

#### Lillian Schmitt Elementary – Bid Package #2

### Addendum #3

#### March 20, 2024

This addendum is hereby made a part of the Drawings and Specifications on the subject work as though originally included therein. The following amendments, additions, and/or corrections shall govern this package.

#### General

- 1) All bids must be received no later than Friday, 3/22/24 at 2PM (Bids to be dropped off at BCSC School Corporation Office : 1200 Central Avenue, Columbus, IN 47201.)
- 2) Bids to be publicly read aloud at BCSC Corporation Office Terrace Room at 2:15PM on 3/22/24.
- 3) If you intend to mail your bid, please send an email to Nate Werner at nwerner@maxwellbuilds.com or call at 513-630-8618 to notify CMc.
- 4) Zoom Link for contractors to attend virtually:

Join Zoom Meeting https://us02web.zoom.us/j/89064812122?pwd=QjR5ZHIMWUINYm1zQ3JjQTBLNnZDZz09 Meeting ID: 890 6481 2122 Passcode: 6VfSt5 One tap mobile +13092053325,,89064812122#,,,,\*634460# US +13126266799,,89064812122#,,,,\*634460# US (Chicago) Meeting ID: 890 6481 2122 Passcode: 634460 Find your local number: https://us02web.zoom.us/u/kd3yxUjdvR

- 5) See the attached **\*\*Updated Bid Forms that must be included within bid envelope\*\*.** These include revised Alternates and Allowances Forms.
- 6) Substitution Requests will no longer be considered. This is the final Addendum that will be issued.

#### 7) Bid Category #1 General Trades

- a. See Q&A #5 below for specific scope information.
- b. BC-1 is responsible for new concrete trench for mechanical pipes in addition as shown on updated Structural drawings.
- c. BC-1 is responsible for patching and repairing glue up ceiling panels as indicated on drawings.
- d. BC-1 is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation.

#### 8) Bid Category #2 Sitework and Paving

a. BC-2 is responsible for SWPP reporting per IDEM requirements.

 BC-2 is responsible for the Site Furnishings such as bike racks and flag poles shown on L drawings with the exception of the Maya Lin Stone. Maya Lin Stone is by BC-1 per MCS BC-1 Note #130.

#### 9) Bid Category #7 Windows and Glazing

- a. All glazing including glazing for wood doors and borrowed lites to be by BC-7.
- b. Aluminum Storefronts by BC-7. BC-7 is responsible for all hardware for storefronts.

#### 10) Bid Category #8 Plumbing/HVAC

- a. BC-1 is responsible for new concrete trench for mechanical pipes in addition as shown on updated Structural drawings.
- b. See attached preliminary submittals/ cost information regarding the Owner's prepurchase equipment.

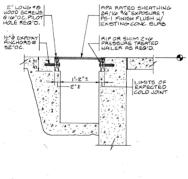
#### 11) Bid Category #10 Painting and Coatings

- a. Multiple Contract Summary Note #14 has hereby been removed from scope of work. Refer to Addendum #1 for caulking clarification.
- b. BC-10 is responsible for painting glue up ceiling panels.

#### **Questions and Answers**

- **1)** Is BC-2 responsible for SWPPP reporting initial setup, weekly inspections, rainfall inspections, etc.? If so, this only needs to be in effect from when sitework stops until finished, correct?
  - a. CM Response: BC-2 is responsible for SWPP reporting per IDEM requirements.
  - 2) Please confirm that BC-2 is responsible for the Site Furnishings shown on L drawings with the exception of the Maya Lin Stone? These include items such as bike racks and flag poles?
    - a. CM Response: This is confirmed. BC-2 is responsible for the Site Furnishings such as bike racks and flag poles shown on L drawings with the exception of the Maya Lin Stone. Maya Lin Stone is by BC-1 per MCS BC-1 Note #130.
  - **3)** Who is responsible for furnishing and installing aluminum doors and/or aluminum door hardware?
    - a. CM Response: Aluminum Storefronts by BC-7. BC-7 is responsible for all hardware for storefronts.
  - 4) Who is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation?
    - a. CM Response: BC-1 is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation.
  - 5) Clarify the exterior wall details on A401 and who is responsible for certain items?
    - a. CM Response: Generally, metal studs by BC-5, exterior gypsum board by BC-5, vapor barrier by BC-1, rigid insulation by BC-1, masonry/wall panels by BC-1, blocking by BC-1, steel plates by BC-1, coping/fascia by BC-11, gravel stop by BC-11, roofing membrane by BC-11, insulation under roofing membrane by BC-11.
      - i. Specifically, all blocking on A121 is by BC-11. All blocking on A401 is by BC-1.
      - ii. Specifically, anywhere there are metal wall panels, rigid insulation under membrane by BC-1.
      - iii. Specifically, anywhere there is PVC membrane and no metal wall panels, rigid insulation by BC-11.
      - iv. Generally, BC-11 is responsible for everything under roofing membrane except for metal studs and first layer of dense glass unless otherwise noted.
  - 6) Who is responsible for glazing in wood doors?
    - a. CM Response: All glazing including glazing for wood doors and borrowed lites to be by BC-7.

- 7) On mechanical drawings in the tunnel level, there is a note about removing piping and installing new piping (hydronic) to be in existing trench. What type of trench is this? Pipe buried in dirt or an open trench with pipe in it?
  - a. See below detail from 1990 drawings for reference.



- 8) Where is the location of any 10 21 23 cubicle curtain track?
  - a. CM Response: The curtains were tagged in the Clinic on A901B in Addendum 1.
- **9)** Who is responsible for patching, painting, and repairing glue up ceiling panels as indicated on drawings?
  - a. CM Response: BC-1 is responsible for patching and repairing glue up ceiling panels as indicated on drawings. BC-10 is responsible for painting glue up ceiling panels.
- **10)** Are the panels in the hallway to be laminate or hardwood? Details on A611 mention hardwood but the other panels on the project around the doors and on the column at the reception desk are laminate. Please clarify.
  - a. Response Per CSO's Attached Narrative: The details on A611 for the panels in the hallway were updated in addendum 2 to be laminate instead of hardwood. See in this addendum for related keynote number change.
- **11)** Can you confirm all casework is to have locks per general casework note G?
  - a. Response Per CSO's Attached Narrative: See revised casework lock locations in CSO's addendum.
- 12) In Addendum #1 Under section 3.030 A501-Door Schedule B. Door and Frame Schedule Unit A 1. Change material finish of door 140 from HM, PT to WD, ST. Can you please verify this, it doesn't appear there is a Door # 140 in Unit A Door Schedule.
  - a. Response Per CSO's Attached Narrative: This change was meant to refer to door #148, not door #140.
- **13)** Specification 08 14 19 Flush Wood Doors/2.05/C/2 says factory install glazing in doors indicated to be factory finished. We have specified in our Multiple Contract Summary that the glazing is to be provided and installed by windows and glazing contractor. Please confirm if this is acceptable and glazing does not need to be factory installed?
  - a. Response Per CSO's Attached Narrative: Glazing being provided and installed by the windows and glazing contractor instead of factory installed is acceptable
- **14)** Site furnishings spec section on barrier gates. The manufacturer listed in specs does not provide a powder coat finish. They provide galvanized steel or aluminum. Will either of these options work? If not, and we need to provide powder coated, which material is required to powder coat?
  - a. Response Per CSO's Attached Narrative: Please include a galvanized steel barrier gate without a powder coat finish.

- **15)** On drawing C400 & C401 storm structure #403 is shown as a 9' diameter perforated manhole as well as a type C manhole (which type C means it is a 48" diameter manhole). Please confirm what this manhole diameter is supposed to be?
  - a. Response Per CSO's Attached Narrative: The diameter is supposed to be 9 feet. The label has been adjusted to "Type N" on
    - Sheet C400 and Sheet C401, which corresponds to a 9-foot diameter manhole.
- **16)** Please provide dimensions/material type for the wood beam wraps shown on A603. Please provide clarity for these beam wraps.
  - Response Per CSO's Attached Narrative: See section 7/A402 for detail on hardwood wrap in media center. Color and size to match adjacent existing beams, approximately 1' - 4 1/8", field verify.

#### Updated Specifications:

- 1) Refer to Addendum #3 Document Attached from CSO Noting Changes.
- 2) Refer to attached specs which have been **added**. Refer to sections above to see which bid categories specs were added to.
  - a. ADD spec section 06 42 19 Plastic-Laminate-Faced Wood Paneling

#### **Updated Drawings:**

1) Refer to Addendum #3 Document Attached from CSO Noting Changes

#### DOCUMENT 004323 - ALTERNATES FORM

Project: Bartholomew Consolidated School Corporation Renovations Project BP#2 – Lillian Schmitt Elementary School Lillian Schmitt Elementary School: 2675 California St, Columbus, IN 47201

Owner: Bartholomew Consolidated School Corporation Architect: CSO Architects

Construction Manager: Maxwell Construction Company

Bid Submitted By:\_\_\_\_\_

Bid Category: No.\_\_\_\_ Description\_\_\_\_\_

#### DESCRIPTION

- A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
- B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
- C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
- D. The Bidder shall be responsible for determining from the Contract Documents the effects of each alternate on the Contract Time and the Contract Sum.
- E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 90 days of the Notice of Award unless otherwise indicated in the Contract Documents.
- F. Acceptance or non-acceptance of any alternates by the Owner shall have no effect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

SCHEDULE OF ALTERNATES AS FOLLOWS:

Bartholomew Consolidated School Corporation Project BP#2 – Lillian Schmitt Elementary

#### Lillian Schmitt Elementary (LSE)

#### Alternate No. 1 – Remove and Replace Bleachers Complete with Hussey

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

ADD\_\_\_\_\_ DEDUCT\_\_\_\_\_ NO CHANGE\_\_\_\_\_ NOT APPLICABLE\_\_\_\_\_

|                  | Dollars (\$ | )           |
|------------------|-------------|-------------|
| (Written Amount) | 、           | (Numerical) |

- Description: Base bid to include existing bleachers to remain. Alternate #1 to include <u>ADD</u> to removal and replacement of existing bleachers complete.
- Base bid to include existing conditions for bleachers. Alternate #1 to include <u>ADD</u> to wire power to new bleachers installed.
- Manufacturer: Hussey

# Alternate No. 1A – Remove and Replace Bleachers Complete with Alternate Approved Manufacturer

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

| ADD | DEDUCT | NO CHANGE | NOT APPLICABLE |
|-----|--------|-----------|----------------|
|     |        |           |                |

(Written Amount) Dollars (\$\_\_\_\_\_\_(Numerical)

- Description: Base bid to include existing bleachers to remain. Alternate #1A to include <u>ADD</u> to removal and replacement of existing bleachers complete.
- Base bid to include existing conditions for bleachers. Alternate #1A to include <u>ADD</u> to wire power to new bleachers installed.
- Manufacturer: Alternate Approved Manufacturer per Specification 12 66 00

#### Alternate No. 2 – Remove and Replace Existing Manual Basketball Goals

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

ADD\_\_\_\_\_DEDUCT\_\_\_\_\_NO CHANGE\_\_\_\_\_NOT APPLICABLE\_\_\_\_\_

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)
(Written Amount)

- Description: Base bid to include existing manual basketball goals to remain. Alternate #2 to include <u>ADD</u> to remove and replace existing manual basketball goals and install retractable basketball goals.
- Base bid to include existing conditions for basketball goals. Alternate #2 to include <u>ADD</u> to wire power to retractable basketball goals.

#### Alternate No. 3 – Remove and Replace Basketball Wall Padding

Responsible Bid Categories: BC-1 General Trades

| ADD         | _ DEDUCT           | NO CHANGE              | NOT APPLICABLE_          |                     |
|-------------|--------------------|------------------------|--------------------------|---------------------|
|             |                    |                        | Dollars                  | s (\$)              |
|             | (Writte            | n Amount)              |                          | (Numerical)         |
| Description | . Base bid to incl | ude existing basketbal | l wall padding to remain | Alternate #3 to in- |

Description: Base bid to include existing basketball wall padding to remain. Alternate #3 to include ADD to remove and replace basketball wall padding complete.

#### Alternate No. 4 – South Sitework Shown on L202

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

| ADD | DEDUCT  | NO CHANGE  | NOT APPLICABLE | _           |
|-----|---------|------------|----------------|-------------|
|     |         |            | Dollars (\$    | )           |
|     | (Writte | en Amount) |                | (Numerical) |

- Description: Base bid to include north sitework as shown on drawings "L" drawings. Alternate #4 to include ADD to complete south sitework as identified in alternate area shown on drawing L102 and L202.
- Base bid to include exterior electrical work per drawing E100 with the exception of 5 'FD-1' light poles and bases. Alternate #4 to include exterior electrical work in "south sitework alternate" area. This includes 5 'FD-1' light poles and bases. Area/parameters for this alternate shown on L202. All electrical work in these parameters to be included in this alternate.

#### Alternate No. 5 – South Sitework Shown on L202 (Alternate #4) Timeline Summer 2025

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

| ADD DEDUCT NO CHANGE_ | NOT APPLICABLE |
|-----------------------|----------------|
|-----------------------|----------------|

Dollars (\$ (Written Amount)

(Numerical)

Description: Alternate #4 to include Alternate #4 South Sitework scope of work occurring in Summer of 2025 and/or Summer of 2026 (exact schedule to be determined after bid). Alternate #5 to include a deduct to do Alternate #4 South Sitework scope of work in Summer of 2025.

#### Alternate No. 6 – Exterior Sitework (BC-2, BC-3, BC-9) Timeline Summer 2025

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

ADD\_\_\_\_\_ DEDUCT\_\_\_\_\_ NO CHANGE\_\_\_\_\_ NOT APPLICABLE\_\_\_\_\_

Dollars (§\_\_\_\_\_)

Bartholomew Consolidated SECTION 004323 -School Corporation Project ALTERNATES FORM (Up-BP#2 - Lillian Schmitt Elemendated Per Addendum #3) tary (Written Amount) (Numerical) Description: Base bid to include sitework occurring in Summer of 2025 and/or Summer of 2026 (exact schedule to be determined after bid). Alternate #6 to include a deduct to do all sitework for these BC's in summer of 2025. Alternate No. 7 - Roofing Manufacturers - Carlisle Responsible Bid Categories: BC-11 Roofing ADD\_\_\_\_\_DEDUCT\_\_\_\_\_NO CHANGE\_\_\_\_\_NOT APPLICABLE\_\_\_\_\_ (Written Amount) \_\_\_\_\_ Dollars (\$\_\_\_\_\_ Description: Base bid to include Sika Sarnfil as roofing manufacturer in accordance with division 7 specifications. Alternate #7 to include a deduct for Carlisle as roofing manufacturer in accordance with Division 7 specifications. Alternate No. 7A - Roofing Manufacturers - Fibertite Responsible Bid Categories: BC-11 Roofing ADD\_\_\_\_\_ DEDUCT\_\_\_\_\_ NO CHANGE\_\_\_\_\_ NOT APPLICABLE\_\_\_\_\_ \_\_\_\_\_Dollars (\$\_\_\_\_ (Written Amount) (Numerical) Description: Base bid to include Sika Sarnfil as roofing manufacturer in accordance with division 7 specifications. Alternate #7A to include a deduct for Fibertite as roofing manufacturer in accordance with Division 7 specifications. SUBMISSION OF BID SUPPLEMENT Respectfully submitted this \_\_\_\_\_ day of \_\_\_\_\_\_, 2024 Submitted By:\_\_\_\_\_(Insert name of bidding firm or corporation) Authorized Signature: (Handwritten signature) Signed By:\_\_\_\_\_(Type or print name) Title: (Owner/Partner/President/Vice President)

END OF DOCUMENT 004323

Bartholomew Consolidated School Corporation Project BP#2 – Lillian Schmitt Elementary

#### SECTION 012100 - ALLOWANCES

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
  - 1. Certain items are specified in the contract documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to contractor. If necessary, additional requirements will be issued by Change Order.
- B. Hourly rates used as part of the allowance must be approved by the Construction Manager prior to start of work. The rate will remain in effect for the duration of the project.
- C. All OH&P for Allowances to be included within Base-Bid.
- D. Types of allowances include the following:
  - **1.** Lump-sum allowances.
  - **2.** Unit-cost allowances.
  - **3.** Contingency allowances.
  - **4.** Testing and Inspection allowances
- E. Related Requirements:
  - 1. Section 00 43 21 "Allowance Form"
  - 2. Section 012200 "Unit Prices" for procedures for using unit prices.
  - **3.** Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - **4.** Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspections.

#### 1.3 DEFINITIONS

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

#### 1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's or Construction Manager's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

#### 1.5 ACTION SUBMITTALS

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

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

#### 1.7 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

#### 1.8 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect or Construction Manager under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

#### 1.9 UNIT-COST ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect or Construction Manager under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect or Construction Manager under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

#### 1.10 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect or Construction Manager for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

#### 1.11 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.

- C. Costs of testing and inspection services not specifically required by the Contract Documents are Contractor responsibilities and are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

#### 1.12 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
  - **1.** Include installation costs in purchase amount only where indicated as part of the allowance.
  - **2.** If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
  - **3.** Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
  - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
  - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

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

#### 3.2 PREPARATION

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

#### 3.3 SCHEDULE OF ALLOWANCES

#### A. BC-1 <u>General Trades</u>

- 1. Include Allowance of \$16,000 to be used for unforeseen items associated with structural work.
- 2. Include Allowance of \$18,000 to be used for unforeseen existing roof decking work.
- 3. Include Allowance of \$27,000 for temporary wall openings to be used as directed by CMc.
- 4. Include Allowance of two hundred (200) 30-Yard dumpsters.
- 5. Include Allowance of \$65,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 6. Include Allowance of \$2,500 per thousand brick Allowance. Allowance includes furnishing face brick. Material allowance and installation is included in this Section and is part of Contract Sum/Price.

#### B. BC-2 Sitework

1. Include Allowance of \$30,000 to be used as directed by CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### C. BC-3 <u>Site Concrete</u>

1. Include Allowance of \$15,000 to be used as directed by CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### D. BC-4 <u>Countertop</u>, Cabinetry, and Casework

1. Include Allowance of \$28,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### E. BC-5 Framing, Drywall, and Acoustical Ceiling

- 1. Include Allowance of \$25,000 for temporary wall partitions to be used as directed by CMc.
- 2. Include Allowance of \$12,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### F. BC-6 Flooring and Tiling

1. Include Allowance of \$40,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### G. BC-7 Windows and Glazing

1. Include Allowance of \$16,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### H. BC-8 Plumbing/Heating, Ventilation, and Air Conditioning

- 1. Include Allowance of \$75,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 2. Include Allowance of \$25,000 for Plumbing unforeseen existing valve and fitting relocation/replacement.

#### I. BC-9 Electrical and Technology

- 1. Include Allowance of \$45,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 2. Include Allowance of \$30,000 to be used for technology/card readers added by owner.

#### J. BC-10 Painting and Coating

1. Include Allowance of \$7,500 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

#### K. BC-11 Roofing

1. Include Allowance of \$37,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

END OF SECTION 012100

#### ADDENDUM

ADDENDUM NO: 3

**BID PACKAGE NO: 2** 

PROJECT: BCSC L.C. Schmitt Elementary Renovations

PROJECT NO: 2021049

DATE: 03/19/2024

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

Addendum Pages:ADD3-1-ADD3-7Attachments:Specifications: 06 42 19 Plastic-Laminate-Faced Wood Paneling, Preliminary division 23<br/>pre purchased equipment submittals<br/>Revised Sheets: C000, C400, C401, S201A, S202A, S402, S701, A211B, A607, A608, A611,<br/>A800, A801A, A801B, A801C, A801D, A802C, ED210A, ED201B, ED201C, ED201D, ED301,<br/>E100, E201A, E201B, E201C, E201D, E202C, E211A, E211B, E211C, E211D, E212C, E231B,<br/>E301, E401, E501, E601, E611, E612, E613

#### PART 1 - BIDDING AND CONTRACT REQUIREMENTS

1.01 NOT USED

#### **PART 2 - SPECIFICATIONS**

- 2.01 TABLE OF CONTENTS
  - A. DIVISION 09 FINISHES
    - 1. Remove 09 78 00 Interior Wall Paneling.
- 2.02 SECTION 06 42 19 PLASTIC-LAMINATE-FACED WOOD PANELING
  - A. Insert new section 06 42 19 Plastic-Laminate-Faced Wood Paneling.
- 2.03 SECTION 23 73 23 CUSTOM AIR-HANDLING UNITS
  - A. Add the following as paragraph **1.3 WARRANTY**

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

#### 2.04 SECTION 23 74 13 – PACKAGED ROOFTOP UNITS

A. Add the following as paragraph **1.3 WARRANTY** 



BY: Lauren Malonev

ROBERT No. AR00900003 STATE OF NO.LANA



"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

#### 2.05 SECTION 23 74 13 – CUSTOM BUILT OUTDOOR CENTRAL STATION AIR-HANDLING UNITS

A. Add the following as paragraph **3.3**, **F**.

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

#### 2.06 SECTION 23 81 33 – VARIABLE REFRIGERANT VOLUME AIR CONDITIONING

A. Add the following to paragraph 1.2, B.

"In addition to the pre-purchased equipment and material, the contractor is responsible for providing all necessary additional material and associated labor for a complete working system."

B. Add the following as paragraph **1.3 WARRANTY** 

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

#### 2.07 SECTION 23 82 24 – VERTICAL UNIT VENTILATORS

A. Add the following as paragraph **1.3 WARRANTY** 

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

#### PART 3 - DRAWINGS

#### CIVIL

- 3.01 <u>COOD TITLE SHEET</u>
  - A. Modify the drawing index to identify the revised sheets & dates under this addendum.
- 3.02 <u>C400 DRAINGAGE PLAN</u>
  - A. Modify label for STR 403 to be Type N Manhole. 9-ft diameter is correct.

#### 3.03 <u>C401 – DRAINAGE PROFILE</u>

A. Modify labels for STR 403 to be Type N Manhole. 9-ft diameter is correct.

#### STRUCTURAL

#### 3.04 <u>S201A – FOUNDATION PLAN – UNIT A</u>

A. Add concrete trenches for underslab piping as shown on the attached sheet.

#### 3.05 S202A – ROOF FRAMING PLAN – UNIT A & UNIT C



- A. Add additional information regarding AESS requirements for clarity.
- B. Revise framing plan to identify moment frames as shown.
- C. Add framing tags as shown on the attached sheet.

#### 3.06 <u>S402 – TYPICAL DETAILS</u>

A. Add sections 15 and 16 to provide details for new to existing conditions.

#### 3.07 STO1 – SECTIONS & DETAILS

A. Revise sections 1 and 3 to accommodate concrete trench for underslab piping.

#### ARCHITECTURAL

- 3.08 KEYNOTE LEGEND
  - A. Revise keynote 06 40 00-W PLASTIC LAMINATE ON <sup>3</sup>/<sub>4</sub>" PARTICLE BOARD to read 06 42 19-A PLASTIC LAMINATE ON <sup>3</sup>/<sub>4</sub>" PARTICLE BOARD.
  - B. Revise keynote 12 36 63 A SOLID SURFACE COUNTERTOPS to read 12 32 16-B SOLID SURFACE COUNTERTOPS.
  - C. Revise keynote 06 40 00-Z SOLID PLASTIC SURFACE ½" WINDOW STOOL to read 12 32 16-C SOLID SURFACE ½" WINDOW STOOL.

#### 3.09 A501 – DOOR SCHEDULE

- A. Revise frame material of doors 145-3, 146-4 and 147-3 from HM to AL.
- B. Revise frame material and finish of door 178-2 from HM PT to AL AN. Remove J38 from the jamb details for this door.
- C. Revise frame material of doors C104 and C112 from AL to HM.

#### 3.010 A211B – FIRST FLOOR REFLECTED CEILING PLAN – UNIT B

A. Revise slat direction above reception desk.

#### 3.011 GENERAL CASEWORK NOTES (A600 SERIES)

- A. Revise note G. "ALL CASEWORK TO HAVE LOCKS PROVIDED UNLESS SPECIFICALLY NOTED OTHERWISE" to read "PROVIDE LOCKS AT ALL TEACHER WARDROBE CABINETS AND AS NOTED ON THE CASEWORK ELEVATIONS".
- 3.012 A607 CASEWORK ELEVATIONS
  - A. Add notes for casework locks as shown on the attached sheet.

#### 3.013 A608 – CASEWORK ELEVATIONS

A. Add notes for casework locks as shown on the attached sheet.



#### 3.014 A611 – ENLARGED MILLWORK, PLANS, SECTIONS AND DETAILS

- A. Add notes for casework locks as shown on the attached sheet.
- B. Update finish tags in plan, elevations, and section details.

#### 3.015 GENERAL FINISH NOTES (A800 SERIES)

A. Add note "24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY. EXTERIOR SIDE TO REMAIN RED."

#### 3.016 A800 – FINISH LEGEND, NOTES & ELEVATIONS

- A. Revise "PL3" to "**NOT USED**".
- B. Update finish information for "PL1" and PL2".
- C. Update finish tags in elevations.

#### 3.017 A801A – FIRST FLOOR FINISH PLAN – UNIT A

A. Update all classrooms, small group rooms, and activity common casework to "PL2".

#### 3.018 A801B - FIRST FLOOR FINISH PLAN - UNIT B

- A. Update all casework to "PL2".
- B. Add "PL2" to corridor panels.
- C. Update STEM LAB 185 countertop to "SS3".

#### 3.019 A801C – FIRST FLOOR FINISH PLAN – UNIT C

- A. Update all classrooms, small group rooms, and activity common casework to "PL2".
- B. Add "PL2" to corridor panels.

#### 3.020 <u>A801D – FIRST FLOOR FINISH PLAN – UNIT D</u>

- A. Add finish tags to STORAGE 195 and 196B.
- B. Add floor finish tag near entrance of GYM 193.

#### 3.021 A802C – SECOND FLOOR FINISH PLAN – UNIT C

- A. Update all classrooms, small group rooms, and activity common casework to "PL2".
- B. Add F25 note to all classrooms.

#### ELECTRICAL

#### 3.01 ED201A - FIRST FLOOR PLAN - UNIT A - ELECTRICAL DEMOLITION



A. This drawing is to be reissued in its entirety.

#### 3.02 ED201B - FIRST FLOOR PLAN - UNIT B - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

#### 3.03 ED201C - FIRST FLOOR PLAN - UNIT C - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

#### 3.04 ED201D - FIRST FLOOR PLAN - UNIT D - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

#### 3.05 ED301 - ENLARGED BOILER ROOM PLAN - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

#### 3.06 E100 - SITE PLAN – ELECTRICAL

A. This drawing is to be reissued in its entirety.

#### 3.07 E201A - FIRST FLOOR PLAN - UNIT A – LIGHTING

- A. This drawing is to be reissued in its entirety.
- 3.08 E201B FIRST FLOOR PLAN UNIT B LIGHTING
  - A. This drawing is to be reissued in its entirety.

#### 3.09 E201C - FIRST FLOOR PLAN - UNIT C – LIGHTING

- A. This drawing is to be reissued in its entirety.
- 3.010 E201D FIRST FLOOR PLAN UNIT D LIGHTING
  - A. This drawing is to be reissued in its entirety.
- 3.011 E202C SECOND FLOOR PLAN UNIT C LIGHTING
  - A. This drawing is to be reissued in its entirety.
- 3.012 E211A FIRST FLOOR PLAN UNIT A POWER
  - A. This drawing is to be reissued in its entirety.
- 3.013 E211B FIRST FLOOR PLAN UNIT B POWER
  - A. This drawing is to be reissued in its entirety.

#### 3.014 E211C - FIRST FLOOR PLAN - UNIT C – POWER



A. This drawing is to be reissued in its entirety.

#### 3.015 E211D - FIRST FLOOR PLAN - UNIT D – POWER

A. This drawing is to be reissued in its entirety.

#### 3.016 E212C - SECOND FLOOR PLAN - UNIT C - POWER

A. This drawing is to be reissued in its entirety.

#### 3.017 E231B - FIRST FLOOR PLAN - UNIT B - FIRE ALARM

A. This drawing is to be reissued in its entirety.

#### 3.018 E301 - ENLARGED BOILER ROOM PLAN – ELECTRICAL

A. This drawing is to be reissued in its entirety.

#### 3.019 E401 - DETAILS - ELECTRICAL

A. This drawing is to be reissued in its entirety.

#### 3.020 E501 - RISER DIAGRAM – ELECTRICAL

A. This drawing is to be reissued in its entirety.

#### 3.021 E601 - SCHEDULES - ELECTRICAL

A. This drawing is to be reissued in its entirety.

#### 3.022 E611 - SCHEDULES - PANELBOARDS

- A. This drawing is to be reissued in its entirety.
- 3.023 E612 SCHEDULES PANELBOARDS
  - A. This drawing is to be reissued in its entirety.

#### 3.024 E613 - SCHEDULES – PANELBOARDS

A. This drawing is to be reissued in its entirety.

#### PART 4 - OTHER ITEMS

- 4.01 MECHANICAL
  - A. Included as a part of this addendum are the preliminary pre purchased equipment shop drawings.

#### PART 5 - QUESTION AND ANSWER

- 5.01 <u>Are the panels in the hallway to be laminate or hardwood? Details on A611 mention hardwood but the other panels on the project around the doors and on the column at the reception desk are laminate.</u> <u>Please clarify.</u>
  - A. Response: The details on A611 for the panels in the hallway were updated in addendum 2 to be laminate instead of hardwood. See above in this addendum for related keynote number change.
- 5.02 <u>Can you confirm all casework is to have locks per general casework note G?</u>
  - A. Response: See revised casework lock locations above in this addendum.
- 5.03 In Addendum #1 Under section 3.030 A501-Door Schedule B. Door and Frame Schedule Unit A 1. Change material finish of door 140 from HM, PT to WD, ST. Can you please verify this, it doesn't appear there is a Door # 140 in Unit A Door Schedule.
  - A. Response: This change was meant to refer to door **#148**, not door **#140**.
- 5.04 <u>Specification 08 14 19 Flush Wood Doors/2.05/C/2 says factory install glazing in doors indicated to be</u> <u>factory finished. We have specified in our Multiple Contract Summary that the glazing is to be provided</u> <u>and installed by windows and glazing contractor. Please confirm if this is acceptable and glazing does not</u> <u>need to be factory installed?</u>
  - A. Response: Glazing being provided and installed by the windows and glazing contractor instead of factory installed is acceptable.
- 5.05 <u>Site furnishings spec section on barrier gates. The manufacturer listed in specs does not provide a</u> powder coat finish. They provide galvanized steel or aluminum. Will either of these options work? If not, and we need to provide powder coated, which material is required to powder coat?
  - A. Response: Please include a galvanized steel barrier gate without a powder coat finish.
- 5.06 On drawing C400 & C401 storm structure #403 is shown as a 9' diameter perforated manhole as well as a type C manhole (which type C means it is a 48" diameter manhole). Please confirm what this manhole diameter is supposed to be?
  - A. Response: The diameter is supposed to be 9 feet. The label has been adjusted to "Type N" on Sheet C400 and Sheet C401, which corresponds to a 9-foot diameter manhole.
- 5.07 <u>Please provide dimensions/material type for the wood beam wraps shown on A603. Please provide clarity for these beam wraps.</u>
  - A. See section 7/A402 for detail on hardwood wrap in media center. Color and size to match adjacent existing beams, approximately 1' 4 1/8", field verify.

END OF ADDENDUM

#### SECTION 06 42 19 - PLASTIC-LAMINATE-FACED WOOD PANELING

- PART 1 GENERAL
- 1.01 RELATED DOCUMENTS
  - A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.02 SUMMARY

- A. Section Includes:
  - 1. Plastic-laminate-faced wood paneling.
  - 2. Extruded aluminum perimeter trim moldings.
- B. Related Requirements:
  - 1. Section 061053 "Miscellaneous Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing paneling that is concealed within other construction before paneling installation.

#### 1.03 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that paneling can be installed as indicated.
- 1.04 ACTION SUBMITTALS
  - A. Product Data: For each type of product.
    - 1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
  - B. Shop Drawings: For plastic-laminate-faced wood paneling.
    - 1. Include plans, elevations, sections, and attachment details.
    - 2. Show details full size.
    - 3. Show locations and sizes of furring and blocking, including concealed blocking specified in other Sections.
  - C. Samples for Verification: For each type of exposed laminate, 8 by 10 inches (200 by 250 mm).
    - 1. Provide one Sample applied to core material and with specified edge material applied to one edge.

#### 1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

- B. Product Certificates: For each type of product.
- C. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

#### 1.06 QUALITY ASSURANCE

Columbus, IN

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products.
- C. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
  - 1. ASTM E 84 (Method of test for surface burning characteristics of building Materials)
  - 2. Required Rating Class A.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver paneling until painting and similar operations that might damage paneling have been completed in installation areas. Store paneling in installation areas or in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

#### 1.08 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install paneling until building is enclosed, wetwork is complete, and HVAC system is operating and will maintain temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
- B. Field Measurements: Where paneling is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Locate concealed framing, blocking, and reinforcements that support paneling by field measurements before being enclosed/concealed by construction and indicate measurements on Shop Drawings.

#### 1.09 WARRANTY

A. Manufacturer warrants any product it has manufactured and sold against defects in materials or workmanship for a period of five years from the date of original purchase and acceptance for use. This warranty extends to products assembled / installed and used in the manner intended and does not cover damage or failure caused by: misuse, abuse or accidents, exposure to extreme temperature, improper installation, improper maintenance, and exposure to water, excessive humidity or excessive moisture.

#### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide panel system by one of the following:
  - 1. Marlite Sieva
  - 2. Panel Specialists, Inc
  - 3. Monarch Metals, Inc.

#### 2.02 TRIM ACCESSORIES

- A. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Fry Reglet Corp.
    - b. Gordon, Inc.
    - c. Pittcon Industries.
    - d. MM Systems Corporation.
  - 2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), Alloy 6063-T5.
  - 3. Aluminum Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
    - a. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

#### 2.03 PANELING, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of plastic-laminate-faced wood paneling (decorative laminate surfacing) indicated for construction, finishes, installation, and other requirements.
  - 1. Grade: Premium.
- B. Provide prefinished decorative panels where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- C. Provide blocking, furring, or wood sheathing as substrate for required installation.

#### 2.04 PLASTIC-LAMINATE-FACED WOOD PANELING

A. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3 and the following requirements:

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- 1. As indicated in drawings or subject to compliance with requirements, provide selection from full line of products by one of the following (must be approved):
  - a. Abet Laminati Inc.
  - b. Arborite.
  - c. Formica Corporation.
  - d. Lamin-Art, Inc.
  - e. Panel Source International, Inc.
  - f. Wilsonart LLC.
- 2. Faces: Grade VGS.
- 3. Backs: Grade BKV.
- 4. Exposed Edges: Same as faces or Grade VGS.
- B. Panel Thickness: 1/2 or 3/4 inches.
  - 1. Dimensions: Refer to Drawings.
    - a. Note: All details were designed assuming 3/4" panel thickness. If contractor elects to use 1/2" panel, sub-framing indicated shall be increased to meet overall dimensional requirements indicated in drawings. This shall be clearly indicated in shop drawings submitted to architect for review.
- C. Panel Edge Finish: Panel edges to be finished with 1mm PVC edge banding matching adjacent surfaces.
- D. Main Laminated Panel Fire Rating: Fire Rating: ASTM E84, Class A.
- E. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed surfaces complying with the following requirements:
  - 1. As indicated in drawings or selected from laminate manufacturer's full line of colors (must be approved).
  - 2. Grain Direction: Vertical.
- F. Panel Core: Fire-retardant particleboard or fire-retardant MDF.
- G. Adhesives for Bonding Plastic Laminate: Unpigmented contact cement.
  - 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.
- H. Fire-Retardant-Treated Paneling: Panels shall consist of fire-retardant plastic laminate and fire-retardant particleboard or fire-retardant, medium-density fiberboard (MDF). Panels shall have a flame-spread index of 25 or less and a smoke-developed index of 450 or less per ASTM E84, and be listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
- I. Assemble panels by gluing and concealed fastening.
- J. Mounting Devices: Concealed on back of panel, recommended by manufacturer to support weight of panel, and as follows:

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1. Metal Clips or Bar Hangers: Manufacturer's standard two-part metal "Z" clips, with one part of each clip mechanically attached to back of panel and the other part to substrate, designed to permit unit removal.

#### 2.05 MATERIALS

- A. Materials, General: Provide materials that comply with requirements of referenced quality standard for each quality grade specified unless otherwise indicated.
- B. Wood Moisture Content: 8 to 13 percent.

#### 2.06 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials that are acceptable to authorities having jurisdiction and with fire-testresponse characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
  - 1. Use treated materials that comply with requirements of referenced quality standard. Do not use materials that are warped, discolored, or otherwise defective.
  - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
  - 3. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.
- B. Fire-Retardant Particleboard: Made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E84.
  - For panels 3/4 inch (19 mm) thick and less, comply with ANSI A208.1 for Grade M-2 except for the following minimum properties: modulus of rupture, 1600 psi (11 MPa); modulus of elasticity, 300,000 psi (2070 MPa); internal bond, 80 psi (550 kPa); and screw-holding capacity on face and edge, 250 and 225 lbf (1100 and 1000 N), respectively.
- C. Fire-Retardant Fiberboard: MDF panels complying with ANSI A208.2, made from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E84.

#### 2.07 INSTALLATION MATERIALS

- A. Required Furring, Blocking, Shims, and Hanging Strips: Provide fire-retardant-treated softwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls.

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- 1. See drawings for fastener intent at specific details, manufacturer to verify best application at all locations to meet intent.
- C. Installation Adhesive: Product recommended by panel fabricator for each substrate for secure anchorage.

#### 2.08 FABRICATION

- A. Complete fabrication, including assembly, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
  - 1. Exposed, field cut panel edges will not be accepted. See 2.04E for required panel edge finish.
  - 2. Notify Architect seven days in advance of the dates and times paneling fabrication will be complete.
- B. Shop cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

#### PART 3 - EXECUTION

#### 3.01 PREPARATION

- A. Before installation, condition paneling to humidity conditions in installation areas.
- B. Before installing paneling, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

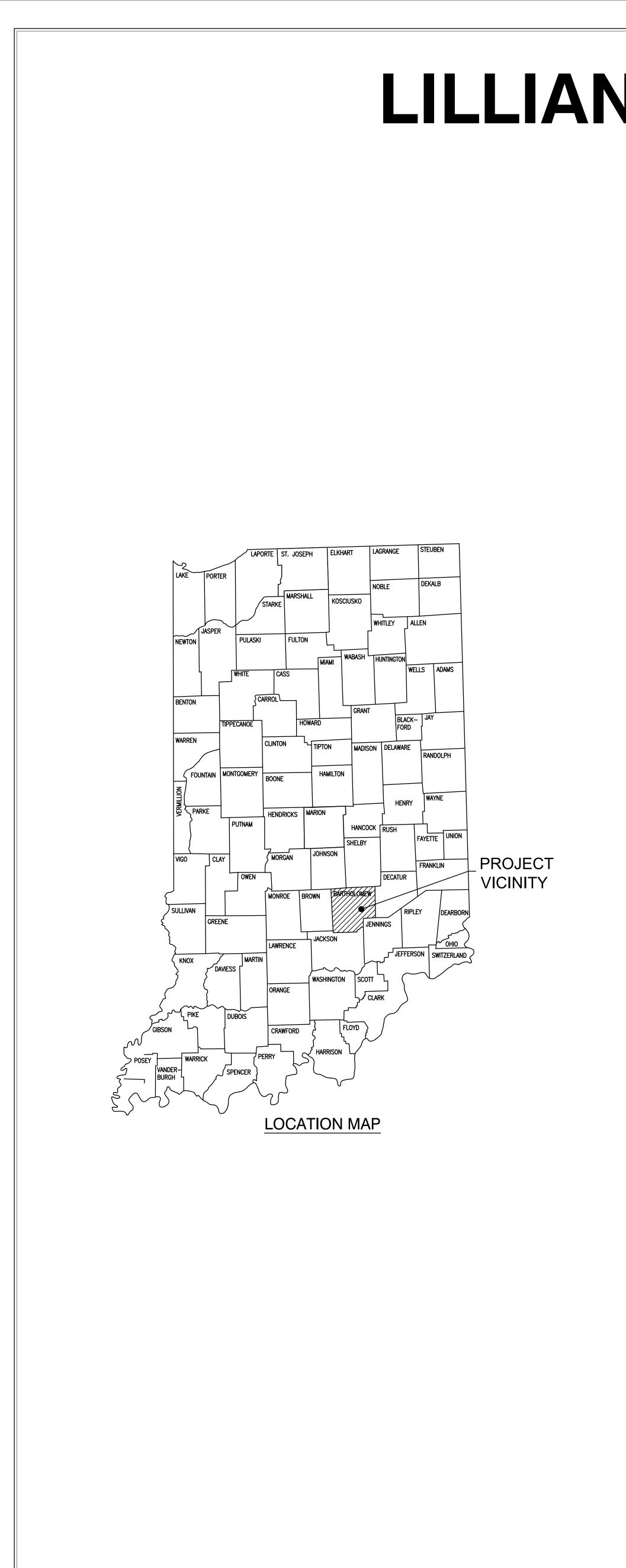
#### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Grade: Install paneling to comply with quality standard grade of paneling to be installed.
- Install paneling level, plumb, true in line, and without distortion. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm). Install with no more than 1/16 inch in 96-inch (1.6 mm in 2400-mm) vertical cup or bow and 1/8 inch in 96-inch (3 mm in 2400-mm) horizontal variation from a true plane.
  - 1. For flush paneling with revealed joints, install with variations in reveal width, alignment of top and bottom edges, and flushness between adjacent panels not exceeding 1/32 inch (0.8 mm).
- D. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips. Do not use face fastening, unless otherwise indicated.

#### 3.03 ADJUSTING AND CLEANING

- A. Repair damaged and defective paneling, where possible, to eliminate defects. Where not possible to repair, replace paneling. Adjust for uniform appearance.
- B. Clean paneling on exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

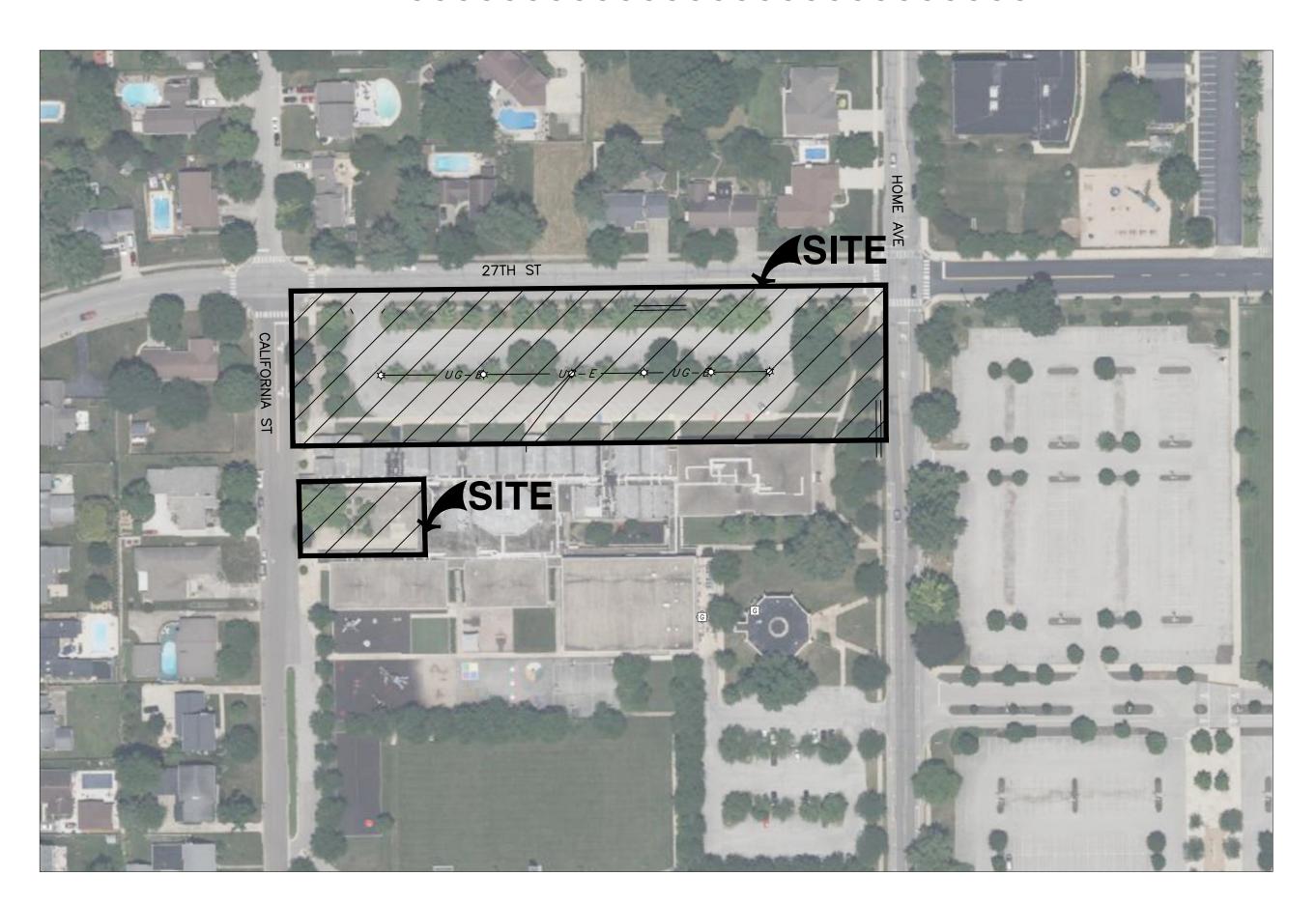
END OF SECTION



# LILLIAN SCHMITT ELEMENTARY SCHOOL RENOVATIONS

# **2675 CALIFORNIA STREET** COLUMBUS, INDIANA 47201 **100% CIVIL PLANS FEBRUARY 16, 2024**

**ADDENDUM #1: MARCH 8, 2024** ADDENDUM #2: MARCH 15, 2024 ADDENDUM #3: MARCH 19, 2024





#### **VICINITY MAP** BASE IMAGE FROM GOOGLE EARTH ACCESSED JAN. 2024 SCALE: 1"=100' SCALE IN FEET 100

# **PROJECT TEAM:**

LANDSCAPE ARCHITEC CONTEXT DESIGN 5825 LAWTON LOOP E DR INDIANAPOLIS, IN 46216 PH: (317) 485-6900 CONTACT: FRED PRAZEAU

CIVIL ENGINEER **CIVIL & ENVIRONMENTAL** CONSULTANTS, INC. 530 E. OHIO ST., STE. G INDIANAPOLIS, IN 46204 PH: (317) 655-7777 CONTACT: JONATHAN PASYK EMAIL: jpasyk@cecinc.com

# **UTILITIES:**

# GAS VECTREN

4324 MIDDLE RD COLUMBUS, IN 47203

SURVEYOR CIVIL & ENVIRONMENTAL

CONSULTANTS, INC. 530 E. OHIO ST., STE. G INDIANAPOLIS, IN 46204 PH: (317) 655-7777 EMAIL: fprazeau@context-design.com CONTACT: ANTHONY SYERS EMAIL: asyers@cecinc.com

> ARCHITECT CSO ARCHITECTS 8831 KEYSTONE CROSSING INDIANAPOLIS, IN 46240 PH: (317) 848-7800 CONTACT: JIM FUNK EMAIL: JFunk@CSOinc.net

SANITARY SEWER LECTRIC COLUMBUS CITY UTILITIES DUKE ENERGY 2727 CENTRAL AVE 1111 MCCLURE RD COLUMBUS, IN 47201

COLUMBUS, IN 47201 (812)372-8861

STORM SEWER WATER COLUMBUS ENGINEERING 123 WASHINGTON ST. COLUMBUS, IN 47201 (812)376-2540

ATTN: SCOTT DOMPKE

ATTN: TROY TODD

1111 MCCLURE RD COLUMBUS, IN 47201 (812)372-8861 ATTN: ANDREW BECKORT ATTN: SCOTT DOMPKE

FIRE DEPARTMENT COLUMBUS CITY UTILITIES COLUMBUS FIRE DEPARTMENT 1101 JACKSON ST. COLUMBUS, IN 47201 (812)376-2583

FLOOD NOTE:

(UN-SHADED) AS SAID PARCEL PLOTS ON MAP NUMBER 18005C0131E (DATED DECEMBER 9, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR THE CITY OF COLUMBUS, BARTHOLOMEW COUNTY, INDIANA. THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.

# **BENCHMARKS**:

OPUS SOLUTION AND ARE ON THE 1988 NORTH AMERICAN VERTICAL DATUM (NAVD88) (GEOID 18). IT IS MY OPINION THAT THE UNCERTAINTY IN THE ÈLEVATION ÒF THE PROJECT BENCHMARK DOES NOT EXCEED 0.10 FOOT. TBM#1: SET MAGNAIL ON TOP OF A LIGHT BASE LOCATED APPROXIMATELY 140 FEET SOUTH OF THE SOUTHWEST CORNER OF THE SITE. TBM#2: NORTHEAST BOLT ON TOP OF A FIRE HYDRANT LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF CALIFORNIA ST. AND 27TH ST. TBM#3: SOUTHWEST BOLT ON TOP OF A FIRE HYDRANT LOCATED IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF HOME AVE. AND 27TH ST. TBM#4: NORTHEAST BOLT ON TOP OF A FIRE HYDRANT LOCATED AT THE SOUTHEAST CORNER OF THE SITE.

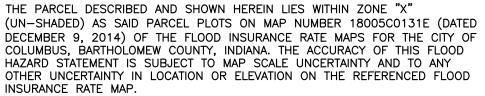
# UTILITY NOTE:

SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA. EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. INDIANA 811 ONE-CALL PUBLIC UTILITY LOCATE SERVICE TICKET NUMBER 2310171909 WAS ISSUED FOR THIS SITE. AMERICAN LOCATING SERVICES, A PRIVATE SUBSURFACE UTILITY LOCATING SERVICE, WAS CONTRACTED TO PERFORM THE PRIVATE UTILITY LOCATIONS FOR THE SUBJECT SITE. THE PRIVATE UTILITIES LOCATED AND DEPICTED HEREIN WERE EITHER OBSERVED FROM MARKINGS ON THE GROUND OR USING EXISTING PLANS PROVIDED BY THE SCHOOL.

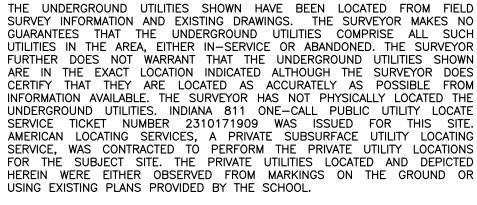
PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, THE CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, AND SANITARY SEWER. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND THE APPROPRIATE AUTHORITIES.

PLANNING DEPARTMENT COLUMBUS PLANNING DEPARTMENT 123 WASHINGTON ST. COLUMBUS, IN 47201 (812)376-2550 ÀTTN: JEFF BERGMAN

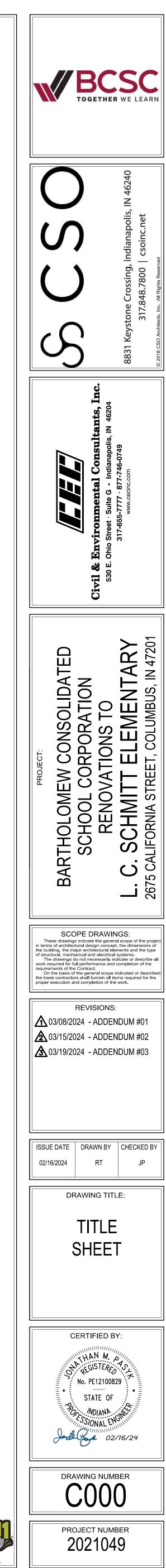
|                 | Drawing Index                                    |                |
|-----------------|--|----------------|
| Sheet<br>Number | Sheet Title                                      | Drawing<br>No. |
| 01              | TITLE SHEET                                      | C000           |
| 02              | BOUNDARY RETRACEMENT SURVEY                      | BNDY           |
| 03              | BOUNDARY RETRACEMENT SURVEY                      | BNDY           |
| 04              | TOPOGRAPHIC SURVEY                               | ТОРО           |
| 05              | TOPOGRAPHIC SURVEY                               | ТОРО           |
| 06              | DEMOLITION PLAN                                  | C101           |
| 07              | GRADING PLAN                                     | C300           |
| 08              | FLOOD ROUTING PLAN                               | C301           |
| 09              | GRADING PLAN - SOUTH ALTERNATE                   | C302           |
| 10              | DRAINAGE PLAN                                    | C400           |
| 11              | DRAINAGE PROFILE                                 | C401           |
| 12              | UTILITY PLAN                                     | C500           |
| 13              | UTILITY PLAN SOUTH ALTERNATE                     | C501           |
| 13              | PLAN DETAILS                                     | C800           |
| 14              | PLAN DETAILS                                     | C801           |
| 15              | STORMWATER POLLUTION PREVENTION PLAN             | C900           |
| 16              | STORMWATER POLLUTION PREVENTION NOTES            | C901           |
| 17              | STORMWATER POLLUTION PREVENTION PLAN - ALTERNATE | C902           |
| 18              | STORMWATER POLLUTION PREVENTION DETAILS          | C903           |
|                 | CITY OF COLUMBUS STANDARD DETAILS                |                |



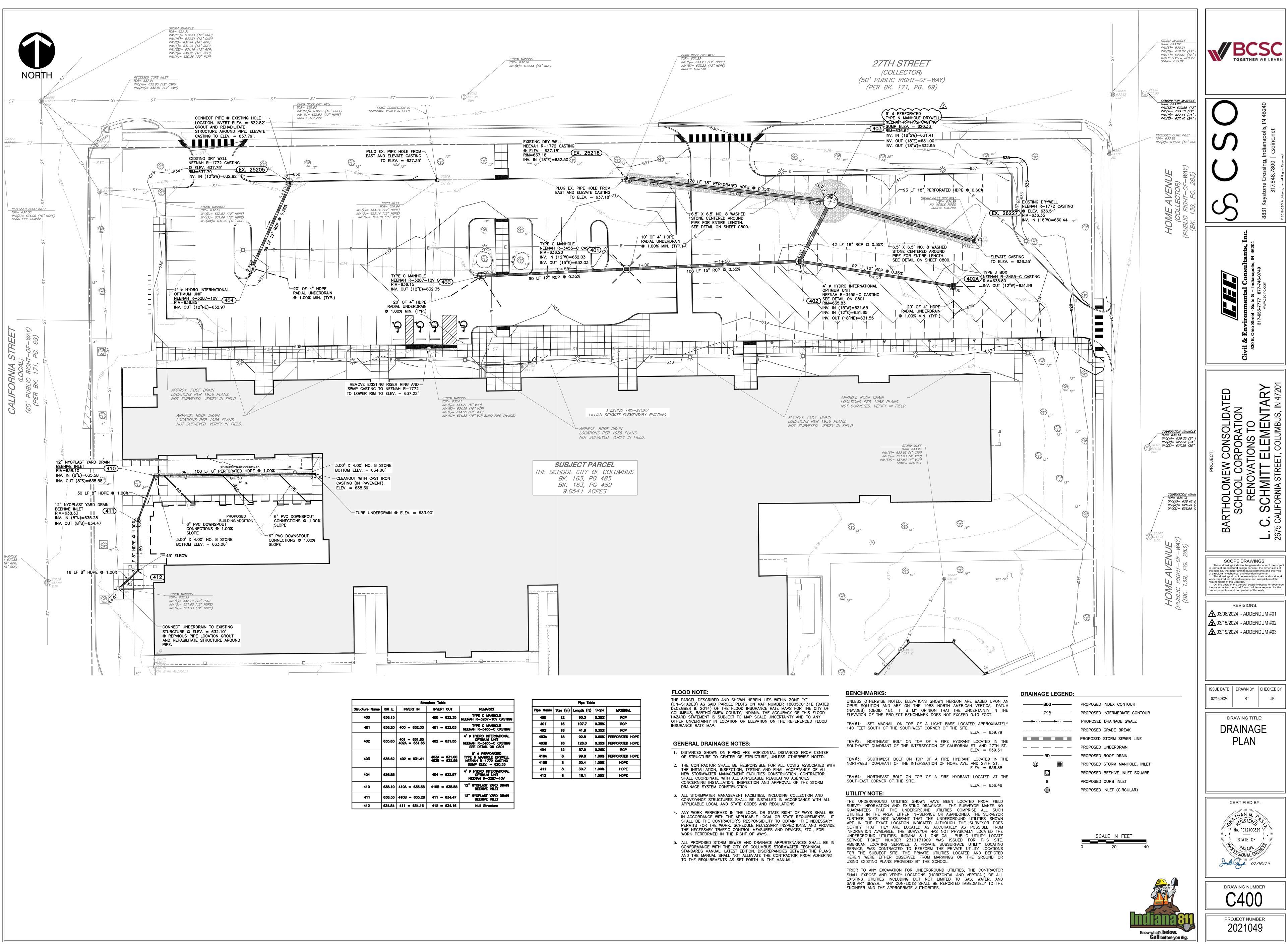
UNLESS OTHERWISE NOTED, ELEVATIONS SHOWN HEREON ARE BASED UPON AN ELEV. = 639.79ELEV. = 639.31ELEV. = 636.88ELEV. = 636.48







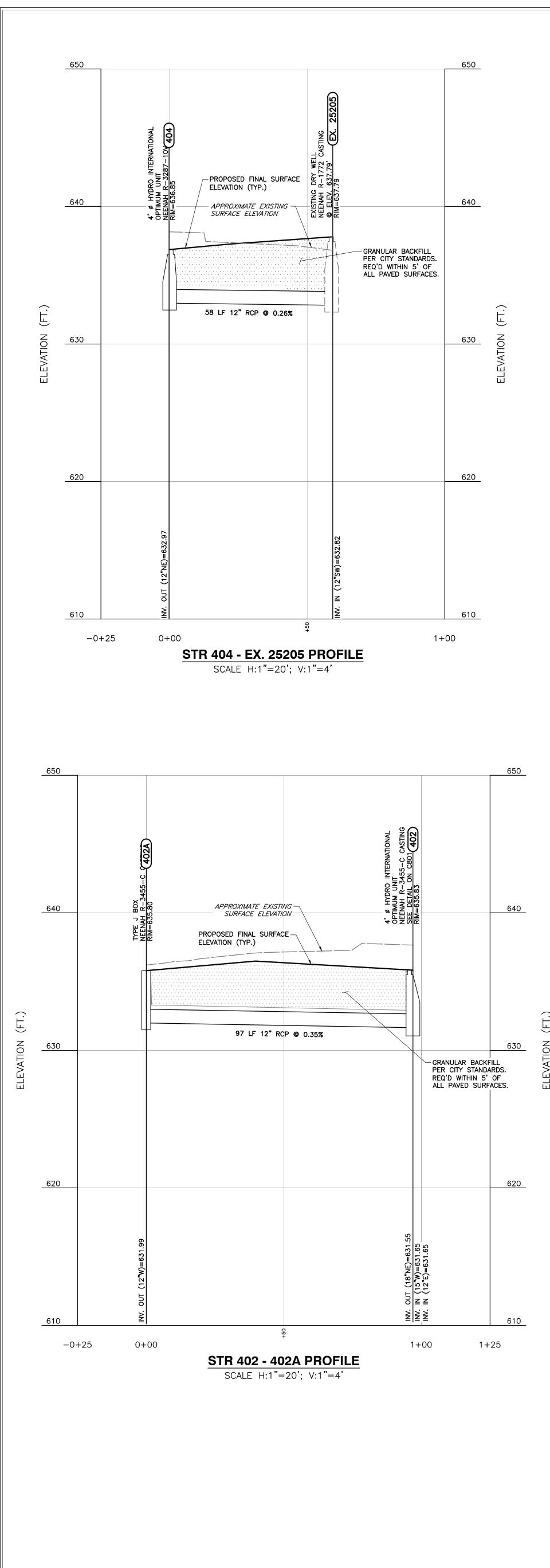
Know what's **below. Call** before you dig.



|                |        | 500                           | icture l'able                  |   |
|----------------|--------|-------------------------------|--------------------------------|---|
| Structure Name | RIM E. | INVERT IN                     | INVERT OUT                     | REMARKS   |
| 400            | 636.15 |                               | 400 = 632.35                   | TYPE C MANHOLE<br>NEENAH R-3287-10V CASTING   |
| 401            | 636.20 | 400 = 632.03                  | 401 = 632.03                   | TYPE C MANHOLE<br>NEENAH R-3455-C CASTING   |
| 402            | 635.83 | 401 = 631.65<br>402A = 631.65 | 402 = 631.55                   | 4' # HYDRO INTERNATIONAL<br>OPTIMUM UNIT<br>NEENAH R-3455-C CASTING<br>SEE DETAIL ON C801 |
| 403            | 636.62 | 402 = 631.41                  | 403A = 631.00<br>403B = 632.95 | 9' Ø PERFORATED<br>TYPE N MANHOLE DRYWELL<br>NEENAH R-1772 CASTING<br>SUMP ELEV. = 620.33 |
| 404            | 636.85 |                               | 404 = 632.97                   | 4" # HYDRO INTERNATIONAL<br>OPTIMUM UNIT<br>NEENAH R-3287-10V                             |
| 410            | 638.10 | 410A = 635.58                 | 410B = 635.58                  | 12" NYOPLAST YARD DRAIN<br>BEEHIVE INLET  |
| 411            | 638.33 | 4108 = 635.28                 | 411 = 634.47                   | 12" NYOPLAST YARD DRAIN<br>BEEHIVE INLET  |
| 412            | 634.84 | 411 = 634.16                  | 412 = 634.16                   | Null Structure  |

|           |           | Pipe Tabl   | le    |                 |
|-----------|-----------|-------------|-------|-----------------|
| Pipe Name | Size (in) | Length (ft) | Slope | MATERIAL        |
| 400       | 12        | 90.3        | 0.35% | RCP             |
| 401       | 15        | 107.7       | 0.35% | RCP             |
| 402       | 18        | 41.8        | 0.35% | RCP             |
| 403A      | 18        | 92.8        | 0.60% | PERFORATED HDPE |
| 403B      | 18        | 128.0       | 0.35% | PERFORATED HDPE |
| 404       | 12        | 57.9        | 0.26% | RCP             |
| 410A      | 8         | 99.8        | 1.00% | PERFORATED HDPE |
| 410B      | 8         | 30.4        | 1.00% | HDPE            |
| 411       | 8         | 30.7        | 1.00% | HDPE            |
| 412       | 8         | 16.1        | 1.00% | HDPE            |

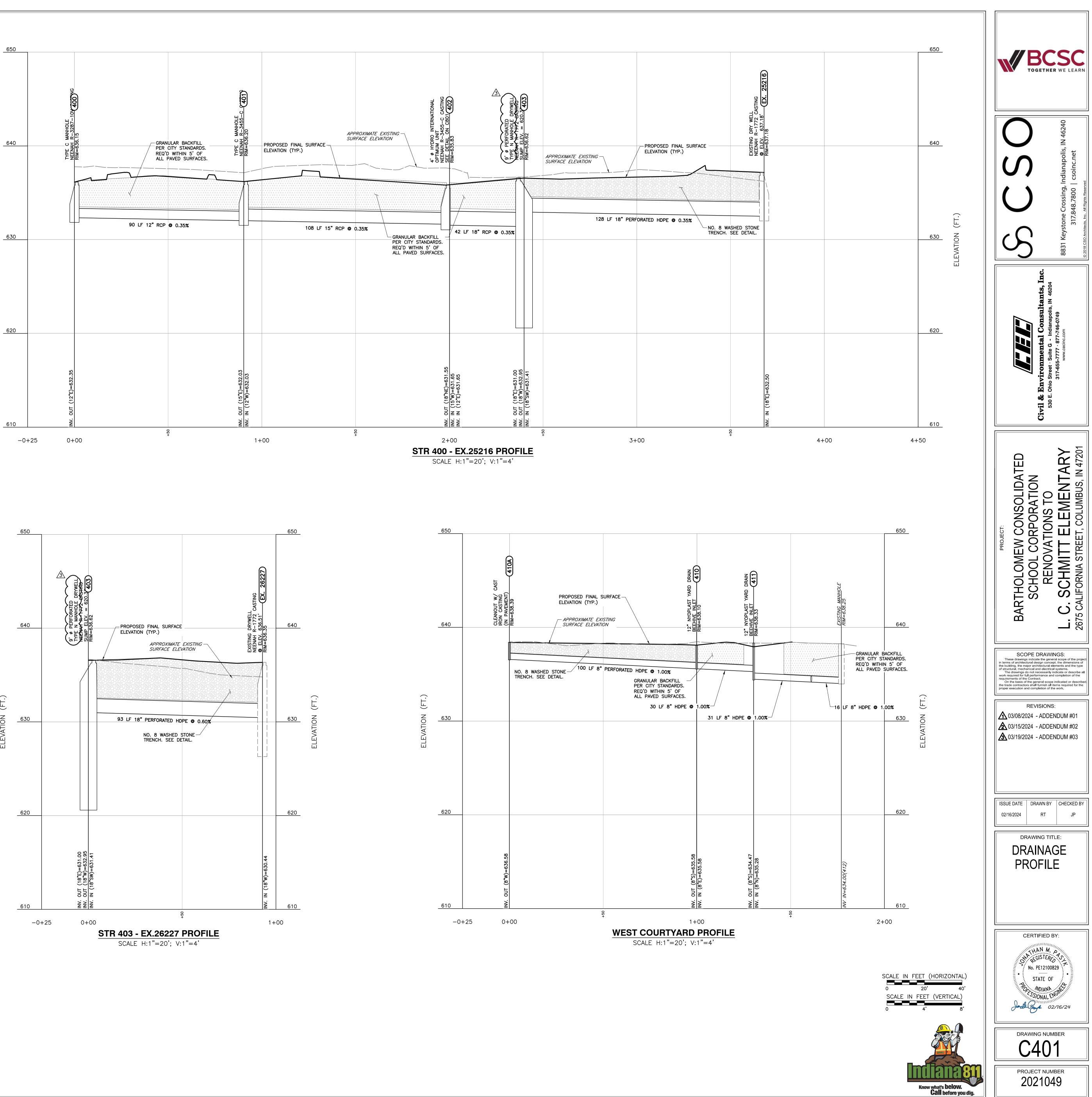
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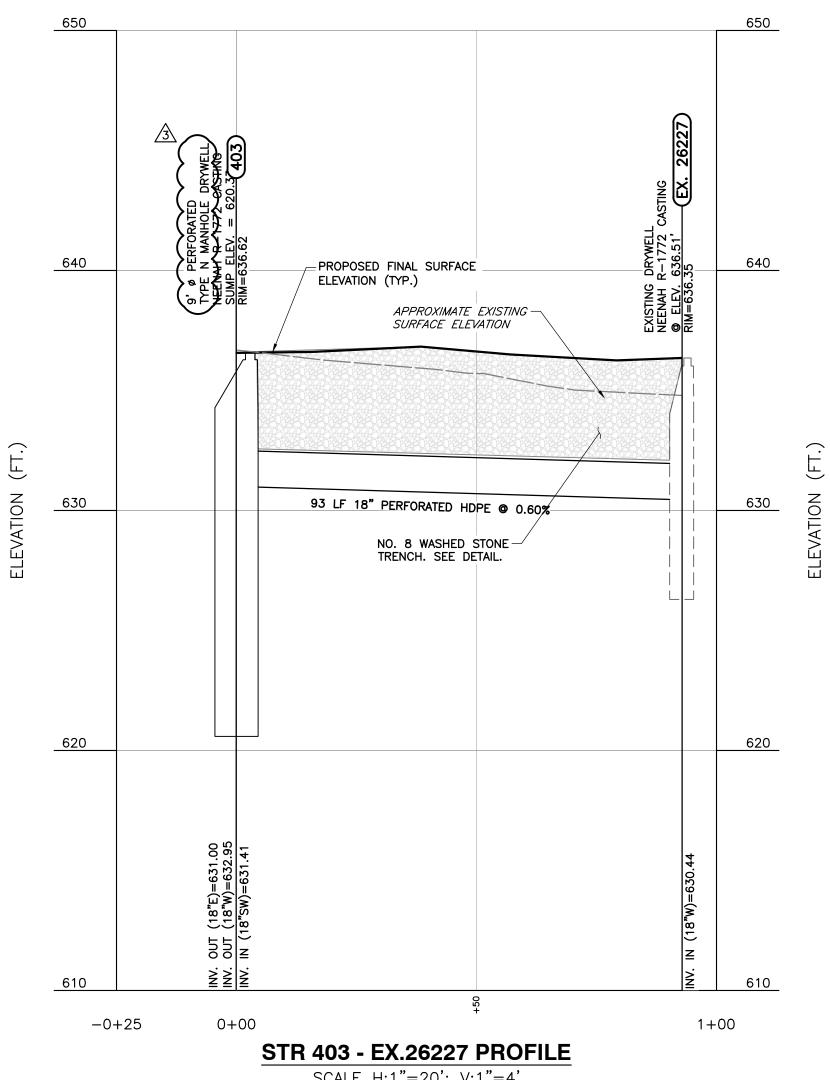


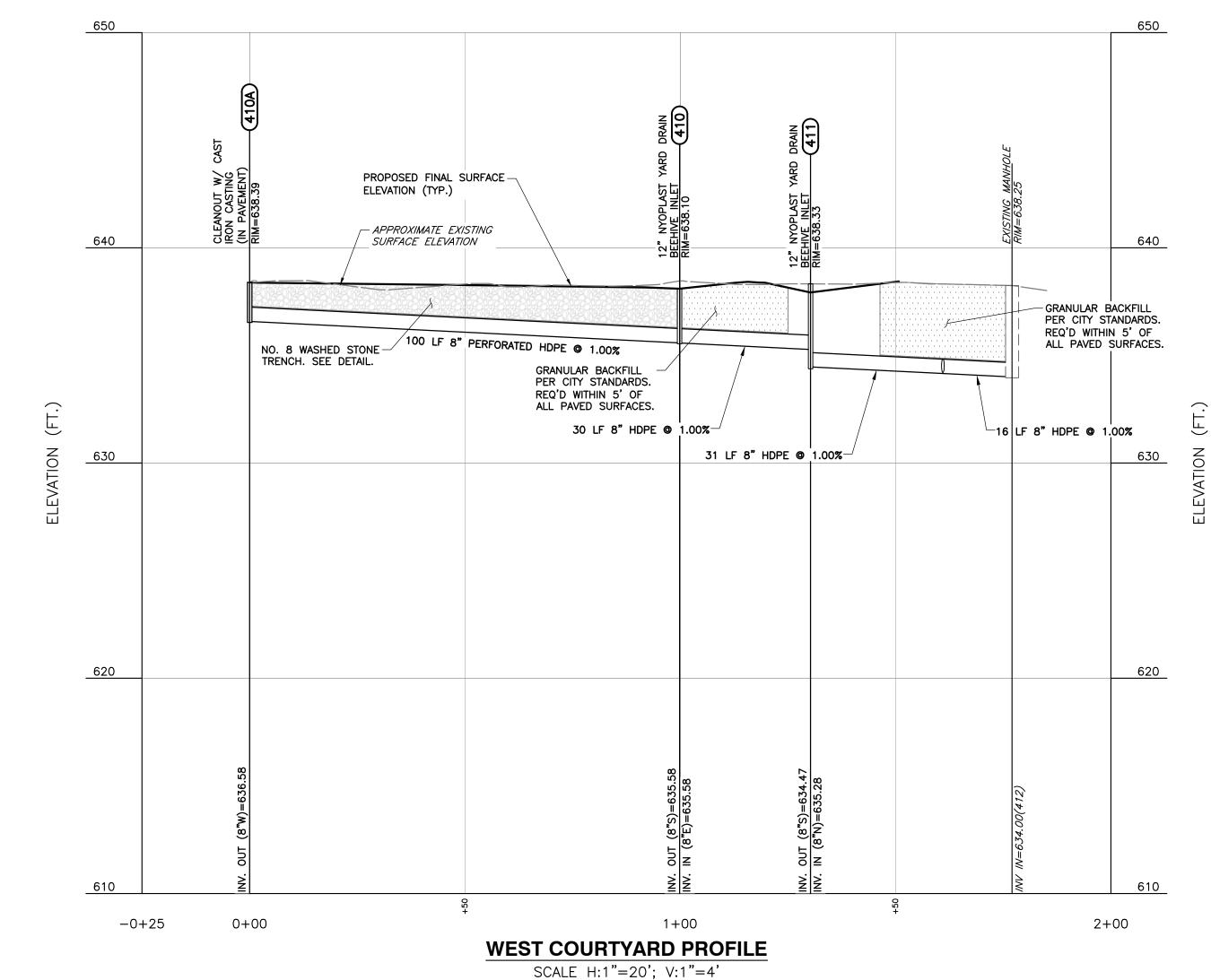
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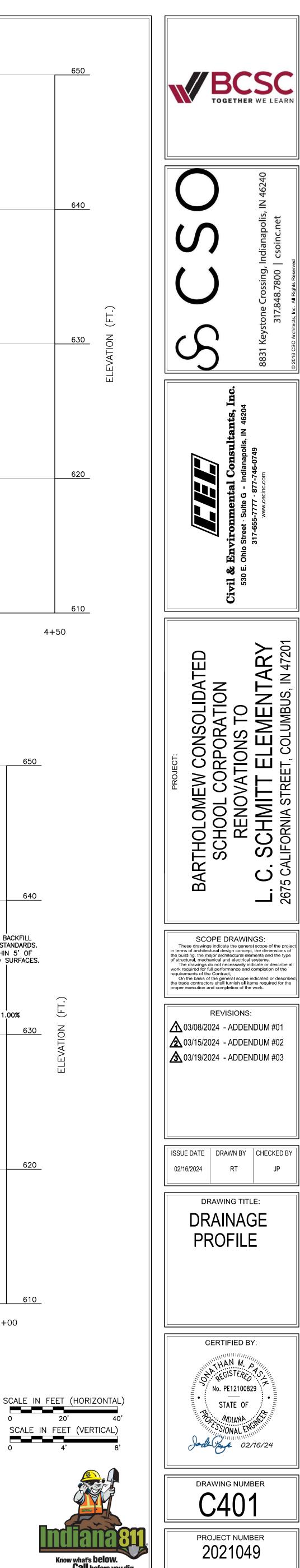
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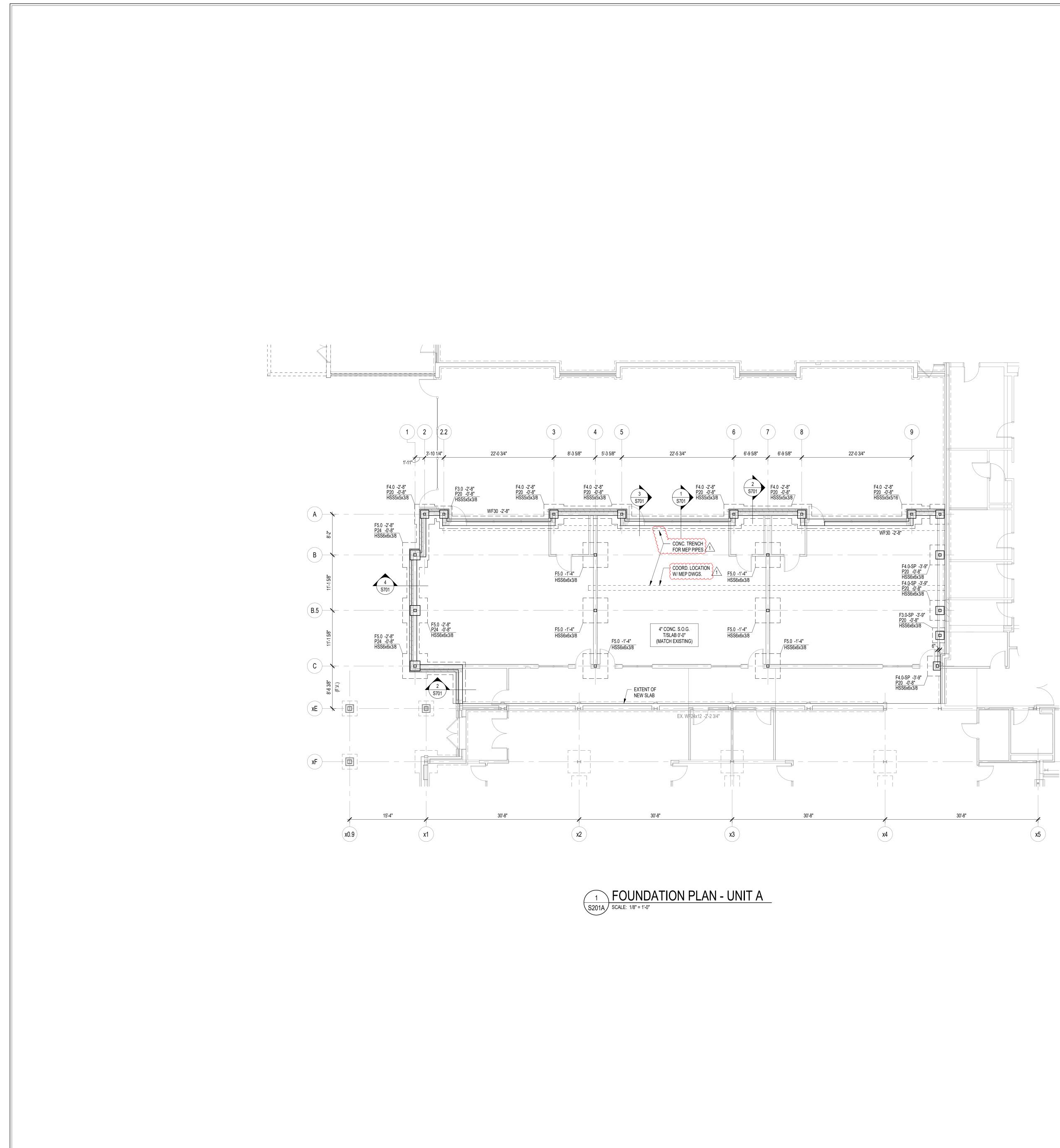
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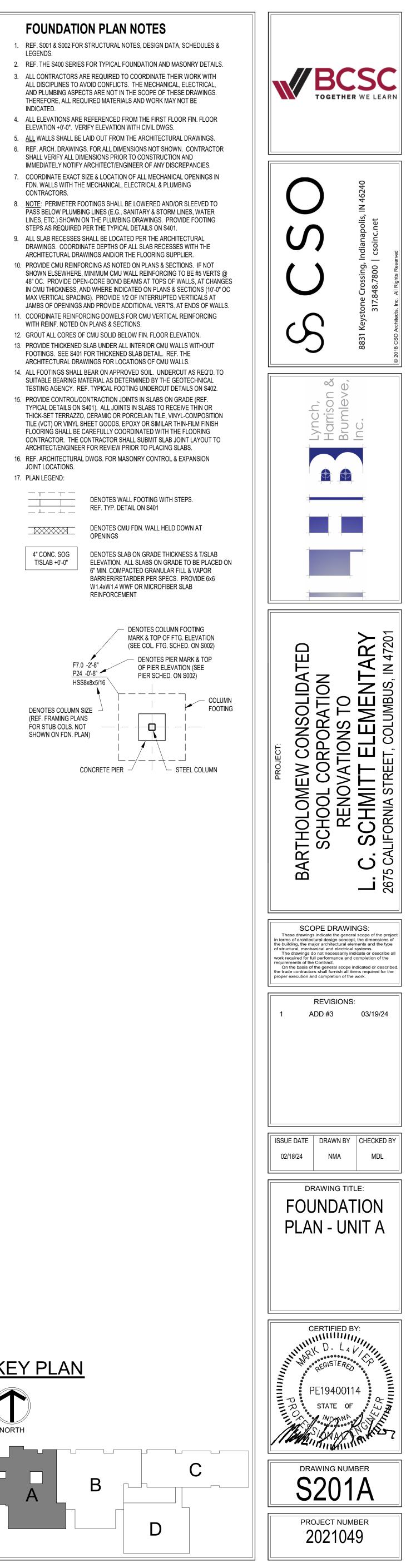


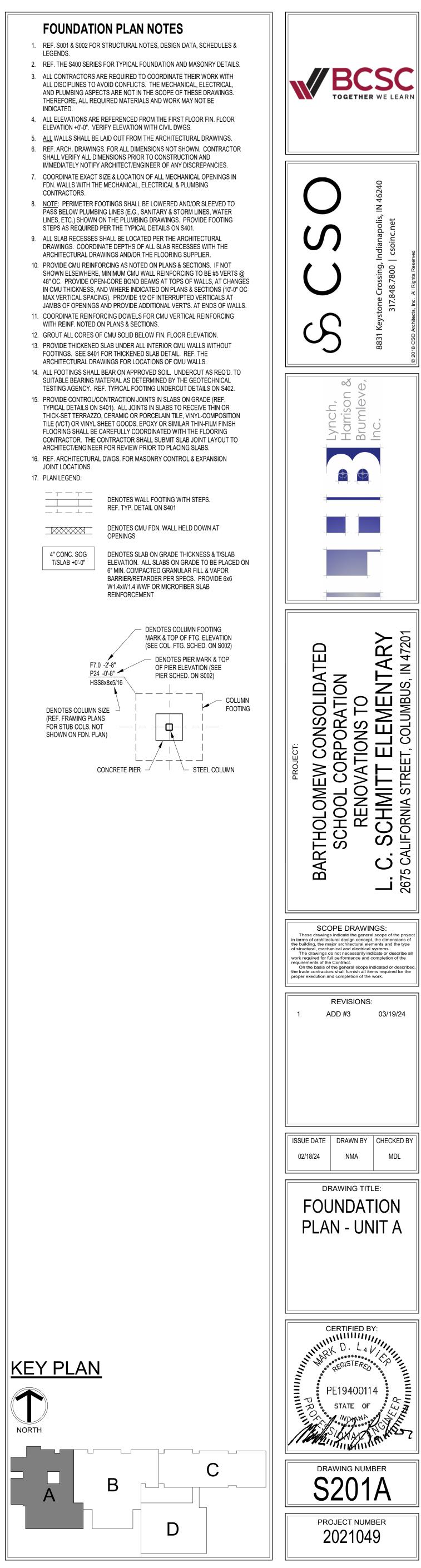


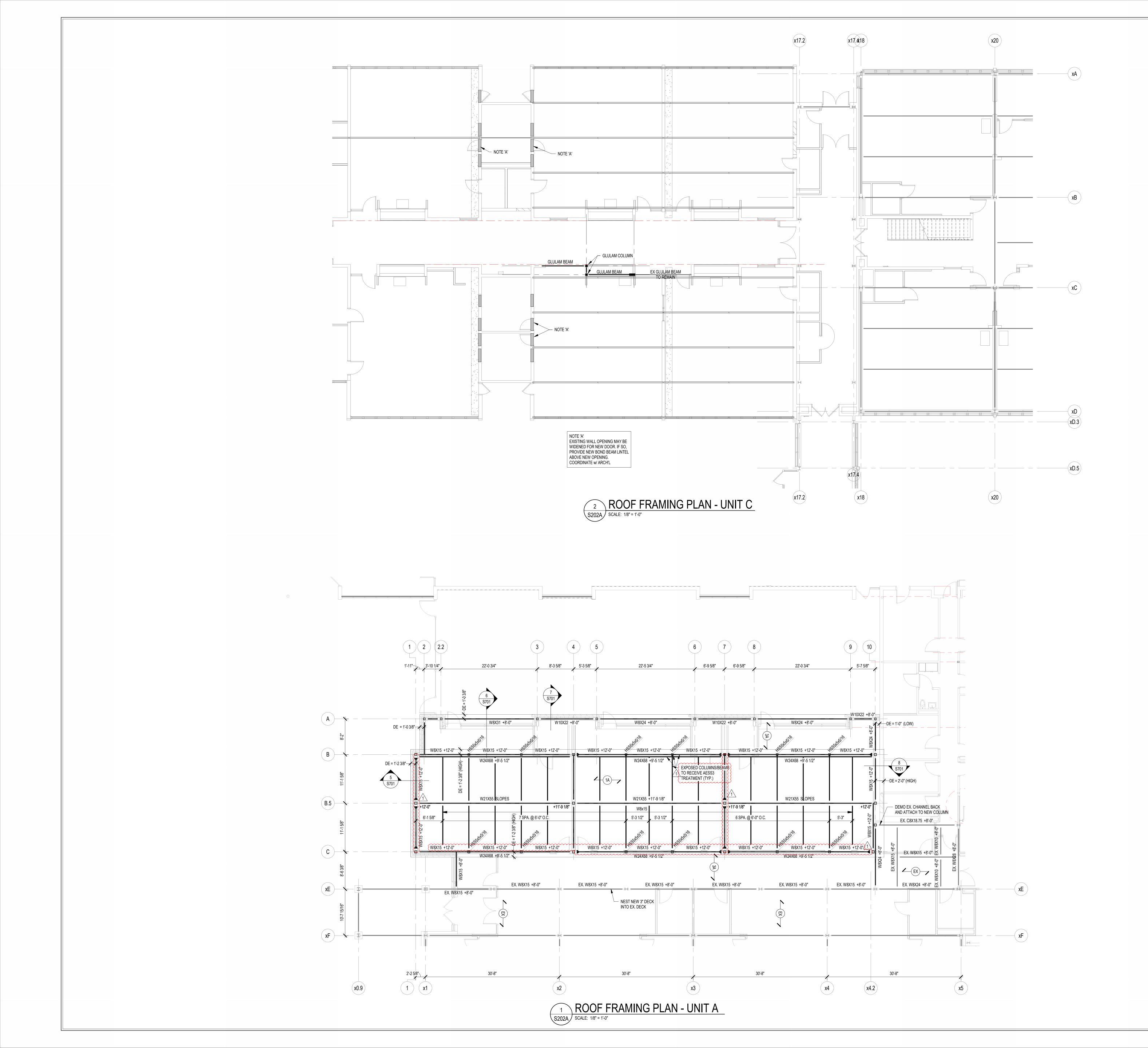




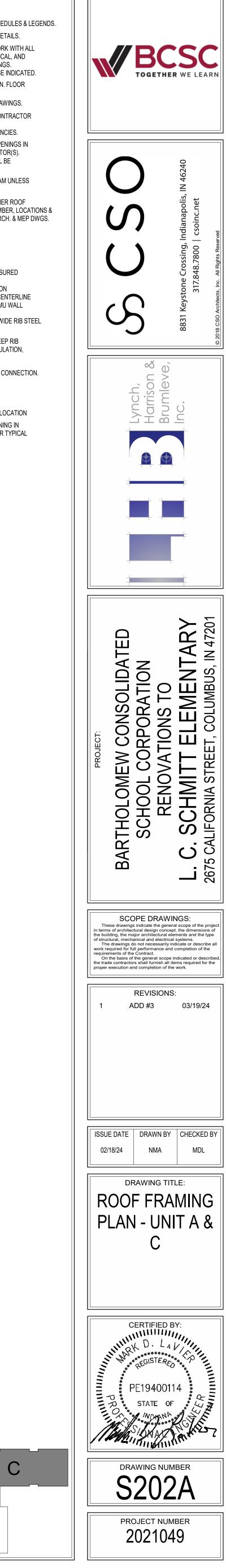


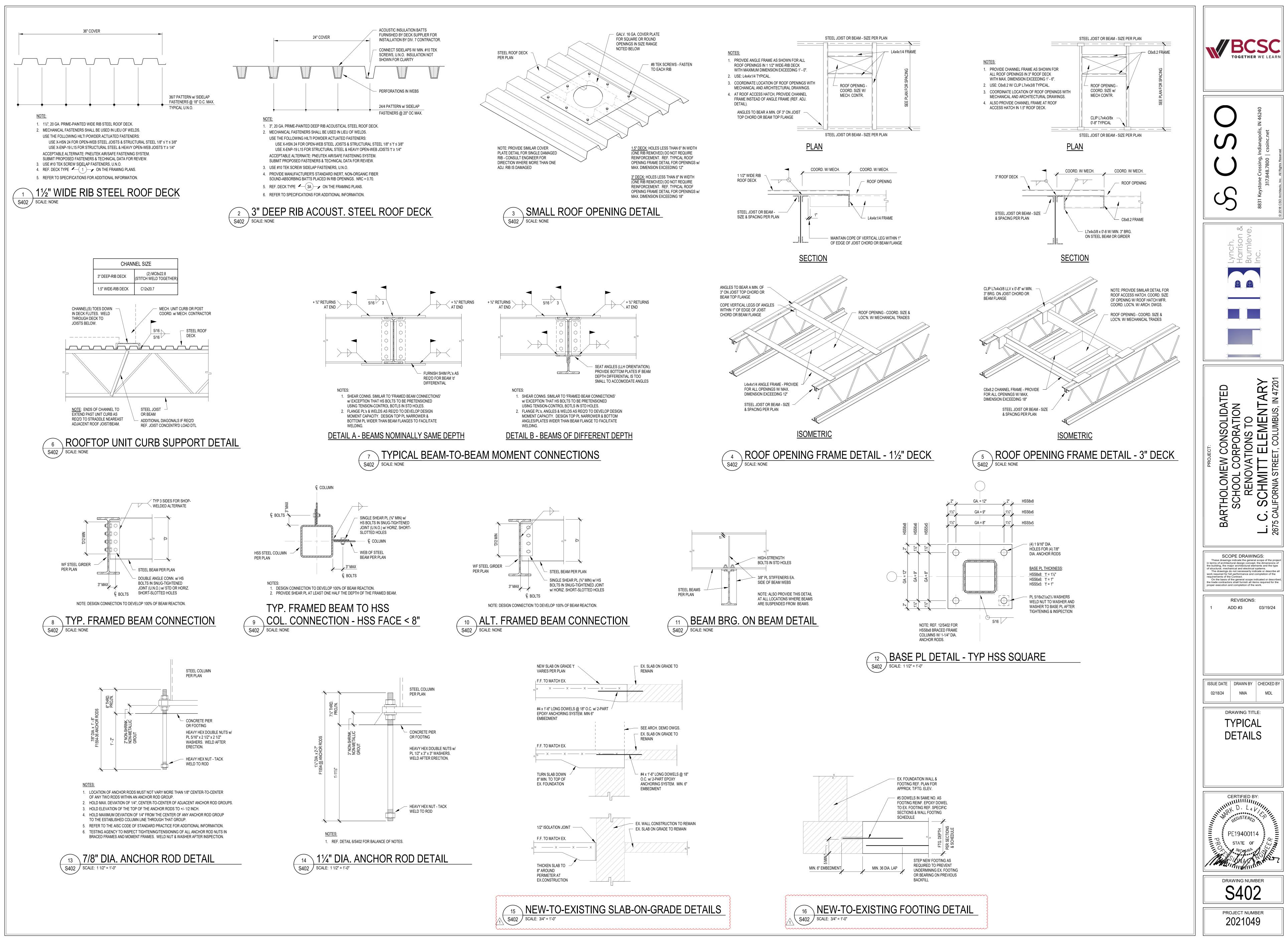


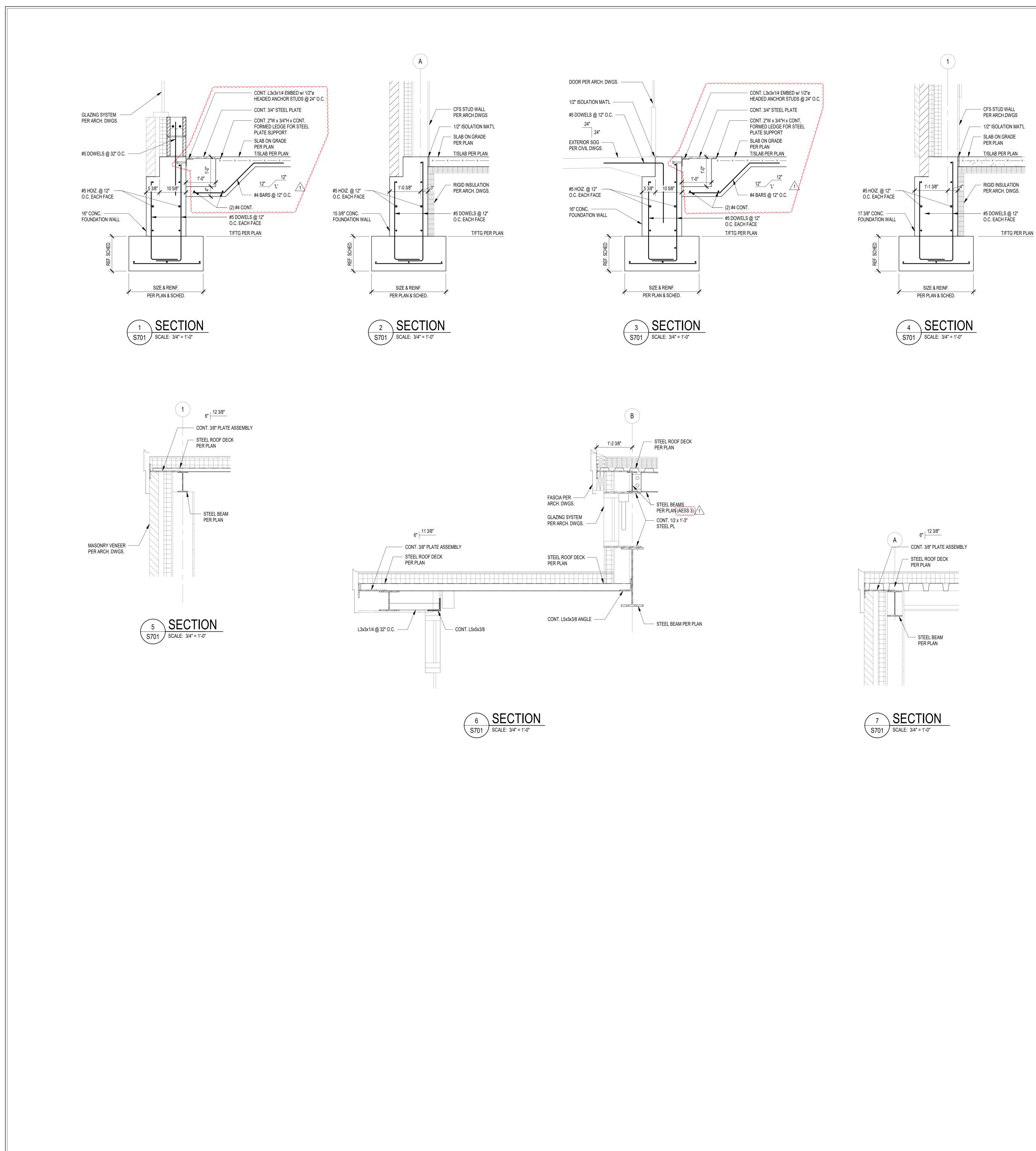




| <ol> <li>REF. THE S400 SERIES I</li> <li>ALL CONTRACTORS AR<br/>DISCIPLINES TO AVOID<br/>PLUMBING ASPECTS AF<br/>THEREFORE, ALL REQU</li> <li>ALL ELEVATIONS ARE R<br/>ELEVATION +0'-0". VERI</li> <li>ALL WALLS SHALL BE L/</li> <li>REF. ARCH. DRAWINGS<br/>SHALL VERIFY ALL DIME<br/>IMMEDIATELY NOTIFY A</li> <li>COORDINATE EXACT SI<br/>FLOOR SLAB, ROOF DEI<br/>LOCATION &amp; SIZE OF AL<br/>VERIFIED PRIOR TO CO</li> <li>ALL ELEVATIONS SHOW<br/>NOTED OTHERWISE.</li> <li>PROVIDE FRAMES AT A<br/>OPENINGS PER TYPICA</li> </ol> | ITRUCTURAL NOTES, DESIGN DATA, SCHEDL<br>FOR TYPICAL FRAMING AND MASONRY DETA<br>E REQUIRED TO COORDINATE THEIR WORK<br>CONFLICTS. THE MECHANICAL, ELECTRICAL<br>RE NOT IN THE SCOPE OF THESE DRAWINGS<br>IRED MATERIALS AND WORK MAY NOT BE IN<br>FIRSENCED FROM THE FIRST FLOOR FIN. FI<br>FY ELEVATION WITH CIVIL DWGS.<br>AND OUT FROM THE ARCHITECTURAL DRAWIN<br>FOR ALL DIMENSIONS NOT SHOWN. CONT<br>SISIONS PRINCE TO CONSTRUCTION AND<br>RCHITECT/ENGINEER OF ANY DISCREPANCI<br>ZE & LOCATION OF ANY MECHANICAL OPENI<br>CX, OR WALLS WITH THE MEP CONTRACTOR<br>CX, OR WALLS WITH THE MEP CONTRACTORS & THE ARCH.<br>DENOTES TOP OF STEEL, SLAB, ETC.<br>DENOTES TOP OF STEEL, SLAB, ETC.<br>DENOTES SLAB EDGE DIMENSION MEASUR<br>FROM BEAM OR COLLINN CENTERLINE<br>DENOTES SLAB EDGE DIMENSION MEASUR<br>FROM BEAM OR COLLINN CENTERLINE<br>DENOTES SLAB EDGE DIMENSION MEASUR<br>FROM BEAM OR COLLINN CENTERLINE<br>DENOTES BEAM BEARING PLATE ON CMU V<br>DENOTES SHAB EARING PLATE ON CMU V<br>DENOTES BEAM TO-COLLINN MOMENT COU<br>REF. DETAIL 6005 DECK WINSULAT<br>NRC=0.70. REF. DETAIL 4/S404.<br>DENOTES BEAM-TO-COLUMN MOMENT COU<br>REF. DETAILS ON S405.<br>DENOTES BEAM-TO-COLUMN MOMENT<br>CONNECTION. REF. DETAILS ON S404 FOR TY<br>OPENING FRAMES. |
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L3x3x1/4 ANGLE ASSEMBLY w/
 5/16" STIFFENER PLATE @ 36" O.C.

— STEEL ROOF DECK PER PLAN

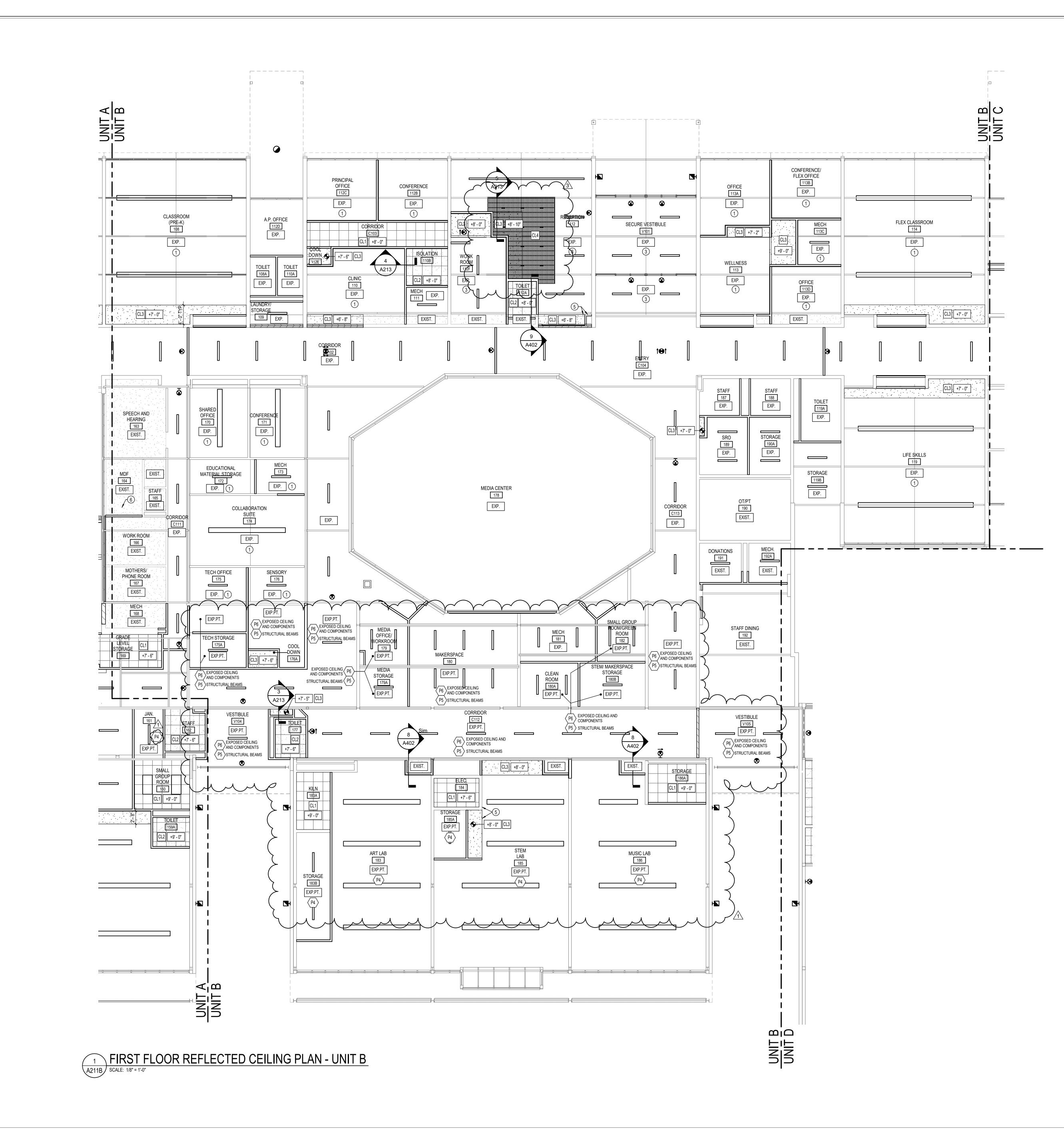
— STEEL BEAM PER PLAN

6" | 12 3/8"

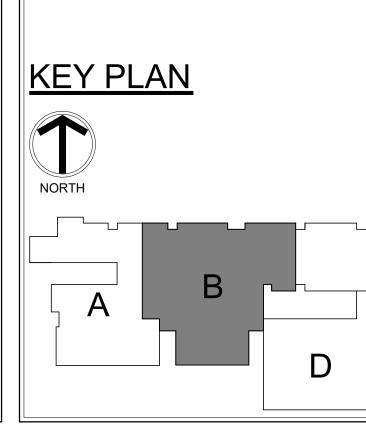
EX. ROOFING & INSULATION -----

CONT. 3/8" PLATE ASSEMBLY -





| RFFI  | LECTED CEILING LEG   |
|---|--|
|   | FLUORESCENT LIGHT FIXTURES, RECESSED OF<br>SURFACED MOUNTED, SEE ELECTRICAL DRAW<br>DOWNLIGHT/HIGH BAY LIGHT FIXTURE; SEE ELE<br>DRAWINGS  |
|   | CEILING MOUNTED PROJECTOR, SEE TECHNOL<br>RETURN/EXHAUST GRILL; SEE MECHANICAL DR  |
|   | SUPPLY AIR GRILL; SEE MECHANICAL DRAWING   |
|   | LINEAR SLOT SUPPLY AIR GRILL; SEE MECHANI  |
|   | SUSPENDED ACOUSTICAL LAY-IN CEILING<br>MFG: ARMSTRONG MODEL #1713<br>STYLE: SCHOOL ZONE HIGH CAC, HIGH NRC<br>DESCRIPTION: SQUARE EDGE<br>COLOR: WHITE SIZE: 24" x 24" x 3/4"<br>LOCATION: CLASSROOMS, CORRIDORS, OFFICI   |
|   | SUSPENDED ACOUSTICAL LAY-IN CEILING<br>MFG: ARMSTRONG MODEL #1935<br>STYLE: ULTIMA HEALTH ZONE<br>DESCRIPTION: SQUARE EDGE<br>COLOR: WHITE SIZE: 2' x 2' x 3/4"<br>LOCATION: RESTROOMS/KITCHENS  |
|   | CL3 GYPSUM WALLBOARD BULKHEAD<br>PAINT: NOTED ON PLAN; REFER TO FINISH LEG   |
|   | SUSPENDED WOOD CEILING<br>MFG: ARMSTRONG WOODWORKS GRILLE FOR<br>DESCRIPTION: 75% OPEN AREA, PROVIDE 6" PE<br>COLOR: PLAIN SLICE WHITE OAK (NOK)<br>SIZE: 4" SLAT HEIGHT<br>LOCATION: RECEPTION  |
|   | EXPOSED STRUCTURE<br>NO PAINTING EXCEPT AS REQUIRED FOR M<br>(TYPICALLY FOR CODING OF SYSTEMS)<br>DO NOT PAINT EXPOSED WOOD DECK OR S  |
|   | EXPOSED STRUCTURE<br>DO NOT PAINT EXPOSED WOOD DECK OR<br>PAINT: SEE A800 SERIES FINISH PLAN NOTE  |
|   | EXISTING GYPSUM BOARD BULKHEAD OR (<br>EXIST.<br>PATCH AND REPAIR AS REQUIRED BY NEW<br>APPLICABLE.  |
|   | EXIST. SUSPENDED ACOUSTICAL LAY-IN CEILING TILE AND GRID TO REMAIN.  |
| +0' - 0"  | CEILING ELEVATION MARK ABOVE FINISHED FL<br>LOCATION IF MULTIPLE FLOOR LEVELS ARE PR   |
| <<br>XX>  | CEILING PAINT; REFER TO FINISH LEGEND ON A   |
|   |  |
| <u>REFL</u>   | ECTED CEILING PLAN   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL   |
| 2 ARMSTI  | RONG INVISACOUSTICS CEILING PANELS ON METAL FURI   |
| 3 STAIN E   | EXISTING WOOD DECK TO MATCH EXISTING.  |
| 4 INSTAL  | L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOU   |
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| TO FLO  | OR DECK INTERFACES IN THIS ROOM.   |
| 5 ALIGN F   | FINISH FACES.  |
| 1 PATCH,<br>2 ARMSTI<br>3 STAIN E<br>4 INSTALI<br>TO FLO<br>5 ALIGN F | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL<br>RONG INVISACOUSTICS CEILING PANELS ON METAL FURI<br>EXISTING WOOD DECK TO MATCH EXISTING.<br>L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC<br>OR DECK INTERFACES IN THIS ROOM.<br>FINISH FACES.<br>AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE |
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| 3 STAIN E   | EXISTING WOOD DECK TO MATCH EXISTING.  |
| 4 INSTALI   | L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC   |
| TO FLO  | OR DECK INTERFACES IN THIS ROOM.   |
| 5 ALIGN F   | FINISH FACES.  |
| 6 PATCH   | AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL   |
| 2 ARMST   | RONG INVISACOUSTICS CEILING PANELS ON METAL FURI   |
| 3 STAIN E   | EXISTING WOOD DECK TO MATCH EXISTING.  |
| 4 INSTALI   | L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC   |
| TO FLO  | OR DECK INTERFACES IN THIS ROOM.   |
| 5 ALIGN F   | FINISH FACES.  |
| 6 PATCH   | AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL   |
| 2 ARMSTI  | RONG INVISACOUSTICS CEILING PANELS ON METAL FURI   |
| 3 STAIN E   | EXISTING WOOD DECK TO MATCH EXISTING.  |
| 4 INSTALI   | L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC   |
| TO FLO  | OR DECK INTERFACES IN THIS ROOM.   |
| 5 ALIGN F   | FINISH FACES.  |
| 6 PATCH   | AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE   |
| 1 PATCH,  | REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL   |
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| 3 STAIN E   | EXISTING WOOD DECK TO MATCH EXISTING.  |
| 4 INSTALI   | L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC   |
| TO FLO  | OR DECK INTERFACES IN THIS ROOM.   |
| 5 ALIGN F   | FINISH FACES.  |
| 6 PATCH   | AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE   |



# <u>GEND</u>

OR AWINGS ELECTRICAL IOLOGY DRAWINGS DRAWINGS INGS ANICAL DRAWINGS

CES, ETC.

GEND ON A800.

ORTE PERIMETER TRIM

R MEP

R STRUCTURE DTES. R CEILING TO REMAIN. EW WORK WHERE

FLOOR (AT THAT PRESENT)

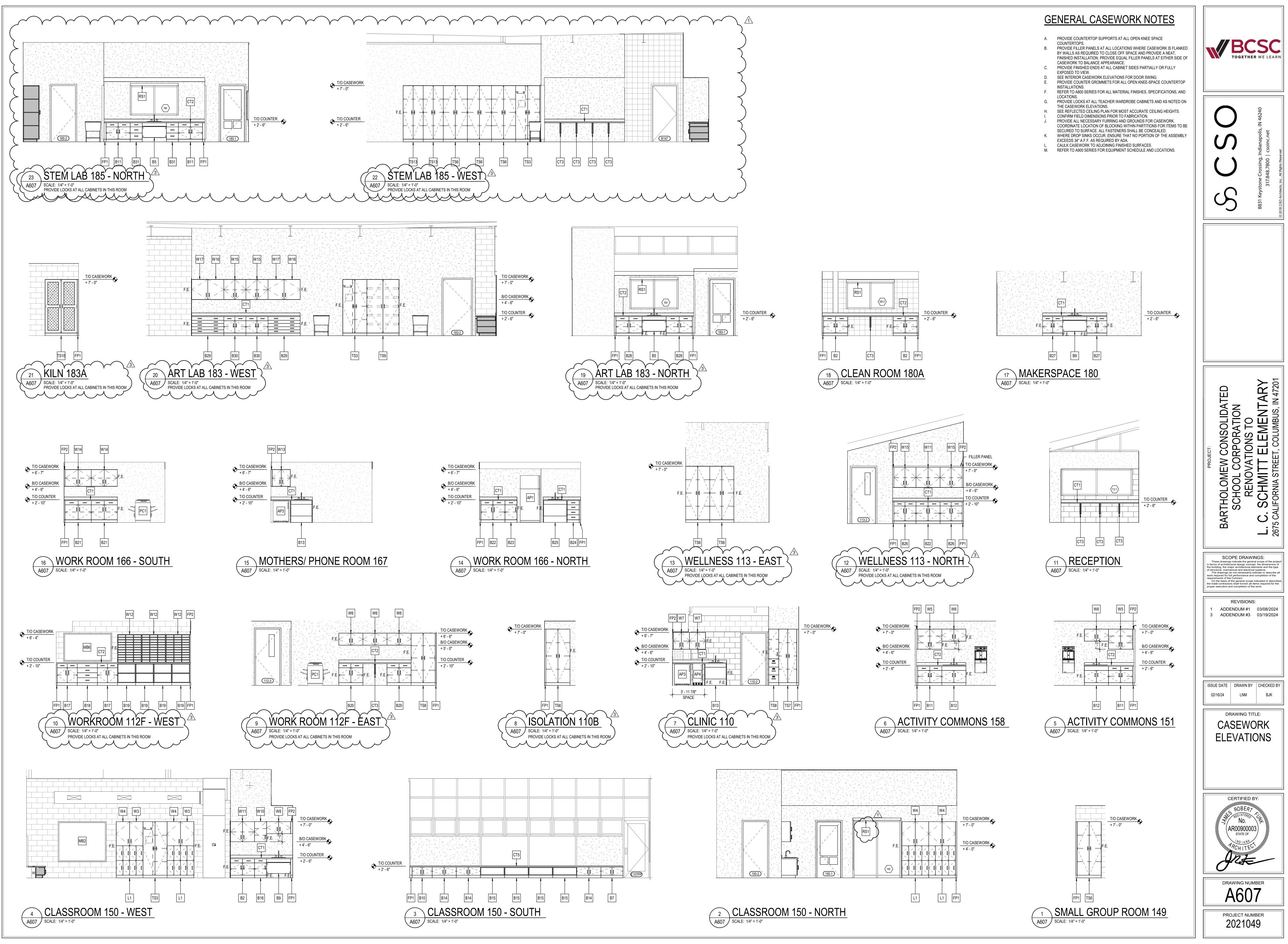
I A800.

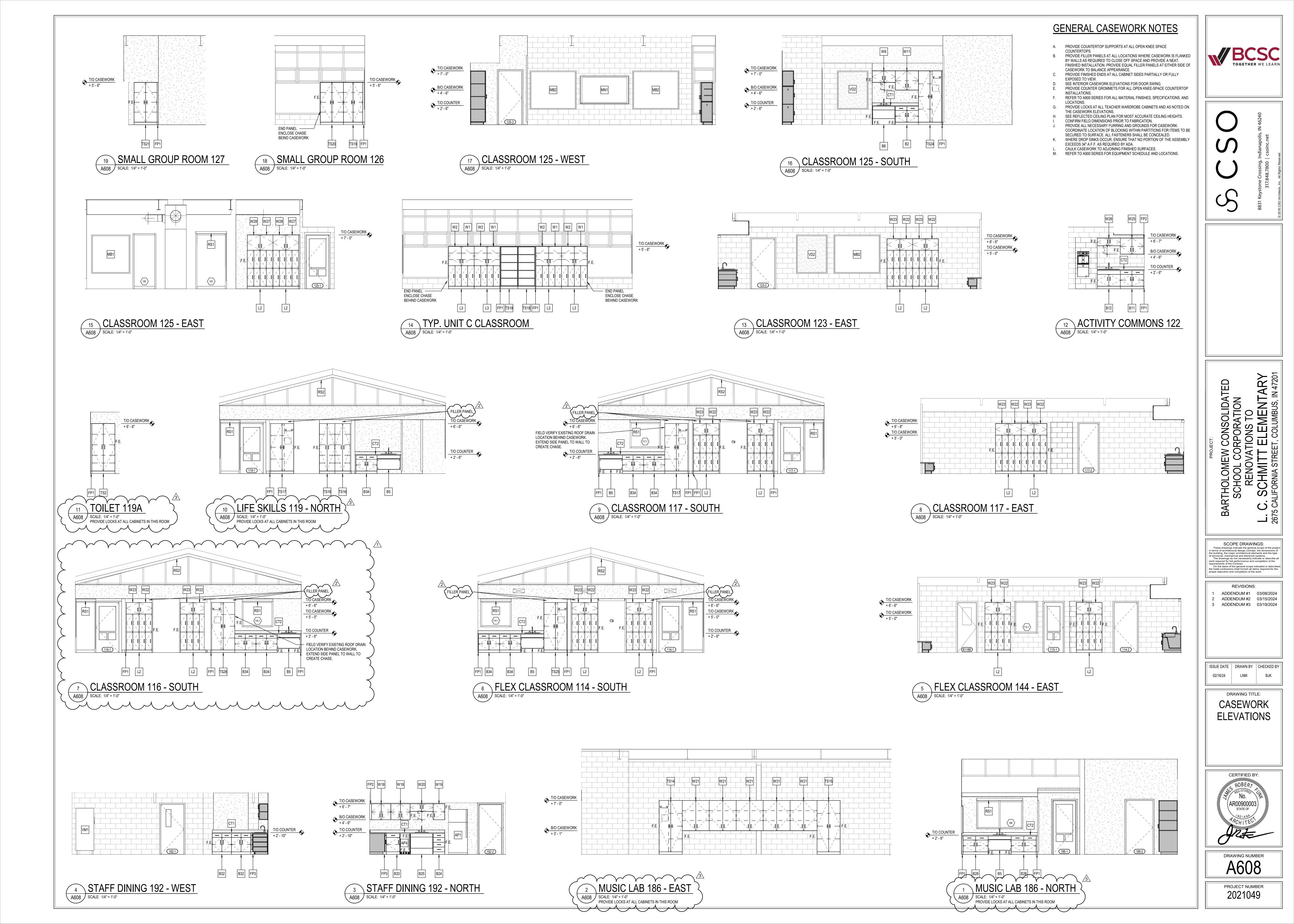
N NOTES

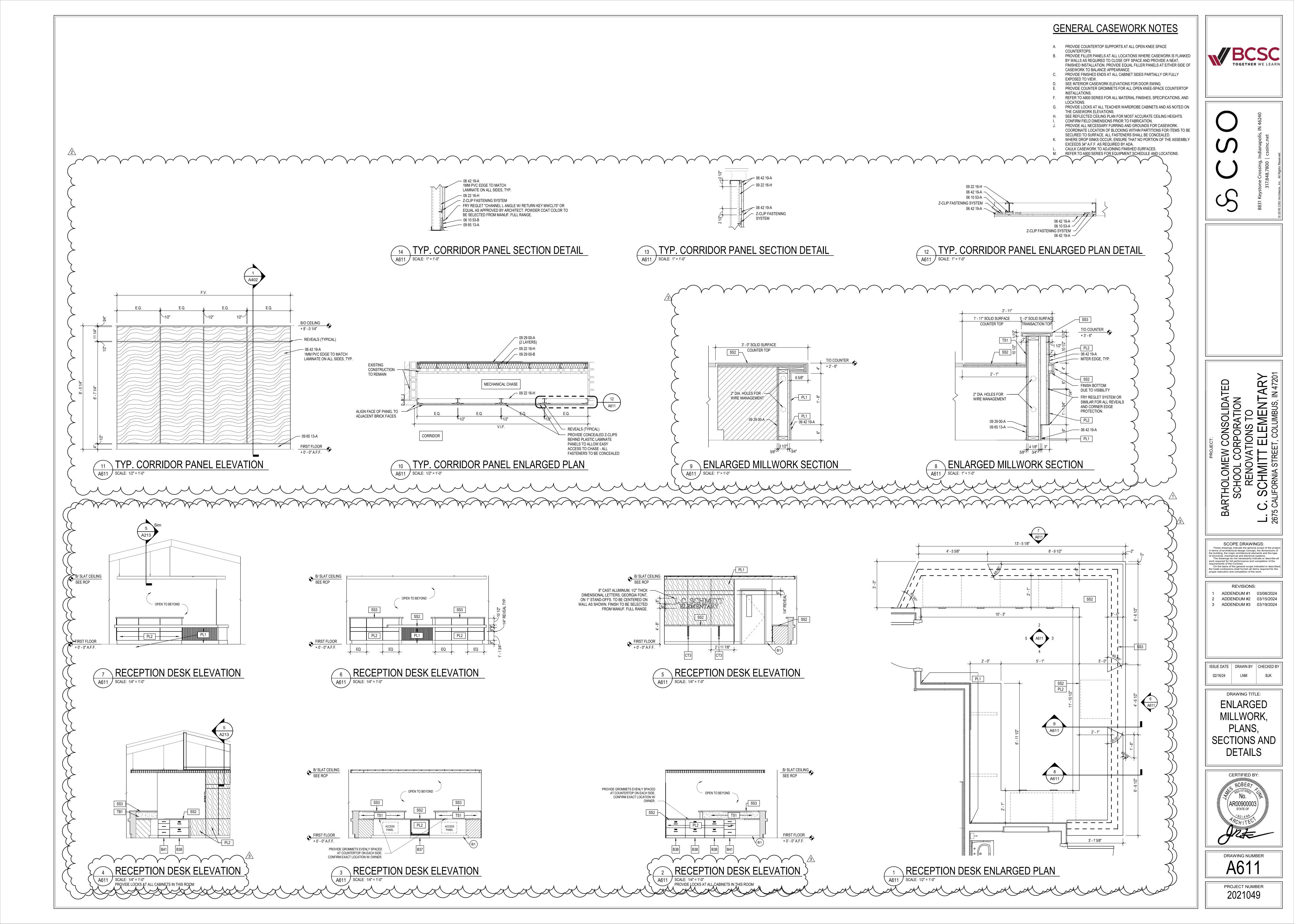
OUSTICAL TILE. JRRING. FACES, AS WELL AS BEAM

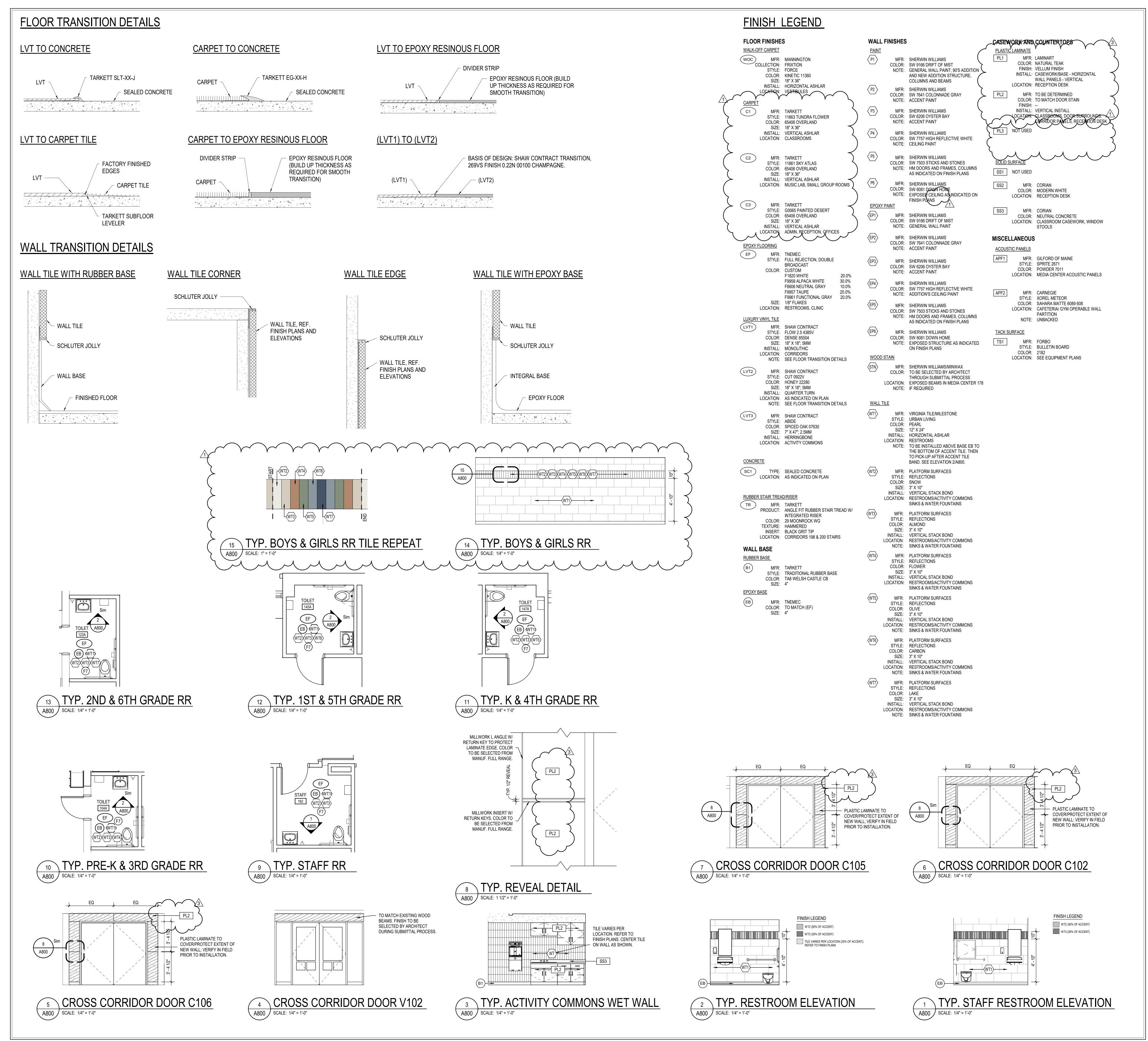
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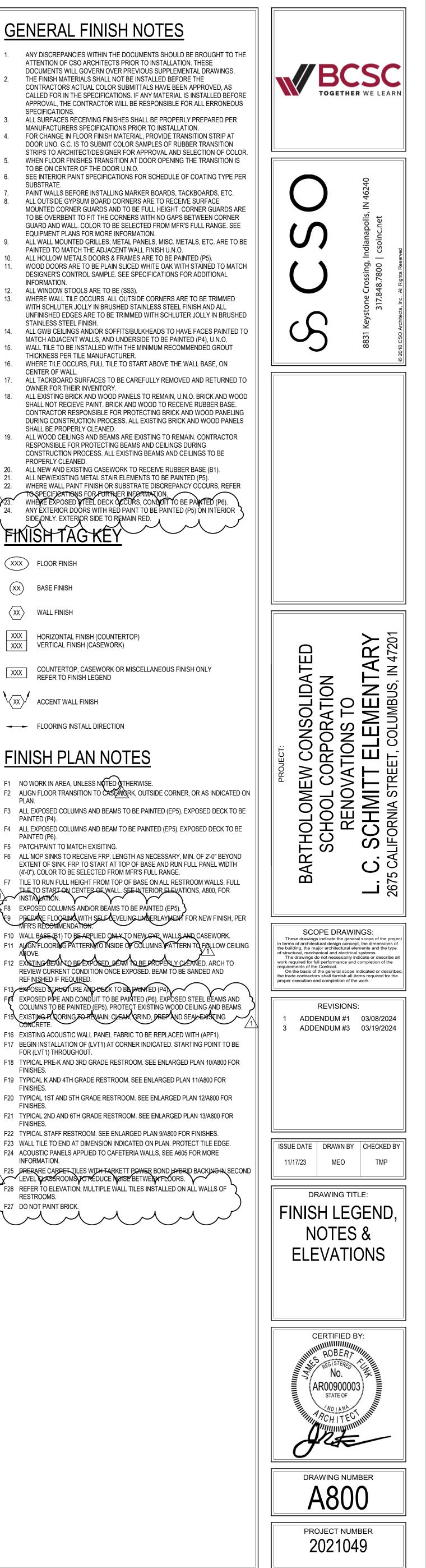


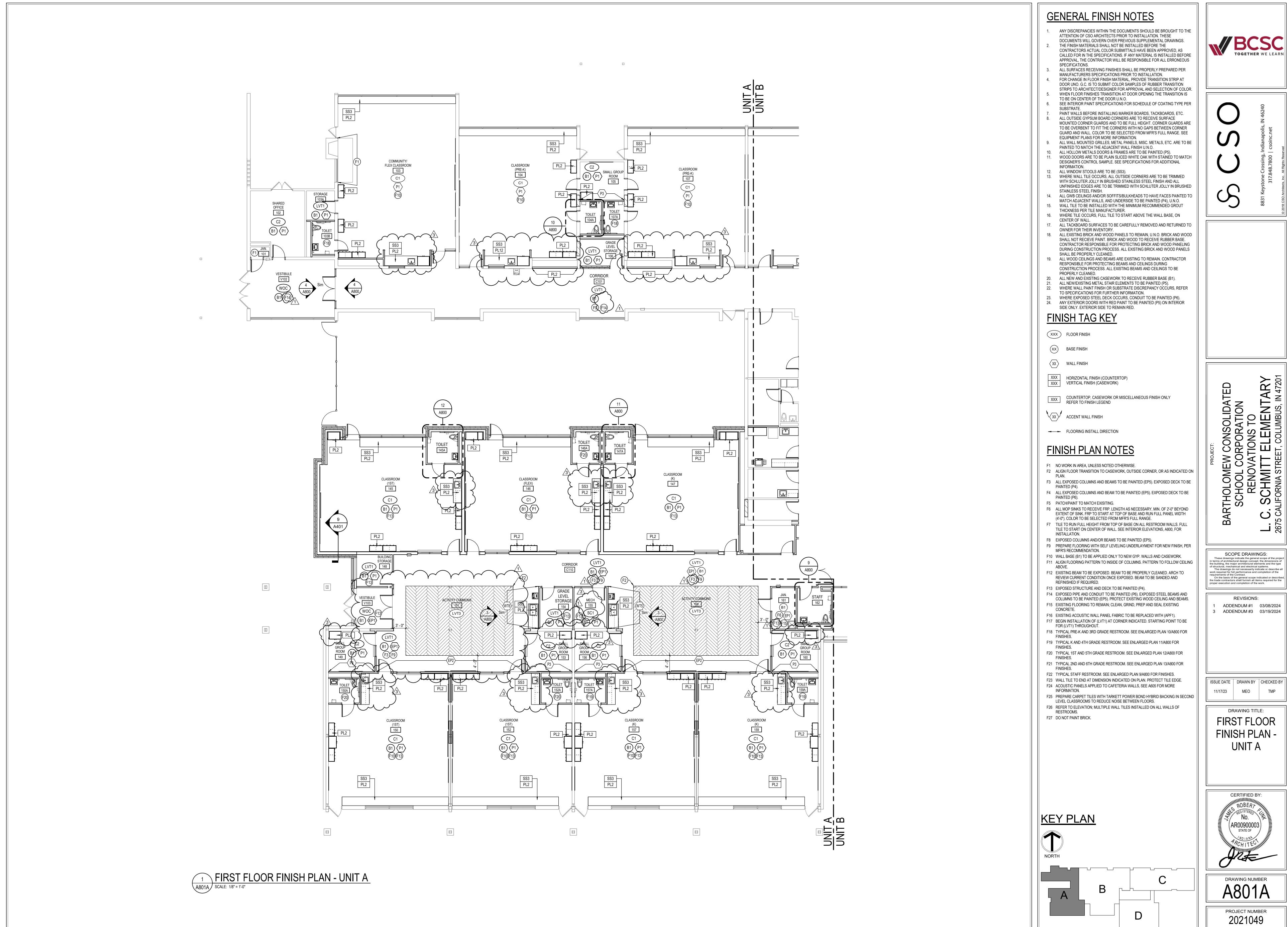


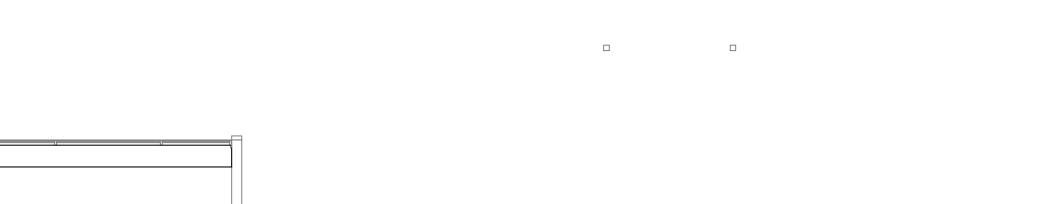


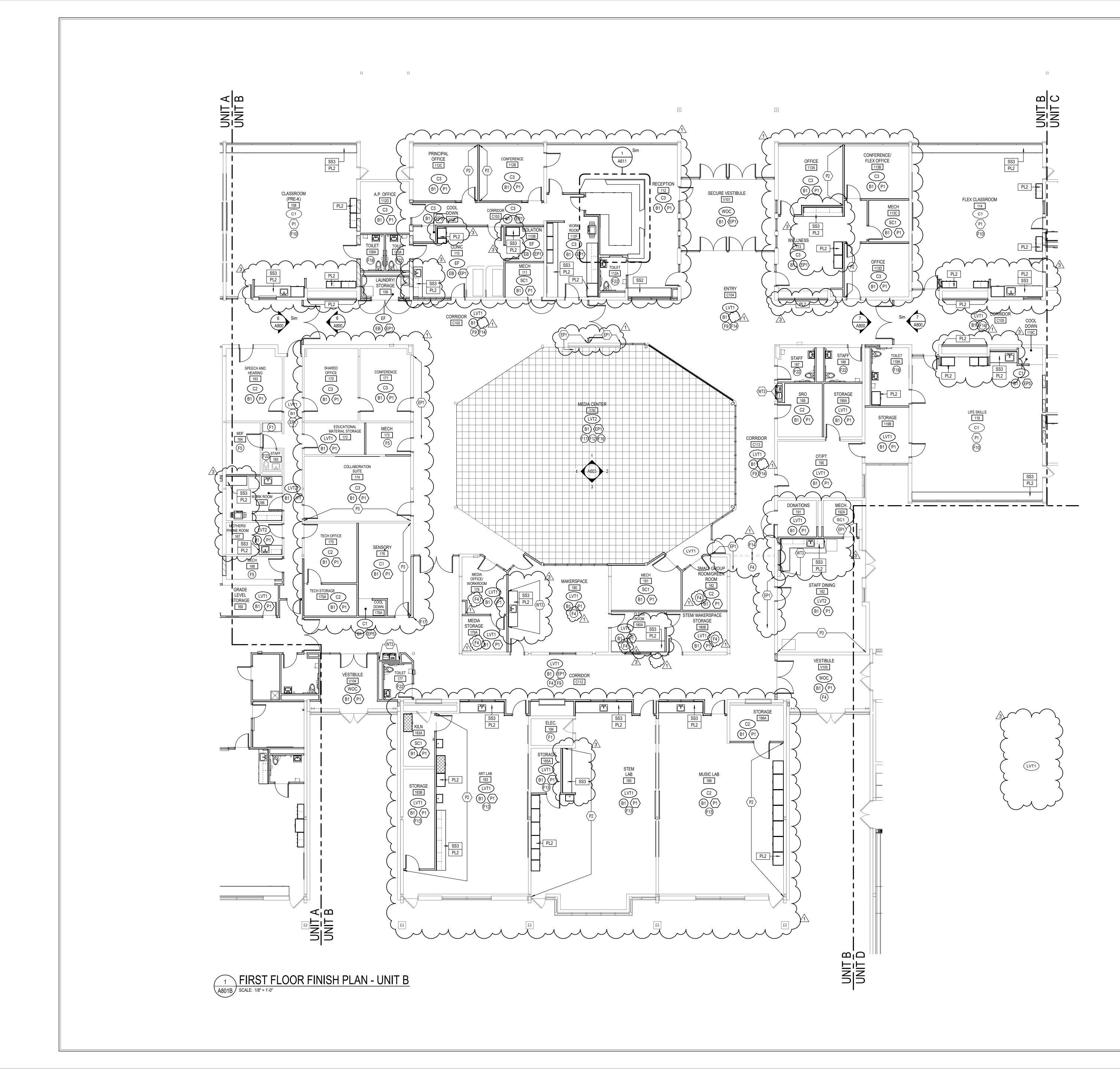


### ANY DISCREPANCIES WITHIN THE DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF CSO ARCHITECTS PRIOR TO INSTALLATION. THESE DOCUMENTS WILL GOVERN OVER PREVIOUS SUPPLEMENTAL DRAWINGS. THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFORE THE CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEEN APPROVED. AS CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS INSTALLED BEFORE APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ERRONEOUS SPECIFICATIONS. ALL SURFACES RECEIVING FINISHES SHALL BE PROPERLY PREPARED PER MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLATION. FOR CHANGE IN FLOOR FINISH MATERIAL, PROVIDE TRANSITION STRIP AT DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUBBER TRANSITION STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND SELECTION OF COLOR WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING THE TRANSITION IS TO BE ON CENTER OF THE DOOR U.N.O. SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE OF COATING TYPE PER SUBSTRATE. PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TACKBOARDS, ETC. ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIVE SURFACE MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. CORNER GUARDS ARE TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS BETWEEN CORNER GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'S FULL RANGE. SEE EQUIPMENT PLANS FOR MORE INFORMATION. ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. METALS, ETC. ARE TO BE PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O. 10. ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAINTED (P5). WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITH STAINED TO MATCH DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 12. ALL WINDOW STOOLS ARE TO BE (SS3). 13. WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH AND ALL UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH. 14. ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAVE FACES PAINTED TO MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINTED (P4), U.N.O. 15. WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOMMENDED GROUT THICKNESS PER TILE MANUFACTURER. 16. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE WALL BASE, ON CENTER OF WALL. 17. ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVED AND RETURNED TO OWNER FOR THEIR INVENTORY. 18. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N.O. BRICK AND WOOD SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEIVE RUBBER BASE. CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AND WOOD PANELING DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK AND WOOD PANELS SHALL BE PROPERLY CLEANED. 19. ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REMAIN. CONTRACTOR RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS DURING CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEILINGS TO BE PROPERLY CLEANED. 20. ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBER BASE (B1). ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINTED (P5). WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANCY OCCURS, REFER SPECIFICATIONS FOR FURTHER INFORMATION WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE PAINTED (P6). C 24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY EXTERIOR SIDE TO REMAIN REL (XXX) FLOOR FINISH xx BASE FINISH $\langle XX \rangle$ WALL FINISH XXX HORIZONTAL FINISH (COUNTERTOP) VERTICAL FINISH (CASEWORK) XXX COUNTERTOP, CASEWORK OR MISCELLANEOUS FINISH ONLY REFER TO FINISH LEGEND ACCENT WALL FINISH ----- FLOORING INSTALL DIRECTION **FINISH PLAN NOTES** F1 NO WORK IN AREA, UNLESS NOTED THERWISE. F2 ALIGN FLOOR TRANSITION TO CASE WORK, OUTSIDE CORNER, OR AS INDICATED ON F3 ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P4). F4 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P6). F5 PATCH/PAINT TO MATCH EXISITING. F6 ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, MIN. OF 2'-0" BEYOND EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN FULL PANEL WIDTH (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. F7 TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTROOM WALLS. FULL THE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATIONS, A800, FOR F8 EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELE VELING LINDERLAYMENT FOR NEW FINISH, PER MFR'S RECOMMENDATION. F10 WALL BASE (B1) TO BE ARPLIED ONLY TO NEW GYR WALLS AND CASEWORK. F11 ALGN FLOORING PATTERNY OINSIDE OF COLUMNS, PATTERN TO FOLLOW CEILING F12 EXISTING BEANTO BE EXPOSED, BEAM TO BE PROPERLY CLEANED. ARCH TO REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE SANDED AND REFINISHED IF REQUIRED -13 EXPOSED STRUGTURE AND DECK TO BE PAINTED (P4), EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED STEEL BEAMS AND COLUMNS TO BE PAINTED (EP5), PROTECT EXISTING WOOD CEILING AND BEAMS. F15 EXISTING FLOORING TO REMAIN; CLEAR, GRIND, PREPAND SEAVEXISTING F16 EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED WITH (APF1) F17 BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STARTING POINT TO BE FOR (LVT1) THROUGHOUT F18 TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PLAN 10/A800 FOR FINISHES. F19 TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLAN 11/A800 FOR FINISHES F20 TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLAN 12/A800 FOR FINISHES. F21 TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PLAN 13/A800 FOR FINISHES. F22 TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 FOR FINISHES F23 WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PROTECT TILE EDGE. F24 ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 FOR MORE INFORMATION. F25 PREPARE CARPET TILES WITH TARKETT POWER BOND HYBRID BACKING IN SECOND F26 REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON ALL WALLS OF RESTROOMS DO NOT PAINT BRICK

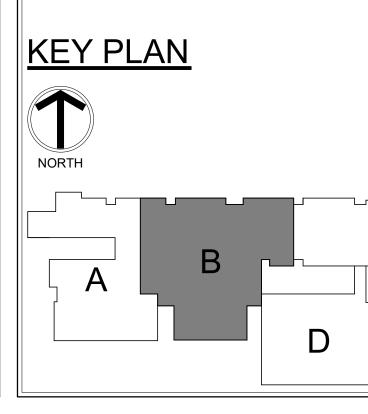


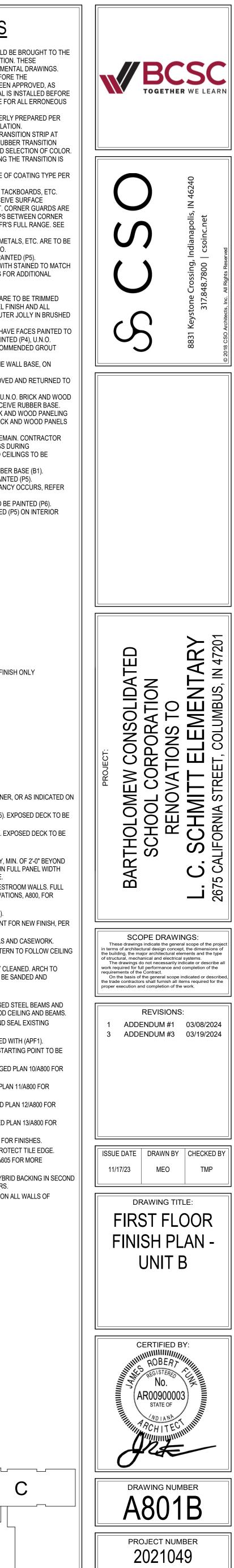


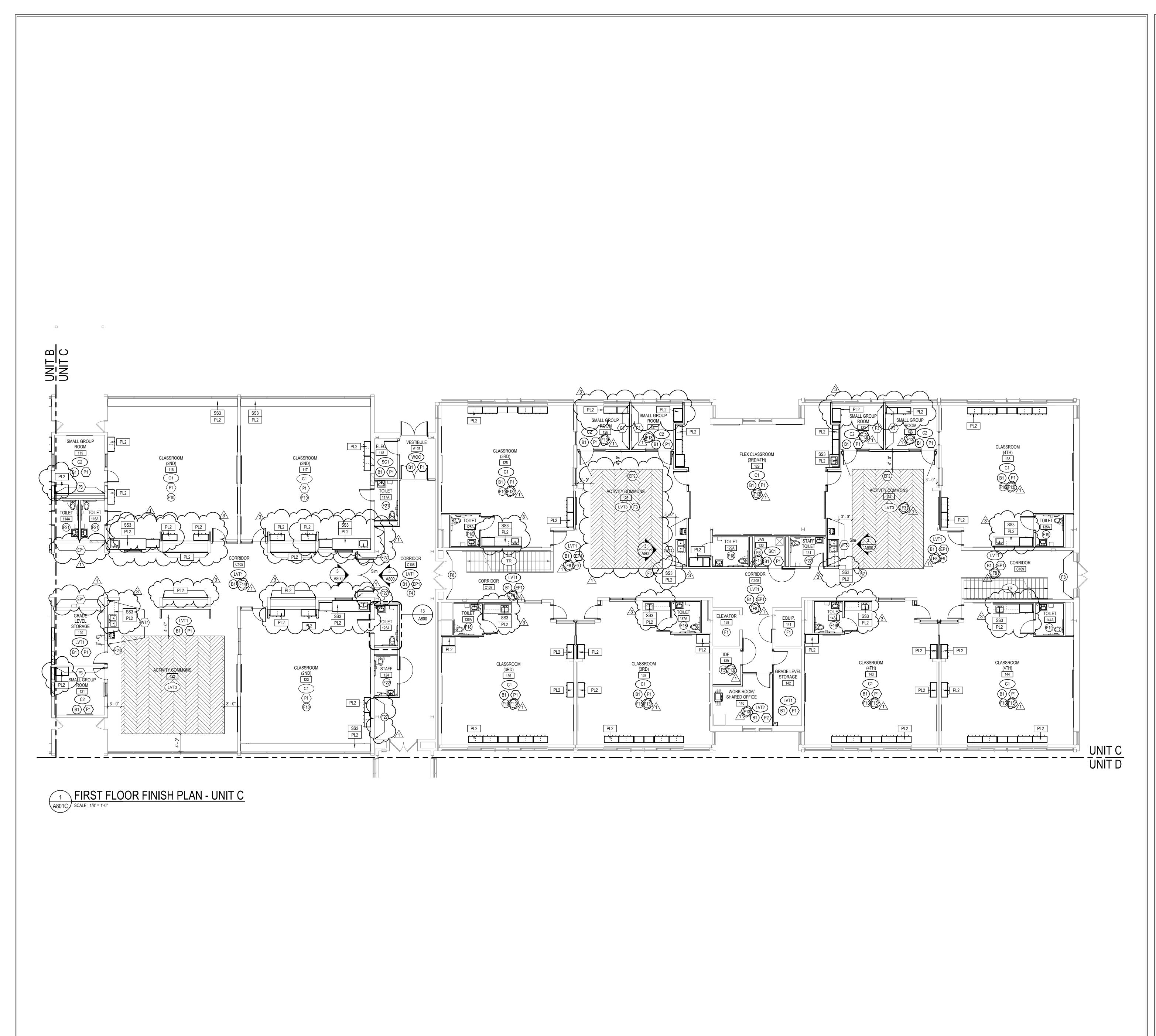




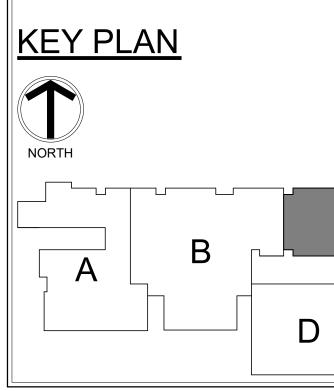
| G   | ENERAL FINISH NOTES   |
|---|---|
| 1.  | ANY DISCREPANCIES WITHIN THE DOCUMENTS SHOULD<br>ATTENTION OF CSO ARCHITECTS PRIOR TO INSTALLATI<br>DOCUMENTS WILL GOVERN OVER PREVIOUS SUPPLEM   |
| 2.  | THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFC<br>CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEE<br>CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL   |
| -   | APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE F<br>SPECIFICATIONS.<br>ALL SURFACES RECEIVING FINISHES SHALL BE PROPER  |
|   | MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLA<br>FOR CHANGE IN FLOOR FINISH MATERIAL, PROVIDE TRA<br>DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RU   |
|   | STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND<br>WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING<br>TO BE ON CENTER OF THE DOOR U.N.O.   |
|   | SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE (<br>SUBSTRATE.<br>PAINT WALLS BEFORE INSTALLING MARKER BOARDS, T.   |
|   | ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECE<br>MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT.<br>TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS<br>GUARD AND WALL. COLOR TO BE SELECTED FROM MFF   |
|   | EQUIPMENT PLANS FOR MORE INFORMATION.<br>ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. MI<br>PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O  |
| 0.<br> 1.   | ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PA<br>WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WI<br>DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS F  |
| 12.<br>13.  | INFORMATION.<br>ALL WINDOW STOOLS ARE TO BE (SS3).<br>WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS AF  |
|   | WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL<br>UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUT<br>STAINLESS STEEL FINISH.   |
| 14.<br>15.  | ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HA<br>MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAIN<br>WALL TILE TO BE INSTALLED WITH THE MINIMUM RECO  |
| 6.  | THICKNESS PER TILE MANUFACTURER.<br>WHERE TILE OCCURS, FULL TILE TO START ABOVE THE<br>CENTER OF WALL.  |
| 7.<br>8.  | ALL TACKBOARD SURFACES TO BE CAREFULLY REMOV<br>OWNER FOR THEIR INVENTORY.<br>ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.  |
|   | SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECE<br>CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK<br>DURING CONSTRUCTION PROCESS. ALL EXISTING BRIC  |
| 9.  | SHALL BE PROPERLY CLEANED.<br>ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REA<br>RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS  |
| 20.   | CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEIEINGS<br>PROPERLY CLEANED.<br>ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBB   |
| 20.<br>21.<br>22.   | ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAIN<br>WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPAN  |
| 23.<br>24.  | TO SPECIFICATIONS FOR FURTHER INFORMATION.<br>WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO B<br>ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED  |
| FI  | SIDE ONLY. EXTERIOR SIDE TO REMAIN RED.   |
| XX  | FLOOR FINISH  |
| $(\mathbf{x})$  | X) BASE FINISH  |
| $\langle x$   | X WALL FINISH   |
| XX<br>XX  |   |
| XX  | COUNTERTOP, CASEWORK OR MISCELLANEOUS FI  |
| \∕x   | ACCENT WALL FINISH  |
| _   | FLOORING INSTALL DIRECTION  |
| FI  | NISH PLAN NOTES   |
| F1<br>F2  | NO WORK IN AREA, UNLESS NOTED OTHERWISE.<br>ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORN  |
| -2<br>-3  | PLAN.<br>ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5)  |
| F4  | PAINTED (P4).   |
| F5<br>F6  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5).   |
|   | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). B<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,   |
| F7  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES   |
| F7<br>F8  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.   |
| F8<br>F9  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT<br>MFR'S RECOMMENDATION.   |
| F8<br>F9<br>F10   | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN'<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS  |
| F8<br>F9<br>F10<br>F11  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br>ABOVE.<br>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE  |
| F8<br>F9<br>F10<br>F11<br>F12<br>F13  | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN'<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br>ABOVE.<br>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B<br>REFINISHED IF REQUIRED.<br>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).<br>EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE  |
| F8<br>F9<br>F10<br>F11<br>F12<br>F13<br>F14   | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br>ABOVE.<br>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B<br>REFINISHED IF REQUIRED.<br>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).<br>EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE<br>COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD<br>EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND  |
| F8<br>F9<br>F10<br>F11<br>F12<br>F13<br>F14<br>F15<br>F16   | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN'<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br>ABOVE.<br>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B<br>REFINISHED IF REQUIRED.<br>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).<br>EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE<br>COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD<br>EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND<br>CONCRETE.<br>EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED<br>BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST  |
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| =8<br>=9<br>=10<br>=11<br>=12<br>=13<br>=14<br>=15<br>=16<br>=17<br>=18<br>=19<br>=20<br>=21<br>=22                             | ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). F<br>PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.<br>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br>(4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.<br>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br>INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).<br>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN'<br>MFR'S RECOMMENDATION.<br>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br>ABOVE.<br>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B<br>REFINISHED IF REQUIRED.<br>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).<br>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).<br>EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE<br>COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD<br>EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND<br>CONCRETE.<br>EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED<br>BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST<br>FOR (LVT1) THROUGHOUT.<br>TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PL<br>FINISHES.<br>TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL<br>FINISHES.<br>TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL<br>FINISHES.<br>TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PL<br>FINISHES.<br>TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F   |
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| F8<br>F9<br>F10<br>F11<br>F12<br>F13<br>F14<br>F15<br>F16<br>F17<br>F18<br>F19<br>F20<br>F21<br>F22<br>F23<br>F24<br>F25<br>F26 | <ul> <li>ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). E<br/>PAINTED (P6).</li> <li>PATCH/PAINT TO MATCH EXISITING.</li> <li>ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,<br/>EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN<br/>(4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.</li> <li>TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES<br/>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA<br/>INSTALLATION.</li> <li>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).</li> <li>PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN'<br/>MFR'S RECOMMENDATION.</li> <li>WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS<br/>ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE<br/>ABOVE.</li> <li>EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY OR<br/>REFINISHED IF REQUIRED.</li> <li>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).</li> <li>EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4).</li> <li>EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE<br/>COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD<br/>EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND<br/>CONCRETE.</li> <li>EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED<br/>BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST.<br/>FOR (LVT1) THROUGHOUT.</li> <li>TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PL<br/>FINISHES.</li> <li>TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL<br/>FINISHES.</li> <li>TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL<br/>FINISHES.</li> <li>TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PL<br/>FINISHES.</li> <li>TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F<br/>WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PRO</li> <li>ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A6</li> </ul> |

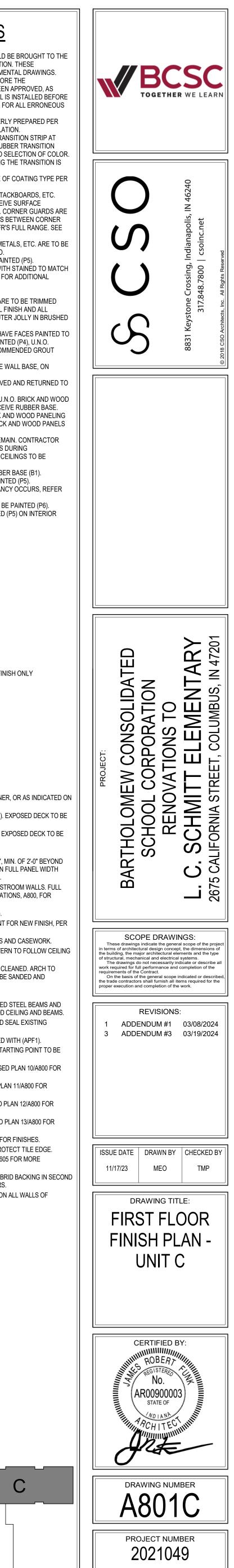


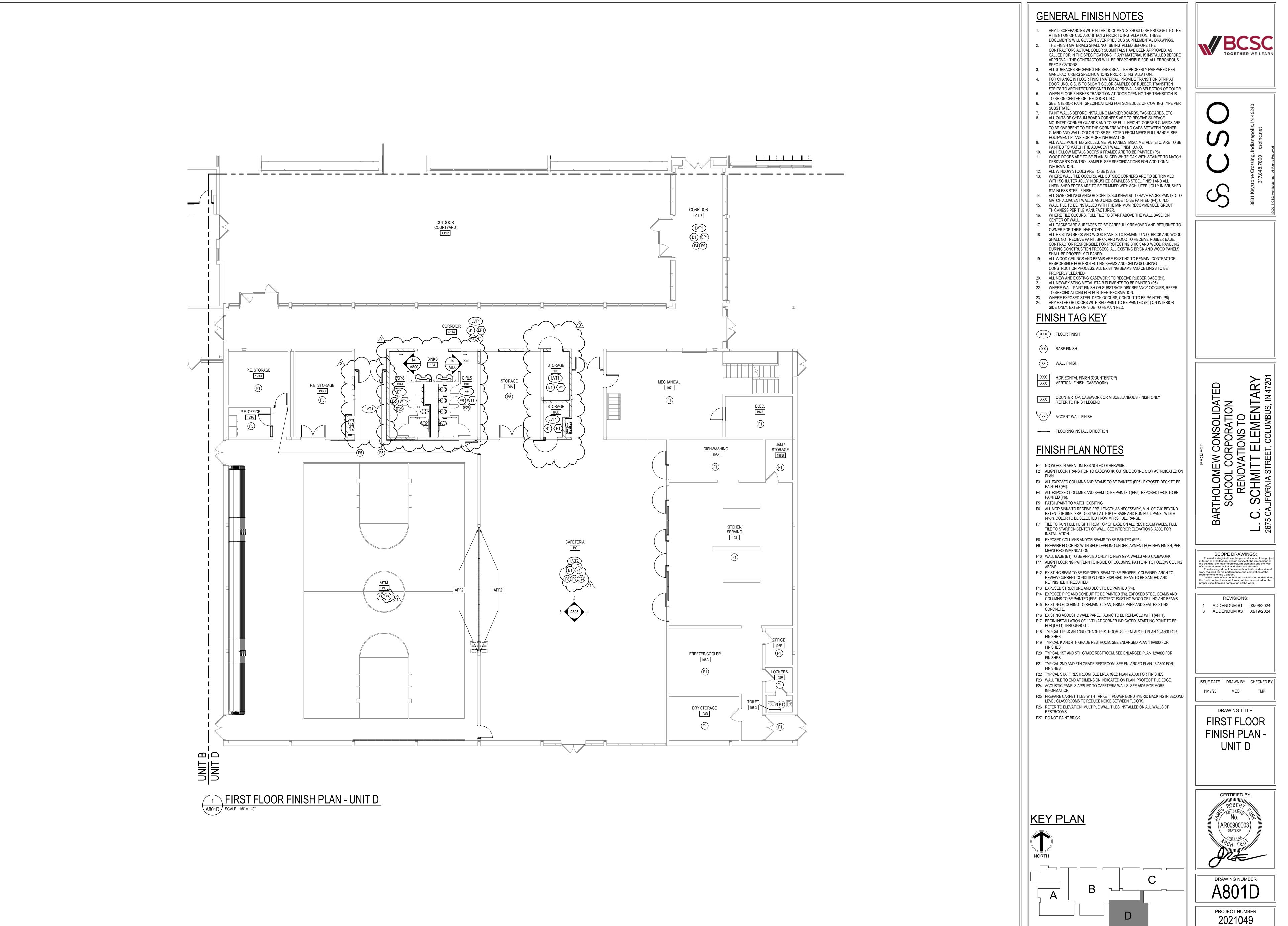


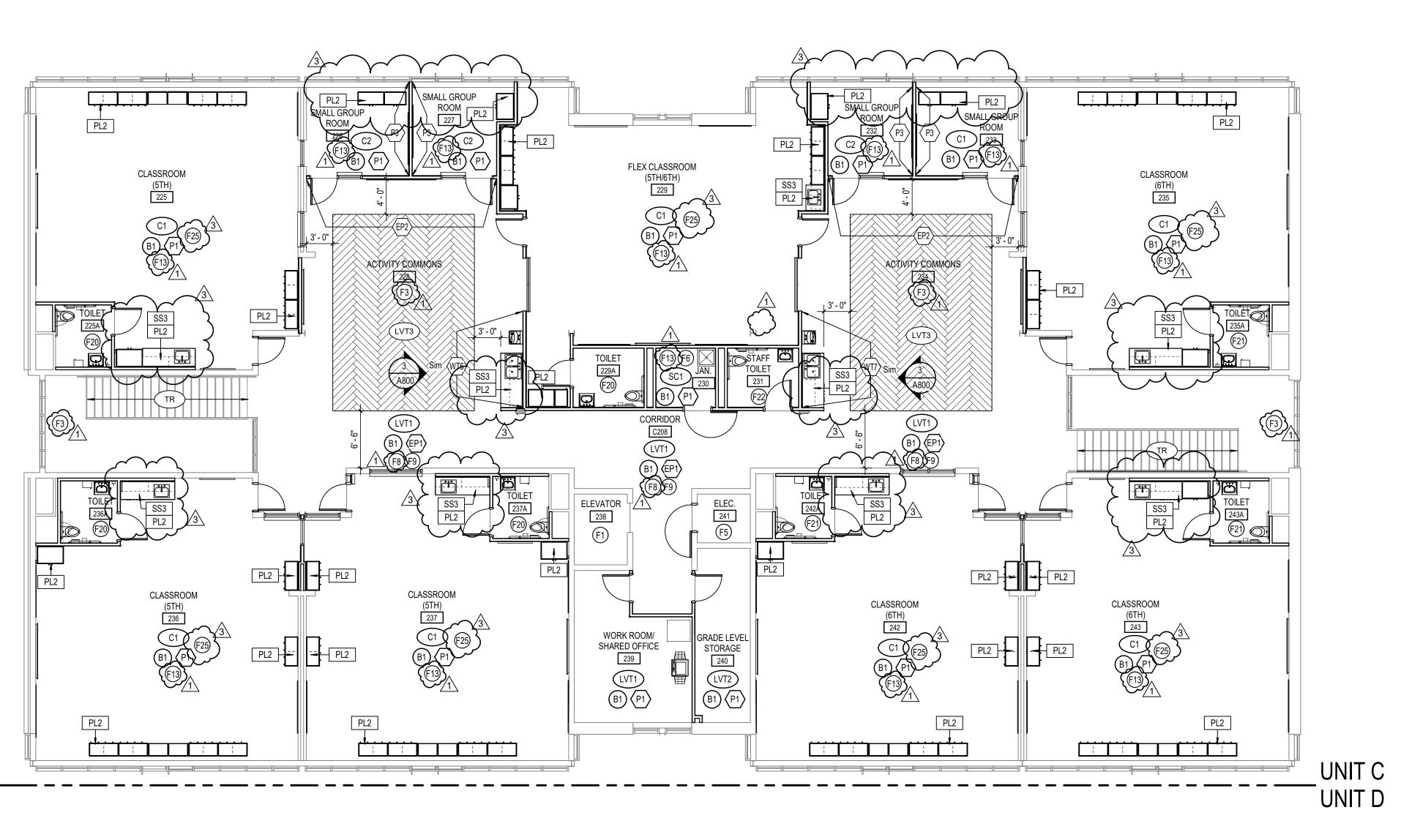


| G  | ENERAL FINISH NOTES   |
|--|---|
|  |   |
| 1.   | ANY DISCREPANCIES WITHIN THE DOCUMENTS SHOULD   |
|  | ATTENTION OF CSO ARCHITECTS PRIOR TO INSTALLATIO<br>DOCUMENTS WILL GOVERN OVER PREVIOUS SUPPLEME                |
| 2.   | THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFOR<br>CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEEN              |
|  | CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS<br>APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FO         |
| 3.   | SPECIFICATIONS.<br>ALL SURFACES RECEIVING FINISHES SHALL BE PROPERL   |
| 4.   | MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLAT<br>FOR CHANGE IN FLOOR FINISH MATERIAL, PROVIDE TRAN            |
|  | DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUB<br>STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND S             |
| 5.   | WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING<br>TO BE ON CENTER OF THE DOOR U.N.O.                            |
| 6.   | SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE O  |
| 7.   | SUBSTRATE.<br>PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TA   |
| 8.   | ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIV<br>MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. C                |
|  | TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS E<br>GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'              |
| 9.   | EQUIPMENT PLANS FOR MORE INFORMATION.<br>ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. MET                      |
| 10.  | PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O.<br>ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAIN             |
| 11.  | WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITI<br>DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FO            |
| 12.  | INFORMATION.<br>ALL WINDOW STOOLS ARE TO BE (SS3).  |
| 13.  | WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE<br>WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL F             |
|  | UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTE<br>STAINLESS STEEL FINISH.                                      |
| 14.  | ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAV  |
| 15.  | MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINT<br>WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOM             |
| 16.  | THICKNESS PER TILE MANUFACTURER.<br>WHERE TILE OCCURS, FULL TILE TO START ABOVE THE V                           |
| 17.  | CENTER OF WALL.<br>ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVE  |
| 18.  | OWNER FOR THEIR INVENTORY.<br>ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N                                 |
|  | SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEN<br>CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AI              |
|  | DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK<br>SHALL BE PROPERLY CLEANED.                                   |
| 19.  | ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REM/<br>RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS D             |
|  | CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CE<br>PROPERLY CLEANED.  |
| 20.<br>21.                                   | ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBEI<br>ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINT            |
| 21.  | WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANC<br>TO SPECIFICATIONS FOR FURTHER INFORMATION.                   |
| 23.  | WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE  |
| 24.  | ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED<br>SIDE ONLY. EXTERIOR SIDE TO REMAIN RED.                      |
| F١   | NISH TAG KEY  |
| <u>.                                    </u> |   |
| (XX  | FLOOR FINISH  |
|  | X) BASE FINISH  |
|  |   |
| < <u>x</u>                                   | X > WALL FINISH   |
| XX<br>XX                                     |   |
|  | COUNTERTOP, CASEWORK OR MISCELLANEOUS FIN   |
| XX   | COUNTERTOP, CASEWORK OR MISCELLANEOUS FINI<br>REFER TO FINISH LEGEND  |
| X  | X ACCENT WALL FINISH  |
| _  |   |
|  |   |
| FI   | NISH PLAN NOTES   |
| F1   | NO WORK IN AREA, UNLESS NOTED OTHERWISE.  |
| F2   | ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORNER  |
| F3   | PLAN.<br>ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). E   |
| F4   | PAINTED (P4).<br>ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EX   |
| F5   | PAINTED (P6).<br>PATCH/PAINT TO MATCH EXISITING.  |
| F6   | ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, M  |
|  | EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN F (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.      |
| F7   | TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL REST<br>TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATION |
| F8   | INSTALLATION.<br>EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).  |
| F9   | PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT I<br>MFR'S RECOMMENDATION.                                     |
| F10  | WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS A   |
| F11  | ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTER ABOVE.  |
| F12  | EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY CL<br>REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE        |
| F13  | REFINISHED IF REQUIRED.   |
| F14  | EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED  |
| F15  | COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD (<br>EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND S   |
| F16  | CONCRETE.<br>EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED   |
| F17  | BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STAI<br>FOR (LVT1) THROUGHOUT.                                |
| F18  | TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED FINISHES.  |
| F19  | TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLA  |
| F20  | FINISHES.<br>TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED P   |
| F21  | FINISHES.<br>TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED F   |
|  | FINISHES.   |
| F22<br>F23                                   |   |
| F24  | ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 INFORMATION.   |
| F25  | PREPARE CARPET TILES WITH TARKETT POWER BOND HYBR<br>LEVEL CLASSROOMS TO REDUCE NOISE BETWEEN FLOORS.           |
|  | REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON  |
| F26  | RESTROOMS.  |
|  | DO NOT PAINT BRICK.   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |





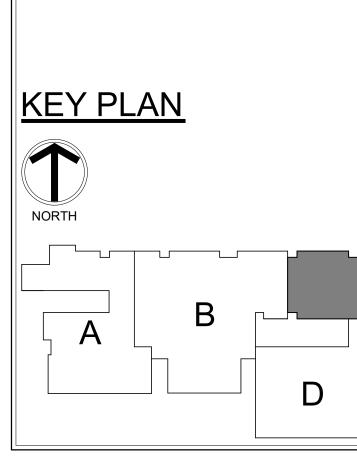


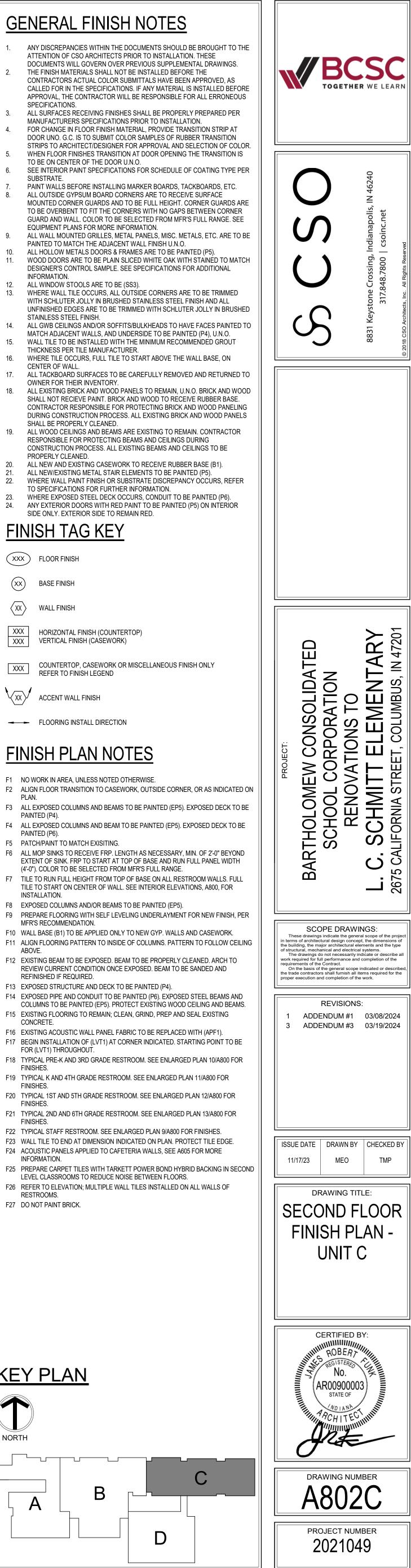


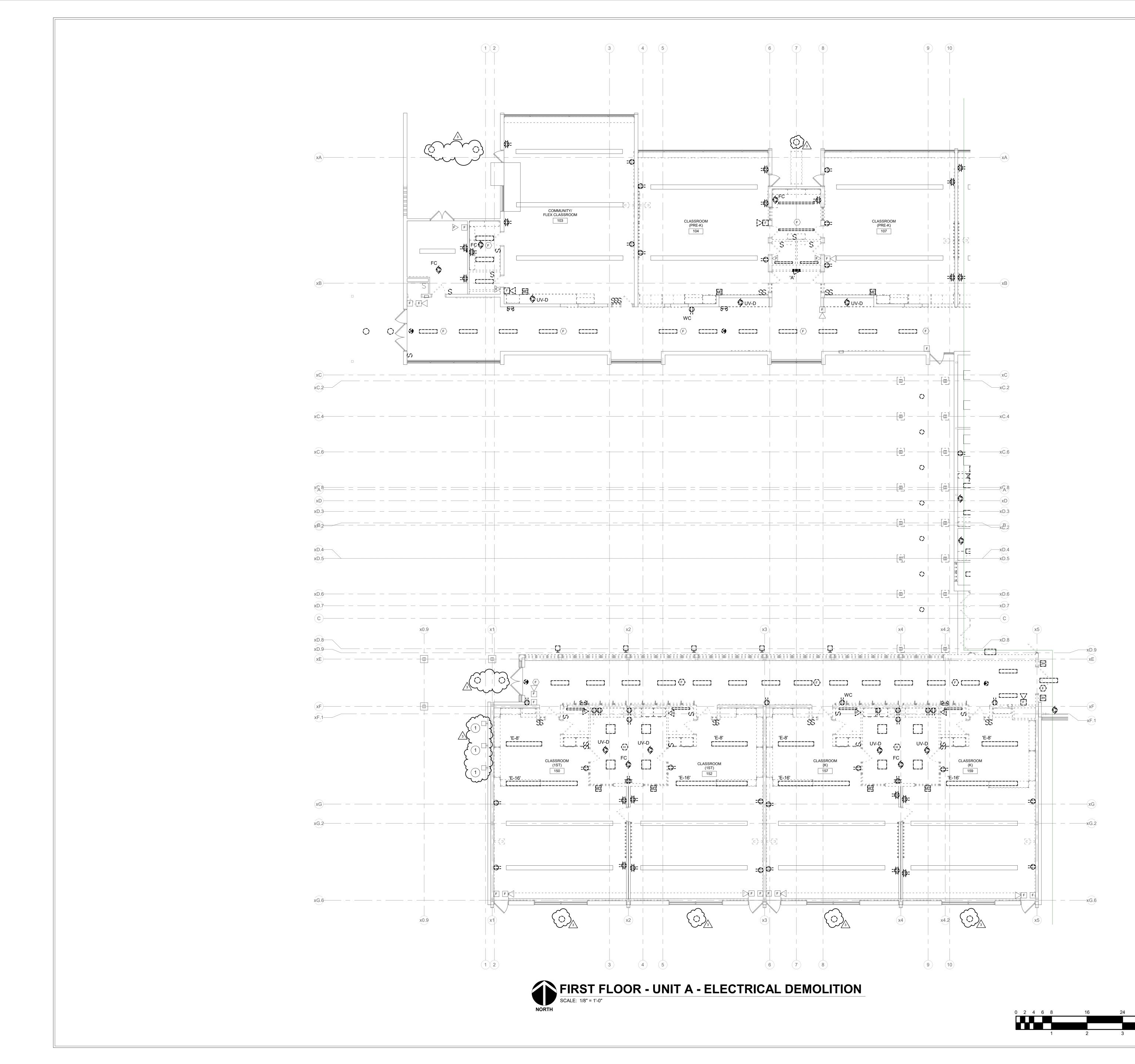
1 SECOND FLOOR FINISH PLAN - UNIT C A802C SCALE: 1/8" = 1'-0"

### CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS INSTALLED BEFORE APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ERRONEOUS SPECIFICATIONS. ALL SURFACES RECEIVING FINISHES SHALL BE PROPERLY PREPARED PER MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLATION. FOR CHANGE IN FLOOR FINISH MATERIAL. PROVIDE TRANSITION STRIP AT 4 DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUBBER TRANSITION STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND SELECTION OF COLOR. WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING THE TRANSITION IS TO BE ON CENTER OF THE DOOR U.N.O. SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE OF COATING TYPE PER SUBSTRATE. PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TACKBOARDS, ETC. ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIVE SURFACE MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. CORNER GUARDS ARE TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS BETWEEN CORNER GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'S FULL RANGE. SEE EQUIPMENT PLANS FOR MORE INFORMATION. ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. METALS, ETC. ARE TO BE PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O. 10. ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAINTED (P5). 11. WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITH STAINED TO MATCH DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 12. ALL WINDOW STOOLS ARE TO BE (SS3). 13. WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH AND ALL UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH. 14. ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAVE FACES PAINTED TO MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINTED (P4), U.N.O. 15. WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOMMENDED GROUT THICKNESS PER TILE MANUFACTURER. 16. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE WALL BASE, ON CENTER OF WALL. 17. ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVED AND RETURNED TO OWNER FOR THEIR INVENTORY. 18. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N.O. BRICK AND WOOD SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEIVE RUBBER BASE. CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AND WOOD PANELING DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK AND WOOD PANELS SHALL BE PROPERLY CLEANED. 19. ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REMAIN. CONTRACTOR RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS DURING CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEILINGS TO BE PROPERLY CLEANED. 20. ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBER BASE (B1). 21. ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINTED (P5). 22. WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANCY OCCURS, REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. 23. WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE PAINTED (P6). 24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY. EXTERIOR SIDE TO REMAIN RED. FINISH TAG KEY (XXX) FLOOR FINISH (XX) BASE FINISH XX WALL FINISH XXX HORIZONTAL FINISH (COUNTERTOP) XXX VERTICAL FINISH (CASEWORK) XXX COUNTERTOP, CASEWORK OR MISCELLANEOUS FINISH ONLY REFER TO FINISH LEGEND ACCENT WALL FINISH - FLOORING INSTALL DIRECTION FINISH PLAN NOTES F1 NO WORK IN AREA, UNLESS NOTED OTHERWISE. F2 ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORNER, OR AS INDICATED ON PLAN. F3 ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P4). F4 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P6). F5 PATCH/PAINT TO MATCH EXISITING. F6 ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, MIN. OF 2'-0" BEYOND EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN FULL PANEL WIDTH (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. F7 TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTROOM WALLS. FULL TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATIONS, A800, FOR INSTALLATION. F8 EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). F9 PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT FOR NEW FINISH, PER MFR'S RECOMMENDATION. F10 WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS AND CASEWORK. F11 ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTERN TO FOLLOW CEILING ABOVE. F12 EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY CLEANED. ARCH TO REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE SANDED AND REFINISHED IF REQUIRED. F13 EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). F14 EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED STEEL BEAMS AND COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD CEILING AND BEAMS. F15 EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND SEAL EXISTING CONCRETE. F16 EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED WITH (APF1). F17 BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STARTING POINT TO BE FOR (LVT1) THROUGHOUT. F18 TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PLAN 10/A800 FOR FINISHES. F19 TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLAN 11/A800 FOR FINISHES. F20 TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLAN 12/A800 FOR FINISHES. F21 TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PLAN 13/A800 FOR FINISHES. F22 TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 FOR FINISHES. F23 WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PROTECT TILE EDGE. F24 ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 FOR MORE

- INFORMATION. F25 PREPARE CARPET TILES WITH TARKETT POWER BOND HYBRID BACKING IN SECOND
- LEVEL CLASSROOMS TO REDUCE NOISE BETWEEN FLOORS. F26 REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON ALL WALLS OF
- RESTROOMS. F27 DO NOT PAINT BRICK.







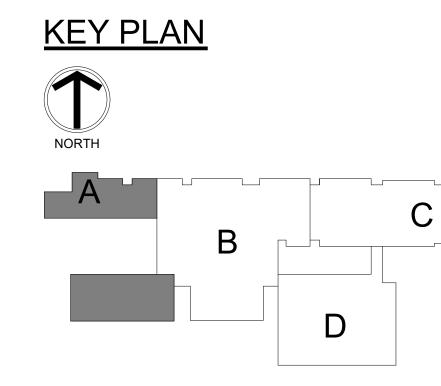
WORK TO BE REMOVED

### **GENERAL NOTES:**

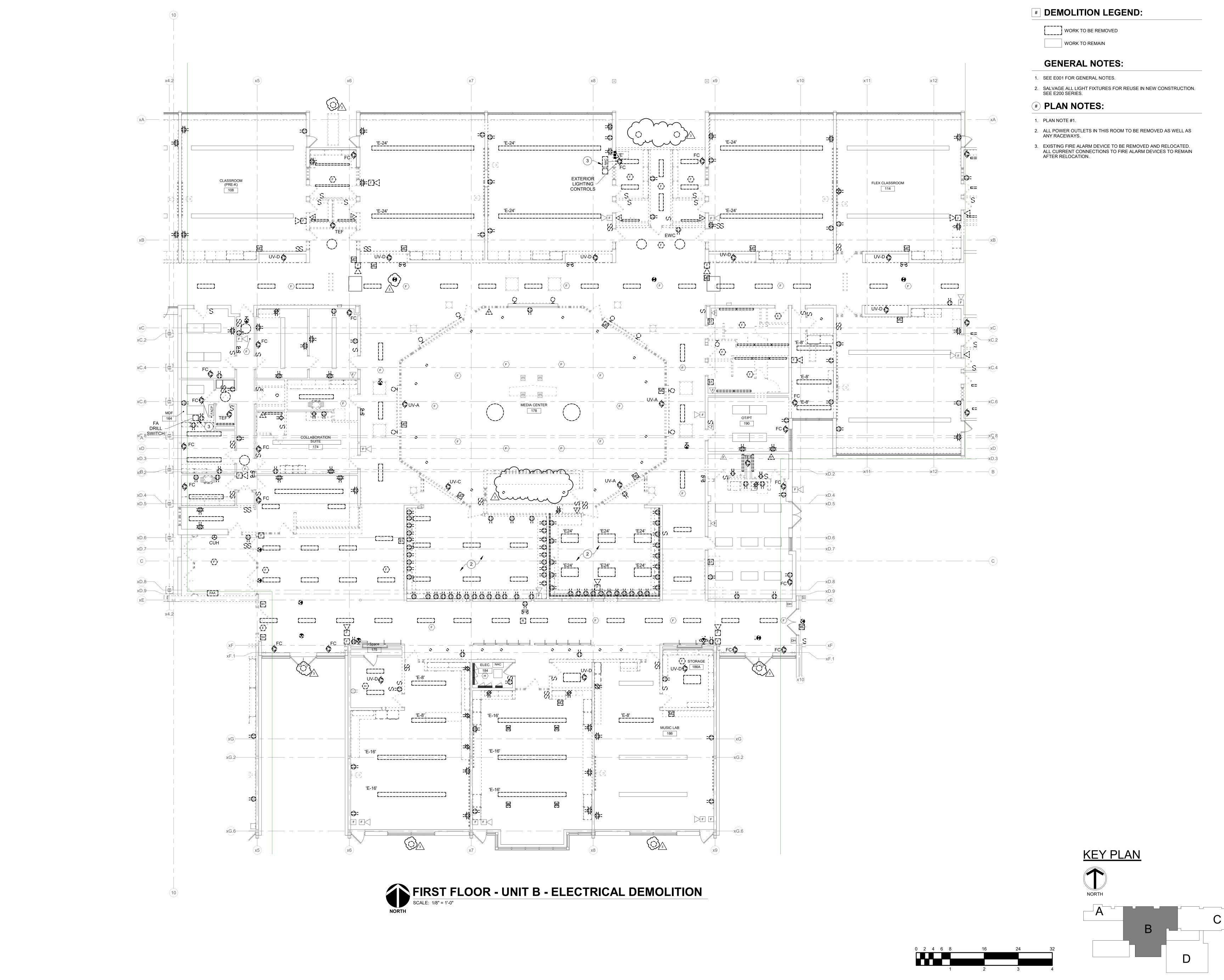
 SEE E001 FOR GENERAL NOTES.
 SALVAGE ALL LIGHT FIXTURES FOR REUSE IN NEW CONSTRUCTION. SEE E200 SERIES.

### **# PLAN NOTES:**

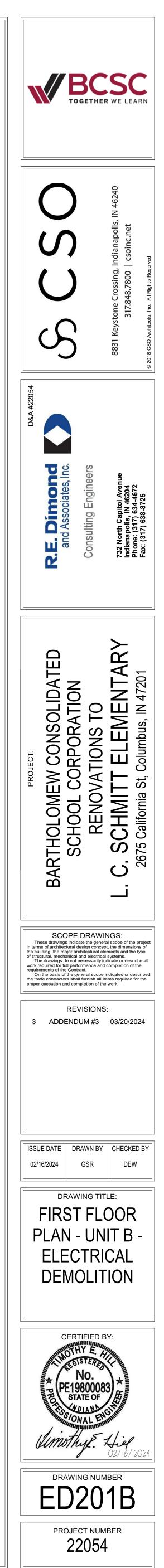
1. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED.

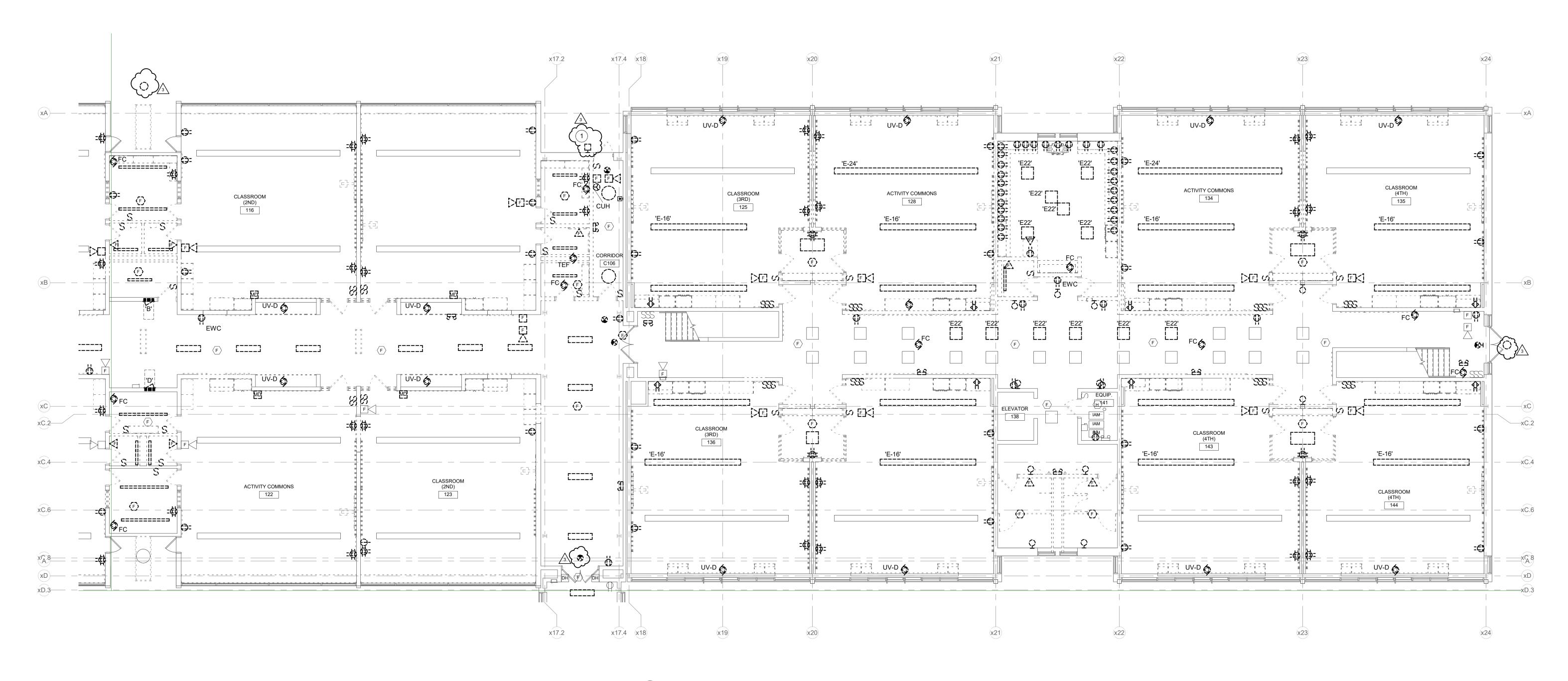














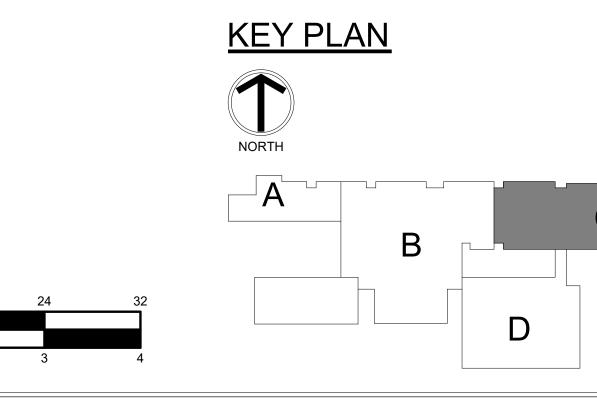
WORK TO BE REMOVED WORK TO REMAIN

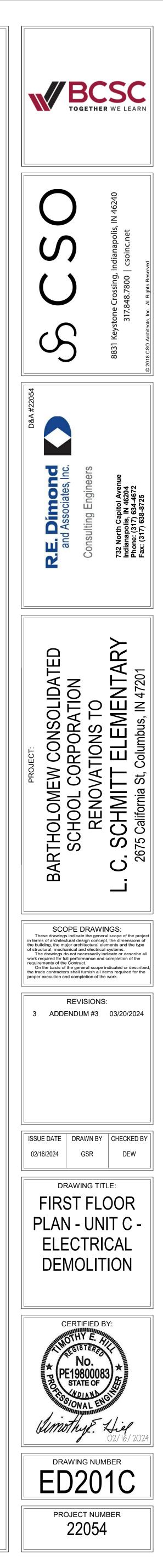
### **GENERAL NOTES:**

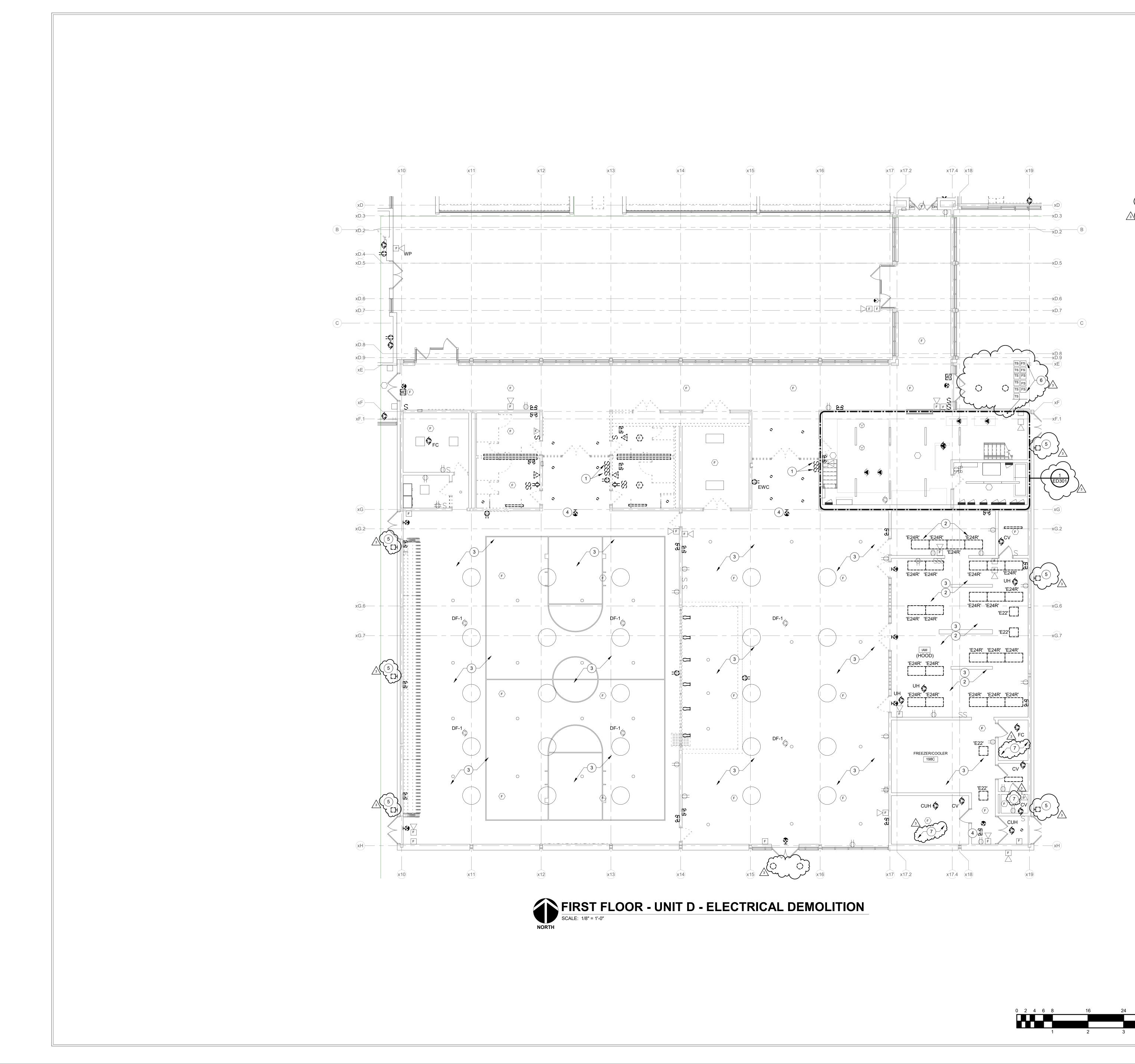
1. SEE E001 FOR GENERAL NOTES. SALVAGE ALL LIGHT FIXTURES FOR REUSE IN NEW CONSTRUCTION. SEE E200 SERIES.

1. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED.

0 2 4 6 8







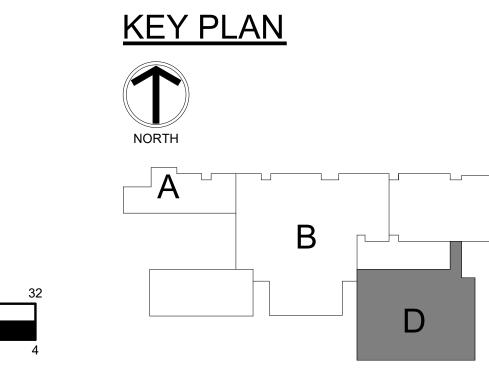
- WORK TO BE REMOVED WORK TO REMAIN
- **GENERAL NOTES:**

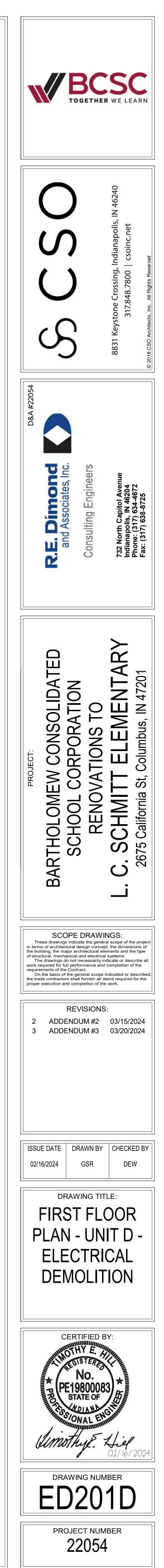
### 1. SEE E001 FOR GENERAL NOTES.

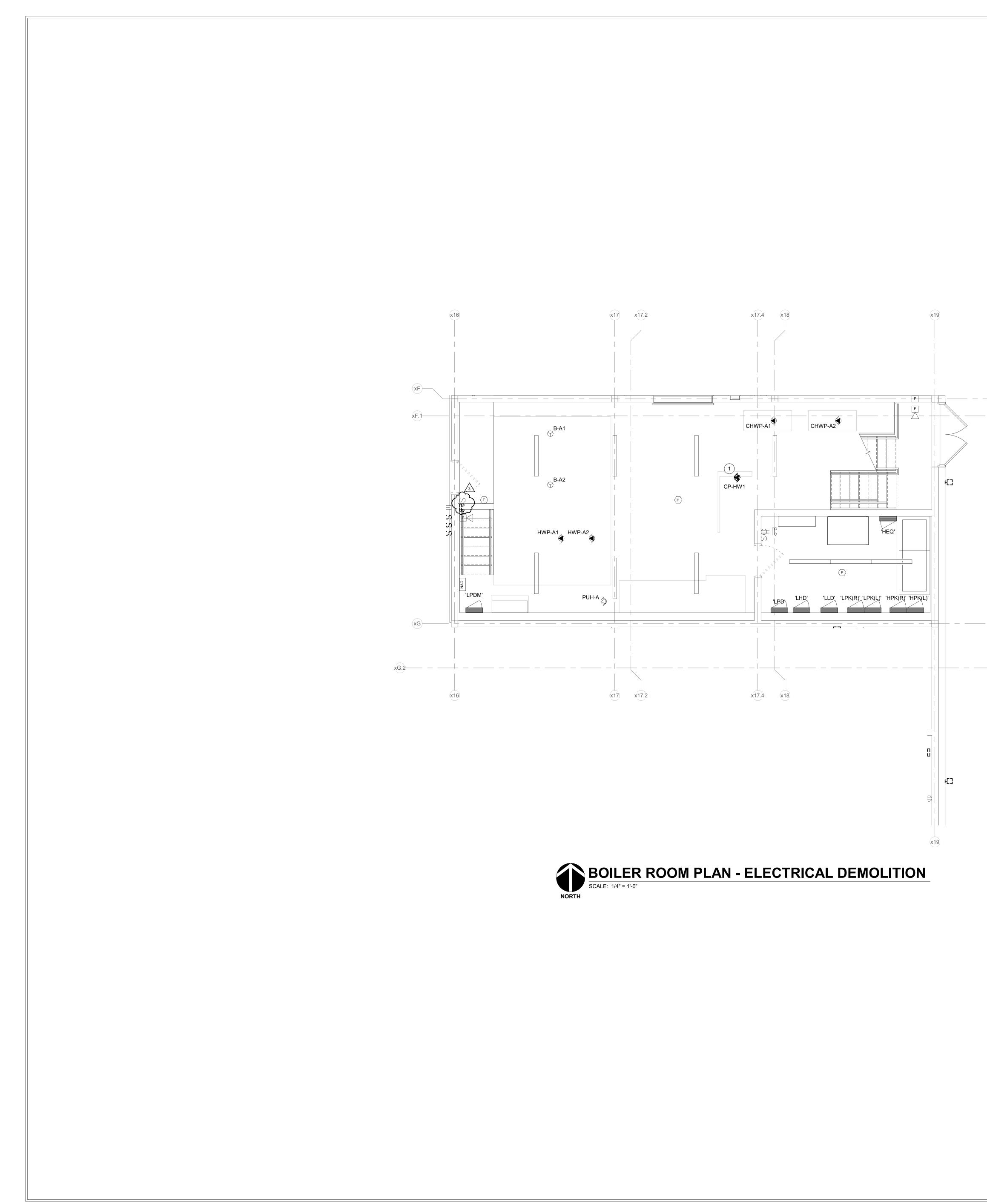
### **# PLAN NOTES:**

- LIGHTING CONTROLS TO BE RELOCATED. SEE E200 SERIES FOR RELOCATION.
- LIGHT FIXTURE/FIXTURES TO BE REMOVED BUT KEPT FOR USE IN NEW CONSTRUCTION. SEE E200 SERIES FOR RELOCATION.
- REMOVE EXIT SIGN AND EMERGENCY LIGHTS. CIRCUITS TO REMAIN IN THIS AREA FOR USE IN NEW CONSTRUCTION. PREPARE FOR NEW DEVICE IN EXISTING LOCATION.

4. FIXTURE TO BE REPLACED AND RELOCATED IN NEW CONSTRUCTION. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED. EXISTING FLOW AND TAMPER SWITCHES IN ROOM TO REMAIN. ALL EXISITING LIGHTING TO REMAIN IN THIS AREA.







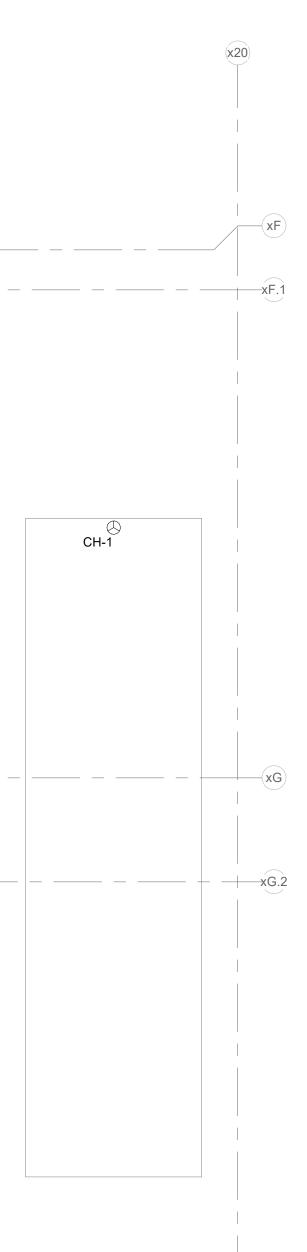
WORK TO BE REMOVED

### **GENERAL NOTES:**

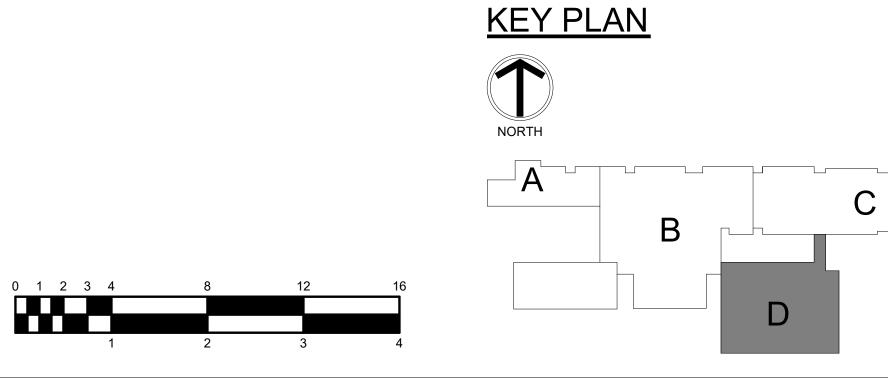
### 1. SEE E001 FOR GENERAL NOTES.

### **# PLAN NOTES:**

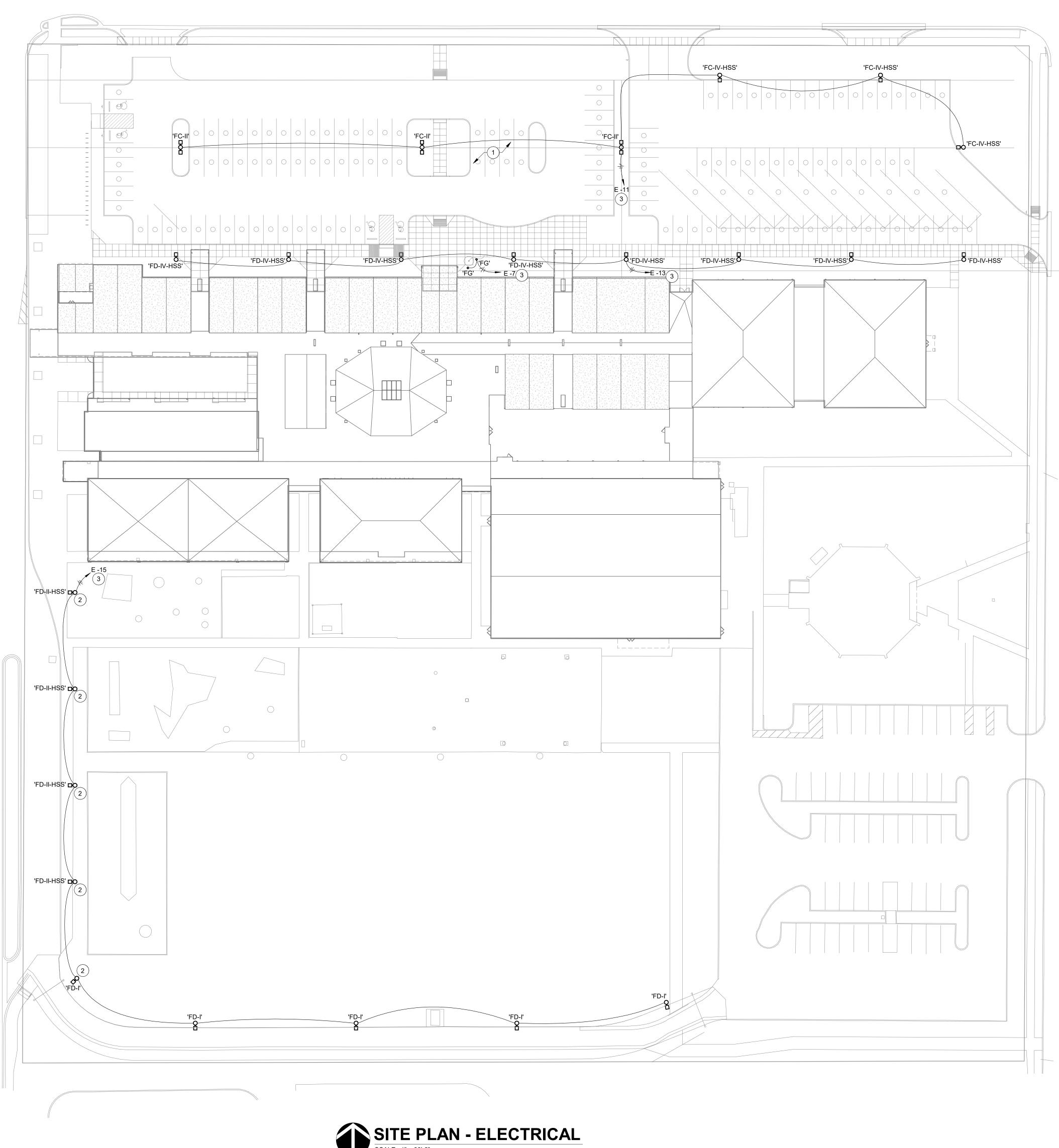
1. REMOVE MECHANICAL EQUIPMENT AND ALL ASSOCIATED WIRING BACK TO PANELBOARD.



(x20)

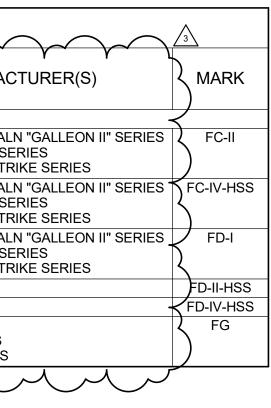






|           | EXTERIOR LIGHT  | FIXTUR   | E SCHI                    | EDULE |           |       |             |       |  |
|-----------|---|----------|---------------------------|-------|-----------|-------|-------------|-------|--|
| MARK      | DESCRIPTION   | MOUNTING | TOTAL<br>FIXTURE<br>WATTS | CRI   | WATTS     | COLOR | LUMENS      | VOLTS | MANUFACTU  |
|           |   |          |                           |       |           |       |             |       | ►  |
| FC-II     | CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE II DISTRIBUTION, TWO FIXTURE HEADS AT 180-DEGREES, WET LOCATION<br>LISTED, 25-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM<br>MANUFACTURER'S CATALOG OF STANDARD FINISHES.   | POLE     | 242                       | 70    | 121W/HEAD | 3000K | 17,000/HEAD |       | MCGRAW EDISON GALN "C<br>LITHONIA RSX1 LED SERIE<br>EXO SLING MICRO STRIKE |
| FC-IV-HSS | CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE IV DISTRIBUTION, HOUSE SIDE SHIELD, ONE FIXTURE HEAD, WET LOCATION<br>LISTED, 25-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM<br>MANUFACTURER'S CATALOG OF STANDARD FINISHES.  | POLE     | 121                       | 70    | 121W/HEAD | 3000K | 17,000/HEAD | 120 V | MCGRAW EDISON GALN "C<br>LITHONIA RSX1 LED SERIE<br>EXO SLING MICRO STRIKE |
| FD-I      | CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE I DISTRIBUTION, ONE FIXTURE HEAD, WET LOCATION LISTED, 15-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES.  | POLE     | 44                        | 70    | 44W/HEAD  | 3000K | 5,750/HEAD  | 120 V | MCGRAW EDISON GALN "C<br>LITHONIA RSX1 LED SERIE<br>EXO SLING MICRO STRIKE |
| FD-II-HSS | SAME AS FIXTURE TYPE 'FD-I,' EXCEPT TYPE II DISTRIBUTION AND HOUSE SIDE SHIELD.   | POLE     | 44                        | 70    | 44W/HEAD  | 3000K | 5,750/HEAD  | 120 V |  |
| FD-IV-HSS | SAME AS FIXTURE TYPE 'FD-I,' EXCEPT TYPE IV DISTRIBUTION AND HOUSE SIDE SHIELD.   | POLE     | 44                        | 70    | 44W/HEAD  | 3000K | 5,750/HEAD  | 120 V | -  |
| FG        | FLAGPOLE FIXTURE, 10-INCH ON-GRADE ADJUSTABLE FLOOD, MEDIUM FLOOD OPTICS (NEMA 5x5), WET LOCATION LISTED, IP67 RATED.<br>VERIFY FINAL LOCATION AND FINISH WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE FINAL AIMING. PROVIDE CONCRETE BASE PER<br>ELECTRICAL DETAILS. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD COLORS. | ON-GRADE | 49                        | 70    | 49W       | 4000K | 3,500       | 120   | VISTA 1059 SERIES<br>LIGMAN UOD SERIES<br>HYDREL TPS2 SERIES               |
|           |   |          |                           |       |           |       |             |       |  |

# SCALE: 1" = 30'-0"



# **RENOVATION LEGEND:**

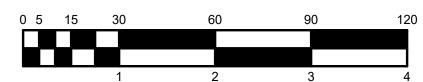
| WORK TO BE INSTALLED |
|----------------------|
| WORK TO REMAIN       |

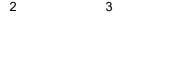
### **GENERAL NOTES:**

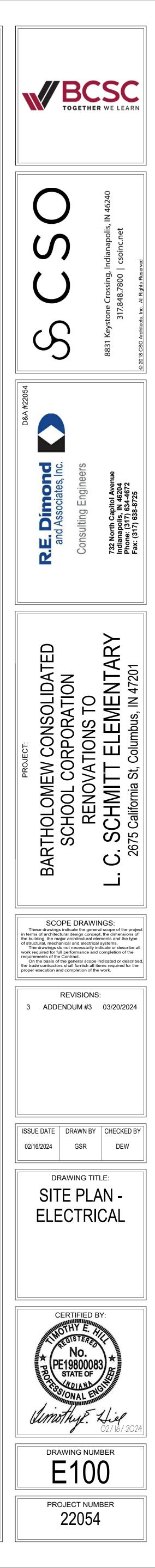
1. SEE E001 FOR GENERAL NOTES. 2. SEE DRAWING E-403 FOR EXTERIOR LIGHT FIXTURE MOUNTING DETAILS.

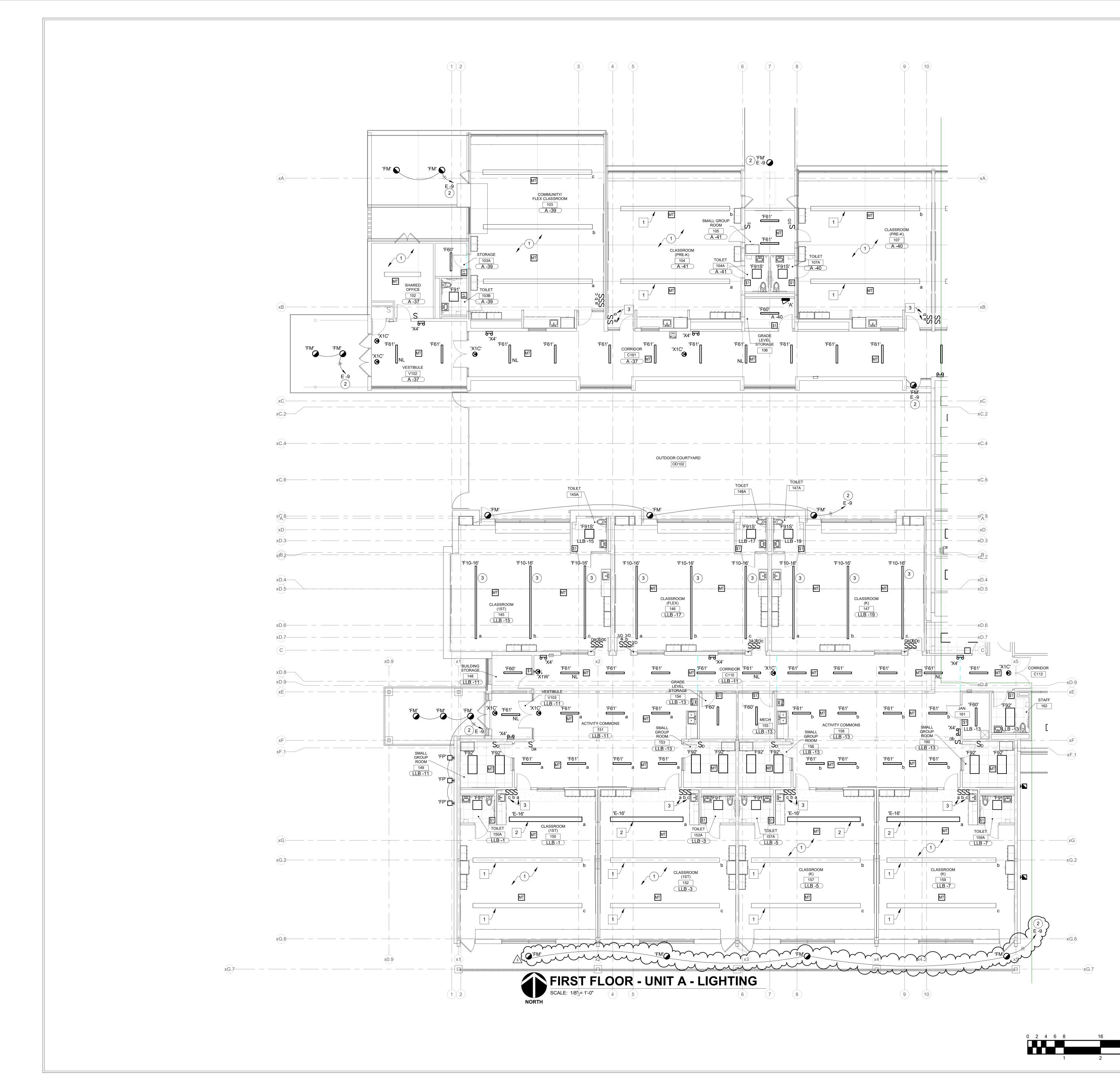
### **# PLAN NOTES:**

- 1. SIX (6) EXISTING PARKING LOT FIXTURES TO BE REMOVED COMPLETE FROM EXISTING NORTH PARKING LOT.
- 2. ALIGN FIXTURE NORTH-SOUTH BETWEEN EXISTING TREES. AVOID ROOT SYSTEM AS PRACTICABLE.
- CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS.









| WORK TO BE INSTALLED |
|----------------------|
| WORK TO REMAIN       |

### **GENERAL NOTES:**

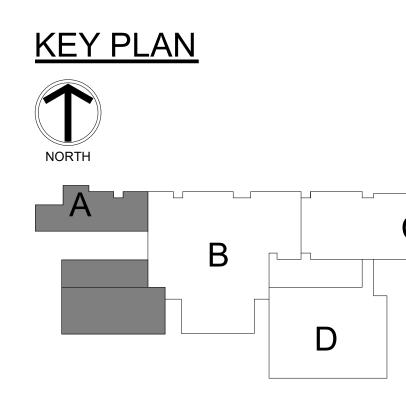
- 1. SEE E001 FOR GENERAL NOTES.
- 2. LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES. SEE E601 SHEET FOR SALVAGED LIGHT FIXTURE COUNT.
- 3. PLAN NOTES ANNOTATED INSIDE SQUARE SYMBOLS ARE PART OF ALTERNATE BID PACKAGE FOR LIGHTING.

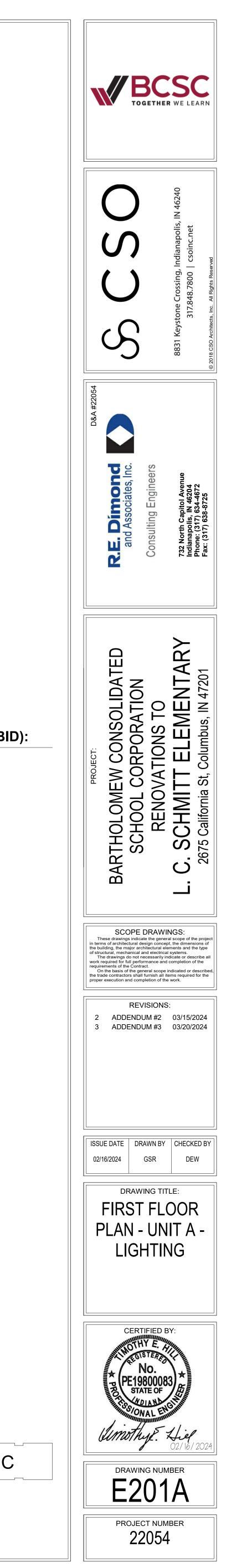
### **# PLAN NOTES:**

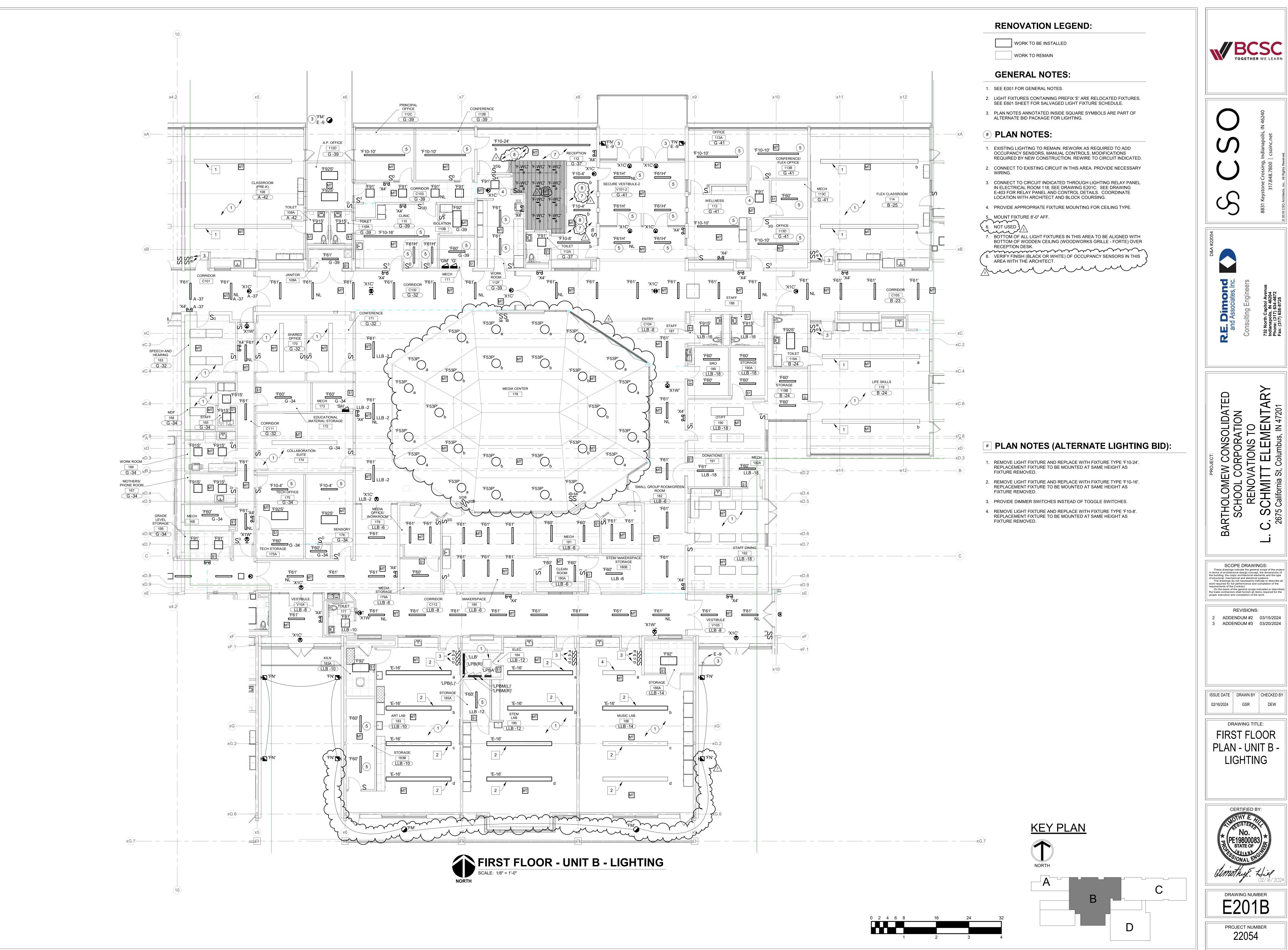
- EXISTING CLASSROOM LIGHTING TO REMAIN. REWORK AS REQUIRED TO ADD OCCUPANCY SENSORS, MANUAL CONTROLS, MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO CIRCUIT INDICATED.
- 2. CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS. COORDINATE LOCATION WITH ARCHITECT AND BLOCK COURSING.
- 3. FIXTURES TO BE INSTALLED 9'-0" AFF.

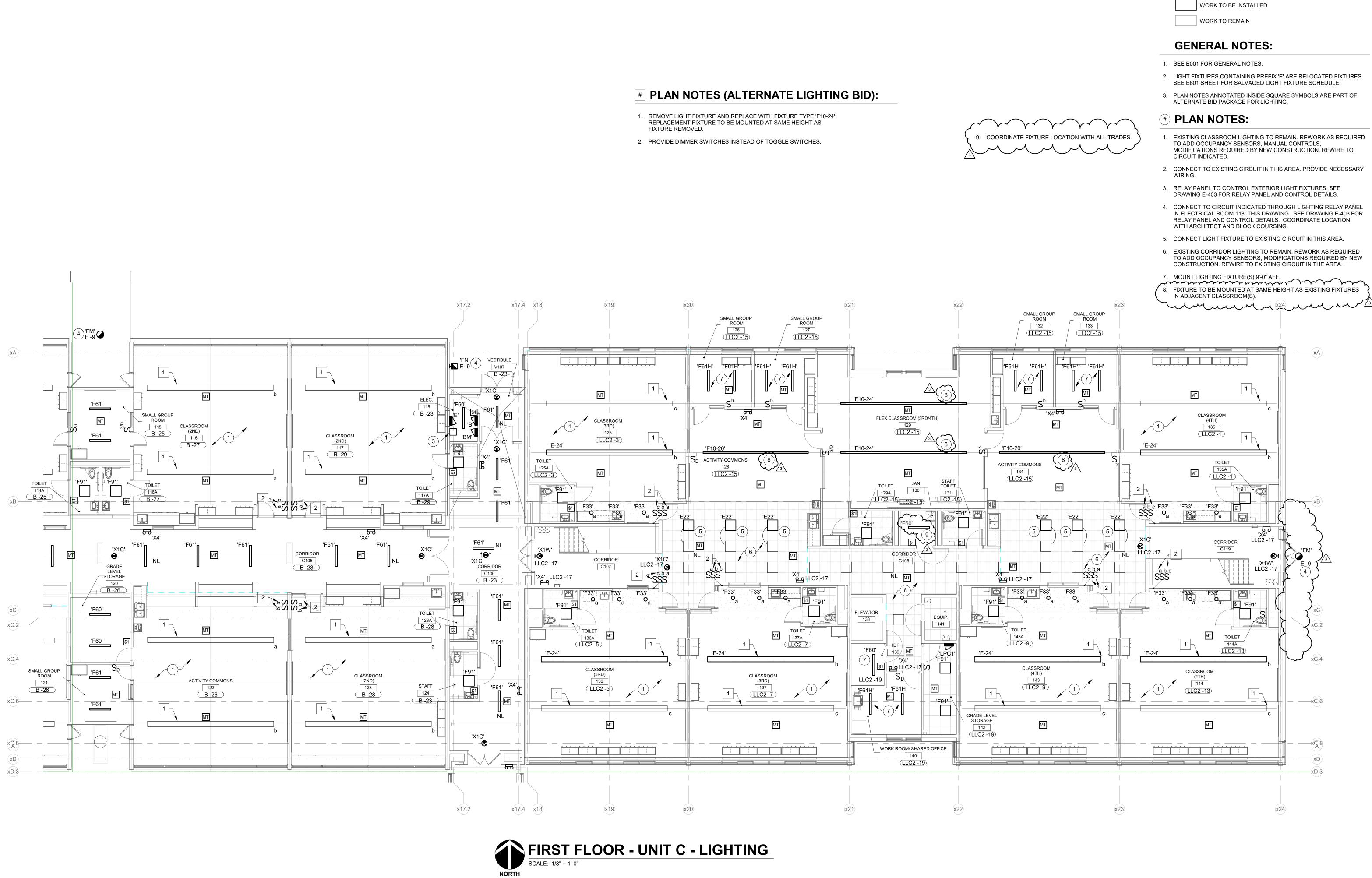
# **#** PLAN NOTES (ALTERNATE LIGHTING BID):

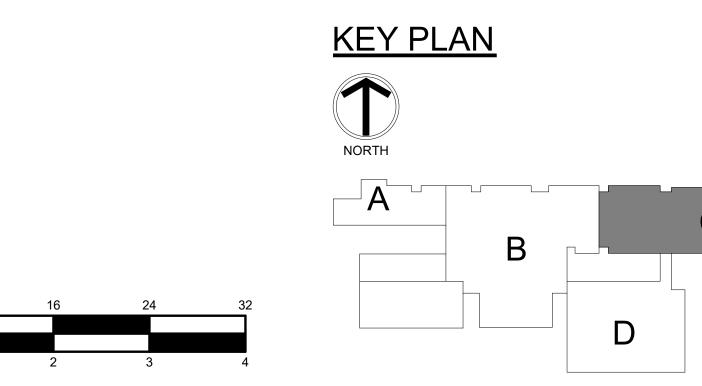
- REMOVE LIGHT FIXTURE AND REPLACE WITH FIXTURE TYPE 'F10-24'. REPLACEMENT FIXTURE TO BE MOUNTED AT SAME HEIGHT AS FIXTURE REMOVED.
- 2. REMOVE LIGHT FIXTURE AND REPLACE WITH FIXTURE TYPE 'F10-16'. REPLACEMENT FIXTURE TO BE MOUNTED AT SAME HEIGHT AS FIXTURE REMOVED.
- 3. PROVIDE DIMMER SWITCHES INSTEAD OF TOGGLE SWITCHES.





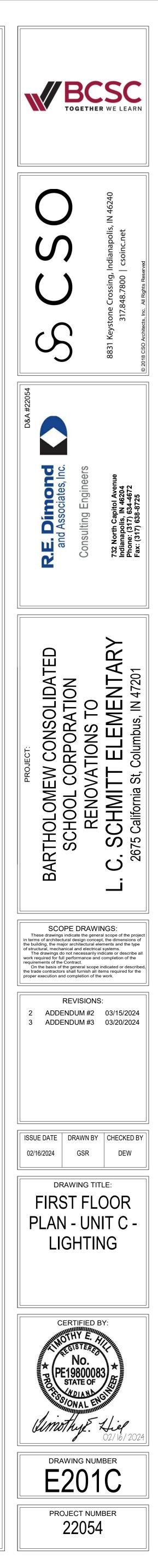


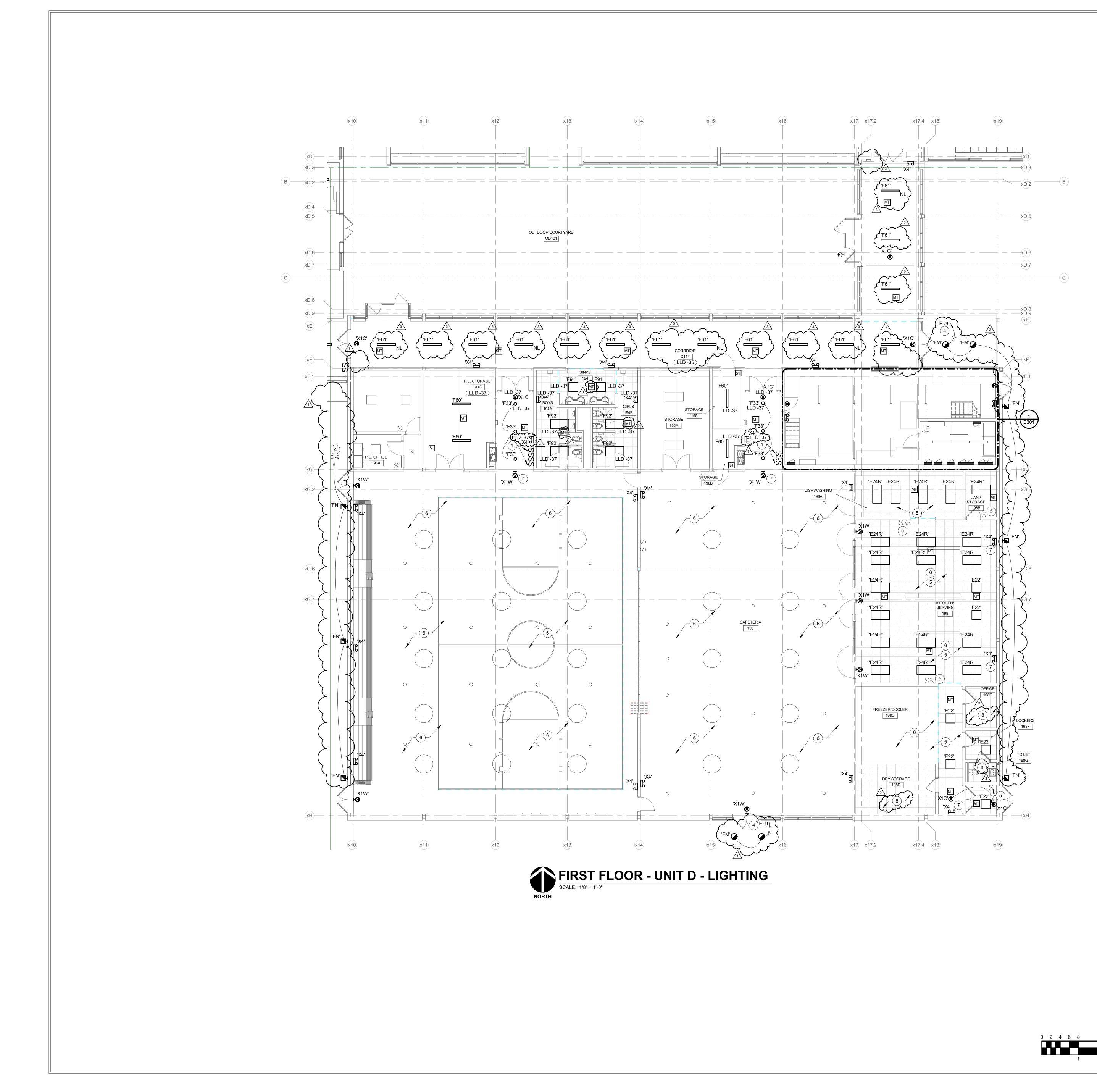




0 2 4 6 8

**RENOVATION LEGEND:** 







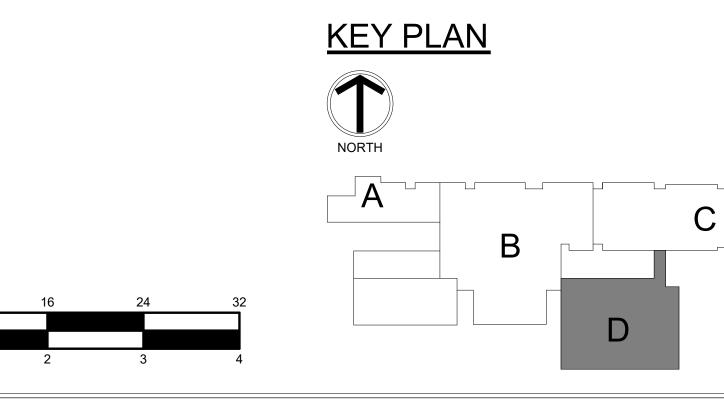
| WORK TO BE INSTALLED |
|----------------------|
|                      |
| WORK TO REMAIN       |

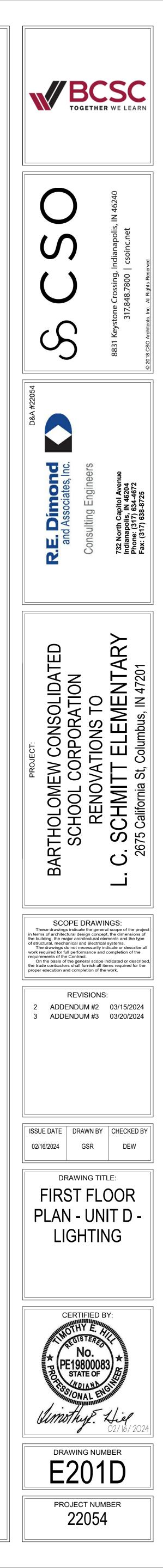
### **GENERAL NOTES:**

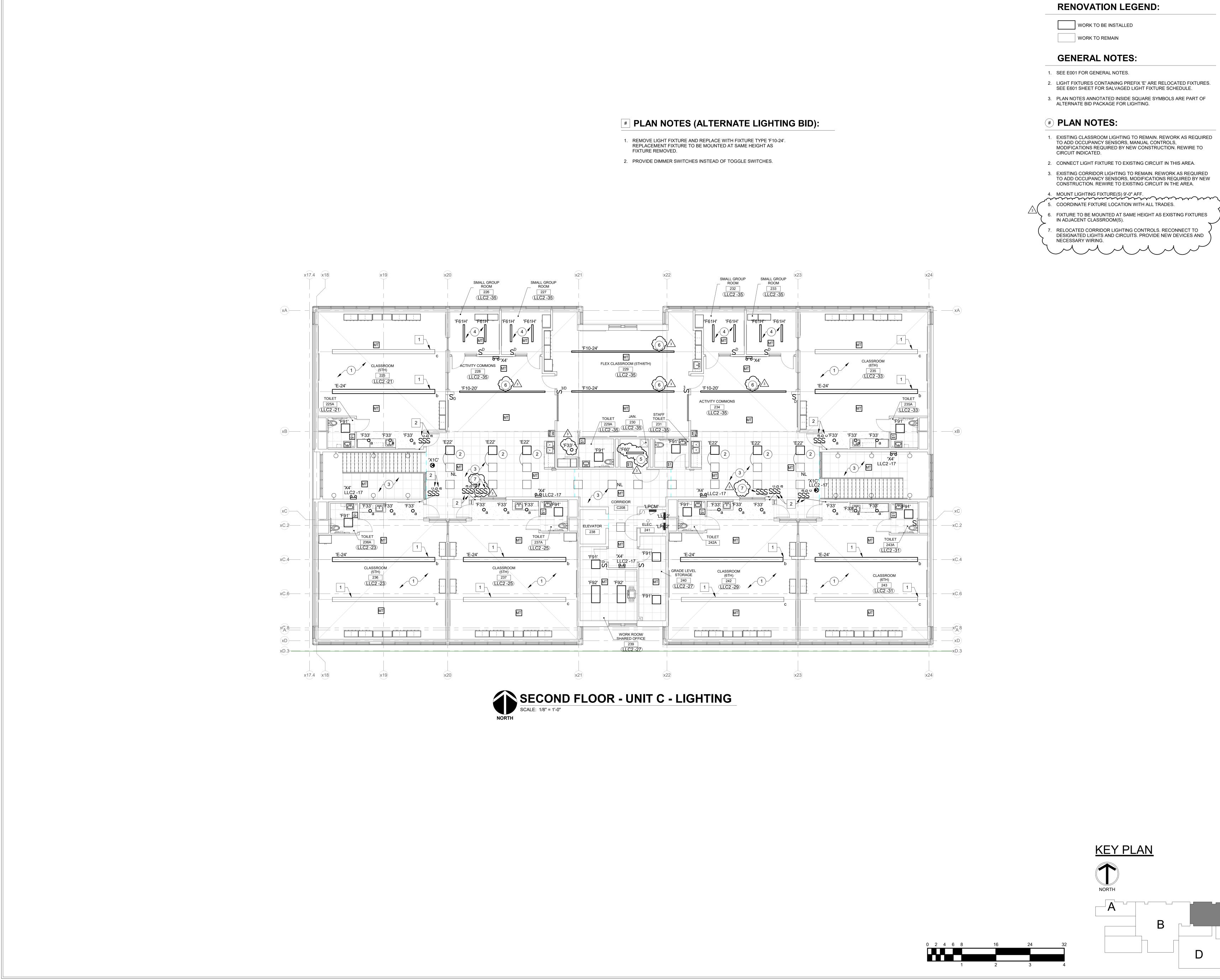
 SEE E001 FOR GENERAL NOTES.
 LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES. SEE E601 SHEET FOR SALVAGED LIGHT FIXTURE SCHEDULE.

### **# PLAN NOTES:**

- RELOCATED COURT LIGHTING CONTROLS. RECONNECT TO DESIGNATED LIGHTS AND CIRCUITS. PROVIDE NEW DEVICES AND NECESSARY WIRING.
- NEW LIGHTING CONTROLS IN THIS AREA. CONNECT TO EXISTING CIRCUITS AND PROVIDE NECESSARY WIRING.
- CONNECT TO EXISTING CIRCUIT IN THIS AREA. PROVIDE NECESSARY WIRING.
- CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS. COORDINATE LOCATION WITH ARCHITECT AND BLOCK COURSING.
- 5. REWORK AS REQUIRED TO ADD OCCUPANCY SENSORS AND MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO EXISTING CIRCUIT IN THE AREA. PROVIDE NEW LIGHT SWITCHES.
- 6. ALL NEW EMERGENCY LIGHTS AND EXIT SIGNS IN THIS ARE TO BE CONNECTED TO EXISTING CIRCUITS.
- 7. RELOCATED EXIT SIGN OR EMERGENCY LIGHT. REPLACE EXISTING FIXTURE WITH FIXTURE SPECIFIED.
- 8. ALL EXISITING LIGHTING TO REMAIN IN THIS AREA.



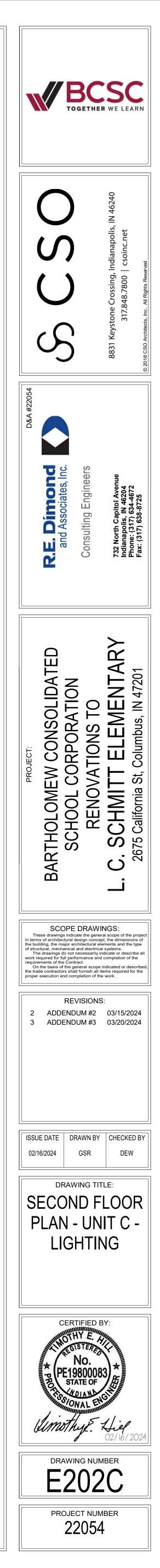




| WORK TO BE INSTALLED |
|----------------------|
|                      |
| WORK TO REMAIN       |

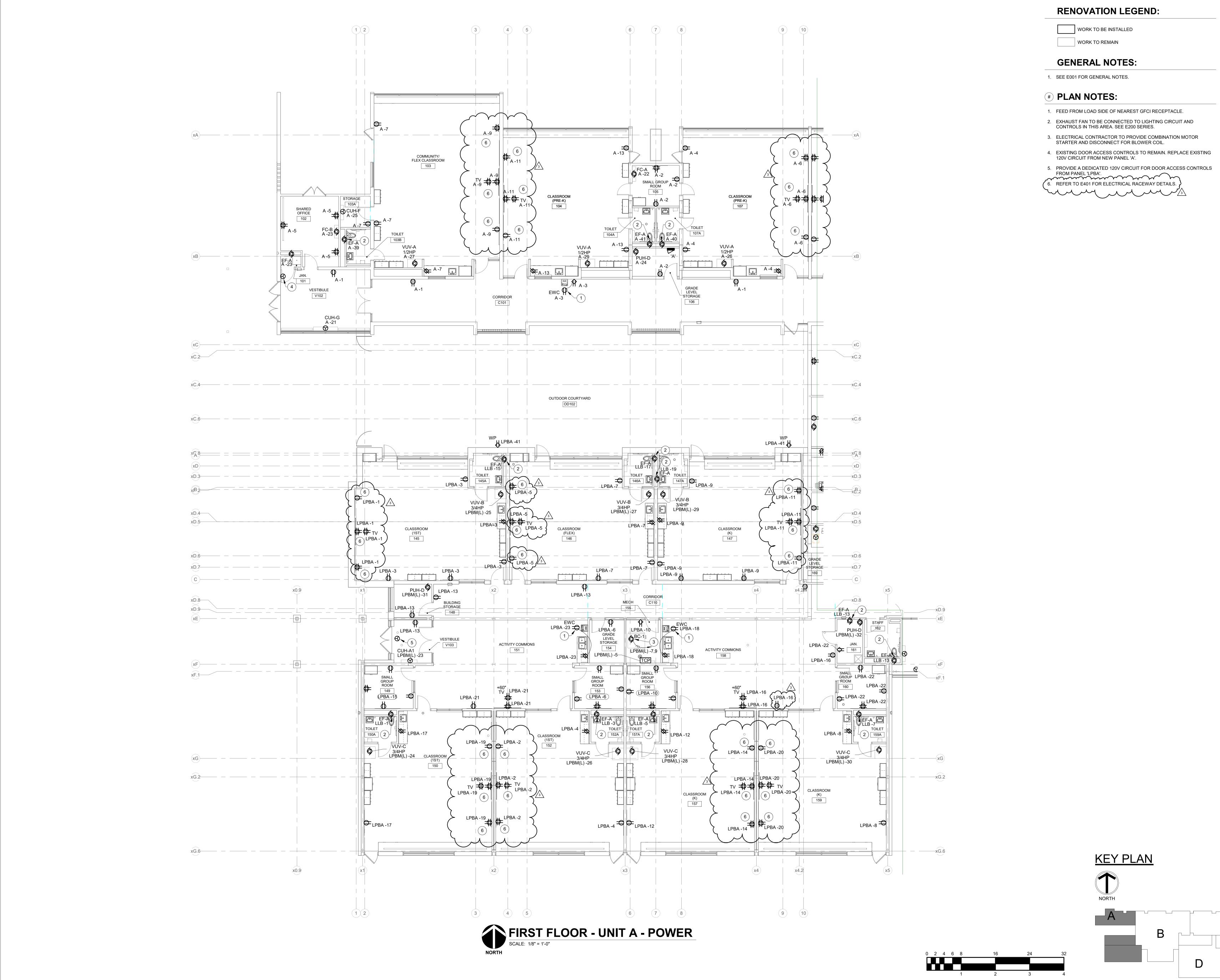
- 2. LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES.

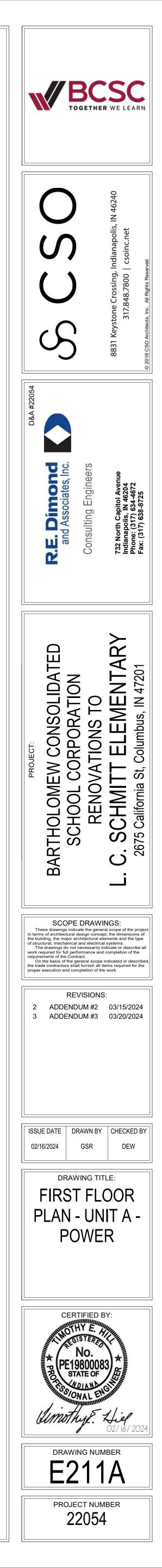
- 1. EXISTING CLASSROOM LIGHTING TO REMAIN. REWORK AS REQUIRED MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO
- CONSTRUCTION. REWIRE TO EXISTING CIRCUIT IN THE AREA.
- 6. FIXTURE TO BE MOUNTED AT SAME HEIGHT AS EXISTING FIXTURES
- 7. RELOCATED CORRIDOR LIGHTING CONTROLS. RECONNECT TO DESIGNATED LIGHTS AND CIRCUITS. PROVIDE NEW DEVICES AND

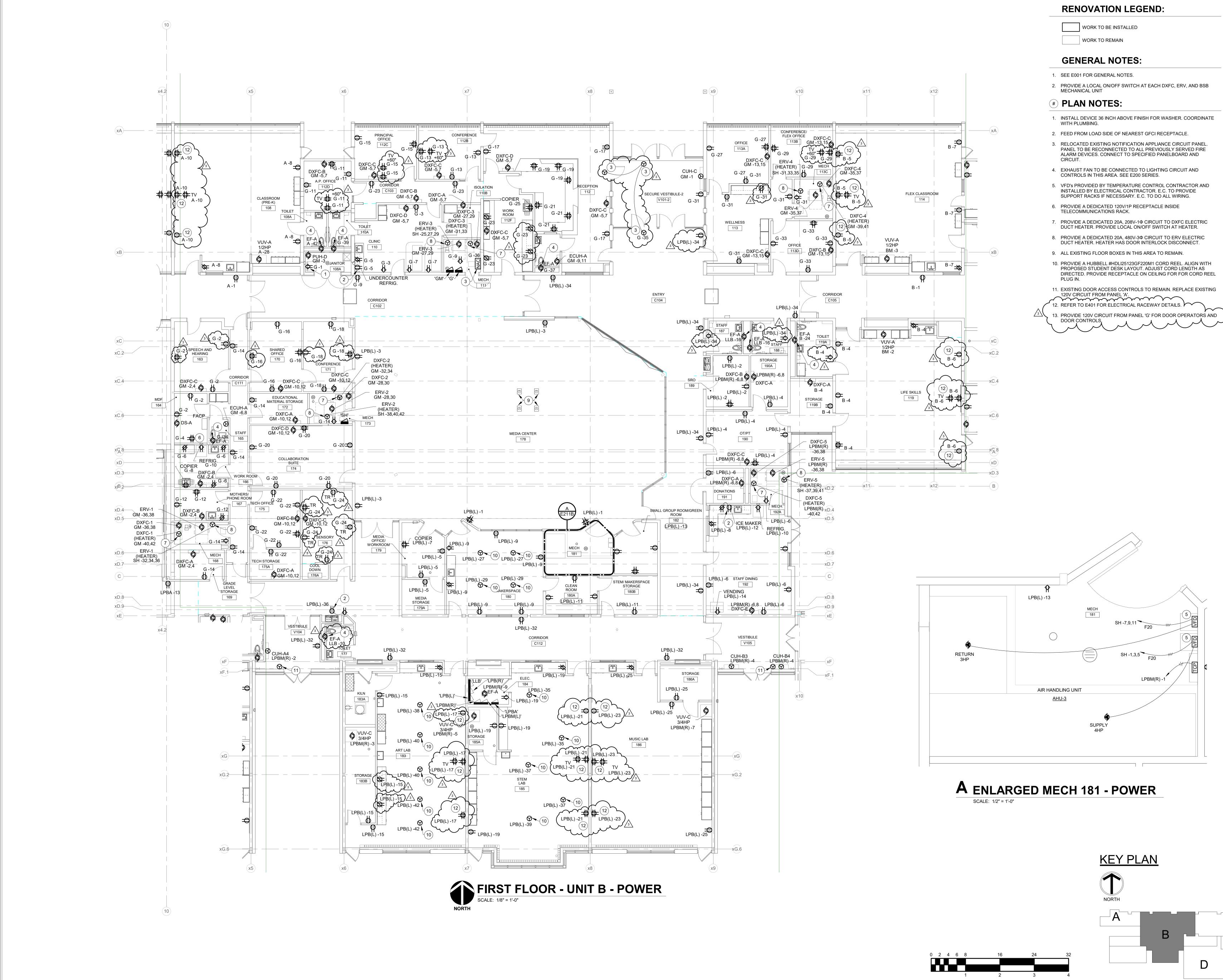


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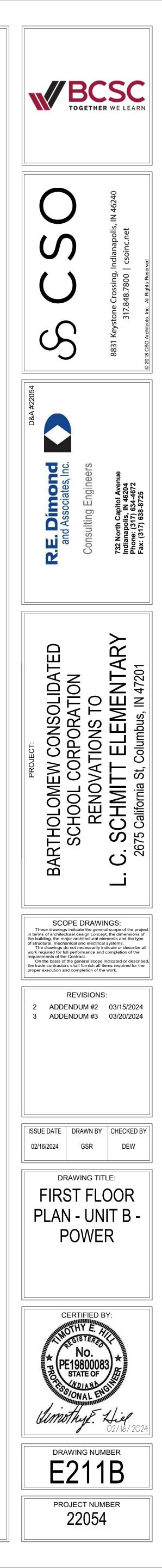
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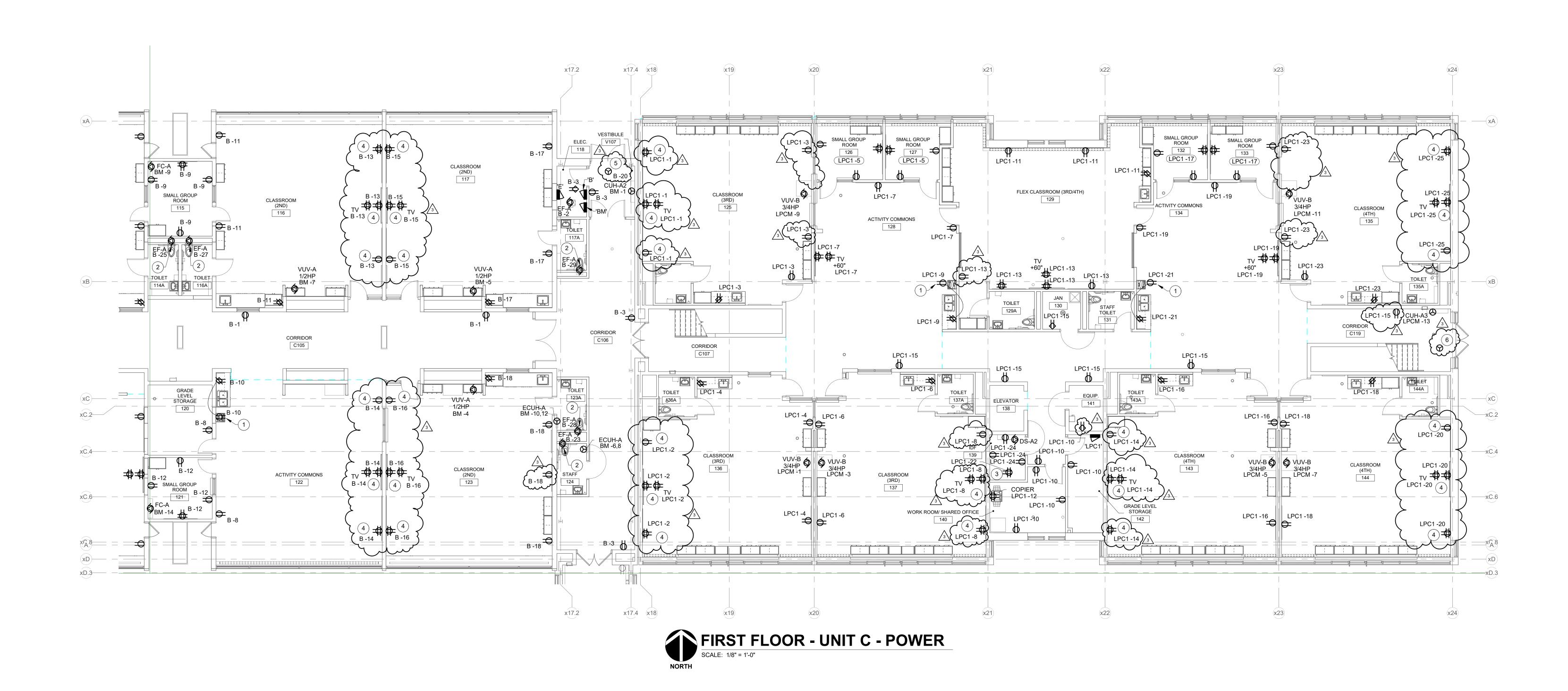






| WORK TO BE INSTALLED |
|----------------------|
| WORK TO REMAIN       |





- WORK TO BE INSTALLED
- **GENERAL NOTES:**
- 1. SEE E001 FOR GENERAL NOTES.

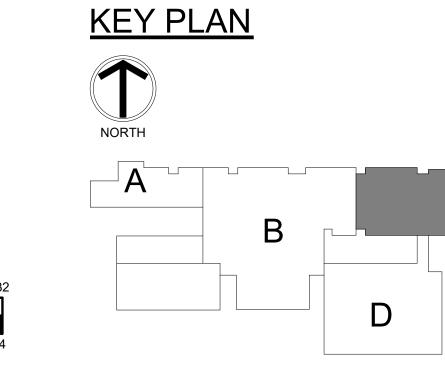
### **# PLAN NOTES:**

- 1. FEED FROM LOAD SIDE OF NEAREST GFCI RECEPTACLE.
- 2. EXHAUST FAN TO BE CONNECTED TO LIGHTING CIRCUIT AND CONTROLS IN THIS AREA. SEE E200 SERIES.
- 3. PROVIDE A DEDICATED 120V/1P RECEPTACLE INSIDE

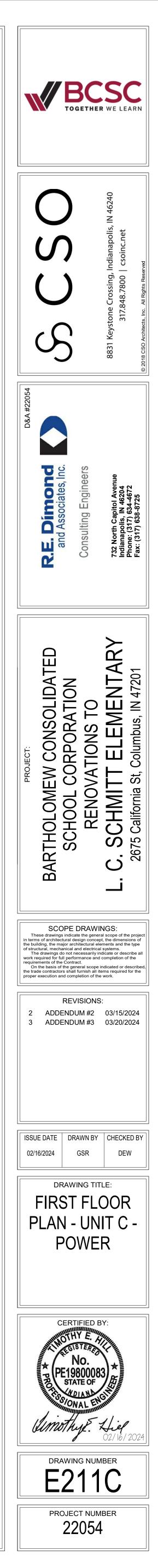
120V CIRCUIT FROM NEW PANEL 'LPC1

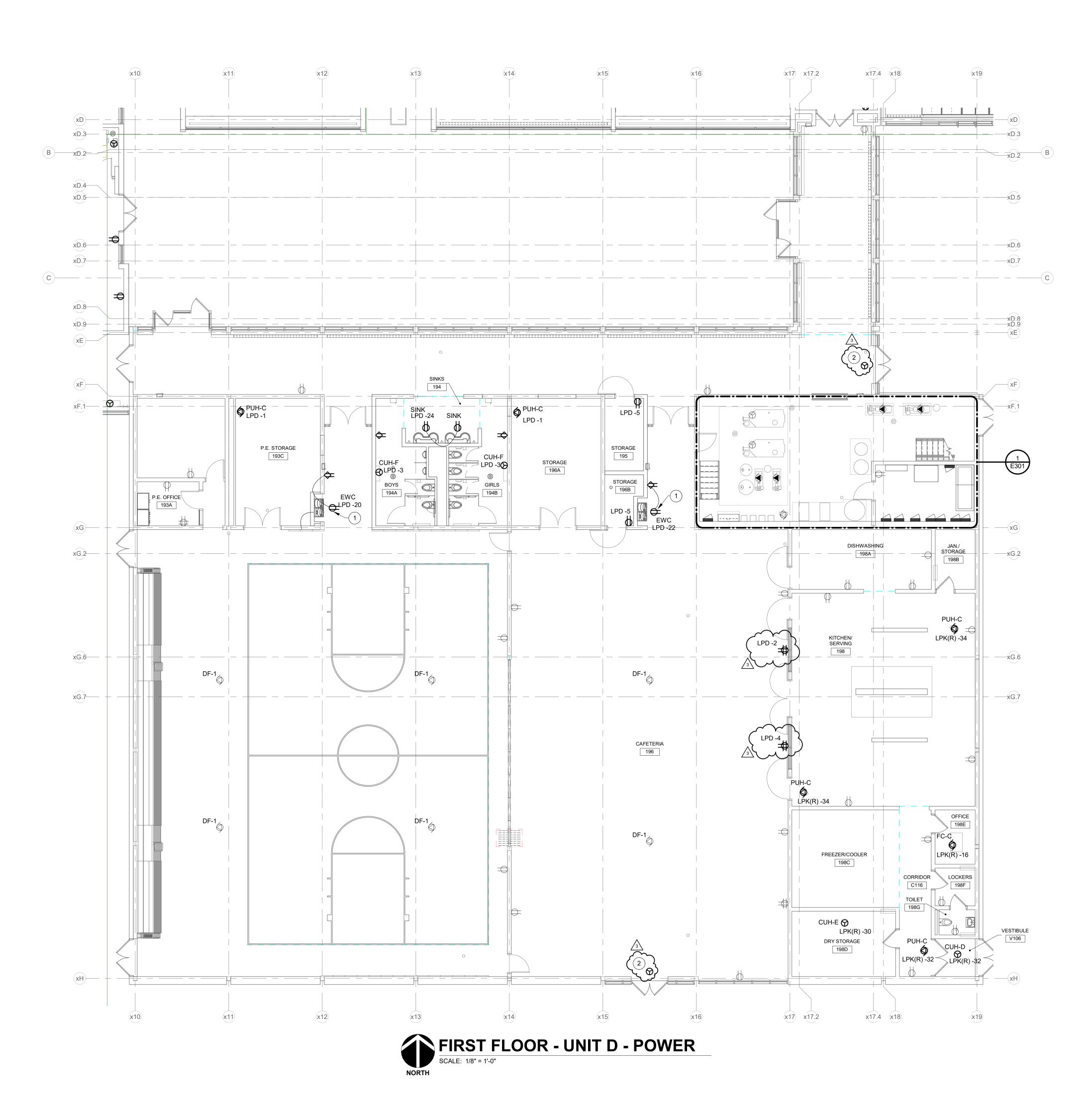
- 4. REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.
- REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.
   PROVIDE 120V CIRCUIT FROM PANEL 'B' FOR DOOR OPERATORS AND DOOR CONTROLS.

6. EXISTING DOOR ACCESS CONTROLS TO REMAIN. REPLACE EXISTING







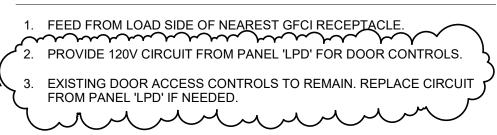


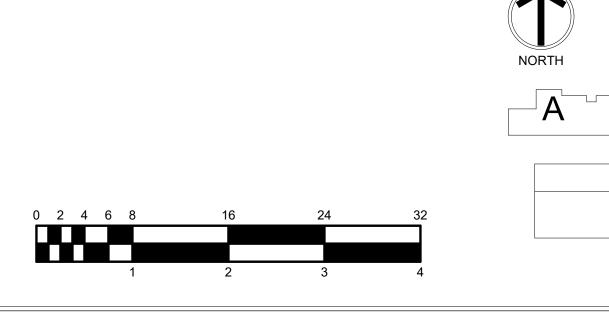
WORK TO BE INSTALLED

### **GENERAL NOTES:**

# 1. SEE E001 FOR GENERAL NOTES.

# **# PLAN NOTES:**

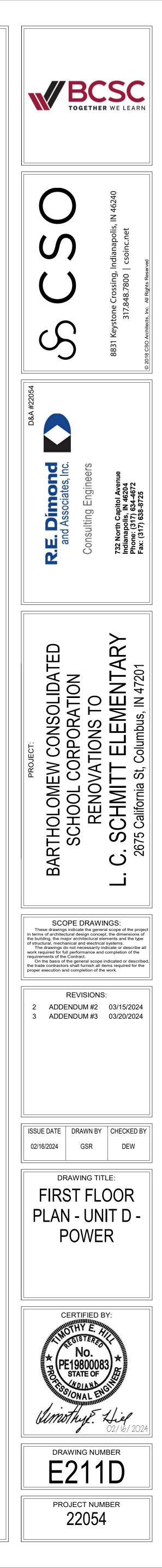


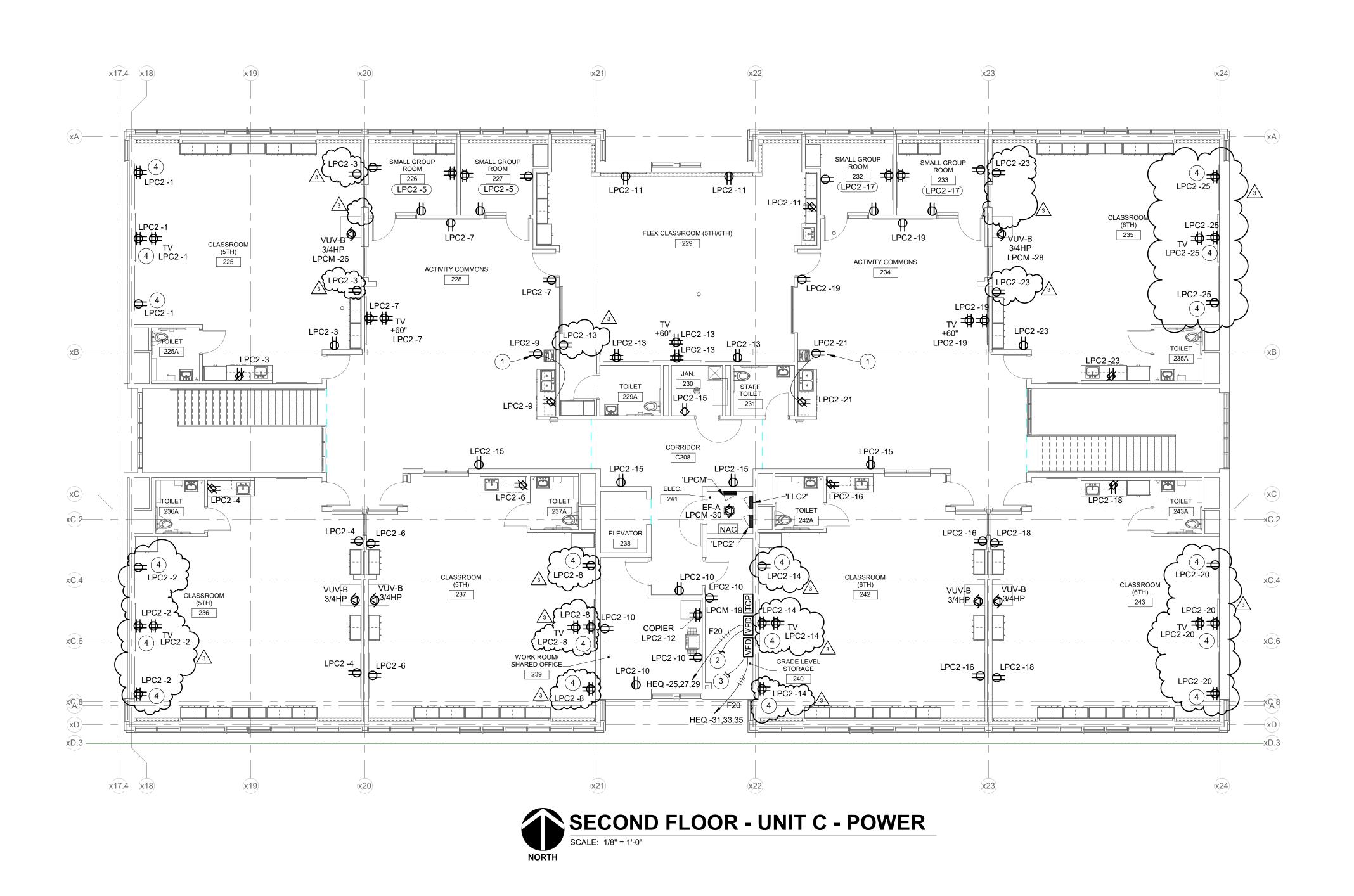


В

С

<u>KEY PLAN</u>





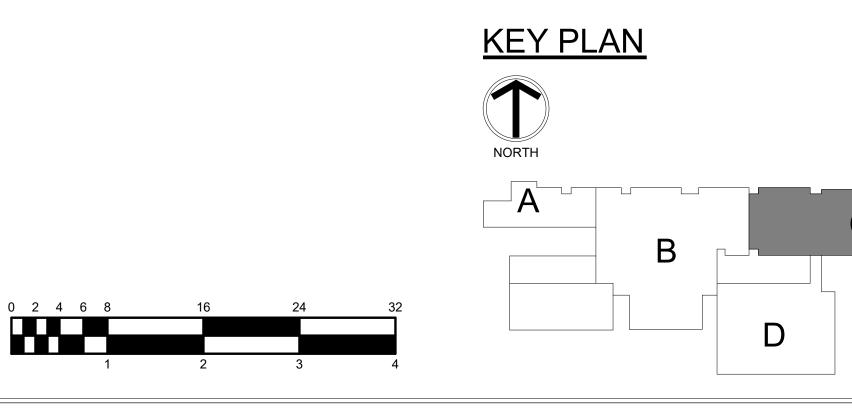
- WORK TO BE INSTALLED WORK TO REMAIN

# **GENERAL NOTES:**

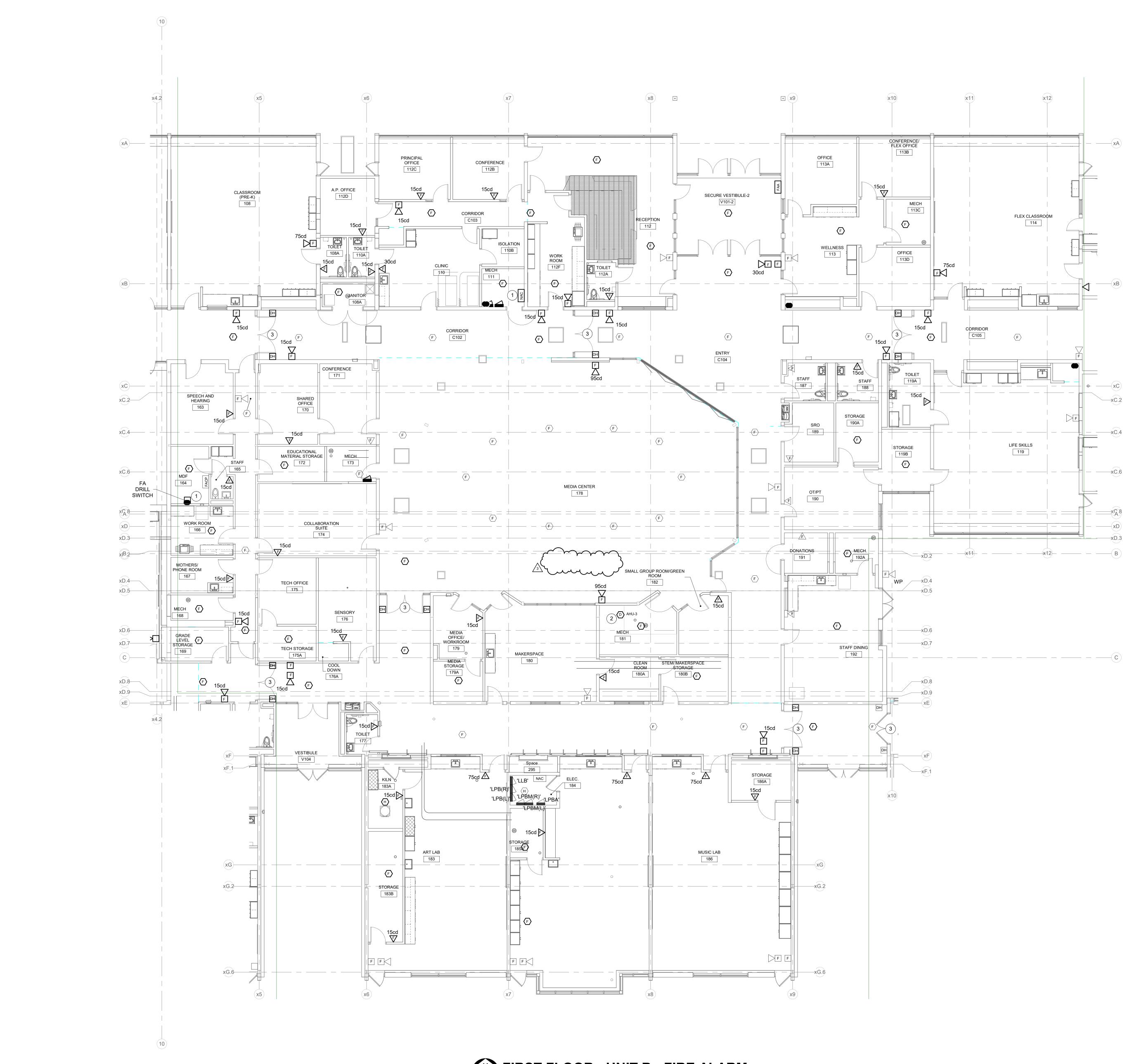
1. SEE E001 FOR GENERAL NOTES.

### **# PLAN NOTES:**

- 1. FEED FROM LOAD SIDE OF NEAREST GFCI RECEPTACLE.
- 2. CONTROL WIRING TO AIR HANDLING UNIT (AHU-4) SUPPLY FAN ON UNIT C ROOF. 3#12, 1#12 GND, 3/4" C.
- 3. CONTROL WIRING TO AIR HANDLING UNIT (AHU-4) RETURN FAN ON
- UNIT C ROOF. 3#12, 1#12 GND, 3/4" C. 4. REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.









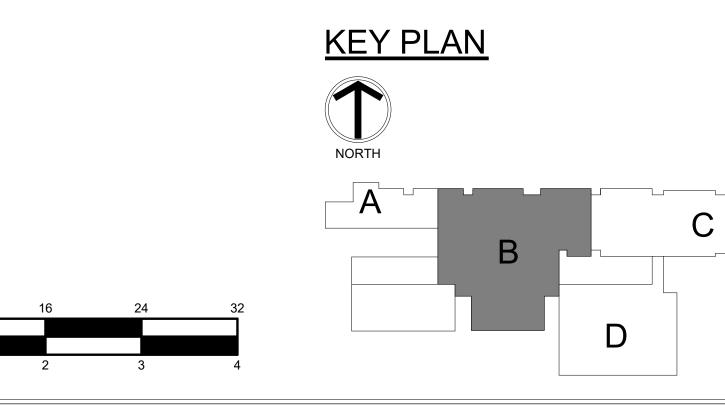
WORK TO BE INSTALLED

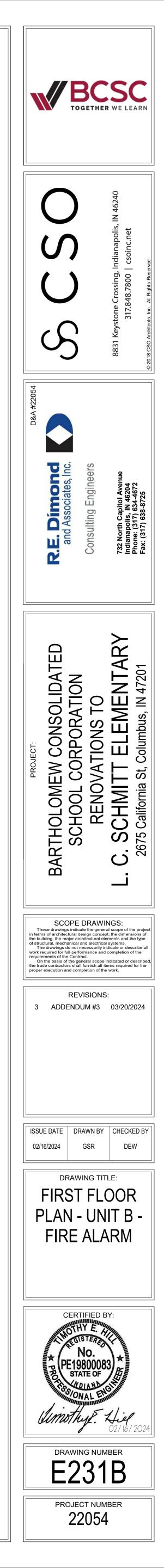
### **GENERAL NOTES:**

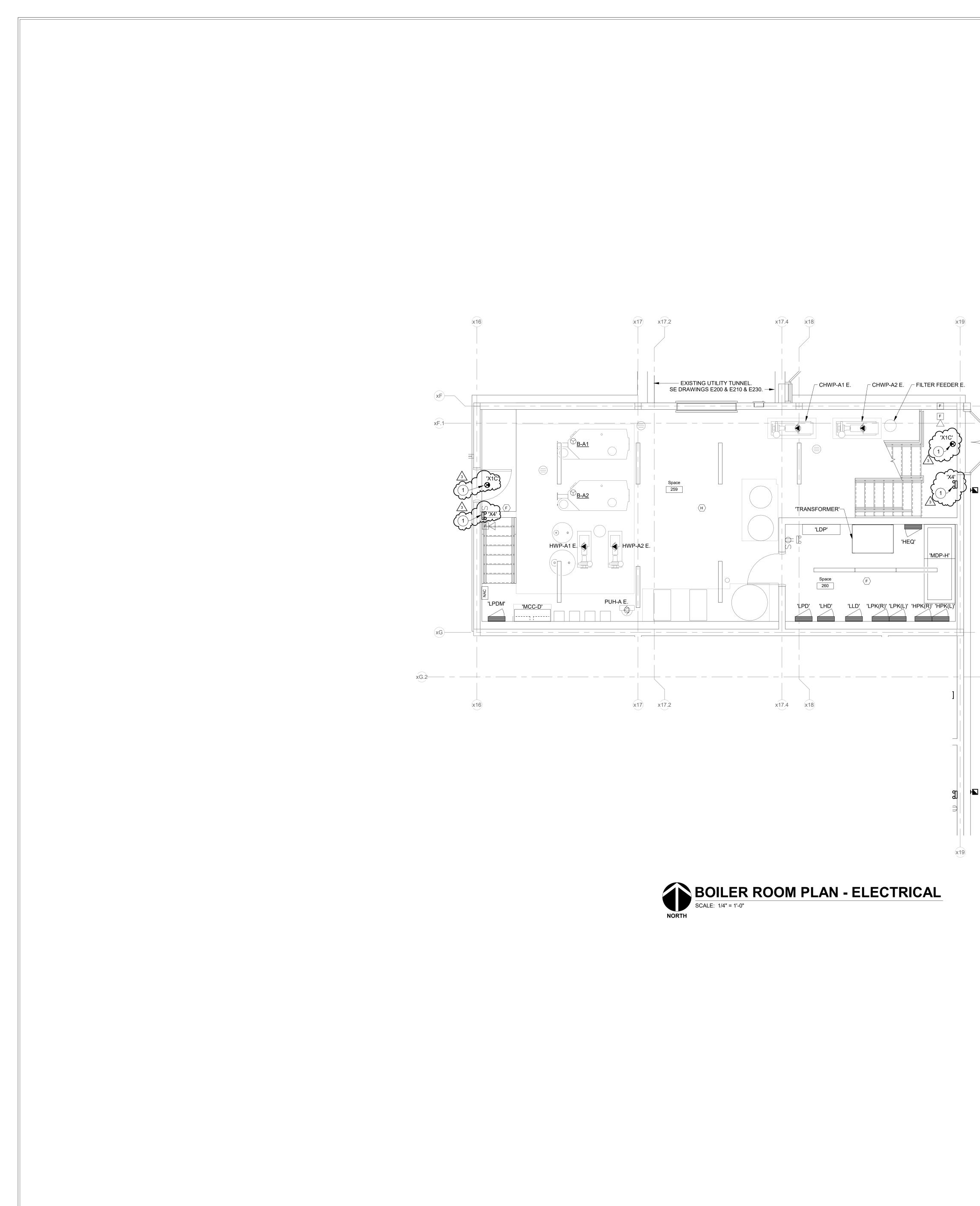
1. REFER TO SHEET E001 FOR ADDITIONAL GENERAL NOTES.

## **# PLAN NOTES:**

- 1. RELOCATED FIRE ALARM DEVICE. ALL PREVIOUS DEVICE CONNECTIONS TO REMAIN.
- 2. INSTALL DUCT MOUNTED SMOKE DETECTOR IN AHU RETURN AND WIRE TO SHUT DOWN AHU.
- 3. PROVIDE FIRE ALARM HOLD OPENS AS SHOWN AND CONNECT TO ELECTRONIC HOLD OPEN PROVIDED IN DOOR CLOSER. INTERFACE WITH LOCK DOWN SYSTEM.



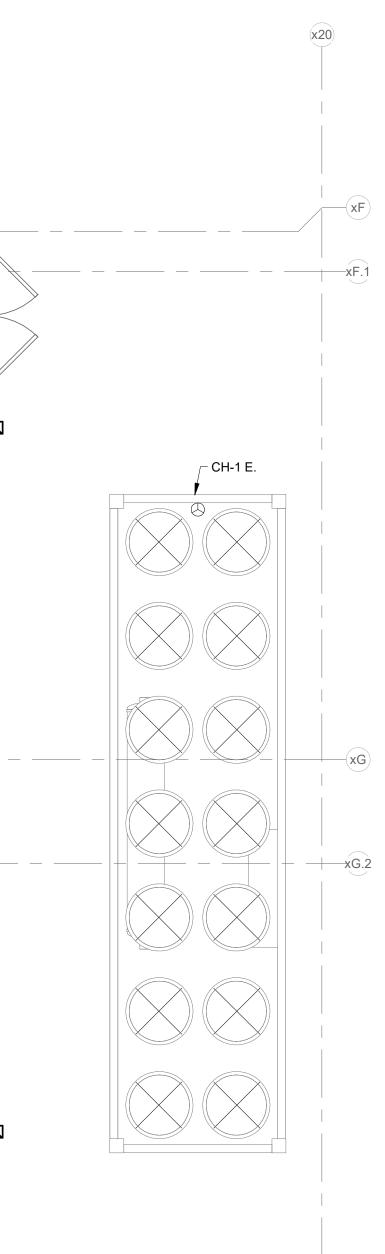




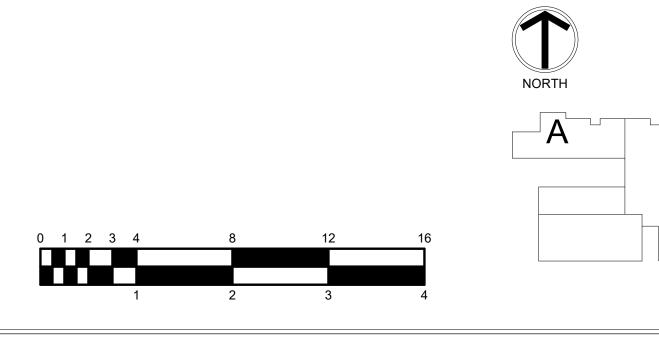
WORK TO BE INSTALLED

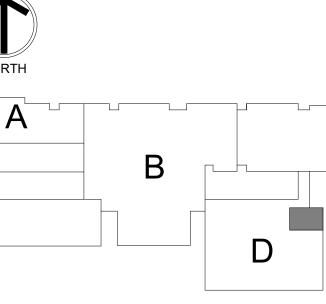
# **GENERAL NOTES:**

| ~~         | 1. SEE E001 FOR GENERAL NOTES.                           |
|------------|--|
| $\langle$  | <b># PLAN NOTES:</b>                                     |
| Č          | 1. CONNECT FIXTURE TO EXISTING LIGHTING CIRCUIT IN ROOM. |
| $\sqrt{3}$ | MMM  |

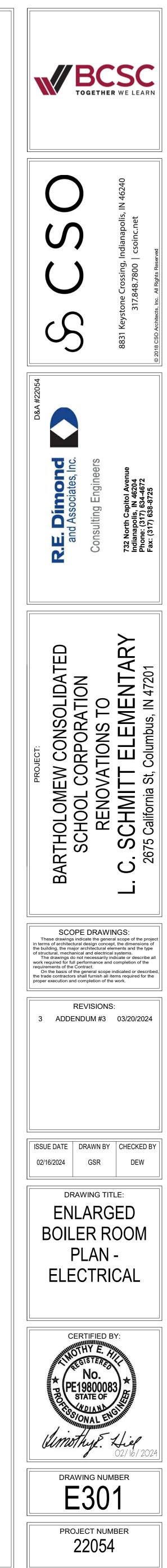


(x20)

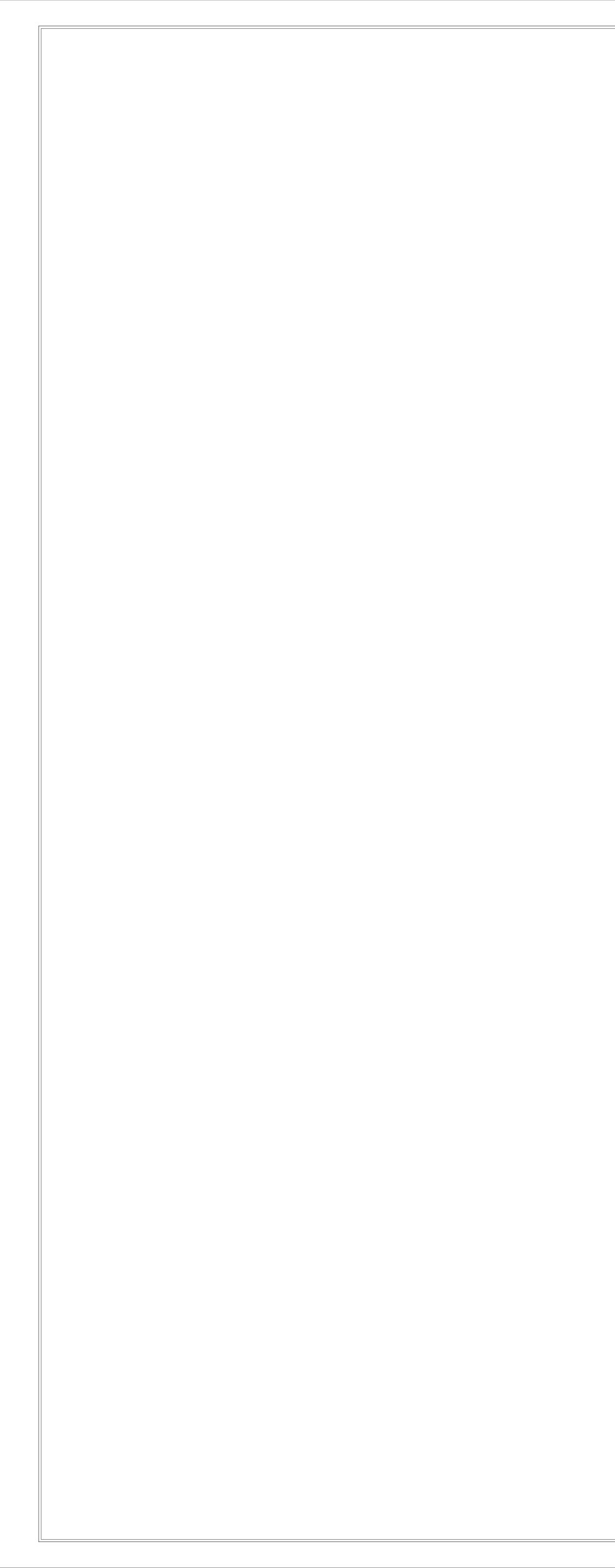


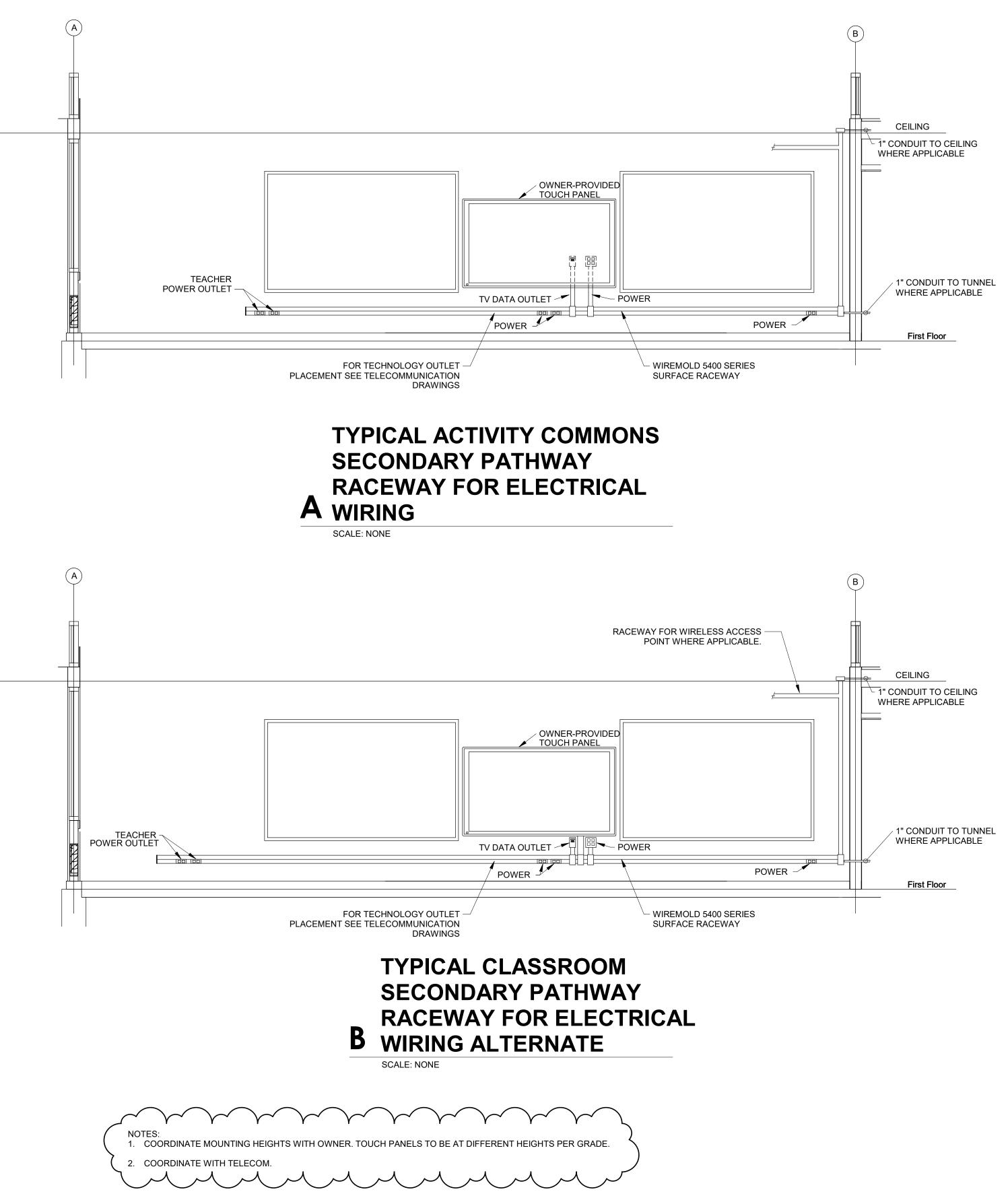


<u>KEY PLAN</u>

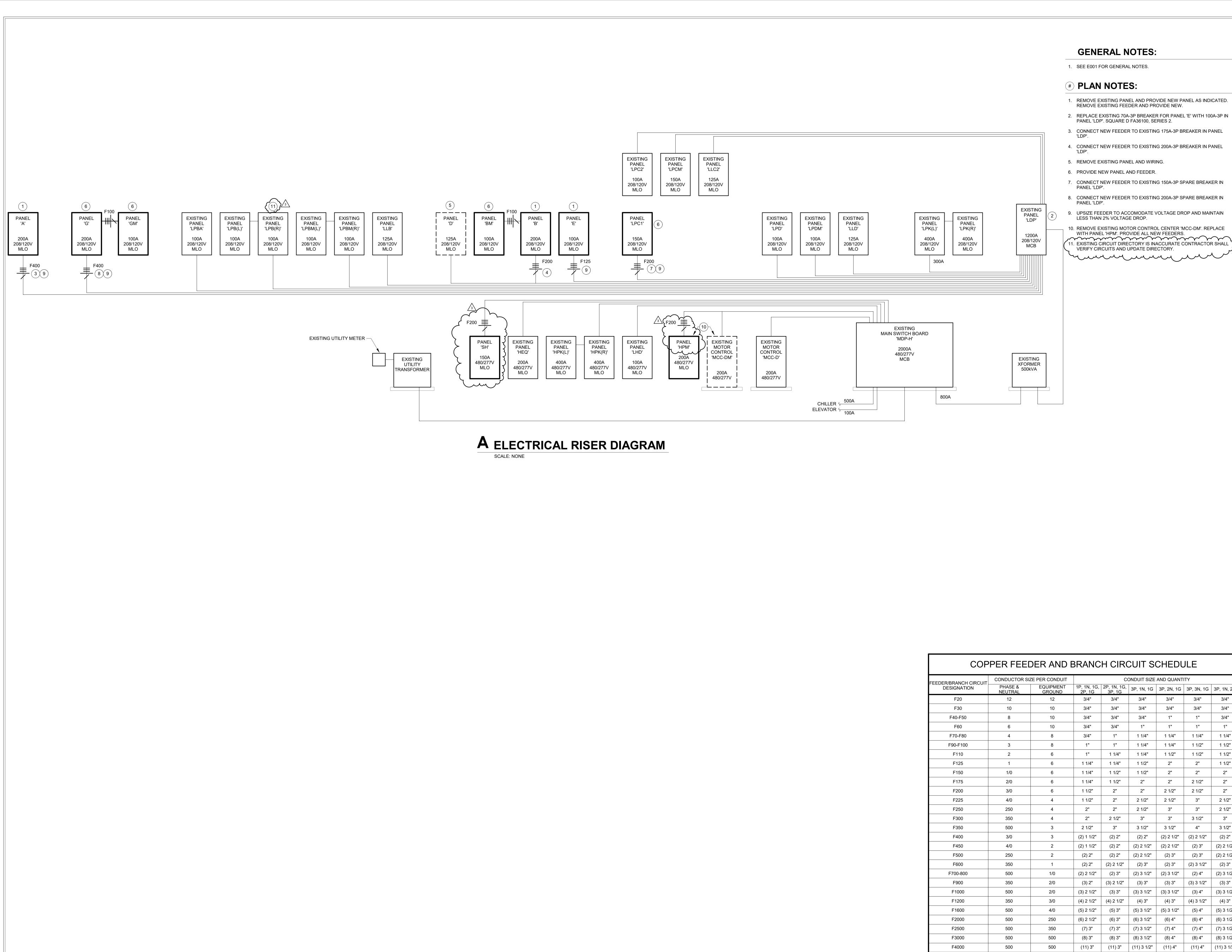


C

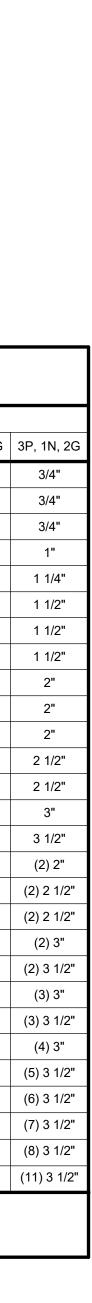








| DER/BRANCH CIRCUIT | CONDUCTOR SI       | ZE PER CONDUIT      |                       | C                     | ONDUIT SIZE | AND QUANT  | ITY        |   |
|--------------------|--------------------|---------------------|-----------------------|-----------------------|-------------|------------|------------|---|
| DESIGNATION        | PHASE &<br>NEUTRAL | EQUIPMENT<br>GROUND | 1P, 1N, 1G,<br>2P, 1G | 2P, 1N, 1G,<br>3P, 1G | 3P, 1N, 1G  | 3P, 2N, 1G | 3P, 3N, 1G | 3 |
| F20                | 12                 | 12                  | 3/4"                  | 3/4"                  | 3/4"        | 3/4"       | 3/4"       |   |
| F30                | 10                 | 10                  | 3/4"                  | 3/4"                  | 3/4"        | 3/4"       | 3/4"       |   |
| F40-F50            | 8                  | 10                  | 3/4"                  | 3/4"                  | 3/4"        | 1"         | 1"         |   |
| F60                | 6                  | 10                  | 3/4"                  | 3/4"                  | 1"          | 1"         | 1"         |   |
| F70-F80            | 4                  | 8                   | 3/4"                  | 1"                    | 1 1/4"      | 1 1/4"     | 1 1/4"     |   |
| F90-F100           | 3                  | 8                   | 1"                    | 1"                    | 1 1/4"      | 1 1/4"     | 1 1/2"     |   |
| F110               | 2                  | 6                   | 1"                    | 1 1/4"                | 1 1/4"      | 1 1/2"     | 1 1/2"     |   |
| F125               | 1                  | 6                   | 1 1/4"                | 1 1/4"                | 1 1/2"      | 2"         | 2"         |   |
| F150               | 1/0                | 6                   | 1 1/4"                | 1 1/2"                | 1 1/2"      | 2"         | 2"         |   |
| F175               | 2/0                | 6                   | 1 1/4"                | 1 1/2"                | 2"          | 2"         | 2 1/2"     |   |
| F200               | 3/0                | 6                   | 1 1/2"                | 2"                    | 2"          | 2 1/2"     | 2 1/2"     |   |
| F225               | 4/0                | 4                   | 1 1/2"                | 2"                    | 2 1/2"      | 2 1/2"     | 3"         |   |
| F250               | 250                | 4                   | 2"                    | 2"                    | 2 1/2"      | 3"         | 3"         |   |
| F300               | 350                | 4                   | 2"                    | 2 1/2"                | 3"          | 3"         | 3 1/2"     |   |
| F350               | 500                | 3                   | 2 1/2"                | 3"                    | 3 1/2"      | 3 1/2"     | 4"         |   |
| F400               | 3/0                | 3                   | (2) 1 1/2"            | (2) 2"                | (2) 2"      | (2) 2 1/2" | (2) 2 1/2" |   |
| F450               | 4/0                | 2                   | (2) 1 1/2"            | (2) 2"                | (2) 2 1/2"  | (2) 2 1/2" | (2) 3"     | - |
| F500               | 250                | 2                   | (2) 2"                | (2) 2"                | (2) 2 1/2"  | (2) 3"     | (2) 3"     | - |
| F600               | 350                | 1                   | (2) 2"                | (2) 2 1/2"            | (2) 3"      | (2) 3"     | (2) 3 1/2" |   |
| F700-800           | 500                | 1/0                 | (2) 2 1/2"            | (2) 3"                | (2) 3 1/2"  | (2) 3 1/2" | (2) 4"     |   |
| F900               | 350                | 2/0                 | (3) 2"                | (3) 2 1/2"            | (3) 3"      | (3) 3"     | (3) 3 1/2" |   |
| F1000              | 500                | 2/0                 | (3) 2 1/2"            | (3) 3"                | (3) 3 1/2"  | (3) 3 1/2" | (3) 4"     |   |
| F1200              | 350                | 3/0                 | (4) 2 1/2"            | (4) 2 1/2"            | (4) 3"      | (4) 3"     | (4) 3 1/2" |   |
| F1600              | 500                | 4/0                 | (5) 2 1/2"            | (5) 3"                | (5) 3 1/2"  | (5) 3 1/2" | (5) 4"     |   |
| F2000              | 500                | 250                 | (6) 2 1/2"            | (6) 3"                | (6) 3 1/2"  | (6) 4"     | (6) 4"     | ( |
| F2500              | 500                | 350                 | (7) 3"                | (7) 3"                | (7) 3 1/2"  | (7) 4"     | (7) 4"     |   |
| F3000              | 500                | 500                 | (8) 3"                | (8) 3"                | (8) 3 1/2"  | (8) 4"     | (8) 4"     |   |
| F4000              | 500                | 500                 | (11) 3"               | (11) 3"               | (11) 3 1/2" | (11) 4"    | (11) 4"    | ( |





| SALVAGED LIGHT FIXTURE SC                               | HE   |
|---|------|
|   |      |
| MARK COUNT DESCRIPTION                                  |      |
|   |      |
| E22 26 EXISTING 2 BY 2-FOOT FIXTURE. R                  | RECE |
| E24 6 EXISTING 2 BY 4-FOOT FIXTURE. SURF/               | ACE  |
| E24R 24 SAME AS 'E24' EXCEPT RECES                      | SSE  |
| E-8 10 EXISTING 8 FOOT FLORESCENT F                     | FIXT |
| E-16 26 SAME AS 'E-8' EXCEPT LENGTH. MADE UP OF 2 SECTI | IONS |
| E-24 10 SAME AS 'E-8' EXCEPT LENGTH. MADE UP OF 3 SECTI | IONS |

NOTE: 1. VERIFY PROPER OPERATION AND REPLACE BALLASTS AND DRIVERS AS REQUIRED.

2. REPLACE ALL FLORESCENT TUBES WITH NEW. VERIFY COLOR TEMPERATURE WITH OWNER/ARCHITECT.

3. COUNT ONLY SHOWN FOR REFERENCE. VERIFY IN FIELD.

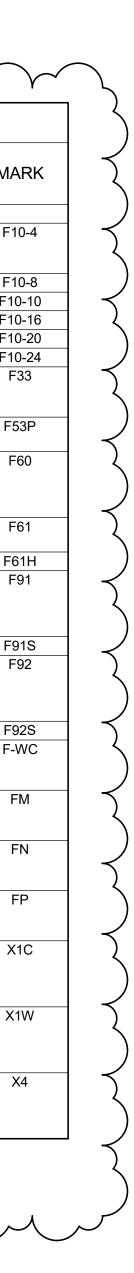
4. FIXTURES MAY BE TAKEN APART TO FORM DESIRED LENGTHS.

5. ALL RELOCATED FIXTURES MUST BE MOUNTED TO MATCH EXISTING (OR PREVOUSLY EXISTING) FIXTURES IN RELOCATION AREA.

# HEDULE

ESSED. E MOUNTED. NS OF TYPE 'E-8' FIXTURES. NS OF TYPE 'E-8' FIXTURES.

|       |  |       |              |        |        | E   | HEDUL                     | JRE SCH                | LIGHT FIXTU  |      |
|-------|--|-------|--------------|--------|--------|-----|---------------------------|------------------------|--|------|
| MAR   | MANUFACTURER(S)  | OLTS  | LUMENS       | COLOR  | WATTS  | CRI | TOTAL<br>FIXTURE<br>WATTS | MOUNTING               | DESCRIPTION  | ARK  |
| F10-4 | JESCO LIN-DI SERIES<br>FOCAL POINT SEEM 2<br>MARK SLOT 2 SERIES                                    |       | 1319/FT      | 3500K  | 10W/FT | 80  | 40                        | SUSPENDED              | LINEAR DIRECT/INDIRECT 2.5-INCH WIDE BY LENGTH INDICATED, AIRCRAFT CABLE, ALUMINUM HOUSING, ADJUSTABLE COLOR<br>TEMPERATURE, WHITE LENS, 0-10V DIMMING.  | 10-4 |
| F10-8 |  | 120 V | 1319/FT      | 3500K  | 10W/FT | 80  | 80                        | SUSPENDED              | LINEAR DIRECT/INDIRECT 2.5-INCH WIDE BY LENGTH INDICATED, AIRCRAFT CABLE, WHITE LENS, 0-10V DIMMING.   | 10-8 |
| F10-1 |  | 120 V | 1319/FT      | 3500K  | 10W/FT | 80  | 100                       | SUSPENDED              | SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.   | 0-10 |
| F10-1 |  | 120 V | 1319/FT      | 3500K  | 10W/FT | 80  | 160                       | SUSPENDED              | SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.   | 0-16 |
| F10-2 |  | 120 V | 1319/FT      | 3500K  | 10W/FT | 80  | 200                       | SUSPENDED              | SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.   | 0-20 |
| F10-2 |  | 120 V | 1319/FT      | 3500K  | 10W/FT | 80  | 240                       | SUSPENDED              | SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.   | 0-24 |
| F33   | HALO COMMERCIAL HC8 SERIES<br>LITHONIA LDN8 SERIES<br>PRESCOLITE LC8 SERIES                        |       | 1100         | 3500K  | 14.4W  | 80  | 14                        | RECESSED               | OPEN DOWNLIGHT, 8-INCH DIAMETER APERTURE, CLEAR SEMI-SPECULAR REFLECTOR, SELF FLANGED, 0-10V DIMMING TO 10-PERCENT, NON-IC RATED.  | -33  |
| F53F  | DEMI INTERIOR PENDENT  | 120 V | 6617         | 3500K  | 68W    | 80  | 68                        | PENDENT                | 24-INCH DIAMETER PENDENT FIXTURE, STEM MOUNTED, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG<br>OF STANDARD FINISHES, INTEGRAL DRIVER, 2 FT TOTAL LENGTH.  | 53P  |
| F60   | COLUMBIA MPS SERIES<br>CREE LS4 SERIES<br>LITHONIA CSS SERIES<br>METALUX SNLED SERIES              |       | 5000         | 3500K  | 48W    | 80  | 48                        | SURFACE/<br>CHAIN HUNG | 4-FOOT LENSED INDUSTRIAL, FORMED STEEL HOUSING, WHITE FINISH, SEMI-FROST ACRYLIC DIFFUSER.   | -60  |
| F61   | ILP QWIKLINK   | 120 V | 5000         | VERIFY | 38W    | 80  | 38                        | SURFACE                | 4-FOOT LENSED INDUSTRIAL, FORMED STEEL HOUSING, WHITE FINISH, FROSTED ACRYLIC LENS, SELECTABLE LUMEN OUTPUT AND TEMPERATURE.   | -61  |
| F61F  |  | 120 V | 5000         | VERIFY | 38W    | 80  | 38                        | SUSPENDED              | SAME AS 'F61' EXCEPT SUSPENDED   | 61H  |
| F91   | COLUMBIA CFP22 SERIES<br>CREE C-TR-A-FP22<br>LITHONIA CPANL22 SERIES<br>METALUX 22FP SERIES        | 120 V | 3200         | 3500K  | 32W    | 80  | 32                        | RECESSED               | 2 BY 2-FOOT FLAT PANEL, ACRYLIC LENS, EDGE-LIT, 0-10V DIMMING TO 10-PERCENT  | 91   |
| F91S  |  | 120 V | 3200         | 3500K  | 32W    | 80  | 32                        | SURFACE                | SAME AS 'F91' EXCEPT SURFACE MOUNTED.  | 91S  |
| F92   | COLUMBIA CFP24 SERIES<br>CREE C-TR-A-FP24 SERIES<br>LITHONIA CPANL24 SERIES<br>METALUX 24FP SERIES | 120 V | 4000         | 3500K  | 40W    | 80  | 40                        | RECESSED               | 2 BY 4-FOOT FLAT PANEL, ACRYLIC LENS, EDGE-LIT, 0-10V DIMMING TO 10-PERCENT  | -92  |
| F92S  |  | 120 V | 4000         | 3500K  | 40W    | 80  | 40                        | RECESSED               | SAME AS 'F92' EXCEPT SURFACE MOUNTED.  | 92S  |
| F-WC  | USAI LIGHTING MICRO MULTI-CELL SERIES  | 120 V | 60/W TO 72/W | 3500K  | 21W    | 80  | 21                        | (IN<br>DESCRIPTION)    | LINEAR DOWNLIGHT WITH INTEGRAL DRIVER, SUITABLE FOR 'WOODWORKS GRILLE - FORTE' CEILING, 6 CELL, PLACED BETWEEN<br>SLATS, ARCHITECT TO SELECT FINISH, 35 DEGREE BEAM, VERIFY CEILING MODEL WITH ARCHITECT BEFORE ORDERING, BOTTOM OF<br>FIXTURE ALIGNED WITH BOTTOM OF CEILING. | -WC  |
| FM    | KENALL MR17FD SERIES<br>NEWSTAR GWRO SERIES<br>COOPER TRB/TRR SERIES                               |       | 2000         | 3000K  | 20W    | 70  | 20                        | SURFACE<br>CEILING     | 17-INCH NOMINAL DIAMETER ROUND FIXTURE, CAST ALUMINUM HOUSING, FROSTED POLYCARBONATE LENS, WET LOCATION<br>LISTED, GASKETED, INTEGRAL EMERGENCY BATTERY BACKUP, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S<br>CATALOG OF STANDARD FINISHES.                        | -M   |
| FN    | EXO SG SERIES<br>LITHONIA WPX SERIES<br>LUMARK AXCS SERIES   |       | 2000         | 3000K  | 20W    | 70  | 20                        | SURFACE WALL           | ARCHITECTURAL WALL PACK, CAST ALUMINUM HOUSING, GASKETED, FULL CUTOFF, WET LOCATION LISTED, INTEGRAL EMERGENCY<br>BATTERY BACKUP, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD COLORS.   | FN   |
| FP    | EXO SG SERIES<br>LITHONIA WPX SERIES<br>LUMARK AXCS SERIES   |       | 2000         | 3000K  | 20W    | 70  | 20                        | SURFACE WALL           | SAME AS FIXTURE 'FN,' EXCEPT NO INTEGRAL EMERGENCY BATTERY BACKUP.   | FP   |
| X1C   | DUAL-LITE SE SERIES<br>SURE-LITES CX SERIES<br>LITHONIA LE SERIES<br>MULE MD SERIES                |       | N/A          | GREEN  | 5W     | 80  | 5                         | SURFACE<br>CEILING     | THERMOPLASTIC EXIT SIGN, WHITE HOUSING, SELF POWERED, SELF DIAGNOSTIC.   | (1C  |
| X1W   | DUAL-LITE SE SERIES<br>SURE-LITES CX SERIES<br>LITHONIA LE SERIES<br>MULE MD SERIES                |       | N/A          | GREEN  | 5W     | 80  | 5                         | SURFACE WALL           | THERMOPLASTIC EXIT SIGN, WHITE HOUSING, SELF POWERED, SELF DIAGNOSTIC.   | (1W  |
| X4    | DUAL-LITE EV SERIES<br>SURE-LITES SEL25 SERIES<br>LITHONIA ELM2 SERIES<br>MULE SQ-80-LED SERIES    | -     | N/A          | WHITE  | 5W     | 80  | 5                         | SURFACE WALL           | EMERGENCY LIGHTING UNIT, 90-MINUTE EMERGENCY CAPACITY, DAMP LOCATION LISTED, SELF DIAGNOSTIC.  | X4   |





| NT         Description         Note         Am         Pole         Am  | Crt         Description         Note And Posce         A         B         C         Posce         Amp Posce         Note Addition         Note   | NT         Description         NOTE AVE         POLE         A         B         C         POLE AVE         NOTE  | DESCRIPTION         NOTE         AMP PoLE         A         B         C         POLE AMP NOTE         DESCRIPTION         OCT           CULIAD VISTRILL VISTO         20 A         1   | VIX         Description         NOTE         AUX         B         C         POLE         AUV         DESCRIPTION         CKT         DESCRIPTION         CKT           1         CUL4-2VESTBULE V107         20 A         1         1000/1170         1         20 A         VUVA-12HP LEX CLASSROOM (2ND) 117         20 A         1         20 A         VUVA-12HP LEX CLASSROOM (2ND) 117         20 A         1         20 A         ECULH ASTAP 12A         6           5         VUVA-12HP ELX CLASSROOM (2ND) 117         20 A         1         20 A         ECULH ASTAP 12A         6           6         FARACE         20 A         1         07760         2         20 A         ECULH ASTOLE F123A         10         20 A         RECEPT CORR.100K (VSE1 107         20 A         1         20 A         RECEPT 12K (2ASSROOM 114         20 A         1         20 A         RECEPT           1         3         SPARE         20 A         1         20 A         RECEPT 12K (2ASSROOM 114         20 A         1         20 A         RECEPT         1         20 A         RECEPT         1         20 A         RECEPT           3         SPARE         20 A         1         20 A         SPARE         20 A         SPARE         20 A </th <th>NT         DESCRIPTION         NOTE         Ame Pole         Ame         C         Pole         Ame         C         Pole         Ame         C         Pole         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         B         C         Pole         Ame         Cover         Ame         Cover         Ame         Ame<!--</th--><th>T         DESCRIPTION         NOTE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         DESCRIPTION         CKT           CULHA2VESTRULE V107         20A         1         1000/1176         120A         1         20A         1</th></th> | NT         DESCRIPTION         NOTE         Ame Pole         Ame         C         Pole         Ame         C         Pole         Ame         C         Pole         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         Cover         Ame         B         C         Pole         Ame         Cover         Ame         Cover         Ame         Ame </th <th>T         DESCRIPTION         NOTE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         DESCRIPTION         CKT           CULHA2VESTRULE V107         20A         1         1000/1176         120A         1         20A         1</th>   | T         DESCRIPTION         NOTE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         POLE         AMP         DESCRIPTION         CKT           CULHA2VESTRULE V107         20A         1         1000/1176         120A         1         20A         1   |
|---|---|--|--|--|--|---|
| 1       CUH-A2 VESTIBULE VIOT       20A       1       1000/1176       20A       1   | 1       CULHA2 VESTRULE V/07       20       1       1       20       VUVA 10/P LEXCESSROAL       1       0       1       0       0       1       0       0       1       0       0       1       0       0       1       0  | 1       CUL-A2 VESTIBLE V107       20 A       VUVA-1/20E-IFFE AULASPACE COMPARE COMP   | CULHAD VESTIONE FV07       20A       1       100/1176       1       20A       VUVA 12/PE URE SUBSEROM (2AD) 12       4       5       4       5       400/200       720/180       1       20A   | 1       CULH-A2 VESTBULE VI07       20 A       1       1000 /1170       20 A       1       20 A       VUVA 124PLES (ASSRO)       20 A       1  | 1       CULH-A2 VESTIBLIE VI07       20 A       1       100/1170       20 A       1       20 A       VUVA 12/PLEX CLASSROOM 1200 117       20 A       1       20 A       1       20 A       VUVA 12/PLEX CLASSROOM 14       20 A       1   | CULHA2VESTBULE VO7       20A       1       1000/1176       10A       VUV-A 120H CLASSROOM (2ND) 123       2A       1       Stor 200       1       20A   |
| 3       VUVA 124P FLASSROOM 14       20 A       1       1176 / 1176       1       20 A       1       VUVA 124P FLASSROOM 24D0 117       20 A       1       20 A       1<   | 3       VUVA 12HP LASSROM (2ND) 117       2A       1       17       17       17       1       0A       1       1       17       1       0A       1       1       17       1       0A       1       1       0A   | 3       VUVA 124P PLEX CLASSROOM (2NO )117       20 A       1       10 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT CORE. 100. VEST 107       20 A       1       00 A       RECEPT COR   | VUVA 124P FLEX CLASSROOM X20P 112       20 A       1       720 / 1176 70       720 / 1500       1       0A       REC         VUVA 124P CLASSROOM X20P 117       20 A       1       1176 / 1176       1       0A       ECULA STAF 124       6         VUVA 124P CLASSROOM X20P 116       20 A       1       1176 / 70       20 A       1       100 A       REC         SPARE       20 A       1       010       0       1       0A       SPARE       20 A       1       010       1       0A       REC         SPARE       20 A       1       010       1       0A       SPARE       20 A       1       010       1       0A       REC         SPARE       20 A       1       010       1       0A       SPARE       1       010       1       0A       REC         SPARE       20 A       1       010       1       0A       SPARE       1       010       1       0A       REC       100   | a       VUV-A 124P PLEX CLASSROOM 14       20 A       1  | 3       VUVA (24P FL82 LASSROOM 14)       20       1176 / 1176 / 50       1       20       VUVA (24P FL82 LASSROOM 120 D1)7       20       1       20       RECEPT CR8. (0.5 VET. 107)       20.4       1       20.4       RECEPT CR8. (0.5 VET. 107)       20.4       1       20.4 <th>VUVA 120P FLEX CLASSROOM 114       20 A       1       1176 / 176 / 50       2       2 A       VUVA 120P CLASSROOM (2ND) 123 4       3       RECEPT CARASROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       RECEPT CLASSROOM 120 116       20 A       1       20 A       RECEPT CLASSROOM 120 116       20 A       1       20 A       RECEPT CLAS</th> | VUVA 120P FLEX CLASSROOM 114       20 A       1       1176 / 176 / 50       2       2 A       VUVA 120P CLASSROOM (2ND) 123 4       3       RECEPT CARASROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       1       20 A       RECEPT CLASSROOM 114       20 A       1       20 A       RECEPT CLASSROOM 120 116       20 A       1       20 A       RECEPT CLASSROOM 120 116       20 A       1       20 A       RECEPT CLAS   |
| 5       VUVA 12HP LASSROOM (2ND) 117       20 Å       1176 / 750       2       2A       ECUHA STAFF 12A       6       8         9       FAN COLL FCA SMALL GROUP ROOM 115       20 Å       1       176 / 750       2       2A       ECUHA STAFF 12A       6       8         1       SPARE       2A Å       1       176 / 750       2       2A       ECUHA STAFF 12A       10       2A Å       5       500 / 800       100 / 800   | 6       VUX-A 12HP CLASSROOM (XPD) 11       20 A       1       170 (750)       2       2       A       CULH-A STAFF 124       6       5       FEECEPT FLEX CLASSROOM 114       20 A       1       200 (80)       4       20 A       1       200 (80)       4       20 A       1       200 (80)       1       100 (80) </td <td>5       VUVA 12HP (LASSROOM (2M0)117       20 A       1170 / 750       2       2 A       ECUH-A STAFF 12A       6         6       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 150       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM</td> <td>WVA V24P CLASSROOM (ADD)117       20 A       1       176 / 750       2       2 A       ECUHA STAFF 124       6       RECEPT FLEX CLASSROOM 114       20 A       1       420 A       8 A       FAN COLE C-A SMAL (APOUP ROOM 115       20 A       1       176 / 750       2       2 A       ECUHA STAFF 124       6         SPARE       20 A       1       107 / 750       2       2 A       ECUHA TOLET 123A       10       50 / 750       1       20 A       1</td> <td>6       VUVA 12HP LASSROM (2ND) 17       20 A       1176 / 750       2       2       A       ECUHA STAFF 12A       6       8       FRCEPF FLEX LASSROM 114       20 A       1       20 A</td> <td>5       VUVA 12HP (LASSROOM (2ND) 117       2DA       1       1176 / 750       2       2       2       C       ECUI+A STAFF 12A       6       8       FECEPF FLEX (LASSROOM 114)       2DA       1       2DA       1<td>UVU-A 12HP (LASSROOM (2ND) 117       20 A       1       1176 / 70       2       2       0       ECUHA STAFF 124       6       5       RECEPT FLEX (LASSROOM 114       20 A       1       200 / 80       1       20 A       1       20 A</td></td> | 5       VUVA 12HP (LASSROOM (2M0)117       20 A       1170 / 750       2       2 A       ECUH-A STAFF 12A       6         6       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 150       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 144       20 A       1       200 / 160       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM 141       20 A       1       20 A       RECCEPT FLEX (LASSROOM   | WVA V24P CLASSROOM (ADD)117       20 A       1       176 / 750       2       2 A       ECUHA STAFF 124       6       RECEPT FLEX CLASSROOM 114       20 A       1       420 A       8 A       FAN COLE C-A SMAL (APOUP ROOM 115       20 A       1       176 / 750       2       2 A       ECUHA STAFF 124       6         SPARE       20 A       1       107 / 750       2       2 A       ECUHA TOLET 123A       10       50 / 750       1       20 A       1  | 6       VUVA 12HP LASSROM (2ND) 17       20 A       1176 / 750       2       2       A       ECUHA STAFF 12A       6       8       FRCEPF FLEX LASSROM 114       20 A       1       20 A   | 5       VUVA 12HP (LASSROOM (2ND) 117       2DA       1       1176 / 750       2       2       2       C       ECUI+A STAFF 12A       6       8       FECEPF FLEX (LASSROOM 114)       2DA       1       2DA       1 <td>UVU-A 12HP (LASSROOM (2ND) 117       20 A       1       1176 / 70       2       2       0       ECUHA STAFF 124       6       5       RECEPT FLEX (LASSROOM 114       20 A       1       200 / 80       1       20 A       1       20 A</td>  | UVU-A 12HP (LASSROOM (2ND) 117       20 A       1       1176 / 70       2       2       0       ECUHA STAFF 124       6       5       RECEPT FLEX (LASSROOM 114       20 A       1       200 / 80       1       20 A   |
| 7       VUVA 12HP CLASSROOM (2N0) 116       20 A       1       1176 / 750       2       20 A       ECUH-A STAFL 123 A       1         11       SPARE       20 A       1       0 / 750       2       20 A       ECUH-A TOILET 123 A       12         13       SPARE       20 A       1       0 / 750       1       20 A       SPARE       20 A       1       20 A       1       20 A       1       20 A       RECEPT         13       SPARE       20 A       1       0 / 0       1       20 A       SPARE       1       20 A       RECEPT       SPARE       20 A       1       20 A       RECEPT         14       SPARE       20 A       1       0 / 0       1       20 A       SPARE       1       120 / 1260       1       20 A       RECEPT         14       SPARE       20 A       1       0 / 0       1       20 A       SPARE       10       1       20 A       RECEPT       SPARE       1       120 / 1260       1       20 A       RECEPT         15       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       1       1       20 A       RECEPT  | v         | 7       VUNA 124P CLASSRO0 (2ND) 16       20 A       1       10 / 16 / 15 / 15 / 15 / 15 / 15 / 15 / 15  | UVAA 124P 0LASSROOM (ND) 116       20A       1       1176 / 750       2       20A       ECUH-AS IAIL GROUP ROOM 115       20A       1       540 / 360       1       20A       1 <td>7       VUVA 124P CLASSROOM (2N0) 116       20 A       1       1176 / 750       2       20 A       ECUH-A SIAL GROUP ROOM 14       20 A       1       540 / 300       1       20 A       1</td> <td>7       VUVA 12#P CLASSROOM (2ND) 116       20 A       1       1176 / 750       2       20 A       ECUH-A SIAL GROUP ROM 14       20 A       1       540 / 360       1       20 A       1</td> <td>VUVA 124P CLASSROOM (2ND) 116       20 A       1       1176 / 750       20 A       20 A       ECUHA STAFT 124       8         FAN COLIF C-A SMALL GROUP ROOM 115       20 A       1       200 / 750       20 A       ECUHA TOLIF 123A       10       9       RECEPT FLEX CLASSROOM 114       20 A       1       900 / 800       1       900 / 800       1       200 A       1       200 / 800       1       200 A       1       200 A       1       200 / 800</td>  | 7       VUVA 124P CLASSROOM (2N0) 116       20 A       1       1176 / 750       2       20 A       ECUH-A SIAL GROUP ROOM 14       20 A       1       540 / 300       1       20 A       1   | 7       VUVA 12#P CLASSROOM (2ND) 116       20 A       1       1176 / 750       2       20 A       ECUH-A SIAL GROUP ROM 14       20 A       1       540 / 360       1       20 A       1  | VUVA 124P CLASSROOM (2ND) 116       20 A       1       1176 / 750       20 A       20 A       ECUHA STAFT 124       8         FAN COLIF C-A SMALL GROUP ROOM 115       20 A       1       200 / 750       20 A       ECUHA TOLIF 123A       10       9       RECEPT FLEX CLASSROOM 114       20 A       1       900 / 800       1       900 / 800       1       200 A       1       200 / 800       1       200 A       1       200 A       1       200 / 800   |
| 7       VUVA 12HP CLASSNOOM (ZAU)116       20 A       1       178/780       1       20 A       1  | v         | /        | VUVA /24P/ CLASSROOM (2ND) 116       20A       1       1/17/20       20/7   | 7        | 7       VUVA 1/24P (L3SSROOM (2M))116       20 A       1       1/47/50       -       1       20 A  | VUVA X2H 2UASSROOM (2ND) 116       20 A       1       77       HECH/ FLASSROOM (2ND) 116       20 A       1   |
| 11       SPARE       20 Å       1       0 / 750       2       20 Å       ECUHA 101LE 1723       12       1       RECEPT       1       20 Å       1       <   | 11       SPARE       20 Å       1       0/750       2       0/750       0/750       2       0/750       2       0/750       2       0/750       2       0/750       2       0/750       <   | 11       SPARE       20 A       1       0/750       2       20 A       1       10   | SPARE       20 A       1       0/750       2       20 A       FAR OLIC 192A       12         SPARE       20 A       1       0/0       1       20 A       FAR OLIC -ASML GROUP ROM 121       14       RECET CLASSROOM (2ND) 116       20 A       1       1280 / 1280  | 1       SPARE       20A       1       0/750       2       2/A       ECUPA 101E1 123A       12       1       ECUPA 101E1 123A       1       1       1       ECUPA 101E1 123A       1       1       ECUPA 101E1 123A       1       1       ECUPA 101E  | 11       SPARE       20A       1       000       20A       20A       1       20A       ECUHA 101E 173A       12       14       ECUHA 101E 173A       14       14       12       14       12       000       1       20A       1       20A <th< td=""><td>SPARE       20 Å       1       00/750       2       20 Å       ECUPA 10[E1 123A       12         SPARE       20 Å       1       00/0       1       20 Å       1       200 Å       1</td></th<>  | SPARE       20 Å       1       00/750       2       20 Å       ECUPA 10[E1 123A       12         SPARE       20 Å       1       00/0       1       20 Å       1       200 Å       1   |
| 13       SPARE       20 Å       1       0 / 0       1       20 Å       1   | 13       SPARE       20 Å       1       0/0       1       20 Å   | 13       SPARE       20A       1       0/0       1       20A       FAN COLFC-ASMALL GROUP ROOM 121       14         15       SPARE       20A       1       0/0       1       20A       SPARE       16       120A       RECEPT       120A       120A       RECEPT         17       SPARE       20A       1       0/0       1       20A       SPARE       16       120A       RECEPT       120A       120A <t< td=""><td>SPARE       20 A       1       0 / 0       1       20 A       1</td><td>3       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å</td><td>3       SPARE       20 Å       1       0 / 0       1       20 Å       1       1       <t< td=""><td>1       0 / 0       0 / 0       1       0 / 0       7       FAN COLL FC-A SMALL GOUP ROOM 121       14         1       0 / 0       1       0 / 0       1       2 / 0       SPARE       16       16       16       16       16       16       16       16       16       16       17       RECEPT CLASSROOM (2ND) 117       20 / 0       1       16       16       16       16       16       17       16       16       16       17       16       17       16       17       16       17       16       16       16       17       16       16       16       17       16       16       17       16       17       16       17       16       17       16       17       16       17       16       18       16       17       14       16       16       17       16       17       16       17       16       18       16       17       16       17       16       17       16       17       16       17       16       18       16       17       16       16       16       17       16       16       16       17       16       17       16       16       16       &lt;</td></t<></td></t<> | SPARE       20 A       1       0 / 0       1       20 A       1   | 3       SPARE       20 Å       1       0 / 0       1       20 Å   | 3       SPARE       20 Å       1       0 / 0       1       20 Å       1       1 <t< td=""><td>1       0 / 0       0 / 0       1       0 / 0       7       FAN COLL FC-A SMALL GOUP ROOM 121       14         1       0 / 0       1       0 / 0       1       2 / 0       SPARE       16       16       16       16       16       16       16       16       16       16       17       RECEPT CLASSROOM (2ND) 117       20 / 0       1       16       16       16       16       16       17       16       16       16       17       16       17       16       17       16       17       16       16       16       17       16       16       16       17       16       16       17       16       17       16       17       16       17       16       17       16       17       16       18       16       17       14       16       16       17       16       17       16       17       16       18       16       17       16       17       16       17       16       17       16       17       16       18       16       17       16       16       16       17       16       16       16       17       16       17       16       16       16       &lt;</td></t<>   | 1       0 / 0       0 / 0       1       0 / 0       7       FAN COLL FC-A SMALL GOUP ROOM 121       14         1       0 / 0       1       0 / 0       1       2 / 0       SPARE       16       16       16       16       16       16       16       16       16       16       17       RECEPT CLASSROOM (2ND) 117       20 / 0       1       16       16       16       16       16       17       16       16       16       17       16       17       16       17       16       17       16       16       16       17       16       16       16       17       16       16       17       16       17       16       17       16       17       16       17       16       17       16       18       16       17       14       16       16       17       16       17       16       17       16       18       16       17       16       17       16       17       16       17       16       17       16       18       16       17       16       16       16       17       16       16       16       17       16       17       16       16       16       <   |
| 15       SPARE       20 Å       1       0 / 0       1       20 Å   | 15       SPARE       20A       1       0/0       1       20A       1  | 15       SPARE       20A       1       0/0       1       20A       1   | SPARE       20.4       1       0/0       1       20.4       1       <   | 5       SPARE       20 Å       1       0 / 0       1       20 Å   | 15       SPARE       20 Å       1       0 / 0       1       20 Å  | Image: Spare spar |
| 17       SPARE       20 Å       1       0/0       1       20 Å       SPARE       18         19       SPARE       20 Å       1       0/0       1       20 Å       SPARE       20       1       0/0       1       20 Å       SPARE       20       1       20 Å       SPARE       20       1       0/0       1       20 Å       SPARE       20       1       0/0       1       20 Å       SPARE       20       1       20 Å       1       20 Å       SPARE       20  | 17       SPARE       20A       1       0/0       1       20A       1  | 17       SPARE       20 Å       1       0 / 0       1       20 Å  | SPARE       20A       1       20A  | 7       SPARE       20 Å       1       0/0       1       20 Å       SPARE       1       20 Å       1  | 17       SPARE       20A       1       0/0       1       20A       SPARE       18         19       SPARE       20A       1       0/0       1       20A       SPARE       20A       1       20A       0/0       1       20A   | SPARE       20A       1       0/0       1       20A   |
| 10       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       21       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å       1       0 / 0       1       20 Å       1 </td <td>19       SPARE       2       0       0       0       1       2</td> <td>10       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       1       2</td> <td>SPARE       20A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       Item Control of the control o</td> <td>9       SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/00       1       20A       SPARE       20A       1       0/048/107       1       20A       LIGHTING AND EFA 117       20A       1       20A       1</td> <td>19       SPARE       20A       1       0/0       1       20A       1       20A       SPARE       20A       1       0/0       1       20A       1       20A&lt;</td> <td>1       0/0       1       0/0       1       20A       1       1       20A       1       0/0       1       20A       1       20A       1       20A       1       20A</td> | 19       SPARE       2       0       0       0       1       2  | 10       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       1       2  | SPARE       20A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       SPARE       22A       1       0 / 0       1       20A       Item Control of the control o  | 9       SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/00       1       20A       SPARE       20A       1       0/048/107       1       20A       LIGHTING AND EFA 117       20A       1  | 19       SPARE       20A       1       0/0       1       20A       1       20A       SPARE       20A       1       0/0       1       20A       1       20A<  | 1       0/0       1       0/0       1       20A       1       1       20A       1       0/0       1       20A       1       20A       1       20A       1       20A   |
| 21       SPARE       20 Å       1       0 / 0       1       20 Å   | 21       SPARE       20       1       0/0       1       20       1<  | 21       SPARE       20 Å       1       0 / 0       1       20 Å  | SPARE       20 A       1       0 / 0       1       20 A       SPARE       22         SPARE       20 A       1       0 / 0       1       20 A       SPARE       22         SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1<  | 1       SPARE       20A       1       0/0       1       20A       1       <  | 21       SPARE       20A       1       0/0       1       20A       1   | SPARE       20A       1       0/0       1       20A       1       20A       1       1       20A       1       1       20A       <   |
| 23       SPARE       20 Å       1       0/0       1       20 Å   | 23 SPARE 20 1 0/0 1 20 1 0/0 1 20 1 20 20 1 <td>23       SPARE       20 Å       1       000       1       20 Å       1       20 Å</td> <td>SPARE       20 Å       1       0 / 0       1       20 Å       1</td> <td>33       SPARE       20 A       1       0/0       1       20 A       1       20 A       1       0/0       1       20 A       &lt;</td> <td>33       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å</td> <td>9       9       1       0       0       1       20       1       20       9</td>  | 23       SPARE       20 Å       1       000       1       20 Å  | SPARE       20 Å       1       0 / 0       1       20 Å       1   | 33       SPARE       20 A       1       0/0       1       20 A       1       20 A       1       0/0       1       20 A       <   | 33       SPARE       20 Å       1       0 / 0       1       20 Å  | 9       9       1       0       0       1       20       1       20       9   |
| 27       SPARE       20 Å       1       0 / 0       1       20 Å   | 27       SPARE       20A       1       0/0       1       20A       1  | 27       SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       972 / 972       1       20 Å       1       1       20 Å       1       1       20 Å       1       20 Å <td>SPARE       20 Å       1       0 / 0       1       20 Å       1</td> <td>7       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å       20 Å       1       20 Å       1</td> <td>27       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å</td> <td>1       1       1       0       1       20       1       20       20       1</td>  | SPARE       20 Å       1       0 / 0       1       20 Å       1   | 7       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å       20 Å       1   | 27       SPARE       20 Å       1       0 / 0       1       20 Å  | 1       1       1       0       1       20       1       20       20       1   |
| 29       SPARE       20 A       1       0       1       20 A       1       0/0       1       20 A       1       20 A       1       0/0       1       20 A       1 <td>29       SPARE       20A       1       0/0       1       20A       1       20A       1       0/0       1       20A       1</td> <td>29       SPARE       20 Å       1       0/0       1       20 Å       1       20</td> <td>SPARE       20 A       1       0 / 0       1       20 A       1</td> <td>9       SPARE       20 A       1       0       1       20 A       <td< td=""><td>29       SPARE       20       1       0       1       20       <td< td=""><td>1       1       1       0       1</td></td<></td></td<></td>   | 29       SPARE       20A       1       0/0       1       20A       1       20A       1       0/0       1       20A       1  | 29       SPARE       20 Å       1       0/0       1       20 Å       1       20  | SPARE       20 A       1       0 / 0       1       20 A       1   | 9       SPARE       20 A       1       0       1       20 A       1       20 A <td< td=""><td>29       SPARE       20       1       0       1       20       <td< td=""><td>1       1       1       0       1</td></td<></td></td<>  | 29       SPARE       20       1       0       1       20 <td< td=""><td>1       1       1       0       1</td></td<>   | 1       1       1       0       1   |
| 31       SPARE       20 Å       1       0 / 0       1       20 Å       1       0 / 0       1       20 Å  | 31       SPARE       20A       1       0/0       1       20A       1       0/0       1       20A       1  | 31       SPARE       20 Å       1       0 / 0       1       20 Å       1       20 Å       1       0 / 0       1       20 Å   | SPARE       20A       1       0/0       1       20A  | 1       SPARE       20 Å       1       0 / 0       1       20 Å   | 31       SPARE       20 A       1       0/0       1       20 A       1       0/0       1       20 A       <   | 9       9       1       0/0       1       20<  |
| 33       SPARE       20A       1       0/0       1       20A       1       20A       1       0/0       1       20A       1       10A       1       10A       1       10A       1       10A       1       10A       1       10A       1  | 33       SPARE       20 A       1       0 / 0       1       20 A       10       10 A  | 33       SPARE       20 A       1       0 / 0       1       20 A       1  | SPARE       20A       1       0/0       1       20A       1       20A       1       0/0       1       20A       1       20A       1       0/0       1       20A       1       0/10       1       20A       1       100       1       20A       1       100       1       20A       1       100       1       20A       1       100<   | 33       SPARE       20 Å       1       0/0       1       20 Å       10 Å  | 33       SPARE       20 A       1       0/0       1       20 A       10 A  | 3       SPARE       1       0 0 0       1       10  |
| 35       SPARE       20A       1       0/0       1       20A       1  | 35       SPARE       20       1       0/0       1       20       1       0/0       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       3       3       SPARE       20       1       0/0       1       20       1       20       20       3       20       1       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       3       20       20       20       20       20       3       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20   | 35       SPARE       20 A       1       0/0       1       20 A       SPARE       36       37       SPARE       38       39       SPARE       20 A       1       0/10       1       20 A       1       0/10       1       20 A       1       0/10       1       20 A       37       SPARE       20 A       1       0/10       1       10 A       100 A  | SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       36         SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       38         SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       38         SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 4102       0 / 3302       3       100 Å         SPARE       20 Å       1       0 / 0       1       20 Å       SPARE       20 Å       1       0 / 3302       3       100 Å  | 35       SPARE       20A       1       0/0       1       20A       1   | 35       SPARE       20       1       0/0       1       20       1       20       36       SPARE       20       1       0/0       1       20       1       20       37       SPARE       20       1       0/0       1       20       1       20       37       SPARE       20       1       0/0       1       20       1       20       37       SPARE       20       1       0/0       1       20       1       20       37       SPARE       20       1       0/0       1       20       1       20       1       20       37       SPARE       20       1       0/0       1       20       1       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       1       20       1       1       20       1       1       20       1       1       20       1       1       20       1<   | i       SPARE       1       1       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       1       20       3  |
| 37       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 0       1       20 A       38         39       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 302       0 / 302       0 / 302       0 / 0       0       0 / 0       0 / 0       0 / 0       0 / 0       0       0 / 0       0       0 / 0       0       0       0 <t< td=""><td>37       SPARE       20 Å       1       0/0       I       20 Å       1       0/402       I       0/402       I       0/402       I       0/402       I       0/302       I       0       0       0       0       1</td><td>37       SPARE       20 Å       1       0/0       1       20 Å       20 Å       1       0/402       1       0/402       3       0       0       1       1       20 Å       1       0/402       3       100 Å       0       1       100 Å       100</td><td>SPARE       20A       1       0/0       1       20A       1       0/0       1       20A       33       SPARE       20A       1       0/4102       0/302       3       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/302       3       10A       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/302       3       10A       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/20A       1       0/20A       3       10A       10</td><td>37       SPARE       20 A       1       0 / 0       1       20 A       1       20 A       1       0 / 4102      </td><td>37       SPARE       20 A       1       0 / 0       1       20 A       1       20 A       1       0 / 4102      </td><td>1       1       0       1       0       1       20 A       1       0       1       20 A       3         1       1       1       20 A       1       0       1       20 A       3</td></t<>   | 37       SPARE       20 Å       1       0/0       I       20 Å       1       0/402       I       0/402       I       0/402       I       0/402       I       0/302       I       0       0       0       0       1  | 37       SPARE       20 Å       1       0/0       1       20 Å       20 Å       1       0/402       1       0/402       3       0       0       1       1       20 Å       1       0/402       3       100 Å       0       1       100 Å       100   | SPARE       20A       1       0/0       1       20A       1       0/0       1       20A       33       SPARE       20A       1       0/4102       0/302       3       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/302       3       10A       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/302       3       10A       10A         SPARE       20A       1       0/0       1       20A       SPARE       20A       1       0/4102       0/20A       1       0/20A       3       10A       10  | 37       SPARE       20 A       1       0 / 0       1       20 A       1       20 A       1       0 / 4102   | 37       SPARE       20 A       1       0 / 0       1       20 A       1       20 A       1       0 / 4102   | 1       1       0       1       0       1       20 A       1       0       1       20 A       3         1       1       1       20 A       1       0       1       20 A       3   |
| 39       SPARE       20 A       1       0 / 00<   | 39       SPARE       20 A       1       0/0       1       20 A       1       20 A       1       0/302       3       10 A       P         41       SPARE       20 A       1       0/0       1       20 A       3       0/0       1       20 A       1       0/2676       0/2676       0  | 39       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 302       3       100 A       P         41       SPARE       20 A       1       0 / 0       1       20 A       SPARE       20 A       1       0 / 0 / 302       3       100 A       P         TOTAL CONNECTED LOAD (VA): 10/80 VA       2676 VA       2676 VA       2676 VA       2676 VA       2070 A       11626 VA       10812 VA       0 / 2676 VA   | SPARE       20 A       1       0/0       1       20 A       SPARE       40       1       0/302       3       100 A         SPARE       20 A       1       0/0       1       20 A       SPARE       42       41       SPARE       20 A       1       0/2676       0/2676       0       100 A       100 A </td <td>9       SPARE       20 A       1       0/0       1       20 A       1       20 A       1       20 A       1       0/0       1       20 A       1       0/20 A       1       1       0/20 A       1       0/20 A       1       0/20 A       1<td>39       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 0       1       20 A       3       30 A       1       30 A       SPARE       40       41       SPARE       20 A       1       0 / 0.302       3       10 A       Prove A       10 A       Prov A       10 A</td><td>9       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 302       0 / 302       0 / 0       0       0 / 0       0 / 0</td></td> | 9       SPARE       20 A       1       0/0       1       20 A       1       20 A       1       20 A       1       0/0       1       20 A       1       0/20 A       1       1       0/20 A       1       0/20 A       1       0/20 A       1 <td>39       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 0       1       20 A       3       30 A       1       30 A       SPARE       40       41       SPARE       20 A       1       0 / 0.302       3       10 A       Prove A       10 A       Prov A       10 A</td> <td>9       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 302       0 / 302       0 / 0       0       0 / 0       0 / 0</td>   | 39       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 0       1       20 A       3       30 A       1       30 A       SPARE       40       41       SPARE       20 A       1       0 / 0.302       3       10 A       Prove A       10 A       Prov A       10 A  | 9       SPARE       20 A       1       0 / 0       1       20 A       1       0 / 302       0 / 302       0 / 0       0       0 / 0       0 / 0   |
| 41       SPARE       20 A       1       0 / 0       1       20 A       SPARE       42         41       SPARE       20 A       1       0 / 2676       0 / 2676         50       TOTALS :       4102 VA       3302 VA       2676 VA       5       5       5       10722 VA       11626 VA       10812 VA  | 41       SPARE       20 A       1       0/0       1       20 A       9       0/2676       0/2676       0 </td <td>41       SPARE       20 A       1       0 / 0       1       20 A       SPARE       41       SPARE       20 A       1       0 / 2676</td> <td>SPARE       20 A       1       0 / 0       1       20 A       SPARE       41       SPARE       20 A       1       0 / 2676       0</td> <td>All       SPARE       QOA       1       O/O       1       20 A       SPARE       42         All       SPARE       42       41       SPARE       20 A       1       O/2676       0/2676         V       TOTALS :       4102 VA       3302 VA       2676 VA       V       V       V       1072 VA       11626 VA       10812 VA</td> <td>A1       SPARE       20 A       1       20 A       1       20 A       1       20 A       1       20 A       0 / 2676       0       0         V       V       V       V       V       V       V       V       V       0 / 2676       0</td> <td>SPARE       20 A       1         0 / 0       1       20 A       20 A       1       0 / 2676</td>   | 41       SPARE       20 A       1       0 / 0       1       20 A       SPARE       41       SPARE       20 A       1       0 / 2676  | SPARE       20 A       1       0 / 0       1       20 A       SPARE       41       SPARE       20 A       1       0 / 2676       0   | All       SPARE       QOA       1       O/O       1       20 A       SPARE       42         All       SPARE       42       41       SPARE       20 A       1       O/2676       0/2676         V       TOTALS :       4102 VA       3302 VA       2676 VA       V       V       V       1072 VA       11626 VA       10812 VA  | A1       SPARE       20 A       1       20 A       1       20 A       1       20 A       1       20 A       0 / 2676       0       0         V       V       V       V       V       V       V       V       V       0 / 2676       0  | SPARE       20 A       1         0 / 0       1       20 A       20 A       1       0 / 2676   |
| TOTALS :       4102 VA       3302 VA       2676 VA  | TOTALS:       4102 VA       3302 VA       2676 VA         TOTAL CONNECTED LOAD (VA):       10812 VA       10812 VA       10812 VA         TOTAL CONNECTED LOAD (VA):       10080 VA       TOTAL CONNECTED LOAD (AMPS):       28 A   | TOTALS :       4102 VA       3302 VA       2676 VA         TOTAL CONNECTED LOAD (VA) :       10722 VA       11626 VA       10812 VA         TOTAL CONNECTED LOAD (VA) :       10080 VA       TOTAL CONNECTED LOAD (AMPS) :       28 A         EMARKS:       NOTES:       NOTES:       NOTES:   | TOTALS :       4102 VA       3302 VA       2676 VA         TOTAL CONNECTED LOAD (VA) :       10812 VA       10812 VA       10812 VA         TOTAL CONNECTED LOAD (VA) :       1080 VA       TOTAL CONNECTED LOAD (AMPS) :       28 A         MARKS:       NOTES:       NOTES:       NOTES:   | TOTALS :       4102 VA       3302 VA       2676 VA   | TOTALS :       4102 VA       3302 VA       2676 VA   |   |
|   | TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (AMPS): 92 A   | TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 28 A         TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 92 A         TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 92 A         TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 92 A         TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 92 A         TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 92 A  | TOTAL CONNECTED LOAD (VA): 10080 VA       TOTAL CONNECTED LOAD (AMPS): 28 A         Marks:       Total connected Load (VA): 10080 VA       Total connected Load (AMPS): 92 A   |  |  | TOTALS: 4102 VA 3302 VA 2676 VA 2676 VA 10812 VA 10812 VA   |
|   |   | EMARKS: $\lambda_{A}$ NOTES: $\lambda_{A}$ NOTES:  |  | TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A  |  |   |
|   | REMARKS: $\langle \Lambda \rangle$ NOTES: NOTES:  |  |  |  | Y TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A  | TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (AMPS): 92 A   |
|   |   |  |  |  |  |   |
|   | $\gamma$ - PROVIDE NEW PANEL $\gamma_3$   | ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'  | VIDE NEW PANEL /3  |  |  |   |
| ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'   |   |  |  | ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'  | EMARKS:     PROVIDE NEW PANEL     Notes:       Rovide New Panel     - PROvide New Panel to Replace Existing PanelBoard 'B' and 'D'     Notes:  |   |
| ROVIDE NEW PANEL /3   |   | $\mathcal{N}$  |  | ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'  |  |   |
| REMARKS: \ NOTES:   |   | - PROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'   | - PROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD B' AND 'D'  |  |  |   |
| ROVIDE NEW PANEL 1/3  |   |  |  | ROVIDE NEW PANEL //3   |  |   |
| ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'   |   |  |  | ROVIDE NEW PANEL //3   |  |   |
|   | ROVIDE NEW PANEL J - PROVIDE NEW PANEL PANEL J - PROVIDE NEW PANEL  | ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'  | VIDE NEW PANEL /3  |  |  |   |
| ROVIDE NEW PANEL / 3  |   |  |  | ROVIDE NEW PANEL /3  |  |   |
| ROVIDE NEW PANEL J/3  |   |  |  | ROVIDE NEW PANEL //3   |  |   |
| ROVIDE NEW PANEL JTO REPLACE EXISTING PANELBOARD 'B' AND 'D'  | $\mathbf{A} = \mathbf{A}$   |  | $\sim 1$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$  | ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'  |  |   |
|   |   |  |  |  |  |   |
|   |   |  |  |  |  |   |
|   |   | ROVIDE NEW PANEL 1/3   |  |  |  |   |
|   |   | I = V = DROVIDE NEW DANEL I/3  |  |  |  |   |
|   | (REMARKS: )   (NOTES: )   |  |  |  |  | $\gamma$   |
|   |   |  |  |  |  |   |

|          | GM                      |              | P             | ANE    | ELBOA       | RD SCH         | IEDULI        | Ε    |                       |                                  |          |
|----------|-------------------------|--------------|---------------|--------|-------------|----------------|---------------|------|-----------------------|----------------------------------|----------|
| LOCAT    | ION : MECH 111          | SCCR (AMPS R | MS SYMM): (2  | 22,000 |             | : 208Y/120V 3Ф | 4-Wire+Ground | AMP  | : 100 A MA            | IN : MLO NEMA: Type 1 MOUNTING : | SURFACE  |
| СКТ      | DESCRIPTION             |              | NOTE AMP      | POLE   | A           | В              | С             | POLE | AMP NOTE              | DESCRIPTION                      | СК       |
| 1        | CUH-C SECURE VESTIBULE  | -2 V101-2    | 20 A          | 1      | 300 / 420   |                | 1             | 2    | 20 A                  | DXFC UNIT ROOM 163, 166-168      | 2        |
| 3        | PUH-D JANITOR 108/      | 4            | 20 A          | 1      |             | 96 / 420       |               | 2    | 20 A                  | DXFC UNIT ROOM 183, 186-188      | 4        |
| 5<br>7   | DXFC UNIT ROOM 110, 112 | 2, C103      | 20 A          | 2      | 945 / 750   |                | 945 / 750     | 2    | 20 A                  | ECUH-A STAFF 165                 | 6<br>8   |
| 9<br>11  | ECUH-A TOILET 112/      | Ą            | 20 A          | 2      |             | 750 / 735      | 750 / 735     | 2    | 20 A                  | DXFC UNIT ROOM 170-172, 174-176  | 10       |
| 13       |                         |              | 00.0          | 0      | 420 / 0     |                |               | 1    | 20 A                  | SPARE                            | 14       |
| 15       | DXFC UNIT ROOM 113, 17  | 13А-В        | 20 A          | 2      |             | 420 / 0        |               | 1    | 20 A                  | SPARE                            | 16       |
| 17       | SPARE                   |              | 20 A          | 1      |             |                | 0/0           | 1    | 20 A                  | SPARE                            | 18       |
| 19       | SPARE                   |              | 20 A          | 1      | 0 / 0       |                |               | 1    | 20 A                  | SPARE                            | 20       |
| 21       | SPARE                   |              | 20 A          | 1      |             | 0 / 0          |               | 1    | 20 A                  | SPARE                            | 22       |
| 23<br>25 | SPARE                   |              | 20 A          | 2      | 0 / 0       |                | 0 / 0         | 2    | 15 A                  | SPARE                            | 24<br>26 |
| 27<br>29 | ERV-3 AND DXFC-3 MECI   | H 111        | 15 A          | 2      |             | 546 / 546      | 546 / 546     | 2    | 15 A                  | ERV-2 AND DXFC-2 MECH 173        | 28<br>30 |
| 31<br>33 | DXFC-3 DUCT HEATER ME   | CH 111       | 20 A          | 2      | 1500 / 1500 | 1500 / 1500    |               | 2    | 20 A                  | DXFC-2 DUCT HEATER MECH 173      | 32       |
| 35<br>37 | ERV-4 AND DXFC-4 MECH   | 113C         | 15 A          | 2      | 546 / 546   |                | 546 / 546     | 2    | 15 A                  | ERV-1 AND DXFC-1 MECH 168        | 36       |
| 39<br>41 | DXFC-4 DUCT HEATER MEC  | CH 113C      | 20 A          | 2      |             | 1500 / 1500    | 1500 / 1500   | 2    | 20 A                  | DXFC-1 DUCT HEATER MECH 168      | 40       |
|          |                         |              | то            | TALS : | 6926 VA     | 9512 VA        | 8362 VA       |      |                       |                                  |          |
| REMAR    |                         | NECTED LOAD  | (VA): 24800 V | /A     |             | TOTA<br>NOTES: | LCONNECTED    | LOAD | ( <b>AMPS)</b> : 69 A |                                  |          |

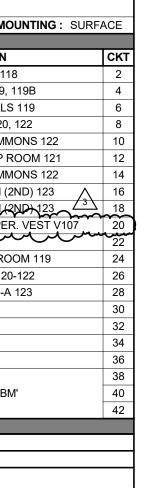
PROVIDE NEW PANEL

|                         |                        |                          | DISTRI  | <b>BUTION PAN</b>                | EL                                 |  |
|-------------------------|------------------------|--------------------------|---|----------------------------------|------------------------------------|--|
| PANEL<br>CONFI<br>MAIN: | GURATION: 208Y         | ″/120V 3Ф 4-Wire         | e+Ground<br>MCB                                 | LOCATION:<br>ENCLOSURE:<br>TRIM: | ELEC. 197A<br>SQUARE D - E1 SERIES |  |
| SCCR                    | (AMPS RMS SYMM.):      |                          |   | MODIFICATIONS:                   |                                    |  |
| NO.                     | Load Name              | Rating                   | POLES   | PHASE A                          | PHASE B                            |  |
| 1                       | PANELBOARD 'E'         | 100 A                    | 3   | 4 A                              | 11 A                               |  |
| 2                       | E. 100A BREAKER        | 100 A                    | 3   |                                  |                                    |  |
| 3                       | E. PANELBOARD 'LPD'    | 100 A                    | 3   |                                  |                                    |  |
| 4                       | E. PANELBOARD 'LPDM'   | 100 A                    | 3   |                                  |                                    |  |
| 5                       | E. PANELBOARD 'LPBM'   | 100 A                    | 3   |                                  |                                    |  |
| 6                       | E. PANELBOARD 'LPC2'   | 100 A                    | 3   |                                  |                                    |  |
| 7                       | E. PANELBOARD 'LPBA'   | 100 A                    | 3   |                                  |                                    |  |
| 8                       | E. PANELBOARD 'LPB'    | 100 A                    | 3   |                                  |                                    |  |
| 9                       | E. PANELBOARD 'LLB'    | 125 A                    | 3   |                                  |                                    |  |
| 10                      | E. PANELBOARD 'LLD'    | 125 A                    | 3   |                                  |                                    |  |
| 11                      | E. PANELBOARD 'LLC2'   | 125 A                    | 3   |                                  |                                    |  |
| 12                      | PANELBOARD 'LPC1'      | 150 A                    | 3   | 94 A                             | 46 A                               |  |
| 13                      | E. PANELBOARD 'LPCM'   | 150 A                    | 3   |                                  |                                    |  |
| 14                      | PANELBOARD 'A'         | 175 A                    | 3   | 44 A                             | 75 A                               |  |
| 15                      | E. PANELBOARD 'LPK'    | 300 A                    | 3   |                                  |                                    |  |
| 16                      | PANELBOARD 'B'         | 200 A                    | 3   | 89 A                             | 97 A                               |  |
| 17                      | PANEL 'LDP' DISCONNECT | 1200 A                   | 3   |                                  |                                    |  |
| 18                      | PANELBOARD 'G'         | 200 A                    | 3   | 163 A                            | 168 A                              |  |
| total<br>Remai          |                        | 9684 VA<br>ISTING SQUARE | <b>TOTAL LOAD (A):</b><br>E D HCWM I-LINE PANEL | 388 A                            |                                    |  |

|              | G                            |                 |  | P           | ANI<br>ANI | CLBOA       | KD 2CI         |               |      |          |            |                   |              |
|--------------|------------------------------|-----------------|--|-------------|------------|-------------|----------------|---------------|------|----------|------------|-------------------|--------------|
| LOCA         | TION : MECH 111              | SCCR (AMPS R    | MS SYN   | им): ζ      | 22,000     |             | : 208Y/120V 3Ф | 4-Wire+Ground | AMP  | : 200 A  | MAIN : MCB | <b>NEMA:</b> Туре | e 1 MOUN     |
| скт          | DESCRIPTION                  |                 | NOTE   |             | POLE       | Α           | В              | с             |      | AMP N    | OTE        | DESCR             |              |
| 1            | WASHER JANITOR CLOSE         | TMC             | NOIL   | 20 A        |            | 1920 / 1080 |                | C             |      | 20 A     |            | RECEPT RO         | -            |
| 3            | RECEPT ROOM 110              | -               |  | 20 A        | 1          | 19207 1000  | 360 / 180      |               | 1    | 20 A     |            | RECEPT            |              |
| 5            | UNDER, REFRIG, CLINI         | -               |  | 20 A        | 1          |             | 3007 100       | 680 / 540     | 1    | 20 A     |            | RECEPT WOR        |              |
| 7            | RECEPT CLINIC 110            |                 |  | 20 A        | 1          | 360 / 1000  |                | 0007 040      | 1    | 20 A     |            | COPIER WOR        |              |
| 9            | RECEPT MECH 111, CORRIE      | -               |  | 20 A        | 1          | 0007 1000   | 360 / 1000     |               | 1    | 20 A     |            | REFRIG. WOF       |              |
| 11           | RECEPT A.P. OFFICE 1         |                 |  | 20 A        | 1          |             | 0007 1000      | 1440 / 720    | 1    | 20 A     | REC        | EPT MOTHERS       |              |
| 13           | RECEPT CONFERENCE            |                 |  | 20 A        | 1          | 1080 / 1260 |                | 1110,120      | 1    | 20 A     |            | EPT ROOM 168.     |              |
| 15           | RECEPT PRINCIPAL OFFIC       |                 |  | 20 A        | 1          | 1000 / 1200 | 1260 / 1080    |               | 1    | 20 A     |            | RECEPT SHAR       |              |
| 17           | RECEPT RECEPTION             |                 |  | 20 A        | 1          |             | 12007 1000     | 540 / 1080    | 1    | 20 A     |            | RECEPT CON        |              |
| 19           | RECEPT RECEPTION             |                 |  | 20 A        | 1          | 1080 / 1080 |                | 0.00, 1000    | 1    | 20 A     | REC        | EPT COLLABO       | -            |
| 21           | RECEPT RECEPTION             |                 |  | 20 A        | 1          | 1000 / 1000 | 1080 / 1260    |               | 1    | 20 A     |            | RECEPT TECH       |              |
| 23           | RECEPT ROOM 112F, 0          |                 |  | 20 A        | 1          |             |                | 1080 / 1080   | 1    | 20 A     |            | RECEPT SE         |              |
| 25           | COPIER WORK ROOM             |                 |  | 20 A        | 1          | 1000 / 0    |                |               | 1    | 20 A     |            | SPA               |              |
| 27           | RECEPT OFFICE 113            | BA              |  | 20 A        | 1          |             | 720 / 0        |               | 1    | 20 A     |            | SPA               | RE           |
| 29           | RECEPT CONFERENCE/FLEX       | OFFICE 113B     |  | 20 A        | 1          |             |                | 1260 / 0      | 1    | 20 A     |            | SPA               | RE           |
| 31           | RECEPT ROOM 113, 1           | 13C             |  | 20 A        | 1          | 1080 / 1007 |                |               | 1    | 20 A     | L          | IGHTING C102      | , C111, 163, |
| 33           |                              |                 |  | 20 <u>A</u> | 1          |             | 1080 / 959     |               | 1    | 20 A     |            | LIGHTING 164      | -169, 172-1  |
| 35           | DOOR CONTROL AND OPER. V10   | 01-2, C104, 112 | <del>~</del> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 20 A        | 1          |             |                | 1500 / 1000   | 1    | 20 A     |            | NAC PANEL         | MECH 111     |
| 37           | LIGHTING RECEPTION           | 112             |  | 20 A        | 1          | 652 / 6926  |                |               |      |          |            |                   |              |
| 39           | LIGHTING 110-112             |                 |  | 20 A        | 1          |             | 1230 / 9512    |               | 3    | 100 A    |            | PANELBO           | ARD 'GM'     |
| 41           | LIGHTING ROOM 113, VES       | ST. V101        |  | 20 A        | 1          |             |                | 647 / 8362    |      |          |            |                   |              |
|              |                              |                 |  |             |            |             |                |               |      |          |            |                   |              |
|              | $\rightarrow$                |                 |  |             | TALS :     | 19525 VA    | 20081 VA       | 19929 VA      |      |          |            |                   |              |
| ~            | $\gamma \sim 1000$ Total con | INECTED LOAD    | (VA): 5  | 59535       | VA         |             | TOTA           | AL CONNECTED  | LOAD | (AMPS) : | 165 A      |                   |              |
| REMA<br>PROV | RKS:                         |                 |  |             |            |             | NOTES:         |               |      |          |            |                   |              |
|              |                              |                 |  |             |            |             |                |               |      |          |            |                   |              |

|                | SH                                       |               |           |                      | $\sim$ $\sim$ |             | RD SCH         |               |      |          |            |                          |          |
|----------------|--|---------------|-----------|----------------------|---------------|-------------|----------------|---------------|------|----------|------------|--------------------------|----------|
| LOCA           | TION: MECH 173                           | SCCR (AMPS    | SRMS SYN  | /M): کرو             | 5,000         |             | : 480Y/277V 3Ф | 4-Wire+Ground | AMP  | 150 A    | MAIN : MLO | NEMA: Type 1             | MOUN     |
| СКТ            | DESCRIPTI                                | ON            | NOTE      | AMP                  | POLE          | Α           | В              | C             | POLE |          | NOTE       | DESCRIPT                 | ΓΙΟΝ     |
| 1<br>3<br>5    | AIR HANDLING UN<br>SUPPLY FAN<br>MECH 18 | 4HP           |           | 20 A                 | 3             | 2105 / 5900 | 2105 / 5900    | 2105 / 5900   | 3    | 30 A     |            | OHRU-<br>UNIT LOCATED AF |          |
| 7<br>9<br>11   | AIR HANDLING UN<br>RETURN FAN<br>MECH 18 | 3HP           |           | 20 A                 | 3             | 1333 / 4598 | 1333 / 4598    | 1333 / 4598   | 3    | 25 A     |            | OHRU-<br>UNIT LOCATED AF |          |
| 13<br>15<br>17 | SPARE<br>SPARE<br>SPARE                  |               |           | 20 A<br>20 A<br>20 A | 1<br>1<br>1   | 0 / 5900    | 0 / 5900       | 0 / 5900      | 3    | 30 A     |            | OHRU-<br>UNIT LOCATED AF |          |
| 19<br>21<br>23 | SPARE                                    |               |           | 20 A                 | 3             | 0 / 0       | 0/0            | 0 / 0         | 3    | 30 A     |            | SPARE                    | <u> </u> |
| 25<br>27<br>29 | ERV-3 DUCT HEATE                         | R MECH 111    |           | 20 A                 | 3             | 3000 / 0    | 3000 / 0       | 3000 / 0      | 3    | 20 A     |            | SPARE                    | E        |
| 31<br>33<br>35 | ERV-4 DUCT HEATER                        | MECH 113C     |           | 20 A                 | 3             | 3000 / 3000 | 3000 / 3000    | 3000 / 3000   | 3    | 20 A     | E          | RV-1 DUCT HEATI          | ER MECH  |
| 37<br>39<br>41 | ERV-5 DUCT HEATEF                        | MECH 192A     |           | 20 A                 | 3             | 3000 / 3000 | 3000 / 3000    | 3000 / 3000   | 3    | 20 A     | E          | RV-2 DUCT HEATI          | ER MECH  |
|                |  |               |           | -                    | TALS :        | 34837 VA    | 34837 VA       | 34837 VA      |      |          |            |                          |          |
|                |  | CONNECTED LOA | AD (VA) : | 104511               | VA            |             |                | L CONNECTED   | LOAD | (AMPS) : | 126 A      |                          |          |
| REMA<br>PROV   | RKS:<br>IDE NEW PANEL                    |               |           |                      |               |             | NOTES:         |               |      |          |            |                          |          |

|   |                      |                                     |  | TCHBOARD   |                                |     |
|---|----------------------|-------------------------------------|--|--|--------------------------------|-----|
| PANEL ID<br>CONFIGU<br>MAIN: MC<br>SCCR (AN | RATION: 48           | DP-H<br>30Y/277V 3Ф 4-Wire<br>000 A | ∍+Ground   | LOCATION:<br>ENCLOSURE:<br>TRIM:<br>MODIFICATIONS: | Space 260<br>SQUARE D - TYPE 1 |     |
| NO.   | Load Name            | Rating                              | POLES  | PHASE A  | PHASE B                        | PHA |
| 1   | E. PANEL 'HPK'       | 400 A                               | 3  |  |                                |     |
| 2 E   | . TRANSFORMER TO 'LD | P' 800 A                            | 3  |  |                                |     |
| 3   | E. CHILLER           | 500 A                               | 3  |  |                                |     |
| 4   | PANEL 'HPM'          | 200 A                               | 3  | 75 A   | 75 A                           | 75  |
| 5   | E. BREAKER ON        | 200 A                               | 3  |  |                                | -   |
| 6   | E. BREAKER OFF       | 50 A                                | 3  |  |                                | -   |
| 7   | E. PANEL 'LHD'       | 100 A                               | 3  |  |                                |     |
| 8   | E. BREAKER OFF       | 100 A                               | 3  |  |                                |     |
| 9   | E. ELEVATOR          | 100 A                               | 3  |  |                                |     |
| 10  | PANELBOARD 'SH'      | 150 A                               | 3  | 126 A  | 126 A                          | 12  |
| 11  | E. MCC-D             | 200 A                               | 3  |  |                                | -   |
| 12  | E. BREAKER ON        | 200 A                               | 3  |  |                                | -   |
| TOTAL LO                                    | S:                   | 167003 VA<br>EXISTING SWITCH        | <b>TOTAL LOAD (A):</b><br>IBOARD - SQUARE D QED 1<br>NECTED TO 200A BREAKER ON PANEL U |  |                                |     |



HASE C 10 A

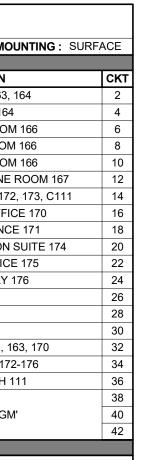
54 A

61 A

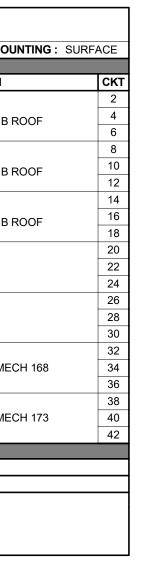
90 A

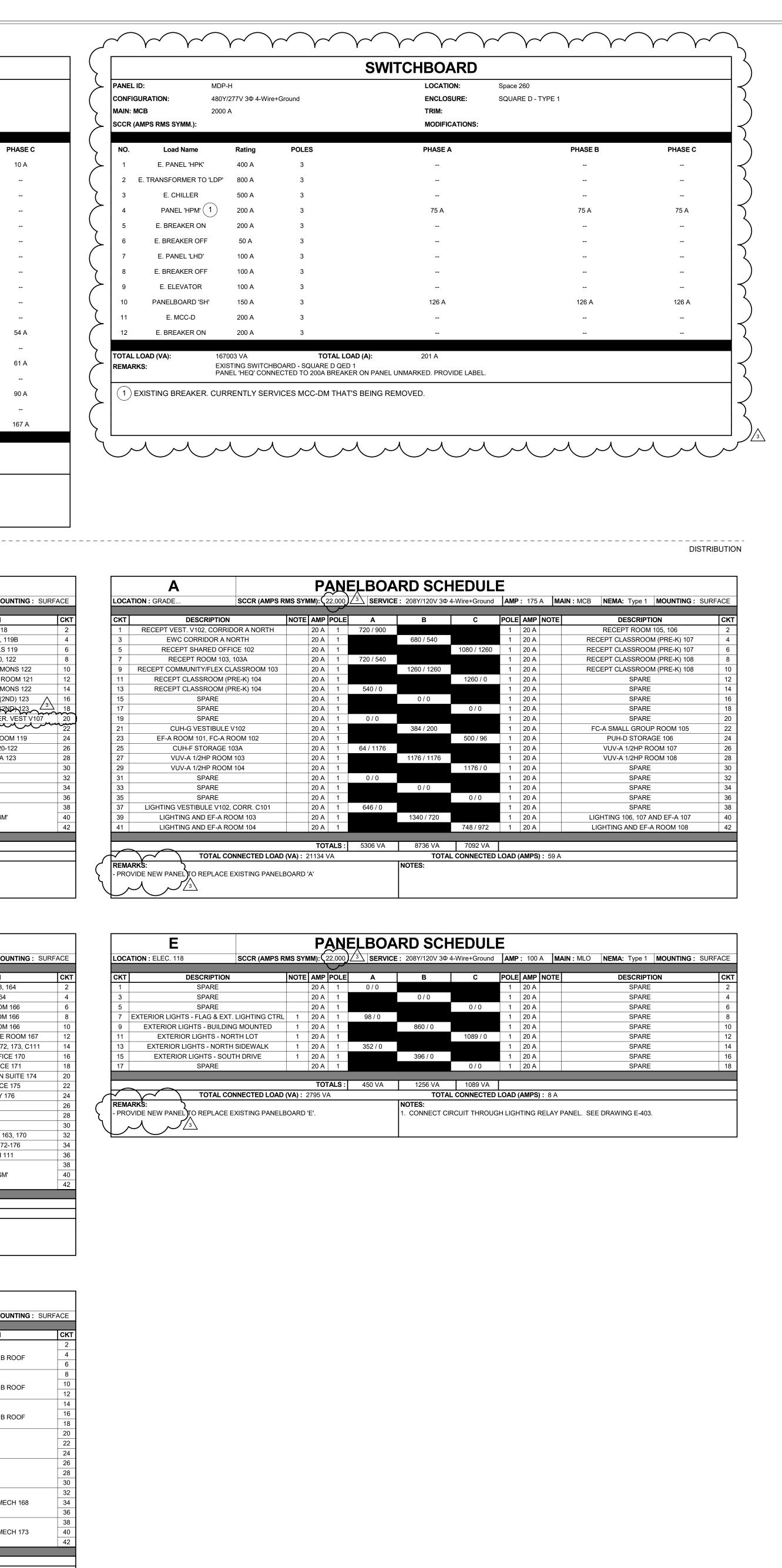
167 A

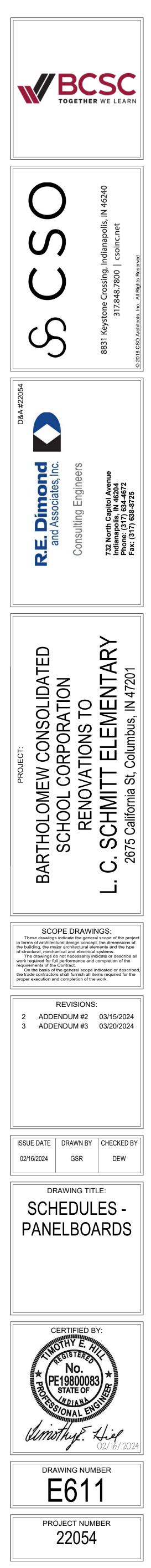
|       |  | $\overline{}$  | ~          |           |             |             |        |           |                                |
|-------|--|----------------|------------|-----------|-------------|-------------|--------|-----------|--------------------------------|
| СКТ   | DESCRIPTION                                      | NOTE AMP PO    | DLE        | Α         | В           | С           | POLE   | AMP NC    | DESCRIPTION                    |
| 1     | RECEPT VEST. V102, CORRIDOR A NORTH              | 20 A 🥤         | 1          | 720 / 900 |             |             | 1      | 20 A      | RECEPT ROOM 105, 106           |
| 3     | EWC CORRIDOR A NORTH                             | 20 A -         | 1          |           | 680 / 540   |             | 1      | 20 A      | RECEPT CLASSROOM (PRE-K) 107   |
| 5     | RECEPT SHARED OFFICE 102                         | 20 A 🥤         | 1          |           |             | 1080 / 1260 | 1      | 20 A      | RECEPT CLASSROOM (PRE-K) 107   |
| 7     | RECEPT ROOM 103, 103A                            | 20 A 🥤         | 1          | 720 / 540 |             |             | 1      | 20 A      | RECEPT CLASSROOM (PRE-K) 108   |
| 9     | RECEPT COMMUNITY/FLEX CLASSROOM 103              | 20 A 🥤         | 1          |           | 1260 / 1260 |             | 1      | 20 A      | RECEPT CLASSROOM (PRE-K) 108   |
| 11    | RECEPT CLASSROOM (PRE-K) 104                     | 20 A 2         | 1          |           |             | 1260 / 0    | 1      | 20 A      | SPARE                          |
| 13    | RECEPT CLASSROOM (PRE-K) 104                     | 20 A 2         | 1          | 540 / 0   |             |             | 1      | 20 A      | SPARE                          |
| 15    | SPARE  | 20 A -         | 1          |           | 0 / 0       |             | 1      | 20 A      | SPARE                          |
| 17    | SPARE  | 20 A -         | 1          |           |             | 0 / 0       | 1      | 20 A      | SPARE                          |
| 19    | SPARE  | 20 A 2         | 1          | 0 / 0     |             |             | 1      | 20 A      | SPARE                          |
| 21    | CUH-G VESTIBULE V102                             | 20 A -         | 1          |           | 384 / 200   |             | 1      | 20 A      | FC-A SMALL GROUP ROOM 105      |
| 23    | EF-A ROOM 101, FC-A ROOM 102                     | 20 A -         | 1          |           |             | 500 / 96    | 1      | 20 A      | PUH-D STORAGE 106              |
| 25    | CUH-F STORAGE 103A                               | 20 A -         | 1          | 64 / 1176 |             |             | 1      | 20 A      | VUV-A 1/2HP ROOM 107           |
| 27    | VUV-A 1/2HP ROOM 103                             | 20 A -         | 1          |           | 1176 / 1176 |             | 1      | 20 A      | VUV-A 1/2HP ROOM 108           |
| 29    | VUV-A 1/2HP ROOM 104                             | 20 A -         | 1          |           |             | 1176 / 0    | 1      | 20 A      | SPARE                          |
| 31    | SPARE  | 20 A -         | 1          | 0/0       |             |             | 1      | 20 A      | SPARE                          |
| 33    | SPARE  | 20 A -         | 1          |           | 0 / 0       |             | 1      | 20 A      | SPARE                          |
| 35    | SPARE  | 20 A -         | 1          |           |             | 0/0         | 1      | 20 A      | SPARE                          |
| 37    | LIGHTING VESTIBULE V102, CORR. C101              | 20 A -         | 1          | 646 / 0   |             |             | 1      | 20 A      | SPARE                          |
| 39    | LIGHTING AND EF-A ROOM 103                       | 20 A -         | 1          |           | 1340 / 720  |             | 1      | 20 A      | LIGHTING 106, 107 AND EF-A 107 |
| 41    | LIGHTING AND EF-A ROOM 104                       | 20 A -         | 1          |           |             | 748 / 972   | 1      | 20 A      | LIGHTING AND EF-A ROOM 108     |
|       |  |                |            |           |             | -           |        |           |                                |
|       |  | TOTAL          | <b>S</b> : | 5306 VA   | 8736 VA     | 7092 VA     |        |           |                                |
| /     | TOTAL CONNECTED LOAD                             | (VA): 21134 VA |            |           |             | L CONNECTED | LOAD ( | AMPS) : 5 | 59 A                           |
| Remar | RK5:<br>/IDE NEW PANEL TO REPLACE EXISTING PANEL |                |            |           | NOTES:      |             |        |           |                                |



| LOCA         | TION : ELEC. 118 SCCR (AMPS RI                     | MS SYN   | им):ζ2 | 22,000     |         | E: 208Υ/120V 3Φ 4        | 1-Wire+Ground | AMP    | : 100 / | MAIN : MLO     | NEMA: Type 1    | MOUNTING : SURF |
|--------------|--|----------|--------|------------|---------|--------------------------|---------------|--------|---------|----------------|-----------------|-----------------|
|              |  |          |        | $\bigcirc$ |         |                          |               |        |         |                |                 |                 |
| СКТ          | DESCRIPTION  | NOTE     | AMP    | POLE       | Α       | В                        | С             | POLE   | AMP     | NOTE           | DESCRIPT        | ION             |
| 1            | SPARE  |          | 20 A   | 1          | 0 / 0   |                          |               | 1      | 20 A    |                | SPARE           |                 |
| 3            | SPARE  |          | 20 A   | 1          |         | 0 / 0                    |               | 1      | 20 A    |                | SPARE           |                 |
| 5            | SPARE  |          | 20 A   | 1          |         |                          | 0/0           | 1      | 20 A    |                | SPARE           |                 |
| 7            | EXTERIOR LIGHTS - FLAG & EXT. LIGHTING CTRL        | 1        | 20 A   | 1          | 98 / 0  |                          |               | 1      | 20 A    |                | SPARE           |                 |
| 9            | EXTERIOR LIGHTS - BUILDING MOUNTED                 | 1        | 20 A   | 1          |         | 860 / 0                  |               | 1      | 20 A    |                | SPARE           |                 |
| 11           | EXTERIOR LIGHTS - NORTH LOT                        | 1        | 20 A   | 1          |         |                          | 1089 / 0      | 1      | 20 A    |                | SPARE           |                 |
| 13           | EXTERIOR LIGHTS - NORTH SIDEWALK                   | 1        | 20 A   | 1          | 352 / 0 |                          |               | 1      | 20 A    |                | SPARE           |                 |
| 15           | EXTERIOR LIGHTS - SOUTH DRIVE                      | 1        | 20 A   | 1          |         | 396 / 0                  |               | 1      | 20 A    |                | SPARE           |                 |
| 17           | SPARE  |          | 20 A   | 1          |         |                          | 0 / 0         | 1      | 20 A    |                | SPARE           |                 |
|              |  |          |        |            |         |                          |               |        |         |                |                 |                 |
|              |  |          | TOT    | TALS :     | 450 VA  | 1256 VA                  | 1089 VA       |        |         |                |                 |                 |
| $\checkmark$ | TOTAL CONNECTED LOAD                               | (VA) : 2 | 2795 V | A          |         | TOTAL                    | CONNECTED     | LOAD ( | AMPS)   | :8A            |                 |                 |
| PRO          | NRKS:<br>VIDE NEW PANEL TO REPLACE EXISTING PANELB | OARD     | 'E'.   |            |         | NOTES:<br>1. CONNECT CIF | RCUIT THROUG  | H LIGH | ITING R | ELAY PANEL. SE | E DRAWING E-403 |                 |





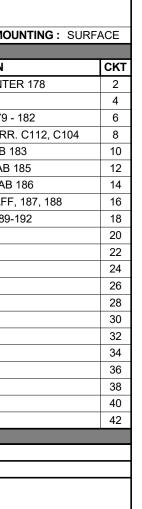


| LP   | B(L)   |  |  | Ρ  | AN  | ELBOA  | RD SCH   | HEDUL   | E  |   |   |   |
|--|--|--|--|--|---|--|--|---|--|---|---|---|
| LOCATION : ELEC  |  | SCCR (AMPS   | RMS SY   | MM):   |   | SERVICE  | : 208Y/120V 3Ф   | 4-Wire+Ground   | AMP  | 100   | A MA  | AIN : MLO NEMA: Type 1  |
| СКТ  | DESCRIPTION  | N  | NOTE   | AMP  | POLE  | A  | В  | С   | POLE   |   | NOTE  | DESCRIP   |
| 1 RE   | ECEPT MEDIA CEN  | TER 178  | E  | 20 A   | 1   | 720 / 720  |  |   | 1  | 20 A  | E   | RECEPT S  |
|  | ECEPT MEDIA CEN  |  | E  | 20 A   | 1   |  | 540 / 1080   | 540 / 4000  | 1  | 20 A  | E   | RECEPT OT   |
| -  | RECEPT WORKROO   |  | E  | 20 A<br>20 A   | 1   | 1000 / 180   |  | 540 / 1080  | 1  | 20 A<br>20 A  | E<br>E  | RECEPT ROO<br>RECEPT STAFF  |
|  | ECEPT MAKERSPA   |  | E  | 20 A   | 1   | 10007-180  | 1080 / 1000  |   | 1  | 20 A  | E   | REFRIG. STAFF   |
| 11 R   | ECEPT ROOM 180   | A, 180B  | E  | 20 A   | 1   |  |  | 720 / 680   | 1  | 20 A  | E   | ICE MAKER STAF  |
|  | RECEPT ROOM 18   |  | E  | 20 A   | 1   | 900 / 1000   |  |   | 1  | 20 A  | E   | VENDING STAFF   |
| 15<br>17   | RECEPT ART LAE   |  | E  | 20 A<br>20 A   | 1   |  | 1080 / 0   | 1260 / 0  | 1  | 20 A<br>20 A  | E<br>E  | SPAR<br>SPAR  |
|  | RECEPT STEM LA   |  | E  | 20 A   | 1   | 900 / 0  |  | 120070  | 1  | 20 A  | E   | SPAR  |
|  | RECEPT STEM LA   | B 185  | E  | 20 A   | 1   |  | 1260 / 0   |   | 1  | 20 A  | ER  | FIRE ALARM CONTRO   |
|  | RECEPT MUSIC LA  |  | E  | 20 A   | 1   | 700 / 0  |  | 1260 / 0  | 1  | 20 A  | E   | SPAR  |
|  | RECEPT MUSIC LA  |  | E  | 20 A<br>20 A   | 1   | 720 / 0  | 720 / 0  |   | 1  | 20 A<br>20 A  | E<br>E  | SPAR<br>SPAR  |
|  | RD REELS MAKERS  |  | E  | 20 A   | 1   |  | 12010  | 720 / 0   | 1  | 20 A  | E   | SPAR  |
| 31   | LIGHTS TUNNE   | EL   | ER   | 20 A   | 1   | 0 / 720  |  |   | 1  | 20 A  | Е   | RECEPT CORRIDOR   |
| 33   | LIGHTS TUNNE   |  | ER   | 20 A   | 1   | _  | 0 / 1440   |   | 1  | 20 A  | E   | RECEPT CORRIDO  |
|  | ORD REELS STEM   |  | E  | 20 A<br>20 A   | 1   | 720 / 360  |  | 720 / 680   | 1  | 20 A<br>20 A  | E   | EWC CORRIE<br>CORD REELS A  |
|  | ORD REELS STEM   |  |  | 20 A   | 1   | 7207360  | 360 / 720  |   | 1  | 20 A  |   | CORD REELS A  |
| 41   | SPACE  |  |  |  | 1   |  |  | 0 / 720   | 1  | 20 A  |   | CORD REELS A  |
|  |  |  |  |  |   |  |  |   | 1  |   |   |   |
|  |  | ONNECTED LOAD  |  | -  | TALS :  | 7940 VA  | 9280 VA  | 8380 VA   |  |   | ) · 71 Δ  |   |
| REMARKS:   | TOTAL  |  |  | 20000  |   |  | NOTES:   |   | LUAD   | (/un 0  |   |   |
| EXISTING SQUARE  | E D PANELBOARD 1   | TYPE 'NQOD'  |  |  |   |  | E - CONNECT T<br>ER - EXISTING (   |   |  | LEAVE   | E AS SP   | PARE IF UNUSED.   |
| СКТ  | . 184  | SCCR (AMPS   | RMS SY   | MM):   |   |  | : 208Y/120V 3Ф   | 4-Wire+Ground   |  | 125   | A <b>M</b> /  | AIN : MLO NEMA: Type 1  |
|  | DESCRIPTION  |  |  | MM):   | POLE  | SERVICE  |  |   | AMP  |   | A MA  |   |
|  | DESCRIPTION<br>HTING AND EF-A R  | N<br>ROOM 150  | NOTE<br>E  | <b>AMP</b><br>20 A   | 1   | SERVICE  | : 208Y/120V 3Ф<br>В  | 4-Wire+Ground   | AMP<br>POLE  | <b>AMP</b><br>20 A  | NOTE<br>E   | DESCRIP<br>LIGHTING MEDIA   |
| 3 LIG  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R  | N<br>ROOM 150<br>ROOM 152  | NOTE<br>E<br>E   | <b>AMP</b><br>20 A<br>20 A   | 1   | SERVICE  | : 208Y/120V 3Ф   | 4-Wire+Ground   | AMP<br>POLE  | AMP<br>20 A<br>20 A   | NOTE<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR   |
| 3 LIG<br>5 LIG   | DESCRIPTION<br>HTING AND EF-A R  | N<br>COOM 150<br>COOM 152<br>COOM 157  | NOTE<br>E  | AMP<br>20 A<br>20 A<br>20 A  | 1   | SERVICE  | : 208Y/120V 3Ф<br>В  | 4-Wire+Ground   | AMP<br>POLE  | <b>AMP</b><br>20 A  | NOTE<br>E   | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO   |
| 3 LIG<br>5 LIG   | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159  | NOTE<br>E<br>E<br>E  | <b>AMP</b><br>20 A<br>20 A   | 1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892  | : 208Y/120V 3Ф<br>В  | 4-Wire+Ground   | AMP<br>POLE  | AMP<br>20 A<br>20 A<br>20 A   | NOTE<br>E<br>E<br>E   | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &   |
| 3 LIG<br>5 LIG<br>7 LIG<br>9<br>11 LIGHTING  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1  | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 150<br>ROOM 150<br>ROO | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>R   | <ul> <li>AMP</li> <li>20 A</li> </ul>  | 1<br>1<br>1<br>1<br>1<br>1<br>1   | <b>A</b><br>1187 / 1892<br>1187 / 1154   | E: 208Y/120V 3Φ<br>B<br>1187 / 0   | 4-Wire+Ground   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE  |
| 3LIG5LIG7LIG91111LIGHTING13LIGHTING  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161  | NOTE           E           E           E           E           E           E           E           E           E           E           E           E           E           E   | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892  | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328   | 4-Wire+Ground C 1187 / 668  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | AMP           20 A  | NOTE           E           E           E           E           E           E           E           E           E           E           E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS  |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>R   | <ul> <li>AMP</li> <li>20 A</li> </ul>  | 1<br>1<br>1<br>1<br>1<br>1<br>1   | <b>A</b><br>1187 / 1892<br>1187 / 1154   | E: 208Y/120V 3Φ<br>B<br>1187 / 0   | 4-Wire+Ground C 1187 / 668  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A   |
| 3LIG5LIG7LIG91111LIGHTING13LIGHTING15LIG17LIG  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE           E           E           E           E           E           E           E           E           E           E           E           E           E           E           E           E           E   | <ul> <li>AMP</li> <li>20 A</li> </ul>  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  | <b>A</b><br>1187 / 1892<br>1187 / 1154   | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328   | 4-Wire+Ground C 1187 / 668 857 / 958  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E   | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROO   |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | <b>SERVICE</b><br><b>A</b><br>1187 / 1892<br>1187 / 1154<br>1333 / 792   | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP           20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E   | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROO<br>SPAR<br>SPAR   |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1  | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0  | E 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664   | 4-Wire+Ground C 1187 / 668 857 / 958  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A   | NOTE              | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROO<br>SPAR<br>SPAR   |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | <b>SERVICE</b><br><b>A</b><br>1187 / 1892<br>1187 / 1154<br>1333 / 792   | E 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP           20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E   | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING ROO<br>SPAR<br>SPAR<br>SPAR  |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0  | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A   | NOTE              | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROO<br>SPAR<br>SPAR<br>SPAR<br>SPAR   |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0  | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>0 / 0  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP 20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROO<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR   |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | AMP<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0   | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>0 / 0<br>0 / 0   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP           20 A  | NOTE              | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR                                      |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0   | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>0 / 0  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP 20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPA                       |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0                                | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>0 / 0<br>0 / 0   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP<br>20 A<br>20 A | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPA                       |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP<br>20 A<br>20 A<br>2   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0                                | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>0 / 0<br>0 / 0   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP<br>20 A<br>20 A                                 | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR                           |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE             | AMP           20 A           20 A     <   | 1         1 | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0                                | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>857 / 958<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP<br>20 A<br>20 A   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR                           |
| 3         LIG           5         LIG           7         LIG           9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE  | N<br>COOM 150<br>COOM 152<br>COOM 157<br>COOM 159<br>C. 184<br>151, V103, C110<br>158, 160, 161<br>COOM 145<br>COOM 146  | NOTE           E | AMP           20 A           20 A <td>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>SERVICE<br/>A<br/>1187 / 1892<br/>1187 / 1154<br/>1333 / 792<br/>812 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>E: 208Y/120V 3Φ<br/>B<br/>1187 / 0<br/>0 / 1328<br/>812 / 664<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>1</td> <td>4-Wire+Ground<br/>C<br/>1187 / 668<br/>857 / 958<br/>857 / 958<br/>812 / 1058<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>AMP<br/>POLE<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>AMP           20 A           20 A     &lt;</td> <td>NOTE         E        &lt;</td> <td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 A<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF</td>  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0                       | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>10<br>0 / 0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>857 / 958<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP           20 A           20 A     <  | NOTE         E        < | DESCRIP<br>LIGHTING MEDIA<br>SPAF<br>LIGHTING ROC<br>LGT VEST. V104, V105 A<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF                      |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>G ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE  | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ONNECTED LOAE   | NOTE           E | AMP           20 A           20 A <td>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>SERVICE<br/>A<br/>1187 / 1892<br/>1187 / 1154<br/>1333 / 792<br/>812 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>E: 208Y/120V 3Φ<br/>B<br/>1187 / 0<br/>0 / 1328<br/>812 / 664<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>10<br/>0 / 0<br/>0 /</td> <td>4-Wire+Ground<br/>C<br/>1187 / 668<br/>857 / 958<br/>812 / 1058<br/>812 / 1058<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C</td> <td>AMP<br/>POLE<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>AMP         20 A         20 A      <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF</td></tr<></td>             | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0                       | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>0 / | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF</td></tr<>   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAF<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF                      |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ONNECTED LOAE   | NOTE           E | AMP           20 A           20 A <td>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>SERVICE<br/>A<br/>1187 / 1892<br/>1187 / 1154<br/>1333 / 792<br/>812 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>E: 208Y/120V 3Φ<br/>B<br/>1187 / 0<br/>0 / 1328<br/>812 / 664<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>0 / 0<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>10<br/>1</td> <td>4-Wire+Ground<br/>C<br/>1187 / 668<br/>857 / 958<br/>812 / 1058<br/>812 / 1058<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C</td> <td>AMP<br/>POLE<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>AMP         20 A         20 A      <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 A<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPA</td></tr<></td>   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0                       | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>10<br>0 / 0<br>10<br>0 / 0<br>10<br>0 / 0<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 A<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPA</td></tr<>   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAF<br>LIGHTING ROC<br>LGT VEST. V104, V105 A<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPA                  |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ONNECTED LOAE   | NOTE           E | AMP           20 A           20 A <td>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>SERVICE<br/>A<br/>1187 / 1892<br/>1187 / 1154<br/>1333 / 792<br/>812 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>E: 208Y/120V 3Φ<br/>B<br/>1187 / 0<br/>0 / 1328<br/>812 / 664<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>10<br/>0 / 0<br/>0 /</td> <td>4-Wire+Ground<br/>C<br/>1187 / 668<br/>857 / 958<br/>812 / 1058<br/>812 / 1058<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C</td> <td>AMP<br/>POLE<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>AMP         20 A         20 A      <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING MOS<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR</td></tr<></td> | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0                       | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>0 / | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING MOS<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR</td></tr<>   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING MOS<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR           |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ONNECTED LOAE   | NOTE           E | AMP           20 A           20 A <td>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>SERVICE<br/>A<br/>1187 / 1892<br/>1187 / 1154<br/>1333 / 792<br/>812 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0</td> <td>E: 208Y/120V 3Φ<br/>B<br/>1187 / 0<br/>0 / 1328<br/>812 / 664<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>10<br/>0 / 0<br/>0 /</td> <td>4-Wire+Ground<br/>C<br/>1187 / 668<br/>857 / 958<br/>812 / 1058<br/>812 / 1058<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>0 / 0<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C<br/>C</td> <td>AMP<br/>POLE<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1<br/>1</td> <td>AMP         20 A         20 A      <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING MOS<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR</td></tr<></td> | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0                       | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>0 / | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING MOS<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR</td></tr<>   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING MOS<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR           |
| 3       LIG         5       LIG         7       LIG         9       11         11       LIGHTING         13       LIGHTING         14       LIG         17       LIG         19       LIG         21       23         25       27         29       31         33       35         37       39         41       SQUARE  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>CONNECTED LOAE  | NOTE           E | AMP         20 A         20 A <tr tr=""></tr>  | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>8357 VA            | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>10<br>0 / 0<br>0 / | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>C<br>5540 VA<br>L CONNECTED<br>O EXISTING BRE<br>CIRCUIT TO REN  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPA</td></tr<>  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPA                       |
|  |  |  |  |  |   |  |  |   |  |   |   |   |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>2. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>CONNECTED LOAE  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E   | AMP<br>20 A<br>20 A<br>2   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>8357 VA<br>ELBOA   | E: 208Y/120V 3Φ<br>B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>3991 VA<br>TOTA<br>NOTES:<br>E - CONNECT T<br>ER - EXISTING O   | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>C<br>CONNECTED<br>O EXISTING BRE<br>CIRCUIT TO REN   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF</td></tr<>  | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAF<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF                           |
| 3       LIG         5       LIG         7       LIG         9       11         11       LIGHTING         13       LIGHTING         15       LIG         17       LIG         19       LIG         21       23         25       27         29       31         33       35         37       39         41       EEMARKS:         EXISTING SQUARE       ELP         .OCATION : Space       Image: Comparison of the system | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE   | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>ROOM 159<br>ROOM 159<br>ROOM 145<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ROOM 145<br>ROOM 146<br>ROOM 147<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 155<br>ROOM 155<br>ROO | NOTE         E        <  | AMP<br>20 A<br>20 A<br>2   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>8357 VA<br>ELBOA<br>SERVICE | B<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>0 / 0<br>3991 VA<br>TOTA<br>NOTES:<br>E - CONNECT T<br>ER - EXISTING O  | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>C<br>CONNECTED<br>O EXISTING BRE<br>CIRCUIT TO REN   | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE         A</td><td>DESCRIF<br/>LIGHTING MEDIA<br/>SPAF<br/>LIGHTING ROC<br/>LGT VEST. V104, V105 &amp;<br/>LIGHTING AR<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING ROC<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF<br/>SPAF</td></tr<>  | NOTE         A  | DESCRIF<br>LIGHTING MEDIA<br>SPAF<br>LIGHTING ROC<br>LGT VEST. V104, V105 &<br>LIGHTING AR<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING ROC<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF<br>SPAF      |
| 3       LIG         5       LIG         7       LIG         9  | DESCRIPTION<br>HTING AND EF-A R<br>HTING AND EF-A R<br>HTING AND EF-A R<br>NAC PANEL ELEC<br>3 ROOM 148, 149, 1<br>NG ROOM 153-156,<br>HTING AND EF-A R<br>HTING AND EF-A R<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPARE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE | N<br>ROOM 150<br>ROOM 152<br>ROOM 157<br>ROOM 159<br>R. 184<br>151, V103, C110<br>158, 160, 161<br>ROOM 145<br>ROOM 145<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 147<br>ROOM 146<br>ROOM 147<br>ROOM 146<br>ROOM 146<br>ROOM 147<br>ROOM 147<br>ROOM 146<br>ROOM 146<br>ROOM 147<br>ROOM 147<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 145<br>ROOM 146<br>ROOM 145<br>ROOM 155<br>ROOM 155<br>ROO   | NOTE         E        <  | AMP<br>20 A<br>20 A<br>2   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1   | SERVICE<br>A<br>1187 / 1892<br>1187 / 1154<br>1333 / 792<br>812 / 0<br>0 / 0<br>0 / 0<br>8357 VA<br>ELBOA<br>SERVICE | В<br>1187 / 0<br>0 / 1328<br>812 / 664<br>0 / 0<br>0 | 4-Wire+Ground<br>C<br>1187 / 668<br>857 / 958<br>812 / 1058<br>812 / 1058<br>0 / 0<br>0 / 0<br>EXISTING BRE<br>CIRCUIT TO REM<br>HEDULL<br>4-Wire+Ground  | AMP<br>POLE<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | AMP         20 A         20 A <tr< td=""><td>NOTE<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E<br/>E</td><td>DESCRIP<br/>LIGHTING MEDIA<br/>SPAR<br/>LIGHTING ROO<br/>LGT VEST. V104, V105 8<br/>LIGHTING ART<br/>LIGHTING STE<br/>LIGHTING MUS<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>LIGHTING AND EF-A<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPAR<br/>SPA</td></tr<>   | NOTE<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E<br>E  | DESCRIP<br>LIGHTING MEDIA<br>SPAR<br>LIGHTING ROO<br>LGT VEST. V104, V105 8<br>LIGHTING ART<br>LIGHTING STE<br>LIGHTING MUS<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>LIGHTING AND EF-A<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPAR<br>SPA |

| СКТ              | DESCRIPTION                       | NOTE              | AMP   | POLE   | Α          | В           | C              | POLE   | AMP  | NOTE    | DESCRIPTION           |
|------------------|-----------------------------------|-------------------|-------|--------|------------|-------------|----------------|--------|------|---------|-----------------------|
| 1                | VUV-B 3/4HP CLASSROOM (3RD) 136   | E                 | 20 A  | 1      | 1656 / 0   |             |                | 2      | 20 A | Е       | SPARE                 |
| 3                | VUV-B 3/4HP CLASSROOM (3RD) 137   | E                 | 20 A  | 1      |            | 1656 / 0    |                | 2      | 20 A |         | SPARE                 |
| 5                | VUV-B 3/4HP CLASSROOM (4TH) 143   | E                 | 20 A  | 1      |            |             | 1656 / 0       | 2      | 20.4 | Е       | SPARE                 |
| 7                | VUV-B 3/4HP CLASSROOM (4TH) 144   | E                 | 20 A  | 1      | 1656 / 0   |             |                | 2      | 20 A |         | SPARE                 |
| 9                | VUV-B 3/4HP CLASSROOM (3RD) 125   | E                 | 20 A  | 1      |            | 1656 / 1656 |                | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 11               | VUV-B 3/4HP CLASSROOM (4TH) 135   | E                 | 20 A  | 1      |            |             | 1656 / 1656    | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 13               | CUH-A3 CORRIDOR C119              | E                 | 20 A  | 1      | 190 / 0    |             |                | 2      | 20.4 | Е       | CDARE                 |
| 15               | SPARE                             | E                 | 20 A  | 1      |            | 0 / 0       |                | 2      | 20 A | E       | SPARE                 |
| 17               | SPARE                             | E                 | 20 A  | 1      |            |             | 0 / 0          | 2      | 20.4 | Е       | SPARE                 |
| 19               | TCP AHU-4 GRADE LEVEL STORAGE 240 | E                 | 20 A  | 1      | 1000 / 0   |             |                | 2      | 20 A |         | SPARE                 |
| 21               | EXHAUST FAN EF-D1 AREA C ROOF     | E                 | 20 A  | 1      |            | 696 / 1656  |                | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 23               | EXHAUST FAN EF-D2 AREA C ROOF     | E                 | 20 A  | 1      |            |             | 696 / 1656     | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 25               | EXHAUST FAN EF-D2 AREA C ROOF     | E                 | 20 A  | 1      | 696 / 1656 |             |                | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 27               | EXHAUST FAN EF-G AREA C ROOF      | E                 | 20 A  | 1      |            | 300 / 1656  |                | 1      | 20 A | E       | VUV-B 3/4HP CLASSROOM |
| 29               | EXHAUST FAN - #7 - E&W            | ER                | 20 A  | 1      |            |             | 0 / 300        | 1      | 20 A | E       | EF-A ELEC. 241        |
| 31               | FIRE ALARM - NAC PANEL            | ER                | 20 A  | 1      | 0 / 0      |             |                | 1      | 20 A | ER      | EXHAUST FAN - #       |
| 33               | AUXILLARY FANS - HALLS            | ER                | 20 A  | 1      |            | 0 / 0       |                | 1      | 20 A | ER      | EXHAUST FAN - #       |
| 35               | EXHAUST FAN - #12                 | ER                | 20 A  | 1      |            |             | 0 / 0          | 1      | 20 A | E       | SPARE                 |
| 37               | EXHAUST FAN - #2                  | E                 | 20 A  | 1      | 0 / 0      |             |                | 1      | 20 A | E       | SPARE                 |
| 39               | EXHAUST FAN - #5                  | ER                | 20 A  | 1      |            | 0 / 0       |                | 1      | 20 A | E       | SPARE                 |
| 41               | IRV - 1                           | ER                | 20 A  | 1      |            |             | 0 / 0          | 1      | 20 A | E       | SPARE                 |
|                  |                                   |                   |       |        |            |             |                |        |      |         |                       |
|                  |                                   |                   | -     | TALS : | 6854 VA    | 9276 VA     | 7620 VA        |        |      |         |                       |
|                  | TOTAL CONNECTED LOAD              | <b>) (VA)</b> : 2 | 23750 | VA     |            | ΤΟΤΑ        | L CONNECTED    | LOAD ( | AMPS | ): 66 A |                       |
| REMAF<br>Existii |                                   | <u>, (11) 1</u>   |       |        |            | NOTES:      | O EXISTING BRE | AKER.  |      |         | PARE IF UNUSED.       |



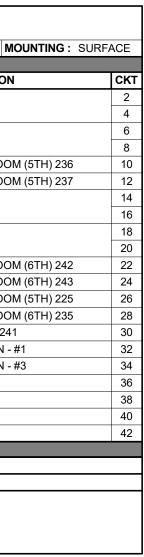
|              | _PB(R)               |                                       |        |        | ARD SCH         |               |      |         |            |              |         |
|--------------|----------------------|---------------------------------------|--------|--------|-----------------|---------------|------|---------|------------|--------------|---------|
| LOCATION : I | ELEC. 184            | SCCR (AMPS RMS SYMM):                 |        | SERVIC | E: 208Υ/120V 3Φ | 4-Wire+Ground | AMP  | : 100 A | MAIN : MLO | NEMA: Type 1 | MOUNTIN |
| СКТ          | DESCRIPTION          | NOTE AMP                              | POLE   | Α      | В               | С             | POLE | AMP N   | OTE        | DESCRIPT     | ΓΙΟΝ    |
| 1            | EXISTING             | 20 A                                  | 1      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 3            | EXISTING             | 20 A                                  | 1      |        | 0 / 0           |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 5            | EXISTING             | 20 A                                  | 1      |        |                 | 0 / 0         | 1    | 20 A    |            | EXISTIN      | 1G      |
| 7            | EXISTING             | 20 A                                  | 1      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 9            | EXISTING             | 20 A                                  | 1      |        | 0 / 0           |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 11           | EXISTING             | 20 A                                  | 1      |        |                 | 0 / 0         | 1    | 20 A    |            | EXISTIN      | 1G      |
| 13           | EXISTING             | 20 A                                  | 1      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 15           | EXISTING             | 20 A                                  | 1      |        | 0 / 0           |               | 1    | 20 A    |            | EXISTIN      | IG      |
| 17           | EXISTING             | 20 A                                  | 1      |        |                 | 0/0           | 1    | 20 A    |            | EXISTIN      | IG      |
| 19           | EXISTING             | 20 A                                  | 1      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | IG      |
| 21           | EXISTING             | 20 A                                  | 1      |        | 0/0             |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 23           | EXISTING             | 20 A                                  | 1      |        |                 | 0/0           | 1    | 20 A    |            | EXISTIN      | IG      |
| 25           | EXISTING             | 20 A                                  | 1      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | IG      |
| 27           | EXISTING             | 20 A                                  | 1      |        | 0 / 0           |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 29           |                      |                                       |        |        |                 | 0/0           | 1    | 20 A    |            | EXISTIN      | 1G      |
| 31           | EXISTING             | 20 A                                  | 2      | 0/0    |                 |               | 1    | 20 A    |            | EXISTIN      | IG      |
| 33           |                      |                                       |        |        | 0 / 0           |               | 1    | 20 A    |            | EXISTIN      | 1G      |
| 35           | EXISTING             | 20 A                                  | 2      |        |                 | 0/0           | 1    | 20 A    |            | EXISTIN      | 1G      |
| 37           |                      |                                       |        | 0/0    |                 |               | 1    |         |            | SPACE        | Ē       |
| 39           | EXISTING             | 20 A                                  | 2      |        | 0 / 0           |               | 1    |         |            | SPACE        | Ξ       |
| 41           | SPACE                |                                       | 1      |        |                 | 0/0           | 1    |         |            | SPACE        | Ξ       |
|              |                      |                                       |        |        |                 |               |      |         |            |              |         |
|              |                      |                                       | TALS : | 0 VA   | 0 VA            | 0 VA          |      |         |            |              |         |
|              | TOTAL CO             | NNECTED LOAD (VA): 0 VA               |        |        |                 | L CONNECTED   | LOAD | AMPS) : | 0 A        |              |         |
| REMARKS:     |                      |                                       |        |        | NOTES:          |               |      |         |            |              |         |
|              | UARE D PANELBOARD TY | 'PE 'NQOD'<br>IRECTORY. CONTRACTOR TO |        |        |                 |               |      |         |            |              |         |



LPBM(L)

| LOCATIO            | N : ELEC. 184 SCCR (AMPS                       | RMS SYI   | MM):    |       | SERVICE     | : 208Y/120V 3Ф                              | 4-Wire+Ground | AMF  | <b>P:</b> 100 | A MAIN  | : MLO NEMA: Type 1 MOUNTING : SUF        | RFACE |
|--------------------|--|-----------|---------|-------|-------------|---|---------------|------|---------------|---------|--|-------|
| СКТ                | DESCRIPTION                                    | NOTE      | AMP     | POLE  | Α           | В   | С             | POLE | AMP           | NOTE    | DESCRIPTION                              | СК    |
| 1                  | SPARE  | E         | 20 A    | 1     | 0 / 0       |   |               | 1    | 20 A          | E       | SPARE                                    | 2     |
| 3                  | SPARE  | E         | 20 A    | 1     |             | 0 / 0                                       |               | 1    | 20 A          | E       | SPARE                                    | 4     |
| 5                  | TCP MECH 155                                   | E         | 20 A    | 1     |             |   | 0 / 0         | 1    | 20 A          | E       | SPARE                                    | 6     |
| 7                  | BLOWER COIL BC-1 MECH 155                      | E         | 20 A    | 2     | 500 / 0     |   |               | 1    | 20 A          | E       | SPARE                                    | 8     |
| 9                  | BEOWER COLE BE-T MECT 135                      |           | 20 A    | 2     |             | 500 / 0                                     |               | 1    | 20 A          | E       | SPARE                                    | 10    |
| 11                 | SPARE  | Е         | 20 A    | 2     |             |   | 0 / 0         | 1    | 20 A          | E       | SPARE                                    | 12    |
| 13                 | SFARE  |           | 20 A    | 2     | 0 / 0       |   |               | 1    | 20 A          | E       | SPARE                                    | 14    |
| 15                 | SPARE  | E         | 20 A    | 2     |             | 0 / 0                                       |               | 1    | 20 A          | E       | SPARE                                    | 16    |
| 17                 | SPARE  |           | 20 A    | 2     |             |   | 0 / 0         | 1    | 20 A          | E       | SPARE                                    | 18    |
| 19                 | ODADE  |           | 20.4    | 2     | 0 / 0       |   |               | 1    | 20 A          | ER      | LIBRARY FLOOR BOX                        | 20    |
| 21                 | SPARE  | E         | 20 A    | 2     |             | 0 / 0                                       |               | 1    | 20 A          | E       | SPARE                                    | 22    |
| 23                 | CUH-A1 VESTIBULE V103                          | E         | 20 A    | 1     |             |   | 190 / 1656    | 1    | 20 A          | E       | VUV-C 3/4HP CLASSROOM (1ST) 150          | 24    |
| 25                 | VUV-B 3/4HP CLASSROOM (1ST) 145                | E         | 20 A    | 1     | 1656 / 1656 |   |               | 1    | 20 A          | E       | VUV-C 3/4HP CLASSROOM (1ST) 152          | 26    |
| 27                 | VUV-B 3/4HP CLASSROOM (1ST) 146                | E         | 20 A    | 1     |             | 1656 / 1656                                 |               | 1    | 20 A          | E       | VUV-C 3/4HP CLASSROOM (1ST) 157          | 28    |
| 29                 | VUV-B 3/4HP CLASSROOM (1ST) 147                | E         | 20 A    | 1     |             |   | 1656 / 1656   | 1    | 20 A          | E       | VUV-C 3/4HP CLASSROOM (1ST) 159          | 30    |
| 31                 | PUH-D BUILDING STORAGE 148                     | E         | 20 A    | 1     | 96 / 96     |   |               | 1    | 20 A          | E       | PUH-D JAN. 161                           | 32    |
| 33                 | SPARE  | E         | 20 A    | 1     |             | 0 / 0                                       |               | 1    | 20 A          | E       | SPARE                                    | 34    |
| 35                 | SPARE  | E         | 20 A    | 1     |             |   | 0 / 0         | 1    | 20 A          | E       | SPARE                                    | 36    |
| 37                 | SPARE  | E         | 20 A    | 1     | 0 / 0       |   |               | 1    |               |         | SPACE                                    | 38    |
| 39                 | SPACE  |           |         | 1     |             | 0 / 0                                       |               | 1    |               |         | SPACE                                    | 40    |
| 41                 | SPACE  |           |         | 1     |             |   | 0 / 0         | 1    |               |         | SPACE                                    | 42    |
|                    |  |           |         |       |             |   |               |      |               |         |  |       |
|                    |  |           | -       | ALS : | 4004 VA     | 3812 VA                                     | 5158 VA       |      |               |         |  |       |
|                    | TOTAL CONNECTED LOA                            | AD (VA) : | 12974 \ | /A    |             |   | L CONNECTED   | LOAD | (AMPS         | ): 36 A |  |       |
| REMARK<br>EXISTING | <b>S:</b><br>S SQUARE D PANELBOARD TYPE 'NQOD' |           |         |       |             | NOTES:<br>E - CONNECT TO<br>ER - EXISTING C |               |      |               |         | E IF UNUSED.<br>EAVE AS SPARE IF UNUSED. |       |

PANELBOARD SCHEDULE



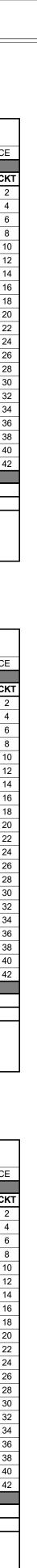
| LPC2   | PAN                           | IELBOA      | RD SCI                  | HEDUL           | E                  |                                     |           | LPC1                  |               | PAN                | ELBOA       | RD SCH         | HEDUL         | E                  |                                     |
|--|-------------------------------|-------------|-------------------------|-----------------|--------------------|-------------------------------------|-----------|-----------------------|---------------|--------------------|-------------|----------------|---------------|--------------------|-------------------------------------|
| OCATION : Space 13 SCCF                      | (AMPS RMS SYMM):              | SERVICE     | : 208Y/120V 3Φ          | 0 4-Wire+Ground | AMP: 100 A MA      | IN: MLO NEMA: Type 1 MOUNTING: SUR  | FACE LOCA | FION : GRADE LEVEL    | SCCR (AMPS F  | RMS SYMM): (22,000 |             | : 208Y/120V 3Φ | 4-Wire+Ground | <b>AMP</b> : 150 A | MAIN : MLO NEMA: Type 1 MOUNTING :  |
| KT DESCRIPTION                               | NOTE AMP POL                  | E A         | В                       | C               | POLE AMP NOTE      | DESCRIPTION                         | СКТ       | DESCRIPTION           |               | NOTE AMP POLE      | A           | В              | C             | POLE AMP           | NOTE DESCRIPTION                    |
| RECEPT CLASSROOM (5TH) 22                    | E 20 A 1                      | 1260 / 1260 |                         |                 | 1 20 A E           | RECEPT CLASSROOM (5TH) 236          | 2 1       | RECEPT CLASSROOM (    | (3RD) 125     | 20 A 1             | 1260 / 1260 |                |               | 1 20 A             | RECEPT CLASSROOM (3RD) 136          |
| RECEPT CLASSROOM (5TH) 22                    | E 20 A 1                      |             | 720 / 540               |                 | 1 20 A E           | RECEPT CLASSROOM (5TH) 236          | 4 3       | RECEPT CLASSROOM (    | (3RD) 125     | 20 A 1             |             | 720 / 540      |               | 1 20 A             | RECEPT CLASSROOM (3RD) 136          |
| RECEPT ROOM 226, 227                         | E 20 A 1                      |             |                         | 1440 / 540      | 1 20 A E           | RECEPT CLASSROOM (5TH) 237          | 6 5       | RECEPT ROOM 126       | 6, 127        | 20 A 1             |             |                | 1440 / 540    | 1 20 A             | RECEPT CLASSROOM (3RD) 137          |
| RECEPT ACTIVITY COMMONS 2                    | B E 20 A 1                    | 1080 / 1260 |                         |                 | 1 20 A E           | RECEPT CLASSROOM (5TH) 237          | 8 7       | RECEPT ACTIVITY COM   | MONS 128      | 20 A 1             | 1080 / 1260 |                |               | 1 20 A             | RECEPT CLASSROOM (3RD) 137          |
| EWC ACTIVITY COMMONS 228                     | E 20 A 1                      |             | 680 / 900               |                 | 1 20 A E           | RECEPT ROOM 239, 240, SOUTH C208    | 10 9      | EWC ACTIVITY COMMO    | ONS 128       | 20 A 1             |             | 680 / 1080     |               | 1 20 A             | RECEPT ROOM 140, 141, 142, SOUTH C1 |
| RECEPT FLEX CLASSROOM (5TH/6T                | I) 229 E 20 A 1               |             |                         | 540 / 1000      | 1 20 A E           | COPIER WORK ROOM/ SHARED OFFICE 239 | 12 11     | RECEPT FLEX CLASSROOM | (3RD/4TH) 129 | 20 A 1             |             |                | 540 / 1000    | 1 20 A             | COPIER WORK ROOM/ SHARED OFFICE     |
| RECEPT FLEX CLASSROOM (5TH/6T                | I) 229 E 20 A 1               | 1440 / 1260 |                         |                 | 1 20 A E           | RECEPT CLASSROOM (6TH) 242          | 14 13     | RECEPT FLEX CLASSROOM | (3RD/4TH) 129 | 20 A 1             | 1440 / 1260 |                |               | 1 20 A             | RECEPT CLASSROOM (4TH) 143          |
| RECEPT ROOM 230, CORRIDOR C                  | 208 E 20 A 1                  |             | 900 / 540               |                 | 1 20 A E           | RECEPT CLASSROOM (6TH) 242          | 16 15     | RECEPT ROOM 130, CORR | RIDOR C108    | 20 A 1             |             | 1080 / 540     |               | 1 20 A             | RECEPT CLASSROOM (4TH) 143          |
| RECEPT ROOM 232, 233                         | E 20 A 1                      |             |                         | 1080 / 540      | 1 20 A E           | RECEPT CLASSROOM (6TH) 243          | 18 17     | RECEPT ROOM 132       | 2, 133        | 20 A 1             |             |                | 1080 / 540    | 1 20 A             | RECEPT CLASSROOM (4TH) 144          |
| RECEPT ACTIVITY COMMONS 2                    | 4 E 20 A 1                    | 1080 / 1260 |                         |                 | 1 20 A E           | RECEPT CLASSROOM (6TH) 243          | 20 19     | RECEPT ACTIVITY COM   | MONS 134      | 20 A 1             | 1080 / 1260 |                |               | 1 20 A             | RECEPT CLASSROOM (4TH) 144          |
| RECEPT ACTIVITY COMMONS 2                    | 4 E 20 A 1                    |             | 680 / 0                 |                 | 1 20 A E           | SPARE                               | 22 21     | EWC ACTIVITY COMMO    | ONS 134       | 20 A 1             |             | 680 / 180      |               | 1 20 A             | RECEPT IDF 139                      |
| RECEPT CLASSROOM (6TH) 23                    | E 20 A 1                      |             |                         | 720 / 0         | 1 20 A E           | SPARE                               | 24 23     | RECEPT CLASSROOM (    | (4TH) 135     | 20 A 1             |             |                | 720 / 540     | 1 20 A             | RECEPT IDF139                       |
| RECEPT CLASSROOM (6TH) 23                    | E 20 A 1                      | 1260 / 0    |                         |                 | 1 20 A E           | SPARE                               | 26 25     | RECEPT CLASSROOM (    | (4TH) 135     | 20 A 1             | 1260 / 0    |                |               | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      |             | 0 / 0                   |                 | 1 20 A E           | SPARE                               | 28 27     | SPARE                 |               | 20 A 1             |             | 0 / 0          |               | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      |             |                         | 0 / 0           | 1 20 A E           | SPARE                               | 30 29     | SPARE                 |               | 20 A 1             |             |                | 0 / 0         | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      | 0 / 0       |                         |                 | 1 20 A E           | SPARE                               | 32 31     | SPARE                 |               | 20 A 1             | 0 / 0       |                |               | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      |             | 0 / 0                   |                 | 1 20 A E           | SPARE                               | 34 33     | SPARE                 |               | 20 A 1             |             | 0 / 0          |               | 1 20 A             | SPARE                               |
| 5 SPARE                                      | E 20 A 1                      |             |                         | 0 / 0           | 1 20 A E           | SPARE                               | 36 35     | SPARE                 |               | 20 A 1             |             |                | 0 / 0         | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      | 0 / 0       |                         |                 | 1 20 A E           | SPARE                               | 38 37     | SPARE                 |               | 20 A 1             | 0 / 0       |                |               | 1 20 A             | SPARE                               |
| 9 SPARE                                      | E 20 A 1                      |             | 0 / 0                   |                 | 1 20 A E           | SPARE                               | 40 39     | SPARE                 |               | 20 A 1             |             | 0 / 0          |               | 1 20 A             | SPARE                               |
| SPARE  | E 20 A 1                      |             |                         | 0 / 0           | 1 20 A ER          | ELEVATOR CONTROL                    | 42 41     | SPARE                 |               | 20 A 1             |             |                | 0 / 0         | 1 20 A             | SPARE                               |
|  | TOTALS                        | : 11160 VA  | 4960 VA                 | 5860 VA         |                    |                                     |           |                       |               | TOTALS :           | 11160 VA    | 5500 VA        | 6400 VA       |                    |                                     |
|  | <b>D LOAD (VA)</b> : 21980 VA | . 11100 VA  |                         |                 | LOAD (AMPS): 61 A  |                                     |           |                       |               | (VA): 23060 VA     | THOUVA      |                |               | LOAD (AMPS) :      | 64 A                                |
| IARKS:<br>STING SQUARE D PANELBOARD TYPE 'NG |                               |             | NOTES:<br>E - CONNECT T |                 | EAKER. LEAVE AS SP | ARE IF UNUSED.                      | PROV      |                       |               | (17) · 2000 VA     |             | NOTES:         |               |                    |                                     |

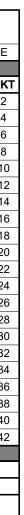
| SURF | ACE |
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|       | LPBA                      |  |                |         |       |             | RD SCH           |               |          |          |        |                        |              |         |
|-------|---------------------------|--|----------------|---------|-------|-------------|------------------|---------------|----------|----------|--------|------------------------|--------------|---------|
| LOCA  | TION : ELEC. 184          | SCCR (AMPS R                           | MS SY          | MM):    |       | SERVICE     | : 208Y/120V 3Φ 4 | 4-Wire+Ground | AMF      | •: 100 A | M      | AIN : MLO NEMA: Type 1 | MOUNTING :   | SURFACE |
| СКТ   | DESCRIPTION               | 1                                      | NOTE           |         | POLE  | A           | В                | С             | POLE     |          | NOTE   | DESCRIPT               | ΓΙΟΝ         | СК      |
| 1     | RECEPT CLASSROOM          | (1ST) 145                              | E              | 20 A    | 1     | 1260 / 1260 |                  |               | 1        | 20 A     | Е      | RECEPT CLASSRO         | OM (1ST) 152 | 2       |
| 3     | RECEPT CLASSROOM          | (1ST) 145                              | E              | 20 A    | 1     |             | 900 / 360        |               | 1        | 20 A     | Е      | RECEPT CLASSRO         | OM (1ST) 152 | 4       |
| 5     | RECEPT CLASSROOM (        | FLEX) 146                              | E              | 20 A    | 1     |             |                  | 1260 / 1080   | 1        | 20 A     | Е      | RECEPT ROOM            | A 153, 154   | 6       |
| 7     | RECEPT CLASSROOM (        | FLEX) 146                              | E              | 20 A    | 1     | 720 / 360   |                  |               | 1        | 20 A     | Е      | RECEPT CLASSR          | OOM (K) 159  | 8       |
| 9     | RECEPT CLASSROOM          | Л (K) 147                              | E              | 20 A    | 1     |             | 900 / 1080       |               | 1        | 20 A     | Е      | RECEPT ROOM            | A 155, 156   | 10      |
| 11    | RECEPT CLASSROOM          | Л (K) 147                              | E              | 20 A    | 1     |             |                  | 1260 / 360    | 1        | 20 A     | Е      | RECEPT CLASSR          | OOM (K) 157  | 12      |
| 13    | RECEPT ROOM 148, 169 & TG | CORRIDOR C110                          | E              | 20 A    | 1     | 900 / 1260  |                  |               | 1        | 20 A     | Е      | RECEPT CLASSR          | OOM (K) 157  | 14      |
| 15    | RECEPT SMALL GROUP        | ROOM 149                               | E              | 20 A    | 1     |             | 900 / 1080       |               | 1        | 20 A     | Е      | RECEPT ACTIVITY (      | COMMONS 158  | 16      |
| 17    | RECEPT CLASSROOM          | (1ST) 150                              | E              | 20 A    | 1     |             |                  | 360 / 680     | 1        | 20 A     | Е      | EWC ACTIVITY CC        | MMONS 158    | 18      |
| 19    | RECEPT CLASSROOM          | (1ST) 150                              | E              | 20 A    | 1     | 1260 / 1260 |                  |               | 1        | 20 A     | Е      | RECEPT CLASSR          | OOM (K) 159  | 20      |
| 21    | RECEPT ACTIVITY COM       | MONS 151                               | E              | 20 A    | 1     |             | 900 / 1080       |               | 1        | 20 A     | Е      | RECEPT ROOM            | / 160, 161   | 22      |
| 23    | EWC ACTIVITY COMM         | ONS 151                                | E              | 20 A    | 1     |             |                  | 680 / 0       | 1        | 20 A     | Е      | SPARE                  | =            | 24      |
| 25    | SPARE                     |  | E              | 20 A    | 1     | 0 / 0       |                  |               | 1        | 20 A     | Е      | SPARE                  | Ξ            | 26      |
| 27    | SPARE                     |  | E              | 20 A    | 1     |             | 0 / 0            |               | 0        | 00.4     | -      | 004.00                 | _            | 28      |
| 29    |                           |  | _              | CO A    | 0     |             |                  | 0 / 0         | 2        | 20 A     | Е      | SPARE                  | =            | 30      |
| 31    | SPARE                     |  | E              | 60 A    | 2     | 0 / 0       |                  |               | <u>_</u> | 20.4     | Е      | SPARE                  | _            | 32      |
| 33    |                           |  | _              | CO A    | ~     |             | 0 / 0            |               | 2        | 20 A     | E      | SPARE                  | =            | 34      |
| 35    | SPARE                     |  | E              | 60 A    | 2     |             |                  | 0/0           | 2        | 00.4     | _      | SPARE                  | _            | 36      |
| 37    | SPARE                     |  | E              | 20 A    | 1     | 0 / 0       |                  |               | 2        | 20 A     | Е      | SPARE                  | =            | 38      |
| -39   | SPARE                     | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <del>م</del> ے | 20 A    | 1     |             | 0/0              |               | 0        | 20.4     | Е      | SPARE                  | _            | 40      |
| 41    | RECEPT OUTDOOR COURT      |  | E              | 20 A    | 1}    |             |                  | 360 / 0       | 2        | 20 A     | E      | SPARE                  | =            | 42      |
| m     | ······                    | mmm                                    | in             | in      | س مر  |             |                  |               |          |          |        |                        |              |         |
|       |                           |  |                |         | ALS : | 8280 VA     | 7200 VA          | 6040 VA       |          |          |        |                        |              |         |
|       |                           | ONNECTED LOAD                          | (VA) :         | 21520 V | /Α    |             |                  | CONNECTED     | LOAD     | (AMPS)   | : 60 A | l l                    |              |         |
| REMA  |                           |  |                |         |       |             | NOTES:           |               |          |          |        |                        |              |         |
| EXIST | ING SQUARE D PANELBOARD T | YPE 'NQOD'                             |                |         |       |             | E - CONNECT TO   | DEXISTING BRE | EAKER    | . LEAVE  | AS SF  | PARE IF UNUSED.        |              |         |

| LOCATIO            | <b>DN :</b> ELEC. 184                 | SCCR (AMPS   | RMS SY   | MM):    |      | SERVICE    | : 208Y/120V 3Ф          | 4-Wire+Ground  | AMF   | <b>•:</b> 100 A | M/     | NIN: MLO NEMA: Type 1 MOUNTING: SU | JRFACE |
|--------------------|---------------------------------------|--------------|----------|---------|------|------------|-------------------------|----------------|-------|-----------------|--------|------------------------------------|--------|
| СКТ                | DESCRIPTION                           | 1            | NOTE     |         | POLE | A          | В                       | С              | POLE  | AMP             | NOTE   | DESCRIPTION                        | СК     |
| 1                  | TCP AHU-3 MECH                        | 181          | E        | 20 A    | 1    | 1000 / 190 |                         |                | 1     | 20 A            | Е      | CUH-A VESTIBULE V104               | 2      |
| 3                  | VUV-C 3/4HP STORAG                    | GE 183B      | E        | 20 A    | 1    |            | 1656 / 200              |                | 1     | 20 A            | Е      | CUH-B VESTIBULE V105               | 4      |
| 5                  | VUV-C 3/4HP STORAC                    | GE 185A      | E        | 20 A    | 1    |            |                         | 1656 / 525     | 2     | 20 A            |        | DXFC UNIT ROOM 189-192             | 6      |
| 7                  | VUV-C 3/4HP MUSIC I                   | LAB 186      | E        | 20 A    | 1    | 1656 / 525 |                         |                | 2     | 20 A            |        | DAFC UNIT ROOM 189-192             | 8      |
| 9                  | EF-A ELEC. 18                         | 4            | E        | 20 A    | 1    |            | 300 / 0                 |                | 1     | 20 A            | Е      | SPARE                              | 1(     |
| 11                 | EXHAUST FAN EF-F AREA                 | B ROOFTOP    | E        | 20 A    | 1    |            |                         | 300 / 0        | 1     | 20 A            | Е      | SPARE                              | 12     |
| 13                 | SPARE                                 |              | E        | 20 A    | 1    | 0 / 0      |                         |                | 1     | 20 A            | Е      | SPARE                              | 14     |
| 15                 | SPARE                                 |              | E        | 20 A    | 1    |            | 0 / 0                   |                | 1     | 20 A            | Е      | SPARE                              | 16     |
| 17                 | SPARE                                 |              | E        | 20 A    | 1    |            |                         | 0 / 0          | 1     | 20 A            | Е      | SPARE                              | 18     |
| 19                 | SPARE                                 |              | E        | 20 A    | 1    | 0 / 0      |                         |                | 1     | 20 A            | Е      | SPARE                              | 20     |
| 21                 | SPARE                                 |              | E        | 20 A    | 1    |            | 0 / 0                   |                | 1     | 20 A            | Е      | SPARE                              | 22     |
| 23                 | SPARE                                 |              | E        | 20 A    | 1    |            |                         | 0 / 0          | 1     | 20 A            | Е      | SPARE                              | 24     |
| 25                 | SPARE                                 |              | E        | 20 A    | 1    | 0 / 0      |                         |                | 1     | 20 A            | Е      | SPARE                              | 26     |
| 27                 | SPARE                                 |              | E        | 20 A    | 1    |            | 0 / 0                   |                | 1     | 20 A            | Е      | SPARE                              | 28     |
| 29                 | SPARE                                 |              | E        | 20 A    | 1    |            |                         | 0 / 0          | 1     | 20 A            | Е      | SPARE                              | 30     |
| 31                 | SPARE                                 |              | E        | 20 A    | 1    | 0 / 0      |                         |                | 1     | 20 A            | Е      | SPARE                              | 32     |
| 33                 | SPARE                                 |              | E        | 20 A    | 1    |            | 0 / 0                   |                | 1     | 20 A            | Е      | SPARE                              | 34     |
| 35                 | SPARE                                 |              | E        | 20 A    | 1    |            |                         | 0 / 546        | 0     | 45.0            |        |                                    | 36     |
| 37                 | SPARE                                 |              | E        | 20 A    | 1    | 0 / 546    |                         |                | 2     | 15 A            |        | ERV-5 AND DXFC-5 MECH. 192A        | 38     |
| 39                 | SPACE                                 |              |          |         | 1    |            | 0 / 1500                |                | 2     | 20.4            |        |                                    | 40     |
| 41                 | SPACE                                 |              |          |         | 1    |            |                         | 0 / 1500       | 2     | 20 A            |        | DXFC-5 DUCT HEATER MECH. 192A      | 42     |
|                    |                                       |              |          |         |      |            |                         |                |       |                 |        |                                    |        |
|                    |                                       |              |          | тот     |      | 3917 VA    | 3656 VA                 | 4527 VA        |       |                 |        |                                    |        |
|                    |                                       | ONNECTED LOA | D (VA) : | 12099 V | Ά    |            |                         | L CONNECTED    | LOAD  | (AMPS)          | : 34 A |                                    |        |
| REMARK<br>EXISTINO | <b>'S:</b><br>G SQUARE D PANELBOARD T | YPE 'NQOD'   |          |         |      |            | NOTES:<br>E - CONNECT T | O EXISTING BRI | EAKER | . LEAVE         | AS SF  | ARE IF UNUSED.                     |        |

| OCAT | ION : Space 13 SCCR (AMPS           | RMS SYN | MM): |       | SERVIC  | E: 208Υ/120V 3Φ | 4-Wire+Ground | AMP  | : 125/ | A M  | AIN: MLO NEMA: Type 1 MOUNTING: SU | RFACE |
|------|-------------------------------------|---------|------|-------|---------|-----------------|---------------|------|--------|------|------------------------------------|-------|
| кт   | DESCRIPTION                         | NOTE    | AMP  | POLE  | A       | В               | С             | POLE | AMP    | NOTE | DESCRIPTION                        | СК    |
| 1    | LIGHTING CLASSROOM (3RD) 135        | E       | 20 A | 1     | 715 / 0 |                 |               | 1    | 20 A   | Е    | SPARE                              | 2     |
| 3    | LIGHTING CLASSROOM (3RD) 125        | E       | 20 A | 1     |         | 715 / 0         |               | 1    | 20 A   | Е    | SPARE                              | 4     |
| 5    | LIGHTING CLASSROOM (3RD) 136        | E       | 20 A | 1     |         |                 | 715 / 0       | 1    | 20 A   | Е    | SPARE                              | 6     |
| 7    | LIGHTING CLASSROOM (3RD) 137        | E       | 20 A | 1     | 715 / 0 |                 |               | 1    | 20 A   | Е    | SPARE                              | 8     |
| 9    | LIGHTING CLASSROOM (4TH) 143        | E       | 20 A | 1     |         | 715 / 0         |               | 1    | 20 A   | ER   | LIGHTS 1ST FLOOR CORRIDOR          | 10    |
| 11   | LIGHTS ELEVATOR ROOM                | ER      | 20 A | 1     |         |                 | 0 / 0         | 1    | 20 A   | ER   | LIGHTS 1ST FLOOR CORRIDOR          | 12    |
| 13   | LIGHTING CLASSROOM (4TH) 144        | E       | 20 A | 1     | 715 / 0 |                 |               | 1    | 20 A   | Е    | SPARE                              | 14    |
| 15   | LIGHTING ROOM 136-134               | E       | 20 A | 1     |         | 1306 / 0        |               | 1    | 20 A   | ER   | TIME CLOCK-C-W-OU-LGT              | 16    |
| 17   | CORRIDOR EXIT, EM LGT 1ST & 2ND FLR | E       | 20 A | 1     |         |                 | 80 / 0        | 1    | 20 A   | Е    | SPARE                              | 18    |
| 19   | LIGHTING ROOM 139, 140, 142         | E       | 20 A | 1     | 188 / 0 |                 |               | 1    | 20 A   | Е    | SPARE                              | 20    |
| 21   | LIGHTING CLASSROOM (5TH) 225        | E       | 20 A | 1     |         | 715 / 0         |               | 1    | 20 A   | Е    | SPARE                              | 22    |
| 23   | LIGHTING CLASSROOM (5TH) 236        | E       | 20 A | 1     |         |                 | 715 / 0       | 1    | 20 A   | Е    | SPARE                              | 24    |
| 25   | LIGHTING CLASSROOM (5TH) 237        | E       | 20 A | 1     | 715 / 0 |                 |               | 1    | 20 A   | Е    | SPARE                              | 26    |
| 27   | LIGHTING ROOM 239, 240              | E       | 20 A | 1     |         | 176 / 0         |               | 1    | 20 A   | Е    | SPARE                              | 28    |
| 29   | LIGHTING CLASSROOM (6TH) 242        | E       | 20 A | 1     |         |                 | 715 / 0       | 1    | 20 A   | Е    | SPARE                              | 30    |
| 31   | LIGHTING CLASSROOM (6TH) 243        | E       | 20 A | 1     | 715 / 0 |                 |               | 1    | 20 A   | ER   | LIGHTS 2ND FLOOR CORRIDOR          | 32    |
| 33   | LIGHTING CLASSROOM (6TH) 235        | E       | 20 A | 1     |         | 715 / 0         |               | 1    | 20 A   | ER   | LIGHTS 2ND FLOOR CORRIDOR          | 34    |
| 35   | LIGHTING ROOM 226-234               | E       | 20 A | 1     |         |                 | 1306 / 0      | 1    | 20 A   | Е    | SPARE                              | 36    |
| 37   | SPARE                               | E       | 20 A | 1     | 0 / 0   |                 |               | 1    | 20 A   | Е    | SPARE                              | 38    |
| 39   | SPARE                               | E       | 20 A | 1     |         | 0/0             |               | 1    | 20 A   | Е    | SPARE                              | 40    |
| 41   | SPARE                               | E       | 20 A | 1     |         |                 | 0 / 0         | 1    | 20 A   | Е    | SPARE                              | 42    |
|      |                                     |         | TOT  | ALS : | 3764 VA | 4343 VA         | 3532 VA       |      |        |      |                                    |       |
|      | TOTAL CONNECTED LOA                 |         |      |       | 5704 VA |                 |               |      |        |      |                                    |       |

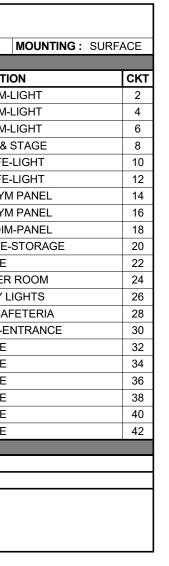






| CKT         DESCRIPTION         NOTE         AMP         POLE         A         B         C         POLE         AMP         NOTE         DI           1         DIMMER-GYM-LIGHTING         ER         20 A         1         0/0         1         20 A         ER         DIMM           3         DIMMER-GYM-LIGHTING         ER         20 A         1         0/0         1         20 A         ER         DIMM           5         DIMMER-GYM-LIGHTING         ER         20 A         1         0/0         1         20 A         ER         DIMM           7         DIMMER-GYM-LIGHTING         ER         20 A         1         0/0         1         20 A         ER         DIMM           9         DIMMER-CAFE-LIGHTS         ER         20 A         1         0/0         1         20 A         ER         DIMM           13         DIMMER-CAFE-LIGHTS         ER         20 A         1         0/0         1         20 A         ER         DIM-SP           15         DIMMER-GYM-LIGHTING         ER         20 A         1         0/0         1         20 A         ER         DIM-SP           17         SPARE-DIM-GYM PANEL         ER <th></th> <th>LLD</th> <th></th> <th>P</th> <th>4NI</th> <th>ELBOA</th> <th><b>RD SCI</b></th> <th>HEDUL</th> <th>Ε</th> <th></th> <th></th> <th></th>  |                     | LLD                                     |           | P    | 4NI  | ELBOA   | <b>RD SCI</b>          | HEDUL         | Ε    |      |              |                        |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
|---|---------------------|---|-----------|------|------|---------|------------------------|---------------|------|------|--------------|------------------------|--|---|---------------------|----|------|---|-------|--|--|---|------|----|----------------|---|---|--------------------|----|------|---|--|-------|--|---|------|----|---------------|---|----|--------------------|----|------|---|--|--|-------|---|------|----|---------------|---|----|--------------------|----|------|---|-------|--|--|---|------|----|---------------|---|----|---------------------|----|------|---|--|-------|--|---|------|----|---------------|--|----|---------------------|----|------|---|--|--|-------|---|------|----|----------------|--|----|------------------------|----|------|---|-------|--|--|---|------|----|--------------------|--|----|------------------------|----|------|---|--|-------|--|---|------|---|-------|--|----|------------------------|----|------|---|--|--|-------|---|------|----|---------------|---|----|--------------------|----|------|---|-------|--|--|---|------|----|--------------|---|----|-------|----|------|---|--|-------|--|---|------|----|----------------|---|----|-----------------------|----|------|---|--|--|-------|---|------|----|------------------|---|----|---|----|------|---|-------|--|--|---|------|---|-------|---|----|---|----|------|---|--|-------|--|---|------|---|-------|--|----|------------------------|---|------|---|--|--|---------|---|------|---|-------|--|------|---|-----|------|---|---------|--|--|---|------|---|-------|--|----|-------|---|------|---|--|-------|--|---|------|---|-------|------------------------------|----|-------|---|------|---|--|--|-------|---|------|---|-------|--|--|--|--|-----|--|---------|-------|----------|--|--|--|--|---|--|--|--|---|---|--------|---|--|--|---|--|--|
| 1       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LI  |                     | N: ELEC. 197A SCCR (AMP                 | S RMS SYI | MM): |      | SERVIC  | <b>Е:</b> 208Y/120V 3Ф | 4-Wire+Ground | AMP  | 125  | A M          | AIN : MLO NEMA: Type 1 |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 1       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0 / 0       1       20 A       ER       DIMMER-GYM-LI  | СКТ                 | DESCRIPTION                             | NOTE      | AMP  | POLE | A       | В                      | С             | POLE |      | NOTE         | DESCRIPTIC             |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 5       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-LIGHTING         9       DIMMER-CAFE-LIGHTS       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         11       DIMMER-CAFE-LIGHTS       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         13       DIMMER-CAFE-LIGHTS       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         15       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         16       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         17       SPARE-DIM-GYM PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-CAFE-LIGHTS         19       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       20 A       E       LIGHTS         21       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       2   | 1                   | DIMMER-GYM-LIGHTING                     |           |      |      | 0 / 0   |                        |               |      | _    |              | DIMMER-GYM-L           |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $   | 3                   | DIMMER-GYM-LIGHTING                     | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | ER           | DIMMER-GYM-L           |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 9DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM11DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM13DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM15DIMMER-GYM-LIGHTINGER20A10/0120AERDIM17SPARE-DIM-GYM PANELER20A10/0120AERDIM19LGTS-CORR & COURT YARDER20A10/0120AERDIA21LGTS-CORR & COURT YARDER20A10/0120AERLIGHT23LIGHTS-COURTYARDER20A10/0120AERLIGHT25LIGHTS-COURTYARDER20A10/0120AERLIGHT29TWO-POLE-LIGHTS-PILOTER20A10/0120AERLIGHT31 $?$ ER20A10/0120AEII33 $?$ ER20A10/0120AEII34LIGHTING CORRDIOR C114E20A1532/0120AEII39SPAREE20A10/0120AEIIII39SPAREE20A10/0120AEIIII <tr <="" td=""><td>5</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-GYM-L</td></tr> <tr><td>11DIMMER-CAFE-LIGHTSER20 A100 A120 AERDIMMER-CAFE-LIGHTS13DIMMER-CAFE-LIGHTSER20 A10/0120 AERDIMMER-GYM-LIGHTINGER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTING-COURTYARDER20 A10/0120 AERLIGHTINGER20 A10/0120 AERLIGHTING-DICH-LIGHTS-PILOTER20 A10/0120 AERLIGHTING-CORRDIOR-C114ER20 A10/0120 AERLIGHTING-CORRDIOR-C114E20 A10/0120 AEIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII&lt;</td><td>7</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS GYM &amp; S</td></tr> <tr><td>13DIMMER-CAFE-LIGHTSER20 A10 / 0120 AERDIM-SP15DIMMER-GYM-LIGHTINGER20 A10 / 0120 AERDIM-SP17SPARE-DIM-GYM PANELER20 A10 / 00 / 0120 AERSPARE19LGTS-CORR &amp; COURT YARDER20 A10 / 00 / 0120 AERSPARE21LGTS-MEZZ-DISPLAY CASEER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT26TWO-POLE-LIGHTS-PILOTER20 A10 / 00 / 0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10 / 0120 AERLIGHTS-COURTYARD31?ER20 A10 / 0120 AERLIGHTS-COURTYARD33?ER20 A10 / 0120 AEIIIGHTS-COURTS</td><td>9</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-CAFE-I</td></tr> <tr><td>15       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A</td><td>11</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-CAFE-I</td></tr> <tr><td>17SPARE-DIM-GYM PANELER20 A100 A120 AERSPARE19LGTS-CORR &amp; COURT YARDER20 A1000120 AER20 A121LGTS-CORR &amp; COURT YARDER20 A1000120 AERLGTS-CORR &amp; COURT YARDER20 A1000120 AERLGTS-CORR &amp; COURT YARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHT25LIGHTS - COURTYARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARD27SPAREER20 A1000000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER</td><td>13</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIM-SPARE-GYM</td></tr> <tr><td>19       LGTS-CORR &amp; COURT YARD       ER       20 A       1       0/0       1       20 A       ER       LGTS-P.E         21       LGTS-CORR &amp; COURT YARD       ER       20 A       1       0/0       1       20 A       E         23       LGTS-MEZZ-DISPLAY CASE       ER       20 A       1       0/0       1       20 A       ER       LIGHT         25       LIGHTS - COURTYARD       ER       20 A       1       0/0       1       20 A       ER       EM         27       SPARE       ER       20 A       1       0/0       1       20 A       ER       EM         29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-         31       ?       ER       20 A       1       0/0       1       20 A       E       LIGHTS-         33       ?       ER       20 A       1       0/0       1       20 A       E      </td><td>15</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIM-SPARE-GYM</td></tr> <tr><td>21LGTS-CORR &amp; COURT YARDER20 A10/0120 AE23LGTS-MEZZ-DISPLAY CASEER20 A10/00/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREM EMER27SPAREER20 A10/00/0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10/00/0120 AERLIGHTS-COURTYARD31?ER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTS-COURTYARD33?ER20 A10/00/0120 AELIGHTS-COURTYARDE20 A10/0120 AE33PAREER20 A1532 / 0605 / 0120 AEII<td>17</td><td>SPARE-DIM-GYM PANEL</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>SPARE-GYM-DIM-</td></td></tr> <tr><td>23LGTS-MEZZ-DISPLAY CASEER20 A10/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREREMER27SPAREER20 A10/0120 AERLGTS-G29TWO-POLE-LIGHTS-PILOTER20 A10/0120 AERLGTS-G31?ER20 A10/0120 AERLIGHTS-G33?ER20 A10/0120 AELIGHTS-G35LIGHTING CORRDIOR C114E20 A1532/0605/0120 AE37LGTN 193C, 194, 195, 196B. GYM &amp; CAFE ENTE20 A1532/0120 AE39SPAREE20 A10/0120 AE</td><td>19</td><td>LGTS-CORR &amp; COURT YARD</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LGTS-P.E. OFFICE-S</td></tr> <tr><td>25       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME         27       SPARE       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       E<!--</td--><td>21</td><td>LGTS-CORR &amp; COURT YARD</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></td></tr> <tr><td><math display="block">\begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td><td>23</td><td>LGTS-MEZZ-DISPLAY CASE</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS-BOILER</td></tr> <tr><td>29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0 / 0       1       20 A       ER       10         31       ?       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       E       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1</td><td>25</td><td>LIGHTS - COURTYARD</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>EMERGENCY LI</td></tr> <tr><td>31       ?       ER       20 A       1       0 / 0       1       20 A       E         33       ?       ER       20 A       1       0 / 0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM &amp; CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E</td><td>27</td><td>SPARE</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LGTS-GYM &amp; CAF</td></tr> <tr><td>33       ?       ER       20 A       1       0/0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM &amp; CAFE ENT       E       20 A       1       532 / 0       1       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E</td><td>29</td><td>TWO-POLE-LIGHTS-PILOT</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS-D-WING-EN</td></tr> <tr><td>35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM &amp; CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E</td><td>31</td><td>?</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td>37       LGTN 193C, 194, 195, 196B. GYM &amp; CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E</td><td>33</td><td>?</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td>39         SPARE         E         20 A         1         0/0         1         20 A         E</td><td>35</td><td>LIGHTING CORRDIOR C114</td><td>E</td><td>20 A</td><td>1</td><td></td><td></td><td>605 / 0</td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td></td><td>37 L</td><td>GTN 193C, 194, 195, 196B. GYM &amp; CAFE EN</td><td>T E</td><td>20 A</td><td>1</td><td>532 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td></td><td>39</td><td>SPARE</td><td>E</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td>41 SPARE E 20A I 0/0 I 20A E</td><td>41</td><td>SPARE</td><td>E</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td></td><td></td><td></td><td></td><td>T01</td><td></td><td>500 V/A</td><td>0.)(A</td><td>COE ) (A</td><td></td><td></td><td></td><td></td></tr> <tr><td>TOTALS :     532 VA     0 VA     605 VA       TOTAL CONNECTED LOAD (VA) :     1137 VA     TOTAL CONNECTED LOAD (AMPS) :     3 A</td><td></td><td></td><td></td><td>-</td><td>_</td><td>332 VA</td><td>-</td><td></td><td></td><td>(</td><td></td><td></td></tr> | 5                   | DIMMER-GYM-LIGHTING                     | ER        | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | ER           | DIMMER-GYM-L           | 11DIMMER-CAFE-LIGHTSER20 A100 A120 AERDIMMER-CAFE-LIGHTS13DIMMER-CAFE-LIGHTSER20 A10/0120 AERDIMMER-GYM-LIGHTINGER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTING-COURTYARDER20 A10/0120 AERLIGHTINGER20 A10/0120 AERLIGHTING-DICH-LIGHTS-PILOTER20 A10/0120 AERLIGHTING-CORRDIOR-C114ER20 A10/0120 AERLIGHTING-CORRDIOR-C114E20 A10/0120 AEIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII< | 7 | DIMMER-GYM-LIGHTING | ER | 20 A | 1 | 0 / 0 |  |  | 1 | 20 A | ER | LIGHTS GYM & S | 13DIMMER-CAFE-LIGHTSER20 A10 / 0120 AERDIM-SP15DIMMER-GYM-LIGHTINGER20 A10 / 0120 AERDIM-SP17SPARE-DIM-GYM PANELER20 A10 / 00 / 0120 AERSPARE19LGTS-CORR & COURT YARDER20 A10 / 00 / 0120 AERSPARE21LGTS-MEZZ-DISPLAY CASEER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT26TWO-POLE-LIGHTS-PILOTER20 A10 / 00 / 0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10 / 0120 AERLIGHTS-COURTYARD31?ER20 A10 / 0120 AERLIGHTS-COURTYARD33?ER20 A10 / 0120 AEIIIGHTS-COURTS | 9 | DIMMER-CAFE-LIGHTS | ER | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | ER | DIMMER-CAFE-I | 15       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A | 11 | DIMMER-CAFE-LIGHTS | ER | 20 A | 1 |  |  | 0 / 0 | 1 | 20 A | ER | DIMMER-CAFE-I | 17SPARE-DIM-GYM PANELER20 A100 A120 AERSPARE19LGTS-CORR & COURT YARDER20 A1000120 AER20 A121LGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHT25LIGHTS - COURTYARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARD27SPAREER20 A1000000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER | 13 | DIMMER-CAFE-LIGHTS | ER | 20 A | 1 | 0 / 0 |  |  | 1 | 20 A | ER | DIM-SPARE-GYM | 19       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       20 A       ER       LGTS-P.E         21       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       20 A       E         23       LGTS-MEZZ-DISPLAY CASE       ER       20 A       1       0/0       1       20 A       ER       LIGHT         25       LIGHTS - COURTYARD       ER       20 A       1       0/0       1       20 A       ER       EM         27       SPARE       ER       20 A       1       0/0       1       20 A       ER       EM         29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-         31       ?       ER       20 A       1       0/0       1       20 A       E       LIGHTS-         33       ?       ER       20 A       1       0/0       1       20 A       E | 15 | DIMMER-GYM-LIGHTING | ER | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | ER | DIM-SPARE-GYM | 21LGTS-CORR & COURT YARDER20 A10/0120 AE23LGTS-MEZZ-DISPLAY CASEER20 A10/00/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREM EMER27SPAREER20 A10/00/0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10/00/0120 AERLIGHTS-COURTYARD31?ER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTS-COURTYARD33?ER20 A10/00/0120 AELIGHTS-COURTYARDE20 A10/0120 AE33PAREER20 A1532 / 0605 / 0120 AEII <td>17</td> <td>SPARE-DIM-GYM PANEL</td> <td>ER</td> <td>20 A</td> <td>1</td> <td></td> <td></td> <td>0 / 0</td> <td>1</td> <td>20 A</td> <td>ER</td> <td>SPARE-GYM-DIM-</td> | 17 | SPARE-DIM-GYM PANEL | ER | 20 A | 1 |  |  | 0 / 0 | 1 | 20 A | ER | SPARE-GYM-DIM- | 23LGTS-MEZZ-DISPLAY CASEER20 A10/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREREMER27SPAREER20 A10/0120 AERLGTS-G29TWO-POLE-LIGHTS-PILOTER20 A10/0120 AERLGTS-G31?ER20 A10/0120 AERLIGHTS-G33?ER20 A10/0120 AELIGHTS-G35LIGHTING CORRDIOR C114E20 A1532/0605/0120 AE37LGTN 193C, 194, 195, 196B. GYM & CAFE ENTE20 A1532/0120 AE39SPAREE20 A10/0120 AE | 19 | LGTS-CORR & COURT YARD | ER | 20 A | 1 | 0 / 0 |  |  | 1 | 20 A | ER | LGTS-P.E. OFFICE-S | 25       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME         27       SPARE       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       E </td <td>21</td> <td>LGTS-CORR &amp; COURT YARD</td> <td>ER</td> <td>20 A</td> <td>1</td> <td></td> <td>0 / 0</td> <td></td> <td>1</td> <td>20 A</td> <td>E</td> <td>SPARE</td> | 21 | LGTS-CORR & COURT YARD | ER | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | E | SPARE | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | 23 | LGTS-MEZZ-DISPLAY CASE | ER | 20 A | 1 |  |  | 0 / 0 | 1 | 20 A | ER | LIGHTS-BOILER | 29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0 / 0       1       20 A       ER       10         31       ?       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       E       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 | 25 | LIGHTS - COURTYARD | ER | 20 A | 1 | 0 / 0 |  |  | 1 | 20 A | ER | EMERGENCY LI | 31       ?       ER       20 A       1       0 / 0       1       20 A       E         33       ?       ER       20 A       1       0 / 0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E | 27 | SPARE | ER | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | ER | LGTS-GYM & CAF | 33       ?       ER       20 A       1       0/0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E | 29 | TWO-POLE-LIGHTS-PILOT | ER | 20 A | 1 |  |  | 0 / 0 | 1 | 20 A | ER | LIGHTS-D-WING-EN | 35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E | 31 | ? | ER | 20 A | 1 | 0 / 0 |  |  | 1 | 20 A | E | SPARE | 37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E | 33 | ? | ER | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | E | SPARE | 39         SPARE         E         20 A         1         0/0         1         20 A         E | 35 | LIGHTING CORRDIOR C114 | E | 20 A | 1 |  |  | 605 / 0 | 1 | 20 A | E | SPARE |  | 37 L | GTN 193C, 194, 195, 196B. GYM & CAFE EN | T E | 20 A | 1 | 532 / 0 |  |  | 1 | 20 A | E | SPARE |  | 39 | SPARE | E | 20 A | 1 |  | 0 / 0 |  | 1 | 20 A | E | SPARE | 41 SPARE E 20A I 0/0 I 20A E | 41 | SPARE | E | 20 A | 1 |  |  | 0 / 0 | 1 | 20 A | E | SPARE |  |  |  |  | T01 |  | 500 V/A | 0.)(A | COE ) (A |  |  |  |  | TOTALS :     532 VA     0 VA     605 VA       TOTAL CONNECTED LOAD (VA) :     1137 VA     TOTAL CONNECTED LOAD (AMPS) :     3 A |  |  |  | - | _ | 332 VA | - |  |  | ( |  |  |
| 5   | DIMMER-GYM-LIGHTING | ER                                      | 20 A      | 1    |      |         | 0 / 0                  | 1             | 20 A | ER   | DIMMER-GYM-L |                        |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 11DIMMER-CAFE-LIGHTSER20 A100 A120 AERDIMMER-CAFE-LIGHTS13DIMMER-CAFE-LIGHTSER20 A10/0120 AERDIMMER-GYM-LIGHTINGER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTING-COURTYARDER20 A10/0120 AERLIGHTINGER20 A10/0120 AERLIGHTING-DICH-LIGHTS-PILOTER20 A10/0120 AERLIGHTING-CORRDIOR-C114ER20 A10/0120 AERLIGHTING-CORRDIOR-C114E20 A10/0120 AEIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII<  | 7                   | DIMMER-GYM-LIGHTING                     | ER        | 20 A | 1    | 0 / 0   |                        |               | 1    | 20 A | ER           | LIGHTS GYM & S         |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 13DIMMER-CAFE-LIGHTSER20 A10 / 0120 AERDIM-SP15DIMMER-GYM-LIGHTINGER20 A10 / 0120 AERDIM-SP17SPARE-DIM-GYM PANELER20 A10 / 00 / 0120 AERSPARE19LGTS-CORR & COURT YARDER20 A10 / 00 / 0120 AERSPARE21LGTS-MEZZ-DISPLAY CASEER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT26TWO-POLE-LIGHTS-PILOTER20 A10 / 00 / 0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10 / 0120 AERLIGHTS-COURTYARD31?ER20 A10 / 0120 AERLIGHTS-COURTYARD33?ER20 A10 / 0120 AEIIIGHTS-COURTS   | 9                   | DIMMER-CAFE-LIGHTS                      | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | ER           | DIMMER-CAFE-I          |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 15       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-LIGHTING       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       DIMMER-GYM-PANEL       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-COURTYARD       ER       20 A   | 11                  | DIMMER-CAFE-LIGHTS                      | ER        | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | ER           | DIMMER-CAFE-I          |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 17SPARE-DIM-GYM PANELER20 A100 A120 AERSPARE19LGTS-CORR & COURT YARDER20 A1000120 AER20 A121LGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHT25LIGHTS - COURTYARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARD27SPAREER20 A1000000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER   | 13                  | DIMMER-CAFE-LIGHTS                      | ER        | 20 A | 1    | 0 / 0   |                        |               | 1    | 20 A | ER           | DIM-SPARE-GYM          |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 19       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       20 A       ER       LGTS-P.E         21       LGTS-CORR & COURT YARD       ER       20 A       1       0/0       1       20 A       E         23       LGTS-MEZZ-DISPLAY CASE       ER       20 A       1       0/0       1       20 A       ER       LIGHT         25       LIGHTS - COURTYARD       ER       20 A       1       0/0       1       20 A       ER       EM         27       SPARE       ER       20 A       1       0/0       1       20 A       ER       EM         29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0/0       1       20 A       ER       LIGHTS-         31       ?       ER       20 A       1       0/0       1       20 A       E       LIGHTS-         33       ?       ER       20 A       1       0/0       1       20 A       E   | 15                  | DIMMER-GYM-LIGHTING                     | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | ER           | DIM-SPARE-GYM          |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 21LGTS-CORR & COURT YARDER20 A10/0120 AE23LGTS-MEZZ-DISPLAY CASEER20 A10/00/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREM EMER27SPAREER20 A10/00/0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10/00/0120 AERLIGHTS-COURTYARD31?ER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTS-COURTYARD33?ER20 A10/00/0120 AELIGHTS-COURTYARDE20 A10/0120 AE33PAREER20 A1532 / 0605 / 0120 AEII <td>17</td> <td>SPARE-DIM-GYM PANEL</td> <td>ER</td> <td>20 A</td> <td>1</td> <td></td> <td></td> <td>0 / 0</td> <td>1</td> <td>20 A</td> <td>ER</td> <td>SPARE-GYM-DIM-</td>  | 17                  | SPARE-DIM-GYM PANEL                     | ER        | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | ER           | SPARE-GYM-DIM-         |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 23LGTS-MEZZ-DISPLAY CASEER20 A10/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREREMER27SPAREER20 A10/0120 AERLGTS-G29TWO-POLE-LIGHTS-PILOTER20 A10/0120 AERLGTS-G31?ER20 A10/0120 AERLIGHTS-G33?ER20 A10/0120 AELIGHTS-G35LIGHTING CORRDIOR C114E20 A1532/0605/0120 AE37LGTN 193C, 194, 195, 196B. GYM & CAFE ENTE20 A1532/0120 AE39SPAREE20 A10/0120 AE  | 19                  | LGTS-CORR & COURT YARD                  | ER        | 20 A | 1    | 0 / 0   |                        |               | 1    | 20 A | ER           | LGTS-P.E. OFFICE-S     |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 25       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME         27       SPARE       ER       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       EME       EME       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       0 / 0       1       20 A       ER       LIGTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       ER       LIGHTS - COURTYARD       ER       20 A       1       0 / 0       1       20 A       E </td <td>21</td> <td>LGTS-CORR &amp; COURT YARD</td> <td>ER</td> <td>20 A</td> <td>1</td> <td></td> <td>0 / 0</td> <td></td> <td>1</td> <td>20 A</td> <td>E</td> <td>SPARE</td>  | 21                  | LGTS-CORR & COURT YARD                  | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| $\begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 23                  | LGTS-MEZZ-DISPLAY CASE                  | ER        | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | ER           | LIGHTS-BOILER          |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 29       TWO-POLE-LIGHTS-PILOT       ER       20 A       1       0 / 0       1       20 A       ER       10         31       ?       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       ER       20 A       1       0 / 0       1       20 A       E       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1   | 25                  | LIGHTS - COURTYARD                      | ER        | 20 A | 1    | 0 / 0   |                        |               | 1    | 20 A | ER           | EMERGENCY LI           |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 31       ?       ER       20 A       1       0 / 0       1       20 A       E         33       ?       ER       20 A       1       0 / 0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E   | 27                  | SPARE                                   | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | ER           | LGTS-GYM & CAF         |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 33       ?       ER       20 A       1       0/0       1       20 A       E         35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E   | 29                  | TWO-POLE-LIGHTS-PILOT                   | ER        | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | ER           | LIGHTS-D-WING-EN       |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 35       LIGHTING CORRDIOR C114       E       20 A       1       605 / 0       1       20 A       E         37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E   | 31                  | ?                                       | ER        | 20 A | 1    | 0 / 0   |                        |               | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 37       LGTN 193C, 194, 195, 196B. GYM & CAFE ENT       E       20 A       1       532 / 0       1       20 A       E         39       SPARE       E       20 A       1       0 / 0       1       20 A       E   | 33                  | ?                                       | ER        | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 39         SPARE         E         20 A         1         0/0         1         20 A         E  | 35                  | LIGHTING CORRDIOR C114                  | E         | 20 A | 1    |         |                        | 605 / 0       | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
|   | 37 L                | GTN 193C, 194, 195, 196B. GYM & CAFE EN | T E       | 20 A | 1    | 532 / 0 |                        |               | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
|   | 39                  | SPARE                                   | E         | 20 A | 1    |         | 0 / 0                  |               | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| 41 SPARE E 20A I 0/0 I 20A E  | 41                  | SPARE                                   | E         | 20 A | 1    |         |                        | 0 / 0         | 1    | 20 A | E            | SPARE                  |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
|   |                     |   |           | T01  |      | 500 V/A | 0.)(A                  | COE ) (A      |      |      |              |                        |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |
| TOTALS :     532 VA     0 VA     605 VA       TOTAL CONNECTED LOAD (VA) :     1137 VA     TOTAL CONNECTED LOAD (AMPS) :     3 A   |                     |   |           | -    | _    | 332 VA  | -                      |               |      | (    |              |                        |  |   |                     |    |      |   |       |  |  |   |      |    |                |   |   |                    |    |      |   |  |       |  |   |      |    |               |   |    |                    |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |               |   |    |                     |    |      |   |  |       |  |   |      |    |               |  |    |                     |    |      |   |  |  |       |   |      |    |                |  |    |                        |    |      |   |       |  |  |   |      |    |                    |  |    |                        |    |      |   |  |       |  |   |      |   |       |  |    |                        |    |      |   |  |  |       |   |      |    |               |   |    |                    |    |      |   |       |  |  |   |      |    |              |   |    |       |    |      |   |  |       |  |   |      |    |                |   |    |                       |    |      |   |  |  |       |   |      |    |                  |   |    |   |    |      |   |       |  |  |   |      |   |       |   |    |   |    |      |   |  |       |  |   |      |   |       |  |    |                        |   |      |   |  |  |         |   |      |   |       |  |      |   |     |      |   |         |  |  |   |      |   |       |  |    |       |   |      |   |  |       |  |   |      |   |       |                              |    |       |   |      |   |  |  |       |   |      |   |       |  |  |  |  |     |  |         |       |          |  |  |  |  |   |  |  |  |   |   |        |   |  |  |   |  |  |

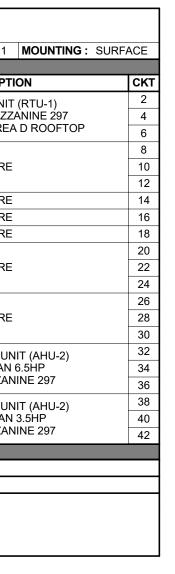
|                      | НРМ  |                     | P                    | ANI         | ELBOA       | RD SCH         | IEDULI        |      |       |         |           |   |       |
|----------------------|--|---------------------|----------------------|-------------|-------------|----------------|---------------|------|-------|---------|-----------|---|-------|
|                      | MECH. MEZZANINE 297  | SCCR (AMPS RMS SYN  | IM): {               | 65,000      |             | : 480Y/277V 3Ф | 4-Wire+Ground | AMP  | : 200 | A M     | AIN : MLO | NEMA: Type 1                                  | M     |
| СКТ                  | DESCRIPTION  | NOTE                | AMP                  | POLE        | A           | В              | С             | POLE | AMP   | NOTE    | 1         | DESCRIP                                       | TION  |
| 1<br>3<br>5          | E. EXHAUST FAN EF-   | 11                  | 20 A                 | 3           | 443 / 6371  | 443 / 6371     | 443 / 6371    | 3    | 30 A  |         |           | ROOFTOP UN<br>VFD MECH. MEZ<br>IT LOCATED ARE | ZANI  |
| 7<br>9<br>11         | SPARE<br>SPARE<br>SPARE  |                     | 20 A<br>20 A<br>20 A | 1<br>1<br>1 | 0 / 0       | 0 / 0          | 0 / 0         | 3    | 30 A  |         |           | SPAR  | E     |
| 13                   | SPARE  |                     | 20 A                 | 1           | 0 / 0       |                |               | 1    | 20 A  |         |           | SPAR  | E     |
| 15                   | SPARE  |                     | 20 A                 | 1           |             | 0/0            |               | 1    | 20 A  |         |           | SPAR  | E     |
| 17                   | SPARE  |                     | 20 A                 | 1           |             |                | 0 / 0         | 1    | 20 A  |         |           | SPAR  | E     |
| 19<br>21             | SPARE<br>SPARE   |                     | 20 A<br>20 A         | 1<br>1      | 0 / 0       | 0 / 0          |               | 3    | 20 A  |         |           | SPAR  | E     |
| 23<br>25<br>27<br>29 | SPARE  |                     | 20 A<br>40 A         | 1<br>3      | 0 / 0       | 0/0            | 0 / 0         | 3    | 20 A  |         |           | SPAR  |       |
| 31<br>33<br>35       | AIR HANDLING UNIT (AF<br>SUPPLY FAN 14HP<br>MECH. MEZZANINE 29 |                     | 40 A                 | 3           | 5817 / 3047 | 5817 / 3047    | 5817 / 3047   | 3    | 20 A  |         |           | AIR HANDLING L<br>SUPPLY FAI<br>MECH. MEZZA   | N 6.5 |
| 37<br>39<br>41       | AIR HANDLING UNIT (AF<br>RETURN FAN 6HP<br>MECH. MEZZANINE 29  | ,                   | 20 A                 | 3           | 3047 / 2105 | 3047 / 2105    | 3047 / 2105   | 3    | 20 A  |         |           | AIR HANDLING L<br>RETURN FA<br>MECH. MEZZA    | N 3.5 |
|                      |  |                     | то                   | TALS :      | 20831 VA    | 20831 VA       | 20831 VA      |      |       |         |           |   |       |
| $\overline{\gamma}$  | TOTAL CON  | NECTED LOAD (VA): 6 | 2492                 | VA          |             | ΤΟΤΑ           | L CONNECTED   | LOAD | AMPS  | ): 75 A | ۱         |   |       |
| -                    |  | ACE MOTOR CONTROL   | . CEN                | TER 'MC     | C-DM'.      | NOTES:         |               |      |       |         |           |   |       |



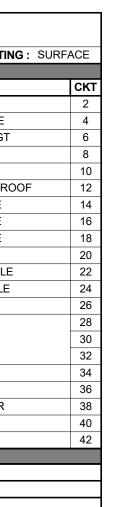
|                     | LPDM                           | P             | AN             | ELBO       | ARD SCH                   | IEDUL         | E            |                   |                             |        |                     | LPD                          |                  | PAN             | <b>ELBO</b> | ARD SCH                                    | HEDUL         | E      |                                       |                                   |         |
|---------------------|--------------------------------|---------------|----------------|------------|---------------------------|---------------|--------------|-------------------|-----------------------------|--------|---------------------|------------------------------|------------------|-----------------|-------------|--|---------------|--------|---------------------------------------|-----------------------------------|---------|
|                     | I : MECHANICAL 197 SCCR (AMP   | S RMS SYMM):  |                | SERVIO     | <b>CE</b> : 208Υ/120V 3Φ  | 4-Wire+Ground | AMP: 225     | A MAIN : MLO      | NEMA: Type 1 MOUNTING : SU  | JRFACE | LOCATION            | : ELEC. 197A                 | SCCR (AMPS RMS S | YMM):           | SERVIC      | <b>Ε</b> : 208Y/120V 3Φ                    | 4-Wire+Ground | AMP    | : 100 A M                             | AIN : MLO NEMA: Type 1 MOUNTING : | SURFACE |
|                     |                                |               |                |            |                           |               |              |                   | · · ·                       |        |                     |                              | $\sim$           |                 | Ì           |  |               |        |                                       |                                   |         |
| кт                  | DESCRIPTION                    | NOTE AM       | _              | Α          | В                         | C             | POLE AMP     |                   | DESCRIPTION                 | СКТ    | СКТ                 | DESCRIPTION                  |                  |                 |             | В  | C             |        |                                       | DESCRIPTION                       |         |
| 1                   | TAC - PANEL                    | ER 20 /       |                | 0 / 0      |                           |               | 1 20 A       |                   | RECEPTACLE - B.R.           | 2      | 1                   | PUH-C STORAGE 193C,          |                  | <b>)</b> 20 A 1 | 400 / 180   |  |               | ( 1    | 20 A E                                | RECEPT CAFETERIA 196              | 2       |
| 3                   | TAC - PANEL                    | ER 20 /       |                |            | 0 / 0                     |               | 1 20 A       |                   | RECEPTACLE - B.R.           | 4      | 3                   | CUH-F RESTROOM 194A,         |                  | <b>3</b> 20 A 1 |             | 400 / 180                                  |               | (1     | 20 A E                                |                                   |         |
| 5                   | SPARE                          | ER 20 /       |                |            |                           | 0/0           | 1 20 A       |                   | CHILLER PIPE HEAT TAPE      | 6      | 5                   | RECEPT STORAGE 195,          |                  | <b>3</b> 20 A 1 |             |  | 360 / 0       | -      |                                       |                                   |         |
| 7                   | SPARE                          | ER 20 /       |                | 0 / 0      |                           |               | 1 20 A       |                   | PUMP #5 FUEL                | 8      | 7                   | SPARE                        |                  | 20 A 1          | 0 / 0       |  |               | 1      | 20 A ER                               | SPARE                             | 8       |
| 9                   | SPARE                          | ER 20 /       |                |            | 0 / 0                     |               | 1 20 A       |                   | PUMP #6 FUEL                | 10     | 9                   | SPARE                        |                  | 20 A 1          |             | 0 / 0                                      |               | 1      | 20 A E                                | SPARE                             | 10      |
| 1                   | UNIT HEATER - KITCHEN          | ER 20 /       | ¥ 1            |            |                           | 0 / 0         | 1 20 A       | ER                | EXHAUST FAN #10             | 12     | 11                  | SPARE                        |                  | 20 A 1          |             |  | 0 / 0         |        | 20 A E                                | SPARE                             | 12      |
| 13                  | SOUTH BOILER CONTROL           | ER 20 /       | ¥ 1            | 0 / 0      |                           | _             | 1 20 A       | ER                | NORTH BOILER CONTROL        | 14     | 13                  | SPARE                        |                  | 20 A 1          | 0 / 0       |  |               | 1      | 20 A ER                               | SPARE                             | 14      |
| 15                  | WATER HEATER #2                | ER 20 /       | A 1            |            | 0 / 0                     |               | 1 20 A       | ER                | L. WATER CIRCULATING P.     | 16     | 15                  | SPARE                        | EF               | 20 A 1          |             | 0 / 0                                      |               | 1      | 20 A E                                | SPARE                             | 16      |
| 17                  | WATER HEATER #1                | ER 20 /       | ¥ 1            |            |                           | 0 / 0         | 1 20 A       | ER                | R. WATER CIRCULATING P.     | 18     | 17                  | SPARE                        | EF               | 20 A 1          |             |  | 0 / 0         | 1      | 20 A ER                               | SPARE                             | 18      |
| 19                  | ?                              | ER 20 /       | ¥ 1            | 0 / 0      |                           |               | 1 20 A       | ER                | SPARE                       | 20     | 19                  | SPARE                        | EF               | 20 A 1          | 0 / 360     |  |               | 1      | 20 A E                                | EWC GYM                           | 20      |
| 21                  | SPARE                          | ER 20 /       | A 1            |            | 0 / 0                     |               | 1 20 A       | ER                | SPARE                       | 22     | 21                  | SPARE                        | EF               | 20 A 1          |             | 0 / 360                                    |               | 1      | 20 A E                                | EWC CAFETERIA 196                 | 22      |
| 23                  | SPARE                          | ER 20 /       | <del>۱</del> ۱ |            |                           | 0 / 0         | 1 20 A       | ER                | SPARE                       | 24     | 23                  | SPARE                        | E                | 20 A 1          |             |  | 0 / 360       | 1      | 20 A E                                | SINKS RESTROOM 194                | 24      |
| 25                  | SPARE                          | ER 20 /       | <b>\</b> 1     | 0/0        |                           |               | 1 20 A       | ER                | RECEPTACLE B.R.             | 26     | 25                  |                              |                  | 00.0            | 0 / 360     |  |               | 1      | 20 A E                                | RECEPT RESTROOM 194               | 26      |
| 27                  | SPARE                          | ER 20 /       | ¥ 1            |            | 0 / 0                     |               | 1 20 A       | ER                | SPARE                       | 28     | 27                  | SPARE                        | E                | 20 A 2          |             | 0 / 0                                      |               | 1      | 20 A ER                               | SPARE                             | 28      |
| 29                  |                                |               |                |            |                           | 0/0           | 1 20 A       | ER                | SPARE                       | 30     | 29                  | 00405                        |                  |                 |             |  | 0/0           |        |                                       |                                   | 30      |
| 31                  | SPARE                          | ER 20 /       | A 3            | 0/0        |                           |               | 1 20 A       | ER                | RECEPTACLE B.R.             | 32     | 31                  | SPARE                        | E                | 20 A 2          | 0/0         |  |               | 2      | 20 A ER                               | SPARE                             | 32      |
| 33                  |                                |               |                |            | 0 / 0                     |               | 1            |                   | SPACE                       | 34     | 33                  |                              | _                |                 |             | 0 / 0                                      |               | 1      | 20 A ER                               | SPARE                             | 34      |
| 35                  | PUH-B1 STORAGE 297A            | 20 /          | A 1            |            |                           | 864 / 1000    | 1 20 A       | тс                | P RTU-1 MECH. MEZZANINE 297 | 36     | 35                  | SPARE                        | E                | 20 A 2          |             |  | 0/0           |        | · · · · · · · · · · · · · · · · · · · |                                   | 36      |
| 37                  | PUH-B2 MECH. MEZZANINE 297     | 20 /          | A 1            | 864 / 1000 |                           |               | 1 20 A       | TC                | P AHU-1 MECH. MEZZANINE 297 | 38     | 37                  |                              |                  |                 | 0/0         |  |               | 2      | 20 A ER                               | SPARE                             | 38      |
| 39                  | PUH-B3 MECH. MEZZANINE 297     | 20 /          |                |            | 864 / 1000                |               | 1 20 A       |                   | P AHU-2 MECH. MEZZANINE 297 | 40     | 39                  | SPARE                        | E                | 20 A 2          |             | 0/0  |               |        | ,                                     |                                   | 40      |
| 41                  | EF-E 1/4HP MECH. MEZZANINE 297 | 20 /          |                |            |                           | 696 / 360     | 1 20 A       |                   | RACK RECEPT MECH. MEZZ. 297 | 42     | 41                  | SPACE                        |                  | 1               |             |  | 0/0           | 2      | 20 A ER                               | SPARE                             | 42      |
|                     |                                |               |                |            |                           |               |              |                   |                             |        |                     |                              |                  | -               |             |  |               |        |                                       |                                   |         |
|                     |                                | т             | DTALS :        | 1864 VA    | 1864 VA                   | 2920 VA       |              |                   |                             |        |                     |                              |                  | TOTALS :        | 1300 VA     | 940 VA                                     | 720 VA        |        |                                       |                                   |         |
|                     | TOTAL CONNECTED LO             | AD (VA): 6648 | VA             |            | TOTA                      | L CONNECTED   | LOAD (AMPS   | <b>):</b> 18 A    |                             |        |                     | TOTAL CON                    | NECTED LOAD (VA) | : 2960 VA       | •           | TOTA                                       | L CONNECTED   | LOAD ( | (AMPS): 8 A                           |                                   |         |
| REMARKS<br>EXISTING | :<br>PANELBOARD                |               |                |            | NOTES:<br>ER - EXISTING ( |               | MAIN. VERIFY | IN FIELD. LEAVE A | AS SPARE IF UNUSED.         |        | REMARKS<br>EXISTING | :<br>SQUARE D PANELBOARD TYP | E 'NQOD'         |                 |             | NOTES:<br>E - CONNECT T<br>ER - EXISTING ( |               |        | . LEAVE AS SF                         | PARE IF UNUSED.                   |         |

|               | LPK(L)                                     |               |          | P      | ANE   | ELBOA  | RD SCH                                      | IEDULI        | E    |        |            |                        |           |
|---------------|--|---------------|----------|--------|-------|--------|---|---------------|------|--------|------------|------------------------|-----------|
| LOCA          | TION : ELEC. 197A                          | SCCR (AMPS RI | MS SYI   | MM):   |       | SERVIC | <b>Ε:</b> 208Y/120V 3Φ                      | 4-Wire+Ground | AMP  | : 400  | А <b>М</b> | AIN : MLO NEMA: Type 1 | MOUNTING  |
|               |  |               |          |        |       |        |   |               |      |        |            |                        |           |
| СКТ           | DESCRIPTION                                |               | NOTE     |        | POLE  | Α      | В   | С             | POLE | AMP    | NOTE       | DESCRIPTIO             | ON        |
| 1             | RECEPT-FLOOR-SALAD                         | ) BAR         | ER       | 20 A   | 1     | 0 / 0  |   | _             | 1    | 20 A   | ER         | REFRIGERAT             | FOR       |
| 3             | SERV-TABL-CASH RE                          | G-W           | ER       | 20 A   | 1     |        | 0 / 0                                       |               | 1    | 20 A   | ER         | SERV-TAB-CASH          | REGIS-E   |
| 5             | SERV-TABL-COMPR-L                          | GTS           | ER       | 20 A   | 1     |        |   | 0 / 0         | 1    | 20 A   | ER         | SERVING-TABLE-C        | OMP LGT   |
| 7             | ANSEL-SYST-CONTRAC                         | CTOR          | ER       | 20 A   | 1     | 0 / 0  |   |               | 1    | 20 A   | ER         | EXHAUST FA             | N - 6     |
| 9             | SPARE                                      |               | E        | 20 A   | 1     |        | 0 / 0                                       |               | 1    | 20 A   | ER         | T. EXHAUST F           | AN - 3    |
| 11            | SPARE                                      |               | E        | 20 A   | 1     |        |   | 0 / 300       | 1    | 20 A   | Е          | EXHAUST FAN EF-C KI    | TCHEN ROC |
| 13            | SPARE                                      |               | E        | 20 A   | 1     | 0 / 0  |   |               | 1    | 20 A   | ER         | WORK-TABLE-RE          | CEPT-E    |
| 15            | SPARE                                      |               | E        | 20 A   | 1     |        | 0 / 0                                       |               | 1    | 20 A   | ER         | RECEPT-WORK-1          | TABLE-E   |
| 17            | SPARE                                      |               | E        | 20 A   | 1     |        |   | 0 / 0         | 1    | 20 A   | ER         | RECEPT-WORK-1          | TABLE-E   |
| 19            |  |               |          | 20.4   | 0     | 0 / 0  |   |               | 1    | 20 A   | ER         | KETLLE - CON           | TROL      |
| 21            | MICROWAVE                                  |               | ER       | 30 A   | 2     |        | 0 / 0                                       |               | 1    | 20 A   | ER         | RECEPTACLE - WO        | RK TABLE  |
| 23            |  |               | ER       | 00.4   | 0     |        |   | 0 / 0         | 1    | 20 A   | ER         | RECEPTACLE-WOR         | RK TABLE  |
| 25            | REF-HALF&HALF-E-W                          | AR            | ER       | 20 A   | 2     | 0 / 0  |   |               | 1    |        |            | SPACE                  |           |
| 27            |  |               |          | 00.4   | 0     |        | 0 / 0                                       |               |      |        |            |                        |           |
| 29            | REFR-HALF&HALF-W-                          | WAR           | ER       | 20 A   | 2     |        |   | 0 / 0         | 3    | 90 A   | ER         | STOVE                  |           |
| 31            |  |               |          |        |       | 0 / 0  |   |               |      |        |            |                        |           |
| 33            | QUART-MIXER                                |               | ER       | 20 A   | 3     |        | 0 / 0                                       |               | 1    | 20 A   | ER         | 110 V-REFRIG-W         | ARMER     |
| 35            |  |               |          |        |       |        |   | 0 / 0         | 1    | 20 A   | ER         | ICE MACHI              | NE        |
| 37            | RECEPT-KIT-EAST W                          | ALL           | ER       | 20 A   | 1     | 0 / 0  |   |               | 1    | 20 A   | ER         | RECEPT-OFFICE-         | LOCKER    |
| 39            | RECEPT-LOCKER-STO                          | RAGE          | ER       | 20 A   | 1     |        | 0 / 0                                       |               | 1    | 20 A   | Е          | SPARE                  |           |
| 41            | SPARE                                      |               | E        | 20 A   | 1     |        |   | 0 / 0         | 1    | 20 A   | Е          | SPARE                  |           |
|               |  |               |          |        |       |        |   |               |      |        |            |                        |           |
|               |  |               |          | тот    | ALS : | 0 VA   | 0 VA  | 300 VA        |      |        |            |                        |           |
|               | TOTAL CON                                  | NECTED LOAD   | (VA) : 🗧 | 300 VA |       |        | ΤΟΤΑ  | L CONNECTED   | LOAD | (AMPS) | :1A        |                        |           |
| REMA<br>EXIST | <b>RKS:</b><br>ING SQUARE D PANELBOARD TYI | PE 'NQOD'     |          |        |       |        | NOTES:<br>E - CONNECT TO<br>ER - EXISTING C |               |      | LEAVE  | AS SF      | PARE IF UNUSED.        |           |

|                         | HPK(L)              |                      | P    | ANE    | ELBOA | RD SCI                   | HEDULI      |      | 3      |        |                    |            |         |
|-------------------------|---------------------|----------------------|------|--------|-------|--------------------------|-------------|------|--------|--------|--------------------|------------|---------|
|                         | · /                 | SCCR (AMPS RMS SYN   |      |        |       | Ξ: (480Y/277V 3Φ         |             |      |        | A MAIN | : MLO NEMA: Type 1 | MOUNTING : | SURFACE |
|                         |                     |                      | ,    |        |       | un                       | Cumer       |      |        |        |                    |            |         |
| СКТ                     | DESCRIPTION         | NOTE                 | AMP  | POLE   | Α     | В                        | С           | POLE | AMP    | NOTE   | DESCRIPT           | ION        | СК      |
| 1                       |                     |                      |      |        | 0 / 0 |                          |             |      |        |        |                    |            | 2       |
| 3                       | EXISTING CIRCUIT    |                      | 20 A | 3      |       | 0 / 0                    |             | 3    | 20 A   |        | EXISTING CI        | RCUIT      | 4       |
| 5                       |                     |                      |      |        |       |                          | 0 / 0       |      |        |        |                    |            | 6       |
| 7                       |                     |                      |      |        | 0 / 0 |                          |             |      |        |        |                    |            | 8       |
| 9                       | EXISTING CIRCUIT    |                      | 20 A | 3      |       | 0 / 0                    |             | 3    | 20 A   |        | EXISTING CI        | RCUIT      | 10      |
| 11                      |                     |                      |      |        |       |                          | 0 / 0       |      |        |        |                    |            | 12      |
| 13                      |                     |                      |      |        | 0/0   |                          |             |      |        |        |                    |            | 14      |
| 15                      | EXISTING CIRCUIT    |                      | 20 A | 3      |       | 0 / 0                    |             | 3    | 20 A   |        | EXISTING CI        | RCUIT      | 16      |
| 17                      |                     |                      |      |        |       |                          | 0 / 0       |      |        |        |                    |            | 18      |
| 19                      |                     |                      |      |        | 0/0   |                          |             |      |        |        |                    |            | 20      |
| 21                      | EXISTING CIRCUIT    |                      | 40 A | 3      |       | 0 / 0                    |             | 3    | 40 A   |        | EXISTING CI        | RCUIT      | 22      |
| 23                      |                     |                      |      |        |       |                          | 0 / 0       |      |        |        |                    |            | 24      |
| 25                      |                     |                      |      |        | 0/0   |                          |             | 1    |        |        | SPACE              |            | 26      |
| 27                      | EXISTING CIRCUIT    |                      | 30 A | 3      |       | 0 / 0                    |             | 1    |        |        | SPACE              |            | 28      |
| 29                      |                     |                      |      |        |       |                          | 0 / 0       | 1    |        |        | SPACE              |            | 30      |
| 31                      | SPACE               |                      |      | 1      | 0 / 0 |                          |             | 1    |        |        | SPACE              |            | 32      |
| 33                      | SPACE               |                      |      | 1      |       | 0 / 0                    |             | 1    |        |        | SPACE              |            | 34      |
| 35                      | SPACE               |                      |      | 1      |       |                          | 0 / 0       | 1    |        |        | SPACE              |            | 36      |
| 37                      | SPACE               |                      |      | 1      | 0 / 0 |                          |             | 1    |        |        | SPACE              |            | 38      |
| 39                      | SPACE               |                      |      | 1      |       | 0 / 0                    |             | 1    |        |        | SPACE              |            | 40      |
| 41                      | SPACE               |                      |      | 1      |       |                          | 0 / 0       | 1    |        |        | SPACE              |            | 42      |
|                         |                     |                      |      |        |       |                          |             |      |        |        |                    |            |         |
|                         |                     |                      |      | TALS : | 0 VA  | 0 VA                     | 0 VA        |      |        |        |                    |            |         |
|                         | TOTAL CON           | NECTED LOAD (VA) : 0 | ) VA |        |       |                          | L CONNECTED | LOAD | (AMPS) | :0A    |                    |            |         |
| REMARKS:<br>EXISTING SO | QUARE D PANELBOARD. |                      |      |        |       | NOTES:<br>ALL CIRCUITS T | TO REMAIN.  |      |        |        |                    |            |         |



|                     | LHD                       |              | P/   | <b>ANE</b> | ELBO   | ARD SC                 | HEDUL       | .E    |          |              |               |              |        |
|---------------------|---------------------------|--------------|------|------------|--------|------------------------|-------------|-------|----------|--------------|---------------|--------------|--------|
|                     | I: ELEC. 197A SCCR (A     | MPS RMS SYM  | IM): |            | SERVIO | CE: None               |             | AMP   | : 100 A  | MAIN : MLO   | NEMA: Type 1  | MOUNTING : S | URFACE |
| СКТ                 | DESCRIPTION               | NOTE         | AMP  | POLE       | A      | В                      | С           | POLE  | AMP N    | OTE          | DESCRIPTIC    | N            | СКТ    |
| 1                   | EXISTING CIRCUIT          |              | 20 A | 1          | 0 / 0  |                        |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 2      |
| 3                   | EXISTING CIRCUIT          |              | 20 A | 1          |        | 0 / 0                  |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 4      |
| 5                   | EXISTING CIRCUIT          |              | 20 A | 1          |        |                        | 0 / 0       | 1     | 20 A     |              | EXISTING CIRC | UIT          | 6      |
| 7                   | EXISTING CIRCUIT          |              | 20 A | 1          | 0/0    |                        |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 8      |
| 9                   | EXISTING CIRCUIT          |              | 20 A | 1          |        | 0 / 0                  |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 10     |
| 11                  | EXISTING CIRCUIT          |              | 20 A | 1          |        |                        | 0 / 0       | 1     | 20 A     |              | EXISTING CIRC | UIT          | 12     |
| 13                  | EXISTING CIRCUIT          |              | 20 A | 1          | 0/0    |                        |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 14     |
| 15                  | EXISTING CIRCUIT          |              | 20 A | 1          |        | 0 / 0                  |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 16     |
| 17                  | EXISTING CIRCUIT          |              | 20 A | 1          |        |                        | 0 / 0       | 1     | 20 A     |              | EXISTING CIRC | UIT          | 18     |
| 19                  | EXISTING CIRCUIT          |              | 20 A | 1          | 0/0    |                        |             | 1     | 20 A     |              | EXISTING CIRC | UIT          | 20     |
| 21                  | SPACE                     |              |      | 1          |        | 0 / 0                  |             |       |          |              |               |              | 22     |
| 23                  | SPACE                     |              |      | 1          |        |                        | 0 / 0       | 3     | 20 A     |              | EXISTING CIRC | UIT          | 24     |
| 25                  | SPACE                     |              |      | 1          | 0/0    |                        |             |       |          |              |               |              | 26     |
| 27                  | SPACE                     |              |      | 1          |        | 0 / 0                  |             |       |          |              |               |              | 28     |
| 29                  | SPACE                     |              |      | 1          |        |                        | 0 / 0       | 3     | 20 A     |              | EXISTING CIRC | UIT          | 30     |
| 31                  | SPACE                     |              |      | 1          | 0 / 0  |                        |             |       |          |              |               |              | 32     |
| 33                  | SPACE                     |              |      | 1          |        | 0 / 0                  |             |       |          |              |               |              | 34     |
| 35                  | SPACE                     |              |      | 1          |        |                        | 0 / 0       | 3     | 20 A     |              | EXISTING CIRC | UIT          | 36     |
| 37                  | SPACE                     |              |      | 1          | 0 / 0  |                        |             |       |          |              |               |              | 38     |
| 39                  | SPACE                     |              |      | 1          |        | 0 / 0                  |             | 1     |          |              | SPACE         |              | 40     |
| 41                  | SPACE                     |              |      | 1          |        |                        | 0 / 0       | 1     |          |              | SPACE         |              | 42     |
|                     |                           |              |      | _          |        |                        |             |       |          |              |               |              |        |
|                     |                           |              | -    | ALS :      | 0 VA   | 0 VA                   | 0 VA        |       |          |              |               |              |        |
|                     | TOTAL CONNECTED           | LOAD (VA): 0 | VA   |            |        |                        | AL CONNECTE | DLOAD | (AMPS) : | Not Computed |               |              |        |
| REMARKS<br>EXISTING | :<br>SQUARE D PANELBOARD. |              |      |            |        | NOTES:<br>ALL CIRCUITS | TO REMAIN.  |       |          |              |               |              |        |



|                        | LPK(R)                 |                    | P      | ANI    | ELBOA   | <b>RD SCH</b>   | IEDUL          | Ε    |                |         |                                       |      |
|------------------------|------------------------|--------------------|--------|--------|---------|---|----------------|------|----------------|---------|---------------------------------------|------|
| LOCATION               | : ELEC. 197A           | SCCR (AMPS RMS SY  | MM):   |        | SERVICE | <b>Ξ</b> : 208Y/120V 3Φ                                       | 4-Wire+Ground  | AMF  | <b>•</b> : 400 | А МА    | AIN : MLO NEMA: Type 1 MOUNTING : SUR | FACE |
| СКТ                    | DESCRIPTION            | NOTE               |        | POLE   | A       | В   | С              | POLE |                | NOTE    | DESCRIPTION                           | C    |
| 1                      | LIGHTS - HOOD          | ER                 | 20 A   | 1      | 0/0     |   |                | 1    | 20 A           | ER      | SP-CIR-KIT-JBOX-A-OFF                 | 2    |
| 3                      | SP-IN-HOOD-FOR-CONT    | ROL ER             | 20 A   | 1      |         | 0/0   |                | 1    | 20 A           | ER      | SP-CIR-KIT-JBOX-A-OFF                 | 4    |
| 5                      | SPARE                  | ER                 | 20 A   | 1      |         |   | 0/0            | 1    | 20 A           | ER      | SP-CIR-KIT-JBOX-A-OFF                 | 6    |
| 7                      | DISH-AREA-LIGHTS       | ER                 | 20 A   | 1      | 0/0     |   |                | 1    | 20 A           | ER      | ?                                     | 8    |
| 9                      | LIGHTS - KITCHEN       | ER                 | 20 A   | 1      |         | 0 / 300   |                | 1    | 20 A           |         | EXHAUST FAN EF-B KITCHEN ROOF         | 1    |
| 11                     | LIGHTS-KITCHEN         | ER                 | 20 A   | 1      |         |   | 0/0            | 1    | 20 A           | ER      | EXHAUST FAN - 5                       | 1    |
| 13                     |                        |                    |        |        | 0/0     |   |                | 1    | 20 A           | ER      | LIGHTS - FREEZER - COOLER             | 1    |
| 15                     | COMPRESSOR             | ER                 | 20 A   | 3      |         | 0 / 200   |                | 1    | 20 A           | E       | FAN COIL FC-A OFFICE 198E             | 1    |
| 17                     |                        |                    |        |        |         |   | 0/0            |      |                |         |                                       | 1    |
| 19                     |                        |                    |        |        | 0/0     |   |                | 2    | 30 A           | ER      | HOT-FD-SERVING-TAB-E                  | 2    |
| 21                     | WALK-IN-COOLER-CO      | M ER               | 20 A   | 3      |         | 0/0   |                | _    |                |         |                                       | 2    |
| 23                     |                        |                    |        |        |         |   | 0/0            | 2    | 30 A           | ER      | HOT-FD-SERVING-TAB-W                  | 2    |
| 25                     |                        |                    |        |        | 0/0     |   |                |      |                | _       |                                       | 2    |
| 27                     | WALK-IN-FREEZR-CC      | M ER               | 30 A   | 3      |         | 0 / 0   |                | 2    | 20 A           | E       | SPARE                                 | 2    |
| 29                     |                        |                    |        |        |         |   | 0 / 600        | 1    | 20 A           | Р       | CUH-E DRY STORAGE 198D                | 3    |
| 31                     |                        |                    |        |        | 0 / 244 |   |                | 1    | 20 A           | Р       | CUH-D VEST. V106, PUH-C CORR. C116    | 3    |
| 33                     | SPARE                  | E                  | 20 A   | 3      |         | 0 / 288   |                | 1    | 20 A           | Р       | HEATER PUH-C SERVING 198              | 3    |
| 35                     |                        |                    |        |        |         |   | 0/0            | 1    | 20 A           | Р       | SPARE                                 | 3    |
| 37                     |                        |                    |        |        | 0/0     |   |                |      |                |         |                                       | 3    |
| 39                     | SPARE                  | E                  | 20 A   | 3      |         | 0/0   |                | 3    | 20 A           | E       | SPARE                                 | 4    |
| 41                     |                        |                    |        |        |         |   | 0 / 0          |      |                |         |                                       | 4    |
|                        |                        |                    | 1      |        |         |   |                |      |                |         |                                       |      |
|                        |                        |                    |        | TALS : | 244 VA  | 788 VA  | 600 VA         |      |                |         |                                       |      |
|                        |                        | NECTED LOAD (VA) : | 1632 V | A      |         |   | L CONNECTED    | LOAD | (AMPS          | ):5A    |                                       |      |
| REMARKS:<br>EXISTING S | QUARE D PANELBOARD TYP | E 'NQOD'           |        |        |         | NOTES:<br>E - CONNECT TO<br>ER - EXISTING C<br>P - PROVIDE NE | CIRCUIT TO REA |      | . LEAVI        | E AS SP | ARE IF UNUSED.                        |      |

|            | HPK(R)              |                    |      | ANE   |        |                 |               |       |          |              |                                    |       |
|------------|---------------------|--------------------|------|-------|--------|-----------------|---------------|-------|----------|--------------|------------------------------------|-------|
| LOCATION : | ELEC. 197A          | SCCR (AMPS RMS SY  | MM): | _     | SERVIC | E: 480Y/277V 34 | 4-Wire+Ground | ) AMP | : 400    | <b>∧ Μ</b> ∕ | NIN: MLO NEMA: Type 1 MOUNTING: SU | JRFAC |
| скт        | DESCRIPTION         | NOTE               | AMP  | POLE  | A      | B               | C             | POLE  | AMP      | NOTE         | DESCRIPTION                        | C     |
| 1          |                     |                    |      |       | 0 / 0  |                 |               |       |          |              |                                    |       |
| 3          | EXISTING CIRCUIT    |                    | 20 A | 3     |        | 0 / 0           |               | 3     | 20 A     |              | EXISTING CIRCUIT                   |       |
| 5          |                     |                    |      |       |        |                 | 0 / 0         |       |          |              |                                    |       |
| 7          |                     |                    |      |       | 0 / 0  |                 |               |       |          |              |                                    |       |
| 9          | EXISTING CIRCUIT    |                    | 20 A | 3     |        | 0 / 0           |               | 3     | 20 A     |              | EXISTING CIRCUIT                   |       |
| 11         |                     |                    |      |       |        |                 | 0 / 0         |       |          |              |                                    |       |
| 13         |                     |                    |      |       | 0/0    |                 |               |       |          |              |                                    |       |
| 15         | EXISTING CIRCUIT    |                    | 20 A | 3     |        | 0 / 0           |               | 3     | 20 A     |              | EXISTING LOAD                      |       |
| 17         |                     |                    |      |       |        |                 | 0 / 0         |       |          |              |                                    |       |
| 19         |                     |                    |      |       | 0 / 0  |                 |               | 1     |          |              | SPACE                              |       |
| 21         | EXISTING CIRCUIT    |                    | 40 A | 3     |        | 0 / 0           |               | 1     |          |              | SPACE                              |       |
| 23         |                     |                    |      |       |        |                 | 0 / 0         | 1     |          |              | SPACE                              |       |
| 25         |                     |                    |      |       | 0 / 0  |                 |               | 1     |          |              | SPACE                              |       |
| 27         | EXISTING CIRCUIT    |                    | 90 A | 3     |        | 0 / 0           |               | 1     |          |              | DO NOT REMOVE THIS TWISTOUT        |       |
| 29         |                     |                    |      |       |        |                 | 0 / 0         | 1     |          |              | DO NOT REMOVE THIS TWISTOUT        |       |
| 31         | SPACE               |                    |      | 1     | 0 / 0  |                 |               | 1     |          |              | SPACE                              | :     |
| 33         | SPACE               |                    |      | 1     |        | 0 / 0           |               | 1     |          |              | SPACE                              | :     |
| 35         | SPACE               |                    |      | 1     |        |                 | 0 / 0         | 1     |          |              | SPACE                              | :     |
| 37         | SPACE               |                    |      | 1     | 0 / 0  |                 |               | 1     |          |              | SPACE                              |       |
| 39         | SPACE               |                    |      | 1     |        | 0 / 0           |               | 1     |          |              | SPACE                              |       |
| 41         | SPACE               |                    |      | 1     |        |                 | 0 / 0         | 1     |          |              | SPACE                              |       |
|            |                     |                    |      |       | 0.1/4  |                 |               | 1     |          |              |                                    |       |
|            |                     |                    |      | ALS : | 0 VA   | AV 0            |               |       |          |              |                                    |       |
| REMARKS:   | TUTAL CON           | NECTED LOAD (VA) : | U VA |       |        | NOTES:          | AL CONNECTED  | LUAD  | (AIVIPS) | : U A        |                                    |       |
|            | QUARE D PANELBOARD. |                    |      |       |        | ALL CIRCUITS    | TO REMAIN     |       |          |              |                                    |       |
|            |                     |                    |      |       |        |                 |               |       |          |              |                                    |       |

| HEQ   |                          | PANELBOARD SCHEDULE |       |        |                         |                        |               |       |        |                |                                    |       |
|---|--------------------------|---------------------|-------|--------|-------------------------|------------------------|---------------|-------|--------|----------------|------------------------------------|-------|
|   | DN: ELEC. 197A SC        | CR (AMPS RMS S      | YMM): |        | SERVIC                  | <b>Е:</b> 480Y/277V 3Ф | 4-Wire+Ground | AMP   | : 200  | <b>∧ Μ</b>     | AIN: MLO NEMA: Type 1 MOUNTING: SU | JRFAC |
| СКТ   | DESCRIPTION              | NOT                 | EAMP  | POLE   | A                       | В                      | C C           | POLE  | AMP    | NOTE           | DESCRIPTION                        |       |
| 1   | SPARE                    | E                   | 20 A  |        | 0/0                     | _                      | _             | 1     | 20 A   | E              | SPARE                              |       |
| 3   | SPARE                    | E                   | 20 A  | 1      |                         | 0/0                    |               | 1     | 20 A   | Е              | SPARE                              |       |
| 5   | SPARE                    | E                   | 20 A  | 1      |                         |                        | 0/0           | 1     | 20 A   | E              | SPARE                              |       |
| 7   |                          |                     |       |        | 0 / 0                   |                        |               |       |        |                |                                    |       |
| 9   | SPARE                    | E                   | 15 A  | 3      |                         | 0/0                    |               | 3     | 20 A   |                | SPARE                              |       |
| 11  |                          |                     |       |        |                         |                        | 0/0           |       |        |                |                                    |       |
| 13  |                          |                     |       |        | 0 / 0                   |                        |               |       |        |                |                                    |       |
| 15  | SPARE                    | E                   | 15 A  | 3      |                         | 0/0                    |               | 3     | 15 A   | E              | SPARE                              |       |
| 17  |                          |                     |       |        |                         |                        | 0 / 0         |       |        |                |                                    |       |
| 19  |                          |                     |       |        | 0 / 0                   |                        |               |       |        |                |                                    |       |
| 21  | SPARE                    | E                   | 15 A  | 3      |                         | 0 / 0                  |               | 3     | 15 A   | Е              | SPARE                              |       |
| 23  |                          |                     |       |        |                         |                        | 0 / 0         |       |        |                |                                    |       |
| 25  | AIR HANDLING UNIT (AHU-  | 1)                  |       |        | 3047 / 0                |                        |               |       |        |                |                                    |       |
| 27  | SUPPLY FAN 7.5HP         | É E                 | 20 A  | 3      |                         | 3047 / 0               |               | 3     | 15 A   | Е              | SPARE                              |       |
| 29  | UNIT LOCATED ON AREA C R | OOF                 |       |        |                         |                        | 3047 / 0      |       |        |                |                                    |       |
| 31  | AIR HANDLING UNIT (AHU-  | 1)                  |       |        | 2105 / 0                |                        |               |       |        |                |                                    |       |
| 33  | RETURN FAN 4HP           | E                   | 15 A  | 3      |                         | 2105 / 0               |               | 3     | 15 A   | E              | SPARE                              |       |
| 35  | UNIT LOCATED ON AREA C R | OOF                 |       |        |                         |                        | 2105 / 0      |       |        |                |                                    |       |
| 37  | SPACE                    |                     |       | 1      | 0 / 0                   |                        |               | 1     |        |                | SPACE                              |       |
| 39  | SPACE                    |                     |       | 1      |                         | 0 / 0                  |               | 1     |        |                | SPACE                              |       |
| 41  | SPACE                    |                     |       | 1      |                         |                        | 0 / 0         | 1     |        |                | SPACE                              |       |
|   |                          |                     |       |        |                         | -                      |               | 1     |        |                |                                    |       |
|   |                          |                     | -     | TALS : | 5152 VA                 | 5152 VA                | 5152 VA       |       |        |                |                                    |       |
|   |                          | CTED LOAD (VA) :    | 15457 | VA     |                         |                        | AL CONNECTED  | LOAD  | (AMPS) | : 19 A         |                                    |       |
| REMARKS:<br>EXISTING SQUARE D 'NF' PANELBOARD |                          |                     |       |        | NOTES:<br>E - CONNECT T | O EXISTING BRI         | EAKER         | LEAVE | AS SF  | ARE IF UNUSED. |                                    |       |





### INDIANA THERMAL SOLUTIONS



| Date: February 20, 2024                   | Freight: Allowed and prepaid |  |  |  |  |
|---|------------------------------|--|--|--|--|
| Project: Lilian Schmitt Elementary School | Payment Terms: Net 30 Days   |  |  |  |  |
| Engineer: RE Dimond Associates            | Delivery Terms: FOB Jobsite  |  |  |  |  |

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

### Bid Category #3: Custom Air Handling Units

### Oty: (3) Nortek Temtrol Custom Air Handling Units

Tags: AHU 1 - 3

- 3" double wall construction
- Fiberglass insulation on indoor units
- ➢ L shaped configuration on AHU − 3
- > Hot water coils as specified with galvanized frame
- > Chilled water cooling coils with stainless steel coil casing and drain pans
- > AHU 1 includes FWT design with coplanar silencer and Motor Overload Panel
- > Direct drive plenum fans wired to junction box external to unit section
- Lights as required
- > Access doors open against pressure
- > AHU 3 inlcudes performated liner on return air section and coplanar silencer on fan
- > OA/RA/EA dampers as required
- > Unit to ship in sections per submittals
- Startup assistance
- 2 year parts warranty

### NOT INCLUDED:

- Disconnects or VFD's
- > Controls, actuators, or sensors of any kind
- Installation of any kind
- Labory warranty

### 

Sincerely,

Brian Rockey Sales Engineer

### INDIANA THERMAL SOLUTIONS



| Date: February 20, 2024                   | Freight: Allowed and prepaid |  |  |  |  |  |
|---|------------------------------|--|--|--|--|--|
| Project: Lilian Schmitt Elementary School | Payment Terms: Net 30 Days   |  |  |  |  |  |
| Engineer: RE Dimond Associates            | Delivery Terms: FOB Jobsite  |  |  |  |  |  |

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

### **Bid Category #4: Packaged Rooftop Units**

### Oty: (1) Daikin Rebel Rooftop Unit

Tags: RTU - 1

- ➢ 460/60/3 phase with 65 kva fused disconnect switch
- > 0 100% enthalpy economizer with barometric relief
- > 2" & 4" filter rack; 2" filters provided
- > Double wall foam panel construction
- ➢ R410a refrigerant
- Inverter compressor with suction and discharge service valves
- MicroTech Controller with BacNet Interface
- > Single zone vav application
- ➢ 5:1 turndown natural gas burner
- > Modulating hot gas reheat coil for dehumidification
- Comination temp/humidity stat (field installed)
- > 24" flat roof curb
- > Startup
- I year parts warranty & 5 year compressor parts warranty & 10 year heat exchanger parts warranty

### NOT INCLUDED & EXCEPTIONS:

- Installation of any kind
- > OA monitoring or smoke detectors

### <u>Total Net Price</u>......\$ 49,500.00 (Current lead time is 10 – 12 weeks)

Sincerely,

Brian Rockey Sales Engineer

### INDIANA THERMAL SOLUTIONS



| Date: February 20, 2024                   | Freight: Allowed and prepaid |  |  |  |  |
|---|------------------------------|--|--|--|--|
| Project: Lilian Schmitt Elementary School | Payment Terms: Net 30 Days   |  |  |  |  |
| Engineer: RE Dimond Associates            | Delivery Terms: FOB Jobsite  |  |  |  |  |

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

### Bid Category #5: Custom Built Outdoor Central Station Air Handling Units

### Oty: (1) Nortek Temtrol Custom Air Handling Units

Tags: AHU-4

- ➢ 3" double wall construction
- > Foam insulation on outdoor units
- > Hot water coils as specified with galvanized frame
- > Chilled water cooling coils with stainless steel coil casing and drain pans
- > Direct drive plenum fans wired to junction box external to unit section
- > Lights as required
- > Access doors open against pressure
- > OA/RA/EA dampers as required
- > Unit to ship in sections per submittals
- > Startup assistance
- > 2 year parts warranty

### NOT INCLUDED:

- > Disconnects or VFD's
- > Controls, actuators, or sensors of any kind
- Installation of any kind
- Labory warranty

### Total Net Price ...... \$ 79,500.00 (Current lead time is 13 weeks)

Sincerely,

Brian Rockey Sales Engineer

# INDIANA THERMAL SOLUTIONS



| Date: February 20, 2024                   | Freight: Allowed and prepaid |
|---|------------------------------|
| Project: Lilian Schmitt Elementary School | Payment Terms: Net 30 Days   |
| Engineer: RE Dimond Associates            | Delivery Terms: FOB Jobsite  |

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

## Bid Category #6: Variable Refrigerant Volume Air Conditioning

## Oty: (Lot) Daikin AC Variable Refrigerant Volume System

Tags: CHRU 1 - 3, DXFC 1 - 5, DXFC A - E, ERV 1 - 4

- Daikin Emerion Heat Recovery Condensing Units 460/60/3 phase
  - > Indoor fan coils
    - Wall mounted or vertical ahu style 208/1
    - Electric heat kits for vertical ahu style (field installed)
    - Wall mounted stat (field installed)
  - ➢ Energy recovery ventilators − 208/1
    - Electric duct heaters (field installed)
      - o Unit controller per unit
  - ➢ Multiport branch selectors − 208/1
  - > All required Daikin Refnet pipe joints
  - > Central control panel with BacNet IP Interface
  - > Startup included
  - > 10 year parts warranty

#### NOT INCLUDED:

- Disconnects on any of the indoor or outdoor units
- > Field refrigerant piping or field refrigerant
- > Temperature control wiring
- > Stands or curbs for the outdoor units
- > Installation of any kind
- Labory warranty

# 

Sincerely,

Brian Rockey Sales Engineer

# INDIANA THERMAL SOLUTIONS



| Date: February 20, 2024                   | Freight: Allowed and prepaid |
|---|------------------------------|
| Project: Lilian Schmitt Elementary School | Payment Terms: Net 30 Days   |
| Engineer: RE Dimond Associates            | Delivery Terms: FOB Jobsite  |

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

#### **Bid Category #7: Vertical Unit Ventilators**

#### Oty: (31) Temspec Vertical Unit Ventilators

Tags: VUV - A (9), VUV B & C (22)

- > VUV A built custom 84" tall with top discharge
- > VUV B & C include 5 sided top acoustical plenum (field installed)
- $\geqslant$  1/2" closed cell insulation
- > 115/1/60 ECM supply fan motor for 0-10 vdc input signal
- Internal wiring with unfused disconnect switch, fan relay, door micro-switch and 75 VA control transformer
- Electrical/control enclosure
- Cabinet finiah: Standard "Light Grey" "Off-White" or "Beige" powder coat finish
- Hinged access panels secured with Phillips head fast-lead captive fasteners
- Ultra-low leakage outdoor & return air dampers
- Face & bypass control dampers
- > 2" MERV 10 filters (3 extra sets provided)
- Stainless steel drain pans for cooling coil
- Heavy duty return air grille
- Top acoustical discharge plenum (VUV C Only)
- Side piping chases
- ➢ Rear plenum (VUV C Only)
- > Duct shroud (VUV A & B)
- Top piping connections
- Chilled water cooling coil
- > Hot water preheat coil
- > Internally mounted shut off valves
- > Control items all wired to terminal strip
  - Modulating spring return OA/RA damper with JCI actuator
    - Modulating non-spring return face & bypass damper JCI actuator
    - o Current sensor for supply fan motor
    - o Mixed air and discharge air temperature sensors
- 2 year parts warranty

## NOT INCLUDED:

- Supply DDC controller and any additional temperature sensors
- Supply and installation of CO2 sensor, zone/temperature sensor, humidity sensor
- > Barometric or powered relief
- Louvers, wall sleeves, block off panels, or raised base
- ➢ Condensate pumps
- > Start-up or labor warranty

Sincerely,

-

Brian Rockey Sales Engineer

# INDIANA THERMAL SOLUTIONS



# Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew Consolidated School Corporation

| Qty  | Tag       | Description                                     |
|------|-----------|---|
| 4    | AHU 1 - 4 | Temtrol Customer Air Handling Units             |
|      |           |   |
|      | N         |   |
|      |           |   |
|      |           |   |
|      |           |   |
| Subm | itted by: | Drawings in this submittal package describe the |

Submitted by: Brian Rockey Indiana Thermal Solutions Drawings in this submittal package describe the equipment we propose to furnish for this project and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



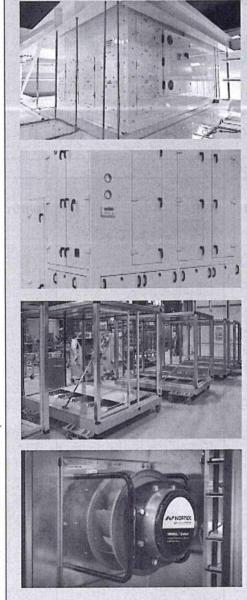
TEMTROL

Preliminary

# Schmitt Elementary

## PRELIMINARY SUBMITTAL

| Generated Date:               | 2024-02-19   |
|-------------------------------|--|
| Revision:                     | P1   |
| QUOTE #                       | 24-0139  |
| EQUIPMENT                     | AHU - 1, AHU - 2, AHU - 4, AHU - 3   |
| REPRESENTATIVE                | Brian Rockey<br>Indiana Thermal Solutions, LLC: Indianapolis<br>6872 Hillsdale Court<br>Indianapolis, IN 46250, USA<br>Phone: (317) 570-5400 |
|                               | Fax: (317) 570-5414<br>Email: brianr@its-indiana.com   |
| SALES APPLICATIONS<br>CONTACT | Jessy Grace<br>Email: jessy.grace@nortek.com   |



# IMPORTANT NOTICE ABOUT THIS SUBMITTAL:

This revision supersedes previous revisions. Approval of this submittal indicates that it has been thoroughly reviewed and approved by all relevant mechanical, electrical, and structural disciplines involved in the project. The equipment Nortek Air Solutions proposes to furnish will be produced in accordance with the contents of this submittal. Nortek Air Solutions is not responsible or liable for features or performance requirements included in plans & specifications that were not furnished to Nortek Air Solutions prior to the preparation of this submittal. An approved and/or reviewed submittal, returned to Nortek Air Solutions with a "Release For Production", shall be deemed to be in essential compliance with plans & specifications and shall be manufactured in accordance with the contents of this submittal. In the event of any discrepancy between this submittal and plans & specifications or other contract documents, this submittal will control.

## Approved By:

Signature of Responsible: \_\_

\_\_\_\_\_ Date \_

Name of Responsible ( Print ):

Title:

Generated By: Brian Rockey, Indiana Thermal Solutions, LLC: Ir

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TEMTROL

## Project

| Project Revision History | 1   |
|--------------------------|-----|
| Project Notes            | 2   |
| Unit Designs             |     |
| AHU - 1                  | 3   |
| Unit Design Options      | 5   |
| Fans                     | 10  |
| Coils                    | 19  |
| Components               | 23  |
| Electrical               | 27  |
| Unit Data                | 31  |
| AHU - 2                  | 38  |
| Unit Design Options      | 40  |
| Fans                     | 45  |
| Coils                    | 52  |
| Components               | 56  |
| Electrical               | 60  |
| Unit Data                | 63  |
| AHU - 3                  | 69  |
| Unit Design Options      | 71  |
| Fans                     | 76  |
| Coils                    | 85  |
| Components               | 88  |
| Electrical               | 92  |
| Unit Data                | 95  |
| AHU - 4                  | 99  |
| Unit Design Options      | 101 |
| Fans                     | 106 |
| Coils                    | 113 |
| Components               | 116 |
| Electrical               | 120 |
| Unit Data                | 123 |
| Terms and Conditions     | 132 |



| PROJECT   | Schmitt Elementary                 |
|-----------|------------------------------------|
| QUOTE #   | 24-0139                            |
| EQUIPMENT | AHU - 1, AHU - 2, AHU - 4, AHU - 3 |
|           |                                    |

| Date       | Revision | Description      |  |
|------------|----------|------------------|--|
| 2024-02-19 | P1       | Initial Revision |  |

Design Assistant



# **Project Notes**

Project Name: Schmitt Elementary

Quote #: 24-0139

#### 100 Project Notes

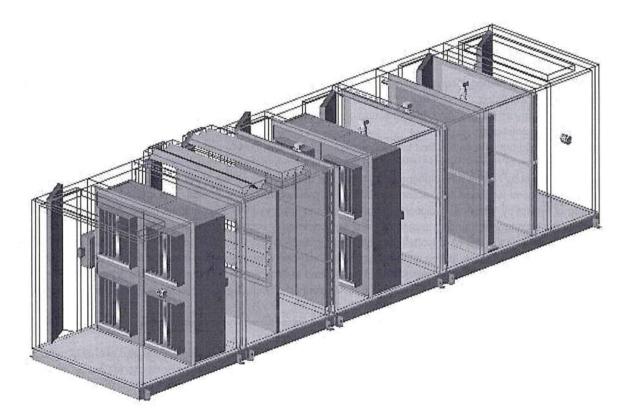
#### **100.1 Exceptions and Clarifications**

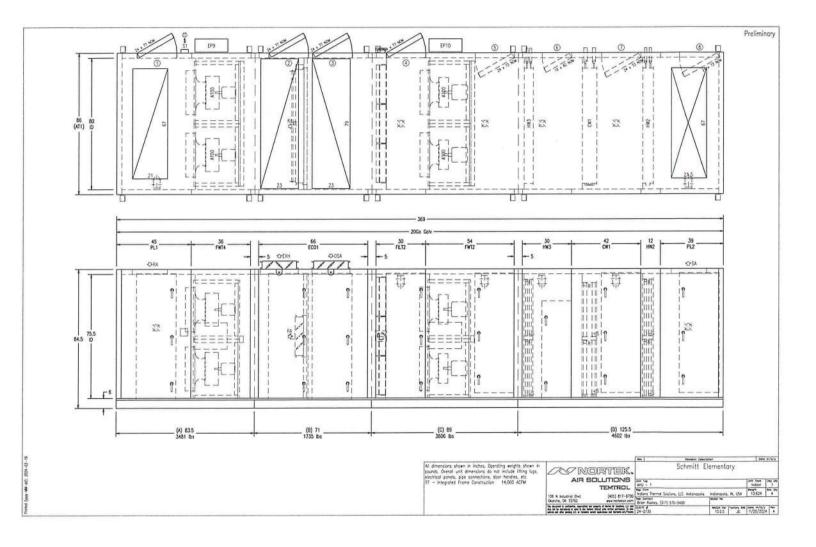
- The proposed unit is designed for mounting on a mounting surface or structure sized and reinforced to support the weight of the unit component sections. Such a mounting surface or structure shall provide support at the entire perimeter dimension of the unit as well as across the entire width of the unit at every base section split. Larger unit base channel sizing may be required where the installation requires point loading of sections with unsupported spans such as at unit base splits across the width of the unit, and at unsupported perimeter base channel locations.
- 2. All controls (Thermostats, DDC and accessories) and control wiring are NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 3. All piping, valves and plumbing accessories, and piping insulation are NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 4. All offloading, rigging, installation, reassembling of unit sections, commissioning, startup and field labor are NOT included unless specifically mentioned as being provided by Nortek Air Solutions.
- 5. Supervision of any field unit assembly is NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 6. Factory Leak & Deflection Testing, Sound Testing, and Field Testing is NOT included unless specifically mentioned as being provided by Nortek Air Solutions.
- Exception is taken to any schedules, specifications, engineering drawings, plans and items incorporated by reference beyond those provided to Nortek Air Solutions.
- 8. The quoted price is valid until the date stated in this quotation, pricing is subject to change thereafter. Availability of components and materials at the time of release to production could affect the estimated lead times given in this quotation. The agreed upon unit pricing, following receipt by Nortek Air Solutions of a written and approved purchase order, will be protected for forty-five (45) days. If the order is not released for production, accompanied by approved equipment submittals and credit approval within forty-five (45) days from date of receipt by Nortek Air Solutions of the written and approved PO, the equipment pricing is subject to change. Nortek reserves the right to revisit pricing should material and commodity costs increase beyond 10%.
- 9. Quoted pricing is based on the standard Nortek Air Solutions Limited Warranty which is 18 months from shipment or 12 months from startup, whichever occurs first, unless specifically noted. Extended warranty pricing is available on request. Equipment must be operated under normal conditions and serviced and maintained in accordance with the operations & maintenance manuals provided at the time of installation in order to be eligible for warranty coverage. Labor for replacement parts is not included. See Nortek Air Solutions Limited Warranty for complete terms.
- 10. Shipping and handling prices are estimated and are quoted FCA Seller's Factory for domestic delivery and EXW Seller's Factory for international delivery and are subject to surcharges at time of shipment.
- 11. The estimated shipping and handling prices are based on equipment configuration, section sizes, and overall dimensions. Please note that subsequent changes to any of the above may result in additional costs. Nortek Air Solutions will not be responsible for additional shipping and handling costs which are a result of changes to the quoted equipment, partial shipments, weekend delivery, layovers, storage, or extraordinary shipping requirements. Any units not accepted to ship per the release acknowledgment ship date will result in storage fees of \$1250/week per trailer until units are shipped.
- 12. All units are configured and bagged for shipment based on economy and shipping limits. Hoods and external pipe houses ship unassembled and separate from unit. Units that include demounted sections will ship in separate sections unless otherwise noted in the submittal/proposal. Shipping configurations may require disassembly and/or assembly by the installing contractor. There will be no gasketing installed between demounted sections. Gasketing between splits must be installed by the installing contractor.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-001        |
| UNIT TAG | AHU - 1            |
| QUANTITY | 1                  |

| Revision | History |                      |
|----------|---------|----------------------|
| Date     | Rev     | Revision Description |







TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-001        |
| UNIT TAG | AHU - 1            |
| QUANTITY | 1                  |

# Unit Design Options

Design Assistant

10.0.0 / 2.0.3.1



# Unit Design Options Quote #: 24-0139-001

#### Project Name: Schmitt Elementary

Unit Tag: AHU - 1

#### 100 Unit Design Summary

#### 100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



# **Unit Design Options**

Project Name: Schmitt Elementary

TEMTROL

#### Unit Tag: AHU - 1

Quote #: 24-0139-001

# 101 Unit Details

| 101.1 Weights / Jobsite Elevation |           |              |       |  |
|-----------------------------------|-----------|--------------|-------|--|
| 1. Shipping Weight                | 13,506 lb | 3. Elevation | 39 ft |  |
| 2. Operating Weight               | 13,624 lb |              |       |  |

# 101.2 Preparation for Shipment 1. Cleaning & Wrapping Ship on open bed truck and heat shrink wrap.

| <u> </u>                  |    |
|---------------------------|----|
| 2. Knockdown Construction | No |

### 102 Unit Construction

| 102.1 Construction      |                        |                   |                        |
|-------------------------|------------------------|-------------------|------------------------|
| 1. Cabinet Construction | ITF - Integrated Frame | 6. Panel Fastener | Drive Screws           |
| 2. Design Environment   | Indoor                 | 7. Thermal Break  | Modified Thermal Break |
| 3. Panel Depth          | 3 in                   | 8. Mounting       | Slab Mounted           |
| 4. Caulk Type           | Standard               |                   |                        |
| 5. Model #              |                        |                   |                        |

| 1. Exterior Material       | 16Ga Galv Pre-Paint        | 8. Blankoff Finish        | None                       |  |  |
|----------------------------|----------------------------|---------------------------|----------------------------|--|--|
| 2. Interior Liner type(s)  | See Drawing                | 9. Internal Wall Material | 16Ga Galv                  |  |  |
| 3. Exterior Paint Type     | Polyester Resin            | Insulation by liner type  |                            |  |  |
| 4. Interior Paint Type     | None                       | 10. Solid liner           | HD Fiberglass Roll (R12.5) |  |  |
| 5. Paint Color             | Sandstone                  |                           |                            |  |  |
| 6. Meets Salt Spray Rating | 2500 Hours                 |                           |                            |  |  |
| 7. Blankoff Material       | 16Ga Galv (See Exceptions) |                           |                            |  |  |

Exceptions:

1. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

| 102.3 Base Construction    |                   |                          |              |
|----------------------------|-------------------|--------------------------|--------------|
| 1. Base Structure Material | Steel Tube        | 7. Base Structure Height | See Drawing  |
| 2. Base Floor Material     | 16Ga Galv         | 8. Sub Floor Material    | 20Ga Galv    |
| 3. Base Floor Seams        | Caulked           | 9. Floor Coating         | None         |
| 4. Insulation              | Polyurethane Foam | 10.R Value               | 20           |
| 5. Floor Drain             | None              | 11.Lifting Lugs          | Yes - Welded |
| 6. Floor Options           | None              |                          |              |

#### 102.4 Box Dimensions

| Box | X          | Y         | Z         | Shipping Weight | Operating Weight |
|-----|------------|-----------|-----------|-----------------|------------------|
| A   | 83.500 in  | 86.000 in | 84.500 in | 3,481 lb        | 3,481 lb         |
| В   | 71.000 in  | 86.000 in | 84.500 in | 1,735 lb        | 1,735 lb         |
| С   | 89.000 in  | 86.000 in | 84.500 in | 4,011 lb        | 3,806 lb         |
| D   | 125.500 in | 86.000 in | 84.500 in | 4,279 lb        | 4,602 lb         |

#### 102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

#### 103 Doors

| 103.1 All Doors (including those associated with specific components) |     |         |                   |       |        |       |       |        |           |                     |                      |
|---|-----|---------|-------------------|-------|--------|-------|-------|--------|-----------|---------------------|----------------------|
| #   | Box | Section | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior  | Exterior            | Options <sup>3</sup> |
| 1   | Α   | PL1     | 3" TBF            | 24    | 77     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 2   | В   | ECO1    | 3" TBF            | 24    | 77     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 3   | В   | ECO1    | 3" TBF            | 24    | 77     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 4   | С   | FILT2   | 3" TBF            | 24    | 77     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 5   | С   | FWT2    | 3" TBF            | 24    | 73     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |

Date/Revision: 2024-02-19 / Rev. P1 Unit Design Revision A

P1 106 N Industrial Blvd. Okarche, Ok 73762 (405) 817-9700 FAX (405) 263-4980 This Document is confidential, copyrighted and property of Nortek Air Solutions LLC.



# **Unit Design Options**

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

Quote #: 24-0139-001

103 Doors (Continued)

| # | Box | Section | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior  | Exterior            | Options <sup>3</sup> |
|---|-----|---------|-------------------|-------|--------|-------|-------|--------|-----------|---------------------|----------------------|
| 6 | D   | HW3     | 3" TBF            | 18    | 60     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | то                   |
| 7 | D   | CW1     | 3" TBF            | 24    | 73     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 8 | D   | PL2     | 3" TBF            | 24    | 73     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |

#### 103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

#### 105 Internal Walls

| 105.1 All Internal Walls (including those associated with specific components) |              |                |          |            |            |           |  |  |  |
|--|--------------|----------------|----------|------------|------------|-----------|--|--|--|
| Box  | Section      | Wall Name      | Depth    | Panel Mat. | Liner Mat. | Insulated |  |  |  |
| В  | Economizer 1 | InternalWall 1 | 2.000 in | Default    | 16Ga Galv  | False     |  |  |  |



# **Unit Design Options**

Quote #: 24-0139-001

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

106 Static Pressure Summary

| 06.1.1 Return    |   |              |
|------------------|---|--------------|
| Tunnel           | Description                                   | APD (in.H20) |
| AirTunnel 1      | FANWALL 4 (Return) 14,000 ACFM @ 1.00 in.H20  | 0.00         |
| AirTunnel 1      | RA Opening (Return Air)                       | 0.00         |
| AirTunnel 1      | EXH Opening - Damper (Exhaust Air)            | 0.17         |
|                  | Total Static Pressure:                        | 0.17         |
| 06.1.2 Supply    |   |              |
| Tunnel           | Description                                   | APD (in.H20) |
| AirTunnel 1      | OSA Opening - Damper (Outside Air)            | 0.02         |
| AirTunnel 1      | Chilled Water Coil 1                          | 0.60         |
| AirTunnel 1      | Hot Water Coil 2                              | 0.13         |
| AirTunnel 1      | RA Opening - Damper (25.5x71)                 | 0.02         |
| AirTunnel 1      | FANWALL 2 (Supply) 14,000 ACFM @ 4.00 in.H20  | 0.00         |
| AirTunnel 1      | SA Opening (Supply Air)                       | 0.23         |
| AirTunnel 1      | Filter 2, Pre / Final (Average Pressure Drop) | 1.29         |
|                  | Total Static Pressure:                        | 2.29         |
| 06.1.3 Unassigne | d   |              |
| Tunnel           | Description                                   | APD (in.H20) |
| AirTunnel 1      | Hot Water Coil 3                              | 0.05         |
|                  | Total Static Pressure:                        | 0.05         |

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply A

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-001        |
| UNIT TAG | AHU - 1            |
| QUANTITY | 1                  |

Fans



Fans

Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 1

200 FANWALL 2 (Supply) : FWT2 : Box C

18-80 - 182T - 36 x 38 x 26 - B2

| 200.1 Configuration /  | Quantity           |                     | END AND STREET | Harry Malas     |               | Shired Conversion |
|------------------------|--------------------|---------------------|----------------|-----------------|---------------|-------------------|
| 1. Function            | Supply Fan         | Cell Size           | 6.Height       | 7.Width         | 8.Depth       | 9.Overall Depth   |
| 2. Quantity            | 4                  |                     | 36             | 38              | 26            | 33.25             |
| 3. Array               | 2 Rows x 2 Cols    | 10. Elev. / Temp.   |                | 39 ft / 70.0 °F |               |                   |
| 4. Construction        | PentaCube          | 11. Motor &         | & Wheel Weight | 161 lb          | 13. Redundant | 0                 |
| 5. Inlet Cone Location | Upstream Removable | 12. Fan Cell Weight |                | 363 lb          | 14. Empty     | 0                 |
|                        |                    | 15. Ship Lo         | oose Fan (Whee | I, Motor and Mo | unting Base)  | 0                 |

| 200.2 Options               |                   |                        |           |
|-----------------------------|-------------------|------------------------|-----------|
| 1. Coplanar Insulation      | Standard Melamine | 8. Cell Finish         | None      |
| 2. Extended Coplanar        | No                | 9. Insulation Retainer | No        |
| 3. Back Draft Dampers       | FBD8              | 10. Inlet Attenuation  | None      |
| 4. Inlet Cone Type          | A100 Curved Cone  | 11.Blankoff Material   | 16Ga Galv |
| 5. Solid Perimeter Material | None              | 12. Blankoff Finish    | None      |
| 6. Discharge Safety Guard   | No                | 13. Removal Rail       | No        |
| 7. Cell Material            | Steel             |                        |           |

| 200.3 Fan Wheel     |          |                 |      |  |  |  |  |
|---------------------|----------|-----------------|------|--|--|--|--|
| 1. Wheel Type       | HPF-A100 | 4. Width        | 80   |  |  |  |  |
| 2. Diameter         | 18       | 5. Max RPM      | 3862 |  |  |  |  |
| 3. Balancing Planes | 1        | 6. Wheel Finish | None |  |  |  |  |

| 200.4 Motor           | Contraction of the second second |                            |                  |
|-----------------------|----------------------------------|----------------------------|------------------|
| 1. Manufacturer       | Toshiba                          | 6. Model                   | 40A003L1ZVS210   |
| 2. HP Each / Total    | 3.5 / 14                         | 7. Efficiency              | 88.5             |
| 3. Poles / RPM        | 4-Pole / 1,750                   | 8. Service Factor          | 1.15             |
| 4. Frame / Casing     | 182T / TEAO                      | 9. Shaft Isolation         | Ceramic Bearings |
| 5. Volts / Phase / Hz | 460/3/60                         | 10.FLA Each / Total        | 4.5 / 18.0 Amps  |
|                       |                                  | 11. Motor HP Safety Factor | 3.0 %            |

| 200.5 Variable Freq | uency Drive |                       |       |  |
|---------------------|-------------|-----------------------|-------|--|
| 1. Quantity         | 0           | 3. Maximum Hertz      | 77.70 |  |
| 2. Voltage          | 460/3/60    | 4. Input Line Reactor | No    |  |

| 200.6 Control System    | A CONTRACT ON THE REAL PROPERTY OF |                    |      | a service serv |
|-------------------------|------------------------------------|--------------------|------|--|
| 1. Redundant VFD        | No                                 | 5. Flow Monitoring | None |  |
| 2. Drive                | Standard                           | 6. Fans to Monitor | None |  |
| 3. Optimization Control | No                                 |                    |      |  |
| 4. Control Method       | By Others                          |                    |      |  |

#### 200.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2104, cone flow differential pressure = 2.76 in.H2O at 3500 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



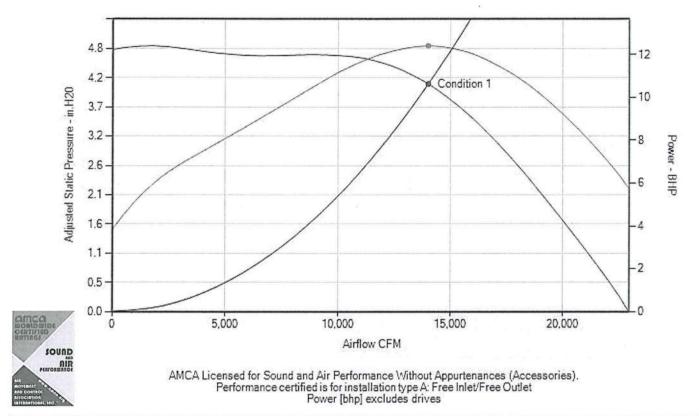
Fans

Quote #: 24-0139-001

# Project Name: Schmitt Elementary

Unit Tag: AHU - 1

200 FANWALL 2 (Supply) : FWT2 : Box C (Continued) 18-80 - 182T - 36 x 38 x 26 - B2



| 200.8 Operating Cor | ditions | 1. 2. 2. 24 | 1000   |       | - Sel |        |      | 10     |      |        | 1        | r the set | Ser Sert | NIP NIP  | 1.00 |
|---------------------|---------|-------------|--------|-------|-------|--------|------|--------|------|--------|----------|-----------|----------|----------|------|
|                     | Usage   | CEM         | SP (in | .H20) | 0     | cell Q | ty   | DDM    | Um   | Fanwhe | el BHP   | Vel.      | Matta    | FEG      | CEI  |
|                     | (%) CFM | Input       | Adj.   | On    | Off   | Fail   | RPIN | RPM Hz | Each | Total  | (ft/min) | ) Watts   | % O.P.   | FEI      |      |
| Condition 1         | 100     | 14,000      | 4.00   | 4.12  | 4     | 0      | 0    | 2,181  | 74.8 | 3.11   | 12.42    | 463       | 10,879   | FEG85 2% | 1.31 |

Design Assistant

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

18-80 - 182T - 36 x 38 x 26 - B2 200 FANWALL 2 (Supply) : FWT2 : Box C (Continued)

#### Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts) 11.1.1.0.01.1.07

| 105      | Inlet - LwA: 91, Lw: 97   |
|----------|---|
| 100      | 96  |
| 95       |   |
| 90       | 86  |
| 85<br>80 | 79 80 79  |
| 75       | To a start of the |
|          |   |
| 100-     |   |
| 90       | 85  |
| 80       | 80 80 79 76   |
| 70       | 72  |
| 60 L     | 63  |
| 00-      | 63 Hz 125 Hz 250 Hz 500 Hz 1K Hz 2K Hz 4K Hz 8K Hz<br>Outlet - LwA: 86, Lw: 92  |

| 200.9 Bare Fan Sound Power | with Coplana | ar Silend | er (dB re | e: 10E-12 | watts) |    |    |    | Same 2 | a herbanes | ALC: N |
|----------------------------|--------------|-----------|-----------|-----------|--------|----|----|----|--------|------------|--------|
| Operating Condition        | 1.00         | 63        | 125       | 250       | 500    | 1k | 2k | 4k | 8k     | LwA        | Lw     |
| Condition 1                | Inlet        | 79        | 76        | 96        | 86     | 80 | 80 | 79 | 77     | 91         | 97     |
|                            | Outlet       | 85        | 80        | 90        | 80     | 79 | 76 | 72 | 63     | 86         | 92     |

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Quote #: 24-0139-001

ans



Project Name: Schmitt Elementary

Unit Tag: AHU - 1

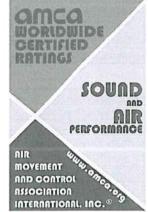
200 FANWALL 2 (Supply) : FWT2 : Box C (Continued)

#### 200.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



32

Quote #: 24-0139-001

18-80 - 182T - 36 x 38 x 26 -



AIR SOLUTIONS

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

201 FANWALL 4 (Return) : FWT4 : Box A

20-105 - 143T - 36 x 38 x 28 - B2

Quote #: 24-0139-001

| 201.1 Configuration / 0 | Quantity           | and a state of the | and the second | A E A BAR AND A BAR | ADAMA DI PARA | WOLKS DENTITY IN THE |
|-------------------------|--------------------|--------------------|----------------|---------------------|---------------|----------------------|
| 1. Function             | Return Fan         |                    | 6.Height       | 7.Width             | 8.Depth       | 9.Overall Depth      |
| 2. Quantity             | 4                  | Cell Size          | 36             | 38                  | 28            | 35.25                |
| 3. Array                | 2 Rows x 2 Cols    | 10. Elev. /        | Temp.          | 39 ft / 70.0 °F     |               |                      |
| 4. Construction         | PentaCube          | 11. Motor &        | & Wheel Weight | 122 lb              | 13. Redundant | 0                    |
| 5. Inlet Cone Location  | Upstream Removable | 12.Fan Ce          | ell Weight     | 331 lb              | 14. Empty     | 0                    |
|                         |                    | 15. Ship Lo        | oose Fan (Whee | I, Motor and Mo     | unting Base)  | 0                    |

| 201.2 Options               |                   | a to minimum of the second second | and the second second second second second |
|-----------------------------|-------------------|-----------------------------------|--|
| 1. Coplanar Insulation      | Standard Melamine | 8. Cell Finish                    | None                                       |
| 2. Extended Coplanar        | No                | 9. Insulation Retainer            | No   |
| 3. Back Draft Dampers       | FBD8              | 10. Inlet Attenuation             | None                                       |
| 4. Inlet Cone Type          | A100 Curved Cone  | 11.Blankoff Material              | 16Ga Galv                                  |
| 5. Solid Perimeter Material | None              | 12. Blankoff Finish               | None                                       |
| 6. Discharge Safety Guard   | No                | 13. Removal Rail                  | No   |
| 7. Cell Material            | Steel             |                                   |  |

| 201.3 Fan Wheel     |          |                 |      | Here in the second |
|---------------------|----------|-----------------|------|--------------------|
| 1. Wheel Type       | HPF-A100 | 4. Width        | 105  |                    |
| 2. Diameter         | 20       | 5. Max RPM      | 3521 |                    |
| 3. Balancing Planes | 1        | 6. Wheel Finish | None |                    |

| 201.4 Motor           |                |                            |                  |
|-----------------------|----------------|----------------------------|------------------|
| 1. Manufacturer       | Toshiba        | 6. Model                   | 40A001L1ZVS210   |
| 2. HP Each / Total    | 1.5/6          | 7. Efficiency              | 85.5             |
| 3. Poles / RPM        | 4-Pole / 1,745 | 8. Service Factor          | 1.15             |
| 4. Frame / Casing     | 143T / TEAO    | 9. Shaft Isolation         | Ceramic Bearings |
| 5. Volts / Phase / Hz | 460/3/60       | 10.FLA Each / Total        | 2.1 / 8.4 Amps   |
|                       |                | 11. Motor HP Safety Factor | 3.0 %            |

| I. Quantity | 0        | 3. Maximum Hertz      | 41.56 |  |
|-------------|----------|-----------------------|-------|--|
| 2. Voltage  | 460/3/60 | 4. Input Line Reactor | No    |  |

| 201.6 Control System    | - AND AND A REAL PROPERTY OF A DATA |                    |      |  |
|-------------------------|-------------------------------------|--------------------|------|--|
| 1. Redundant VFD        | No                                  | 5. Flow Monitoring | None |  |
| 2. Drive                | Standard                            | 6. Fans to Monitor | None |  |
| 3. Optimization Control | No                                  |                    |      |  |
| 4. Control Method       | By Others                           |                    |      |  |

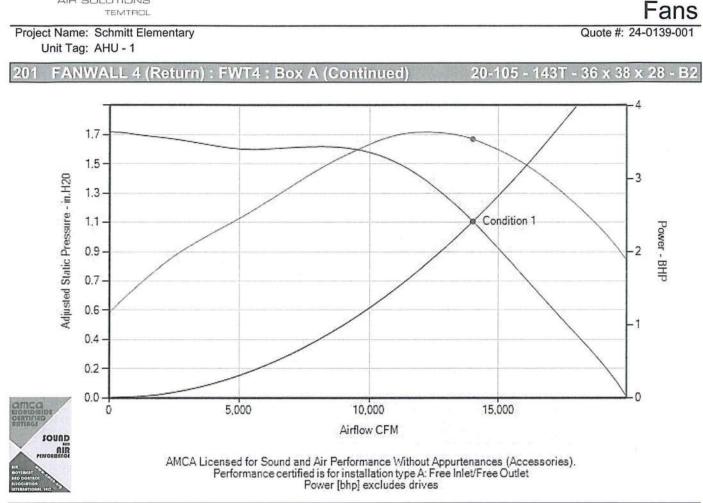
#### 201.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 1.92 in.H2O at 3500 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



| 201.8 Operating Con | ditions |        |        | in the | 10 | 2234  |      |       |      | Seller . | 2.4 2. 2 | 18       | 1      |          | A. S. |
|---------------------|---------|--------|--------|--------|----|-------|------|-------|------|----------|----------|----------|--------|----------|-------|
| Operating Condition | Usage   | OFM    | SP (in | .H20)  | C  | ell Q | ty   | RPM   | 11-  | Fanwhe   | el BHP   | Vel.     | Watts  | FEG      | FEI   |
| Operating Condition | (%)     | CFM    | Input  | Adj.   | On | Off   | Fail | RPIN  | Hz   | Each     | Total    | (ft/min) | vvalls | % O.P.   | FEI   |
| Condition 1         | 100     | 14,000 | 1.00   | 1.12   | 4  | 0     | 0    | 1,148 | 39.5 | .89      | 3.55     | 463      | 3,317  | FEG80 1% | 1.49  |

AIR SOLUTIONS

| - 14 | A | - | 7 |
|------|---|---|---|
|      |   |   |   |
|      |   |   |   |

Design Assistant

ans

Project Name: Schmitt Elementary

| 95   | Inlet - LwA: 80, Lw: 89  |
|------|--|
| 90   |  |
| 85   | 83   |
| 80   |  |
| 75   | 73 73 71   |
| 70   | 65   |
| 65   | 61   |
| 60   |  |
| 90   | 75 79<br>75 79<br>73 71<br>67<br>60  |
| 50   | 50   |
| 40 L |  |
|      | 63 Hz 125 Hz 250 Hz 500 Hz 1K Hz 2K Hz 4K Hz 8K Hz<br>Outlet - LwA: 77, Lw: 87 |

| 201.9 Bare Fan Sound Power | with Coplana | r Silend | cer (dB re | e: 10E-12 | watts) | 21-191-2 | Contraction of | la sel te se | Section 1 | 1 - DURING | Tio a b |
|----------------------------|--------------|----------|------------|-----------|--------|----------|----------------|--------------|-----------|------------|---------|
| Operating Condition        |              | 63       | 125        | 250       | 500    | 1k       | 2k             | 4k           | 8k        | LwA        | Lw      |
|                            | Inlet        | 73       | 87         | 83        | 73     | 73       | 71             | 65           | 61        | 80         | 89      |
| Condition 1                | Outlet       | 75       | 85         | 79        | 73     | 71       | 67             | 60           | 50        | 77         | 87      |

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# Unit Tag: AHU - 1 201 FANWALL 4 (Return) : FWT4 : Box A (Continued) 20-105 - 143T - 36 x 38 x 28 - B2 Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts) Inlet - LwA- 90 Lwr 99

Preliminary





Project Name: Schmitt Elementary

Unit Tag: AHU - 1

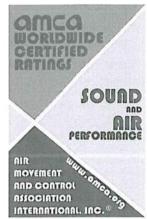
201 FANWALL 4 (Return) : FWT4 : Box A (Continued) 20-105 - 143T - 36 x 38 x 28 -

#### 201.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



32

Quote #: 24-0139-001



PROJECTSchmitt ElementaryQUOTE #24-0139-001UNIT TAGAHU - 1QUANTITY1

# Coils



Coils

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

300 Chilled Water Coil 1 : CW1 : Box D

5WC - 6 - 33 x 70 x 5 - 10 A

| 300.1 Coil Layout         |           |                      |             |  |
|---------------------------|-----------|----------------------|-------------|--|
| 1. Coil Hand              | Left      | 6. Rack Style        | None        |  |
| 2. Configuration          | Single    | 7. Rack Finish       | None        |  |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga 304 SS |  |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None        |  |
| 5. Connection Type        | MPT       |                      |             |  |

| 300.2 Construction | on                    |                  |                     |                   | WE ALL DESCRIPTION OF A DESCRIPTION |
|--------------------|-----------------------|------------------|---------------------|-------------------|-------------------------------------|
| 1. Quantity        | 2                     | 8. Stand Height  | 1 in                | 14. Casing        | 16Ga 304 SS                         |
| 2. Serpentine      | 0.8333333             | Tube Detai       | I - Primary Surface | 15. Coating       | None                                |
| 3. Fin Height      | 33.000 in             | 9. Material      | Copper              | Fin Detail -      | Secondary Surface                   |
| 4. Fin Length      | 70.000 in             | 10. O.D. x Wall  | 0.625 x 0.025 in    | 16. Material      | Aluminum                            |
| 5. Rows            | 5                     | 11. Spacing      | 1.500 x 1.299 in    | 17. Thickness     | 0.010 in                            |
| 6. Fins per Inch   | 10                    | 12. Internal     | Smooth              | 19 Configuration  | Corrugated, Waffle with             |
| 7. Face Area       | 32.08 ft <sup>2</sup> | 13. Return Bends | 0.035 in            | 18. Configuration | Straight Edge                       |

### Single Bank, Left Hand, 2 per unit

5WC - 6 - 33 x 70 x 5 - 10 AL

| Supply / Return Connections |      |           |           | Vent and Drain | A CONCEPTION OF THE STATE |                   |
|-----------------------------|------|-----------|-----------|----------------|---------------------------|-------------------|
| Quantity                    | Туре | Pipe Size | Material  | Туре           | Vent Location             | Drain Location    |
| 2                           | MPT  | 2.0 in    | Red Brass | 0.125 in FPT   | Return Connection         | Supply Connection |

| 300.3 Condition 1                |             |                          |               |
|----------------------------------|-------------|--------------------------|---------------|
| Contraction of the second second | Entering    |                          | Leaving       |
| 1. Actual Airflow                | 14,000 ACFM | 10. Total Capacity       | 623.1 MBH     |
| 2. Standard Airflow              | 13,721 SCFM | 11. Sensible Capacity    | 422.9 MBH     |
| 3. Elevation                     | 39 ft       | 12. Actual Face Velocity | 436.36 ft/min |
| 4. Entering Air DB               | 80.0 °F     | 13. Leaving Air DB       | 52.0 °F       |
| 5. Entering Air WB               | 67.0 °F     | 14. Leaving Air WB       | 51.8 °F       |
| 6. Fluid Type                    | Water       | 15.APD                   | 0.60 in.H20   |
| 7. Entering Fluid Temp           | 44.0 °F     | 16.Leaving Fluid Temp    | 54.0 °F       |
| 8. Fluid Flow Rate               | 124.2 GPM   | 17. Fluid Velocity       | 3.95 ft/s     |
| 9. Fluid Fouling Internal        | 0.0000      | 18. Fluid Pressure Drop  | 9.82 ft.H20   |

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

#### 300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 990 lb.

6. Total fluid volume is 22.2 Gal.



AIR SOLUTIONS

## Preliminary

Coils Quote #: 24-0139-001

#### Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

#### 301 Hot Water Coil 3 : HW3 : Box D

5WC - 4 - 34.5 x 70 x 1 - 6 AL

| 301.1 Coil Layout         |           | SACING SERVICE PROPERTY AND ADDRESS OF THE OWNER. |           | a nether |
|---------------------------|-----------|---|-----------|----------|
| 1. Coil Hand              | Left      | 6. Rack Style                                     | None      |          |
| 2. Configuration          | Single    | 7. Rack Finish                                    | None      |          |
| 3. Connection Orientation | Straight  | 8. Blankoff Material                              | 16Ga Galv |          |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish                                | None      |          |
| 5. Connection Type        | MPT       |   |           |          |

| 301.2 Construction | on                    |                  |                   |                   | and the state of the second second |
|--------------------|-----------------------|------------------|-------------------|-------------------|------------------------------------|
| 1. Quantity        | 2                     | Tube Detail      | - Primary Surface | 13. Casing        | 16Ga Galv                          |
| 2. Serpentine      | 0.25                  | 8. Material      | Copper            | 14. Coating       | None                               |
| 3. Fin Height      | 34.500 in             | 9. O.D. x Wall   | 0.625 x 0.025 in  | Fin Detail -      | Secondary Surface                  |
| 4. Fin Length      | 70.000 in             | 10. Spacing      | 1.500 x 1.299 in  | 15. Material      | Aluminum                           |
| 5. Rows            | 1                     | 11. Internal     | Smooth            | 16. Thickness     | 0.010 in                           |
| 6. Fins per Inch   | 6                     | 12. Return Bends | 0.035 in          | 17. Configuration | Corrugated, Waffle with            |
| 7. Face Area       | 33.54 ft <sup>2</sup> |                  |                   | T7.Configuration  | Straight Edge                      |

#### Single Bank, Left Hand, 2 per unit

5WC - 4 - 34.5 x 70 x 1 - 6 AL

| Supply / Return Connections |      |           |           |              | Vent and Drain    | A company of the second |
|-----------------------------|------|-----------|-----------|--------------|-------------------|-------------------------|
| Quantity                    | Туре | Pipe Size | Material  | Туре         | Vent Location     | Drain Location          |
| 2                           | MPT  | 1.25 in   | Red Brass | 0.125 in FPT | Return Connection | Supply Connection       |

| 301.3 Condition 1         |             |                          |               |
|---------------------------|-------------|--------------------------|---------------|
| のしたり、それで美しいない。            | Entering    |                          | Leaving       |
| 1. Actual Airflow         | 14,000 ACFM |                          |               |
| 2. Standard Airflow       | 14,820 SCFM | 9. Sensible Capacity     | 384.0 MBH     |
| 3. Elevation              | 39 ft       | 10. Actual Face Velocity | 417.39 ft/min |
| 4. Entering Air DB        | 40.0 °F     | 11.Leaving Air DB        | 63.9 °F       |
| 5. Fluid Type             | Water       | 12.APD                   | 0.05 in.H20   |
| 6. Entering Fluid Temp    | 180.0 °F    | 13. Leaving Fluid Temp   | 140.0 °F      |
| 7. Fluid Flow Rate        | 19.6 GPM    | 14. Fluid Velocity       | 2.25 ft/s     |
| 8. Fluid Fouling Internal | 0.0000      | 15. Fluid Pressure Drop  | 2.03 ft.H20   |

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

#### 301.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 277 lb.

6. Total fluid volume is 5.0 Gal.

Design Assistant



Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

302 Hot Water Coil 2 : HW2 : Box D

5WC - 4 - 34.5 x 70 x 2 - 8 AL

5WC - 4 - 34.5 x 70 x 2 - 8 AL

| 302.1 Coil Layout                          |           |                      |           | 100.15.24 |
|--|-----------|----------------------|-----------|-----------|
| 1. Coil Hand                               | Left      | 6. Rack Style        | None      |           |
| 2. Configuration                           | Single    | 7. Rack Finish       | None      |           |
| <ol> <li>Connection Orientation</li> </ol> | Straight  | 8. Blankoff Material | 16Ga Galv |           |
| 4. Connection Material                     | Red Brass | 9. Blankoff Finish   | None      |           |
| 5. Connection Type                         | MPT       |                      |           |           |

| 302.2 Construction | on                    |                  |                     |                   |                         |
|--------------------|-----------------------|------------------|---------------------|-------------------|-------------------------|
| 1. Quantity        | 2                     | Tube Detai       | I - Primary Surface | 13. Casing        | 16Ga Galv               |
| 2. Serpentine      | 0.5                   | 8. Material      | Copper              | 14. Coating       | None                    |
| 3. Fin Height      | 34.500 in             | 9. O.D. x Wall   | 0.625 x 0.025 in    | Fin Detail -      | Secondary Surface       |
| 4. Fin Length      | 70.000 in             | 10. Spacing      | 1.500 x 1.299 in    | 15. Material      | Aluminum                |
| 5. Rows            | 2                     | 11. Internal     | Smooth              | 16. Thickness     | 0.010 in                |
| 6. Fins per Inch   | 8                     | 12. Return Bends | 0.035 in            | 17. Configuration | Corrugated, Waffle with |
| 7. Face Area       | 33.54 ft <sup>2</sup> |                  |                     |                   | Straight Edge           |

## Single Bank, Left Hand, 2 per unit

Vent and Drain

|          | Supply / Retu | irn Connections |           |              | Vent and Drain    |                   |
|----------|---------------|-----------------|-----------|--------------|-------------------|-------------------|
| Quantity | Туре          | Pipe Size       | Material  | Туре         | Vent Location     | Drain Location    |
| 2        | MPT           | 1.5 in          | Red Brass | 0.125 in FPT | Return Connection | Supply Connection |

| 302.3 Condition 1         |             |                          |               | a la |
|---------------------------|-------------|--------------------------|---------------|------|
| teres and the second      | Entering    |                          | Leaving       |      |
| 1. Actual Airflow         | 14,000 ACFM |                          |               |      |
| 2. Standard Airflow       | 14,529 SCFM | 9. Sensible Capacity     | 828.3 MBH     |      |
| 3. Elevation              | 39 ft       | 10. Actual Face Velocity | 417.39 ft/min |      |
| 4. Entering Air DB        | 50.0 °F     | 11.Leaving Air DB        | 102.6 °F      |      |
| 5. Fluid Type             | Water       | 12.APD                   | 0.13 in.H20   |      |
| 6. Entering Fluid Temp    | 180.0 °F    | 13. Leaving Fluid Temp   | 140.0 °F      |      |
| 7. Fluid Flow Rate        | 42.3 GPM    | 14. Fluid Velocity       | 2.20 ft/s     |      |
| 8. Fluid Fouling Internal | 0.0000      | 15. Fluid Pressure Drop  | 2.52 ft.H20   |      |

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in

the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

#### 302.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 448 lb.

6. Total fluid volume is 9.6 Gal.



TEMTROL

| PROJECT | Schmitt Elementary |
|---------|--------------------|
|         |                    |

QUOTE # 24-0139-001

UNIT TAG AHU - 1

QUANTITY 1

# Components



# Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

500 Filter 2 : FILT2 : Box C

| 1. Loading                  | Upstream Face Load          | 7. Bank Size                 | 72.125 in W x 72.000 in H    |
|-----------------------------|-----------------------------|------------------------------|------------------------------|
| 2. Frame Material           | Galvanized                  | 8. Qty / set & Frame Size 1  | (9) 24 in x 24 in            |
| 3. Frame Finish             | None                        | 9. Qty / set & Frame Size 2  |                              |
| 4. Filter Clips             | (36) C-79-5                 | 10. Qty / set & Frame Size 3 |                              |
| 5. Blankoff / Rack Material | 16Ga Galv                   | 11. Qty / set & Frame Size 4 |                              |
| 6. Blankoff / Rack Finish   | None                        |                              |                              |
| 500.2 Pre Filter            |                             |                              |                              |
| 1. Filter Depth             | 2.000 in                    | 4. Number of Sets            | 3                            |
| 2. Efficiency               | MERV 8                      | 5. Max Face Velocity         | 388.89 ft/min at 14,000 ACFM |
| 3. Manufacturer             | American Air Filter         | 6. Model                     | PerfectPleat SC              |
| 500.3 Pressure Gage Speci   | fications - Gage 2          |                              | and the second second        |
| 1. Manufacturer             | Dwyer                       | 3. Options                   | Hinged Cover                 |
| 2. Model / Range            | Magnehelic 2002 (0-2" w.c.) | 4. Quantity                  | 1                            |
| 500.4 Final Filter          | A CARLEN CHARLEN AND THE    |                              |                              |
| 1. Filter Depth             | 4.000 in                    | 4. Number of Sets            | 3                            |
| 2. Efficiency               | MERV 13                     | 5. Max Face Velocity         | 388.89 ft/min at 14,000 ACFM |
| 3. Manufacturer             | American Air Filter         | 6. Model                     | VariCel II                   |

1. All sets of Filters and clips to ship loose inside unit, installed by others.

Design Assistant

10.0.0/2.0.3.1



Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

TEMTROL

#### Unit Tag: AHU - 1

#### 600 OSA Opening : OSA : Box B : Roof

| 600.1 Opening Const | truction       | NEW STREET, ST | Sector and the sector sector | Marshall Back |
|---------------------|----------------|--|------------------------------|---------------|
| 1. Description      | Outside Air    | 4. Shape   | Rectangle                    |               |
| 2. Max CFM          | 14,000 ACFM    | 5. Max APD   | 0.02 in.H20                  |               |
| 3. Size             | 79 W x 23 H in |  |                              |               |

| 1. Manufacturer      | Ruskin                        | 6. Jackshaft         | Yes             |
|----------------------|-------------------------------|----------------------|-----------------|
| 2. Model             | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 1,109.52 ft/min |
| 0.                   | 79.000 in (Blade Direction) x | 8. Torque            | 88 lb-in        |
| 3. Size              | 23.000 in                     | 9. End Switches      | No              |
| 4. Blade Config      | Parallel                      |                      |                 |
| 5. Blade Orientation | Horizontal                    |                      |                 |

1. Ordered with 1.500 in. Rear Flange

| 600.3 Damper Actuator | The second s | Contraction of the second | C. D. Martin |
|-----------------------|--|---------------------------|--------------|
| 1. Manufacturer       | 6. Qty   | 1                         |              |
| 2. Model              | 7. Floor Mounted   |                           |              |
| 3. Direction          | 8. Furnished By  | Others                    |              |
| 4. Location           | 9. Mounted By  | Others                    |              |
| 5. Type               | 10. Wiring By  | Others                    |              |

600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

#### 601 SA Opening : SA : Box D : Roof

#### 601.1 Opening Construction

| out. Topening cons | luction          | of all high the second second of the second s |                 | TOCK TO A DECISION |
|--------------------|------------------|---|-----------------|--------------------|
| 1. Description     | Supply Air       | 4. Shape  | Rectangle       |                    |
| 2. Max CFM         | 14,000 ACFM      | 5. Max APD  | 0.23 in.H20     |                    |
| 3. Size            | 67 W x 21.5 H in | 6. Max Velocity   | 1,400.00 ft/min |                    |

#### 602 RA Opening : RA : Box A : Roof

| 602.1 Opening Const | truction       |                 |                 |  |
|---------------------|----------------|-----------------|-----------------|--|
| 1. Description      | Return Air     | 4. Shape        | Rectangle       |  |
| 2. Max CFM          | 14,000 ACFM    | 5. Max APD      | 0.00 in.H20     |  |
| 3. Size             | 67 W x 21 H in | 6. Max Velocity | 1,433.00 ft/min |  |

## 603 EXH Opening : EXH : Box B : Roof

| 603.1 Opening Cons | truction       |            |             |  |
|--------------------|----------------|------------|-------------|--|
| 1. Description     | Exhaust Air    | 4. Shape   | Rectangle   |  |
| 2. Max CFM         | 14,000 ACFM    | 5. Max APD | 0.17 in.H20 |  |
| 3. Size            | 79 W x 23 H in |            |             |  |

| 1. Manufacturer                  | Ruskin                        | 6. Jackshaft         | Yes             |  |
|----------------------------------|-------------------------------|----------------------|-----------------|--|
| 2. Model                         | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 1,109.52 ft/min |  |
| a o:                             | 79.000 in (Blade Direction) x | 8. Torque            | 63 lb-in        |  |
| 3. Size                          | 23.000 in                     | 9. End Switches      | No              |  |
| <ol> <li>Blade Config</li> </ol> | Opposed                       |                      |                 |  |
| 5. Blade Orientation             | Horizontal                    |                      |                 |  |

Unit Design Revision A

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Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

603 EXH Opening : EXH : Box B : Roof (Continued)

| 603.3 Damper Actuator |                  |        |  |
|-----------------------|------------------|--------|--|
| 1. Manufacturer       | 6. Qty           | 1      |  |
| 2. Model              | 7. Floor Mounted |        |  |
| 3. Direction          | 8. Furnished By  | Others |  |
| 4. Location           | 9. Mounted By    | Others |  |
| 5. Туре               | 10. Wiring By    | Others |  |

#### 603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

604 RA Opening : RA : Box B : Internal Wall

| 604.1 Opening Construction |                  |            |             |  |  |
|----------------------------|------------------|------------|-------------|--|--|
| 1. Description             | Return Air       | 4. Shape   | Rectangle   |  |  |
| 2. Max CFM                 | 14,000 ACFM      | 5. Max APD | 0.02 in.H20 |  |  |
| 3. Size                    | 71 W x 25.5 H in |            |             |  |  |

| 1. Manufacturer                     | Ruskin                        | 6. Jackshaft         | Yes             |
|-------------------------------------|-------------------------------|----------------------|-----------------|
| 2. Model                            | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 1,113.51 ft/min |
| a o:                                | 71.000 in (Blade Direction) x | 8. Torque            | 88 lb-in        |
| 3. Size                             | 25.500 in                     | 9. End Switches      | No              |
| 4. Blade Config                     | Parallel                      |                      |                 |
| 5. Blade Orientation                | Horizontal                    |                      |                 |
| Notes:<br>1. Ordered with 1.500 in. | Front Flange                  |                      |                 |

| 1. Manufacturer | 6. Qty           | 1      |
|-----------------|------------------|--------|
| 2. Model        | 7. Floor Mounted |        |
| 3. Direction    | 8. Furnished By  | Others |
| 4. Location     | 9. Mounted By    | Others |
| 5. Type         | 10. Wiring By    | Others |

#### 604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others



PROJECTSchmitt ElementaryQUOTE #24-0139-001UNIT TAGAHU - 1QUANTITY1

# Electrical



Electrical

Quote #: 24-0139-001

Surface mount on unit

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 1

700 ElecPanel 9 : FWT4 : Box A : Far Side

NEMA 4 Indoor / Outdoor

| 1. Volt/Phase/Hertz         | 460/3/60            | 3. Provides power to | Return Fan |
|-----------------------------|---------------------|----------------------|------------|
| 2. MCA                      | 8.9                 |                      |            |
| 1. For electrical loads see | electrical drawings |                      |            |
| 700.2 Construction          |                     |                      |            |
| 1. Enclosure Type           | MSP Panel           | 4. Route             | C          |

5. Mounting

| 3. Size                              | See electrical drawings | 6. Finish              | Polyester Resin (Sandstone) |
|--------------------------------------|-------------------------|------------------------|-----------------------------|
| 700.3 Options                        |                         |                        |                             |
| 1. Cooling Fan                       | No                      | 5. Floor Stand         | No                          |
| 2. Filter Kit                        | No                      | 6. Control Transformer | No                          |
| 3. Keypad or Touch screen<br>on Door | No                      | 7. Window Kit          | No                          |
| 4. Power Transformer                 | No                      |                        |                             |

#### 700.4 Notes / Features

2. Type

1. MSP panel includes motor protection. MSP panel must be visible and within 50 feet from electrical disconnect.

#### 701 ElecPanel 10 : FWT2 : Box C : Far Side

| 701.1 Electrical Service Information |                       |                      |            |  |  |
|--------------------------------------|-----------------------|----------------------|------------|--|--|
| 1. Volt/Phase/Hertz                  | 460/3/60              | 3. Provides power to | Supply Fan |  |  |
| 2. MCA                               | 19.1                  |                      |            |  |  |
| 1. For electrical loads see          | e electrical drawings |                      |            |  |  |

| 701.2 Construction |                         |             |                             |  |
|--------------------|-------------------------|-------------|-----------------------------|--|
| 1. Enclosure Type  | MSP Panel               | 4. Route    | C                           |  |
| 2. Type            | NEMA 4 Indoor / Outdoor | 5. Mounting | Surface mount on unit       |  |
| 3. Size            | See electrical drawings | 6. Finish   | Polyester Resin (Sandstone) |  |

| 701.3 Options                        |    |                        |    |
|--------------------------------------|----|------------------------|----|
| 1. Cooling Fan                       | No | 5. Floor Stand         | No |
| 2. Filter Kit                        | No | 6. Control Transformer | No |
| 3. Keypad or Touch screen<br>on Door | No | 7. Window Kit          | No |
| 4. Power Transformer                 | No |                        |    |

#### 701.4 Notes / Features

1. MSP panel includes motor protection. MSP panel must be visible and within 50 feet from electrical disconnect.

#### 702 Lighting Circuit

| 702.1 Electrical Service Information |          |                      |                        |  |
|--------------------------------------|----------|----------------------|------------------------|--|
| 1. Volt/Phase/Hertz                  | 120/1/60 | 3. Provides power to | ElecSwitch 1, Lighting |  |
| 2. MCA                               | 0.0      |                      |                        |  |

1. For electrical loads see electrical drawings

#### 702.2 Switches / Outlets

|   | Name         | Box | Section | Туре                          | Mounted  | Illum. Switch | Timer | Cover | GFCI | MOCP      |
|---|--------------|-----|---------|-------------------------------|----------|---------------|-------|-------|------|-----------|
| · | ElecSwitch 1 | A   | PL1     | Light Switch /<br>120V Outlet | External | No            | None  | No    | Yes  | 20.0 Amps |



# Electrical

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

702 Lighting Circuit (Continued)

702.3 Lighting Types and Quantities

(6) Vapor Proof 14W LED



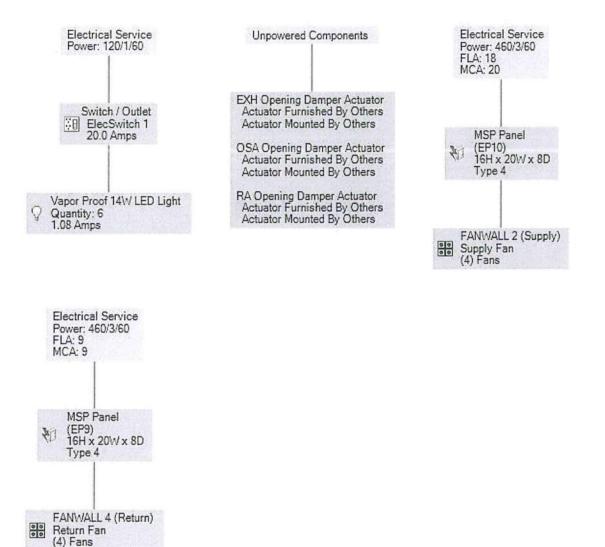
Electrical

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

703 Electrical Layout Diagram





| R SOLUTIONS<br>TEMTROL |                    |
|------------------------|--------------------|
| PROJECT                | Schmitt Elementary |
| QUOTE #                | 24-0139-001        |
| UNIT TAG               | AHU - 1            |
| QUANTITY               | 1                  |

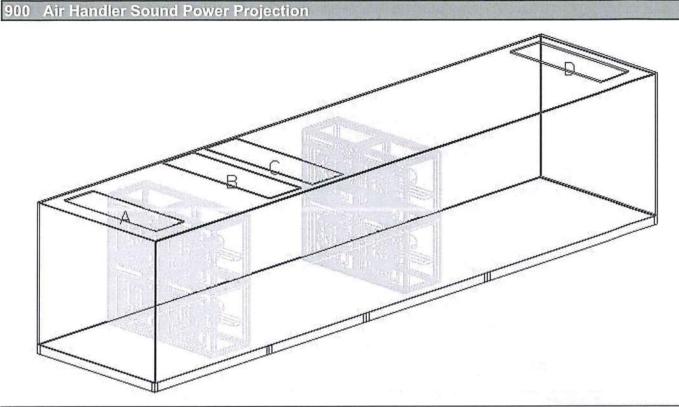
# Unit Data



Project Name: Schmitt Elementary

Unit Tag: AHU - 1

Quote #: 24-0139-001



|                 | Openings    | - Condition 1 |                      | 12. 34 | Octa | ve Ban | d Freq. S | Sound I | Power ( | db re: 1 | 0E-12 v | watts) |    |
|-----------------|-------------|---------------|----------------------|--------|------|--------|-----------|---------|---------|----------|---------|--------|----|
| Tag             | Title       | Cabinet Liner | Area                 | 63     | 125  | 250    | 500       | 1k      | 2k      | 4k       | 8k      | LwA    | Lw |
| A               | RA Opening  | Solid         | 9.8 ft <sup>2</sup>  | 73     | 87   | 85     | 78        | 75      | 74      | 70       | 68      | 82     | 90 |
| В               | EXH Opening | Solid         | 12.6 ft <sup>2</sup> | 78     | 82   | 92     | 82        | 76      | 76      | 75       | 73      | 87     | 93 |
| С               | OSA Opening | Solid         | 12.6 ft <sup>2</sup> | 77     | 78   | 93     | 83        | 77      | 77      | 76       | 74      | 88     | 94 |
| D               | SA Opening  | Solid         | 10.0 ft <sup>2</sup> | 84     | 79   | 90     | 80        | 79      | 76      | 72       | 63      | 86     | 92 |
| Casing Radiated |             |               | 77                   | 78     | 78   | 63     | 59        | 57      | 54      | 51       | 72      | 83     |    |
| Floor Radiated  |             |               |                      | 71     | 73   | 72     | 47        | 41      | 35      | 35       | 35      | 65     | 77 |

### 900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



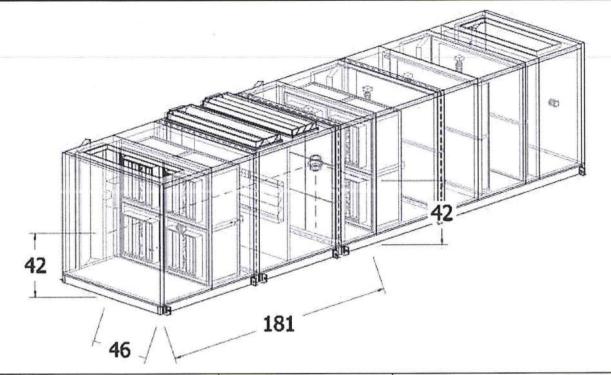
Unit Data

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity



| Size (Inches) |       |       | Operating Weight (Doundo) | Center of Gravity (Inches) |       |       |  |
|---------------|-------|-------|---------------------------|----------------------------|-------|-------|--|
| х             | Y     | Z     | Operating Weight (Pounds) | Х                          | Y     | Z     |  |
| 369.00        | 86.00 | 84.50 | 13,624                    | 184.00                     | 46.00 | 42.00 |  |

### 901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.



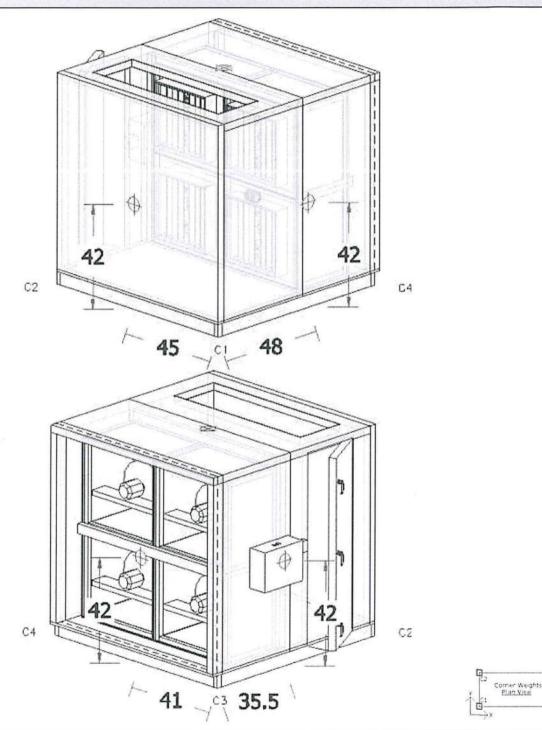
## Unit Data Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

### 901.2 Box A



| Size (Inches) |       |       | (Inches)                                     |     | Corner Weights (Pounds) |       |     |
|---------------|-------|-------|--|-----|-------------------------|-------|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1  | C2                      | C3    | C4  |
| 83.50         | 86.00 | 84.50 | 3,481  | 706 | 774                     | 1,047 | 954 |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

34

Ð



Unit Data

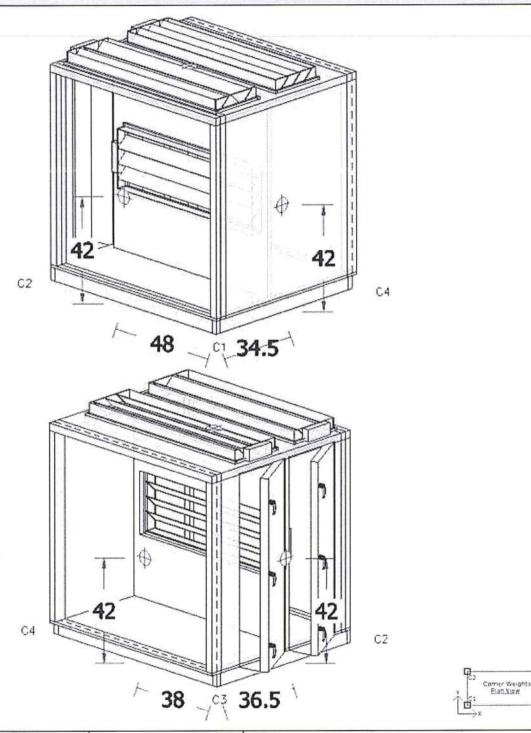
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

### 901 Center of Gravity (Continued)

### 901.3 Box B



| Size (Inches) |       |       | Objection (Mainh4 (Doundo)                   |     | Corner Weig | hts (Pounds) |     |
|---------------|-------|-------|--|-----|-------------|--------------|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1  | C2          | C3           | C4  |
| 71.00         | 86.00 | 84.50 | 1,735  | 394 | 498         | 470          | 372 |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

-10



## Unit Data

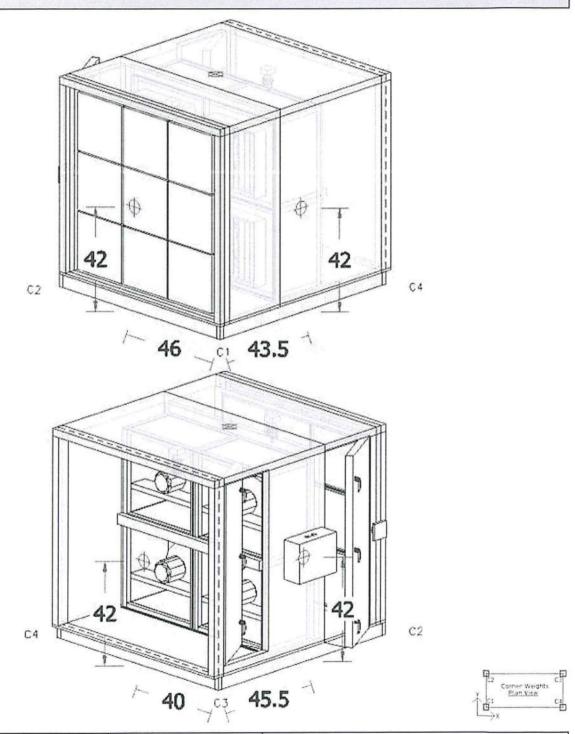
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

### 901.4 Box C



| Size (Inches) |       |       | Chinaina Maishi (Doundo)                     |     | Corner Weig | hts (Pounds) |     |
|---------------|-------|-------|--|-----|-------------|--------------|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1  | C2          | C3           | C4  |
| 89.00         | 86.00 | 84.50 | 4,011  | 975 | · 1,121     | 1,024        | 891 |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.



Unit Data

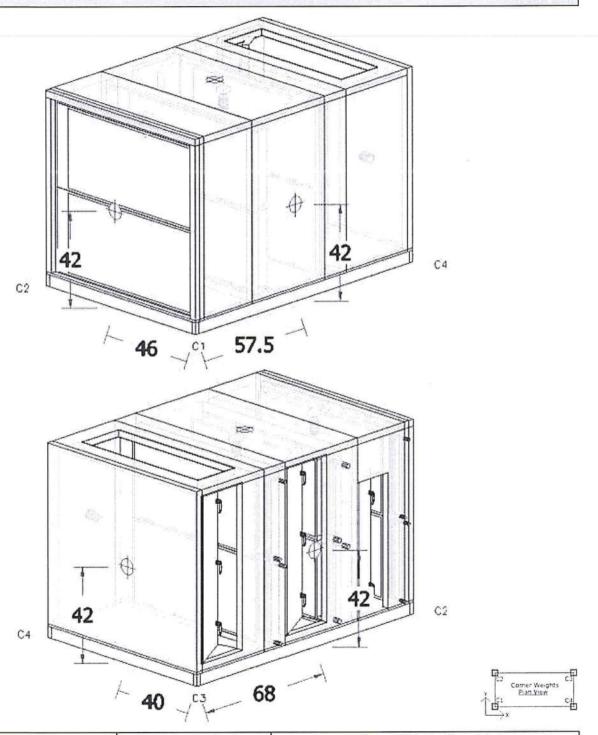
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

### 901.5 Box D



| Size (Inches) |       |       | Chinaian Waight (Dauada)                     | Corner Weights (Pounds) |       |       |     |
|---------------|-------|-------|--|-------------------------|-------|-------|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1                      | C2    | C3    | C4  |
| 125.50        | 86.00 | 84.50 | 4,279  | 1,078                   | 1,240 | 1,049 | 912 |

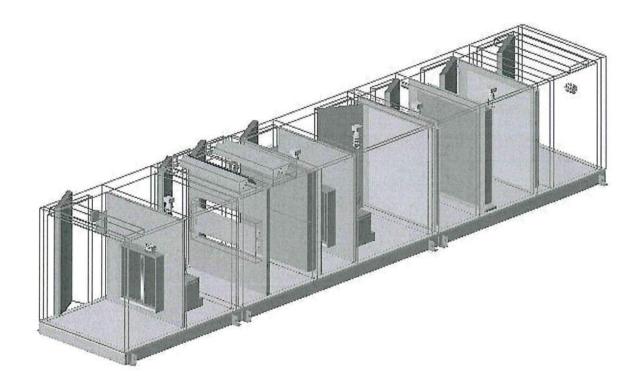
Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

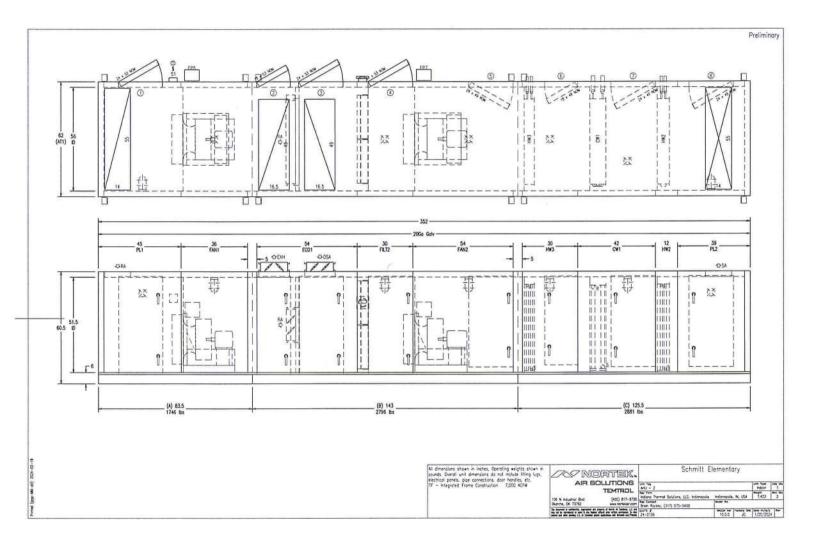


TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

| Revision | History |                      |
|----------|---------|----------------------|
| Date     | Rev     | Revision Description |
|          |         |                      |







| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

# Unit Design Options



## Unit Design Options Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

100 Unit Design Summary

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



## **Unit Design Options**

### Project Name: Schmitt Elementary

Unit Tag: AHU - 2

| Quole #. 24-0139-002 | Quote | #: | 24-0139-002 |
|----------------------|-------|----|-------------|
|----------------------|-------|----|-------------|

|    | 0    | 53 - SCORE (1995) |  |
|----|------|-------------------|--|
| 01 | Unit | Details           |  |

| 101.1 Weights / Jobsite | Elevation |              |       | 18542 |
|-------------------------|-----------|--------------|-------|-------|
| 1. Shipping Weight      | 7,360 lb  | 3. Elevation | 39 ft |       |
| 2. Operating Weight     | 7,423 lb  |              |       |       |

| 1. | Cleaning & Wrapping    | Ship on open bed truck and heat shrink wrap. |
|----|------------------------|--|
| 2. | Knockdown Construction | No   |

#### 102 Unit Construction

| 102.1 Construction      |                        |                   |                        |
|-------------------------|------------------------|-------------------|------------------------|
| 1. Cabinet Construction | ITF - Integrated Frame | 6. Panel Fastener | Drive Screws           |
| 2. Design Environment   | Indoor                 | 7. Thermal Break  | Modified Thermal Break |
| 3. Panel Depth          | 3 in                   | 8. Mounting       | Slab Mounted           |
| 4. Caulk Type           | Standard               |                   |                        |
| 5. Model #              | 2                      |                   |                        |

| 1. Exterior Material       | 16Ga Galv Pre-Paint        | 8. Blankoff Finish        | None                       |  |
|----------------------------|----------------------------|---------------------------|----------------------------|--|
| 2. Interior Liner type(s)  | See Drawing                | 9. Internal Wall Material | 16Ga Galv                  |  |
| 3. Exterior Paint Type     | Polyester Resin            | Insulation by liner type  |                            |  |
| 4. Interior Paint Type     | None                       | 10. Solid liner           | HD Fiberglass Roll (R12.5) |  |
| 5. Paint Color             | Sandstone                  |                           |                            |  |
| 6. Meets Salt Spray Rating | 2500 Hours                 |                           |                            |  |
| 7. Blankoff Material       | 16Ga Galv (See Exceptions) |                           |                            |  |

#### Exceptions:

1. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

| 102.3 Base Construction    |                   |                          |              |  |
|----------------------------|-------------------|--------------------------|--------------|--|
| 1. Base Structure Material | Steel Tube        | 7. Base Structure Height | See Drawing  |  |
| 2. Base Floor Material     | 16Ga Galv         | 8. Sub Floor Material    | 20Ga Galv    |  |
| 3. Base Floor Seams        | Caulked           | 9. Floor Coating         | None         |  |
| 4. Insulation              | Polyurethane Foam | 10.R Value               | 20           |  |
| 5. Floor Drain             | None              | 11.Lifting Lugs          | Yes - Welded |  |
| 6. Floor Options           | None              |                          |              |  |

## 102.4 Box Dimensions

| Box | X          | Y         | Z         | Shipping Weight | Operating Weight |
|-----|------------|-----------|-----------|-----------------|------------------|
| А   | 83.500 in  | 62.000 in | 60.500 in | 1,746 lb        | 1,746 lb         |
| В   | 143.000 in | 62.000 in | 60.500 in | 2,887 lb        | 2,796 lb         |
| С   | 125.500 in | 62.000 in | 60.500 in | 2,727 lb        | 2,881 lb         |

### 102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

### 103 Doors

| 103.1 All Doors (including those associated with specific components) |     |         |                   |       |        |       |       |        |           |                     |                      |
|---|-----|---------|-------------------|-------|--------|-------|-------|--------|-----------|---------------------|----------------------|
| #   | Box | Section | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior  | Exterior            | Options <sup>3</sup> |
| 1   | A   | PL1     | 3" TBF            | 24    | 53     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 2   | В   | ECO1    | 3" TBF            | 18    | 53     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 3   | В   | ECO1    | 3" TBF            | 24    | 53     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 4   | В   | FILT2   | 3" TBF            | 24    | 53     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 5   | В   | FAN2    | 3" TBF            | 24    | 49     | RH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 6   | С   | HW3     | 3" TBF            | 18    | 48     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |

Date/Revision: 2024-02-19 / Rev. P1



## Unit Design Options

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 2

Quote #: 24-0139-002

## 103 Doors (Continued)

| # | Box | Section | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior  | Exterior            | Options <sup>3</sup> |
|---|-----|---------|-------------------|-------|--------|-------|-------|--------|-----------|---------------------|----------------------|
| 7 | С   | CW1     | 3" TBF            | 24    | 49     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 8 | С   | PL2     | 3" TBF            | 24    | 49     | LH    | In    | None   | 16Ga Galv | 16Ga Galv Pre-Paint | TO                   |

### 103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

### 105 Internal Walls

| 105.1 All Internal Walls (including those associated with specific components) |              |                |          |            |            |           |  |
|--|--------------|----------------|----------|------------|------------|-----------|--|
| Box  | Section      | Wall Name      | Depth    | Panel Mat. | Liner Mat. | Insulated |  |
| В  | Economizer 1 | InternalWall 1 | 2.000 in | Default    | 16Ga Galv  | False     |  |

**Design Assistant** 



# Unit Design Options

### Project Name: Schmitt Elementary

Unit Tag: AHU - 2

106 Static Pressure Summary

### 106.1 Condition 1

| Tunnel      | Description                        | APD (in.H20) |
|-------------|------------------------------------|--------------|
| AirTunnel 1 | RA Opening (Return Air)            | 0.00         |
| AirTunnel 1 | EXH Opening - Damper (Exhaust Air) | 0.21         |
|             | Total Static Pressure:             | 0.21         |

| Tunnel      | Description                                   | APD (in.H20) |
|-------------|---|--------------|
| AirTunnel 1 | OSA Opening - Damper (Outside Air)            | 0.03         |
| AirTunnel 1 | Chilled Water Coil 1                          | 0.68         |
| AirTunnel 1 | Hot Water Coil 2                              | 0.16         |
| AirTunnel 1 | RA Opening - Damper (19x47)                   | 0.03         |
| AirTunnel 1 | SA Opening (Supply Air)                       | 0.20         |
| AirTunnel 1 | Filter 2, Pre / Final (Average Pressure Drop) | 1.46         |
|             | Total Static Pressure:                        | 2.56         |

| Tunnel      | Description                                    | APD (in.H20) |
|-------------|--|--------------|
| AirTunnel 1 | Plenum Fan 1 (Supply) 7,000 ACFM @ 1.50 in.H20 | 0.00         |
| AirTunnel 1 | Plenum Fan 2 (Supply) 7,000 ACFM @ 4.00 in.H20 | 0.00         |
| AirTunnel 1 | Hot Water Coil 3                               | 0.06         |
|             | Total Static Pressure:                         | 0.06         |

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply Air

#### 106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

## Fans



TEMTROL

Quote #: 24-0139-002

Project Name: Schmitt Elementary Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A

| li p ] | =   | ŧΥ | a 11  |
|--------|-----|----|-------|
| 10.64  | mh. | 12 | 5 III |

Fans

| 200.1 Configuration |              |                      |                           |
|---------------------|--------------|----------------------|---------------------------|
| 1. Function         | Supply       | 6. Elevation         | 39 ft                     |
| 2. Fan Quantity     | 1            | 7. Stand Height      | 4 in                      |
| 3. Orientation      | Horizontal   | 8. Blankoff Material | 16Ga Galv                 |
| 4. Drive System     | Direct Drive | 9. Blankoff Finish   | None                      |
| 5. Isol. / Defl.    | None         | 10. Fan Construction | Galvanized                |
| 200.2 Fan Wheel     |              |                      |                           |
| 1. Diameter         | 22           | 4. Mat / Inertia     | AL / 9 lb-ft <sup>2</sup> |
| 2. Width            | 100.0 %      | 5. Max Wheel RPM     | 3,166 rpm                 |
| 3. Class            | III          |                      |                           |

| 200.3 Motor       |               |          |                |
|-------------------|---------------|----------|----------------|
| 1. Manufacturer   | Toshiba       | 5. Model | 4OA003L1ZVS210 |
| 2. HP             | 3.5           | 6. V/P/H | 460/3/60       |
| 3. Poles / RPM    | 4-Pole / 1750 | 7. FLA   | 4.5 Amps       |
| 4. Frame / Casing | 182T / TEAO   |          |                |

| 200.4 Variable Freq | uency Drive |                            |     |
|---------------------|-------------|----------------------------|-----|
| 1. Quantity         | 0           | 3. Maximum Hertz           | .00 |
| 2. Voltage          | 460/3/60    | 4. Redundant VFD           | No  |
|                     |             | 5. Input Line Reactor (3%) | No  |
|                     |             | 6. Individual Disconnects  | No  |

### 200.5 Notes / Features

1. Include: Aluminum Wheel

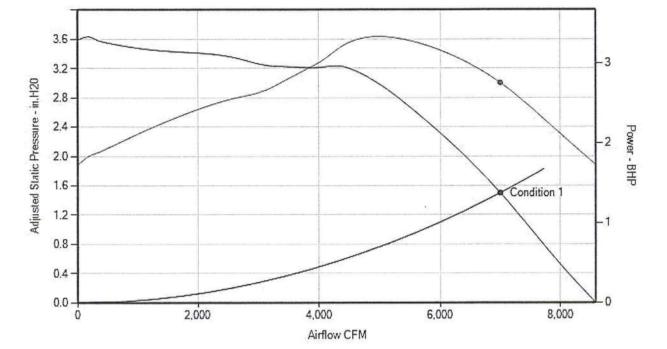
2. Back Draft Dampers

Design Assistant

10.0.0 / 2.0.3.1

Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



| Power Rating BHP does no | t include transmission losses. |
|--------------------------|--------------------------------|
|--------------------------|--------------------------------|

| 200.6 Operating Conditions | S     |       |       |          |            |      |       |            | 40.8% | 31 1 2 3 | CARLES NO. 1 | 1983 |
|----------------------------|-------|-------|-------|----------|------------|------|-------|------------|-------|----------|--------------|------|
| Opporting Condition        | Usage | CFM   | SP    | (in.H20) | Wheel RPM  | Fan  | BHP   | Static Eff | Matte | Hz       | FEG          | FEI  |
| Operating Condition        | (%)   | CFIVI | Input | Adjusted | Wheel RPIN | Each | Total | Static Ell | vvaus | пz       | % O.P.       | FEI  |
| Condition 1                | 100   | 7,000 | 1.50  | 1.50     | 1,485      | 2.76 | -     | 60.0 %     | 2,298 | 50.91    | FEG80 5%     | 1.40 |

## Preliminary

Quote #: 24-0139-002

Fans

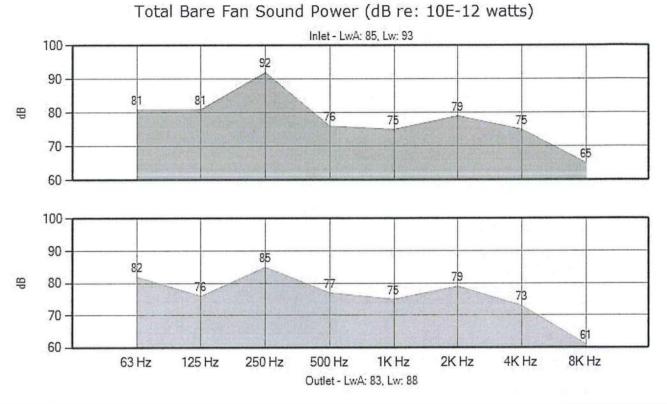
**PF09** 



Project Name: Schmitt Elementary

Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



| 200.7 Bare Fan Sound Power ( | dB re: 10E-1 | 12 watts | )   | <b>Market</b> | -   | 1000 | 1999 (A. 1997) |    |    |     |    |
|------------------------------|--------------|----------|-----|---------------|-----|------|----------------|----|----|-----|----|
| Operating Condition          |              | 63       | 125 | 250           | 500 | 1k   | 2k             | 4k | 8k | LwA | Lw |
| Condition 1                  | Inlet        | 81       | 81  | 92            | 76  | 75   | 79             | 75 | 65 | 85  | 93 |
|                              | Outlet       | 82       | 76  | 85            | 77  | 75   | 79             | 73 | 61 | 83  | 88 |

PF09



Fans

### Project Name: Schmitt Elementary

201 Plenum Fan 2 (Supply) : FAN2 : Box B

Unit Tag: AHU - 2

PF09

| 201.1 Configuration    |               |  |                                       |
|------------------------|---------------|--|---------------------------------------|
| 1. Function            | Supply        | 6. Elevation   | 39 ft                                 |
| 2. Fan Quantity        | 1             | 7. Stand Height  | 4 in                                  |
| 3. Orientation         | Horizontal    | 8. Blankoff Material   | 16Ga Galv                             |
| 4. Drive System        | Direct Drive  | 9. Blankoff Finish   | None                                  |
| 5. Isol. / Defl.       | None          | 10. Fan Construction   | Galvanized                            |
| 201.2 Fan Wheel        |               |  |                                       |
| 1. Diameter            | 22            | 4. Mat / Inertia   | AL / 13 lb-ft <sup>2</sup>            |
| 2. Width               | 100.0 %       | 5. Max Wheel RPM   | 3,166 rpm                             |
| 3. Class               | III           |  |                                       |
| 201.3 Motor            |               | and the second | New York and the second second second |
| 1. Manufacturer        | Toshiba       | 5. Model   | 40A005L1ZVS210                        |
| 2. HP                  | 6.5           | 6. V/P/H   | 460/3/60                              |
| 3. Poles / RPM         | 4-Pole / 1740 | 7. FLA   | 8.1 Amps                              |
| 4. Frame / Casing      | 184T / TEAO   |  |                                       |
| 201.4 Variable Frequer | icy Drive     | to the solution of the solution of the   |                                       |
| 1. Quantity            | 0             | 3. Maximum Hertz   | .00                                   |
| 2. Voltage             | 460/3/60      | 4. Redundant VFD   | No                                    |
|                        |               | 5. Input Line Reactor (3%)   | No                                    |
|                        |               | 6. Individual Disconnects  | No                                    |

| 201.5 Notes / Features     |  |
|----------------------------|--|
| 1. Include: Aluminum Wheel |  |
| 2. Back Draft Dampers      |  |

Design Assistant



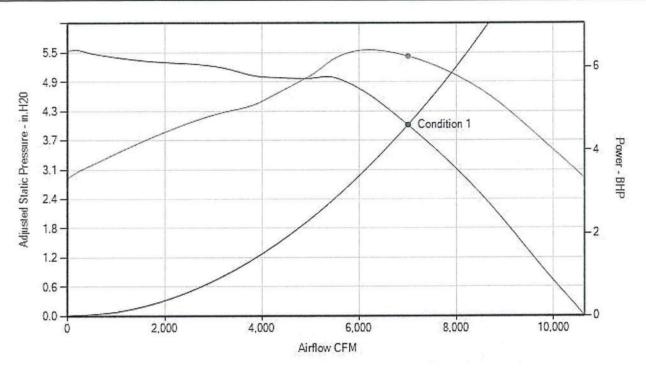
Fans

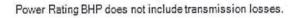
PF09

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

201 Plenum Fan 2 (Supply) : FAN2 : Box B (Continued)





| 201.6 Operating Condition | S     |       |       | ada san it |           |      | 1,007-23 | 812.04     |        | LEN YOUNG |          | T.S.P |
|---------------------------|-------|-------|-------|------------|-----------|------|----------|------------|--------|-----------|----------|-------|
| Operating Condition       | Usage | CFM   | SP    | (in.H20)   | Wheel RPM | Fan  | BHP      | Static Eff | Watte  | Hz        | FEG      | FEI   |
| Operating Condition       | (%)   | CFIM  | Input |            | wheel RPM | Each | Total    | Static Ell | vvalis | ΠZ        | % O.P.   | TEI I |
| Condition 1               | 100   | 7,000 | 4.00  | 4.00       | 1,846     | 6.27 |          | 70.4 %     | 5,321  | 63.66     | FEG80 0% | 1.35  |

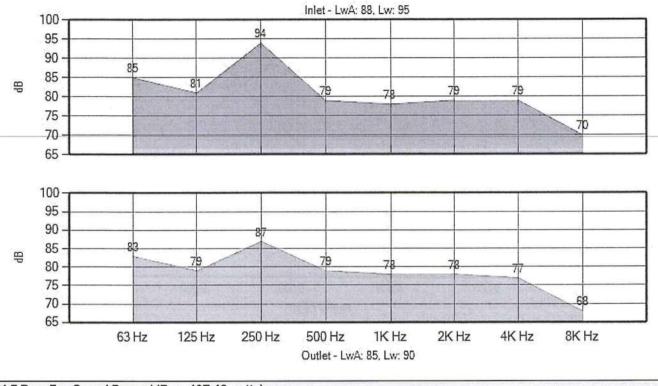
Design Assistant

Total Bare Fan Sound Power (dB re: 10E-12 watts)

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

201 Plenum Fan 2 (Supply) : FAN2 : Box B (Continued)



| 201.7 Bare Fan Sound Power ( | dB re: 10E-1 | 2 watts | )   |     | <b>Ginisa</b> di |    |    |    |    | S. Law St. | 121-63 |
|------------------------------|--------------|---------|-----|-----|------------------|----|----|----|----|------------|--------|
| Operating Condition          |              | 63      | 125 | 250 | 500              | 1k | 2k | 4k | 8k | LwA        | Lw     |
|                              | Inlet        | 85      | 81  | 94  | 79               | 78 | 79 | 79 | 70 | 88         | 95     |
| Condition 1                  | Outlet       | 83      | 79  | 87  | 79               | 78 | 78 | 77 | 68 | 85         | 90     |

## AIR SOLUTIONS TEMTROL

PF09

Quote #: 24-0139-002

Fans



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

## Coils



Coils

Project Name: Schmitt Elementary

### Unit Tag: AHU - 2

300 Chilled Water Coil 1 : CW1 : Box C

5WC - 6 - 45 x 46 x 5 - 10 AL

| 300.1 Coil Layout         |           |                      |             |  |
|---------------------------|-----------|----------------------|-------------|--|
| 1. Coil Hand              | Left      | 6. Rack Style        | None        |  |
| 2. Configuration          | Single    | 7. Rack Finish       | None        |  |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga 304 SS |  |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None        |  |
| 5. Connection Type        | MPT       |                      |             |  |

| 300.2 Construction | on                    |                  |                     | International Sector |                         |
|--------------------|-----------------------|------------------|---------------------|----------------------|-------------------------|
| 1. Quantity        | 1                     | 8. Stand Height  | 1 in                | 14. Casing           | 16Ga 304 SS             |
| 2. Serpentine      | 0.8333333             | Tube Detai       | I - Primary Surface | 15. Coating          | None                    |
| 3. Fin Height      | 45.000 in             | 9. Material      | Copper              | Fin Detail -         | Secondary Surface       |
| 4. Fin Length      | 46.000 in             | 10.O.D. x Wall   | 0.625 x 0.025 in    | 16. Material         | Aluminum                |
| 5. Rows            | 5                     | 11. Spacing      | 1.500 x 1.299 in    | 17. Thickness        | 0.010 in                |
| 6. Fins per Inch   | 10                    | 12. Internal     | Smooth              | 19 Configuration     | Corrugated, Waffle with |
| 7. Face Area       | 14.38 ft <sup>2</sup> | 13. Return Bends | 0.035 in            | 18. Configuration    | Straight Edge           |

## Single Bank, Left Hand, 1 per unit

5WC - 6 - 45 x 46 x 5 - 10 AL

| Supply / Return Connections |      |           |           | Vent and Drain |                   |                   |
|-----------------------------|------|-----------|-----------|----------------|-------------------|-------------------|
| Quantity                    | Туре | Pipe Size | Material  | Туре           | Vent Location     | Drain Location    |
| 2                           | MPT  | 2.0 in    | Red Brass | 0.125 in FPT   | Return Connection | Supply Connection |

| 300.3 Condition 1         |            |                          |               |
|---------------------------|------------|--------------------------|---------------|
|                           | Entering   | Leaving                  |               |
| 1. Actual Airflow         | 7,000 ACFM | 10. Total Capacity       | 271.0 MBH     |
| 2. Standard Airflow       | 6,861 SCFM | 11. Sensible Capacity    | 194.2 MBH     |
| 3. Elevation              | 39 ft      | 12. Actual Face Velocity | 486.96 ft/min |
| 4. Entering Air DB        | 80.0 °F    | 13. Leaving Air DB       | 54.3 °F       |
| 5. Entering Air WB        | 67.0 °F    | 14. Leaving Air WB       | 54.0 °F       |
| 6. Fluid Type             | Water      | 15.APD                   | 0.68 in.H20   |
| 7. Entering Fluid Temp    | 44.0 °F    | 16.Leaving Fluid Temp    | 54.0 °F       |
| 8. Fluid Flow Rate        | 54.0 GPM   | 17. Fluid Velocity       | 2.48 ft/s     |
| 9. Fluid Fouling Internal | 0.0000     | 18. Fluid Pressure Drop  | 4.62 ft.H20   |

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

### 300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 461 lb.

6. Total fluid volume is 10.7 Gal.



Coils

### Project Name: Schmitt Elementary

Unit Tag: AHU - 2

### 301 Hot Water Coil 3 : HW3 : Box C

5WC - 4 - 46.5 x 46 x 1 - 6 AL

| 301.1 Coil Layout         |           |                      |   |  |
|---------------------------|-----------|----------------------|---|--|
| 1. Coil Hand              | Left      | 6. Rack Style        | None                                    |  |
| 2. Configuration          | Single    | 7. Rack Finish       | None                                    |  |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga Galv                               |  |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None                                    |  |
| 5. Connection Type        | MPT       |                      | - 1 i i i i i i i i i i i i i i i i i i |  |

| 301.2 Construction | on                    |                  |                               |                   |                         |
|--------------------|-----------------------|------------------|-------------------------------|-------------------|-------------------------|
| 1. Quantity        | 1                     | Tube Detai       | Tube Detail - Primary Surface |                   | 16Ga Galv               |
| 2. Serpentine      | 0.25                  | 8. Material      | Copper                        | 14. Coating       | None                    |
| 3. Fin Height      | 46.500 in             | 9. O.D. x Wall   | 0.625 x 0.025 in              | Fin Detail -      | Secondary Surface       |
| 4. Fin Length      | 46.000 in             | 10. Spacing      | 1.500 x 1.299 in              | 15. Material      | Aluminum                |
| 5. Rows            | 1                     | 11. Internal     | Smooth                        | 16. Thickness     | 0.010 in                |
| 6. Fins per Inch   | 6                     | 12. Return Bends | 0.035 in                      | 17. Configuration | Corrugated, Waffle with |
| 7. Face Area       | 14.85 ft <sup>2</sup> |                  |                               | TT. Comgutation   | Straight Edge           |

## Single Bank, Left Hand, 1 per unit

5WC - 4 - 46.5 x 46 x 1 - 6 AL

| Supply / Return Connections |      |           | nnections Vent and Drain |              |                   | A show a set of the local set of the loc |
|-----------------------------|------|-----------|--------------------------|--------------|-------------------|--|
| Quantity                    | Туре | Pipe Size | Material                 | Туре         | Vent Location     | Drain Location   |
| 2                           | MPT  | 1.25 in   | Red Brass                | 0.125 in FPT | Return Connection | Supply Connection  |

|                                    | Entoring   | and the second | Leaving       |
|------------------------------------|------------|---|---------------|
|                                    | Entering   |   | Leaving       |
| <ol> <li>Actual Airflow</li> </ol> | 7,000 ACFM | -18   |               |
| 2. Standard Airflow                | 7,410 SCFM | 9. Sensible Capacity  | 173.7 MBH     |
| 3. Elevation                       | 39 ft      | 10. Actual Face Velocity  | 471.25 ft/min |
| 4. Entering Air DB                 | 40.0 °F    | 11. Leaving Air DB  | 61.6 °F       |
| 5. Fluid Type                      | Water      | 12.APD  | 0.06 in.H20   |
| 6. Entering Fluid Temp             | 180.0 °F   | 13. Leaving Fluid Temp  | 140.0 °F      |
| 7. Fluid Flow Rate                 | 8.9 GPM    | 14. Fluid Velocity  | 1.45 ft/s     |
| 8. Fluid Fouling Internal          | 0.0000     | 15. Fluid Pressure Drop   | 0.99 ft.H20   |

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

### 301.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 129 lb.

6. Total fluid volume is 2.5 Gal.



TEMTROL

Quote #: 24-0139-002

oils

Project Name: Schmitt Elementary Unit Tag: AHU - 2

302 Hot Water Coil 2 : HW2 : Box C

5WC - 4 - 46.5 x 46 x 2 - 8 AL

| 1. Coil Hand              | Left      | 6. Rack Style        | None      |  |
|---------------------------|-----------|----------------------|-----------|--|
| 2. Configuration          | Single    | 7. Rack Finish       | None      |  |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga Galv |  |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None      |  |
| 5. Connection Type        | MPT       |                      |           |  |

| 302.2 Construction | on                    | and the second |                               |                                | PERSONAL PROPERTY AND   |
|--------------------|-----------------------|--|-------------------------------|--------------------------------|-------------------------|
| 1. Quantity        | 1                     | Tube Detai   | Tube Detail - Primary Surface |                                | 16Ga Galv               |
| 2. Serpentine      | 0.5                   | 8. Material  | Copper                        | 14. Coating                    | None                    |
| 3. Fin Height      | 46.500 in             | 9. O.D. x Wall   | 0.625 x 0.025 in              | Fin Detail - Secondary Surface |                         |
| 4. Fin Length      | 46.000 in             | 10. Spacing  | 1.500 x 1.299 in              | 15. Material                   | Aluminum                |
| 5. Rows            | 2                     | 11. Internal   | Smooth                        | 16. Thickness                  | 0.010 in                |
| 6. Fins per Inch   | 8                     | 12. Return Bends   | 0.035 in                      | 17 Configuration               | Corrugated, Waffle with |
| 7. Face Area       | 14.85 ft <sup>2</sup> |  |                               | 17. Configuration              | Straight Edge           |

## Single Bank, Left Hand, 1 per unit

5WC - 4 - 46.5 x 46 x 2 - 8 AL

| Supply / Return Connections |      |           | Vent and Drain |              |                   |                   |
|-----------------------------|------|-----------|----------------|--------------|-------------------|-------------------|
| Quantity                    | Туре | Pipe Size | Material       | Туре         | Vent Location     | Drain Location    |
| 2                           | MPT  | 1.25 in   | Red Brass      | 0.125 in FPT | Return Connection | Supply Connection |

| Entering                  |            |                          | Leaving       |
|---------------------------|------------|--------------------------|---------------|
| 1. Actual Airflow         | 7,000 ACFM |                          |               |
| 2. Standard Airflow       | 7,264 SCFM | 9. Sensible Capacity     | 376.8 MBH     |
| 3. Elevation              | 39 ft      | 10. Actual Face Velocity | 471.25 ft/min |
| 4. Entering Air DB        | 50.0 °F    | 11. Leaving Air DB       | 97.9 °F       |
| 5. Fluid Type             | Water      | 12.APD                   | 0.16 in.H20   |
| 6. Entering Fluid Temp    | 180.0 °F   | 13. Leaving Fluid Temp   | 140.0 °F      |
| 7. Fluid Flow Rate        | 19.2 GPM   | 14. Fluid Velocity       | 1.47 ft/s     |
| 8. Fluid Fouling Internal | 0.0000     | 15. Fluid Pressure Drop  | 2.77 ft.H20   |

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

### 302.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 204 lb.

6. Total fluid volume is 4.4 Gal.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

# Components



Components Quote #: 24-0139-002

### Project Name: Schmitt Elementary

### Unit Tag: AHU - 2

500 Filter 2 : FILT2 : Box B

| 1. Loading                     | Upstream Face Load          | 7. Bank Size                 | 48.063 in W x 48.000 in H   |
|--------------------------------|-----------------------------|------------------------------|-----------------------------|
| 2. Frame Material              | Galvanized                  | 8. Qty / set & Frame Size 1  | (4) 24 in x 24 in           |
| 3. Frame Finish                | None                        | 9. Qty / set & Frame Size 2  |                             |
| <ol><li>Filter Clips</li></ol> | (16) C-79-5                 | 10. Qty / set & Frame Size 3 |                             |
| 5. Blankoff / Rack Material    | 16Ga Galv                   | 11.Qty / set & Frame Size 4  |                             |
| 6. Blankoff / Rack Finish      | None                        |                              |                             |
| 500.2 Pre Filter               | STORE STORE                 |                              |                             |
| 1. Filter Depth                | 2.000 in                    | 4. Number of Sets            | 3                           |
| 2. Efficiency                  | MERV 8                      | 5. Max Face Velocity         | 437.50 ft/min at 7,000 ACFM |
| 3. Manufacturer                | American Air Filter         | 6. Model                     | PerfectPleat SC             |
| 500.3 Pressure Gage Spec       | ifications - Gage 2         |                              |                             |
| 1. Manufacturer                | Dwyer                       | 3. Options                   | Hinged Cover                |
| 2. Model / Range               | Magnehelic 2002 (0-2" w.c.) | 4. Quantity                  | 1                           |
| 500.4 Final Filter             |                             | NAME OF TAXABLE OF           |                             |
| 1. Filter Depth                | 4.000 in                    | 4. Number of Sets            | 3                           |
| 2. Efficiency                  | MERV 13                     | 5. Max Face Velocity         | 437.50 ft/min at 7,000 ACFM |
|                                | American Air Filter         | 6. Model                     | VariCel II                  |

1. All sets of Filters and clips to ship loose inside unit, installed by others.



## Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

Quote #: 24-0139-002

#### 600 OSA Opening : OSA : Box B : Roof 600.1 Opening Construction 1. Description Outside Air 4. Shape Rectangle 2. Max CFM 7,000 ACFM 5. Max APD 0.03 in.H20 3. Size 49 W x 16.5 H in 600.2 Damper Specifications No 1. Manufacturer Ruskin 6. Jackshaft 1,246.75 ft/min Ruskin CD 50 (Aluminum) 7. Max Face Velocity 2. Model

| 3. Size              | 49.000 in (Blade Direction) x<br>16.500 in | 8. Torque<br>9. End Switches | 39 lb-in<br>No |  |
|----------------------|--|------------------------------|----------------|--|
| 4. Blade Config      | Parallel                                   |                              |                |  |
| 5. Blade Orientation | Horizontal                                 |                              |                |  |
|                      |  |                              |                |  |

Notes:

1. Ordered with 1.500 in. Front Flange

| 600.3 Damper Actuator |                  |                            | 12.24 |
|-----------------------|------------------|----------------------------|-------|
| 1. Manufacturer       | 6. Qty           | 1                          |       |
| 2. Model              | 7. Floor Mounted | nice and the second second |       |
| 3. Direction          | 8. Furnished By  | Others                     |       |
| 4. Location           | 9. Mounted By    | Others                     |       |
| 5. Type               | 10. Wiring By    | Others                     |       |

#### 600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

### 601 SA Opening : SA : Box C : Roof

| 601.1 Opening Construction |                |                 |                 | The second |
|----------------------------|----------------|-----------------|-----------------|------------|
| 1. Description             | Supply Air     | 4. Shape        | Rectangle       |            |
| 2. Max CFM                 | 7,000 ACFM     | 5. Max APD      | 0.20 in.H20     |            |
| 3. Size                    | 55 W x 14 H in | 6. Max Velocity | 1,310.00 ft/min |            |

### 602 RA Opening : RA : Box A : Roof

| 602.1 Opening Construction |                |                 |                 |  |
|----------------------------|----------------|-----------------|-----------------|--|
| 1. Description             | Return Air     | 4. Shape        | Rectangle       |  |
| 2. Max CFM                 | 7,000 ACFM     | 5. Max APD      | 0.00 in.H20     |  |
| 3. Size                    | 55 W x 14 H in | 6. Max Velocity | 1,310.00 ft/min |  |

## 603 EXH Opening : EXH : Box B : Roof

| 603.1 Opening Construction |                  |            |             | C. Stewart |
|----------------------------|------------------|------------|-------------|------------|
| 1. Description             | Exhaust Air      | 4. Shape   | Rectangle   |            |
| 2. Max CFM                 | 7,000 ACFM       | 5. Max APD | 0.21 in.H20 |            |
| 3. Size                    | 49 W x 16.5 H in |            |             |            |

| kin                       | 6. Jackshaft                               | No  |
|---------------------------|--|---|
| kin CD 50 (Aluminum)      | 7. Max Face Velocity                       | 1,246.75 ft/min   |
| 00 in (Blade Direction) x | 8. Torque                                  | 28 lb-in  |
| 00 in                     | 9. End Switches                            | No  |
| osed                      |  |   |
| zontal                    |  |   |
|                           |  |   |
| (                         | 00 in (Blade Direction) x<br>00 in<br>osed | 00 in (Blade Direction) x     8. Torque       00 in     9. End Switches |

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## Components Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

603 EXH Opening : EXH : Box B : Roof (Continued)

| 603.3 Damper Actuator |                  |        |
|-----------------------|------------------|--------|
| 1. Manufacturer       | 6. Qty           | 1      |
| 2. Model              | 7. Floor Mounted | Tel 1  |
| 3. Direction          | 8. Furnished By  | Others |
| 4. Location           | 9. Mounted By    | Others |
| 5. Type               | 10. Wiring By    | Others |

### 603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

### 604 RA Opening : RA : Box B : Internal Wall

| 604.1 Opening Construction |                |            |             |  |
|----------------------------|----------------|------------|-------------|--|
| 1. Description             | Return Air     | 4. Shape   | Rectangle   |  |
| 2. Max CFM                 | 7,000 ACFM     | 5. Max APD | 0.03 in.H20 |  |
| 3. Size                    | 47 W x 19 H in |            |             |  |

| 1. Manufacturer      | Ruskin                        | 6. Jackshaft         | No              |
|----------------------|-------------------------------|----------------------|-----------------|
| 2. Model             | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 1,128.78 ft/min |
| 3. Size              | 47.000 in (Blade Direction) x | 8. Torque            | 43 lb-in        |
|                      | 19.000 in                     | 9. End Switches      | No              |
| 4. Blade Config      | Parallel                      |                      |                 |
| 5. Blade Orientation | Horizontal                    |                      |                 |

| 604.3 Damper Actuator |                  |        | MALLAR P. M. |
|-----------------------|------------------|--------|--------------|
| 1. Manufacturer       | 6. Qty           | 1      |              |
| 2. Model              | 7. Floor Mounted |        |              |
| 3. Direction          | 8. Furnished By  | Others |              |
| 4. Location           | 9. Mounted By    | Others |              |
| 5. Type               | 10. Wiring By    | Others |              |

### 604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

Design Assistant

10.0.0 / 2.0.3.1



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

## Electrical



Electrical

Quote #: 24-0139-002

Project Name: Schmitt Elementary

### Unit Tag: AHU - 2

| 700 ElecPanel                                      | -<br>5 : FA | N1 : Bo   | ox A : Far Sid                | 6   |   |                                | 1-6-37   |             |                       | 12422345          |
|--|-------------|---|-------------------------------|---|---|--------------------------------|----------|-------------|-----------------------|-------------------|
| 700.1 Electrical Service                           |             |   | A ST IS GI CIU                |   | 7.50.577                                |                                | CITY NO. |             |                       |                   |
| 1. Volt/Phase/Hertz                                |             | 160/3/60  |                               | 12  | Dros                                    | ides power to                  |          | Supply Fan  | Constantine and a     | Tale Status State |
| 2. MCA   |             | 5.6   |                               | ].  | . 10                                    | vides power to                 |          | Зирріў Ган  | (                     |                   |
| 1. For electrical loads s                          |             |   | ingo                          |   |   |                                |          |             |                       |                   |
| 1. FOI electrical loads s                          | ee elect    | incal uraw  | ings                          |   |   |                                |          |             |                       |                   |
| 700.2 Construction                                 |             |   |                               |   | Pape                                    | here and                       | No.      |             |                       |                   |
| 1. Enclosure Type                                  | J           | Junction B  | ох                            | 4.  | 4. Mounting                             |                                |          | Surface mo  | unt on un             | it                |
| 2. Type  | N           | NEMA 4 Indoor / Outdoor   |                               |   | 5. Finish                               |                                |          | Polyester R | esin (Sar             | ndstone)          |
| 3. Size  | 5           | See electri   | ical drawings                 |   |   |                                |          |             |                       |                   |
| 700.3 Options                                      | CISAL DEC   |   | and the second                |   | 13030                                   |                                |          | 0.000000000 |                       | TRACING AND IN    |
| 1. Cooling Fan                                     |             | No  | 9/2-19 19 19 19 5 5 5         | 15  | Flor                                    | or Stand                       |          | No          |                       |                   |
| 2. Filter Kit                                      |             | No  |                               |   |   |                                | or       | No          |                       |                   |
|  |             | 10  |                               |   | 6. Control Transformer<br>7. Window Kit |                                |          | No          |                       |                   |
| <ol><li>Keypad or Touch so<br/>on Door</li></ol>   | reen N      | No  |                               |   |   |                                |          | NO          |                       |                   |
| 4. Power Transformer                               | 1           | No  |                               |   |   |                                |          |             |                       |                   |
| 701 ElecPanel                                      | 7 : FA      | N2 : Bo   | ox B : Far Sid                | e   | 100                                     |                                |          |             | Seven de la           |                   |
|  |             |   |                               |   |   |                                |          |             |                       |                   |
| 701.1 Electrical Servic                            | ce Inform   | mation  |                               |   |   |                                | 24.24    |             | No CEN                |                   |
| 1. Volt/Phase/Hertz                                | 4           | 460/3/60  |                               | 3.  | 3. Provides power to Supply Fan         |                                |          |             |                       |                   |
| 2. MCA   | 1           | 10.1  |                               |   |   |                                |          |             |                       |                   |
| 1. For electrical loads s                          | ee elect    | trical draw   | ings                          |   |   |                                |          |             |                       |                   |
| 701.2 Construction                                 | -           | 0.000   | Sector Sector                 | 10-10-10-10-1                                   | 1828                                    | A STATE OF A STATE OF A STATE  | 6.000    |             |                       |                   |
| 1. Enclosure Type                                  |             | Junction B  | ox                            | 4   | . Mou                                   | Inting                         |          | Surface mo  | unt on un             | it                |
| 2. Type  |             |   | ndoor / Outdoor               |   | 5. Finish Polyester Resin (Sandstone)   |                                |          |             |                       | ndstone)          |
| 3. Size  |             |   | ical drawings                 |   |   |                                |          |             | 1                     |                   |
|  |             |   | iour ururringo                |   |   |                                |          |             |                       |                   |
| 701.3 Options                                      | Service (   | Self-self-  | SP 10 BUS                     |   |   | Senters                        | 3.20     | 1920 - 12   | D IN MARK             | and an interest   |
| 1. Cooling Fan                                     | 1           | No  |                               | 5.  | 5. Floor Stand No                       |                                |          |             |                       |                   |
| <ol><li>Filter Kit</li></ol>                       | 1           | No  |                               | 6   | 6. Control Transformer No               |                                |          |             |                       |                   |
| <ol> <li>Keypad or Touch so<br/>on Door</li> </ol> | reen        | No  |                               | 7   | . Win                                   | dow Kit                        |          | No          |                       |                   |
| 4. Power Transformer                               | 1           | No  |                               |   |   |                                |          |             |                       |                   |
| 702 Lighting Ci                                    | trauit      |   |                               |   | 1                                       |                                |          |             | 10000000              |                   |
|  |             | A THE REAL  |                               | A LEAST AND |   | and a literature of the second |          |             | and the second second |                   |
| 702.1 Electrical Servic                            |             | and the second se |                               |   |   | Ser Sellonia                   |          |             | A STATE OF            | Sec. 349          |
| 1. Volt/Phase/Hertz                                |             | 120/1/60  |                               | 3.  | . Pro                                   | vides power to                 | ()       | ElecSwitch  | 1, Lightin            | g                 |
| 2. MCA   |             | 0.0   |                               |   |   |                                |          |             |                       |                   |
| 1. For electrical loads s                          | ee elect    | trical draw   | ings                          |   |   |                                |          |             |                       |                   |
| 702.2 Switches / Outle                             | ets         | 199   | a start and the second        |   |   | THE REAL                       | 1-1-27   | 125.251     | 02122                 |                   |
|  |             | Section   | Туре                          | Mounted   | I L                                     | llum. Switch                   | Time     | r Cover     | GFCI                  | MOCP              |
|  | A           | PL1   | Light Switch /<br>120V Outlet | External  | 100                                     | No                             | None     |             | Yes                   | 20.0 Amp          |
| Switch / Outlet is conr                            | nected to   | o service.  |                               | I   |   |                                |          |             |                       |                   |
|  |             |   |                               |   |   |                                |          |             |                       |                   |
| 702.3 Lighting Types                               |             | antities  | and the second second         | and the second second                           |   |                                | 10.00    |             | Sec. 1                |                   |
| (7) Vapor Proof 14W LI                             | ED          |   |                               |   |   |                                |          |             |                       |                   |

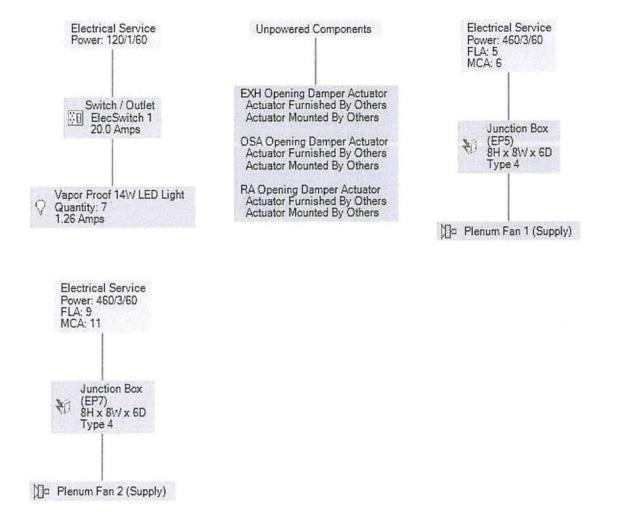
(7) Vapor Proof 14W LED



Project Name: Schmitt Elementary

Unit Tag: AHU - 2

703 **Electrical Layout Diagram** 



Electrical

Quote #: 24-0139-002



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-002        |
| UNIT TAG | AHU - 2            |
| QUANTITY | 1                  |

## Unit Data



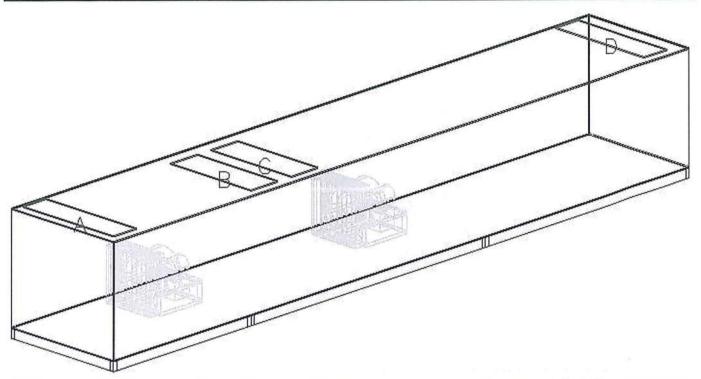
Unit Data

Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

900 Air Handler Sound Power Projection



| Openings - Condition 1 |             |               | Octave Band Freq. Sound Power (db re: 10E-12 watts) |    |     |     |     |    |    |    | 51.5 |     |    |
|------------------------|-------------|---------------|---|----|-----|-----|-----|----|----|----|------|-----|----|
| Tag                    | Title       | Cabinet Liner | Area  | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k   | LwA | Lw |
| A                      | RA Opening  | Solid         | 5.3 ft <sup>2</sup>                                 | 81 | 81  | 92  | 76  | 76 | 79 | 75 | 65   | 87  | 93 |
| В                      | EXH Opening | Solid         | 5.6 ft <sup>2</sup>                                 | 82 | 78  | 91  | 78  | 76 | 79 | 76 | 66   | 86  | 92 |
| C                      | OSA Opening | Solid         | 5.6 ft <sup>2</sup>                                 | 82 | 78  | 91  | 77  | 75 | 77 | 76 | 67   | 86  | 92 |
| D                      | SA Opening  | Solid         | 5.3 ft <sup>2</sup>                                 | 81 | 78  | 87  | 79  | 78 | 79 | 77 | 68   | 85  | 90 |
| Casing Radiated        |             |               | 79  | 75 | 79  | 61  | 60  | 62 | 59 | 49 | 73   | 83  |    |
| Floor Radiated         |             |               | 74  | 70 | 72  | 45  | 42  | 38 | 35 | 35 | 65   | 77  |    |

900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



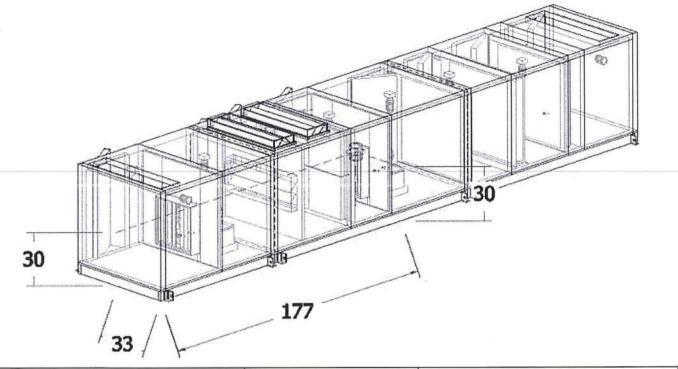
Unit Data

Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity



|        | Size (Inches) |       | Operating Weight (Deundo) | Cent   | er of Gravity (Inc | ches) |
|--------|---------------|-------|---------------------------|--------|--------------------|-------|
| Х      | Y             | Z     | Operating Weight (Pounds) | Х      | Y                  | Z     |
| 352.00 | 62.00         | 60.50 | 7,423                     | 179.00 | 33.00              | 30.00 |

### 901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.

Design Assistant



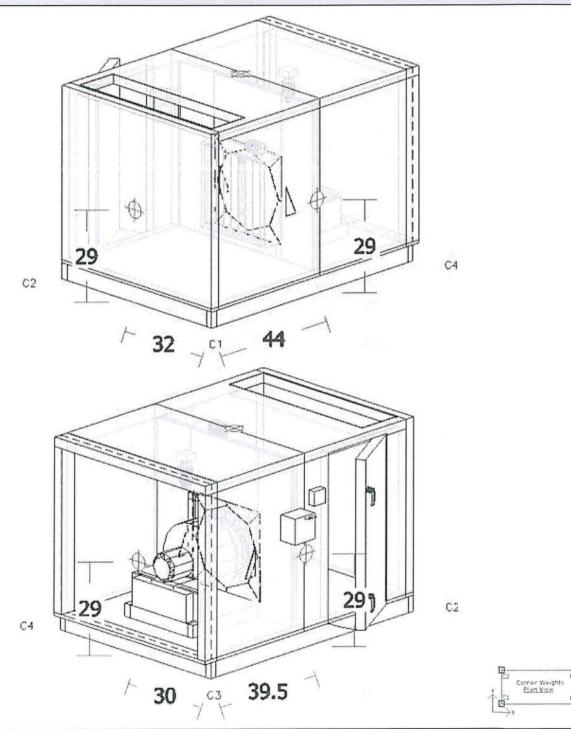
Unit Data

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

### 901.2 Box A



| -     | Size (Inches) |       | China Maight (Doundo)                        | 199 - 19 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 | Corner Weig | hts (Pounds) |     |
|-------|---------------|-------|--|--|-------------|--------------|-----|
| Х     | Y             | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1   | C2          | C3           | C4  |
| 83.50 | 62.00         | 60.50 | 1,746  | 400  | 426         | 475          | 445 |

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

-

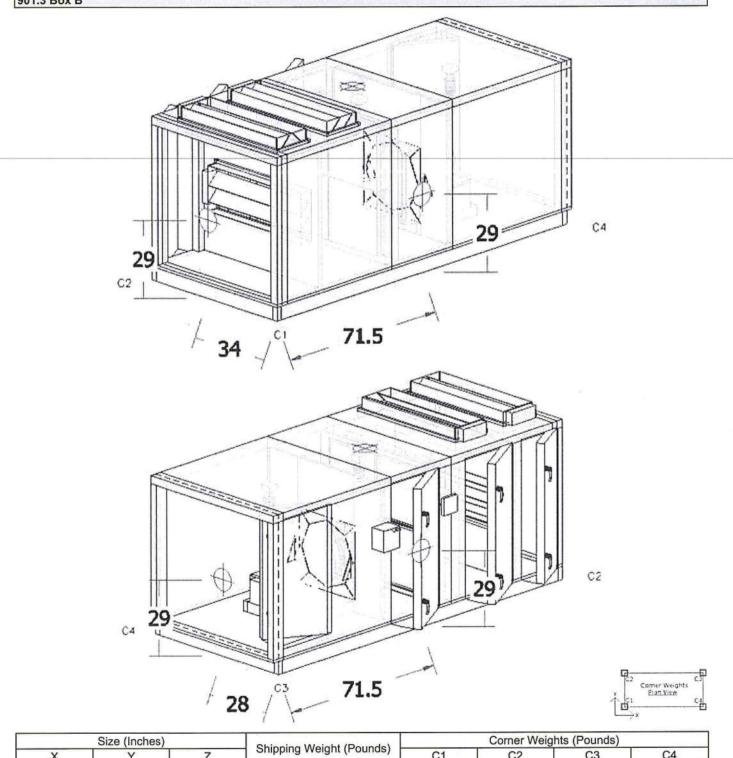


Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

### 901.3 Box B



|        | Size (Inches) |       | Chinging Weight (Dounds) | Corner Weights (Pounds) |     |         |    |
|--------|---------------|-------|--------------------------|-------------------------|-----|---------|----|
| Х      | Y             | Z     | Shipping Weight (Pounds) | C1                      | C2  | C3      | C4 |
| 143.00 | 62.00         | 60.50 | 2,887                    | 652                     | 792 | 792 792 |    |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0 / 2.0.3.1

Unit Data

Quote #: 24-0139-002



Unit Data

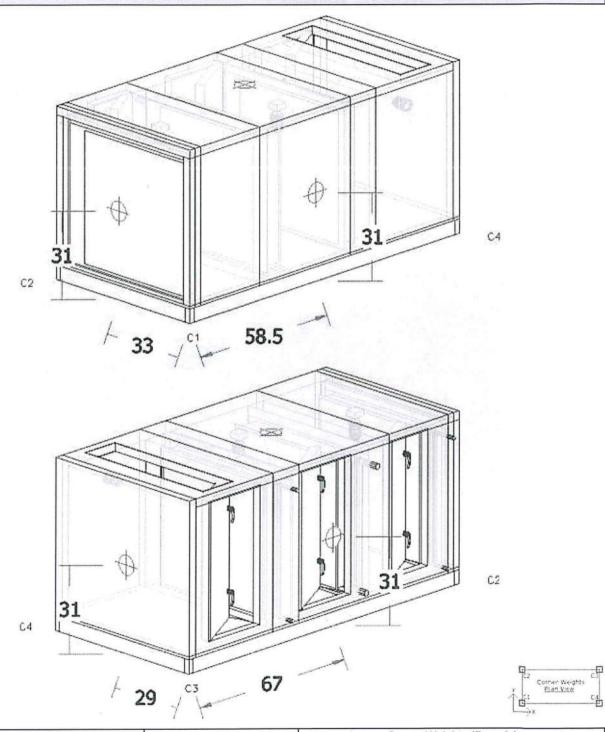
Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

### 901.4 Box C



|        | Size (Inches) |       | Chinging Waight (Dounds)                     | Corner Weights (Pounds) |     |     |     |  |
|--------|---------------|-------|--|-------------------------|-----|-----|-----|--|
| Х      | Y             | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1                      | C2  | C3  | C4  |  |
| 125.50 | 62.00         | 60.50 | 2,727  | 671                     | 763 | 688 | 605 |  |

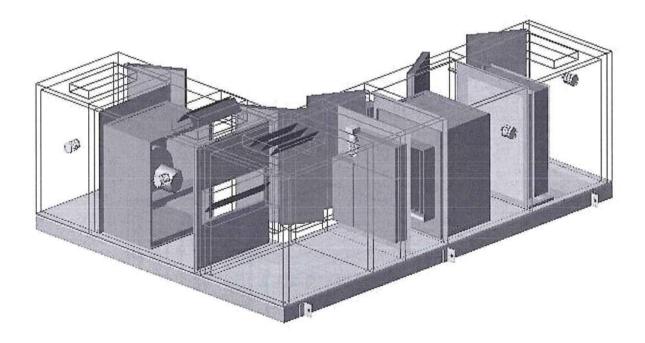
Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

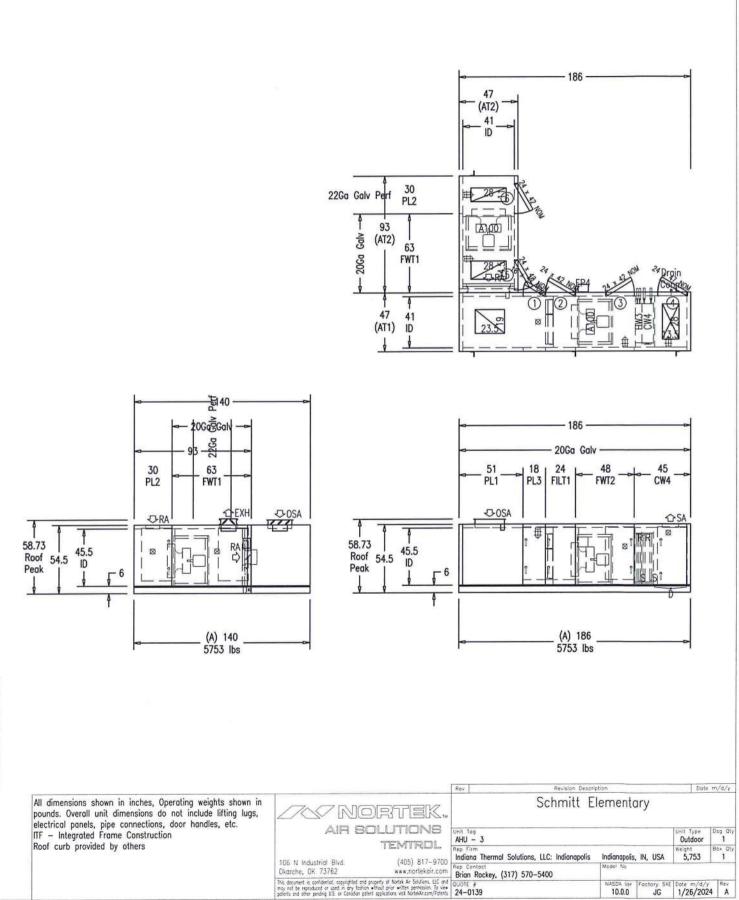


TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

| Revision | History |                      |
|----------|---------|----------------------|
| Date     | Rev     | Revision Description |







TEMTROL

PROJECT Schmitt Elementary QUOTE # 24-0139-005 UNIT TAG AHU - 3 QUANTITY 1

# Unit Design Options

Design Assistant 10.0.0 / 2.0.3.1



## **Unit Design Options**

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

100 Unit Design Summary

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



## Unit Design Options

Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

Quote #: 24-0139-005

| 101          | U  | nit Deta                | ils  |                                |   |           |                          |                                  |                       |  |   | N Road and           |  |
|--------------|--|-------------------------|--|--------------------------------|---|-----------|--------------------------|----------------------------------|-----------------------|--|---|----------------------|--|
| 101.         | 1 We   | ights / Job             | site Elev  | ation                          |   |           | 52.003                   |                                  |                       |  |   | A MARGINE            |  |
|              |  | ng Weight               |  | 5,682 lb                       |   |           |                          | 3. Elevatio                      | n                     | 39 ft                                  |   |                      |  |
|              |  | ting Weight             | t  | 5,753 lb                       |   |           |                          |                                  |                       |  |   |                      |  |
|              |  |                         |  |                                |   |           | WIND CHANNEL             |                                  | and the second second | THE REPORT OF THE PARTY OF             | Sec. Sec. 19  | CONTRACTOR IN        |  |
|              |  | paration f              |  | ent                            |   |           | Lauralia and             | d haat shelat                    | Restance and set      | 80-00 0 A 20 A 10 A 20                 | S. Detter   | B. B. A. B. Barris   |  |
|              |  | ing & Wrap<br>down Cons |  |                                | No  | open bed  | truck an                 | d heat shrink                    | wrap.                 |  |   |                      |  |
| 2. r         | NOCK   | down Cons               | struction  |                                | INO   |           |                          |                                  |                       |  |   | 0.00                 |  |
| 102          | 2 U  | nit Con                 | structio   | DN                             | The state   | -         | The second               |                                  |                       |  | Carl and the  |                      |  |
| 102.         | 1 Co   | nstruction              |  |                                |   |           |                          | N HIGH TOTAL                     | STORE STORE           |  |   | an estant            |  |
| 1. 0         | abin   | et Construc             | tion   | ITF - Integ                    | grated Fra  | ame       |                          | 6. Panel F                       | astener               | Drive Screws                           |   |                      |  |
| 2. C         | Desig  | n Environm              | ent  | Outdoor                        | -   |           |                          | 7. Therma                        | Break                 | Modified Ther                          | mal Break   | <                    |  |
| _            |  | Depth                   |  | 3 in                           |   |           | 8. Mountin               | g                                | Curb Mounted          |  |   |                      |  |
| 4. C         | aulk   | Туре                    |  | Standard                       |   |           |                          | 9. Roof Cu                       | irb By                | Others                                 |   |                      |  |
| 5. N         | lodel  | #                       |  |                                |   |           |                          | 10. Curb He                      | eight                 | 8.000 in                               |   |                      |  |
| 400          | 0.0  |                         |  |                                | AN ANTAR  | C.ATACY I | to szere                 | Carl Cold State                  |                       |  | 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.  |                      |  |
|              |  | binet Mate              | rial   | 100- 0-                        | Pre Det   | at an     | the state of the         | 0 Display                        | Einich                | Nonc                                   |   |                      |  |
|              | Exterior Material         16Ga Galv Pre-Paint           Interior Liner type(s)         See Drawing |                         | nt   |                                | 8. Blankoff Finish None     9. Internal Wall Material 16Ga Galv |           |                          |                                  |                       |  |   |                      |  |
|              |  |                         |  | See Drawing<br>Polyester Resin |   |           | Insulation by liner type |                                  |                       | 511 - 11 - 11 - 11 - 11 - 11 - 11 - 11 |   |                      |  |
|              |  | or Paint Typ            |  |                                | Resin   |           |                          | 10. Solid lin                    |                       | HD Fiberglass                          |   | 2.5)                 |  |
|              |  | r Paint Typ             | e  | None                           |   |           | 11.Perforat              | N/S C                            | HD Faced Fib          |  | and the second se |                      |  |
|              |  | Color<br>Salt Spray     | Dating   | 2500 Hou                       | 7.  |           |                          | TI.Penoral                       | ed liner              | IND Faceu Fib                          | ergiass n   | 011 (112.3)          |  |
|              |  | off Material            | Rating   | 16Ga Gal                       |   | contiono  | 1                        |                                  |                       |  |   |                      |  |
|              |  | Water Coil              |  | off materia                    | l is 16Ga   | 304 SS    | -<br>Manutate            | 2 Northeast Control              | a contraction         |  | in the second   |                      |  |
|              |  | Structure M             | A HEARING AND A HEARING AN | Steel Tub                      | e   |           |                          | 7. Base St                       | ructure Height        | See Drawing                            |   |                      |  |
|              |  | Floor Mater             | - para or material and the   | 16Ga Ga                        |   |           |                          | 8. Sub Flo                       |                       |  | 20Ga Galv   |                      |  |
|              |  | Floor Seam              |  | Caulked                        |   |           |                          | 9. Floor Coating None            |                       |  |   |                      |  |
|              | nsula  |                         |  | Polyureth                      | ane Foar  | n         |                          | 10.R Value 20                    |                       |  |   |                      |  |
|              |  | Drain                   |  | None                           |   |           |                          | 11. Lifting Lugs Yes - Removable |                       |  |   |                      |  |
| 6. F         | loor   | Options                 |  | None                           |   |           |                          |                                  |                       | •                                      |   |                      |  |
| 102.         | 4 Bo   | x Dimensio              | ons  |                                | an hear   | Q. 91. 3  |                          |                                  |                       |  |   |                      |  |
|              | I  | Зох                     |  | Х                              |   | Y         |                          | Z SI                             |                       | Shipping Weight Operat                 |   | ing Weight           |  |
|              |  | Α                       | 1  | 86.000 in                      |   | 140.000   | ) in                     | 58.72                            | 9 in                  | 5,682 lb                               | 5,  | 753 lb               |  |
| 1. B<br>2. T | ox di<br>he he   | eight dimen             | lo not incl<br>sions incl  | ude raised                     | roof sear   | ms and s  | loped roc                | of for outdoor                   |                       | etc.<br>are not shown on               | drawing.  |                      |  |
| 103          | 8 D  | oors                    | Ne Si  |                                |   |           | N. A. Balle              |                                  | A CHARACT             |  |   | No.                  |  |
| 103          | 1 AII  | Doors (inc              | ludina ti  | nose asso                      | ciated wi   | ith speci | fic com                  | onents)                          | 1.1.1.1.1.1.1         |  | 1.19.197  | 22.49                |  |
| 10 L         | Box  | Section                 | Type <sup>1</sup>  | Width                          | Height  | Hinge     | Swing                    | Window                           | Interior              | Exterior                               | r   | Options <sup>3</sup> |  |
| 1            | A  | PL3                     | 3" TBF   |                                | 42  | LH        | Out                      | None                             | 20Ga Galv             | 16Ga Galv Pr                           |   | TO                   |  |
| 2            | A  | FILT1                   | 3" TBF   |                                | 42  | LH        | Out                      | None                             | 20Ga Galv             | 16Ga Galv Pr                           |   | TO                   |  |

FWT2

CW4

3" TBF

3" TBF

24

24

42

47

RH

LH

3

4 A

A

Out

Out

None

None

20Ga Galv

20Ga Galv

16Ga Galv Pre-Paint

16Ga Galv Pre-Paint

TO

TO



## **Unit Design Options**

### Project Name: Schmitt Elementary

Unit Tag: AHU - 3

Quote #: 24-0139-005

|   | -   |         |                   |       |        |       |       |        |           |                     | 0                    |
|---|-----|---------|-------------------|-------|--------|-------|-------|--------|-----------|---------------------|----------------------|
| # | Box | Section | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior  | Exterior            | Options <sup>3</sup> |
| 5 | A   | FWT1    | 3" TBF            | 24    | 42     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |
| 6 | A   | PL2     | 3" TBF            | 24    | 42     | RH    | Out   | None   | 20Ga Galv | 16Ga Galv Pre-Paint | TO                   |

### 103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

### 104 Drains

| 104.1 A | I Drains (inc | luding those a | associated wit | h specific | components) | Contraction of the | enter nationalités. | a stringer of the |
|---------|---------------|----------------|----------------|------------|-------------|--------------------|---------------------|-------------------|
| Box     | Section       | Туре           | Conn (in)      | Hand       | Above Floor | Pipe Ext.          | Grating Material    | Pan Material      |
| A       | CW4           | Drain Pan      | 1.25           | Left       | 0.00 in     | 0.00 in            | None                | 16Ga 304 SS       |

### 104.2 Notes / Features

1. Drain Constructions included: Triple Pitched

### 105 Internal Walls

| 105.1 All Internal Walls (including those associated with specific components) |                    |                |          |            |            |           |  |
|--|--------------------|----------------|----------|------------|------------|-----------|--|
| Box  | Section            | Wall Name      | Depth    | Panel Mat. | Liner Mat. | Insulated |  |
| A  | FANWALL 1 (Return) | InternalWall 2 | 2.000 in | Default    | 16Ga Galv  | False     |  |



### Unit Design Options Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

106 Static Pressure Summary

### 106.1 Condition 1

| Tunnel      | Description                                   | APD (in.H20) |
|-------------|---|--------------|
| AirTunnel 1 | OSA Opening - Damper (Outside Air)            | 0.07         |
| AirTunnel 1 | Filter 1, Pre / Final (Average Pressure Drop) | 1.71         |
| AirTunnel 1 | SA Opening (Supply Air)                       | 0.28         |
| AirTunnel 1 | FANWALL 2 (Supply) 4,000 ACFM @ 4.00 in.H20   | 0.00         |
| AirTunnel 1 | Hot Water Coil 3                              | 0.06         |
| AirTunnel 1 | Chilled Water Coil 4                          | 0.63         |
| AirTunnel 2 | RA Opening (Return Air)                       | 0.00         |
| AirTunnel 2 | EXH Opening - Damper (Exhaust Air)            | 0.29         |
| AirTunnel 2 | RA Opening - Damper (Return Air)              | 0.04         |
| AirTunnel 2 | FANWALL 1 (Return) 4,000 ACFM @ 3.00 in.H20   | 0.00         |
|             | Total Static Pressure:                        | 3.08         |

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply Air

### 106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

## Fans



TEMTROL

Fans

Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A

20-80 - 182T - 40 x 36 x 28 - A1

| 200.1 Configuration / ( | Quantity           |             | STATES STATES  | New APPEND       |               |                 |
|-------------------------|--------------------|-------------|----------------|------------------|---------------|-----------------|
| 1. Function             | Supply Fan         |             | 6.Height       | 7.Width          | 8.Depth       | 9.Overall Depth |
| 2. Quantity             | 1                  | Cell Size   | 40             | 36               | 28            | 35.25           |
| 3. Array                | 1 Rows x 1 Cols    | 10. Elev. / | Temp.          | 39 ft / 70.0 °F  |               |                 |
| 4. Construction         | PentaCube          | 11. Motor & | & Wheel Weight | 163 lb           | 13. Redundant | 0               |
| 5. Inlet Cone Location  | Upstream Removable | 12.Fan Ce   | ell Weight     | 364 lb           | 14. Empty     | 0               |
|                         |                    | 15.Ship Lo  | oose Fan (Whee | I, Motor and Mou | inting Base)  | 0               |

| 200.2 Options               |                   |                        |           |
|-----------------------------|-------------------|------------------------|-----------|
| 1. Coplanar Insulation      | Standard Melamine | 8. Cell Finish         | None      |
| 2. Extended Coplanar        | No                | 9. Insulation Retainer | No        |
| 3. Back Draft Dampers       | FBD8              | 10. Inlet Attenuation  | None      |
| 4. Inlet Cone Type          | A100 Curved Cone  | 11.Blankoff Material   | 16Ga Galv |
| 5. Solid Perimeter Material | None              | 12. Blankoff Finish    | None      |
| 6. Discharge Safety Guard   | No                | 13. Removal Rail       | No        |
| 7. Cell Material            | Steel             | 1                      |           |

| 200.3 Fan Wheel     |          |                 |      |  |
|---------------------|----------|-----------------|------|--|
| 1. Wheel Type       | HPF-A100 | 4. Width        | 80   |  |
| 2. Diameter         | 20       | 5. Max RPM      | 3521 |  |
| 3. Balancing Planes | 1        | 6. Wheel Finish | None |  |

| 200.4 Motor                    | 到海洋的学习的行为。这时   | <ul> <li>Million and a strain of the second strain str</li></ul> |                  |
|--------------------------------|----------------|--|------------------|
| 1. Manufacturer                | Toshiba        | 6. Model   | 4OA003L1ZVS210   |
| 2. HP Each / Total             | 4/4            | 7. Efficiency  | 87.5             |
| 3. Poles / RPM                 | 4-Pole / 1,740 | 8. Service Factor  | 1.15             |
| 4. Frame / Casing              | 182T / TEAO    | 9. Shaft Isolation   | Ceramic Bearings |
| 5. Volts / Phase / Hz 460/3/60 | 460/3/60       | 10. FLA Each / Total   | 5.1 / 5.1 Amps   |
|                                |                | 11. Motor HP Safety Factor   | 3.0 %            |

| 200.5 Variable Frequency Drive |          |                       |     |  |  |  |  |
|--------------------------------|----------|-----------------------|-----|--|--|--|--|
| 1. Quantity                    | 0        | 3. Maximum Hertz      | .00 |  |  |  |  |
| 2. Voltage                     | 460/3/60 | 4. Input Line Reactor | No  |  |  |  |  |

| 200.6 Control System |                             |              |  |  |  |  |
|----------------------|-----------------------------|--------------|--|--|--|--|
| 1.                   | Redundant VFD               | No           |  |  |  |  |
| 2.                   | Drive                       | Junction Box |  |  |  |  |
| 3.                   | <b>Optimization Control</b> | No           |  |  |  |  |
| 4.                   | Control Method              | By Others    |  |  |  |  |

### 200.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 2.51 in.H2O at 4000 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



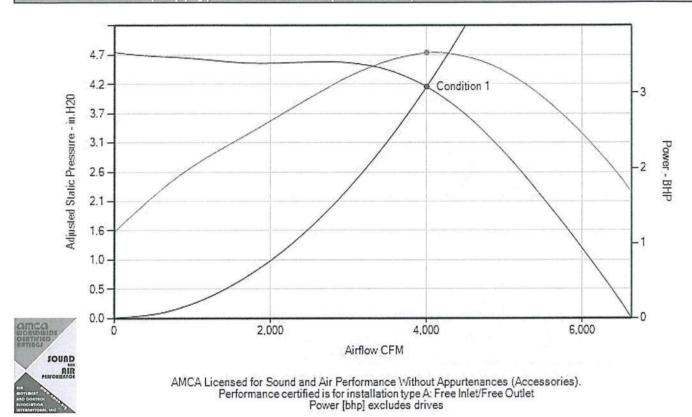
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A (Continued) 20-80 -

20-80 - 182T - 40 x 36 x 28 - A1



| 200.8 Operating Con           | ditions |       |        |       | 01.73 | N.S.   | 4.5% |       | , THE  | 122    | 40.0,803 | 148 12   | 1990  | and the mouth | 36.2 |
|-------------------------------|---------|-------|--------|-------|-------|--------|------|-------|--------|--------|----------|----------|-------|---------------|------|
| Operating Condition Usage (%) | Usage   | OFM   | SP (in | .H20) | C     | cell Q | ty   | RPM   | Ll-    | Fanwhe | el BHP   | Vel.     | Watts | FEG           | FEI  |
|                               |         | CFM   | Input  | Adj.  | On    | Off    | Fail | RPIN  | RPM Hz | Each   | Total    | (ft/min) | waits | % O.P.        | FEI  |
| Condition 1                   | 100     | 4,000 | 4.00   | 4.15  | 1     | 0      | 0    | 1,960 | 67.6   | 3.54   | 3.54     | 500      | 3,201 | FEG85 2%      | 1.39 |



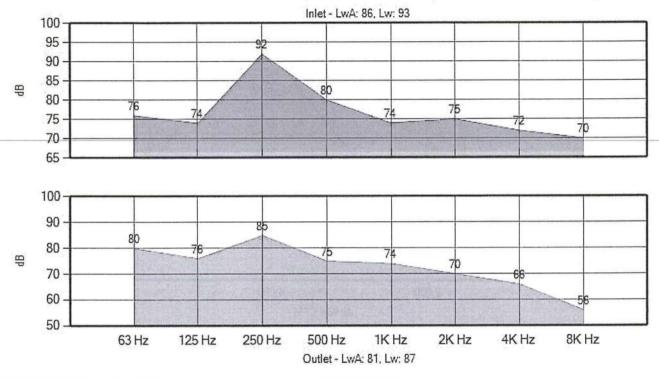
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A (Continued) 20-80 - 182T - 40 x 36 x 28 - A1

### Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts)



| 200.9 Bare Fan Sound Power | with Coplana | ar Silend | cer (dB re | e: 10E-12 | watts) |    |    |    | and the set | 1.12 | NUST. |
|----------------------------|--------------|-----------|------------|-----------|--------|----|----|----|-------------|------|-------|
| Operating Condition        |              | 63        | 125        | 250       | 500    | 1k | 2k | 4k | 8k          | LwA  | Lw    |
| 0                          | Inlet        | 76        | 74         | 92        | 80     | 74 | 75 | 72 | 70          | 86   | 93    |
| Condition 1                | Outlet       | 80        | 76         | 85        | 75     | 74 | 70 | 66 | 56          | 81   | 87    |



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

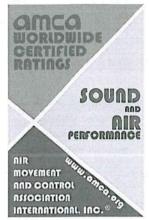
200 FANWALL 2 (Supply) : FWT2 : Box A (Continued)

### 200.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



20-80 - 182T - 40 x 36 x 28



Fans

Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A

20-80 - 182T - 40 x 36 x 28 - A1

| 201.1 Configuration / 0                               | Quantity           | Contra and  |                | V THE AND A STATE | A STATE AND   | Waller of Benter Part |
|---|--------------------|-------------|----------------|-------------------|---------------|-----------------------|
| 1. Function   | Return Fan         |             | 6.Height       | 7.Width           | 8.Depth       | 9.Overall Depth       |
| 2. Quantity   | 1                  | Cell Size   | 40             | 36                | 28            | 35.25                 |
| 3. Array  | 1 Rows x 1 Cols    | 10. Elev. / | Temp.          | 39 ft / 70.0 °F   |               |                       |
| 4. Construction                                       | PentaCube          | 11. Motor   | & Wheel Weight | 163 lb            | 13. Redundant | 0                     |
| 5. Inlet Cone Location                                | Upstream Removable | 12. Fan Ce  | ell Weight     | 364 lb            | 14. Empty     | 0                     |
| 15. Ship Loose Fan (Wheel, Motor and Mounting Base) 0 |                    |             |                |                   |               | 0                     |

| 201.2 Options               | new well-been not at health | a some some statement of the | solions has colleged his of palaugh |
|-----------------------------|-----------------------------|------------------------------|-------------------------------------|
| 1. Coplanar Insulation      | Standard Melamine           | 8. Cell Finish               | None                                |
| 2. Extended Coplanar        | No                          | 9. Insulation Retainer       | No                                  |
| 3. Back Draft Dampers       | FBD8                        | 10. Inlet Attenuation        | None                                |
| 4. Inlet Cone Type          | A100 Curved Cone            | 11. Blankoff Material        | 16Ga Galv                           |
| 5. Solid Perimeter Material | None                        | 12. Blankoff Finish          | None                                |
| 6. Discharge Safety Guard   | No                          | 13. Removal Rail             | No                                  |
| 7. Cell Material            | Steel                       |                              | •                                   |

| 201.3 Fan Wheel     |          |                 |      | 的目的主要的情况 |
|---------------------|----------|-----------------|------|----------|
| 1. Wheel Type       | HPF-A100 | 4. Width        | 80   |          |
| 2. Diameter         | 20       | 5. Max RPM      | 3521 |          |
| 3. Balancing Planes | 1        | 6. Wheel Finish | None |          |

| 201.4 Motor                    |                      |                            |                  |
|--------------------------------|----------------------|----------------------------|------------------|
| 1. Manufacturer                | Toshiba              | 6. Model                   | 4OA003L1ZVS210   |
| 2. HP Each / Total             | 3/3                  | 7. Efficiency              | 89.5             |
| 3. Poles / RPM                 | 4-Pole / 1,760       | 8. Service Factor          | 1.15             |
| 4. Frame / Casing              | 182T / TEAO          | 9. Shaft Isolation         | Ceramic Bearings |
| 5. Volts / Phase / Hz 460/3/60 | 10. FLA Each / Total | 4 / 4.0 Amps               |                  |
|                                |                      | 11. Motor HP Safety Factor | 3.0 %            |

| 201.5 Variable Frequency Drive |          |                       |     |  |  |  |  |
|--------------------------------|----------|-----------------------|-----|--|--|--|--|
| 1. Quantity                    | 0        | 3. Maximum Hertz      | .00 |  |  |  |  |
| 2. Voltage                     | 460/3/60 | 4. Input Line Reactor | No  |  |  |  |  |

| 20 | 201.6 Control System        |              |  |  |  |  |  |  |
|----|-----------------------------|--------------|--|--|--|--|--|--|
| 1. | Redundant VFD               | No           |  |  |  |  |  |  |
| 2. | Drive                       | Junction Box |  |  |  |  |  |  |
| 3. | <b>Optimization Control</b> | No           |  |  |  |  |  |  |
| 4. | Control Method              | By Others    |  |  |  |  |  |  |

### 201.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 2.51 in.H2O at 4000 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.

| NORTEK.       |  |
|---------------|--|
| AIR SOLUTIONS |  |
| TEMTROL       |  |

2

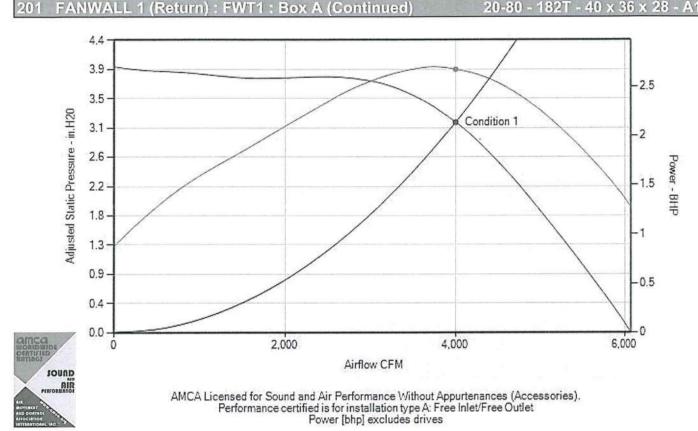
Fans Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

FANWALL 1 (Return) : FWT1 : Box A (Continued

20-80 - 182T - 40 x 36 x 28 - A1



| 201.8 Operating Con | ditions    |       |        |       | 120 |        |      |        | 14.0.2 | ありいたり  | and the main | and the | A STATE | AND ALL AND A |      |
|---------------------|------------|-------|--------|-------|-----|--------|------|--------|--------|--------|--------------|---------|---------|---------------|------|
| Operating Condition | Usage      | OFM   | SP (in | .H20) | C   | cell Q | ty   | DDM    | L.     | Fanwhe | el BHP       | Vel.    | Watts   | FEG           | FEI  |
|                     | on (%) CFM | CFIM  | Input  | Adj.  | On  | Off    | Fail | RPM Hz | Each   | Total  | (ft/min)     | walls   | % O.P.  | FEI           |      |
| Condition 1         | 100        | 4,000 | 3.00   | 3.15  | 1   | 0      | 0    | 1,791  | 61.1   | 2.67   | 2.67         | 500     | 2,374   | FEG85 0%      | 1.48 |



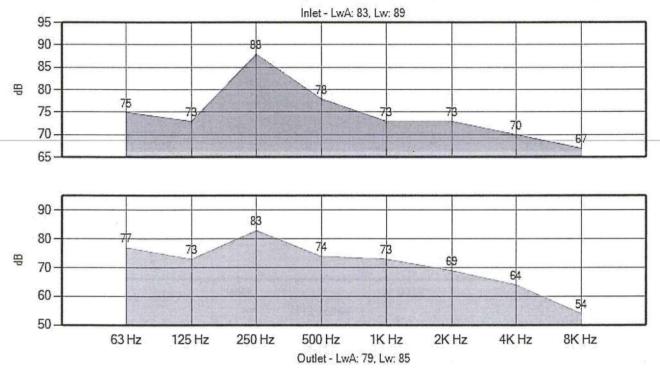
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A (Continued) 20-80 - 182T - 40 x 36 x 28 - A1

### Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts)



| 201.9 Bare Fan Sound Power | with Coplana | ar Silene | cer (dB re | e: 10E-12 | watts) |    |    |    | - Chilling |     |    |
|----------------------------|--------------|-----------|------------|-----------|--------|----|----|----|------------|-----|----|
| Operating Condition        |              | 63        | 125        | 250       | 500    | 1k | 2k | 4k | 8k         | LwA | Lw |
| Condition 1                | Inlet        | 75        | 73         | 88        | 78     | 73 | 73 | 70 | 67         | 83  | 89 |
| Condition 1                | Outlet       | 77        | 73         | 83        | 74     | 73 | 69 | 64 | 54         | 79  | 85 |



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A (Continued)

### 201.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



Quote #: 24-0139-005

20-80 - 182T - 40 x 36 x 28



TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

Coils



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

300 Chilled Water Coil 4 : CW4 : Box A

5WC - 6 - 39 x 31 x 5 - 10 AL

| 300.1 Coil Layout         |           |                      |             |  |  |  |
|---------------------------|-----------|----------------------|-------------|--|--|--|
| 1. Coil Hand              | Left      | 6. Rack Style        | None        |  |  |  |
| 2. Configuration          | Single    | 7. Rack Finish       | None        |  |  |  |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga 304 SS |  |  |  |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None        |  |  |  |
| 5. Connection Type        | MPT       |                      |             |  |  |  |

| 300.2 Construction | on                   |                  |                   |                   |                         |
|--------------------|----------------------|------------------|-------------------|-------------------|-------------------------|
| 1. Quantity        | 1                    | 8. Stand Height  | 1 in              | 14. Casing        | 16Ga 304 SS             |
| 2. Serpentine      | 0.8333333            | Tube Detai       | - Primary Surface | 15. Coating       | None                    |
| 3. Fin Height      | 39.000 in            | 9. Material      | Copper            | Fin Detail -      | Secondary Surface       |
| 4. Fin Length      | 31.000 in            | 10.O.D. x Wall   | 0.625 x 0.025 in  | 16. Material      | Aluminum                |
| 5. Rows            | 5                    | 11. Spacing      | 1.500 x 1.299 in  | 17. Thickness     | 0.010 in                |
| 6. Fins per Inch   | 10                   | 12. Internal     | Smooth            | 18. Configuration | Corrugated, Waffle with |
| 7. Face Area       | 8.40 ft <sup>2</sup> | 13. Return Bends | 0.035 in          | ro. Configuration | Straight Edge           |

### Single Bank, Left Hand, 1 per unit

5WC - 6 - 39 x 31 x 5 - 10 AL

|          | Supply / Retu | Irn Connections | 1 - Sale - Sa |              | Vent and Drain    |                   |
|----------|---------------|-----------------|---|--------------|-------------------|-------------------|
| Quantity | Туре          | Pipe Size       | Material  | Туре         | Vent Location     | Drain Location    |
| 2        | MPT           | 1.5 in          | Red Brass   | 0.125 in FPT | Return Connection | Supply Connection |

| 300.3 Condition 1         |            |                          |               |        |  |  |
|---------------------------|------------|--------------------------|---------------|--------|--|--|
| Entering                  |            |                          | Leaving       | 121318 |  |  |
| 1. Actual Airflow         | 4,000 ACFM | 10. Total Capacity       | 128.6 MBH     |        |  |  |
| 2. Standard Airflow       | 3,920 SCFM | 11. Sensible Capacity    | 100.2 MBH     |        |  |  |
| 3. Elevation              | 39 ft      | 12. Actual Face Velocity | 476.43 ft/min |        |  |  |
| 4. Entering Air DB        | 80.0 °F    | 13. Leaving Air DB       | 56.8 °F       |        |  |  |
| 5. Entering Air WB        | 67.0 °F    | 14. Leaving Air WB       | 56.5 °F       |        |  |  |
| 6. Fluid Type             | Water      | 15.APD                   | 0.63 in.H20   |        |  |  |
| 7. Entering Fluid Temp    | 44.0 °F    | 16.Leaving Fluid Temp    | 54.0 °F       |        |  |  |
| 8. Fluid Flow Rate        | 25.6 GPM   | 17. Fluid Velocity       | 1.40 ft/s     |        |  |  |
| 9. Fluid Fouling Internal | 0.0000     | 18. Fluid Pressure Drop  | 2.41 ft.H20   |        |  |  |

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Chilled water velocity is below recommended minimum of 2.5 fps

#### 300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Coil is directly connected to the downstream side of Hot Water Coil 3.

3. Top and bottom casing flange height is 1.000 in.

4. SCFM is corrected for Elevation and EDB.

5. Coils to be pressure tested at 315 PSI

6. Total operating weight is 291 lb.

7. Total fluid volume is 6.5 Gal.



Coils

Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

301 Hot Water Coil 3 : CW4 : Box A

5WC - 4 - 39 x 31 x 1 - 6 AL

5WC - 4 - 39 x 31 x 1 - 6 AL

Quote #: 24-0139

| 301.1 Coil Layout         |           |                      |             | 1.0 |
|---------------------------|-----------|----------------------|-------------|-----|
| 1. Coil Hand              | Left      | 6. Rack Style        | None        |     |
| 2. Configuration          | Single    | 7. Rack Finish       | None        |     |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga 304 SS |     |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None        |     |
| 5. Connection Type        | MPT       |                      |             |     |

| 301.2 Construction | on                   | · · · · · · · · · · · · · · · · · · · |                   |                   | A STATE STATE AND A STATE OF |
|--------------------|----------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| 1. Quantity        | 1                    | 8. Stand Height                       | 1 in              | 14. Casing        | 16Ga 304 SS                  |
| 2. Serpentine      | 0.25                 | Tube Detail                           | - Primary Surface | 15. Coating       | None                         |
| 3. Fin Height      | 39.000 in            | 9. Material                           | Copper            | Fin Detail -      | Secondary Surface            |
| 4. Fin Length      | 31.000 in            | 10.O.D. x Wall                        | 0.625 x 0.025 in  | 16. Material      | Aluminum                     |
| 5. Rows            | 1                    | 11. Spacing                           | 1.500 x 1.299 in  | 17. Thickness     | 0.010 in                     |
| 6. Fins per Inch   | 6                    | 12. Internal                          | Smooth            | 18. Configuration | Corrugated, Waffle with      |
| 7. Face Area       | 8.40 ft <sup>2</sup> | 13. Return Bends                      | 0.035 in          | ro. Configuration | Straight Edge                |

### Single Bank, Left Hand, 1 per unit

Supply / Return Connections Vent and Drain Quantity Pipe Size Material Туре Vent Location **Drain Location** Type 2 MPT 1.25 in Red Brass 0.125 in FPT **Return Connection** Supply Connection

|                           | Entering   |                          | Leaving       |
|---------------------------|------------|--------------------------|---------------|
| 1. Actual Airflow         | 4,000 ACFM |                          |               |
| 2. Standard Airflow       | 4,234 SCFM | 9. Sensible Capacity     | 94.0 MBH      |
| 3. Elevation              | 39 ft      | 10. Actual Face Velocity | 476.43 ft/min |
| 4. Entering Air DB        | 40.0 °F    | 11. Leaving Air DB       | 60.5 °F       |
| 5. Fluid Type             | Water      | 12.APD                   | 0.06 in.H20   |
| 6. Entering Fluid Temp    | 180.0 °F   | 13. Leaving Fluid Temp   | 140.0 °F      |
| 7. Fluid Flow Rate        | 4.8 GPM    | 14. Fluid Velocity       | 0.92 ft/s     |
| 8. Fluid Fouling Internal | 0.0000     | 15. Fluid Pressure Drop  | 0.31 ft.H20   |

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

### 301.4 Notes / Features

- 1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179
- 2. Coil is directly connected to the upstream side of Chilled Water Coil 4.
- 3. Top and bottom casing flange height is 1.000 in.
- 4. SCFM is corrected for Elevation and EDB.
- 5. Coils to be pressure tested at 315 PSI
- 6. Total operating weight is 96 lb.
- 7. Total fluid volume is 1.6 Gal.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

# Components



Components Quote #: 24-0139-005

### Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

500 Filter 1 : FILT1 : Box A

| 1. Loading                  | Upstream Face Load | 7. Bank Size                | 36.063 in W x 36.000 in H   |
|-----------------------------|--------------------|-----------------------------|-----------------------------|
| 2. Frame Material           | Galvanized         | 8. Qty / set & Frame Size 1 | (2) 12 in x 24 in           |
| 3. Frame Finish             | None               | 9. Qty / set & Frame Size 2 | (1) 24 in x 24 in           |
| 4. Filter Clips             | (12) C-79-5        | 10.Qty / set & Frame Size 3 |                             |
| 5. Blankoff / Rack Material | 16Ga Galv          | 11.Qty / set & Frame Size 4 |                             |
| 6. Blankoff / Rack Finish   | None               |                             |                             |
| 500.2 Pre Filter            |                    |                             |                             |
| 1. Filter Depth             | 2.000 in           | 4. Number of Sets           | 1                           |
| 2. Efficiency               | MERV 8             | 5. Max Face Velocity        | 500.00 ft/min at 4,000 ACFM |

| 3. Manufacturer    | American Air Filter | 6. Model             | PerfectPleat SC             |
|--------------------|---------------------|----------------------|-----------------------------|
| 500.3 Final Filter |                     |                      |                             |
| 1. Filter Depth    | 4.000 in            | 4. Number of Sets    | 1                           |
| 2. Efficiency      | MERV 14             | 5. Max Face Velocity | 500.00 ft/min at 4,000 ACFM |
| 3. Manufacturer    | American Air Filter | 6. Model             | VariCel II                  |

#### 500.4 Notes / Features

1. All sets of Filters and clips to ship loose inside unit, installed by others.



## Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

Quote #: 24-0139-005

600 OSA Opening : OSA : Box A : Roof

| 600.1 Opening Cons | truction         |            |             | SOROUTAS |
|--------------------|------------------|------------|-------------|----------|
| 1. Description     | Outside Air      | 4. Shape   | Rectangle   |          |
| 2. Max CFM         | 4,000 ACFM       | 5. Max APD | 0.07 in.H20 |          |
| 3. Size            | 19 W x 23.5 H in |            |             |          |

### 600.2 Damper Specifications

| 1. Manufacturer      | TAMCO                             | 6. Jackshaft                            | Yes             |
|----------------------|-----------------------------------|---|-----------------|
| 2. Model             | TAMCO 9000 (Aluminum)             | 7. Max Face Velocity                    | 1,290.03 ft/min |
|                      | 23.500 in (A - Blade Direction) x | 8. Torque                               | 35 lb-in        |
| 3. Size              | 19.000 in (B)                     | 9. End Switches                         | No              |
| 4. Blade Config      | Parallel                          |   |                 |
| 5. Blade Orientation | Horizontal                        | 1 · · · · · · · · · · · · · · · · · · · |                 |

| 600.3 Damper Actuator |                  |        |
|-----------------------|------------------|--------|
| 1. Manufacturer       | 6. Qty           | 1      |
| 2. Model              | 7. Floor Mounted | 66-429 |
| 3. Direction          | 8. Furnished By  | Others |
| 4. Location           | 9. Mounted By    | Others |
| 5. Type               | 10. Wiring By    | Others |

#### 600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.

2. Damper Actuators wired by Others

#### 601 SA Opening : SA : Box A: Roof

### 601 1 Opening Construction

| 1. Description | Supply Air       | 4. Shape        | Rectangle       |  |
|----------------|------------------|-----------------|-----------------|--|
| 2. Max CFM     | 4,000 ACFM       | 5. Max APD      | 0.28 in.H20     |  |
| 3. Size        | 28 W x 13.5 H in | 6. Max Velocity | 1,524.00 ft/min |  |

#### 602 RA Opening : RA : Box A Roof

| 602.1 Opening Const | ruction        |                 |                 | 101 1 0H |
|---------------------|----------------|-----------------|-----------------|----------|
| 1. Description      | Return Air     | 4. Shape        | Rectangle       |          |
| 2. Max CFM          | 4,000 ACFM     | 5. Max APD      | 0.00 in.H20     |          |
| 3. Size             | 28 W x 11 H in | 6. Max Velocity | 1,871.00 ft/min |          |

#### EXH Opening : EXH : Box A : Roof 603

| 603.1 Opening Cons | truction         |            |             | will fin |
|--------------------|------------------|------------|-------------|----------|
| 1. Description     | Exhaust Air      | 4. Shape   | Rectangle   |          |
| 2. Max CFM         | 4,000 ACFM       | 5. Max APD | 0.29 in.H20 |          |
| 3. Size            | 28 W x 14.5 H in |            |             |          |

| 603.2 Damper Specifications |        |
|-----------------------------|--------|
| 1. Manufacturer             | Ruskin |

| 1. Manufacturer           | Ruskin                        | 6. Jackshaft         | Yes             |
|---------------------------|-------------------------------|----------------------|-----------------|
| 2. Model                  | Ruskin CD 60 (Galvanized)     | 7. Max Face Velocity | 1,418.72 ft/min |
| a a:                      | 28.000 in (Blade Direction) x | 8. Torque            | 20 lb-in        |
| 3. Size                   | 14.500 in                     | 9. End Switches      | No              |
| 4. Blade Config           | Opposed                       |                      |                 |
| 5. Blade Orientation      | Horizontal                    |                      |                 |
| Notes:                    |                               |                      |                 |
| 1. Ordered with 1.500 in. | Rear Flange                   |                      |                 |



### Components Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

603 EXH Opening : EXH : Box A : Roof (Continued)

| 603.3 Damper Actuator |                  | 2. 如何的时候,我们的问题,你们就是我们的问题。 |
|-----------------------|------------------|---------------------------|
| 1. Manufacturer       | 6. Qty           | 1                         |
| 2. Model              | 7. Floor Mounted | 1 A 25                    |
| 3. Direction          | 8. Furnished By  | Others                    |
| 4. Location           | 9. Mounted By    | Others                    |
| 5. Type               | 10. Wiring By    | Others                    |

### 603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.

2. Damper Actuators wired by Others

### 604 RA Opening : RA : Box A : Internal Wall

| 604.1 Opening Cons | truction         |            |             | 1.1.200 |
|--------------------|------------------|------------|-------------|---------|
| 1. Description     | Return Air       | 4. Shape   | Rectangle   |         |
| 2. Max CFM         | 4,000 ACFM       | 5. Max APD | 0.04 in.H20 |         |
| 3. Size            | 35 W x 12.5 H in |            |             |         |

| 604.2 Damper Specifica                             | tions                         |                      |                 | 201225 |
|--|-------------------------------|----------------------|-----------------|--------|
| 1. Manufacturer                                    | Ruskin                        | 6. Jackshaft         | Yes             |        |
| 2. Model   | Ruskin CD 60 (Galvanized)     | 7. Max Face Velocity | 1,316.57 ft/min |        |
| 3. Size 35.000 in (Blade Direction) x<br>12.500 in | 35.000 in (Blade Direction) x | 8. Torque            | 21 lb-in        |        |
|  | 9. End Switches               | No                   |                 |        |
| 4. Blade Config                                    | Parallel                      |                      |                 |        |
| 5 Blade Orientation                                | Horizontal                    |                      |                 |        |

Notes:

1. Ordered with 1.500 in. Front Flange

| 604.3 Damper Actuator | NUMBER OF A STREET OF A STREET | MARCA (PTD 2. |
|-----------------------|--------------------------------|---------------|
| 1. Manufacturer       | 6. Qty                         | 1             |
| 2. Model              | 7. Floor Mounted               |               |
| 3. Direction          | 8. Furnished By                | Others        |
| 4. Location           | 9. Mounted By                  | Others        |
| 5. Type               | 10. Wiring By                  | Others        |

### 604.4 Notes / Features

Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.
 Damper Actuators wired by Others



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

## Electrical



## Electrical

Quote #: 24-0139-005

Project Name: Schmitt Elementary

### Unit Tag: AHU - 3

700 ElecPanel 4 : FWT2 : Box A : Far Side

| 1. Volt/Phase/Hertz             | 460/3/60                 | 3. Provides power to                     | Supply Fan                  |
|---------------------------------|--------------------------|--|-----------------------------|
| 2. MCA                          | 6.4                      |  |                             |
| 1. For electrical loads see ele | ectrical drawings        |  |                             |
| 700.2 Construction              | Real and a second second |  |                             |
| 1. Enclosure Type               | Junction Box             | 4. Mounting                              | Surface mount on unit       |
| 2. Type                         | NEMA 4 Indoor / Outdoor  | 5. Finish                                | Polyester Resin (Sandstone) |
| 3. Size                         | See electrical drawings  |  |                             |
| 700.3 Options                   | and the second second    |  |                             |
|                                 |                          |  | No                          |
| 1. Cooling Fan                  | No                       | 5. Floor Stand                           | INO                         |
|                                 | No<br>No                 | 5. Floor Stand<br>6. Control Transformer | No                          |
| 1. Cooling Fan                  |                          |  |                             |

701.1 Lighting Types and Quantities

(5) Vapor Proof 14W LED



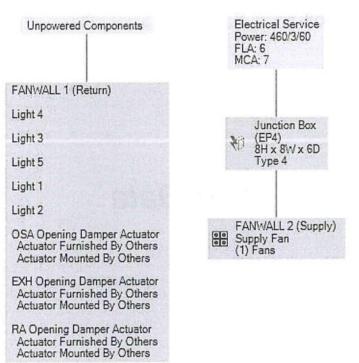
## Electrical

Quote #: 24-0139-005

### Project Name: Schmitt Elementary

Unit Tag: AHU - 3

### 702 Electrical Layout Diagram



 Note: The FLA and MCA values shown are estimated, see the electrical schematics for the actual values.

 Date/Revision: 2024-02-19 / Rev. P1
 106 N Industrial Blvd. Okarche, Ok 73762

 Unit Design Revision A
 (405) 817-9700

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TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-005        |
| UNIT TAG | AHU - 3            |
| QUANTITY | 1                  |

# Unit Data



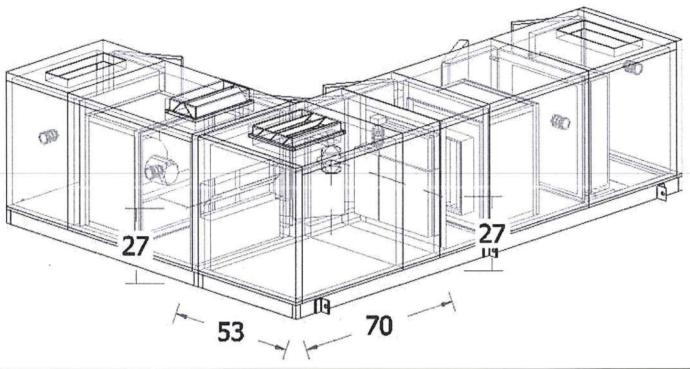
Project Name: Schmitt Elementary Unit Tag: AHU - 3 Quote #: 24-0139-005



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

901 Center of Gravity



| Size (Inches) |        | Operating Weight (Reunde) | Center of Gravity (Inches) |       |       |       |
|---------------|--------|---------------------------|----------------------------|-------|-------|-------|
| х             | Y      | Z                         | Operating Weight (Pounds)  | Х     | Y     | Z     |
| 186.00        | 140.00 | 54.50                     | 5,753                      | 71.00 | 53.00 | 27.00 |

### 901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Weights shown do not include roof curbs provided by others.

5. Corner weights apply to rectangular boxes only.

6. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.

Unit Data Quote #: 24-0139-005



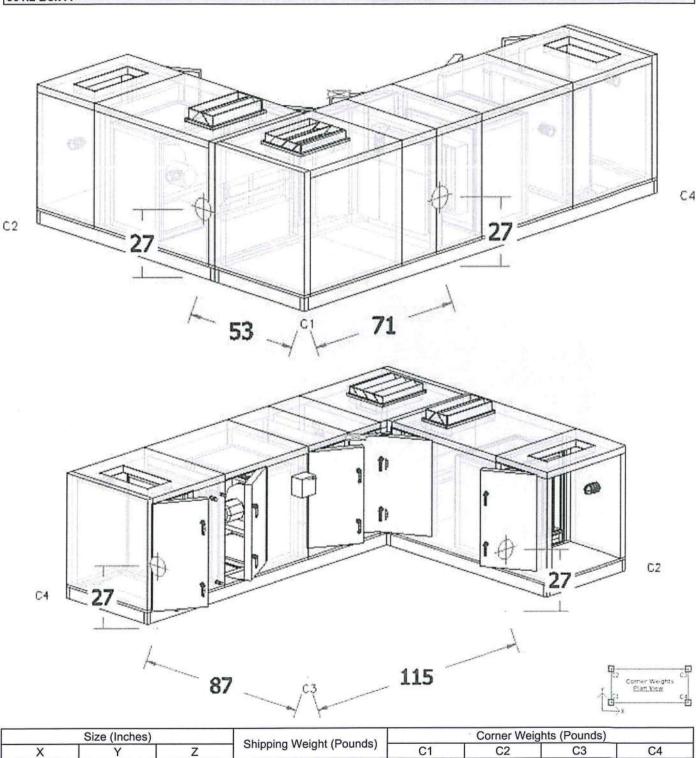
### Unit Data Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

901 Center of Gravity (Continued)





 186.00
 140.00
 54.50
 5,682

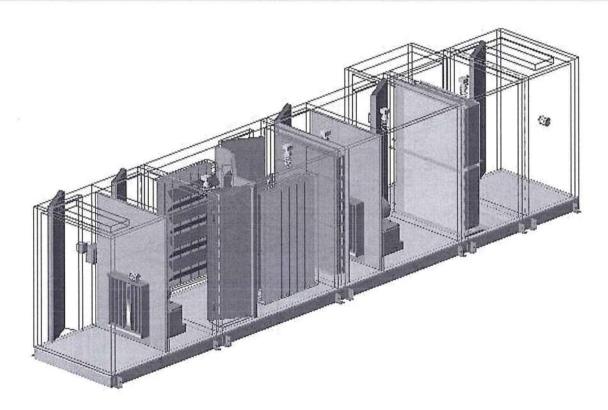
 ◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change. Corner weights are not available for non-rectangular shipping boxes.

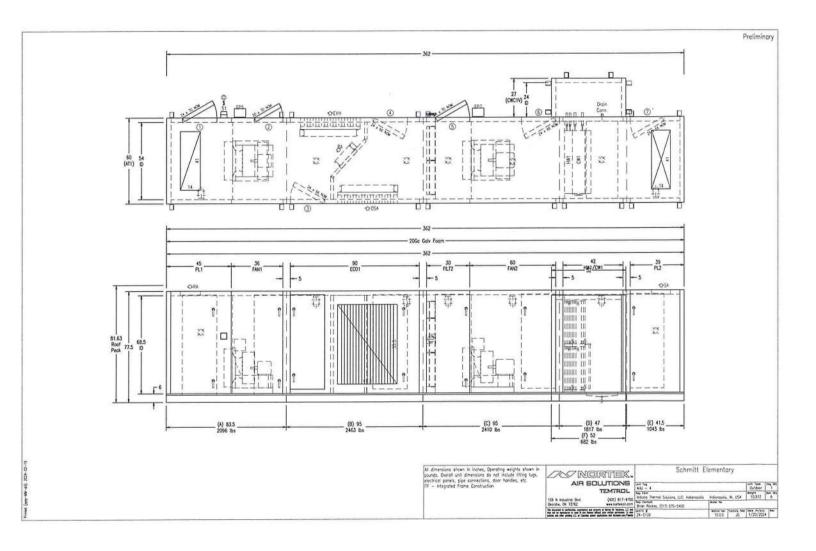


TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

| Pov | Revision Description |
|-----|----------------------|
|     | Rev                  |







| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

## Unit Design Options

Design Assistant



# Unit Design Options Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

#### 100 **Unit Design Summary**

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



Preliminary

## Unit Design Options

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 4

Quote #: 24-0139-004

| 404 Unit Details              |                        |                            |                         |
|-------------------------------|------------------------|----------------------------|-------------------------|
| 101 Unit Details              |                        |                            |                         |
| 101.1 Weights / Jobsite Ele   | evation                |                            |                         |
| 1. Shipping Weight            | 10,484 lb              | 3. Elevation               | 39 ft                   |
| 2. Operating Weight           | 10,512 lb              |                            | •                       |
| 101.2 Preparation for Ship    | ment                   |                            |                         |
| 1. Cleaning & Wrapping        | Ship on open bed to    | ruck and heat shrink wrap. |                         |
| 2. Knockdown Construction     | No                     |                            |                         |
| 102 Unit Construct            |                        |                            |                         |
| 102.1 Construction            |                        |                            |                         |
| 1. Cabinet Construction       | ITF - Integrated Frame | 6. Panel Fastener          | Drive Screws            |
| 2. Design Environment         | Outdoor                | 7. Thermal Break           | Modified Thermal Break  |
| <ol><li>Panel Depth</li></ol> | 3 in                   | 8. Mounting                | Slab Mounted            |
| 4. Caulk Type                 | Standard               |                            |                         |
| 5. Model #                    |                        |                            |                         |
| 102.2 Cabinet Material        | onserver and the well  |                            |                         |
| 1. Exterior Material          | 16Ga Galv Pre-Paint    | 8. Blankoff Finish         | None                    |
| 2. Interior Liner type(s)     | See Drawing            | 9. Internal Wall Material  | 16Ga Galv               |
| 3. Exterior Paint Type        | Polyester Resin        | Insula                     | ation by liner type     |
| 4. Interior Paint Type        | None                   | 10. Solid liner            | Polyurethane Foam (R24) |
| 5. Paint Color                | Sandstone              |                            |                         |
| 6. Meets Salt Spray Rating    | 2500 Hours             |                            |                         |

#### Exceptions:

7. Blankoff Material

1. Hot Water Coil 1: blankoff material is 16Ga 304 SS

2. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

| 1. Base Structure Material | Steel Tube        | 7. Base Structure Height | See Drawing                |
|----------------------------|-------------------|--------------------------|----------------------------|
| 2. Base Floor Material     | 16Ga Galv         | 8. Sub Floor Material    | 20Ga Galv                  |
| 3. Base Floor Seams        | Caulked           | 9. Floor Coating         | None                       |
| 4. Insulation              | Polyurethane Foam | 10.R Value               | 20                         |
| 5. Floor Drain             | None              | 11.Lifting Lugs          | Yes - Welded and Removable |
| 6. Floor Options           | None              |                          |                            |

| Box | X         | Y         | Z         | Shipping Weight | Operating Weight |
|-----|-----------|-----------|-----------|-----------------|------------------|
| A   | 83.500 in | 60.000 in | 81.625 in | 2,096 lb        | 2,096 lb         |
| В   | 95.000 in | 60.000 in | 81.625 in | 2,463 lb        | 2,463 lb         |
| С   | 95.000 in | 60.000 in | 81.625 in | 2,525 lb        | 2,410 lb         |
| D   | 47.000 in | 60.000 in | 81.625 in | 1,675 lb        | 1,817 lb         |
| E   | 41.500 in | 60.000 in | 81.625 in | 1,043 lb        | 1,043 lb         |
| F   | 52.000 in | 27.000 in | 78.125 in | 682 lb          | 682 lb           |

#### 102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

2. The height dimensions include raised roof seams and sloped roof for outdoor equipment.

16Ga Galv (See Exceptions)

3. Refer to unit drawing for removable lug locations. Removable lugs on demounts (if required) are not shown on drawing.

#### 103 Doors



Preliminary

# Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

103 Doors (Continued)

| - |     | Doors (inc |                   | -     |        |       | -     |        | Lot and a s | Estadas             | Ontinga              |
|---|-----|------------|-------------------|-------|--------|-------|-------|--------|-------------|---------------------|----------------------|
| # | Box | Section    | Type <sup>1</sup> | Width | Height | Hinge | Swing | Window | Interior    | Exterior            | Options <sup>3</sup> |
| 1 | A   | PL1        | 3" TBF            | 24    | 70     | RH    | Out   | None   | 20Ga Galv   | 16Ga Galv Pre-Paint | TO                   |
| 2 | A   | FAN1       | 3" TBF            | 20    | 70     | RH    | Out   | None   | 20Ga Galv   | 16Ga Galv Pre-Paint | SC TO                |
| 3 | В   | ECO1       | 3" TBF            | 24    | 66     | RH    | In    | None   | 16Ga Galv   | 16Ga Galv Pre-Paint | TO                   |
| 4 | В   | ECO1       | 3" TBF            | 24    | 66     | RH    | In    | None   | 16Ga Galv   | 16Ga Galv Pre-Paint | TO                   |
| 5 | С   | FILT2      | 3" TBF            | 24    | 70     | RH    | Out   | None   | 20Ga Galv   | 16Ga Galv Pre-Paint | TO                   |
| 6 | С   | FAN2       | 3" TBF            | 24    | 66     | LH    | In    | None   | 16Ga Galv   | 16Ga Galv Pre-Paint | TO                   |
| 7 | E   | PL2        | 3" TBF            | 24    | 66     | LH    | In    | None   | 16Ga Galv   | 16Ga Galv Pre-Paint | TO                   |

#### 103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: SC = Safety Catch, TO = Tool Operated Handle

#### 104 Drains

| 104.1 A | II Drains (inclu | ding those as | sociated with | specific o | components) |           |                  |              |
|---------|------------------|---------------|---------------|------------|-------------|-----------|------------------|--------------|
| Box     | Section          | Туре          | Conn (in)     | Hand       | Above Floor | Pipe Ext. | Grating Material | Pan Material |
| D       | HW1/CW1          | Drain Pan     | 1.25          | Left       | 0.00 in     | 0.00 in   | None             | 16Ga 304 SS  |

#### 104.2 Notes / Features

1. Drain Constructions included: Triple Pitched

#### 105 Internal Walls

| Box | Section      | Wall Name      | Depth    | Panel Mat. | Liner Mat. | Insulated |
|-----|--------------|----------------|----------|------------|------------|-----------|
| В   | Economizer 1 | InternalWall 1 | 2.000 in | Default    | 16Ga Galv  | False     |
| В   | Economizer 1 | InternalWall 6 | 2.000 in | Default    | 16Ga Galv  | False     |
| В   | Economizer 1 | InternalWall 7 | 2.000 in | Default    | 16Ga Galv  | False     |



### **Unit Design Options** Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

106 Static Pressure Summary

### 106.1 Condition 1

| 106.1.1 Return    |  | 5            |
|-------------------|--|--------------|
| Tunnel            | Description                                    | APD (in.H20) |
| AirTunnel 1       | RA Opening (Return Air)                        | 0.00         |
| AirTunnel 1       | EXH Opening - Louver & Damper (Exhaust Air)    | 0.18         |
|                   | Total Static Pressure:                         | 0.18         |
| 106.1.2 Supply    |  | 1.1.1        |
| Tunnel            | Description                                    | APD (in.H20) |
| AirTunnel 1       | OSA Opening - Louver & Damper (Outside Air)    | 0.14         |
| AirTunnel 1       | Hot Water Coil 1                               | 0.05         |
| AirTunnel 1       | Chilled Water Coil 1                           | 0.58         |
| AirTunnel 1       | RA Opening - Damper (62.5x16.5)                | 0.02         |
| AirTunnel 1       | SA Opening (Supply Air)                        | 0.48         |
| AirTunnel 1       | Filter 2, Pre / Final (Average Pressure Drop)  | 1.33         |
|                   | Total Static Pressure:                         | 2.60         |
| 106.1.3 Unassigne | d  |              |
| Tunnel            | Description                                    | APD (in.H20) |
| AirTunnel 1       | Plenum Fan 1 (Supply) 8,000 ACFM @ 1.50 in.H20 | 0.00         |
| AirTunnel 1       | Plenum Fan 2 (Supply) 8,000 ACFM @ 4.00 in.H20 | 0.00         |
|                   | Total Static Pressure:                         | 0.00         |

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.

Design Assistant

10.0.0/2.0.3.1



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

## Fans



Project Name: Schmitt Elementary

Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A

| 1. Function      | Supply       | 6. Elevation         | 39 ft      |  |
|------------------|--------------|----------------------|------------|--|
| 2. Fan Quantity  | 1            | 7. Stand Height      | 4 in       |  |
| 3. Orientation   | Horizontal   | 8. Blankoff Material | 16Ga Galv  |  |
| 4. Drive System  | Direct Drive | 9. Blankoff Finish   | None       |  |
| 5. Isol. / Defl. | None         | 10. Fan Construction | Galvanized |  |

| 200.2 I all whieel |         |                  |                            | the state of the s |
|--------------------|---------|------------------|----------------------------|--|
| 1. Diameter        | 22      | 4. Mat / Inertia | AL / 10 lb-ft <sup>2</sup> |  |
| 2. Width           | 100.0 % | 5. Max Wheel RPM | 3,166 rpm                  |  |
| 3. Class           | Ш       |                  |                            |  |

| 200.3 Motor       |               |          |                |  |
|-------------------|---------------|----------|----------------|--|
| 1. Manufacturer   | Toshiba       | 5. Model | 4OA003L1ZVS210 |  |
| 2. HP             | 4             | 6. V/P/H | 460/3/60       |  |
| 3. Poles / RPM    | 4-Pole / 1740 | 7. FLA   | 5.1 Amps       |  |
| 4. Frame / Casing | 182T / TEAO   |          |                |  |

| 200.4 Variable Freq | uency Drive |                            |     |
|---------------------|-------------|----------------------------|-----|
| 1. Quantity         | 0           | 3. Maximum Hertz           | .00 |
| 2. Voltage          | 460/3/60    | 4. Redundant VFD           | No  |
|                     |             | 5. Input Line Reactor (3%) | No  |
|                     |             | 6. Individual Disconnects  | No  |

| 200.5 Notes / Features     |  |
|----------------------------|--|
| 1. Include: Aluminum Wheel |  |
| 2. Back Draft Dampers      |  |

Design Assistant

Fans

PF09

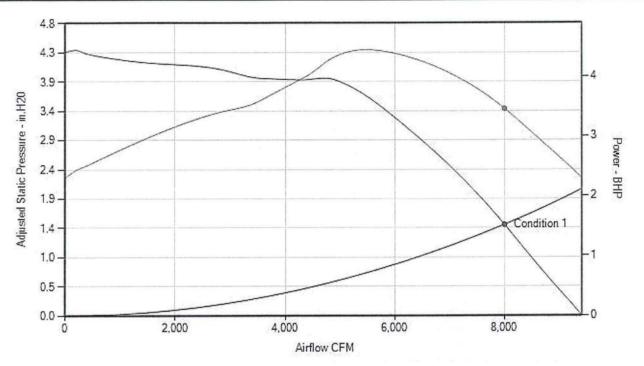
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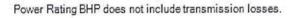
Fans

PF09

Project Name: Schmitt Elementary Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)





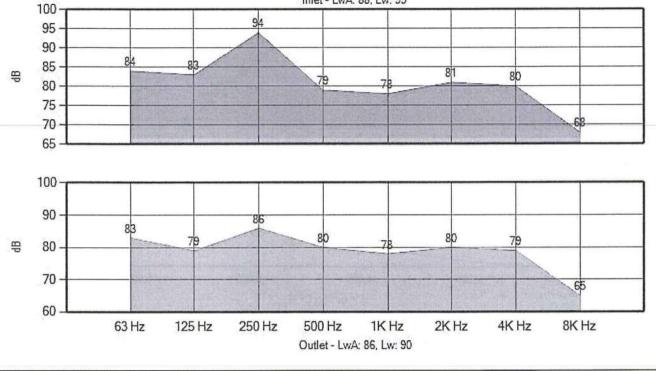
| 200.6 Operating Conditions | 5     | 1     | n= 40 | 2.46     |            |      |       |            | 2     |       | Contraction of |      |
|----------------------------|-------|-------|-------|----------|------------|------|-------|------------|-------|-------|----------------|------|
| Operating Condition        | Usage | CFM   | SP    | (in.H20) | Wheel RPM  | Fan  | BHP   | Static Eff | Matte | Hz    | FEG            | FEI  |
|                            | (%)   |       | Input | Adjusted | Wheel RPIN | Each | Total | Static Ell | walls | 112   | % O.P.         | FEI  |
| Condition 1                | 100   | 8,000 | 1.50  | 1.50     | 1,633      | 3.46 | -     | 54.7 %     | 2,891 | 56.31 | FEG80 9%       | 1.26 |

Design Assistant

10.0.0 / 2.0.3.1

Project Name: Schmitt Elementary Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



Preliminary

Total Bare Fan Sound Power (dB re: 10E-12 watts)

Inlet - LwA: 88, Lw: 95

| 200.7 Bare Fan Sound Power ( | dB re: 10E-1 | 2 watts | )   | 1993年1月<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1993年<br>1995<br>1995<br>1995<br>1995<br>1995<br>1995<br>1995<br>199 |     | 自然の世代 |    |    | N. DENT | 1 Martin | 1200 |
|------------------------------|--------------|---------|-----|---|-----|-------|----|----|---------|----------|------|
| Operating Condition          |              | 63      | 125 | 250   | 500 | 1k    | 2k | 4k | 8k      | LwA      | Lw   |
|                              | Inlet        | 84      | 83  | 94  | 79  | 78    | 81 | 80 | 68      | 88       | 95   |
| Condition 1                  | Outlet       | 83      | 79  | 86  | 80  | 78    | 80 | 79 | 65      | 86       | 90   |



PF09

Fans



### Preliminary

Fans

PF09

#### Project Name: Schmitt Elementary

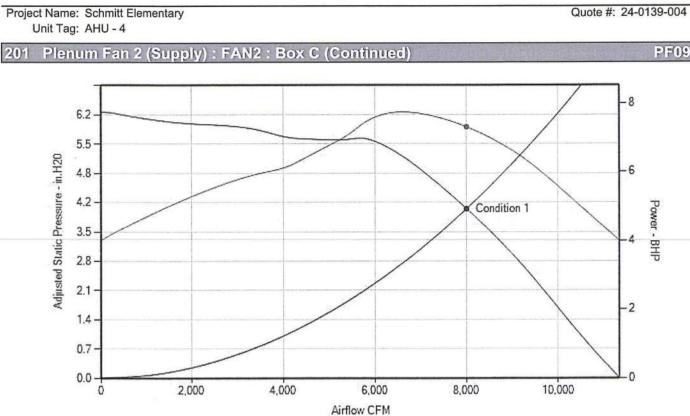
Unit Tag: AHU - 4

### 201 Plenum Fan 2 (Supply) : FAN2 : Box C

| 201.1 Configuration |               |                      |                            |
|---------------------|---------------|----------------------|----------------------------|
| 1. Function         | Supply        | 6. Elevation         | 39 ft                      |
| 2. Fan Quantity     | 1             | 7. Stand Height      | 4 in                       |
| 3. Orientation      | Horizontal    | 8. Blankoff Material | 16Ga Galv                  |
| 4. Drive System     | Direct Drive  | 9. Blankoff Finish   | None                       |
| 5. Isol. / Defl.    | None          | 10. Fan Construction | Galvanized                 |
| 201.2 Fan Wheel     |               |                      |                            |
| 1. Diameter         | 22            | 4. Mat / Inertia     | AL / 15 lb-ft <sup>2</sup> |
| 2. Width            | 100.0 %       | 5. Max Wheel RPM     | 3,166 rpm                  |
| 3. Class            | Ш             |                      | 2                          |
| 201.3 Motor         |               |                      |                            |
| 1. Manufacturer     | Toshiba       | 5. Model             | 40AY75L1ZVS210             |
| 2. HP               | 7.5           | 6. V/P/H             | 460/3/60                   |
| 3. Poles / RPM      | 4-Pole / 1760 | 7. FLA               | 9.8 Amps                   |
| 4. Frame / Casing   | 213T / TEAO   |                      |                            |

| 201.4 Variable Freq | uency Drive |                            |     |
|---------------------|-------------|----------------------------|-----|
| 1. Quantity         | 0           | 3. Maximum Hertz           | .00 |
| 2. Voltage          | 460/3/60    | 4. Redundant VFD           | No  |
|                     |             | 5. Input Line Reactor (3%) | No  |
|                     |             | 6. Individual Disconnects  | No  |

| 201.5 Notes / Features     |   |
|----------------------------|---|
| 1. Include: Aluminum Wheel |   |
| 2. Back Draft Dampers      | K |





| 201.6 Operating Condition | s     | Terra State | 1-19  | (日本)于这些  |            |      |       | southe setting |        | 100   |          |      |
|---------------------------|-------|-------------|-------|----------|------------|------|-------|----------------|--------|-------|----------|------|
| Operating Condition       | Usage | CFM         | SP    | (in.H20) | Wheel RPM  | Fan  | BHP   | Static Eff     | Watts  | Hz    | FEG      | FEI  |
|                           | (%)   | CFIN        | Input | Adjusted | wheel RPIN | Each | Total | Static Ell     | vvalis |       | % O.P.   | L CI |
| Condition 1               | 100   | 8,000       | 4.00  | 4.00     | 1,964      | 7.30 | -     | 69.1 %         | 5,940  | 66.95 | FEG80 0% | 1.37 |



**PF09** 

TEMTHOL

NORTEK. AIR SOLUTIONS

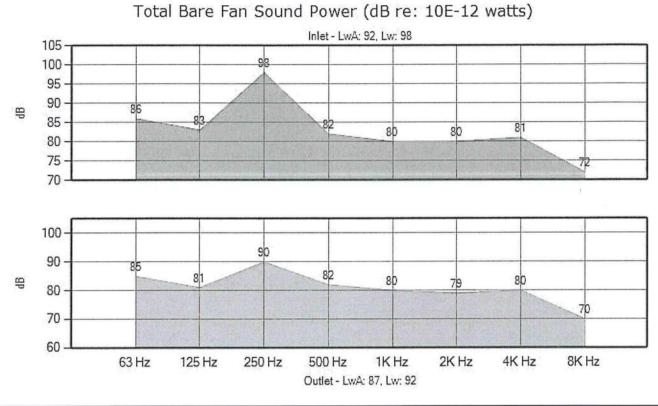


Preliminary

#### Project Name: Schmitt Elementary

Unit Tag: AHU - 4

201 Plenum Fan 2 (Supply) : FAN2 : Box C (Continued)



| 201.7 Bare Fan Sound Power ( | dB re: 10E-1 | 2 watts | )   |     | Section 1 | -  |    | 3 - |    | Marine H |    |
|------------------------------|--------------|---------|-----|-----|-----------|----|----|-----|----|----------|----|
| Operating Condition          | 1.1.1.1      | 63      | 125 | 250 | 500       | 1k | 2k | 4k  | 8k | LwA      | Lw |
|                              | Inlet        | 86      | 83  | 98  | 82        | 80 | 80 | 81  | 72 | 92       | 98 |
| Condition 1                  | Outlet       | 85      | 81  | 90  | 82        | 80 | 79 | 80  | 70 | 87       | 92 |

PF(0.9)



TEMTROL

| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

## Coils

Design Assistant



Coils

Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

300 Chilled Water Coil 1 : HW1/CW1 : Box D

5WC - 6 - 30 x 44 x 5 - 10 AL

| 300.1 Coil Layout         | And Charles How of | Service and the service of the servi |             | Sector R |
|---------------------------|--------------------|--|-------------|----------|
| 1. Coil Hand              | Left               | 6. Rack Style  | None        |          |
| 2. Configuration          | Single             | 7. Rack Finish   | None        |          |
| 3. Connection Orientation | Straight           | 8. Blankoff Material   | 16Ga 304 SS |          |
| 4. Connection Material    | Red Brass          | 9. Blankoff Finish   | None        |          |
| 5. Connection Type        | MPT                |  |             |          |

| 300.2 Construction | on                    |                  |                     |                   | 日間は「読む」「自己」の言語          |
|--------------------|-----------------------|------------------|---------------------|-------------------|-------------------------|
| 1. Quantity        | 2                     | 8. Stand Height  | 1 in                | 14. Casing        | 16Ga 304 SS             |
| 2. Serpentine      | 0.8333333             | Tube Detail      | I - Primary Surface | 15. Coating       | None                    |
| 3. Fin Height      | 30.000 in             | 9. Material      | Copper              | Fin Detail -      | Secondary Surface       |
| 4. Fin Length      | 44.000 in             | 10. O.D. x Wall  | 0.625 x 0.025 in    | 16. Material      | Aluminum                |
| 5. Rows            | 5                     | 11. Spacing      | 1.500 x 1.299 in    | 17. Thickness     | 0.010 in                |
| 6. Fins per Inch   | 10                    | 12. Internal     | Smooth              | 10 Configuration  | Corrugated, Waffle with |
| 7. Face Area       | 18.33 ft <sup>2</sup> | 13. Return Bends | 0.035 in            | 18. Configuration | Straight Edge           |

#### Single Bank, Left Hand, 2 per unit

5WC - 6 - 30 x 44 x 5 - 10 AL

| No. of Land | Supply / Retu | Irn Connections |           |              | State State       |                   |
|-------------|---------------|-----------------|-----------|--------------|-------------------|-------------------|
| Quantity    | Туре          | Pipe Size       | Material  | Туре         | Vent Location     | Drain Location    |
| 2           | MPT           | 1.5 in          | Red Brass | 0.125 in FPT | Return Connection | Supply Connection |

| 300.3 Condition 1         |            |                          |               |
|---------------------------|------------|--------------------------|---------------|
| Entering                  |            | Leaving                  |               |
| 1. Actual Airflow         | 8,000 ACFM | 10. Total Capacity       | 317.8 MBH     |
| 2. Standard Airflow       | 7,841 SCFM | 11. Sensible Capacity    | 225.6 MBH     |
| 3. Elevation              | 39 ft      | 12. Actual Face Velocity | 436.36 ft/min |
| 4. Entering Air DB        | 80.0 °F    | 13. Leaving Air DB       | 53.9 °F       |
| 5. Entering Air WB        | 67.0 °F    | 14. Leaving Air WB       | 53.7 °F       |
| 6. Fluid Type             | Water      | 15.APD                   | 0.58 in.H20   |
| 7. Entering Fluid Temp    | 44.0 °F    | 16.Leaving Fluid Temp    | 54.0 °F       |
| 8. Fluid Flow Rate        | 63.3 GPM   | 17. Fluid Velocity       | 2.27 ft/s     |
| 9. Fluid Fouling Internal | 0.0000     | 18. Fluid Pressure Drop  | 4.43 ft.H20   |

Notes:

1. Coil is NOT certified by AHRI

2. Odd tubes in Circuiting

3. Chilled water velocity is below recommended minimum of 2.5 fps

#### 300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Coil is directly connected to the downstream side of Hot Water Coil 1.

3. Top and bottom casing flange height is 1.000 in.

4. SCFM is corrected for Elevation and EDB.

5. Coils to be pressure tested at 315 PSI

6. Total operating weight is 594 lb.

7. Total fluid volume is 13.1 Gal.



Coils

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 4

301 Hot Water Coil 1 : HW1/CW1 : Box D

5WC - 4 - 30 x 44 x 1 - 6 AL

5WC - 4 - 30 x 44 x 1 - 6 AL

| 301.1 Coil Layout         |           |                      |             | Children and |
|---------------------------|-----------|----------------------|-------------|--------------|
| 1. Coil Hand              | Left      | 6. Rack Style        | None        |              |
| 2. Configuration          | Single    | 7. Rack Finish       | None        |              |
| 3. Connection Orientation | Straight  | 8. Blankoff Material | 16Ga 304 SS |              |
| 4. Connection Material    | Red Brass | 9. Blankoff Finish   | None        |              |
| 5. Connection Type        | MPT       |                      |             |              |

| 301.2 Construction | on                    |                  |                     |                   | A Start Band Katha AL   |
|--------------------|-----------------------|------------------|---------------------|-------------------|-------------------------|
| 1. Quantity        | 2                     | 8. Stand Height  | 1 in                | 14. Casing        | 16Ga 304 SS             |
| 2. Serpentine      | 0.25                  | Tube Detai       | I - Primary Surface | 15. Coating       | None                    |
| 3. Fin Height      | 30.000 in             | 9. Material      | Copper              | Fin Detail -      | Secondary Surface       |
| 4. Fin Length      | 44.000 in             | 10. O.D. x Wall  | 0.625 x 0.025 in    | 16. Material      | Aluminum                |
| 5. Rows            | 1                     | 11. Spacing      | 1.500 x 1.299 in    | 17. Thickness     | 0.010 in                |
| 6. Fins per Inch   | 6                     | 12. Internal     | Smooth              | 19 Configuration  | Corrugated, Waffle with |
| 7. Face Area       | 18.33 ft <sup>2</sup> | 13. Return Bends | 0.035 in            | 18. Configuration | Straight Edge           |

#### Single Bank, Left Hand, 2 per unit

Supply / Return Connections Vent and Drain Quantity Pipe Size Vent Location Drain Location Туре Material Type MPT 1.25 in Red Brass 0.125 in FPT **Return Connection** Supply Connection 2

| Entering                  |            |                          | Leaving       |
|---------------------------|------------|--------------------------|---------------|
| 1. Actual Airflow         | 8,000 ACFM |                          |               |
| 2. Standard Airflow       | 8,468 SCFM | 9. Sensible Capacity     | 204.9 MBH     |
| 3. Elevation              | 39 ft      | 10. Actual Face Velocity | 436.36 ft/min |
| 4. Entering Air DB        | 40.0 °F    | 11. Leaving Air DB       | 62.3 °F       |
| 5. Fluid Type             | Water      | 12.APD                   | 0.05 in.H20   |
| 6. Entering Fluid Temp    | 180.0 °F   | 13. Leaving Fluid Temp   | 140.0 °F      |
| 7. Fluid Flow Rate        | 10.5 GPM   | 14. Fluid Velocity       | 1.20 ft/s     |
| 8. Fluid Fouling Internal | 0.0000     | 15. Fluid Pressure Drop  | 0.45 ft.H20   |

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

#### 301.4 Notes / Features

- 1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179
- 2. Coil is directly connected to the upstream side of Chilled Water Coil 1.
- 3. Top and bottom casing flange height is 1.000 in.
- 4. SCFM is corrected for Elevation and EDB.
- 5. Coils to be pressure tested at 315 PSI
- 6. Total operating weight is 194 lb.

7. Total fluid volume is 3.1 Gal.



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

# Components



### Preliminary

Components Quote #: 24-0139-004

#### Project Name: Schmitt Elementary

#### Unit Tag: AHU - 4

500 Filter 2 : FILT2 : Box C

| 1. Loading  | Upstream Face Load  | 7. Bank Size                 | 48.063 in W x 60.000 in H   |
|---|---|------------------------------|-----------------------------|
| 2. Frame Material                                     | Galvanized  | 8. Qty / set & Frame Size 1  | (4) 24 in x 24 in           |
| 3. Frame Finish                                       | None  | 9. Qty / set & Frame Size 2  | (2) 12 in x 24 in           |
| 4. Filter Clips                                       | (24) C-79-5   | 10.Qty / set & Frame Size 3  |                             |
| 5. Blankoff / Rack Material                           | 16Ga Galv   | 11. Qty / set & Frame Size 4 |                             |
| 6. Blankoff / Rack Finish                             | None  |                              |                             |
| 500.2 Pre Filter                                      |   |                              |                             |
| 1. Filter Depth                                       | 2.000 in  | 4. Number of Sets            | 3                           |
| 2. Efficiency   | MERV 8  | 5. Max Face Velocity         | 400.00 ft/min at 8,000 ACFM |
| 3. Manufacturer                                       | American Air Filter   | 6. Model                     | PerfectPleat SC             |
|   |   |                              |                             |
| 500 3 Pressure Gage Speci                             | ifications - Gage 2   |                              |                             |
| 500.3 Pressure Gage Speci<br>1. Manufacturer          |   | 3. Options                   | Hinged Cover                |
|   | ifications - Gage 2<br>Dwyer<br>Magnehelic 2002 (0-2" w.c.) | 3. Options<br>4. Quantity    | Hinged Cover<br>1           |
| 1. Manufacturer                                       | Dwyer   |                              |                             |
| Manufacturer     Model / Range     S00.4 Final Filter | Dwyer   |                              |                             |
| 1. Manufacturer<br>2. Model / Range                   | Dwyer<br>Magnehelic 2002 (0-2" w.c.)                        | 4. Quantity                  | 1                           |



## Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

Quote #: 24-0139-004

#### 600 OSA Opening : OSA : Box B : Near Side 600.1 Opening Construction 1. Description Outside Air 4. Shape Rectangle 2. Max CFM 8,000 ACFM 5. Max APD 0.14 in.H20 41.5 W x 55.5 H in 3. Size 600.2 Damper Specifications No 1. Manufacturer 6. Jackshaft Ruskin 569.94 ft/min Ruskin CD 50 (Aluminum) 7. Max Face Velocity 2. Model 38,500 in (Blade Direction) x 8. Torque 98 lb-in

| 3. Size              | 52.500 in  | 9. End Switches | No |  |
|----------------------|------------|-----------------|----|--|
| 4. Blade Config      | Parallel   |                 |    |  |
| 5. Blade Orientation | Horizontal |                 |    |  |
| Notes:               |            |                 |    |  |

1. Ordered with 1.500 in. Front Flange

| 600.3 Damper Actuator | the design of the second second |        |
|-----------------------|---------------------------------|--------|
| 1. Manufacturer       | 6. Qty                          | 1      |
| 2. Model              | 7. Floor Mounted                |        |
| 3. Direction          | 8. Furnished By                 | Others |
| 4. Location           | 9. Mounted By                   | Others |
| 5. Type               | 10. Wiring By                   | Others |

| 600.4 Louver Specifications |                    |   |  |  |
|-----------------------------|--------------------|---|--|--|
| 1. Manufacturer             | Ruskin             | 4. Options                                |  |  |
| 2. Model                    | EME6625D           | 5. Max Face Velocity 500.16 ft/min        |  |  |
| 3. Size                     | 41.5 W x 55.5 H in | 6. Max Free Area Velocity 1,457.09 ft/min |  |  |

#### 600.5 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

#### 601 SA Opening : SA : Box E : Roof

| 601.1 Opening Const<br>1. Description | Supply Air     | 4. Shape        | Rectangle       | 2. |
|---------------------------------------|----------------|-----------------|-----------------|----|
| 2. Max CFM                            | 8,000 ACFM     | 5. Max APD      | 0.48 in.H20     |    |
| 3. Size                               | 41 W x 14 H in | 6. Max Velocity | 2,007.00 ft/min |    |

#### 602 RA Opening : RA : Box A : Roof

| 602.1 Opening Construction |                |                 |                 |  |
|----------------------------|----------------|-----------------|-----------------|--|
| 1. Description             | Return Air     | 4. Shape        | Rectangle       |  |
| 2. Max CFM                 | 8,000 ACFM     | 5. Max APD      | 0.00 in.H20     |  |
| 3. Size                    | 41 W x 14 H in | 6. Max Velocity | 2,007.00 ft/min |  |

#### 603 EXH Opening : EXH : Box B : Far Side

| 603.1 Opening Construction |                    |            |             |  |
|----------------------------|--------------------|------------|-------------|--|
| 1. Description             | Exhaust Air        | 4. Shape   | Rectangle   |  |
| 2. Max CFM                 | 8,000 ACFM         | 5. Max APD | 0.18 in.H20 |  |
| 3. Size                    | 41.5 W x 55.5 H in |            |             |  |



### Components Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

603 EXH Opening : EXH : Box B : Far Side (Continued)

| 1. Manufacturer      | Ruskin                        | 6. Jackshaft         | No            |  |
|----------------------|-------------------------------|----------------------|---------------|--|
| 2. Model             | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 569.94 ft/min |  |
| 0.0:                 | 38.500 in (Blade Direction) x | 8. Torque            | 70 lb-in      |  |
| 3. Size              | 52.500 in                     | 9. End Switches      | No            |  |
| 4. Blade Config      | Opposed                       |                      |               |  |
| 5. Blade Orientation | Horizontal                    |                      |               |  |

1. Ordered with 1.500 in. Front Flange

| 603.3 Damper Actuator |                  | And the second |
|-----------------------|------------------|--|
| 1. Manufacturer       | 6. Qty           | 1  |
| 2. Model              | 7. Floor Mounted |  |
| 3. Direction          | 8. Furnished By  | Others   |
| 4. Location           | 9. Mounted By    | Others   |
| 5. Type               | 10. Wiring By    | Others   |

| 603.4 Louver Specific | ations             |                           |                 |
|-----------------------|--------------------|---------------------------|-----------------|
| 1. Manufacturer       | Ruskin             | 4. Options                |                 |
| 2. Model              | EME6625D           | 5. Max Face Velocity      | 500.16 ft/min   |
| 3. Size               | 41.5 W x 55.5 H in | 6. Max Free Area Velocity | 1,457.09 ft/min |

#### 603.5 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

#### 604 RA Opening : RA : Box B : Internal Wall

| 604.1 Opening Cons | truction           | Card bolinich unit that einer the | interaction built and the second second |
|--------------------|--------------------|-----------------------------------|---|
| 1. Description     | Return Air         | 4. Shape                          | Rectangle                               |
| 2. Max CFM         | 8,000 ACFM         | 5. Max APD                        | 0.02 in.H20                             |
| 3. Size            | 16.5 W x 62.5 H in |                                   |   |

| <ol> <li>Manufacturer</li> </ol> | Ruskin                        | 6. Jackshaft         | No              |
|----------------------------------|-------------------------------|----------------------|-----------------|
| 2. Model                         | Ruskin CD 50 (Aluminum)       | 7. Max Face Velocity | 1,117.09 ft/min |
|                                  | 16.500 in (Blade Direction) x | 8. Torque            | 50 lb-in        |
| 3. Size                          | 62.500 in                     | 9. End Switches      | No              |
| 4. Blade Config                  | Parallel                      |                      |                 |
| 5. Blade Orientation             | Horizontal                    |                      |                 |

1. Ordered with 1.500 in. Front Flange

| 604.3 Damper Actuator | Victory Letters  | et at a with the | - 2 - S |
|-----------------------|------------------|------------------|---------|
| 1. Manufacturer       | 6. Qty           | 1                |         |
| 2. Model              | 7. Floor Mounted |                  |         |
| 3. Direction          | 8. Furnished By  | Others           |         |
| 4. Location           | 9. Mounted By    | Others           | 1.22    |
| 5. Type               | 10. Wiring By    | Others           |         |

#### 604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others



| PROJECT  | Schmitt Elementary |
|----------|--------------------|
| QUOTE #  | 24-0139-004        |
| UNIT TAG | AHU - 4            |
| QUANTITY | 1                  |

## Electrical

Date/Revision: 2024-02-19 / Rev. P1

Design Assistant 10.0.0 / 2.0.3.1



### Preliminary

Electrical

Quote #: 24-0139-004

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 4

| 700 ElecPanel 5 : F                                    | AN1 : Bo   | ox A : Far Sid                | e            | NELS NORTHER              |         |                             |            |              |
|--|--|-------------------------------|--------------|---------------------------|---------|-----------------------------|------------|--------------|
| 700.1 Electrical Service Inf                           | ormation   |                               | Sec. 304     | 200-2 <b>211</b> -02      | (a) (b) |                             | 54. MAR    |              |
| 1. Volt/Phase/Hertz                                    | 460/3/60   |                               | 3.           | Provides power to         |         | Supply Fan                  |            |              |
| 2. MCA   | 6.4  |                               |              |                           |         |                             |            |              |
| 1. For electrical loads see el                         | ectrical draw  | ings                          |              |                           |         |                             |            |              |
| 700.2 Construction                                     |  |                               |              |                           |         |                             |            |              |
| 1. Enclosure Type                                      | Junction E   | ox                            | 4.           | Mounting                  |         | Surface mo                  | unt on un  | iit          |
| 2. Type  | NEMA 4 In  | ndoor / Outdoor               | 5.           | Finish                    |         | Polyester R                 | esin (Sar  | ndstone)     |
| 3. Size  |  | ical drawings                 |              |                           |         |                             |            |              |
| 700.3 Options  |  |                               |              |                           | ST 100  |                             |            | 19122 (53.5) |
| 1. Cooling Fan   | No   |                               | 5.           | Floor Stand               |         | No                          |            |              |
| 2. Filter Kit  | No   |                               | 6.           | Control Transform         | ner     | No                          |            |              |
| <ol> <li>Keypad or Touch screen<br/>on Door</li> </ol> | the statement of the st |                               |              | Window Kit                |         | No                          |            |              |
| 4. Power Transformer                                   | No   |                               |              |                           |         |                             |            |              |
| 701 ElecPanel 7 : F                                    | AN2 : Bo   | ox C : Far Sid                | le           |                           |         |                             |            |              |
| 701.1 Electrical Service Int                           | ormation   |                               |              |                           |         |                             |            | 9            |
| 1. Volt/Phase/Hertz                                    | 460/3/60   |                               | 3.           | Provides power to         | )       | Supply Fan                  |            |              |
| 2. MCA   |  |                               |              |                           |         |                             |            |              |
| 1. For electrical loads see el                         |  | vinas                         |              |                           |         |                             |            |              |
|  |  |                               |              |                           |         |                             |            |              |
| 701.2 Construction                                     |  | CONTRACTOR OF STREET          |              |                           |         | 0.1                         |            |              |
| 1. Enclosure Type                                      | Junction E   |                               |              | . Mounting<br>. Finish    |         | Surface mo                  |            |              |
| 2. Type  |  | ndoor / Outdoor               | 5.           | FINISN                    |         | Polyester Resin (Sandstone) |            |              |
| 3. Size  | See electr   | ical drawings                 |              |                           |         |                             |            |              |
| 701.3 Options  |  | Mar Warts                     | New Training |                           | 1       | Steel and                   |            | Diff Value   |
| 1. Cooling Fan   | No   |                               | 5.           | 5. Floor Stand No         |         |                             |            |              |
| 2. Filter Kit  | No   |                               | 6.           | 6. Control Transformer No |         |                             |            |              |
| <ol> <li>Keypad or Touch screen<br/>on Door</li> </ol> | No   |                               | 7.           | Window Kit                |         | No                          |            |              |
| 4. Power Transformer                                   | No   |                               |              |                           |         |                             |            |              |
| 702 Lighting Circu                                     | it   |                               |              |                           | 100     |                             |            |              |
| 702.1 Electrical Service In                            | formation  |                               | WENGAL       | CYOCARC LAST              |         | Alexand                     | 1 al na    |              |
| 1. Volt/Phase/Hertz                                    | 120/1/60   |                               | 3.           | Provides power to         | )       | ElecSwitch                  | 1, Lightin | Ig           |
| 2. MCA   | 0.0  |                               |              |                           |         |                             |            |              |
| 1. For electrical loads see e                          | ectrical drav  | vings                         |              |                           |         |                             |            |              |
| 702.2 Switches / Outlets                               | Set of the set   | LT. 7990.151                  | 2000125      |                           | LAN E.S | 1251 3. 11                  | 1000       | 30.000.000   |
| Name Box   | Section  | Туре                          | Mounted      | Illum. Switch             | Time    | r Cover                     | GFCI       | MOCP         |
| ElecSwitch 1 A   | PL1  | Light Switch /<br>120V Outlet | External     | No                        | None    | e Yes                       | Yes        | 20.0 Amp     |
| <ul> <li>Switch / Outlet is connected</li> </ul>       | d to service.  |                               |              |                           |         |                             |            |              |
| 702.3 Lighting Types and                               | Quantities   |                               |              |                           |         | -                           |            | 1.1.1.1.1    |
| (7) Vapor Proof 14W LED                                | quantities   |                               | No. Dr. Com  |                           |         |                             |            |              |
| (i) tupor i toor itti LLD                              |  |                               |              |                           |         |                             |            |              |



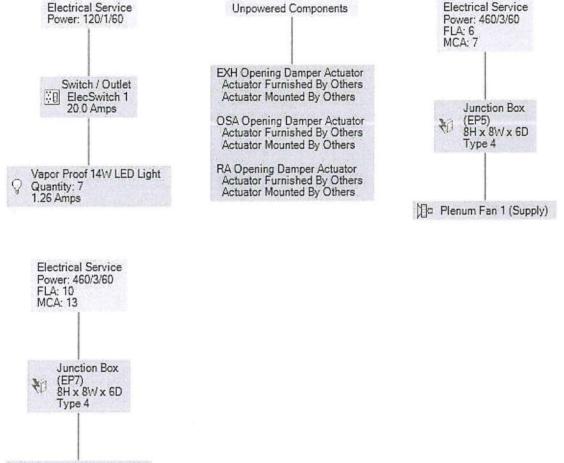
Electrical

Quote #: 24-0139-004

### Project Name: Schmitt Elementary

Unit Tag: AHU - 4

#### 703 Electrical Layout Diagram



Plenum Fan 2 (Supply)



TEMTROL PROJECT Sch

PROJECT Schmitt Elementary QUOTE # 24-0139-004 UNIT TAG AHU - 4 QUANTITY 1

# Unit Data

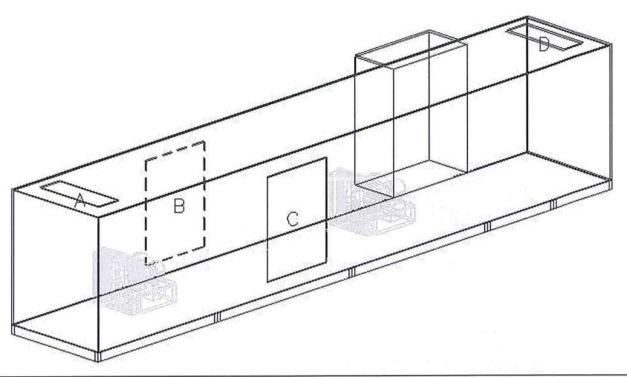


Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

900 Air Handler Sound Power Projection



| Openings - Condition 1 |             | Octave Band Freq. Sound Power (db re: 10E-12 watts) |                      |    |     |     |     | watts) |    |    |    |     |    |
|------------------------|-------------|---|----------------------|----|-----|-----|-----|--------|----|----|----|-----|----|
| Tag                    | Title       | Cabinet Liner                                       | Area                 | 63 | 125 | 250 | 500 | 1k     | 2k | 4k | 8k | LwA | Lw |
| A <sup>2</sup>         | RA Opening  | Solid   | 4.0 ft <sup>2</sup>  | 82 | 82  | 93  | 77  | 76     | 79 | 77 | 65 | 88  | 94 |
| В                      | EXH Opening | Solid   | 16.0 ft <sup>2</sup> | 83 | 80  | 93  | 81  | 79     | 80 | 80 | 68 | 88  | 94 |
| С                      | OSA Opening | Solid   | 16.0 ft <sup>2</sup> | 84 | 82  | 96  | 81  | 79     | 79 | 80 | 71 | 90  | 97 |
| D <sup>2</sup>         | SA Opening  | Solid   | 4.0 ft <sup>2</sup>  | 82 | 79  | 88  | 79  | 77     | 76 | 76 | 66 | 85  | 90 |
| Casing Radiated        |             | 84  | 77                   | 83 | 71  | 71  | 62  | 61     | 51 | 78 | 87 |     |    |
|                        | Floor       | Radiated  |                      | 74 | 71  | 74  | 46  | 43     | 37 | 35 | 35 | 67  | 78 |

900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



Project Name: Schmitt Elementary

Unit Tag: AHU - 4

Quote #: 24-0139-004

GT

901 Center of Gravity

| Size (Inches) |       | Operating Maight (Doundo) | Center of Gravity (Inches)                    |        |       |       |
|---------------|-------|---------------------------|---|--------|-------|-------|
| Х             | Y     | Z                         | <ul> <li>Operating Weight (Pounds)</li> </ul> | Х      | Y     | Z     |
| 362.00        | 87.00 | 77.50                     | 10,512  | 194.00 | 34.00 | 37.00 |

193

#### 901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.



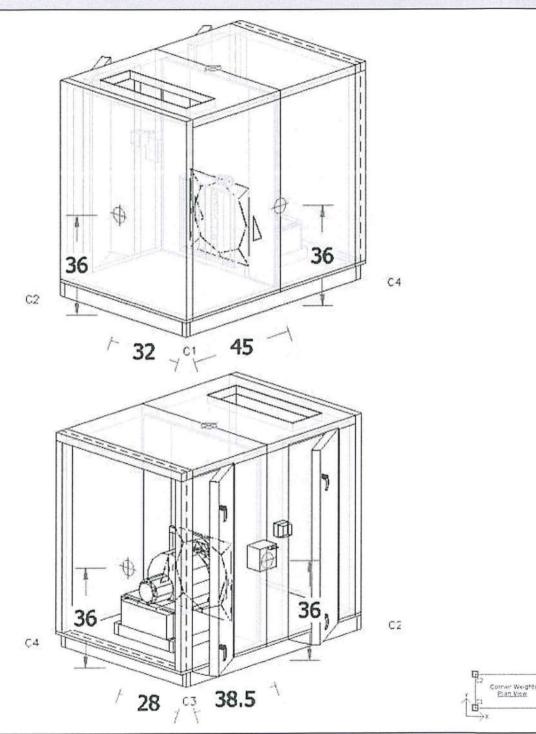
Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

#### 901.2 Box A



|       | Size (Inches) | 10 - 10 - 14 - 14 | Objectes (Maisht (Deurda) | State and state | Corner Weig | hts (Pounds) |     |
|-------|---------------|-------------------|---------------------------|-----------------|-------------|--------------|-----|
| Х     | Y             | Z                 | Shipping Weight (Pounds)  | C1              | C2          | C3           | C4  |
| 83.50 | 60.00         | 77.50             | 2,096                     | 451             | 515         | 603          | 527 |

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0/2.0.3.1

Ð

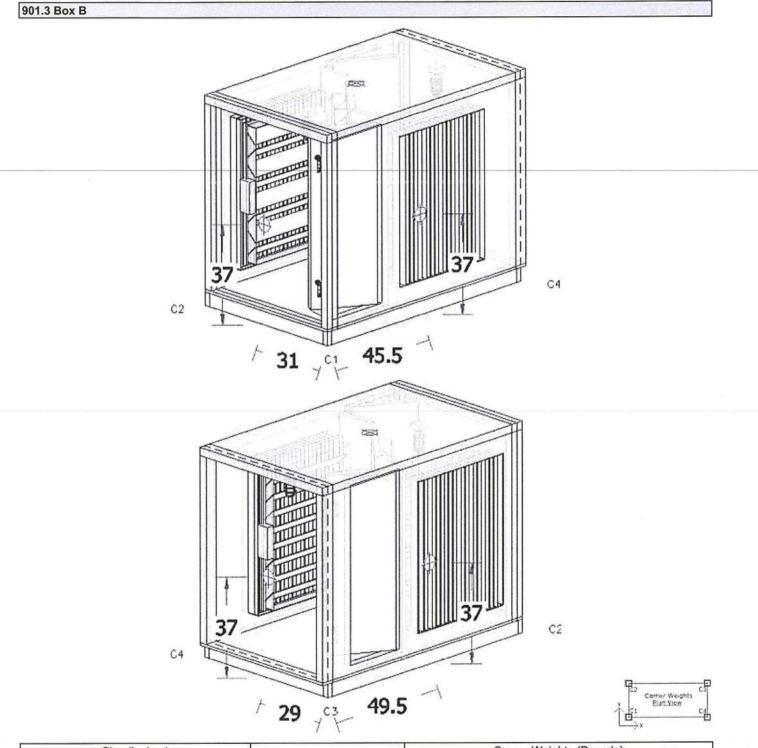


Quote #: 24-0139-004

Project Name: Schmitt Elementary

#### Unit Tag: AHU - 4

901 Center of Gravity (Continued)



|       | Size (Inches) |       | Inches) Chipping Weight (Pounds)             |     | Corner Weights (Pounds) |     |     |  |
|-------|---------------|-------|--|-----|-------------------------|-----|-----|--|
| Х     | Y             | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1  | C2                      | C3  | C4  |  |
| 95.00 | 60.00         | 77.50 | 2,463  | 620 | 663                     | 610 | 570 |  |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant 10.0.0 / 2.0.3.1



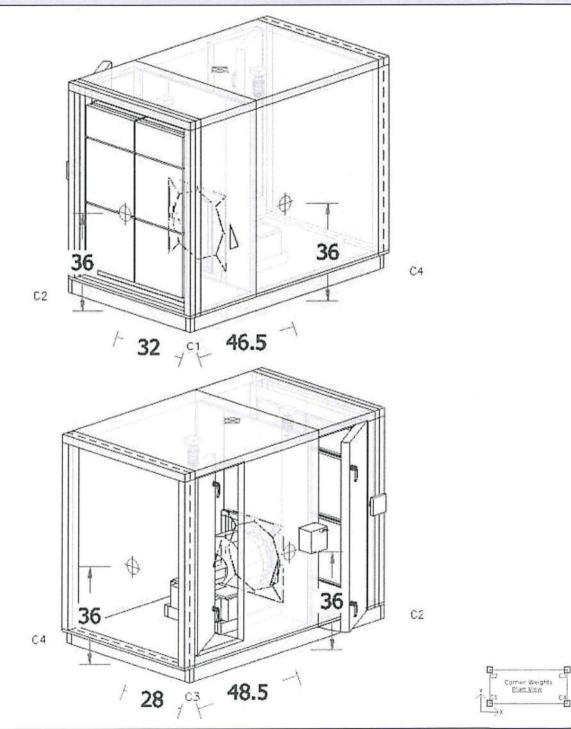
Unit Data Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

#### 901.4 Box C



| Size (Inches) |       |       | Objectes Weight (Deutsda)                    | Corner Weights (Pounds) |     |     |     |
|---------------|-------|-------|--|-------------------------|-----|-----|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1                      | C2  | C3  | C4  |
| 95.00         | 60.00 | 77.50 | 2,525  | 614                     | 702 | 645 | 564 |

O Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0/2.0.3.1

NORTEK. AIR SOLUTIONS

Preliminary

Unit Data Quote #: 24-0139-004

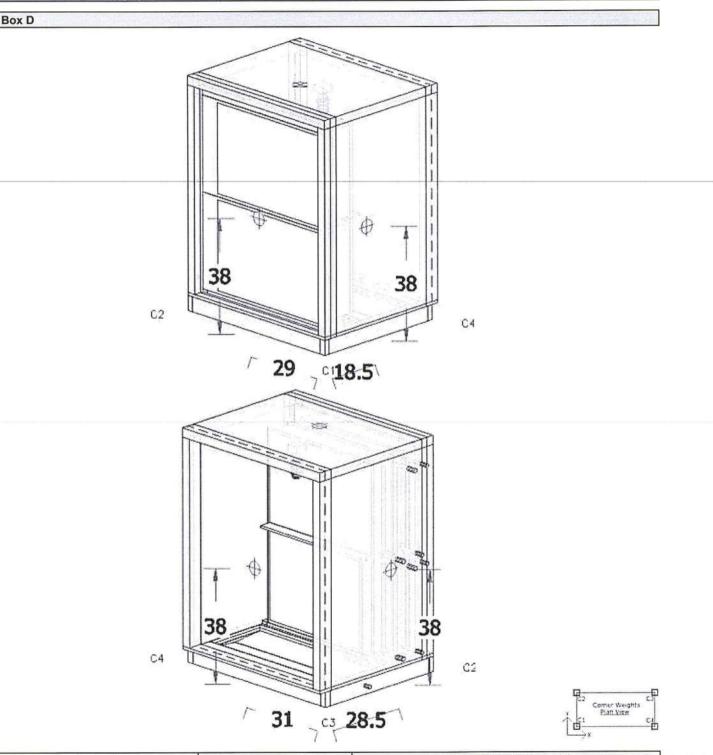
Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

901.5 Box D



| Size (Inches) |       |       | Objector Micheld (Bounds)  | Corner Weights (Pounds) |     |     |     |
|---------------|-------|-------|----------------------------|-------------------------|-----|-----|-----|
| Х             | Y     | Z     | - Shipping Weight (Pounds) | C1                      | C2  | C3  | C4  |
| 47.00         | 60.00 | 77.50 | 1,675                      | 525                     | 491 | 319 | 341 |

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

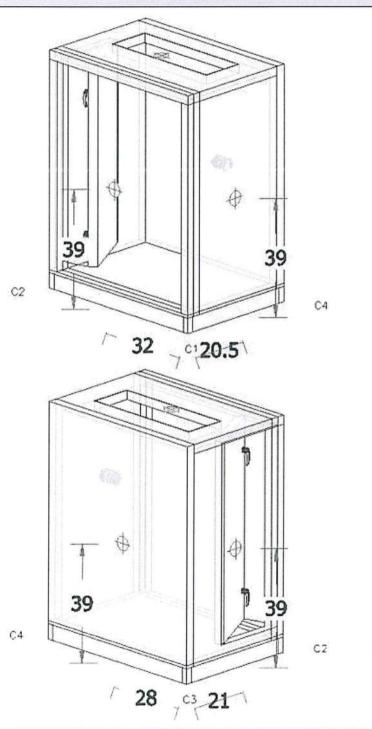


Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

#### 901.6 Box E



| 102  |                | d  |
|------|----------------|----|
|      | Corner Weights |    |
| A la | CUMUNISM       | C4 |

| Size (Inches) |       |       | Chinning Waight (Doundo) | Corner Weights (Pounds) |     |     |     |
|---------------|-------|-------|--------------------------|-------------------------|-----|-----|-----|
| Х             | Y     | Z     | Shipping Weight (Pounds) | C1                      | C2  | C3  | C4  |
| 41.50         | 60.00 | 77.50 | 1,043                    | 246                     | 281 | 275 | 240 |

O Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

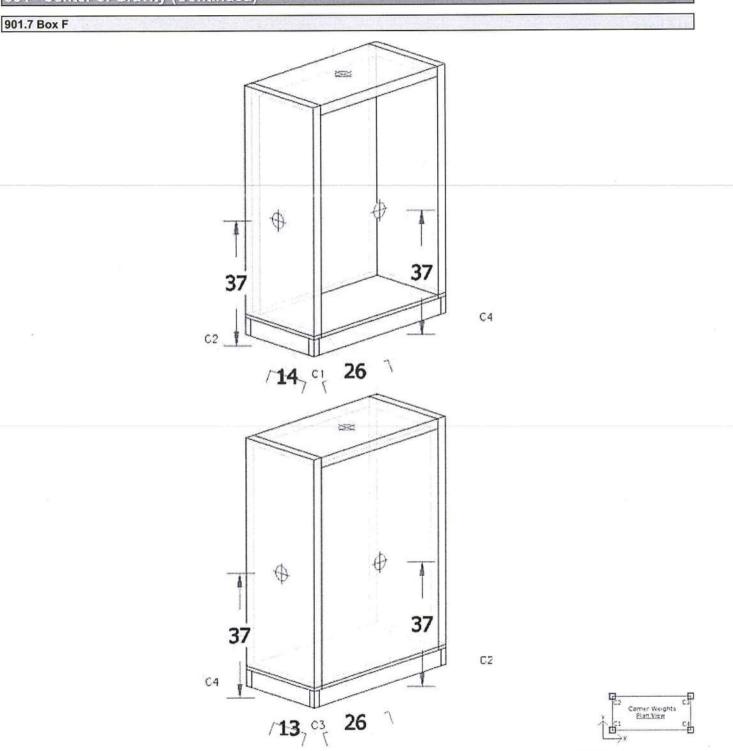
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AIR SOLUTIONS TEMTROL

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)



| Size (Inches) |       |       | Objection Matcheld (Devender)                | Corner Weights (Pounds) |     |     |     |
|---------------|-------|-------|--|-------------------------|-----|-----|-----|
| Х             | Y     | Z     | <ul> <li>Shipping Weight (Pounds)</li> </ul> | C1                      | C2  | C3  | C4  |
| 52.00         | 27.00 | 74.00 | 682  | 164                     | 177 | 177 | 164 |

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Unit Data

Quote #: 24-0139-004



PROJECT Schmitt Elementary QUOTE # 24-0139

# Terms and Conditions

#### NORTEK AIR SOLUTIONS TERMS AND CONDITIONS OF SALE

These Terms and Conditions of Sale and the non-conflicting provisions in Seller's quotation, acknowledgement or invoice from Seller form the parties' agreement (the "Agreement") which governs all sales of any products ("Products") and services ("Services") from Nortek Air Solutions, LLC or its North American affiliates or business units selling Products and Services ("Seller") to purchaser ("Buyer"). Seller disclaims any Buyer terms that are different or conflicting. Any agreed exceptions to these terms and conditions shall be made in writing and attached to this Agreement.

1. Prices and Taxes. Prices are those in effect when Seller accepts a purchase order. Seller may accept or reject purchase orders in its sole discretion. All sales are subject to prior credit approval. Buyer must pay or promptly reimburse. Seller for any sales, use or any other local, state, provincial or federal taxes arising from the sale or delivery of the Products and Services or provide an exemption certificate.

2. Payment. Unless otherwise agreed in writing. Buyer shall pay invoices, without setoff, NET 30 days from invoice date in the currency specified on the invoice. If Buyer fails to make payment (a) Buyer shall pay all of Seller's costs arising from Buyer's failure to pay according to terms including attorneys' fees, commissions, and product cancellation costs. (b) Seller may accelerate all Buyer payments, and (c) Seller may terminate or suspend further performance under the Agreement and any other agreements with Buyer. Past due amounts are subject to service charges of 11/2% per month (or the maximum amount permitted by law) and, if credit terms have been agreed to in writing, Seller reserves the right to charge lawful rates of interest upon any outstanding balance, whether past due or not. If in Seller's judgment, reasonable grounds for insecurity arise concerning Buyer's ability to make payment when due, Seller may demand additional satisfactory security or adequate assurance of due performance, may refuse delivery except for cash, including payment for all goods previously delivered under the contract, or may stop delivery or reclaim the Products, in addition to all other remedies provided for by law. Buyer's purchase order, and any shipping or delivery instructions, shall each constitute the Buyer's separate written representation that it is solvent.

3. Changes. Seller may revise prices, dates of delivery, and warranties upon acceptance of requests by Buyer for modifications to Products or Services. If Buyer rejects proposed changes to made-to-order Products deemed necessary by Seller to conform to the applicable specification, Seller is relieved of its obligation to conform to such specification.

4. Shipment and Delivery. Deliveries of Products, risk of loss and title (subject to reservation of Seller's security interest) pass to Buyer FCA Seller's facility (Incoterms 2010) for domestic shipments or EXW Seller's Facility (Incoterms 2010) for international shipments. Buyer is responsible for all demurrage or detention charges. Title to any software provided with Products remains with Seller or its supplier. Any claims for shortages or transit damages must be submitted directly to the carrier. All shipping dates are

approximate and not guaranteed. Seller reserves the right to make partial shipments. Seller is not bound to tender delivery of any Products for which Buyer has not provided shipping instructions. If shipment of Products is postponed or delayed by Buyer for any reason, including a Force Majeure Event (see Section 9), Seller may move Products to storage at Buyer's cost and risk of loss, the Products then deemed delivered. Products may not be returned except with the prior written consent of Seller, which may include additional terms.

5. Inspection and Acceptance. Unless otherwise agreed in writing signed by Seller, Buyer shall inspect Products upon receipt at the first delivery destination. Buyer's failure to inspect Products and give written notice to Seller of rejection within ten (10) days after receipt at first delivery destination shall constitute Buyer's irrevocable acceptance of Products delivered. Notice of any latent defect must be delivered to Seller in writing within ten (10) days of start-up.

6. Limited Warranty. Unless otherwise agreed in writing signed by Seller:

(a) Seller warrants: (i) All Products (excluding software and spare parts) manufactured by Seller will conform to the specifications and submittals provided by Seller and will be free of defects in material and workmanship ("Defects") for 12 months following start-up or 18 months following ship date, whichever occurs first, under normal use and regular service and maintenance, if installed and maintained pursuant to Seller's instructions. Extended warranties, if offered, may be purchased for an additional fee at the time of Product sale. For warranty purposes, start-up occurs when the equipment (or any portion thereof) is started for operation regardless of when the building may be ready for operation. (Per submittal, certain DX Products require Seller or its authorized Agent to perform start up or Product warranties are void. Any Seller required completed start-up form shall be delivered to Seller within six (6) months from shipment, or start-up will be deemed to have occurred on the ship date.) . With the exception of OEM parts that may provide a longer pass-through warranty term from the third party manufacturer, new spare parts will be free of Defects for 3 months following ship date. Refer to New Spare Parts Warranty Policy.

. Buyer must notify Seller in writing of any Defect promptly upon discovery and if such notification occurs within the applicable warranty period, Seller shall remedy such Defect by, at Seller's option, adjustment, repair or replacement of Products or any affected portion of Products, or providing a refund of the portion of the purchase price attributable to the defective portion of the Product. Buyer must grant Seller access to the premises at which Products are located at all reasonable times so that Seller may evaluate the Defect and make repairs or replacements on site. Repaired or replaced portions of Products are warranted until the later of the end of the original warranty period applicable to the defective portion of Products repaired or replaced or 30 days following the completion of the repair or ship date of the replacement parts; and (ii) Services will be of workmanlike quality. If Buyer notifies Seller in writing of any nonconforming

Services within 30 days after Services are completed, Seller shall re-perform, if able to be cured, those Services directly affected by such failure, at its sole expense. Buyer's sole remedy for such nonconforming Services is limited to Seller's cost of re-performing the Services.

b) Buver is responsible for disassembly, removal and re-assembly or otherwise of non-Seller supplied products. Seller does not warrant and shall have no obligation with respect to any Products or parts that: (i) have been repaired or altered by someone other than Seller or Seller's authorized representative; (ii) have been subject to misuse, abuse, neglect, intentional misconduct, accident, Buyer or third party negligence, unauthorized modification or alteration, use beyond rated capacity, improper grounding, voltage irregularities, a Force Majeure Event, or improper, or a lack of, maintenance; (iii) are comprised of materials provided by, or designed pursuant to instructions from, Buyer; (iv) have failed due to ordinary wear and tear; or (v) have been exposed to adverse operating or environmental conditions, including but not limited to contaminants, corrosive agents, chemicals or minerals, (vi) were manufactured or furnished by others and which are not an integral part of a product manufactured by Selleror (vii) have not been fully paid for by Buyer. Refrigerants, fluids, oils and expendable items such as filters are not covered by this Limited Warranty. If Seller has relied upon any specifications, information, representations or descriptions of operating conditions or other data supplied by Buyer or its agents to Seller in the selection or design of Products, and actual operating conditions or other conditions differ, any warranties or other provisions contained herein that are affected by such conditions will be null and void.

(c) Buyer is solely responsible for determining the fitness and suitability of Products for the use contemplated by Buyer. Buyer shall ensure that (i) the Products are used only for the purposes and in the manner for which they were designed and supplied, (ii) all persons likely to use or come into contact with the Products receive appropriate training and copies of applicable instructions and documentation supplied by Seller, (iii) all third parties who use or may be affected by or rely upon the Products are given full and clear warning of any hazards associated with them or limitations of their effectiveness and that safe working practices are adopted and complied with, (iv) any warning notices displayed on the Products are supplied agrees not to remove or obscure such warning notices.

(d) If Software is Licensed: To the extent available and authorized by the Third Party Software supplier, Seller hereby assigns to Buyer any warranties provided by Third Party Software providers. Seller provides Third Party Software "as is," without any warranties, express or implied. Seller has no obligation for Third Party Software failures.

(e) THE WARRANTIES SET FORTH IN THIS SECTION 6 ARE SELLER'S SOLE AND EXCLUSIVE WARRANTIES WITH RESPECT TO PRODUCTS. SOFTWARE AND SERVICES, AND ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY AGAINST INFRINGEMENT; AND ALL IMPLIED WARRANTIES OF

> NAS Terms and Conditions of Sale Issue date January 1, 2016 rev 02 February 24, 2017

MERCHANTABILITY, USAGE OF TRADE, AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to Buyer. SELLER DOES NOT WARRANT THAT THE OPERATION OF SOFTWARE WILL BE UNINTERRUPTED OR ERROR FREE, OR THAT ANY DEFECT OR MALFUNCTION IN THE SOFTWARE IS CORRECTABLE OR WILL BE CORRECTED. THE REMEDIES PROVIDED IN THIS SECTION 6 ARE BUYER'S EXCLUSIVE REMEDIES FOR ANY AND ALL CLAIMS ARISING FROM OR RELATED TO PRODUCTS AND SERVICES. All warranty claims must be received by Seller in writing on or before the end of the applicable warranty period.

7. Limitation of Remedy and Liability. Unless otherwise provided by law, Seller's total liability under the Agreement, whether in law, equity, contract, infringement, negligence, strict liability or other otherwise, shall not exceed the price paid by Buyer under the Agreement for the Product or Services giving rise to the claim. Under no circumstances shall Seller be liable for special, incidental, indirect, delay or liquidated, punitive or consequential damages for any reason. "Consequential damages" includes, without limitation. loss of anticipated profits: business interruption; loss of use, revenue, reputation or data; costs incurred, including without limitation, costs for capital, fuel or power; loss or damage to property or equipment; and environmental clean-up. Any action arising under or relating to the Agreement, (whether based in law, equity, contract, infringement, negligence, strict liability, other tort or otherwise), must be commenced with one year from the date the claim arose. Seller assumes no obligation or liability for technical advice given or not given, or results obtained. Seller has set its prices and entered into the Agreement in reliance upon the limitations of liability and other terms and conditions specified herein, which allocate the risk between Buyer and Seller and form a basis of this bargain between the parties.

8. Indemnity. (a) Seller shall defend at its own expense any action brought against Buyer by a third party alleging that Products (the "Indemnified Items") directly infringe any United States patent, and shall pay all damages and costs finally awarded in any such action, provided that Buyer has promptly notified Seller in writing of the action, delivers all necessary assistance in the defense of the action, and permits Seller to control all aspects of the defense, including settlement rights. Seller has no obligation with regard to: (i) any non-Seller originated Products, software or processes, including Indemnified Items or processes which have been modified or combined with non-Seller products or processes: (ii) any Indemnified Items or process provided pursuant to a design provided by or on behalf of Buyer; (iii) any patent issued after the date of the Agreement; (iv) any action settled or otherwise terminated without the prior written consent of Seller; or (v) any claims arising from, or related to, Seller's adherence to any specifications or instructions provided by or on behalf of Buyer.

(b) Buyer shall indemnify, defend and hold harmless Seller and its affiliates and their respective shareholders, officers, directors, members, agents and employees against all expenses, costs (including reasonable attorneys' fees), claims, demands, damages, liability, suits or the like arising in connection with or out of (i) any breach by Buyer of the Agreement; or (ii) Seller's adherence to specifications or use of material furnished or specified by Buyer or any of its agents. Additionally, if all or a part of the Indemnified Items sold hereunder are incorporated into an improvement to real property owned by a third party, Buyer will indemnify, defend and hold harmless Seller and its affiliates and their respective shareholders, officers, directors, members, agents and employees against any claim by such third party or its guests or invitees to the extent that the claim seeks to recover damages or otherwise to invoke any legal or equitable remedies beyond those for which Seller has agreed to be liable hereunder.

9. Excuse of Performance. Seller has no liability for nonperformance due to acts of God; acts of Buyer; war (declared or undeclared); terrorism or other criminal conduct: fire: flood; weather; sabotage; strikes, or labor or civil disturbances; governmental requests, restrictions, laws, regulations, orders, omissions or actions; unavailability of. or delays in, utilities or transportation; default of suppliers or other inability to obtain necessary materials; embargoes or any other events or causes beyond Seller's reasonable control (each, a "Force Majeure Event"). Deliveries or other performance may be suspended for an appropriate period of time or canceled by Seller upon notice to Buyer in the event of a Force Majeure Event, but the remainder of the Agreement will otherwise remain unaffected as a result of the Force Majeure Event. If Seller determines that its ability to perform the Services or the total demand for Products is hindered, limited or made impracticable due to a Force Majeure Event, Seller may delay delivery of Products and Services and allocate its available supply of Products (without obligation to acquire other supplies of any such Products) among its customers on such basis as Seller determines to be equitable without liability for any failure of performance. In the event of a Force Majeure Event, the date of delivery will be extended by a period equal to the delay plus a reasonable time to train and resume production, and the price will be equitably adjusted to compensate Seller for such delay and related costs and expenses.

10. Laws and Regulations. Compliance with any federal, state, provincial or local laws, regulations and directives ("Laws") relating to the installation, operation or use of Products or Services is the sole responsibility of Buyer. In addition, Buyer shall comply with all applicable laws, rules, regulations and orders related to anti-bribery or anticorruption legislation (including without limitation the U.S. Foreign Corrupt Practices Act of 1977 and all national, state, provincial or territorial anti-bribery and anti-corruption statutes). The Agreement is governed by the laws of the State where Seller's principal office is located, without giving effect to its conflict of laws rules, and the parties consent to the exclusive jurisdiction and venue of the federal and state courts located in such State. The application of the United Nations Convention on Contracts for the International Sale of Goods does not apply.

**11. Drawings**. Any designs, manufacturing drawings or other information submitted to Buyer remain the exclusive property of Seller. Buyer shall not, without Seller's prior

NAS Terms and Conditions of Sale Issue date January 1, 2016 rev 02 February 24, 2017 written consent, copy such information or disclose such information to a third party.

**12. Cancellation.** Buyer may cancel orders only upon reasonable advance written notice and upon payment to Seller of cancellation charges which include: (a) all costs and expenses incurred by Seller, and (b) a fixed sum of 10% of the total price of Products to compensate for disruption in scheduling, planned production and other indirect and administrative costs.

**13. Export Control.** Certain Products may be subject to export controls under the Laws of the US and other countries. Buyer must comply with all such Laws and not export, re-export or transfer, directly or indirectly, any such Product except in compliance with such Laws.

14. Assignment. Buyer acknowledges that Seller, through its affiliates (i.e., parents, subsidiaries and other affiliates) offers expanded manufacturing capability, and Seller may in its sole discretion manufacture, supply or deliver from any location or source, including any of its affiliates, any Products or Services and such manufacture, supply or delivery from such affiliates shall also be subject to these Terms and Conditions.

15. General Provisions. The Agreement constitutes the entire agreement between the parties and supersedes all other communications between the parties relating to the subject matter of the Agreement. Seller's guotations are offers that may only be accepted in full. No conditions, usage or trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, reject, or supplement the Agreement shall be binding unless made in writing and signed by both parties, expressly and specifically referencing the Agreement, and no modification or objection shall be caused by Seller's receipt, acknowledgment, or acceptance of purchase orders, shipping instruction forms, or other documentation containing different or additional terms to those set forth herein. No waiver by either party with respect to any breach or default or of any right or remedy and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver is expressed in writing signed by both parties, specifically referencing the Agreement. Nothing in the Agreement confers upon any person other than Seller and Buyer any right or remedy under or by reason of this Agreement. All typographical or clerical errors made by Seller in any quotation, acknowledgment or publication are subject to correction.

#### BUYER accepts these terms and conditions:

## INDIANA THERMAL SOLUTIONS



## Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew **Consolidated School Corporation** 

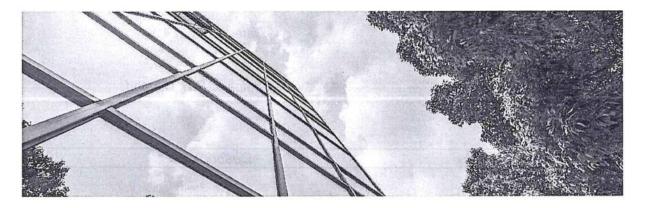
| Qty   | Tag       | Description                                      |
|-------|-----------|--|
| 1     | RTU 1     | Daikin Applied Packaged Rooftop Units            |
|       |           |  |
|       |           |  |
|       |           |  |
|       |           |  |
|       |           |  |
| Submi | itted by: | Drawings in this submittal package describe the  |
|       | Rockey    | equipment we propose to furnish for this project |

Indiana Thermal Solutions

and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com





## SUBMITTAL DATA

Job Name

Schmitt Elementary HVAC Replacement

For

Sold To

Prepared For

Customer PO#

Prepared By

Justin Holcomb

Date

2/16/2024

Technical Data Sheet - RTU-1

Rebel Drawings - RTU-1

3 7

#### **Technical Data Sheet**

| Job Information  |                        | Technical Data Sheet |   |
|------------------|------------------------|----------------------|---|
| Job Name         | Schmitt Elementary HVA | C Replacement        |   |
| Date             | 2/16/2024              |                      |   |
| Submitted By     | Justin Holcomb         |                      |   |
| Software Version | 12.43                  |                      | * |
| Unit Tag         | RTU-1                  |                      |   |

#### Unit Overview

| Model Number Voltage<br>V/Hz/Phase | Voltage            | Design Cooling | AHRIB60 Stan | dard Efficiency | ASHRAE 90.1-2019              |
|------------------------------------|--------------------|----------------|--------------|-----------------|-------------------------------|
|                                    | Capacity<br>Btu/hr | EER            | IEER         | Compliant       |                               |
| DPS010A                            | 460/60/3           | 119300         | 12.1         | 18.8            | ASHRAE 90.1-2019<br>compliant |

| Model Number:    | DPS010A  |  |
|------------------|--|--|
| Model Type:      | Cooling  |  |
| Heat Type:       | Gas  |  |
| Hot Gas Reheat:  | MHGRH with Combination Space Temperature and Humidity Sensor |  |
| Energy Recovery: | None   |  |
| Application:     | Variable Air Volume, Single Zone (Mixed Air or 100% OA)      |  |
| Controls:        | Microtech III  |  |
| Outside Air:     | 0-100% Economizer with Comparative Enthalpy Control          |  |
| Altitude:        | 0 ft   |  |
| Approval         | cETLus   |  |

|                          | Dimensions and   | Weight  |                                  |
|--------------------------|--|---------|----------------------------------|
| Length                   | Height*  | Width   | Weight*                          |
| 91.0 in                  | 56.8 in  | 96.5 in | 2388 ю                           |
|                          | Corner Wei   | zhts    |                                  |
| L1                       | L2   | L3      | L4                               |
| 373 lb                   | 339 lb   | 797 lb  | 879 іь                           |
|                          | Constructi   | on      |                                  |
| Exterior                 | Insulation and Liners  | Air     | Opening Location                 |
|                          |  | Return  | Supply                           |
| Painted Galvanized Steel | 1" Injected Foam, R-7,<br>Galvanized Steel Liner                     | Bottom  | Bottom                           |
| trical                   |  |         |                                  |
| Unit FLA                 | MCA  | MROPD   | SCCR                             |
| 21.0 A                   | 23.0 A   | 30 A    | 65 kAIC                          |
| Note:                    | Use only copper supply wires with a terminals must be made with copp |         | conductor rating. Connections to |
| urn/Outside/Exhaust Air  |  |         |                                  |

| Return/Outside/Exhaust Air                           |                         |                   |  |  |  |
|--|-------------------------|-------------------|--|--|--|
| Outside Air Option                                   |                         |                   |  |  |  |
| Туре   | Damper Pressure Drop    | Exhaust Air Type  |  |  |  |
| 90.1 and California Title 24 Compliant<br>Economizer | 0.07 inH <sub>2</sub> O | Barometric Relief |  |  |  |

#### **Technical Data Sheet**

| Filter Section  |                          |           |               |   |  |
|---|--------------------------|-----------|---------------|---|--|
| A.C. Strength of the out  |                          | Physical  |               | and the second se |  |
| Туре  | Quantity / Size          | Face Area | Face Velocity | Air Pressure Drop   |  |
| COMBO RACK - 2"<br>MERV8 filters from<br>actory & blank 4" rack | 6 / 18 in x 24 in x 2 in | 18.0 ft²  | 166.7 ft/min  | 0.05  |  |

|                    |                  |                 |                | Physical             | P. 32          | The second second |                         |                       |
|--------------------|------------------|-----------------|----------------|----------------------|----------------|-------------------|-------------------------|-----------------------|
| Coil Type          | Refrigerant Type | Fins per Inch   | Rows           | Face Area            | a Face V       | /elocity          | Air Pressure<br>drop    | Drain Pan<br>Material |
| Cu Tube/ Al<br>Fin | R410A            | 15              | 4              | 15.4 ft <sup>2</sup> | 194.4          | 1 ft/min          | 0.17 inH <sub>2</sub> O | Stainless<br>Steel    |
|                    |                  |                 | Coolin         | ng Performance       | approved and   | usion le consti   |                         | 1. 31 50.3            |
|                    | Capacity         |                 |                | Indoor               | Air Temperatu  | re                |                         | Ambient air           |
| Total              | Sensible         | Moisture        | Ente           | ring                 |                | Leaving           |                         | Temperature           |
| Btu/hr             | Btu/hr           | Removal<br>lb/h | Dry Bulb<br>°F | Wet Bulb<br>°F       | Dry Bulb<br>°F | Wet Bulb<br>°F    | Dewpoint<br>°F          | ۴F                    |
| 119300             | 83828            | 30.7            | 80.0           | 67.0                 | 54.4           | 54.1              | 53.8                    | 95.0                  |

| Hot Gas Reheat Coil Section    |           |                         |                |                         |          |  |
|--------------------------------|-----------|-------------------------|----------------|-------------------------|----------|--|
| Туре                           | Face Area | Air Pressure Drop       | Total Capacity | Leaving Air Temperature |          |  |
|                                |           |                         |                | Dry Bulb                | Wet Bulb |  |
| Aluminum Tube<br>Micro-Channel | 14.6 ft²  | 0.04 inH <sub>2</sub> O | 50627 Btu/hr   | 70.0 °F                 | 59.9 °F  |  |

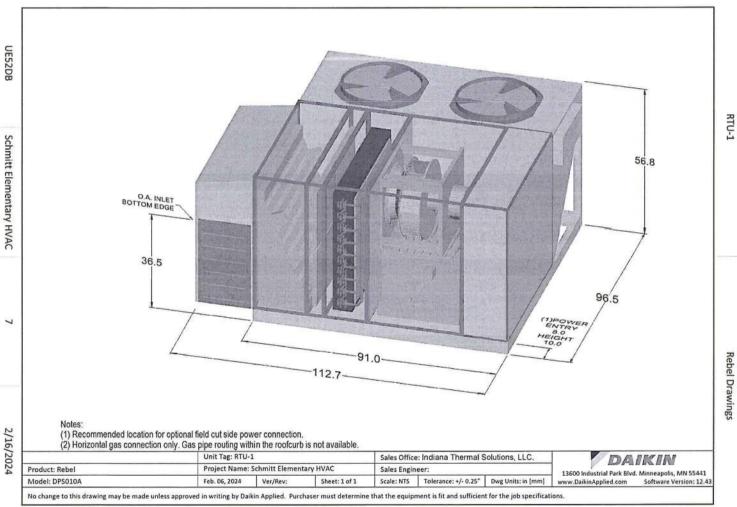
|           |                       | Fan         |                  |                           |                         |
|-----------|-----------------------|-------------|------------------|---------------------------|-------------------------|
| Туре      | Fan Wheel Diameter    | Fan Series  | Fan Isolation    | Total Input<br>Power (kW) | Fan Energ<br>Index (FEI |
| SWSI AF   | 18 in                 | Series II   | None             | 1.19404                   | 1.506                   |
| 0         |                       | Performance |                  |                           |                         |
| Airflow   | Total Static Pressure | Fan Speed   | Brake Horsepower | Altitude                  |                         |
| 3000 CFM  | 1.9 inH₂O             | 1539 rpm    | 1.37 HP          | 0 f                       | ť                       |
|           | Motor                 |             |                  | Driv                      | /e                      |
| Туре      | Horsepower            | Efficiency  | FLA              | Туре                      |                         |
| ECM Motor | 8.0                   | Premium     | 6.8 A            | Direct Drive              |                         |

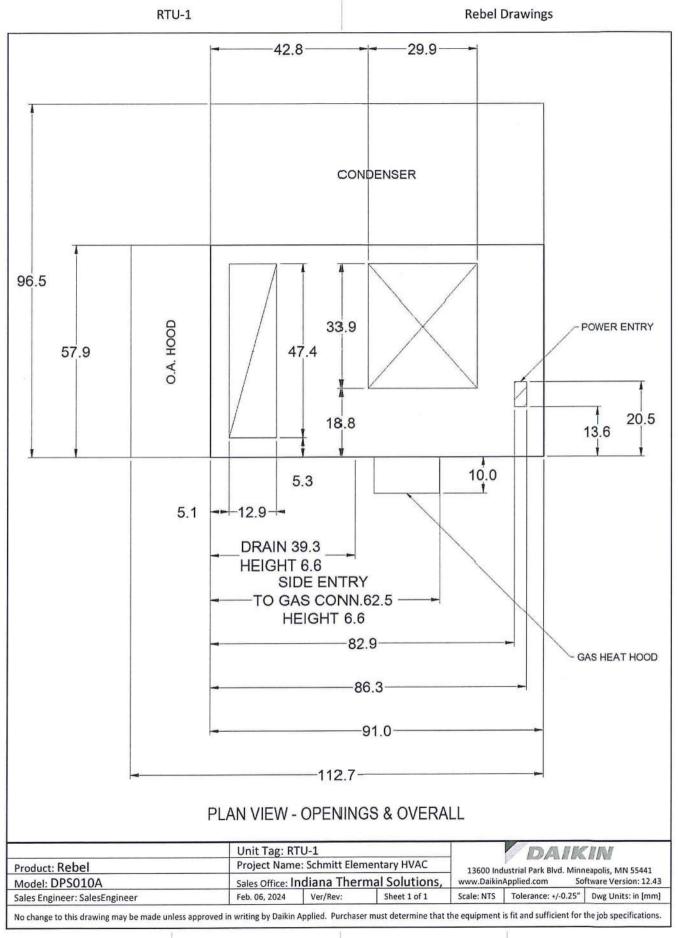
| s Heat Section |                       |               |         | The second second |                  | The set the set               | and the second second second |
|----------------|-----------------------|---------------|---------|-------------------|------------------|-------------------------------|------------------------------|
|                |                       |               | Phys    | ical              |                  |                               |                              |
| Airflow        | Max Allowat<br>Temp I |               | Size    | Conne             | ction (Qty) Size | Heat Ex                       | changer Material             |
| 3000 CFM       | 60.0                  | °F            | 200 MBH | (1) 0.75          | in. Female NPT   | Stai                          | nless Steel                  |
|                |                       |               | Perform | mance             |                  |                               |                              |
| Capacity       | Air Temperat          | ture Dry Bulb | Air Pre | essure Drop       | Gas Pr           | essure                        | Modulation                   |
| Btu/hr         | Entering<br>°F        | Leavin<br>°F  | ig i    | inH₂O             | Minimum<br>inH₂O | Maximum<br>inH <sub>2</sub> O |                              |
| 160000         | 60.0                  | 109.2         | 2       | 0.02              | 5                | 14                            | Modulating 5:<br>Turndown    |

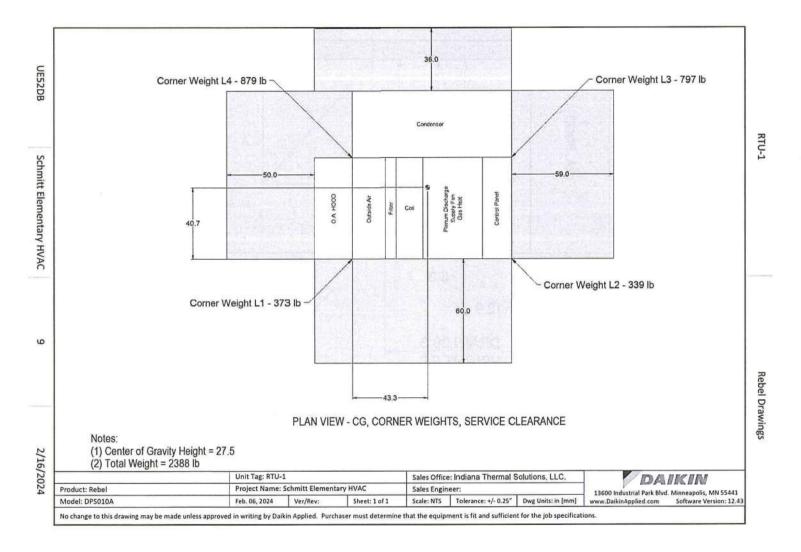
#### **Technical Data Sheet**

| nit Discharge Condi   | itions                   |  |                      |   |                             |  |
|---|--------------------------|--|----------------------|---|-----------------------------|--|
| and the second states of the second se | Contract Charles         | AirTemp  |                      | 1994 - 1995 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |                             |  |
| Motor Heat<br>Btu/hr  | Moisture Remov           | val Unit Leavin<br>°   |                      | Unit Leaving Wet Bulb<br>°F   | Unit Leaving Dewpoint<br>°F |  |
| 5532  | 30.7                     | 56   | .2                   | 54.7  | 53.8                        |  |
|   |                          | Minimum  | Airflows             |   |                             |  |
| N   | lotes: Refer to fan curv | ve for applicability of  | approximate airfle   | ows   |                             |  |
| ondensing Section   |                          |  |                      | - Charles and   |                             |  |
| Selection of the  | HER STREET, STORES       | Comp   | ressor               | and the second second second  |                             |  |
| Туре  | Quantity                 | Refrigerant Charge<br>Ib   | Total Power          | Capacity Control  | Compressor Isolation        |  |
| Inverter Scroll +<br>Fixed Scroll   | 2                        | 25.8   | 8.12 kW              | Mod Control with<br>Inverter Compressor   | Rubber in Shear             |  |
|   |                          | Compress   | sor Amps:            |   |                             |  |
|   | Compressor 1             |  |                      | 4.5 A   |                             |  |
|   | Compressor 2             |  |                      | 7.9 A   |                             |  |
|   |                          | Conden   | ser Coil             |   |                             |  |
| Ту  | pe                       | Fins p   | er Inch              | Fin   | Material                    |  |
| Aluminum N  | Aicrochannel             | 23   |                      | Aluminum  |                             |  |
| Coil Optic  | ons: Vandal Guard        |  |                      |   |                             |  |
| A CARE STREAM   |                          | Condenser  | Fan Motors           |   | and the second second       |  |
|   | Number of Motors*        |  |                      | Full Load Current (Total  | )                           |  |
|   | 2                        |  |                      | 1.8 A   |                             |  |
|   | AH                       | IRI 360 Certified Data at A  | HRI 360 Standard Con | ditions   |                             |  |
| Net Ca  | apacity                  | EER  | IEER                 | and a state of the second state of the second state of the  | RAE 90.1                    |  |
| 121000  | 0 Btu/hr                 | 12.1   | 18.8                 | ASHRAE 90.1   | -2019 compliant             |  |
| nternal Pressure Dre  | op Calculation           |  |                      |   |                             |  |
| External Stat   | tic Pressure:            |  | 1.50 i               | nH₂O  |                             |  |
|   | Filter:                  |  | 0.05 i               | nH₂O  |                             |  |
|   | Outside Air:             |  | 0.07 i               | nH₂O  |                             |  |
| DX Coil:  |                          |  | 0.17 i               | nH₂O  |                             |  |
| Hot Gas Reheat:   |                          | 0.04 inH <sub>2</sub> O  |                      |   |                             |  |
| Gas Heat:   |                          |  | 0.02 i               | nH₂O  |                             |  |
| Total Sta   | tic Pressure:            |  | 1.86 i               | nH₂O  |                             |  |
| ound  |                          |  |                      |   |                             |  |
|   |                          | A description of the second se | und Power (db)       |   |                             |  |
| Frequency 63  |                          | 250 Hz 500 H   |                      | 2 kHz 4 kH  |                             |  |
| Inlet 77  |                          | 83 78  |                      | 74 69   |                             |  |
| Discharge 77  |                          | 86 83  |                      | 80 77   |                             |  |
| Radiated* 85  | 5 85                     | 81 78  | 76                   | 71 64   | 57                          |  |

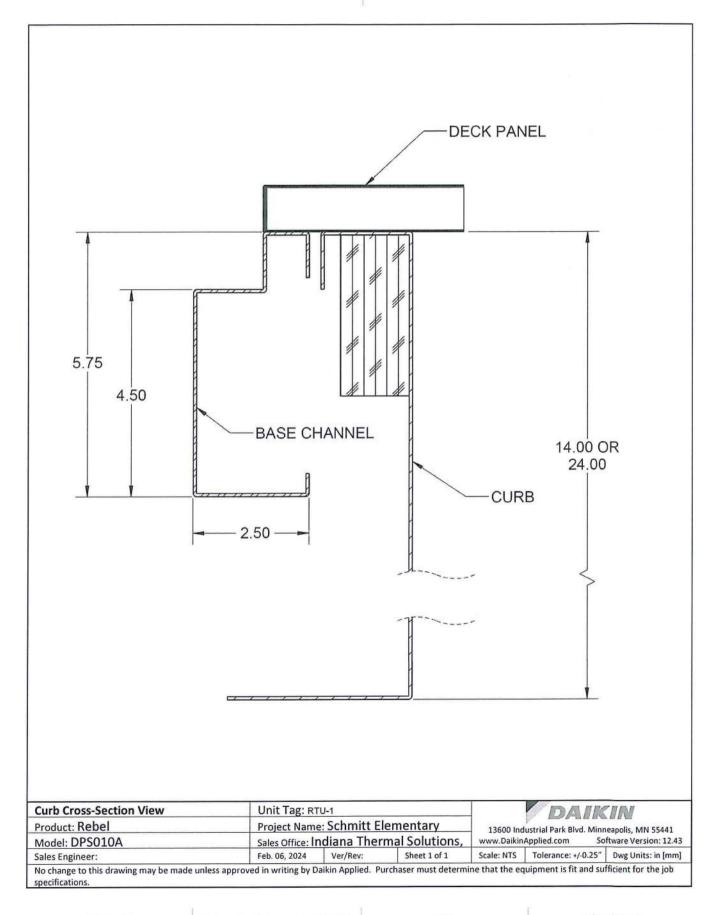
| options  |  |
|--|--|
|  | Unit   |
| Smoke Detectors:   | Return Air Smoke Detector  |
|  | Electrical   |
| Field Connection:  | Fused Disc: 65 kAIC - 208/230/460V: 22 kAIC 575V   |
| Powered Receptacle:  | Field powered 115V GFI outlet  |
| Power Options:   | Phase Failure Monitor  |
| Pris District And And  | Controls   |
| Communication Card:  | BACnet/MSTP card, Field installed  |
| actory Installed Sensors   |  |
| eaving Coil/Entering Fan Tempera                                 | ture Sensor  |
| uct High Limit Switch  |  |
| eturn Air Temperature Sensor                                     |  |
| ischarge Air Temperature sensor -                                | – Wired in unit, mounted in supply duct  |
| utside Air Temperature Sensor                                    |  |
| eturn Air Enthalpy Sensor  |  |
| utside Air Enthalpy Sensor                                       |  |
| irty Filter On/Off Switch  |  |
| upply Fan Air Proving Via Modbus                                 |  |
|  |  |
| Varranty   |  |
| Parts:   | Standard One Year  |
| Compressor:  | Additional Four Year, Five Year Total  |
| Gas Heat Exchanger:  | Extended Nine Year, Ten Year Total   |
| HRI Certification  |  |
| AHRI GERTIFIED.  |  |
| All equipmer   | nt is rated and certified in accordance with AHRI 360.   |
|  |  |
| otes   |  |
| Forklift slots to remove unit f<br>lifted onto curb per IOM inst | from a truck bed. The fork lift slots are not to be used to place unit on a roof curb. Unit is to be ructions. |
| ccessories   |  |
|  | Mandatory  |
| Part Number  | Description  |
| 090016710  | MT III Com Mod for Applied Rooftops, BACnet MS/TP  |
| 910191961  | Combo Digital Temp and Humidity Sensor w/Adj setpoint and tenent override                                      |
|  | Optional   |
|  |  |
| Part Number<br>910119532   | Description<br>24" Roof Curb, No ERW, Size 007 - 015   |











#### Overview

Smoke detectors are use to detect smoke in the return air stream, supply air stream, or both. A set of normaly closed contact will open in the presence of smoke. This can be used to shut down the RTU by either cutting power across the terminal of a thermostat controlled RTU or as a signal to DDC controlled RTU.



#### Features

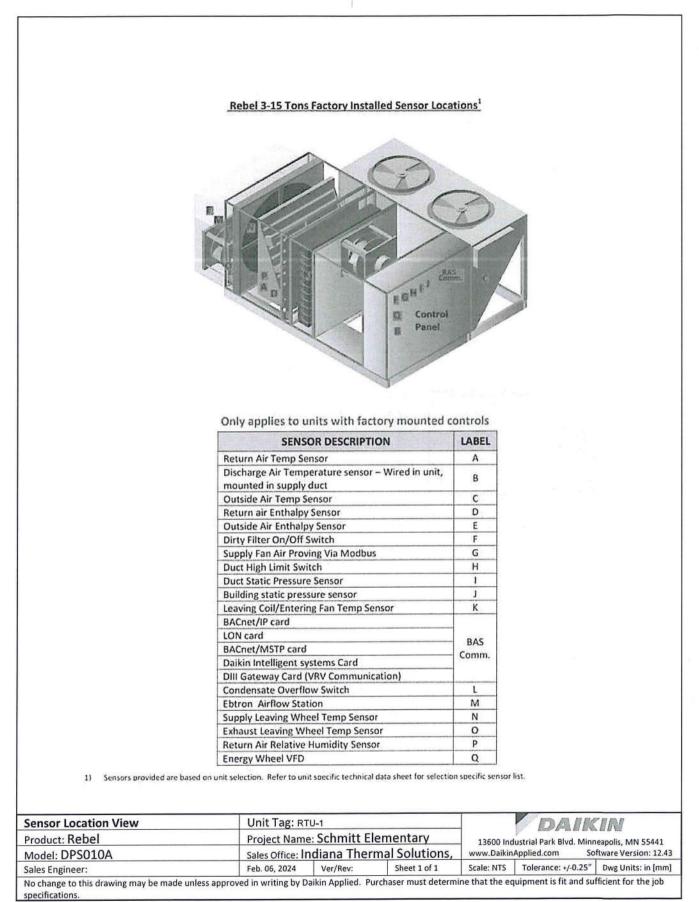
- Universal voltage: 24 VAC, 24 VDC, 115 VAC, or 230 VAC
- · Visual indication of power and alarm status
- Two alarm contacts and one trouble contact
- Interchangeable "plug-in" photoelectric or ionization heads
- Compatible with building automation and fire alarm systems
- · Dust filtering included in detector head
- Interconnect up to 30 detectors for common function

#### Specifications

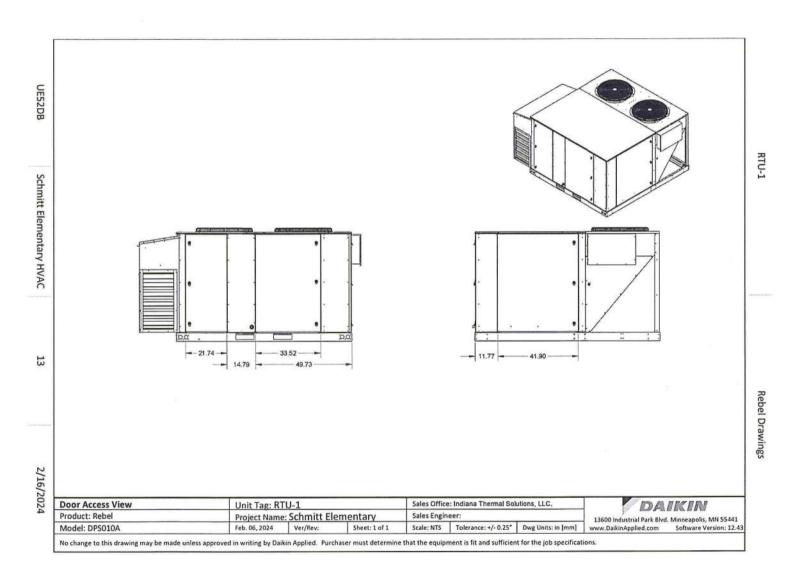
| Daikin Part Number    | 113126601   |
|-----------------------|---|
| Supply Voltage        | 24 VAC: @ 35 mA standby, 74 mA alarm;<br>24 VDC:@ 15 mA standby, 56 mA alarm;<br>115 VAC: @ 25 mA standby, 32 mA alarm;<br>230 VAC @ 12 mA standby, 16 mA alarm |
| Frequency             | 50/60 Hz  |
| Air Velocity          | 0-2000 fpm (0-10.2 mps)   |
| Radioactive Element   | For HS-100-N only Americium 241, 0.9 µCi  |
| Relay Output Alarm    | 1-SPDT, 10A, 115 VAC, resistive;<br>1-SPST-NO, 2A Trouble 1-SPST-NC, 10A, 115 VAC<br>resistive  |
| Wiring Terminations   | Solid or stranded, 12 to 22 AWG terminals   |
| Operating Humidity    | 0% to 85% RH non-condensing   |
| Operating Temperature | HS-100-N 32° to 158°F (0° to 70°C)  |
| Enclosure Rating      | White plastic, NEMA 1   |
| Dimensions            | 6" (Dia.) × 4.0"(H) (15.2 × 10.2 cm)  |

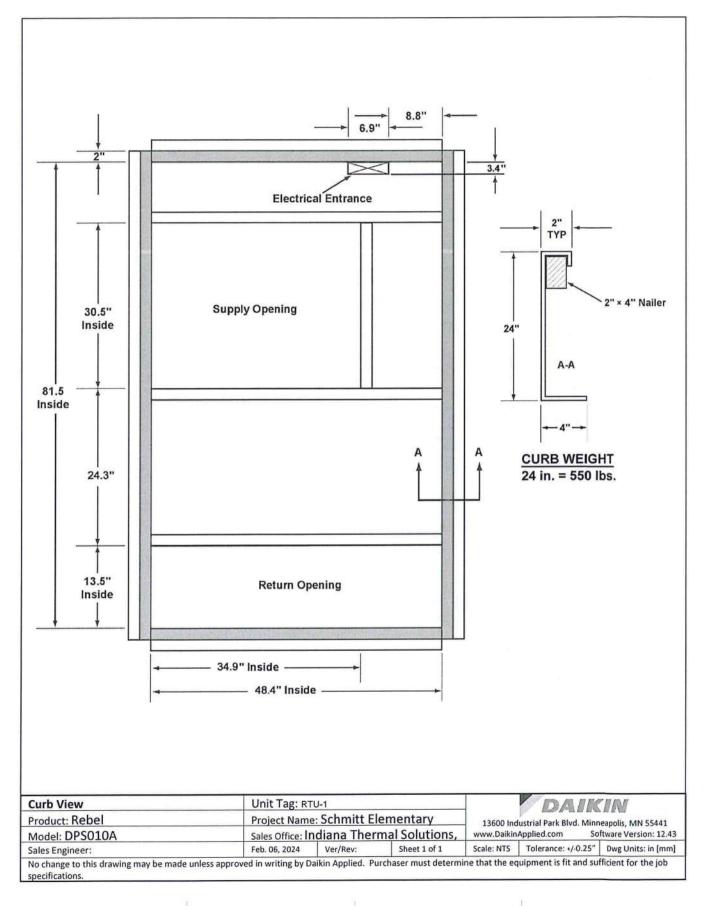
| Smoke Detector - 113126601 | Unit Tag: RT     | Unit Tag: RTU-1<br>Project Name: Schmitt Elementary<br>Sales Office: Indiana Thermal Solutions, |              |            | DAIKIN   |                    |  |  |  |
|----------------------------|------------------|---|--------------|------------|--|--------------------|--|--|--|
| Product: Rebel             | Project Name     |   |              |            | 13600 Industrial Park Blvd. Minneapolis, MN 5544 |                    |  |  |  |
| Model: DPS010A             | Sales Office: Ir |   |              |            | www.DaikinApplied.com Software Version: 12.4     |                    |  |  |  |
| Sales Engineer:            | Feb. 06, 2024    | Ver/Rev:  | Sheet 1 of 1 | Scale: NTS | Tolerance: +/-0.25"                              | Dwg Units: in [mm] |  |  |  |





12





#### Introduction

The space temperature and humidity sensor is designed to work with the  ${\rm MicroTech}^\oplus$  III unit controller to measure the space conditions.

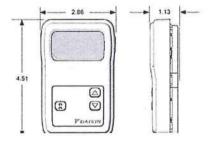
This device is not a traditional 7-day programmable thermostat. It does not provide a scheduling function. However, it does have a tenant override button to force the unit occupied outside of normal scheduled operation.

On CAV and single zone VAV systems, it acts as the control device for heating and cooling operations during occupied and unoccupied time periods.

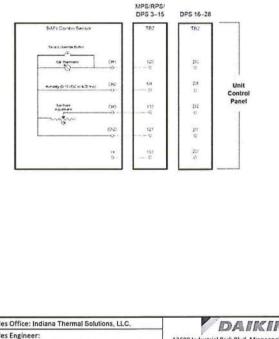
On duct pressure control VAV systems, it is not used as the occupied mode control device but it is used to control unoccupied operation.

The humidity sensing element is used to enable the dehumidification sequence in the RTU. This sequence overcools the air to remove moisture and then reheats it to avoid overcooling the space. The RTU must have a valid source of reheat for this to feature to be useful. Valid reheat sources include hot gas reheat, liquid subcooling, modulating natural gas heat, or modulating hot water/steam heat. Staged heating options are not functional in the MicroTech III for use in dehumidification.

The sensor features a large format LCD display that displays the space temperature and humidity. The display alternates between displaying humidity and temperature on a timed interval. Also included are setpoint adjustment keys to increase or decrease the temperature setpoint. Humidity setpoint is not adjustable through this device. Humidity setpoint must be changed through the MicroTech III. When the adjustment keys are first pressed, the display will show the current reading for the temperature setpoint. Further pressing of these keys will change that setpoint value.



| Daikin Part Number | 910191961                     |  |  |  |
|--------------------|-------------------------------|--|--|--|
| Pawer              | 18 to 30 VAC                  |  |  |  |
| Power Consumption  | 50 mA max. DC, 1.5 VA max. AC |  |  |  |
| Ambient            | 32"F to 122"F (1"C to 50"C)   |  |  |  |
|                    | 0% to 95% RH, Non-Cond.       |  |  |  |
| B                  | Setpoint Up/Down buttons      |  |  |  |
| Button Options     | Tenant Override button        |  |  |  |
| Wiring             | 16-22 AWG shielded            |  |  |  |



2/16/2024

UE52DB

Schmitt Elementary HVAC

15

| Space Temp/Humidity Sensor – 910191961 | Unit Tag: RTU-1 |               | Sales Office  | e: Indiana Thermal Sol | utions, LLC.         | DAIKIN             |                            |                         |
|--|-----------------|---------------|---------------|------------------------|----------------------|--------------------|----------------------------|-------------------------|
| Product: Rebel                         | Project Name    | : Schmitt Ele | ementary      | Sales Engin            | eer:                 |                    | 13600 Industrial Park Blvd |                         |
| Model: DPS010A                         | Feb. 06, 2024   | Ver/Rev:      | Sheet: 1 of 1 | Scale: NTS             | Tolerance: +/- 0.25" | Dwg Units: in [mm] |                            | Software Version: 12.43 |

Rebel Drawings

## INDIANA THERMAL SOLUTIONS



## **Submittal Data**

Project: L.C. Schmitt Elementary School

Date: 2/19/2024

Customer: Bartholomew Consolidated School Corporation

Engineer: R.E. Dimond

| Qty | Tag                | Description   |
|-----|--------------------|---|
| 7   | DXFC-A             | Daikin 0.5 ton Wall Mounted Unit                                  |
| 7   | DXFC-B             | Daikin 0.75 ton Wall Mounted Unit                                 |
| 12  | DXFC-C             | Daikin 1 ton Wall Mounted Unit                                    |
| 4   | DXFC-D             | Daikin 1.5 ton Wall Mounted Unit                                  |
| 5   | DXFC-1A,1B,2,3,4,5 | Daikin 1 ton Air Handling Unit (with Electric Heat) Daikin Energy |
| 5   | ERV-1-5            | Recovery Ventilator (Duct Electric Heaters field installed)       |
| 1   | OHRU-2             | Daikin 10 ton Emerion Outdoor Unit                                |
| 2   | OHRU-1, OHRU-3     | Daikin 12 ton Emerion Outdoor Unit                                |
| 2   | BSB-1B, BSB-3A     | 6 port Branch Selector Box  |
| 2   | BSB-1A, BSB-3B     | 8 port Branch Selector Box  |
| 1   | BSB-2              | 10 Port Branch Selector Box                                       |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |
|     |                    |   |

Submitted by:

Indiana Thermal Solutions

Drawings in this submittal package describe the

equipment we propose to furnish for this project

and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



# **VRV** Selection

## **Project Report**

### Report details

Produced on: 2/19/2024 Application version: 2024.2.16.2

## Project details

Project name: Schmitt Elementary HVAC Replacement

Solution name: VRV-1

Client Name: R.E. Diamond

Customer reference:

Quotation reference:

Project number: 622980/780071

Selection parameters of the indoor units can be found in the Engineering Data Books Selection parameters of the outdoor units can be found in the Engineering Data Books Only the data published in the data book are correct. This program uses close approximations of these data.



## Material list

| Model        | Quantity  | Description                             |
|--------------|---|---|
| REYQ120AAYDA | 1   | VRV EMERION (460V) (VRV EMERION (460V)) |
| REYQ144AAYDA | 2   | VRV EMERION (460V) (VRV EMERION (460V)) |
| BSF6Q54TVJ   | 2   | Branch selector unit                    |
| BSF8Q54TVJ   | 2   | Branch selector unit                    |
| BS10Q54TVJ   | 1   | Branch selector unit                    |
| FXAQ07PVJU   | 7   | FXAQ - Wall Mounted Unit                |
| FXAQ09PVJU   | 7   | FXAQ - Wall Mounted Unit                |
| FXAQ12PVJU   | 12  | FXAQ - Wall Mounted Unit                |
| FXAQ18PVJU   | 4   | FXAQ - Wall Mounted Unit                |
| FXTQ12TAVJUA | 5   | FXTQ_TA(A) - Multi Position Air Handler |
| VAM300GVJU   | 5   | CEILING MOUNTED DUCT TYPE ERV           |
| KHRP25M72TUA | 2   | Refnet branch piping kit                |
| DCM601B71    | 1   | intelligent Touch Manager (iTM)         |
| BRC1E73      | 5   | new Navigation Remote Controller        |
| BRC1H71W     | 35  | Madoka Remote Controller                |
| DCM014A51    | CM014A51 1 ITM BACnet Server Gatew<br>with client or MS-TP, max |   |
| HKSX03XC     | 5   | Heater Kit 3kW (208/240V)               |
| KHFP26A100CA | 3   | Branch Selector Closed Pipe Kit         |

| Piping | Liquid | Suction              | Discharge | Total   |
|--------|--------|----------------------|-----------|---|
|        | ft     | ft                   | ft        | ft           875.0           186.5           890.5           79.0           196.5 |
| 1/4"   | 875.0  | 0.0                  | 0.0       | 875.0   |
| 3/8"   | 186.5  | 0.0 0.0<br>875.0 0.0 |           | 186.5   |
| 1/2"   | 15.5   |                      |           | 890.5   |
| 5/8"   | 0.0    | 0.0                  | 79.0      | 79.0  |
| 3/4"   | 0.0    | 79.0                 | 117.5     | 196.5   |
| 7/8"   | 0.0    | 107.5                | 5.5       | 113.0   |
| 1 1/8" | 0.0    | 15.5                 | 0.0       | 15.5  |



#### Table of abbreviations

| Abbreviation | Description                                 |
|--------------|---|
| Name         | Logical name of the device                  |
| FCU          | Device model name                           |
| Tmp C        | Indoor conditions in cooling                |
| Rq TC        | Required total cooling capacity             |
| Max TC       | Available total cooling capacity            |
| Rq SC        | Required sensible cooling capacity          |
| Tevap        | Evaporating temperature of indoor unit coil |
| Max SC       | Available sensible cooling capacity         |
| Tmp H        | Indoor temperature in heating               |
| Rq HC        | Required heating capacity                   |
| Max HC       | Available heating capacity                  |
| Sound        | Sound pressure level low and high           |
| PS           | Power supply (voltage and phases)           |
| MCA          | Minimum Circuit Amps                        |
| MOP          | Maximum Overcurrent Protection              |
| WxHxD        | WidthxHeightxDepth                          |
| Weight       | Weight of the device                        |



#### OHRU-1 - REYQ144AAYDA

#### Capacity data at conditions and connection ratio (97) as entered

| Name   | FCU           | Cooling         |       |        |       |       |        |  |  |
|--------|---------------|-----------------|-------|--------|-------|-------|--------|--|--|
|        | and the state | Tmp C           | Rq TC | Max TC | Rq SC | Tevap | Max SC |  |  |
|        |               | °F<br>(DBT/WBT) | BTU/h | BTU/h  | BTU/h | °F    | BTU/h  |  |  |
| DXFC-B | FXAQ09PVJU    | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |  |  |
| DXFC-B | FXAQ09PVJU    | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |  |  |
| DXFC-D | FXAQ18PVJU    | 78.8/65.5       | n/a   | 17,039 | n/a   | 42.8  | 12,802 |  |  |
| DXFC-B | FXAQ07PVJU    | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |  |  |
| DXFC-C | FXAQ12PVJU    | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |
| DXFC-A | FXAQ07PVJU    | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |  |  |
| DXFC-A | FXAQ07PVJU    | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |  |  |
| DXFC-1 | FXTQ12TAVJUA  | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 9,373  |  |  |
| DXFC-A | FXAQ07PVJU    | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |  |  |
| DXFC-C | FXAQ12PVJU    | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |
| DXFC-C | FXAQ12PVJU    | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |
| DXFC-C | FXAQ12PVJU    | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |
| DXFC-2 | FXTQ12TAVJUA  | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 9,373  |  |  |
| EVR-1  | VAM300GVJU    | n/a             | n/a   | n/a    | n/a   | 42.8  | n/a    |  |  |
| ERV-2  | VAM300GVJU    | n/a             | n/a   | n/a    | n/a   | 42.8  | n/a    |  |  |
|        |               |                 | 0     |        |       |       |        |  |  |

| Name   | FCU          | Heating |       |                 |  |  |
|--------|--------------|---------|-------|-----------------|--|--|
|        |              | Tmp H   | Rq HC | Max HC<br>BTU/h |  |  |
|        |              | °F      | BTU/h |                 |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100          |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100          |  |  |
| DXFC-D | FXAQ18PVJU   | 68.0    | n/a   | 21,000          |  |  |
| DXFC-B | FXAQ07PVJU   | 68.0    | n/a   | 8,700           |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000          |  |  |
| DXFC-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700           |  |  |
| DXFC-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700           |  |  |
| DXFC-1 | FXTQ12TAVJUA | 68.0    | n/a   | 14,000          |  |  |
| DXFC-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700           |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000          |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000          |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000          |  |  |
| DXFC-2 | FXTQ12TAVJUA | 68.0    | n/a   | 14,000          |  |  |
| EVR-1  | VAM300GVJU   | n/a     | n/a   | n/a             |  |  |
| ERV-2  | VAM300GVJU   | n/a     | n/a   | n/a             |  |  |
|        |              |         | n/a   |                 |  |  |



| Name   | FCU          | Room Sound PS |         | MCA          | MOP | WxHxD | Weight             |       |  |
|--------|--------------|---------------|---------|--------------|-----|-------|--------------------|-------|--|
|        |              |               | dBA     |              | A   |       | inch               | lbs   |  |
| DXFC-B | FXAQ09PVJU   |               | 31 - 37 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-B | FXAQ09PVJU   |               | 31 - 37 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-D | FXAQ18PVJU   |               | 37 - 43 | 208-230V 1ph | 0.4 | 15A   | 41.3 x 11.4 x 9.3  | 30.9  |  |
| DXFC-B | FXAQ07PVJU   |               | 29 - 35 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-C | FXAQ12PVJU   |               | 31 - 38 | 208-230V 1ph | 0.4 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-A | FXAQ07PVJU   |               | 29 - 35 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-A | FXAQ07PVJU   |               | 29 - 35 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-1 | FXTQ12TAVJUA |               | - 36    | 208-230V 1ph | 4.9 | 15A   | 17.5 x 45.0 x 21.0 | 115.0 |  |
| DXFC-A | FXAQ07PVJU   |               | 29 - 35 | 208-230V 1ph | 0.3 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-C | FXAQ12PVJU   |               | 31 - 38 | 208-230V 1ph | 0.4 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-C | FXAQ12PVJU   |               | 31 - 38 | 208-230V 1ph | 0.4 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-C | FXAQ12PVJU   |               | 31 - 38 | 208-230V 1ph | 0.4 | 15A   | 31.3 x 11.4 x 9.3  | 26.5  |  |
| DXFC-2 | FXTQ12TAVJUA |               | - 36    | 208-230V 1ph | 4.9 | 15A   | 17.5 x 45.0 x 21.0 | 115.0 |  |
| EVR-1  | VAM300GVJU   |               | -       | 208-230V 1ph | 1.6 |       | 34.6 x 12.0 x 31.5 | 71.0  |  |
| ERV-2  | VAM300GVJU   |               | -       | 208-230V 1ph | 1.6 |       | 34.6 x 12.0 x 31.5 | 71.0  |  |

Remarks

Outdoor vs. indoor position

Outdoor unit placed 8.0ft above the indoor units.

#### OHRU-2 - REYQ120AAYDA

Capacity data at conditions and connection ratio (102) as entered

| Name   | FCU          | Cooling         |       |        |       |       |        |  |  |  |
|--------|--------------|-----------------|-------|--------|-------|-------|--------|--|--|--|
|        |              | Tmp C           | Rq TC | Max TC | Rq SC | Tevap | Max SC |  |  |  |
|        |              | °F<br>(DBT/WBT) | BTU/h | BTU/h  | BTU/h | °F    | BTU/h  |  |  |  |
| DXFC-D | FXAQ18PVJU   | 78.8/65.5       | n/a   | 17,039 | n/a   | 42.8  | 12,802 |  |  |  |
| DXFC-B | FXAQ09PVJU   | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |  |  |  |
| DXFC-B | FXAQ09PVJU   | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |  |
| DXFC-D | FXAQ18PVJU   | 78.8/65.5       | n/a   | 17,039 | n/a   | 42.8  | 12,802 |  |  |  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |  |
| DXFC-A | FXAQ07PVJU   | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |  |  |  |
| DXFC-3 | FXTQ12TAVJUA | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 9,373  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |  |  |  |
| ERV-3  | VAM300GVJU   | n/a             | n/a   | n/a    | n/a   | 42.8  | n/a    |  |  |  |
|        |              |                 | 0     |        |       |       |        |  |  |  |

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|----|---------------|
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| Name   | FCU          | Heating |       |        |  |  |  |  |
|--------|--------------|---------|-------|--------|--|--|--|--|
|        |              | Tmp H   | Rq HC | Max HC |  |  |  |  |
|        |              | °F      | BTU/h | BTU/h  |  |  |  |  |
| DXFC-D | FXAQ18PVJU   | 68.0    | n/a   | 21,000 |  |  |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100 |  |  |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-D | FXAQ18PVJU   | 68.0    | n/a   | 21,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700  |  |  |  |  |
| DXFC-3 | FXTQ12TAVJUA | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| ERV-3  | VAM300GVJU   | n/a     | n/a   | n/a    |  |  |  |  |
|        |              |         | n/a   |        |  |  |  |  |

| Name   | FCU            | Room | Sound   | PS           | MCA | MOP | WxHxD              | Weight |  |
|--------|----------------|------|---------|--------------|-----|-----|--------------------|--------|--|
|        | 1. 外部分数 1. 经公司 | 1    | dBA     |              | Α   |     | inch               | lbs    |  |
| DXFC-D | FXAQ18PVJU     |      | 37 - 43 | 208-230V 1ph | 0.4 | 15A | 41.3 x 11.4 x 9.3  | 30.9   |  |
| DXFC-B | FXAQ09PVJU     |      | 31 - 37 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-B | FXAQ09PVJU     |      | 31 - 37 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-C | FXAQ12PVJU     |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-C | FXAQ12PVJU     |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-D | FXAQ18PVJU     |      | 37 - 43 | 208-230V 1ph | 0.4 | 15A | 41.3 x 11.4 x 9.3  | 30.9   |  |
| DXFC-C | FXAQ12PVJU     |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-A | FXAQ07PVJU     |      | 29 - 35 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-3 | FXTQ12TAVJUA   |      | - 36    | 208-230V 1ph | 4.9 | 15A | 17.5 x 45.0 x 21.0 | 115.0  |  |
| DXFC-C | FXAQ12PVJU     |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| ERV-3  | VAM300GVJU     |      | -       | 208-230V 1ph | 1.6 |     | 34.6 x 12.0 x 31.5 | 71.0   |  |

Remarks

Outdoor vs. indoor position

#### Outdoor unit placed 8.0ft above the indoor units.



OHRU-3 - REYQ144AAYDA

#### Capacity data at conditions and connection ratio (93) as entered

| Name   | FCU          | almont Statest  |       | Coolin | g     |       |        |
|--------|--------------|-----------------|-------|--------|-------|-------|--------|
|        |              | Tmp C           | Rq TC | Max TC | Rq SC | Tevap | Max SC |
|        |              | °F<br>(DBT/WBT) | BTU/h | BTU/h  | BTU/h | °F    | BTU/h  |
| DXFC-B | FXAQ09PVJU   | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |
| DXFC-4 | FXTQ12TAVJUA | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 9,373  |
| DXFC-A | FXAQ09PVJU   | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |
| DXFC-5 | FXTQ12TAVJUA | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 9,373  |
| DXFC-C | FXAQ12PVJU   | 78.8/65.5       | n/a   | 11,342 | n/a   | 42.8  | 8,348  |
| DXFC-B | FXAQ09PVJU   | 78.8/65.5       | n/a   | 8,994  | n/a   | 42.8  | 7,016  |
| DXFC-A | FXAQ07PVJU   | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |
| DCFX-A | FXAQ07PVJU   | 78.8/65.5       | n/a   | 7,095  | n/a   | 42.8  | 5,937  |
| DXFC-E | FXAQ18PVJU   | 78.8/65.5       | n/a   | 17,039 | n/a   | 42.8  | 12,802 |
| ERV-4  | VAM300GVJU   | n/a             | n/a   | n/a    | n/a   | 42.8  | n/a    |
| ERV-5  | VAM300GVJU   | n/a             | n/a   | n/a    | n/a   | 42.8  | n/a    |
|        |              |                 | 0     |        |       |       |        |

| Name   | FCU          | Heating |       |        |  |  |  |  |
|--------|--------------|---------|-------|--------|--|--|--|--|
|        |              | Tmp H   | Rq HC | Max HC |  |  |  |  |
|        |              | °F      | BTU/h | BTU/h  |  |  |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-4 | FXTQ12TAVJUA | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-A | FXAQ09PVJU   | 68.0    | n/a   | 11,100 |  |  |  |  |
| DXFC-5 | FXTQ12TAVJUA | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-C | FXAQ12PVJU   | 68.0    | n/a   | 14,000 |  |  |  |  |
| DXFC-B | FXAQ09PVJU   | 68.0    | n/a   | 11,100 |  |  |  |  |
| DXFC-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700  |  |  |  |  |
| DCFX-A | FXAQ07PVJU   | 68.0    | n/a   | 8,700  |  |  |  |  |
| DXFC-E | FXAQ18PVJU   | 68.0    | n/a   | 21,000 |  |  |  |  |
| ERV-4  | VAM300GVJU   | n/a     | n/a   | n/a    |  |  |  |  |
| ERV-5  | VAM300GVJU   | n/a     | n/a   | n/a    |  |  |  |  |
|        |              |         | n/a   |        |  |  |  |  |

| Name   | FCU          | Room | Sound   | PS           | MCA | MOP | WxHxD              | Weight |
|--------|--------------|------|---------|--------------|-----|-----|--------------------|--------|
|        |              |      | dBA     |              | Α   |     | inch               | lbs    |
| DXFC-B | FXAQ09PVJU   |      | 31 - 37 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-C | FXAQ12PVJU   |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-C | FXAQ12PVJU   |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-C | FXAQ12PVJU   |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-4 | FXTQ12TAVJUA |      | - 36    | 208-230V 1ph | 4.9 | 15A | 17.5 x 45.0 x 21.0 | 115.0  |
| DXFC-A | FXAQ09PVJU   |      | 31 - 37 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-5 | FXTQ12TAVJUA |      | - 36    | 208-230V 1ph | 4.9 | 15A | 17.5 x 45.0 x 21.0 | 115.0  |
| DXFC-C | FXAQ12PVJU   |      | 31 - 38 | 208-230V 1ph | 0.4 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-B | FXAQ09PVJU   |      | 31 - 37 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |
| DXFC-A | FXAQ07PVJU   |      | 29 - 35 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |

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| Name   | FCU        | Room | Sound   | PS           | MCA | MOP | WxHxD              | Weight |  |
|--------|------------|------|---------|--------------|-----|-----|--------------------|--------|--|
|        |            |      | dBA     |              | Α   |     | inch               | lbs    |  |
| DCFX-A | FXAQ07PVJU |      | 29 - 35 | 208-230V 1ph | 0.3 | 15A | 31.3 x 11.4 x 9.3  | 26.5   |  |
| DXFC-E | FXAQ18PVJU |      | 37 - 43 | 208-230V 1ph | 0.4 | 15A | 41.3 x 11.4 x 9.3  | 30.9   |  |
| ERV-4  | VAM300GVJU |      | -       | 208-230V 1ph | 1.6 |     | 34.6 x 12.0 x 31.5 | 71.0   |  |
| ERV-5  | VAM300GVJU |      | -       | 208-230V 1ph | 1.6 |     | 34.6 x 12.0 x 31.5 | 71.0   |  |

Remarks

Outdoor vs. indoor position

Outdoor unit placed 8.0ft above the indoor units.



#### Table of abbreviations

| Abbreviation   | Description   |
|----------------|---|
| Name           | Logical name of the device  |
| Model          | Device model name   |
| A              | Optimized selection: Larger outdoor model selected than standard proposed model       |
| CR             | Connection ratio  |
| Tmp C          | Outdoor conditions in cooling   |
| WFR per module | Water flow per outdoor unit module  |
| СС             | Available cooling capacity  |
| Rq CC          | Required cooling capacity   |
| PIC            | Power input in cooling mode   |
| InC            | Water inlet temperature in cooling mode   |
| OutC           | Water outlet temperature in cooling mode  |
| Tmp H          | Outdoor conditions in heating (dry bulb temp. / RH)                                   |
| HC             | Available heating capacity (integrated heating capacity)                              |
| Rq HC          | Required heating capacity   |
| PIH            | Power input in heating mode   |
| InH            | Water inlet temperature in heating mode   |
| OutH           | Water outlet temperature in heating mode  |
| Piping         | Largest distance from indoor unit to outdoor unit                                     |
| Bse Refr       | Standard factory refrigerant charge (16.4ft actual piping length) excluding extra     |
|                | refrigerant charge. For calculation of extra refrigerant charge refer to the databook |
| Ex Refr        | Extra refrigerant charge  |
| PS             | Power supply (voltage and phases)   |
| MCA            | Minimum Circuit Amps  |
| MOP            | Maximum Overcurrent Protection  |
| FLA            | Fan Motor Input   |
| RLA            | Nominal Running Amps  |
| WxHxD          | WidthxHeightxDepth  |
| Weight         | Weight of the device  |
| EER            | EER value at nominal condition  |
| EER2           | EER2 value at nominal condition   |
| IEER           | IEER value at nominal condition   |
| COP47          | COP value at nominal condition and at ambient temperature of 47°F                     |
| COP17          | COP value at nominal condition and at ambient temperature of 17°F                     |



#### Outdoor details

| Name Model | Model          | CR    | Singl | Cooling  | H               | Piping    |         |        |       |
|------------|----------------|-------|-------|----------|-----------------|-----------|---------|--------|-------|
|            |                | Tmp C | CC    | CC Rq CC |                 | HC        | Rq HC   |        |       |
|            | %              | °F    | BTU/h | BTU/h    | °F<br>(DBT/WBT) | BTU/h     | BTU/h   | ft     |       |
| OHRU-1     | REYQ144AAYDA   | 96.5  | 95.0  | 134,091  | 65,730          | -2.0/-2.0 | 104,279 | 81,000 | 95.1  |
| OHRU-2     | REYQ120AAYDA 🛦 | 102.1 | 95.0  | 112,172  | 57,936          | -2.0/-2.0 | 81,268  | 71,450 | 102.4 |
| OHRU-3     | REYQ144AAYDA   | 92.7  | 95.0  | 133,676  | 63,132          | -2.0/-2.0 | 103,227 | 77,850 | 129.2 |

| Name Model |              | PS              | MCA  | MOP  | RLA  | FLA | WxHxD                 | Weight |
|------------|--------------|-----------------|------|------|------|-----|-----------------------|--------|
|            |              | 同時間的時候          | Α    | Α    | Α    | Α   | inch                  | lbs    |
| OHRU-1     | REYQ144AAYDA | 460V 3ph        | 21.3 | 25.0 | 11.7 |     | 48.8 x 65.4 x<br>30.1 | 800.3  |
| BSB-1A     | BSF8Q54TVJ   | 208-230V<br>1ph | 0.8  | 15.0 |      |     | 23.3 x 9.5 x<br>23.7  | 81.6   |
| BSB-1B     | BSF6Q54TVJ   | 208-230V<br>1ph | 0.6  | 15.0 |      |     | 23.3 x 9.5 x<br>23.7  | 72.8   |
| OHRU-2     | REYQ120AAYDA | 460V 3ph        | 16.6 | 20.0 | 9.6  |     | 48.8 x 65.4 x<br>30.1 | 727.5  |
| BSB-2      | BS10Q54TVJ   | 208-230V<br>1ph | 1.0  | 15.0 |      |     | 32.3 x 11.7 x<br>18.9 | 101.4  |
| OHRU-3     | REYQ144AAYDA | 460V 3ph        | 21.3 | 25.0 | 11.7 |     | 48.8 x 65.4 x<br>30.1 | 800.3  |
| BSB-3A     | BSF6Q54TVJ   | 208-230V<br>1ph | 0.6  | 15.0 |      |     | 23.3 x 9.5 x<br>23.7  | 72.8   |
| BSB-3B     | BSF8Q54TVJ   | 208-230V<br>1ph | 0.8  | 15.0 |      |     | 23.3 x 9.5 x<br>23.7  | 81.6   |

| Name   | Efficiency Metrics - Ducted |      |      |       |       |      |      |       |      |       |  |  |
|--------|-----------------------------|------|------|-------|-------|------|------|-------|------|-------|--|--|
|        | EER                         | EER2 | IEER | COP47 | COP17 | SCHE | SEER | SEER2 | HSPF | HSPF2 |  |  |
| OHRU-1 | 12                          |      | 22.5 | 3.35  | 2.1   | 22.1 |      |       |      |       |  |  |
| OHRU-2 | 12.4                        |      | 23.5 | 3.48  | 2.25  | 22.2 |      |       |      |       |  |  |
| OHRU-3 | 12                          |      | 22.5 | 3.35  | 2.1   | 22.1 |      |       |      |       |  |  |

| Name   | Efficiency Metrics - Non Ducted |      |      |       |       |      |      |       |      |       |  |  |
|--------|---------------------------------|------|------|-------|-------|------|------|-------|------|-------|--|--|
|        | EER                             | EER2 | IEER | COP47 | COP17 | SCHE | SEER | SEER2 | HSPF | HSPF2 |  |  |
| OHRU-1 | 12.5                            |      | 26.5 | 3.8   | 2.2   | 25.6 |      |       |      |       |  |  |
| OHRU-2 | 13.2                            |      | 27.5 | 4     | 2.38  | 26.1 |      |       |      |       |  |  |
| OHRU-3 | 12.5                            |      | 26.5 | 3.8   | 2.2   | 25.6 |      |       |      |       |  |  |



#### Sound Data

| Name   | Model        | Sound Power |         | Sound Pressure |         |
|--------|--------------|-------------|---------|----------------|---------|
|        | 0.00         | Cooling     | Heating | Cooling        | Heating |
| OHRU-1 | REYQ144AAYDA | -           | -       | 65             | -       |
| OHRU-2 | REYQ120AAYDA | -           | -       | 61             | -       |
| OHRU-3 | REYQ144AAYDA | -           | -       | 65             | -       |

Refrigerant information

| Name   | Model        | Refrigerant type | GWP    | Base charge | Extra charge | Total                        | Total CO2            |
|--------|--------------|------------------|--------|-------------|--------------|------------------------------|----------------------|
|        |              |                  |        | lbs         | lbs          | refrigerant<br>charge<br>lbs | equivalent<br>tonnes |
| OHRU-1 | REYQ144AAYDA | R410A            | 2087.5 | 25.79       | 23.93        | 49.73                        | 47.09                |
| OHRU-2 | REYQ120AAYDA | R410A            | 2087.5 | 25.79       | 11.97        | 37.76                        | 35.76                |
| OHRU-3 | REYQ144AAYDA | R410A            | 2087.5 | 25.79       | 26.66        | 52.46                        | 49.67                |

The system(s) contain fluorinated greenhouse gases.

#### OHRU-1 - REYQ144AAYDA

| Model        | Quantity | Description                             |  |
|--------------|----------|---|--|
| REYQ144AAYDA | 1        | VRV EMERION (460V) (VRV EMERION (460V)) |  |
| BSF6Q54TVJ   | 1        | Branch selector unit                    |  |
| BSF8Q54TVJ   | 1        | Branch selector unit                    |  |
| FXAQ07PVJU   | 4        | FXAQ - Wall Mounted Unit                |  |
| FXAQ09PVJU   | 2        | FXAQ - Wall Mounted Unit                |  |
| FXAQ12PVJU   | 4        | FXAQ - Wall Mounted Unit                |  |
| FXAQ18PVJU   | 1        | FXAQ - Wall Mounted Unit                |  |
| FXTQ12TAVJUA | 2        | FXTQ_TA(A) - Multi Position Air Handler |  |
| VAM300GVJU   | 2        | CEILING MOUNTED DUCT TYPE ERV           |  |
| KHRP25M72TUA | 1        | Refnet branch piping kit                |  |
| BRC1E73      | 2        | new Navigation Remote Controller        |  |
| BRC1H71W     | 13       | Madoka Remote Controller                |  |
| HKSX03XC     | 2        | Heater Kit 3kW (208/240V)               |  |
| KHFP26A100CA | 1        | Branch Selector Closed Pipe Kit         |  |

| Piping | Liquid | Suction | Discharge | Total |
|--------|--------|---------|-----------|-------|
|        | ft     | ft      | ft        | ft    |
| 1/4"   | 268.5  | 0.0     | 0.0       | 268.5 |
| 3/8"   | 67.5   | 0.0     | 0.0       | 67.5  |
| 1/2"   | 4.5    | 268.5   | 0.0       | 273.0 |
| 5/8"   | 0.0    | 0.0     | 25.0      | 25.0  |
| 3/4"   | 0.0    | 25.0    | 42.5      | 67.5  |
| 7/8"   | 0.0    | 42.5    | 4.5       | 47.0  |
| 1 1/8" | 0.0    | 4.5     | 0.0       | 4.5   |



#### Refrigerant information

| Refrigerant type | GWP    | Base charge<br>Ibs | Extra charge<br>Ibs | Total refrigerant<br>charge<br>Ibs | Total CO2<br>equivalent<br>tonnes |
|------------------|--------|--------------------|---------------------|------------------------------------|-----------------------------------|
| R410A            | 2087.5 | 25.79              | 23.93*)             | 49.73                              | 47.09                             |

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

| Maximum Connection Index | Diameters          |
|--------------------------|--------------------|
| 53.9                     | 3/8"×5/8"×1/2"     |
| 71.9                     | 3/8"x3/4"x5/8"     |
| 110.9                    | 3/8"×7/8"×3/4"     |
| 161.9                    | 1/2"x1 1/8"x3/4"   |
| 229.9                    | 5/8"x1 1/8"x1 1/8" |
| 299.9                    | 3/4"x1 3/8"x1 1/8" |
| > 299.9                  | 3/4"x1 5/8"x1 1/8" |
| Main pipe size up        | 5/8"x1 1/8"x7/8"   |

#### **Piping limitations**

| Description   | Value  |
|---|--|
| Maximum total length  | 3,280.8ft  |
| Maximum longest actual length   | 541.3ft  |
| Maximum longest equivalent length   | 623.4ft  |
| Maximum main pipe length (size up of main pipe required if longer)  | •  |
| Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)                          | 131.2ft  |
| Maximum length first branch to indoor unit  | 295.3ft  |
| Maximum length of indoor units to nearest branch  | 131.2ft  |
| Maximum length difference between longest and shortest distance to indoor units                                       | 131.2ft  |
| Maximum height difference, outdoor unit below indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit below indoor units   | -  |
| Maximum height difference, outdoor unit above indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit above indoor units   | -  |
| Maximum height difference in technical cooling, outdoor unit below indoor units                                       | 360.9ft  |
| Maximum height difference in technical cooling, outdoor unit above indoor units                                       | 360.9ft  |
| Maximum height difference between indoor units  | 98.4ft   |
| Connection ratio range  | 50.0% - 200.0%                                     |
| Refrigerant pipe diameters  | 5/8" (liquid) x 1 1/8" (gas)<br>x 7/8" (discharge) |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer) | 1=1  |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET  | 295.3ft  |
| Maximum actual length between CM and HM   |  |
| Maximum height difference between CM and HM   | -  |



#### OHRU-2 - REYQ120AAYDA

| Model        | Quantity | Description                             |  |
|--------------|----------|---|--|
| REYQ120AAYDA | 1        | VRV EMERION (460V) (VRV EMERION (460V)) |  |
| BS10Q54TVJ   | 1        | Branch selector unit                    |  |
| FXAQ07PVJU   | 1        | FXAQ - Wall Mounted Unit                |  |
| FXAQ09PVJU   | 2        | FXAQ - Wall Mounted Unit                |  |
| FXAQ12PVJU   | 4        | FXAQ - Wall Mounted Unit                |  |
| FXAQ18PVJU   | 2        | FXAQ - Wall Mounted Unit                |  |
| FXTQ12TAVJUA | 1        | FXTQ_TA(A) - Multi Position Air Handler |  |
| VAM300GVJU   | 1        | CEILING MOUNTED DUCT TYPE ERV           |  |
| BRC1E73      | 1        | new Navigation Remote Controller        |  |
| BRC1H71W     | 10       | Madoka Remote Controller                |  |
| HKSX03XC     | 1        | Heater Kit 3kW (208/240V)               |  |

| Piping  | Liquid | Suction | Discharge | Total |
|---------|--------|---------|-----------|-------|
| NA ELES | ft     | ft      | ft        | ft    |
| 1/4"    | 279.5  | 0.0     | 0.0       | 279.5 |
| 1/2"    | 10.0   | 279.5   | 0.0       | 289.5 |
| 3/4"    | 0.0    | 0.0     | 10.0      | 10.0  |
| 1 1/8"  | 0.0    | 10.0    | 0.0       | 10.0  |

#### Refrigerant information

| Refrigerant type | GWP    | Base charge<br>Ibs | Extra charge<br>Ibs | Total refrigerant<br>charge<br>lbs | Total CO2<br>equivalent<br>tonnes |
|------------------|--------|--------------------|---------------------|------------------------------------|-----------------------------------|
| R410A            | 2087.5 | 25.79              | 11.97*)             | 37.76                              | 35.76                             |

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

| Maximum Connection Index | Diameters          |
|--------------------------|--------------------|
| 53.9                     | 3/8"x5/8"x1/2"     |
| 71.9                     | 3/8"x3/4"x5/8"     |
| 110.9                    | 3/8"x7/8"x3/4"     |
| 161.9                    | 1/2"×1 1/8"×3/4"   |
| 229.9                    | 5/8"x1 1/8"x1 1/8" |
| 299.9                    | 3/4"x1 3/8"x1 1/8" |
| > 299.9                  | 3/4"x1 5/8"x1 1/8" |
| Main pipe size up        | 5/8"x1 1/8"x3/4"   |



#### **Piping limitations**

| Description   | Value  |
|---|--|
| Maximum total length  | 3,280.8ft  |
| Maximum longest actual length   | 541.3ft  |
| Maximum longest equivalent length   | 623.4ft  |
| Maximum main pipe length (size up of main pipe required if longer)  | -  |
| Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)                          | 131.2ft  |
| Maximum length first branch to indoor unit  | 295.3ft  |
| Maximum length of indoor units to nearest branch  | 131.2ft  |
| Maximum length difference between longest and shortest distance to indoor units                                       | 131.2ft  |
| Maximum height difference, outdoor unit below indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit below indoor units   | -  |
| Maximum height difference, outdoor unit above indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit above indoor units   |  |
| Maximum height difference in technical cooling, outdoor unit below indoor units                                       | 360.9ft  |
| Maximum height difference in technical cooling, outdoor unit above indoor units                                       | 360.9ft  |
| Maximum height difference between indoor units  | 98.4ft   |
| Connection ratio range  | 50.0% - 200.0%                                     |
| Refrigerant pipe diameters  | 5/8" (liquid) x 1 1/8" (gas)<br>x 3/4" (discharge) |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer) |  |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET  | 295.3ft  |
| Maximum actual length between CM and HM   | -  |
| Maximum height difference between CM and HM   | -  |

#### OHRU-3 - REYQ144AAYDA

| Model        | Quantity | Description                             |
|--------------|----------|---|
| REYQ144AAYDA | 1        | VRV EMERION (460V) (VRV EMERION (460V)) |
| BSF6Q54TVJ   | 1        | Branch selector unit                    |
| BSF8Q54TVJ   | 1        | Branch selector unit                    |
| FXAQ07PVJU   | 2        | FXAQ - Wall Mounted Unit                |
| FXAQ09PVJU   | 3        | FXAQ - Wall Mounted Unit                |
| FXAQ12PVJU   | 4        | FXAQ - Wall Mounted Unit                |
| FXAQ18PVJU   | 1        | FXAQ - Wall Mounted Unit                |
| FXTQ12TAVJUA | 2        | FXTQ_TA(A) - Multi Position Air Handler |
| VAM300GVJU   | 2        | CEILING MOUNTED DUCT TYPE ERV           |
| KHRP25M72TUA | 1        | Refnet branch piping kit                |
| BRC1E73      | 2        | new Navigation Remote Controller        |
| BRC1H71W     | 12       | Madoka Remote Controller                |
| HKSX03XC     | 2        | Heater Kit 3kW (208/240V)               |
| KHFP26A100CA | 2        | Branch Selector Closed Pipe Kit         |



| Piping | Liquid | Suction | Discharge | Total |
|--------|--------|---------|-----------|-------|
|        | ft     | ft      | ft        | ft    |
| 1/4"   | 327.0  | 0.0     | 0.0       | 327.0 |
| 3/8"   | 119.0  | 0.0     | 0.0       | 119.0 |
| 1/2"   | 1.0    | 327.0   | 0.0       | 328.0 |
| 5/8"   | 0.0    | 0.0     | 54.0      | 54.0  |
| 3/4"   | 0.0    | 54.0    | 65.0      | 119.0 |
| 7/8"   | 0.0    | 65.0    | 1.0       | 66.0  |
| 1 1/8" | 0.0    | 1.0     | 0.0       | 1.0   |

Refrigerant information

| Refrigerant type | GWP    | Base charge<br>lbs | Extra charge<br>Ibs | Total refrigerant<br>charge<br>lbs | Total CO2<br>equivalent<br>tonnes |
|------------------|--------|--------------------|---------------------|------------------------------------|-----------------------------------|
| R410A            | 2087.5 | 25.79              | 26.66*)             | 52.46                              | 49.67                             |

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

| Maximum Connection Index | Diameters          |
|--------------------------|--------------------|
| 53.9                     | 3/8"x5/8"x1/2"     |
| 71.9                     | 3/8"x3/4"x5/8"     |
| 110.9                    | 3/8"x7/8"x3/4"     |
| 161.9                    | 1/2"x1 1/8"x3/4"   |
| 229.9                    | 5/8"x1 1/8"x1 1/8" |
| 299.9                    | 3/4"x1 3/8"x1 1/8" |
| > 299.9                  | 3/4"x1 5/8"x1 1/8" |
| Main pipe size up        | 5/8"x1 1/8"x7/8"   |

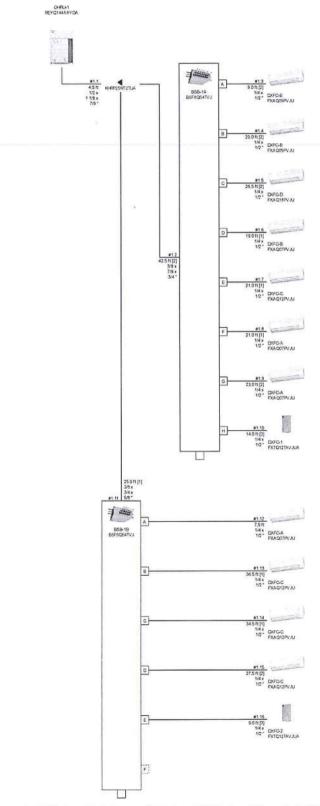


Piping limitations

| Description   | Value  |
|---|--|
| Maximum total length  | 3,280.8ft  |
| Maximum longest actual length   | 541.3ft  |
| Maximum longest equivalent length   | 623.4ft  |
| Maximum main pipe length (size up of main pipe required if longer)  |  |
| Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)                          | 131.2ft  |
| Maximum length first branch to indoor unit  | 295.3ft  |
| Maximum length of indoor units to nearest branch  | 131.2ft  |
| Maximum length difference between longest and shortest distance to indoor units                                       | 131.2ft  |
| Maximum height difference, outdoor unit below indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit below indoor units   | -  |
| Maximum height difference, outdoor unit above indoor units  | 360.9ft  |
| Minimum connection ratio, outdoor unit above indoor units   | -  |
| Maximum height difference in technical cooling, outdoor unit below indoor units                                       | 360.9ft  |
| Maximum height difference in technical cooling, outdoor unit above indoor units                                       | 360.9ft  |
| Maximum height difference between indoor units  | 98.4ft   |
| Connection ratio range  | 50.0% - 200.0%                                     |
| Refrigerant pipe diameters  | 5/8" (liquid) x 1 1/8" (gas)<br>x 7/8" (discharge) |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer) | -  |
| Maximum equivalent length from BP unit or VRV indoor to VRV REFNET  | 295.3ft  |
| Maximum actual length between CM and HM   |  |
| Maximum height difference between CM and HM   | (m)  |



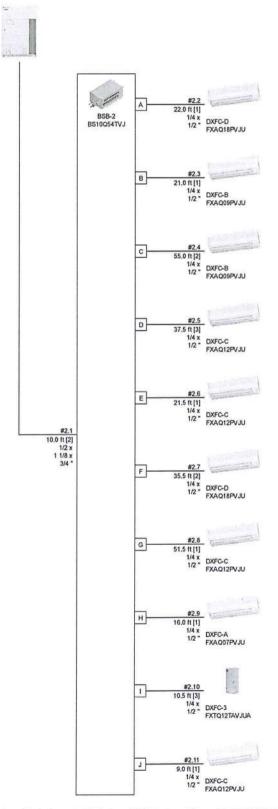
## Piping OHRU-1





Piping OHRU-2

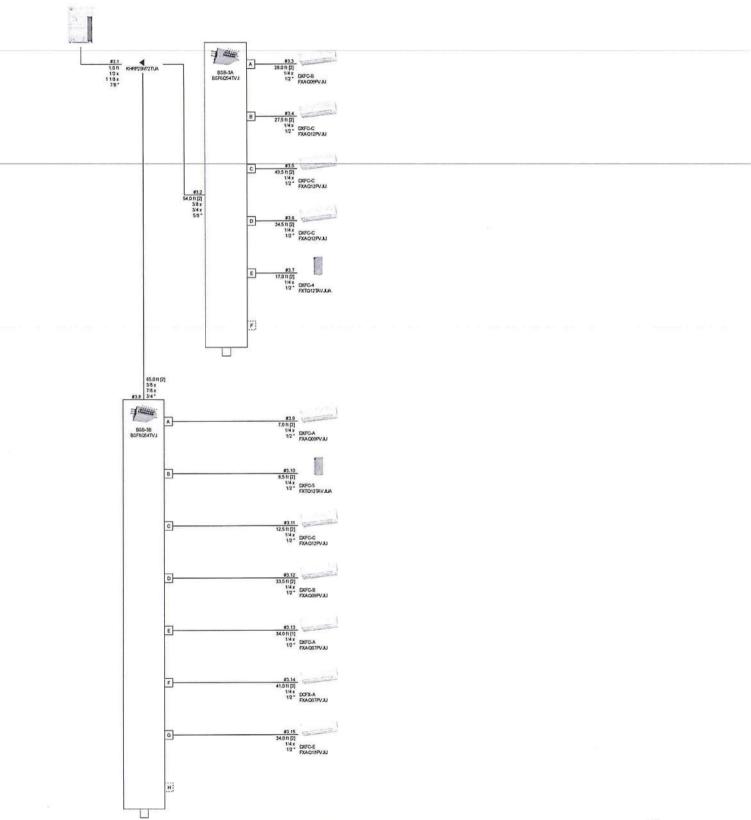
OHRU-2 REYQ120AAYDA





Piping OHRU-3

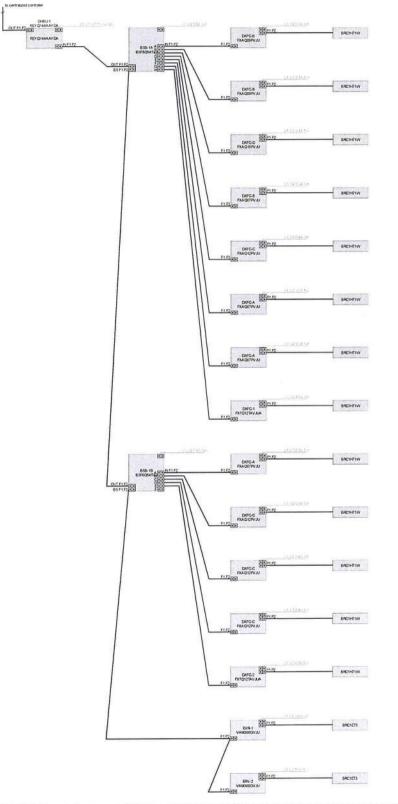
OHRU-3 REYQ144AAYDA



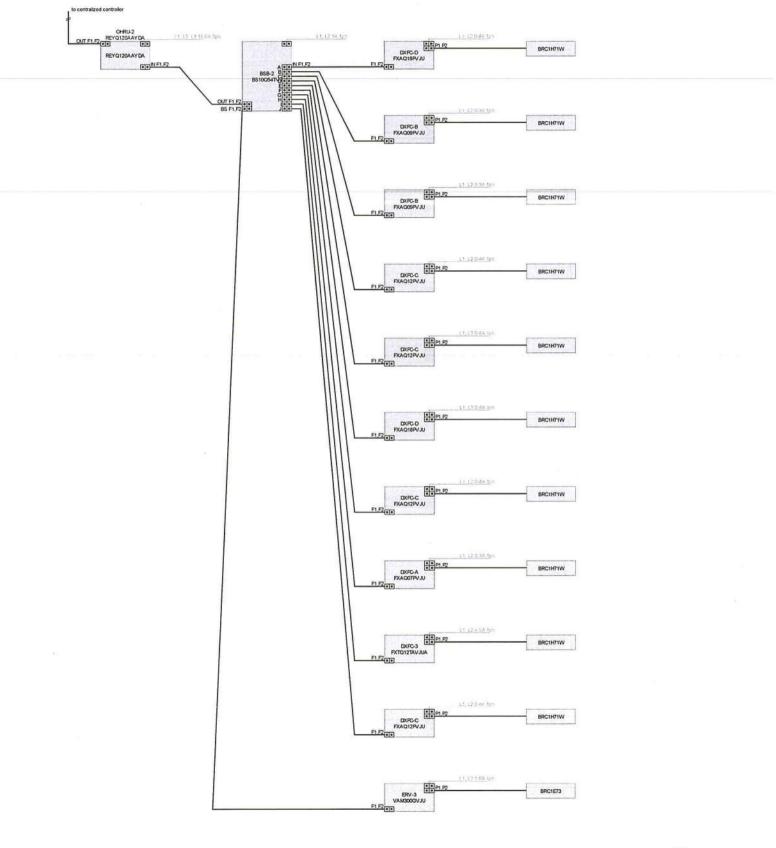


## Wiring diagrams

#### Wiring OHRU-1

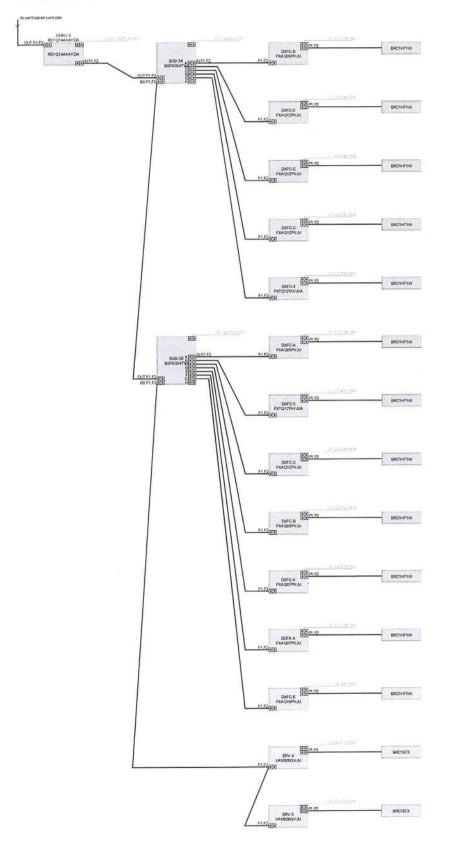








Wiring OHRU-3



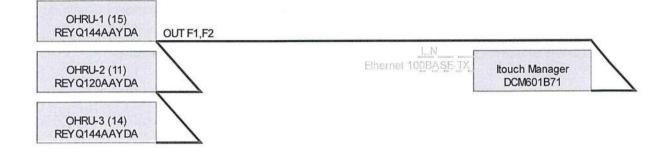


Concept

| obal Controllers | Control Group<br># outdoors:3, # indoors:40, # addressed:40  |  |
|------------------|--|--|
|                  | Group Controllers<br>Intelligent Touch Manager (# 1)<br>Outdoor Units<br>I 	 OHRU-1 (15)<br>I 	 OHRU-2 (11)<br>I 	 OHRU-3 (14) |  |
|                  |  |  |
|                  |  |  |



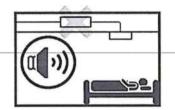
Control Group

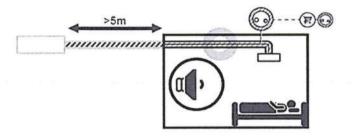




#### Multi BS-box

- Install the multi BS-box on a location where the refrigerant noise cannot disturb the room occupants
- To avoid that refrigerant noise disturbs the people in the room, keep at least 5m piping length between the occupied room and the multi BS unit (See figure)
- If there is no false ceiling in the occupied room, please add sound insulation around the piping between the multi BS-box and indoor unit, or keep much longer length between multi BS-box unit and occupied room (See figure)



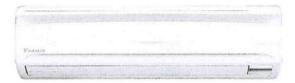




0.5-Ton Wall Mounted Unit FXAQ07PVJU

#### FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts





Daikin City Generated Submittal Data

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

www.daikinac.com www.daikincomfort.com



0.5-Ton Wall Mounted Unit

FXAQ07PVJU

| PERFORMANCE                      |              |                               | · · · · · · · · · · · · · · · · · · ·                     |
|----------------------------------|--------------|-------------------------------|---|
| Indoor Unit Model No.            | FXAQ07PVJU   | Indoor Unit Name:             | 0.5-Ton Wall Mounted Unit                                 |
| Туре:                            | Wall Mounted | Rated Cooling Conditions:     | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 |
| Rated Cooling Capacity (Btu/hr): | 7,500        | Rated Heating Conditions:     | Indoor (*F DB/WB): 70 / 60<br>Ambient (*F DB/WB): 47 / 43 |
| Sensible Capacity (Btu/hr):      | 6,400        | Rated Piping Length(ft):      |   |
| Cooling Input Power (kW):        | 0.020        | Rated Height Separation (ft): |   |
| Rated Heating Capacity (Btu/hr): | 8,500        |                               |   |
| Heating Input Power (kW):        | 0.03         |                               | er) stationer stöllt i brak ett til stöllt. Hun sena ska  |

# INDOOR UNIT DETAILS

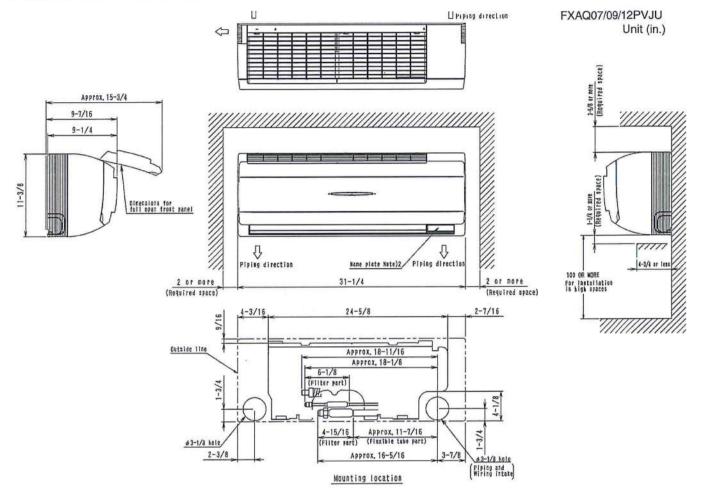
| INDIGON ON THE PARTS                     |                         |                                | A STATE OF THE AREA TO AND |
|--|-------------------------|--------------------------------|--|
| Power Supply (V/Hz/Ph):                  | 208-230 / 60 / 1        | Ainflow Rate (H/L) (CFM):      | 260/160  |
| Power Supply Connections:                | L1, L2, Ground          | Moisture Removal (Gal/hr):     |  |
| Min. Circuit Amps MCA (A):               | 0.4                     | Gas Pipe Connection (inch):    | 1/2  |
| Max Overcurrent Protection (MOP) (A):    | 15                      | Liquid Pipe Connection (inch): | 1/4  |
| Dimensions (HxWxD) (in):                 | 11-3/8 x 31-1/4 x 9-1/4 | Condensate Connection (inch):  | 11/16  |
| Net Weight (lb):                         | 26                      | Sound Pressure (H/L) (dBA):    | 36/31  |
| Ext. Static Pressure (Rated/Max) (inWg): | 1                       | Sound Power Level (dBA):       |  |
|  |                         |                                |  |

www.daikinac.com www.daikincomfort.com



0.5-Ton Wall Mounted Unit FXAQ07PVJU

# DIMENSIONAL DRAWING



www.daikinac.com www.daikincomfort.com

(Daikin's products are subject to continuous improvements. Daikin reserves the right to modify product design, specifications and information in this data sheet without notice and without incurring any obligations)

Daikin City Generated Submittal Data



0.75-Ton Wall Mounted Unit FXAQ09PVJU

#### FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts

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Daikin City Generated Submittal Data

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

www.daikinac.com www.daikincomfort.com



0.75-Ton Wall Mounted Unit FXAQ09PVJU

| PERFORMANCE                      |              |                               |   |
|----------------------------------|--------------|-------------------------------|---|
| Indoor Unit Model No.            | FXAQ09PVJU   | Indoor Unit Name:             | 0.75-Ton Wall Mounted Unit                                |
| Туре:                            | Wall Mounted | Rated Cooling Conditions:     | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 |
| Rated Cooling Capacity (Btu/hr): | 9,500        | Rated Heating Conditions:     | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43 |
| Sensible Capacity (Btu/hr):      | 7,300        | Rated Piping Length(ft):      |   |
| Cooling Input Power (kW):        | 0.030        | Rated Height Separation (ft): |   |
| Rated Heating Capacity (Btu/hr): | 10,500       |                               |   |
| Heating Input Power (kW):        | 0.03         |                               |   |

# INDOOR UNIT DETAILS

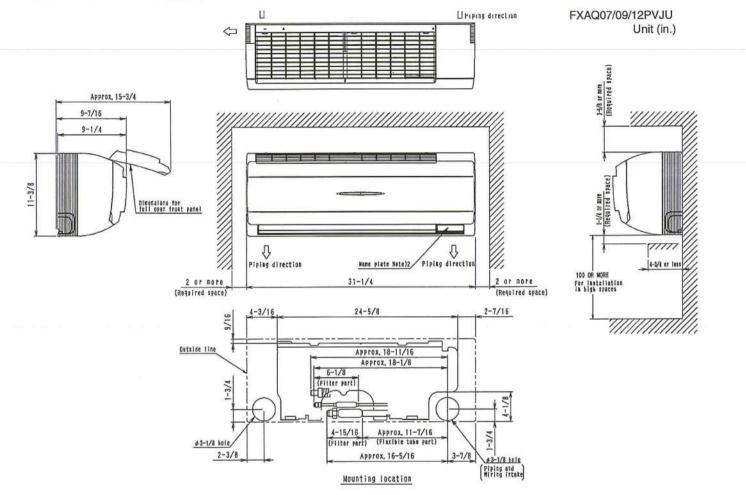
| Power Supply (V/Hz/Ph):                  | 208-230 / 60 / 1        | Airflow Rate (H/L) (CFM):      | 280/175 |
|--|-------------------------|--------------------------------|---------|
| Power Supply Connections:                | L1, L2, Ground          | Moisture Removal (Gal/hr):     |         |
| Min. Circuit Amps MCA (A):               | 0.4                     | Gas Pipe Connection (inch):    | 1/2     |
| Max Overcurrent Protection (MOP) (A):    | 15                      | Liquid Pipe Connection (inch): | 1/4     |
| Dimensions (HxWxD) (in):                 | 11-3/8 x 31-1/4 x 9-1/4 | Condensate Connection (inch):  | 11/16   |
| Net Weight (lb):                         | 26                      | Sound Pressure (H/L) (dBA):    | 37/31   |
| Ext. Static Pressure (Rated/Max) (inWg): | 1                       | Sound Power Level (dBA):       |         |

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0.75-Ton Wall Mounted Unit FXAQ09PVJU

# DIMENSIONAL DRAWING



Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

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Daikin City Generated Submittal Data



1.0-Ton Wall Mounted Unit FXAQ12PVJU

#### FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts





Daikin City Generated Submittal Data

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

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1.0-Ton Wall Mounted Unit

FXAQ12PVJU

| PERFORMANCE                      |              |                               | ALL AND THE DESCRIPTION OF                                |
|----------------------------------|--------------|-------------------------------|---|
| Indoor Unit Model No.            | FXAQ12PVJU   | Indoor Unit Name:             | 1.0-Ton Wall Mounted Unit                                 |
| Туре:                            | Wall Mounted | Rated Cooling Conditions:     | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 |
| Rated Cooling Capacity (Btu/hr): | 12,000       | Rated Heating Conditions:     | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43 |
| Sensible Capacity (Btu/hr):      | 8,900        | Rated Piping Length(ft):      |   |
| Cooling Input Power (kW):        | 0.030        | Rated Height Separation (ft): |   |
| Rated Heating Capacity (Btu/hr): | 13,500       |                               |   |
| Heating Input Power (kW):        | 0.04         |                               |   |

# INDOOR UNIT DETAILS

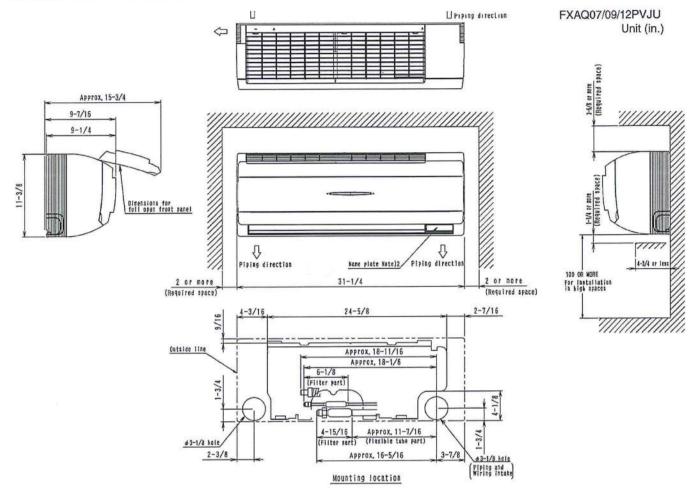
| Power Supply (V/Hz/Ph):                  | 208-230 / 60 / 1        | Airflow Rate (H/L) (CFM):      | 290/180 |
|--|-------------------------|--------------------------------|---------|
| Power Supply Connections:                | L1, L2, Ground          | Moisture Removal (Gal/hr):     |         |
| Min. Circuit Amps MCA (A):               | 0.4                     | Gas Pipe Connection (inch):    | 1/2     |
| Max Overcurrent Protection (MOP) (A):    | 15                      | Liquid Pipe Connection (inch): | 1/4     |
| Dimensions (HxWxD) (in):                 | 11-3/8 x 31-1/4 x 9-1/4 | Condensate Connection (inch):  | 11/16   |
| vet Weight (Ib):                         | 26                      | Sound Pressure (H/L) (dBA):    | 38/31   |
| Ext. Static Pressure (Rated/Max) (inWg): | 1                       | Sound Power Level (dBA):       |         |

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1.0-Ton Wall Mounted Unit FXAQ12PVJU

# DIMENSIONAL DRAWING



Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

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Daikin City Generated Submittal Data



1.5-Ton Wall Mounted Unit FXAQ18PVJU

#### FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts

| Children | and The entrementers |           | CONTRACTOR OF STREET |
|----------|----------------------|-----------|----------------------|
|          |                      |           |                      |
| FEARIN   |                      | 1977 - C. | -                    |
| LE       |                      |           | <u> </u>             |



Daikin City Generated Submittal Data

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1.5-Ton Wall Mounted Unit FXAQ18PVJU

|                                  |              |   | A THE REPORT OF A RECEIPTION OF A RECEIPTION OF A RECEIPTION |
|----------------------------------|--------------|---|--|
| ndoor Unit Model No.             | FXAQ18PVJU   | Indoor Unit Name:   | 1.5-Ton Wall Mounted Unit                                    |
| Туре:                            | Wall Mounted | Rated Cooling Conditions:   | Indoor (°F DB/WB): 80 / 67                                   |
| ype.                             | Wai Mounted  | rated cooming contantonol   | Ambient (°F DB/WB): 95 / 75                                  |
| Rated Cooling Capacity (Btu/hr): | 18,000       | Rated Heating Conditions:   | Indoor (°F DB/WB): 70 / 60                                   |
| tated booling oupdoily (blann).  |              | the second se | Ambient (°F DB/WB): 47 / 43                                  |
| Sensible Capacity (Btu/hr):      | 13,700       | Rated Piping Length(ft):  |  |
| Cooling Input Power (kW):        | 0.030        | Rated Height Separation (ft):   |  |
| Rated Heating Capacity (Btu/hr): | 20,000       |   |  |
| Heating Input Power (kW):        | 0.04         |   |  |

# INDOOR UNIT DETAILS

| Mbood own de naco                        |                         |                                |         |
|--|-------------------------|--------------------------------|---------|
| Power Supply (V/Hz/Ph):                  | 208-230 / 60 / 1        | Airflow Rate (H/L) (CFM):      | 500/400 |
| Power Supply Connections:                | L1, L2, Ground          | Moisture Removal (Gal/hr):     |         |
| Min. Circuit Amps MCA (A):               | 0.5                     | Gas Pipe Connection (inch):    | 1/2     |
| Max Overcurrent Protection (MOP) (A):    | 15                      | Liquid Pipe Connection (inch): | 1/4     |
| Dimensions (HxWxD) (in):                 | 11-3/8 x 41-3/8 x 9-1/4 | Condensate Connection (inch):  | 11/16   |
| Net Weight (lb):                         | 31                      | Sound Pressure (H/L) (dBA):    | 43/37   |
| Ext. Static Pressure (Rated/Max) (inWg): | 1                       | Sound Power Level (dBA):       |         |
|  |                         |                                |         |

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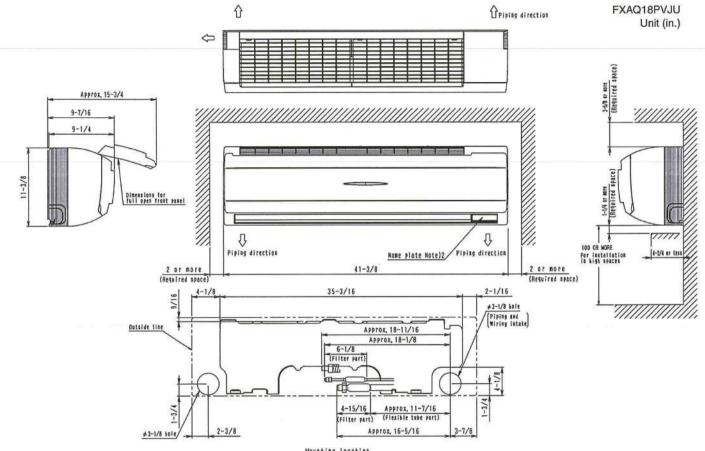
Daikin City Generated Submittal Data



Submittal Data Sheet 1.5-Ton Wall Mounted Unit

FXAQ18PVJU

# DIMENSIONAL DRAWING



Mounting location

Daikin City Generated Submittal Data

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# FEATURES

- Superior performance with a high efficiency fan and the capability for use in a wide range of climates (5°F DB ~ 122°F DB and 80% RH or less) \*
- Interlocked simultaneous operation with VRV indoor units
- Pre-cooling/heating control function to delay the start of ventilation during air conditioner start-up for higher energy savings
- Unique functions such as independent operation, interlock with other HVAC systems and automatic night purge to reduce cooling loads and increase energy savings
- Standard Limited Warranty: 10-year warranty on compressor and all parts





\* Performance characteristics certified to AHRI Standard 1060 are only applicable to the cooling and heating operating conditions specified in the performance table of this document.

- The cooling effectiveness shall be based on 95°F DB / 78°F WB for the entering supply air and 75°F DB / 63°F WB for the entering exhaust air, at a leaving supply airflow of both 100% and 75% of the rated airflow.

- The heating effectiveness shall be based on 35°F DB / 33°F WB for the entering supply air and 70°F DB / 58°F WB for the entering exhaust air, at a leaving supply airflow of both 100% and 75% of the rated airflow.

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| PERFORMANCE   |            |   |                                  |  |
|---|------------|---|----------------------------------|--|
| Indoor Unit Model No.                                   | VAM300GVJU | Indoor Unit Name  | Energy Recovery Ventilato<br>300 |  |
| Cooling Input Power (KW):                               | 0.307      | Heating Input Power (KW):                               | 0.307                            |  |
| Rated Cooling Supply Air<br>Condition (°F DB / WB):     | 95 / 78    | Rated Heating Supply Air<br>Condition (°F DB / WB):     | 35 / 33                          |  |
| Rated Cooling Exhaust Air<br>Condition (°F DB / WB):    | 75 / 63    | Rated Heating Exhaust Air<br>Condition (°F DB / WB):    | 70 / 58                          |  |
| Rated Cooling Sensible<br>Effectiveness (100% Airflow): | 60.6       | Rated Heating Sensible<br>Effectiveness (100% Airflow): | 60                               |  |
| Rated Cooling Latent<br>Effectiveness (100% Airflow):   | 29         | Rated Heating Latent<br>Effectiveness (100% Airflow):   | 46                               |  |
| Rated Cooling Sensible<br>Effectiveness (75% Airflow):  | 63.9       | Rated Heating Sensible<br>Effectiveness (75% Airflow):  | 63                               |  |
| Rated Cooling Latent<br>Effectiveness (75% Airflow):    | 40         | Rated Heating Latent<br>Effectiveness (75% Airflow):    | 53                               |  |

\* Certified in accordance with the AHRI ERV Certification Program, which is based on AHRI Standard 1060. Certified units may be found in the AHRI Directory at www.ahridirectory.org.



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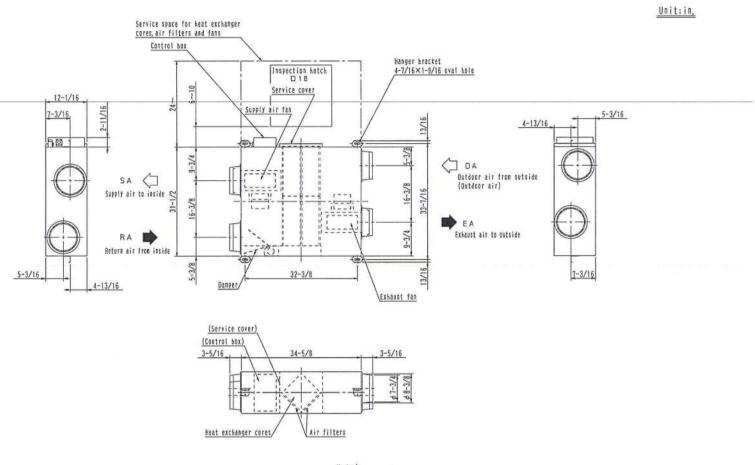


| INDOOR UNIT DETAILS                       |                               |  |                |  |
|---|-------------------------------|--|----------------|--|
| Power Supply (V/Hz/Ph):                   | 208-230/60/1                  | Airflow Rate (HH/H/L) (CFM):             | 305/300/170    |  |
| Power Supply Connections:                 | L1, L2, Ground                | Connection Duct Diameter (in):           | 8              |  |
| Min Circuit Amps MCA (A):                 | 1.6                           | Gas Pipe Connection (in):                | NA             |  |
| Max Overcurrent Protection MOP (A):       | 15                            | Liquid Pipe Connection (in):             | NA             |  |
| Dimensions (HxWxD) (in):                  | 12-1/16 x 34-5/8 x 31-<br>1/2 | Condensate Pipe Connection (in):         | NA             |  |
| Net Weight (Ib):                          | 71                            | Sound Pressure @ 208V<br>(HH/H/L) (dBA): | 34.5/31.5/21.5 |  |
| Ext Static Pressure (HH/H/L) (in<br>W.C.) | 0.64/0.26/0.16                | Sound Power @ 208V<br>(HH/H/L) (dB):     | 54/50.9/42.8   |  |

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# DIMENSIONAL DRAWING



Note) 1. Be sure to provide an inspection hatch (18×18 in.) to inspect air filters, heat exchanger cores and fans.

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BRC1E73 – Navigation Remote Controller

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |
|               |               |

# MODEL COMPATIBILITY:

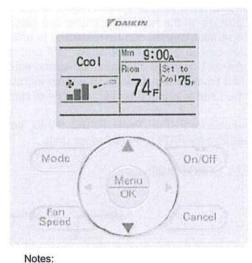
Compatible with VRV and VRV Life<sup>™</sup> indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ\_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ

Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

# SPECIFICATIONS:

| Model                       | BRC1E73   |  |
|-----------------------------|---|--|
| Description                 | Navigation Remote Controller                      |  |
| Maximum Connections         | 16 indoor units                                   |  |
| Communication Wire          | 18AWG-2, No polarity<br>Stranded, Non-shielded    |  |
| Total Wiring Length         | 1,640 ft. (500 m)                                 |  |
| Communication<br>Protocol   | Daikin proprietary P1P2 protocol                  |  |
| Power                       | 16VDC supplied by indoor unit<br>(1.58VA maximum) |  |
| Comfort Setpoint Range      | 60 to 90 °F (16 to 32 °C)                         |  |
| Setback Setpoint Range      | 40 to 95 °F (5 to 35°C)                           |  |
| Operating Temp Range        | 14 to 122°F (-10 to 50°C)                         |  |
| Operating Humidity<br>Range | 75% or less (RH)<br>(without condensation)        |  |
| Dimensions (WxHxD)          | 4.72x4.72x0.75 inch<br>(120x120x19 mm)            |  |
| Weight (Mass)               | 0.42 lbs. (0.19 kg)                               |  |

# PRODUCT IMAGE:



 (1) 1 of 3 display options – Detailed display shown

# FEATURES:

- 1. Up to 16 indoor units are controllable within one group
- 2. Within one group, up to 2 Navigation Remote Controllers can be used, one as a main and one as a sub
- 3. Backlit LCD displays in English, Spanish or French
- 4. Temperature sensor built-in with configurable offset
- 5. Display of Temperature and Setpoint in 1°F / °C increments
- 6. Three configurable display options: Detailed, Standard and Simple
- 7. Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
- 8. Setpoint range limit for cooling and heating modes

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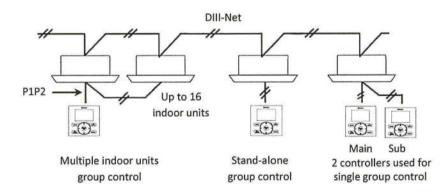


BRC1E73 – Navigation Remote Controller

| Approval:     |                                   |
|---------------|-----------------------------------|
| Date:         |                                   |
| Construction: |                                   |
| Unit #:       |                                   |
| Drawing #:    |                                   |
|               | Date:<br>Construction:<br>Unit #: |

- 9. Independent cooling and heating setback setpoints (unoccupied period)
- 10. Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
- 11. Airflow Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)\*
- 12. Built-in 7 days, weekdays+weekend, weekdays+Sat+Sun, and Everyday schedules with up to 5 actions per day with independent cooling and heating or setback setpoints
- 13. Automatic Setback by occupancy sensor\*
- 14. Automatic Off by occupancy sensor\*
- 15. Configuration for Self-cleaning filter panel\*\*
- 16. Automatic adjustment for Daylight Savings Time (DST)
- 17. 48 hour clock/calendar battery backup (protects schedule timing in cases of short term power loss from indoor unit)
- 18. Real-time monitoring of system malfunctions with immediate display of unit in error and error code
- 19. The buttons on the remote controller are selectable by locking out the unwanted buttons
- 20. The operation modes can be restricted to provide only the desired mode(s) of operation
- 21. Display can be configured to show "Off" and room temperature only when indoor unit is turned off
- 22. To prevent unwanted changes, fan speed selection and display may be hidden
- 23. Auto off timer configurable in 10 minute increments (range 30-180 minutes)
- 24. Can be used to replace earlier versions of remote controllers
  - \* Available for FXFQ\_TVJU, FXUQ\_PVJU, and FXZQ\_TA indoor units \*\*Available for FXFQ\_TVJU indoor units

SYSTEM DIAGRAM:



### FACE DECAL OPTIONS:

Face decal options are used to hide unnecessary buttons:

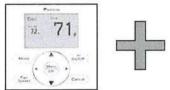
- 1. The face decal is designed to adhere to the faceplate
- 2. Hidden buttons can be accessed by service personnel without removing the face decal due to its flexibility

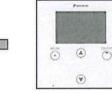
Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056 www.daikinac.com www.daikincity.com



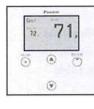
BRC1E73 – Navigation Remote Controller

# Project Name: Location: Approval: Engineer: Date: Submitted to: Construction: Submitted by: Unit #: Reference: Drawing #:



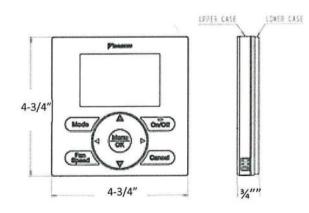






| Used with   |                     | Single Setpoint mode |                | Dual Setpoint mode |            |             |  |
|-------------|---------------------|----------------------|----------------|--------------------|------------|-------------|--|
|             | BRC1E72RM BRC1E72RF |                      | BRC1E72RMF     | BRC1E72RM2         | BRC1E72RF2 | BRC1E72RMF2 |  |
|             | Paccin              | Frees                | Faces          | P                  | Passa      | Franc       |  |
| Model       | <ul> <li></li></ul> | ۵ ک<br>ک<br>ای ک     | i⊙<br>i⊙<br>i⊛ | ©. ●. Ŭ<br>. ●     |            | ©<br>⊗      |  |
| On/Off      | x                   | x                    | x              | X                  | x          | x           |  |
| Mode        | х                   |                      | x              | X                  |            | x           |  |
| Fan         |                     | x                    | x              |                    | Х          | х           |  |
| Up, Down    | x                   | x                    | x              | х                  | X          | х           |  |
| Left, Right | 14                  |                      |                | x                  | x          | x           |  |
| Menu/Ok     |                     |                      |                |                    |            |             |  |
| Cancel      |                     |                      |                |                    |            |             |  |

# **DIMENSIONS:**



# DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056 www.daikinac.com www.daikincity.com



BRC1E73 – Navigation Remote Controller

| Approval:     |                                   |
|---------------|-----------------------------------|
| Date:         |                                   |
| Construction: |                                   |
| Unit #:       |                                   |
| Drawing #:    |                                   |
|               | Date:<br>Construction:<br>Unit #: |

- Submittal
- Guide Specifications
- Quick User Guide
- Field Setting Table

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056 www.daikinac.com www.daikincity.com



1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024

Submitted to: No Engineer Name Specified

Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

#### FEATURES

- Capable of upflow, horizontal-right, horizontal-left, and downflow installation. Downflow installation requires the use of a field installed downflow accessory kit.
- Variable speed ECM motor produces nominal CFM up to 0.9" external static pressure
- Improved auxiliary heat logic
- Designed with less than 2% air leakage when tested in accordance with ASHRAE 193
- All-aluminum coil
- Precise refrigerant modulation from a 2000 pulse electric expansion valve
- · Cool, Dry, Auto, Heat, and Fan operation modes
- Auto Fan Speed automatically adjusts fan speed in relation to space temperature and set point
- Configurable Dry mode
- Optional slide-in electric heat available up to 6 kW
- Standard Limted Warranty: 10-year warrantly on compressor and all parts

#### BENEFITS

- Optimized fan speed from Auto Fan Speed logic
- Reduced auxiliary heat dead band
- Configurable electric heat on/off temperature settings
- Compact footprint fits tight spaces





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(Daikin's products are subject to continuous improvements, Daikin reserves the right to modify product design, specifications and information in this data sheet without notice and without incurring any obligations)

Page 1 of 3



1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

# PERFORMANCE

| FXTQ12TAVJUA   | Indoor Unit Name:                            | 1.0-Ton Multi Position Air Handling<br>Unit   |  |
|--|--|---|--|
| Type: Ducted Rated Cooling Capacity (Btu/hr): 12,000 |  | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75   |  |
|  |  | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43   |  |
| 9,900  | Rated Piping Length(ft):                     |   |  |
| 0.150  | Rated Height Separation (ft):                |   |  |
| 13,500   |  |   |  |
| 0.15   |  |   |  |
|  | Ducted<br>12,000<br>9,900<br>0.150<br>13,500 | Ducted     Rated Cooling Conditions:       12,000     Rated Heating Conditions:       9,900     Rated Piping Length(ft):       0.150     Rated Height Separation (ft):       13,500 |  |

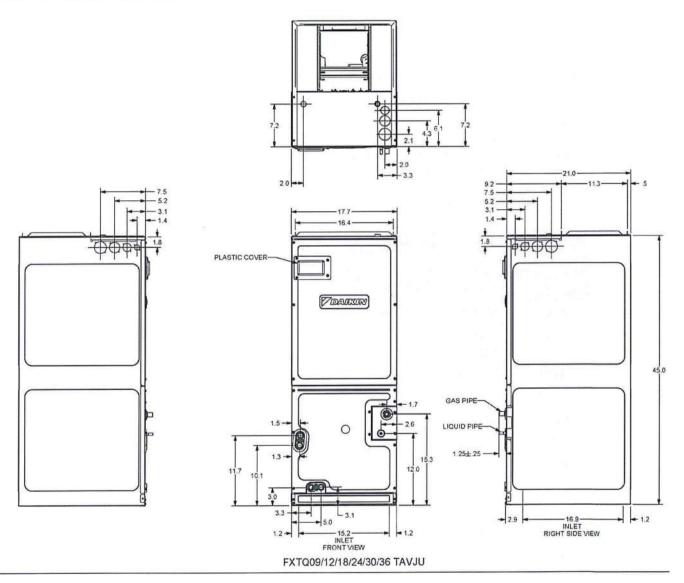
# INDOOR UNIT DETAILS

| Power Supply (V/Hz/Ph):                     | 208/230 / 60 / 1 | Airflow Rate (H/M/L) (CFM):    | 400/340/280 |
|---|------------------|--------------------------------|-------------|
| Power Supply Connections:                   |                  | Moisture Removal (Gal/hr):     |             |
| Min. Circuit Amps MCA (A):                  | 4.9/4.9          | Gas Pipe Connection (inch):    | 1/2         |
| Max Overcurrent Protection (MOP)<br>(A):    | 15               | Liquid Pipe Connection (inch): | 1/4         |
| Dimensions (HxWxD) (in):                    | 45 x 17.5 x 21   | Condensate Connection (inch):  | 3/4         |
| Net Weight (lb):                            | 115              | Sound Pressure () (dBA):       |             |
| Ext. Static Pressure (Rated/Max)<br>(inWg): | / 0.9"           | Sound Power Level (dBA):       |             |



1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

# DIMENSIONAL DRAWING



Daikin North America LLC, 19001 Kernvier Rd, Waller, TX 77484

www.darkinac.com www.darkincomfart.com



Submittal Data Sheet Electric Heat Kit for FXTQ HKS(X)C03/05/06/08/10/15/19/20/25

# DESCRIPTION

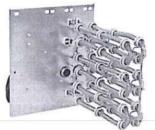
The electrical heat kit mounts directly inside FXTQ to provide auxiliary heating or to be used as alternate heat.

# FEATURES

- · Allows for easy addition axillary heat to supplement heating capabilities without any major equipment changes
- Sequencers for better temperature control
- Multiple branch circuit capability
- Completely assembled and tested
- · Control circuitry arranged to readily permit staging
- Factory-installed circuit breakers available on specific models
- · Fuse link secondary high-temperature limit control
- Plug-in wiring harness for ease of installation into air handler
- Rust-resistant nickel chromium heat elements

| Specification |          |          | the State Barrier State |                           |    |     |    |                          |           |     |          | and a series |        |
|---------------|----------|----------|-------------------------|---------------------------|----|-----|----|--------------------------|-----------|-----|----------|--------------|--------|
| Heater        | Heater   |          | With                    | - NUMBER                  |    |     |    | Contraction of the owner | npatilbil |     | 1 - E.S. |              | A ANIA |
| Model No.     | Capacity | Voltage  | Circuit                 | FXTQ_TAVJUA / FXTQ_TAVJUD |    |     |    |                          |           |     |          |              |        |
|               | copacity |          | Breaker?                | 9                         | 12 | 112 | 24 | - 3(0                    | 36        | 4/2 | -48      | 514          | 510    |
| HKSX03XC      | 3 kW     | 208/240V | no                      | 1                         | 1  | 1   | 1  | 1                        | 1         | -   | -        | -            | -      |
| HKSC05XC      | 5 kW     | 208/240V | yes                     | 1                         | 1  | 1   | 1  | 1                        | 1         | 1   | 1        | 1            | 1      |
| HKSX05XC      | 5 kW     | 208/240V | no                      | 1                         | 1  | ✓   | ✓  | 1                        | 1         | 1   | 1        | 1            | 1      |
| HKSX06XC      | 6 kW     | 208/240V | no                      | -                         | 1  | 1   | 1  | 1                        | 1         | 1   | 1        | 1            | 1      |
| HKSX08XC      | 8 kW     | 208/240V | no                      |                           | 1  | 1   | 1  | 1                        | 1         | 1   | 1        | 1            | 1      |
| HKSX10XC      | 10 kW    | 208/240V | no                      | -                         | 1  | 1   | 1  | 1                        | 1         | 1   | 1        | 1            | 1      |
| HKSC15XA      | 15 kW    | 208V     | yes                     | -                         | -  | -   | -  | -                        | -         | 1   | 1        | 1            | 1      |
| HKSC15XB      | 15 kW    | 240V     | yes                     | -                         | -  | -   | -  | -                        | -         | 1   | 1        | 1            | 1      |
| HKSC19CA      | 19 kW    | 208V     | yes                     | -                         | -  | -   | -  | -                        | -         | 1   | ~        | -            | -      |
| HKSC19CB      | 19 kW    | 240V     | yes                     | -                         | -  | -   | -  | -                        | -         | 1   | 1        | -            | -      |
| HKSC20DA      | 20 kW    | 208V     | yes                     | -                         | -  | -   | -  | -                        | -         | -   | -        | 1            | 1      |
| HKSC20DB      | 20 kW    | 240V     | yes                     | -                         | -  | -   | -  | -                        | -         | -   | -        | 1            | 1      |
| HKSC25DC      | 25 kW    | 208/240V | yes                     | -                         | -  | -   | -  | -                        | -         | -   | -        | 1            | 1      |

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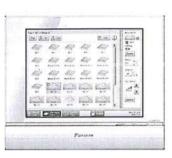
DCM601B71 – intelligent Touch Manager

| Project Name: |               |   |
|---------------|---------------|---|
| Location:     | Approval:     | _ |
| Engineer:     | Date:         |   |
| Submitted to: | Construction: |   |
| Submitted by: | Unit #:       |   |
| Reference:    | Drawing #:    |   |
|               |               |   |

# SPECIFICATIONS:

| Model   | DCM601B71                                      | DCM601A72                             |
|---|--|---------------------------------------|
| Description   | intelligent Touch Manager (iTM)                | iTM Plus Adaptor                      |
| Maximum Indoor Unit Groups                                  | 64   | 64                                    |
| Max Indoor Units  | 128  | 128                                   |
| Max Outdoor Units   | 10   | 10                                    |
| Max BACnet Servers  | 50   | · · · · · · · · · · · · · · · · · · · |
| System Total  | 512 Indoor Unit Groups                         | (1024 Indoor Units)                   |
| Power Supply  | 24 VAC, 60 Hz                                  | 24 VAC, 60 Hz                         |
| Power Consumption   | 23 Watts                                       | 23 Watts                              |
| Operating Temp Range  | 32-104°F                                       | 14 - 122°F                            |
| Operating Humidity Range                                    | 85% or less (w/o condensation)                 | 85% or less (w/o condensation)        |
| Dimensions (W x H x D)                                      | 11.42 x 9.57 x 1.97 in.                        | 6.30 x 5.87 x 2.41 in.                |
| Weight (Mass)   | 5.3 lbs. (2.4 kg)                              | 1.1 lbs. (0.5 kg)                     |
| Certifications  | FCC Part 15                                    | Class B                               |
| DIII-NET Systems  | 1  | 1                                     |
| RJ-45 (Ethernet)<br>100Base-TX or 10Base-T                  | 2  | N/A                                   |
| USB Port-USB2.0 (2GB to 32GB)                               | 1  | N/A                                   |
| RS485 (19 - 22 AWG)   | 1  | 1                                     |
| Digital Input forced shutdown of<br>all indoor unit systems | 1  | N/A                                   |
| Digital Input and/or<br>Pulse Input Terminals               | tal Input and/or 3 x 10 mA @ 16 VDC/ 4 x 10 m/ |                                       |

# **PRODUCT IMAGE:**



iTM



iTM Plus Adaptor (Optional)

# OPTIONS:

- Software Options:
  - Power Proportional Distribution (PPD) Option (DCM002A71)<sup>(1)</sup>
  - Web (HTTP) Interface Software (DCM007A51)
  - BACnet Client Option Software (DCM009A51)
  - BACnet/IP Server Gateway Option (DCM014A51)<sup>(2)(3)</sup>
- Hardware Options:
  - iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
  - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
- Spare Parts:
  - o iTM Sliding Door (Part# B72A930)
  - o SD Card (Part# 2336767)

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DCM601B71 – intelligent Touch Manager

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#### Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit or the Low Temp Hydrobox.

### MODEL COMPATIBILITY:

The following indoor units are compatible with the iTM:

| System                              | Model  |
|-------------------------------------|--|
| VRV and VRV<br>Life™                | FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ,<br>FXUQ, FXZQ, CXTQ, VAM*, Low Temperature Hydrobox (HXY48TAVJ)*  |
| SkyAir                              | FAQ, FBQ, FCQ, FHQ, FTQ  |
| Single<br>Zone/Multi<br>Zone/SkyAir | <ul> <li>FDMQ, FFQ_Q</li> <li>FFQ_LVJU with the use of the Interface Adaptor DTA112BA51</li> <li>FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S</li> <li>FTK_N, FTX_N, FTX_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E</li> </ul> |

\*iTM BACnet Server Gateway Option is not compatible with VAM unit and LT Hydrobox

The outdoor operational data is available for the following outdoor unit models:

| VRV Family   | Model  |
|--|--|
| VRV III S  | RXYMQ_PVJU   |
| VRV IV S   | RXTQ_TAVJU   |
| VRV LIFE   | RXSQ_TAVJU   |
| VRV III  | RXYQ_PBTJ, RXYQ_PBYD, REYQ_PATJ, REYQ_PBTJ, REYQ_PBYD, REYQ_PCTJ, REYQ_PCYD, RWEYQ_PTJU and RWEYQ_PYDN |
| VRV AURORA   | RXLQ_TATJU, RXLQ_TAYDU, RXLQ_TAYCU, RELQ_TATJU, RELQ_TAYDU and RELQ TAYCU                              |
| VRV IV X   | REYQ_XATJU, REYQ_XAYDU, REYQ_XAYCU, RXYQ_XATJA, RXYQ_XAYDA, REYQ_XATJA, REYQ_XAYDA, REYQ_XAYCA         |
| VRV T  | RWEQ_TATJU, RWEQ_TAYDU, RWEQ_TAYCU   |
| VRV IV RXYQ_TTJU, RXYQ_TATJU, RXYQ_TAYDU, REYQ_TATJU, REYQ_TAYDU,<br>RXYQ_TAYCU, RXYQ_TYDN, REYQ_TAYCU, REYQ_TTJU, REYQ_TYDN,<br>RWEYQ_PCTJ and RWEYQ_PCYD |  |
| VRV Emerion  | REYQ_AATJA, REYQ_AAYDA, RXYQ_AATJA, RXYQ_AAYDA   |

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DCM601B71 – intelligent Touch Manager

|               | 2 2                               |
|---------------|-----------------------------------|
| Approval:     |                                   |
| Date:         |                                   |
| Construction: |                                   |
| Unit #:       |                                   |
| Drawing #:    |                                   |
| -             | Date:<br>Construction:<br>Unit #: |

# FEATURES:

- 1. Management size up to 512 indoor unit groups (1024 indoor units).
  - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
  - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.

1

### 2. Control / Monitoring

- a. Independent Cool and Heat setpoints
  - i. Setpoint tracking for full range of setpoint differentials
- b. Independent Cool and Heat Setback setpoints (unoccupied)
  - i. Adjustable timed override
- c. Room temperature displayed in 0.1°F
- d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
  - i. Optimum Start
  - ii. Schedule the capacity demand limit of the outdoor unit's compressor by 0%, 40%, 70% or 100%
  - iii. Schedule the outdoor unit low noise operation
- e. Auto-changeover: Fixed, Individual, Average, and Vote
  - i. Weighted demand (0-3) configurable for Average and Vote methods
  - ii. Adjustable (1-4°F) Primary and Secondary changeover bands

### 3. Web Accessibility

- a. Web and Alert Email function standard with iTM
- b. All iTM configuration/setup can be done through Web Option or touch screen

### 4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points
- 5. Easy installation
  - a. Wall mount and flush mount installation.
  - b. Automatic indoor unit registration and indoor unit model detection.

#### 6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

#### 7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
   i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
  - i. AI, AO, AV, BI, BO, BV, MI, MO and MV

# 8. Power Proportional Distribution (PPD) (Optional)

- a. Provide function to distribute the energy consumption of the Outdoor units to the selected indoor unit group address, based on indoor unit operation duration, electronic expansion valve opening ration, indoor size.... etc.
- b. Up to 512 indoor unit group address
- c. PPD data can be downloaded in CSV format to a PC or USB flash drive

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DCM601B71 – intelligent Touch Manager

| Approval:     |
|---------------|
| Date:         |
| Construction: |
| Unit #:       |
| Drawing #:    |
|               |

### 9. Web (HTTP) Interface Software (Optional)

- a. Provide function to monitor and control up to 512 indoor unit group addresses by a BMS via HTTP protocol.
- b. The following data points are available: Fan Speed Louver Direction Ventilation Mode Ventilation Amount -
  - Normal/Error monitor On/Off Operation Mode Setpoint Room Temp

#### 10. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
  - i. Up to 50 BACnet IP servers can be connected

# 11. BACnet Server Gateway (Optional)

- a. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
  - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
  - ii. Up to 4000 BACnet objects
  - iii. Virtual BACnet router function embedded
    - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

#### 12. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).
- 13. D-Net compatible (Service option)
  - a. Remote monitoring of VRV equipment status and reporting

# 14. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
  - i. Indoor and outdoor unit operation data.
  - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
  - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period. (See iTM BACnet Server points list below for IDU/ODU operational data list)

#### 15. Demand Limiting

- a. Interlock the digital input signals to provide the following automatic demand control functions
  - i. Indoor unit set-point shift control
  - ii. Indoor unit forced thermo-off
  - iii. Indoor unit on/off control
  - iv. Outdoor unit's capacity demand limit control

### WIRING SPECIFICATION:

|              | Specifications of Communication Cabling                                     |  |
|--------------|---|--|
| DIII-Net     |   |  |
| Туре         | 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket      |  |
| Size         | AWG 18-2  |  |
| Total Length | Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft. |  |
|              | iTM Plus Adapter  |  |
| Туре         | 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket      |  |
| Size         | AWG 18-2  |  |
| RS485 Length | Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.          |  |
| Total Length | Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft. |  |

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| Unit #:       |                                   |
| Drawing #:    |                                   |
|               | Date:<br>Construction:<br>Unit #: |

| WAGO         |  |
|--------------|--|
| Туре         | 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV) |
| Size         | 2 Wire AWG 24 - 18 stranded  |
| Total Length | Maximum wiring distance between iTM and Bus Coupler 1640 ft.                           |

# BACNET CLIENT OPTION MANAGEMENT POINTS:

The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

| Object<br>Type # | Object Name        | Description   |  |
|------------------|--------------------|---|--|
| 0                | Analog Input       | Analog input value such as a temperature and measurement value.   |  |
| 1                | Analog Output      | Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).            |  |
| 2                | Analog Value       | Analog input value such as a temperature and measurement value or analog output value such as a setting value.                  |  |
| 3                | Binary Input       | Digital input value such as an On/Off status and error status.  |  |
| 4                | Binary Output      | Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).  |  |
| 5                | Binary Value       | Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.              |  |
| 13               | Multi-state Input  | Digital input value such as an operation mode   |  |
| 14               | Multi-state Output | put Digital output value such as an operation mode (For example, can be used as the digital inp<br>value of an operation mode). |  |
| 19               | Multi-state Value  | Digital input value such as an operation mode or digital output value such as an operation mode.                                |  |

# BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

#### System configuration points linked to iTM control logic (one set of points per iTM):

| Point Name                              | Point Description   |  |
|---|---|--|
| Enable ITM Schedule<br>Operation        | Enable or Disable iTM Schedule operation  |  |
| Enable ITM Auto Changeover<br>Operation | Enable or disable iTM Auto changeover logic.  |  |
| Timed Override Minutes                  | Set override time in minutes  |  |
| System Forced Off                       | The Forced System Stop command will force the indoor unit to stop running. Remote<br>controllers will be locked out from restarting indoor units during the forced system stop event. |  |

# Indoor unit monitoring points (one set of points per indoor unit group):

| Point Name         | Point Description                            |  |
|--------------------|--|--|
| Unit On_Off Status | Monitors if the indoor unit fan is On or Off |  |

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| Date:         |                                   |
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| Unit #:       |                                   |
| Drawing #:    |                                   |
|               | Date:<br>Construction:<br>Unit #: |

| Alarm Status              | Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoo<br>unit has a malfunction. Error Code is shown in the description. |
|---------------------------|--|
| Room Temperature          | Monitors and displays the room temperature.  |
| Unit On Details           | Indoor unit details operation Off - Normal (ON) - Override - Setback   |
| Filter Sign Status        | Monitors filter run time and provides service alert.   |
| Indoor Fan Status         | Monitors if the indoor unit fan is On or Off   |
| Communication Status      | Monitor if the communication is Normal or in Alarm   |
| Thermo-on Status          | Monitors whether or not the indoor unit is actively cooling or heating.  |
| Compressor Status         | Monitors if the compressor of the outdoor unit is On/Off/Defrost   |
| Aux Heater Status         | Monitors if the external heater controlled by the indoor unit is operating.  |
| Changeover Option         | Monitor if iTM changeover logic is Active.   |
| Return Air Temperature    | Monitors and displays the return air temperature.  |
| Discharge Air Temperature | Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.   |
| Liquid Pipe Temperature   | Monitors and displays the liquid pipe temperature.   |
| Gas Pipe Temperature      | Monitors and displays the gas pipe temperature.  |
| EV Position               | Monitors and displays the expansion valve position.  |
| Freeze Protection         | Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).                                     |
|                           |  |

#### Indoor unit monitoring and control points (one set of points per indoor unit group):

| Point Name                                       | Point Description  |
|--|--|
| Occupancy Mode                                   | Set the occupancy of the indoor unit Occupied , Unoccupied or Standby  |
| Operation mode                                   | Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode                         |
| Occ Cooling Setpoint                             | Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Occ Heating Setpoint                             | Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Unocc Cooling Setpoint                           | Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value                     |
| Unocc Heating Setpoint                           | Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Max Cooling Setpoint                             | Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Cooling Setpoint                             | Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Max Heating Setpoint                             | Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Heating Setpoint                             | Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Setpoint Differential<br>(Cooling & Heating) | Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value. |
| Cooling & Heating Setpoint<br>Tracking Mode      | Enable or disable iTM setpoint tracking mode.  |
| Fan speed  | Sets the indoor unit fan speed and monitors the latest setting   |

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DCM601B71 - intelligent Touch Manager

| Approval:     |
|---------------|
| Date:         |
| Construction: |
| Unit #:       |
| Drawing #:    |
|               |

| Timed Override Operation                       | Enable or disable iTM override timer  |
|--|---|
| Remote Controller Prohibit<br>(On Off)         | Permits or prohibits the remote controller to control the indoor unit's On/Off.         |
| Remote Controller Prohibit<br>(Operation Mode) | Permits or prohibits the remote controller to control the indoor unit's Operation mode. |
| Remote Controller Prohibit (Setpoint)          | Permits or prohibits the remote controller to control the indoor unit's Setpoint.       |
| Filter Sign Reset                              | Clears the filter sign status.  |
| Forced Thermo-off                              | Force the indoor unit to stop actively cooling or heating.                              |

#### Outdoor unit monitoring points\*:

| Point Name                           | Point Description  |  |
|--------------------------------------|--|--|
| Communication Status                 | Monitors and displays the communication status (General)                           |  |
| Operation Mode                       | Monitors and displays the operation mode (Cool, Heat, Fan or Heat &Cool) (General, |  |
| Outdoor Unit Alarm Status            | Monitors whether or not the outdoor unit is operating normally. (General)          |  |
| Defrost Mode                         | Monitors if the defrost mode is active. (General)                                  |  |
| Oil Return Mode                      | Monitors whether or not the outdoor unit is in oil return operation. (General)     |  |
| Electric Power                       | Monitors and displays the electric power (calculated). (General)                   |  |
| Electric Current                     | Monitors and displays the electric current (calculated). (General)                 |  |
| System Capacity Code                 | Monitors and displays the system capacity code. (General)                          |  |
| Outdoor Air Temperature              | Monitors and displays the outdoor air temperature. (General)                       |  |
| M_Condensing Pressure                | Monitors and displays the condensing pressure (Master Module)                      |  |
| M_Evaporating Pressure               | Monitors and displays the evaporating pressure (Master Module)                     |  |
| M_Condensing Temperature             | Monitors and displays the condensing temperature (Master Module)                   |  |
| M_Evaporating Temperature            | Monitors and displays the evaporating temperature (Master Module)                  |  |
| M_Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Master Module)        |  |
| M_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Master Module)        |  |
| M_Fan Step                           | Monitors and displays the fan step (Master Module)                                 |  |
| M_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Master Module)         |  |
| M_EV position 2                      | Monitors and displays the position of the expansion valve2 (Master Module)         |  |
| M_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Master Module)   |  |
| M_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Master Module)   |  |
| M_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Master Module)                  |  |
| M_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Master Module) |  |
| M_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Master Module) |  |
| M_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Master Module)  |  |

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Rev.1022



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| Submitted by: | Unit #:       |                                       |
| Reference:    | Drawing #:    |                                       |
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| M_Gas Pipe Temperature (HX Upper)     | Monitors and displays the gas pipe temperature for the upper HX (Master Module)  |
|---------------------------------------|--|
| M_Gas Pipe Temperature (HX Lower)     | Monitors and displays the gas pipe temperature for the lower HX (Master Module)  |
| M_Suction Temperature                 | Monitors and displays the suction temperature (Master Module)                    |
| M_Compressor Suction Temperature      | Monitors and displays the compressor's suction temperature (Master Module)       |
| M_Subcool Inlet Temperature           | Monitors and displays the subcool inlet temperature (Master Module)              |
| M_Subcool Outlet temperature          | Monitors and displays the subcool outlet temperature (Master Module)             |
| M_Subcool EV Position                 | Monitors and displays the subcool expansion valve position (Master Module)       |
| S1_Condensing Pressure                | Monitors and displays the condensing pressure (Sub Module1)                      |
| S1_Evaporating Pressure               | Monitors and displays the evaporating pressure (Sub Module1)                     |
| S1_Condensing Temperature             | Monitors and displays the condensing temperature (Sub Module1)                   |
| S1_Evaporating Temperature            | Monitors and displays the evaporating temperature (Sub Module1)                  |
| S1_Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Sub Module1)        |
| S1_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Sub Module1)        |
| S1_Fan Step                           | Monitors and displays the fan step (Sub Module1)                                 |
| S1_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Sub Module1)         |
| S1_EV position 2                      | Monitors and displays the position of the expansion valve2 (Sub Module1)         |
| S1_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)   |
| S1_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)   |
| S1_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Sub Module1)                  |
| S1_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1) |
| S1_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1) |
| S1_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)  |
| S1_Gas Pipe Temperature (HX Upper)    | Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)    |
| S1_Gas Pipe Temperature (HX Lower)    | Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)     |
| S1_Suction Temperature                | Monitors and displays the suction temperature (Sub Module1)                      |
| S1_Compressor Suction Temperature     | Monitors and displays the compressor's suction temperature (Sub Module1)         |
| S1_Subcool Inlet Temperature          | Monitors and displays the subcool inlet temperature (Sub Module1)                |
| S1_Subcool Outlet temperature         | Monitors and displays the subcool outlet temperature (Sub Module1)               |
| S1_Subcool EV Position                | Monitors and displays the subcool expansion valve position (Sub Module1)         |
| S2_Condensing Pressure                | Monitors and displays the condensing pressure (Sub Module2)                      |
| S2_Evaporating Pressure               | Monitors and displays the evaporating pressure (Sub Module2)                     |
| S2_Condensing Temperature             | Monitors and displays the condensing temperature (Sub Module2)                   |
| S2_Evaporating Temperature            | Monitors and displays the evaporating temperature (Sub Module2)                  |
| S2 Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Sub Module2)        |

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Rev.1022



DCM601B71 - intelligent Touch Manager

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |
|               |               |

| S2_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Sub Module2)        |
|---------------------------------------|--|
| S2_Fan Step                           | Monitors and displays the fan step (Sub Module2)                                 |
| S2_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Sub Module2)         |
| S2_EV position 2                      | Monitors and displays the position of the expansion valve2 (Sub Module2)         |
| S2_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Sub Module2)   |
| S2_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Sub Module2)   |
| S2_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Sub Module2)                  |
| S2_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Sub Module2) |
| S2_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Sub Module2) |
| S2_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Sub Module2)  |
| S2_Gas Pipe Temperature (HX Upper)    | Monitors and displays the gas pipe temperature for the upper HX (Sub Module2)    |
| S2_Gas Pipe Temperature (HX Lower)    | Monitors and displays the gas pipe temperature for the lower HX(Sub Module2)     |
| S2_Suction Temperature                | Monitors and displays the suction temperature (Sub Module2)                      |
| S2_Compressor Suction Temperature     | Monitors and displays the compressor's suction temperature (Sub Module2)         |
| S2_Subcool Inlet Temperature          | Monitors and displays the subcool inlet temperature (Sub Module2)                |
| S2_Subcool Outlet temperature         | Monitors and displays the subcool outlet temperature (Sub Module2)               |
| S2_Subcool EV Position                | Monitors and displays the subcool expansion valve position (Sub Module2)         |

DIMENSIONS:

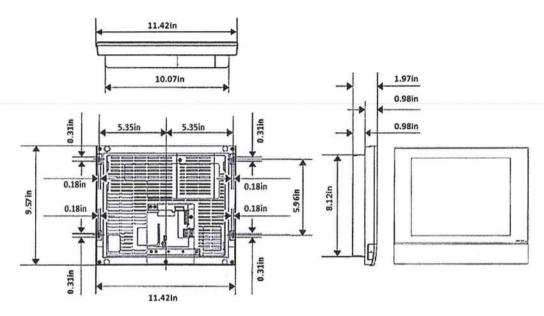
iTM:

Rev.1022

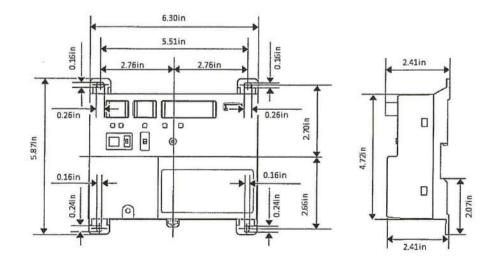


DCM601B71 - intelligent Touch Manager

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |



iTM Plus Adaptor:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

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DCM601B71 - intelligent Touch Manager

| Project Name: |               |  |
|---------------|---------------|--|
| Location:     | Approval:     |  |
| Engineer:     | Date:         |  |
| Submitted to: | Construction: |  |
| Submitted by: | Unit #:       |  |
| Reference:    | Drawing #:    |  |

- Submittal 0
- Sales Brochure •
- Guide Specs

0

- Installation Manual
- Operation Manual
- iTM D3 Operation Data Analysis Tool
  - iTM BACnet Server Gateway
    - o Design Guide
      - o Sales Flyer
    - o Quick User Guide
- iTM BACnet Client
- Sales Flyer
   iTM BACnet Client macro tools
  - WAGO I/O Basic Kit and Modules
    - o Submittal
    - Installation Manual
    - o Sales Flyer

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Submittal Data Sheet 3 PIPE REFNET JOINT KHRP25M72TU9

## DESCRIPTION

REFNET Joints provide a factory designed option for the branching within the refrigerant piping network.

## FEATURES

- Engineered for uniform refrigerant flow and refrigerant distribution.
- Designed to help smoother oil return.
- Flexible installation; vertical or ± 30° from horizontal.
- Designed with tube diameters (I.D. and O.D.) required for VRV system installations.
- Pre-formed clamshell style insulation<sup>1,2</sup> for cleaner and reliable application.
- Accounts for 1.5 ft equivalent pipe length calculation.

|     | - A 22                        |
|-----|-------------------------------|
| 1PP | - dimension                   |
|     | Brought and the second second |
|     | II Was                        |
|     | 7                             |
| No. | Picture for REFERENCE ONLY    |

VRV



| SPECIFICATIONS  |  |  |  |
|---|--|--|--|
| Piping Material:  |  | ACR Copper Alloy C12200  |  |
| Ports / Branches:   |  | 2  |  |
|   |  | 1 pcs. – Suction Gas Side  |  |
| Included in Branch Kit  |  | 1 pcs. – Discharge Gas Side  |  |
|   |  | 1 pcs Liquid Side  |  |
| Kit Name:   | SUCTION GAS SIDE   | DISCHARGE GAS SIDE   | LIQUID SIDE                              |
| Reducer Fittings:   | 1 pcs – I.D. Ø 5/8<br>2 pcs – I.D. Ø 7/8<br>1 pcs – I.D. Ø 1-1/8   | 1 pcs – I.D. Ø 3/8<br>1 pcs – I.D. Ø 1/2   | 1 pcs – I.D. Ø 5/8<br>1 pcs – I.D. Ø 3/4 |
| Insulation Material:  | Polypr   | opylene  | Expandable Polystyrene<br>(EPS)          |
| Insulation Quantity<br>(per Joint):   | 1 pcs.   | 1 pcs.   | 1 pcs.                                   |
| Indoor Unit<br>Capacity Index:  |  | 111 ≤ x < 246  |  |
| Pipe Connection Size:   | Refer to Dime  | ensional Drawing and VRV Expres  | s Calculations                           |
| and second as a second s | and the first of the same short 1 is the same when all provide the same same short the same short it using same in | I Provide the second state of the second state of the second state of the second s |  |

#### Notes:

1) In applications where the REFNET kits are installed in an environment requiring fire-rated materials to be used, it is necessary for the installer to obtain from a third party supplier and to utilize, for insulation, fire-rated materials that meet all applicable building codes and other requirements. The Factory-provided insulation that is supplied with the REFNET kit should be discarded in a manner meeting all applicable laws.

2) The insulation of the refrigerant piping must be reinforced based on the environment of the installation. Otherwise dew may condensate on the surface of insulation.

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Submittal Data Sheet 3 PIPE REFNET JOINT KHRP25M72TU9 DIMENSIONAL DRAWING

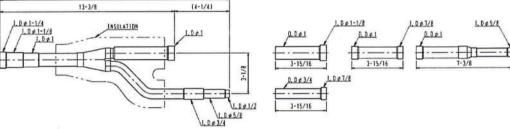
17-5/8

### KHRP25M72TU9

Unit: in.

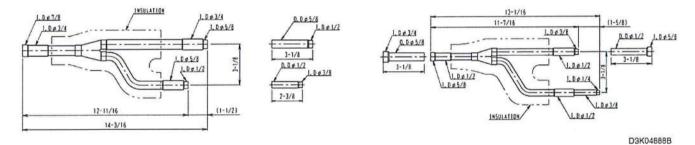
## ACCESSORIES REDUCER:4 pcs.(FOR SUCTION GAS SIDE) :2 pcs.(FOR DISCHARGE GAS SIDE) :2 pcs.(FOR LIQUID SIDE) INSULATION:3 pcs. INSTALLATION MANUAL:1 sheet



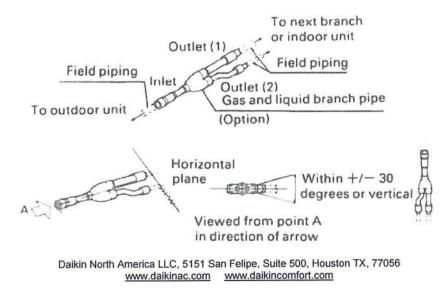


DISCHARGE GAS SIDE

LIQUID SIDE



## TYPICAL INSTALLATION DRAWING





Closed Pipe Kit for Branch Selector Box KHFP26A100CA

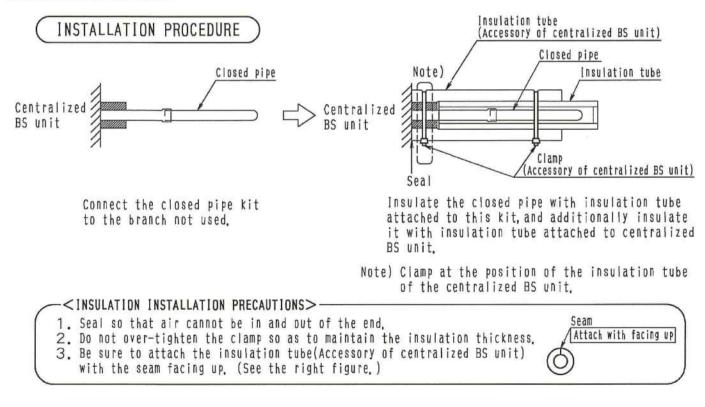
### DESCRIPTION

Each Branch Selector boxes comes with 1 set of closed pipe kit to seal off unused piping on the indoor unit side of the branch selector box. The KHFP26A100CA is an additional set of closed pipe kit if more than 1 set of close pipe kit is required.

Components Included:

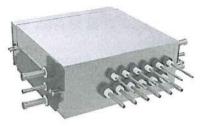
| Name     | Closed pipe of Gas pipe side | Closed pipe of Liquid pipe side | Insulation tube (Gas pipe side) | Insulation tube (Liquid pipe side) |
|----------|------------------------------|---------------------------------|---------------------------------|------------------------------------|
| Quantity | 1 pc,                        | 1 pc.                           | 1 pc,                           | 1 pc,                              |
| Shape    | ø15.9mm (ø5/8 inch)          | ∮9,5mm (∮3/8 inch)              | 0                               | 0                                  |

## Installation Instruction:





Submittal Data Sheet Branch Selector Box, Flex-Series BSF6Q54TVJ



## DESCRIPTION

Daikin's new Flex series Branch selector boxes are engineered to be compact and provide flexibility in design, installation, maintenance, and service. Packed with Daikin technology, the new Flex series branch selector boxes fit in tight ceiling spaces. The versatile piping configurations, and the ease of maintenance and service makes the Flex series an ideal choice for commercial buildings.

## FEATURES and BENEFITS

- Engineered for flexibility in design with left, right and pass through piping configuration
- Ideal for tight spaces with 9-1/2" height and no service clearance requirement on top
- · Series connectible up to 12 ports with up to 230 MBH downstream capacity
- Low ambient technical cooling capability down to -4F°
- Pass through configuration allows reduction in required REFNETs
- · Ease of maintenance with access to EEV heads from side access panels
- · Ability to mix and match standard and flex series branch selector units
- Same piping flexibility as standard series branch selector units
- Compatible with M, P and T series indoor units and all T series VRV 3 phase heat recovery systems

| SPECIFICATIONS  |                     |                          |                    |                            |
|---|---------------------|--------------------------|--------------------|----------------------------|
| Model No:   |                     |                          |                    | BSF6Q54TVJ                 |
| Туре  |                     |                          | Multi-Port         |                            |
| Power Supply  |                     |                          |                    | Single phase 208/230V 60Hz |
| MCA / MOP   | 140 H 44 K          |                          |                    | 0.6 / 15                   |
| Number of Branches  |                     |                          |                    | 6                          |
| Max Capacity Index o  | f Connectable Indoo | or Units Per BS Box / Co | onnected in Series | 216 / 162                  |
| Maximum connection  | n index per port    |                          |                    | 54                         |
| Max Capacity Index o<br>in Series   | f Total Connectable | Indoor Units Under BS    | 5 Units Connected  | 230                        |
|   | Indoor Unit         | Liquid                   | in.                | 3/8 (1/4) Brazing          |
|   |                     | Gas                      | in.                | 5/8 (1/2) Brazing          |
| Piping connections  |                     | Liquid                   | in.                | 5/8 Brazing                |
|   | Outdoor unit        | Suction Gas              | in.                | 1-1/8 Brazing              |
|   |                     | HP/LP Gas                | in.                | 1-1/8 Brazing              |
| Weight  |                     |                          | lbs (kg)           | 73 (33)                    |
|   |                     | Height                   | in. (mm)           | 9 -1/2 (241)               |
| Dimensions  |                     | Width in. (mm)           |                    | 23-3/8 (593)               |
| and where a second s |                     | Depth                    | in. (mm)           | 23-3/4 (603)               |
| Sound Level   | Operating Sound /   | Max Sound                | dB(A)              | 40.5 / 50                  |
| Refrigerant   |                     |                          |                    | R410A                      |
| Optional Accessory  |                     | Pipe Reducer Kit         | Part Number        | KHFP26A200T                |

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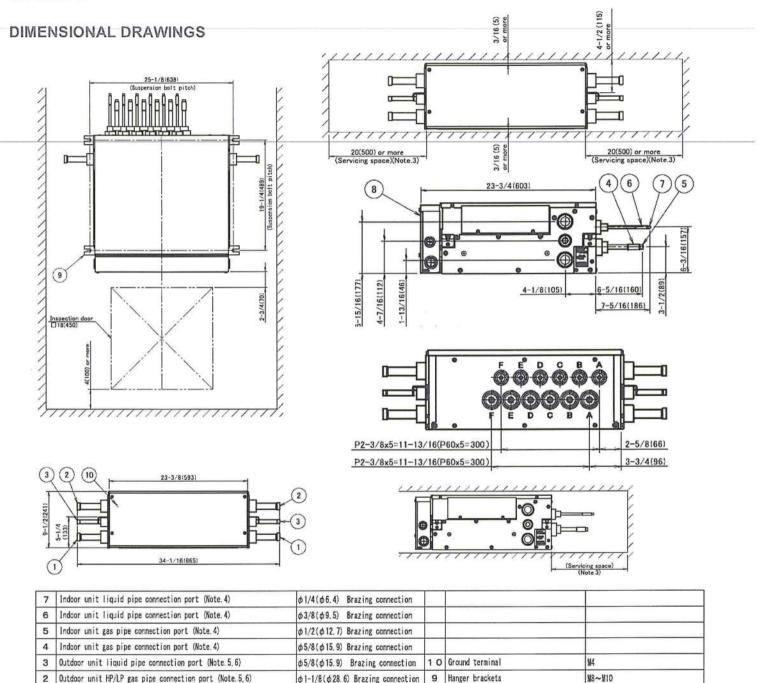
Outdoor unit suction gas pipe connection port (Note. 5, 6)

Part name

1

No.

Submittal Data Sheet Branch Selector Box, Flex-Series BSF6Q54TVJ



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φ1-1/8(φ28.6) Brazing connection

Renark

Control box (Note. 1)

Part name

8

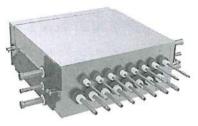
No.

(Daikin's products are subject to continuous improvements. Daikin reserves the right to modify product design, specifications and information in this data sheet without notice and without incurring any obligations).

Remark



Submittal Data Sheet Branch Selector Box, Flex-Series BSF8Q54TVJ



## DESCRIPTION

Daikin's new Flex series Branch selector boxes are engineered to be compact and provide flexibility in design, installation, maintenance, and service. Packed with Daikin technology, the new Flex series branch selector boxes fit in tight ceiling spaces. The versatile piping configurations, and the ease of maintenance and service makes the Flex series an ideal choice for commercial buildings.

## FEATURES and BENEFITS

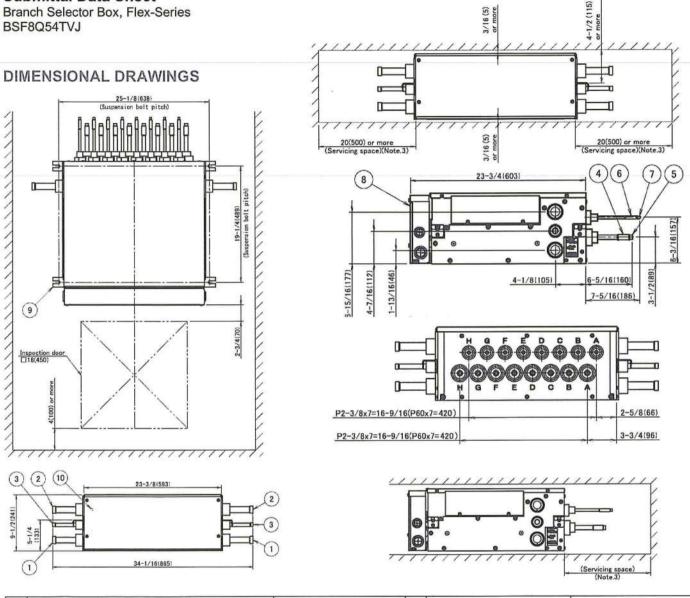
- Engineered for flexibility in design with left, right and pass through piping configuration
- Ideal for tight spaces with 9-1/2" height and no service clearance requirement on top
- Series connectible up to 12 ports with up to 230 MBH downstream capacity
- Low ambient technical cooling capability down to -4F°
- Pass through configuration allows reduction in required REFNETs
- · Ease of maintenance with access to EEV heads from side access panels
- Ability to mix and match standard and flex series branch selector units
- · Same piping flexibility as standard series branch selector units
- Compatible with M, P and T series indoor units and all T series VRV 3 phase heat recovery systems

| SPECIFICATIONS                     |   |                        | States of the second states |                            |
|------------------------------------|---|------------------------|-----------------------------|----------------------------|
| Model No:                          |   | Ka-in                  |                             | BSF8Q54TVJ                 |
| Туре                               |   |                        | Multi-Port                  |                            |
| Power Supply                       | 10 a                                    |                        |                             | Single phase 208/230V 60Hz |
| MCA / MOP                          | 1                                       |                        | Contraction of the second   | 0.8 / 15                   |
| Number of Branches                 |   | - Andrew Martin        |                             | 8                          |
| Max Capacity Index of              | Connectable Indoor L                    | Jnits Per BS Box / Cor | nnected in Series           | 290 / 162                  |
| Maximum connection i               | ndex per port                           |                        |                             | 54                         |
| Max Capacity Index of<br>in Series | Fotal Connectable Ind                   | door Units Under BS I  | Units Connected             | 230                        |
| - A                                |   | Liquid                 | in.                         | 3/8 (1/4) Brazing          |
|                                    | Indoor Unit                             | Gas                    | in.                         | 5/8 (1/2) Brazing          |
| Piping connections                 |   | Liquid                 | in.                         | 5/8 Brazing                |
|                                    | Outdoor unit                            | Suction Gas            | in.                         | 1-1/8 Brazing              |
|                                    |   | HP/LP Gas              | in.                         | 1-1/8 Brazing              |
| Weight                             |   |                        | lbs (kg)                    | 81 (37)                    |
|                                    |   | Height                 | in. (mm)                    | 9 -1/2 (241)               |
| Dimensions                         |   | Width                  | in. (mm)                    | 23-3/8 (593)               |
|                                    |   | Depth                  | in. (mm)                    | 23-3/4 (603)               |
| Sound Level                        | Operating Sound                         | / Max Sound            | dB(A)                       | 40.5 / 50                  |
| Refrigerant                        | • • • / *** • • • • • • • • • • • • • • | Silling and sealer     |                             | R410A                      |
| Optional Accessory                 |   | Pipe Reducer Kit       | Part Number                 | KHFP26A200T                |

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Submittal Data Sheet Branch Selector Box, Flex-Series BSF8Q54TVJ



| No. | Part name  | Remark  | No. | Part name            | Remark |
|-----|--|---|-----|----------------------|--------|
| 1   | Outdoor unit suction gas pipe connection port (Note.5,6) | $\phi$ 1-1/8( $\phi$ 28.6) Brazing connection | 8   | Control box (Note.1) |        |
| 2   | Outdoor unit HP/LP gas pipe connection port (Note 5,6)   | $\phi$ 1-1/8( $\phi$ 28.6) Brazing connection | 9   | Hanger brackets      | M3~M10 |
| 3   | Outdoor unit liquid pipe connection port (Note.5,6)      | φ5/8(φ15.9) Brazing connection                | 10  | Ground terminal      | ¥4     |
| 4   | Indoor unit gas pipe connection port (Note,4)            | $\phi$ 5/8( $\phi$ 15.9) Brazing connection   |     |                      |        |
| 5   | Indoor unit gas pipe connection port (Note.4)            | $\phi 1/2 (\phi 12.7)$ Brazing connection     |     |                      |        |
| 6   | Indoor unit liquid pipe connection port (Note.4)         | $\phi$ 3/8( $\phi$ 9.5) Brazing connection    |     |                      |        |
| 7   | Indoor unit liquid pipe connection port (Note.4)         | φ1/4(φ6.4) Brazing connection                 |     |                      |        |

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BRC1H71W – Madoka Remote Controller

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |
|               |               |

## MODEL COMPATIBILITY:

Compatible with VRV and VRV Life<sup>™</sup> indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ\_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

### SPECIFICATIONS:

| Model                       | BRC1H71W  |
|-----------------------------|---|
| Description                 | Madoka Remote Controller                          |
| Maximum Connections         | 16 indoor units                                   |
| Communication Wire          | 18AWG-2, No polarity<br>Stranded, Non-shielded    |
| Total Wiring Length         | 1,640 ft. (500 m)                                 |
| Communication<br>Protocol   | Daikin proprietary P1P2 protocol                  |
| Power                       | 16VDC supplied by indoor unit<br>(1.58VA maximum) |
| Comfort Setpoint Range      | 60 to 90 °F (16 to 32 °C)                         |
| Setback Setpoint Range      | 40 to 95 °F (5 to 35°C)                           |
| Operating Humidity<br>Range | 75% or less (RH)<br>(without condensation)        |
| Dimensions                  | 3.35 x 3.35 x 0.98 (inches)<br>85 x 85 x 25 (mm)  |
| Weight                      | 0.42 lbs. (0.19 kg)                               |

PRODUCT IMAGE:



Text Display Mode



Icon Display Mode



Scale (Text) Display Mode



Scale (Icon) Display Mode

### FEATURES:

- Compact and stylish design
  - Configurable LED light ring (Dimmable/Off) and LCD brightness
  - Simple and Intuitive touch buttons and a physical On/Off button 0
  - Selective Display Mode: Text display, Icon display, Scale (Text) display, and Scale (Icon) display 0
  - Display of Temperature and Setpoint in 1°F / °C increments 0
  - Customizable display to show selected information only 0
- Connectivity
  - Up to 16 indoor units can be controlled together within one remote controller group 0
  - Within one remote controller group, up to 2 Madoka Remote Controllers can be used, one as a main and one as 0 a sub
- Leveled user authority
  - 3 levels at the controller: user, administrator/owner, and installer

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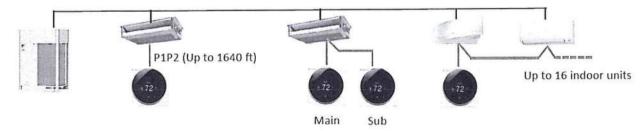
BRC1H71W – Madoka Remote Controller

| Approval:     |                                   |
|---------------|-----------------------------------|
| Date:         |                                   |
| Construction: |                                   |
| Unit #:       |                                   |
| Drawing #:    |                                   |
|               | Date:<br>Construction:<br>Unit #: |

- o Configurable passwords to access administrator/owner and installer menu in the controller
- 2 levels at the App: administrator/owner and installer
- Bluetooth quick configuration app available for both Administrator and Installer
  - o Can manually set multiple settings at the same time
  - Can create and save pre-configuration files
- Advanced indoor unit control:
  - o Temperature sensor built-in with configurable offset
  - Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
  - o Setpoint range limit for cooling and heating modes
  - o Independent cooling and heating setback setpoints (unoccupied period)
  - o Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
  - Airflow Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants) \*
  - Automatic Setback by occupancy sensor\*
  - Automatic Off by occupancy sensor\*
  - Configuration for Self-cleaning filter panel\*\*
  - o Real-time monitoring of system malfunctions with immediate display of unit in error and error code
  - o Remote controller function prohibition: mode (or prohibit specific modes), fan speed, setpoint
- Advanced features
  - o Supported language: English, Spanish or French
  - Automatic adjustment for Daylight Savings Time (DST)
  - o 48-hour clock/calendar battery backup
- Mounting
  - Can mount to a drywall or an electrical component box
  - o Mounting plates and screws are included

\* Available for FXFQ\_TVJU, FXUQ\_PVJU, and FXZQ\_TA indoor units \*\*Available for FXFQ\_TVJU indoor units

### SYSTEM DIAGRAM:



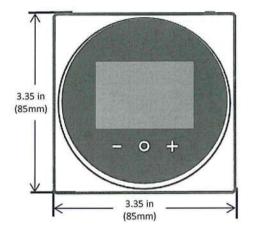
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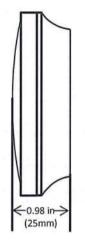


BRC1H71W – Madoka Remote Controller

| Approval:     |
|---------------|
| Date:         |
| Construction: |
| Unit #:       |
| Drawing #:    |
|               |

## DIMENSIONS:





## **DOCUMENTATION:**

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual
- App User Manual
- Submittal
- Written Guide Specs
- Quick User Guide
- Field Setting Table



10 ton, 460V, VRV EMERION HR - REYQ120AAYDA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

Tags: OHRU-2

#### FEATURES

- New Simple and Stylish design with expanded line up with singlemodule units from 6 - 20T and dual-modules up to 40 T
- Space-saving 16 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 30.0 delivers up to 30% efficiency increase
- Year-round comfort and energy savings with Daikin's Variable Refrigerant Temperature technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Continuous heating during defrost capability with single module (16 T - 20 T) and all dual module systems
- · Hot gas defrost circuit allows for installation without base pan heater
- High dust and moisture protection with an IP55 rated sealed E-box
- Dual-fuel ready with connectivity to Daikin communicating gas furnace or all-electric heat pump heating for optimized operational costs based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibility compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago pressure relief codes
- Reduced wiring costs with up to 34% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel design
- Factory ships with increased space for easy field piping connections to service valves.
- Built-in data recorder to store up to 40 minutes of operational data
- Integrates with new Daikin HERO ecosystem, an IoT-based remote monitoring and diagnostics platform.



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10 ton, 460V, VRV EMERION HR - REYQ120AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-2

## PERFORMANCE

| Outdoor Unit Model No.           | REYQ120AAYDA  | Outdoor Unit Name:                       | 10 ton, 460V, VRV EMERION HR                              |
|----------------------------------|---|--|---|
| Туре:                            | Heat Recovery   | Unit Combination:                        |   |
| Rated Cooling Conditions:        | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 | Rated Heating Conditions:                | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43 |
| Rated Piping Length(ft):         |   |  |   |
| Rated Height Difference (ft):    |   |  |   |
| Rated Cooling Capacity (Btu/hr): | 114,000   | Rated Heating Capacity (Btu/hr):         | 129,000   |
| Nom Cooling Capacity (Btu/hr):   | 120,000   | Nom Heating Capacity (Btu/hr):           | 135,000   |
| Cooling Input Power (kW):        |   | Heating Input Power (kW):                |   |
| EER (Non-Ducted/Ducted):         | 13.20 / 12.40   | Heating COP (Non-Ducted/Ducted):         | 4.0 / 3.5   |
| IEER (Non-Ducted/Ducted):        | 27.50 / 23.50   | Heating COP 17F (Non-<br>Ducted/Ducted): | 2.4 / 2.3   |
|                                  |   | SCHE (Non-Ducted/Ducted):                | 26.10/22.20   |

## OUTDOOR UNIT DETAILS

| Power Supply (V/Hz/Ph):                  | 460 / 60 / 3 | Compressor Stage:                |         |
|--|--------------|----------------------------------|---------|
| Power Supply Connections:                |              | Capacity Control Range (%):      | 3 - 100 |
| Min. Circuit Amps MCA (A):               | 16.6         | Capacity Index Limit:            | -       |
| Max Overcurrent Protection (MOP)<br>(A): | 20           | Airflow Rate (H) (CFM):          | 8965    |
| Max Starting Current MSC(A):             |              | Gas Pipe Connection (inch):      | 1-1/8   |
| Rated Load Amps RLA(A):                  | 4.8 + 4.8    | Liquid Pipe Connection (inch):   | 1/2     |
| Dimensions (Height) (in):                | 65-3/8       | H/L Pressure Connection (inch)   | 3/4     |
| Dimensions (Width) (in):                 | 48-13/16     | H/L Equalizing Connection (inch) |         |
| Dimensions (Depth) (in):                 | 30-1/8       | Sound Pressure (H) (dBA):        | 61      |
| Net Weight (lb):                         | 728          | Sound Power Level (dBA):         |         |
| A - WITCH HILLS IN A                     |              |                                  |         |

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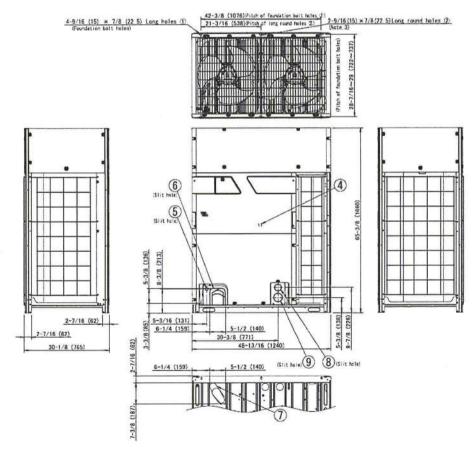


10 ton, 460V, VRV EMERION HR - REYQ120AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-2

## SYSTEM DETAILS

| Refrigerant Type:  | R-410A | Cooling Operation Range (°F DB):  | 23 - 122 |
|--|--------|-----------------------------------|----------|
| Holding Refrigerant Charge (lbs):  | 25.8   | Heating Operation Range (°F WB):  | -13 - 60 |
| Additional Charge (Ib/ft):   |        | Max. Pipe Length (Vertical) (ft): | 361      |
| Pre-charge Piping (Length) (ft):   |        | Cooling Range w/Baffle (°F DB):   | -        |
| Max, Pipe Length (Total) (ft):   | 540    |                                   |          |
| Max. Pipe Length (Total) (ft):<br>Max Height Separation (Ind to Ind ft): |        |                                   |          |

## DIMENSIONAL DRAWING



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12 ton, 460V, VRV EMERION HR - REYQ144AAYDA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

Tags: OHRU-1, OHRU-3

#### FEATURES

- New Simple and Stylish design with expanded line up with singlemodule units from 6 - 20T and dual-modules up to 40 T
- Space-saving 16 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 30.0 delivers up to 30% efficiency increase
- Year-round comfort and energy savings with Daikin's Variable Refrigerant Temperature technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Continuous heating during defrost capability with single module (16 T - 20 T) and all dual module systems
- Hot gas defrost circuit allows for installation without base pan heater
- High dust and moisture protection with an IP55 rated sealed E-box
- Dual-fuel ready with connectivity to Daikin communicating gas furnace or all-electric heat pump heating for optimized operational costs based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibility compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago pressure relief codes
- Reduced wiring costs with up to 34% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel design
- Factory ships with increased space for easy field piping connections to service valves.
- · Built-in data recorder to store up to 40 minutes of operational data
- Integrates with new Daikin HERO ecosystem, an IoT-based remote monitoring and diagnostics platform.



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Page 1 of 3



12 ton, 460V, VRV EMERION HR - REYQ144AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-1, OHRU-3

## PERFORMANCE

|                                  |   | the second s | and the second s |
|----------------------------------|---|--|--|
| Outdoor Unit Model No.           | REYQ144AAYDA  | Outdoor Unit Name:   | 12 ton, 460V, VRV EMERION HR   |
| Туре:                            | Heat Recovery   | Unit Combination:  |  |
| Rated Cooling Conditions:        | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 | Rated Heating Conditions:  | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43  |
| Rated Piping Length(ft):         |   |  |  |
| Rated Height Difference (ft):    |   |  |  |
| Rated Cooling Capacity (Btu/hr): | 138,000   | Rated Heating Capacity (Btu/hr):   | 154,000  |
| Nom Cooling Capacity (Btu/hr):   | 144,000   | Nom Heating Capacity (Btu/hr):   | 162,000  |
| Cooling Input Power (kW):        |   | Heating Input Power (kW):  |  |
| EER (Non-Ducted/Ducted):         | 12.50 / 12.00   | Heating COP (Non-Ducted/Ducted):   | 3.8 / 3.4  |
| IEER (Non-Ducted/Ducted):        | 26.50 / 22.50   | Heating COP 17F (Non-<br>Ducted/Ducted):   | 2.2/2.1  |
|                                  |   | SCHE (Non-Ducted/Ducted):  | 25.60 / 22.10  |
|                                  |   |  |  |

## OUTDOOR UNIT DETAILS

| Power Supply (V/Hz/Ph):                  | 460 / 60 / 3 | Compressor Stage:                |         |  |
|--|--------------|----------------------------------|---------|--|
| Power Supply Connections:                |              | Capacity Control Range (%):      | 3 - 100 |  |
| Min. Circuit Amps MCA (A):               | 21.3         | Capacity Index Limit:            | -       |  |
| Max Overcurrent Protection (MOP)<br>(A): | 25           | Airflow Rate (H) (CFM):          | 9680    |  |
| Max Starting Current MSC(A):             |              | Gas Pipe Connection (inch):      | 1-1/8   |  |
| Rated Load Amps RLA(A):                  | 4.5 + 7.2    | Liquid Pipe Connection (inch):   | 1/2     |  |
| Dimensions (Height) (in):                | 65-3/8       | H/L Pressure Connection (inch)   | 7/8     |  |
| Dimensions (Width) (in):                 | 48-13/16     | H/L Equalizing Connection (inch) |         |  |
| Dimensions (Depth) (in):                 | 30-1/8       | Sound Pressure (H) (dBA):        | 65      |  |
| Net Weight (lb):                         | 800          | Sound Power Level (dBA):         |         |  |

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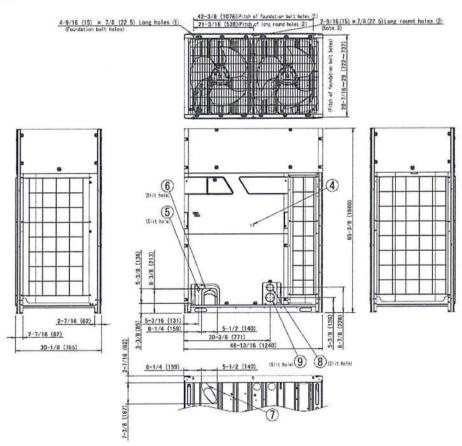


12 ton, 460V, VRV EMERION HR - REYQ144AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-1, OHRU-3

## SYSTEM DETAILS

| Refrigerant Type:                      | R-410A | Cooling Operation Range (°F DB):  | 23 - 122 |
|--|--------|-----------------------------------|----------|
| Holding Refrigerant Charge (lbs):      | 25.8   | Heating Operation Range (°F WB):  | -13 - 60 |
| Additional Charge (lb/ft):             |        | Max. Pipe Length (Vertical) (ft): | 361      |
| Pre-charge Piping (Length) (ft):       |        | Cooling Range w/Baffle (°F DB):   |          |
| Max, Pipe Length (Total) (ft):         | 540    |                                   |          |
| Max Height Separation (Ind to Ind ft): |        |                                   |          |

## DIMENSIONAL DRAWING



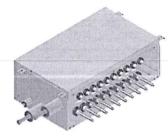
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10 Port Branch Selector Unit - BS10Q54TAVJ Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified



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10 Port Branch Selector Unit - BS10Q54TAVJ Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

#### PERFORMANCE

| Indoor Unit Model No.            | BS10Q54TAVJ | Indoor Unit Name:             | 10 Port Branch Selector Unit                  |
|----------------------------------|-------------|-------------------------------|---|
| Туре:                            |             | Rated Cooling Conditions:     | Indoor (°F DB/WB): /<br>Ambient (°F DB/WB): / |
| Rated Cooling Capacity (Btu/hr): | 290,000     | Rated Heating Conditions:     | Indoor (°F DB/WB): /<br>Ambient (°F DB/WB): / |
| Sensible Capacity (Btu/hr):      |             | Rated Piping Length(ft):      |   |
| Cooling Input Power (kW):        | 0.107       | Rated Height Separation (ft): |   |

| INDOOR UNIT DETAILS                         |                             |                                |       |
|---|-----------------------------|--------------------------------|-------|
| Power Supply (V/Hz/Ph):                     | 208-230 / 60 / 1            | Airflow Rate (H) (CFM):        |       |
| Power Supply Connections:                   |                             | Moisture Removal (Gal/hr):     |       |
| Min. Circuit Amps MCA (A):                  | 1.00                        | Gas Pipe Connection (inch):    | 1-1/8 |
| Max Overcurrent Protection (MOP)<br>(A):    | 15.00                       | Liquid Pipe Connection (inch): | 5/8   |
| Dimensions (HxWxD) (in):                    | 11-3/4 x 32-5/16 x 18-15/16 | Condensate Connection (inch):  |       |
| Net Weight (Ib):                            | 101                         | Sound Pressure (H) (dBA):      | 40    |
| Ext. Static Pressure (Rated/Max)<br>(inWg): | 1                           | Sound Power Level (dBA):       |       |

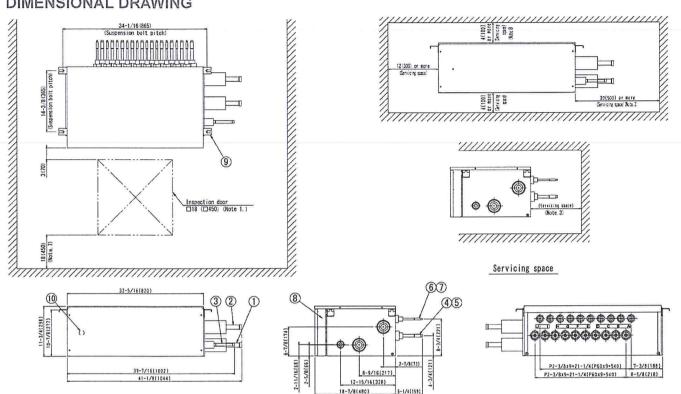


10 Port Branch Selector Unit - BS10Q54TAVJ

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

## DIMENSIONAL DRAWING



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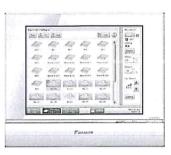
DCM601B71 – intelligent Touch Manager

| Location:     | Approval:     |   |
|---------------|---------------|---|
| Engineer:     | Date:         |   |
| Submitted to: | Construction: |   |
| Submitted by: | Unit #:       | _ |
| Reference:    | Drawing #:    |   |

## SPECIFICATIONS:

| Model  | DCM601B71   | DCM601A72   |
|--|---|---|
| Description  | intelligent Touch Manager (iTM)   | iTM Plus Adaptor  |
| Maximum Indoor Unit Groups                               | 64  | 64  |
| Max Indoor Units   | 128   | 128   |
| Max Outdoor Units  | 10  | 10  |
| Max BACnet Servers                                       | 50  | -   |
| System Total   | 512 Indoor Unit Groups  | (1024 Indoor Units)   |
| Power Supply   | 24 VAC, 60 Hz   | 24 VAC, 60 Hz   |
| Power Consumption  | 23 Watts  | 23 Watts  |
| Operating Temp Range                                     | 32-104°F  | 14 - 122°F  |
| Operating Humidity Range                                 | 85% or less (w/o condensation)  | 85% or less (w/o condensation)  |
| Dimensions (W x H x D)                                   | 11.42 x 9.57 x 1.97 in.   | 6.30 x 5.87 x 2.41 in.  |
| Weight (Mass)  | 5.3 lbs. (2.4 kg)   | 1.1 lbs. (0.5 kg)   |
| Certifications   | FCC Part 15 Class B   |   |
| DIII-NET Systems   | 1   | 1   |
| RJ-45 (Ethernet)<br>100Base-TX or 10Base-T               | 2   | N/A   |
| USB Port-USB2.0 (2GB to 32GB)                            | 1   | N/A   |
| RS485 (19 - 22 AWG)                                      | 1   | 1   |
| Digital Input forced shutdown of all indoor unit systems | 1   | N/A   |
| Digital Input and/or<br>Pulse Input Terminals            | 3 x 10 mA @ 16 VDC/<br>3 x 1 pulse at 1 or 10 kWh<br>at 100 ms interval | 4 x 10 mA @ 16 VDC/<br>4 x 1 pulse at 1 or 10 kWh<br>at 100 ms interval |

## PRODUCT IMAGE:



iТМ



iTM Plus Adaptor (Optional)

## OPTIONS:

- Software Options:
  - Power Proportional Distribution (PPD) Option (DCM002A71)<sup>(1)</sup>
  - Web (HTTP) Interface Software (DCM007A51)
  - BACnet Client Option Software (DCM009A51)
  - BACnet/IP Server Gateway Option (DCM014A51)<sup>(2)(3)</sup>
- Hardware Options:
  - o iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
  - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
- Spare Parts:
  - iTM Sliding Door (Part# B72A930)
  - o SD Card (Part# 2336767)

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DCM601B71 - intelligent Touch Manager

| Approval:     |
|---------------|
| Date:         |
| Construction: |
| Unit #:       |
| Drawing #:    |
|               |

#### Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit or the Low Temp Hydrobox.

## MODEL COMPATIBILITY:

The following indoor units are compatible with the iTM:

| System                              | Model  |
|-------------------------------------|--|
| VRV and VRV<br>Life <sup>™</sup>    | FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM*, Low Temperature Hydrobox (HXY48TAVJ)*   |
| SkyAir                              | FAQ, FBQ, FCQ, FHQ, FTQ  |
| Single<br>Zone/Multi<br>Zone/SkyAir | <ul> <li>FDMQ, FFQ_Q</li> <li>FFQ_LVJU with the use of the Interface Adaptor DTA112BA51</li> <li>FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S</li> <li>FTK_N, FTX_N, FTX_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E</li> </ul> |

\*iTM BACnet Server Gateway Option is not compatible with VAM unit and LT Hydrobox

The outdoor operational data is available for the following outdoor unit models:

| VRV Family  | Model   |
|-------------|---|
| VRV III S   | RXYMQ_PVJU  |
| VRV IV S    | RXTQ_TAVJU  |
| VRV LIFE    | RXSQ_TAVJU  |
| VRV III     | RXYQ_PBTJ, RXYQ_PBYD, REYQ_PATJ, REYQ_PBTJ, REYQ_PBYD, REYQ_PCTJ,<br>REYQ_PCYD, RWEYQ_PTJU and RWEYQ_PYDN   |
| VRV AURORA  | RXLQ_TATJU, RXLQ_TAYDU, RXLQ_TAYCU, RELQ_TATJU, RELQ_TAYDU and RELQ_TAYCU   |
| VRV IV X    | REYQ_XATJU, REYQ_XAYDU, REYQ_XAYCU, RXYQ_XATJA, RXYQ_XAYDA, REYQ_XATJA, REYQ_XAYDA, REYQ_XAYCA  |
| VRV T       | RWEQ_TATJU, RWEQ_TAYDU, RWEQ_TAYCU  |
| VRV IV      | RXYQ_TTJU, RXYQ_TATJU, RXYQ_TAYDU, REYQ_TATJU, REYQ_TAYDU,<br>RXYQ_TAYCU, RXYQ_TYDN, REYQ_TAYCU, REYQ_TTJU, REYQ_TYDN,<br>RWEYQ_PCTJ and RWEYQ_PCYD |
| VRV Emerion | REYQ_AATJA, REYQ_AAYDA, RXYQ_AATJA, RXYQ_AAYDA  |

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| Project Name:<br>Location: | Approval:     |  |
|----------------------------|---------------|--|
| Engineer:                  | Date:         |  |
| Submitted to:              | Construction: |  |
| Submitted by:              | Unit #:       |  |
| Reference:                 | Drawing #:    |  |

## FEATURES:

- 1. Management size up to 512 indoor unit groups (1024 indoor units).
  - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
  - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.

### 2. Control / Monitoring

- a. Independent Cool and Heat setpoints
  - i. Setpoint tracking for full range of setpoint differentials
- b. Independent Cool and Heat Setback setpoints (unoccupied)
  - i. Adjustable timed override
- c. Room temperature displayed in 0.1°F
- d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
  - i. Optimum Start
  - ii. Schedule the capacity demand limit of the outdoor unit's compressor by 0%, 40%, 70% or 100%
  - iii. Schedule the outdoor unit low noise operation
- e. Auto-changeover: Fixed, Individual, Average, and Vote
  - i. Weighted demand (0-3) configurable for Average and Vote methods
  - ii. Adjustable (1-4°F) Primary and Secondary changeover bands

### 3. Web Accessibility

- a. Web and Alert Email function standard with iTM
- b. All iTM configuration/setup can be done through Web Option or touch screen

### 4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points
- 5. Easy installation
  - a. Wall mount and flush mount installation.
  - b. Automatic indoor unit registration and indoor unit model detection.

#### 6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

#### 7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
   i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
  - i. AI. AO, AV, BI, BO, BV, MI, MO and MV

#### 8. Power Proportional Distribution (PPD) (Optional)

- a. Provide function to distribute the energy consumption of the Outdoor units to the selected indoor unit group address, based on indoor unit operation duration, electronic expansion valve opening ration, indoor size.... etc.
- b. Up to 512 indoor unit group address
- c. PPD data can be downloaded in CSV format to a PC or USB flash drive

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DCM601B71 – intelligent Touch Manager

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |

### 9. Web (HTTP) Interface Software (Optional)

- a. Provide function to monitor and control up to 512 indoor unit group addresses by a BMS via HTTP protocol.
- b. The following data points are available: Fan Speed Louver Direction Ventilation Mode Ventilation Amount -Normal/Error monitor - On/Off - Operation Mode - Setpoint - Room Temp

### 10. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
  - i. Up to 50 BACnet IP servers can be connected

#### 11. BACnet Server Gateway (Optional)

- a. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
  - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
  - ii. Up to 4000 BACnet objects
  - iii. Virtual BACnet router function embedded
    - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

#### 12. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).
- 13. D-Net compatible (Service option)
  - a. Remote monitoring of VRV equipment status and reporting

#### 14. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
  - i. Indoor and outdoor unit operation data.
  - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
  - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period. (See iTM BACnet Server points list below for IDU/ODU operational data list)

#### 15. Demand Limiting

- a. Interlock the digital input signals to provide the following automatic demand control functions
  - i. Indoor unit set-point shift control
  - ii. Indoor unit forced thermo-off
  - iii. Indoor unit on/off control
  - iv. Outdoor unit's capacity demand limit control

#### WIRING SPECIFICATION:

| Specifications of Communication Cabling |   |  |  |
|---|---|--|--|
|   | DIII-Net  |  |  |
| Туре                                    | 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket      |  |  |
| Size                                    | AWG 18-2  |  |  |
| Total Length                            | Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft. |  |  |
|   | iTM Plus Adapter  |  |  |
| Туре                                    | 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket      |  |  |
| Size                                    | AWG 18-2  |  |  |
| RS485 Length                            | Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.          |  |  |
| Total Length                            | Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft. |  |  |

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DCM601B71 - intelligent Touch Manager

| Project Name: |               |   |
|---------------|---------------|---|
| Location:     | Approval:     |   |
| Engineer:     | Date:         |   |
| Submitted to: | Construction: |   |
| Submitted by: | Unit #:       | _ |
| Reference:    | Drawing #:    |   |

| WAGO  |  |  |
|---|--|--|
| Type 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV) |  |  |
| Size  | Size 2 Wire AWG 24 - 18 stranded                             |  |
| Total Length  | Maximum wiring distance between iTM and Bus Coupler 1640 ft. |  |

## BACNET CLIENT OPTION MANAGEMENT POINTS:

The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

| Object<br>Type # | Object Name        | Description  |
|------------------|--------------------|--|
| 0                | Analog Input       | Analog input value such as a temperature and measurement value.  |
| 1                | Analog Output      | Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).           |
| 2                | Analog Value       | Analog input value such as a temperature and measurement value or analog output value such as a setting value.                 |
| 3                | Binary Input       | Digital input value such as an On/Off status and error status.   |
| 4                | Binary Output      | Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation). |
| 5                | Binary Value       | Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.             |
| 13               | Multi-state Input  | Digital input value such as an operation mode  |
| 14               | Multi-state Output | Digital output value such as an operation mode (For example, can be used as the digital input value of an operation mode).     |
| 19               | Multi-state Value  | Digital input value such as an operation mode or digital output value such as an operation mode.                               |

## BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

## • System configuration points linked to iTM control logic (one set of points per iTM):

| Point Name                              | Point Description   |
|---|---|
| Enable ITM Schedule<br>Operation        | Enable or Disable iTM Schedule operation  |
| Enable ITM Auto Changeover<br>Operation | Enable or disable iTM Auto changeover logic.  |
| Timed Override Minutes                  | Set override time in minutes  |
| System Forced Off                       | The Forced System Stop command will force the indoor unit to stop running. Remote<br>controllers will be locked out from restarting indoor units during the forced system stop event. |

## Indoor unit monitoring points (one set of points per indoor unit group):

| Point Name         | Point Description                            |  |
|--------------------|--|--|
| Unit On_Off Status | Monitors if the indoor unit fan is On or Off |  |

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| Alarm Status              | Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoor unit has a malfunction. Error Code is shown in the description. |
|---------------------------|--|
| Room Temperature          | Monitors and displays the room temperature.  |
| Unit On Details           | Indoor unit details operation Off - Normal (ON) - Override - Setback   |
| Filter Sign Status        | Monitors filter run time and provides service alert.   |
| Indoor Fan Status         | Monitors if the indoor unit fan is On or Off   |
| Communication Status      | Monitor if the communication is Normal or in Alarm   |
| Thermo-on Status          | Monitors whether or not the indoor unit is actively cooling or heating.  |
| Compressor Status         | Monitors if the compressor of the outdoor unit is On/Off/Defrost   |
| Aux Heater Status         | Monitors if the external heater controlled by the indoor unit is operating.  |
| Changeover Option         | Monitor if iTM changeover logic is Active.   |
| Return Air Temperature    | Monitors and displays the return air temperature.  |
| Discharge Air Temperature | Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.   |
| Liquid Pipe Temperature   | Monitors and displays the liquid pipe temperature.   |
| Gas Pipe Temperature      | Monitors and displays the gas pipe temperature.  |
| EV Position               | Monitors and displays the expansion valve position.  |
| Freeze Protection         | Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).                                   |

#### • Indoor unit monitoring and control points (one set of points per indoor unit group):

| Point Name                                       | Point Description  |
|--|--|
| Occupancy Mode                                   | Set the occupancy of the indoor unit Occupied , Unoccupied or Standby  |
| Operation mode                                   | Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode                         |
| Occ Cooling Setpoint                             | Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Occ Heating Setpoint                             | Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Unocc Cooling Setpoint                           | Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value.                    |
| Unocc Heating Setpoint                           | Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.                      |
| Max Cooling Setpoint                             | Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Cooling Setpoint                             | Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Max Heating Setpoint                             | Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Heating Setpoint                             | Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.                       |
| Min Setpoint Differential<br>(Cooling & Heating) | Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value. |
| Cooling & Heating Setpoint<br>Tracking Mode      | Enable or disable iTM setpoint tracking mode.  |
| Fan speed  | Sets the indoor unit fan speed and monitors the latest setting   |

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Rev.1022



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| Timed Override Operation                       | Enable or disable iTM override timer  |
|--|---|
| Remote Controller Prohibit<br>(On_Off)         | Permits or prohibits the remote controller to control the indoor unit's On/Off.         |
| Remote Controller Prohibit<br>(Operation Mode) | Permits or prohibits the remote controller to control the indoor unit's Operation mode. |
| Remote Controller Prohibit (Setpoint)          | Permits or prohibits the remote controller to control the indoor unit's Setpoint.       |
| Filter Sign Reset                              | Clears the filter sign status.  |
| Forced Thermo-off                              | Force the indoor unit to stop actively cooling or heating.                              |

### • Outdoor unit monitoring points\*:

| Point Name                           | Point Description   |
|--------------------------------------|---|
| Communication Status                 | Monitors and displays the communication status (General)                            |
| Operation Mode                       | Monitors and displays the operation mode (Cool, Heat, Fan or Heat & Cool) (General) |
| Outdoor Unit Alarm Status            | Monitors whether or not the outdoor unit is operating normally. (General)           |
| Defrost Mode                         | Monitors if the defrost mode is active. (General)                                   |
| Oil Return Mode                      | Monitors whether or not the outdoor unit is in oil return operation. (General)      |
| Electric Power                       | Monitors and displays the electric power (calculated). (General)                    |
| Electric Current                     | Monitors and displays the electric current (calculated). (General)                  |
| System Capacity Code                 | Monitors and displays the system capacity code. (General)                           |
| Outdoor Air Temperature              | Monitors and displays the outdoor air temperature. (General)                        |
| M_Condensing Pressure                | Monitors and displays the condensing pressure (Master Module)                       |
| M_Evaporating Pressure               | Monitors and displays the evaporating pressure (Master Module)                      |
| M_Condensing Temperature             | Monitors and displays the condensing temperature (Master Module)                    |
| M_Evaporating Temperature            | Monitors and displays the evaporating temperature (Master Module)                   |
| M_Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Master Module)         |
| M_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Master Module)         |
| M_Fan Step                           | Monitors and displays the fan step (Master Module)                                  |
| M_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Master Module)          |
| M_EV position 2                      | Monitors and displays the position of the expansion valve2 (Master Module)          |
| M_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Master Module)    |
| M_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Master Module)    |
| M_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Master Module)                   |
| M_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Master Module)  |
| M_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Master Module)  |
| M_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Master Module)   |

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| M_Gas Pipe Temperature (HX Upper)         Monitors and displays the gas pipe temperature for the upper HX ( <i>Master Module</i> )           M_Gas Pipe Temperature (HX Lower)         Monitors and displays the succion temperature ( <i>Master Module</i> )           M_Compressor Suction Temperature         Monitors and displays the subcool intert temperature ( <i>Master Module</i> )           M_Subcool Inlet Temperature         Monitors and displays the subcool intert temperature ( <i>Master Module</i> )           M_Subcool Inlet Temperature         Monitors and displays the subcool intert temperature ( <i>Master Module</i> )           M_Subcool Inlet Temperature         Monitors and displays the subcool expansion valve position ( <i>Master Module</i> )           Subcool Pressure         Monitors and displays the condensing pressure ( <i>Sub Modulet</i> )           S1_Condensing Pressure         Monitors and displays the evaporating pressure ( <i>Sub Modulet</i> )           S1_Evaporating Pressure         Monitors and displays the evaporating temperature ( <i>Sub Modulet</i> )           S1_Evaporating Temperature         Monitors and displays the speed of the inverter compressor1 ( <i>Sub Modulet</i> )           S1_Inverter Compressor 1 Speed         Monitors and displays the position of the expansion valve2 ( <i>Sub Modulet</i> )           S1_Fan Step         Monitors and displays the position of the expansion valve2 ( <i>Sub Modulet</i> )           S1_Lev Position 1         Monitors and displays the hot gas temperature of the compressor1 ( <i>Sub Modulet</i> )           S1_Lev Dosition 2         Monitors and displays the li   |                                       |  |
|--|---------------------------------------|--|
| M_Suction Temperature         Monitors and displays the suction temperature (Master Module)           M_Compressor Suction Temperature         Monitors and displays the subcool linket temperature (Master Module)           M_Subcool Inlet Temperature         Monitors and displays the subcool linket temperature (Master Module)           M_Subcool CV Position         Monitors and displays the subcool expansion valve position (Master Module)           M_Subcool EV Position         Monitors and displays the condensing pressure (Sub Module1)           S1_Condensing Pressure         Monitors and displays the condensing pressure (Sub Module1)           S1_Condensing Temperature         Monitors and displays the condensing temperature (Sub Module1)           S1_Fanstep         Monitors and displays the speed of the inverter compressor1 (Sub Module1)           S1_Inverter Compressor 2 Speed         Monitors and displays the fan step (Sub Module1)           S1_Fan Step         Monitors and displays the fan step (Sub Module1)           S1_Fan Step         Monitors and displays the fan step (Sub Module1)           S1_Fan Step         Monitors and displays the fan step (Sub Module1)           S1_Fan Step         Monitors and displays the fan step (Sub Module1)           S1_Fan Step         Monitors and displays the fan step (Sub Module1)           S1_Lev Position 1         Monitors and displays the fan step (Sub Module1)           S1_Lev Dosition 2         Monitors and displays   | M_Gas Pipe Temperature (HX Upper)     | Monitors and displays the gas pipe temperature for the upper HX (Master Module)  |
| M_Compressor Suction Temperature         Monitors and displays the compressor's suction temperature (Master Module)           M_Subcool Outlet temperature         Monitors and displays the subcool outlet temperature (Master Module)           M_Subcool Outlet temperature         Monitors and displays the subcool expansion valve position (Master Module)           Subcool EV Position         Monitors and displays the subcool expansion valve position (Master Module)           S1_Condensing Pressure         Monitors and displays the condensing pressure (Sub Module1)           S1_Evaporating Pressure         Monitors and displays the condensing temperature (Sub Module1)           S1_Condensing Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the speed of the inverter compressor1 (Sub Module1)           S1_Inverter Compressor 1 Speed         Monitors and displays the position of the expansion valve1 (Sub Module1)           S1_EV Position 1         Monitors and displays the position of the expansion valve1 (Sub Module1)           S1_EV Position 2         Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)           S1_EV Position 2         Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)           S1_EV position 2         Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)           S1_Liquid Pipe Temperature (Compressor 2)         Monitors and displays the l  | M_Gas Pipe Temperature (HX Lower)     | Monitors and displays the gas pipe temperature for the lower HX (Master Module)  |
| M_Subcool Inlet Temperature         Monitors and displays the subcool inlet temperature (Master Module)           M_Subcool CV Position         Monitors and displays the subcool expansion valve position (Master Module)           M_Subcool EV Position         Monitors and displays the subcool expansion valve position (Master Module)           S1_Condensing Pressure         Monitors and displays the condensing pressure (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Condensing Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the speed of the inverter compressor 1 (Sub Module1)           S1_Inverter Compressor 2 Speed         Monitors and displays the speed of the inverter compressor 2 (Sub Module1)           S1_EV Position 1         Monitors and displays the position of the expansion valve2 (Sub Module1)           S1_EV Position 2         Monitors and displays the hot gas temperature of the compressor 2 (Sub Module1)           S1_Liquid Pipe Temperature (Compressor 2)         Monitors and displays the hot gas temperature of the compressor 2 (Sub Module1)           S1_Liquid Pipe Temperature (HX Upper)         Monitors and displays the hot gas temperature of the compressor 2 (Sub Module1)           S1_Liquid Pipe Temperature (HX Upper)         Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)           S1_Liquid Pipe Temperature   | M_Suction Temperature                 | Monitors and displays the suction temperature (Master Module)                    |
| M_Subcool Outlet temperature         Monitors and displays the subcool outlet temperature (Master Module)           M_Subcool EV Position         Monitors and displays the subcool expansion valve position (Master Module)           S1_Condensing Pressure         Monitors and displays the condensing pressure (Sub Module1)           S1_Evaporating Pressure         Monitors and displays the evaporating pressure (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the speed of the inverter compressor1 (Sub Module1)           S1_Inverter Compressor 2 Speed         Monitors and displays the speed of the inverter compressor2 (Sub Module1)           S1_EV Position 1         Monitors and displays the position of the expansion valve1 (Sub Module1)           S1_EV Position 2         Monitors and displays the position of the expansion valve2 (Sub Module1)           S1_Lev Position 1         Monitors and displays the position of the expansion valve2 (Sub Module1)           S1_Lev Position 2         Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)           S1_Liquid Pipe Temperature (Compressor 2)         Monitors and displays the liquid pipe temperature (Sub Module1)           S1_Liquid Pipe Temperature (HX Upper)         Monitors and displays the liquid pipe temperature (Sub Module1)           S1_Liquid Pipe Temperature (HX Lower)         Monitors and displays the liquid pipe tempe  | M_Compressor Suction Temperature      | Monitors and displays the compressor's suction temperature (Master Module)       |
| M_subcool EV Position         Monitors and displays the subcool expansion valve position (Master Module)           S1_Condensing Pressure         Monitors and displays the condensing pressure (Sub Module1)           S1_Evaporating Pressure         Monitors and displays the evaporating pressure (Sub Module1)           S1_Econdensing Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the evaporating temperature (Sub Module1)           S1_Evaporating Temperature         Monitors and displays the speed of the inverter compressor1 (Sub Module1)           S1_Enverter Compressor 2 Speed         Monitors and displays the speed of the inverter compressor2 (Sub Module1)           S1_Ex Position 1         Monitors and displays the position of the expansion valve1 (Sub Module1)           S1_EV Position 2         Monitors and displays the position of the expansion valve2 (Sub Module1)           S1_Lev position 2         Monitors and displays the position of the expansion valve2 (Sub Module1)           S1_Lev position 2         Monitors and displays the logit pipe temperature of the compressor2 (Sub Module1)           S1_Levid Pipe Temperature (Compressor 2)         Monitors and displays the liquid pipe temperature (Sub Module1)           S1_Levid Pipe Temperature (HX Upper)         Monitors and displays the liquid pipe temperature (Sub Module1)           S1_Liquid Pipe Temperature (HX Lower)         Monitors and displays the gas pipe temperature fo  | M_Subcool Inlet Temperature           | Monitors and displays the subcool inlet temperature (Master Module)              |
| S1_Condensing Pressure       Monitors and displays the condensing pressure (Sub Module1)         S1_Evaporating Pressure       Monitors and displays the evaporating pressure (Sub Module1)         S1_Condensing Temperature       Monitors and displays the condensing temperature (Sub Module1)         S1_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module1)         S1_Inverter Compressor 1 Speed       Monitors and displays the speed of the inverter compressor1 (Sub Module1)         S1_Inverter Compressor 2 Speed       Monitors and displays the speed of the inverter compressor2 (Sub Module1)         S1_EV Position 1       Monitors and displays the position of the expansion valve1 (Sub Module1)         S1_EV Position 2       Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)         S1_Hot Gas Temperature (Compressor 1)       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_Lev position 2       Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)         S1_Levid Gas Temperature (Compressor 2)       Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the liquid pipe temperature (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the gas pipe temp  | M_Subcool Outlet temperature          | Monitors and displays the subcool outlet temperature (Master Module)             |
| S1_Evaporating Pressure       Monitors and displays the evaporating pressure (Sub Module1)         S1_Condensing Temperature       Monitors and displays the condensing temperature (Sub Module1)         S1_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module1)         S1_Inverter Compressor 1 Speed       Monitors and displays the speed of the inverter compressor1 (Sub Module1)         S1_Inverter Compressor 2 Speed       Monitors and displays the speed of the inverter compressor2 (Sub Module1)         S1_EV Position 1       Monitors and displays the position of the expansion valve1 (Sub Module1)         S1_EV Position 2       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_EV position 2       Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)         S1_Licud Pipe Temperature (Compressor 1)       Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (Compressor 2)       Monitors and displays the hot gas temperature (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       M  | M_Subcool EV Position                 | Monitors and displays the subcool expansion valve position (Master Module)       |
| S1_Condensing Temperature       Monitors and displays the condensing temperature (Sub Module1)         S1_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module1)         S1_Inverter Compressor 1 Speed       Monitors and displays the speed of the inverter compressor1 (Sub Module1)         S1_Inverter Compressor 2 Speed       Monitors and displays the speed of the inverter compressor2 (Sub Module1)         S1_Fan Step       Monitors and displays the position of the expansion valve1 (Sub Module1)         S1_EV Position 1       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_EV position 2       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_Hot Gas Temperature (Compressor 1)       Monitors and displays the tog as temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature       Monitors and displays the liquid pipe temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the liquid pipe temperature of the upper HX (Sub Module1)         S1_Liquid Pipe Temperature (De-Icer)       Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)         S1_Suction Temperature (De-Icer)       Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)         S1_Suction Temperature (MX Lower)       Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)         S1_Subcool Intel Temperature   | S1_Condensing Pressure                | Monitors and displays the condensing pressure (Sub Module1)                      |
| S1_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module1)         S1_Inverter Compressor 1 Speed       Monitors and displays the speed of the inverter compressor1 (Sub Module1)         S1_Inverter Compressor 2 Speed       Monitors and displays the speed of the inverter compressor2 (Sub Module1)         S1_Fan Step       Monitors and displays the fan step (Sub Module1)         S1_EV Position 1       Monitors and displays the position of the expansion valve1 (Sub Module1)         S1_EV position 2       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_Hot Gas Temperature (Compressor 1)       Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (Compressor 2)       Monitors and displays the liquid pipe temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (MX Upper)       Monitors and displays the liquid pipe temperature (Sub Module1)         S1_Liquid Pipe Temperature (De-Icer)       Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)         S1_Gas Pipe Temperature (HX Upper)       Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the subcool inlet temperature (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Mo  | S1_Evaporating Pressure               | Monitors and displays the evaporating pressure (Sub Module1)                     |
| S1_Inverter Compressor 1 Speed       Monitors and displays the speed of the inverter compressor1 (Sub Module1)         S1_Inverter Compressor 2 Speed       Monitors and displays the speed of the inverter compressor2 (Sub Module1)         S1_Fan Step       Monitors and displays the fan step (Sub Module1)         S1_EV Position 1       Monitors and displays the position of the expansion valve1 (Sub Module1)         S1_EV position 2       Monitors and displays the position of the expansion valve2 (Sub Module1)         S1_Hot Gas Temperature (Compressor 1)       Monitors and displays the to gas temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (Compressor 2)       Monitors and displays the liquid pipe temperature of the compressor2 (Sub Module1)         S1_Liquid Pipe Temperature (HX Upper)       Monitors and displays the liquid pipe temperature (Sub Module1)         S1_Liquid Pipe Temperature (De-Icer)       Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the gas pipe temperature (Sub Module1)         S1_Suction Temperature (HX Lower)       Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Monitors and displays the suction temperature (Sub Module1)         S1_Gas Pipe Temperature (HX Lower)       Moni  | S1_Condensing Temperature             | Monitors and displays the condensing temperature (Sub Module1)                   |
| S1_Inverter Compressor 2 SpeedMonitors and displays the speed of the inverter compressor2 (Sub Module1)S1_Fan StepMonitors and displays the fan step (Sub Module1)S1_EV Position 1Monitors and displays the position of the expansion valve1 (Sub Module1)S1_EV position 2Monitors and displays the position of the expansion valve2 (Sub Module1)S1_Hot Gas Temperature (Compressor 1)Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the liquid pipe temperature of the compressor2 (Sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the liquid pipe temperature of the upper HX (Sub Module1)S1_Liquid Pipe Temperature (MX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (De-lcer)Monitors and displays the gas pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction Temperature (HX Lower)Monitors and displays the suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool ultet temperature (Sub Module1)S1_Subcool Cutlet temperatureMonitors and displays the subcool ultet temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool ultet temperature (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2) <td>S1_Evaporating Temperature</td> <td>Monitors and displays the evaporating temperature (Sub Module1)</td>      | S1_Evaporating Temperature            | Monitors and displays the evaporating temperature (Sub Module1)                  |
| S1_Fan StepMonitors and displays the fan step (Sub Module1)S1_EV Position 1Monitors and displays the position of the expansion valve1 (Sub Module1)S1_EV position 2Monitors and displays the position of the expansion valve2 (Sub Module1)S1_Hot Gas Temperature (Compressor 1)Monitors and displays the hot gas temperature of the compressor (Sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor (Sub Module1)S1_Liquid Pipe TemperatureMonitors and displays the liquid pipe temperature (Sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the over HX (Sub Module1)S1_Liquid Pipe Temperature (De-leer)Monitors and displays the gas pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction Temperature (HX Lower)Monitors and displays the suction temperature (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool outlet temperature (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Condensing PrepsureMonitors and displays the  | S1_Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Sub Module1)        |
| S1_EV Position 1Monitors and displays the position of the expansion valve1 (Sub Module1)S1_EV position 2Monitors and displays the position of the expansion valve2 (Sub Module1)S1_Hot Gas Temperature (Compressor 1)Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)S1_Hot Gas Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the liquid pipe temperature of the compressor2 (Sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature for the lower HX (Sub Module1)S1_Suction TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)  | S1_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Sub Module1)        |
| S1_EV position 2Monitors and displays the position of the expansion valve2 (sub Module1)S1_Hot Gas Temperature (Compressor 1)Monitors and displays the hot gas temperature of the compressor1 (sub Module1)S1_Hot Gas Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor2 (sub Module1)S1_Liquid Pipe Temperature (Compressor 2)Monitors and displays the liquid pipe temperature (sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the upper HX (sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the gas pipe temperature for the upper HX (sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the upper HX (sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the upper HX (sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (sub Module1)S1_Suction TemperatureMonitors and displays the subcool inlet temperature (sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (sub Module2)S2_Evaporating PressureMonitors and displays the evaporating temperature (sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (sub Module2) </td <td>S1_Fan Step</td> <td>Monitors and displays the fan step (Sub Module1)</td>                                   | S1_Fan Step                           | Monitors and displays the fan step (Sub Module1)                                 |
| S1_Hot Gas Temperature (Compressor 1)Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)S1_Hot Gas Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)S1_Liquid Pipe TemperatureMonitors and displays the liquid pipe temperature (Sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool Cullet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the condensing pressure (Sub Module2)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2) </td <td>S1_EV Position 1</td> <td>Monitors and displays the position of the expansion valve1 (Sub Module1)</td> | S1_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Sub Module1)         |
| S1_Hot Gas Temperature (Compressor 2)Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)S1_Liquid Pipe TemperatureMonitors and displays the liquid pipe temperature (Sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction Temperature (HX Lower)Monitors and displays the gas pipe temperature (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2   | S1_EV position 2                      | Monitors and displays the position of the expansion valve2 (Sub Module1)         |
| S1_Liquid Pipe TemperatureMonitors and displays the liquid pipe temperature (Sub Module1)S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Levaporating PressureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating Temp   | S1_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)   |
| S1_Liquid Pipe Temperature (HX Upper)Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Suction TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays  | S1_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)   |
| S1_Liquid Pipe Temperature (HX Lower)Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Compressor Suction TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool CV PositionMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the condensing pressure (Sub Module2)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evapor  | S1_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Sub Module1)                  |
| S1_Liquid Pipe Temperature (De-Icer)Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Compressor Suction TemperatureMonitors and displays the compressor's suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the condensing pressure (Sub Module2)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the evaporating pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1) |
| S1_Gas Pipe Temperature (HX Upper)Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Compressor Suction TemperatureMonitors and displays the compressor's suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the condensing pressure (Sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1) |
| S1_Gas Pipe Temperature (HX Lower)Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Compressor Suction TemperatureMonitors and displays the compressor's suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)  |
| S1_Suction TemperatureMonitors and displays the suction temperature (Sub Module1)S1_Compressor Suction TemperatureMonitors and displays the compressor's suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)   | S1_Gas Pipe Temperature (HX Upper)    | Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)    |
| S1_Compressor Suction TemperatureMonitors and displays the compressor's suction temperature (Sub Module1)S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)   | S1_Gas Pipe Temperature (HX Lower)    | Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)     |
| S1_Subcool Inlet TemperatureMonitors and displays the subcool inlet temperature (Sub Module1)S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Suction Temperature                | Monitors and displays the suction temperature (Sub Module1)                      |
| S1_Subcool Outlet temperatureMonitors and displays the subcool outlet temperature (Sub Module1)S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Compressor Suction Temperature     | Monitors and displays the compressor's suction temperature (Sub Module1)         |
| S1_Subcool EV PositionMonitors and displays the subcool expansion valve position (Sub Module1)S2_Condensing PressureMonitors and displays the condensing pressure (Sub Module2)S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)   | S1_Subcool Inlet Temperature          | Monitors and displays the subcool inlet temperature (Sub Module1)                |
| S2_Condensing Pressure       Monitors and displays the condensing pressure (Sub Module2)         S2_Evaporating Pressure       Monitors and displays the evaporating pressure (Sub Module2)         S2_Condensing Temperature       Monitors and displays the condensing temperature (Sub Module2)         S2_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module2)         S2_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module2)   | S1_Subcool Outlet temperature         | Monitors and displays the subcool outlet temperature (Sub Module1)               |
| S2_Evaporating PressureMonitors and displays the evaporating pressure (Sub Module2)S2_Condensing TemperatureMonitors and displays the condensing temperature (Sub Module2)S2_Evaporating TemperatureMonitors and displays the evaporating temperature (Sub Module2)  | S1_Subcool EV Position                | Monitors and displays the subcool expansion valve position (Sub Module1)         |
| S2_Condensing Temperature       Monitors and displays the condensing temperature (Sub Module2)         S2_Evaporating Temperature       Monitors and displays the evaporating temperature (Sub Module2)  | S2_Condensing Pressure                | Monitors and displays the condensing pressure (Sub Module2)                      |
| S2_Evaporating Temperature Monitors and displays the evaporating temperature (Sub Module2)   | S2_Evaporating Pressure               | Monitors and displays the evaporating pressure (Sub Module2)                     |
|  | S2_Condensing Temperature             | Monitors and displays the condensing temperature (Sub Module2)                   |
| S2_Inverter Compressor 1 Speed Monitors and displays the speed of the inverter compressor1 (Sub Module2)   | S2_Evaporating Temperature            | Monitors and displays the evaporating temperature (Sub Module2)                  |
|  | S2_Inverter Compressor 1 Speed        | Monitors and displays the speed of the inverter compressor1 (Sub Module2)        |

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DCM601B71 - intelligent Touch Manager

| Project Name: |               |  |
|---------------|---------------|--|
| Location:     | Approval:     |  |
| Engineer:     | Date:         |  |
| Submitted to: | Construction: |  |
| Submitted by: | Unit #:       |  |
| Reference:    | Drawing #:    |  |

| S2_Inverter Compressor 2 Speed        | Monitors and displays the speed of the inverter compressor2 (Sub Module2)        |
|---------------------------------------|--|
| S2_Fan Step                           | Monitors and displays the fan step (Sub Module2)                                 |
| S2_EV Position 1                      | Monitors and displays the position of the expansion valve1 (Sub Module2)         |
| S2_EV position 2                      | Monitors and displays the position of the expansion valve2 (Sub Module2)         |
| S2_Hot Gas Temperature (Compressor 1) | Monitors and displays the hot gas temperature of the compressor1 (Sub Module2)   |
| S2_Hot Gas Temperature (Compressor 2) | Monitors and displays the hot gas temperature of the compressor2 (Sub Module2)   |
| S2_Liquid Pipe Temperature            | Monitors and displays the liquid pipe temperature (Sub Module2)                  |
| S2_Liquid Pipe Temperature (HX Upper) | Monitors and displays the liquid pipe temperature for the upper HX (Sub Module2) |
| S2_Liquid Pipe Temperature (HX Lower) | Monitors and displays the liquid pipe temperature for the lower HX (Sub Module2) |
| S2_Liquid Pipe Temperature (De-Icer)  | Monitors and displays the liquid pipe temperature for the de-icer (Sub Module2)  |
| S2_Gas Pipe Temperature (HX Upper)    | Monitors and displays the gas pipe temperature for the upper HX (Sub Module2)    |
| S2_Gas Pipe Temperature (HX Lower)    | Monitors and displays the gas pipe temperature for the lower HX(Sub Module2)     |
| S2_Suction Temperature                | Monitors and displays the suction temperature (Sub Module2)                      |
| S2_Compressor Suction Temperature     | Monitors and displays the compressor's suction temperature (Sub Module2)         |
| S2_Subcool Inlet Temperature          | Monitors and displays the subcool inlet temperature (Sub Module2)                |
| S2_Subcool Outlet temperature         | Monitors and displays the subcool outlet temperature (Sub Module2)               |
| S2_Subcool EV Position                | Monitors and displays the subcool expansion valve position (Sub Module2)         |

## DIMENSIONS:

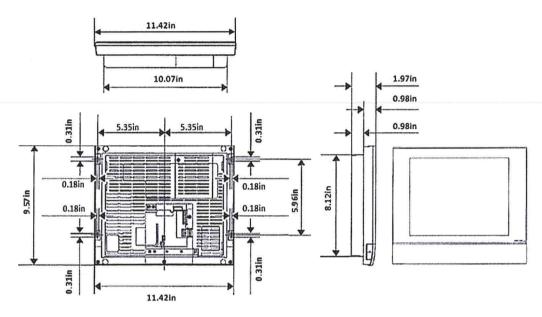
iTM:

Rev.1022

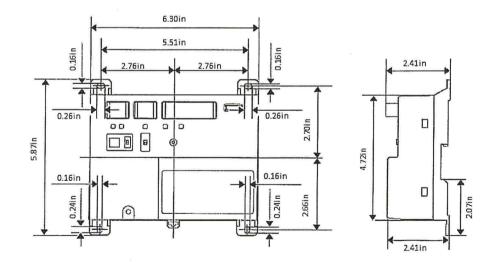


DCM601B71 - intelligent Touch Manager

| Project Name: |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |



iTM Plus Adaptor:



## DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

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DCM601B71 - intelligent Touch Manager

| Project Name:<br>Location: | Approval:     |  |
|----------------------------|---------------|--|
| Engineer:                  | Date:         |  |
| Submitted to:              | Construction: |  |
| Submitted by:              | Unit #:       |  |
| Reference:                 | Drawing #:    |  |

Submittal •

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- Sales Brochure •
- Guide Specs •
- Installation Manual •
- **Operation Manual** •
- iTM D3 Operation Data Analysis Tool 0
  - iTM BACnet Server Gateway
    - o Design Guide
    - o Sales Flyer
    - o Quick User Guide
- **iTM BACnet Client** •

  - Sales Flyer
     iTM BACnet Client macro tools
- WAGO I/O Basic Kit and Modules .
  - o Submittal
  - o Installation Manual
  - o Sales Flyer

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## INDIANA THERMAL SOLUTIONS



## Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew Consolidated School Corporation

| Qty   | Tag       | Description                                     |  |
|-------|-----------|---|--|
|       |           |   |  |
| 31    | VUV A - C | Temspec Vertical Unit Ventilators               |  |
|       |           |   |  |
|       |           |   |  |
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|       | 56).      |   |  |
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|       |           |   |  |
| Submi | tted by:  | Drawings in this submittal package describe the |  |

Submitted by: Brian Rockey Indiana Thermal Solutions Drawings in this submittal package describe the equipment we propose to furnish for this project and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



## Unit Ventilator Submittals

| Inter Salar | Submittals Issued | Submittals Released For Production |
|-------------|-------------------|------------------------------------|
|             | Feb 16, 2024      | NOT RELEASED                       |
| Rev No.     | Revision Date     | Submittal Pages Revised            |
|             |                   |                                    |
|             |                   |                                    |
|             |                   |                                    |
|             |                   |                                    |

**Temspec Inc. - PRELIMINARY SUBMITTAL** 

Project: SCHMITT E.S. Location: COLUMBUS, IN

**Please Return APPROVED Copy To:** 

Temspec, Inc. 2360 Millrace Court Mississauga, Ontario

Canada, L5N 1W2



### PROJECT INFORMATION

| Company:      | INDIANA THERMAL SOLUTIONS | Job Number: | PRELIMINARY SUBMITTAL  |
|---------------|---------------------------|-------------|------------------------|
| Rep. Contact: | BRIAN ROCKEY              | Job Name:   | SCHMITT E.S.           |
| Fax:          | 1(317) 570-5414           | Email:      | BRIANR@ITS-INDIANA.COM |
| Phone:        | 1(317) 570-5400           |             |                        |

| Title Page                                     |          |
|--|----------|
| Contents                                       | 1        |
| Outstanding Issues & Questions                 | 2 to 3   |
| Construction Data                              | 4        |
| Specialties & Exceptions                       | 5        |
| Control Strategy Advisory                      | 6        |
| Commissioning Advisory for Chilled Water Units | 7        |
| Controls Schedule                              | 8 to 12  |
| Electrical Schematic                           | 13       |
| Electrical Data                                | 14 to 15 |
| Hot Water Piping Schematic                     | 16       |
| Chilled Water Piping Schematic                 | 17       |
| Coil Performance - Hot / Chilled Water         | 18 to 19 |
| Warranty Statement                             | 20       |
| Duct Attenuation for "Draw-Through" units      | 21       |
| Accessories Summary                            | 22 to 25 |
| Top Acoustical Plenum Installation             | 26       |
| Rear Plenum Assembly Installation              | 27 to 28 |
| Side Pipe Cover Installation                   | 29       |
| Wall Trim                                      | 30       |
| Unit Layout - VUD 1200D                        | 31       |
| Unit Layout - VUD 1600D                        | 32       |
| Application Layout - VUD 1200D                 | 33       |
| Application Layout - VUD 1600D                 | 34       |
| ECM  | 35 to 36 |
| Mixed Air Damper Actuator                      | 37 to 38 |
| Face & Bypass Damper Actuator                  | 39 to 41 |
| Low Limit Temperature Control                  | 42       |

Total pages submitted 43

Submitted by: Jeff

## Jeff McDonald jmcdonald@temspec.com



The following information is to be provided or verified by the Engineer or Contractor as soon as possible. At the time of compilation of these shop drawing submittals, the data was unavailable or unclear.

| Issue<br>No. | Questions & Notes   | Response            |
|--------------|---|---------------------|
| 1            | <b>IMPORTANT NOTE:</b> These submittals represent what Temspec intends to build and ship. Any revision to these submittals require a written approval of the desired changes.   |                     |
| 2            | Contractor to select a color from the metal color samples provided, that is to be used for the CABINET. <b>Note: "Light Grey" is the default finish.</b>  | (response required) |
| 3            | Contractor to provide the following information for VUV-B & C units:<br>Height of the Top Acoustical Plenum (Htap) and Discharge Side (Front,<br>RH or LH). NOTE: Min Htap = 13". Available in 1" increments. Max H<br>of std plenum = 42"H.  | (response required) |
| 4            | Contractor to provide the following information for units with top extensions. The height of the top extension (Hte).   | (response required) |
| 5            | Contractor to provide rear plenum depth (Drp). Refer to 'Application<br>Layout' page in these submittals. Minimum recommended depth = 8".   | (response required) |
| 6            | Contractor to provide side pipe cover width (Wspc). Refer to<br>'Application Layout' page in these submittals. Min $W = 5$ ". Widths available in 1" increments.  | (response required) |
| 7            | Temspec has been contracted to supply a 'DDC Ready' Unit. Engineer or controls contractor to confirm sensor requirements.   | (response required) |
| 8            | Contractor to confirm the access panel hinge location (when facing<br>unit). Refer to 'Specialties & Exception' and 'Unit Layout' pages in<br>these submittals. NOTE: Left hand selected as default.  | (response required) |
| 9            | Piping outlets will be from the top of the units as submitted. Contractor<br>to NOTE these connections. See 'Unit Layout' page(s) for reference.<br>Please note that it may be possible to provide alternate connection<br>locations but this needs to be co-ordinated with Temspec as alternate<br>piping locations may not be available for all unit layouts. | (response required) |
| 10           | Contractor to provide the anticipated requirement date of the equipment, for scheduling purposes. This information must be provided when releasing for Production.  | (response required) |

| 11 | Engineer/contractor to provide external static pressure (ESP, "W.C.)<br>for ductwork. This information is important for proper selection and<br>programming of motors. | (response required) |
|----|--|---------------------|
| 12 | Contractor to confirm the supply voltage shown on the electrical data page in these submittals.  | (response required) |



| Temspec Model           | VUD 1200D             | VUD 1600D                    |  |                       |  |
|-------------------------|-----------------------|------------------------------|--|-----------------------|--|
| Mark No.                | VUV-A                 | VUV-B & C                    |  |                       |  |
| Quantity of Units       | 9                     | 22                           |  |                       |  |
| CABINET                 | A Real Provide State  |                              |  |                       |  |
| Air Flow Configuration  | Upflow                | Upflow                       |  |                       |  |
| Air Discharge           | Ducted                | Ducted                       |  |                       |  |
| Supply Fan Position     | Draw Through          | Draw Through                 |  |                       |  |
| Cabinet Size (WxDxH)    | 28"x21.5"x <b>84"</b> | 33"x23"x93"                  |  |                       |  |
| Approximate Weight      | 300 lbs               | 750 lbs                      |  |                       |  |
| Cabinet Material        | 18ga Steel            | 14ga Steel                   |  |                       |  |
| Finish                  | Powder Coat           | Powder Coat                  |  |                       |  |
| Color                   | LIGHT GREY            | LIGHT GREY                   |  |                       |  |
| Insulation Type         | Closed Cell           | Closed Cell                  |  |                       |  |
| Insulation Thickness    | 1/2"                  | 1"                           |  |                       |  |
| MIXED AIR FILTERS       |                       |                              |  |                       |  |
| Mixed Air Nominal Size  | 20" × 20"             | 12" x 24"                    |  |                       |  |
| Thickness               | 2"                    | 2"                           |  |                       |  |
| Quantity per Unit       | 1                     | 2                            |  |                       |  |
| Construction            | PLEATED               | PLEATED                      |  |                       |  |
| MERV Rating             | MERV10                | MERV10                       |  |                       |  |
| OUTDOOR AIR / RETU      | RN AIR DAMPE          | RS                           | port and a part                          |                       |  |
| Manufacturer            | Tamco                 | Tamco                        |  |                       |  |
| Model                   | 1400 series           | 1400 series                  |  |                       |  |
| Туре                    | Inline                | L-type                       |  |                       |  |
| Blade Operation         | Parallel              | Parallel                     |  |                       |  |
| FACE & BYPASS DAM       | PER(S)                |                              |  |                       | A CARLES AND A C |
| Manufacturer            | Tamco                 | Tamco                        |  |                       |  |
| Model                   | 1400 series           | 1400 series                  |  |                       |  |
| Blade Operation         | Parallel              | Parallel                     |  |                       |  |
| RETURN AIR GRILLE       |                       | A AL AND AND AND             | 20 20 20 20 20 20 20 20 20 20 20 20 20 2 |                       |  |
| Manufacturer            | EH Price              | EH Price                     |  |                       |  |
| Material                | Steel, painted        | Steel, painted               |  |                       |  |
| Nominal Size            | 21" x 11"             | 24" x 18"                    |  |                       |  |
| WATER COIL              |                       |                              |  | and the second second |  |
| Configuration           | 4 Pipe - Preheat      | 4 Pipe - Preheat             |  |                       |  |
| Tubes                   | 1/2" copper           | 1/2" copper                  |  |                       |  |
| Fins                    | aluminum              | aluminum                     |  |                       |  |
| Pressure Tested         | 350 p.s.i.            | 350 p.s.i.                   |  |                       |  |
| DRAIN PAN               |                       | STATISTICS IN THE STATISTICS |  |                       |  |
| Material                | Stainless Steel       | Stainless Steel              |  |                       |  |
| Coating                 | n/a                   | n/a                          |  |                       |  |
| Insulation on Underside | Closed Cell           | Closed Cell                  |  |                       |  |
| CONDENSATE LINE         | Closed Cell           |                              |  |                       |  |
| Material                | 5/8" Vinyl            | 5/8" Vinyl                   |  |                       |  |
| P-trap                  | Not Included          | Not Included                 |  |                       |  |



# Specialties & Exceptions

| SPEC | HALTY ITEMS PROVIDED BY TEMSPEC   |                |
|------|---|----------------|
|      | DESCRIPTION   | PLAN REFERENCE |
| 1    | Electrical / Control enclosure with unfused disconnect and up to 75VA control transformer.  | All Units      |
| 2    | Variable speed (analog 0-10Vdc) supply air ECM. Max 50% turndown.   | All Units      |
| 3    | Top acoustical plenum for ducted applications, 42"H.<br>Discharge location = TBA  | VUV-B & C      |
| 4    | Top extension/Duct shroud.  | VUV-C          |
| 5    | Stainless steel drain pan.  | All Units      |
| 6    | 84" H cabinet   | VUV-A          |
| 7    | Left hand access panel hinges.  | All Units      |
| 8    | Closed cell insulation cabinet liner.   | All Units      |
| 9    | Two year PARTS ONLY warranty.   | All Units      |
| 10   | DDC ready units with damper actuators, freeze stat (low<br>limit temperature controller), discharge, mixed air<br>temperature sensors & supply motor current sensor. NOTE:<br>Factory controls wired to terminal strip. | All Units      |
| 11   | Three spare sets of filters.  | All Units      |

#### **EXCEPTIONS - ITEMS NOT PROVIDED BY TEMSPEC**

|   | DESCRIPTION   | PLAN REFERENCE |
|---|---|----------------|
| A | Supply of unit controller/thermostat, space/zone sensor,<br>humidistat, CO2 sensor, occupancy sensor. | All Units      |
| в | Control valves, balancing valves, strainer.   | All Units      |
| с | Cam locks, insulated damper assemblies, powered exhaust/relief dampers.                               | All Units      |
| D | Condensate pump, drain pan overflow switch  | All Units      |
| Е | Louvers, wall sleeves, block-off panels, top extensions (duct shrouds)                                | All Units      |
| F | Start-up and commissioning, warranty labor, owner training.   | All Units      |



#### Temperature inside the cabinet during unoccupied mode

During unoccupied mode the outdoor air damper is closed. On a call for space heating the supply air fan runs and the control valve or face damper opens to provide heat. If H.W. is wild and water flow continues through the coil when the call for heating ends, there is a risk that the maximum allowable temperature inside the cabinet will be exceeded. All electrical devices have maximum rated temperatures which are stated by the manufacturer. Temspec uses devices from internationally recognized manufacturers to ensure component reliability at high ambient temperatures. These components are UL or CSA approved.

THE MAXIMUM ALLOWABLE TEMPERATURE WITHIN THE CABINET IS 120°F (50°C). Electrical devices can be damaged or have reduced operating life if this upper limit is compromised.

The control strategy employed by the controller must limit the temperature inside the unit so that this maximum is not exceeded.



# Commissioning Advisory for Chilled Water Units

Unit Ventilators are designed to function inside conditioned interior rooms. Should the chilled water be running before the units are commissioned (controls, ventilation rates, hydronic and air balancing), excessive condensation may occur. Under these conditions it is possible for condensation to form in areas not protected by drain pans and on components not designed for condensing environment.

Contractor is advised not to run chilled water through the unit ventilators prior to commissioning. The responsibility for damage to components subject to the conditions detailed above will remain with the contractor.

| TEMSPEC~                                     |                   |                     |                  |                   |                   | <u>ls Sch</u>           |                     |
|--|-------------------|---------------------|------------------|-------------------|-------------------|-------------------------|---------------------|
| Plan Reference                               | VUV-A             | VUV-A               | VUV-A            | VUV-A             | VUV-A             | VUV-A                   | VUV-A               |
| Room#  | 103               | 104                 | 107              | 108               | 114               | 116                     | 117                 |
| Temspec Production Number                    | T-01              | T-02                | T-03             | T-04              | T-05              | T-06                    | T-07                |
| Temspec Model                                | VUD 1200D         | VUD 1200D           | VUD 1200D        | VUD 1200D         | VUD 1200D         | VUD 1200D               | VUD 1200D           |
| THERMOSTAT /<br>CONTROLLER                   |                   |                     |                  |                   |                   | /                       |                     |
| Provided By                                  | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| Installed By                                 | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| SENSORS Provided &<br>Installed by Temspec   |                   |                     |                  |                   |                   |                         |                     |
| Mixed Air Sensor Mfg. Part ID                | A/20K-RA-18"-PB   | A/20K-RA-18"-PB     | A/20K-RA-18"-PB  | A/20K-RA-18"-PB   | A/20K-RA-18"-PB   | A/20K-RA-18"-PB         | A/20K-RA-18"-P      |
| Discharge Air Sensor Mfg. Part ID            | A/20K-DO-4        | A/20K-DO-4          | A/20K-DO-4       | A/20K-DO-4        | A/20K-DO-4        | A/20K-DO-4              | A/20K-DO-4          |
| SA Fan Current Sensor Mfg. Part ID           | RIBXKTF           | RIBXKTF             | RIBXKTF          | RIBXKTF           | RIBXKTF           | RIBXKTF                 | RIBXKTF             |
| OW LIMIT<br>TEMPERATURE CONTROL              |                   |                     |                  |                   |                   |                         |                     |
| Provided By                                  | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Installed By                                 | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Manuafacturer                                |                   | 1.00.000.000.00     | JOHNSON CONTROLS |                   | JOHNSON CONTROLS  |                         |                     |
| Reset Mode                                   | AUTO RESET        | AUTO RESET          | AUTO RESET       | AUTO RESET        | AUTO RESET        | AUTO RESET              | AUTO RESET          |
| Manufacturer Part ID                         | A70GA-1C          | A70GA-1C            | A70GA-1C         | A70GA-1C          | A70GA-1C          | A70GA-1C                | A70GA-1C            |
| MIXED AIR                                    | - A COATC         | Arocarc             | AUCATE           | AVOATE            | Artonic           | Artonic                 | - Aroonic           |
| DAMPER ACTUATOR                              |                   |                     |                  |                   |                   |                         |                     |
| Provided By                                  | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Installed By                                 | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Manuafacturer                                | JCI               | JCI                 | JCI              | JCI               | JCI               | JCI                     | JCI                 |
| Type of Operation                            | MODULATING        | MODULATING          | MODULATING       | MODULATING        | MODULATING        | MODULATING              | MODULATING          |
| Spring or Non-Spring Return                  |                   |                     |                  |                   | SPRING RETURN     | SPRING RETURN           | SPRING RETURN       |
| Manufacturer Part ID                         | SPRING RETURN     | SPRING RETURN       | SPRING RETURN    | SPRING RETURN     |                   |                         |                     |
| ACE & BYPASS                                 | M9203-GGA-2       | M9203-GGA-2         | M9203-GGA-2      | M9203-GGA-2       | M9203-GGA-2       | M9203-GGA-2             | M9203-GGA-2         |
|  |                   |                     |                  |                   |                   |                         |                     |
| DAMPER ACTUATOR                              |                   |                     |                  |                   |                   |                         |                     |
| Provided By                                  | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Installed By                                 | TEMSPEC           | TEMSPEC             | TEMSPEC          | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC             |
| Manuafacturer                                | JCI               | JCI                 | JCI              | JCI               | JCI               | JCI                     | JCI                 |
| Type of Operation                            | MODULATING        | MODULATING          | MODULATING       | MODULATING        | MODULATING        | MODULATING              | MODULATING          |
| Spring or Non-Spring Return                  | NON-SPRING RETURN |                     |                  | NON-SPRING RETURN | NON-SPRING RETURN | NON-SPRING RETURN       | NON-SPRING RETUR    |
| Manufacturer Part ID                         | M9104-GGA-2S      | M9104-GGA-2S        | M9104-GGA-2S     | M9104-GGA-2S      | M9104-GGA-2S      | M9104-GGA-2S            | M9104-GGA-25        |
| CONTROL<br>VALVE & ACTUATOR<br>CHILLED WATER |                   |                     |                  |                   |                   |                         |                     |
| Provided By                                  | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| Installed By                                 | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| HOT WATER                                    |                   | The second standard |                  | The second second | Station and State | A STATE AND A STATE AND | All and the surgers |
| Provided By                                  | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| Installed By                                 | OTHERS            | OTHERS              | OTHERS           | OTHERS            | OTHERS            | OTHERS                  | OTHERS              |
| HUT-OFF<br>BALL VALVES                       |                   |                     |                  |                   |                   |                         |                     |
| Manufacturer                                 | NEXUS             | NEXUS               | NEXUS            | NEXUS             | NEXUS             | NEXUS                   | NEXUS               |
| Manufacturer Part ID - CWS                   | NX-075S-075S-MS   | NX-0755-0755-MS     |                  | NX-075S-075S-MS   | NX-0755-0755-MS   | NX-075S-075S-MS         | NX-0755-0755-M      |
| Manufacturer Part ID - CWR                   | NX-075S-075S-MS   | NX-0755-0755-MS     | NX-075S-075S-MS  | NX-075S-075S-MS   | NX-0755-0755-MS   | NX-0755-0755-MS         | NX-075S-075S-M      |
| Manufacturer Part ID - HWS                   | NX-075S-075S-MS   | NX-0755-0755-MS     | NX-075S-075S-MS  | NX-075S-075S-MS   | NX-0755-0755-MS   | NX-0755-0755-MS         | NX-0755-0755-M      |
|  | CW-CC/0-CC/0-Art  | 110-01 33-01 33-M3  |                  |                   |                   |                         |                     |

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|  |                   |                   |                   |  | Contro            |                            |                   |
|--|-------------------|-------------------|-------------------|--|-------------------|----------------------------|-------------------|
| Plan Reference                               | VUV-A             | VUV-A             | VUV-B             | VUV-B  | VUV-B             | VUV-B                      | VUV-B             |
| Room#  | 119               | 123               | 125               | 135  | 136               | 137                        | 143               |
| Temspec Production Number                    | T-08              | T-09              | T-10              | T-11   | T-12              | T-13                       | T-14              |
| Temspec Model                                | VUD 1200D         | VUD 1200D         | VUD 1600D         | VUD 1600D  | VUD 1600D         | VUD 1600D                  | VUD 1600D         |
| THERMOSTAT /                                 |                   |                   |                   |  |                   |                            |                   |
| CONTROLLER                                   |                   |                   |                   |  | O RUISSO          | OTUERS                     | OTUFAC            |
| Provided By                                  | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| Installed By                                 | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| SENSORS Provided &                           |                   |                   |                   |  |                   |                            |                   |
| Installed by Temspec                         |                   |                   |                   | . /  |                   | . /00% Dt 10" DD           | 1 /00K D1 10" DD  |
| Mixed Air Sensor Mfg. Part ID                | A/20K-RA-18"-PB   | A/20K-RA-18"-PB   | A/20K-RA-18"-PB   | A/20K-RA-18"-PB  | A/20K-RA-18"-PB   | A/20K-RA-18"-PB            | A/20K-RA-18"-PB   |
| Discharge Air Sensor Mfg. Part ID            | A/20K-DO-4        | A/20K-DO-4        | A/20K-DO-4        | A/20K-DO-4   | A/20K-DO-4        | A/20K-DO-4                 | A/20K-DO-4        |
| SA Fan Current Sensor Mfg. Part ID           | RIBXKTF           | RIBXKTF           | RIBXKTF           | RIBXKTF  | RIBXKTF           | RIBXKTF                    | RIBXKTF           |
| LOW LIMIT                                    |                   |                   |                   |  |                   |                            |                   |
| TEMPERATURE CONTROL                          |                   |                   |                   |  |                   |                            | TELEPEC           |
| Provided By                                  | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Installed By                                 | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Manuafacturer                                | JOHNSON CONTROLS  |                   | JOHNSON CONTROLS  |  | JOHNSON CONTROLS  |                            |                   |
| Reset Mode                                   | AUTO RESET        | AUTO RESET        | AUTO RESET        | AUTO RESET   | AUTO RESET        | AUTO RESET                 | AUTO RESET        |
| Manufacturer Part ID                         | A70GA-1C          | A70GA-1C          | A70GA-1C          | A70GA-1C   | A70GA-1C          | A70GA-1C                   | A70GA-1C          |
| MIXED AIR                                    |                   |                   |                   |  |                   |                            |                   |
| DAMPER ACTUATOR                              |                   |                   |                   |  |                   |                            |                   |
| Provided By                                  | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Installed By                                 | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Manuafacturer                                | JCI               | JCI               | JCI               | JCI  | JCI               | JCI                        | JCI               |
| Type of Operation                            | MODULATING        | MODULATING        | MODULATING        | MODULATING   | MODULATING        | MODULATING                 | MODULATING        |
| Spring or Non-Spring Return                  | SPRING RETURN     | SPRING RETURN     | SPRING RETURN     | SPRING RETURN  | SPRING RETURN     | SPRING RETURN              | SPRING RETURN     |
| Manufacturer Part ID                         | M9203-GGA-2       | M9203-GGA-2       | M9203-GGA-2       | M9203-GGA-2  | M9203-GGA-2       | M9203-GGA-2                | M9203-GGA-2       |
| FACE & BYPASS                                |                   |                   |                   |  |                   |                            |                   |
| DAMPER ACTUATOR                              |                   |                   |                   |  |                   | ويستحل فيساله              |                   |
| Provided By                                  | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Installed By                                 | TEMSPEC           | TEMSPEC           | TEMSPEC           | TEMSPEC  | TEMSPEC           | TEMSPEC                    | TEMSPEC           |
| Manuafacturer                                | JCI               | JCI               | JCI               | JCI  | JCI               | JCI                        | JCI               |
| Type of Operation                            | MODULATING        | MODULATING        | MODULATING        | MODULATING   | MODULATING        | MODULATING                 | MODULATING        |
| Spring or Non-Spring Return                  | NON-SPRING RETURN | NON-SPRING RETURN | NON-SPRING RETURN | NON-SPRING RETURN  | NON-SPRING RETURN | NON-SPRING RETURN          | NON-SPRING RETURN |
| Manufacturer Part ID                         | M9104-GGA-2S      | M9104-GGA-2S      | M9104-GGA-25      | M9104-GGA-2S   | M9104-GGA-2S      | M9104-GGA-2S               | M9104-GGA-2S      |
| CONTROL<br>VALVE & ACTUATOR<br>CHILLED WATER |                   |                   |                   |  |                   |                            |                   |
| Provided By                                  | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| Installed By                                 | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| HOT WATER                                    | The same and the  |                   |                   |  | and some state    | An of side in the interest |                   |
| Provided By                                  | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| Installed By                                 | OTHERS            | OTHERS            | OTHERS            | OTHERS   | OTHERS            | OTHERS                     | OTHERS            |
| SHUT-OFF<br>BALL VALVES                      |                   |                   |                   | 1977 - Alf Indonesia (Maria Indonesia (Maria))<br>1977 - Alf Indonesia (Maria Indonesia (Maria)) |                   |                            |                   |
| Manufacturer                                 | NEXUS             | NEXUS             | NEXUS             | NEXUS  | NEXUS             | NEXUS                      | NEXUS             |
| Manufacturer Part ID - CWS                   | NX-0755-0755-MS   | NX-0755-0755-MS   | NX-0755-0755-MS   | NX-0755-0755-MS  | NX-0755-0755-MS   | NX-0755-0755-MS            | NX-0755-0755-M    |
| Manufacturer Part ID - CWR                   | NX-0755-0755-MS   |                   | NX-0755-0755-MS   | NX-075S-075S-MS  | NX-0755-0755-MS   | NX-0755-0755-MS            | NX-0755-0755-M    |
| Manufacturer Part ID - HWS                   | NX-075S-075S-MS   |                   | NX-0755-0755-MS   | NX-075S-075S-MS  |                   | NX-0755-0755-MS            | NX-0755-0755-MS   |
|  |                   | NX-0755-0755-MS   |                   | NX-0755-0755-MS  | NX-075S-075S-MS   | NX-075S-075S-MS            | NX-0755-0755-MS   |

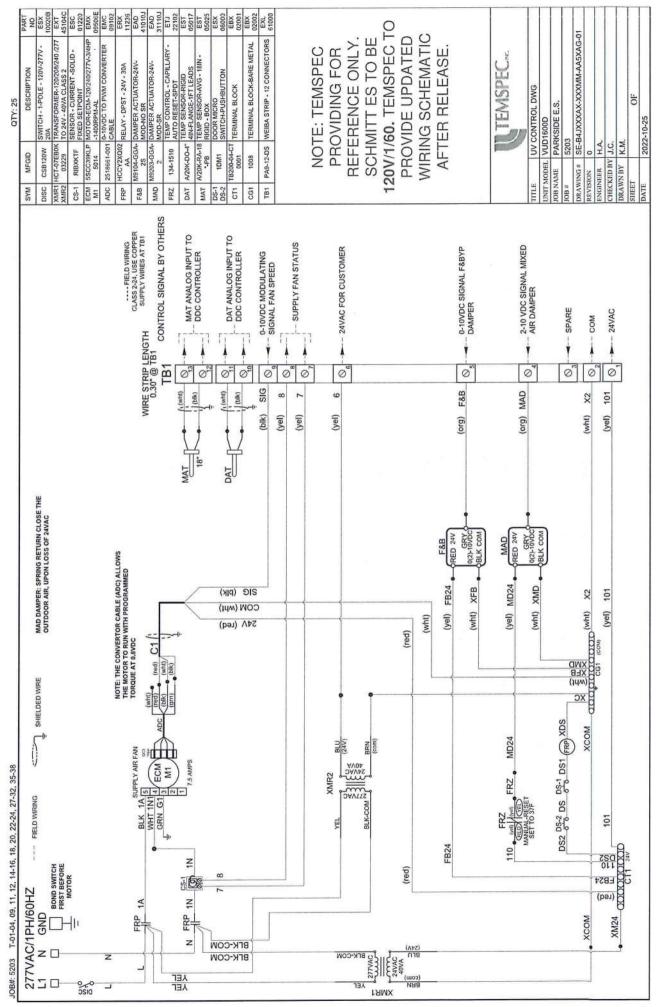
|   | 10000   |                       | MIRAN                 |                               |                               | ls Sch            |  |
|---|---|-----------------------|-----------------------|-------------------------------|-------------------------------|-------------------|--|
| Plan Reference  | VUV-B   | VUV-B                 | VUV-B                 | VUV-B                         | VUV-C                         | VUV-C             | VUV-C  |
| Room#   | 144   | 145                   | 146                   | 147                           | 150<br>T-19                   | 152<br>T-20       | 157<br>T-21  |
| Temspec Production Number   | T-15  | T-16<br>VUD 1600D     | T-17                  | T-18<br>VUD 1600D             | VUD 1600D                     | VUD 1600D         | VUD 1600D  |
| Temspec Model   | VUD 1600D   | VUD 1600D             | VUD 1600D             | VUD 1600D                     | VUD 1600D                     | VUD 1800D         | V00 10000  |
| THERMOSTAT /  |   |                       |                       |                               |                               |                   |  |
| CONTROLLER  | OTUERC  | OTUERC                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| Provided By<br>Installed By   | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| SENSORS Provided &  | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
|   |   |                       |                       |                               |                               |                   |  |
| Installed by Temspec<br>Mixed Air Sensor Mfg. Part ID                   |   | 1/00/ 01 107 00       | 1/00% D4 107 DD       | 1/00% D4 10" DD               | 4 /00K DA 10" DB              | A/20K-RA-18"-PB   | A/20K-RA-18"-PE  |
|   | A/20K-RA-18"-PB   | A/20K-RA-18"-PB       | A/20K-RA-18"-PB       | A/20K-RA-18"-PB<br>A/20K-DO-4 | A/20K-RA-18"-PB<br>A/20K-DO-4 | A/20K-DO-4        | A/20K-DO-4   |
| Discharge Air Sensor Mfg. Part ID<br>SA Fan Current Sensor Mfg. Part ID | A/20K-DO-4  | A/20K-DO-4<br>RIBXKTF | A/20K-DO-4<br>RIBXKTF | RIBXKTF                       | RIBXKTF                       | RIBXKTF           | RIBXKTF  |
| LOW LIMIT   | RIBXKTF   | KIDANIF               | RIDANIF               | RIDANI                        | KIDAKTI                       | RIDARII           | KIDAKII  |
|   |   |                       |                       |                               |                               |                   |  |
| TEMPERATURE CONTROL   | TEMEDEC   | TEMEDEC               | TEMSDEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Provided By   | TEMSPEC   | TEMSPEC               | TEMSPEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Installed By  | TEMSPEC   | TEMSPEC               | TEMSPEC               | JOHNSON CONTROLS              |                               | JOHNSON CONTROLS  | JOHNSON CONTROL  |
| Manuafacturer   | JOHNSON CONTROLS  | JOHNSON CONTROLS      | JOHNSON CONTROLS      |                               |                               |                   | AUTO RESET   |
| Reset Mode  | AUTO RESET  | AUTO RESET            | AUTO RESET            | AUTO RESET                    | AUTO RESET                    | AUTO RESET        |  |
| Manufacturer Part ID  | A70GA-1C  | A70GA-1C              | A70GA-1C              | A70GA-1C                      | A70GA-1C                      | A70GA-1C          | A70GA-1C   |
| MIXED AIR   |   |                       |                       |                               |                               |                   |  |
| DAMPER ACTUATOR   |   |                       |                       |                               |                               |                   |  |
| Provided By   | TEMSPEC   | TEMSPEC               | TEMSPEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Installed By  | TEMSPEC   | TEMSPEC               | TEMSPEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Manuafacturer   | JCI   | JCI                   | JCI                   | JCI                           | JCI                           | JCI               | JCI  |
| Type of Operation   | MODULATING  | MODULATING            | MODULATING            | MODULATING                    | MODULATING                    | MODULATING        | MODULATING   |
| Spring or Non-Spring Return   | SPRING RETURN   | SPRING RETURN         | SPRING RETURN         | SPRING RETURN                 | SPRING RETURN                 | SPRING RETURN     | SPRING RETURN  |
| Manufacturer Part ID  | M9203-GGA-2   | M9203-GGA-2           | M9203-GGA-2           | M9203-GGA-2                   | M9203-GGA-2                   | M9203-GGA-2       | M9203-GGA-2  |
| FACE & BYPASS   |   |                       |                       |                               |                               |                   |  |
| DAMPER ACTUATOR   |   |                       |                       |                               |                               |                   |  |
| Provided By   | TEMSPEC   | TEMSPEC               | TEMSPEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Installed By  | TEMSPEC   | TEMSPEC               | TEMSPEC               | TEMSPEC                       | TEMSPEC                       | TEMSPEC           | TEMSPEC  |
| Manuafacturer   | JCI   | JCI                   | JCI                   | JCI                           | JCI                           | JCI               | JCI  |
| Type of Operation   | MODULATING  | MODULATING            | MODULATING            | MODULATING                    | MODULATING                    | MODULATING        | MODULATING   |
| Spring or Non-Spring Return   | NON-SPRING RETURN   | NON-SPRING RETURN     | NON-SPRING RETURN     | NON-SPRING RETURN             | NON-SPRING RETURN             | NON-SPRING RETURN | NON-SPRING RETUR   |
| Manufacturer Part ID  | M9104-GGA-2S  | M9104-GGA-25          | M9104-GGA-25          | M9104-GGA-2S                  | M9104-GGA-2S                  | M9104-GGA-25      | M9104-GGA-25   |
| CONTROL<br>VALVE & ACTUATOR   |   |                       |                       |                               |                               |                   |  |
| CHILLED WATER   | A STATE OF A |                       |                       | and the second second         | THE REAL PROPERTY.            |                   | C. C. States   |
| Provided By   | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| Installed By  | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| HOT WATER   | A REAL PROPERTY.  | THE REAL PROPERTY OF  | Service States (1)    |                               |                               | State State       | and the second sec |
| Provided By   | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| Installed By  | OTHERS  | OTHERS                | OTHERS                | OTHERS                        | OTHERS                        | OTHERS            | OTHERS   |
| SHUT-OFF<br>BALL VALVES   |   |                       |                       |                               |                               |                   |  |
| Manufacturer  | NEXUS   | NEXUS                 | NEXUS                 | NEXUS                         | M.A. STEWART                  | M.A. STEWART      | M.A. STEWART   |
| Manufacturer Part ID - CWS  | NX-0755-0755-MS   | NX-0755-0755-MS       | NX-0755-0755-MS       | NX-0755-0755-MS               | B4-1                          | B4-1              | B4-1   |
| Manufacturer Part ID - CWR  | NX-0755-0755-MS   | NX-0755-0755-MS       | NX-0755-0755-MS       | NX-0755-0755-MS               | B4-1                          | B4-1              | B4-1   |
| Manufacturer Part ID - CWK  | NX-0755-0755-MS   | NX-0755-0755-MS       | NX-0755-075S-MS       | NX-0755-0755-MS               | NX-075S-075S-MS               | NX-0755-0755-MS   | NX-0755-0755-M   |
|   |   |                       |                       |                               |                               |                   |  |

| Disc. Buttering                              | MINC              | VUV-C                 | VUV-C             | VUV-C             | Contro                  | VUV-B             | VUV-B           |
|--|-------------------|-----------------------|-------------------|-------------------|-------------------------|-------------------|-----------------|
| Plan Reference<br>Room#                      | VUV-C<br>159      | 183                   | 185               | 186               | 225                     | 235               | 236             |
| Temspec Production Number                    | T-22              | T-23                  | T-24              | T-25              | T-26                    | I-27              | T-28            |
| Temspec Model                                | VUD 1600D         | VUD 1600D             | VUD 1600D         | VUD 1600D         | VUD 1600D               | VUD 1600D         | VUD 1600D       |
| THERMOSTAT /                                 | 100 10000         | 100 10000             | 10010000          | 100 10000         |                         |                   |                 |
| CONTROLLER                                   |                   |                       |                   |                   |                         |                   |                 |
| Provided By                                  | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| Installed By                                 | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| SENSORS Provided &                           |                   |                       |                   |                   |                         |                   |                 |
| Installed by Temspec                         |                   |                       |                   |                   |                         |                   |                 |
| Mixed Air Sensor Mfg. Part ID                | A/20K-RA-18"-PB   | A/20K-RA-18"-PB       | A/20K-RA-18"-PB   | A/20K-RA-18"-PB   | A/20K-RA-18"-PB         | A/20K-RA-18"-PB   | A/20K-RA-18"-PB |
| Discharge Air Sensor Mfg. Part ID            | A/20K-DO-4        | A/20K-DO-4            | A/20K-DO-4        | A/20K-DO-4        | A/20K-DO-4              | A/20K-DO-4        | A/20K-DO-4      |
| SA Fan Current Sensor Mfg. Part ID           | RIBXKTF           | RIBXKTF               | RIBXKTF           | RIBXKTF           | RIBXKTF                 | RIBXKTF           | RIBXKTF         |
| LOW LIMIT                                    |                   |                       |                   |                   |                         |                   |                 |
| TEMPERATURE CONTROL                          |                   |                       |                   |                   |                         |                   |                 |
| Provided By                                  | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Installed By                                 | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Manuafacturer                                | JOHNSON CONTROLS  | JOHNSON CONTROLS      | JOHNSON CONTROLS  | JOHNSON CONTROLS  | JOHNSON CONTROLS        |                   |                 |
| Reset Mode                                   | AUTO RESET        | AUTO RESET            | AUTO RESET        | AUTO RESET        | AUTO RESET              | AUTO RESET        | AUTO RESET      |
| Manufacturer Part ID                         | A70GA-1C          | A70GA-1C              | A70GA-1C          | A70GA-1C          | A70GA-1C                | A70GA-1C          | A70GA-1C        |
| MIXED AIR<br>DAMPER ACTUATOR                 |                   |                       |                   |                   |                         |                   |                 |
| Provided By                                  | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Installed By                                 | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Manuafacturer                                | JCI               | JCI                   | JCI               | JCI               | JCI                     | JCI               | JCI             |
| Type of Operation                            | MODULATING        | MODULATING            | MODULATING        | MODULATING        | MODULATING              | MODULATING        | MODULATING      |
| Spring or Non-Spring Return                  | SPRING RETURN     | SPRING RETURN         | SPRING RETURN     | SPRING RETURN     | SPRING RETURN           | SPRING RETURN     | SPRING RETURN   |
| Manufacturer Part ID                         | M9203-GGA-2       | M9203-GGA-2           | M9203-GGA-2       | M9203-GGA-2       | M9203-GGA-2             | M9203-GGA-2       | M9203-GGA-2     |
| FACE & BYPASS                                |                   |                       |                   |                   |                         |                   |                 |
| DAMPER ACTUATOR                              |                   |                       |                   |                   |                         |                   |                 |
| Provided By                                  | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Installed By                                 | TEMSPEC           | TEMSPEC               | TEMSPEC           | TEMSPEC           | TEMSPEC                 | TEMSPEC           | TEMSPEC         |
| Manuafacturer                                | JCI               | JCI                   | JCI               | JCI               | JCI                     | JCI               | JCI             |
| Type of Operation                            | MODULATING        | MODULATING            | MODULATING        | MODULATING        | MODULATING              | MODULATING        | MODULATING      |
| Spring or Non-Spring Return                  | NON-SPRING RETURN | NON-SPRING RETURN     | NON-SPRING RETURN | NON-SPRING RETURN |                         | NON-SPRING RETURN |                 |
| Manufacturer Part ID                         | M9104-GGA-2S      | M9104-GGA-2S          | M9104-GGA-2S      | M9104-GGA-25      | M9104-GGA-2S            | M9104-GGA-2S      | M9104-GGA-2S    |
| CONTROL<br>VALVE & ACTUATOR<br>CHILLED WATER |                   | and the second second |                   |                   | No. of Concession, Name |                   |                 |
| Provided By                                  | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| Installed By                                 | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| HOT WATER                                    |                   |                       |                   |                   |                         |                   |                 |
| Provided By                                  | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| Installed By                                 | OTHERS            | OTHERS                | OTHERS            | OTHERS            | OTHERS                  | OTHERS            | OTHERS          |
| SHUT-OFF<br>BALL VALVES                      |                   |                       |                   |                   |                         |                   |                 |
| Manufacturer                                 | M.A. STEWART      | M.A. STEWART          | M.A. STEWART      | M.A. STEWART      | NEXUS                   | NEXUS             | NEXUS           |
| Manufacturer Part ID - CWS                   | B4-1              | B4-1                  | B4-1              | B4-1              | NX-0755-0755-MS         | NX-0755-0755-MS   | NX-0755-0755-MS |
| Manufacturer Part ID - CWR                   | B4-1              | B4-1                  | B4-1              | B4-1              | NX-0755-0755-MS         |                   | NX-0755-0755-MS |
| Manufacturer Part ID - HWS                   | NX-075S-075S-MS   | NX-0755-0755-MS       | NX-0755-0755-MS   | NX-0755-0755-MS   | NX-0755-0755-MS         |                   | NX-0755-0755-MS |
| Manufacturer Part ID - HWR                   | NX-0755-0755-MS   |                       | NX-0755-0755-MS   | NX-0755-0755-MS   | NX-0755-0755-MS         | NX-0755-0755-MS   | NX-0755-0755-MS |



# Controls Schedule

| Plan Reference                     | VUV-B                        | VUV-B  | VUV-B           |   | that the state                          |  |   |
|------------------------------------|------------------------------|--|-----------------|---|---|--|---|
| Room#                              | 237                          | 242  | 243             |   | Same 2                                  | and restand  | Carl Stranger   |
| Temspec Production Number          | T-29                         | T-30   | T-31            |   | 1                                       | The second second  | Later Adda to   |
| Temspec Model                      | VUD 1600D                    | VUD 1600D  | VUD 1600D       |   | and stores                              |  |   |
| THERMOSTAT /                       |                              |  |                 |   |   |  |   |
| CONTROLLER                         |                              |  |                 |   |   |  |   |
| Provided By                        | OTHERS                       | OTHERS   | OTHERS          |   |   |  |   |
| Installed By                       | OTHERS                       | OTHERS   | OTHERS          |   |   |  |   |
| SENSORS Provided &                 |                              |  |                 |   |   |  |   |
| Installed by Temspec               |                              |  |                 |   |   |  |   |
| Mixed Air Sensor Mfg. Part ID      | A/20K-RA-18"-PB              | A/20K-RA-18"-PB  | A/20K-RA-18"-PB |   |   |  |   |
| Discharge Air Sensor Mfg. Part ID  | A/20K-DO-4                   | A/20K-DO-4   | A/20K-DO-4      |   |   |  |   |
| SA Fan Current Sensor Mfg. Part ID | RIBXKTF                      | RIBXKTF  | RIBXKTF         |   |   |  |   |
| OW LIMIT                           |                              |  |                 |   |   |  |   |
| TEMPERATURE CONTROL                |                              |  |                 |   |   |  |   |
| Provided By                        | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Installed By                       | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Manuafacturer                      |                              | JOHNSON CONTROLS   |                 |   |   |  |   |
| Reset Mode                         | AUTO RESET                   | AUTO RESET   | AUTO RESET      |   |   |  |   |
| Manufacturer Part ID               |                              | and the second sec | A70GA-1C        |   |   |  |   |
|                                    | A70GA-1C                     | A70GA-1C   | A/UGA-IC        |   |   |  |   |
| MIXED AIR                          |                              |  |                 |   |   |  |   |
| DAMPER ACTUATOR                    |                              |  |                 |   |   |  | 1   |
| Provided By                        | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Installed By                       | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Manuafacturer                      | JCI                          | JCI  | JCI             |   |   |  |   |
| Type of Operation                  | MODULATING                   | MODULATING   | MODULATING      |   |   |  |   |
| Spring or Non-Spring Return        | SPRING RETURN                | SPRING RETURN  | SPRING RETURN   |   |   |  |   |
| Manufacturer Part ID               | M9203-GGA-2                  | M9203-GGA-2  | M9203-GGA-2     |   |   |  |   |
| FACE & BYPASS                      |                              |  |                 |   |   |  |   |
| DAMPER ACTUATOR                    |                              |  |                 |   |   |  |   |
| Provided By                        | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Installed By                       | TEMSPEC                      | TEMSPEC  | TEMSPEC         |   |   |  |   |
| Manuafacturer                      | JCI                          | JCI  | JCI             |   |   |  |   |
| Type of Operation                  | MODULATING                   | MODULATING   | MODULATING      |   |   |  |   |
| Spring or Non-Spring Return        |                              | NON-SPRING RETURN  |                 |   |   |  |   |
| Manufacturer Part ID               | M9104-GGA-25                 | M9104-GGA-25   | M9104-GGA-25    |   |   |  |   |
| CONTROL                            | M7104-00A-20                 | M7104-00A-10   | 111104-001-10   |   |   |  |   |
| VALVE & ACTUATOR                   |                              |  |                 |   |   |  |   |
| GHILLED WATER                      | Course and the second second | With Line Party Street   |                 | State of the second  |   |  |   |
| Provided By                        | OTHERS                       | OTHERS   | OTHERS          | and the second se | and the second second second            | and the second second second second  | and the second se |
| Installed By                       | OTHERS                       | OTHERS   | OTHERS          |   |   | -  |   |
| HOT WATER                          | OTTICKO                      | GITIERO  | C III LINO      | THE REAL PROPERTY OF  | Contraction of the                      | Rept. Contraction  |   |
| Provided By                        | OTHERS                       | OTHERS   | OTHERS          | and and the second second   | 100000000000000000000000000000000000000 | and the second s |   |
| Installed By                       | OTHERS                       | OTHERS   | OTHERS          |   |   |  |   |
| SHUT-OFF                           | OTTERS                       | OTTERO   | U UNICAS        |   |   |  |   |
| BALL VALVES                        |                              |  |                 |   |   |  |   |
| Manufacturer                       | NEXUS                        | NEXUS  | NEXUS           |   |   | 1  | 1   |
|                                    |                              |  |                 |   |   | -  |   |
| Manufacturer Part ID - CWS         | NX-0755-0755-MS              | NX-075S-075S-MS  |                 |   |   |  |   |
| Manufacturer Part ID - CWR         |                              | NX-075S-075S-MS  |                 |   |   |  |   |
| Manufacturer Part ID - HWS         | NX-075S-075S-MS              | NX-075S-075S-MS  | NX-075S-075S-MS |   |   |  |   |
| Manufacturer Part ID - HWR         | NX-075S-075S-MS              | NX-075S-075S-MS  | NX-075S-075S-MS |   |   |  |   |

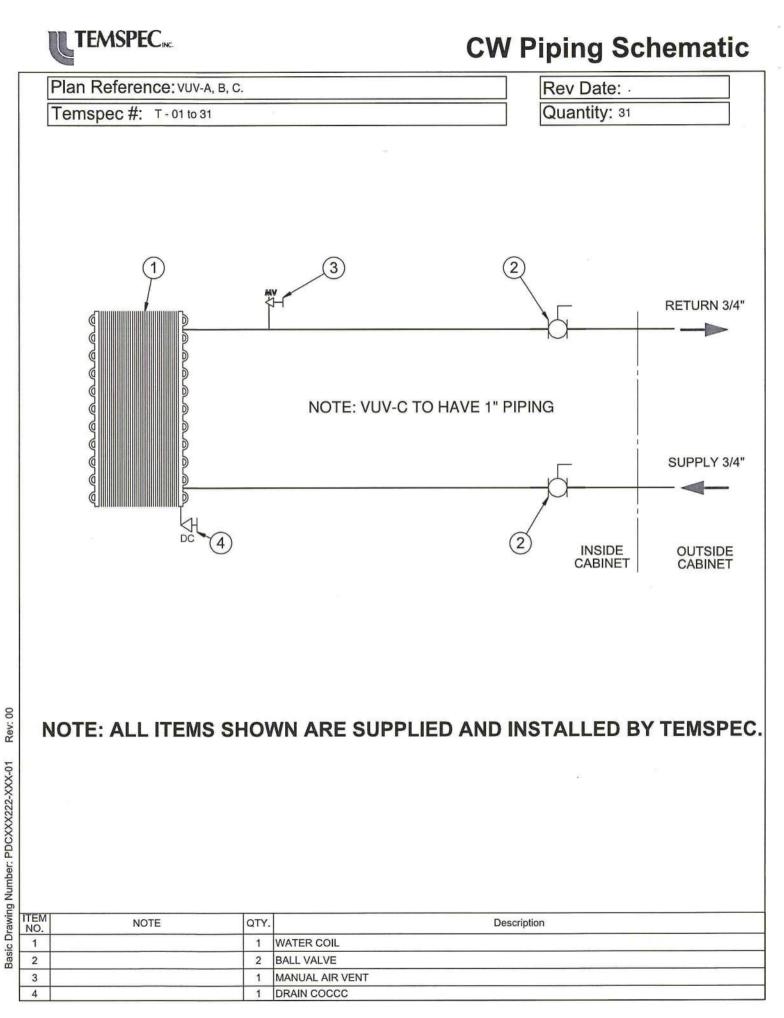


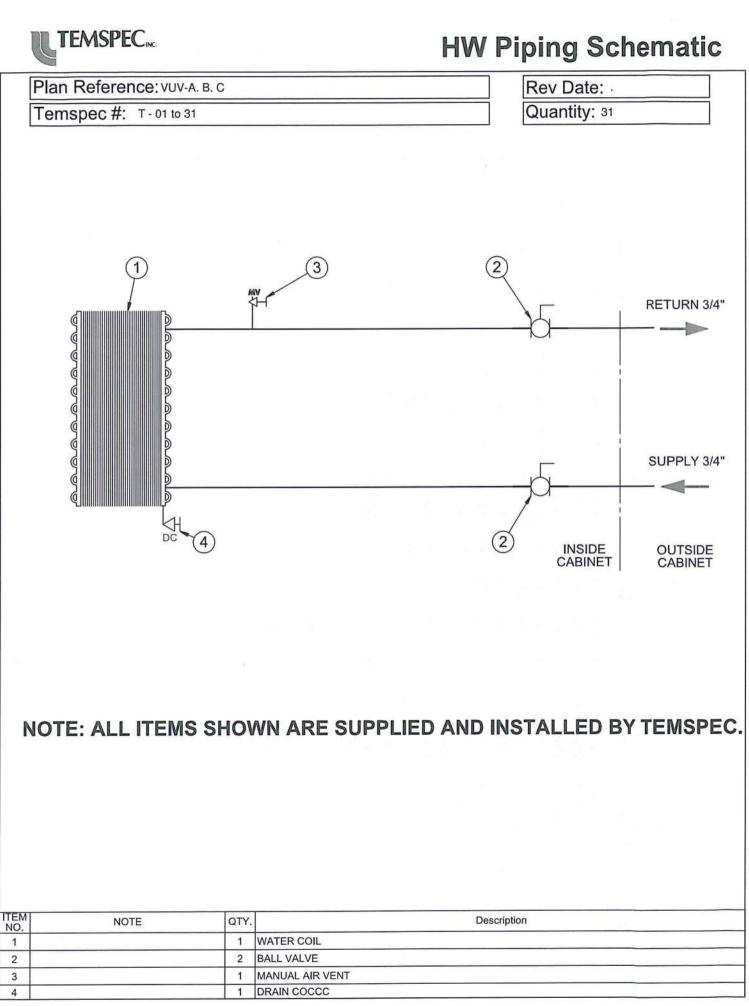
| Cont they     |                       | VOL        | VOLTAGE        | and a second and | adlus     | <b>JLY AIR</b> | SUPPLY AIR MOTOR |       | CONTRACTOR OF |     |
|---------------|-----------------------|------------|----------------|------------------|-----------|----------------|------------------|-------|---------------|-----|
| Plan Ref. Mfg | Mfg No. Temspec Model | Supply     | S.A. Fan Motor | Nom. CFM         | ESP "W.C. | ₽              | RPM / Speeds     | AMPS  | Qty           | MCA |
| 1-            | T-01 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| Ŧ             | T-02 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| 1-1           | T-03 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | 1             | 11A |
| Ŧ             | T-04 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | 1             | 11A |
| Ĩ             | T-05 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| 1-1           | T-06 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| 1-1           | T-07 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| -L            | T-08 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| 1-1           | T-09 VUD 1200D        | 115V / 1ph | 115V / 1ph     | 1200             | 0.25"     | 1/2            | 1400/VAR         | 8.4A  | -             | 11A |
| Ļ             | T-10 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| Ļ             | T-11 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| Ļ             | T-12 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | L             | 14A |
| Ļ             | T-13 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-B T-      | T-14 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| Ļ             | T-15 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| Ļ             | T-16 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| Ļ             | T-17 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | 1             | 14A |
| Ļ             | T-18 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C T-      | T-19 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C T-:     | T-20 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C 1-:     | T-21 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C 1-:     | T-22 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C 1-:     | T-23 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C T-:     | T-24 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-C T-      | T-25 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1600             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-B T-:     | T-26 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-B T-:     | T-27 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-B T-:     | T-28 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |
| VUV-B T-      | T-29 VUD 1600D        | 115V / 1ph | 115V / 1ph     | 1400             | 0.25"     | 3/4            | 1400/VAR         | 11.2A | -             | 14A |

**Electrical Data** 

| TEM              | SPEC           | NC.        |            |  |  |  |  |  |  |  |  | E | le | ct | ri | Ca | al | D | ata |
|------------------|----------------|------------|------------|--|--|--|--|--|--|--|--|---|----|----|----|----|----|---|-----|
|                  | MCA            | 14A        | 14A        |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | Qty            | -          | -          |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | AMPS           | 11.2A      | 11.2A      |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
| SUPPLY AIR MOTOR | RPM / Speeds   | 1400/VAR   | 1400/VAR   |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
| Y AIR            | £              | 3/4        | 3/4        |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
| Iddins           | ESP "W.C.      | 0.25"      | 0.25"      |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | Nom. CFM       | 1400       | 1400       |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
| AGE              | S.A. Fan Motor | 115V / 1ph | 115V / 1ph |  |  |  |  |  |  |  |  |   | 0  |    |    |    |    |   |     |
| VOLTAGE          | Unit Supply    | 115V / 1ph | 115V / 1ph |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | Temspec Model  | VUD 1600D  | VUD 1 600D |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | Mfg No.        | T-30       | T-31       |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |
|                  | Plan Ref.      | VUV-B      | VUV-B      |  |  |  |  |  |  |  |  |   |    |    |    |    |    |   |     |

## 





Basic Drawing Number: PDCXXX222-XXX-01 Rev: 00

| J                   | TEN           | ASPEC.             | c.         |            |            | (          | C          | oi         | 1          | Pe        | er         | fc        | or        | m         | a         | n         | ce        | <u>-</u>  | F         | H         | ot        | /          | C         | h         | il        | le         | d          | V         | Va        | ate       | er        |
|---------------------|---------------|--------------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|
|                     | 1. H. H.      | WPD<br>ft.         | 6.6        | 9.9        | 9.9        | 6.9        | 9.9        | 9.9        | 9.9        | 9.9       | 10.3       | 10.3      | 10.3      | 10.3      | 10.3      | 10.3      | 10.3      | 10.3      | 10.3      | 10.3      | 12.5      | 12.5       | 12.5      | 12.5      | 12.5      | 12.5       | 12.5       | 10.3      | 10.3      | 10.3      | 10.3      |
|                     |               | LAT<br>wb          | 56         | 56         | 56         | 56         | 56         | 56         | 56         | 56        | 55         | 55        | 55        | 55        | 55        | 55        | 55        | 55        | 55        | 55        | 55        | 55         | 55        | 55        | 55        | 55         | 55         | 55        | 55        | 55        | 55        |
| ~                   |               | LAT db             | 56         | 56         | 56         | 56         | 56         | 56         | 56         | 56        | 56         | 56        | 56        | 56        | 56        | 56        | 56        | 56        | 56        | 56        | 55        | 55         | 55        | 55        | 55        | 55         | 55         | 56        | 56        | 56        | 56        |
| R ONLY              | ~             | LWT                | 53         | 53         | 53         | 53         | 53         | 53         | 53         | 53        | 54         | 54        | 54        | 54        | 54        | 54        | 54        | 54        | 54        | 54        | 54        | 54         | 54        | 54        | 54        | 54         | 54         | 54        | 54        | 54        | 54        |
| WATER               | WATTER        | Sens.<br>MBH       | 31.3       | 31.3       | 31.3       | 31.3       | 31.3       | 31.3       | 31.3       | 31.3      | 35.7       | 35.7      | 35.7      | 35.7      | 35.7      | 35.7      | 35.7      | 35.7      | 35.7      | 35.7      | 41.6      | 41.6       | 41.6      | 41.6      | 41.6      | 41.6       | 41.6       | 35.7      | 35.7      | 35.7      | 35.7      |
| JRE                 | CHILLED WATER | Total<br>MBH       | 46.9       | 46.9       | 46.9       | 46.9       | 46.9       | 46.9       | 46.9       | 46.9      | 49.0       | 49.0      | 49.0      | 49.0      | 49.0      | 49.0      | 49.0      | 49.0      | 49.0      | 49.0      | 57.0      | 57.0       | 57.0      | 57.0      | 57.0      | 57.0       | 57.0       | 49.0      | 49.0      | 49.0      | 49.0      |
| NIXTU               | CHI           | EWT                | 44         | 44         | 44         | 44         | 44         | 44         | 44         | 44        | 44         | 44        | 44        | 44        | 44        | 44        | 44        | 44        | 44        | 44        | 44        | 44         | 44        | 44        | 44        | 44         | 44         | 44        | 44        | 44        | 44        |
| CW / GLYCOL MIXTURE |               | EAT<br>wb E        | 65.3       | 65.3       | 65.3       | 65.3       | 65.3       | 65.3       | 65.3       | 65.3      | 65.3       | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3      | 65.3       | 65.3      | 65.3      | 65.3      | 65.3       | 65.3       | 65.3      | 65.3      | 65.3      | 65.3      |
| / GLY               | The second    | EAT E db           | 78.8 6     | 78.8 6     | 78.8 6     | 78.8 6     | 78.8 6     | 78.8 6     | 78.8 6     | 78.8 6    | 78.8 6     | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6     | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6     | 78.8 6     | 78.8 6    | 78.8 6    | 78.8 6    | 78.8 6    |
| CW                  |               | gpm E              | 11.0 7     | 11.0 78    | 11.0 71    | 11.0 7     | 0          | 0.         | 11.0 7     | 11.0 7    | 11.0 7     | 11.0 7    | 0.        | o.        | 11.0 7    | 11.0 7    | 11.0 7    | 0.        | 0         | 11.0 7    | 3.0 7     | 3.0 7      | 3.0 7     | 3.0 7     | 3.0 7     | 3.0 7      | 3.0 7      | 11.0 7    | 11.0 7    | 0         | 0         |
| 7                   |               | 0                  | -          |            |            |            | 9 11.      | 6 11       | -          | -         |            |           | 6 11      | 6 11      |           |           |           | 6 11      | 6 11      |           | -         | -          | -         | 4 15      | 4 13      | -          | -          | -         |           | 9 11      | 6 11      |
|                     |               | 1.00               | 55 3.9     | 55 3.9     | 155 3.9    | 155 3.9    | 55 3.9     | 55 3.9     | 155 3.9    | 155 3.9   | 155 3.9    | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 149 4.9   | 53 7.4    | 53 7.4     | 53 7.4    | 53 7.     | 53 7.     | 53 7.4     | 53 7.4     | 49 4.9    | 49 4.9    | 49 4.9    | 49 4.9    |
|                     |               | T LWT              | -          | -          |            |            | -          | -          |            |           |            |           |           |           |           |           |           |           |           |           | -         | -          | 96 15     | 96 15     | 96 15     | 96 15      | 96 15      | -         | -         | -         | -         |
| 13                  | ATTER         | H LAT              | 4 97       | 4 97       | 4 97       | 4 97       | 4 97       | 4 97       | 4 97       | 4 97      | 4 97       | 4 97      | 4 97      | 4 97      | 4 97      | .4 97     | .4 97     | .4 97     | 4 97      | 4 97      | 5 96      | 5 96       |           |           |           |            |            | .4 97     | .4 97     | .4 97     | .4 97     |
| ANO                 | HOT WATER     | Heating<br>MBH     | 67.4       | 67.4       | 67.4       | 67.4       | 67.4       | 67.4       | 67.4       | 67.4      | 67.4       | 81.4      | 81.4      | 81.4      | 81.4      | 81        | 81        | 81        | 81.4      | 81.4      | 90.5      | 90.5       | 90.5      | 90.5      | 90.5      | 90.5       | 90.5       | 81        | 81        | 81        | 81        |
| WATER O             | H             | EWT                | 180        | 180        | 180        | 180        | 180        | 180        | 180        | 180       | 180        | 180       | 180       | 180       | 180       | 180       | 180       | 180       | 180       | 180       | 180       | 180        | 180       | 180       | 180       | 180        | 180        | 180       | 180       | 180       | 180       |
| W                   |               | EAT                | 43         | 43         | 43         | 43         | 43         | 43         | 43         | 43        | 43         | 43        | 43        | 43        | 43        | 43        | 43        | 43        | 43        | 43        | 43        | 43         | 43        | 43        | 43        | 43         | 43         | 43        | 43        | 43        | 43        |
| URE                 |               | dbm                | 5.5        | 5.5        | 5.5        | 5.5        | 5.5        | 5.5        | 5.5        | 5.5       | 5.5        | 5.5       | 5.5       | 5.5       | 5.5       | 5.5       | 5.5       | 5.5       | 5.5       | 5.5       | 7.0       | 7.0        | 7.0       | 7.0       | 7.0       | 7.0        | 7.0        | 5.5       | 5.5       | 5.5       | 5.5       |
| T MIXT              | CFM           | SA Nominal         | 1200       | 1200       | 1200       | 1200       | 1200       | 1200       | 1200       | 1200      | 1200       | 1400      | 1400      | 1400      | 1400      | 1400      | 1400      | 1400      | 1400      | 1400      | 1600      | 1600       | 1600      | 1600      | 1600      | 1600       | 1600       | 1400      | 1400      | 1400      | 1400      |
| HW / GLYCOL MIXTURE |               | Temspec<br>Model   | VUD 1 200D | VUD 1200D | VUD 1 200D | VUD 1600D | VUD 1 600D | VUD 1600D | VUD 1600D | VUD 1600D | VUD 1 600D | VUD 1 600D | VUD 1600D | VUD 1600D | VUD 1600D | VUD 1600D |
| HW                  |               | No.                | 10-1       | T-02       | T-03       | T-04       | T-05       | T-06       | 1-07       | T-08      | 1-09       | I-10      | 11-1      | T-12      | T-13 \    | T-14      | T-15      | r-16      | T-17      | T-18      | T-19      | T-20       | T-21      | r-22      | T-23      | T-24       | T-25       | T-26      | 1-27      | T-28      | T-29      |
|                     |               | ROWS I<br>(ewited) | 5/1 T      | 5/1 1      | 5/1 1      | 5/1 T      |            |            | 5/1 T      | 5/1 T     | 5/1 T      | 5/1 1     |           | 5/1 1     | 5/1 1     | 5/1 1     | 5/1 1     |           |           | 5/1 1     | 5/1 T     | 5/1 1      | 5/1 1     | 5/1 1     | 5/1 1     | 5/1 1      | 5/1 1      | 5/1 T     | 5/1 1     | 5/1 1     | 5/1 1     |
|                     |               | Plan Ref.          | A-VUV      | A-VUV     | A-VUV      | VUV-B     | VUV-C     | VUV-C      | VUV-C     | VUV-C     | VUV-C     | VUV-C      | VUV-C      | VUV-B     | VUV-B     | VUV-B     | VUV-B     |

| ]]                    | TEN           | <b>ISPEC</b>   | c         |             | Сс | oil [ | Pe | rfo | rn | nai | nc | e - | E | lot | :/ | Cł | il | lec | V E | Wa | ater |
|-----------------------|---------------|----------------|-----------|-------------|----|-------|----|-----|----|-----|----|-----|---|-----|----|----|----|-----|-----|----|------|
|                       |               | WPD<br>ft.     | 10.3      | 10.3        |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       |               | LAT<br>wb      | 55        | 55          |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       |               | LAT db         | 56        | 56          |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       | er.           | LWT            | 54        | 54          |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       | WATE          | Sens.<br>MBH   | 35.7      | 35.7        |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| JRE                   | CHILLED WATER | Total<br>MBH   | 49.0      | 49.0        |    |       |    |     |    |     |    |     |   |     |    |    |    |     | 1   |    |      |
| NIXTL                 | CHI           | EWT            | 44        | 44          |    |       |    |     |    |     | -  |     |   |     |    |    |    |     | T   |    |      |
| MER                   |               | EAT<br>wb E    | 65.3      | 65.3        |    | -     |    |     |    |     |    |     |   |     |    |    |    |     | 1   |    |      |
| CHILLED WATER MIXTURE |               | db EAT         | 78.8 6    | 78.8 6      |    |       |    |     |    |     |    |     |   |     |    |    |    |     | 1   |    |      |
| HILLE                 |               | mqg            | 11.0 7    | 11.0 7      |    |       |    |     |    |     |    |     |   |     |    |    |    |     | 1   |    |      |
| S                     |               | WPD<br>ft.     | 4.9 1     | 4.9 1       |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       |               | LWT            | 149       | 149         |    |       |    |     |    |     |    |     |   |     |    |    |    |     | 1   |    |      |
|                       | <u>n</u>      | LAT            | 67        | 67          |    |       |    |     |    |     |    |     |   |     |    | 1  |    |     |     |    |      |
| 7                     | OT WATER      | Heating<br>MBH | 81.4      | 81.4        |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| R ONLY                | HOT           | EWT            | 180       | 180         |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| WATER                 |               | EAT            | 43        | 43          |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| ШШ                    |               | mdg            | 5.5       | 5.5         |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| MIXTU                 | CIAM          | SA nom.<br>cfm | 1400      | 1400        |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
| HOT WATER MIXTURE     |               | Model          | VUD 1600D | 4000 1 600D |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       | Miz.          | No.            | T-30      | T-31        |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       | ROW           | (CW/H          | 5/1       | 5/1         |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |
|                       |               | Plan Ref.      | VUV-B     | VUV-B       |    |       |    |     |    |     |    |     |   |     |    |    |    |     |     |    |      |



Temspec Inc. warrants that its equipment will be free from factory defects in material or workmanship for a period of **twenty-four (24)** months from the date of shipment. The shipment date is the date on which the final consignment of HVAC units leaves the factory. All units must be shipped within three months of initial shipment. The shipment date for accessory items has no bearing on the warranty of the goods in general. Accessory items include but are not limited to thermostats, grills, filters and sheet metal covers.

This warranty applies only when the equipment is installed and used in accordance with our printed instructions and does not apply to any equipment which has been subject to misuse, abuse or alteration. This warranty is in lieu of all other warranties, express or implied.

Should any approved replacement part be required within the warranty period, they will be supplied at no charge, freight prepaid to the jobsite. The cost of service labor or incidental expenses incurred in the repair or replacement of parts does not form part of this warranty.

Temspec Inc. cannot consider any charge without being given reasonable opportunity to assess the cause or nature of the defect and/or to make arrangements for correction. In no event, be it due to breach of warranty or any other cause arising out of performance or nonperformance of the contract shall Temspec Inc. be liable for any loss, injury or damages including consequential or indirect damages.



# Duct Attenuation

#### FOR DRAW-THROUGH CLASSROOM FAN COIL UNITS

Attenuation of air noise from HVAC equipment in the classroom is critically important. The Temspec classroom fan coil units are constructed to minimize sound breakout from the cabinet by the use of heavy gauge steel and duct liner.

For units with a "Draw-Through" configuration (supply air fan at the top of the unit), air noise from the return air grille is negligible since the supply air blower is typically 7ft. distance from the return air opening. Supply air blower noise at the discharge must be adequately attenuated.

#### DUCTWORK INSTALLATION RECOMMENDATIONS

The following method is recommended for duct work associated with the classroom fan coil units. **Note:** This recommendation only applies to the Draw-Though units that do not utilize Temspec's top acoustical plenum.

Fabricate the discharge elbow using heavy gauge steel, a minimum of 20ga. Line the elbow and first 8 ft. of duct with 1" duct liner. Line the remainder of the duct with 1/2" duct liner. Pay particular attention to ensuring that there is no air leakage at the joint at the discharge from the unit. Do not use a flexible joint at the discharge as the blower and motor have vibration isolation mountings. Avoid locating supply air grilles / diffusers closer than 8ft. from the fan discharge.

External cladding of the elbow with a high density material will assist in reducing low frequency sound breakout.



| Plan Reference                          | VUV-A                                    | VUV-A       | VUV-A     | VUV-A     | VUV-A         | VUV-A       | VUV-A     | VUV-A           | VUV-A         | VUV-B      |
|---|--|-------------|-----------|-----------|---------------|-------------|-----------|-----------------|---------------|------------|
| Ceiling Height                          | TBA                                      | TBA         | TBA       | TBA       | TBA           | TBA         | TBA       | TBA             | TBA           | TBA        |
| Temspec Production Number               | T-01                                     | T-02        | T-03      | T-04      | T-05          | T-06        | T-07      | T-08            | T-09          | T-10       |
| Temspec Model Number                    | VUD 1200D                                | VUD 1200D   | VUD 1200D | VUD 1200D | VUD 1200D     | VUD 1200D   | VUD 1200D | VUD 1200D       | VUD 1200D     | VUD 1600D  |
| TOP CABINET EXTENSION                   | 1940 A. C                                | INSULATIO   | ON TYPE   | NONE      |               |             |           |                 | 1.11          |            |
| Duct Shroud - H=? W= 33" D= 23"         | 1  |             |           |           |               | -           |           |                 |               |            |
| TOP ACOUSTICAL PLENUM                   | States 1                                 | INSULATIO   | ON TYPE   | Glassfibe | er (stuffed a | round the S | A elbow)  | 1.1.1.1.1.1.1.1 |               |            |
| LEFT Supply Air Opening - Ho=? H= 42"   | 1  |             |           |           |               |             |           |                 |               | 1          |
| REAR PLENUM                             | No. Contraction                          | INSULATIO   | ON TYPE   | 1 inch th | ick Closed (  | Cell        | asm da    | and and         | 12 ISN        | 1000 81    |
| Side Panel - L= 93" D= 8"               |  |             |           |           |               |             |           |                 |               | 2          |
| Back Panel - L= 93" W=33"               |  |             |           |           |               |             |           |                 |               | 1          |
| Back Extension - L= "? W=33"            |  |             |           |           |               |             |           |                 |               | 1          |
| Right Side Extension - L= "? D= 8"      |  |             |           |           |               |             |           |                 |               | 1          |
| Left Side Extension - L= "? D= 8"       |  |             |           |           |               |             |           |                 |               | 1          |
| Top/Middle/Bottom Panel- D= 8" W=33"    |  |             |           |           |               |             |           |                 |               | 2          |
| SIDE PIPE COVER                         | A STATISTICS                             | INSULATIO   | ON THE    | NONE      |               |             |           |                 | (independent) |            |
| Side Pipe Cover - W=5" L= 93" D= 21.5"  | 1  | 1           | 1         | 1         | 1             | 1           | 1         | 1               | 1             |            |
| Right Extension - W=5" L= ? D= 21.5"    | 1  | 1           | 1         | 1         | 1             | 1           | 1         | 1               | 1             |            |
| Left Extension - W=5" L= ? D= 21.5"     | 1  | 1           | 1         | 1         | 1             | 1           | 1         | 1               | 1             |            |
| Wall Bracket - L= 84"                   | 1  | 1           | 1         | 1         | 1             | 1           | 1         | 1               | 1             |            |
| Cover Support - L= 84" H=               | 1  | 1           | 1         | 1         | 1             | 1           | 1         | 1               | 1             |            |
| SPARE FILTERS                           |  |             |           | 1.1.      | Ket Biggets   | 2 51 20     | 1         |                 |               |            |
| Filter Type: MERV10                     |  |             |           |           |               |             |           |                 |               |            |
| VUD 1200D (1 per unit) - 20" x 20" x 2" | 3  | 3           | 3         | 3         | 3             | 3           | 3         | 3               | 3             | _          |
| VUD 1600D (2 per unit) - 12" x 24" x 2" |  |             |           |           |               |             |           |                 |               | 6          |
| MISCELLANEOUS ITEMS                     | 1- | State Parks |           |           | Selver.       |             |           | MEN PER         | VE ALL PAR    | The second |
| Wall Trim (2" x 1" x ?")                | 2  | 2           | 2         | 2         | 2             | 2           | 2         | 2               | 2             | 2          |
| CABINET touch-up paint (quart)          | 3  |             |           |           |               |             |           |                 |               |            |



| Plan Reference                          | VUV-B             | VUV-B           | VUV-B     | VUV-B     | VUV-B         | VUV-B       | VUV-B          | VUV-B     | VUV-C      | VUV-C         |
|---|-------------------|-----------------|-----------|-----------|---------------|-------------|----------------|-----------|------------|---------------|
| Ceiling Height                          | TBA               | TBA             | TBA       | TBA       | TBA           | TBA         | TBA            | TBA       | TBA        | TBA           |
| Temspec Production Number               | T-11              | T-12            | T-13      | T-14      | T-15          | T-16        | T-17           | T-18      | T-19       | T-20          |
| Temspec Model Number                    | VUD 16000         | VUD 1600D       | VUD 1600D | VUD 1600D | VUD 1600D     | VUD 1600D   | VUD 1600D      | VUD 1600D | VUD 1600D  | VUD 16000     |
| TOP CABINET EXTENSION                   | and Residentials  | INSULATION TYPE |           | NONE      |               |             |                |           |            |               |
| Duct Shroud - H= ? W= 33" D= 23         | " ]               |                 |           |           |               |             |                |           | 1          | 1             |
| TOP ACOUSTICAL PLENUM                   | an sugar          | INSULATIO       | ON TYPE   | Glassfib  | er (stuffed a | round the S | A elbow)       | A DEAL    | Les the Ba | L.C. Status   |
| LEFT Supply Air Opening - Ho=? H= 42    | "] 1              | 1               | 1         | 1         | 1             | 1           | 1              | 1         | 1          | 1             |
| REAR PLENUM                             | and the states of | INSULATIO       | ON TYPE   | 1 inch th | ick Closed (  | Cell        | and the second | ner and   | a montal   | 1.4.11 E      |
| Side Panel - L= 93" D= 8"               | 2                 | 2               | 2         | 2         | 2             | 2           | 2              | 2         | 2          | 2             |
| Back Panel - L= 93" W=33                | " 1               | 1               | 1         | 1         | 1             | 1           | 1              | 1         | 1          | 1             |
| Back Extension - L= "? W=33             | " 1               | 1               | 1         | 1         | 1             | 1           | 1              | 1         | 1          | 1             |
| Right Side Extension - L= "? D= 8"      | 1                 | 1               | 1         | 1         | 1             | 1           | 1              | 1         | 1          | 1             |
| Left Side Extension - L= "? D= 8"       | 1                 | 1               | 1         | 1         | 1             | 1           | 1              | 1         | 1          | 1             |
| Top/Middle/Bottom Panel- D= 8" W=33     | " 2               | 2               | 2         | 2         | 2             | 2           | 2              | 2         | 2          | 2             |
| SIDE PIPE COVER                         |                   | INSULATIO       | ON TYPE   | NONE      | 一般で           | M. R.       |                | 1000      | 15-16-16-  |               |
| Side Pipe Cover - W=5" L= 93" D= 21     | .5"               |                 |           |           |               |             |                |           |            |               |
| Right Extension - W=5" L= ? D= 21       | .5"               |                 |           |           |               |             |                |           |            |               |
| Left Extension - W=5" L= ? D= 21        | .5"               |                 |           |           |               |             |                |           |            |               |
| Wall Bracket - L= 84"                   |                   |                 |           |           |               |             |                |           |            |               |
| Cover Support - L= 84" H=               |                   |                 |           |           |               |             |                |           |            |               |
| SPARE FILTERS                           |                   |                 |           |           |               |             |                | ·《西南市10月  | 1000       | AL PRODUCTION |
| Filter Type: MERV10                     |                   |                 |           |           |               |             |                |           |            |               |
| VUD 1200D (1 per unit) - 20" x 20" x 2" |                   |                 |           |           |               |             |                |           |            |               |
| VUD 1600D (2 per unit) - 12" x 24" x 2" | 6                 | 6               | 6         | 6         | 6             | 6           | 6              | 6         | 6          | 6             |
| MISCELLANEOUS ITEMS                     |                   |                 | CIDINE LA |           |               |             | 100 A. 1929    | BARRIE    |            |               |
| Wall Trim (2" x 1" x ?")                | 2                 | 2               | 2         | 2         | 2             | 2           | 2              | 2         | 2          | 2             |
| CABINET touch-up paint (quart)          |                   |                 |           |           |               |             |                |           |            |               |



| Plan Reference                          | VUV-C          | VUV-C     | VUV-C     | VUV-C     | VUV-C         | VUV-B       | VUV-B              | VUV-B     | VUV-B         | VUV-B     |
|---|----------------|-----------|-----------|-----------|---------------|-------------|--------------------|-----------|---------------|-----------|
| Ceiling Height                          | TBA            | TBA       | TBA       | TBA       | TBA           | TBA         | TBA                | TBA       | TBA           | TBA       |
| Temspec Production Number               | T-21           | T-22      | T-23      | T-24      | T-25          | T-26        | T-27               | T-28      | T-29          | T-30      |
| Temspec Model Number                    | VUD 1600D      | VUD 1600D | VUD 1600D | VUD 1600D | VUD 1600D     | VUD 1600D   | VUD 1600D          | VUD 1600D | VUD 1600D     | VUD 1600D |
| TOP CABINET EXTENSION                   | Six Site       | INSULATIO | ON TYPE:  | NONE      | USGP!         | 10          | Contraction of the | where are | Signation and | Deg 1     |
| Duct Shroud - H=? W= 33" D= 23"         | 1              | 1         | 1         | 1         | 1             |             |                    |           |               |           |
| TOP AGOUSTICAL PLENUM                   | Contraction of | INSULATIO | ON TYPE   | Glassfib  | er (stuffed a | round the S | A elbow)           | 100       |               | S.C.a.L.  |
| LEFT Supply Air Opening - Ho=? H= 42"   | 1              | 1         | 1         | 1         | 1             | 1           | 1                  | 1         | 1             | 1         |
| REAR PLENUM                             |                | INSULATIO | ON TYPE   | 1 inch th | ick Closed (  | Cell        | AGENT A            | 1.200     | S. O.         | A PARTY A |
| Side Panel - L= 93" D= 8"               | 2              | 2         | 2         | 2         | 2             | 2           | 2                  | 2         | 2             | 2         |
| Back Panel - L= 93" W=33"               | 1              | 1         | 1         | 1         | 1             | 1           | 1                  | 1         | 1             | 1         |
| Back Extension - L= "? W=33"            | 1              | 1         | 1         | 1         | 1             | 1           | 1                  | 1         | 1             | 1         |
| Right Side Extension - L= "? D= 8"      | 1              | 1         | 1         | 1         | 1             | 1           | 1                  | 1         | 1             | 1         |
| Left Side Extension - L= "? D= 8"       | 1              | 1         | 1         | 1         | 1             | 1           | 1                  | 1         | 1             | 1         |
| Top/Middle/Bottom Panel- D= 8" W=33"    | 2              | 2         | 2         | 2         | 2             | 2           | 2                  | 2         | 2             | 2         |
| SIDE PIPE COVER                         | Contraction of | INSULATIO | ON TYPE   | NONE      | 1.1.1         |             |                    |           |               |           |
| Side Pipe Cover - W= 5" L= 93" D= 21.5" |                |           |           |           |               |             |                    |           |               |           |
| Right Extension - W= 5" L= ? D= 21.5"   |                |           |           |           |               |             |                    |           |               |           |
| Left Extension - W= 5" L= ? D= 21.5"    |                |           |           |           |               |             |                    |           |               |           |
| Wall Bracket - L= 84"                   |                |           |           |           |               |             |                    |           |               |           |
| Cover Support - L= 84" H=               |                |           |           |           |               |             |                    |           |               |           |
| SPARE FILTERS                           |                |           |           |           |               |             |                    |           |               |           |
| Filter Type: MERV10                     |                |           |           |           |               |             |                    |           |               |           |
| VUD 1200D (1 per unit) - 20" x 20" x 2" |                |           |           |           |               |             |                    |           |               |           |
| VUD 1600D (2 per unit) - 12" x 24" x 2" | 6              | 6         | 6         | 6         | 6             | 6           | 6                  | 6         | 6             | 6         |
| MISCELLANEOUS ITEMS                     |                |           | 12 34     |           | 132           |             |                    |           | - Intern      | No. 17    |
| Wall Trim (2" x 1" x ?")                | 2              | 2         | 2         | 2         | 2             | 2           | 2                  | 2         | 2             | 2         |
| CABINET touch-up paint (quart)          |                |           |           |           |               |             |                    |           |               |           |



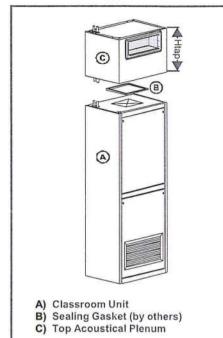
| Plan Reference                          | VUV-B         |                  |  |  |  |  |  |  |
|---|---------------|------------------|--|--|--|--|--|--|
| Ceiling Height                          | TBA           | Carlos States    |  |  |  |  |  |  |
| Temspec Production Number               | T-31          | and the second   | Concern States and a state of the state of t |  |  |  |  |  |
| Temspec Model Number                    | VUD 1600D     |                  |  |  |  |  |  |  |
| TOP CABINET EXTENSION                   | Elli Falantas | INSULATION TYPE  | NONE   |  |  |  |  |  |
| Duct Shroud - H=? W= 33" D= 23"         |               |                  |  |  |  |  |  |  |
| TOP ACOUSTICAL PLENUM                   | 172222.50     | INSULATION TYPE  | Glassfiber (stuffed around the SA elbow)   |  |  |  |  |  |
| LEFT Supply Air Opening - Ho=? H= 42"   | 1             |                  |  |  |  |  |  |  |
| REAR PLENUM                             | ANT CAME      | INSULATION TYPE  | 1 inch thick Closed Cell   |  |  |  |  |  |
| Side Panel - L= 93" D= 8"               | 2             |                  |  |  |  |  |  |  |
| Back Panel - L= 93" W=33"               | 1             |                  |  |  |  |  |  |  |
| Back Extension - L= "? W=33"            | 1             |                  |  |  |  |  |  |  |
| Right Side Extension - L= "? D= 8"      | 1             |                  |  |  |  |  |  |  |
| Left Side Extension - L= "? D= 8"       | 1             |                  |  |  |  |  |  |  |
| Top/Middle/Bottom Panel- D= 8" W=33"    | 2             |                  |  |  |  |  |  |  |
| SIDE PIPE COVER                         | The Gallerian | INSULATION TYPE: | NONE   |  |  |  |  |  |
| Side Pipe Cover - W=5" L= 93" D= 21.5"  |               |                  |  |  |  |  |  |  |
| Right Extension - W=5" L= ? D= 21.5"    |               |                  |  |  |  |  |  |  |
| Left Extension - W=5" L= ? D= 21.5"     |               |                  |  |  |  |  |  |  |
| Wall Bracket - L= 84"                   |               |                  |  |  |  |  |  |  |
| Cover Support - L= 84" H=               |               |                  |  |  |  |  |  |  |
| SPARE FILTERS                           |               |                  |  |  |  |  |  |  |
| Filter Type: MERV10                     |               |                  |  |  |  |  |  |  |
| VUD 1200D (1 per unit) - 20" x 20" x 2" |               |                  |  |  |  |  |  |  |
| VUD 1600D (2 per unit) - 12" x 24" x 2" | 6             |                  |  |  |  |  |  |  |
| MISCELLANEOUS ITEMS                     |               |                  |  |  |  |  |  |  |
| Wall Trim (2" x 1" x ?")                | 2             | 2                |  |  |  |  |  |  |
| CABINET touch-up paint (quart)          |               |                  |  |  |  |  |  |  |

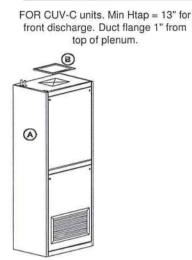


# **Top Acoustical Plenum Installation**

Drawings are conceptual. Please refer to the 'Unit Lavout' and 'Application Layout' pages in these submittals for precise pipe & duct connection locations and

#### NOTE: Installation screws, washers and sealing gasket NOT PROVIDED.





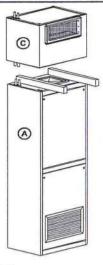
NOTE:

additional accessories.

#### STEP 1:

Fit a suitable compressible SEALING GASKET (B) around the suppy air fan discharge to prevent air leakage at the interface of the unit and the TOP ACOUSTICAL PLENUM (C).

33

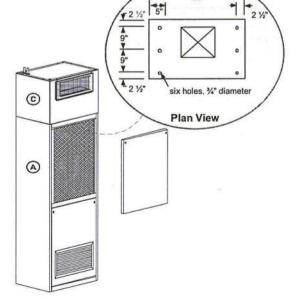


STEP 2: Stand the TOP ACOUSTICAL PLENUM (C) onto two pieces of 2"x4" wood on top of the CLASSROOM UNIT (A).



#### STEP 3:

Within the 4" gap, make soldered connections between the CLASSROOM UNIT (A) stub-outs and the bottom end of the pipe extensions in the TOP ACOUSTICAL PLENUM (C). Remove the 2"x4" wood and allow the TOP ACOUSTICAL PLENUM to rest on the CLASSROOM UNIT squarely.



#### STEP 5:

0

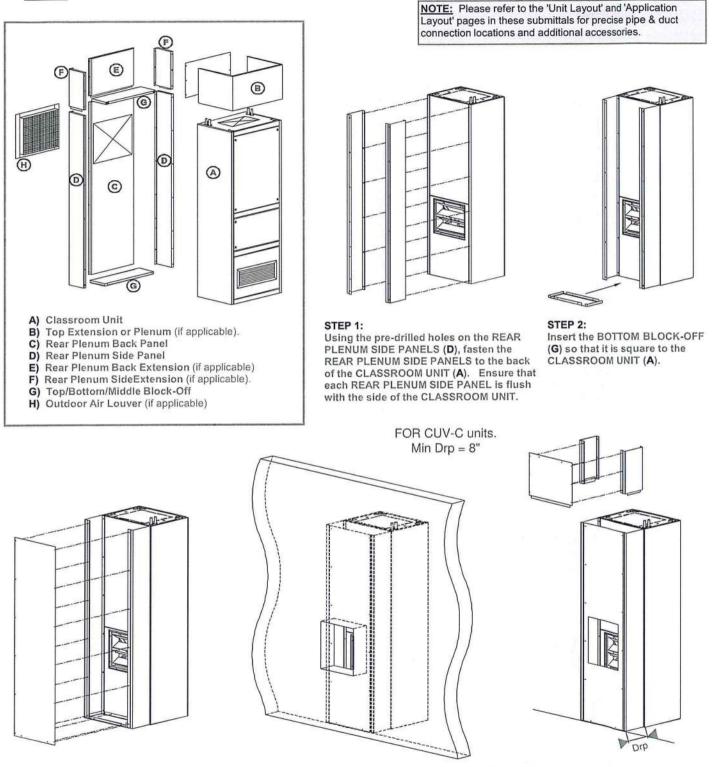
()

Feed the power cable down through the 1" conduit, pre-installed within the TOP ACOUSTICAL PLENUM (C) and down into the CLASSROOM UNIT (A) to the terminal block within the electrical enclosure. Attach the duct to the pre-installed supply air collar on the TOP ACOUSTICAL PLENUM (C).

STEP 4:

Remove the top access panel of the CLASSROOM UNIT (C). Locate the six 3/4" clearance holes in the top horizontal panel of the CLASSROOM UNIT. The holes are beneath the insulation. Using six 1/4" x 20 t.p.l. Screws and 1 1/4" O.D. flat washers under the screw heads, secure the top of the CLASSROOM UNIT to the TOP ACOUSTICAL PLENUM (A). The TOP ACOUSTICAL PLENUM has weld nuts (flush mounted) on the bottom surface.

NOTE: Installation screws NOT PROVIDED.



#### STEP 3:

Fasten the BOTTOM BLOCK-OFF PANEL (G) to the back of the CLASSROOM UNIT (A). Using the pre-drilled holes, align and fasten the REAR PLENUM BACK PANEL (C) to the REAR PLENUM SIDE PANELS (D).

#### STEP 4:

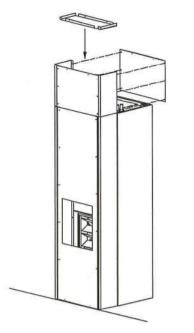
Center the CLASSROOM UNIT (A) to the wall opening. Cut the outdoor air intake opening in the REAR PLENUM BACK PANEL (C) to suit the wall opening.

#### STEP 5:

Using the pre-drilled holes, fasten the REAR PLENUM BACK EXTENSIONS (E) to the two REAR PLENUM SIDE EXTENSIONS (F). Insert the extension assembly into the top of the rear plenum.

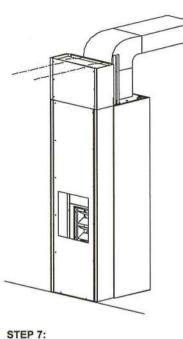


### **Rear Plenum Installation**



#### STEP 6:

Fasten the back piece of the TOP EXTENSION (B) to the REAR PLENUM SIDE EXTENSIONS (F). Insert the REAR PLENUM TOP BLOCK-OFF PANEL (G) into the top of the extension assembly.



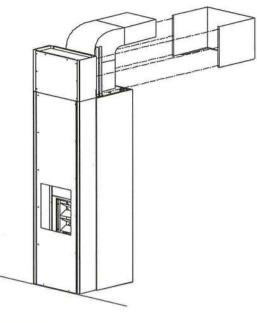
Using the pre-drilled holes, fasten the

REAR PLENUM TOP BLOCK-OFF PANEL (G) to the CLASSROOM UNIT

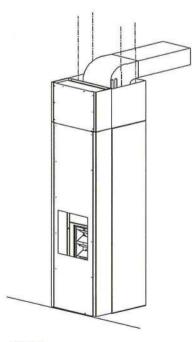
(A) and to the REAR PLENUM BACK

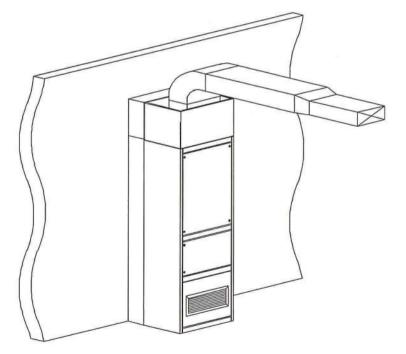
EXTENSION (E). Where required, make duct and pipe connections to

the CLASSROOM UNIT (A).



STEP 8: If applicable, slide the TOP EXTENSION (B) into place and fasten to the top extension back panel.



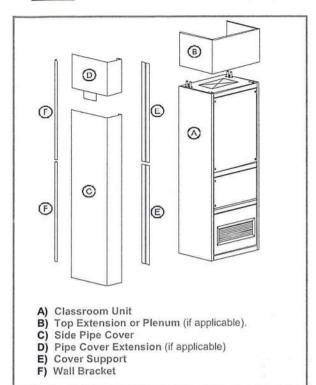


STEP 9: Secure the TOP EXTENSION (B) to the top of the CLASSROOM UNIT (A) (if applicable).

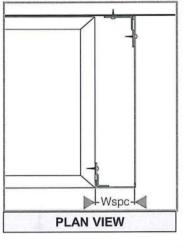


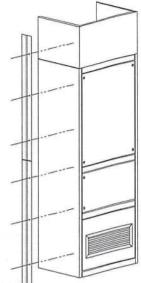
### Side Pipe Cover Installation

NOTE: Installation screws NOT PROVIDED.



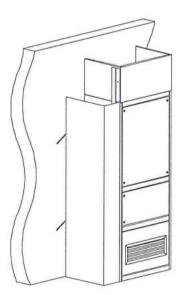
**NOTE:** Please refer to the 'Unit Layout' and 'Application Layout' pages in these submittals for precise pipe & duct connection locations and additional accessories.





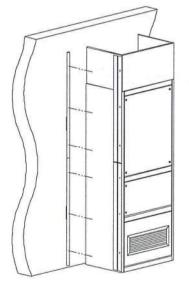
#### STEP 1:

If applicable, install the top extension or plenum onto the CLASSROOM UNIT (**A**). Fasten the COVER SUPPORT (**E**) to the CLASSROOM UNIT. This bracket should be installed 1 inch off of the finished floor level.



#### STEP 2:

Put SIDE PIPE COVER (C) into place. Mark off where the edge of the SIDE PIPE COVER meets the wall.





Wspc

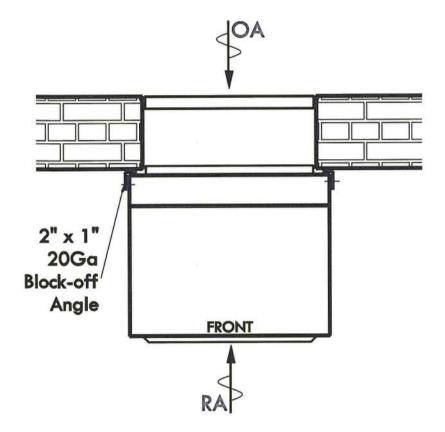


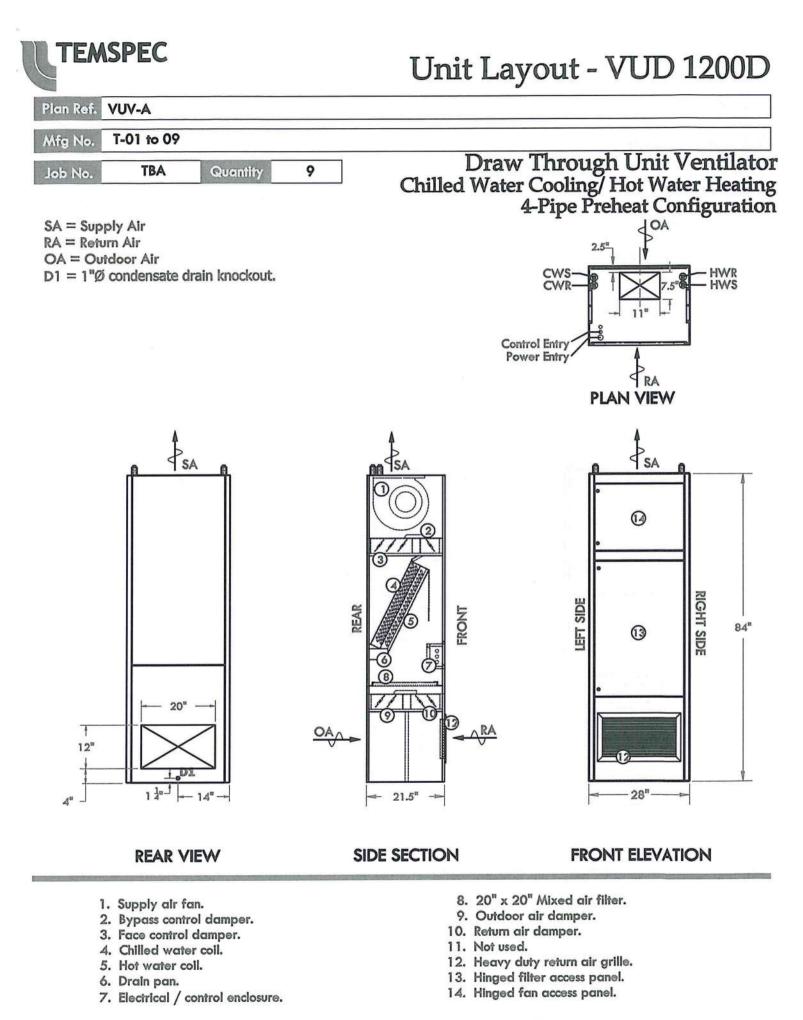
Put the SIDE PIPE COVER (C) back into place and fasten to the WALL BRACKETS (F) using flat head type screws. Install PIPE COVER EXTENSION (D) in the same fashion. Using the cabinet touch-up paint provided, touch up the screw heads to match the cabinet.



### 2" x 1" block-off angles, color matched, painted on both sides.

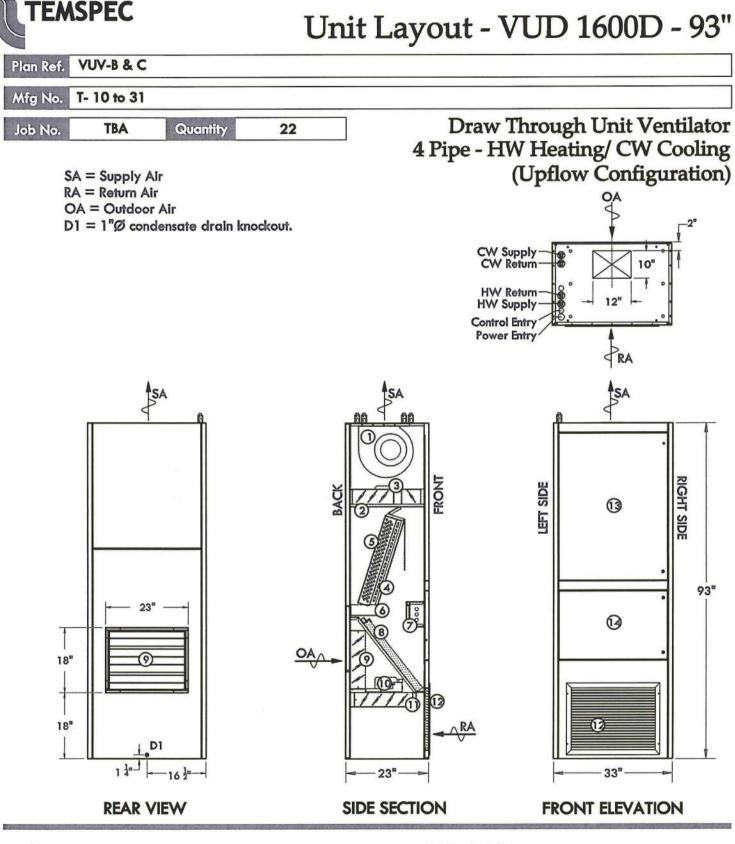
Note: Drawing show for reference only. Actual installation may vary.





Temspec Preliminary Submittal - Schmitt E.S. -CONFIDENTIAL-

Page 31

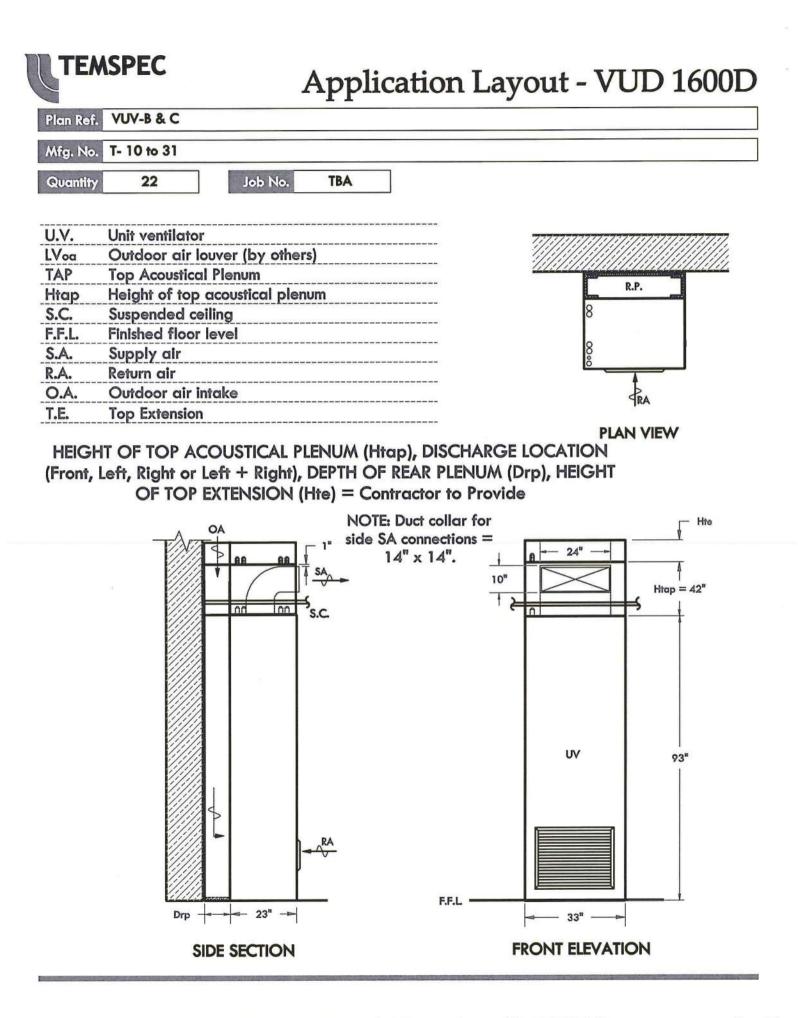


- 1. Supply air fan.
- 2. Face & bypass control dampers.
- 3. Face & bypass damper actuator.
- 4. Hot water coil.
- 5. Chilled water coil.
- 6. Drain pan.
- 7. Electrical / control enclodure.

- 8. Mixed air filters.
- 9. Outdoor air damper.
- 10. Mix air damepr actuator.
- 11. Return air damper.
- 12. Heavy duty steel return air grille, painted.
- 13. Coil access panel, hinged.
- 14. Filter access panel, hinged.

# Application Layout - VUD 1200D

|           | ± ±                            | -   |
|-----------|--------------------------------|---|
| Plan Ref. | VUV - A                        |   |
| Mfg. No.  | T- 01 to 09                    |   |
| Job No.   | TBA Quantity 9                 |   |
|           |                                |   |
| U.V.      | Unit ventilator                |   |
| TE        | Top extension (duct shroud)    |   |
| RP        | Rear Plenum Assembly           |   |
| S.C.      | Suspended ceiling              |   |
| F.F.L.    | Finished floor level           |   |
| S.A.      | Supply air                     | 8 2 8   |
| R.A.      | Return air                     | Dspc S.A.   |
| O.A.      | Outdoor air intake             | 0   |
| S.P.C.    | Side Pipe Cover                | <b>.</b>  |
|           |                                | SPC   |
|           |                                | NOTE: Default side pipe $\ensuremath{\P}^{RA}$              |
| SIDE PI   | PE COVER WIDTH (Wspc) & DEPTH  | cover depth (Dspc) to<br>match unit depth. <b>PLAN</b> VIEW |
|           |                                | match unit depth. PLAN VIEW                                 |
| (Dspc)    | and LOCATION (RIGHT or LEFT) = |   |
|           | Contractor to Provide          | Duct by   |
|           | ٨                              | others  |
|           | SA                             |   |
|           |                                |   |
|           |                                | TE TE   |
|           |                                |   |
|           | s.c.                           |   |
|           |                                |   |
|           |                                |   |
|           |                                |   |
|           |                                |   |
|           |                                |   |
|           |                                |   |
|           |                                | UV 84"  |
|           | AO NO                          |   |
|           |                                |   |
|           |                                |   |
|           |                                |   |
|           | RA                             |   |
|           |                                |   |
|           |                                |   |
|           | - 21.5" - F.F.L.               | Wspc _= 28"   |
|           |                                |   |
|           | SIDE SECTION                   | FRONT ELEVATION   |
|           |                                |   |



# EON

#### TARGETED APPLICATIONS

- O Residential HVAC furnace and air handler
- O Commercial variable air volume (VAV)
- O Fan filter units (FFU)

#### SPECIFICATIONS

- Variable speed, constant torque/constant airflow, ECM
- 120/240/277 and 120/240 VAC single-phase input, 50/60Hz
- Designed for direct-drive blower applications in systems
- O Available in 1/3, 1/2, 3/4 and 1HP ratings
- O Operating speed range of 200-1300 rpm (1/3 HP rating will be 200-1800 rpm)
- O NEMA 48-frame
- O UL and cUL recognized component, CE to follow
- **O RoHS Compliant**

#### AVAILABILITY

In Production

#### FEATURES

- Variable speed operation from 200-1300 rpm (1/3 HP rating will be 200-1800 rpm)
- O 6kV surge protection

- O Backward compatible with ECM 2.3
- O Reduced overall length and weight compared to ECM 2.3

- O Similar input connections to original ECM 2.3
- O ECM Toolbox<sup>™</sup> based programming software
- O BlakBox enabled

#### BENEFITS

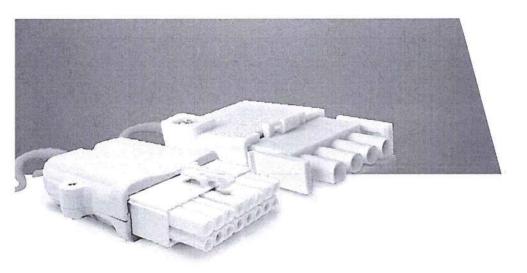
- O Full Load Efficiencies of minimum 75% with 2.3 replacement
- O Full Load Efficiencies of minimum 80% with high efficiency design to follow
- O Reliability improvement with fully potted single control board and mechanical magnet retention
- Drop-in replacement for original ECM 2.3 with airflow and software solutions to minimize application engineering work
- O Fully integrated connector ensures better protection against moisture and contaminants
- O Using the latest version of ECM Toolbox<sup>™</sup>, OEM customers can easily create EON programs from existing ECM 2.3 motor programs
- O Improved starting characteristics over ECM 2.3

#### REFERENCES

www.theDealerToolbox.com

BLAK BRX Sented 1946 WEST COOK ROAD : FORT WAYNE, IN 46818 : the dealer toolbox.com PH : 260 416 5400 FX : 260 416 5499 ©2011 Regal Beloit Corporation

Temspec to program motors for a maximum turndown of 50% of scheduled cfm.



⇒genteq°

### 0 to 10 Vdc/4 to 20 mA Convertor Cables For EON or ECM 3.0

#### TARGETED APPLICATIONS

North American HVAC market Commercial ECM Motor market

#### SPECIFICATIONS

0 to 10 Vdc control signal or 4 to 20 mA control signal (EON only) 12 to 24 Vdc or 16 to 28 Vac power input 36" Cable and plug length

#### FEATURES

Linear voltage or current to speed control curve 0 to 10 Vdc control signal for EON or ECM 3.0 4 to 20 mA control signal input for EON Wide range power input 12 to 24 Vdc or 16 to 28 Vac

#### BENEFITS

Allows 0 to 10 Vdc or 4 to 20 mA control input without external converter required No tool installation Works on EON or ECM 3.0 through a PWM control signal

Plugs directly into motor control connector No drilling holes or mounting a PWA

#### REFERENCES

genteqmotors.com Available for purchase on thedealertoolbox.com

1946 West Cook Rd Fort Wayne, IN 46818 PH: 260-416-5400 FAX: 260-416-5499

www.thedealertoolbox.com

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www.regalbeloit.com

2024-02-16

Temspec Preliminary Submittal - Schmitt E.S.

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#### 

**Issued September 2017** 

34-1791-16. Rev. D

#### M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators Part No. 34-1791-16, Rev. D

#### Installation Instructions

M9203-GGA-2, M9203-GGB-2, M9203-GGA-2Z, M9203-GGB-2Z

Refer to the QuickLIT website for the most up-to-date version of this document.

#### Applications

The M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators are direct-mount actuators that operate on AC/DC 24 V power. These bidirectional actuators do not require a damper linkage, and are easily installed on round shafts from 1/4 to 1/2 in. (6 to 12 mm) or square shafts from 1/4 to 5/16 in. (6 to 8 mm) using the standard shaft clamp included with the actuator.

A single M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator provides 27 lb·in. (3 N·m) running and spring return torque. An integral line voltage auxiliary switch, available only on the M9203-xxB-2(Z) models, indicates end-stop position, or performs switching functions within the selected rotation range.

M9203-GGA-2 and M9203-GGA-2Z actuators include plenum-rated cables and are specially configured for installation in spaces used for environmental air-handling purposes other than ducts and plenums as specified in National Fire Protection Association (NFPA) 70: National Electrical Code section 300.22(C), Other Space Used for Environmental Air. The space over a hung ceiling used for environmental air handling purposes is an example of the type of space for which these actuators are configured. **IMPORTANT:** Use this M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator only to control equipment under normal operating conditions. Where failure or malfunction of the actuator could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the actuator.

**IMPORTANT :** Utiliser ce M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator uniquement pour commander des équipements dans des conditions normales de fonctionnement. Lorsqu'une défaillance ou un dysfonctionnement du actuator risque de provoquer des blessures ou d'endommager l'équipement contrôlé ou un autre équipement, la conception du système de contrôle doit intégrer des dispositifs de protection supplémentaires. Veiller dans ce cas à intégrer de façon permanente d'autres dispositifs, tels que des systèmes de supervision ou d'alarme, ou des dispositifs de sécurité ou de limitation, ayant une fonction d'avertissement ou de protection en cas de défaillance ou de dysfonctionnement du actuator.

#### Installation

The M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators mount directly to the surface in any convenient orientation using two No. M3.5 x 9.5 mm self-drilling sheet metal screws and the antirotation bracket (parts included with the actuator). No additional linkages or couplers are required. Electrical connections are color-coded and identified with numbers permanently marked on the actuator cable. A tag on the actuator cable identifies the electrical connections and wiring details are included on the actuator housing.



M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators 1 Installation Instructions

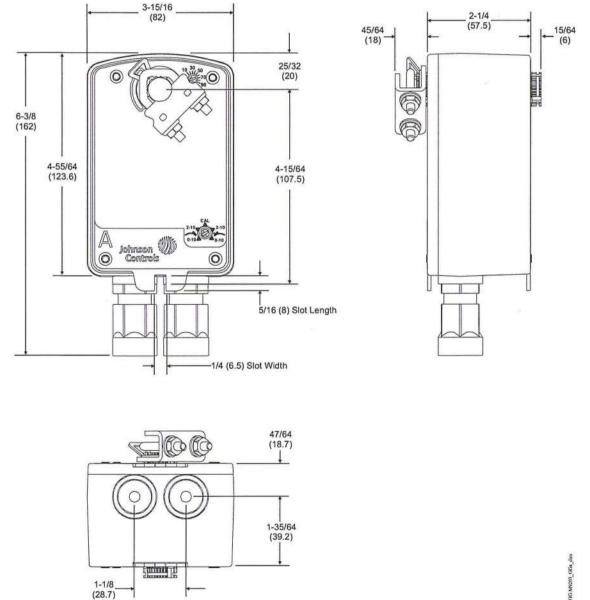
**IMPORTANT:** Do not install or use this M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators in or near environments where corrosive substances or vapors could be present. Exposure of the electric actuator to corrosive environments may damage the internal components of the device, and will void the warranty.

#### Parts Included

- M9203-GGx-2(Z) actuator
- M9203-603 adjustable stop kit
- M9000-604 anti-rotation bracket with two No. M3.5 x 9.5 mm, pan-head, cross-recessed (Phillips), self-drilling and self-tapping screws

#### Special Tools Needed

- 10 mm wrench/socket
- drill with Phillips bit, driver size 1





2 M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators Installation Instructions

#### Dimensions

Johnson M

# M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators

#### Description

The M9102 and M9104 Series Actuators are direct-mount, non-spring return electric actuators that operate on AC 24 V or 100 to 240 VAC power. These motor-driven actuators provide floating control (AGA), floating control with automatic shutoff (IGA), proportional control with selectable 0-10 or 2-10 VDC (GGA), and line voltage power supply (IUA). The -2S models are equipped with plenum cables, and the -3S models are equipped with terminal blocks.

All models are compact in size and are easily installed on VAV boxes, Variable Air Volume and Temperature (VVT) two-position zone applications, or small- to medium-sized dampers with a round shaft up to 1/2 in. (13 mm) in diameter or a 3/8 in. (10 mm) square shaft.

The M9102 Series Electric Non-Spring Return Actuators provide a running torque of 18 lb-in (2 N·m), and the nominal travel time is 30 seconds at 60 Hz (36 seconds at 50 Hz) for 90° of rotation. The M9104 Series Electric Non-Spring Return Actuators provide a running torque of 35 lb-in (4 N·m), and the nominal travel time is 60 seconds at 60 Hz for 90° of rotation.

Refer to the M9102-AGA-2S, -3S and M9104-xGA-2S, -3S Series Electric Non-Spring-Return Actuators Product Bulletin (LIT-1201742) for important product application information.

#### Features

- Two Torques Available: 18 and 35 lb-in (2 and 4 N·m)
- Short 30-Second Travel Time Available
- 35 dBA Maximum Audible Noise Rating at 1 Meter
- Synchronous Drive (AGA, IGA, GGA models)
- 100,000 Cycle Rating
- Direct Shaft Mounting with Single-Screw Coupler
- Magnetic Clutch
- Manual Gear Release
- Plenum Cable or Screw Terminal Electric Connections
- Floating, Floating with Timeout, and Proportional 0(4) to 10 VDC Control Inputs Available
- Small, Compact Design

#### Applications

The M9102 and M9104 Series Electric Non-Spring Return Actuators are designed to position balancing, control, round, and zone dampers in HVAC systems. These electric actuators are also designed to position blades in a VAV box, or they can be used in VVT two-position zone applications.

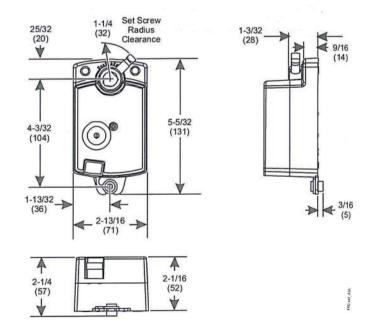
Each actuator mounts directly to the surface in any convenient orientation using a single No. 10 standard sheet metal screw (included with the actuator). No additional linkages or couplers are required. Electrical connections on the actuator are clearly labeled to simplify installation.

#### **Repair Information**

If the M9102 or M9104 Series Electric Non-Spring Return Actuator fails to operate within its specifications, replace the unit. For a replacement electric actuator, contact the nearest Johnson Controls® representative.



M9102 Series Electric Non-Spring Return Actuator



M9102/M9104 Series Electric Non-Spring Return Actuator Dimensions, in. (mm)

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# M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators (Continued)

#### **Selection Chart**

| Code Number  | Control Type       | Running<br>Torque   | Travel Time                                | Power<br>Supply<br>(VA rating) | Electrical Connections  |
|--------------|--------------------|---------------------|--|--------------------------------|---|
| M9102-AGA-2S | Floating           | 18 lb∙in (2<br>N∙m) | 30 Seconds at 60 Hz<br>36 Seconds at 50 Hz | 2.5                            | 48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 19 AWG (0.75 mm <sup>2</sup> ) conductors and .25 in. (6 mm) ferrule ends                  |
| M9102-AGA-3S | Floating           | 18 lb∙in (2<br>N∙m) | 30 Seconds at 60 Hz<br>36 Seconds at 50 Hz | 2.5                            | M3 Screw Terminals  |
| M9104-AGA-2S | Floating           | 35 lb∙in (4<br>N∙m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 2.1                            | 48 in. (1.2 m) UL 444 Type CMP Plenum Rated<br>cable with 19 AWG (0.75 mm <sup>2</sup> ) conductors and<br>.25 in. (6 mm) ferrule ends            |
| M9104-AGA-3S | Floating           | 35 lb∙in (4<br>N∙m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 2.1                            | M3 Screw Terminals  |
| M9104-IGA-2S | Floating or On/Off | 35 lb∙in (4<br>N∙m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 3.0                            | 48 in. (1.2 m) UL 444 Type CMP Plenum Rated<br>cable with 19 AWG (0.75 mm <sup>2</sup> ) conductors and<br>.25 in. (6 mm) ferrule ends            |
| M9104-IGA-3S | Floating or On/Off | 35 lb∙in (4<br>N∙m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 3.0                            | M3 Screw Terminals  |
| M9104-GGA-2S | Proportional       | 35 lb•in (4<br>N•m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 2.9                            | 48 in. (1.2 m) UL 444 Type CMP Plenum Rated<br>cable with 19 AWG (0.75 mm <sup>2</sup> ) conductors and<br>.25 in. (6 mm) ferrule ends            |
| M9104-GGA-3S | Proportional       | 35 lb•in (4<br>N•m) | 60 Seconds at 60 Hz<br>72 Seconds at 50 Hz | 2.9                            | M3 Screw Terminals  |
| M9104-IUA-2S | Floating or On/Off | 35 lb∙in (4<br>N∙m) | 60 Seconds at 50/60<br>Hz                  | 7.5<br>(0.07A)                 | 48 in. (1.2 m) UL 444 Type CMP Plenum Rated<br>cable with 18 AWG (1.02 mm <sup>2</sup> ) conductors for<br>3/8 in. (10 mm) flexible metal conduit |

#### Accessories

| Code Number | Description   |
|-------------|---|
| DMPR-KC0031 | 7 in. (178 mm) blade pin extension without bracket for Johnson Controls direct-mount damper applications                            |
| DMPR-KR0031 | Sleeve pin kit for Johnson Controls round dampers with a 5/16 in. (8 mm) diameter shaft   |
| M9000-200   | Commissioning tool that provides a control signal to drive 24 V on/off, floating, proportional, and/or resistive electric actuators |
| M9104-100   | Connector for 3/8 in. (10 mm) flexible metal conduit  |

1. Furnished with the damper and may be ordered separately.

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### Johnson Controls

#### *M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators (Continued)*

#### **Technical Specifications**

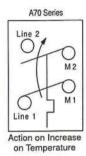
| Power Requirements     | M910x-AGA-xS                 | AC 24 V +25%/-20% at 50/60 Hz, 2.1 VA, Class 2, Safety Extra-Low Voltage (SELV)   |  |  |  |  |  |
|------------------------|------------------------------|---|--|--|--|--|--|
|                        | M9104-IGA-xS                 | AC 24 V +25%/-20% at 50/60 Hz, 3.0 VA, Class 2, SELV  |  |  |  |  |  |
|                        | M9104-GGA-xS                 | AC 24 V +25%/-20% at 50/60 Hz, 2.9 VA, Class 2, SELV  |  |  |  |  |  |
|                        | M9104-IUA-2S                 | AC 100 to 240 V (-15%+10%) at 60 Hz, 0.07A, and 7.5 VA Supply   |  |  |  |  |  |
| Control Type           | M910x-AGA-xS                 | Floating Control without Timeout  |  |  |  |  |  |
|                        | M9104-IGA-xS                 | Floating or On/Off Control with Timeout   |  |  |  |  |  |
|                        | M9104-GGA-xS                 | Proportional Control  |  |  |  |  |  |
|                        | M9104-IUA-2S                 | Floating or On/Off Control with Timeout   |  |  |  |  |  |
| Input Signal           | M910x-AGA-xS                 | AC 24 V +25%/-20% at 50/60 Hz, Class 2, SELV without Timeout  |  |  |  |  |  |
|                        | M9104-IGA-xS                 | AC 24 V +25%/-20% at 50/60 Hz, Class 2, SELV with Timeout   |  |  |  |  |  |
|                        | M9104-GGA-xS                 | 0(2) to 10 VDC or 0(4) to 20 mA with Field-furnished 500 ohm Resistor   |  |  |  |  |  |
|                        | M9104-IUA-2S                 | AC 100 to 240 V (-15%+10%) at 50/60 Hz, and 7.5 VA Supply   |  |  |  |  |  |
| Feedback Signal        | M9104-GGA-2S                 | 0 to 10 VDC or 2 to 10 VDC for 90° (10 VDC at 1 mA)<br>Corresponds to Input Signal Span Selection   |  |  |  |  |  |
| Motor Input Impedance  |                              | 200 ohms Nominal  |  |  |  |  |  |
| Running Torque         | M9102 Series                 | 18 lb·in (2 N·m)  |  |  |  |  |  |
|                        | M9104 Series                 | 35 lb·in (4 N·m)  |  |  |  |  |  |
| Travel Time            | M9102 Series                 | 30 Seconds at 60 Hz (36 Seconds at 50 Hz) for 90° of Rotation   |  |  |  |  |  |
|                        | M9104 Series                 | 60 Seconds at 60 Hz (72 Seconds at 50 Hz) for 90° of Rotation   |  |  |  |  |  |
|                        | M9104 (IUA)                  | 60 Seconds at 50/60 Hz for 90° of Rotation  |  |  |  |  |  |
| Rotation Range         |                              | 93° ±3°, CW or CCW  |  |  |  |  |  |
| Cycles                 |                              | 100,000 Full Stroke Cycles;<br>2,500,00 Repositions at Rated Running Torque   |  |  |  |  |  |
| Audible Noise Rating   |                              | 35 dBA at 39-13/32 in. (1 m) Maximum  |  |  |  |  |  |
| Electrical Connections | M9102-AGA-2S<br>M9104-xxA-2S | 48 in. (1.02 m) UL 444 Type CMP Plenum Rated Cable with 18 AWG (1.02 mm)<br>Conductors and 1/4 in. (6 mm) Ferrule Ends  |  |  |  |  |  |
|                        | M9102-AGA-3S<br>M9104-xGA-3S | M3 Screw Terminals  |  |  |  |  |  |
|                        | M9104-IUA-2S                 | 48 in. (1.2 mm) with 18 AWG (1.02 mm <sup>2</sup> ) Conductors and Connector for 3/8 in. (10 m<br>Flexible Metal Conduit  |  |  |  |  |  |
| Mechanical Connections |                              | Up to 1/2 in. (13 mm) Diameter Round Damper Shaft or 3/8 in. (10 mm) Square Damper Shaft  |  |  |  |  |  |
| Enclosure              | M9102-AGA-2S<br>M9104-xxA-2S | NEMA 1, IP42  |  |  |  |  |  |
|                        | M9102-AGA-3S<br>M9104-xxA-3S | NEMA 1, IP40  |  |  |  |  |  |
| Ambient Conditions     | Operating                    | -4 to 140°F (-20 to 60°C); 90% RH Maximum, Noncondensing  |  |  |  |  |  |
|                        | Storage                      | -20 to 150°F (-29 to 66°C); 90% RH Maximum, Noncondensing   |  |  |  |  |  |
| Compliance             | United States                | UL Listed, CCN XAPX, File 27734<br>Plenum rated, UL2043, suitable for use in other environmental spaces (plenums) in<br>accordance with section 300.22.(c) of the National Electrical Code                        |  |  |  |  |  |
|                        | Canada                       | cUL Listed, CCN XAPX7, File 27734<br>Plenum Rated Per CSA 22.2 No. 236/UL 1995, Heating and Cooling Equipment   |  |  |  |  |  |
|                        | Europe                       | Johnson Controls, Inc. declares that this product is in compliance with the essential<br>requirements and other relevant provisions of the EMC Directive 2004/108/EC and the Low<br>Voltage Directive 2006/95/EC. |  |  |  |  |  |
|                        | Australia and New Zealand    | C-Tick Mark, Australia/NZ Emissions Compliant   |  |  |  |  |  |
| Shipping Weight        |                              | 1.0 lb (0.5 kg)   |  |  |  |  |  |

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CONTRELS

Controls Group 507 E. Michigan Street P.O. Box 423, Milwaukee, WI 53202 Code No. LIT-1927140

### A70 Series Four-Wire, Two-Circuit Temperature Control





A70GA-1

### Description

The A70 Series temperature control incorporates a vapor-charged sensing element. The A70G, A70H, and A70K have a 4-wire, 2-circuit contact block that contains two isolated sets of contacts.

The contacts are designed so that when the main contact opens, the auxiliary contact closes.

#### Features

- · long-life, snap-acting contacts
- · automatic or manual reset models

#### Applications

Typical applications include energizing an indicator light after a low temperature cutout on a ventilating system.

#### **Replacement Covers**

| Code Number | Description     |  |  |  |  |
|-------------|-----------------|--|--|--|--|
| CVR17A-620R | Automatic reset |  |  |  |  |
| CVR17A-621R | Manual reset    |  |  |  |  |

#### To Order

Specify the code number from the following selection chart.

#### Selection Chart

| Code                    | Swite         | ch Action          | Range                        | Diff F°   | Bulb and                         | Max Bulb     | Range            |
|-------------------------|---------------|--------------------|------------------------------|---|----------------------------------|--------------|------------------|
| Number                  | Main Contacts | Auxiliary Contacts | °F (°C)                      | (C°)  | Capillary                        | Temp °F (°C) | Adjuster         |
| A70GA-1C <sup>(a)</sup> |               | Close Low          | 15 to 55<br>(-9.4 to 12.8)   | 5 (2.8)   | 20 ft of 1/8 in.<br>O.D. Tubing  | 400 (204.4)  | Screwdriver slot |
| A70GA-2C                | Open Low      |                    | 35 to 80<br>(1.7 to 26.7)    | 3 to 30<br>(-16.1 to -1.1),<br>factory set at 12<br>(-11.1) | 3/8 in. x 3 in. 6 ft Cap.        | 250 (121)    | Screwdriver slot |
| A70HA-1C <sup>(a)</sup> | -             |                    | 15 to 55<br>(-9.4 to 12.8)   | Manual reset  | 20 ft. of 1/8 in. O.D.<br>Tubing | 400 (204.4)  | Screwdriver slo  |
| A70HA-2C                |               |                    | 35 to 80<br>(1.7 to 26.7)    | Manual reset  | 3/8 in. x 3 in. 6 ft cap.        | 250 (121)    | Screwdriver slot |
| A70KA-1C                | Open High     | Close High         | 100 to 170<br>(37.8 to 76.7) | Manual reset  | 3/8 in. x 10 in. 6 ft cap.       | 240 (116)    | Screwdriver slot |

(a) The low cutout stop is set and sealed at 35°F (1.6°C). The control responds only to the lowest temperature along any one ft. of the entire 20 ft. element or bellows CUD.

#### **Electrical Ratings**

| Pole Number<br>Motor Ratings VAC | LINE-M2 (Main)                                     |      |      |     |                    |                    | LINE-M1 (Auxiliary) |      |      |     |
|----------------------------------|--|------|------|-----|--------------------|--------------------|---------------------|------|------|-----|
|                                  | 120  | 208  | 240  | 277 | 480 <sup>(a)</sup> | 600 <sup>(a)</sup> | 120                 | 208  | 240  | 277 |
| AC Full Load Amp                 | 16.0   | 9.2  | 8.0  |     | 5.0                | 4.8                | 6.0                 | 3.4  | 3.0  | -   |
| AC Locked Rotor Amp              | 96.0   | 55.2 | 48.0 | -   | 30.0               | 28.8               | 36.0                | 20.4 | 18.0 | -   |
| AC Non-Inductive Amp             | 16.0   | 9.2  | 8.0  | 7.2 | -                  | -                  | 6.0                 | 6.0  | 6.0  | 6.0 |
| Pilot Duty - Both Poles          | 125 VA, 120 to 600 VAC and 57.5 VA, 120 to 300 VDC |      |      |     |                    |                    |                     |      |      |     |

(a) Not compressor motor loads.

Page

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