B R i
Beckett&Raeder

ADDENDUM NO. 2

PROJECT:	Dexter High School Twin Turf Fields Restroom Building
OWNER:	Dexter Community Schools
LANDSCAPE ARCHITECT/ ENGINEER:	Beckett & Raeder, Inc. 535 W. William, Suite 101 Ann Arbor, MI 48103
DATE:	October 14, 2025
BID DUE DATE:	October 20, 2025 – 1 p.m. (unchanged)

This Addendum is issued to inform Bidders of revisions to the Bidding Documents and to incorporate these changes into the Bidding Documents.

All requirements contained in the Bidding Documents shall apply to this Addendum and the general character of the work called for in the Addendum shall be the same as originally set forth in the applicable portions of the Bidding Documents for similar work unless otherwise specified under this Addendum.

The time of completion will not be affected in this Addendum.

This Addendum, as well as any previous Addendums, are hereby made a part of the Bidding Documents and shall be included in the Contract Documents.

On the Bid Form, the Contractor shall state all Addendum numbers in order to acknowledge receipt of the Addenda. The Contractor's base bid, alternate bids, and unit prices shall reflect this Addendum.

DRAWINGS:

1. C6.2 – Utility & Restoration Plan (re-issued)
   a. Clarified sanitary sewer structures and inverts.
2. C6.7 – Sanitary Plan & Profile (new issuance)
   a. Added sanitary sewer plan & profile for clarification of sewer structures and inverts.
3. E-004 – Electrical Site New Work Plan (re-issued)
   a. Clarified routing of feeder to RP-2.
4. E-501 – One Line Diagram, Panel Schedules, Electrical Details & Diagrams (re-issued)
   a. Clarified electrical feed to RP-2.
   b. Removed RP-1 panel schedule.

SPECIFICATIONS

1. 072100 – Thermal Insulation (re-issued)
   a. Specification was inadvertently issued with edit tracking visible. Specification is being re-issued to remove edit tracking.

2. 081116 – Aluminum Flush Doors (re-issued)
   a. Duplicate specification sections were previously issued. Please disregard both previously issued 081116 Aluminum Flush Doors specification sections and replace with the specification section issued with this Addendum 2.
3. 087100 – Door Hardware (re-issued)
   a. Duplicate specification sections were previously issued. Please disregard both previously issued 087100 Door Hardware specification sections and replace with the specification section issued with this Addendum 2.

BIDDER QUESTIONS:

Q: *Sheet E004 and sheet E501- One line diagram is indicating that we are to supply the new electrical panel (RP-2) with 150A three phase power from the existing panel RP-1. I have spoken with a supplier of our and they have indicated that Eaton does not provide a 150 three pole breaker for the existing panel (RP-1). The largest that they have is a 100A three pole. Either everything can be reduced to 100A, or we can find another source to feed the RR building. If there is any space available in the existing LP-A field lighting panel (480V three phase), this could be the source to a step-down transformer at the RR building. Please have this confirmed.*

A: Please refer to revised power feeds issued with this Addendum 2.

Q: *Sheet E-004- This has us installing a 3/4 " PVC conduit to a new camara pole. They say that the camara pole is provided by others. Are we to assume the camara pole cement base is provided by others as well? If we are to install the base can a detail be created?*

A: Please strike "(BY OTHERS)" from the Sheet E-004 plan note. The camera pole is within the project scope and is to be supplied and installed by the contractor. As described in Specification 323300 Site Furnishings, the camera pole is to be installed per manufacturer's standard details, including concrete foundation, anchor bolts, and conduits.

Q: *087100 Door Hardware --- There appear to be two differing spec sections for the door hardware. Can you please confirm what spec section we are to use?*

A: Please disregard both previously issued 087100 Door Hardware specification sections and replace with the specification section issued with this Addendum 2.

Q: *In the detail for the coiling shutter shown on 2/A-102, is the intent to have the door housing sit between the rafters on the top plate?*

A: The shutter coil housing sits on top of the double top plate as shown on 2/A-102. The rafters are located at the roof line and form the gable end. Coordinate with detail 9/A-102.

Q: *Upon review, we noticed that the sanitary structure schedule lists four structures, but only three appear to be shown on the drawings. Could you please confirm if there's any additional information or clarification available on this?*

A: Please refer to clarified sanitary sewer plan and profiles issued with this Addendum 2.

Q: *For the 2" telecommunication conduit to run to the boiler room, will this follow a similar path as the waterline, or is there a different route that is necessary?*

A: Yes, the conduit may follow parallel to the water line.

Q: *Division 10 - Please provide model number for baby changing station.*
A: Bradley MODEL 962-11 Surface Mounted Stainless Steel Baby Changing Station

Q: *Division 10 - Please provide model number for coat hooks.*
A: Bradley MODEL 9314 Satin Stainless Steel Towel Hook

Q: *Division 10 - The model of mirror specified has been discontinued, please provide alternative.*
A: Bradley MODEL 7805 Angle Frame Mirror with Shelf

Q: *Division 10 - Is a standard 1-1/25"OD grab bar acceptable?*
A: Bradley MODEL 812 Grab Bars 1 1/2" with Concealed Mounting

Q: *Brick/Block: Do the interior block walls receive paint? If not, are they to be burnished or match the exterior block type per 8/A-102?*
A: All interior CMU is to be painted. Refer to plans and specifications.

END OF ADDENDUM

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Extruded polystyrene foam-plastic board.
2. Glass-fiber blanket.
3. Mineral-wool blanket.
4. Mineral-wool board.
5. Spray-applied cellulosic insulation.

B. Related Requirements:

1. Section 042000 "Unit Masonry" for insulation installed in masonry cells.
2. Section 061600 "Sheathing" for foam-plastic board sheathing installed directly over wood or steel framing.
3. for insulated drainage panels installed with plaza deck insulation.
4. Section 075323 "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing" for insulation specified as part of roofing construction.
5. Section 092900 "Gypsum Board" for sound attenuation blanket used as acoustic insulation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each product, for tests performed by a qualified testing agency.

B. Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect foam-plastic board insulation as follows:

1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.1 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD

A. Extruded Polystyrene Board : ASTM C578, 25-psi minimum compressive strength; maximum flame-spread and smoke-developed indexes of 25 and 450, respectively, per ASTM E84.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. DiversiFoam Products.
b. Dow Chemical Company (The).Foamular 250
c. Owens Corning.

2.2 ACCESSORIES

A. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

B. Sealing Tape: JointSealR from Ownes Corning or similar from approved alternate manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.3 INSTALLATION OF WALL AND SLAB INSULATION

A. On vertical slab edge and foundation surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.

1. If not otherwise indicated, extend insulation full depth of foundation wall.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

1. If not otherwise indicated, extend insulation across entire floor from foundation wall to foundation wall.
2. Apply in a minimum of 2 layers. Stagger joints and tape seams of top layer.

C. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 08 11 16

ALUMINUM FLUSH DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Cross Aluminum Flush Doors.

B. Aluminum Door Fra

1.02 RELATED SECTIONS

A. Section 042000: Masonry (Frame Installation)

B. Section 079200: Joint Sealers

C. Section 087100: Door Hardware

1.03 REFERENCES

A. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM B 221 - Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

C. ASTM B 308 - Aluminum-Alloy 6061-T6 Standard Structural Profiles.

D. ASTM E 283 - Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

E. ASTM E 330 - Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

F. ASTM E 331 - Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

G. ASTM E 1886 – Standard Test Method for Performance of Exterior Windows, Curtain Walls, Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

H. ASTM E 1996 – Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

1.04 SYSTEM DESCRIPTION

A. System Performance Requirements:

1. Air infiltration: When tested in accordance with ASTM E 283, the air infiltration should not exceed .04 cfm per square foot of fixed area.

2. Water Penetration: No water will pass through the entry system when tested in accordance with ASTM E 331 at a pressure of 6.24.

3. Uniform Load Deflection: Entry system shall be tested in accordance with ASTM E 330: 3840 Pa or 80.0 psf positive and negative.

4. Uniform Load Structural: Entry system shall be tested in accordance with ASTM E 330: 5760 Pa or 120.0 psf positive and negative.

5. Missile Impact: Entry system will pass double impact from large missile; ASTM E 1886.

1.05 SUBMITTALS

A. General: Refer to Submittal Procedures – Per Owner's bidding requirements.

B. Product Data: Include manufacturer's product information, including material, elemental construction, fabrication, and finishes.

C. Shop Drawings: Include shop drawings relating to dimensions, fabrication, finish and installation.
   1. Drawings should include the following:
      a. Dimensions
      b. Elevations with necessary detail keys
      c. Entry system reinforcement
      d. Fabrication and Finish

D. Samples:
   1. Color: Provide manufacturer's samples of standard finishes.
   2. Door: Supply manufacturer's door sample presenting finish, interior insulation, and standard reinforcement components.

E. Test Results: Offer any required test results for particular jobs. Accredited test reports will be available upon request.

F. Manufacturer's Instructions: Provide all necessary instructions for installation including glazing, anchoring, reinforcement (if applicable), and optimum performance installation.

1.06 QUALITY ASSURANCE

A. Manufacturer's Qualifications:
   1. Manufacturing process with contemporary inspection using neoteric checklist for optimum field performance.
   2. Manufacturing same product specified for over 25 years.

B. Pre-Installation Meetings: Plan initial pre-installation meetings for job details and regional regulations.

1.07 DELIVERY, STORAGE, HANDLING

A. Packing: Finished products shall be packaged securely with appropriate labeling for protection and product identification visible on packaging.

B. Shipping and Handling: Deliver materials to site in original condition and packaging without any damage to packaging or materials.

C. Unloading: Individually packaged products to be unloaded by hand truck or 2-person team lift (or more if needed) to avoid unnecessary damage.

D. Storage and Protection:
   1. Store items indoors away from excessive amounts of moisture.
   2. Protect entry doors against damage from outdoor hazards and during the entire installation

E. Waste Management: Refer to contact information apparent on packaging for appropriate recycling opportunities.

1.08 WARRANTY

A. Warrant doors and frames to be free from defects and premature degradation of finish and door structure.

B. Warranty period will be ten years from the date of manufacture.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Cross Aluminum Products Inc.,
Address: 1770 Mayflower Rd., Niles, Michigan 49120.
Phone: (800) 806-3667 or (269) 697-8340
Fax: (269) 697-8348
Web: www.crossaluminum.com
Email: door@crossaluminum.com

B. Alternate manufacturers: As approved by architect in writing prior to bid due date.

2.02 ALUMINUM FLUSH DOORS

A. Product: FL-400 Series with required aluminum frames.

B. Door Opening Size: refer to drawings

C. Door Assembly:
1. Door Stile: To be aluminum alloy 6063; temper to be T5 with a minimum 1/8" wall thickness.
2. Stile Thickness: To be 1 3/4" thick tubular extrusion.
3. Door Joinery: Joinery shall be 3/8" diameter zinc plated tie rods bolted through interlocking stiles. Minimum of 3 tie rods per door (where applicable).
4. Top of Door: To receive added 1/8" reinforcement closer plate adhered to interior wall for door closer hardware.
5. Top/Bottom of Door: To receive 1/8" thick cap for further seal and to trim the top and bottom of door.

D. Pattern: Fluted

E. Insulation: Polyisocyanurate Rigid Foam

2.03 MATERIALS & ACCESSORIES

A. Aluminum:
1. ASTM B 221, alloy and temper to be 6063 T-5 or similar alloy and temper recommended by manufacturer for optimum finish results and consistency.

B. Internal Reinforcement
1. ASTM B 308, for structural aluminum.

C. Fasteners
1. Material: Aluminum, 18-8 Stainless Steel, or other non-corrosive materials compatible with items being screw applied.
2. Exposed:
   a. Type: Fasteners exposed will be Philips flathead fasteners unless provided by other supplier.
   b. Finish: Fasteners to match appropriate finish on standard doors and frames.
3. Concealed: To be standard according to manufacturer's standards.

D. Weather stripping:
   1. Wool pile:
      a. Material: Solid Propylene Base with resilient fibers.
      b. Color: Manufacturer's standard black color.

2.04 HARDWARE

A. Hardware Preparation: To be fabricated at factory according to hardware templates provided.

B. Hardware Installation: To factory install all applicable and supplied hardware to doors and frames.

C. Hardware Reinforcement: To provide necessary reinforcement for proper longevity and hardware function; ASTM B 209 and/or ASTM 308.

D. Hardware refer to section 087100

E. Hardware Finish: US26D

2.05 FABRICATION

A. Processes:
   1. Job Preparation:
      a. Preliminary Analysis: Job drawings to indicate door types, sizes, vision lite configuration(s), and finishes.
      b. Fulfill Custom Requirements: Follow through on any specific deviations from standard requirements.

   2. Assembly:
      a. Product Operation: Measure, cut, and fabricate required materials for designated job.
      b. Product Refinement: Smooth rough cut edges.
      c. Arrangement: Place prepared structural fasteners inside door to conceal from view.
      d. Reinforcement Preparation: To apply necessary structural and hardware reinforcement in beneficial areas of doors and frames where needed.

   3. Fitting:
      a. Placement: Product materials to fit accurately in appropriate locations.
      b. Alignment: Doors to be in proper alignment with intended elevations.

B. Tolerances: Doors and/or frame elevations will not deviate from last revised and approved drawings.

2.06 FRAMING SYSTEMS

A. Framing Members: Manufacturer's standard aluminum extruded profiles with required thickness for load support.
   1. Vertical Jamb Sizes: 2"x 4 1/2"
   2. Header Sizes: 2" x 4 1/2"

B. Clips and Reinforcements: Manufacturer's standard high strength aluminum: ASTM B 221 and/or ASTM B 308.

C. Fasteners and Accessories: Manufacturer's standard non-bleeding and non-corrosive material congruent to adjacent material.
   1. Exposed Fasteners: To be stainless steel Philips flathead screws with appropriate finish: ASME B 18.6.4
   2. Concealed Fasteners: To be manufacturer's standard.

D. Assembly:
   1. Framing members are separate aluminum pieces cut to length and mechanically fastened from either spline or clip systems.
   2. Joinery to be hairline.
   3. Sommer and Maca Dymonic or Dow Corning® 795 Sealants applied on applicable areas.
   4. Framing elevations to be identified according to final approved drawings.

E. Anchoring:
   1. Appropriate anchoring fasteners to be secured no more than 18" apart on entire frame opening.
   2. Frame headers to receive no less than 2 anchoring fasteners.
   3. Add extra fasteners where hardware and hinge may require more.

F. Doorstop:
   1. To be #CDM-32.
      a. Wall Thickness: To be 3/16" thick for receiving applicable hardware.
      b. Profile Height: To be no less than 5/8" high.
   2. Snap-in: Fits standard manufacturer's door jamb profiles.
   3. To receive weather strip around acting door leafs.
      a. Wool pile: Solid Propylene Base with resilient fibers in a standard black color.

G. Hardware Preparation:
   1. Intramural Work: Hardware preparation according to hardware suppliers' templates.
   2. Field Work: Refer to manufacturers' installation instructions.

H. Side lites and Transoms:
   1. Factory-assembled to largest allowable shipping size.
   2. Identified in concealed locations according to final approved elevation numbers.

2.07 GLAZING

A. Not required

2.08 LOUVERS

A. Style: Extruded Aluminum, mitered corners secured with reinforcing clips, inverted-Y design.

B. Dimension: Refer to drawings

C. Finish: Clear

D. Installation: Louvers to be factory installed and removable from interior only.

2.09 FINISHES

A. Available Anodic Finishes: Louver
   1. Clear 215 R1: Architectural Class 1, AA-M12C22A41, 0.7 mils.

B. Paint Finishes: Door and Frame
   1. 70% Fluoropolymer (PVDF): AAMA 2605, ASCA 96, Kynar 500® or Hylar 5000®.
      a. Duranar®: 3-coat system.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine conditions for compliance with requirements for installation tolerances and other conditions affecting proper installation.

3.02 INSTALLATION

A. Comply with manufacturer's instructions.

B. Do not install damaged components.

C. Install doors plumb, level, and square, with no warp or rack in frame.

D. Hang doors with the following required clearances:
1. Lock Stiles: 0.125"
2. Between Meeting Stiles: 0.187"- 0.250"
3. At Top Rails: 0.125"
4. Between Bottom Rail and Threshold: 0.125" - 0.187"

E. Fit joints to produce hairline joints free of burrs and distortion.

F. Rigidly secure non movement joints.

G. Install recommended anchors with separators to prevent metal corrosion and electrolytic deterioration.

H. Seal joints watertight, unless otherwise indicated.

I. Glazers to provide necessary glazing shims for proper glass installation on vision lites and side lites. Reference section Glazing Accessories (08 85 00).

J. Place thresholds in proper weather sealant.

3.03 ADJUSTING

A. Fine-tune doors and hinges to operate properly without bind or sag.

B. Adjust pressure settings on closers.
1. For doors accessible to people with disabilities, adjust closers to provide a 3-second closer sweep period for doors to move from a 70-degree open position to 3 inches from the latch measured to the leading door edge.

3.04 CLEANING

A. Immediately clean doors after installation.

B. Avoid any harsh cleaners not specified on manufacturer's cleaning and care guide.

3.05 PROTECTION

A. Follow Manufacturer's guide to cleaning and care for proper treatment on entrances for optimum longevity, function, and performance.

END OF SECTION

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.
2. Sliding doors.
3. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical door hardware.
3. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section "Hollow Metal Doors and Frames".
2. Division 28 Section "Access Control System".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. Michigan Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.
4. UL 305 - Panic Hardware.
5. ANSI/UL 437- Key Locks.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:

    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

    a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
    b. Complete (risers, point-to-point) access control system block wiring diagrams.
    c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

1.4 CLOSEOUT SUBMITTALS

A. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

B. Project Record Documents: Provide record documentation of as-built door hardware sets in digital format (.pdf, .docx, .xlsx, .csv) and as required in Division 01, Project Record Documents.

1.5 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

F. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.6 DELIVERY, STORAGE AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.7 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.8 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hardware shall not have any visible manufacturer names on exposed materials, except cylinders, when the door is in a closed position.

2.2 BUTT HINGES

A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

   a. Two Hinges: For doors with heights up to 60 inches.
   b. Three Hinges: For doors with heights 61 to 90 inches.
   c. Four Hinges: For doors with heights 91 to 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

   a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
   b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for all out-swinging lockable doors.

5. Manufacturers:

   a. McKinney (MK) - TA/T4A Series, 5-knuckle.

2.3 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.

3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Match Facility Restricted Keyway.

C. Small Format Interchangeable Cores: Provide small format interchangeable cores (SFIC) as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.

D. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

E. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. Existing System: Field verify and key cylinders to match Owner's existing system.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

G. Construction Keying: Provide construction master keyed cylinders.

H. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.4 MORTISE LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all functions and features as specified herein.

1. Electromechanical locksets shall have the following functions and features:

a. Universal Molex plug-in connectors that have standardized color-coded wiring and are available in fail safe or fail secure and operate from 12vdc to 24vdc regulated.
b. EcoFlex or equivalent technology that reduces energy consumption up to 92% as certified by GreenCircle.
c. Options to be available for request-to-exit or enter signaling, latchbolt and deadbolt monitoring.
d. Optional high security monitoring with internal end-of-line monitoring alongside deadbolt privacy and integrated door position monitoring.
e. Two-year limited warranty on electrified functions.

2. Manufacturers:

a. Corbin Russwin Hardware (RU) – NAC-ML2000 Series.

b. Sargent Manufacturing (SA) – NAC-8200 Series.

2.5 SURFACE DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard..

1. Manufacturers:

a. Corbin Russwin Hardware (RU) - DC6000 Series.
b. Norton Rixson (NO) - 7500 Series.
c. Sargent Manufacturing (SA) - 351 Series.

2.6 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. Pemko (PE).

2.7 ELECTRONIC ACCESSORIES

A. Intelligent Switching Power Supplies: Provide the least number of power supplies at the appropriate amperage level sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

1. Power supplies shall meet all functions and features as specified herein.

a. UL listed dual voltage 12 or 24 VDC field selectable continuous output.
b. Dedicated fast charger to prolong battery life with low battery cutoff to protect batteries from deep discharge.
c. Enhanced surge immunity for input/output protection
d. Separate, dedicated battery charging circuit to keep locks cooler.
e. Dual-color LED visual notification to prevent applying incorrect voltages to the power supply.
f. Instant auto-switch to battery on AC loss.
g. Expandable up to 16 outputs in the standard enclosure
h. Integrated fire alarm interface to allow main output shutdown or disconnect on a per output basis when using an R8 output module.
i. Network ready and remotely manage locks and connected devices when using an M8 managed output module on network models.
j. Lifetime replacement, no-fault, no questions asked warranty.

2. Manufacturers:

a. Securitron (SU) - AQL Series.

2.8 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.9 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Push Plates and Door Pulls: When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

B. Manufacturer's Abbreviations:

1. MK - McKinney
2. SA - SARGENT

3. PE - Pemko
4. SU - Securitron
5. OT - Other

Hardware Sets

Set: 1.0

Doors: 01
Description: Concession / Utility - Storage

2	Hinge, Full Mortise, Hvy Wt	T4A3386	US32D	MK	087100	
1	Hinge, Full Mortise, Hvy Wt	T4A3386 x CC8-18	US32D	MK	087100	
1	Electrified Mortise Lock	IDP NAC-82281 LNP x LB thumb turn	US26D	SA	087100	⚡
1	Mortise Cylinder	- Match Owner's Existing Interchangeable Core System	626		087100	
1	Surface Closer	351 O - pull side mount	EN	SA	087100	
1	Weatherstrip	2891APK TKSP - head and jambs		PE	087100	
1	Sweep	345AV TKSP		PE	087100	
1	Threshold	279x292AFGPK MSES25SS		PE	087100	
1	Integrated Door Position Switch	- Built Into Lockset		SA		
1	Power Supply	AQL4-R8E1		SU	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	
1	Wiring Diagram Package	- Elevation Wiring and Point-to-Point Wiring Diagrams		OT		

Notes: ** Power supply provides low voltage power and relays for Doors 01, 02, 03, 04, 05.

Door normally closed and locked. Key override outside retracts latch bolt and deadbolt. Deadbolt is projected and retracted by key outside and thumb turn inside. Valid use of card reader outside temporarily unlocks outside lever for access. Outside lever is unlocked upon schedule as determined in access control system. Lockset contains integrated magnetic door position switch in series with the internal auxiliary latch and latch bolt position switches to provide three factor monitoring. Inside lever function equipped with signal switch for request to exit alarm shunt (REX).
Free egress always permitted.

Fail secure lock: locked upon loss of power.

Set: 2.0

Doors: 02, 03, 04, 05
Description: Men's, Women's, Family Restrooms

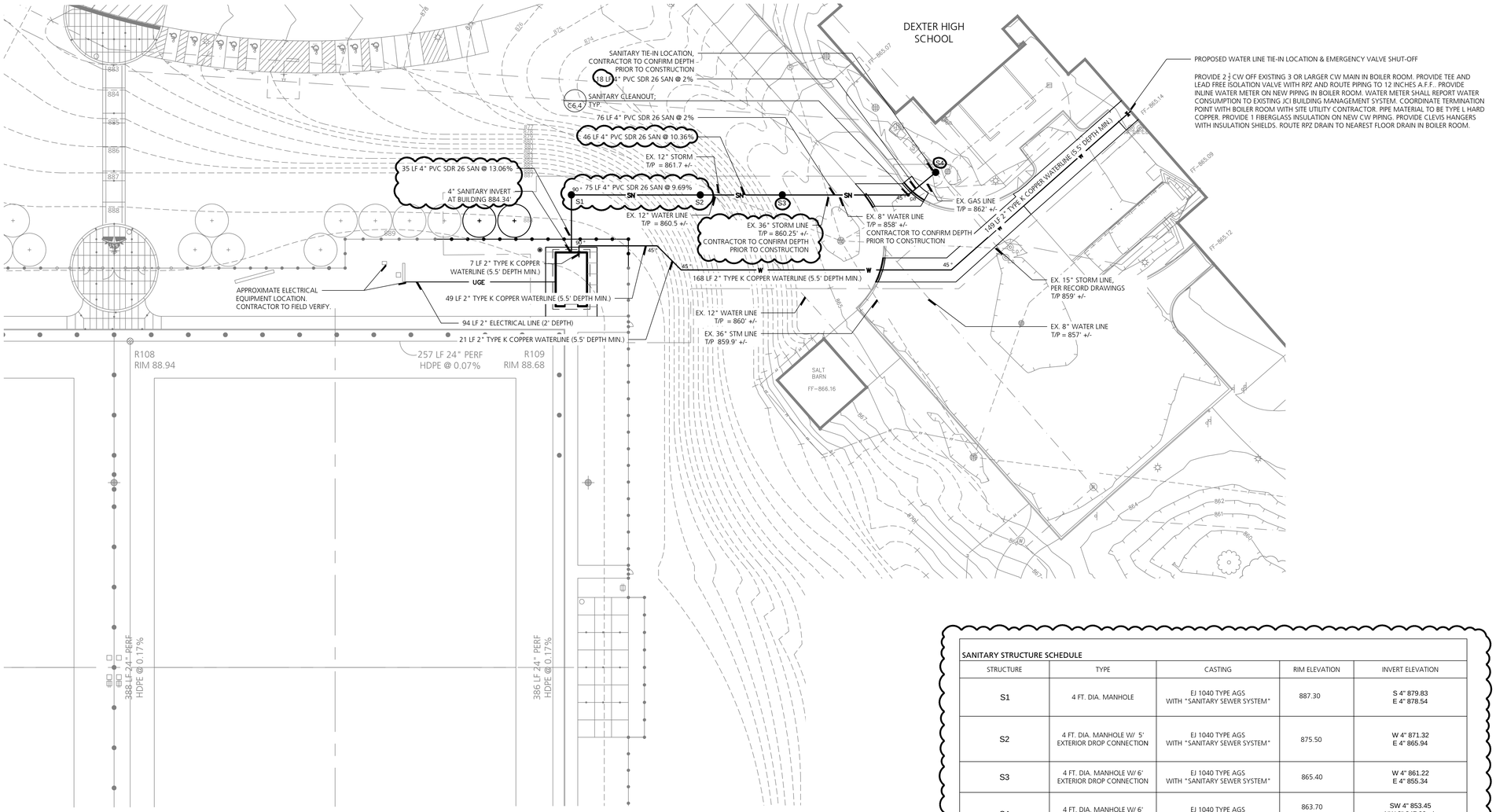
2	Hinge, Full Mortise, Hvy Wt	T4A3386	US32D	MK	087100	
1	Hinge, Full Mortise, Hvy Wt	T4A3386 x CC8-18	US32D	MK	087100	
1	Electrified Mortise Lock (w/ outside indicator)	V20 IDP PHR NAC-82281 LNP x LB thumb turn	US26D	SA	087100	⚡
1	Mortise Cylinder	- Match Owner's Existing Interchangeable Core System	626		087100	
1	Surface Closer	351 O - pull side mount	EN	SA	087100	
1	Weatherstrip	2891APK TKSP - head and jambs		PE	087100	
1	Sweep	345AV TKSP		PE	087100	

1	Threshold	279x292AFGPK MSES25SS	PE	087100
1	Integrated Door Position Switch	- Built Into Lockset	SA	
1	Card Reader	- Provided by Security Contractor	OT	281300
1	Wiring Diagram Package	- Elevation Wiring and Point-to-Point Wiring Diagrams	OT	

Notes: Door normally closed and locked. Key override outside retracts latch bolt. Valid use of card reader outside temporarily unlocks outside lever for access. Outside lever shall unlock upon schedule as determined in access control system (unlock at 7:00AM and automatically lock at 7:00PM (Example only).
Lockset contains integrated magnetic door position switch in series with the internal auxiliary latch and latch bolt position switches to provide three factor monitoring.
Engaging deadbolt disables remote access control unlocking (card reader) or scheduled unlock. Engaging deadbolt changes outside indicator from Vacant to Occupied.
Inside lever function equipped with signal switch for request to exit alarm shunt (REX). Turning inside lever retracts deadbolt and latch bolt simultaneously and changes outside indicator from Occupied to Vacant.
Free egress always permitted.

Fail secure lock: locked upon loss of power. Free egress always permitted.

END OF SECTION 087100



SANITARY STRUCTURE SCHEDULE				
STRUCTURE	TYPE	CASTING	RIM ELEVATION	INVERT ELEVATION
S1	4 FT. DIA. MANHOLE	EJ 1040 TYPE AGS WITH "SANITARY SEWER SYSTEM"	887.30	S 4" 879.83 E 4" 878.54
S2	4 FT. DIA. MANHOLE W/ 5' EXTERIOR DROP CONNECTION	EJ 1040 TYPE AGS WITH "SANITARY SEWER SYSTEM"	875.50	W 4" 871.32 E 4" 865.94
S3	4 FT. DIA. MANHOLE W/ 6' EXTERIOR DROP CONNECTION	EJ 1040 TYPE AGS WITH "SANITARY SEWER SYSTEM"	865.40	W 4" 861.22 E 4" 855.34
S4	4 FT. DIA. MANHOLE W/ 6' EXTERIOR DROP CONNECTION	EJ 1040 TYPE AGS WITH "SANITARY SEWER SYSTEM"	863.70	SW 4" 853.45 NW 8" 847.90 +/- SE 8" 848.00 +/-

UTILITY & RESTORATION LEGEND

- UGE — PROPOSED ELECTRIC LINE
- SN — PROPOSED SANITARY LINE
- W — PROPOSED WATER LINE
- PROPOSED WATER STRUCTURE
- PROPOSED SANITARY CLEANOUT
- PROPOSED SANITARY MANHOLE

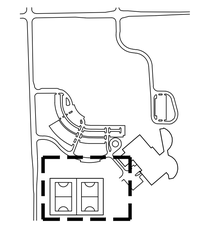
UTILITY PLAN NOTES

1. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS REFLECT FINISH GRADES. HOLD DOWN SUBGRADE ELEVATIONS ACCORDINGLY. ADJUST RIM ELEVATIONS OF ALL UTILITIES AFFECTED BY WORK IN THIS CONTRACT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ON THE SITE. ANY AREA THAT APPEARS TO NOT PROPERLY DRAIN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT / ENGINEER FOR RESOLUTION.
2. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT PRICE WILL BE AWARDED FOR ACTUAL DISCREPANCIES IN UTILITY LOCATIONS DUE TO THE FAILURE TO VERIFY ACTUAL FIELD LOCATIONS.
3. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CLEAN UP AND HAUL AWAY ALL CONSTRUCTION DEBRIS AND LITTER CAUSED BY HIS OPERATIONS.
4. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. ALL UTILITY CROSSINGS SHALL HAVE A MINIMUM OF 18" VERTICAL CLEARANCE.
6. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT STATE OF MICHIGAN STANDARD SPECIFICATIONS AND DETAILS, UNLESS OTHERWISE NOTED. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

VICINITY MAP



KEY PLAN



Know what's below. Call before you dig.

0 15 30 60 90

B R Beckett&Raeder
Landscape Architecture Planning, Engineering & Environmental Services

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Project Title

Dexter Community Schools

Twin Turf Fields
Restroom Building

Dexter, Michigan

Sheet Title

DHS Twin Turf Fields
Utility & Restoration Plan

Dates

DATE	ISSUED FOR
03.12.2025	IN-PROGRESS OWNER REVIEW
05.02.2025	95% CD OWNER REVIEW
07.11.2025	BCC REVIEW
09.05.2025	BIDS
10.14.2025	ADDENDUM 2

Scale

1" = 30'

Quality Control

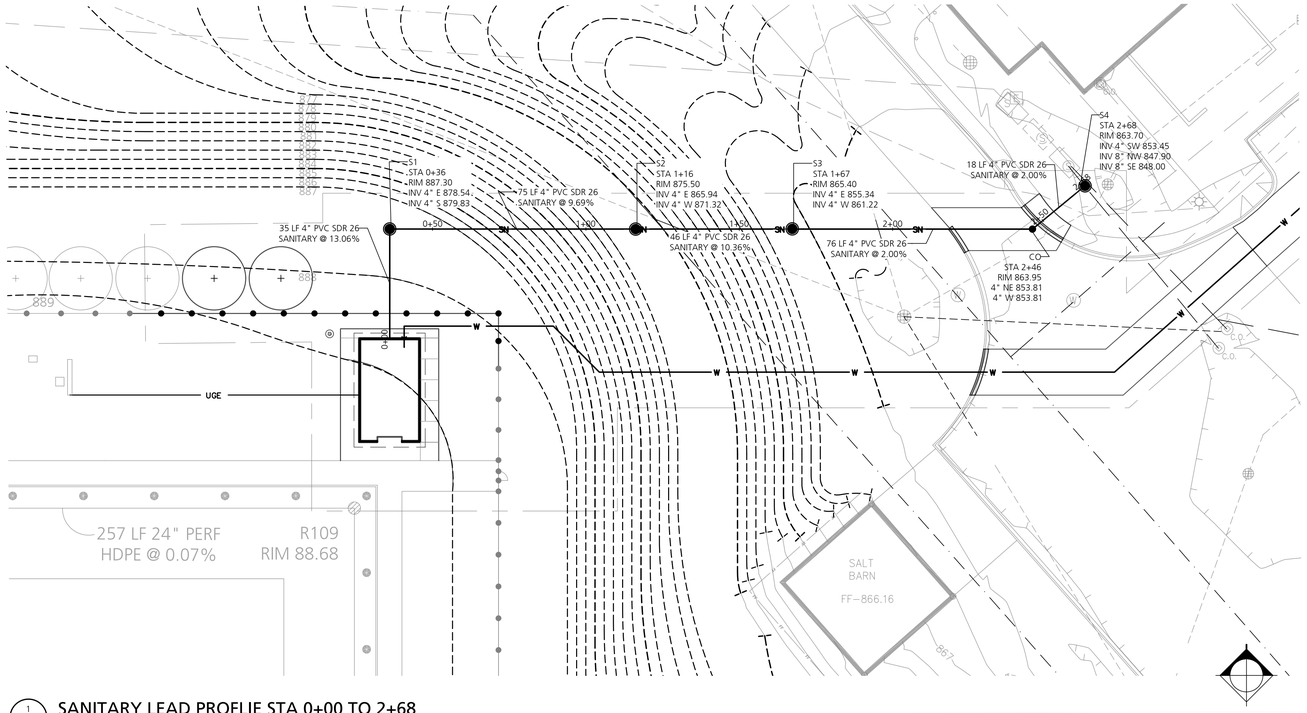
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Approved: BB

Project Number

BRI 2021097

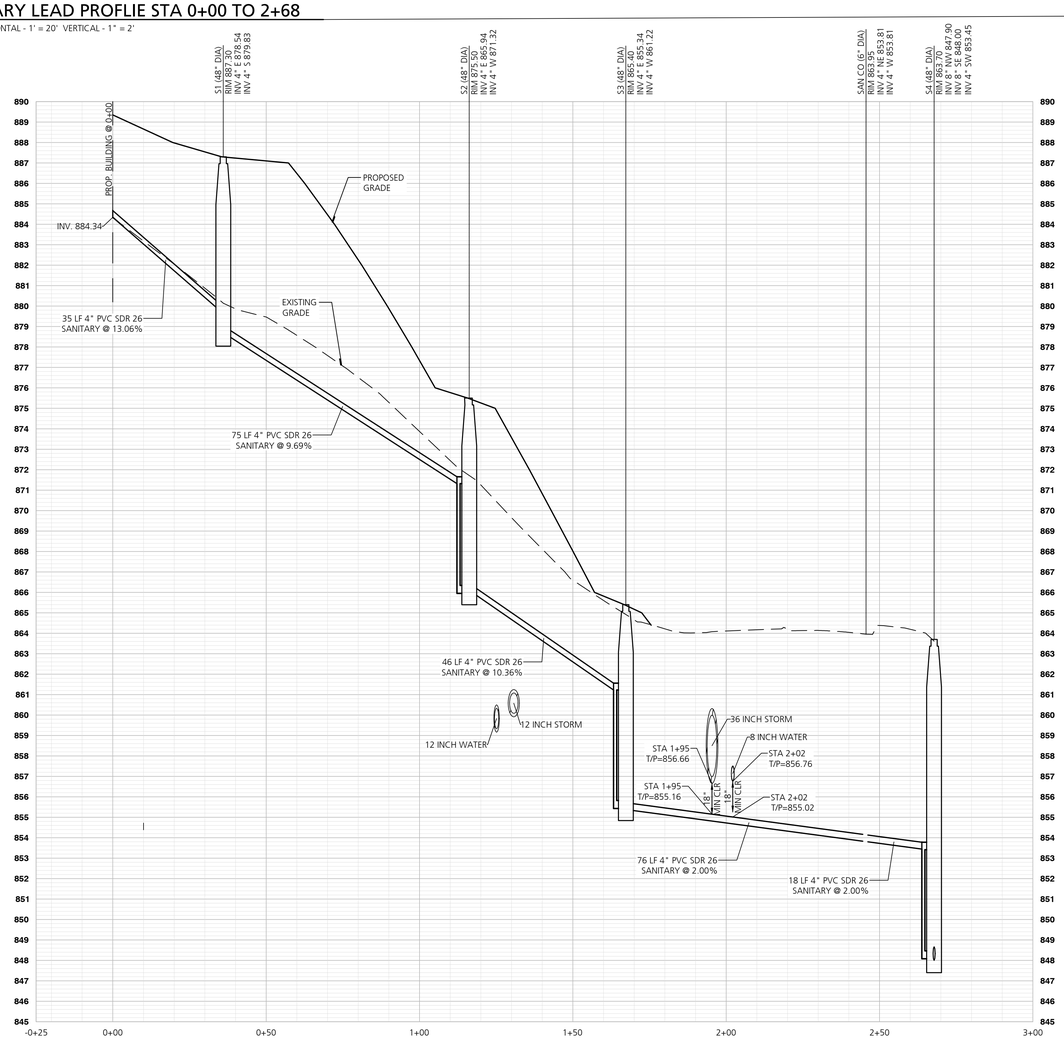
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C6.2



1 SANITARY LEAD PROFLIE STA 0+00 TO 2+68

SCALE: HORIZONTAL - 1" = 20' VERTICAL - 1" = 2'



2 SANITARY LEAD PROFLIE STA 0+00 TO 2+68

SCALE: HORIZONTAL - 1" = 20' VERTICAL - 1" = 3'

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Project Title

Dexter Community Schools

Twin Turf Fields
Restroom Building

Dexter, Michigan

Sheet Title

DHS Twin Turf Fields
Sanitary Plan and Profile

Dates

DATE	ISSUED FOR
03.12.2025	IN-PROGRESS OWNER REVIEW
05.02.2025	95% CD OWNER REVIEW
07.11.2025	BCC REVIEW
09.05.2025	BIDS
10.14.2025	ADDENDUM 2

Scale

1" = 20'

Quality Control

Drawn: DF
Checked: BB
Approved: BB

Project Number

BRI 2021097

Sheet Number

C6.7

Know what's below. Call before you dig.

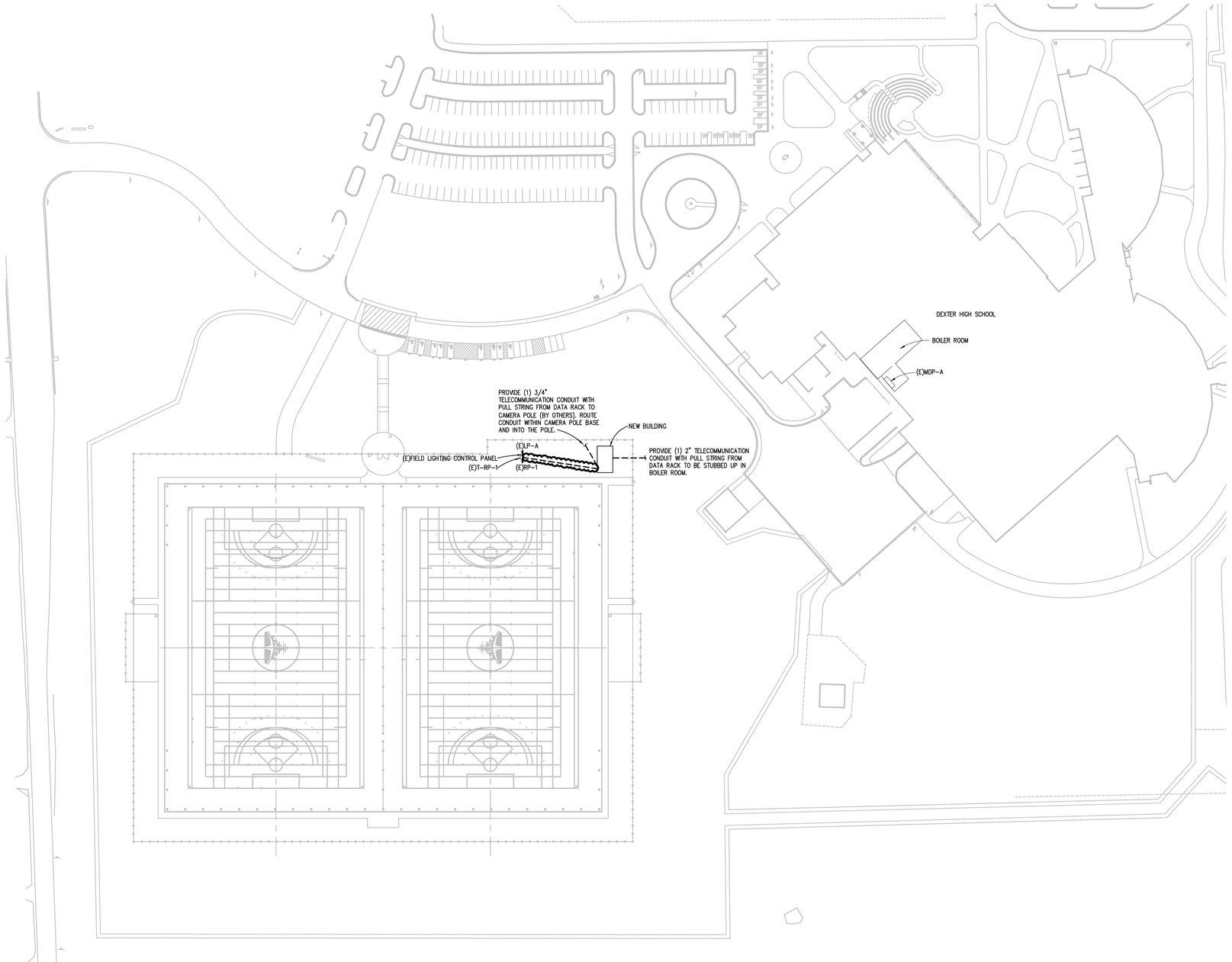
0 15 30 60 90

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

1"

SITE PLAN GENERAL NOTES:

1. THESE NOTES ARE GENERIC GUIDELINES ONLY. ELECTRICAL CONTRACTOR'S PERSONNEL ON SITE SHALL BE THOROUGHLY FAMILIAR WITH THE PUBLISHED SPECIFICATIONS FOR EXACT DESCRIPTIONS OF SCOPE, METHODS, AND MATERIAL.
2. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
3. CONDUCT A SURVEY TO IDENTIFY ALL UNDERGROUND UTILITIES. CALL 811 PRIOR TO EXCAVATION.
4. UTILITIES SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE EXACT LOCATION OF ALL EXISTING UTILITIES, AND ROUTING OF ALL NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
5. DEWATER TRENCHES PRIOR TO INSTALLATION OF CONDUITS. PROVIDE WATER TIGHT FITTINGS ON ALL UNDERGROUND CONDUITS.
6. COORDINATE DEMOLITION WORK, AND ELECTRICAL AND TELEPHONE SERVICES TO THE SITE, WITH THE RESPECTIVE LOCAL UTILITY COMPANY REPRESENTATIVES PRIOR TO COMMENCEMENT OF WORK. INCLUDE ALL ASSOCIATED COST/FEES BY THE UTILITY COMPANIES IN THE BID PRICE.
7. INSTALL UNDERGROUND CONDUITS 42" BELOW FINISHED GRADE, MINIMUM, UNLESS NOTED OTHERWISE.
8. COORDINATE SERVICE SHUT-DOWNS WITH ALL TRADES INVOLVED ON SITE AND OBTAIN WRITTEN AUTHORIZATION FROM OWNER 72 HOURS PRIOR TO ANY ELECTRICAL AND/OR TELEPHONE SHUT-DOWN.
9. REMOVE ALL DE-ENERGIZED CONDUCTORS FROM SITE AT COMPLETION OF THE PROJECT.
10. SPARE CONDUITS SHALL INCLUDE PULL STRING AND SHALL BE TERMINATED WITH A CAP.
11. EXCAVATE THE ENTIRE LENGTH OF TRENCH TO PROPERLY SET DUCT ELEVATIONS.



ELECTRICAL SITE NEW WORK PLAN

SCALE: 1" = 60'

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PBA Project No.: 2025.0071

Project Title

Dexter Community Schools

Twin Turf Field
Restroom Building

Dexter, Michigan

Sheet Title

ELECTRICAL SITE NEW WORK PLAN

Dates

DATE	ISSUED FOR
03.12.2025	IN PROGRESS OWNER REVIEW
05.02.2025	95% CD OWNER REVIEW
07.11.2025	BCC REVIEW
09.05.2025	BIDS
10.14.2025	ADDENDUM #2

Scale

Quality Control

Drawn:MPD
Checked:STP
Approved:STP

Project Number

BRI 2021097

Sheet Number

E-004

811 Know what's below. Call before you dig.

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RP-2

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC		NEW		3483	3843			360	20	NEW	RECEPTACLE	R	2
3	NC	ECUH - 1	NEW	40	3483		3663		180	20	NEW	RECEPTACLE	R	4
5	NC		NEW		3483			3663	180	20	NEW	RECEPTACLE	R	6
7	NC		NEW		1081	1261			180	20	NEW	RECEPTACLE	R	8
9	NC	ECUH - 2	NEW	15	1081		1621		540	20	NEW	RECEPTACLE	R	10
11	NC		NEW		1081			1261	180	20	NEW	RECEPTACLE	R	12
13	NC		NEW		1081	1441			360	20	NEW	RECEPTACLE	R	14
15	NC	ECUH - 3	NEW	15	1081		1248		167	15	NEW	EF-1	C	16
17	NC		NEW		1081			3581	2500	30	NEW	DWH-1	NC	18
19	NC		NEW		1441	2315			874	20	NEW	LIGHTING	L	20
21	NC	ECUH - 4	NEW	15	1441		2641		1200	20	NEW	ELECTRIC HAND DRYER	NC	22
23	NC		NEW		1441			2641	1200	20	NEW	ELECTRIC HAND DRYER	NC	24
25	NC		NEW		1441	2641			1200	20	NEW	ELECTRIC HAND DRYER	NC	26
27	NC	ECUH - 5	NEW	15	1441		2641		1200	20	NEW	ELECTRIC HAND DRYER	NC	28
29	NC		NEW		1441			1771	330	20	GFEP	HEAT TRACE	C	30
31	C	SECURITY SYSTEM	NEW	20	500	500				20	NEW	SPARE		32
33		SPARE	NEW	20						20	NEW	SPARE		34
35		SPARE	NEW	20						20	NEW	SPARE		36
37		SPARE	NEW	20						20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
						12001 ØA	11814 ØB	12917 ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 225A
MAIN TYPE: 150A MCB
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD

		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)	997	100%	997	125%	1246
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	32881	100%	32881	100%	32881
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)	1980	100%	1980	100%	1980
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)	874	100%	874	125%	1093
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	36.7		
		TOTAL (AMPS):	102.0	TOTAL (AMPS):	103.3

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

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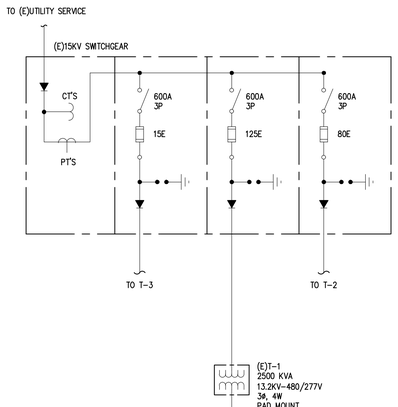
DIAGRAM GENERAL NOTES:

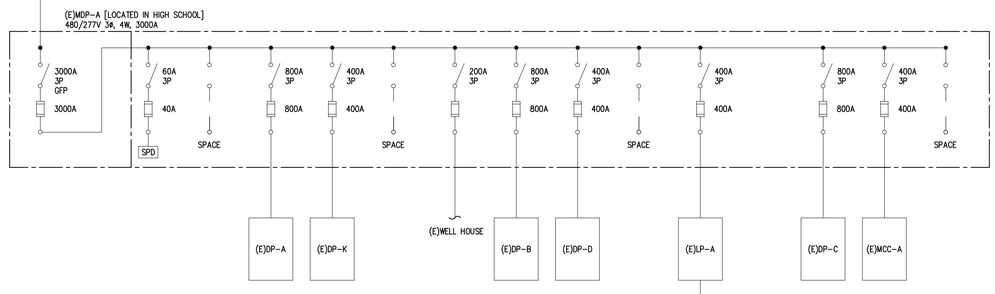
1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE "FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE-GENERAL PURPOSE" ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.

B R ⓘ
Beckett&Raeder
Landscape Architecture
Planning, Engineering &
Environmental Services

Beckett & Raeder, Inc.
535 West William, Suite 101
Ann Arbor, MI 48103

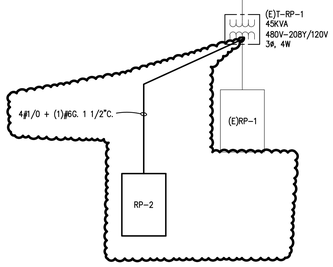
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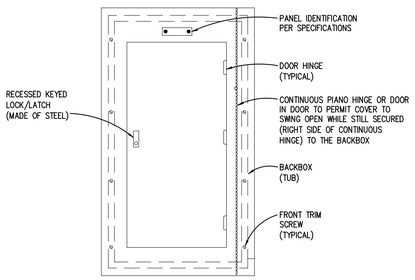


MDP-A CONNECTED LOAD CALCULATION

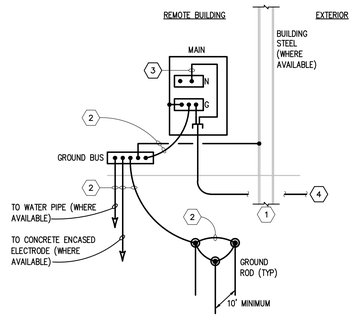
METERED 1552 KVA (1.25)	1940 KVA
ADDED LOAD	
RP-2	37 KVA
TOTAL CONNECTED LOAD	1977 KVA



ONE LINE DIAGRAM
NO SCALE



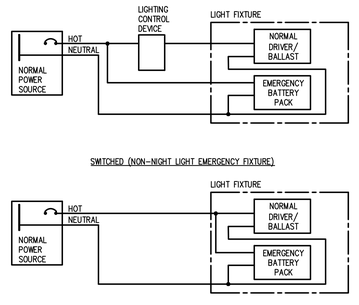
PANELBOARD FRONT COVER DETAIL
NO SCALE



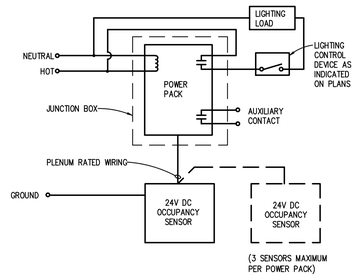
REMOTE BUILDING GROUNDING
NO SCALE

(#) KEYED NOTES:

1. METAL IN-GROUND SUPPORT STRUCTURE IN DIRECT CONTACT WITH EARTH VERTICALLY FOR A MINIMUM OF 10FT, WHERE AVAILABLE.
2. GROUNDING ELECTRODE CONDUCTOR, #4/0 COPPER.
3. GROUNDED CONDUCTOR (NEUTRAL), SEE ONE LINE DIAGRAM.
4. PHASE CONDUCTORS, GROUNDED CONDUCTOR (NEUTRAL), AND EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT TO MAIN BUILDING. SEE ONE LINE DIAGRAM.



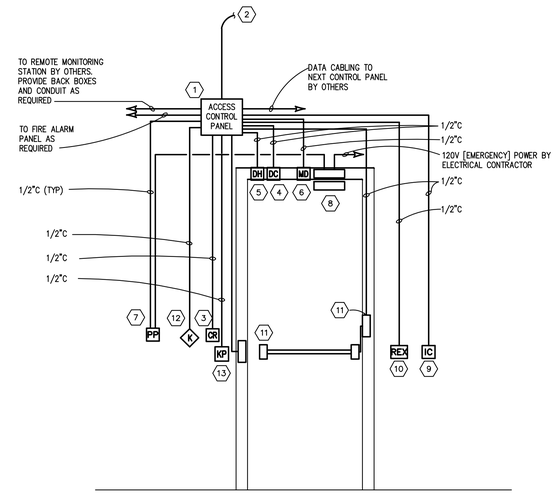
EMERGENCY BATTERY BACKUP WIRING DIAGRAM - INTERNAL TO LIGHT FIXTURE
NO SCALE



OCCUPANCY SENSOR WIRING DIAGRAM
NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ACCEPTED MANUFACTURERS.
2. PROVIDE POWER PACKS AND SLAVE PACKS AS REQUIRED FOR SWITCHING AS INDICATED ON PLAN. REVISE DETAIL AS REQUIRED BY MANUFACTURER.
3. MOUNTING LOCATION PER MANUFACTURER'S RECOMMENDATION.
4. ADJUST SENSITIVITY LEVELS PER THE OWNER REQUIREMENTS.
5. PROVIDE FACTORY SUPPORT FOR AIMING/ADJUSTING OF SENSORS.
6. PLACE CEILING MOUNTED OCCUPANCY SENSORS IN CENTER OF A FULL CEILING TILE, WHERE APPLICABLE.
7. SENSOR ADJUSTMENT: BEFORE MAKING ADJUSTMENTS, MAKE SURE ROOM FURNITURE IS INSTALLED, LIGHTING CIRCUITS ARE TURNED ON, AND THE HVAC SYSTEMS ARE IN THE ON POSITION. VAV SYSTEMS SHOULD BE SET TO THEIR HIGHEST AIRFLOW. SET THE LOGIC CONFIGURATION DIP SWITCHES TO "EITHER". EITHER REQUIRES MOTION DETECTION BY ONLY ONE TECHNOLOGY. SET THE TIME DELAY PER OWNERS DIRECTION.



TYPICAL ACCESS CONTROL SINGLE DOOR CONNECTION DIAGRAM
NO SCALE

GENERAL NOTES:

1. REFER TO ELECTRICAL FLOOR PLANS FOR DOOR LOCATIONS.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE BACK BOXES, CONDUIT, 120 VOLT WIRING AND TERMINATIONS AS REQUIRED BY MANUFACTURE.
3. ACCESS CONTROL CONTRACTOR SHALL PROVIDE EQUIPMENT DEVICES AND ALL LOW VOLTAGE WIRING AND TERMINATIONS.
4. SOME DEVICES INDICATED MAY NOT APPLY REFER TO DOOR HARDWARE AND DOOR SCHEDULE. COORDINATE ALL WORK WITH HARDWARE CONTRACTOR.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE INTERCONNECTION WITH FIRE ALARM PANEL TO RELEASE DOORS I.E. ELECTROMAGNETIC LOCKS UPON AN ALARM CONDITION, AS REQUIRED.

KEYED NOTES:

1. ACCESS CONTROL SYSTEM, DOOR PANEL BY OTHERS.
2. LOW VOLTAGE CABLING, BY OTHERS.
3. PROXIMITY CARD READER, BY OTHERS.
4. DOOR MONITOR CONTACT SWITCH, BY OTHERS.
5. DOOR HOLDER, BY OTHERS. ELECTROMAGNETIC SWITCH MOUNTED ON/IN DOOR AND FRAME. [FOR DELAYED OPERATION] IN LIEU OF ELECTRIC STRIKE.
6. MOTION DETECTOR, BY OTHERS. REQUEST TO EXIT MOTION DETECTOR MOUNTED TO TOP OF DOOR FRAME. COORDINATE WITH DOOR AND FRAME CONTRACTOR.
7. DOOR OPERATOR PUSH PLATE, BY OTHERS.
8. DOOR OPERATOR, BY OTHERS.
9. INTERCOM STATION, BY OTHERS.
10. REQUEST TO EXIT PUSH PAD, BY OTHERS.
11. ELECTRIC STRIKE, PANIC HARDWARE, POWER TRANSFER, BY OTHERS.
12. KEY-SWITCH, BY OTHERS.
13. KEYPAD, BY OTHERS.

Consultants

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PBA Project No.: 2025.0071

Project Title

Dexter Community Schools

Twin Turf Field
Restroom Building

Dexter, Michigan

Sheet Title

ONE LINE DIAGRAM, PANEL SCHEDULES, ELECTRICAL DETAILS & DIAGRAMS

Dates

DATE	ISSUED FOR
03.12.2025	IN PROGRESS OWNER REVIEW
05.02.2025	95% CD OWNER REVIEW
07.11.2025	BCC REVIEW
09.05.2025	BIDS
10.14.2025	ADDENDUM #2

Scale

Quality Control

Drawn:MPD
Checked:STP
Approved:STP

Project Number

BRI 2021097

Sheet Number

E-501

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