Addendum #1
Historic Yates Mill County Park Renovations

To: All Registered Plan Holders

From: Kimley-Horn & Associates

Date: Thursday, October 22, 2026

Project Name: Historic Yates Mill County Park Renovation

Project: RFB #26-092

Subject: Addendum #1

This Addendum becomes part of the Contract Documents and shall be acknowledged by each Bidder on the Bid Form. Each Bidder should read each item carefully. All parts of the original specifications and plan documents shall remain in force except as noted below:

Pre-Bid Meeting Minutes and Attendee List:

- Attached for reference

Current Plan Holder's List:

Company Name	Contact	Email	Phone Number
Dodge Data and Analytics	Jayalakshmi L	jayalakshmil@construction.com	413-376-7032
MLG Construction	Keith Ziomek	kziomek@mlgconstructionllc.com	919-427-0987
Scotia Construction Inc.	Garrett Hodges	estimating@scotiaconstructioninc.com	252-341-5454
Associated General Contractors	Michael Stubbs	content@constructconnect.com	800-364-2059
Browe Construction	Sam Gore Chad Grady	sam.gore@browecon.com chad.grady@browecon.com	919-415-1616
Daniels & Daniels	Chris May	estimating@danddcc.com	919-778-4525
West Contractors	Ryan Shultz	ryanshultz@west-contractors.com	919-215-8488
JFour Partners		jfourpartners@gmail.com	919-423-0193
IQV Construction LLC	Chris	iqvconstructionllc@gmail.com	
HM Kern	Jonathan Inman John Walker Jason Kepley	jinman@hmkern.com JWalker@hmkern.com estimating@hmkern.com jkepley@hmkern.com	336-668-3213

Harrod & Associates	Ed Long Nan Bryson Scott Roller	elong@harrodandassoc.com nbryson@harrodandassoc.com estimating@harrodandassoc.com	919-828-7782
Bliss Products & Services, Inc.	Andy Caguioa Andrea Panopio	Andy.Caguioa@blissproducts.com Andrea.Panopio@blissproducts.com	678-673-3225
Progressive Contracting Company	Tyler Maher	tmaher@progressivecci.com	919-718-5454
Habitech Builders	Ali Vahidy	vahidy1@gmail.com	949-929-3890
Construct Connect	Marissa Bacon	Marissa.Bacon@constructconnect.com	772-233-4931
Forever Construction	Ana Kruta	ana@foreverconstructionnc.com	347-257-1652
WC Construction Company	Mark Reyes	mark@wcconstructionco.com bids@wcconstructionco.com	336-721-3420
BAR Construction	Shirley Hernandez Austin Riccio	shernandez@barconstruction.com bids@barconstruction.com	336-274-2477
BCO	Art Connelly	artconnelly.tcc@gmail.com	919-816-6347
JNB Construction LLC	Seth Nicholson	seth.nicholson@jnbcontracting.com	334-805-6548
JPH Contracting LLC	Jacob Heroux	jphcontractingllc@gmail.com	919-268-2846
Atlantic Civil	Andrew Davis Raymond Taylor Chance Taylor	estimate@atlanticcc.org rtaylor@atlanticcc.org ctaylor@atlanticcc.org	834-337-3469
Home Doctor Construction LLC	Jonathan Rossman	jonathan@nchomedoctor.com	336-934-7337
Energy Smart LLC	Alexander Gomes Luke Uherek Phylicia Gomes	projects@energysmartnc.com luke@energysmartnc.com admin@energysmartnc.com	919-505-9685
Carolina Construction Bros		manager@carolinaconstructionbros.com	919-446-3343
Painting Pros	Miguel Espitia	miguelespitia99@gmail.com	919-883-7673
Superior Communication Services	Brian Seage	BSeage@scs08.com	305-542-4727
H.G. Reynolds	Jesse Hill Ryan Shultz	jhill@hgreynolds.net blong@hgreynolds.net	252-492-3071
Hansel Construction LLC	Marvin Sanchez	hanselconcretellc@gmail.com	919-741-2902
T&M Construction	Terome Mapp	terome@tmconstructiongroup.com	336-404-8690
All Phase Power and Controls	Jenni Becker	jbecker@allphasenc.com	919-609-2849
Furnish My Place	Sam	sam@furnishmyplace.com	
F&R Electrical Contractors LLC	Corey Raymond	coreyfandrelectrical@gmail.com	910-585-8121

Questions Received:

1. **Q:** Do you have the spec for Frit glass?
   A: Specification 088000 Glazing has been revised to include section 2.4.G. - Fritted Bird Glass. Please see revised Specification 088000 included in this addendum.

2. **Q:** We did not see any detail specific to the fence on top of the retaining wall at the maintenance building in the Architectural Plans. Could you provide the specs for this fencing?
   A: For the fence on top of the retaining wall at the maintenance building/yard, the height changes, but you can find information related to the required height on sheet C3.1. This should be a chain link fence matching the requirements (color, finish, material, etc.) of the 8' tall chain link fence and double swing gate pictured in detail 1/C3.6.

3. **Q:** Is a job-site trailer required or optional?
   A: Field offices shall be provided on-site in accordance with Section 015000 of the bid specifications.

4. **Q:** Is there a specific area for laydown specified at this time?
   A: Construction stockpiles/staging areas shall not be located in the existing Visitor Center parking lot. Construction stockpiles/staging areas may be field located/adjusted provided they meet the requirements specified in the Erosion Control Sequence Notes on sheets C6.1-C6.9 of the bid drawings.

5. **Q:** Will the trails be shut down while construction is ongoing there?
   A: The timing of any required trail closures will be coordinated with the selected Contractor at the time of construction for the trail work being completed.

6. **Q:** Can the DWG files for this project be supplied?
   A: The CAD files for the project will be released to the selected Contractor, but they are not available as part of the bid process.

7. **Q:** Can you provide the current list of general contractors/prime bidders?
   A: The current plan holders list is included in this addendum.

8. **Q:** Is there a sign-in sheet from the site walk held on 10/15 available?
   A: The sign-in sheet from the Pre-Bid Meeting held on 10/15 is included as an attachment to this addendum.

9. **Q:** Is there an estimated cost or budget for this project?
   A: There is not an estimated cost for this project determined at this time.

10. **Q:** Do you have an anticipated start date or completion date at this time?
    A: The notice to proceed date will be determined once the Contractor is selected, but the total project duration is 270 days as stated in the bid manual.

11. **Q:** Please confirm if sealed proposals are to Wake County Procurement Services, Suite 2900, Wake County Justice Center, 301 McDowell Street, Raleigh, NC 27601, by 3:00 PM on November 5, 2026.
    A: Sealed proposals will be received by Wake County Procurement Services, in Suite 2900, Wake County Justice Center, 301 McDowell Street, Raleigh, NC 27601, up to 3:00 p.m., Thursday, November 5, 2026.

12. **Q:** Has an addendum been issued for this project?
    A: This Addendum is the only addendum issued for this project at this time. All addendums will be posted publicly to the online plan rooms advertising the bid and will be emailed to everyone on the plan holders list.

13. **Q:** How will addendums be distributed?
    A: All addendums will be posted publicly to the online plan rooms advertising the bid and will be emailed to everyone on the plan holders list.

14. **Q:** Who is the project manager for Wake County on this project?
    A: All project contacts, including the Wake County contact, for this project can be found in the bid manual.

15. **Q:** Please confirm the bid deadline.
    A: Sealed proposals will be received by Wake County Procurement Services, in Suite 2900, Wake County Justice Center, 301 McDowell Street, Raleigh, NC 27601, up to 3:00 p.m., Thursday, November 5, 2026.

16. **Q:** Please confirm the pre-bid meeting requirements.
    A: A non-mandatory Pre-Bid Meeting will be held from 10:30 am to 11:30 am on October 15, 2026 at the Historic Yates Mill County Park Visitor Center Classroom at 4620 Lake Wheeler Road, Raleigh, NC 27603.

17. **Q:** Who is the appropriate contact for project questions?
    A: Please direct all questions regarding the bid documents to Melissa Brand and Seth Brown as specified in the bid documents.

18. **Q:** Where is the spec for the custom louver above window type "B" at the maintenance building (MB)?
    A: Specification 084113 Aluminum-Framed Entrances and Storefronts has been revised to include section 2.4.G. – Louvers. Please see revised Specification 084113 included in the addendum.

19. **Q:** What size of furring should be used behind MB at 1x6 cypress?
    A: Please reference Specification 062013 for Exterior Finish Carpentry - 2.4.F.1 - Extruded Polypropylene Plastic Continuous Cellular Strip Vent.

20. **Q:** Are there separate telecommunications and security documents available for bidding, or is the low-voltage scope intended to be limited to the infrastructure shown on the electrical sheets?
    A: Security and telecommunication design is currently being completed by Protus3. Please review the Allowance No. 7 and 8 for more information.
    - Allowance No. 7: Installation of security equipment on-site. Includes installation of security equipment to be installed by subcontractor on Wake County approved vendor list. General Contractor shall be responsible for bidding the allowance bid with the County approved vendor list.
    - Allowance No. 8: Security fiber optic and telecommunications cabling installation. Includes installation of security fiber optic and telecommunications cabling to be installed by a subcontractor on Wake County approved vendor list. General Contractor shall be responsible for bidding the allowance bid with the County approved vendor list.

Contractors' base bid shall include an allowance of $145,000 for installation of security equipment and an allowance of $50,000 for security fiber optic and telecommunications cabling installation. In addition, the contractor's base bid price shall also include the installation of all conduits/raceways for security and low-voltage. See sheet MBE3.0 for more information. Security plans and specifications will be provided to the awarded Contractor for them to request quotes from approved county vendors. Upon County approval of the vendor and price, the work will be performed under the corresponding allowance amount.

21. **Q:** Are contractors still bidding, or has the job been awarded? Could you share the appropriate contacts so we can get our electrical proposal to them?
A: The project has not been awarded to a bidder yet. Sealed proposals are due on or before 3:00 pm on November 5th as specified in the bid documents. The plan holders list is included as part of this addendum. This is a General Construction Work – Single Prime Contract.

22. **Q:** Can you confirm that the bids are due November 5 at 3 p.m. Eastern?
A: That is correct, sealed proposals are due no later than 3:00 pm eastern standard time on November 5th.

23. **Q:** Is there a preliminary construction schedule available?
A: A construction schedule is not available. The total project duration is 270 days as stated in the bid manual.

24. **Q:** When are questions due, and should we send them directly to you?
A: The pre-bid meeting minutes and responses to all questions received through October 20th are included as part of this addendum. All questions are due by October 23rd. Please send all questions to Melissa Brand and Seth Brown as specified in the bid documents.

25. **Q:** Could we arrange a site visit if needed to review the existing electrical conditions?
A: The site is open to the public for visiting during standard operating hours for the park. If there are specific questions regarding existing infrastructure on-site that is not available to the general public, please email them to Melissa Brand or Seth Brown before the noted deadline and they will be answered in a future addendum.

26. **Q:** MBE3.0–MBE3.1 show security equipment by others. Are security drawings available, and who will be providing the cabling and equipment?
A: See response to question #20 above.

27. **Q:** For the well-pump feeder changeover shown on MBE2.0, are there approved shutdown windows, or should we include temporary power to keep the pump running?
A: The well pump shall remain running at all times. There is no public water connection to the site and all onsite water is supplied by the existing well.

28. **Q:** Do you have a Schneider Electric contact for pricing the existing Edwards fire-alarm work required by Section 283111?
    A: A contact with Schneider Electric has not been identified.

29. **Q:** Are the existing exhibits in the Visitor Center remaining in-place during construction?
    A: Yes, all exhibits that are not within the office rooms and conference room being renovated, as well as the reception desk in the entrance lobby of the Visitor Center, shall be protected in-place and shall remain undisturbed. The Contractor shall ensure that construction debris and/or dust does not damage existing exhibits. The Contractor shall also ensure that all existing stone flooring throughout the Visitor Center is not damaged during construction. If damage occurs to the existing exhibits, the existing reception desk, or the existing stone flooring being protected-in-place as a result of construction activities, the Contractor is responsible for repairing exhibits, the reception desk, and the stone floor to their original condition at no additional cost to the Owner.

30. **Q:** Can you provide the spec for the stone veneer for the CIP retaining walls?
    A: The stone veneer for the proposed retaining walls shall match the stone veneer of the existing walls on-site exactly. We have provided images of the veneer below for reference.





31. **Q:** Spec 260533 requires rigid steel conduit with threaded fittings for all underground raceways. The site feeders and security pathways total roughly 3,000 LF underground. Is Schedule 40 PVC with rigid steel (or PVC-coated RGS) elbows and risers acceptable for the underground runs?
    A: Please bid per the specifications.

32. **Q:** Feeder 1 shows a #10 EGC. NEC 250.122 requires at least #8 for an 80A OCPD, and 250.122(B) requires a proportional increase where the phase conductors were upsized for voltage drop (about #6). The feeder schedule also lists the rating as 40A while the APPH breaker and MBH main are 80A. Please confirm the breaker size and EGC.
    A: The conductor and ground sizes have been updated on sheet MBE0.2. Please see revised sheet MBE0.2 included in this addendum.

33. **Q:** Feeder 5 (20A breaker) and Feeder 6 (30A breaker) use #6 phase conductors, upsized for voltage drop from #12 and #10. Both schedules show #12G and #10G. NEC 250.122(B) requires the EGC to be upsized in proportion, which works out to about #6 for both feeders and #8 for the upsized PHLA-27 security circuit. Please confirm the EGC sizes.
    A: The conductor and ground sizes have been added in the Panelboard PHLA Schedule on sheet MBE0.1. The conductor and ground sizes have been updated in the Feeder Schedule on sheet MBE0.2. Please see revised sheets MBE0.1 and MBE0.2 included in this addendum.

34. **Q:** Panel MBH is fed by about 1,000 ft of #2 Cu from APPH (45 kAIC). The calculated available fault current at MBH is roughly 1.5 kA. Is the 65 kAIC rating required, or are standard 18 kAIC (480Y/277V) breakers acceptable?
    A: The KAIC rating in the Panelboard MBH Schedule on sheet MBE0.1 has been changed to 18 from 65. Please see revised sheet MBE0.1 included in this addendum.

35. **Q:** A 60A bus is not a standard panelboard rating. Is a 100A bus with a 45A/3P main breaker acceptable?
    A: The Bus Rating in the Panelboard MBL Schedule on sheet MBE0.1 has been changed for 60 Amp to 100 Amp. Please see revised sheet MBE0.1 included in this addendum.

36. **Q:** Please provide the manufacturer, model and frame of existing Panels APPH and PHLA so the new 80A/3P (45 kAIC) and two 20A/1P breakers can be matched. Also confirm the APPH main rating; the riser shows 200A and the schedule shows 400A.
    A: The panel manufacturer information has been provided in the Panelboard APPH Schedule and Panelboard PHLA Schedule on sheet MBE0.1. MCB has also been changed to 200 Amp in the Panelboard APPH. Please see revised sheet MBE0.1 included in this addendum.

37. **Q:** Demo note 1 covers MDP to the multi-conduit junction box, where the wire comes out and the conduit stays. Demo note 2 is tagged where the feeder leaves that junction box and again near the Maintenance Building, and it removes the feeder "with associated underground conduit." That reads as removing about 1,000 LF of buried conduit, including two drive crossings. Spec 260100 bars abandoning conduit without Owner/Engineer permission. May the underground conduit be abandoned in place and capped instead?
A: Please bid per the construction documents. All underground demolished conduits shall be removed. Do not abandon in place. Any impacts to existing conditions that must be repaired or replaced (such as pavement cutting, pavement patching, grading, etc.) shall be considered incidental to the cost of removing the underground demolished conduits.

38. **Q:** The HH mid-length on the Maintenance Building northwest face, next to MBH/MBL, takes about six conduit entries (Feeders 1, 5 and 6 in and out), but the detail provides two 2-1/2" mouseholes. The security fiber route ends at the same location. Please confirm the HH size, and confirm fiber gets its own HH (for separation and bend radius). Also confirm the load rating: note 2 calls for H-20, while the box spec reads as Tier 15. Which HHs are in or next to drives?
A: The notes in the Composite/Fiberglass Handhole detail on sheet MBE0.1 changed to spec the housing and cover for handholes to be heavy-duty H-20. The notes also changed to provide adequate mouseholes as required for associated handholes and to allow the contractor to route feeders/conduits from the ground into the bottom of the handhole. Please see sheet MBE0.1 included in this addendum.

39. **Q:** The riser shows a HH on Feeder 5 labeled "Pavilion Building Power Service," but the site plan does not show it. Where should it go?
A: The exact location of the handhole between the Pavilion and the Maintenance Building is at the contractor’s discretion and should be coordinated in advance with the Owner.

40. **Q:** The HB-2 detail calls for a 1-1/2" conduit "to drop in pump house," but the site plan routes HB-2 fiber through the HH pair north of HB-1. Does each enclosure need its own 1-1/2" home run to the pump house drop (and HB-1 a separate run to the MB drop), or is one conduit per route line acceptable as drawn?
A: Please see the enclosure details on revised sheet MBE3.1 included in this addendum. One conduit route for fiber for both enclosures is permitted. Enclosure details for HB-1 and HB-2 were revised to show fiber and power for HB-2 comes off HB-1.

41. **Q:** PHLA-27 feeds HB-1 and HB-2, a circuit length of about 650 ft. No conductor size is shown (the legend default is #12, which would give excessive voltage drop). Please confirm the conductor size.
A: The wire and ground sizes have been added to the Panelboard PHLA Schedule. Please see revised sheet MBE0.1 included in this addendum.

42. **Q:** Please provide the location, depth, material and condition of the existing 4" road sleeve, and confirm it is empty and available. If it cannot be used, is a directional bore or open cut acceptable?
    A: Assume the existing sleeve is suitable for use.

43. **Q:** Please confirm the camera poles, pole foundations ("concrete pole base"), pole grounding, camera mounts and all security devices and cabling are by the County-approved security vendor (Allowance No. 7).
    A: Per the details and notes, the electrical contractor is responsible for the conduit and pull wire; all other equipment and installations are by others.

44. **Q:** Please confirm the EC scope is limited to the pathways, boxes, enclosures, support racks, handholes and 120V power shown on E3.0/E3.1. Fiber, cabling, NVR, network switches, UPS, AMAG/DMP panels, power supplies, patch panels, cameras and devices would be by the security vendor.
    A: The Security Drop details on sheet MBE3.1 were revised to show additional notes that security equipment is by others. Per the construction specifications and construction documents, security equipment and cabling are by others. Please see revised sheet MBE3.1 included in this addendum.

45. **Q:** The civil sheets relocate an existing transformer and its electrical lines from the old amphitheater area to the Maintenance Building drive, but the MEP drawings do not show this work. Who owns the transformer (Duke Energy or the County), and what does it serve? What is the contractor's scope (trench, conduit size and quantity, pad, secondary reconnection), and are Duke relocation charges paid by the Owner?
    A: The existing transformer is being relocated as shown in the construction drawings. The transformer is owned by Duke Energy. The Contractor shall include Duke Energy relocation charges in their base bid and shall coordinate the relocation of the transformer with Duke Energy at time of construction.

46. **Q:** Who owns the existing light pole to be relocated (Duke lease or County)? Please provide the foundation detail for the new location and the circuit source.
    A: The existing light pole being relocated on sheet C2.1 and C3.2 is owned by Duke Energy. Duke Energy will be responsible for relocating the existing light pole and providing the foundation design. The Contractor shall include Duke Energy relocation charges in their base bid and shall coordinate the relocation of the light pole with Duke Energy at time of construction.

47. **Q:** The rerouting of existing site lighting conduit is not shown. Please provide the routing and quantities, or confirm the work is by Duke Energy.
    A: The work associated with rerouting of existing site lighting will be handled by Duke Energy. The Contractor shall coordinate the relocation of the light pole with Duke Energy at time of construction. The Contractor shall include Duke Energy relocation charges in their base bid.

48. **Q:** Parts of the feeder and security routes run through wooded areas near tree protection fencing. Please confirm the routes are within the limits of disturbance, and identify the segments that require hand or air-spade trenching.
    A: Feeder and conduit routing through the fenced tree line is diagrammatic. Avoid disturbing the tree area. See civil plans for the limits of disturbance. The Contractor will be response for coordinating with the Civil Engineer for more accurate routing and where hand/air-spade trenching may be required during construction.

49. **Q:** The electric line and the 3" waterline run parallel from the Pump House area to the Maintenance Building. Is a joint trench allowed (with the required separation), and will the site contractor provide the trenching?
    A: The electrical line and water line shall be run in separate trenches. Electrical contractor is responsible for a separate electrical trench and is to coordinate routing with the General Contractor and other trades.

50. **Q:** Please confirm the minimum cover and warning-tape requirements for electrical and security raceways.
    A: Notes were added to sheet MBE2.0 and MBE3.0 for requirements for cover and detectable warning tape for electrical and security feeders/conduit. Please see revised sheets MBE2.0 and MBE3.0 included in this addendum.

51. **Q:** Is trench rock in electrical trenches paid under the GC's Unit Price No. 4 / Allowance No. 4?
    A: Coordinate this with the General Contractor.

52. **Q:** Please confirm GFCI protection for all 125V receptacles in the Maintenance Building workshop, which has an overhead coiling door.
    A: GFCI receptacles are not required.

53. **Q:** Please confirm the disconnect type and rating at the unit heaters, or confirm the units come with factory disconnects.
    A: Sheet MBE1.0 indicates a motor-rated switch at each heater.

54. **Q:** Please confirm the Type A/AE mounting method.
    A: A note was added to the Light Fixture Schedule on sheet MBE1.0 requiring aircraft cable support. Please see revised sheet MBE1.0 included in this addendum.

55. **Q:** The spec calls for a ventilated enclosure and also for a core and coil encapsulated in resin. Is a standard ventilated copper-wound transformer acceptable for the 15 kVA T-MBL mounted above Panel MBL?
    A: Standard ventilated enclosure is acceptable. This will be addressed in the addendum.

56. **Q:** What is the existing floor construction at Conference 103 (slab-on-grade or crawlspace)? Please also confirm the floor box conduit sizes and routing, and who patches the flooring.
    A: The legend on sheet VCE1.0 has been revised to match the detail. Please see sheet VCE1.0 included in this addendum.

57. **Q:** Is Schneider Electric supervision/programming required when only notification appliances are relocated or replaced? Please also confirm the existing NAC and battery capacity is adequate, so no booster power supply is needed.
    A: There are no changes to the number of devices. A power booster change is not required.

58. **Q:** Please provide the Wake County standard conduit color. Does factory-colored EMT satisfy the painting requirement, and can concealed conduit be left unpainted?
    A: Please see the Wake County Conduit Colors chart included in this addendum.

59. **Q:** Maintenance Building door 04 is a card-reader door, and Drop M includes a lock/device power supply, but the DC2/KP detail shows no raceway to electrified hardware (strike, power-transfer hinge, REX). Please confirm the hardware type and the pathway required.
    A: Provide conduit as indicated on sheet MBE3.1 details.

60. **Q:** The Protus3 security plans are not in the bid documents. The camera callouts on C3.1 (Maintenance Building corner) and C3.2 (parking area) appear to match the E3.0 corner camera and the two pole cameras. Please confirm that no pathways or power are needed beyond E3.0/E3.1.
    A: Electrical Contractor provides pathways as indicated on the construction documents.

Attachments included for reference in this Addendum:

a. Pre-Bid Meeting Minutes
b. Pre-Bid Meeting Attendee List
c. Project Manual
    - Section 012100 – Allowances
        i. Allowance No. 9 – Owner-Preferred Door Hardware was added.
    - Section 084113 – Aluminum-Framed Entrances and Storefronts
        i. Added section 2.4.G Louvers.
    - Section 088000 – Glazing
        i. Added section 2.4.G Fritted Bird Glass
d. Drawings
    - MBE0.1
        i. Delete and replace with the attached revised sheet.
    - MBE0.2
        i. Delete and replace with the attached revised sheet.
    - MBE1.0
        i. Delete and replace with the attached revised sheet.
    - MBE2.0
        i. Delete and replace with the attached revised sheet.

- MBE3.0
    i. Delete and replace with the attached revised sheet.
- MBE3.1
    i. Delete and replace with the attached revised sheet.
- VCE1.0
    i. Delete and replace with the attached revised sheet.
- VCE1.1
    i. Delete and replace with the attached revised sheet.

e. Bid Proposal Form
- Updated list of Allowances
    i. Allowance No. 9 – Owner-Preferred Door Hardware was added.

f. Wake County Conduit Colors Chart

Addendum to Specifications:

a. Section 260533 – Raceways and Boxes for Electrical Systems
- Part 2, Section 2.2, Paragraph E.2 - Add the attached Wake County Conduit and Box Color Chart Standard to the end of the specification.

b. Section 262200 – Dry-Type Transformers (600 V and Less)
- Part 2, Section 2.3, Paragraph C – Delete and replace with the following:

    Enclosure: Standard Ventilation, NEMA 250, Type 2.

    1. Finish: Comply with NEMA 250 for "Indoor Corrosion Protection."
    2. Finish Color: Gray

Pre-Bid Meeting Minutes
Historic Yates Mill County Park Renovations

Date: Thursday, October 15, 2026

Time: 10:30 – 11:30 am

Place: Historic Yates Mill County Park, 4620 Lake Wheeler Road, Visitor Center Classroom, Raleigh, NC 27603

1. **Sign-In Sheet**
   Please provide your name and contact information on the sign in sheet. The sign-in sheet will be distributed as part of Addendum #1.
2. **Project Team Introductions**
   - Owner:
     - Eric Staehle, Wake County, Senior Facilities Project Manager
     - Paulo Lopez, Wake County, Project Manager
     - Matt Fryar, Wake County, Park Manager
     - Patrick Lynch, Wake County, Assistant Park Manager
   - Landscape Architecture and Civil Engineering (Project Lead)
     - Melissa Brand, Kimley-Horn, Project Manager & Landscape Architect
     - Andie Altemeier, Kimley-Horn, Civil Engineer
   - Architect
     - Zach Hoffman, in situ studio, Architect
   - MEP
     - Richard Thorne Jr., HDM Associates, Mechanical/Plumbing Engineer
   - Structural Engineering
     - Mark Blankinship, Lysaght & Associates, Structural Engineer
   - Geotechnical Engineering
     - Rachel Lujan, Terracon, Geotechnical Engineer
   - Surveying
     - Robin Lee, McKim & Creed, Surveyor
3. **Communication**
   - All communication shall be directed to Melissa Brand (melissa.brand@kimley-horn.com) and Seth Brown (seth.brown@kimley-horn.com). Please copy both of the noted contacts to ensure a prompt response.
   - Questions discussed at this meeting are non-binding to the contract and will be clarified in Addendum #1. Answers provided at this meeting will not be official until provided as part of the addendum.

4. **Project Description**
   - This project consists of a renovation at the existing Historic Yates Mill County Park located at 4620 Lake Wheeler Road in Raleigh, North Carolina. The proposed renovations include renovations to the existing Visitor Center, a new Maintenance Facility with storage yard, a new picnic shelter and plaza, parking improvements with bus parking spaces, improved ADA sidewalks throughout the site, overlooks along the pond, and other miscellaneous improvements.
   - The scope of work associated with the renovations includes existing building renovation, new building construction, grading, construction surveying, paving, storm drainage, curb & gutter, driveways, sidewalk, curb ramps, signing, pavement markings, utilities, erosion control, landscaping, and other related items as shown on the Construction Drawings.
   - Refer to the Project Manual herein and associated Construction Drawings for the full scope of work.

5. **Project Documents**
   - The Construction Documents and the Project Manual are available in digital format upon request by emailing Melissa Brand (melissa.brand@kimley-horn.com) and Seth Brown (seth.brown@kimley-horn.com).
   - Addenda will be listed on the Wake County website and at https://www.planscope.com.
   - Any printed copies are the responsibility of the prospective bidder and at their expense. Printed copies maybe purchased from Accent Imaging by contacting Accent Imaging at production@accentimaging.com or by calling 919-782-3332 or by visiting https://www.planscope.com.

6. **Bid Proposal**
   - Proposal to be bid includes: *General Construction Work – Single Prime Contract*. All bidders must have a valid license in the State of North Carolina.
   - A bid bond of 5% is required for the bid. The Bid Bond form included in the project manual must be used or the bid may be rejected. A payment and performance bond in the amount equal to 100% of the contract price is required for the construction agreement.
   - Please Review in the Project Manual:
     - Required forms
     - Bid Bond
     - Insurance requirements
     - Sub-contractors and qualifications

7. **Unit Prices, Allowances, & Bid Alternates**
   - Unit Prices
     - Unit Prices are included in the base bid and are defined in the project manual.
     - There are 21 items specified to include unit prices at this time.
   - Allowances
     - Allowances are included in the base bid and are defined in the project manual.
     - There are 8 items specified to include as allowances at this time.
   - Bid Alternates
     - Bid alternates are required and are defined in the project manual.
     - There are 3 add alternates specified to be included.
       - Observation Deck, 2 Benches, 1 Trash Receptacle and Concrete Pad, and Overlook Binoculars, this can be found on sheet C3.4 of the plan set.
       - Natural Surface Overlook Pad and 1 Wood Backless Bench, this can be found on sheet C3.4 of the plan set.
       - Reinforced Turf, this can be found on sheet C3.1 of the plan set.

8. Addendums

- An addendum is anticipated which will include the pre-bid meeting minutes, which will go to all official bidders in attendance. The addendum will include any plan or bid clarifications questions resulting from this pre-bid meeting. This will be posted by October 22, 2026.
- Any questions need to be emailed to Melissa Brand (melissa.brand@kimley-horn.com) and Seth Brown (seth.brown@kimley-horn.com) by 5:00 pm on October 23, 2026.
- The final addendum is projected to be posted by October 29, 2026.

9. Bid Schedule

- Notice for Bidders: October 7, 2026
- Pre-Bid Meeting: 10:30 AM on October 15, 2026
- Addendum Issued: October 22, 2026
- Deadline for Questions: 12:00 PM on October 23, 2026
- Final Addendum Issued: October 29, 2026
- Bid Opening: 3:00 PM on November 5, 2026

10. Bid Opening

- Bids will be received until 3:00 PM on Thursday, November 5, 2026. Any bids received after this time will not be accepted.
- Submit bids to:

  Wake County Procurement Services
  Attention: Eric Staehle, Project Manager
  Re: Historic Yates Mill County Park Renovations
  Wake County Justice Center
  301 McDowell Street, Suite 2900
  Raleigh, NC 27601
- Each proposal shall be delivered, enclosed in an opaque sealed envelope, marked "Proposal" and bearing the name of Project, name and address of the Bidder, the Bidder's license number.
- Please allow adequate time to arrive at the bid opening location. An ID is required to enter the building and pass through the building's security checkpoint. It is recommended that you leave anything that might be confiscated in your vehicle (knives/tools/weapons).

11. Notice to Proceed (Date of Availability)

- To be determined with the contractor after selection.

12. Construction Time

- Refer to the Supplemental General Conditions.
- Contract Time: The contract time is 270 consecutive calendar days beginning on the date of Commencement as specified in the Notice-to-Proceed.
- On-Site Work Hours:
  - Work shall be generally performed during normal business working hours of 8:00 a.m. to 5 p.m., Monday through Friday.
  - Due to the time sensitive nature of the project, this may be extended to include weekends and after hours as allowable by the City of Raleigh and Wake County noise ordinance if approved by Wake County in advance.

13. Liquidated Damages

- If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time and as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover $500 per calendar day until the work is completed.

14. Electronic Files & Project Information

- Electronic CAD files (.dwg format) will be provided to the selected contractor.
- The geotechnical report by ~~Falcon Engineering~~ Terracon is included as part of the Bid Manual.

15. Project Management

- The contractor will be required to attend bi-weekly construction progress meetings. A detailed schedule is expected to be provided by the contractor and discussed at each meeting.
- The park will remain open to Wake County staff and park visitors during construction. Wake County staff will be relocated to the Visitor Center Classroom prior to commencement of construction activities for the Visitor Center renovations. The contractor is expected to keep driveways, loading areas, and entrances serving premises clear and available to Wake County, Wake County employees, park visitors, and emergency vehicles at all times.
- Contractor is required to provide access to an online, digital project management software (such as Procore or similar) for full duration of construction.

16. Questions

- See Addendum #1 for full list of questions discussed.

17. General Notes

- MBE Requirements:
  - Eric Staehle noted that the MBE requirements are no longer required per a recently passed North Carolina state statute.
- On-site Water Supply:
  - Richard Thorne noted that the existing well on-site supplies all site water, including the state mussel research lab. The awarded Contractor must ensure that the water supply to all on-site sources remain operating and undisturbed at all times for the full duration of construction activity. Melissa Brand noted that there is no public water to the site.
- Security Drawings:
  - Eric Staehle noted that there is an allowance required for --. This allowance will be used for the awarded Contractor to coordinate the public bid process for the final security drawings.

Pre-Bid Meeting Attendance Sheet

Historic Yates Mill County Park Renovations
4620 Lake Wheeler Road, Visitor Center Classroom, Raleigh, NC 27603
10:30-11:30 AM on October 15, 2026

NAME	COMPANY	PHONE	EMAIL
Eric Staehle	Wake County	919-856-6369	Eric.Staehle@wake.gov
Melissa Brand	Kimley-Horn	919-653-5841	melissa.brand@kimley-horn.com
Andie Altemeier	Kimley-Horn	984-389-1493	andie.altemeier@kimley-horn.com
Seth Brown	Kimley-Horn	919-653-2932	seth.brown@kimley-horn.com
Zach Hoffman	in situ studio	704-301-4750	zach@insitustudio.us
JEROME MAPP	TM Construction	336-404-8690	jerome@tmconstructiongroup.com
Paulo Lopez	Wake County	(919) 856 6351	paulo.lopez@wake.gov
Richard Thorne	HDM Assoc	(252) 698-3003	HDMA@mindspring.com

Pre-Bid Meeting Attendance Sheet

Historic Yates Mill County Park Renovations
4620 Lake Wheeler Road, Visitor Center Classroom, Raleigh, NC 27603
10:30-11:30 AM on October 15, 2026

NAME	COMPANY	PHONE	EMAIL
John Walker	HM Kenn	336-668-3213	estimating@hmkenn.com
Chad Grady	Brown Const.	919-222-8873	Chad.Grady@BrownCon.Com
Austin Riccio	BAR Construction	336-274-2477	Bids@BARConstruction.com
Garrett Hodges	Scotia Construction	252-341-5454	estimating@scotiaconstruction inc.com
[redacted]	[redacted]		
Ryan Shultz	HG Reynolds		blong@hgreynolds.com
SCOTT ROLLER	HARROD AND ASSOC	919.828.7782	ESTIMATING@HARRODANDASSOC.COM
Mark Reyes	W.C. Construction	336-721-3420	bids@wcconstructionco.com
Tyler Maher	Progressive Contracting	919-770-6548	tmaher@progressivecci.com

Pre-Bid Meeting Attendance Sheet

Historic Yates Mill County Park Renovations
4620 Lake Wheeler Road, Visitor Center Classroom, Raleigh, NC 27603
10:30-11:30 AM on October 15, 2026

NAME	COMPANY	PHONE	EMAIL
Sam Trogdon	PROS		
Laura Ketcham	LYM		
Patrick Lynch	LYM		

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:
   1. Lump-sum allowances.
   2. Lump sum allowances.
   3. Quantity allowances.
   4. Contingency allowances.
   5. Testing and inspecting allowances.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Landscape Architect and Owner of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Landscape Architect, or Owner's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Landscape Architect or Owner from the designated supplier.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Engineer of Record under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Landscape Architect/Engineer of Record under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
   1. If requested, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 QUANTITY ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Landscape Architect/Engineer of Record under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Landscape Architect/Engineer of Record under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
   1. If requested, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.9 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Landscape Architect/Engineer of Record for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.10 TESTING AND INSPECTING ALLOWANCES

A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.

B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.

C. Costs of testing and inspection services not specifically required by the Contract Documents are Contractor responsibilities and are not included in the allowance.

D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.11 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
   1. Include installation costs in purchase amount only where indicated as part of the allowance.
   2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
   3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to lump sum allowances.
   4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
   1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
   2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No. 1: Removal of unsatisfactory soil, debris, and plastic/elastic soil excavation and disposal off-site and replacement with satisfactory soil material from off-site, as specified in Section 312000 “Earthwork.”
   1. Unit of Measurement: cubic yard of soil excavated and replaced
   2. Allowance Units: 100 CuYd

B. Allowance No. 2: Removal of unsatisfactory soil, debris, and plastic/elastic soil and replacement with satisfactory structural soil material on-site, as specified in Section 312000 “Earthwork.”
   1. Unit of Measurement: cubic yard of soil excavated and replaced
   2. Allowance Units: 100 CuYd

C. Allowance No. 3: Mass rock removal and replacement with satisfactory soil material, as specified in Section 312000 “Earthwork.”
   1. Unit of Measurement: cubic yard of rock excavated and replaced
   2. Allowance Units: 100 CuYd

D. Allowance No. 4: Trench rock removal and replacement with satisfactory soil material, as specified in Section 312000 “Earthwork.”
   1. Unit of Measurement: cubic yard of rock excavated and replaced
   2. Allowance Units: 100 CuYd

E. Allowance No. 5: Mirafi 500X geotextile, or approved equal.
   1. Unit of Measurement: square foot of geotextile fabric
   2. Allowance Units: 200 SqYd

F. Allowance No. 6: Include a contingency allowance for use according to Owner's written instructions.
   1. Unit of Measurement: lump sum
   2. Allowance Units: $100,000

G. Allowance No. 7: Installation of security equipment on-site. Includes installation of security equipment to be installed by subcontractor on Wake County approved vendor list. General Contractor shall be responsible for bidding the allowance bid with the County approved vendor list.
   1. Unit of Measurement: lump sum
   2. Allowance Units: $145,000

H. Allowance No. 8: Security fiber optic and telecommunications cabling installation. Includes installation of security fiber optic and telecommunications cabling to be installed by subcontractor on Wake County approved vendor list. General Contractor shall be responsible for bidding the allowance bid with the County approved vendor list.
   1. Unit of Measurement: lump sum
   2. Allowance Units: $50,000

I. Allowance No. 9: Owner-preferred door hardware. Includes installation of owner-preferred door hardware.
   1. Unit of Measurement: lump sum
   2. Allowance Units: $10,000

END OF SECTION 012100

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Aluminum-framed entrance and storefront systems.

B. Related Requirements:

1. Section 014339 "Mockups" for preconstruction laboratory mockup testing.
2. Section 084126 "All-Glass Entrances and Storefronts" for systems without aluminum support framing.
3. Section 081116.13 "Interior Aluminum Doors and Frames" for interior aluminum framing.

1.2 ALLOWANCES

A. See Section 012100 "Allowances" for description of allowances affecting items specified in this Section.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Operating characteristics, electrical characteristics, and furnished accessories.

B. Shop Drawings:

1. Plans, elevations, sections, full-size details, and attachments to other work.
2. Details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
3. Full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed entrance and storefront systems, showing the following:

a. Joinery, including concealed welds.
b. Anchorage.
c. Expansion provisions.

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d. Glazing.
e. Flashing and drainage.

4. Connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
5. Point-to-point wiring diagrams showing the following:

a. Power requirements for each electrically operated door hardware.
b. Location and types of switches, signal device, conduit sizes, and number and size of wires.

6. Signed and sealed by the qualified professional engineer responsible for their preparation.

C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.

D. Samples for Verification: Actual sample of finished products for each type of exposed finish.

1. Size: Manufacturers' standard size.

E. Fabrication Sample: Of each vertical-to-horizontal intersection of assemblies, made from **12-inch** lengths of full-size components and showing details of the following:

1. Joinery, including concealed welds.
2. Anchorage.
3. Expansion provisions.
4. Glazing.
5. Flashing and drainage.

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

G. Delegated Design Submittals: For aluminum-framed entrances and storefront systems, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Energy Performance Certificates: For aluminum-framed entrance and storefront systems, accessories, and components, from manufacturer.

1. Basis for Certification: NFRC-certified energy performance values for each aluminum-framed entrance and storefront system.

B. Product Test Reports: For aluminum-framed entrance and storefront systems, for tests performed by a qualified testing agency.

C. Preconstruction Test Reports: For aluminum-framed entrance and storefront systems.

1. Testing Program: Developed specifically for Project.

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2. Test Reports: Prepared by a qualified preconstruction testing agency for each preconstruction test.
3. Record Drawings: As-built drawings of preconstruction laboratory mockups showing changes made during preconstruction laboratory mockup testing.

D. Source Quality-Control Reports: For aluminum-framed entrance and storefront systems.

E. Field Quality-Control Reports: For aluminum-framed entrance and storefront systems.

F. Quality-Control Program: Developed specifically for Project, including fabrication and installation, in accordance with recommendations in ASTM C1401. Include periodic quality-control reports.

G. Qualification Statements:

1. For Installer and field testing agency.

H. Delegated Design Engineer Qualifications: For aluminum-framed entrance and storefront systems.

I. Sample Warranties: For aluminum-framed entrance and storefront systems.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For aluminum-framed entrance and storefront systems.

B. Maintenance Data for Structural Sealant: For structural-sealant-glazed storefront. Include ASTM C1401 recommendations for post-installation-phase quality-control program.

1.7 QUALITY ASSURANCE

A. Installer Qualifications:

1. Entity that employs installers and supervisors who are trained and approved by manufacturer.
2. Authorized representative who is trained and approved by manufacturer.

B. Delegated Design Engineer Qualifications: A professional engineer who is legally qualified to practice in state where Project is located and who is experienced in providing engineering services of the type indicated.

C. Laboratory Mockup Testing Agency Qualifications: Qualified in accordance with ASTM E699 for testing indicated .

D. Testing Agency Qualifications: Qualified in accordance with ASTM E699 for testing indicated and acceptable to Owner and Architect.

E. Egress Door Inspector Qualifications:

1. Inspector for field quality-control inspections of egress door assemblies to comply with

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qualifications set forth in NFPA 101, Ch. 7 "Means of Egress," Section "Means of Egress Components," Article "Inspection of Door Openings."

2. Inspector for field quality-control inspections of egress door assemblies to be certified under DHI's certification program as a Fire and Egress Door Assembly Inspector (FDAI) or a Certified Fire and Egress Door Assembly Inspector (CFDAI).

F. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.

1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

G. Structural-Sealant Glazing: Comply with ASTM C1401 for design and installation of storefront systems that include structural glazing.

1.8 WARRANTY

A. Special Warranty: Manufacturer and Installer agree to repair or replace components of aluminum-framed entrance and storefront systems that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures <**Insert type of failure**>.
b. Faulty operation of components.
c. Deterioration of metals , metal finishes, and other materials beyond normal use.

2. Warranty Period: 10 years from date of Substantial Completion.

B. Special Finish Warranty, Factory-Applied Finishes: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Warranty Period: 10 years from date of Substantial Completion.

C. Special Finish Warranty, Anodized Finishes: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of anodized finishes within specified warranty period.

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1. Deterioration includes, but is not limited to, the following:

    a. Color fading more than 5 Delta E units when tested in accordance with ASTM D 2244.
    b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D 4214.
    c. Cracking, peeling, or chipping.

2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain all components of aluminum-framed entrance and storefront system, including framing spandrel panels venting windows and accessories, from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed entrance and storefront systems.

B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrance and storefront systems representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Aluminum-framed entrance and storefront systems to withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
2. Failure also includes the following:

    a. Thermal stresses transferring to building structure.
    b. Glass breakage.
    c. Noise or vibration created by wind and thermal and structural movements.
    d. Loosening or weakening of fasteners, attachments, and other components.
    e. Failure of operating units.

C. Structural Loads:

1. Wind Loads: As indicated on Drawings.
2. Other Design Loads: As indicated on Drawings.

D. Deflection of Framing Members Supporting Glass: At design wind load, as follows:

1. Deflection Normal to Wall Plane: Limited to 1/175 of length of span of the framing member for lengths of up to 13 feet 6 inches and to 1/240 of length of span of the framing member plus 1/4 inch for lengths greater than 13 feet 6 inches.
2. Deflection Parallel to Glazing Plane: Limited to amount not exceeding that which reduces

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glazing bite to less than 75 percent of design dimension and that which reduces edge clearance between framing members and glazing or other fixed components to less than 1/8 inch.

a. Operable Units: Provide a minimum **1/16-inch** clearance between framing members and operable units.

E. Structural: Test in accordance with ASTM E330/E330M as follows:

1. When tested at positive and negative wind-load design pressures, storefront assemblies, including entrance doors, do not evidence deflection exceeding specified limits.
2. When tested at 150 percent of positive and negative wind-load design pressures, storefront assemblies, including entrance doors and anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
3. Test Durations: As required by design wind velocity, but not less than 10 seconds.

F. Water Penetration under Static Pressure: Test in accordance with ASTM E331 as follows:

1. No evidence of water penetration through fixed glazing and framing areas, including entrance doors, when tested in accordance with a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 15 lbf/sq. ft..

G. Water Penetration under Dynamic Pressure: Test in accordance with AAMA 501.1 as follows:

1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 15 lbf/sq. ft..
2. Maximum Water Leakage: No uncontrolled water penetrating assemblies or water appearing on assemblies' normally exposed interior surfaces from sources other than condensation. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.

H. Seismic Performance: Aluminum-framed entrance and storefront systems to withstand the effects of earthquake motions determined in accordance with ASCE/SEI 7.

1. Seismic Drift Causing Glass Fallout: Complying with criteria for passing based on building occupancy type when tested in accordance with AAMA 501.6 at design displacement and 1.5 times the design displacement.

I. Noise Reduction: Test in accordance with ASTM E90, with ratings determined by ASTM E1332, as follows.

1. Outdoor-Indoor Transmission Class: Minimum 26.

J. Blast Resistance:

1. Hazard Rating: In accordance with ASTM F2912, tested in accordance with ASTM F1642/F1642M.

K. Windborne-Debris Impact Resistance: Passes ASTM E1886 missile-impact and cyclic-pressure

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tests in accordance with ASTM E1996 for Wind Zone [**1**][**2**][**3**][**4**] for [**basic**][**enhanced**] protection.

1. Large-Missile Test: For glazing located within 30 feet of grade.

L. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.

1. Temperature Change: **120 deg F**, ambient; **180 deg F**, material surfaces.
2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested in accordance with AAMA 501.5.

    a. High Exterior Ambient-Air Temperature: That which produces an exterior metal-surface temperature of 180 deg F.
    b. Low Exterior Ambient-Air Temperature: 0 deg F.
    c. Interior Ambient-Air Temperature: 75 deg F.

M. Structural-Sealant Joints:

1. Designed to carry gravity loads of glazing.

N. Structural Sealant: ASTM C1184. Capable of withstanding tensile and shear stresses imposed by structural-sealant-glazed, aluminum-framed entrance and storefront systems without failing adhesively or cohesively. When tested for preconstruction adhesion and compatibility, cohesive failure of sealant to occur before adhesive failure.

1. Adhesive failure occurs when sealant pulls away from substrate cleanly, leaving no sealant material behind.
2. Cohesive failure occurs when sealant breaks or tears within itself but does not separate from each substrate, because sealant-to-substrate bond strength exceeds sealant's internal strength.

2.3 ALUMINUM-FRAMED ENTRANCE AND STOREFRONT SYSTEMS

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

1. Kawneer Company, Inc.; Arconic Corporation
2. U.S. Aluminum; C.R. Laurence Co., Inc.; CRH Americas, Inc.
3. YKK AP America Inc.

B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Exterior Framing Construction: Thermally broken.
2. Interior Vestibule Framing Construction: Nonthermal.
3. Glazing System: Retained mechanically with gaskets on four sides.
4. Glazing Plane: Front.
5. Finish: Clear anodic finish.

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6. Fabrication Method: Field-fabricated stick system.
7. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
8. Steel Reinforcement: As required by manufacturer.

C. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

D. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

E. Venting Windows:

1. As specified in Section 085113 "Aluminum Windows."
2. Manufacturer's standard units, complying with AAMA/WDMA/CSA 101/I.S.2/A440, with self-flashing mounting fins, and as follows:

a. Window Type: As indicated on Drawings.
b. Minimum Performance Class: AW.
c. Hardware: Manufacturer's standard; of aluminum, stainless steel, die-cast steel, malleable iron, or bronze; including the following:

1) Cam handle locking system.
2) Multi-point locking system.
3) Pole-operated, cam handle locking system, where rail is more than **72 inches** above floor.
4) Rotary operator.
5) Steel or bronze operating arms.
6) Limit Devices: Concealed friction adjustor and adjustable stay bar limit devices designed to restrict sash opening.

a) Limit clear opening to 4 inches for ventilation; with custodial key release.

d. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
e. Insect Screens: Provide removable insect screen on each operable exterior sash, with screen frame finished to match window unit, complying with SMA 1004 or SMA 1201, and as follows:

1) Fabric: Manufacturer's standard aluminum wire fabric or glass-fiber mesh fabric.

f. Glazing: Same as adjacent aluminum-framed entrances and storefront glazing.
g. Finish: Match adjacent aluminum-framed entrances and storefront finish.

F. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing or automatic operation.

1. Door Construction: 2- to 2-1/4-inch overall thickness, with minimum 0.125-inch- thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with

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reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.

a. Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.

2. Door Design: Medium stile; 3-1/2-inch nominal width Wide stile; 5-inch nominal width.
3. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.

a. Provide nonremovable glazing stops on outside of door.

4. Finish: Anodized Aluminum.

G. Louvers: Manufacturer's standard louver insert for storefront frame.

1. Construction: Extruded aluminum
2. Finish: Match Storefront Finish.
3. Blades: Horizontally Fixed.
4. Depth: Match storefront frame.
5. Glazing Adaptor, if needed.
6. Free Area: Match requirements of exhaust fan in mechanical drawings.
7. Screen: Stainless steel installed on interior.
8. Provide solid-back panel over louver for areas not covered by exhaust fan.

2.4 ENTRANCE DOOR HARDWARE

A. Entrance Door Hardware: Hardware not specified in this Section is specified in Section 087100 "Door Hardware."

B. General: Provide entrance door hardware and entrance door hardware sets indicated in door and frame schedule for each entrance door, to comply with requirements in this Section.

1. Entrance Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
3. Opening-Force Requirements:

a. Egress Doors: Not more than **15 lbf** to release the latch and not more than **30 lbf** to set the door in motion and not more than 15 lbf to open the door to its minimum required width.
b. Accessible Interior Doors: Not more than **5 lbf** to fully open door.

C. Designations: Requirements for design, grade, function, finish, quantity, size, and other distinctive qualities of each type of entrance door hardware are indicated in "Entrance Door Hardware Sets" Article. Products are identified by using entrance door hardware designations as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for

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each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in "Entrance Door Hardware Sets" Article.

2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

D. Pivot Hinges: BHMA A156.4, Grade 1.

1. Offset-Pivot Hinges: Provide top, bottom, and intermediate offset pivots at each door leaf.

E. Butt Hinges: BHMA A156.1, Grade 1, radius corner.

1. Nonremovable Pins: Provide setscrew in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while entrance door is closed.
2. Exterior Hinges: Stainless steel, with stainless steel pin.
3. Quantities:

a. For doors up to 87 inches high, provide three hinges per leaf.
b. For doors more than 87 and up to 120 inches high, provide four hinges per leaf.

F. Continuous-Gear Hinges: BHMA A156.26.

G. Mortise Auxiliary Locks: BHMA A156.5, Grade 1.

H. Manual Flush Bolts: BHMA A156.16, Grade 1.

I. Automatic and Self-Latching Flush Bolts: BHMA A156.3, Grade 1.

J. Panic Exit Devices: BHMA A156.3, Grade 1, listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing in accordance with UL 305.

K. Cylinders:

1. As specified in Section 087100 "Door Hardware."

L. Strikes: Provide strike with black-plastic dust box for each latch or lock bolt; fabricated for aluminum framing.

M. Operating Trim: BHMA A156.6.

N. Removable Mullions: BHMA A156.3 extruded aluminum.

1. When used with panic exit devices, provide keyed removable mullions listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing in accordance with UL 305. Use only mullions that have been tested with exit devices to be used.

O. Closers: BHMA A156.4, Grade 1, with accessories required for a complete installation, sized as required by door size, exposure to weather, and anticipated frequency of use; adjustable to comply with field conditions and requirements for opening force.

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P. Concealed Overhead Holders and Stops: BHMA A156.8, Grade 1.

Q. Door Stops: BHMA A156.16, Grade 1, floor or wall mounted, as appropriate for door location indicated, with integral rubber bumper.

R. Weather Stripping: Manufacturer's standard replaceable components.

1. Compression Type: Made of ASTM D2000 molded neoprene or ASTM D2287 molded PVC.
2. Sliding Type: AAMA 701/702, made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.

S. Weather Sweeps: Manufacturer's standard exterior-door bottom sweep with concealed fasteners on mounting strip.

T. Thresholds: BHMA A156.21 raised thresholds beveled with a slope of not more than 1:2, with maximum height of **1/2 inch**.

U. Finger Guards: Manufacturer's standard collapsible neoprene or PVC gasket anchored to frame hinge-jamb at center-pivoted doors.

2.5 GLAZING

A. Glazing: Comply with Section 088000 "Glazing."

B. Glazing Gaskets: Comply with Section 088000 "Glazing."

C. Glazing Sealants: Comply with Section 088000 "Glazing."

D. Structural Glazing Sealants: ASTM C1184 chemically curing silicone formulation that is compatible with system components with which it comes in contact; specifically formulated and tested for use as structural sealant and approved by structural-sealant manufacturer for use in storefront system indicated.

1. Color: As selected by Architect from manufacturer's full range of colors.

E. Weatherseal Sealants: ASTM C920 for Type S; Grade NS; Class 25; Uses NT, G, A, and O; chemically curing silicone formulation that is compatible with structural sealant and other system components with which it comes in contact; recommended by structural-sealant, weatherseal-sealant, and structural-sealant-glazed storefront manufacturers for this use.

1. Color: Match structural sealant.

2.6 MATERIALS

A. Sheet and Plate: **ASTM B209**.

B. Extruded Bars, Rods, Profiles, and Tubes: **ASTM B221**.

C. Structural Profiles: ASTM B308/B308M.

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D. Steel Reinforcement:

1. Structural Shapes, Plates, and Bars: ASTM A36/A36M.
2. Cold-Rolled Sheet and Strip: ASTM A1008/A1008M.
3. Hot-Rolled Sheet and Strip: ASTM A1011/A1011M.

E. Steel Reinforcement Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods in accordance with recommendations in SSPC-SP COM, and prepare surfaces in accordance with applicable SSPC standard.

F. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

2.7 ACCESSORIES

A. Automatic Door Operators: Section 087113 "Power Door Operators."

B. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.

1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.
3. Use exposed fasteners with countersunk Phillips screw heads , fabricated from 300 series stainless steel.

C. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A123/A123M or ASTM A153/A153M requirements.

D. Concealed Flashing: Dead-soft, 0.018-inch- thick stainless steel, complying with ASTM A240/A240M, of type recommended by manufacturer.

E. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for **30-mil** thickness per coat.

F. Rigid PVC filler.

2.8 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

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C. Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
5. Provisions for field replacement of glazing from interior.
6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

E. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.

1. At interior and exterior doors, provide compression weather stripping at fixed stops.

F. Entrance Doors: Reinforce doors as required for installing entrance door hardware.

1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
2. At exterior doors, provide weather sweeps applied to door bottoms.

G. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.

H. After fabrication, clearly mark components to identify their locations in Project in accordance with Shop Drawings.

2.9 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.

B. Color Anodic Finish: AAMA 611, AA-M12C22A32/A34, Class II, 0.010 mm or thicker.

1. Color: As selected by Architect from full range of industry colors and color densities.

C. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of **1.5 mils**. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

1. Color and Gloss: As selected by Architect from manufacturer's full range.

2.10 SOURCE QUALITY CONTROL

A. Structural Sealant: Perform quality-control procedures complying with ASTM C1401 recommendations, including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

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PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF ALUMINUM-FRAMED ENTRANCE AND STOREFRONT SYSTEMS

A. Comply with manufacturer's written instructions.

B. Do not install damaged components.

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

D. Rigidly secure nonmovement joints.

E. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.

F. Seal perimeter and other joints watertight unless otherwise indicated.

G. Metal Protection:

1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

H. Set continuous sill members and flashing in full sealant bed, as specified in Section 079200 "Joint Sealants," to produce weathertight installation.

I. Install joint filler behind sealant as recommended by sealant manufacturer.

J. Install components plumb and true in alignment with established lines and grades.

K. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.

L. Install entrance doors to produce smooth operation and tight fit at contact points.

1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware in accordance with entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

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M. Install glazing as specified in Section 088000 "Glazing."

N. Install structural glazing as follows:

1. Prepare surfaces that will contact structural sealant in accordance with sealant manufacturer's written instructions, to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.
2. Set glazing into framing in accordance with sealant manufacturer and framing manufacturer's written instructions and standard practice. Use a spacer or backer as recommended by manufacturer.
3. Set glazing with proper orientation so that coatings face exterior or interior as specified.
4. Hold glazing in place using temporary retainers of type and spacing recommended by manufacturer, until structural sealant joint has cured.
5. Apply structural sealant to completely fill cavity, in accordance with sealant manufacturer and framing manufacturer's written instructions and in compliance with local codes.
6. Apply structural sealant at temperatures indicated by sealant manufacturer for type of sealant.
7. Allow structural sealant to cure in accordance with manufacturer's written instructions.
8. Clean and protect glass as indicated in Section 088000 "Glazing."
9. After structural sealant has completely cured, remove temporary retainers and insert backer rod between lites of glass as recommended by sealant manufacturer.
10. Install weatherseal sealant to completely fill cavity, in accordance with sealant manufacturer's written instructions, to produce weatherproof joints.

3.3 ERECTION TOLERANCES

A. Install aluminum-framed entrance and storefront systems to comply with the following maximum tolerances:

1. Plumb: **1/8 inch in 10 feet**; **1/4 inch in 40 feet**.
2. Level: **1/8 inch in 20 feet**; **1/4 inch in 40 feet**.
3. Alignment:

    a. Where surfaces abut in line or are separated by reveal or protruding element up to **1/2 inch** wide, limit offset from true alignment to **1/16 inch**.
    b. Where surfaces are separated by reveal or protruding element from **1/2 to 1 inch** wide, limit offset from true alignment to **1/8 inch**.
    c. Where surfaces are separated by reveal or protruding element of **1 inch** wide or more, limit offset from true alignment to **1/4 inch**.

4. Location: Limit variation from plane to **1/8 inch in 12 feet**; **1/2 inch** over total length.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests.

B. Tests: Perform the following tests on representative areas of aluminum-framed entrance and storefront systems.

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1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect to be tested in accordance with AAMA 501.2 and to not evidence water penetration.

    a. Perform a minimum of two tests in areas as directed by Architect.
    b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 10, 35, and 70 percent completion.

2. Air Leakage: ASTM E783 at 1.5 times the rate specified for laboratory testing in "Performance Requirements" Article but not more than **0.09 cfm/sq. ft.** at a static-air-pressure differential of **1.57 lbf/sq. ft.**.

    a. Perform a minimum of two tests in areas as directed by Architect.

3. Water Penetration: ASTM E1105 at a minimum uniform static-air-pressure differential of 0.67 times the static-air-pressure differential specified for laboratory testing in "Performance Requirements" Article, but not less than **6.24 lbf/sq. ft.**, and to not evidence water penetration.

C. Inspection Agency: Engage a qualified inspector to perform inspections.

D. Inspections:

1. Egress Door Inspections: Inspect each aluminum-framed entrance door equipped with panic hardware, located in an exit enclosure, electrically controlled, and equipped with special locking arrangements, in accordance with NFPA 101, Ch. 7 "Means of Egress," Section "Means of Egress Components," Article "Inspection of Door Openings."

E. Aluminum-framed entrance and storefront systems will be considered defective if they do not pass tests and inspections.

F. Prepare test and inspection reports.

3.5 MAINTENANCE SERVICE

A. Entrance Door Hardware Maintenance:

1. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of entrance door hardware.

3.6 ENTRANCE DOOR HARDWARE SETS

END OF SECTION 084113

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SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Glass products.
2. Insulating glass.
3. Glazing tapes.
4. Miscellaneous glazing materials.

B. Related Requirements:

1. Section 088300 "Mirrors."
2. Section 084113 "Aluminum-Framed Entrances and Storefronts."

1.2 DEFINITIONS

A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters in accordance with ASTM C1036.

C. IBC: International Building Code.

D. Interspace: Space between lites of an insulating-glass unit.

1.3 COORDINATION

A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances to achieve proper safety margins for glazing retention under each design load case, load case combination, and service condition.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review temporary protection requirements for glazing during and after installation.

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1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Glass Samples: For each type of the following products; **12 inches** square.

1. Coated glass.
2. Laminated glass.
3. Insulating glass.
4. Fritted glass.

C. Glazing Accessory Samples: For sealants and colored spacers, in **12-inch** lengths.

D. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer manufacturers of fabricated glass units glass testing agency and sealant testing agency.

B. Product Certificates: For glass.

C. Product Test Reports: For fabricated glass and glazing sealants, for tests performed by a qualified testing agency.

1. For glazing sealants, provide test reports based on testing current sealant formulations within previous 36-month period.

D. Preconstruction adhesion and compatibility test report.

E. Sample Warranties: For special warranties.

1.7 QUALITY ASSURANCE

A. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.

B. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C1021 to conduct the testing indicated.

1.8 PRECONSTRUCTION TESTING

A. Preconstruction Adhesion and Compatibility Testing: Test each glass product, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants.

1. Testing is not required if data are submitted based on previous testing of current sealant products and glazing materials matching those submitted.

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2. Use ASTM C1087 to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.
3. Schedule enough time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, submit sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials in accordance with manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

B. Comply with insulating-glass manufacturer's written instructions for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

1.10 FIELD CONDITIONS

A. 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 glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below **40 deg F**.

1.11 WARRANTY

A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.

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

B. Manufacturer's Special Warranty for Laminated Glass: Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to 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.

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

C. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written

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instructions. Evidence of failure is obstruction of vision by dust, moisture, or film on interior surfaces of glass.

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

D. Manufacturer's Special Warranty for Heat-Soaked Tempered Glass: Manufacturer agrees to replace heat-soaked tempered glass units that spontaneously break due to nickel sulfide (NiS) inclusions at a rate exceeding 0.3 percent (3/1000) within specified warranty period. Coverage for any other cause is excluded.

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

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Source Limitations for Glass: Obtain coated glass from single source from single manufacturer.

B. Source Limitations for Glazing Accessories: For each product and installation method, obtain from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazing.

C. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined in accordance with the IBC and ASTM E1300:

1. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or **1 inch**, whichever is less.
2. Thermal Loads: Design glazing to resist thermal stress breakage induced by differential temperature conditions and limited air circulation within individual glass lites and insulated glazing units.

D. Windborne-Debris-Impact Resistance: Exterior glazing shall pass ASTM E1886 missile-impact and cyclic-pressure tests in accordance with ASTM E1996 for Wind Zone 4 for basic protection.

1. Large-Missile Test: For glazing located within 30 feet of grade.
2. Small-Missile Test: For glazing located between **30 feet** and 60 feet grade.

E. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR

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1201, Category II.

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

1. For monolithic-glass lites, properties are based on units with lites 6 mm thick of thickness indicated.
2. For laminated-glass lites, properties are based on products of construction indicated.
3. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
4. U-Factors: Center-of-glazing values, in accordance with NFRC 100 and based on most current non-beta version of LBL's WINDOW computer program, expressed as **Btu/sq. ft. x h x deg F**.
5. SHGC and Visible Transmittance: Center-of-glazing values, in accordance with NFRC 200 and based on most current non-beta version of LBL's WINDOW computer program.
6. Visible Reflectance: Center-of-glazing values, in accordance with NFRC 300.

G. Acoustic Performance:

1. Exterior Glazing: 35 OITC.
2. Interior Glazing: 35 STC.

2.3 GLASS PRODUCTS, GENERAL

A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. NGA Publications: [**"Laminated Glazing Reference Manual" and**] "Glazing Manual."
2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR A7, "Sloped Glazing Guidelines."
3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Guidelines for Sloped Glazing."
4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."

B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

C. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than thickness indicated.

1. Minimum Glass Thickness for Exterior Lites: 6 mm.
2. Thickness of Tinted Glass: Provide same thickness for each tint color indicated throughout Project.

D. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-

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strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

A. Low-Iron Annealed Float Glass: ASTM C1036, Type I, Class I (clear), Quality-Q3; and with visible light transmission of not less than 91 percent and SHGC of not less than 0.87.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. AGC Glass Company North America, Inc.
b. Guardian Glass LLC
c. Pilkington North America; NSG Group
d. Vitro Architectural Glass

B. Fully Tempered Float Glass: ASTM C1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.

C. Heat-Strengthened Float Glass: ASTM C1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.

D. Ceramic-Coated Vision Glass: ASTM C1048, Condition C, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3; and complying with Specification No. 95-1-31 in NGA's "Engineering Standards Manual."

E. Ceramic-Coated Spandrel Glass: ASTM C1048, Type I, Condition B, Quality-Q3.

F. Reflective- and Low-E-Coated Spandrel Glass: ASTM C1376, Kind CS.

G. Fritted Bird Glass

1. Glass by Manufacturer providing clear vision glass with a fritted pattern to make glass visible to birds to prevent impact.

a. Pattern: Selected by Architect from manufacturer’s full range.
b. Frit surface: Surface 2.
c. Provide where indicated in Drawings.

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2.5 INSULATING GLASS

A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified in accordance with ASTM E2190.

1. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
2. Desiccant: Molecular sieve or silica gel, or a blend of both.

2.6 GLAZING SEALANTS

A. General:

1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range of industry colors.

2.7 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; 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; and complying with ASTM C1281 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.

B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

1. AAMA 810.1, Type 1, for glazing applications in which tape acts as primary sealant.
2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.8 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, recommended in writing by manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

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B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks:

1. EPDM with Shore A durometer hardness of 85, plus or minus 5.
2. Type recommended in writing by sealant or glass manufacturer.

D. Spacers:

1. Neoprene blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
2. Type recommended in writing by sealant or glass manufacturer.

E. Edge Blocks:

1. EPDM with Shore A durometer hardness per manufacturer's written instructions.
2. Type recommended in writing by sealant or glass manufacturer.

F. Cylindrical Glazing Sealant Backing: ASTM C1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.9 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.

a. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.

C. Grind smooth and polish exposed glass edges and corners.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep systems.

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3. Minimum required face and edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that leave visible marks in the completed Work.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.

C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

F. Provide spacers for glass lites where length plus width is larger than **50 inches**.

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
2. Provide **1/8-inch-** minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and in accordance with requirements in referenced glazing publications.

H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

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I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.

J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended in writing by gasket manufacturer.

3.4 TAPE GLAZING

A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.

B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.

D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.

E. Do not remove release paper from tape until right before each glazing unit is installed.

F. Apply heel bead of elastomeric sealant.

G. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.

D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and

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press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.

E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 CLEANING AND PROTECTION

A. Immediately after installation, remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. 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 buildup of dirt, scum, alkaline deposits, or stains.

1. If, despite such protection, contaminating substances do contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.

C. Remove and replace glass that is damaged during construction period.

D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 088000

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EXISTING PANELBOARD APPH SCHEDULE

BUSS RATING: 400A 200A MCB, 277/480 V, 3 PHASE, 4 WIRE, 45 KAIC MINIMUM SURFACE MOUNT

LOAD SERVED	LOAD (AMPS) A	B	C	BR TRIP	CKT NO	PH	CKT NO	BR TRIP	LOAD (AMPS) A	B	C	LOAD SERVED
LTS PUMP HOUSE	1.10			20 1P EXIST	1	A	2	20 1P EXIST				SPARE
SPARE				20 1P EXIST	3	B	4	20 1P EXIST				SPARE
SPARE				20 1P EXIST	5	C	6	20 1P EXIST				SPARE
SPACE					7	A	8					SPACE
SPACE					9	B	10	20 3P EXIST				POWER SCOUT METER
SPACE					11	C	12					
SPACE					13	A	14					
SPACE					15	B	16					SPACE
SPACE					17	C	18					SPACE
PUMP PWP-2A NON-COCURRENT LOAD W PWP-2B	3.40			20 3P EXIST	19	A	20	20 3P EXIST	3.40			PUMP PWP-2B NON-COCURRENT LOAD W PWP-2A
		3.40			21	B	22			3.40		
			3.40		23	C	24				3.40	
PUMP RWP-1A NON-COCURRENT LOAD W RWP-1B	52.00			90 3P EXIST	25	A	26	90 3P EXIST	52.00			PUMP RWP-1B NON-COCURRENT LOAD W RWP-1A
		52.00			27	B	28			52.00		
			52.00		29	C	30				52.00	
PUMP PWP-1A NON-COCURRENT LOAD W PWP-1B	52.00			90 3P EXIST	31	A	32	90 3P EXIST	52.00			PUMP PWP-1B NON-COCURRENT LOAD W PWP-1A
		52.00			33	B	34			52.00		
			52.00		35	C	36				52.00	
PANEL PHLA VIA TRANSFORMER T-5	29.00			70 3P EXIST	37	A	38	80 3P NEW	46.23			PANEL MBH (MAINTENANCE BUILDING) * PROVIDE MATCHING BREAKER.
		25.10			39	B	40			39.90		
			23.00		41	C	42				23.50	
TOTAL	137.60	81.20	75.40						153.63	147.30	130.90	TOTAL
TOTAL CONNECTED AMPS				A: 292			B:280			C: 262		

NOTE: PANEL APPH IS A SQUARE D, NF PANEL, 480V/277V 3 PHASE, 4W 60HZ SCCR 42KA. BREAKER TYPE EJB.

PANELBOARD PHLA SCHEDULE

BUSS RATING: 225 150 MLB, 120/208 V, 3 PHASE, 4 WIRE, 22 KAIC MINIMUM SURFACE MOUNT

LOAD SERVED	LOAD (AMPS) A	B	C	BR TRIP	CKT NO	PH	CKT NO	BR TRIP	LOAD (AMPS) A	B	C	LOAD SERVED
CONTROLLER RWUV-1B	1.00			20 1P EXIST	1	A	2	20 1P EXIST	4.50			REC PUMP HOUSE
CONTROLLER RWUV-1A		1.00		20 1P EXIST	3	B	4	20 1P EXIST		4.50		REC PUMP HOUSE
REC DOCK			1.50	20 1P EXIST	5	C	6	20 1P EXIST			5.00	GEN BATTERY CHARGER
AHU-4	20.00			30 2P EXIST	7	A	8	30 2P EXIST	4.80			GEN ALT HEATER
		20.00			9	B	10			4.80		
HP-4			9.80	20 2P EXIST	11	C	12	30 2P EXIST			14.40	GEN JACKET HEATER
	9.80				13	A	14		14.40			
EDH-1		11.10		20 3P EXIST	15	B	16	20 1P EXIST		9.80		SUMP PUMP
			11.10		17	C	18	20 1P EXIST			5.00	SUMP PUMP CONTROLLER
	11.10				19	A	20	20 1P EXIST	1.00			CONTROLLER PWF-1
AB-1B		6.00		20 1P EXIST	21	B	22	20 1P EXIST		1.00		CONTROLLER PWF-2
AB-1A			6.00	20 1P EXIST	23	C	24	20 1P EXIST			1.00	CONTROLLER RWF-1
* REC SECURITY DROP	5.00			20 1P NEW	25	A	26	80 3P EXIST	20.00			SUB PANEL IN GENERATOR ROOM
* REC SECURITY POLE CAMERAS 2#8, 1#8G IN 3/4" CONDUIT		5.00		20 1P NEW	27	B	28			20.00		
SPACE					29	C	30				20.00	
SPACE					31	A	32					SPACE
SPACE					33	B	34					SPACE
SPACE					35	C	36					SPACE
SPACE					37	A	38					SPACE
SPACE					39	B	40					SPACE
SPACE					41	C	42					SPACE
TOTAL	46.90	43.10	28.40						44.70	40.10	45.40	TOTAL
TOTAL CONNECTED AMPS				A: 91.6			B:83.2			C: 73.8		

NOTE: * PROVIDE MATCHING BREAKER
PANEL PHLA IS A SQUARE D, NF PANEL, 120V/208V 3 PHASE, 4W 60HZ SCCR 22KA. BREAKER TYPE EGB.

PANELBOARD MBH SCHEDULE

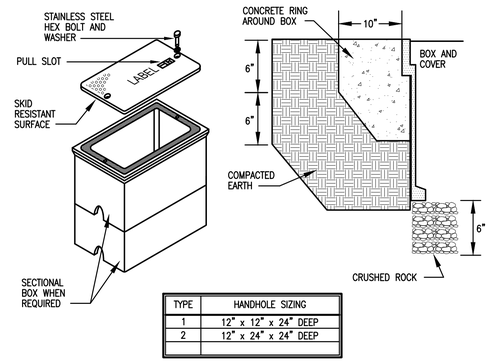
BUSS RATING: 225A 80A MCB, 277/480 V, 3 PHASE, 4 WIRE, 18 KAIC MINIMUM SURFACE MOUNT

LOAD SERVED	LOAD (AMPS) A	B	C	BR TRIP	CKT NO	PH	CKT NO	BR TRIP	LOAD (AMPS) A	B	C	LOAD SERVED
LTS INTERIOR	4.00			20 1P	1	A	2	20 3P	8.23			PANEL MBL VIA TRANSFORMER T-MBL
LTS EXTERIOR		2.00		20 1P	3	B	4			3.90		
EXHAUST FAN EF-1			2.00	20 1P	5	C	6				6.50	
UNIT HEATER UH-1	19.00			30 1P	7	A	8	30 3P	15.00			WELL HOUSE PUMP
UNIT HEATER UH-2		19.00		30 1P	9	B	10			15.00		
SPARE				20 1P	11	C	12				15.00	
SPARE				20 1P	13	A	14	20 1P				SPARE
SPARE				20 1P	15	B	16	20 1P				SPARE
SPARE				20 1P	17	C	18	20 1P				SPARE
TOTAL	23.00	21.00	2.00						23.23	18.90	21.50	TOTAL
TOTAL CONNECTED AMPS				A: 47			B:40			C: 24		

PANELBOARD MBL SCHEDULE

BUSS RATING: 100A 65A MCB 120/208 V, 3 PHASE, 4 WIRE, 22 KAIC MINIMUM SURFACE MOUNT

LOAD SERVED	LOAD (AMPS) A	B	C	BR TRIP	CKT NO	PH	CKT NO	BR TRIP	LOAD (AMPS) A	B	C	LOAD SERVED
REC MAINTENANCE BUILDING	9.00			20 1P	1	A	2	20 2P	5.00			PAVILION DISCONNECT SWITCH
REC MAINTENANCE BUILDING		6.00		20 1P	3	B	4			3.00		
WATER HEATER MAINTENANCE BUILDING			15.00	20 1P	5	C	6	20 1P				SPARE
SECURITY DROP	5.00			20 1P	7	A	8	20 1P				SPARE
SPARE				20 1P	9	B	10	20 1P				SPARE
SPARE				20 1P	11	C	12	20 1P				SPARE
TOTAL	14.00	6.00	15.00						5.00	3.00	0.00	TOTAL
TOTAL CONNECTED AMPS				A: 19			B:9			C: 15		



TYPE	HANDHOLE SIZING
1	12" x 12" x 24" DEEP
2	12" x 24" x 24" DEEP

HANDHOLE REQUIREMENTS

1. HOUSING SHALL BE A POLYMER CONCRETE REINFORCED WITH A HEAVY WEAVE FIBERGLASS REINFORCING, HEAVY DUTY, H-20 LOADING.
2. COVER SHALL HEAVY DUTY, H-20 LOADING.
3. PROVIDE STAINLESS STEEL BOLTS AND INSERTS.
4. PROVIDE WITH 2 1/2" MOUSEHOLES FOR EACH HANDHOLE AS REQUIRED. CONTRACTOR PERMITTED TO RUN CONDUIT THRU GROUND UP INTO BOTTOM OF HANDHOLES.
5. PROVIDE LABEL RELATIVE TO EQUIPMENT IN HANDHOLE. COORDINATE WITH ENGINEER.

COMPOSITE/FIBERGLASS HANDHOLE

E2-001

NO SCALE

BUILDING LOAD SUMMARY

LOAD	CONN LOAD (KVA) A	B	C	DEMAND FACTOR	DEMAND LOAD (KVA) A	B	C
EXISTING LOAD	100.0	100.0	100.0	125%	125.0	125.0	125.0
PANEL MBH (NEW LOAD)	12.0	11.0	8.0	SEE LOAD SUMMARY	12.0	11.0	8.0
TOTAL (KVA)	112.0	111.0	108.0		137.0	136.0	133.0
				CALCULATED AMPS:	490	488	472
				VOLTAGE:	277/480 V		
				SERVICE SIZE:	600 AMP		

PANEL MBH LOAD SUMMARY

LOAD SERVED	CONN LOAD (KVA) A	B	C	DEMAND FACTOR	DEMAND LOAD (KVA) A	B	C
INTERIOR LIGHTING *	1.11	0.55	0.00	125% **	1.39	0.69	0.00
HVAC	5.26	5.26	0.55	100% ****	5.26	5.26	0.55
EQUIPMENT	4.16	4.16	4.16	100%	4.16	4.16	4.16
PANEL MBL	2.28	1.08	1.80	SEE LOAD SUMMARY	2.28	1.08	1.80
TOTAL (KVA)	12.81	11.05	6.51		13.08	11.19	6.51
				AMPS	47.23	40.40	23.50
				VOLTAGE	277/480V		
				SERVICE SIZE	80 AMP		

* BASED ON NEC TABLE 220.12
** CONTINUOUS LOAD PER NEC
*** BASED ON NEC TABLE 220.44
**** FLA PLUS 25% OF LARGEST MOTOR LOAD
***** BASED ON NEC TABLE 220.56
****** BASED ON NEC TABLE 660.6 (A),(B)

PANEL MBL LOAD SUMMARY

LOAD SERVED	CONN LOAD (KVA) A	B	C	DEMAND FACTOR	DEMAND LOAD (KVA) A	B	C
RECEPTACLES	1.08	0.72	0.00	FIRST 10 KVA @ 100% REMAINDER KVA OVER 10 KVA @ 50%	1.08	0.72	0.00
WATER HEATER	0.00	0.00	1.80	100%	0.00	0.00	1.80
EQUIPMENT	1.20	0.36	0.00	100%	1.20	0.36	0.00
TOTAL (KVA)	2.28	1.08	1.80		2.28	1.08	1.80
				AMPS	19.00	9.00	15.00
				VOLTAGE	120/208V		
				SERVICE SIZE	45 AMP		

* BASED ON NEC TABLE 220.12
** CONTINUOUS LOAD PER NEC
*** BASED ON NEC TABLE 220.44
**** FLA PLUS 25% OF LARGEST MOTOR LOAD
***** BASED ON NEC TABLE 220.56
****** BASED ON NEC TABLE 660.6 (A),(B)

LEGEND

LEGEND NOTES:

1. ALL DARK AND DASHED SYMBOLS INDICATE EQUIPMENT AND/OR DEVICES TO BE REMOVED OR LOCATED UNDERGROUND AS NOTED.
2. ALL DARK AND SOLID SYMBOLS INDICATE NEW EQUIPMENT AND/OR DEVICES TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. ALL LIGHT AND SOLID SYMBOLS INDICATE EQUIPMENT AND/OR DEVICES THAT ARE EXISTING TO REMAIN.
4. CAPITAL LETTER BESIDE FIXTURE SYMBOL DENOTES FIXTURE TYPE WITH REFERENCE TO FIXTURE SCHEDULE.
5. MOUNTING HEIGHTS GIVEN BELOW SHALL BE FOLLOWED UNLESS NOTED ON THE FLOOR PLANS, SCHEDULES OR SHOWN DIFFERENT IN THE ARCHITECTURAL ELEVATIONS. ALL HEIGHTS ARE TO CENTER OF THE DEVICE.
6. "WP" SUBSCRIPT INDICATES WEATHER PROOF ENCLOSURE EQUAL TO TAYMAC MX3200 OR ENGINEER APPROVED EQUAL.

- CEILING MOUNTED LIGHTING FIXTURE. SEE LIGHT FIXTURE SCHEDULE.
- WALL MOUNTED LIGHTING FIXTURE. SEE LIGHT FIXTURE SCHEDULE.
- WALL MOUNTED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK. THE EMERGENCY BATTERY PACK SHALL BE CONNECTED AHEAD OF SWITCH/TIMECLOCK.
- SPOT OR FLOODLIGHT. SEE LIGHT FIXTURE SCHEDULE.
- EXIT LIGHT, ARROW INDICATES DIRECTION, TWO ARROWS INDICATE DOUBLE FACE. CONNECT AHEAD OF SWITCH.
- LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK. THE EMERGENCY BATTERY PACK SHALL BE CONNECTED AHEAD OF SWITCH. SEE LIGHT FIXTURE SCHEDULE.
- S SINGLE POLE SWITCH, 20A, 48" AFF.
- S_M MOTOR RATED SWITCH WITH OVERLOADS.
- OCCUPANCY CEILING MOUNTED OCCUPANCY SENSOR
- DUPLEX RECEPTACLE, 20A, 125 VOLTS, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER PLATE. MOUNT 18" AFF EXCEPT AS NOTED.
- DUPLEX RECEPTACLE WITH GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION, 20A, 125 VOLT, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER PLATE. MOUNT 18" AFF EXCEPT AS NOTED.
- (E) EQUIPMENT CONNECTION
- 1 REVISION DESIGNATION
- # NEW WORK NOTE DESIGNATION
- ◇ GENERAL NOTE
- BRANCH CIRCUIT (CONDUIT AND WIRE) RUN CONCEALED IN WALL OR ABOVE CEILING UNLESS NOTED OTHERWISE. WIRE SIZE #12 UNLESS NOTED OTHERWISE.
- L-1 INDICATES CIRCUIT HOMERUN TO PANEL. LETTER & NUMBERS INDICATE PANEL DESIGNATION & CIRCUIT BREAKER NUMBER.
- T TRANSFORMER, KVA AS NOTED
- PANELBOARD, 120/208 VOLTS, SEE SCHEDULE
- PANELBOARD, 277/480 VOLTS, SEE SCHEDULE

GENERAL COORDINATION NOTES

1. COORDINATE LOCATION AND REQUIREMENTS WITH OTHER TRADES PRIOR TO BEGINNING ANY WORK.
2. COORDINATE EXACT LOCATION AND REQUIREMENTS PRIOR TO BEGINNING ANY WORK. SEE ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.
3. COORDINATE POWER CONNECTION AND REQUIREMENTS WITH EQUIPMENT SUPPLIED.

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ☐ Performance ■ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive

Lighting schedule (each fixture type) See Drawing
lamp type required in fixture See Drawing
number of lamps in fixture See Drawing
ballast type used in the fixture See Drawing
number of ballasts in fixture See Drawing
total wattage per fixture See Drawing
total interior wattage specified vs. allowed (whole building or space by space)
specified: 456 watts, allowed: 1,815 watts
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

☐C406.2 More Efficient HVAC Equipment Performance
■C406.3 Reduced Lighting Power Density
☐C406.4 Enhanced Digital Lighting Controls
☐C406.5 On-Site Renewable Energy
☐C406.6 Dedicated Outdoor Air System
☐C406.7 Reduced Energy Use in Service Water Heating

REVISIONS
1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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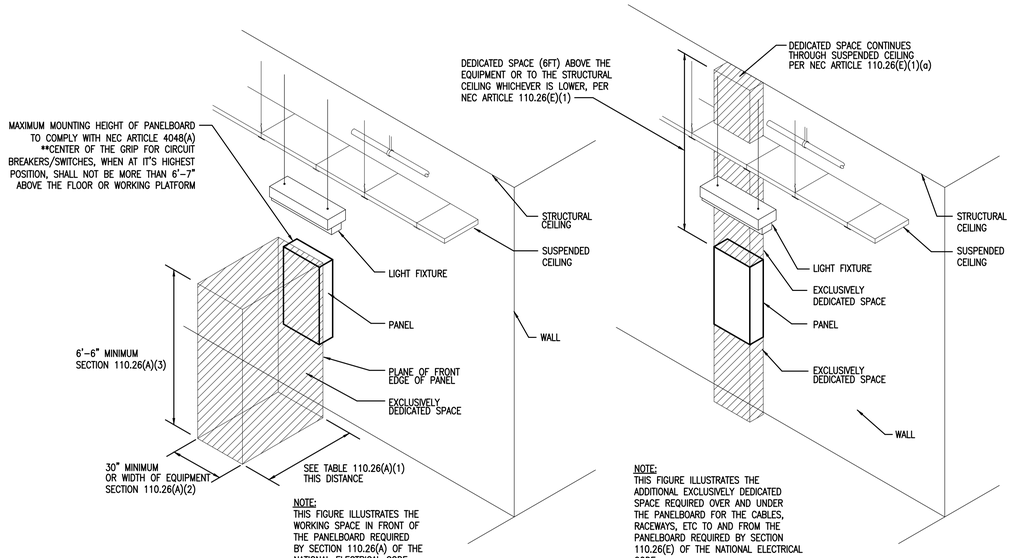
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IFB

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MBE0.1 ELECTRICAL SCHEDULES

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NOTE:
THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE PANELBOARD REQUIRED BY SECTION 110.26(A) OF THE NATIONAL ELECTRICAL CODE

NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE PANELBOARD FOR THE CABLES, RACEWAYS, ETC TO AND FROM THE PANELBOARD REQUIRED BY SECTION 110.26(E) OF THE NATIONAL ELECTRICAL CODE

TABLE 110.26(A)(1) WORKING CLEARANCES

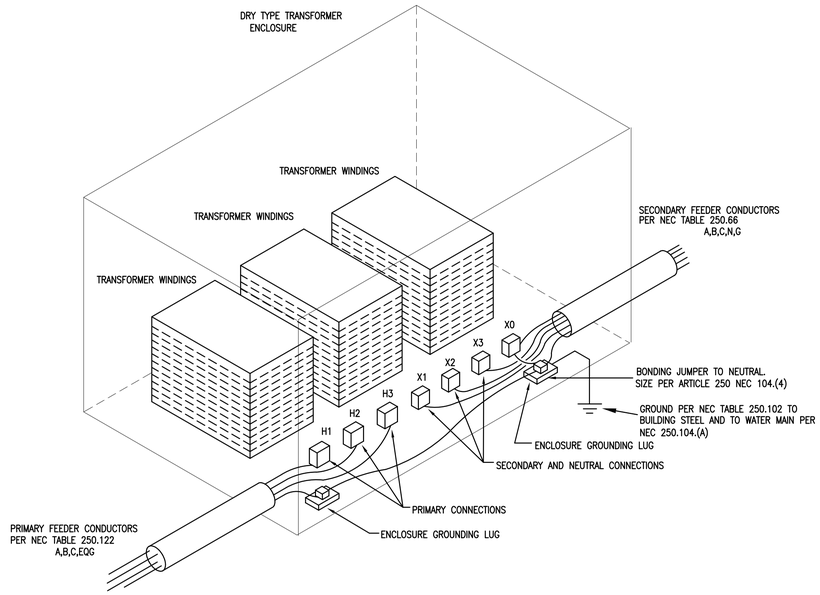
VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET) CONDITION: 1	2	3
0–150	3	3	3
151–600	3	3 1/2	4
600–1000	3	4	5

WHERE THE "CONDITIONS" ARE AS FOLLOWS:
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS INSULATED WIRE OR INSULATE BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
2. 2 EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. 3 EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

NOTES:
NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN ABOVE

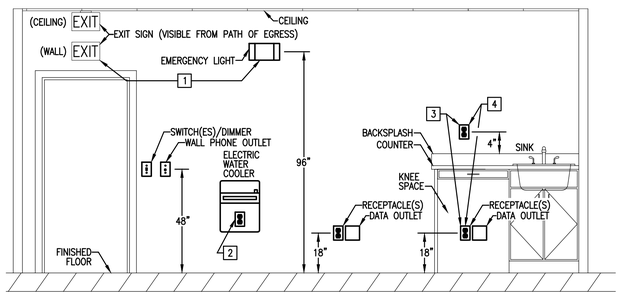
ELECTRICAL EQUIPMENT WORK SPACE REQUIREMENTS DETAIL PER NEC 110.26(A)

NO SCALE



DRY TRANSFORMER GROUNDING DETAIL

NOT TO SCALE ED-016

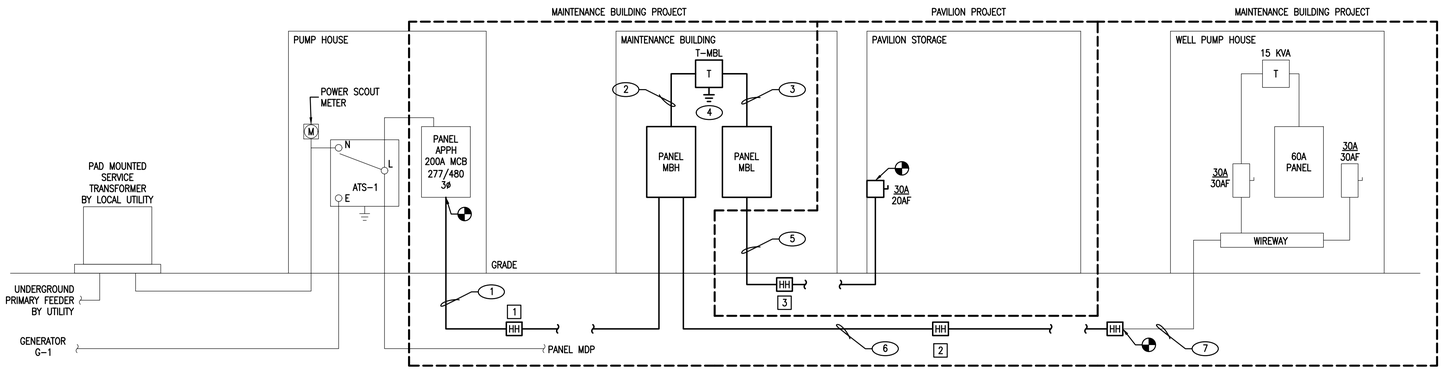


ELECTRICAL DEVICE INSTALLATION DETAIL 5 6

NO SCALE ED-012

ELECTRICAL DEVICE INSTALLATION DETAIL NOTES

1. ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
2. RECEPTACLE SHALL BE GFCI TYPE. COORDINATE LOCATION WITH PLUMBING CONTRACTOR.
3. COORDINATE ALL RECEPTACLE LOCATIONS NEAR MILLWORK WITH MILLWORK BEFORE ROUGH IN.
4. ALL RECEPTACLES WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE.
5. RECEPTACLE LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS.
6. ALL MOUNTING HEIGHTS GIVEN ARE TO CENTER OF DEVICE. UNLESS NOTED OTHERWISE.



POWER RISER DIAGRAM (PARTIAL)

NO SCALE

POWER RISER DIAGRAM NOTES

1. PROVIDE HANDHOLE. SEE SITE PLAN. COORDINATE LOCATION WITH ENGINEER. PROVIDE LABEL INDICATING: "MAINTENANCE BUILDING POWER SERVICE".
2. PROVIDE HANDHOLE. SEE SITE PLAN. COORDINATE LOCATION WITH ENGINEER. PROVIDE LABEL INDICATING: "WELL PUMP HOUSE BUILDING POWER SERVICE".
3. PROVIDE HANDHOLE. SEE SITE PLAN. COORDINATE LOCATION WITH ENGINEER. PROVIDE LABEL INDICATING: "PAVILION BUILDING POWER SERVICE".

TRANSFORMER SCHEDULE

MARK	RATING (KVA)	480V PRIMARY (DELTA) 3ø, 3 WIRE: RATING (AMPS)	PRIMARY FEEDERS	MOCP (AMPS)	120/208V SECONDARY (Y) 3ø, 4 WIRE: RATING (AMPS)	SECONDARY FEEDERS	MOCP (AMPS)	GROUNDING ELECTRODE CONDUCTOR
T-MBL	15	18	3#12, 1#12G IN 3/4" CONDUIT	20	41.6	4#8, 1#8G IN 3/4" CONDUIT	45	1#8G IN 3/4" CONDUIT

NOTES: FEEDER SIZED FOR NO MORE THAN 100 FEET.

FEEDER SCHEDULE

MARK	TYPE	DESCRIPTION	RATING (AMPS)
1	FEEDER (1000 FT)	4#1/0, 1#3G IN 2" CONDUIT	80
2	FEEDER	SEE TRANSFORMER SCHEDULE	–
3	FEEDER	SEE TRANSFORMER SCHEDULE	–
4	GROUND	SEE TRANSFORMER SCHEDULE	–
5	FEEDER (300 FT)	3#6, 1#6G IN 1" CONDUIT	20
6	FEEDER (250 FT)	4#6, 1#6G IN 1" CONDUIT	30
7	EXISTING FEEDER	4#6, 1#10G IN 1" CONDUIT	30

REVISIONS
1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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NC LICENSE NO. 0407000711

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Consultants

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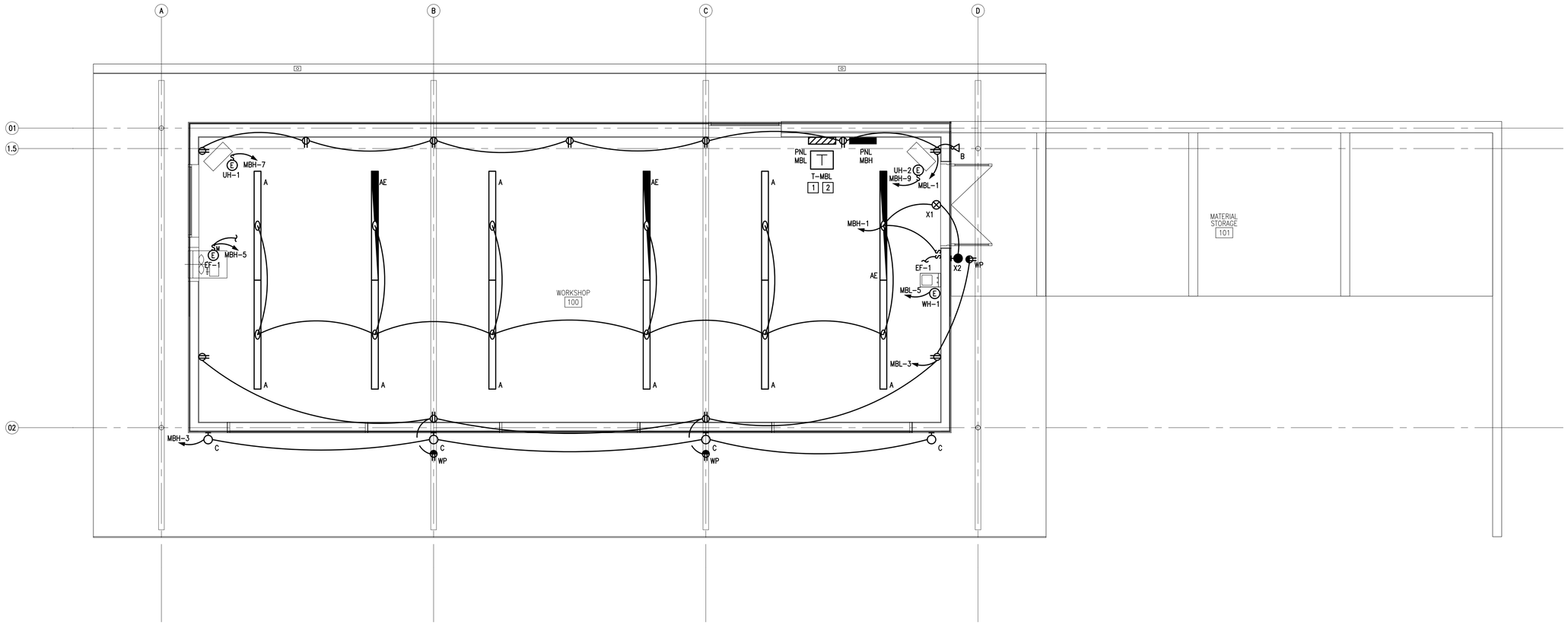
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MBE0.2 ELECTRICAL DETAILS

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LYSAGHT & ASSOCIATES
Landscape/Civil
Structural
PME/FIRE
Cost Estimation
consultants

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ELECTRICAL FLOOR PLAN – MAINTENANCE BUILDING – NEW WORK

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

NEW WORK NOTES

1. PROVIDE ALL REQUIRED MATERIALS TO MOUNT TRANSFORMER ABOVE PANEL.
2. COORDINATE LOCATION OF PANELS AND TRANSFORMER WITH PLUMBING CONTRACTOR AND ENGINEER PRIOR TO BEGINNING ANY WORK.

LIGHT FIXTURE SCHEDULE ②③⑦

TYPE	MANUFACTURER	CATALOG NO.	LAMPS NO.	LAMPS TYPE	VOLTAGE	WATTS FIXTURE	BALLAST NO.	BALLAST TYPE	MOUNTING	DESCRIPTION	NOTES
A	LITHONIA ⚠1	TZL1D-L96--10000LM-FST-MVOLT-35K-80CRI-LBOZU-WH-ZACVHM100	–	LED	277	38	–	–	SUSPENDED	8' STRIP LIGHT W/OCCUPANCY SENSOR	④
AE											①④
B	WAC	WS-W230302-30-1085X2-BZ	–	LED	120	10	–	–	WALL	EXTERIOR SPOT LIGHT	⑤⑥
C	BEGA	B66698-K4-BRZ	–	LED	277	13	–	–	WALL	EXTERIOR WALL LIGHT	⑤⑥
X1	CHLORIDE	ER46LIWR	–	LED	277	–	–	–	UNIVERSAL	EXIT LIGHT	
X2	LITHONIA	WDGE1-LED-P0-40K-80CRI-VF-MVOLT-E4WH-DDBXD	–	LED	277	3	–	–	WALL	EGRESS ONLY LIGHT	⑤

NOTES:

1. PROVIDE EMERGENCY BATTERY PACK WHERE INDICATED ON PLANS.
2. LIGHT FIXTURE SUBSTITUTIONS WILL BE CONSIDERED DURING THE BIDDING PHASE UNTIL SEVEN (7) DAYS PRIOR TO THE RECEIPT OF BIDS. NO SUBSTITUTIONS WILL BE CONSIDERED AFTER SEVEN (7) DAYS PRIOR TO THE RECEIPT OF BIDS. SEE INSTRUCTION TO BIDDERS, PARAGRAPH 4, SUBSTITUTIONS.
3. PROVIDE ALL REQUIRED MOUNTING MATERIALS AND ACCESSORIES TO MOUNT FIXTURE AT HEIGHT INDICATED. COORDINATE HEIGHT WITH ARCHITECT AND ENGINEER.
4. MOUNT FIXTURE 9'-6" ABOVE FINISHED FLOOR.
5. MOUNT FIXTURE 7'-6" ABOVE FINISHED GRADE.
6. PROVIDE WITH PHOTOCELL.
7. COORDINATE ALL LIGHT FIXTURE LOCATIONS AND CONTROLS WITH ARCHITECT AND ENGINEER IN FIELD.

REVISIONS

⚠ 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

GRAPHIC SCALE

1/4" = 1'-0"

2' 0 2' 4' 8'

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HDM#25008 09/24/26

MBE1.0 ELECTRICAL FLOOR PLAN – MAINTENANCE BUILDING – NEW WORK

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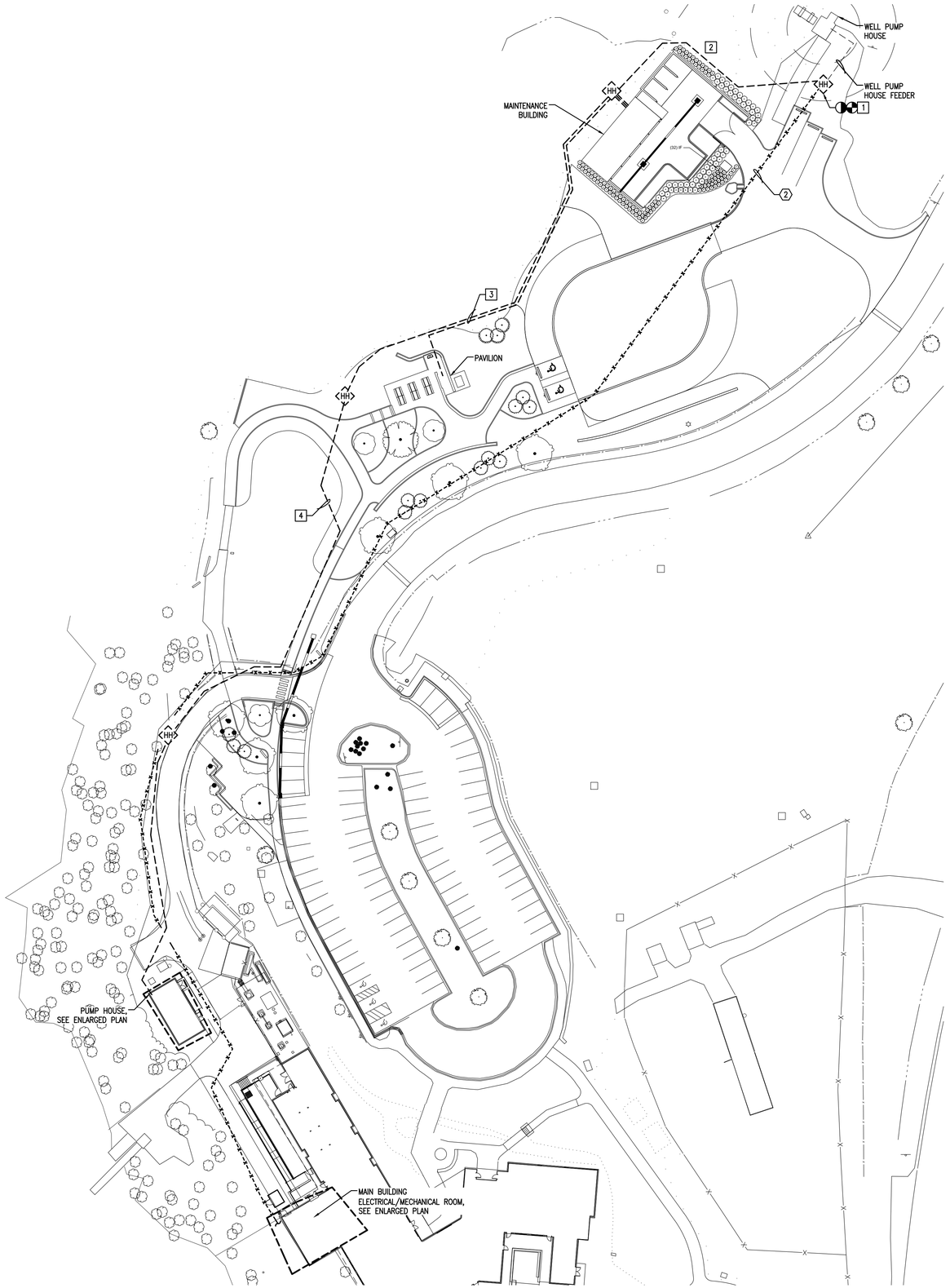
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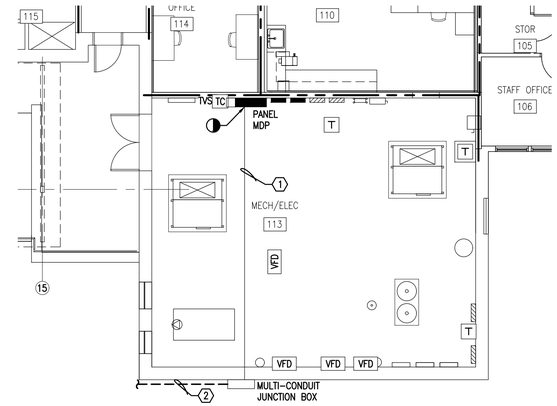
Consultants
Landscape/Civil KIMLEY-HORN & ASSOCIATES, INC.
Structural LYSAGHT & ASSOCIATES
PME/FIRE HDM ASSOCIATES, INC.
Cost Estimation LYSAGHT & ASSOCIATES

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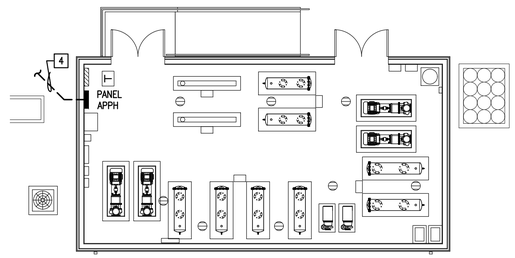
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ELECTRICAL SITE PLAN
SCALE: 1/4" = 1'-0"



ELECTRICAL ENLARGED PLAN – MAIN BUILDING ELECTRICAL/MECHANICAL ROOM
SCALE: 1/8" = 1'-0"



ELECTRICAL ENLARGED PLAN – PUMP HOUSE
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES

1. DISCONNECT WELL PUMP HOUSE FEEDER FROM PANEL MDP AND REMOVE FEEDER BACK TO POINT INDICATED ON SITE PLAN. BREAKER IN PANEL SHALL BECOME SPARE. CONDUIT EXISTING TO REMAIN.
2. REMOVE WELL PUMP HOUSE FEEDER WITH ASSOCIATED UNDERGROUND CONDUIT BACK TO POINT INDICATED.

NEW WORK NOTES

1. INTERCEPT EXISTING WELL PUMP HOUSE FEEDER AND PROVIDE HANDHOLE (TYPE 2) AT POINT OF INTERSECTION.
2. APPROXIMATE ROUTING OF NEW FEEDER FOR WELL PUMP HOUSE TO BE CONNECTED TO EXISTING FEEDER IN HANDHOLE. SEE RISER DIAGRAM.
3. APPROXIMATE ROUTING OF FEEDER AND HANDHOLES (TYPE 1) FOR PAVILION. SEE RISER DIAGRAM.
4. APPROXIMATE ROUTING OF FEEDER AND HANDHOLES (TYPE 1) MAINTENANCE BUILDING. SEE RISER DIAGRAM.

NOTE:
* ALL EXISTING FEEDERS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE FIELD INVESTIGATION RESULTS AND THESE DRAWINGS.

NOTE:
* COORDINATE NEW HANDHOLES AND FEEDER ROUTINGS WITH ENGINEER PRIOR TO BEGINNING ANY WORK.

NOTE:
* FOR UNDERGROUND ELECTRICAL FEEDERS, THE MINIMUM COVER IS 24". PROVIDE UNDERGROUND DETECTABLE WARNING TABLE OVER EACH FEEDER AT 6". INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

GRAPHIC SCALE
1/8" = 1'-0" 4' 0 4' 8' 16'

GRAPHIC SCALE
1" = 40' 40' 20' 0 20' 40' 80'

REVISIONS
1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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VA LICENSE NO. 0407030711

REGISTERED PROFESSIONAL ENGINEER SEAL 18043 RICHARD DAVIS

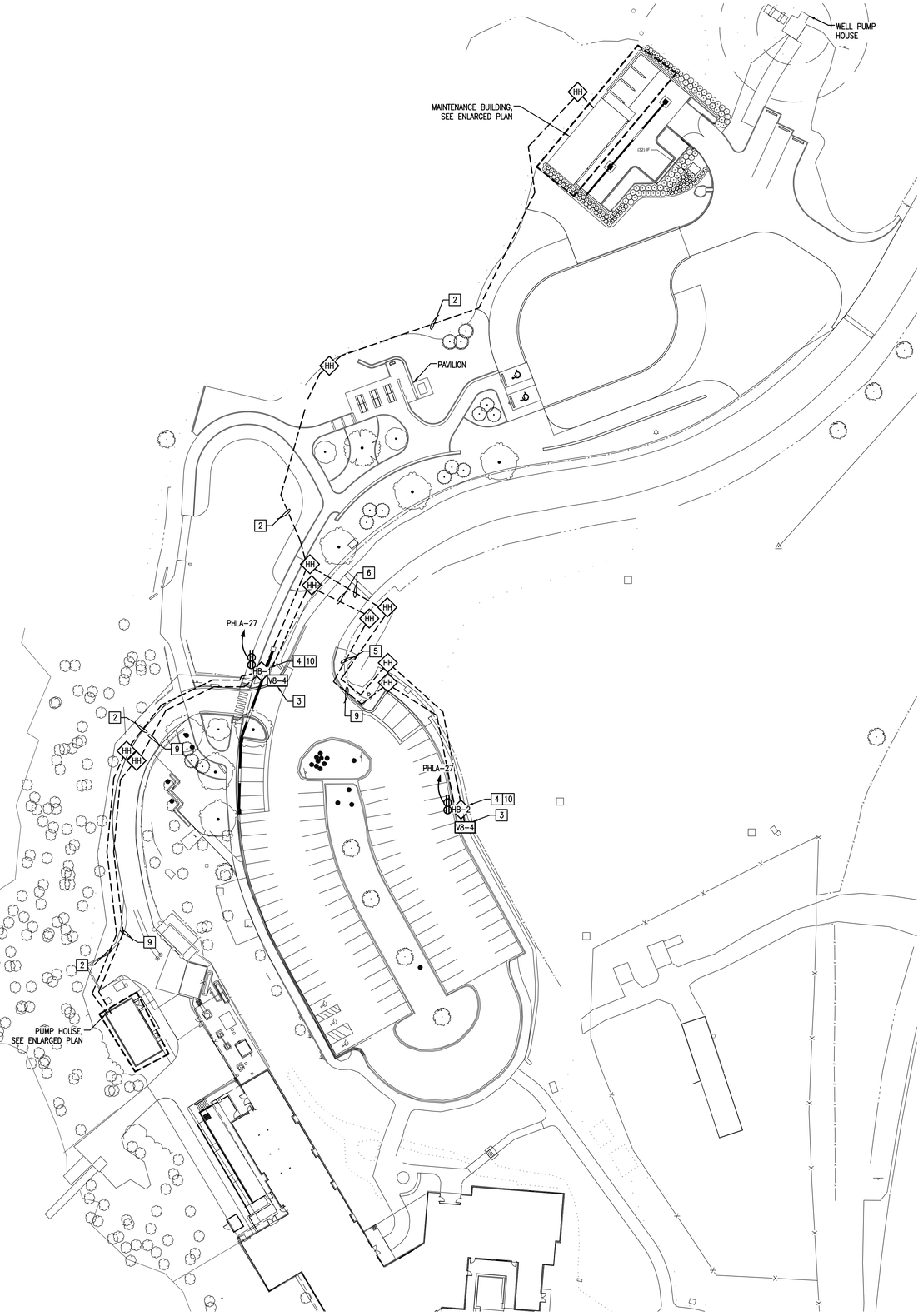
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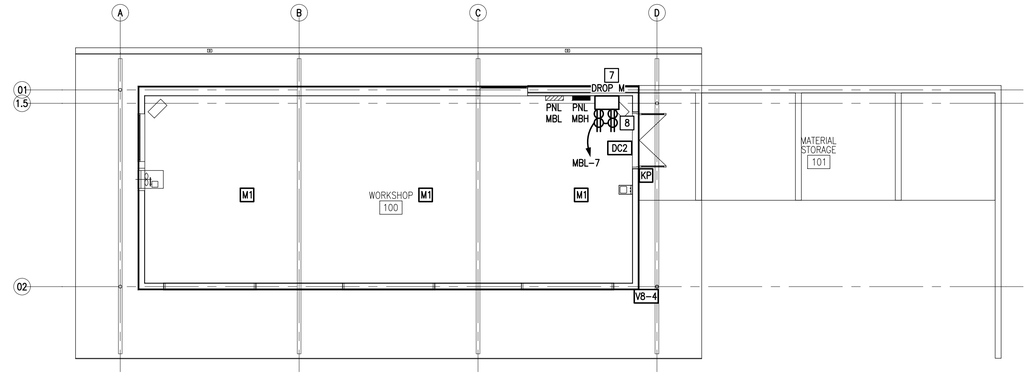
MBE2.0 | ELECTRICAL SITE PLAN | HISTORIC YATES MILL COUNTY PARK, 4620 LAKE WHEELER RD, RALEIGH, NC 27603 | 10 01 26, scale as noted | IFB | Consultants

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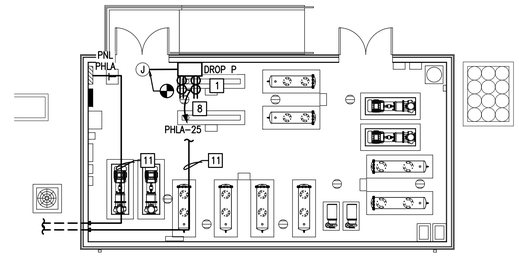
ELECTRICAL SITE PLAN – SECURITY INFRASTRUCTURE

SCALE: 1" = 40'-0"



ELECTRICAL ENLARGED FLOOR PLAN – MAINTENANCE BUILDING – SECURITY INFRASTRUCTURE

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



ELECTRICAL ENLARGED PLAN – PUMP HOUSE – SECURITY INFRASTRUCTURE

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

NEW WORK NOTES

1. APPROXIMATE LOCATION OF SECURITY DROP P (PUMP HOUSE). PROVIDE 1" CONDUIT WITH PULLWIRE FROM EXISTING DOOR CONTACTOR JUNCTION BOX TO SECURITY DROP. SEE DETAIL.
2. APPROXIMATE ROUTING OF 1 1/2" CONDUIT WITH PULLWIRE AND HANDHOLES (TYPE 1) FROM PUMP HOUSE TO MAINTENANCE BUILDING. LABEL HANDHOLE AS 'SECURITY FIBER'. ROUTING SHALL RUN PARALLEL TO ELECTRICAL SERVICE FEEDERS.
3. APPROXIMATE LOCATION OF POLE MOUNTED CAMERA. PROVIDE CONDUIT WITH PULLWIRE FROM ENCLOSURE TO CAMERA. SEE DETAIL.
4. PROVIDE ABOVE GROUND ENCLOSURE FOR ADJACENT POLE MOUNTED CAMERA. PROVIDE RECEPTALCE MOUNTED IN ENCLOSURE. SEE DETAIL.
5. APPROXIMATE ROUTING OF 1 1/2" CONDUIT WITH PULLWIRE AND HANDHOLES (TYPE 1) FROM PUMP HOUSE TO SECURITY ENCLOSURE. LABEL HANDHOLE AS 'SECURITY FIBER'.
6. ROUTE CONDUIT THRU EXISTING 4" CONDUIT SLEEVE UNDER ROAD.
7. APPROXIMATE LOCATION OF SECURITY DROP M (PUMP HOUSE). SEE DETAIL.
8. MOUNT RECEPTACLES IN ENCLOSURE. SEE DETAIL. COORDINATE WITH SECURITY CONTRACTOR.
9. APPROXIMATE ROUTING OF BRANCH CIRCUIT IN 1" CONDUIT AND HANDHOLES (TYPE 1) FROM PUMP HOUSE TO EXTERIOR SECURITY ENCLOSURES. LABEL HANDHOLE AS 'SECURITY POWER'. ROUTING SHALL RUN PARALLEL TO ELECTRICAL SERVICE FEEDERS AND SECURITY FIBER CONDUITS.
10. PROVIDE UNISTRUT SUPPORT RACK WITH ASSOCIATED CONCRETE BASE AND ACCESSORIES. SIZE AS REQUIRED TO SUPPORT EQUIPMENT INDICATED. SEE DETAIL. COORDINATE WITH ENGINEER.
11. ROUTE CONDUIT AS HIGH AS POSSIBLE ALONG STRUCTURE ABOVE, THEN DOWN WALL TO BELOW GRADE.

LEGEND (CONTINUED)

KP	KEY PAD. SEE DETAIL.
DROP	SECURITY DROP. SEE DETAIL.
M#	MOTION DETECTOR. SEE DETAIL.
DC#	DOOR CONTACT. SEE DETAIL.
V#	CAMERA. SEE DETAIL.

NOTE:
* FOR UNDERGROUND SECURITY CONDUIT, THE MINIMUM COVER IS 18". PROVIDE UNDERGROUND DETECTABLE WARNING TABLE OVER EACH FEEDER AT 6". INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

NOTE:
* COORDINATE ALL DEVICE AND EQUIPMENT LOCATION AND REQUIREMENTS WITH ARCHITECTURAL SHEETS, ENGINEER, SECURITY CONTRACTOR/CONSULTANT AND SECURITY CONSTRUCTION DOCUMENTS PRIOR TO BEGINNING ANY WORK.

NOTE:
* ALL EXISTING FEEDERS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE FIELD INVESTIGATION RESULTS AND THESE DRAWINGS.

NOTE:
* COORDINATE NEW HANDHOLES AND ROUTINGS WITH ENGINEER IN FIELD PRIOR TO BEGINNING ANY WORK.

GRAPHIC SCALE

1/8" = 1'-0" 4' 0 4' 8' 16'

GRAPHIC SCALE

1" = 40' 40' 20' 0 20' 40' 80'

REVISIONS

1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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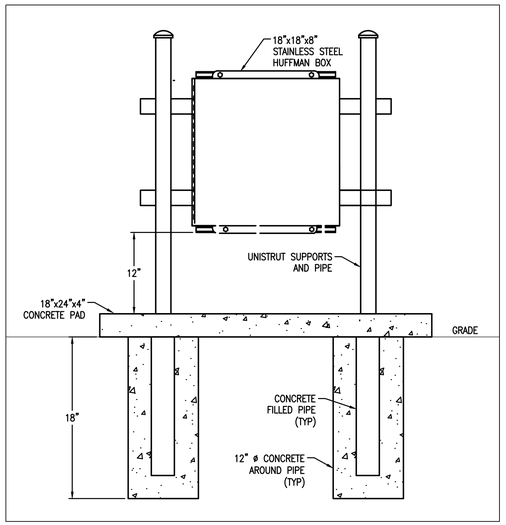
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MBE3.0 ELECTRICAL SITE PLAN HISTORIC YATES MILL COUNTY PARK, 4620 LAKE WHEELER RD, RALEIGH, NC 27603 10 01 26, scale as noted IFB

Consultants
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Structural — LYSAGHT & ASSOCIATES
PME/FIRE — HDM ASSOCIATES, INC.
Cost Estimation — LYSAGHT & ASSOCIATES

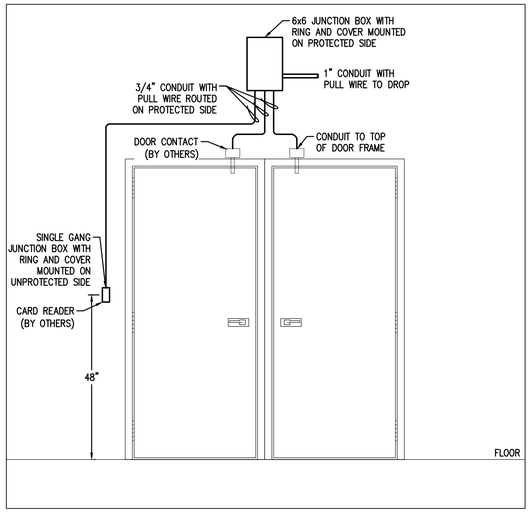
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UNISTRUT SUPPORT FOR ENCLOSURE DETAIL HB-1 HB-2

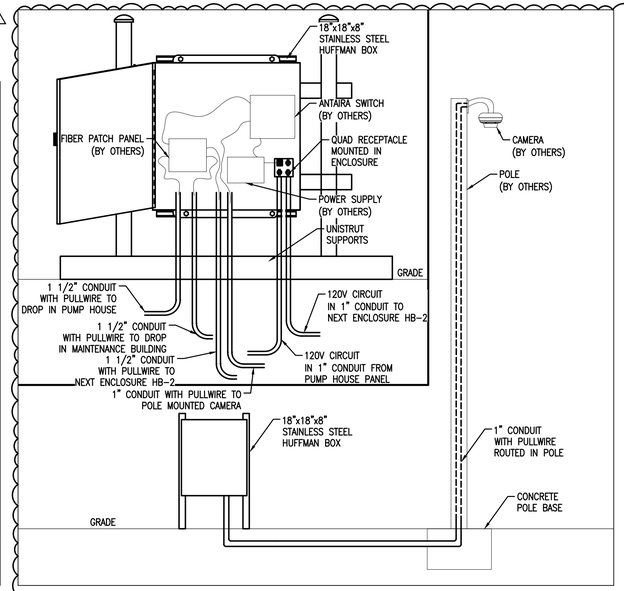
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DOUBLE DOOR CONTACT DETAIL W/KEYPAD DC2 KP

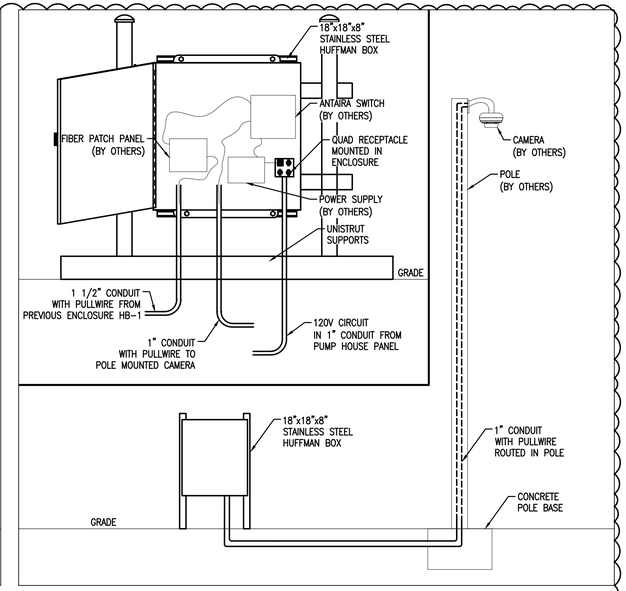
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* TYPICAL DETAIL LAYOUT. COORDINATE EXACT DOOR TYPE AND INSTALLATION REQUIREMENTS WITH ARCHITECT.



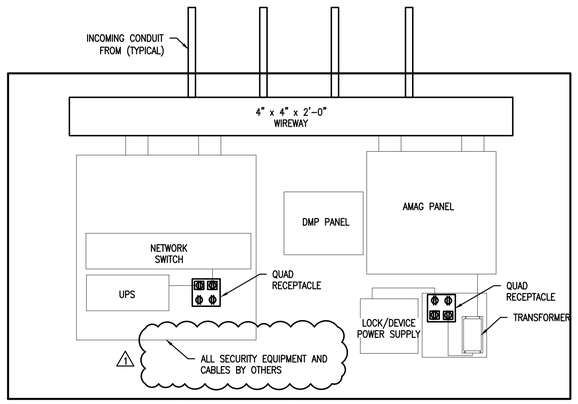
POLE MOUNTED CAMERA WITH ENCLOSURE DETAIL V8-4 HB-1

NO SCALE



POLE MOUNTED CAMERA WITH ENCLOSURE DETAIL V8-4 HB-2

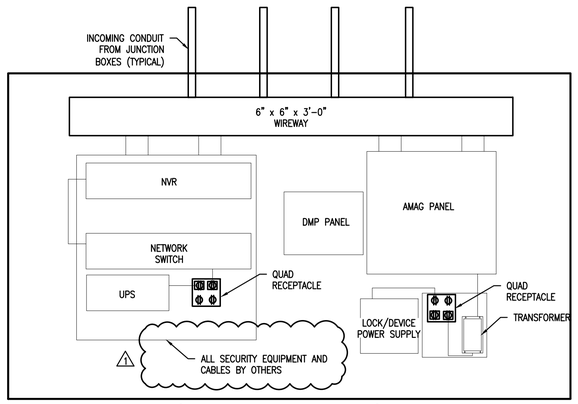
NO SCALE



SECURITY DROP P (PUMP HOUSE) DETAIL

NO SCALE

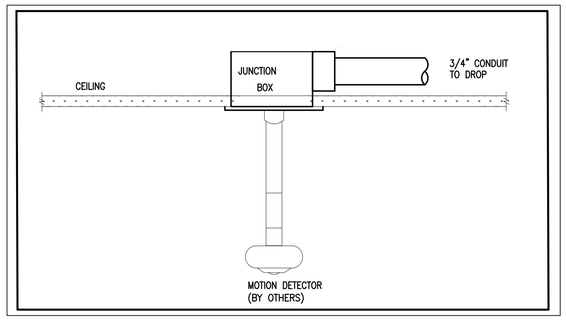
* TYPICAL DETAIL LAYOUT. COORDINATE EXACT LAYOUT AND INSTALLATION REQUIREMENTS WITH SECURITY CONTRACTOR.



SECURITY DROP M (MAINTENANCE BUILDING) DETAIL

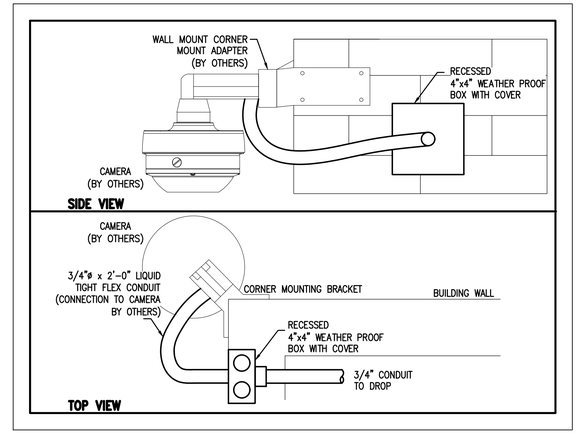
NO SCALE

* TYPICAL DETAIL LAYOUT. COORDINATE EXACT LAYOUT AND INSTALLATION REQUIREMENTS WITH SECURITY CONTRACTOR.



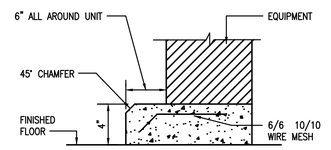
MOTION DETECTOR DETAIL M1

NO SCALE



CORNER BRACKET CAMERA DETAIL V8-4

NO SCALE



EQUIPMENT PAD DETAIL

NO SCALE

NOTE:

* COORDINATE ALL DEVICE AND EQUIPMENT LOCATION AND REQUIREMENTS WITH ARCHITECT, ENGINEER, SECURITY CONTRACTOR/CONSULTANT AND SECURITY CONSTRUCTION DOCUMENTS PRIOR TO BEGINNING ANY WORK.

REVISIONS

1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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09/24/26

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Structural LYSAGHT & ASSOCIATES
PME/FIRE HDM ASSOCIATES, INC.
Cost Estimation LYSAGHT & ASSOCIATES

IFB

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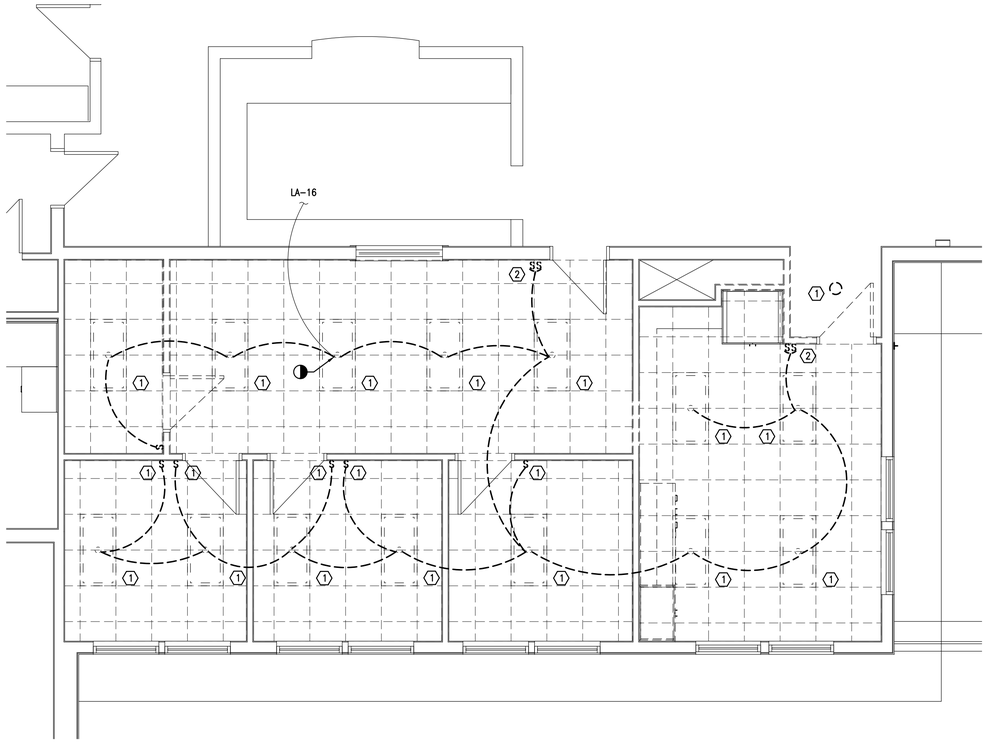
scale as noted

HISTORIC YATES MILL COUNTY PARK
4620 LAKE WHEELER RD
RALEIGH, NC 27603

ELECTRICAL DETAILS

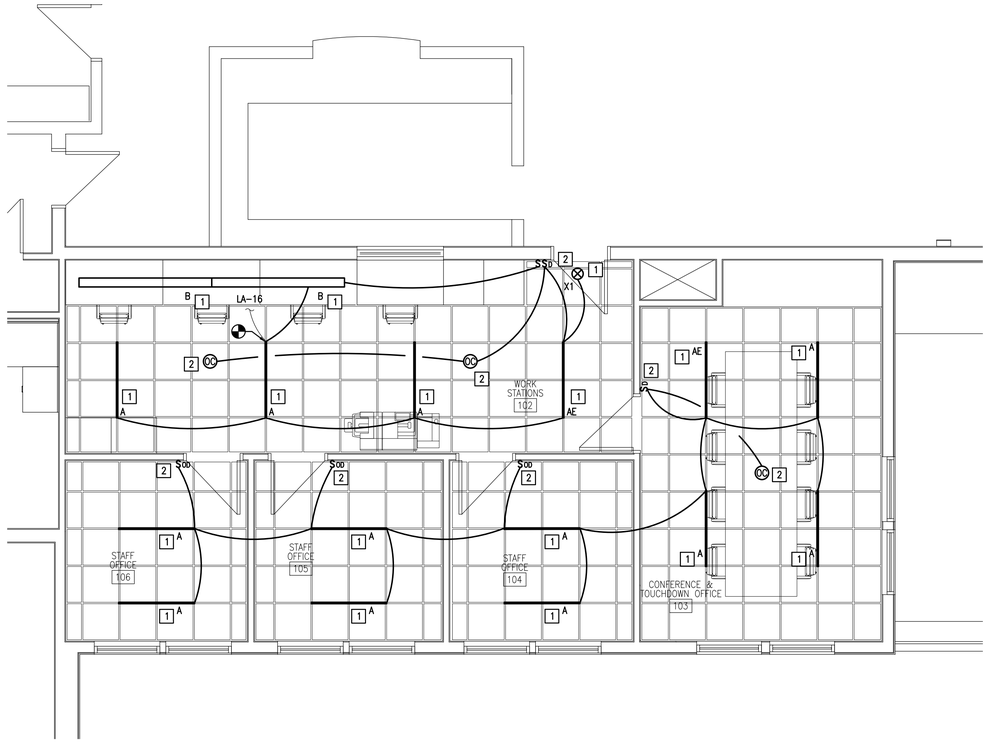
MBE3.1

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ELECTRICAL FLOOR PLAN – VISITOR'S CENTER – LIGHTING – DEMOLITION

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



ELECTRICAL FLOOR PLAN – VISITOR'S CENTER – LIGHTING – NEW WORK

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

DEMOLITION NOTES

1. REMOVE LIGHT FIXTURE WITH ASSOCIATED CONDUIT AND WIRING BACK TO NEAREST JUNCTION BOX. MAINTAIN EXISTING CIRCUIT FOR ADJACENT FIXTURES TO REMAIN.
2. REMOVE SWITCH WITH ASSOCIATED DEVICE BOX, CONDUIT AND WIRING BACK TO SOURCE.

NEW WORK NOTES

1. PROVIDE LIGHT FIXTURE WITH CONDUIT AND WIRING AS SHOWN. CONNECT TO CIRCUIT INDICATED.
2. PROVIDE SWITCH WITH DEVICE BOX, CONDUIT AND WIRING AS SHOWN. CONNECT TO FIXTURES INDICATED.

LIGHT FIXTURE SCHEDULE (2)(3)

TYPE	MANUFACTURER	CATALOG NO.	LAMPS NO.	LAMPS TYPE	VOLTAGE	WATTS FIXTURE	BALLAST NO.	BALLAST TYPE	MOUNTING	DESCRIPTION	NOTES
A	INTER LUX	WG-20LRR-RGT9-S-48-M-935-D010-OD-W	–	LED	277	24	–	–	RECESSED	4" LINEAR RECESSED	
AE											(1)
B	LLI	LLI-ANG-W-W-1.5W--35K-94IN	–	LED	277	11	–	–	SURFACE	94" UNDERCOUNTER STRIP TAPE LIGHT	
X1	CHLORIDE	ER46LIWR	–	LED	277	3	–	–	UNIVERSAL	EXIT LIGHT	

NOTES:

1. PROVIDE EMERGENCY BATTERY PACK WHERE INDICATED ON PLANS.
2. LIGHT FIXTURE SUBSTITUTIONS WILL BE CONSIDERED DURING THE BIDDING PHASE UNTIL SEVEN (7) DAYS PRIOR TO THE RECEIPT OF BIDS. NO SUBSTITUTIONS WILL BE CONSIDERED AFTER SEVEN (7) DAYS PRIOR TO THE RECEIPT OF BIDS. SEE INSTRUCTION TO BIDDERS, PARAGRAPH 4, SUBSTITUTIONS.
3. PROVIDE ALL REQUIRED MOUNTING MATERIALS AND ACCESSORIES TO MOUNT FIXTURE AS INDICATED. COORDINATE LOCATIONS WITH ARCHITECT AND ENGINEER.

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ☐ Performance ■ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive

Lighting schedule (each fixture type) See Drawing
lamp type required in fixture See Drawing
number of lamps in fixture See Drawing
ballast type used in the fixture See Drawing
number of ballasts in fixture See Drawing
total wattage per fixture See Drawing
total interior wattage specified vs. allowed (whole building or space by space)
specified: 312 watts, allowed: 841 watts
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

☐C406.2 More Efficient HVAC Equipment Performance
■C406.3 Reduced Lighting Power Density
☐C406.4 Enhanced Digital Lighting Controls
☐C406.5 On-Site Renewable Energy
☐C406.6 Dedicated Outdoor Air System
☐C406.7 Reduced Energy Use in Service Water Heating

LEGEND

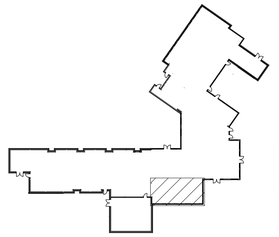
LEGEND NOTES:

1. ALL DARK AND DASHED SYMBOLS INDICATE EQUIPMENT AND/OR DEVICES TO BE REMOVED OR LOCATED UNDERGROUND AS NOTED.
2. ALL DARK AND SOLID SYMBOLS INDICATE NEW EQUIPMENT AND/OR DEVICES TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. ALL LIGHT AND SOLID SYMBOLS INDICATE EQUIPMENT AND/OR DEVICES THAT ARE EXISTING TO REMAIN.
4. CAPITAL LETTER BESIDE FIXTURE SYMBOL DENOTES FIXTURE TYPE WITH REFERENCE TO FIXTURE SCHEDULE.
5. MOUNTING HEIGHTS GIVEN BELOW SHALL BE FOLLOWED UNLESS NOTED ON THE FLOOR PLANS, SCHEDULES OR SHOWN DIFFERENT IN THE ARCHITECTURAL ELEVATIONS. ALL HEIGHTS ARE TO CENTER OF THE DEVICE.

- CEILING MOUNTED LIGHTING FIXTURE. SEE LIGHT FIXTURE SCHEDULE.
- EXIT LIGHT, ARROW INDICATES DIRECTION, TWO ARROWS INDICATE DOUBLE FACE. CONNECT AHEAD OF SWITCH.
- LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK. THE EMERGENCY BATTERY PACK SHALL BE CONNECTED AHEAD OF SWITCH. SEE LIGHT FIXTURE SCHEDULE.
- S — SINGLE POLE SWITCH, 20A, 48" AFF.
- S_O — SINGLE POLE OCCUPANCY SENSING SWITCH, 20A, 48" AFF.
- S_D — DIMMER SWITCH, 20A, 0-10V, DUAL VOLTAGE, 48" AFF.
- S_{OD} — DIMMER/OCCUPANCY SWITCH, 20A, 0-10V, DUAL VOLTAGE, 48" AFF.
- OC — CEILING MOUNTED OCCUPANCY SENSOR
- DUPLEX RECEPTACLE, 20A, 125 VOLTS, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER PLATE. MOUNT 18" AFF EXCEPT AS NOTED.
- TWO DUPLEX RECEPTACLES, 20A, 125 VOLTS, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH DOUBLE GANG RING AND COVER PLATE. MOUNT 18" AFF EXCEPT AS NOTED.
- FLUSH FLOOR BOX WITH HINGED COVER PLATE, DIVIDED COMPARTMENTS FOR SHARED ACCESS WITH QUAD RECEPTACLE, 20A, 125 VOLTS, 3 WIRE, GROUNDING TYPE AND VOICE/DATA OUTLET. SEE DETAIL. (1)
- WALL VOICE/DATA OUTLET, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER PLATE. MOUNT 18" AFF EXCEPT AS NOTED. PROVIDE 1" CONDUIT WITH PULLWIRE TO ABOVE CEILING.
- POINT OF DEMOLITION LIMIT
- POINT OF CONNECTION
- REVISION DESIGNATION
- DEMOLITION NOTE DESIGNATION
- NEW WORK NOTE DESIGNATION
- GENERAL NOTE
- BRANCH CIRCUIT (CONDUIT AND WIRE) RUN CONCEALED IN WALL OR ABOVE CEILING UNLESS NOTED OTHERWISE. WIRE SIZE #12 UNLESS NOTED OTHERWISE.
- L-1 — INDICATES CIRCUIT HOMERUN TO PANEL. LETTER & NUMBERS INDICATE PANEL DESIGNATION & CIRCUIT BREAKER NUMBER.

GENERAL COORDINATION NOTES

1. COORDINATE LOCATION AND REQUIREMENTS WITH OTHER TRADES PRIOR TO BEGINNING ANY WORK.
2. COORDINATE EXACT LOCATION AND REQUIREMENTS PRIOR TO BEGINNING ANY WORK. SEE ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.
3. COORDINATE POWER CONNECTION AND REQUIREMENTS WITH EQUIPMENT SUPPLIED.
4. COORDINATE DEVICE LOCATION WITH MILLWORK PRIOR TO ROUGH-IN.
5. COORDINATE EXACT LOCATION AND LIMITS OF DEMOLITION PRIOR TO BEGINNING ANY WORK.



KEY PLAN

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0"

2' 0 2' 4' 8'

REVISIONS

10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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09/24/26

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HDM ASSOCIATES, INC. — PME/FIRE
LYSAGHT & ASSOCIATES — Cost Estimation

IFB

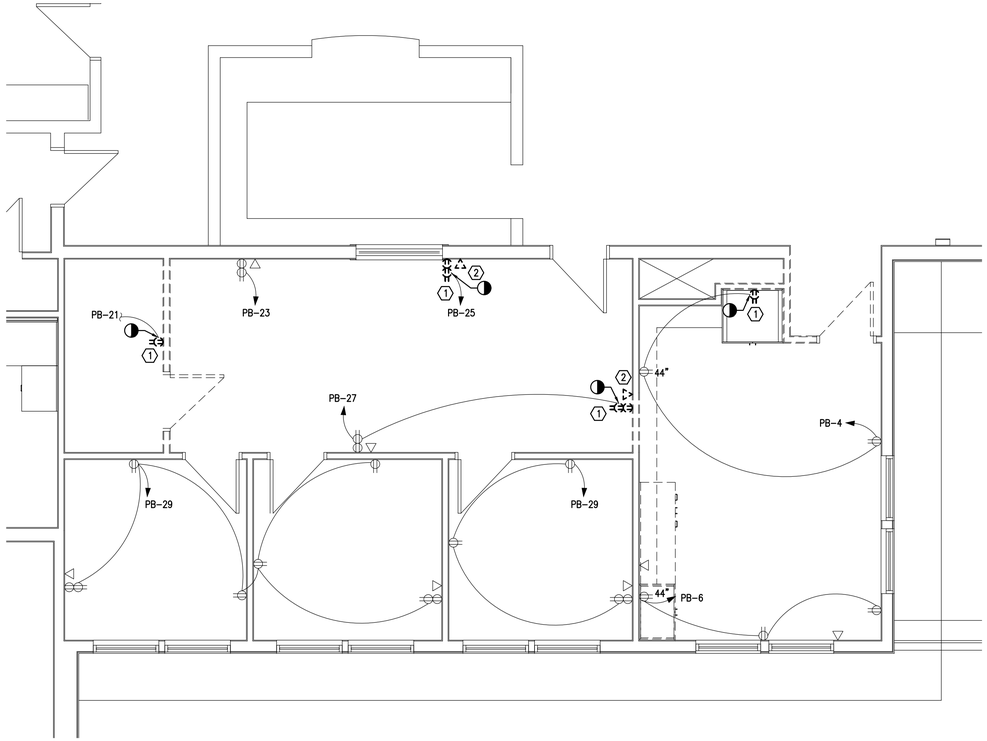
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scale as noted

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VCE1.0

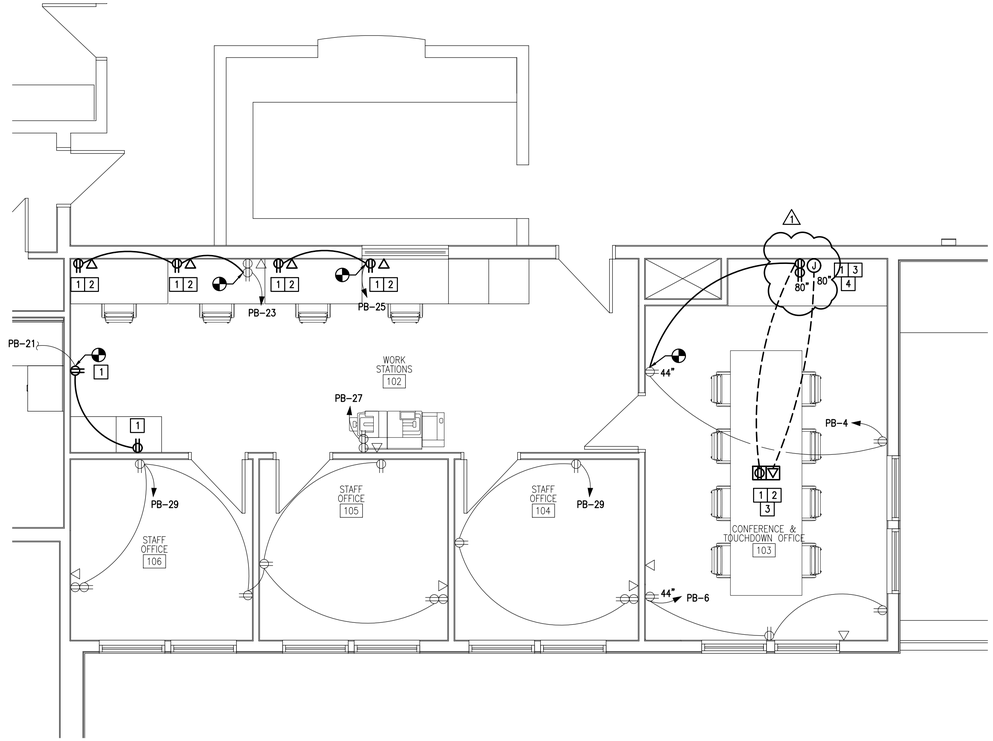
ELECTRICAL FLOOR PLAN – VISITOR'S CENTER

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ELECTRICAL FLOOR PLAN – VISITOR'S CENTER – POWER – DEMOLITION

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

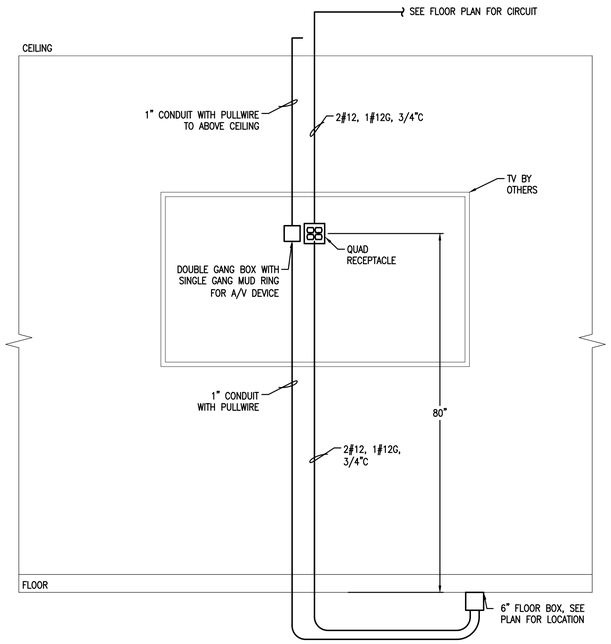


ELECTRICAL FLOOR PLAN – VISITOR'S CENTER – POWER – NEW WORK

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

DEMOLITION NOTES

1. REMOVE RECEPTACLE WITH ASSOCIATED DEVICE BOX, CONDUIT AND WIRING TO NEAREST JUNCTION BOX. MAINTAIN EXISTING CIRCUIT FOR ADJACENT DEVICES TO REMAIN.
2. REMOVE TELE/DATA OUTLET WITH ASSOCIATED CONDUIT AND WIRING TO SOURCE.

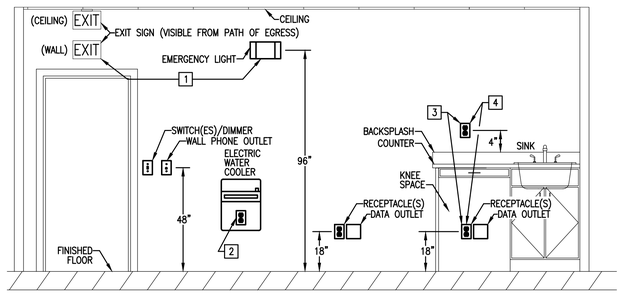


TYPICAL A/V DEVICE (FLOOR MOUNT) DETAIL

NO SCALE

NEW WORK NOTES

1. PROVIDE RECEPTACLE WITH DEVICE BOX, CONDUIT AND WIRING AS SHOWN. CONNECT TO CIRCUIT INDICATED.
2. PROVIDE TELE/DATA OUTLET WITH DEVICE BOX, CONDUIT AND PULL WIRE TO ABOVE ACCESSIBLE CEILING.
3. SEE A/V DETAIL FOR ADDITIONAL INFORMATION.
4. PROVIDE JUNCTION BOX WITH CONDUIT AND PULL WIRE TO ABOVE ACCESSIBLE CEILING. SEE A/V DETAIL.



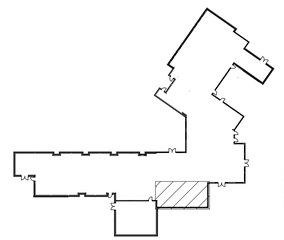
ELECTRICAL DEVICE INSTALLATION DETAIL [5] [6]

ED-012

NO SCALE

ELECTRICAL DEVICE INSTALLATION DETAIL NOTES

1. ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
2. RECEPTACLE SHALL BE GFCI TYPE. COORDINATE LOCATION WITH PLUMBING CONTRACTOR.
3. COORDINATE ALL RECEPTACLE LOCATIONS NEAR MILLWORK WITH MILLWORK BEFORE ROUGH IN.
4. ALL RECEPTACLES WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE.
5. RECEPTACLE LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS.
6. ALL MOUNTING HEIGHTS GIVEN ARE TO CENTER OF DEVICE. UNLESS NOTED OTHERWISE.



KEY PLAN

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0"

2' 0 2' 4' 8'

REVISIONS

1 10/22/26, ADDENDUM #1: SHEETS CHANGED: MEB0.1, MEB0.2, MEB1.0, MEB2.0, MEB3.0, MEB3.1, VCE1.0, VCE1.1

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Consultants

IFB

10 01 26
scale as noted

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ELECTRICAL FLOOR PLAN – VISITOR'S CENTER

VCE1.1

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Historic Yates Mill County Park Renovation

Project No. RFB #26-092

BID PROPOSAL FORM

(USE THIS FORM ONLY. Bids submitted on anything other than the form(s) provided may be considered non-responsive and subject to rejection)

SINGLE PRIME GENERAL CONSTRUCTION WORK
FORMAL CONTRACT

BIDDERS NAME

_____ License Number: _____

BASE BID PROPOSAL

The undersigned, as Bidder, hereby declares that the only person or persons interested in this Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a Bid or Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the specifications for the work and the Contract Documents relative thereto, including addenda, if any, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this Proposal is accepted to contract with the County of Wake with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and Contract Documents, for the sum of:

Base Bid _____
_____ Dollars ($_____).

SUBCONTRACTOR LISTING

PLUMBING CONTRACTOR

Name: _____ License Number: _____

$_____

HVAC CONTRACTOR

Name: _____ License Number: _____

$_____

ELECTRICAL CONTRACTOR

Name: _____ License Number: _____

$_____

(OTHER CONTRACTOR)

Name: _____ License Number: _____

$_____

(OTHER CONTRACTOR)

Name: _____ License Number: _____

$_____

(OTHER CONTRACTOR)

Name: _____ License Number: _____

$_____

(OTHER CONTRACTOR)

Name: _____ License Number: _____

$_____

ALTERNATES

Should any of the alternates as described in the specifications be accepted, the amount written below shall be the amount to "add to" of "deduct from" the Base Bid. If to be "deducted from" Base Bid, put minus sign (-) in parentheses at head of alternate and plus sign (+) in parentheses if to be added. Refer to Section 012300 for description of alternates.

Add Alternate No. 1 (+) Observation Deck, 2 Benches, 1 Trash Receptacle and Concrete Pad, and Overlook Binoculars Dollars ($_____)

Add Alternate No. 2 (+) Natural Surface Overlook Pad and 1 Wood Backless Bench_____ Dollars ($_____)

Add Alternate No. 3 (+) Reinforced Turf_____ Dollars ($_____)

UNIT PRICES

Unit prices are complete for labor, equipment, material, overhead and profit. Base bid includes the stipulated allowance quantity of each item. Unused amount will be credited to the Owner by change order at the end of the project.

Description	Unit Price	Unit Measure	Allowance Units
No. 1: Removal of unsatisfactory soil, debris, and plastic/elastic soil excavation and disposal off-site and replacement with satisfactory soil material from off-site.		CY	100
No. 2: Removal of unsatisfactory soil, debris, and plastic/elastic soil and replacement with satisfactory structural soil material on-site.		CY	100
No. 3: Mass rock removal and replacement with satisfactory soil material.		CY	100
No. 4: Trench rock removal and replacement with satisfactory soil material.		CY	100
No. 5: Mirafi 500X geotextile, or approved equal.		SY	200
No. 6: Landscape Boulders		EA	N/A
No. 7: Canopy Tree		EA	N/A
No. 8: Asphalt Surface Standard Duty, 3” S9.5B		SY	N/A
No. 9: Aggregate Base Course, 6” – Standard Duty Asphalt		SY	N/A
No. 10: Asphalt Surface Heavy Duty, 2” S9.5B		SY	N/A
No. 11: Asphalt Binder Heavy Duty, 4” I19.0B		SY	N/A
No. 12: Aggregate Base Course, 8” – Heavy Duty Asphalt		SY	N/A
No. 13: 4” Concrete Sidewalk		SY	N/A

No. 14: Heavy Duty Concrete, 6" Depth		SY	N/A
No. 15: Aggregate Base Course, 6" – Heavy Duty Concrete		SY	N/A
No. 16: Gravel Pave 2 – Reinforced ABC Gravel		SY	N/A
No. 17: Grass Pave 2 – Reinforced Turf		SY	N/A
No. 18: Standard Duty Exposed Aggregate Concrete		SY	N/A
No. 19: Heavy Duty Exposed Aggregate Concrete		SY	N/A
No. 20: 8' Ht. Polyoelfin Coated Chain Link Fence		LF	N/A
No. 21: Mobilization for Removal of Mass Rock or Trench Rock		LS	1

ALLOWANCES

Allowances indicated shall be included in the Total Base Bid Amount. Refer to Section 012100 for description of allowances.

A. Allowance No. 1: Include an allowance of 100 CY for removal of unsatisfactory soil, debris, and plastic/elastic soil excavation and disposal off-site and replacement with satisfactory soil material from off-site.
$_____

B. Allowance No. 2: Include an allowance of 100 CY for removal of unsatisfactory soil, debris, and plastic/elastic soil and replacement with satisfactory structural soil material on-site. $_____

C. Allowance No. 3: Include an allowance of 100 CY of mass rock removal and replacement with satisfactory soil material. $ _____

D. Allowance No. 4: Include 100 CY of trench rock removal and replacement with satisfactory soil material. $_____

E. Allowance No. 5: Include 200 SY of Mirafi 500X geotextile, or approved equal. $_____

F. Allowance No. 6: Include an allowance of $100,000 for use according to the Owner's written instructions.

G. Allowance No. 7: Include an allowance of $145,000 for installation of security equipment on-site.

H. Allowance No. 8: Include an allowance of $50,000 for security fiber optic and telecommunications cabling installation.

I. Allowance No. 9: Include an allowance of $10,000 for owner-preferred door hardware.

CERTIFICATION OF PROPOSER:

The Bidder further proposes and agrees hereby to commence work under his Contract on a date to be specified in a written order of Wake County and shall fully complete all work thereunder within the number of consecutive calendar days stipulated in the Supplementary General Conditions. Applicable liquidated damages shall be as stated in Supplementary General Conditions.

The undersigned acknowledges receipt of the following addenda issued during the time of bidding and includes the changes therein in this Proposal:

Addendum Number 1, Dated: **10/22/2026**

Addendum Number _____, Dated _____

Addendum Number _____, Dated _____

The undersigned agrees that this Proposal will not be withdrawn for a period of sixty (60) days.

The undersigned agrees to comply with the E-Verify requirements of the General Statutes of North Carolina, all contractors, including any subcontractors employed by the contractor(s), by submitting a bid, proposal or any other response, or by providing any material, equipment, supplies, services, etc., attest and affirm that they are aware and in full compliance with Article 2 of Chapter 64, (NCGS64-26(a)) relating to the E-Verify requirements.

The undersigned agrees not to discriminate in any manner on the basis of race, natural hair or hairstyles, ethnicity, creed, color, sex, pregnancy, marital or familial status, sexual orientation, gender identity or expression, national origin or ancestry, marital or familial status, pregnancy, National Guard or veteran status, religious belief or non-belief, age, or disability with reference to the subject matter of this Contract. The Parties agree to comply with the provisions and intent of Wake County Ordinance SL 2017-4. This anti-discrimination provision shall be binding on the successors and assigns of the Parties with reference to the subject matter of this Contract.

The undersigned further agrees that in the case of failure on his part to execute the said Contract and the Bond within ten (10) consecutive calendar days after written notice being given of the award of the Contract, the check, cash or Bid Bond accompanying this Bid shall be paid into the funds of Owner's Account set aside for this Project, as liquidated damages for such failure; otherwise the check, cash or Bid Bond accompanying this Proposal shall be returned to the undersigned.

Respectfully submitted this __ day of _____, 20__

PROPOSER SIGNATURE PAGE

_____
(Name of Firm or Corporation making Bid)

By: _____

WITNESS:

_____
(Proprietorship or Partnership)

Title: _____
(Owner, Partner, or Corporation President or Vice President only)



Address: _____
_____
_____

Affix Corporate Seal Above

License Number: _____

ATTEST:

By: _____

Title: _____
(Corporation Secretary or Assistant Secretary only)

Wake County Conduit and Box Color Chart

System	Junction Box & Cover	Conduit Color	Raceway Labels	Comments
120/208 V equipment	Galvanized	Galvanized		
277/480 V equipment	Black	Galvanized		
Emergency Systems	Green	Green		
Telephone Systems	Orange	Orange		
Data Systems	Brown	Orange		
Paging	White	Orange		
Fire Alarm Systems	Bright Red	Red	White	
TV Systems	Purple	Orange		
Audio Visual	Blue	Galvanized		
HVAC Controls	Galvanized	Blue		
Communications - ES	Galvanized	Yellow	Orange	Intercom System
Security Control - ES	Galvanized	Yellow	Green	Card Reader System
Video Surveillance - ES	Galvanized	Yellow	Blue	Camera System
Network	Galvanized	Yellow	Yellow	Backbone that connects the security closets
Nurse Call System	Galvanized	Orange		Label box covers “Nurse Call System”

Revised 08/17/2015