

DOCUMENT 00 90 00
ADDENDUM

ADDENDUM No.: 3

DATE: August 21, 2024

RE: WESTERN TECHNICAL COLLEGE
PHYSICAL PLANT OFFICE
505 9TH STREET NORTH
LA CROSSE, WISCONSIN 54601
PROJECT NO. 24003

FROM: HSR Associates, Inc
100 Milwaukee Street
La Crosse, WI 54603
(608) 784-1830

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated August 2024. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of: 5 pages, 1 document, 7 sections, and 20 Sheets.

CHANGES TO INTRODUCTORY INFORMATION AND BIDDING REQUIREMENTS:

1. Document 00 41 00 Bid Form
 - a. See the revised document included in this addendum. Disregard the previous version.
 - b. Added an Information Bids section to require documentation of the breakout pricing for lighting controls.

CHANGES TO GENERAL REQUIREMENTS:

2. Section 01 21 00 Allowances
 - a. See the new section included in this addendum.

CHANGES TO SPECIFICATIONS:

3. Section 08 36 13 Sectional Doors
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Added paragraph 2.05 A H to require a hand turn interior latch at electrified doors.
 - c. Revised 2.07 D. to require two control stations per interior door and to provide the Owner the option of keyed operators or pushbutton operators at the submittal timeframe.
4. Section 08 80 00 Glazing
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Revised Paragraph 2.01 to remove Oldcastle from the list of glass manufacturers. The specification does not define a list of fabricators of glazing units. Oldcastle (amongst others) is a welcome fabricator of glazing units.

- c. Revised Paragraph 2.02 B to change the reference to Weather-Resistive Barrier from Section 07 25 00 to Section 07 27 00 Air Barriers.
 - d. Revised Paragraph 2.04 C regarding GLT-12 for security glazing to revise wording regarding basis of design tint, redesignate U-value from Summer to Winter, revise visible light transmittance from .70 to .50, revise solar heat gain coefficient from .38 to .29 and add 6mm glazing as equivalent to ¼ inch.
 - e. Revised Paragraph 2.04 D regarding GLT-13 for safety glazing to revise wording regarding basis of design tint, redesignate U-value from Summer to Winter, revise visible light transmittance from .70 to .50, revise solar heat gain coefficient from .38 to .29 and add 6mm glazing as equivalent to ¼ inch.
 - f. Revised Paragraph 2.04 E regarding GLT-16 for spandrel glazing to require fully tempered glazing in lieu of heat-strengthened and annealed, remove spandrel coating from #2 and #3 face, apply spandrel coating to the #4 face, redesignate U-Value from Summer to Winter, and add 6mm glazing as equivalent to ¼ inch.
5. Section 09 05 61 Common Work Results for Flooring Preparation
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Revised 2.01 A.1.e. Revised Ardex product from K15 to V1200.
 6. Section 09 54 23 Linear Metal Ceilings
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Revised paragraph 2.01 to list USG Ceilings Plus Planx Universal as a listed product.
 - c. Revised paragraph 2.03 B.3. to correct error. Removed extra "from".
 7. Section 09 84 30 Sound Absorbing Wall and Ceiling Units
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Revised paragraph 2.01 D to list additional manufacturers Frasch and Accufelt. Use of these manufacturers may require a custom color match for the orange color.
 8. Section 10 28 00 Toilet, Bath, and Laundry Accessories
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Added paragraph 1.01 C. to include Diaper Changing Stations in the section.
 - c. Added paragraph 2.05 to include requirements for Diaper Changing Stations in the section.

CHANGES TO DRAWINGS

9. Sheet A400 ENLARGED TOILET ROOM PLANS 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Changed Baby Diaper Changing stations from Owner Furnished Contractor Installed to Contractor Furnished Contractor Installed.
10. Sheet A501 DETAILS 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised details #6 and #10 to clarify requirements at insulated metal panel assemblies at curtainwall.
11. Sheet FP100 FIRE PROTECTION SCOPE PLAN 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Added a note regarding sump requirement at elevator shafts.

12. Sheet P100 PLUMBING BELOW GRADE 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Added a note regarding sump requirement at elevator shafts.
13. Sheet ED01 ELECTRICAL FIRST FLOOR REMOVAL PLAN - LIGHTING 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Keyed note #12 was added and applied to low voltage switch located adjacent to Stair B - BO2.
14. Sheet ED02 ELECTRICAL SECOND FLR. REMOVAL PLAN – LIGHTING 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Keyed note #12 was added and applied to low voltage switches located adjacent to Stair B – BO3 and Stair A – AO3.
15. Sheet E101 ELECTRICAL LIGHTING PLAN – FIRST FLOOR 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised lighting layout in Robotics #110.
 - c. Revised lighting layout in Shop #112.
 - d. Revised lighting layout in Conference Room #107.
 - e. Keyed note #20 was added and applied to low voltage switch located in corridor 100.
 - f. Reinstall a previously removed low voltage push-button switch connected to existing automated logic control panel to control lighting fixtures on corridors. Switch is located on South end of corridor 100.
 - g. In Mens 122 changed type 'SL12' lighting fixture type to 'SL12-2' and in Women's 118 changed type 'SL18' lighting fixture type to 'SL18-2'.
16. Sheet E102 ELECTRICAL LIGHTING PLAN – SECOND FLOOR 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. In Vestibule 102 changed type 'G' lighting fixture to type 'G1'.
 - c. In Mens 221 changed type 'SL12' lighting fixture to type 'SL12-2'.
17. Sheet E201 ELECTRICAL POWER PLAN – FIRST FLOOR 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised electrical layout in Computer labs #117 & #119.
 - c. Revised keyed note #10.
18. Sheet E202 ELECTRICAL POWER PLAN – SECOND FLOOR 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised keyed note #10.
19. Sheet E300 ELECTRICAL LOW VOLTAGE PLAN - BASEMENT 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised Keyed notes #12, #18, #19.
 - c. Added new notes #50-52.

20. Sheet E301 ELECTRICAL LOW VOLTAGE PLAN – FIRST FLOOR 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised keyed notes #12, #18 & #19.
 - c. Added keyed notes #50-52.
 - d. Erased keyed note number #48 pointing at Alertis Beacon in Robotics Room #110 on East Exterior Wall.
 - e. Changed keyed note number #6 to #50 pointing at data jacks by Teacher's station located in Flex Space #121.
 - f. Changed 1AV symbol to 2AV for Overhead projector in Flex Room #121.
 - g. Changed 3D data symbol to 3DW in Flex Room #121 and changed keyed note #29 to #10.
21. Sheet E302 ELECTRICAL LOW VOLTAGE PLAN – SECOND FLOOR 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised keyed notes #12, #18 & #19.
 - c. Added keyed notes #50 – 52.
 - d. Changed 2DW data symbol for wireless access point to 1DW data symbol in Classroom/Lab 206.
 - e. Changed keyed Note #43 to #44 pointing at data symbol at Teacher's station in Classroom/Lab 206.
 - f. Applied keyed notes #26, #51 & #52 in Classroom 219.
22. Sheet E401 ELECTRICAL RISERS 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. The 125 amp feeder D between existing 2000 amp switchboard located in Electrical Room 032 and Life Safety (LS) ATS switch located in Boiler Room 022A is existing and shall remain as is, the line type will be changed from 'Dark Line Type' to 'Light Line Type'.
23. Sheet E402 ELECTRICAL DETAILS 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Refer to Detail 4/E402 – New IT Equipment Rack Detail – IT Room 207A
 - i. Changed LED perimeter neon type flexible lighting fixture manufacturer from "Superbrightsled.com" to "Diode LED.Com" or approved equal.
24. Sheet E500 ELECTRICAL SCHEDULES 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Refer to Lighting Fixture Schedule:
 - i. Added type 'G1', 'SL12-2' and 'SL18-2'.
 - ii. Revised the Lighting Fixture Remarks.
25. Sheet E600 ELECTRICAL LIGHTING CONTROLS 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Reissued complete set of lighting control drawings.
26. Sheet E601 ELECTRICAL LIGHTING CONTROLS 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Reissued complete set of lighting control drawings.
27. Sheet E602 ELECTRICAL LIGHTING CONTROLS 30"x42"
- a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Reissued complete set of lighting control drawings.

28. Sheet E603 ELECTRICAL LIGHTING CONTROLS 30"x42"

- a. See the revised sheet included in this addendum. Disregard the previous version.
- b. Reissued complete set of lighting control drawings.

PRIOR APPROVALS

29. Section 05 12 00 Structural Steel Fabrication

- a. Add Farrat and Armatherm as additional listed manufacturers for the structural thermal break material. This approval is subject to the manufacturers providing products that comply with the listed criteria.

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DOCUMENT 00 41 00

BID FORM

BIDDER: _____

BID FOR SINGLE PRIME CONTRACT

**PROJECT: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER
405 8TH STREET NORTH
LA CROSSE, WISCONSIN 54601**

**TO: WESTERN TECHNICAL COLLEGE
PHYSICAL PLANT OFFICE
505 9TH STREET NORTH
LA CROSSE, WISCONSIN 54601
ATT: GENE McCURDY- DIRECTOR, FACILITIES**

BASE BID

The undersigned, having examined the site where the Work is to be executed and become familiar with local conditions affecting the cost of the Work and carefully examined the Project Manual, the Project Drawings, all other Bidding Documents and Addenda thereto prepared by the AE, HSR Associates, Inc., hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the ENTIRE WORK, in the time frame stipulated in these contract documents, for the Base Bid stipulated sum of:

_____ Dollars (\$_____ .00)

ALTERNATE BIDS

The undersigned further agrees to perform the alternative portions of the Work as described in the Project Manual, Section 01 23 00 Alternates, for the following additions to or deductions from the Base Bid sum stipulated above:

Alternate No. 1 - Exterior Upgrades

Add _____ Dollars (\$_____ .00)

Alternate No. 2 - Additions

Add _____ Dollars (\$_____ .00)

Alternate No. 3 - Roofing

Add _____ Dollars (\$_____ .00)

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Alternate No. 4 – BIS Suite Interior Renovations

Add _____ Dollars (\$_____ .00)

Alternate No. 5 – Restroom Renovations

Add _____ Dollars (\$_____ .00)

Alternate No. 6 – HVAC Remodel

Add _____ Dollars (\$_____ .00)

Alternate No. 7A – Exterior Building Signage

Add _____ Dollars (\$_____ .00)

Alternate No. 7B – Monument Sign (La Crosse St & 8th St)

Add _____ Dollars (\$_____ .00)

Alternate No. 7C – Monument Sign (Badger St & 8th St)

Add _____ Dollars (\$_____ .00)

Alternate No. 7D – Interior Signage

Add _____ Dollars (\$_____ .00)

Alternate No. B1 – Additional Electrical Panel Replacement

Add _____ Dollars (\$_____ .00)

UNIT PRICES

The undersigned agrees to add or deduct portions of the Work from the Contract as described in the Project Manual, Section 01 22 00 Unit Prices, for the following Unit Price amounts:

Item	Reference Section	Unit Price	Quantity included in Lump Sum Base Bid
UP-1 Repointing Mortar and Repair Masonry	04 01 00	\$_____ / sq yd	80 sq yd
UP-2 Repointing Mortar at Horizontal Joints	04 01 00	\$_____ / ln ft	45 ln ft

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INFORMATIONAL BIDS

Informational Bid No. I-1: Provide an informational breakout price for lighting controls in accordance with instructions in General Notes for Lighting item F as shown on sheet E101.

(\$ _____)

BIDDER'S CHOICE SUBSTITUTIONS

The following Bidder's Choice Substitution is proposed for your consideration subject to the requirements set forth in Document 00 22 13 Supplementary Instructions to Bidders, Subparagraph 3.3.5:

Substitution No. S1:

For substituting _____

Type, Brand, Catalog No. _____

Manufacturer _____

Deduct from BASE BID _____ Dollars (\$ _____ .00)

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In submitting this Bid, the undersigned agrees to:

1. Hold this Bid open for **30** days.
2. Accept the provisions of Instructions to Bidders regarding disposition of Bid Security.
3. Enter into and execute an Agreement, if awarded on the basis of this Bid, and to furnish Performance and Labor and Material Payment Bonds according to the Supplementary Conditions.
4. Accomplish work according to the Contract Documents.
5. Complete the work by the time stated in Section 01 10 00 Summary of the Work.

Receipt of the following Addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Attached hereto are the required:

- a. Bid Security
- b. Certificate of Organization and Authority
- c. Non-Collusive Affidavit: An affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this Bid or any other bid or the submitting of bids for the contract for which this bid is submitted.
- d. Certification of Non-segregated Facilities

FIRM NAME: _____

(Affix seal if
Corporation)

By: _____

Title: _____

By: _____

Title: _____

Date: _____

Official Address: _____

Telephone: _____

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**SECTION 01 21 00
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cash allowances.
- B. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CASH ALLOWANCES

- A. The Contract Sum shall include allowances as indicated herein and all other expenses/costs in accord with Paragraph 3.8 "Allowances" of the General Conditions.
- B. Materials and services included in the Contract as an allowance shall be guaranteed in the same manner as all other materials and services specified in the Contract Documents.
- C. Allowances shall be reconciled with the actual cost of the work performed under the allowance by Change Order, including situations where the allowance amount and actual cost amount are the same.

1.04 GENERAL

- A. Costs included in Cash Allowances: Cost of product to Contractor or to Subcontractor purchaser, less trade discounts, less cost of delivery to site, less applicable taxes.
- B. Costs Not Included in Cash Allowances: Product delivery to site and handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; labor for installation and finishing; and overhead and profit.
- C. A/E Responsibilities:
 - 1. Consult with Contractor for consideration and selection of products, suppliers, and installers.
 - 2. Select products in consultation with Owner and transmit decision to Contractor.
 - 3. Prepare Change Order.
- D. Contractor Responsibilities:
 - 1. Assist A/E in selection of products, suppliers, and installers.
 - 2. Obtain proposals from suppliers and installers and offer recommendations.
 - 3. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
 - 4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
 - 5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Differences in costs will be adjusted by Change Order.

1.05 EXCESS MATERIALS

- A. Submit invoices or delivery slips to indicate the actual quantities of materials delivered to the Project Site for use in fulfillment of each allowance.
- B. Where economically feasible and so requested by the AE, return unused materials to manufacturer/supplier for credit to the Owner, after the installation has been completed and accepted. Where not economically feasible, prepare unused materials for the Owner's storage and deliver to the Owner's storage space as directed. Otherwise, disposal of excess materials is the Contractor's responsibility.

1.06 ALLOWANCES SCHEDULE

- A. Section 26 51 13 LED Lighting Fixtures: Provide \$60,000 Dollar lighting fixture allowance for Three (3) Type 'F' Lighting Fixtures and One (1) Type 'J' lighting fixture.

B. Section 26 51 13 LED Lighting Fixtures: Provide \$3,000 Dollar allowance to provide additional structural support for Three (3) type 'F' lighting fixtures (\$1,000 for each fixture) to be installed in the two new tower additions.

C. Provide \$5,000 allowance to upgrade existing lighting controller for existing lighting.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 08 36 13
SECTIONAL DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Overhead sectional doors, electrically operated.
- B. Operating hardware and supports.
- C. Electrical controls.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 1 govern the work of this section.
- B. Section 04 20 00 - Unit Masonry; Prepared opening in masonry.
- C. Section 05 50 00 - Metal Fabrications: Steel channel opening protection.
- D. Division 26: Equipment wiring.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- C. DASMA 102 - American National Standard Specifications for Sectional Doors; 2018.
- D. ITS (DIR) - Directory of Listed Products; Current Edition.
- E. NEMA ICS 2 - Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts; 2008 (Reaffirmed 2020).
- F. NEMA MG 1 - Motors and Generators; 2021.
- G. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2020.
- H. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- I. UL (DIR) - Online Certifications Directory; Current Edition.
- J. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for procedures.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. Review Submittals - Preparatory:
 - 1. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
 - 2. Product Data: Show component construction, anchorage method, and hardware. When glass is installed include unit u-value, center of glass u-value, visual light transmittance and solar heat gain coefficient.
- D. Review Submittals - Samples:
 - 1. Samples: Submit two panel finish samples, 12 by 12 inch in size, illustrating color and finish.
- E. Information Submittals - Preparatory:
 - 1. Manufacturer's Installation Instructions: Include any special procedures required by project conditions.
- F. Closeout Submittals:
 - 1. Operation Data: Include normal operation, troubleshooting, and adjusting.

2. Maintenance Data: Include data for motor and transmission, shaft and gearing, lubrication frequency, spare part sources.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years documented experience.
- C. Comply with applicable code for motor and motor control requirements.

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for warranty requirements.
- B. Extended Correction Period: Correct defective work within a 2-year period commencing on Date of Substantial Completion.
- C. Manufacturer Warranty: Provide 5-year manufacturer warranty for electric operating equipment. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sectional Doors:
 1. C.H.I. Overhead Doors: www.chiohd.com.
 2. Clopay Building Products: www.clopaydoor.com.
 3. Cornell Ironworks: www.cornelliron.com.
 4. Overhead Door Co.: www.overheaddoor.com.
 5. Raynor Garage Doors: www.raynor.com.
 6. Wayne-Dalton, a Division of Overhead Door Corporation; Thermospan 125: www.wayne-dalton.com.
 7. Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.

2.02 STEEL DOORS - EXTERIOR

- A. Exterior Steel Doors: Stile and rail steel with solid and glazed panels; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
 1. Door Panels: Stile and rail construction, of steel sheet 0.058 inch minimum thickness, with welded joints; rabbeted weather joints at meeting rails.
 2. Door Nominal Thickness: 2 inches thick.
 3. Exterior Finish:
 - a. Factory finished with acrylic baked enamel; color as selected by Architect.
 4. Interior Finish:
 - a. Factory finished with acrylic baked enamel; color as selected by Architect.
 5. Glazed Lites: Full panel width, each row; set in place with resilient glazing channel.
 - a. Glazing: Fully tempered glass; insulated glass units; clear; 5/8 inch nominal overall thickness.
 6. Electric Operation: Electric control station.

2.03 STEEL DOORS - INTERIOR - GLAZED

- A. Interior Steel Doors: Stile and rail steel with glazed panels; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
 1. Door Panels: 24 gauge.
 2. Finish Both Sides: Factory finished with acrylic baked enamel; color as selected from manufacturers standard line.
 3. Glazed Lights: Full panel width, each row; set in place with resilient glazing channel.
 4. Interior Glazing: Fully tempered glass; single pane; clear; 1/8 inch overall thickness.
 5. Electric Operation: Electric control station.

2.04 STEEL DOORS - INTERIOR - FLUSH

- A. Interior Steel Doors: Flush steel, insulated; standard lift operating style with track and hardware; complying with DASHA 102, Commercial application.
 - 1. Door Panels: 24 gauge.
 - 2. Finish Both Sides: Factory finished with acrylic baked enamel; color as selected from manufacturers standard line.
 - 3. Interior Glazing: Fully tempered glass; single pane; clear; 1/8 inch overall thickness.
 - 4. Electric Operation: Electric control station.

2.05 COMPONENTS

- A. Track: Rolled galvanized steel, 0.060 inch minimum thickness; 2 inch wide, continuous one piece per side; galvanized steel mounting brackets 1/4 inch thick.
- B. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.
- C. Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables.
- D. Sill Weatherstripping: Resilient hollow rubber strip, one piece; fitted to bottom of door panel, full length contact.
- E. Jamb Weatherstripping: Roll formed steel section full height of jamb, fitted with resilient weatherstripping, placed in moderate contact with door panels.
- F. Head Weatherstripping: EPDM rubber seal, one piece full length.
- G. Panel Joint Weatherstripping: Neoprene foam seal, one piece full length.
- H. Interior Latch: Provide hand turn interior latch at electrified doors.

2.06 MATERIALS

- A. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G60/Z180 coating, plain surface.
- B. Insulation: Rigid polyurethane, bonded to facing. Minimum total R14.

2.07 ELECTRIC OPERATION

- A. Operator, Controls, Actuators, and Safeties: Conform to UL 325; provide products listed by ITS (DIR) or UL (DIR).
 - 1. Provide interlock switches on motor operated units.
- B. Electric Operators:
 - 1. Mounting: Center mounted on cross head shaft.
 - 2. Motor Enclosure:
 - a. Exterior Doors: NEMA MG 1, Type 4; open drip proof.
 - b. Interior Doors: NEMA MG 1, Type 1; open drip proof.
 - 3. Motor sized as required for door size.
 - 4. Motor Voltage: 120 volts, single phase, 60 Hz.
 - 5. Motor Controller: NEMA ICS 2, full voltage, reversing magnetic motor starter.
 - 6. Controller Enclosure: NEMA 250, Type 1.
 - 7. Opening Speed: 12 inches per second.
 - 8. Brake: Adjustable friction clutch type, activated by motor controller.
 - 9. Manual override in case of power failure.
- C. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated; enclose terminal lugs in terminal box sized to comply with NFPA 70.
- D. Control Stations: Provide standard three button or key-operated as confirmed with Owner at submittal time-frame (Open-Close-Stop) continuous-contact control device for each operator conforming to UL 325.
 - 1. At interior doors provide an operator on each side of the wall so that the door can be operated from inside and outside of the room.
 - 2. 24 volt circuit.

3. Surface mounted, at interior door jamb.
4. Entrapment Protection Devices: Provide sensing devices and safety mechanisms complying with UL 325.
 - a. Light bar attached to door frame.
 - b. Height: 3 feet.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- B. Verify that electric power is available and of the correct characteristics.

3.02 PREPARATION

- A. Prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.

3.03 INSTALLATION

- A. Install door unit assembly in accordance with manufacturer's instructions.
- B. Anchor assembly to wall construction and building framing without distortion or stress.
- C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- D. Fit and align door assembly including hardware.
- E. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.
- F. Install warning placard provided by supplier at each door.

3.04 TOLERANCES

- A. Maximum Variation from Plumb: 1/16 inch.
- B. Maximum Variation from Level: 1/16 inch.
- C. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch from 10 ft straight edge.
- D. Maintain dimensional tolerances and alignment with adjacent work.

3.05 ADJUSTING

- A. Adjust door assembly for smooth operation and full contact with weatherstripping.

3.06 CLEANING

- A. Clean doors and frames.
- B. Remove temporary labels and visible markings.

3.07 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.
- B. Clean doors, frames.
- C. Remove temporary labels and visible markings.
- D. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

END OF SECTION

SECTION 08 80 00

GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Insulating glass units.
- B. Glazing units.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 1 govern the work of this section.
- B. Section 07 27 00 - Air Barriers: Sealing assemblies to weather barrier installed on adjacent construction.
- C. Section 07 92 00 - Joint Sealants: Sealants for other than glazing purposes.
- D. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.
- E. Section 08 14 16 - Flush Wood Doors: Glazed lites in doors.
- F. Section 08 43 13 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.
- G. Section 08 44 13 - Glazed Aluminum Curtain Walls: Glazing provided as part of wall assembly.
- H. Section 08 44 35 - Protective Framed Glazing Assemblies: Glazing fire-tested as part of wall assembly.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- E. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- F. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2019.
- G. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- H. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- I. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- J. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- K. ASTM F1233 - Standard Test Method for Security Glazing Materials And Systems; 2021.
- L. GANA (GM) - GANA Glazing Manual; 2022.
- M. GANA (SM) - GANA Sealant Manual; 2008.
- N. GANA (LGRM) - Laminated Glazing Reference Manual; 2019.
- O. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- P. IGMATM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (2016).
- Q. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- R. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.
- S. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for procedures.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. It is permissible for a single supplier to combine submittal items for multiple sections within Division 8 Openings. This permission applies to sections that describe requirements for glazing, hardware, any passage door and windows that are framed using the same systems as the passage doors. Identify all sections that are included in the transmittal on the coversheet.
- D. Coordinate submittals for the following sections so they are submitted available for review by the Architect for the full duration of the review period.
 - 1. Section 07 92 00 - Joint Sealants.
 - 2. Section 08 16 13 - Fiberglass Doors.
 - 3. Section 08 43 13 - Aluminum-Framed Storefronts.
 - 4. Section 08 44 13 - Glazed Aluminum Curtain Walls: Curtain wall framing to comply with single source requirement and aluminum doors to be installed in curtainwall framing.
 - 5. Section 08 71 00 - Door Hardware / Finish Hardware.
 - 6. Section 08 80 00 - Glazing.
 - 7. Section 08 88 13 - Fire-Rated Glazing.
- E. Review Submittals - Preparatory Group:
 - 1. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
 - 2. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors. Coordinate the following information with product in Section 08 43 13 and 08 44 13; unit u-value, center of glass u-value and solar heat gain coefficient.
- F. Closeout Submittals:
 - 1. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA (GM), GANA (SM), and IGMA TM-3000 for glazing installation methods. Maintain one copy on site.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.06 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a ten (10) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Float Glass Manufacturers:
 - 1. AGC Glass Company North America, Inc: www.us.agc.com.
 - 2. Cardinal Glass Industries: www.cardinalcorp.com.
 - 3. Guardian Industries Corp: www.sunguardglass.com.
 - 4. Pilkington North America Inc: www.pilkington.com/na.

5. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 1. Design Pressure: Calculated in accordance with ASCE 7.
 2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 3. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 4. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
 1. In conjunction with weather barrier related materials described in other sections, as follows:
 - a. Water-Resistive Barriers: See Section 07 27 00 Air Barriers.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
 2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
 3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
 5. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.
- B. Laminated Glass: Float or Tempered glass laminated in accordance with ASTM C1172.
 1. Laminated Safety Glass: Complies with ANSI Z97.1 - Class B or 16 CFR 1201 - Category II impact test requirements.
 2. Polyvinyl Butyral (PVB) Interlayer: 0.030 inch thick, minimum.

2.04 INSULATING GLASS UNITS

- A. Manufacturers:
 1. Glass: Any of the manufacturers specified for float glass.
 2. Fabricator certified by glass manufacturer for type of glass, coating, and treatment involved and capable of providing specified warranty.
 3. Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.
- B. Insulating Glass Units: Types as indicated.
 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
 3. Metal-Edge Spacers: Aluminum, bent and soldered corners.
 4. Spacer Color: Aluminum.
 5. Edge Seal:

- a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
 - 6. Color: Black.
 - 7. Purge interpane space with dry air, hermetically sealed.
 - 8. Configured for compatibility with curtainwall mounting as applicable.
- C. GLT-12 Insulating Glass Units: Security glazing.
 - 1. Applications:
 - a. Glazed lites in exterior doors.
 - b. Glazed sidelights and panels next to doors.
 - c. Other locations required by applicable federal, state, and local codes and regulations.
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Fully tempered float glass, 1/4 inch (6mm) thick, minimum.
 - a. Tint: Gray. Basis of Design: Vitro Architectural Glass - Optigray.
 - b. Low-E Coating, Basis of Design: Vitro Architectural Glass, Solarban 60 on #2 surface.
 - 4. Inboard Lite: Laminated float glass, 1/4 inch (6mm) thick, minimum. 0.030 PVB layer.
 - a. Tint: Clear.
 - 5. Total Thickness: 1 inch.
 - 6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.24, nominal.
 - 7. Visible Light Transmittance (VLT): 50 percent, nominal.
 - 8. Solar Heat Gain Coefficient (SHGC): 0.29, nominal.
- D. GLT-13 Insulating Glass Units: Vision glass, double glazed. Safety Glazing.
 - 1. Applications: Ground floor windows away from doors and as scheduled.
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Fully tempered float glass, 1/4 inch (6mm) thick, minimum.
 - a. Tint: Gray. Basis of Design: Vitro Architectural Glass - Optigray.
 - b. Low-E Coating, Basis of Design: Vitro Architectural Glass, Solarban 60 on #2 surface.
 - 4. Inboard Lite: Fully tempered float glass, 1/4 inch (6mm) thick, minimum.
 - a. Tint: Clear.
 - 5. Total Thickness: 1 inch.
 - 6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.24, nominal.
 - 7. Visible Light Transmittance (VLT): 50 percent, nominal.
 - 8. Solar Heat Gain Coefficient (SHGC):.29, nominal.
 - 9. Glazing Method: Dry glazing method, gasket glazing.
- E. GLT-16 Insulating Glass Units: Spandrel glazing.
 - 1. Applications: Exterior spandrel glazing unless otherwise indicated.
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Fully tempered float glass, 1/4 inch (6mm) thick, minimum.
 - a. Tint: Gray, Basis of Design: Vitro Architectural Glass - Optigray.
 - b. Low-E Coating, Basis of Design: Vitro Architectural Glass, Solarban 60 on #2 surface.
 - 4. Inboard Lite: Fully tempered float glass, 1/4 inch (6mm) thick.
 - a. Tint: Clear.
 - b. Opacifier: Ceramic frit, on #4 surface.
 - c. Opacifier Color: As selected by A/E.
 - 5. Total Thickness: 1 inch.
 - 6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.24, nominal.
 - 7. Glazing Method: Dry glazing method, gasket glazing.

2.05 GLAZING UNITS

- A. GLT-4 - Monolithic Safety Glazing: Non-fire-rated:
 - 1. Applications:
 - a. Glazed lites in doors, except fire doors.
 - b. Glazed sidelights to doors, except in fire-rated walls and partitions.

- c. Other locations required by applicable federal, state, and local codes and regulations.
- d. Other locations indicated on drawings.
- 2. Glass Type: Fully tempered safety glass as specified.
- 3. Tint: Clear.
- 4. Thickness: 1/4 inch, nominal.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

3.02 PREPARATION

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 CLEANING

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove nonpermanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.
- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.06 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

SECTION 09 05 61

COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
 - 1. Resilient tile and sheet.
 - 2. Carpet tile.
 - 3. Thin-set ceramic tile and stone tile.
- B. Removal of existing floor coverings.
- C. Preparation of existing concrete floor slabs for installation of floor coverings.
- D. Testing of concrete floor slabs for moisture and alkalinity (pH).
- E. Testing of floor flatness at areas receiving large format tile.
- F. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
 - 1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.
- G. Patching compound.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 1 govern the work of this section.
- B. Section 01 40 00 - Quality Requirements: Additional requirements relating to testing agencies and testing.

1.03 REFERENCE STANDARDS

- A. ASTM E1155 - Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers; 2020.
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- C. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.
- D. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- E. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for procedures.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. Review Submittals - Preparatory:
 - 1. Testing Agency's Report:
 - a. Description of areas tested; include floor plans and photographs if helpful.
 - b. Summary of conditions encountered.
 - c. Moisture and alkalinity (pH) test reports.
 - d. Adhesive bond and compatibility test report.
 - e. Copies of specified test methods.

- f. Recommendations for remediation of unsatisfactory surfaces.
- g. Submit report to Architect.
- h. Submit report not more than two business days after conclusion of testing.
- 2. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
 - a. Moisture and alkalinity (pH) limits and test methods.
 - b. Manufacturer's required bond/compatibility test procedure.
- 3. Remedial Materials Product Data: Manufacturer's published data on each product to be used for remediation.
 - a. Manufacturer's qualification statement.
 - b. Manufacturer's statement of compatibility with types of flooring applied over remedial product.
 - c. Test reports indicating compliance with specified performance requirements, performed by nationally recognized independent testing agency.
 - d. Manufacturer's installation instructions.
 - e. Specimen Warranty: Copy of warranty to be issued by coating manufacturer and certificate of underwriter's coverage of warranty.

1.06 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.
- B. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
 - 1. Submit evidence of experience consisting of at least 3 test reports of the type required, with Owner's project contact information.
- C. Contractor's Responsibility Relating to Independent Agency Testing:
 - 1. Provide access for and cooperate with testing agency.
 - 2. Confirm date of start of testing at least 10 days prior to actual start.
 - 3. Allow at least 4 business days on site for testing agency activities.
 - 4. Achieve and maintain specified ambient conditions.
 - 5. Notify Architect when specified ambient conditions have been achieved and when testing will start.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

1.08 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Floor Topping, Leveler and Patching Compound: Free flowing self-leveling, pumpable, cement-based compound for applications from 1-1/2 inch thick to feathered edges, minimum strength of 4000 psi.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Schonox; US. www.hpsubfloors.com.
 - b. Schonox; AP. www.hpsubfloors.com.
 - c. MAPEI Corporation; Ultraplan Easy with Primer T. www.mapei.com.

- d. Maxxon Great Lakes; Level-Right Maxx. www.maxxon.com.
 - e. Ardex, Inc; V 1200. www.ardexamericas.com.
 - f. Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.
- B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.

PART 3 EXECUTION

3.01 CONCRETE FLOOR FLATNESS TESTING

- A. Minimum floor flatness performance at completion of cast-in-place concrete is indicated in Section 03 30 00. Where large format tile is installed, maximum allowable floor flatness tolerances shall be no more than 1/8 inch in 10 feet and 1/16 inch in 24 inches. (Approximate minimum FF 50/FL35 per ASTM E1155) Large format tile locations not meeting this standard shall have leveling compound installed. Refer to Division 1 Allowances when applicable.
1. At locations receiving large format tile measure floor flatness to confirm tolerances are within industry acceptable range as stated above.

3.02 CONCRETE SLAB PREPARATION

- A. Refer to Section 03 30 00 for responsibilities of all contractors to protect concrete floors from contamination. Start of work by flooring contractor indicate acceptance of conditions.
- B. Follow recommendations of testing agency.
- C. Perform following operations in the order indicated: (Moisture testing shall occur a minimum of 60 days prior to installation of flooring systems, with any required remediation efforts to begin immediately after test results.)
1. Preliminary cleaning.
 2. Internal relative humidity tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
 3. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 4. Specified remediation, if required.
 5. Patching, smoothing, and leveling, as required to meet manufacturer's requirements.
 6. Other preparation specified by flooring manufacturer.
 7. Adhesive bond and compatibility test.
 8. Protection of installed flooring.

3.03 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Do test removal to determine how many layers of existing flooring occur.
- B. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.
- C. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.04 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

3.05 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.

- C. Verify that concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity in accordance with ASTM F1869. Obtain instructions if test results are not within the following limits:
 1. Moisture emission rate: Not greater than 3 lb per 1000 sq ft per 24 hours when tested using calcium chloride moisture test kit for 72 hours.
 2. At floors to receive finish materials, perform three tests for the first 1000 square feet and at least one additional test for each additional 1000 square feet.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as required. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.
- F. Report: Report the information required by the test method.

3.06 INTERNAL RELATIVE HUMIDITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes and as follows.
- D. Verify that new and existing concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity. Obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer. Testing procedures shall be:
 1. Maximum allowable moisture levels for each type of floor finish shall be received from flooring suppliers prior to testing.
 2. At floors to receive finish materials, perform three tests for the first 1000 square feet and at least one additional test for each additional 1000 square feet.
 3. Select test locations to provide information about moisture distribution across the entire floor slab, especially areas of potential high moisture. For slabs on-grade and below-grade, include a test location within three feet of each exterior wall.
- E. Testing with electrical impedance or resistance apparatus may not be substituted for the specified ASTM test method, as the values determined are not comparable to the ASTM test values and do not quantify the moisture content sufficiently.
- F. In the event that test values exceed floor covering manufacturer's limits, perform remediation as required. In the absence of manufacturer limits, perform remediation if any test value exceeds 75 percent relative humidity.
- G. Report: Report the information required by the test method.

3.07 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience.
 1. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
 2. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
 3. Use of a digital pH meter with probe is acceptable; follow meter manufacturer's instructions.

- C. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.08 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.09 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

3.10 APPLICATION OF REMEDIAL FLOOR COATING

- A. Comply with requirements and recommendations of coating manufacturer.

3.11 PROTECTION

- A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

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SECTION 09 54 23
LINEAR METAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Linear metal ceilings.
- B. Suspended metal support system and perimeter trim.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 01 govern the work of this section.
- B. Section 09 51 00 - Acoustical Ceilings.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
- C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate work of this section with installation of mechanical and electrical components and with other construction activities affected by work of this section.
- B. Sequencing: Supply hanger clips during steel deck erection. Supply additional hangers and inserts as required.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for procedures.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. Review Submittals - Preparatory:
 - 1. Product Data: Furnish for component profiles.
 - 2. Shop Drawings: Indicate reflected ceiling plan.
- D. Review Submittal - Samples:
 - 1. Samples: Submit two samples 4 by 12 inch in size illustrating color and finish of exposed to view components.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements for additional provisions.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section.
 - 1. Minimum 3 years documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 74 19 - Construction Waste Management and Disposal for packaging waste requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Linear Metal Ceilings: Basis of Design; Armstrong Ceilings, Metalworks Linear - Synchro.

- B. Other listed Product:
 - 1. USG Ceilings Plus; Planx Universal.
 - 2. Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.

2.02 LINEAR METAL CEILINGS

- A. Board Type LMC-1: Linear Metal Ceiling System: Panels, suspension members, trim and accessories as required to provide a complete system.
- B. Performance Requirements:
 - 1. Design to support imposed loads of indicated items without eccentric loading of supports.
 - 2. Design for maximum deflection of 1/360 of span.
 - 3. Noise Reduction Coefficient (NRC): 70, measured in accordance with ASTM C423 with insulation installed.

2.03 COMPONENTS

- A. Acoustical Backer: Manufacturer's standard non-woven fabric; as required to achieve specified acoustic performance.
- B. Linear Panels:
 - 1. Profile: Channel shape, 6 inch width.
 - 2. Length: Continuous. Panel lengths joined with internal integral splices as required.
 - 3. Sight-exposed Surface Finish: Silver Grey selected from manufacturer's standard range. Microperforated for acoustical properties.
- C. Edge Molding and Splices: Same material, thickness, and finish as linear panels.
- D. End Caps: Formed metal; same color and finish as sight-exposed surfaces of linear panels.
- E. Accessories: Stabilizer bars as required for suspended grid system; sight-exposed surfaces same color and finish as sight-exposed surfaces of linear panels.
- F. Suspension Members: Formed steel sections, with integral attachment points; galvanized finish; size and type to suit application and ceiling system flatness requirement specified.
- G. Suspension Wire: Steel, annealed, galvanized finish, 9 gauge, 0.1144 inch diameter.
- H. Subgirt Members: Hot-dip galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating; formed to resist imposed loads and to provide attachment for linear ceiling and accessories.

2.04 FABRICATION

- A. Shop cut linear panels to accommodate mechanical and electrical items.
- B. Factory-form internal and external corners of same material, thickness, finish, and profile to match exposed linear panels; back brace internal corners.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.
- C. Verify that required utilities are available, in proper location, and ready for use.
- D. Verify that field measurements are as indicated.

3.02 INSTALLATION

- A. Suspension Components:
 - 1. Install after above-ceiling work is complete in accordance with ASTM C636/C636M, ASTM E580/E580M, ASTM C636/C636M, ASTM E580/E580M, ASTM C636/C636M, and ASTM E580/E580M.
 - 2. Hang carrying members independent of walls, columns, ducts, light fixtures, pipe, and conduit; where carrying members are spliced, avoid visible displacement of face panels with adjacent panels.

3. Where ducts or other equipment prevent regular spacing of hangers, reinforce nearest adjacent hangers to span the required distance.
 4. Locate suspension system for linear panel layout parallel to building lines according to reflected plan.
- B. Linear Metal Ceiling:
1. Install linear panels, baffles, and other system components in accordance with manufacturer's instructions.
 2. Align end joints.
 3. Install filler strips between linear panels at interior locations.
 4. Install edge moldings at junctions with other finishes and at vertical surfaces; use maximum piece lengths.
 5. Exercise care when site cutting sight-exposed finished components to ensure surface finish is not defaced.
- C. Insulation: Install above panel members; fit tight between grid members.

3.03 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation From Dimensioned Position: 1/4 inch.

3.04 CLEANING

- A. Clean surfaces.
- B. Replace damaged or abraded components.

END OF SECTION

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SECTION 09 84 30
SOUND-ABSORBING WALL AND CEILING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sound-absorbing panels.
- B. Sound-absorbing ceiling baffles.
- C. Mounting accessories.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 1 shall govern the work of this section.

1.03 REFERENCE STANDARDS

- A. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2023.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- C. ASTM E795 - Standard Practices for Mounting Test Specimens during Sound Absorption Tests; 2023.

1.04 SUBMITTALS

- A. See Section 01 33 00 Submittal Procedures for requirements.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. Review Submittals - Preparatory:
 - 1. Product Data: Manufacturer's printed data sheets for products specified.
 - 2. Shop Drawings: Fabrication and installation details, panel layout, fabric orientation, and wood grain orientation.
- D. Review Submittals - Samples:
 - 1. Selection Samples: Manufacturer's color charts for fabric covering, indicating full range of fabrics, colors, and patterns available.
 - 2. Verification Samples: Fabricated samples of each type of panel specified; 12 by 12 inch, showing construction, edge details, and fabric covering.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver in factory-wrapped bundles; do not open bundles until units are needed for installation.
- B. Store units flat, in dry, well-ventilated space; do not stand on end.
- C. Protect edges from damage.

PART 2 PRODUCTS

2.01 FABRIC-COVERED SOUND-ABSORBING UNITS

- A. Manufacturers:
 - 1. Acoustic Design Works: www.acousticdesignworks.com.
 - 2. Custom Acoustical Products: www.capinc.com.
 - 3. G&S Acoustics: www.gsacoustics.com.
 - 4. PanelTech Acoustics: www.ptacoustics.com.
 - 5. Turf: www.turf.design.
 - 6. Sound Seal: www.soundseal.com.

- B. General:
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 50 or less, when tested in accordance with ASTM E84.
- C. Fabric-Covered Acoustical Panels for Walls:
 - 1. Panel Core: Manufacturer's standard rigid or semi-rigid fiberglass core.
 - 2. Core Density: 6 to 7 lb/cu ft.
 - 3. Panel Size: As detailed on Drawings.
 - 4. Panel Thickness: 2 inches.
 - 5. Edges: Perimeter edges reinforced by a formulated resin hardener.
 - 6. Fabric: Refer to Master Color Schedule on ID Drawings.
 - 7. Mounting Method: Back-mounted with mechanical fasteners.
- D. Fabric-Covered Acoustical Ceiling Baffles LAC-1 and LAC-2.:
 - 1. Basis of Design Product:
 - a. Turf, Dimensional Baffles, Beam: Color per Master Color Schedule.
 - 2. Other manufacturers:
 - a. Frasch, Blade BAFL: Provide custom color to match LAC-2.
 - b. Accufelt, Truss: Provide custom color to match LAC-2.
 - 3. Baffle Core: Manufacturer's standard rigid or semi-rigid fiberglass core.

2.02 FABRICATION

- A. Tolerances: Fabricate to finished tolerance of plus or minus 1/16 inch for thickness, overall length and width, and squareness from corner to corner.

2.03 ACCESSORIES

- A. Back-Mounting Accessories: Manufacturer's standard accessories for concealed support, designed to allow panel removal:
 - 1. Two-part clip and base-support bracket system; brackets designed to support full weight of panels and clips designed for lateral support, with one part mechanically attached to back of panel and the other attached to substrate.
 - a. Hanger Options: Monarch Metal Fabrication. www.monarchmetal.com.
- B. Ceiling-Suspended Accessories: Manufacturer's standard accessories at locations as indicated on each acoustical unit, sized appropriately for weight of acoustical unit.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
- B. Install mounting accessories and supports in accordance with shop drawings.
- C. Align panels accurately, with edges plumb and top edges level. Scribe to fit accurately at adjoining work and penetrations.
- D. Suspend ceiling baffles at locations and heights as indicated.
- E. Install acoustical units to construction tolerances of plus or minus 1/16 inch for the following:
 - 1. Plumb and level.
 - 2. Flatness.

3.03 CLEANING

- A. Clean sound-absorptive panels upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

3.04 PROTECTION

- A. Provide protection of installed acoustical panels until Date of Substantial Completion.

B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

END OF SECTION

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SECTION 10 28 00
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Mirrors.
- C. Diaper Changing Stations.

1.02 RELATED REQUIREMENTS

- A. Applicable provisions of Division 1 govern the work of this section.
- B. Section 06 10 00 - Rough Carpentry and 09 21 16 - Gypsum board Assemblies: Concealed supports for accessories, including in wall framing and plates.
- C. Section 10 21 13.19 - Plastic Toilet Compartments.

1.03 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2022.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.
- E. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- F. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2024.
- G. ASTM F2285 - Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use; 2022.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for procedures.
- B. Provide submittal transmittals that include all submittal items identified in each submittal group below.
- C. Review Submittals - Preparatory:
 - 1. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- D. Review Submittals - Samples:
 - 1. Samples: Submit two samples of partition panel, illustrating color and finish.
- E. Information Submittals - Preparatory:
 - 1. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet, Shower, and Bath Accessories:
 - 1. AJW Architectural Products: www.ajw.com.
 - 2. ASI - American Specialties, Inc: www.americanspecialties.com.
 - 3. Bradley Corporation: www.bradleycorp.com.
 - 4. Bobrick Washroom Equipment Inc: www.bobrick.com.
 - 5. PSiSC Manufacturer of Columbia Accessories: www.psisc.com.
 - 6. Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.

- B. Provide products of each category type by single manufacturer.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Grind welded joints smooth.
 - 2. Fabricate units made of metal sheet or seamless sheets with flat surfaces.
- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- D. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- E. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- F. Adhesive: Two component epoxy type, waterproof.
- G. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.
- H. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Grab Bars - Concealed Flange:
 - 1. Grab Bars: Stainless steel, 1-1/2 inches outside diameter, minimum 0.05 inch wall thickness, nonslip grasping surface finish, exposed flange mounting with torx head screws; 11 ga closure plate at bottom of bar. Length and configuration as indicated on drawings.
 - a. American Specialties, Inc.: 3800 Series.
 - b. Bobrick: B-6806.99.
 - c. Bradley: Equal with concealed anchors and secured flanges.
- B. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
 - 1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
 - 2. Size: As scheduled on Drawings.
 - 3. Frame: 0.05 inch angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; bright annealed or satin finish.
 - 4. Backing: Full-mirror sized, minimum 0.03 inch galvanized steel sheet and nonabsorptive filler material.

2.05 INFANT DIAPER CHANGING STATIONS

- A. Diaper Changing Station: Wall-mounted folding diaper changing station for use in commercial toilet facilities, meeting or exceeding ASTM F2285.
 - 1. Material: Polyethylene.
 - 2. Mounting: Surface.
 - 3. Color: As selected by AE from manufacturer's standard range.
 - 4. Minimum Rated Load: 250 pounds.
 - 5. Configuration: Horizontal-Folding, Surface-Mounted without Wall Frame:
 - a. Material: Polyethylene.
 - b. Products:
 - 1) Koala Corp.: KB300-SS; www.koalabear.com.
 - 2) American Specialties: 9012; www.americanspecialties.com.
 - 3) Saniflow: Babymedi Horizontal; www.saniflowcorp.com.
 - 4) Foundations Worldwide, Inc.: Classic Horizontal Baby Changing Station; www.foundations.com.

- 5) Substitutions: See Section 01 25 00 - Substitution Procedures for requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.
- C. Verify that field measurements are as indicated on drawings.
- D. See Section 06 10 00 and 09 21 16 for installation of blocking and concealed anchors in walls.

3.02 PREPARATION

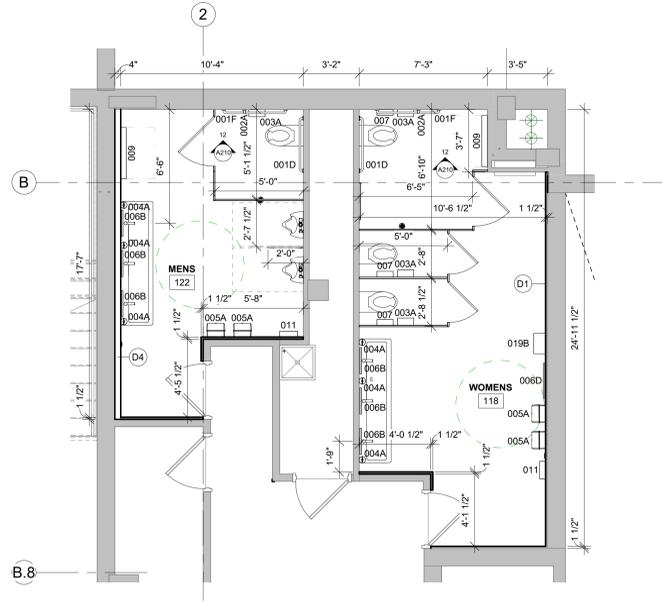
- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

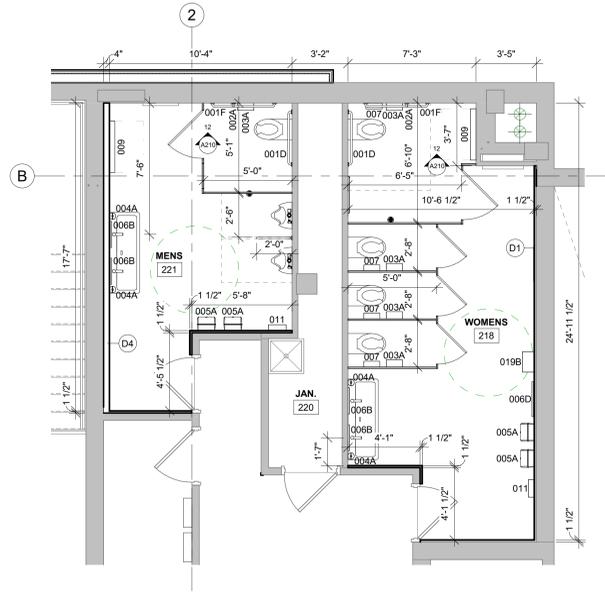
- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, and indicated on accessory schedule on drawings.
- D. Mounting Heights and Locations: As required by accessibility regulations and as indicated on drawings.

END OF SECTION

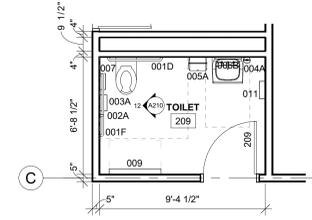
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1 ENLARGED TOILET RM PLAN
1/4" = 1'-0"



2 ENLARGED TOILET RM PLAN
1/4" = 1'-0"



3 ENLARGED TOILET RM PLAN
1/4" = 1'-0"

ACCESSORIES GENERAL NOTES:

- NOT ALL ACCESSORIES REFERENCED ON SHEET 0002 ARE INCLUDED IN THIS PROJECT. SEE ENLARGED FLOOR PLANS / ELEVATION SHEETS FOR ACCESSORIES LOCATIONS / LAYOUT.
- ALL ACCESSORIES TO BE PROVIDED AND INSTALLED BY CONTRACTOR, UNLESS NOTED OTHERWISE.
- CONFIRM EXACT LOCATION OF EACH ACCESSORY WITH OWNER PRIOR TO INSTALLATION.
- SURFACE MOUNTED ACCESSORIES SHALL BE INSTALLED OVER WALL TILE.
- OFCI = OWNER FURNISHED, CONTRACTOR INSTALLED, BASIS OF DESIGN MODEL PROVIDED BY OWNER, VERIFIED FOR PLACEMENT COORDINATION.
- PROVIDE INSULATION WRAP AT EXPOSED PIPING AT SINKS WHERE NO OTHER PROTECTION IS PROVIDED.
- GENERAL CONTRACTOR TO PROVIDE BLOCKING FOR ALL ACCESSORIES.

ACCESSORY SCHEDULE

MARK	ITEM	OFCI	OFCI	OFCI	HEIGHT A.F.F.	COMMENTS
001D	GRAB BAR, 36" HORIZONTAL		X	X	CENTER AT 2'-10" A.F.F.	
001F	GRAB BAR, 42" HORIZONTAL		X	X	CENTER AT 2'-10" A.F.F.	
002A	GRAB BAR, 18" VERTICAL		X	X	BOTTOM AT 3'-4" A.F.F.	
003A	TOILET PAPER 2 ROLL		X		SEE MOUNTING HEIGHTS DRAWINGS	
004A	SOAP DISPENSER MANUAL		X		SEE MOUNTING HEIGHTS DRAWINGS	
005A	PAPER TOWEL DISPENSER ROLL		X		SEE MOUNTING HEIGHTS DRAWINGS	
006B	MIRROR, 18" x 36"		X		SEE MOUNTING HEIGHTS DRAWINGS	
006D	MIRROR, 24" x 60"		X		SEE MOUNTING HEIGHTS DRAWINGS	
007	SANITARY NAPKIN DISPOSAL		X		SEE MOUNTING HEIGHTS DRAWINGS	
009	BABY CHANGING STATION		X		SEE MOUNTING HEIGHTS DRAWINGS	
011	SHARPS		X		SEE MOUNTING HEIGHTS DRAWINGS	
017B	WHITE BOARD 72" X 48"		X		SEE MOUNTING HEIGHTS DRAWINGS	
019B	SANITARY NAPKIN DISPENSER		X		SEE MOUNTING HEIGHTS DRAWINGS	



Consultant:

Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER
Project Location: 405 8TH STREET NORTH
LA CROSSE, WI
Sheet Title: ENLARGED TOILET ROOM PLANS

HSR Project Number: 24003
Project Date: AUGUST 2024
Drawn By: HSR

Key Plan:

Revisions:

No.	Description	Date
A03	ADDENDUM #3	8-21-2024

Graphic Scale: VARIES
Last Update: 8/20/2024 2:52:49 PM



Consultant:

Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: DETAILS

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: HSR

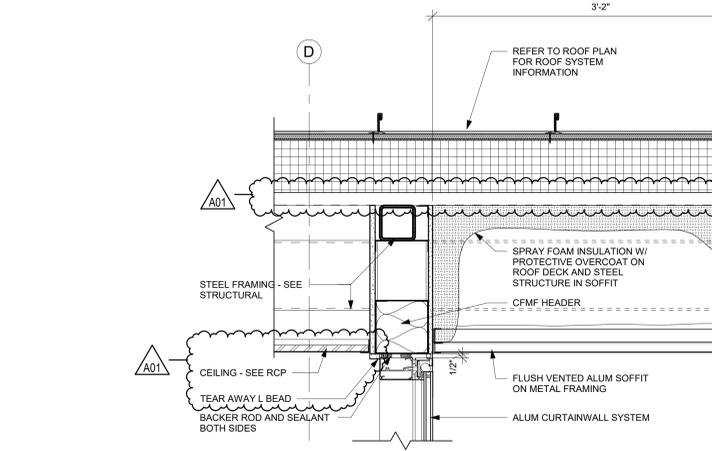
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A03	ADDENDUM #3	8-21-2024

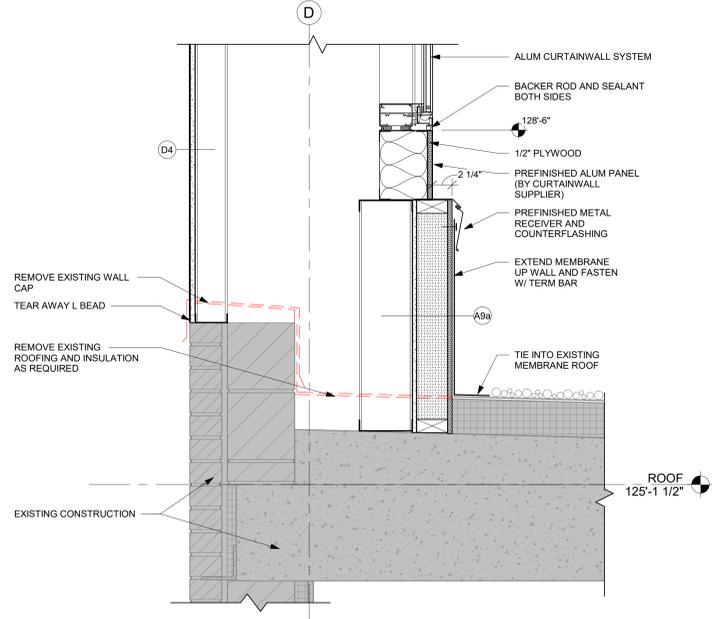
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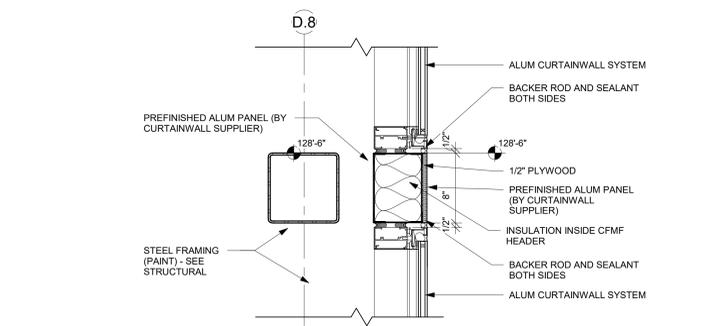
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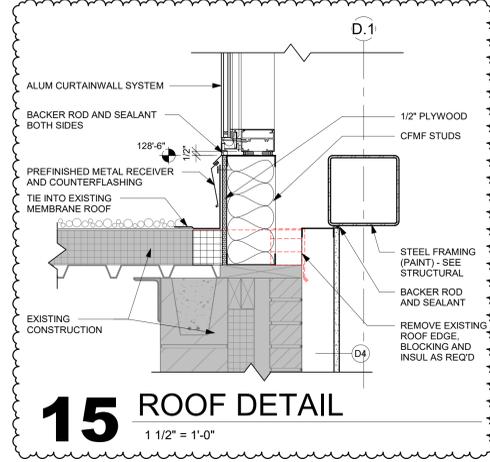
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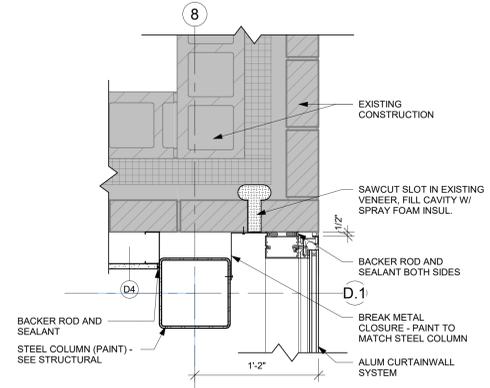
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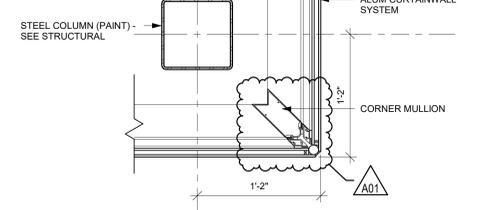
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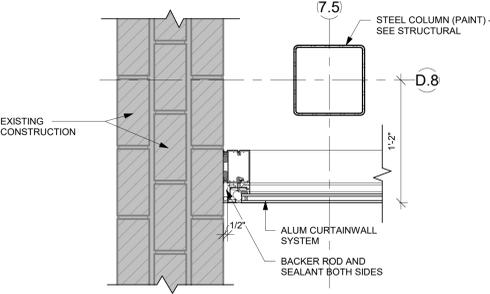
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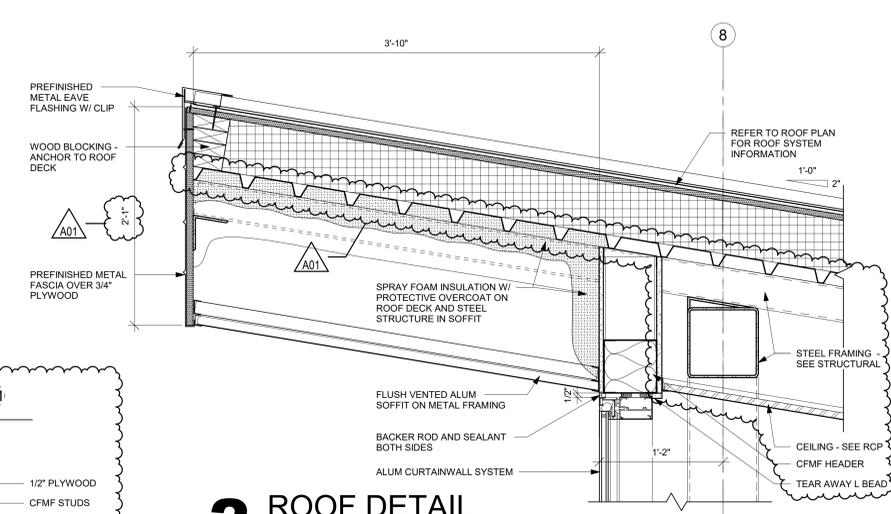
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1 1/2" = 1'-0"



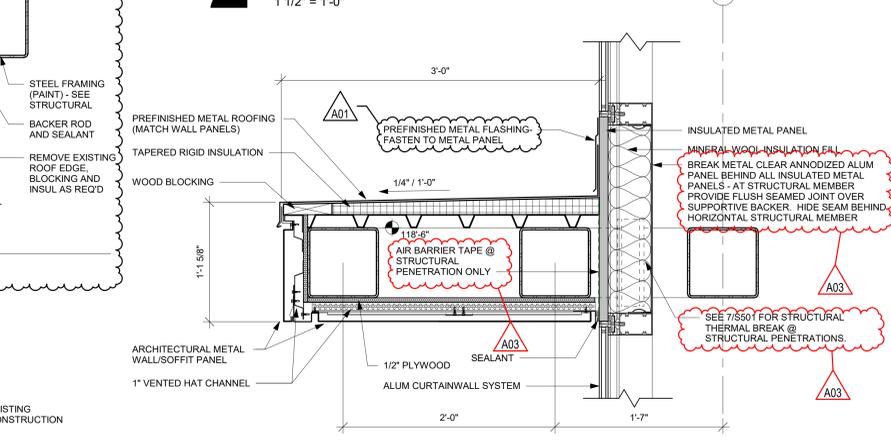
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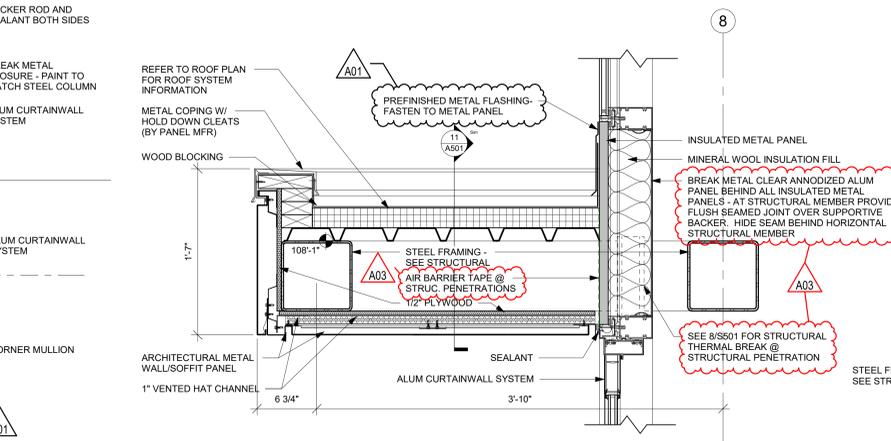
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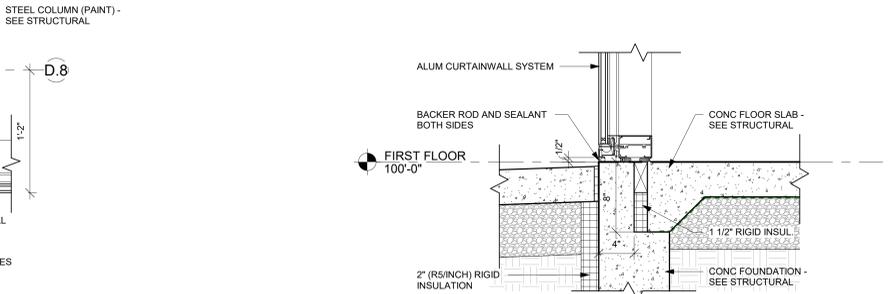
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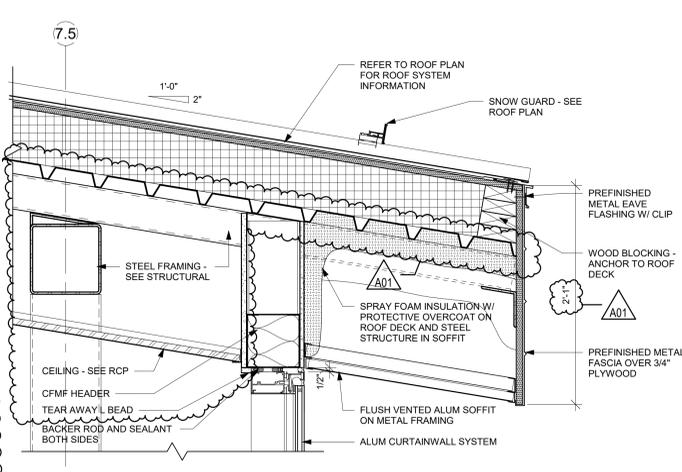
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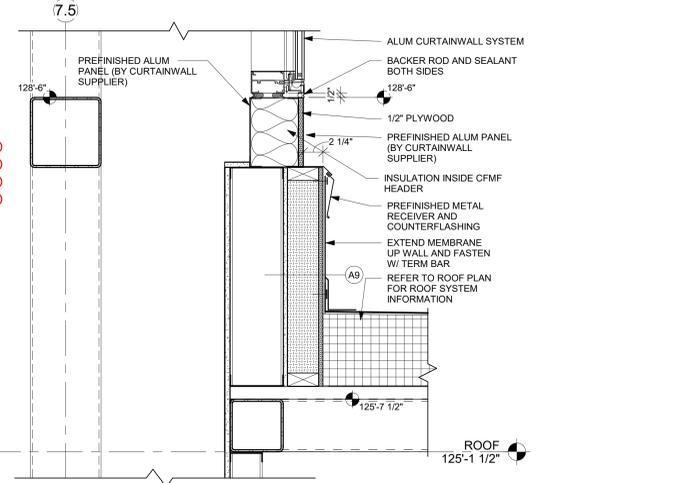
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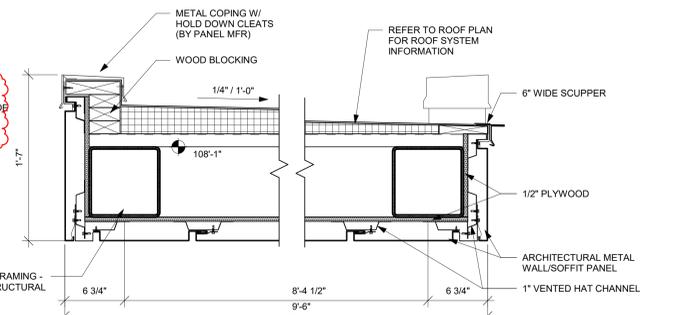
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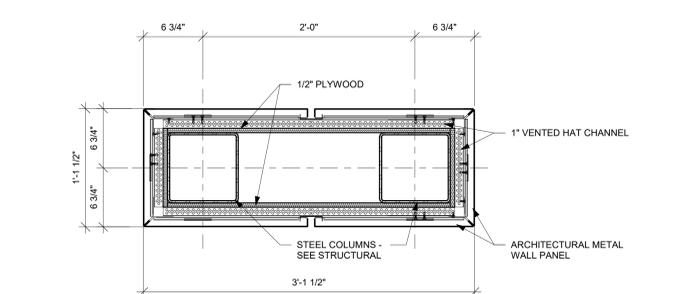
3 ROOF DETAIL
1 1/2" = 1'-0"



7 ROOF DETAIL
1 1/2" = 1'-0"



11 CANOPY DETAIL
1 1/2" = 1'-0"



14 COLUMN DETAIL
1 1/2" = 1'-0"



Consultant:



(608) 643-4100 www.ramaker.com

Project Title: **HSR WTC Wanek Innovation Center**

Project Location: **LACROSSE, WI**

Sheet Title: **FIRE PROTECTION SCOPE PLAN**

HSR/Ramaker Project Number: **24003/60597**

Project Date: **AUGUST 2024**

Drawn By: **DER**

Key Plan:

Certification # Seal:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Designer under the laws of the State of Wisconsin.



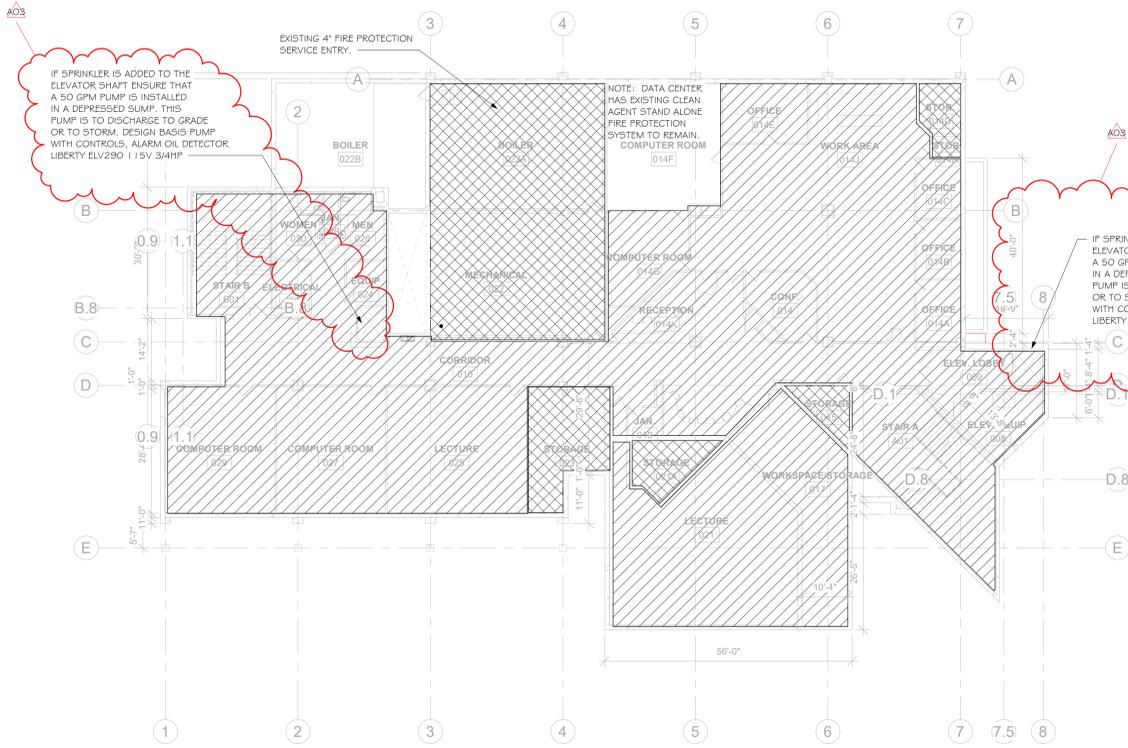
08/13/2024

No.	Description	Date
A01	Addendum #01	08/09/2024
A02	Addendum #02	08/16/2024
A03	Addendum #03	08/21/2024

Graphic Scale: **VARIES**

Last Update: **8/21/2024 12:47:00 PM**

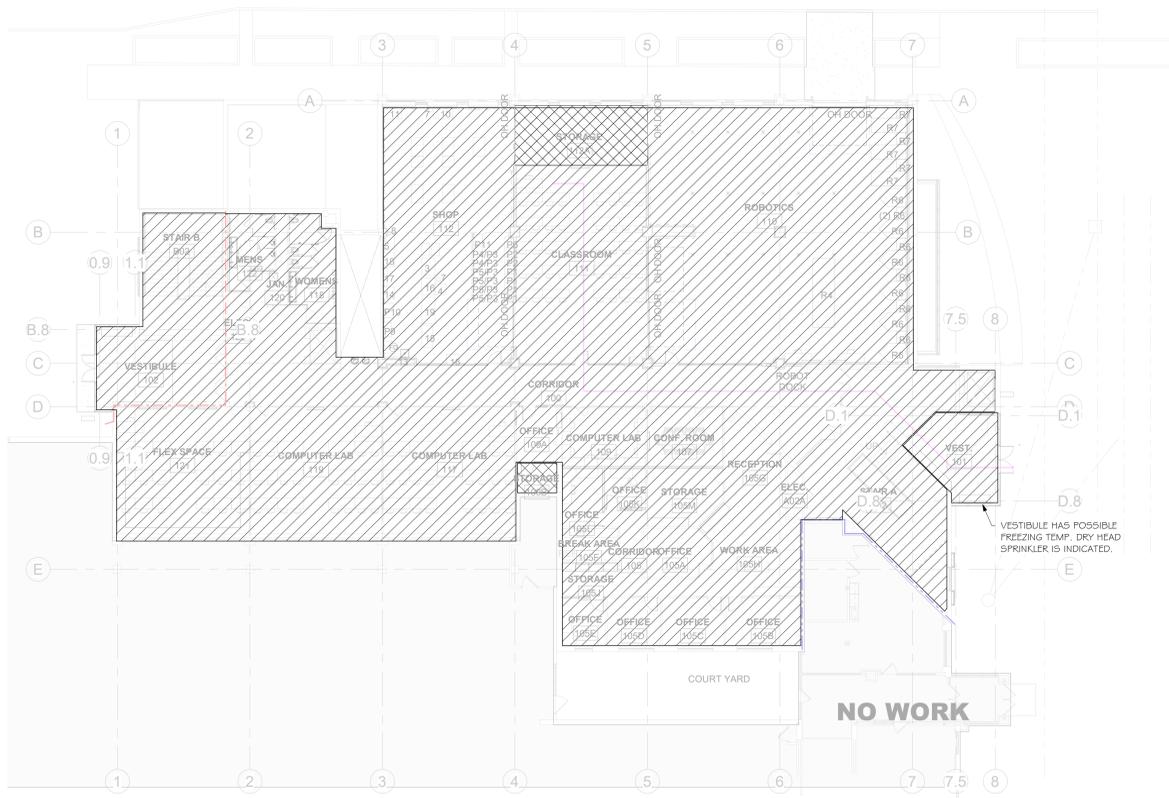
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1 BELOW GRADE PLAN
SCALE: 1/16" = 1'-0"



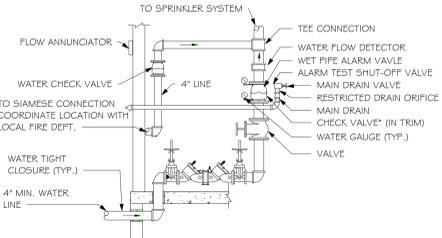
3 SECOND FLOOR PLUMBING PLAN
SCALE: 1/16" = 1'-0"



2 FIRST FLOOR PLUMBING PLAN
SCALE: 1/16" = 1'-0"

- NFPA 1.3 LIGHT HAZARD
- NFPA 1.3 ORDINARY HAZARD
- SERVER ROOM 215, CLEAN AGENT SYSTEM (NFPA 2001) RECOMMENDED IF SERVERS ARE OF A CRITICAL IMPORTANCE.

ELEVATOR SHAFT NOTE: IF ELEVATOR SHAFT IS NON-COMBUSTIBLE AND IF ELEVATOR IS NOT A HYDRAULIC ELEVATOR SPRINKLERS MAY BE OMITTED. ALSO IF ELEVATOR IS NOT HYDRAULIC THE SPRINKLERS MAY BE OMITTED IN THE MACHINE ROOM. HYDRAULIC ELEVATORS REQUIRE SPRINKLER IN FIT AND TOP OF SHAFT AND IN MACHINE ROOM. THIS NOTE IS FOR GUIDANCE ENSURE ALL NFPA, ELEVATOR AND LOCAL CODES AND STANDARDS ARE FOLLOWED.



4 FIRE PROTECTION RISER SCHEMATIC
SCALE: N.T.S.



Consultant:



Project Title: **WESTERN TECHNICAL COLLEGE
INNOVATION CENTER**

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: **ELECTRICAL FIRST FLOOR REMOVAL PLAN - LIGHTING**

HSR Project Number: **24003**

Project Date: **AUGUST 2024**

Drawn By: **PLP**

Key Plan:

No.	Description	Date
3	ADDENDUM #3	08-21-24

Graphic Scale: **VARIES**

Last Update: **7/29/2024**

ED01



SHADED AREAS INDICATE "NO WORK"



1

ELECTRICAL FIRST FLOOR REMOVAL PLAN - LIGHTING

1/8" = 1'-0"

KEYED ELECTRICAL DEMOLITION LIGHTING PLAN NOTES:

- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LED LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING EMPTY CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, ETC. REMOVE EXISTING BRANCH-CIRCUIT AND SWITCH-LEG WIRING BACK TO SOURCE. DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING POWER SUPPLY FOR LOW VOLTAGE LED LIGHTING FIXTURE. REMOVE WIRING BACK TO SOURCE. REMOVE, DISPOSE OF EXISTING CONDUIT, WIRING, FITTINGS, JUNCTION BOXES, ETC.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING EXIT LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, WIRING, ETC. REMOVE EXISTING SWITCH-LEG WIRING BACK TO SOURCE. DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND SALVAGE EXISTING LED LIGHTING FIXTURE. IT SHALL BE REQUIRED FOR THE ELECTRICAL CONTRACTOR TO WIPE CLEAN FIXTURE, STORE ON PALLET AND SHRINK WRAP EXISTING LIGHTING FIXTURES FOR FUTURE SALE AT AN AUCTION. IT SHALL BE ALLOWED TO REUSE EXISTING EMPTY CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, ETC. REMOVE EXISTING BRANCH-CIRCUIT AND SWITCH-LEG WIRING BACK TO SOURCE. DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING OCCUPANCY SENSOR AND ASSOCIATED LOW VOLTAGE OR LINE VOLTAGE WIRING.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LOW-VOLTAGE PUSH-BUTTON LIGHTING CONTROL SWITCH CONNECTED TO EXISTING AUTOMATED LOGIC CONTROL PANEL LOCATED IN STORAGE ROOM #128 OR #222. REMOVE LOW VOLTAGE WIRING BACK TO SOURCE. DO NOT ABANDON IN PLACE.
- DISCONNECT, REMOVE AND DISPOSE OF SINGLE-POLE LINE VOLTAGE LIGHT SWITCH. IT SHALL BE ALLOWED TO REUSE EXISTING JUNCTION BOX, CONDUIT, ETC. FOR REMODEL PROJECT. REMOVE EXISTING WIRING BACK TO SOURCE. DO NOT REUSE OR ABANDON IN PLACE. PROVIDE BLANK COVER PLATE FOR ANY UNUSED JUNCTION BOXES TO REMAIN.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING WALL-MOUNTED OCCUPANCY SENSOR. REMOVE LINE VOLTAGE WIRING BACK TO SOURCE. IT SHALL BE ALLOWED TO REUSE EMPTY JUNCTION BOX, CONDUIT, ETC. FOR REMODEL PROJECT.
- AUTOMATED LOGIC CONTROL PANEL TO REMAIN AS IS. REUSE TO FEED NEW LIGHTING FIXTURES IN CORRIDORS ONLY.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING DAYLIGHT SENSOR AND ASSOCIATED LOW VOLTAGE OR LINE VOLTAGE WIRING.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LED LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, BRANCH-CIRCUIT WIRING, ETC.
- EXISTING LOW-VOLTAGE PUSH-BUTTON LIGHTING CONTROL SWITCH CONNECTED TO EXISTING AUTOMATED LOGIC CONTROL PANEL LOCATED IN STORAGE ROOM #128 OR #222 TO REMAIN AS IS.



Consultant:



WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

ELECTRICAL SECOND FLR. REMOVAL PLAN - LIGHTING

Project Title:

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PLP

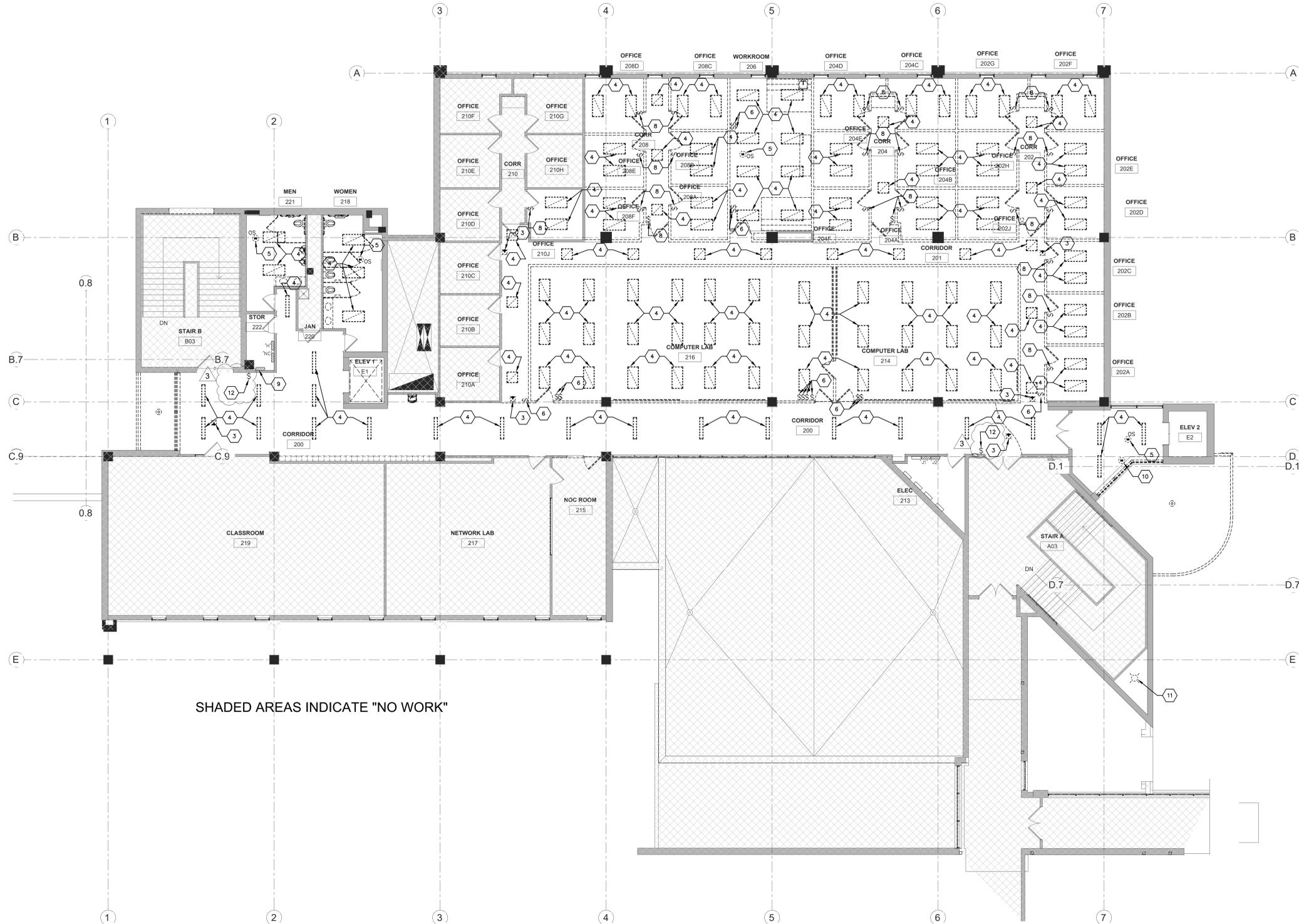
Key Plan:

No.	Description	Date
3	ADDENDUM #3	08-21-24

Graphic Scale: VARIES

Last Update: 7/29/2024

ED02



SHADED AREAS INDICATE "NO WORK"



1

ELECTRICAL SECOND FLOOR REMOVAL PLAN - LIGHTING

1/8" = 1'-0"

KEYED ELECTRICAL DEMOLITION LIGHTING PLAN NOTES:

- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LED LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING EMPTY CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, ETC. REMOVE EXISTING BRANCH-CIRCUIT AND SWITCH-LEG WIRING BACK TO SOURCE, DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING POWER SUPPLY FOR LOW VOLTAGE LED LIGHTING FIXTURE. REMOVE WIRING BACK TO SOURCE. REMOVE, DISPOSE OF EXISTING CONDUIT, WIRING, FITTINGS, JUNCTION BOXES, ETC.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING EXIT LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, WIRING, ETC. REMOVE EXISTING SWITCH-LEG WIRING BACK TO SOURCE, DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND SALVAGE EXISTING LED LIGHTING FIXTURE. IT SHALL BE REQUIRED FOR THE ELECTRICAL CONTRACTOR TO WIPE CLEAN FIXTURE, STORE ON PALLET AND SHRINK WRAP EXISTING LIGHTING FIXTURES FOR FUTURE SALE AT AN AUCTION. IT SHALL BE ALLOWED TO REUSE EXISTING EMPTY CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, ETC. REMOVE EXISTING BRANCH-CIRCUIT AND SWITCH-LEG WIRING BACK TO SOURCE, DO NOT REUSE OR ABANDON WIRING IN PLACE. TYPICAL.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING OCCUPANCY SENSOR AND ASSOCIATED LOW VOLTAGE OR LINE VOLTAGE WIRING.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LOW-VOLTAGE PUSH-BUTTON LIGHTING CONTROL SWITCH CONNECTED TO EXISTING AUTOMATED LOGIC CONTROL PANEL LOCATED IN STORAGE ROOM #128 OR #222. REMOVE LOW VOLTAGE WIRING BACK TO SOURCE, DO NOT ABANDON IN PLACE.
- DISCONNECT, REMOVE AND DISPOSE OF SINGLE-POLE LINE VOLTAGE LIGHT SWITCH. IT SHALL BE ALLOWED TO REUSE EXISTING JUNCTION BOX, CONDUIT, ETC. FOR REMODEL PROJECT. REMOVE EXISTING WIRING BACK TO SOURCE, DO NOT REUSE OR ABANDON IN PLACE. PROVIDE BLANK COVER PLATE FOR ANY UNUSED JUNCTION BOXES TO REMAIN.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING WALL-MOUNTED OCCUPANCY SENSOR. REMOVE LINE VOLTAGE WIRING BACK TO SOURCE. IT SHALL BE ALLOWED TO REUSE EMPTY JUNCTION BOX, CONDUIT, ETC. FOR REMODEL PROJECT.
- AUTOMATED LOGIC CONTROL PANEL TO REMAIN AS IS. REUSE TO FEED NEW LIGHTING FIXTURES IN CORRIDORS ONLY.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING DAYLIGHT SENSOR AND ASSOCIATED LOW VOLTAGE OR LINE VOLTAGE WIRING.
- DISCONNECT, REMOVE AND DISPOSE OF EXISTING LED LIGHTING FIXTURE. IT SHALL BE ALLOWED TO REUSE EXISTING CONDUIT, JUNCTION BOXES, FITTINGS, STRAPS, FIXTURE WHIPS, BRANCH-CIRCUIT WIRING, ETC.
- EXISTING LOW-VOLTAGE PUSH-BUTTON LIGHTING CONTROL SWITCH CONNECTED TO EXISTING AUTOMATED LOGIC CONTROL PANEL LOCATED IN STORAGE ROOM #128 OR #222 TO REMAIN AS IS.



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Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: ELECTRICAL LIGHTING PLAN - FIRST FLOOR

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PCP

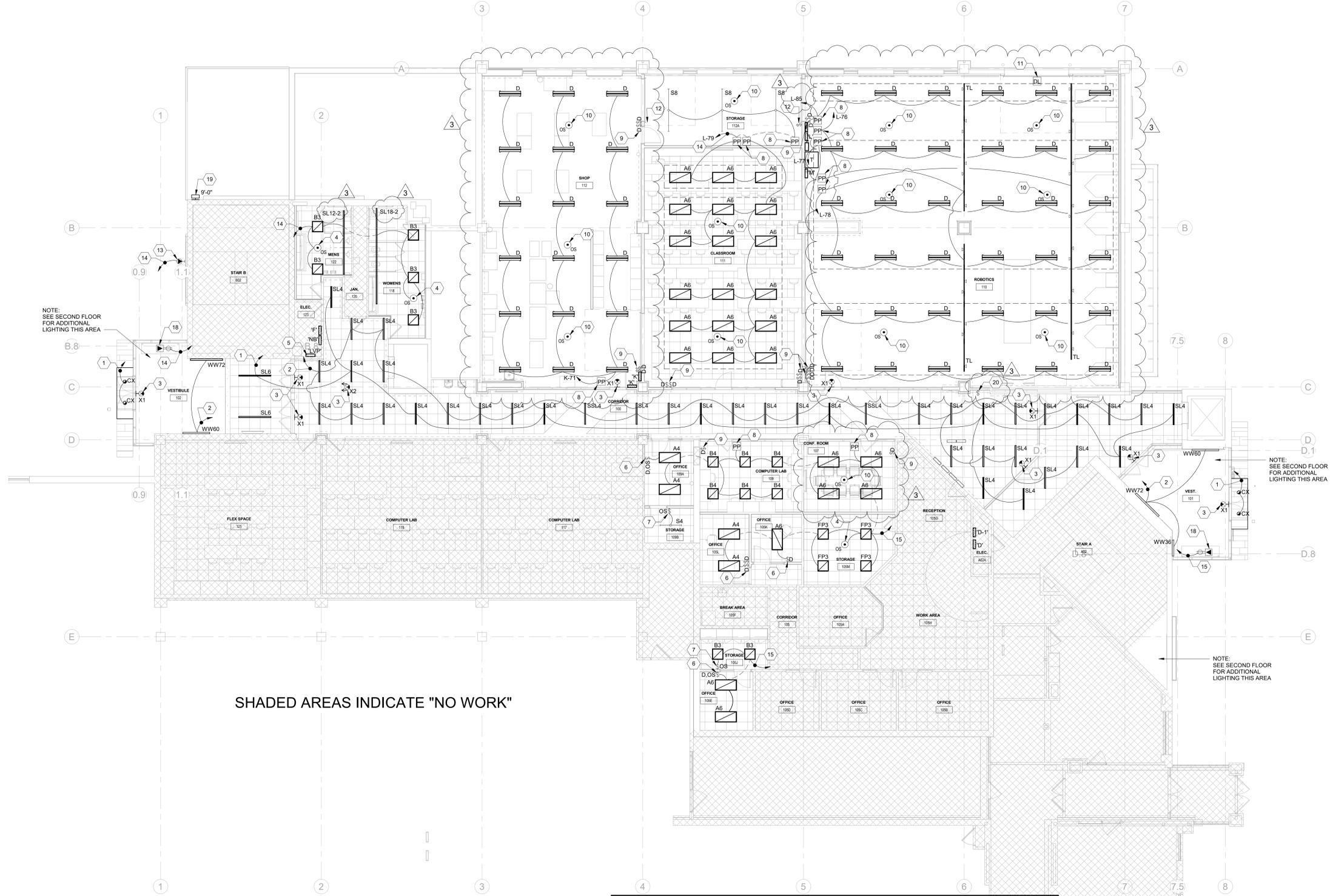
Key Plan:

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2	ADDENDUM #2	08-14-24
3	ADDENDUM #3	08-21-24

Graphic Scale: VARIES

Last Update: 8/21/2024 9:50:15 AM

E101



SHADED AREAS INDICATE "NO WORK"



1 ELECTRICAL LIGHTING PLAN - FIRST FLOOR

1/8" = 1'-0"

GENERAL NOTES FOR LIGHTING:

- FINAL OCCUPANCY SENSOR LOCATION SHALL BE BY OCCUPANCY SENSOR MANUFACTURER.
- LIGHTING CONTROL SYSTEM BASED UPON ACUTY CONTROLS. n-LIGHT MANUFACTURER. WATTSTOPPER ONLY SHALL BE AN APPROVED EQUAL FOR THIS PROJECT. REFER TO SHEETS E600 - E603 FOR LIGHTING CONTROL DETAILS. ONLY TWO LIGHTING CONTROL MANUFACTURERS ARE APPROVED FOR THIS PROJECT.
- COORDINATE LIGHTING FIXTURE LOCATIONS WITH MECHANICAL PIPING AND DUCTWORK PRIOR TO INSTALLATION.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL DESIGNER FOR LIGHTING FIXTURE BRANCH-CIRCUITS. THE INTENT IS TO REUSE EXISTING LIFE-SAFETY BRANCH-CIRCUITS AND TO REUSE EXISTING EMERGENCY BRANCH-CIRCUITS (NON-LIFE SAFETY). PROVIDE A LIGHTING FIXTURE ALLOWANCE OF \$60,000 (DOLLARS) IN THE BID.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A SEPARATE 'BREAK-OUT' COST FOR LIGHTING CONTROLS AND LIGHTING FIXTURE PACKAGE. DO NOT COMBINE LIGHTING CONTROLS AND LIGHTING FIXTURE PACKAGE INTO ONE BID. IT SHALL BE ALLOWED TO PROVIDE 'WATTSTOPPER' LIGHTING CONTROLS AS AN ALTERNATE TO 'MIGHT' WHICH WAS USED AS A BASIS FOR DESIGN ON THIS PROJECT.

KEYED LIGHTING PLAN NOTES

- CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL. FEED WITH 'LIFE-SAFETY' EXISTING BRANCH-CIRCUIT FOR EGRESS LIGHTING.
- CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL. FEED WITH EXISTING NON-LIFE SAFETY EMERGENCY BRANCH-CIRCUIT.
- CONNECT NEW EXIT LIGHTING FIXTURE TO AN EXISTING LIFE-SAFETY BRANCH-CIRCUIT AVAILABLE IN THE AREA.
- PROVIDE A DUAL TECHNOLOGY CEILING-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR AS RECOMMENDED BY ACUTY CONTROLS. n-LIGHT MANUFACTURER FOR AUTOMATIC CONTROL OF LIGHTING FIXTURES IN THIS ROOM.
- LOCATION OF EXISTING 'AUTOMATED LOGIC' CONTROL PANEL. USE THIS PANEL TO CONTROL EXTERIOR AND CORRIDOR LIGHTING FIXTURES ONLY.
- PROVIDE A WALL-MOUNTED COMBINATION OCCUPANCY/DIMMER. THIS SWITCH SHALL SERVE AS AN OCCUPANCY SENSOR AND 0-10V DIMMER FOR LED LIGHTING FIXTURES.
- PROVIDE INFRARED SINGLE RELAY WALL-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR AS RECOMMENDED BY ACUTY n-LIGHT MANUFACTURER.
- PROVIDE AN ACUTY CONTROLS. n-LIGHT ROOM CONTROLLER 1-ZONE POWER PACK AS RECOMMENDED BY MANUFACTURER. REFER TO LIGHTING CONTROL DRAWINGS E601 - E606. TYPICAL.
- PROVIDE AN ACUTY CONTROLS. n-LIGHT TWO BUTTON LOW VOLTAGE DIGITAL DIMMING SWITCH COMPATIBLE WITH n-LIGHT ROOM CONTROLLER ZONE POWER PACK. PROVIDE A LOW VOLTAGE CAT5 CABLE AS RECOMMENDED BY n-LIGHT MANUFACTURER.
- MAKE FINAL CONNECTION TO BACKLASH EXTERIOR SIGN. PROVIDE AN DISCONNECT AS REQUIRED BY NEC.
- PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM NEW REPLACEMENT PANELBOARDS 'F' OR 'NC' LOCATED IN ELECTRICAL ROOM 123.
- ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'D' OR 'D1' LOCATED IN ELECTRICAL A02A. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'H' OR 'NC' LOCATED IN ELECTRICAL 222.
- ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'J' LOCATED IN DATA/ELECTRICAL 213. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- PROVIDE A FLOOR BOX WITH DLP EXCEPT TABLE.
- ELECTRICAL CONTRACTOR SHALL LOWER EXISTING EXTERIOR WALL SCONCE LIGHTING FIXTURE TO 9'-0".
- REINSTALL A PREVIOUSLY REMOVED PUSH-BUTTON SWITCH AND CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL LOCATED IN ELECTRICAL ROOM 123. THIS PUSH-BUTTON SHALL CONTROL CORRIDOR LIGHTING FIXTURES.



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Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: ELECTRICAL LIGHTING PLAN - SECOND FLOOR

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PCP

Key Plan:

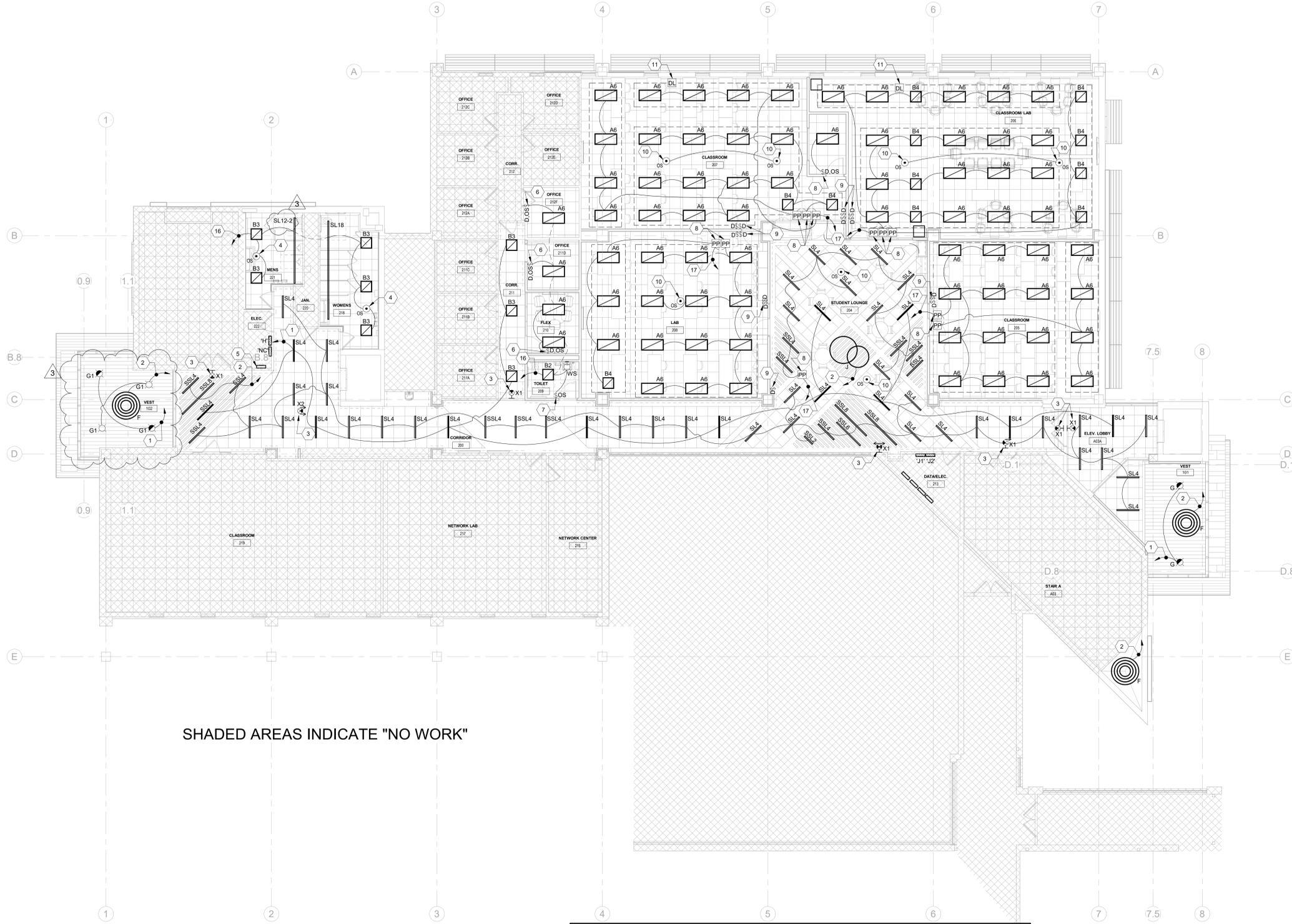
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Revisions:

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E102



SHADED AREAS INDICATE "NO WORK"



1

ELECTRICAL LIGHTING PLAN - SECOND FLOOR

1/8" = 1'-0"

GENERAL NOTES FOR LIGHTING:

- A. FINAL OCCUPANCY SENSOR LOCATION SHALL BE BY OCCUPANCY SENSOR MANUFACTURER.
- B. LIGHTING CONTROL SYSTEM BASED UPON ACUITY CONTROLS. n-LIGHT MANUFACTURER. WATTSTOPPER ONLY SHALL BE AN APPROVED EQUAL FOR THIS PROJECT. REFER TO SHEETS E600 - E603 FOR LIGHTING CONTROL DETAILS. ONLY TWO LIGHTING CONTROL MANUFACTURERS ARE APPROVED FOR THIS PROJECT.
- C. COORDINATE LIGHTING FIXTURE LOCATIONS WITH MECHANICAL PIPING AND DUCTWORK PRIOR TO INSTALLATION.
- D. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL DESIGNER FOR LIGHTING FIXTURE BRANCH-CIRCUITS. THE INTENT IS TO REUSE EXISTING LIFE-SAFETY BRANCH-CIRCUITS AND TO REUSE EXISTING EMERGENCY BRANCH-CIRCUITS (NON-LIFE SAFETY). PROVIDE A LIGHTING FIXTURE ALLOWANCE OF \$60,000 (DOLLARS) IN THE BID.
- E. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A SEPARATE BREAK-OUT COST FOR LIGHTING CONTROLS AND LIGHTING FIXTURE PACKAGE. DO NOT COMBINE LIGHTING CONTROLS AND LIGHTING FIXTURE PACKAGE INTO ONE BID. IT SHALL BE ALLOWED TO PROVIDE WATTSTOPPER LIGHTING CONTROLS AS AN ALTERNATE TO n-LIGHT WHICH WAS USED AS A BASIS FOR DESIGN ON THIS PROJECT.
- F.

KEYED LIGHTING PLAN NOTES

- 1. CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL. FEED WITH LIFE-SAFETY EXISTING BRANCH-CIRCUIT FOR EGRESS LIGHTING.
- 2. CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL FEED WITH EXISTING NON-LIFE SAFETY EMERGENCY BRANCH-CIRCUIT.
- 3. CONNECT NEW EXIT LIGHTING FIXTURE TO AN EXISTING LIFE-SAFETY BRANCH-CIRCUIT AVAILABLE IN THE AREA.
- 4. PROVIDE A DUAL TECHNOLOGY CEILING-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR AS RECOMMENDED BY ACUITY CONTROLS, n-LIGHT MANUFACTURER FOR AUTOMATIC CONTROL OF LIGHTING FIXTURES IN THIS ROOM.
- 5. LOCATION OF EXISTING 'AUTOMATED LOGIC' CONTROL PANEL. USE THIS PANEL TO CONTROL EXTERIOR AND CORRIDOR LIGHTING FIXTURES ONLY.
- 6. PROVIDE A WALL-MOUNTED COMBINATION OCCUPANCY/DIMMER. THIS SWITCH SHALL SERVE AS AN OCCUPANCY SENSOR AND 0-10V DIMMER FOR LED LIGHTING FIXTURES.
- 7. PROVIDE INFRARED SINGLE RELAY WALL-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR AS RECOMMENDED BY ACUITY n-LIGHT MANUFACTURER.
- 8. PROVIDE AN ACUITY CONTROLS, n-LIGHT ROOM CONTROLLER 1-ZONE POWER PACK AS RECOMMENDED BY MANUFACTURER. REFER TO LIGHTING CONTROL DRAWINGS E601 - E606. TYPICAL.
- 9. PROVIDE AN ACUITY CONTROLS, n-LIGHT TWO BUTTON LOW VOLTAGE DIGITAL DIMMING SWITCH COMPATIBLE WITH n-LIGHT ROOM CONTROLLER ZONE POWER PACK. PROVIDE A LOW VOLTAGE CAT5 CABLE AS RECOMMENDED BY n-LIGHT MANUFACTURER.
- 10. PROVIDE AN ACUITY CONTROLS, n-LIGHT DUAL TECHNOLOGY CEILING-MOUNTED OCCUPANCY SENSOR COMPATIBLE WITH CONTROL ZONE POWER PACK.
- 11. PROVIDE AN ACUITY CONTROLS, n-LIGHT DAY-LIGHT SENSOR COMPATIBLE WITH CONTROL ZONE POWER PACK.
- 12. PROVIDE AN ACUITY CONTROLS, n-LIGHT SINGLE BUTTON LOW VOLTAGE DIGITAL ON/OFF SWITCH COMPATIBLE WITH n-LIGHT ROOM CONTROLLER ZONE POWER PACK. PROVIDE A LOW VOLTAGE CAT5 CABLE AS RECOMMENDED BY n-LIGHT MANUFACTURER.
- 13. MAKE FINAL CONNECTION TO BACKLIT EXTERIOR SIGN. PROVIDE AN DISCONNECT AS REQUIRED BY NEC.
- 14. PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM NEW REPLACEMENT PANELBOARDS 'F' OR 'NC' LOCATED IN ELECTRICAL ROOM 123.
- 15. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- 16. PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'D' OR 'D1' LOCATED IN ELECTRICAL A02A. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- 17. PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'H' OR 'NC' LOCATED IN ELECTRICAL 222.
- 18. PROVIDE A 20 AMP, 120VAC, BRANCH-CIRCUIT FROM EXISTING REPLACEMENT PANELBOARDS 'J' LOCATED IN DATA/ELECTRICAL 213. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO FEED FROM.
- 19. PROVIDE A FLOOR BOX WITH DPLI EXCEPT TABLE.
- 20. ELECTRICAL CONTRACTOR SHALL LOWER EXISTING EXTERIOR WALL SCONCE LIGHTING FIXTURE TO 9'-0". REINSTALL A PREVIOUSLY REMOVED PUSH-BUTTON SWITCH AND CONNECT TO EXISTING 'AUTOMATED LOGIC' CONTROL PANEL LOCATED IN ELECTRICAL ROOM 123. THIS PUSH-BUTTON SHALL CONTROL CORRIDOR LIGHTING FIXTURES.



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Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: ELECTRICAL POWER PLAN - FIRST FLOOR

HSR Project Number:
24003

Project Date:
AUGUST 2024

Drawn By:
PCP

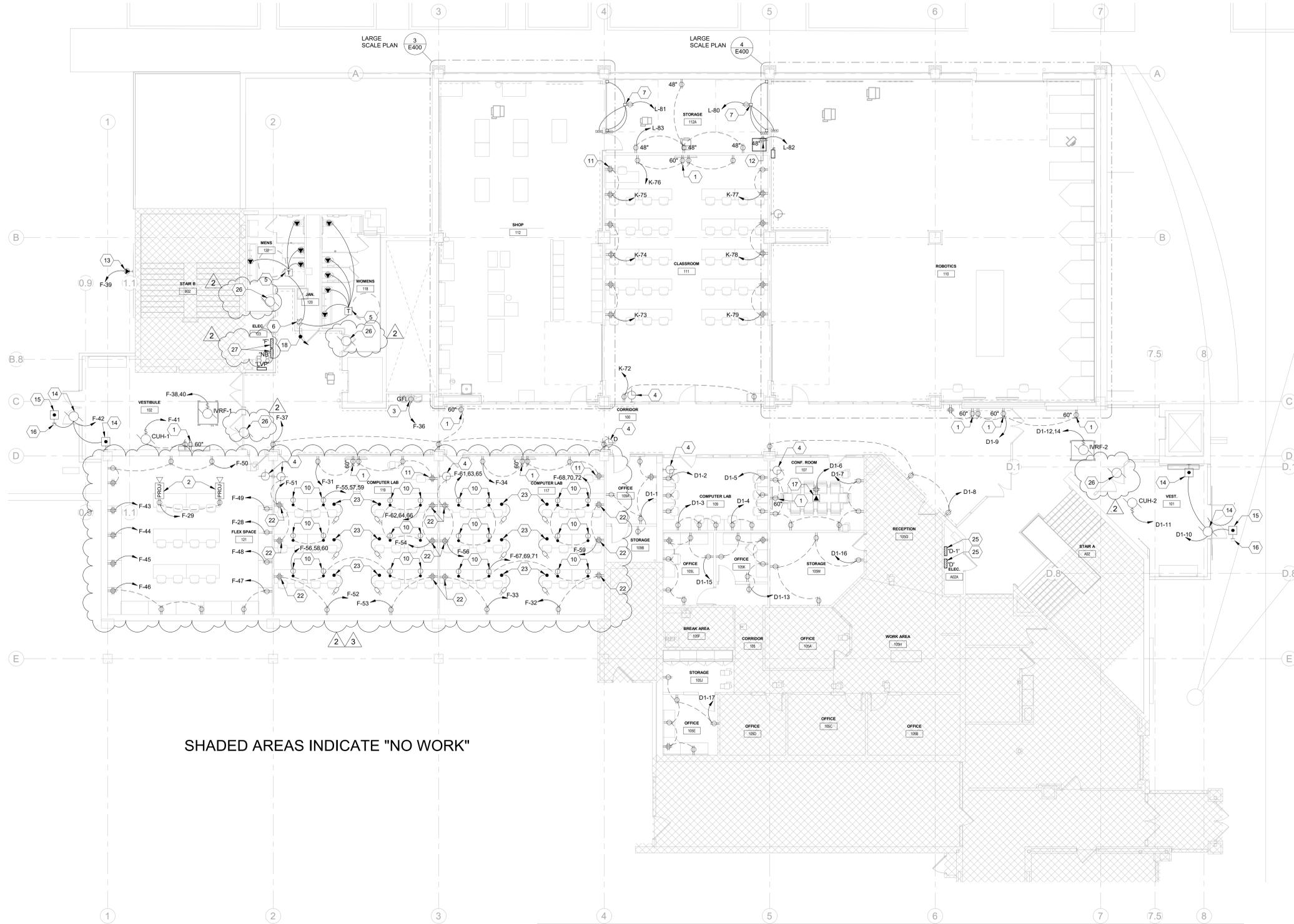
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2	ADDENDUM #2	08-14-24
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Graphic Scale:
VARIES

Last Update:
8/21/2024 9:50:20 AM

E201



SHADED AREAS INDICATE "NO WORK"



1 ELECTRICAL POWER PLAN - FIRST FLOOR

1/8" = 1'-0"

GENERAL NOTES:

- A. PROVIDE SQUARE 'D' PANELBOARDS ONLY, NO EQUALS ACCEPTED.
- B. WORK PERFORMED IN NON-REMODELED AREAS, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP AND PATCHING OF WALLS AND CEILINGS. TYPICAL

KEYED POWER PLAN NOTES-E201 & E202:

1. PROVIDE A DUPLEX RECEPTACLE FOR WALL-MOUNTED MONITOR, 'FISH' WIRING INSIDE EXISTING WALL IF POSSIBLE. OTHERWISE PROVIDE WIREMOLD 500/700 AND INSTALL VERTICALLY FROM ABOVE SUSPENDED CEILING. FIELD VERIFY MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
2. PROVIDE A 20 AMP, 120VAC, CEILING MOUNTED DUPLEX RECEPTACLE FOR OVERHEAD PROJECTOR CORD AND PLUG CONNECTION. COORDINATE EXACT LOCATION WITH WTC IT DEPARTMENT.
3. PROVIDE A NEW 20 AMP, 120VAC DUPLEX RECEPTACLE TO REPLACE EXISTING, INSTALL IN EXISTING JUNCTION BOX. REUSE EXISTING CONDUIT INSTALLED IN WALL TO THE EXTENT POSSIBLE. PROVIDE NEW BRANCH-CIRCUIT WIRING TO WIRING-DEVICE. PROVIDE A NEW STAINLESS STEEL COVER PLATE. PROVIDE GFI RECEPTACLE WHERE NOTED.
4. ELECTRICAL CONTRACTOR SHALL INSTALL A WTC STANDARDIZED LATHEM AIRTIME CLOCK AND BACKBOX AT THIS LOCATION PROVIDED BY WTC FACILITY MAINTENANCE DEPARTMENT (OWNER). INSTALL A LATHEM AIRTIME BACKBOX WITH 120VAC RECEPTACLE PROVIDED BY OWNER. INSTALL A 120VAC LATHEM AIRTIME WIRELESS CLOCK PROVIDED BY OWNER. PROVIDE A 120VAC BRANCH-CIRCUIT WIRING AND MAKE FINAL CONNECTION AS REQUIRED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN. MOUNT BACKBOX FLUSH IN NEW WALLS. SURFACE MOUNT IS ACCEPTABLE IN EXISTING WALLS. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT. REINSTALL EXISTING CLOCK PREVIOUSLY REMOVED DURING DEMO PHASE OF PROJECT.
5. ELECTRICAL CONTRACTOR SHALL INSTALL 40VA TYPE OF TRANSFORMER PROVIDED BY PLUMBING CONTRACTOR FOR AUTOMATIC FLUSH VALVE CONTROL. COORDINATE WITH PLUMBING CONTRACTOR.
6. PROVIDE A SINGLE-POLE SWITCH TO CONTROL AUTOMATIC FLUSH VALVE TRANSFORMERS, CLEARLY LABEL AS DIRECTED BY WTC FACILITY MAINTENANCE DEPARTMENT.
7. ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTION TO LOW VOLTAGE CONTROL SYSTEM FOR OVERHEAD DOOR SENSORS AND START/STOP STATION. INSTALL LOW VOLTAGE WIRING INSIDE EMT CONDUIT RACEWAY SYSTEM. DO NOT INSTALL LOW VOLTAGE WIRING 'FREE-AIR'.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE AN INDUSTRIAL GRADE WHITE RETRACTABLE CORD REEL WITH A 20 AMP, DUPLEX RECEPTACLE. HUBBELL MODEL #HBL145123G220M1. SET RETRACTABLE CORD TO APPROXIMATELY 4'-0" ABOVE FINISH FLOOR. CORD REEL SHALL BE CONSTRUCTED OF ALUMINUM MATERIAL. FIELD VERIFY MOUNTING LOCATION WITH WTC INSTRUCTORS. REFER TO DETAIL 1E402.
9. PROVIDE A COMBINATION POWER/DATA WIREMOLD 4000 SERIES SURFACE RACEWAY.
10. FOR ESTIMATING PURPOSES ONLY, PROVIDE A 50 CORD WITH A 20AMP, 125/250VAC, 4-WIRE PLUS GROUND, 3-PHASE SINGLE TWIST-LOCK RECEPTACLE WITH GROUND AND NEUTRAL SUSPENDED FROM CEILING, PROVIDE KELLUM TYPE CORD SUPPORT, NEMA L14-20R, CONFIRM NEMA TYPE WITH WTC INSTRUCTOR PRIOR TO PURCHASING AND INSTALLING SINGLE RECEPTACLE. LENGTH OF CORD SHALL BE APPROXIMATELY 4'-0" A.F.F.
11. PROVIDE A 20AMP, 120VAC, DOUBLE DUPLEX RECEPTACLE FOR TEACHER'S STATION.
12. PROVIDE A DOUBLE DUPLEX RECEPTACLE FOR NEW 'STUDENT-IT' EQUIPMENT RACK. COORDINATE WITH WTC IT DEPARTMENT. PROVIDE A 20 AMP, 120VAC BRANCH-CIRCUIT.
13. MAKE FINAL CONNECTION TO EXTERIOR SIGN.
14. MAKE FINAL CONNECTION TO MOTORIZED ASSISTED DOOR OPENER. WIRE ASSOCIATED LOW VOLTAGE 'HARD-WIRED' LOW VOLTAGE PUSHBUTTONS.
15. CONNECT MOTORIZED ASSISTED DOOR PUSHBUTTON TO EXTERIOR ALUMINUM POST.
16. EXTERIOR ALUMINUM POST PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A COMBINATION POWER/COMMUNICATION FLOOR JUNCTION BOX AS FOLLOWS:
 - A. ONE (1) WIREMOLD RFB4-4 COMPARTMENT COMBINATION BOX.
 - B. TWO (2) WIREMOLD RFB-DR DUPLEX RECEPTACLE BRACKETS.
 - C. TWO (2) WIREMOLD DTB-2-3T COMMUNICATION BRACKETS.
 - D. ONE (1) RFB4 COVER PLATE TO MATCH FLOORING TYPE.
 - E. CONSULT WIREMOLD SALES REPRESENTATIVE TO CONFIRM QUANTITY AND MODEL NUMBERS.
18. CONNECT TRANSFORMER TO NEAREST AVAILABLE EXISTING 120VAC BRANCH-CIRCUIT IN THIS ROOM.
19. PROVIDE A DUPLEX RECEPTACLE FOR LAP-TOP COMPUTER CHARGING CART.
20. PROVIDE A DUPLEX RECEPTACLE FOR REFRIGERATOR. FEED WITH GFI CIRCUIT BREAKER.
21. PROVIDE A 20AMP, 120VAC, DUPLEX RECEPTACLE FOR MICROWAVE OVEN.
22. PROVIDE A 20 AMP, 120VAC, NEMA L5-20R RECEPTACLE. RECEPTACLE SHALL MATCH 20 AMP, 120VAC, TWIST-LOCK CORD AND PLUG ON TABLE. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT.
23. TABLE INCLUDES A 20 AMP, 120VAC, TWIST-LOCK CORD AND PLUG.
24. CONNECT EXHAUST FAN TO ROOM LIGHTING FIXTURES.
25. EXISTING PANELBOARDS 'D' AND 'D1' ARE NEWER SQUARE 'D' PANELS. USE 'SPARE' CIRCUIT BREAKERS IN THESE PANELS FOR REMODEL PROJECT. THERE IS AMPLE QUANTITY OF CIRCUIT BREAKERS AVAILABLE TO FEED REMODEL LOADS.
26. DISCONNECT EXISTING 120VAC MOTORIZED ASSISTED DOOR OPENER FOR REMOVAL AND RECONNECT A NEW 120VAC MOTORIZED DOOR OPENER INSTALLED IN SAME LOCATION. REUSE EXISTING BRANCH-CIRCUIT.
27. PROVIDE A REPLACEMENT PANELBOARD INSTALLED IN THIS APPROXIMATE LOCATION WITH NEW SQUARE 'D' (ONLY) PANELBOARD. REUSE EXISTING EMPTY CONDUIT TO THE EXTENT POSSIBLE FOR NEW FEEDER. PROVIDE AS AN ALTERNATE BID. REFER TO ELECTRIC RIVER DIAGRAM 1E401.



Consultant:



PROJECT LOCATION: 405 8TH STREET NORTH
LA CROSSE, WI

Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

Sheet Title: ELECTRICAL POWER PLAN - SECOND FLOOR

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PCP

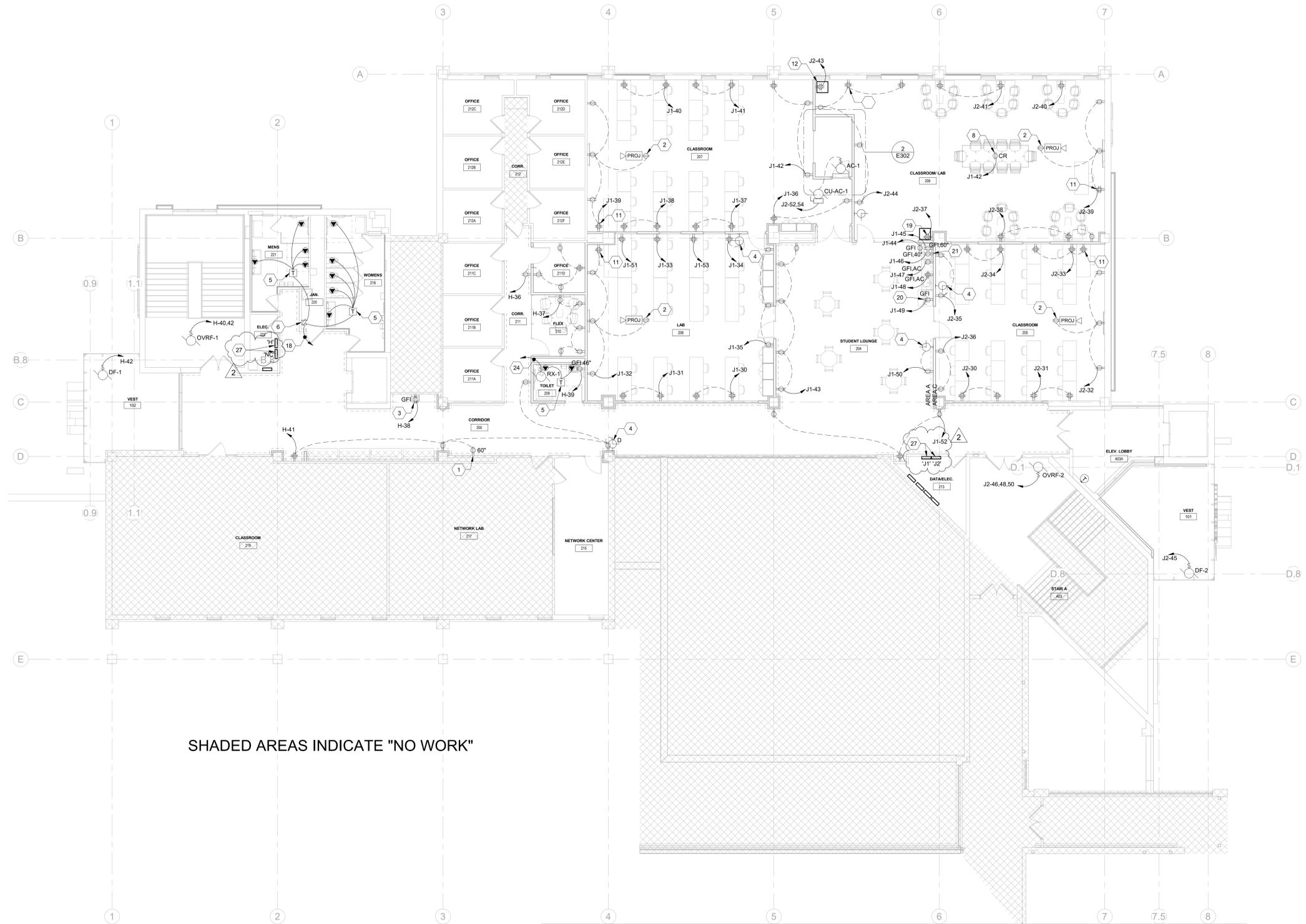
Key Plan:

No.	Description	Date
2	ADDENDUM #2	08-14-24
3	ADDENDUM #3	08-21-24

Graphic Scale: VARIES

Last Update: 8/21/2024 9:50:22 AM

E202



SHADED AREAS INDICATE "NO WORK"



1 ELECTRICAL POWER PLAN - SECOND FLOOR

1/8" = 1'-0"

- GENERAL NOTES:**
- PROVIDE SQUARE 'D' PANELBOARDS ONLY, NO EQUALS ACCEPTED.
 - WORK PERFORMED IN NON-REMODELED AREAS, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP AND PATCHING OF WALLS AND CEILINGS. TYPICAL.
- KEYED POWER PLAN NOTES-E201 & E202:**
- PROVIDE A DUPLEX RECEPTACLE FOR WALL-MOUNTED MONITOR, 'FISH' WIRING INSIDE EXISTING WALL IF POSSIBLE, OTHERWISE PROVIDE WIREMOLD 500/700 AND INSTALL VERTICALLY FROM ABOVE SUSPENDED CEILING. FIELD VERIFY MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 - PROVIDE A 20 AMP, 120VAC, CEILING MOUNTED DUPLEX RECEPTACLE FOR OVERHEAD PROJECTOR CORD AND PLUG CONNECTION. COORDINATE EXACT LOCATION WITH WTC IT DEPARTMENT.
 - PROVIDE A NEW 20 AMP, 120VAC DUPLEX RECEPTACLE TO REPLACE EXISTING. INSTALL IN EXISTING JUNCTION BOX. REUSE EXISTING CONDUIT INSTALLED IN WALL TO THE EXTENT POSSIBLE. PROVIDE NEW BRANCH-CIRCUIT WIRING TO WIRING-DEVICE. PROVIDE A NEW STAINLESS STEEL COVER PLATE. PROVIDE GFI RECEPTACLE WHERE NOTED.
 - ELECTRICAL CONTRACTOR SHALL INSTALL A WTC STANDARDIZED LATHEM AIRTIME CLOCK AND BACKBOX AT THIS LOCATION PROVIDED BY WTC FACILITY MAINTENANCE DEPARTMENT (OWNER). INSTALL A LATHEM AIRTIME BACKBOX WITH 120VAC RECEPTACLE PROVIDED BY OWNER. INSTALL A 120VAC LATHEM AIRTIME WIRELESS CLOCK PROVIDED BY OWNER. PROVIDE A 120VAC BRANCH-CIRCUIT WIRING AND MAKE FINAL CONNECTION AS REQUIRED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN. MOUNT BACKBOX FLUSH IN NEW WALLS. SURFACE MOUNT IS ACCEPTABLE IN EXISTING WALLS. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT. REINSTALL EXISTING CLOCK PREVIOUSLY REMOVED DURING DEMO PHASE OF PROJECT.
 - ELECTRICAL CONTRACTOR SHALL INSTALL 40VA TYPE OF TRANSFORMER PROVIDED BY PLUMBING CONTRACTOR FOR AUTOMATIC FLUSH VALVE CONTROL. COORDINATE WITH PLUMBING CONTRACTOR.
 - PROVIDE A SINGLE-POLE SWITCH TO CONTROL AUTOMATIC FLUSH VALVE TRANSFORMERS, CLEARLY LABEL AS DIRECTED BY WTC FACILITY MAINTENANCE DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTION TO LOW VOLTAGE CONTROL SYSTEM FOR OVERHEAD DOOR SENSORS AND START/STOP STATION. INSTALL LOW VOLTAGE WIRING INSIDE EMT CONDUIT RACEWAY SYSTEM. DO NOT INSTALL LOW VOLTAGE WIRING 'FREE-AIR'.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AN INDUSTRIAL GRADE 'WHITE' RETRACTABLE CORD REEL WITH A 20 AMP, DUPLEX RECEPTACLE. HUBBELL, MODEL #HBL145123GF220M1. SET RETRACTABLE CORD TO APPROXIMATELY 4'-0" ABOVE FINISH FLOOR. CORD REEL SHALL BE CONSTRUCTED OF ALUMINUM MATERIAL. FIELD VERIFY MOUNTING LOCATION WITH WTC INSTRUCTORS. REFER TO DETAIL 1E492.
 - PROVIDE A COMBINATION POWER/DATA WIREMOLD 4000 SERIES SURFACE RACEWAY.
 - FOR ESTIMATING PURPOSES ONLY, PROVIDE A 50 CORD WITH A 20AMP, 125/250VAC, 4-WIRE PLUS GROUND, 3-PHASE SINGLE TWIST-LOCK RECEPTACLE WITH GROUND AND NEUTRAL SUSPENDED FROM CEILING. PROVIDE KELLUM TYPE CORD SUPPORT, NEMA L14-20R. CONFIRM NEMA TYPE WITH WTC INSTRUCTOR PRIOR TO PURCHASING AND INSTALLING SINGLE RECEPTACLE. LENGTH OF CORD SHALL BE APPROXIMATELY 4'-0" A.F.F.
 - PROVIDE A 20AMP, 120VAC, DOUBLE DUPLEX RECEPTACLE FOR TEACHER'S STATION.
 - PROVIDE A DOUBLE DUPLEX RECEPTACLE FOR NEW 'STUDENT' IT EQUIPMENT RACK. COORDINATE WITH WTC IT DEPARTMENT. PROVIDE A 20 AMP, 120VAC BRANCH-CIRCUIT.
 - MAKE FINAL CONNECTION TO EXTERIOR SIGN.
 - MAKE FINAL CONNECTION TO MOTORIZED ASSISTED DOOR OPENER. WIRE ASSOCIATED LOW VOLTAGE 'HARD-WIRED' LOW VOLTAGE PUSHBUTTONS.
 - CONNECT MOTORIZED ASSISTED DOOR PUSHBUTTON TO EXTERIOR ALUMINUM POST.
 - EXTERIOR ALUMINUM POST PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A COMBINATION POWER/COMMUNICATION FLOOR JUNCTION BOX AS FOLLOWS:
 - ONE (1) WIREMOLD RFB4 - 4 COMPARTMENT COMBINATION BOX.
 - TWO (2) WIREMOLD RFB-DR DUPLEX RECEPTACLE BRACKETS.
 - TWO (2) WIREMOLD DTB-2-3T COMMUNICATION BRACKETS.
 - ONE (1) RFB4 COVER PLATE TO MATCH FLOORING TYPE.
 - CONSULT WIREMOLD SALES REPRESENTATIVE TO CONFIRM QUANTITY AND MODEL NUMBERS.
 - CONNECT TRANSFORMER TO NEAREST AVAILABLE EXISTING 120VAC BRANCH-CIRCUIT IN THIS ROOM.
 - PROVIDE A DUPLEX RECEPTACLE FOR LAP-TOP COMPUTER CHARGING CART.
 - PROVIDE A DUPLEX RECEPTACLE FOR REFRIGERATOR. FEED WITH GFI CIRCUIT BREAKER.
 - PROVIDE A 20AMP, 120VAC, DUPLEX RECEPTACLE FOR MICROWAVE OVEN.
 - PROVIDE A 20 AMP, 120VAC, NEMA L5-20R RECEPTACLE. RECEPTACLE SHALL MATCH 20 AMP, 120VAC, TWIST-LOCK CORD AND PLUG ON TABLE. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT.
 - TABLE INCLUDES A 20 AMP, 120VAC, TWIST-LOCK CORD AND PLUG.
 - CONNECT EXHAUST FAN TO ROOM LIGHTING FIXTURES.
 - EXISTING PANELBOARDS 'D' AND 'D1' ARE NEWER SQUARE 'D' PANELS. USE 'SPARE' CIRCUIT BREAKERS IN THESE PANELS FOR REMODEL PROJECT. THERE IS AMPLE QUANTITY OF CIRCUIT BREAKERS AVAILABLE TO FEED REMODEL LOADS.
 - DISCONNECT EXISTING 120VAC MOTORIZED ASSISTED DOOR OPENER FOR REMOVAL AND RECONNECT A NEW 120VAC MOTORIZED DOOR OPENER INSTALLED IN SAME LOCATION. REUSE EXISTING BRANCH-CIRCUIT.
 - PROVIDE A REPLACEMENT PANELBOARD INSTALLED IN THIS APPROXIMATE LOCATION WITH NEW SQUARE 'D' (ONLY) PANELBOARD. REUSE EXISTING EMPTY CONDUIT TO THE EXTENT POSSIBLE FOR NEW FEEDER. PROVIDE AS AN ALTERNATE BID. REFER TO ELECTRIC RIVER DIAGRAM 1E491.

GENERAL LOW VOLTAGE NOTES:

- A. COLOR CODING SHALL BE AS FOLLOWS:
1. NETWORKING (DATA) = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
2. IP PHONE = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
3. AUDIO/VIDEO (AV) = GREEN DATA JACKS WITH GREEN CAT6A CABLE
4. SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE
5. ELECTRONIC DOOR ACCESS SYSTEM = YELLOW MULTIELEMENT SMART CABLE
6. HVAC CONTROLS = PURPLE JACKS WITH PURPLE CAT6A CABLES
7. NETWORKING (DATA) FOR STUDENTS = GRAY DATA JACKS WITH GRAY CAT6A CABLES
8. NETWORKING (DATA) FOR NOC = BLUE DATA JACKS WITH BLUE CAT6A CABLES
9. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE 'J' HOOKS AND CONDUIT SLEEVES THROUGH WALLS FOR LOW VOLTAGE CABLE ROUTING AS REQUIRED.
B. ALL LOW VOLTAGE WIRING SHALL BE PLENUM RATED.
ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL 'J-HOOK' TYPE LOW VOLTAGE CABLE WIRING SUPPORT ON 4'-0" CENTERS ABOVE SUSPENDED ACOUSTIC CEILINGS BETWEEN CONDUIT WALL STUDS AND CABLE TRAY, ETC. ALL LOW VOLTAGE WIRING SHALL BE INDEPENDENTLY SUPPORTED SEPARATE FROM GRID TYPE CEILINGS. NO EXCEPTIONS.
ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING, DATA JACKS, ETC. FOR A COMPLETE SYSTEM FOR THIS PROJECT.

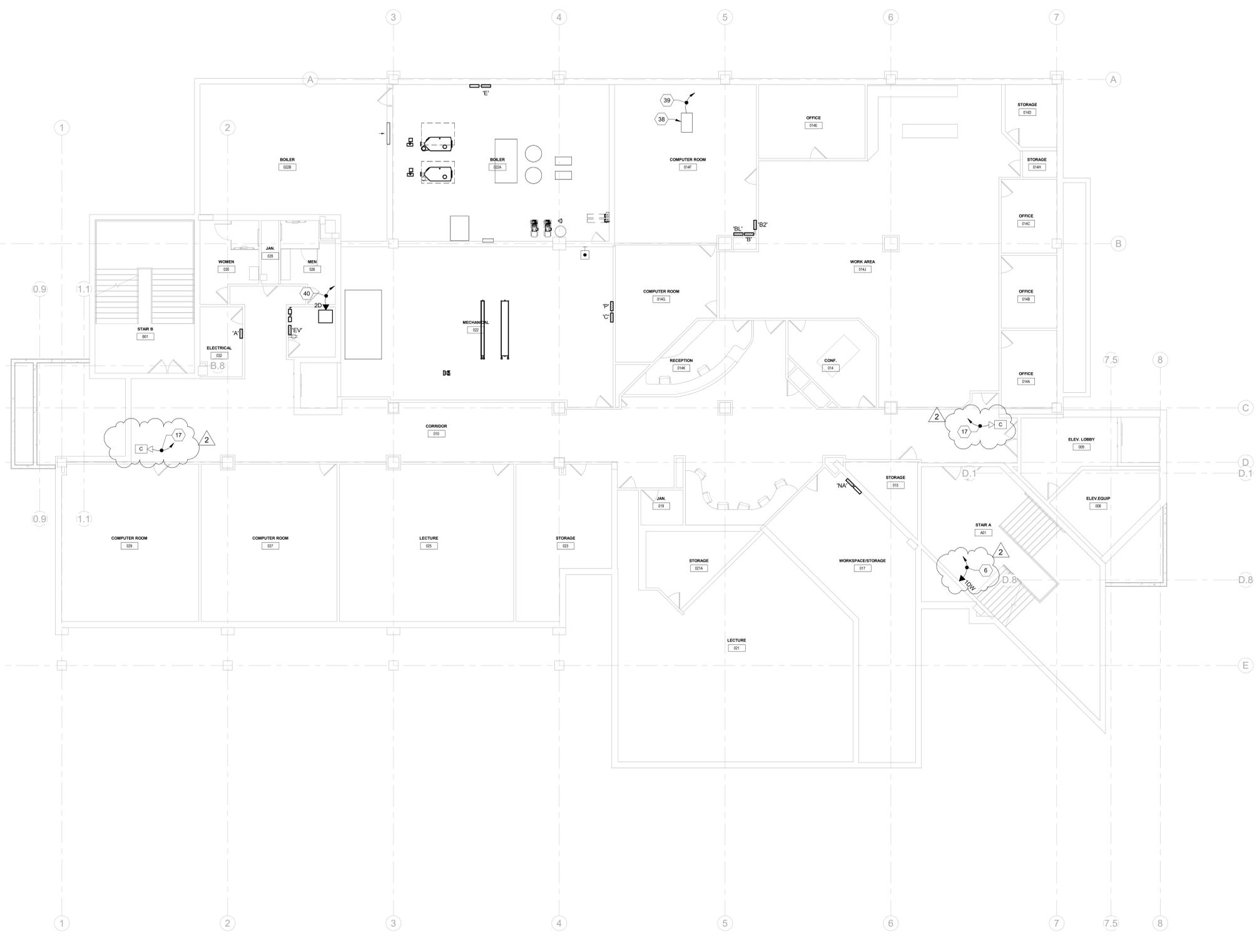
KEYED LOW VOLTAGE PLAN NOTES:

- 1. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLES BETWEEN WIRELESS ACCESS POINT AND EXISTING IT NETWORK EQUIPMENT RACK #3 LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING IT NETWORK EQUIPMENT RACK #3 LOCATED IN COMPUTER ROOM #014E IN BASEMENT FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MOUNTED. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNT MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT (8) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
10. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE THREE (3) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS.
11. PROVIDE A COMBINATION POWER/SIGNALIZATION POKE THRU WIREMOLD JUNCTION BOX SIZED AS REQUIRED FOR DUPLEX RECEPTACLE AND THREE-PORT DATA JACK.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR WALL-MONITOR. PROVIDE ONE (1) NETWORK CAT 6A CABLE TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT EQUIPMENT RACK LOCATED IN STORAGE #112A. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN WALL-MOUNT MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX IN ROBOTICS #116. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING.
13. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE SIX (6) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND THREE (3) WALL-MOUNT JUNCTION BOXES. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. TERMINATE BOTH ENDS OF ALL CABLES. PROVIDE JUNCTION BOXES AND RACEWAYS SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND WALL-MOUNT JUNCTION BOX. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
15. PROVIDE A HUBBELL CATEGORY 6 DATA CORD REEL. REFER TO DETAIL 2E602. NO EQUALS ACCEPTED. PROVIDE ONE CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS OF CABLE. SET CORD REEL LENGTH TO REACH FLOOR.
16. PROVIDE WIREMOLD RACEWAY. PROVIDE SEPARATE FROM POWER.
17. ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
18. ELECTRICAL CONTRACTOR SHALL PROVIDE A SMART CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN IT ROOM #010A ON SECOND FLOOR. SMART CABLE SHALL BE BELDEN MODEL R868P1 OR EQUAL, 16 CONDUCTOR, 4 ELEMENT ACCESS CONTROL CABLE, 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONTROL DETAIL E6602. REFER TO PHOTO #21E301 FOR EXAMPLE.
19. EXTERIOR METAL POST PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
20. LOCATION OF EXTERIOR COMPUTER CHARGING CAB.
21. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NEW STUDENT FLOOR MOUNTED 2-POST NETWORK EQUIPMENT RACK. REFER TO DETAIL #E6602.
22. ELECTRICAL CONTRACTOR SHALL PROVIDE A 12 STRAND, SINGLE-MODE FIBER OPTIC CABLE FEED FOR NEW STUDENT IT EQUIPMENT RACK. FEED FROM COMPUTER ROOM #014E. REFER TO FIBER OPTIC RISER DIAGRAM 2E601.
23. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND NOC IT NETWORK EQUIPMENT RACK LOCATED IN NETWORK CENTER #115. TERMINATE BOTH ENDS OF CABLE.
24. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
25. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
26. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS.
27. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING 'NOC' IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER CENTER #115 AND TERMINATE BOTH ENDS.
28. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING 'NOC' IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER CENTER #115 AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
29. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE THREE (3) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS.
30. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR (4) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN FOUR-PORT DATA JACK AND EXISTING 'NOC' IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER CENTER #115 AND TERMINATE BOTH ENDS.
31. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND EXISTING 'NOC' IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #115 AND TERMINATE BOTH ENDS.
32. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
33. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE ONE (1) NETWORK CAT6A CABLE TO NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #115. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
34. APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MONITOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNT MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
35. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE ONE (1) NETWORK CAT6A CABLE TO 'STUDENT' IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER LAB #08. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN POD STATION DATA/AV JACKS AND IT EQUIPMENT RACK LOCATED IN IT ROOM #027A. TERMINATE BOTH ENDS OF EACH CABLE. PROVIDE JUNCTION BOXES AND RACEWAYS SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
36. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND WALL-MOUNTED STUDENT IT EQUIPMENT RACK LOCATED IN THIS ROOM. TERMINATE BOTH ENDS OF CABLE.
37. PROVIDE A 18U WALL-MOUNTED IT EQUIPMENT RACK WITH LOCKABLE COVER. REFER TO DETAIL 2E602.
38. EXISTING NETWORK EQUIPMENT RACK TO REMAIN. IT WILL BE REQUIRED FOR THE ELECTRICAL CONTRACTOR TO UPGRADE WITH CAT6 AND CAT6A PATCH PANELS AS REQUIRED FOR REMODEL PROJECT.
39. PROVIDE ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC FEED TO NEW EQUIPMENT IT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE A ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC CABLE FEED TO NEW IT EQUIPMENT RACKS LOCATED IN IT ROOM #027A. REFER TO GROUNDING AND FIBER OPTIC RISER DIAGRAM 2E601.
40. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) NETWORK CAT6A CABLES BETWEEN ELEVATOR CONTROLLER AND EXISTING IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E AND TERMINATE BOTH ENDS.
41. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
42. ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E OR IT ROOM #027A. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
43. IN THIS ROOM ALL LOW VOLTAGE CABLES SHALL BE SHIELDED TO AVOID INTERFERENCE TO ROBOTIC EQUIPMENT.
44. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE FIVE (5) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND IT EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
45. PROVIDE 4" DEEP X 12" WIRE BASKET CABLE TRAY AS SPECIFIED.
46. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE SIX (6) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
47. ELECTRICAL CONTRACTOR SHALL INSTALL ONE (1) ALERTIS SYSTEM BEACON PROVIDED BY WTC FACILITY DEPARTMENT OR WTC IT DEPARTMENT. PROVIDE ONE (1) CAT6A CABLE TO IT EQUIPMENT RACK LOCATED IN BASEMENT COMPUTER ROOM #014E AND TERMINATE BOTH ENDS.
48. ELECTRICAL CONTRACTOR SHALL PROVIDE A LOW VOLTAGE CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN IT ROOM #010A ON SECOND FLOOR FOR OVERHEAD DOOR CONTACT SWITCH #4. PROVIDE CABLE AS DIRECTED BY WTC DOOR ACCESS CONTROL VENDOR.
49. PROVIDE ADDITIONAL CAT6A PATCH PANELS AS REQUIRED IN EXISTING 'NOC' EQUIPMENT RACKS. COORDINATE WITH WTC IT DEPARTMENT.
50. APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
51. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN EXISTING IT EQUIPMENT RACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS.
52. ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID TO WIRE TWENTY SEVEN (27) DATA JACKS INSTALLED IN FIVE (5) EXISTING FLOOR BOXES TO NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #027A. PROVIDE TWENTY SEVEN (27) CAT6A CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #027A AND TERMINATE BOTH ENDS OF CABLES. ALSO INCLUDE TO REMOVE TWENTY (27) EXISTING CAT 5 OR CAT6 CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND EXISTING IT EQUIPMENT RACK LOCATED IN DATA ELECTRICAL ROOM #115.



ELECTRICAL LOW VOLTAGE PLAN - BASEMENT

1/8" = 1'-0"



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PROJECT TITLE: WESTERN TECHNICAL COLLEGE INNOVATION CENTER
PROJECT LOCATION: 405 6TH STREET NORTH
LA CROSSE, WI
SHEET TITLE: ELECTRICAL LOW VOLTAGE PLAN - BASEMENT

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PCP

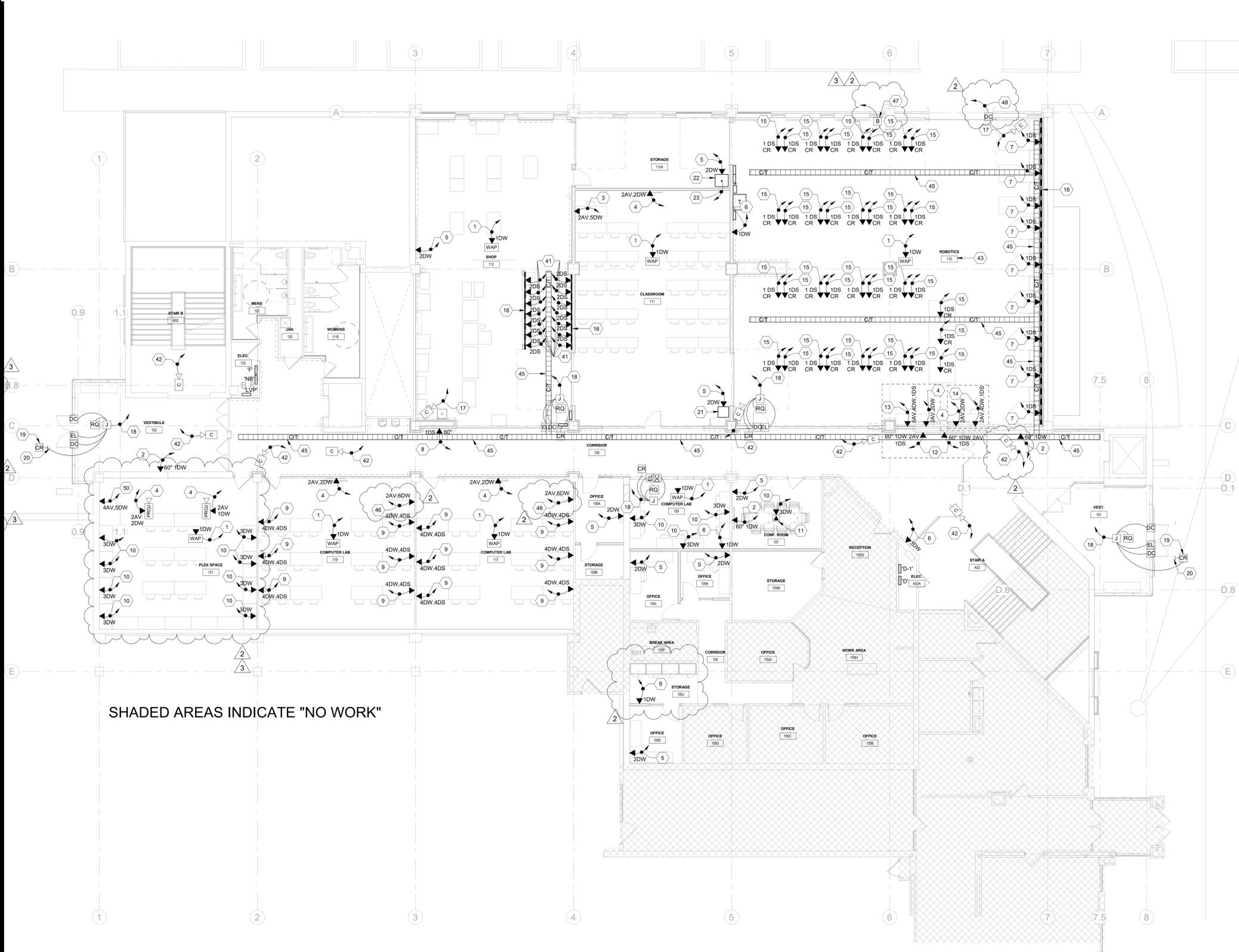
Key Plan:

Revisions table with columns: No., Description, Date. Contains three entries: 1. ADDENDUM #1 (08-14-24), 2. ADDENDUM #2 (08-14-24), 3. ADDENDUM #3 (08-21-24).

Graphic Scales: VARIES
Last Update: 8/21/2024 9:50:23 AM

- GENERAL LOW VOLTAGE NOTES:**
- COLOR CODING SHALL BE AS FOLLOWS:
1. NETWORKING (DATA) = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
2. IP PHONE = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
3. AUDIO/VIDEO (AV) = GREEN DATA JACKS WITH GREEN CAT6A CABLE
4. SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE
5. ELECTRONIC DOOR ACCESS SYSTEM = YELLOW MULTIELEMENT SMART CABLE
6. HVAC CONTROLS = PURPLE JACKS WITH PURPLE CAT6A CABLES
7. NETWORKING (DATA) FOR STUDENTS = GRAY DATA JACKS WITH GRAY CAT6A CABLES
8. NETWORKING (DATA) FOR NOC = BLUE DATA JACKS WITH BLUE CAT6A CABLES
9. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE 'J' HOOKS AND CONDUIT SLEEVES THROUGH WALLS FOR LOW VOLTAGE CABLE ROUTING AS REQUIRED.
 - ALL LOW VOLTAGE WIRING SHALL BE PLENUM RATED.**
ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL "J-HOOK" TYPE LOW VOLTAGE CABLE WIRING SUPPORT ON 4'-0" CENTERS ABOVE SUSPENDED ACOUSTIC CEILINGS BETWEEN CONDUIT WALL STUDS AND CABLE TRAY, ETC. ALL LOW VOLTAGE WIRING SHALL BE INDEPENDENTLY SUPPORTED SEPARATE FROM GRID TYPE CEILINGS. NO EXCEPTIONS.
ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING, DATA JACKS, ETC. FOR A COMPLETE SYSTEM FOR THIS PROJECT.

- KEYED LOW VOLTAGE PLAN NOTES:**
- APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN WIRELESS ACCESS POINT AND EXISTING IT NETWORK EQUIPMENT RACK #83 LOCATED IN COMPUTER ROOM #1014F IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING IT NETWORK EQUIPMENT RACK #83 LOCATED IN COMPUTER ROOM #1014F IN BASEMENT FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MOUNTED. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNT MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT (8) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE THREE (3) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT AND TERMINATE BOTH ENDS.
 - PROVIDE A TERMINAL POWER COMMUNICATION POKE THRU WIREMOLD JUNCTION BOX SIZED AS REQUIRED FOR DUPLEX RECEPTACLE AND THREE-PORT DATA JACK.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR WALL-MOUNTED. PROVIDE ONE (1) NETWORK CAT 6A CABLE TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN WALL-MOUNTED JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX IN ROBOTICS #111. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL AN ELEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE SIX (6) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND THREE (3) WALL-MOUNTED JUNCTION BOXES. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE TWO (2) NETWORK CAT6A CABLES TO TEACHER'S STATION DATA/AV JACKS AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND WALL-MOUNTED JUNCTION BOX. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - PROVIDE A HUBBELL CATEGORY 6 DATA CORD REEL. REFER TO DETAIL 216-02. NO EQUALS ACCEPTED. PROVIDE ONE CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE TWO (2) NETWORK CAT6A CABLES TO REEL LENGTH TO REACH FLOOR.
 - PROVIDE A SERIES SURFACE RACEWAY. PROVIDE SEPARATE FROM POWER.
 - ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A SMART CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN FLOOR. SMART CABLE SHALL BE BELDEN HOMERUN RESISTORLESS 16 CONDUCTOR, 4 ELEMENT ACCESS CONTROL CABLE. 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO INSTALL CARD READER ON EXTERIOR METAL #E666. REFER TO PHOTO #216-031 FOR EXAMPLE.
 - EXTERIOR METAL POST PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NEW STUDENT FLOOR MOUNTED 2-POST NETWORK EQUIPMENT RACK. REFER TO DETAIL 216-03.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A 12 STRAND, SINGLE-MODE FIBER OPTIC CABLE FEED FOR NEW STUDENT IT EQUIPMENT RACK. FEED FROM COMPUTER ROOM #1014E. REFER TO FIBER OPTIC RISER DIAGRAM 216-041.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #215 AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE THREE (3) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR (4) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN FOUR-PORT DATA JACK AND EXISTING NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #215 AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE ONE (1) NETWORK CAT6A CABLE TO NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #215. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MOUNTED. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNT MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FIVE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR POD STATION. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE ONE (1) NETWORK CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER LAB #208. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN POD STATION DATA/AV JACKS AND IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND WALL-MOUNTED STUDENT IT EQUIPMENT RACK LOCATED IN THIS ROOM. TERMINATE BOTH ENDS OF CABLE.
 - PROVIDE A 18U WALL-MOUNTED IT EQUIPMENT RACK WITH LOCKABLE COVER. REFER TO DETAIL 216-042.
 - EXISTING NETWORK EQUIPMENT RACK TO REMAIN. IT WILL BE REQUIRED FOR THE ELECTRICAL CONTRACTOR TO UPGRADE WITH CAT6 AND CAT6A PATCH PANELS AS REQUIRED FOR REMODEL PROJECT.
 - PROVIDE ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC FEED TO NEW EQUIPMENT IT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE A ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC CABLE FEED TO NEW IT EQUIPMENT RACKS LOCATED IN IT ROOM #207A. REFER TO GROUNDING AND FIBER OPTIC RISER DIAGRAM 216-041.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) NETWORK CAT6A CABLES BETWEEN ELEVATOR CONTROLLER AND EXISTING IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E OR IT ROOM #207A. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 - IN THIS ROOM ALL LOW VOLTAGE CABLES SHALL BE SHIELDED TO AVOID INTERFERENCE TO ROBOTIC EQUIPMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - PROVIDE 4" DEEP X 12" WIRE BASKET CABLE TRAY AS SPECIFIED.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE SIX (6) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL INSTALL ONE (1) ALERTIS SYSTEM BEACON PROVIDED BY WTC FACILITY DEPARTMENT OR WTC IT DEPARTMENT. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN BASEMENT COMPUTER ROOM #1014E AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A LOW VOLTAGE CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN IT ROOM #101A ON SECOND FLOOR FOR OVERHEAD DOOR CONTACT SWITCH #4. PROVIDE CABLE AS DIRECTED BY WTC DOOR ACCESS CONTROL VENDOR.
 - PROVIDE ADDITIONAL CAT6A PATCH PANELS AS REQUIRED IN EXISTING NOC EQUIPMENT RACKS. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #1014E IN BASEMENT. PROVIDE FOUR (4) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL INTERCONNECT EXISTING IT EQUIPMENT RACK LOCATED IN CLASSROOM #111 TO NEW IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN EXISTING IT EQUIPMENT RACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID TO WIRE TWENTY SEVEN (27) DATA JACKS INSTALLED IN FIVE (5) EXISTING FLOOR BOXES TO NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWENTY SEVEN (27) CAT6A CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS OF CABLES. ALSO INCLUDE TO REMOVE TWENTY (27) EXISTING CAT 5 OR CAT6 CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND EXISTING IT EQUIPMENT RACK LOCATED IN DATA ELECTRICAL ROOM #115.



SHADED AREAS INDICATE "NO WORK"



ELECTRICAL LOW VOLTAGE PLAN - FIRST FLOOR

1/8" = 1'-0"



2 PHOTO #1
NO SCALE



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INNOVATION CENTER**
PROJECT LOCATION: 405 8TH STREET NORTH
LA CROSSE, WI

Project Title:
HSR Project Number:
24003

Project Date:
AUGUST 2024

Drawn By:
PCP

Key Plan:

Revisions:

No.	Description	Date
2	ADDENDUM #2	08-14-24
3	ADDENDUM #3	08-21-24

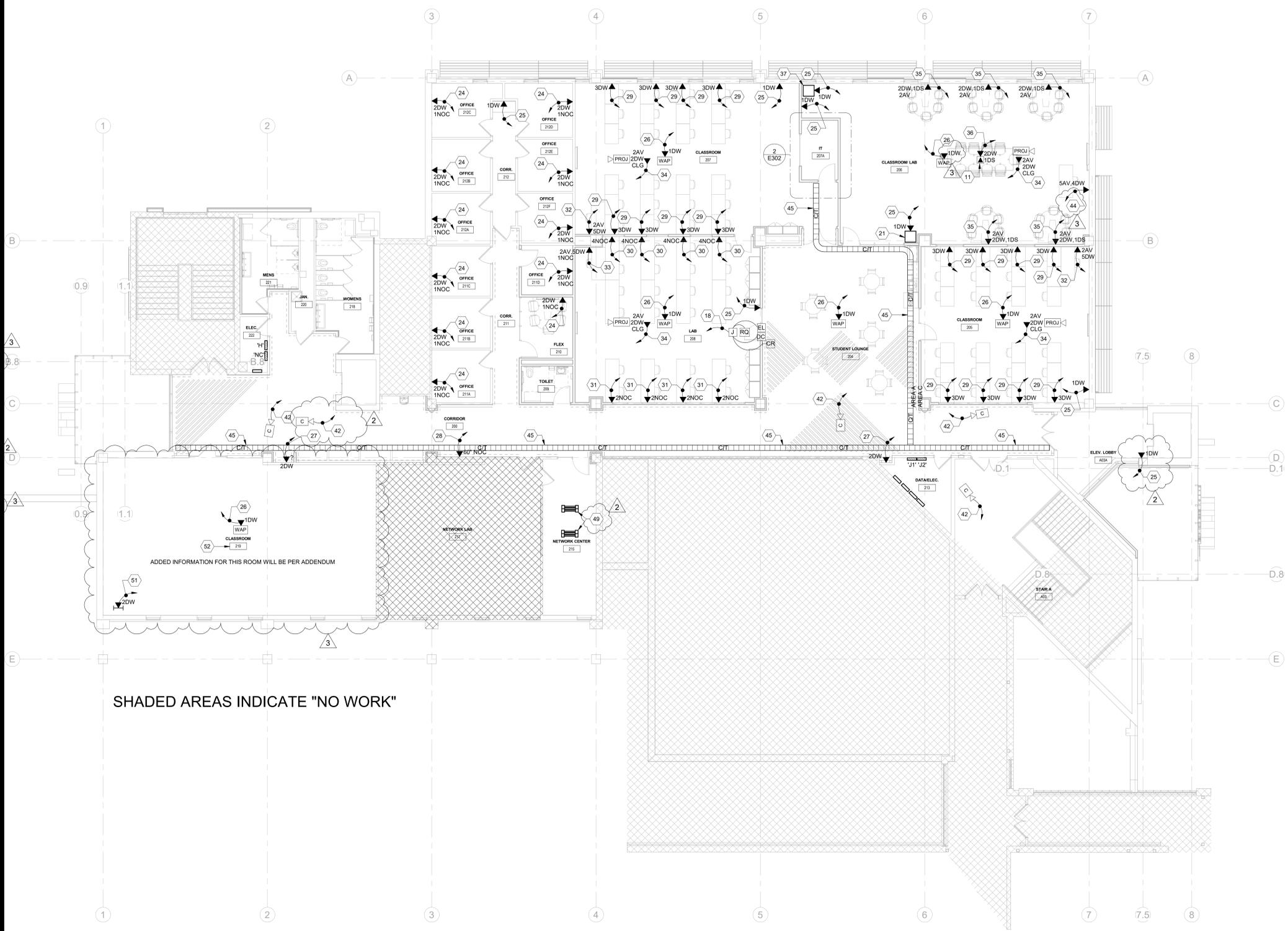
Graphic Scales:
VARIES

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E301

- GENERAL LOW VOLTAGE NOTES:**
- COLOR CODING SHALL BE AS FOLLOWS:
 - NETWORKING (DATA) = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
 - IP PHONE = ORANGE DATA JACKS WITH BLUE CAT6A CABLES
 - ADDITIONAL (AV) = GREEN DATA JACKS WITH GREEN CAT6A CABLE
 - SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE
 - ELECTRONIC DOOR ACCESS SYSTEM = YELLOW MULTIELEMENT SMART CABLE
 - HVAC CONTROLS = PURPLE JACKS WITH PURPLE CAT6A CABLES
 - NETWORKING (DATA) FOR STUDENTS = GRAY DATA JACKS WITH GRAY CAT6A CABLES
 - NETWORKING (DATA) FOR NOC = BLUE DATA JACKS WITH BLUE CAT6A CABLES
 - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE 'J' HOOKS AND CONDUIT SLEEVES THROUGH WALLS FOR LOW VOLTAGE CABLE ROUTING AS REQUIRED.
 - ALL LOW VOLTAGE WIRING SHALL BE PLENUM RATED. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL 'J-HOOK' TYPE LOW VOLTAGE CABLE WIRING SUPPORT ON 4'-0" CENTERS ABOVE SUSPENDED ACOUSTIC CEILINGS BETWEEN CONDUIT WALL STUDS AND CABLE TRAY, ETC. ALL LOW VOLTAGE WIRING SHALL BE INDEPENDENTLY SUPPORTED SEPARATE FROM GRID TYPE CEILINGS. NO EXCEPTIONS.
 - ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING, DATA JACKS, ETC. FOR A COMPLETE SYSTEM FOR THIS PROJECT.

- KEYED LOW VOLTAGE PLAN NOTES:**
- APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLES BETWEEN WIRELESS ACCESS POINT AND EXISTING IT NETWORK EQUIPMENT RACK #3 LOCATED IN COMPUTER ROOM #014F IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOX AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING IT NETWORK EQUIPMENT RACK #3 LOCATED IN COMPUTER ROOM #014F IN BASEMENT FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MOUNTED. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNTED MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014F IN BASEMENT AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A FOR WALL-MOUNTED MONITOR AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL EIGHT (8) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN EIGHT-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE THREE (3) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT AND TERMINATE BOTH ENDS.
 - PROVIDE A COMMUNICATION MANIPULATION POKE THRU WIREMOLD JUNCTION BOX SIZED AS REQUIRED FOR DUPLEX RECEPTACLE AND THREE-PORT DATA JACK.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR WALL-MOUNTED. PROVIDE ONE (1) NETWORK CAT 6A CABLE TO IT EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014F IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND THREE (3) WALL-MOUNTED JUNCTION BOXES. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. TERMINATE BOTH ENDS OF ALL CABLES. PROVIDE JUNCTION BOXES AND RACEWAYS SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND WALL-MOUNTED JUNCTION BOX. PROVIDE ONE (1) CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - PROVIDE A HUBBELL CATEGORY 6 DATA CORD REEL. REFER TO DETAIL 2E402. NO EQUALS ACCEPTED. PROVIDE ONE CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS OF CABLE. SET CORD REEL LENGTH TO REACH FLOOR.
 - PROVIDE WIREMOLD RACEWAY. PROVIDE SEPARATE FROM POWERS.
 - ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014F IN BASEMENT. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A SMART CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN IT ROOM #027A ON SECOND FLOOR. SMART CABLE SHALL BE BELDEN MODEL H864F OR EQUAL. 16 CONDUCTOR, 4 ELEMENT, ACCESS CONTROL CABLE. 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONTROL DETAIL 6E402.
 - INSTALL CARD READER ON EXTERIOR DETAIL 6E402. REFER TO PHOTO 02E301 FOR EXAMPLE.
 - EXTERIOR METAL POST PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
 - LOCATION OF EXISTING CHANGING CABS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NEW STUDENT FLOOR MOUNTED 2-POST NETWORK EQUIPMENT RACK. REFER TO DETAIL 2E402.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A 12 STRAND, SINGLE-MODE FIBER OPTIC CABLE FEED FOR NEW STUDENT IT EQUIPMENT RACK. FEED FROM COMPUTER ROOM #014F. REFER TO FIBER OPTIC RISER DIAGRAM 2E401.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND NOC IT NETWORK EQUIPMENT RACK LOCATED IN NETWORK CENTER #215. TERMINATE BOTH ENDS OF CABLE.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MIDDING. STUB ONE 1/2" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.
 - APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) PORT DATA JACK. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN ONE-PORT DATA JACK AND EXISTING NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #215 AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SEVEN-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FIVE (5) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE ONE (1) NETWORK CAT6A CABLE TO NOC IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER NETWORK CENTER #215. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR OR WALL-MOUNTED. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT6A AV CABLES BETWEEN OVERHEAD PROJECTOR OR WALL-MOUNTED MONITOR JUNCTION BOX AND TEACHER'S STATION JUNCTION BOX. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED MOUNTED FLUSH IN CEILING OR WALL FOR DATA/AV WIRING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FIVE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR POD STATION. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE ONE (1) NETWORK CAT6A CABLE TO STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER LAB #208. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN POD STATION DATA/AV JACKS AND IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. TERMINATE BOTH ENDS OF EACH CABLE. PROVIDE JUNCTION BOXES AND RACEWAYS SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A THREE (3) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN THREE-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS. PROVIDE ONE (1) NETWORK CAT6A CABLE BETWEEN THREE-PORT DATA JACK AND WALL-MOUNTED STUDENT IT EQUIPMENT RACK LOCATED IN THIS ROOM. TERMINATE BOTH ENDS OF CABLE.
 - PROVIDE A 18U WALL-MOUNTED IT EQUIPMENT RACK WITH LOCKABLE COVER. REFER TO DETAIL 2E402.
 - EXISTING NETWORK EQUIPMENT RACK TO REMAIN. IT WILL BE REQUIRED FOR THE ELECTRICAL CONTRACTOR TO UPGRADE WITH CAT6 AND CAT6A PATCH PANELS AS REQUIRED FOR REMODEL PROJECT.
 - PROVIDE ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC FEED TO NEW EQUIPMENT IT RACK LOCATED IN STORAGE ROOM #112A. PROVIDE A ONE (1) 12 STRAND SINGLE MODE FIBER OPTIC CABLE FEED TO NEW IT EQUIPMENT RACKS LOCATED IN IT ROOM #207A. REFER TO GROUNDING AND FIBER OPTIC RISER DIAGRAM 2E401.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) NETWORK CAT6A CABLES BETWEEN ELEVATOR CONTROLLER AND EXISTING IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014F AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND STUDENT IT NETWORK EQUIPMENT RACK LOCATED IN STORAGE ROOM #112A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014F OR IT ROOM #027A. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 - IN THIS ROOM, LOW VOLTAGE CABLES SHALL BE SHIELDED TO AVOID INTERFERENCE TO ROTARY EQUIPMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE FIVE (5) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE SIX (6) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE TWO (2) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) ALERTIS SYSTEM BEACON PROVIDED BY WTC FACILITY DEPARTMENT OR WTC IT DEPARTMENT. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN BASEMENT COMPUTER ROOM #014F AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A LOW VOLTAGE CABLE HOMERUN TO NEW ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN IT ROOM #027A ON SECOND FLOOR. SMART CABLE SHALL BE BELDEN MODEL H864F OR EQUAL. 16 CONDUCTOR, 4 ELEMENT, ACCESS CONTROL CABLE. 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONTROL DETAIL 6E402.
 - PROVIDE ADDITIONAL CAT6A PATCH PANELS AS REQUIRED IN EXISTING NOC EQUIPMENT RACKS. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NINE-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN COMPUTER ROOM #014E IN BASEMENT. PROVIDE FOUR (4) SHIELDED CAT 6A AV CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR OR WALL-MOUNTED JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROUTING.
 - ELECTRICAL CONTRACTOR SHALL INTERCONNECT EXISTING IT EQUIPMENT RACK LOCATED IN CLASSROOM #219 TO NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN EXISTING IT EQUIPMENT RACK AND IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS.
 - ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID TO WIRE TWENTY SEVEN (27) DATA JACKS INSTALLED IN FIVE (5) EXISTING FLOOR BOXES TO NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #207A. PROVIDE TWENTY SEVEN (27) CAT6A CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND NEW IT EQUIPMENT RACK LOCATED IN IT ROOM #207A AND TERMINATE BOTH ENDS OF CABLES. ALSO INCLUDE TO REMOVE TWENTY (27) EXISTING CAT 5 OR CAT6 CABLES BETWEEN FIVE (5) EXISTING FLOOR JUNCTION BOXES AND EXISTING IT EQUIPMENT RACK LOCATED IN DATA ELECTRICAL ROOM #215.



SHADED AREAS INDICATE "NO WORK"



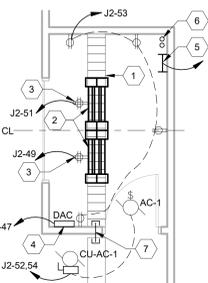
ELECTRICAL LOW VOLTAGE PLAN - SECOND FLOOR

1/8" = 1'-0"



EN. PLAN - IT RM 207A

1/4" = 1'-0"



- KEYED IT ROOM PLAN 207A NOTES:**
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL LADDER TYPE TRAY AS SPECIFIED. PROVIDE WATERFALL TRANSITION AS REQUIRED TO EQUIPMENT RACKS.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) TWO-POST EQUIPMENT RACKS PER DETAIL 4E402. COORDINATE WITH WTC IT DEPARTMENT.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE A DOUBLE DUPLEX RECEPTACLE FOR EQUIPMENT RACK. REFER TO DETAIL 6E402.
 - LOCATION OF ELECTRONIC DOOR ACCESS CONTROL PANEL PROVIDED AND INSTALLED BY WTC DOOR ACCESS CONTROL VENDOR. ELECTRICAL CONTRACTOR SHALL ROUGH-IN DOOR ACCESS CONTROL CABLE TO THIS LOCATION. REFER TO DETAIL 6E402.
 - PROVIDE A GROUNDING BAR AND MAKE CONNECTION TO IT EQUIPMENT RACK AS NOTED ON GROUNDING DIAGRAM 2E401.
 - PROVIDE TWO (2) 4" PVC SCHEDULE 80 SLEEVES THROUGH FLOOR. PROVIDE PLASTIC BUSHING ON EACH END OF SLEEVES. EXTEND CONDUIT SLEEVES VERTICAL ON WALL TO LADDER RACK.
 - PROVIDE TWO (2) 4" SCHEDULE 40 PVC CONDUIT SLEEVES THROUGH EXISTING WALL. PROVIDE PLASTIC BUSHINGS ON EACH END OF CONDUIT SLEEVES. SECURELY ANCHOR SLEEVES.
 - PROVIDE INTERCONNECTING WIRING BETWEEN MINI SPLIT SYSTEM INTERIOR UNIT AND EXTERIOR UNIT LOCATED ON THE ROOF. COORDINATE WITH HVAC CONTRACTOR.



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**WESTERN TECHNICAL COLLEGE
INNOVATION CENTER**

Project Title: **WESTERN TECHNICAL COLLEGE INNOVATION CENTER**

Project Location: **405 8TH STREET NORTH
LA CROSSE, WI**

Sheet Title: **ELECTRICAL LOW VOLTAGE PLAN - SECOND FLOOR**

Project Number: **24003**

Project Date: **AUGUST 2024**

Drawn By: **PCP**

Key Plan:

Revisions:

No.	Description	Date
1	ADDENDUM #2	08-14-24
2	ADDENDUM #3	08-21-24
3	ADDENDUM #2	08-21-24

Graphic Scale: **VARIES**

Last Update: **8/21/2024 9:50:29 AM**

E302



Consultant:



Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER
Project Location: 405 8TH STREET NORTH
LA CROSSE, WI
Sheet Title: ELECTRICAL RISERS

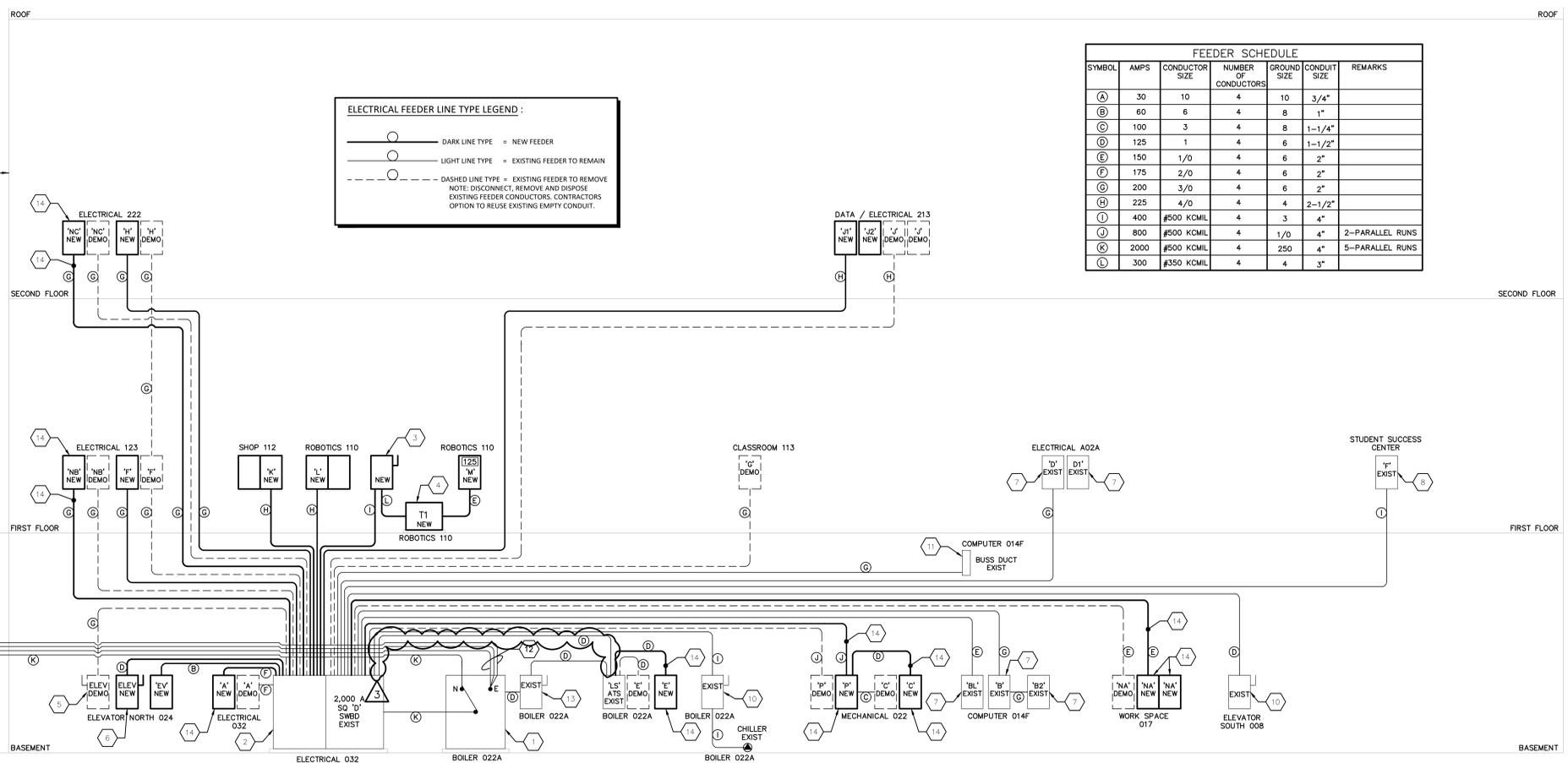
Project Title: WESTERN TECHNICAL COLLEGE
INNOVATION CENTER
Project Location: 405 8TH STREET NORTH
LA CROSSE, WI
Sheet Title: ELECTRICAL RISERS

HSR Project Number: 24003
Project Date: AUGUST 2024
Drawn By: PLP
Key Plan:

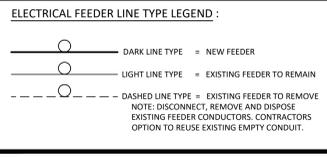
No.	Description	Date
ADDENDUM #2		8-16-2024
ADDENDUM #3		8-21-2024

Graphic Scale: VARIES
Last Update: 7/24/2024

E401

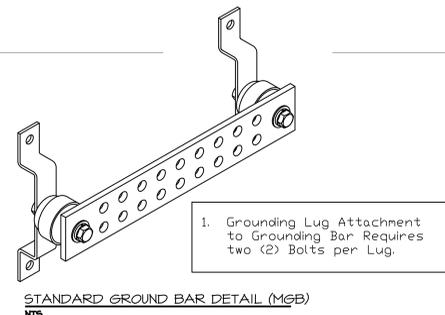


FEEDER SCHEDULE						
SYMBOL	AMPS	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	GROUND SIZE	CONDUIT SIZE	REMARKS
(A)	30	10	4	10	3/4"	
(B)	60	6	4	8	1"	
(C)	100	3	4	6	1-1/4"	
(D)	125	1	4	6	1-1/2"	
(E)	150	1/0	4	6	2"	
(F)	175	2/0	4	6	2"	
(G)	200	3/0	4	6	2"	
(H)	225	4/0	4	4	2-1/2"	
(I)	400	#500 KCMIL	4	3	4"	
(J)	800	#500 KCMIL	4	1/0	4"	2-PARALLEL RUNS
(K)	2000	#500 KCMIL	4	250	4"	5-PARALLEL RUNS
(L)	300	#350 KCMIL	4	4	3"	

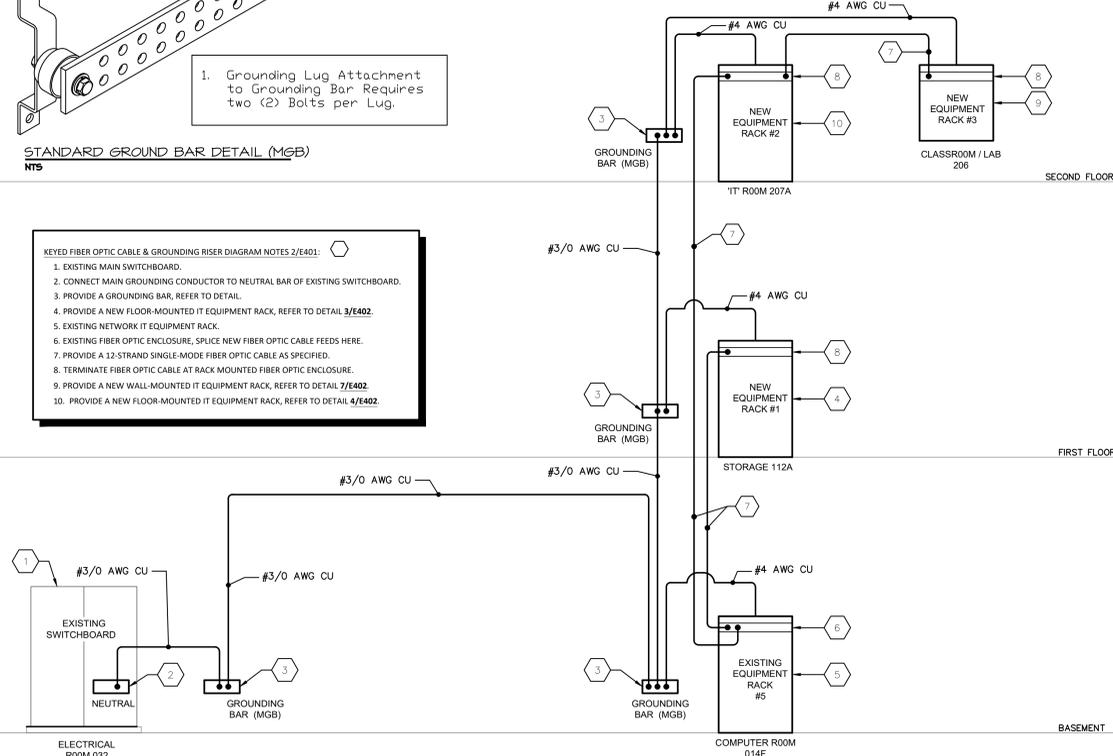


- ELECTRIC RISER DIAGRAM NOTES:**
- GENERAL NOTE:**
1. ELECTRICAL CONTRACTOR SHALL PROVIDE A SHORT CIRCUIT/ARC FAULT STUDY FOR ENTIRE BUSINESS EDUCATION (BE) BUILDING. IT WILL BE REQUIRED TO FIELD VERIFY FEEDER CONDUCTOR SIZES, CIRCUIT BREAKERS, LENGTHS, ETC. THIS ELECTRIC RISER DIAGRAM WAS PROVIDED BASED UPON CASUAL FIELD VERIFICATION BY ELECTRICAL DESIGNER AND MAY NOT CONTAIN THE ENTIRE EXISTING ELECTRICAL SYSTEM.
- KEYED NOTES:**
1. EXISTING 2,000 AMP., 120/208VAC, 3-PHASE, 4-WIRE ASCO SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH TO REMAIN AS IS. PLEASE NOTE ENTIRE BUILDING IS CONNECTED TO THREE (3) EMERGENCY GENERATORS.
 2. EXISTING SQUARE 'D' QED 2,000 AMP., 120/208VAC, 3-PHASE, 4-WIRE SWITCHBOARD TO REMAIN AS IS. PLEASE NOTE SWITCHBOARD IS RATED FOR 300,000 AVAILABLE FAULT CURRENT. IT WILL BE REQUIRED TO PROVIDE NEW CIRCUIT BREAKERS AS REQUIRED FOR THIS PROJECT.
 3. PROVIDE A 400 AMP., 3-POLE, HEAVY DUTY, NEMA 1, FUSIBLE DISCONNECT SWITCH. PROVIDE 300 AMP FUSES.
 4. PROVIDE A 112 KVAVA STEP-UP TRANSFORMER PRIMARY VOLTAGE SHALL BE 120/208VAC, 3-PHASE, 4-WIRE AND THE SECONDARY SHALL BE 480/277 VAC, 3-PHASE, 4-WIRE.
 5. DISCONNECT, REMOVE AND DISPOSE OF EXISTING 'NORTH' ELEVATOR DISCONNECT. PLEASE NOTE, ELEVATOR SHALL BE REPLACED WITH NEW.
 6. PROVIDE A 125 AMP., 3-POLE, HEAVY DUTY, 208VAC, 3-PHASE, DISCONNECT WITH AUXILIARY CONTACTS AND SHUNT TRIP FOR ELEVATOR CONTROLLER. PROVIDE 110 AMP FUSES. VERIFY FUSE SIZE WITH ELEVATOR INSTALLER. PROVIDE 'BUSSMAN' ALL-IN-ONE ELEVATOR DISCONNECT. PROVIDE POWER MODULE SWITCH AS REQUIRED. MODEL PPS-3-TSD-RL-K-G-A2-B-F3-TYPE1. VERIFY CONTROL VOLTAGES WITH ELEVATOR INSTALLER AND FIRE ALARM INSTALLER.
 7. EXISTING SQUARE 'D' PANELBOARDS TO REMAIN AS IS.
 8. EXISTING 400 AMP., SQUARE 'D', 120/208 VAC, 3-PHASE, 4-WIRE PANELBOARD TO REMAIN AS IS. NO WORK REQUIRED. PROVIDED FOR INFORMATION ONLY. THIS PANELBOARD IS LOCATED ON THE FIRST FLOOR, NORTH END OF STUDENT SUCCESS BUILDING.
 9. EXISTING 'GENERAC' EMERGENCY GENERATOR TO REMAIN AS IS. NO WORK REQUIRED. PROVIDED FOR INFORMATION ONLY.
 10. EXISTING DISCONNECT TO REMAIN AS IS FOR EXISTING MOTOR/EQUIPMENT. NO WORK REQUIRED.
 11. EXISTING BUSS DUCT TO REMAIN AS IS. NO WORK REQUIRED.
 12. EXISTING FEEDER TO REMAIN AS IS. NO WORK REQUIRED. IT WILL BE REQUIRED TO FIELD VERIFY QUANTITY, SIZE, LENGTH, ETC. FOR ARC FAULT/SHORT CIRCUIT STUDY.
 13. EXISTING 200 AMP., 3-POLE, 208VAC, FUSIBLE DISCONNECT TO REMAIN AS IS. THIS DISCONNECT FEEDS 'LIFE-SAFETY' BRANCH AUTOMATIC TRANSFER SWITCH.
 14. THIS PANELBOARD AND ASSOCIATED FEEDER SHALL BE INCLUDED WITH ALTERNATE BID.

1 ELECTRICAL RISER DIAGRAM
E401 N.T.S.
2402-E-RISER DIAGRAM



- KEYED FIBER OPTIC CABLE & GROUNDING RISER DIAGRAM NOTES 2/E401:**
1. EXISTING MAIN SWITCHBOARD.
 2. CONNECT MAIN GROUNDING CONDUCTOR TO NEUTRAL BAR OF EXISTING SWITCHBOARD.
 3. PROVIDE A GROUNDING BAR, REFER TO DETAIL.
 4. PROVIDE A NEW FLOOR-MOUNTED IT EQUIPMENT RACK, REFER TO DETAIL 3/E402.
 5. EXISTING NETWORK IT EQUIPMENT RACK.
 6. EXISTING FIBER OPTIC ENCLOSURE, SPLICE NEW FIBER OPTIC CABLE FEEDS HERE.
 7. PROVIDE A 12-STRAND SINGLE-MODE FIBER OPTIC CABLE AS SPECIFIED.
 8. TERMINATE FIBER OPTIC CABLE AT RACK MOUNTED FIBER OPTIC ENCLOSURE.
 9. PROVIDE A NEW WALL-MOUNTED IT EQUIPMENT RACK, REFER TO DETAIL 7/E402.
 10. PROVIDE A NEW FLOOR-MOUNTED IT EQUIPMENT RACK, REFER TO DETAIL 4/E402.



2 FIBER OPTIC & GROUNDING RISER DIAGRAM
E401 N.T.S.
2402-E-FIBER OPTIC RISER DIAGRAM



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WESTERN TECHNICAL COLLEGE
INNOVATION CENTER
405 8TH STREET NORTH
LA CROSSE, WI
ELECTRICAL SCHEDULES

Project Title: WESTERN TECHNICAL COLLEGE INNOVATION CENTER
Project Location: 405 8TH STREET NORTH, LA CROSSE, WI
Sheet Title: ELECTRICAL SCHEDULES

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E500

POWER TRANSFORMERS

TRANSFORMER IDENTIFICATION	NOMINAL RATING (Kva)	PRIMARY CHARACTERISTICS	PRIMARY CONNECTION	SECONDARY CHARACTERISTICS	SECONDARY CONNECTION	TP1 Compliant?	DESCRIPTION	MOUNTING	REMARKS
T1	112.5	120/208VAC	Y (4-WIRE)	480/277VAC (Y)	Wye (4 Wire)	Yes	Dry type - Energy Efficient	Floor-mount Interior	1, 2

REMARKS:
1 Nema 1.
2 Step up transformer.

MOTOR & EQUIPMENT SCHEDULE

EQUIPMENT REFERENCE I.D.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION			MOTOR OR EQUIPMENT REQUIREMENTS AND CHARACTERISTICS										MOTOR STARTERS		DISCONNECT SWITCHES					CONTROL WIRING BY			Branch Circuit or Feeder			REMARKS	
		Room No.	Room Name	Elevation	Motor HP	Equipment Watts	VOLT	PH.	FLA	MCA	MOP	Start Type	Provided By	Installed By	Start Size	Disconnect Type	Provided By	Installed By	NEMA Encl.	Fuse Size	Lockable?	MC	EC	N.C.	Conductor Size	Conduit Min. Size	Ground Size		
AC-1	Ductless Air Conditioner	207A	IT Room	Wall		208	208	1	1.0	1.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3	
B1P-1	Gas Fired Boiler - 1	022A	Boiler Room	Floor		1,560	120	1	13.0	13.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3	
B1P-2	Gas Fired Boiler - 2	022A	Boiler Room	Floor		1,560	120	1	13.0	13.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3	
B1P-3	Boiler Circulating Pump - 1	022A	Boiler Room	Floor		2,496	208	1	12.0	12.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3	
B1P-4	Boiler Circulating Pump - 2	022A	Boiler Room	Floor		2,496	208	1	12.0	12.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3	
CU-AC-1	Condensing Unit with AC-1	022A	Roof	Roof		2,288	208	1	11.0	11.0	20.0	None				Manual	EC	EC	3R	N/A	Yes	X		2	12	1/2"	12	2, 3	
CUH-1	Cabinet Unit Heater - 1	102	Vestibule	Ceiling		240	120	1	2.0	2.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	1, 3	
CUH-2	Cabinet Unit Heater - 2	101	Vestibule	Ceiling		240	120	1	2.0	2.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	1, 3	
DF-1	Destratification Fan - 1	102	Vestibule	Ceiling		60	120	1	0.5	0.5	20.0	None				Cord and Plug	MC	MC	1	N/A	No	X		2	12	1/2"	12	4	
DF-2	Destratification Fan - 2	101	Vestibule	Ceiling		60	120	1	0.5	0.5	20.0	None				Cord and Plug	MC	MC	1	N/A	No	X		2	12	1/2"	12	4	
Elevator	Elevator Replacement	024	Elev. Equipmt Room	Floor		28,152	208	3	78.2	110	110.0	Included	Included	Included	Manual	EC	EC	1	TBD	Yes	Include		3	2	1-1/4"	6	7		
HCP-1	Grculating Pump-1	022	Mechanical	Floor		75	156	120	1	13.8	13.8	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 3
HWP-1	Hot Water Circulating Pump-1	022A	Boiler Room	Floor		7.5	9,108	208	3	25.3	25.3	50.0	VFD	MC	EC	7.5HP	w/VFD	MC	EC	1	N/A	Yes	X	3	6	1"	10	2, 6	
HWP-2	Hot Water Circulating Pump-1	022A	Boiler Room	Floor		7.5	9,108	208	3	25.3	25.3	50.0	VFD	MC	EC	7.5HP	w/VFD	MC	EC	1	N/A	Yes	X	3	6	1"	10	2, 6	
RV-1	Exhaust Fan - 1	209	Toilet	Ceiling		528	120	1	4.4	4.4	20.0	None				Manual	MC	MC	1	N/A	No	X		2	12	1/2"	12	1, 5	
IVRF-1	Interior Mini Split System	102	Vestibule	Wall		960	208	1	8.0	8.0	20.0	None				Manual Toggle	EC	EC	1	N/A	No	X		2	12	1/2"	12	1, 3	
IVRF-2	Interior Mini Split System	101	Vestibule	Wall		960	208	1	8.0	8.0	20.0	None				Manual Toggle	EC	EC	1	N/A	No	X		2	12	1/2"	12	1, 3	
OVRF-1	Outdoor Mini Split Condenser System	102	Vestibule	Roof		10440	208	3	29.0	29.0	45.0	None				Manual	EC	EC	3R	N/A	Yes	X		3	12	1/2"	12	2, 3	
OVRF-2	Outdoor Mini Split Condenser System	101	Vestibule	Roof		10440	208	3	29.0	29.0	45.0	None				Manual	EC	EC	3R	N/A	Yes	X		3	12	1/2"	12	2, 3	
UH-1	Gas Fired Unit Heater	110	Robotics	Ceiling		120	120	1	1.0	1.0	20.0	None				Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	1, 3	

REMARKS:

1. Make connection to motor/equipment with flexible metal conduit.
2. Make connection to motor/equipment with liquid-tight, flexible metal conduit.
3. Provide and install a 20 amp, SPST or DPST, manual motor control switch without thermal overload protection. Motor control switch shall be mounted in a NEMA 1 or NEMA 3R enclosure, as noted. Mount disconnect on structure in close proximity to motor or equipment, or directly on equipment.
4. Provide and install a power receptacle to receive a plug and cord connection. Verify preferred location with the appropriate equipment supplier. Nema type shall match cord on unit.
5. Interlock with lighting fixtures in the room.
6. VFD provided by Mechanical Contractor, installed by Electrical Contractor.
7. Coordinate with Elevator Contractor. Provide shunt-trip breaker as required.

Switchboard Schedule - Existing Square 'D' QED

NO.	Circuit Description	# of Poles	Circuit Breaker Size
1	TVSS	3	30 (EXSTG)
2	Panelboard 'EV'	3	60 (NEW)
3	South Elevator	3	125 (EXSTG)
4	North Elevator	3	125 (NEW)
5	Panelboard 'E'	3	125 (EXSTG)
6	Panelboard 'BL' (Lighting)	3	150 (EXSTG)
7	Panelboard 'NA'	3	150 (EXSTG)
8	Panelboard 'A'	3	175 (EXSTG)
9	Panelboard 'B' & 'B1'	3	200 (EXSTG)
10	Panelboard 'D' & 'D1'	3	200 (EXSTG)
11	Panelboard 'F'	3	200 (EXSTG)
12	Spare (Was Panelboard 'G')	3	200 (EXSTG)
13	Panelboard 'H'	3	200 (EXSTG)
14	Bus Duct in Computer Room	3	200 (EXSTG)
15	Panelboard 'NB'	3	200 (EXSTG)
16	Panelboard 'NC'	3	200 (EXSTG)
17	Panelboard 'J'	3	225 (EXSTG)
18	Panelboard 'K'	3	225 (NEW)
19	Panelboard 'L'	3	225 (NEW)
20	Chiller	3	400 (EXSTG)
21	Disconnect for Transformer 'T1'	3	400 (NEW)
22	Panelboard 'T' (Student Success Center)	3	400 (EXSTG)
23	Panelboard 'P'	3	800 (EXSTG)
24	Spare	3	150 (EXSTG)
25	Spare	3	225 (EXSTG)

- NOTES:
1.) Provide Circuit Breakers where labeled as 'NEW'
2.) Provide adjustable breakers for 400 amps or larger.

Panel- 'H', NEW SQUARE 'D', 225 AMP., 120/208VAC, M.L.O. 22K

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	EXISTING	20/1			20/1	EXISTING	2
3	EXISTING	20/1			20/1	EXISTING	4
5	EXISTING	20/1			20/1	EXISTING	6
7	EXISTING	20/1			20/1	EXISTING	8
9	EXISTING	20/1			20/1	EXISTING	10
11	EXISTING	20/1			20/1	EXISTING	12
13	EXISTING	20/1			20/1	EXISTING	14
15	EXISTING	20/1			20/1	EXISTING	16
17	EXISTING	20/1			20/1	EXISTING	18
19	EXISTING	20/1			20/1	EXISTING	20
21	EXISTING	20/1			20/1	EXISTING	22
23	EXISTING	20/1			20/1	EXISTING	24
25	SPARE	20/1			20/1	SPARE	26
27	SPARE	20/1			20/1	SPARE	28
29	SPARE	20/1			20/1	SPARE	30
31	SPARE	20/1			20/1	SPARE	32
33	SPARE	20/1			20/1	SPARE	34
35	SPARE	20/1			20/1	SPARE	36
37	RECEPTACLE	20/1	0.90	0.50	20/1	RECEPTACLE (EWC)	38
39	RECEPTACLE	20/1	0.18	0.90	20/2	MOTOR (IVRF-1)	40
41	RECEPTACLE	20/1	0.54	0.90	20/2	-	42

LIGHTING (KVA):	
RECEPTACLES (KVA):	
MOTOR/EQUIPMENT (KVA):	
TOTAL (KVA):	TOTAL AMP. :
	(DIVERSITY) TOTAL (KVA):

Notes:
1 Provide a 42 space panelboard.

Panel- 'EV', 100 AMP., 120/208VAC, 3-Phase, M.L.O. 22K

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	RECEPTACLE	20/1	0.18	0.20	20/1	LIGHTING - SHAFT	2
3	PIT RECEPTACLE	20/1	0.18	0.50	20/1	CAR LIGHTS	4
5	EQUIPMENT ROOM LIGHTS	20/1	0.10	1.20	20/1	SUMP PUMP RECEPTACLE	6
7	SPARE	20/1			20/1	SPARE	8
9	SPARE	20/1			20/1	SPARE	10
11	SPARE	20/1			20/1	SPARE	12
13	SPARE	20/1			20/1	SPARE	14
15	SPARE	20/1			20/1	SPARE	16

LIGHTING (KVA):	0.7
RECEPTACLES (KVA):	0.38
MOTOR/EQUIPMENT (KVA):	1.6
TOTAL (KVA):	TOTAL AMP. :
	(DIVERSITY) TOTAL (KVA):

Notes:
1 Provide a 16 space panelboard.

Panel- 'F', NEW SQUARE 'D', 225 AMP., 120/208VAC, M.L.O. 22K

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	XSTG TVSS	30/3			20/1	EXISTING	2
3	-	30/3			20/1	EXISTING	4
5	-	30/3			20/1	EXISTING	6
7	EXISTING	20/1			20/1	EXISTING	8
9	EXISTING	20/1			20/1	EXISTING	10
11	EXISTING	20/1			20/1	EXISTING	12
13	EXISTING	20/1			20/1	EXISTING	14
15	EXISTING	20/1			20/1	EXISTING	16
17	EXISTING	20/1			20/1	EXISTING	18
19	EXISTING	20/1			20/1	EXISTING	20
21	EXISTING	20/1			20/1	EXISTING	22
23	EXISTING	20/1			20/1	EXISTING	24
25	EXISTING	20/1			20/1	EXISTING	26
27	EXISTING	20/1		0.36	20/1	RECEPTACLE	28
29	RECEPTACLE	20/1	0.36	0.72	20/1	RECEPTACLE	30
31	RECEPTACLE	20/1	1.10	0.54	20/1	RECEPTACLE	32
33	RECEPTACLE	20/1	0.54	1.10	20/1	RECEPTACLE	34
35	RECEPTACLE	20/1	0.72	0.50	20/1	RECEPTACLE	36
37	RECEPTACLE	20/1	0.72	0.90	20/2	MOTOR (IVRF-1)	38
39	EXTERIOR SIGN	20/1	1.00	0.90	20/2	-	40
41	RECEPTACLE & CUH-1	20/1	0.50	0.50	20/2	DOOR ASSIST MOTOR	42
43	RECEPTACLE	20/1	0.36	0.36	20/1	RECEPTACLE	44
45	RECEPTACLE	20/1	0.36	0.72	20/1	RECEPTACLE	46
47	RECEPTACLE	20/1	0.72	0.72	20/1	RECEPTACLE	48
49	RECEPTACLE	20/1	0.72	0.90	20/1	RECEPTACLE	50
51	RECEPTACLE	20/1	0.72	0.54	20/1	RECEPTACLE	52
53	RECEPTACLE	20/1	0.54	0.72	20/1	RECEPTACLE	54
55	208V RECEPTACLE	20/3	0.50	0.50	20/3	208V RECEPTACLE	56
57	-	20/3	0.50	0.50	20/3	-	58
59	-	20/3	0.50	0.50	20/3	-	60</



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General System Notes

ON DIGITAL SYSTEMS, ALL DEVICES TO BE CONNECTED IN A DAISY CHAIN PATTERN SO THAT THE FIRST AND LAST DEVICE IN THE CHAIN HAS AN OPEN PORT.

ON DIGITAL SYSTEMS, CONTRACTOR SHALL NOTE AND LABEL ADDRESS AND LOCATION OF EACH DEVICE ON THE SYSTEM ONE-LINE DIAGRAMS OR SYSTEM LAYOUT DRAWINGS AT TIME OF INSTALLATION.

ONE-LINE DIAGRAMS INDICATE THE REQUIRED GROUPING OF WIRES, NOT THE NUMBER OR SIZE OF CONDUITS.

WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) AND APPLICABLE LOCAL CODES, INCLUDING PROVISION OF EQUIPMENT GROUNDING AS REQUIRED BY THE NEC.

POWER CONDUCTORS SHALL BE SIZED PER THE NEC AMPACITY TABLES (ARTICLE 310), INCLUDING ADJUSTMENT FACTOR AND NEUTRAL CONDUCTOR REQUIREMENTS (FEED AND BRANCH NEUTRAL CONDUCTORS MUST BE COUNTED AS CURRENT CARRYING CONDUCTORS). RUN SEPARATE NEUTRAL CONDUCTORS FOR EACH DIMMED LOAD CIRCUIT.

FOR 0-10VDC DIMMING SYSTEMS, VIOLET AND GRAY CONDUCTORS ARE FOR 0-10VDC LOW VOLTAGE TERMINATIONS ONLY. NEVER TERMINATE LINE VOLTAGE (120/230/277VAC) TO VIOLET AND GRAY.

CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL TERMINATIONS. NO SPLICES ARE PERMITTED IN CONTROL WIRING.

POWER AND CONTROL CONDUCTORS MUST NOT SHARE THE SAME RACEWAY OR CONDUIT.

LIGHTING CONTROL EQUIPMENT MUST BE INSTALLED, MAINTAINED, AND OPERATED IN AN "OFFICE CLEAN" DRY ENVIRONMENT, INDOOR DRY LOCATIONS ONLY, 10% - 90% RELATIVE HUMIDITY; AMBIENT TEMPERATURE 0°- 40°C (32°- 104°F) - 0°- 35°C (32°- 95°F) RECOMMENDED.

SENSORS IN ELECTRICAL/MECHANICAL LOCATIONS NEED TO BE VERIFIED WITH AUTHORITY HAVING JURISDICTION. REFER TO NEC 110.26.D.

RELAY AND DIMMER PANEL SCHEDULES SHOULD CONTAIN BREAKER PANEL INPUTS AS WELL AS ZONES/AREAS CONTROLLED.

VERIFY MAXIMUM CABLE LENGTHS BASED ON CONTROL SYSTEM. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

LOW VOLTAGE CABLE MUST BE INSTALLED AT LEAST 12 INCHES FROM ALL LINE VOLTAGE CONDUCTORS EXCEPT TO CROSS OR MAKE TERMINATIONS. CAT. 5 CABLE MUST BE KEPT AWAY FROM ALL EMF DEVICES SUCH AS BALLASTS OR TRANSFORMERS.

0-10V DIMMING BALLASTS AND DRIVERS ARE REQUIRED TO COMPLY WITH IEC 60929 ANNEX E SPECIFICATIONS.

SSI Notes

ONE POWER PACK IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED BY A MAXIMUM OF 14 LOW VOLTAGE SENSORS. POWER PACK PLACEMENT ON DRAWINGS IS FOR COUNTING ONLY. FINAL PLACEMENT OF POWER PACK IS UP TO CONTRACTOR/ENGINEER. PLEASE RECHECK COUNTS TO VERIFY THE NUMBER OF POWER PACKS NEEDED TO MAKE A COMPLETE SYSTEM. THE MAXIMUM NUMBER OF POWER PACKS THAT CAN BE CONTROLLED BY A GROUP OF SENSORS IS 5. IF YOU HAVE MORE THEN 5 CIRCUITS CONTROLLING A SPACE YOU WILL EITHER HAVE TO BREAK UP THE SPACE INTO ZONES OR USE ONE POWER PACK PER LIGHTING CONTACTOR TO PULL IN THE CIRCUITS.

SENSOR PLACEMENT AND TYPES WERE PLACED WITH CURRENT PROJECT INFORMATION. ADDITIONAL SENSORS AND TYPES OF SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE DEPENDING ON DRAWING CHANGES, EMS/BMS, FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.

FOR MAXIMUM DISTANCE USING CEILING MOUNTED 360° SENSORS ROTATE THE SENSOR CLOCKWISE SO THAT THE SCREW AXIS IS POSITIONED 7.5" OFF THE ENTRANCE AXIS. WHEN WALKING ACROSS A SENSOR'S BEAM, DETECTION WILL OCCUR AT APPROXIMATELY LONGEST DISTANCE. (REFER TO SPECIFICATION SHEET FOR PICTORIAL OF ALIGNMENT)

SENSOR MASKING KITS MAY BE REQUIRED TO LIMIT COVERAGE DEPENDING ON YOUR REQUIREMENTS.

MAXIMUM CABLE LENGTH FROM START DEVICE TO END DEVICE IS 1800'. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

nLight System Notes

EVERY NLIGHT ENABLED DEVICE (INCLUDING NLIGHT EENABLED FIXTURES) IS FURNISHED WITH (1) PERMANENTLY ADHERED ID TAG AND (1) MATCHING, PARTIALLY ADHERED ID TAG TO BE PLACED ON THE RISER DIAGRAM SHEET, OR THE LIGHTING CONTROL LAYOUT SHEET, PROVIDED AS PART OF AN NLIGHT SUBMITTAL. THIS SHALL BE DONE DURING INSTALLATION AND PRIOR TO FACTORY STARTUP. FAILURE TO COMPLY MAY RESULT IN STARTUP DELAYS AND ADDITIONAL COSTS AT THE CONTRACTOR'S EXPENSE. DO NOT PLACE DEVICE ID STICKERS ON FLOOR PLAN UNLESS REQUIRED TO EXECUTE NFLOORPLAN SERVICES, REFERENCE NFLOORPLAN SERVICE NOTES ON THIS SHEET FOR SPECIFIC REQUIREMENTS.

ONE RELAY PACK OR NLIGHT ENABLED FIXTURE IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED AND CAN RESIDE WITHIN SENSORS, WALLPODS, OR RELAY PACKS. POWER PACK PLACEMENT ON DRAWINGS IS FOR COUNTING ONLY; FINAL PLACEMENT IS UP TO DISCRETION OF CONTRACTOR/ENGINEER. PLEASE RECHECK COUNTS TO VERIFY THE NUMBER OF RELAYS NEEDED TO SWITCH ALL DESIRED LOADS.

BRIDGES, RELAYS, POWER PACKS, WALLPODS, AND SENSORS ON DRAWINGS WERE PLACED WITH INFORMATION PROVIDED AT TIME OF DESIGN. ADDITIONAL BRIDGES AND/OR SENSORS MAY BE REQUIRED DEPENDING ON BUILDING CHANGES, FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.

THE LAYOUT OF THE NETWORK BACKBONE (BRIDGES AND GATEWAYS) HAS BEEN PLACED IN A SEPARATE TREE DIAGRAM AND NOT ON THE ACTUAL LAYOUT. FINAL PLACEMENT OF THE BRIDGE(S) AND GATEWAY(S) DEVICES SHALL BE AT THE CONTRACTOR/ENGINEER DISCRETION.

ALL DEVICES HAVE RJ-45 FEMALE PORTS. MAKING NETWORK CONTROL CABLES IS REQUIRED, T568B TERMINATIONS ARE RECOMMENDED. IT IS IMPERATIVE THAT ALL NETWORK CONTROL CABLES BE TESTED WITH A LAN CABLE TESTER TO VERIFY PROPER TERMINATIONS.

DAISY-CHAINED DEVICES SHOULD BE POWERED UP AND WORKING ON DEFAULT PROGRAMMING PRIOR TO CONNECTION TO BRIDGE OR GATEWAYS.

LOW VOLTAGE NETWORK CONTROL CABLE (CAT5/5E/6) RUNS FOR LOCAL ZONES, HOMERUNS AND BACKBONE SHOULD BE WHITE WITH CABLES LABELED.

CONTRACTOR TO VERIFY BLINK/DIAGNOSTIC CODES (VISIT [HTTP://NLIGHTCONTROLS.COM/WP-CONTENT/UPLOADS/NLIGHT_POCKET_GUIDE.PDF](http://nlightcontrols.com/wp-content/uploads/nlight_pocket_guide.pdf)) WHEN CONNECTING GATEWAYS/BRIDGES TO ZONES.

MAXIMUM CABLE LENGTH FROM START DEVICE TO END DEVICE IS 1500' INCLUDING HOMERUN TO BRIDGE DEVICE, IF PRESENT. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

Load Types

LINE VOLTAGE INCANDESCENT - NON-PHASE DEPENDENT FOR DIMMING.

MAGNETIC LOW VOLTAGE INCANDESCENT - ALLOWABLE IN FORWARD PHASE CONTROL MODE ONLY. TRANSFORMER MUST BE RATED FOR DIMMING BY ITS MANUFACTURER. ADD 25% TO LAMP WATTAGE TO ALLOW FOR TRANSFORMER LOSS AND TO CALCULATE TOTAL LOAD.

FLUORESCENT - ALLOWABLE WITH 2-WIRE BALLAST, 0-10VDC BALLASTS, SOME 3-WIRE AND SWITCHED DEPENDING ON SYSTEM COMPATIBILITY. VERIFY CONTROL TYPES WITH YOUR REGIONAL SUPPORT TEAM.

LED - DIMMING ALLOWED PER LED DRIVER MANUFACTURER SPECIFICATIONS. VERIFY CONTROL TYPES WITH YOUR REGIONAL SUPPORT TEAM.

NEON and COLD CATHODE - ALLOWABLE IN FORWARD PHASE CONTROL MODE ONLY. BALLAST MUST BE RATED FOR DIMMING BY ITS MANUFACTURER AND BE NORMAL (LOW) POWER FACTOR. CONNECTED LOAD MUST NOT EXCEED 50% OF THE DIMMER'S NOMINAL RATING.

MOTORS - NO DIMMING ALLOWED. SWITCHED CONTROL SOURCE ONLY.

ELECTRONIC LOW VOLTAGE INCANDESCENT - ALLOWABLE, NORMALLY IN REVERSE PHASE CONTROL MODE ONLY. ELV TRANSFORMER MUST BE RATED FOR DIMMING BY ITS MANUFACTURER.

HID - DIMMING NOT ALLOWED UNLESS WITH DIMMABLE HID DRIVER. OTHERWISE, MUST BE ON SWITCHED CONTROL SOURCE.

EMERGENCY - PLEASE CONTACT YOUR REGIONAL SUPPORT TEAM TO VERIFY EMERGENCY CONTROLS NECESSARY BASED ON SYSTEM REQUIREMENTS.

Project Title: WESTERN TECHNICAL COLLEGE

INNOVATION CENTER

Project Location: 405 8TH STREET NORTH

LA CROSSE, WI

Sheet Title: ELECTRICAL LIGHTING CONTROLS

HSR Project Number: 24003

Project Date: AUGUST 2024

Drawn By: PLP

Key Plan:

Revisions:		
No.	Description	Date
3	ADDENDUM #3	08-21-24

Graphic Scale: VARIES

Last Update: 7/29/2024

RE-ISSUED PER ADDENDUM #3

E600



Consultant:



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WESTERN TECHNICAL COLLEGE
INNOVATION CENTER

Project Location: 405 8TH STREET NORTH
LA CROSSE, WI

ELECTRICAL LIGHTING CONTROLS

Project Title:

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Project Date:
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PLP

Key Plan:

No.	Description	Date
3	ADDENDUM #3	08-21-24

Graphic Scale:
VARIES

Last Update:
7/29/2024

E602



NOTE:
SEE SECOND FLOOR
FOR ADDITIONAL
LIGHTING THIS AREA

NOTE:
SEE SECOND FLOOR
FOR ADDITIONAL
LIGHTING THIS AREA

NOTE:
SEE SECOND FLOOR
FOR ADDITIONAL
LIGHTING THIS AREA

PRODUCT LEGEND LC 1.0	
2	SX WSXA XX Wall Switch Sensor
4	SXP D WSXA PDT D XX Wall Switch Sensor, Passive Dual Technology, 0-10V Dimming
3	CRP 9 CMR PDT 9 Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360° Lens
2	nS NPODMA XX nLight Wired Wallpod, On/Off
16	nS D NPODMA DX XX nLight Wired Wallpod, On/Off, Raise/ Lower
1	nCM ADC NCM ADCX RJB Low Voltage Ceiling Mount Sensor, Photocontrol w/ Auto Dimming; No Wires
12	nCP 10AR NCM PDT 10 AR RJB Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Auxiliary Relay
2	nCP 9AR NCM PDT 9 AR RJB Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360° Lens, Auxiliary Relay
12	nPD NPP16 D EFP Power/Relay Pack, Occupancy Controlled Dimming, External Fault Protection

WIRE LEGEND LC 1.0	
	CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network

NORTH
1 LC 1.0
NO SCALE

RE-ISSUED PER ADDENDUM #3



Consultant:



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WESTERN TECHNICAL COLLEGE
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ELECTRICAL LIGHTING CONTROLS

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Key Plan:

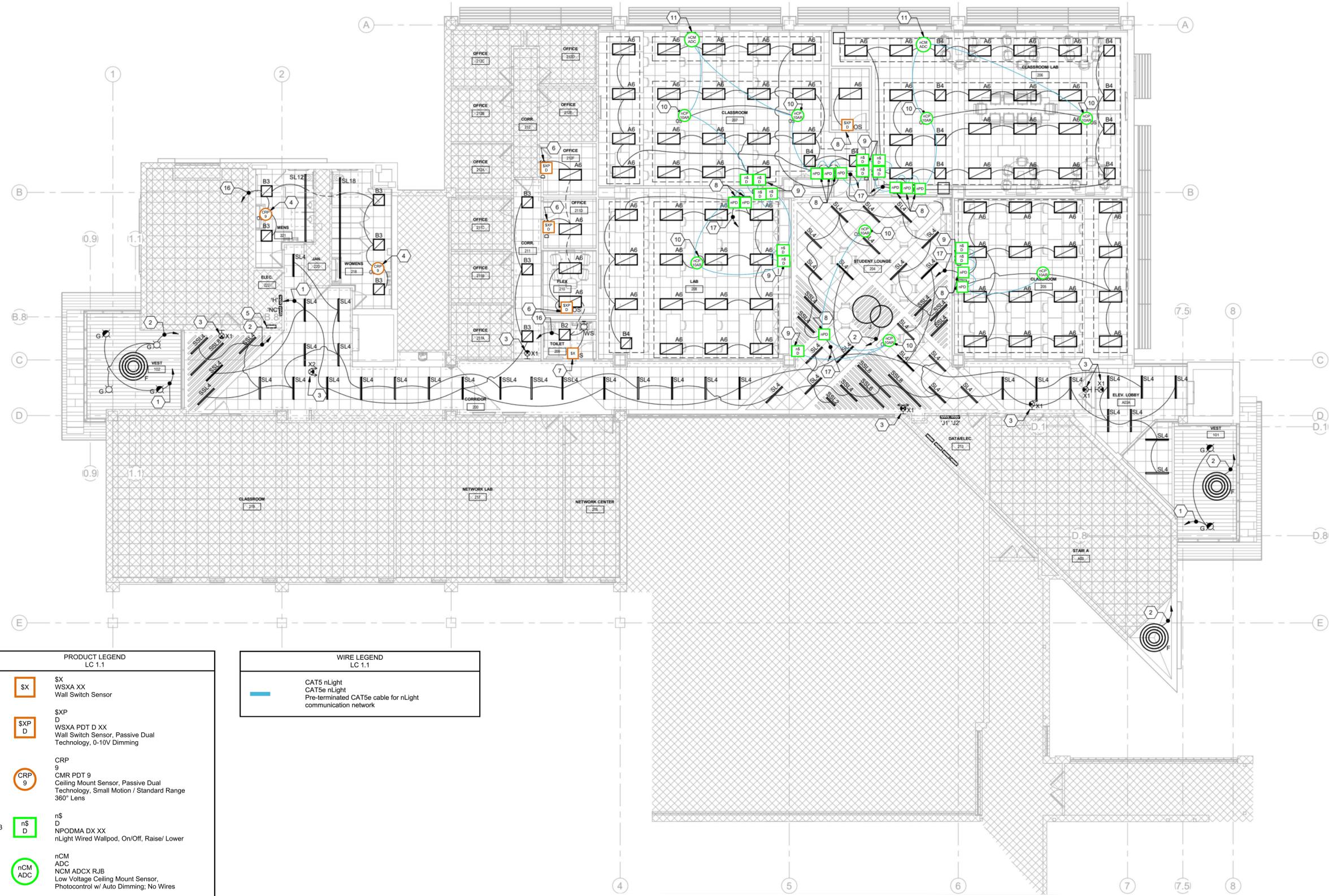
No.	Description	Date
3	ADDENDUM #3	08-21-24

Graphic Scale:
VARIES

Last Update:
7/29/2024

7/29/2024

E603



PRODUCT LEGEND LC 1.1	
1	\$X WSXA XX Wall Switch Sensor
4	\$XP D WSXA PDT D XX Wall Switch Sensor, Passive Dual Technology, 0-10V Dimming
2	CRP 9 CMR PDT 9 Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360° Lens
13	nS D NPODMA DX XX nLight Wired Wallpod, On/Off, Raise/ Lower
2	nCM ADC NCM ADCX RJB Low Voltage Ceiling Mount Sensor, Photocontrol w/ Auto Dimming; No Wires
8	nCP 10AR NCM PDT 10 AR RJB Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Auxiliary Relay
11	nPD NPP16 D EFP Power/Relay Pack, Occupancy Controlled Dimming, External Fault Protection

WIRE LEGEND LC 1.1	
	CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network

RE-ISSUED PER ADDENDUM #3