Addendum 2 for RFB921500-01

Project Name: Grimes Lighting Replacement
DAS RFB #: 921500-01
DAS Project #: 9215.00
Date: 09/15/2021

REVISED BID DATE: September 22nd, 2021 at 2:00pm

1. **Contents**
    a. **Cover Page – Table of Contents, Revisions, and Questions (2 pages)**
    b. **REVISED 00 4116 BID FORM (6 pages)**
    c. **KCL Mechanical and Electrical Addendum (2 pages)**
    d. **REVISED Specification 23 33 00 – Air Duct Accessories (4 pages)**
    e. **ADDED Specification 28 46 00 – Fire Detection and Alarm (3 pages)**
    f. **REVISED Drawings M101, M102, M103, M300, E101, & E102 (6 pages)**

Revisions:

1. **THE DUE DATE FOR BIDS HAS BEEN REVISED TO SEPTEMBER 22ND, 2021 AT 2:00 PM CST**
2. **CHANGES TO BID SUBMITTAL AND OPENING**
    a. Due to the circumstances surrounding COVID-19, the State is amending the bid submittal and public opening procedures of the above RFB.
    b. **BID SUBMITTAL**
        i. The Bid shall be submitted to the Issuing Officer through the Iowa VSS electronic bidding system. The link to VSS is: https://vss.iowa.gov/webapp/VSS_ON/AltSelfService.
        ii. VSS should be accessed via Internet Explorer. Bidder will need to register regardless of whether it has already done business with the State of Iowa. Click the Register button on the left side of the VSS screen to start the registration process. If you have any issues with registration, please call the helpdesk at 515-281-6614. **Bidders should complete the registration process and ensure the ability to log in as soon as possible to ensure Bids can be submitted on the due date as the helpdesk is not available 24/7.** Bids should be split into several files if the bid exceeds the 10MB threshold. There is no limit on the number of files which can be uploaded. Please make sure the electronic documents submitted contain all of the required signatures. Digital signatures will be accepted. Bidders without access to electronic means should contact the issuing officer at 515-322-2893.
    c. **PUBLIC OPENING**
        i. The public opening will be held via conference call only. The call details are below.
            1. Call time: 3:00pm on September 22nd, 2021
            2. Call number: 617-675-4444
            3. Pin: 877 592 266 8757#
3. **REVISE 01 1200 1.09.B.12 to read** "For all ceiling tile mounted fixtures, this contractor shall install devices in a new ceiling tile and set new ceiling tile in the existing grid. This shall include the removal and reinstallation of all existing devices to remain. This scope shall also include disconnection and reinstallation of the smoke detection and coordination with the fire alarm provider as needed. Fire alarm tagout to be performed by the State. This contractor shall obtain new ceiling tile from Bid Package #03 to perform this work."
4. **ADD 01 1200 1.09.A.10** "This contractor shall be responsible for the procurement and installation of new fire/smoke dampers. This shall include, but not be limited to, duct modifications, insulation, thru-wall

penetration modifications, and the installation of duct-mounted access doors. Contractor shall provide electrical and smoke detection requirements to Bid Package #02 for connections by that contractor."

5. **ADD 01 1200 1.09.B.16** "This contractor shall be responsible for electrical connections to new fire/smoke dampers. Dampers to be installed by Bid Package #01. Coordinate with Bid Package #01 contractor for electrical requirements."
6. **ADD 01 1200 1.09.B.17** "This contractor shall be responsible for the installation of new duct smoke detectors in supply duct and connection to new dampers for proper operation of damper. This shall include, but not be limited to, connection into the fire alarm panels, programming, and coordination with the existing fire alarm service provider."
7. **REPLACE 00 4116 BID FORM** with revised form provided in this addendum.

Questions:

1Q. Who is responsible for removing the fire sprinkler escutcheon collars & cutting & installing them in the new tiles & any adjustment for the new ceilings?

1A. Sprinkler heads are located on the lower level only. Removal of existing ceiling tile and installation of new at fire sprinkler heads will be contracted by the State separately from this bid.

2Q. Who is responsible for removal and re-installation of smoke detector, emergency exits, speakers & other ceiling mounted apparatus? Also, shutting down & reactivating the smoke detection system or alarms.?

2A. Addendum #01 added the following scope to Bid Package #02 – Electrical and Controls, "For all ceiling tile mounted fixtures, this contractor shall install devices in a new ceiling tile and set new ceiling tile in the existing grid. **This shall include the removal and reinstallation of all existing devices to remain.** This contractor shall obtain new ceiling tile from Bid Package #03 to perform this work. Removal and reinstallation of thermostats to be by Bid Package #01." This scope shall also include disconnection and reinstallation of the smoke detection and coordination with the fire alarm provider as needed. Fire alarm tagout to be performed by the State.

3Q. Radar #22310 called out on the plans for ACT1 is a 2x4 tile. I assume they want a 2x2, but there are a couple options. Can we get clarification?

3A. See the attached addendum information from KCL for revisions to ceiling schedule.

4Q. Can you clarify if off work hours apply for bidding?

4A. Per section 01 1200 1.05 Work Hour Restrictions, "Work hours are from 6:00 PM to 7:00 AM Sunday night through Friday morning, unless arrangements are made in advance."

SECTION 00 4116

BID FORM – ADDENDUM #02

RFB #921500-01

BID FORM for CONSTRUCTION CONTRACT
for
Grimes Office Building
400 E 14th St, Des Moines, Iowa
Project 9215.00

Iowa Department of Administrative Services
Hoover State Office Building, Level 3
1305 East Walnut Street
Des Moines, Iowa 50319-0105

The following documents are to be completed and submitted with your bid.

1. Bid Proposal Form (Required)
2. Non Discrimination Clause Form
3. Contractor Targeted Small Business Enterprise Pre-Bid Contract Information Form
4. Bid Security – 5% of total Bid amount (Is to be submit in separate envelope) (Required)

Authorized Representative:
The undersigned Bidder, in response to your Request for Bid for construction of the above project, having examined the Drawings, Specifications, and other Bidding Documents dated August 26th 2021, and Addenda issued and acknowledged below as received and being familiar with all the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplies to perform all work to construct the project in strict accordance with the proposed Contract Documents, within the time and at the prices stated below. Prices are to cover all expenses incurred in performing the work required under the proposed Contract Documents, of which this bid is a part.

Bidder acknowledges receipt of the following Addenda which are a part of the Bidding Documents and for which any effect on cost of the Work is included in the bid amounts indicated:

Number	_____	_____	_____	_____	_____
Dated	_____	_____	_____	_____	_____

Note that the State of Iowa is exempt from State and Local sales and use taxes (including local option and school option) for this project. Taxes on construction materials shall NOT be included in the bid amounts.

Amounts shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words shall govern.

BID PACKAGES:

BP 01

Description: Mechanical

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____).

BP 02

Description: Electrical

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____). Total to include $15,000 allowance for conduit replacement.

Provide a breakout of cost associated with the new lighting controls. Cost should be included in above total:

_____Dollars

($_____).

BP 03

Description: Acoustical ceilings

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____).

ALTERNATES:

ALT 01

Description: 1st Floor Storage/Screening & 2nd Floor Conference Light Fixture Replacements

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____).

ALTERNATES:

ALT 02

Description: Lobby Fixture Replacement

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____).

ALTERNATES:

ALT 03

Description: Basement & Penthouse Fluorescent Fixture Replacement

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

_____

_____ Dollars

($_____).

UNIT PRICES:

UNIT 01

Description: 3/4” conduit replacement per LF

_____

_____ Dollars /LF

($_____)/LF.

UNIT PRICES:

UNIT 02

Description: Disposal of PCB containing ballasts.

_____

_____ Dollars /EA

($_____)/EA.

Bidder hereby certifies that:

1. This bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm or corporation;
2. Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain any advantage over any other bidder or over the Owner.
3. Bidder hereby certifies that the Bidder is registered with the Iowa Labor Commissioner as a Contractor as required by Chapter 91C, Code of Iowa.
4. Bidder agrees to comply with all Federal and State Affirmative Action/Equal Employment Opportunity requirements concerning fair employment and will not discriminate between or among them by reason of race, color, religion, sex, national origin or physical handicap.
5. All construction under this Contract shall conform to the requirements of the *Iowa State Building Code*.
6. Bidder agrees that this bid shall remain valid and shall not be withdrawn for a period of thirty (30) calendar days after the date for receipt of bids.
7. Bidder agrees that if written notice of acceptance of this bid is mailed, emailed, or delivered to the undersigned within thirty (30) days after the date in which bids are due, or at any time thereafter before it is withdrawn, the undersigned will sign and return the Contract Agreement, prepared in accord with the Bidding Documents and this bid as accepted; and will also provide proof of insurance coverage and required surety bonds.
8. Bidder understands that the Owner reserves the right to reject any and all bids, and to waive irregularities or informalities and enter into a contract for the work, as the Owner deems to be in the best interest of the State.
9. Bidder understands that the Owner reserves the right to accept any, or no, Alternate Bid, if requested, and that the Alternate Bids may be considered in any order or combination, and the low Bidder shall be determined on the basis of the sum of the base bid and any Alternate(s) accepted.

Subcontractors:
The Trade Contractor must identify all Subcontractors and Suppliers within 48 hours of the published date and time for which bids must be submitted, in accordance with Iowa Code Section 8A311, as amended by House File 646 in 2011. Subcontractors and suppliers may not be changed without the approval of the Owner. Requests for changing a Subcontractor or supplier must identify the reason for the proposed change, the name of the new Subcontractor or supplier, and the change in the subcontractor or supplier price as a result of the change. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract Price via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.

Enforcement of Reciprocal Resident Bidder Preference, per Iowa Code 73A.21.

All bidders shall either check the box next to “Resident Bidder” or check the box next to “Nonresident Bidder” and by doing so and signing thereafter certifies and attests to the same. All information requested must be provided. Seek out the advice of an attorney if you have questions.

"Resident Bidder" means a person or entity authorized to transact business in of the State of Iowa and having a place of business for transacting business within the State of Iowa at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. Note, however, that if a nonresident bidder's state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.

☐ Resident Bidder

Name of Resident Bidder: _____

By: _____
Authorized Agent and Signatory of Resident Bidder

OR:

☐ Nonresident Bidder

Name of Nonresident Bidder: _____

Name of State or Foreign Country of Nonresident Bidder: _____

Particularly identify and describe any preference, labor preference, or any other type of preferential treatment, in effect in the nonresident bidder's state or foreign country at the time of this bid:
_____
_____
_____
_____

NOTICE: Nonresident Bidders domiciled in a state or country with a resident labor force preference shall make and keep, for a period of not less than three years, accurate records of all workers employed on the public improvement. The records shall include each worker's name, address, telephone number when available, social security number, trade classification, and the starting ending time of employment.

By: _____
Authorized Agent and Signatory of Nonresident Bidder

Bid Form shall be signed by an officer of the company with authority to bind in a contract.
Notice of acceptance of this bid, or request for additional information by the Department of Administrative Services, may be addressed to the undersigned at the address set forth below:

Legal Name of Firm: _____

Date: _____

Signature of Bidder: _____

Title: _____

Typed Name of Signatory: _____

Email: _____

Business Address:

_____
_____
_____

Telephone Number: _____ Fax Number: _____

Federal Tax Identification Number: _____

Iowa Contractor Registration Number: _____

Bidder Safety Manager Name:_____

For an out-of-state Bidder, Bidder certifies that the Resident Preference given by the State or Foreign Country of Bidder's residence, _____, is _____ %.

END OF SECTION

KCL
ENGINEERING

300 4th Street
West Des Moines, IA 50265
515.724.7938

CONSULTING ENGINEERS
Mechanical
Electrical
Plumbing
Lighting
Technology

State of Iowa Capital Complex
Grimes Office Building Lighting
Addendum #2
September 14, 2021

This addendum is issued to modify, clarify, or amend the original Project Drawings and Specifications and is hereby made part of the Contract Documents. The Contractor shall be responsible for incorporating items in this Addendum to the Work. The following shall take precedence over anything to the contrary in the Drawings or Specifications.

Mechanical Specifications:

1. Specification 23 33 00 – Air Duct Accessories
   a. **REPLACE** entire section with attached revised specification section 233300 to include information for added combination fire/smoke dampers.

2. Specification 28 46 00 – Fire Detection and Alarm
   a. **ADD** entire section with attached revised specification section 28 46 00 to include information for added duct detectors and output modules.

Architectural Drawings:

1. A100,A101,A102,A103 – RCP plans
   a. **REVISE** Ceiling schedule to change ACT-1 and ACT-1B to Radar Climaplus 22521. Refer to updated schedule and model number below.

MARK	MANUFACTURER	MODEL
ACT-1	USG	RADAR CLIMAPLUS HIGH-NRC/CAC 22521
ACT-1B	USG	RADAR CLIMAPLUS HIGH-NRC/CAC 22521
ACT-2	EXISTING	EXISTING
ACT-3	USG	EXISTING RADAR CLIMAPLUS 2210, NEW TO MATCH EXISTING
ACT-4	USG	RADAR CLIMAPLUS 2210 - 205
ACT-5	USG	RADAR CLIMAPLUS 2210

KCL ENGINEERING

Mechanical Drawings:

2. MD103 – Third Floor HVAC Demolition Plan
    a. **ADD** the disconnecting/salvage of additional existing thermostats where indicated on revised sheet M103.
3. M101 – First Floor Plan HVAC Plan
    a. **REVISE** drawing as indicated in attached revised drawing.
4. M102 – Second Floor Plan HVAC Plan
    a. **REVISE** drawing as indicated in attached revised drawing.
5. M103 – Third Floor Plan HVAC Plan
    a. **REVISE** drawing as indicated in attached revised drawing.
6. M300 – Mechanical Schedules and Details
    a. **ADD** fire/smoke damper detail as indicated in attached revised drawing.

Electrical Drawings:

1. E101 - Electrical Lighting First Floor
    a. **ADD** 120v 20A 1p Circuit in panel S1B and in N1B for smoke dampers.
    b. **ADD** Duct smoke detectors in supply duct near dampers. Detectors shall close dampers upon smoke detection.
    c. Refer to attached full size sheet E101.

2. E102 - Electrical Lighting Second Floor
    a. **Revise** lighting controls in Conference room G219 and G221 to be three switch.
    b. Refer to attached full size sheet E102.

Electrical – Approved Manufacturers:
The following shall be added to specifications as approved manufacturers:

Light Fixture Type	**Manufacturer**
EE	Emergensee
F2	Lithonia
INV	Evenlite

End of Mechanical and Electrical Addendum.

SECTION 233300
AIR DUCT ACCESSORIES

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. Manual volume dampers.
   2. Combination fire and smoke dampers.
   3. Flange connectors.
   4. Duct-mounted access doors.
   5. Duct accessory hardware.

1.03 ACTION SUBMITTALS

A. Shop Drawings: For duct accessories. Include plans, elevations, sections, details and attachments to other work.
   1. Detail duct accessories fabrication and installation in ducts and other construction. Include dimensions, weights, loads, and required clearances; and method of field assembly into duct systems and other construction. Include the following:
      a. Special fittings.
      b. Manual volume damper installations.
      c. Fire-damper, smoke-damper, combination fire- and smoke-damper, ceiling, and corridor damper installations, including sleeves; and duct-mounted access doors and remote damper operators.
      d. Wiring Diagrams: For power, signal, and control wiring.

1.04 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For air duct accessories to include in operation and maintenance manuals.

PART 2 PRODUCTS

2.01 ASSEMBLY DESCRIPTION

A. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," and with NFPA 90B, "Installation of Warm Air Heating and Air Conditioning Systems."

B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

2.02 MATERIALS

A. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
   1. Galvanized Coating Designation: G60.
   2. Exposed-Surface Finish: Mill phosphatized.

2.03 MANUAL VOLUME DAMPERS

A. Standard, Steel, Manual Volume Dampers:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Air Balance Inc.; a division of Mestek, Inc.
      b. American Warming and Ventilating; a division of Mestek, Inc.
      c. Flexmaster U.S.A., Inc.
      d. McGill AirFlow LLC.
      e. Nailor Industries Inc.
      f. Pottorff.
      g. Ruskin Company.
      h. Engineer Pre-approved equivalent. See section 012500R - Substitution Procedures for requirements.
   2. Standard leakage rating.

3. Suitable for horizontal or vertical applications.
4. Frames:
    a. Frame: Hat-shaped, 0.094-inch-thick, galvanized sheet steel.
    b. Mitered and welded corners.
    c. Flanges for attaching to walls and flangeless frames for installing in ducts.
5. Blades:
    a. Multiple or single blade.
    b. Parallel- or opposed-blade design.
    c. Stiffen damper blades for stability.
    d. Galvanized-steel, 0.064 inch thick.
6. Blade Axles: Galvanized steel.
7. Bearings:
    a. Oil-impregnated bronze.
    b. Dampers in ducts with pressure classes of 3-inch wg or less shall have axles full length of damper blades and bearings at both ends of operating shaft.
8. Tie Bars and Brackets: Galvanized steel.

B. Jackshaft:
1. Size: 0.5-inch diameter.
2. Material: Galvanized-steel pipe rotating within pipe-bearing assembly mounted on supports at each mullion and at each end of multiple-damper assemblies.
3. Length and Number of Mountings: As required to connect linkage of each damper in multiple-damper assembly.

C. Damper Hardware:
1. Zinc-plated, die-cast core with dial and handle made of 3/32-inch-thick zinc-plated steel, and a 3/4-inch hexagon locking nut.
2. Include center hole to suit damper operating-rod size.
3. Include elevated platform for insulated duct mounting.

2.04 COMBINATION FIRE AND SMOKE DAMPERS

A. Type: Dynamic; rated and labeled according to UL 555 and UL 555S by an NRTL.

B. Closing rating in ducts up to 4-inch wg static pressure class and minimum 2000-fpm velocity.

C. Fire Rating: 1-1/2 and 3 hours.

D. Frame: Hat-shaped, 0.094-inch-thick, galvanized sheet steel, with welded or mechanically attached corners and mounting flange.

E. Heat-Responsive Device: Electric resettable device and switch package, factory installed, rated.

F. Blades: Roll-formed, horizontal, interlocking, 0.063-inch-thick, galvanized sheet steel.

G. Leakage: Class I.

H. Rated pressure and velocity to exceed design airflow conditions.

I. Mounting Sleeve: Factory-installed, 0.039-inch-thick, galvanized sheet steel; length to suit wall or floor application with factory-furnished silicone calking.

J. Damper Motors: two-position action, 120V/1

K. Accessories:
1. Auxiliary switches for signaling.
2. Test and reset switches, mounted.

L. Manufacturers:
1. Nailor Industries, Inc.
2. Pottorff
3. Ruskin Company
4. Engineer Pre-approved equivalent. See section 012500R - Substitution Procedures for requirements.

2.05 FLANGE CONNECTORS

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

following:
1. Ductmate Industries, Inc.
2. Nexus PDQ; Division of Shilco Holdings Inc.
3. Ward Industries, Inc.; a division of Hart & Cooley, Inc.
4. Engineer Pre-approved equivalent. See section 012500R - Substitution Procedures for requirements.

B. Description: Add-on or roll-formed, factory-fabricated, slide-on transverse flange connectors, gaskets, and components.

C. Material: Galvanized steel.

D. Gage and Shape: Match connecting ductwork.

2.06 DUCT-MOUNTED ACCESS DOORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. American Warming and Ventilating; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Ductmate Industries, Inc.
4. Elgen Manufacturing.
5. Flexmaster U.S.A., Inc.
6. Greenheck Fan Corporation.
7. McGill AirFlow LLC.
8. Nailor Industries Inc.
9. Pottorff.
10. Ventfabrics, Inc.
11. Ward Industries, Inc.; a division of Hart & Cooley, Inc.
12. Engineer Pre-approved equivalent. See section 012500R - Substitution Procedures for requirements.

B. Duct-Mounted Access Doors: Fabricate access panels according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figures 7-2, "Duct Access Doors and Panels," and 7-3, "Access Doors - Round Duct."
1. Door:
   a. Double wall, rectangular.
   b. Galvanized sheet metal with insulation fill and thickness as indicated for duct pressure class.
   c. Vision panel.
   d. Hinges and Latches: 1-by-1-inchbutt or piano hinge and cam latches.
   e. Fabricate doors airtight and suitable for duct pressure class.
2. Frame: Galvanized sheet steel, with bend-over tabs and foam gaskets.
3. Number of Hinges and Locks:
   a. Access Doors Less Than 12 Inches Square: No hinges and two sash locks.

2.07 DUCT ACCESSORY HARDWARE

A. Instrument Test Holes: Cast iron or cast aluminum to suit duct material, including screw cap and gasket. Size to allow insertion of pitot tube and other testing instruments and of length to suit duct-insulation thickness.

B. Adhesives: High strength, quick setting, neoprene based, waterproof, and resistant to gasoline and grease.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install duct accessories according to applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal ducts and in NAIMA AH116, "Fibrous Glass Duct Construction Standards," for fibrous-glass ducts.

B. Install duct accessories of materials suited to duct materials; use galvanized-steel accessories in galvanized-steel and fibrous-glass ducts, stainless-steel accessories in stainless-steel ducts, and aluminum accessories in aluminum ducts.

C. Install volume dampers at points on supply, return, and exhaust systems where branches extend from larger ducts. Where dampers are installed in ducts having duct liner, install

dampers with hat channels of same depth as liner, and terminate liner with nosing at hat channel.
   1. Install steel volume dampers in steel ducts.

D. Set dampers to fully open position before testing, adjusting, and balancing.

E. Install fire and smoke dampers according to UL listing.

F. Install duct access doors on sides of ducts to allow for inspecting, adjusting, and maintaining accessories and equipment at the following locations:
   1. Adjacent to and close enough to fire or smoke dampers, to reset or reinstall fusible links. Access doors for access to fire or smoke dampers having fusible links shall be pressure relief access doors and shall be outward operation for access doors installed upstream from dampers and inward operation for access doors installed downstream from dampers.

G. Install access doors with swing against duct static pressure.

H. Access Door Sizes:
   1. One-Hand or Inspection Access: 8 by 5 inches.
   2. Two-Hand Access: 12 by 6 inches.

I. Install duct test holes where required for testing and balancing purposes.

3.02 FIELD QUALITY CONTROL

A. Tests and Inspections:
   1. Operate dampers to verify full range of movement.
   2. Inspect locations of access doors and verify that purpose of access door can be performed.
   3. Operate fire, smoke, and combination fire and smoke dampers to verify full range of movement and verify that proper heat-response device is installed.
   4. Inspect turning vanes for proper and secure installation.

END OF SECTION 233300

SECTION 284600
FIRE DETECTION AND ALARM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire alarm system design and installation, including all components, wiring, and conduit.

1.02 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code.

B. NFPA 72 - National Fire Alarm and Signaling Code.

1.03 SUBMITTALS

A. Evidence of designer qualifications.

B. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
   1. Copy (if any) of list of data required by authority having jurisdiction.
   2. NFPA 72 "Record of Completion", filled out to the extent known at the time.
   3. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7-5-2.2(9), and complete listing of software required.
   4. System zone boundaries and interfaces to fire safety systems.
   5. Location of all components, circuits, and raceways; mark components with identifiers used in control unit programming.
   6. Circuit layouts; number, size, and type of raceways and conductors; conduit fill calculations; spare capacity calculations; notification appliance circuit voltage drop calculations.
   7. List of all devices on each signaling line circuit, with spare capacity indicated.
   8. Manufacturer's detailed data sheet for each component, including wiring diagrams, installation instructions, and circuit length limitations.
   9. Description of power supplies; if secondary power is by battery include calculations demonstrating adequate battery power.
   10. Certification by either the manufacturer of the control unit or by the manufacturer of each other component that the components are compatible with the control unit.
   11. Certification by the manufacturer of the control unit that the system design complies with Contract Documents.
   12. Certification by Contractor that the system design complies with Contract Documents.
   13. Do not show existing components to be removed.

C. Operating and Maintenance Data: one set available during closeout demonstration:
   1. Contact information for firm that will be providing contract maintenance and trouble call-back service.
   2. List of recommended spare parts, tools, and instruments for testing.

D. Project Record Documents:
   1. Complete set of floor plans showing actual installed locations of components, conduit, and zones.
   2. "As installed" wiring and schematic diagrams, with final terminal identifications.
   3. "As programmed" operating sequences, including control events by device, updated input/output chart, and voice messages by event.

E. Closeout Documents:
   1. Certification by manufacturer that the system has been installed in compliance with manufacturer's installation requirements, is complete, and is in satisfactory operating condition.

1.04 WARRANTY

A. Provide installer's warranty that the installation is free from defects and will remain so for 1 year after date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Simplex

1. Existing Simplex 4100 U control panel

2.02 FIRE ALARM SYSTEM

A. Fire Alarm System: Provide modifications and extensions to the existing automatic fire detection and alarm system:
   1. Provide all components necessary, regardless of whether shown in Contract Documents or not.
   2. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
      a. ADA Standards.
      b. The requirements of the State Fire Marshal.
      c. Contract Documents (drawings and specifications).
      d. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.

B. Power Sources:
   1. Primary: Dedicated branch circuits of the facility power distribution system.
   2. Secondary: Storage batteries.
   3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.
   4. Each Computer System: Provide uninterruptible power supply (UPS).

2.03 EXISTING COMPONENTS

A. Clearly label components that are "Not In Service."

B. Remove unused existing components and materials from site and dispose of properly.

2.04 FIRE SAFETY SYSTEMS INTERFACES

A. HVAC:
   1. Duct Smoke Detectors: Close dampers indicated.

2.05 COMPONENTS

A. Initiating Devices:
   1. Addressable Systems:
      a. Addressable Devices: Individually identifiable by addressable fire alarm control unit.
      b. Provide suitable addressable interface modules as indicated or as required for connection to conventional (non-addressable) devices and other components that provide a dry closure output.

B. Circuit Conductors: Copper; color code and label.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and Contract Documents.

B. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.

C. Obtain Owner's approval of locations of devices, before installation.

3.02 INSPECTION AND TESTING FOR COMPLETION

A. Notify Owner 7 days prior to beginning completion inspections and tests.

B. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.

C. Provide all tools, software, and supplies required to accomplish inspection and testing.

D. Perform inspection and testing in accordance with NFPA 72 and requirements of authorities having jurisdiction; document each inspection and test.

E. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.

3.03 OWNER PERSONNEL INSTRUCTION

A. Provide the following instruction to designated Owner personnel:
   1. Hands-On Instruction: On-site, using operational system.

B. Basic Operation: One-hour sessions for attendant personnel, security officers, and engineering staff; hands-on:
   1. Initial Training: 1 session pre-closeout.

C. Furnish the services of instructors and teaching aids; have copies of operation and maintenance data available during instruction.

3.04 CLOSEOUT

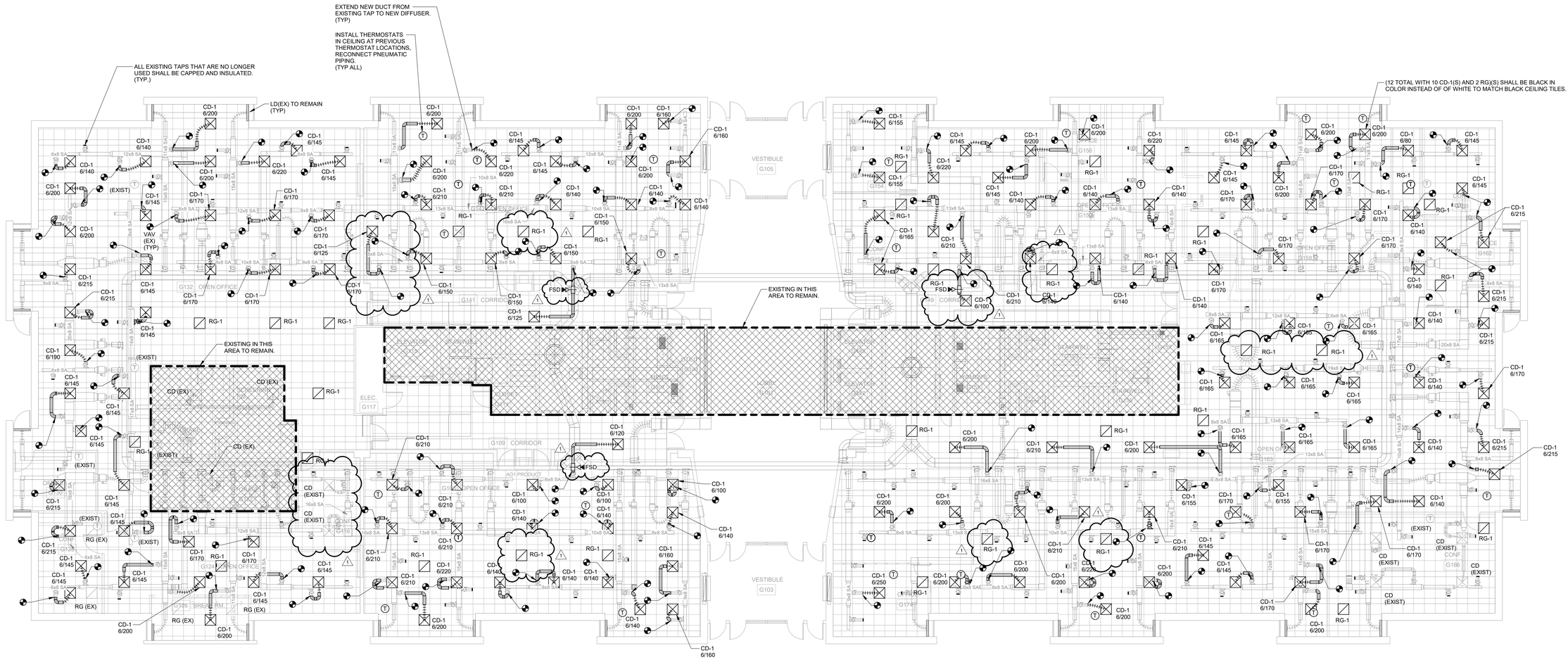
A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.
   1. Be prepared to conduct any of the required tests.
   2. Have at least one copy of operation and maintenance data, preliminary copy of project record drawings, input/output matrix, and operator instruction chart(s) available during demonstration.
   3. Have authorized technical representative of control unit manufacturer present during demonstration.
   4. Demonstration may be combined with inspection and testing required by authority having jurisdiction; notify authority having jurisdiction in time to schedule demonstration.
   5. Repeat demonstration until successful.

END OF SECTION 284600

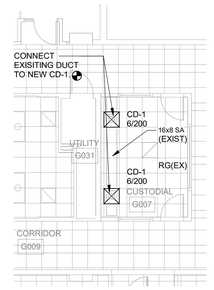
GENERAL NOTES

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO M300 FOR MECHANICAL DETAILS AND SCHEDULES.



1 FIRST FLOOR HVAC PLAN
1/8" = 1'-0"



2 BASEMENT FLOOR HVAC PLAN
1/8" = 1'-0"

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STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT

400 EAST 14TH STREET, DES MOINES

Project No:	21127
Date:	08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	ADD 2	9.14.21

Drawing Name:
FIRST FLOOR HVAC PLAN

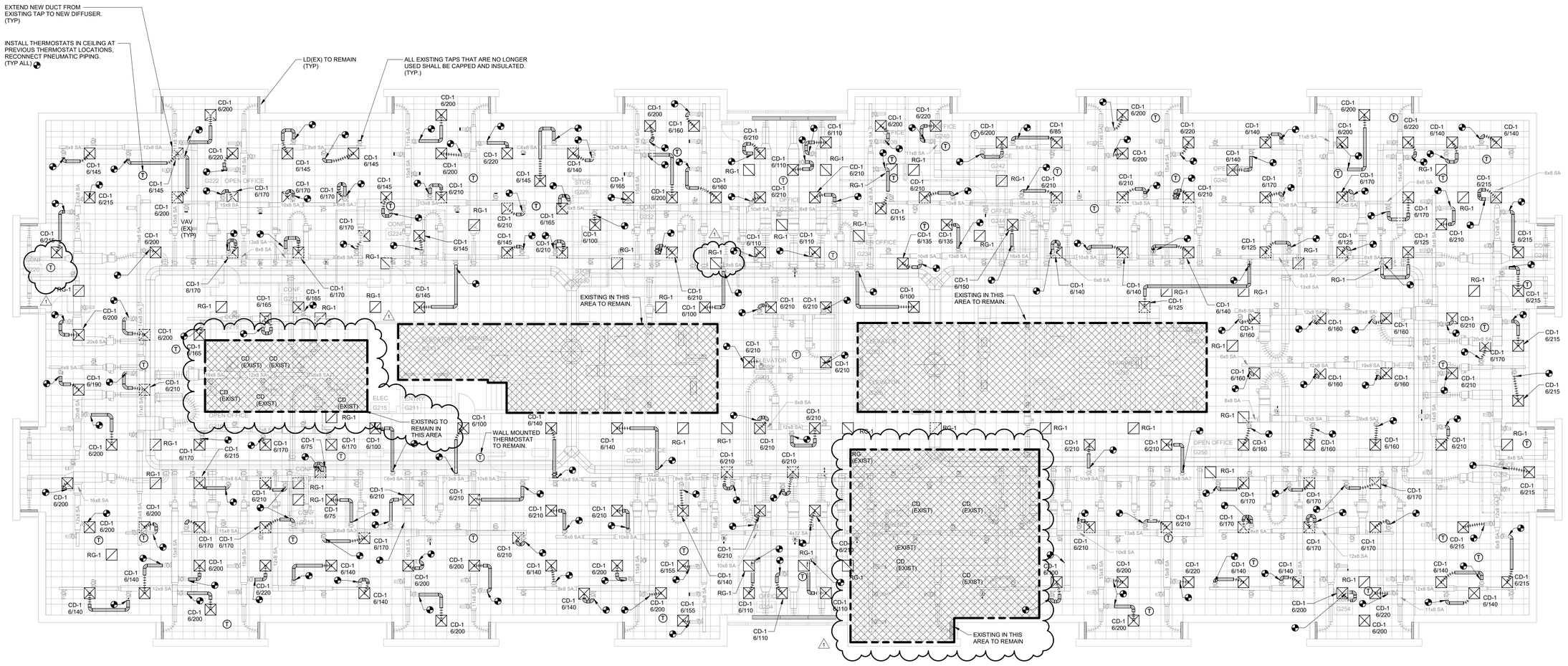
Drawing #:
M101

Plot Date & Time: 9/14/2021 10:09:12 AM

GENERAL NOTES

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO M300 FOR MECHANICAL DETAILS AND SCHEDULES.



1 SECOND FLOOR HVAC PLAN
1/8" = 1'-0"

STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT

400 EAST 14TH STREET, DES MOINES

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Project No:	21127
Date:	08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	ADD 2	9.14.21

Drawing Name:
SECOND FLOOR HVAC PLAN

Drawing #:
M102

Plot Date & Time: 9/14/2021 10:05:18 AM

GENERAL NOTES

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO M300 FOR MECHANICAL DETAILS AND SCHEDULES.

EXTEND NEW DUCT FROM EXISTING TAP TO NEW DIFFUSER. (TYP)

INSTALL THERMOSTATS IN CEILING AT PREVIOUS THERMOSTAT LOCATIONS. RECONNECT PNUEMATIC PIPING. (TYP ALL)

LD(EX) TO REMAIN (TYP)

ALL EXISTING TAPS THAT ARE NO LONGER USED SHALL BE CAPPED AND INSULATED. (TYP.)

EXISTING IN THIS AREA TO REMAIN.

EXISTING IN THIS AREA TO REMAIN.

1 THIRD FLOOR HVAC PLAN
1/8" = 1'-0"

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STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT

400 EAST 14TH STREET, DES MOINES

Project No:	21127
Date:	08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	ADD 2	9.14.21

Drawing Name:
THIRD FLOOR HVAC PLAN

Drawing #:
M103

Plot Date & Time: 9/14/2021 10:09:27 AM

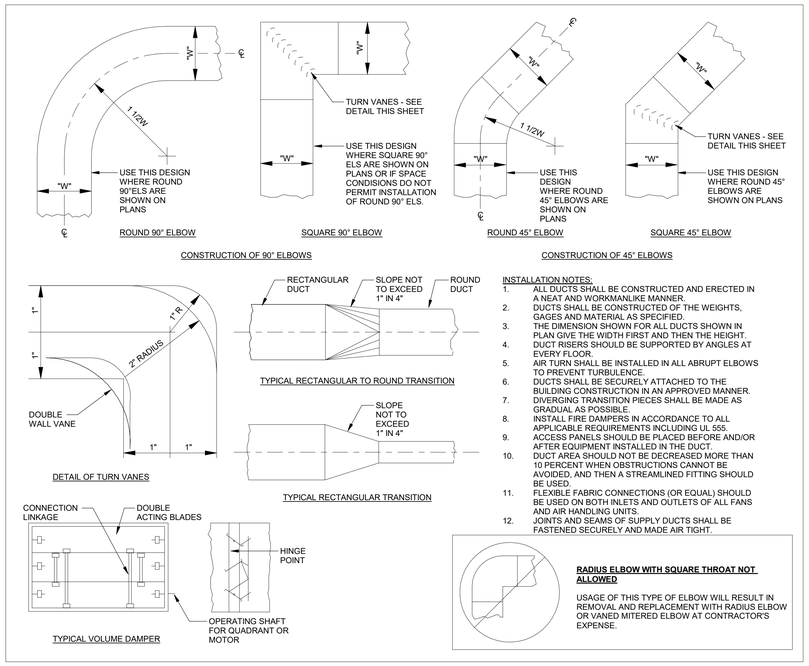
GRILLES REGISTERS AND DIFFUSERS SCHEDULE

REFERENCE	MATERIAL	MARGIN (IN)	INLET (IN)	FACE (IN)	DAMPER	MFR	MODEL	NOTES
CD-1 (SUPPLY DIFFUSER)	STEEL	NA	SEE DWG	24x24	YES	TITUS	OMNI	1,2
RG-1 (RETURN GRILLE)	STEEL	1 1/4"	SEE DWG	FACE ONLY	NO	TITUS	PXP	1,2

NOTES:

1. REFER TO REFLECTED CEILING PLANS FOR FINAL CEILING TYPE FOR MOUTING TYPE.

2. PROVIDE WITH WHITE FINISH. (ONLY EXCEPTION IS BLACK DIFFUSERS AND GRILLES IN OFFICE G158 - REFER TO PLANS FOR DETAILS.)



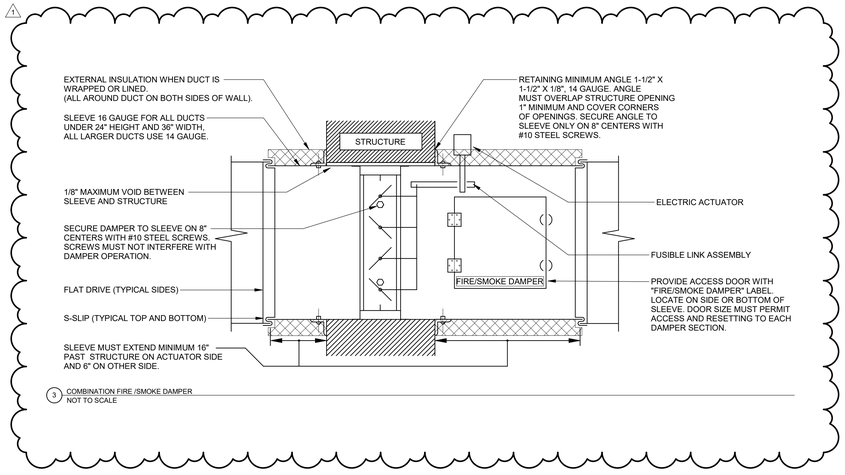
INSTALLATION NOTES:

1. ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
2. DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS, GAGES AND MATERIAL AS SPECIFIED.
3. THE DIMENSION SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE WIDTH FIRST AND THEN THE HEIGHT.
4. DUCT RISERS SHOULD BE SUPPORTED BY ANGLES AT EVERY FLOOR.
5. AIR TURN SHALL BE INSTALLED IN ALL ABRUPT ELBOWS TO PREVENT TURBULENCE.
6. DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
7. DIVERGING TRANSITION PIECES SHALL BE MADE AS GRADUAL AS POSSIBLE.
8. INSTALL FIRE DAMPERS IN ACCORDANCE TO ALL APPLICABLE REQUIREMENTS INCLUDING UL 555.
9. ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
10. DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCENT WHEN OBSTRUCTIONS CANNOT BE AVOIDED, AND THEN A STREAMLINED FITTING SHOULD BE USED.
11. FLEXIBLE FABRIC CONNECTIONS (OR EQUAL) SHOULD BE USED ON BOTH INLETS AND OUTLETS OF ALL FANS AND AIR HANDLING UNITS.
12. JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

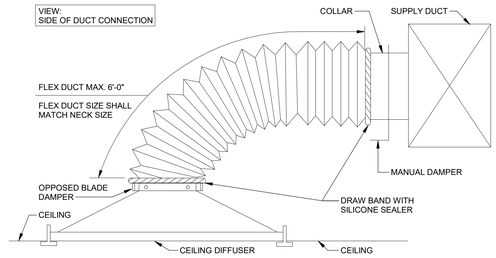
RADIUS ELBOW WITH SQUARE THROAT NOT ALLOWED

USAGE OF THIS TYPE OF ELBOW WILL RESULT IN REMOVAL AND REPLACEMENT WITH RADIUS ELBOW OR VANED MITERED ELBOW AT CONTRACTOR'S EXPENSE.

1 LOW VELOCITY DUCT LAYOUT DETAILS
12" = 1'-0"



3 COMBINATION FIRE /SMOKE DAMPER
NOT TO SCALE



2 DIFFUSER CONNECTION DETAIL (TYP.)
12" = 1'-0"

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STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT
400 EAST 14TH STREET, DES MOINES

Project No: 21127

Date: 08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	ADD 2	9.14.21

Drawing Name:
MECHANICAL SCHEDULES AND DETAILS

Drawing #:
M300

Plot Date & Time: 9/1/2021 10:05:28 AM

LIGHTING GENERAL NOTES

A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH NEW CEILINGS. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

B. INSTALL #12 AWG STRANDED CONDUCTORS FOR BRANCH CIRCUITS.

C. LABEL EMERGENCY/NIGHT LIGHT FIXTURES WITH "EMERGENCY" AND CIRCUIT #. PROVIDE AS CLEAR LABEL WITH BLACK TEXT ON FLANGE OF FIXTURE.

KEYNOTES (#)

1 INSTALL EXTERIOR EGRESS LIGHTING ON MULLION ABOVE DOOR. SURFACE MOUNT RACEWAY HORIZONTALLY ON INTERIOR MULLION FOR PATHWAY TO ADJACENT ACCESSIBLE CEILING. PAINT RACEWAY TO MATCH MULLION COLOR. INTERCEPT ADJACENT INTERIOR LIGHTING "HOT" CIRCUIT WITH REMOTE POWER SUPPLY. INSTALL POWER SUPPLY IN ELECTRICAL ROOM G117 OR G157 TO INTERCEPT LOCAL CIRCUIT. INSTALL CONDUIT AND CONDUCTORS AS REQUIRED BY MANUFACTURER FROM FIXTURE TO POWER SUPPLY. INSTALL GASKETING AND CAULK AT FIXTURE TO MINIMIZE WATER INFILTRATION.

2 ALTERNATE #2: IN LOBBY G101, G103, AND G105 REMOVE HOMERUN AND CONDUCTORS BACK TO SOURCE. EXISTING CONDUIT CAN REMAIN IF DEEMED IN GOOD CONDITION AND REUSED FOR NEW CONDUCTORS. REMOVE EXISTING LAMP AND TURN OVER TO OWNER. REMOVE REFLECTOR. INSTALL NEW RETROFIT LAMP/REFLECTOR IN EXISTING CAN.

3 ALTERNATE #1: REMOVE EXISTING FIXTURES AND REPLACE WITH NEW. REUSE AND EXTEND EXISTING CONDUIT AND CONDUCTORS AS NECESSARY FOR NEW FIXTURES.

4 CONNECT NEW EMERGENCY LIGHTING FIXTURES TO NEAREST 120V BRANCH CIRCUIT IN ROOM. COORDINATE FIXTURE INSTALLATION LOCATION WITH EXISTING PANELS, CLEARANCES, EQUIPMENT, ETC. FOR ACCESSIBLE LOCATION.

5 INSTALL NEW SWITCH IN EXISTING WALL. FISH WALL AND INSTALL RECESSED BOX FOR A FLUSH INSTALLATION.

6 INSTALL LIGHTING CONTROL PANEL OVERRIDE SWITCHES IN EXISTING JUNCTION BOX ENCLOSURE. REMOVE EXISTING SWITCHES IN LOCATION AND INSTALL SWITCH TO MATCH ZONES SHOWN ON PLAN. OVERRIDE SWITCHES/BUTTONS PROVIDED PER ZONE AND WILL PROVIDE 2-HOUR OVERRIDE CAPABILITY. CONTRACTOR TO PROVIDE MAP ON INTERIOR OF ENCLOSURE FOR EASE OF USE. COORDINATE BUTTON ENGRAVING AND MAP WITH OWNER. PROVIDE CUSTOM COVERPLATE TO FIT NEW SWITCH(ES) INSTALLED IN ENCLOSURE.

7 EXISTING BREAKER FOR LOBBY LIGHTING IS IN SPACE 38, 40, 42 OF PANEL N1B. REPLACE BREAKER WITH (3) NEW 120V 1P BREAKER. USE BREAKER #38 TO SUPPLY POWER TO RELAYS FOR LOBBY AND VESTIBULE LIGHTING. REMOVE EXISTING CONTACTOR AND RELATED CONDUIT USED FOR LOBBY LIGHTING CONTROLS IN ROOM. INSTALL NEW CONDUIT TO INTERCEPT EXISTING CONDUIT TO LOBBY SPACE.

8 INSTALL NEW 20A 1P BREAKER IN PANEL S1B FOR NEW 120V DAMPERS INSTALLED IN CORRIDOR G141 AND G109.

9 INSTALL NEW DUCT SMOKE DETECTOR NEAR DAMPER. INSTALL DETECTOR AND ACCESSORIES AS REQUIRED SUCH THAT THE DETECTOR WILL CLOSE THE DAMPER UPON SMOKE DETECTION.

10 INSTALL NEW 20A 1P BREAKER IN PANEL N1B IN SPACE #40 FOR NEW 120V DAMPER IN CORRIDOR G149.

LIGHTING CONTROL RELAY SCHEDULE #1 (FIRST FLOOR SOUTH) - LCP1S

RELAY #	ZONE TAG	POWER CIRCUIT		DESCRIPTION	LOCAL CONTROL	GLOBAL CONTROL	DIMMING
1	1a	LA-1-5	277V	SOUTHWEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
2	1b	LA-1-5	277V	SOUTH MIDDLE OPEN OFFICE	N/A	TIMECLOCK	0-10V
3	1c	LA-1-6	277V	WEST OPEN OFFICE	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
4	1d	LA-1-6	277V	SOUTH CORRIDORS	N/A	TIMECLOCK	0-10V
5	1e	LA-1-7	277V	EAST OFFICE	N/A	TIMECLOCK	0-10V
6	1f	LA-1-7	277V	SOUTHEAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
7	1g	LA-1-7	277V	STORAGE	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
8	1h	LA-1-7	277V	ENCLOSED OFFICES AND SPACES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
9	1i	LA-1-9	277V	SPARE			
10	1j	LA-1-9	277V	SPARE			
11	1k	LA-1-11	277V	SPARE			
12	1l	LA-1-11	277V	SPARE			
EMERGENCY SEPERATOR							
13	1m	INV1	277V	SOUTHWEST OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V
14	1n	INV1	277V	SOUTHEAST OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V
15	1o	INV1	277V	G106 OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V
16	1p	INV1	277V	G142 OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V

NOTES: TRACE 277V CIRCUITS FOR PANEL LA-1 TO VERIFY EXISTING CIRCUITS SHOWN ON THIS SCHEDULE ARE UTILIZED ONLY FOR EXISTING LIGHTING CIRCUITS. COORDINATE CIRCUITS AND USE WITH ENGINEER UPON FINDINGS.

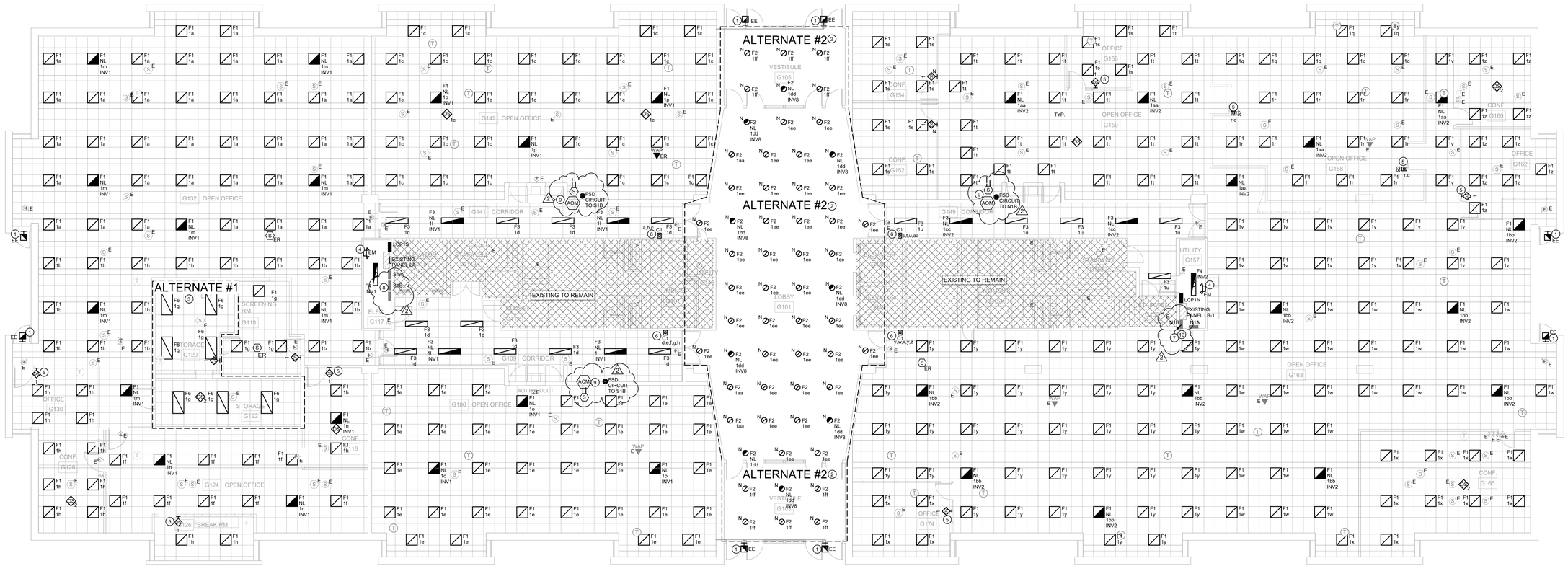
EMERGENCY FIXTURES TO BE TURNED ON TO 100% OUTPUT VIA 0-10V AFTER HOURS AND UPON LOSS OF POWER. PROVIDE LOCAL LIGHTING UNSWITCHED CIRCUIT TO SENSE LOSS OF POWER TO TURN ON EMERGENCY FIXTURES TO 100% OUTPUT.

LIGHTING CONTROL RELAY SCHEDULE #2 (FIRST FLOOR NORTH) - LCP1N

RELAY #	ZONE TAG	POWER CIRCUIT		DESCRIPTION	LOCAL CONTROL	GLOBAL CONTROL	DIMMING
1	1q	LB-1-5	277V	ICN FRONT ROW	PUSH BUTTON DIMMING	TIMECLOCK	0-10V
2	1r	LB-1-5	277V	ICN BACK ROW	PUSH BUTTON DIMMING	TIMECLOCK	0-10V
3	1s	LB-1-5	277V	ENCLOSED OFFICES AND SPACES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
4	1t	LB-1-5	277V	WEST OPEN OFFICE	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
5	1u	LB-1-7	277V	NORTH CORRIDOR	N/A	TIMECLOCK	0-10V
6	1v	LB-1-7	277V	NORTHWEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
7	1w	LB-1-7	277V	NORTHEAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
8	1x	LB-1-9	277V	NORTHEAST CONFERENCE ROOM	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
9	1y	LB-1-9	277V	EAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
10	1z	LB-1-9	277V	NORTH ENCLOSED OFFICE	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
EMERGENCY SEPERATOR							
11	1aa	INV2	277V	NORTHWEST OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V
12	1bb	INV2	277V	NORTHEAST OFFICE EMERGENCY	N/A	TIMECLOCK	0-10V
EMERGENCY SEPERATOR							
13	1cc	INV2	277V	CORRIDOR EMERGENCY	N/A	TIMECLOCK	0-10V
VOLTAGE SEPERATOR							
14	1dd	INV8	120V	ENTRY EMERGENCY	N/A	TIMECLOCK	0-10V
15	1ee	N1B-38	120V	LOBBY (ALTERNATE #2)	NONE	TIMECLOCK	0-10V
16	1ff	N1B-38	120V	VESTIBULES (ALTERNATE #2)	NONE	TIMECLOCK	0-10V

NOTES: TRACE 277V CIRCUITS FOR PANEL LB-1 AND 120V CIRCUITS FOR N1B TO VERIFY EXISTING CIRCUITS SHOWN ON THIS SCHEDULE ARE UTILIZED ONLY FOR EXISTING LIGHTING CIRCUITS. COORDINATE CIRCUITS AND USE WITH ENGINEER UPON FINDINGS.

EMERGENCY FIXTURES TO BE TURNED ON TO 100% OUTPUT VIA 0-10V AFTER HOURS AND UPON LOSS OF POWER. PROVIDE LOCAL LIGHTING UNSWITCHED CIRCUIT TO SENSE LOSS OF POWER TO TURN ON EMERGENCY FIXTURES TO 100% OUTPUT.



NORTH

1 FIRST FLOOR LIGHTING
1/8" = 1'-0"

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STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT
400 EAST 14TH STREET, DES MOINES

Project No: 21127

Date: 08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	Addendum #1	09.03.2021
2	Addendum #2	09.14.2021

Drawing Name:
ELECTRICAL LIGHTING FIRST FLOOR

Drawing #:
E101

LIGHTING CONTROL RELAY SCHEDULE #3 (SECOND FLOOR SOUTH) - LCP2S							
RELAY #	ZONE TAG	POWER CIRCUIT		DESCRIPTION	LOCAL CONTROL	GLOBAL CONTROL	DIMMING
1	2a	LA-2-5	277V	SOUTH CORRIDORS	N/A	TIMECLOCK	0-10V
2	2b	LA-2-5	277V	SOUTHWEST CONFERENCE ROOM	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
3	2c	LA-2-5	277V	WEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
4	2d	LA-2-7	277V	SOUTHWEST ENCLOSED SPACES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
5	2e	LA-2-7	277V	SOUTHWEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
6	2f	LA-2-9	277V	SOUTHEAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
7	2g	LA-2-9	277V	SOUTHEAST ENCLOSED SPACES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
8	2h	LA-2-11	277V	EAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
9	2i	LA-2-11	277V	SPARE			
10	2j	LA-2-11	277V	SPARE			
11	2k	LA-2-13	277V	SPARE			
12	2l	LA-2-13	277V	SPARE			
EMERGENCY SEPERATOR							
13	2m	INV3	277V	OPEN OFFICE SOUTHWEST EMERGENCY	N/A	TIMECLOCK	0-10V
14	2n	INV3	277V	OPEN OFFICE SOUTHEAST EMERGENCY	N/A	TIMECLOCK	0-10V
15	2o	INV3	277V	CORRIDOR EMERGENCY	N/A	TIMECLOCK	0-10V
16	2p	INV3	277V	OPEN OFFICE EAST EMERGENCY			

NOTES: TRACE 277V CIRCUITS FOR PANEL LA-2 TO VERIFY EXISTING CIRCUITS SHOWN ON THIS SCHEDULE ARE UTILIZED ONLY FOR EXISTING LIGHTING CIRCUITS. COORDINATE CIRCUITS AND USE WITH ENGINEER UPON FINDINGS.

EMERGENCY FIXTURES TO BE TURNED ON TO 100% OUTPUT VIA 0-10V AFTER HOURS AND UPON LOSS OF POWER. PROVIDE LOCAL LIGHTING UNSWITCHED CIRCUIT TO SENSE LOSS OF POWER TO TURN ON EMERGENCY FIXTURES TO 100% OUTPUT.

LIGHTING CONTROL RELAY SCHEDULE #4 (SECOND FLOOR NORTH) - LCP2N							
RELAY #	ZONE TAG	POWER CIRCUIT		DESCRIPTION	LOCAL CONTROL	GLOBAL CONTROL	DIMMING
1	2q	LB-2-5	277V	NORTH CORRIDORS	N/A	TIMECLOCK	0-10V
2	2r	LB-2-5	277V	WEST CENTER OPEN OFFICE	N/A	TIMECLOCK	0-10V
3	2s	LB-2-5	277V	WEST ENCLOSED OFFICES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
4	2t	LB-2-7	277V	WEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
5	2u	LB-2-7	277V	NORTHWEST OPEN OFFICE	N/A	TIMECLOCK	0-10V
6	2v	LB-2-9	277V	NORTH ENCLOSED SPACES	ON/OFF WITH OCCUPANCY SENSORS	TIMECLOCK	0-10V
7	2w	LB-2-9	277V	NORTHEAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
8	2x	LB-2-11	277V	EAST OPEN OFFICE	N/A	TIMECLOCK	0-10V
9	2y	LB-2-5	277V	ELEVATOR LOBBY	N/A	TIMECLOCK	0-10V
10	2z	LB-2-11	277V	SPARE			
11	2aa	LB-2-13	277V	SPARE			
12	2bb	LB-2-11	277V	EAST CONFERENCE ROOM (ALTERNATE #1)	WALL SWITCH	NONE	0-10V
EMERGENCY SEPERATOR							
13	2cc	INV4	277V	CORRIDOR EMERGENCY	N/A	TIMECLOCK	0-10V
14	2dd	INV4	277V	OPEN OFFICE NORTHWEST EMERGENCY	N/A	TIMECLOCK	0-10V
15	2ee	INV4	277V	OPEN OFFICE NORTHEAST EMERGENCY	N/A	TIMECLOCK	0-10V
16	2ff	INV4	277V	OPEN OFFICE G234 EMERGENCY	N/A	TIMECLOCK	0-10V

NOTES: TRACE 277V CIRCUITS FOR PANEL LB-2 TO VERIFY EXISTING CIRCUITS SHOWN ON THIS SCHEDULE ARE UTILIZED ONLY FOR EXISTING LIGHTING CIRCUITS. COORDINATE CIRCUITS AND USE WITH ENGINEER UPON FINDINGS.

EMERGENCY FIXTURES TO BE TURNED ON TO 100% OUTPUT VIA 0-10V AFTER HOURS AND UPON LOSS OF POWER. PROVIDE LOCAL LIGHTING UNSWITCHED CIRCUIT TO SENSE LOSS OF POWER TO TURN ON EMERGENCY FIXTURES TO 100% OUTPUT.

LIGHTING GENERAL NOTES

A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH NEW CEILINGS. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

B. INSTALL #12 AWG STRANDED CONDUCTORS FOR BRANCH CIRCUITS.

C. LABEL EMERGENCY/NIGHT LIGHT FIXTURES WITH "EMERGENCY" AND CIRCUIT #. PROVIDE AS CLEAR LABEL WITH BLACK TEXT ON FLANGE OF FIXTURE.

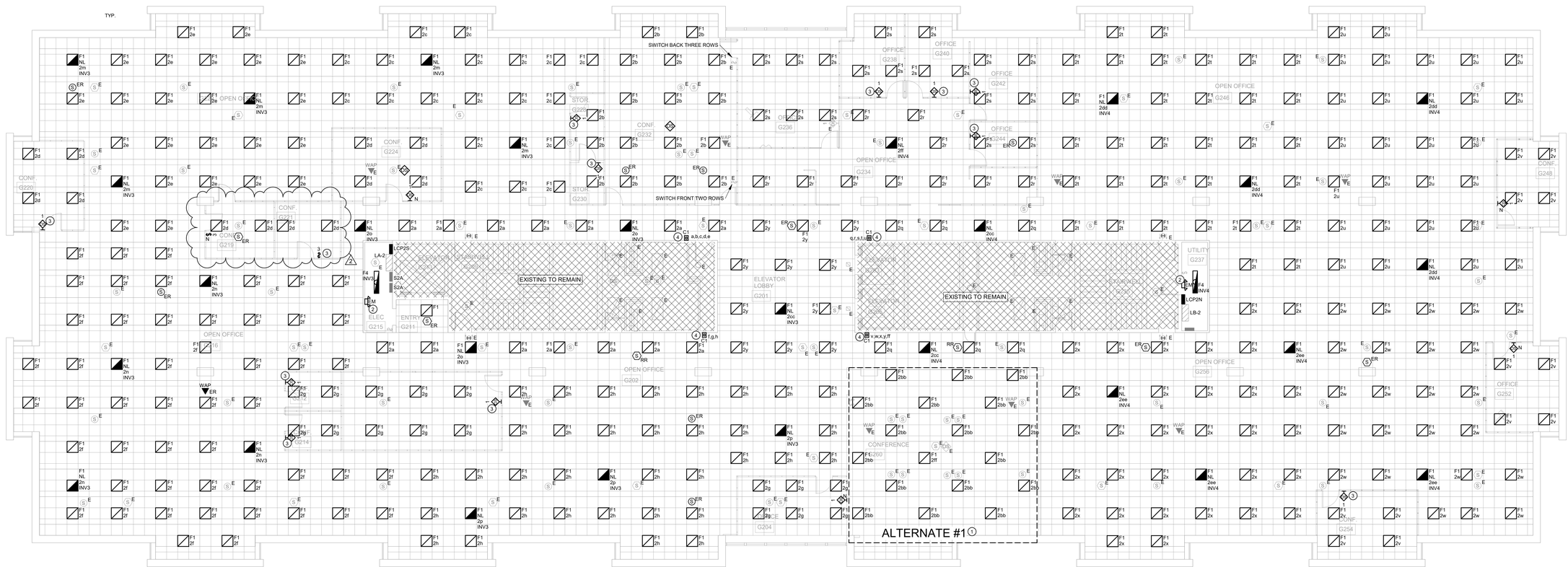
KEYNOTES (#)

1 ALTERNATE #1: REPLACE EXISTING 2' X 2' LIGHTING FIXTURES IN SPACE WITH NEW. EXISTING CONDUIT, CONDUCTORS, AND CONTROLS ARE TO BE REUSED IN SPACE.

2 CONNECT NEW EMERGENCY LIGHTING FIXTURES TO NEAREST 120V BRANCH CIRCUIT IN ROOM. COORDINATE FIXTURE INSTALLATION LOCATION WITH EXISTING PANELS, CLEARANCES, EQUIPMENT, ETC. FOR ACCESSIBLE LOCATION.

3 INSTALL NEW SWITCH IN EXISTING WALL. FISH WALL AND INSTALL RECESSED BOX FOR A FLUSH INSTALLATION.

4 INSTALL LIGHTING CONTROL PANEL OVERRIDE SWITCHES IN EXISTING JUNCTION BOX ENCLOSURE. REMOVE EXISTING SWITCHES IN LOCATION AND INSTALL SWITCH TO MATCH ZONES SHOWN ON PLAN. OVERRIDE SWITCHES/BUTTONS PROVIDED PER ZONE AND WILL PROVIDE 2-HOUR OVERRIDE CAPABILITY. CONTRACTOR TO PROVIDE MAP ON INTERIOR OF ENCLOSURE FOR EASE OF USE. COORDINATE BUTTON ENGRAVING AND MAP WITH OWNER. PROVIDE CUSTOM COVERPLATE TO FIT NEW SWITCH(ES) INSTALLED IN ENCLOSURE.



NORTH

1 SECOND FLOOR LIGHTING
1/8" = 1'-0"

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STATE OF IOWA CAPITOL COMPLEX
GRIMES OFFICE BUILDING LIGHTING REPLACEMENT
400 EAST 14TH STREET, DES MOINES

Project No: 21127

Date: 08/26/2021

100% CONSTRUCTION DOCUMENT

#	Revision	Date
1	Addendum #1	09.03.2021
2	Addendum #2	09.14.2021

Drawing Name:
ELECTRICAL LIGHTING SECOND FLOOR

Drawing #:
E102

Plot Date & Time: 9/14/2021 10:28:09 AM