

**DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242**

ADDENDUM NO. 3 TO PROJECT NO. #46136

**CONSTRUCTION, HVAC, PLUMBING AND ELECTRICAL WORK
PROVIDE CLASSROOMS & OFFICE SPACE, 2nd FLOOR,
BUILDINGS 08, 10 AND 11
RESIDENTIAL REHABILITATION UNIT
UPSTATE CORRECTIONAL FACILITY
309 BARE HILL RD
MALONE, NY**

April 10,2020

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.
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ADDENDUM

1. Addendum 01 – GENERAL SPECIFICATIONS - Item No. 3:
 - A. Delete: “3.013119 PROJECT MEETINGS, 1.02 C”
 - B. Add: “013119 PROJECT MEETINGS, 1.02 C”

2. Addendum 01 – CONSTRUCTION SPECIFICATIONS - Item No. 3:
 - A. Delete:
 - “3. 015000 CONSTRUCTION FACILITIES & TEMPORARY CONTROLS
 - A. Page 012000 – 1, Add: “1.02.B. State Field Office: Section 015213.”

3. Addendum 01 – CONSTRUCTION SPECIFICATIONS - Item No. 6.B:
 - A. Delete:
 - “B. Page 111901 – 15, Article 2.03 C., Group F: Change Paragraph 7. to Read:
“Security Door Closer: 1 ea LCN 4514T TMS x SRI x AL.”.”

4. Addendum 01 – CONSTRUCTION SPECIFICATIONS - Item No. 6.D:
 - A. Delete:
 - “D. Page 111901 – 20. Article 2.05 A., Add the Following Paragraph:
 - “6. Control console unlocks knobs both sides on the Folger Adam D9349 series (classroom entry doors and some stairwells). The knob, either side, must then be turned to retract the latch bolt.””

PLUMBING SPECIFICATIONS

5. 221343 SEWAGE PUMPING STATION
 - A. Delete Section 221343 in its entirety. Replace with the updated Section 221343 that accompanies this addendum.

ELECTRICAL SPECIFICATIONS

6. 000110 TABLE OF CONTENTS
 - A. Page 011000 – 3; DIVISION 26 – ELECTRICAL, Add: “263354.1 UNINTERRUPTIBLE POWER SUPPLY SYSTEM – DETENTION EQUIPMENT”
7. 263354.1 UNINTERRUPTIBLE POWER SUPPLY SYSTEM – DETENTION EQUIPMENT
 - A. Add Section 263354.1 in its entirety that accompanies this addendum.

HVAC DRAWINGS

8. Add Drawing:
 - A. Drawing No. AD 03.01 which accompanies this Addendum and forms part of the Contract Documents.

PLUMBING WORK DRAWINGS

9. Detail No. 4 / P-601:
 - A. Basis of Design – Vinylflow Lay Flat Discharge Hose.

ELECTRICAL WORK DRAWINGS

10. Drawing No. E-101:
 - B. B – Wing & C – Wing Conduit / Box Relocation Scope Notes, add the following to Note 5:

“Cable splicing of radio conductors and coaxial cables shall only be permitted where appropriate assurance can be provided that no signal degradation will occur. If that assurance cannot be made, then the cables shall be replaced entirely from point to point. Splicing of lighting / power circuits is permitted. Splices shall be insulated type splices (ILSCO or equal / similar) and shall be placed within boxes, as per NEC criteria.”

11. Drawing No. E-503:

C. General Sheet Notes, Revise Note 2, 3rd Bullet Point to read as follows:

“Cable splicing of radio conductors and coaxial cables shall only be permitted where appropriate assurance can be provided that no signal degradation will occur. If that assurance cannot be made, then the cables shall be replaced entirely from point to point. Splicing of lighting/power circuits is permitted. Splices shall be insulated type splices (ILSCO or equal/similar) and shall be placed within boxes, as per NEC criteria. Termination blocks are existing within each distribution box and within the distribution head end rack. Utilize these terminal blocks to land new cables.”

END OF ADDENDUM

Erik T. Deyoe, P.E.
Director, Division of Design
Design & Construction

SECTION 221343

SEWAGE PUMPING STATION

PART 1 GENERAL

1.01 DEFINITIONS

- A. Company Field Advisor: An employee of the Company which lists and markets the primary components of the system under their name who is certified in writing by the Company to be technically qualified in design, installation and servicing of the required products or an employee of an organization certified by the foregoing Company to be technically qualified in design, installation and servicing of the required products.

1.02 SYSTEM DESCRIPTION

- A. A completely operational sewage pumping station including pumps, motor controllers, piping, plastic and metal fabrications, valves, painting, etc for the collection and transfer of raw domestic sanitary wastewater.

1.03 SUBMITTALS

- A. Product Data: Catalog sheets, specifications.
 - 1. Pumps:
 - a. Dimensions.
 - b. Illustration/description of construction.
 - c. Hydraulic performance curve.
 - 2. Pump controls.
 - 3. Pressure gages.
- B. Shop Drawings:
 - 1. Motor Controller Electric Schematic Wiring Diagrams:
 - a. Furnish schematic control wiring diagrams for the motor controllers for the 2 pumps.
 - b. Show control of equipment action, its sequence of operation.
 - c. The control wiring diagrams shall be specifically prepared for this contract and reprinted copies of catalog wiring diagrams, modified for this contract, or wiring diagrams previously prepared for other customers, will be rejected and returned as not approved.
- C. Quality Control Submittals:
 - 1. Company Field Advisor Data:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company, listed specifically for this project.

2. Test Reports, Pump Test Curves:
 - a. In addition to the catalog curves, furnish pump curves, for tests conducted in compliance with the standards of the Hydraulic Institute and performed at the pump manufacturer's plant.
 - b. Furnish tests for the 2 pumps.
 - c. Furnish curves for tests performed on the actual assembled pumps to be furnished. Curves derived from tests made on models, at reduced speeds, or equal pumps fabricated for others at a previous date will be rejected and returned as not approved.
 - d. Submit tabulated test data results together with the graphic performance curves for each pump. Present curves, in English Units, for total dynamic head, efficiency, and horsepower as functions of discharge rate.
 - e. Furnish curves from tests that are witnessed, dated, and certified correct by the Company Field Advisor.

1.04 QUALITY ASSURANCE

- A. Company Field Advisor: Secure the services of a Company Field Advisor for the equipment for a minimum of 8 working hours. Delays that are due to faulty installation and wiring that unreasonably extends that service visit shall not be included as part of the 8 working hours.
 1. The Field Advisor shall check equipment for installation, wiring, and operation.

1.05 MAINTENANCE

- A. Manuals: Provide maintenance manuals bound within soft covers for each item of equipment furnished for the pumping station. Identify the equipment on the front covers and present in triplicate to the Director's Representative.
- B. Spare Parts: Deliver the following materials to the Director's Representative in unopened containers, correctly identified and with their factory labels attached.
 1. Pumps: Furnish 2 spare cutter knives, and 2 spare sets (one set for each pump) of mechanical seals for the sewage pumps equal in quality to the original seals provided for the pumps.
- C. Lubrication Charts:
 1. Furnish one set of lubrication charts sealed in rigid laminated plastic and framed for wall mounting. Mount charts at the pump location in the Station Pump Room.
 2. Furnish a second set of lubrication charts to the Director's Representative inside protective plastic sheets with preformed holes for binding.

PART 2 PRODUCTS

2.01 COMPANIES

- A. Pump:

1. Cutter Pumps and Sump Pump: Enpo-Cornell, 420 Third Street, Piqua, OH 45356.
 2. Liberty Pumps: 7000 Apple Tree Avenue, Bergen NY 14416
- B. Motor Controllers:
1. Klockner-Moeller, Natick, MA.
 2. Wincom Corp., Lawrence, MA.
- C. Pressure Gages and Appurtenances: ACCO Helicoid Gage, 118 Railroad Hill Street, Waterbury, CT 06708.
- D. Electrical Quick-Disconnect Couplings: Cam-Lok Empire Products, Inc., 10540 Chester Road, Cincinnati, OH 45215.

2.02 PUMPS

- A. Cutter-type Pumps; 2 required, Liberty Pump Model LSG203:
1. Completely submersible.
 2. Capable of self-comminuting unscreened sewage.
 3. Capacity - 50 gpm minimum at T.D.H.
 4. T.D.H. - 40 feet water.
 5. Motor size - 2 hp.
 6. Electric power service - 208 V, 60 hz, 3 phase.
 7. Pump Construction:
 - a. Heavy duty cast iron casing, impeller, and motor housing.
 - b. Tungsten carbide edged cutter cone and tungsten carbide tipped adjustable cutter knife.
 - c. Heavy cast iron weight, secured to impeller top, for flywheel cutting action.
 - d. Iron fitted pump.
 - e. Sliding "breakway" discharge connections for removal of pumps without disturbance of discharge piping.
 8. Motor Construction:
 - a. National Electrical Code Class 1, Division 1 (explosion-proof) rated service; UL listed for Class 1, Group C and D in air or submersible in sewage.
 - b. Thermal overload protection with automatic reset.
 - d. Bronze or stainless steel hardware.
 - e. Minimum bearing life rated for 17,500 hours.
 - f. Oil-filled motor.
 - g. Single stainless steel shaft for pump impeller and motor rotor.
 - h. Double mechanical motor seals plus moisture sensing probes for detection of water infiltration into motor.
 9. Appurtenances:
 - a. Cast iron discharge base elbows with standard ANSI Class 125 discharge flanges, mounting sockets for a two-pipe pump guide rail, and mating flanges for sliding "breakway" connection with pumps.
 - b. Schedule 80, 1-1/2 inch diameter, Type 304, stainless steel pipe guide rails.

- c. Guide rail terminal caps.
- d. Stainless steel pump lift chains rated for 2,000 lbs strength.
- 10. Electric quick disconnect couplings:
 - a. Cam-Lok miniature style Portia-change couplings.
 - b. In-line male/female connectors.
 - c. Connectors sealed with its respective sheathed cable against a totally wet environment.
 - d. Sized to match pump manufacturer's power/signal cable.
 - e. Dummy plugs for each electric cable.

2.03 PUMP CONTROLS

- A. Sewage Pumps:
 - 1. Consolidated Electric Company Model 9G mercury switches sealed within 5 inch stainless steel ball floats.
 - 2. Pilot duty service.
 - 3. Four switches required.
 - 4. Furnish sufficient signal cable to reach electric motor controller in the Mechanical Room without intermediate splices.

2.04 MOTOR CONTROLLERS

- A. Pumps:
 - 1. Double duplex-type in NEMA 1 enclosure for automatic operation and control of each pump.
 - 2. Circuit breaker type disconnects.
 - a. Separate circuit breaker for each motor and control circuit.
 - 3. H.O.A. switches.
 - 4. Transformer for 120 volt, single phase, control circuit service and for intrinsically safe circuits for the pump controls.
 - 5. Elapsed time meters for each cutter pump and metering pump.
 - 6. One set of Auxiliary dry contacts (N.O. & N.C.) for connection to Integrated Fire Alarm and Control System for annunciation of "High Water Level Alarm" condition.
 - 7. Set of dry contacts (N.O. & N.C.) for connection to the exterior red flashing light and audible alarm on the Sewage Pumping Station for annunciation of "High Water Level" condition.
 - 8. Protection of starters against overload, undervoltage, and single phasing condition.
 - 9. Relays for pump/motor seal leak sensors.
 - 10. Colored transformer-type incandescent light displays for pumps running, for pump seal failures, pump motor over temperature indication, and high level water alarm.
 - 11. Nameplate Identification:
 - a. Screw-attached engraved white-on-black phenolic plastic nameplates for each pump, switch, and indicator lamp, and one large nameplate identifying the SEWAGE PUMPS enclosure.
 - 12. Wire-markers for identification of wiring at both ends.
 - 13. Baked-on acrylic enamel paint finish of white color for the enclosure.

2.05 PRESSURE GAGES

- A. Pumps:
 - 1. Helicoid 400 Series.
 - 2. Zero to 60 feet water dial range.
 - 3. Black-on-white dial calibration with 5 feet majors and 1 feet minors.
 - 4. Construction:
 - a. Six inch dial diameter.
 - b. Flangeless, aluminum alloy, stainless steel snap ring, bottom mounted case.
 - c. Seamless, phosphor bronze Grade A bourdan tube actuator with capillary bleed gage.
 - d. Polished stainless steel helicoid movement (gear movement will not be approved), rigidized Teflon bearings, graphite Bakelite cam facing, and stainless steel hairspring internal movement.
 - e. Right-hand movement.
 - f. Brass gage connection with 1/4 inch male NPT.
 - g. Gage accuracy of one percent + 1/2 of the scale range.
 - 5. Diaphragm Seal Unit:
 - a. Helicoid 1654 HR Model.
 - b. Bronze housing material.
 - c. Teflon diaphragm material.
 - d. Glycerine and water filled.
 - e. Bleed screw to re-zero gage.
 - f. Connections: Top - 1/4 inch FNPT, Bottom - one inch NPT internal.
 - 6. Snubber:
 - a. Helicoid S-4 brass/stainless steel pressure snubber.
 - 7. Piping:
 - a. Schedule 160, Type 316 stainless steel nipples.

2.06 FERROUS FABRICATIONS

- A. Floor Grate: Neenah Model R-4441, Type A with matching Neenah Model R-4889 angle frame.
- B. Wet Well Baffles:
 - 1. Schedule 40 steel pipe cut into 2 halves.
 - 2. Steel Plate, ASTM A 36.
- C. Fasteners: Type 316 stainless steel.
- D. Expansion Shields: HILTI, Diamond, etc.

2.07 PLASTIC FABRICATIONS

- A. Flow Recorder Enclosure:
 - 1. Bonded or cemented acrylic sheeting.
 - 2. Rohm and Haas Plexiglas MC sheet.
 - 3. Transparent neutral grey color.

4. Provide plastic enclosure to match flow recorder furnished.

2.08 FLEXIBLE HOSE

- A. Flexible Hose
 1. Manufacturer Vinylflow Lay Flat Discharge Hose
 2. Flexible PVC/Vinyl
 3. Temperature range -5 deg F to 170 deg F

PART 3 EXECUTION

3.01 INSTALLATION

- A. Sewage Pumps
 1. Pipe-up the pumps using flange adapters and flexible connectors as indicated, to permit removal of the pumps from the Pump Pit space.
 2. Drill sewage piping and make connections with the pressure gage at the locations shown by the drawings.
- B. Sequence of Sewage Pump Operation:
 1. Rising Water Level in Wet Well:
 - a. Elevation 34": Lead pump "ON". After time delay, pump "ON". If proximity switch on inline check valve does not open, shut-down pump and turn on other pump and repeat same time delay process.
 - b. Elevation 40": Lag pump "ON". Two pumps are in operation.
 - c. Elevation 43": Alarm circuit for audio/visual alarm is energized, audio/visual alarm is "ON".
 2. Falling Water Level in Wet Well:
 - a. Elevation 40": Alarm circuit for audio/visual alarm is de-energized, audio/visual "OFF", Lag pump "OFF".
 - b. Elevation 13": Pumps "OFF" together. Alternate pump indexed for start-up on next pump cycle.

3.02 FIELD QUALITY CONTROL

- A. Test Preparation:
 1. Notify the Director's Representative at least 3 working days prior to testing so arrangements can be made to witness the test. All tests shall be witnessed by the Director's Representative.
 2. Obtain the services of the Company Field Advisor for the equipment prior to or during the testing of the sewage pumps.
 3. Clean construction debris from pumping station wet well before adding water for testing. Obtain verification from the Director's Representative that the wet well is clean.
 4. Obtain water for testing sewage pump from the Facility water distribution system. Provide all necessary materials and equipment for obtaining water.

5. Provide all equipment and materials required to discharge water to nearby drainage course.
- B. Testing Sewage Pumps and Air Blowers:
 1. Individually put each Sewage Pump into automatic mode of operation and run the pump, by use of float switch control.

3.03 CLEANING

- A. Clean all room areas of construction debris, papers, dirt, etc. Leave the spaces broom clean.

END OF SECTION

SECTION 263354.1

UNINTERRUPTIBLE POWER SUPPLY SYSTEM – DETENTION EQUIPMENT

PART 1 GENERAL

1.01 SYSTEM DESCRIPTION

- A. The uninterruptible power supply shall provide continuous high quality regulated sine wave power to the control consoles and solenoid operated deadlatches indicated on drawings.

1.02 SUBMITTALS

- A. Waiver of Submittals: This “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.
- C. Shop Drawings:
 - 1. Wiring and/or schematic diagram of the complete system as proposed to be installed (standard diagrams will not be accepted).
- D. Product Data:
 - 1. Catalog sheets, specifications and installation instructions.
 - 2. Company’s data indicating volt-amp rating with proof that the unit will meet the final system test.
 - 3. Name, address and telephone number of nearest fully equipped service organization.
- E. Quality Control Submittals:
 - 1. Battery Purchase Data: Statement indicating proposed date for battery purchase and installation.
 - 2. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company, listed specifically for this project.
- F. Contract Closeout Submittals:
 - 1. Test Report: System acceptance test report.
 - 2. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.
 - 3. Battery Manufacture Certified Date: Upon battery purchase, submit certified data from the battery manufacturer indicating date batteries were manufactured.

4. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

1.03 QUALITY ASSURANCE

- A. Equipment Qualifications For Products Other Than Those Specified:
 1. At the time of submission provide written notice to the Director of the intent to propose an "or equal" for products other than those specified. Make the "or equal" submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
 - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
 - b. Only references from the actual owner or owner's representative (Security Supervisor, Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others, who are not the actual owners of the proposed products, are not acceptable.
 - 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
 - a. Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
 4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.
- B. Source Quality Control: The company producing the system shall have test facilities available which can demonstrate that the proposed system meet contract requirements.
- C. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 24 working hours for the following:
 1. Render advice regarding installation and final adjustment of the system.

2. Verify that batteries are properly matched to units.
 3. Witness final system test and then certify with a sworn affidavit that the system is installed in accordance with the contract documents and is operating properly.
 4. Train facility personnel on the operation and maintenance of the system (minimum of three 2 hour sessions).
 5. Explain available service programs to facility supervisory personnel for their consideration.
- D. Service Availability: A fully equipped service organization capable of guaranteeing response time within 24 hours to service calls shall be available to service the completed Work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Do not purchase batteries more than 60 days before completion date, just prior to final system test.
- B. Batteries shall not have been in an active state prior to purchase. Shelf life shall not exceed battery manufacturers recommendations.

1.05 PROJECT CONDITIONS

- A. The uninterruptible power supply shall meet all requirements at the following ambient temperatures (actual site conditions):
 1. Maximum ambient temperature: 37.8 degrees C.
 2. Minimum ambient temperature: 4.4 degrees C.

1.06 MAINTENANCE

- A. Spare Parts:
 1. Hydrometer for testing batteries.
 2. Syringe.
 3. Thermometer for battery temperature.
 4. Set of connector bolt wrenches.
 5. Set of cell numbers for mounting on rack.
 6. Anti-corrosion compound for battery connections.
 7. 50 percent spare of each type fuse.

PART 2 PRODUCTS

2.01 UNINTERRUPTIBLE POWER SUPPLY

- A. Eaton Corporation Powerware 9155 UPS with two(2) EBM96 battery packs and external maintenance bypass, having:
 1. 10 KVA output minimum.
 2. 208 VAC, single phase, 60 Hz input voltage.
 3. 208 VAC, single phase, 60 Hz output voltage.
 4. AC load circuit breaker.
 5. Sealed lead calcium batteries (20 year warranty) of capacity to supply and maintain system at full rated load for 120 minutes minimum.

6. Utility failure alarm.

2.03 REMOTE ALARM PANEL

- A. Surface mounted.
- B. Common audible alarm with silencing switch and ringback feature.
- C. Common trouble indicating lamp.
- D. Lamp, switches labeled with engraved phenolic nameplates.

PART 3 EXECUTION

3.01 INSTALLATION

- A. General: Install uninterruptible power supply complete and ready for service.
- B. Identification:
 1. Stencil on front of unit with white paint in 1 inch high lettering "UNINTERRUPTIBLE POWER SUPPLY".
 2. Label function of each branch circuit.

3.02 FIELD QUALITY CONTROL

- A. Preliminary System Test:
 1. Preparation: Have the Company Field Advisor adjust the completed system and then operate it long enough to assure that it is performing properly.
 2. Run a preliminary test for the purpose of:
 - a. Determining whether the system is in a suitable condition to conduct an acceptance test.
 - b. Checking and adjusting equipment.
 - c. Training facility personnel.
- B. System Acceptance Test:
 1. Preparation: Notify the Director's Representative at least three working days prior to the test so arrangements can be made to have a Facility Representative witness the test.
 2. Make the following tests:
 - a. Simulated utility power failure at full load to prove uninterrupted of load power supply.
 - b. Simulated UPS failure at full load to prove transfer to utility power upon malfunction of UPS (disconnect batteries with temporary disconnect switch or other methods to temporarily disable unit).
 - c. Full load test for 30 minutes to prove capacity of system (utility power source disconnected). Record battery voltage and current at start and end of period. Record AC output voltage at start and end of period. Battery cell voltage under full load at the end of 30 minutes shall not be less than 1.75V.

- d. Continue at full load beyond 30 minute period to automatic shutdown of inverter due to low battery voltage. Record battery voltage at shutdown and time interval beyond the 30 minute period to shutdown.
 - e. Reactive utility power source, recharge batteries and record time interval required to restore unit to full charge.
 - f. Connect unit to control consoles and simulate utility power failure to prove compatibility of UPS with the connected systems.
3. Supply an adjustable resistive load bank or other approved apparatus to load UPS to full rated load.
4. Supply all equipment necessary for system adjustment and testing.
5. Submit written report of test results signed by Company Field Advisor and the Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly adjacent to the UPS.

END OF SECTION

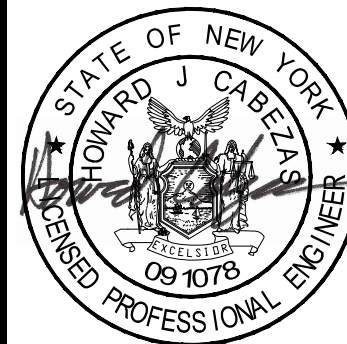
CONSULTANTS



Bernier, Carr & Associates,
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HVAC

PROVIDE CLASSROOM &
UPSTATE CORRECTIONAL FACILITY
BUILDING NO. 8, 10 & 11

UPSTATE CORRECTIONAL FACILITY
309 BARE HILL ROAD
MALONE, NY

DEPARTMENT OF CORRECTIONS
AND COMMUNITY SUPERVISION[illegible]

MARK	DATE	DESCRIPTION
PROJECT NUMBER:	46136- H	
DESIGNED BY:	HJC	
DRAWN BY:	HJC	
CHECKED BY:		
APPROVED BY:		

SHEET TITLE

ERU-1
INLINE
PUMP

AD 03.01

SHEET

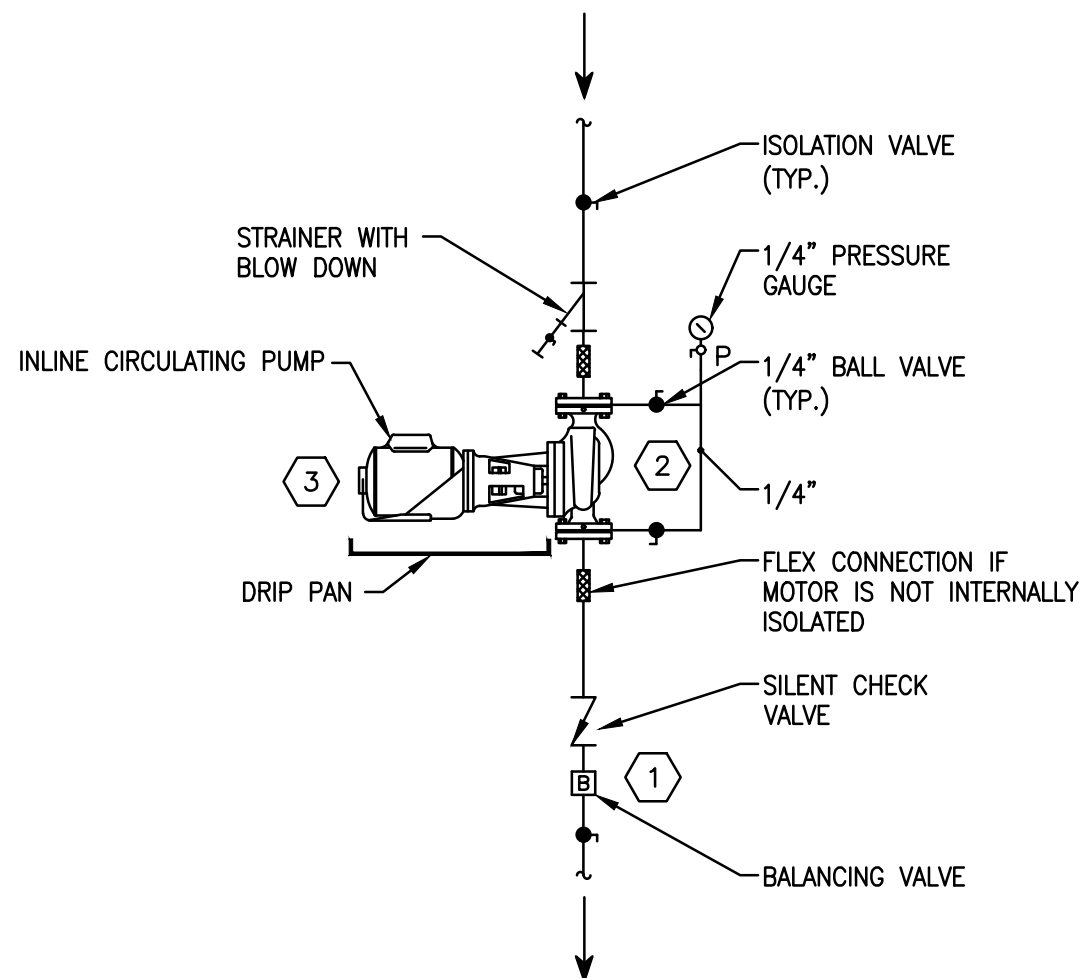
OF

PUMP SCHEDULE

PUMP SCHEDULE									
UNIT NO.	LOCATION	GPM	HEAD FEET	RPM	MOTOR HP	ELECTRIC		MAKE & MODEL NO.	NOTES
						VOLTS	PHASE		
P-1	ERU-1	28	20	1725	1/2	120	1	BELL AND GOSSETT E-90 1.25AAB	1, 2

NOTES

1. PROVIDE DISCONNECT.
2. PROVIDE (3) PUMPS ONE FOR BUILDING 8,10 AND 11



- 1 TRIPLE DUTY VALVES MAYBE USED IN LIEU OF
BALANCE VALVE AND CHECK VALVE
- 2 SUPPORT PUMP INDEPENDENT OF PIPING STATION
AND CHECK VALVE
- 3 SUPPORT PUMP MOTOR INDEPENDENT OF PUMP AND
PUMP SHAFT BEARING

NOTE:
GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S).
REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE.

ENTIRE ASSEMBLY SHOWN ON DRAWING AS 

1 INLINE CIRCULATION PUMP PIPING SCHEMATIC
N.T.S.