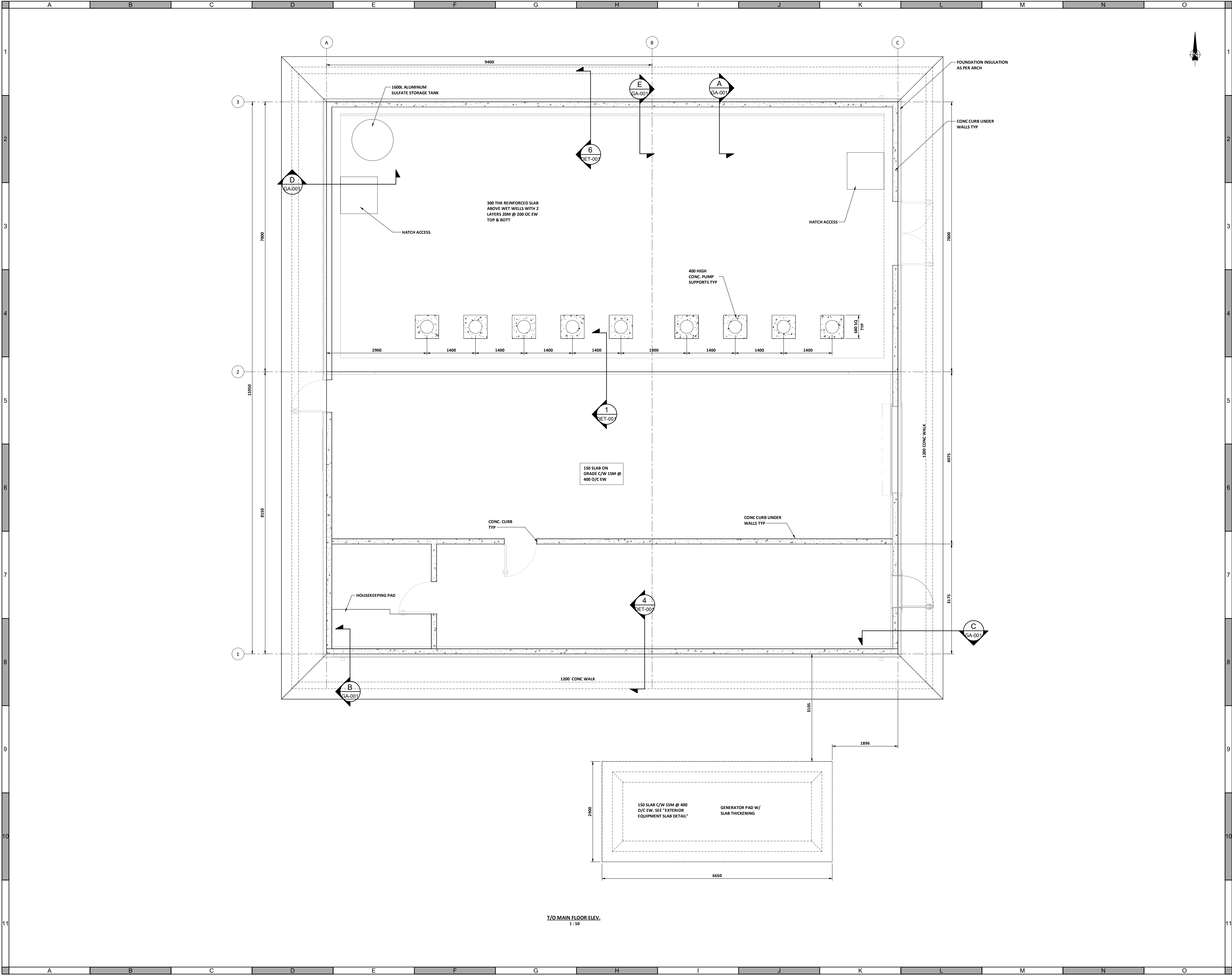
#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



URBAN systems	
Scale	1 : 50
Quality Control by	SA
Designed by	BDL
Drawn by	BHG

FOOTHILLS OKOTOKS MIDLINE PUMP STATION SHALLOW FOUNDATION PLAN	
Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-S-LAY-002	D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP
urbansystems.ca

Professional Seals		

#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



URBAN
systems

Scale
1 : 50

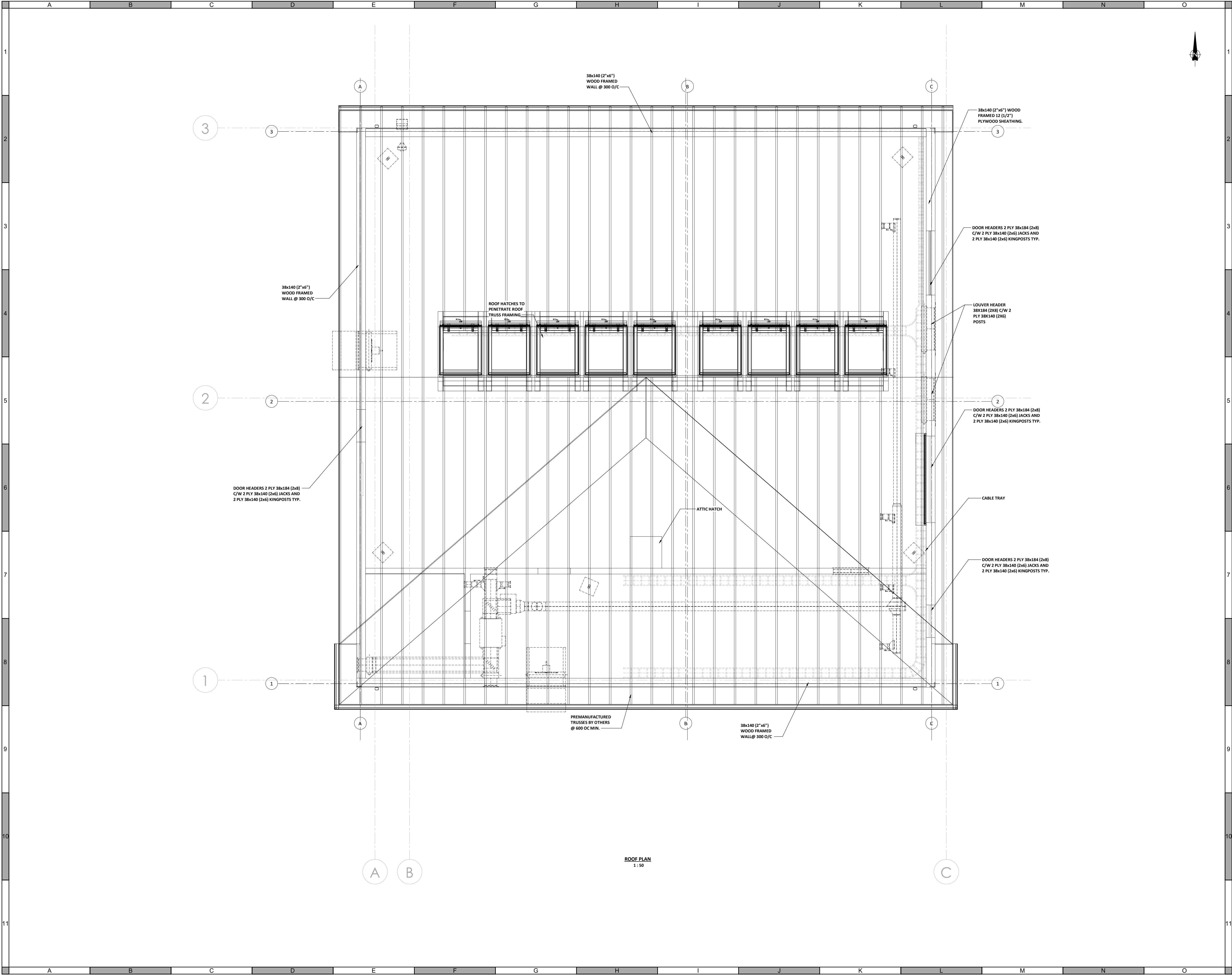
Quality Control by
Designed by
Drawn by

SA
BDL
BHG

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SLAB PLAN

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-S-LAY-003 D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST
RFP
urbansystems.ca

Professional Seals

#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	

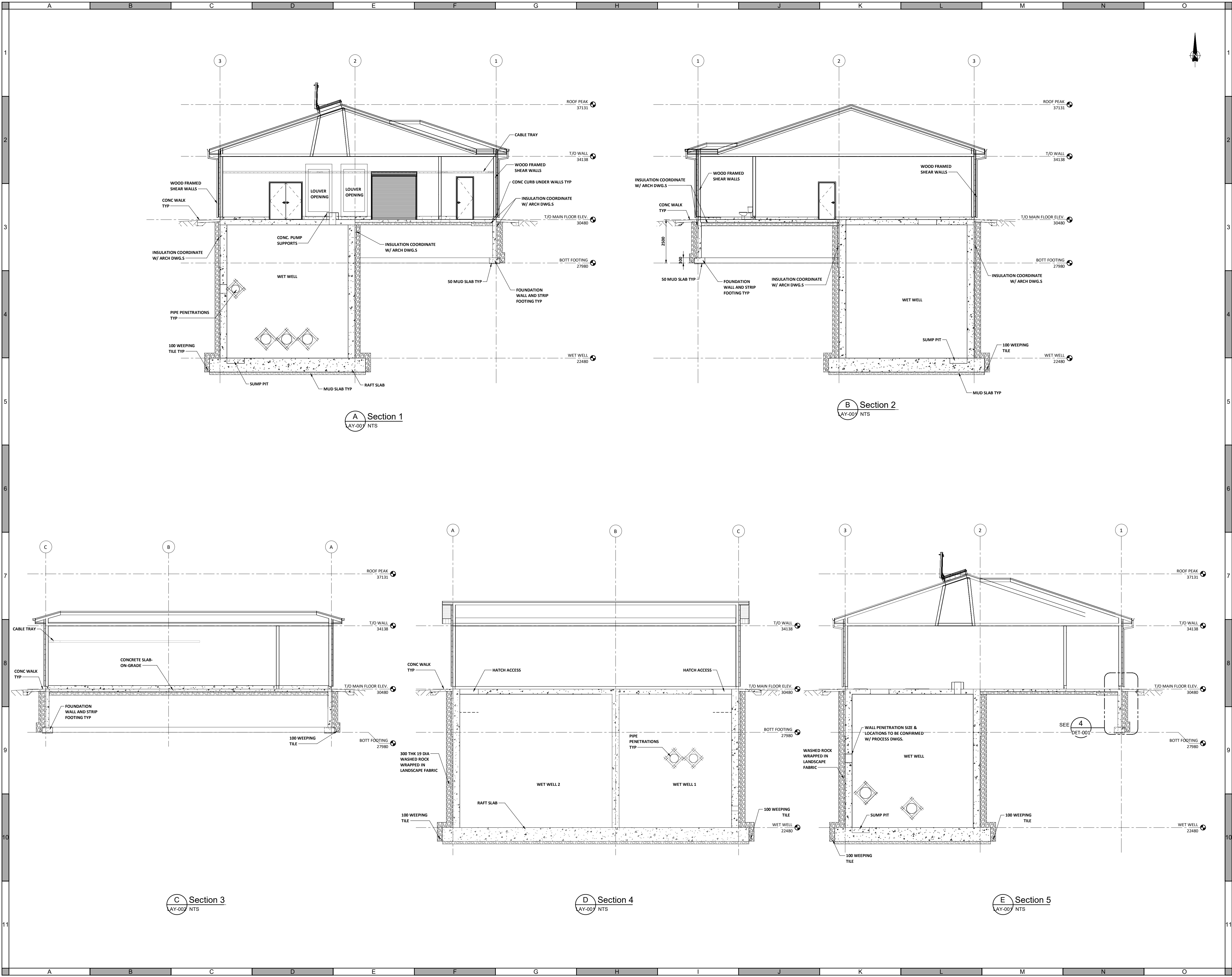


Scale	1 : 50
Quality Control by	SA
Designed by	BDL
Drawn by	BHG

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ROOF PLAN

Sheet Number	of
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-S-LAY-004	D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field of all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



URBAN
systems

Scale
1 : 100

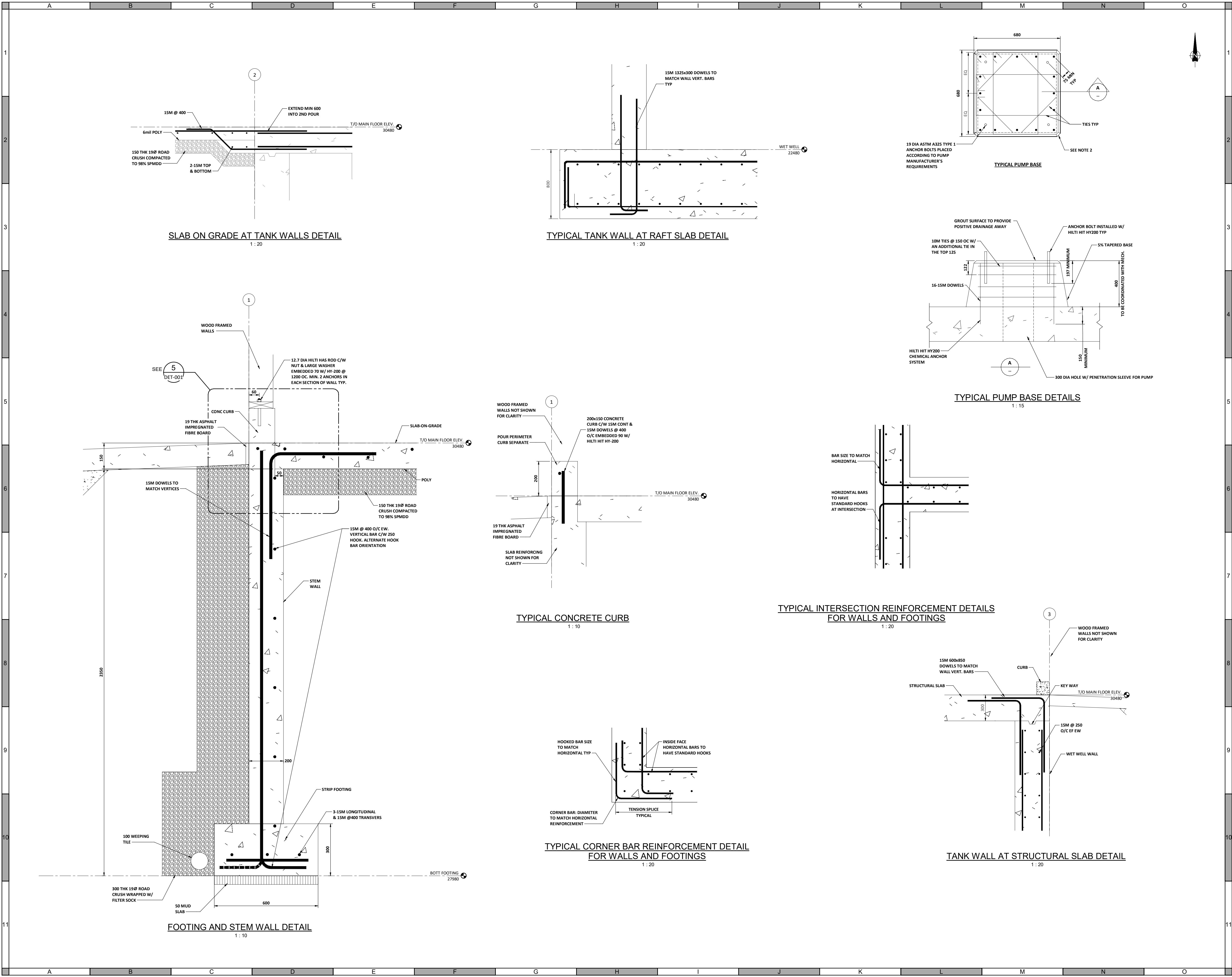
Quality Control by
Designed by
Drawn by

SA
BDL
BHG

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ELEVATIONS

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-S-GA-001 D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field of all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST
RFP

urbansystems.ca

Professional Seals

#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



Scale
As indicated

Quality Control by
Designed by
Drawn by

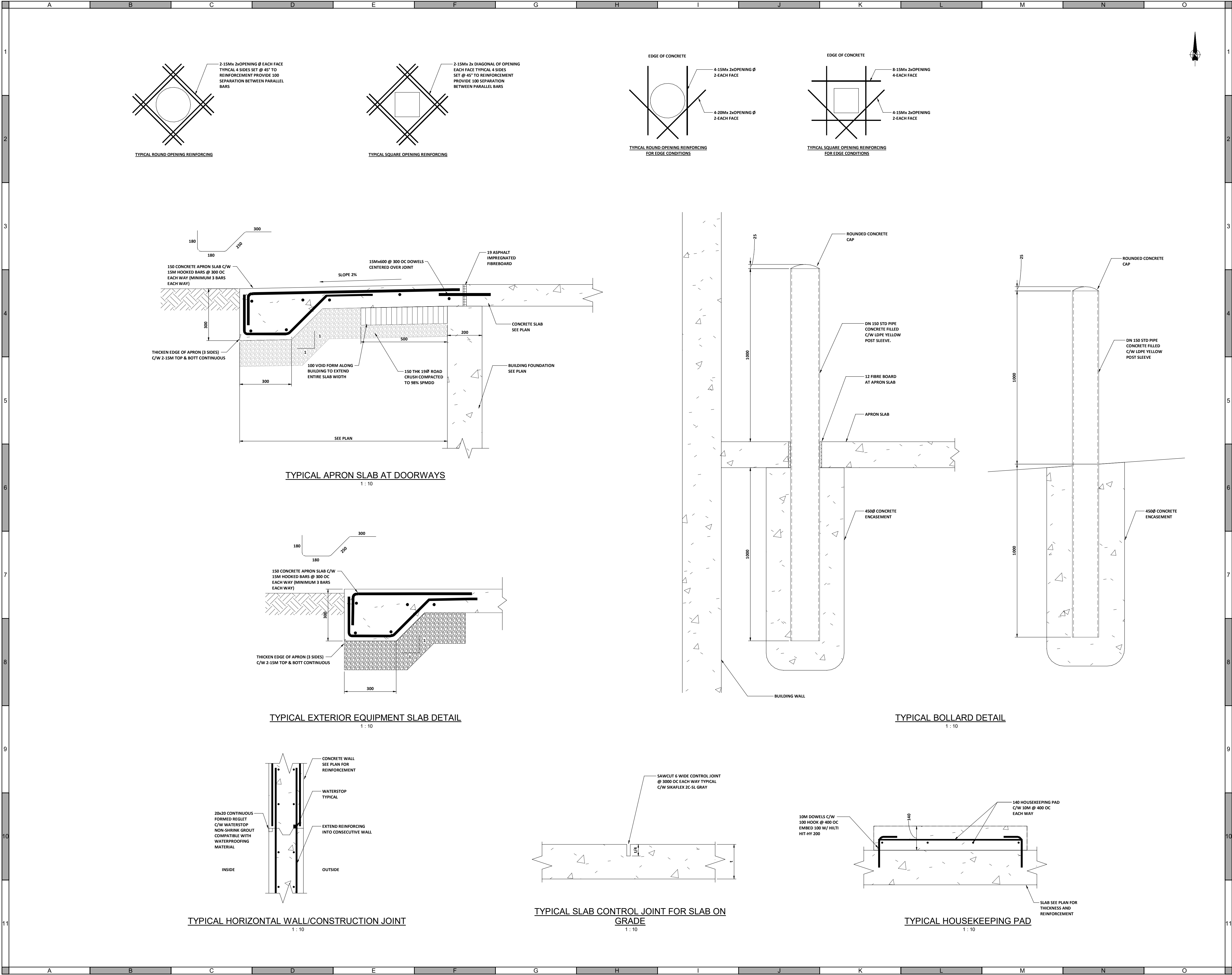
SA
BDL
BHG

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SECTIONS

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-S-DET-001

of
Revision
D

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of URBAN SYSTEMS LTD.
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN ASSIST
RFP
urbansystems.ca

Professional Seals

#	YY/MM/DD	Issue/ Revision	App
A	24-09-10	ISSUED FOR 50% DESIGN	
B	24-09-24	ISSUED FOR 60% DESIGN	
C	24-11-06	ISSUED FOR 75% DESIGN	
D	24-11-29	FOR DESIGN ASSIST RFP	



URBAN
systems

Scale
As indicated

Quality Control by
Designed by
Drawn by

SA
BDL
BHG

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
TYPICAL DETAILS

Sheet Number of
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-S-DET-002 D

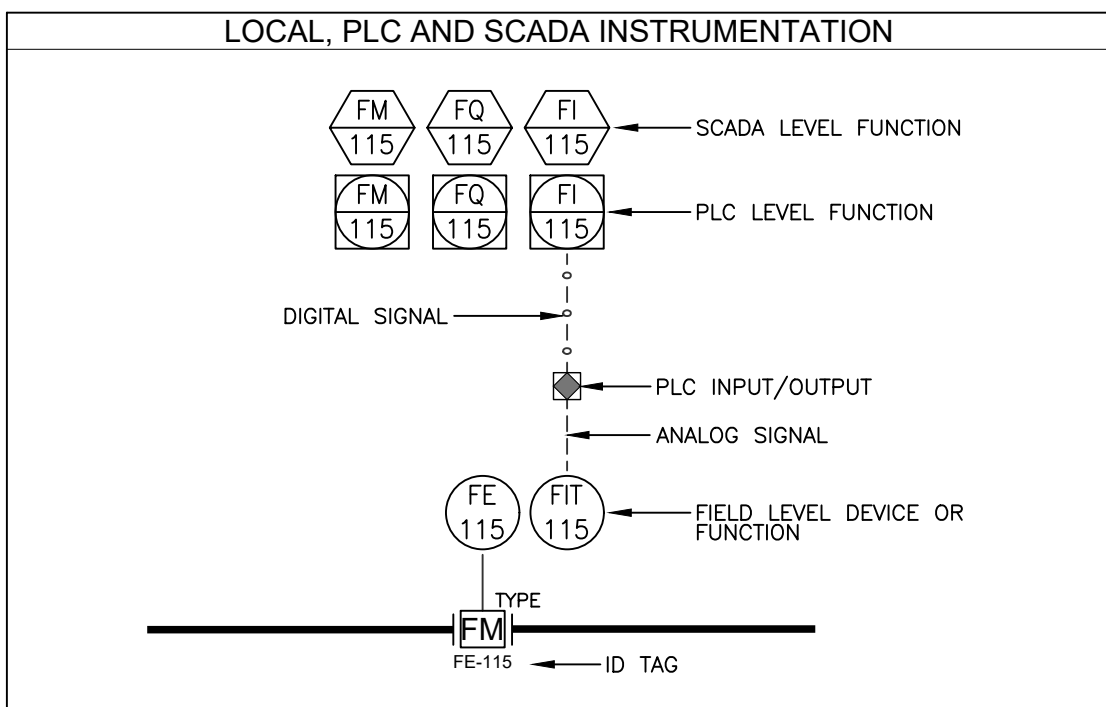
NOT FOR CONSTRUCTION

U:\projects_cal\1306\0120\07-D-Design\CAD\20-PID_Pump_Building.dwg, I-00, 2024/11/08 08:40 am ywang

ANSI/ISA 5.1-2009 INSTRUMENTATION IDENTIFICATION				
FIRST LETTERS		SUCCEEDING LETTERS		
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
A ANALYSIS		ALARM		
B BURNER			CONTROL	CLOSE
C AUTO				DEVIATION
D USER'S CHOICE	DIFFERENTIAL	DISABLE		
E VOLTAGE		PRIM ELEMENT		
F FLOW	RATIO			
G USER'S CHOICE	RATIO	GLASS, GAUGE		
H HAND				HIGH
I CURRENT		INDICATE		
J POWER		SCAN		
K TIME, SCHEDULE	RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW
M REQUEST		TREND		MIDDLE
N USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O USER'S CHOICE		ORIFICE		OPEN
P PRESSURE		POINT		
Q QUANTITY	INTEGRATE	TOTALIZE		
R RADIATION	REMOTE	RECORD		RUN
S SPEED, FREQ	SAFETY		SWITCH	STOP
T TEMPERATURE	SAFETY		TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTIONAL	MULTIFUNCTIONAL	
V VIBRATION			VALVE	
W WEIGHT, FORCE		WELL, PROBE		
X LAMPLIGHT	X-AXIS	ACC. DEVICES	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE	Y-AXIS		AUXILIARY DEV	
Z POSITION	Z-AXIS		DRIVE, ACTUATOR	

INSTRUMENTATION DEVICE AND FUNCTION TAG	
SYMBOL	DESCRIPTION
	FIELD MOUNTED DEVICE
	LOCAL PANEL MOUNTED DEVICE
	INACCESSIBLE LOCAL PANEL DEVICE
	FUNCTION LOCATED IN PRIMARY PLC, NOT ACCESSIBLE TO OPERATOR
	FUNCTION LOCATED IN PRIMARY PLC, ACCESSIBLE TO OPERATOR
	FUNCTION LOCATED IN PRIMARY PLC, NOT NORMALLY ACCESSIBLE TO OPERATOR
	SCADA LEVEL FUNCTION, NOT ACCESSIBLE TO OPERATOR
	SCADA LEVEL FUNCTION, ACCESSIBLE TO OPERATOR

PLC AND HARDWARE COMMUNICATION	
SYMBOL	DESCRIPTION
	HARDWARE INTERLOCK
	PLC INPUT/OUTPUT (I/O)
	PLC LOGIC FUNCTION



COMPONENT AND INSTRUMENTATION TAG IDENTIFICATION SYSTEM	
IDENTIFICATION SYSTEM GENERAL EXPLANATION:	
• XXX-XXXX or XX-XXXX : ALL TAGS UTILIZE AN ALPHA-NUMERIC 6 OR 7 VALUE SYSTEM.	
• XXX-XXXX : THE FIRST TWO OR THREE VALUES ARE ALPHA IDENTIFIERS AND CONFORM TO ANSI/ISA DESCRIPTIVE STANDARDS/GUIDELINES OR INDUSTRY FREE FORM METHODS (EG CV = CHECK VALVE AND LIT = LEVEL INDICATING TRANSMITTER).	
• XX-XXXX : THE LAST THREE DIGITS REPRESENT A SPECIFIC AREA, SERIES OR SUBSYSTEM AND ARE DEFINED AS FOLLOWS:	
-000 EXISTING	
-100 EXISTING	
-200 PROPOSED PROCESS MECHANICAL	
-300 PROPOSED PROCESS MECHANICAL	
-400 PROPOSED PROCESS INSTRUMENTATION	
-500 PROPOSED CHEMICAL	
-600 OVERFLOW/DRAINAGE SYSTEM	
-700 ELECTRICAL	
-800 ELECTRICAL	
-900 BUILDING MECHANICAL	

EQUIPMENT		
SYMBOL	TAG	DESCRIPTION
	AC-XXXX	AIR COMPRESSOR
	SB-XXXX	BASKET STRAINER
	BR-XXXX	BLOWER (ROTARY)
	BL-XXXX	BLOWER/FAN (CENTRIFUGAL)
	FI-XXXX	MEMBRANE FILTER
	MX-XXXX	MIXER
	CP-XXXX	PUMP CENTRIFUGAL
	MP-XXXX	PUMP (METERING)
	SP-XXXX	PUMP (SUBMERSIBLE)
	WP-XXXX	PUMP (SUBMERSIBLE GROUNDWATER WELL AND CASING)
	VP-XXXX	PUMP (VERTICAL TURBINE)
	UVL-XXXX	UV REACTOR (LOW PRESSURE)
	UVM-XXXX	UV REACTOR (MEDIUM PRESSURE)

LIQUID STORAGE AND PRESSURE VESSEL		
SYMBOL	TAG	DESCRIPTION
	DT-XXXX	CHEMICAL STORAGE DAY TANK C/W SECONDARY CONTAINMENT
	CT-XXXX	CHEMICAL STORAGE TOTE C/W SECONDARY CONTAINMENT
	BS-XXXX	CHEMICAL BULK STORAGE VESSEL
	ET-XXXX	ELEVATED TANK OR RESERVOIR
	PT-XXXX	HORIZONTAL PRESSURE TANK
	HWT-XXXX	HOT WATER TANK
	HT-XXXX	HYDROPNEUMATIC BLADDER TANK
	LCT-XXXX	LIQUID STORAGE TANK (CLOSED TOP)
	LT-XXXX	LIQUID STORAGE TANK (OPEN TOP TO ATMOSPHERE)
	WS-XXXX	WATER SOFTENER

ELECTRICAL AND CONTROL	
SYMBOL	DESCRIPTION
	MOTOR (FIXED DRIVE), STARTER AND SUPPLY VOLTAGE
	MOTOR WITH SOFT START
	MOTOR WITH VARIABLE SPEED DRIVE AND SUPPLY VOLTAGE
	SOLENOID AND SUPPLY VOLTAGE

VALVE		
SYMBOL	TAG	DESCRIPTION
	AR-XXXX	AIR RELEASE VALVE
	AV-XXXX	AIR/VACUUM VALVE
	DC-XXXX	BACK-FLOW PREVENTER - DOUBLE CHECK OR REDUCED PRESSURE PRINCIPLE
	BL-XXXX	BALL VALVE - NORMALLY OPEN/CLOSED
	BV-XXXX	BUTTERFLY VALVE - NORMALLY OPEN/CLOSED
	CV-XXXX	CHECK VALVE - SWING, BALL, DISC
	CVD-XXXX	CHECK VALVE - DUCK BILL
	CA-XXXX	COMBINATION AIR VALVE
	DV-XXXX	DIAPHRAGM VALVE - NORMALLY OPEN/CLOSED
	AF-XXXX	FLOAT OR ALTITUDE CONTROL VALVE
	VD-XXXX	FLOW CONTROL VALVE (HYDRAULIC ADJUSTABLE)
	VD-XXXX	FLOW CONTROL VALVE (HYDRAULIC FIXED)
	GV-XXXX	GATE VALVE - NORMALLY OPEN/CLOSED
	GL-XXXX	GLOBE VALVE - NORMALLY OPEN/CLOSED
	KV-XXXX	KNIFE GATE VALVE - NORMALLY OPEN/CLOSED
	NV-XXXX	NEEDLE VALVE
	PC-XXXX	PETCOCK VALVE
	PV-XXXX	PLUG VALVE - NORMALLY OPEN/CLOSED
	PCV-XXXX	PRESSURE VALVE - REDUCING OR SUSTAINING
	PR-XXXX	PRESSURE RELIEF OR SURGE ANTICIPATING VALVE
	MV-XXXX	THERMOSTATIC MIXING VALVE
	VB-XXXX	VACUUM BREAKER VALVE
	TW-XXXX	3-WAY VALVE - GENERIC SYMBOL
	FW-XXXX	4-WAY VALVE - GENERIC SYMBOL

INSTRUMENTATION COMPONENT		
SYMBOL	TAG	DESCRIPTION
	FS-XXXX	FLOAT SWITCH
	FE-XXXX	FLOW METER
	LE-XXXX	LEVEL TRANSMITTER (ULTRASONIC)
	LE-XXXX	LEVEL TRANSMITTER (TRANSDUCER)
	LE-XXXX	LEVEL TRANSMITTER (RADAR)

ACTUATOR AND OPERATOR	
SYMBOL	DESCRIPTION
	ELECTRIC ACTUATOR
	ELECTRIC ACTUATOR (FLOW CONTROL)
	ELECTRIC ACTUATOR C/W MANUAL OVERRIDE
	ELECTRIC ACTUATOR (FLOW CONTROL) C/W MANUAL OVERRIDE
	MANUAL CHAIN-WHEEL OPERATOR
	MANUAL GEAR OPERATOR
	MANUAL LEVER OPERATOR
	PNEUMATIC ACTUATOR
	PNEUMATIC ACTUATOR C/W MANUAL OVERRIDE
	PNEUMATIC FLOW CONTROL ACTUATOR
	SOLENOID ACTUATOR

DESCRIPTION	LINE TYPE		
	PROPOSED	EXISTING	FUTURE
AIR			
CHEMICAL DOUBLE WALL			
CHEMICAL			
DRAIN			
ELECTRICAL SIGNAL ANALOG			
ELECTRICAL SIGNAL DIGITAL			
ELECTRICAL SUPPLY			
FLOW DIRECTION			
PROCESS - PRIMARY			
PROCESS - SECONDARY			

ANNOTATION	
SYMBOL	DESCRIPTION
	ELEV: XXX.XXXm
	PRIMARY OR SECONDARY PROCESS SYSTEM FLOW INFORMATION
	AIR OR PNEUMATIC SYSTEM PROCESS FLOW INFORMATION
	ELECTRICAL OR DATA SYSTEM PROCESS FLOW INFORMATION

ACCESSORY		
DESCRIPTION	TAG	SYMBOL
CALIBRATION COLUMN	CC	
CHEMICAL INJECTION QUILL	IQ-XXX	
CLEANOUT	C/O	
DEGASSING COLUMN		
DISCHARGE TO FUNNEL STYLE FLOOR DRAIN C/W ATMOSPHERIC BREAK		
FLANGE		
ORIFICE PLATE		
PULSATION DAMPENR		
QUICK CONNECT COUPLING (FEMALE AND MALE ENDS)	QC	
REDUCER (CONCENTRIC)		
REDUCER (ECCENTRIC)		
ROTAMETER	RM	
SPECTACLE BLIND (NORMALLY CLOSED)	SF	
SPECTACLE BLIND (NORMALLY OPEN)	SF	
STRAINER WYE STYLE	WY-XXX	
STATIC MIXER	SM-XXX	
TRANSITION COUPLING	TC RC GC	
WET WELL OR RESERVOIR VENT		
WEIR		

COMMODITY	
DESCRIPTION	
AIR	AERATION
AS	AIR SCOUR
ASC	ANTISCALANT
BW	BACKWASH WATER
CA	COMPRESSED AIR
CIP	CLEAN IN PLACE
CIT	CITRIC ACID (C ₆ H ₈ O ₇)
COG	COAGULANT
DAF	DISSOLVED AIR FLOATATION FEED
DR	DRAIN (PROCESS)
DRW	DRAIN WASTE
DW	DISINFECTED WATER
FB	FILTER BYPASS
FF	FILTER FEED
FP	FILTER PERMEATE
FR	FILTER RECYCLE
HCI	HYDROCHLORIC ACID
HRW	HEAT RECOVERY WATER
HYD	SODIUM HYDROXIDE (NaOH)
HYP	SODIUM HYPOCHLORITE (NaOCL)
IA	INSTRUMENT AIR
MIT	MEMBRANE INTEGRITY TEST
OF	OVER FLOW
PA	PROCESS AIR
PLY	POLYMER
POT	POTABLE WATER DISTRIBUTION
PWS	POTABLE WATER SERVICE
RAW	RAW WATER
REJ	FILTER REJECT (OR CONCENTRATE)
SBS	SODIUM BISULPHITE (NaHSO ₃)
SLU	SLUDGE
SMBS	SODIUM METABISULPHITE (Na ₂ S ₂ O ₅)
SOL	SOLIDS (SEDIMENT)
SUL	SULPHURIC ACID (H ₂ SO ₄)
SW	SERVICE WATER
TR	TREATED RESIDUALS
TW	TREATED WATER
VAC	VACUUM
VE	VENTILATION

PIPE TAG IDENTIFICATION SYSTEM	
COMMODITY	PIPE MATERIAL
PIPE NOMINAL DIAMETER	PIPE WALL THICKNESS
150	RAW PVC SCH80
PIPE MATERIAL	
DESCRIPTION	
ABS	ACRYLONITRILE BUTADIENE STYRENE
CPVC	CHLORINATE POLYVINYL CHLORIDE
CS	CARBON STEEL
CU	COPPER
DI	DUCTILE IRON
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE
PEX	CROSS LINKED POLYETHYLENE
PVC	POLYVINYL CHLORIDE
SS	STAINLESS STEEL
UPVC	UN-PLASTICIZED PVC (DRAIN PIPING)

ABBREVIATION	
ABBREVIATION	
CIRC	CIRCULATION
CONT	CONTROL
COND	CONDUCTIVITY
DIA	DIAMETER
DP	DIFFERENTIAL PRESSURE
DQ	DESIGN FLOW
ELEV	ELEVATION
EQ	EQUALIZATION
FWL	FULL WATER LEVEL
HWL	HIGH WATER LEVEL
HOA	HAND/OFF/AUTO
HP	HORSE POWER
IND	INDICATE
LWL	LOW WATER LEVEL
MAG	MAGNETIC
MAX	MAXIMUM
MIN	MINIMUM
MS	MOTOR STARTER
O/C	OPEN/CLOSED
OF	OVERFLOW
PLC	PROGRAMMABLE LOGIC CIRCUIT
POS	POSITION
Q	FLOW
REC	RECIRCULATION
SCH	SCHEDULE
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TURB	TURBIDITY
TYP	TYPICAL
UV	ULTRAVIOLET RADIATION
UVT	ULTRAVIOLET TRANSMITTANCE
VAC	VOLTS AC
VFD	VARIABLE FREQUENCY DRIVE
WTP	WATER TREATMENT PLANT

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

ISSUED FOR
75% DESIGN
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-07-15	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME



URBAN
systems

Scale
NOT TO SCALE

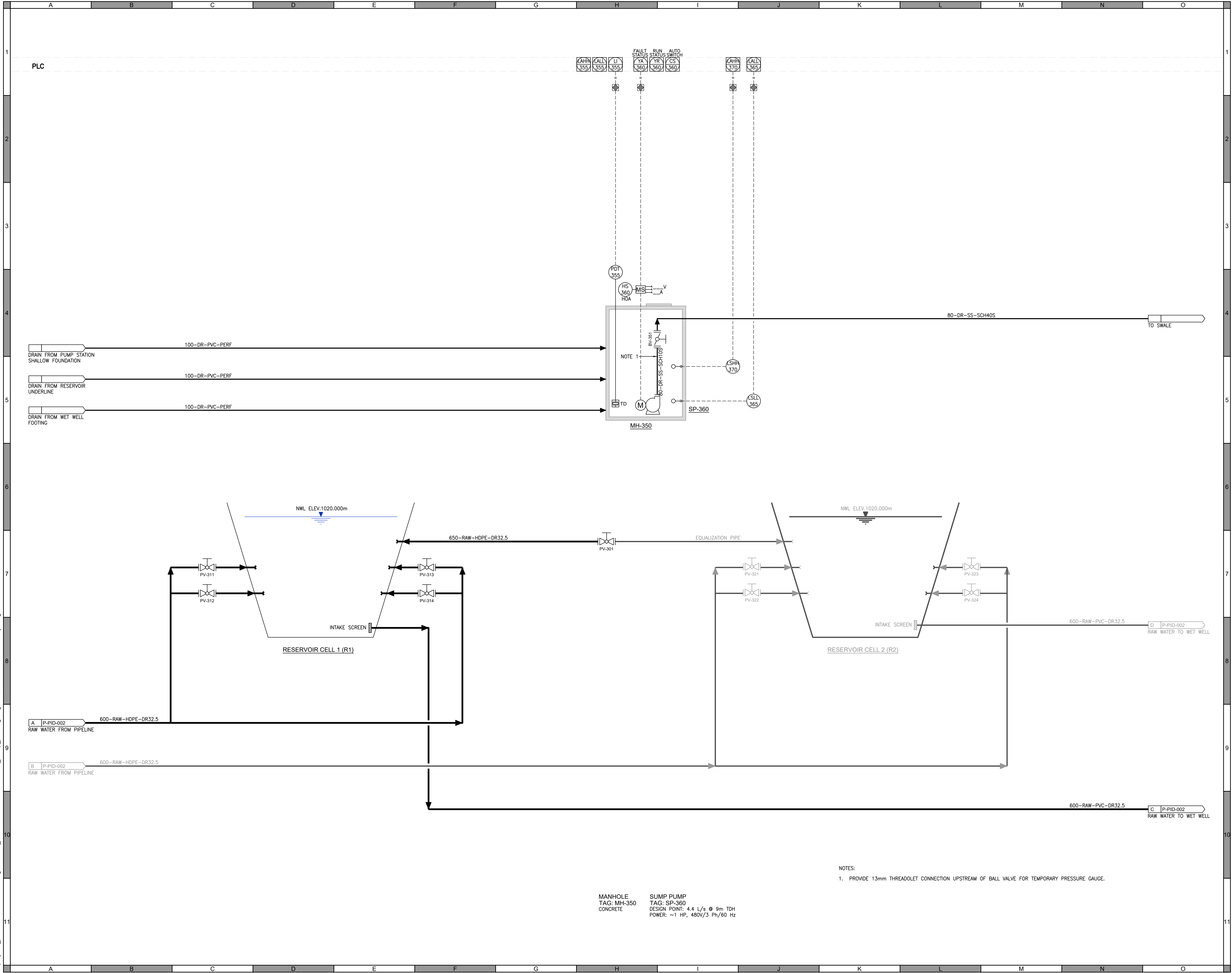
Quality Control by	A.Joshi
Designed by	A.Joshi
Drawn by	J.Y.Wang

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
MIDLINE PUMP STATION
P&ID LEGEND

Sheet Number	# of 10
Project Number	
1306.0120.07	
Drawing Number	Revision
FORWP-02-P-PID-001	B

NOT FOR CONSTRUCTION

U:\projects_cal\1306\0120\07\0-D-Design\CAD\20_PROD\SET1\306012001-PID_Pump_Building.dwg, I-02, 2024/11/08 08:40 am ywang



MANHOLE
TAG: MH-350
CONCRETE

SUMP PUMP
TAG: SP-360
DESIGN POINT: 4.4 L/s @ 9m TDH
POWER: ~1 HP, 480V/3 Ph/60 Hz

- NOTES:
1. PROVIDE 13mm THREADOLET CONNECTION UPSTREAM OF BALL VALVE FOR TEMPORARY PRESSURE GAUGE.

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

ISSUED FOR
75% DESIGN
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-07-15	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME



URBAN
systems

Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

A.Joshi
A.Joshi
J.Y.Wang

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
MIDLINE PUMP STATION
P&ID

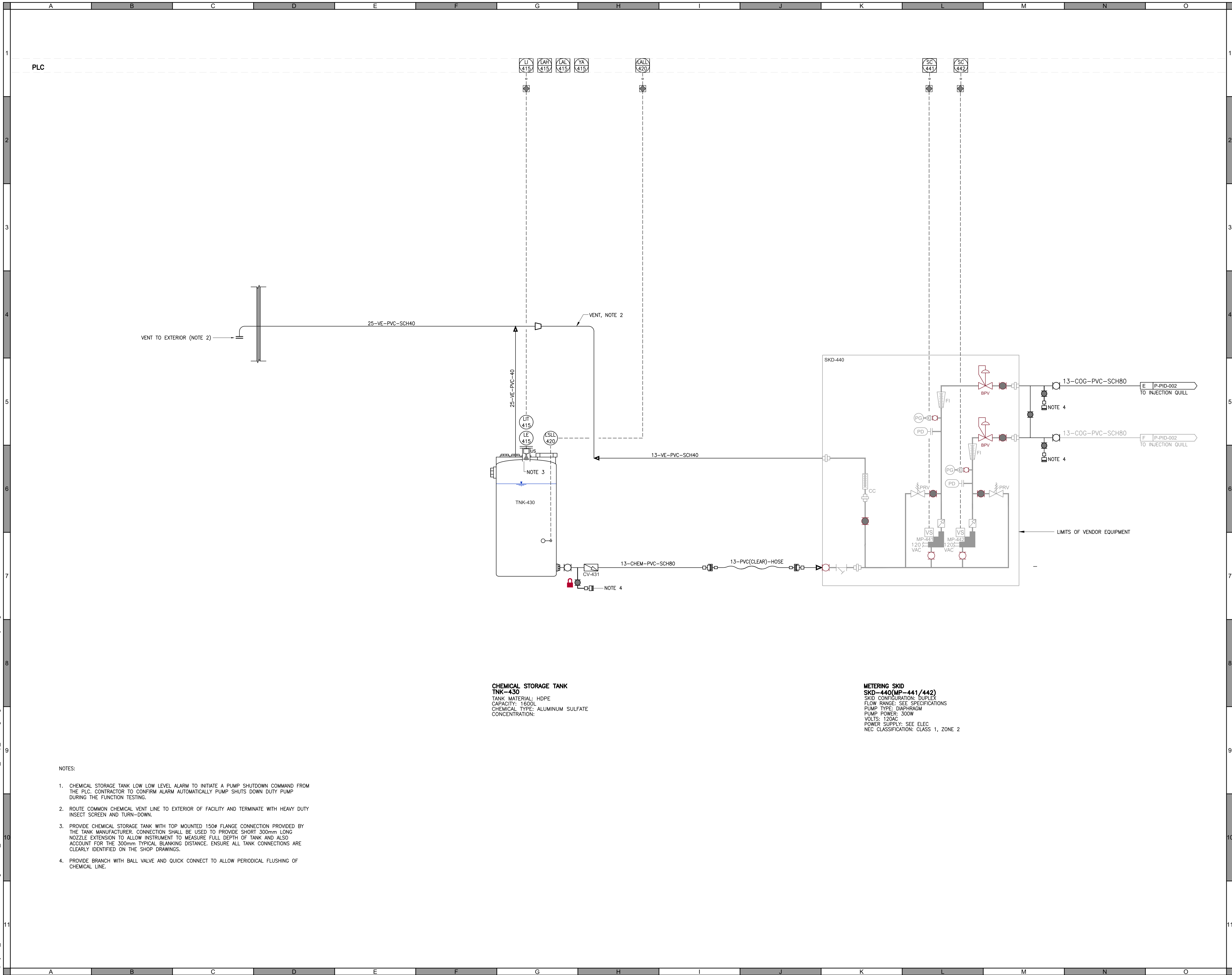
Sheet Number
Project Number
Drawing Number

---- of 10
1306.0120.07
FORWP-02-P-PID-003

Revision
B

NOT FOR CONSTRUCTION

U:\projects_cal\1306\0120\07-D-Design\CAD\20_PROD\SET1\306012001-PID_Pump_Building.dwg, I-03, 2024/11/08 08:40 am ywang



ATTENTION

This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

ISSUED FOR
75% DESIGN

NOVEMBER 06, 2024

urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-07-15	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME



URBAN
systems

Scale
NOT TO SCALE

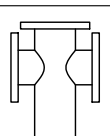
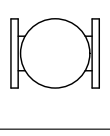
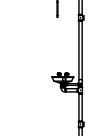
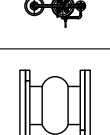
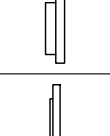
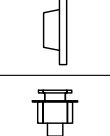
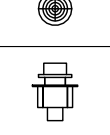
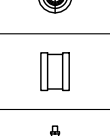
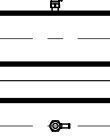
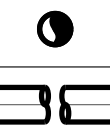
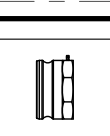
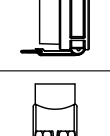
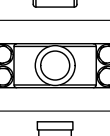
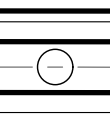
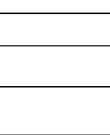
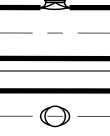
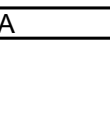
Quality Control by	A.Joshi
Designed by	A.Joshi
Drawn by	J.Y.Wang

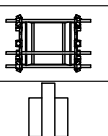
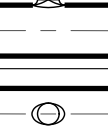
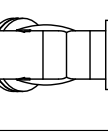
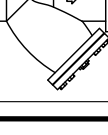
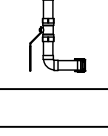
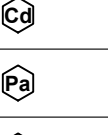
FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
MIDLINE PUMP STATION
P&ID

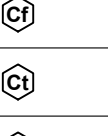
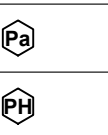
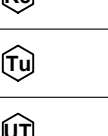
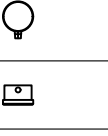
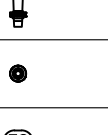
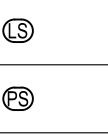
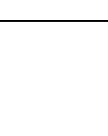
Sheet Number	# of 10
Project Number	
1306.0120.07	
Drawing Number	Revision
FORWP-02-P-PID-004	B

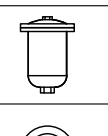
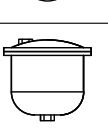
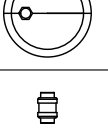
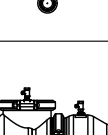
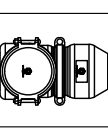
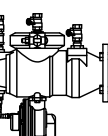
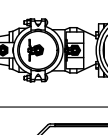
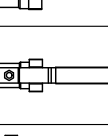
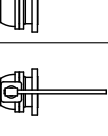
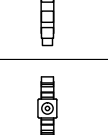
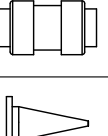
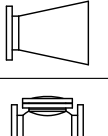
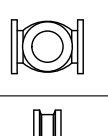
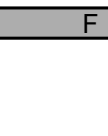
NOT FOR CONSTRUCTION

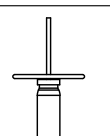
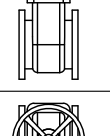
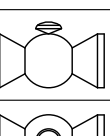
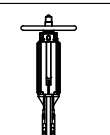
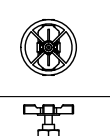
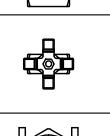
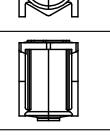
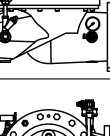
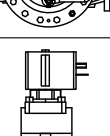
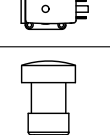
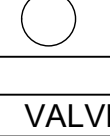
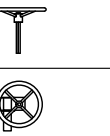
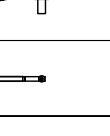
U:\projects_cal\1306\0120\07\Design\CAD\10_Design\FORW Midline Pump Station\Orthos\DWGs\FORWP-02-P-GA-001.dwg, 001, 2024-11-08 08:40 am ywang

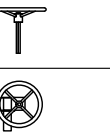
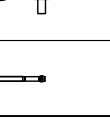
ACCESSORY		
SYMBOL	TAG	DESCRIPTION
	STR-XXXX	BASKET STRAINER (SIDE)
	STR-XXXX	BASKET STRAINER (TOP)
	ES-XXXX	EMERGENCY SHOWER AND EYEWASH STATION (SIDE)
	ES-XXXX	EMERGENCY SHOWER AND EYEWASH STATION (TOP)
	EJ	EXPANSION JOINT - RUBBER (SINGLE ARCH)
		FLANGE - PVC SOCKET
		FLANGE - STEEL SLIP / LAP JOINT
		FLANGE - STEEL WELD NECK
	FD	FLOOR DRAIN - FLUSH MOUNT (SIDE)
	FD	FLOOR DRAIN - FLUSH MOUNT (TOP)
	FFD	FLOOR DRAIN - FUNNEL (SIDE)
	FFD	FLOOR DRAIN - FUNNEL (TOP)
	GC	GROOVED COUPLING - FLEXIBLE / RIGID
	IQ-XXXX	INJECTION QUILL (SIDE)
	IQ-XXXX	INJECTION QUILL (TOP)
		PIPE - END
		PIPE - BREAK / CONTINUATION
		PIPE - PLAIN END TERMINATION
	QC	QUICK CONNECT CONNECTION - MALE
	QC	QUICK CONNECT CONNECTION - FEMALE
	SS	SERVICE SADDLE (SIDE)
		SERVICE SADDLE (TOP)
		SOCKOLET (SIDE)
		SOCKOLET (TOP)
	SM-XXXX	STATIC MIXER - TUBULAR (SIDE)
	SM-XXXX	STATIC MIXER - TUBULAR (TOP)
		THREAOLET (SIDE)
		THREAOLET (TOP)

ACCESSORY		
SYMBOL	TAG	DESCRIPTION
	RC	TRANSITION COUPLING - RESTRAINED
	UJ	UNION JOINT
		WELDOLET (SIDE)
		WELDOLET (TOP)
	WS-XXXX	WYE STRAINER (SIDE)
	WS-XXXX	WYE STRAINER (TOP)
	SP	SAMPLE POINT / DRAIN

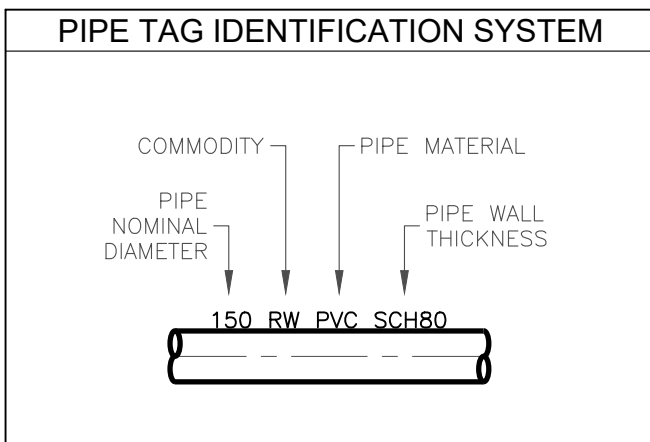
INSTRUMENTATION		
SYMBOL	TAG	DESCRIPTION
	AE-XXXX	ANALYSIS ELEMENT - CHLORINE FREE
	AE-XXXX	ANALYSIS ELEMENT - CHLORINE TOTAL RESIDUAL
	AE-XXXX	ANALYSIS ELEMENT - CONDUCTIVITY
	AE-XXXX	ANALYSIS ELEMENT - PARTICLE
	AE-XXXX	ANALYSIS ELEMENT - PH
	AE-XXXX	ANALYSIS ELEMENT - REDOX
	AE-XXXX	ANALYSIS ELEMENT - TURBIDITY
	AE-XXXX	ANALYSIS ELEMENT - UVT
	FE-XXXX	FLOW ELEMENT - MASS FLOW PROBE
	LE-XXXX	LEVEL ELEMENT
	PE-XXXX	PRESSURE ELEMENT
	TE-XXXX	TEMPERATURE ELEMENT
	FE-XXXX	FLOW METER
	PG-XXXX	PRESSURE GAUGE C/W FEED PIPING AND ISOLATION BALL VALVE (SIDE)
	PG-XXXX	PRESSURE GAUGE (TOP)
	RM	ROTAMETER (SIDE)
	RM	ROTAMETER (TOP)
	FS-XXXX	SWITCH - FLOAT
	LS-XXXX	SWITCH - LEVEL
	PS-XXXX	SWITCH - PRESSURE
	TS-XXXX	SWITCH - TEMPERATURE

VALVE		
SYMBOL	TAG	DESCRIPTION
	AR-XXXX	AIR RELEASE VALVE - SMALL PORT (SIDE)
	AR-XXXX	AIR RELEASE VALVE - SMALL PORT (TOP)
	CA-XXXX	AIR RELEASE VALVE - COMBINATION (SIDE)
	CA-XXXX	AIR RELEASE VALVE - COMBINATION (TOP)
	AVC-XXXX	AIR VALVE - CHEM STYLE (SIDE)
	AVC-XXXX	AIR VALVE - CHEM STYLE (TOP)
	DC-XXXX	BACK-FLOW PREVENTER - DOUBLE CHECK VALVE ASSEMBLY (SIDE)
	DC-XXXX	BACK-FLOW PREVENTER - DOUBLE CHECK VALVE ASSEMBLY (TOP)
	DC-XXXX	BACK-FLOW PREVENTER - REDUCED PRESSURE PRINCIPLE STYLE (SIDE)
	DC-XXXX	BACK-FLOW PREVENTER - REDUCED PRESSURE PRINCIPLE STYLE (TOP)
	BL	BALL VALVE - SOCKET, THREADED (SIDE)
	BL	BALL VALVE - SOCKET, THREADED (TOP)
	BL	BALL VALVE - FLANGED (SIDE)
	BL	BALL VALVE - FLANGED (TOP)
	BV-XXXX	BUTTERFLY VALVE - WAFER / LUGGED (SIDE)
	BV-XXXX	BUTTERFLY VALVE - WAFER / LUGGED (TOP)
	CV-XXXX	CHECK VALVE - BALL
	CV-XXXX	CHECK VALVE - DUCK BILL (SIDE)
	CV-XXXX	CHECK VALVE - DUCK BILL (TOP)
	CV-XXXX	CHECK VALVE - SWING (SIDE)
	CV-XXXX	CHECK VALVE - SWING (TOP)
	CV-XXXX	CHECK VALVE - WAFER

VALVE		
SYMBOL	TAG	DESCRIPTION
	GV-XXXX	GATE VALVE (SIDE)
	GV-XXXX	GATE VALVE (TOP)
	GL-XXXX	GLOBE VALVE (SIDE)
	GL-XXXX	GLOBE VALVE (TOP)
	KV-XXXX	KNIFE GATE VALVE (SIDE)
	KV-XXXX	KNIFE GATE VALVE (TOP)
	NV	NEEDLE VALVE (SIDE)
	NV	NEEDLE VALVE (TOP)
	PV-XXXX	PLUG VALVE (SIDE)
	PV-XXXX	PLUG VALVE (TOP)
	PCV-XXXX	PRESSURE VALVE - GLOBE STYLE SUSTAINING, RELIEF, SURGE, REDUCING (SIDE)
	PCV-XXXX	PRESSURE VALVE - GLOBE STYLE SUSTAINING, RELIEF, SURGE, REDUCING (TOP)
	SV-XXXX	SOLENOID VALVE (SIDE)
	SV-XXXX	SOLENOID VALVE (TOP)
	VB-XXXX	VACUUM BREAKER VALVE (SIDE)
	VB-XXXX	VACUUM BREAKER VALVE (TOP)

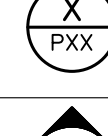
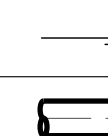
VALVE ACTUATOR AND OPERATOR	
SYMBOL	DESCRIPTION
	MANUAL GEAR OPERATOR C/W HAND WHEEL - SIDE
	MANUAL GEAR OPERATOR C/W HAND WHEEL - TOP
	MANUAL OPERATOR C/W LEVER STYLE HANDLE - SIDE
	MANUAL OPERATOR C/W LEVER STYLE HANDLE - TOP

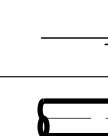
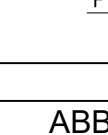
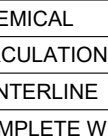
DESCRIPTION COMPONENT OR EQUIPMENT CONCRETE STRUCTURES LIQUID (OR HGL) LEVEL LIQUID LEVEL LOW PIPING - AIR (HIGH PRESSURE) PIPING - AIR (LOW PRESSURE) PIPING - CHEMICAL PIPING - DRAIN (PRIMARY) PIPING - WASTEWATER (PRIMARY) PIPING - WATER (PRIMARY) PIPING OR EQUIPMENT CENTERLINE PIPING - HIDDEN	LINE TYPE		
	PROPOSED	EXISTING	FUTURE
COMPONENT OR EQUIPMENT	_____	_____	_____
CONCRETE STRUCTURES	_____	_____	_____
LIQUID (OR HGL) LEVEL	_____	_____	_____
LIQUID LEVEL LOW	_____	_____	_____
PIPING - AIR (HIGH PRESSURE)	_____	_____	_____
PIPING - AIR (LOW PRESSURE)	_____	_____	_____
PIPING - CHEMICAL	_____	_____	_____
PIPING - DRAIN (PRIMARY)	_____	_____	_____
PIPING - WASTEWATER (PRIMARY)	_____	_____	_____
PIPING - WATER (PRIMARY)	_____	_____	_____
PIPING OR EQUIPMENT CENTERLINE	_____	_____	_____
PIPING - HIDDEN	_____	_____	_____



PIPE MATERIAL	
ABB	DESCRIPTION
ABS	ACRYLONITRILE BUTADIENE STYRENE
CPVC	CHLORINATE POLYVINYL CHLORIDE
CS	CARBON STEEL
CU	COPPER
DI	DUCTILE IRON
HDPE	HIGH DENSITY POLYETHYLENE
PEX	CROSS LINKED POLYETHYLENE
PVC	POLYVINYL CHLORIDE
SS	STAINLESS STEEL
UPVC	UN-PLASTICIZED PVC (DRAIN PIPING)

PML WATER COMMODITY	
ABB	DESCRIPTION
PRIMARY PROCESS	
DW	DISINFECTED WATER
FB	FILTER BYPASS
FF	FILTER FEED
FP	FILTER PERMEATE
FR	FILTER RECYCLE
POT	POTABLE WATER DISTRIBUTION
RAW	RAW WATER
TW	TREATED WATER
SECONDARY PROCESS	
BW	BACKWASH WATER
CIP	CLEAN IN PLACE
HRW	HEAT RECOVERY WATER
PSW	POTABLE WATER SERVICE
REJ	FILTER REJECT (OR CONCENTRATE)
SOL	SOLIDS (SEDIMENT)
SW	SERVICE WATER
TR	TREATED RESIDUALS
CHEMICAL	
ASC	ANTISCALANT
CIT	CITRIC ACID (C ₆ H ₈ O ₇)
COG	COAGULANT
HCl	HYDROCHLORIC ACID
HYD	SODIUM HYDROXIDE (NaOH)
HYP	SODIUM HYPOCHLORITE (NaOCl)
PLY	POLYMER
SBS	SODIUM BISULPHITE (NaHSO ₃)
SMBS	SODIUM METABISULPHITE (Na ₂ S ₂ O ₅)
SUL	SULPHURIC ACID (H ₂ SO ₄)
AIR - HIGH	
CA	COMPRESSED AIR
IA	INSTRUMENT AIR
MIT	MEMBRANE INTEGRITY TEST
PA	PROCESS AIR
AIR - LOW	
AIR	AERATION
AS	AIR SCOUR
DA	DAF FEED
VAC	VACUUM
VE	VENTILATION
WASTE/DRAIN	
DR	DRAIN (PROCESS)
DRW	DRAIN WASTE
OF	OVERFLOW
WW - GRIT, SLUDGE, SOLIDS	
SLP	PRIMARY SLUDGE

ANNOTATION AND SYMBOL (TITLE, SECTION AND DETAIL)	
ANNOTATION AND SYMBOLS	DESCRIPTION
 PLAN - TITLE NOT TO SCALE	PLAN TITLE
 SECTION - TITLE NOT TO SCALE	SECTION TITLE, REFERENCE INFORMATION
 PLAN - TITLE NOT TO SCALE	SECTION INDICATION AND REFERENCE INFORMATION
 PLAN - TITLE NOT TO SCALE	DETAIL TITLE AND REFERENCE INFORMATION
	DETAIL INDICATOR AND REFERENCE INFORMATION

ANNOTATION SYMBOL	
SYMBOLS	DESCRIPTION
	ELEV: XXX.XXXm
	PIPE FLOW DIRECTION ARROW
	ELEVATION SECTION MARKER (GEODETIC)

ABBREVIATION	
ABB	DESCRIPTION
CHEM	CHEMICAL
CIRC	CIRCULATION
CL	CENTERLINE
CW	COMPLETE WITH
DIA	DIAMETER
DP	DIFFERENTIAL PRESSURE
DQ	DESIGN FLOW
ELEV	ELEVATION
EQ	EQUALIZATION
FWL	FULL WATER LEVEL
HF	HIGH FLOW
HGL	HYDRAULIC GRADE LINE
HOA	HAND/OFF/AUTO
HP	HORSE POWER
HPZ	HIGH PRESSURE ZONE
HWL	HIGH WATER LEVEL
HWV	HIGH WATER VOLUME
INV	INVERT
LF	LOW FLOW
LPZ	LOW PRESSURE ZONE
LWL	LOW WATER LEVEL
MAG	MAGNETIC
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MS	MOTOR STARTER
O/C	OPEN/CLOSED
PLC	PROGRAMMABLE LOGIC CIRCUIT
Q	FLOW
REC	RECIRCULATION
RED	REDOX
REQ	REQUIRED
RET	RETURN
RF	REVERSE FLUSH
RO	REVERSE OSMOSIS
SCH	SCHEDULE
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TURB	TURBIDITY
TYP	TYPICAL
US	ULTRASONIC
UV	ULTRAVIOLET
UVT	ULTRAVIOLET TRANSMITTANCE
VAC	VOLTS AC
VDC	VOLTS DC
VFD	VARIABLE FREQUENCY DRIVE
VT	VERTICAL TURBINE PUMP
WTP	WATER TREATMENT PLANT
WWTP	WASTE WATER TREATMENT PLANT

FITTING ID	
ABB	DESCRIPTION
BM	BELL MOUTH
CR	CROSS
RE	REDUCER - ECCENTRIC
SR	ELBOW - 90° SHORT RADIUS
TR	TEE - REDUCING
Y	LATERAL

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

**ISSUED FOR
75% DESIGN**
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-11-05	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME

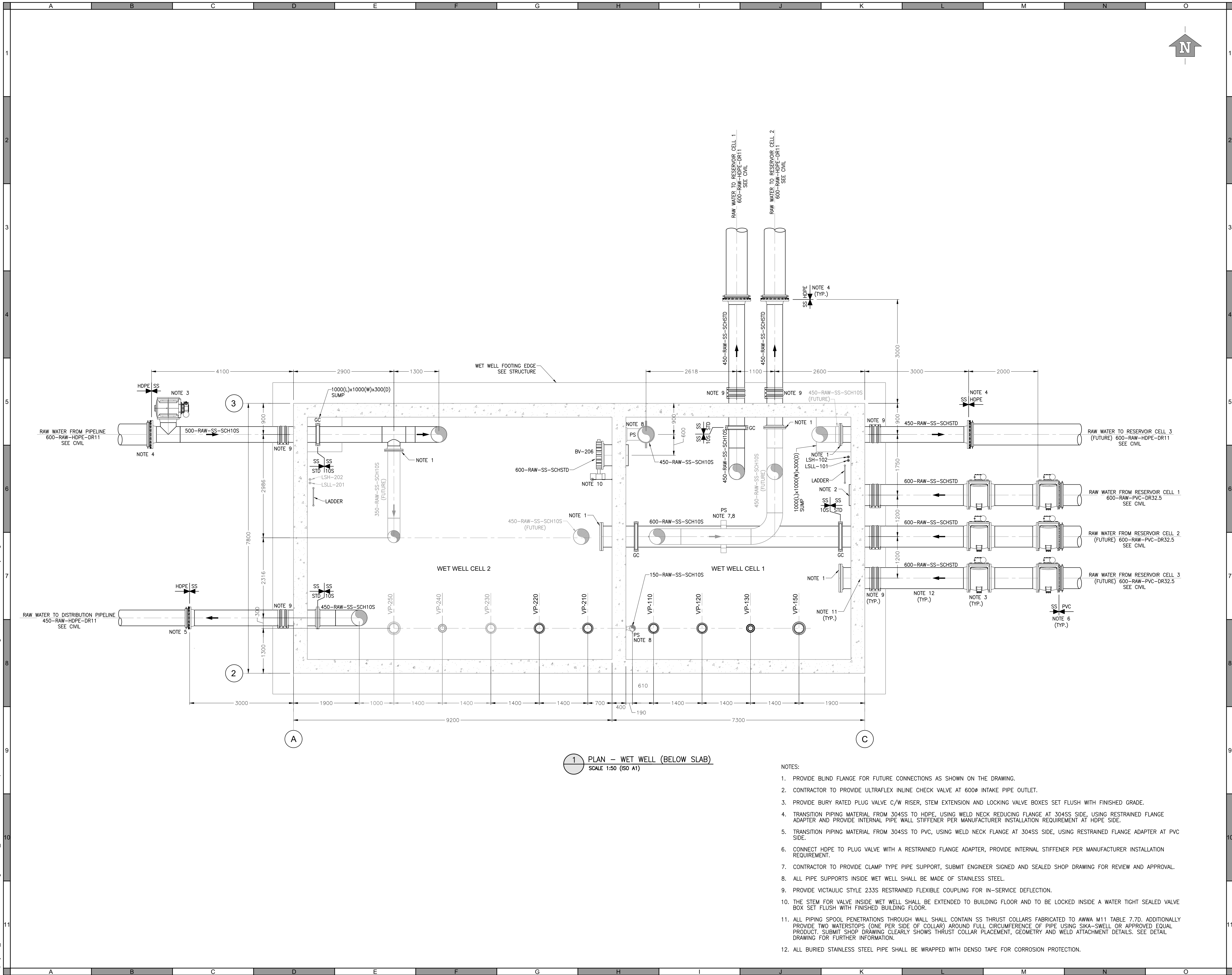


URBAN systems	
Scale AS SHOWN	
Quality Control by Designed by Drawn by	A.Joshi J.Y.Wang J.Y.Wang

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT MIDLINE PUMP STATION PROCESS MECHANICAL LEGEND	
Sheet Number Project Number 1306.0120.07 Drawing Number FORWP-02-P-GA-001	# of 10 Revision B

NOT FOR CONSTRUCTION

U:\projects_cal\1306\0120\07\0-Design\CAD\10_DESIGN\FORW Midline Pump Station\Orthos\DWG\FORWP-02-P-GA-002.dwg, 002, 2024-11-08 08:40 am ywang



1 PLAN - WET WELL (BELOW SLAB)
SCALE 1:50 (ISO A1)

NOTES:

- PROVIDE BLIND FLANGE FOR FUTURE CONNECTIONS AS SHOWN ON THE DRAWING.
- CONTRACTOR TO PROVIDE ULTRAFLEX INLINE CHECK VALVE AT 600Ø INTAKE PIPE OUTLET.
- PROVIDE BURY RATED PLUG VALVE C/W RISER, STEM EXTENSION AND LOCKING VALVE BOXES SET FLUSH WITH FINISHED GRADE.
- TRANSITION PIPING MATERIAL FROM 304SS TO HDPE, USING WELD NECK REDUCING FLANGE AT 304SS SIDE, USING RESTRAINED FLANGE ADAPTER AND PROVIDE INTERNAL PIPE WALL STIFFENER PER MANUFACTURER INSTALLATION REQUIREMENT AT HDPE SIDE.
- TRANSITION PIPING MATERIAL FROM 304SS TO PVC, USING WELD NECK FLANGE AT 304SS SIDE, USING RESTRAINED FLANGE ADAPTER AT PVC SIDE.
- CONNECT HDPE TO PLUG VALVE WITH A RESTRAINED FLANGE ADAPTER, PROVIDE INTERNAL STIFFENER PER MANUFACTURER INSTALLATION REQUIREMENT.
- CONTRACTOR TO PROVIDE CLAMP TYPE PIPE SUPPORT, SUBMIT ENGINEER SIGNED AND SEALED SHOP DRAWING FOR REVIEW AND APPROVAL.
- ALL PIPE SUPPORTS INSIDE WET WELL SHALL BE MADE OF STAINLESS STEEL.
- PROVIDE VICTAULIC STYLE 233S RESTRAINED FLEXIBLE COUPLING FOR IN-SERVICE DEFLECTION.
- THE STEM FOR VALVE INSIDE WET WELL SHALL BE EXTENDED TO BUILDING FLOOR AND TO BE LOCKED INSIDE A WATER TIGHT SEALED VALVE BOX SET FLUSH WITH FINISHED BUILDING FLOOR.
- ALL PIPING SPOOL PENETRATIONS THROUGH WALL SHALL CONTAIN SS THRUST COLLARS FABRICATED TO AWWA M11 TABLE 7.7D. ADDITIONALLY PROVIDE TWO WATERSTOPS (ONE PER SIDE OF COLLAR) AROUND FULL CIRCUMFERENCE OF PIPE USING SIKAWELL OR APPROVED EQUAL PRODUCT. SUBMIT SHOP DRAWING CLEARLY SHOWS THRUST COLLAR PLACEMENT, GEOMETRY AND WELD ATTACHMENT DETAILS. SEE DETAIL DRAWING FOR FURTHER INFORMATION.
- ALL BURIED STAINLESS STEEL PIPE SHALL BE WRAPPED WITH DENSO TAPE FOR CORROSION PROTECTION.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY ("the Client"). Urban Systems Ltd. makes no representations and shall bear no responsibility or duty in law to any party, other than the Client, for any use of this drawing for any purpose without the express written authority of Urban Systems Ltd.

ADVISORY & WARNING
Utilities or structures shown on this drawing were compiled from information supplied by other sources and may not be complete or accurate at the time of review. It is the sole responsibility of any party making use of this drawing to expose and conclusively confirm the location in the field of all underground utilities and structures, whether or not indicated on this drawing, all underground utilities in the area of the proposed work, and any utilities or structures reasonably apparent from an inspection of the proposed worksite. Urban Systems Ltd. shall bear no responsibility or duty in law for loss or damage to any party, whether in contract or tort, in the event of their failure to comply with the above.

ISSUED FOR
75% DESIGN
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-05	ISSUED FOR APPROVAL	AJ
B	2024-06	ISSUED FOR 75% DESIGN	ME



URBAN
systems

Scale
AS SHOWN

Quality Control by
Designed by
Drawn by

A.Joshi
J.Y.Wang
J.Y.Wang

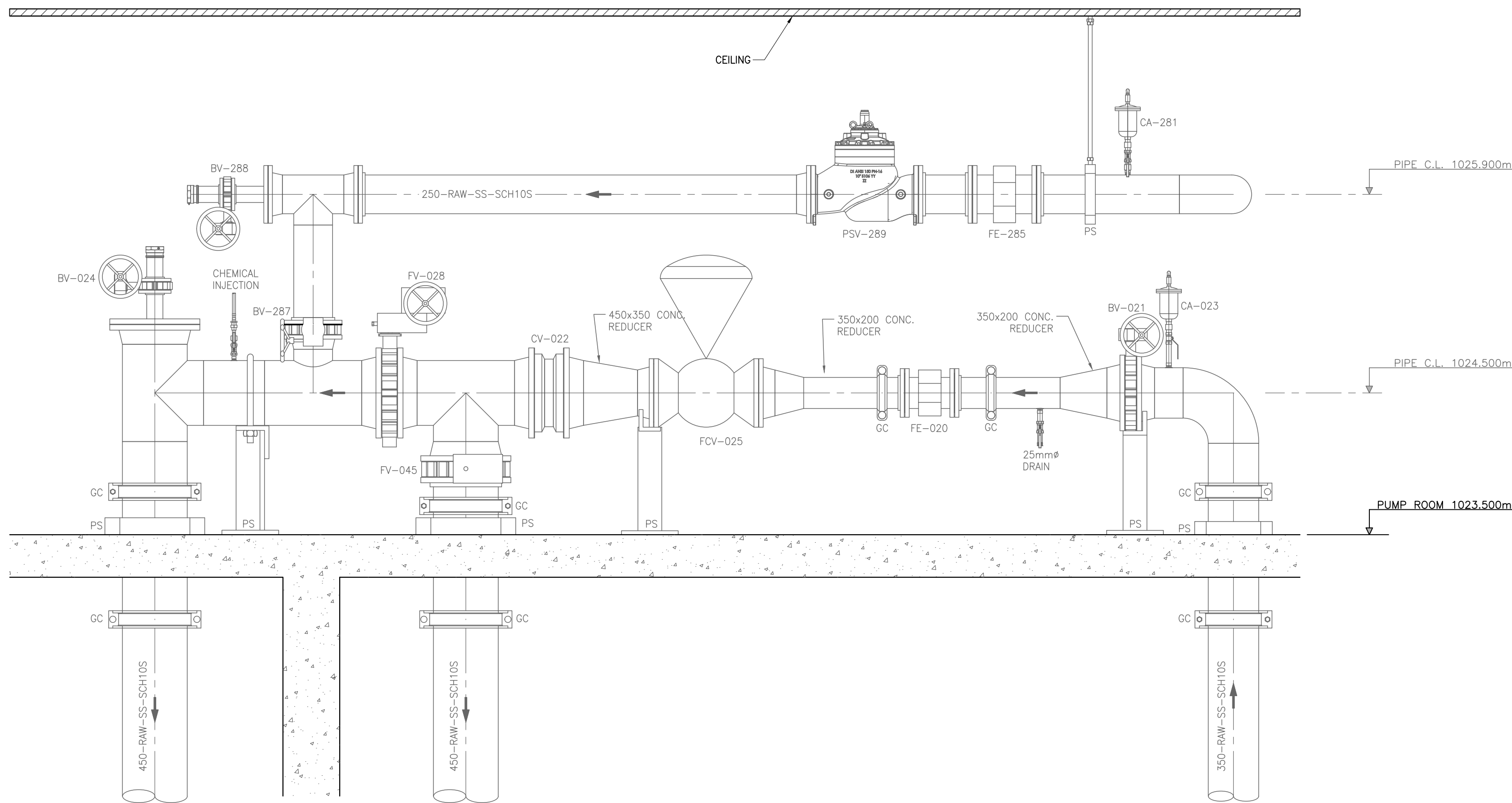
FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
MIDLINE PUMP STATION
WET WELL PLAN

Sheet Number
Project Number
1306.0120.07
Drawing Number
FORWP-02-P-GA-002

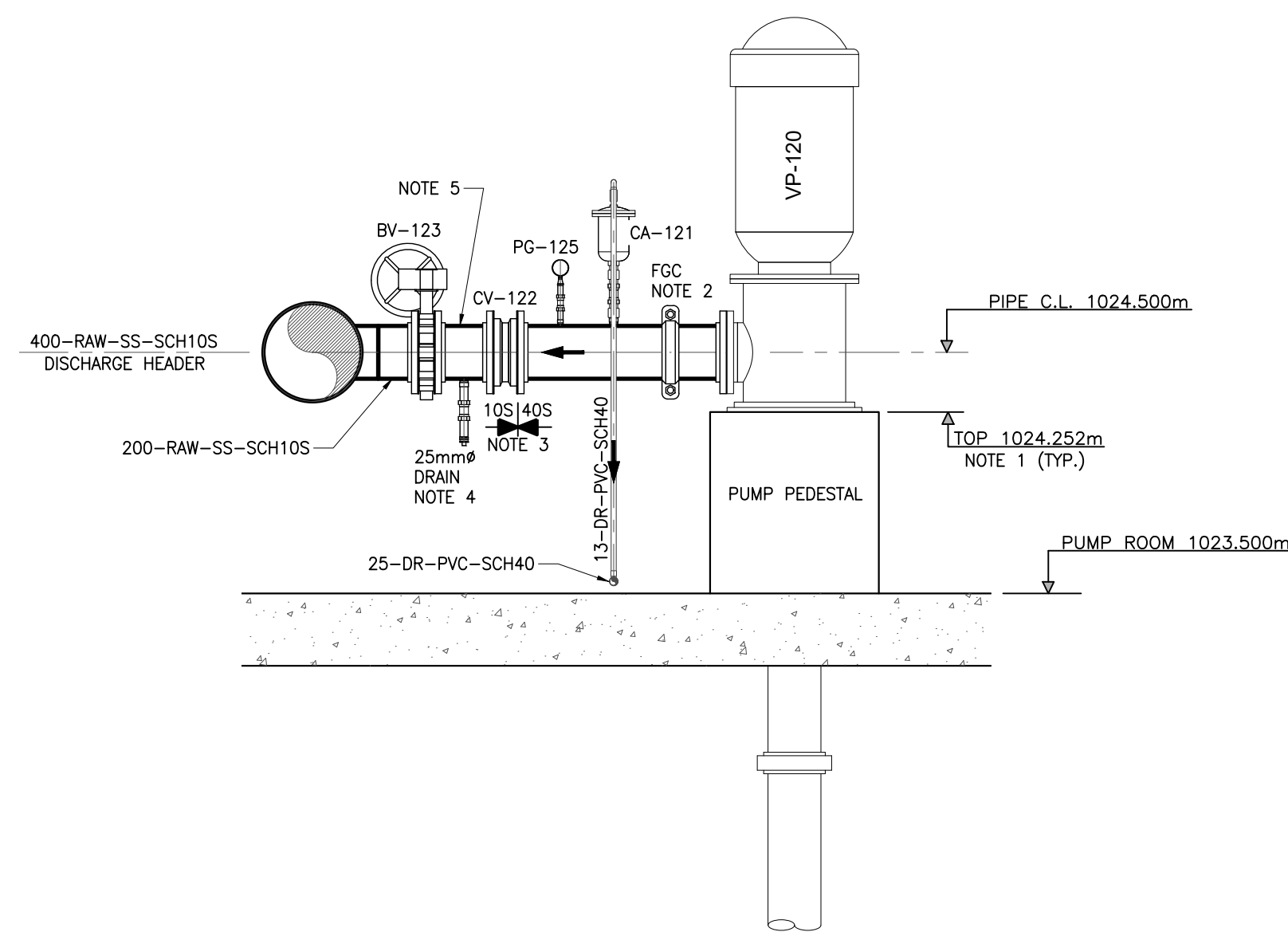
of 10
Revision
B

NOT FOR CONSTRUCTION

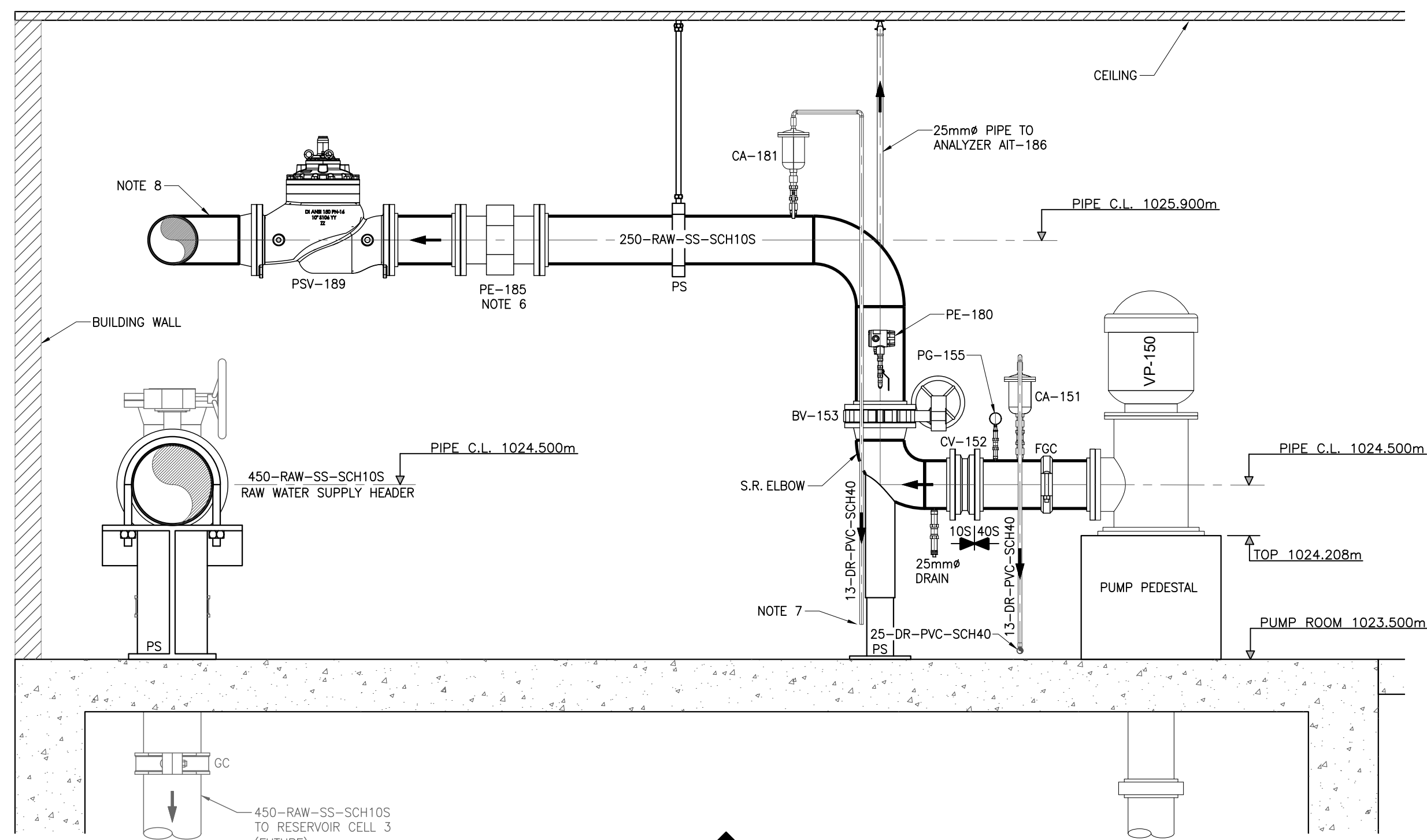
U:\projects_call\1306\0120\07\0-D-Design\CAD\10_DES\FORW Midline Pump Station\Orthos\DWG\FORWP-02-P-GA-006.dwg, 006, 2024-11-08 08:40 am ywang



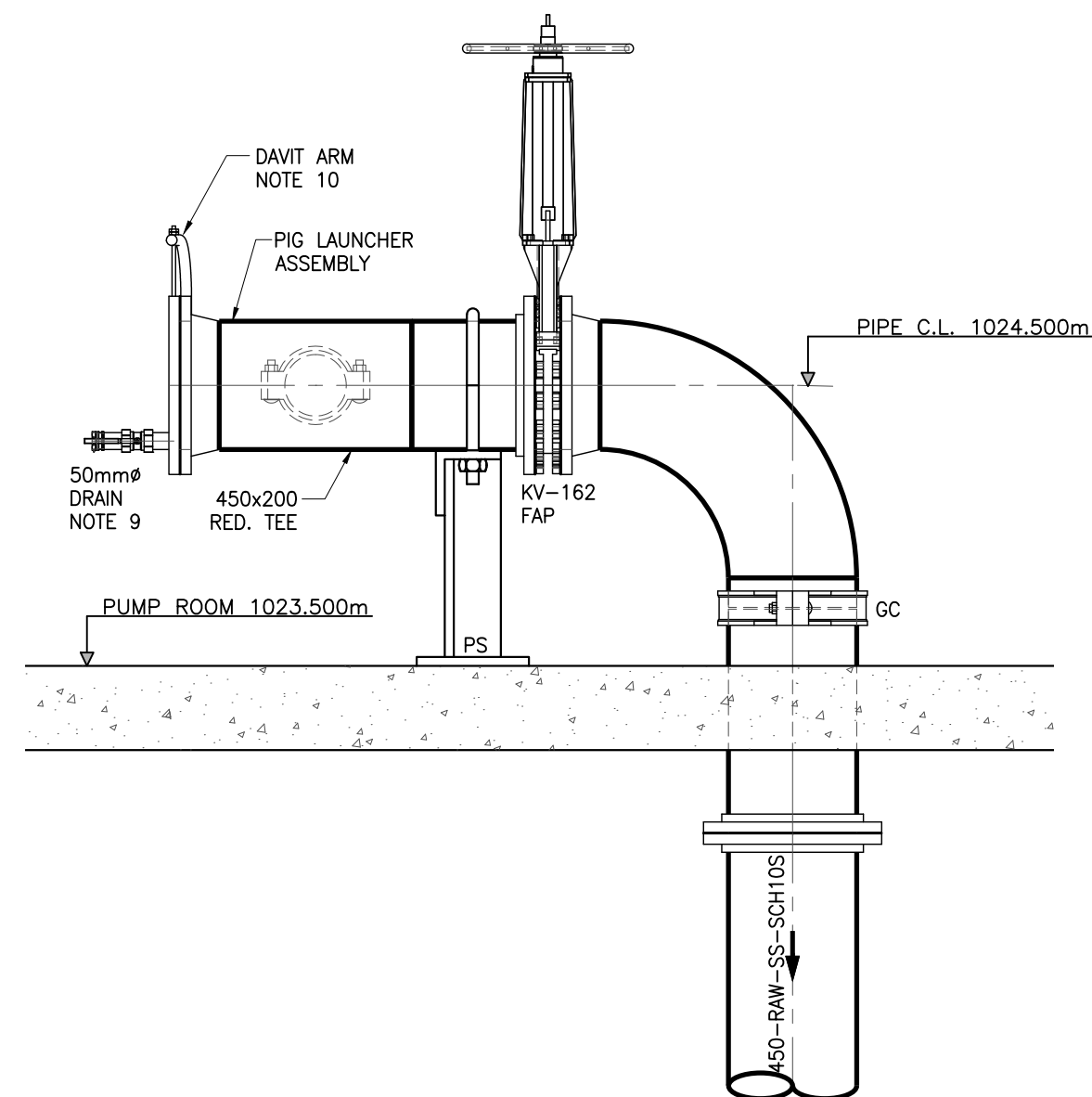
C SECTION
003 SCALE 1:25 (ISO A1)



D SECTION
003 SCALE 1:25 (ISO A1)



E SECTION
003 SCALE 1:25 (ISO A1)



F SECTION
003 SCALE 1:25 (ISO A1)

NOTES:

- PUMP PEDESTAL ELEVATIONS SHOWN ARE BASED ON THE SELECTED PUMPS IN THE SPECIFICATION. CONTRACTOR TO CONFIRM AND ADJUST THE ELEVATIONS AS REQUIRED IF THE FINAL SELECTED PUMPS DURING CONSTRUCTION ARE DIFFERENT FROM THE ONES IN THE SPECIFICATION.
- PROVIDE GROOVED FLEXIBLE COUPLING IN ALL PUMP DISCHARGE PIPING TO MITIGATE VIBRATION TRANSITION FROM PUMP TO PIPING SYSTEM.
- CONTRACTOR TO PROVIDE SCH40S STAINLESS STEEL PIPE FROM PUMP DISCHARGE TO CHECK VALVE, TYPICALLY APPLICABLE TO ALL PUMPS.
- DRAIN/VENT CONNECTION C/W THREADOLET, 50mm LONG PIPE NIPPLES AND MALE CAMLOCK.
- CONTRACTOR TO ENSURE NO INTERFERENCE BETWEEN BUTTERFLY VALVE DISC AND WAFER CHECK VALVE DISC DURING NORMAL OPERATION, TYPICALLY APPLICABLE TO ALL PUMPS.
- CONTRACTOR TO PROVIDE STRAIGHT PIPE MINIMUM 50 UPSTREAM AND 2D DOWNSTREAM OF FLOW METER, OR TO MEET MANUFACTURER'S REQUIREMENT.
- CONTRACTOR TO DIRECT AIR VALVE DISCHARGE TO NEAREST FLOOR DRAIN, DRAIN PIPE SHALL TERMINATE 200mm ABOVE THE FLOOR DRAIN.
- FLANGED REMOVABLE SPOOL FROM PSV-189 TO TEE IS INTEND FOR INSTALLATION OF POTENTIAL VENTURI AERATION NOZZLE IN THE FUTURE.
- PROVIDE PIG LAUNCHER ASSEMBLY WITH BLIND FLANGE SET, 50mm BALL VALVE AND MALE CAMLOCK CONNECTION TO PRIMING AND SEATING OF THE PIG. 50mm CONNECTION TO BE SET SAME PIPE INVERT ELEVATION WITH 450mm PIPING.
- PROVIDE DAVIT ARM FOR PIG LAUNCHER ASSEMBLY BLIND FLANGE SET.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY ("the Client"). Urban Systems Ltd. makes no representations and shall bear no responsibility or duty in law to any party, other than the Client, for any use of this drawing for any purpose without the express written authority of Urban Systems Ltd.

ADVISORY & WARNING
Utilities or structures shown on this drawing were compiled from information supplied by other sources and may not be complete or accurate at the time of review. It is the sole responsibility of any party making use of this drawing to expose and conclusively confirm the location in the field of all underground utilities and structures, whether or not indicated on this drawing. All underground utilities in the area of the proposed work, and any utilities or structures reasonably apparent from an inspection of the proposed worksite. Urban Systems Ltd. shall bear no responsibility or duty in law for loss or damage to any party, whether in contract or tort, in the event of their failure to comply with the above.

**ISSUED FOR
75% DESIGN**
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-11-05	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME



**URBAN
systems**

Scale
AS SHOWN

Quality Control by
Designed by
Drawn by

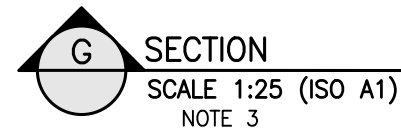
A.Joshi
J.Y.Wang
J.Y.Wang

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT**
MIDLINE PUMP STATION
PUMP ROOM SECTION

Sheet Number
Project Number
1306.0120.07
Drawing Number
FORWP-02-P-GA-006

of 10
Revision
B

NOT FOR CONSTRUCTION



1. CONTRACTOR TO CORE MANHOLE WALL AND INSTALL LINK SEAL AT THE PENETRATION TO ENSURE WATER TIGHT SEAL.
2. PROVIDE 13mm THREADED CONNECTION ON TOP OF PIPE FOR TEMPORARY PRESSURE GAUGE CONNECTION, PLUG THE CONNECTION WHEN PRESSURE GAUGE IS NOT CONNECTED.
3. PUMP LIFTING GUIDE RAIL OMITTED FORM SECTION FOR CLARITY.
4. LEVEL SETTINGS ARE APPROXIMATE AND DEPEND ON PUMP SELECTION AND GROUND WATER SITUATION. FIELD OPTIMIZE THE LEVEL SETTINGS DURING COMMISSIONING.
5. PROVIDE ANTI-SWAY RINGS FOR DEEP SUSPENDED FLOAT SWITCHES.
6. PROVIDE SUITABLE GUIDE TUBE FOR HYDROSTATIC LEVEL SENSOR.
7. PROVIDE 75mm DIRECT BURY RATED POLYURETHANE SPRAY FOAM INSULATION UP TO 2m BELOW GRADE. INSULATE UNDERSIDE OF COVER WITH 75mm THICK RIGID XPS INSULATION. SUBMIT INSULATION AND CONSTRUCTION ADHESIVE PRODUCT DATA FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
8. PROVIDE MANHOLE WITH CUSTOM CAST IN PLACE CONCRETE LID AND ACCESS HATCH AS SHOWN. HATCH SHALL BE RATED FOR 14.4kPa LOADING. CONTRACTOR TO PROVIDE SEALED SHOP DRAWING FOR REVIEW AND APPROVAL.

ADVISORY & WARNING

Utilities or structures shown on this drawing were compiled from information supplied by other sources and may not be complete or accurate at the time of review. It is the sole responsibility of any party making use of this drawing to expose and conclusively confirm the location in the field of all underground utilities and structures, whether or not indicated on this drawing, all underground utilities in the area of the proposed work, and any utilities or structures reasonably apparent from an inspection of the proposed worksites. Urban Systems Ltd. shall bear no responsibility or duty in law for loss or damage to any party, whether in contract or tort, in the event of their failure to comply with the above.

ISSUED FOR
75% DESIGN
NOVEMBER 06, 2024
urbansystems.ca

#	Date	Issue / Revision	App
A	2024-07-15	ISSUED FOR APPROVAL	AJ
B	2024-11-06	ISSUED FOR 75% DESIGN	ME

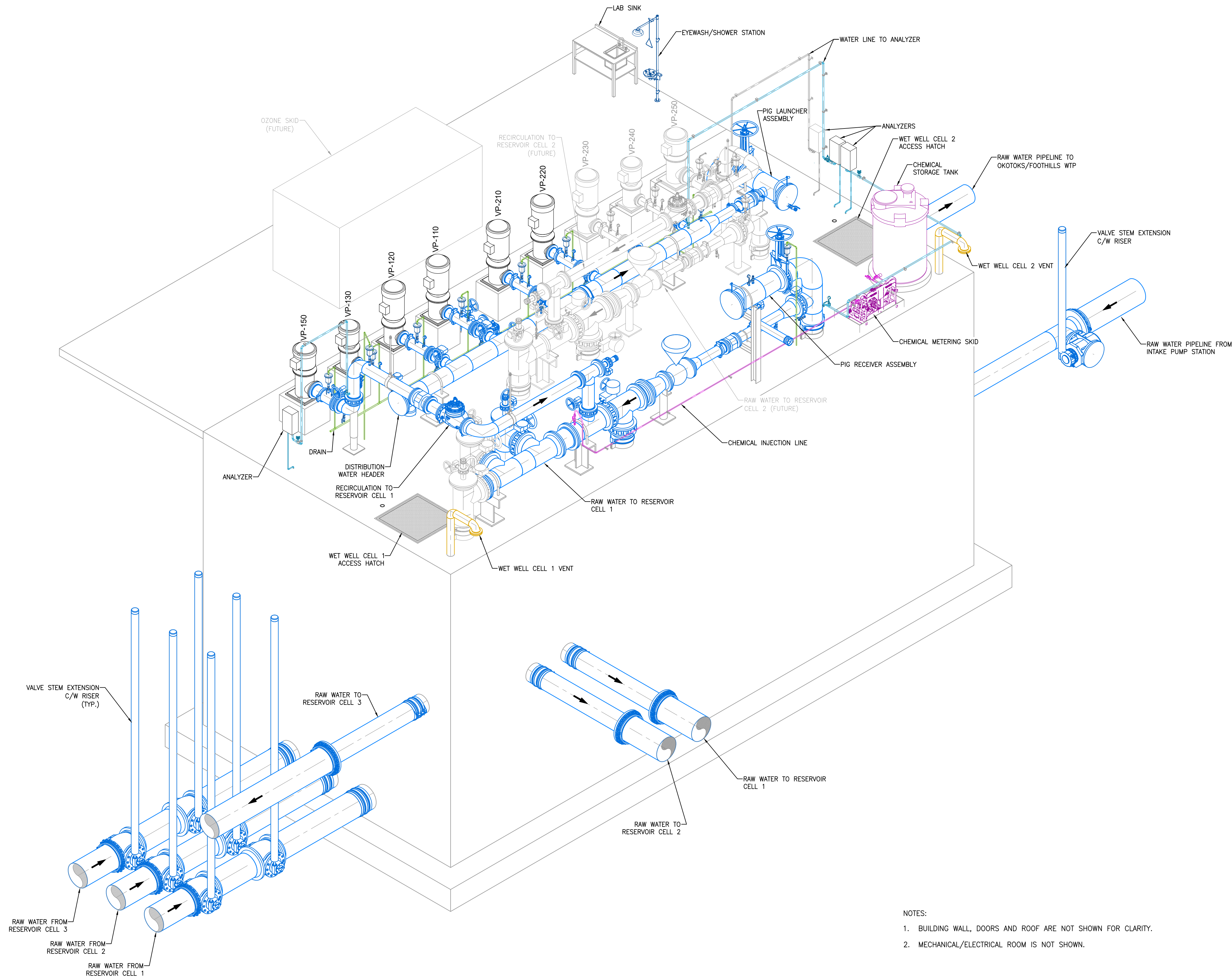


Quality Control by	A.Joshi
Designed by	J.Y.Wang
Drawn by	J.Y.Wang

Sheet Number	# of 10
Project Number	
1306.0120.07	
Drawing Number	Revision
FORWP-02-P-GA-007	B

NOT FOR CONSTRUCTION

U:\projects_cal\1306\0120\07\0-Design\CAD\10_DES\FORW Midline Pump Station\Orthos\DWG\FORWP-02-P-GA-008.dwg, 008, 2024-11-08 08:40 am ywang



- NOTES:
- BUILDING WALL, DOORS AND ROOF ARE NOT SHOWN FOR CLARITY.
 - MECHANICAL/ELECTRICAL ROOM IS NOT SHOWN.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY ("the Client"). Urban Systems Ltd. makes no representations and shall bear no responsibility or duty in law to any party, other than the Client, for any use of this drawing for any purpose without the express written authority of Urban Systems Ltd.

ADVISORY & WARNING
Utilities or structures shown on this drawing were compiled from information supplied by other sources and may not be complete or accurate at the time of review. It is the sole responsibility of any party making use of this drawing to expose and conclusively confirm the location in the field of all underground utilities and structures, whether or not indicated on this drawing, all underground utilities in the area of the proposed work, and any utilities or structures reasonably apparent from an inspection of the proposed worksite. Urban Systems Ltd. shall bear no responsibility or duty in law for loss or damage to any party, whether in contract or tort, in the event of their failure to comply with the above.

ISSUED FOR
75% DESIGN
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-11-08	ISSUED FOR 75% DESIGN	ME

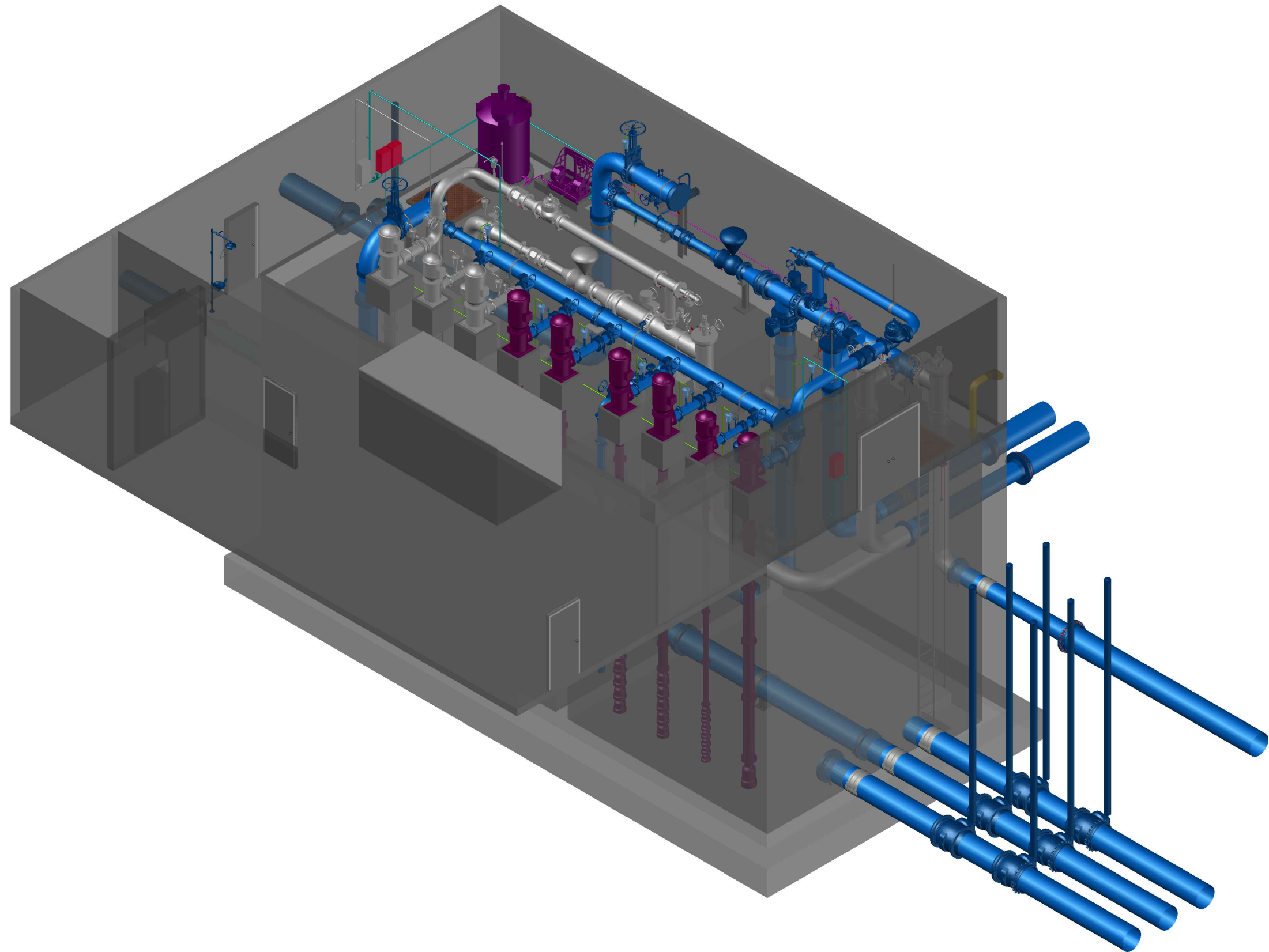


URBAN systems	
Scale	AS SHOWN
Quality Control by	A. Joshi
Designed by	A. Joshi
Drawn by	J.Y. Wang

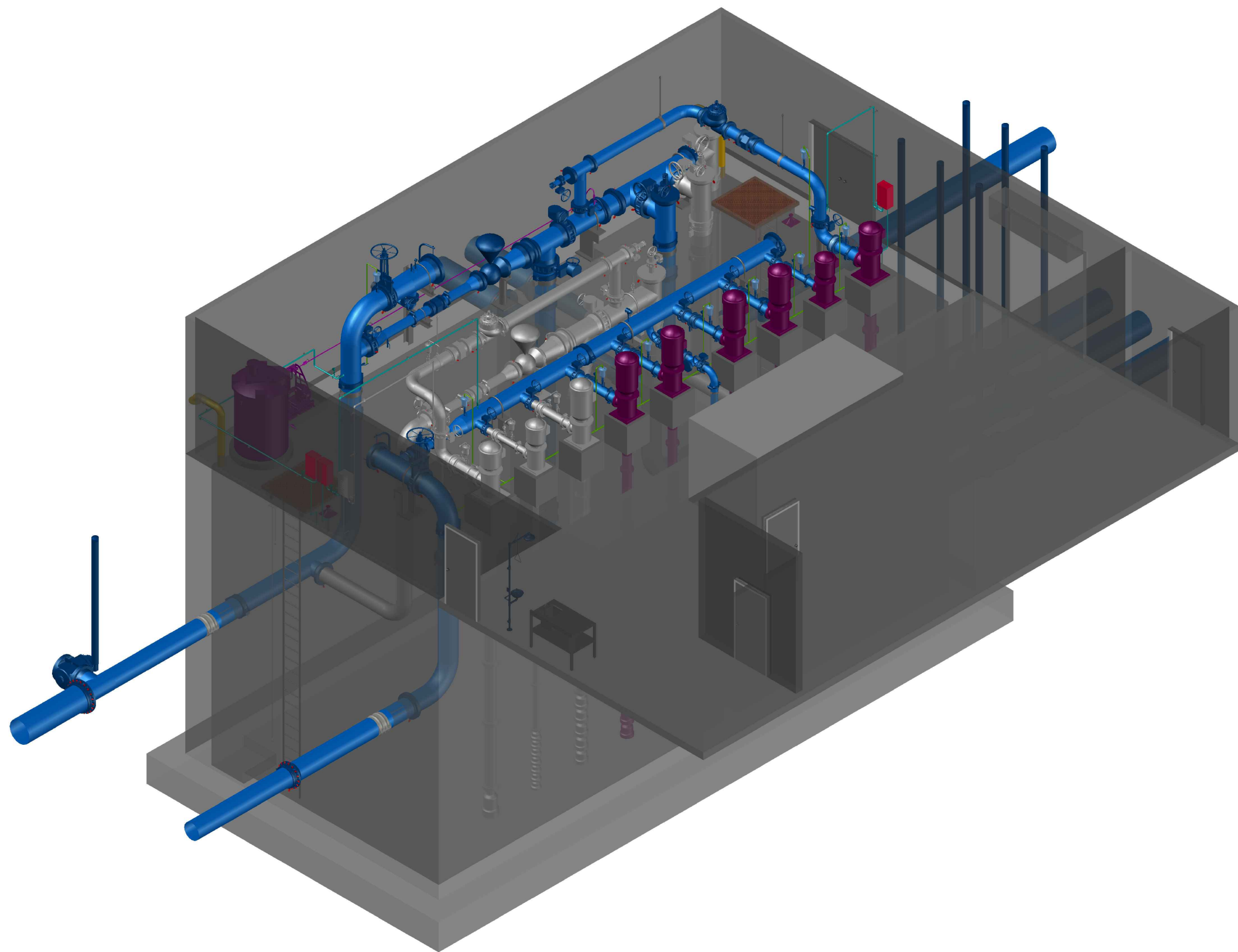
FOOTHILLS OKOTOKS REGIONAL WATER PROJECT MIDLINE PUMP STATION ISOMETRIC VIEW	
Sheet Number	# of 10
Project Number	1306.0120.07
Drawing Number	FORWP-02-P-GA-008
Revision	A

NOT FOR CONSTRUCTION

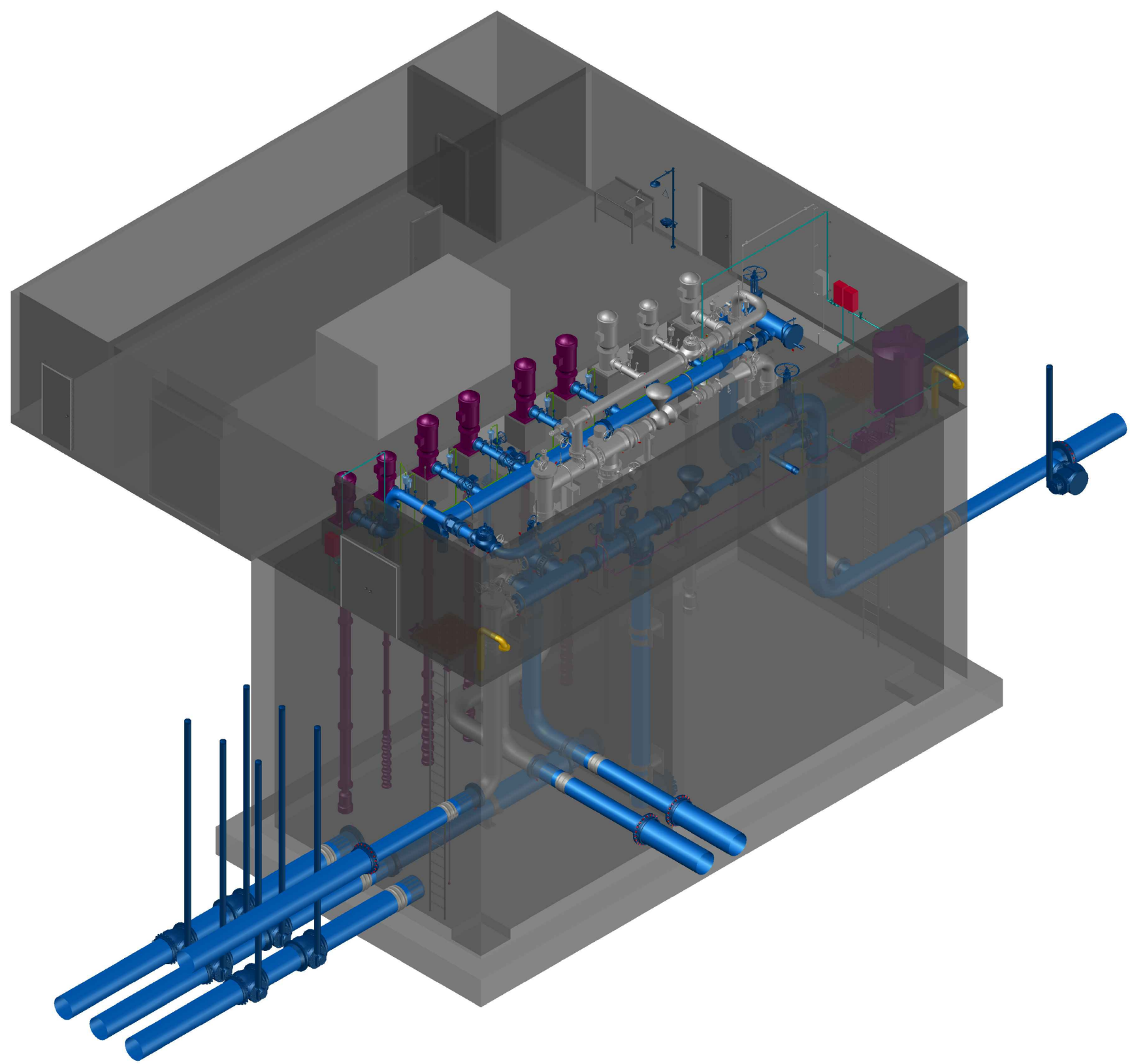
U:\projects_call\1306\0120\07\0-D-Design\CAD\10_DES\FORW Midline Pump Station\Orthos\DWGs\FORWP-02-P-GA-008.dwg, 009, 2024-11-08 08:40 am ywang



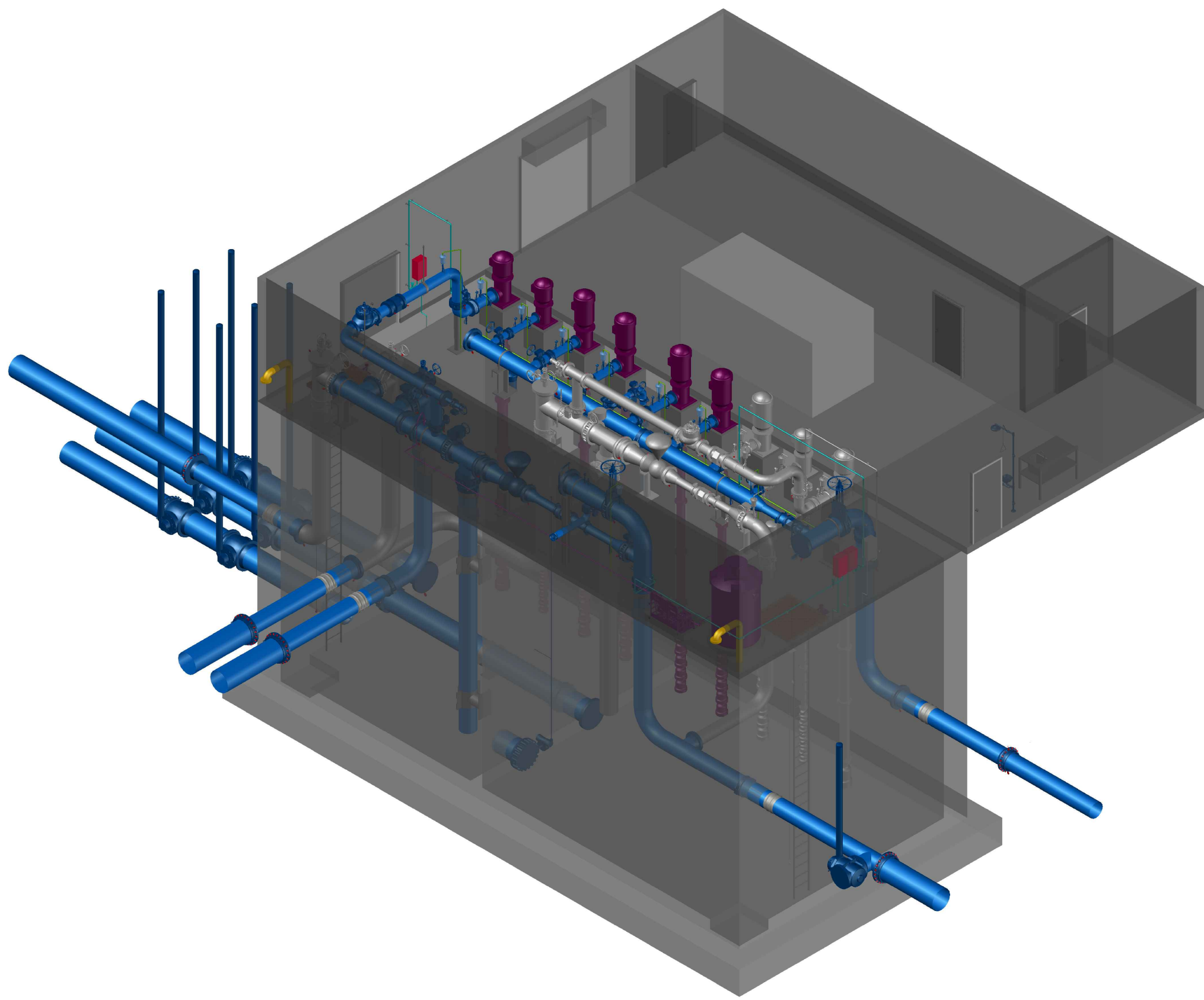
ISOMETRIC VIEW — SE
NTS



ISOMETRIC VIEW — SW
NTS



ISOMETRIC VIEW — NE
NTS



ISOMETRIC VIEW — NW
NTS

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
("the Client"). Urban Systems Ltd. makes no representations and shall
bear no responsibility or duty in law to any party, other than the Client,
for any use of this drawing for any purpose without the express written
authority of Urban Systems Ltd.

ADVISORY & WARNING
Utilities or structures shown on this drawing were compiled from
information supplied by other sources and may not be complete or
accurate at the time of review. It is the sole responsibility of any party
making use of this drawing to expose and conclusively confirm the loca-
tion in the field of all underground utilities and structures, whether or not
indicated on this drawing, all underground utilities in the area of the
proposed work, and any utilities or structures reasonably apparent from
an inspection of the proposed worksite. Urban Systems Ltd. shall bear
no responsibility or duty in law for loss or damage to any party, whether
in contract or tort, in the event of their failure to comply with the above.

**ISSUED FOR
75% DESIGN**
NOVEMBER 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue / Revision	App
A	2024-11-08	ISSUED FOR 75% DESIGN	ME



**URBAN
systems**

Scale
AS SHOWN

Quality Control by
Designed by
Drawn by

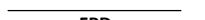
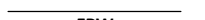
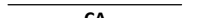
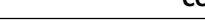
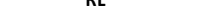
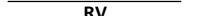
A. Joshi
A. Joshi
J.Y. Wang

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
MIDLINE PUMP STATION
ISOMETRIC RENDERING**

Sheet Number
Project Number
1306.0120.07
Drawing Number
FORWP-02-P-GA-009

of 10
Revision
A

NOT FOR CONSTRUCTION

GENERAL EQUIPMENT		GENERAL PIPING		HEATING EQUIPMENT CONTINUED		FIRE PROTECTION		VENTILATION FIXTURE	
 PROPOSED		 PIPE DROP		 BALANCE VALVE		 FIRE EXTINGUISHER		 CARBON DIOXIDE	
 EQUIPMENT TO BE REMOVED		 PIPE RISE		 CIRCUIT SETTER		 FIRE EXTINGUISHER C/W SEMI RECESSED CABINET		 CARBON MONOXIDE	
 EXISTING		 OFFSET DOWN		 GAS COCK		 FIRE HOSE STATION		 HUMIDISTAT	
 MARKER DENOTING EXTENT OF WORK TO EXISTING SYSTEMS		 BOTTOM TAKE-OFF		 ISOLATION VALVE		 FIRE DEPARTMENT SIAMESE CONNECTION		 NITROGEN DIOXIDE	
PLUMBING		 TOP TAKE-OFF		 PRESSURE REDUCING VALVE		 UPRIGHT SPRINKLER		 OUTSIDE AIR TEMP.	
 G NATURAL GAS		 TEE CONNECTION		 RELIEF OR SAFETY VALVE		 PENDANT SPRINKLER		 PRESSURE SENSOR	
 DCW DOMESTIC COLD WATER		 CAP		 AUTOMATIC FILL VALVE		 CONCEALED SPRINKLER		 TEMP. SENSOR	
 DHW DOMESTIC HOT WATER		 BLOW OFF STRAINER		 SOLENOID VALVE		 DRY PENDANT SPRINKLER		 THERMOSTAT	
 DHWR DOMESTIC HOT WATER RETURN		 CONCENTRIC REDUCER		 DIFFERENTIAL PRESSURE VALVE		 SIDEWALL HEAD SPRINKLER		 FREEZE-STAT	
 W WATER SERVICE		 ECCENTRIC REDUCER		 STEAM TRAPS		 SIDEWALL HEAD DRY SPRINKLER		 DIFFERENTIAL PRESSURE SENSOR	
 SAN BELOW GRADE SANITARY		 FLANGED SPOOL PIECE		 SUPERVISED VALVE		VENTILATION DUCT WORK  THERMAL LINING (INSULATION)		 THERMOSTAT C/W LOCKABLE COVER	
 SAN ABOVE GRADE SANITARY		 UNION/FLANGED CONNECTION		 SWING GATE CHECK VALVE				 THERMOSTAT C/W REMOTE TEMPERATURE SENSOR	
 STM BELOW GRADE STORM		 EXPANSION JOINT		 BACK FLOW PREVENTER		 RECTANGULAR DUCT		 SUPPLY OR OUTSIDE AIR DUCT	
 STM ABOVE GRADE STORM		 PUMP		 SIGHT GLASS		 ROUND DUCT		 RETURN OR TRANSFER AIR DUCT	
 FPD FIRE PROTECTION DRY		 PRESSURE GAUGE AND COCK		 MICRON FILTER		 FLAT OVAL DUCT		 EXHAUST OR COMBUSTION AIR DUCT	
 FPW FIRE PROTECTION WET		 STRAINER		 RADIATION TAG		 FLEXIBLE DUCT CONNECTION		 LOUVERED GRILLE	
 RAD RADON		 PIPE SIZE		 DRINKING FOUNTAIN		 BRAIDED FLEXIBLE PIPE CONNECTOR		 ROUND CONE DIFFUSER	
 CA COMPRESSED AIR		 DIRECTION OF FLOW		 THERMOMETER		 DOUBLE SPHERE RUBBER PIPE CONNECTOR		 SQUARE CONE DIFFUSER	
 V SANITARY VENT		 TEMPERATURE SENSOR SINGLE POINT PROBE		 METER		 VARIABLE VOLUME TERMINAL UNIT		 RETURN AIR DIFFUSER	
 WT WEeping TILE BELOW GRADE		 SENSOR AVERAGING PROBE		 FLOOR DRAIN		 TRANSITION		 ROUND SUPPLY DUCT RISER	
HEATING		 AIR SEPARATOR		 FUNNEL FLOOR DRAIN		 RECTANGULAR TO ROUND TRANSITION		 AIR GRILLE ABBREVIATION	
 HWS HEATING WATER SUPPLY		 AIR SCOOP		 HUB DRAIN		 TURNING VANES		 S- SUPPLY	
 HWR HEATING WATER RETURN		 CHEMICAL POT FEEDER		 ROOF DRAIN		 SMOKE DETECTORS		 R- RETURN	
 GLS GLYCOL SUPPLY		 AIR VENT		 FIXTURE TRAP		 DUCT REHEAT COIL		 E- EXHAUST	
 GLR GLYCOL RETURN		 HEATING EQUIPMENT		 CLEAN-OUT		 RELIEF VENT		 T- TRANSFER	
COOLING		 2 WAY MOTORIZED CONTROL VALVE		 IN FLOOR CLEAN-OUT		 CHIMNEY		 BALANCE DAMPER	
 CHWS CHILLED WATER SUPPLY		 3 WAY MOTORIZED CONTROL VALVE		 NON FREEZE HOSE BIBB		 INDICATES DIRECTION OF AIR FLOW		 FIRE DAMPER	
 CHWR CHILLED WATER RETURN		 HEATING EQUIPMENT		 SANITARY VENT		 AIR FLOW MEASURING STATION		 FIRE/ SMOKE DAMPER	
 CWS CONDENSER WATER SUPPLY		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 MOTORIZED DAMPER		 MOTORIZED DAMPER	
 CWR CONDENSER WATER RETURN		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		TAGS  FIXTURE AND EQUIPMENT TAG	
 RL REFRIGERANT LIQUID		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 FLOW SWITCH	
 RV REFRIGERANT VAPOUR		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 EMCS POINT IDENTIFICATION TAG	
 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 VAV BOX IDENTIFICATION TAG	
 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 VOLTAGE/CURRENT PRESSURE TRANSDUCER	
 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 HEATING EQUIPMENT		 KEY NOTES	

HVAC AIR STREAMS	
	SUPPLY AIR
S/A	
	RETURN AIR
R/A	
	EXHAUST AIR
E/A	
	OUTDOOR AIR
O/A	
	COMBUSTION AIR
C/A	
	TRANSFER AIR
T/A	

EQUIPMENT ABBREVIATIONS
EQUIPMENT NAME
FURNACE
ENERGY RECOVERY VENTILATOR
MAKE-UP AIR UNIT
AIR HANDLING UNIT
ROOF TOP UNIT
FAN COIL
INFRARED RADIANT HEATER
UNIT HEATER
FORCE FLUSH HEATER
CABINET UNIT HEATER
BASEBOARD HEATER
REHEAT COIL
MIXED AIR VOLUME BOX
VARIABLE AIR VOLUME BOX
BOILER
CHILLER
AIR CONDITIONING COIL
AIR CONDITIONING CONDENSER
HUMIDIFIER
EXHAUST FAN
TRANSFER FAN
ANTI-STARVATION FAN
RANGE HOOD
FUME HOOD
VEHICLE EXHAUST
COMPRESSOR
DOMESTIC WATER HEATER
PUMPS
EXPANSION TANK
SEPTIC TANK
SUMP
FIRE EXTINGUISHER
BALANCING DAMPER
BACKDRAFT DAMPER
FIRE DAMPER
MOTORIZED DAMPER

"ERV"
"HRV"
"MUA"
"AHU"
"RTU"
"FC"
"IRH"
"UH"
"FF"
"CUH"
"BB"
"RHC"
"MAV"
"VAV"
"B"
"CH"
"AC"
"CND"
"H"
"EF"
"TF"
"ASF"
"RH"
"FH"
"VE"
"CMP"
"DWH"
"P"
"ET"
"ST"
"SMP"
"FE"
"BD"
"BDD"
"FD"
"DM"

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE CIVIL LEGEND AND CIVIL ABBREVIATIONS DRAWING.
2. READ THE MECHANICAL SITE DRAWINGS IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, STRUCTURAL AND ELECTRICAL.
3. REFER TO THE ELECTRICAL DRAWINGS FOR POWER AND COMMUNICATION CABLES AND SITE ELECTRIFICATION INFORMATION.
4. CONSTRUCTION LIMITS ARE APPROXIMATE, VERIFY WITH OWNER PRIOR TO COMMENCING WORK.
5. EXPOSE, SURVEY AND VERIFY ALL UNDERGROUND UTILITY LINE-INS AND CROSSINGS PRIOR TO COMMENCING WORK.

GENERAL PLUMBING NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE INTENT ONLY. PROVIDE ALL VERTICAL AND HORIZONTAL OFFSETS NOT NECESSARILY IDENTIFIED IN THE DRAWINGS IN A MANNER THAT MEETS ALL CODE REQUIREMENTS.
2. SIZE ALL PLUMBING LINES TO THE NATIONAL PLUMBING CODE.
3. FIBER OPTIC PENETRATIONS SHALL BE IN ACCORDANCE WITH THE RATED MATERIALS.
4. ALL DOMESTIC PLUMBING FIXTURES ARE TO HAVE ISOLATION VALVES.
5. DOMESTIC COLD AND HOT WATER LINES ARE TO BE SIZED AT 3/2" UNLESS NOTED OTHERWISE. SIZE ALL LINES TO THE NATIONAL PLUMBING CODE REQUIREMENTS.
6. INSTALL FRET TRAPS ON THE INCOMING DOMESTIC COLD LINE AT ALL DOMESTIC WATER HEATERS.
7. ALL GAS PIPING SHALL BE IN ACCORDANCE WITH THE APPLIANCE SHALL BE MADE WITH A UNION, ISOLATION GAS COCK AND DIRT LEG. GAS LINES TO BE SIZED TO CAN/CSA B149.3-20, INCLUDE GASTIGHT FLEX CONNECTION FOR RANGES. HARD PIPE AT OTHER MECHANICAL EQUIPMENT.
8. COORDINATE PLUMBING LINES AND FIXTURES/ EQUIPMENT WITH ALL OTHER DISCIPLINES.
9. VENT ALL PLUMBING EQUIPMENT AND FIXTURES AS REQUIRED BY CODE.
10. GROUP FIXTURES AS REQUIRED BY CODE. GROUP FIXTURE VENTS TO COMMON VENT OPENINGS AND PENETRATIONS.
11. ALL FLOOR DRAINS ARE TO BE COMPLETE WITH TRAP PRIMERS.

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE INTENT ONLY. PROVIDE ALL VERTICAL AND HORIZONTAL OFFSETS NOT NECESSARILY IDENTIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. VENTILATION EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
3. DUCTWORK SHALL MEET THE REQUIREMENTS OF NFPA-90A-2024, AIR CONDITIONING AND MECHANICAL VENTILATING SYSTEMS. DUCTWORK SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA AND ASHRAE MANUALS AND HANDBOOKS. EXHAUST HOOD AND DUCTING SHALL MEET THE REQUIREMENTS OF NFPA-96-2024.
4. PROVIDE AND INSTALL FIRE DAMPERS WHERE REQUIRED TO MAINTAIN FIRE SEPARATION. FIRE DAMPERS SHALL BE TO BE LISTED AND MANUFACTURED AS REQUIRED BY CAN/ULC-S513.2-07 (R2021).
5. EXHAUST HOODS SHALL BE 100% OF ALL RELIEF AND EXHAUST AIR DUCTING IS TO BE INSULATED WITH 100mm (4") THERMAL INSULATION.
6. THE FIRST 3 METERS (10 FT) OF ALL DUCTS CONNECTED TO FURNACES AND WATER HEATERS SHALL BE 100% OF ALL RELIEF AND EXHAUST AIR DUCTING IS TO BE INSULATED WITH 100mm (4") THERMAL INSULATION.
7. ALL DUCT SIZES SHOWN INDICATE THE FREE AIR SPACE REQUIRED.
8. COORDINATE HVAC DUCTING AND EQUIPMENT WITH ALL OTHER DISCIPLINES.
9. COORDINATE WITH CEILING HEIGHT REQUIREMENTS AND ARCHITECTURAL REFLECTED LIGHTING PLAN.

WATER CLOSET
LAVATORY
URINAL
SINK
SHOWER
BATH TUB
DRINKING FOUNTAIN
EYE WASH STATION
GREASE INTERCEPTOR
WATER SOFTENER
DISHWASHER
MOP SINK
REFRIGERATOR
RANGE
LAUNDRY BOX
FLOOR DRAIN
FUNNEL FLOOR DRAIN
TRENCH DRAIN
HUB DRAIN
ROOF DRAIN
HOSE BIBB
NON-FREEZE HOSE BIBB
CLEANOUT

SUPPLY AIR
RETURN AIR
EXHAUST AIR
FRESH AIR
TRANSFER AIR
OUTDOOR AIR
COMBUSTION AIR

R/A
E/A
F/A
T/A
O/A
C/A

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.com



Scale

NTS

Quality Control by P.P.G.
Designed by B.K.D.
Drawn by H.K.

Sheet Number 1 of 9

Sheet Number 1 of 9

29121-005-12

Drawing Number	Revision
FORW-02-M-DN-001	A

NOT FOR CONSTRUCTION

PLUMBING FIXTURE AND SPECIALTIES SCHEDULE															
TAG	DESCRIPTION		MANUFACTURER	MODEL	COMMENTS							QUANTITY	CWFU	HWFU	WFU
EW-1	ADA COMPLIANT COMBINATION DRENCH SHOWER AND EYEWASH UNIT		BRADLEY	S19314BFSS	COMPLETE WITH THERMOSTATIC MIXING VALVE							1	1	1	1
FD-1	102mm FLOOR DRAIN		WATTS	FD-204	EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEPHOLES, NICKEL BRONZE STRAINER, PRIMED BY TRAP PRIMER.							2	0	0	4
FD-2	51mm FLOOR DRAIN		WATTS	FD-202	EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEPHOLES, NICKEL BRONZE STRAINER, PRIMED BY TRAP PRIMER.							6	0	0	2
HB-1	19mm HOSE BIBB		WATTS	LFSCB-4	BRONZE CONSTRUCTION WITH VACUUM BREAKER, HOSE THREAD SPOUT.							1	6	0	0
LAV-1	WALL MOUNT LAVATORY		AMERICAN STANDARD	LUCERNE	102mm (4") CENTERS, MONTERREY 1.5 GPM SINGLE HANDLE FAUCET, COMPRESSION STOPS, COVER PLATES, SUPPLY TUBES, P-TRAP, WALL HANGER, AND ALL NECESSARY CONNECTIONS.							1	1.5	1.5	2
SK-1	SINGLE BASIN STAINLESS STEEL SINK		AMERICAN STANDARD	COLONY	SELF RIMMING DROP IN SINK WITH FAUCET LEDGE C/W AMERICAL STANDARD COLONY PRO TWO HANDLE KITCHEN FAUCET, GOOSENECK SPOUT, COMPRESSION STOPS, COVER PLATES, SUPPLY TUBES, P-TRAP, 3-PORT TRAP PRIMER HEADER AND ALL NECESSARY CONNECTIONS.							1	1.5	1.5	1.5
WC-1	WATER CLOSET WITH TANK		AMERICAN STANDARD	CADET	C/W OPEN SEAT, NO LID, RIGHT HEIGHT ELONGATED BOWL, SUPPLY VALVE AND TUBE WITH ALL NECESSARY CONNECTIONS.							1	2.2	0	4

PUMP SCHEDULE																
TAG	DESCRIPTION	MANUFACTURER	MODEL	FLOW	SUCTION HEAD	DISCHARGE PRESSURE	ELECTRICAL			MOTOR	COMMENTS					
P-1	JETPUMP	XYLEM/ GDULDS	J515	20.0 GPM	2 ft	276 Pa	V	Ph	Hz	HP	FLA					
							120	1	60	1.5	20 A	C/W V45MP EXPANSION TANK, AND PRESSURE SWITCH. WATER PUMP CUT OUT TO BE WIRED TO SEPTIC HIGH HIGH LEVEL ALARM.				

DOMESTIC WATER HEATER SCHEDULE															
TAG	DESCRIPTION	MANUFACTURER	MODEL	HEATING INPUT	LENGTH	HEIGHT	ELECTRICAL			WEIGHT	COMMENTS				
DWH-1	INSTANTANEOUS ELECTRICAL WATER HEATER	STIEBEL ELTRON	DHC-E8	5,400 W	200 mm	360 mm	V	Ph	Hz	WEIGHT					
							208	1	60	2.7 kg	INSTALLED ON WALL IN WASHROOM, BACK SUPPLY AND OUTLET, C/W ISOLATION VALVES, UNIONS, AND ACCESS PANEL.				

FIRE EXTINGUISHER SCHEDULE														
TAG	MODEL	STYLE	SIZE	COMMENTS							QUANTITY			
FE-1	ABC-DRY CHEMICAL	WALLMOUNT WITH HOOK	5 kg	INSTALLATION SHALL MEET NFPA 10 CODE REQUIREMENTS							4			
FE-2	TYPE C	WALLMOUNT WITH HOOK	5 kg	INSTALLED IN ELECTRICAL ROOM. NON-CONDUCTIVE, NON-CORROSIVE, NO RESIDUE GASEOUS AGENT, COMPLETE WITH WALL BRACKET, HALOTRON 4137 OR EQUIVALENT. INSTALLATION SHALL MEET NFPA 10 CODE REQUIREMENTS.							2			

FAN SCHEDULE																
TAG	DESCRIPTION	MANUFACTURER	MODEL	NOMINAL AIR FLOW	ESP	MOTOR		VOLTAGE		WEIGHT	COMMENTS					
EF-1	SIDE WALL EXHAUST FAN	GREENHECK	BAER-36	6,135 L/s	124.0 Pa	1,400	5	575	3	60	182 kg	C/W WALL HOUSING, 45 DEGREE WEATHER HOOD AND BIRD SCREEN.				
EF-2	SIDE WALL EXHAUST FAN	GREENHECK	BAER-36	6,135 L/s	124.0 Pa	1,400	5	575	3	60	182 kg	C/W WALL HOUSING, 45 DEGREE WEATHER HOOD AND BIRD SCREEN.				
EF-3	CHEMICAL TANK EXHAUST FAN	FANTECH	FG-4XL-EC	5 L/s	124.0 Pa	1,650	1/8	120	1	60	8 kg	FAN TO OPERATE CONTINUOUSLY DEPRESSURIZE CHEMICAL TANK				

AIR TERMINAL SCHEDULE														
TAG	MANUFACTURER	MODEL	SIZE	SYSTEM TYPE	COMMENTS							QUANTITY		
E-1	PRICE	80/ TB/ B12 (EGGCRATE)	VARIES	EXHAUST AIR	COLOUR TO MATCH ARCHITECTURAL FINISH.							3		
L-1	PRICE	D6635	356x356mm	VARIES	6" DEEP, 35 DEGREE BLADE EXTRUDED DRAINABLE LOUVER, COMPLETE WITH BIRDSCREEN AND BAKED ENAMEL PAINT, COLOUR TO MATCH ARCHITECTURAL FINISH							2		
L-2	PRICE	R5E5	1219x2438mm	OUTDOOR AIR	5" DEEP, 35 DEGREE BLADE EXTRUDED DRAINABLE LOUVER, COMPLETE WITH BIRDSCREEN AND BAKED ENAMEL PAINT, COLOUR TO MATCH ARCHITECTURAL FINISH							2		
S-1	PRICE	520 SERIES DOUBLE DEFLECTION GRILLE	152x152mm	SUPPLY AIR	COLOUR TO MATCH ARCHITECTURAL FINISH.							5		
T-1	PRICE	80/ TB/ B12 (EGGCRATE)	152x152mm	TRANSFER AIR	COLOUR TO MATCH ARCHITECTURAL FINISH.							4		

DIVISION 23.72.15 - HRV SCHEDULE															
TAG	DESCRIPTION	MANUFACTURER	MODEL	AIR FLOW	ESP	ELECTRICAL			MCA	MOCP	FLA	WEIGHT	COMMENTS		
HRV-1	HEAT RECOVERY VENTILATOR	FANTECH	SHR 450	160 L/s	124.0 Pa	V	Ph	Hz	15 A	4 A		66 kg	INTERLOCKED WITH STATION LIGHTS C/W INTAKE AND EXHAUST FANS, WASHABLE ALUMINUM CORE, WASHABLE FILTERS, INTEGRAL SPEED AND DEFROST CONTROLS, PROVIDE AND INSTALL 19mm CONDENSATE DRAIN LINE TO WASHROOM VENT.		

DUCT HEATER SCHEDULE														
TAG	DESCRIPTION	MANUFACTURER	MODEL	HEATING OUTPUT	ELECTRICAL			COMMENTS						
DH-1	INLINE DUCT HEATER	THERMOLEC	MSCD-1015-0002-0000	10 kW	V	Ph	Hz	DISCHARGE TEMP. 21°C C/W AUTOMATIC CUT-OUT, BUILT IN AIRFLOW SENSOR, S.C.R. 0-10V MODULATING CONTROL, INTERLOCKED WITH HRV-1.						

CONTROL DAMPER SCHEDULE															
TAG	SERVICE	MANUFACTURER	MODEL	BLADE TYPE	DAMPER WIDTH	DAMPER HEIGHT	MANUFACTURER	MODEL	TYPE	SIGNAL	POSITION	FAIL	ELECTRICAL		COMMENTS
DM-1	EXHAUST	GREENHECK	ICD-45	PARALLEL	1156 mm	1156 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	
DM-2	INTAKE	GREENHECK	ICD-45	PARALLEL	1219 mm	2438 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	
DM-3	EXHAUST	GREENHECK	ICD-45	PARALLEL	1156 mm	1156 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	
DM-4	INTAKE	GREENHECK	ICD-45	PARALLEL	1219 mm	2438 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	
DM-5	INTAKE	GREENHECK	ICD-45	PARALLEL	356 mm	356 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	
DM-6	EXHAUST	GREENHECK	ICD-45	PARALLEL	356 mm	356 mm	BELIMO	NFB24-S	ON/OFF	0-10V	OPEN	24	1	60	

UNIT HEATER SCHEDULE																
TAG	DESCRIPTION	MANUFACTURER	MODEL	HEATING OUTPUT	AIR FLOW	HP	RPM	ELECTRICAL		WEIGHT	COMMENTS					
UH-1	ELECTRIC UNIT HEATER	OUELLET	OAS05036AM	5.0 kW	330 L/s	1/30	1,550	600	3	60	20 kg	C/W WALL MOUNT REMOTE THERMOSTAT.				
UH-2	ELECTRIC UNIT HEATER	OUELLET	OAS05036AM	5.0 kW	330 L/s	1/30	1,550	600	3	60	20 kg	C/W WALL MOUNT REMOTE THERMOSTAT.				
UH-3	ELECTRIC UNIT HEATER	OUELLET	OAS05036AM	5.0 kW	330 L/s	1/30	1,550	600	3	60	20 kg	C/W WALL MOUNT REMOTE THERMOSTAT.				
UH-4	ELECTRIC UNIT HEATER	OUELLET	OAS05036AM	5.0 kW	330 L/s	1/30	1,550	600	3	60	20 kg	C/W WALL MOUNT REMOTE THERMOSTAT.				
UH-5	ELECTRIC UNIT HEATER	OUELLET	OAS04036AM	4.0 kW	240 L/s	1/30	1,550	600	3	60	20 kg	C/W WALL MOUNT REMOTE THERMOSTAT.				

BASEBOARD HEATER SCHEDULE															
TAG	DESCRIPTION	MANUFACTURER	MODEL	HEATING OUTPUT	ELECTRICAL			DIMENSIONS		WEIGHT	COMMENTS				QUANTITY
BBH-1	ELECTRIC BASEBOARD HEATER	OUELLET	OCB1008	1,000 W	V	Ph	Hz	LENGTH	HEIGHT	6.2 kg	C/W INTEGRAL THERMOSTAT AND 965x610mm STAINLESS STEEL WALL BACKING ABOVE HEATER.				1

TANK SCHEDULE																
TAG	DESCRIPTION	MANUFACTURER	MODEL	TANK CAPACITY	DIMENSIONS			WEIGHT	COMMENTS							
TK-1	STORAGE TANK	ZIEBEST	V5600	600.0 gal	LENGTH	WIDTH	HEIGHT	-	HEAVY DUTY, ONE-PIECE SEAMLESS POLYETHYLENE CONSTRUCTION C/W BRASS FITTINGS MOLDED INTO TANK.							
TK-2	SANITARY HOLDING TANK	AWS	1104BH	1,500.0 gal	2,438 mm	-	-	2,030 mm	6,668 kg	BELOW GRADE SANITARY HOLDING TANK, Ø610 MANWAY, Ø102 INLET, Ø102 VENTS, PUMP OUT MANUALLY BY TRUCK, REQUIRE CONCRETE EXTENTIONS.						

FILTER SCHEDULE														
TAG	TYPE	SIZE	COMMENTS											
FIL-1	MERV 8	1219x2438x102mm	SYNTHETIC FILTER MEDIA CAMPIL CS 20TD OR EQUIVALENT C/W BUILT-UP OR PRE-MANUFACTURED FILTER FRAME											
FIL-2	MERV 8	1219x2438x102mm	SYNTHETIC FILTER MEDIA CAMPIL CS 20TD OR EQUIVALENT C/W BUILT-UP OR PRE-MANUFACTURED FILTER FRAME											

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Exposure and conclusively confirm the location in the field of all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

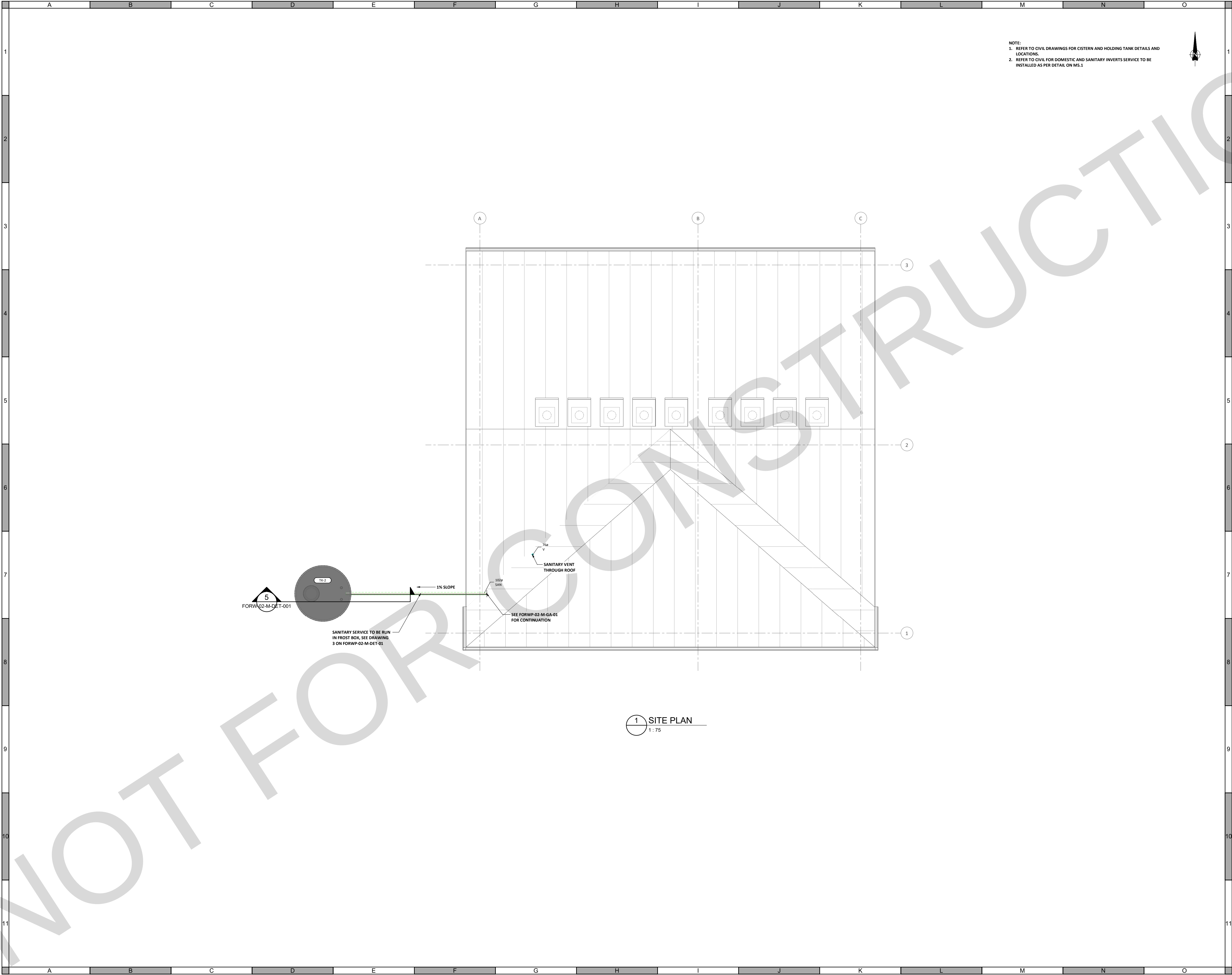
Scale

Quality Control by	P.P.G.
Designed by	B.K.D.
Drawn by	H.K.

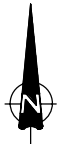
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SCHEDULES

Sheet Number	2 of 9
Project Number	29121-005-12
Drawing Number	FORW-02-M-SCH-001
Revision	A

NOT FOR CONSTRUCTION



NOTE:
1. REFER TO CIVIL DRAWINGS FOR CISTERN AND HOLDING TANK DETAILS AND LOCATIONS.
2. REFER TO CIVIL FOR DOMESTIC AND SANITARY INVERTS SERVICE TO BE INSTALLED AS PER DETAIL ON M5.1



ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.

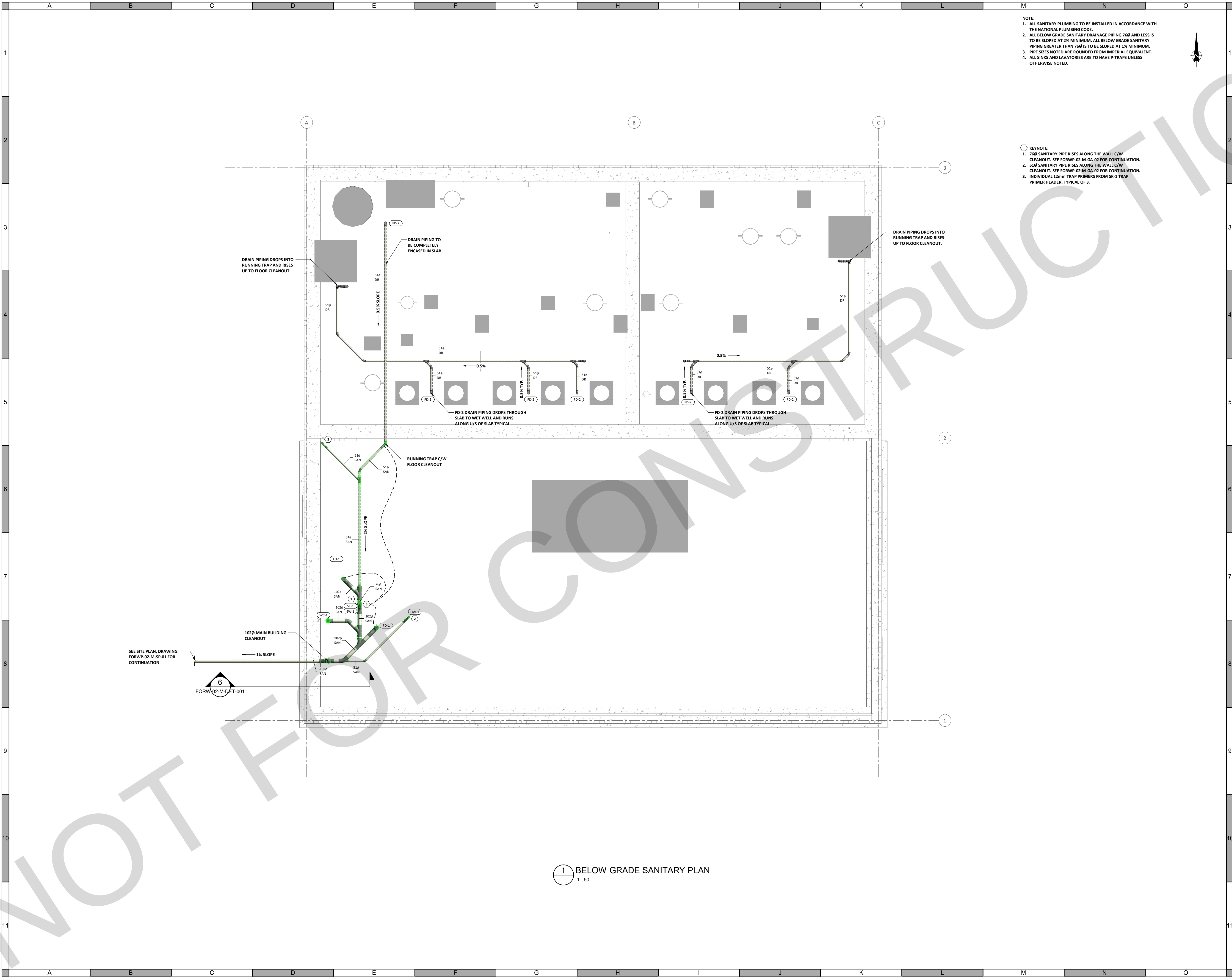


URBAN
systems

Scale	1 : 75
Quality Control by	P.P.G.
Designed by	B.K.D.
Drawn by	H.K.

FOOTHILLS OKOTOKS MIDLINE PUMP STATION SITE PLAN	
Sheet Number	3 of 9
Project Number	29121-005-12
Drawing Number	FORW-02-M-SP-001
Revision	A

NOT FOR CONSTRUCTION



1 BELOW GRADE SANITARY PLAN
1 : 50

NOTE:
1. ALL SANITARY PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE.
2. ALL BELOW GRADE SANITARY DRAINAGE PIPING 76# AND LESS IS TO BE SLOPED AT 2% MINIMUM. ALL BELOW GRADE SANITARY PIPING GREATER THAN 76# IS TO BE SLOPED AT 1% MINIMUM.
3. PIPE SIZES NOTED ARE ROUNDED FROM IMPERIAL EQUIVALENT.
4. ALL SINKS AND LAVATORIES ARE TO HAVE P-TRAPS UNLESS OTHERWISE NOTED.

KEYNOTE:
1. 76# SANITARY PIPE RISES ALONG THE WALL C/W CLEANOUT. SEE FORWP-02-M-GA-02 FOR CONTINUATION.
2. 51# SANITARY PIPE RISES ALONG THE WALL C/W CLEANOUT. SEE FORWP-02-M-GA-02 FOR CONTINUATION.
3. INDIVIDUAL 12mm TRAP PRIMERS FROM SK-1 TRAP PRIMER HEADER, TYPICAL OF 3.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Exposure and conclusively confirm the location in the field of all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

Scale
1 : 50

Quality Control by
Designed by
Drawn by

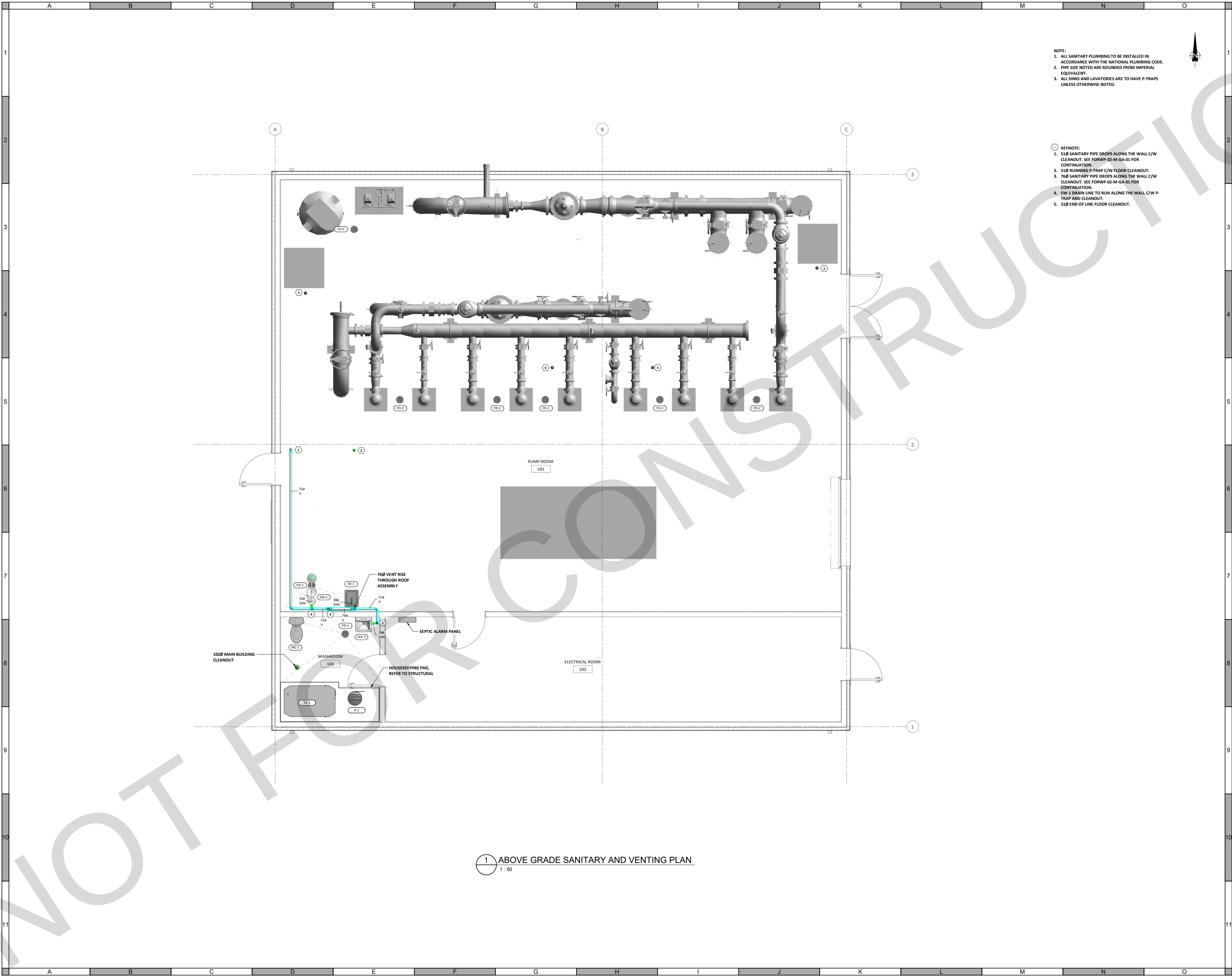
P.P.G.
B.K.D.
H.K.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
BELOW GRADE SANITARY PLAN

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-M-LAY-001

4 of 9
Revision
A

NOT FOR CONSTRUCTION



NOTE:
1. ALL SANITARY PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE.
2. PIPE SIZE NOTED ARE ROUNDED FROM IMPERIAL EQUIVALENT.
3. ALL SINKS AND LAVATORIES ARE TO HAVE P-TRAPS UNLESS OTHERWISE NOTED.

KEYNOTE:
1. S10 SANITARY PIPE DROPS ALONG THE WALL C/W CLEANOUT. SEE FORWP-02-M-GA-01 FOR CONTINUATION.
2. S10 RUNNING P-TRAP C/W FLOOR CLEANOUT.
3. 760 SANITARY PIPE DROPS ALONG THE WALL C/W CLEANOUT. SEE FORWP-02-M-GA-01 FOR CONTINUATION.
4. EW-1 DRAIN LINE TO RUN ALONG THE WALL C/W P-TRAP AND CLEANOUT.
5. S10 END OF LINE FLOOR CLEANOUT.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Exposure and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals				

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

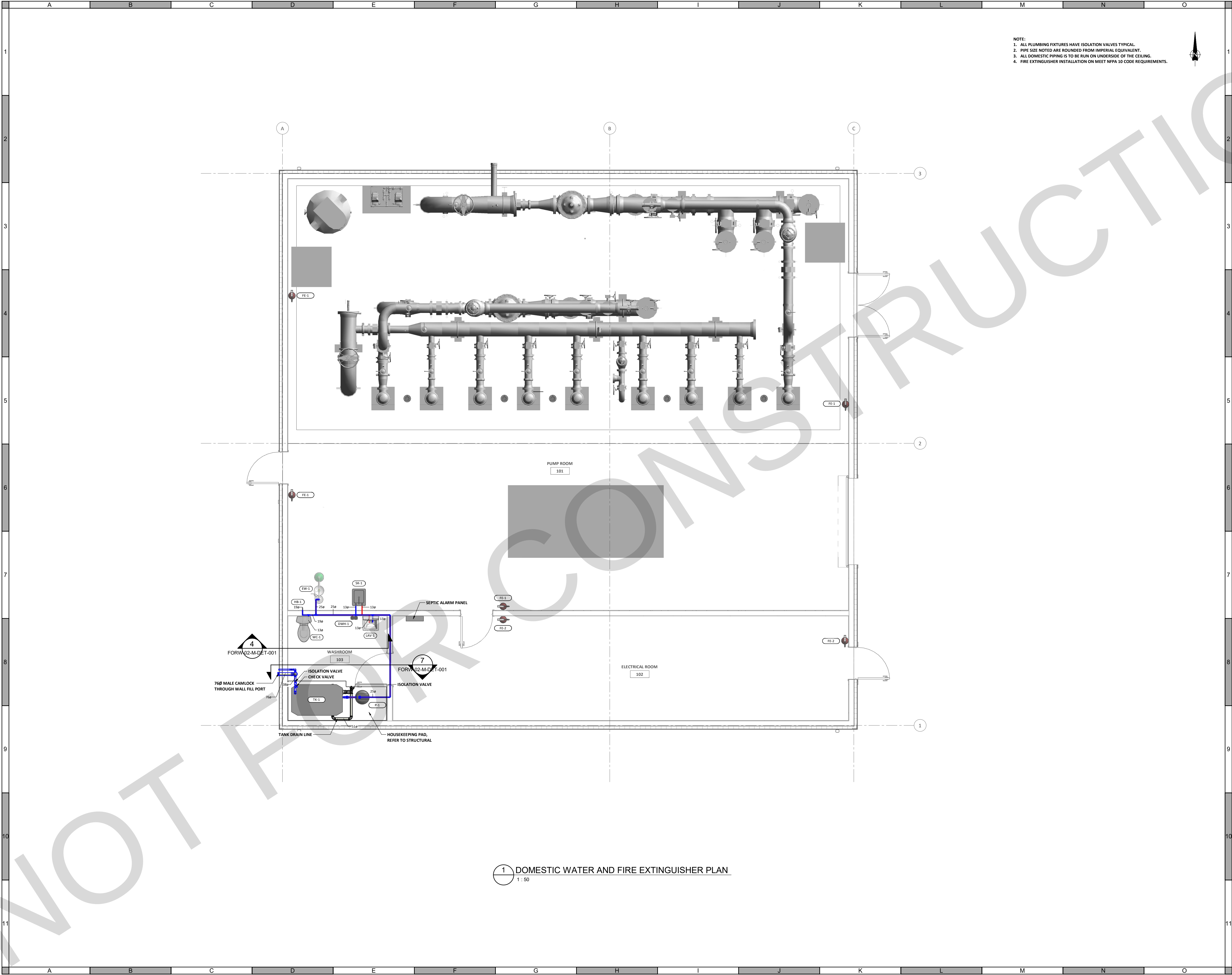
Scale
1 : 50

Quality Control by
Designed by
Drawn by

P.P.G.
B.K.D.
H.K.

FOOTHILLS OKOTOKS MIDLINE PUMP STATION SANITARY AND VENTING PLAN	
Sheet Number	5 of 9
Project Number	29121-005-12
Drawing Number	FORW-02-M-LAY-002
Revision	A

NOT FOR CONSTRUCTION



NOTE:
1. ALL PLUMBING FIXTURES HAVE ISOLATION VALVES TYPICAL.
2. PIPE SIZE NOTED ARE ROUNDED FROM IMPERIAL EQUIVALENT.
3. ALL DOMESTIC PIPING IS TO BE RUN ON UNDERSIDE OF THE CEILING.
4. FIRE EXTINGUISHER INSTALLATION ON MEET NFPA 10 CODE REQUIREMENTS.



ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various
parties and may not be complete or accurate.
Expose and conclusively confirm the location in the
field all underground utilities and structures indicated
on this drawing, all underground utilities in the area
of the proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Ian Moxon
Architect



FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

Scale
1 : 50

Quality Control by
Designed by
Drawn by

P.P.G.
B.K.D.
H.K.

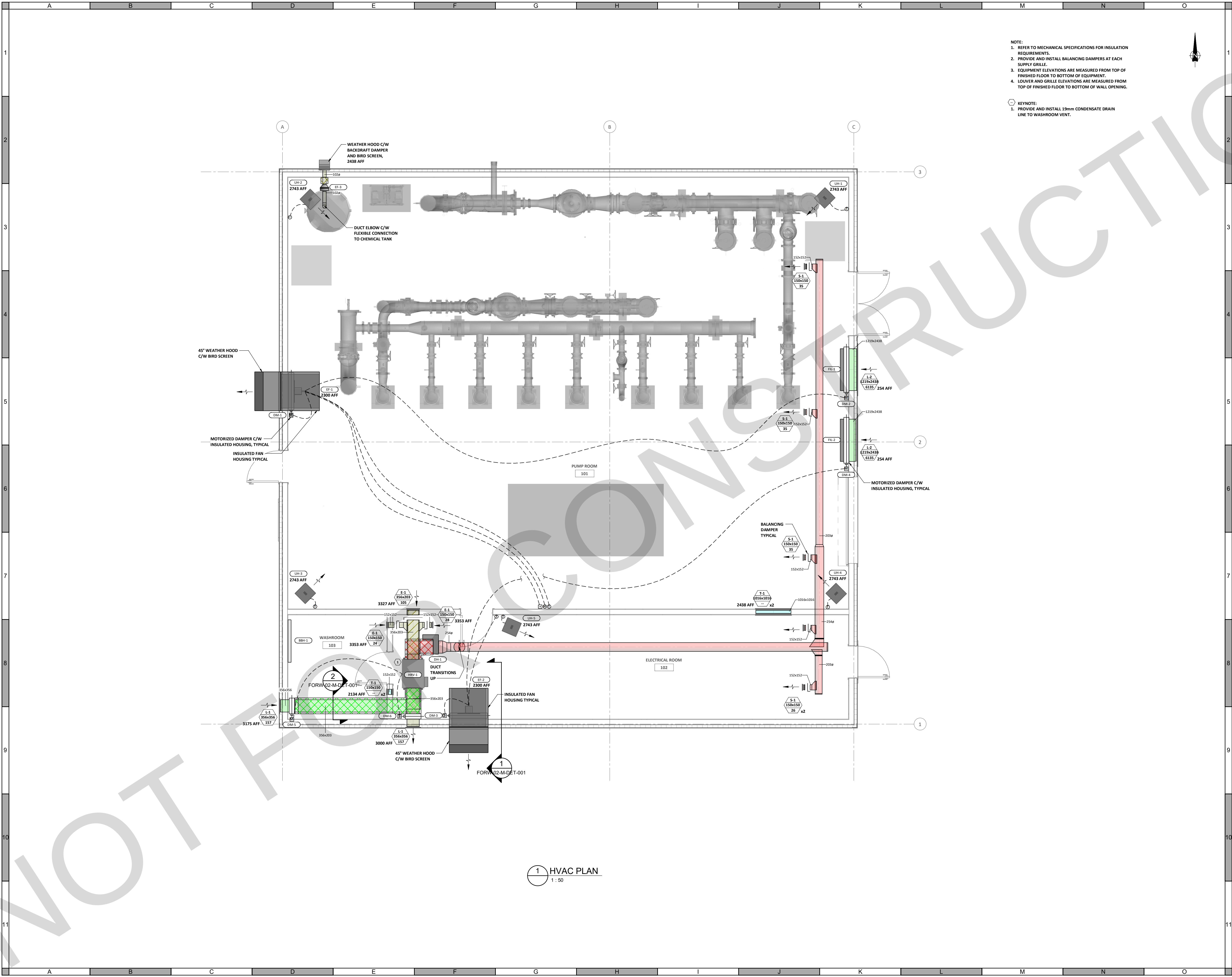
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
DOMESTIC WATER AND FIRE
EXTINGUISHER PLAN

Sheet Number
Project Number
29121-005-12
Drawing Number
FORW-02-M-LAY-003

6 of 9
Revision
A

1 DOMESTIC WATER AND FIRE EXTINGUISHER PLAN
1 : 50

NOT FOR CONSTRUCTION



- NOTE:
1. REFER TO MECHANICAL SPECIFICATIONS FOR INSULATION REQUIREMENTS.
 2. PROVIDE AND INSTALL BALANCING DAMPERS AT EACH SUPPLY GRILLE.
 3. EQUIPMENT ELEVATIONS ARE MEASURED FROM TOP OF FINISHED FLOOR TO BOTTOM OF EQUIPMENT.
 4. LOUVER AND GRILLE ELEVATIONS ARE MEASURED FROM TOP OF FINISHED FLOOR TO BOTTOM OF WALL OPENING.

- KEYNOTE:
1. PROVIDE AND INSTALL 19mm CONDENSATE DRAIN LINE TO WASHROOM VENT.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.



FOR DESIGN ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

Scale
1 : 50

Quality Control by
Designed by
Drawn by

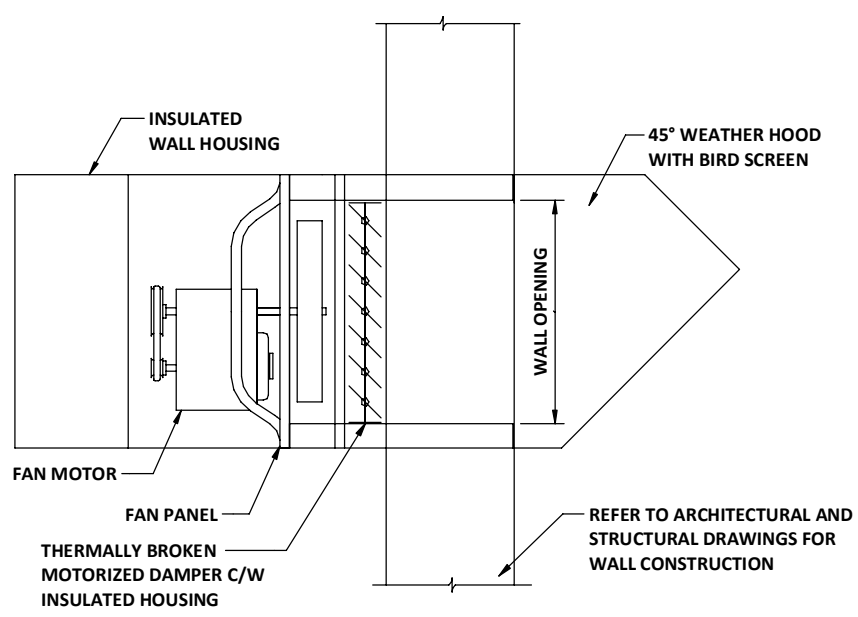
P.P.G.
B.K.D.
H.K.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
HVAC PLAN

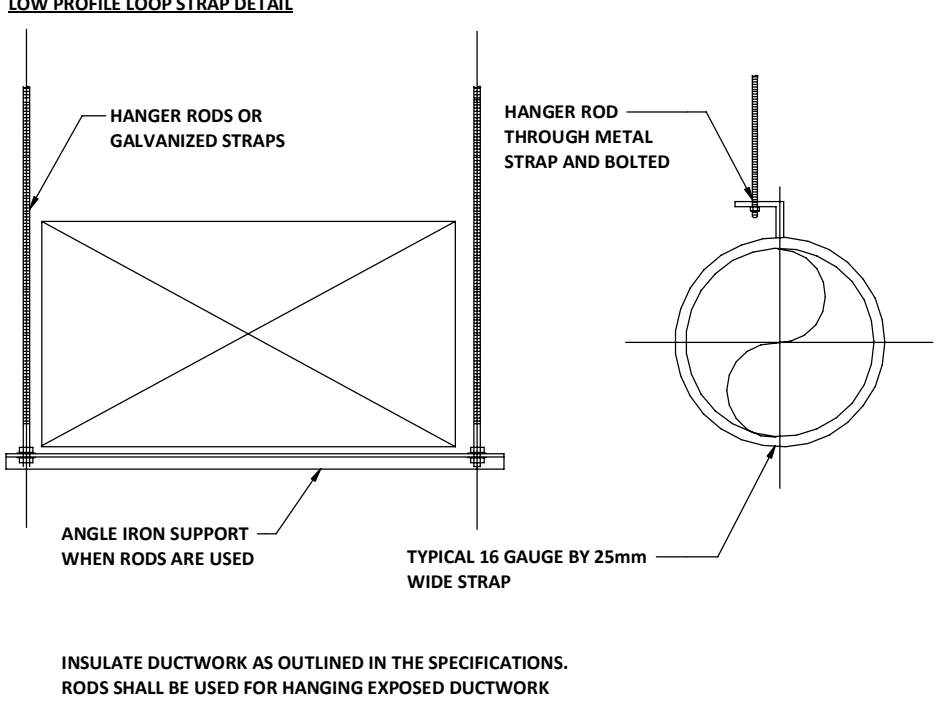
Sheet Number
Project Number
29121-005-12
Drawing Number
FORW-02-M-LAY-004

7 of 9
Revision
A

NOT FOR CONSTRUCTION



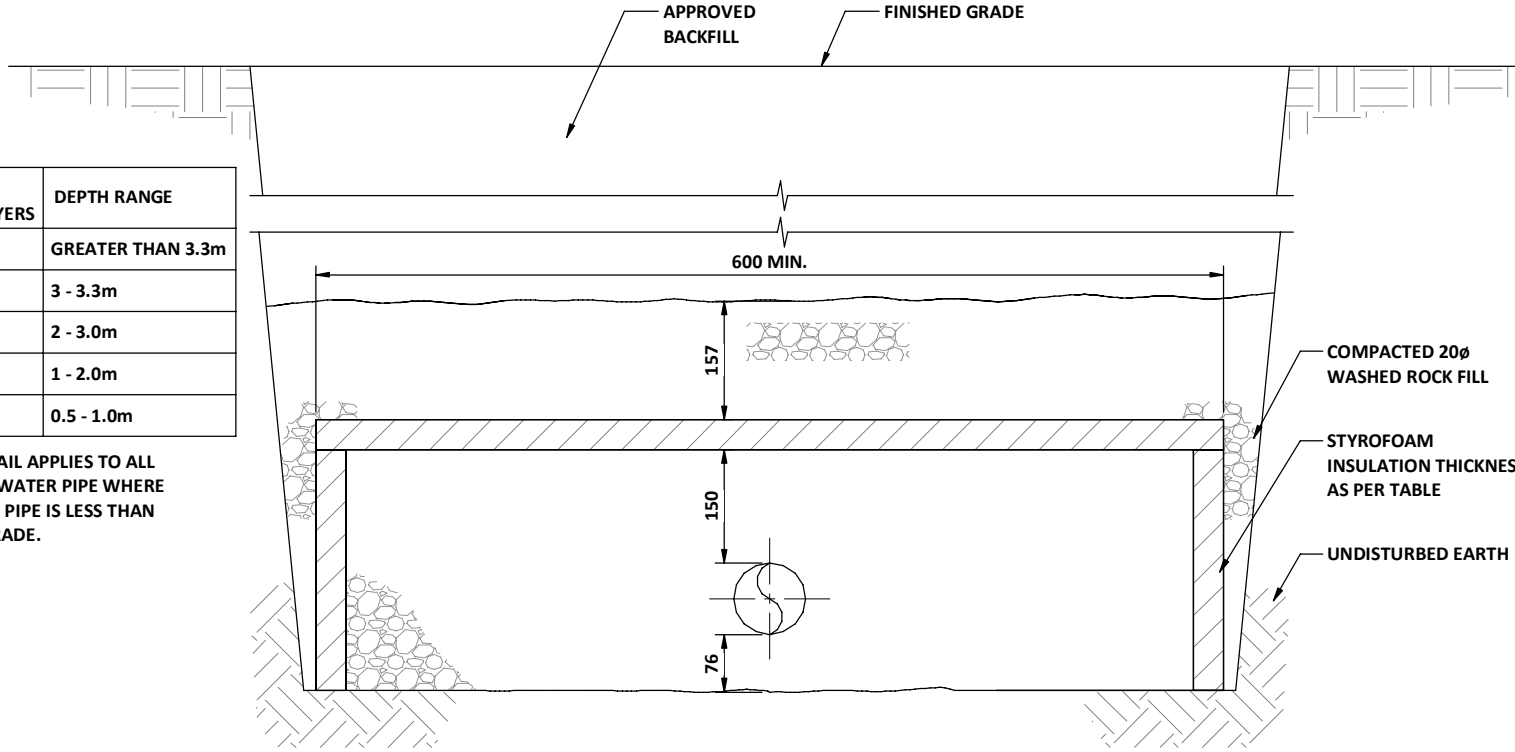
1 INTERIOR WALL MOUNT FAN DETAIL
FORW-02-M-LAY-084 2



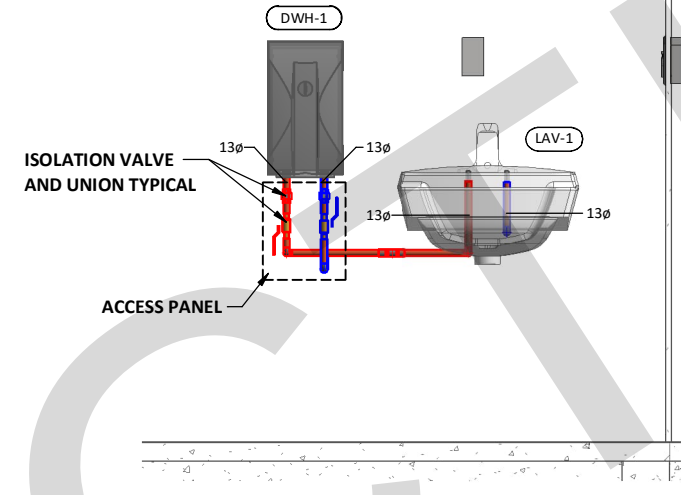
2 TYPICAL DUCT HANGING DETAILS
FORW-02-M-LAY-084 100

50mm THICK INSULATION LAYERS	DEPTH RANGE
0	GREATER THAN 3.3m
1	3 - 3.3m
2	2 - 3.0m
3	1 - 2.0m
4	0.5 - 1.0m

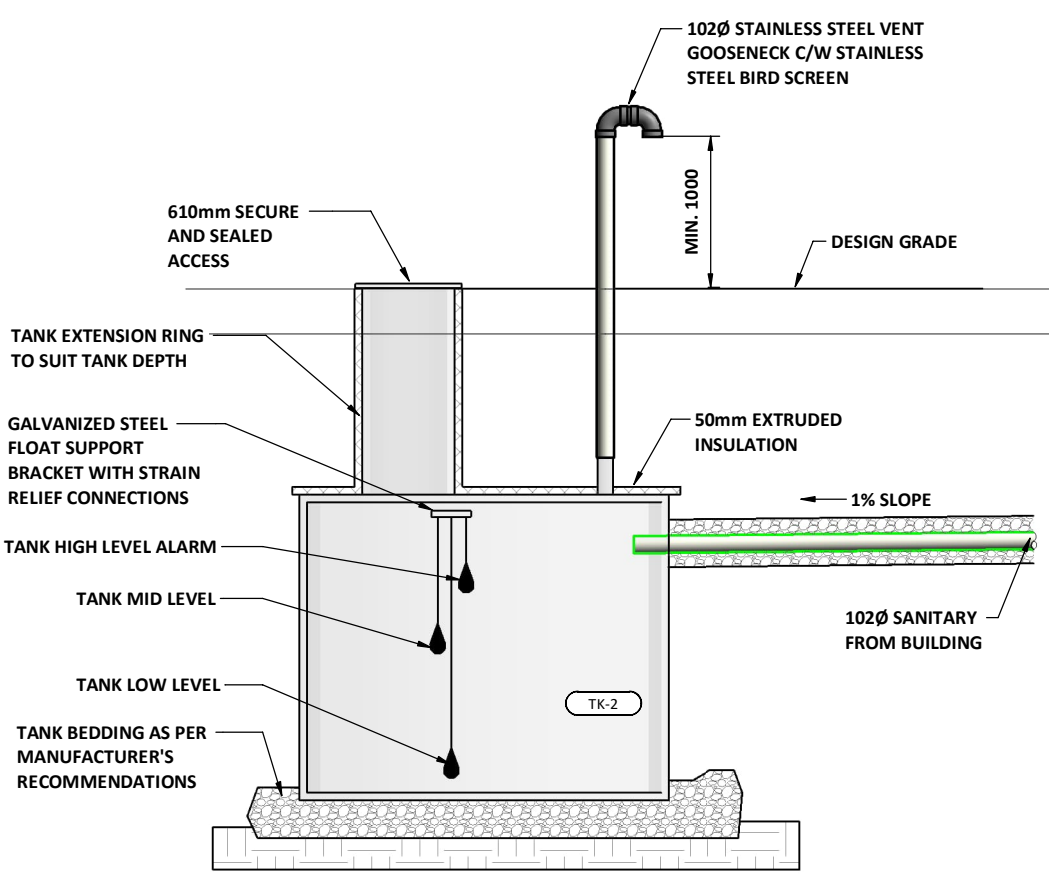
NOTE: THIS DETAIL APPLIES TO ALL SANITARY AND WATER PIPE WHERE THE TOP OF THE PIPE IS LESS THAN 3.3m BELOW GRADE.



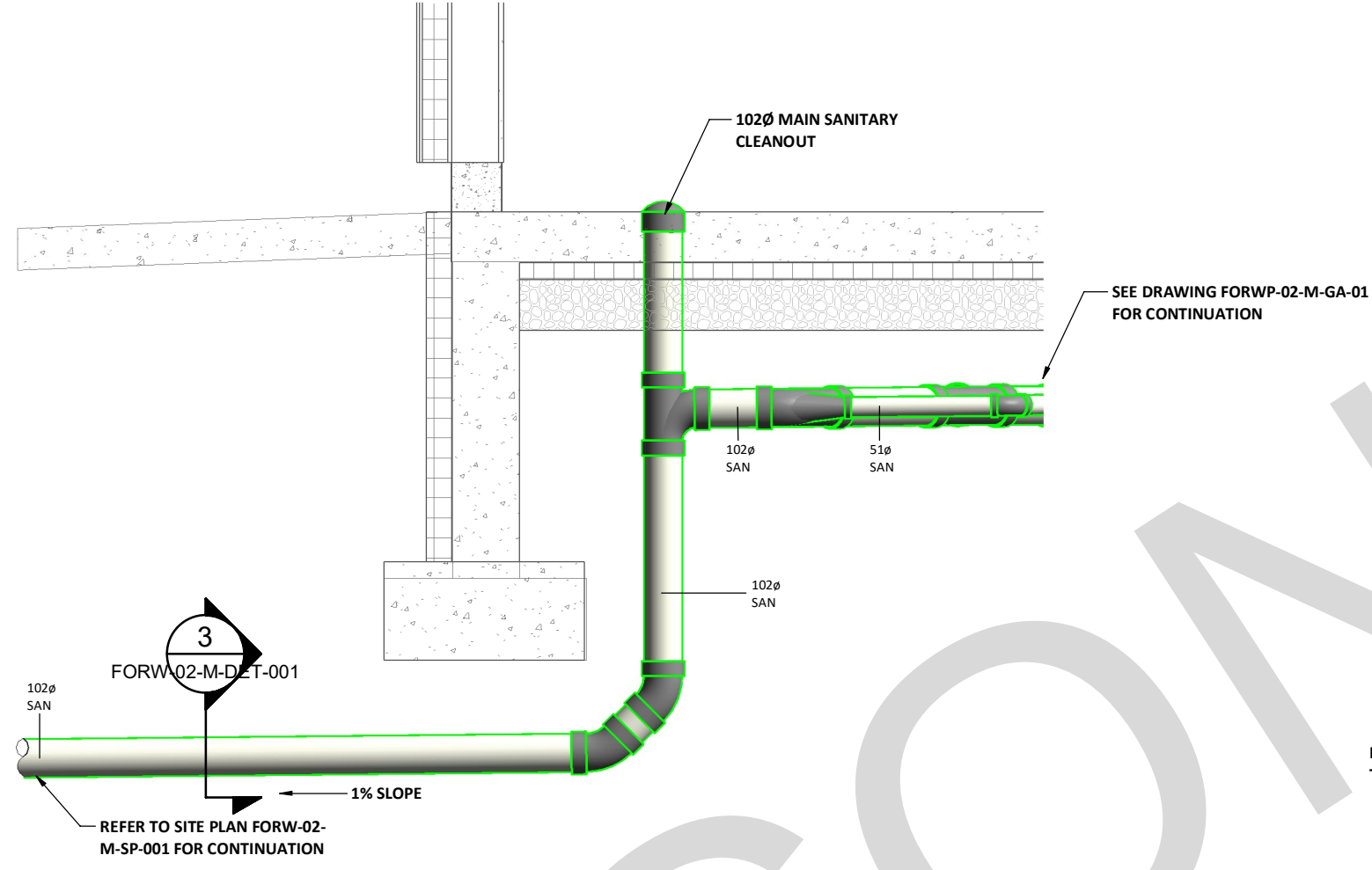
3 MINIMUM PIPE COVERAGE DETAIL
FORW-02-M-DET-081 10



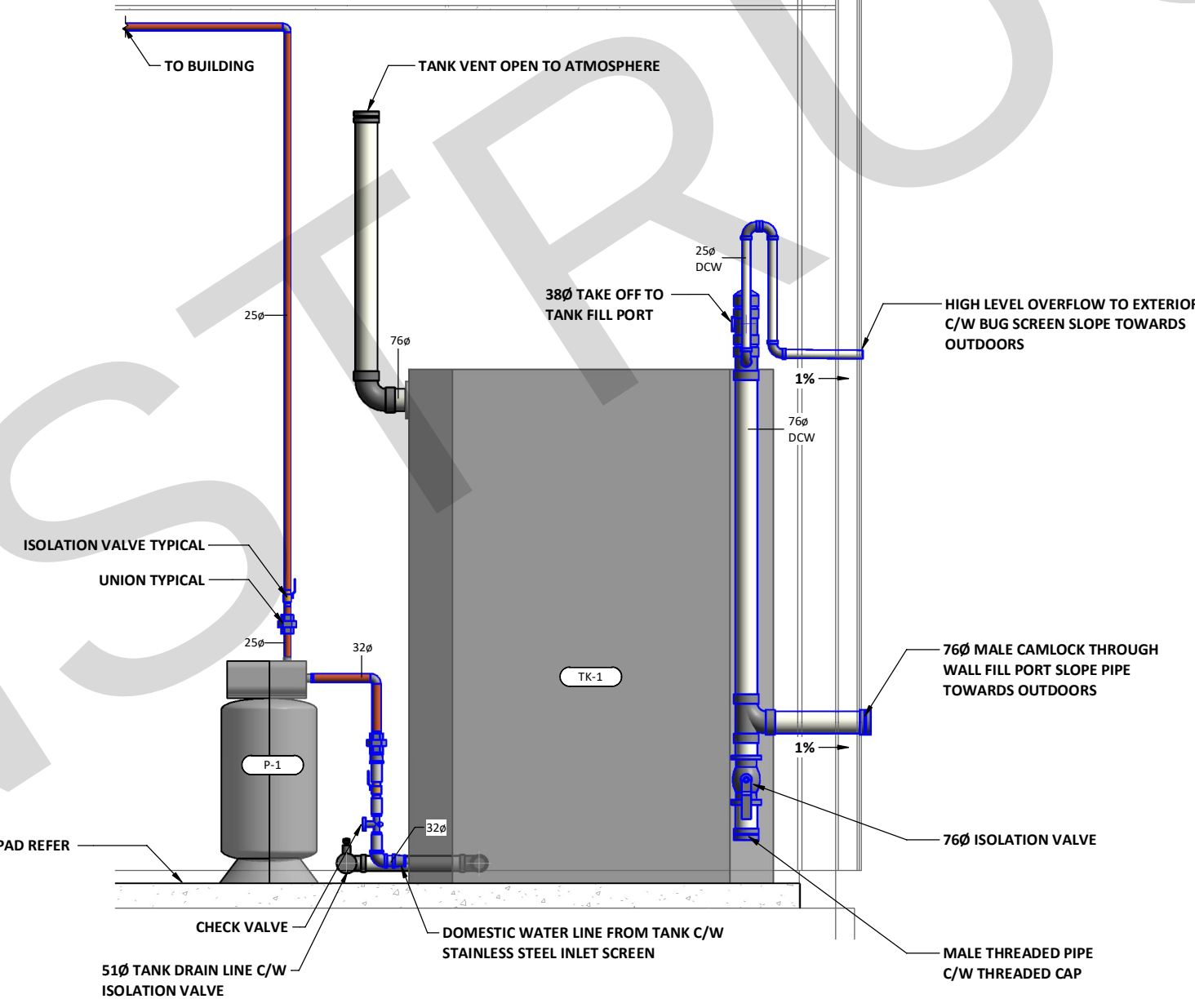
4 DWH CONNECTION DETAIL
FORW-02-M-LAY-083 20



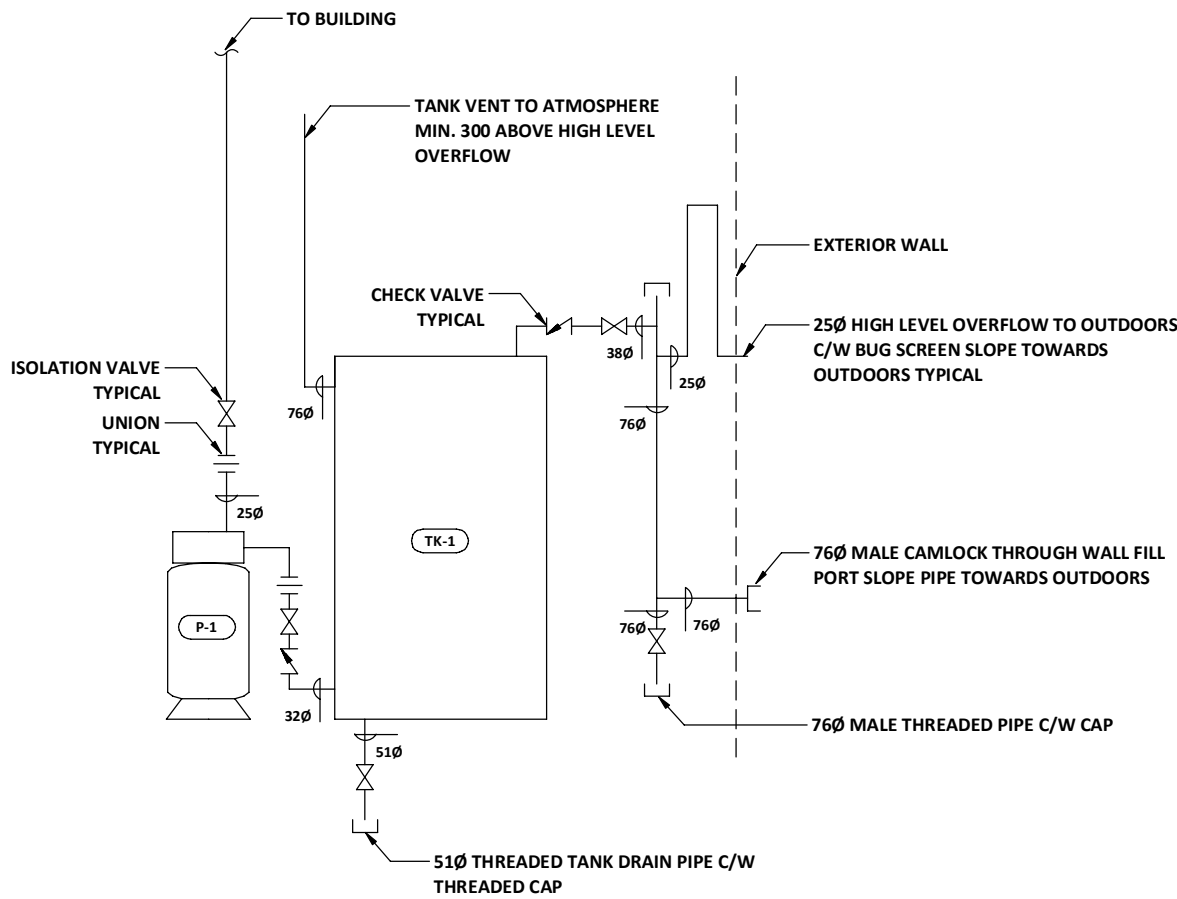
5 SANITARY HOLDING TANK DETAIL
FORW-02-M-SP-001: 50



6 MAIN SANITARY SERVICE DETAIL
FORW-02-M-LAY-081 20



7 TANK CONNECTION DETAIL
FORW-02-M-LAY-083 25



8 DOMESTIC WATER STORAGE TANK SCHEMATIC
NTS

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field of all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.

FOOTHILLS COUNTY
Okotoks
Historic Place, Sustainable Future

URBAN
systems

Scale
As indicated

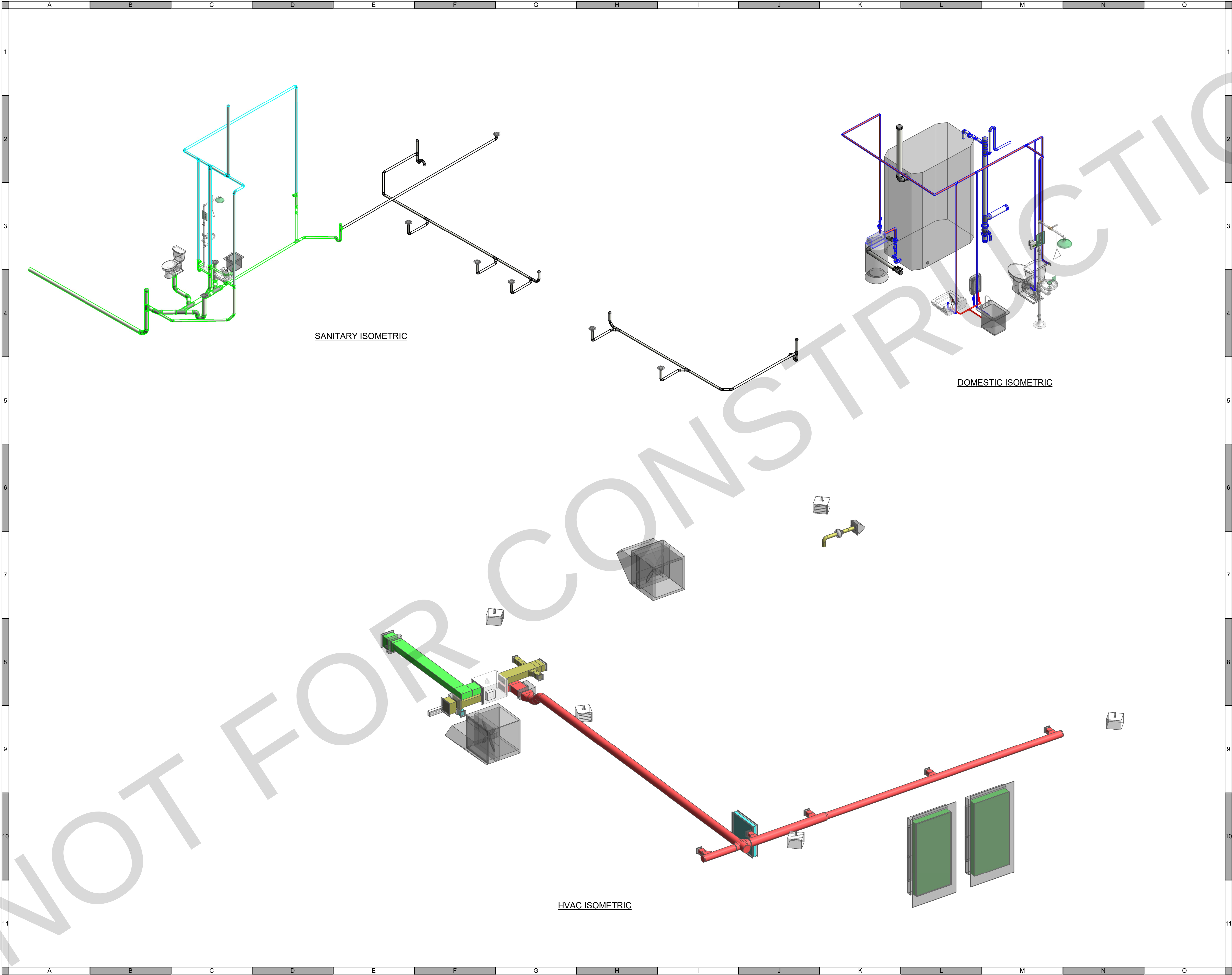
Quality Control by
Designed by
Drawn by

P.P.G.
B.K.D.
H.K.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
DETAILS AND SECTIONS

Sheet Number 8 of 9
Project Number
29121-005-12
Drawing Number
FORW-02-M-DET-001
Revision
A

NOT FOR CONSTRUCTION



SANITARY ISOMETRIC

DOMESTIC ISOMETRIC

HVAC ISOMETRIC

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various
parties and may not be complete or accurate.
Expose and conclusively confirm the location in the
field all underground utilities and structures indicated
on this drawing, all underground utilities in the area
of the proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Ian Moxon
Architect

MPE
a division of Englobe

FOR DESIGN
ASSIST RFP
NOV 29, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
A	2024-11-29	FOR DESIGN ASSIST RFP	P.P.G.



URBAN
systems

Scale

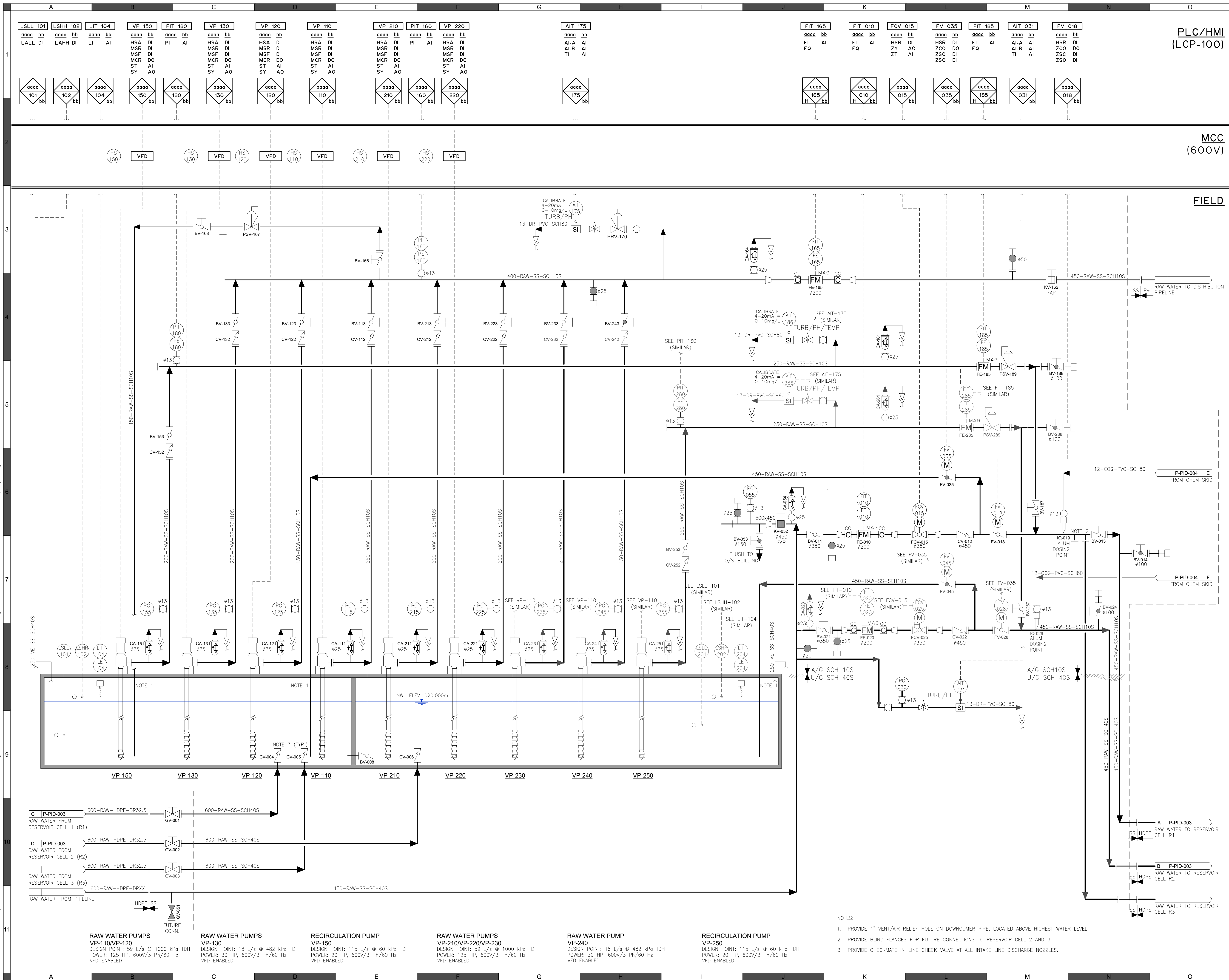
Quality Control by	P.P.G.
Designed by	B.K.D.
Drawn by	H.K.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ISOMETRIC VIEWS

Sheet Number	9 of 9
Project Number	29121-005-12
Drawing Number	FORW-02-M-DET-002
Revision	A

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\1d\005-12 task 7 - raw midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-002 & 007.dwg, FORWP-02-E-PID-002, 2024/11/29 03:15 pm ysheng



ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale: NOT TO SCALE

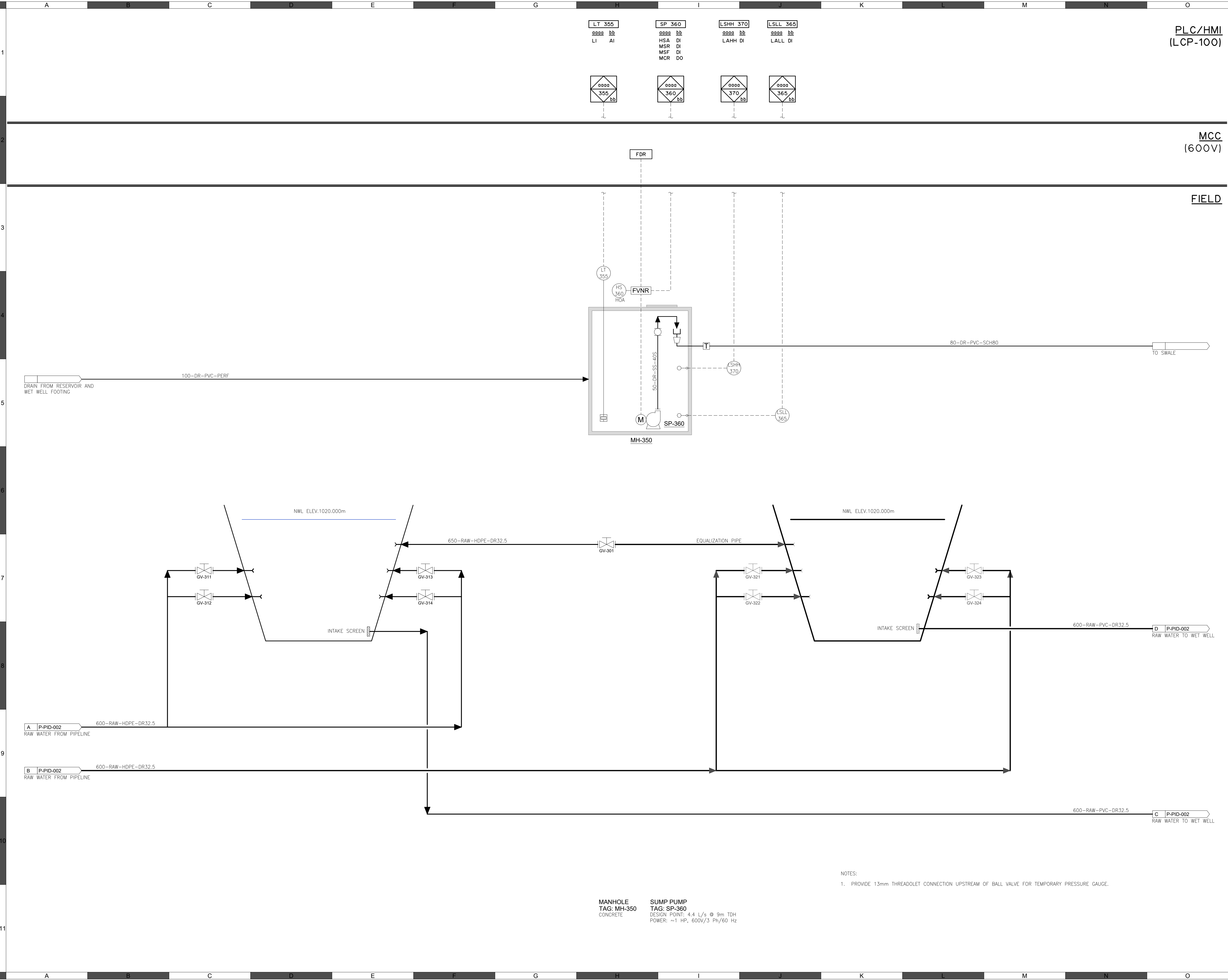
Quality Control by: G.B.P.
Designed by: Y.F.S.
Drawn by:

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
P&ID

Sheet Number	# of ##
29121-005-12	
Drawing Number	Revision
FORWP-02-E-PID-002	B

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - few midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-003_2024\11\29 03:15 pm ysheng



ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.

###



Scale
NOT TO SCALE

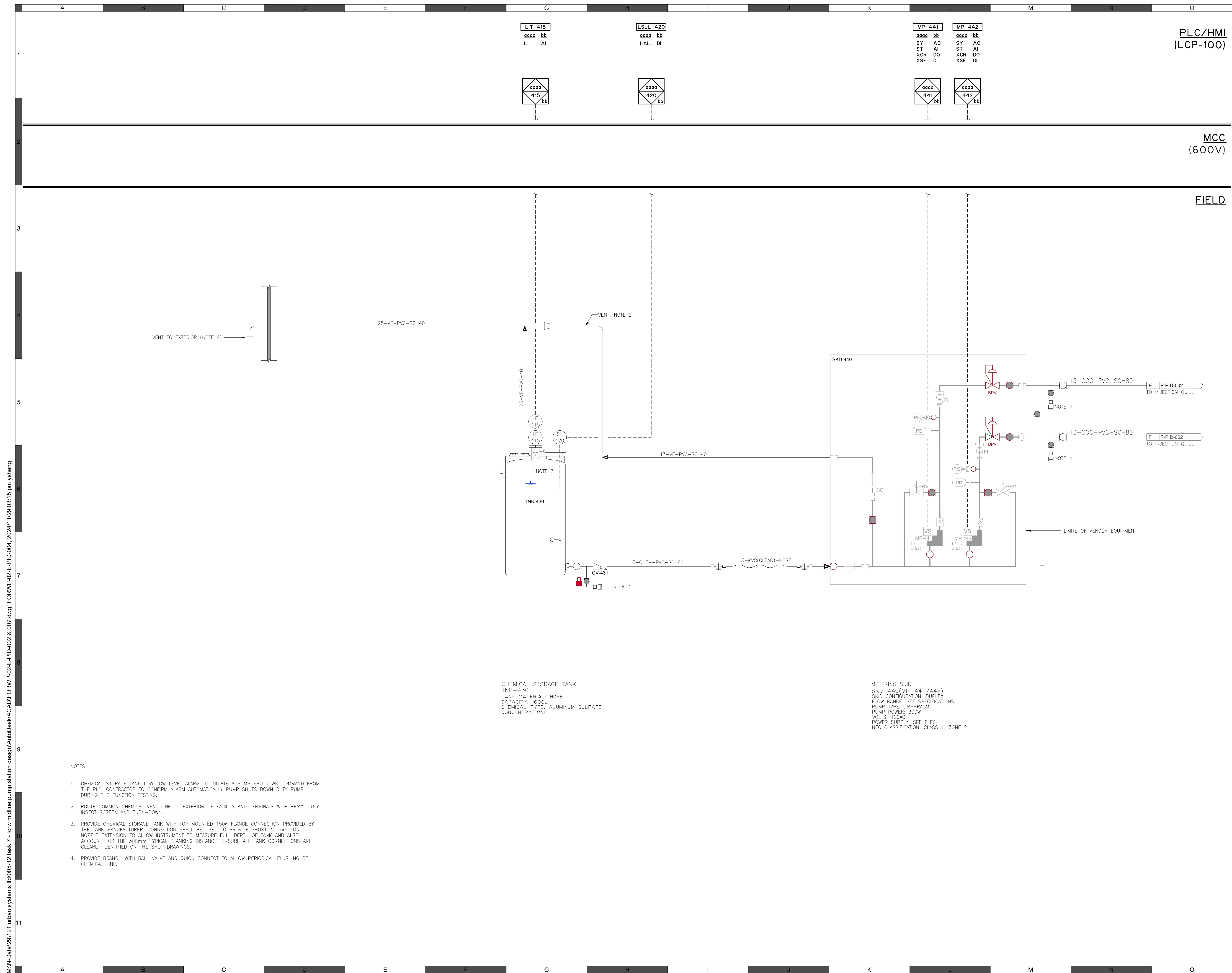
Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

**FOOTHILLS OKOTOKS
MIDLINE PUMP STATION**
RESERVOIRS AND MH
P&ID

Sheet Number	# of ##
Project Number 29121-005-12	
Drawing Number FORWP-02-E-PID-003	Revision B

NOT FOR CONSTRUCTION



PLC/HMI
(LCP-100)

FIELD

ATTENTION

WARNING

Professional Seals

##



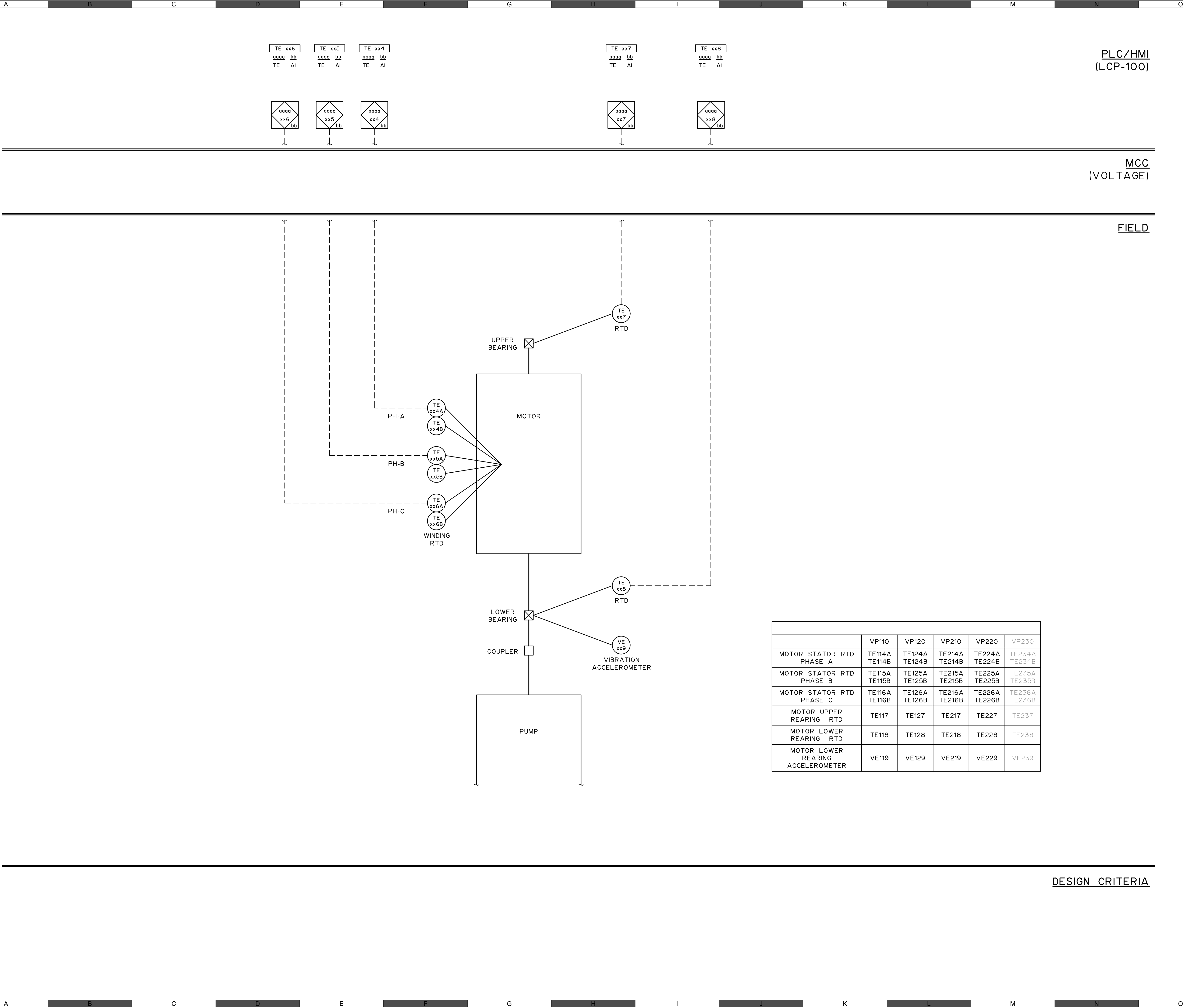
Scale

NOT TO SCALE

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
CHEMICAL STORAGE TANK
P&ID

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems lfd\005-12 task 7 - few midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-002 & 007.dwg, FORWP-02-E-PID-005, 2024/11/29 03:15 pm ysheng



DESIGN CRITERIA

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.

###



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

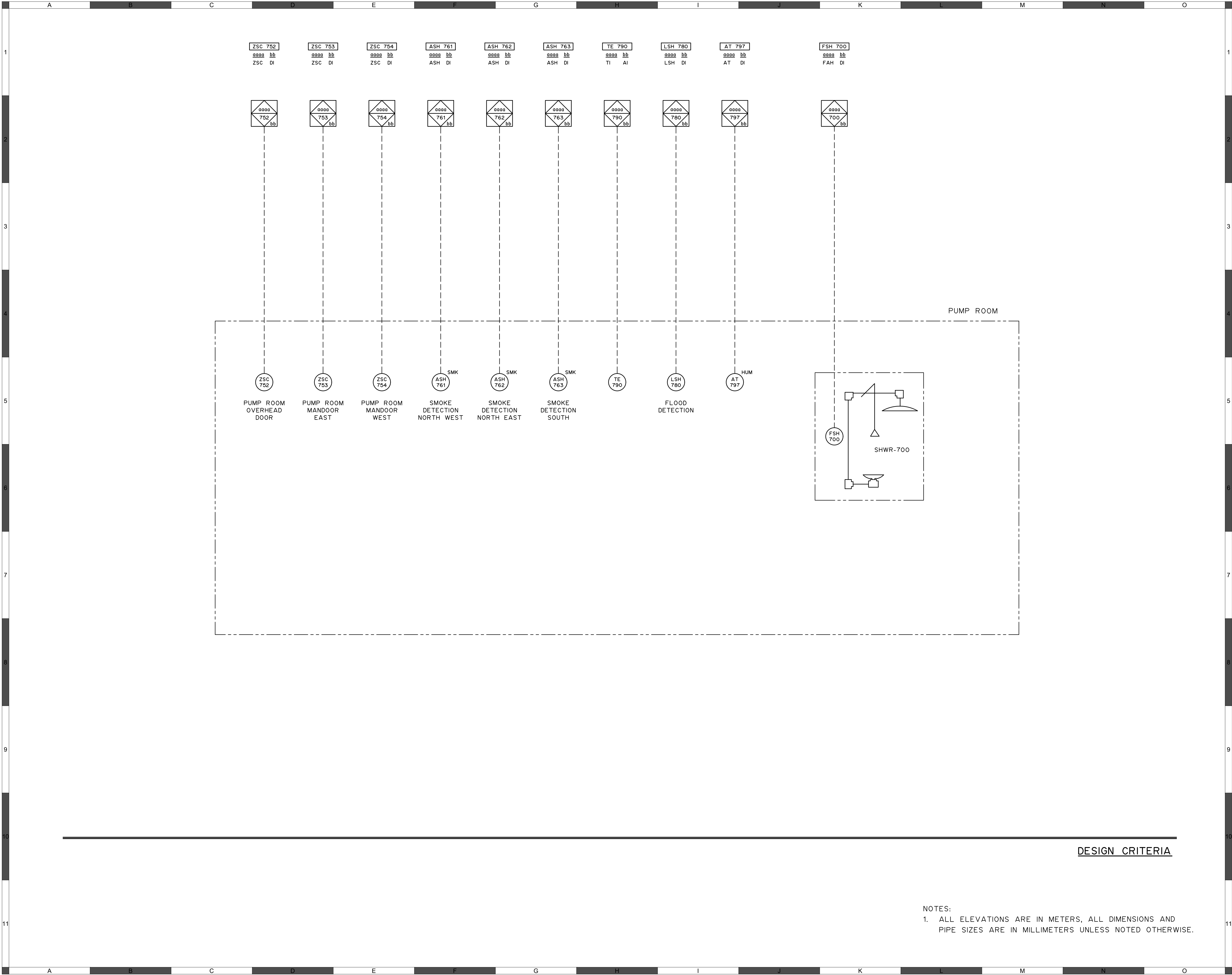
FOOTHILLS COUNTY
MIDLINE PLANTATION
PUMP MONITORING TYPICAL
P&ID

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-PID-005

of ##
Revision
B

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems lfd\005-12 task 7 - few midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-002 & 007.dwg, FORWP-02-E-PID-006, 2024/11/29 03:15 pm ysheng



ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.

###

Okotoks

Historic Past. Sustainable Future.

URBAN systems

a division of

Scale: NOT TO SCALE

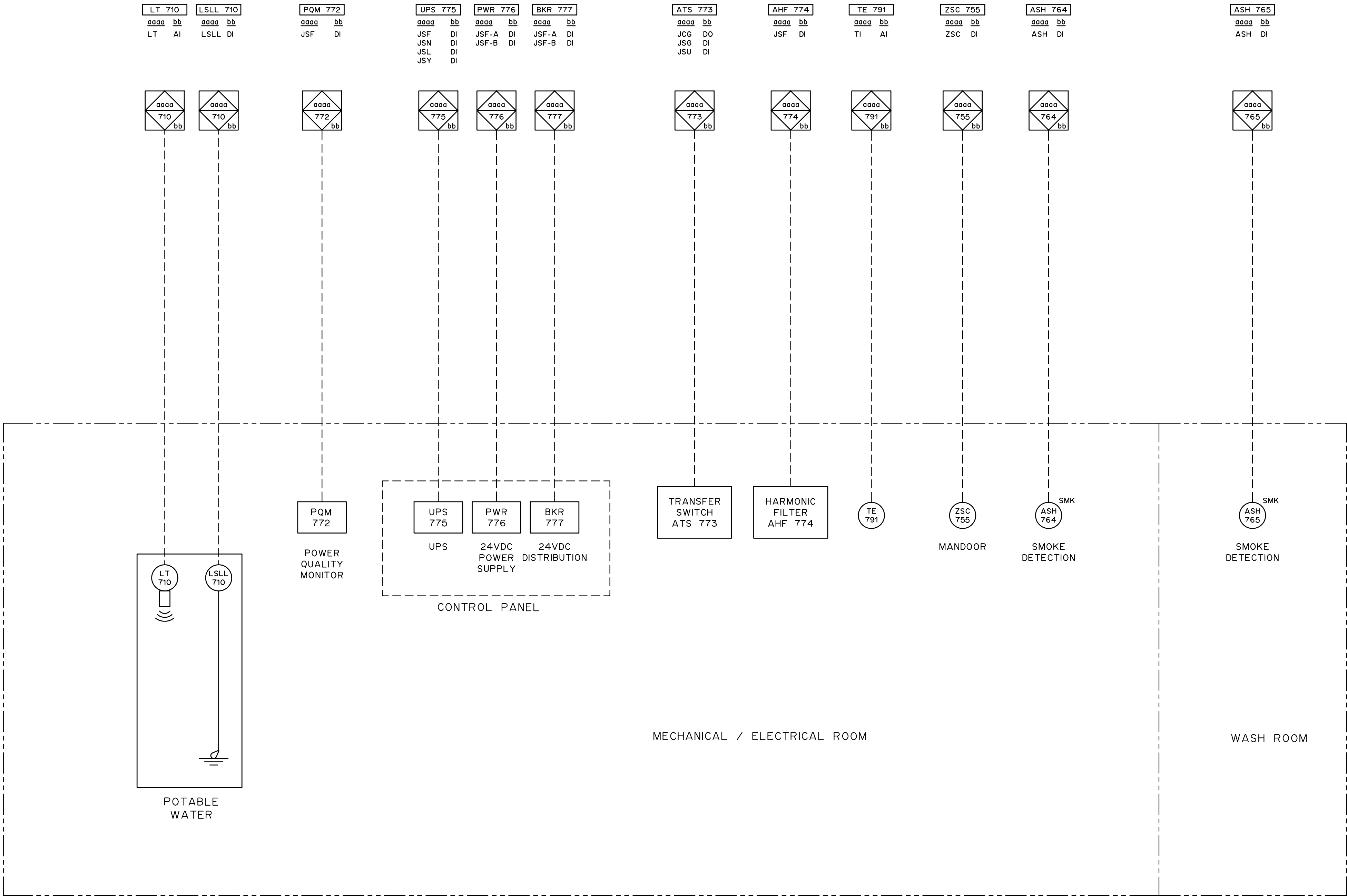
Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
AUXILIARIES PUMP ROOM
P&ID

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-PID-006	B

NOT FOR CONSTRUCTION

M:\N-Data\29121\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-002 & 007.dwg, FORWP-02-E-PID-007, 2024/11/29 03:15 pm ysheng



POTABLE WATER
V:

DESIGN CRITERIA

- NOTES:
1. ALL ELEVATIONS ARE IN METERS, ALL DIMENSIONS AND PIPE SIZES ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.

###



URBAN
systems
a division of

Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

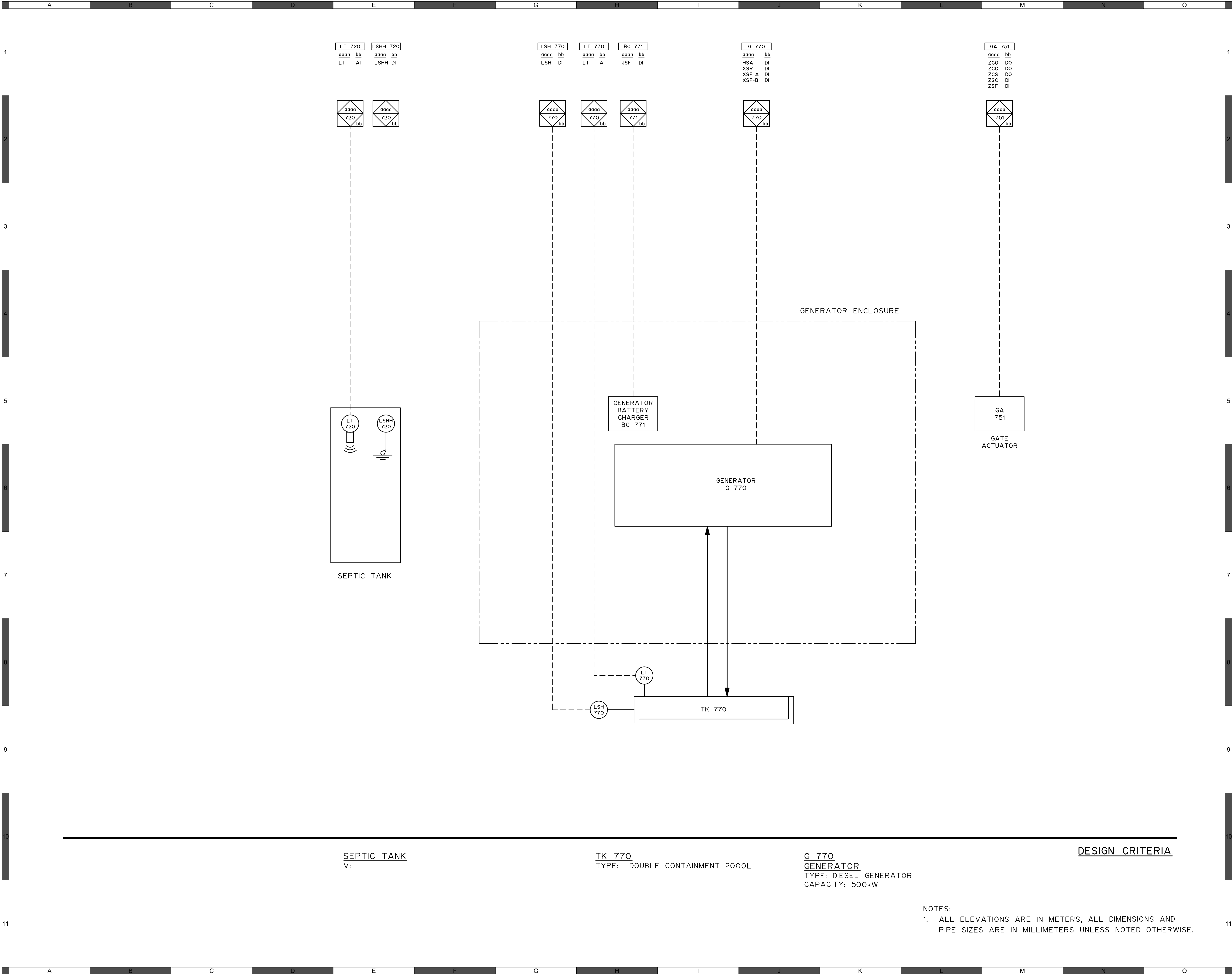
G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
AUXILIARIES MISCELLANEOUS
P&ID

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-PID-007	B

NOT FOR CONSTRUCTION

M:\N-Data\29121\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACAD\FORWP-02-E-PID-002 & 007.dwg, FORWP-02-E-PID-008, 2024/11/29 03:17 pm ysheng



ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.

###

Scale

NOT TO SCALE

Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
AUXILIARIES EXTERIOR
P&ID

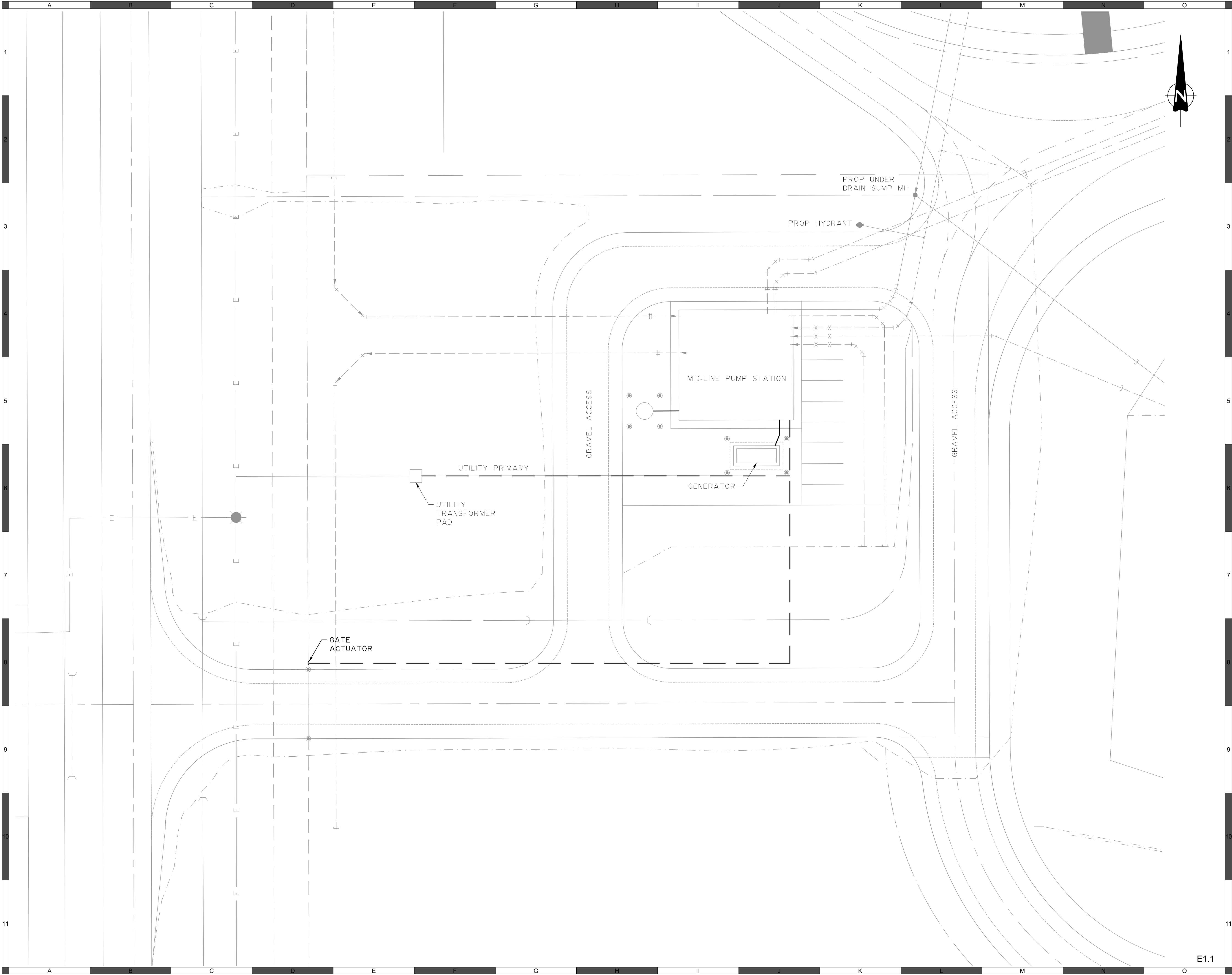
Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-PID-008	B

NOTES:

1. ALL ELEVATIONS ARE IN METERS, ALL DIMENSIONS AND PIPE SIZES ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems ltd\005-12 task 7 - low midline pump station design\AutoDesk\ACAD\IE1.1 FORWP-02-E-SP-001 SITE PLAN.dwg, FORWP-02-E-SP-001, 2024/11/29 03:16 pm ysheng



E1.1

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



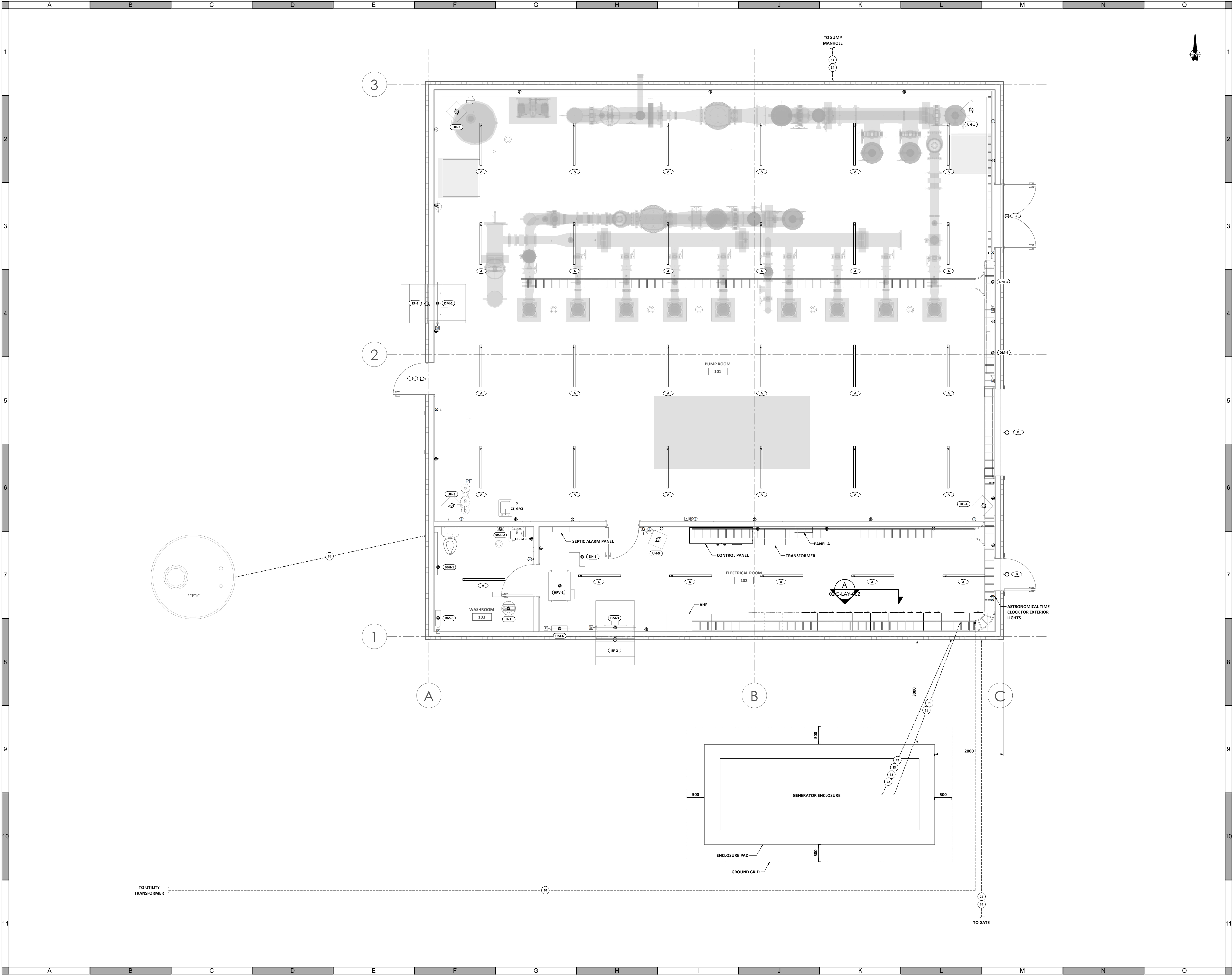
Scale 1 : 250

Quality Control by G.B.P.
Designed by Y.F.S.
Drawn by

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SITE PLAN

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SP-001	A

NOT FOR CONSTRUCTION



ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various
parties and may not be complete or accurate.
Expose and conclusively confirm the location in the
field all underground utilities and structures indicated
on this drawing, all underground utilities in the area
of the proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.



ISSUED FOR 75%
REVIEW
NOV 06, 2024
urbansystems.ca

Professional Seals

#	Date	Issue/ Revision	App
1	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.



URBAN
systems

Scale
1 : 50

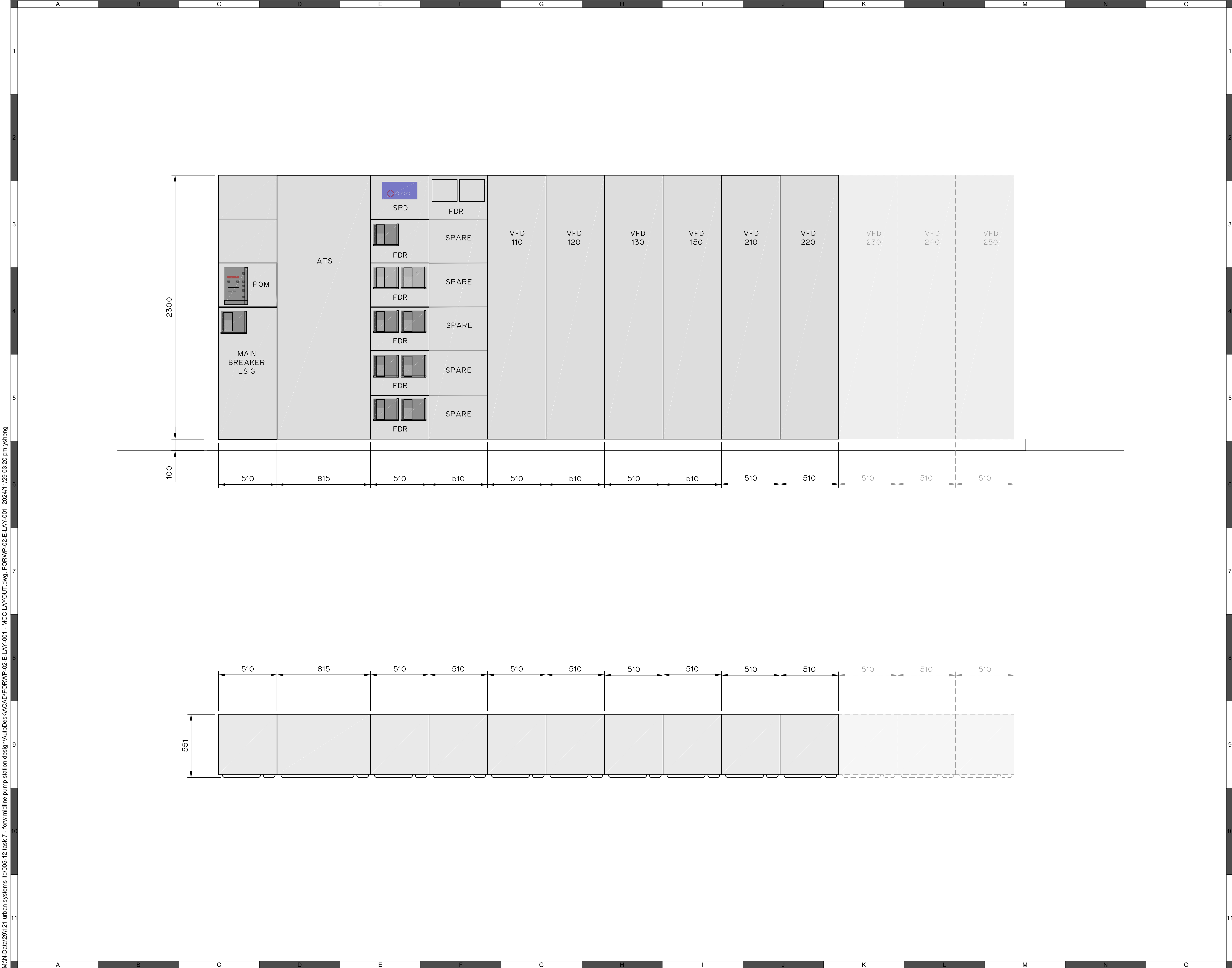
Quality Control by
Designed by
Drawn by

Checker
M.T.F., G.B.P.
N.O.W.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
FLOOR PLAN

Sheet Number	of 9
Project Number	
29121-005-12	
Drawing Number	Revision
02-E-LAY-001	1

NOT FOR CONSTRUCTION



ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-10-15	ISSUED FOR QUOTATION REVISED	G.B.P.
B	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.





a division of Englobe

Scale

0 0.15m 0 0.15 0.3 0.45

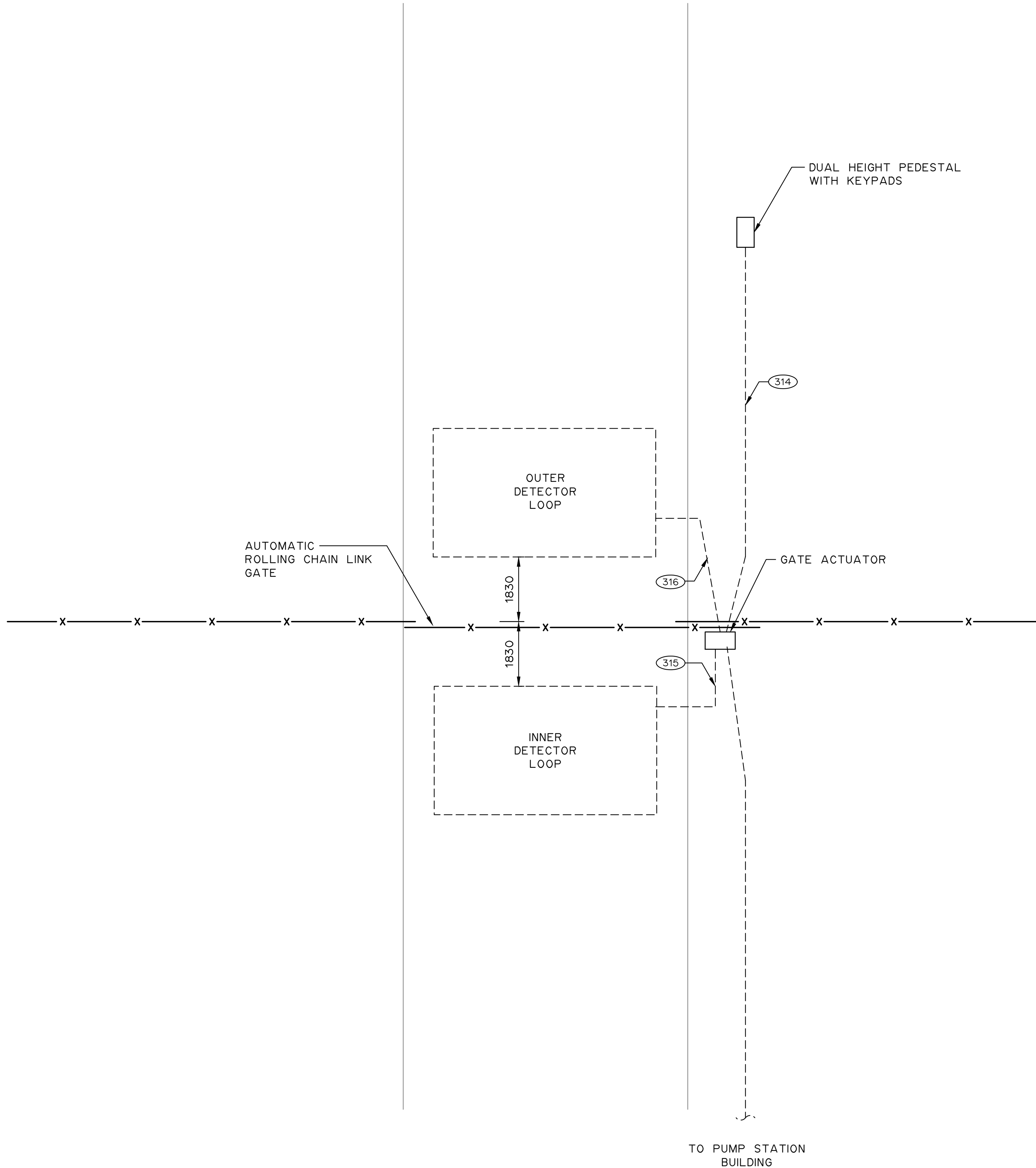
Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
MCC LAYOUT

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-LAY-001	A

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACAD\IE1.7 FORWP-02-E-LAY-003.dwg, 2024/11/29 03:20 pm ysheng



- NOTES:
1. GATE DESIGN BASED ON PACKAGE FROM PHOENIX FENCE WITH LIFTMASTER IHSL24UL ACTUATOR.
 2. LAYOUT SHOWN IS TYPICAL. SEE SITE PLAN FOR LOCATION OF GATE ACTUATOR WITH RESPECT TO ROAD.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



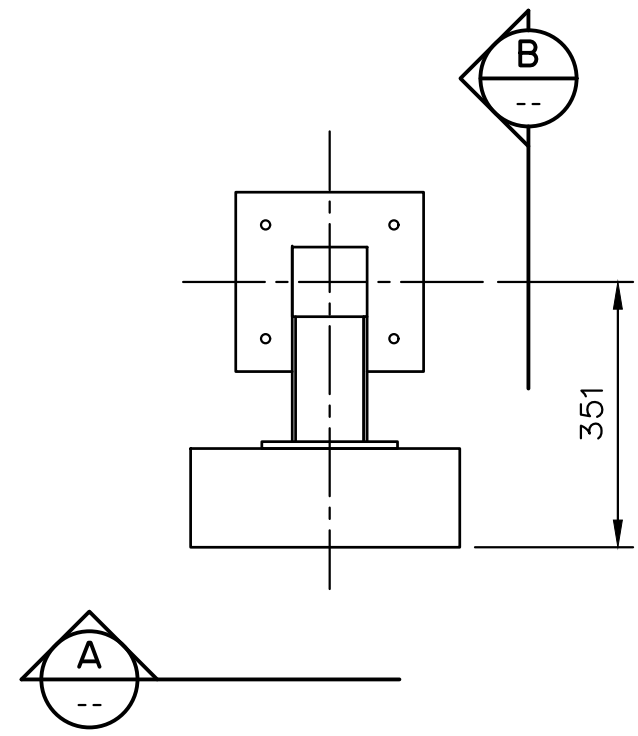
Scale	NOT TO SCALE
Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS MIDLINE PUMP STATION GATE AREA SITE PLAN	
Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-LAY-003	A

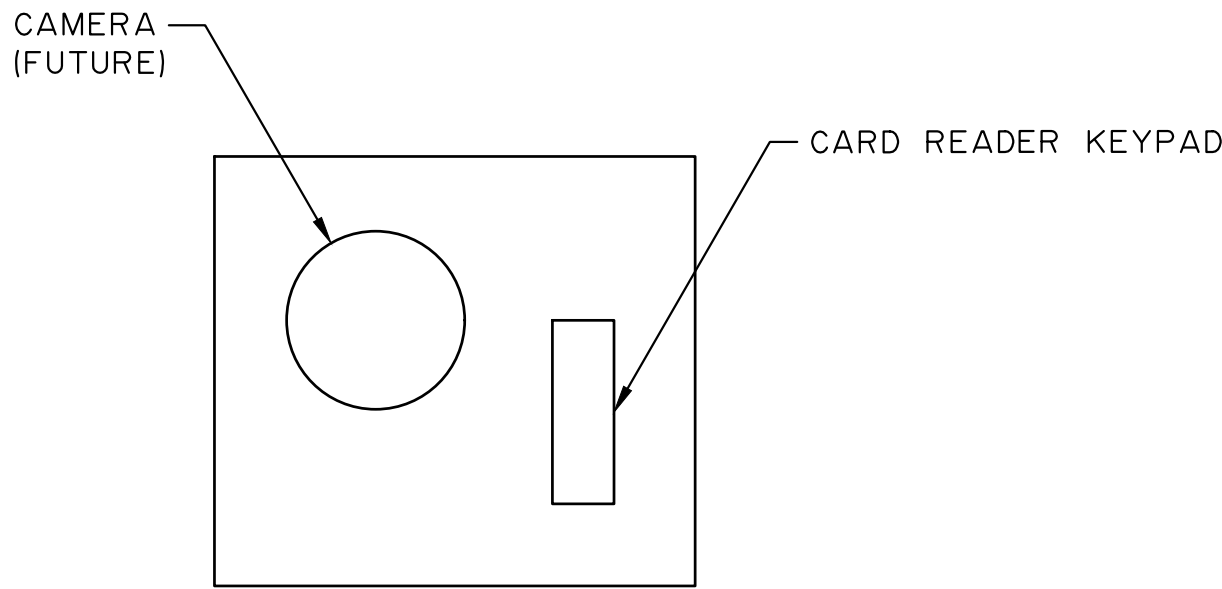
E1.7

NOT FOR CONSTRUCTION

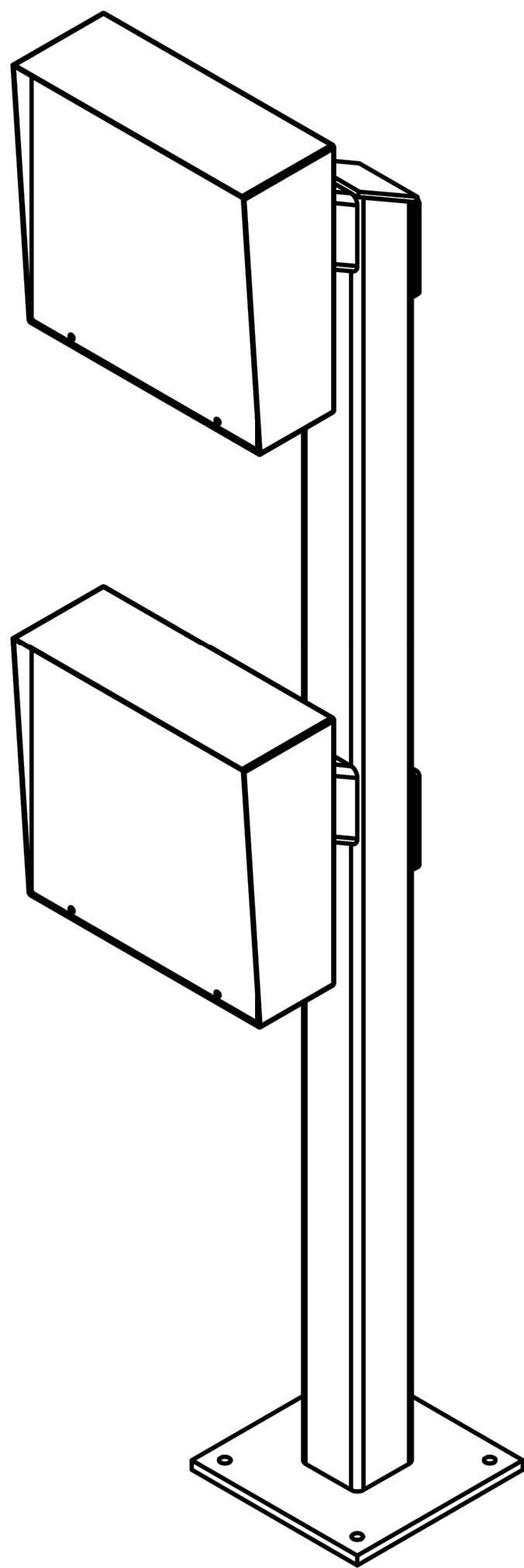
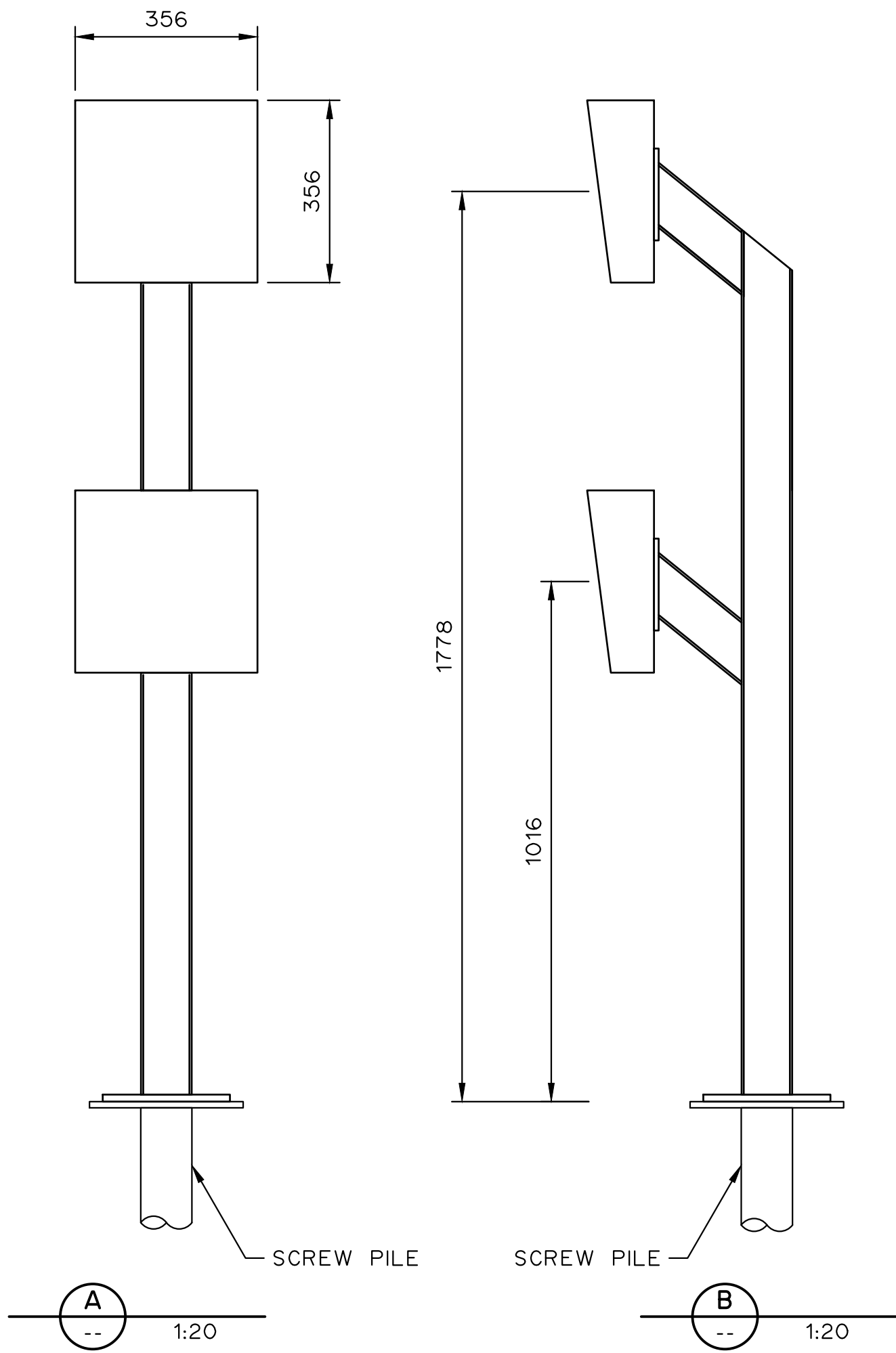
M:\N-Data\2011\21 urban systems\td005-12 task 7 - low midline pump station design\AutoDesk\ACAD\FORWP-02-E-DET-001.dwg, FORWP-02-E-DET-001, 2024/11/29 03:16 pm ysheng



PLAN
1:20



TYPICAL DEVICE INSTALLATION
NTS



ISOMETRIC
NTS

- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES AND SYMBOLS REFER TO THE LEGEND DRAWINGS.
 - HEAVY DUTY DUAL HEIGHT PEDESTAL AVAILABLE FROM AUTOMATIC SYSTEMS AMERICA.
 - INSTALL ON SCREW PILE WITH CONDUIT RISER INTO PEDESTAL LEG.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
AS SHOWN

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

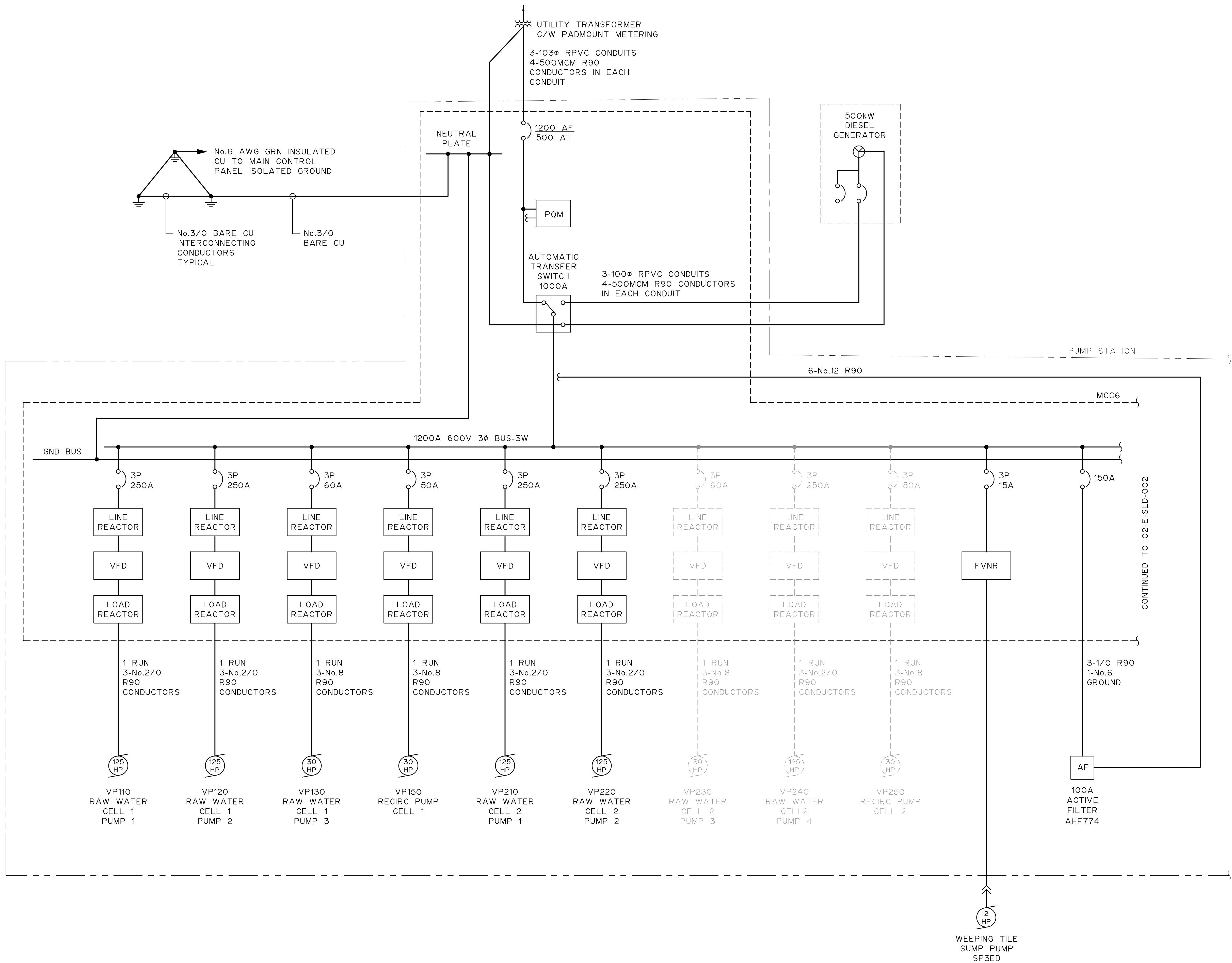
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
GATE CARD READER
PEDESTAL DETAILS

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-DET-001	A

E1.8

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACADE2.1 - E2.2 FORWP-02-E-SLD-001 & 002.dwg, FORWP-02-E-SLD-001, 2024/11/29 03:20 pm ysheng



NOTES:
1. FOR INFORMATION REGARDING GENERAL NOTES,
ABBREVIATIONS AND SYMBOLS REFER TO THE
LEGEND DRAWINGS.

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY.
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-04-11	ISSUED FOR AGREEMENT	G.B.P.
B	24-10-15	ISSUED FOR QUOTATION REVISED	G.B.P.
C	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
D	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

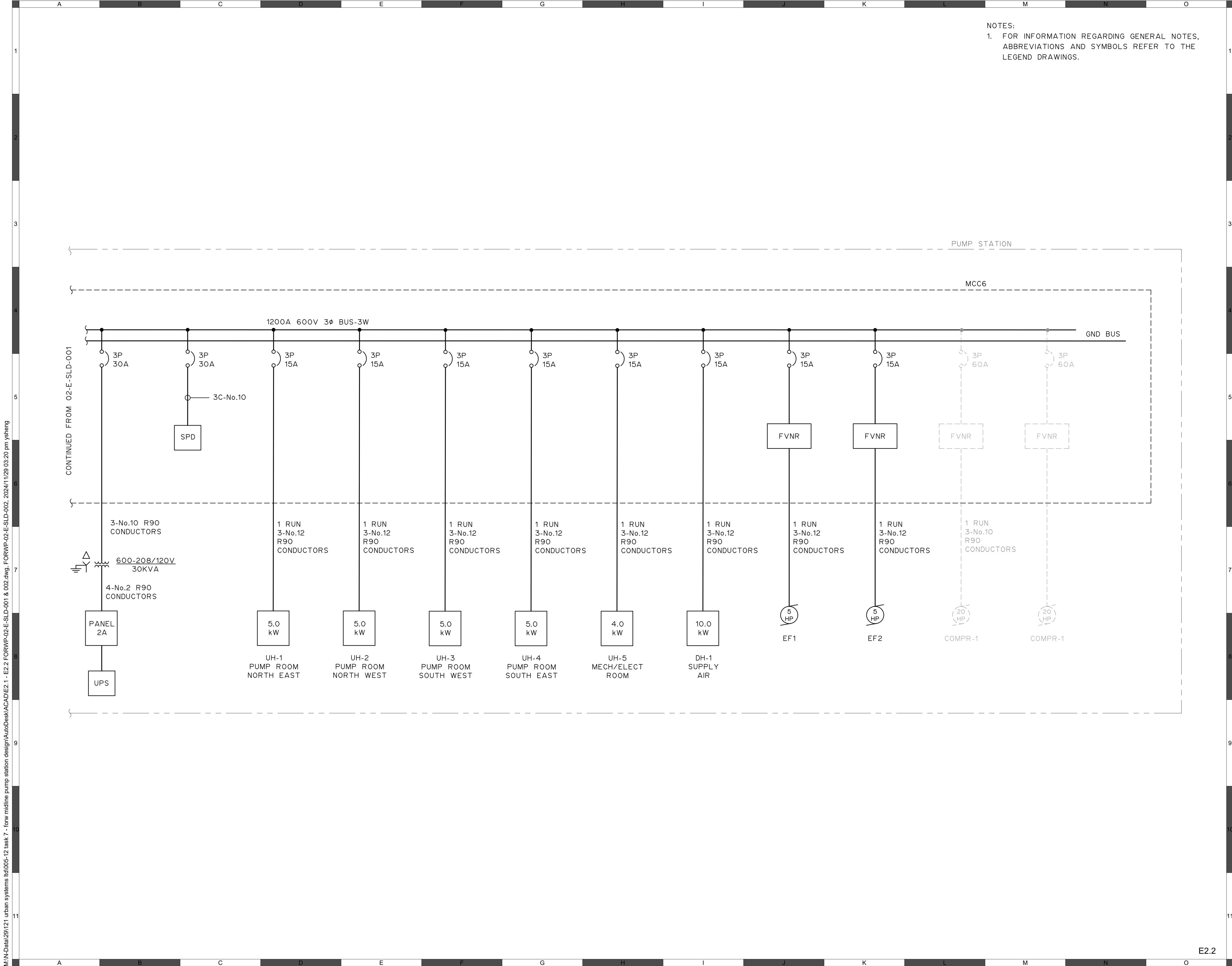
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SINGLE LINE DIAGRAM 1 OF 2

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-SLD-001

of ##
Revision
B

E2.1

NOT FOR CONSTRUCTION



NOTES:
1. FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS AND SYMBOLS REFER TO THE LEGEND DRAWINGS.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-04-11	ISSUED FOR AGREEMENT	G.B.P.
B	24-10-15	ISSUED FOR QUOTATION REVISED	G.B.P.
C	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
D	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



URBAN
systems
a division of

Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
SINGLE LINE DIAGRAM 2 OF 2

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-SLD-002

of ##
Revision
B

E2.2

M:\N-Data\29121 urban systems\td005-12 task 7 - low midline pump station design\AutoDesk\ACADE\IE2.1 - E2.2 FORWP-02-E-SLD-001 & 002.dwg, FORWP-02-E-SLD-002, 2024/11/29 03:20 pm ysheng

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE\2.3 FORWP-02-E-SCH-001.dwg, FORWP-02-E-SCH-001, 2024/11/29 03:16 pm ysheng

	PANEL 2C SCHEDULE							
	LOCATION: TERTIARY TREATMENT FACILITY							
	208/120V, 3ø, 4W, 225A MAIN							
DESCRIPTION	TRIP AMPS	BRK. No.	PHASE A B C			BRK. No.	TRIP AMPS	DESCRIPTION
INTERIOR LIGHTING / EMERGENCY LIGHTING	20	1	●			2	20	UPS
EXTERIOR LIGHTING	15	3		●		4	15	RECEPTACLES - PUMP ROOM NORTH
RECEPTACLES - MECH/ELECT ROOM	15	5			●	6	15	RECEPTACLES - PUMP ROOM SOUTH
SPARE	15	7	●			8	15	RECEPTACLES - PUMP ROOM EAST
WASHROOM	15	9		●		10	15	RECEPTACLES - PUMP ROOM WEST
SPARE	15	11			●	12	15	BUILDING CONTROL PANEL SERVICE RECEPTACLE
SPARE	15	13	●			14	15	SPARE
EXTERIOR LIGHTING	15	15		●		16	15	EXTERIOR RECEPTACLES
GATE PANEL	15	17			●	18	20	WATER HEATER DWH1
DOMESTIC WATER PUMP P1	15	19	●			20	20	
CHEMICAL TANK EXHAUST FAN EF3	15	21		●		22	20	WASHROOM HEATER BBH1
SPARE	15	23			●	24	15	
HEAT RECOVERY VENTILATOR HRV1	15	25	●			26	15	SPARE
SPARE	15	27		●		28	15	
SPARE	15	29			●	30	15	SPARE
SPARE	15	31	●			32	15	SPARE
SPARE	15	33		●		34	15	SPARE
SPARE	15	35			●	36	15	SPARE
SPARE	15	37	●			38	15	SPARE
SPARE	15	39		●		40	15	SPARE
SPARE	15	41			●	42	15	SPARE

LUMINAIRE SCHEDULE						
TYPE	DESCRIPTION	MAKE/MODEL	LAMPING	VOLTAGE	MOUNTING/BALLAST	QUANTITY
101	INTERIOR VAPOUR TIGHT LIGHT	COLUMBIA, LXEM 4-40HL-RFA-EU	LED	120V	STD	36
102						
103	VANITY	COLUMBIA, LBIL2-40ML-EU	LED	120V	STD	1
104	EXTERIOR LIGHT	HUBBEL TRP2-24L-30-4K7-3-UNV-DB-PC	LED	120V		3
105	EMERGENCY LIGHTING CENTRAL BATTERY	LUMACELL RG24S-144-2-LD13	LED	120V		1
106	EMERGENCY LIGHTING REMOTE HEAD FOR EGRESS	LUMACELL RSQBDD13	LED	24VDC		7
107	EXIT SIGN REMOTE POWERED	LUMACELL LER450UNIV	LED	24VDC		5

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

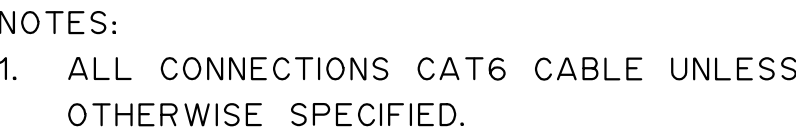
Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
PANEL AND LIGHTING SCHEDULES

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-001	A

E2.3

NOT FOR CONSTRUCTION



ATTENTION

This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. to any employee or any party with
whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be correct or accurate. Expose and
conclusively confirm the location in the field of
underground utilities and structures indicated on this
drawing. All underground utilities in the area of the
proposed work and any utilities or structures
responsibly adjacent to the proposed work. Urban
Systems Ltd. assumes no responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale

NOT TO SCALE

Quality Control by _____
Designed by _____ G.B.P.
Drawn by _____ Y.F.S.

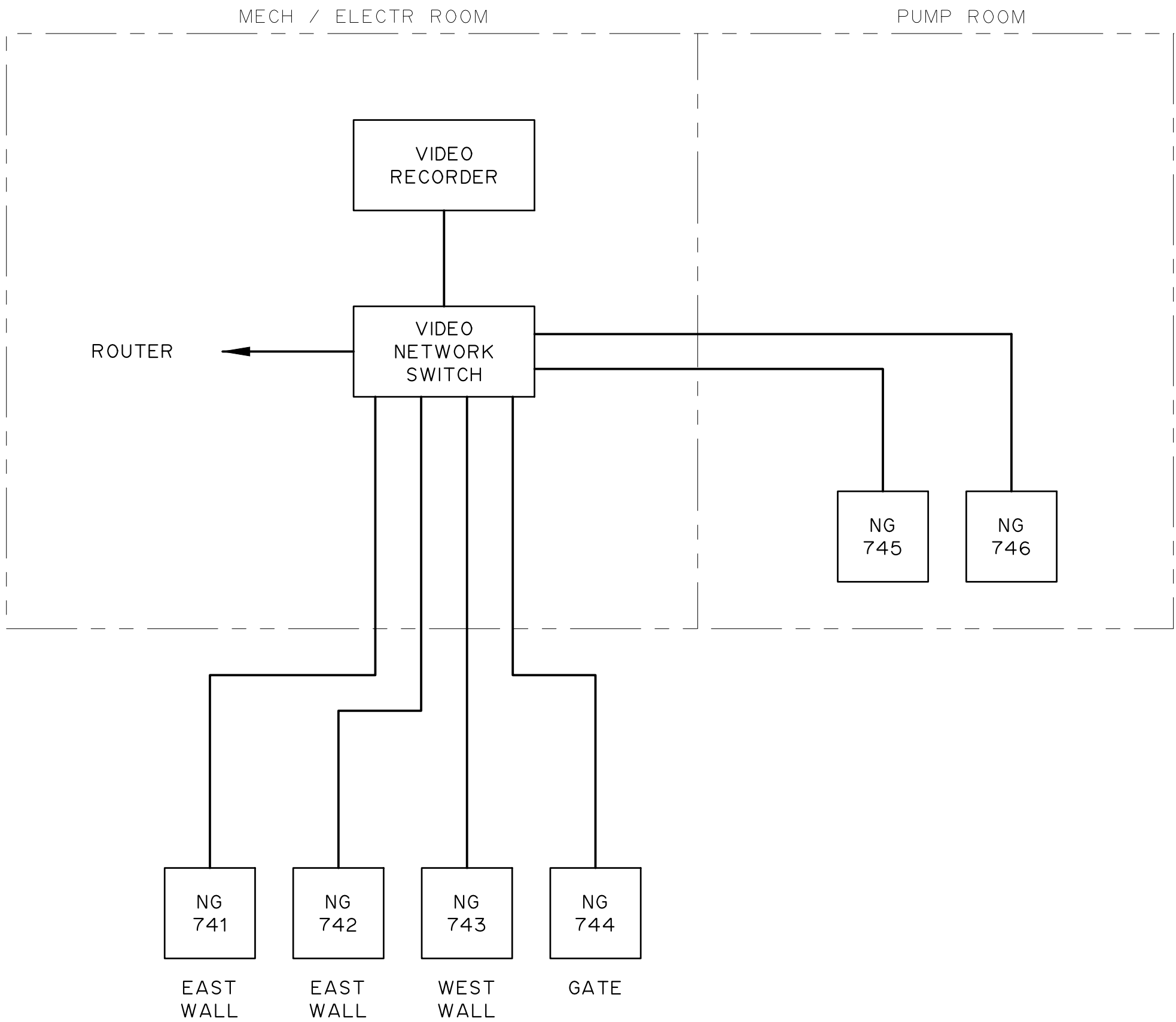
FOOTHILLS OKOTOKS MIDLINE PUMP STATION CONTROL ARCHITECTURE

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-CSA-001	A

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE3.0 - E3.1 FORWP-02-E-CSA-001 & 002.dwg, FORWP-02-E-CSA-002, 2024/11/28 03:20 pm ysheng

- NOTES:
1. ALL CONNECTIONS CAT6 CABLE UNLESS OTHERWISE SPECIFIED.



ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

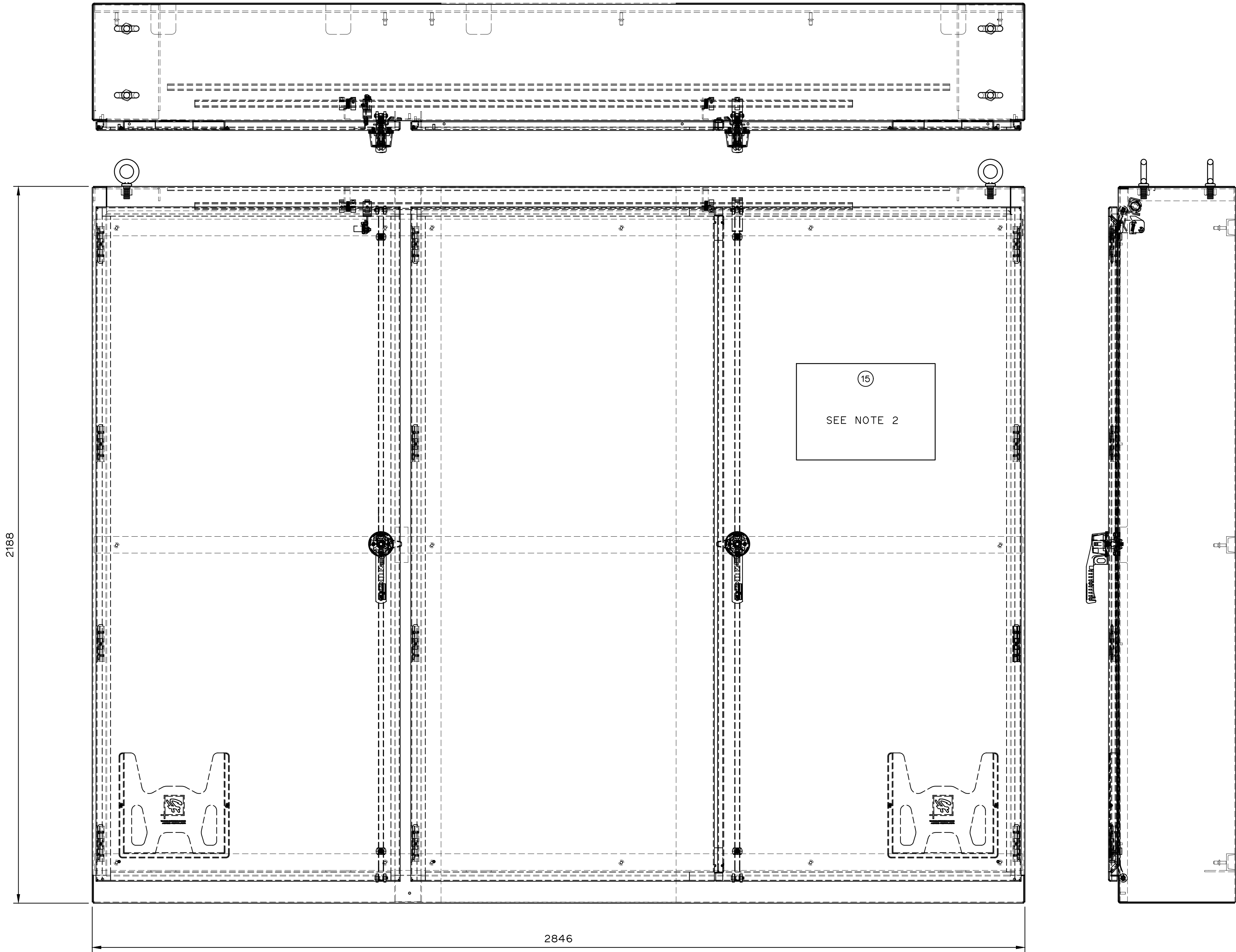
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
VIDEO MONITORING SYSTEM

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-CSA-002	A

E3.1

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - few midline pump station design\AutoDesk\ACAD\E3.2-E3.3 FORWP-02-E-LAY-002 & 003- CONTROL PANEL LAYOUT.dwg, FORWP-02-E-LAY-002, 2024/11/29 03:21 pm ysheng



CONTROL PANEL EXTERIOR

- NOTES:
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - CENTRE OF HMI TO BE 1500 ABOVE FINISHED FLOOR. ALLOW FOR HOUSE KEEPING PAD.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
1 : 7.5

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

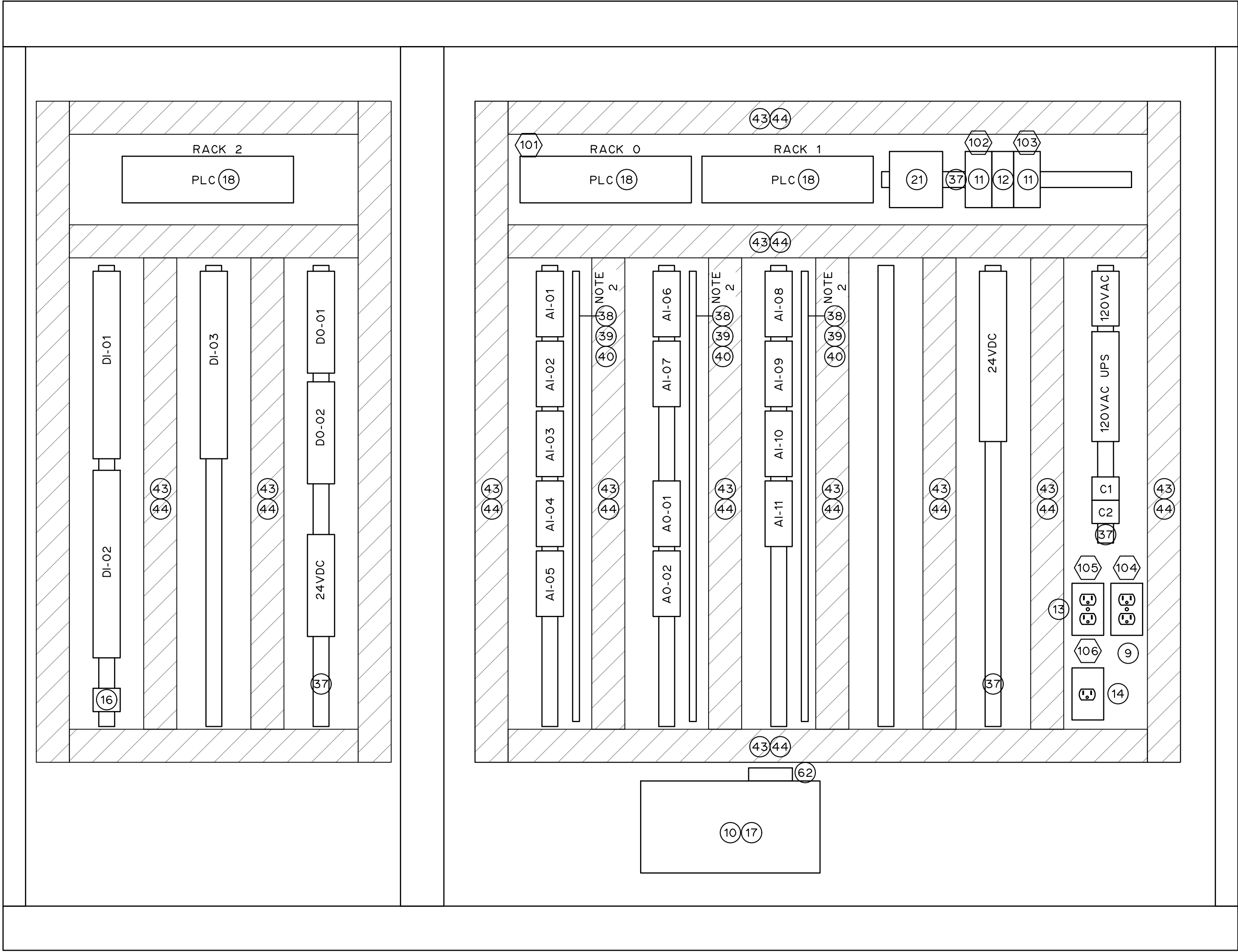
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
CONTROL PANEL LAYOUT EXTERIOR

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-LAY-002	A

E3.2

NOT FOR CONSTRUCTION

M:\N-Data\29121\urban systems\td005-12 task 7 - low midline pump station design\AutoDesk\ACADE3.2-E3.3 FORWP-02-E-LAY-002 & 003- CONTROL PANEL LAYOUT.dwg, FORWP-02-E-LAY-003, 2024/11/29 03:20 pm ysheng



CONTROL PANEL INTERIOR

- NOTES:
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - ISOLATED GROUND BUS TO BE CONNECTED TO GROUND GRID.

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale 1 : 7.5

Quality Control by G.B.P.
Designed by Y.F.S.
Drawn by

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
CONTROL PANEL LAYOUT INTERIOR

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-LAY-003	A

E3.3

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems ltr005-12 task 7 - low midline pump station design\AutoDesk\ACAD\E3.4 - E3.5 FORWP-02-E-SCH-002 & 003.dwg, FORWP-02-E-SCH-002, 2024/11/20 03:20 pm ystheng

BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOGUE No.
①	1	ENCLOSURE – THREE DOOR 86"x112"x14" C/W 3 POINT LATCH	HOFFMAN	A86M3E6
②	2	ENCLOSURE – BACK MOUNTING PLATE	HOFFMAN	C/W ABOVE
③				
④				
⑤				
⑥				
⑦				
⑧				
⑨	1	DUPLEX RECEPTACLE		
⑩	1	UPS 1500 VA/120VAC SIDE MOUNTING DISPLAY	ALWAYS ON	GES152N WITH OPTIONS
⑪	2	POWER SUPPLY 24VDC 10A	PHOENIX CONTACT	2903149
⑫	1	DIODE MODULE	PHOENIX CONTACT	2907380
⑬	1	DUPLEX RECEPTACLE (ORANGE)		
⑭	1	SIMPLEX RECEPTACLE		
⑮	1	HMI	HOPE INDUSTRIAL SYSTEMS	HIS-ML19.5
⑯	1	DB25 TO TERMINALS INTERFACE	PHOENIX CONTACT	2315188
⑰	1	DB25 SOCKET TO DB25 PIN CABLE LENGTH AS APPROPRIATE		
⑱	1	PLC	SCHNEIDER	SEE LAYOUT
⑲	1	COMPUTER	ONLOGIC	HX500
⑳	1	ALARM REPORTING UNIT C/W CELL CALLOUT	GUARDIAN TELECOM	B1285-M1, B1285-W4, B1285-P2
㉑	1	ETHERNET SWITCH 16 PORTS. CU	SCHNEIDER	
㉒				
㉓				
㉔				
㉕				
㉖	A/R	ELECTRONIC CIRCUIT BREAKER 24VDC 1-3A	PHOENIX CONTACT	2909909
㉗				
㉘	A/R	THERMAL MAGNETIC CIRCUIT BREAKER 120VAC 2A TMC 81C02A	PHOENIX CONTACT	2907559
㉙	A/R	KNIFE DISCONNECT TERMINAL BLOCK - PT4-MT	PHOENIX CONTACT	3211933
㉚	A/R	TERMINAL, PT4	PHOENIX CONTACT	3211757
㉛	A/R	FUSE TERMINAL, PT4, VOLTAGE AS REQUIRED	PHOENIX CONTACT	
㉜	A/R	RELAY TERMINAL, 24VDC ICO, 10A CONTACTS PT TERMINAL	PHOENIX CONTACT	2900291
㉝	A/R	GROUND TERMINAL PT4-PE	PHOENIX CONTACT	3211766
㉞	A/R	END BRACKET, CLIP FIX 35–5	PHOENIX CONTACT	3022276
㉟	A/R	END PLATE, DU–T	PHOENIX CONTACT	3030420
㊱	A/R	TAG CARRIER, KLM 3–L	PHOENIX CONTACT	0814788
㊲	A/R	MOUNTING RAIL	PHOENIX CONTACT	
㊳	1	BUS BAR, PERFORATED, NSCH 15x2	WEIDMULLER	
㊴	A/R	PRESSURE PIECE, DKSUE	WEIDMULLER	
㊵	A/R	CLAMPING SCREW, BFSC M5x8	WEIDMULLER	
㊶	A/R	2" X 3" NARROW FINGER SLOTTED WIRING DUCT, WHITE	PANDUIT	F2X3WH6
㊷	A/R	2" WIRING DUCT COVER, WHITE	PANDUIT	C2WH6
㊸	A/R	3" X 3" NARROW FINGER SLOTTED WIRING DUCT, WHITE	PANDUIT	F3X3WH6
㊹	A/R	3" WIRING DUCT COVER, WHITE	PANDUIT	C3WH6
㊺	A/R	4" X 3" NARROW FINGER SLOTTED WIRING DUCT, WHITE	PANDUIT	F4X3WH6
㊻	A/R	4" WIRING DUCT COVER, WHITE	PANDUIT	C4WH6
㊼	A/R	4" WIRING DUCT COVER, WHITE	PANDUIT	C4WH6
㊽				
㊾	A/R	RELAY PLUG–IN BRIDGE BLUE	PHOENIX CONTACT	2966692
㊿	A/R	TERMINAL JUMPER 2 POSITION RED	PHOENIX CONTACT	3030336
1	A/R	TERMINAL JUMPER No. POSITION AND COLOUR AS NEEDED	PHOENIX CONTACT	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12	1	ROUTER	CISCO	MERAKI Z3 C/W 5 YEAR ENTERPRISE SUPPORT

- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, AND SYMBOLS, REFER TO THE LEGEND AND ABBREVIATION DRAWINGS.
 - UPS WITH DISPLAY SIDE MOUNTED.
 - 30300 (GES-152N 120V)
 - 00987 (AS400 RELAY COMMUNICATION CARD)
 - 30080 (FACE PLATE SIDE MOUNT OPTION 701N-152N)

NOTE 2

LAMICOID/LABEL SCHEDULE				
ITEM	QTY	DESCRIPTION	TYPE	SIZE
⑩0		CONTROL PANEL	LAMICOID	25x50
⑩1		PLC RACK 0	LAMICOID	25x50
⑩2		POWER SUPPLY A	LAMICOID	25x50
⑩3		POWER SUPPLY B	LAMICOID	25x50
⑩4		SERVICE RECEPTACLE	LAMICOID	25x50
⑩5		UPS RECEPTACLE	LAMICOID	25x50
⑩6		UPS FEED	LAMICOID	25x50
⑩7				
⑩8				
⑩9				
⑪0				
⑪1				
⑪2				
⑮0		120VAC	LABEL	TO FIT
⑮1		120VAC UPS	LABEL	TO FIT
⑮2		24 VDC	LABEL	TO FIT
⑮3		DI-01	LABEL	TO FIT
⑮4		DI-02	LABEL	TO FIT
⑮5		DI-03	LABEL	TO FIT
⑮6		AI-01	LABEL	TO FIT
⑮7		AI-02	LABEL	TO FIT
⑮8		AI-03	LABEL	TO FIT
⑮9		AI-04	LABEL	TO FIT
⑮0		AI-05	LABEL	TO FIT
⑮1		AI-06	LABEL	TO FIT
⑮2		AI-07		
⑮3		AI-08	LABEL	TO FIT
⑮4		AI-09	LABEL	TO FIT
⑮5		AI-10	LABEL	TO FIT
⑮6		AI-11	LABEL	TO FIT
⑮7		A0-01	LABEL	TO FIT
⑮8		A0-02	LABEL	TO FIT
⑮9		D0-01	LABEL	TO FIT
⑰0		D0-02	LABEL	TO FIT

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by	G.B.P.
Designed by	Y.F.S.
Drawn by	

FOOTHILLS OKOTOKS MIDLINE PUMP STATION
CONTROL PANEL BILL OF MATERIALS AND LABEL SCHEDULE

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-002	A

E3.4

NOT FOR CONSTRUCTION

F	G	H	I	
---	---	---	---	--



	H
--	---

ATTENTION

ATTENTION

ATTENTIO

ATTENTION

ATTENTION

ATTENTION



ATTENTION

ATTENTION

ATTENTION

ATTENTION

1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															

AI-01

156

040P

041P

042P

043P

044P

045P

046P

047P

040C

041C

042C

043C

044C

045C

046C

047C

36

34

30

35

34

AI-02

157

B060

B061

B062

B063

B064

B065

B066

B067

060P

060V

061P

061V

062P

062V

063P

063V

064P

064V

065P

065V

066P

066V

067P

067V

060C

061C

062C

063C

064C

065C

066C

067C

36

34

26

30

35

34

AI-03

158

B070

B071

B072

B073

B074

B075

B076

B077

070P

070V

071P

071V

072P

072V

073P

073V

074P

074V

075P

075V

076P

076V

077P

077V

070C

071C

072C

073C

074C

075C

076C

077C

36

34

26

30

35

34

AI-04

159

080P

080V

081P

081V

082P

082V

083P

083V

084P

084V

085P

085V

086P

086V

087P

087V

080C

081C

082C

083C

084C

085C

086C

087C

36

34

30

35

34

AI-05

160

090P

090V

091P

091V

092P

092V

093P

093V

094P

094V

095P

095V

096P

096V

097P

097V

090C

091C

092C

093C

094C

095C

096C

097C

36

34

30

35

34

AI-06

161

0A0P

0A0V

0A1P

0A1V

0A2P

0A2V

0A3P

0A3V

0A4P

0A4V

0A5P

0A5V

0A6P

0A6V

0A7P

0A7V

0A0C

0A1C

0A2C

0A3C

0A4C

0A5C

0A6C

0A7C

36

34

30

35

34

AO-01

167

160P

161P

162P

163P

164P

165P

166P

167P

161C

162C

163C

164C

165C

166C

167C

</

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale

NOT TO SCALE

Quality Control by
Designed by G.B.P.
Drawn by Y.F.S.

FOOTHILLS OKOTOKS MIDLINE
PUMP STATION
CONTROL PANEL TERMINAL STRIP
LAYOUT 1 OF 2

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-004	A

NOT FOR CONSTRUCTION

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, AND SYMBOLS, REFER TO THE LEGEND AND ABBREVIATION DRAWINGS.
2. ADJACENT JUMPERED TERMINALS TO BE IMPLEMENTED WITH MANUFACTURER PROVIDED BRIDGES.
3. 24VDC CIRCUIT BREAKERS TO BE SUPPLIED WITH BOTH 24VDC+ AND 24VDC COM. CIRCUIT BREAKERS FOR 24VDC AND DIGITAL INPUT TERMINAL STRIPS TO BE MONITORED BY PLC INPUTS. MONITORING CONTACTS OF EACH GROUP INDICATED TO BE CONNECTED IN SERIES WITH MANUFACTURER 2 POLE BRIDGES. SEE DETAIL.

M:\N-Data\29121\21 urban systems\td005-12 task 7 - low midline pump station design\AutoDesk\ACADE\E3.6 - E3.7 FORWP-02-E-SCH-004 & 005.dwg, FORWP-02-E-SCH-005, 2024/11/29 03:17 pm ystheng

DO-01			
	169		36
			34
A1	R2500	12	32
A2		14	
A1	R2501	11	
A2		12	
A1	R2502	11	
A2		14	
A1	R2503	12	
A2		14	
A1	R2504	12	
A2		14	
A1	R2505	11	
A2		12	
A1	R2506	12	
A2		14	
A1	R2507	12	
A2		14	
A1	R2508	11	
A2		12	
A1	R2509	11	
A2		14	
A1	R2510	12	
A2		14	
A1	R2511	11	
A2		14	
A1	R2512	12	
A2		14	
A1	R2513	12	
A2		14	
A1	R2514	11	
A2		12	
A1	R2515	12	
A2		14	
	P		
	P		
	N		
	N		
			34

COIL COMMON
BRIDGE 49

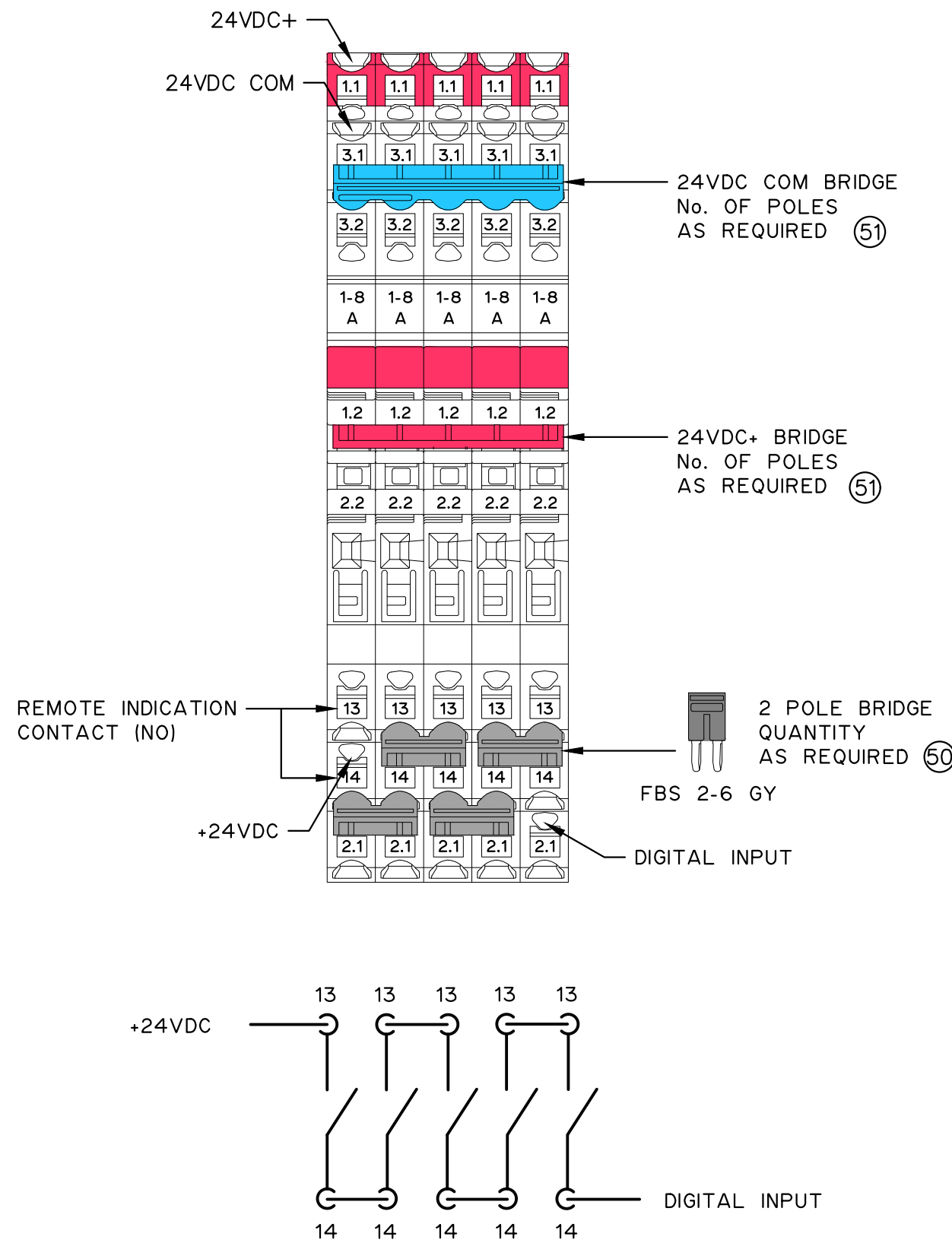
DO-02			
	170		36
			34
A1	R2600	12	32
A2		14	
A1	R2601	11	
A2		12	
A1	R2602	11	
A2		14	
A1	R2603	12	
A2		14	
A1	R2604	12	
A2		14	
A1	R2605	12	
A2		14	
A1	R2606	12	
A2		14	
A1	R2607	12	
A2		14	
A1	R2608	11	
A2		12	
A1	R2609	12	
A2		14	
A1	R2610	12	
A2		14	
A1	R2611	11	
A2		14	
A1	R2612	12	
A2		14	
A1	R2613	12	
A2		14	
A1	R2614	11	
A2		12	
A1	R2615	12	
A2		14	
	P		
	P		
	N		
	N		
			34

COIL COMMON
BRIDGE 49

24VDC		
52		36
		34
		26
B301		
B302		
B303		
B304		
B305		
B306		
B307		
B308		
B309		
B310		
B311		
B312		
B313		
B314		
B315		
B316		
B317		
B318		
B319		
B320		
B321		
B322		
B323		
301C		30
302C		
303C		
304C		
305C		
306C		
307C		
308C		
309C		
310C		
311C		
312C		
313C		
314C		
315C		
316C		
317C		
318C		
319C		
320C		
321C		
322C		
323C		
		35
		34

120VAC UPS		
151		36
		34
		28
B201		
B202		
B203		
B204		
B205		
B206		
B207		
B208		
B210		
B211		
B212		
B213		
B214		
B215		
B216		
B217		
B218		
B219		
B220		
B221		
B222		
B223		
B224		
B225		
201N		30
202N		
203N		
204N		
205N		
206N		
207N		
208N		
210N		
211N		
212N		
213N		
214N		
215N		
216N		
217N		
218N		
219N		
220N		
221N		
222N		
223N		
224N		
225N		
		35
		34

120VAC		
150		36
		34
		28
B100		
B101		
B102		
100N		30
101N		
102N		
		35
		34



24VDC CIRCUIT BREAKER DETAIL

- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, AND SYMBOLS, REFER TO THE LEGEND AND ABBREVIATION DRAWINGS.
 - ADJACENT JUMPERED TERMINALS TO BE IMPLEMENTED WITH MANUFACTURER PROVIDED BRIDGES.
 - 24VDC CIRCUIT BREAKERS TO BE SUPPLIED WITH BOTH 24VDC+ AND 24VDC COM. CIRCUIT BREAKERS FOR 24VDC AND DIGITAL INPUT TERMINAL STRIPS TO BE MONITORED BY PLC INPUTS. MONITORING CONTACTS OF EACH GROUP INDICATED TO BE CONNECTED IN SERIES WITH MANUFACTURER 2 POLE BRIDGES. SEE DETAIL.

E3.7

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

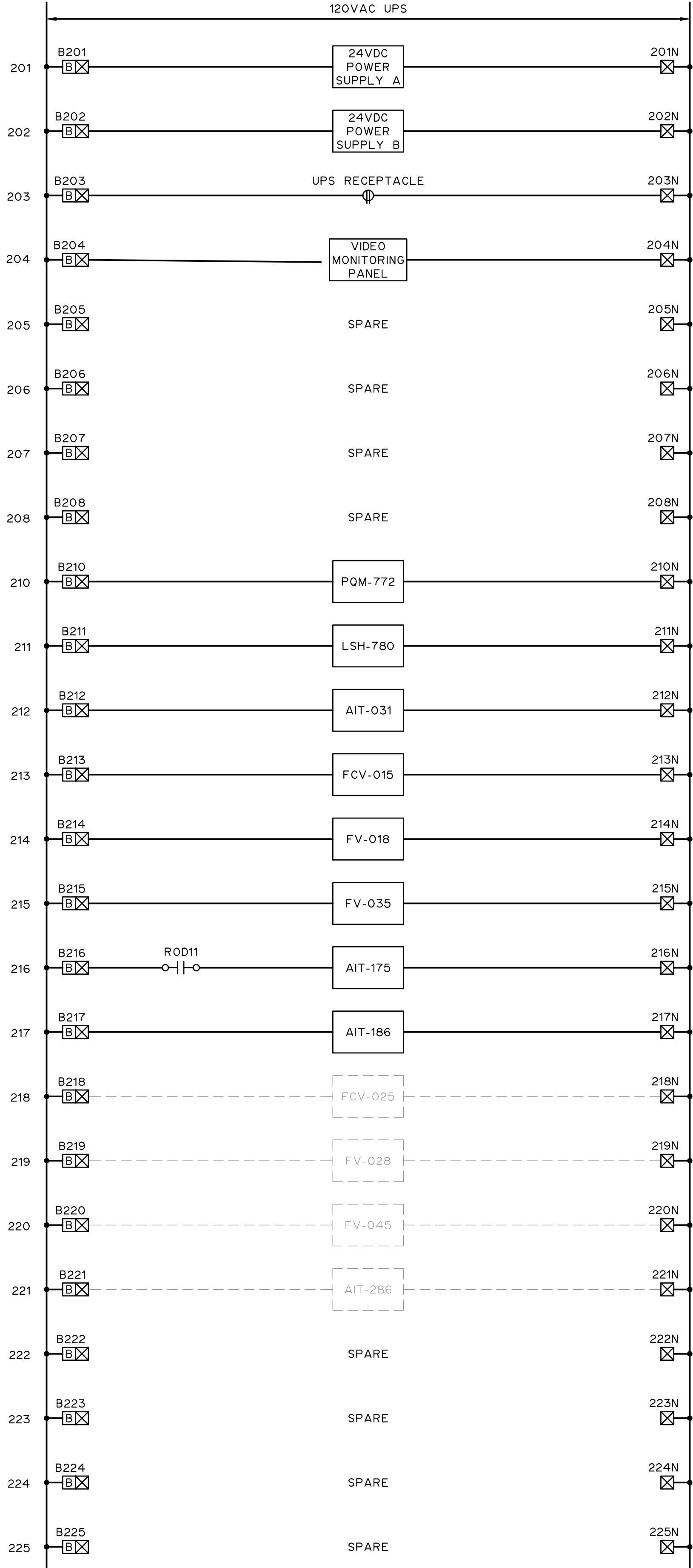
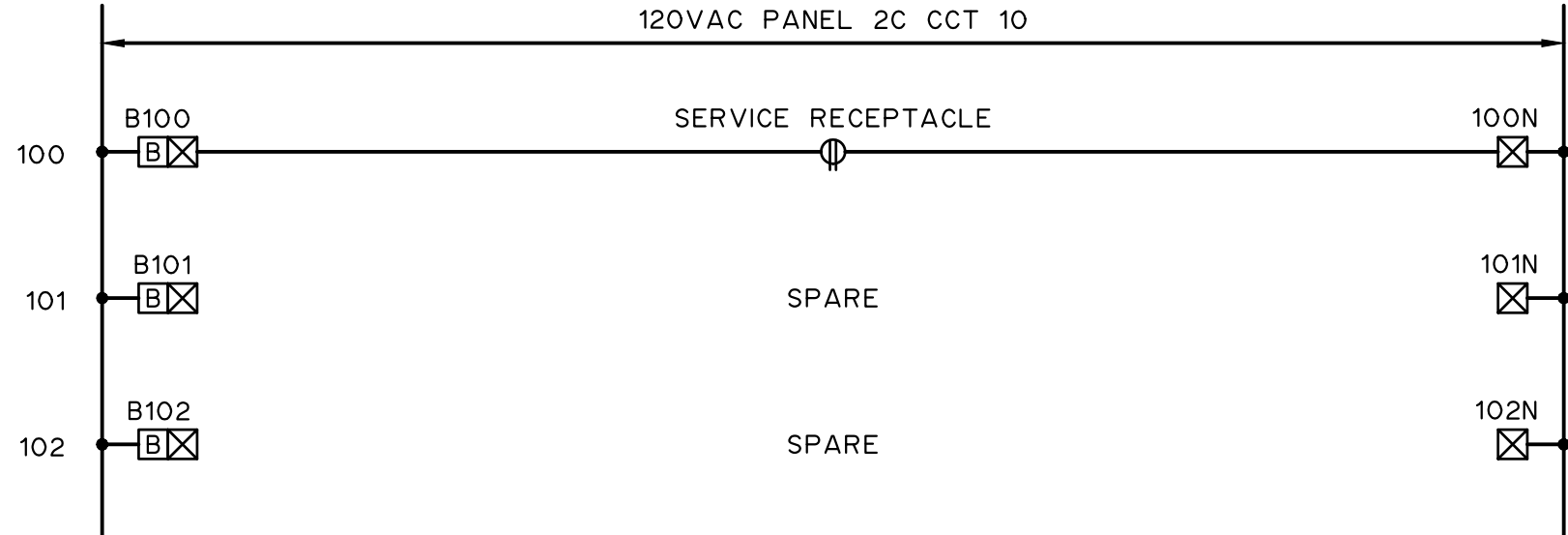
G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS MIDLINE
PUMP STATION
CONTROL PANEL TERMINAL STRIP
LAYOUT 2 OF 2

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-005	A

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE3.8 FORWP-02-E-SCH-006 POWER.DIST*120VAC.dwg, 2024/11/29 03:19 pm ysheng



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, AND SYMBOLS, REFER TO THE LEGEND AND ABBREVIATION DRAWINGS.

E3.8

ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale NOT TO SCALE

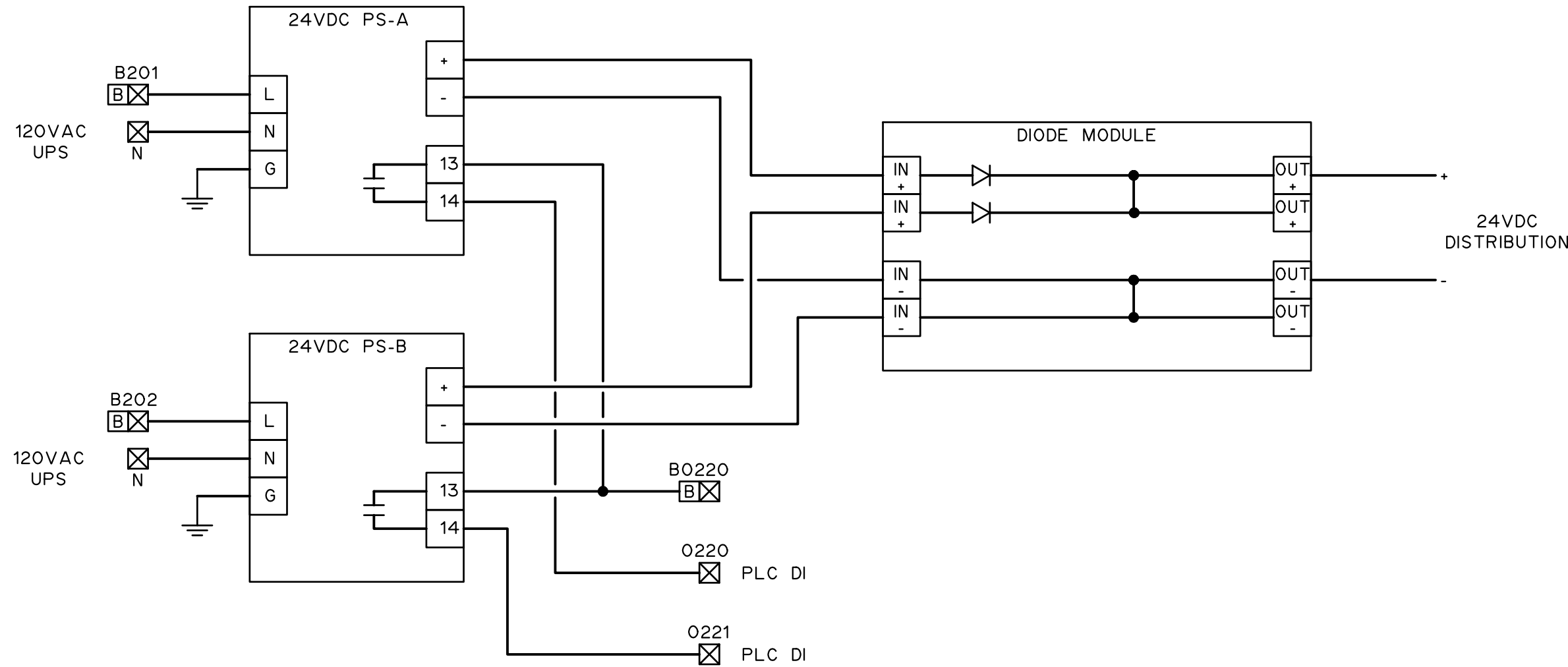
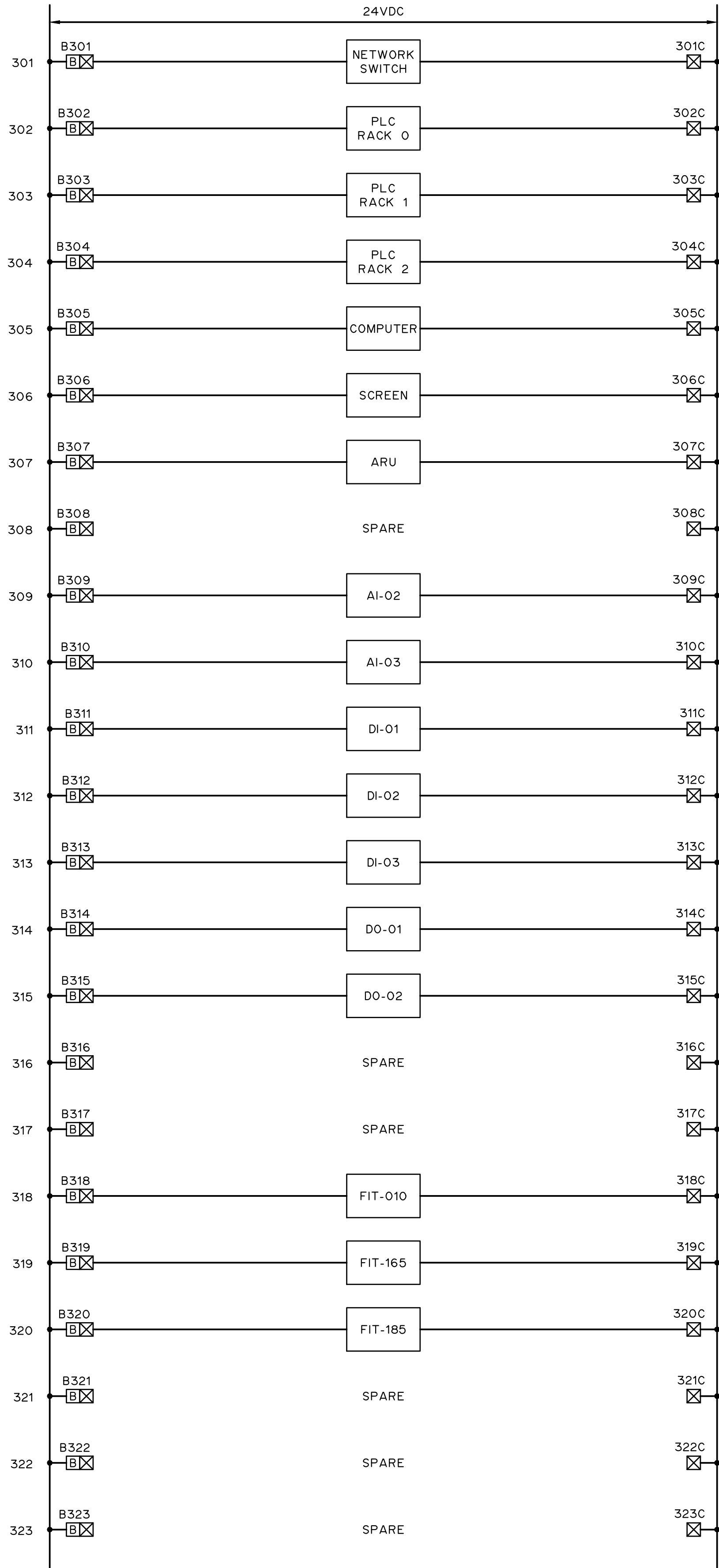
Quality Control by G.B.P.
Designed by Y.F.S.
Drawn by

FOOTHILLS OKOTOKS MIDLINE PUMP STATION
CONTROL PANEL POWER DISTRIBUTION
120VAC

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-006	A

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\td005-12 task 7 - low midline pump station design\AutoDesk\ACADE\IE3.9 FORWP-02-E-SCH-007 POWER.DIST. 24VDC.dwg, FORWP-02-E-SCH-007, 2024/11/29 03:19 pm ysheng



- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, AND SYMBOLS, REFER TO THE LEGEND AND ABBREVIATION DRAWINGS.

E3.9

ATTENTION
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

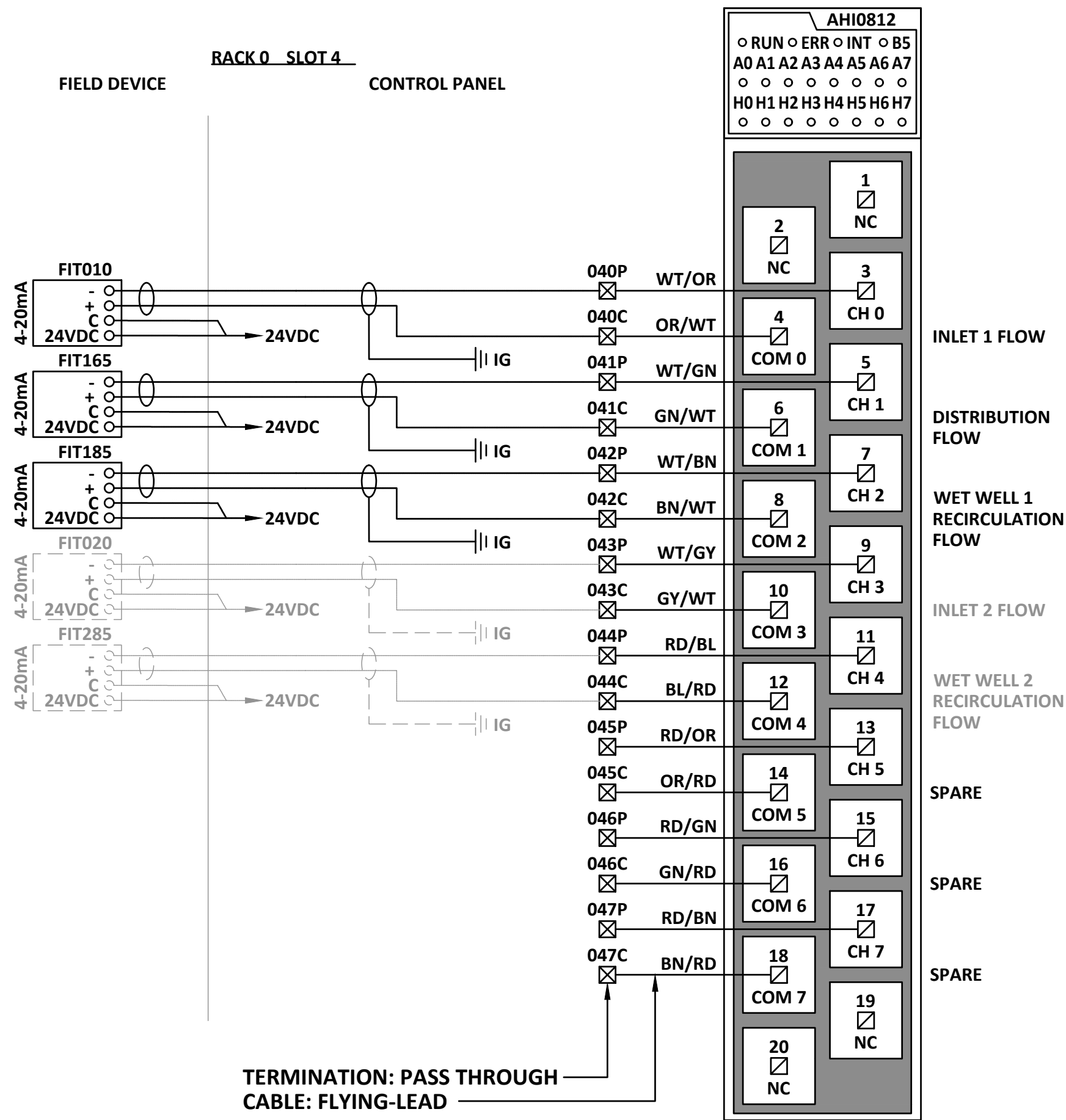
G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS MIDLINE
PUMP STATION
CONTROL PANEL POWER DISTRIBUTION
24VDC

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-SCH-007	A

NOT FOR CONSTRUCTION

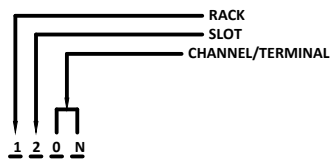
M:\N-Data\2011\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACADE3.10 - FORWP-02-E-WD-004 ANALOG INPUT MODULE 1.dwg, FORWP-02-E-WD-004, 2024/11/20 03:19 pm ysheng



ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

- NOTES:**
1. FOR INFORMATION REGARDING GENERAL NOTES,
ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND
DRAWINGS.
 2. REFER TO BILL OF MATERIALS AND LABEL SCHEDULE
DRAWING.
 3. REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR
TERMINAL STRIP LOCATION.
 4. CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 5. DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC
COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ANALOG INPUT MODULE 1

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-WD-004	A

E3.10

NOT FOR CONSTRUCTION



1 2 0 N

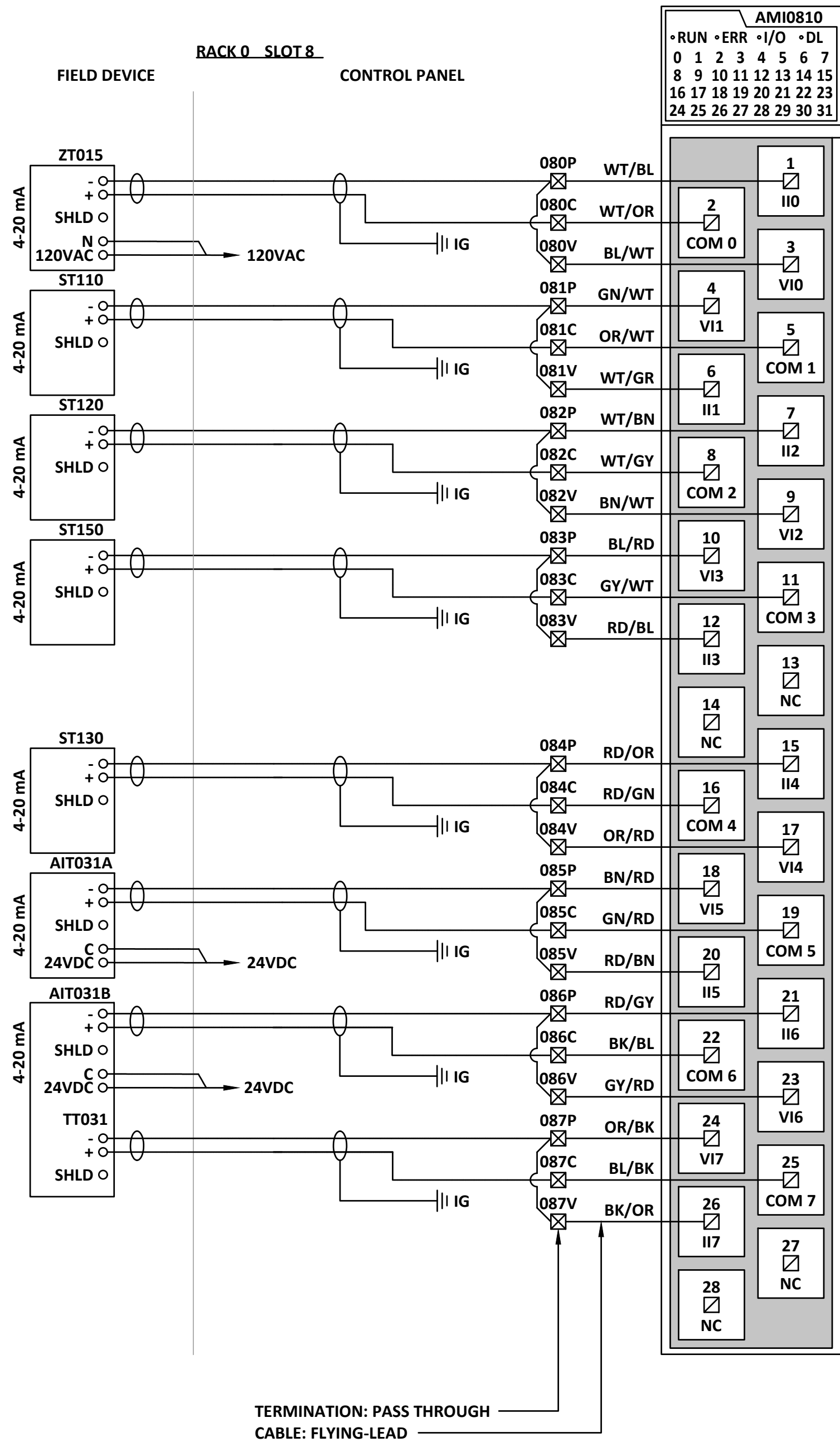
RACK
SLOT
CHANNEL/TERMINAL

Sheet Number	# of ##
Project Number	
29121-005-12	
Drawing Number	Revision
FORWP-02-E-WD-005	A

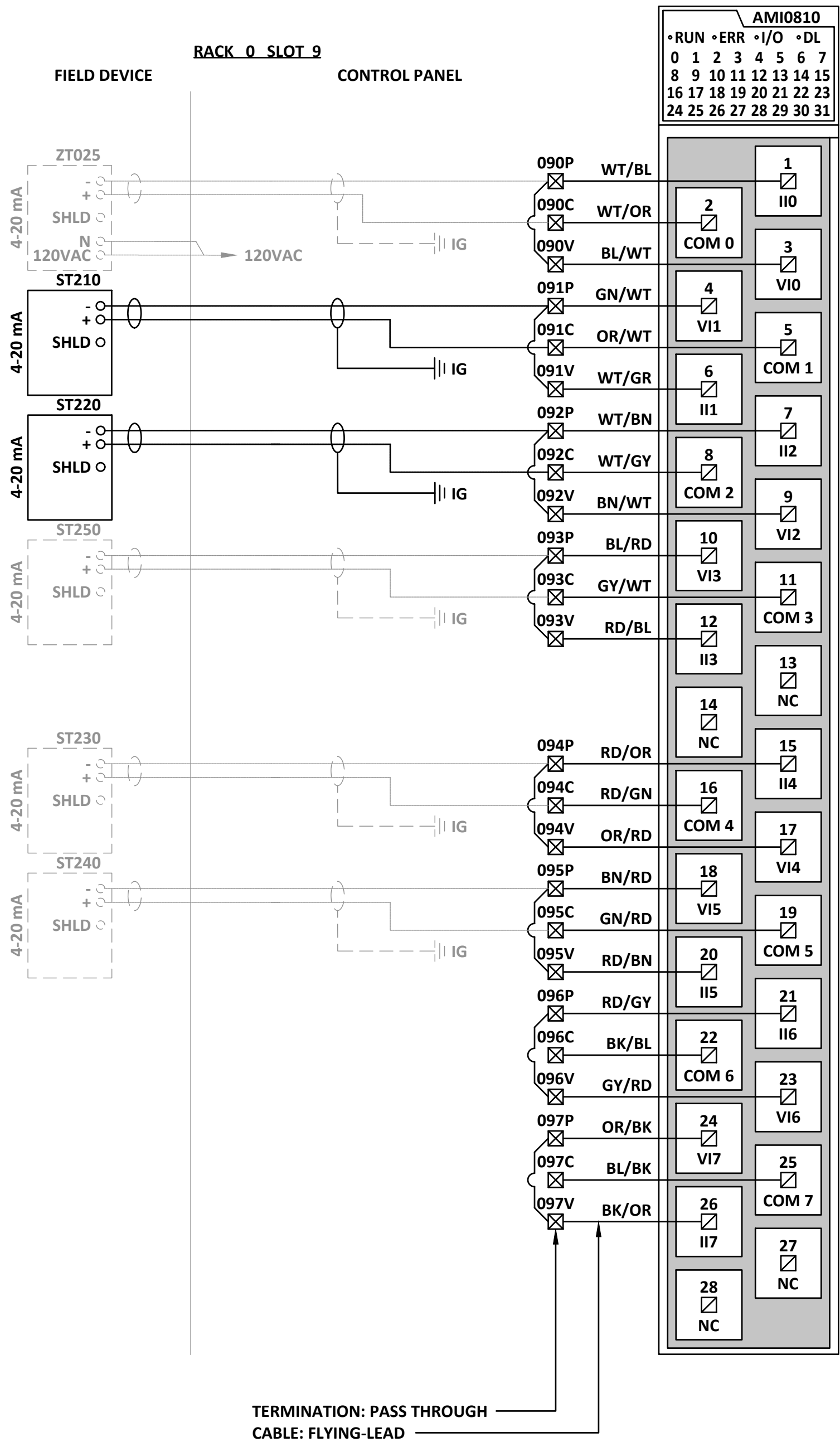
E3.11

NOT FOR CONSTRUCTION

M:\N-Data\29121 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE\IE3.12 - FORWP-02-E-WD-006 ANALOG INPUT MODULE 4 AND 5.dwg, FORWP-02-E-WD-006, 2024/11/29 03:21 pm ysheng



AI-04

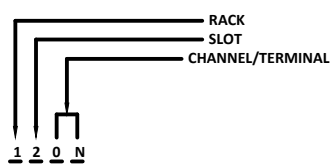


AI-05

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND DRAWINGS.
 - REFER TO BILL OF MATERIALS AND LABEL SCHEDULE DRAWING.
 - REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR TERMINAL STRIP LOCATION.
 - CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 - DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale NOT TO SCALE

Quality Control by
Designed by
Drawn by

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ANALOG INPUT MODULE 4 AND 5

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-WD-006

of

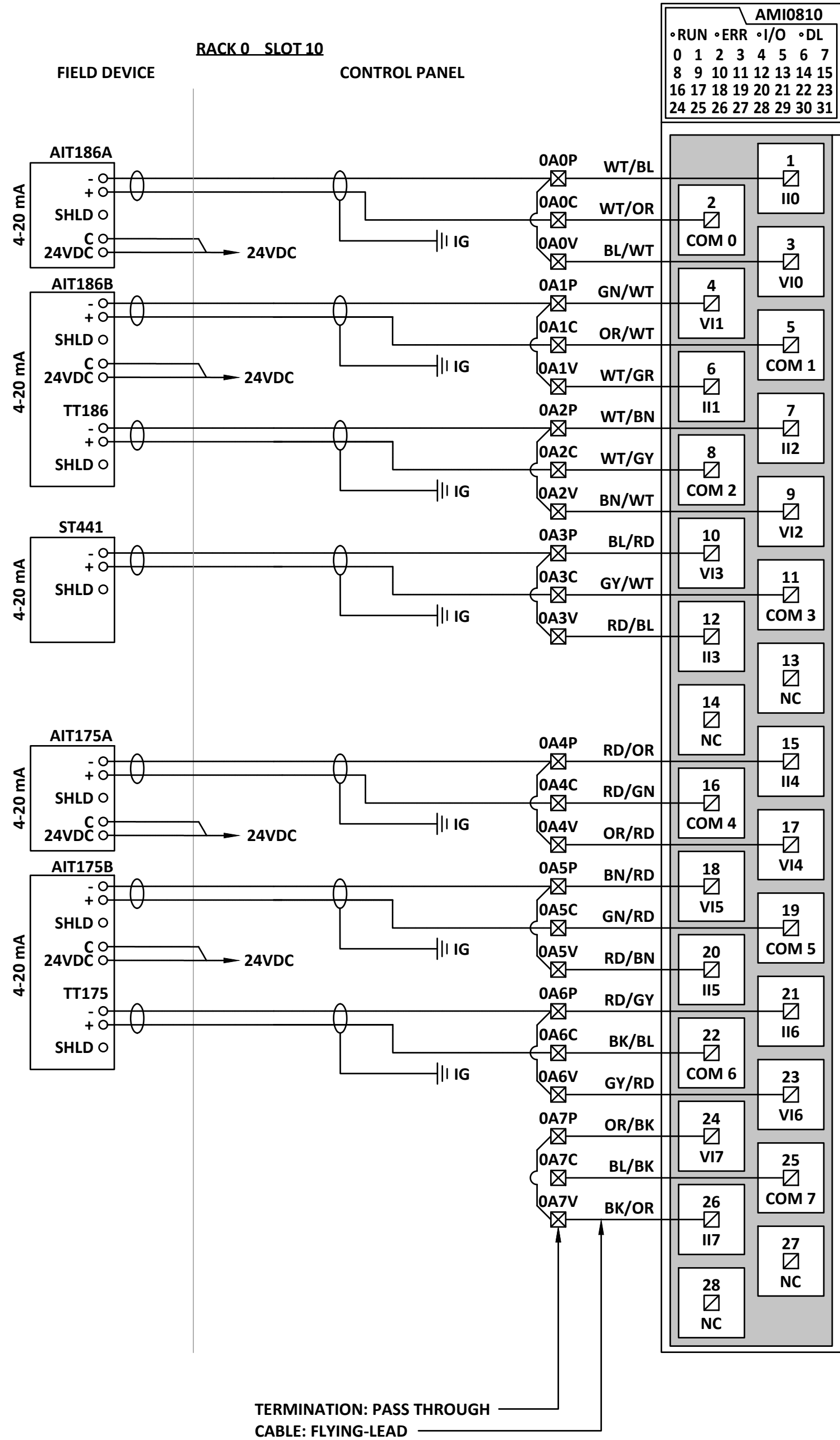
Revision

A

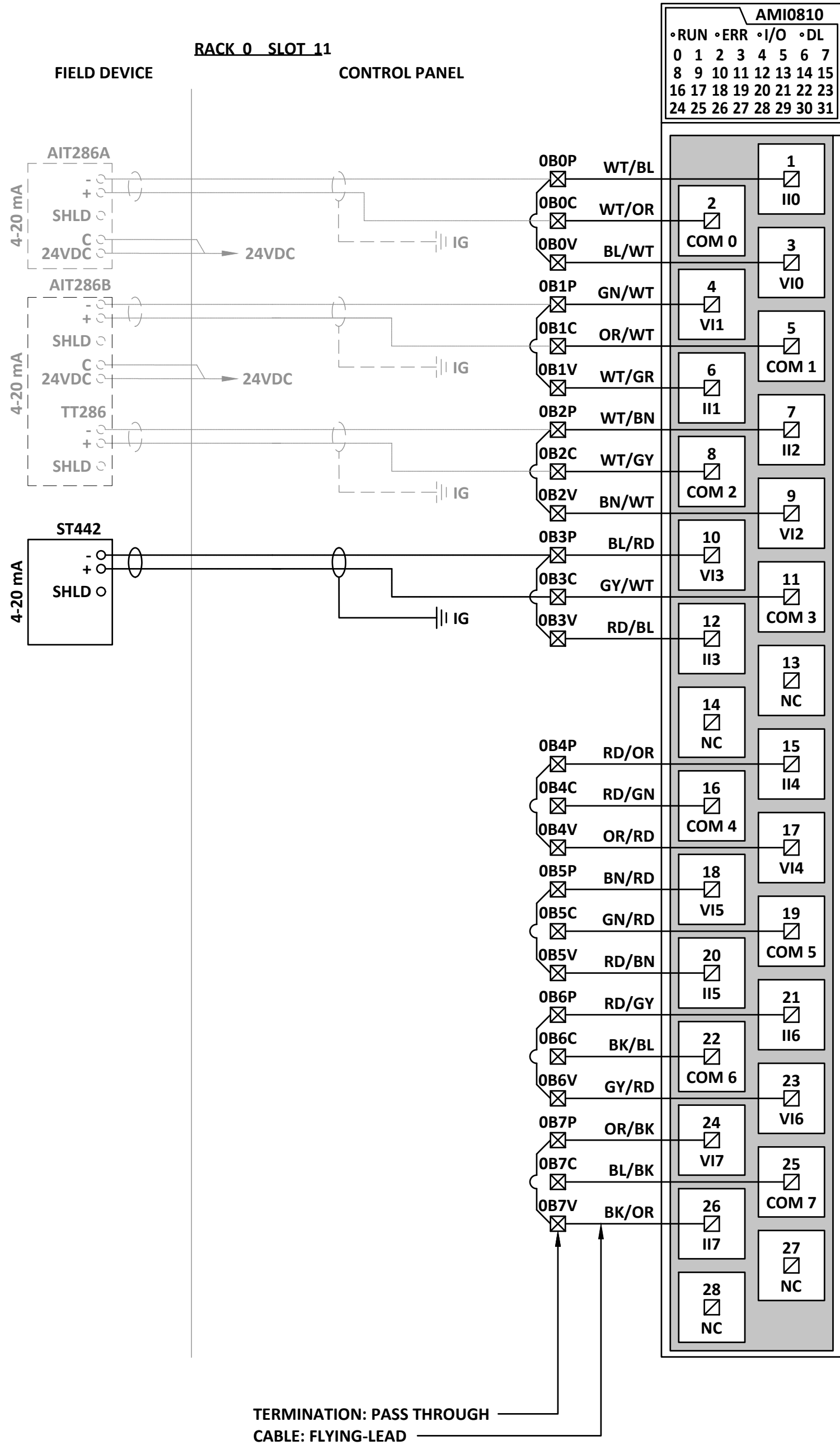
E3.12

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE\IE3.13 - FORWP-02-E-WD-007 ANALOG INPUT MODULE 6 AND 7.dwg, FORWP-02-E-WD-007, 2024/11/29 03:15 pm ysheng



AI-06



AI-07

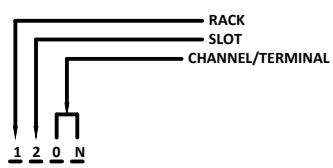
ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

- NOTES:**
- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEAD DRAWINGS.
 - REFER TO BILL OF MATERIALS AND LABEL SCHEDULE DRAWING.
 - REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR TERMINAL STRIP LOCATION.
 - CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 - DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale NOT TO SCALE

Quality Control by G.B.P.
Designed by Y.F.S.
Drawn by

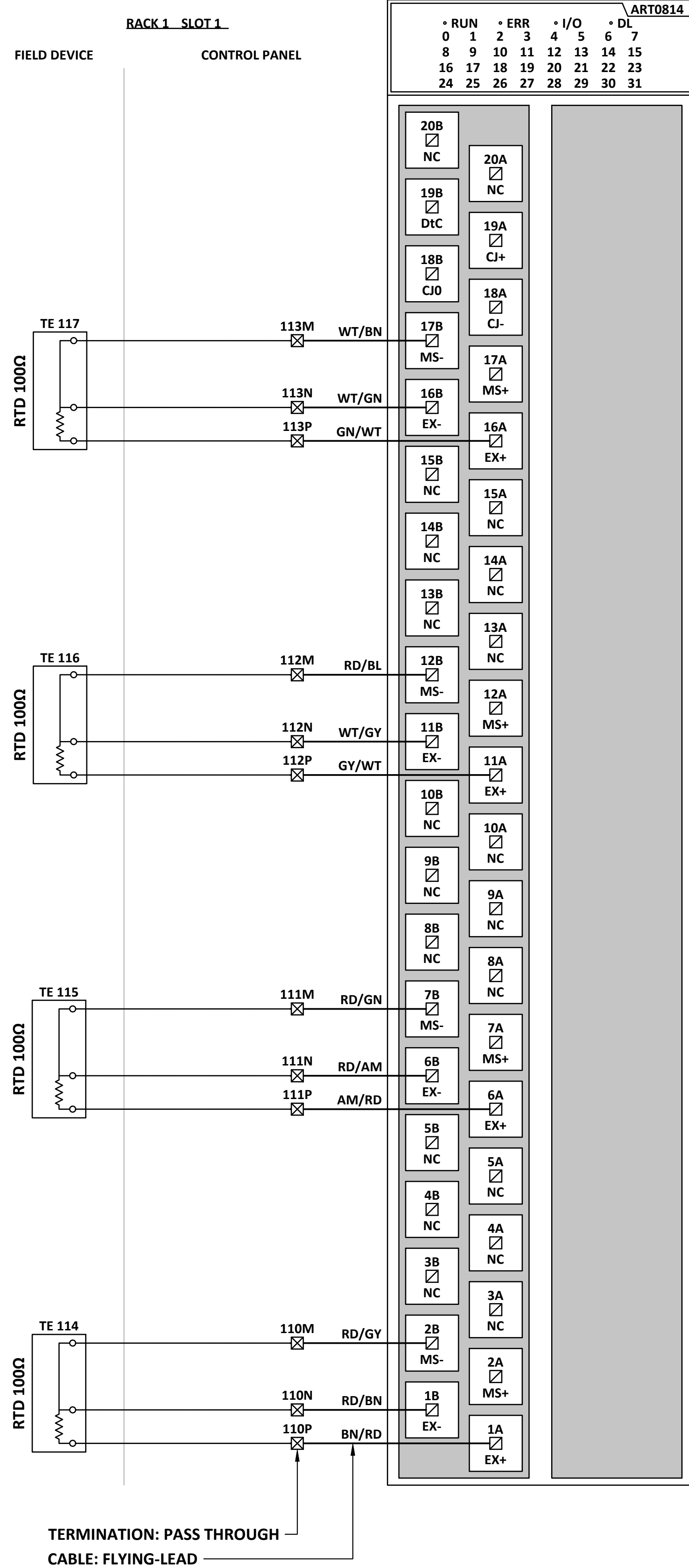
FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
ANALOG INPUT MODULE 6 AND 7

Sheet Number # of ##
Project Number
29121-005-12
Drawing Number Revision
FORWP-02-E-WD-007 A

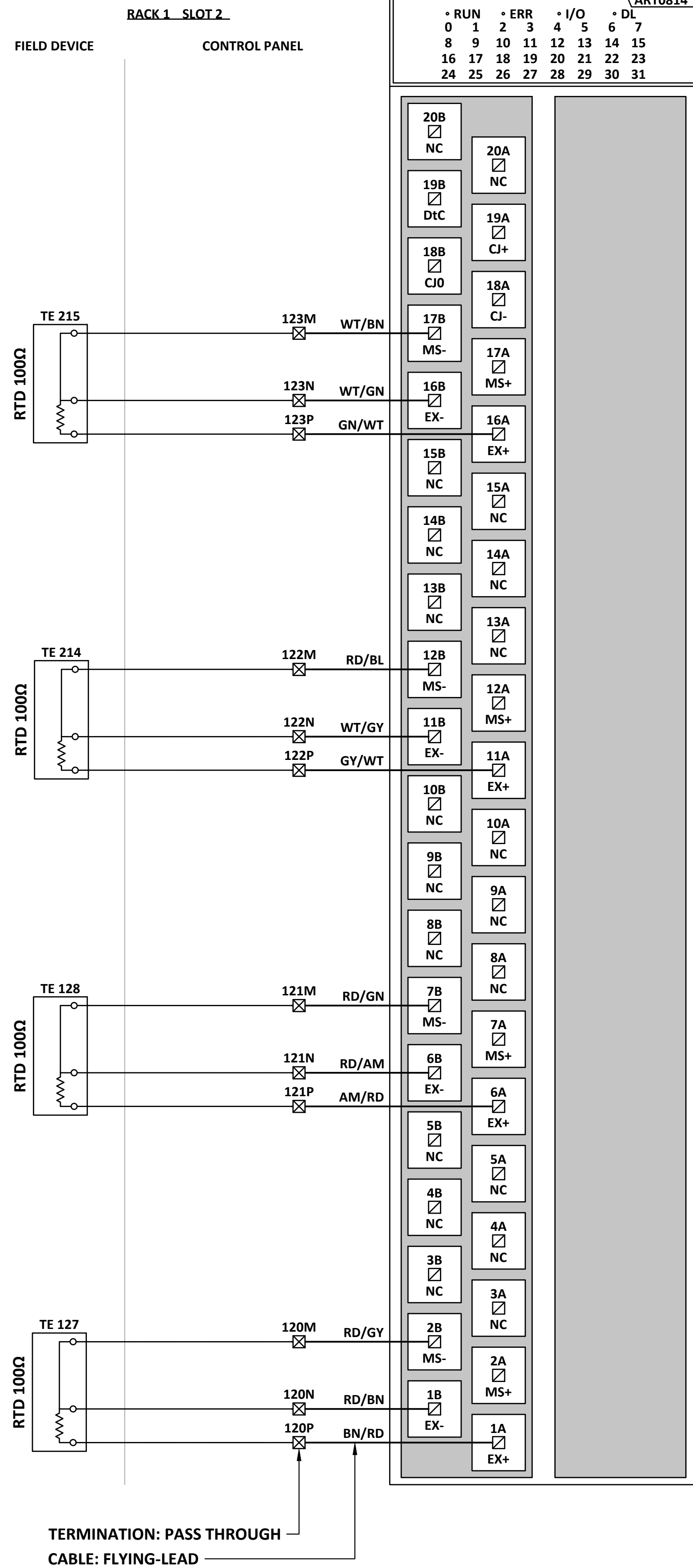
E3.13

NOT FOR CONSTRUCTION

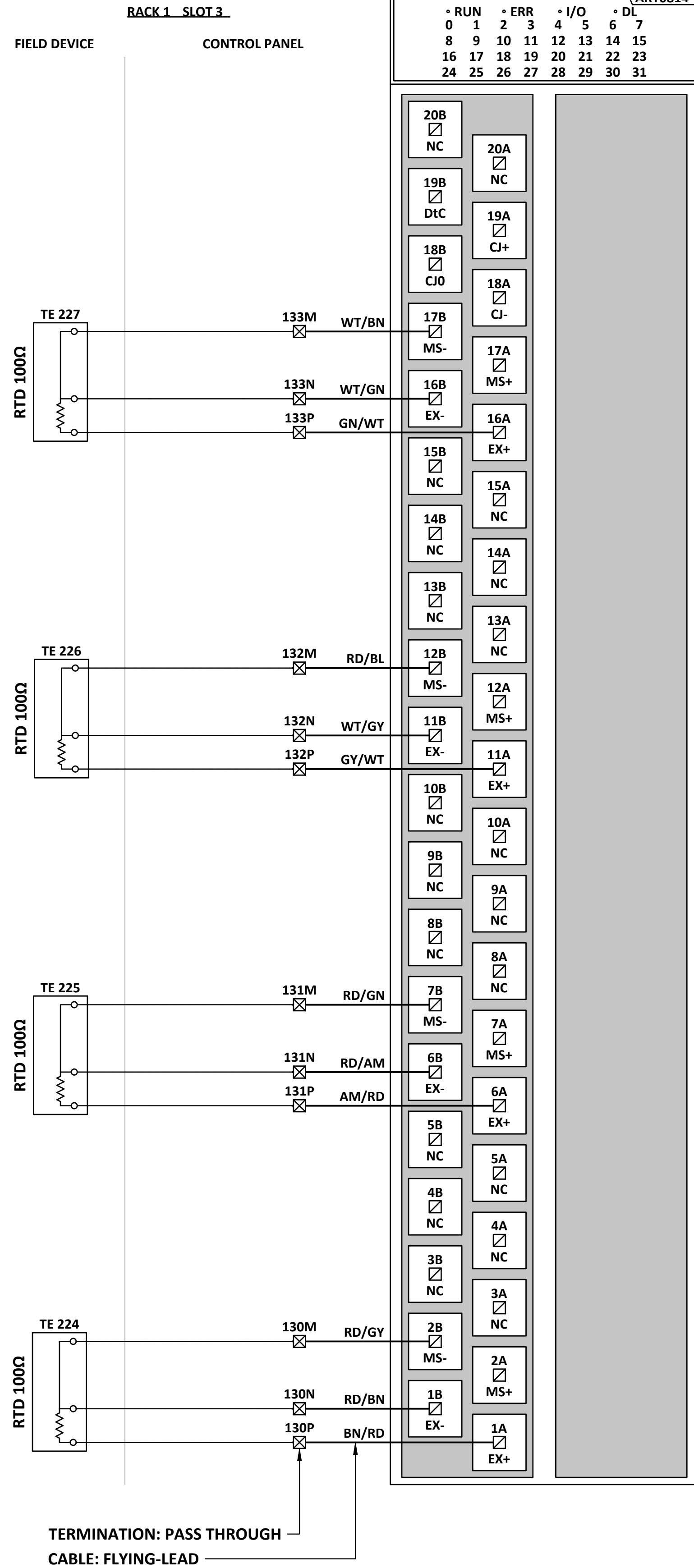
M:\N-Data\2011\21 urban systems\td005-12 task 7 - raw midline pump station design\AutoDesk\ACADE3.14 - FORWP-02-E-WD-008 ANALOG INPUT MODULE 8.dwg, FORWP-02-E-WD-008, 2024/11/20 05:21 pm ysheng



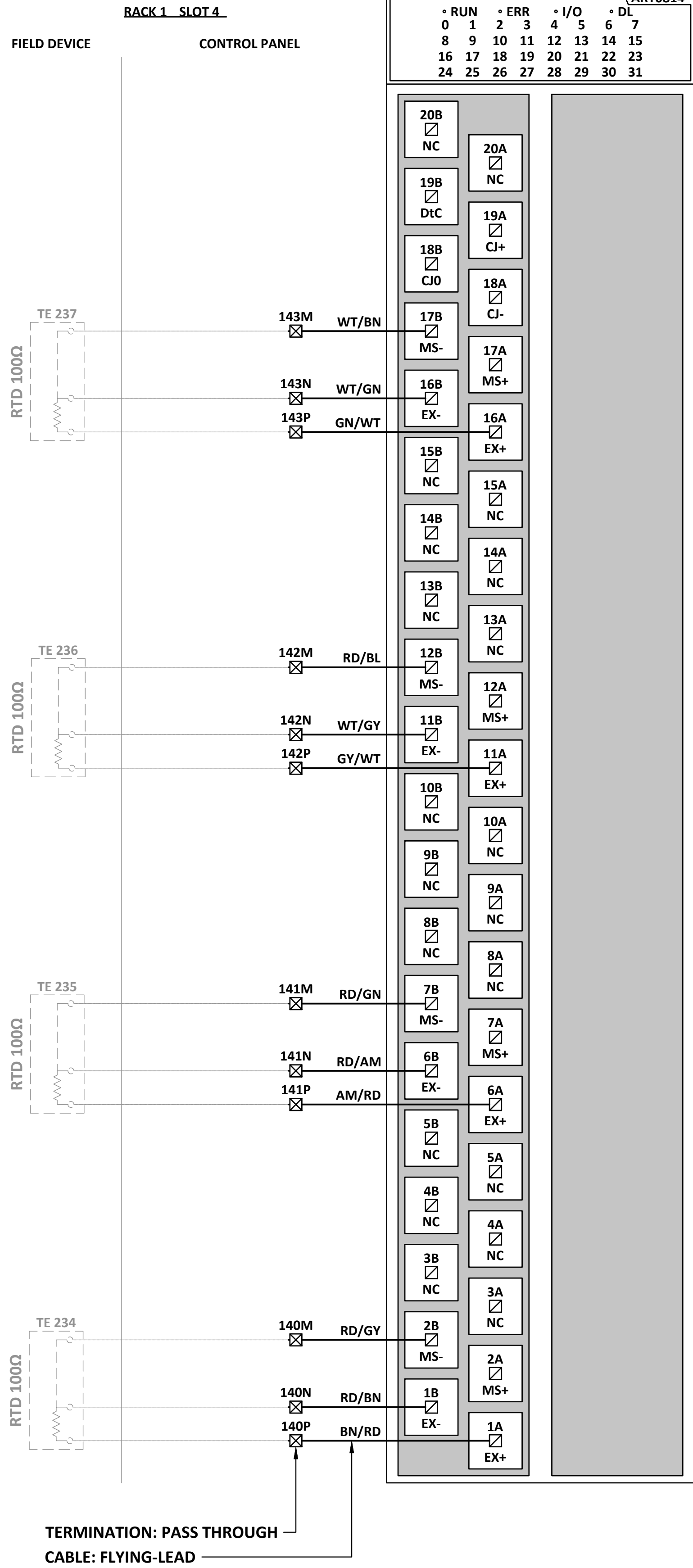
M:\N-Data\29121\urban systems\td005-12 task 7 - raw midline pump station design\AutoDesk\ACADE3.15 - FORWP-02-E-WD-009 ANALOG INPUT MODULE 9.dwg, FORWP-02-E-WD-009, 2024/11/29 03:15 pm ysheng



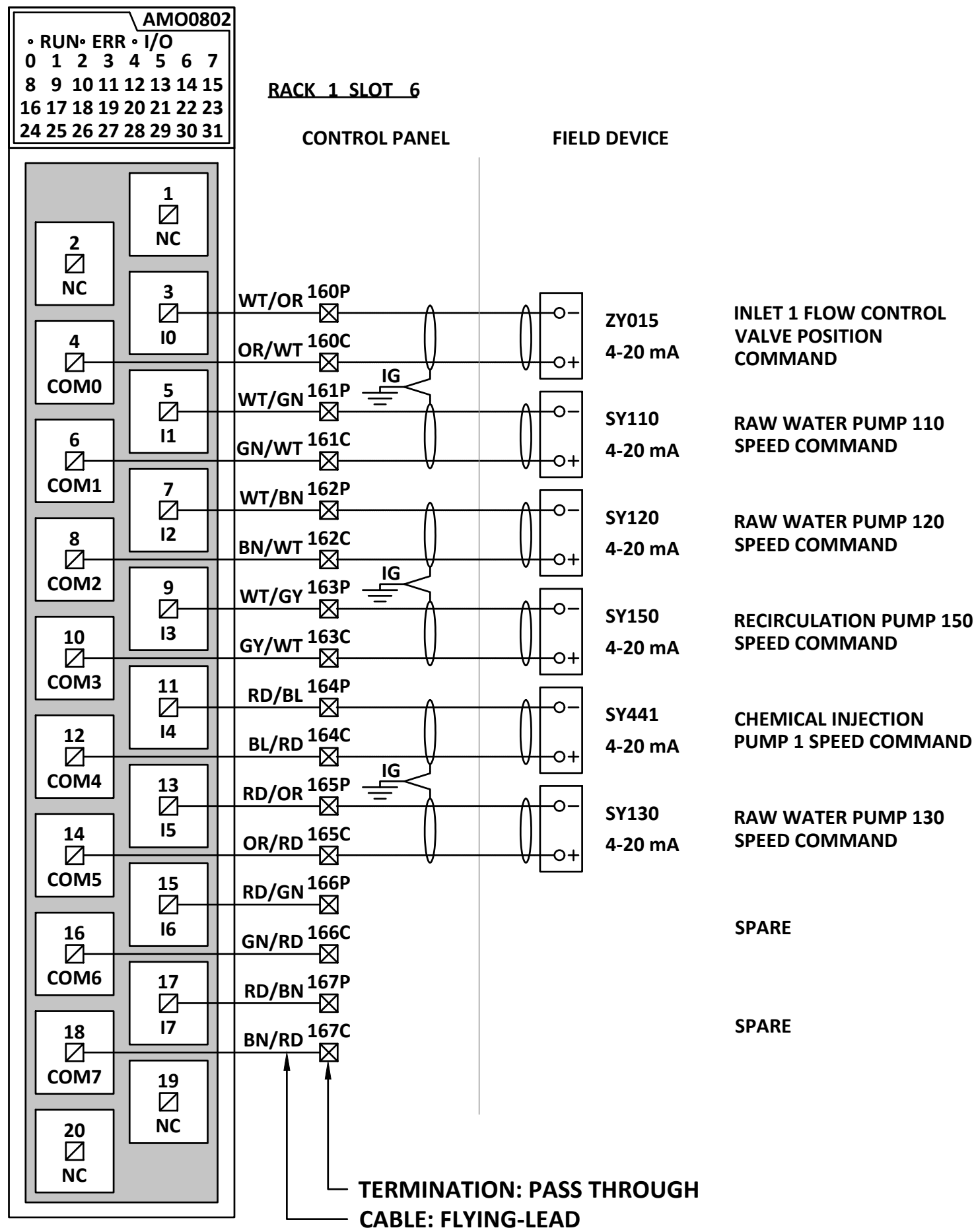
M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE3 16 - FORWP-02-E-WD-010 ANALOG INPUT MODULE 10.dwg, FORWP-02-E-WD-010, 2024/11/29 03:17 pm ysheng



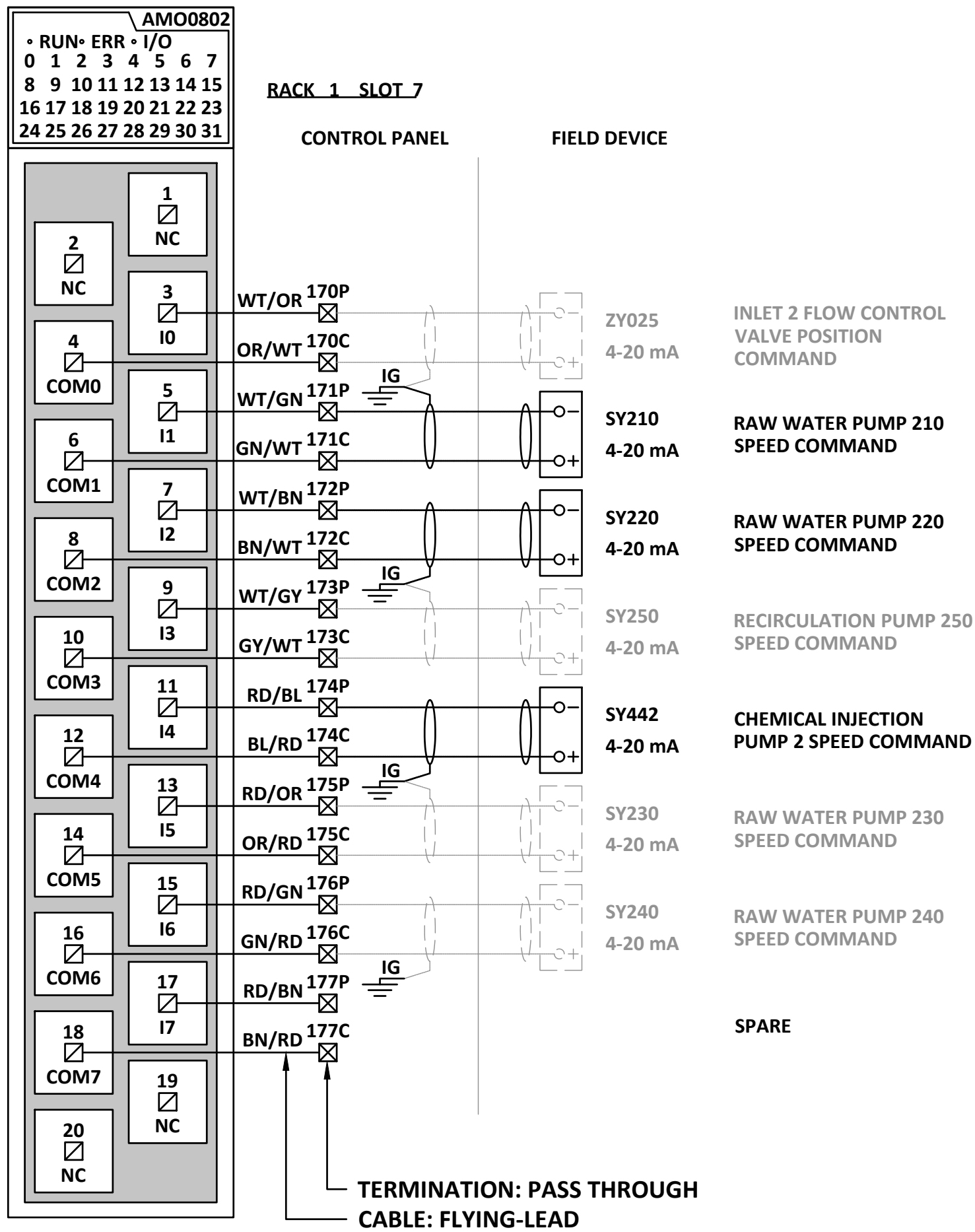
M:\N-Data\2011\21 urban systems\ltd005-12 task 7 - low midline pump station design\AutoDesk\ACADE\17 - FORWP-02-E-WD-011 ANALOG INPUT MODULE 11.dwg, FORWP-02-E-WD-011, 2024/11/29 03:21 pm ysheng



M:\N-Data\29121 urban systems\td005-12 task 7 - raw midline pump station design\AutoDesk\ACADE\18 - FORWP-02-E-WD-012 ANALOG OUTPUT MODULE 1 AND 2.dwg, FORWP-02-E-WD-012, 2024/11/29 03:21 pm ysheng



AO-01



AO-02

ATTENTION

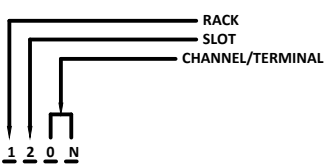
This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

NOTES:

- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND DRAWINGS.
- REFER TO BILL OF MATERIALS AND LABEL SCHEDULE DRAWING.
- REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR TERMINAL STRIP LOCATION.
- CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
- DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale

NOT TO SCALE

Quality Control by

Designed by

Drawn by

G.B.P.

Y.F.S.

FOOTHILLS OKOTOKS

MIDLINE PUMP STATION

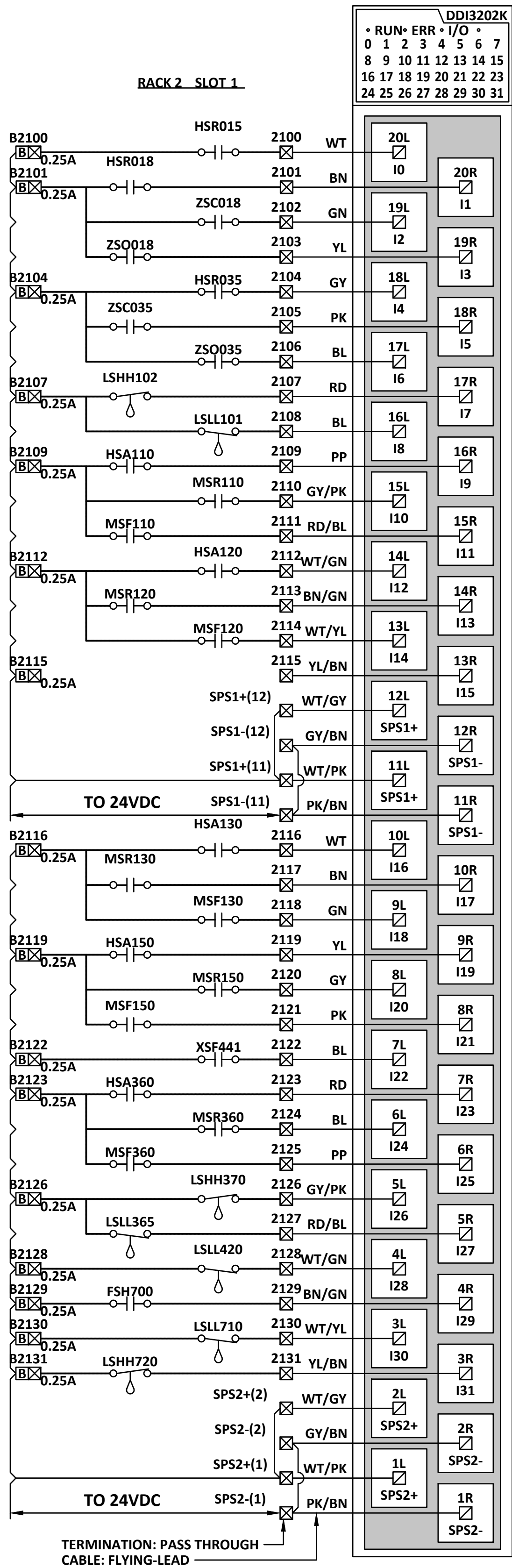
ANALOG OUTPUT MODULE 1 AND 2

Sheet Number	# of ##
29121-005-12	
Project Number	
Drawing Number	Revision
FORWP-02-E-WD-012	A

E3.18

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\td005-12 task 7 - forw midline pump station design\AutoDesk\ACADE\3-19 - FORWP-02-E-WD-013 DIGITAL INPUT MODULE 1 AND 2.dwg, FORWP-02-E-WD-013, 2024/11/29 03:15 pm ysheng



DI-01

INLET 1 FLOW CONTROL VALVE REMOTE

INLET 1 TO RESERVOIR R1 VALVE REMOTE

INLET 1 TO RESERVOIR R1 VALVE CLOSED STATUS

INLET 1 TO RESERVOIR R1 VALVE OPENED STATUS

INLET 1 TO WET WELL 1 VALVE REMOTE

INLET 1 TO WET WELL 1 VALVE CLOSED STATUS

INLET 1 TO WET WELL 1 VALVE OPENED STATUS

WET WELL 1 LEVEL HIGH HIGH

WET WELL 1 LEVEL LOW LOW

RAW WATER PUMP 110 AUTO STATUS

RAW WATER PUMP 110 RUN STATUS

RAW WATER PUMP 110 FAULT

RAW WATER PUMP 120 AUTO STATUS

RAW WATER PUMP 120 RUN STATUS

RAW WATER PUMP 120 FAULT

SPARE

RAW WATER PUMP 130 AUTO STATUS

RAW WATER PUMP 130 RUN STATUS

RAW WATER PUMP 130 FAULT

RECIRCULATION PUMP 150 AUTO STATUS

RECIRCULATION PUMP 150 RUN STATUS

RECIRCULATION PUMP 150 FAULT

CHEMICAL INJECTION PUMP 1 FAULT

SUMP PUMP 360 AUTO STATUS

SUMP PUMP 360 RUN STATUS

SUMP PUMP 360 FAULT

SUMP PUMP MANHOLE LEVEL HIGH HIGH

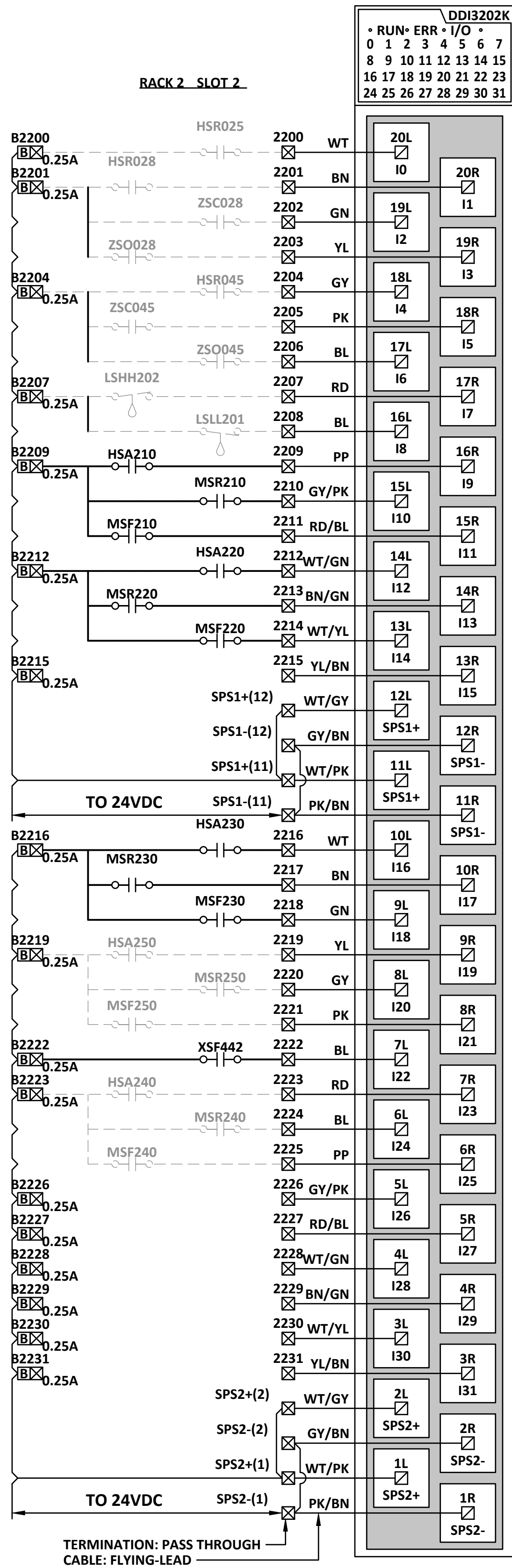
SUMP PUMP MANHOLE LEVEL LOW LOW

CHEMICAL STORAGE TANK LEVEL LOW LOW

EMERGENCY SHOWER IN USE

POTABLE WATER LEVEL LOW LOW

SEPTIC TANK LEVEL HIGH HIGH



DI-02

INLET 2 FLOW CONTROL VALVE REMOTE

INLET 2 TO RESERVOIR R2 VALVE REMOTE

INLET 2 TO RESERVOIR R2 VALVE CLOSED STATUS

INLET 2 TO RESERVOIR R2 VALVE OPENED STATUS

INLET 2 TO WET WELL 2 VALVE REMOTE

INLET 2 TO WET WELL 2 VALVE CLOSED STATUS

INLET 2 TO WET WELL 2 VALVE OPENED STATUS

WET WELL 2 LEVEL HIGH HIGH

WET WELL 2 LEVEL LOW LOW

RAW WATER PUMP 210 AUTO STATUS

RAW WATER PUMP 210 RUN STATUS

RAW WATER PUMP 210 FAULT

RAW WATER PUMP 220 AUTO STATUS

RAW WATER PUMP 220 RUN STATUS

RAW WATER PUMP 220 FAULT

SPARE

RAW WATER PUMP 230 AUTO STATUS

RAW WATER PUMP 230 RUN STATUS

RAW WATER PUMP 230 FAULT

RECIRCULATION PUMP 250 AUTO STATUS

RECIRCULATION PUMP 250 RUN STATUS

RECIRCULATION PUMP 250 FAULT

CHEMICAL INJECTION PUMP 1 FAULT

RAW WATER PUMP 240 AUTO STATUS

RAW WATER PUMP 240 RUN STATUS

RAW WATER PUMP 240 FAULT

SPARE

SPARE

SPARE

SPARE

SPARE

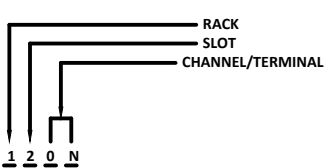
ATTENTION

This drawing is prepared for the sole use of TOWN OF OKOTOKS & FOOTHILLS COUNTY. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

- NOTES:**
- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND DRAWINGS.
 - REFER TO BILL OF MATERIALS AND LABEL SCHEDULE DRAWING.
 - REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR TERMINAL STRIP LOCATION.
 - CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 - DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-26	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
DIGITAL INPUT MODULE 1 AND 2

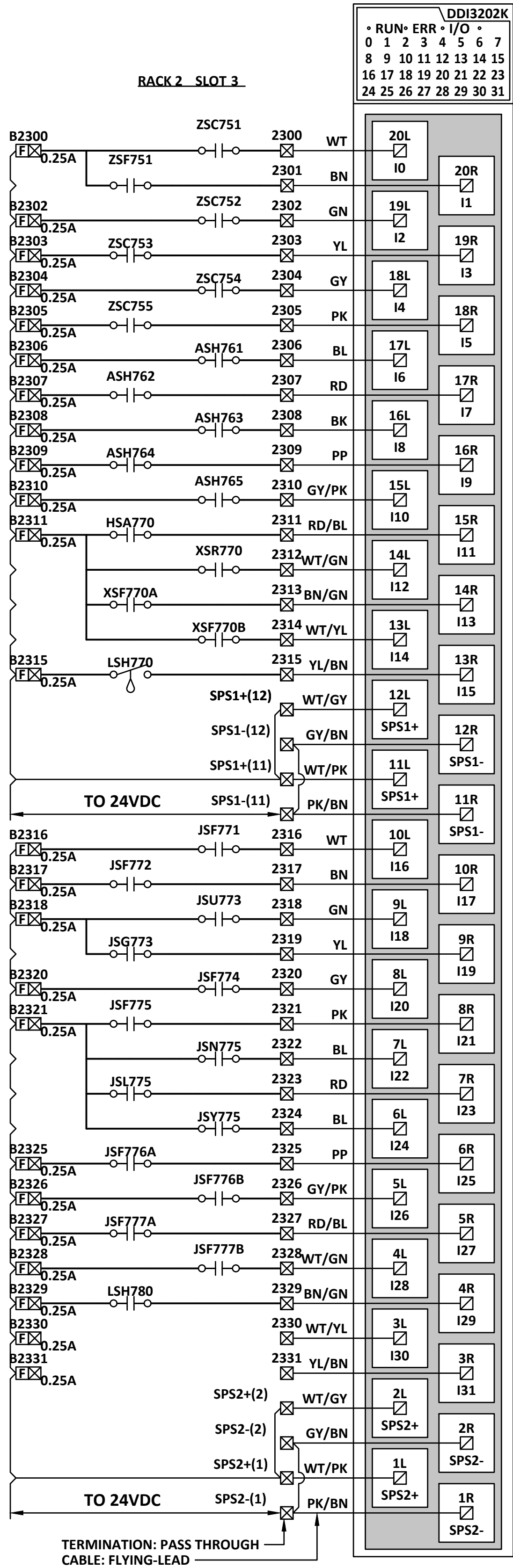
Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-WD-013

of ##
Revision
A

E3.19

NOT FOR CONSTRUCTION

M:\N-Data\2011\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACADE\IE3.20 - FORWP-02-E-WD-014 DIGITAL INPUT MODULE 3.dwg, FORWP-02-E-WD-014, 2024/11/29 03:21 pm ysheng



DI-03

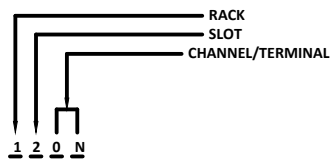
- GATE CLOSED STATUS
- GATE FAULT STATUS
- PUMP ROOM OVERHEAD DOOR CLOSED
- PUMP ROOM MAIN DOOR EAST CLOSED
- PUMP ROOM MAIN DOOR WEST CLOSED
- ELECTRIC ROOM MAIN DOOR CLOSED
- PUMP ROOM NORTHWEST FIRE DETECTED
- PUMP ROOM NORTHEAST FIRE DETECTED
- PUMP ROOM SOUTH FIRE DETECTED
- ELECTRICAL ROOM FIRE DETECTED
- WASH ROOM FIRE DETECTED
- GENERATOR AUTO STATUS
- GENERATOR RUNNING
- GENERATOR PRE ALARM
- GENERATOR FAULT
- GENERATOR FUEL TANK LEAK

- GENERATOR BATTERY CHARGER FAULT
- POWER QUALITY MONITOR FAULT
- TRANSFER SWITCH ON UTILITY
- TRANSFER SWITCH ON GENERATOR
- HARMONIC FILTER FAULT
- UPS FAULT
- UPS FEED NORMAL
- UPS LOW BATTERY
- UPS ON BYPASS
- 24VDC POWER SUPPLY A FAULT
- 24VDC POWER SUPPLY B FAULT
- 24VDC DISTRIBUTION BREAKER FAULT
- 24VDC DIGITAL INPUT BREAKER FAULT
- PUMP ROOM FLOOD DETECTED
- SPARE
- SPARE

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

- NOTES:**
- FOR INFORMATION REGARDING GENERAL NOTES,
ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND
DRAWINGS.
 - REFER TO BILL OF MATERIALS AND LABEL SCHEDULE
DRAWING.
 - REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR
TERMINAL STRIP LOCATION.
 - CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 - DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC
COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

G.B.P.
Y.F.S.

**FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
DIGITAL INPUT MODULE 3**

Sheet Number
Project Number
29121-005-12
Drawing Number
FORWP-02-E-WD-014

of ##
Revision
A

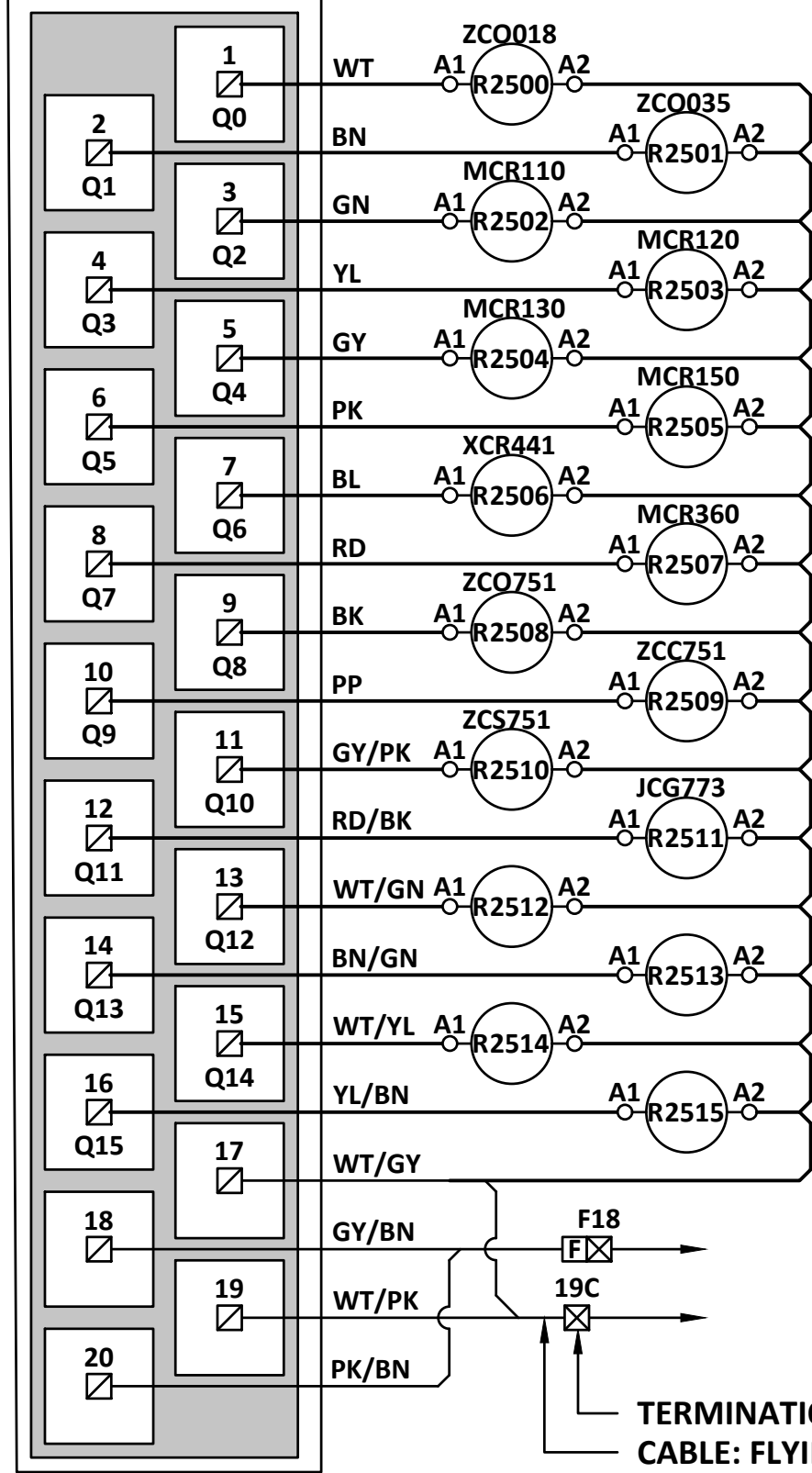
E3.20

NOT FOR CONSTRUCTION

M:\N-Data\29121\21 urban systems\td005-12 task 7 - few midline pump station design\AutoDesk\ACADE\21 - FORWP-02-E-WD-015 DIGITAL OUTPUT MODULE 1 AND 2.dwg, FORWP-02-E-WD-015, 2024/11/29 03:21 pm ysteng

DDO1602															
• RUN • ERR • INT •															
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

RACK2_SLOT 5.

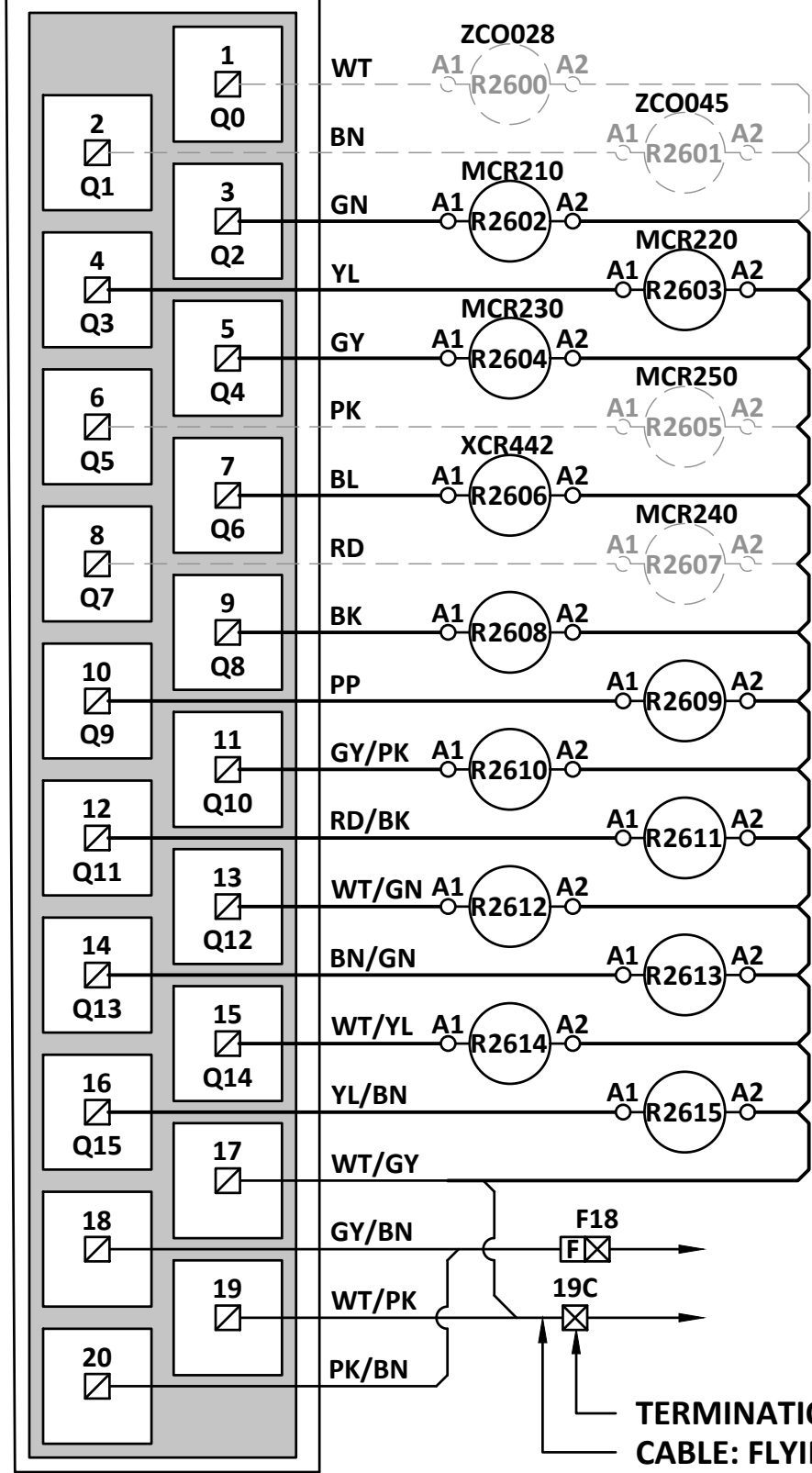


TERMINATION: PASS THROUGH
CABLE: FLYING-TEAR

DO-01

DDO1602															
• RUN • ERR • INT •															
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

RACK2_SLOT 6.



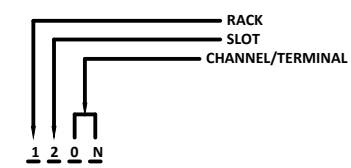
TERMINATION: PASS THROUGH
CABLE: FLYING-TEAR

DO-02

ATTENTION
This drawing is prepared for the sole use of
TOWN OF OKOTOKS & FOOTHILLS COUNTY
No representations of any kind are made by Urban
Systems Ltd. or its employees to any party with
whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were
compiled from information supplied by various parties
and may not be complete or accurate. Expose and
conclusively confirm the location in the field all
underground utilities and structures indicated on this
drawing, all underground utilities in the area of the
proposed work and any utilities or structures
reasonably apparent from an inspection of the
proposed work. Urban Systems Ltd. assumes no
responsibility for loss or damage caused by third
party negligence or failure to comply with the above.

- NOTES:
- FOR INFORMATION REGARDING GENERAL NOTES,
ABBREVIATIONS, AND SYMBOLS, REFER TO THE LEGEND
DRAWINGS.
 - REFER TO BILL OF MATERIALS AND LABEL SCHEDULE
DRAWING.
 - REFER TO CONTROL PANEL ENCLOSURE DRAWING FOR
TERMINAL STRIP LOCATION.
 - CIRCUIT BREAKERS 1AMP UNLESS NOTED OTHERWISE.
 - DEVICE IS THREE WIRE. INCLUDE CONNECTION TO 24VDC
COMMON.



Professional Seals

#	Date	Issue / Revision	App
A	24-11-06	ISSUED FOR 75% REVIEW	G.B.P.
B	24-11-29	ISSUED FOR DESIGN ASSIST RFP	G.B.P.



Scale
NOT TO SCALE

Quality Control by
Designed by
Drawn by

FOOTHILLS OKOTOKS
MIDLINE PUMP STATION
DIGITAL OUTPUT MODULE 1 AND 2

Sheet Number	# of ##
29121-005-12	
Drawing Number	Revision
FORWP-02-E-WD-015	A

E3.21

NOT FOR CONSTRUCTION