SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

March 10, 2025 SC 23070.00

ADDENDUM NO. 2

To the Contract Documents for:

BICENTENNIAL BARN – MCCAMMON CREEK PARK
6844 Bale Kenyon Road
Lewis Center, OH 43035

TO ALL BIDDERS:

This Addendum supplements and amends the original Bidding Documents, shall be taken into account in preparing bids, and shall become a part of the Contract Documents.

The following documents are a part of and are issued with this Addendum and are attached to this Addendum.

Pre-Bid Meeting Notes and Sign-In Sheet
Bidder Questions and Answers
Section 03 35 43 – Stained Concrete Finishing
Section 08 80 00 – Glazing
Section 23 07 05 – HVAC Insulation
Section 23 31 10 – Low pressure ductwork
Section 23 83 17 – electric duct heaters
Section 26 05 37 – Flush Floor Outlets

C000	A010	H301
C102	A102	H302
C103	A610	H501
C105	A702	H601
C106	F201	H701
C200	P001	E000
C201	P200	E001
C201	P201	E201
C202	P202	E300
C204	P501	E301
C207	P601	E501
C300	P701	E502
C301	H201	E601

300 Marconi Boulevard
Columbus, Ohio 43215

T 614 628.0300
F 614 628.0311

schooleycaldwell.com

SPECIFICATIONS

ITEM 1 SECTION 03 35 43 – STAINED CONCRETE FINISHING

Section replaces original section.

ITEM 2 SECTION 07 31 26 – SLATE SHINGLES

In Article 3.05. Delete paragraphs D4 and D5.

ITEM 3 SECTION 08 80 00 – GLAZING

Section replaces original section.

ITEM 4 SECTION 20 05 80 – VIBRATION ISOLATORS

Paragraph 2.02 Isolator Schedule: Change the isolator requirement for the DOAS unit to: Base Type: None, Isolator Type: 1, Deflection (inches): 0.50.

ITEM 5 SECTION 23 07 05 – HVAC INSULATION

Replace with attached revised section.

ITEM 6 SECTION 23 09 93 – SEQUENCES OF OPERATION

Add Paragraph 3.05 MISCELLANEOUS: "C. Electric Duct Heater, EDH1: The duct heater shall operate through its factory controls to pre-heat the DOAS outside air when the ambient temperature falls below 15 degrees F (dry bulb). The duct heater shall respond to a factory furnished duct thermostat and maintain a 15 degree F discharge air setpoint. Provide a duct temperature sensor that reports the EDH1 discharge air temperature to the BAS. Provide status to the BAS of the electric duct heater being energized."

ITEM 7 SECTION 23 31 10 – LOW PRESSURE DUCTWORK

Replace with attached revised section.

ITEM 8 SECTION 23 83 17 – ELECTRIC DUCT HEATERS

Add this new section.

ITEM 9 SECTION 26 05 37 – FLUSH FLOOR OUTLETS

Add this new section.

DRAWINGS

ITEM 1 SHEET C000 – TITLE SHEET

Added Sheet C302 to Sheet Index.

Revised sheet titles in Sheet Index.

ITEM 2 SHEET C102 – STAKING PLAN

Revised coordinate 75 in both plan view and the Staking Coordinate Table.

Revised easement limits.

Added two bollards to plan view and a bollard Legend item.

ITEM 3 SHEET C103 – STAKING PLAN

Revised alternate descriptions to match Sheet C102.

ITEM 4 SHEET C105 – STAKING DETAILS

Added Detail I.

ITEM 5 SHEET C106 – STAKING PLAN ALTERNATES

Revised sheet title.

Revised easement limits.

ITEM 6 SHEET C200 – GRADING PLAN

Revised sanitary building connection and clean out location.

Revised easement limits.

Revised 2” water layout.

Revised 6” fire layout.

Revised 6” FDC layout.

Revised grading.

Revised storm layout.

ITEM 7 SHEET C201 – GRADING PLAN

Revised alternate descriptions to match Sheet C102.

ITEM 8 SHEET C202 – STORM PROFILES

Revised Storm Sewer 6A-7 Profile.

Revised Structure 7 in the Storm Sewer Structure Coordinates table.

ITEM 9 SHEET C204 – EROSION CONTROL PLAN

Revised sanitary building connection and clean out location.

Revised easement limits.

Revised 2” water layout.

Revised 6” fire layout.

Revised 6” FDC layout.

Revised grading.

Revised storm layout.

ITEM 10 SHEET C207 – GRADING PLAN ALTERNATE A & C

Revised sheet title.

Revised sanitary building connection and clean out location.

Revised easement limits.

Revised 2" water layout.

Revised 6" fire layout.

Revised 6" FDC layout.

Revised water coordinate labels.

Revised storm layout.

Revised Water Service Coordinates tables.

ITEM 11 SHEET C300 – UTILITY PLAN

Revised sanitary building connection and clean out location.

Revised easement limits.

Revised 2" water layout.

Revised 6" fire layout.

Revised 6" FDC layout.

Added two bollards to plan view and a bollard Legend item.

Revised grading.

Revised storm layout.

ITEM 12 SHEET C301 – UTILITY DETAILS

Revised profiles.

ITEM 13 SHEET A010 – CONSTRUCTION ASSEMBLIES

Corrected typo for expected roof insulation R-value based on thickness

ITEM 14 SHEET A102 – MAIN FLOOR – NEW WORK PLAN

Added Wall Tags

ITEM 15 SHEET A201 – EXTERIOR ELEVATIONS – NORTH AND SOUTH

Added minimum dimension to Concrete Faced Panels above grade

ITEM 16 SHEET A610 – DOOR SCHEDULE

Updated Door Types Names, Thickness, Sliding Door Height, and Remarks.

ITEM 17 SHEET A701 – ENLARGED PLANS AND ELEVATIONS

Revised graphics for sliding door and egress door.

ITEM 18 SHEET F201 – GROUND FLOOR FIRE PROTECTION PLAN

Revise Coded Note 1.

Revise Coded Note 4.

Add pipe elevations to fire service entering building and leaving building (to FDC).

Revise location of the 4" FDC sprinkler drop and the underground line exiting the building.

Change pipe size of fire service entering building and leaving building (to FDC) as shown to match Civil Drawings.

ITEM 19 SHEET P001 – PLUMBING INDEX SHEET

Revise General Note 2 to indicate new USGS elevations.

ITEM 20 SHEET P200 – UNDERFLOOR PLUMBING PLAN

Delete text and arrow referring to “2 inch Vent Up” in Mechanical Room along Column Line A.

Add pipe elevation to 2” water service entering building.

Add starting invert elevation for sanitary main at floor cleanout in Mechanical Room.

Revise sanitary branch to future water closet (Coded Note 4).

Add invert elevation at sanitary main leaving the building at floor cleanout near Column Line G.

Delete Coded Note 7 and move the 2” DCW line serving the future remote restroom to Sheet P201, to better reflect its bury depth (which is not below the ground floor level).

ITEM 21 SHEET P201 – GROUND FLOOR PLUMBING PLAN

Add Coded Note 10 and 11

Add starting invert elevation for sanitary main at First Floor main restroom group.

Revise the Vent Piping for the future water closet and the Vent Riser to the first floor.

Show the 2” DCW line serving the future remote restroom (moved from Sheet P200), to better reflect its bury depth. Label the bury depth elevation and tag with Coded Note 11 Symbol.

ITEM 22 SHEET P202 – FIRST FLOOR PLUMBING PLAN

Revise the Vent Pipe sizing.

ITEM 23 SHEET P501 – PLUMBING SCHEDULES

Revise faucets for LAV1 and LAV2 to comply with ASSE 1070.

Add note to Drain Schedule.

ITEM 24 SHEET P601 – PLUMBING DETAILS

Revise water pipe sizes from site contractor on Detail 1.

Delete Detail 4.

ITEM 25 SHEET P701 – PLUMBING STACKS

Stack A: Revise sanitary branch and vent piping to future ground floor water closet.

Stack B: Revise Vent pipe sizes as shown and show location of wall cleanout at the end of the main toilet room restroom group stack that is shown in Plan View (Sheet P201)

Riser B: Add water hammer arrestors (SA1) to domestic cold water branches serving water closets.

Riser B: Change mis-labelled UR1 tag to WC1 to correlate to water closet in Women’s RR.

ITEM 26 SHEET H201 – GROUND FLOOR HVAC PLAN

Add Electric Duct Heating Coil, EDH1, to the 24/16 ventilation air duct.

Add Coded Note 12.

ITEM 27 SHEET H301 – GROUND FLOOR HVAC PIPING

Add VRF piping offset at Column Line D.

Add Coded Note 5.

ITEM 28 SHEET H302 – FIRST FLOOR HVAC PIPING

Show locations of all fan coil thermostats.

Revise condensate and VRF pipe routing to FC2 an FC4.

ITEM 29 SHEET H501 – HVAC SCHEDULES

Revise VRF Indoor Fan Coil Unit Schedule.

Revise VRF Outdoor Condensing Unit Schedule.

Add “In-Duct Electric Heating Coil Schedule”

ITEM 30 SHEET H601 – HVAC DETAILS

Detail 8: Revise mounting frame detail.

ITEM 31 SHEET H701 HVAC VRF SCHEMATICS

Detail 2: Add “Notes”.

ITEM 32 SHEET S101 – FOUNDATION PLAN

Added lines showing locations where utility lines penetrate foundation walls.

Stepped footings at some locations for utility line penetrations.

Stepped footings along North wall to follow civil grading plan and keep exterior footings at frost depth

Added framing platform detailing for mechanical DOAS unit.

ITEM 33 SHEET S11 – FOUNDATION DETAILS

Added detail 10/S511 for mechanical platform framing.

ITEM 34 SHEET E000 – ELECTRICAL SYMBOLS LIST AND LEGENDS

Revised flush receptacle symbol description.

ITEM 35 SHEET E001 – ELECTRICAL NEW WORK SITE PLAN

Revised coded note to include CT cabinet.

ITEM 36 SHEET E201 – ELECTRICAL MAIN FLOOR LIGHTING PLAN

Revised coded notes to call out specific inverters.

Revised lighting circuits.

ITEM 37 SHEET E300 – ELECTRICAL GROUND FLOOR POWER PLAN

Revised coded note to call out CT cabinet along with meter.

Added CT cabinet to drawings.

Added power to EDH1.

Added outdoor fire alarm signal device.

Added 3 tamper switches.

Revised general note.

ITEM 38 SHEET E301 – ELECTRICAL MAIN FLOOR POWER PLAN

Revised power feed to company switch.

Added power for garage door opener.

Revised coded note for added instruction.

Added general note for added instruction of conduit rough in.

ITEM 39 SHEET E501 – ELECTRICAL LIGHTING FIXTURE SCHEDULE

Revised inverter schedule.

ITEM 40 SHEET E502 – ELECTRICAL PANEL SCHEDULES

Updated panel schedules per circuiting changes.

ITEM 41 SHEET E601 – ELECTRICAL ONE-LINE DIAGRAM

Revised one-line to show CT cabinet.

END OF DOCUMENT

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PRE-BID MEETING NOTES

PROJECT: **Bicentennial Barn-McCammon Creek Park**

DATE: 2/27/2025

The bid-bid walkthrough was held on 2/25/2025 at 1:00 on site at 6844 Bale Kenyon Road, Lewis Center, Ohio 43035. Participants signed on the sign-in sheet (attached here).

1. Introductions were made (Owner - PPDC, Architect – Schooley Caldwell, Engineer - Korda)
2. Bids are due on **03/13/2025 at 3:00 PM**. Bids will be opened and publicly read by PPDC.
3. Bids must be submitted in a sealed envelope labeled with the project name, bidder name, and bidder address. Bids that are mailed should be sealed inside another envelope, sealed and addressed to: **Attn: Matt Simpson, Preservation Parks of Delaware County** and marked as follows:
   - **"Bid For BICENTENNIAL BARN – MCCAMMON CREEK PARK"**
4. Project Scope
   - Dismantling and Reconstruction of the Barn is a major part and an important part of the project.
   - Allowances – Section 01 22 00
   - Alternates – Section 01 23 00
   - Owner-supplied Products – G001
5. Single Prime Construction Contract
6. This is a prevailing wage project for prime and sub-contractors, per Ohio Dept of Commerce.
7. Contractor Accepts the Building "As-is"
8. AIA Contract A101-2017 with Supplementary Conditions will be used for Owner-Contractor Agreement
9. Project is Tax Exempt
10. Construction expected to start in May 2025 and Substantial Completion expected by May 2026 or sooner.
11. This project is to be bid per Plans/Specifications
    - Front end conditions will govern during the project
12. Working conditions
    - Bale Kenyon Road is a high traffic road – exercise caution coming in and out of the site
    - Site Cleaning and waste management – keep site clean and free of debris
    - Phase 1 work – which includes the entry driveway and parking – no damage to phase 1 work
13. Site visits during bidding – contact Matt Simpson (*msimpson@preservationparks.com*)
14. Bid Period: RFIs to Kalpa Baghasingh at Schooley Caldwell by email (*kbaghasingh@schooleycaldwell.com)* by 3/6/2025 5:00 PM.
15. Substitutions
    - Include Substitution Sheet with bid
    - No substitutions will be accepted prior to bid
16. Acknowledgement of all Addendums on Bid Form

300 Marconi Boulevard
Columbus, Ohio 43215

T 614 628.0300
F 614 628.0311

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17. Bid Procedures:
    - Fully complete all forms
    - Bid to include:
        - Bid Form
        - Bid Guaranty and Contract Bond
        - Certificate of Insurance
        - Ohio Workers' Compensation Certificate
        - Resumes of Project Managers and Superintendents that will be working on the project.
18. **Owner may decide to have a Pre-Award Meeting with apparent low bidders. Date TBD.**
19. Schooley Caldwell to procure Building Permit. Other fees, permits and licenses by Contractor.
20. Pay Application / "Pencil Copy" – use AIA form - Send to architect.
21. Submit schedule per CSI divisions.
22. Change Orders: Must be approved by Schooley Caldwell & PPDC prior to work proceeding
23. Project management and coordination: responsibility of the General Contractor
24. Preconstruction Meeting: Minutes by General Contractor
25. Pre-installation Conferences by General Contractor
26. Progress Meetings: Minutes by General Contractor
27. Coordination Meetings: Minutes by General Contractor
28. Project Identification Sign – PPDC is adding a construction sign for the public.
29. Submittal Procedures – see spec section 01 33 00
30. Temporary Facilities and Controls – see spec section 01 50 00
    - Parking on site
    - Dumpster: by General Contractor
    - Trailers: by General Contractor
    - NO burning permitted
    - Water and gas connections and use costs by General Contractor
    - *Post-meeting, the Owner found out that the electrical service was disconnected when the adjacent house (and electric meter) was demolished. Temporary electrical service connections and use costs will be by General Contractor.*
    - Temporary heat by General Contractor
    - Port-a-johns required – by General Contractor
    - Meeting Space by Contractor
31. Working Hours: Monday through Friday: 7:00 AM to 5:00 PM. Other hours upon Owner's approval at no additional cost to the Owner. Local jurisdiction permitted hours.
32. Tour of Site

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Bicentennial Barn - McCammon Creek Park
PRE-BID MEETING SIGN-IN SHEET

SC # 23070

Name/Title	Company Name/Address	E-mail Address	Office Number	Cell Number
Ronnie Davis	180 Demo		614 6195022	
Randy Smith / OWNER	Ohio Valley Barn Salvage	RSmith.ovbs@gmail.com	419-564-9803	
David Midgley	Weekley Electric	david.midgley@weekleyelectric.com	740-919-7725	
Natalie Schotts	Robertson Construction	nschotts@robertsonconstruction.net	740-929-1000	
CRAIG TURNER	FERGUSON CONST.	CTURNER@FERGUSON-CONSTRUCTION.COM	OH-364-5908	
TJ Garee	NUWAY INC	tjg@nuway incorporated.com	740-334-2937	
Graham Watkins	Korda	graham.watkins@Korda.com		
Nathan Horsley	Garber connect	nhorsley@garberconnect.com	740-601-7652	
Chris Miggo	2K General	chris.miggo@2kgeneral.com	614-743-2492	
Jordan Spano	Setterlin	J.Spano@Setterlin.com	330-812-0296	
Isaias Manriquez	ECS	imanriquez@ecsbuilds.com	614.334.7858	

Name/Title	Company Name/Address	E-mail Address	Office Number	Cell Number
CALEB PEES / EI	KORDA	Caleb.pees@korda.com	614-643-1222	
Brad Bloomberg / VP	Miles-McClellan	brad.bloomberg@mmbuildings.com	614.487-7744	614.679.2333
Mike McCartney	Hydro Mechanical	MMCCARTNEY@HydroMechanicalohio.com	614 285-2747	
Micah Byler / PM	Miles McClellan	micah.byler@mmbuildings.com		614-579-9830
SHAWN MCDONALD / PM	3C1	SHAWN.MCDONALD@3CINDUSTRIES.com		614-578-6718
PAUL CARR / MECH ENG	KORDA	Paul.carr16@gmail.com	614-487-1650	

Name/Title	Company Name/Address	E-mail Address	Office Number	Cell Number
James Braunstein Jr	Tuttle	Jaricb@tuttleconstruction.com		6146018046
Eric Lipps	Steller Construction	eric@steller-construction.com		614-981-6500
Rob Reisdorf	Steller Construction	Rob@steller-construction.com		614 800 0570
Wesley Phillips Est.	Spear Mechanical	wphillips@spearmechanical.com		614-704-1627
Phillip Adu	Woahene Electrical	Woahenelectrical@gmail.com		6147432414

Name/Title	Company Name/Address	E-mail Address	Office Number	Cell Number
Kaylynn Morgan-Stulgis	Ferguson Construction	Kstulgis@ferguson-construction.com Kstulgis@ferguson-Construction		614-400-8766
MATT ALLSHOUSE	ELFORD	MALLSHOUSE@ELFORD.COM		614-216-2170
Also present were: Matt Simpson from Preservation Parks of Delaware County (msimpson@preservationparks.com) Tyler Young from Schooley Caldwell (tyoung@schooleycaldwell.com) Kalpa Baghasingh from Schooley Caldwell (kbaghasingh@schooleycaldwell.com)				

finish". All spaces with exposed ductwork are in the ground floor mechanical room, "Ground Floor Shell Space" or "Storage Room 207", none of which require the ductwork to be painted. This requirement will be removed from spec. In addition, PVC jacketing for exposed ductwork will be removed from spec (except for ductwork in attic which needs extra protection). Regarding insulation, I could not find the statement in the spec "all exposed ductwork will be wrapped". The intent of the design is for the following ducts to be "internally lined (so no external insulation unless it passes up into the attic space). (Spec 23 31 10): "1) all return air ductwork to the fan coil units, 2) all transfer air ductwork. Additional ductwork insulation requirements (Spec 23 07 05) calls for the following ductwork to be insulated: "1) supply (this includes fan coil supply and DOAS supply), 2) return/exhaust ducts and transfer air duct in the attic space". The insulation spec says to wrap the following : 1) exposed round, 2) concealed round, 3) concealed un-lined rectangular. The insulation spec says to provide board insulation for the following: 1) exposed un-lined rectangular. The insulation spec says to provide closed-cell elastomeric for the following : 1) exposed ductwork in the attic.

Q34. [MECHANICAL] We do not make double wall plenums. I can quote them as lined though.

A. As an alternate to solid double-wall plenums, we will include the insulation criteria for the Outside Air Intake and Exhaust /Relief plenums. The plenums shall be insulated same as exposed, un-lined rectangular ductwork. Minium insulation thickness to be 2" with a minimum R-Value of 8.7. Please do not use internal lining on these high moisture areas.

Q35. [MECHANICAL] Should the outside air drops through the floor from the basement to first floor be stainless? Note: we do not do No. 4 finished duct. Is this the only stainless to be quoted on these prints?

A. No, there is no requirement for stainless steel ductwork other than the bottom panel of the outside air plenum boxes as identified in Section 23 21 10

Q36. [ELECTRICAL] The main service does not show a neutral in the feeder schedule. This should have one since this is a 3 phase 4 wire system.

A. Correct, the feeder will be corrected to 29A to show a neutral. Omit the ground conductor.

Q37. [ELECTRICAL] With the DBA panel located at the opposite wall of the meter, should this service have a 600A disconnect on the outside of the building?

A. No,, since the service conductors will be fed from underground as shown on the site plan, a disconnect is not needed outside.

Q38. [ELECTRICAL] Since this is a 600A service, should we have a CT cabinet mounted on the outside of the building?

A. Correct, the metering cabinet (per AEP requirements) is shown on the north wall on the site plan and on the one line diagram. We anticipate metering configuration will be similar to AEP diagram F012B of the AEP Meter and Service Guide. Will add clarification on metering enclosure size.

SECTION 03 35 43

POLISHED AND STAINED CONCRETE FINISHING

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes:

1. Grinding of the slab surface to receive colored reactive, penetrating liquid hardener/densifier.
2. Application of colored reactive, penetrating liquid hardener to interior concrete.
3. Refining the interior concrete slab with a diamond-impregnated burnishing system.
4. Application of protective surface treatment.

B. Related Requirements:

1. Section 03 30 00 – Cast-in-Place Concrete for concrete floors.

1.02 REFERENCES

A. American Concrete Institute (ACI) – Specification for Polished Concrete Slab Finishes ACI 310.1-20.

B. American National Standard Institute / National Floor Safety Institute:

1. ANSI B101.1-Test Method for Measuring Wet SCOF of Common Hard-Surface Floor Materials.

1.03 DEFINITIONS

A. Design Reference Sample: Sample designated by Architect in the Contract Documents that reflects acceptable surface quality and appearance of polished concrete.

1.04 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Pre-Installation Meeting: Convene before the start of work on new concrete slabs, patching of existing concrete slabs and start of application of concrete finish system.
2. Require attendance of parties directly affecting work of this Section, including the Owner's Representative, Contractor, Architect, concrete installer, and applicator. Meeting should only convene when required parties are present.
3. Review the following:

   a. Physical requirements of completed concrete slab and slab finish.
   b. Locations and time of test areas.
   c. Protection of surfaces not scheduled for finish application.
   d. Surface preparation.
   e. Application procedure.
   f. Final appearance of dyed concrete.
   g. Quality control.
   h. Cleaning.
   i. Protection of finish system.
   j. Coordination with other work.

1.05 ACTION SUBMITTALS

A. Prepare the following submittals in accordance with Section 01 33 00 – Submittal Procedures.

1. Product Data: For each type of product.
2. Samples for Initial Selection: For each type of product requiring color selection.
3. Samples for Verification: For each type of exposed color.

1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Material Certificates: For each of the following, signed by manufacturers:

1. Repair materials.
2. Stain materials.
3. Concrete sealer.

1.07 QUALITY ASSURANCE

A. Manufacturer: Minimum 10 years' experience producing concrete coatings.

B. Installer Qualifications:

1. Concrete Polishing Council (CPC) Craftsman Supervisor or equivalent on site during work.
2. Installer to be familiar with the specified requirements and the methods needed for proper performance of work of this section. Applicator must have availability of proper equipment to perform work within scope of this project on a timely basis. Applicator should have successfully performed a minimum of 5 projects of similar scope and complexity.

C. Mockups: Before casting concrete, build mockups to verify selections made under Sample submittals and to demonstrate typical joints, surface finish, tolerances, and standard of workmanship. Build mockups to comply with the following requirements, using materials indicated for the completed Work:

1. Notify the above parties one week in advance of date and time when mock-up will be completed.
2. Require attendance of parties directly affecting work of this Section, including the Contractor, Architect, applicator, and Owner's Representative.
3. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
4. Multiple mock-ups may be required until desired finish is achieved.
5. Demonstrate the materials, equipment and application methods to be used for work specified herein in pre-approved location approximately 50 sq. ft. in area or as directed by the Architect.
6. Retain approved mock-up during construction as a standard for judging the completed work. Areas may remain as part of the completed work.

D. Sample Test Area: GemTone Stain

1. Test a minimum 4 ft. by 4 ft. area on each type of surface to confirm suitability and desired results. Use the manufacturer's application instructions. Include representative imperfections in the test area. Floor composition and surface finish affect final color. Let test area of protective treatment cure before inspection. Keep test panels available for comparison throughout the project.

1.08 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in original containers, with seals unbroken, bearing manufacturer labels indicating brand name and directions for storage.

B. Store concrete hardener/densifier and surface protectant treatment in environment recommended on published manufacturer's product data sheets.

1. Store containers upright in a cool, dry, well-ventilated place, out of the sun with temperature between 40 and 100 degrees F (4 and 38 degrees C).
2. Protect from freezing.
3. Store away from other chemicals and potential sources of contamination.
4. Keep lights, fire, sparks and heat away from containers.
5. Do not drop containers or slide across sharp objects.
6. Do not stack pallets more than three high.
7. Keep containers tightly closed when not in use.

1.09 PROJECT CONDITIONS

A. Environmental limitations:

1. Comply with manufacturer's written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting performance and finishing requirements.

B. Close areas to traffic during floor application and after application for time period recommended in writing by manufacturer.

C. Protect the completed slab to prevent damage by the other trades during floor completion.

D. Temperature Limitations:

1. Apply when surface and air temperature are between 40 degrees F (4 degrees C) and above 95 degrees F (35 degrees C) unless otherwise indicated by manufacturer's written instructions.
2. Apply when surface and air temperatures are expected to remain above 40 degrees F (4 degrees C) for a minimum of 8 hours after application, unless otherwise indicated by manufacturer's written instructions.

E. Apply when air conditions are calm to minimize surface treatment contacting surface not intended to be finished.

F. Do not apply to frozen substrate. Allow adequate time for substrate to thaw, if freezing conditions exist before application.

PART 2 – PRODUCTS

2.01 MANUFACTURER

1. Basis of Design: Prosoco
2. Substitutions: Section 01 25 00 – Substitutions

2.02 MATERIALS

A. Pre-Densifier Concrete Cleaner: Cleaner to remove dirt, oil, grease, and other stains from existing slab surface.

1. Product: Consolideck Cleaner/Degreaser manufactured by PROSOCO, Inc., Lawrence, KS.

B. Penetrating Concrete Hardener/Densifier: Lithium silicate hardener/densifier.

1. Product: Consolideck LS, manufactured by PROSOCO, Inc.
2. Coefficient of Friction: Greater than 0.60 dry, Greater than 0.60 wet when tested in accordance with ASTM C1028.
3. Adhesion: Greater than 10 percent increase in pull-off strength when compared to an untreated sample when tested in accordance with ASTM D4541.
4. Water Vapor Transmission: 100 percent retained when compared to untreated samples when tested in accordance with ASTM E96/96M Method B (Water Method).
5. UV Stability: No degradation or yellowing of material when tested in accordance with ASTM G154.

C. Translucent Concrete Dye: General Purpose water-carried, penetrating, translucent colored dye.

1. Product: Consolideck GemTone Stain manufactured by PROSOCO Inc.

D. Interior Concrete Protective Treatments:

1. General Purpose medium gloss film forming premium sealer, lithium silicate hardener/densifier.

a. Product: Consolideck PolishGuard, manufactured by PROSOCO, Inc.

2. Coefficient of Friction: Greater than 0.60 dry, greater than 0.60 wet when tested in accordance with ASTM C1028.
3. Stain Resistance: Achieve limited or no adverse effects when tested in accordance with ASTM D1038.
4. UV Stability: No degradation or yellowing of material when tested in accordance with ASTM G154.

2.03 EQUIPMENT

A. Auto Scrubber Machine: For cleaning operations.

B. Hand Grinder or stand-up edger for edge grinding/polishing.

C. Polishing Equipment:

1. Dry grinding/polishing machines shall include a dust extraction system, including HEPA filtration vacuum.

D. Diamond Segments:

1. Use heads from the same manufacturers throughout the entirety of the project.

E. Diamond Heads Types:

1. Metal Diamonds: 60, 80 or 150.
2. Hybrid Style Diamonds: 50 or 100.
3. Resin Bonded, Phenolic Diamonds: 100, 200, 400, 800, 1300 and 3000 (if necessary).

F. Burnishing Machine and Burnishing Pads to produce specified results.

1. Burnishing Machine: High speed burnisher, generating pad speeds of 1,500 RPM or higher, as recommended by protective treatment manufacturer. Dust skirt must be installed at time of work.
2. Burnishing Pads: as recommended by protective treatment manufacturer.
    a. White Burnishing Pad, non-abrasive,
    b. Consolideck Heat Pad manufactured by PROSOCO, Inc

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine substrate with installer present for conditions affecting performance of finish. Correct conditions detrimental to timely and proper work. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.

B. Do not begin installation until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.02 PREPARATION

A. Clean dirt, dust, oil, grease and other contaminants that interfere with penetration or performance of specified product from surfaces. Use appropriate concrete cleaners approved by the concrete surface treatment manufacturer where necessary. Rinse thoroughly using pressure water spray to remove cleaner residues. Allow surfaces to dry completely before application of product.

B. Repair, patch and fill cracks, voids, defects and damaged areas in surface as approved by the Architect. Allow repair materials to cure completely before application of product.

C. Variations in substrate texture and color will affect final appearance and should be corrected prior to application of sealer/hardener system and the polishing steps.

D. Protect surrounding areas prior to application. If product is accidentally misapplied to adjacent surfaces, flush with water immediately before material dries.

E. Avoid contact in areas not to be treated. Avoid contact with metal, glass and painted surfaces.

F. Seal open joints in accordance with Section 07 92 00 –Joint Sealants.

G. Apply specified sealants and caulking and allow complete curing before application of penetrating concrete hardener/densifier.

H. Do not proceed until unsatisfactory conditions have been corrected.

3.03 CONCRETE GRINDING, HONING, AND POLISHING

A. Adhere to industry standard grinding, honing, and polishing procedures for dry and wet grinding and honing..

B. Scrub and rinse slab surface with clean water and vacuum with auto-scrubber between and after final polishing passes.

C. Sequential progression of diamond polishing steps shall be required and limited to no more than double the grit value of the previous diamonds used.

D. Overlap adjacent polishing passes by 25 percent.

E. Perform each pass perpendicular to the other pass north/south then east/west; multiple passes may be needed.

F. Progressively grind, hone and polish the slab surface utilizing approved diamond segments as necessary to produce Finishing requirements.

1. Apply liquid concrete repair material to fill gaps, voids and pop-outs during grinding operation per manufacturer's published recommendations.
2. Apply cutting aid chemical during the initial wet grinding process per manufacturer's published recommendations. (Typically before the 200 grit resin or lower)

3.04 APPLICATION OF PENETRATING TRANSLUCENT DYE AND CONCRETE HARDENER/DENSIFIER

A. Areas to be treated:

1. Interior Concrete, as scheduled.

B. Diamond grind and polish concrete floor to equivalent of #200 grit resin diamonds.

C. Clean the floor with a floor-scrubbing machine and fresh water and allow to dry.

D. Lightly wet a clean microfiber pad with prepared GemTone Stain.

E. Using a low-pressure sprayer with conical spray pattern, apply enough prepared GemTone Stain to wet the surface without producing puddles. Do not over apply.

F. Using the microfiber pad prewet with prepared GemTone Stain, spread the spray-applied GemTone Stain to ensure uniform wetting and color distribution. Continue spray-application and maintain a wet edge. Work the color into the surface to minimize streaks and patterns.

G. Allow to dry thoroughly, 60 minutes minimum. Do not walk on freshly stained floor.

H. Use a floor scrubbing machine and fresh water to remove excess stain residue. Allow to dry.

I. If more color or color variations are desired, apply a second coat of GemTone Stain pursuant to Steps A-F above. Each coat must dry for one hour minimum prior to using an auto-scrubber.

J. Using a floor scrubbing machine and fresh water, remove excess stain residue. Allow to dry.

K. Using a low-pressure sprayer, apply a single coat of Consolideck® LS®. Apply sufficient material to wet the surface without producing puddles. Use a clean, soft-bristle push broom or microfiber pad to spread the LS® evenly and achieve uniform wetting. Avoid spreading once drying begins. Scrubbing is not necessary.

L. Allow the treated concrete floor to dry. Proceed to Application Instructions for Sealing the concrete floor.

3.05 APPLICATION OF INTERIOR CONCRETE PROTECTIVE TREATMENT

A. Application of a no gloss modified silane blend, penetrating clear reactive oil and water protective treatment with a VOC content of 350 g/L or less:

1. Apply per manufacturer's published recommendations to clean, dry slab at the completion of mechanically polishing the slab surface.
2. Apply in a single application in a well-ventilated area, at an estimated coverage rate of 200 to 600 square feet per gallon. Use enough material to keep the surface wet for about a minute before penetrating. Do not atomize.
3. Remove all puddles thoroughly per manufacturer's recommendations until protective treatment completely penetrates the surface.
4. Wipe down excess with a clean, absorbent towel.
5. Do not burnish slab.

3.06 SLAB PROTECTION

A. Protect finished floors to prevent damage including staining, gouges and scratching by construction traffic and activities until possession.

B. Do not drag or drop equipment or material across the slab which will scratch or chip it.

C. Inspect tires for debris prior to use on slab. Remove embedded items which may cause damage to floor slab.

D. Clean up spills on slab immediately. Provide cleaning chemicals and absorptive materials.

E. Develop a concrete protection procedure which addresses the following procedures:

1. Communication of protection plan to subcontractors and vendors.
2. Procedures for cleaning up slab spills, including use of and availability of cleaning chemicals and absorptive materials at Site.

F. Provide a clean slab using concrete maintenance cleaner within an auto scrubber, equipped with soft nylon brushes, in accordance with manufacturer's recommendations

3.07 FINISHING APPEARANCE

A. Appearance:

1. Interior exposed finished slab areas must consist of the following:

   a. Slab surface must meet the desired sheen, as discussed in Pre-Installation meeting and be consistent with approved Mock-up.
   b. Slab surface must have a consistent look and exhibit a finish that has no evidence of streaking or burnish marks.
   c. White residue or hazy appearance is not acceptable.
   d. Exposure of aggregate beyond CPAA Class B-Fine Aggregate is not acceptable.

2. Interior exposed finished slab areas must consist of the following CPAA Gloss Level:

   a. Finished Gloss Level 1 – Flat Gloss Appearance.

3.08 CLEANING AND PROTECTION

A. Protection: Do not cover, but protect floor area from paint and other contaminates that could inhibit the stain.

END OF SECTION

SECTION 08 80 00

GLAZING

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes glass and glazing for the following applications, including those specified in other Sections where glazing requirements are specified by reference to this Section.

1. Glazed curtain wall assemblies
2. Glazed entrances and storefronts.
3. Interior glazing

B. Related Sections:

1. Section 08 11 00 – Metal Doors and Frames
2. Section 08 14 33 – Stile and Rail Wood Doors
3. Section 08 41 13 – Aluminum-Framed Entrances and Storefront
4. Section 08 44 13 – Glazed Aluminum Curtain Walls

1.02 DEFINITIONS

A. Manufacturer: A firm that produces primary glass or fabricated glass as defined in referenced glazing publications.

B. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

C. Deterioration of Laminated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

D. Deterioration of Insulating Glass: Failure of the hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1.03 DESIGN REQUIREMENTS

A. Provide glass and glazing that has been produced, fabricated and installed to withstand normal thermal movement, and wind load and impact loading (where applicable), without failure including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glass and glazing materials and other defects in the work.

1. Normal thermal movement is defined as that resulting from an ambient temperature range of 120 degrees F and from a consequent temperature range with glass and glass framing members of 180 degrees F.

B. Glass Design: Provide glass lites in the thickness and strengths (annealed or heat-treated) to meet or exceed the following criteria based on analysis of Project loads and in-service conditions.

1. Minimum glass thickness of lites composed of annealed or heat-treated glass are selected so the worst-case probability of failure does not exceed the following:

a. Eight (8) lites per 1000 for lites set vertically or not over 15 degrees off vertical and under wind action.
b. One (1) lite per 1000 for lites set over 15 degrees off vertical and under action of wind or snow.
c. Specified Design Wind Loads: As indicated on the Structural Drawings
d. Specified Design Snow Loads: As indicated on the Structural Drawings, but not less than snow loads applicable to Project, required by ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 7, "Snow Loads.

e. Minimum Glass Thickness for Exterior Lites: Not less than 6mm
f. Thickness of Tinted and Heat-Absorbing glass: Provide the same thickness of each tint color indicated throughout Project.

C. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:

1. Center-of-glass U-values: NFRC 100 methodology using LBL-35298 WINDOW 5.2 computer program, expressed as BTU/sq ft x h x deg F (W/sq. m x K).
2. Center-of-glass solar heat gain coefficient: NFRC 200 methodology using LBL-35298 WINDOW 5.2 computer program
3. Solar Optical Properties: NFRC 300.

1.04 ACTION SUBMITTALS

A. Prepare the following submittals per requirements of Section 01 33 00 – Submittal Procedures.

B. Design Data: Submit glass manufacturer's analysis demonstrating compliance with requirements for wind load, thermal stresses, snow loads (where applicable), and center deflection.

1. Identify each glass type as listed in Part 4 of this Section and the maximum design wind load it can accommodate.
2. Each glass type shall indicate glass thickness and whether glass is annealed, heat-strengthened or tempered.
3. Submit energy calculations indicating that selected glass meets or exceeds the specified U-value requirements for both glazing and overall assembly performance, including opaque spandrel glazing.

C. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1. Low-emissivity coating, including data and table on performance criteria verifying compliance with this specification.
2. Interlayer for laminated glass.
3. Translucent frit glass of each type required. (Dot pattern and solid frit). Samples: Submit 12-inch square representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

D. Shop Drawings:

1. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
2. Glazing Instructions: Submit detailed instructions for the installation of glass. Instructions and explanatory details shall include the following:

a. Sequence of installation, including cleaning procedures and priming (if required).
b. Method of installation, including list of glazing materials
c. Location of specific items, such as the setting blocks and any special instructions as may be required.

E. Samples for Initial Selection: Submit spandrel glass manufacturer's actual color samples showing full range of standard colors available. Submit fritted glass with translucent dot patterns at 40%, 50% and 60% coverage for selection.

F. Samples for Verification: Submit 12 inch square samples, including edge condition for exposed glass panels. Glass products listed below form the basis of design. Architect may require additional samples with manufacturer's standard product line in order to satisfy design intent.

1. Insulating glass units (IGU).
2. Insulating glass units (IGU) with both translucent dot pattern and a solid translucent frit.
3. Interlayer for laminated glass.

1.05 INFORMATIONL SUBMITTALS.

A. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.

1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.

B. Qualification Data: For installers.

C. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.

D. Product Test Reports: For each of the following types of glazing products:

1. Coated float glass.
2. Fire-resistive glazing products.
3. Insulating glass.
4. Glazing sealants.
5. Glazing gaskets.

E. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.

1. Coated Glass: Manufacturer's 10-year warranty.
2. Insulating Glass: Manufacturer's 10-year warranty.

1.06 QUALITY ASSURANCE

A. Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this section or in referenced standards.

1. NGA Publications:

a. GANA Glazing Manual (2023)
b. Laminated Glazing Reference Manual (2019)

B. Safety Glazing Standard: Provide type of products which comply with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials.

1. Subject to compliance with requirements, provide safety glass permanently marked with certification label of Safety Glazing Certification Council (SGCC) or other certification agency acceptable to authorities having jurisdiction.

C. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers).

D. Insulating Glass Certification Program: Provide insulating glass units permanently marked either on spacers or at least one component pane of units with appropriate certification label of Insulating Glass Certification Council (IGCC).

E. To ensure consistent quality of appearance and performance, provide materials produced by a single manufacturer or fabricator for each kind and conditions of glass indicated and composed of primary glass obtained from a single source for each type and class required.

F. Preconstruction Compatibility and Adhesion Testing: Submit samples of all glass, gaskets, glazing accessories and glass framing members proposed for use in contact with, or proximity of, glazing sealants, to sealant manufacturer for compatibility and adhesion testing in accordance with sealant manufacturer's standard testing methods and the following requirements:

1. Submit each type and finish of glass framing member and of each type, class, kind, condition and form (monolithic, laminated, insulating units) of glass for adhesion testing and one sample of substrates (gaskets, setting blocks and spacers) for compatibility testing.
2. Schedule sufficient time for testing and analysis of results to prevent delay in the progress of the work.
3. Investigate materials failing compatibility or adhesion tests and obtain sealant manufacturer's written recommendations for corrective measure, including use of specially formulated primers.

G. Installation: Performed only by experienced glaziers.

1.07 DELIVERY, STORAGE, AND PROTECTION

A. Protect glass and glazing materials during delivery, storage, and handling to comply with manufacturer's directions and as required to prevent edge damage to glass, and damage to glass and glazing materials from effects of moisture including condensation, of temperature changes, and from other causes.

1. Handle and install glass in accordance with guidelines set forth in the NGA GANA Glazing Manual.

B. Deliver, store and handle glazing materials in accordance with manufacturer's recommendations to prevent damage and deterioration.

C. Deliver glass with manufacturer's labels intact. Do not remove labels until glass has been installed.

D. Deliver glazing compounds and sealants in manufacturer's unopened labeled containers.

1.08 PROJECT CONDITIONS

A. Field verify measurements and conditions of installation.

B. Examine all details. Provide proper fitting to details indicated.

C. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 degrees F (4.4 degrees C).

D. Protect work from damage during and after installation until project acceptance.

1.09 WARRANTY

A. Glass Installation: Submit installer's written warranty agreeing to repair or replace glass and glazing which fails to remain weathertight within five years of the date of acceptance of the work. warranty shall include sealants within the installation.

B. Manufacturer’s Special Warranty on Insulating Glass: Written warranty, made out to Owner and signed b0y insulating-glass manufacturer agreeing to furnish replacements for insulating-glass units that deteriorate as defined in “Definitions” Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years from date of Contract Completion.

PART 2 – PRODUCTS

2.01 ACCEPTABLE GLASS MANUFACTURERS

A. Primary Glass; provide products from one of the following:

1. Pilkington North America, Toledo, OH
2. Viracon, Owatonna, MN
3. Vitro Architectural Glass, Cheswick, PA
4. Guardian Industries, Carleton, MI

2.02 GLASS PRODUCT STANDARDS

A. General: Unless indicated otherwise, reference numbers used throughout this Specification Section are from ASTM C 1036 and C 1048. When the end product involves one or more categories, both, the primary glass specifications and the specifications of the additional features or construction shall be met.

2.03 GLASS PRODUCTS

A. Annealed Float Glass (Clear): ASTM C1036, Type I (transparent glass flat), Class 1 (Clear), Quality q3 (glazing select) except as noted otherwise.

B. Heat-Treated Glass: ASTM C1048, Kind as indicated below, Condition A (uncoated surfaces) or Condition C (other coated glass), Type I (transparent glass flat), Class 1 (Clear), Quality q3 (glazing select); and the safety criteria of ANSI Z97.1-1975 and the CPSC 16 CFR 1201.

1. Heat Strengthened as scheduled: Kind HS; surface compression values shall not exceed 7,500 psi.
2. Full Tempered as scheduled: Kind FT; minimum surface compression shall be 10,000 psi.
3. Coated Glass: Low-emissivity coating as hereinafter specified.
4. Fabrication Process: Use horizontal oscillating roller hearth process with roll-wave distortion parallel to bottom edge of glass as installed to limit ream, strings and distortions after treatment to 1/2 acceptable under ASTM C1036.

C. Insulating Glass: Factory assembled low "E" units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, complying with requirements of IGCC other requirements specified:

1. Dual-Seal, panes of glass enclosing a hermetically sealed dehydrated air space and complying with ASTM E774 for performance classification indicated as well as with other requirements specified for glass characteristics, air, space, sealing system, sealant, space material, and desiccants.

    a. Total Unit Thickness: 1 inch.
    b. Thickness of Each Pane: 1/4 inch
    c. Air Space Thickness: 1/2 inch

2. Exterior Pane of Glass: Clear tempered glass with low-emissivity coating on #2 surface except as scheduled.
3. Interior Pane of Glass: Clear and tempered glass where scheduled.
4. Sealing System: Provide unit edge seals meeting requirement of ASTM E 773, with aluminum spacers having mitered corners and silicone sealant for glass-to-spacer seals. Manufacturer's standard dual seal, with polyisobutylene and silicone polyisobutylene and hotmelt butyl polyisobutylene and polyurethane primary and secondary.

    a. Desiccant: Manufacturer's standard.
    b. Either Molecular Sieve or Silica Gel or blend of both.
    c. Spacer Material: Manufacturer's standard metal, with anodized finish.

5. Factory glazing shall be in accordance with manufacturer’s standard requirements. Glass shall be factory-labeled. Non-labeled glass will be rejected.
6. Glazing materials shall be compatible with aluminum and those sealants and sealing materials used in the composite structure which have direct contact with the gasket.
7. Standard exterior and interior glazing gaskets shall be a dry glazed elastomer in accordance with ASTM C509-91.

2.04 STOREFRONT AND CURTAIN WALL INSULATED VISION-GLASS UNITS

A. Low-Emissivity Coating: Low-emissivity coated glass produced by sputter coating technology applied in a vacuum chamber. Coating shall be applied to the #2 surface. Low-emissivity coated glass shall meet the following performance values; values listed have been based on Viracon (Basis of Design) VE1-2M (clear outboard and inboard glass) as indicated below.

B. Procedures as determined by Architect’s approval, meeting both performance and aesthetic values.

C. Basis of Design Vision Glass: Low-e coated, clear insulating glass: (“VE1-2M,”by Viracon)

1. Overall unit Thickness: 1 inch
2. Outdoor Lite: Heat-strengthened float glass:

    a. Thickness: 1/4 inch
    b. Low-E Coating: Coating on second (#2) surface

3. Interspace Content: Air

    a. Thickness: 1/2 inch

4. Indoor Lite: Heat-strengthened clear float glass:

    a. Thickness: 1/4 inch

5. Visible Light Transmittance: 70 percent
6. Winter Nighttime U-Factor: 0.29 Btu/(hr x sq ft x ºF)
7. Summer Daytime U-Factor: 0.26 Btu/(hr x sq ft x ºF)
8. Reflectance (Exterior): 11 percent
9. Reflectance (Interior): 12 percent
10. Shading Coefficient: 0.44
11. Solar Heat Gain Coefficient: 0.38 maximum
12. LSG: 1.84
13. Provide safety glazing labeling.

D. Solarban 60 by PPG Industries.

1. Visible Light Transmittance: 70 percent.
2. Winter Nighttime U-Factor): 0.29.
3. Reflectance (Exterior): 11 percent.
4. Shading Coefficient: 0.44.
5. Solar Heat Gain Coefficient: 0.38.

E. SN-68 by Guardian Industries.

1. Visible Light Transmittance: 68 percent.
2. Winter Nighttime U-Factor: 0.29.
3. Reflectance (Exterior): 10 percent.
4. Shading Coefficient: 0.43.
5. Solar Heat Gain Coefficient: 0.37.

2.05 INTERIOR GLASS

A. Interior Glass Types:

1. Interior Glass Type: Minimum 6 mm thick clear, tempered safety glass.

2.06 GLAZING MATERIALS AND ACCESSORIES

A. Provide products of type indicated and complying with the following requirements:

1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
2. Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants and tapes which have performance characteristics suitable for applications indicated and conditions at time of installation.
3. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C920 requirements, including those for Type, Grade, Class and uses.

B. Glazing Sealants and Compounds:

1. Provide glazing sealants of color indicated, when not indicated as selected by Architect from manufacturer's standard colors. Comply with manufacturer's recommendations for selection of hardness. Select materials and variations or modifications for compatibility with surfaces contacted in the installation.
2. Exterior Glazing: One part silicone rubber glazing sealant, complying with ASTM C920, non-sag. Provide acid type recommended by manufacturer where only non-porous bond surfaces are contacted, provide non-acid type recommended by manufacturer where one or more porous bond surfaces are contacted.
3. Interior Glazing: Butyl rubber glazing sealant: Compound of polymerized butyl rubber and inert fillers, solvent based, 95 percent solids, formed and coiled in release paper, tack-free in 24 hours, paintable, non-staining.

C. Miscellaneous Glazing Materials: Provide materials with proven record of compatibility with surfaces contacted in installation.

1. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.

2. Setting Blocks: 100 percent silicone material with a Shore A durometer hardness of 85 plus or minus 5.
3. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

D. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 804.3 tape, where indicated.
2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

E. Expanded Cellular Glazing Tape: Closed-cell, PVC foam tape; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:

1. Type 1, for glazing applications in which tape acts as the primary sealant.
2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.07 FABRICATION

A. Factory fabricate glass and glazing products in sizes required to glaze openings indicated for project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements. Provide thickness indicated, or if not otherwise indicated, as recommended by glass manufacturer for application indicated.

B. Insulating glass: Provide manufacturer's standard units. Provide glass lights heat strengthened, except where fully tempered lights are indicated.

C. Heat strengthened and tempered glass:

1. Provide glass of type indicated, heat treated to strengthen glass in bending to not less than 2.0 times annealed strength for the strengthen glass and to not less than 4.5 times annealed strength for fully tempered glass.
2. Cut glass to required size before tempering. Comply with Glass Tempering Association recommendations.
3. Provide tongless tempered glass. When size limitations require tong edges, support each piece during tempering process so that tong marks will be concealed in the glazing system.

D. Safety Glazing: Provide fully tempered safety glass at location scheduled on the drawings as scheduled.

1. Provide fully tempered glass in exterior and interior doors and at panels adjacent to doors as indicated.
2. Provide fully tempered panels at other scheduled locations as indicated on the drawings of required by code.

PART 3 – EXECUTION

3.01 INSPECTION

A. Examine substrates, structure and installation conditions. Do not proceed with glazing work until unsatisfactory conditions have been corrected.

B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

A. Protect glass from edge damage at all times during and after installation. Do not cut, seam, nip or abrade tempered glass.

B. Inspect each piece of glass immediately before installation and eliminate any which have observable edge damage or face imperfections.

C. Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other pieces.

D. Clean glazing channels and other framing members to receive glass immediately before glazing. Remove loose coatings. Apply primer to joint surfaces receiving sealants when recommended by sealant manufacturer.

3.03 INSTALLATION

A. Comply with combined recommendations and technical reports of manufacturers of glass and glazing materials used and with National Glass Association “GANA Glazing Manual," except when more stringent requirements are indicated.

B. Glazing channel dimensions as shown are intended to provide for necessary minimum bite on the glass, minimum edge clearance, and adequate sealant thicknesses with reasonable tolerances. The glazier is responsible for correct glass size for each opening within the tolerances and necessary dimensions established.

1. Unless noted otherwise, clearances are 3/16 inch face clearance, ¼ inch minimum edge clearance, and ½ inch minimum glass bite.

C. Comply with combined recommendations of glass manufacturer and manufacturer of sealants and other materials used in glazing and their technical representatives except where more stringent requirements are shown or specified.

D. Inspect each piece of glass immediately before installation and eliminate those which have observable edge damage or face imperfections.

E. Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw, and bow oriented in the same direction as other pieces.

3.04 GLAZING

A. Install setting blocks of proper size at quarter points of sill rabbet. Set blocks in thin course of the heel bead compound. Block shall be 1/16 inch less than the channel width.

B. Provide spacers inside and out and of proper size and spacing for glass sizes larger than 50 united inches, except where gaskets are used for glazing. Provide 1/8 inch minimum bite of spacers on glass and use thickness equal to sealant width; except with sealant tape, use thickness slightly less than final compressed thickness of tape.

C. Voids and Filler Rods: Prevent exudation of sealant or compound by forming voids or installing filler rods in the channel at the heel of jambs and head (do not leave voids in the sill channels) except as otherwise indicated, depending on light size, thickness and type of glass, and complying with manufacturer's recommendations.

D. Do not attempt to cut, seam, nip, or abrade glass which is tempered, heat strengthened, or coated.

E. Force sealants into channel to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.

F. Tool exposed surfaces of glazing liquids and compounds to provide a substantial "wash" away from the glass. Install pressurized tapes and gaskets to protrude slightly out of the channel, so as to eliminate dirt and moisture pockets.

G. Clean and trim excess glazing materials from the glass and stops or frames promptly after installation and eliminate stains and discoloration.

H. Where wedge shaped gaskets are driven into one side of the channel to pressurize the sealant or gasket on the opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when subjected to dynamic movement. Anchor gasket to stop with matching ribs or by proven adhesives including embedment of gasket tail in cured heel bead.

3.05 FIELD QUALITY CONTROL

A. Watertight and airtight installation of exterior glass and glazing is required. Each installation shall withstand normal temperature changes, wind loading, impact loading (for operating doors) without failure

including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the work.

3.06 PROTECTION AND CLEANING

A. Protect glass from breakage immediately upon installation by attachment of streamers to framing held away from glass. Do not apply markers of nay type to surfaces of tinted and reflective glass. Remove non-permanent labels and clean surfaces.

B. Maintain glass in a reasonably clean condition during construction, so that it will not be damaged by corrosive action and will not contribute (by wash off) to the deterioration of glazing materials and other work. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkaline deposits, or stains; remove as recommended by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents, and vandalism, during construction period.

E. Wash and polish glass on both faces not more than four days before acceptance of the work. Comply with glass manufacturer's recommendations for final cleaning.

3.07 GLAZING SCHEDULE

A. Tempered glazing for both curtainwall and storefront

Glass Type (GL-1):	**Insulating Units** (Units with Bird-Friendly glass)
Total Thickness:	1 inch nominal.
Exterior Pane:	Clear tempered glass, 1/4 inch thick, with Walker/Pilkington pattern 714 Aviprotek T coating (vertical pattern) on surface #1
Air Space:	1/2-inch, nominal filled with argon gas
Interior Pane:	Clear tempered glass, 1/4 inch thick with low “E” coating on surface #3
Reference	(see https://www.walkerglass.com/products-options/aviprotek-t-pattern-714/)

B. "Annealed" non-tempered glazing for both curtainwall and storefront

Glass Type (GL-2):	**Insulating Units** (Units with Bird-Friendly glass)
Total Thickness:	1 inch nominal.
Exterior Pane:	Clear annealed glass, 1/4 inch thick, with Walker/Pilkington pattern 714 Aviprotek T coating (vertical pattern) on surface #1
Air Space:	1/2-inch, nominal, filled with argon gas
Interior Pane:	Clear annealed glass, 1/4 inch thick.
Reference	(see https://www.walkerglass.com/products-options/aviprotek-t-pattern-714/

C. Exterior Monolithic Glass

GLASS TYPE (GL-3)	**Tempered Glass** (Exterior Overhead door OHD1)
Total Thickness	1/2 inch thick
	Clear tempered glass with bird glass film

D. Interior Monolithic glass.

Glass Type (GL-4):	**Tempered Glass (**Vestibule Interior Storefront, door, and sidelight/transom**)**
Total Thickness:	1/4 inch.
	Clear tempered glass

E. Glazing for windows:

GLASS TYPE (GL-5)	**Insulating Units** (Windows)
Total Thickness	3/4 inch nominal
Exterior Pane:	Clear annealed glass, 1/8 inch thick, with Low “E” coating on #2 surface
Air Space:	1/2 inch, nominal filled with argon gas
Interior Pane:	Clear annealed glass, 1/8 inch thick

END OF SECTION

SECTION 23 07 05
HVAC INSULATION

PART 1 GENERAL

1.01 DESCRIPTION

A. Insulate the following:
   1. Piping:
      a. Condensation drain
      b. Refrigerant lines
   2. Ductwork:
      a. All Supply (fan coil supply and DOAS supply)
      b. Return/Exhaust ducts in the attic space and Transfer Air ducts in the attic space (within the truss space of the new addition). Even if the ductwork is internally lined, provide additional exterior insulation for ductwork in the attic as indicated in this spec.
      c. Outside Air and Relief/Exhaust Plenums (in lieu of double-wall ductwork construction).
      d. Outside Air Ductwork (DOAS OA intake ductwork)

B. Refer to Section 23 31 10, "Low Velocity Ductwork" for duct liner.
   1. The following rectangular ductwork shall be lined for sound attenuation purposes:
      a. All return air ductwork to the fan coil units.
      b. All transfer air ductwork.

1.02 QUALITY ASSURANCE

A. Indoor pipe and duct insulation shall have a flame-spread rating not exceeding 25, a smoke-developed rating not exceeding 50, and a fuel-contributed rating not exceeding 50. All insulation accessories shall have similar ratings. All rating procedures shall meet the standards set in ASTM E-84, NFPA 255, and UL 723.

B. Install insulation to according to "Commercial and Industrial Insulation Standards," as published by the Midwest Insulation Contractor's Association, latest edition.

C. Insulation values shall be in accordance with the State Energy Codes.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Protection: Leave insulation boxed and stored until time for use. Elevate and cover material to avoid moisture condensation and physical abuse.

1.04 MANUFACTURERS

A. Fiberglass-based insulation: Owens-Corning, Manson, Knauf, or Johns-Manville.

B. Closed-cell elastomeric insulations: Armacell, Rubatex, or IMCOA.

C. Calcium silicate insulation: Pabco Super Caltemp Gold 1500, or approved equal by Kaylo.

D. Polyisocyanurate insulation: Dow Chemical CompanyPRODUCTS

1.05 ADHESIVES, FINISHES, AND MASTICS

A. Use the following items or equivalent items:
1. Vapor barrier lap adhesive - Foster Drion Contact Bond Cement 85-75
2. Lagging adhesive - Foster 81-42W
3. Metal bonding adhesive - Foster 85-15
4. Indoor vapor barrier finish - Foster 30-80
5. Indoor breather finish - Foster Lagtone 46-50
6. Outdoor vapor barrier mastic - Foster 46-50
7. "Fuse-Seal" sticks and applicator (for polyolefin insulation)

1.06 THERMAL RESISTANCE OF PIPING INSULATION

A. Insulate all piping installed to serve buildings and within buildings in accordance with the minimum pipe insulation as listed in the following table. Pipe insulation not required between control valve and heating coil on runouts when the control valve is within 4 feet of coil and piping is 1 inch or smaller. Condensate system design temperature shall match the saturation temperature of the steam system they drain.

Minimum Insulation Thickness for Pipe Sizes (Inches)

Piping System Types	Fluid Temperature Ranges (°F)	Less than 1	1 to 1-1/4	1 1/2 to 3	4 to 6	8 and Over
Cooling systems:						
Condensate	Above 40	0.5	1.5	1.5	1.5	1.5
Refrigerant	Below 40	1.0	1.5	1.5	1.5	1.5

B. Pipe sizes are nominal dimensions. For piping exposed to outdoor temperatures, increase thickness by 0.5 inches.

1.07 INDOOR PIPING

A. Use fiberglass, heavy-density insulation with all service jacket and pressure sealing lap adhesive on longitudinal and butt strips. Jacket vapor membrane shall have an installed vapor permeance of not more than 0.09 perms. Staple and seal with pressure-sealing lap adhesive on longitudinal and butt strips. Insulation conductivity shall be in accordance with the following table. Condensate system insulation design temperature shall match the saturation temperature of the steam system they drain.

Piping System Types	Fluid Design Temperature Ranges (°F)	Insulation Conductivity Range (Btuh in./ft^3 deg. F)	Mean Rating Temperature (°F)
Cooling systems:			
Condensate	Above 40	0.21-0.27	75
Refrigerant	Below 40	0.20-0.26	50

1.08 EXPOSED INDOOR PIPING UP TO 10 FEET ABOVE NEAREST WALKING SURFACE

A. Insulation same as for indoor piping. Cover with ultraviolet-resistant PVC jacket. Jacket is to be self-extinguishing and have zero fuel contribution. All piping visible inside and outside mechanical room is considered exposed.
   1. Ceel-Co Ceel-Tite 300 Series or Foster Sealfas.

1.09 FITTINGS AND VALVES

A. Premolded PVC covers over molded insulation. Insulation same thickness as on adjoining pipe. Insulation shall have a flame-spread rating not exceeding twenty-five (25) and a smoke-developed rating not exceeding fifty (50). Exception: heating valves and unions, or any components specified to have removable covers.

1.10 OUTDOOR PIPING

A. Insulation type and vapor barrier shall be the same as indoor piping. Increase insulation thickness by 1/2 inch, minimum. Cover with ultraviolet-resistant PVC jacket. Jacket is to be self-extinguishing and have zero fuel contribution.
   1. Ceel-Co Ceel-Tite 300 Series or Foster Sealfas.

1.11 PIPE INSULATING SUPPORT

A. Refer to Section 20 05 45, "Hangers, Supports, and Inserts." The use of thermal protectors as pipe insulation support are noted elsewhere in this Specification. Maintain insulation vapor barrier integrity where inserts are used.

1.12 REFRIGERANT PIPING

A. Insulation for all indoor refrigerant piping shall be the same as for indoor piping.

B. Insulation requirements for all outdoor refrigerant piping shall be the same as for outdoor piping.

C. Option: Flexible elastomeric thermal insulation K=0.27 at 75 degrees F, as manufactured by Armacell, Rubatex, or IMCOA. Indoor insulation must meet a flame-spread rating not exceeding twenty-five (25) and a smoke-developed rating not exceeding fifty (50), as specified in Paragraph 1.02.A.

1.13 INSULATE DUCTWORK AS FOLLOWS

Duct Type	Minimum Insulation Thickness (Inches)	Minimum R-Value (As-installed; not including film resistance)
Concealed-round or rectangular	2	6.0
Exposed-round	1 1/2	4.5
Exposed-rectangular	1	4.3
Exposed-rectangular-outdoors (attic space)	2	8.0
Exposed-round-outdoors (attic space)	2	8.0
Outdoor air intakes & Relief/Exhaust Plenums	2	8.7

1.14 CONCEALED DUCTWORK - ROUND OR UNLINED RECTANGULAR

A. Flexible fiberglass duct wrap laminated to foil-reinforced kraft vapor membrane facing with 2 inch stapling flange, 1.0 pcf density, K=0.27 at 75 degrees F, Owens-Corning Commercial Grade Fiberglass Duct Wrap Type 100. Installed vapor membrane shall be less than 0.09 perms.

1.15 EXPOSED DUCTWORK - ROUND

A. Flexible fiberglass duct wrap laminated to foil-reinforced kraft vapor membrane facing with 2 inch stapling flange, 1.0 pcf density, K=0.27 at 75 degrees F, Owens-Corning Commercial Grade Fiberglass Duct Wrap Type 100. Installed vapor membrane shall be less than 0.09 perms.

1.16 EXPOSED DUCTWORK - UNLINED RECTANGULAR

A. Rigid fiberglass industrial board with foil scrim kraft vapor membrane facing, 6.0 pcf density, K=0.22 at 75 degrees F, Owens-Corning Industrial Type 705. Option: ASJ Jacket. Installed vapor membrane shall be less than 0.09 perms.

1.17 ALL DUCTWORK IN ATTIC AREA

A. Insulation material shall be a flexible, closed-cell elastomeric insulation in sheet form: AP Armaflex SA sheet and roll insulation, 2 inch installed thickness. This product meets the requirements as defined in ASTM C 534, specification for preformed elastomeric cellular thermal insulation in sheet and tubular form.

B. Materials shall have a flame spread rating of 25 or less and a smoke-developed rating of 50 or less when tested in accordance with ASTM E 84, latest revision. Sheet material with a thickness greater than 1 inch shall have a flame spread rating of 25 or less and a smoke developed rating of 100 or less when tested in accordance with ASTM E 84, latest revision. In addition, the product, when tested, shall not melt or drip flaming particles, the flame shall not be progressive, and all materials shall pass simulated end-use fire tests.

C. Materials shall have a minimum thermal conductivity of 0.25 Btu-in./h-ft2 - °F at a 75 degrees F mean temperature when tested in accordance with ASTM C 177 or ASTM C 518, latest revisions.

D. Materials shall have a minimum water vapor transmission of 0.05 perm-inches when tested in accordance with ASTM E 96, Procedure A, latest revision.

E. The material shall be manufactured under an independent third party supervision testing program covering the properties of fire performance, thermal conductivity, and water vapor transmission.

F. Duct insulation that is installed shall be wrapped not stretched around the duct, and shall be adhered directly to clean, oil-free surfaces with a full coverage of adhesive. All insulation shall be adhered directly to clean, oil-free surfaces.
   1. The duct insulation shall be constructed from the bottom up, with the top insulation sized to extend over the side insulation. This will form a watershed.
   2. Butt-edge seams shall be adhered using Armaflex 520 Adhesive by the compression fit method to allow for expansion/contraction. Leave a 1/2 inch-wide uncoated border at the butt-edge seams on the duct surface and the insulation surface. Overlap the insulation 1/4 inch at the butt-edges and compress the edges into place. Apply Armaflex 520 Adhesive to the butt-edges of the insulation.
   3. Standing metal duct seams shall be insulated with the same insulation thickness as installed on the duct surface. Seams may be covered using strips of Armaflex Sheet Insulation or half sections of tubular pipe insulation with miter-cut ends. Standing seams shall be adhered using Armaflex 520 Adhesive.
   4. Insulation seams shall be staggered when applying multiple layers of insulation.
   5. On round ductwork larger than 12 inches in diameter, the insulation shall be adhered to the duct surface on the lower one third. On ductwork greater than 24 inches in diameter, the insulation shall be completely adhered to the duct surface.

G. Use the following duct insulation adhesives or equivalent items, as recommended by the insulation manufacturer:
   1. Insulation adhesive - Armaflex 520 BLV
   2. Insulation spray adhesive - Armaflex Low VOC Spray Contact Adhesive

1.18 ALL DUCTWORK IN ATTIC AREA - JACKET

A. Jacketing shall be produced from a glossy white, high impact, abrasion-resistant, UV-resistant polyvinyl chloride compound. Jacketing shall have a minimum 30 mil thickness, and have a flame spread index of less than 25 and a smoke-developed index of less than 50 when tested in accordance with ASTM E 84, latest revision. Ceel-Co 300 Series jacketing, or approved equal, joined with Ceel-Tite welding adhesive to result is a completely sealed and self-supporting monolithic system.

PART 2 EXECUTION

2.01 INSTALLATION NOTES

A. Use no damaged or water-soaked insulation.

B. Insulate piping where concealed in walls.

C. Make insulation continuous through sleeves and hangers, except through fire-rated walls.

D. Leave no "raw" ends on insulation. Bevel insulation terminations, seal with insulating cement, and cover ends with glass cloth or similar to pipe insulation covering.

E. Ensure that exposed insulation has a neat and finished appearance. Size insulation if required and leave ready for painting.

F. Ensure that jacket has overlapping joints and is sealed with suitable adhesive. The use of staples is acceptable on heating hot water systems only, but only as an installation aid and not as a substitute for adhesive.

G. Brush coat all staples used with a white vapor barrier mastic.

H. Use adhesive and welded pins with washers for attaching liner and rigid board insulation to ductwork. Seal joints with a 2 inch wide application of adhesive.

I. Provide sheet metal lips on leading and leaving air edges at liner transitions.

J. All duct sizes shown are clear inside dimensions.

K. Tape and seal all joints.

L. Duct insulation that is installed shall be wrapped not stretched around the duct. On ductwork larger than 12 inches in diameter, the insulation shall be adhered to the duct surface on the lower one third. On ductwork greater than 24 inches in diameter, the insulation shall be completely adhered to the duct surface. Butt-edge seams shall be adhered using adhesive by the compression fit method to allow for expansion/contraction. Overlap the insulation at the butt-edges and compress the edges into place. Apply adhesive to the butt-edges of the insulation.

END OF SECTION

SECTION 23 31 10
LOW PRESSURE DUCTWORK

PART 1 GENERAL

1.01 DESCRIPTION

A. This section specifies the construction of ductwork for the listed systems when the duct static pressure is 2 inches W.C. or less (positive or negative). Each duct system shall have a single pressure classification, which shall exceed the fan's external static rating listed in the equipment schedules. In cases where an external fan static is not given in the equipment schedules, the pressure classification of the duct system shall exceed the fan's total static rating.

B. Provide ductwork and/or plenums for the following low pressure air systems:
1. Supply air
2. Exhaust air
3. Return air
4. Transfer air

C. Include all turning vanes, extractors, volume dampers, duct access doors, walls and ceiling access panels, flexible connections, flexible duct, duct sealing systems, hangers and supports necessary to complete the indicated and specified system and achieve the desired system operation.

D. The following rectangular ductwork shall be lined for sound attenuation purposes:
1. All return air ductwork to the fan coil units.
2. All transfer air ductwork.

1.02 QUALITY ASSURANCE

A. The listed standards are referenced for the contractor to follow for the construction of ductwork items not specifically addressed in this specification section. This specification takes precedence over the referenced standards.

B. Standards:
1. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Sheet Metal and Air Conditioning Contractors National Association (SMACNA), National Fire Protection Association (NFPA), and Underwriters' Laboratories (UL).
2. SMACNA "HVAC Duct Construction Standards Metal and Flexible" – 2006 ANSI edition. Construct ductwork to meet all functional criteria defined in the SMACNA standards except where superseded by this Specification. Note: Duct constructions compliant with SMACNA standards that do not meet the minimum duct thickness listed in this Specification are not acceptable.
3. SMACNA "HVAC Air Duct Leakage Test Manual" latest edition.

C. All ductwork and fittings must have a computer generated label affixed to each section detailing all applicable information including the duct dimensions, gage, reinforcement type/class, and connector type of systems manufacturer. In addition, galvanizing thickness and country of origin must be clearly stenciled on each duct section.

D. The Engineer reserves the right to randomly check sheet metal gauges and reinforcing to verify all duct construction is in compliance. Non-conforming material will be replaced by the Contractor at no cost to the Owner.

1.03 SUBMITTALS

A. Submit ductwork fabrication and layout shop drawings in accordance with Section 20 05 15, "Submittals." Coordinate the detailed fabrication drawings with all trades. Coordinate size and location of ductwork with structure, piping, lighting, equipment, conduit, bus ducts, ceiling construction and clear height above ceilings and other items which may present a potential conflict.

B. Layout Drawings shall be at 1/4 inch = 1 foot scale on reproducible media with enlarged sections, elevations, plan drawings, and mechanical room drawings as necessary to ensure a coordinated installation.

C. Provide a written program outlining protection of ductwork from contamination with dirt and procedures for cleaning contaminated ductwork.

D. Submit documentation that the minimum two weeks building 100% outside air flush-out was completed, including dates when the flush-out was begun and completed and what steps were taken to guarantee 100% outside air usage.

E. Submit documentation for the filtration media used during the flush-out period, including filtration media manufacturer's name, model number, and MERV value.

F. Submit documentation that all filtration was replaced immediately, prior to occupancy including filtration media manufacturer's name, model number, and MERV value.

G. Low Emitting Materials Documentation:
1. Provide a cut sheet and a Material Safety Data Sheet for each adhesive used in the building highlighting compliance with Specification requirements.
2. Provide a cut sheet and a Material Safety Data Sheet for each sealant used in the building highlighting compliance with Specification requirements.

1.04 DUCT DIMENSIONS

A. The dimensions indicated on the drawings are the net inside clear dimensions available for airflow.

B. Contractor shall allow for shop-lined or exterior insulation thickness as required and indicate this on the ductwork layout shop drawings.

PART 2 PRODUCTS

2.01 STEEL DUCTWORK

A. MATERIAL
1. Unless noted otherwise, all ducts shall be constructed with G-90 or better galvanized steel conforming to ASTM A653/A653M and A924/A924M Standards, Lock-Forming Quality (LFQ). G-60 galvanized steel is not acceptable.
2. Pre-engineered low pressure duct systems with factory fabricated fittings utilizing gasketed joints are acceptable. "Spiro-safe" by Lindab, "Uni-gasket" by McGill Airflow Corporation, or "Velocity" by Semco.
3. Stainless steel ductwork shall be Type 304 stainless steel with a No. 2D finish in concealed locations

2.02 RECTANGULAR DUCT

A. Minimum gauges and duct reinforcement shall comply with the ANSI 2006 edition of the SMACNA Standards, as well as the requirements listed below.
1. No ductwork, regardless of size, shall be less than 24 gauge.
2. There shall be no cross internal reinforcement; all internal reinforcement shall be in the direction of one axis only. If more reinforcement is needed, increase the duct gauge or provide external reinforcement.
3. All ductwork with a side 16 inches or greater and 20 gauge or less thickness with more than 10 square feet of panel area shall be cross-broken or beaded.
4. Bead, crossbreak and reinforce flat surfaces of all fittings the same as straight duct sections.
5. Transverse joints shall not be considered as duct reinforcement unless specifically stated and listed in the SMACNA standard.
6. Rectangular elbows shall be centerline radius, 1.5 times duct width. Short radius (1D) elbows or square throat mitered elbows are only to be used where shown on the drawings. The drawings shall indicate the style of elbow to be provided. Square throat 90 degree elbows shall include turning vanes. Square throat elbows that are less than 90 degrees shall not contain vanes.
7. The following fittings are strictly prohibited: square throat with radius heel elbows, gored elbows, and drop cheek elbows.
8. All rectangular duct fittings shall conform to the gauge and reinforcement requirements indicated for the largest connected straight duct section.
9. Provide opposed multiblade volume dampers in rectangular ducts.
10. Turning vanes shall be double wall with every sixth vane welded to the runner. Provide standard vane spacing of 3.25” with a radius of 4.5”. Different radius or spacing must be submitted for approval.
    a. Turning vanes shall be Harper double wall turning vanes fabricated from the same material as the duct.
    b. Turning vane front and back panels shall be securely locked together with adequate crimping to prevent twisting of vane. Vane shall be capable of withstanding 250 pounds of tensile load when secured according to the manufacturer's instructions.
    c. Rails for mounting turning vanes shall have self-locking, friction fit tabs designed to facilitate proper alignment of vanes.

2.03 ROUND DUCT

A. Minimum gauges and duct reinforcement shall comply with the ANSI 2006 edition of the SMACNA Standards, as well as the requirements listed below.
   1. Seam construction shall be spiral seam, lap and rivet or tack weld on 6 inch interval, spot weld on 2 inch interval, continuous butt weld, or lapped and seam welded.
   2. Round elbows shall be radius type, with a centerline radius of 1.5 times the duct diameter, of stamped, pleated, or three-piece segmented construction. Mitered elbows are prohibited unless specifically shown on the drawings.
   3. Provide round volume dampers with wing nuts, hand quadrants, bearings and stiffened blades.
   4. No ductwork, regardless of size, shall be less than 24 gauge.

2.04 FLAT OVAL DUCT

A. Minimum gauges and duct reinforcement shall comply with the ANSI 2006 edition of the SMACNA Standards. All fittings are to be continuously welded construction, or spot welded and bonded.
   1. Seam construction shall be spiral seam, lap and rivet or tack weld on 6 inch interval, spot weld on 2 inch interval, continuous butt weld, or lapped and seam welded.
   2. Round elbows shall be radius type, with a centerline radius of 1.5 times the duct diameter, of stamped, pleated, or three-piece segmented construction. Mitered elbows are prohibited unless specifically shown on the drawings.
   3. Provide round volume dampers with wing nuts, hand quadrants, bearings and stiffened blades.
   4. No ductwork, regardless of size, shall be less than 24 gauge.

2.05 EXPOSED DUCTWORK

A. Provide tapered wedge (ramp) joint or gasketed fittings on round ducts.

B. Minimize the use of duct sealants. Apply sealants at joints only in a neat and workman-like manner.

2.06 SPLITTER DAMPERS

A. 20 gauge galvanized steel blades welded to square cold-rolled steel operating rod, air tight end bearings with rubber gasket, adjustable locking mechanism.

2.07 DUCT SEALS

A. Seal all duct transverse joints and longitudinal seams to meet SMACNA Seal Class A for 2 inches of static pressure (positive or negative) as a minimum, and so that leakage rates do not exceed those stated in other sections of this specification.

B. Duct Sealant: Liquid seal for joints and seams. Surfaces are to be clean and free from oil, dust, dirt, rust, moisture, or any substance which would interfere with bonding of sealant. Where metal clearances exceed 1/16 inch, several applications are required.
   1. McGill AirSeal Corporation, "United Duct Sealer – Water Based"
   2. Hardcast "Duct-Seal 321"

3. Ductmate "Proseal"
4. Products with documented VOC-emission rates meeting LEED guidelines by Dow Corning, Miracle Adhesives, Ductmate Industries, or Surebond, Inc.

2.08 FIELD ERECTED CASING, PLENUMS AND MIXING BOXES

A. Construct all casings and plenums to the pressure class equal to the fan's total static pressure as indicated on the drawings, but for no less than 2 inches static pressure. The casings shall be capable of handling both positive and negative pressures.

B. Seal all pipe penetrations airtight.

C. Panel construction shall be galvanized steel.

D. Drain pans shall be welded stainless steel and shall extend beyond the coil to catch all condensed water (extend a minimum of 6 inches beyond coil). For coils over 30 inches tall provide intermediate drain pans.

E. Provide casing access doors with a minimum of two hinges and two latches. Provide access doors such that filters, dampers, motors, coils and control devices are accessible for service or removal.
1. Ventlock, Ruskin, or McGill AirPressure Corporation.

F. Seal all joints, seams, duct wall penetrations, and connections in accordance with SMACNA Seal Class A for 2 inches of static pressure (positive or negative) as a minimum. Provide gasketing on all doors and access panels.

G. Insulate all casings, plenums and mixing boxes.

H. Outside air intake plenums behind louvers: panel construction shall be galvanized steel except for the bottom. The bottom of the plenum shall be aluminum or stainless steel and shall be sloped towards the louver to allow for water drainage. Caulk all seams to prevent water leakage. If the plenum is large enough for personnel access, provide external reinforcement for walking support.

2.09 INSULATED FLEXIBLE DUCTWORK

A. Five feet is the maximum allowable length for final connection to supply diffusers in suspended ceilings. Flexible ductwork shall not be used to connect return or exhaust air devices unless specifically indicated on Drawings.

B. All flexible ducts shall be UL-listed for use as flexible air ducts, and rated for 10 inches W.C. positive pressure and 2 inches negative pressure for sizes through 16 inches diameter, from -20 degrees F to +250 degrees F. Flexible ductwork shall be composed of an aluminum and fiberglass or heavy duty polyester and fiberglass core with a steel wire helix, a fiberglass insulating blanket (R6.0), and metalized outer vapor barrier. The flame spread rating shall not exceed 25 and the smoke developed rating shall not exceed 50. Average attenuation across octave bands one through seven, based on 650 FPM velocity through 9 feet of 8 inch duct, shall be 23 dB.

C. Each flexible duct section shall be supported by a minimum of two duct supports and shall not sag more than 1/2 inch per linear feet of duct.

D. Manufacturers: Flexmaster USA Type 5M or Thermaflex M-KC.

2.10 FLEXIBLE CONNECTIONS

A. Flexible duct connector shall be used where ductwork connects to fans of apparatus, or apparatus casing to fans to isolate vibration transfer. Connectors shall be attached in such a manner as to provide an airtight and waterproof seal. Connectors will comply with NFPA 90A, "Installation of Air Conditioning & Ventilation Systems" and NFPA 90B, "Installation of Warm Air Heating & Air Conditioning Systems."

B. Indoor installations shall be of a UL 214 listed, fire retardant Vinyl coated woven nylon or Neoprene coated woven fiberglass fabric. Minimum density of Vinyl is 20 ounces per square yard and rated to 200 degree F. Minimum density of Neoprene is 30 ounces per square yard and rated to 200 degrees F.

C. Outdoor installations shall be of a UL 214 listed UV-resistant Hypalon coated woven-fiberglass fabric. Minimum density 24 ounces per square yard and rated to 250 degrees F.

2.11 DUCT LINER

A. Semi-rigid fiberglass duct liner with flame spread rating not to exceed 25 and a smoke developed rating not to exceed 50 and K=0.23 at 75 degrees F, 1 inch thick.

B. Liner shall have antimicrobial coating.

C. All edges of liner facing in the direction of airflow shall be coated with adhesive or shall have a metal nosing.

D. Mechanical fasteners shall be used to install the liner in addition to the adhesive. Fasteners shall be welded pin and washer or clinching type impact fasteners - galvanized.

E. Remove and replace all liner that is exposed to water during construction.

2.12 BLANK-OFF PANELS

A. Provide 16 gauge, steel or aluminum, double skinned, insulating blank-off panels behind louvers as indicated on the drawings. Sheet metal material shall match louver material. Panel finish and color to match louver. Seal panel joints airtight. Provide panels with a minimum R-value of 6.

2.13 ROUND TAKEOFF FITTINGS

A. Bellmouth galvanized (24 gauge minimum) fitting with neoprene gasket and locking quadrant volume damper with square shaft and shaft extension. Provide insulation guard when used with internally lined ductwork.
   1. Elgen "Bellmouth" fitting or approved equal by Flexmaster USA or Buckley.

B. Conical galvanized (24 gauge minimum) fitting locking quadrant volume damper with square shaft and shaft extension. Provide insulation guard when used with internally lined ductwork.
   1. Elgen "Conical" fitting or approved equal by Flexmaster USA or Buckley.

PART 3 EXECUTION

3.01 INSTALLATION

A. All duct installations and duct construction shall comply with all requirements of this specification and meet or exceed SMACNA standards and recommendations for construction and installation.

B. Provide sweep elbows at all changes of direction in supply, exhaust, and return ductwork. If mitered elbows must be used due to coordination, provide turning vanes in 90 degree elbows only.

C. Seal all duct seams, joints, connections, and duct wall penetrations. Seal all branch ductwork connecting to plenums.

D. Provide a minimum 6 inch flexible connection where ductwork connects to motor-driven equipment. Do not bulge or install on a bind.

E. Provide duct access doors at all fire dampers, smoke dampers, combination fire/smoke dampers, and motor-operated control dampers. Provide ceiling access panel in dry wall or other inaccessible ceiling systems such that fire dampers are serviceable.

F. Keep ductwork tight to underside of structure. Maintain at least 7 inches clear between duct and suspended ceiling construction.

G. Install all dampers and provide blank-off plates to seal frames airtight.

H. Provide volume dampers at all low velocity duct connections. This includes, but is not limited to, duct connections at shafts, takeoffs to submains (serving two or more branch mains), takeoffs to branch mains (serving two or more terminals or outlets), and branches to single terminals or outlets. The fact that some, but not necessarily all, volume dampers are shown on the contract drawings does not relieve the contractor from these requirements. Locate volume dampers in accessible locations.

I. All duct liners shall be secured in place with mechanical fasteners and adhesive spread over the entire contact surface. Pin spacing shall meet or exceed SMACNA requirements.

J. Install flexible ducting only for termination in 5 feet maximum lengths and with only one 90 degree bend at a radius of one duct diameters.

K. Metallic flexible duct shall be attached with at least three (3) #8 sheet metal screws equally spaced around duct circumference, and five (5) #8 screws for ducts over 12 inches in diameter. Locate screws at least 1/2 inch from duct end.

L. Non-Metallic flexible ducts shall be secured with a draw band. On ducts over 12 inches in diameter, position draw band behind a bead in the metal collar.

M. Secure all insulation and vapor barriers on factory-fabricated flexible ducts with a separate draw band, independent of any used for the connection of the flexible duct to the duct collar.

N. Provide duct access doors at all duct smoke detector locations. Coordinate locations with the Electrical Contractor.

O. Galvanizing Repairs – Repair galvanizing damaged by welding, scratches, etc., using cold galvanizing compound.

P. Branch taps off of elbows are prohibited.

3.02 TESTING

A. Test Requirements:
1. Installed ductwork shall be tested prior to installation of access doors, take-offs, etc.
2. The Contractor shall give the Architect, Engineer, and Owner 72 hours notice prior to testing.
3. Any testing conducted without prior notification shall be considered invalid and will be redone at the Contractor's expense.
4. Leak-test all ductwork. Air leakage in any tested section of ductwork shall not exceed that of SMACNA Leakage Class 6 for rectangular duct and Leakage Class 3 for round duct.

B. Recommended Test Procedure: Perform testing in accordance with SMACNA HVAC Air Duct Leakage Test Manual and as follows below. Note that this reference establishes procedures only; and the allowable leakage rates are found in these Specifications.
1. Use a certified orifice tube and its corresponding logarithmic chart for measuring the leakage. Supply fan must have a CFM capacity greater than the allowable leakage in CFM for the section being tested.
2. Define section of system to be tested and blank off.
3. Determine the percentage of the system being tested, on a square foot of surface area basis.
4. Using the percentage determined in Step "3" and the maximum allowable leakage of 2% of the total system volume, determine the allowable leakage (cfm) for the section being tested.
5. Pressurize to 100% of the duct pressure class design pressure and repair any significant or audible leaks.
6. Pressurize again and measure leakage.
7. Repeat Steps "5" and "6" until the leakage measured is less than the allowable defined in Step "4."

C. Document all duct testing and submit testing results as part of "As-Built" documents. Furnish copies of all completed duct testing documentation upon request of the Architect, Engineer, or Owner.

3.03 DUCT CLEANLINESS

A. Cap/seal supply, return, and exhaust air duct openings immediately after fabrication or cleaning. cover all duct ends and openings with a dual polyethylene protective film. Securely affix the film to protect against dirt and debris. Film must be translucent to facilitate inspection of interior surfaces without removing film. Film must have a minimum elongation of 600%, contain no VOC and leave no residue on duct after removal. Ductmate Industries "ProGuard" or approved equal.

B. The area where duct is to be installed shall be clean and dry.

C. Schedule duct deliveries to the job site to match installation timing to avoid excessive storage at the job site.

D. Store any ductwork at the job site in closed trailers or in the immediate area in which it will be installed. Any ducts at the site that have any opening seals damaged or loose are to be re-cleaned per shop cleaning requirements and re-sealed until needed for installation.

E. Protective coverings shall only be removed immediately before installation. Maintain caps/seals on all openings of installed ducts. If openings of installed ducts have their seals damaged or loose, re-clean contaminated duct sections per shop cleaning requirements and reseal. When a duct system is not being used, all return inlet and supply outlets shall be covered to prevent the migration of dust and dirt from construction activities. If a system is being utilized in a 100% outside air configuration, the return inlets shall be covered. If the system is being used to return or relieve air, the inlets shall be covered by filter media with a minimum MERV rating of 8.

F. Clean external surfaces of foreign substances that might cause corrosion, deterioration of the metal, or where ductwork is to be painted.

G. Prior to equipment start-up, inspect duct to assure it is clean and free of dust, dirt and debris. Demonstrate the cleanliness quality control to the Construction Manager. The duct shall be considered clean when free of visible, non-adhered dust, dirt, debris.

H. If the duct is found to be dirty, the system shall be cleaned in accordance with NADCA (National Air Duct Cleaners Association) standards at the contractor’s expense.

END OF SECTION

SECTION 23 83 17
SLIP-IN ELECTRIC DUCT HEATERS

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide slip-in electric open-coil duct heaters complete with Ni-Cr elements, and prewired control panels.

1.02 QUALITY ASSURANCE

A. Standards: Underwriters' Laboratories (UL).

1.03 RATINGS AND CAPACITIES

A. Refer to the Drawings for kW, sizes, stages, voltage and other electrical requirements.

1.04 MANUFACTURERS

A. Indeeco Type QUA, Valley Industries, Chromalox, or Brasch.

PART 2 PRODUCTS

2.01 DUCT HEATERS

A. Heating Coils: Electric resistance open-coil type with elements constructed of 80% nickel - 20% chrome wire, properly insulated and adequately supported to prevent sagging and short circuiting, heater frames constructed of heavy aluminized steel. The heater circuits shall be arranged to keep the entire face area of the heater active during all steps of the heater capacity. Three phase heaters shall be arranged to maintain a balanced load between phases at all times.

B. Coil Arrangement: Coils shall be suitable for use in ductwork, constructed for insertion or flange mounting as indicated. Leakage in the duct around the heater frame shall be controlled as recommended by the manufacturer.

C. High Limit Temperature Controls: Provide two (2) independent controls for each heater. The limit controls shall be built in with the primary being automatic reset type to limit maximum exit air temperature to 194 degrees F, and the secondary being load carrying disc type to limit exit air temperature to 248 degrees F. The primary limit control shall be accessible outside the control panel.

D. Unit Control Panel: Frame-mounted and complete with all components mounted and prewired to coded terminal strips, ready to receive external wiring. Control panels shall have enclosures to suit environmental conditions, but shall be NEMA Type 1 General Purpose unless noted otherwise. All wires shall be color-coded and installed and bundled to give a neat and orderly arrangement with the panel. A complete control and power-wiring diagram of each panel shall be mounted under plastic on the inside of the front cover of each panel. Adequate insulation shall be provided to prevent condensation in the control panel or terminal box. Include the following:
   1. Fuse blocks and dual-element fuses for control supply circuits when transformer is not required.
   2. Fused Control voltage transformer.
   3. Primary limit auto reset type.
   4. Relays and PE switches.
   5. Branch circuit fuse blocks and dual-element fuses for all power circuits.
   6. Magnetic contactors for each step of heater capacity. Each leg of each circuit shall be broken.
   7. All power and control circuits to be factory-wired to terminal blocks for field wiring, entering and leaving the panel.
   8. A built-in disconnect switch interlocked with the panel door to prevent opening unless power is disconnected.
   9. A built-in pressure type air flow switch to deactivate the coil anytime air quantity is insufficient for operation.
   10. Staging Controls:
      a. Step controller and magnetic contactors.

PART 3 EXECUTION

3.01 INSTALLATION

A. Secure heaters to duct and properly seal to prevent air leakage.

B. Check all clearances for control panel door opening.

C. Interlock with existing thermostat.

END OF SECTION

SECTION 26 05 37
FLUSH FLOOR OUTLETS

PART 1 GENERAL

1.01 DESCRIPTION

A. Furnish and install Flush Floor Outlets where indicated on the Drawings.

B. Furnish and install wiring devices and cover plates in floor outlets including branch cabling to source.

1.02 QUALITY ASSURANCE

A. All equipment shall be UL listed and labeled with applicable NEMA and ANSI Standards.

1.03 SUBMITTALS

A. For Review:
   1. Product data sheets of floor outlets

B. To be included in Record and Information Manuals:
   1. One (1) copy of each approved submittal

1.04 MANUFACTURERS

A. Floor Outlets
   1. Legrand
   2. Steel City/American Electric
   3. Hubbell
   4. Crouse-Hinds

B. Devices
   1. Refer to Section 26 27 26, "Wiring Devices and Plates."

PART 2 PRODUCTS

2.01 FLUSH FLOOR OUTLETS (RECEPTACLES)

A. Floor outlets shall have watertight, fully adjustable, steel bodies, and shall be complete with box, carpet plate where applicable, and coverplate, including all mounting hardware. All flanges and cover plates shall be brass. The floor box shall also have been evaluated by UL to meet the applicable U.S. and Canadian safety standards for scrub water exclusion when used on tile, terrazzo, wood, and carpet covered floors.

B. Flush floor outlets shall be Legrand W880W2 with brass rectangular hinged cover plates. Provide appropriate flange to the flooring being used. Engineer-approved equivalents may be used from manufacturers listed above.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install outlets as shown on the drawings in compliance with Manufacturer's written instructions, applicable sections of NEC and NECA, and in accordance with recognized industry practice.

B. Unless dimensioned on the drawings, the exact location of floor outlets shall not be scaled from the electrical drawings. Exact locations shall be shown on the architectural drawings. If not provided, contractor shall submit request to architect in a timely fashion for exact locations to be determined before installation. Minimum spacing between outlets shall be in accordance with UL listing requirements.

C. Provide 3/4” conduit for power conductors. Provide 1.5” conduit for low voltage conductors. Conduits shall run horizontally below slab to nearest column or fixed CMU wall above and up through floor slab to above ceiling space. Do not run up within partition walls.

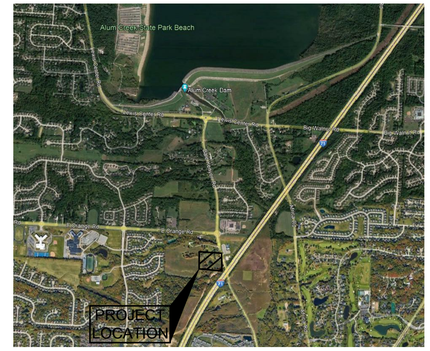
D. Record routing of conduits in slab on the "As Built" Drawings.

END OF SECTION

FINAL ENGINEERING PLAN

MCCAMMON CREEK PARK PHASE 2

6844 BALE KENYON ROAD, LEWIS CENTER, OHIO 43035
DELAWARE COUNTY, OHIO
OCTOBER 2023
ZONING: (FR-1) FARM RESIDENCE DISTRICT



LOCATION MAP
NO SCALE

GENERAL SUMMARY

TOTAL ACRES:	1.9 ACRES
DISTURBED AREA:	1.9 ACRES
EX. IMPERVIOUS:	0.3 ACRES (15.8%)
PR. IMPERVIOUS:	0.9 ACRES (47.4%)

SHEET INDEX

2

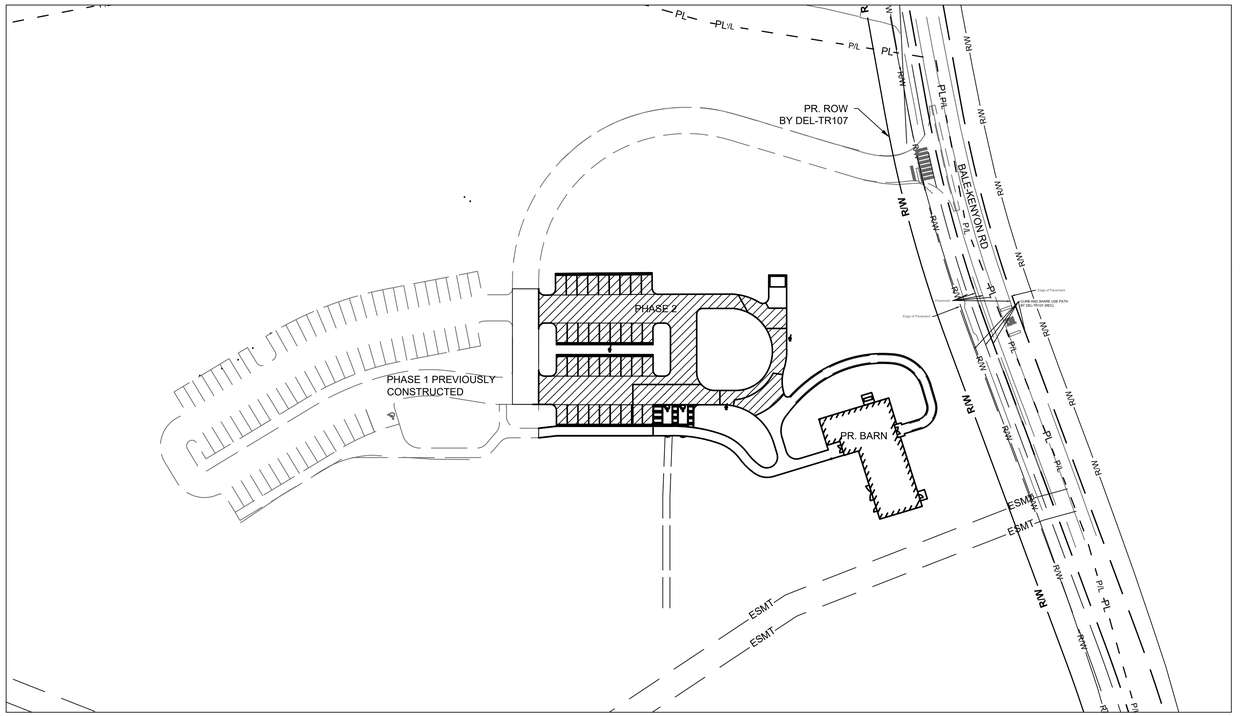
BID SET	PERMIT SET	INDEX
C000	1	TITLE SHEET
TS100	2	MCCAMMON CREEK PARK TOPO
C001	3	GENERAL NOTES
C100	4	DEMOLITION PLAN
C101	5	DEMOLITION PLAN
C102	6	STAKING PLAN
C103	7	STAKING PLAN
C104	8	STAKING DETAILS
C105	9	STAKING DETAILS
C106	10	STAKING PLAN ALTERNATES
C200	11	GRADING PLAN
C201	12	GRADING PLAN
C202	13	STORM PROFILES
C203	14	STORM AND GRADING DETAILS
C204	15	EROSION CONTROL PLAN
C205	16	EROSION CONTROL PLAN
C206	17	EROSION CONTROL DETAILS
C207	18	GRADING PLAN ALTERNATE A & C
C300	19	UTILITY PLAN
C301	20	UTILITY DETAILS
C302	21	DEL-CO STANDARD DETAILS

FLOODPLAIN

THE PROJECT SITE IS LOCATED IN ZONE X, ZONE X DESCRIBED AS ABOVE THE ELEVATION OF THE 0.2% ANNUAL CHANCE FLOOD ON FLOOD INSURANCE RATE MAP, DELAWARE COUNTY, OHIO, MAP 39041C0262L, EFFECTIVE DATE (DECEMBER 21, 2023).

CONSTRUCTION SPECIFICATIONS

THE DELAWARE COUNTY ENGINEER DCMSC, ODOT CMS, CITY OF COLUMBUS & DEL-CO WATER



INDEX MAP
SCALE: 1"=60"

0 60 120 180
GRAPHIC SCALE
SCALE IN FEET

UTILITY COMPANIES

DELAWARE COUNTY REGIONAL SEWER DISTRICT
THE BYXBE BUILDING
1610 STATE ROUTE 521, P.O. BOX 8006
DELAWARE, OHIO 43015 740-833-2439

DEL-CO WATER COMPANY
6658 OLETANGY RIVER ROAD
DELAWARE, OHIO 43015
ATTN: CRIS VALENZUELA
740-548-7746

AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
ATTN: PAUL PAXTON
614-883-6829

DELAWARE COUNTY ENGINEERS OFFICE PERMIT DEPARTMENT
THE BYXBE BUILDING
1610 STATE ROUTE 521, P.O. BOX 8006
DELAWARE, OHIO 43015 740-833-2439

SUBURBAN NATURAL GAS, INC
2626 LEWIS CENTER ROAD
LEWIS CENTER, OHIO 43035
ATTN: AARON ROLL
614-883-6829

COLUMBIA GAS OF OHIO
3550 JOHNNY APPLESEED COURT
COLUMBUS, OHIO 43231
ATTN: MATT MYERS
614-818-2113

FRONTIER COMMUNICATIONS
1300 COLUMBUS SANDUSKY ROAD
MARION, OHIO 43302
ATTN: CHRIS AVERY
740-383-0551

STANDARD DRAWINGS

THE STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS LISTED BELOW SHALL BE CONSIDERED A PART OF THIS PLAN.

DELAWARE COUNTY	DATE
DCED-S133A	1/04/2010
DCED-S133D	1/04/2010
DCED-S139	1/04/2010
DCED-S150	1/22/2008
DCED-S151	1/04/2010
DCED-S166	1/04/2010
DCED-S168	9/15/2014
DCED-S176	5/05/2011
DCED-S440A	5/07/2013
DCED-S440B	4/09/2013

APPROVALS

THE DELAWARE COUNTY ENGINEER'S SIGNATURE ON THIS PLAN SIGNIFIES ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATION OF THE PROPOSED IMPROVEMENTS WITH RESPECT TO IMPROVEMENTS WITHIN THE RIGHT-OF-WAY, STORM WATER MANAGEMENT, EROSION AND SEDIMENT CONTROL. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS.

DELAWARE COUNTY ENGINEER

_____ DATE

CHIEF OPERATING OFFICER, DEL-CO WATER

_____ DATE

OHIO Utilities Protection SERVICE
Click, Call or Tap Before You Dig

CIVIL ENGINEER

KORDA/NEMETH ENGINEERING
ATTN: GRAHAM WATKINS
1650 WATERMARK DRIVE
COLUMBUS, OHIO 43215
(614)487-1650
GRAHAM.WATKINS@KORDA.COM

ARCHITECT

SCHOOLEY CALDWELL
ATTN: KALPA BAGHASINGH
300 MARCONI BLVD, SUITE 100
COLUMBUS, OHIO 43215
(614)628-0300
KBAGHASINGH@SCHOOLEYCALDWELL.COM

OWNER/DEVELOPER:

DELAWARE COUNTY
PRESERVATION PARKS OF DELAWARE COUNTY
ATTN: MATT SIMPSON
SR. PARK PLANNER
2656 HOGBACK ROAD
SUNBURY, OHIO 43074
OFFICE: (740) 524-8600 X 102
PRESERVATIONPARKS.COM

KORDA
KORDA/NEMETH ENGINEERING

CHANGE ORDER SCHEDULE

CHANGE	PREPARED	DATE OF CHANGE	DESCRIPTION OF CHANGE	SHT NO.	APPROVED	DATE OF APPROVAL

REVISIONS

MARK	DATE	DESCRIPTION

TITLE SHEET

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK
PHASE 2

KORDA
Korda/Nemeth Engineering, Inc. - Consulting Engineers
1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7910
TEL 614-487-1650 - FAX 614-487-8981 - WEB www.korda.com

DATE
11/17/2023

JOB NO.
2023-0006

SHEET
1/21

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
schooleycaldwell.com
T 614-628-0300
F 614-628-0311
Columbus OH 43215

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.834.2049

Drawing Issue Dates
- Design Development Submittal 11/17/2023
- 50% Construction Documents 08/15/2024
- 90% Construction Documents 01/15/2025
- Bid Set / Permit Set 02/14/2025

Revision Schedule

#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

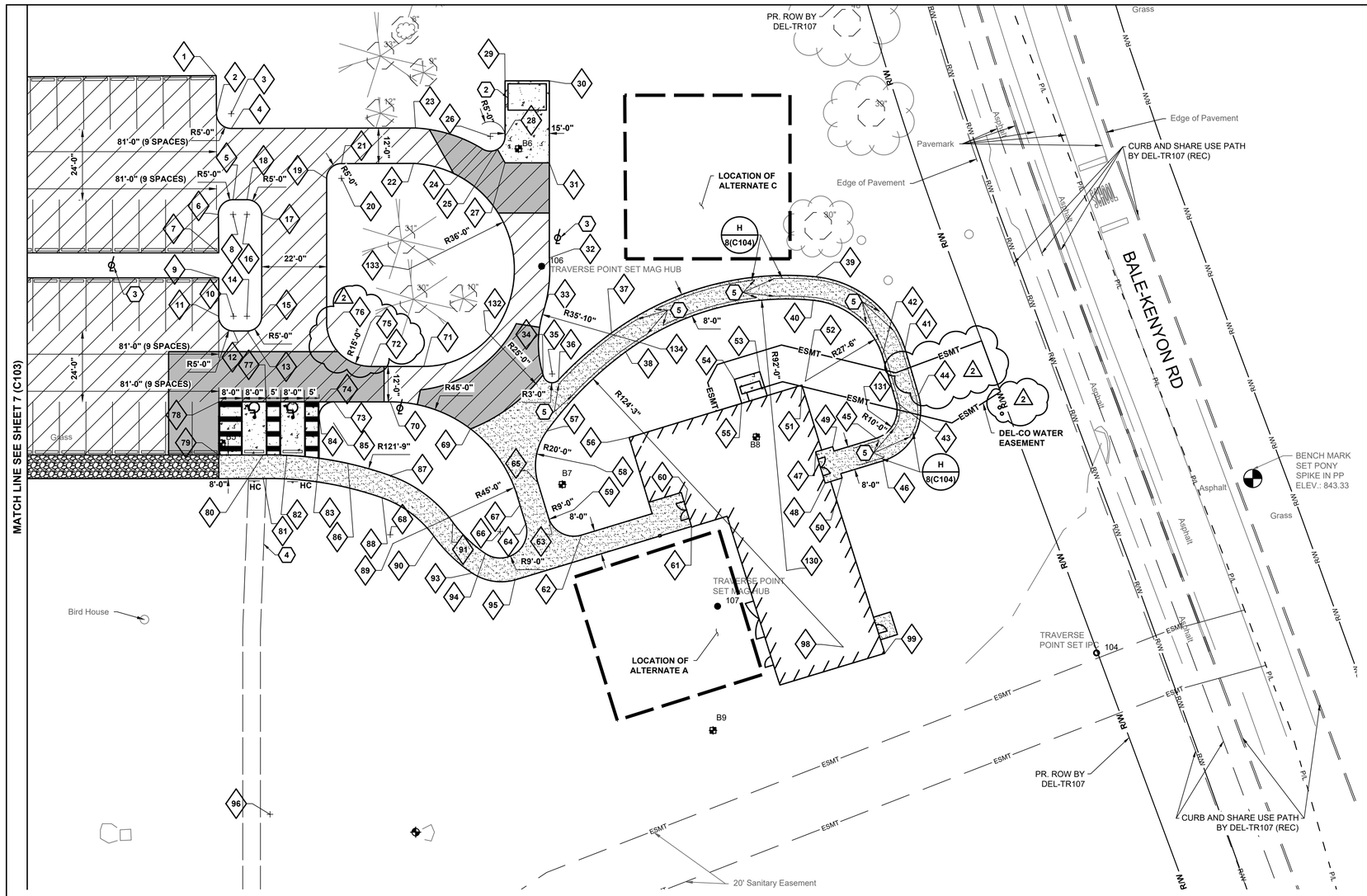
STATE OF OHIO
GRAHAM J. WATKINS
E-84007
REGISTERED PROFESSIONAL ENGINEER

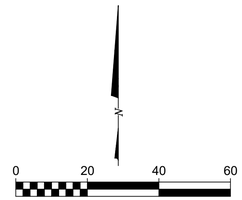
TITLE SHEET

C000

11/25/2024

23070





STAKING LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- R/W — RIGHT-OF-WAY, REFER TO DEL-TR107
- FENCE
- BUILDING/WALL
- PAVEMENT
- WALK
- PAINTED WHEELCHAIR SYMBOL
- SIGN PER DETAIL B/9(C105)
- HC — HANDICAPPED PARKING SIGN PER DETAIL B/9(C105)
- BUMPER BLOCK PER DETAIL G/8(C104) (TYP OF 38)
- TREE PROTECTION PER DETAIL A/8(C104)
- 2 — BOLLARD PER DETAIL I/9(C105)
- BASE BID ALTERNATE B: GRAVEL PER DETAIL C/9(C105)
  ALTERNATE: LIGHT DUTY ASPHALT PAVEMENT PER DETAIL B/8(C104)
- CONCRETE PAVEMENT OR SIDEWALK PER DETAIL D/8(C104)
- HEAVY DUTY CONCRETE PER DETAIL G/9(C105)
- GRAVEL SIDEWALK PER DETAIL I/8(C104)
- GRAVEL TRANSITION PER DETAIL C/10(C106) (BASE BID)

GENERAL NOTES:

1. DIMENSIONS AND COORDINATES ARE GIVEN TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. CURB AND SIDEWALK RADII SHALL BE 5'-0" UNLESS OTHERWISE NOTED.
3. PROVIDE STRIPING AND SYMBOLS AS SHOWN PER ODOT ITEM 641 AND 642. PROVIDE STRIPING PAINT WITH GLASS BEADS. PROVIDE TYPE I OR TYPE IA PAINT IN ACCORDANCE WITH ODOT ITEM 642 DEPENDING ON TEMPERATURE CONDITIONS AT THE TIME OF APPLICATION. TYPICAL LINE WIDTH SHALL BE 4 INCHES, COLOR WHITE. PROVIDE TWO COATS.
4. STANDARD PARKING STALL DIMENSIONS ARE 9'-0" IN WIDTH BY 18'-0" IN LENGTH UNLESS OTHERWISE NOTED.
5. SAWCUT FULL DEPTH SIDEWALK AND PAVEMENT WHERE NEW WORK ABUTS EXISTING CONSTRUCTION. TAKE CARE TO PROVIDE NEAT STRAIGHT LINES. PROVIDE PAVEMENT SEALANT PER ODOT ITEM 640 AND 641 AT JOINT BETWEEN EXISTING AND NEW ASPHALT. REMOVE CONCRETE TO NEAREST JOINT. PROVIDE 1/2" PREFORMED EXPANSION JOINT FILLER BETWEEN NEW AND EXISTING CONSTRUCTION.
6. ANY PROPERTY PINS DAMAGED AS PART OF CONSTRUCTION SHALL BE RESET BY AN OHIO REGISTERED SURVEYOR.
7. PROVIDE 1 HANDICAP ACCESSIBLE PARKING SIGNS AND 1 VAN ACCESSIBLE PARKING SIGNS. FINAL LOCATION OF SIGNS TO BE DETERMINED BY ARCHITECT.
8. MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ADJACENT BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SITE SIGNAGE NOT SHOWN ON THIS SHEET.
10. BUILDING COORDINATES PROVIDED FOR BUILDING LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR BUILDING LAYOUT.
11. PROVIDE CONCRETE PARKING BLOCKS AT ALL SPACES PER DETAIL G/8(C104).
12. PROVIDE CONTROL JOINTS PER DETAIL E/8(C104). PROVIDE ISOLATION JOINTS WHERE NEW CONCRETE ABUTS EXISTING STRUCTURES PER DETAIL C/8(C104) AND PER SPECIFICATIONS.

(X) CODED NOTES:

1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
2. TRASH ENCLOSURE PER DETAILS D,E,F ON SHEET 9(C105).
3. ALTERNATE: LIGHTPOLES, REFER TO ELECTRICAL DRAWINGS.
4. FUTURE PATH SHOWN FOR REFERENCE.
5. RAILING TO EXTEND 1'-0" INTO THE 8' LANDING (TYPICAL).

ALTERNATE

1. BASE BID - PROVIDE TOP SOIL AND GRASS.
   ALTERNATE A - PROVIDE GRAVEL PATIO PER SHEET 10(C106) DETAIL A/10(C106).
2. BASE BID - PROVIDE GRAVEL PER DETAIL C/9(C105) AND C/10(C106).
   ALTERNATE B - PROVIDE ASPHALT PER DETAIL B/8(C104) AND 18(C207).
3. BASE BID- PROVIDE TOP SOIL AND GRASS.
   ALTERNATE C - PROVIDE ALTERNATE WALKING PATH PER SHEET 10(C106) AND 18(C207).

STAKING COORDINATE TABLE		
	Northing	Easting
1	184054.58	1839095.68
2	184041.63	1839095.78
3	184041.67	1839100.78
4	184036.67	1839100.82
5	184012.52	1839101.42
6	184007.47	1839096.42
7	183994.52	1839096.55
8	184007.52	1839101.42
9	183986.03	1839096.55
10	183973.03	1839101.55
11	183973.03	1839096.55
12	183968.03	1839101.55
13	183968.03	1839106.12
14	183973.03	1839106.12
15	183973.03	1839111.12
16	184007.52	1839106.12

STAKING COORDINATE TABLE		
	Northing	Easting
17	184007.52	1839111.12
18	184012.52	1839106.12
19	184019.75	1839133.12
20	184019.75	1839138.12
21	184024.75	1839138.11
22	184024.82	1839162.58
23	184036.81	1839163.20
24	184029.72	1839185.92
25	184029.61	1839190.99
26	184033.97	1839188.55
27	184025.01	1839193.55
28	184033.97	1839193.55
29	184052.80	1839193.55
30	184052.80	1839208.55
31	184025.01	1839208.55
32	183992.80	1839208.55

STAKING COORDINATE TABLE		
	Northing	Easting
33	183975.00	1839206.66
34	183953.20	1839206.44
35	183953.50	1839209.50
36	183951.45	1839211.68
37	183967.38	1839229.63
38	183960.94	1839234.37
39	183986.40	1839298.73
40	183978.43	1839297.95
41	183962.01	1839329.05
42	183959.76	1839321.37
43	183944.08	1839325.97
44	183946.34	1839333.65
45	183931.70	1839319.28
46	183924.04	1839321.60
47	183927.09	1839298.80
48	183916.50	1839302.00

STAKING COORDINATE TABLE		
	Northing	Easting
49	183928.82	1839304.55
50	183918.23	1839307.75
51	183949.70	1839294.13
52	183951.04	1839295.25
53	183954.26	1839279.85
54	183951.64	1839271.24
55	183943.52	1839273.73
56	183931.94	1839235.57
57	183934.10	1839207.69
58	183922.33	1839223.86
59	183907.51	1839216.86
60	183909.49	1839254.40
61	183901.83	1839256.71
62	183898.89	1839219.47
63	183904.90	1839208.25
64	183902.71	1839200.55

STAKING COORDINATE TABLE		
	Northing	Easting
65	183916.52	1839204.72
66	183900.10	1839191.94
67	183909.07	1839198.62
68	183899.03	1839154.64
69	183934.87	1839181.86
70	183944.03	1839154.64
71	183956.03	1839165.99
72	183956.03	1839148.12
73	183944.03	1839135.57
74	183944.03	1839130.57
75	183971.03	1839148.12 (2)
76	183968.45	1839133.12
77	183944.03	1839112.57
78	183944.03	1839096.57
79	183926.03	1839096.57
80	183926.03	1839111.61

STAKING COORDINATE TABLE		
	Northing	Easting
81	183918.03	1839111.61
82	183926.03	1839119.61
83	183924.91	1839130.57
84	183939.03	1839130.57
85	183936.85	1839135.47
86	183923.16	1839140.30
87	183919.06	1839154.59
88	183911.52	1839151.92
89	183896.01	1839155.56
90	183898.55	1839169.38
91	183903.29	1839175.83
93	183886.02	1839182.42
94	183892.64	1839186.90
95	183883.71	1839196.96
96	183804.29	1839113.93
98	183860.97	1839308.12

STAKING COORDINATE TABLE		
	Northing	Easting
99	183858.83	1839322.21
100	184054.04	1839014.68
101	184041.02	1839014.78
102	184040.99	1839009.78
103	184035.95	1839009.15
104	184040.98	1839005.64
105	184035.95	1839005.67
106	184041.35	1839000.63
107	184041.28	1838978.63
108	184007.50	1839000.63
109	184007.50	1839005.63
110	184012.50	1839005.59
111	184012.54	1839010.43
112	184007.54	1839010.46
113	184007.57	1839015.46
114	183994.52	1839015.55

STAKING COORDINATE TABLE		
	Northing	Easting
115	183986.03	1839015.57
116	183973.03	1839015.57
117	183973.03	1839010.57
118	183968.03	1839010.57
119	183968.03	1839005.62
120	183973.03	1839005.62
121	183973.03	1839000.62
122	183944.28	1839010.57
123	183939.28	1839010.57
124	183939.28	1839015.57
125	183944.28	1838978.63
126	183924.28	1839000.59
127	183916.28	1839000.59
128	183926.03	1839015.57
129	183918.03	1839016.03
130	183886.88	1839288.94

KORDA
Korda/Nemeth Engineering, Inc. - Consulting Engineers
1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7010
TEL 614-487-1650 - FAX 614-487-8981 - WEB www.korda.com

DATE 11/17/2023

JOB NO. 2023-0006

SHEET 6/21

KORDA / NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: EAM
DESIGNED BY: EAM
CHECKED BY: GJW
PROJECT NUMBER: 2023-0006

REVISIONS

MARK	DATE	DESCRIPTION

STAKING PLAN

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK
PHASE 2

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
schooleycaldwell.com
T 614-628-0300
F 614-628-0311
Columbus OH 43215

Consultants:
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1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates
- Design Development Submittal 11/17/2023
- 50% Construction Documents 08/15/2024
- 90% Construction Documents 01/15/2025
- Bid Set / Permit Set 02/14/2025

Revision Schedule

#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

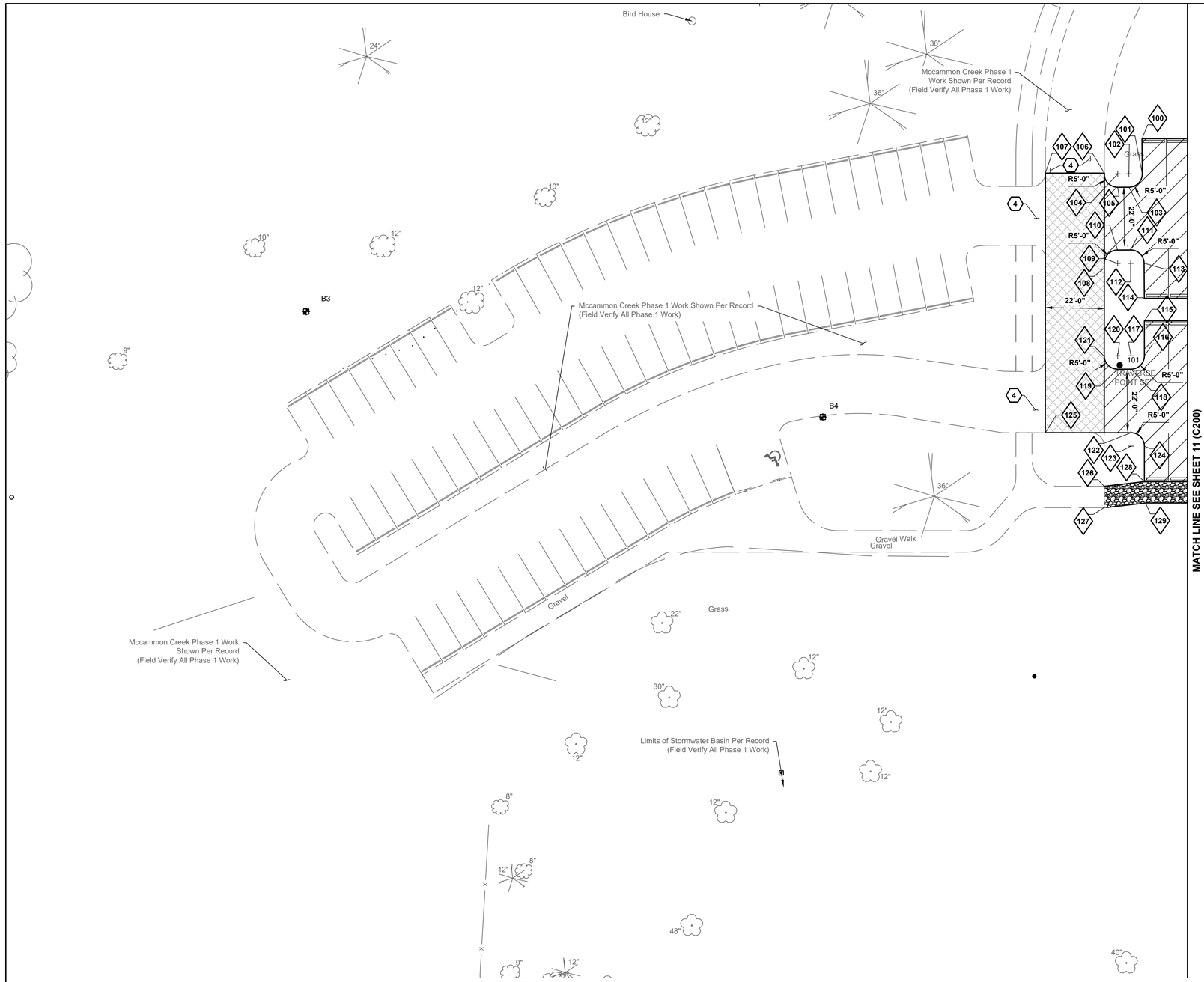
GRAHAM J. WATKINS E-84007 REGISTERED PROFESSIONAL ENGINEER
STATE OF OHIO
10-8-25

STAKING PLAN

C102

11/25/2024

23070



0 20 40 60

GRAPHIC SCALE
SCALE IN FEET

STAKING LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- R/W — RIGHT-OF-WAY, REFER TO DEL-TR107
- FENCE
- BUILDING/WALL
- PAVEMENT
- WALK
- PAINTED WHEELCHAIR SYMBOL
- SIGN PER DETAIL B/9(C105)
- HC — HANDICAPPED PARKING SIGN PER DETAIL B/9(C105)
- BUMPER BLOCK PER DETAIL G/8(C104) (TYP OF 38)
- TREE PROTECTION PER DETAIL A/8(C104)
- BASE BID ALTERNATE B: GRAVEL PER DETAIL C/9(C105) ALTERNATE: LIGHT DUTY ASPHALT PAVEMENT PER DETAIL B/8(C104)
- CONCRETE PAVEMENT OR SIDEWALK PER DETAIL D/8(C104)
- HEAVY DUTY CONCRETE PER DETAIL G/9(C105)
- GRAVEL SIDEWALK PER DETAIL I/8(C104)
- ASPHALT AREA TO BE INCLUDED WITH ALTERNATE B. REFER TO SHEET 10(C106)

GENERAL NOTES:

1. DIMENSIONS AND COORDINATES ARE GIVEN TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. CURB AND SIDEWALK RADII SHALL BE 5'-0" UNLESS OTHERWISE NOTED.
3. PROVIDE STRIPING AND SYMBOLS AS SHOWN PER ODOT ITEM 641 AND 642. PROVIDE STRIPING PAINT WITH GLASS BEADS. PROVIDE TYPE I OR TYPE IA PAINT IN ACCORDANCE WITH ODOT ITEM 642 DEPENDING ON TEMPERATURE CONDITIONS AT THE TIME OF APPLICATION. TYPICAL LINE WIDTH SHALL BE 4 INCHES, COLOR WHITE. PROVIDE TWO COATS.
4. STANDARD PARKING STALL DIMENSIONS ARE 9'-0" IN WIDTH BY 18'-0" IN LENGTH UNLESS OTHERWISE NOTED.
5. SAWCUT FULL DEPTH SIDEWALK AND PAVEMENT WHERE NEW WORK ABUTS EXISTING CONSTRUCTION. TAKE CARE TO PROVIDE NEAT STRAIGHT LINES. PROVIDE PAVEMENT SEALANT PER ODOT ITEM 640 AND 641 AT JOINT BETWEEN EXISTING AND NEW ASPHALT. REMOVE CONCRETE TO NEAREST JOINT. PROVIDE 1/2" PREFORMED EXPANSION JOINT FILLER BETWEEN NEW AND EXISTING CONSTRUCTION.
6. ANY PROPERTY PINS DAMAGED AS PART OF CONSTRUCTION SHALL BE RESET BY AN OHIO REGISTERED SURVEYOR.
7. PROVIDE 1 HANDICAP ACCESSIBLE PARKING SIGNS AND 1 VAN ACCESSIBLE PARKING SIGNS. FINAL LOCATION OF SIGNS TO BE DETERMINED BY ARCHITECT.
8. MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ADJACENT BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SITE SIGNAGE NOT SHOWN ON THIS SHEET.
10. BUILDING COORDINATES PROVIDED FOR BUILDING LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR BUILDING LAYOUT.
11. PROVIDE CONCRETE PARKING BLOCKS AT ALL SPACES PER DETAIL G/8(C104).
12. PROVIDE CONTROL JOINTS PER DETAIL E/8(C104). PROVIDE ISOLATION JOINTS WHERE NEW CONCRETE ABUTS EXISTING STRUCTURES PER DETAIL C/8(C104) AND PER SPECIFICATIONS.

(X) CODED NOTES:

1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
2. TRASH ENCLOSURE PER DETAILS D,E,F ON SHEET 9(C105).
3. LIGHTPOLES SHOWN FOR REFERENCE, REFER TO ELECTRICAL DRAWINGS.
4. PROVIDE A 17' TRANSITION FROM EXISTING GRADE OF EXISTING GRAVEL PAVEMENT TO THE 4" ASPHALT PROVIDED IN ALTERNATE B.

ALTERNATE

1. BASE BID - PROVIDE TOP SOIL AND GRASS.
   ALTERNATE A - PROVIDE GRAVEL PATIO PER SHEET 10(C106) DETAIL A/10(C106).
2. BASE BID - PROVIDE GRAVEL PER DETAIL C/9(C105) AND C/10(C106).
   ALTERNATE B - PROVIDE ASPHALT PER DETAIL B/8(C104) AND 18(C207). (2)
3. BASE BID- PROVIDE TOP SOIL AND GRASS.
   ALTERNATE C - PROVIDE ALTERNATE WALKING PATH PER SHEET 10(C106) AND 18(C207).

REVISIONS

MARK	DESCRIPTION	DATE

STAKING PLAN

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK
PHASE 2

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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

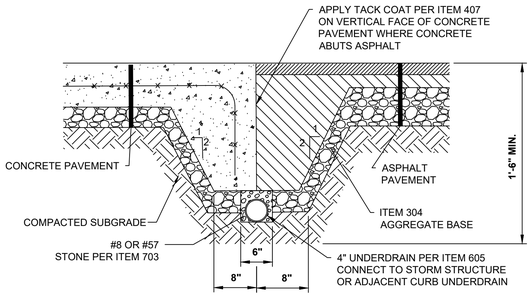
STATE OF OHIO
GRAHAM J. WATKINS
84007
REGISTERED
PROFESSIONAL ENGINEER

STAKING PLAN

C103

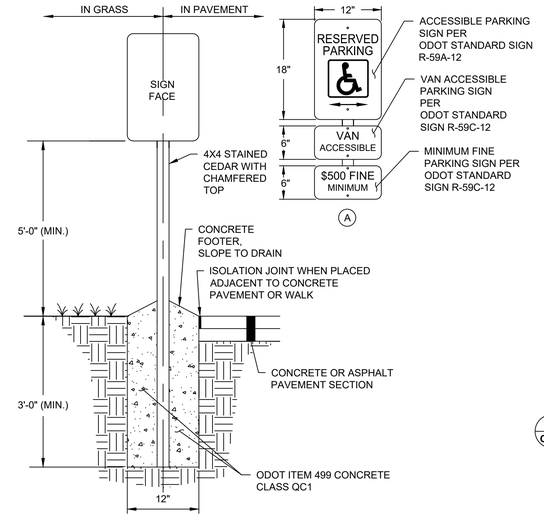
11/25/2024

23070



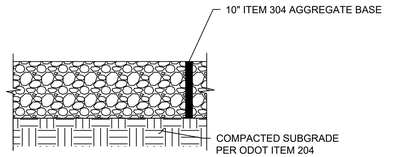
NOTE:
1. CONTRACTOR SHALL PROVIDE TURNDOWN ANYWHERE ASPHALT AND CONCRETE OR CONCRETE BASE PAVEMENT MEET.

A DETAIL
ASPHALT CONCRETE TURNDOWN SLAB (ALTERNATE B) N.T.S.



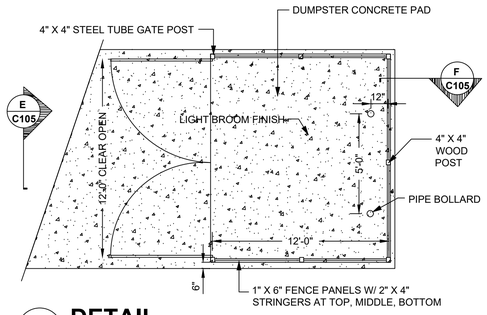
NOTES:
1. PROVIDE SIGN IN ACCORDANCE WITH ODOT ITEM 630.
2. PROVIDE 0.063 THICK, FLAT ALUMINUM SIGN PANELS.
3. PROVIDE REFLECTIVE FINISH ON SIGN.
4. PROVIDE PERMANENT WEATHERPROOF ALUMINUM CAP ON POST TOP.
5. PROVIDE "VAN ACCESSIBLE" SIGN WHERE NOTED ON DRAWINGS.
6. ATTACH SIGNS WITH UNISTRUT UNIVERSAL DRIVE RIVET OR APPROVED EQUAL.
7. ACCESSIBLE SIGNAGE TO BE AS SHOWN UNLESS OTHERWISE SPECIFIED BY LOCAL CODE.

B DETAIL
PARKING SIGNS N.T.S.

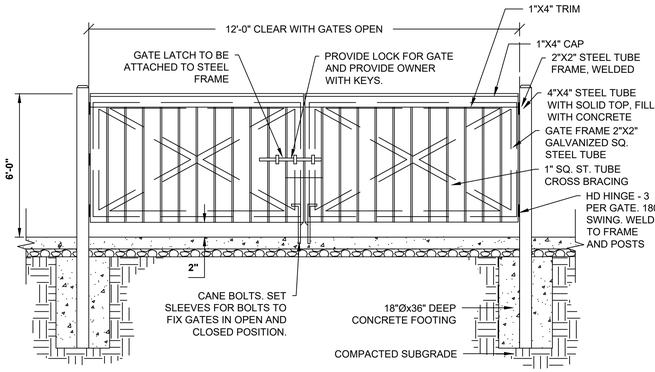


NOTES:
1. ALL PAVEMENT MATERIALS SHALL MEET ODOT STANDARDS & SPECS, LATEST EDITION. PAVEMENT SECTION SHOWN FOR BIDDING PURPOSES ONLY.

C DETAIL
GRAVEL N.T.S.

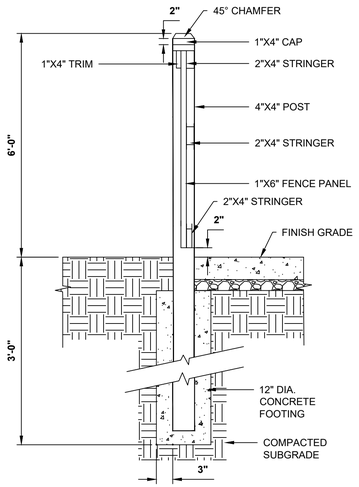


D DETAIL
WOOD DUMPSTER ENCLOSURE N.T.S.

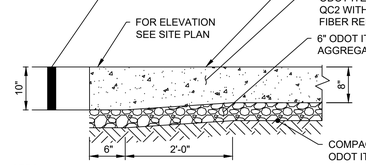


NOTES:
1. PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
2. ALL STEEL TO BE GALVANIZED AND SHOP PRIMED FOR FIELD PAINTING.
3. ALL METAL AND WOOD MATERIALS TO BE PAINTED TO MATCH ACCESSORY BUILDING.

E DETAIL
WOOD DUMPSTER ENCLOSURE N.T.S.

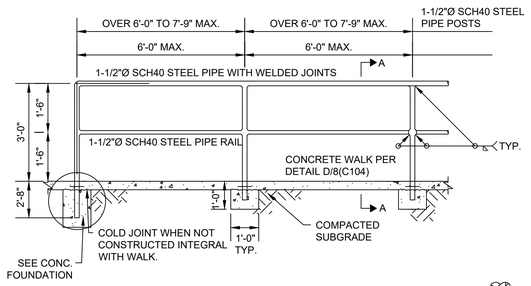


F DETAIL
WOOD DUMPSTER ENCLOSURE WALL N.T.S.

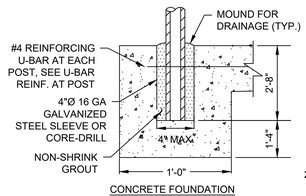


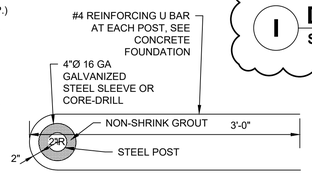
NOTES:
1. PROVIDE JOINTS AS INDICATED ON DRAWINGS. IN ABSENCE OF INFORMATION ON THE DRAWINGS, LOCATE AS SPECIFIED IN SECTION 32 13 00.
2. PROVIDE CONTROL AND ISOLATION JOINTS PER DETAILS ON SHEET 8(C104).
3. SYNTHETIC FIBER REINFORCEMENT: ASTMC1116/C1116M-10A(2015). ACCEPTABLE PRODUCTS OR APPROVED EQUAL:
   A. NYCON RC OR PROCON-M POLYPROPYLENE FIBER NYLON FIBERS BY NYCON.
   B. NYLO-MONO NYLON FIBERS OR MIGHTY-MONO POLYPROPYLENE FIBERS BY FORTA
   C. FIBERMESH 150 POLYPROPYLENE FIBERS BY PROPEX.
   D. SINTA F19 OR SINTA M2219 BY GCP APPLIED TECHNOLOGIES
   E. PSI FIBERSTRAND 150 BY EUCLID.
4. SYNTHETIC FIBER REINFORCEMENT SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DOSAGE RATE SHALL BE AS RECOMMENDED BY THE MANUFACTURER, BUT NOT LESS THAN 1 POUND PER CUBIC YARD.
5. DISSIPATING CURING COMPOUND: COMPLY WITH ASTM C309-98A, TYPE 1, CLASS B (CLEAR), EXCEPT MOISTURE LOSS NOT TO EXCEED 0.40 KG/SQ M. IN 72 HOURS. COMPOUND SHALL COMPLY WITH EPA'S VOC REQUIREMENTS. APPLY AT THE MANUFACTURER'S WRITTEN RECOMMENDED APPLICATION RATE. COMPLETELY REMOVE CURING COMPOUND PRIOR TO APPLICATION OF PENETRATING SEALER.
6. PENETRATING SEALER: ACCEPTABLE PRODUCTS OR APPROVED EQUAL:
   A. L&M CONSTRUCTION CHEMICALS - AQUAPEL PLUS 40
   B. PROSOCO - SALTGUARD WB
   C. HULS AMERICA INC. - CHEM-TRETE BSM 40
   D. MASTER BUILDERS INC. - MASTERSEAL SL 40
   E. LYMTAL INTERNATIONAL - ISO-FLEX 618-50 WB
   F. BASF - ENVIROSEAL 40 OR HYDROZO SILANE 40
   G. TEX-COTE - RAINSTOPPER RS140
7. IF CONCRETE INSTALLED OCTOBER-MARCH, WAIT UNTIL APRIL-SEPTEMBER TO APPLY PENETRATING SEALER. IF SCHEDULE DOES NOT ALLOW FOR APPLICATION OF SEALER, PROVIDE CREDIT FOR NON-PERFORMANCE.

G DETAIL
HEAVY DUTY CONCRETE SLAB N.T.S.

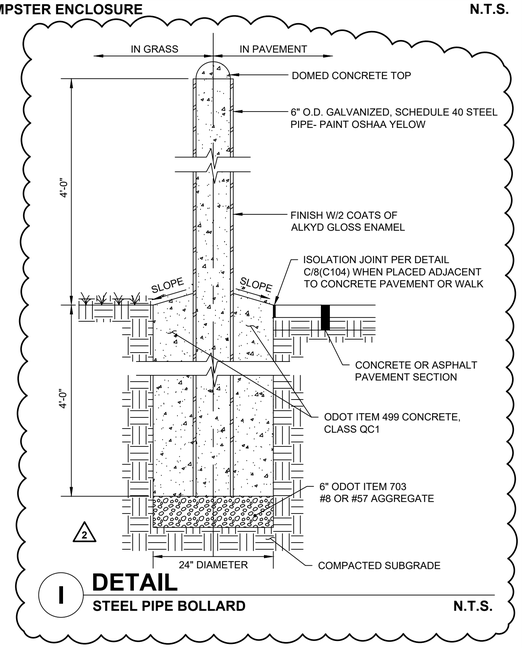


NOTES:
1. RAILING SHALL BE HOT DIP GALVANIZED AFTER FABRICATION AND PAINTED BLACK.
2. ALL POSTS SHALL BE PLUMB AND RAILS PARALLEL TO THE GROUND.
3. PIPE MATERIAL SHALL CONFORM TO ASTM A53.
4. REINFORCING STEEL ASTM A615 GR 60.
5. IF THE CONCRETE WALK SLOPE IS 5% OR GREATER A GRIPPING HANDRAIL IS REQUIRED. SEE RAIL/RAIL END INTERSECTION DETAILS.
6. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.





H DETAIL
PEDESTRIAN RAILS N.T.S.



I DETAIL
STEEL PIPE BOLLARD N.T.S.

REVISIONS

MARK	DATE	DESCRIPTION

STAKING DETAILS

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK PHASE 2

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Bicentennial Barn - McCammon Creek Park
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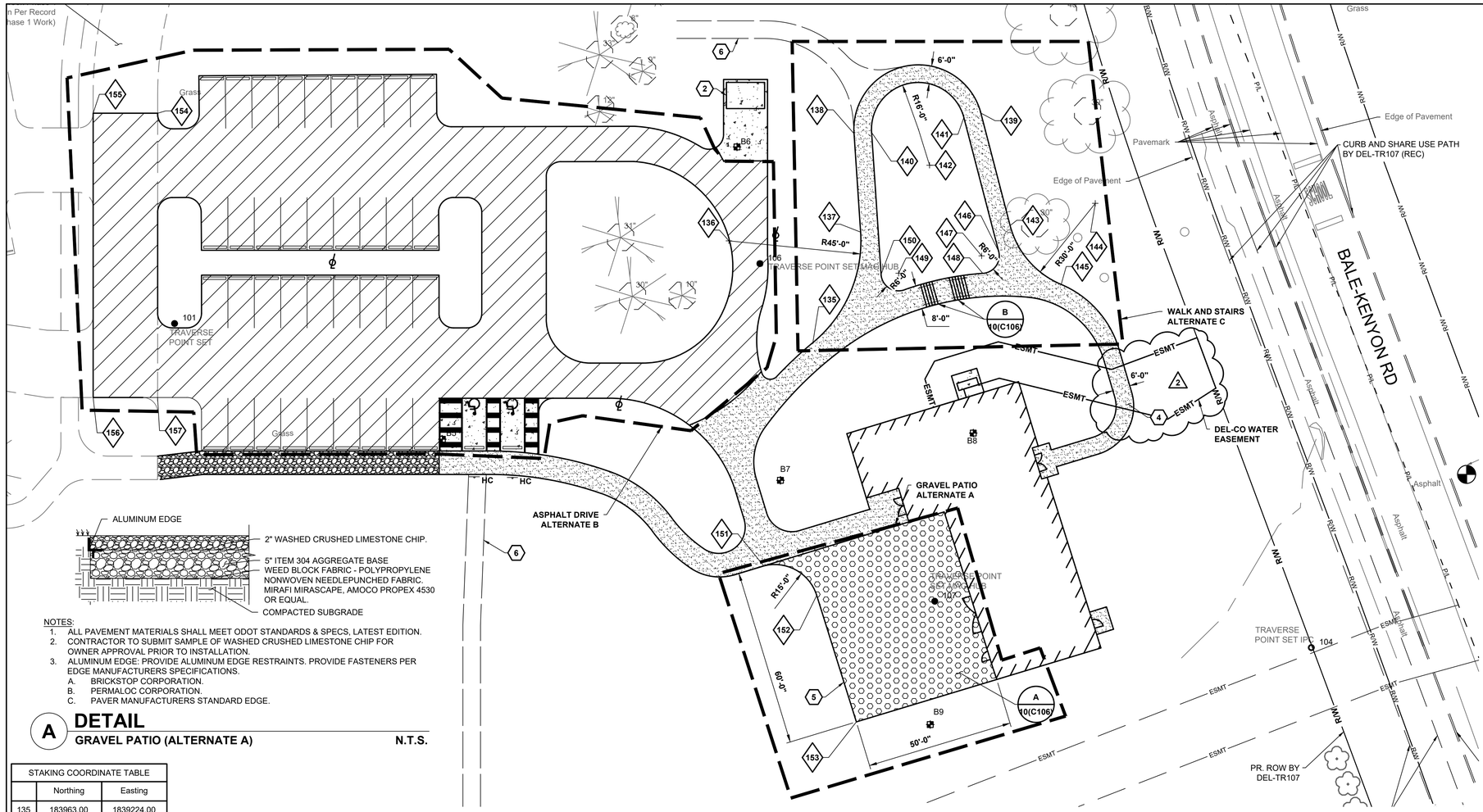
STATE OF OHIO — GRAHAM J. WATKINS — E-84007 — REGISTERED PROFESSIONAL ENGINEER

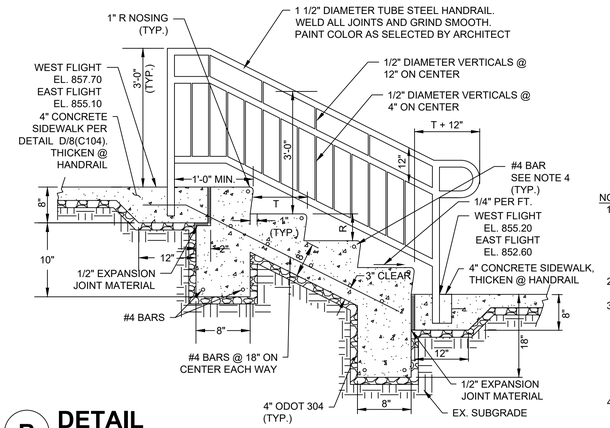
STAKING DETAILS
C105
11/25/2024
23070



NOTES:
1. ALL PAVEMENT MATERIALS SHALL MEET ODOT STANDARDS & SPECS, LATEST EDITION.
2. CONTRACTOR TO SUBMIT SAMPLE OF WASHED CRUSHED LIMESTONE CHIP FOR OWNER APPROVAL PRIOR TO INSTALLATION.
3. ALUMINUM EDGE: PROVIDE ALUMINUM EDGE RESTRAINTS. PROVIDE FASTENERS PER EDGE MANUFACTURERS SPECIFICATIONS.
   A. BRICKSTOP CORPORATION.
   B. PERMALOC CORPORATION.
   C. PAVER MANUFACTURERS STANDARD EDGE.

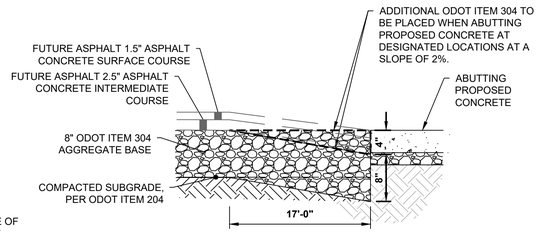
A DETAIL
GRAVEL PATIO (ALTERNATE A) N.T.S.

STAKING COORDINATE TABLE		
	Northing	Easting
135	183963.00	1839224.00
136	183997.73	1839195.38
137	184000.72	1839240.28
138	184034.30	1839238.04
139	184041.30	1839281.28
140	184034.70	1839244.03
141	184039.79	1839275.48
142	184035.77	1839259.99
143	184002.97	1839291.25
144	184010.51	1839320.28
145	183982.86	1839308.65
146	183994.13	1839287.35
147	183992.62	1839281.54
148	183986.63	1839281.96
149	183986.68	1839253.24
150	183986.29	1839247.26
151	183886.82	1839207.29
152	183876.77	1839225.31
153	183833.62	1839238.82
154	184041.28	1839000.63
155	184041.28	1838978.63
156	183944.28	1838978.63
157	183944.28	1839000.60



NOTES:
1. ALL RISERS SHALL BE OF EQUAL HEIGHT AND ALL TREADS SHALL BE OF EQUAL DEPTH ON ANY ONE SET OF STEPS.
   R= 5" MIN., 7" MAX.
   T= 11" MIN., 15" MAX.
2. HANDRAILS SHALL CONFORM TO ALL APPLICABLE A.D.A REQUIREMENTS.
3. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS. IF STAIR WIDTH EXCEEDS 12'-0", A HANDRAIL SHALL BE PROVIDED AT THE MIDPOINT OF THE STAIR, AS WELL AS ON BOTH SIDES. HANDRAIL SHALL BE PAINTED STANDARD STEEL HANDRAIL. COLOR SELECTED BY ARCHITECT.
4. PROVIDE A MINIMUM 2" OF COVER AROUND #4 NOSING BARS.

B DETAIL
SIDEWALK STEPS WITH HANDRAILS (ALTERNATE C) N.T.S.



NOTES:
1. COMPOSE HOT MIX ASPHALT MIXTURE WITH AGGREGATE AND ASPHALT BINDER MEETING ODOT REQUIREMENTS.
2. SUBMIT AN APPROVED JOB MIX FORMULA INCLUDING MIX TYPE PROPOSED FOR USE, AGGREGATE SOURCE, TYPE, AND GRADATION, PERCENT OF ASPHALT BINDER, AND UNIT WEIGHT OF THE MIXTURE.
3. OBTAIN JOB MIX FORMULA APPROVAL BY PROVIDING A PREVIOUSLY ODOT APPROVED FORMULA THE AGENCY PERFORMING THE TESTING MUST BE LEVEL III BITUMINOUS CONCRETE APPROVED BY ODOT.
4. PROVIDE QUALITY ASSURANCE TESTING IN ACCORDANCE WITH ODOT ITEM 441 AND SUPPLEMENTAL SPECIFICATION 1055, THE AGENCY PERFORMING THE TESTING MUST HAVE A CURRENT LEVEL I BITUMINOUS CONCRETE APPROVAL FROM ODOT.
5. PROVIDE COMPACTION RANGING FROM 90 TO 97.9% OF THE AVERAGE MAXIMUM SPECIFIC GRAVITY FOR SURFACE COURSE AND 90 TO 96.9% FOR INTERMEDIATE COURSE. REMOVE AND REPLACE MATERIAL PLACED OUTSIDE OF SAID RANGES. PROVIDE REPLACEMENT PAVEMENT AND QUALITY ASSURANCE TESTING AT NO ADDITIONAL COST TO THE OWNER.

C DETAIL
GRAVEL TRANSITION N.T.S.

0 20 40 60
GRAPHIC SCALE
SCALE IN FEET

STAKING LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- R/W — RIGHT-OF-WAY, REFER TO DEL-TR107
- FENCE
- BUILDING/WALL
- PAVEMENT
- WALK
- PAINTED WHEELCHAIR SYMBOL
- SIGN PER DETAIL B/9(C105)
- HC — HANDICAPPED PARKING SIGN PER DETAIL B/9(C105)
- BUMPER BLOCK PER DETAIL G/8(C104) (TYP OF 38)
- TREE PROTECTION PER DETAIL A/8(C104)
- BASE BID ALTERNATE B: GRAVEL PER DETAIL C/9(C105) ALTERNATE: LIGHT DUTY ASPHALT PAVEMENT PER DETAIL B/8(C104)
- CONCRETE PAVEMENT OR SIDEWALK PER DETAIL D/8(C104)
- HEAVY DUTY CONCRETE PER DETAIL G/9(C105)
- GRAVEL SIDEWALK PER DETAIL I/8(C104)

GENERAL NOTES:
1. DIMENSIONS AND COORDINATES ARE GIVEN TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. CURB AND SIDEWALK RADII SHALL BE 5'-0" UNLESS OTHERWISE NOTED.
3. PROVIDE STRIPING AND SYMBOLS AS SHOWN PER ODOT ITEM 641 AND 642. PROVIDE STRIPING PAINT WITH GLASS BEADS. PROVIDE TYPE I OR TYPE IA PAINT IN ACCORDANCE WITH ODOT ITEM 642 DEPENDING ON TEMPERATURE CONDITIONS AT THE TIME OF APPLICATION. TYPICAL LINE WIDTH SHALL BE 4 INCHES, COLOR WHITE. PROVIDE TWO COATS.
4. STANDARD PARKING STALL DIMENSIONS ARE 9'-0" IN WIDTH BY 18'-0" IN LENGTH UNLESS OTHERWISE NOTED.
5. SAWCUT FULL DEPTH SIDEWALK AND PAVEMENT WHERE NEW WORK ABUTS EXISTING CONSTRUCTION. TAKE CARE TO PROVIDE NEAT STRAIGHT LINES. PROVIDE PAVEMENT SEALANT PER ODOT ITEM 640 AND 641 AT JOINT BETWEEN EXISTING AND NEW ASPHALT. REMOVE CONCRETE TO NEAREST JOINT. PROVIDE 1/2" PREFORMED EXPANSION JOINT FILLER BETWEEN NEW AND EXISTING CONSTRUCTION.
6. ANY PROPERTY PINS DAMAGED AS PART OF CONSTRUCTION SHALL BE RESET BY AN OHIO REGISTERED SURVEYOR.
7. PROVIDE 1 HANDICAP ACCESSIBLE PARKING SIGNS AND 1 VAN ACCESSIBLE PARKING SIGNS. FINAL LOCATION OF SIGNS TO BE DETERMINED BY ARCHITECT.
8. MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ADJACENT BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SITE SIGNAGE NOT SHOWN ON THIS SHEET.
10. BUILDING COORDINATES PROVIDED FOR BUILDING LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR BUILDING LAYOUT.
11. PROVIDE CONCRETE PARKING BLOCKS AT ALL SPACES PER DETAIL G/8(C104).
12. PROVIDE CONTROL JOINTS PER DETAIL E/8(C104). PROVIDE ISOLATION JOINTS WHERE NEW CONCRETE ABUTS EXISTING STRUCTURES PER DETAIL C/8(C104) AND PER SPECIFICATIONS.

(X) CODED NOTES:
1. SAW-CUT EXISTING PAVEMENT WITH NEAT, STRAIGHT LINES. MATCH EXISTING PAVEMENT GRADE AT THIS POINT.
2. TRASH ENCLOSURE PER DETAILS D,E,F ON SHEET 9(C105).
3. LIGHTPOLES SHOWN FOR REFERENCE, REFER TO ELECTRICAL DRAWINGS.
4. ALTERNATE C DOES NOT HAVE RAILINGS ALONG THE WALK.
5. BARN STONES BY OWNER.
6. FUTURE PATH SHOWN FOR REFERENCE.

ALTERNATE
1. BASE BID - PROVIDE TOP SOIL AND GRASS.
   ALTERNATE A - PROVIDE GRAVEL PATIO PER SHEET 10(C106) DETAIL A/10(C106).
2. BASE BID - PROVIDE GRAVEL PER DETAIL C/9(C105) AND C/10(C106).
   ALTERNATE B - PROVIDE ASPHALT PER DETAIL B/8(C104) AND 18(C207).
3. BASE BID- PROVIDE TOP SOIL AND GRASS.
   ALTERNATE C - PROVIDE ALTERNATE WALKING PATH PER SHEET 10(C106) AND 18(C207).

KORDA
KORDA/NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	EAM
DESIGNED BY:	EAM
CHECKED BY:	GJW
PROJECT NUMBER:	2023-0006

REVISIONS

MARK	DATE	DESCRIPTION

STAKING PLAN

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK
PHASE 2

KORDA
Korda/Nemeth Engineering, Inc.- Consulting Engineers
1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7100
TEL 614-487-1650 - FAX 614-487-9981 - WEB www.korda.com

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T 614-628-0300
F 614-628-0311
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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

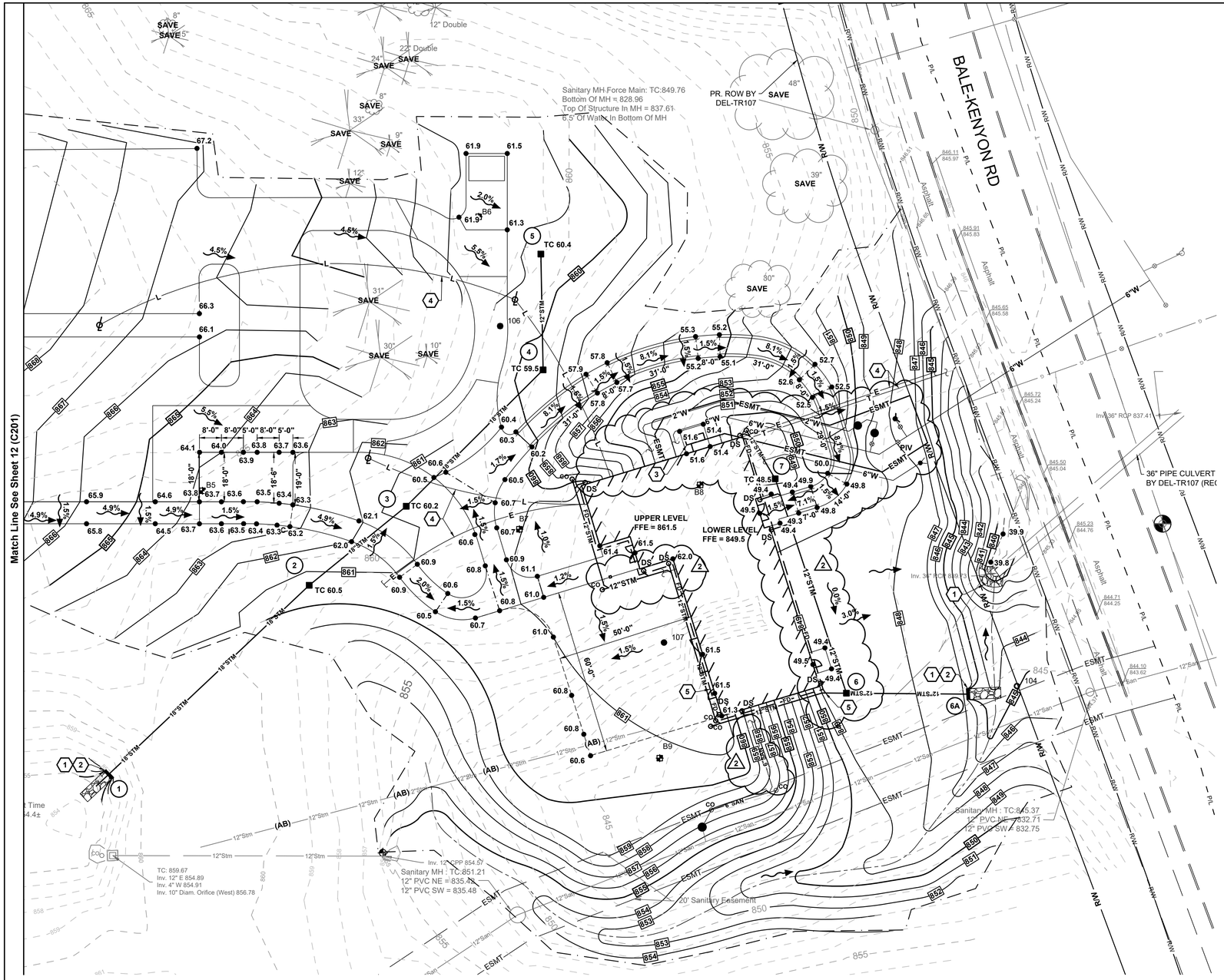
GRAHAM J. WATKINS 84007 REGISTERED PROFESSIONAL ENGINEER
11/25/2024

2 STAKING PLAN ALTERNATES

C106

11/25/2024

23070



0 20 40 60

GRAPHIC SCALE
SCALE IN FEET

GRADING LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- 800 — INDEX CONTOUR
- 799 — INTERMEDIATE CONTOUR
- BUILDING/WALL
- E — UNDERGROUND ELECTRIC LINE
- T — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- STM — STORM SEWER
- UD — UNDERDRAIN
- FD — FOUNDATION DRAIN
- SAN — SANITARY SEWER
- CATCH BASIN
- DS — DOWNSPOUT ADAPTER
- GATE VALVE & CURB BOX
- GRADE BREAK (CROWN) LINE
- GRADING/SEEDING LIMITS
- 708.53 — SPOT ELEVATION
- TC — TOP OF CASTING
- 700.00 / 699.50 — TOP OF CURB ELEVATION / GUTTER ELEVATION AT FACE OF CURB
- FLOW DIRECTION ARROW
- HIGH (CROWN) POINT
- EMERGENCY OVERFLOW
- M.E. — MATCH EXISTING ELEVATION

GENERAL NOTES:

1. PROVIDE 10' UNDERDRAINS IN FOUR DIRECTIONS AT CATCH BASINS IN PAVEMENT.
2. PAVEMENT ELEVATIONS REFER TO FINISHED PAVEMENT ELEVATION AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. CONSTRUCTION WORK WILL NOT BE PERMITTED WITHOUT APPROVED PLANS AND INSPECTION.
3. ADD 800' TO SPOT ELEVATIONS TO OBTAIN U.S.G.S. ELEVATIONS.
4. PERFORM WORK IN ACCORDANCE WITH ODOT MATERIAL SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS. IN CASE OF A DISCREPANCY BETWEEN COUNTY OF DELAWARE REQUIREMENTS AND PROJECT SPECIFICATIONS, COUNTY OF DELAWARE STANDARDS SHALL GOVERN.
5. SOIL EROSION AND SEDIMENTATION BMP MEASURES, PER SHEET C205, SHALL BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND SHALL BE MAINTAINED UNTIL CONSTRUCTION HAS BEEN COMPLETED, INCLUDING GRASS BEING WELL ESTABLISHED AND/OR PERMANENT EROSION AND SEDIMENTATION BMP MEASURES IN PLACE. BMP MEASURES SHALL BE TO THE SATISFACTION OF DELAWARE COUNTY.
6. STREET CLEANING (ON AN AS-NEEDED BASIS) IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING, AND (IF NECESSARY) MANUAL REMOVAL OF DIRT AND/OR MUD IN THE STREET GUTTERS.
7. REMOVE SEDIMENT FROM DETENTION AREAS, OUTLET STRUCTURES, AND UNDERDRAINS ONCE FINAL SEED HAS BEEN ESTABLISHED.
8. ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.
9. DIMENSIONS AND COORDINATES ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. EXTEND UTILITIES TO WITHIN 5'-0" OF FACE OF BUILDING UNLESS OTHERWISE NOTED. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
11. MAXIMUM FINISH SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED.
12. COORDINATES AND ELEVATIONS BASED ON SURVEY PERFORMED BY WOOLPERT, DATED 05/16/2022. REFER TO SURVEY SHEET.
13. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL THROUGHOUT THE SITE PRIOR TO EXCAVATION. UPON COMPLETION OF FINAL GRADING, PROVIDE 6 INCHES OF TOPSOIL AND SEED AREAS DISTURBED BY CONSTRUCTION, INCLUDING LAYDOWN AREAS AND TRAILER LOCATIONS IF LOCATED OUTSIDE THE GRADING/SEEDING LIMITS.
14. DISPOSE EXCESS EXCAVATED MATERIALS AND UNACCEPTABLE/UNSUITABLE SOILS OFF SITE IN ACCORDANCE WITH LOCAL CODES. NO PERMANENT STOCKPILES WILL REMAIN ON SITE.
15. EXISTING VALVES, MANHOLES, AND OTHER APPURTANCES TO REMAIN LOCATED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO FINISH GRADE.
16. OUTLET CURB UNDERDRAINS TO ADJACENT EXISTING UNDERDRAINS OR STORM SEWER SYSTEM.
17. EXPOSE UTILITIES NOTED THUS: **EXPOSE** PRIOR TO BEGINNING WORK ON THAT UTILITY TO DETERMINE EFFECTS ON THE PROPOSED ALIGNMENT AND PROFILE. REPORT ELEVATION AND LOCATION TO THE ENGINEER IN ORDER THAT ANY CORRECTIONS TO THE ELEVATION AND LOCATION CAN BE MADE.
18. CONCRETE ADJACENT TO BUILDING SHALL BE SLOPED AWAY FROM BUILDING AT 2.0% UNLESS OTHERWISE NOTED.
19. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
20. EMBANKMENT SHALL BE CONSTRUCTED PER DETAIL E/14(C203) AND SPECIFICATIONS 31 00 00.

(X) CODED NOTES:

1. HEADWALL PER DETAIL E/14(C203).
2. PROVIDE SANDSTONE ROCK CHANNEL PROTECTION 18" DEEP X 10' LONG X WIDTH OF HEADWALL.
3. COORDINATE GRADE AND LOCATION WITH MECHANICAL CONTRACTOR.
4. APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH ELECTRICAL PLANS AND ELECTRICAL CONTRACTOR.
5. FOUNDATION DRAIN SHOWN FOR REFERENCE. COORDINATE FOUNDATION DRAIN AND CONNECTION WITH STRUCTURAL CONTRACTOR. CONNECT FOUNDATION DRAIN TO 12" STORM PIPE AT INVERT 845.4'. ENSURE POSITIVE DRAINAGE.

ALTERNATE

1. BASE BID - PROVIDE TOP SOIL AND GRASS.
   ALTERNATE A - PROVIDE GRAVEL PATIO PER SHEET 10(C106) DETAIL A/10(C106).
2. BASE BID - PROVIDE GRAVEL PER DETAIL C/9(C105) AND C/10(C106).
   ALTERNATE B - PROVIDE ASPHALT PER DETAIL B/8(C104) AND 18(C207).
3. BASE BID- PROVIDE TOP SOIL AND GRASS.
   ALTERNATE C - PROVIDE ALTERNATE WALKING PATH PER SHEET 10(C106) AND 18(C207).

EARTHWORK NOTES:

REFER TO GCI SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT, GCI PROJECT NO. 22-G-26626, DATED JULY 14, 2022 FOR SITE SOILS INFORMATION. SITE PREPARATION SHALL BE PER SPECIFICATION SECTION 31 00 00 UNLESS OTHERWISE NOTED IN THESE PLANS.
PLEASE NOTE THE FOLLOWING SOIL REMEDIATION PROVISIONS FOR THIS PROJECT:

1. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL THROUGHOUT THE SITE PRIOR TO EXCAVATION. UPON COMPLETION OF FINAL GRADING, THE CONTRACTOR MAY EMBANK ADDITIONAL TOPSOIL WITHIN LAWN AREAS TO HELP EARTHWORK BALANCE.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ANY DEWATERING OPERATIONS NECESSARY FOR EARTHWORK ACTIVITIES, AS SPECIFIED IN SPECIFICATION SECTION 31 00 00.

EXISTING FILL SOIL REMOVAL NOTES:

1. REMOVE EXISTING FILL SOILS UNDER NEW BUILDING AND EXTENDING 10' BEYOND THE BUILDING. COORDINATE REMOVAL WITH TESTING AGENCY. TESTING AGENCY SHALL APPROVE REMOVAL PRIOR TO PLACING FILL.
2. PROOF ROLL NATIVE SOIL AND PREPARE SUBGRADE PER SPECIFICATION SECTION 31 00 00 PRIOR TO FILL PLACEMENT.
3. PLACE FILL IN ACCORDANCE WITH SPECIFICATION SECTION 31 00 00.
4. SOME EXISTING FILL SOIL WILL BE ACCEPTABLE AS FILL MATERIAL. PROVIDE ANY ADDITIONAL SOIL AS NECESSARY TO COMPLETE FILL CONSTRUCTION. DISPOSE OF ANY UNSUITABLE FILL OFF-SITE IN ACCORDANCE WITH LOCAL CODES.

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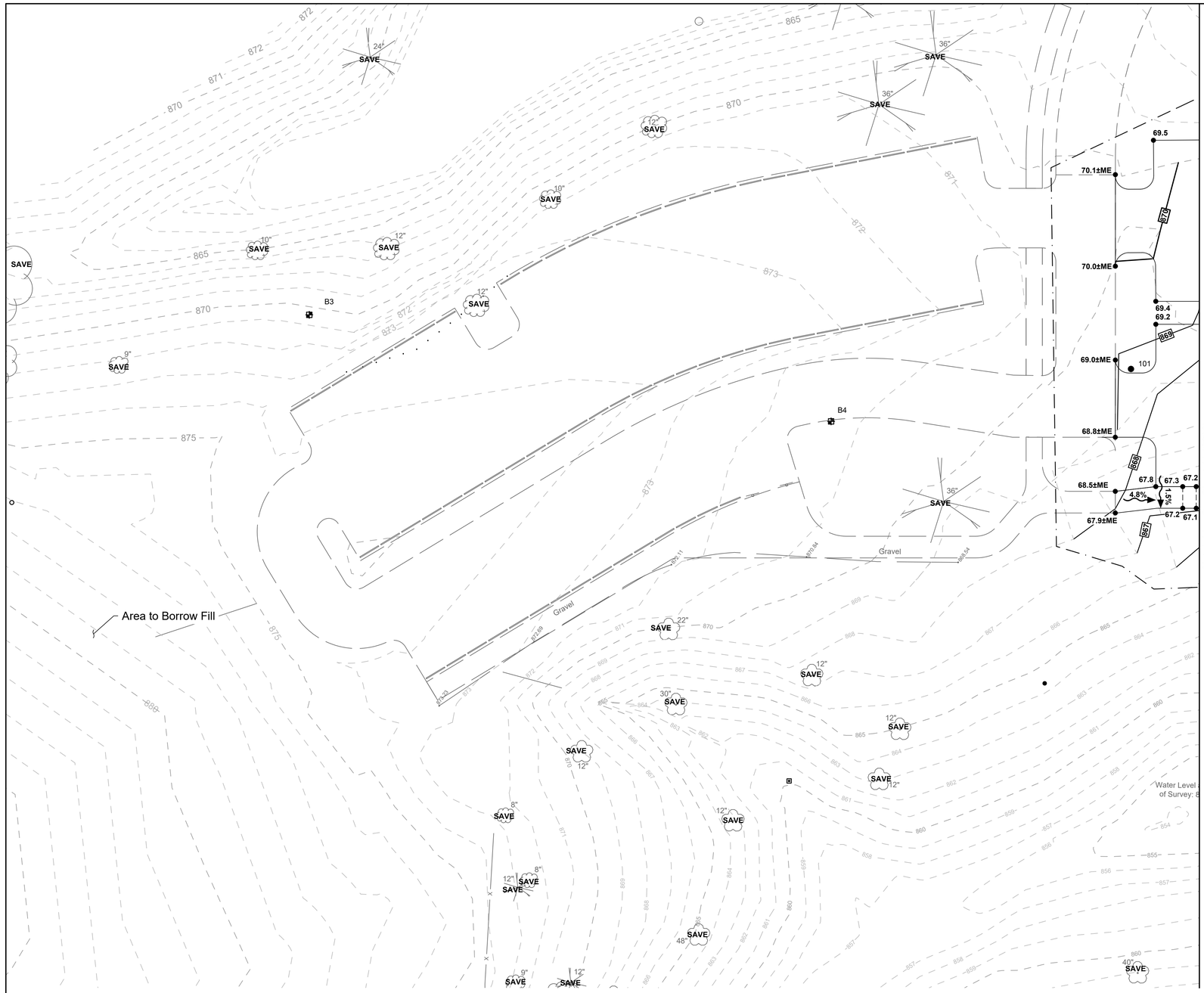
STATE OF OHIO
GRAHAM J. WATKINS
84007
Registered
PROFESSIONAL ENGINEER

GRADING PLAN

C200

11/25/2024

23070



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GRAPHIC SCALE
SCALE IN FEET

N

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- M.E. — MATCH EXISTING ELEVATION

GENERAL NOTES:

1. PROVIDE 10' UNDERDRAINS IN FOUR DIRECTIONS AT CATCH BASINS IN PAVEMENT.
2. PAVEMENT ELEVATIONS REFER TO FINISHED PAVEMENT ELEVATION AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. CONSTRUCTION WORK WILL NOT BE PERMITTED WITHOUT APPROVED PLANS AND INSPECTION.
4. PERFORM WORK IN ACCORDANCE WITH ODOT MATERIAL SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS. IN CASE OF A DISCREPANCY BETWEEN COUNTY OF DELAWARE REQUIREMENTS AND PROJECT SPECIFICATIONS, COUNTY OF DELAWARE STANDARDS SHALL GOVERN.
5. SOIL EROSION AND SEDIMENTATION BMP MEASURES, PER SHEET C205, SHALL BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND SHALL BE MAINTAINED UNTIL CONSTRUCTION HAS BEEN COMPLETED, INCLUDING GRASS BEING WELL ESTABLISHED AND/OR PERMANENT EROSION AND SEDIMENTATION BMP MEASURES IN PLACE. BMP MEASURES SHALL BE TO THE SATISFACTION OF DELAWARE COUNTY.
6. STREET CLEANING (ON AN AS-NEEDED BASIS) IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING, AND (IF NECESSARY) MANUAL REMOVAL OF DIRT AND/OR MUD IN THE STREET GUTTERS.
7. REMOVE SEDIMENT FROM DETENTION AREAS, OUTLET STRUCTURES, AND UNDERDRAINS ONCE FINAL SEED HAS BEEN ESTABLISHED.
8. ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.
9. DIMENSIONS AND COORDINATES ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. EXTEND UTILITIES TO WITHIN 5'-0" OF FACE OF BUILDING UNLESS OTHERWISE NOTED. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
11. MAXIMUM FINISH SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED.
12. COORDINATES AND ELEVATIONS BASED ON SURVEY PERFORMED BY WOOLPERT, DATED 05/16/2022. REFER TO SURVEY SHEET.
13. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL THROUGHOUT THE SITE PRIOR TO EXCAVATION. UPON COMPLETION OF FINAL GRADING, PROVIDE 6 INCHES OF TOPSOIL AND SEED AREAS DISTURBED BY CONSTRUCTION, INCLUDING LAYDOWN AREAS AND TRAILER LOCATIONS IF LOCATED OUTSIDE THE GRADING/SEEDING LIMITS.
14. DISPOSE EXCESS EXCAVATED MATERIALS AND UNACCEPTABLE/UNSUITABLE SOILS OFF SITE IN ACCORDANCE WITH LOCAL CODES. NO PERMANENT STOCKPILES WILL REMAIN ON SITE.
15. EXISTING VALVES, MANHOLES, AND OTHER APPURTANCES TO REMAIN LOCATED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO FINISH GRADE.
16. OUTLET CURB UNDERDRAINS TO ADJACENT EXISTING UNDERDRAINS OR STORM SEWER SYSTEM.
17. EXPOSE UTILITIES NOTED THUS: **EXPOSE** PRIOR TO BEGINNING WORK ON THAT UTILITY TO DETERMINE EFFECTS ON THE PROPOSED ALIGNMENT AND PROFILE. REPORT ELEVATION AND LOCATION TO THE ENGINEER IN ORDER THAT ANY CORRECTIONS TO THE ELEVATION AND LOCATION CAN BE MADE.
18. CONCRETE ADJACENT TO BUILDING SHALL BE SLOPED AWAY FROM BUILDING AT 2.0% UNLESS OTHERWISE NOTED.
19. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
20. EMBANKMENT SHALL BE CONSTRUCTED PER DETAIL E/14(C203) AND SPECIFICATIONS 31 00 00.

ALTERNATE

1. BASE BID - PROVIDE TOP SOIL AND GRASS.
   ALTERNATE A - PROVIDE GRAVEL PATIO PER SHEET 10(C106) DETAIL A/10(C106).
2. BASE BID - PROVIDE GRAVEL PER DETAIL C/9(C105) AND C/10(C106).
   ALTERNATE B - PROVIDE ASPHALT PER DETAIL B/8(C104) AND 18(C207). (2)
3. BASE BID- PROVIDE TOP SOIL AND GRASS.
   ALTERNATE C - PROVIDE ALTERNATE WALKING PATH PER SHEET 10(C106) AND 18(C207).

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STATE OF OHIO
GRAHAM J. WATKINS
E-84007
REGISTERED
PROFESSIONAL ENGINEER

GRADING PLAN

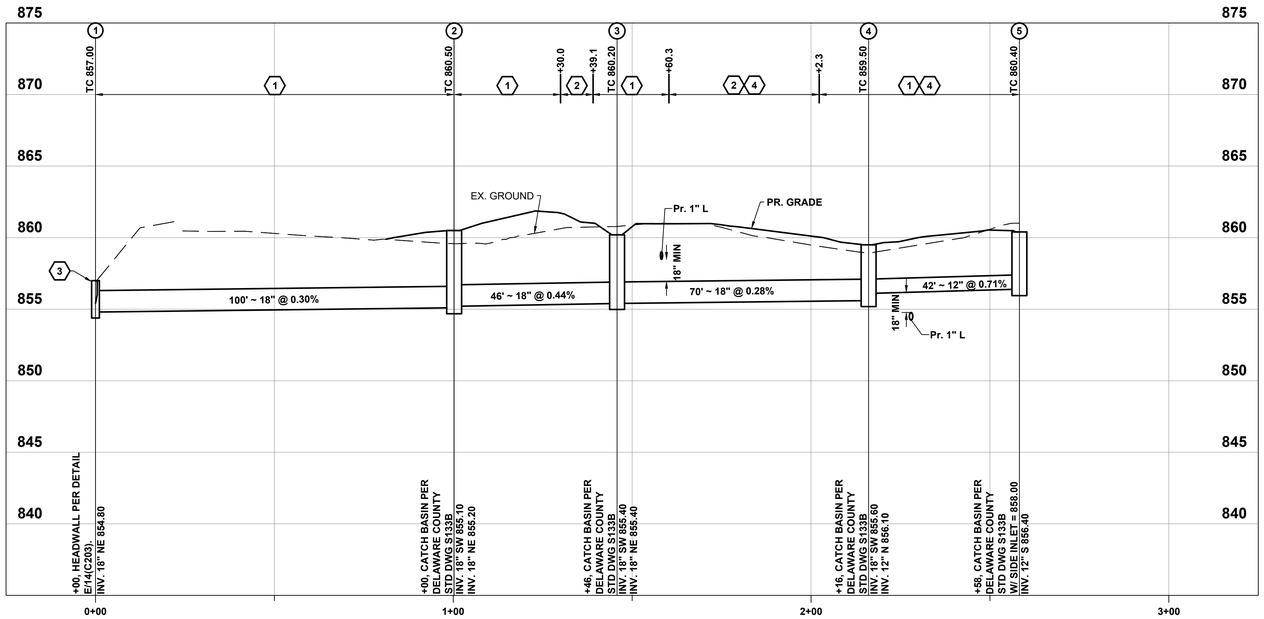
C201

11/25/2024

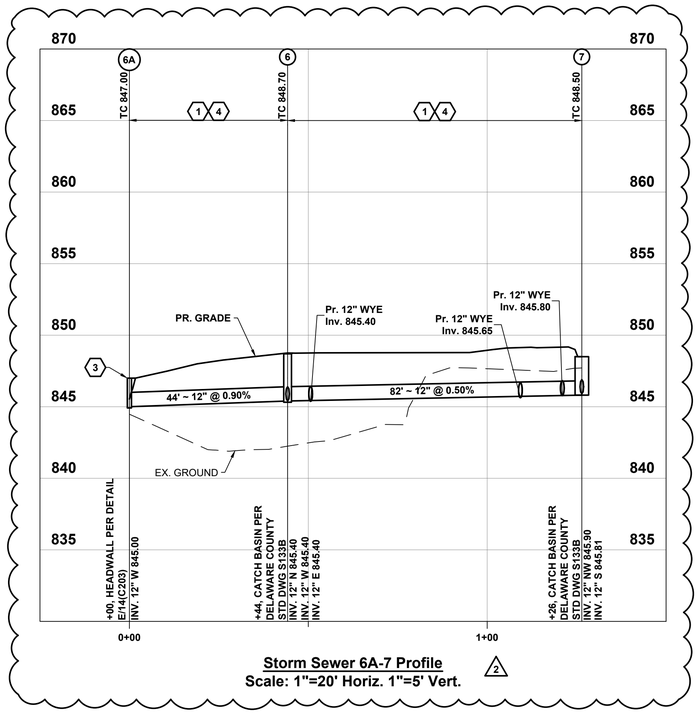
23070

(X) CODED NOTES:

1. BACKFILL WITH COMPACTED BACKFILL PER CMSC ITEM 911
2. BACKFILL WITH COMPACTED GRANULAR MATERIAL PER CMSC ITEM 912
3. PROVIDE ODOT TYPE C ROCK CHANNEL PROTECTION 18" DEEP X 10' LONG X WIDTH OF HEADWALL.
4. INSTALL REINFORCED CONCRETE PIPE PER CMSC ITEM 706.02.



Storm Sewer 1-5 Profile
Scale: 1"=20' Horiz. 1"=5' Vert.



Storm Sewer 6A-7 Profile (2)
Scale: 1"=20' Horiz. 1"=5' Vert.

STORM SEWER STRUCTURE COORDINATES (2)

Structure	TC	Northing	Easting	Northing As-Built	Easting As-Built
2	860.50	183895.63	1839136.50		
3	860.20	183924.40	1839171.79		
4	859.50	183974.05	1839221.57		
5	860.40	184016.19	1839220.76		
6A	847.00	183856.01	1839376.13		
6	848.70	183856.36	1839331.91		
7	848.50	183934.40	1839305.99		

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STORM PROFILES

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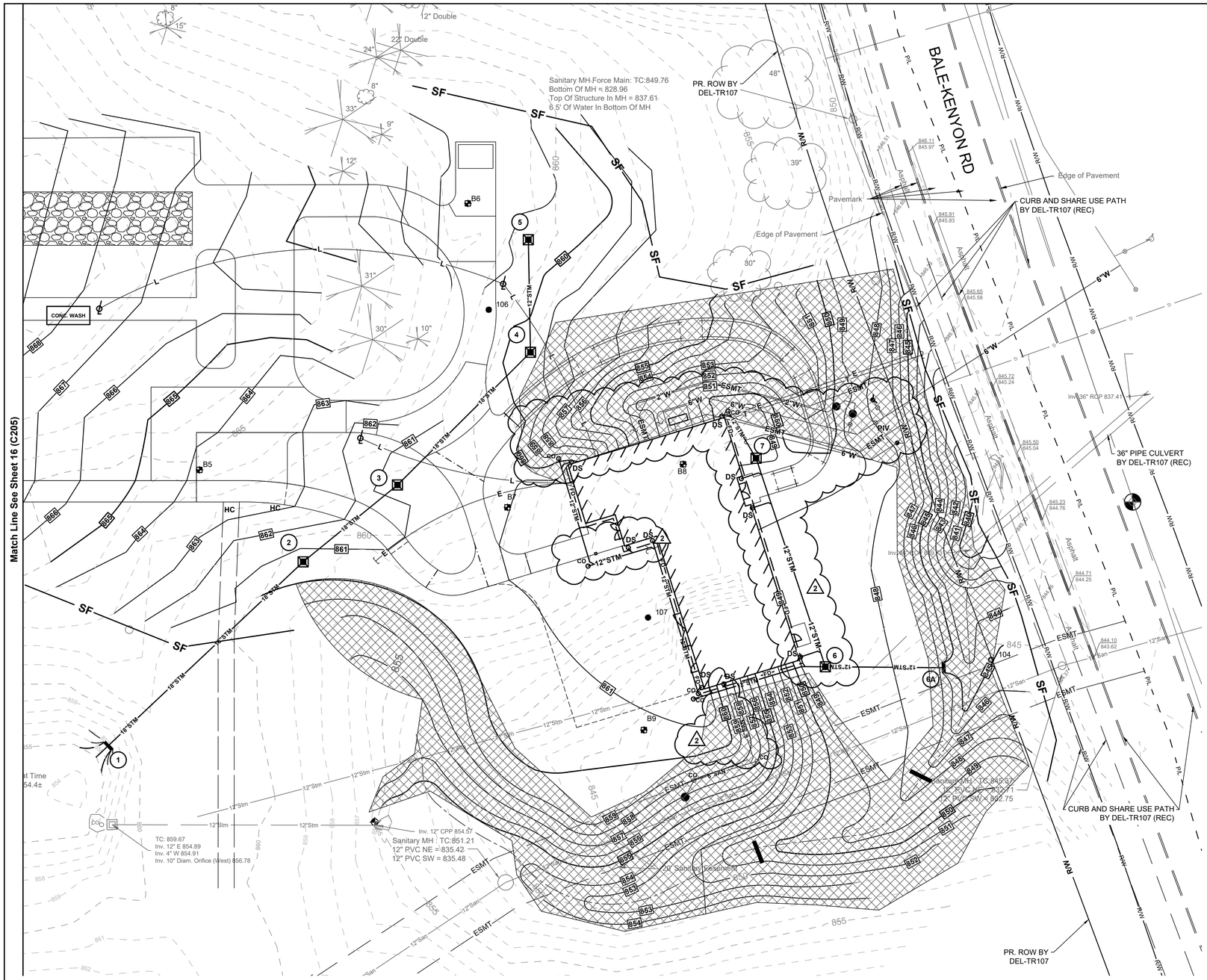
C202

11/25/2024

23070



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GRAPHIC SCALE
SCALE IN FEET

EROSION AND SEDIMENT CONTROL LEGEND

EXISTING

REFER TO SHEET 2

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- 800 — INDEX CONTOUR
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- BUILDING/WALL
- STM — STORM SEWER
- CATCH BASIN
- CURB & GUTTER INLET
- MANHOLE
- DS — DOWNSPOUT ADAPTER
- SF — SILT FENCE PER DETAIL E/17(C206)
- ROCK CHECK DAM PER DETAIL D/17(C206)
- EROSION CONTROL MATTING PER DETAIL C/17(C206)
- STABILIZED CONSTRUCTION ENTRANCE PER DETAIL B/17(C206)
- CONC. WASH — CONCRETE WASHOUT PER DETAIL F/17(C206)
- INLET FILTER PER DETAIL C/16(C205)

REVISIONS			
MARK	DATE	DESCRIPTION	

EROSION CONTROL PLAN

DELAWARE COUNTY, OHIO
FINAL ENGINEERING PLAN
FOR
MCCAMMON CREEK PARK
PHASE 2

KORDA
Korda/Nemeth Engineering, Inc. - Consulting Engineers
1650 Watermark Drive, Suite 200 - Columbus, Ohio 43215-7910
TEL 614-487-1650 - FAX 614-487-9981 - WEB www.korda.com

DATE
11/17/2023

KORDA
KORDA/NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

JOB NO.
2023-0006

SHEET
15/21

DRAWN BY:	EAM
DESIGNED BY:	EAM
CHECKED BY:	GJW
PROJECT NUMBER:	2023-0006

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
schooleycaldwell.com
T 614-628-0300
F 614-628-0311
Columbus OH 43215

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates
- Design Development Submittal 11/17/2023
- 50% Construction Documents 08/15/2024
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Revision Schedule

#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

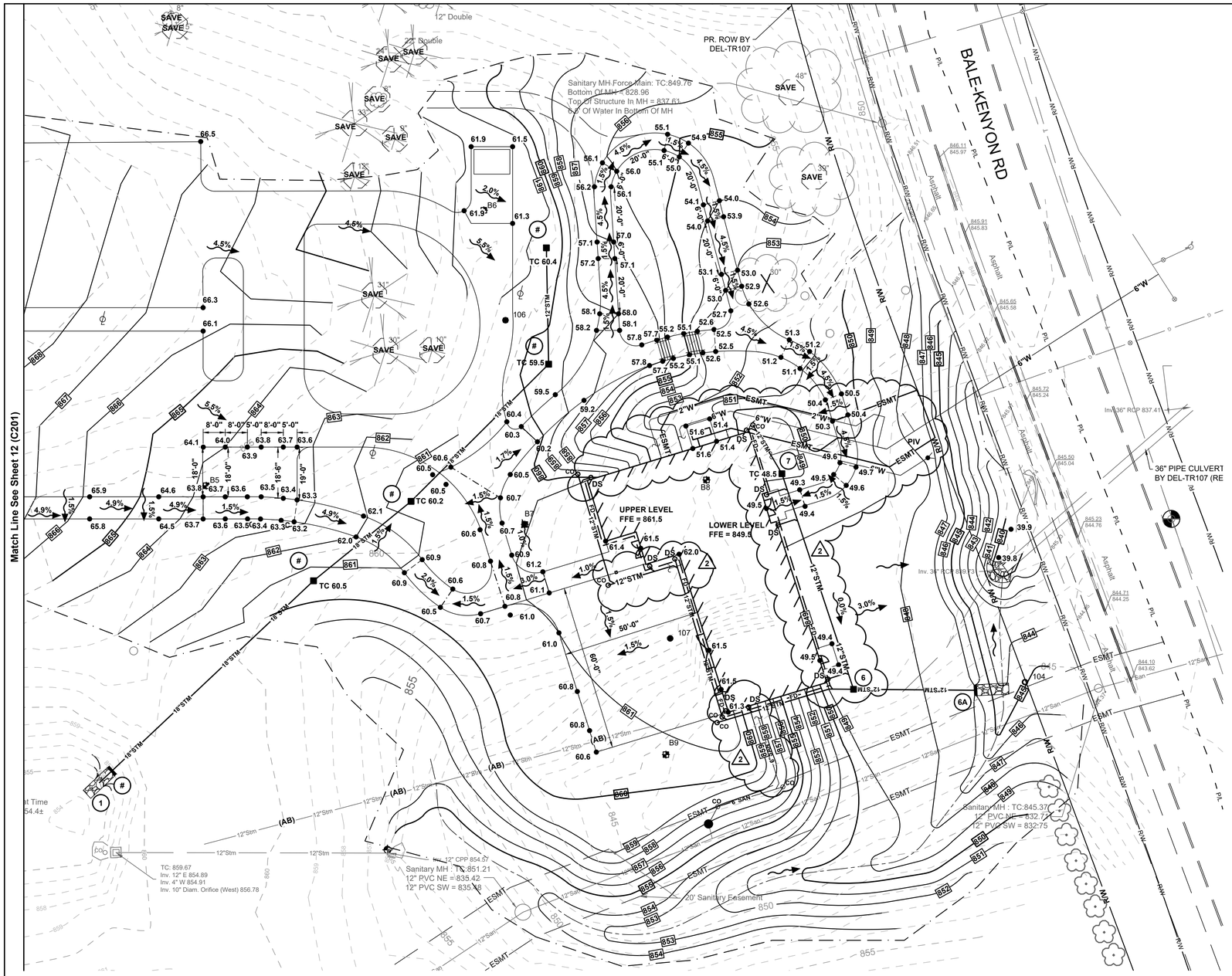
STATE OF OHIO
GRAHAM J. WATKINS
84007
PROFESSIONAL ENGINEER

EROSION CONTROL PLAN

C204

11/25/2024

23070



0 20 40 60

GRAPHIC SCALE
SCALE IN FEET

N

GRADING LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- 800 — INDEX CONTOUR
- 799 — INTERMEDIATE CONTOUR
- BUILDING/WALL
- E — UNDERGROUND ELECTRIC LINE
- T — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- STM — STORM SEWER
- UD — UNDERDRAIN
- SAN — SANITARY SEWER
- CATCH BASIN
- DS — DOWNSPOUT ADAPTER
- GATE VALVE & CURB BOX
- GRADE BREAK (CROWN) LINE
- GRADING/SEEDING LIMITS
- 708.53 — SPOT ELEVATION
- TC — TOP OF CASTING
- 700.00 / 699.50 — TOP OF CURB ELEVATION / GUTTER ELEVATION AT FACE OF CURB
- FLOW DIRECTION ARROW
- HIGH (CROWN) POINT
- EMERGENCY OVERFLOW
- M.E. — MATCH EXISTING ELEVATION
- TREE PROTECTION PER DETAIL A/8(C104)

GENERAL NOTES:

1. PROVIDE 10' UNDERDRAINS IN FOUR DIRECTIONS AT CATCH BASINS IN PAVEMENT.
2. PAVEMENT ELEVATIONS REFER TO FINISHED PAVEMENT ELEVATION AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. CONSTRUCTION WORK WILL NOT BE PERMITTED WITHOUT APPROVED PLANS AND INSPECTION.
4. ADD 800' TO SPOT ELEVATIONS TO OBTAIN U.S.G.S. ELEVATIONS.
4. PERFORM WORK IN ACCORDANCE WITH ODOT MATERIAL SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS. IN CASE OF A DISCREPANCY BETWEEN COUNTY OF DELAWARE REQUIREMENTS AND PROJECT SPECIFICATIONS, COUNTY OF DELAWARE STANDARDS SHALL GOVERN.
5. SOIL EROSION AND SEDIMENTATION BMP MEASURES, PER SHEET C205, SHALL BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND SHALL BE MAINTAINED UNTIL CONSTRUCTION HAS BEEN COMPLETED, INCLUDING GRASS BEING WELL ESTABLISHED AND/OR PERMANENT EROSION AND SEDIMENTATION BMP MEASURES IN PLACE. BMP MEASURES SHALL BE TO THE SATISFACTION OF DELAWARE COUNTY.
6. STREET CLEANING (ON AN AS-NEEDED BASIS) IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING, AND (IF NECESSARY) MANUAL REMOVAL OF DIRT AND/OR MUD IN THE STREET GUTTERS.
7. REMOVE SEDIMENT FROM DETENTION AREAS, OUTLET STRUCTURES, AND UNDERDRAINS ONCE FINAL SEED HAS BEEN ESTABLISHED.
8. ANY EXISTING STORM INLETS IMPACTED BY THE NEW CONSTRUCTION ACTIVITY WILL NEED THE APPROPRIATE INLET PROTECTION FOR SEDIMENT CONTROL.
9. DIMENSIONS AND COORDINATES ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. EXTEND UTILITIES TO WITHIN 5'-0" OF FACE OF BUILDING UNLESS OTHERWISE NOTED. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
11. MAXIMUM FINISH SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED.
12. COORDINATES AND ELEVATIONS BASED ON SURVEY PERFORMED BY WOOLPERT, DATED 05/16/2022. REFER TO SURVEY SHEET.
13. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL THROUGHOUT THE SITE PRIOR TO EXCAVATION. UPON COMPLETION OF FINAL GRADING, PROVIDE 6 INCHES OF TOPSOIL AND SEED AREAS DISTURBED BY CONSTRUCTION, INCLUDING LAYDOWN AREAS AND TRAILER LOCATIONS IF LOCATED OUTSIDE THE GRADING/SEEDING LIMITS.
14. DISPOSE EXCESS EXCAVATED MATERIALS AND UNACCEPTABLE/UNSUITABLE SOILS OFF SITE IN ACCORDANCE WITH LOCAL CODES. NO PERMANENT STOCKPILES WILL REMAIN ON SITE.
15. EXISTING VALVES, MANHOLES, AND OTHER APPURTANCES TO REMAIN LOCATED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO FINISH GRADE.
16. OUTLET CURB UNDERDRAINS TO ADJACENT EXISTING UNDERDRAINS OR STORM SEWER SYSTEM.
17. EXPOSE UTILITIES NOTED THUS: **EXPOSE** PRIOR TO BEGINNING WORK ON THAT UTILITY TO DETERMINE EFFECTS ON THE PROPOSED ALIGNMENT AND PROFILE. REPORT ELEVATION AND LOCATION TO THE ENGINEER IN ORDER THAT ANY CORRECTIONS TO THE ELEVATION AND LOCATION CAN BE MADE.
18. CONCRETE ADJACENT TO BUILDING SHALL BE SLOPED AWAY FROM BUILDING AT 2.0% UNLESS OTHERWISE NOTED.
19. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
20. EMBANKMENT SHALL BE CONSTRUCTED PER DETAIL E/14(C203) AND SPECIFICATIONS 31 00 00.

EARTHWORK NOTES:

REFER TO GCI SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT, GCI PROJECT NO. 22-G-26626, DATED JULY 14, 2022 FOR SITE SOILS INFORMATION. SITE PREPARATION SHALL BE PER SPECIFICATION SECTION 31 00 00 UNLESS OTHERWISE NOTED IN THESE PLANS. PLEASE NOTE THE FOLLOWING SOIL REMEDIATION PROVISIONS FOR THIS PROJECT:

1. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL THROUGHOUT THE SITE PRIOR TO EXCAVATION. UPON COMPLETION OF FINAL GRADING, THE CONTRACTOR MAY EMBANK ADDITIONAL TOPSOIL WITHIN LAWN AREAS TO HELP EARTHWORK BALANCE.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ANY DEWATERING OPERATIONS NECESSARY FOR EARTHWORK ACTIVITIES, AS SPECIFIED IN SPECIFICATION SECTION 31 00 00.

EXISTING FILL SOIL REMOVAL NOTES:

1. REMOVE EXISTING FILL SOILS UNDER NEW BUILDING AND EXTENDING 10' BEYOND THE BUILDING. COORDINATE REMOVAL WITH TESTING AGENCY. TESTING AGENCY SHALL APPROVE REMOVAL PRIOR TO PLACING FILL.
2. PROOF ROLL NATIVE SOIL AND PREPARE SUBGRADE PER SPECIFICATION SECTION 31 00 00 PRIOR TO FILL PLACEMENT.
3. PLACE FILL IN ACCORDANCE WITH SPECIFICATION SECTION 31 00 00.
4. SOME EXISTING FILL SOIL WILL BE ACCEPTABLE AS FILL MATERIAL. PROVIDE ANY ADDITIONAL SOIL AS NECESSARY TO COMPLETE FILL CONSTRUCTION. DISPOSE OF ANY UNSUITABLE FILL OFF-SITE IN ACCORDANCE WITH LOCAL CODES.

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DATE 11/17/2023

STATE OF OHIO
GRAHAM J. WATKINS
84007
REGISTERED
PROFESSIONAL ENGINEER

GRADING PLAN ALTERNATE A & C (2)

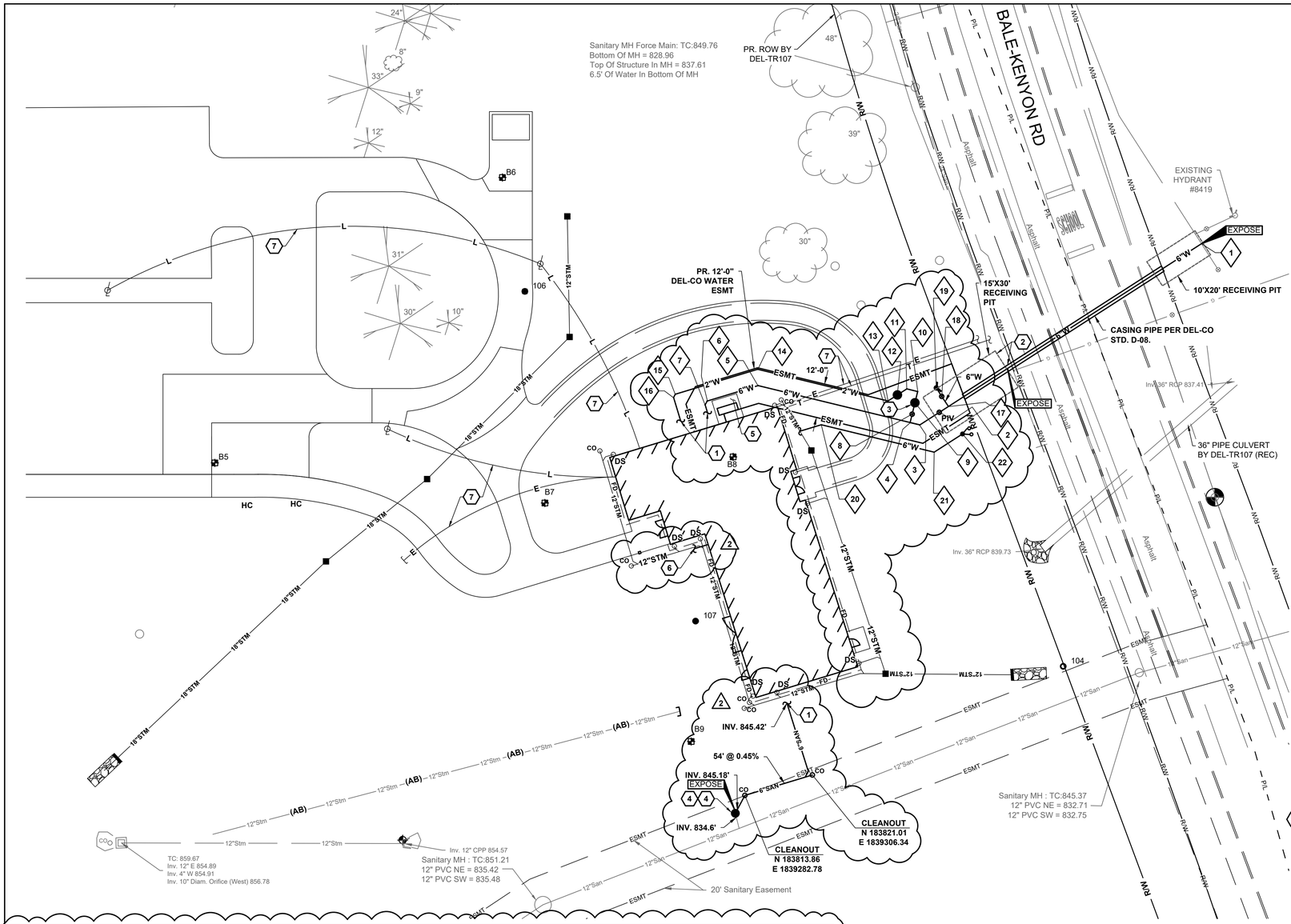
Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

C207

11/25/2024

23070



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GRAPHIC SCALE
SCALE IN FEET

UTILITY LEGEND

EXISTING

REFER TO SHEET 2

PROPOSED

- E — UNDERGROUND ELECTRIC LINE
- T — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- STM — STORM SEWER
- UD — UNDERDRAIN
- SAN — SANITARY SEWER
-] — CUT AND PLUG EXISTING UTILITY
- (AB) — ABANDON EXISTING UTILITY
- (R) — REMOVE EXISTING UTILITY
- 2 — BOLLARD PER DETAIL I/9(C105)
- PIV — GATE VALVE & CURB BOX
- POST INDICATING VALVE
- FIRE DEPARTMENT CONNECTION
- CO — CLEAN OUT
- 1 — STRUCTURE NUMBER
- 1 — WATER SERVICE SURVEY COORDINATE

GENERAL NOTES:

1. OBTAIN ALL PERMITS TO COMPLETE THE WORK SHOWN.
2. DIMENSIONS AND COORDINATES ARE FROM FACE OF CURB OR EXTERIOR FACE OF BUILDING, UNLESS OTHERWISE NOTED.
3. EXTEND UTILITIES TO WITHIN 5' OF FACE OF BUILDING, UNLESS OTHERWISE NOTED. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
4. REFER TO SHEETS 11-17(C200-C206) FOR STORM SEWER INFORMATION.
5. MAINTAIN MINIMUM 4'-0" COVER OVER ALL WATERLINES.
6. MAINTAIN MINIMUM 18" VERTICAL CLEARANCE FROM THE OUTSIDE OF ANY WATERLINE PIPE TO THE OUTSIDE OF ANY STORM OR SANITARY SEWER.
7. PROVIDE THRUST BLOCKS OR RESTRAINED MECHANICAL JOINT PIPE AT EACH VALVE, TEE, FITTING, OR CHANGE IN DIRECTION OF WATERLINE. REFER TO DELCO STD. DWG. D-4
8. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
9. ALL COORDINATES AND ELEVATIONS BASED ON SURVEY PERFORMED BY WOOLPERT DATED 05/16/2022. REFER TO SURVEY SHEET.
10. WHERE PLANS PROVIDE FOR A PROPOSED UTILITY TO BE CONNECTED TO, OR CROSS OVER, OR UNDER AN EXISTING UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES, BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED UTILITY. THESE LOCATIONS ARE NOTED THUS: **EXPOSE**. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXPOSED UTILITY DIFFERS FROM THE PLAN ELEVATION, RESULTS IN A CHANGE IN THE PLAN SEWER SLOPE, OR WILL INTERSECT AN EXISTING UTILITY AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED UTILITY WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.
11. SUPPORT AND PROTECT ALL UTILITIES EXPOSED DURING EXCAVATION AND TRENCHING.
12. ANY REQUIRED WATERLINE SHUT-DOWNS SHALL BE COORDINATED WITH THE OWNER AND DEL-CO WATER.

X CODED NOTES:

1. CAP AND MARK FOR FUTURE CONNECTION. COORDINATE FINAL LOCATION AND ELEVATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
2. PROVIDE DIRECTIONAL BORE WATER SERVICE PER DEL-CO STD. DWG. D-09 AND CASING PIPE PER DEL-CO STD. DWG. D-8.
3. 2" METER & METER PIT BY DEL-CO WATER.
4. CUT AND CAP EXISTING SANITARY SERVICE. RECONNECT NEW SERVICE TO EXISTING SANITARY TAP UTILIZING AN INSPECTION MANHOLE PER DELAWARE COUNTY STD. DWG. SA.S-30. INVERTS TO MANHOLE ARE ASSUMED. EXPOSE EXISTING PIPE BEFORE ORDERING MANHOLE.
5. MECHANICAL EQUIPMENT, COORDINATE WATERLINE LOCATION WITH MECHANICAL EQUIPMENT CONSTRUCTION.
6. 2" WATER SERVICE STUB TO 5' OUTSIDE BUILDING BY PLUMBING CONTRACTOR. EXTEND STUB BEYOND THE PATIO SPACE IF ALTERNATE A IS SELECTED.
7. APPROXIMATE LOCATION AND SHOWN FOR REFERENCE. COORDINATE FINAL LOCATION WITH ELECTRICAL PLANS AND ELECTRICAL CONTRACTOR.
8. PROVIDE DROP PIPE AT MANHOLE PER DELAWARE COUNTY STD. DWG. SA.S-8.

X 2 WATER SERVICE COORDINATES

No.	Type	Northing	Easting	NORTHING AS-BUILT	EASTING AS-BUILT	CENTERLINE ELEVATION
1	8"X6" CUT-IN TEE WITH 6" VALVE RESTRAINED TO TEE BY DEL-CO WATER AT CONTRACTOR'S EXPENSE	184006.64	1839442.22			
2	6" POST INDICATOR VALVE	183947.71	1839350.67			
3	45° HORZ. BEND	183943.33	1839343.87			
4	6"X2" TAPPED TEE W/ 2" BRASS MIP X COMPRESSION FITTING & 2" GATE VALVE RESTRAINED TO TEE	183944.15	1839340.48			
5	45° HORZ. BEND	183957.06	1839287.39			
6	45° HORZ. BEND	183951.67	1839269.60			
7	45° HORZ. BEND	183950.35	1839268.90			
8	2" GATE VALVE	183947.08	1839341.19			
9	2" METER AND METER PIT BY DEL-CO WATER	183951.06	1839342.16			
10	90° HORZ. BEND	183954.99	1839343.12			
11	45° HORZ. BEND	183955.91	1839339.32			
12	IPRV (INTERNAL PRESSURE REDUCING VALVE) & CROCK BY DEL-CO WATER	183953.80	1839336.04			

X WATER SERVICE COORDINATES

No.	Type	Northing	Easting	NORTHING AS-BUILT	EASTING AS-BUILT	CENTERLINE ELEVATION
13	45° HORZ. BEND	183951.69	1839332.76			
14	45° HORZ. BEND	183962.76	1839287.23			
15	45° HORZ. BEND	183954.05	1839258.49			
16	45° HORZ. BEND	183952.90	1839257.87			
17	6"X6" TEE	183949.72	1839353.89			
18	6" VALVE	183953.23	1839351.54			
19	FIRE HYDRANT PER DETAIL A/C301	183956.27	1839349.61			
20	22.5° HORZ. BEND	183943.38	1839309.46			
21	22.5° HORZ. BEND	183933.79	1839348.88			
22	FIRE DEPARTMENT CONNECTION PER DETAIL B/C301	183940.16	1839358.78			

REVISIONS

MARK	DATE	DESCRIPTION

UTILITY PLAN

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PHASE 2

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6844 Bale Kenyon Rd
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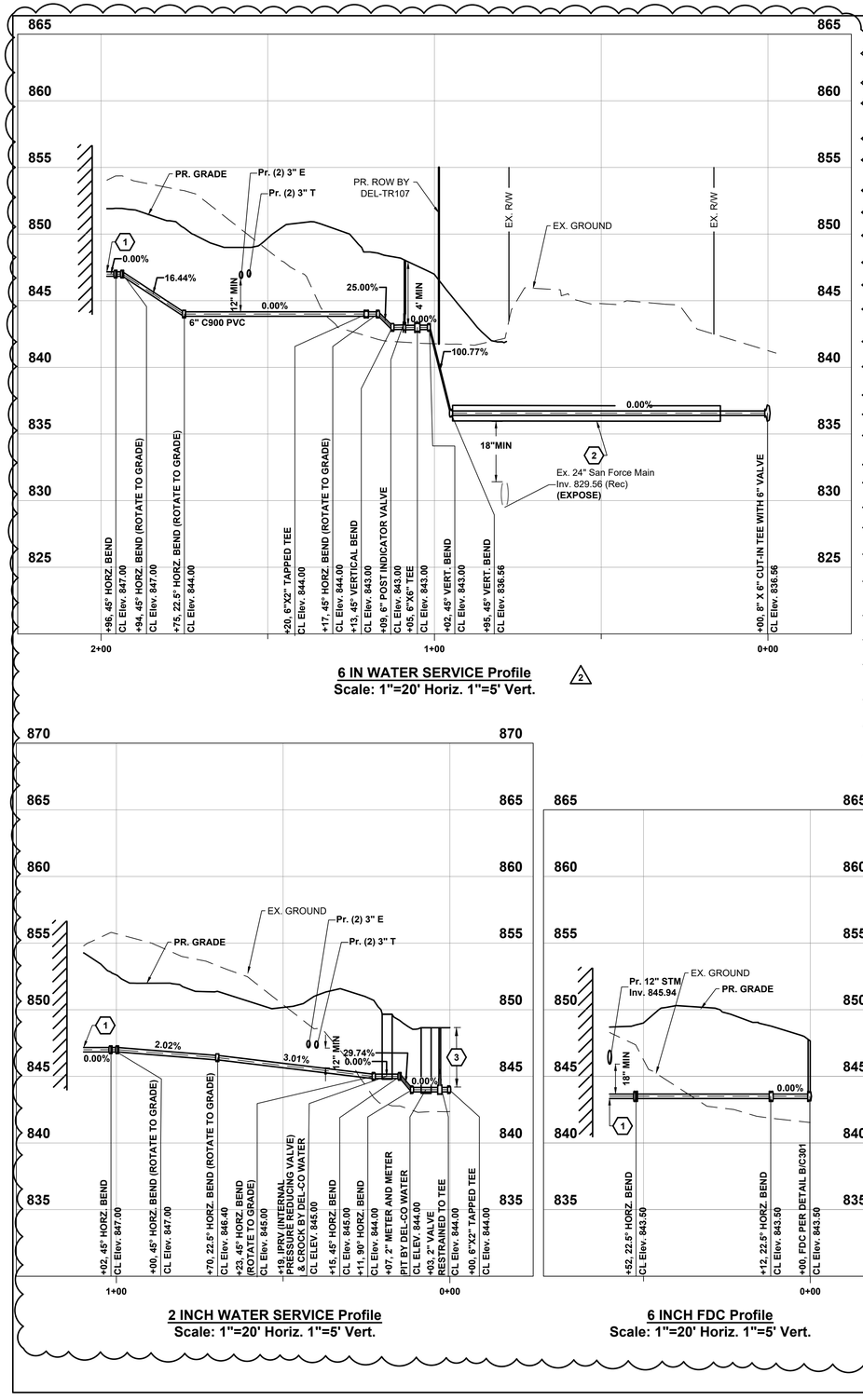
STATE OF OHIO
GRAHAM J. WATKINS
E-84007
REGISTERED PROFESSIONAL ENGINEER

UTILITY PLAN

C300

11/25/2024

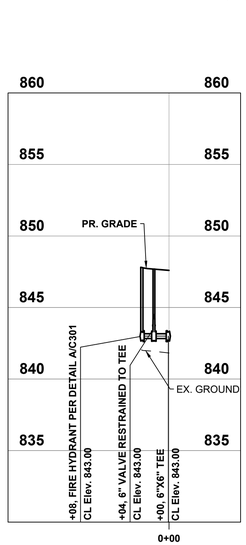
23070



6 IN WATER SERVICE Profile
Scale: 1"=20' Horiz. 1"=5' Vert.

2 INCH WATER SERVICE Profile
Scale: 1"=20' Horiz. 1"=5' Vert.

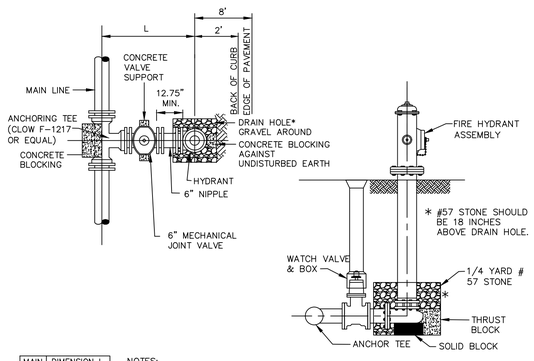
6 INCH FDC Profile
Scale: 1"=20' Horiz. 1"=5' Vert.



6 INCH FIRE HYDRANT Profile
Scale: 1"=20' Horiz. 1"=5' Vert.

CODED NOTES:

1. CAP AND MARK FOR FUTURE CONNECTION. COORDINATE FINAL LOCATION AND ELEVATION WITH PLUMBING CONTRACTOR. FINAL CONNECTION BY PLUMBING CONTRACTOR.
2. CASING PIPE PER DELCO STD. DWG. D-8.
3. 2" DOMESTIC SERVICE LINE MUST BE ATLEAST 48" BUT NO MORE THAN 54" BELOW FINISHED GRADE AT THIS LOCATION.

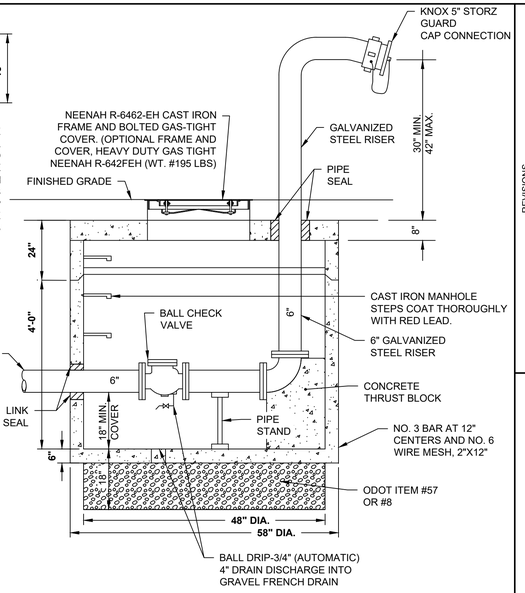


MAIN LINE	DIMENSION L (MINIMUM)
6"	35"
8"	36"
12"	39"
16"	42"

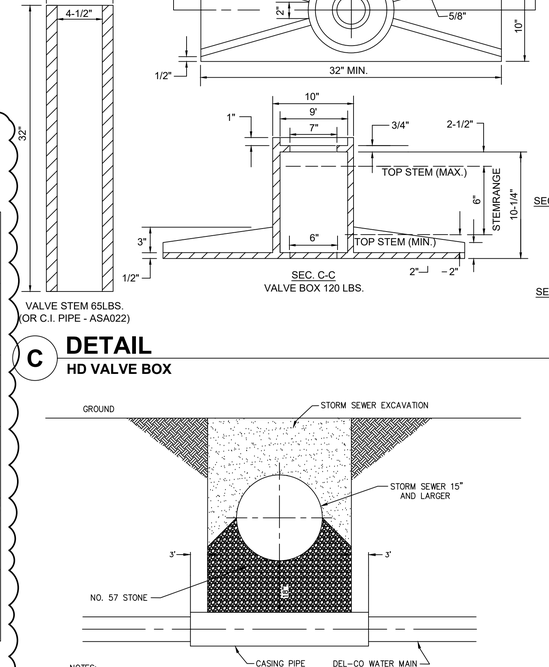
NOTES:
- FIRE HYDRANTS SHALL BE SET A MINIMUM OF 6' FROM ALL DRIVEWAY OPENINGS.

* CREATE A DRY WELL AROUND HYDRANT DRAIN USING 1/4 YARD OF #57 GRAVEL.

A DETAIL
HYDRANT SETTING TYPE A 09 OCT 18 D-2 N.T.S.



B DETAIL
REMOTE FIRE DEPARTMENT CONNECTION N.T.S.



C DETAIL
HD VALVE BOX N.T.S.

NOTES:
CASING PIPE SHALL BE SDR 26 OR GREATER AND SHALL BE SIZED SO THAT PIPE CAN BE EASILY REMOVED IF NECESSARY. DO NOT INSTALL CASING SPACERS OR END SEALS.

D DETAIL
STORM CROSSING CASING PIPE 09 OCT 18 D-30 N.T.S.

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UTILITY DETAILS

C301

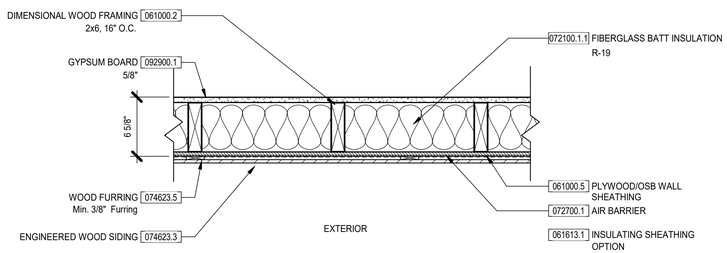
11/25/2024

23070

02/A010

EXTERIOR WALL ASSEMBLY AW-1

Typical Upper Level Addition Siding

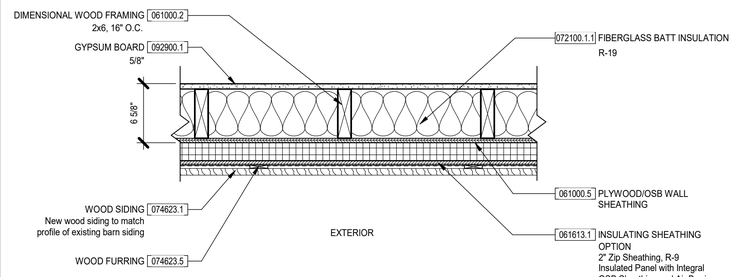


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

03/A010

EXTERIOR WALL ASSEMBLY BW-2

Barn Siding at Lower Level East Wall



NOTES:
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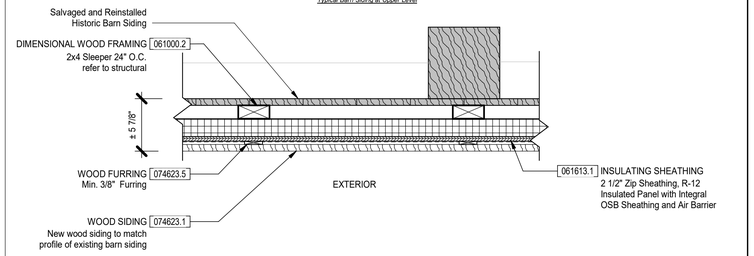
01/A010

EXTERIOR WALL ASSEMBLY BW-1

Typical Barn Siding at Upper Level

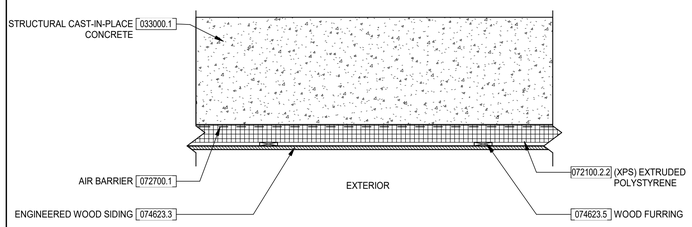


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage
- Upper wall siding will be furred out 3/4" to allow decorative "pie crust" pattern at wall. Reuse of historic siding may establish this change in wall plane without need for furred out wall.

05/A010

EXTERIOR WALL ASSEMBLY CW-2

Engineered Siding on Concrete Foundation Wall at Lower Level of Addition

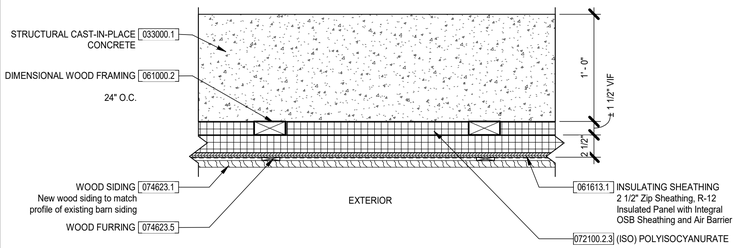


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

04/A010

EXTERIOR WALL ASSEMBLY CW-1

Barn Siding on Concrete Foundation Wall at Lower Level

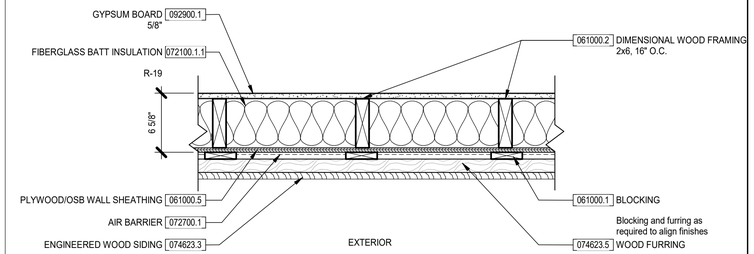


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

03/A010

EXTERIOR WALL ASSEMBLY AW-2

Addition Siding at UpperLevel North Wall

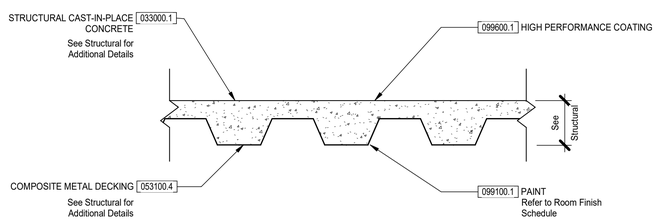


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

10/A010

FLOOR CEILING ASSEMBLY CF-2

Typical Upper Level Floor Assembly

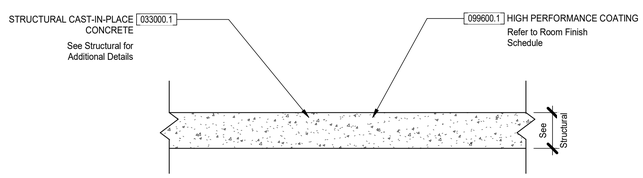


NOTES:
- Refer to Structural Drawings for reinforcing

09/A010

FLOOR ASSEMBLY CF-1

Typical Interior Slab on Grade Floor Assembly

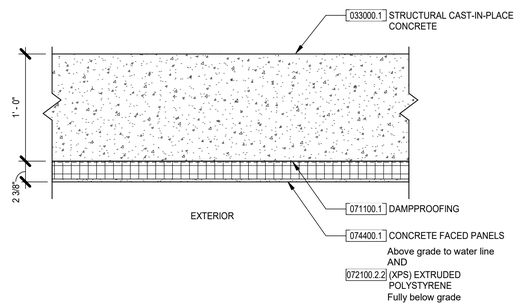


NOTES:
- Refer to Structural Drawings for depth and reinforcing

06/A010

EXTERIOR WALL ASSEMBLY CW-3

Retaining Walls at Lower Level

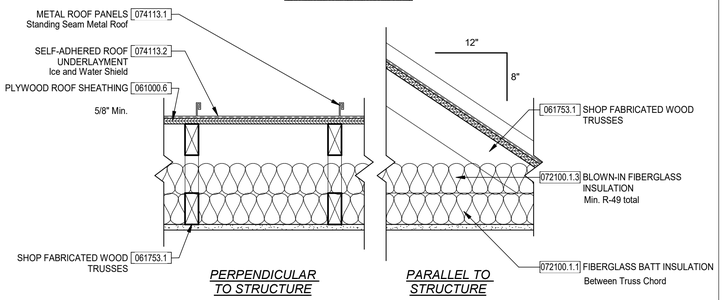


NOTES:
- Refer to Structural Drawings for reinforcing

03/A011

ROOF ASSEMBLY AR-2

Typical Roof Assembly at Restroom Building

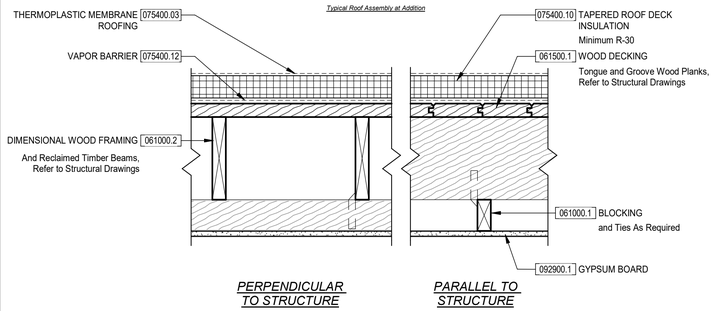


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

12/A010

ROOF ASSEMBLY AR-1

Typical Roof Assembly at Addition

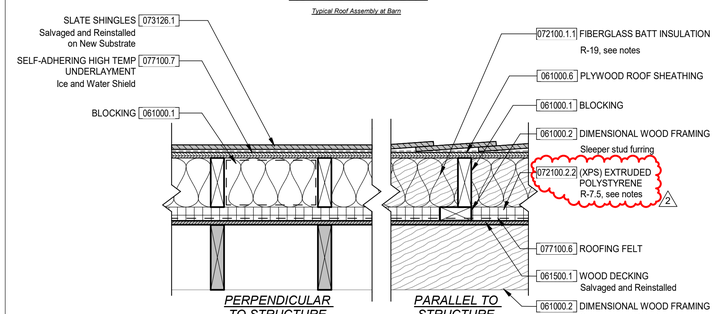


NOTES:
- May be utilized for either Bearing or Non-Load Bearing applications - Refer To Structural Drawings for usage

11/A010

ROOF ASSEMBLY BR-1

Typical Roof Assembly at Barn



NOTES:
- Provide spacing and depth as indicated on Structural Drawings
- Alternate to use Close Cell Spray Foam in lieu of Batt Insulation over Rigid Insulation, refer to detail 1B/A404

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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:

Civil, Structural & MEPT
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

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07/19/2024

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01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule

#	Description	Date
2	Addendum 02	Date 2

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
Kalpa Baghasingh
1516341
REGISTERED ARCHITECT

Kalpa Baghasingh, License #1516341
Expiration Date 12/31/2025

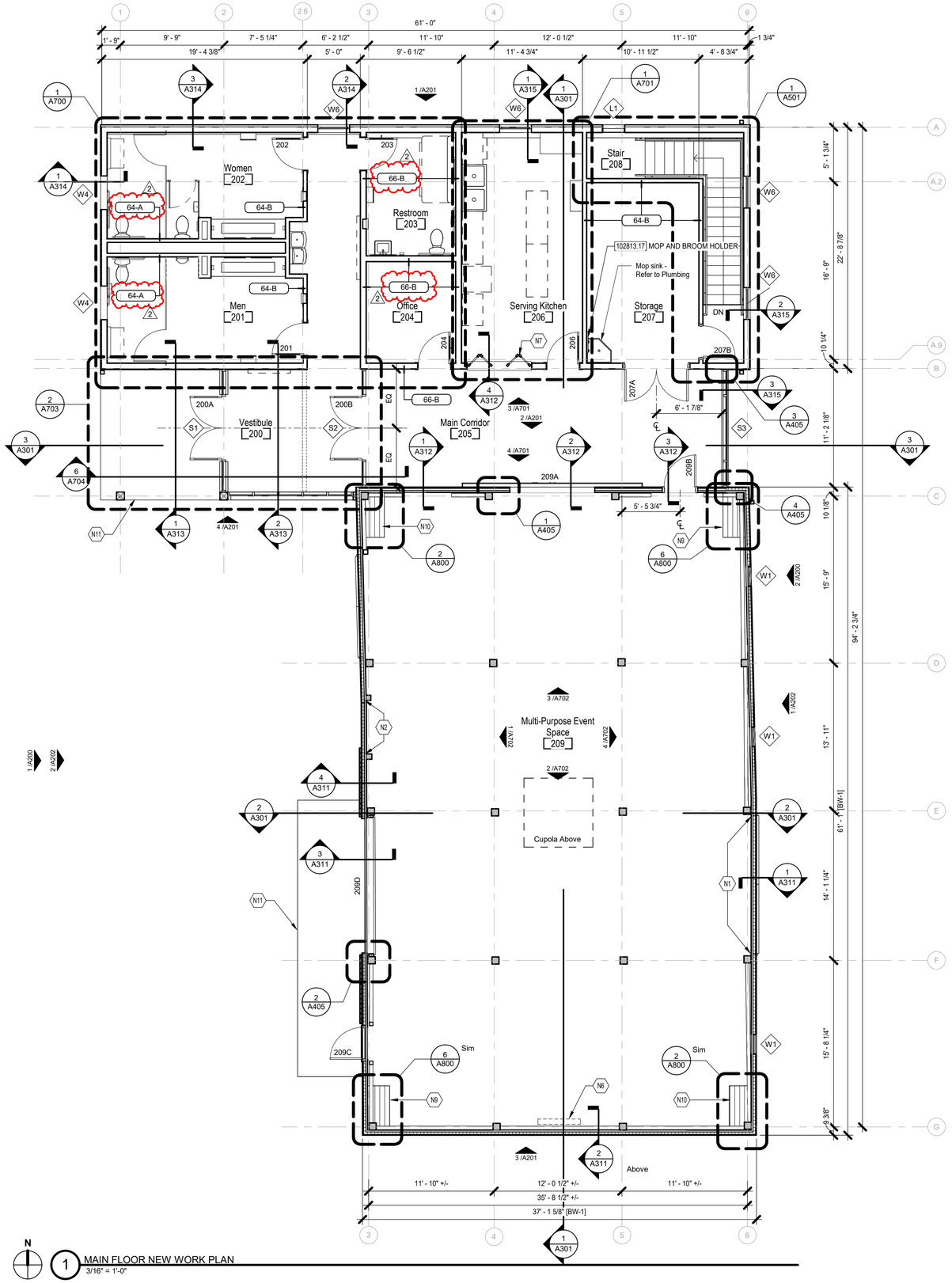
Construction Assemblies

A010

02/14/2025

23070

Autodesk Docs://23070 - Bicentennial Barn/23070_Bicentennial Barn_New_v22.rvt
3/10/2025 6:10:51 PM



NEW WORK - GENERAL NOTES

A. Do not scale drawings. Dimensions in details shall govern over small scale drawings. If dimensions are in questions, the contractor shall be responsible for obtaining clarification from the Architect before continuing with construction.

B. Dimensions shown on the floor plan for construction are to the centerline of columns or to the finish face of interior partition for interior walls; and exterior face of concrete, masonry or wood framing for exterior walls except where specifically noted otherwise on the drawings.

C. Provide blocking for support of all wall attachments including but not limited to wall accessories (handrail, bumpers, guards, etc.), toilet accessories (grab bars, diaper changing stations, etc.), base and wall cabinets. Contractor shall coordinate and verify all requirements for attachments.

D. Contractor shall build out partitions to accommodate depth required by fire extinguisher cabinets and recessed power panels. Coordinate with engineering drawings final locations of all cabinets and panels to be approved by the architect.

E. Refer to Door and Frame Schedule for all door requirements and opening details. All doors locations not dimensions are located with the face of jamb 6" from adjacent wall U.N.O

F. Offset studs based on wall type to ensure face of finish is continuous and uninterrupted.

G. Coordinate locations and/or elevations of floor drains, registers, access panels, grilles, louvers, unit heaters, electrical panels, etc. with mechanical and electrical contractors prior to starting work.

H. Refer to structural drawings for location and extent of shear walls and braced frame locations.

I. Interior partitions to be Type 64-B unless noted otherwise. See A020 for details.

J. Ensure all reused salvaged material is thoroughly cleaned with pressure washing and/or non-marring bronze brushes on all sides and surfaces before reassembly. All parts shall be inspected to ensure their fitness for reassembly and reuse in the project. Replace any damaged or deteriorated pieces using salvaged material of appropriate species.

K. In reassembly of Barn, secure refurbished barn siding and sheathing to frame, girts or rafters, remove any fastener which misses component. No fasteners shall protrude to interior.

L. Shaded regions represent reclaimed barn wood.

NEW WORK - CODED NOTES

N1 Reinstall salavaged door at same position, permanently locked in place

N2 Reinstall salavaged door at relocated position, permanently locked in place

N6 Reinstall salvaged windmill blades.

N7 Lockable white pine wood bi-fold door at pass-through opening with concrete countertop. Wood stained to match adjacent wood.

N9 21" tall bench. See casework details for addtional details.

N10 21" tall bench with diffusers for supply air distribution from below. See casework details and Mechanical drawings for addtional details.

N11 New concrete frost slab - Refer to Civil and Structural.

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300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

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Civil, Structural & MEPT
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

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Mt. Vernon Barn Co.
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Main Floor - New Work Plan

A102

02/14/2025

23070

Door & Frame Schedule

DOOR MARK	DOOR TYPE	SIZE W	SIZE H	SIZE THK	DOOR FINISH	DOOR GLAZING TYPE	FRAME TYPE	FRAME FINISH	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	HARDWARE SET NO	REMARKS
GROUND FLOOR													
100A	AL2	6' - 0"	7' - 11"	1 3/4"	FF	GL-1	S1	FF				12	
100B	HM1	3' - 0"	7' - 0"	1 3/4"		---	FH1					10	Clapboard siding on exterior side of door to match adjacent barn exterior siding
101	HM2	6' - 0"	7' - 0"	1 3/4"	PT01	---	FH1	PT01				09	
FIRST FLOOR													
200A	AL2	6' - 0"	8' - 0"	1 3/4"	FF	GL-1	S1	FF				12	
200B	AL2	6' - 0"	8' - 0"	1 3/4"	FF	GL-1	S1	FF				03	
201	WD1	3' - 0"	7' - 0"	1 3/4"	TR	---	FH2	PT01				01	
202	WD1	3' - 0"	7' - 0"	1 3/4"	TR	---	FH2	PT01				01	
203	WD1	3' - 0"	7' - 0"	1 3/4"	TR	---	FH2	PT01				04	
204	WD1	3' - 0"	7' - 0"	1 3/4"	TR	---	FH2	PT01				05	
206 (2)	WD1	3' - 0"	7' - 0"	1 3/4"	TR	---	FH2	PT01				06	
207A	WD2	6' - 0"	7' - 0"	1 3/4"	PT01	---	FH1	PT01				08	
207B	HM1	3' - 0"	8' - 0"	1 3/4"	PT01	---	FH1	PT01				07	
207C (1)	WD4	6' - 0"	3' - 11 3/4"	1 3/4"	TR								See Details 2, 3, 4, and 5 Sheet A801 (1)
209A	WD3 (2)	8' - 0"	10' - 0"	1 3/4"	TR / PT	---	---	TR / PT				13	Sliding door shall barn door hardware. Corridor side to be painted PT-5, Event Space side to be TR
209B	WD1	3' - 0"	7' - 0"	1 3/4"	TR / PT	---	FH2	TR / PT				02	Corridor side to be painted PT-5, Event Space side to be TR
209C	HM1	3' - 0"	8' - 0"	1 3/4"	PT01	---	FH2	TR			(1)	11	Clapboard siding on interior and exterior side of door to match adjacent barn siding (2)

Overhead Door Schedule

DOOR MARK	DOOR TYPE	Opening Width	Opening Height	SIZE THK	FINISH	GLAZING TYPE	HEAD	JAMB	SILL DETAIL	ELECTRICAL	REMARKS
FIRST FLOOR											
209D	OHD1	12' - 10"	12' - 5"	1 3/4"	Charcoal	GL-3				Powered + Key Operated	Contractor to apply bird glass film similar to storefront system

DOOR NOTES

A. NUMBER:
The door number matches the room number. When more than one door exists per room, the first door is followed with "A", the second door "B", etc.

B. All doors are to have a 3/4" undercut U.N.O.

C. FINISH:
CA - Clear Annodized
FF - Factory Finish (Charcoal)
PT - Paint - Refer to Finish Schedule
WS - Wood Stain and Polyurethane
TR - Polyurethane

D. GLAZING:
GL-1 = 1" Clear Insulated Tempered Vision Glass with AviProtek T 714 Organic, Transparent Bird Glass Film
GL-2 = 1" Clear Insulated Annealed Vision Glass with AviProtek T 714 Organic, Transparent Bird Glass Film
GL-3 = 1/2" Clear Tempered Vision Glass with AviProtek T 714 Organic, Transparent Bird Glass Film

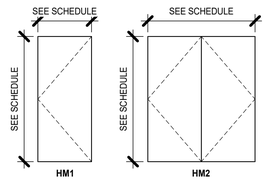
E. HARDWARE SET:
See specifications for description of hardware sets.

F. ELECTRICAL:
Electrical contractor to provide power to door hardware power supply.

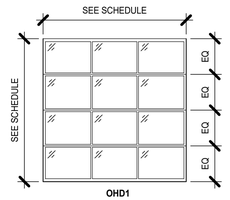
GL-1 = 1" Clear Insulated Tempered Vision Glass with AviProtek T 714 Organic, Transparent Bird Glass Film

GL-2 = 1" Clear Insulated Annealed Vision Glass with AviProtek T 714 Organic, Transparent Bird Glass Film

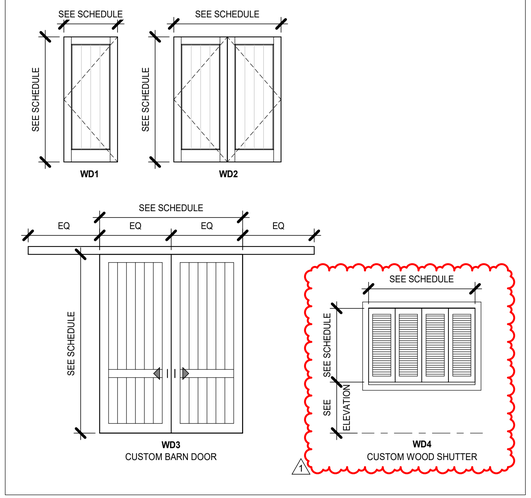
081113.1 - HOLLOW METAL DOOR TYPES



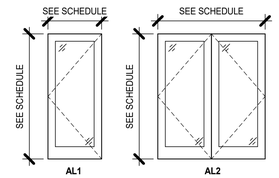
083613.1 - SECTIONAL DOOR TYPES



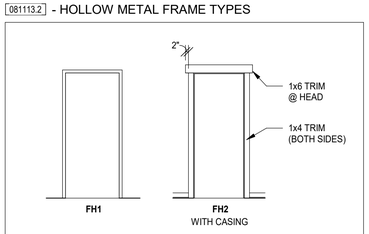
081433.1 - STILE AND RAIL WOOD DOOR TYPES



084113.1 - ALUMINUM FRAMED ENTRANCES & STOREFRONTS



081113.2 - HOLLOW METAL FRAME TYPES



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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

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Kalpa
Baghasingh
1516341
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Expiration Date 12/31/2025

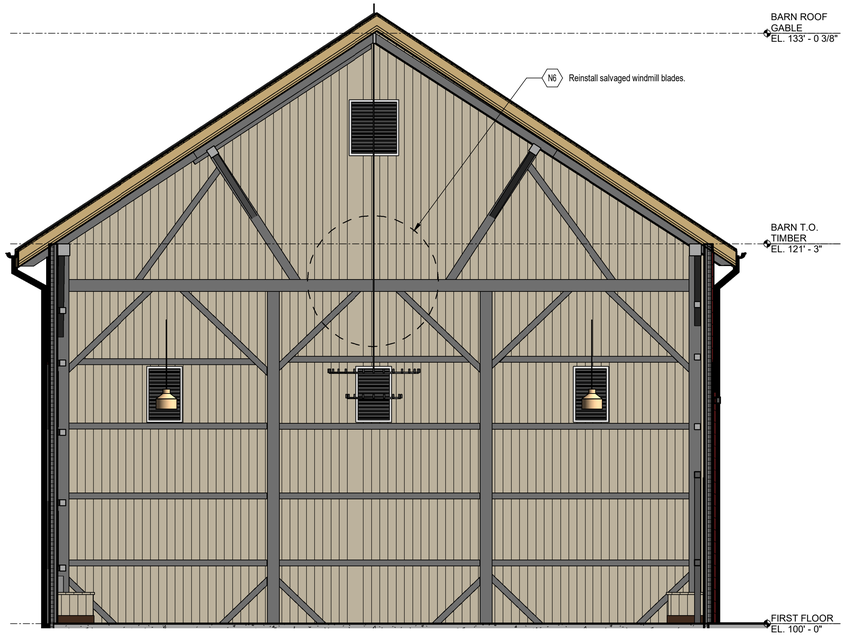
Door Schedule

Architectural

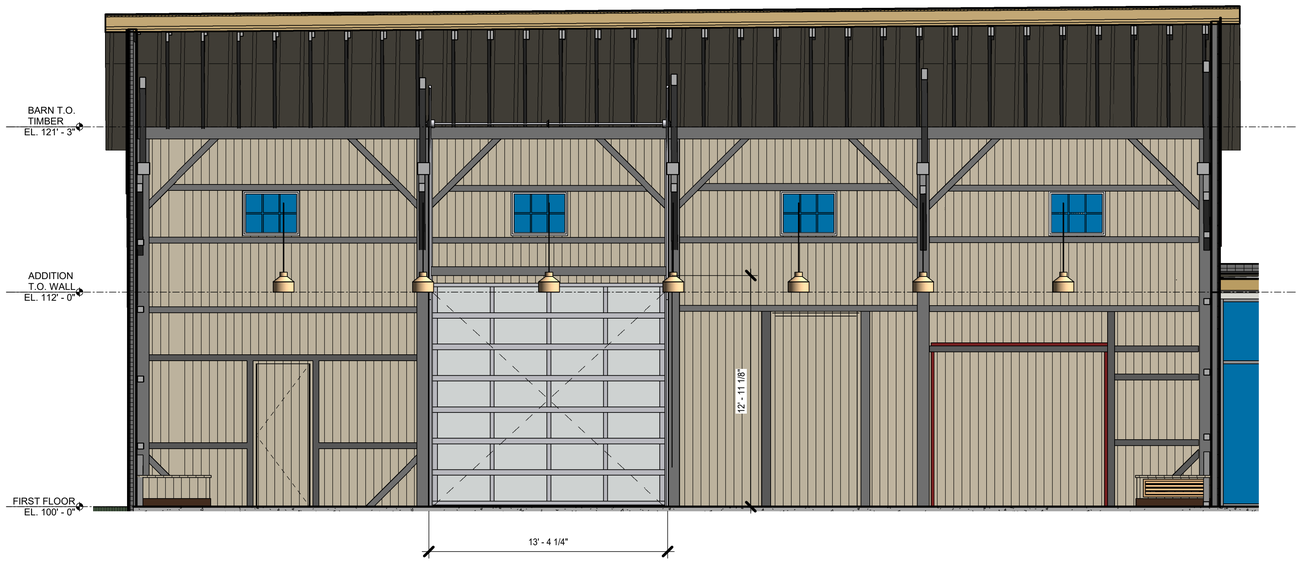
A610

02/14/2025

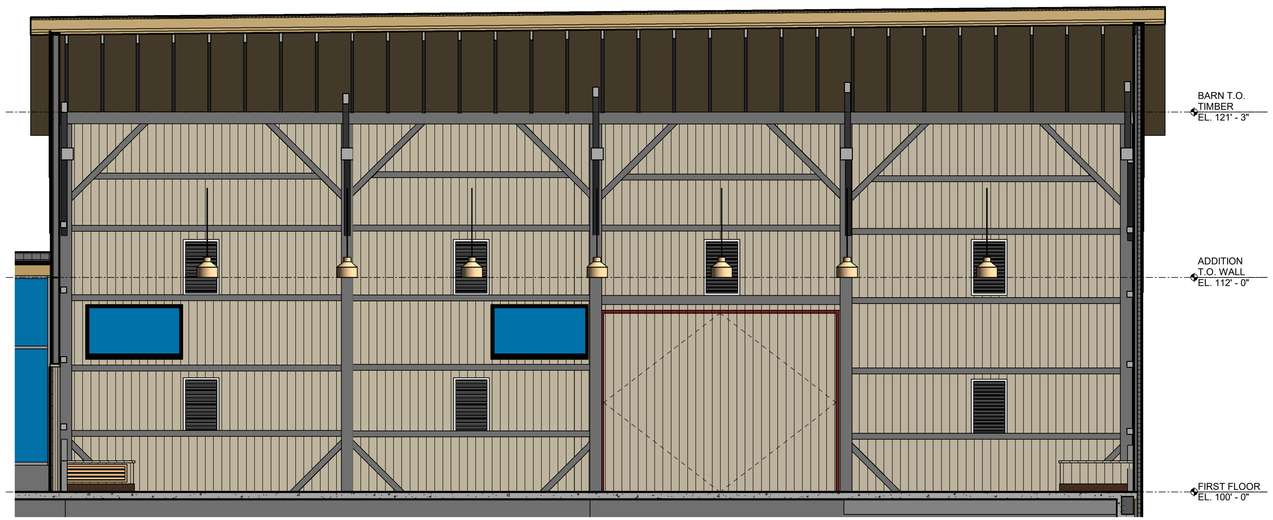
23070



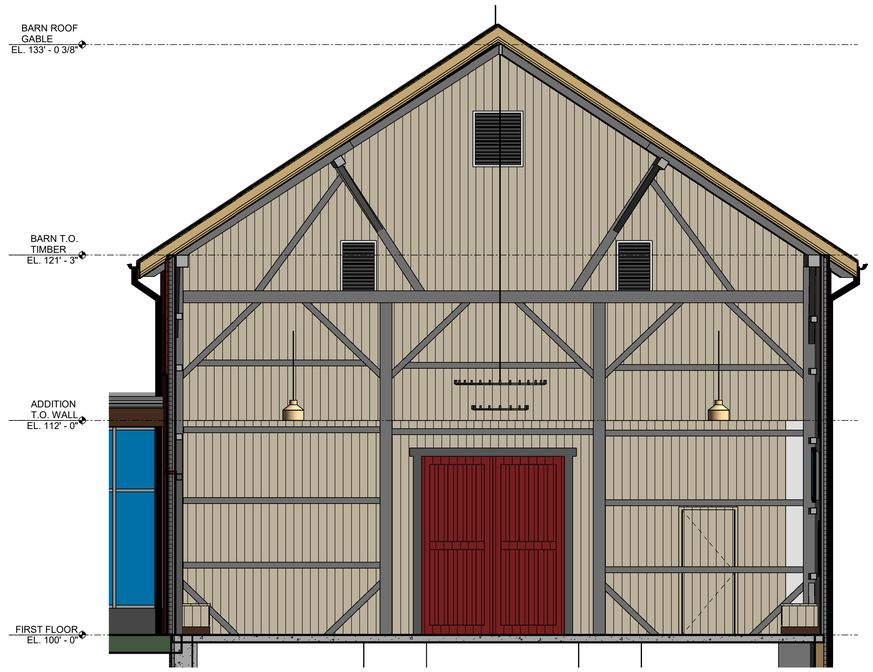
2 BARN SOUTH INTERIOR ELEVATION
1/4" = 1'-0"



1 BARN WEST INTERIOR ELEVATION
1/4" = 1'-0"



4 BARN EAST INTERIOR ELEVATION
1/4" = 1'-0"



3 BARN NORTH INTERIOR ELEVATION
1/4" = 1'-0"

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.

300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

Consultants:

Civil, Structural & MEPT
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Barn Interior Elevations

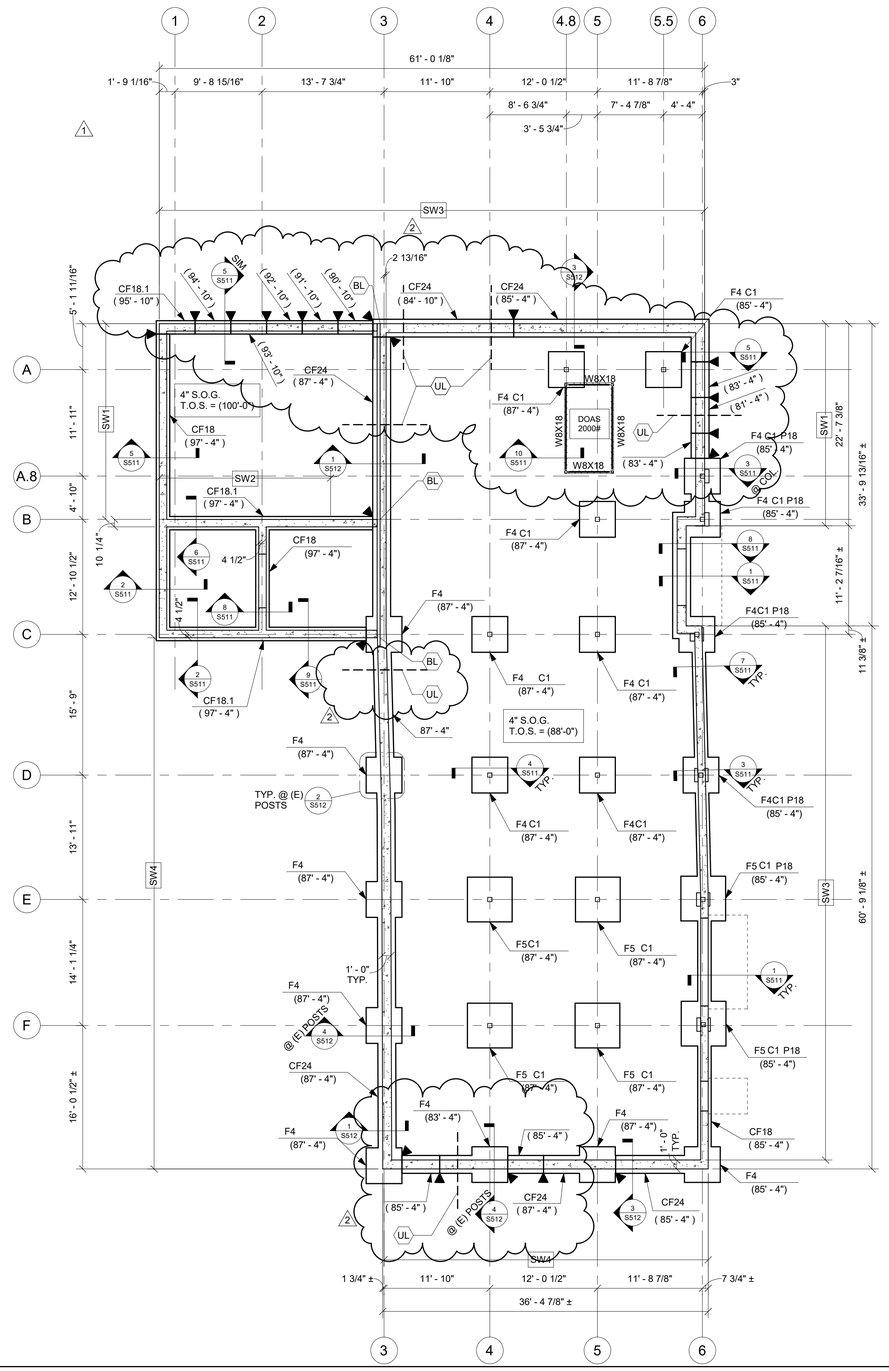
Architectural

A702

02/14/2025

23070

SHEAR WALL SCHEDULE				NAIL SPACING:		HOLD DOWN:				BASE CONNECTION:	
WALL TYPE:	WALL MEMBERS:	SHEATHING TYPE & THICKNESS:	NAIL SIZE:	EDGE:	FIELD:	TYPE:	ANCHOR:	EMBED:	BOUNDARY CHORD:	FASTENER:	SPACING:
SW1	2X6 @ 16" O.C.	EXTERIOR: 7/16" SHEATHING INTERIOR: 5/8" GYPSUM SHEATHING PER ARCH	10d 6d	2" O.C. 4" O.C.	12" O.C. 12" O.C.	HDU14-SDS2.5	1" DIAM. ANCHOR ROD - ATTACH TO STEEL END W/ SIMPSON ATS-SBC	14" MIN.	(3) 2X6 STUDS	1/2" DIAM. SCREW ANCHOR EMBED 5" MIN. INTO FOUNDATION OR 0.15" SHANK PAF EMBED INTO STEEL	4'-0" O.C. 12" O.C.
SW2	2X6 @ 16" O.C.	EXTERIOR: 7/16" SHEATHING INTERIOR: 5/8" GYPSUM SHEATHING PER ARCH	10d 6d	2" O.C. 4" O.C.	12" O.C. 12" O.C.	HDU11-SDS2.5	1" DIAM. ANCHOR ROD	14" MIN.	(3) 2X6 STUDS	1/2" DIAM. SCREW ANCHOR EMBED 5" MIN.	4'-0" O.C.
SW3	2X6 @ 16" O.C.	EXTERIOR: 7/16" SHEATHING PANEL @ ADDITION, R-12 ZIP PANEL W/ 7/16" SHEATHING PANEL AT (E) BARN INTERIOR: 5/8" GYPSUM SHEATHING PER ARCH	10d 6d	2" O.C. 4" O.C.	12" O.C. 12" O.C.	HDU2-SDS2.5	5/8" DIAM. ANCHOR ROD	10" MIN.	(3) 2X6 STUDS	1/2" DIAM. SCREW ANCHOR EMBED 5" MIN.	4'-0" O.C.
SW4	2X4 FLAT @ 24" O.C.	R-12 ZIP PANEL, W/ 7/16" SHEATHING PANEL	12d	2" O.C.	12" O.C.	CUSTOM BASE PLATE	SEE DETAIL 3/S522	12" MIN.	(E) 8X8 WOOD POST	0.15" SHANK PAF EMBED 1 1/2" MIN. EMBED	2'-0" O.C.
SW5	2X4 FLAT @ 24" O.C.	R-12 ZIP PANEL, W/ 7/16" SHEATHING PANEL SEE DETAIL 4/S521	12d	2" O.C.	12" O.C.	CUSTOM BASE PLATE	SEE DETAIL 4/S521	N/A	(E) 8X8 WOOD POST	0.15" SHANK PAF EMBED 1 1/2" MIN. INTO SOD	2'-0" O.C.
SW6	2X4 FLAT @ 24" O.C. ABOVE LOW ROOF & 2X4 @ 16" O.C. BELOW LOW ROOF	R-12 ZIP PANEL, W/ 7/16" SHEATHING PANEL ABOVE LOW ROOF & 1/2" SHEATHING BELOW LOW ROOF. SEE DETAIL 7/S530	12d	2" O.C.	12" O.C.	CUSTOM BASE PLATE	SEE DETAIL 7/S522 & 3/S522	N/A	(2) 8X8 WOOD POST	0.15" SHANK PAF EMBED 1 1/2" MIN. INTO SOD	2'-0" O.C.



1 FOUNDATION PLAN

SCALE: 1/8" = 1'-0"
0' 1' 2' 4' 8'

N

CONTRACTOR TO VERIFY EXACT DIMENSIONS OF EXISTING BARN BEFORE POURING NEW BASEMENT WALLS & FOUNDATIONS FOR EXISTING BARN.

COLUMN LINES SHOWN ON PLAN LOCATE **NEW** COLUMNS ONLY. CONTRACTOR TO VERIFY LOCATIONS OF (E) COLUMNS IN FIELD.

EXACT LOCATION OF NEW STEEL COLUMNS, CONCRETE WALLS, & FOUNDATIONS ALONG COLUMN LINE 3 & COLUMN LINE 6 BENEATH (E) BARN SHALL BE VERIFIED WITH (E) BARN DIMENSIONS.

FOUNDATION NOTES

1. REFERENCE ELEVATION 100'-0" = N.G.S. EL. 861.5'
2. FOUNDATIONS SHALL BE FOUNDED ON VIRGIN SOIL OR ON ENGINEERED FILL AT THE ELEVATIONS SHOWN WITH A DESIGN BEARING CAPACITY OF 10 KSF BELOW 88'-0" AND 3.5 KSF ABOVE 88'-0". ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE SOILS ENGINEER FOR THE BEARING CAPACITY INDICATED ABOVE PRIOR TO PLACING CONCRETE.
3. EXPANSIVE SHALE WILL BE ENCOUNTERED ON SITE. REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT OFOR RECOMMENDATIONS REGARDING UNDERCUTTING UNDER FOUNDATIONS AND TREATMENT OF SHALE.
4. KEEP FOUNDATION EXCAVATIONS FREE OF WATER AT ALL TIMES. REPLACE SOFT OR WEAKENED SOIL WITH CLASS IV CONCRETE.
5. BASEMENT WALLS HAVE BEEN DESIGNED FOR AN EQUIVALENT LATERAL FLUID PRESSURE OF 55 PCF.
6. BACKFILL AGAINST ALL BASEMENT WALLS SHALL CONSIST OF FREE DRAINING GRANULAR MATERIAL FOR FULL HEIGHT OF THE WALL EXTENDING UPWARD FROM THE BASE AT A 35 DEGREE ANGLE FROM THE VERTICAL. MINIMUM THICKNESS OF GRANULAR BACKFILL MATERIAL SHALL BE 2'-0".
7. ELEVATIONS SHOWN AT FOOTINGS ARE TOP OF FOOTING ELEVATION (T.O.F.).
8. ALL EXTERIOR FOOTINGS TO BEAR MIN. 3'-0" BELOW ADJACENT GRADE. ADJUST BOTTOM OF FOOTING AS REQUIRED.
9. ▼ INDICATES FOOTING STEP, SEE 1.3/S510 .
10. TOP OF PIER ELEVATION (T.O.P.) = 87'-4", U.N.O.
11. FLOOR CONSTRUCTION = 4" THICK CONCRETE SLAB ON GRADE REINFORCED WITH SYNTHETIC FIBER REINFORCING ON 4" OF AGGREGATE BASE. SEE DETAIL 1.1 & 1.2 /S510 FOR TYPICAL CONCRETE SLAB-ON-GRADE CONSTRUCTION. S.O.G. AT 100'-0" ELEVATION IS TO BE EXPOSED SEALED CONCRETE REINFORCED W/ #3 @12" O.C. E.W. AT MID DEPTH OF SLAB FOR CRACKING CONTROL.
12. TOP OF SLAB EL. (T.O.S.) = 88'-0" AT BASEMENT AND 100'-0" AT FIRST FLOOR, U.NO. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR MINOR DEPRESSIONS AND SLOPES TO DRAINS.
13. SEE SHEET S001 FOR STRUCTURAL NOTES & LEGEND.
14. SEE 1.4 /S510 FOR THICKENED SLAB UNDER STAIR STRINGERS & STAIR POSTS. SEE ARCHITECTURAL PLANS FOR LOCATIONS.
15. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL BOTH THE SLAB-ON-GRADE AND THE SUPPORTED SLAB ABOVE ARE IN PLACE AND CURED. BACKFILL AGAINST BOTH SIDES OF WALLS EQUALLY UNTIL THE LOWER ELEVATION IS ATTAINED.

FOOTING SCHEDULE (3000 PSF SOIL)				
Mark	Size			Bottom Reinforcement
	Length	Width	Thickness	
F4	4' - 0"	4' - 0"	1' - 0"	5#5 E.W.
F5	5' - 0"	5' - 0"	1' - 0"	5#5 E.W.

CONTINUOUS FOOTING SCHEDULE			
Mark	Width	Thickness	Reinforcement
CF18	1' - 6"	1' - 0"	2#5 CONT. BOT.
CF18.1	1' - 6"	1' - 0"	2#7 CONT. BOT.
CF24	2' - 0"	1' - 0"	2#5 CONT. BOT.

Structural Column Schedule				
Mark	Column	BASE CONNECTION	Anchor Rods	Embedment
C1	HSS6X6X3/8	3/4X12X12 BASE PLATE. SEE 7/S512	(4) 3/4" Ø	8"
C2	8X8 PT POST	SIMPSON CPTZ POST BASE	(2) 1/2" Ø	8"
C3	(E) ROUGH 8X8 POST	BASE PL & KNIFE PL PER 7/S522 & 13/S522	(2) 5/8" Ø	8"
C4	(2) 2X6 FOR ADULT CHANGING TABLE	ATTACH TO BOT. PLATE W/ SIMPSON A44 EA. SIDE.	(2) 1/4" Ø	1 1/2"

CODED NOTES	
BL	PROVIDE 4" BEARING LEDGE FOR STRIP FOOTING TO BEAR ON POURED WALL. PROVIDE HOOKED DOWELS IN WALL TO LAP CONT. BARS IN CONTINUOUS FOOTING.
UL	UNDERGROUND LINE PER MECH. COORDINATE WITH MECHANICAL DRAWINGS.

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
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614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

90% Construction Documents
01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule		
#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
IAN J. PFEFFERLE
E-73568
REGISTERED
PROFESSIONAL ENGINEER
02/14/2025

FOUNDATION PLAN

Structural

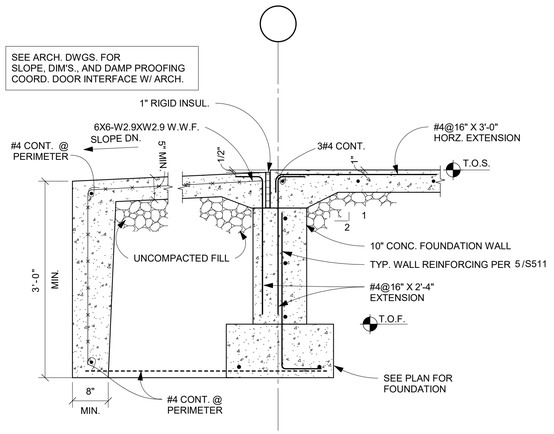
S101

11/25/2024

23070

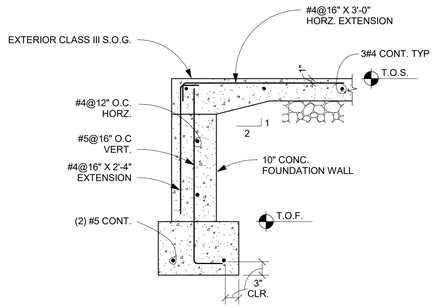
KORDA
KORDA/NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: WRH
DESIGNED BY: CKP
CHECKED BY: IJP
PROJECT NUMBER: 2023-0006



1 SECTION

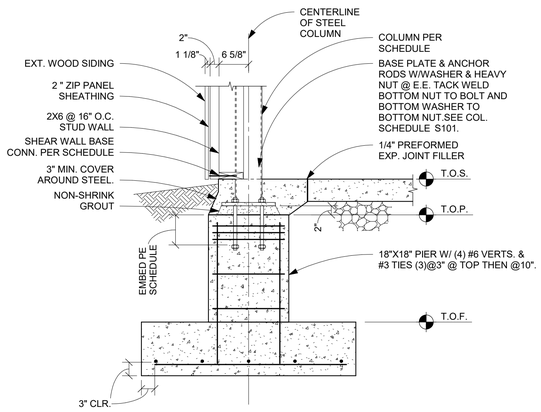
N.T.S.



2 SECTION

SCALE: 3/4" = 1'-0"

0' 3" 6" 1' 2'



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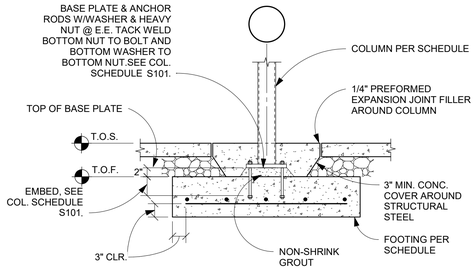
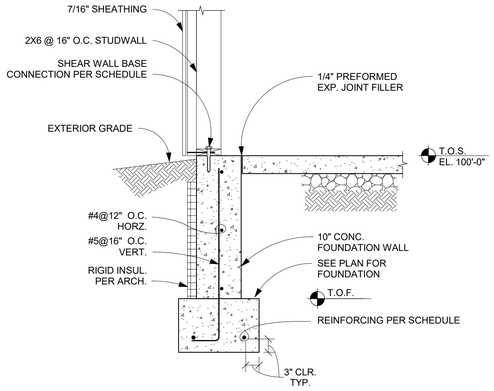


4 SECTION

TYP. STEEL COLUMN ON FOOTING

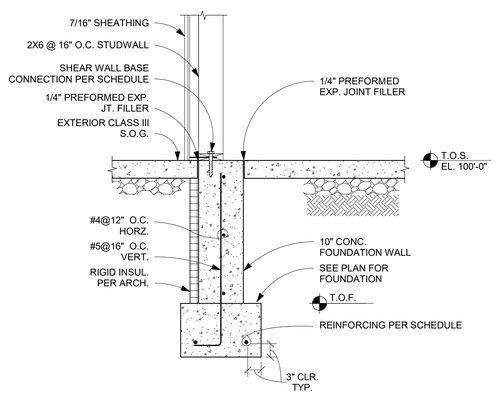
N.T.S.



5 SECTION

SCALE: 3/4" = 1'-0"

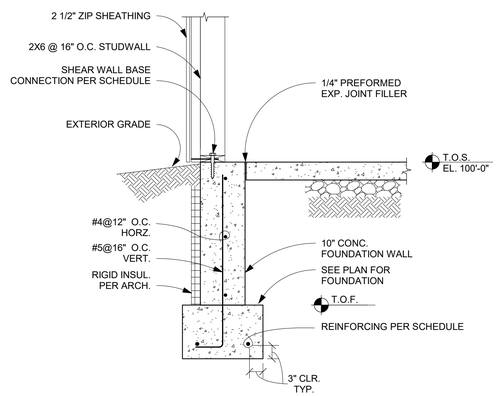
0' 3" 6" 1' 2'



6 SECTION

SCALE: 3/4" = 1'-0"

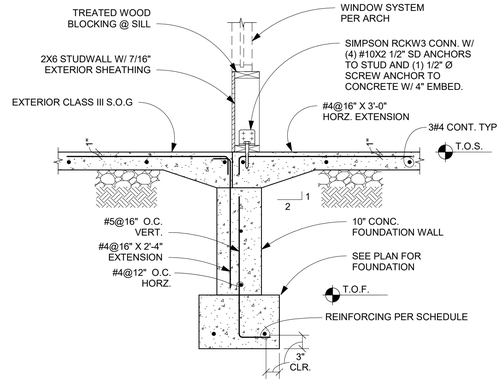
0' 3" 6" 1' 2'



7 SECTION

SCALE: 3/4" = 1'-0"

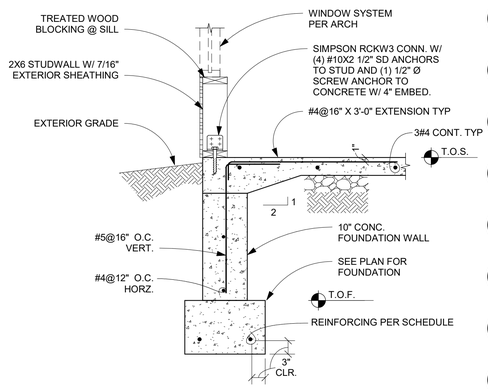
0' 3" 6" 1' 2'



8 SECTION

SCALE: 3/4" = 1'-0"

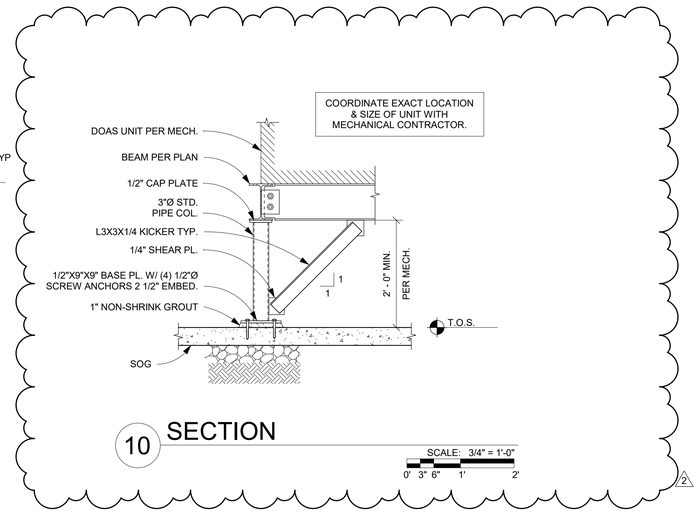
0' 3" 6" 1' 2'



9 SECTION

SCALE: 3/4" = 1'-0"

0' 3" 6" 1' 2'



10 SECTION

SCALE: 3/4" = 1'-0"

0' 3" 6" 1' 2'

2

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
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schooleycaldwell.com

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#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
IAN J. PFEFFERLE
E-73568
REGISTERED
PROFESSIONAL ENGINEER
02/14/2025

FOUNDATION DETAILS

Structural

S511

11/25/2024

23070

KORDA
KORDA/NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

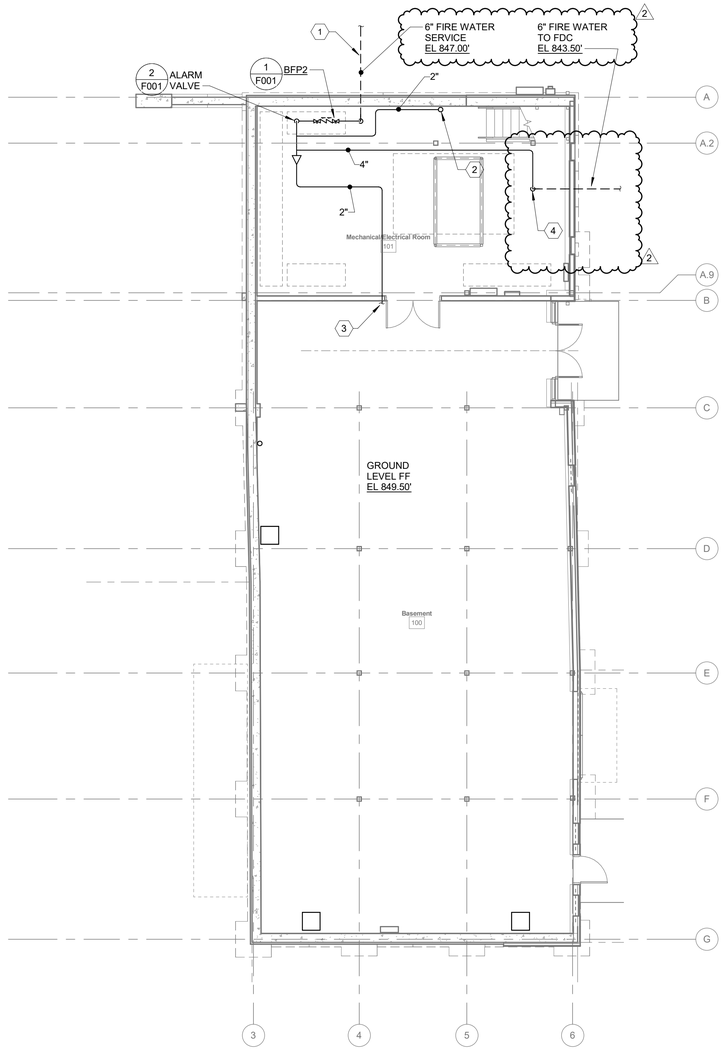
DRAWN BY: WRH
DESIGNED BY: CKP
CHECKED BY: IJP
PROJECT NUMBER: 2023-0006

GENERAL NOTES:

1. ALL AREAS OF THE BUILDING SHALL BE PROVIDED WITH A WET PIPE SPRINKLER SYSTEM DESIGNED PER NFPA 13, UNLESS NOTED OTHERWISE.

CODED NOTES:

1. 6" FIRE SERVICE LINE TO BE EXTENDED TO 5'-0" FROM BUILDING BY SITE UTILITY CONTRACTOR. COORDINATE LOCATION OF THIS LINE AND EXTEND 6" INTO THE BUILDING AND REDUCE ABOVE FLOOR AT BACKFLOW DEVICE.
2. 2" SPRINKLER RISER UP TO FIRST FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.
3. EXTEND TO SPRINKLER HEADS SERVING GROUND FLOOR.
4. 4" FIRE LINE SERVING THE REMOTE MOUNTED FIRE DEPARTMENT CONNECTION (SIAMESE) TO DROP, INCREASE TO 6" PIPE SIZE ABOVE FLOOR PENETRATION, AND EXTEND 6" PIPE UNDERGROUND TO A POINT 5' FROM THE BUILDING. COORDINATE EXACT LOCATION WITH SITE UTILITY CONTRACTOR.



1 FLOOR PLAN
GROUND FLOOR

SCALE: 1/8" = 1'-0"
0' 1' 2' 4' 8'

N

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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53378
REGISTERED PROFESSIONAL ENGINEER
2-14-25

GROUND FLOOR FIRE PROTECTION PLAN

F201

02/14/2025

23070

KORDA
KORDA · NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Ann Guan
DESIGNED BY:	Paul Carr
CHECKED BY:	Eric Stephens
PROJECT NUMBER:	2023-0006

PLUMBING SYMBOLS LIST

NOTE: ALL SYMBOLS NOT NECESSARILY USED

GENERAL

- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- EXISTING TO BE ABANDONED
- FUTURE
- FLOW ARROW
- UNDER FLOOR PIPING

PIPING

- WATER SERVICE — W
- DOMESTIC COLD WATER — DCW
- SOFT WATER — SW
- DOMESTIC HOT WATER (XXX°F) — DHW (XXX°F)
- TEMPERED WATER (XXX°F) — TW (XXX°F)
- DOMESTIC HOT WATER RETURN (XXX°F) — DHWR (XXX°F)
- RAW WATER — RW
- DISTILLED WATER — DW
- DEIONIZED WATER — DE
- SANITARY — SAN
- ACID WASTE — AW
- HOT WASTE — HW
- INDIRECT WASTE — IND
- COMBINATION SEWER — COMB
- FAT, OIL AND GREASE WASTE — FOG
- STORM — STM
- UNDER DRAIN — UD
- EMERGENCY STORM — E-STM
- PUMPED DISCHARGE — PD
- VENT — V
- ACID VENT — AV
- FUEL OIL SUPPLY — FOS
- FUEL OIL RETURN — FOR
- FUEL OIL VENT — FOV
- NATURAL GAS — G
- PROPANE — P
- MEDICAL OXYGEN — O2
- MEDICAL AIR — MA
- INSTRUMENT AIR — IA
- COMPRESSED AIR — CA
- VACUUM — VAC
- VACUUM CLEANING — VC
- MEDICAL VACUUM — MV
- WASTE GAS DISPOSAL — WAGD
- NITROGEN — N2
- NITROUS OXIDE — N2O
- CARBON DIOXIDE — CO2

VALVES

- BACKFLOW PREVENTER — BP
- BALANCING/SHUT-OFF VALVE WITH GAUGE TAPPINGS
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- GAS PRESSURE REGULATOR
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SOLENOID VALVE
- STRAINER

SPECIALTIES AND MISCELLANEOUS

- CAPPED PIPE
- PIPE SLEEVE
- FLEXIBLE CONNECTION
- GAUGE
- METER — M
- P-TRAP
- PIPE DROP
- PIPE RISE
- THERMOMETER
- THROUGH FLOOR AT LEVEL SHOWN — 1
- UNION
- VENT THROUGH ROOF (VTR)
- CLEANOUT — CO
- WALL HYDRANT (FREEZE PROOF)
- HOSE BIBB
- YARD HYDRANT
- SHOCK ABSORBER
- FLOOR OR AREA DRAIN
- ROOF DRAIN — RD
- CONNECT TO EXISTING
- VALVE IN RISER/DROP
- HEAT TRACED PIPE
- DENOTES ITEM PROVIDED BY ANOTHER CONTRACTOR, SHOWN FOR COORDINATION OR REFERENCE — OC
- MEDICAL OXYGEN OUTLET — O
- MEDICAL AIR OUTLET — A
- MEDICAL VACUUM OUTLET — V
- CARBON DIOXIDE OUTLET — C
- NITROGEN OUTLET — N
- NITROUS OXIDE OUTLET — NO
- INSTRUMENT AIR OUTLET — I
- SLIDE — S
- WASTE ANESTHESIA GAS DISPOSAL — W

GENERAL NOTES – PLUMBING (APPLY TO ALL PLUMBING DRAWINGS)

1. THE SYSTEM DESIGN IS BASED ON THE LATEST EDITION OF THE OHIO PLUMBING CODE, INCLUDING ALL AMENDMENTS THROUGH THE DATE OF DRAWING ISSUE.
2. FINISHED FIRST FLOOR ELEVATION IS 100.00' (USGS ELEVATION 861.5). GROUND FLOOR ELEVATION IS 88.00' (USGS ELEVATION 849.5).
3. INVERTS AND LOCATIONS SHOWN FOR PIPING CONNECTIONS TO THE VARIOUS SITE UTILITIES HAVE BEEN COORDINATED WITH THE CIVIL ENGINEER'S DOCUMENTS PRIOR TO BIDDING. CONTRACTOR SHALL VERIFY INVERTS, PIPE SIZES, AND LOCATIONS WITH SITE CONTRACTOR PRIOR TO ANY INSTALLATION. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
4. COORDINATE ALL PIPING WITH CEILING ELEVATIONS, STRUCTURE, MECHANICAL AND ELECTRICAL WORK. UNLESS DESIGNATED AS BELOW SLAB, ALL PIPING IS INTENDED TO BE CONCEALED ABOVE FINISHED CEILING IN AREAS WITH CEILINGS. IF THERE IS NO CEILING, COORDINATE PIPING TO RUN AS HIGH AS POSSIBLE. DO NOT INSTALL PIPING IN FRONT OF OR OVER TOP OF ELECTRICAL SWITCH GEAR OR PANELS.
5. ALL DOWNSPOUTS, STACKS, RISERS, ETC. SHALL BE CAREFULLY INSTALLED SO AS TO BE CONCEALED BY FINISHED CONSTRUCTION. WHERE PIPING IS EXPOSED, LOCATIONS SHALL BE COORDINATED WITH OTHER TRADES.
6. UNLESS NOTED OTHERWISE, SLOPE ALL SANITARY AND STORM PIPING AT NO LESS THAN 1/8" PER FOOT. ALL SANITARY PIPING SMALLER THAN 3" SHALL BE SLOPED AT NO LESS THAN ¼" PER FOOT.
7. REFER TO PIPING DIAGRAMS, DETAILS, AND STACKS FOR PIPING AND PIPE SIZES NOT SHOWN ON THE FLOOR PLANS. PIPE SIZES SERVING INDIVIDUAL FIXTURES ARE INDICATED ON THE PLUMBING FIXTURE SCHEDULE.
8. ALL FLOOR DRAINS ARE CONSIDERED "EMERGENCY FLOOR DRAIN" UNLESS DFU'S ARE ASSIGNED. ALL FLOOR DRAINS SHALL BE PROVIDED WITH ASSE 1072 COMPLIANT BARRIER TYPE TRAP SEAL.
9. PROVIDE ISOLATION VALVES IN ALL SUPPLY BRANCHES SERVING MULTIPLE FIXTURES. PROVIDE ADDITIONAL ISOLATION VALVES AS SHOWN ON THE DRAWINGS. PROVIDE BALANCING VALVES ON ALL HOT WATER RETURN PIPE BRANCHES.
10. SEAL ALL THROUGH FLOOR PENETRATIONS AIR AND WATER TIGHT.
11. ALL EXPOSED INSULATED PIPING IN FINISHED AREAS SHALL HAVE A PVC JACKET.
12. MAKE ALL CONNECTIONS TO KITCHEN EQUIPMENT. PROVIDE SHUT - OFF VALVES, UNIONS, SUPPLIES, AND WASTES REQUIRED FOR A COMPLETE CONNECTION. SUPPLIES TO KITCHEN FAUCETS AT SINKS SHALL HAVE CHECK VALVES. ALL UNDERGROUND WASTE PIPING IN KITCHEN AREAS SHALL BE CAST IRON.

PLUMBING SHEET INDEX

SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

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6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-83708
REGISTERED
PROFESSIONAL ENGINEER
2-14-25

PLUMBING INDEX SHEET

P001

02/14/2025

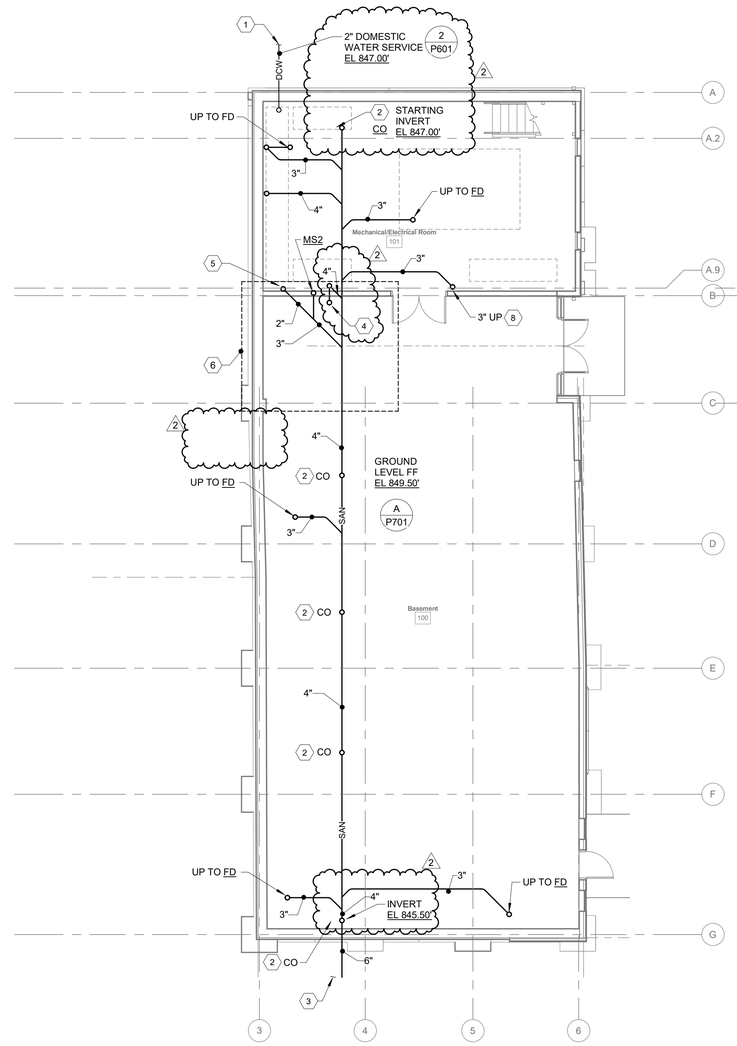
23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Ann Guan
DESIGNED BY: Paul Carr
CHECKED BY: Eric Stephens
PROJECT NUMBER: 2023-0006

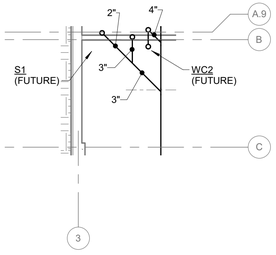
CODED NOTES:

1. 2" DOMESTIC WATER SERVICE LINE TO BE EXTENDED TO 5'-0" FROM BUILDING BY SITE UTILITY CONTRACTOR. COORDINATE LOCATION OF THIS LINE AND EXTEND 2" LINE INTO THE BUILDING.
2. PROVIDE CLEANOUTS AS SHOWN TO IDENTIFY UNDERFLOOR SANITARY LOCATION FOR FUTURE CONNECTION.
3. PLUMBING CONTRACTOR TO EXTEND SANITARY LINE 5'-0" FROM BUILDING. COORDINATE LEAVING ELEVATION AND TERMINATION POINT WITH SITE UTILITY CONTRACTOR.
4. PROVIDE 4" SANITARY ROUGH-IN CONNECTION FOR FUTURE WATER CLOSET.
5. PROVIDE 2" SANITRY BRANCH FOR NEW SERVICE SINK IN MECHANICAL ROOM AND NEW SERVICE SINK ON SOUTH SIDE OF THAT WALL. FUTURE RESTROOM WILL INVOLVE REMOVING THIS SOUTH WALL SERVICE SINK AND REPLACING WITH A TYPICAL RESTROOM LAVATORY (NOT IN CONTRACT).
6. PLUMBING TO BE ROUGHED IN TO ACCOMODATE FUTURE RESTROOM. REFER TO PLAN 2/P200 FOR FUTURE RESTROOM LAYOUT AND FIXTURES.
7. NOT USED.
8. 4" SANITARY TO RISE UP TIGHT TO MECHANICAL ROOM WALL TO SERVE MOP SINK ON FIRST FLOOR.



1 UNDERFLOOR PLAN
GROUND FLOOR

SCALE: 1/8" = 1'-0"
0' 1' 2' 4' 8'



2 UNDERFLOOR PLAN
FUTURE RESTROOM

SCALE: 1/8" = 1'-0"
0' 1' 2' 4' 8'

N

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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
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STATE OF OHIO
ERIC C. STEPHENS
E-53230
REGISTERED PROFESSIONAL ENGINEER
2-14-25

UNDERFLOOR PLUMBING PLAN

P200

02/14/2025

23070

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SUITE 200
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DRAWN BY: Ann Guan
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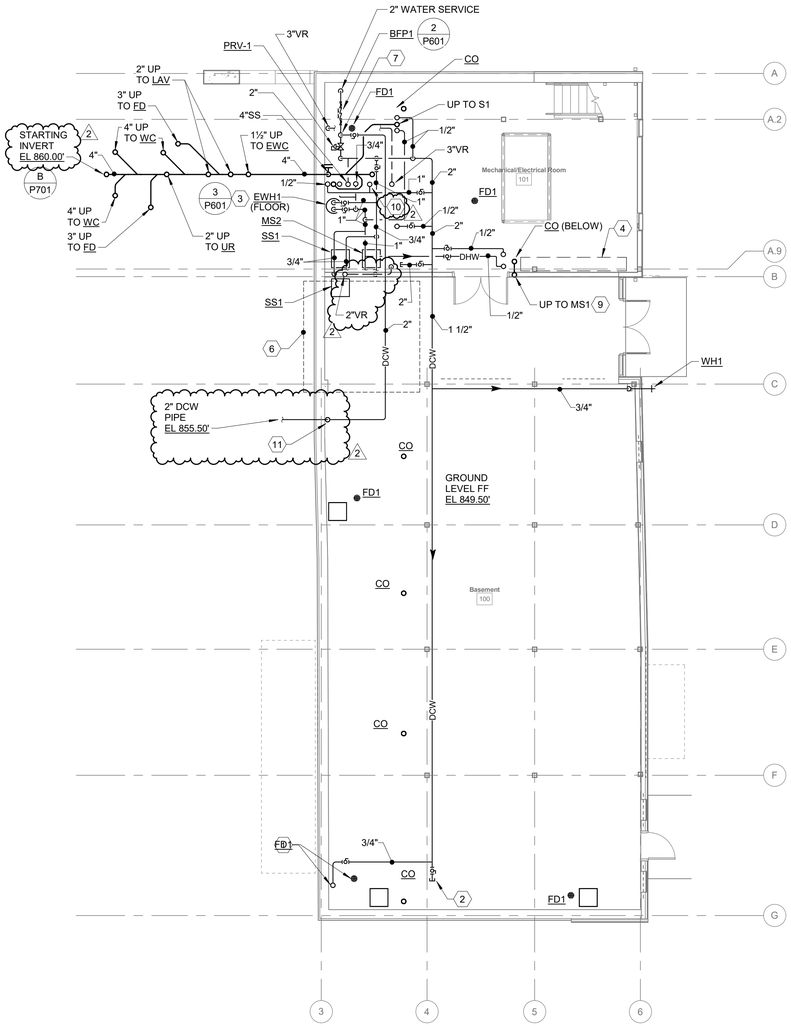

1 FLOOR PLAN

GROUND FLOOR

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

2 FLOOR PLAN

FUTURE RESTROOM

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

CODED NOTES:

1. 3/4" DCW TO RISE UP WITHIN ARCHITECTURAL WINDOW SEAT TO SERVE FIRST FLOOR WALL HYDRANT.
2. PROVIDE 3/4" DCW BRANCH WITH VALVE AND CAP FOR FUTURE LAVATORY CONNECTION.
3. FLOOR MOUNTED ELECTRIC WATER HEATER TO BE MOUNTED ON 4" CONCRETE HOUSEKEEPING PAD.
4. ELECTRICAL PANELS AND EQUIPMENT. AVOID ROUTING ANY PIPING WITHIN THIS AREA.
5. RESTROOM TO BE FINISHED IN FUTURE PHASE. PLUMBING FIXTURES SHOWN ARE FOR REFERENCE ONLY AND NOT IN THIS CONTRACT.
6. PLUMBING TO BE ROUGHED IN TO ACCOMODATED FUTURE RESTROOM. REFER TO PLAN 2/P200 FOR FUTURE RESTROOM LAYOUT AND FIXTURES.
7. PROVIDE 2" DEDICATED BRANCH LINE DOWNSTREAM OF BACKFLOW PREVENTER (UPSTREAM OF PRV) WITH ISOLATION VALVE. BRANCH TO SERVE FUTURE REMOTE RESTROOM BUILDING ONLY. CLEARLY LABEL "FOR FUTURE REMOTE RESTROOM BUILDING ONLY".
8. DOMESTIC WATER PRESSURE REDUCING VALVE.
9. 4" SANITARY RISER TO MOP SINK ON FIRST FLOOR. OFFSET PIPE TIGHT TO UNDERSIDE OF STRUCTURE. PROVIDE CLEANOUT ON RISER 24" A.F.F.
10. PROVIDE WATER HAMMER ARRESTOR (SA1) ON BRANCH LINE SERVING FAMILY RESTROOM WATER CLOSET.
11. 2" DCW LINE FOR FUTURE REMOTE RESTROOM TO DROP TIGHT TO WALL AND PENETRATE FOUNDATION WALL AS INDICATED. EXTEND 5' FROM BUILDING TO CONNECTION POINT WITH SITE CONTRACTOR. COORDINATE LOCATION AND ELEVATION WITH SITE CONTRACTOR. PROVED TEE WITH DRAIN VALVE AND CAP AT BOTTOM OF PIPE DROP ALONG WALL.

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

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02/14/2025

Revision Schedule		
#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53378
REGISTERED PROFESSIONAL ENGINEER
2-14-25

GROUND FLOOR PLUMBING PLAN

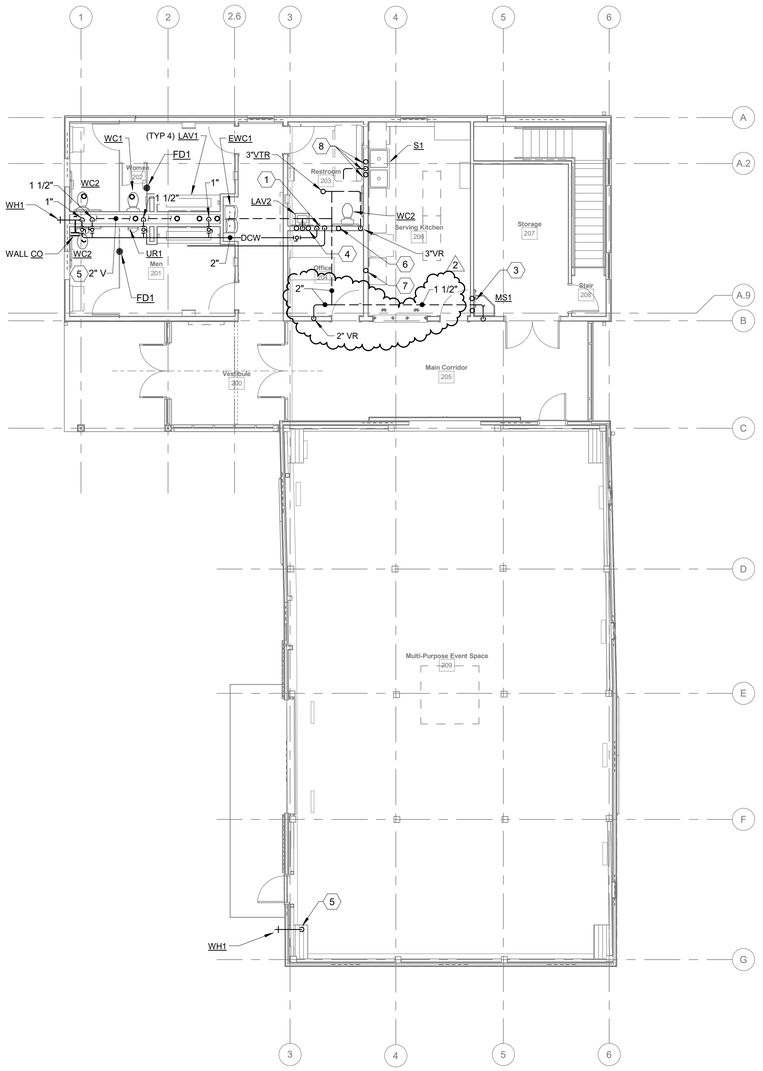
P201

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Ann Guan
DESIGNED BY:	Paul Carr
CHECKED BY:	Eric Stephens
PROJECT NUMBER:	2023-0006



1 FLOOR PLAN

MAIN FLOOR

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

N

CODED NOTES:

1. 2" DCW AND 3/4" DHW LINE IN CHASE TO SERVE MAIN TOILET ROOM.
2. PLUMBING STACK WITH CIRCUIT VENT RUNNING WITHIN CHASE APPROXIMATELY 5'-0" ABOVE FINISHED FLOOR.
3. 1/2" DCW AND DHW LINES IN STUD WALL TO SERVE MOP SINK FAUCET.
4. 1/2" DCW AND DHW LINES IN CHASE TO SERVE SINK.
5. 1/2" DCW DROP IN ARCHITECTURAL WINDOW SEAT.
6. 1" DCW IN STUD WALL TO SERVE WATER CLOSET.
7. 1/2" DCW IN STUD WALL TO WALL BOX MOUNTED 24" A.F.F.. MAKE FINAL CONNECTION TO REFRIGERATOR/FREEZER ICE MAKER LINE.
8. 2" SAN, 1/2" DCW, AND 1/2" DHW IN STUD WALL TO SERVE KITCHEN SINK. PROVIDE ANGLE STOPS UNDER SINK AND MAKE FINAL WATER CONNECTIONS TO FAUCET. MAKE FINAL DRAIN CONNECTION TO GARBAGE DISPOSAL OUTLET.

SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53736
REGISTERED PROFESSIONAL ENGINEER
2-14-25

MAIN FLOOR PLUMBING PLAN

P202

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
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SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Ann Guan
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PLUMBING EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MFR & MODEL	ELEC. REQ.	REMARKS
WB1	WALL BOX	GUY GRAY MIB1AB	-	1/2" COLD
WB2	WALL BOX	GUY GRAY MIB1AB	-	1/2" COLD AND 2" DRAIN.
EWH1	ELECTRIC WATER HEATER GROUND FLOOR MECH ROOM	A.O.SMITH DEN 40	4 KW, 208 V, 1PH	50 GALLON TANK (46 GAL RATED STORAGE VOLUME); 6 KW HEATER, 208 VOLT, 1 PHASE, 34 GAL/HOUR RECOVERY AT 72 DEG TEMP RISE/
WH1	EXTERIOR WALL HYDRANT	JAY R. SMITH 5509QT	-	3/4" COLD WATER CONNECTION

DRAIN SCHEDULE

TAG	DESCRIPTION	MFR & MODEL	REMARKS
FD1	FLOOR DRAIN	ZURN Z415B	CAST IRON BODY, INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR, 5" POLISHED NICKEL-BRONZE STRAINER, VANDAL-PROOF TOP, SIZE AS INDICATED ON DRAWINGS. REFER TO SHEET P001, GENERAL NOTE 8 FOR TRAP SEAL REQUIREMENTS. 2

PLUMBING FIXTURE SCHEDULE

MANUFACTURERS AS INDICATED SERVE AS BASIS OF DESIGN. FOR ADDITIONAL ACCEPTABLE MANUFACTURERS, REFER TO SPECIFICATIONS.

1 = WALL MOUNTED 2 = FLOOR MOUNTED 3 = FULLY RECESSED 4 = SEMI-RECESSED 5 = COUNTERTOP 6 = VITREOUS CHINA 7 = STAINLESS STEEL 8 = STEEL 9 = FIBERGLASS 10 = PRECAST TERRAZO 11 = MOLDED STONE 12 = BRASS 13 = CAST IRON 14 = WHITE 15 = CHROME PLATED 16 = AS PER MFR. STANDARD 17 = AS INDICATED 18 = PLASTIC POLYMER

TAG	ADA	DESCRIPTION	PIPE CONNECTIONS				MFR. AND MODEL NUMBER	MOUNTING	MATERIAL	COLOR	CARRIER	FITTINGS AND TRIM - MFR. AND MODEL NO.		REMARKS
			SAN	VENT	DCW	DHW						FLUSH VALVE, FAUCET or MIXING VALVE	STRAINER	
WC1		WATER CLOSET (TOILET ROOMS)	4"	2"	1"	-	AMERICAN STANDARD 3451.001	2	6	14	-	SLOAN ROYAL 110	-	FLOOR MOUNT, FLOOR OUTLET, TOP SPUD, 15" RIM HEIGHT, ELONGATED, ANTI-MICROBIAL SURFACE. FLUSH VALVE: MANUAL, EXPOSED, DIAPHRAGM TYPE, 1.6 GPF. SEAT: BEMIS 315SSCT, OPEN FRONT, LESS COVER, ANTI-MICROBIAL SURFACE, EXTRA HEAVY DUTY, SELF SUSTAINING CHECK HINGES, STAINLESS STEEL POSTS.
WC2	●	WATER CLOSET (TOILET ROOMS)	4"	2"	1"	-	AMERICAN STANDARD 3461.001	2	6	14	-	SLOAN ROYAL 110	-	FLOOR MOUNT, FLOOR OUTLET, TOP SPUD, 16-1/2" RIM HEIGHT, ELONGATED, ANTI-MICROBIAL SURFACE. FLUSH VALVE: MANUAL, EXPOSED, DIAPHRAGM TYPE, 1.6 GPF. SEAT: BEMIS 315SSCT, OPEN FRONT, LESS COVER, ANTI-MICROBIAL SURFACE, EXTRA HEAVY DUTY, SELF SUSTAINING CHECK HINGES, STAINLESS STEEL POSTS.
UR1	●	URINAL (TOILET ROOMS)	2"	1-1/2"	3/4"	-	AMERICAN STANDARD "WASHBROOK" 6590.001	1	6	14	Y	SLOAN ROYAL 186	-	SIPHON JET, 3/4" INLET SPUD, 2" OUTLET SPUD. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. FLUSH VALVE: MANUAL, 1.0 GPF, 1-1/2" TOP SPUD, TRUE MECHANICAL OVERRIDE.
LAV 1	●	LAVATORY (TOILET ROOMS)	1-1/2"	1-1/2"	1/2"	1/2"	SINK PART OF COUNTER SPECIFIED BY ARCHITECT	5	6	16	-	CHICAGO H-T11H-43ABCPT (ASSE 1070 CERTIFIED) 2	GRID STRAINER WITH OFFSET TAILPIECE	SINK: SINGLE CENTER FAUCET HOLE, FAUCET: HARDWIRED SENSOR-OPERATED, 0.5 GPM NON-AERATING SPRAY, DECK MOUNT, CHROME-PLATED, VANDAL RESISTANT, LESS BATTERIES. PROVIDE TRANSFORMER AND EXTENSION CABLES (LENGTH AS REQUIRED). 2
LAV 2	●	LAVATORY (FAMILY RESTROOMS)	1-1/2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD 0356.012 (LUCERNE)	5	6	16	-	CHICAGO 420-T45E2805ABCP (ASSE 1070 CERTIFIED)	GRID STRAINER WITH OFFSET TAILPIECE	SINK : FAUCET HOLES ON 4" CENTERS. FRONT OVERFLOW. FAUCET: DECK-MOUNTED, SINGLE 4-1/2" VANDAL PROOF LEVER HANDLE, 0.50 GPM LAMINAR FLOW CONTROL, CERAMIC CARTRIDGE WITH BUILT-IN CHECK VALVE AND THERMOSTATIC ELEMENT.
S1	●	SINK (SERVERY/CATERING KITCHEN)	1-1/2"	1-1/2"	1/2"	1/2"	REGENCY 600 S22323X	1	7	16	-	REGENCY 600 PRW812	GRID STRAINER	SINK: DOUBLE BOWL, 23"X23"X12" DEEP. 3-1/2 DRAIN BASKET, WITH STAINLESS STEEL LEGS, CROSS BRACING, TWO HOLE 8" CENTERS; SPRAYER: 1.15 GPM WALL MOUNTED PRE-RINSE SPRAYER WITH WALL BRACKET; FAUCET: TWO HOLE 8" CENTERS, BACK MOUNTED, 12" GOOSENECK FAUCET. FIXTURE S1 FURNISHED BY EQUIPMENT SUPPLIER
SS1	●	SERVICE SINK (GROUND FLOOR MECH ROOM)	1-1/2"	1-1/2"	1/2"	1/2"	FIAT SF-1-F	1	17	16	-	T&S BRASS B-0667-WW-POL	GRID STRAINER	SINK: SINGLE BOWL, 19"X19"X14" DEEP PLASTIC POLYMER TUB, INTEGRALLY MOLDED SINGLE DRAIN, 4" MOLDED LEDGE WITH 2 DISH SOAP LOCATIONS, STEEL PAINTED ANGLE LEG SUPPORTS, 3-3/8" CENTER DECK HOLES. FAUCET: METAL CHROME PLATED FAUCET, 3-3/8" CENTER, WITH WALL BRACKET, PAIL HOOK, COLOR INDEXED METAL LEVER HANDLES, VACUUM BREAKER W/QUARTER TURN BALL VALVES
MS1	●	MOP SINK (FIRST FLOOR JANITORS CLOSET)	3"	1-1/2"	1/2"	1/2"	FIAT TSBC 1610	1	10	14	-	T&S BRASS B-0665-BSTR-963	-	ONE PIECE CORNER UNIT, 24"X24"X12" HIGH, 6" HIGH DROP FRONT, 2" WIDE SHOULDERS , SS CAP ON THRESHOLD, 18 GAUGE STAINLESS STEEL WALL GUARDS; FAUCET: METAL CHROME PLATED FAUCET W/WALL BRACKET, PAIL HOOK, COLOR INDEXED METAL LEVER HANDLES, VACUUM BREAKER W/QUARTER TURN BALL VALVES; INCLUDE FLAT TYPE STAINLESS STEEL STRAINER, HOSE, MOP BRACKET AND SILICONE SEALANT. PROVIDE VACUUM BREAKER RATED FOR CONTINUOUS PRESSURE.
MS2	●	MOP SINK (GROUND FLOOR MECH ROOM)	3"	1-1/2"	1/2"	1/2"	FIAT TSB 3000	1	10	14	-	T&S BRASS B-0665-BSTR-963	-	24"X24"X10" HIGH, 6" HIGH DROP FRONT, 2" WIDE SHOULDERS WITH SS CAPS ON ALL CURBS, 18 GAUGE STAINLESS STEEL WALL GUARDS; FAUCET: METAL CHROME PLATED FAUCET W/WALL BRACKET, PAIL HOOK, COLOR INDEXED METAL LEVER HANDLES, VACUUM BREAKER W/QUARTER TURN BALL VALVES; INCLUDE FLAT TYPE STAINLESS STEEL STRAINER, HOSE, MOP BRACKET AND SILICONE SEALANT. PROVIDE VACUUM BREAKER RATED FOR CONTINUOUS PRESSURE.
EWC1	●	ELECTRIC WATER COOLER (HI-LOW)	2"	1-1/2"	1/2"	-	OASIS PG8EBQSL	1	7	16	16	INTEGRAL	-	MECHANICALLY ACTIVATED BUBBLER NON-FILTERED 8.0 GPH OF 50°F DRINKING WATER AT 80°F INLET WATER TEMPERATURE AND 90°F ROOM TEMPERATURE. 6.0 FLA, 370 W, 120 V, 1PH, 60 HZ. UL LISTED. WALL-MOUNTED UNIT SHALL BE LEAD FREE DESIGN CONFORMING TO NSF / ANSI 61 & 372 INCLUDE ELECTRONIC BOTTLE FILLING STATION & VANDAL - RESISTANT MECHANICAL FRONT BUBBLER BUTTON ACTIVATION.

SHOCK ABSORBER SCHEDULE

ITEM	FIXTURE UNITS CONNECTED	P. D. I. SYMBOL
SA1	1 - 11	A
SA2	12 - 32	B
SA3	33 - 60	C
SA4	61 - 113	D
SA5	114 - 154	E
SA6	155 - 330	F

CLEANOUT SCHEDULE

ITEM	DESCRIPTION	MFR & MODEL	ACCESSORIES
CO	CLEANOUT CARPET *	ZURN Z-1400-CM-HD-VP SERIES	ADJUSTABLE CAST IRON BODY WITH THREADED ABS PLUG, HEAVY DUTY NICKEL-BRONZE VANDAL- RESISTANT SCORIATED COVER, VANDAL-RESISTANT S.S. CARPET MARKER, LINE SIZE, CAULK OUTLET
CO	CLEANOUT TILE	ZURN Z-1400-HD-VP	ADJUSTABLE CAST IRON BODY WITH THREADED ABS PLUG, HEAVY DUTY NICKEL-BRONZE VANDAL-RESISTANT ROUND SCORIATED COVER, LINE SIZE, CAULK OUTLET.
CO	CLEANOUT CONCRETE NO VEHICLE TRAFFIC	ZURN Z-1400-HD-VP	ADJUSTABLE CAST IRON BODY WITH THREADED ABS PLUG, HEAVY DUTY NICKEL-BRONZE VANDAL-RESISTANT SCORIATED COVER, LINE SIZE, CAULK OUTLET.
CO	CLEANOUT WALL	ZURN Z-1446-VP	VANDAL-RESISTANT STAINLESS STEEL COVER. STAINLESS STEEL SCREW LENGTH AS REQUIRED. CONTRACTOR TO PROVIDE PIPE WITH THREADED ABS PLUG AND FITTING.

* SUBMIT ANSI CERTIFICATION WITH SHOP DRAWINGS

KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: Ann Guan
DESIGNED BY: Paul Carr
CHECKED BY: Eric Stephens
PROJECT NUMBER: 2023-0006

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
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Korda/Nemeth Engineering
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Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
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Drawing Issue Dates

Design Development Submittal
11/17/2023

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Revision Schedule

#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

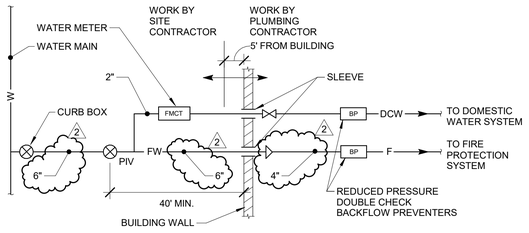
STATE OF OHIO
ERIC C. STEPHENS
E-52326
REGISTERED PROFESSIONAL ENGINEER
2-14-25

PLUMBING SCHEDULES

P501

02/14/2025

23070



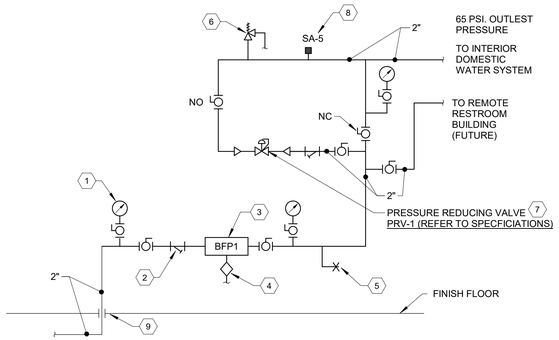
1 DETAIL

WATER SERVICE - COMBINATION DOMESTIC/FP WITH SINGLE METER WATER SERVICE TO BUILDING

N.T.S.

CODED NOTES

1. PRESSURE GAUGE (TYPICAL).
2. STRAINER (TYPICAL).
3. REDUCED PRESSURE BACKFLOW PREVENTER (LINE SIZE).
4. ROUTE DRAIN PIPING FULL SIZE FROM BACKFLOW PREVENTER TO NEAREST FLOOR DRAIN. PROVIDE AIR GAP FITTING.
5. HOSE BIBB TO SERVE AS DRAIN.
6. 3/4" PRESSURE RELIEF VALVE SET AT SYSTEM TEST PRESSURE. EXTEND PRESSURE RELIEF VALVE DISCHARGE LINE TO FLOOR DRAIN.
7. PRESSURE REDUCING VALVE SET AT 65 PSI.
8. SHOCK ABSORBER.
9. SLEEVE WITH WATER-TIGHT SEAL.

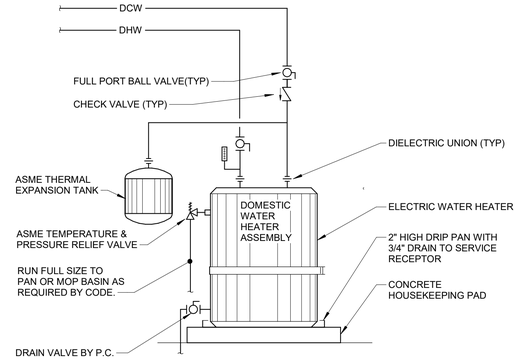


NOTE : PROVIDE B-LINE OR UNISTRUT SUPPORTS FOR SECURELY ANCHORING DOMESTIC WATER METER / BACKFLOW PREVENTER ASSEMBLY. BOLT ASSEMBLY TO FLOOR.

2 DETAIL

BACKFLOW PREVENTER AND PRESSURE REDUCING VALVE SCHEMATIC

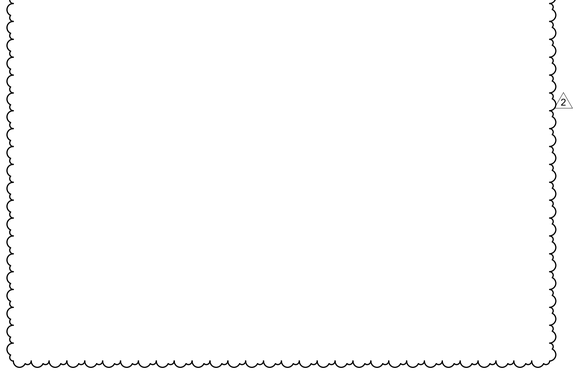
N.T.S.

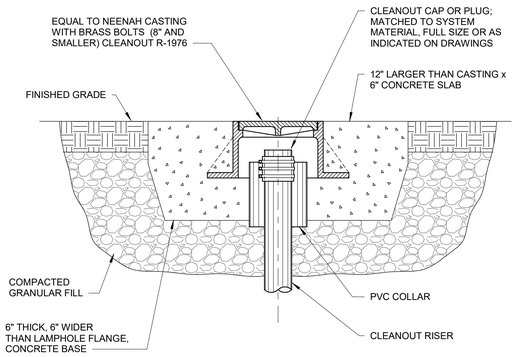


3 DETAIL

WATER HEATER - ELECTRIC FLOOR MOUNTED

N.T.S.

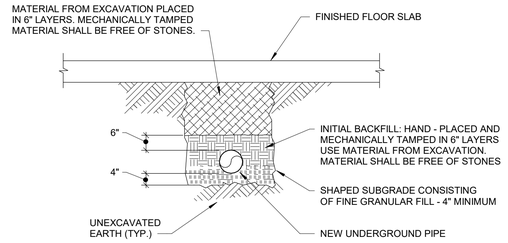




7 DETAIL

CLEANOUT - EXTERIOR 8" & SMALLER

N.T.S.



6 DETAIL

UNDERGROUND SANITARY & STORM PIPE INSTALLATION

N.T.S.

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ARCHITECTURE. INSPIRED.

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E-53378
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2-19-25

PLUMBING DETAILS

P601

02/14/2025

23070

Autodesk Docs://23070 - Bicentennial Barn/R22-230006 Bicentennial Barn Relocation MECH.rvt
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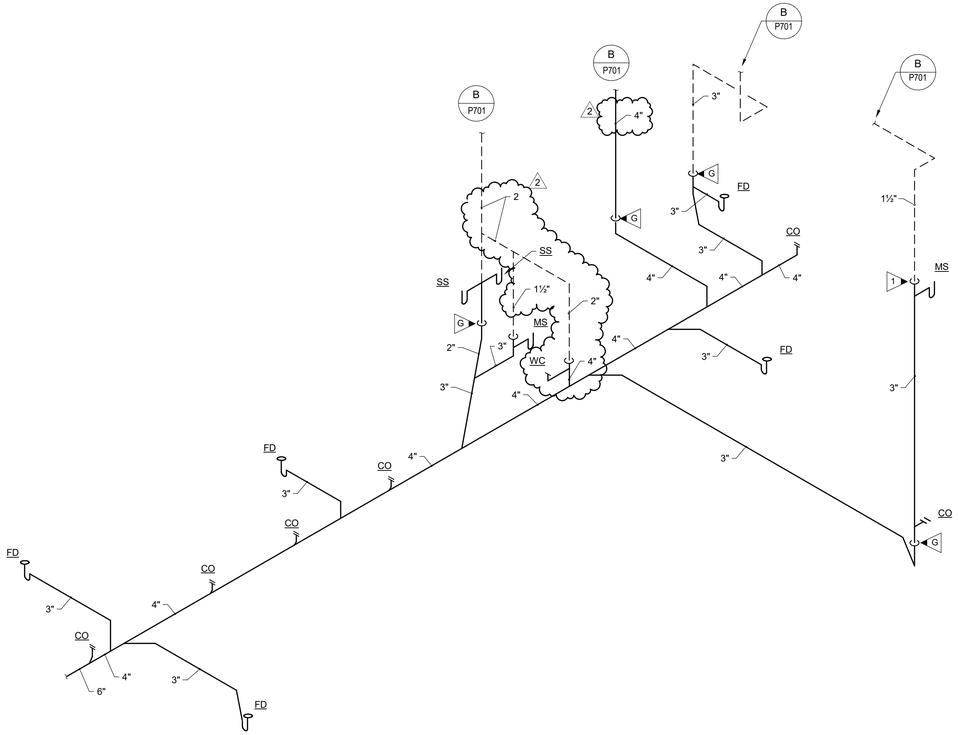
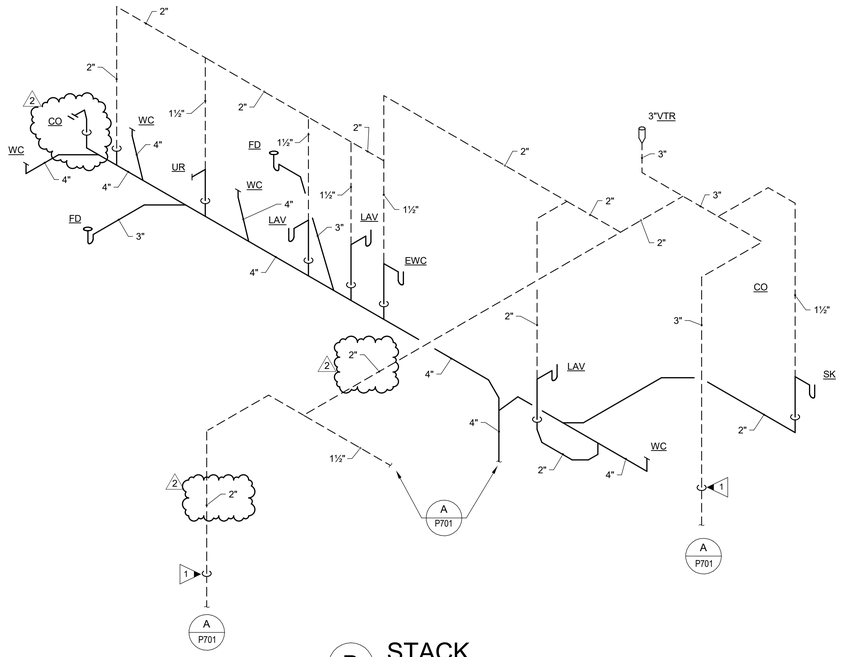
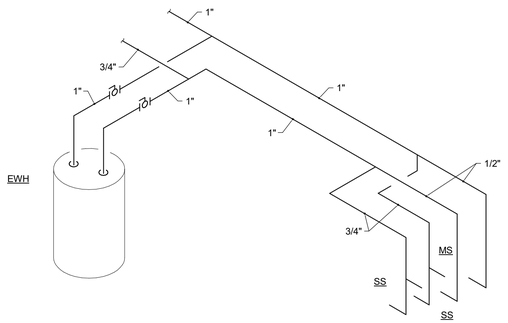


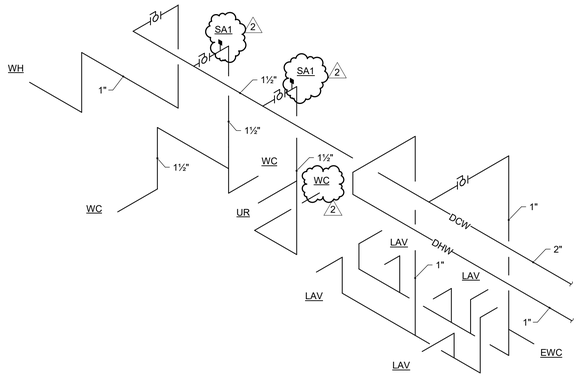
A STACK
GROUND FLOOR PLUMBING STACK
N.T.S.



B STACK
MAIN FLOOR PLUMBING STACK
N.T.S.



A RISER
GROUND FLOOR PLUMBING RISER
N.T.S.



B RISER
MAIN FLOOR PLUMBING RISER
N.T.S.

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.

300 Marconi Boulevard
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STATE OF OHIO
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E-52300
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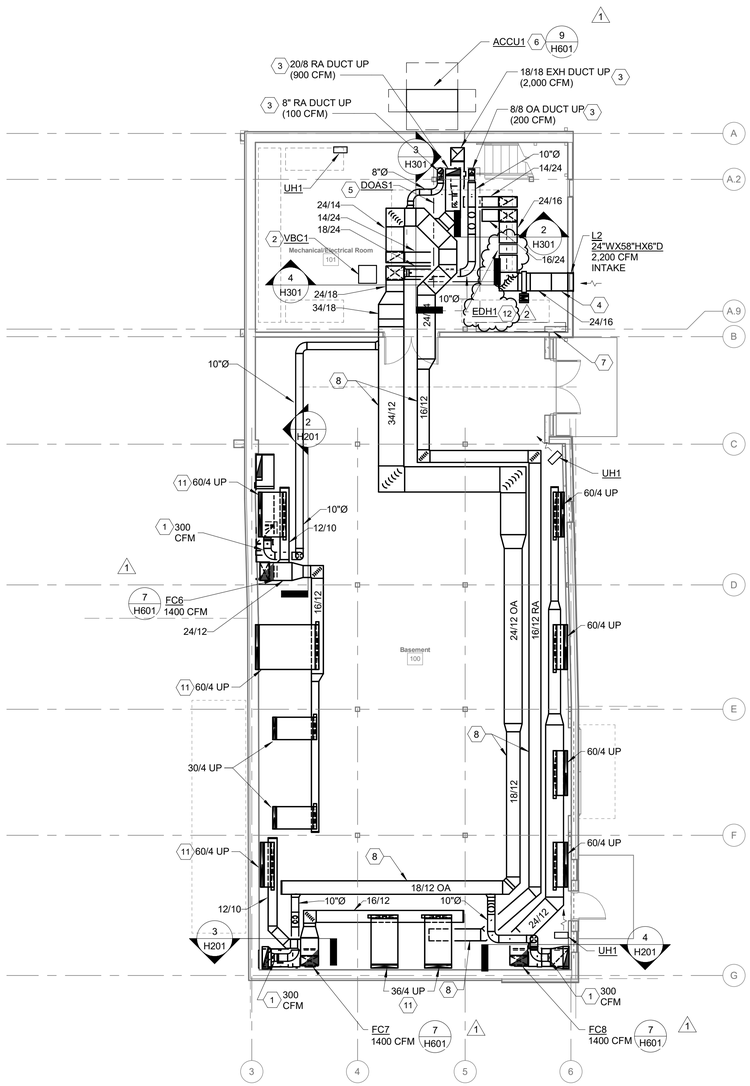
2-14-25

PLUMBING STACKS

P701

02/14/2025

23070



1 FLOOR PLAN

GROUND FLOOR

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

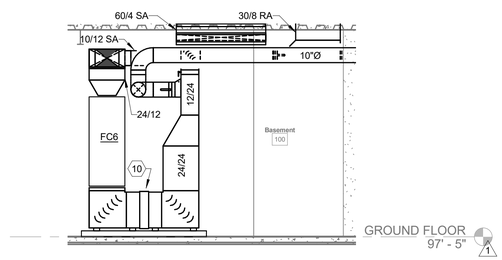
N

CODED NOTES:

1. VENTILATION AIR DUCT TO BE BALANCED TO CFM INDICATED ON PLAN.
2. VRF SYSTEM CHANGE-OVER CONTROL BOX FOR INDOOR VRF UNITS LOCATED ON THE GROUND LEVEL.
3. DUCTWORK TO RISE UP EXPOSED INTO FIRST FLOOR NON-RATED STAIRWELL. REFER TO SPECIFICATIONS FOR INSULATION REQUIREMENTS FOR EXPOSED DUCTWORK.
4. DOUBLE WALL INSULATED PLENUM BOX, FULL SIZE OF LOUVER (24" DEEP).
5. INDOOR DOAS UNIT TO BE MOUNTED ON UNI-STRUT FRAME 24" ABOVE FINISHED FLOOR (SUPPORTED FROM FLOOR).
6. OUTDOOR VRF REFRIGERATION UNIT MOUNTED ON 8" CONCRETE RE-INFORCED PAD.
7. ELECTRICAL PANELS AND EQUIPMENT. AVOID ROUTING DUCTWORK OR PIPING WITHIN THIS AREA.
8. DOAS VENTILATION SUPPLY AND RETURN/EXHAUST DUCT MAINS IN GROUND LEVEL SIZED FOR FUTURE EXPANSION OF GROUND FLOOR SHELL SPACE.
9. RETURN DUCT UP INTO FIRST FLOOR ARCHITECTURAL SEAT.

CODED NOTES (CONTINUED):

10. PROVIDE FILTER MODULE (HONEYWELL F100 20X25 OR EQUAL).
11. SUPPLY DUCT TO RISE UP INTO NOTCHED FOUNDATION WALL AND CONNECT TO FLOOR REGISTER ABOVE ON FIRST FLOOR. REFER TO STRUCTURAL FOUNDATION DETAIL FOR NOTCH HEIGHT AND WIDTH (DETAIL 5, SHEET S622).
12. PROVIDE ELECTRIC DUCT HEATER ON OUTSIDE AIR DUCT TO DOAS UNIT (PRE-HEAT COIL). DUCT HEATER SHALL BE CONTROLLED BY A DUCT THERMOSTAT SET TO MAINTAIN 15 DEGREES F DISCHARGE AIR SETPOINT. PROVIDE BAS SENSORS TO MONITOR DUCT HEATER STATUS AND DISCHARGE AIR TEMPERATURE.

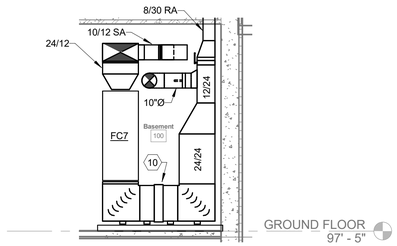


2 SECTION

FC6

SCALE: 1/4" = 1'-0"

0' 1' 2' 4'

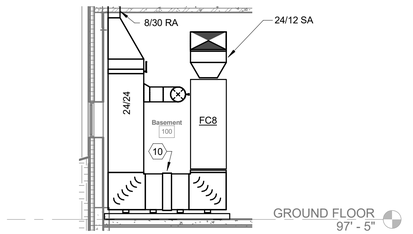


3 SECTION

FC7

SCALE: 1/4" = 1'-0"

0' 1' 2' 4'



4 SECTION

FC8

SCALE: 1/4" = 1'-0"

0' 1' 2' 4'

SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

90% Construction Documents
01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule		
#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53378
REGISTERED PROFESSIONAL ENGINEER
2-14-25

GROUND FLOOR HVAC PLAN

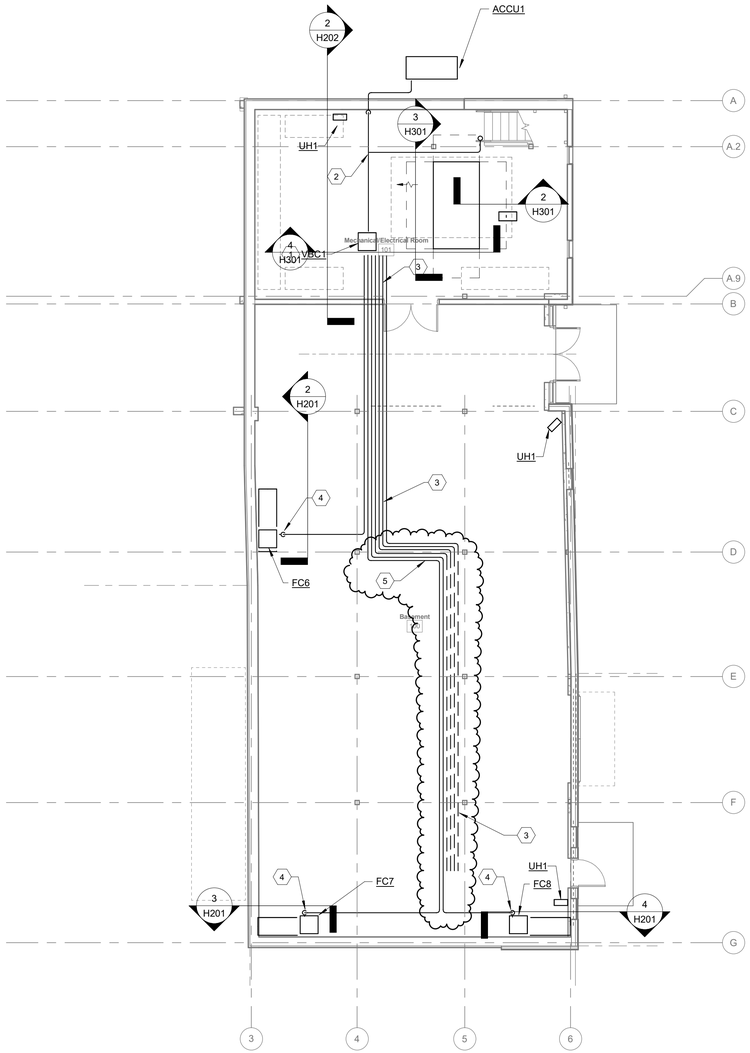
H201

02/14/2025

23070

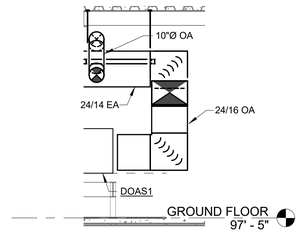
KORDA
KORDA · NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Ann Guan
DESIGNED BY:	Paul Carr
CHECKED BY:	Eric Stephens
PROJECT NUMBER:	2023-0006



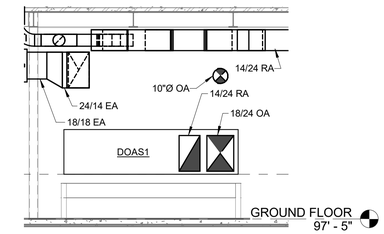
CODED NOTES:

1. VRF SYSTEM SPLITTER.
2. VRF SYSTEM CHANGE-OVER CONTROL BOX FOR VRF UNITS LOCATED ON THE GROUND LEVEL.
3. PROVIDE PIPING SPACE FOR 4 ADDITOINAL VRF ZONES ON THE MAIN PIPING RUN AT THE BASEMENT LEVEL.
4. PROVIDE TRAPPED CONDENSATE DRAIN LINE FROM FAN COIL AND EXTEND TO FLOOR DRAIN ADJACENT TO UNIT.
5. PROVIDE SMOOTH RADIUS OFFSET (LONG RADIUS) TO ACCOMMODATE PIPE EXPANSION.



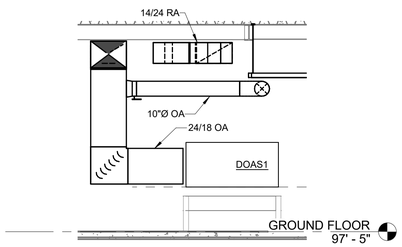
2 SECTION
DOAS1

SCALE: 1/4" = 1'-0"
0' 1' 2' 4'



3 SECTION
DOAS2

SCALE: 1/4" = 1'-0"
0' 1' 2' 4'



4 SECTION
DOAS3

SCALE: 1/4" = 1'-0"
0' 1' 2' 4'

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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
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Revision Schedule		
#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53376
REGISTERED PROFESSIONAL ENGINEER
2-14-25

GROUND FLOOR HVAC PIPING

H301

02/14/2025

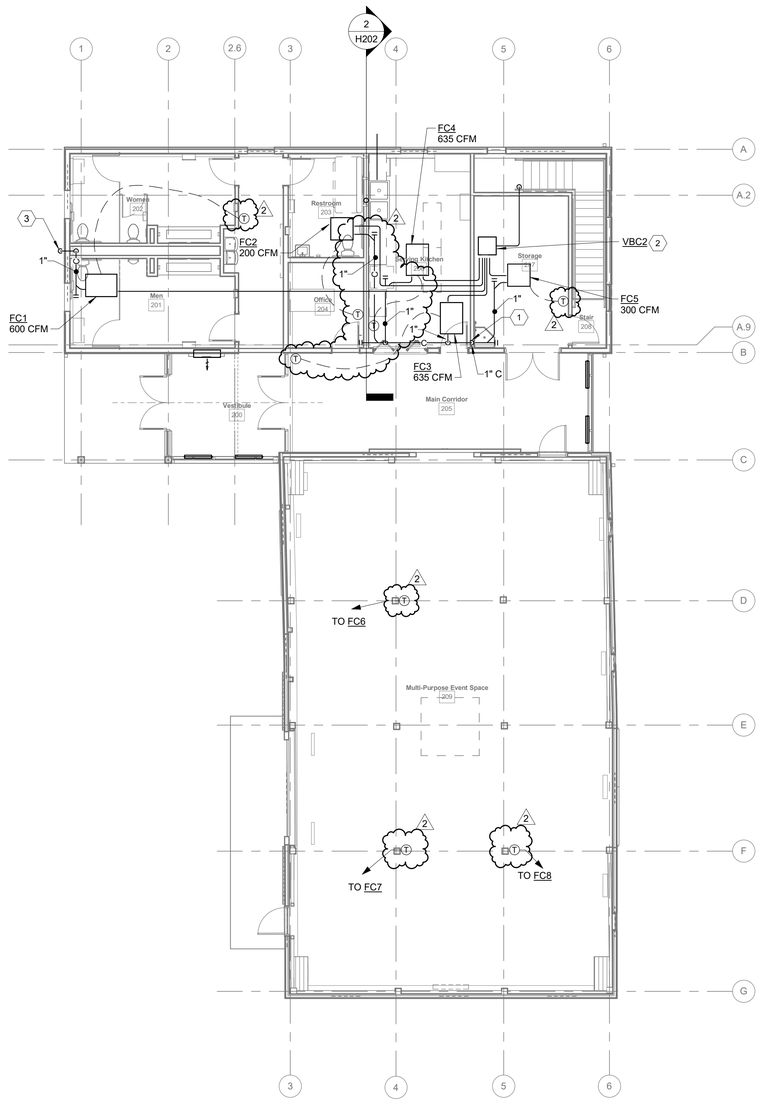
23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Cole Neeley
DESIGNED BY: Paul Carr
CHECKED BY: Eric Stephens
PROJECT NUMBER: 2023-0006

CODED NOTES:

1. 1" CONDENSATE DRAIN LINE TO DROP INSIDE WALL AND DISCHARGE TO MOP SINK. PIPE TO STUB OUT OF WALL 24" ABOVE FINISHED FLOOR AND TURN DOWN INTO MOP SINK.
2. VRF SYSTEM CHANGEOVER CONTROL BOX FOR GROUND FLOOR.
3. 1" CONDENSATE DRAIN LINE TO DROP IN PLUMBING CHASE AND DISCHARGE OUTSIDE. PENETRATE EXTERIOR WALL 12" ABOVE GRADE AND TURN DOWN ON SPLASH BLOCK.



1 FLOOR PLAN
MAIN FLOOR

SCALE: 1/8" = 1'-0"
0' 1' 2' 4' 8'

N

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

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2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53356
REGISTERED PROFESSIONAL ENGINEER
2-14-25

FIRST FLOOR HVAC PIPING

H302

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Cole Neeley
DESIGNED BY:	Paul Carr
CHECKED BY:	Eric Stephens
PROJECT NUMBER:	2023-0006

DOAS AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (BASED ON UNITED COOLAIR)

TAG	LOCATION	MODEL	OUTSIDE AIR	RETURN/ EXHAUST AIR	PERCENT OA	Supply Air ESP	Exhaust Air ESP	ER WHEEL - DEHUMIDIFICATION							DX COIL - COOLING					REHEAT			ER WHEEL - HEATING							HEATING		ELECTRICAL										WEIGHT
								OUTSIDE AIR TEMP		RETURN AIR TEMP		WHEEL SUPPLY AIR TEMP		Recovered Capacity	COIL SUPPLY AIR TEMP			TOTAL CAPACITY	SENSIBLE CAPACITY	UNIT SUPPLY AIR TEMP		CAPACITY	OUTSIDE AIR TEMP		RETURN AIR TEMP		WHEEL SUPPLY AIR TEMP		Recovered Capacity	SUPPLY AIR TEMP	CAPACITY	VOLTAGE	SUPPLY FAN MOTOR		EXHAUST FAN MOTOR		COMPRESSOR		ERW QTY	ERW (EACH)	UNIT MCA	UNIT MOP	
			CFM	CFM	%	IN. H2O	IN. H2O	DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	DB °F	WB °F	DP °F	MBH	MBH	DB °F	DP °F	MBH	DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	DB °F	MBH	V-PH-HZ	KW	AMPS	KW	AMPS	LRA	RLA		AMPS	AMPS	AMPS	LBS
DOAS1	GROUND FLOOR MECH RM 103	ALPHA AIRE II AAH210G3ASTB2	2200	2000	100	1.0	0.5	95.0	75.0	75.0	62.0	80.7	66.4	71,544	48.8	48.5	48.2	114,055	77,179	75.0	48.2	62,187	10.0	6.0	70.0	50.0	53.1	39.8	121,111	88.3	81,296	208/230-3-60	4.4	13.7	4.4	13.7	240	32.3	2	0.4	69.8	100	2000

1 Direct Drive Plenum Fans with EC Motors - Supply and Exhaust
2 Stainless steel drain pans - Evaporator and Condenser
3 Built-in Pressure Transducers for Airflow Measurement
4 2" MERV 13 pleated throwaway outdoor air filter
5 2" MERV 8 pleated throwaway return air filter
6 Isolated Electrical Control Box
7 Marvel Premium microprocessor with Wall Display Interface and BACnet communications.
8 All required temperature and humidity sensors factory installed.
9 Provide Non-Fused Disconnect

VARIABLE REFRIGERANT FLOW (VRF) - INDOOR FAN COIL UNIT SCHEDULE (BASED ON DAIKIN)

TAG	AREA SERVED	MODEL	NOMINAL TONNAGE	TYPE	CONNECTED TO: CONDENSING UNIT	CONNECTED TO: ZONE CHANGEOVER DEVICE	SUPPLY FAN AIR FLOW RATE CFM	COOLING CAPACITY REQUIRED TOTAL BTU/h	COOLING CAPACITY REQUIRED SENSIBLE BTU/h	COOLING CAPACITY AVAILABLE TOTAL BTU/h	COOLING CAPACITY AVAILABLE SENSIBLE BTU/h	ENTERING AIR °F DB	ENTERING AIR °F WB	HEATING CAPACITY REQUIRED BTU/h	HEATING CAPACITY AVAILABLE BTU/h	ENTERING AIR °F DB	ELECTRICAL Voltage - Phase	ELECTRICAL MCA	ELECTRICAL MOP	DIMENSIONS WxHxD inch	WEIGHT Net lbs	NOTES	Options and Accessories
FC1	VESTIBULE 200, MAIN FLR TOILET RMS 200 & 202	FXMQ18PBVJU	1.5	Ceiling Mounted Ducted (Medium Static)	ACCU1	Yes	635	15,500	9900	18,2981	14,200	79.8	69.5	10,900	20,257	69.3	208 V, 1 PHASE	1.6	15.0	39.4 x 11.8 x 27.6	79.4		UNIT CONTROLLER MODEL BRC1E73
FC2	FAMILY TOILET RM 203, OFFICE 204, RR CORRIDOR	FXMQ07PBVJU	0.6	Ceiling Mounted Ducted (Medium Static)	ACCU1	Yes	317	3,500	2,000	7,530	4,293	73.5	67.5	800	8,496	70.0	208 V, 1 PHASE	0.6	15.0	21.7 x 11.8 x 27.6	55.1		UNIT CONTROLLER MODEL BRC1E73
FC3	MAIN CORRIDOR 205	FXMQ18PBVJU	1.5	Ceiling Mounted Ducted (Medium Static)	ACCU1	Yes	635	14,800	10,700	16,483	11,718	74.0	64.6	5,600	19,919	70.2	208 V, 1 PHASE	1.6	15.0	39.4 x 11.8 x 27.6	79.4		UNIT CONTROLLER MODEL BRC1E73
FC4	SERVING KITCHEN 206	FXMQ18PBVJU	1.5	Ceiling Mounted Ducted (Medium Static)	ACCU1	Yes	635	12,800	10,800	15,467	12,286	73.5	63.0	900	19,656	70.9	208 V, 1 PHASE	1.6	15.0	39.4 x 11.8 x 27.6	79.4		UNIT CONTROLLER MODEL BRC1E73
FC5	STORAGE ROOM 207	FXZQ05TBVJU	0.5	4-Way Discharge Ceiling Cassette Vista (2' x 2') white	ACCU1	Yes	300	4,800	2,500	5,870	3,175	73.5	67.6	2,200	6,483	70.0	208 V, 1 PHASE	0.3	15.0	22.6 x 10.2 x 22.6	35.3		UNIT CONTROLLER MODEL BRC1E73, WHITE DECORATIVE FACE PANEL MODEL BYFQ60C3W2W
FC6	EVENT SPACE 209	FXTQ42TBVJUA	3.5	Multi Position Air Handler	ACCU1	Yes	1,400	28,600	24,200	36,130	24,913	73.5	63.0	12,900	46,868	70.7	208 V, 1 PHASE	6.5	15.0	21.0 x 53.4 x 21.0	149.9		UNIT CONTROLLER MODEL BRC1E73
FC7	EVENT SPACE 209	FXTQ42TBVJUA	3.5	Multi Position Air Handler	ACCU1	Yes	1,400	28,600	24,200	36,130	24,913	73.5	63.0	12,900	46,868	70.7	208 V, 1 PHASE	6.5	15.0	21.0 x 53.4 x 21.0	149.9		UNIT CONTROLLER MODEL BRC1E73
FC8	EVENT SPACE 209	FXTQ42TBVJUA	3.5	Multi Position Air Handler	ACCU1	Yes	1,400	28,600	24,200	36,130	24,913	73.5	63.0	12,900	46,868	70.7	208 V, 1 PHASE	6.5	15.0	21.0 x 53.4 x 21.0	149.9		UNIT CONTROLLER MODEL BRC1E73

1 Built-in condensate pump (FXDQ_M, FXFQ_P, FXFQ_T, FXMQ_M, FXMQ_P, FXUQ_P, FXZQ_M)
2 Optional MERV 8 and 13 filters (FXMQ_M, FXMQ_P)

VARIBABLE REFRIGERANT FLOW (VRF) - OUTDOOR AIR-COOLED CONDENSING UNIT SCHEDULE (BASED ON DAIKIN)

TAG: ROOM	MODEL	NOMINAL TONNAGE	LOCATION	COOLING CAPACITY BTU/h	COOLING CAPACITY AMBIENT DESIGN (°F DB)	HEATING CAPACITY BTU/h	HEATING CAPACITY AMBIENT DESIGN (°F DB / WB)	REFRIGERANT CHARGE Factory Charge (lbs)	REFRIGERANT CHARGE Add'l Refrigerant (lbs)	CONNECTION RATIO (%)	ELECTRICAL VOLTAGE-PHASE	ELECTRICAL MIN CIRCUIT AMPS (MCA) mod #1	ELECTRICAL MIN CIRCUIT AMPS (MCA) total	ELECTRICAL MAX OVERCURRENT PROTECTION (MOP) mod #1	ELECTRICAL MAX OVERCURRENT PROTECTION (MOP) total	ELECTRICAL RUNNING CURRENT(RLA) mod #1	ELECTRICAL RUNNING CURRENT(RLA) total	DIMENSIONS (WxHxD) (inch)	DIMENSIONS WEIGHT (lbs)	EFFICIENCY (NonDucted/Ducted or Specific Combo) EER	IEER	COP47	COP17	SCHE	SEER	HSPF	Options and Accessories
ACCU1	REYQ192AATJA	16	ON GRADE NORTH OF GROUND FLR MECH ROOM 103	162,161	95.0	132,547	0.0 / -1.0	25.8	52.76	100.7	208V, 3 PHASE	59.8	59.8	60.0	60.0	33.2	33.2	68.9 x 65.4 x 30.1	956.8	12.3 / 11.5	24 / 21	3.85 / 3.45	2.05 / 2.05	26.6 / 22.8	n/a / n/a	n/a / n/a	

VARIABLE REFRIGERANT FLOW - ZONE BRANCH CONTROLLER SCHEDULE (BASED ON DAIKIN)

TAG: ROOM	MODEL	UNITS SERVED	VOLTAGE-PHASE	MIN CIRCUIT AMPS (MCA)	MAX OVERCURRENT PROTECTION (MOP)	MAX CAPACITY (per Port)	DIMENSIONS (WxHxD inch)	WEIGHT (lbs)	ZONE SERVED	Options and Accessories
VBC1	BSF8Q54TVJ	ACCU1	208, 1 PHASE	0.8	15.0	54,000	23.3 x 9.5 x 23.7	81.6	FC6, FC7, FC8, (FUTURE FC9, FC10, FC11, FC12)	PROVIDE PIPE CAP KIT(S) FOR OPEN PORT(S)
VBC2	BSF6Q54TVJ	ACCU1	208V, 1 PHASE	0.6	15.0	54,000	23.3 x 9.5 x 23.7	72.8	FC1, FC2, FC3, FC3, FC5	PROVIDE PIPE CAP KIT(S) FOR OPEN PORT(S)

IN-DUCT ELECTRIC HEATING COIL SCHEDULE (BASED ON INDEECO)

UNIT DATA TAG	UNIT DATA MODEL	AIR DATA CFM	AIR DATA E.A.T. °F	AIR DATA L.A.T. °F	ELECTRICAL DATA KW	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	FACE AREA	FACE VELOCITY FPM	INDICATED COMPONENTS PROVIDED BY DIV 23	INDICATED COMPONENTS PROVIDED BY DIV 26	REMARKS
EDH1	QUA-24"W X16"H	2,200	0	10	7.0	208	1	2.67	825	-	B	PROVIDE DUCT THERMOSTAT WITH TYPE "G" CONTROLLER.

CODED NOTES:
A. DISCONNECT SWITCH
B. CONTROL PANEL WITH INTEGRAL DISCONNECT SWITCH
C. CONTROL PANEL
D. LINE VOLTAGE PANEL
E. REDUCED VOLTAGE STARTERTWO SPEED STARTERS
F. VARIABLE FREQUENCY DRIVE
G. EMERGENCY POWER
H. PLUG-IN UNIT
I. THERMOSTAT
J. WALL SWITCH

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ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO ERIC C. STEPHENS E-53376 REGISTERED PROFESSIONAL ENGINEER 2-14-25

HVAC SCHEDULES

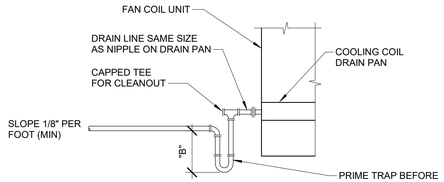
H501

02/14/2025

23070

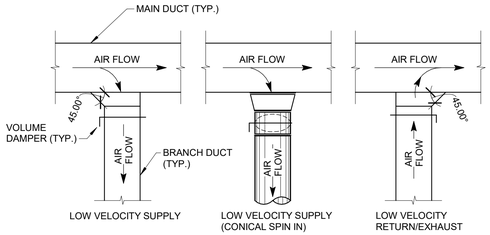
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE SUITE 200 COLUMBUS, OHIO 43215

DRAWN BY: Ann Guan
DESIGNED BY: Paul Carr
CHECKED BY: Eric Stephens
PROJECT NUMBER: 2023-0006



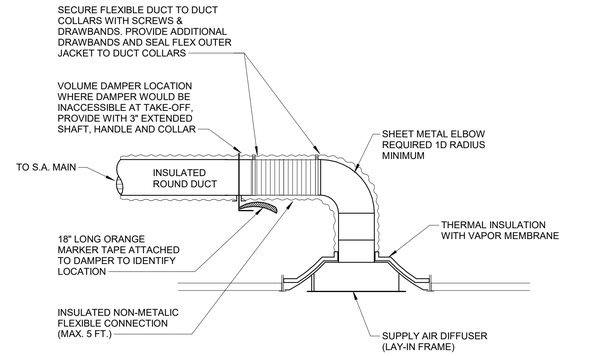
	A(IN)	B(IN)
DRAWTHRU COIL	FAN INLET STATIC	"A"/2+1
BLOWTHRU COIL	2" MIN	FAN DISCHARGE STATIC PLUS 1"

1 DETAIL
CONDENSATION DRAIN TRAP PIPING
N.T.S.

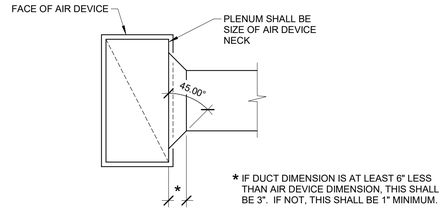


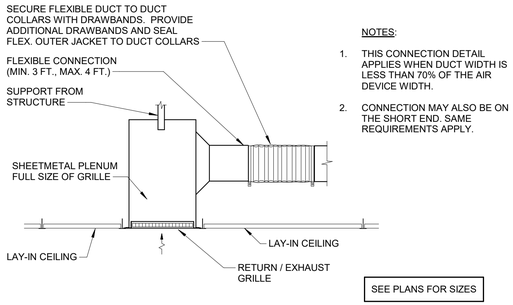
PROVIDE 18" LONG ORANGE MARKER TAPE ON EACH VOLUME DAMPER HANDLE TO IDENTIFY LOCATION

2 DETAIL
TYPICAL DUCT CONNECTIONS
N.T.S.



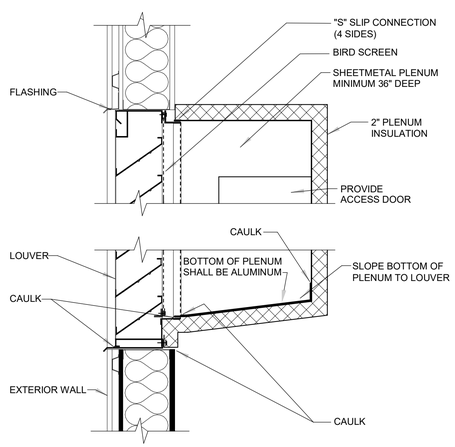
3 DETAIL
DIFFUSER MOUNTING
N.T.S.



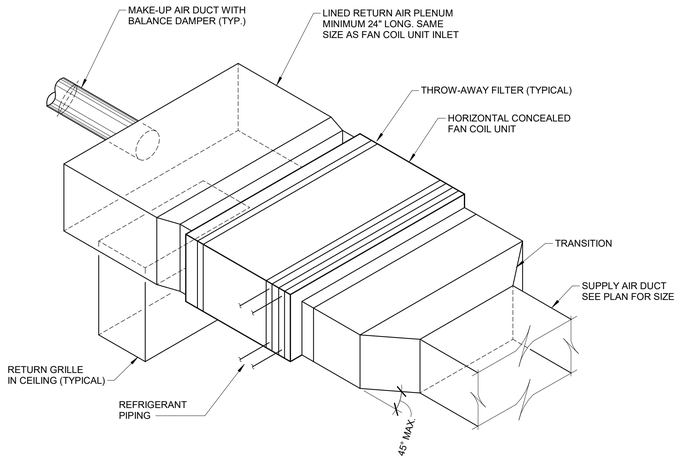


NOTES:
1. THIS CONNECTION DETAIL APPLIES WHEN DUCT WIDTH IS LESS THAN 70% OF THE AIR DEVICE WIDTH.
2. CONNECTION MAY ALSO BE ON THE SHORT END. SAME REQUIREMENTS APPLY.

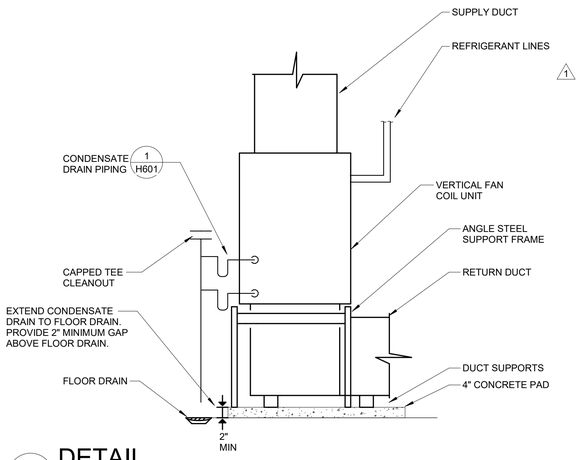
4 DETAIL
RETURN / EXHAUST GRILLE CONNECTION
N.T.S.



5 DETAIL
OUTSIDE AIR INTAKE AND RELIEF LOUVER
N.T.S.



6 DETAIL
HORIZONTAL FAN COIL INSTALLATION
N.T.S.



7 DETAIL
VERTICAL FAN COIL INSTALLATION
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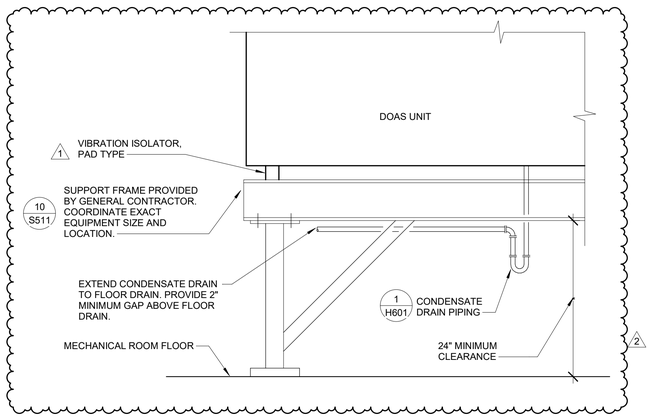

8 DETAIL
DOAS UNIT AND MOUNTING FRAME IN MECHANICAL ROOM
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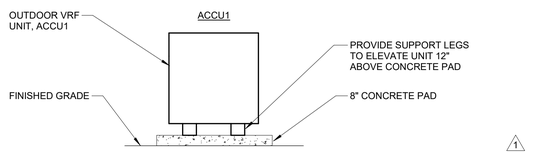


9 DETAIL
ACCU1
N.T.S.

KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215
DRAWN BY: Ann Guan
DESIGNED BY: Paul Carr
CHECKED BY: Eric Stephens
PROJECT NUMBER: 2023-0006

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

90% Construction Documents
01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule

#	Description	Date
1	Addendum 01	02/26/2025
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

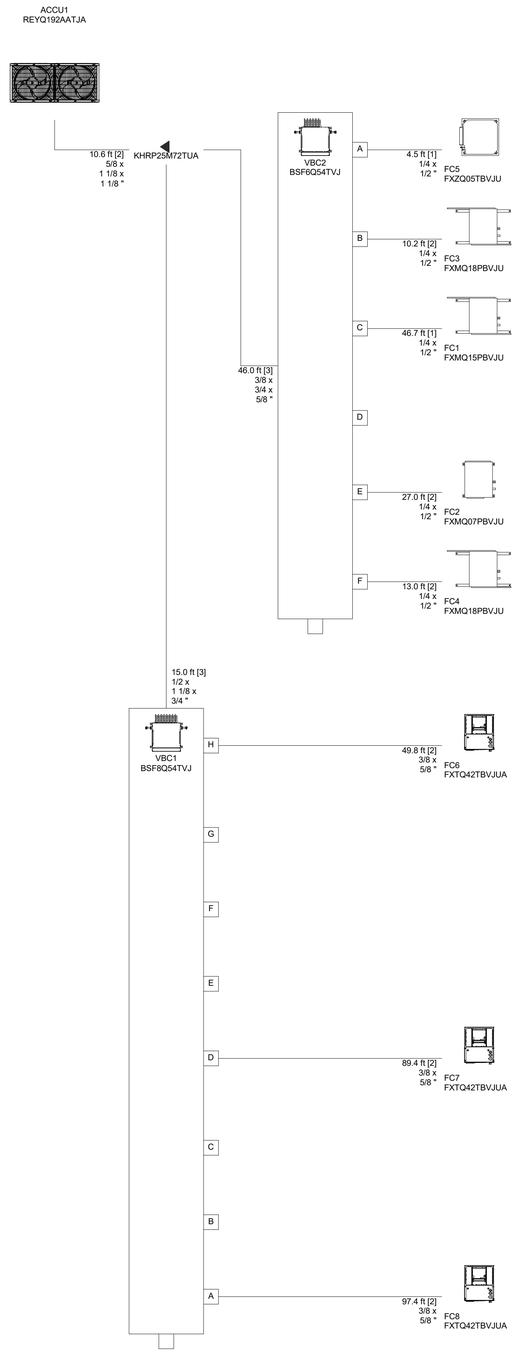
STATE OF OHIO
ERIC C. STEPHENS
E-53236
REGISTERED
PROFESSIONAL ENGINEER
2-14-25

HVAC DETAILS

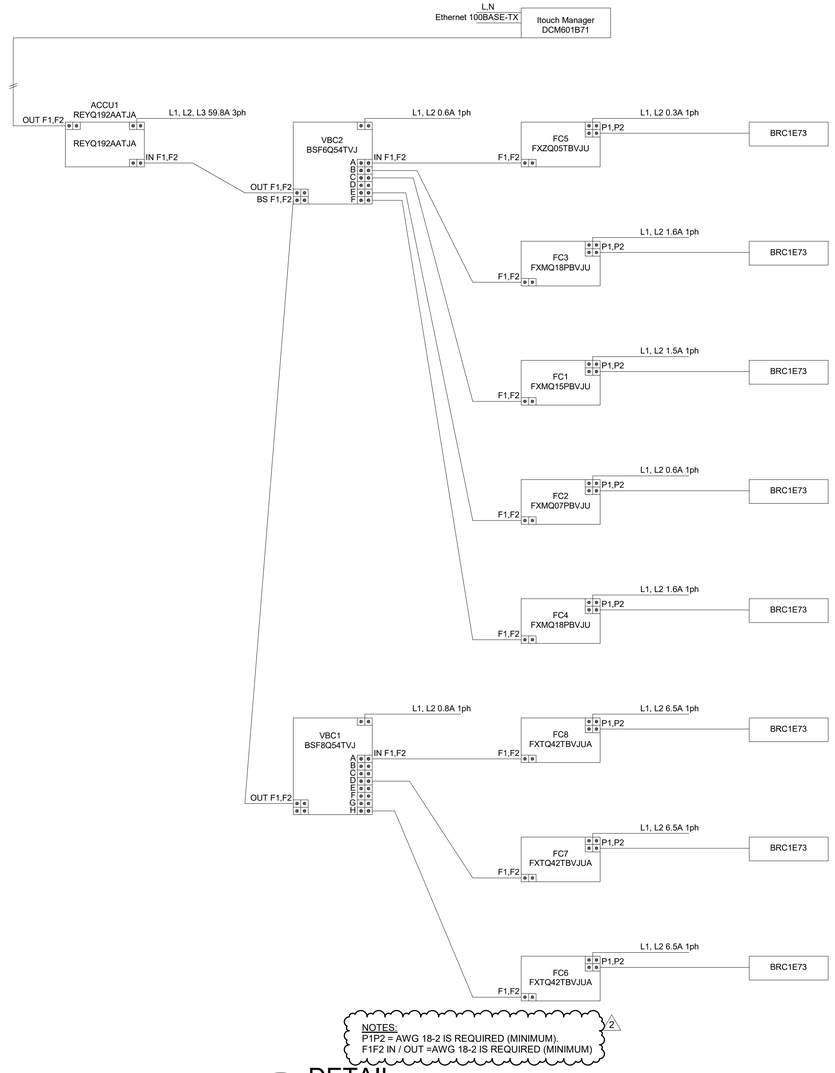
H601

02/14/2025

23070



1 DETAIL
VRF PIPE DIAGRAM
N.T.S.



2 DETAIL
VRF CONTROL WIRING
N.T.S.

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

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Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ERIC C. STEPHENS
E-53376
REGISTERED PROFESSIONAL ENGINEER
2-14-25

HVAC VRF SCHEMATICS

H701

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Ann Guan
DESIGNED BY:	Paul Carr
CHECKED BY:	Eric Stephens
PROJECT NUMBER:	2023-0006

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT UNLESS NOTED OTHERWISE
R1 / R1 / R1	LUMINAIRE: TYPE "R1"; SEE LUMINAIRE SCHEDULE	----
	EMERGENCY EGRESS LUMINAIRE: ON EMERGENCY BRANCH CIRCUIT OR WITH INTEGRAL BATTERY PACK	----
R2 W2 W2	CEILING OR WALL MOUNTED LUMINAIRE TYPE "R2", "W2"; SEE LUMINAIRE SCHEDULE	SEE DRAWINGS
X1 X1	EXIT SIGN FIXTURE (WITH DIRECTIONAL ARROWS AS SHOWN) (TYPE AND MOUNTING AS NOTED; SEE LUMINAIRE SCHEDULE) SHADED AREA DENOTES FACE	94"
P1 B1	SITE LUMINAIRE (TYPE AND MOUNTING AS NOTED; SEE LUMINAIRE SCHEDULE)	----
SX	LINE VOLTAGE SWITCH 0 - OCCUPANCY SENSOR SWITCH 3 - 3-WAY K - KEY OPERATED	46"
VS	LOW VOLTAGE VACANCY SENSOR, CEILING MOUNTED C - CORNER MOUNTED	CEILING
OS	LOW VOLTAGE OCCUPANCY SENSOR, CEILING MOUNTED	CEILING
LV	LOW VOLTAGE SWITCH, 1 ZONE, 2 BUTTON, ON AND OFF	46"
LV	LOW VOLTAGE SWITCH AS INDICATED G - GRAPHIC USER INTERFACE K - KEY OPERATED SWITCH	46"
D	LOW VOLTAGE DIMMER, 1 ZONE, 4 BUTTON, ON, OFF, RAISE, LOWER	46"
D	LOW VOLTAGE SWITCH AS INDICATED VS - VACANCY SENSOR DIMMER	46"
RC	LIGHTING ROOM CONTROLLER	ABOVE CEILING

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT UNLESS NOTED OTHERWISE
	COMBINATION FIRE ALARM AUDIBLE AND VISUAL DEVICE	LENS LOCATED WITHIN 80" TO 96"
	FIRE ALARM VISUAL DEVICE	LENS LOCATED WITHIN 80" TO 96"
	FIRE ALARM MANUAL PULL STATION; K, KEY OPERATED TYPE	48"
DH	FIRE ALARM MAGNETIC DOOR HOLDER	72"
FL	FIRE ALARM FLOW SWITCH (BY DIVISION 22)	----
T	FIRE ALARM TAMPER SWITCH (BY DIVISION 22)	----
S H	CEILING MOUNTED FIRE ALARM SMOKE DETECTOR; HEAT DETECTOR	----
S	DUCT MOUNTED FIRE ALARM SMOKE DETECTOR	----

POWER SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT UNLESS NOTED OTHERWISE
	SIMPLEX RECEPTACLE; DUPLEX RECEPTACLE; QUADRUPLEX (DOUBLE DUPLEX) RECEPTACLE	18"
	DUPLEX RECEPTACLE; QUADRUPLEX RECEPTACLE GROUND FAULT INTERRUPTER	46"
X X X X	RECEPTACLE FOR EQUIPMENT AS INDICATED	
	CM - COFFEE MAKER	46"
	DH - DOOR HARDWARE	----
	EWC - ELECTRIC WATER COOLER	18"
	GD - GARBAGE DISPOSAL	18"
	IM - ICE MACHINE	46"
	KE-* - KITCHEN EQUIPMENT; * DENOTES EQUIPMENT NUMBER	COORD HT
	M - MONITOR	COORD HT
	MW - MICROWAVE	COORD HT
	PR - PRINTER	COORD HT
	RF - FREEZER/REFRIGERATOR	58"
	TV - TELEVISION OUTLET MOUNTED IN AV BOX	SEE TECH
WP	WEATHERPROOF GFCI DEVICE WITH WEATHERPROOF IN-USE COVER	24"
J	JUNCTION BOX, CEILING OR WALL MOUNTED	SEE DRAWINGS
JX	JUNCTION BOX FOR EQUIPMENT AS INDICATED	
	DH - DOOR HARDWARE	----
	DW - DISHWASHER	18"
	HD - ELECTRIC HAND DRYER	COORD HT
	HVAC - HVAC CONTROLS	----
	MS - MOTORIZED SCREEN	----
	FLUSH RECEPTACLE AS INDICATED (SEE SPECIFICATIONS) (2)	
6-30R	SPECIAL PURPOSE RECEPTACLE (TYPE AS NOTED) OR IN SPECIFICATIONS)	SEE DRAWINGS
	SPECIAL PURPOSE RECEPTACLE FOR EQUIPMENT AS INDICATED	
	CD - NEMA 14-30R; CLOTHES DRYER	34"
	RA - NEMA 6-50R; RANGE	4"
F	JUNCTION BOX WITH POWER CONNECTION TO ELECTRONIC FAUCET/DISPENSER	----
AO	AUTOMATIC DOOR OPERATOR 120V 1Ø. PROVIDE WIRING TO PUSHBUTTON	COORD HT
HD	AUTOMATIC DOOR OPERATOR PUSHBUTTON	----
HW	HAND WAVE AUTOMATIC DOOR OPERATOR	----
M	MOTOR (BY DIVISION 1-25)	----
S	TOGGLE DISCONNECT SWITCH	46"
S	SWITCH FURNISHED BY OTHERS FOR EQUIPMENT AS INDICATED	46"
	MS - MOTORIZED SCREEN	
60/45/3 3R, NF	SAFETY SWITCH (SWITCH SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "3R" DENOTES NEMA "3R" ENCLOSURE, "NF" DENOTES NONFUSED	60"
1/25/3 3R	COMBINATION MOTOR STARTER (STARTER SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "3R" DENOTES NEMA "3R" ENCLOSURE "NF" DENOTES NONFUSED	60"
CP	CONTROL PANEL	SEE DRAWINGS
	VOICE/DATA TERMINAL BOARD	60"
P1 P1	PANELBOARD: SURFACE MOUNTED, FLUSH MOUNTED PANEL DESIGNATION AS SHOWN	72"
	DISTRIBUTION PANELBOARD	----
	CONDUIT, RISER UP	----
	CONDUIT, RISER DOWN	----
	CONDUIT ROUTED UNDER FLOORSPACE OR UNDERGROUND	----
	HOME RUN BRANCH CIRCUIT (OVERHEAD)	----
	HOME RUN BRANCH CIRCUIT (UNDERFLOOR)	----
T1	TRANSFORMER: (SIZE AS NOTED OR IN TRANSFORMER SCHEDULE)	SEE DRAWINGS

POWER GENERAL NOTES
APPLIES TO EACH POWER DRAWING

1. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER CONSTRUCTION TRADES FOR ADDITIONAL ELECTRICAL WORK INCLUDED IN THIS CONTRACT.
2. COORDINATE EXACT LOCATIONS OF EQUIPMENT WITH OTHER CONSTRUCTION TRADES. VERIFY EXACT WIRING AND CONNECTION REQUIREMENTS WITH SUBMITTAL DOCUMENTS BEFORE INSTALLATION. SPECIALTY OUTLET TYPES SHALL BE VERIFIED BEFORE ORDERING. ALL ELECTRICAL WORK SHOWN HERE MUST BE VERIFIED AND COORDINATED IN FIELD BEFORE INSTALLATION.
3. REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET MOUNTING HEIGHTS.
4. EXACT LOCATIONS OF FLOOR RECESSED OUTLETS, FLOORBOXES, AND POKE-THRUS, SHALL BE COORDINATED WITH FURNITURE AND EQUIPMENT PLANS. OBTAIN LATEST PLANS FROM OWNERS REPRESENTATIVE.
5. ALL CONDUITS IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE RUN INCONSPICUOUSLY AS POSSIBLE, HIDDEN BEHIND BEAMS, CLOSE TO DECK, ETC. OBTAIN APPROVAL OF CONDUIT RUNS BELOW BEAMS WITH OWNER'S REPRESENTATIVE.
6. ALL DEVICES SHOWN ON THE EXTERIOR OF THE BUILDING SHALL BE WEATHERPROOF TYPE. ALL WEATHERPROOF RECEPTACLES HAVE WHILE-IN-USE COVERS UNLESS NOTED OTHERWISE
7. REFER TO ARCHITECTURAL DOOR SCHEDULES, AND DOOR HARDWARE SPECIFICATION FOR ELECTRICAL DEVICES INSTALLED AT DOORS.
8. PROVIDE ALL FINAL POWER CONNECTIONS TO EQUIPMENT. PROVIDE ALL CONDUIT, DEVICE BOXES, AND CONTROL WIRING TO EQUIPMENT UNLESS NOTED OTHERWISE.
9. RACEWAY SHALL RUN AS INCONSPICUOUSLY AS POSSIBLE. VERTICAL RUNS SHALL OCCUR IN CORNERS OF ROOMS. HORIZONTAL RUNS SHALL OCCUR ALONG BASEBOARD OF WALL WITH VERTICAL RUNS UP TO DEVICE BOXES BRANCHING OUT OF CORNER BOXES, TEES, ELBOWS AND ECT.
10. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION.
11. CIRCUIT NUMBER INDICATED WITH "GF" IS A CIRCUIT PROTECTED BY GROUND FAULT INTERRUPTING CIRCUIT BREAKER.

LIGHTING GENERAL NOTES
APPLIES TO EACH LIGHTING DRAWING

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LUMINAIRES. COORDINATE WITH OTHER TRADES CONTRACTORS, IN ADVANCE OF INSTALLATION, TO AVOID CONFLICTS OF SUFFICIENT SPACE ABOVE CEILINGS FOR RECESSED LIGHTING FIXTURES.
2. REFER TO ARCHITECTURAL ELEVATIONS, CASEWORK, AND DETAILS, ELECTRICAL DETAILS, AND LUMINAIRE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHTS AND ADDITIONAL INSTALLATION INFORMATION.
3. LOCATIONS OF LUMINAIRES IN ROOMS WITH MECHANICAL EQUIPMENT SHALL BE COORDINATED IN FIELD WITH INSTALLED EQUIPMENT. FIXTURES TO BE LOCATED OVER ACCESS PATHWAYS AROUND EQUIPMENT AND NOT OVER TOP OF EQUIPMENT OR DUCTWORK. DO NOT SUSPEND FIXTURES FROM PIPING OR DUCTWORK. PROVIDE APPROPRIATE MOUNTING HARDWARE AS REQUIRED TO SUPPORT FIXTURES.
4. SOME SWITCHED LIGHTING CIRCUITING NOT SHOWN FOR CLARITY. ALL FIXTURES WITHIN A SPACE ARE TO BE CONTROLLED FROM SWITCHES/OCCUPANCY/VACANCY SENSORS SHOWN IN THAT SPACE UNLESS NOTED OTHERWISE.
5. OCCUPANCY/VACANCY SENSOR POWER PACKS ARE NOT SHOWN FOR CLARITY REFER TO OCCUPANCY/VACANCY SENSOR WIRING DIAGRAMS. POWER PACKS TO BE LOCATED WITHIN EACH ROOM ABOVE CEILING ADJACENT TO ENTRY DOOR. PROVIDE CONDUIT AND WIRING FROM POWER PACK TO SENSOR UNITS.
6. INSTALL DRIVER FOR LUMINAIRES PROVIDED WITH REMOTE DRIVERS, IN NEAREST MECHANICAL ROOM WITH SUFFICIENT WALL SPACE. PROVIDE DRIVER WIRING SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION FOR DISTANCE.
7. PROVIDE STEEL BRIDGING BETWEEN PURLINS/JOISTS/BEAMS AS NECESSARY TO SUPPORT THE WEIGHT OF SUSPENDED LUMINAIRES.

DEMOLITION GENERAL NOTES
APPLIES TO EACH DEMOLITION DRAWING

1. TURN OVER ANY SALVAGEABLE EQUIPMENT.
2. COORDINATE EXACT EXTENT OF DEMOLITION WITH ARCHITECTURAL DEMOLITION DRAWINGS.
3. COORDINATE PHASING OF DEMOLITION AND CONSTRUCTION PER DRAWINGS.
4. REMOVE ALL LIGHTING FIXTURES, DEVICES, OUTLETS, CONDUIT, CABLING, PANELS, AND EQUIPMENT WITHIN AREAS OF DEMOLITION. REMOVE WIRING AND CONDUIT BACK TO SOURCE OR LAST POINT OF CONNECTION TO REMAIN.
5. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK BOUNDARIES SHALL BE MAINTAINED. RECONNECT ANY CIRCUITS CUT PASSING THROUGH DEMOLITION AREAS.
6. REMOVE ALL UNUSED WIRING AND CABLES BACK TO THEIR SOURCE. REMOVE ALL UNUSED CONDUIT THAT IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS WHICH IS AFFECTED BY OR IS IN THE AREA OF THE DEMOLITION WORK.
7. THE INTENTION OF THE ELECTRICAL DEMOLITION DRAWINGS IS TO DISCONNECT AND REMOVE ALL ELECTRICAL WORK MADE VOID BY THE SCOPE OF THE CONISTRUCTION AND ALTERATION. FIELD VERIFY EXACT MATERIAL QUANTITIES REQUIRED TO BE REMOVED.
8. WHERE BURIED CONDUITS EXTENDING OUT OF A CONCRETE SLAB BECOME ABANDONED, CUT AND GRIND THE CONDUITS OFF FLUSH WITH TOP OF SLAB AND PLUG WITH NON-SHRINK WATERPROOF GROUT FILL.
9. COORDINATE ALL DEMOLITION WORK WITH ALL OTHER TRADES.
10. LEGALLY DISPOSE OF HAZARDOUS MATERIALS AND BALLAST OR OTHER EQUIPMENT CONTAINING PCBS AND LAMPS CONTAINING MERCURY. COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS.

ELECTRICAL ABBREVIATIONS

ABBREVIATIONS USED ON DRAWINGS IN GENERAL ARE LISTED BELOW. REFER TO CSI DOCUMENT TD-2-4 FOR ANY ABBREVIATIONS LISTED ON THE DRAWINGS BUT ARE NOT LISTED BELOW.

A	AMPS
AC	AIR CONDITIONER
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLER UNIT
BRKR	BREAKER
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CUH	CABINET UNIT HEATER
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
Cu	COPPER
DISTR	DISTRIBUTION
DLH	DAYLIGHT HARVESTING
EF	EXHAUST FAN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
EVSE	ELECTRIC VEHICLE SERVICE EQUIPMENT (CHARGER)
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPLOSION PROOF TYPE DEVICE
F	FUSE
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM PANEL
FARA	FIRE ALARM REMOTE ANNUNCIATOR
FC	FAN COIL UNIT
FIXT	LIGHT FIXTURE
FLUOR	FLUORESCENT
FLR	FLOOR
FS	FUSIBLE SWITCH
G	GROUND
GRC	GALVANIZED RIGID CONDUIT
GF	GROUND FAULT INTERRUPTER DEVICE
HID	HIGH INTENSITY DISCHARGE
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HP	HORSEPOWER
IT	INFORMATION TECHNOLOGY
J	JUNCTION BOX
KEC	KITCHEN EQUIPMENT CONTRACTOR
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTG	LIGHTING
LV	LOW VOLTAGE
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MSB	MAIN SWITCHBOARD
MCC	MOTOR CONTROL CENTER
MTD	MOUNTED
+N	INDICATES MOUNTING HEIGHT (N) TO CENTER OF DEVICE FROM FINISH FLOOR UNLESS OTHERWISE NOTED.
NIC	NOT IN CONTRACT
NL	NIGHTLIGHT
NTS	NOT TO SCALE
OC OR O/C	ON CENTER
OH	OVERHEAD
P	POLE (PHASE)
PVC	POLYVINYL CHLORIDE
PE	PNEUMATIC/ELECTRIC
PNL	PANEL
Ø OR P	PHASE
RAF	RETURN AIR FAN
RTU	ROOFTOP UNIT
SH	SHUNT TRIP
SW	SWITCH
TCP	TEMPERATURE CONTROL PANEL
TFMR	TRANSFORMER
TR	TAMPER RESISTANT
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
VC	VOLUME CONTROL
W	WATTS
WP	WEATHERPROOF TYPE DEVICE
1/E.1	MEANS DETAIL No. 1, DRAWING SHEET "E1"

SYMBOL LIST GENERAL INFORMATION

1. SOME SYMBOLS MAY NOT BE USED.
2. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.
3. STRAIGHT LINES BETWEEN DEVICES INDICATE CONTROLLED CIRCUIT.

DEVICE SUFFIXES

AC	ABOVE COUNTER OUTLET
C	CEILING MOUNTED OUTLET
F	FLOOR MOUNTED OUTLET
L	LINE VOLTAGE TYPE
M	MODULAR FURNITURE OUTLET
W	WALL MOUNTED
WG	WIRE GUARD
WP	WEATHER PROOF

BRANCH CIRCUIT GENERAL NOTE

1. BRANCH CIRCUIT CONDUIT ROUTING IS NOT SHOWN ON THE PLANS AND LEFT TO THE DISCRETION OF THE CONTRACTOR. BRANCH CIRCUIT WIRE SIZE SHALL BE AS FOLLOWS BASED ON CONDUIT ROUTE LENGTHS. BEFORE WIRING INSTALLATION, VERIFY THAT THE FURTHEST DISTANCE FROM PANELBOARD TO OUTLET DOES NOT EXCEED THE FOLLOWING DISTANCE FOR WIRE SIZE SHOWN. INCREASE WIRE SIZE APPROPRIATELY FOR FARTHER DISTANCES.

CONDUCTOR SIZE	MAXIMUM LENGTH
#12 AWG	100 FEET
#10 AWG	150 FEET
#8 AWG	250 FEET
#6 AWG	400 FEET

ELECTRICAL SHEET INDEX

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Lewis Center, OH 43035

STATE OF OHIO
ROBERT R. JONES
E-84916
REGISTERED
PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL SYMBOLS LIST AND LEGENDS

E000

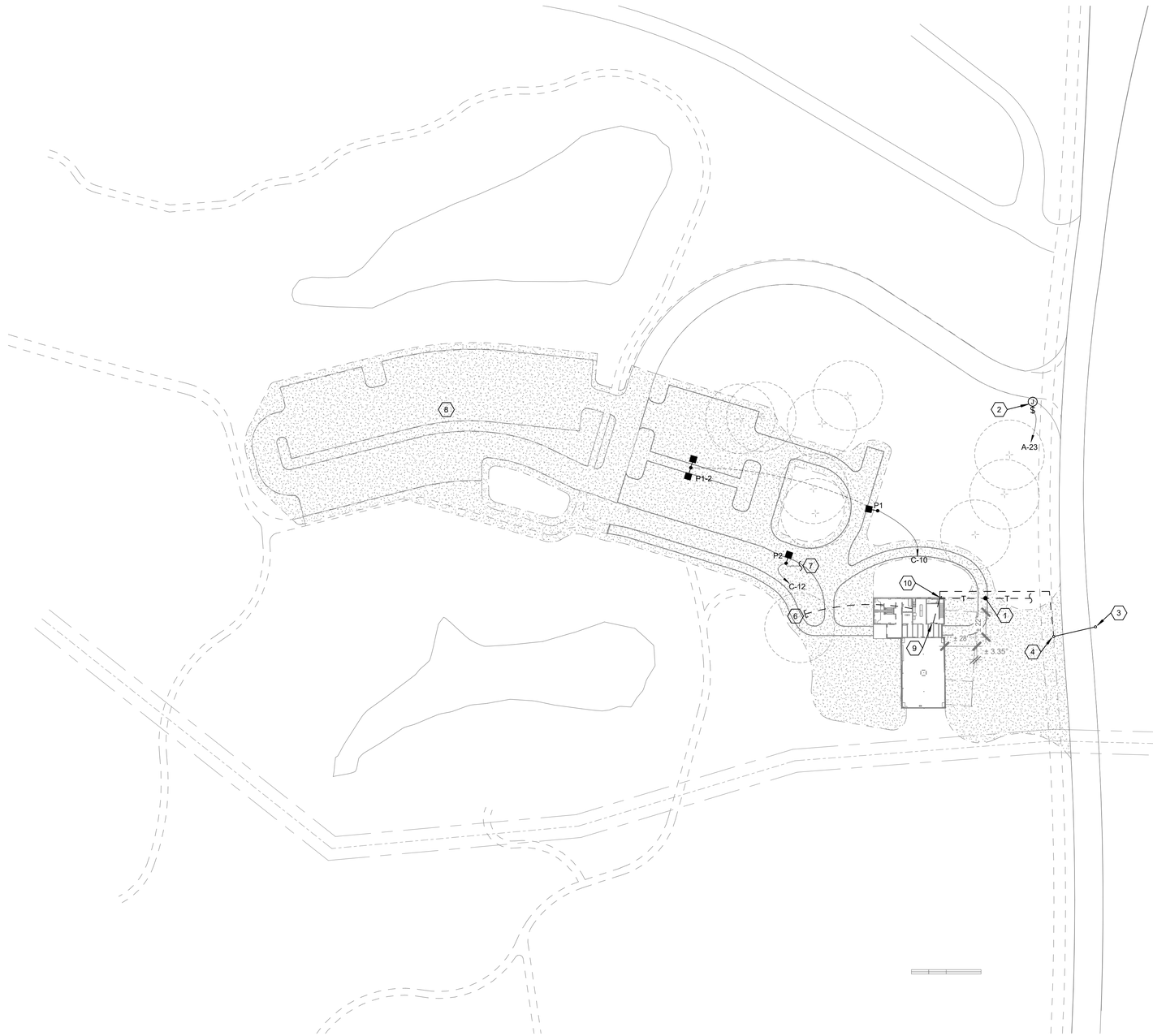
02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Jack Messmore
DESIGNED BY: Jack Messmore
CHECKED BY: Rob Jones
PROJECT NUMBER: 2023-0006

Autodesk Docs://23070 - Bicentennial Barn/R22-230006 Bicentennial Barn Relocation ELEC.rvt
3/6/2025 3:35:02 PM



1 SITE PLAN

NEW WORK SITE PLAN

SCALE: 1" = 50'-0"

0 50' 100' 150'

N

GENERAL NOTES

1. REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INSTALLATION INFORMATION.
2. REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS FOR MOUNTING HEIGHTS OF BUILDING EXTERIOR LIGHTING FIXTURES.
3. PROVIDE APPROPIATE REINFORCED CONCRETE BASES FOR SITE LIGHTING POLE LIGHTS, ILLUMINATED BOLLARDS, AND GROUND MOUNTED LIGHTING FIXTURES. REFER TO E702 FOR DETAILS.
4. REFER TO ELECTRICAL WIRING DIAGRAM AND DETAIL SHEETS FOR LIGHTING FIXTURE POLE BASE DETAILS, CONTROL DIAGRAMS, DUCTBANK SECTIONS AND OTHER SITE DETAILS.
5. PROVIDE CONCRETE PAD EQUIPMENT BASES FOR ALL EXTERIOR ELECTRICAL EQUIPMENT, IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.
6. COORDINATE EXACT LOCATIONS OF ELECTRICAL UTILITY EQUIPMENT AND REQUIREMENTS BEFORE INSTALLATION.
7. ALL POLE MOUNTED LIGHTING FIXTURES SHALL HAVE TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS) MOUNTED IN POLE BASE.
8. EXTERIOR LIGHTING TO BE CONTROLLED BY INTEGRAL PHOTOCELL AND MOTION SENSOR UNLESS NOTED OTHERWISE. REFER TO LIGHTING PLANS AND LUMINAIRE SCHEDULE FOR MORE INFORMATION.

CODED NOTES

1. (2) 3" CONDUITS WITH PULL CORD FROM PROPERTY LINE AT THE ROAD UNDERGROUND, STUBBED UP INTO THE TECHNOLOGY ROOM.
2. DISCONNECT FOR GATE OPERATOR.
3. APPROXIMATE LOCATION OF EXISTING UTILITY POLE.
4. APPROXIMATE LOCATION OF NEW UTILITY POLE WITH AEP TRANSFORMER. COORDINATE REQUIREMENTS WITH AEP.
5. UNDERGROUND SERVICE FEEDER FROM AEP TRANSFORMER TO MAIN PANEL DBA. SEE ONE LINE DIAGRAM.
6. STUB & CAP (2) 2" CONDUITS FROM MAIN DISTRIBUTION BOARD "DBA" FOR FUTURE ACCESSORY BUILDINGS.
7. REFER TO FLOOR PLANS FOR CONNECTION TO ROOM CONTROLLER.
8. FUTURE PARKING LOT.
9. APPROXIMATE LOCATION OF ELECTRICAL DISTRIBUTION PANEL IN BASEMENT. REFER TO FLOOR PLANS.
10. FEED SERVICE TO WALL MOUNTED UTILITY METER AND CT CABINET. RUN CONDUIT UNDERGROUND FROM METER TO DISTRIBUTION PANEL.

SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

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schooleycaldwell.com

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ELECTRICAL NEW WORK SITE PLAN

E001

02/14/2025

23070

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1650 WATERMARK DRIVE
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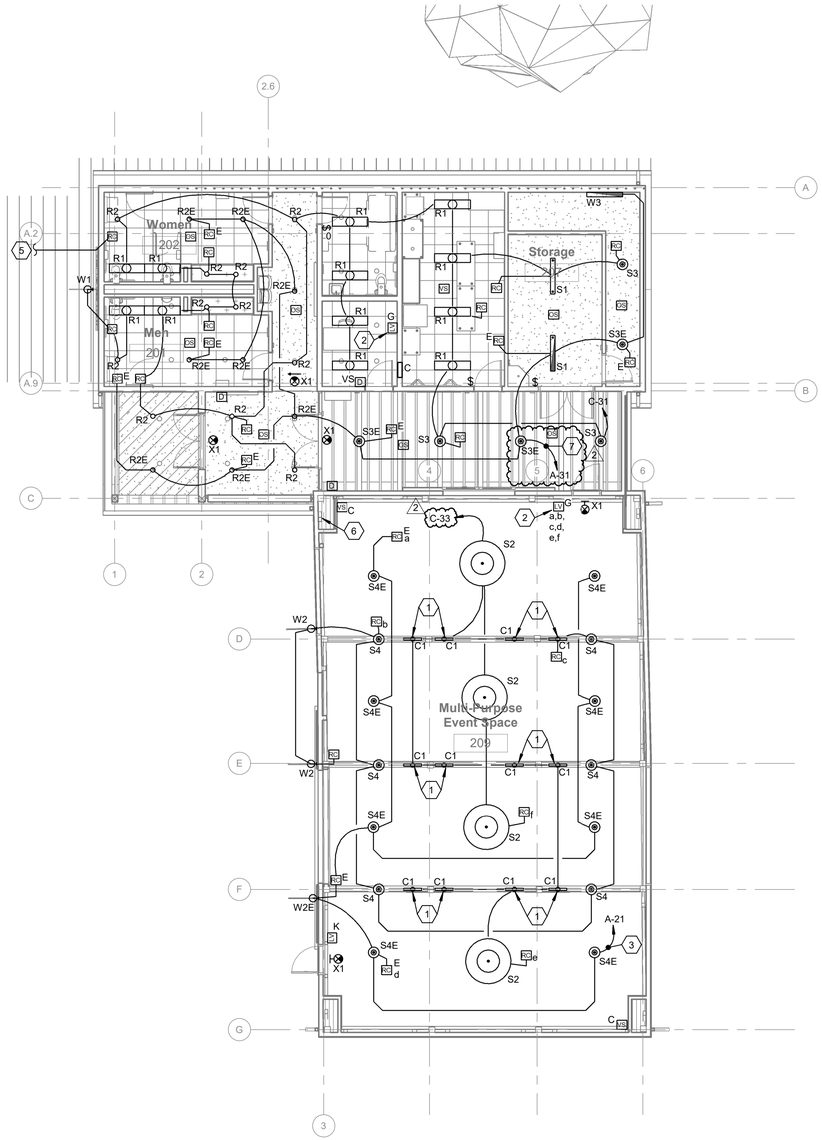
CHECKED BY:	Rob Jones
PROJECT NUMBER:	2023-0006

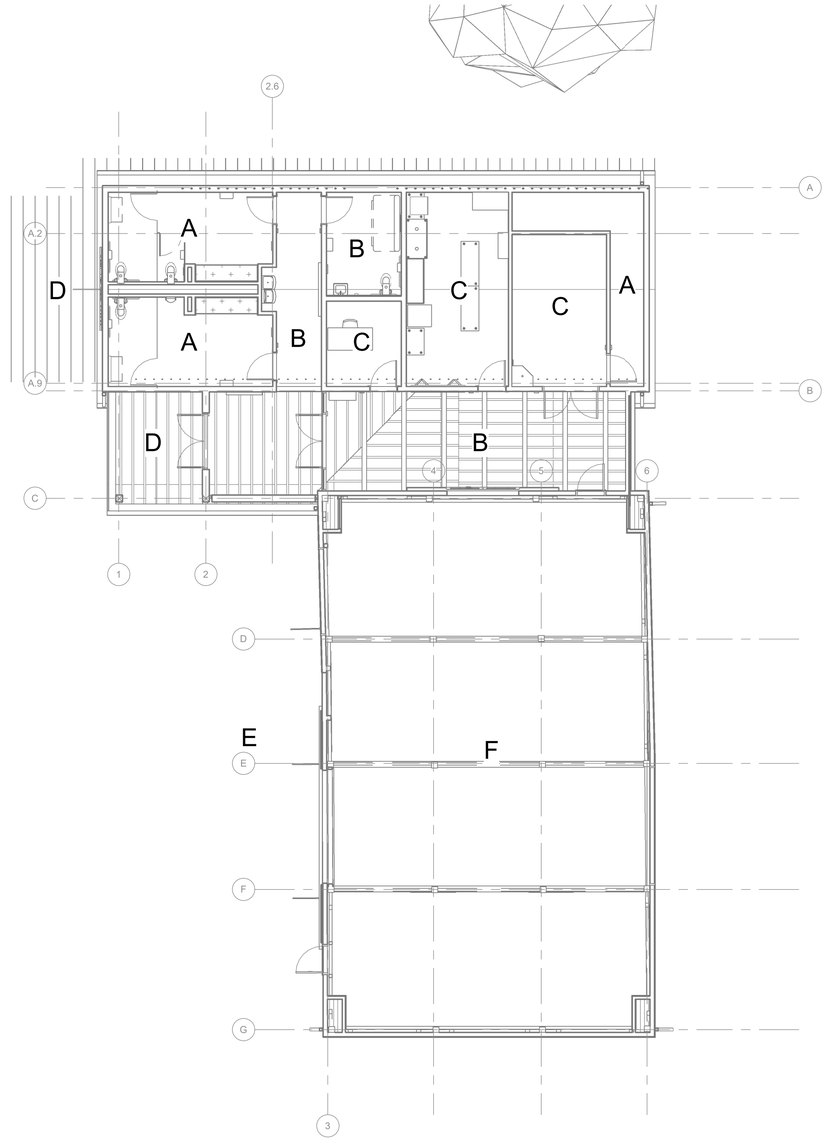


1 FLOOR PLAN

MAIN FLOOR NEW WORK LIGHTING PLAN

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'



2 FLOOR PLAN

MAIN FLOOR NEW WORK LIGHTING PLAN CONTROLS

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

GENERAL NOTES

1. EXIT SIGNS TO BE FED BY NEAREST EMERGENCY LIGHTING CIRCUIT.
2. ROOM CONTROLLERS TO BE LOCATED ABOVE NEARBY ACT CEILING. COORDINATE LOCATION WITH ARCHITECT IN FIELD.
3. LIGHT FIXTURES TAGGED WITH AN 'E' AT THE END OF THE TAG DENOTE EMERGENCY LIGHTING.
4. REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INSTALLATION INFORMATION.
5. REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS FOR MOUNTING HEIGHTS OF BUILDING EXTERIOR LIGHTING FIXTURES.

CODED NOTES

1. MINI LINEAR LIGHTING MOUNTED ON TOP OF BEAMS AND AIMED TO UPLIGHT CEILING.
2. TOUCH SCREEN GRAPHIC CONTROLLER FOR LIGHTING. (BASIS OF DESIGN; nLIGHT NTS)
3. ROUTE CIRCUIT THROUGH LIGHTING INVERTER "INV1".
4. FEED THESE 2 CANOPY LIGHTS THROUGH LCP TO BE CONTROLLED BY TIME OF DAY SCHEDULE WITH MANUAL OVERRIDE.
5. ROOM CONTROLLER FOR "P2" PEDESTRIAN POLE LIGHT ON SITE PLAN.
6. LOCATE EVENT SPACE ROOM CONTROLLERS IN CORNER OF ROOM.
7. ROUTE CIRCUIT THROUGH LIGHTING INVERTER "INV2"

LIGHTING CONTROL ZONE SCHEDULE

A. AUTO-ON TO 100% BY OCCUPANCY SENSOR.
- AUTO-OFF BY OCCUPANCY SENSOR AFTER 30 MINUTES OF VACANCY.

B. AUTO-ON TO 100% BY OCCUPANCY SENSOR.
- MANUAL ON/OFF/DIM BY WALL MOUNTED DIMMER/SWITCH.
- AUTO-OFF BY OCCUPANCY SENSOR AFTER 30 MINUTES OF VACANCY.

C. MANUAL ON TO 100% BY WALL MOUNTED DIMMER/SWITCH.
- MANUAL ON/OFF BY WALL MOUNTED SWITCH.
- AUTO-OFF BY VACANCY SENSOR AFTER 30 MINUTES OF VACANCY.

D. (NETWORKED) ON/OFF BY TIME OF DAY CONTROL.
- SCHEDULE FOR LIGHTS ON TO 50% AT DUSK, AND OFF AT SUNRISE.
- MANUAL ON/OFF CONTROL BY TOUCHSCREEN CONTROLLER IN OFFICE.

E. (NETWORKED) MANUAL ON TO 100% BY GRAPHICAL CONTROLLERS.
-SCHEDULED OFF AT SUNRISE.

F. (NETWORKED) MANUAL ON TO CUSTOM SCENES BY GRAPHICAL CONTROLLER AS FOLLOWS:
- "ON" OPTION TO TURN ALL ZONES ON TO 100%.
- "OFF" OPTION TO TURN ALL ZONES OFF.
- "SHADES" OPTION TO TURN ONLY ZONE 'a', 'b', and 'd' ON TO 100%.
- "WEDDING" OPTION TO DIM ZONE 'a', 'b' and 'd' TO 50%, AND TURN ALL REMAINING LIGHTS TO 100%.
- "PRESENTATION" OPTION TO DIM ZONE 'd' and 'e' TO 10%, AND DIM ALL REMAINING LIGHTS TO 80%.
- PROVIDE ABILITY TO DIM EACH INDIVIDUAL ZONE NAMED ACCORDINGLY:
  ZONE 'a', 'b', and 'd': SHADES
  ZONE 'b' and 'e': CHANDELIERS
  ZONE 'c': UPLIGHT
  ZONE 'd' and 'e': PRESENTATION

MANUAL ON/OFF TO 100%/0% BY LOW-VOLTAGE KEYPAD SWITCH.
- AUTO-OFF BY VACANCY SENSOR AFTER 30 MINUTES OF VACANCY.

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ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

90% Construction Documents
01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule		
#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ROBERT R. JONES
E-84916
REGISTERED PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL MAIN FLOOR LIGHTING PLAN

E201

02/14/2025

23070

KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

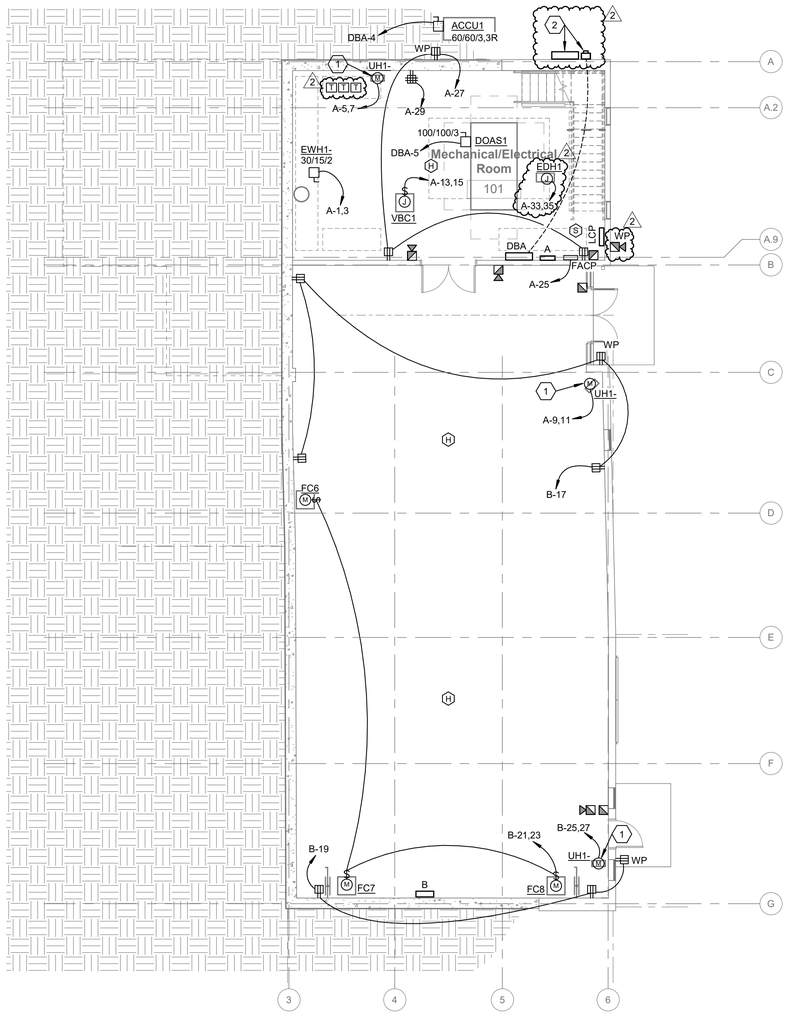
DRAWN BY:	Jack Messmore
DESIGNED BY:	Jack Messmore
CHECKED BY:	Rob Jones
PROJECT NUMBER:	2023-0006

GENERAL NOTES

1. ALL CONDUITS IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE RUN AS INCONSPICUOUSLY AS POSSIBLE, HIDDEN BEHIND BEAMS, CLOSE TO DECK, ETC. OBTAIN APPROVAL OF CONDUIT RUNS BELOW BEAMS WITH ARCHITECT PRIOR TO ROUGH IN.

CODED NOTES

1. POWER TO UH1. INTEGRAL DISCONNECT PROVIDED BY DIVISION 23.
2. WALL MOUNTED UTILITY METER AND CT CABINET. COORDINATE WITH AEP.



1 FLOOR PLAN

GROUND FLOOR NEW WORK POWER PLAN

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Jack Messmore
DESIGNED BY:	Jack Messmore
CHECKED BY:	Rob Jones
PROJECT NUMBER:	2023-0006

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6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ROBERT R. JONES
E-84916
REGISTERED PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL GROUND FLOOR POWER PLAN

E300

02/14/2025

23070

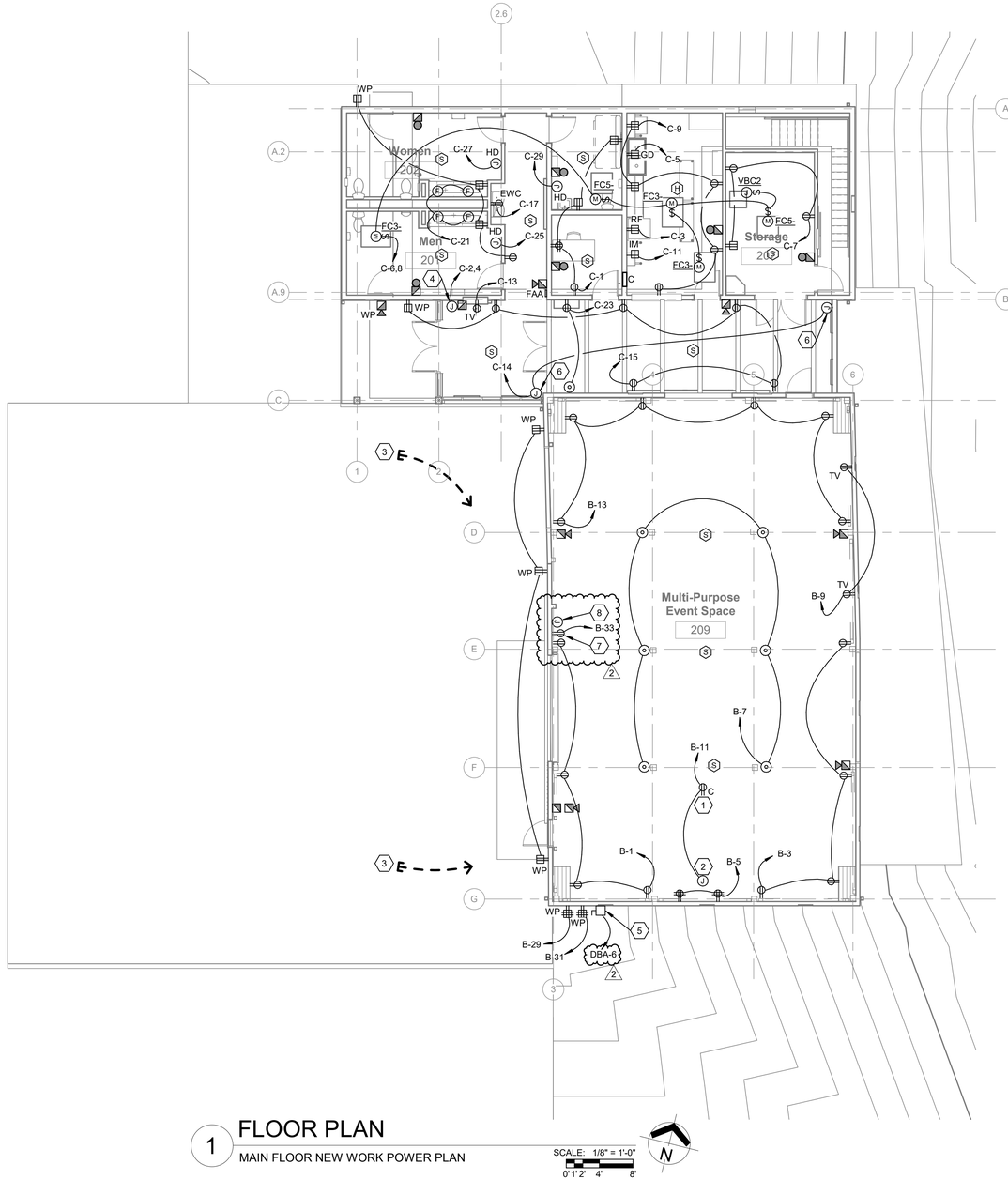
Autodesk Docs://23070 - Bicentennial Barn/R22-230006 Bicentennial Barn Relocation ELEC.rvt
3/6/2025 3:35:20 PM

GENERAL NOTES

1. ALL CONDUITS IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE RUN AS INCONSPICUOUSLY AS POSSIBLE, HIDDEN BEHIND BEAMS, CLOSE TO DECK, ETC. OBTAIN APPROVAL OF CONDUIT RUNS BELOW BEAMS WITH OWNERS REPRESENTATIVE.
2. ALL CONDUIT ON INTERIOR WALLS OF EXISTING BARN STRUCTURE. WHERE EXPOSED, SHALL BE RUN AS INCONSPICUOUSLY AS POSSIBLE, HIDDEN ALONG STRUCTURAL COLUMNS, ETC. HORIZONATAL RUNS ALONG WALL SHALL BE BELOW FLOOR OR ABOVE HEIGHT OF BEAMS. OBTAIN APPROVAL OF PROPOSED CONDUIT RUNS WHERE EXPOSED ON WALLS WITH ARCHITECT PRIOR TO ROUGH IN.

CODED NOTES

1. RECEPTACLE MOUNTED ON BEAM FOR PROJECTOR.
2. JUNCTION BOX MOUNTED AT XX'-XX" FOR PROJECTOR SCREEN.
3. STUB & CAP (2) 3/4" CONDUITS FROM GROUND FLOOR (LOWER LEVEL) TO 5 FEET OUTSIDE OF BUILDING FOR FUTURE USE.
4. JUNCTION BOX FOR POWER TO CUH1. INTEGRAL DISCONNECT PROVIDED BY DIVISION 23.
5. 200A, 3 PHASE COMPANY SWITCH, NEMA 3R, W/ CAM LOCK AND BARE END CONNECTION CHAMBERS. (UNION CONNECTOR SERIES 16 SAFECAM OR EQUIVALENT)
6. JUNCTION BOX FOR POWER TO EBH1. INTEGRAL DISCONNECT PROVIDED BY DIVISION 23.
7. OUTLET FOR POWER CONNECTION TO GARAGE DOOR OPERATOR. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
8. JUNCTION BOX FOR KEY SWITCH TO OPERATE GARAGE DOOR.



1 FLOOR PLAN

MAIN FLOOR NEW WORK POWER PLAN

SCALE: 1/8" = 1'-0"

0' 1' 2' 4' 8'

N

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REGISTERED PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL MAIN FLOOR POWER PLAN

E301

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Jack Messmore
DESIGNED BY: Jack Messmore
CHECKED BY: Rob Jones
PROJECT NUMBER: 2023-0006

LUMINAIRE SCHEDULE

B: BOLLARD C: CEILING CV: COVE G: GROUND P: POLE R: RECESSED S: SUSPENDED T: TRACK UC: UNDERCABINET W: WALL X: UNIVERSAL

PARTIAL MODEL NUMBERS MAY BE SHOWN AND ARE INTENDED TO INDICATE ACCEPTABLE MANUFACTURER'S PRODUCT LINE. EXACT MODEL NUMBERS MEETING THE FIXTURE DESCRIPTION SHALL BE OBTAINED FROM THE MANUFACTURER'S AGENTS. ALL FIXTURES MAY NOT BE USED - REFER TO PLANS. DIMENSIONS MAY VARY. REFER TO THE SPECIFICATIONS SECTIONS 26 51 13 FOR ADDITIONAL REQUIREMENTS. REFER TO DRAWINGS FOR FIXTURES CIRCUITED AND CONTROL.

TAG	MANUFACTURER	SERIES	MODEL	DIMENSIONS (W x L x D)	DESCRIPTION	SOURCE	VOLTAGE	WATTAGE	COLOR TEMP	LUMENS	DIMMING	HOUSING	MOUNTING	LENS	FINISH/TRIM	REFLECTOR FINISH	OPTIONS	APPROVED MANUFACTURERS
R1	DAY-BRITE	DSRT	1DSRT3050LCS	47.7" x 11.9" x 3"	1 x 4 TROFFER	LED	UNV	31 W	3500K	4059	0-10V, 1%	STEEL	GRID RECESSED	FROSTED	WHITE			
R2	PRESCOLITE	LITEISTRY	LTR-SL10L-DM1	6" DIA	DOWNLIGHT	LED	UNV	12 W	2700K	1192	0-10V, 1%	DIE CAST ALUMINUM	RECESSED	MEDIUM DISTRIBUTION	SPECULAR	SPECULAR	MEDIUM DISTRIBUTION	
S1	COLUMBIA	MPS	MPS4-35MW-CW-E-U	48" x 3.11" x 3.06"	STRIP LINEAR	LED	UNV	26.7 W	3500K	3541	FIXED OUTPUT	CODE-GAUGE STEEL	SUSPENDED - CHAIN	FROSTED	WHITE	WHITE		
S1E	COLUMBIA	MPS	MPS4-35MW-CW-E-U-ELL14H2	48" x 3.11" x 3.06"	STRIP LINEAR W/ EMER BATTERY PACK	LED	UNV	26.7 W	3500K	3541	FIXED OUTPUT	CODE-GAUGE STEEL	SUSPENDED - CHAIN	FROSTED	WHITE	WHITE	EMERGENCY BATTERY PACK 2-HOUR RUN TIME	
S2	TETON	ST. JAMES SULLIVAN	2 TIER STEEL CHANDELIER	65" H x 60" DIA	CHANDELIER	SEE OPTIONS	UNV	57 W	2700K	5000	0-10V	COPPER	SUSPENDED - CHAIN	OPEN	BLACK		44 CANDELABRA LIGHTS	
S3	OLDE BRICK	WARNER	14" WHITE	14" DIA x 3.5" H	SUSPENDED SHADE	SEE OPTIONS	120V	75 W	3000K	3000	0-10V	PORCELAIN ENAMEL METAL	SUSPENDED - STEM	OPEN	BLACK	WHITE	E26 SOCKET FILAMENT STYLE LED BULB	
S4	BASELITE	FARM HOUSE	VT14	14" x 13.5"	DEEP BOWL	LED	UNV	45 W	3000K	5000	0-10V	OIL RUBBED BRONZE	SUSPENDED - CHAIN	OPEN	OIL RUBBED BRONZE	WHITE		
W1	COCOWEB	DAHLIA	RUSTIC	8" DIA	GOOSENECK SIGN LIGHT	LED	UNV	24 W	2700K	1600	0-10V	DIE CAST ALUMINUM	WALL	CLEAR	BLACK	MEDIUM	RUSTIC STEM	
W2	COCOWEB	DAHLIA	COSMOPOLITAN	8" DIA	GOOSENECK WALL SCONCE	LED	UNV	24 W	2700K	1600	0-10V	DIE CAST ALUMINUM	WALL	CLEAR	BLACK	MEDIUM	COSMOPOLITAN STEM	
W3	COLUMBIA	MPS	MPS4-35MW-CW-E-U	48" x 3.11" x 3.06"	STRIP LINEAR	LED	UNV	26.7 W	3500K	3541	FIXED OUTPUT	CODE-GAUGE STEEL	WALL	FROSTED	WHITE	WHITE		
W4	LUMARK	XTOR	XTOR2B-Y	6-5/8" x 3-5/8" x 6-3/4"	WALL PACK	LED	UNV	18	3000K	1997	0-10V, 1%	DIE CAST ALUMINUM	WALL	CLEAR	BLACK	WHITE	INTEGRAL PHOTOCELL	
C1	LUMINII	BARA SURFACE	SUP2-L	0.93" x 0.40" x 24"	MICRO LINEAR	LED	24VDC	9.2 W	3000K	492	0-10V	SILVER ANODIZED	SURFACE	FROSTED	SILVER ANODIZED		0-10V WARM DIMMING 0% POWER SUPPLY 120VAC-277VAC	
X1	EXITRONIX	900EX	902EX-U-LB-RM-BA	4.3: x 18" x 7.2"	EXIT/EMERGENCY	LED	UNV	3.9 W	RED	-	-	ALUMINUM	UNIVERSAL	CLEAR	BLACK	MIRROR		
X2	COMPASS	CC	CCRGB	4.3: x 18" x 7.2"	EXIT/EMERGENCY	LED	UNV	3.9 W	RED	-	-	THERMOPLASTIC	UNIVERSAL	CLEAR	BLACK	WHITE		
G1	STONCO	SLIMFLOOD	SLIMFOOD	7.2" x 6.3" x 2.2"	FAÇADE FLOODLIGHT	LED	UNV	35 W	3500K	5320	FIXED OUTPUT	35 W YOKE	GROUND MOUNT	GLASS	BRONZE	WHITE		
P1	LITHONIA	RADEAN	RAD1 LED	28" D x 21" H	SINGLE HEAD AREA LIGHT - TYPE 3	LED	120V	79 W	3000K	11,000	FIXED OUTPUT	ALUMINUM	POLE MOUNTED	CLEAR	BLACK	TYPE 3	INTEGRAL PHOTOCELL	
P1-2	LITHONIA	RADEAN	RAD1 LED	28" D x 21" H	2-180 HEAD AREA LIGHT - TYPE 3	LED	120V	158 W	3000K	11,000	FIXED OUTPUT	ALUMINUM	POLE MOUNTED	CLEAR	BLACK	TYPE 3	DOUBLE HEAD MOUNTED 180 DEGREES, INTEGRAL PHOTOCELL	
P2	COCOWEB	DAHLIA	DAHLIA POST LIGHT	12" DIA x 11' H	PEDESTRIAN POLE LIGHT	LED	120V	24 W	2700K	1,600	FIXED OUTPUT	ALUMINUM	POLE MOUNTED	CLEAR	BLACK	WHITE	LIGHT PACKAGE WITH 11' POLE	
P1 POLE	STRUCTURA	BOL	BOL-S-20-55-55-S6-C5	(20' X 5.5")	AREA LIGHT POLE							WOOD	GROUND MOUNT		MAHOGANY BODY W/ SLATE ACCENT		ROUND WOOD POLE	

2

INVERTER SCHEDULE

TAG	WATTAGE	VOLTAGE	NO. OF CIRCUIT BREAKERS	BATTERY CAPACITY	NOTES
INV1	600 W	120 V	1	90 MIN.	-
INV2	600 W	120 V	1	90 MIN.	-

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
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ELECTRICAL LIGHTING FIXTURE SCHEDULE

E501

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Jack Messmore
DESIGNED BY: Jack Messmore
CHECKED BY: Rob Jones
PROJECT NUMBER: 2023-0006

Panel Name: A

Location:	Mechanical/Electrical...	**Volts:**	120/208 Wye	**Mains Type:**	MLO
Supply From:	DBA	**Phases:**	3	**Mains Rating:**	100.00 A
Mounting:	Surface	**Wires:**	4		

Notes: - COORDINATE LUG SIZE WITH WIRE SIZE ON ONE LINE DIAGRAM
- PROVIDE PANEL WITH FEED THRU LUGS

Note	Branch Circuit Description	Trip	#	A	B	C	#	Trip	Branch Circuit Description	Note
2	EWH1	25 A	1,3	2.00 / 0.00			2	--	SPACE	
					2.00 / 0.00		4	--	SPACE	
	UH1 - MECH/ELEC RM	20 A	5,7			1.50 / 0.00	6	--	SPACE	
				1.50 / 0.00			8	--	SPACE	
	UH1 - SHELL	20 A	9,11		0.68 / 0.00		10	--	SPACE	
						0.68 / 0.00	12	--	SPACE	
	VBC1 - ELEC RM	15 A	13,15	0.09 / 0.00			14	--	SPACE	
				0.09 / 0.00			16	--	SPACE	
	LIGHTING CONTROL	20 A	17			0.00 / 0.00	18	--	SPACE	
	BASEMENT LIGHTING	20 A	19	0.81 / 0.00			20	--	SPACE	
	EMERGENCY LIGHTING	20 A	21		0.62 / 0.00		22	--	SPACE	
	GATE OPENER	20 A	23			0.50 / 0.00	24	--	SPACE	
	FACP	20 A	25	0.00 / 0.00			26	--	SPACE	
	ELEC RM / MECH YARD OUTLETS	20 A	27		0.54 / 0.00		28	--	SPACE	
2	TECH RACK POWER	20 A	29			0.36 / 0.00	30	--	SPACE	
	EMERGENCY LIGHTING	20 A	31	0.51 / 0.00			32	--	SPACE	
	EDH1	45 A	33,35		3.50 / 0.00		34	--	SPACE	
						3.50 / 0.00	36	--	SPACE	
	SPARE	20 A	37	0.00 / 0.00			38	--	SPACE	
	SPARE	20 A	39		0.00 / 0.00		40	--	SPACE	
	SPARE	20 A	41			0.00 / 0.00	42	--	SPACE	
			Total Load:	4.88 kVA	7.39 kVA	6.54 kVA				
			Total Amps:	40.70 A	63.71 A	56.57 A				

Load Classification	Connected Load	NEC Demand Factor	Estimated Demand	Panel Totals	
HEATING	4.17 kVA	100.00%	4.17 kVA	**Total Conn. Load:**	18.81 kVA
LIGHTING	1.94 kVA	125.00%	2.42 kVA	**Total Est. Demand:**	20.03 kVA
Motor	4.35 kVA	117.24%	5.10 kVA	**Total Conn.:**	52.20 A
POWER	0.00 kVA	0.00%	0.00 kVA	**Total Est. Demand:**	55.59 A
RECEPTACLE	8.40 kVA	100.00%	8.40 kVA		

Panel Name: B

Location:	Basement 100	**Volts:**	120/208 Wye	**Mains Type:**	MLO
Supply From:	DBA	**Phases:**	3	**Mains Rating:**	100.00 A
Mounting:	Surface	**Wires:**	4		

Notes: - COORDINATE LUG SIZE WITH WIRE SIZE ON ONE LINE DIAGRAM
- PROVIDE PANEL WITH FEED THRU LUGS

Note	Branch Circuit Description	Trip	#	A	B	C	#	Trip	Branch Circuit Description	Note
	EVENT SPACE - RECEPTACLES	20 A	1	0.72 / 0.00			2	20 A	SPARE	
	EVENT SPACE - RECEPTACLES	20 A	3		0.72 / 0.00		4	20 A	SPARE	
	STAGE - QUADS	20 A	5			0.72 / 0.00	6	20 A	SPARE	
	EVENT CORE - RECEPTACLES	20 A	7	1.08 / 0.00			8	20 A	SPARE	
	EVENT SPACE TV'S	20 A	9		0.36 / 0.00		10	20 A	SPARE	
	STAGE POWER	20 A	11			0.68 / 0.00	12	20 A	SPARE	
	EVENT BACK - RECEPTACLES	20 A	13	1.08 / 0.00			14	20 A	SPARE	
	PATIO - RECEPTACLES	20 A	15		0.54 / 0.00		16	20 A	SPARE	
	BASEMENT - RECEPTACLES	20 A	17			0.72 / 0.00	18	20 A	SPARE	
	BACK BASEMENT - RECEPTACLES	20 A	19	0.54 / 0.00			20	20 A	SPARE	
2	FAN COILS	25 A	21,23		2.03 / 0.00		22	20 A	SPARE	
						2.03 / 0.00	24	20 A	SPARE	
	UH1 - SHELL	20 A	25,27	0.68 / 0.00			26	20 A	SPARE	
					0.68 / 0.00		28	20 A	SPARE	
	EXTERIOR QUAD	20 A	29			0.36 / 0.00	30	20 A	SPARE	
2	EXTERIOR QUAD	20 A	31	0.36 / 0.00			32	20 A	SPARE	
	GARAGE DOOR	20 A	33		0.68 / 0.00		34	20 A	SPARE	
	SPARE	20 A	35			0.00 / 0.00	36	20 A	SPARE	
	SPARE	20 A	37	0.00 / 0.00			38	20 A	SPARE	
	SPARE	20 A	39		0.00 / 0.00		40	20 A	SPARE	
	SPARE	20 A	41			0.00 / 0.00	42	20 A	SPARE	
			Total Load:	4.46 kVA	5.00 kVA	4.51 kVA				
			Total Amps:	37.13 A	41.73 A	37.61 A				

Load Classification	Connected Load	NEC Demand Factor	Estimated Demand	Panel Totals	
Motor	5.40 kVA	106.25%	5.74 kVA	**Total Conn. Load:**	13.96 kVA
RECEPTACLE	8.56 kVA	100.00%	8.56 kVA	**Total Est. Demand:**	14.30 kVA
				Total Conn.:	38.75 A
				Total Est. Demand:	39.69 A

Panel Name: C

Location:	Serving Kitchen 206	**Volts:**	120/208 Wye	**Mains Type:**	MLO
Supply From:	DBA	**Phases:**	3	**Mains Rating:**	100.00 A
Mounting:	Surface	**Wires:**	4		

Notes: - COORDINATE LUG SIZE WITH WIRE SIZE ON ONE LINE DIAGRAM
- PROVIDE PANEL WITH FEED THRU LUGS

Note	Branch Circuit Description	Trip	#	A	B	C	#	Trip	Branch Circuit Description	Note
	OFFICE & RR - RECEPTACLES	20 A	1	0.90 / 0.25			2,4	15 A	CUH1	
GF	REFRIGERATOR	20 A	3		1.00 / 0.25					
	GARBAGE DISPOSAL	20 A	5			0.18 / 1.24	6,8	20 A	FAN COILS	
	STORAGE RCPTS	20 A	7	0.54 / 1.24						
	KITCHEN RECEPTACLES	20 A	9		0.90 / 0.10		10	20 A	PARKING LOT LTG	
GF	ICE MAKER (FUTURE)	20 A	11			1.00 / 0.10	12	20 A	PEDESTRIAN LTG	
	DIGITAL SIGNAGE	20 A	13	0.18 / 1.50			14	20 A	EBH1	
	CORRIDOR - RECEPTACLES	20 A	15		1.08 / 0.00		16	--	SPACE	
GF	DRINKING FOUNTAIN	20 A	17			0.72 / 0.00	18	--	SPACE	
	VEST, CORR, EXTR ENTR - RECEPTACLES	20 A	19	0.72 / 0.00			20	--	SPACE	
	MAIN RR FAUCETS	20 A	21		0.08 / 0.00		22	--	SPACE	
	DISPLAY CASE LTG	20 A	23			0.36 / 0.00	24	--	SPACE	
	HAND DRYER - MENS	20 A	25	0.10 / 0.00			26	--	SPACE	
	HAND DRYER - WOMENS	20 A	27		0.10 / 0.00		28	--	SPACE	
	HAND DRYER - UNISEX	20 A	29			0.10 / 0.00	30	--	SPACE	
	LIGHTING	20 A	31	0.92 / 0.00			32	--	SPACE	
	BARN LIGHTING	20 A	33		0.85 / 0.00		34	--	SPACE	
	SPARE	20 A	35			0.00 / 0.00	36	--	SPACE	
	SPARE	20 A	37	0.00 / 0.00			38	--	SPACE	
	SPARE	20 A	39		0.00 / 0.00		40	--	SPACE	
	SPARE	20 A	41			0.00 / 0.00	42	--	SPACE	
			Total Load:	6.34 kVA	4.34 kVA	3.70 kVA				
			Total Amps:	53.68 A	37.02 A	30.79 A				

Load Classification	Connected Load	NEC Demand Factor	Estimated Demand	Panel Totals	
HEATING	3.66 kVA	100.00%	3.66 kVA	**Total Conn. Load:**	14.38 kVA
LIGHTING	1.96 kVA	125.00%	2.46 kVA	**Total Est. Demand:**	14.94 kVA
Motor	0.81 kVA	108.95%	0.88 kVA	**Total Conn.:**	39.91 A
RECEPTACLE	7.96 kVA	100.00%	7.96 kVA	**Total Est. Demand:**	41.47 A

BRANCH CIRCUIT WIRING SCHEDULE

277 VOLT 1Ø, 2W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-1P	2 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 145'
	2 #10 & 1 #10 GND.	3/4" CONDUIT	145' - 230'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	230' - 370'
30A-1P	2 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 150'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	150' - 245'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	245' - 390'

480 VOLT 3Ø, 3W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-3P	3 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 215'
	3 #10 & 1 #10 GND.	3/4" CONDUIT	215' - 345'
30A-3P	3 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 230'
	3 #8 & 1 #10 GND.	3/4" CONDUIT	230' - 370'
40A-3P	3 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 350'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	350' -
50A-3P	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 350'
	3 #4 & 1 #8 GND.	1" CONDUIT	350' -
60A-3P	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 290'
	3 #4 & 1 #8 GND.	1" CONDUIT	290' -

277/480 VOLT 3Ø, 4W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-3P *	4 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 215'
	4 #10 & 1 #10 GND.	3/4" CONDUIT	215' - 345'
30A-3P *	4 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 230'
	4 #8 & 1 #10 GND.	3/4" CONDUIT	230' - 370'
40A-3P *	4 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 350'
	4 #6 & 1 #10 GND.	1" CONDUIT	350' -
50A-3P *	4 #6 & 1 #10 GND.	1" CONDUIT	0 - 350'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	350' -
60A-3P *	4 #6 & 1 #10 GND.	1" CONDUIT	0 - 290'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	290' -

NOTES:
1. REFER TO SPECIFICATION FOR EXTENT OF USE FOR TYPE MC CABLE.
2. ASTERISK "*" DENOTES NEUTRAL CONDUCTOR REQUIRED.

BRANCH CIRCUIT WIRING SCHEDULE

120 VOLT 1Ø, 2W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
15A-1P/20A-1P	2 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 65'
	2 #10 & 1 #10 GND.	3/4" CONDUIT	65' - 100'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	100' - 160'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	160' - 255'
30A-1P	2 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 65'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	65' - 105'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	105' - 170'
	2 #4 & 1 #10 GND.	1" CONDUIT	170' - 270'

120/208 VOLT 1Ø, 3W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-2P *	3 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 110'
	3 #10 & 1 #10 GND.	3/4" CONDUIT	110' - 170'
	3 #8 & 1 #10 GND.	3/4" CONDUIT	170' - 275'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	275' - 440'
30A-2P *	3 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 115'
	3 #8 & 1 #10 GND.	3/4" CONDUIT	115' - 185'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	185' - 290'
	3 #4 & 1 #8 GND.	1" CONDUIT	290' - 460'
40A-2P *	3 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 135'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	135' - 220'
	3 #4 & 1 #8 GND.	1" CONDUIT	220' - 340'
50A-2P *	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 175'
	3 #4 & 1 #8 GND.	1" CONDUIT	175' - 280'
	3 #3 & 1 #8 GND.	1-1/4" CONDUIT	280' - 350'
60A-2P *	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 145'
	3 #4 & 1 #8 GND.	1" CONDUIT	145' - 230'
	3 #3 & 1 #8 GND.	1-1/4" CONDUIT	230' - 290'
	3 #2 & 1 #8 GND.	1-1/2" CONDUIT	290' - 365'

208 VOLT 1Ø, 2W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-2P	2 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 110'
	2 #10 & 1 #10 GND.	3/4" CONDUIT	110' - 170'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	170' - 275'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	275' - 440'
30A-2P	2 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 115'
	2 #8 & 1 #10 GND.	3/4" CONDUIT	115' - 185'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	185' - 290'
	2 #4 & 1 #8 GND.	1" CONDUIT	290' - 460'
40A-2P	2 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 135'
	2 #6 & 1 #10 GND.	3/4" CONDUIT	135' - 220'
	2 #4 & 1 #8 GND.	1" CONDUIT	220' - 340'
50A-2P	2 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 175'
	2 #4 & 1 #8 GND.	1" CONDUIT	175' - 280'
	2 #3 & 1 #8 GND.	1-1/4" CONDUIT	280' - 350'
60A-2P	2 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 145'
	2 #4 & 1 #8 GND.	1" CONDUIT	145' - 230'
	2 #3 & 1 #8 GND.	1-1/4" CONDUIT	230' - 290'
	2 #2 & 1 #8 GND.	1-1/2" CONDUIT	290' - 365'

BRANCH CIRCUIT WIRING SCHEDULE

208 VOLT 3Ø, 3W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-3P	3 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 95'
	3 #10 & 1 #10 GND.	3/4" CONDUIT	95' - 150'
	3 #8 & 1 #10 GND.	3/4" CONDUIT	150' - 240'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	240' - 380'
30A-3P	3 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 100'
	3 #8 & 1 #10 GND.	3/4" CONDUIT	100' - 160'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	160' - 255'
	3 #4 & 1 #8 GND.	1" CONDUIT	255' - 400'
40A-3P	3 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 120'
	3 #6 & 1 #10 GND.	3/4" CONDUIT	120' - 190'
	3 #4 & 1 #8 GND.	1" CONDUIT	190' - 300'
50A-3P	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 150'
	3 #4 & 1 #8 GND.	1" CONDUIT	150' - 240'
	3 #3 & 1 #8 GND.	1/4" CONDUIT	240' - 305'
60A-3P	3 #6 & 1 #10 GND.	3/4" CONDUIT	0 - 125'
	3 #4 & 1 #8 GND.	1" CONDUIT	125' - 200'
	3 #3 & 1 #8 GND.	1/4" CONDUIT	200' - 255'
	3 #2 & 1 #8 GND.	1-1/2" CONDUIT	255' - 320'

120/208 VOLT 3Ø, 4W.+ GND CIRCUITS

CIRCUIT BREAKER	CONDUCTOR	RACEWAY	BRANCH CIRCUIT DISTANCE
20A-3P *	4 #12 & 1 #12 GND.	3/4" CONDUIT	0 - 95'
	4 #10 & 1 #10 GND.	3/4" CONDUIT	95' - 150'
	4 #8 & 1 #10 GND.	3/4" CONDUIT	150' - 240'
	4 #6 & 1 #10 GND.	1" CONDUIT	240' - 380'
30A-3P *	4 #10 & 1 #10 GND.	3/4" CONDUIT	0 - 100'
	4 #8 & 1 #10 GND.	3/4" CONDUIT	100' - 160'
	4 #6 & 1 #10 GND.	1" CONDUIT	160' - 255'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	255' - 400'
40A-3P *	4 #8 & 1 #10 GND.	3/4" CONDUIT	0 - 120'
	4 #6 & 1 #10 GND.	1" CONDUIT	120' - 190'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	190' - 300'
50A-3P *	4 #6 & 1 #10 GND.	1" CONDUIT	0 - 150'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	150' - 240'
	4 #3 & 1 #8 GND.	1/4" CONDUIT	240' - 305'
60A-3P *	4 #6 & 1 #10 GND.	1" CONDUIT	0 - 125'
	4 #4 & 1 #8 GND.	1/4" CONDUIT	125' - 200'
	4 #3 & 1 #8 GND.	1/4" CONDUIT	200' - 255'
	4 #2 & 1 #8 GND.	1-1/2" CONDUIT	255' - 320'

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

Design Development Submittal
11/17/2023

50% Construction Documents
08/15/2024

90% Construction Documents
01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule		
#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ROBERT R. JONES
E-84916
REGISTERED
PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL PANEL SCHEDULES

E502

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY:	Jack Messmore
DESIGNED BY:	Jack Messmore
CHECKED BY:	Rob Jones
PROJECT NUMBER:	2023-0006

SYMBOLS LIST FOR WIRING DIAGRAMS AND DETAILS

1. SOME SYMBOLS MAY NOT BE USED.

SYMBOL	DESCRIPTION
100/3 / 100	FUSIBLE SWITCH WITH FUSES (SIZE AS NOTED)
100/3	CIRCUIT BREAKER (SIZE AS NOTED)
100/3	SPACE FOR DEVICE (SIZE AS NOTED)
100/3	SPARE FUSIBLE SWITCH (WITHOUT FUSES)
K	KIRK KEY INTERLOCK
S	SHUNT TRIP
AS ; VS	AMMETER, VOLTMETER SWITCH
AM	ANALOG AMMETER
VM	ANALOG VOLTMETER
GF	GROUND FAULT SENSOR/OPERATOR
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
WHM	ANALOG WATTHOUR METER
M	UTILITY METER
M	ELECTRONIC METERING UNIT
	PANELBOARD
TX T1	POWER TRANSFORMER, "TX" DENOTES NAME "T1" NOTES TYPE (SEE TRANSFORMER SCHEDULE)
#6	GROUNDING ELECTRODE AND CONDUCTOR (CONDUCTOR SIZE AS NOTED)
1/25/3 3R, NF	COMBINATION MOTOR STARTER (STARTER SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "3R" DENOTES NEMA "3R" ENCLOSURE, "NF"=NONFUSED
1/25/3 3R, NF	MAGNETIC MOTOR STARTER (STARTER SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "3R" DENOTES NEMA "3R" ENCLOSURE, "NF"=NONFUSED
30/20/3 NF	SAFETY SWITCH (SWITCH SIZE, FUSE SIZE, NO. OF POLES AS NOTED) NF=NONFUSED
WP	WEATHERPROOF
CP	CONTROL PANEL (BY OTHERS)
VFD	VARIABLE FREQUENCY DRIVE
SPD	SURGE PROTECTION DEVICE
M	MOTOR
	EQUIPMENT (AS NOTED)

ALUMINUM ONE LINE DIAGRAM-FEEDER SCHEDULE

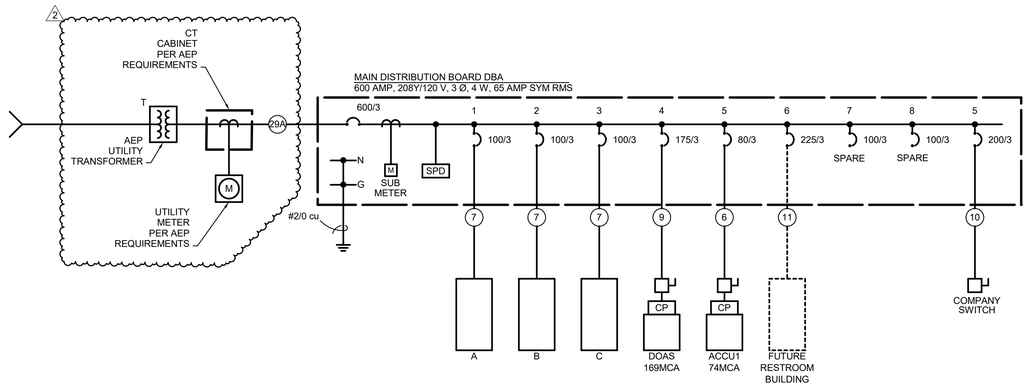
INSULATION TYPE: COMPACT XHHW-2, ALUMINUM CONDUCTORS

OVERCURRENT PROTECTION AMPACITY	NOTE NUMBER	NUMBER OF SETS	PHASE WIRES QUANTITY - SIZE	NEUTRAL WIRE QUANTITY - SIZE	GROUND SIZE COPPER ONLY	CONDUIT SIZE PER SET	COMMENTS
100	1A	1	3 - #1 AWG	-	1 - #8 AWG	1-1/4"	
125	2A	1	3 - #2/0 AWG	-	1 - #6 AWG	1-1/2"	
150	3A	1	3 - #3/0 AWG	-	1 - #6 AWG	2"	
175	4A	1	3 - #4/0 AWG	-	1 - #6 AWG	2"	
200	5A	1	3 - 250 KCMIL	-	1 - #6 AWG	2"	
225	6A	1	3 - 300 KCMIL	-	1 - #4 AWG	2-1/2"	
250	7A	1	3 - 350 KCMIL	-	1 - #4 AWG	2-1/2"	
300	8A	1	3 - 500 KCMIL	-	1 - #4 AWG	3"	
350	9A	2	3 - #4/0 AWG	-	1 - #3 AWG	2"	
400	10A	2	3 - 250 KCMIL	-	1 - #3 AWG	2"	
500	11A	2	3 - 350 KCMIL	-	1 - #2 AWG	2-1/2"	
600	12A	2	3 - 500 KCMIL	-	1 - #1 AWG	3	
700	13A	3	3 - 350 KCMIL	-	1 - #1/0 AWG	2-1/2"	
800	14A	3	3 - 400 KCMIL	-	1 - #1/0 AWG	3"	
100	19A	1	3 - #1 AWG	1 - #1 AWG	1 - #8 AWG	1-1/2"	
125	20A	1	3 - #2/0 AWG	1 - #2/0 AWG	1 - #6 AWG	1-1/2"	
150	21A	1	3 - #3/0 AWG	1 - #3/0 AWG	1 - #6 AWG	2"	
200	22A	1	3 - 250 KCMIL	1 - 250 KCMIL	1 - #6 AWG	2-1/2"	
225	23A	1	3 - 300 KCMIL	1 - 300 KCMIL	1 - #4 AWG	3"	
250	24A	1	3 - 350 KCMIL	1 - 350 KCMIL	1 - #4 AWG	3"	
300	25A	1	3 - 500 KCMIL	1 - 500 KCMIL	1 - #4 AWG	3-1/2"	
350	26A	2	3 - #4/0 AWG	1 - #4/0 AWG	1 - #3 AWG	2"	
400	27A	2	3 - 250 KCMIL	1 - 250 KCMIL	1 - #3 AWG	2-1/2"	
500	28A	2	3 - 350 KCMIL	1 - 350 KCMIL	1 - #2 AWG	3"	
600	29A	2	3 - 500 KCMIL	1 - 500 KCMIL	1 - #1 AWG	3-1/2"	
700	30A	3	3 - 350 KCMIL	1 - 350 KCMIL	1 - #1/0 AWG	3"	
800	31A	3	3 - 400 KCMIL	1 - 400 KCMIL	1 - #1/0 AWG	3"	

COPPER ONE LINE DIAGRAM-FEEDER SCHEDULE

INSULATION TYPE: THWN with COPPER CONDUCTORS

OVERCURRENT PROTECTION AMPACITY	NOTE NUMBER	NUMBER OF SETS	PHASE WIRES QUANTITY - SIZE	NEUTRAL WIRE QUANTITY - SIZE	GROUND SIZE (ECG)	CONDUIT SIZE PER SET	COMMENTS
20	1	1	3 - #12 AWG	-	1 - #12 AWG	3/4"	
30	2	1	3 - #10 AWG	-	1 - #10 AWG	3/4"	
40	3	1	3 - #8 AWG	-	1 - #10 AWG	3/4"	
50	4	1	3 - #6 AWG	-	1 - #10 AWG	3/4"	
70	5	1	3 - #4 AWG	-	1 - #8 AWG	1"	
90	6	1	3 - #2 AWG	-	1 - #8 AWG	1-1/4"	
110	7	1	3 - #1 AWG	-	1 - #6 AWG	1-1/4"	
150	8	1	3 - #1/0 AWG	-	1 - #6 AWG	1-1/2"	
175	9	1	3 - #2/0 AWG	-	1 - #6 AWG	1-1/2"	
200	10	1	3 - #3/0 AWG	-	1 - #6 AWG	2"	
225	11	1	3 - #4/0 AWG	-	1 - #4 AWG	2"	
250	12	1	3 - 250 KCMIL	-	1 - #4 AWG	2"	
300	13	1	3 - 350 KCMIL	-	1 - #4 AWG	2-1/2"	
350	14	1	3 - 500 KCMIL	-	1 - #3 AWG	3"	
400	15	1	3 - 600 KCMIL	-	1 - #3 AWG	3"	
500	16	2	3 - 250 KCMIL	-	1 - #2 AWG	2"	
600	17	2	3 - 350 KCMIL	-	1 - #1 AWG	2-1/2"	
700	18	2	3 - 500 KCMIL	-	1 - #1/0 AWG	3"	
800	19	2	3 - 600 KCMIL	-	1 - #1/0 AWG	3"	
OPEN	23	-	-	-	-	-	
100	24	1	3 - #1 AWG	1 - #1 AWG	1 - #8 AWG	1-1/2"	
150	25	1	3 - #1/0 AWG	1 - #1/0 AWG	1 - #6 AWG	2"	
200	26	1	3 - #3/0 AWG	1 - #3/0 AWG	1 - #6 AWG	2"	
225	27	1	3 - #4/0 AWG	1 - #4/0 AWG	1 - #4 AWG	2-1/2"	
250	28	1	3 - 250 KCMIL	1 - 250 KCMIL	1 - #4 AWG	2-1/2"	
300	29	1	3 - 350 KCMIL	1 - 350 KCMIL	1 - #4 AWG	3"	
350	30	1	3 - 500 KCMIL	1 - 500 KCMIL	1 - #3 AWG	3-1/2"	
400	31	1	3 - 600 KCMIL	1 - 600 KCMIL	1 - #3 AWG	3-1/2"	
500	32	2	3 - 250 KCMIL	1 - 250 KCMIL	1 - #2 AWG	2-1/2"	
600	33	2	3 - 350 KCMIL	1 - 350 KCMIL	1 - #1 AWG	3"	
800	34	2	3 - 600 KCMIL	1 - 600 KCMIL	1 - #1/0 AWG	4"	
TVSS	50	1	3 - #2 AWG	1 - #2 AWG	1 - #2 AWG	1-1/2"	MINIMIZE LENGTH



A WIRING DIAGRAM

ONE LINE N.T.S.

SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

Consultants:
Civil, Structural & MEP
Korda/Nemeth Engineering
1650 Watermark Drive, Columbus, OH 43215
614.487.1650

Barn Consultant
Mt. Vernon Barn Co.
7676 Co Rd 19, Fredericktown, OH 43019
614.634.2049

Drawing Issue Dates

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11/17/2023

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08/15/2024

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01/15/2025

Bid Set / Permit Set
02/14/2025

Revision Schedule		
#	Description	Date
2	Addendum 02	03/10/2025

Bicentennial Barn - McCammon Creek Park

6844 Bale Kenyon Rd
Lewis Center, OH 43035

STATE OF OHIO
ROBERT R. JONES
E-84916
REGISTERED
PROFESSIONAL ENGINEER
02-14-2025

ELECTRICAL ONE-LINE DIAGRAM

E601

02/14/2025

23070

KORDA
KORDA NEMETH ENGINEERING
1650 WATERMARK DRIVE
SUITE 200
COLUMBUS, OHIO 43215

DRAWN BY: Jack Messmore
DESIGNED BY: Jack Messmore
CHECKED BY: Rob Jones
PROJECT NUMBER: 2023-0006

Autodesk Docs://23070 - Bicentennial Barn/R22-230006 Bicentennial Barn Relocation ELEC.rvt
3/6/2025 3:35:39 PM