

ADDENDUM #1

Addendum Number: Phase 5-01 **Project:** U of U Bldg 303 Seismic

Upgrade #22649

FFKR #: 18136 - Phase 5 Date: 3.22.2024

Contractor: **Gramoll Construction** Attention: Gary Hansen

The Addendum is for all persons preparing Bids for the above named project; and, as such, shall be made a part of the Documents. Changes, corrections, and deletions enumerated herein shall be included in the Contractor's Bid. Bidders should acknowledge receipt of the Addendum in the space provided in the Contractor's Bid Form. Failure to do so may subject the Bidder to disqualification. In case of any conflict between the drawings, specifications, and this addendum, this addendum shall govern.

Make changes to the bid documents:

AD-201-5: Added lightning protection keynote.

AE-101-5: Window type BB changed to EE and added 'Alternate' callout.

AE-102-5: Added guardrail keynote and 'Alternate' callout; metal grating keynote revised.

AE-103-5: Added guardrail and overhead crane/structure keynote and 'Alternate' callout; metal grating keynote revised.

AE-104-5: Added 'Alternate' callout.

AE-201-5: Window type BB changed to EE, changes to the southeast door frame.

Added lightning protection keynote and 'Alternate' callout.

AE-410: Added overhead hoist keynote.

AE-506: Added 'Alternate' callout.

AE-601: Added window type EE and door frame F10-1 and clarification on louver

Various mechanical and electrical updates.

Schedule: Work will begin Mid April and complete by end of 2024. Final schedule will be negotiated with the successful bidders. Bidder's questions and responses:

1. None

Additional information:

Subcontract agreement

Attachment:

- 1. Above mentioned architectural sheets
- 2. Revised MEP sheets
- 3. Subtract agreement
- 4. Revised specification section.

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University of Utah, Building 303 Seismic Upgrade Salt Lake City, Utah 84123

Permit Set Phase 5 **Addenda No#1**

SECTION 01 2300 - ALTERNATES

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 for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other Work of the Contract.
- C. Schedule: A Part 3 "Schedule of Alternates" Article is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Rooftop exhaust fans, including installation and wiring to the panel.
 - 1. Base Bid: Steel that supports future exhaust fans, roof curb, and conduit stub-ins for exhaust fans, as indicated on Drawings.
 - 2. Alternate: Add exhaust fans, including installation and wiring to panels. as indicated on Drawings and as specified.
- B. Alternate No. 2: Fire suppression sprinkler system and fire alarm system.
 - 1. Base Bid: No fire suppression system or fire alarm system.
 - 2. Alternate: Provide fire suppression sprinkler system and fire alarm system as indicated on Drawings and as specified.
- C. Alternate No. 3: High performance coating at metal buttresses.
 - 1. Base Bid: No new coatings for metal buttresses.
 - 2. Alternate: Provide high-performance coating at buttresses as indicated on Drawings and as specified in Section 09 9600 "High-Performance Coatings."

END OF SECTION 01 2300

18136 (3/21/24) ALTERNATES 01 2300-2

NO. XXXXX

SUBCONTRACT AGREEMENT

THIS SUBCONTRACT AGREEMENT ("Subcontract") by and between GRAMOLL CONSTRUCTION COMPANY, a Utah corporation, hereinafter referred to as "Contractor," and (SUBCONTRACTOR NAME & ADDRESS) hereinafter referred to as "Subcontractor," is entered into and shall be effective as of the date it has been signed by both parties hereto (the "Subcontract Date"). If Subcontractor commences work prior to signing this Subcontract, the Subcontract Date shall be deemed to be the date Subcontractor commenced the Work.

RECITALS

- 1. Contractor has entered into a contract with [PROJECT OWNER] for the construction, performance and completion of a certain project known as [PROJECT TITLE] said contract being hereinafter referred to as the "General Contract".
- 2. Subcontractor desires to furnish, and Contractor desires to have Subcontractor furnish a portion of the work for Contractor. Contractor and Subcontractor desire to establish the terms and conditions that govern the relationship between them when Subcontractor furnishes such labor, materials, and equipment pursuant to this Subcontract.

ARTICLE I

1.1 Scope of Work. Subcontractor shall furnish all labor, materials, permits, tools, machinery, equipment, facilities, supplies and services, pay all applicable taxes, and comply with any and all additional requirements imposed by the jurisdiction in which the work is performed, and to do all things necessary to complete the following items of work under the General Contract (the "Work"):

Furnish all labor, materials, equipment and supervision required to complete all [LABOR TYPE] work required, as described in specifications sections [SECTION NUMBER & DESCRIPTION] and as shown on the drawings in [BID PACKAGE] and comply with all other sections of the specifications and the drawings dated [DATE], for [PROJECT NAME] prepared by [ARCHITECT], as related to such work.

ated	DATEJ, for [PROJECT NAME] prepared by [ARCHITECT], as related to such	
	Addenda:	
	Alternates:	
	Includes:	

Hereinafter, all such documents, plus this Subcontract and the General Contract are collectively referred to as the "Subcontract Documents." All Subcontract Documents other than this Subcontract are incorporated herein by reference and hereby adopted and made a part of this Subcontract as fully as if it were set forth in full herein, subject to the limitations set forth in Article I hereof. All General, Supplemental General, and Special Conditions of the specifications and all terms and conditions of the General Contract shall apply to this Subcontract, except where ambiguous or inconsistent with this Subcontract, in which case the provisions of this Subcontract shall control. Subcontractor acknowledges that the Work to be performed by Subcontractor is not confined to any particular portion of the drawings or section of the specifications but may be scattered throughout those documents. In the performance of this Subcontract, Subcontractor binds itself to Contractor to comply fully with all undertakings and obligations of the Contractor to the extent that they apply to the scope of the Work.

ARTICLE II

2.1 Subcontract Price. Contractor shall pay Subcontractor for completion of the Work in accordance with the Subcontract Documents the lump sum of [SUBCONTRACT PRICE] (the "Subcontract Price.") The Subcontract Price includes all costs and expenses to perform the Work, and associated with the performance of the Work, including, without limitation, (1) all applicable transportation charges, costs and expenses, and (2) all applicable taxes including, without limitation, applicable taxes under any law now existing, or which may

Excludes:

hereafter be adopted by federal, state, local or other governmental authorities, taxing the labor, materials, or equipment furnished, or any other tax levied as a result of performance of the Work. The Subcontract Price may be adjusted only as provided for in Article V.

ARTICLE III

- 3.1 Independent Contractor. The relationship of Subcontractor to Contractor during the term of this Subcontract shall be that of an independent contractor. Subcontractor shall take any and all actions necessary to maintain that independent contractor relationship throughout the term of the Subcontract, and neither Subcontractor nor its employees shall be considered employees of Contractor. Subcontractor shall exercise exclusive control for the means, methods, techniques, and procedures in performance of the Work.
- 3.2 Examination of Subcontract Documents/ Site. Subcontractor has examined the Subcontract Documents and the applicable Laws and Regulations, as that term is defined below, and has examined the site of the work and satisfied itself as to all conditions to be encountered in the performance of the Work. Subcontractor enters this Subcontract on the basis of its own examination, investigation and evaluation of all such matters, and not in reliance on the opinions or representations of Contractor or Owner. If there are any inconsistencies between the Subcontract Documents or ambiguities in any Subcontract Document, Subcontractor shall bring such inconsistencies or ambiguities to the attention of Contractor before the execution of this Subcontract; otherwise, Subcontractor shall be bound by Contractor's resolution of such inconsistencies or ambiguities.

In the event of any discrepancy (1) in the Subcontract Documents, or (2) between the Subcontract Documents and the Laws and Regulations, those which are more stringent, provide persons and property with greater protection, or provide for a better product shall govern. In the event of any discrepancy in the Subcontract Documents between dimensions and measurements for the Work based on scaling, the Work shall comply with the dimensions for such Work. Subcontractor shall promptly notify Contractor in writing of any such discrepancy. To the extent that the Subcontract Documents include plans, specifications or other documents that depict, refer or relate to mechanical, plumbing, electrical or fire protection systems, such documents are diagrammatic only, and are not intended to show the precise alignment, physical locations, or configurations of such Work. The Subcontract Price includes all costs and expenses for such systems to be installed such that they clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance.

Before commencing Work, Subcontractor will satisfy itself as to the location of all utilities that may affect or interfere with Subcontractor's Work. Subcontractor will fully protect all utilities, and keep them operating at all times, unless otherwise provided in the Subcontract Documents. Subcontractor shall take such field measurements as are necessary for the proper execution of its work. It shall be assumed that the Subcontractor has fully accepted the work of others as being satisfactory and he shall be fully responsible thereafter for the satisfactory performance of the work covered by this Agreement, regardless of the defective work of others.

- 3.3 Lines, Levels, Dimensions and Measurements. Subcontractor assumes full responsibility for the proper interpretation and interpolation of all lines, levels, dimensions, and measurements and their relation to benchmarks, property lines, reference lines and the work of Contractor and other trades. In all cases where dimensions are governed by conditions already established, the responsibility for correct knowledge of the condition's rests entirely on Subcontractor. The Work shall comply with the dimensions provided in the Subcontract Documents and shall not be performed based on scales indicated in those documents. No variations from specified lines, levels or dimensions shall be made except on prior written approval of Contractor clearly setting forth the variation.
- 3.4 Shop Drawings/ Submittals. Shop drawings and submittals shall be provided in a minimum of one (1) digital copy to Contractor's office in North Salt Lake. Additional copies shall be provided if required by the Subcontract Documents. Shop drawings and/ or submittals and/ or samples are due within fourteen (14) days of Subcontract's date of issuance. At the time of submission, Subcontractor shall clearly identify in writing any deviation in its shop drawings/ submittals/ samples from the requirements of the Subcontract Documents and must receive from Contractor specific written approval for any deviation.

- 3.5 Warranty. Subcontractor warrants that:
 - 3.5.1 all materials and equipment furnished under this Subcontract will be of good quality and new, unless otherwise required or permitted by the Subcontract Documents.
 - 3.5.2 the materials and equipment provided as part of the Work will be suitable for the purposes intended in the Subcontract Documents.
 - 3.5.3 the Work will be performed in a good and workmanlike manner.
 - 3.5.4 the Work will conform to the requirements of the Subcontract Documents; and
 - 3.5.5 the Work will be free from defects.

Work not conforming to these requirements including, without limitation, substitutions not properly approved and authorized, shall be considered defective (all such work, "Defective Work"). Subcontractor shall (1) execute any special guarantees, and (2) assign to Contractor all warranties, as required by the Subcontract Documents.

- 3.6 Correction and Replacement of Defective Work. During performance of the Work, Subcontractor shall promptly correct or replace Defective Work. Contractor shall determine whether Work is defective and whether work performed by Subcontractor to correct or replace Defective Work complies with Subcontractor's warranty obligations.
 - 3.6.1 If, within the greater of (1) the period established in the Subcontract Documents, or (2) one year after the Completion Date, (hereinafter the "Warranty Period"), any of Subcontractor's Work is found to be defective, Subcontractor shall correct or replace it promptly after receipt of written notice of the Defective Work. If Contractor prefers to accept, rather than correct or repair Defective Work, Contractor may, in its sole discretion, accept the work subject to its right of reimbursement, as set forth below.
 - 3.6.2 Subcontractor shall pay all costs to correct or replace Defective Work without any adjustment to the Subcontract Price or Subcontract Time. If Subcontractor fails to correct Defective Work within the time allowed by Contractor, or if no time is specified, a reasonable time after receipt of notice of such defects, Contractor may correct or replace the Defective Work. Subcontractor shall reimburse Contractor for (1) the costs to correct or replace defective Work, including, without limitation, the costs of additional sampling, testing and inspections, if any, made necessary by Defective Work, corrections or replacements, (2) all Losses that Contractor incurs that arise out of or result from Defective Work, (3) any amounts assessed and collected by Owner from Contractor for acceptance of Defective Work, and (4) any other amounts for which Subcontractor is responsible at law or in equity.
- 3.7 Safety. Subcontractor shall initiate, maintain and supervise all safety precautions, measures, policies and programs, training and inspections in connection with the Work including, without limitation, such precautions and programs as necessary to comply with those required or recommended by O.S.H.A., Governmental, or Quasi-Governmental authorities having jurisdiction and by the Contractor and Owner. This shall include but not be limited to, requirements imposed by the Subcontract Documents. Subcontractor shall provide copies of all Safety Meeting and Training Notes on a weekly basis or as required by Contractor. Subcontractor shall take all necessary precautions to prevent damage, injury or loss to (a) all persons performing the Work or who may be affected by the Work; and (b) all Work, whether stored on or off the Project site. Subcontractor shall promptly report to Contractor all accidents incidental to the Work which result in death or injury to persons or in damage to property. Subcontractor shall provide to Contractor any reasonable documentation requested by Contractor related to any such death, injury, damages.

If the Subcontractor, or its Sub-Contractors or their employees performing work on this Project, are found to be in violation of any O.S.H.A. regulation or standard, and such violation results in a fine or assessment being assessed against the Contractor, without fault on its part, the cost of such fines or other damages will be deducted from the funds due and payable to the Sub-Contractor. Any balance not paid through monies due the Sub-Contractor shall be paid by the Sub-Contractor.

- 3.8 Compliance with Laws and Regulations. Subcontractor shall comply with and give all notices required by all federal, state, local, and municipal laws, regulations, codes, ordinances, and orders that directly or indirectly bear on the Work and/or the performance of the Work including, without limitation:
 - 3.8.1 building codes and ordinances.
 - 3.8.2 worker's compensation laws and regulations.
 - 3.8.3 safety laws, codes, regulations and orders, including, without limitation, the Occupational Safety & Health Act of 1970, as enacted and amended, and regulations issued under that act.
 - 3.8.4 environmental laws including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, the Clean Water Act, the Clean Air Act, and the Resources Conservation and Recovery Act, as enacted and amended, regulations issued under those acts, and counterpart state laws.
 - 3.8.5 wage, hour, labor, and anti-discrimination laws, including, without limitation, the Equal Employment Opportunity (EEO) Executive Order 11246, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, the Equal Pay Act of 1963, the Family and Medical Leave Act, the Americans with Disabilities Act, the National Labor Relations Act, the Fair Labor Standards Act; Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, the Immigration Reform Control Act of 1986, as enacted and amended, and all regulations issued under those acts and Gramoll Constructions Harassment Prevention Policy.
 - 3.8.6 tax laws and regulations; all as enacted and amended, and all regulations issued under such acts

Collectively, these are referred to in this Subcontract as the "Laws and Regulations."

3.9 Subcontractors. Subcontractor shall not assign this contract, in part or in whole, without Contractor's prior written consent, nor shall Subcontractor assign any monies due or to become due to it hereunder, without Contractor's prior written consent. Subcontractor shall, upon request from Contractor at the inception of this Subcontract, provide to Contractor or supplier a written list of sub-subcontractors or suppliers that Subcontractor intends to use in connection with the performance of its obligations under this Subcontract where the dollar amount individually or in the aggregate with the same sub-subcontractor will exceed 5% of the Subcontract Price. Subcontractor shall require all of its sub-subcontractors to comply with the Subcontract Documents to the extent that they apply to the scope of work of such sub-subcontractor. Subcontractor shall not change sub-subcontractors without prior written approval of Contractor.

Upon Contractor's request, Subcontractor agrees to provide documentation evidencing full payment of all subsubcontractors and/or suppliers engaged by Subcontractor with respect to its performance of this Subcontract.

If this Subcontract is terminated, each of Subcontractor's contracts for performance of the Work shall be assigned to Contractor, provided that Contractor accepts such assignment in writing and assumes all rights and obligations of Subcontractor pursuant to each such contract.

- 3.10 Cleanup. Subcontractor will continuously clean, and remove from the jobsite, its debris and excess materials and at the end of each day will leave its working areas in broom-clean condition. Also, he shall clean up to the satisfaction of the inspectors, all dirt, grease marks, etc., from walls, ceilings, floors, fixtures, etc., deposited or placed thereon as a result of the execution of this Subcontract. If Subcontractor fails to do so, Contractor may perform the cleanup and backcharge Subcontractor for the cost of performing such cleanup.
- 3.11 Supervision. Subcontractor shall have available on the project, at all times, a qualified superintendent, who is acceptable to Contractor, to coordinate the Subcontractor's work with that of the Contractor and of the other subcontractors, and any instruction given by the Contractor to said representative on the project shall have the same force and effect as if given to the Subcontractor either at the project or at the Subcontractor's office away from the project site.

ARTICLE IV

4.1 Subcontract Time. Subcontractor shall commence and complete the Work in accordance with the most current schedule prepared by Contractor, as may be revised from time to time during the course of the Project (the "Project Schedule"). Subcontractor shall commence and complete all activities in compliance with the time periods expressly provided for such activities in the Project Schedule. The periods of time provided in the Project Schedule for commencement and final completion of all activities that comprise the Work shall constitute the "Subcontract Time." Except as otherwise expressly noted, as used herein and in the Project Schedule, the term "day" shall refer to a calendar day. The date on which all the work performed by Contractor and its subcontractors is completed and accepted by the Owner shall be referred to hereinafter as the "Completion Date."

Subcontractor's commencement, prosecution, and completion of the Work in the Subcontract Time and in compliance with the Project Schedule is of the essence of this Subcontract.

Subcontractor acknowledges that the precise time periods scheduled for its performance are estimates only. Subcontractor shall cooperate with Contractor in scheduling and performing its work to avoid conflict or interference with the work of Contractor or other trades. Contractor reserves the right, in its sole discretion, to extend or to delay the scheduling of Subcontractor's work if such extension or delay becomes necessary in the opinion of Contractor. Each Subcontractor shall review the schedule of all items of work other than his own, to anticipate completion of specific items of its Work as it affects other trades, to be certain that work following Subcontractor's Work is not delayed. In the event of any conflicts in the Project Schedule between the work of Subcontractor and Contractor or another trade, Contractor shall determine, in its sole discretion, which work shall have precedence and how the parties will coordinate their respective work. All other work not specifically scheduled shall be coordinated as necessary to avoid delaying Work as scheduled. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time based on the coordination of such activities with Contractor or any determination by Contractor concerning coordination of the work.

If Contractor determines, in its sole discretion, that Subcontractor has failed to diligently prosecute the Work in accordance with the Project Schedule, or that Subcontractor will not complete the Work within the Subcontract Time, Contractor may, in its sole discretion, (1) require Subcontractor to work overtime and/or use such additional labor and equipment as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule, (2) supplement Subcontractor's work by furnishing additional labor and equipment to the Project as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule, (3) require Subcontractor to provide reasonable assurances of timely performance in accordance with the Project Schedule, (4) terminate this Subcontract pursuant to Article X, and/ or (5) exercise all other rights and remedies available under this Subcontract. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time as a result of any such action by Contractor.

ARTICLE V

- Changes and Modifications to Subcontract. Without invalidating the Subcontract and without notice to any surety, Contractor may, at any time or from time to time, order additions, deletions or revisions in the Work or acceleration of the Work. Any such additions, deletions, revisions, or acceleration shall be binding upon Contractor and Subcontractor exclusively when made in writing executed by an officer of Gramoll Construction Company. Upon receipt of such an order, Subcontractor shall promptly proceed with the Work involved, which shall be performed under the applicable conditions of this Subcontract and the Subcontract Documents, except as otherwise specifically provided. Subcontractor shall not proceed to perform changes in the Work without prior written authorization from Contractor as provided herein. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time for any work performed without such prior written authorization. Except as provided in this Article V or Section 12.1, the terms and conditions of this Subcontract are not otherwise subject to addition, modification, or change.
- 5.2 Claims. The Subcontract Price and the Subcontract Time may be changed only by a written directive by Contractor, change order, or written Amendment to this Subcontract signed by an officer of Gramoll Construction Company. Within seven (7) working days of an occurrence or event giving rise to a claim for a adjustment in the Subcontract Price or Subcontract Time, Subcontractor shall provide to Contractor written notice (hereinafter, a "Claim") stating the nature of the Claim and the adjustment in Subcontract Price and Subcontract Time requested, accompanied by supporting documentation. All Claims shall include and/ or be accompanied by the following supporting information and/ or documents: (a) the specific amount of the

requested adjustment in the Subcontract Price, if any, (b) the specific number of days' adjustment in the Subcontract Time requested, if any, (c) the reasons justifying the request for an adjustment in the Subcontract Price and the Subcontract Time, including a CPM analysis demonstrating a critical path delay for any requested adjustment in the Subcontract Time, if any, (d) the party or parties whose orders, decisions, acts or omissions give rise to the requested adjustment in the Subcontract Price and/ or the Subcontract Time, and (e) a revised schedule based on the requested adjustments in the Subcontract Time, if any.

A Claim shall be deemed to include all adjustments in Subcontract Price and/ or Subcontract Time to which the claimant is entitled as a result of the occurrence or events giving rise to the Claim. No Claim by Subcontractor for an adjustment of the Subcontract Price or Subcontract Time will be valid if not delivered to the Contractor within the seven (7) working day period prescribed above. Subject to Contractor's right to terminate Subcontractor's rights under this Subcontract, Subcontractor shall continue performance of its obligations under this Subcontract notwithstanding any dispute between Contractor and Subcontractor concerning a Claim asserted by either party.

Subcontractor's sole and exclusive right to an adjustment in the Subcontract Price and/ or the Subcontract Time shall be the adjustment in the contract price and/ or the contract time to the General Contract actually received by Contractor from Owner on behalf of Subcontractor as a result of any such Claim. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time or any other remedy under this Subcontract or remedy for breach thereof as a result of any event, occurrence, or act or omission of Contractor or Owner beyond such adjustment in the contract price and/or the contract time to the General Contract received by Contractor from Owner. Receipt by Contractor of a fully-executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time, a remedy under this Subcontract, or remedy for breach of this Subcontract. Subcontractor's right to recover for such change, remedy, or breach shall be limited to the adjustment in contract price and/ or contract time received by Contractor from Owner for such change, remedy, or breach.

Delays If events, occurrences, acts, or omissions beyond the control of Subcontractor including, without limitation, the work of other trades or contractors, fire, earthquake, acts of God, terrorist acts, riots, war, strikes or other force majeure events delay Subcontractor's Work, the Subcontract Time and/ or the Subcontract Price will be adjusted to the extent of any adjustment in the contract price and/ or the contract time in the General Contract received by Contractor from Owner on behalf of Subcontractor. Subcontractor may make a Claim for an adjustment in the Subcontract Time and/ or the Subcontract Price if, and only if, Subcontractor timely presents to Contractor a Claim in compliance with Section 5.2. Any such adjustment in the contract price and/ or the contract time under the General Contract received by Contractor from Owner shall be Subcontractor's sole and exclusive remedy for such delays, if any, to Subcontractor's Work on the Project. Receipt by Contractor of a fully executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time for delays of any kind or nature.

The Subcontract Time and the Subcontract Price shall not be adjusted and Subcontractor shall not be entitled to any remedy under this Subcontract, or for breach of this Subcontract for (a) delays caused concurrently by Subcontractor and Contractor, Owner or any other person, or (b) any other delays to Subcontractor's Work on the Project for any other events, occurrences, acts or omissions of any person or entity or of any other kind or nature other than that for which an adjustment in the Subcontract Price and/ or the Subcontract Time are expressly authorized in this Section.

Subcontractor-Caused Delays. Subcontractor recognizes and acknowledges that Contractor will suffer substantial Losses if Subcontractor fails to perform the Work in compliance with the Project Schedule. Subcontractor shall indemnify and hold Contractor harmless from and against any and all Losses and liquidated damages that are attributable to or caused by Subcontractor's failure to perform the Work in compliance with the Project Schedule. In addition to liquidated damages, such Losses may include, without limitation, direct jobsite overhead costs such as costs for project management and supervision, quality control, utilities, and other costs such as home office overhead, attorneys' and other professional fees, and other usual and customary mark-ups. If Contractor incurs Losses and/ or is assessed liquidated damages as a result of delays caused concurrently by Subcontractor and other trades or contractors, such Losses and/ or liquidated damages shall be pro rated by Contractor, in its sole discretion, between Subcontractor and all other responsible parties. Contractor's allowing Subcontractor to proceed with Work beyond the time specified for Subcontractor's performance of that Work shall not constitute a waiver of any rights by Contractor to recover damages for Subcontractor's delay.

ARTICLE VI

- 6.1 Payment. Contractor shall pay Subcontractor in monthly payments of 95% percent of the work performed in any preceding month, in accordance with estimates prepared by Subcontractor. All such pay estimates shall be made on the sample form provided, entitled "Subcontractor's Application for Payment." Contractor has the unfettered right, at its discretion, to adjust Subcontractor's statements to reflect any overestimation of the percent of work complete made by Subcontractor in a pay estimate.
- 6.2 Pay-If-Paid. When such pay estimates are approved by Contractor and/ or the Owner, Contractor will pay Subcontractor as payments are received by Contractor from the Owner covering the monthly pay estimates of the Contractor, including the approved portion of Subcontractor's monthly pay estimate.

All payments to Subcontractor will be made only from a special fund, namely, from payments made by Owner to Contractor in respect of work performed by Subcontractor. No payments will be made to Subcontractor unless that fund comes into existence. Owner's payment to Contractor for Subcontractor's Work is an express condition precedent to Contractor's obligation to make any payment to Subcontractor.

- 6.3 Delayed Pay Estimate/ Retainage. If the Subcontractor fails to submit a timely request for payment in an amount approved by Contractor, Subcontractor's payment may be delayed. Contractor shall have the right to withhold from any payment the percentage of retention set forth in the General Contract between Contractor and the Owner, but in no case less than five percent of all amounts due Subcontractor until the project is fully completed and accepted by the architect or Owner, and Contractor has received final payment from the Owner.
- 6.4 Payroll Summaries/ Prevailing Wages. Subcontractor agrees to furnish to Contractor one copy of each weekly payroll summary within seven days after the date of payment. Subcontractor agrees to comply with any and all provisions in the General Contract relating to labor standards, minimum wages and other wage and hour provisions to the same extent as they are binding upon Contractor. In the event the Owner requires Contractor to furnish payroll affidavits, subcontractor agrees to furnish similar affidavits to the Contractor.
- 6.5 **Withholding.** Contractor may withhold payment to Subcontractor in whole or in part to the extent necessary, in Contractor's sole discretion, to protect Contractor against Losses for which Subcontractor is responsible as a result of any Default, as that term is defined below.
- If, at any time prior to final payment, Contractor determines, in its sole discretion, that it is insecure regarding Subcontractor's ability, willingness, or intent to fulfill its warranty obligations under the Subcontract Documents, Contractor may, at its option, withhold final payment during the entire Warranty Period. Subcontractor waives any right to recover interest on the amount withheld during that time. Contractor shall make final payment for Subcontractor's Work within ten (10) days of (1) expiration of the Warranty Period, or (2) Contractor's receipt of adequate assurances from Subcontractor of its ability, willingness and intent to perform the warranty work, subject to receipt of by Contractor of final payment from Owner as provided in Section 6.2.
- 6.6 Backcharges. Where feasible, Contractor shall use reasonable efforts to give Subcontractor notice before any costs are incurred which will be offset against the Subcontract Price. If Subcontractor disagrees with the nature or amount of costs to be incurred, it shall advise Contractor promptly in writing, and in no event later than three (3) days after its receipt of notice from Contractor. Such notification shall include reasons for Subcontractor's dispute and shall propose a reasonable and acceptable alternative along with an estimate of the cost of the alternative, where applicable.
- If Contractor receives no protest to a proposed backcharge or Subcontractor protests and does not provide an alternative to Contractor's proposed action, Contractor may proceed to incur the costs and offset them against the Subcontract Price. Costs so offset shall be deemed to be reasonable and beyond dispute by Subcontractor. If Subcontractor timely protests and proposes a reasonable alternative that Contractor rejects, the disputed costs incurred shall be subject to the dispute resolution procedure outlined in Article XI, if Subcontractor gives Contractor written notice within ten (10) days of such rejection.
- 6.7 Lien Waivers. Subcontractor shall present to Contractor lien waivers for all labor, materials and equipment furnished by others in connection with this Subcontract prior to receiving each payment hereunder. Contractor may require such lien waivers as a condition of progress or final payment.

- 6.8 Liens. Subcontractor shall timely pay all claims for labor, materials, and equipment incurred in the performance of the Work and shall (1) keep the property on which the Project is situated (the "Property") free from mechanic's liens or attachments, and (2) prevent the filing of any claim or stop notice against funds or the payment of funds owed to Contractor, by any person or entity performing a portion of the Work. If any mechanic's lien, attachment, claim against funds, or stop notice is filed against the Property or funds owed to Contractor arising out of or related to performance of the Work, Subcontractor shall, within ten (10) days after written demand by Contractor, take all reasonable steps necessary to cause the effect of such lien, attachment, claim, or stop notice to be released. Upon request by Contractor, Subcontractor shall obtain a lien release or discharge bond or other bond satisfactory to Contractor in the amount of 150% all liens, attachments, claims, or stop notices so recorded or served.
- 6.9 Acceptance of, or payment for, Subcontractor's defective or late work shall not constitute a waiver of any claim or offset that Contractor may have under the terms of this Subcontract.

ARTICLE VII

Indemnification. To the fullest extent allowed by law, Subcontractor shall indemnify and hold harmless Contractor, Owner, the project architects and engineers, and all of their respective agents and employees (the "Indemnitees") from and against all claims, damages, losses and expenses including, without limitation, attorney's fees ("Losses"), arising out of or resulting from (1) any Default, or failure by Subcontractor to comply with any express duty, warranty, representation, acknowledgment or covenant in this Subcontract, (2) any charges, claims, or liquidated damages assessed and collected by the Owner against Contractor as a result of and to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees; (3) personal or bodily injury to or death of any person, including, without limitation, any agent, employee, guest or invitee of Subcontractor or its sub-subcontractors, other contractors, Contractor, or Owner, to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, quests or invitees. (4) damage to or loss of property to the extent caused by any act or omission of Subcontractor or its subsubcontractors, guests or invitees, (5) any use of Contractor's equipment, tools, rigging, blocking, hoists, or scaffolding, (6) liens, attachments, claims, or stop notices against funds or payments owed to Contractor, recorded or served by any of Subcontractor's sub-subcontractors, or (7) infringement of any patent or copyright by Subcontractor. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

The indemnity agreement shall be covered by Subcontractor's comprehensive general liability insurance policy. The indemnity obligations set forth in this Subcontract shall not be limited by (1) the Subcontract Price, or (2) the amount or type of proceeds, compensation, or benefits available to Subcontractor under any insurance policy including, without limitation, any self-insurance or similar program or policy maintained by Subcontractor.

At the request of an Indemnitee, Subcontractor shall defend any claim for Losses against an Indemnitee. The Indemnitee shall be entitled to approve the legal counsel to be paid for by Subcontractor for the purpose of defending such claims for Losses. No claim for Losses shall be settled or discontinued, nor shall judgment be permitted to be entered without the written consent of the Indemnitee, which consent shall not be unreasonably withheld.

ARTICLE VIII

- 8.1 Insurance. Unless otherwise specified in the Subcontract Documents indicating that insurance shall be provided pursuant to an owner-controlled or contractor-controlled insurance program, Subcontractor shall purchase and maintain the following insurance coverages for itself and the Additional Insureds during the course of the Work and during the Warranty Period, and shall maintain completed operations coverage for itself and the Additional Insureds for the length of time necessary to cover any manifestation date within the applicable statutes of limitations and/ or repose which pertain to the Work. If additional insurance coverage or greater limits of liability are required by the General Contract Documents, such provisions shall control.
 - 8.1.1 Commercial General Liability coverage on an occurrence basis with a deductible not to exceed \$1,000 per occurrence that includes coverage for liability assumed under any oral or written contract relating to the conduct of Subcontractors' business, including this Subcontract, and also including (1) broad form property damage liability coverage; (2) premises-operations coverage; (3) explosion and collapse hazard coverage; (4) underground hazard; (5) products and completed operations hazard coverage, and (6) independent contractor coverage. The limit of

liability shall be not less than \$1,000,000 each occurrence, \$2,000,000 general aggregate (subject to a per project general aggregate provision applicable to the project per ISO form CG 2503 or its equivalent), \$2,000,000 products/completed operations aggregate and \$1,000,000 personal and advertising injury.

Claims Made/Self-Insurance Provisions. Subcontractor shall not provide general liability insurance under any Claims-Made General Liability form without express prior written consent of Contractor. Any self-insurance program providing coverage in excess of \$25,000 per occurrence requires the prior written consent of the contractor.

- 8.1.2 Automobile Liability coverage in comprehensive form affording coverage for owned, hired, and non-owned vehicles. The limit of liability shall not be less than \$1,000,000 for bodily injury and property damage combined, \$1,000,000 for each accident. (No aggregate on automobile insurance). The General Contractor, Owner and all other parties required of the General Contractor, shall be included as insureds on the auto policy.
- 8.1.3 Workers Compensation and Employers Liability coverage with Workers Compensation limits complying with statutory requirements, and Employers Liability Insurance limits of at least \$1,000,000 each accident, \$1,000,000 for bodily injury by accident, and \$1,000,000 each employee for injury by disease. Workers' compensation insurance shall comply with the statutory form.
- 8.1.4 Commercial Umbrella coverage with limits of at least \$1,000,000. Umbrella coverage must include as insureds all entities that are additional insureds on the CGL. Umbrella coverage for such additional insureds shall apply as primary before any other insurance or self-insurance, including any deductible, maintained by, or provided to, the additional insured other than the CGL, Auto Liability and Employers Liability coverages maintained by the Subcontractor.
- 8.1.5 Hazardous Materials If Subcontractor and/or its subcontractors or suppliers, regardless of tier, perform remediation of hazardous material, or if their operations create an exposure to hazardous materials as those terms are defined in federal, state, or local law, Subcontractor and its subcontractors and suppliers must obtain a "Contractor's Pollution Liability" policy with limits not less than \$1,000,000 per occurrence and \$2,000,000 aggregate for Bodily Injury, Personal Injury, and Property Damage, naming Contractor and Owner as additional insured. If Subcontractor or its subcontractors or suppliers haul hazardous material (including, without limitation, waste), they must carry Auto Liability insurance with a \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage applicable to all hazardous waste hauling vehicles and include MCS 90 and CA9948.
- 8.1.6 Professional Liability Coverage Any subcontractor performing work that includes design/build work or services shall obtain a Professional Liability Insurance Policy. Design/build work includes, without limitation, design/build work with respect to mechanical, structural, plumbing, and fire sprinkler systems. Coverage must allow for a minimum of two years following the completion of the project. If Owner or Contractor elects to purchase a project design policy, Subcontractor's policy shall be endorsed to provide excess coverage only.

The liability insurance policies, including commercial general liability, automobile liability and excess liability, shall be endorsed to provide: (1) that Contractor and Owner are additional insureds (the "Additional Insureds") per ISO form CG 20 10 07 04 and CG 20 37 07 04 or their equivalent, (2) that the insurance afforded by the policies shall apply to Contractor as though a separate policy had been issued to Contractor, and (3) that the coverage afforded to Contractor is primary and any other insurance in force for Contractor will be excess and will not contribute to the primary policies. All required insurance shall be provided by insurance companies with a rating of A- VII or better by A.M. Best Company.

Prior to performing any Work, Subcontractor shall provide Contractor with a certificate of insurance demonstrating that Subcontractor has obtained all of the insurance coverages required by this Section. An additional insured endorsement shall be attached to such certificate of insurance. The certificate of insurance and the insurance policies effectuating coverages required by this Section shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to Contractor.

- 8.2 Subcontractor waives all rights against Contractor, Owner and Architect and their respective agents, officers, directors and employees for recovery of damages to the extent these damages are covered by commercial general liability, commercial umbrella liability, business auto liability or workers compensation or employers liability insurance.
- 8.3 Subcontractor will protect the job site, the work of Contractor and subcontractors, and its own work until completion and acceptance of the entire project. Contractor and Subcontractor waive all rights against each other and against all other subcontractors and Owner for loss or damage to the extent reimbursed by Builder's Risk or any other property or equipment insurance applicable to the work, except such rights as they may have to the proceeds of such insurance. If the Subcontractors policies of insurance referred to in this Section require an endorsement or consent of the insurance company to provide for continued coverage where there is a waiver of subrogation, the owners of such policies will cause them to be so endorsed or obtain such consent.

Upon written request of the Subcontractor, Contractor shall provide Subcontractor with a copy of the Builder's Risk policy of insurance or any other property or equipment coverage in force for the project and procured by Contractor. Subcontractor shall satisfy himself as to the existence and extent of such coverage prior to commencement of Subcontractor's work.

If Builder's Risk insurance purchased by Owner or Contractor provides coverage for Subcontractor for loss or damage to Subcontractor's work, Subcontractor shall be responsible for the insurance policy deductible amount applicable to damage to the Subcontractor's work and/or damage to other work caused by Subcontractor. If not covered under the Builder's Risk policy of insurance or any other property or equipment insurance required by the Contract Documents, Subcontractor shall procure and maintain at his own expense property and equipment insurance for portions of Subcontractor's work stored off the site or in transit.

If Owner or Contractor has not purchased Builder's Risk or equivalent insurance including the full insurable value of Subcontractor's work, then Subcontractor may procure such insurance at his own expense as will protect the interests of Subcontractor, and his subcontractors in the work. Such insurance shall also apply to any of the Owner's or Contractor's property in the care, custody, or control of Subcontractor.

8.4 Health Insurance Certification. Subcontractor hereby certifies that the Subcontractor and all applicable subcontractors and suppliers at any tier that is subject to UCA 63A-5-205 and Utah Administrative Code Rule R23-23, has and will maintain for the duration of this contract, an offer of qualified health insurance coverage for their employees; all in accordance with UCA 63A-5-205, and Utah Administrative Code Rule R23-23.

ARTICLE IX

- 9.1 Default. The following acts or omissions by Subcontractor shall constitute events of default ("Default") under this Subcontract and shall give rise to all rights and remedies for material breach of this Subcontract, including, without limitation, termination of this Subcontract:
 - (a) failure to perform the Work in strict compliance with this Subcontract and the Subcontract Documents.
 - (b) failure to promptly and diligently correct or replace Defective Work.
 - (c) failure to diligently perform the Work in compliance with the Project Schedule including, without limitation, failure to supply sufficient skilled laborers, materials, or equipment.
 - (d) failure to provide reasonable assurances of timely performance.
 - (e) failure to provide timely submittal information for review and approval as provided in the Subcontract Documents.
 - (f) failure or evidence of failure to timely pay workers, subcontractors, or health, welfare, pension or other benefit funds for labor, materials or equipment furnished as part of the Work.
 - (g) failure to keep the Property free from mechanic's liens.

- (h) third party claims or evidence indicating, in Contractor's sole discretion, probable filing of such claims unless Subcontractor provides security against such claims in a form acceptable to Contractor.
- (i) failure to pay prevailing wages, if required.
- (j) assignment or subcontracting the majority of the Work without prior written authorization from Contractor.
- (k) failure to perform the Work in strict compliance with the Laws and Regulations or the Safety Rules and Regulations.
- (I) evidence that the Work can not be completed for the unpaid balance of the Subcontract Price, as determined by Contractor in its sole discretion.
- (m) evidence that the Work will not be completed within the Subcontract Time, and/ or that the unpaid balance will not be adequate to cover actual or liquidated damages for the anticipated delay, as determined by Contractor in its sole discretion.
- (n) damage to the work of Contractor or others on the Project.
- (o) insolvency, inability to pay its current obligations, filing of any action seeking the protection of a bankruptcy court where this Subcontract is rejected by the trustee or the Subcontractor is unable to satisfy the requirements for assuming this Subcontract under the applicable provisions of the bankruptcy code, seeking to effect reorganization or workout with its creditors, filing in bankruptcy court by its creditors seeking to compel Subcontractor to reorganize or liquidate assets, appointment of a receiver or trustee related to any insolvency of Subcontractor, and garnishment of any amounts owed by Contractor to Subcontractor;
- (p) any other material breach of this Subcontract or the Subcontract Documents; and
- (q) any act, occurrence or event that places Subcontractor in default under any agreement between Contractor and Subcontractor other than this Subcontract.
- 9.2 Notice of Default. Upon written notice of Default, Subcontractor shall, within forty-eight (48) hours of receipt of such notice, take all actions requested by Contractor and such other actions as may be necessary to cure such Default. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time as a result of any efforts to cure such Default.
- 9.3 If Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notice of Default, Contractor may cure or remedy any Default by Subcontractor. Subcontractor shall reimburse Contractor and/or Contractor may backcharge Subcontractor for, any and all Losses it incurs, plus a reasonable allowance for profit, to cure or remedy any Default, or as a result of any other failure of Subcontractor to comply with the terms and conditions of this Subcontract or the Subcontract Documents. Contractor may offset against the Subcontract Price any Losses incurred as a result of a Default or any amounts owed to Contractor pursuant to this Section.

ARTICLE X

10.1 Termination for Cause. If (1) Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notification of such Default, or (2) a Default threatens to cause immediate personal or bodily injury or death, Contractor may terminate Subcontractor's rights under this Subcontract in its entirety and Contractor shall have all the rights and remedies available under this Subcontract and at law or in equity including, without limitation, those remedies specified below.

If Contractor terminates this Subcontract for cause as provided herein, Contractor may, without prejudice to any other of its rights or remedies, perform and complete the Work and in connection therewith, Contractor may do any or all of the following:

10.1.1 exclude Subcontractor from the Project.

- 10.1.2 take possession of all materials, equipment, and tools intended for performance of the Work including materials and equipment at the Project site, stored materials and equipment, and materials and equipment in the course of preparation wherever located (without liability to Subcontractor for trespass or conversion),
- 10.1.3 accept assignment of Subcontractor's rights under all of Subcontractor's contracts with subsubcontractors for performance of the Work, pursuant to Section 3.9 and/or
- 10.1.4 otherwise obtain materials and equipment and employ persons which, in Contractor's sole discretion, are necessary to complete the Work.

Upon termination for cause as provided herein, Subcontractor shall not be entitled to receive any further payment until completion of all of the Work and acceptance of the entire Project. Subcontractor shall reimburse Contractor for all Losses it incurs to complete Subcontractor's Work, plus a reasonable allowance for overhead and profit. If the unpaid balance of the Subcontract Price exceeds the Contractor's Losses, plus allowance for overhead and profit, Contractor shall pay such excess to Subcontractor. If such Losses, overhead, and profit exceed the unpaid balance of the Subcontract Price, the Subcontractor shall pay the difference to Contractor. In addition, Contractor shall be entitled to such other and further remedies available at law or in equity.

- 10.2 Suspension for Convenience. Contractor may, without cause, suspend, delay, or interrupt the Work in whole or in part for such period of time as the Contractor may determine and/ or as provided in the Subcontract Documents. Subject to the requirements and limitations of Article V, the Subcontract Price and Subcontract Time may be adjusted for increases in the cost and time to complete the Work caused by such suspension. No adjustment shall be made, however, to the extent that (a) performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Subcontractor is responsible, (b) an adjustment is made or denied under another provision of this Subcontract, or (c) Contractor is not entitled to a adjustment in the contract price and/ or the contract time under the General Contract on behalf of Subcontractor as a result of such suspension.
- 10.3 Termination for Convenience. The Contractor may, at any time, terminate this Subcontract for the convenience of Contractor and without cause. Subcontractor's sole and exclusive right to compensation for Losses resulting from such termination shall be the compensation actually received by Contractor from Owner on behalf of Subcontractor as a result of any such termination. Subcontractor shall not be entitled to any compensation for Losses or any other remedy under this Subcontract or for breach thereof as a result of such termination beyond such adjustment in the contract price and/ or the contract price to the Prime Contract received by Contractor from Owner on behalf of Subcontractor. Receipt by Contractor of such compensation is a condition precedent to Subcontractor's right, if any, to compensation for Losses resulting from such termination. Subcontractor's right to recover for such termination shall be limited to the compensation received by Contractor from Owner for such termination on behalf of Subcontractor.

ARTICLE XI

- 11.1 Dispute Resolution. Disputes, if any, between Subcontractor and Contractor arising out of or relating to this Subcontract or the Work shall be resolved as provided in this Article.
- 11.2 Disputes Involving the Owner or the Architect. Any disputes in which the Owner or the Architect is a party shall be governed by the dispute resolution procedures in the Subcontract Documents other than this Subcontract. If those Subcontract Documents contain no dispute resolution procedures, such disputes shall be resolved as provided in Section 11.3 below.
- 11.3 Disputes Not Involving the Owner or the Architect. At the sole and exclusive discretion of Contractor, all disputes in which neither the Owner nor the Architect is a party shall be resolved in (1) binding arbitration, or (2) litigation in a state or federal court of competent jurisdiction situated in the state of the location of the Project. If Contractor determines to resolve disputes under this Subcontract by binding arbitration, the following rules shall apply.
 - I1.3.1 Binding Arbitration shall be pursuant to the current Construction Industry Arbitration Rules of the American Arbitration Association unless the parties mutually agree otherwise. A written demand for arbitration shall be filed with the American Arbitration Association and the other party within

- a reasonable time after the dispute or claim has arisen, but in no event after the applicable statute of limitations for a legal or equitable proceeding would have run.
- 11.3.2 Any Arbitration pursuant to this Subcontract may be joined or consolidated with any arbitration involving (1) any other person or entity necessary to resolve the claim, dispute or controversy, (2) the same transaction or series of related transactions as those in the Arbitration, or (3) a common issue of law or fact with those in the Arbitration creating the possibility of conflicting rulings by more than one arbitrator or panel of arbitrators. The location of the arbitration proceedings shall be in the state of the location of the Project. The arbitration award shall be final.
- 11.3.3 Arbitration pursuant to this Section shall be governed by the applicable version of the Uniform Arbitration Act in enacted by the state of the location of the Project. The arbitrator, in determining an award, shall be without jurisdiction to enter any award not in conformity with the laws determined by the parties to be controlling pursuant to Section 12.4. The arbitrator shall have all authority necessary to enforce all the terms and conditions of this Subcontract and provide for all remedies available hereunder including, without limitation, interim relief, if appropriate. The arbitrator shall prepare a (1) reasoned award, or (2) findings of fact and conclusions of law, applying the governing laws to the facts of the case.
- 11.3.4 Notwithstanding the foregoing, the arbitrator shall be deemed to have exceeded the authority granted under this Subcontract if, and to the extent, an award does not comply with the requirements of this Subcontract. The Parties consent to the jurisdiction of the state and federal courts of the state in which the Project is located for the purposes of (1) enforcing the parties' obligation to arbitrate disputes, claims and controversies under this Subcontract, (2) determining the scope of the matters that are subject to arbitration, (3) requiring the joinder and/ or consolidation of matters subject to arbitration, and (4) enforcing and entering judgment upon the arbitration award entered by the arbitrator. Each Party waives any objection that it may now have or hereafter have to venue in such courts.
- 11.3.5 If any action or proceeding is brought in connection with this Subcontract, the prevailing party shall be entitled to recover its costs and reasonable expert and attorneys' fees.

ARTICLE XII

- 12.1 This Subcontract and the Subcontract Documents constitute the final, complete, and exclusive statement of the agreement between the parties, and supersedes and replaces in their entirety all prior oral or written agreements, including but not limited to, bids and bid acceptances. This Subcontract may not be altered, amended or extended, except by written agreement of the parties hereto executed by James Gramoll on behalf of Contractor.
- 12.2 This Subcontract shall inure to the benefit of and be binding upon the parties hereto, their successors and permitted assigns.
- 12.3 Delay by Contractor in enforcing any rights or remedies in the event of Default or a breach of any term or condition of this Subcontract or any other contract between Contractor or Subcontractor, shall not be construed as a waiver of such Default or breach. Payment by Contractor of progress payments or final payment shall not be construed as acceptance of any work for which payment is made or waiver of any Claims, rights, or remedies under this Subcontract.
- 12.4 This Subcontract shall be construed and interpreted as a whole in accordance with its fair meaning and in accordance with the laws of the state of the location of the Project. Under no circumstances, however, shall such laws be interpreted to apply conflict of laws principles to require the laws of another state to determine the interpretation or construction of this Subcontract.
- 12.5 Performance Guaranty. If Subcontractor operates as a corporation, limited liability company, partnership or a business entity other than as an individual or sole proprietor, this Subcontract will be signed by the President and Secretary of the corporation, the managing member(s), partners, or other authorized principals of Subcontractor's company, and the officers, managing member(s), partners, and/ or other principals signing this Subcontract on behalf of the corporation, limited liability company, partnership or other

business entity do jointly and severally, guarantee to the Contractor the full and faithful performance of this Subcontract by Subcontractor, and do further agree, jointly and severally, that they shall be personally liable to Contractor for the full and faithful performance of Subcontractor's obligations under this Subcontract. Failure of Contractor to request a performance bond from Subcontractor shall not affect the obligation assumed by the officers, managing members, partners or other principals signing this Subcontract on behalf of Subcontractor.

SUBCONTRAC	TOR: (SUBCONTRACTOR NAME)	
	Ву	
	Print	
	Its	
	Date:	
CONTRACTOR	: GRAMOLL CONSTRUCTION COMPANY	
	Auth	
	Print Dustin Gramoll, President	
	Date:	

IN WITNESS WHEREOF, this Subcontract has been executed by the Contractor and Subcontractor as of the

day and the year below.

02.02 REMOVE EXISTING MASONRY WALL FROM 11'-0"
A.F.F. AND UP, BRACE EXISTING MASONRY, MEP EQUIPMENT, CONDUITS, PIPES, ETC. AS REQ'D. SALVAGE @ 40 SF FOR PATCH & REPAIR

T.O. MAIN ROOF

EXT'G ROOF (VARIES) 4787' - 4"

FAN FLOOR 4772' - 0"

PIPING FLOOR 4757' - 0"

T.O. EXT'G BRICK 4753' - 0"

OPERATING FLOOR 4742' - 0"

02.01 REMOVE EXISTING WINDOW

02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" 02.20 EXISTING DOOR TO REMAIN

REFERENCE NOTES

02.35 EXISTING BUTTRESS FRAMEWORK FROM PREVIOUS PHASE TO REMAIN AND PROTECT 02.43 EXISTING LOUVER TO REMAIN, PROTECT, PROVIDE A CLEAN/CLEAR AIR FLOW

02.80 REMOVE EXISTING METAL WALL PANEL, PREP FOR NEW INSULATED METAL PANEL 02.81 REMOVE EXISTING TEMPORARY WALL

02.87 REMOVE EXISTING DOOR AND FRAME, PREP FOR NEW BUILD

02.100 REMOVE AND PROTECT LIGHTNING PROTECTION FOR FUTURE REINSTALLATION

32.03 CHAIN LINK FENCE

SOUTH DEMO ELEVATION SCALE: 1/8" = 1'-0"

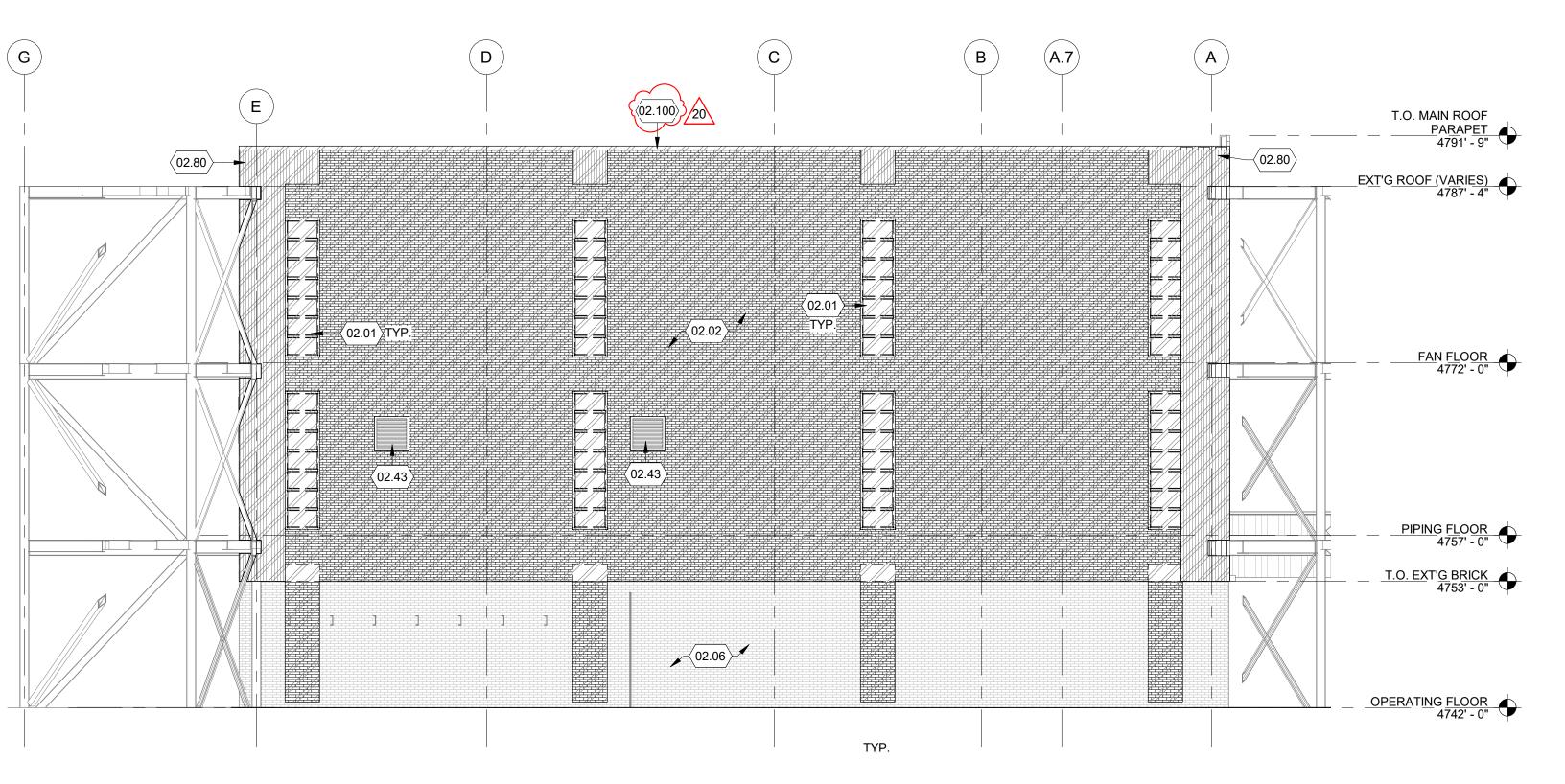
(02.06)

√02.86 ∑

(02.20)

 $\langle 02.35 \rangle$

(02.80)



(02.100)

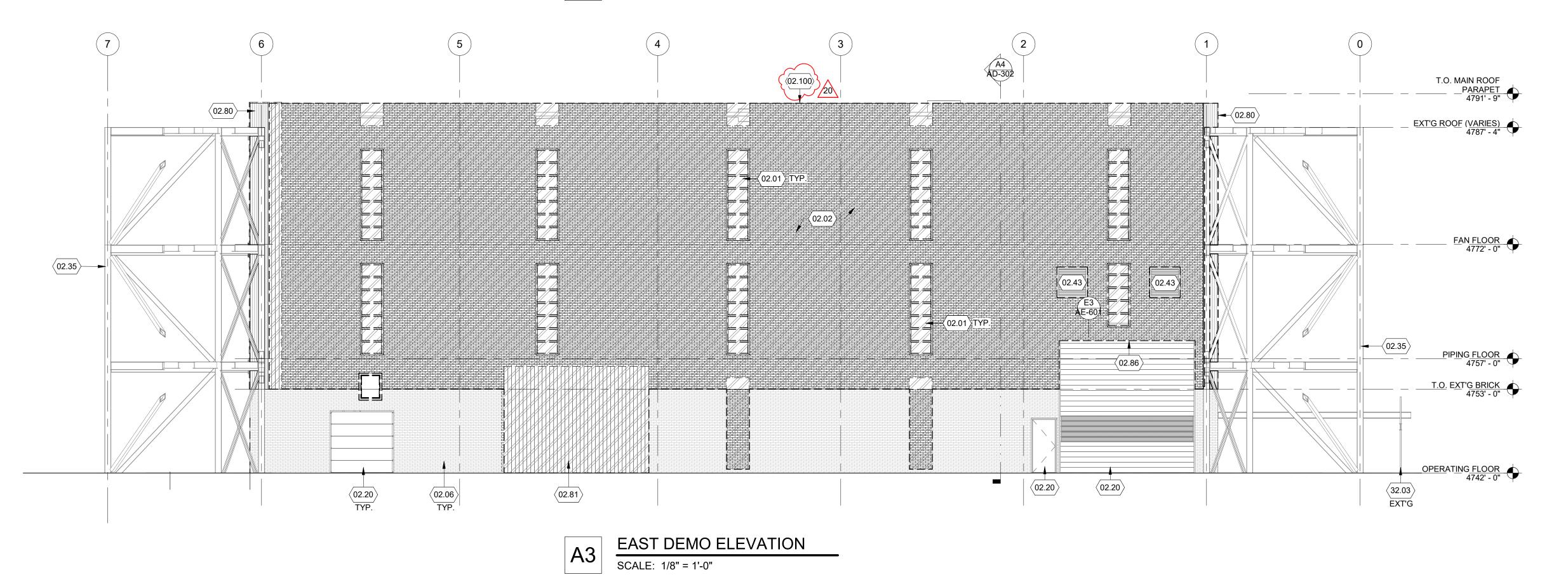
(02.01)

02.87

02.80

NORTH DEMO ELEVATION

SCALE: 1/8" = 1'-0" В3



PHASE 5 DEMO LEGEND





U BLDG. 303 SEISMIC UPGRADE LAKE CITY UTAH

PROJECT NUMBER 18136

EXTERIOR

ELEVATIONS

DEMO

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION 2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL 3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2 4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS 5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD 6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

AD-201-5

PHASE 5

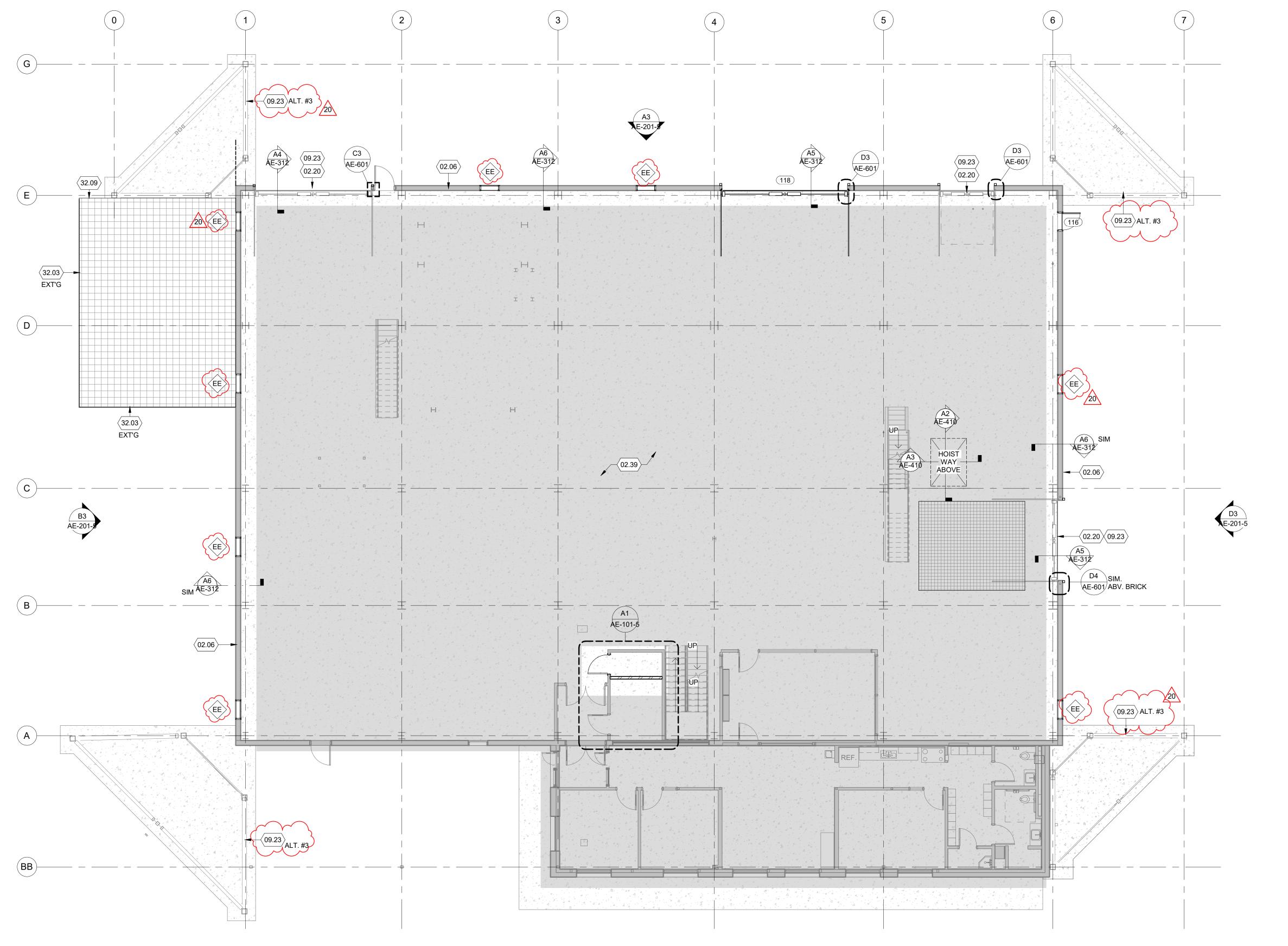
02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.20 EXISTING DOOR TO REMAIN
02.39 NO WORK PERFORMED IN THIS AREA

02.39 NO WORK PERFORMED IN THIS AREA
02.94 REINSTALLATION OF EXISTING DOOR AND FRAME, REVERSE HARDWARE AS REQ'D
09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6

26.03 REROUTE ELECTRICAL CONTROL, SENSOR, SWITCHES, ETC., AS REQ'D

32.03 CHAIN LINK FENCE

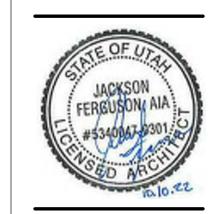
32.09 10' TALL GALVANIZED CHAIN LINK FENCE TO MATCH EXISTING, ATTACHED TO EXISTING CORNER POST AND TERMINATE AT THE BUILDING EXTERIOR WALL. PROVIDE A STEEL CHANNEL AT TOP OF FENCE POST, MATCH EXISTING



OPERATING LEVEL FLOOR PLAN PHASE 5

PHASE 5 ALTERNATES

1. ROOF TOP EXHAUST FANS TO INCLUDE: FANS, INSTALLATION, WIRING TO THE PANEL.
2. FIRE SUPRESSION AND FIRE ALARM.
3. HIGH PERFORMANCE PAINT AT ALL EXTERIOR BUTTRESSES.



303 SEISMIC UPGRADE Y UTAH

△ DATE REVISION 20 3-20-24 Ph. 5 Add #1

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION 2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL 3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2 4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS 5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD 6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

PROJECT NUMBER 18136

OPERATING LEVEL FLOOR PLAN PHASE 5

AE-101-5

3/22/2024 10:29:17 AM

STORAGE

PROGRAMMER

[110 .

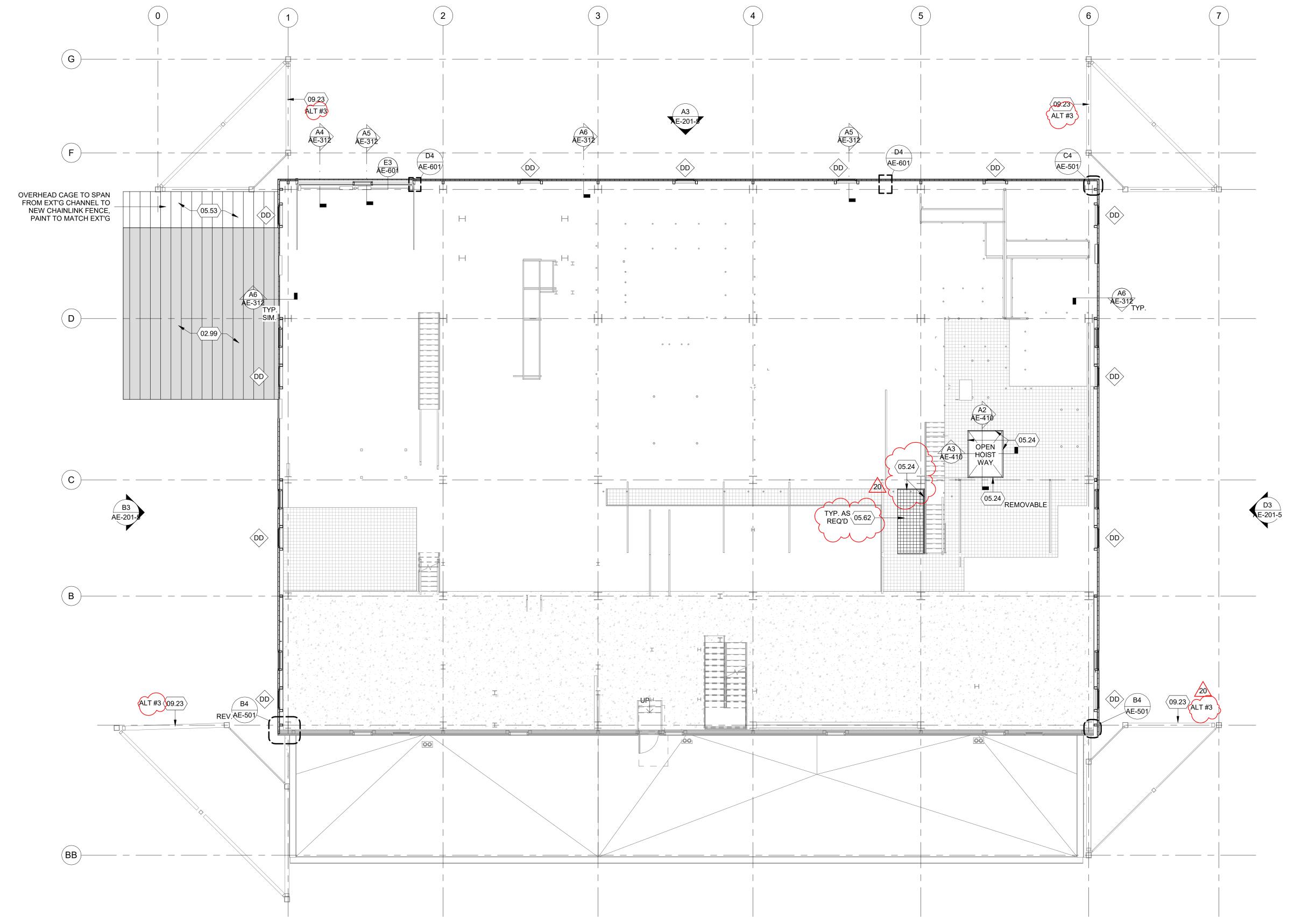
STORAGE ROOM

STRUCTURAL W BEAMS, HOT DIPPED GALVANIZED, PAINTED

05.62 INFILL WITH SALVAGED METAL GRATING, ADD STEEL SUPPORT AND NEW GRATING (SAME SPEC AS ORIGINAL) AS REQ'D, LEVEL WITH

ADJACENT SURFAĆE

09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO
RE. GEN. NOTE #6



PIPING LEVEL FLOOR PLAN - PHASE 5

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

PHASE 5 FLOOR LEGEND

CONCRETE FLOO

FLOOR GRATE

PHASE 5 ALTERNATES

 ROOF TOP EXHAUST FANS TO INCLUDE: FANS, INSTALLATION, WIRING TO THE PANEL.
 FIRE SUPRESSION AND FIRE ALARM.
 HIGH PERFORMANCE PAINT AT ALL EXTERIOR BUTTRESSES.

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION 2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL 3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2 4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS 5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD 6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

△ DATE REVISION 20 3-20-24 Ph. 5 Add #1

303 SEISMIC UPGRADE Y UTAH

PROJECT NUMBER 18136

PIPING LEVEL FLOOR PLAN PHASE 5

AE-102-5

REFERENCE NOTES

EXPOSED

RE. GEN. NOTE #6

(MANUAL)

05.02 STRUCTURAL BEAM, PRIMED; PAINTED IF

05.24 42" HIGH GUARDRAIL, MATCH EXISTING DESIGN, PAINTED

05.18 3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.

05.62 INFILL WITH SALVAGED METAL GRATING, ADD STEEL SUPPORT AND NEW GRATING (SAME

09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO

OPERATION LEVEL TO BELOW ROOF. ON TROLLEY FOR BACK/FORTH SLIDING

11.01 ELECTRICALLY OPERATED 1000 LBS CAPACITY (MIN.) HOIST TO REACH FROM

SPEC AS ORIGINAL) AS REQ'D, LEVEL WITH ADJACENT SURFACE

PHASE 5 FLOOR LEGEND

CONCRETE FLOOR

FLOOR GRATE

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL

2. BRACE EXISTING MEP CONDUITS, PIPES, ETC.,

3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2

CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS

FOR ALL EXPOSED STRUCTURAL STEEL

4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE

COMPANY PRIOR TO BEGIN WORK IN THE HIGH

A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL

6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN

AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED

INFORMATION

METAL PANEL

PRESSURE GAS YARD

FAN LEVEL FLOOR PHASE 5

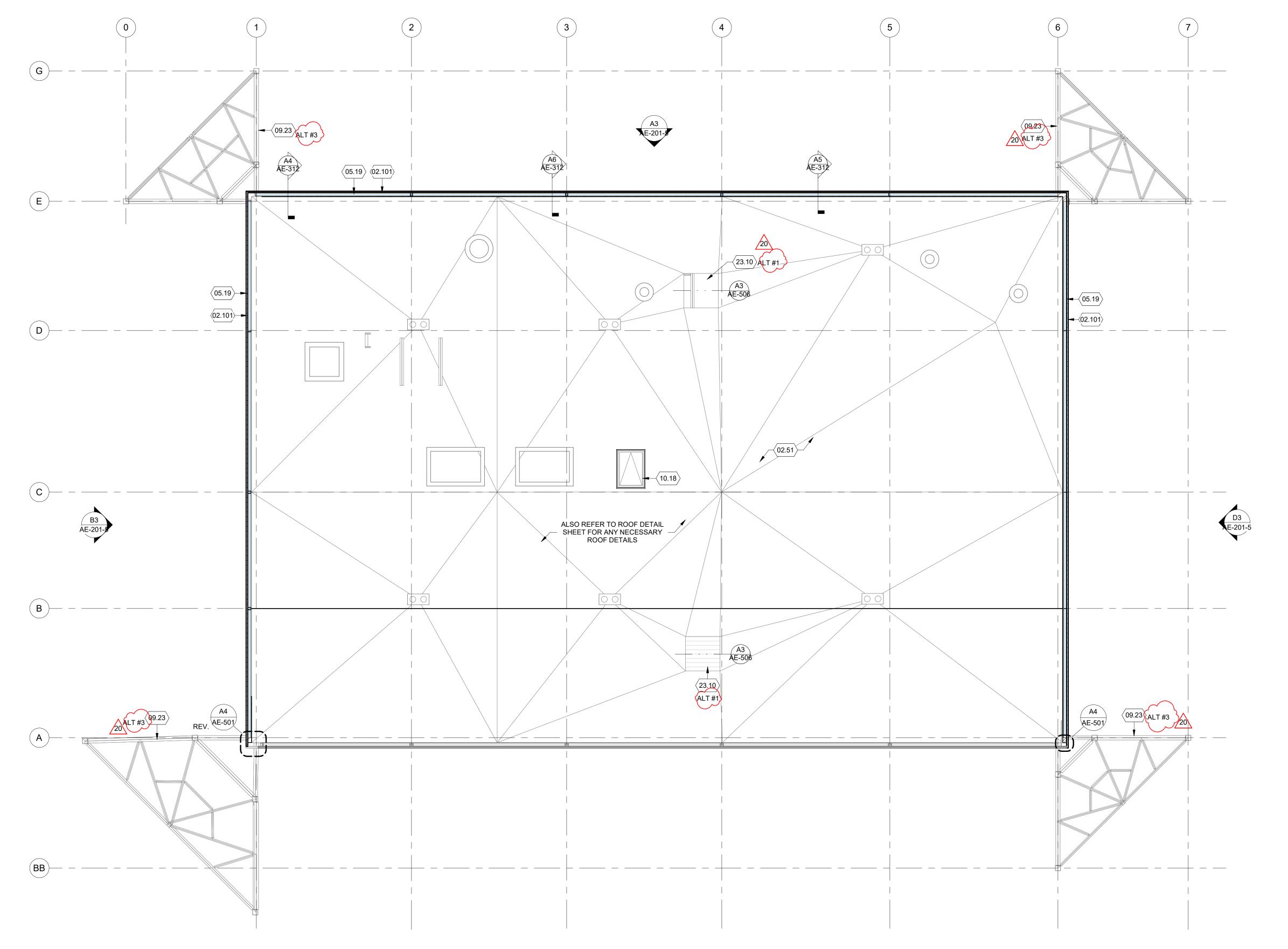
AE-103-5

FAN LEVEL FLOOR PLAN - PHASE 5

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

09.23 ALT #3 OPEN TO S BELOW 05.62 TYP. AS REQ'D REMOVABLE

- 02.51 EXISTING ROOF SYSTEM, PROTECT
- 02.101 REINSTALLATION OF EXT'G LIGHTNING PROTECTION, WATER TIGHT, MUST MEET CURRENT DFCM STANDARD 05.19 PREPAINTED METAL CAP/FLASHING, CAULK
- AS REQ'D 09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6
- 10.18 PREMANUFACTURED FALL PROTECTION WITH SELF CLOSING GATE, ATTACHED TO SIDES OF THE ROOF HATCH CURB
- 23.10 ROOF TOP EXHAUST FAN, RE. MECH DWG.



PHASE 5 ALTERNATES

ROOF TOP EXHAUST FANS TO INCLUDE: FANS, INSTALLATION, WIRING TO THE PANEL.
 FIRE SUPRESSION AND FIRE ALARM.
 HIGH PERFORMANCE PAINT AT ALL EXTERIOR BUTTRESSES.

GENERAL NOTES

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A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL

FOR ALL EXPOSED STRUCTURAL STEEL

AE-104-5

ROOF PLAN (EL. VARIES) PHASE 5

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

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PHASE 5

PROJECT NUMBER 18136

- 02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0"
- 02.20 EXISTING DOOR TO REMAIN
- 02.101 REINSTALLATION OF EXT'G LIGHTNING PROTECTION, WATER TIGHT, MUST MEET
- CURRENT DECM STANDARD
- VERTICALLY, ATTACH TO STÈEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.
- 05.64 PAINTED HSS FRAME W/ END CAPS, REFER TO
- 08.03 DOOR. RE DOOR SCHEDULE
- 08.14 REFINISH TO MATCH ADJ. NEW LOUVERS, ADD
- 09.22 PREP & PAINT TO MATCH NEW DOORS, SERVICE
- & LUBE ALL MECHANICAL COMPONENTS 09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO
- 32.09 10' TALL GALVANIZED CHAIN LINK FENCE TO MATCH EXISTING, ATTACHED TO EXISTING CORNER POST AND TERMINATE AT THE BUILDING EXTERIOR WALL. PROVIDE A STEEL CHANNEL AT TOP OF FENCE POST, MATCH

303 SEISMIC UPGRADE Y UTAH

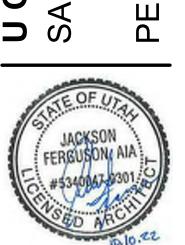
18 12-6-23 Ph. 5 PR #2-R1 19 2-14-24 Ph. 5 PR #2-R2 20 3-20-24 Ph. 5 Add #1

PROJECT NUMBER 18136

EXTERIOR

ELEVATIONS PHASE 5

AE-201-5



20 3-20-24 Ph. 5 Add #1

ENLARGED STAIRS PLANS AND SECTIONS

AE-410

REINSTALLATION OF EXT'G

- WATER TIGHT, MUST MEET

WEST WALL PARAPET CAP

INSIDE PARAPET CORNER

PARAPET 4791' - 9"

T.O. HSS

4791' - 7 1/2" F.V.

STEEL TUBE, PRIMED &

FROM PHASE 4; SHOP DWGS. AVAILABLE UPON

REQUEST

NOTE: MUST CONFORM TO CURRENT DFCM DESIGN STANDARD,

VERIFY WITH MECH. SUBMITTAL

RE. STRU. DWG. FOR ADDITIONAL STRU. SUPPORT

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

ROOF CURB DETAIL - PHASE 5

PARAPET CAP DETAIL - PHASE 5

\(\begin{aligned}
23.09
\end{aligned}

ALSO REFER TO SPECIFICATION FOR ROOFING WARRANTY

HEIGHT TO MATCH OR NOT TO EXCEED THE HSS'S

ELEVATION TO MATCH

OF THE WEST WALL T.O. MAIN ROOF

LIGHTNING PROTECTION,

CURRENT DFCM STANDARD

FULLY WELDED SINGLY PLY

ROOFING TAPE, MIN. 6" -

CONTINUOUS 24 GA

24 GA. PREFINISHED

FASCIA METAL - CRIMP

TOP OVER COATED METAL

CON'T BEAD OF SEALANT

20(ALT #1)(23.10)—

(07.38)

(02.51)

(07.18)

3"(07.01)

07.20

1'-0"

COATED METAL/HOLD

WIDE

REQUIREMENT

 \multimap 07.14angle

23.09

DOWN CLIP

REFERENCE NOTES

- 02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
- 02.30 EXISTING ROOFING AND INSULATION TO
- 02.49 EXISTING METAL DECK
- 02.51 EXISTING ROOF SYSTEM, PROTECT 02.52 EXISTING SINGLE PLY ROOFING, MIN. 12"
- OVERLAP @ SEAM 02.67 EXISTING CONCRETE FLOOR/SLAB OR ASPHALT PAVING TO REMAIN
- 02.101 REINSTALLATION OF EXT'G LIGHTNING PROTECTION, WATER TIGHT, MUST MEET CURRENT DFCM STANDARD
- 03.06 CONCRETE SLAB ON METAL DECK, RE. STRU. 05.02 STRUCTURAL BEAM, PRIMED; PAINTED IF
- EXPOSED
- 05.06 3 5/8" METAL STUD 05.07 6" METAL STUD
- 05.08 METAL ROOF DECKING, PAINTED IF EXPOSED 05.09 STEEL TUBE, PRIMED & PAINTED
- 05.11 PAINTED STEEL FRAME, RE. STRU. DWG 05.12 NEW STAIR, PAINTED 05.18 3" INSULATED METAL PANEL (R25) TO SPAN
- VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.
- 05.19 PREPAINTED METAL CAP/FLASHING, CAULK 05.35 42" HIGH GUARD RAIL WITH A MID RAIL AND 4"
- 05.37 GALVANIZED RIGLET, FLASHING, ETC., CAULK,

BASE, MATCH EXISTING, PAINTED

- 05.38 PAINTED METAL PANEL CLOSURE TRIM, COLOR TO MATCH, TYP AT ALL CONNECTION
- 05.43 POWDER COATED ALUMINUM TRIM 05.44 14 GA DIAMOND PLATE
- 05.45 GALVANIZED Z GIRT; SIZE, GA. AND SPACING AS PER METAL PANEL MANUFACTURER'S
- REQUIREMENT 05.61 EXTRUDED ALUMINUM COUNTER FLASHING,
- CONTINUOUS 06.04 WOOD BLOCKING
- 07.01 RIGID ROOF INSULATION. MIN. R 32,, THICKNESS VARIES
- 07.13 SINGLE PLY ROOFING, MIN. 6" OVERLAP AT 07.14 VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE
- EXPOSED JOINTS 07.18 METAL FLASHING WITH DRIP EDGE 07.19 SINGLE PLY ROOFING MEMBRANE TO WRAP

INSIDE OF METAL STUD WALL, TAPE AT ALL

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18 12-6-23 Ph. 5 PR #2-R1

20 3-20-24 Ph. 5 Add #1

PROJECT NUMBER 18136

ROOF

DETAILS

- OVER CURB WALL 07.20 1/2" EXTERIOR GLASS MAT SHEATHING 07.29 BATT INSULATION, MIN. R3 PER 1 INCH
- 07.30 RIGID ROOF INSULATION, 1/4" PER FOOT SLOPE
- 07.31 FLUID APPLIED AIR BARRIER 07.32 SPRAY FOAM INSULATION
- 07.33 ROOF ASSEMBLY, RE. TYP. ROOF DETAIL E4/AE-506 07.38 FULLY WELDED SINGLY PLY ROOFING TAPE,
- MIN. 6" WIDE 09.17 5/8" COVER BOARD 23.09 PREMANUFACTURED MECHANICAL CURB,
- VERIFY THICKNESS WITH SUBMITTAL 23.10 ROOF TOP EXHAUST FAN, RE. MECH DWG.

BUILDING ENVELOPE NOTES

1. VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE INSIDE OF METAL STUD WALL, TAPE AT ALL EXPOSED 2. FLUID APPLIED AIR BARRIER TO BE APPLIED ON

ALL SOLID VERTICAL WALL SUBSTRATES. 3. VAPOR BARRIER TO BE APPLIED ON WALLS WHERE THERE IS NOT A SOLID SUBSTRATE; CONTINUOUS, TAPE AT ALL JOINTS.

PHASE 4 NOTES

1. NO FURRING NOR TILE BEHIND THE LOWER MILLWORK AT THE EXISTING WALL @ WARMING 2. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE, CERTAIN INFORMATION WERE ISSUED PREVIOUSLY

PHASE 5 NOTES

1. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE, CERTAIN INFORMATION WERE ISSUED PREVIOUSLY. 2. ALL ROOFING RELATED COMPONENTS MUST CONFORM TO DFCM DESIGN STANDARD, RE.

PHASE 5 ALTERNATES

1. ROOF TOP EXHAUST FANS TO INCLUDE: FANS, INSTALLATION, WIRING TO THE PANEL. 2. FIRE SUPRESSION AND FIRE ALARM. 3. HIGH PERFORMANCE PAINT AT ALL EXTERIOR BUTTRESSES.

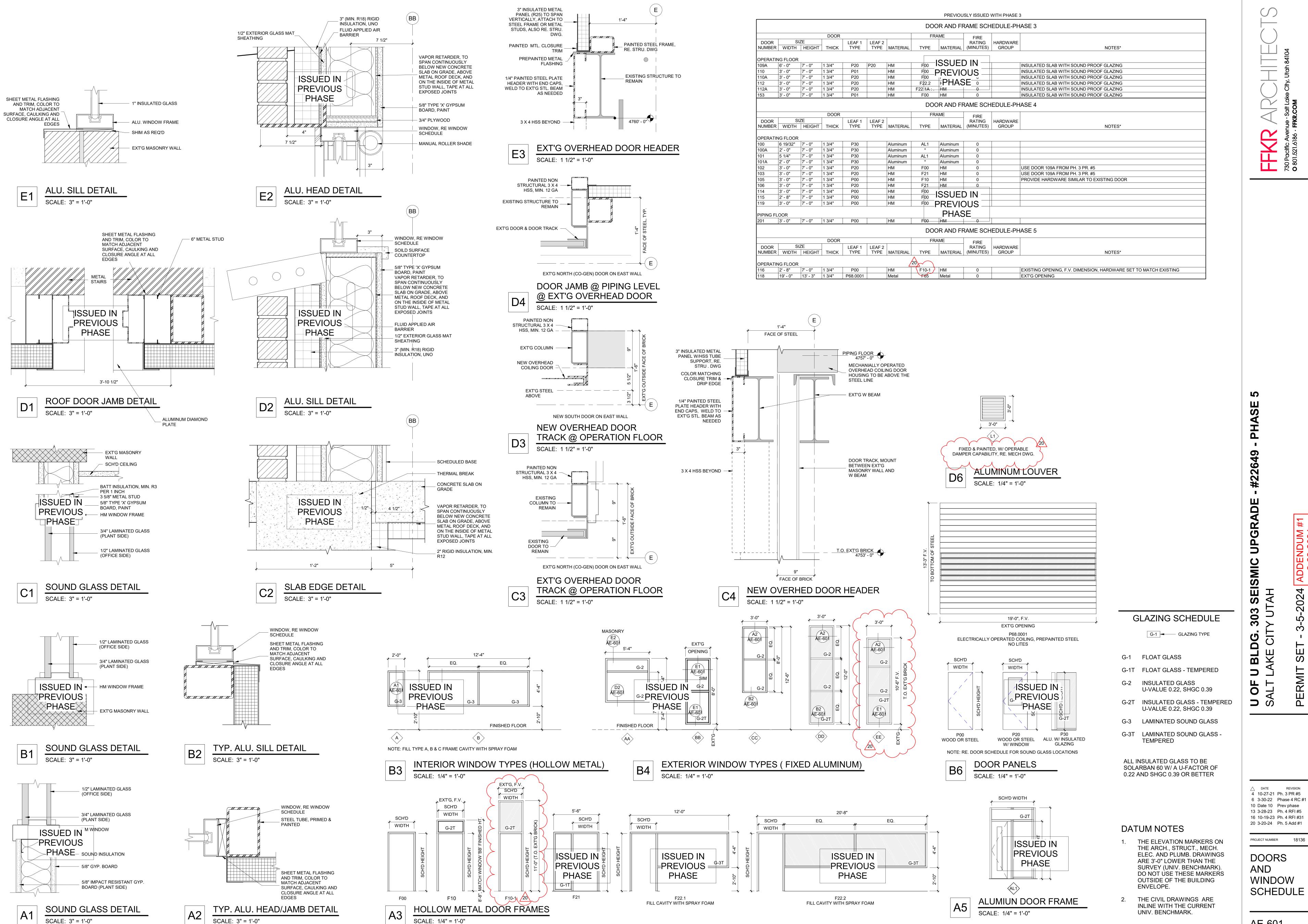
GENERAL NOTES

1. SHORE ALL ROOF TOP EQUIPMENT, PIPES, ETC., AS REQUIRED
2. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION 3. TAPERED INSULATION IS REQUIRED AT THE ROOF LEVEL TO ACHIEVE SLOPES INDICATED ON ROOF

DATUM NOTES

1. THE ELEVATION MARKERS ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE 3'-0" LOWER THAN THE SURVEY (UNIVERSITY BENCHMARK). DO NOT USE THESE MARKERS OUTSIDE OF THE BUILDING ENVELOPE.

2. THE CIVIL DRAWINGS ARE INLINE WITH THE AE-506 CURRENT UNIVERSITY BENCHMARK.



P SEISMIC 303

CIT BLDG.

AE-601

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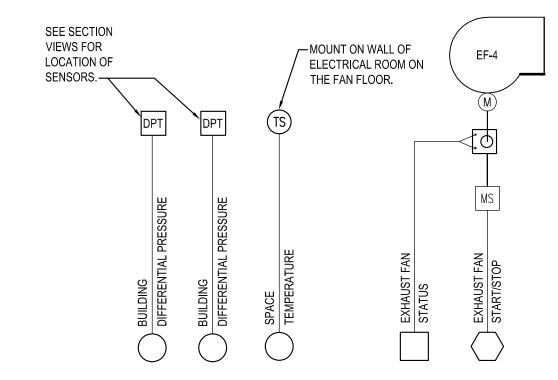
MECHANICAL LEGEND

M-000-5

					MECHANICA	AL	LEGEND	(NOTE: NOT ALL SYMBOLS SHOWN ARE USE	ED ON THESE	DRAWINGS)				
ABBR.	SYMBOL	DESCRIPTION	ABBR.	SYMBOL	DESCRIPTION ABBR	BR.	SYMBOL	DESCRIPTION	ABBR.	SYMBOL	DESCRIPTION	ABBR.	SYMBOL	DESCRIPTION
					- PIPING -					ZONE#				
SA		POSITIVE PRESSURE DUCT UP		<u> </u>	METER		——HTHWS——	HIGH TEMP. HOT WATER SUPPLY		T	THERMOSTAT W/ZONE CALLOUT	RD	(a)	ROOF DRAIN
SA		POSITIVE PRESSURE DUCT DOWN		<u>M</u>	2-WAY MOTOR CONTROL VALVE CWS		— HTHWR— — — — — — — — — — — — — — — — — — —	HIGH TEMP. HOT WATER RETURN COOLING WATER SUPPLY		ZONE #	HUMIDITY SENSOR W/ZONE CALLOUT	OD	(<u>0</u>)	OVERFLOW DRAIN
EA/RA		NEGATIVE PRESSURE DUCT UP		<u>M</u>	3-WAY MOTOR CONTROL VALVE		—— CWR ——	COOLING WATER RETURN		ZONE #	TEMP SENSOR W/ZONE CALLOUT	FS		FLOOR SINK
EA/RA		NEGATIVE PRESSURE DUCT DOWN		———	BALANCE VALVE CHW		—— CHWS———	CHILLED WATER SUPPLY CHILLED WATER RETURN		©	CARBON MONOXIDE DETECTOR	FD		FLOOR DRAIN
	•			─ & <u></u>	FLOW MEASURING STATION CDS		—— CDS ——	CONDENSER WATER SUPPLY (TOWER)		$\langle CO_2 \rangle$	CARBON DIOXIDE SENSOR	FCO	Θ	FLOOR CLEANOUT
OA		OUTSIDE AIR INTAKE DUCT UP			BALL VALVE CDS		——————————————————————————————————————	CONDENSER WATER RETURN (TOWER) CONDENSER WATER SUPPLY			DIGITAL INPUT	GCO	 	GRADE CLEANOUT
OA		OUTSIDE AIR INTAKE DUCT DOWN			BUTTERFLY VALVE CDF		—— CDR ——	CONDENSER WATER RETURN			ANALOG INPUT		<u>□</u>	
		ROUND DUCT UP			CHECK VALVE CA GATE VALVE	A	— CA — IA —	COMPRESSED AIR INSTRUMENT AIR			DIGITAL OUTPUT	WCO		WALL CLEANOUT
		ROUND DUCT DOWN			GLOBE VALVE PC	;	—— PC ———	PUMPED CONDENSATE CONDENSATE OR EQUIPMENT DRAIN			ANALOG OUTPUT	HB	 + N	HOSE BIBB
		CONICAL FITTING WITH DAMPER		k	PRESSURE REDUCING VALVE		BD	BLOW-DOWN DRAIN		\bigcirc	BI-DIRECTIONAL NETWORK CONNECTION	SA		SHOCK ABSORBERS
	<u> </u>			<u></u>	PRESSURE RELIEF VALVE DCW		—— OF ——	OVERFLOW DRAIN DOMESTIC COLD WATER			FLOW ARROW			ODADUJO OVAJDOJ O
		ECCENTRIC FITTING WITH DAMPER		1 1 1 1 1 1 1 1 1 1	HOSE END DRAIN VALVE			SOFTENED WATER		FS	FLOW SWITCH		(1)	- GRAPHIC SYMBOLS - KEY NOTE
	Д	CONICAL FITTING WITHOUT DAMPER			STRAINER DHW			NON-POTABLE WATER DOMESTIC HOT WATER						REVISION NUMBER
	K	ECCENTRIC FITTING WITHOUT DAMPER			DHW			DOMESTIC HOT WATER DOMESTIC HOT WATER CIRCULATING			DUCT AVERAGING TEMPERATURE SENSOR		TAG	MECHANICAL EQUIPMENT TAG
	uu	ELBOW WITH TURNING VANES		- Low	STRAINER WITH BLOW OFF VALVE DWT			DOMESTIC VENT DIDING		@ @	DUCT AVERAGING TEMPERATURE SENSOR		TAG	MECHANICAL EQUIPMENT TAG SHADING INDICATES MECHANICAL EQUIPMENT
	Н	EL DOWNAUTHOUT TUDANNO VANCO		— ▼ —	PLUG VALVE V	v	— V ——	DOMESTIC VENT PIPING SANITARY WASTE (ABOVE FLOOR)		T	WELL MOUNTED TEMPERATURE SENSOR			HATCHING OR HEAVY SHORT DASH INDICATE
		ELBOW WITHOUT TURNING VANES		 ♦ 	GAS COCK W	•	—— W ——	SANITARY WASTE (BELOW FLOOR)		MD • ///	MOTORIZED DAMPER ACTUATOR			ITEMS TO BE REMOVED
		LONG RADIUS ELBOW		— ———	SOLENOID VALVE OST		OST	STORM OVERFLOW DRAIN STORM DRAIN (ABOVE FLOOR)		M	MOTORIZED DAMPER ACTUATOR			NORTH ARROW
	7	SHORT RADIUS ELBOW	PRV	————			—— ST ——	STORM DRAIN (BELOW FLOOR)						CONNECT TO EVICTING
				U	THERMOWELL SS G		—— SS —— —— G ——	SANITARY SEWER (BELOW FLOOR) NATURAL GAS		TL {	TEMPERATURE LOW LIMIT THERMOSTAT		• Eviet	CONNECT TO EXISTING
		DUCTWORK			THERMOMETER WITH THERMOWELL LO	0	—— LO ——	LUBE OIL		SD	DUCT SMOKE DETECTOR		EXIST NEW	CONNECT TO EXISTING PIPE
MVD	L	MANUAL VOLUME DAMPER		 	UNION					ES	DAMPER/VALVE END SWITCH			SPOT ELEVATION
				DE	DIELECTRIC COUPLING		——	ORIFICE PLATE		DPS	DIFFERENTIAL PRESSURE SWITCH			
		ACCESS PANEL (SIZE)		— -	ORIFICE PLATE			PIPE ANCHOR		HPS	HIGH PRESSURE SWITCH			
		2005		—	VENTURI			PIPE GUIDE		PS	PRESSURE SWITCH MANUAL RESET			
		PUMP			AUTOMATIC AIR VENT			FLEX CONNECTION						
	 \/	DUCT BREAK					E	PIPE CAP		PE	AQUASTAT PRESSURE ELECTRIC SWITCH			
				P ₁	MANUAL AIR VENT		<u> </u>	PIPE BREAK		MS				
					VACUUM BREAKER			FLOW ARROW			MOTOR STARTER		M2.1	<u>DETAIL BUBBLE</u> DETAIL NUMBER
				<u>Ψ</u>	THERMOMETER		<u> </u>	PIPE DOWN PIPE UP		CR VED	CONTROL RELAY		M2.1	SHEET NUMBER - WHERE DETAIL IS SHOWN
				<u> </u>	GAUGE			TEE OUTLET UP		VFD	VARIABLE FREQUENCY DRIVE			SECTION CUT SECTION LETTER
				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	GAUGE WITH BALL VALVE			TEE OUTLET DOWN		VFD B P	VARIABLE FREQUENCY DRIVE WITH BY-PASS		XXX	SHEET NUMBER
										<u></u>	ELECTRIC MOTOR			
				©	DIFFERENTIAL PRESSURE GAUGE					TC 2	TEMPERATURE CONTROLLER	AFF A	BOVE FINISHED FLOOI	- ABBREVIATIONS -
					PRESSURE TEMPERATURE/TEST POINT					TT E	TEMPERATURE TRANSMITTER	BDD B	ACK DRAFT DAMPER	LAT LEAVING AIR TEMPERATURE
										LT	LEVEL TRANSMITTER		ELOW FINISHED FLOO ENTERLINE	R LWT LEAVING WATER TEMPERATURE MA MIXED AIR
										PT	PRESSURE TRANSMITTER	co c	EANOUT	(N) NEW
										DPT	DIFFERENTIAL PRESSURE TRANSMITTER		KISTING KHAUST AIR	NC NORMALLY CLOSED NO NORMALLY OPEN
										FT.		EAT E	NTERING AIR TEMPER	ATURE OA OUTSIDE AIR
											FLOW TRANSMITTER		LEVATION KTERNAL STATIC PRE	OTCS OPEN TO CEILING SPACE SSURE RA RETURN AIR
										EPT P	ELECTRIC\PNEUMATIC TRANSDUCER		NTERING WATER TEM	PERATURE SA SUPPLY AIR
											ELECTRIC\PNEUMATIC TRANSDUCER		NISHED FLOOR ELEV <i>I</i> .UE GAS RECIRCULAT	
										<u></u>	CURRENT SWITCH/TRANSMITTER	GENER	AL NOTES:	
										ANN	ANNUNCIATOR			E SPECIFICATIONS FOR CONSTRUCTION ROCEDURES. SPECIFICATIONS ARE A PART
										FACP	FIRE ALARM CONTROL PANEL	OF THE CO	NSTRUCTION DOCUM THE DRAWINGS AND S	ENTS. SHOULD ANY CONFLICT ARISE PECIFICATIONS, SUCH CONFLICT SHALL BE
										CAM	CONTROL ADDRESSABLE MODULE	RESOLUTIO	N.	THE ARCHITECT/ENGINEER FOR
										MAM	MONITOR ADDRESSABLE MODULE		RATIONS THROUGH F MAINTAIN SEPARATIO	RE-RATED WALLS OR FLOORS ARE TO BE NN RATING.
										ESR	EMERGENCY STOP RELAY			MATIC IN CHARACTER AND DO NOT EQUIRED OFFSET, FITTING, ETC.
										LC	LEVEL CONTROLLER	ALL DUCTW	ORK DIMENSIONS SH	OWN ARE INTERIOR CLEAR DIMENSIONS.
										EPO	EMERGENCY POWER SHUTOFF	EXISTING C	ONDITIONS ARE TAKE	OR INSULATION ARE NOT INCLUDED N FROM EXISTING DRAWINGS AND FIELD
										AFS	AIR FLOW SWITCH	OBSERVAT	ION. ACTUAL CONDITI	ONS MAY VARY FROM WHAT IS SHOWN. RIOR TO COMMENCING WORK.
														COPYRIGHT, THE RMH GROUP, INC 2018

							FAN SCHEDULE							
TAG SERVICE	TYPE	CFM	ESP	BHP	FAN	DDIVE	MOTOR CONTROLLER	DAMPER		ELECT	RICAL	WEIGHT	MANUFACTURER &	NOTES
TAG SERVICE	ITE	Crivi	ESP	DHP	RPM	DRIVE	MOTOR CONTROLLER	TYPE	APD	HP	V/PH	LBS	MODEL	NOIE2
EF-1 CIRCULATION	DOWNBLAST ROOF VENTILATOR	38000	0.25	9.9	453	BELT	STARTER/CONTACTOR			10	460/3	555	GREENHECK GB-540	1, 2, 3, 7, 8
EF-2 CIRCULATION	DOWNBLAST ROOF VENTILATOR	38000	0.25	9.9	453	BELT	STARTER/CONTACTOR			10	460/3	555	GREENHECK GB-540	1, 2, 3, 7, 8
C. EQUIPMENT WITH 208V D. OPERATION AT 180 VO	SITE CONDITIONS ALLOWED AND IS INCLUDED WITH ESF / NAMEPLATES SHALL HAVE MOTORS ILTS OR PROVIDED WITH 200V TO 208 DOF VENTILATORS OVER 5 HP SHALL	S SUITAB V TRANS	FORMER		' AND BE	SELECTED	WITHIN 15% OF PEAK EFFICIENCY			\triangle	3. GRAVI 4. HINGE 5. SCRO 6. SCRO 7. AMCA 8. BASE E INSTALL	BRAL DISCO ITY BACKDI ED CURB BA LL DRAIN LL CLEANC SPARK A/BA BID, INSTAL FAN AS SH	RAFT DAMPER ASE UT C L WITH WEATHER TIGH OWN.	IT CAP ALTERNATE #1

TAG	PURPOSE	TYPE	MOUNTING	SIZE	NC	ACCESSORIES	MANUFACTURER	NOTE
					MAX		& MODEL	
D	SUPPLY DIFFUSER	DUCT	WALL	8 X 8	40	OBD	PRICE 510	



EXHAUST FAN EF-1, EF-2

NOTE: FANS AND CONTROLS ARE PART OF ALTERNATE #1.

EXHAUST FAN CONTROL SEQUENCE OF OPERATION:

DESIGN INTENT: THE INTENT OF THESE FANS IS TO CONTROL TEMPERATURE BY EXHAUSTING HOT AIR FROM THE PLANT WITHOUT INTERFERING WITH COMBUSTION AIR FLOW TO THE BOILERS.

EXHAUST FAN CONTROL

1. EXHAUST FANS SHALL BE DE-ENERGIZED WHENEVER THE DIFFERENTIAL PRESSURE EXCEEDS (IS MORE NEGATIVE THAN)
-0.2 INCHES OF WATER COLUMN AT EITHER OF THE TWO BUILDING DIFFERENTIAL PRESSURE SENSORS. THE MEASUREMENT

-0.2 INCHES OF WATER COLUMN AT EITHER OF THE TWO BUILDING DIFFERENTIAL PRESSURE SENSORS. THE MEASUREMENT SHALL BE MADE WITH AN AVERAGING ALGORITHM TO REDUCE THE IMPACTS OF WIND GUSTS ON THE READINGS.

2. ANY TIME NEGATIVE BUILDING PRESSURE EXCEEDING -02 INCHES OF WATER COLUMN FOR MORE THAN 10 MINUTES

INITIATE AN ALARM.

3. WHEN NOT PROHIBITED BY DIFFERENTIAL PRESSURE THE FIRST EXHAUST FAN (EF-2) SHALL BE ENERGIZED AT 90F ON THE

UPPER FLOOR AND THE SECOND EXHAUST SHALL BE ENERGIZED AT 95F.

UPGRADE - PHASE 5

F U BLDG. 303 SEISMIC U

△ DATE REVISION

1 03/19/24 ADD
ALTERNATE
#1

PROJECT NUMBER 21486 / 2163

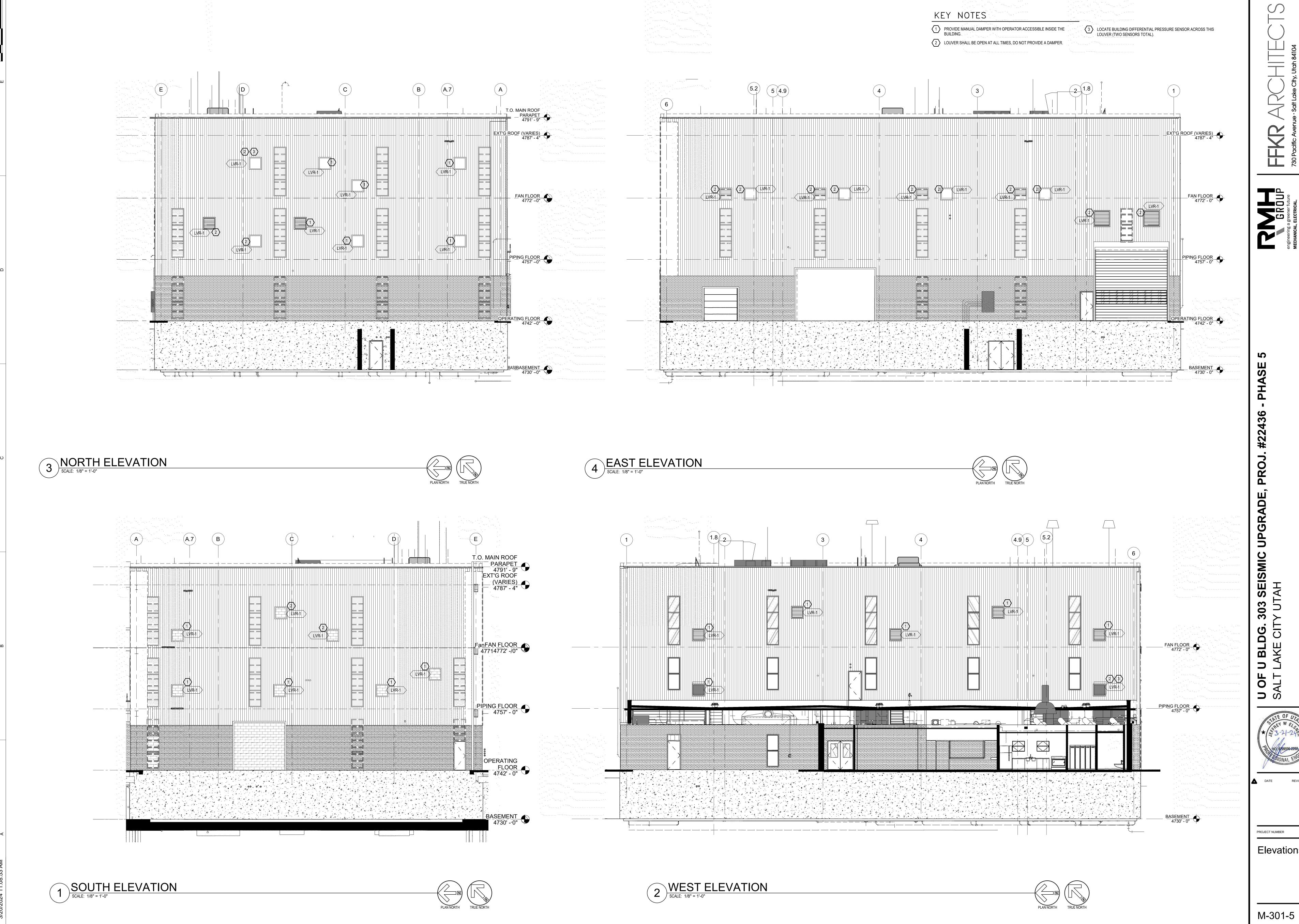
EQUIPMENT SCHEDULES

M-001-5

OPERATING FLOOR -MECHANICAL



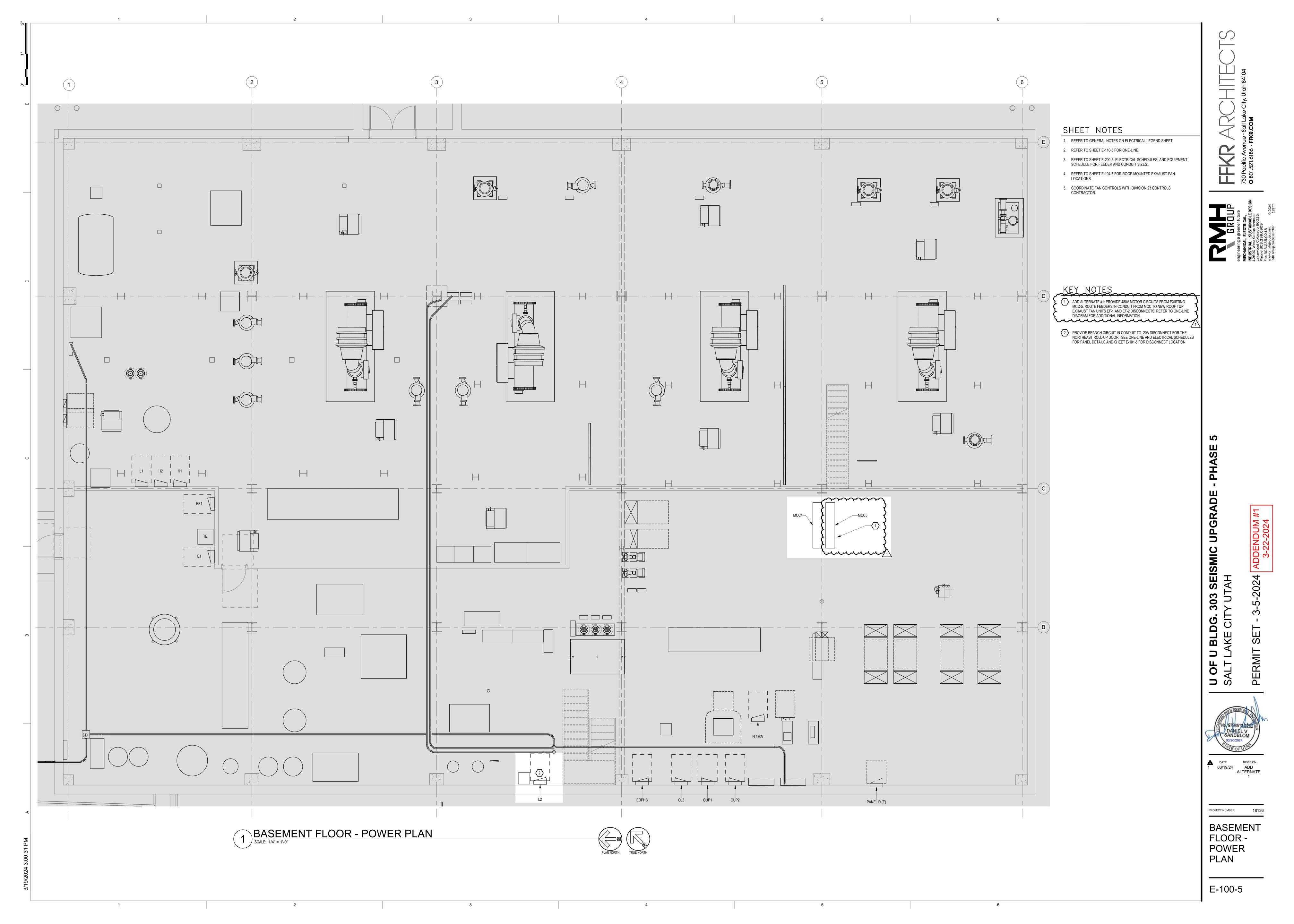
ROOF -MECHANICAL

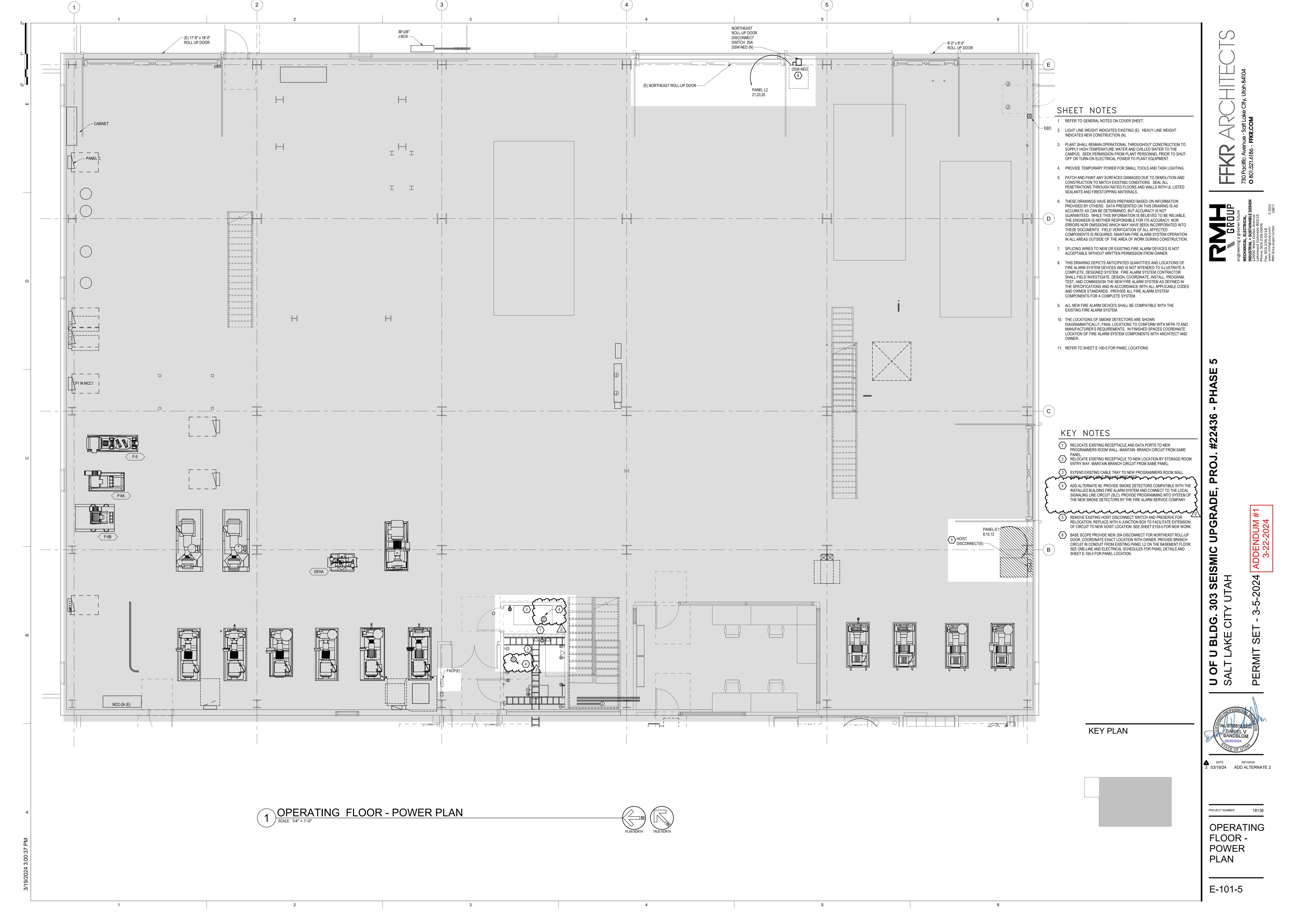


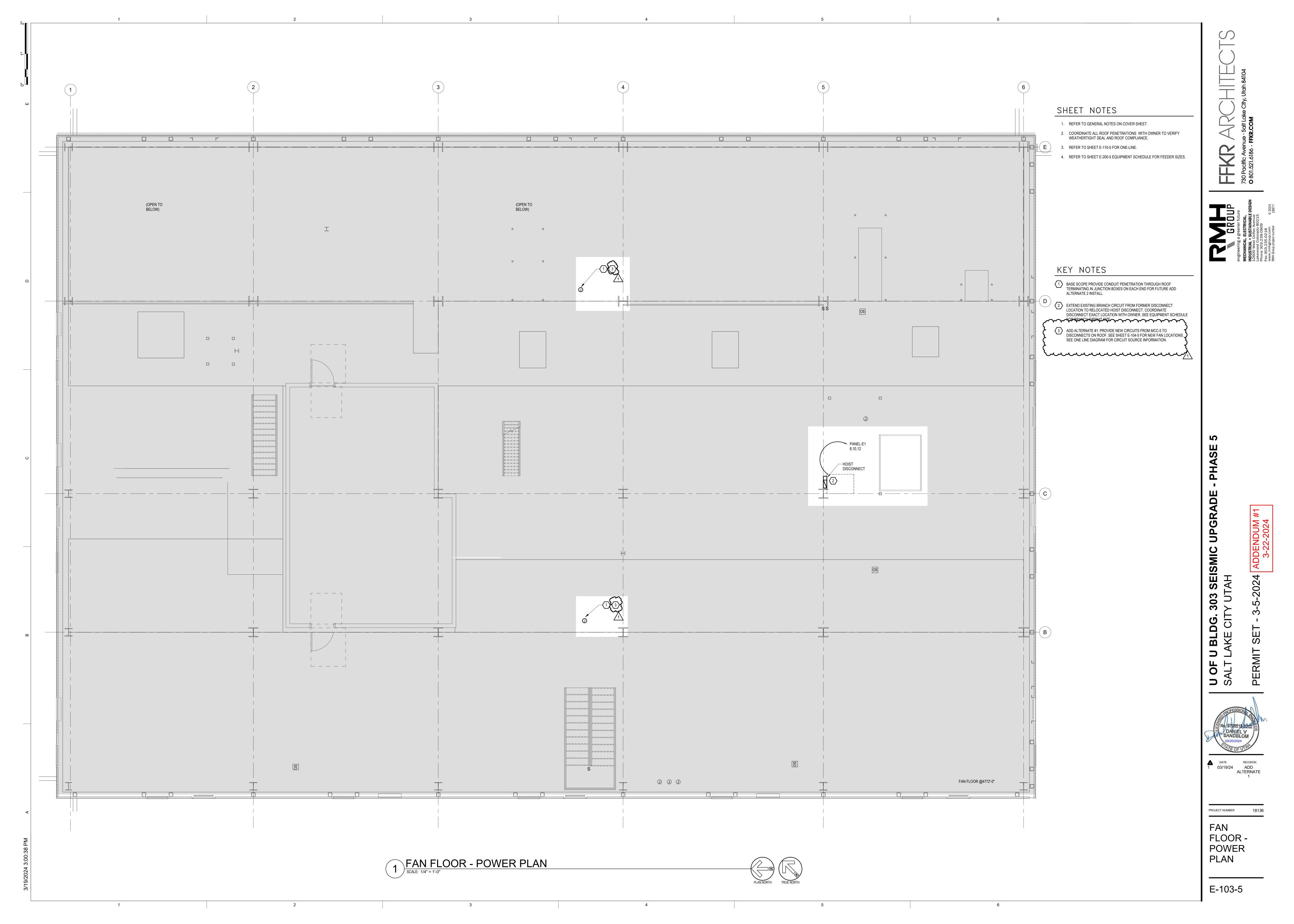
Elevations

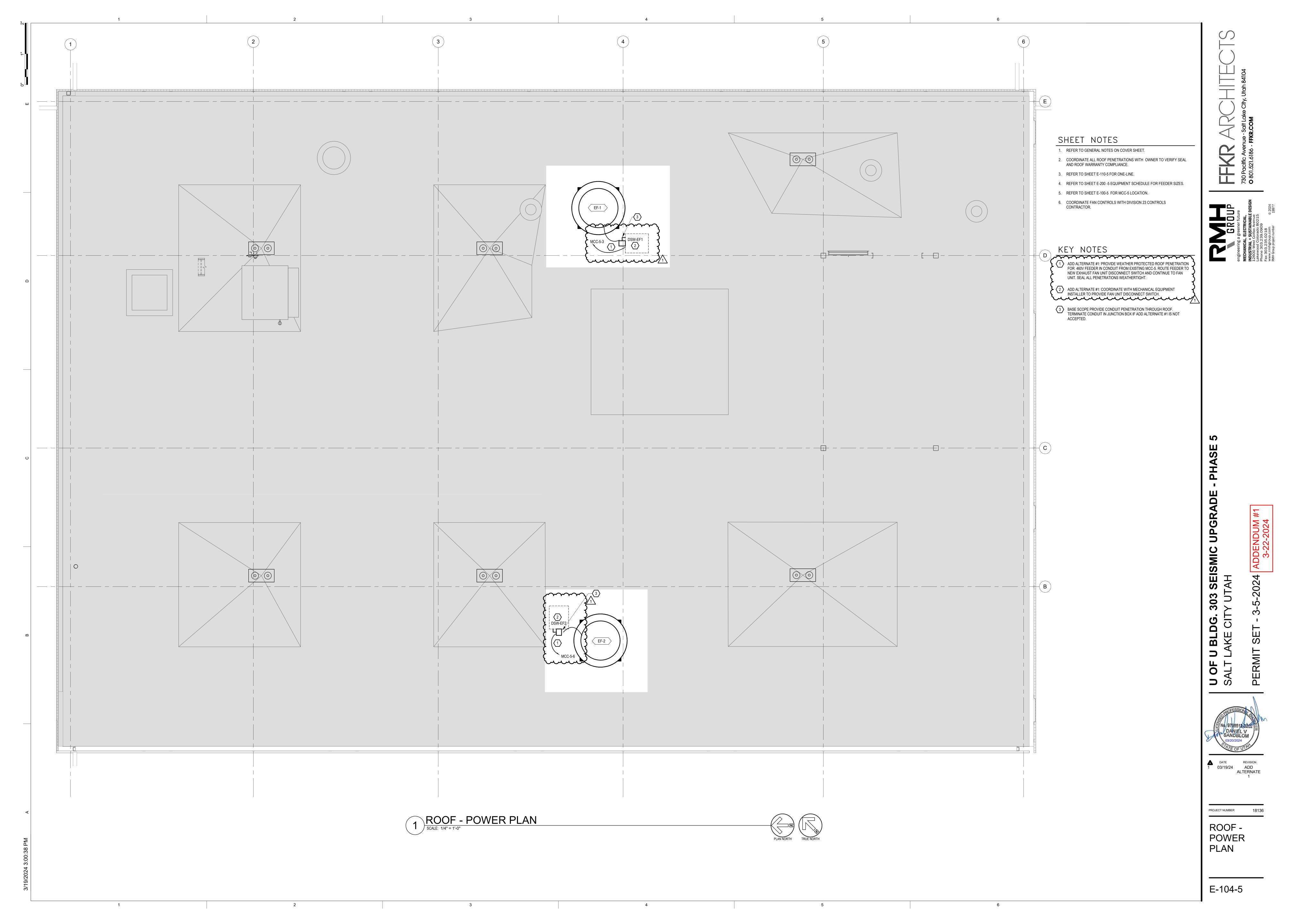
PROJECT NUMBER 21486/21632

					ELECTRICAL LE	EGEND	(NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON THESE DRA	AWINGS)					APPLICABLE CODES
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION			AHJ: UNIVERSITY	
_	ONE LINE SYMBOLS -		– GENERAL –	- S	PECIAL SYSTEMS DEVICES -		- POWER -	- LIGHT	ING — (REFER TO LUMINAIRE SCHEDULE)	_	ABBREVIATIONS -	REMODEL X	UNIVERSITY OF UTAH NEW
	CIRCUIT BREAKER		BRANCH CIRCUIT HOME RUN TO PANELBOARD, DESIGNATION	∇	DATA OUTLET	φ	DUPLEX RECEPTACLE D = DEDICATED CIRCUIT		LUMINAIRES	(E) (N)	EXISTING NEW	YEAR CODE	NATIONAL BUILDING CODE
≪ ^⇒	DRAW-OUT CIRCUIT BREAKER (MOLDED INSULATED CASE)		INDICATES PANEL AND CIRCUIT NUMBERS CONTROL WIRING	T	COMBINATION TELEPHONE/DATA OUTLET	P GFI	IG = ISOLATED GROUND DEVICE GFI = GROUND FAULT CIRCUIT INTERRUPTER		X = FIXTURE DESIGNATION # = BRANCH CIRCUIT NUMBER * = SWITCH LEG IDENTIFIER	(PART) A	PARTIAL CIRCUIT AMP	2018 INTER	NATIONAL MECHANICAL CODE NATIONAL PLUMBING CODE
 		,	CONTROL WIRING	V	TELEPHONE OUTLET	 (D)	FLOOR MOUNTED DUPLEX RECEPTACLE	#	J	AC AF	ABOVE COUNTER TOP AMP FRAME, AMP FUSE	2018 INTER	NATIONAL ENERGY CONSERVATION CODE
	CONTROL FUSE		LIGHTING, ONE-LINE, AND POWER CIRCUITING	4	TELEVISION JACK		FLOOR MOUNTED FOURPLEX RECEPTACLE		SHADING INDICATES LUMINAIRE ON LIFE SAFETY	AFF AFG	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE	2020 NATIO	NATIONAL FIRE CODE NAL ELECTRICAL CODE
			LIGHTING, ONE-LINE, AND POWER CIRCUITING (UNDERGROUND)	-	CEILING MOUNTED DATA OUTLET		FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE		SHADING INDICATES PORTION OF LUMINAIRE ON LIFE SAFETY	AHJ AIC	AUTHORITY HAVING JURISDICTION AMPS INTERRUPTING CAPACITY		NATIONAL EXISTING BUILDING CODE NATIONAL RESIDENTIAL CODE
			FLEXIBLE CONDUIT				CEILING MOUNTED DUPLEX RECEPTACLE	오모	WALL MOUNTED LUMINAIRE	AL APL	ALUMINUM APPLIANCE	2018 INTERI	NATIONAL ENERGY CONSERVATION CODE YES IS THE BUILDING YES
PANEL			CONDUIT BREAK SYMBOL	(7)	CEILING MOUNTED TELEPHONE/DATA OUTLET		CEILING MOUNTED FOURPLEX RECEPTACLE	 	STRIP LIGHT	AS AT	AMP SWITCH AMP TRIP	FULLY SPRINKLERE	D? NO FULLY DETECTED? NO
XXX	PANELBOARD	 	CONDUIT CAP		CEILING MOUNTED TELEPHONE OUTLET		CEILING MOUNTED SPECIAL PURPOSE RECEPTACLE	⊢	STRIP LIGHT WITH LIFE SAFETY	ATS AV	AUTOMATIC TRANSFER SWITCH AUDIOVISUAL		- GRAPHIC SYMBOLS -
			CONDUIT CHANGE IN ELEVATION	abla	FLOOR MOUNTED DATA OUTLET	₩	FOURPLEX RECEPTACLE	\$₽	POLE MOUNTED LUMINAIRE	BJ C	BONDING JUMPER CONDUIT	1	KEY NOTE
ATS-XX XXX A	AUTOMATIC TRANSFER SWITCH		CONDUIT STUB DOWN (OUT OF DRAWING LIMITS)	V	FLOOR MOUNTED TELEPHONE/DATA OUTLET	₩		0 □	(QUANTITY OF LUMINAIRES PER POLE AS INDICATED ON PLANS)	CB CCT	CIRCUIT BREAKER CIRCUIT		REVISION NUMBER
100A4G	FEEDER DESIGNATION, SEE FEEDER SCHEDULE		, , , , , , , , , , , , , , , , , , ,		FLOOR MOUNTED TELEPHONE OUTLET	₩	RANGE RECEPTACLE		DOWNLIGHT LUMINAIRE	CCTV CLG	CLOSED CIRCUIT T.V. CEILING	\Diamond	DETAIL NOTE
		-	CONSOLITOR OF CONTROL PROVINCE LIMITED	TTB	TELEPHONE TERMINAL BOARD	Ψ	SINGLE RECEPTACLE	_		CU DISC	COPPER DISCONNECT		X = DENOTES ALL LUMINAIRES IN THE RESPECTIVE AREA ARE THE TYPE INDICATED, REFER TO
	AUTOMATIC TRANSFER SWITCH WITH BY-PASS	0	JUNCTION BOX	DTB	DATA TERMINAL BOARD	Ψ	SPECIAL PURPOSE RECEPTACLE	•	WALL WASHER LUMINAIRE	DIST E/G	DISTRIBUTION ENGINE/GENERATOR	TAG	LUMINAIRE SCHEDULE PANEL FLAG
(SE	ENGINE GENERATOR	$\frac{\Psi}{}$	WALL MOUNTED JUNCTION BOX	⟨ M⟩	MICROPHONE OUTLET	•	SWITCHED RECEPTACLE		ADJUSTABLE LUMINAIRE	ELEC ELEV	ELECTRIC, ELECTRICAL ELEVATOR ELEVATION	TAG	OWNER EQUIPMENT TAG
	TRANSFORMER		FLOOR MOUNTED JUNCTION BOX	⋄ ⑤x	SPEAKER	•	DUPLEX EMERGENCY/CRITICAL	-	PENDANT LUMINAIRE	EM EQPT	EMERGENCY EQUIPMENT	S#X	LIGHTING CONTROL SEQUENCE INDICATION, SEE LIGHTING CONTROL SEQUENCE OF OPERATION
₹ <u>t</u> x-xxxx		更	PUSH BUTTON A = ABORT	Ο χ	V = WITH INTEGRAL VOLUME CONTROL	•	FOURPLEX EMERGENCY/CRITICAL	 □ □ □ 	TRACK LIGHTING	F FA	FUSE FIRE ALARM		SCHEDULE FOR INFORMATION X = DENOTES ILLUMINATION SET POINT
 	ENCLOSED BUSWAY		DA = DURESS ALARM EPO = EMERGENCY POWER OFF IC = INTERCOM	SH	WALL MOUNTED SPEAKER		DUPLEX-2PORT USB	®	PHOTOCELL	FAA FACP	FIRE ALARM ANNUNCIATOR FIRE ALARM CONTROL PANEL	TAG	MECHANICAL EQUIPMENT TAG
	GROUND BUS	V	ST = SHUNT TRIP	VH	WALL MOUNTED VOLUME CONTROL	P	4PORT USB	tet	EXIT LIGHT (WITH FACES AND DIRECTION ARROWS IND	FIXT ICA∓ED)	FIXTURE FIBER OPTIC		SHADING INDICATES EQUIPMENT
Œ	WEATHERHEAD	S [*] #	SWITCH SYMBOL (#) SINGLE POLE (IF BLANK)	©	CLOCK RECEPTACLE OUTLET	ㅁ	DISCONNECT SWITCH			FLR FLUOR		1/////	HATCHING INDICATES ITEM(S) TO BE REMOVED
M	MOTOR		2 = DOUBLE POLE 3 = THREE-WAY 4 = FOUR-WAY	ŭ	SECURITY CAMERA	C	FUSED DISCONNECT SWITCH	⊦⊗ ‡	WALL MOUNTED EXIT LIGHT (WITH FACES AND DIRECTION ARROWS INDICATED)	G GEN	GROUND (EQUIPMENT) GENERATOR	A100	ROOM NUMBER
	DELTA CONNECTION		AS = ADJUSTABLE SPEED D = DIMMER	T	THERMOSTAT		ENCLOSED CIRCUIT BREAKER	1	WALL MOUNTED BATTERY PACK EMERGENCY LIGHT	GFI GF	GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION		NORTH ARROW
\ \ \ \ \ \	WYE CONNECTION		K = KEY OPERATED LV = LOW VOLTAGE M = MANUAL MOTOR SWITCH	XX	SPECIAL SYSTEMS SYMBOLS:		MOTOR STARTER	- (GROUNDING SYMBOLS -	HC	GROUND HANDICAPPED		DETAIL BUBBLE DETAIL NUMBER
	GROUNDED WYE CONNECTION		OS = OCCUPANCY SENSOR P = WITH PILOT LIGHT	· AA	AB = ABORT BUTTON AMP = AMPLIFIER	⊠r	COMBINATION MOTOR STARTER	\otimes	GROUND TEST WELL	HP	HOSPITAL GRADE HORSEPOWER	E2.1	SHEET NUMBER - WHERE DETAIL IS SHOWN
\ \			T = TIMER TO = THERMAL OVERLOAD VS = VACANCY SENSOR		ANN = ANNUNCIATOR ASD = ADJUSTABLE SPEED DRIVE ATS = AUTOMATIC TRANSFER SWITCH	SØ	COMBINATION SWITCH AND RECEPTACLE		GROUNDING CONDUCTOR	INC	HIGH VOLTAGE INCANDESCENT		SECTION CUT SECTION NUMBER/LETTER
' =	GROUNDED WYE CONNECTION WITH RESISTOR GROUND		WP = WEATHERPROOF x = SMALL LETTER - LUMINAIRES CONTROLLED		B = BUZZER BMS = BALANCED MAGNETIC STRIP	M	CONDUIT SEAL OFF	•	LIGHTNING PROTECTION AIR TERMINAL	IG IG	INTERMEDIATE DISTRIBUTION FRAME ISOLATED GROUND	2 E2.2	SHEET NUMBER - WHERE SECTION IS SHOWN
Lw ⁻	GROUNDED WYE CONNECTION WITH REACTOR GROUND	SS	XP = EXPLOSION PROOF DUAL SWITCH		CAM = CONTROL ADDRESSABLE MODULE CH = CHIME CK = CARD READER/KEYPAD	0	FIRE RATED POKE-THROUGH		BONDING POINT	LED	JUNCTION BOX LIGHT EMITTING DIODE LIGHTING	GENER	AL NOTES
€ _₩	METERING DEVICE	33 ¢	INTERCOM SWITCH		CR = CARD READER DA = DURESS ALARM PUSH-BUTTON		PARTITION CIRCUIT SPLIT	 G	GROUND BAR	LV MATV	LOW VOLTAGE MASTER ANTENNA T.V.		ARE A PART OF THE CONSTRUCTION DOCUMENTS. SHOULD ANY BETWEEN THE DRAWINGS AND SPECIFICATIONS, BRING SUCH
	CURRENT TRANSFORMER	Ψ	- FIRE ALARM DEVICES -		DC = DOOR CONTACT DE = DELAYED EGRESS DMA = DOOR MANAGEMENT ALARM		POWER POLE	Ţ	ELECTRICAL GROUND	MCB MCC	MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER	CONFLICT TO TH	E ATTENTION OF THE ENGINEER FOR RESOLUTION. UNLESS ECTED BY ENGINEER, THE MOST STRINGENT REQUIREMENT WILL
-3E-	POTENTIAL TRANSFORMER	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	BELL BELL		DO = DOOR MANAGEMENT ALARM DO = DOOR OPERATOR DS = DOOR STRIKE	- 	SURFACE RACEWAY	•	GROUND ROD	MDF MH	MAIN DISTRIBUTION FRAME MANHOLE	DATA ON THE DR	RAWINGS IS AS EXACT AS COULD BE REASONABLY SECURED.
→	LOAD-BREAK CONNECTOR		DUCT SMOKE DETECTOR		DTC = DATA TERMINAL CABINET DVR = DIGITAL VIDEO RECORDER EC = ELECTRICAL CONTACTOR		METER	≡ ⊗	GROUND ROD WITH INSPECTION TEST WELL	MLO MOP	MAIN LUGS ONLY METHOD OF PROCEDURE	MEASUREMENTS	JRACY IS NOT GUARANTEED. VERIFY EXACT LOCATIONS, B, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS WITH ADAPT WORK TO ACTUAL CONDITIONS AT THE SITE. BEFORE
##	PROTECTIVE RELAY DEVICE	<u>#</u>			EC = ELECTRICAL CONTACTOR EL = ELECTRIC LOCK ES = ELECTRIC STRIKE		WILTLIX	-	PIGTAIL	MTD MTG	MOUNTED MOUNTING	ACTUAL CONDIT	STS VISIT THE SITE TO BECOME THOROUGHLY FAMILIAR WITH THE IONS OF THIS PROJECT. THESE DRAWINGS ARE DIAGRAMMATIC IN I SCALE. THESE DRAWINGS DO NOT SHOW MATERIALS FOR A
K	KEY INTERLOCK	\ \\	FIRE FIGHTER'S TELEPHONE JACK		F = MANUAL PULL STATION FAA = FIRE ALARM ANNUNCIATOR				FIGIAIL	MTR MV	MOTOR MEDIUM VOLTAGE	COMPLETE INSTA DIAGRAMMED IN	ALLATION; PLAN THE INSTALLATION AND LAYOUT OF THE WORK AS THESE DOCUMENTS. REFER TO FLOOR PLANS, SCHEMATICS AND
	RESISTOR		COMBINATION FIRE HORN/STROBE LIGHT		FACP = FIRE ALARM CONTROL PANEL FS = FLOW SWITCH FSD = FIRE SMOKE DAMPER				- EQUIPMENT -	N NC	NEUTRAL NORMALLY CLOSED		THER TRADES FOR ELECTRICAL REQUIREMENTS, BRANCH THER ELECTRICAL CONNECTIONS NOT INDICATED ON THESE
RESISTOR 1	CONTACT NORMALLY OPEN		COMBINATION FIRE SPEAKER/STROBE LIGHT		GB = GLASSBREAK DETECTOR HC = HANDICAP PUSH-BUTTON					NEC NF	NATIONAL ELECTRICAL CODE NON-FUSED		ENETRATIONS THROUGH RATED WALLS AND FLOORS WITH ABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES
	CONTACT NORMALLY CLOSED		FIRE ALARM STROBE LIGHT		IC = INTERCOM CALL STATION IP = INDICATOR PANEL KP = KEYPAD				DISTRIBUTION PANEL	NIC NL	NOT IN CONTRACT NIGHT LIGHT	WHEN SUBJECTE FIRE STOPS AST	ED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC FOR
		¤	FIRE ALARM STROBE, CEILING MOUNT		MAM = MONITOR ADDRESSABLE MODULE MH = MANHOLE				EXISTING DISTRIBUTION PANEL	NO OHE	NORMALLY OPEN OVERHEAD ELECTRIC	THE PROPER NU	S FOR LUMINAIRES AND OUTLETS ARE NOT INDICATED. PROVIDE MEET LOCAL CODE AND NATIONAL
		Ø	FIRE ALARM STROBE/SPEAKER, CEILING MOUNT		MD = MOTORIZED DAMPER MS = MOTION SENSOR ML = MAGNETIC LOCK					P PA	POLE PUBLIC ADDRESS		ORK IN ACCORDANCE WITH SUPPORTING OBJECTS FOR SEISMIC
		⊞¤	FIRE HORN		NCMS = NURSE CALL MASTER STATION CM-CENTRALIZED PHYSIOLOGICAL				NEW PANEL, FLUSH MOUNTED	PB PH	PULL BOX PHASE	AND FLOOR ATTA	BY STATE AND LOCAL CODES ALL CEILING ATTACHED OBJECTS ACHED EQUIPMENT INCLUDING, BUT NOT LIMITED TO: PENDANT RES, GENERAL LIGHTING, MULTIPLE RACEWAYS, GENERATOR,
		Þ⊞Þ	DUAL PROJECTION FIRE HORN		MONITORING STATION NCT = NURSE CALL TERMINAL CABINET OS = OCCUPANCY SENSOR			r	EVICTING DANIEL FLUCH MOUNTED	PNL PWR	PANEL POWER		ELECTRICAL SWITCHGEAR, SWITCHBOARDS AND OTHER
÷	LIGHTNING ARRESTOR	F	MANUAL PULL STATION		PA = PUBLIC ADDRESS PB = PULLBOX				EXISTING PANEL, FLUSH MOUNTED	SBC) RECEPTACLE(S) STRANDED BARE COPPER	CONNECTION TO	NECTS ARE INDICATED ON DRAWINGS PROVIDE FINAL DEQUIPMENT BEING SERVED BY DISCONNECT. DISCONNECTING
-0~-	THERMAL ELEMENT, OVERLOAD RELAY		MAGNETIC DOOR HOLD OPEN		PIR = PASSIVE INFRARED DETECTOR PM = POWER QUALITY METER PS = POWER SUPPLY				NEW PANEL, SURFACE MOUNTED	SPD SW	SURGE PROTECTIVE DEVICE SWITCH	CLEARANCE REC	
		© .,	DETECTOR /		R = REMOTE INDICATING LIGHT RT = REMOTE TEST STATION					TEL TP	TELEPHONE TAMPERPROOF	REQUIRED SEAL	S (CLASSIFIED) AREAS COMPLY WITH NFPA 70 (NEC). PROVIDE ALL OFF FITTINGS WHERE CONDUITS ENTER OR LEAVE AREAS OUS ATMOSPHERES AND AREAS OF WIDELY DIFFERENT
		$\mathbf{O}_{\mathbf{X}}^{\mathbf{X}}$	DETECTOR UNDER FLOOR F = FLAME		RX = REQUEST TO EXIT PUSH-BUTTON S = WALL MOUNTED SPEAKER				EXISTING PANEL, SURFACE	TV UF	TELEVISION UNDERFLOOR	TEMPERATURES METAL CONDUIT	OR HUMIDITY. PROVIDE ENCLOSURES, CONDUIT FITTINGS AND FOR HAZARDOUS (CLASSIFIED) LOCATIONS IN COMPLIANCE WITH
			I = IONIZATION TYPE P = PHOTOELECTRIC TYPE T = THERMAL TYPE		SAP = SECURITY ALARM PANEL SPD = SURGE PROTECTIVE DEVICE TC = TIME CLOCK					UNO	UNLESS NOTED OTHERWISE UNINTERRUPTIBLE POWER SUPPLY	UP-TO-DATE ELE	21201, ANSI/UL 122701, ANSI/NÉPA 496, AND UL 1203. CTRICAL RECORD DRAWINGS ARE NOT AVAILABLE FOR THIS
		<u> </u>	BEAM DETECTOR		TS = TAMPER SWITCH VFD = VARIABLE FREQUENCY DRIVE				TRANSFORMER	V VFD	VOLTAGE VARIABLE FREQUENCY DRIVE	DIRECTORIES, A'	RMATION FOR EXISTING CIRCUITRY IS BASED ON EXISTING PANEL VAILABLE DRAWINGS, AND ASSUMPTIONS. LOCATIONS AND DR EXISTING ELECTRICAL DEVICES AND EQUIPMENT SHOWN ON
		⊬® ±			VM = VIDEO MONITOR VS = VACANCY SENSOR					VP W	VAPOR PROOF WIRE	THESE DOCUME OBSERVATION A	NTS ARE APPROXIMATE AND WERE DERIVED FROM FIELD ND AVAILABLE RECORD DRAWINGS. VERIFY ACTUAL FIELD OR TO STARTING WORK.
		▼	PULL STATION/TELEPHONE JACK DELUGE VALVE							WG WP	WIRE GUARD WEATHERPROOF TRANSFORMER	CONDITIONS FRI	S. C. O STATING WORK.
REV: 09/26/2019	COPYRIGHT, THE RMH GROUP, INC. 2021	S	DELOGE VALVE							XFMR XP	TRANSFORMER EXPLOSION PROOF		









PA	NEL: D (E)		VC	LTAGE:	120/24	10 V.			TYPE:	LIG	HTING	& APPLIA	ANCE				
				1 PH	3 W.	60	HZ M	10UN	ITING:	SU	RFACE						
F	ED FROM: MCC-2A						PAN	EL C	OVER:	SU	RFACE						
	N/A	amp mai	IN RAT	ED AT	809	6	NEU	TRA	_BUS:	YE	S						
	MLO	AMP MAI	IN LUG	\$			GRO	DUNC	BUS:	YE	S	ISOLATE	D GN	D:	NO		
	100	AMP BUS	S						NOTE:	1.	EXISTIN	IG PANE	L				
	COPPER	BUSING								2	ADD FIX	KTURE T	O CIF	RCUIT			
	10000	SYMMET	RICAL	RMS AN	ИPS					3.	[]			
		PANEL S	HORT	CIRCUI	T RATI	NG				4.]			1			
				CCT	BREA				AKER		CCT						
STE	DESCRIPTION			VA	AMP	/ P	ССТРН ССТ	AMF	7 P		VA	DESC	CRIPT	ION			NOTE
	JCBO L.R. PANEL BAS	SEMENT		200	20	/ 1	1 A 2	20) / 1		460	LTG, PI	PING	FL. H	IGH E	BAG	
	JCBO CONSOLE CON	ITROL RO	OM	800	20	/ 1	3 B 4	20) / 1		460	LTG. PI	PING	FL. G	EN #:	3&4	
	LTG. PIPING FL HIGH	BAG		200	20	/ 1	5 A 6	20) / 1		460	LTG. PI	PING	FL. G	EN. #	4	
	LTG. OPERATING FL.	, GEN. #4		460	20	/ 1	788	20) / 1		460	LTG. B/	ASEM	ENT V	WEST	HALF	
	LTG. STAIRWAY			460	20	/ 1	9 A 10	20) / 1	T	460	LTG. B/	ASEM	ENT V	WEST	HALF	
	LTG. BASEMENT GEN	V. #5		460	20	/ 1	11 B 12	20	1		460	LTG. B/	ASEM	ENI (ŒN,	#3	L -
	LTG. BASEMENT GEN			460	1	/ 1	13 (14		7 1							RVER RI	1 2
	LTG. OPERATING FL.		T T	460	20		15 B 16	2		4	460	F G 3					/ ~
	LTG. OPERATING FL.			460	4	/ 1	17 A 18	20		1	460	LTG. O					
	LTG. PIPING FL. SO W	******		460		7 1	19 B 20	20	7 1			PIPING	***********	**********	***************************************	******	
	LTG. FAN FL. SO. WE	ST		460	20	/ 1	21 A 22	20) / 1	T	360	PLUGS	BASE	MEN.	T WES	ST WALL	8
	LTG. FAN FL. GEN. #4	4		460	20	/ 1	23 B 24	20) / 1			PLUGS					
	LTG. FAN FL. GEN #3	***********		460	20	7 1	25 A 26	20		 	***************************************	O2 ANA	*******	~~~~	*******	***************************************	
	O2 ANALYZER GEN #							20								NSION D	RU
	O2 ANALYZER GEN #			300	20 20	/ 1	27 B 28 29 A 30	20				ANNUN					
	PLUGS FAN FL.			360	20	71	31 B 32	20				BTU M					
	PLUGS PIPING FL.			360	20		33 A 34	20		4						L. SO. W	<u>-sl</u>
	OUTSIDE BLDG. LTG.			800	20		35 B 36		7 1							DR/CTRL	
	PLUG BY ROLL UP DO	······		180	20		37 A 38		7/1			LTG. Al					``
	PLUGS, OPERATING		ST	360	1		39 B 40		7 1			LTG. C					
	EXHAUST FAN CONT			360	1		41 A 42		7 / 1			CHART				,	
	PANEL LOAD					<u> </u>	1 11 12	4.				LOAD S			, 0.7.0	·	
I OA	D TYPE	PHA		TOT	AI I	\vdash		\neg	114.	, 00	POWE				CINA	CALCUI	ATED
	ANDESCENT		0.0	0.0			LOAD TYPE		kW		FACT					LOAD.	J 1,1 E.D
	JCTIVE LTG		5.8	11.6		IN	CANDESCE!			@	100%	= 0.0					kVA
	EPTACLES	1.3	2.6	3.9	kVA		DUCTIVE LT		11.0	@	95%	= 11.					kVA
	ORS	0.0	0.0	0.0	kVA		ECEPTACLES		11.0	w	JQ /Q	- 11.	u w	1207		17.0	WALL
	LIANCES	1.2	0.5	1.7	kVA	-['`	FIRST 10 k		3.7	@	95%	= 3.9	9 @	1009	% =	3.9	kVA
HEA		0.0	0.0	0.0	kVA		REMAIND		0.0	@	95%	= 0.0	_			5.5	kVA
	APUTER	0.0	0.0	0.0	kVA	.	OTORS		0.0	w	JO 70	- U.U	, W	30%	U	-	VAW
OTH		0.0	0.0	0.0	kVA	Į IVI	LARGE	ارى	ΔΛ	(A)	80%	nr	ı e	125%	·/-	0.0	kVA
	ICOINCIDENT	0.0		0.0	kVA		REMAIND		0.0	@		= 0.0	-				kva kva
		0.0	0.0	0.0		Α,			0.0	@	80%	= 0.0		1009			
- E-A	K LOAD	L		<u> </u>	kVA		PPLIANCES		1.3	@	80%	= 1.7	_				kVA
	TOTAL	8.2	8.9	17.1	kVA		EAT		0.0	@	100%	= 0.0	-				kVA
						E	OMPUTER		0.0	@	95%	= 0.0	_				kVA
					T ~~ 1		THER		0.0	@	85%	= 0.0	_				kVA
	PHAS	E BALANO	上(%)		PF		ONCOINCIDE	:N]	0.0	@	95%	= 0.0	_				kVA
				92	94	P	EAK LOAD		0.0	@	90%	= 0.0					kVA
						\perp	0 % SPAI	_	0.0	@	90%	= 0.0			% <u>=</u>		kVA
	MIN PANEL AMPA	(CITY)	84	AMPER	ES	1	TOT	AL.	16.0	kW		17.	1 kV	Ά		20.1	kVA

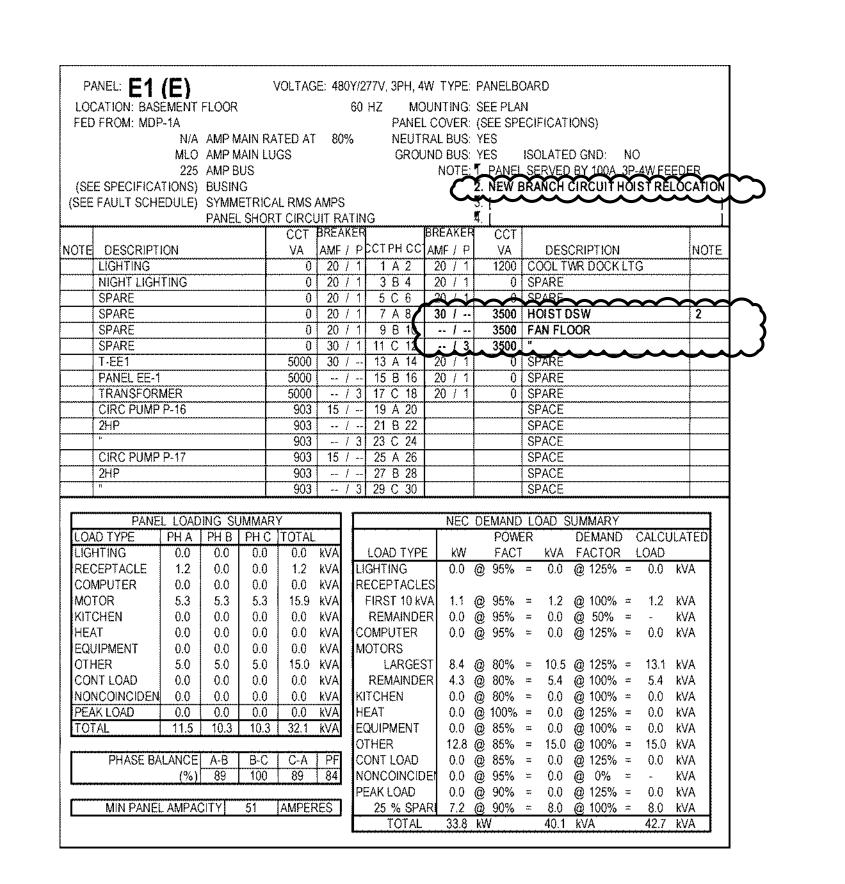
***************************************								E	QUIPMEN	T SCHEDULE						
EM			MOTOR	UNIT	UNIT	UNIT	PANEL (SEE	BREAKER	MOTOR		(SEÈ	STARTE		LOCAL DISC. SW.	DISC. LOCATION (SEE NOTE 4)	
		PH	10 HP	FLA 14.0				SIZE	CIRCUIT KEY		NOTETI					REMARKS ADD ALTERNATE #1
OOF-MOUNTED EXHAUST FAN 2	460	3	10	14.0	11.2	9.0	MCC-5	30.0	30A3GM	3/4" C - 3#10, 1#10G	1	FVNR	1 MC		ATIINIT	ADD ALTERNATE #1
DIST (RELOCATED EXISTING)	460	3		20.0	15.9	12.7	E1	30.0	3UA3GM	3/4" C - 3#10, 1#10G	3			30A, 3P	BY-UNIT	ADD ALTERITATE #1
	SCRIPTION (SEE NOTE 1) OF-MOUNTED EXHAUST FAN 1 OF-MOUNTED EXHAUST FAN 2	SCRIPTION (SEE NOTE 1) VOLTS OF-MOUNTED EXHAUST FAN 1 460 OF-MOUNTED EXHAUST FAN 2 460	SCRIPTION (SEE NOTE 1) VOLTS PH OF-MOUNTED EXHAUST FAN 1 460 3	SCRIPTION (SEE NOTE 1) OF-MOUNTED EXHAUST FAN 1 OF-MOUNTED EXHAUST FAN 2 VOLTS PH HP 10 10 10 10 10 10 10 10 10 10 10 10 10	SCRIPTION (SEE NOTE 1) VOLTS PH HP FLA DOF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 DOF-MOUNTED EXHAUST FAN 2 460 3 10 14.0	SCRIPTION (SEE NOTE 1) VOLTS PH HP FLA KVA DOF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 DOF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2	SCRIPTION (SEE NOTE 1) VOLTS PH HP FLA KVA KW DOF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 DOF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2 9.0	MOTOR UNIT UNIT UNIT (SEE NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 OF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2 9.0 MCC-5	MOTOR UNIT UNIT UNIT (SEE BREAKER VOLTS PH HP FLA KVA KW NOTE 2) SIZE OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 OF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2 9.0 MCC-5 30.0	MOTOR UNIT UNIT UNIT (SEE BREAKER NOTOR CIRCUIT KEY OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM	MOTOR UNIT UNIT UNIT (SEE BREAKER NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) SIZE CIRCUIT KEY MOTOR CIRCUIT COF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G	EM	EM MOTOR UNIT UNIT UNIT (SEE NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) SIZE CIRCUIT KEY MOTOR CIRCUIT NOTE 1) TYPE OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR OF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR	MOTOR UNIT UNIT UNIT (SEE NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) SIZE CIRCUIT KEY MOTOR CIRCUIT NOTE 1) TYPE SIZE LOCATION (SEE NOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 1 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC-5 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC-5 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC-5 30A3GM 3/4" C - 3	EM MOTOR UNIT UNIT UNIT (SEE NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) SIZE OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 20A, 3P OF-MOUNTED EXHAUST FAN 2 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 20A, 3P	EM MOTOR UNIT UNIT UNIT UNIT (SEE NOTE 1) VOLTS PH HP FLA KVA KW NOTE 2) SIZE CIRCUIT KEY MOTOR CIRCUIT NOTE 1) TYPE SIZE LOCATION (SEE NOTE 3) OF-MOUNTED EXHAUST FAN 1 460 3 10 14.0 11.2 9.0 MCC-5 30.0 30A3GM 3/4" C - 3#10, 1#10G 1 FVNR 1 MCC 20A, 3P AT UNIT NOTE 1) TYPE SIZE LOCATION (SEE NOTE 3) AT UNIT NOTE 4)

					LU	MINAIRE S	CHEDULE			Version †107
		LAMP(S)					SPECIFICATION (NOTE 1)			
KEY	QTY	TYPE	DESCRIPTION	FINISH	MOUNTING	MANUFACTURER	CATALOG NUMBER	VOLTS	WATTS	NOTES
Α	NA	LED	SURFACE MOUNT LINEAR LED	WHITE	SURFACE	ALS	IL4A-SWSC-WH-UD	100-277	44	SELECTABLE 44W AND 4000K CCT

		LIGHTI	NG CONTROL S	EQUE	ICE OF	OPE	RATION	SCHEDU	ILE	
KEY	DESCRIPTION	CONTROL SYSTEM TYPE	VACANCY OCCUPANCY (MANUAL ON, AUTO OFF) AUTO OFF)	TIMECLOCK	LOCAL MANUAL SWITCHING	MANUAL	DELAY	PHOTOSENSOR DIMMING	PHOTOSENSOR ON/OFF	NOTES
S21	OCCUPANCY SENSING	NETWORK	X		×		20 MINUTE			LIGHTS SHALL BE MANUAL ON TO 100% AND AUTOMATIC OFF WHEN THE SPACE IS VACANT.

	ANEL: PAN ED FROM: T-1	2		-	3 PH	4 W.		HZ M	INUO			E PLAN E SPE		ICATIO	ONS)				
		MLO	AMP M	AIN LU	ATED AT IGS	80	%	NEU [*] GRC	UND	BUS:	YES	3				ND:		-		
/CE	ב פטבפובנפ אז		AMP B						N	OIE:		XISTI SERVE	_				NI I	FLOOR		
•	E SPECIFICAT FAULT SCHE	,			AI DAAC I	2 CINA						VEW E					~	~	~~	$\checkmark\!$
()	TAOLI GOTE	JULL			T CIRCL			·		○		٣				ب	\sim		<u> </u>	4^
				1	CCT				BRE	AKER	<u> </u>	CCT								
IOTE	DESCRIPTION	N			VA			ССТРН СС	1 _{AMP}	/ P		VA		DES	CRIE	PTION			NO.	TE
	PANEL OL3				9000	100	/	1 A 2	100	/		0	SF	ARE						
	H II				9000		/	3 B 4		/ 2		0	1							
:	. н п				9000		/ 3	5 C 6	100	1		12000	P/	NEL E	}					
	UNKNOWN				0		/	7 A 8	1.00	/ 2		12000		NICT. T						
					0		/ 2	9 B 10	100	/	L	12000	PA	MEL C	,					
	SPACE RECEPTACLI	ie een	VED DI	,	0 540	20 20	/ <u>1</u> / 1	11 C 12	20	<u>/ 2</u> / 1	ļ	12000	; IA	IKNOV	A/K-I					
	RECEPTACL			/	900	20	$\frac{1}{1}$	15 B 16		1		3000		ELDIN		LIC		***************************************		
	QUAD RECE			RM	360	20	/ 1	17 C 18	30			3000	1		J L	.00				
	FANCOL I				667	15	1	19 A 20		7	ļ	0		ARE						
3	NORTHEAST)R	800		/	······		12		0	<u> </u>	ACE	**********	***************************************				•••••
	OPERATING			 	0		/	23 C 24		/		0	1	ACE						
	11 11				0		1 3			/		0	<u> </u>	ACE	**********	************	•••••	************		
	SPACE				0		/ 1	27 B 28		/		0		ACE				,.,		
	SPACE				0	20	/ 1	29 C 30	<u> </u>	/		0	SF	ACE						
_	DANEI	LOAD	ING SU	18.48.4.4.0	· · · · · · · · · · · · · · · · · · ·	_				NICO	חבו	MAND	10	AD CI	18.48	#ΛD∨				
100		PH A	PH B		TOTAL		-			NEC		POWE		AD SI		MAND		CALCU	LATED	
	ANDESCENT	0.0	0.0	0.0	0.0	kVA		LOAD TYPI	:	kW		FACT		kVA		CTOR		LOAD	יבייורט	
	OUCTIVE LTG	0.0	0.0	0.0	0.0	kVA	ΙΝ	CANDESCE			@	100%				125%		0.0	kVA	
	CEPTACLES	0.5	3.9	3.4	7.8	kVA		DUCTIVE L				95%			_	125%		0.0	kVA	
1	TORS	0.7	0.8	0.0	1.5	kVA	R	ECEPTACL			_				~					
IMO	PLIANCES	0.0	0.0	0.0	0.0	kVA		FIRST 10 k								100%		7.8	kVA	
	1	0.0	0.0	0.0	0.0	kVA		REMAIND	ER	0.0	@	95%	#	0.0	@	50%	#	-	kVA	
APF HEA	MPUTER	0.0	0.0	0.0	0.0	kVA	M	OTORS			_				_					
APF HEA COI	HED 1	21.9	21.0	33.0	75.9			LARGE					#	2.4		125%		3.0	kVA	
APF HEA COI OTA	1	0.0	0.0	0.0	0.0	kVA		REMAIND	EK -			80%		- 0.9		100%		- 0.9	kVA	
APF HEA COI OTH NOI	NCOINCIDEN		11 11 1	0.0	0.0	kVA kVA		PPLIANCES EAT				80%		0.0	_	100% 125%		0.0	kVA kVA	
APF HEA COI OTH NOI PEA	NCOINCIDEN AK LOAD	0.0	0.0	36 A	1 25 0		171	r^1 i				100% 95%		0.0		100%		0.0	kVA kVA	
APF HEA COI OTH NOI	NCOINCIDEN AK LOAD		0.0 25.7	36.4	85.0	KVA		MPHTED			14.7	JU /0	_		_	100/0	_	V.V	D.Y.C.	
APF HEA COI OTH NOI PEA	NCOINCIDEN AK LOAD	0.0		36.4	85.0	KVA	C	OMPUTER THER					#	75.9	ന	100%	#	75.9		
APF HEA COI OTH NOI PEA	NCOINCIDEN AK LOAD TAL	0.0 23.1	25.7		.		0	THER		64.5	@	85%				100%	==	75.9 -	kVA	
APF HEA COI OTH NOI PEA	NCOINCIDEN AK LOAD	0.0 23.1 ANCE	25.7 A-B	B-C	C-A	PF	0°			64.5 0.0	@	85% 95%	=	0.0	@	0%	#	-		
APF HEA CON OTH NOI PEA	NCOINCIDEN AK LOAD TAL	0.0 23.1	25.7		.		0°	THER ONCOINCID	EN	64.5 0.0 0.0	000	85%	=		@		==	75.9 - 0.0 0.0	kVA kVA	

P/	NEL: OUP1 (E)	VO	LTAGE:	120/2	240	V.	T'	YPE:	LIGH	ITING	& APPLI	ANCE	Ξ.			
	.	 ,						TMUC	ING:	SEE	PLAN						
F	ED FROM: MTS (E)						PANE	L CO	/ER:	(SEE	SPE	CIFICATI	ONS				
	` ,	AMP MA	IN RA	TED AT	80	1%	NEUT						,				
		AMP MA				-	GRO	UND I	BUS:	YES	18	OLATED	GND): N	0		
		AMP BU					4.14					NG PANE			_		
	COPPER							• •				O BY EXI			3		
		SYMME		I RMS	AMPS					3. 0			•,,,,	·			
		PANEL					IG			4. [1			
		, , , , , , , ,	1		BREA			BREA	KFR	_	CT						\neg
NOTE	DESCRIPTION			VA			ССТРН ССТ					DESC	RIPT	ION			NC
11011	PC & HMI REC			200	20				7	<u> </u>	- 1	PANEL					- 1,40
	GEN 6 CONTROL			200	20				/ 2		200	I MILL	001 2	<u></u>			+
	FLOW METER			200	20				/			RECEP	TACL	CATE	O I	A.1	
	FLOWMETER			200	20				12		3600	NEGER	MOL	COIN	\L 1\	,EVI	
	GEN 7 CONTROL			200	1	/ 1			<u>/ Z</u> / 1	<u> </u>		RECEP	T A C L	CC CT	וח	ma.	
		mm	-		1	/ 1			/ 1				HAUL	ESUI	KL.	KW	\dashv
	CTRL & VALVE POW			200	1							SPARE					
	CTRL & VALVE POW			200		/ 1			/ 1			SPARE					_
	RECEPTACLES SER			1080	20				/ 1			SPARE				******	
	RECEPTACLE SERV	EKKM		3600] -		L	/ 1			SPARE				······································	
				3600	<u> </u>	12		L	/ 1	1		SPARE					
	RECEPTACLE SERV	ER RM		3600	4	/ -	L		/ 1	1		SPARE					
				3600		1 2		L	/ 1		1	SPARE					
	RECEPTACLES SER	VER RM		360	1	/ 1			/ 1			SPARE					
	SPARE			0	1				/ 1	1		SPARE					
	SPARE			0	20	/_1	29 A 30		/ 1			SPARE					
	PANEL LOAD					L		1	VEC.			LOAD S					
	D TYPE		PH B	TOT								R				CALC	JLATE
	ANDESCENT	0.0	0.0	0.0		L	LOAD TYPE		kW		ACT					LOAD	
	UCTIVE LTG	0.0	0.0	1	kVA		NCANDESCE					= 0.0					
REC	EPTACLES	12.1	11.9	24.0	kVA	I	NDUCTIVE LT	G -	0.0	@ 9	95%	= 0.0	@	125%	==	0.0	kVA
	rors	0.0	0.0	0.0	kVA	F	RECEPTACLE	S									
APP	LIANCES	0.0	0.0	0.0	kVA		FIRST 10 k	VA]	9.5	@ 9	95%	= 10.0	@	100%	#	10.0	kVA
HEA	λT	0.0	0.0	0.0	kVA		REMAINDE	ER 1	13.3	@ 9	95%	= 14.0	@	50%	==	7.0	kVΑ
CON	MPUTER	0.0	0.0	0.0	kVA	١	MOTORS			_			-				
OTH	IER .	0.8	8.0	1.6	kVA		LARGES	ST	0.0	@ 8	30%	= 0.0	@	125%	==	0.0	kVA
	COINCIDENT	0.0	0.0	0.0	kVA		REMAIND			@ 8		= 0.0		100%		0.0	kVA
	K LOAD	0.0	0.0	0.0	kVA	A	APPLIANCES				30%			100%		0.0	kVA
	TOTAL	12.9	12.7	25.6	kVA		EAT				00%		~	125%		0.0	kVA
_							COMPUTER)5%		-	100%		0.0	kVA
							THER			-	35%		-	100%		1.6	kVA
	PHASE	BALANC	F (%)	A-B	PF		ONCOINCIDE			_	95%		@	0%	=	-	kVA
	: 11710L	. or writing	- (70)	98	95		PEAK LOAD			-	30%	= 0.0		125%		0.0	kVA
L		***************************************		1	1 00	ľ	0 % SPA		0.0	~	10 % 10%	= 0.0	_	100%		0.0	kVA
	MIN PANEL AMPA	CITVI	78	AMPER	ce	┝	TOTA		24.2		/V /Q	25.6					kVA
L	MINAL VAREE VINIEN	VIII.	10	CIVIE LE	,O	L		- AL A	.7.4.	WAA		۷.0	VAY	······			ion 121



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UPGRADE



ALTERNATE 1

PROJECT NUMBER 21486/21632

ELECTRICAL

S

PROJECT NUMBER 21486/21632

ELECTRICAL ONE-LINE

SHEET NOTES 1. LIGHT LINE WEIGHT INDICATES EXISTING (E) . HEAVY LINE WEIGHT INDICATES NEW (N) CONSTRUCTION. POWER DISTRIBUTION LUG SIZES ARE NOT INDICATED ON THIS DRAWING. ENSURE THAT ALL LUGS ARE SIZED TO ACCOMMODATE THE FEEDERS LISTED IN THE FEEDER SCHEDULE BELOW. 3. PATCH AND PAINT ANY SURFACES DAMAGED DUE TO DEMOLITION AND CONSTRUCTION TO MATCH EXISTING CONDITIONS. SEAL ALL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH UL LISTED SEALANTS AND FIRESTOPPING MATERIALS. 4. THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. DATA PRESENTED ON THIS DRAWING IS AS ACCURATE AS CAN BE DETERMINED, BUT ACCURACY IS NOT GUARANTEED. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NEITHER RESPONSIBLE FOR ITS ACCURACY, NOR ERRORS NOR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DOCUMENTS. FIELD VERIFICATION OF ALL AFFECTED COMPONENTS IS REQUIRED. 5. REFER TO SHEET E-200-5 FOR ELECTRICAL SCHEDULES AND EQUIPMENT SCHEDULE. 6. REFER TO SHEETS E-100-5, E-101-5 AND E-104-5 FOR EQUIPMENT LOCATIONS. 7. COORDINATE FAN CONTROLS WITH DIVISION 23 CONTROLS CONTRACTOR. KEY NOTES _____ ADD ALTERNATE #1: PROVIDE NEW NEMA SIZE 1 STARTER FOR NEW EXHAUST FAN IN EXISTING BUCKET SPACE. SIZE EQUIPMENT TO AIC RATING 18,000 AMPS MINIMUM. 2 ADD ALTERNATE #1: PROVIDE NEW BRANCH CIRCUIT IN CONDUIT FROM MCC-5 FOR NEW 460V EXHAUST FAN. ROUTE BRANCH CIRCUIT IN CONDUIT TO FAN UNIT THROUGH DISCONNECT SWITCH. 3 ADD ALTERNATE #1: DETERMINE BREAKER AND STARTER SIZE DURING OUTAGE AND 5 BRANCH CIRCUIT EXTENDED TO NEW LIGHT FIXTURE. REFER TO SHEET EL201-5 FOR DETAILS. RECEPTACLE RELOCATION TO MAINTAIN EXISTING BRANCH CIRCUIT IN TELECOM ROOM. REFER TO SHEET E-101-5 FOR DETAILS. 7 EXISTING BRANCH CIRCUIT FOR HOIST EXTENDED TO THE FAN FLOOR. SEE EQUIPMENT SCHEDULE FOR BRANCH CIRCUIT SIZE. 8 PROVIDE BRANCH CIRCUIT FROM PANEL IN CONDUIT TO DISCONNECT FOR THE NORTHEAST ROLL-UP DOOR. SEE ELECTRICAL SCHEDULE FOR PANEL DETAILS AND SHEET E-101-5 FOR DISCONNECT LOCATION. OUTAGE NOTES 1. COORDINATE AND SCHEDULE ALL ELECTRICAL OUTAGES AND OUTAGE TIME FRAMES WITH OWNER'S REPRESENTATIVE AT LEAST TWO WEEKS PRIOR TO OUTAGE. 2. SUBMIT A DETAILED METHOD OF PROCEDURE (MOP) FOR OUTAGES FOUR WEEKS PRIOR TO OUTAGE. 3. PERFORM OUTAGES DURING OFF HOURS AT A TIME ACCEPTABLE BY THE OWNER.

4. ACCOMPLISH ALL PREP WORK PRIOR TO OUTAGE TO MINIMIZE THE OUTAGE TIME FRAME.

5. PROVIDE TEMPORARY POWER FOR ALL CONSTRUCTION NEEDS.

480V/277V 1,600 AMP, 480/277V, 3 PHASE, 4 WIRE COGEN MCC-1(E)1,200 AMP, 480/277V, 3 PHASE, 4 WIRE <u>600AT</u> 600AF 277/480V, 3P, 4W 1200A, 65KAIC 30A4G 120/208V PANEL (E) ('100A 120/208 480V 3-PHASE, 3-WIRE, 600 AMP - MOTOR CONTROL CENTER "MCC-5" MLO (E) SPACE SPACE EXISTING EQUIPMENT (P-8B) P-8A P-5 30A3GM EMERGENCY MAKE-UP WATER PUMP DEAERATOR DEAERATOR SUPPLY PUMP 1 SUPPLY PUMP 2 EF-2 EF-1 EXHAUST FAN ROOF TOP EXHAUST FAN ROOF TOP

MOTOR CONTROL CENTER "MCC-5" ONE-LINE DIAGRAM

SCALE: NONE

FEEDER SCHEDULE CONDUIT & CONDUCTORS KEY [SEE NOTE 1] REMARKS 30A3GM 3/4 C - 3#10, 1#10G NOTE 6 600A4G 2 [3" C - 4#350, 1#1G] 1200A4G 4 [3" C - 4#350, 1#3/0G] 60A3GM 1" C - 3#4, 1#10G

FEEDER SCHEDULE NOTES:

1. THE NOMINAL CONDUCTOR AMPACITIES AND CONDUIT SIZES IN THIS FEEDER SCHEDULE ARE BASED ON COPPER CONDUCTORS, 60 DEGREE CENTIGRADE TERMINATIONS AND TYPE TW CONDUCTORS FOR SIZES #14 TO #1, AND 75 DEGREE CENTIGRADE TERMINATIONS AND TYPE THW CONDUCTORS FOR SIZES #1/0 AND LARGER. UNLESS NOTED OTHERWISE, CONDUIT IS SIZED BASED ON TYPE EMT CONDUIT. CONDUCTOR AMPACITIES ARE BASED ON 30 DEG C (86 DEG F) AMBIENT TEMPERATURE. USE OF OTHER CONDUIT, CONDUCTOR TYPES, AND AMBIENT TEMPERATURE CONDUCTOR AMPACITY AND CONDUIT SIZE. MODIFICATIONS MUST BE SUBMITTED FOR ENGINEER'S

REVIEW AND CONFIRMATION.

SHORT CIRCUIT SCHEDULE					
Fau	ılt Contributions				
Utility contribution: 750 kVA, 480 V, 3 PH, 5.32%Z		16,957 A			
Total system motor contribution: 600 FLA		3,600 A			
Total fault current from all sources		20,557 A			
Poi	nt Fault Calculations				
		Required Short	Short Circuit Isc	Line-Line	Length o
POINT	DESCRIPTION	Circuit Bracing	SYM RMS	Voltage V	(Note 1)
X1	Service Transformer to ATS	25,000	20,350	480	10
X2	ATS TO MCC-1	20,000	18,152	480	150
Х3	MCC-1 TO TE FEP1A TE	14,000	9,779	480	50
X4	MCC-1 to SWBD EDPHA	20,000	16,489	480	140
X5	SWBD EDPHA to SWBD MOP	18,000	16,159	480	25
X6	SWBD MDP to MCC-5	18,000	15,186	480	50
X7	MCC-5 to EF-1	10,000	1,619	480	150
X8	MCC-5 to EF-2	10,000	1,619	480	150

480V 3-PHASE, 3-WIRE, 600 AMP - MOTOR CONTROL CENTER "MCC-5" MLO (E)

MOTOR CONTROL CENTER "MCC-5" ELEVATION DIAGRAM
SCALE: NONE

12.47KV-480Y/277V

———— ATS-1 (E)

1000A

BSGEN-1 BLACK START

GENERATOR 600KW/750KVA 902FLA

OPERATING FLOOR -ELECTRICAL LIGHTING PLAN

EL-201-5

LIGHT LINE WEIGHT INDICATES EXISTING (E). HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION (N).

SHEET NOTES

2. PLANT SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION TO SUPPLY HIGH-TEMPERATURE WATER AND CHILLED WATER TO THE CAMPUS. SEEK PERMISSION FROM PLANT PERSONNEL PRIOR TO SHUT-OFF OR TURN-ON ELECTRICAL POWER TO PLANT EQUIPMENT.

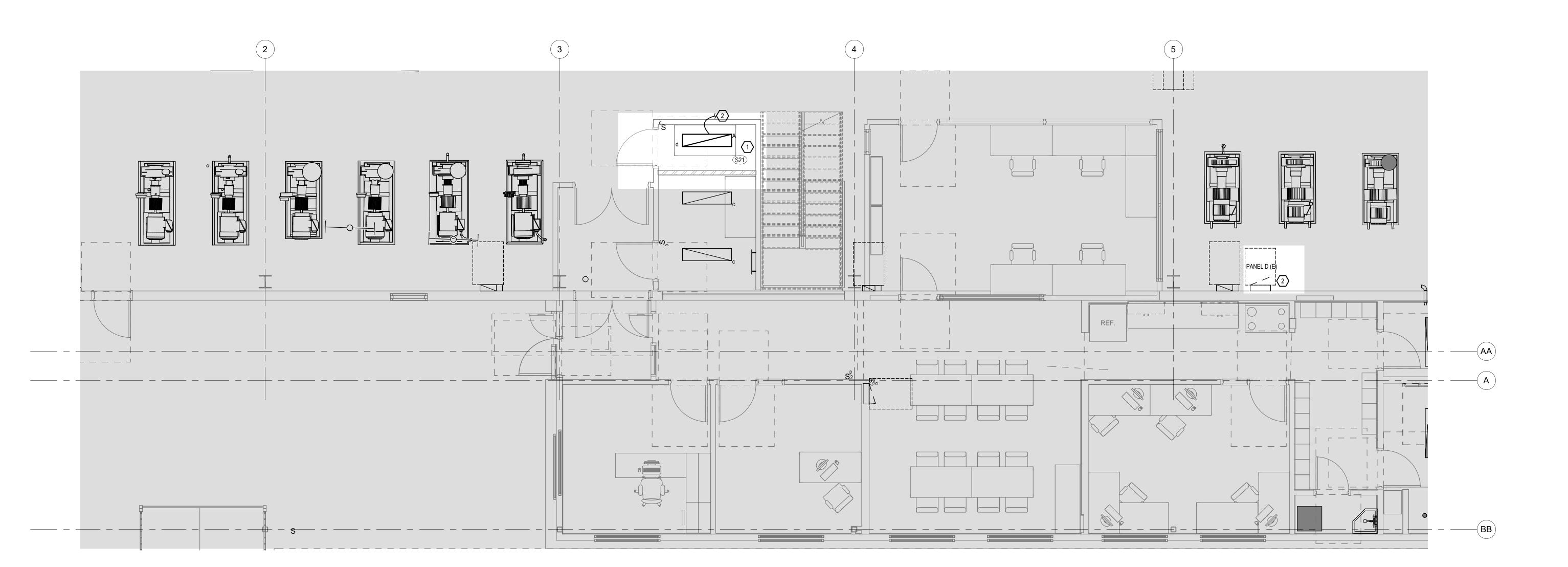
- 3. PROVIDE TEMPORARY POWER FOR SMALL TOOLS AND TASK LIGHTING. 4. PATCH AND PAINT ANY SURFACES DAMAGED DUE TO DEMOLITION AND
- CONSTRUCTION TO MATCH EXISTING CONDITIONS. SEAL ALL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH UL LISTED SEALANTS AND FIRESTOPPING MATERIALS. 5. THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION
- PROVIDED BY OTHERS. DATA PRESENTED ON THIS DRAWING IS AS ACCURATE AS CAN BE DETERMINED, BUT ACCURACY IS NOT GUARANTEED. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NEITHER RESPONSIBLE FOR ITS ACCURACY, NOR ERRORS NOR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DOCUMENTS. FIELD VERIFICATION OF ALL AFFECTED COMPONENTS IS REQUIRED.
- 6. REFER TO SHEET E-110-5 FOR ONE-LINE.
- 7. REFER TO SHEET E-200-5 FOR PANEL SCHEDULES, LUMINAIRE SCHEDULE, AND LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE.

KEY NOTES

PROVIDE NEW LIGHTING FIXTURE AND SWITCH IN STORAGE ROOM. PROVIDE LIGHTING CONTROLS COMPATIBLE WITH THE COOPER WAVELINX CONTROL SYSTEM CURRENTLY INSTALLED.

 $\overline{2}$ EXTEND EXISTING TELECOM ROOM LIGHTING BRANCH CIRCUIT.

KEY PLAN



OPERATING FLOOR - ELECTRICAL LIGHTING PLAN

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

