

**BARDSTOWN NELSON COUNTY AIRPORT**

**REQUEST FOR QUALIFICATION**

**OF**

**CONSTRUCTION MANAGEMENT AT RISK**

**FOR**

**NELSON COUNTY AIRPORT**

**TERMINAL**

**RFQ # 21-001**

## Announcement

To: Construction Manager at Risk Firms

From: David Mattingly  
Bardstown-Nelson County Air Board

Date: July 09, 2021

Subject: **RFQ # 21-001 Construction Management at Risk for Nelson County Airport Terminal**

The Bardstown-Nelson County Air Board is soliciting qualifications from qualified Construction Managers for the construction of their proposed Terminal building. The Bardstown-Nelson County Air Board will evaluate Construction Management firms based on their submitted Qualifications and select a single Construction Management firm.

The attached RFQ contains information on the project and required scope, along with other services the Construction Management firm shall provide. In addition, it outlines how the selection process will be managed, Bardstown-Nelson County Airport's requirements, Bardstown – Nelson County Airport's evaluation of the submittal package and their contract requirements. After you have reviewed the RFQ information, you are invited to submit your firm's submission as a Construction Manager Firm to the Bardstown-Nelson County Air Board.

**SUBMISSIONS ARE TO BE SEALED, MARKED WITH THE OFFEROR'S NAME AND ADDRESS AND LABELED: RFQ # 21-001 Construction Management at Risk for Nelson County Airport Terminal**

And delivered to: Bardstown-Nelson County Airport  
1924 Boston Road  
Bardstown, KY 40004

no later than **10:00 A.M. E.D.T., Friday, July 16, 2021**. Submissions received after said date and time will not be considered. Having the envelop postmarked by Friday, July 16, 2021 does not meet the requirements of this RFQ. The RFQ must be in the hands of the recipient prior to the designated time.

The written requirements contained in this RFQ shall not be changed or superseded except by written addendum from the Bardstown-Nelson County Airport. The Owner reserves the right to reject any and all proposals deemed to be non-responsive. The Bardstown-Nelson County Airport also reserves the right to reject any and all qualifications, to waive any technicalities,

informalities or irregularities and to ultimately award a contract to the firm that is deemed to have presented the best and most advantageous qualifications for the Airport, resulting from an evaluation process using criteria set forth in Section III of this qualification document.

Any inquiries regarding this RFQ must be submitted in writing no later than close of business on Tuesday, July 13, 2021. Inquiries must be submitted to David Mattingly, Board Member, [davidwmattingly@hotmail.com](mailto:davidwmattingly@hotmail.com). Questions will only be answered in writing by Addendum. Questions received after Tuesday, July 13, 2021 will not receive a response.

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- D. Reference Survey Form (required submittal)
- E. Project Schedule
- F. Construction Management Contract

Note: Please examine the contents of this RFQ package and if anything is missing contact David Mattingly, Board Member, [davidwmattingly@hotmail.com](mailto:davidwmattingly@hotmail.com).

**SECTION I – REQUEST FOR QUALIFICATION OVERVIEW AND PROCEDURES**

**A. PURPOSE**

The Bardstown-Nelson County Airport, the Owner, is soliciting Qualification from firms experienced in the Construction Management at Risk delivery method.

**B. PROGRAM DESCRIPTION**

The Bardstown-Nelson County Air Board is soliciting qualifications from qualified Construction Managers for the construction of their proposed Terminal building. The Bardstown-Nelson County Air Board will evaluate Construction Management firms based on their submitted Qualifications and select a single Construction Management firm.

**SCOPE:**

**GENERAL SCOPE OF SERVICES.** Includes complete CM Pre-Construction services; cost management; schedule management; design coordination to include providing Design Assist from your proposed Mechanical, Plumbing, and Electrical; coordination with Bardstown-Nelson County Airport’s special inspector; Bardstown-Nelson County Airport Board and Staff Meeting; coordination with design team during Pre-Construction, Submittal, and assistance with submission to Authorities Having Jurisdiction, including, but not limited to, Planning Commission, Plan Review, Permitting; full Construction Management and Post Construction Services.

It is the objective of the Bardstown-Nelson County Airport to have their project completed for as low cost as practical without sacrificing the Owner’s requirements, Design Standards, and/or Long-Term Operating / Life Cycle costs.

**C. INFORMATION FOR OFFERORS**

**1. RFP TIMETABLE**

The anticipated schedule for the RFQ and contract approval is as follows:

RFQ available	<b>Friday, July 9, 2021</b>
Deadline for Submission of Questions	<b>Tuesday, July 13, 2021 C.O.B.</b>
Deadline for receipt of Submissions	<b>Friday, July 16, 2021 at 10:00 A.M. E.D.T.</b>

2. **SUBMISSION**

Offerors must submit (6) original copies of the Proposal, and (1) additional copy of the Proposal in electronic format (PDF) on a USB drive. Submission must be submitted by **Friday, July 16, 2021 at 10:00 A.M. E.D.T.** Submission must be submitted in a sealed envelope, marked with the Offeror's name, address, telephone number, and labeled **RFQ # 21-001 Construction Management at Risk for Nelson County Airport Terminal**, to:

Bardstown-Nelson County Airport  
1924 Boston Road  
Bardstown, KY 4004

The Submission must be signed by an Officer of the Company, legally authorized to enter into a contractual relationship in the name of the Offeror.

Proposal shall be valid for a period of 60 days.

3. **RFQ QUESTIONS**

Any inquiries regarding this RFQ must be submitted in writing no later than close of business on Tuesday, July 13, 2021. Inquiries must be submitted to David Mattingly, Board Member, [davidwmattingly@hotmail.com](mailto:davidwmattingly@hotmail.com). Questions will only be answered in writing by Addendum. Questions received after Tuesday, July 13, 2021 will not receive a response.

4. **ADDITIONAL INFORMATION/ADDENDA**

Bardstown-Nelson County Airport will issue responses to inquiries and any other corrections or amendments it deems necessary in the form of written Addenda prior to the Submission Date. Offerors should not rely on any representations, statements or explanations other than those made in this RFQ including the Attachment or in any Addendum to this RFQ.

Where there appears to be a conflict between the RFQ and any Addenda issued, the latest Addendum shall prevail.

5. **LATE PROPOALS, LATE MODIFICATIONS AND LATE WITHDRAW**

Submissions received after the Submission Due Date and Time will not be Considered. Modifications received after the Submission Due Date and Time

will not be considered. No responsibility shall apply to the Bardstown-Nelson County Airport for the premature opening of a Submission Package not properly addressed, identified, and/or delivered to the proper location.

**6. REJECTION OF SUBMISSIONS**

Bardstown-Nelson County Airport may reject all Submittal packages submitted and reserves the right to waive any irregularities or informalities in any Submission package submitted or in the Submission procedure.

Submissions received after said time or at any place other than the time and place as stated in the Notice will not be considered.

**7. COST INCURRED BY OFFERORS**

All expenses involved with the preparation of Submissions, or any work performed in connection therewith are the responsibility of the Offeror(s).

**8. MINORITY BUSINESS POLICY STATEMENT**

Bardstown-Nelson County Airport does not discriminate on the basis of race, color, religion, sex, national origin, disability, age, marital status, sexual orientation, or gender identity in its employment practices, programs, or activities.

Bardstown-Nelson County Airport encourages Minority and Women Businesses to compete in the RFQ process and encourages all businesses to provide for the participation of MBE/WBE businesses through partnerships, subcontracts and other contractual opportunities.

**9. RFQ DOCUMENTS**

The RFQ documents consist of the RFQ and the following attachments which are incorporated herein by reference.

- A. General Scope of Work
- B. Scope of Work
- C. Acknowledgement of Addendum Form (required submittal)
- D. Reference Survey Form (required submittal)
- E. Project Schedule
- F. Construction Management Contract
- G. Contractor Security and Immigration Compliance Affidavit

## SECTION II – QUALIFICATION REQUIREMENTS

Submissions shall not exceed Fifty typed pages. Font shall be no less than 10 point and you may utilize double siding. All Submissions shall include the information indicated below and in the following order with individual tabs for each section and sub section. Tabs and other dividers do not attribute to your overall page count.

### A. QUALIFICATION SECTION:

All Submissions should include the information outlined below in the following order and separated by tabs:

1. **A. Cover Letter & Statement of Interest** – Briefly, explain why your firm is interested in the Bardstown-Nelson County Airport project. This information shall include the following:

- Number of projects the firm has undertaken in the last five (5) years with a construction value of at least \$1,000,000.
- Provide at least Three (3) relevant projects in which you have successfully provided Construction Management services in a similar contractual arrangement.
- Explain experience of delivering projects on time, within budget, and with high quality of standards.
- Provide awards and acknowledgments.

**B. Acknowledgement of Addenda:** Include completed Acknowledgment of Addenda form From Attachment C of this RFQ.

### 2. Firm Description and Information

- Company Name
- Company Address
- Company Contact Information
- Basic company information
- Proposed Team Members, Email, Phone Number
- Number of Years in Business
- Dunn and Bradstreet Number
- Form of Ownership
- Succinctly describe the history and growth of the firm



### 3. Firm Financial Information

Letter from Financial Institution indicating strength of firm to include as minimum financial Ratios such as:

- 1) **Utilization Rate** – Defined as the ratio of direct labor costs to total labor costs
- 2) **Net Labor Multiplier** – Net service revenue divided by direct labor costs. A firm with a higher net labor multiplier is generating more revenue from its direct labor costs. This could be to pricing premium or to managing projects more efficiently through better staffing and execution.
- 3) **Revenue Factor** – A firm’s utilization rate and net labor multiplier each supply valuable information for judging how well a firm manages its labor cost and project performance. Taken together, however, they produce a reliable measure for determining a firm’s ability to manage its total labor cost effectively.
- 4) **Overhead Rate** – To calculate, divide all overhead costs – marketing and selling, general and administrative, indirect labor, payroll expenses, and any other expenditures that are not reimbursed or chargeable directly to a specific job – by direct labor costs. The proper calculation and monitoring of the overhead rate is vital both to determining the hourly rate to charge and as the basis of flat fee calculations.
- 5) **Average Collection Period** – The rate at which a company converts billings to cash – its average collection period (ACP) – is calculated by dividing accounts receivable by the average gross revenue per day generated by the firm. This gives the average number of days it takes a firm to collect on its invoices.

#### 6) **Bonding:**

##### A. **Identify the CM Firm’s surety or sureties:**

The CM Firm’s surety or sureties must be licensed in Kentucky, be currently rate “A-“ Of better by the A.M. Best Company and, additionally, shall be currently listed on the U.S. Department of Treasury’s Listing of Approved Sureties (Department Circular 570) as a surety authorized to write bonds for the U.S. Government with a total underwriting limitation of the CM Firm’s surety or sureties equal to or greater than the Estimated Construction Value of the project stated on page one of this form.

B. State the CM Firm’s current per project bonding capacity with its surety or sureties:

C. The CM Firm’s current bonding capacity per project must equal or exceed the Estimated Construction Value of the Project \$1,000,000.00

D. State the unused amount of the line of bonding credit (aggregate) currently available to the CM Firm.

E. State the name(s), address(s), and telephone number(s) of the CM Firm’s surety agent(s) or underwriting contact(s) for the past (5) years.

F. State whether Performance or Payment Bond claims have been made to the CM Firm’s surety on any project within the last five (5) years.

If the answer is “yes”, describe each claim, the name of the project, the owner, the

name of the company or persons making the claim, date of claim, the circumstances of the claim, and the resolution.

#### **4. Firm's Current Legal Status**

- Regarding litigation with owners, design professionals, project managers, subcontractors, suppliers: List any active or pending litigation the Firm is involved in.
- Has the CM firm ever failed to complete any work awarded to them or has been removed from any project awarded? If so, explain.

#### **5. Firm's Relevant Project Experience and Reference Points**

Relevant project experience includes similar building type and delivery method. Describe no fewer than Three (3) projects in order from most relevant to least relevant that demonstrate the firm's capabilities to perform the Project at hand. For each project, the following information should be provided:

- The name of the organization to which the services were provided
- Project name
- Project location
- Project location
- Dates during which services were performed
- Physical description (square footage, stories, site, etc.)
- Brief description of the project
- Services performed
- Project contract amount
- Project schedule
- Representative photo of the project

#### **6. Firm's References**

For at least Three (3) of the projects listed above, provide the following. Reference forms are to be completed by the client or person providing the reference.

- Provide minimum of Three (3) Reference Forms (See Attachment) for references from Owners for whom the firm has provided Construction Management services of a nature and quality similar to those described herein.
- Provide written statement from each Owner as to whether the project finished on time and on budget or if not why.

#### **7. CM Personnel Capability**

- Provide resume' of firm's proposed personnel including
  - Construction Manager / Project Manager

- Site Superintendent / Field Manager

#### **8. Firm's Safety Practices and Record**

- Proposing CM Firms shall provide a copy of their Safety Manual.
- For the last 25 years, list any and all citation or penalty received from the Occupational Safety and Health Administration to the proposing Firm.
- Provide evidence that Firm participates in pre-employment and periodic drug screening.
- Provide Firm's current Experience Modification Rate (EMR)

#### **9. Firm's Computer Software and Capabilities**

Identify Firm's proposed mobile, cloud-based Construction Management Software capable of providing support in following areas:

- Drawings & Specification Management
- Project Correspondence Management
- Submittal
- Scheduling
- Daily Logs
- Photos
- Meeting Minutes

### **SECTION III – EVALUATION AND SELECTION PROCESS**

#### **1. Selection Committee**

The selection of CM will be by a Selection Committee comprised of representatives of The Bardstown-Nelson County Air Board.

#### **2. Initial Written Submittal**

The selection committee will receive and review submittals in an effort to determine compliance with the format set out in Section II of this RFQ. Review of Submissions by Selection Committee members will be evaluated against a set of weighted criteria (See table below) to determine those firms meeting minimal qualifications who suits the best needs of The Bardstown-Nelson County Air Board. The Selection Committee will review the Qualifications and will score and rank each submission. No more than the top three highest ranking firms will be invited to present to the Selection Committee a technical presentation with a question-and-answer period.

#### **TABLE – Evaluation of Weighted Criteria**

The selection committee will evaluate the Submissions of each firm based upon the criteria listed in the table below. The Owner has judged each major category of criteria to be worth the

point value given, as a maximum, in establishing committee rankings of submittals.

<b>No.</b>	<b>QUALIFICATIONS Major Category</b>	<b>Max Points</b>	<b>Criteria</b>
1	Cover Letter & Statement of Interest	25	Introduction of firm, form background; clarity in expressing interest, specific and compelling reasons why program is a good fit for the firm.
2	Firm Description and Information	20	Basic company information; Form of Ownership; history and growth of your firm.
3	Firm Financial Information	10	Understand firms financial stability
4	Firm Current Legal Status	10	Firm's litigation record
5	Firm's Relevant Project Experience and References Projects	30	Firm's experience using delivery method Firm's experience of like projects
6	Firm References	20	Quality of references from an Owner for proposed firm
7	Firm's Team/Personnel Capability	30	Depth of resources with experience to lead team through project.
8	Firm's Safety Practices and Record	30	Evidence that safety is paramount above all other considerations
9	Firm's Computer Software and Capabilities	25	Ability for Board Member to have access as to remain engaged in the project without being onsite daily.
			<b>TOTAL AVAILABLE POINTS: 200</b>

#### **SECTION IV – CONTRACT REQUIREMENTS**

This section describes The Bardstown-Nelson County Air Board's expectations for the selected CM Firm. The final terms and conditions of the contract supersede the information provided here. The information below is intended to provide base requirements of the Offerors. It is not the intent to limit opportunities to reduce cost or expedite the schedule. Alternatives that allow the CM to "fast track" the project and incorporate value engineering and the advantages of such alternatives should be adequately explained in the Submission.

## **A. FORM OF AGREEMENT**

- The Owner intends to enter into a Contract with the Selected Offeror. The Contract Agreement is not subject to negotiation.
- It is the intent of the Owner to utilize a Construction Management contract for the Cost of the Work plus a Fixed Fee with a Guaranteed Maximum Price (GMP).
- It will be the responsibility of the CM to work with the Owner to ensure the total cost of the work is not outside the total Project Budget.

## **B. TERMS OF PAYMENT AND COST CONTROL**

The project delivery method to be utilized for this project is CM that incorporates conditions of a cost-plus fixed fee with a Guaranteed Maximum Price contract. This total cannot exceed the project budget.

The CM will be required to provide a detailed cost estimate at the end of the Design Phase. This Design Estimate shall be reviewed and evaluated by the Owner and Design firm as part of the reconciliation process.

Furthermore, once successive parts of the contract have been executed for construction, the CM shall obtain competitive bids for work that is not self-performing and prepare detailed cost estimates for work it intends to self-perform based on construction documents approved by the Owner and all appropriate permit issuing agencies. The bids and Detailed Construction Documents Estimate shall be reviewed and evaluated by the Owner. While there is no minimum requirements for the number of bids or limitations on self-performed work, the CM is required to take all reasonable steps to minimize costs while adhering to the Bardstown-Nelson County Airport's Design Standards.

During the construction, detailed cost reports with associated back up will be submitted as part of the Application for Payment. At no time will payments exceed the GMP without prior written and approved Change Orders.

## **C. INSURANCE AND BONDS**

1. The CM shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds of minimum amounts of insurance specified in the CM Contract. The insurer shall be in good standing within the State of Kentucky and must be A- or better with AM Best Company.
2. The certificate of Insurance evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Bardstown-Nelson County Airport's interest shall not be effective until 30 days after the insurer or the Contractor gives written notice to the Bardstown-Nelson County Air Board.
3. The Certificate of Insurance shall reference the RFQ identification number and description as evidencing this requirement.
4. The Contractor shall insert the substance of this requirement, including this paragraph, in subcontracts under the contract that require work on property and shall require

subcontractors to provide and maintain a copy of all subcontractor's proof of required insurance, and shall make copies available for the Bardstown-Nelson County Air Board upon request.

**5. Comprehensive General Liability**

This shall be taken out in the name of the Construction Management firm with the Bardstown-Nelson County Airport and Bardstown-Nelson County Air Board as additional insured.

- Combined Single Limit shall not be less than \$2,000,000 aggregate and not less than \$1,000,000 for each occurrence.

**6. Automobile Liability Insurance**

Taken out in the name of the Construction Management firm

- Combined Single Limit shall not be less than \$1,000,000 combined single limit.

**7. Worker's Compensation Insurance**

The Construction Management Firm shall obtain and maintain Worker's Compensation Insurance in accordance with statutory requirements and Employer's Liability Insurance covering all employees of the CM Firm, and any uninsured subcontractors. It shall be the responsibility of the Construction Management firm to ensure Sub Contractor's compliance with this requirement.

- Combined Single Limit shall not be less than \$500,000 for each occurrence. Before commencing the job, the CM Firm shall provide the Bardstown-Nelson County Airport with satisfactory evidence that the above-mentioned insurance is in force.

**8. Sub-CM Firm's Public Liability and Property Damage Insurance**

For contracts \$50,000 and greater, the CM Firm shall require each of his subcontractors to procure and to maintain during the life of his subcontract, subcontractor's public liability and property damage insurance of the type and amount specified previously.

**9. CM Firm's Protective Liability Insurance**

This shall be taken out in the name of the CM Firm

- Personal injury including death – limits of \$1,000,000 for each occurrence. Property damage – limits of \$500,000 for each occurrence and \$500,000 aggregate operations. Include broad form property damage liability or equivalent.

**10. CM Firm's Builder's Risk Insurance**

This shall be taken out in the name of the CM Firm and shall be in the amount of the completed value of the structure (including all materials and labor costs, excluding value of the land).

**D. PERFORMANCE AND PAYMENT BONDS**

CM's Performance and Payment Bonds shall be issued by a Surety company that is:

- i. listed in the most current US Treasury List (Circular 570) and who's underwriting capacity, as shown on that list, is ample for the Project, and

ii. rated by A.M. Best Co. with a minimum rating of A-.

Before commencing any work, the CM shall provide the Bardstown-Nelson County Airport with certificates of insurance or other satisfactory evidence that the above-mentioned insurance and bonds are in force.

**E. HOLD HARMLESS AND INDEMNIFICATION**

The Offeror agrees, insofar as it legally may, to indemnify and hold harmless the Bardstown-Nelson County Air Board against all loss, cost, expenses, including attorney's fees, claims, suits and judgements, whatsoever in connection with injury to or death of any person or persons or loss of or damage to property resulting from any and all operations performed by Offeror, its officers, employees, and agents under the terms of the contract.

## **Section V – Attachments**

- A. General Scope of Work
- B. Scope of Work / Design Drawings
- C. Acknowledgement of Addendum Form (required submittal)
- D. Reference Survey Form (required submittal)
- E. Project Schedule
- F. Construction Management Contract



## **RFQ # 21-001-Attachment A**

### **General Scope of Work**

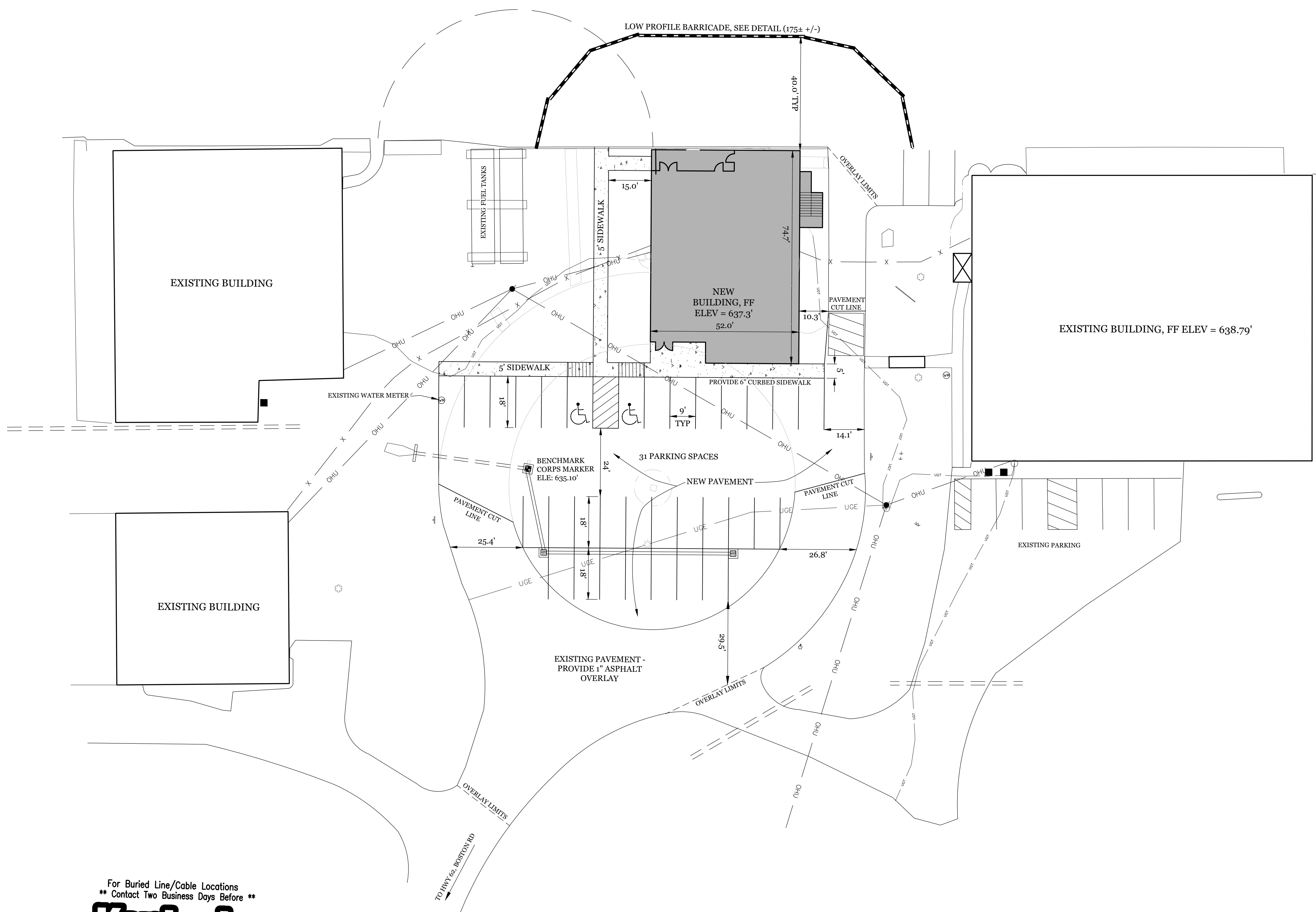
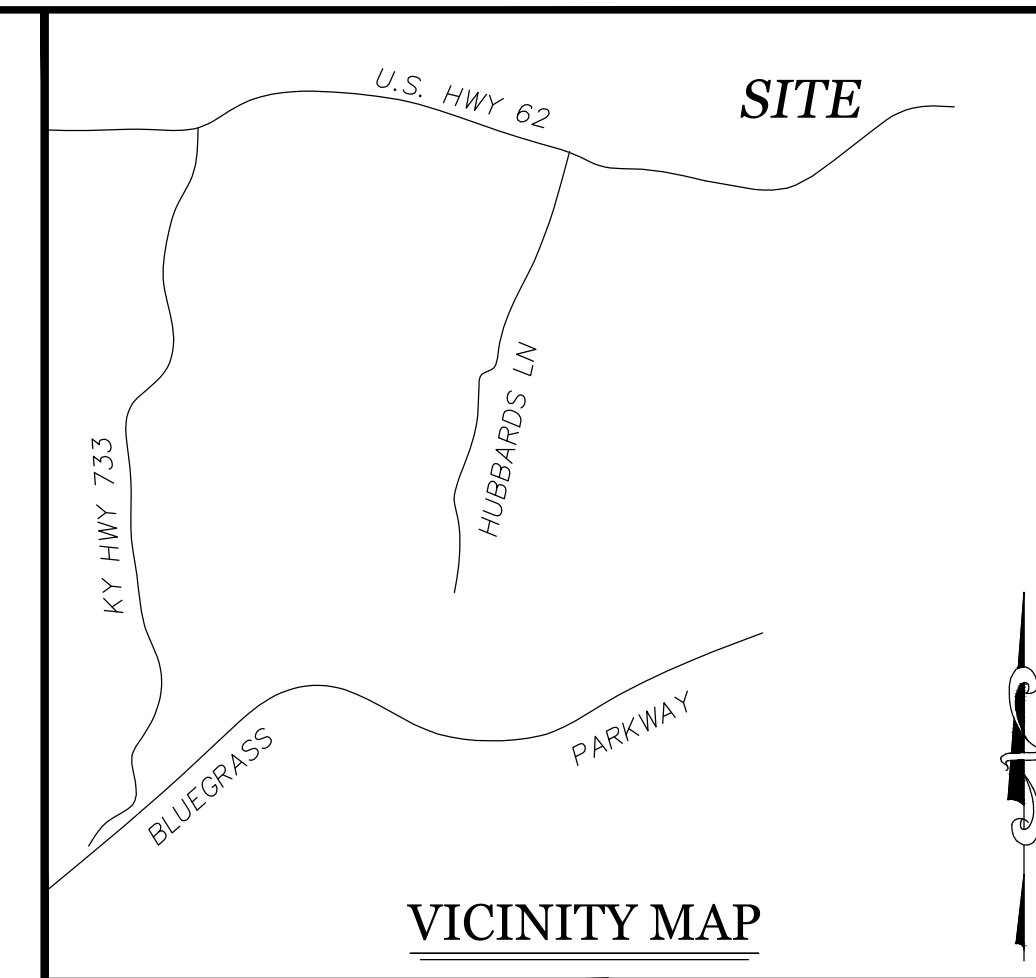
#### Construction Manager's General Responsibilities

1. Scope of Services include, but is not limited to:
  - Site analysis and Mobilization Plan
  - Management and execution of a Safety Plan
  - Prepare project schedule and monthly updates
  - Provide necessary insurance
  - Provide 100% Performance and Payment Bond
  - Suggest value engineering alternatives and incorporate into documents is approved
  - Management and execution of Design Phase Services
  - Management and execution of all required permits
  - Management and execution of the Procurement Phase
  - Management and execution of all Construction Phase activities
  - Management and execution of the Post Construction Phase
2. The Construction Manager will be required to assume an active role in the control of time and cost of the project. The CM shall develop a Master Project critical path method (CPM) schedule reflecting all phases of the project including design, procurement, construction and project closeout to the satisfaction of the Bardstown-Nelson County Air Board. The schedule shall reflect agreed upon milestones for evaluation of progress and show relationships between tasks, activities, shutdown, inspections, approvals, design discipline and construction trades. Preparation and adherence to the Project Schedule shall be a contractual responsibility of the CM. In addition to the CM's work, the schedule should include the timing and coordination of Owner supplied/ Owner installed items. These items shall be determined during the Design phase. The CM shall remain fully responsible for constructing the project within the established budget and time constraints.
3. The CM shall develop, manage and execute a safety program for all phases of the work with periodic reporting to the Bardstown-Nelson County Air Board.
4. The CM shall make weekly reports to Bardstown-Nelson County Air Board's Representative indicating the status of all activities and depicting their impact on schedule and budget.
5. For the duration of the CM's contract, they will provide an on-site office.

6. The Construction Manager will be responsible for applying and paying for all applications, permits, utility fees, etc. This includes the coordination and preparation of applications, drawings, exhibits, surveys, and any needed document to file for and obtain any necessary permits and to satisfy the Owner and Jurisdiction that the intent of the Project is being met. Responsibilities include, but not limited to:
  - Coordinate and provide Constructability Reviews of the Design teams design development and construction documents.
  - Coordinate timing for review and approval by the proper authorities and the Bardstown-Nelson County Airport's staff to obtain approval.
  - Coordinate all aspects of the design relating to matching scope and budgets
  - Update the project schedule with each payment request
  - Coordinate all documents necessary to obtain all required permits. All permit and other fees are the responsibility of the CM.
  - Conduct, record, distribute meeting minutes of progress meetings with the Bardstown-Nelson County Airport.
  - Prepare and submit a detailed Preliminary Design Estimate, and Construction Design Estimate of the construction cost for the project based off the approved plans.
  - Coordinate with the Bardstown-Nelson County Air Board's requirements and attend all necessary meeting with the Bardstown-Nelson County Air Board's representatives.
  - Prepare necessary supporting documentation required for submission of the CM's monthly Application for Payment.
7. Services during construction
  - Construction management
  - Full-Time Onsite Supervision
  - Accurate and timely issuance of daily log information
  - Quality control of work in place
  - Coordination of Owner's material testing agency
  - Project closeout / Owner training

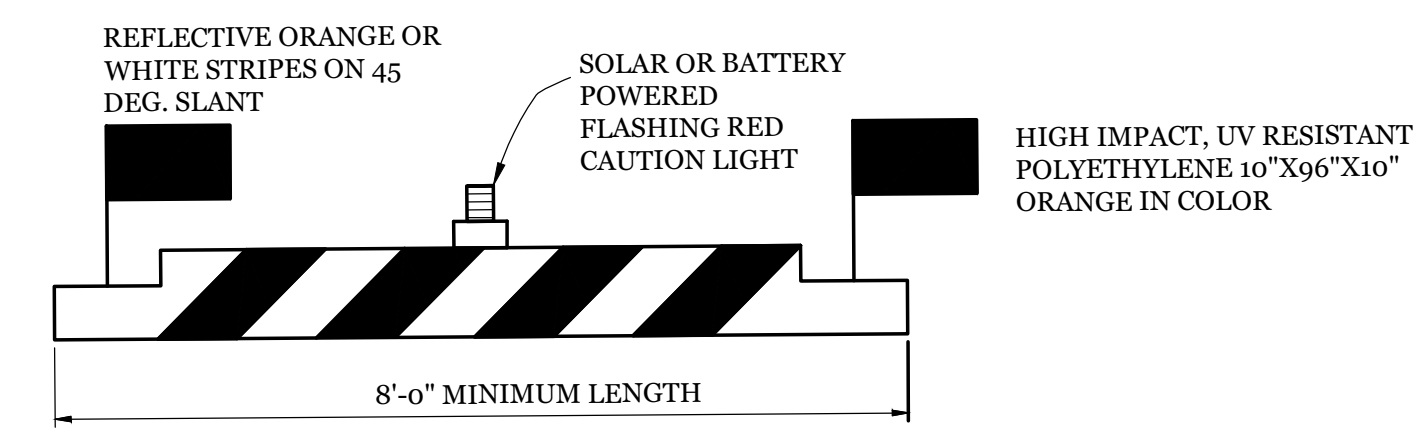
**RFQ # 21-001-Attachment B**  
**Scope of Work / Design Drawings**

**Nelson County Airport Terminal**



**NOTES:**

- THE CONSTRUCTION SEQUENCE WILL BE ESTABLISHED AT A PRE CONSTRUCTION MEETING.
- ALL EQUIPMENT SHALL BE PARKED IN "EQUIPMENT PARKING AREAS" WHEN NOT IN USE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE FBO AT LEAST 5 DAYS PRIOR TO ANY OPERATIONS ON AIRPORT PROPERTY SO THAT "NOTICES TO AIRMEN" (NOTAMS) MAY BE PUBLISHED.
- ALL VEHICLES SHALL BE MARKED, LIGHTED AND IDENTIFIED WITH COMPANY NAME IN ACCORDANCE WITH AC 150/5210-5.
- THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAVEMENTS, LIGHTS, NAVIGATIONAL AIDS, OR OTHER FACILITIES THAT OCCUR AS A RESULT OF HIS/HER OPERATIONS AT HIS/HER EXPENSE.
- COSTS FOR FLAGS, VEHICLE LIGHTING, BARRICADES AND ALL OTHER EQUIPMENT REQUIRED FOR SAFETY ARE INCIDENTAL TO SAFETY DEVICES BID ITEM.
- ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE PROJECT WORK AREA AS SHOWN ON THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND MAINTENANCE OF ALL ACCESS AND HAUL ROADS DURING CONSTRUCTION.
- SUFFICIENT SWEEPERS AND CLEAN UP EQUIPMENT SHALL BE PROVIDED TO KEEP THE PAVED AREAS FREE OF LOOSE MATERIAL AND DEBRIS AT ALL TIMES.
- ALL WASTE WILL BE DISPOSED OFF AIRPORT PROPERTY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL ENSURE THAT ALL AIRPORT PAVEMENTS (INCLUDING ROADS) ARE TO REMAIN FREE OF DUST AND FOREIGN OBJECT DEBRIS (FOD). THE CONTRACTOR SHALL, AT THEIR EXPENSE, REMOVE THE DUST OR FOD BUILD-UP. PLEASE REFERENCE AC 150/5210-24, TRASH AND DEBRIS WILL NOT BE PERMITTED ON THE AIRFIELD.
- THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY AGC OF AMERICA, INC., AND THE "SAFETY AND HEALTH REGULATION FOR CONSTRUCTION" ISSUED BY THE UNITED STATES DEPARTMENT OF LABOR.
- THE CONTRACTOR SHALL MAINTAIN THE LPB'S DURING THE PROJECT AND TURN THESE OVER TO THE OWNER UNDAMAGED AND IN GOOD CONDITION. ALL LPB'S SHALL REMAIN THE PROPERTY OF THE AIRPORT UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL INSURE NONE ARE DISPLACED OR DISTURBED DURING CONSTRUCTION AND WILL IMMEDIATELY REPLACE ALL DAMAGED LPB'S AT NO ADDITIONAL COST TO THE AIRPORT.
- CONTRACTOR SHALL BE FAMILIAR WITH FAA AC 150/5370-2 "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AC 150/5370-10F "STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS", AND AC 150/5200-18C "AIRPORT SAFETY SELF INSPECTION".
- THE CONTRACT TIME WILL BE 90 CALENDAR DAYS FOR BASE BID. LIQUIDATED DAMAGES OF \$1000 PER CALENDAR DAY WILL BE ASSESSED FOR FAILURE TO COMPLETE CONSTRUCTION WITHIN THE ALLOTTED DAY.
- THE CONTRACTOR IS RESPONSIBLE FOR INFORMING EMPLOYEES UNDER HIS/HER CONTROL THAT UNAUTHORIZED CONSTRUCTION PERSONNEL FOUND IN RESTRICTIVE AREAS OF THE AIRPORT, AS DEPICTED ON THE SAFETY PLAN, ARE SUBJECT TO ARREST FOR A PUNISHABLE FEDERAL OFFENSE AND WILL PROMPTLY AND PERMANENTLY BE REMOVED FROM THE AIRPORT PROPERTY.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS, AND SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING PROPER BARRICADES, LIGHTS, AND SIGNS, WITH IN THE LIMITS OF CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATION AND CODES IN REGARDS TO SAFETY, NOISE CONTROL, EROSION CONTROL, WATERSHED PROTECTION, HAZARDOUS EMISSIONS, AND DUST CONTROL THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AND MONITOR A RADIO TUNED TO THE AIRPORT'S FREQUENCY (UNICOM #122.8), TO LISTEN FOR EMERGENCY DISTRESS CALLS.
- OBJECT FREE AREA (OFA) - AN AREA ON THE GROUND CENTERED ON A RUNWAY, TAXIWAY, OR TAXILANE CENTERLINE PROVIDED TO ENHANCE THE SAFETY OF AIRCRAFT OPERATIONS BY HAVING THE AREA FREE OF OBJECTS, EXCEPT FOR OBJECTS THAT NEED TO BE LOCATED IN THE OFA FOR AIR NAVIGATION OR AIRCRAFT GROUND MANEUVERING PURPOSES.
- RUNWAY SAFETY AREA (RSA) - A DEFINED SURFACE SURROUNDING THE RUNWAY PREPARED OR SUITABLE FOR REDUCING THE RISK OF DAMAGE TO AIRPLANES IN THE EVENT OF AN UNDERSHOOT, OVERSHOOT, OR EXCURSION FROM THE RUNWAY.
- DUST CONTROL MEASURES WILL BE MAINTAINED BY USE OF WATER.
- INSPECTION SCHEDULE WILL BE ESTABLISHED AT PRE CONSTRUCTION MEETING. CONTRACTOR WILL NOT BE PAID UNLESS ALL ITEMS ARE INSPECTED & APPROVED BY ENGINEER.



**NOTES:**

- INTENDED FOR THE FOLLOWING:  
-MARKING/LIGHTING OF TEMPORARY HAZARDS WITHIN THE AOA  
-LONG TERM CLOSURE OF AIRCRAFT ROUTES
- INSTALL AT 12' O/C SPACING ALONG FULL WIDTH OF PAVEMENT OR AS SHOWN ON PLANS
- WHERE TRYING TO KEEP OUT FOOT TRAFFIC, SHALL BE LINKED IN A CONTINUOUS LINE WITH ALTERNATING ORANGE AND WHITE UNITS
- SHALL BE USED IN AREAS SUBJECTED TO JET BLAST
- SHALL BE EQUIPPED WITH ALTERNATING ORANGE AND WHITE 20"X20" FLAGS.
- SHALL ALSO BE EQUIPPED WITH SOLAR OR BATTERY POWERED FLASHERS WITH RED LENSES
- SHALL BE WATER FILLED AND MODULAR TO ASSEMBLE/DISASSEMBLE AND NEST FOR COMPACT STORAGE
- AIRPORT SHALL SUPPLY ALL BARRICADES FOR CONSTRUCTION AND SHALL REMAIN AIRPORT PROPERTY.

LOW PROFILE BARRICADE DETAIL  
SCALE: N.T.S.

**FAA ADVISORY CIRCULARS:**

THE CONTRACTOR SHALL ACQUIRE THE MOST CURRENT EDITIONS OF THE FOLLOWING ADVISORY CIRCULARS AS REFERENCE STANDARDS FOR SAFETY DURING AIRPORT CONSTRUCTION. ADVISORY CIRCULARS MAY BE OBTAINED AT [www.faa.gov](http://www.faa.gov).

**ADVISORY CIRCULAR**

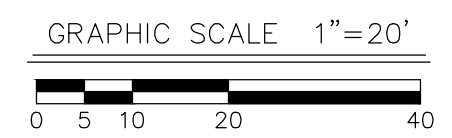
AC 150/5370-2 OPERATIONAL SAFETY ON AIRPORTS DURING

CONSTRUCTION STANDARDS  
AC 150/5370-10 FOR SPECIFYING CONSTRUCTION OF AIRPORTS

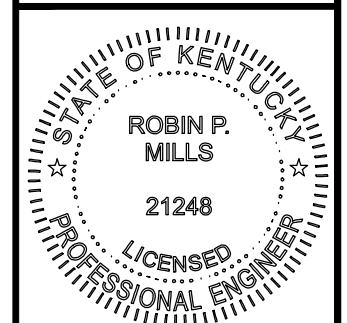
AC 150/5200-18 AIRPORT SAFETY SELF-INSPECTION

AC 150/5340-1 STANDARDS FOR AIRPORT MARKINGS

AC 150/5210-5 PAINTING, MARKING & LIGHTING OF VEHICLES USED ON AN AIRPORT



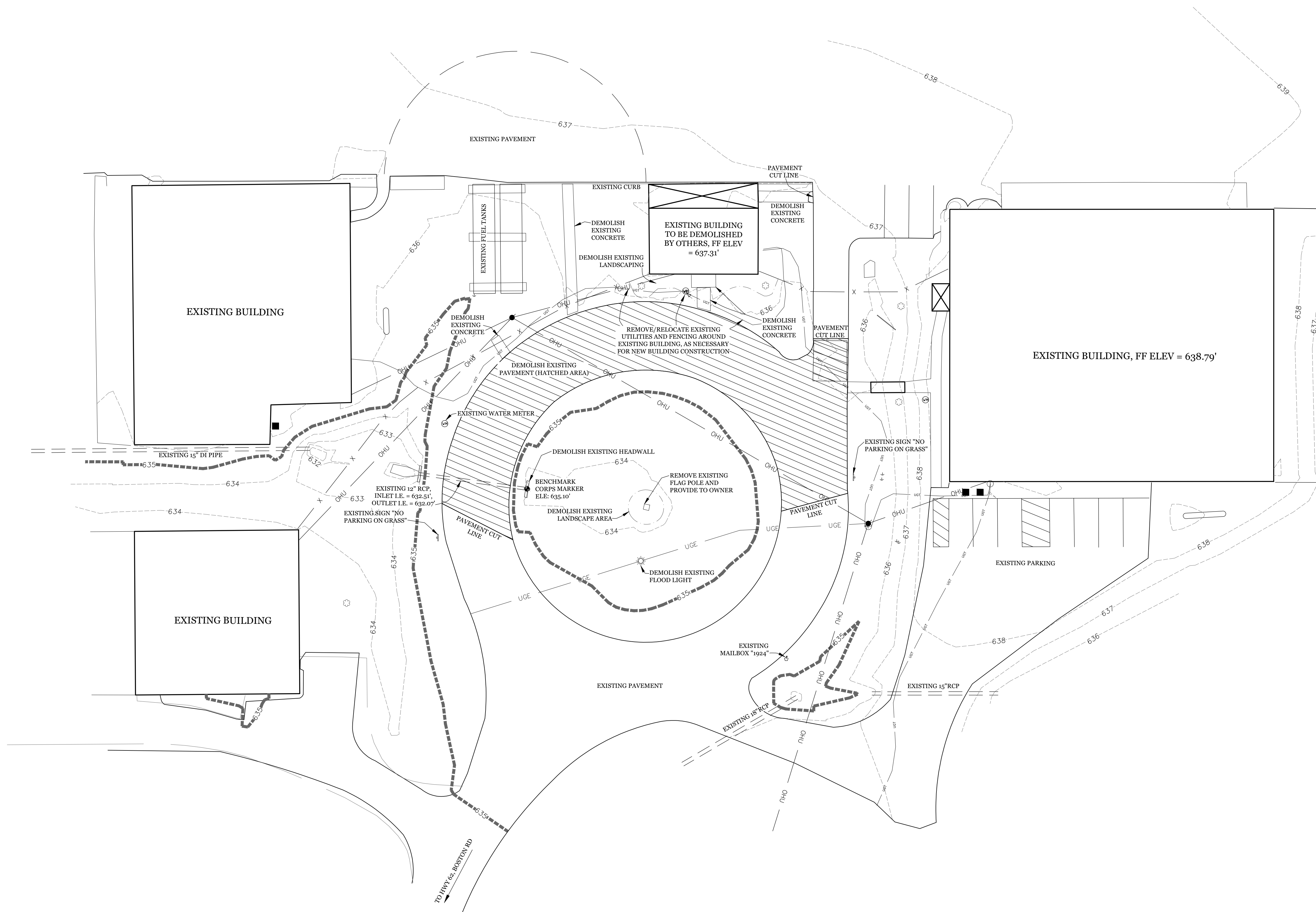
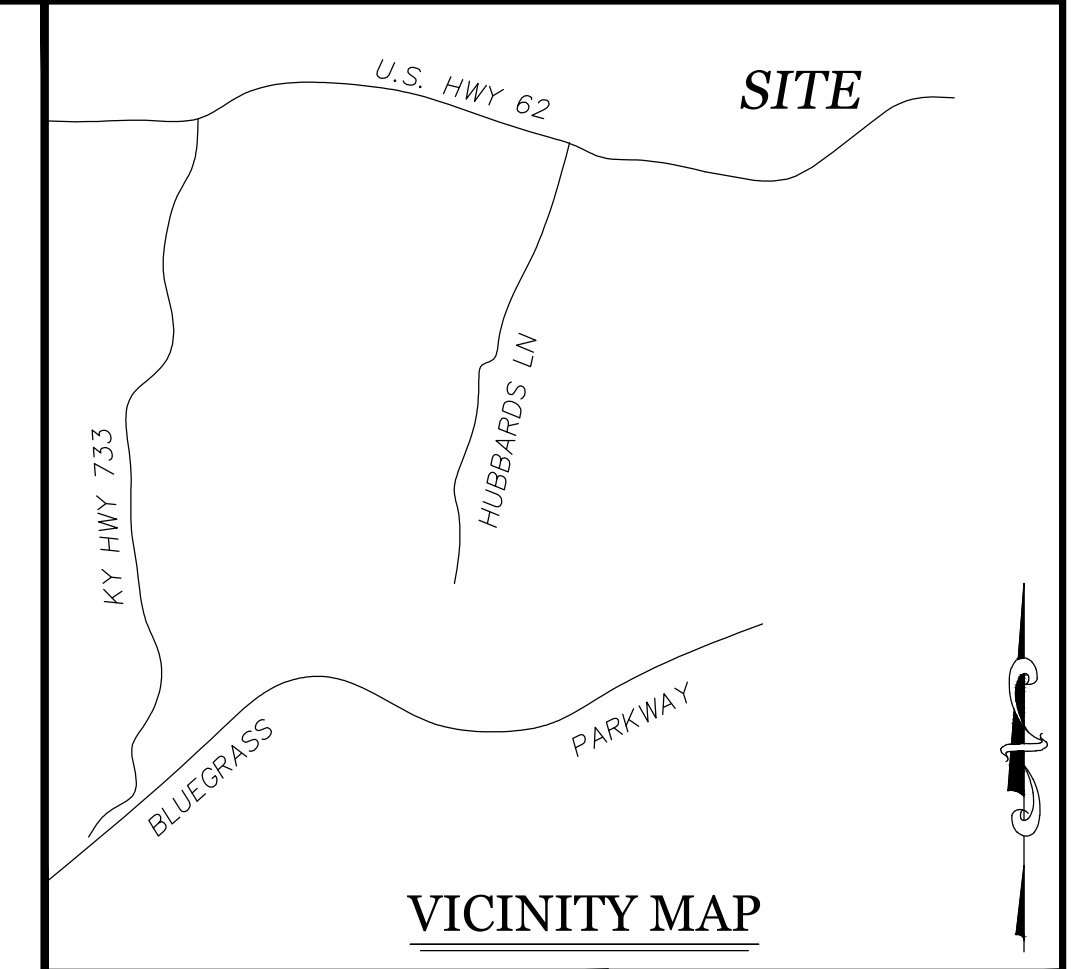
**Horizon ENGINEERING, LLC**  
Civil Engineering & Land Surveying  
111 North Second Street - P.O. Box 364  
Bardonia, KY 40004  
Phone: (502) 348-4330



Revisions	Date	Description

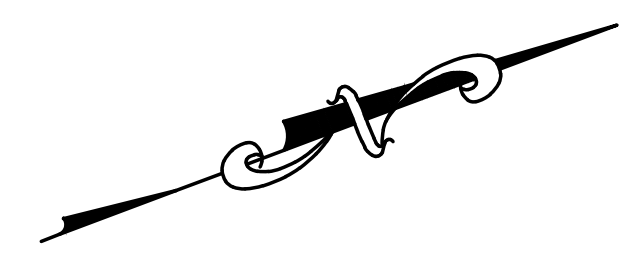
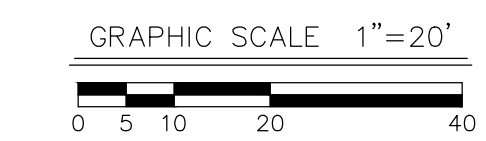
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Job Number: IH4021  
Scale: 1" = 20'  
PVA Number:  
Drawn By: RPM  
Date: 4/27/2021  
Sheet: 1 of 1

**AIRPORT SAFETY PLAN - TERMINAL BUILDING**  
Nelson County Airport  
1024 BOSTON ROAD  
BARDSTOWN, KENTUCKY 40004  
1024 BOSTON ROAD  
BARDSTOWN, NELSON COUNTY, KENTUCKY

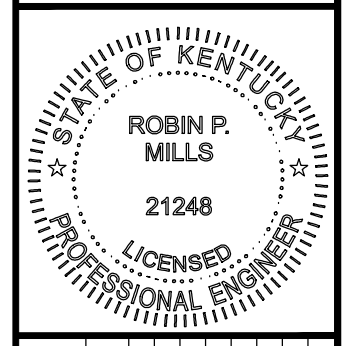


For Buried Line/Cable Locations  
 \*\* Contact Two Business Days Before \*\*

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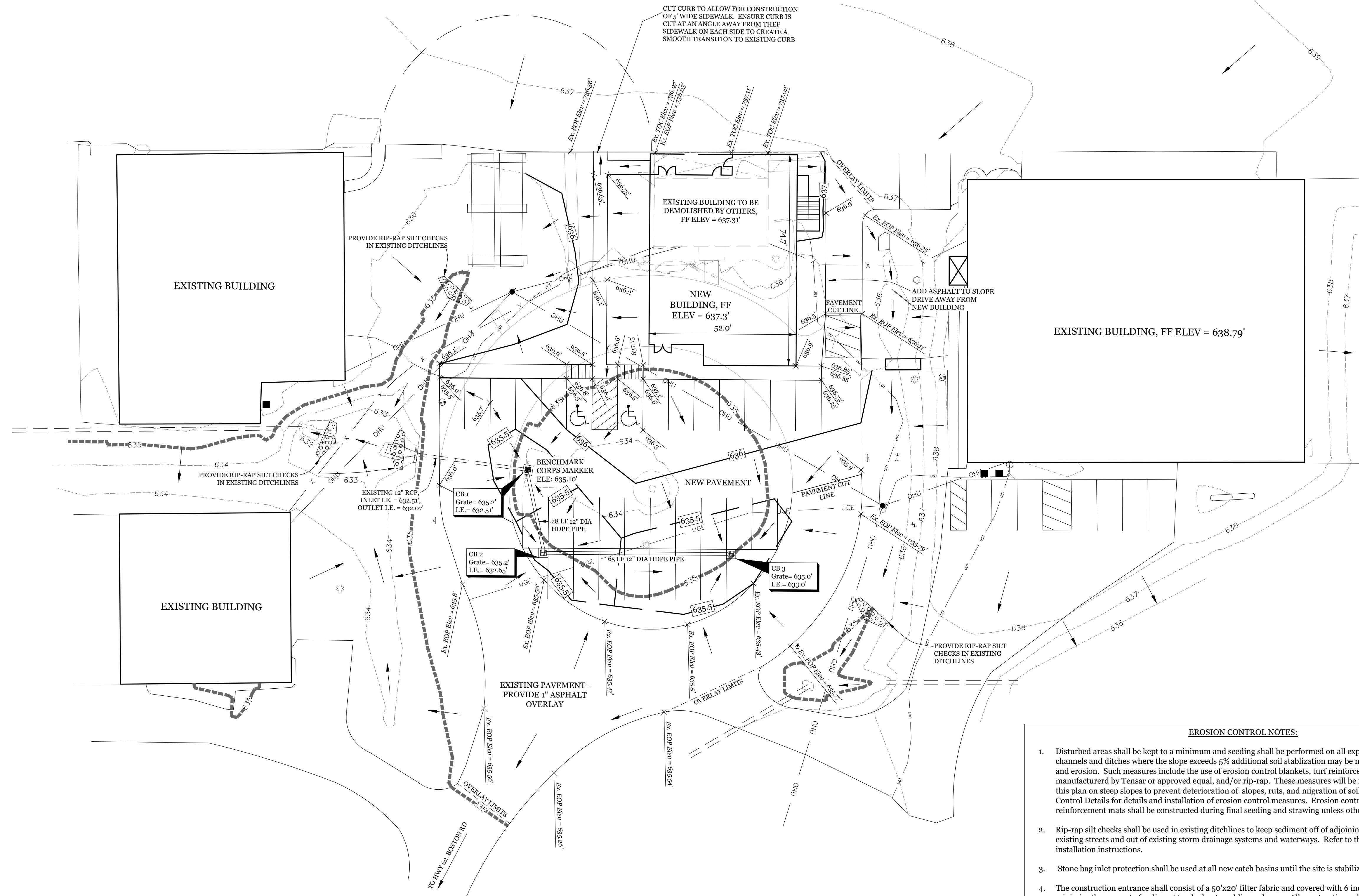


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 Job Number: IH4021  
 Scale: 1" = 20'  
 PVA Number:  
 Drawn By: RPM  
 Date: 4/27/2021  
 Sheet: 1 of 5

**SITE SURVEY & DEMOLITION PLAN**  
 Nelson County Airport  
 1924 BOSTON ROAD  
 BARDSTOWN, KENTUCKY 40004  
 1924 BOSTON ROAD  
 BARDSTOWN, NELSON COUNTY, KENTUCKY





CUT CURB TO ALLOW FOR CONSTRUCTION OF 5' WIDE SIDEWALK. ENSURE CURB IS CUT AT AN ANGLE AWAY FROM THE SIDEWALK ON EACH SIDE TO CREATE A SMOOTH TRANSITION TO EXISTING CURB

PROVIDE RIP-RAP SILT CHECKS IN EXISTING DITCHLINES

ADD ASPHALT TO SLOPE DRIVE AWAY FROM NEW BUILDING

EXISTING BUILDING

EXISTING BUILDING TO BE DEMOLISHED BY OTHERS, FF ELEV = 637.31'

NEW BUILDING, FF ELEV = 637.3'  
52.0'

EXISTING BUILDING, FF ELEV = 638.79'

EXISTING BUILDING

EXISTING 12" R/OV, INLET I.E. = 632.51', OUTLET I.E. = 632.07'

CB 1 Grates = 635.2' I.E. = 632.51'

CB 2 Grates = 635.2' I.E. = 632.65'

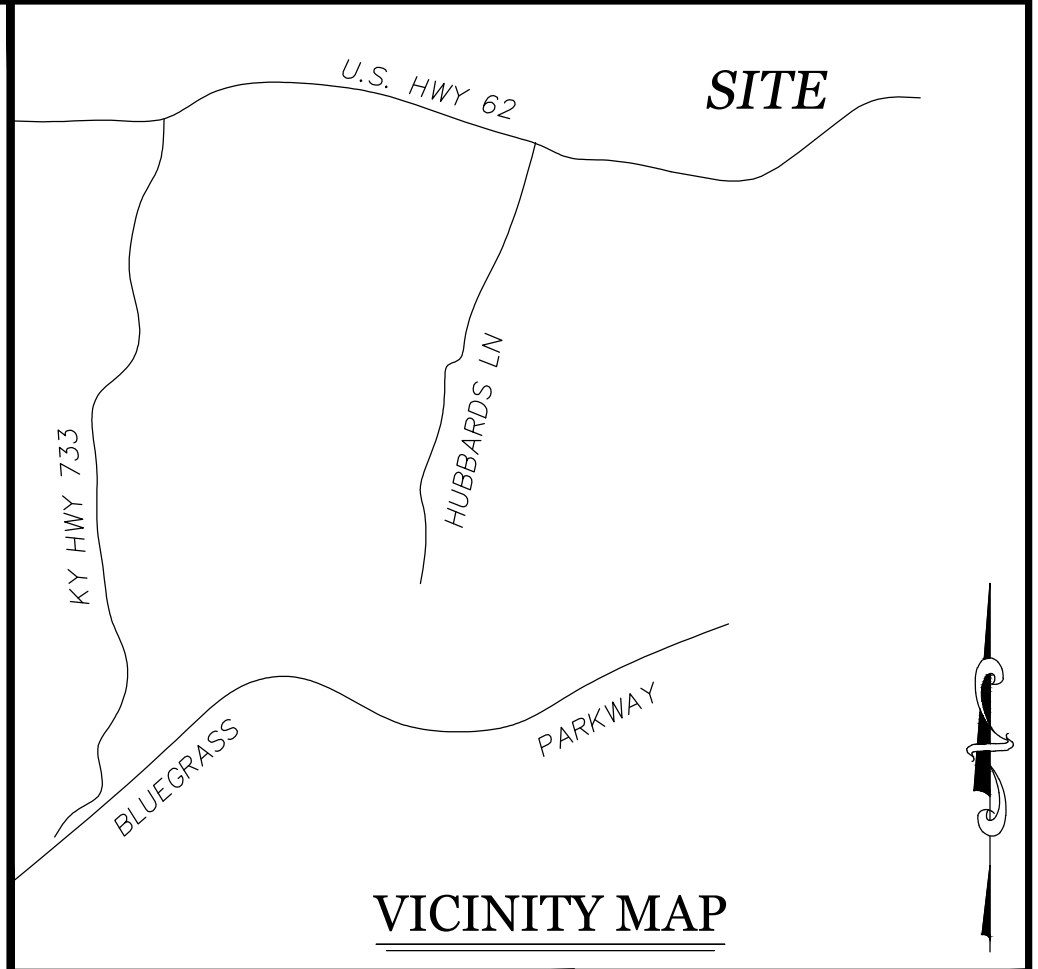
CB 3 Grates = 635.0' I.E. = 633.0'

EXISTING PAVEMENT - PROVIDE 1" ASPHALT OVERLAY

PAVEMENT CUT LINE

PROVIDE RIP-RAP SILT CHECKS IN EXISTING DITCHLINES

DISTURB LIMITS = 0.45 Acres  
IMPERVIOUS AREA ADDED = 0.19 Acres

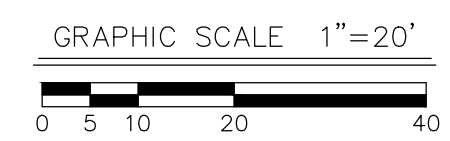


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# Kentucky 811

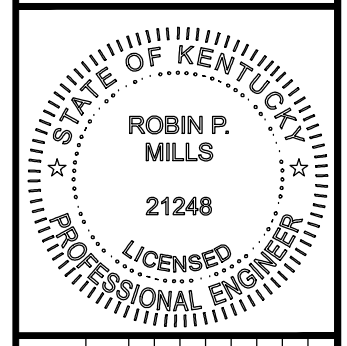
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- EROSION CONTROL NOTES:**
- Disturbed areas shall be kept to a minimum and seeding shall be performed on all exposed earth. For channels and ditches where the slope exceeds 5% additional soil stabilization may be necessary to prevent ruts and erosion. Such measures include the use of erosion control blankets, turf reinforcement mats, as manufactured by Tensar or approved equal, and/or rip-rap. These measures will be required as shown on this plan on steep slopes to prevent deterioration of slopes, ruts, and migration of soils. Refer to the Erosion Control Details for details and installation of erosion control measures. Erosion control blankets turf reinforcement mats shall be constructed during final seeding and strawing unless otherwise noted.
  - Rip-rap silt checks shall be used in existing ditchlines to keep sediment off of adjoining property owners, off of existing streets and out of existing storm drainage systems and waterways. Refer to the detail sheet for installation instructions.
  - Stone bag inlet protection shall be used at all new catch basins until the site is stabilized.
  - The construction entrance shall consist of a 50'x20' filter fabric and covered with 6 inches of #2 stone to minimize the amount of sediment tracked onto public roadways. All construction vehicles shall drive across this pad before leaving the site. See detail.
  - Borrow or spoils areas shall be temporarily stabilized if construction is suspended for more than 14 days and will not continue for 21 days. Additional silt fence may be necessary around stockpile areas of topsoil to be used in areas designated as green space as well as spoils areas. Once site is to grade, stabilize areas with permanent stabilization per owner's specifications.
  - All erosion control measures shall be performed in accordance with this drainage plan.

**Horizon ENGINEERING, L.L.C.**  
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111 North Second Street - P.O. Box 364  
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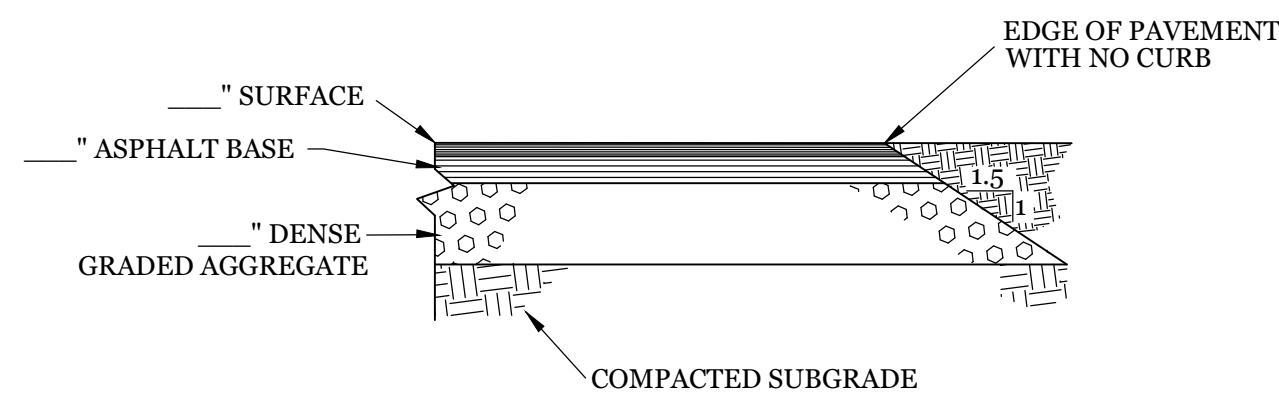


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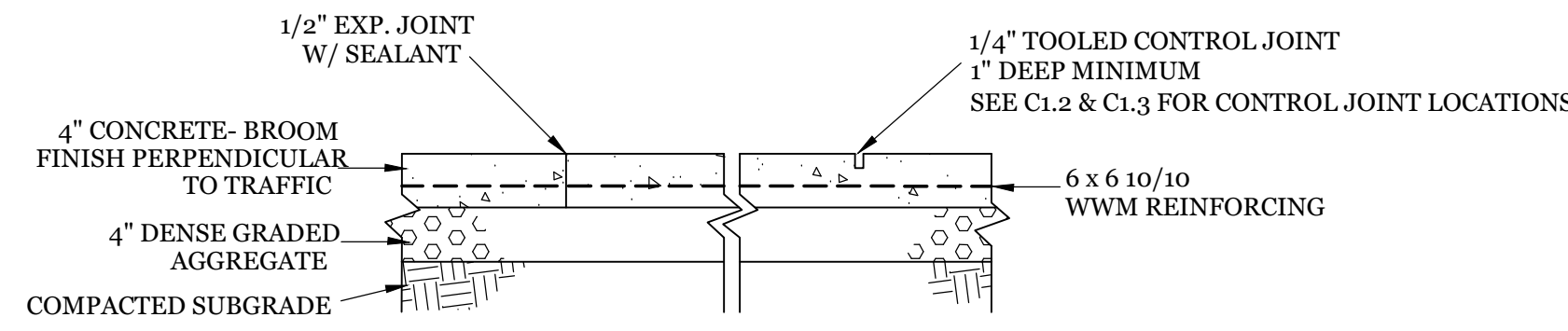
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P/A Number:  
Drawn By: RPM  
Date: 4/27/2021  
Sheet: 3 of 5

**GRADING PLAN - TERMINAL BUILDING**  
Nelson County Airport  
1024 BOSTON ROAD  
BARDSTOWN, KENTUCKY 40004

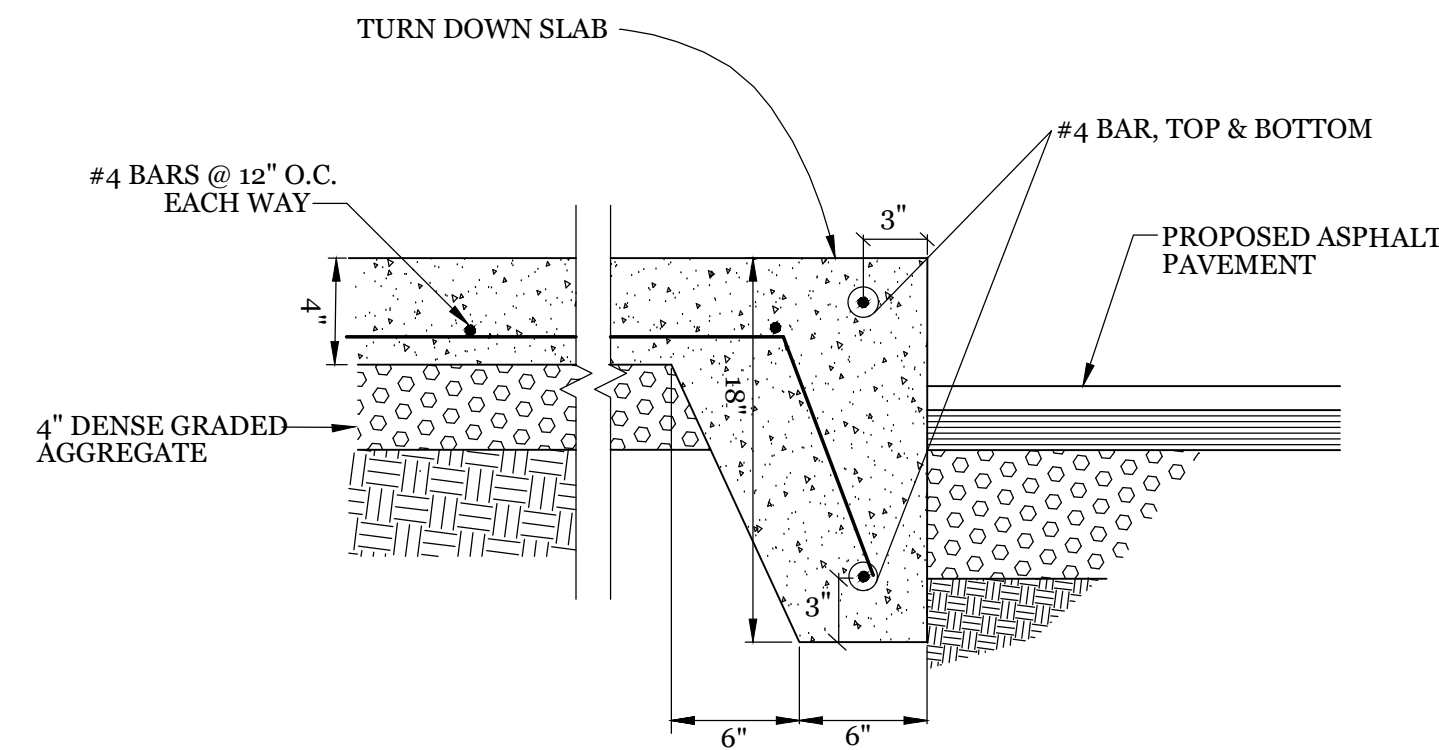
1024 BOSTON ROAD  
BARDSTOWN, NELSON COUNTY, KENTUCKY



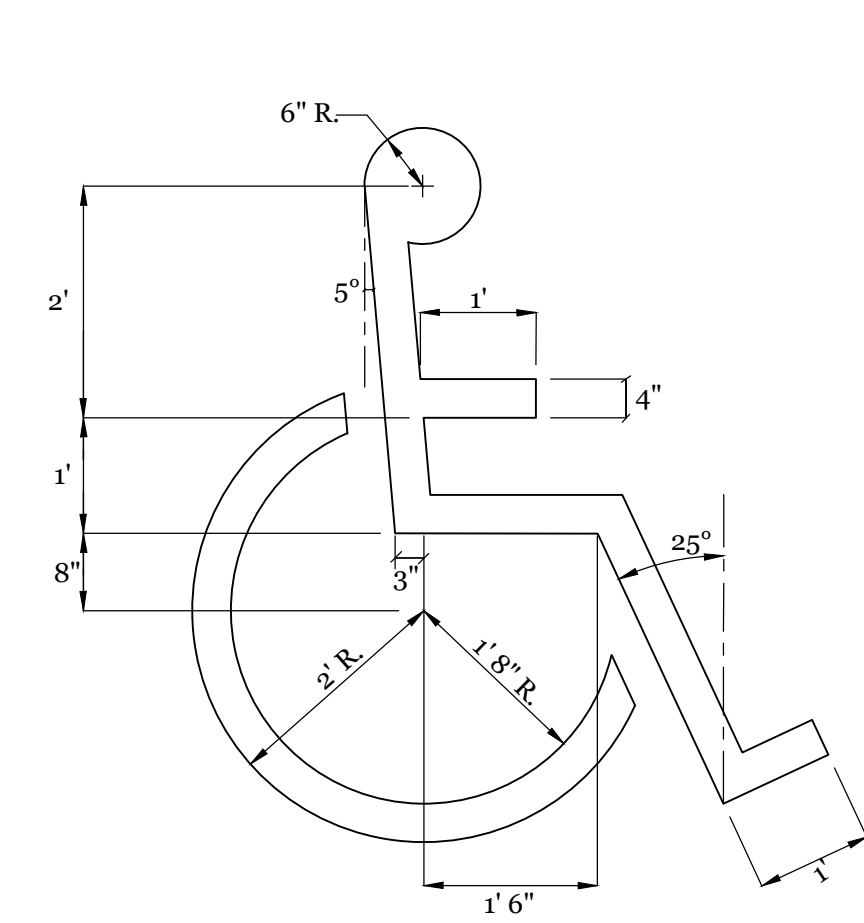
**ASPHALT PAVING**  
NOT TO SCALE



**CONCRETE SIDEWALK (TYP)**  
NOT TO SCALE

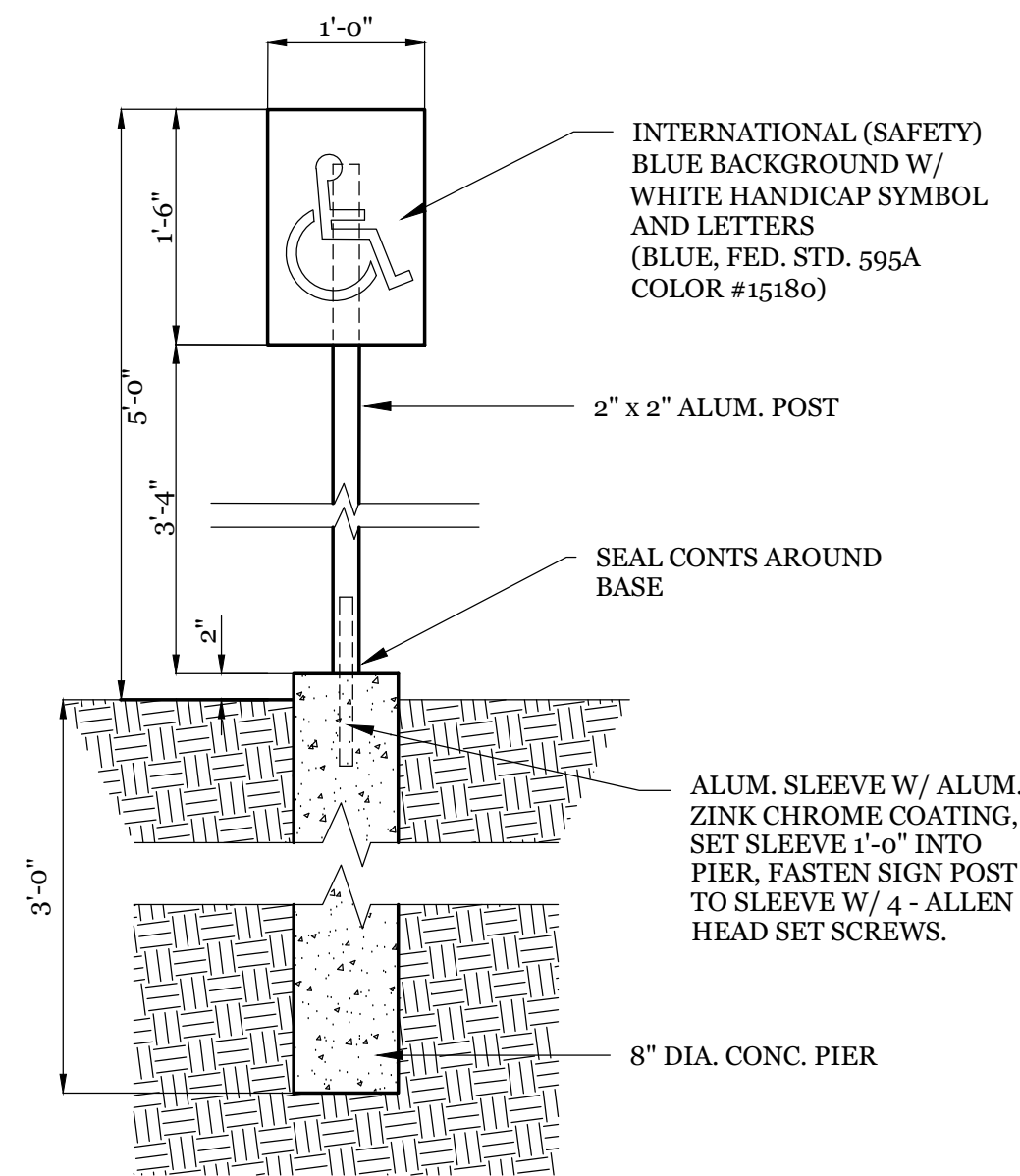


**SIDEWALK/ASPHALT TRANSITION**  
NOT TO SCALE

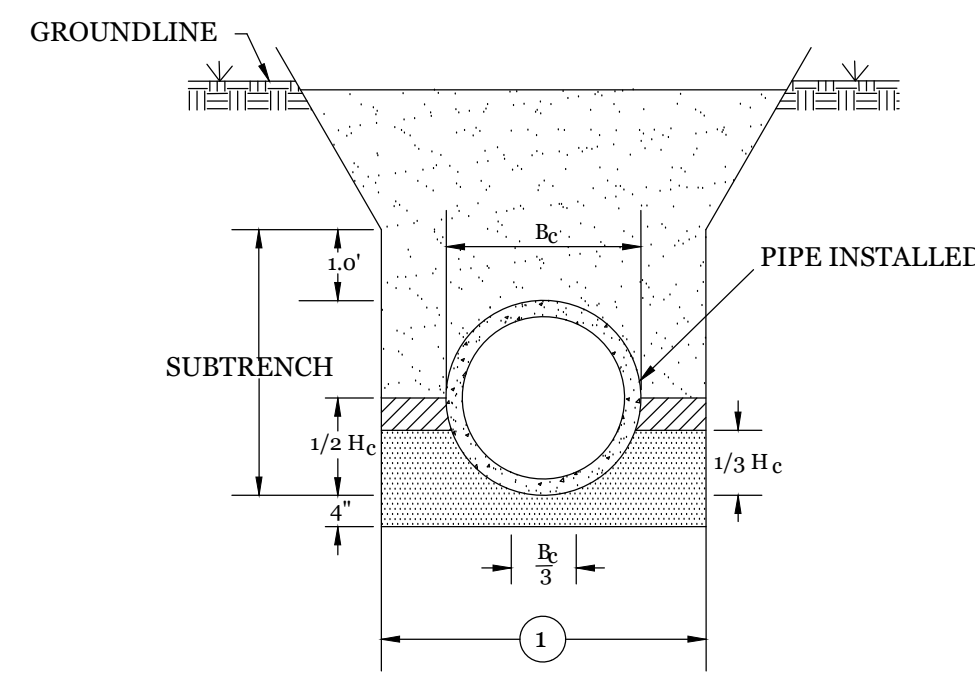


NOTE:  
Paint symbol at disabled parking spaces.

**DISABLED LOGO**  
NOT TO SCALE



**HANDICAP SIGN**  
NOT TO SCALE



- EMBANKMENT MATERIAL (UNLESS SPECIFIED OTHERWISE)
- INITIAL BACKFILL
- SHAPED BEDDING

**TYPE 1 INSTALLATION**

FOR ALL RCP INSTALLATIONS (EXCEPT TYPE 4) WHEN THE TOP OF THE PIPE IS NOT WITHIN ONE PIPE DIAMETER OF THE SUBGRADE AS SPECIFIED IN SECTION 701.03.06A OF THE KYTC STANDARD SPECIFICATIONS (LATEST EDITION).

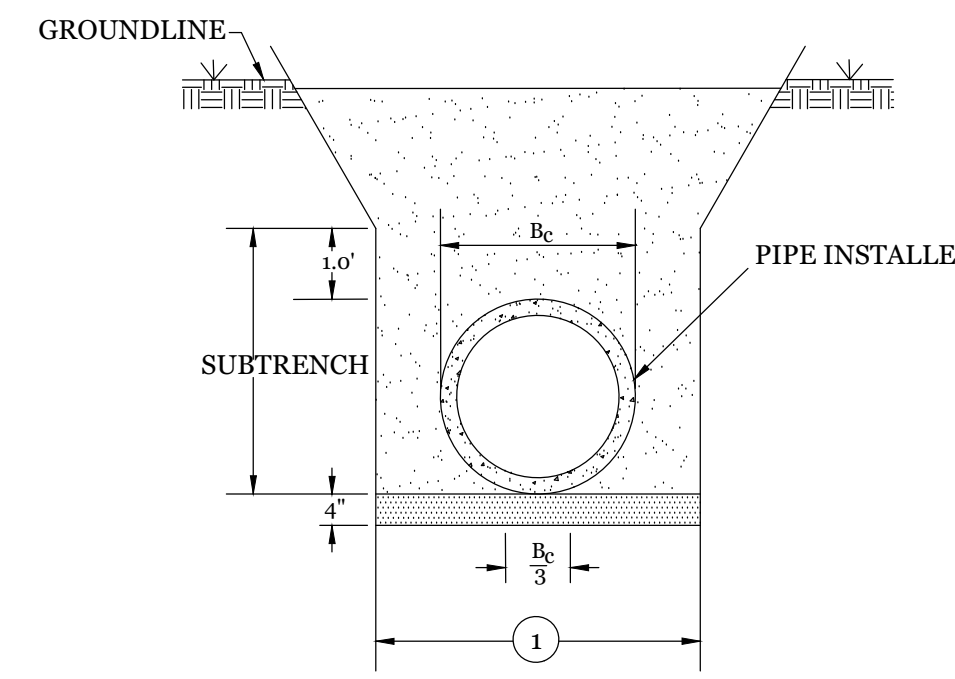
- NOTES:
- 1 Bc + 24" FOR RCP 36" DIAMETER OR LESS
  - Bc + 48" FOR RCP GREATER THAN 36" DIAMETER

PLACE PIPE ON 4" UNCOMPACTED BEDDING MATERIAL. LEAVE CENTER THIRD OF OUTSIDE PIPE DIAMETER (Bc/3) BEDDING UNCOMPACTED FOR TYPE 1 AND TYPE 4 INSTALLATIONS.

IF ROCK FOUNDATION IS ENCOUNTERED, EXCAVATE SUBTRENCH AN ADDITIONAL DEPTH THAT IS A MINIMUM OF 6" AND SHALL NOT EXCEED 24". BACKFILL WITH COMPACTED BEDDING MATERIAL IN LAYERS 6" OR LESS.

WRAP BEDDING MATERIAL IN GEOTEXTILE FABRIC WHEN THE STANDARD SPECIFICATION SPECIFIES.

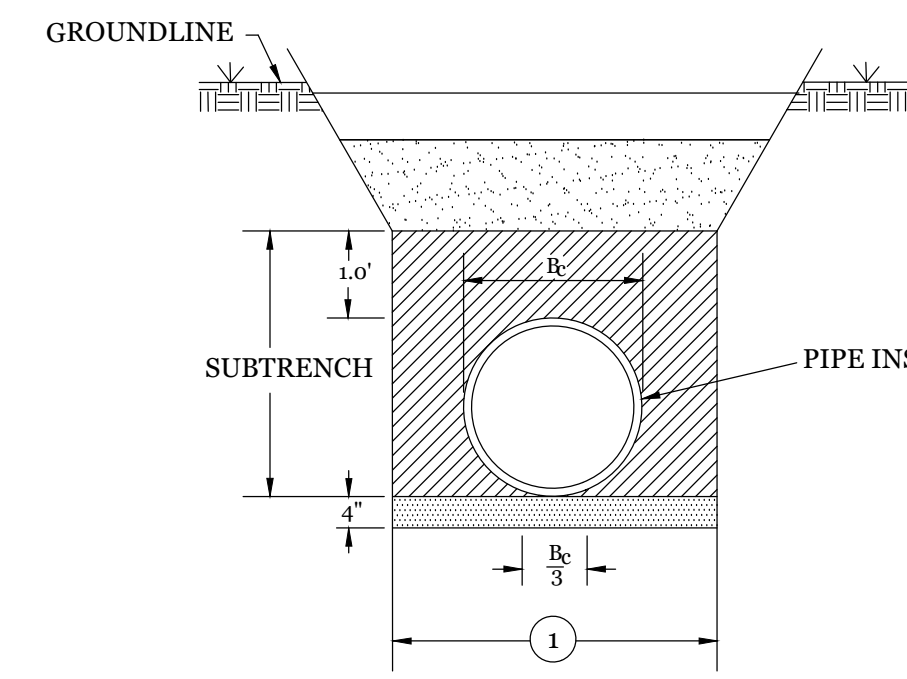
THE MAXIMUM COVER HEIGHT FOR HORIZONTAL ELLIPTICAL PIPE IS 10'.



- EMBANKMENT MATERIAL (UNLESS SPECIFIED OTHERWISE)
- TYPE 4 BEDDING

**TYPE 4 INSTALLATION**

FOR RCP MEDIAN DRAINS AND INSTALLATIONS LOCATED 35 FEET OR MORE FROM THE EDGE OF SHOULDER, BACK OF CURB, OR ANY OTHER PAVED SURFACE AS SPECIFIED IN SECTION 701.03.06A OF THE KYTC STANDARD SPECIFICATIONS (LATEST EDITION).



- EMBANKMENT MATERIAL (UNLESS SPECIFIED OTHERWISE)
- INITIAL BACKFILL
- SHAPED BEDDING

**FLEXIBLE PIPE INSTALLATION**

INCLUDES CORRUGATED METAL, THERMOPLASTIC, AND STRUCTURAL PLATE PIPE.

- NOTES:
- 1 Bc + 24" FOR PIPE 36" DIAMETER OR LESS
  - Bc + 48" FOR PIPE GREATER THAN 36" DIAMETER

COMPACT BEDDING IN SUBTRENCH IN LAYERS 6" OR LESS TO WIDTH AND ELEVATION SHOWN.

COMPACT REQUIRED BACKFILL MATERIAL IN LAYERS 6" OR LESS TO 1.0' ABOVE THE TOP OF THE PIPE.

PROCEED WITH TRENCH BACKFILL IN A SYMMETRICAL MANNER IN LAYERS 1.0' OR LESS TO THE ORIGINAL GROUND.

WRAP BEDDING MATERIAL IN GEOTEXTILE FABRIC WHEN THE STANDARD SPECIFICATIONS SPECIFIES.

NOTE: PIPE BENEATH PAVEMENT SHALL BE BACKFILLED WITH STONE TO SUBBASE ELEVATION OF PAVEMENT.

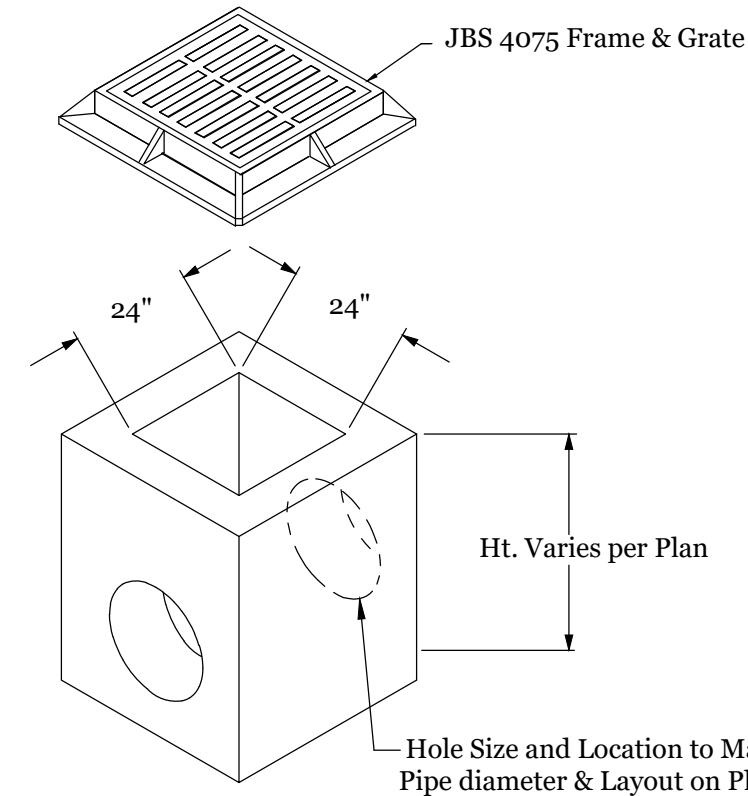
- BEDDING MATERIAL  
NO. 8 OR NO. 9-M AGGREGATE UNLESS OTHERWISE SPECIFIED. DO NOT USE A DGA OR GRAVEL BASE FOR BEDDING.
- GRANULAR BACKFILL MATERIAL

REINFORCED CONCRETE PIPE (RCP) - USE SIZE NO. 2, 23, 3, 37, 4, 467, 5, 67, 68, 78, 8, OR 9-M AGGREGATE. LIMIT ROCK FRAGMENTS TO A 3 INCH MINIMUM SIZE.

CORRUGATED METAL PIPE (CMP) - USE SAME AGGREGATES AS FOR RCP EXCEPT LIMIT ROCK FRAGMENTS TO A SIZE THAT DOES NOT EXCEED THE CORRUGATION WIDTH.

THERMOPLASTIC PIPE - USE SIZE NO. 5, 57, 67, 68, 78, 8 OR 9-M AGGREGATE. LIMIT ROCK FRAGMENTS TO A MAXIMUM OF 1.5 INCHES. FOR CORRUGATED PIPE, ROCK FRAGMENTS SHALL NOT EXCEED THE CORRUGATION WIDTH OR 1.5 INCHES WHICHEVER IS LEAST.

**STORM PIPE TRENCH DETAILS**  
NOT TO SCALE



	Grate	I.E.
CB 1	635.2'	632.51'
CB 2	635.2'	632.65'
CB 3	635.0'	633.0'

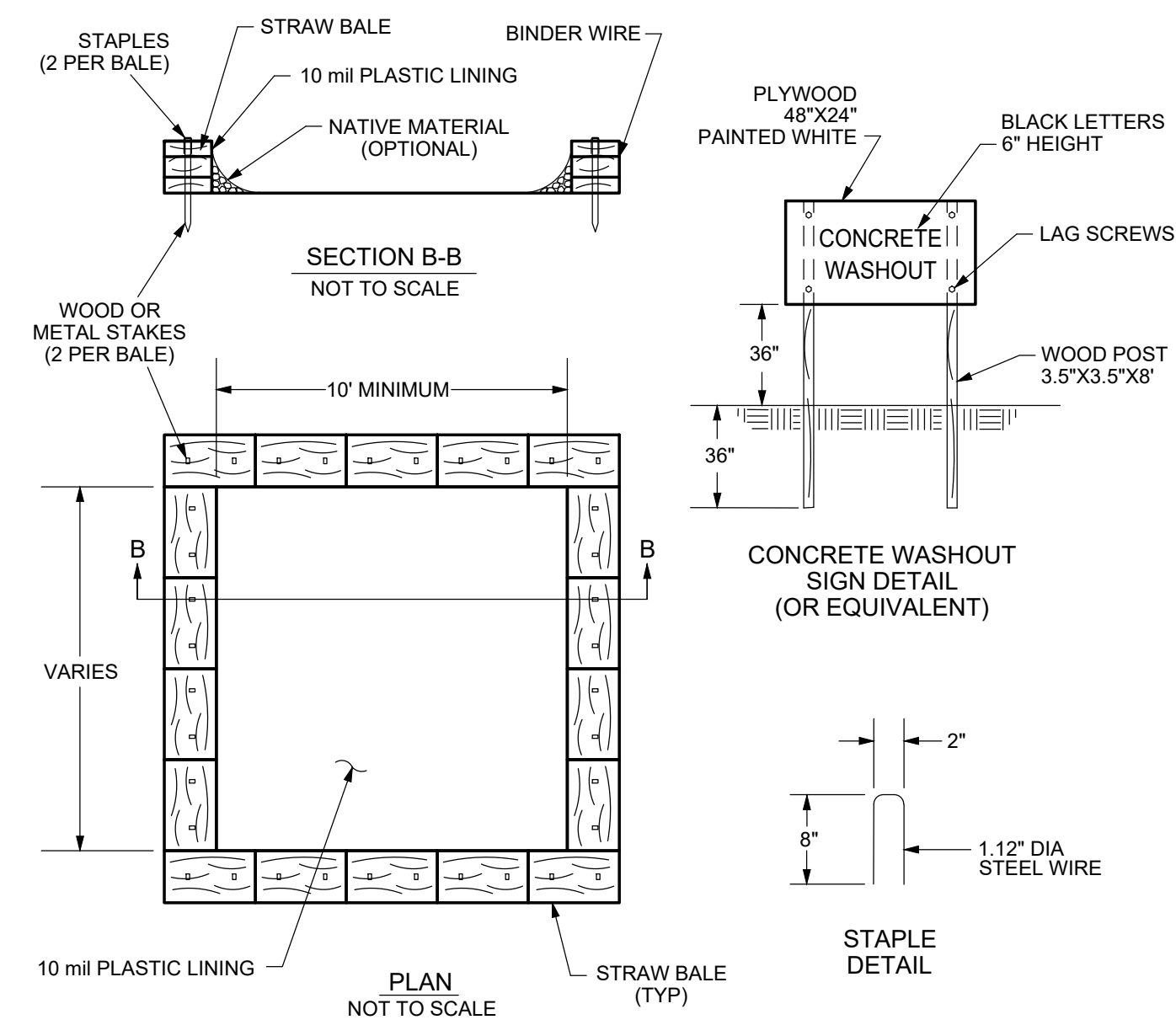
GENERAL NOTES:  
1. STEEL REINFORCEMENT & CONC. STRENGTH PER ASTM C913.

**2' x 2' CATCH BASIN (CB)**  
NOT TO SCALE

Revisions	By	Date
Description		

Data File: IH4021	By
Drawing File: IH4021\NCARRPORT.dwg	Date
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Drawn By: RPM	Date: 4/27/2021
Sheet: 4 of 5	

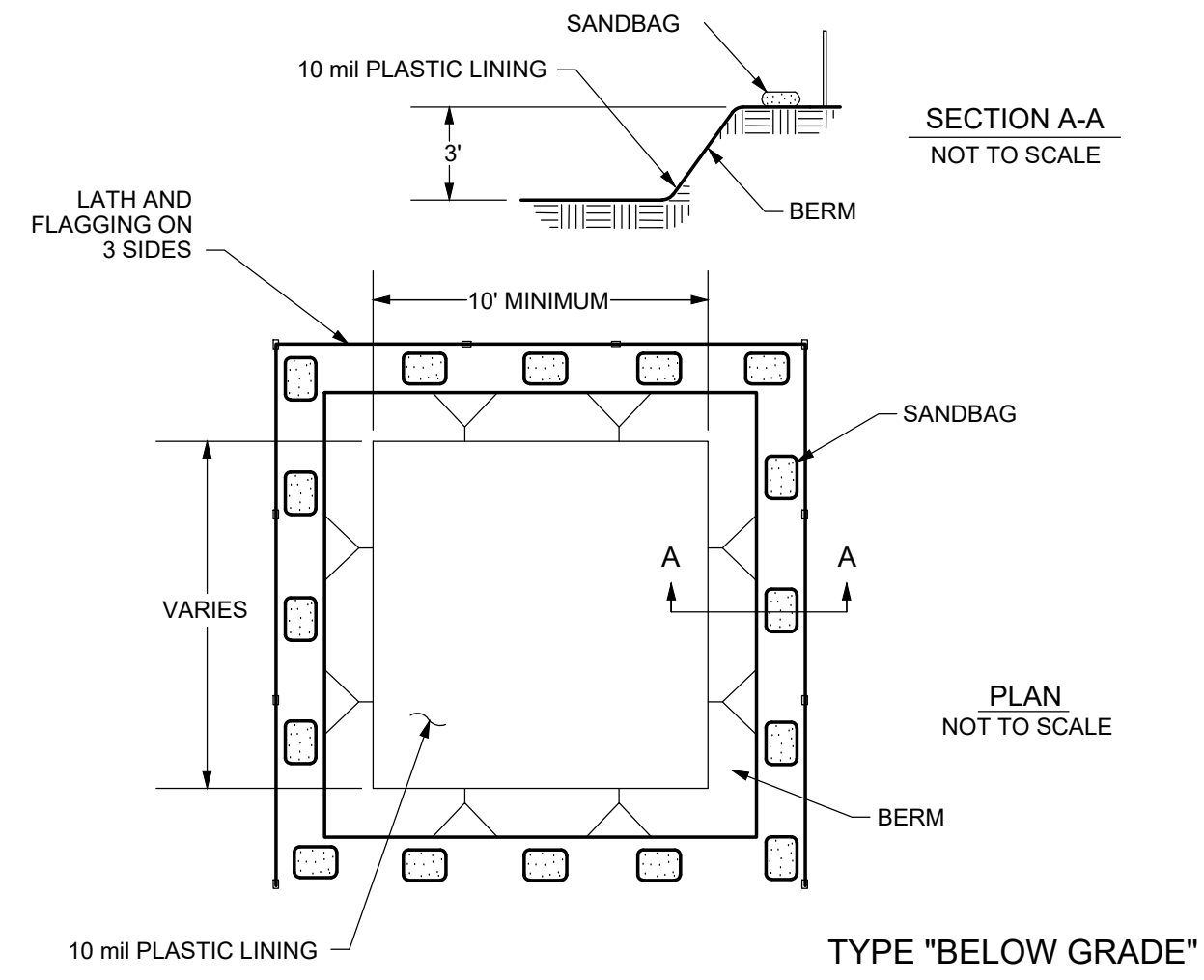




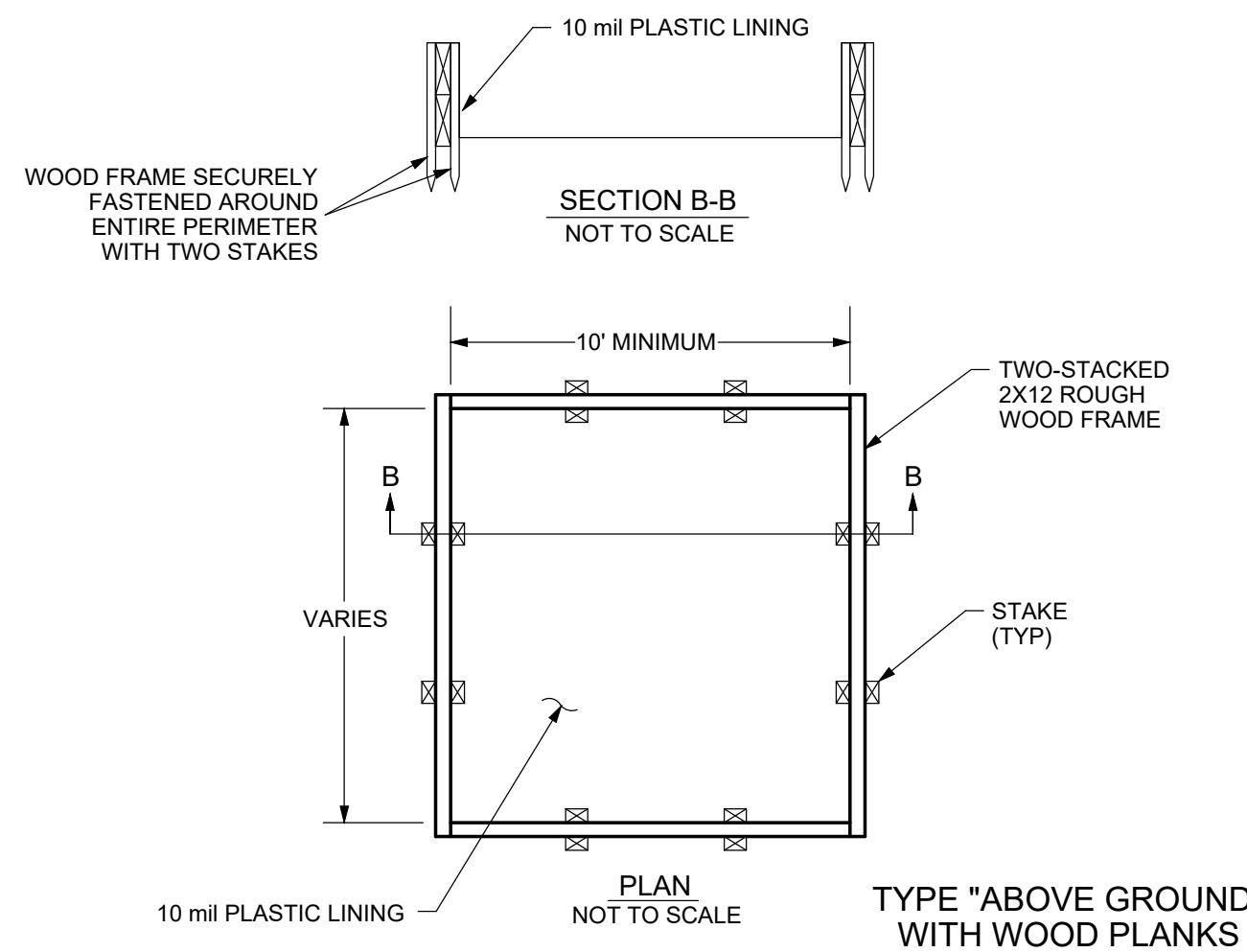
TYPE "ABOVE GRADE" WITH STRAW BALES

**NOTES**

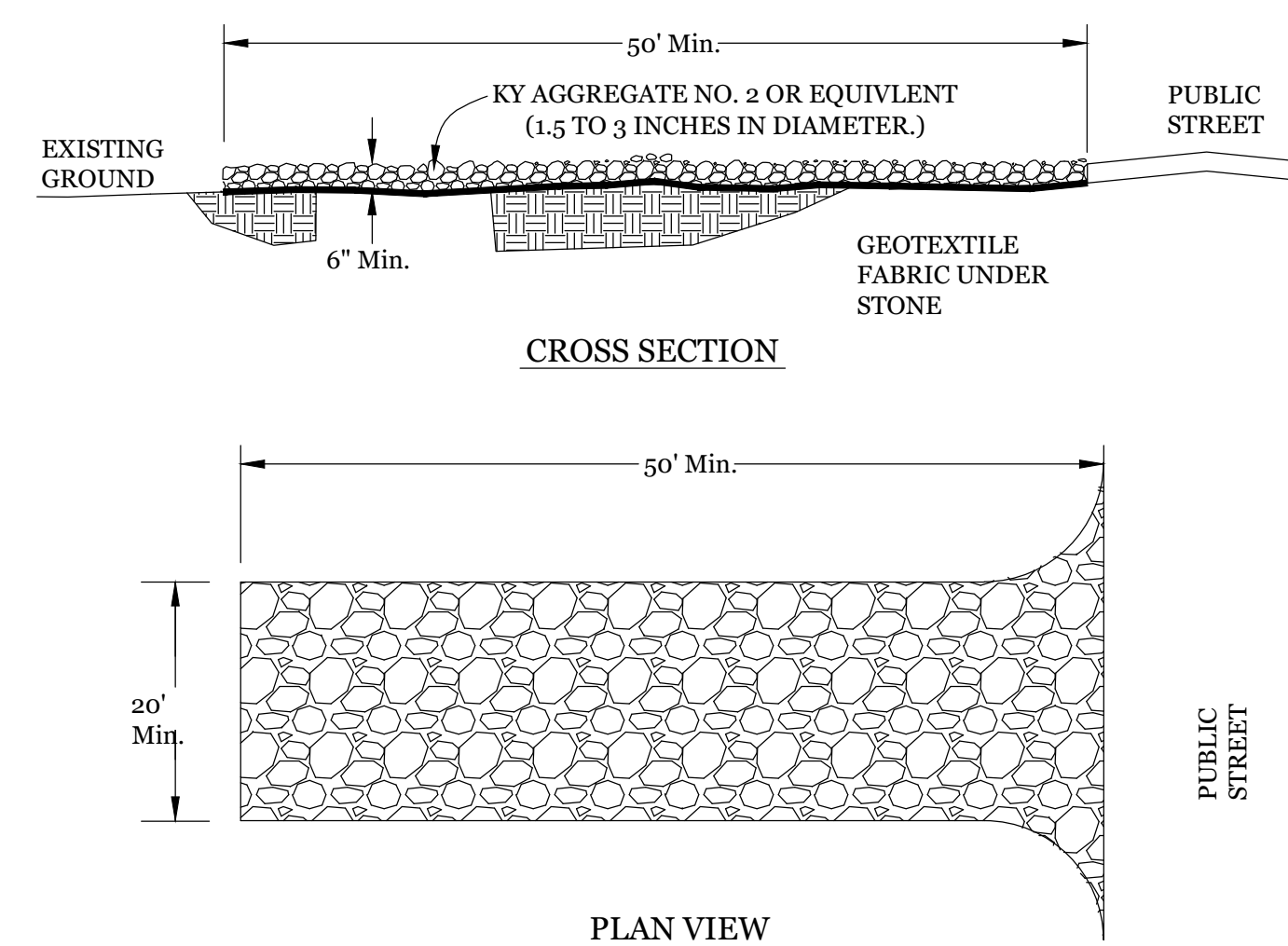
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.



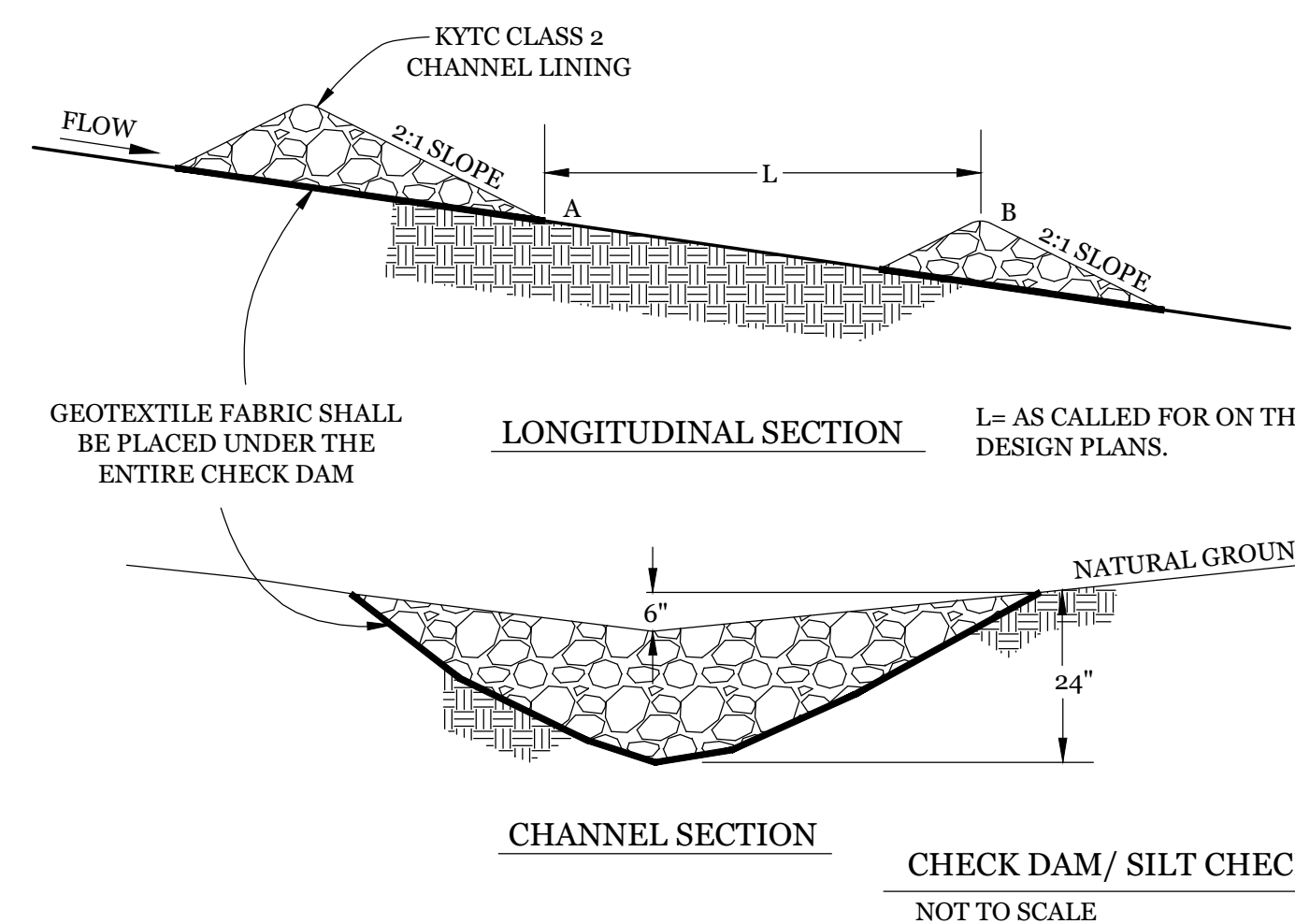
TYPE "BELOW GRADE"



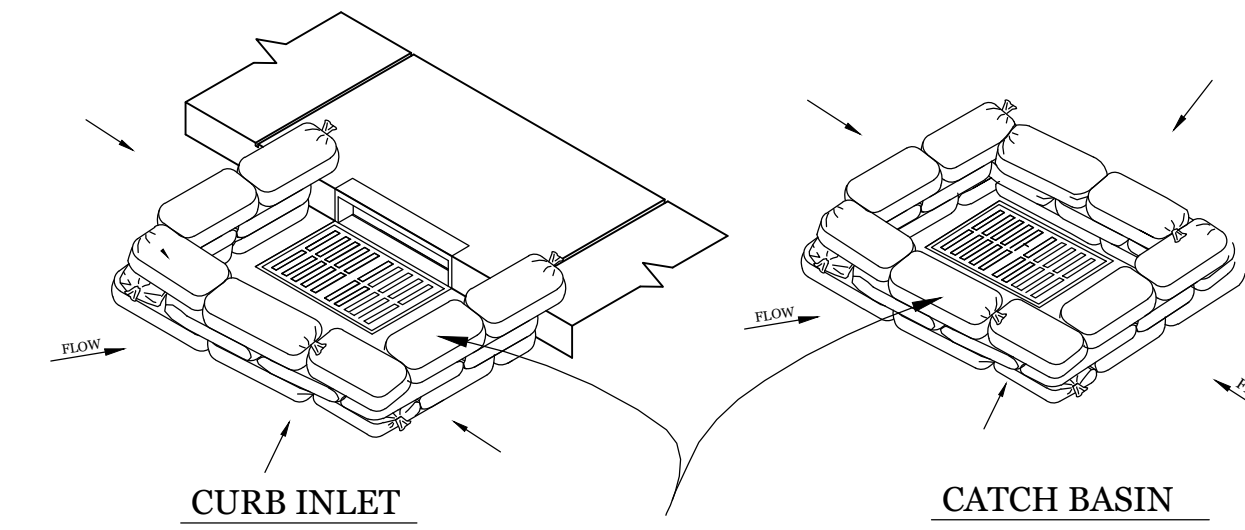
TYPE "ABOVE GROUND" WITH WOOD PLANKS



CONSTRUCTION ENTRANCE  
NOT TO SCALE



CHANNEL SECTION  
CHECK DAM/SILT CHECK  
NOT TO SCALE



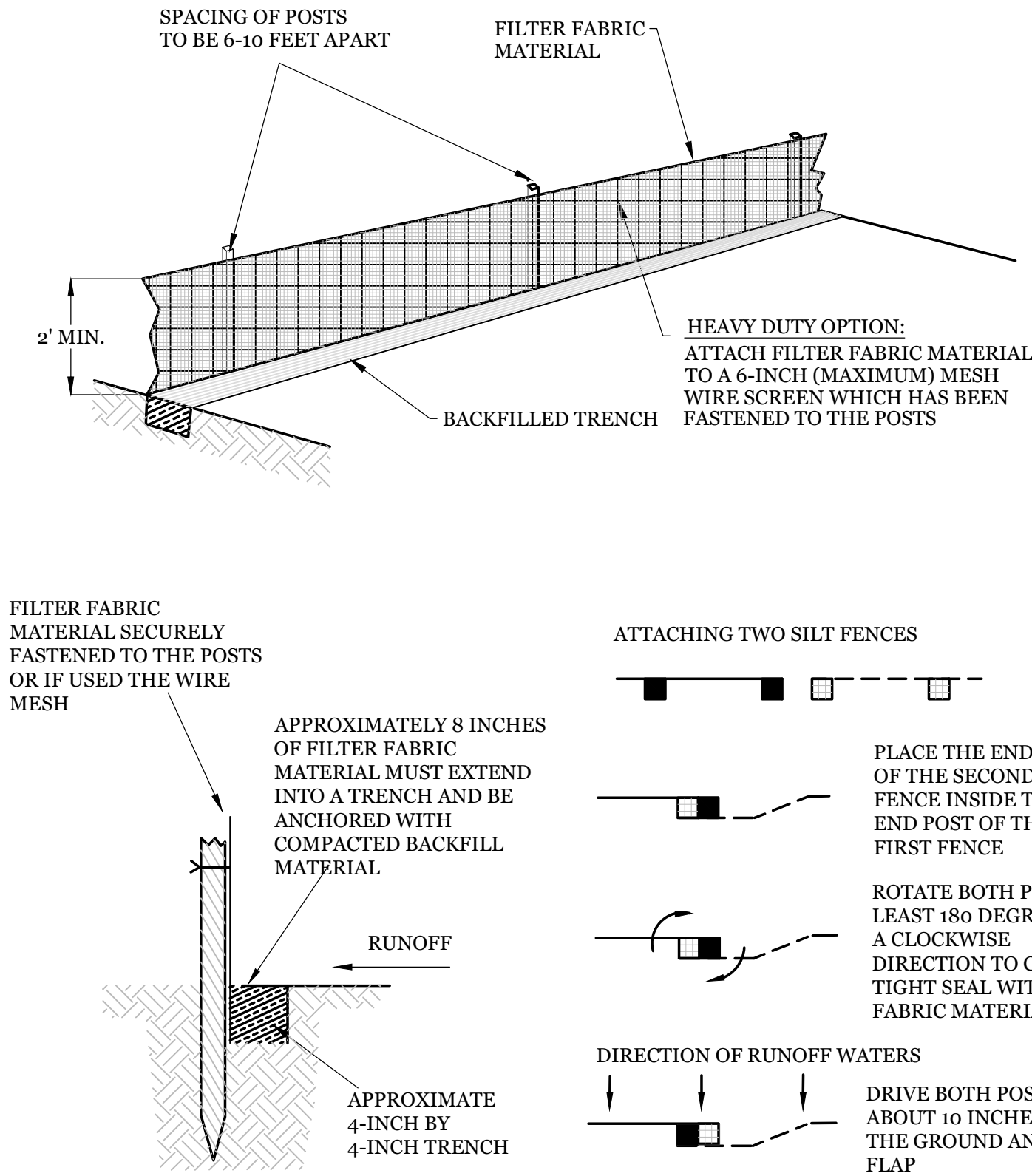
CURB INLET  
CATCH BASIN

- NOTE:**
1. INSTALL STONE BAGS AROUND INLET IF PERMANENT STABILIZATION OF DISTURBED AREA IS NOT COMPLETE.
  2. STONE BAGS SHALL BE INTERWEAVED SO AS TO FILL ALL GAPS AND PROVIDE A SEAL TO BLOCK SEDIMENT.
  3. STONE BAGS SHALL BE INSPECTED WEEKLY. ANY BUILT-UP SEDIMENT SHALL BE REMOVED.
  4. STONE BAGS MAY ALSO BE USED FOR SILT PROTECTION IN SMALL SWALES OR SMALL DRAINAGE AREAS.

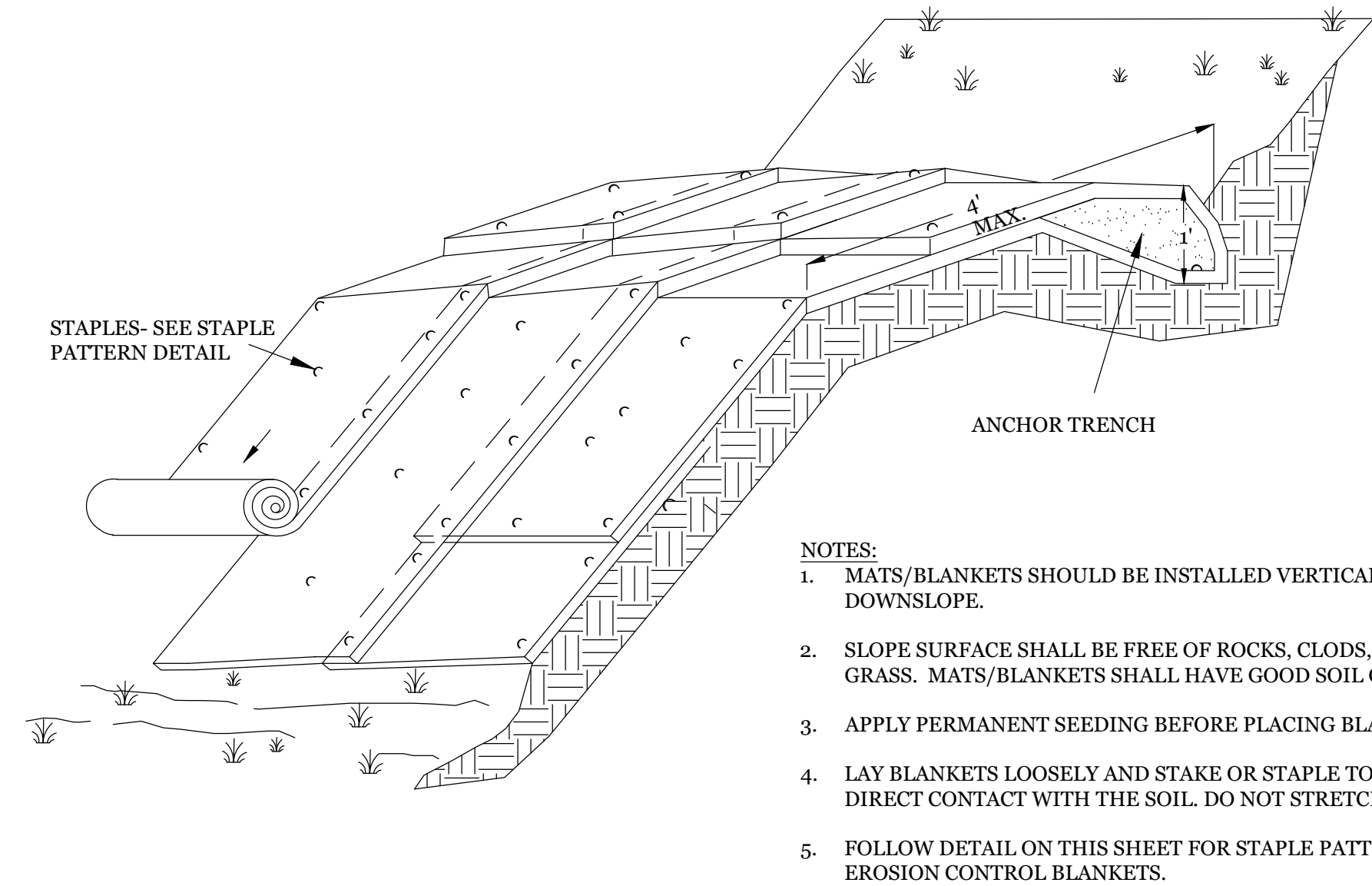
STONE BAG INLET PROTECTION  
SOURCE : KDOH STANDARD DRAWINGS 11-21-07

**NOTES:**

1. GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE SILT CHECK DAM AND SOIL.
2. STONE SHALL BE HAND PLACED TO A MINIMUM THICKNESS OF 12 INCHES.
3. ALL CHECK DAMS SHOULD BE 24" OR LESS IN HEIGHT. THE OVERFLOW POINT SHOULD BE 6" LOWER THAN THE OUTER EDGES.
4. FRONT AND BACK SLOPES SHALL BE 2:1.
5. MORE THAN ONE CHECK DAM SHALL BE USED WHEN CHANNEL DRAINS MORE THAN ONE ACRE.



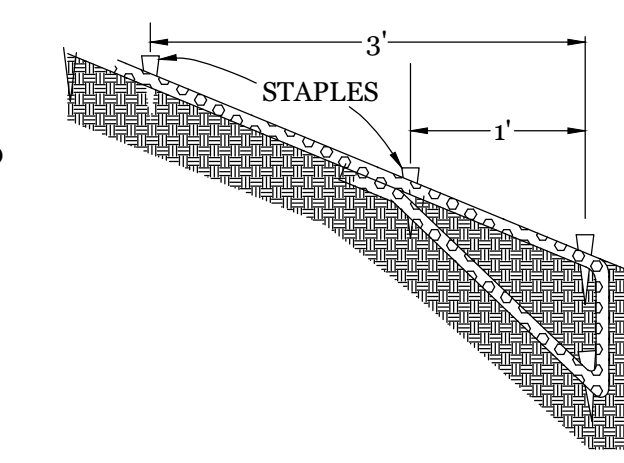
- NOTES:**
1. SILT FENCE TO BE PLACED ON SLOPE CONTOUR.
  2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- SILT FENCE INSTALLATION - TRENCH METHOD**  
SOURCE : CITY OF CLEARWATER, FLORIDA, STANDARD DRAWINGS, JULY 2002



SLOPE INSTALLATION FOR EROSION CONTROL BLANKETS  
SOURCE : SALIX APPLIED EARTHCARE - EROSION DRAW 5.0

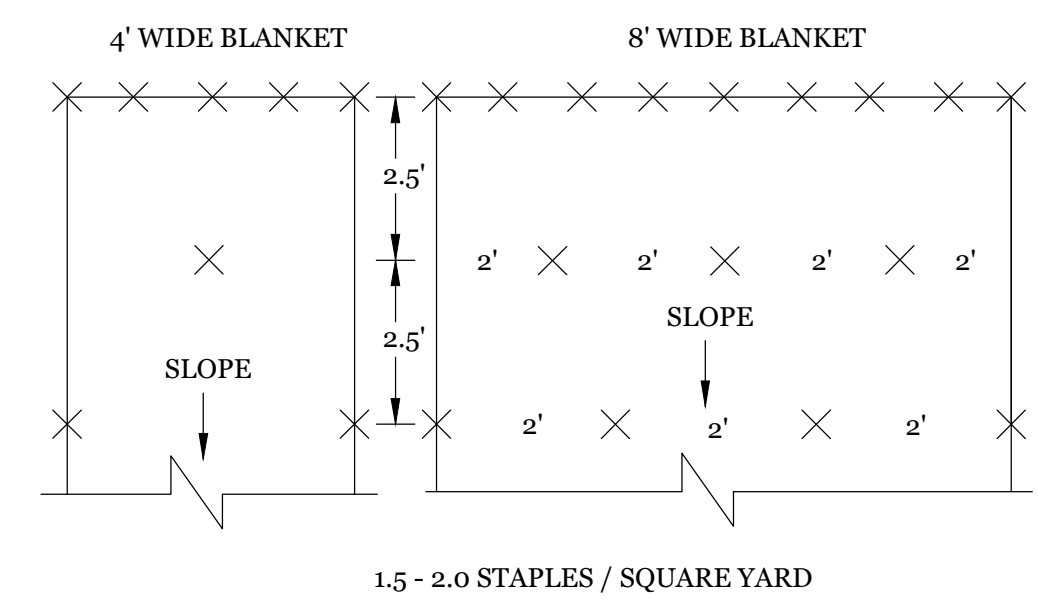
- NOTES:**
1. MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
  2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
  3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
  4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
  5. FOLLOW DETAIL ON THIS SHEET FOR STAPLE PATTERN OF EROSION CONTROL BLANKETS.

UPSTREAM ANCHOR SLOT DETAIL  
SOURCE : LFUGC STORMWATER MANUAL EFFECTIVE 1-1-09



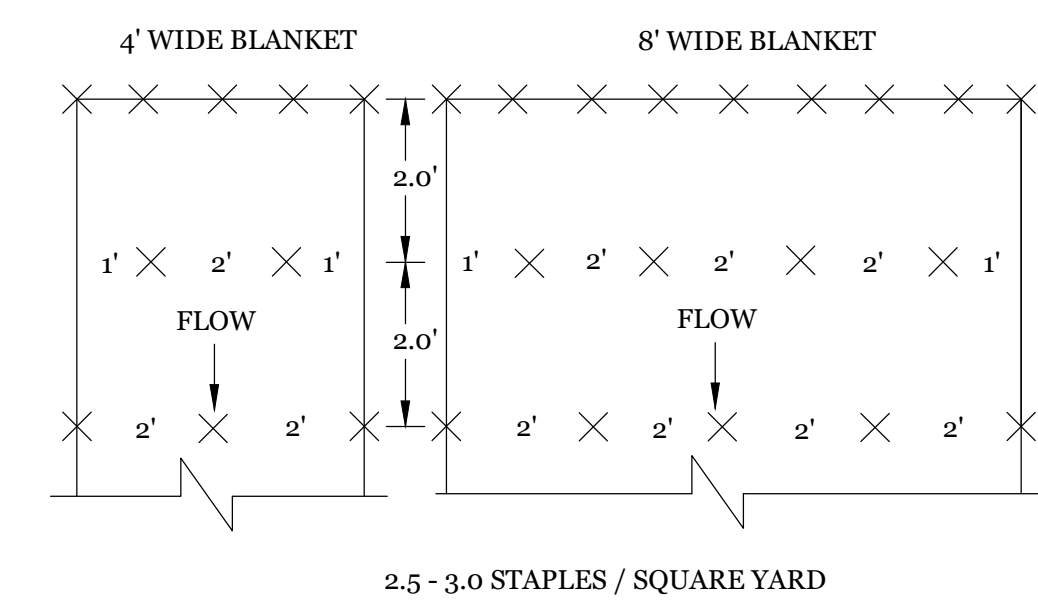
DOWNSTREAM ANCHOR SLOT DETAIL  
SOURCE : LFUGC STORMWATER MANUAL EFFECTIVE 1-1-09

**NOTE:**  
THE ABOVE STAPLE PATTERN DETAILS INCLUDE STRAW AND EXCELSIOR MATS.

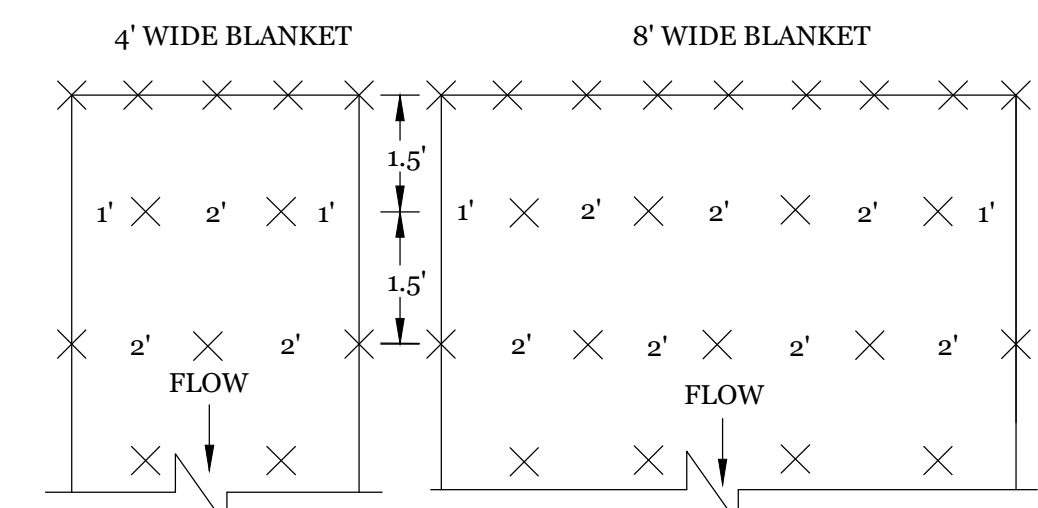


- SLOPES UP TO 1.5H:1V**
1. INSTALL BLANKET VERTICALLY OR HORIZONTALLY.
  2. USE 12" STAPLE SPACING ON STARTER ROW.

- COHESIVE SOILS:**
1. NO OVERLAP REQUIRED ON SIDE SEAMS
  2. USE 8" STAPLE LENGTH
  3. USE 6" STAPLE LENGTH
- NON-COHESIVE SOILS:**
1. USE 6" SIDE SEAM OVERLAP
  2. USE 8" STAPLE LENGTH
  3. USE 6" ANCHOR TRENCH AT TOP OF SLOPE



- CHANNELS IN COHESIVE SOILS**
1. USE 6" SIDE SEAM OVERLAP
  2. USE 6" STAPLE LENGTH
  3. USE 6" TRANSVERSE ANCHOR TRENCH AT 100 FT. INTERVALS.
  4. USE 12" STAPLE SPACING ON STARTER ROW.
  5. UPSTREAM BLANKET SHOULD OVERLAP DOWNSTREAM BLANKET A DISTANCE OF 12" IN A "SHINGLE" FASHION AND BURY THE FINISHED TOE AT LEAST 6"



- CHANNELS IN NON-COHESIVE SOILS**
1. USE 6" SIDE SEAM OVERLAP
  2. USE 8" STAPLE LENGTH
  3. USE 6" TRANSVERSE ANCHOR TRENCH AT 50 FT. INTERVALS.
  4. USE 12" STAPLE SPACING ON STARTER ROW.
  5. UPSTREAM BLANKET SHOULD OVERLAP DOWNSTREAM BLANKET A DISTANCE OF 12" IN A "SHINGLE" FASHION AND BURY THE FINISHED TOE AT LEAST 6"

3.5 - 4.0 STAPLES / SQUARE YARD  
STAPLE PATTERN FOR EROSION CONTROL BLANKETS  
SOURCE : LFUGC STORMWATER MANUAL EFFECTIVE 1-1-09

Revisions	By	Date

Date File: IH4021	By: RPM
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Job Number: IH4021	Scale: 1" = 20'
P/A Number:	Sheet: 5 of 5

# NEW CONSTRUCTION

# SAMUELS FIELD AIRPORT

# TERMINAL

BARDSTOWN, KY 40004  
1924 BOSTON RD

## ARCHITECT:

KEYES ARCHITECTS AND ASSOCIATES  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213  
PH: (502) 636-5113  
CONTACT: DEBBY BIRD  
EMAIL: DBIRD@KEYESARCHITECTS.COM  
ARCHITECT: CHARLES J. KEYES III

## MEP ENGINEER:

E.C. Engineering, Inc.  
P.O. Box 91977  
LOUISVILLE, KENTUCKY  
502-494-4219  
Ernest Cruse II, P.E.  
ecruse@engltg.com

## OWNER:

BARDSTOWN - NELSON COUNTY AIRPORT  
1924 BOSTON RD  
BARDSTOWN, KY 40004  
502-827-0356  
DAVID MATTINGLY  
davidwmattingly@hotmail.com

## STRUCTURAL ENGINEER:

RICHARD BARRIOS, CONSULTING ENGINEER, INC.  
330 N. EVERGREEN RD.  
LOUISVILLE, KY 40243  
PH: (502) 873-5741  
CONTACT: RICHARD BARRIOS  
EMAIL: RBARRIOS@ATT.NET



### PROJECT INFORMATION

APPLICABLE BUILDING CODES: KBC 2018  
BUILDING CODE: ADA/ANSI A117.1  
ACCESSIBILITY CODE: 2012 IECC/ASHRE 90.1 OPTION  
ENERGY CODE:

USE AND OCCUPANCY: B - BUSINESS

CONSTRUCTION TYPE: II-B

BUILDING INFORMATION - 2 STORY METAL FRAMED BUILDING

TOTAL BUILDING SIZE: 3,724 s.f. PER FLOOR

FIRE SUPPRESSION: NOT SPRINKLERED

### OCCUPANCY ALLOWANCE

FUNCTION OF SPACE	ALLOWANCE	AREA	OCCUPANCY
CONFERENCE ROOM	15 NET	565 S.F.	38
WAITING AREAS	15 GROSS	1,042 S.F.	70
ACCESSORY STORAGE/ MECHANICAL	300 GROSS	53 S.F.	1
BUSINESS AREAS	100 GROSS	407 S.F.	4
BREAK ROOM	100 GROSS	175 S.F.	2
UPSTAIRS FUTURE USE (ASSUMING CLASSROOM)	20 NET	3,212 S.F.	161
TOTAL OCCUPANCY ALLOWANCE:			276

### REVISIONS:

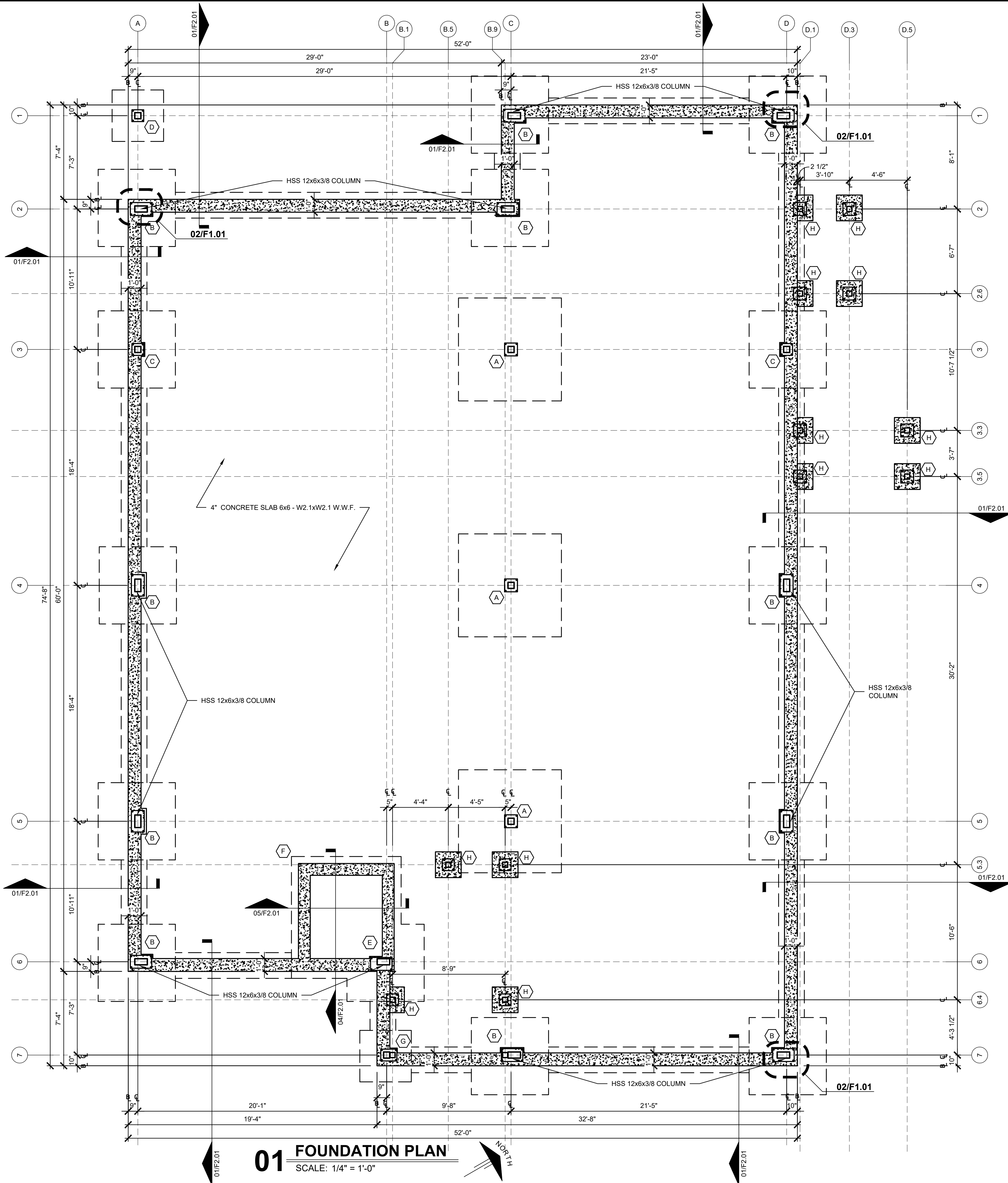
REVISION SYMBOL	DATE	REVISIONS FOR ENERGY CODE
A	6/25/2021	REVISIONS FOR ENERGY CODE

### Sheet List Table

Sheet Number	Sheet Title
T1.01	Title Sheet
Foundation Plans & Details	
F1.01	Foundation Plan
F2.01	Foundation Details
Structural	
S1.01	Second Floor Framing Plan
S1.02	Roof Framing Plan
S2.01	Structural Details
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LS1.01	Life Safety Plan
Floor Plans	
A1.01	Floor Plan
A1.02	Dimensioned Floor Plan
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A6.03	Cabinetry Details
Stair Details	
A7.01	Stair Details
A7.02	Interior Stair Plans & Details

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M1.01	Mechanical Notes and Details
M1.02	HVAC Floor Plans
M1.03	Mechanical Schedules
Plumbing	
U1.01	Plumbing Site Utilities Plan
P0.01	Plumbing Notes
P1.01	Plumbing Risers and Plans
P1.02	Plumbing Gas Risers and Details
ELECTRICAL	
E1.01	1st Floor Lighting Plans
E1.02	1st Floor Power Plans
E1.03	2nd Floor Power and Lighting Plans
E2.01	Electrical Specifications
E2.02	Electrical Specifications
Specifications	
SP1.01	Specifications
SP1.02	Specifications
SP1.03	Specifications

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: F1.01 Foundation Plan.dwg - DATE: Jun 29, 2021 11:41 AM - BY: DEBBY BIRD



**01 FOUNDATION PLAN**  
SCALE: 1/4" = 1'-0"

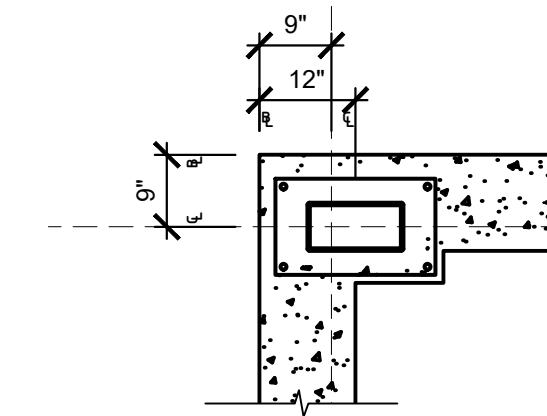
**FOUNDATION NOTES**

- 1) ALL CONCRETE TO BE 4,000 P. S.I.
- 2) ALL FOOTINGS AND PIERS ARE TO BE CENTERED ON THE BUILDING COLUMNS UNLESS OTHERWISE NOTED.
- 3) COLUMN PIERS ARE TO BE PLACED INTEGRAL WITH THE GRADE BEAM OR FOUNDATION WALLS WITH REINFORCING TO BE CONTINUOUS THROUGH PIERS.
- 4) COLUMN PIERS MUST BE MIN. 12" ANY DIRECTION PLUS 1" PAST MANUF. BASE PLATES. GROUT SOLID BETWEEN PIER AND BASE PLATE.
- 5) BUILDING FOUNDATIONS ARE DESIGNED FOR 1,500 P.S.F. SOIL BEARING CAPACITY. VERIFY BEFORE CONSTRUCTION.
- 6) JUNCTURE OF FLOOR SLAB WITH ALL PIERS AND GRADE TO BE 1/2" WIDE EXPANSION JOINT MATERIAL.
- 7) FLOOR SLAB TO BE POURED THRU AT ALL DOORWAYS. SLOPE 2% TO OUTSIDE
- 8) BUILDING ANCHOR BOLTS TO BE DIAMETER PER SCHEDULE. LENGTHS TO BE 3" PROJECTION, 15" IMBEDDED W/ 3" HOOK UNLESS OTHERWISE DESIGNED BY MANUFACTURER OR HERE IN.
- 9) CONCRETE TO FOLLOW KYTC CONCRETE SPECIFICATIONS (SEE SPECS)

**FOUNDATION SCHEDULE**

TAG	FOUNDATION SIZE	REINFORCING	MIN. PIER	BASE PLATE SIZE	BOLTS	COLUMN SIZE	DETAILS	REMARKS
A	8'-0" x 8'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	-	3/4" x 12" x 12"	(4) 3/4" Ø	HSS 6"x6"x 3/8"	03/F2.01	
B	6'-0" x 6'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	16"x24"	1 1/8" x 12" x 20"	(4) 1 1/4" Ø	HSS 12"x6"x3/8"	02/F2.01	
C	6'-0" x 6'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	13"x15"	3/4" x 11" x 11"	(4) 3/4" Ø	HSS 5"x5"x3/16"	02/F2.01	
D	4'-0" x 4'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	16"x16"	3/4" x 11" x 11"	(4) 3/4" Ø	HSS 5"x5"x3/16"	02/F2.01	
E	6'-0" x 6'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	16"x24"	1 1/8" x 12" x 20"	(4) 1 1/4" Ø	HSS 12"x6"x3/8"	02/F2.01	1
F	9'-6" x 8'-6" x 1'-0"	#5 BARS @ 12" O.C. E.W.	-	-	-	-	04/F2.01	1
G	4'-0" x 4'-0" x 1'-0"	#5 BARS @ 12" O.C. E.W.	16"x18"	3/4" x 11" x 15"	(4) 3/4" Ø	HSS 5"x5"x3/16" HSS 4"x4"x3/16"	02/F2.01	1
H	2'-0" x 2'-0" x 2'-6"	(4) #4 DOWELS W/#3 TIES AT 9" O.C.	-	3/4" x 11" x 11"	(4) 3/4" Ø	HSS 4"x4"x3/16"	06.07/F2.01	

FOUNDATION COMMENTS:  
1. COMBINATION FOOTING



**02 TYPICAL OFFSET HSS 12x6 COLUMN PLACEMENT**  
SCALE: 1/2" = 1'-0"

NOTE: ACCORDING TO THE GEOTECHNICAL INVESTIGATION THAT WAS CARRIED OUT FOR THE ABOVE REFERENCED AIRPORT TERMINAL, SOILS AT THIS SITE ARE COMPETENT TO SUPPORT SPREAD FOOTINGS DESIGNED BASED ON AN ALLOWABLE NET BEARING CAPACITY OF UP TO 2,000 POUNDS PER SQUARE FOOT. HOWEVER, THERE ARE AREAS OF SOFT SOIL THAT WILL NECESSITATE UNDERCUT AND REFILL BELOW FOUNDATIONS AND SLAB-ON-GRADE. FURTHER DETAIL ON FOUNDATIONS AND OTHER GEOTECHNICAL CONSIDERATIONS IS PROVIDED IN THE BODY OF THE REPORT, AVAILABLE UPON REQUEST TO CONTRACTOR.

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER  
NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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21-4140  
DRAWN BY:  
DLB/GRH  
DATE:  
5/26/21

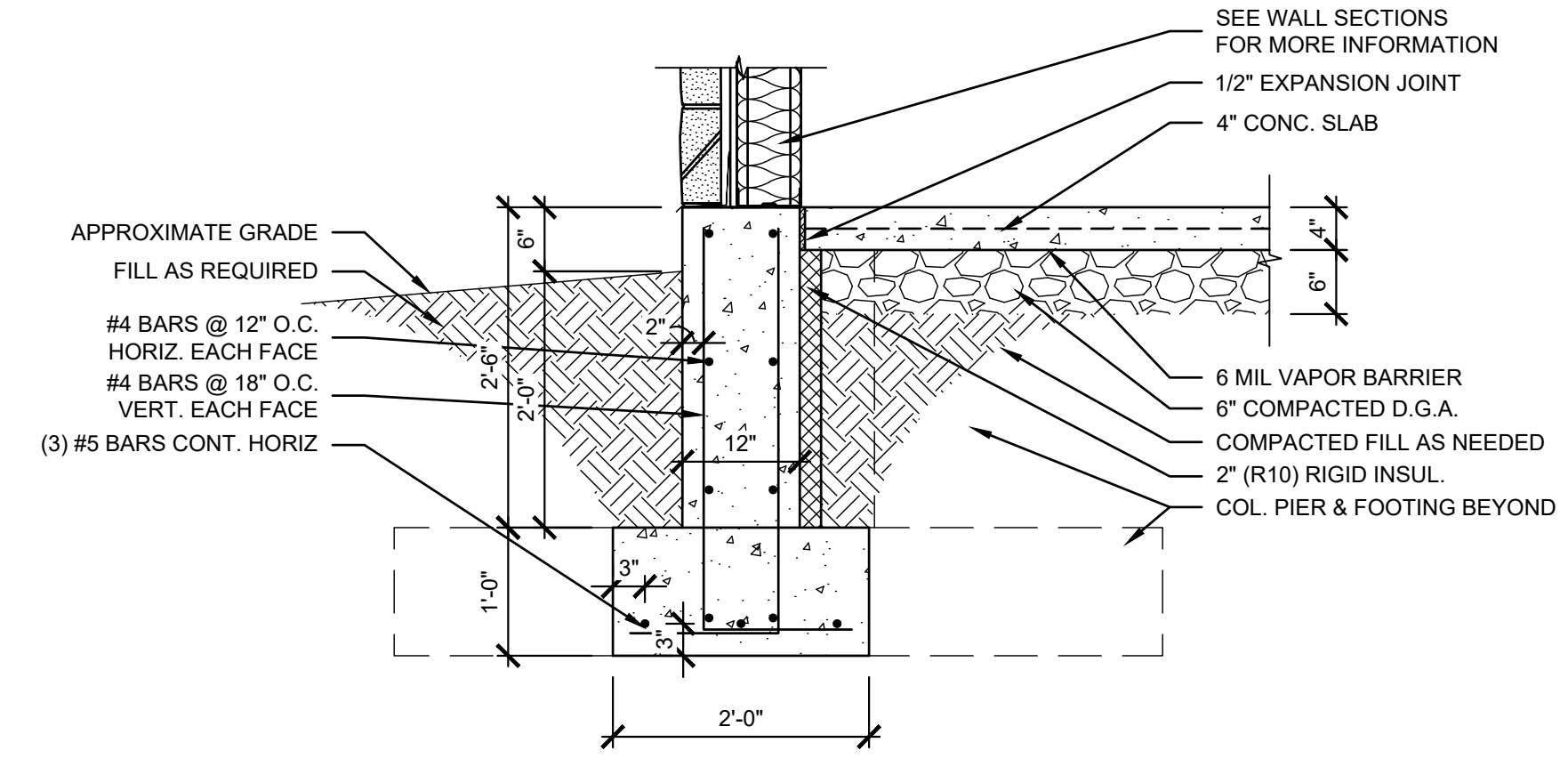
06/25/2021



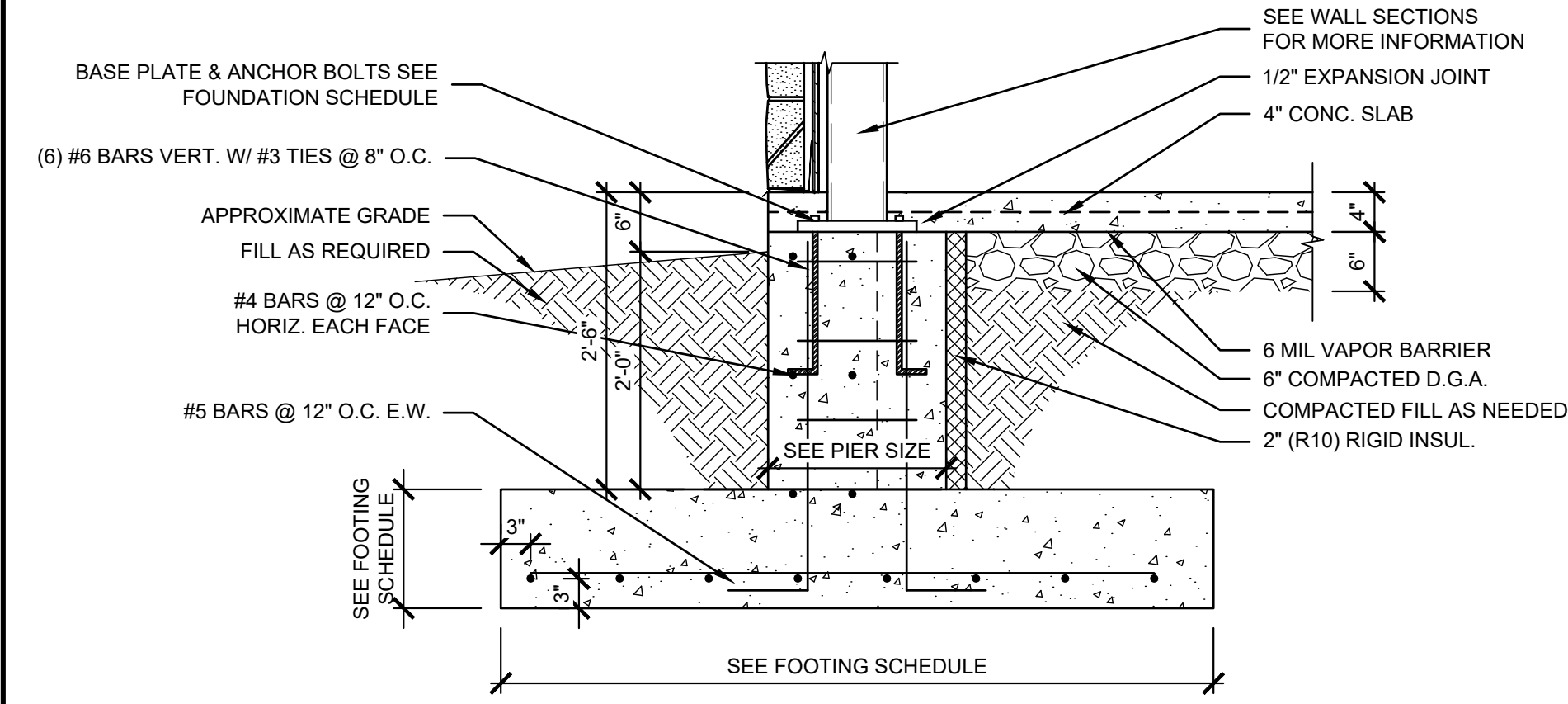
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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

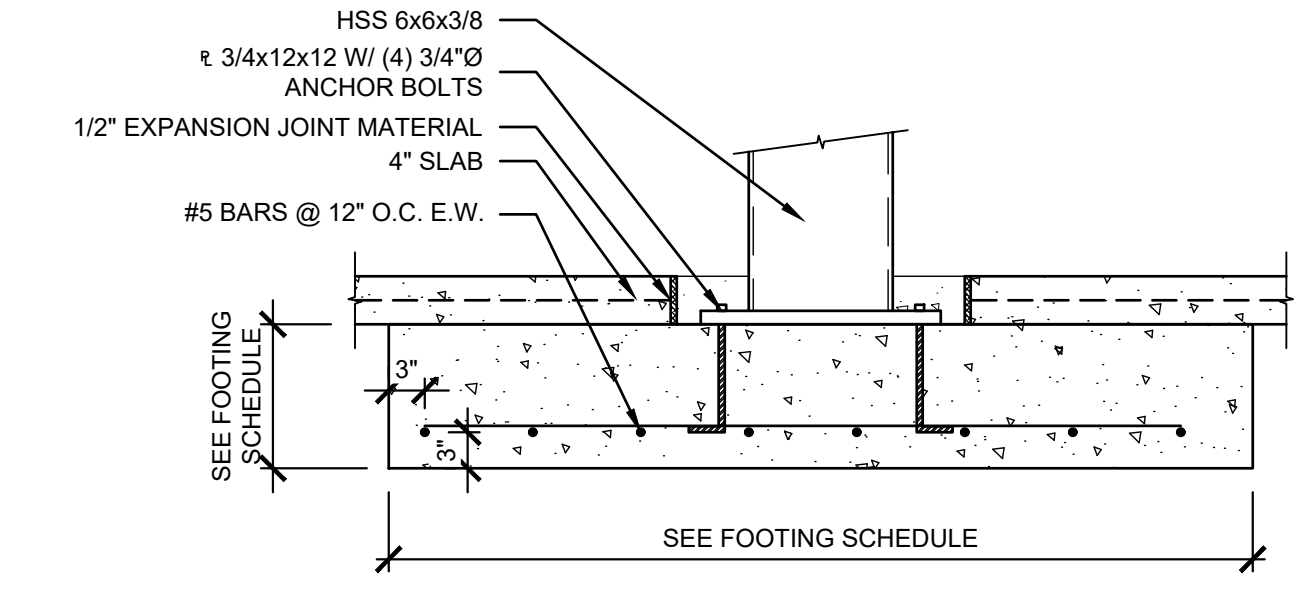
FOUNDATION PLAN  
**F1.01**



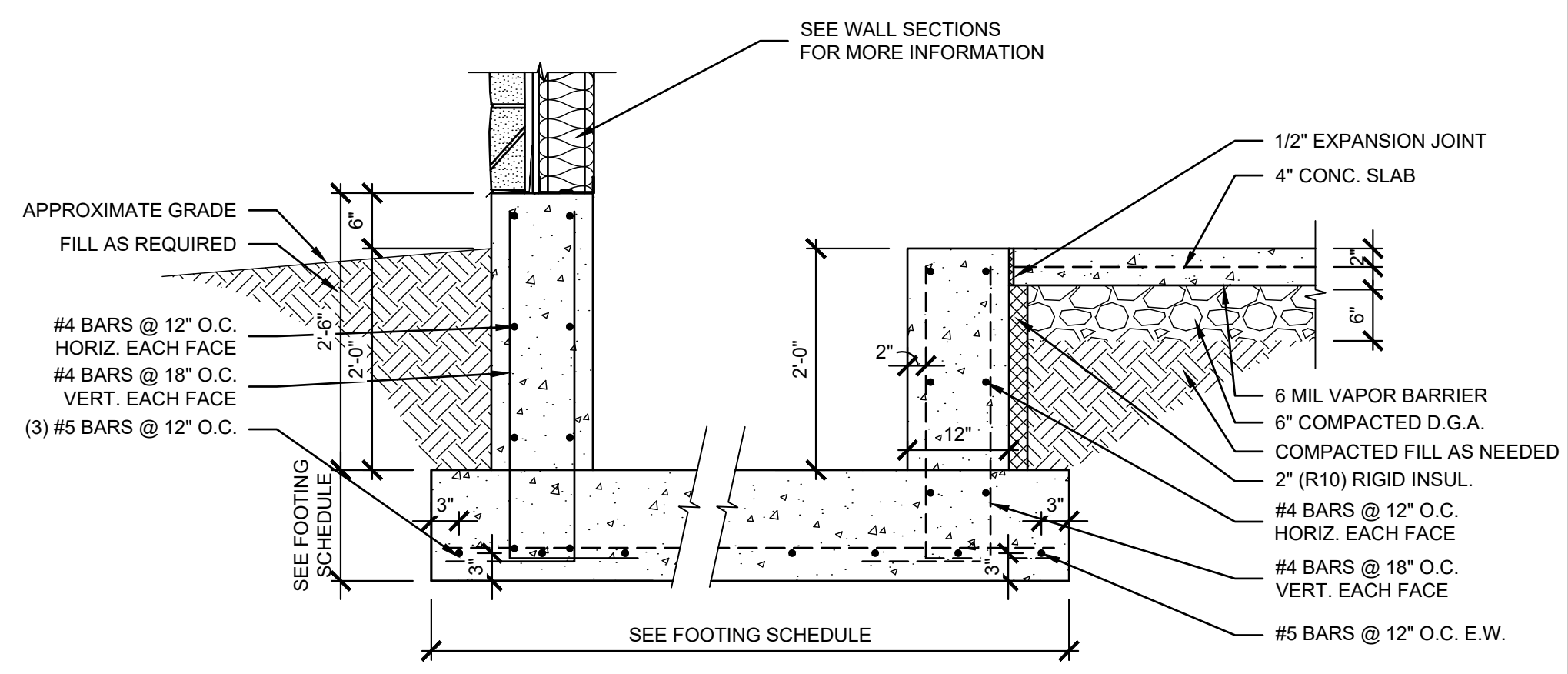
**01 WALL FOOTING AROUND PERIMETER OF BUILDING**  
SCALE: 3/4" = 1'-0"



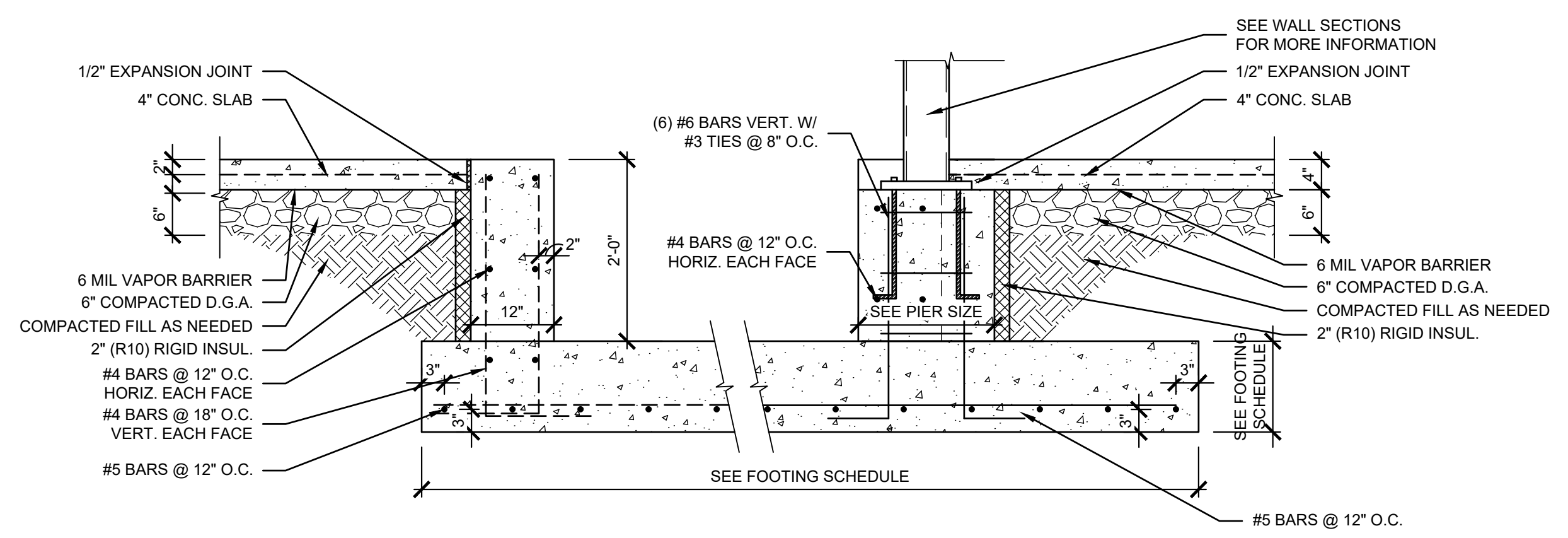
**02 COLUMN FOOTING**  
SCALE: 3/4" = 1'-0"



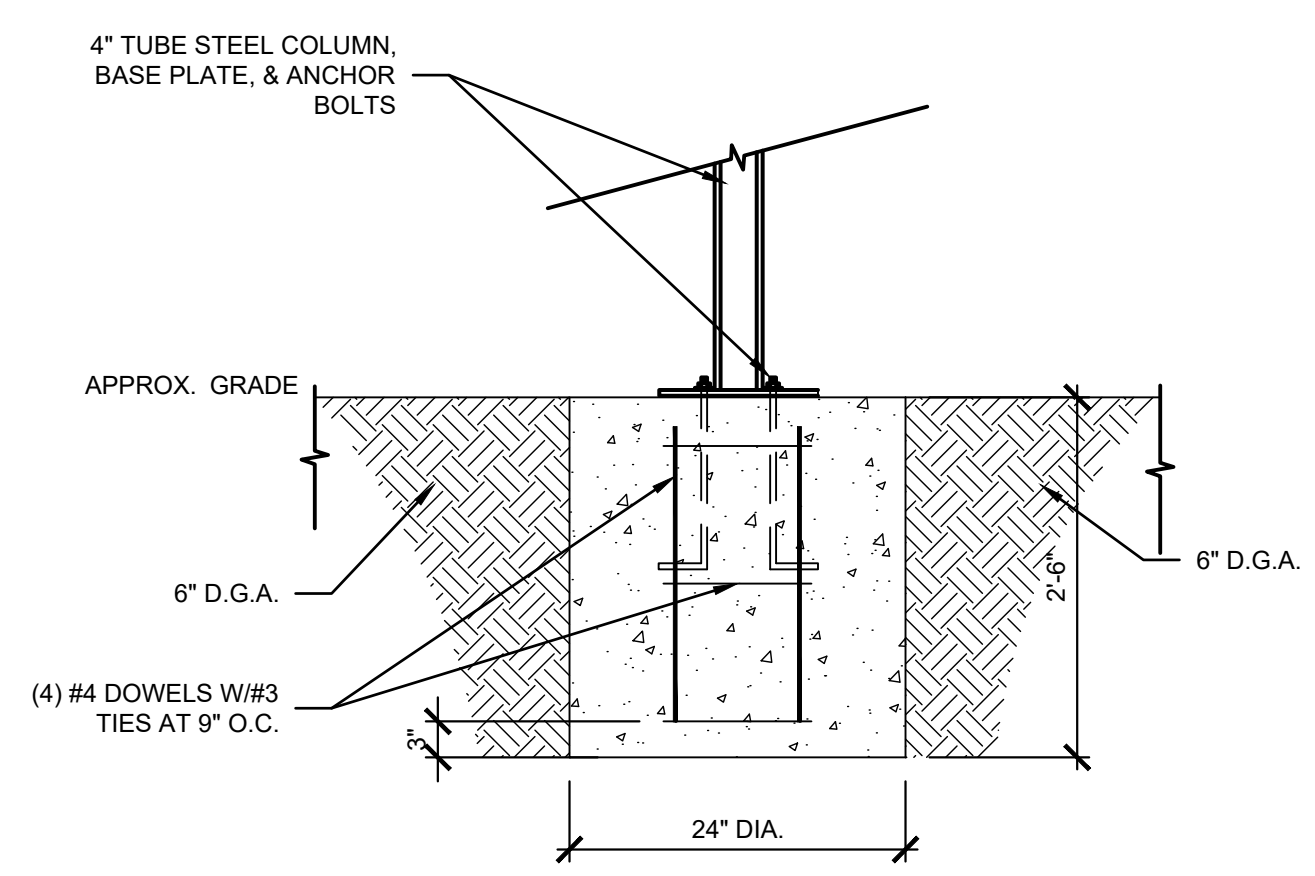
**03 INTERIOR COLUMN FOOTING**  
SCALE: 3/4" = 1'-0"



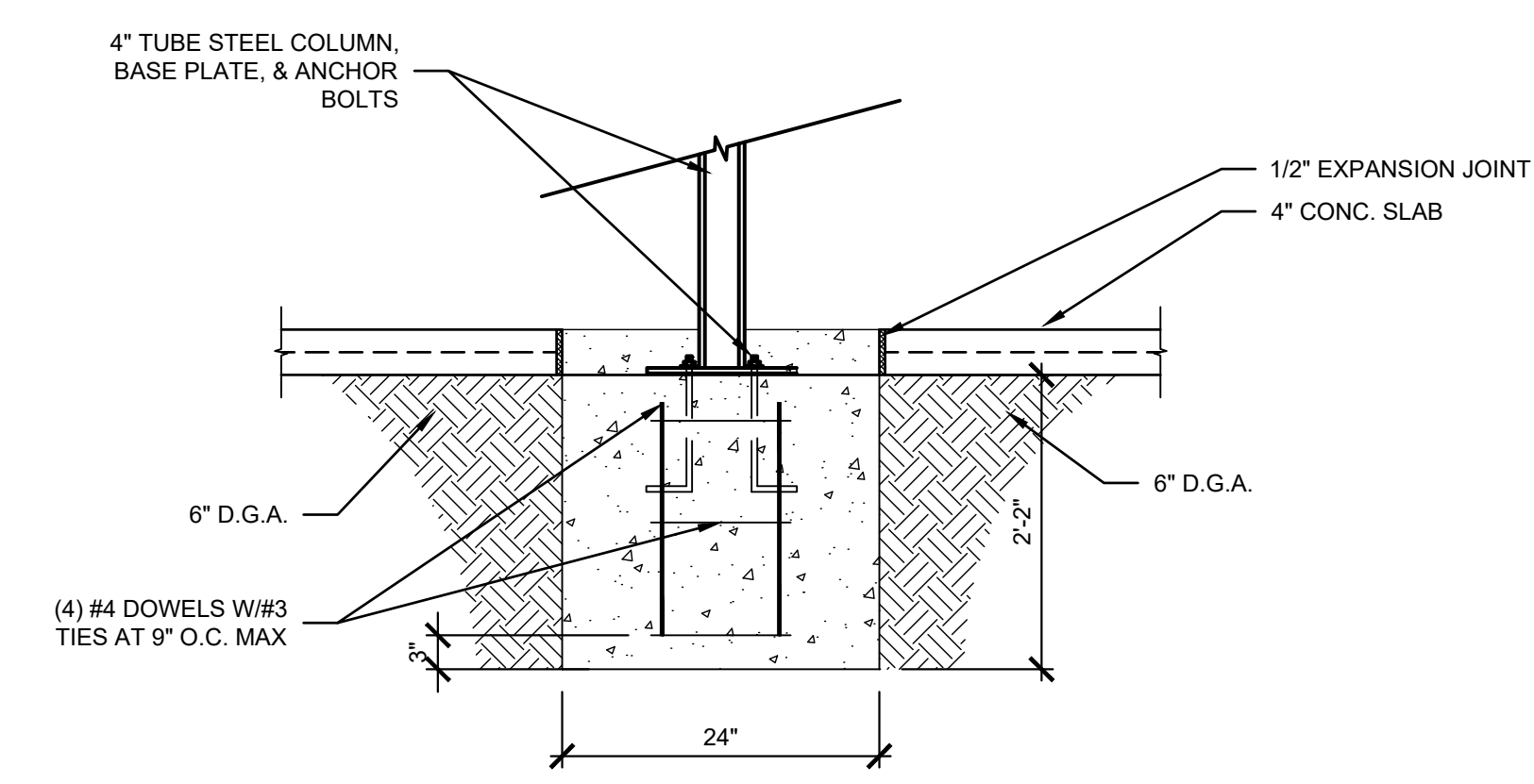
**04 ELEVATOR PIT FOUNDATION**  
SCALE: 3/4" = 1'-0"



**05 ELEVATOR PIT SHARED FOOTING FOUNDATION**  
SCALE: 3/4" = 1'-0"



**06 EXTERIOR STAIR COLUMN FOUNDATION DETAIL**  
SCALE: 3/4" = 1'-0"



**07 INTERIOR STAIR COLUMN FOUNDATION DETAIL**  
SCALE: 3/4" = 1'-0"



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FOUNDATION DETAILS

**F2.01**

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: F2.01 Foundation Details.dwg - DATE: Jun 29, 2021 11:42AM - BY: DEBBY BIRD

NOTE:  
FASTEN STEEL DECKING TO SUPPORTS W/ #10 SDS IN 36/5 PATTERN @ ENDLAPS  
@ 12' O.C. @ SIDELAPS  
@ 6' O.C. AROUND BUILDING PERIMETER

# SPECIFICATIONS

DESIGN CODE  
2018 KENTUCKY BUILDING CODE

### GENERAL

1. CONTENTS OF THIS SUBMITTAL SHOW THE INTENDED APPLICATION OF METAL FRAMING COMPONENTS. FRAMING ERECTOR IS TO REFER TO THE PROJECT CONTRACT DOCUMENTS FOR ADDITIONAL CONSTRUCTION ASSEMBLY REQUIREMENTS.
2. DIMENSIONS SHOWN HEREIN HAVE BEEN DETERMINED PER THE CONTRACT DOCUMENTS AND ARE FOR DESIGN REFERENCE ONLY. ALL CONDITIONS SHALL BE VERIFIED PRIOR TO ERECTION.
3. THIS SUBMITTAL IS ALSO SUBJECT TO THE REVIEW AND CONCEPTUAL APPROVAL OF THE PROJECT ENGINEER AND/OR ARCHITECT PRIOR TO ERECTION.
4. FOR SPECIFIC REQUIREMENTS AND WARRANTY INFORMATION ON SYSTEMS OR MATERIALS CONNECTED AND APPURTENANT TO THE METAL FRAMING INCLUDING WINDOWS, CAULKING AND FLASHINGS REFER TO MANUFACTURER'S DATA.
5. DETAILS OF THE WALL FINISHES ARE FOR ARRANGEMENT AND REFERENCE. FOR SPECIFIC REQUIREMENTS, METHODS, MATERIALS AND EXECUTION STANDARDS, REFER TO TECHNICAL DATA FROM PRODUCT MANUFACTURER. IN THE EVENT OF CONFLICT, MANUFACTURER'S INSTRUCTIONS SHALL DICTATE.

### CONNECTIONS

1. IF REQUIRED, ALL WELDED CONNECTIONS ARE TO BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF AWS D1.3 SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES. CONSULT AWS D19.0 WELDING ZINC COATED STEEL AND ANSI STANDARD Z49.1 FOR INFORMATION REGARDING SAFE WELDING PROCEDURES. ALL WELDS TO BE TOUCHED-UP WITH A RUST INHIBITIVE GALVANIZING PAINT.
2. SUGGESTED WELD METAL AND PROCESS FOR SHOP WELDING ARE: 60 KSI WELD METAL STRENGTH (MINIMUM) - MIG. SUGGESTED METHODS FOR FIELD WELDING: 1/8" (UNLESS NOTED OTHERWISE) E60XX (MINIMUM) ELECTRODE - SMAW, OR "GASLESS" MIG. MINIMUM WELD THROAT THICKNESS (T) MUST MATCH OR EXCEED THE BASE STEEL THICKNESS OF THE THINNEST CONNECTED PART UNLESS NOTED OTHERWISE.
3. UNLESS NOTED OTHERWISE, REFER TO LITERATURE PUBLISHED BY HILTI FASTENING SYSTEMS, INC. FOR EXPANSION BOLT, AND POWER DRIVEN FASTENER INFORMATION. USE 1 INCH MINIMUM EMBEDMENT FOR EACH POWER DRIVEN FASTENER UNLESS NOTED OTHERWISE. REFER TO BUILDEX, INC. TECHNICAL INFORMATION FOR TEKS SCREW DATA. ALTERNATE MANUFACTURER'S FASTENERS OF COMPARABLE SPECIFICATIONS AND LOAD CAPACITIES ARE ACCEPTABLE.

### GENERAL REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK AND MATERIAL SHALL BE IN ACCORDANCE TO ACI 318.
2. CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4000 PSI.
3. CONCRETE SHALL BE AIR ENTRAINED TO 6% ± 1%.
4. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60.
5. CONCRETE COVER FOR REINFORCEMENT SHALL BE 3" FOR ALL CONCRETE CAST AGAINST EARTH.
6. CONCRETE SLUMP TO BE BETWEEN 4" - 6" IN DRY HOLE.
7. FOUNDATION DESIGN BASED ON A 2000 PSF SOIL BEARING CAPACITY.

### STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS, 9TH EDITION.
2. ALL STRUCTURAL STEEL (PLATES, WIDE FLANGE SHAPES, CHANNELS, AND ANGLES) SHALL BE ASTM A572, GRADE 50 MULTI-CERTIFIABLE.
3. ALL BOLTS 5/8" AND LARGER SHALL BE ASTM A-307 AND/OR ASTM A-325. THREADED ROD SHALL BE ASTM A-36.
4. ALL WELDS SHALL CONFORM TO AWS D1.1 LATEST EDITION.
5. ELECTRODES SHALL BE E70XX. ALL WELDING SHALL BE BY CERTIFIED WELDERS.
6. ALL STEEL CONNECTIONS ARE NOT SLIP CRITICAL CONNECTIONS AND ARE DESIGNED FOR BEARING AND SHEAR ONLY.
7. ALL STRUCTURAL BOLTS SHALL BE TIGHTENED BY THE "TURN-OF-NUT" METHOD AS PER AISC COMMENTARY ON SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

### LIGHT GAGE FRAMING

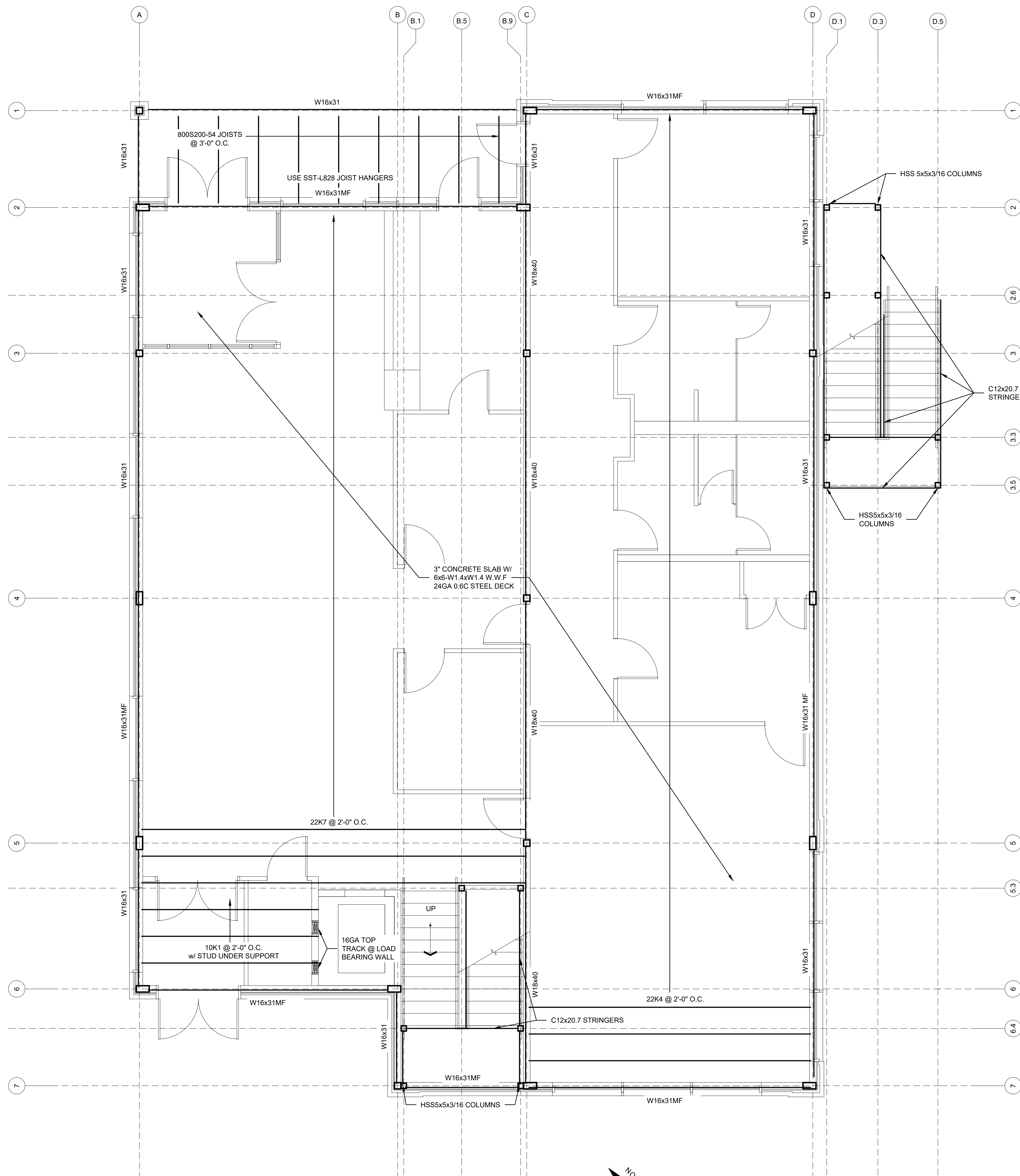
1. ALL STUD AND JOIST MEMBERS 16 GAGE AND HEAVIER SHALL BE FORMED FROM STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I. SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH A MINIMUM YIELD STRENGTH OF 50 KSI.
2. ALL 18 GAGE AND LIGHTER MEMBERS, AND ALL TRACK, BRIDGING AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL MEETING THE CRITERIA AS LISTED ABOVE, WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.
3. STRUCTURAL PROPERTIES AND CAPACITIES OF STEEL FRAMING COMPONENTS SHALL BE IN ACCORDANCE WITH THE A.I.S.I. COLD-FORMED DESIGN SPECIFICATION.
4. ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A ZINC COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM A525. 5. STRUCTURAL PROPERTIES USED IN THIS SUBMITTAL ARE THOSE PUBLISHED BY LIGHT GAGE INSTITUTE.
5. SUBSTITUTE MATERIALS OF EQUAL PERFORMANCE MAYBE USED DUE TO AVAILABILITY.

### INSTALLATION

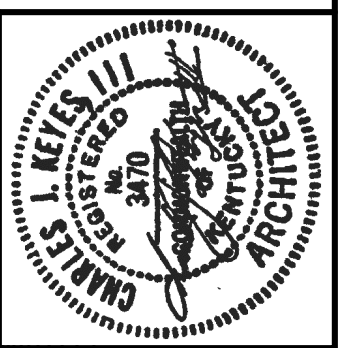
1. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
2. TEMPORARY BRACING SHALL BE PROVIDED AND REMAIN IN PLACE UNTIL WORK IS COMPLETELY STABILIZED.
3. ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED MEMBERS IS UNACCEPTABLE.
4. WHEN REQUIRED FOR BRIDGING PURPOSES, FRAMING FABRICATOR IS TO ENSURE PUNCHOUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAIL.
5. NO SPLICES IN STUDS, JOISTS OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).
6. WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUD SPACINGS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.

### DESIGN SPECIFICATIONS

FLOOR LIVE LOAD: 100 PSF.  
ROOF LIVE LOAD: 20.  
ROOF SNOW LOAD  
Pg. 15 PSF.  
Ce: 1.0  
Is: 1.10  
Cs: 1.0  
WIND LOAD  
3-SEC GUST SPEED, ULTIMATE: 120 MPH.  
Iw: 1.00  
EXPOSURE: C  
EXPOSURE COEFFICIENT: K<sub>h</sub> = 0.98 (HT=30')  
WIND PRESSURE: 24.8 PSF (WALL); -16.0 PSF (ROOF)  
EARTHQUAKE DESIGN DATA  
SITE CLASSIFICATION - "D"  
MAX. 0.2 SEC SPECTRAL RESPONSE = 0.207G  
MAX. 1 SEC SPECTRAL RESPONSE = 0.166G  
SEISMIC DESIGN CATEGORY - "C"  
R = 3.5 (STEEL ORDINARY MOMENT FRAMES)



**01 SECOND FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"

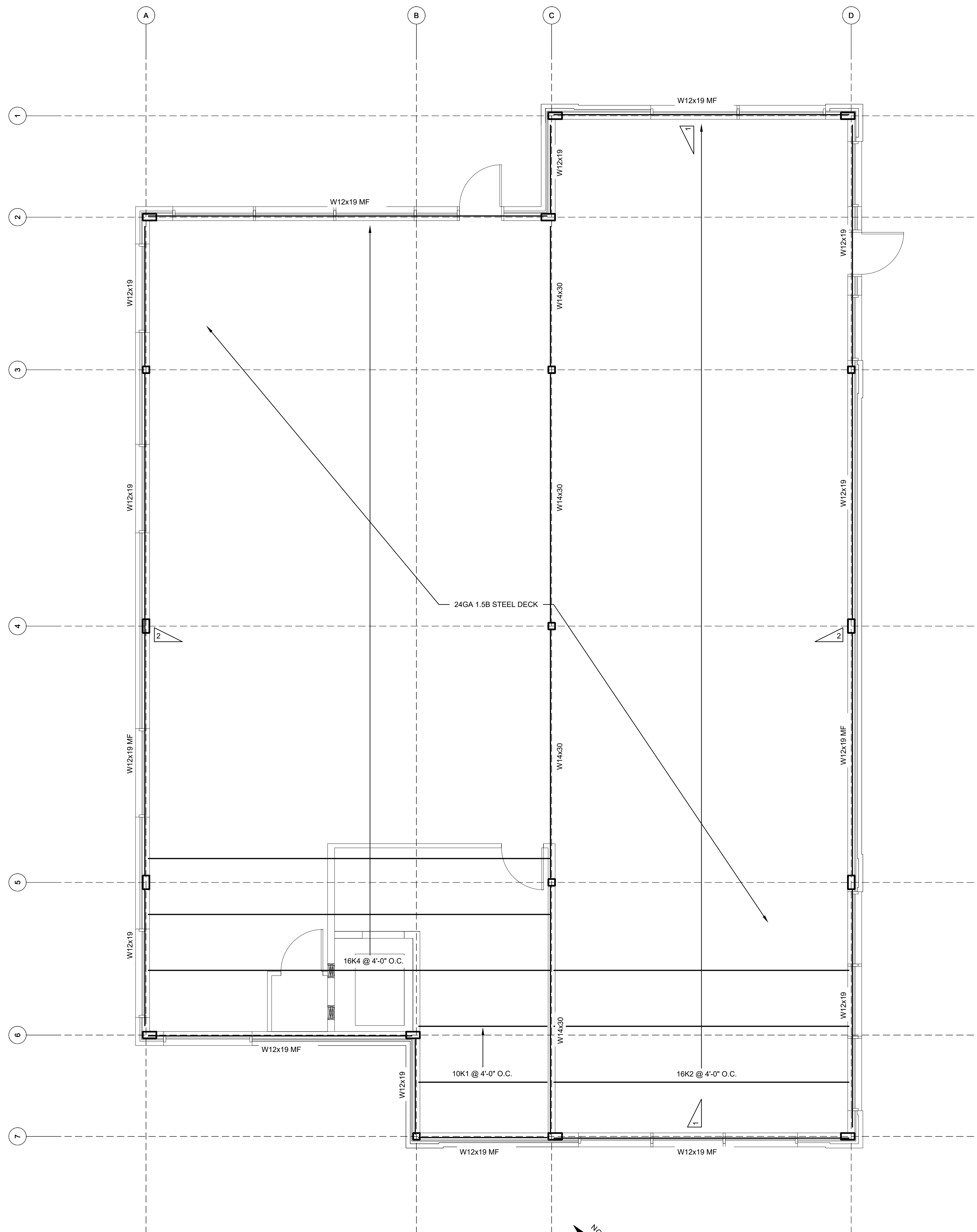


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SECOND FLOOR FRAMING PLAN  
**S1.01**



**01 ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



NOTE:  
FASTEN STEEL DECKING TO SUPPORTS W/ #10 SDS IN 36/5 PATTERN @ ENDLAPS  
@ 12' O.C. @ SIDELAPS  
@ 6' O.C. AROUND BUILDING PERIMETER

**SNOW DRIFT SCHEDULE**

1	30.6 PSF 7'-8"
2	25.0 PSF 6'-4"

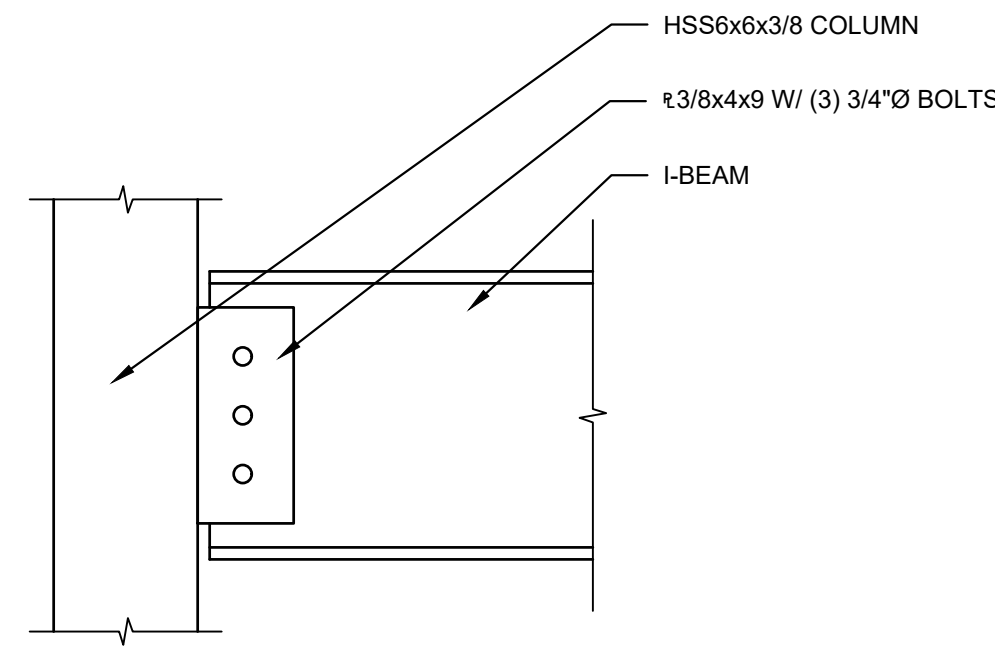
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21-4140  
DRAWN BY:  
DLB/GRH  
DATE:  
5/26/21



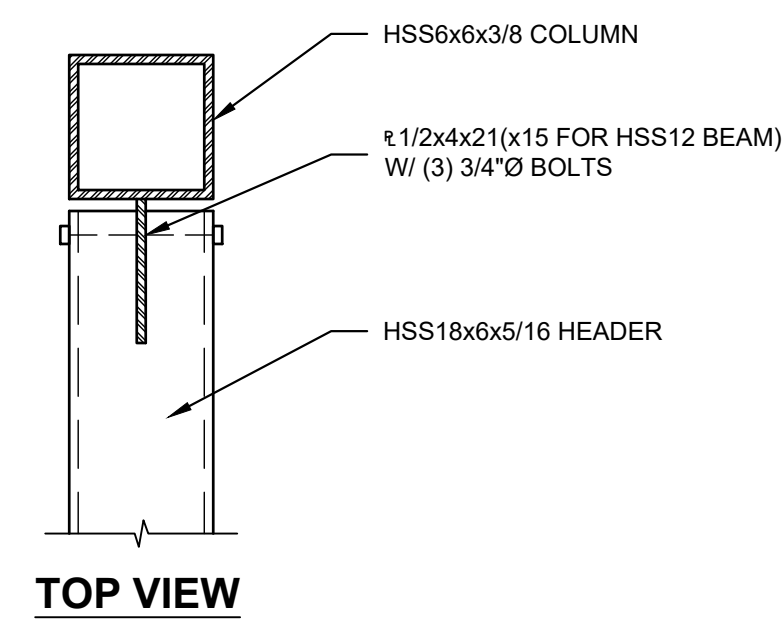
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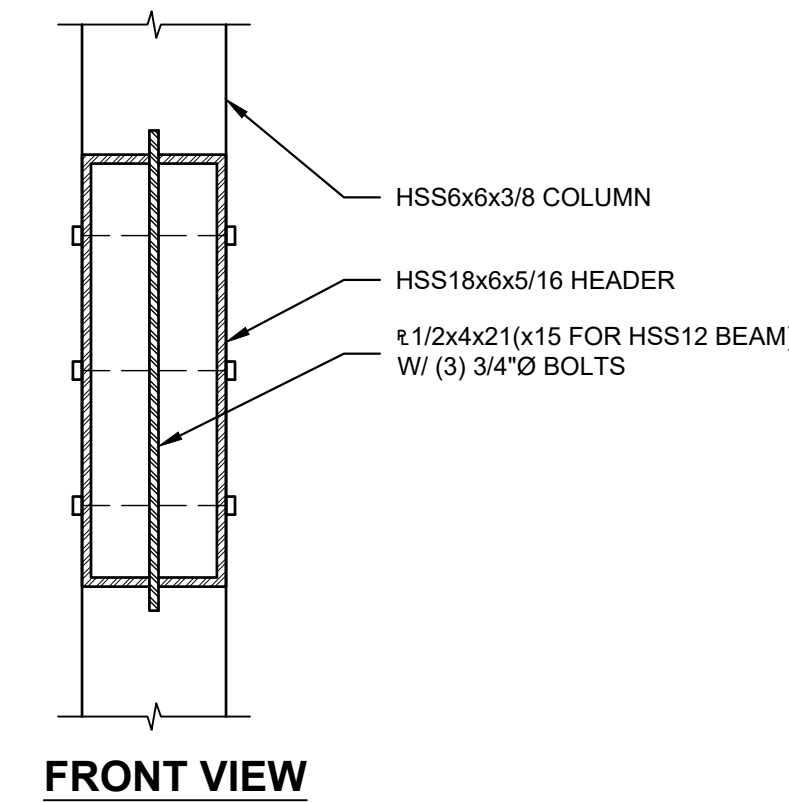
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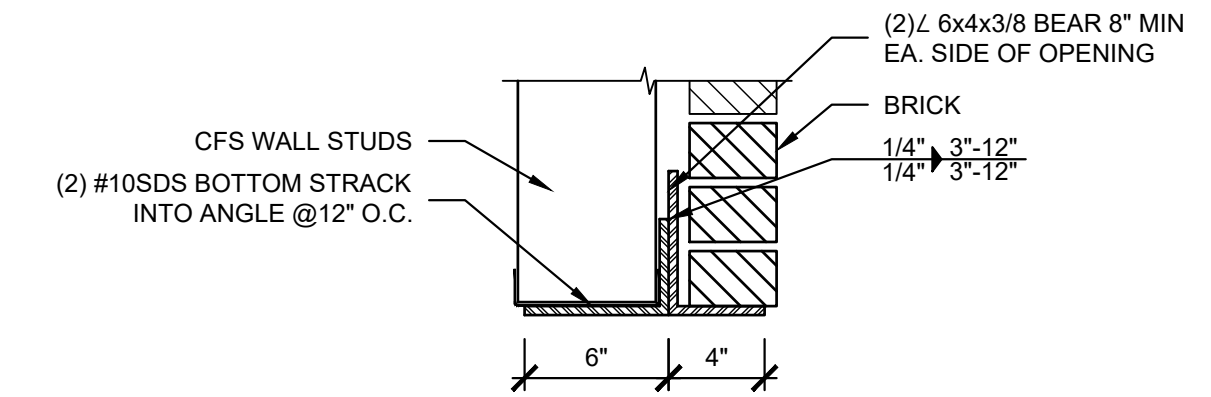
**01** TYPICAL BEAM CONNECTION  
SCALE: N.T.S.



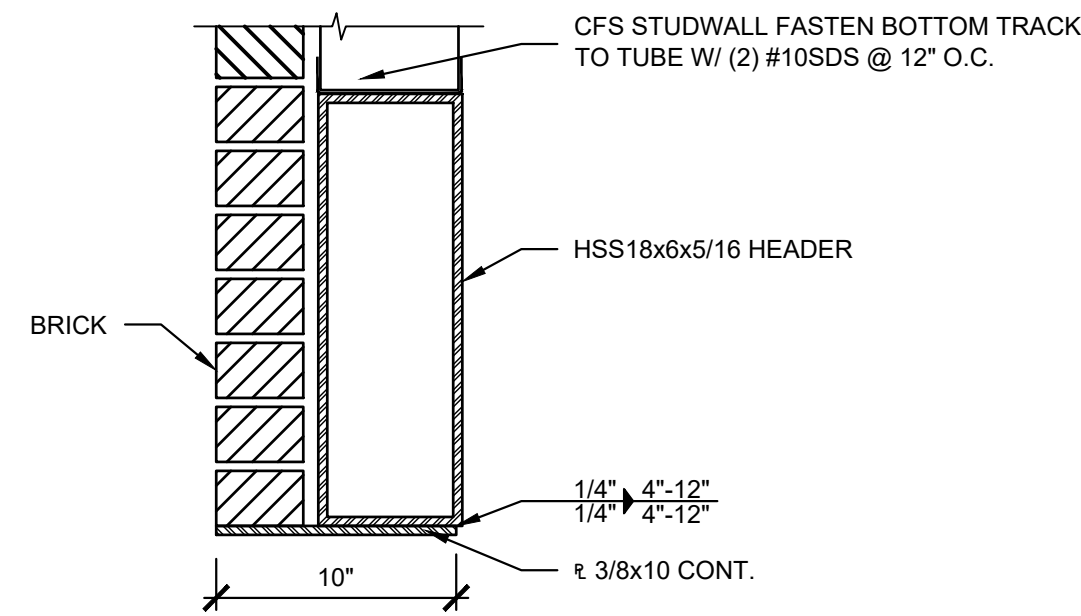
**02** HSS TUBE HEADER COLUMN CONNECTION  
SCALE: N.T.S.



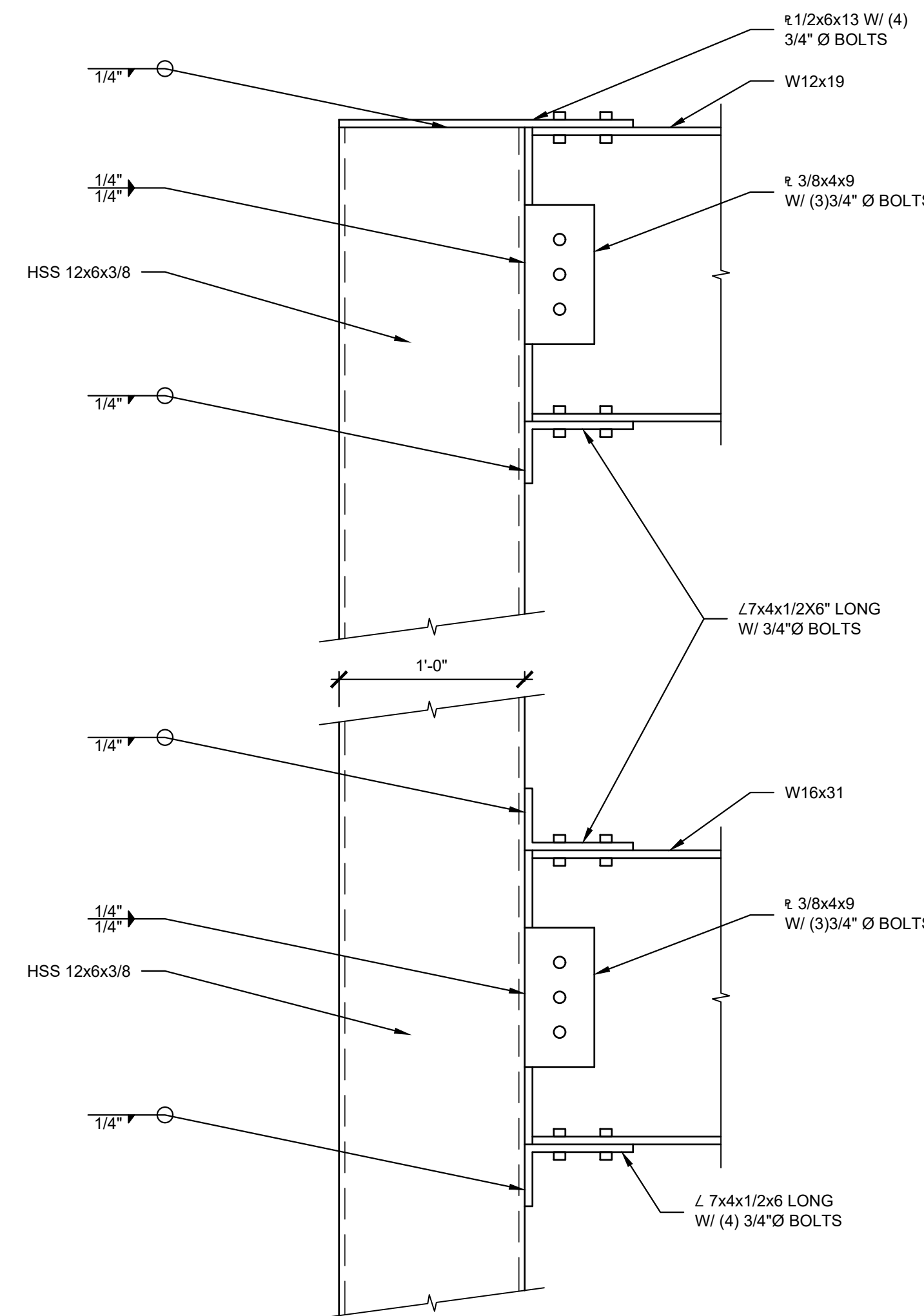
**03** HSS TUBE HEADER COLUMN CONNECTION  
SCALE: N.T.S.



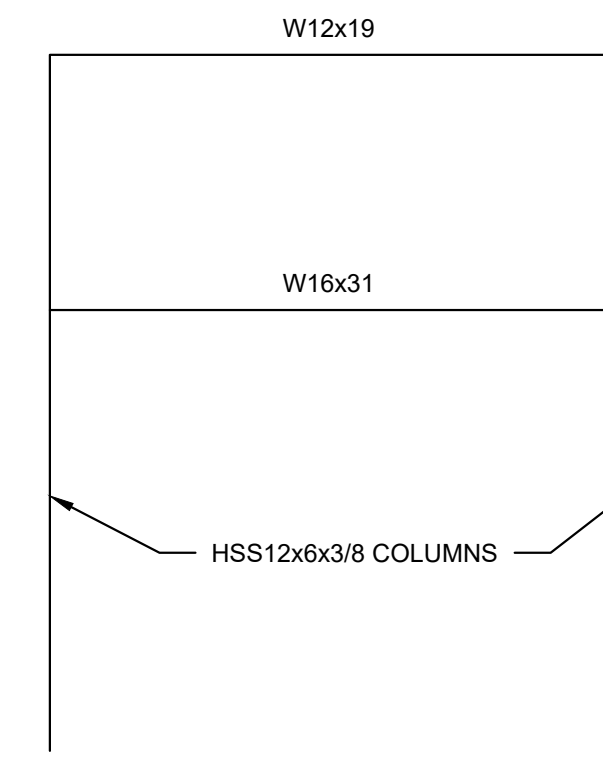
**04** HEADER H2 DETAIL  
SCALE: N.T.S.



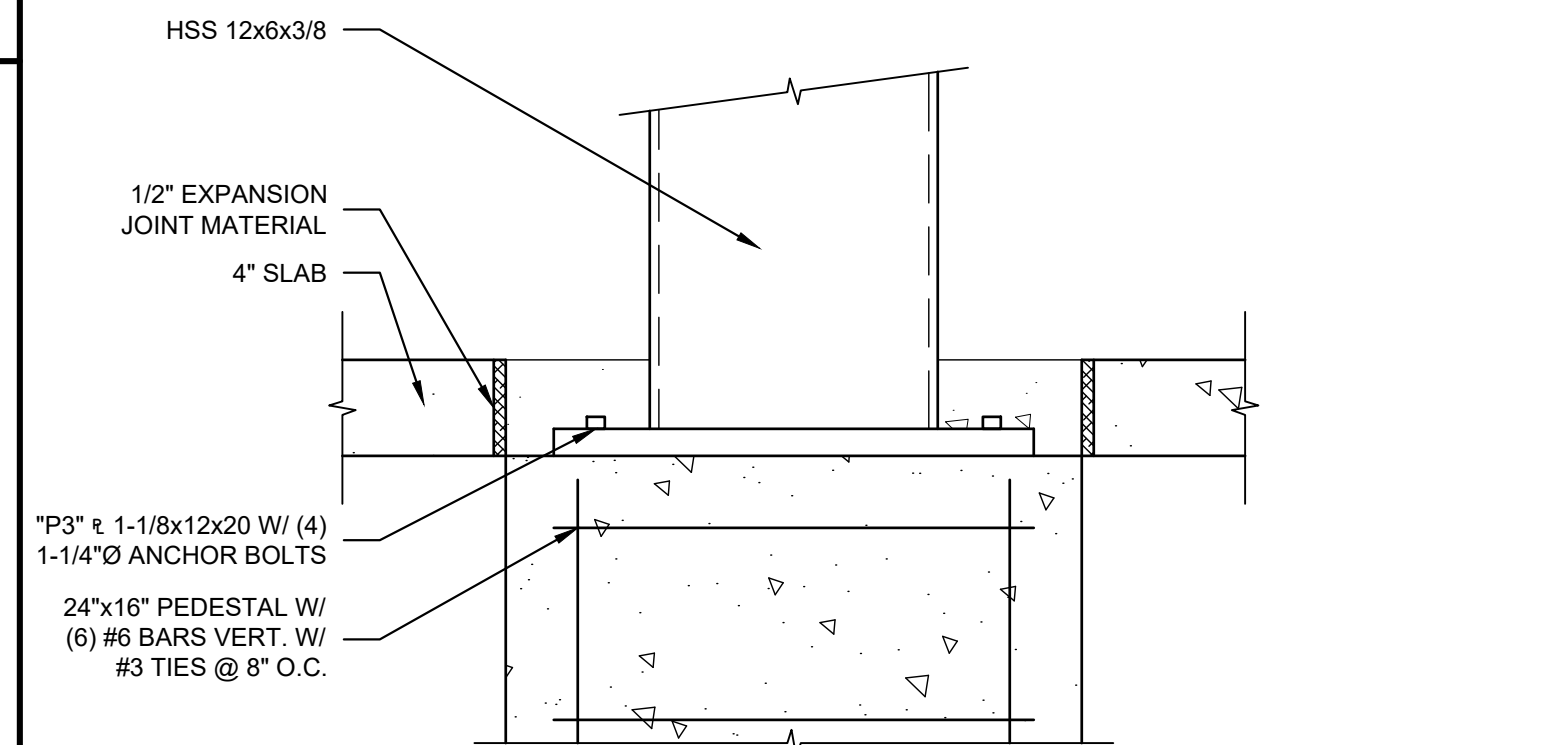
**05** HEADER H3 DETAIL  
SCALE: N.T.S.



**06** MOMENT FRAME DETAIL  
SCALE: N.T.S.



**07** MOMENT FRAME  
SCALE: N.T.S.



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LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT  
TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

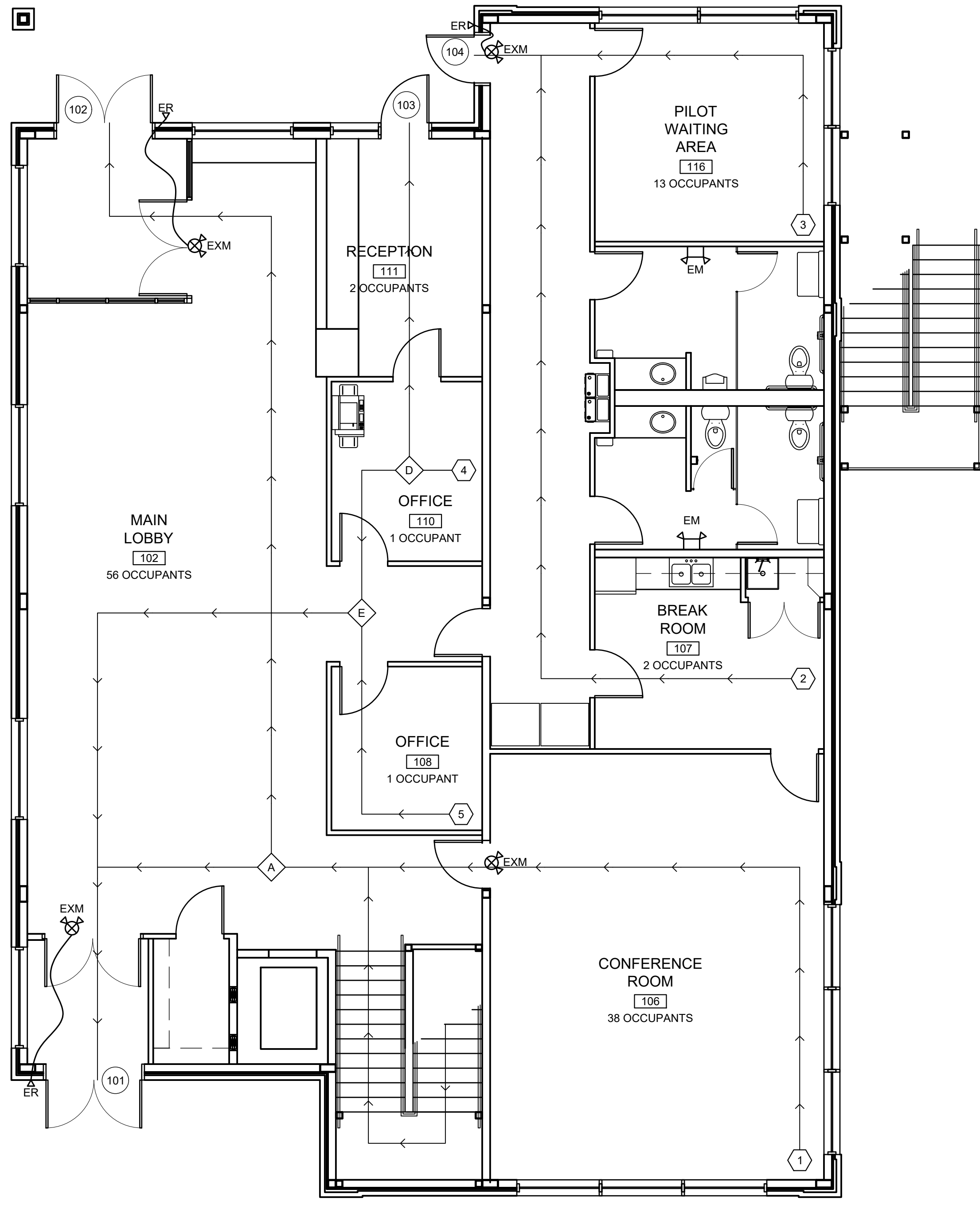
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STRUCTURAL DETAILS

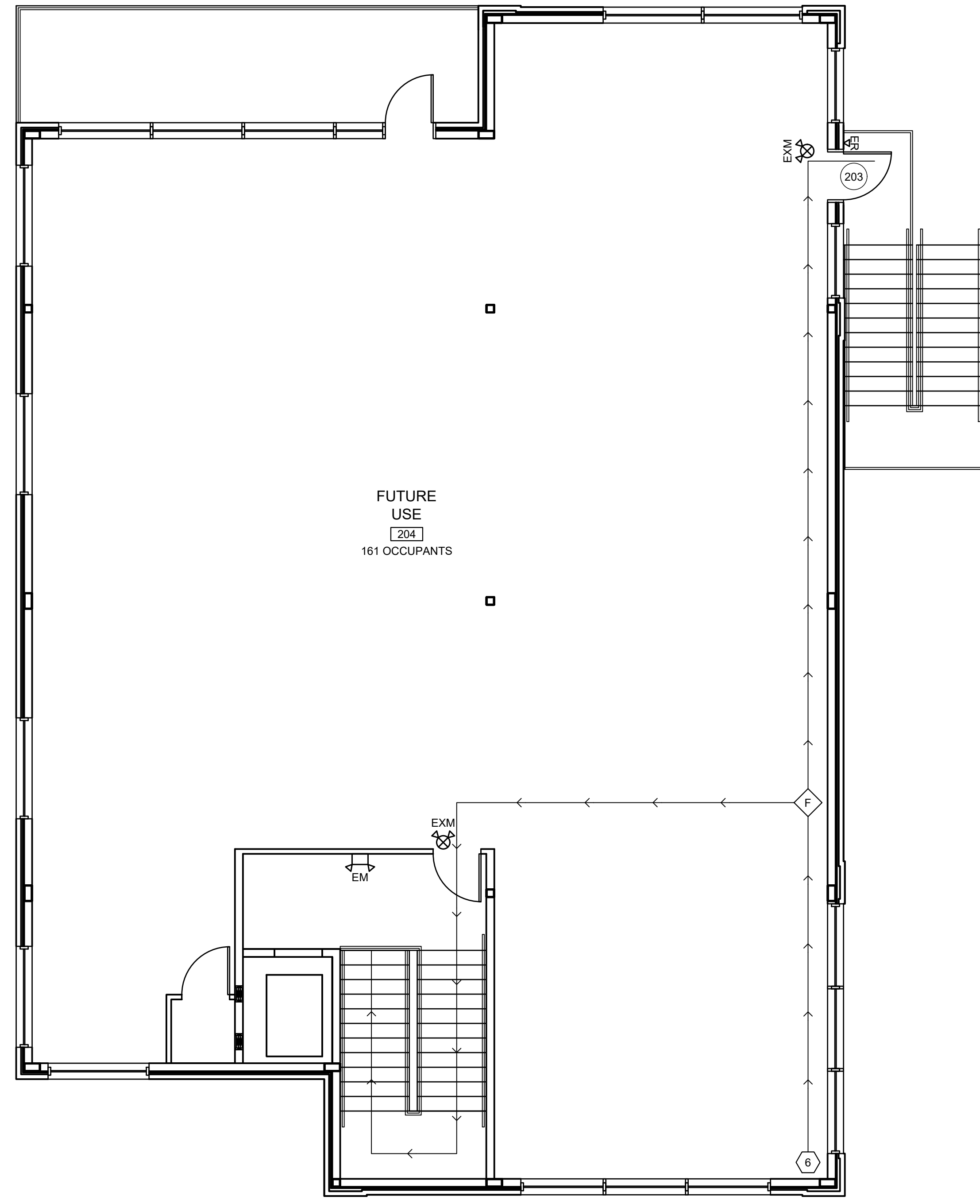
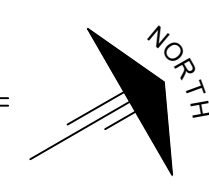
**S2.01**

EMERGENCY LIGHT FIXTURE SCHEDULE			
TYPE	DESCRIPTION	MODEL#	BULBS
ER	EMERGENCY REMOTE HEAD	LITHONIA #ELA-NX-H0606	INCLUDED
EM	EMERGENCY LIGHT W/ BATTERY PACK REMOTE HEAD WHERE SHOWN	LITHONIA #6ELM2P	INCLUDED
EXM	COMBINATION EXIT/EMERGENCY FIXTURE W/ BATTERY PACK	LITHONIA #LHQM-S-W-1-R-120/277-HO	INCLUDED

NOTE: EXIT EMERGENCY LIGHTING IS ON AN "NL" CIRCUIT  
NOTE: EXIT EMERGENCY LIGHTING ON ELECTRICAL PLANS IS TO BE USED IF IN CONFLICT WITH FIXTURES DESIGNATED HERE-IN



**01 LIFE SAFETY PLAN**  
SCALE: 3/16" = 1'-0"



**02 LIFE SAFETY PLAN**  
SCALE: 3/16" = 1'-0"

CODE ANALYSIS			
CATEGORY	CODE REFERENCE	REQUIREMENT/DESIGNATION	PROVIDED
CONSTRUCTION TYPE	TABLE 506.2		IIB
OCCUPANCY GROUPS	TABLE 304.1		A-3 TRANSPORTATION TERMINAL B- BUSINESS EDUCATION OVER 12th GRADE
OCCUPANCY LOAD	TABLE 1004.1.2	276 TOTAL OCCUPANTS	CONFERENCE ROOM - 38 OCCUPANTS WAITING AREAS - 70 OCCUPANTS ACCESSORY STORAGE - 1 OCCUPANT BUSINESS AREAS - 4 OCCUPANTS BREAK ROOM - 2 OCCUPANTS FUTURE UPSTAIRS CLASSROOMS - 161 OCCUPANTS
ALLOWABLE AREA	TABLE 506.2	TABULAR 9,500 S.F. 2 STORIES	3,724 s.f. PER FLOOR 2 STORIES
EXIT CALCULATIONS	SECTION 1006.3.2 SECTION 1017 TABLE 1017.2	COMMON PATH OF EGRESS TRAVEL GROUP EXIT ACCESS TRAVEL DISTANCE	75 FT 250 FT
NON-SEPERATED OCCUPANCIES	SECTION 508.3	NO SEPARATION BETWEEN GROUP A-3 AND GROUP B MOST RESTRICTIVE REQUIREMENTS USED	

LIFE SAFETY PATHWAYS							
LOCATION	COMMON PATH	TOTAL TRAVEL DISTANCE	DOOR NUMBER				
			EXIT 101	EXIT 102	EXIT 103	EXIT 104	EXIT 203
1	A	49'-10"	63'-2"	97'-10"	101'-10"	-	-
2	B	15'-9"	-	-	-	61'-0"	-
3	C	26'-6"	-	-	-	30'-9"	-
4	D	2'-8"	60'-7"	-	24'-6"	-	-
5	E	18'-2"	64'-1"	46'-8"	-	-	-
6	F	21'-11"	-	-	-	115'-6"	66'-5"

PATHWAY KEY PLAN:  
 → : TRAVEL PATH W/ DIRECTION OF FLOW  
 # : TRAVEL PATH STARTING LOCATION, WHERE "#" = LOCATION COLUMN IN THIS TABLE.  
 # : COMMON PATH LOCATION, WHERE "#" = LOCATION COLUMN IN THIS TABLE.  
 # : EXIT DOOR LOCATION, WHERE "#" = DOOR IN THIS TABLE AND IN DOOR FINISH SCHEDULE.

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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: LS1.01 Life Safety Plan.dwg - DATE: Jun 29, 2021 11:45AM - BY: DEBBY BIRD



### WALL LEGEND

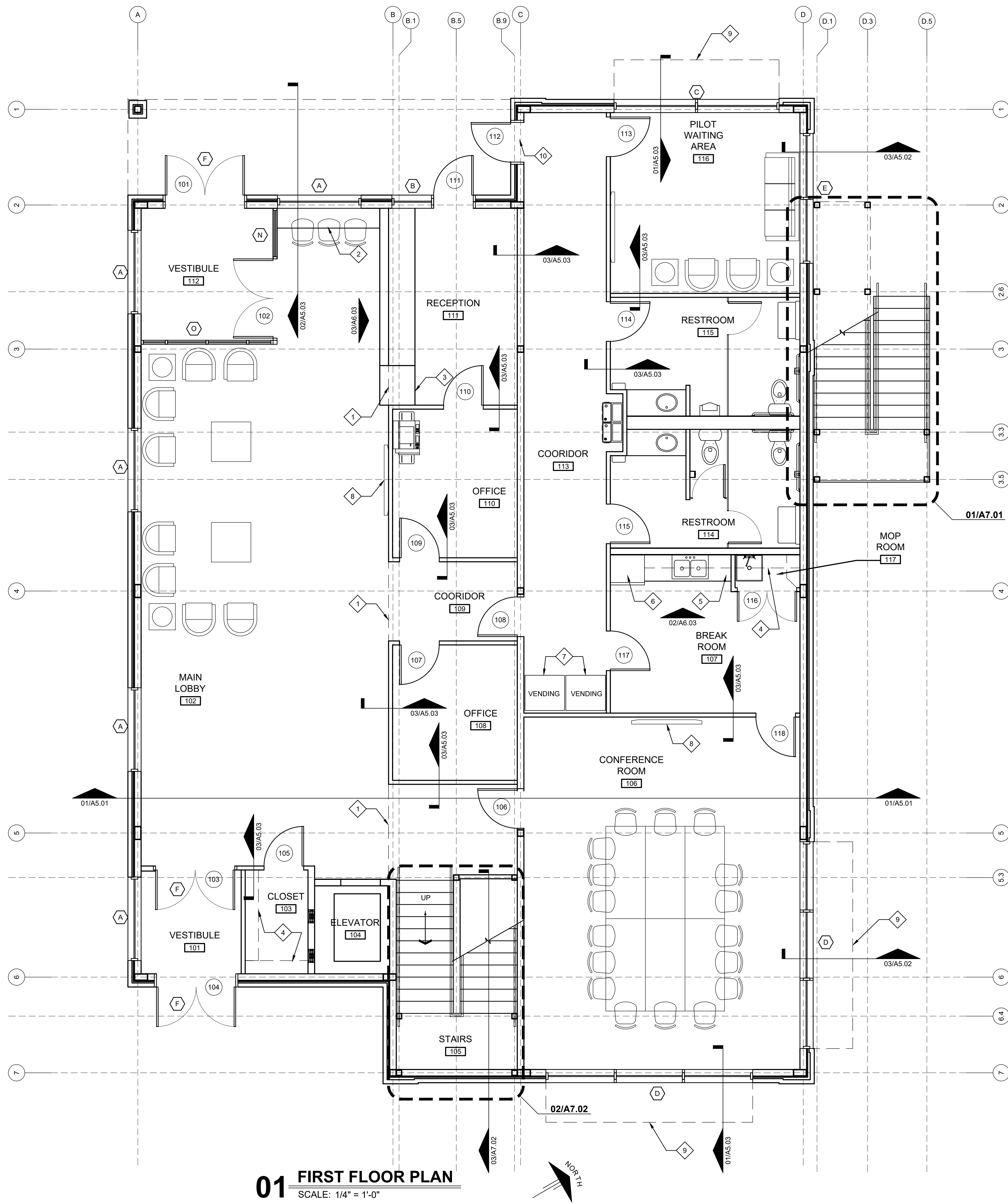
	3-5/8" METAL STUD WALL
	3-5/8" METAL STUD WALL WITH EXTERIOR GRADE SHEATHING, AIR GAP AND BRICK VENEER
	3-5/8" METAL STUD KNEE WALL

\*ALL MATERIALS ARE SIZES LISTED IN THIS LEGEND UNLESS OTHERWISE DIMENSIONED ON THIS PLAN OR SPECIFIED IN THE DETAILS AT A DIFFERENT SIZE

### SHEET NOTES:

- 1 BULKHEAD ABOVE
- 2 BAR HEIGHT LIVE EDGE WOOD COUNTER
- 3 ADA LIFT TOP ACCESS GATE
- 4 SHELVING
- 5 UPPER AND LOWER CABINETS
- 6 REFRIDGERATOR BY OWNER
- 7 VENDING MACHINE BY OWNER
- 8 TV BY OWNER. PROVIDE ALL REQUIRED MOUNTING AND HOOKUPS.
- 9 AWNING ABOVE
- 10 PILOT ACCESS DOOR (SEE HARDWARE SCHEDULE)

NOTE SYMBOL



**01** FIRST FLOOR PLAN  
SCALE: 1/4" = 1'-0"

**NOTE:** ALL DIMENSIONS ARE TO FACE OF STUD  
**NOTE:** GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER  
**NOTE:** ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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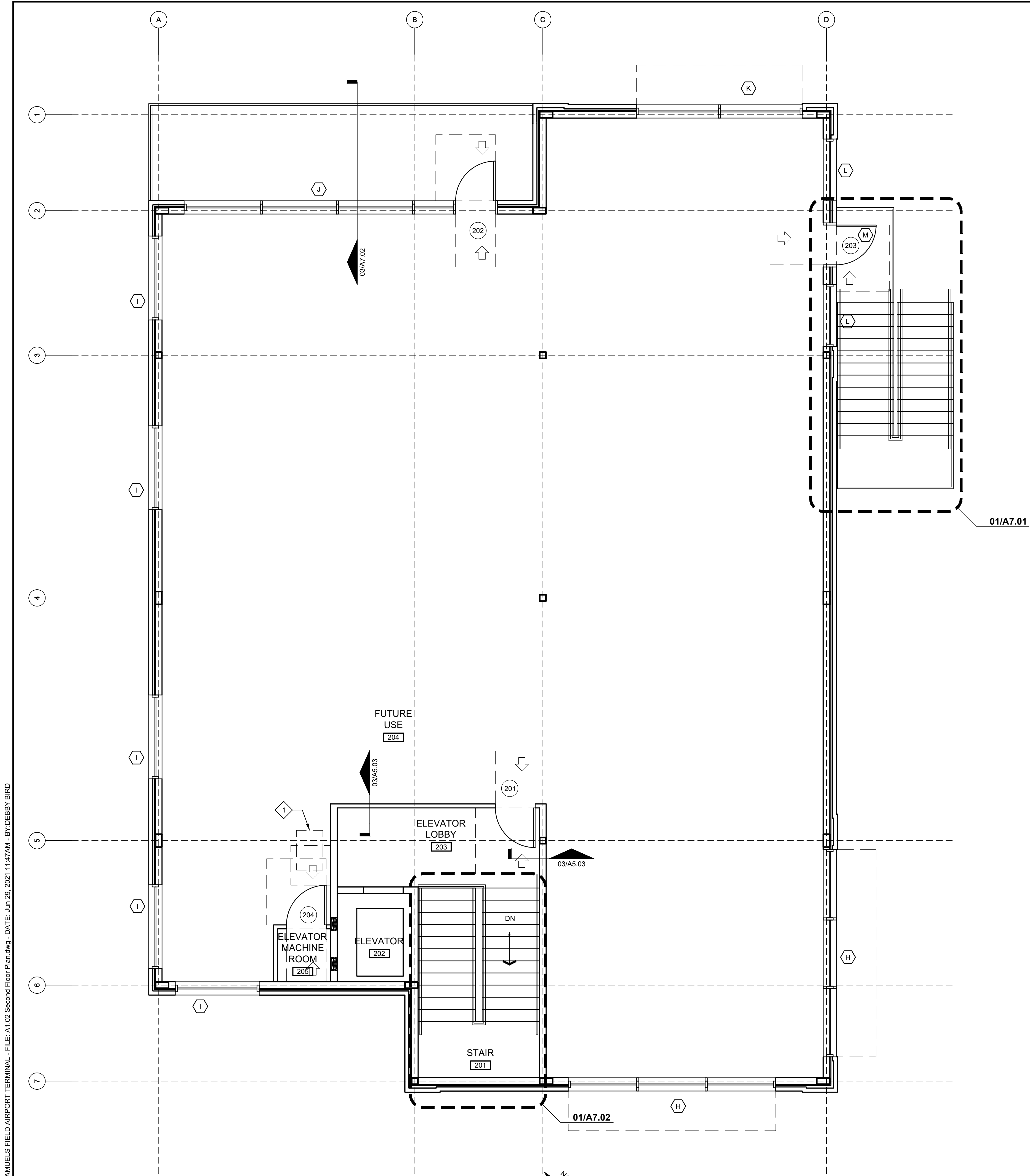
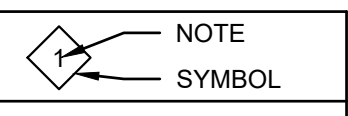
NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD



WALL LEGEND	
	3-5/8" METAL STUD WALL
	3-5/8" METAL STUD WALL WITH EXTERIOR GRADE SHEATHING, AIR GAP AND BRICK VENEER
	3-5/8" METAL STUD KNEE WALL

\*ALL MATERIALS ARE SIZES LISTED IN THIS LEGEND UNLESS OTHERWISE DIMENSIONED ON THIS PLAN OR SPECIFIED IN THE DETAILS AT A DIFFERENT SIZE

SHEET NOTES:	
1	ROOF ACCESS HATCH & LADDER



**01 SECOND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**NOTE:** ALL DIMENSIONS ARE TO FACE OF STUD  
**NOTE:** GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER  
**NOTE:** ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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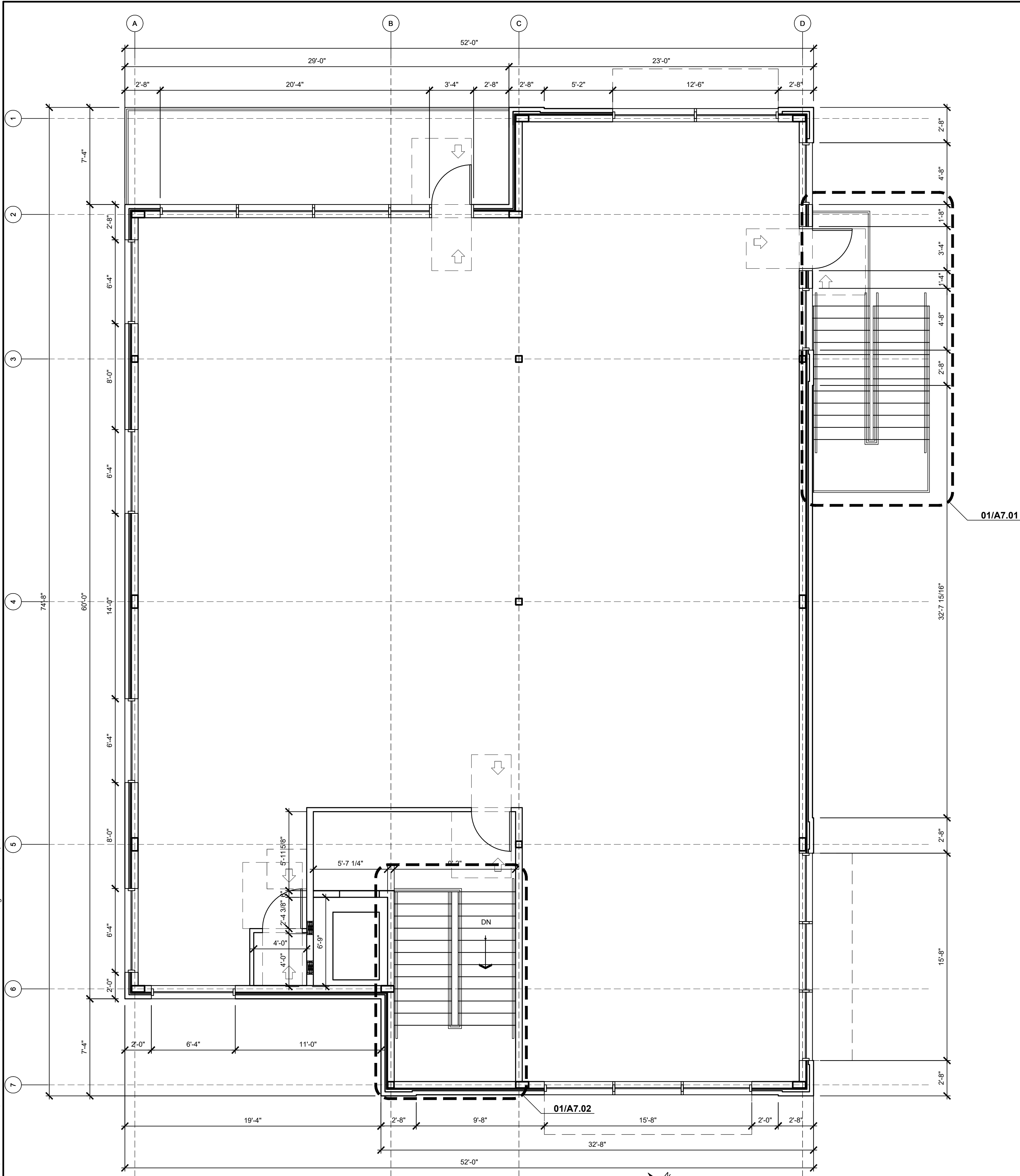


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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A1.02 Second Floor Plan.dwg - DATE: Jun 29, 2021 11:47AM - BY: DEBBY BIRD

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A1.04 Dimensioned Second Floor Plan.dwg - DATE: Jun 29, 2021 11:48AM - BY: DEBBY BIRD



### WALL LEGEND

- 
- 
- 

\*ALL MATERIALS ARE SIZES LISTED IN THIS LEGEND UNLESS OTHERWISE DIMENSIONED ON THIS PLAN OR SPECIFIED IN THE DETAILS AT A DIFFERENT SIZE

PROJECT NO:  
21-4140  
DRAWN BY:  
DLB/  
DATE:  
5/26/21  
06/25/2021



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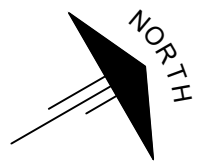
NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

DIMENSIONED SECOND FLOOR PLAN

# A1.04

## 01 DIMENSIONED SECOND FLOOR PLAN

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



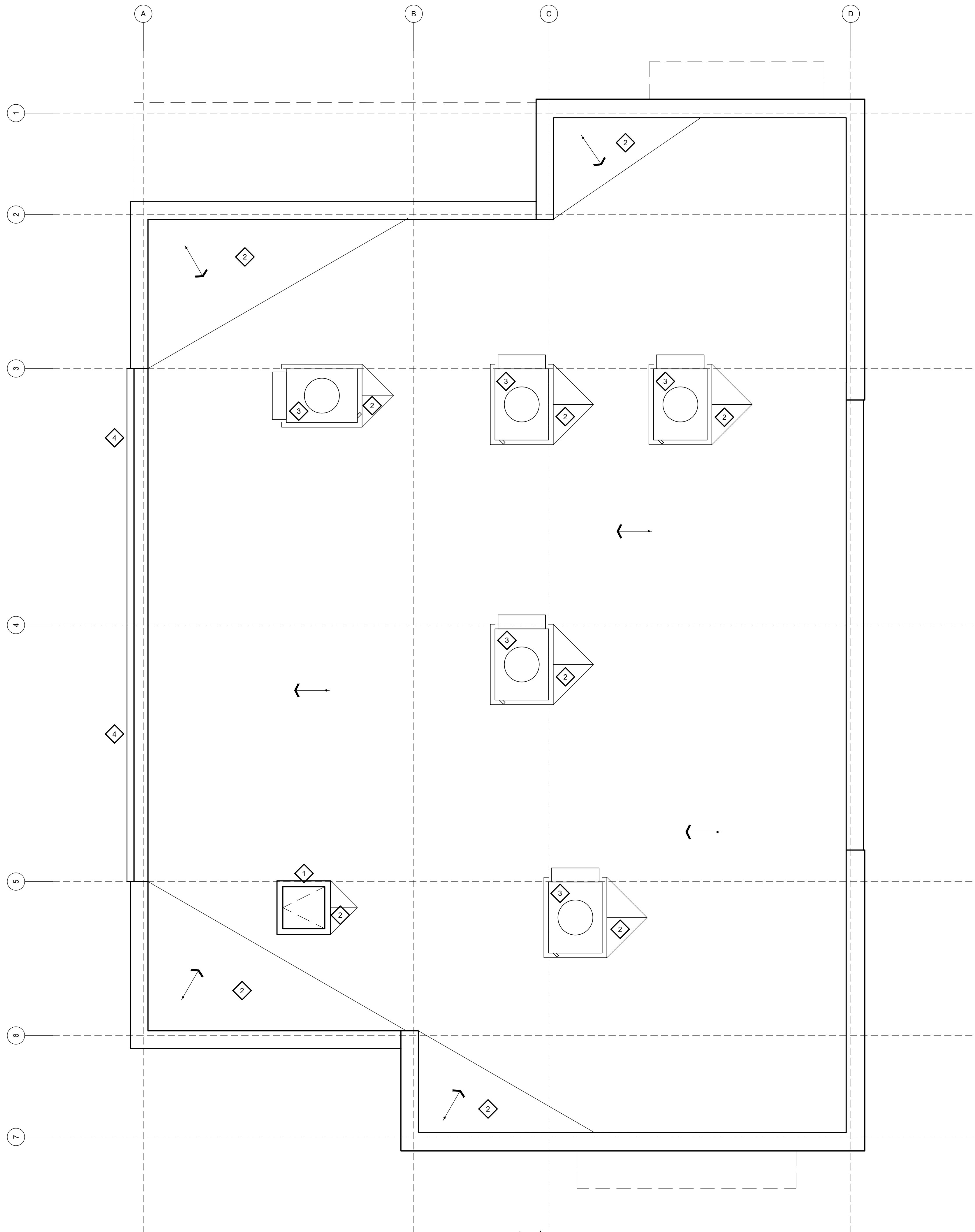
**NOTE:** ALL DIMENSIONS ARE TO FACE OF STUD

**NOTE:** GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

**NOTE:** ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

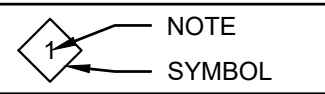
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PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A1.05 Roof Plan.dwg - DATE: Jun 29, 2021 11:49AM - BY: DEBBY BIRD



**SHEET NOTES:**

- 1 ROOF ACCESS HATCH & LADDER
- 2 TAPERED INSULATION TO SLOPE AT 5% MIN FOR DRAINAGE TO MAIN ROOF
- 3 RTU SEE MECHANICAL
- 4 GUTTER AND DOWNSPOUTS



PROJECT NO:

21-4140

DRAWN BY:

DLB/

DATE:

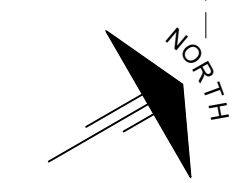
5/26/21



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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
 BARDSTOWN, KY 40004  
 1924 BOSTON RD

**01 ROOF PLAN**  
 SCALE: 1/4" = 1'-0"



**NOTE:** ALL DIMENSIONS ARE TO FACE OF STUD

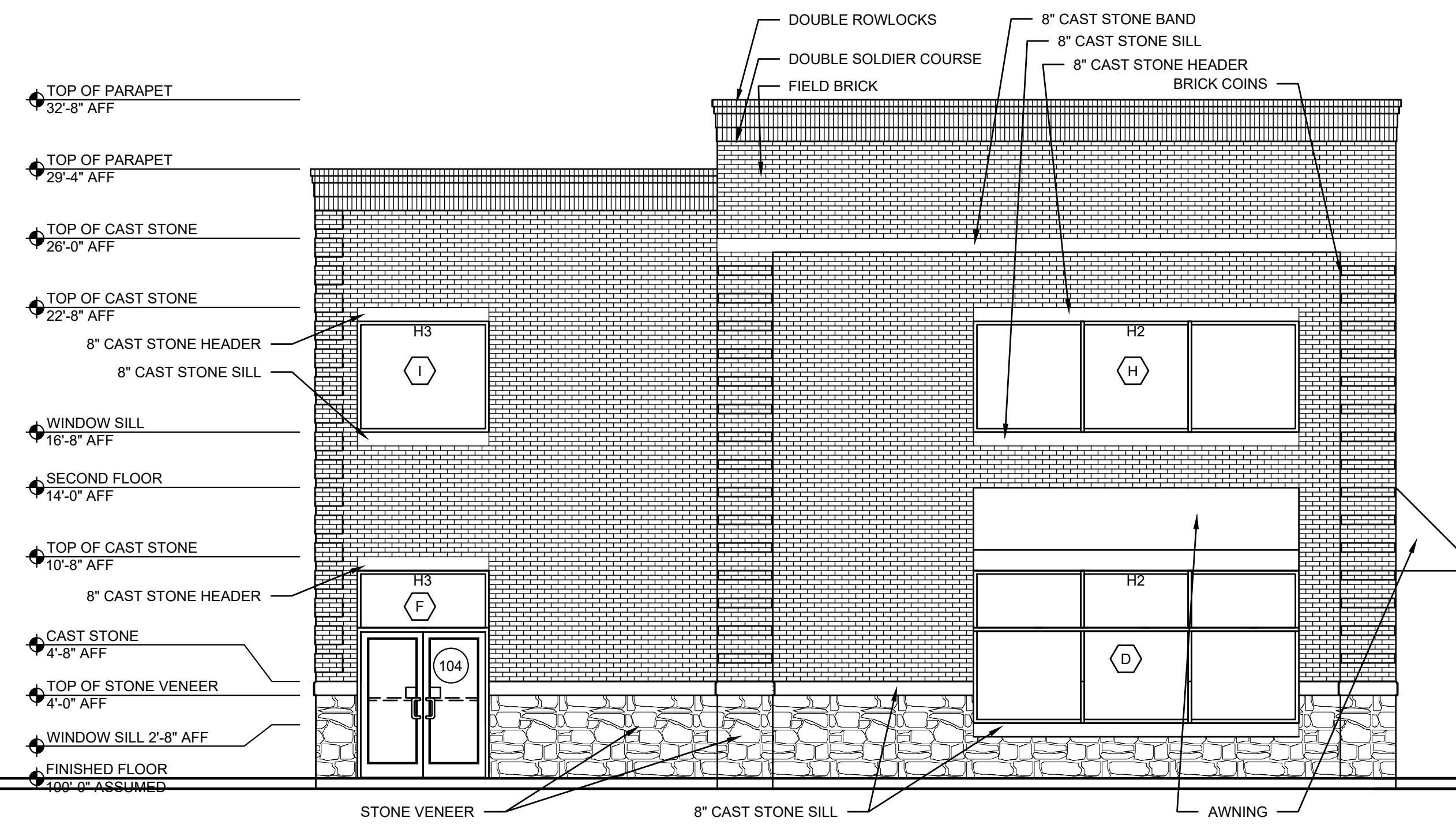
**NOTE:** GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

**NOTE:** ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

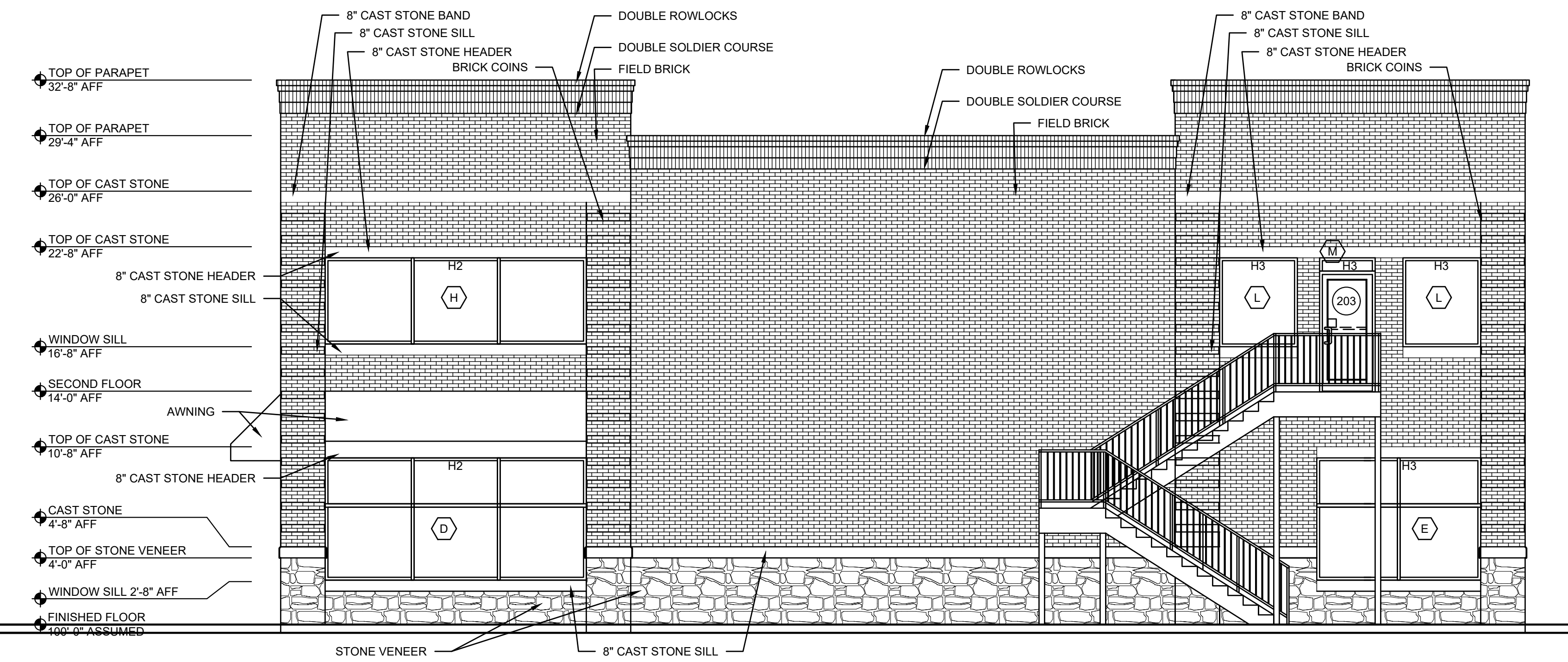
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ROOF PLAN

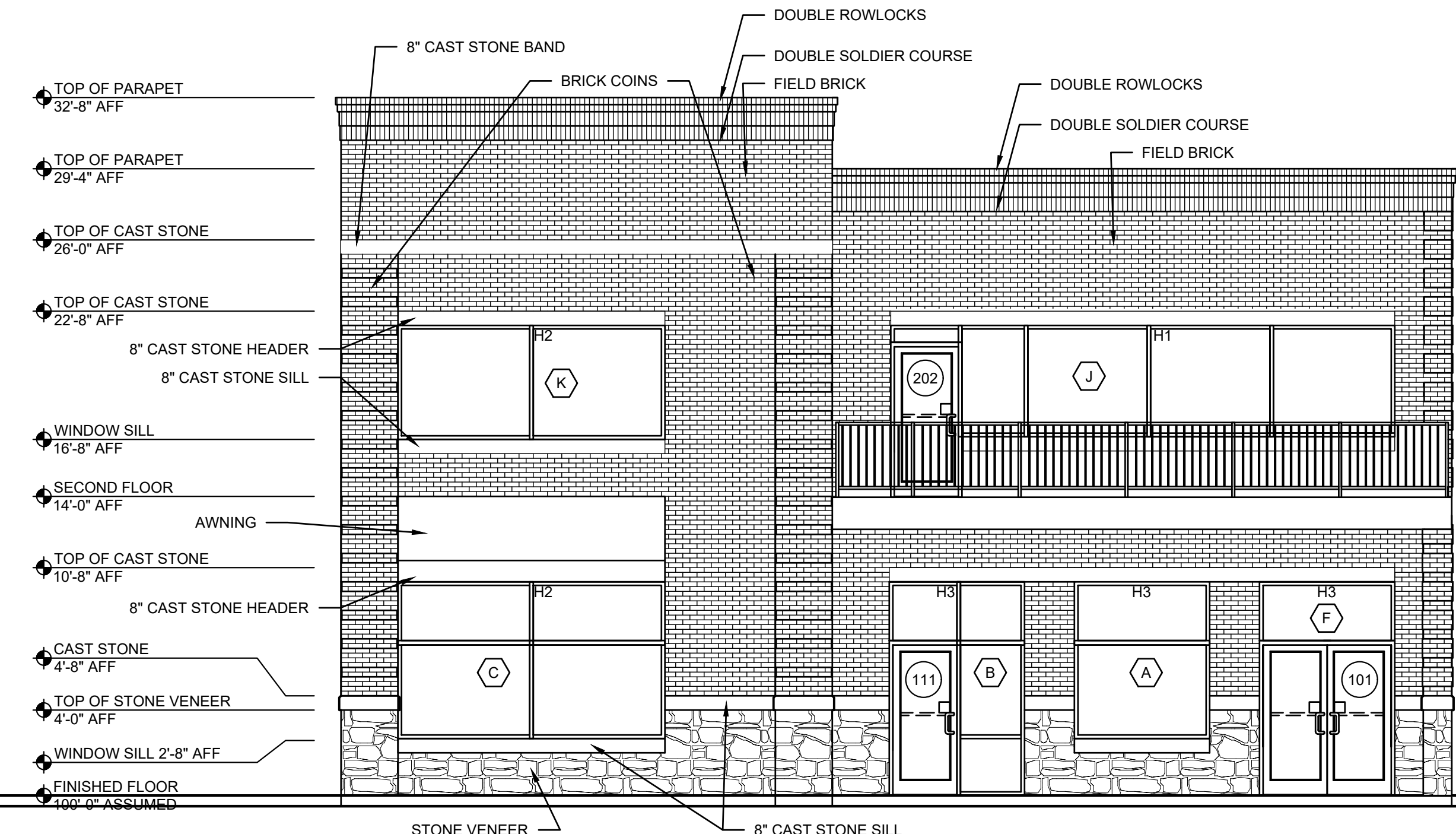
**A1.05**



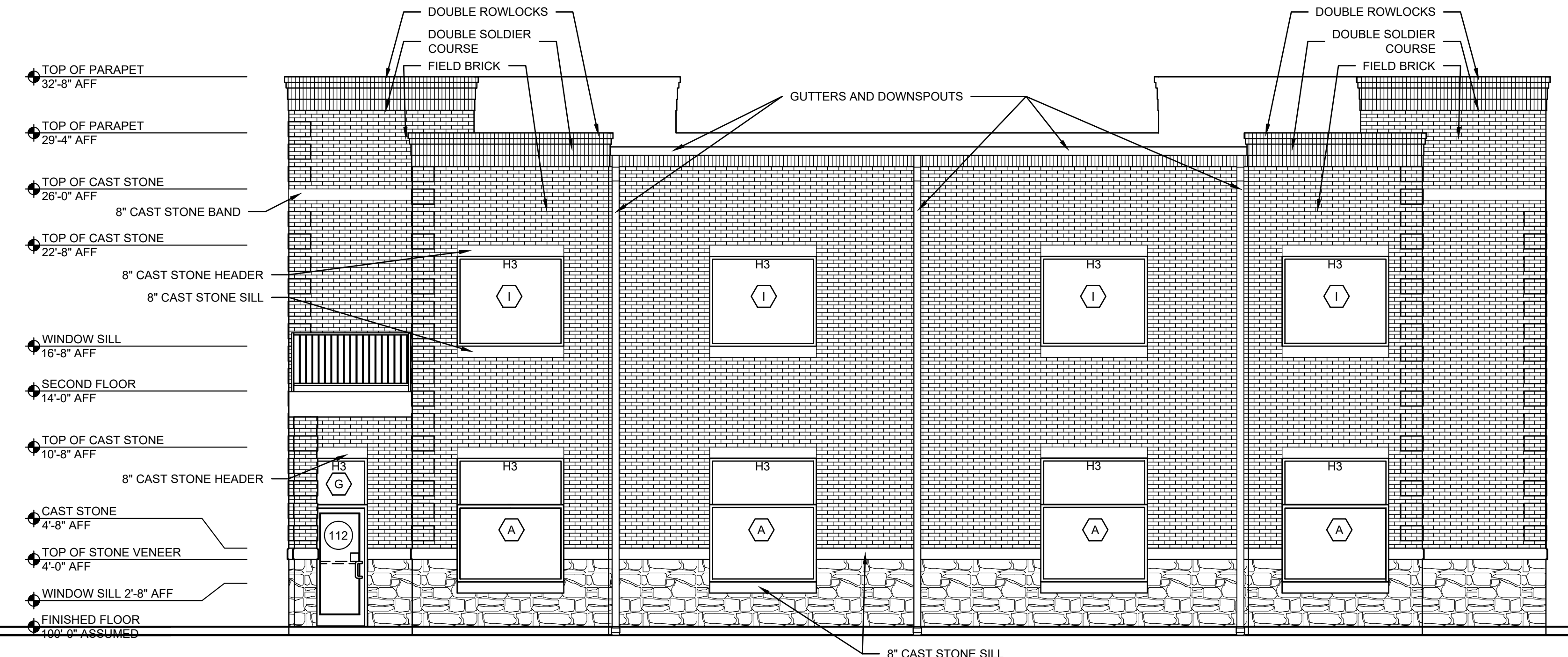
**01 ELEVATION**  
SCALE: 3/16" = 1'-0"



**02 ELEVATION**  
SCALE: 3/16" = 1'-0"



**03 ELEVATION**  
SCALE: 3/16" = 1'-0"



**04 ELEVATION**  
SCALE: 3/16" = 1'-0"

HEADER SCHEDULE	
H1	HSS18x6x5/16
H2	HSS 12x6x1/4
H3	(2) L6x4x3/8



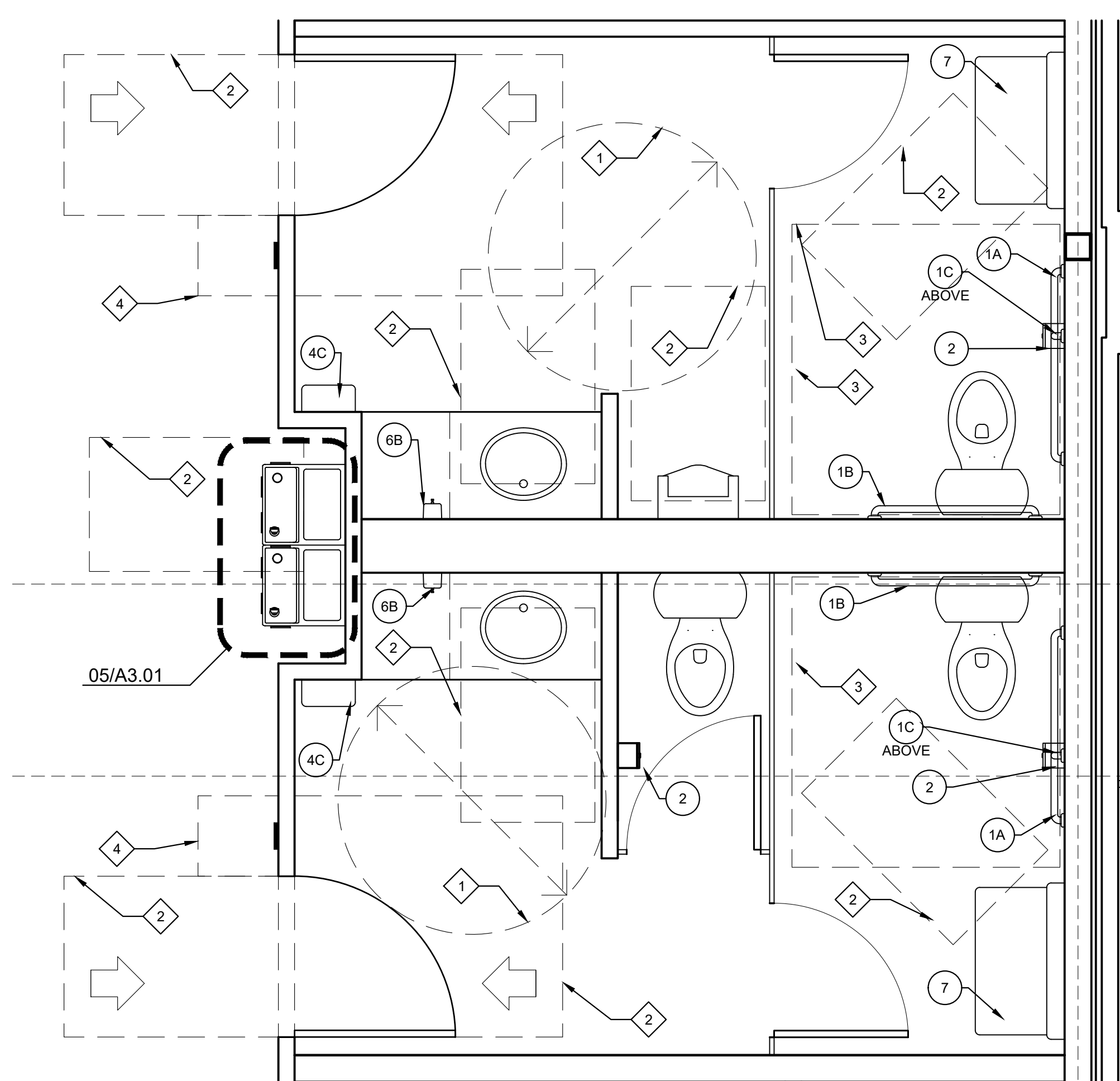
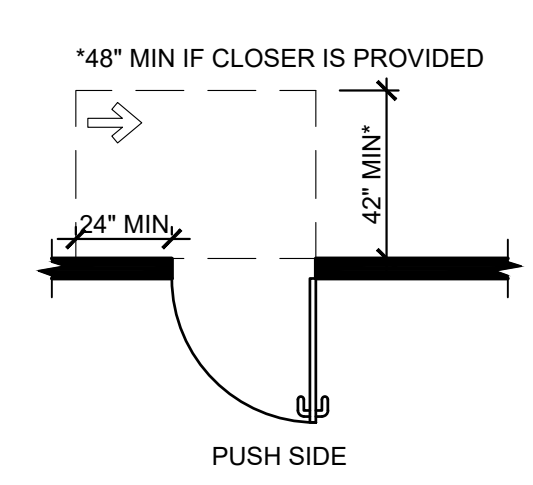
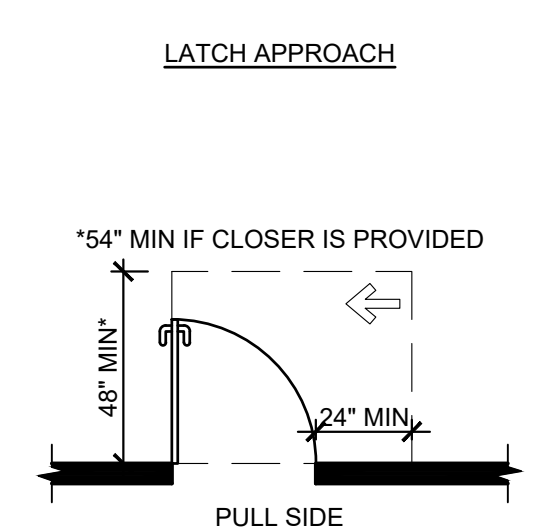
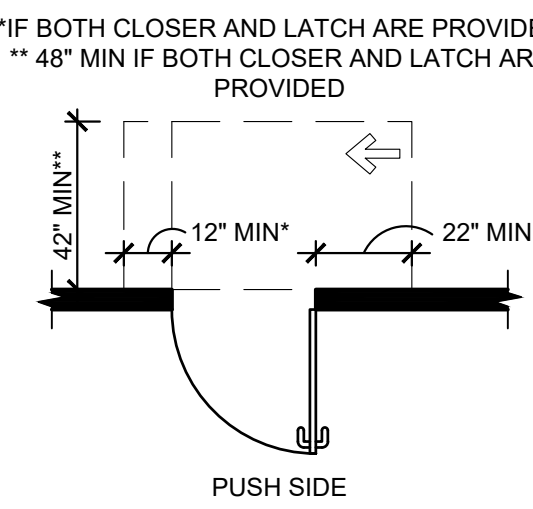
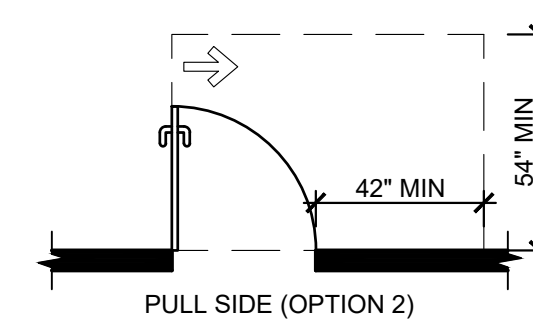
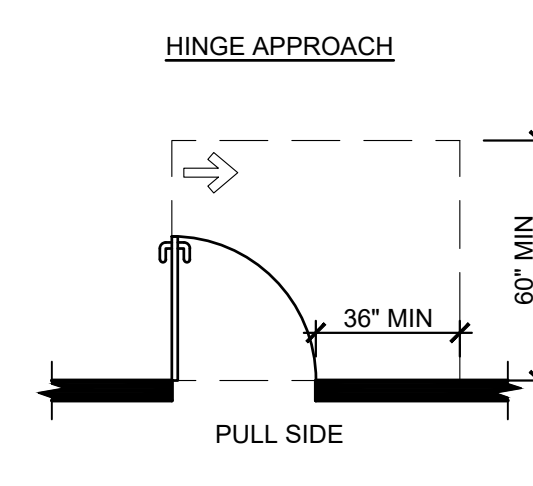
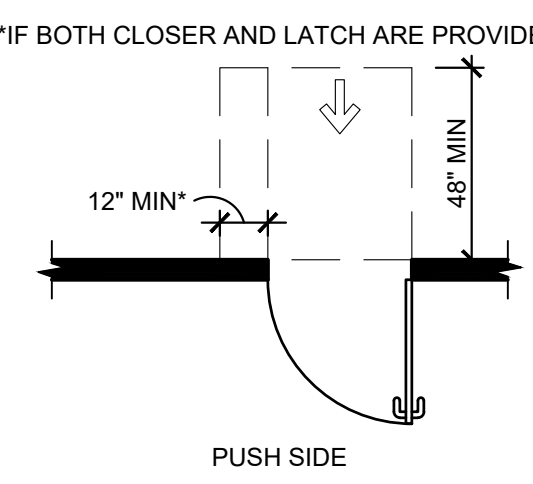
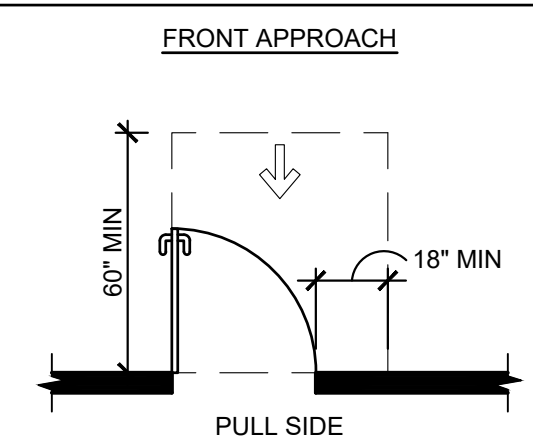
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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
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PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A2.01 Exterior Elevations.dwg - DATE: Jun 29, 2021 11:50AM - BY: DEBBY BIRD

**REQUIRED DOOR ACCESSIBLE CLEAR FLOOR SPACE**



**01 TITLE**  
SCALE: 1/2" = 1'-0"



**REQUIRED ACCESSIBLE CLEAR FLOOR SPACE**

NOTE SYMBOL

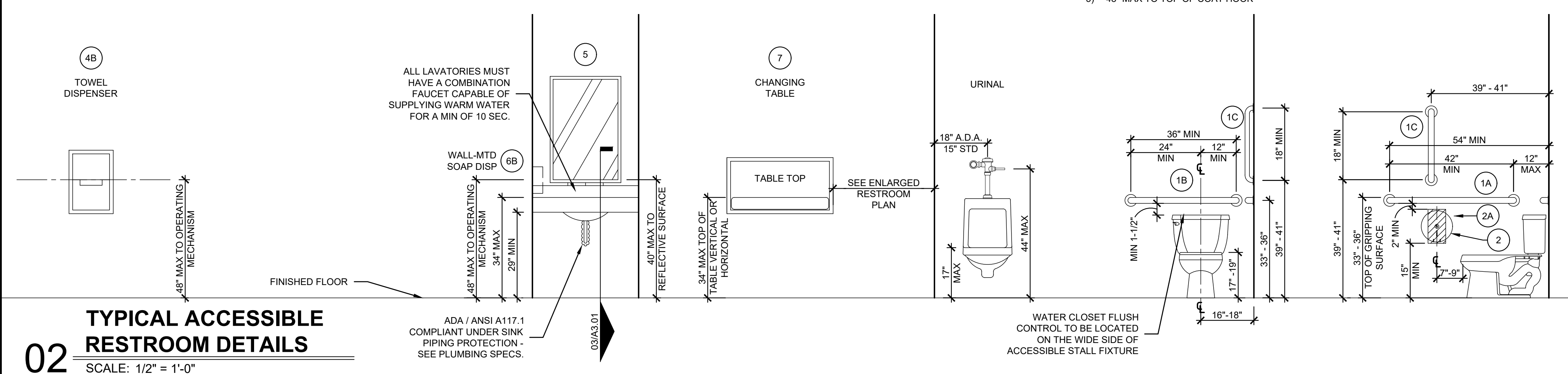
TYPICAL CLEAR FLOOR SPACES	
1	TURNAROUND / TURNING CIRCLE: 60" DIAMETER CLEAR FLOOR SPACE (TYP.)
2	EQUIPMENT / FIXTURE: 30"x48" CLEAR FLOOR SPACE
3a	TOILET IN TOILET PARTITION ROOM WITH 9" TOE CLEARANCE: 60"x60" CLEAR FLOOR SPACE
3b	TOILET WITHOUT 9" TOE CLEARANCE: 66"x66" CLEAR FLOOR SPACE
4	ACCESSIBLE SIGNAGE - SEE DETAIL 04/A3.01 FOR MORE INFORMATION

MEETS THE STRICTEST INTERPRETATION OF BOTH THE ANSI 117.1 AND 2010 FEDERAL ADA STANDARDS FOR ACCESSIBLE DESIGN

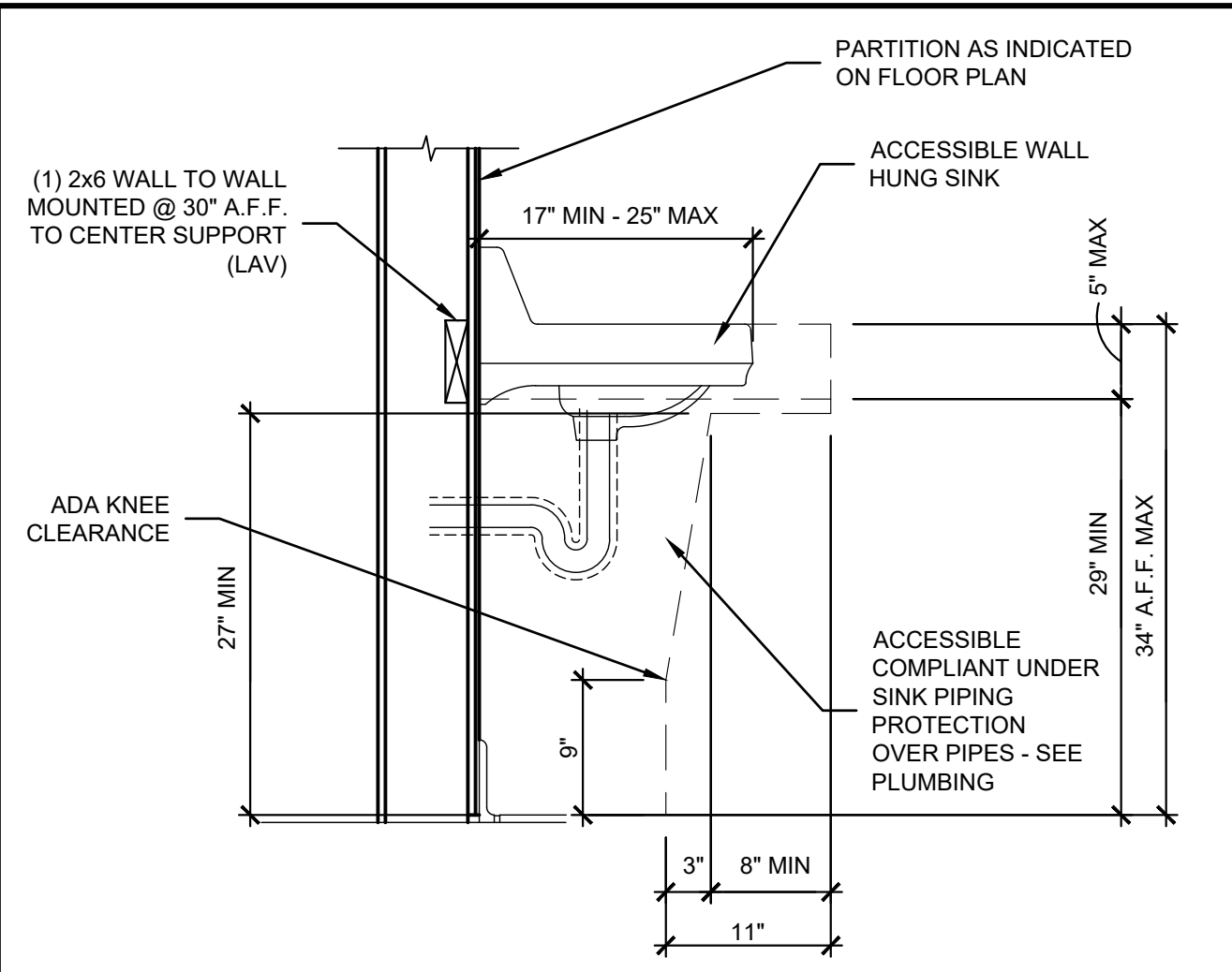
NOTE:  
NOT ALL ITEMS LISTED ON THIS SHEET WILL APPLY TO THIS PROJECT. IF THERE ARE ANY QUESTIONS OR COMMENTS CONTACT KEYES ARCHITECTS AND ASSOCIATES.

**RESTROOM ACCESSORIES SCHEDULE**

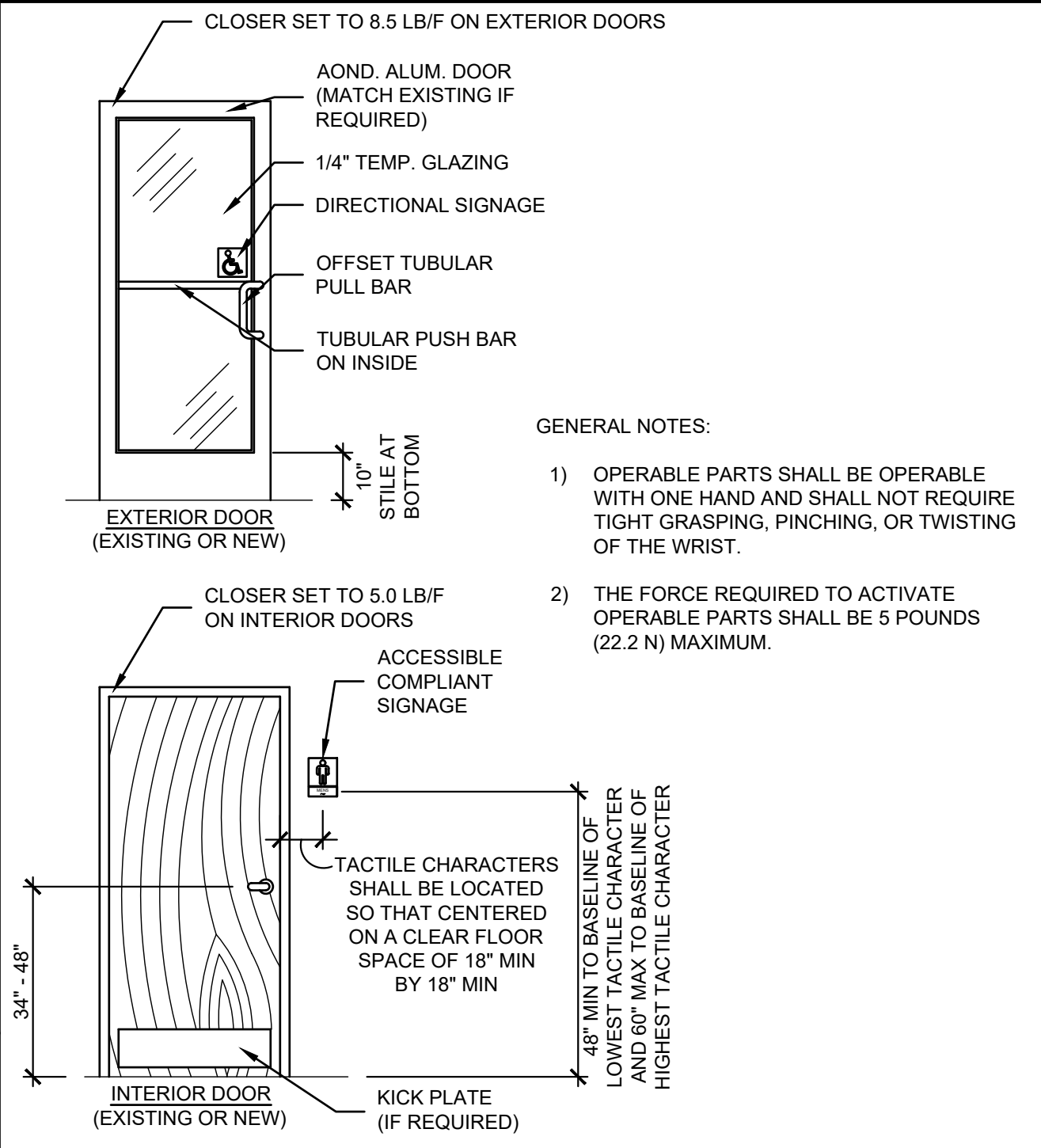
ITEM (SEE NOTE 2)	MODEL #	SUPPLIER	BACKUP SUPPORT (SEE NOTE 3)
1A	GRAB BAR 42"	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
1B	GRAB BAR 36"	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
1C	GRAB BAR 24" (18" MIN)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
2	TOILET TISSUE DISPENSER, DOUBLE, SURFACE MOUNTED (SEE NOTE 4)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
2A	JUMBO TOILET TISSUE DISPENSER (OPTIONAL)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
3	SANITARY NAPKIN RECEPTACLE (OPTIONAL)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
4A	HAND DRYER, RECESSED, ADA, WHITE-OTHER COLORS AT ADDITIONAL COST	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
4B	TOWEL DISPENSER & WASTE RECEPTACLE, INDIVIDUAL RECESSED (OPTIONAL)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
4C	TOWEL DISPENSER & WASTE RECEPTACLE, COMBINATION, RECESSED (OPTIONAL)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
5	MIRROR, CHANNEL FRAME	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
6A	SOAP DISPENSER, COUNTER MOUNTED, 6" SPOUT (OPTIONAL)	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
6B	SOAP DISPENSER, WALL-MOUNTED	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS
7	BABY CHANGE TABLE, accessible COMPLIANT	SEE SPECS.	SEE SPECS. FOR RECOMMENDED MANUFACTURERS



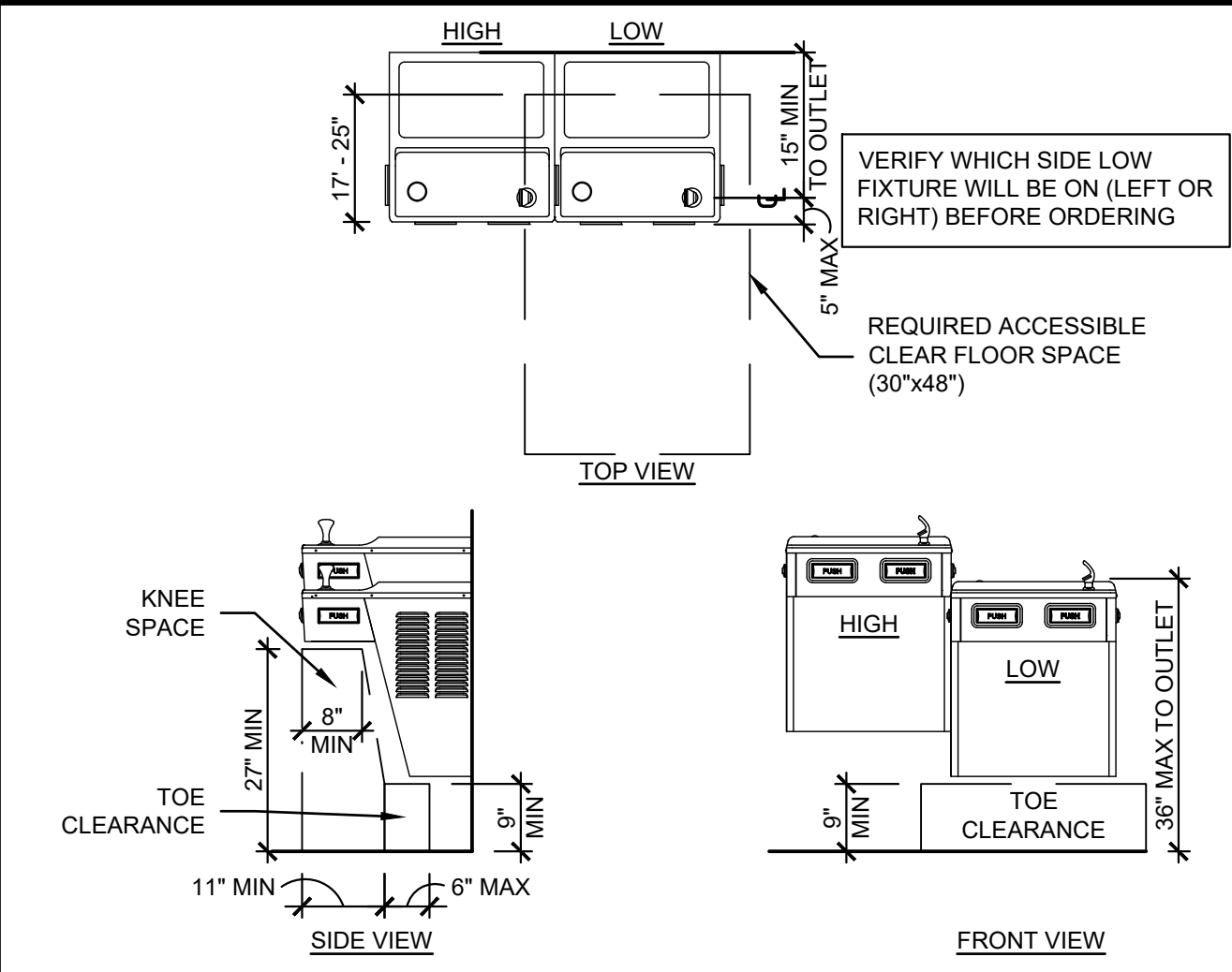
**02 TYPICAL ACCESSIBLE RESTROOM DETAILS**  
SCALE: 1/2" = 1'-0"



**03 LAVATORY DETAIL**  
SCALE: 1" = 1'-0"



**04 DOOR SIGN / DOOR DETAIL**  
SCALE: 3/8" = 1'-0"



**05 DRINKING FOUNTAIN DETAIL**  
SCALE: 1/2" = 1'-0"

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DLB/  
DATE:  
5/26/21

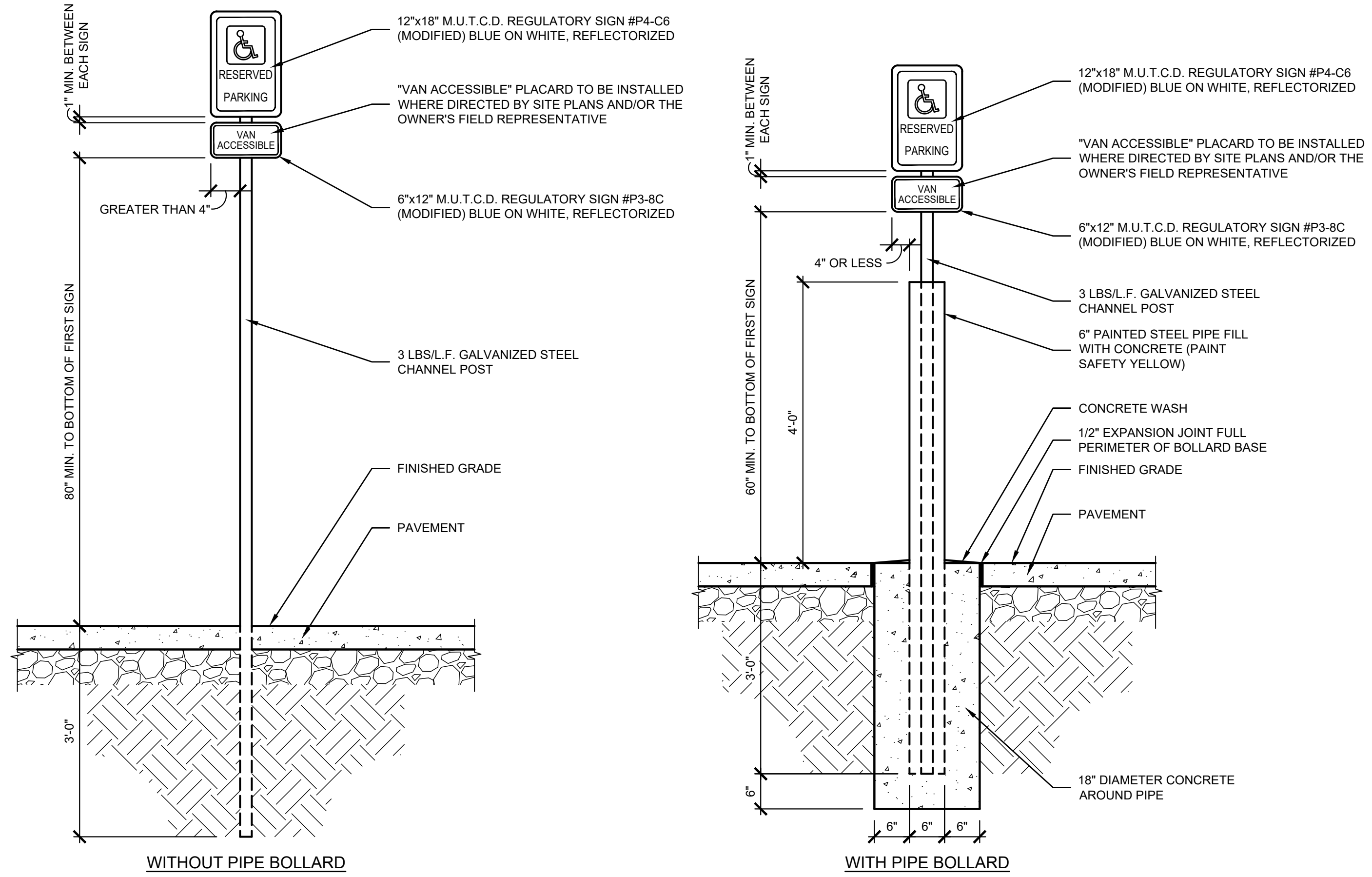


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NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

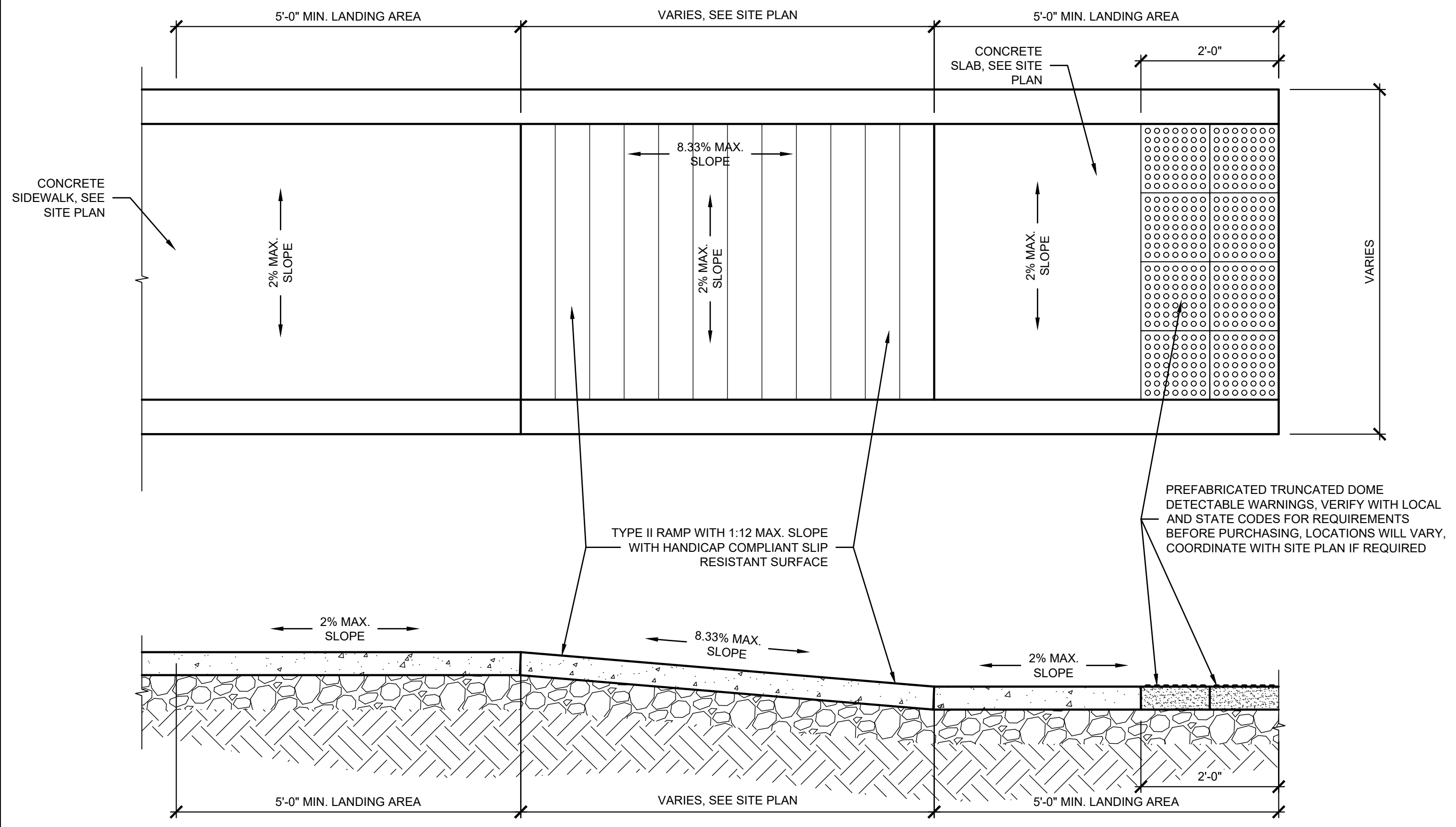
COMMERCIAL ADA-ANSI GUIDELINES  
**A3.01**

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A3.01 Commercial ADA-ANSI Guidelines.dwg - DATE: Jun 29, 2021, 11:51AM - BY: DEBBY BIRD

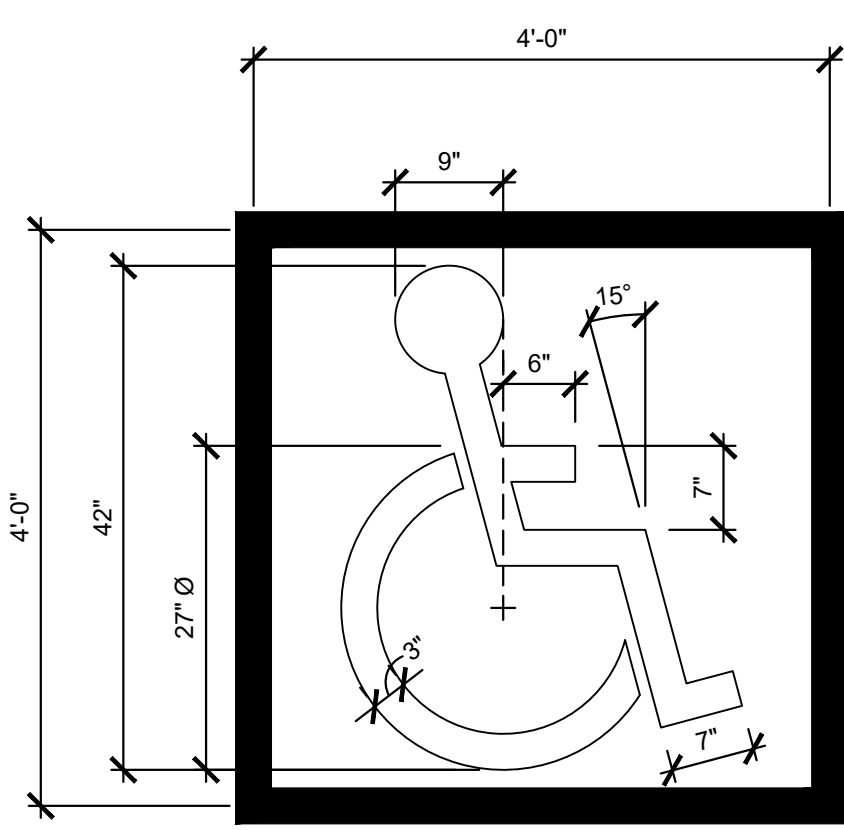
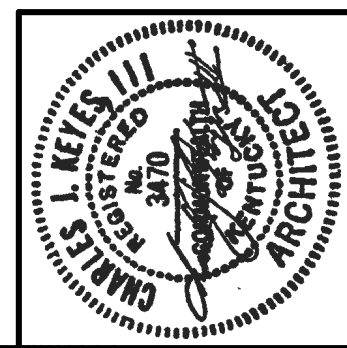


**01 ACCESSIBLE PARKING SIGNAGE DETAIL**  
SCALE: 3/4" = 1'-0"

NOTE:  
SIGN TO BE A MIN. OF 2'-0"  
FROM FACE OF CURB (SEE  
SITE PLAN BY OTHERS)

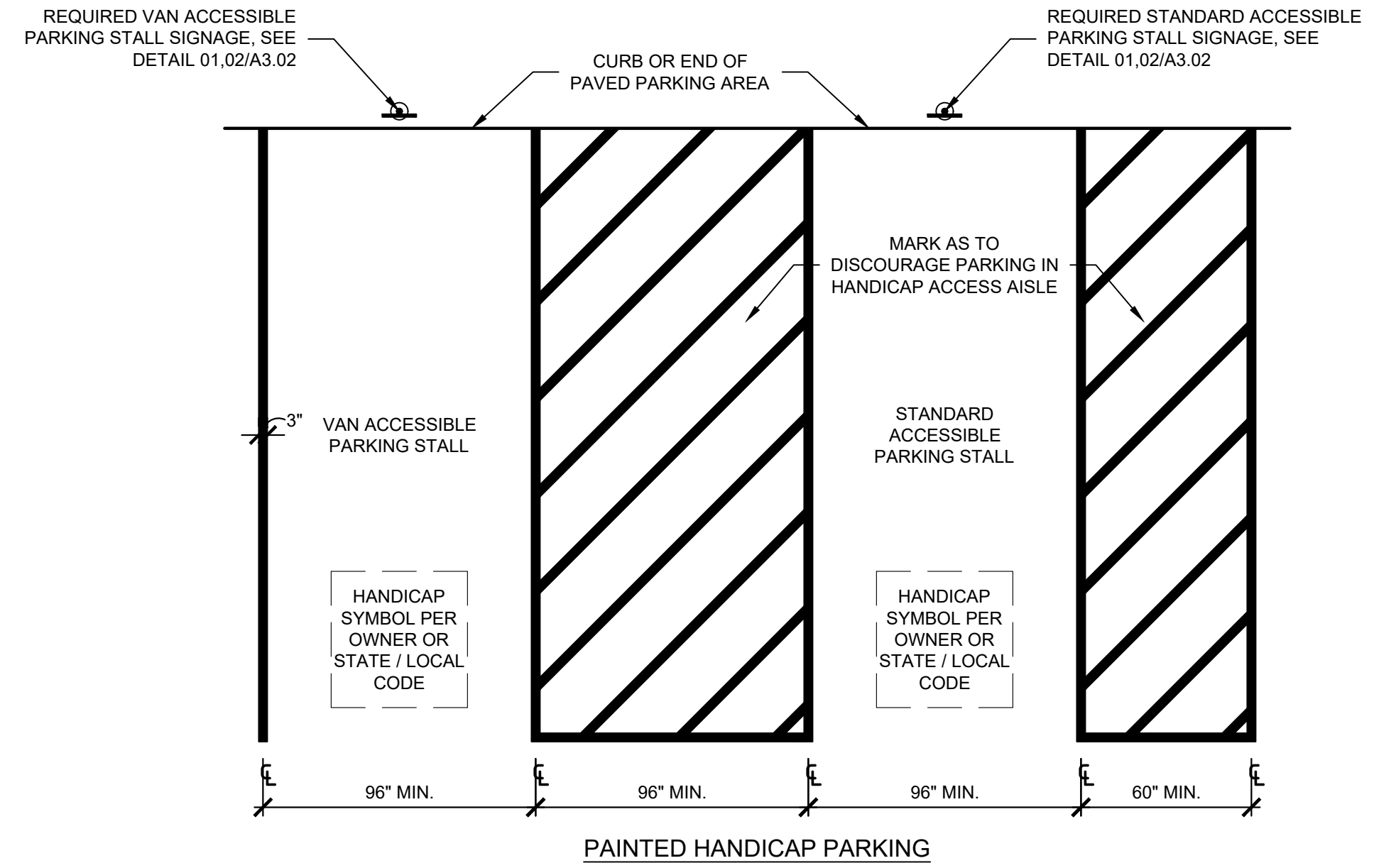


**02 TYPE II ACCESSIBLE RAMP**  
SCALE: 3/4" = 1'-0"



PAINTED HANDICAP SYMBOL PER OWNER OR LOCAL / STATE CODE

- NOTE:
1. USE PAINT WHICH CONTRASTS WITH BACKGROUND
  2. THIS SIGN TO BE FURNISHED AND INSTALLED BY G.C.



PAINTED HANDICAP PARKING

TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	2 PERCENT OF TOTAL
1001 AND OVER	20, PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1000

**03 PAINTED ACCESSIBLE SYMBOL / PAINTED ACCESSIBLE PARKING**  
SCALE: NTS

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ROOM FINISH SCHEDULE							
ROOM #	ROOM NAME	FLOOR	BASE	WALLS	CEILING MTL	CEILING HGT	REMARKS
101	VESTIBULE	CERAMIC TILE	VINYL	GYP BD	CEILING #1	10'-0"	1
102	MAIN LOBBY	VP	VINYL	GYP BD	OPEN/ PAINT	OPEN	1
103	CLOSET	VP	VINYL	GYP BD	CEILING #1	9'-0"	1
104	ELEVATOR	PER MANUF	PER MANUF	PER MANUF	PER MANUF	PER MANUF	1
105	STAIRS	CONCRETE	VINYL	GYP BD	CEILING #1	10' ABOVE 2ND FL	1
106	CONFERENCE ROOM	VP	VINYL	GYP BD	CEILING #1	10'-0"	1
107	BREAK ROOM	VP	VINYL	GYP BD	CEILING #2	10'-0"	1
108	OFFICE	VP	VINYL	GYP BD	CEILING #1	9'-0"	1
109	COORDOR	VP	VINYL	GYP BD	CEILING #1	10'-0"	1
110	OFFICE	VP	VINYL	GYP BD	CEILING #1	9'-0"	1
111	RECEPTION	VP	VINYL	GYP BD	CEILING #1	10'-0"	1,2
112	VESTIBULE	CERAMIC TILE	VINYL	GYP BD	CEILING #1	10'-0"	1
113	COORDOR	VP	VINYL	GYP BD	CEILING #1	10'-0"	1
114	WOMEN'S RESTROOM	CERAMIC TILE	VINYL	GREEN BD	CEILING #2	9'-0"	1
115	MEN'S RESTROOM	CERAMIC TILE	VINYL	GREEN BD	CEILING #2	9'-0"	1
116	PILOT WAITING AREA	VP	VINYL	GYP BD	CEILING #1	10'-0"	1
117	MOP ROOM	VP	VINYL	GREEN BD	CEILING #1	9'-0"	1
201	STAIRS	CONCRETE	VINYL	GYP BD	CEILING #1	10' ABOVE 2ND FL	1
202	ELEVATOR	PER MANUF	PER MANUF	PER MANUF	PER MANUF	PER MANUF	1
203	ELEVATOR LOBBY	CONCRETE	VINYL	GYP BD	CEILING #1	10'-0"	1
204	FUTURE USE	CONCRETE	-	GYP BD	OPEN	VARIES	1
205	ELEVATOR MACHINE ROOM	CONCRETE	VINYL	GYP BD	CEILING #1	9'-0"	1

DOOR SCHEDULE										
NUMBER	SIZE	FIRE	MATERIAL	FRAME	HARDWARE	DETAILS	REMARKS	DOOR TYPE SYMBOL		
101	PR 3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	1	01,02,07,08,09/A6.01	1	1000		
102	PR 3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	2	10,11/A6.01 08,09/A6.02	1			
103	PR 3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	2	10,11/A6.01 08,09/A6.02	1			
104	PR 3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	1	01,02,07,08,09/A6.01	1			
105	3'-0" x 7'-0"	N/A	WOOD	H.M.	11	05,06/A6.01				
106	3'-0" x 7'-0"	N/A	WOOD	H.M.	10	03,04/A6.01				
107	3'-0" x 7'-0"	N/A	WOOD	H.M.	10	05,06/A6.01				
108	3'-0" x 7'-0"	N/A	WOOD	H.M.	10	03,04/A6.01				
109	3'-0" x 7'-0"	N/A	WOOD	H.M.	10	05,06/A6.01				
110	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01				
111	3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	5	02,07,08,09/A6.01				
112	3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	4	02,07,08,09/A6.01	1			
113	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01				
114	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01	1			
115	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01				
116	PR 2'-6" x 7'-0"	N/A	WOOD	H.M.	3	05,06/A6.01				
117	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01				
118	3'-0" x 7'-0"	N/A	WOOD	H.M.	9	05,06/A6.01				
201	3'-0" x 7'-0"	N/A	WOOD	H.M.	10	05,06/A6.01				
202	3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	6	08,07/A6.01 SIM 09/A6.01 08,09/A6.02	1			
203	3'-0" x 7'-0"	N/A	ALUM/GLASS	ALUM	5	08,07/A6.01 SIM 09/A6.01 08,09/A6.02	1			
204	3'-0" x 7'-0"	N/A	WOOD	H.M.	11	05,06/A6.01				

WINDOW SCHEDULE							
LETTER	SIZE	SILL HEIGHT	GLAZING	FRAME	DETAILS	REMARKS	WINDOW TYPE SYMBOL
A	6'-4" x 7'-4"	2' - 8"	1" INSULATED	ALUM	01,04,05,06,07/A6.02		
B	6'-4" x 10'-0"	0' - 0"	1" INSULATED	ALUM	02,07,08,09 A6.01 04,05,06,07,08,09/A6.02	1	
C	12'-6" x 7'-4"	2' - 8"	1" INSULATED	ALUM	01,03,05,06,07/A6.02		
D	15'-4" x 7'-4"	2' - 8"	1" INSULATED	ALUM	01,03,05,06,07/A6.02		
E	9'-10" x 7'-4"	2' - 8"	1" INSULATED	ALUM	01,04,05,06,07/A6.02		
F	6'-4" x 10'-0"	0' - 0"	1" INSULATED	ALUM	02,07,08,09/A6.01 04,06,09/A6.02	1	
G	3'-4" x 10'-0"	0' - 0"	1" INSULATED	ALUM	02,07,08,09/A6.01 04,06,09/A6.02	1	
H	15'-4" x 5'-4"	2' - 8"	1" INSULATED	ALUM	02,03,06,07/A6.02		
I	6'-4" x 5'-4"	2' - 8"	1" INSULATED	ALUM	02,04,06,07/A6.02		
J	23'-8" x 5'-4"	2' - 8"	1" INSULATED	ALUM	02,08,09/A6.01 02,03,06,07,08,09/A6.02	1	
K	12'-6" x 5'-4"	2' - 8"	1" INSULATED	ALUM	02,03,06,07/A6.02		
L	4'-8" x 5'-4"	2' - 8"	1" INSULATED	ALUM	02,04,06,07/A6.02		
M	3'-4" x 8'-0"	0' - 0"	1" INSULATED	ALUM	02,08,09/A6.01 04,09/A6.02		
N	10'-0" x 10'-0"	0' - 0"	1" INSULATED	ALUM	10,11/A6.01 07,08,09,10,11,12/A6.02	1	
O	10'-0" x 10'-0"	0' - 0"	1" INSULATED	ALUM	07,10,11,12/A6.02		

**WINDOW SCHEDULE REMARKS**

- 1) PART OF THE STOREFRONT SYSTEM, SEE DOOR SCHEDULE

FINISH SCHEDULE KEY	
VP	VINYL PLANK FLOORING - SEE SPECIFICATIONS
CERAMIC TILE	VERIFY SIZES AND STYLE WITH OWNER
CONCRETE	SEALED CONCRETE FLOOR - SEE SPECIFICATIONS
CEILING #1	2x2' LAY-IN RECESSED WHITE GRID WITH ACOUSTICAL TILE - SEE SPECIFICATIONS
CEILING #2	2x2' LAY-IN FLUSH WHITE GRID WITH VINYL FACED TILE - SEE SPECIFICATIONS

**ROOM FINISH REMARKS**

- 1) VERIFY ALL FINISHES WITH OWNER
- 2) DECORATIVE BOURBON BARREL STAVE WALL ON FRONT OF RECEPTION DESK AND WALL BEHIND DESK, COORDINATE WITH OWNER

**DOOR HARDWARE SCHEDULE**

\*NRP = NON-REMOVABLE PIN

- 1) 2 PR. PIVOTS  
2 PANIC DEVICE W/ PUBLIC ACCESS FEATURE  
1 VERTICAL BAR  
2 CLOSERS  
1 WEATHERSTRIP SET  
1 THRESHOLD
- 2) 2 PR. PIVOTS  
2 CLOSERS
- 3) 3 PR. 180° HINGES  
2 PR. PUSH/PULL  
2 PR. KICK PLATES  
2 WALL STOPS W/ HOLD OPEN
- 4) 1-1/2 PR. HINGES (NRP)  
1 ENTRANCE SET W/ ELECTRONIC STRIKE  
1 CLOSER  
1 WEATHERSTRIP SET  
1 THRESHOLD
- 5) 1-1/2 PR. HINGES (NRP)  
1 INTERCONNECT LOCKSET (THUMB TURN INSIDE)  
1 CLOSER  
1 WEATHERSTRIP SET  
1 THRESHOLD

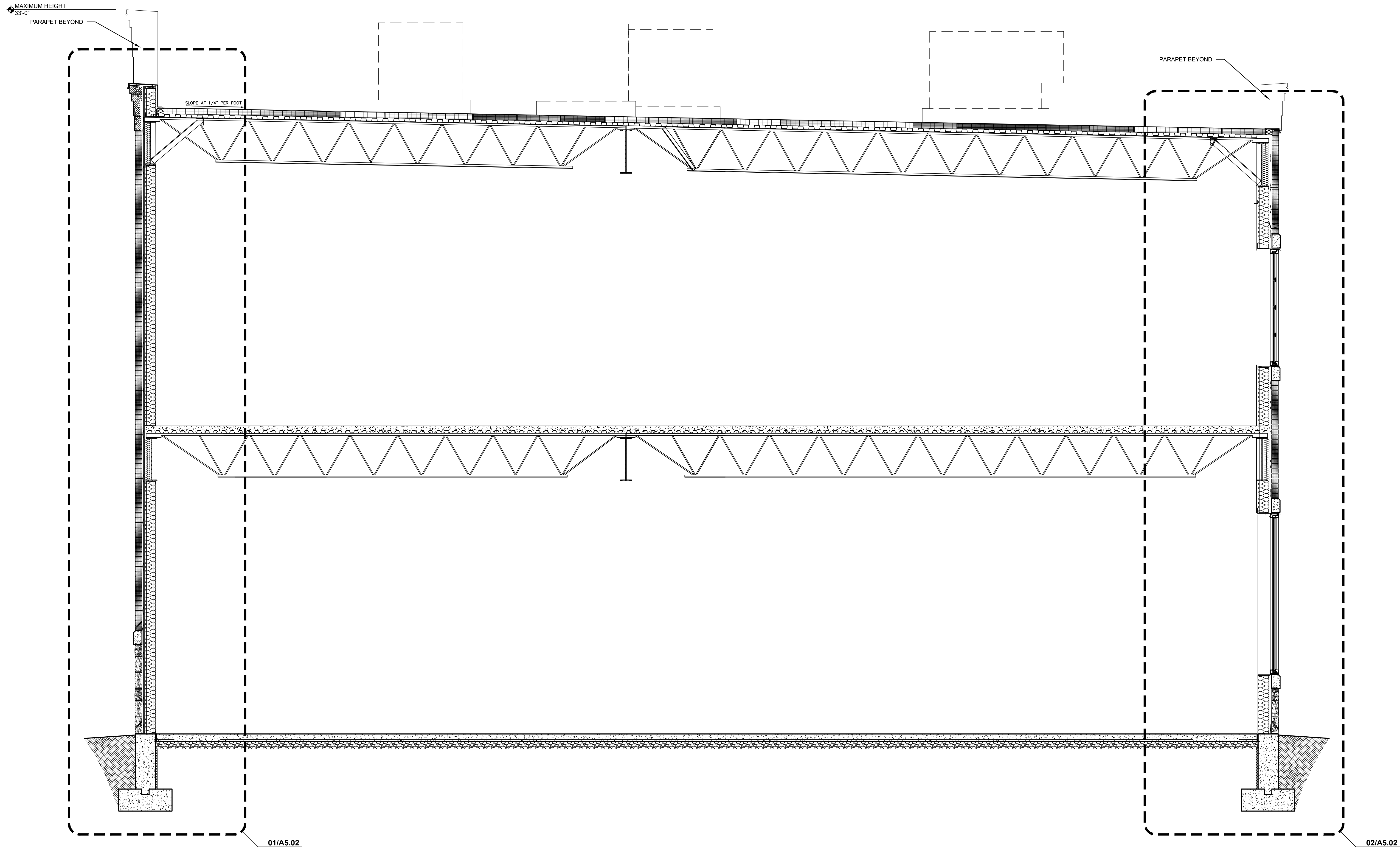
**DOOR SCHEDULE REMARKS**

- 1) DOOR PART OF ALUMINUM STOREFRONT SYSTEM (SEE SPECIFICATIONS)



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**01 BUILDING SECTION**  
SCALE: 1/2" = 1'-0"

01/A5.02

02/A5.02



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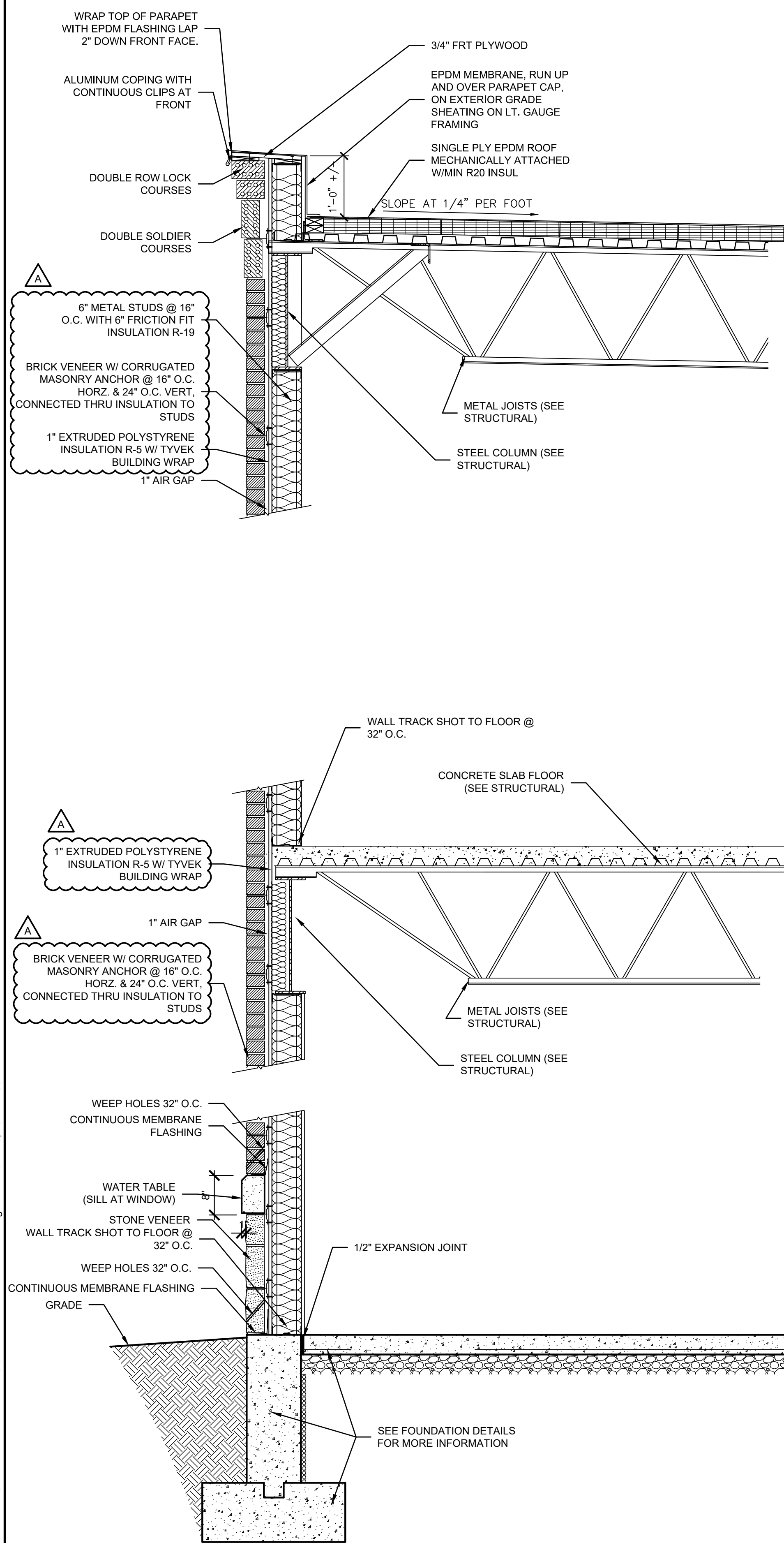
NEW CONSTRUCTION  
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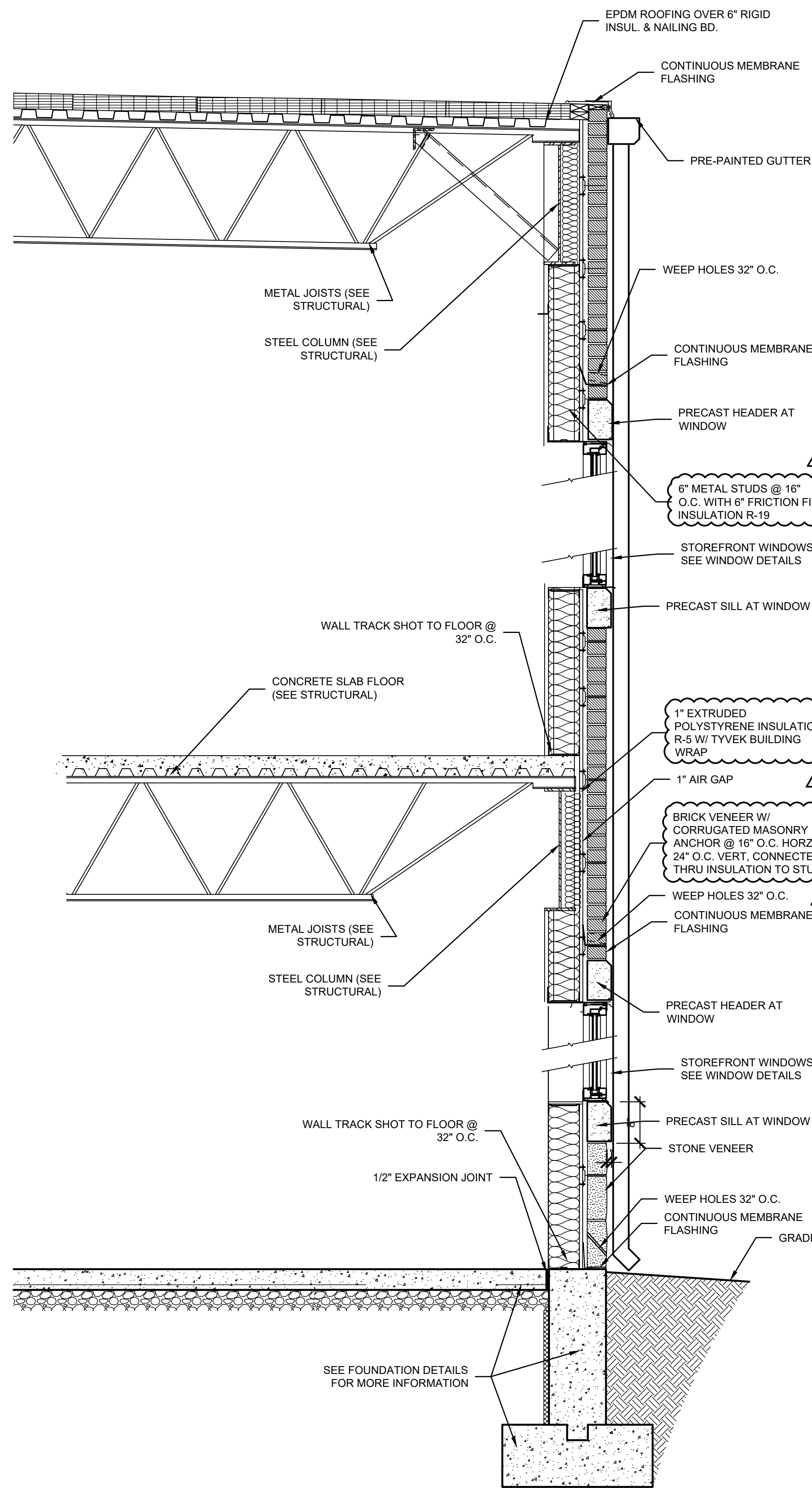
BUILDING SECTION  
**A5.01**

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A5.01 Wall Sections and Details.dwg - DATE: Jun 29, 2021 11:53AM - BY: DEBBY BIRD

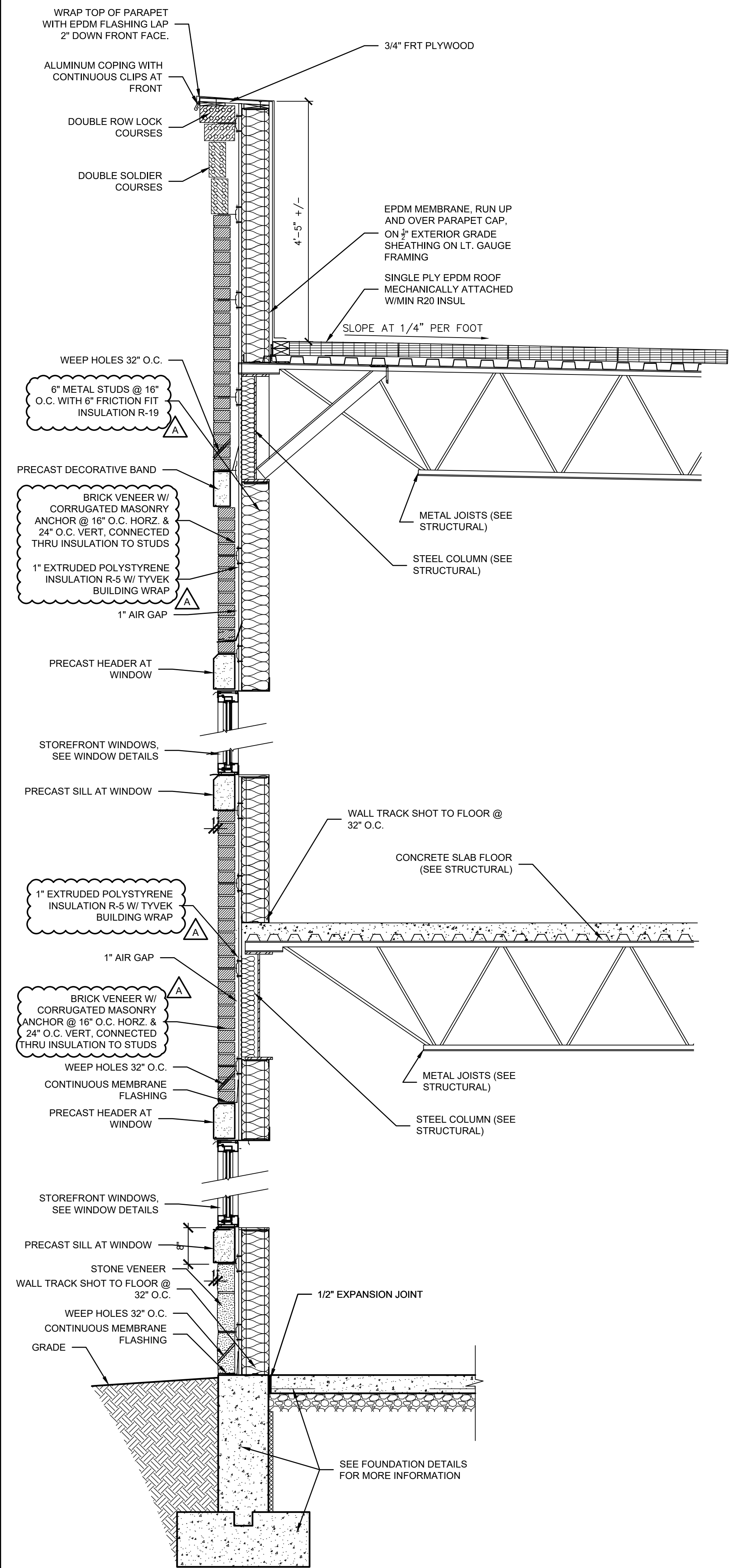
PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A5.02 Wall Sections and Details.dwg - DATE: Jun 29, 2021 11:53AM - BY: DEBBY BIRD



**01 HIGH WALL SECTION**  
SCALE: 3/4" = 1'-0"

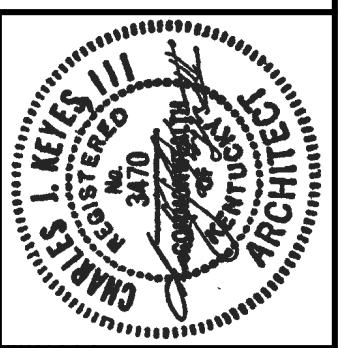


**02 LOW WALL SECTION**  
SCALE: 3/4" = 1'-0"



**03 HIGH WALL SECTION**  
SCALE: 3/4" = 1'-0"

PROJECT NO:  
21-4140  
DRAWN BY:  
DLB/  
DATE:  
5/26/21  
06/25/2021



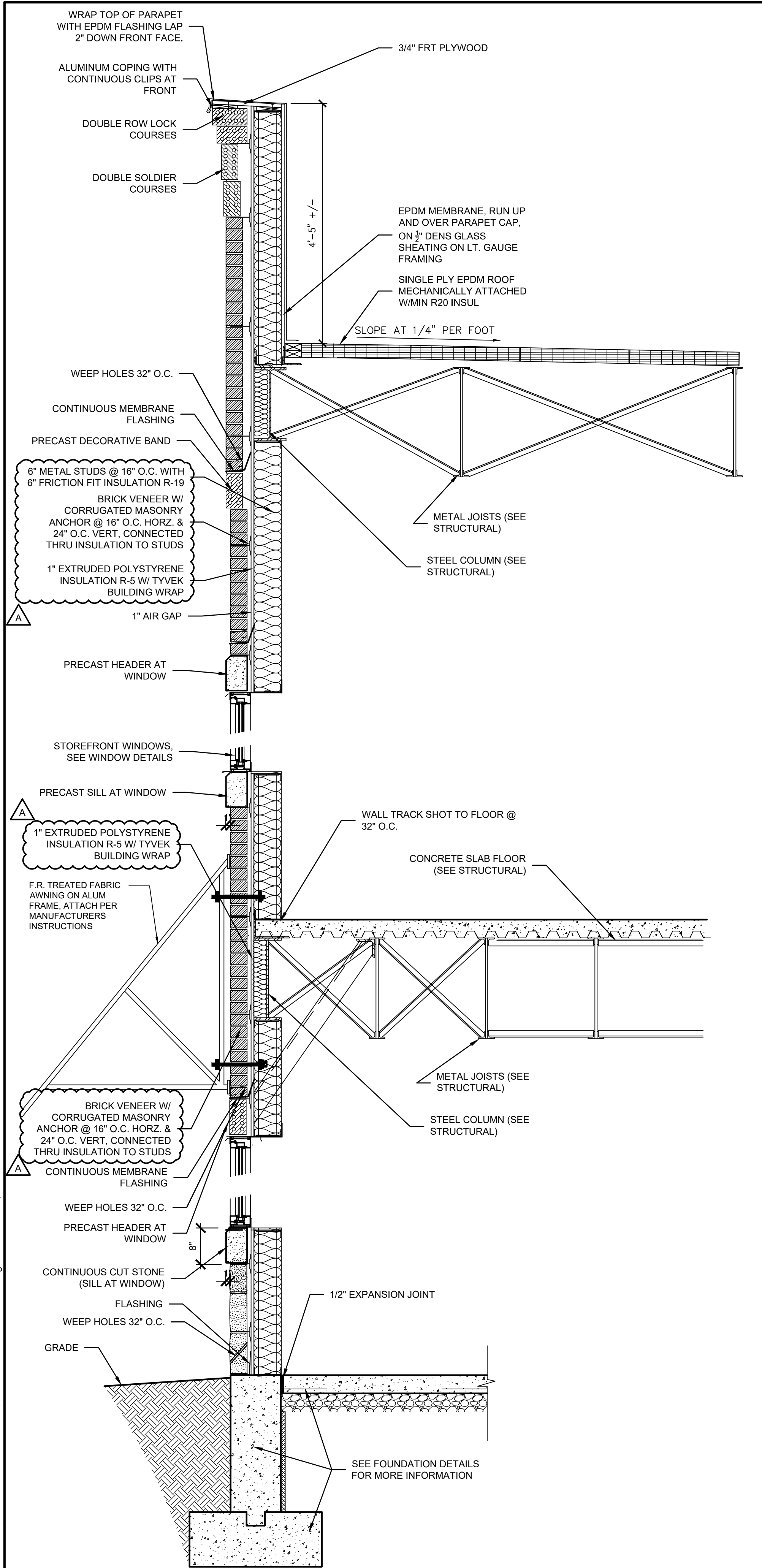
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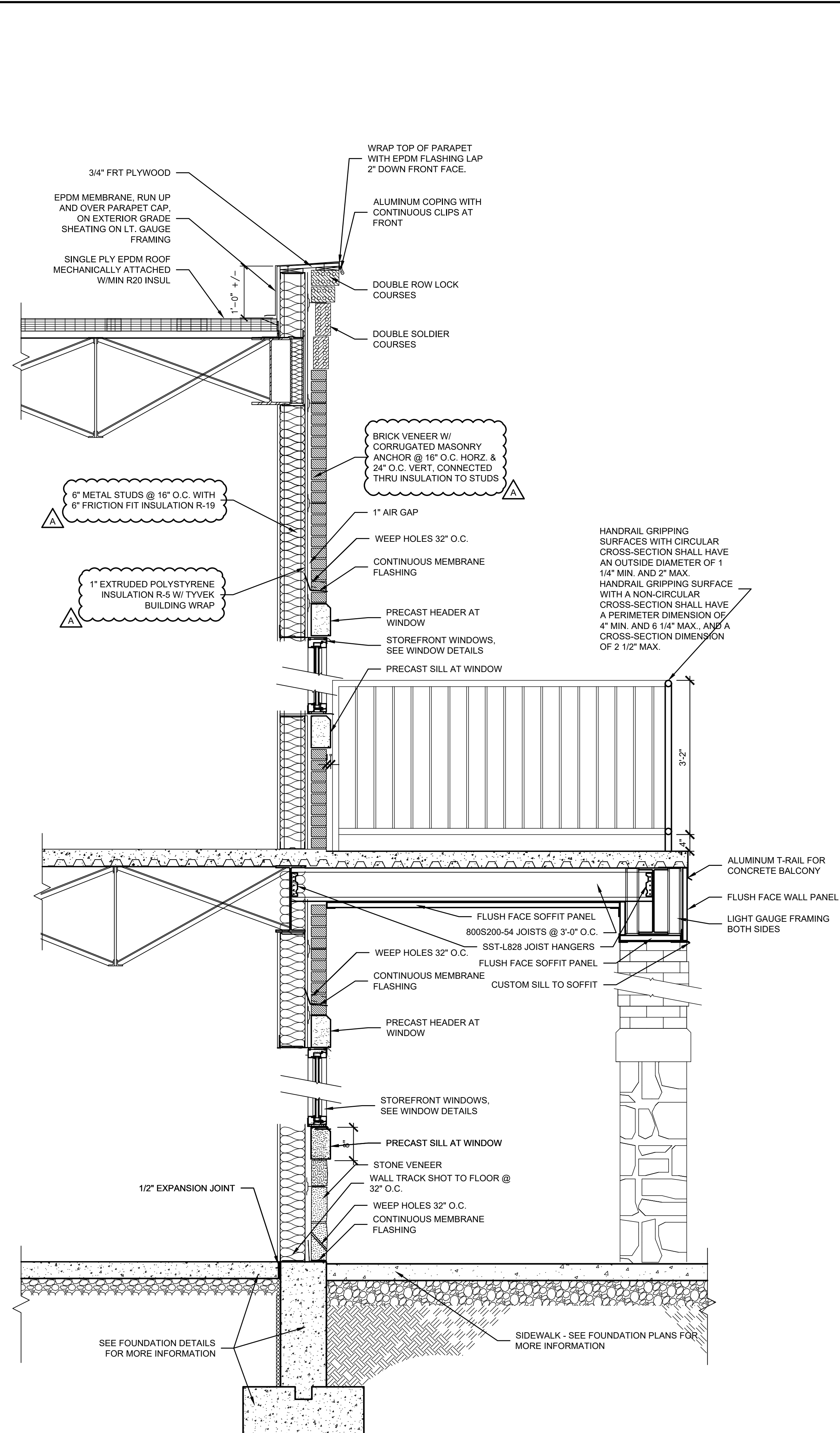
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WALL SECTIONS AND DETAILS  
**A5.02**

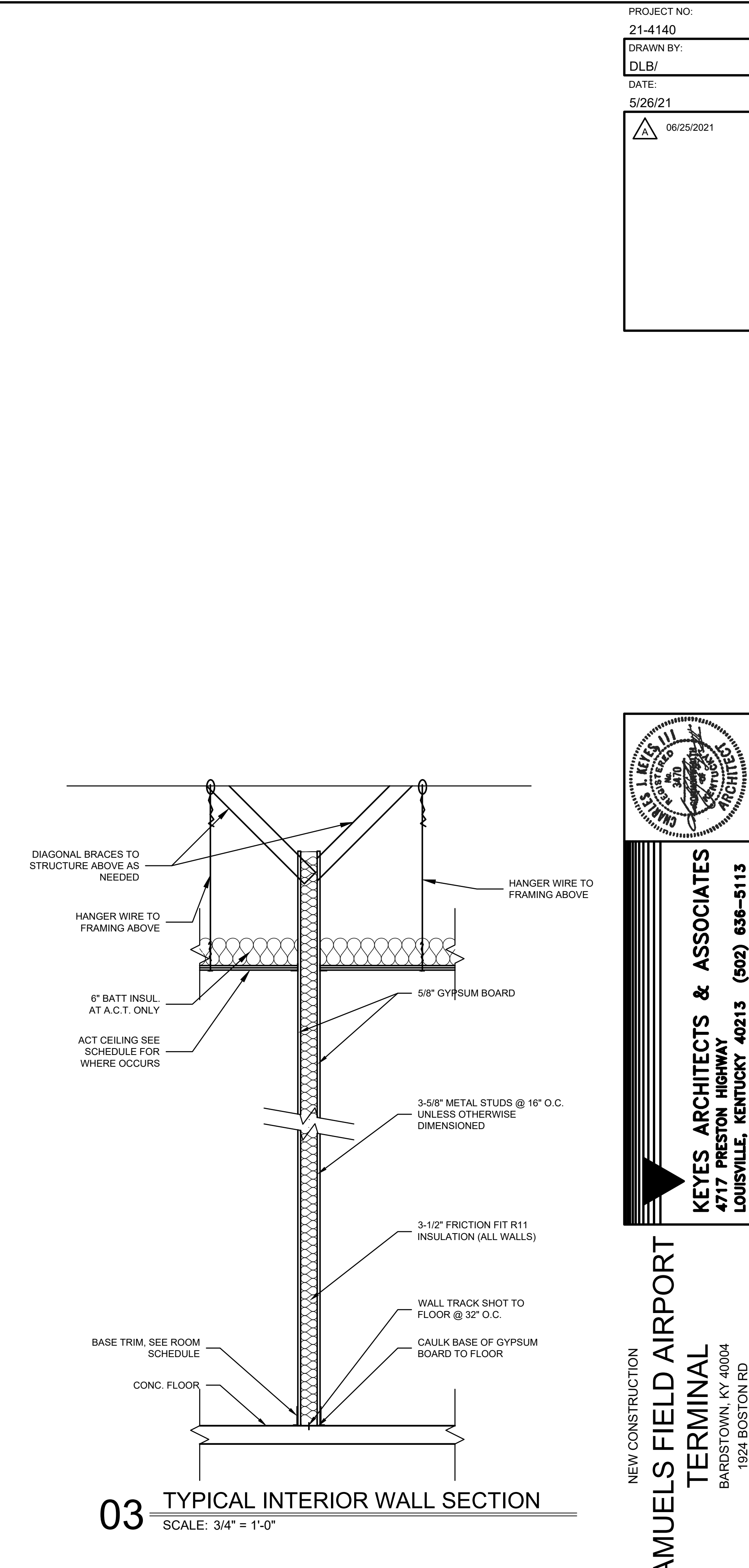
PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A5.03 Wall Sections and Details.dwg - DATE: Jun 29, 2021 11:54AM - BY: DEBBY BIRD



**01 WALL SECTION**  
SCALE: 3/4" = 1'-0"



**02 BALCONY SECTION**  
SCALE: 3/4" = 1'-0"



**03 TYPICAL INTERIOR WALL SECTION**  
SCALE: 3/4" = 1'-0"

PROJECT NO:  
21-4140  
DRAWN BY:  
DLB/  
DATE:  
5/26/21  
06/25/2021

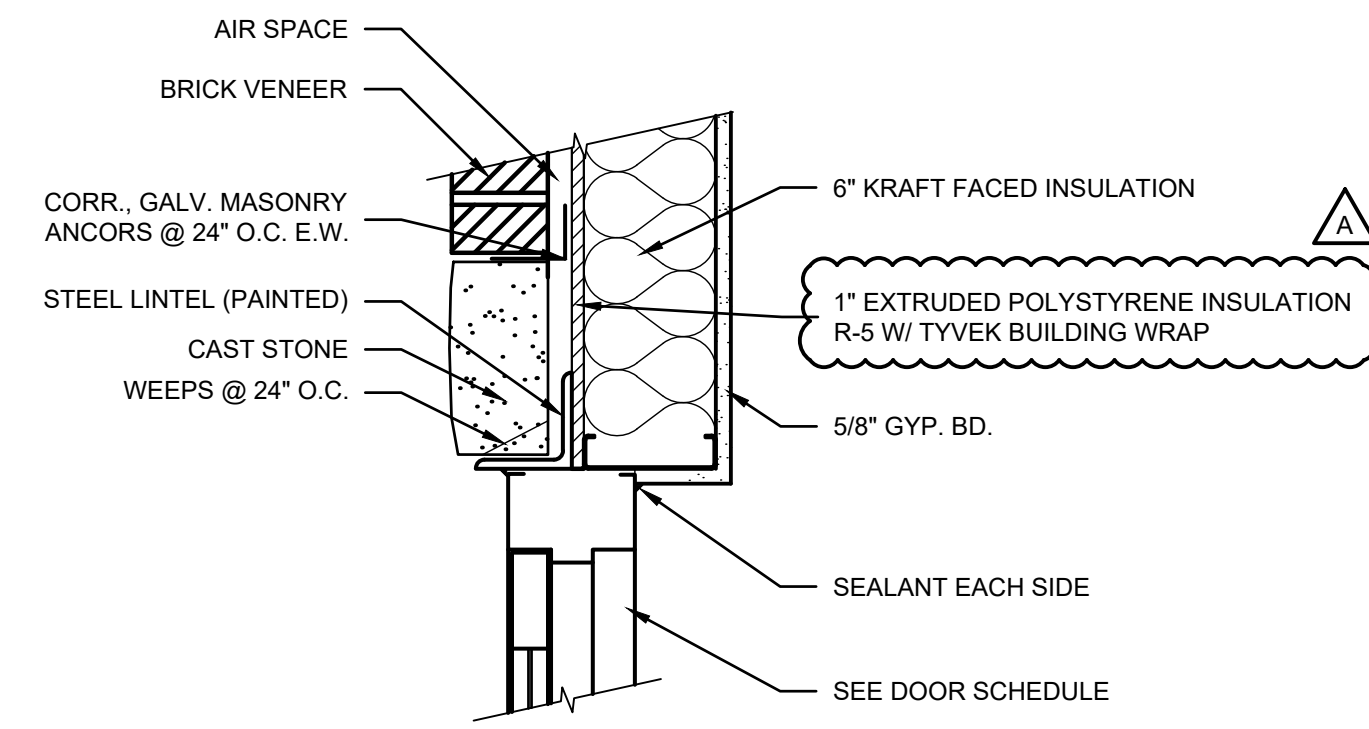


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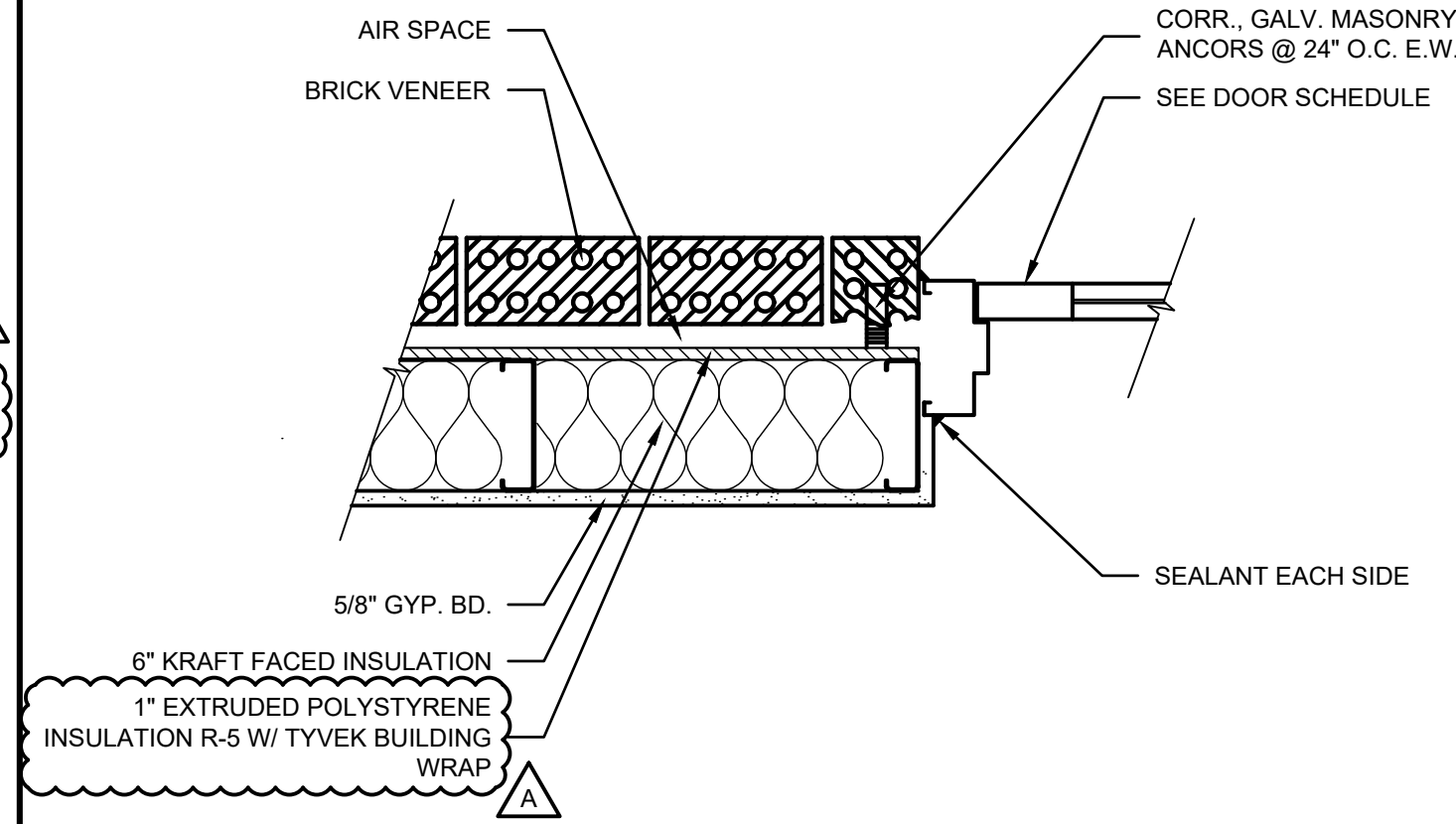
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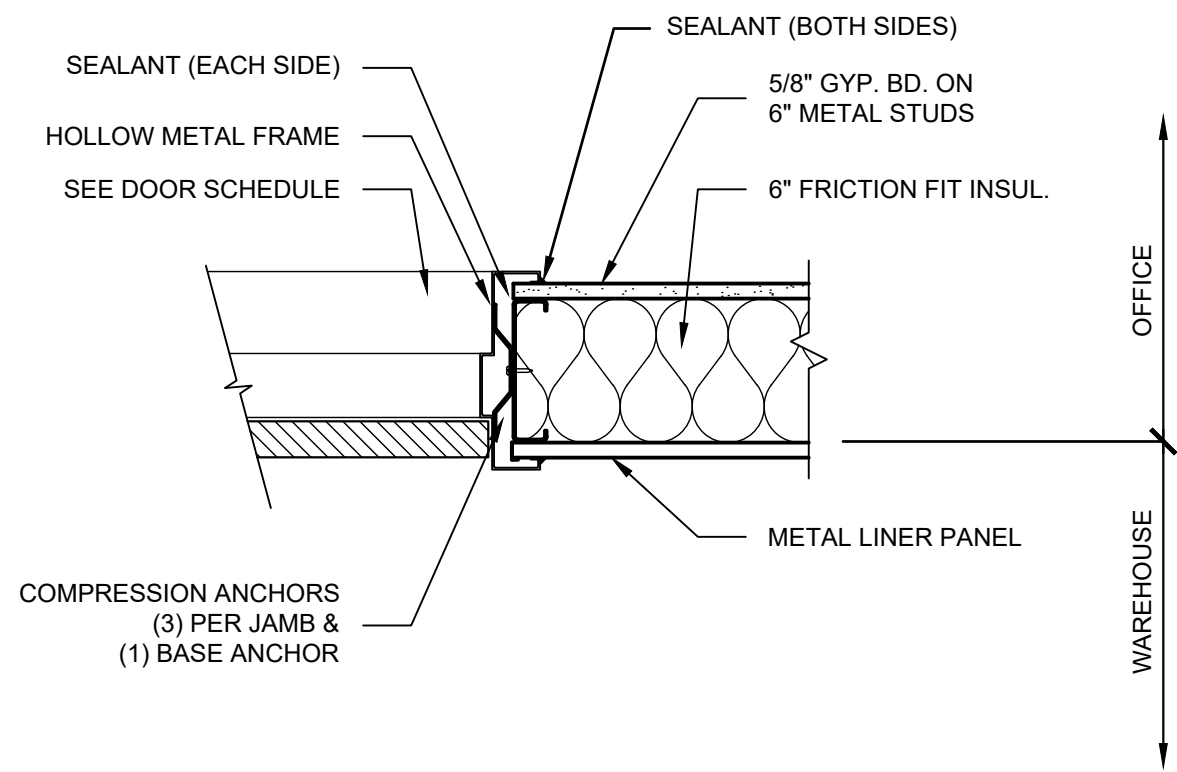
WALL SECTIONS AND DETAILS  
**A5.03**



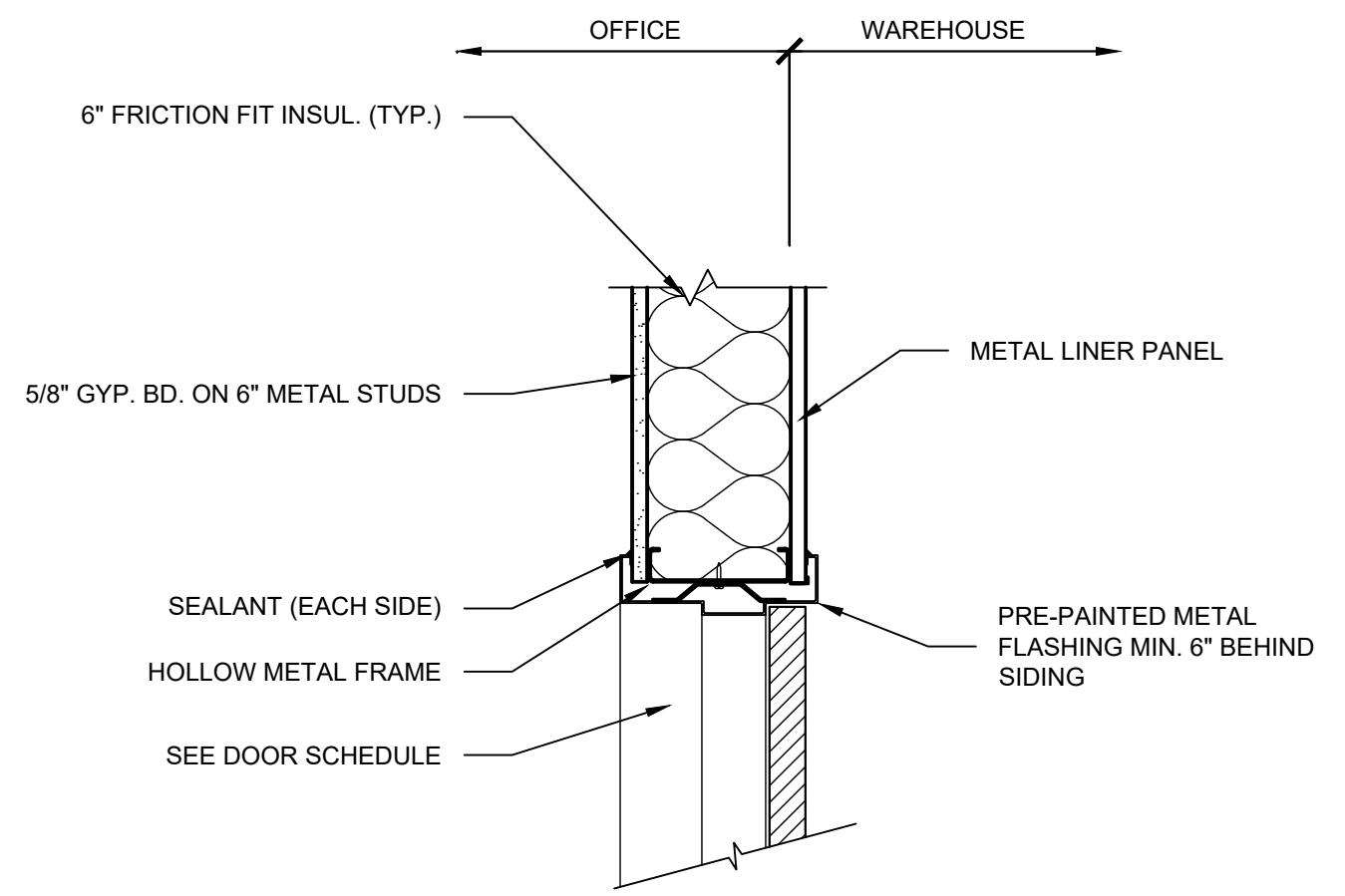
**01 ALUMINUM DOOR HEAD**  
SCALE: 1-1/2" = 1'-0"



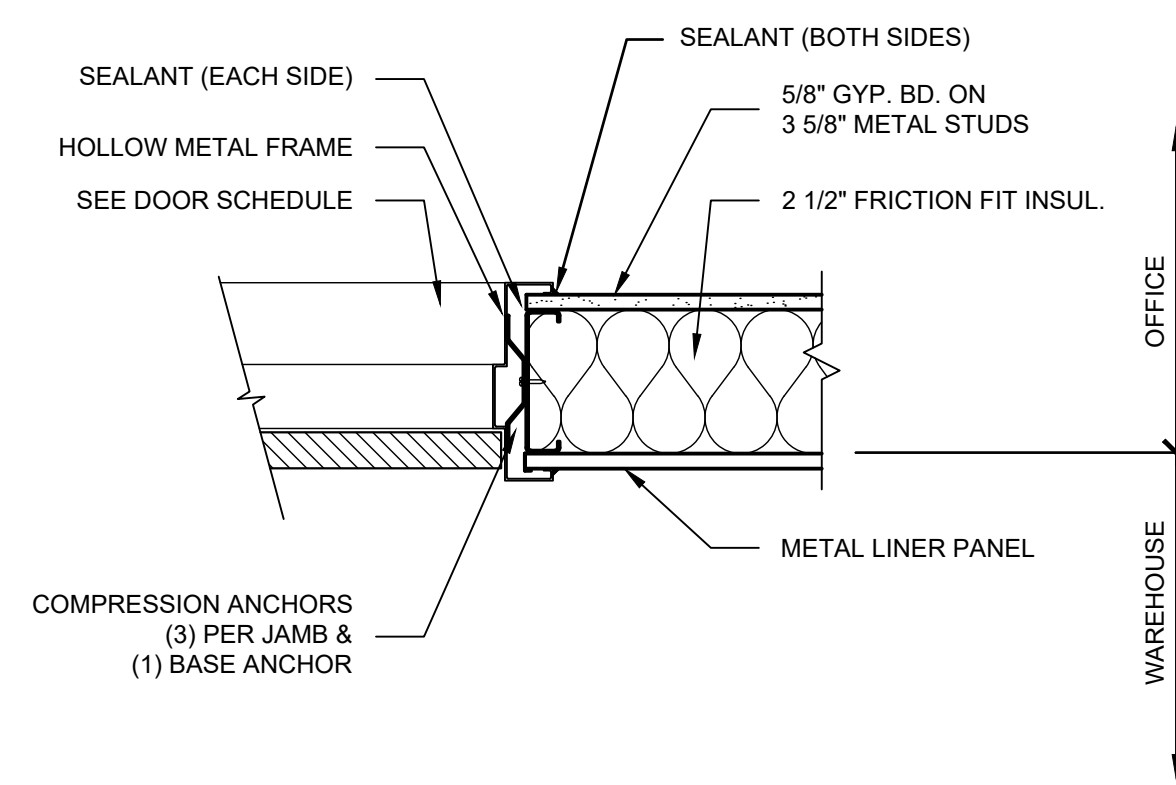
**02 ALUMINUM DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"



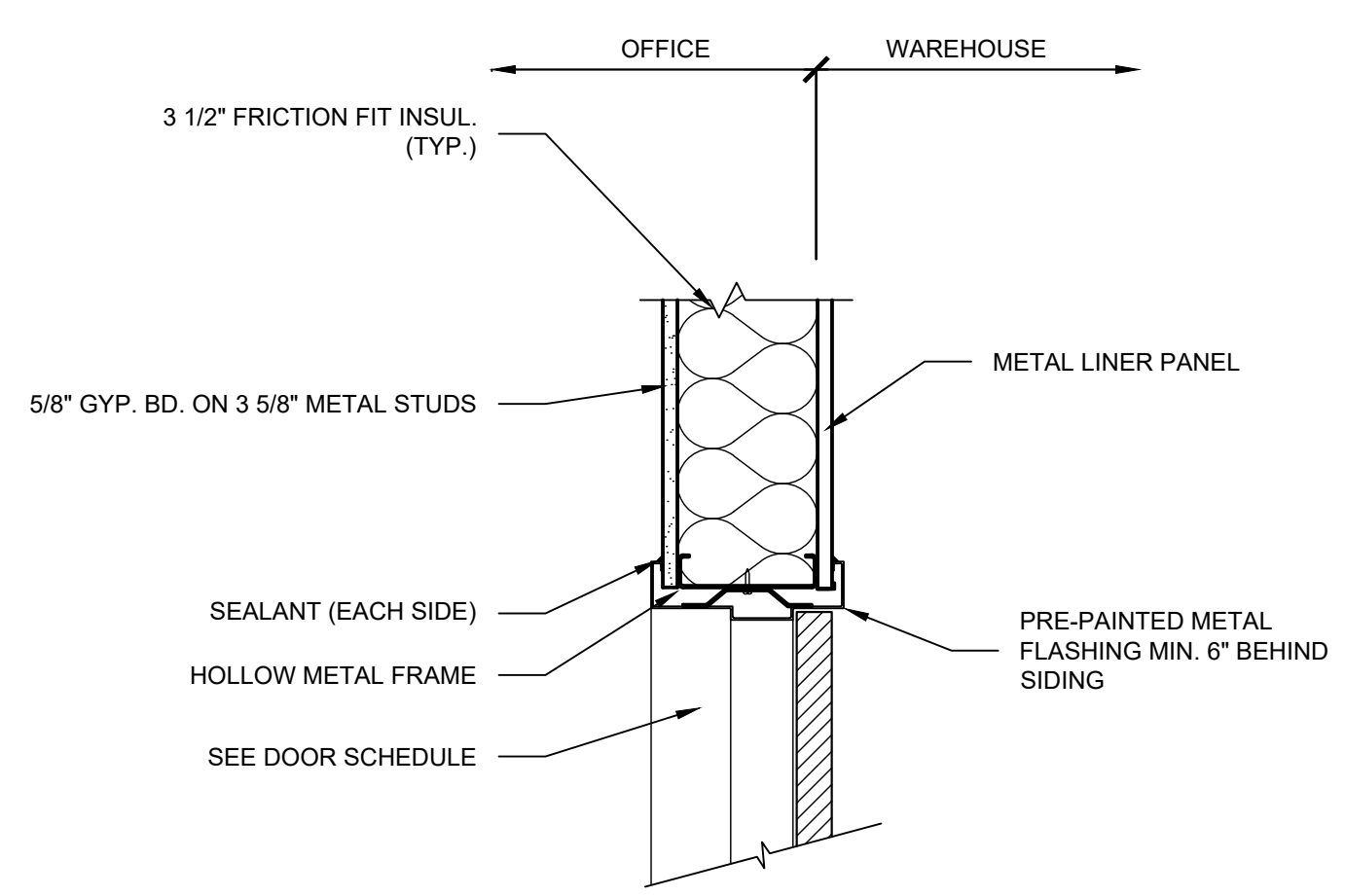
**03 HOLLOW METAL DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"



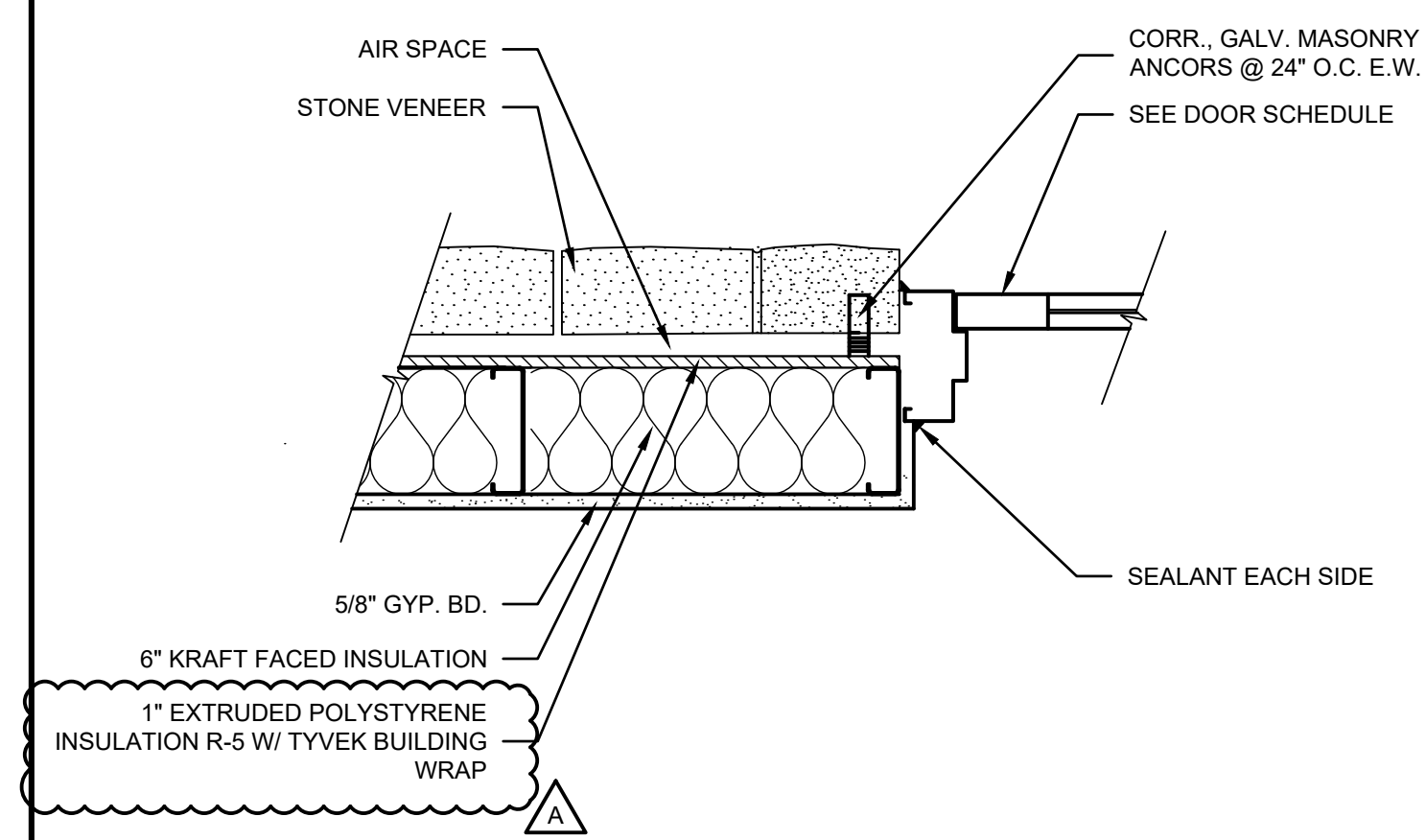
**04 HOLLOW METAL DOOR HEAD**  
SCALE: 1-1/2" = 1'-0"



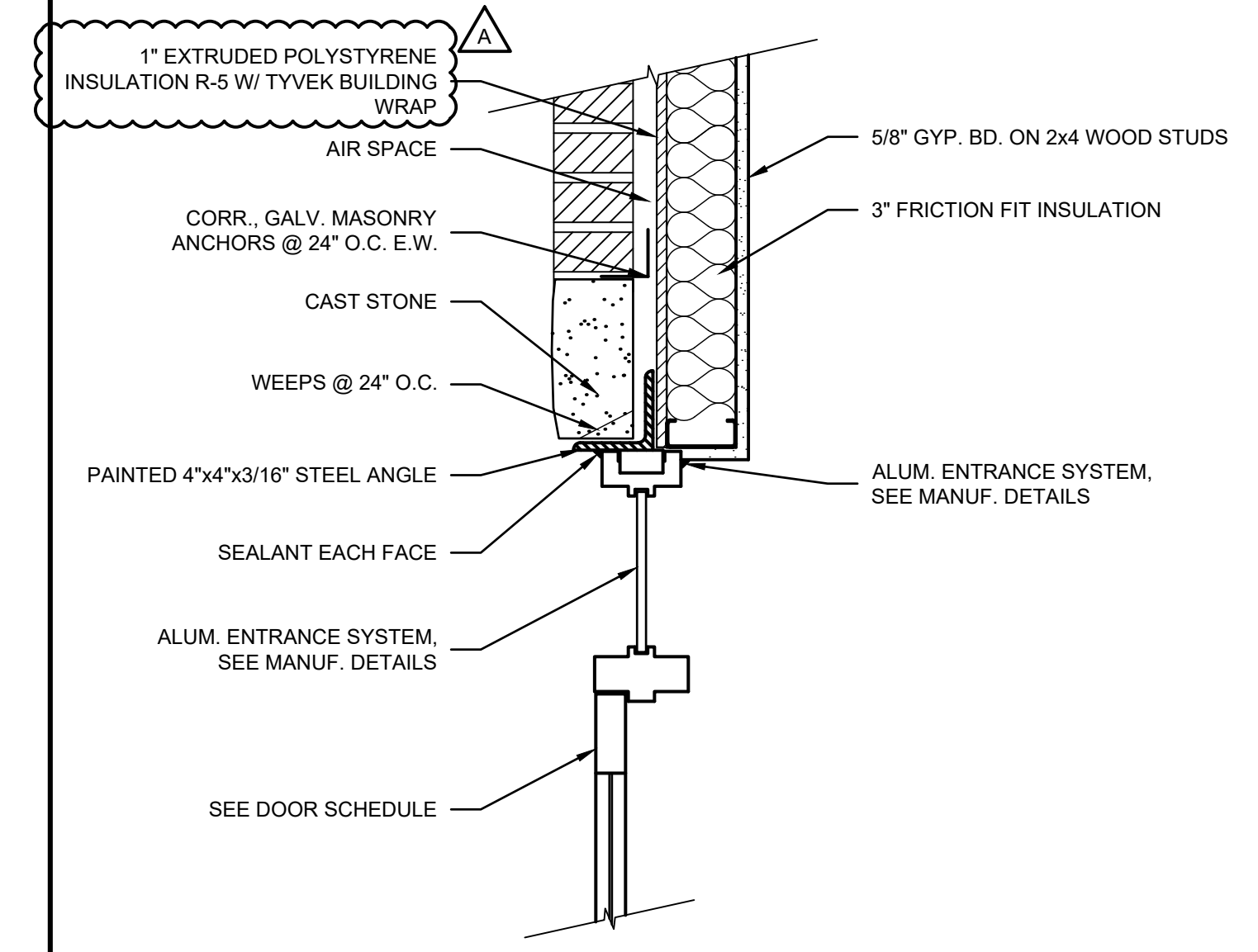
**05 HOLLOW METAL DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"



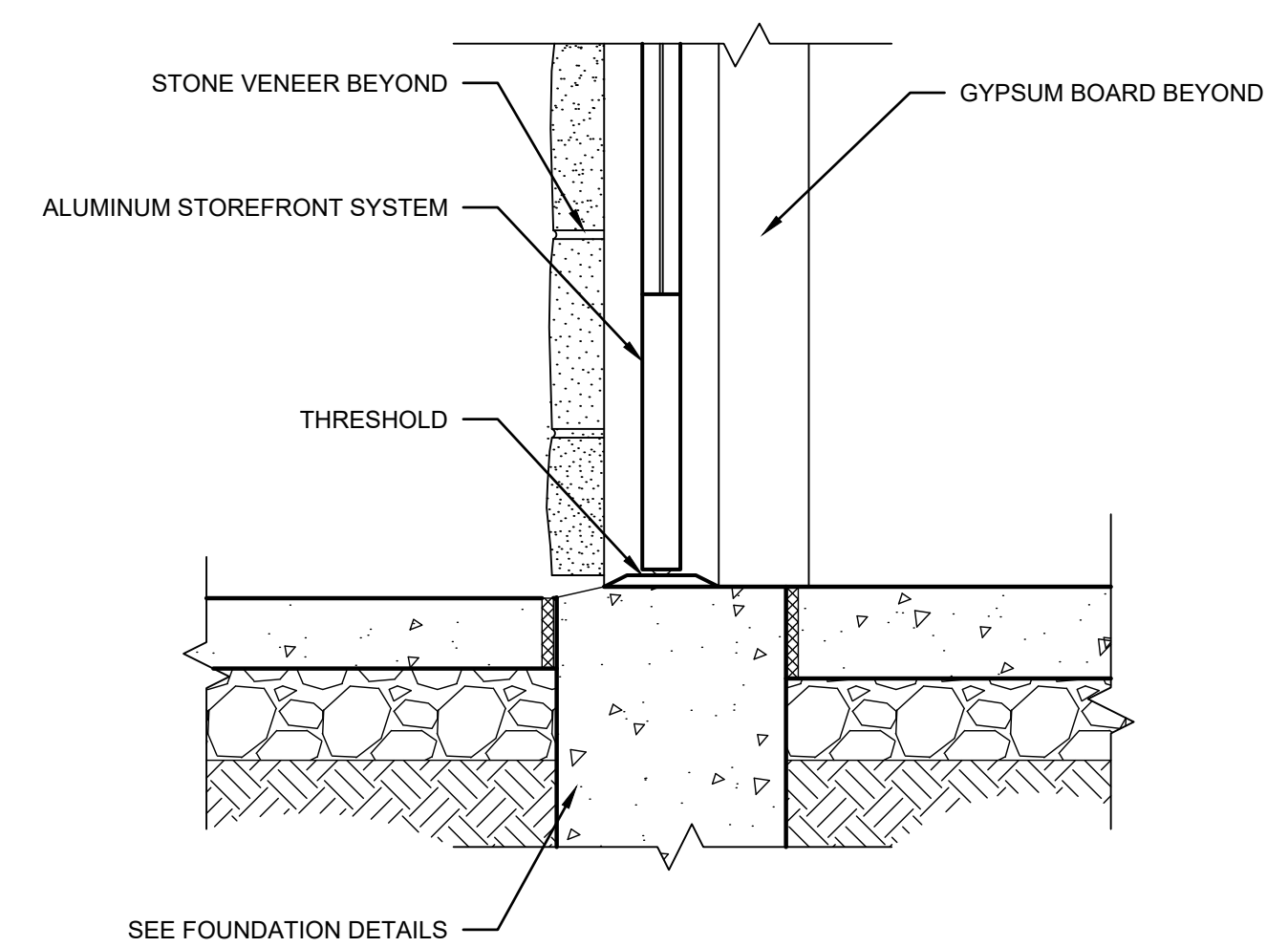
**06 HOLLOW METAL DOOR HEAD**  
SCALE: 1-1/2" = 1'-0"



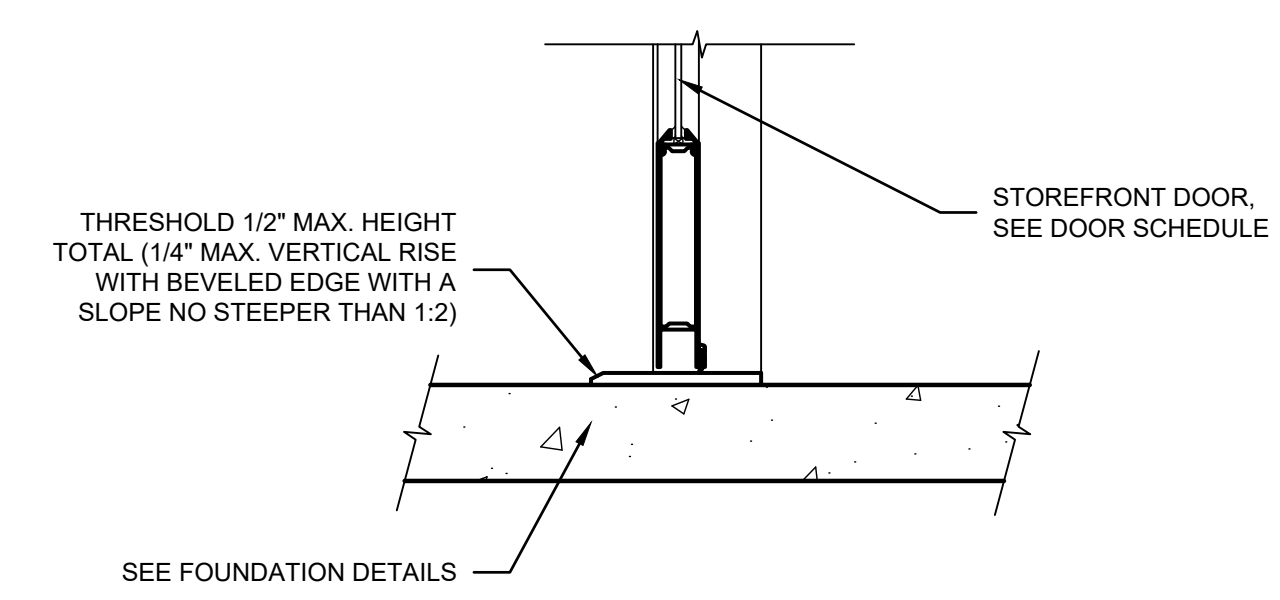
**07 ALUMINUM DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"



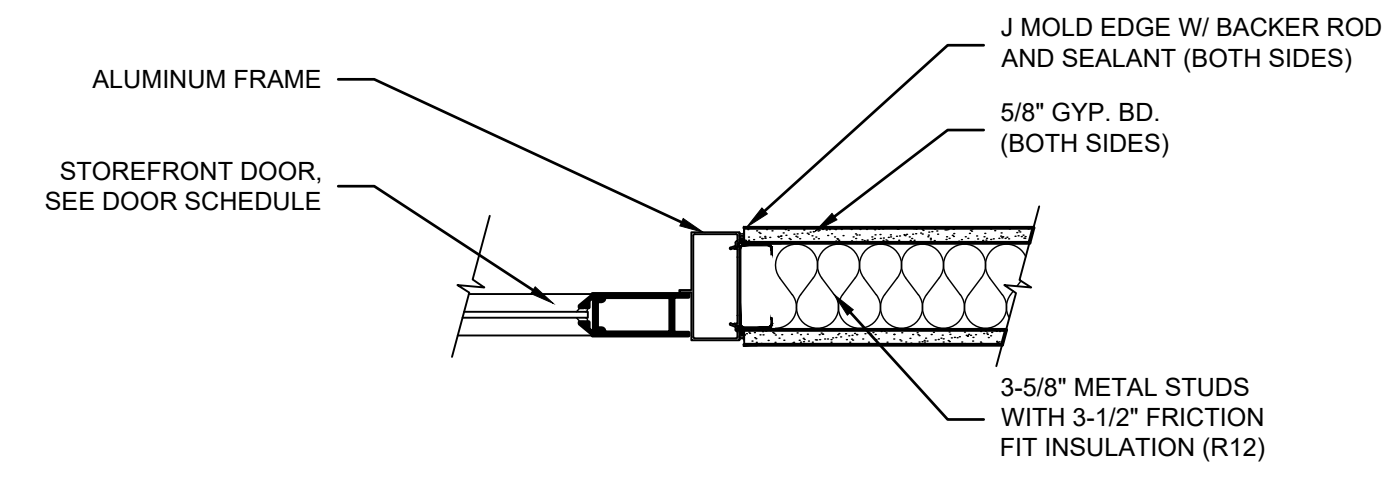
**08 ALUMINUM DOOR HEAD**  
SCALE: 1-1/2" = 1'-0"



**09 THRESHOLD DETAIL**  
SCALE: 1-1/2" = 1'-0"



**10 DOOR THRESHOLD**  
SCALE: 1-1/2" = 1'-0"



**11 STOREFRONT DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"

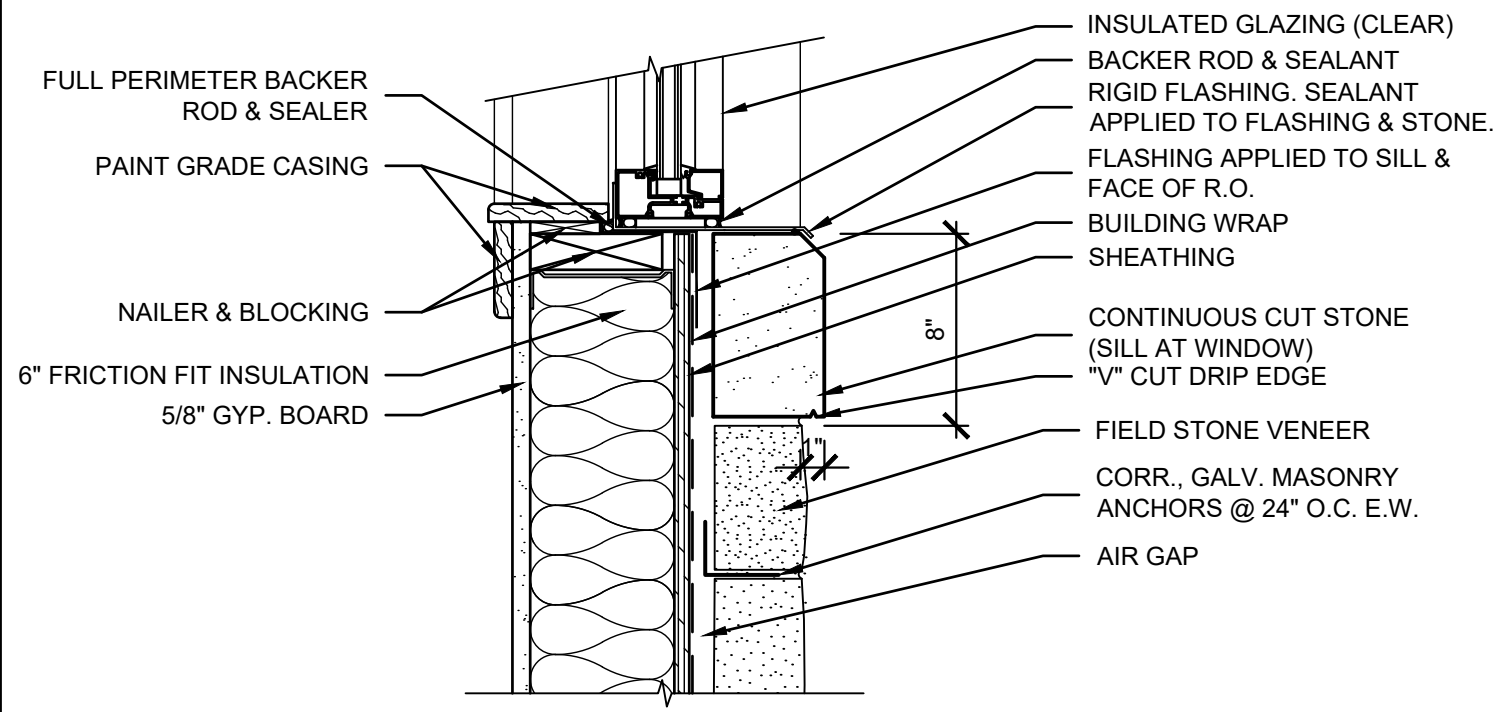
PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A6.01 Door Details.dwg - DATE: Jun 29, 2021 11:55AM - BY: DEBBY BIRD



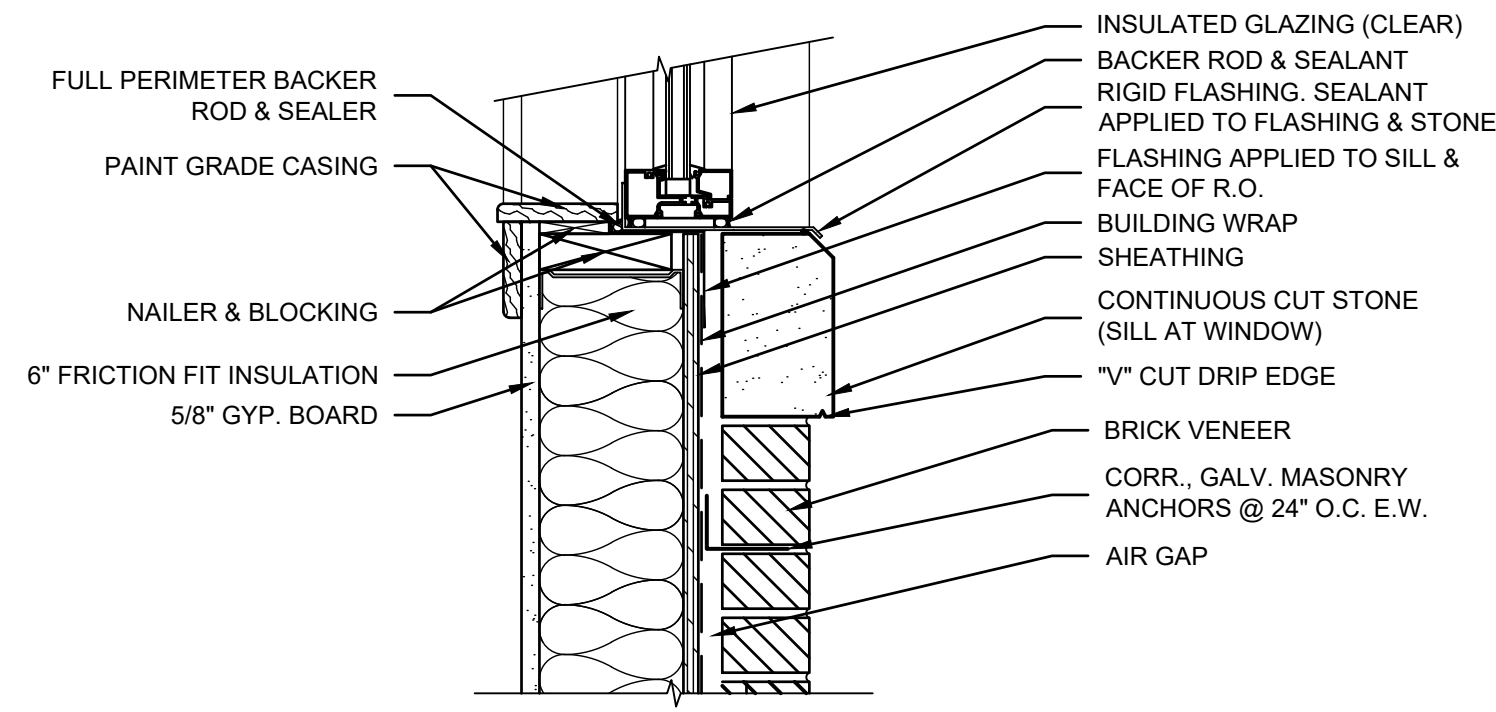
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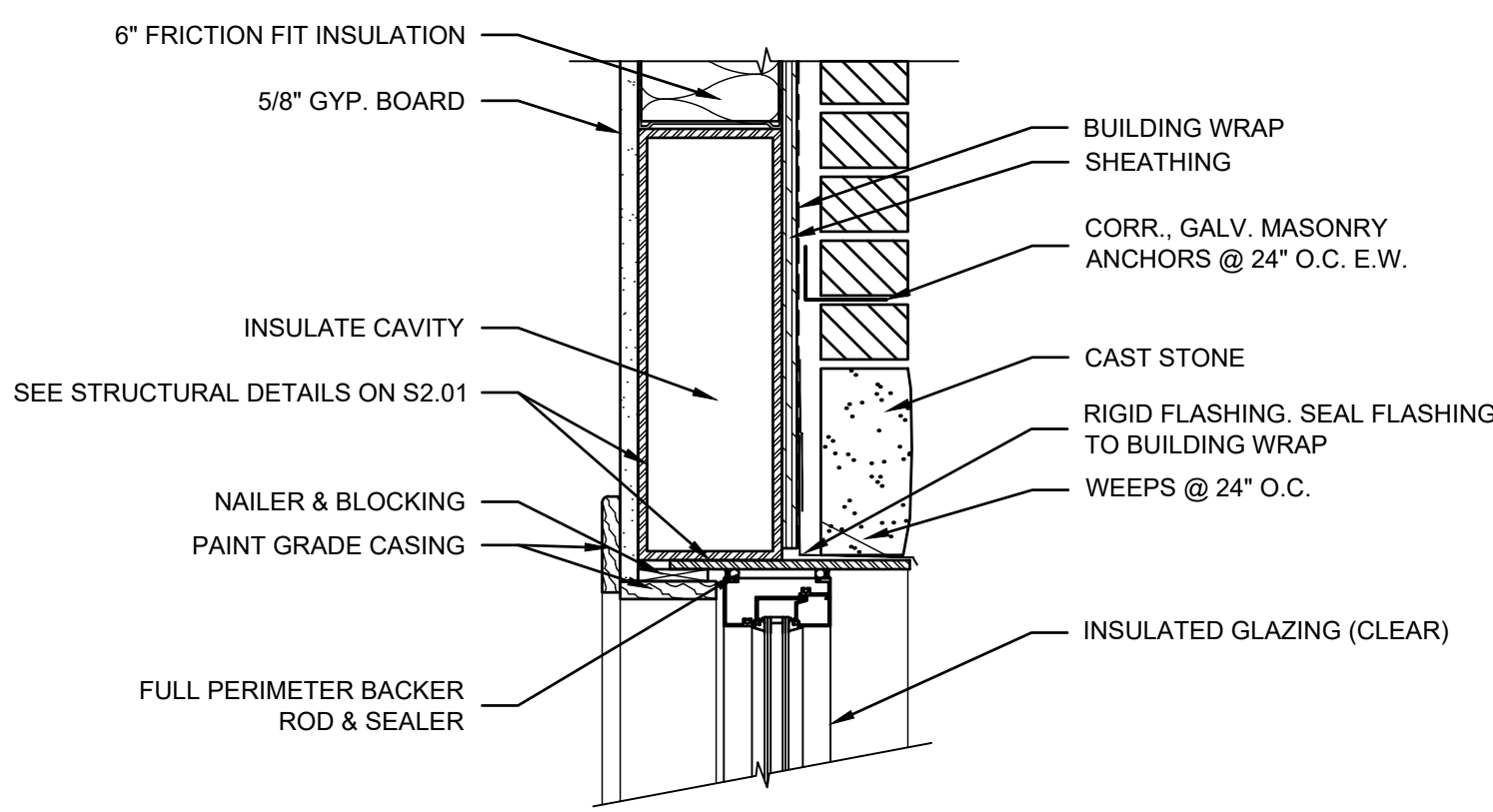
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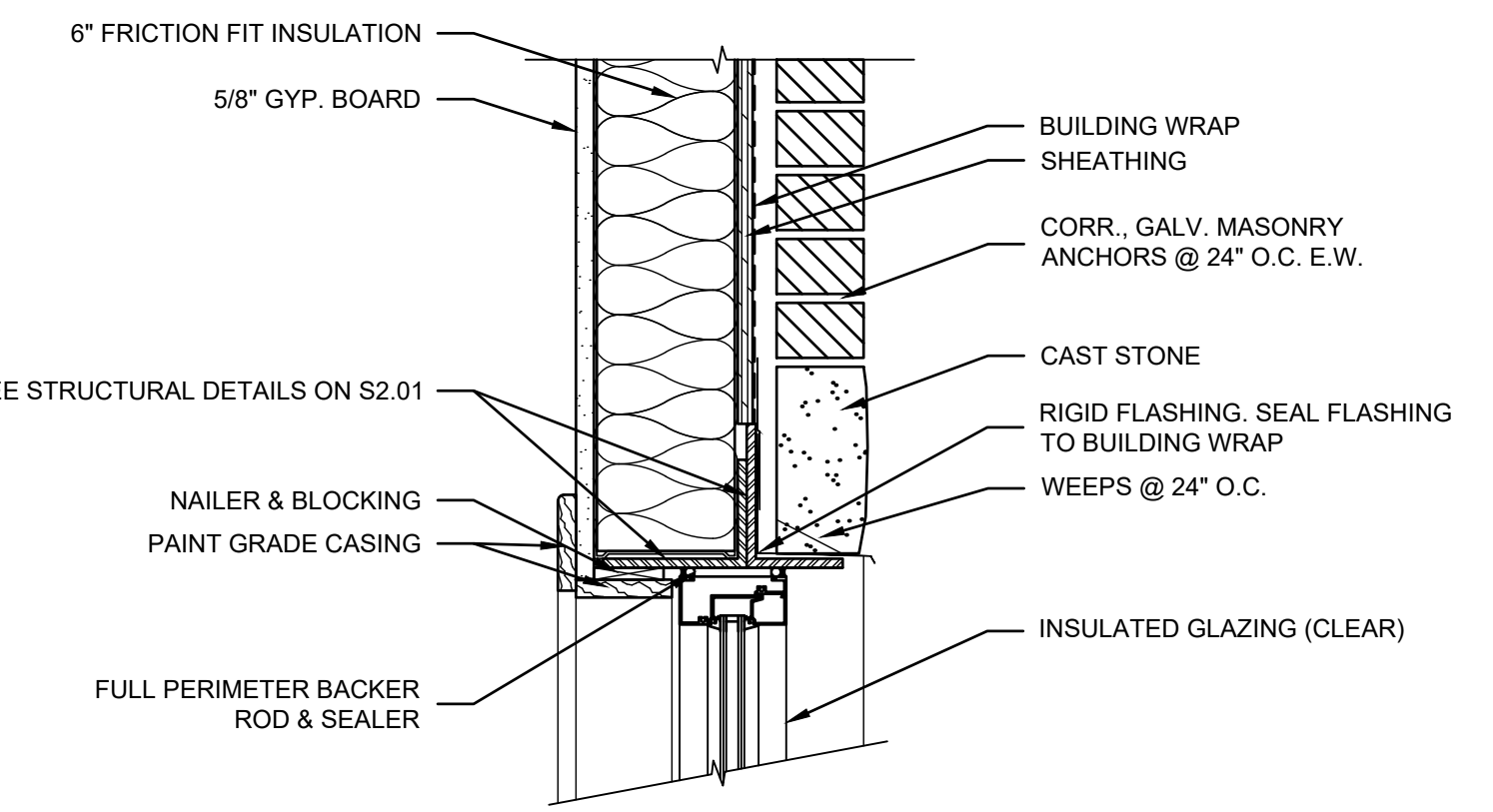
**01 ALUM WINDOW SILL @ STONE**  
SCALE: 1-1/2" = 1'-0"



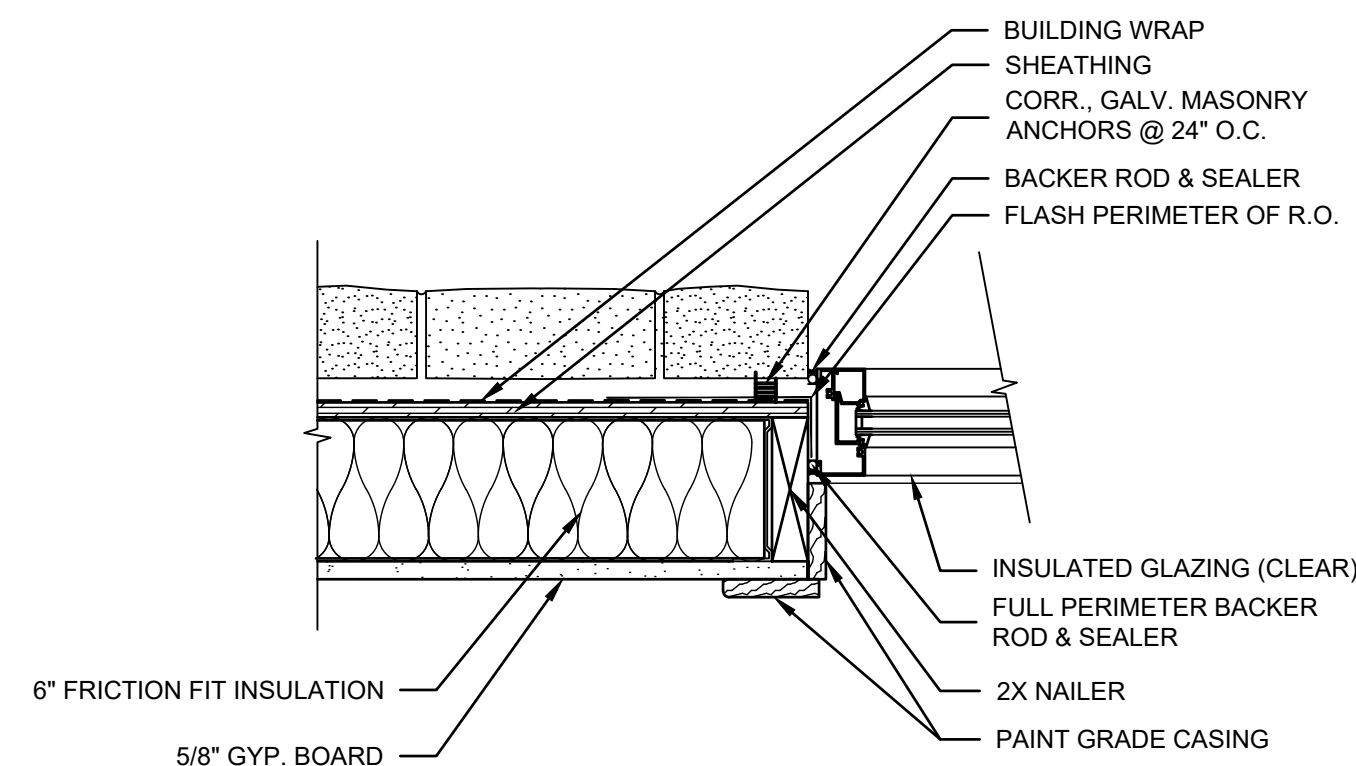
**02 ALUM WINDOW SILL @ BRICK**  
SCALE: 1-1/2" = 1'-0"



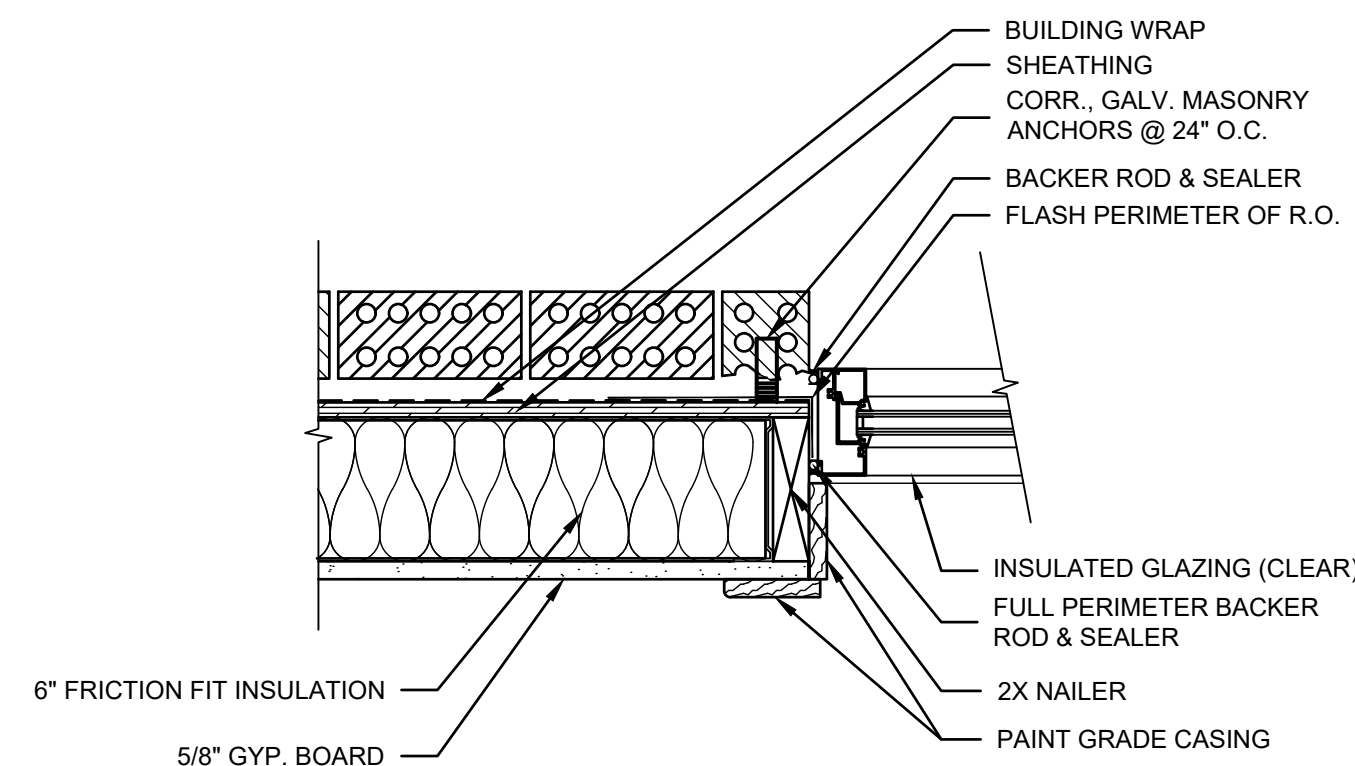
**03 ALUM WINDOW H1/H2 HEADER**  
SCALE: 1-1/2" = 1'-0"



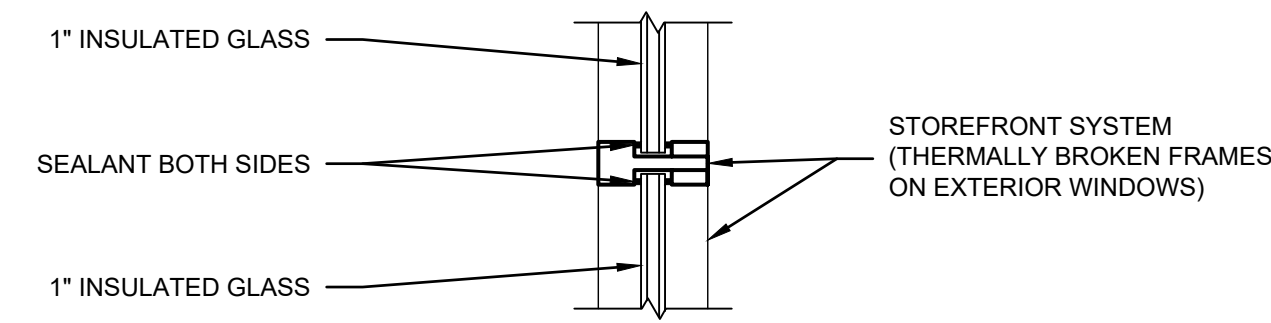
**04 ALUM WINDOW H3 HEADER**  
SCALE: 1-1/2" = 1'-0"



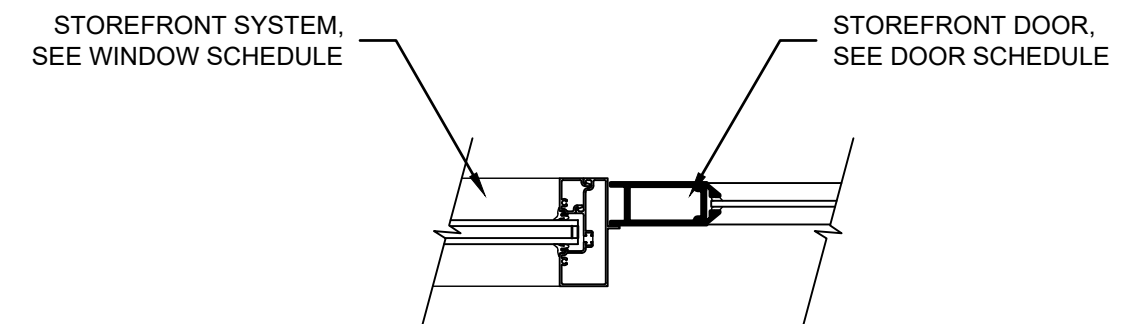
**05 ALUM WINDOW JAMB @ STONE**  
SCALE: 1-1/2" = 1'-0"



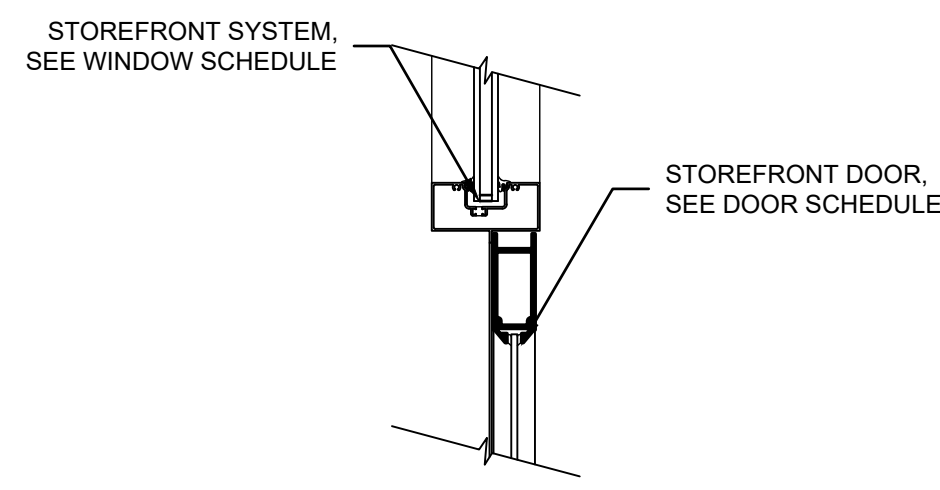
**06 ALUM WINDOW JAMB @ BRICK**  
SCALE: 1-1/2" = 1'-0"



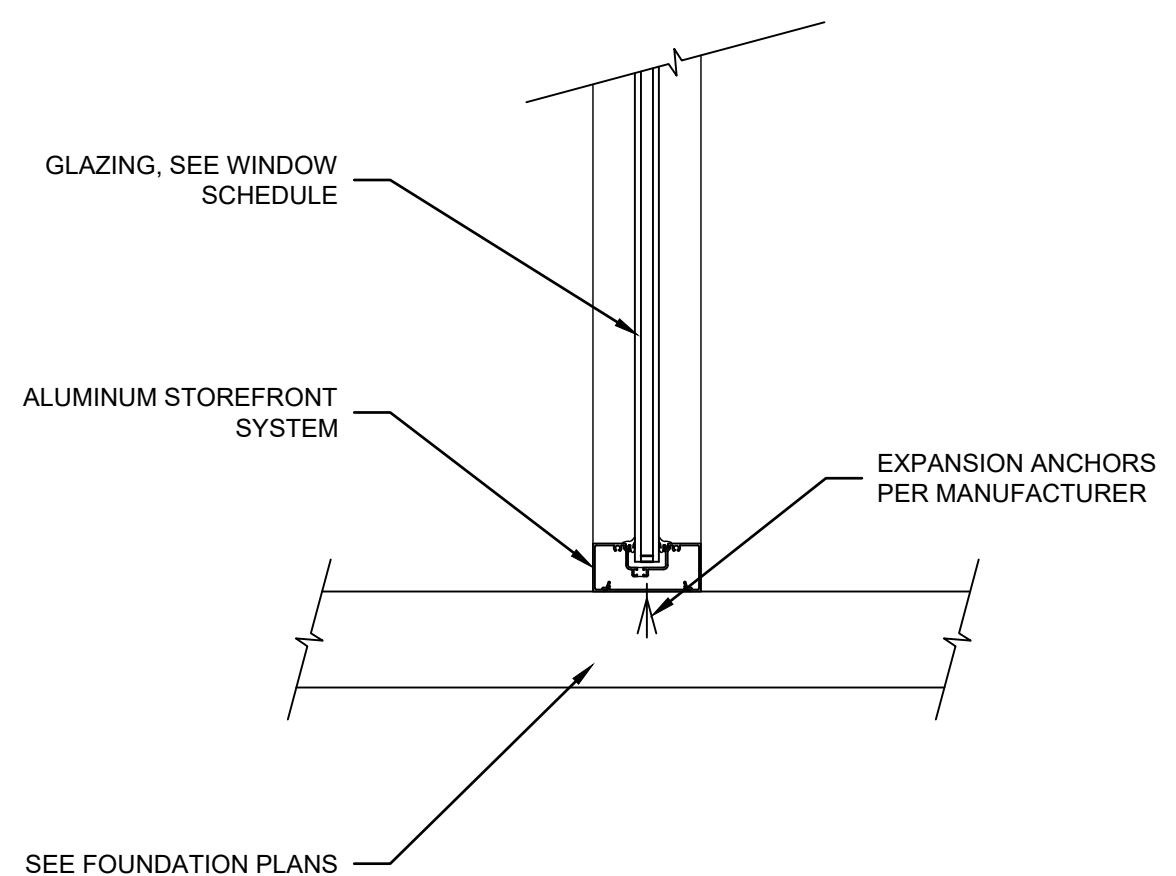
**07 HORZ./VERT. MULLION**  
SCALE: 1-1/2" = 1'-0"



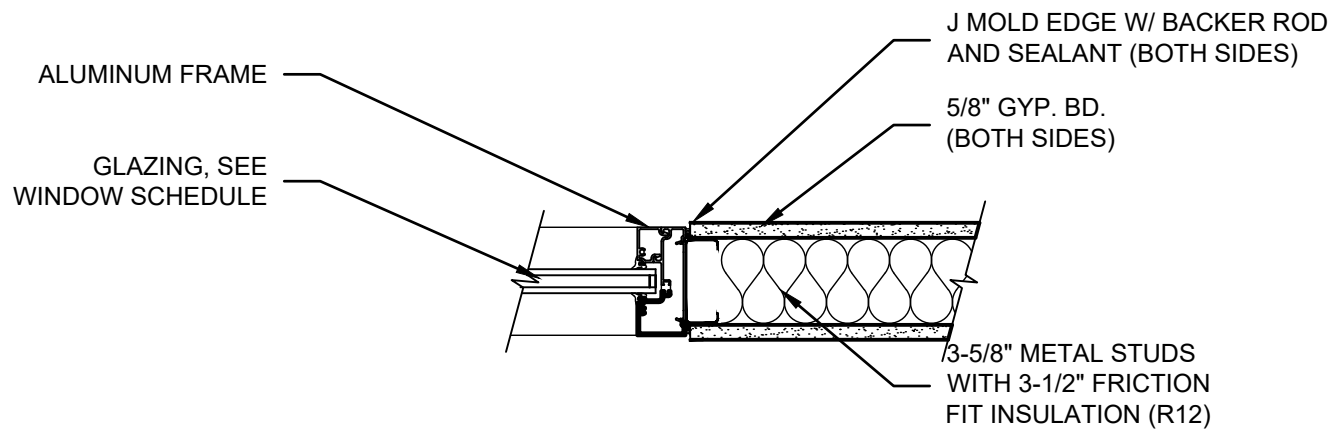
**08 STOREFRONT DOOR JAMB**  
SCALE: 1-1/2" = 1'-0"



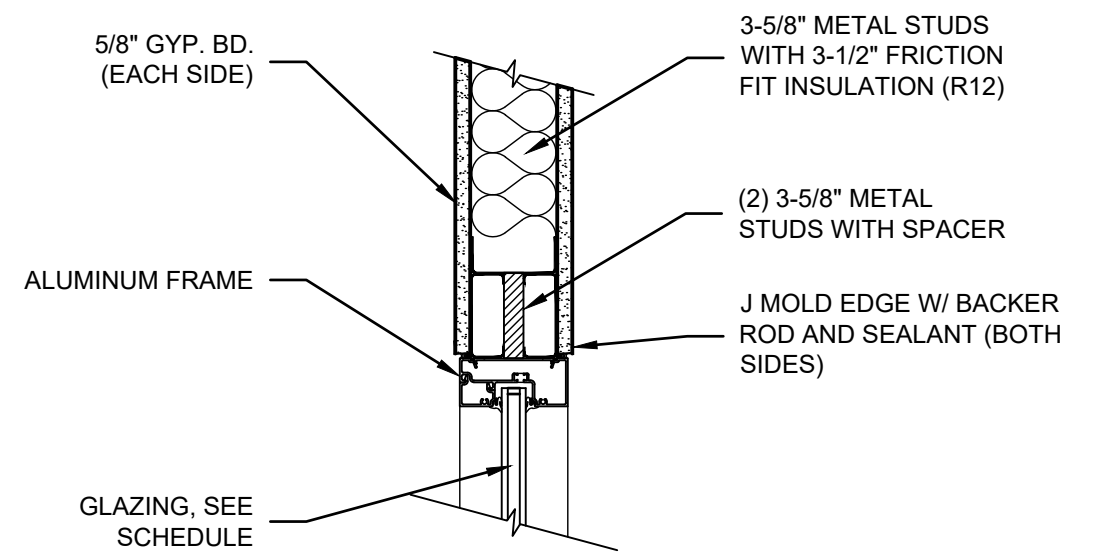
**09 STOREFRONT DOOR HEAD**  
SCALE: 1-1/2" = 1'-0"



**10 ALUMINUM WINDOW SILL**  
SCALE: 1-1/2" = 1'-0"



**11 ALUMINUM WINDOW JAMB**  
SCALE: 1-1/2" = 1'-0"



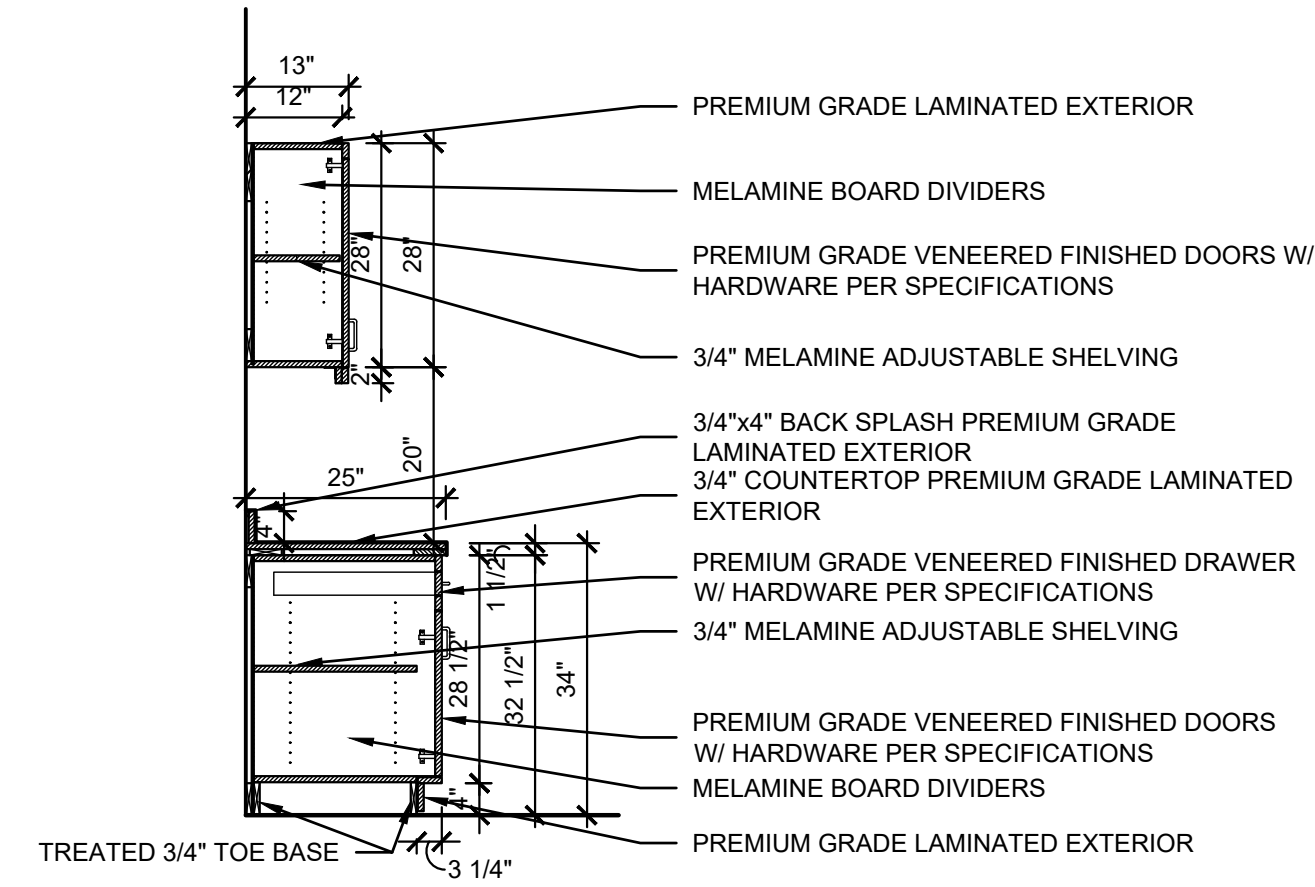
**12 ALUMINUM WINDOW HEAD**  
SCALE: 1-1/2" = 1'-0"

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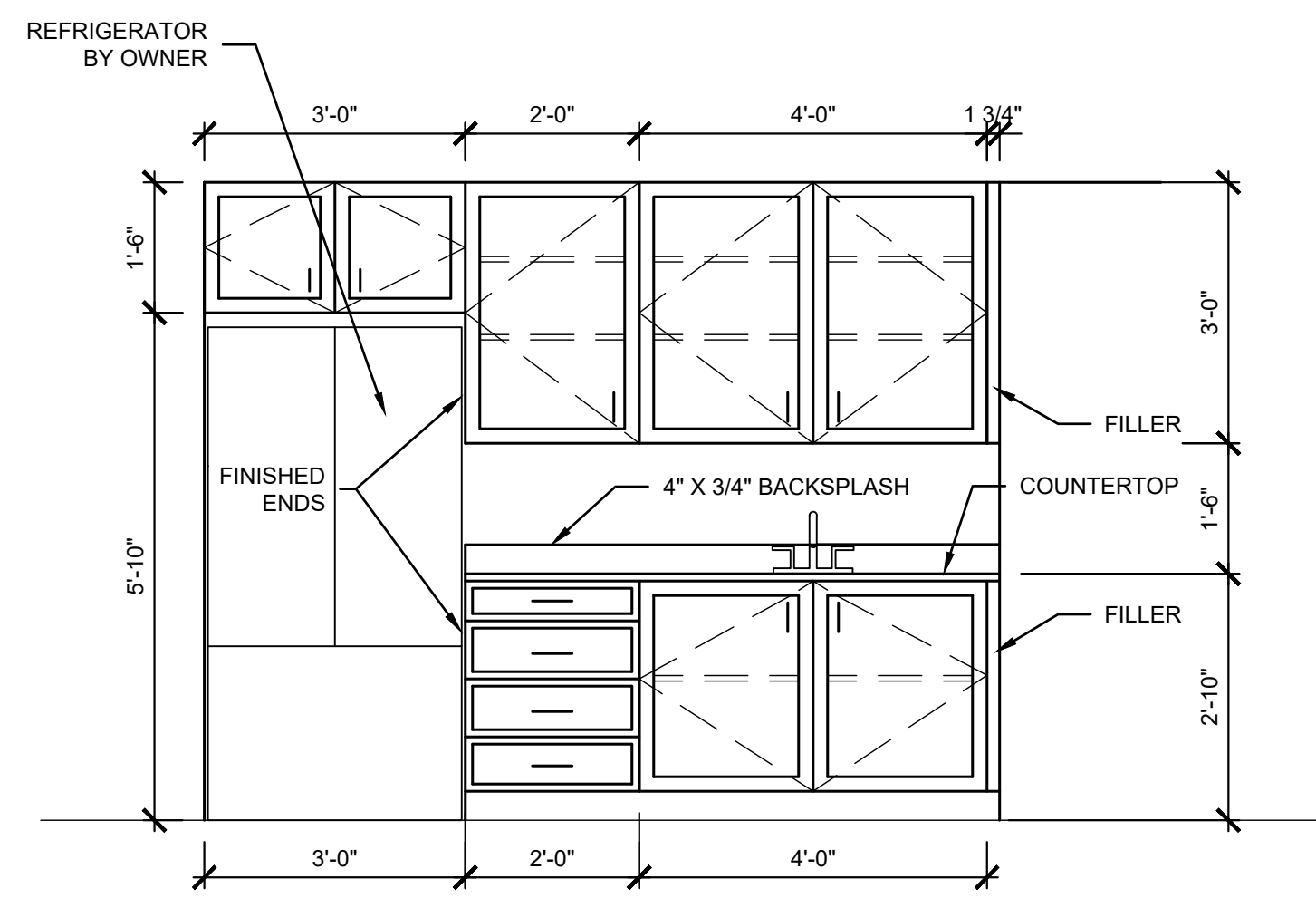


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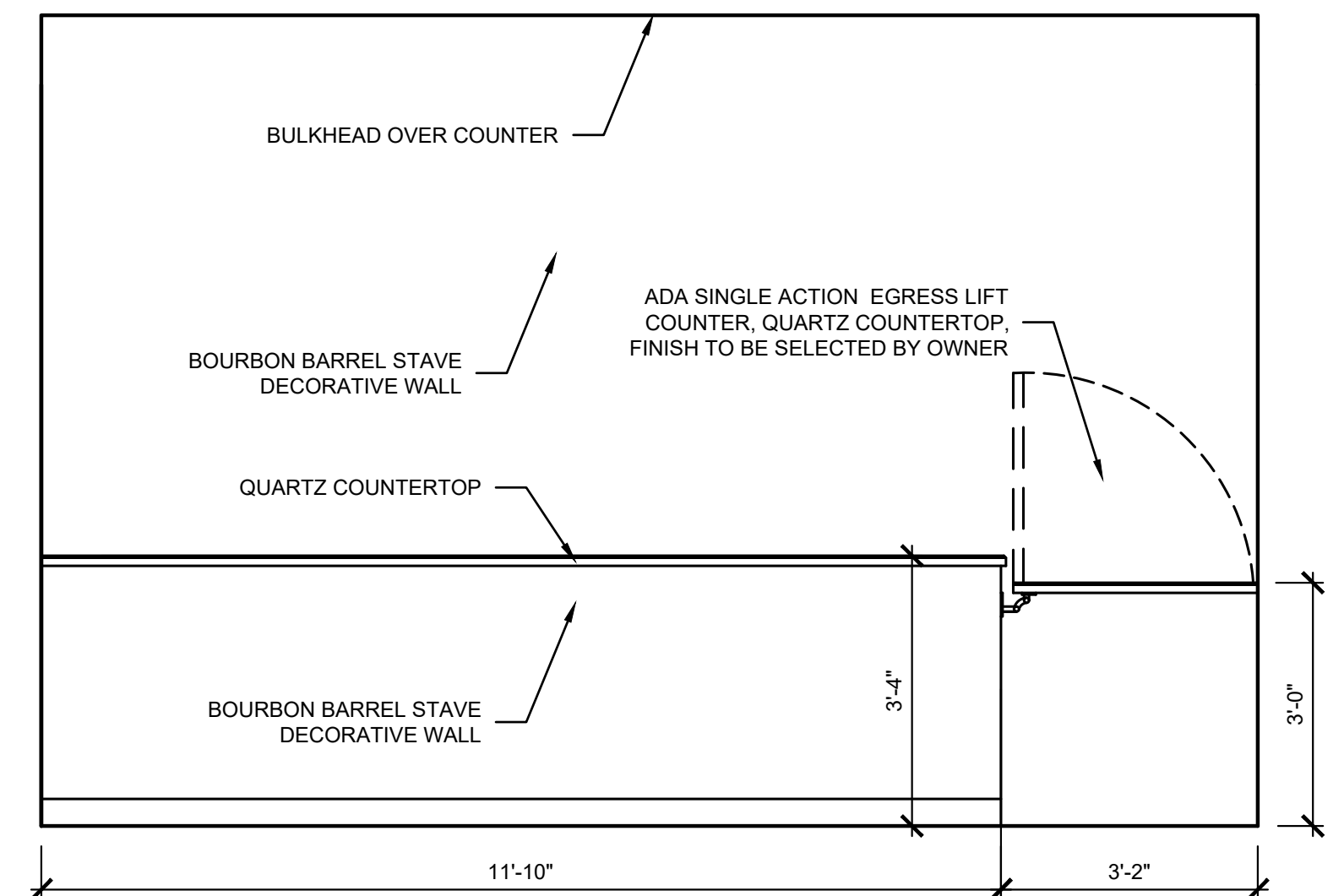
NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD



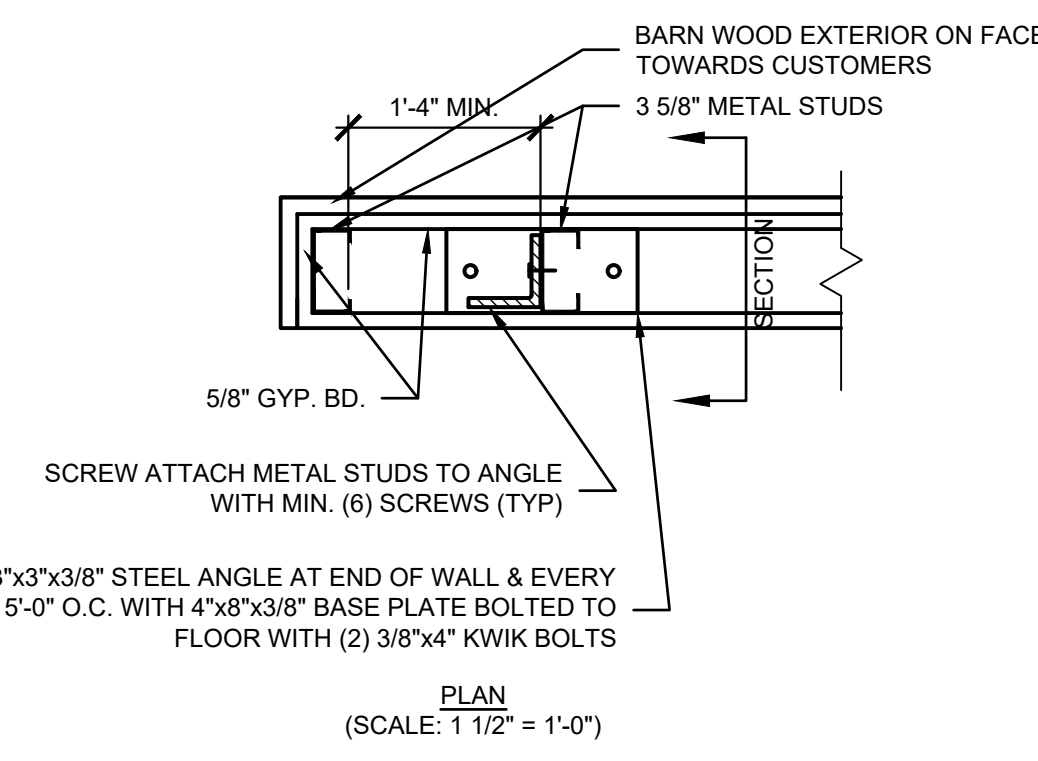
**01 CABINET SECTION - BASE WITH WALL HUNG**  
SCALE: 1/2" = 1'-0"



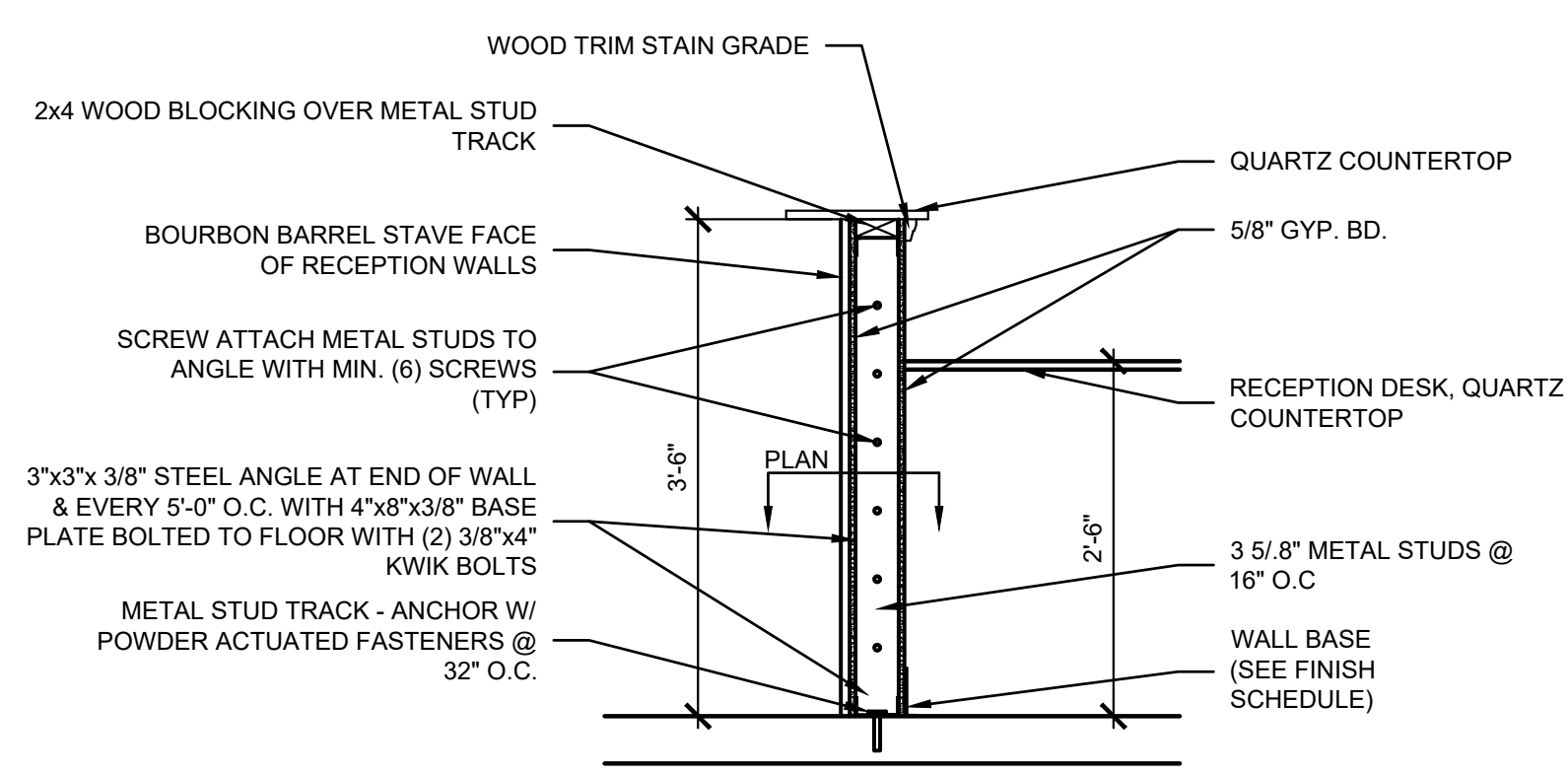
**02 BREAK ROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



**03 RECEPTION ELEVATION**  
SCALE: 1/2" = 1'-0"



PLAN  
(SCALE: 1 1/2" = 1'-0")



SECTION  
**04 RECEPTION KNEE WALL**  
SCALE: 3/4" = 1'-0"



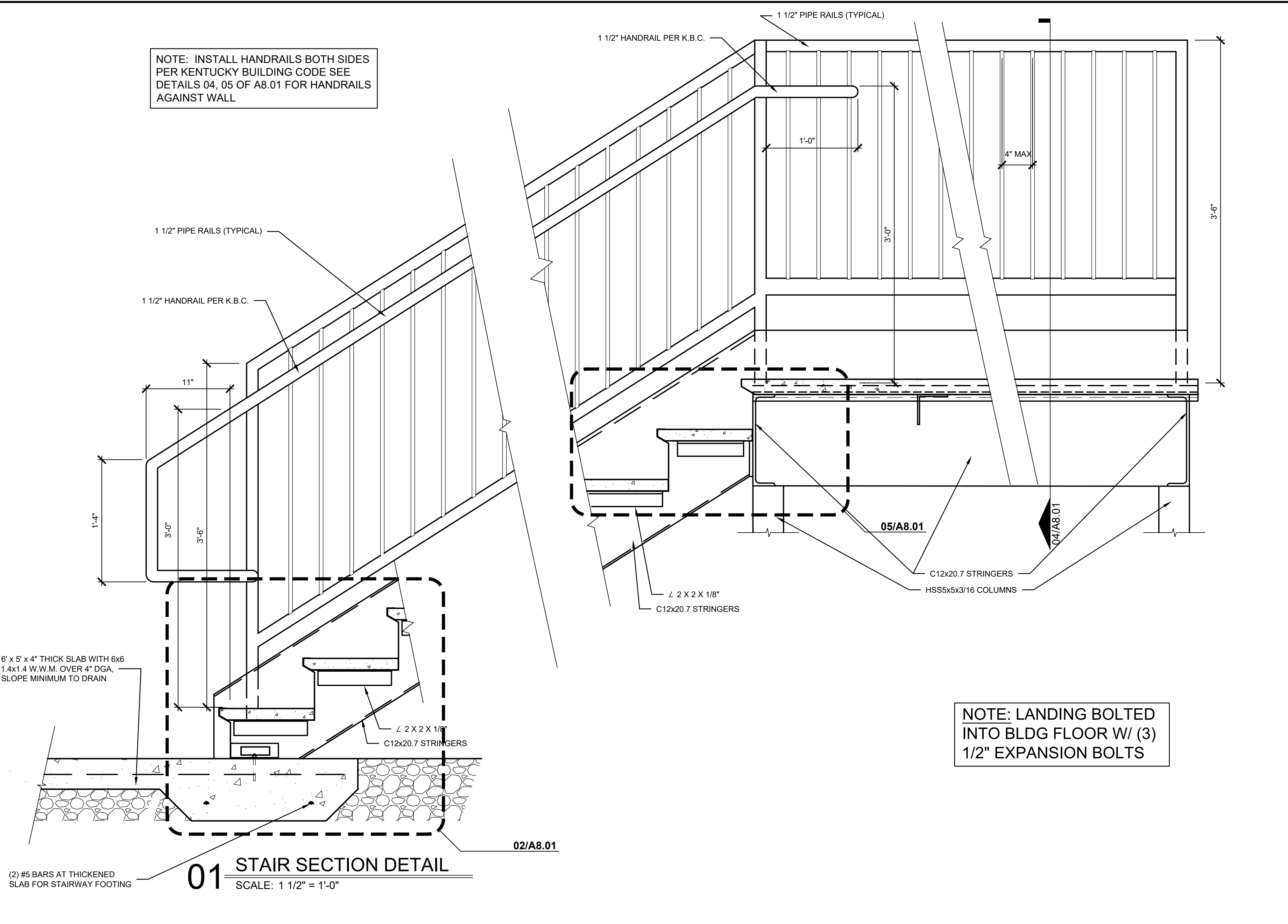
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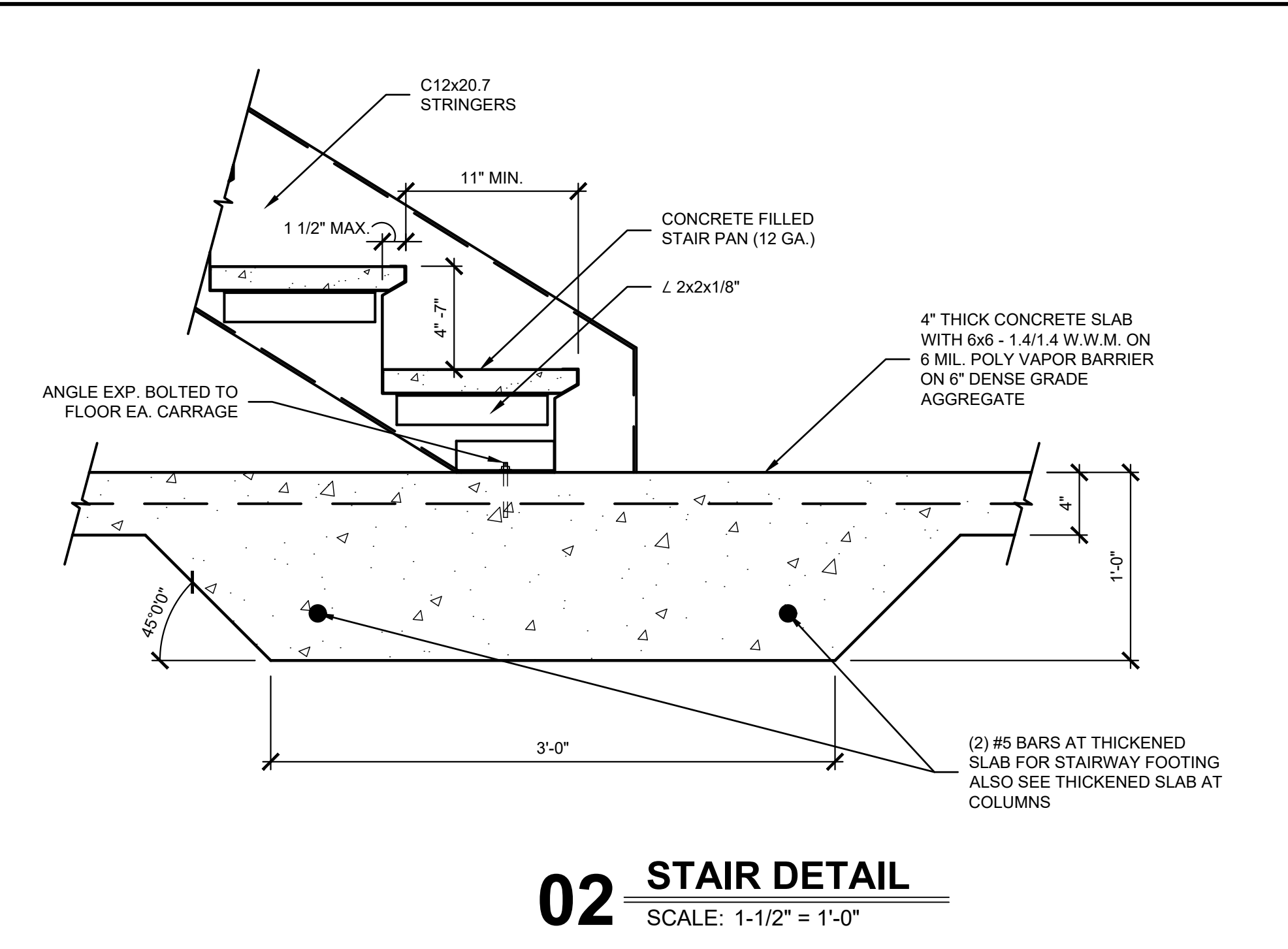
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PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A5.03 Cabinetry Details.dwg - DATE: Jun 29, 2021 11:56AM - BY: DEBBY BIRD

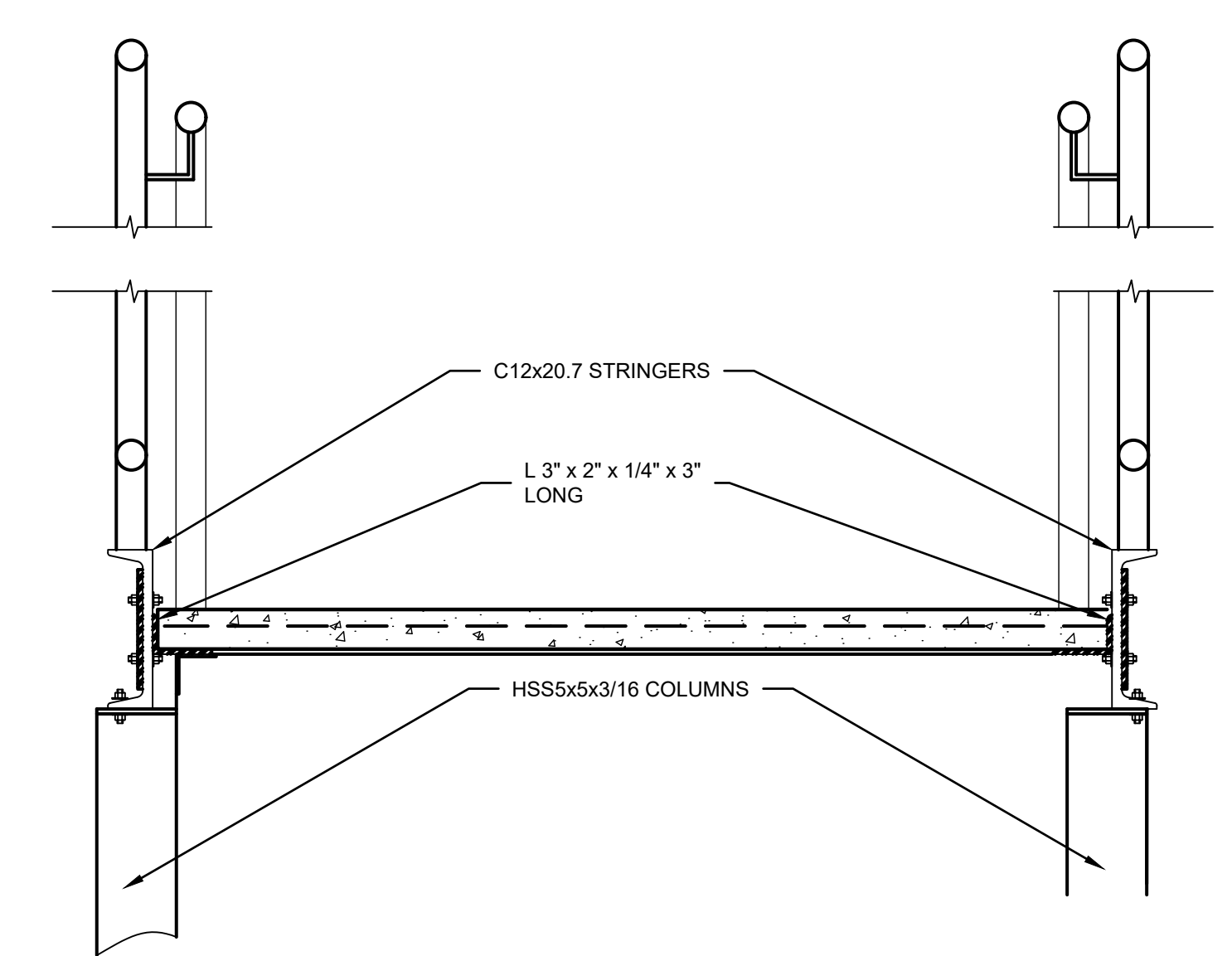
NOTE: INSTALL HANDRAILS BOTH SIDES PER KENTUCKY BUILDING CODE SEE DETAILS 04, 05 OF A8.01 FOR HANDRAILS AGAINST WALL



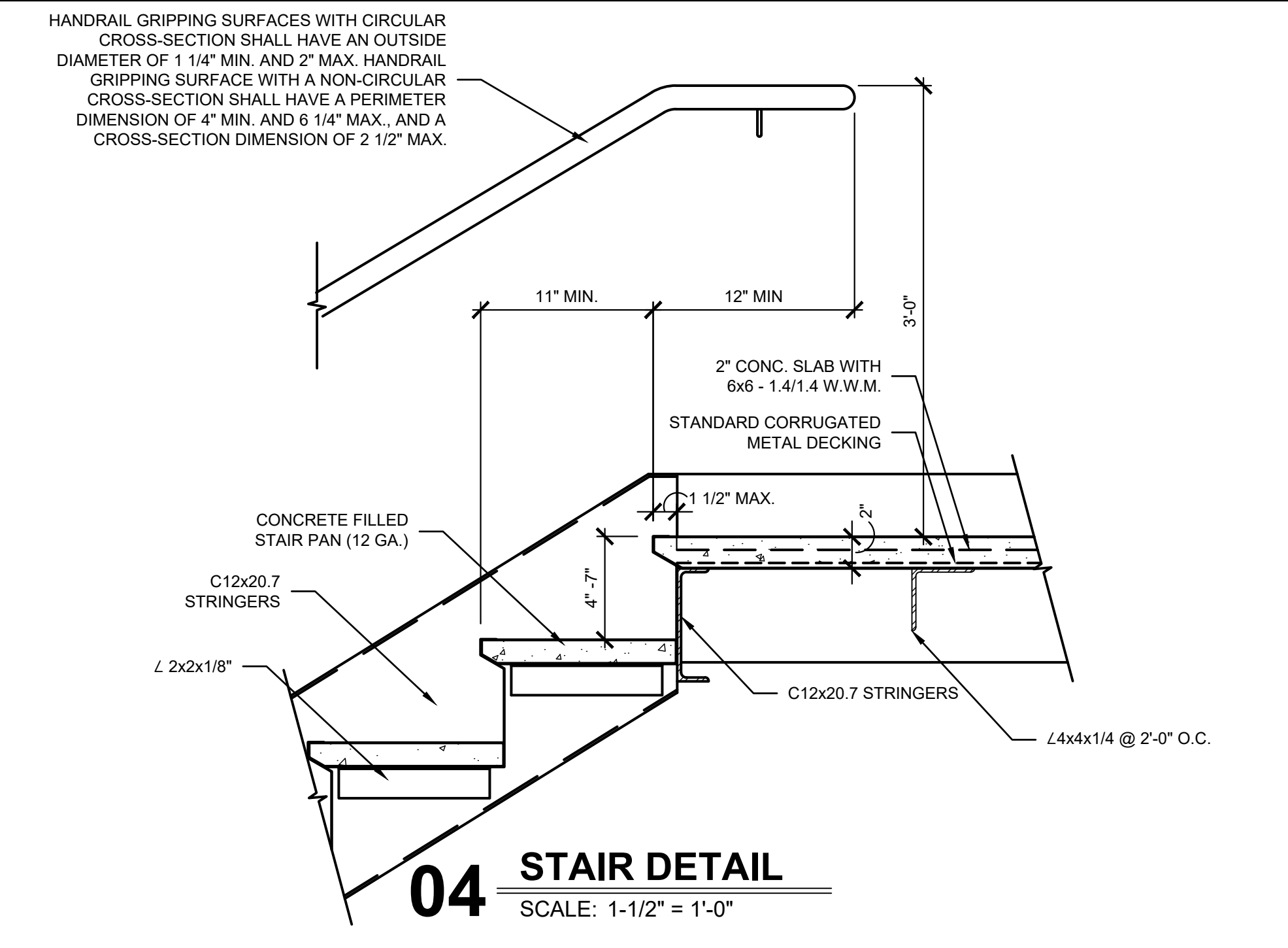
**01 STAIR SECTION DETAIL**  
SCALE: 1 1/2" = 1'-0"



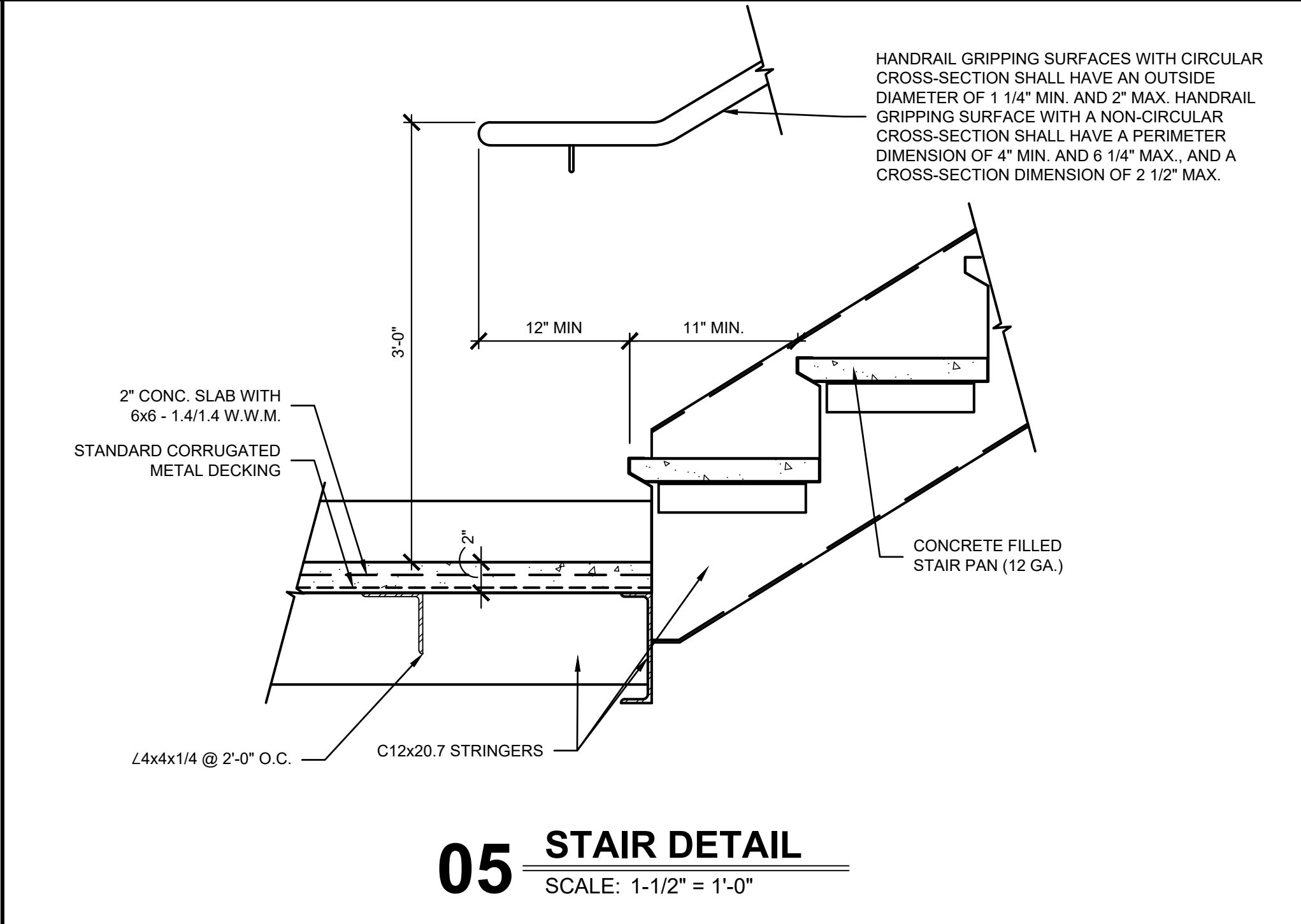
**02 STAIR DETAIL**  
SCALE: 1-1/2" = 1'-0"



**03 STAIR DETAIL**  
SCALE: 1-1/2" = 1'-0"



**04 STAIR DETAIL**  
SCALE: 1-1/2" = 1'-0"



**05 STAIR DETAIL**  
SCALE: 1-1/2" = 1'-0"



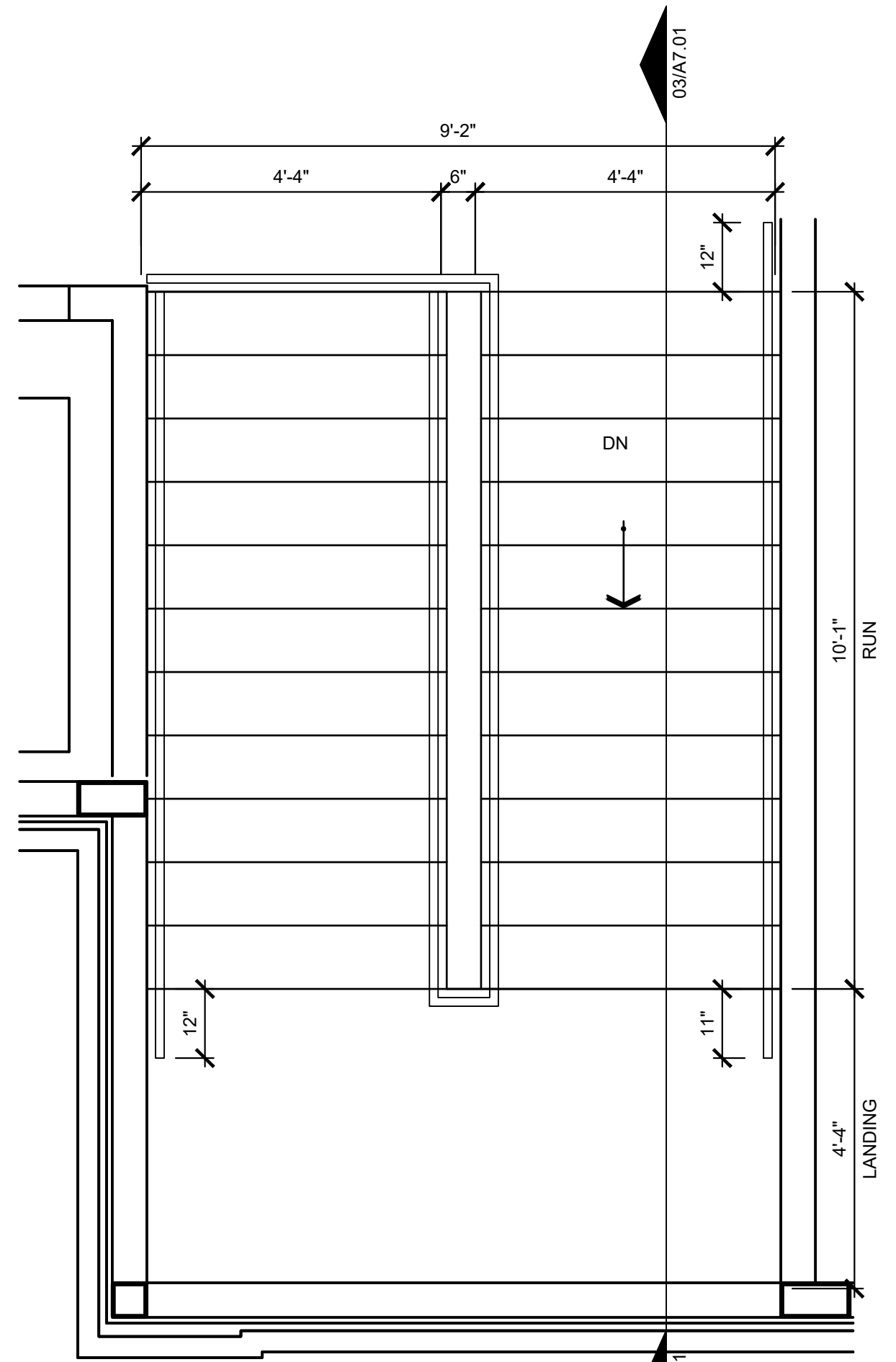
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**SAMUELS FIELD AIRPORT TERMINAL**  
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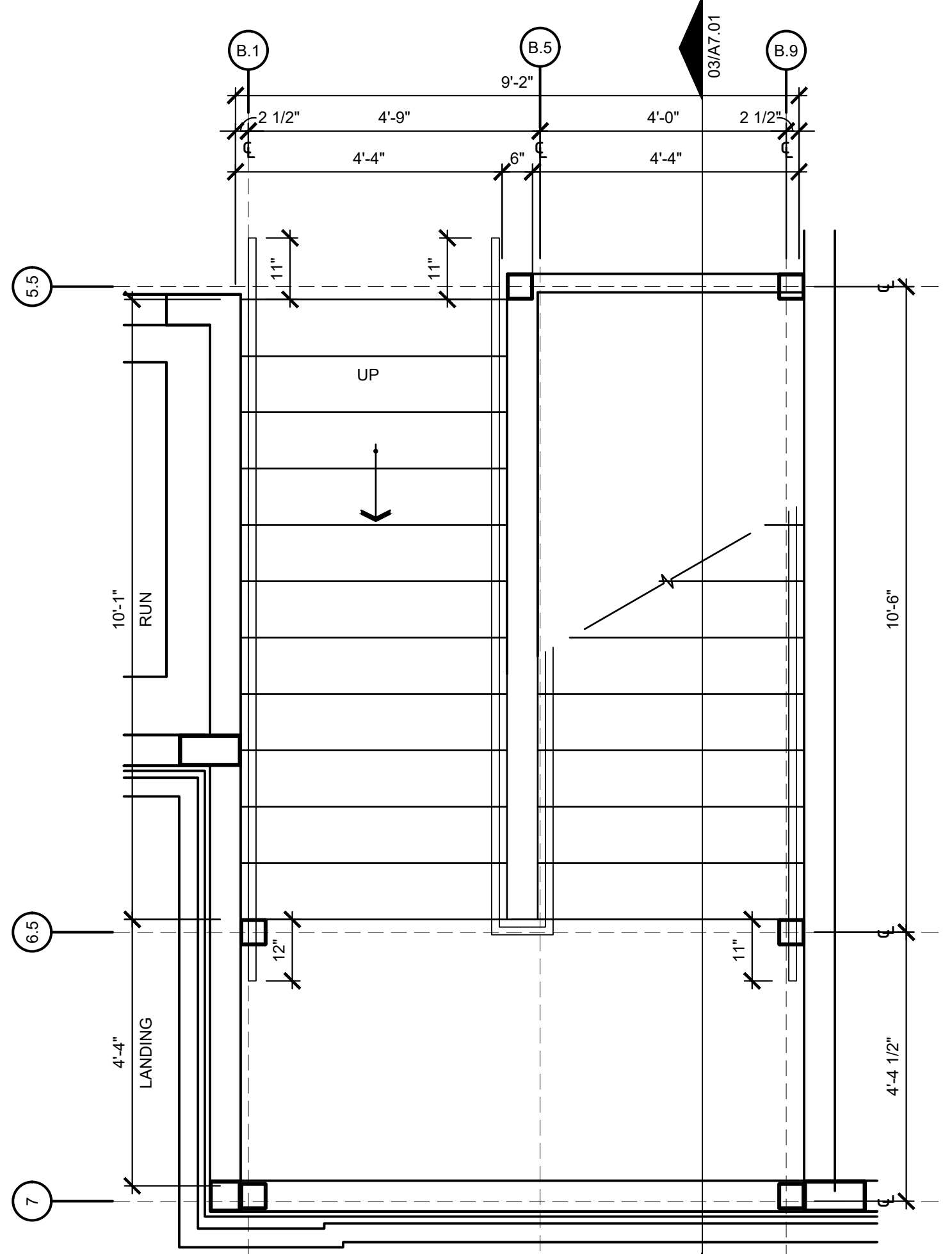
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PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: A7.01 Stair Details.dwg - DATE: Jun 29, 2021 11:56AM - BY: DEBBY BIRD

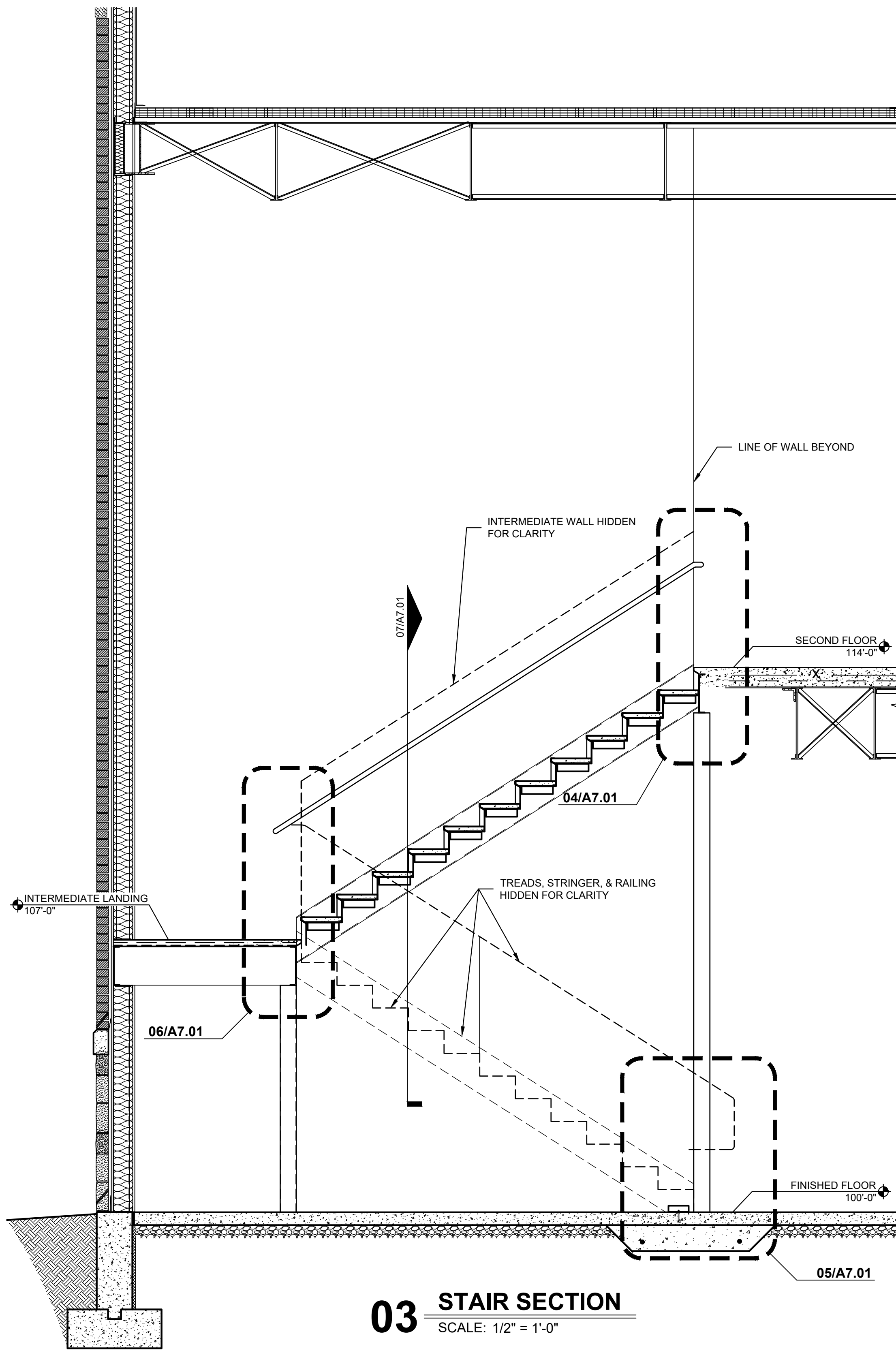




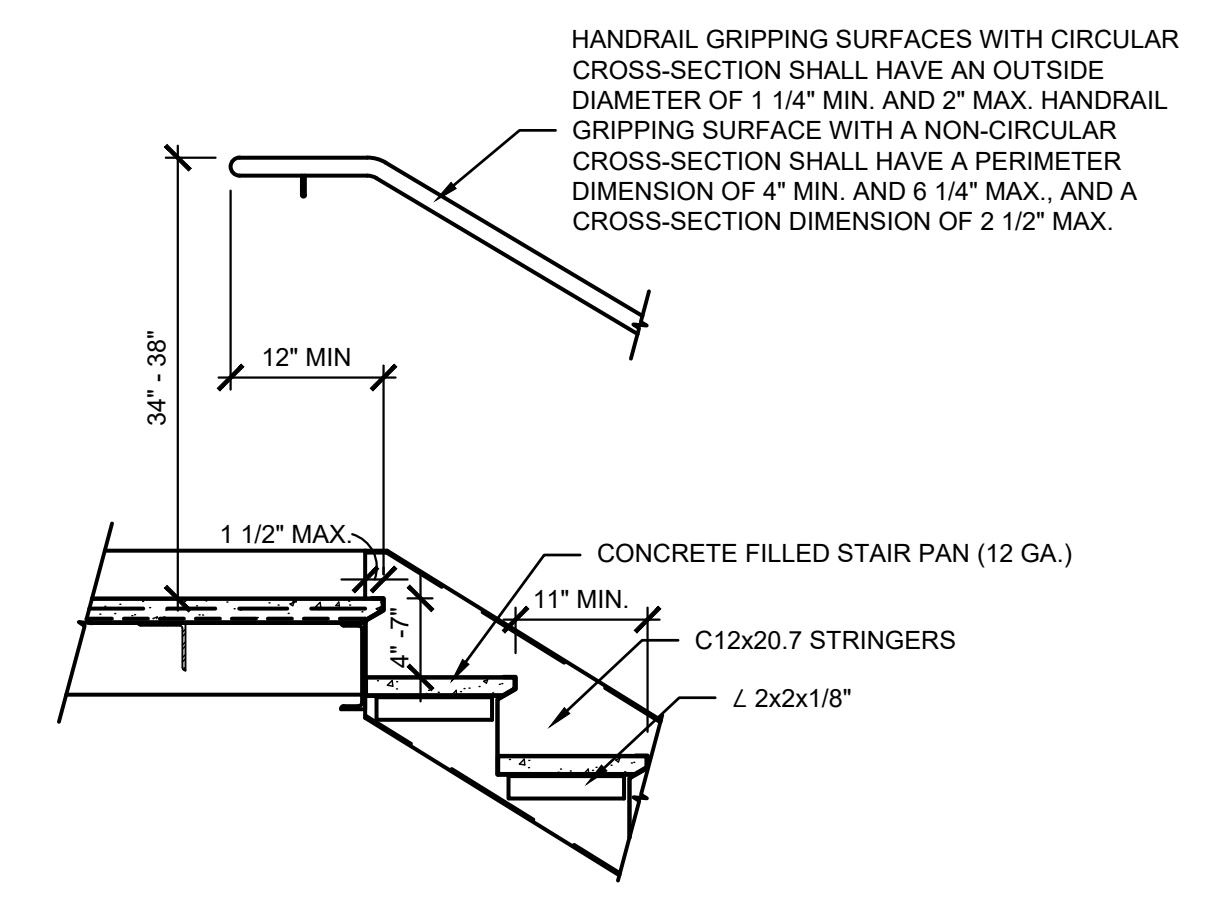
**01 SECOND FLOOR STAIR PLAN**  
SCALE: 1/2" = 1'-0"



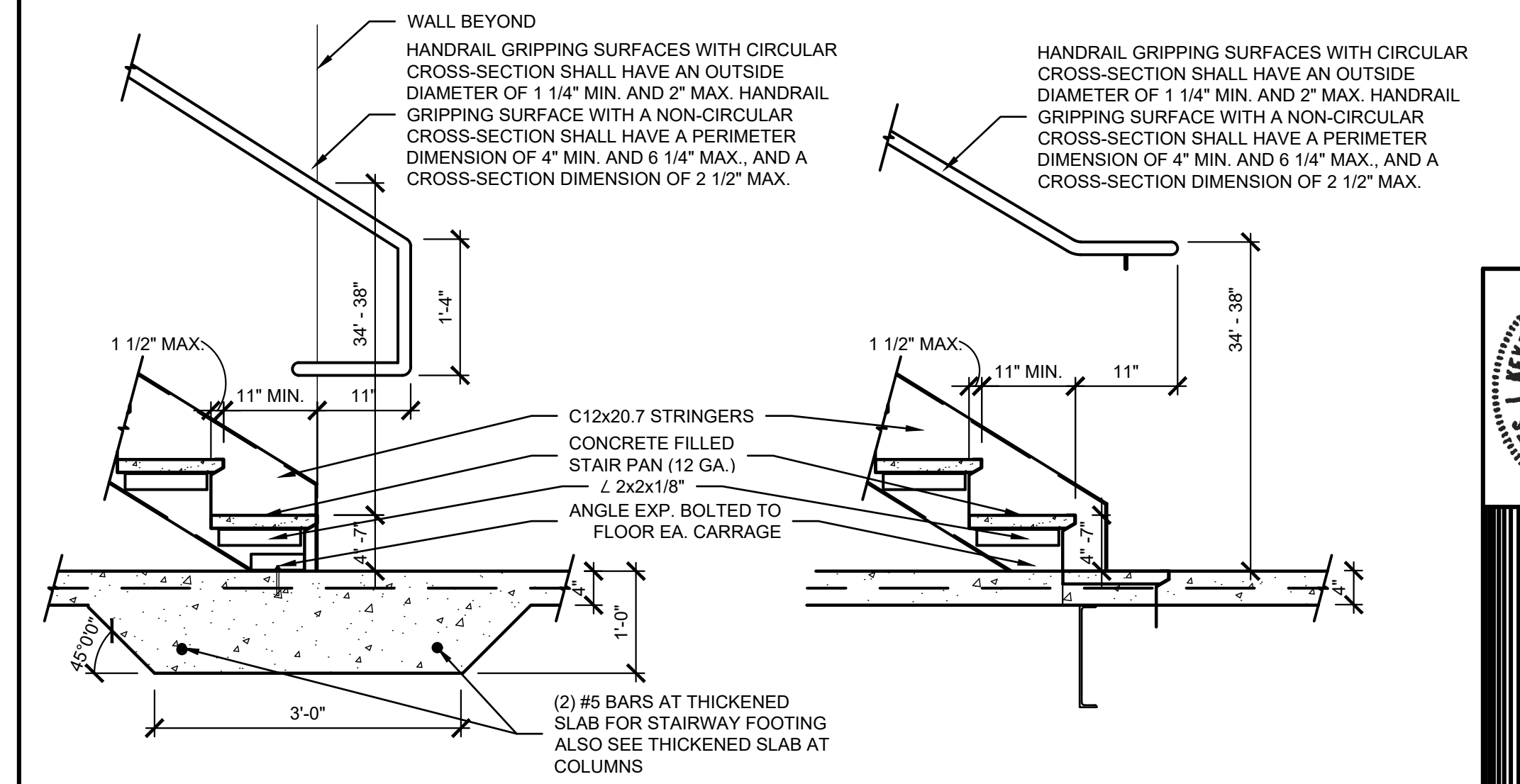
**02 FIRST FLOOR STAIR PLAN**  
SCALE: 1/2" = 1'-0"



**03 STAIR SECTION**  
SCALE: 1/2" = 1'-0"

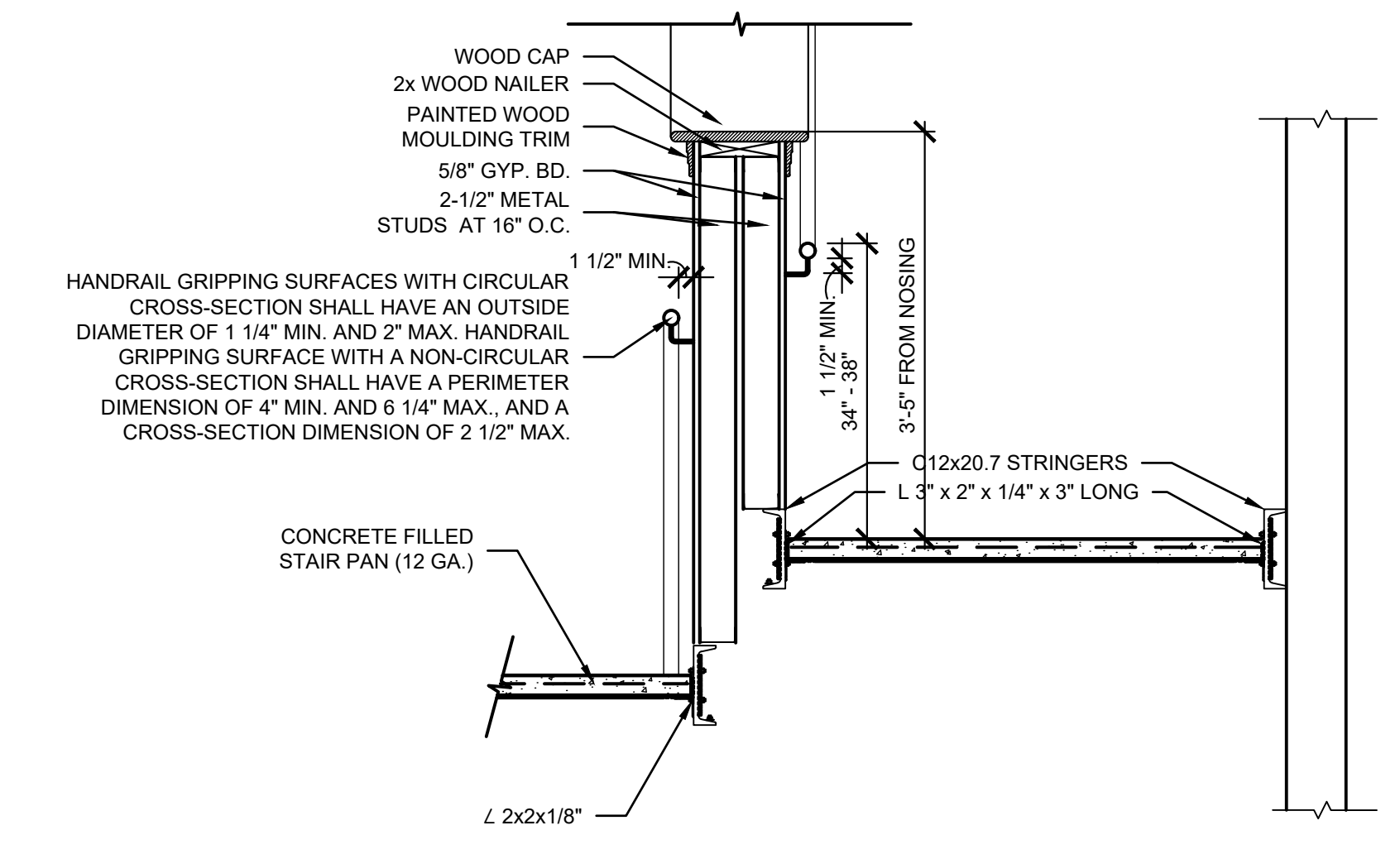


**04 HANDRAIL DETAIL**  
SCALE: 3/4" = 1'-0"



**05 HANDRAIL DETAIL**  
SCALE: 3/4" = 1'-0"

**06 HANDRAIL DETAIL**  
SCALE: 3/4" = 1'-0"



**07 STAIR SIDE ELEVATION**  
SCALE: 3/4" = 1'-0"



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INTERIOR STAIR PLANS & DETAILS

**A7.02**

## HVAC SYSTEM GENERAL NOTES

- A. IN GENERAL THE DRAWINGS FOR THE HEATING AND COOLING SYSTEM SHALL BE CONSIDERED DIAGRAMMATIC. DESIGN AND INSTALLATION OF THE HEATING AND COOLING SYSTEM SHALL BE IN ACCORDANCE WITH THE "GUIDE" OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS.
- B. ALL WORK SHALL COMPLY WITH THE INTERNATIONAL MECHANICAL CODE, ASHRAE, SMACNA, OSHA, AND LOCAL CODE REGULATIONS. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMITY WITH THESE REQUIREMENTS.
- C. INSTALLATION OF ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE PRACTICE OF GOOD WORKMANSHIP AND IN ACCORDANCE WITH APPLICABLE REQUIREMENTS.
- D. THE HEATING AND COOLING CONTRACTOR SHALL CORRECT ANY DEFECTS, OMISSIONS AND ERRORS UPON REQUEST BY THE OWNER AND THE FINAL RESPONSIBILITY FOR CORRECT INSTALLATION AND PROPER FUNCTIONING OF THE HEATING AND COOLING SYSTEM SHALL REST WITH THE HEATING AND COOLING CONTRACTOR.
- E. THE HEATING AND COOLING CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTIONS AND APPROVAL OF HEATING AND COOLING SYSTEM, INSTALLATION OF EQUIPMENT FOR FINAL ACCEPTANCE OF THE COMPLETE HEATING AND COOLING SYSTEM INSTALLATION BY STATE AND LOCAL INSPECTORS.
- F. PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL HVAC UNITS.
- G. VERIFY OPENING DIMENSIONS FOR ALL DUCTWORK ROUTED IN TRUSS/JOIST BAY OR THROUGH TRUSS/JOIST OPENINGS. COORDINATE DUCT SIZES AND LAYOUT PRIOR TO FABRICATION.
- H. ALL ROOF CURBS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR.
- I. PROVIDE ALL THERMOSTATS FOR HVAC SYSTEMS. MECHANICAL CONTRACTOR TO INSTALL THERMOSTAT AND WIRING. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND ROUGH-IN BOXES FOR THERMOSTAT INSTALLATION COORDINATE LOCATIONS WITH ELECTRICAL CONTRACTOR.

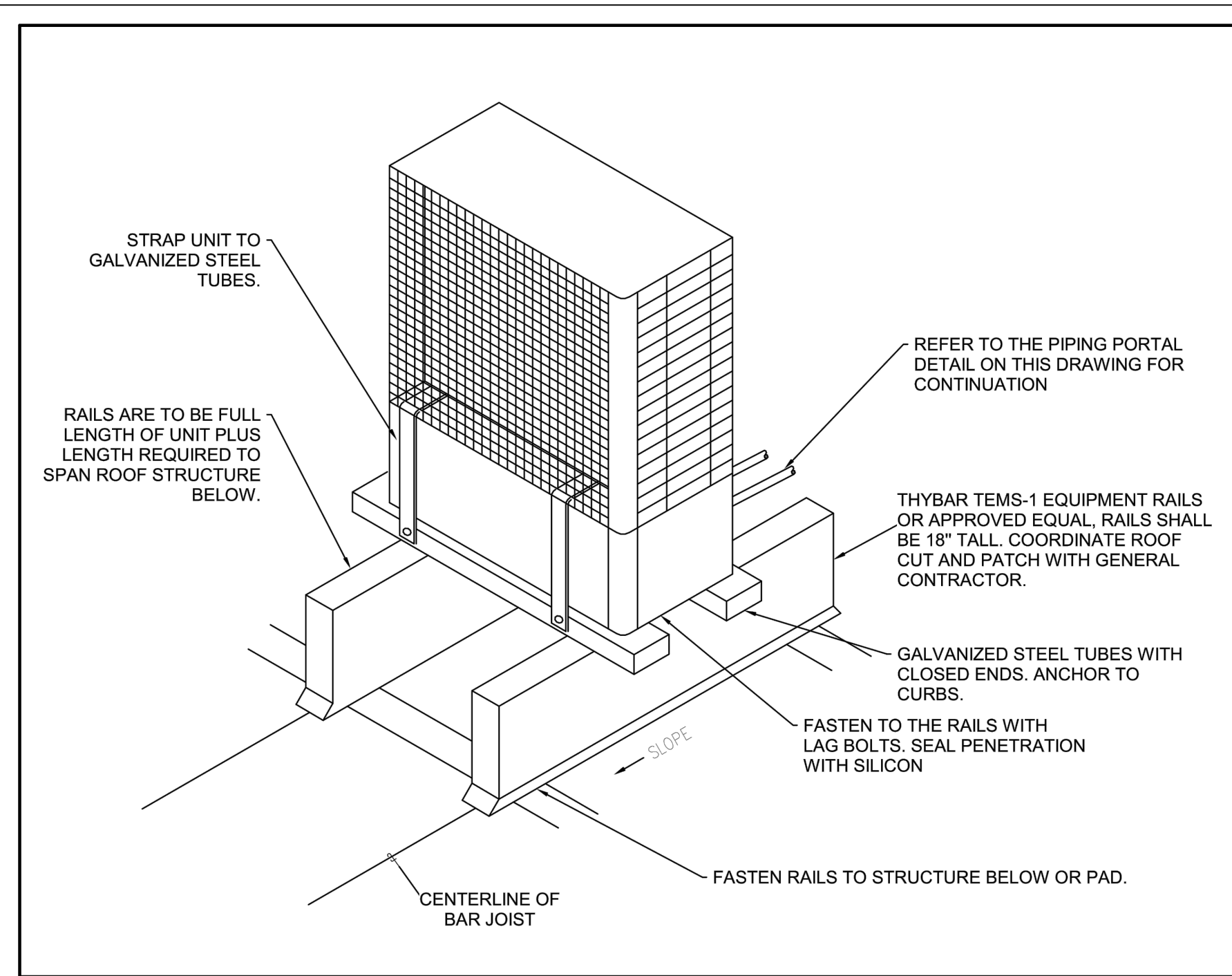
### MECHANICAL SPECIFICATIONS:

#### DIVISION 23 - HVAC MATERIALS AND METHODS

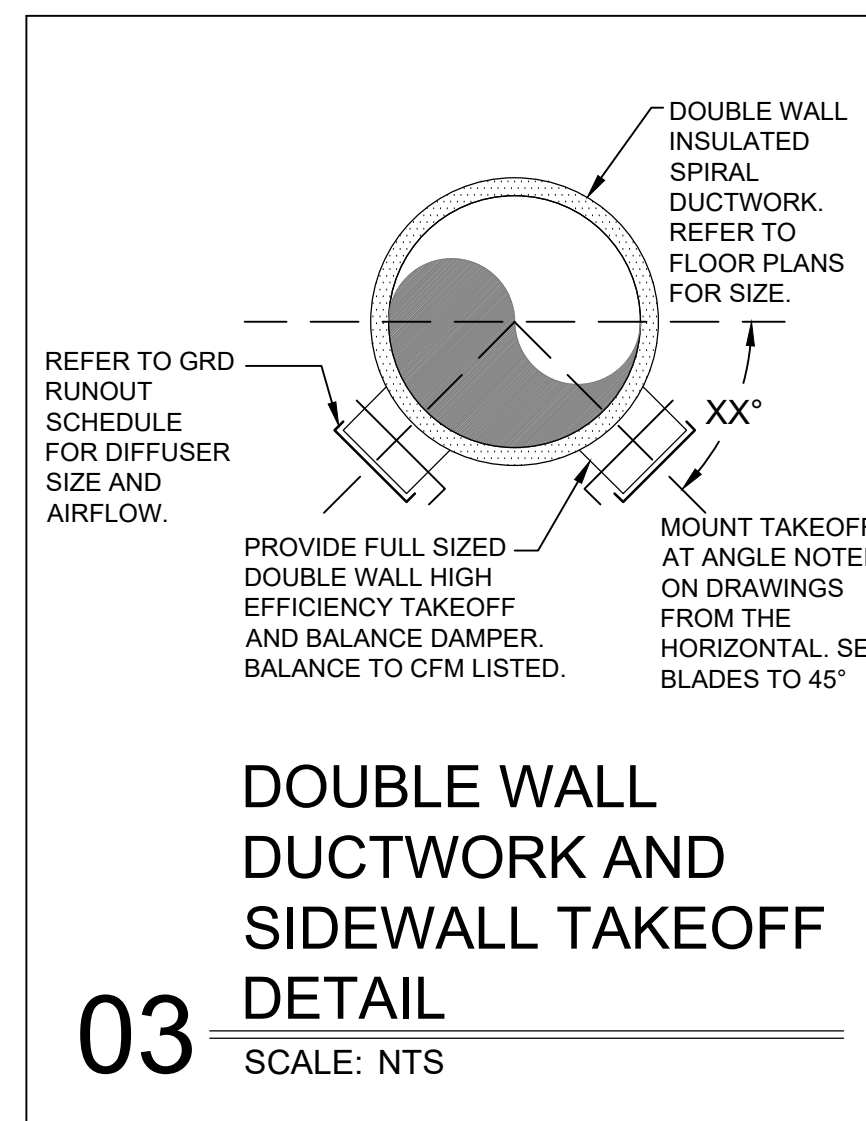
- A) DUCT WORK
- 1) FLEX DUCT MAY BE USED FOR FINAL CONNECTION TO DIFFUSERS ROOM. FLEX DUCT RUNS SHALL NOT EXCEED 5 LINEAL FEET. USE THERMAFLEX "G-KM" INSULATED FLEX DUCT OR EQUAL.
  - 2) ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE INSULATED.
  - 3) DUCT INSULATION SHALL BE ELASTOMERIC OR 2 1/2" FIBERGLASS BLANKET WITH FOIL VAPOR BARRIER. USE OWENS/CORNING ALL SERVICE FIBERGLASS DUCT WRAP, "FACED DUCT WRAP - TYPE 75", 2" THICK FIBERGLASS DUCT WRAP, FACTORY LAMINATED TO A REINFORCED FOIL KRAFT VAPOR BARRIER. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS. UTILIZE R-6.5 (R-8 WHERE SPECIFIED) SEAL JOINTS AND SEAMS TO MAINTAIN VAPOR BARRIER. INSULATE SUPPLY AND RETURN AIR DUCTS WITH R6 INSULATION. UTILIZE R8 DUCT INSULATION ON ALL OUTSIDE AIR DUCTWORK. EXPOSED DUCTWORK THAT REQUIRES INSULATION SHALL BE INSULATED WITH JOHNS-MANVILLE 800 SERIES DUCT BOARD INSULATION AND SHALL BE PAINTED CUSTOM COLOR SELECTED BY ARCHITECT.
  - 4) ALL EXPOSED DUCTWORK SHALL BE PAINTED BY CUSTOM COLOR SELECTED BY THE ARCHITECT.
  - 5) PROVIDE FLEXIBLE CONNECTIONS BETWEEN DUCTWORK AND FURNACE OR FAN.
  - 6) ALL BRANCH CONNECTIONS AND TRANSVERSE JOINTS SHALL BE SEALED WITH HARD CAST LIQUID SEALANT OR EQUAL. DUCT TAPE SHALL NOT BE PERMITTED.
  - 7) INTERNAL DUCT LINER MAY ONLY BE USED FOR SOUND CONTROL. INCREASE DUCT SIZE AND AIR VOLUME AS REQUIRED.
  - 8) ALL DUCT SHALL BE CONCEALED IN WALLS OR CEILING UNLESS SHOWN EXPOSED.
  - 9) ALL DUCT SHALL BE SUPPORTED BY UNI-STRUT AND ALL-THREAD ROD.
  - 10) ALL SYSTEMS IN FINISHED AREAS SHALL HAVE DUCTED SUPPLY & RETURN.
  - 11) EXPOSED DOUBLE WALL DUCTWORK:
    - 11)1) PROVIDE INSULATED DOUBLE-WALL SUPPLY AIR DUCTWORK IN EXPOSED AREAS.
    - 11)2) OUTER DUCTWORK SHALL BE CONSTRUCTED OF 'PAINT GRIP' STEEL
    - 11)3) INNER SHELL SHALL BE GALVANIZED STEEL.
    - 11)4) ALL FITTINGS SHALL BE MADE BY THE SAME MANUFACTURER.
    - 11)5) PROVIDE A FIBERGLAS LINER FOR INNER SHELL MATCHING INSULATION SPECIFICATIONS ABOVE. NO INSULATION SHALL BE EXPOSED TO THE AIR STREAM.
- B) EQUIPMENT
- 1) AHU AND AH UNIT MANUFACTURERS SHALL BE TRANE. PERFORMANCE FOR ALTERNATE MANUFACTURER'S SHALL BE VERIFIED PRIOR TO SUBMITTING FOR REVIEW.
  - 2) UNIT EFFICIENCY SHALL BE APPROXIMATELY 95% UNLESS NOTED OTHERWISE.
  - 3) AHU SEER RATING SHALL BE 15 OR GREATER. DX SPLIT UNITS SHALL HAVE A SEER RATING OF 17 OR HIGHER.
  - 4) HVAC CONTRACTOR SHALL PROVIDE ANY MOTOR STARTERS THAT ARE REQUIRED. STARTERS WILL BE INSTALLED BY ELECTRICAL CONTRACTOR.
  - 5) ANY FURNACE, ROOFTOP UNIT OR AIR HANDLER, OR AC UNIT RATED AT 2,000 CFM OR GREATER SHALL HAVE A DUCT SMOKE DETECTOR, REMOTE TEST SWITCH AND AUDIO/VISUAL ALARM AS REQUIRED.
  - 6) VARIABLE REFRIGERANT FLOW/VOLUME SYSTEM SHALL BE DESIGNED BY THE MANUFACTURER'S ENGINEER AND INSTALLED BY A CONTRACTOR THAT HAS COMPLETED THE MANUFACTURER'S INSTALLATION TRAINING IN THE PAST 36 MONTHS. PROVIDE A COMPLETE SYSTEM DESIGNED FOR HEAT RECOVERY BY UTILIZING BRANCH SELECTION OR OTHER MEANS. SYSTEM SHALL HAVE STANDALONE THERMOSTATIC CONTROL WITH PROGRAMMABLE THERMOSTATS. PROVIDE RIGID COPPER LINES FOR ALL LINES BETWEEN THE OUTDOOR CONDENSER AND THE INDOOR DISTRIBUTION SYSTEM (BRANCH SELECTOR BOXES).
- C) PIPING
- 1) REFRIGERANT PIPING SHALL BE ACR HARD COPPER. INSULATE ALL LINES WITH 1" ARMAFLEX, SEALED TO MAINTAIN VAPOR BARRIER. INSULATION MUST BE OUTDOOR RATED.
  - 2) CONDENSATE PIPING SHALL BE COPPER. PROVIDE A FULL SIZE, CAPPED TRAP, SAFETY T SWITCH AND DRAIN AT EACH AIR-HANDLING UNIT COOLING COIL/CONDENSING FURNACE. INSULATE PIPING WITH 1/2" THICK INSULATION.
  - 3) PROVIDE LIQUID SUB-COOLER AND ADDITIONAL REFRIGERANT SUCTION LINE FOR HIGH LIFT APPLICATIONS. SUB-COOLER AND ADDITIONAL PIPING SHALL BE SIZED FOR EQUIPMENT.
- D) DRAIN PANS
- 1) DRAIN PANS SHALL BE SECURELY SUPPORTED USING THREADED ROD AND UNI-STRUT OR PLACE ON DECKING USED TO SUPPORT UNIT. DRAIN PANS WILL NOT BE ACCEPTED IF HOLES EXIST OTHER THAN DRAIN PIPE OUTLET. EACH DRAIN PAN SHALL HAVE AN AUXILIARY FLOAT SWITCH CONNECTED FOR UNIT SHUT DOWN.
- E) THERMOSTATS AND CONTROLS
- 1) THERMOSTATS IN FINISHED AREAS SHALL BE 7 DAY PROGRAMMABLE WITH OCCUPIED OVERRIDE.
  - 2) THERMOSTATS INSTALLED IN RETURN AIR DUCTWORK SHALL BE AVERAGED WITH ASSOCIATED ROOM THERMOSTATS AND CONTROLLED BY THE WALL PLATE IN THE MRI CONTROL ROOM.
  - 3) PROVIDE AVERAGING THERMOSTATIC CONTROL FOR ANY SPACE SERVED BY MULTIPLE TEMPERATURE SENSORS. THERMOSTAT CONTROLLER SHALL BE CAPABLE OF AVERAGING TEMPERATURE SENSORS, INDEPENDENT TEMPERATURE SENSING, AND VENTILATION (FAN ONLY) CONTROLS FOR UNITS AS INDICATED ON THE FLOOR PLANS. BASIS OF DESIGN IS HONEYWELL VISION PRO 8000.
- F) TESTING
- 5) PROVIDE AIR BALANCE TESTING AND ADJUSTMENT TO PROVIDE FLOW RATES AS DESIGNED. PROVIDE ONE (1) ADDITIONAL VISIT TO BALANCE ACCORDING TO OCCUPANCY LOADS.

#### HVAC SCOPE OF WORK

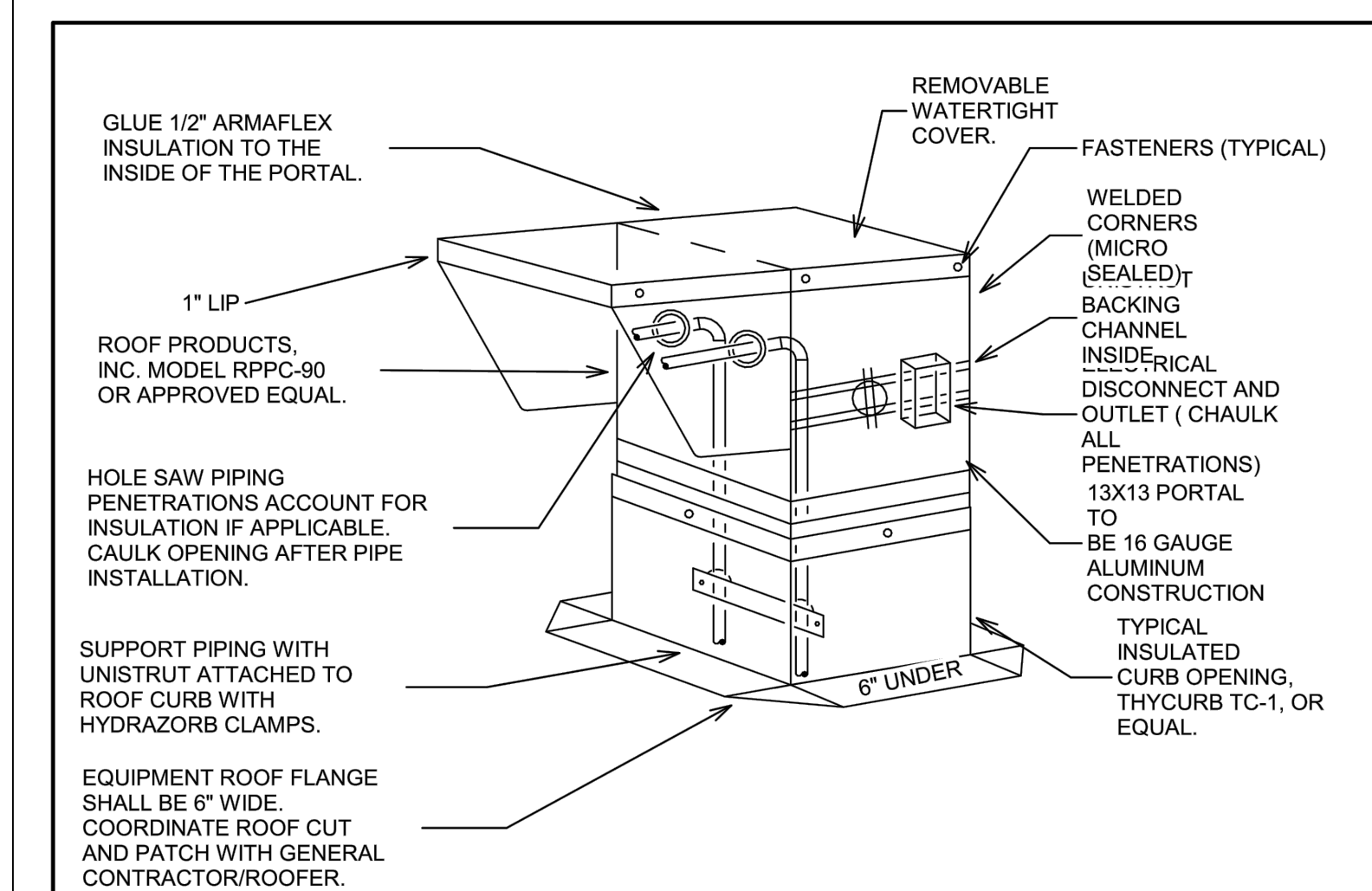
THE DRAWINGS SHALL BE PROPERLY COORDINATED WITH THOSE OF OTHER TRADES TO PREVENT CONFLICTS. MAINTAIN A SEPARATE SET OF PRINTS SHOWING ALL CHANGES AND VARIATIONS THAT ARE MADE DURING CONSTRUCTION.



**01** CONDENSING UNIT DETAIL  
SCALE: NTS



**03** DOUBLE WALL DUCTWORK AND SIDEWALL TAKEOFF DETAIL  
SCALE: NTS



**02** PIPING PORTAL DETAIL  
SCALE: NTS

## SHEET METAL GENERAL NOTES:

ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS. PROVIDE AND INSTALL HANGERS PER SMACNA RECOMMENDED PRACTICES.

- 3" - 12" ROUND DUCT - 26 GAUGE MINIMUM.
- 14" - 18" ROUND DUCT - 24 GAUGE MINIMUM.
- 3" - 12" RECTANGULAR DUCT WIDTH - 26 GAUGE MINIMUM.
- 14" - 30" RECTANGULAR DUCT WIDTH - 24 GAUGE MINIMUM.

PROVIDE CROSS BREAKS ON ALL DUCTS 12" WIDE OR LARGER. DUCTS SHALL BE HUNG BY 18 GAUGE STRAPS, NO LESS THAN ONE SET OF HANGERS PER SECTION.

PROVIDE FLEXIBLE CANVAS DUCT CONNECTIONS AT THE INLET AND OUTLET OF EACH PIECE OF EQUIPMENT. DURO-DYNE, VENTFABRICS INC, U.S. RUBBER OR APPROVED EQUAL, 20 OZ. NEOPRENE COATED GLASS FABRIC.

PROVIDE A COMMERCIAL HIGH EFFICIENCY ANGLED BOOT TAKE-OFF AT EACH SUPPLY, RETURN, AND EXHAUST GRILLE / DIFFUSER TAKE-OFF. HIGH EFFICIENCY TAKE-OFF BOOT SHALL BE CFM CONTROLS, MODEL CHEABT OR EQUAL. 26 GAUGE BODY, 20 GAUGE BLADE, 2" STAND OFF BRACKET, LOCKING QUADRANT, DIE CAST METAL SLIDE PIN, AND NYLON BUSHINGS.

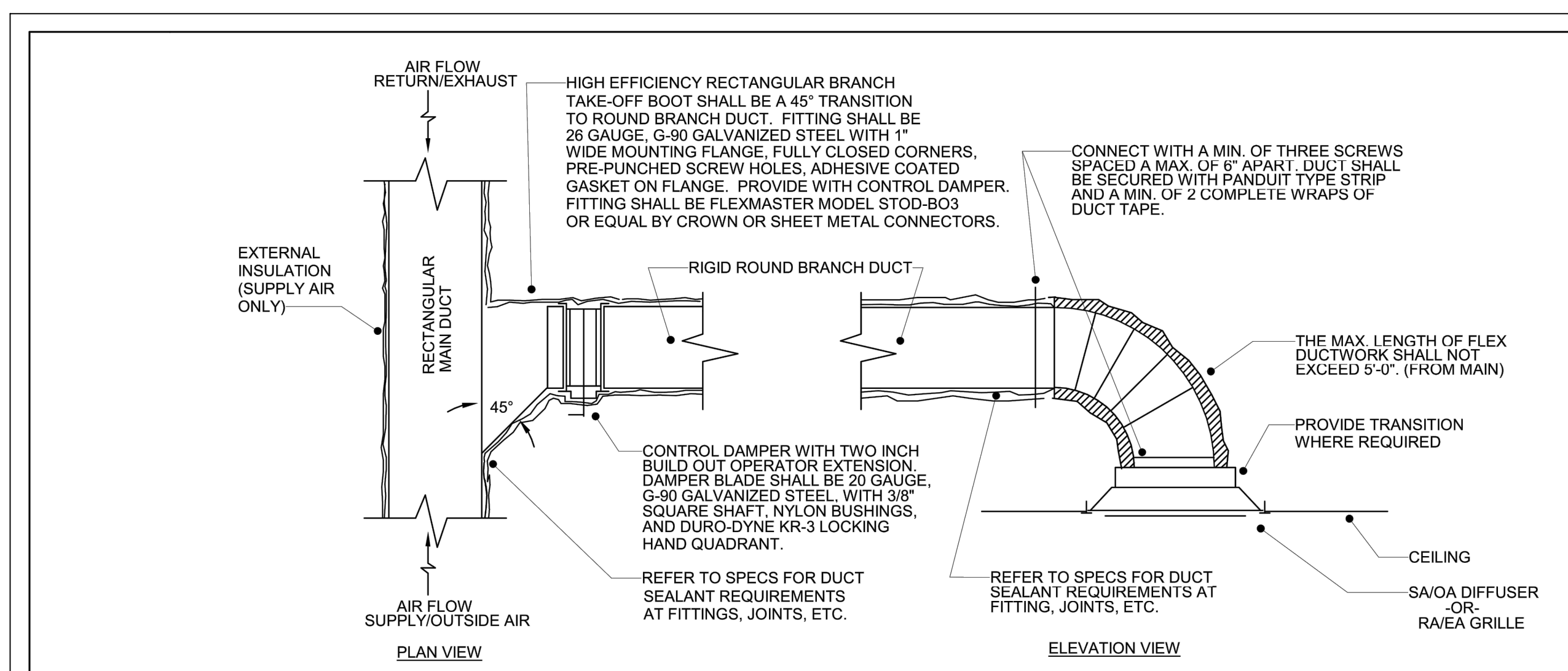
ALL CONCEALED SUPPLY DUCTWORK SHALL BE WRAPPED WITH OWENS/CORNING ALL SERVICE FIBERGLASS DUCT WRAP, "FACED DUCT WRAP - TYPE 75", 2" THICK FIBERGLASS DUCT WRAP, FACTORY LAMINATED TO A REINFORCED FOIL KRAFT VAPOR BARRIER. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS.

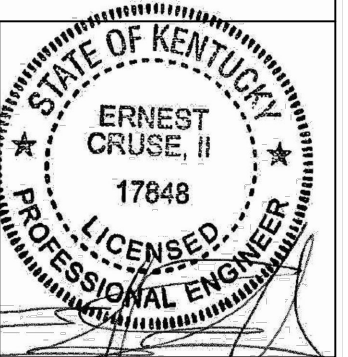
FLEXIBLE DUCTWORK IS ALLOWED FOR USE ON CONCEALED DUCTWORK. THE MAXIMUM LENGTH SHALL BE SIX FEET. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX G-KM OR EQUAL.

SEAL ALL JOINTS WITH HARDCAST "IRONGRIP 601". APPLY PER THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE AN AIR BALANCE MATCHING DESIGN SETTINGS. BALANCE ALL ROOF TOP UNITS, EXHAUST FANS, AND EACH GRD TO WITHIN 10% OF DESIGN.



**04** TYPICAL RECT. TO ROUND BRANCH DUCT DETAIL  
SCALE: NTS

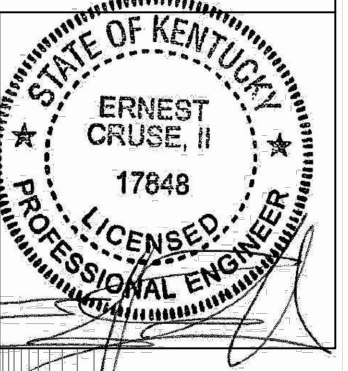


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NEW CONSTRUCTION  
NELSON COUNTY  
AIRPORT TERMINAL

**TAGGED NOTES:**

1. ALL ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED WITH ROOF CURB. COORDINATE CURB WITH ROOF MANUFACTURER. HVAC EQUIPMENT SHALL BE A MINIMUM OF 10'-0" FROM EDGE OF THE BUILDING. TRAP AND SPILL CONDENSATE TO ROOF. CUT 18x18 OPENING IN TOP OF RETURN AIR DUCTWORK FOR RETURN AIR DUCT. KEEP RETURN DUCTWORK AS HIGH AS POSSIBLE IN SPACE.
2. DUCTWORK THRU SECOND FLOOR SLAB. COORDINATE WITH STRUCTURE UNDER SLAB.
3. DUCTWORK UP THRU ROOF TO ROOF MOUNTED EQUIPMENT. COORDINATE PENETRATION WITH ROOFING MANUFACTURER AND STRUCTURAL DRAWINGS.
4. REFRIGERANT PIPING UP THRU PIPING PORTAL THRU ROOF. COORDINATE CURB AND PORTAL WITH ROOFING CONTRACTOR.
5. INSTALL HIGH EFFICIENCY TAKE-OFFS ON ALL BRANCH RUN OUT DUCTWORK. TYPICAL OF ALL. BALANCE AIRFLOW WITH MANUAL DAMPER OR DIFFUSER BUTTERFLY VALVE AS REQUIRED.
6. INSTALL DUCTLESS SPLIT UNIT AT 9'-0" AFF. PROVIDE MANUFACTURER THERMOSTAT AND MOUNT TO WALL. PUMP CONDENSATE TO OPEN RECEPTACLE IN RESTROOM WET WALL. COORDINATE LOCATION WITH PLUMBER.
7. PROVIDE DOUBLE WALL DUCTWORK IN MAIN LOBBY AREA. REFER TO THE DOUBLE WALL DUCTWORK DETAIL. DIFFUSERS SHALL BE 30' FROM THE HORIZONTAL.

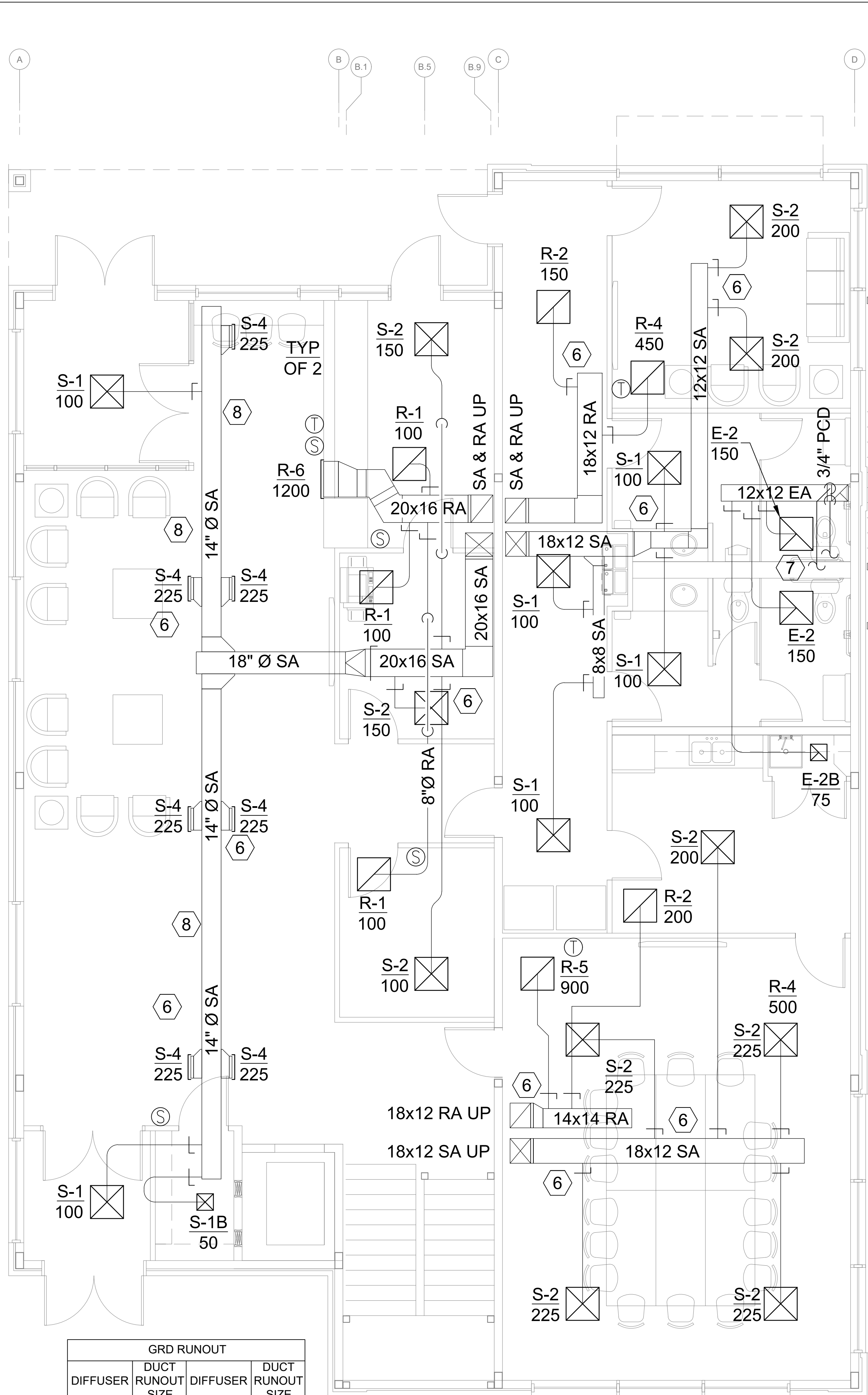
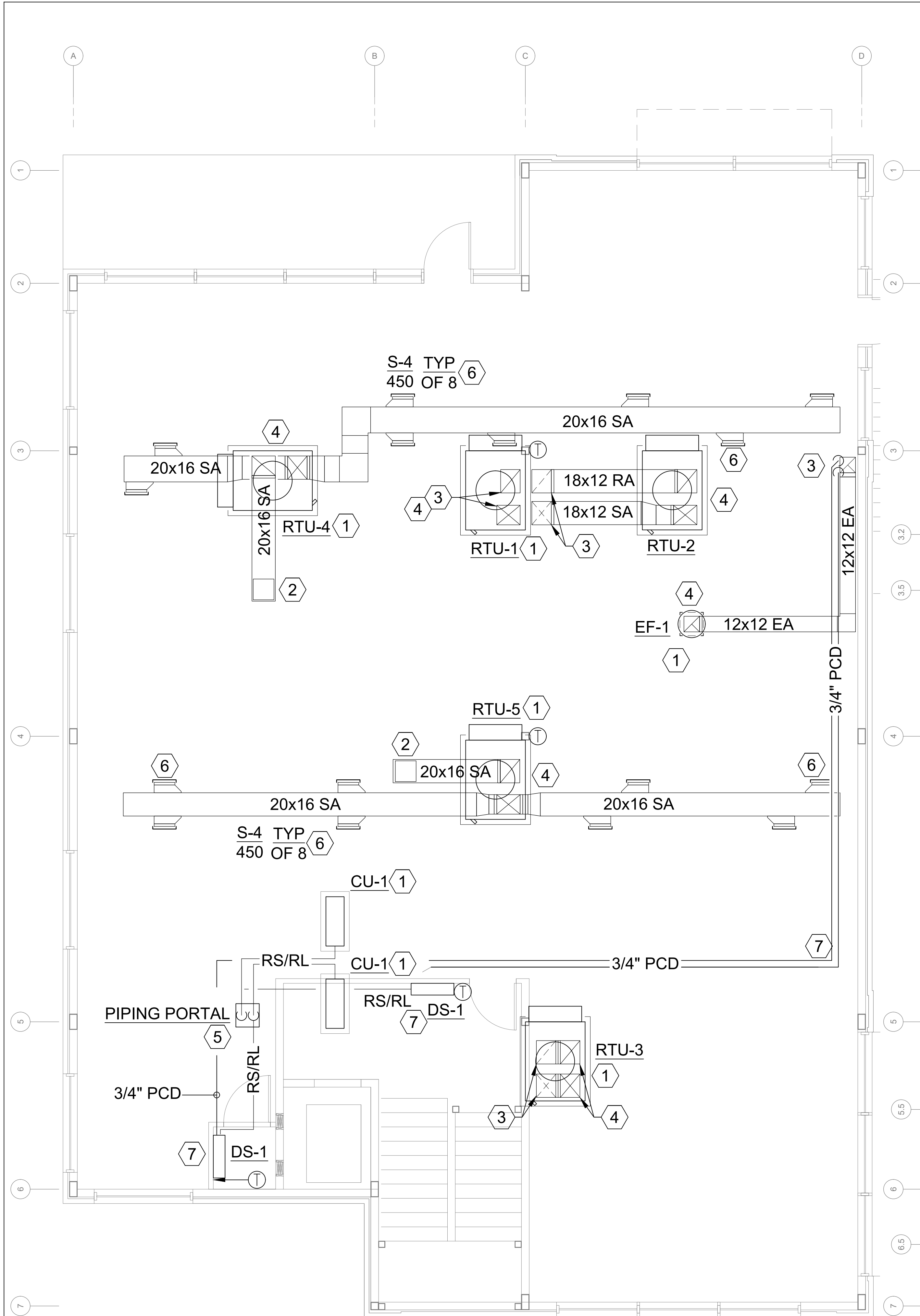


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NEW CONSTRUCTION  
**NELSON COUNTY AIRPORT TERMINAL**

MECHANICAL FLOORPLANS

M1.02



GRD RUNOUT			
DIFFUSER	DUCT RUNOUT SIZE	DIFFUSER	DUCT RUNOUT SIZE
S-1	6" Ø	R-1	6" Ø
S-2	8" Ø	R-2	8" Ø
S-4	10" Ø	R-4	12" Ø
E-2	8" Ø	R-5	14" Ø
		R-6	26x16

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GRILLES, REGISTERS, AND DIFFUSERS							
SYMBOL	MANUFACTURER MODEL	MATERIAL AND TYPE	CFM RANGE	INLET DUCT SIZE	FACE SIZE	NECK SIZE	REMARKS
S-1	TITUS OMNI-AA	EXTRUDED ALUMINUM PLAQUE FACE DIFFUSER	0-100	6"ø	24x24	6"ø	1,2,3,5,8
S-2	TITUS OMNI-AA	EXTRUDED ALUMINUM PLAQUE FACE DIFFUSER	101-225	8"ø	24x24	8"ø	1,2,3,5,8
S-4	TITUS 300FS	EXTRUDED ALUMINUM DOUBLE DEFLECTION LOUVERED SUPPLY GRILLE	450	16x10	18x12	16x10	3,6,8
R-1	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	0-100	6"ø	24x24	6"ø	1,2,3,8
R-2	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	101-225	8"ø	24x24	8"ø	1,2,3,8
R-4	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	376-600	12"ø	24x24	12"ø	1,2,3,8
R-5	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	601-1000	14"ø	24x24	12"ø	1,2,3,8
R-6	TITUS 350FL	EXTRUDED ALUMINUM 3/4" FIXED BLADE 35° ANGLE	1200	26x16	28x18	26x16	3,6,8
E-1	TITUS 50F	EXTRUDED ALUMINUM 1/2" CUBE CORE	0-100	6"ø	12x12	10x10	1,2,3,8

- REMARKS:
- CEILING T-BAR MOUNTED IN 24"x24" ALUMINUM PANEL. GRILLES REGISTERS AND DIFFUSERS WITH AN 'A' DESIGNATION SHALL REQUIRED A PLASTER FRAME TO LAY GRILLE IN GYPSUM BOARD CEILING. DIFFUSERS WITH A 'B' DESIGNATION SHALL BE 12x12 FACE SIZE.
  - INLET TRANSITION BOX ROUND TO RECTANGULAR.
  - PROVIDE WHITE IN COLOR.
  - PROVIDE WITH FILTER FACE AND HINGED DOOR FOR ACCESS. PROVIDE WITH 4 SETS OF 20"x20" FILTERS FOR EACH GRILLE.
  - PROVIDE WITH MOLDED INSULATION BLANKET.
  - GRILLE SHALL BE PROVIDED WITH 1" BORDER TO BE SURFACE OR DUCT MOUNTED. PROVIDE FACE ADJUSTABLE BUTTERFLY BALANCING DAMPER WITH GRILLE.
  - PROVIDE FACTORY MADE DISTRIBUTION PLENUM.
  - ACCEPTABLE MANUFACTURERS: TITUS, PRICE, TUTTLE AND BAILEY, METALAIRE, ANEMOSTAT.

### DUCTLESS MINI-SPLIT

MARK	DS-1
MANUFACTURER MODEL NUMBER	SAMSUNG ARO9ABT
AREA SERVED	STORM SHELTER
CONFITURATION	DX COOLING
FAN CFM / ESP	300 / 0.01"
ELECTRICAL V / Ø / Hz	208/1/60
MCA / MOP	NL
SYMBOL (OUTDOOR)	CU-1
MANUFACTURER MODEL NUMBER	SAMSUNG ARO9ABT
SEER / HSPF	24.5 / 12.5
COOLING (MBH)	9.0
HEATING (MBH)	11.0
REFRIGERANT	R-410A
ELECTRICAL V / Ø / Hz	208/1/60
MCA / MOP	12.0 / 20
REMARKS	ALL

- REMARKS:
- PROVIDE WITH SIGHT GLASS, EXPANSION DEVICE, LINE DRIER, SIZE LINES AND PROVIDE INTERMEDIATE TRAPS PER MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE WITH LOW AMBIENT KIT AND CRANKCASE HEATER
  - PROVIDE WITH UL LISTING.
  - ACCEPTABLE MANUFACTURERS: TRANE, GOODMAN CARRIER, JCI-YORK
  - PROVIDE WITH CONDENSATE PUMP THAT FITS INSIDE INDOOR UNIT HOUSING.

### EXHAUST FAN

SYMBOL	EF-1
MANUF. & MODEL	TWIN CITY 085D BCRD
TYPE	ROOF MOUNTED DOWNBLAST
SERVICE	RESTROOMS
CFM / TSP	400 / 0.5"
SUM OF GRILLES	375
DRIVE / FAN RPM	BELT / 1450
FAN HP	1/4
ELECTRICAL	120 / 1 / 60
MAX SONES	9.1
REMARKS	ALL

- REMARKS:
- THE FAN SHALL BE UL LISTED.
  - PROVIDE MANUFACTURER'S BACKDRAFT DAMPER.
  - PROVIDE WITH A FACTORY MOUNTED AND WIRED VARIABLE MOTOR SPEED CONTROLLER.
  - PROVIDE WITH NEMA 3R DISCONNECT.
  - PROVIDE WITH 14" TALL ROOF CURB.
  - PROVIDE WITH VIBRATION ISOLATION KIT.
  - PROVIDE WITH CONTROL SWITCH INSTALLED IN THE ROOM.
  - ACCEPTABLE MANUFACTURERS: TWIN CITY, GREENHECK, COOK

### PACKAGED ROOF TOP UNIT

SYMBOL	AHU-1, 4, 5	AHU-2	AHU-3
MANUF. & MODEL	TRANE 4YC26060C	TRANE 4YC26024A	TRANE 4YC26036A
SERVICE	LOBBY & 2ND FLOOR	WAITING & RESTROOMS	CONFERENCE ROOM
TYPE OF SYSTEM	PACKAGED ROOFTOP	PACKAGED ROOFTOP	PACKAGED ROOFTOP
CONFIGURATION	VERTICAL DISCHARGE	VERTICAL DISCHARGE	VERTICAL DISCHARGE
ECONOMIZER (APD)	YES-LOW LEAK (0.11")	YES-LOW LEAK (0.11")	YES-LOW LEAK (0.11")
WEIGHT	650 LBS	500 LBS	500LBS
DIMENSIONS	61"W x47"D x 42"T	61"W x47"D x 42"T	61"W x47"D x 42"T
ELECTRICAL	208-230V/1ø/60Hz	208-230V/1ø/60Hz	208-230V/1ø/60Hz
MCA / MOP	44.4 / 60	19.5 / 30	19.7 / 30
SINGLE-POINT CONNECTION	YES	YES	YES
UNIT MOUNTED DISCONNECT	YES - FACTORY	YES - FACTORY	YES - FACTORY
ACOUSTICS (RADIATED)	73 dB	65 dB	70 dB
ACOUSTICS (UNIT DISCHARGE)	N/L	N/L	N/L
ACOUSTICS (UNIT RETURN)	N/L	N/L	N/L
REMAKRS	ALL	ALL	ALL

### SUPPLY AIR FAN

MAXIMUM SA CFM	2,000	800	1,200
SUM OF SA DIFFUSERS	-	-	-
MAX OA CFM	500	200	300
RPM / FAN DIAMETER	VARIES / 11x10	VARIES / 10x10	VARIES / 11x10
TOTAL SP / ESP / BHP	NL / 0.7" / NL	NL / 0.7" / NL	NL / 0.7" / NL
HP/VOLTS/PHASE/Hz	1.0 / SEE ABOVE	0.5 / SEE ABOVE	1.0 / SEE ABOVE
DRIVE / TYPE	DIRECT CENTRIFUGAL	DIRECT CENTRIFUGAL	DIRECT CENTRIFUGAL

### GAS FIRED HEATER

TOTAL CFM	2,000	800	1,200
NAT. GAS LINE PRESSURE	NA	NA	NA
INPUT LOW/HI (MBH)	92 / 115	48 / 60	56.3 / 75
OUTPUT LOW/HI (MBH)	74 / 92	38.4 / 48	45 / 60
TEMP RISE - MIN/MAX	30.0°F / 60.0°F	30.0°F / 60.0°F	30.0°F / 60.0°F
NAT. GAS THERMAL EFF.(MIN)	80%	80%	80%
LP CONVERSION KIT	YES	YES	YES

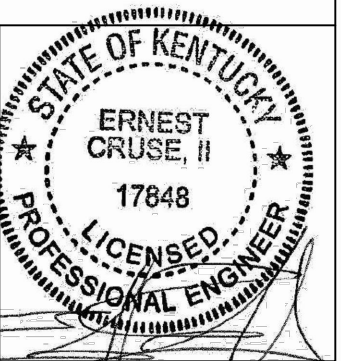
### DX COOLING COIL

MAXIMUM CFM	2,000	800	1,200
STAGED CAPACITY (MBH)	40.5 / 57.5	19.2 / 24.0	25.2 / 35.6
EAT (DB/WB)	80.0°F / 67.0°F	80.0°F / 67.0°F	80.0°F / 67.0°F
REFRIGERANT TYPE	R-410A	R-410A	R-410A
EFFICIENCY @ AHRI (EER/SEER)	15.1	16.0	11.4 / 15.1

### FILTERS

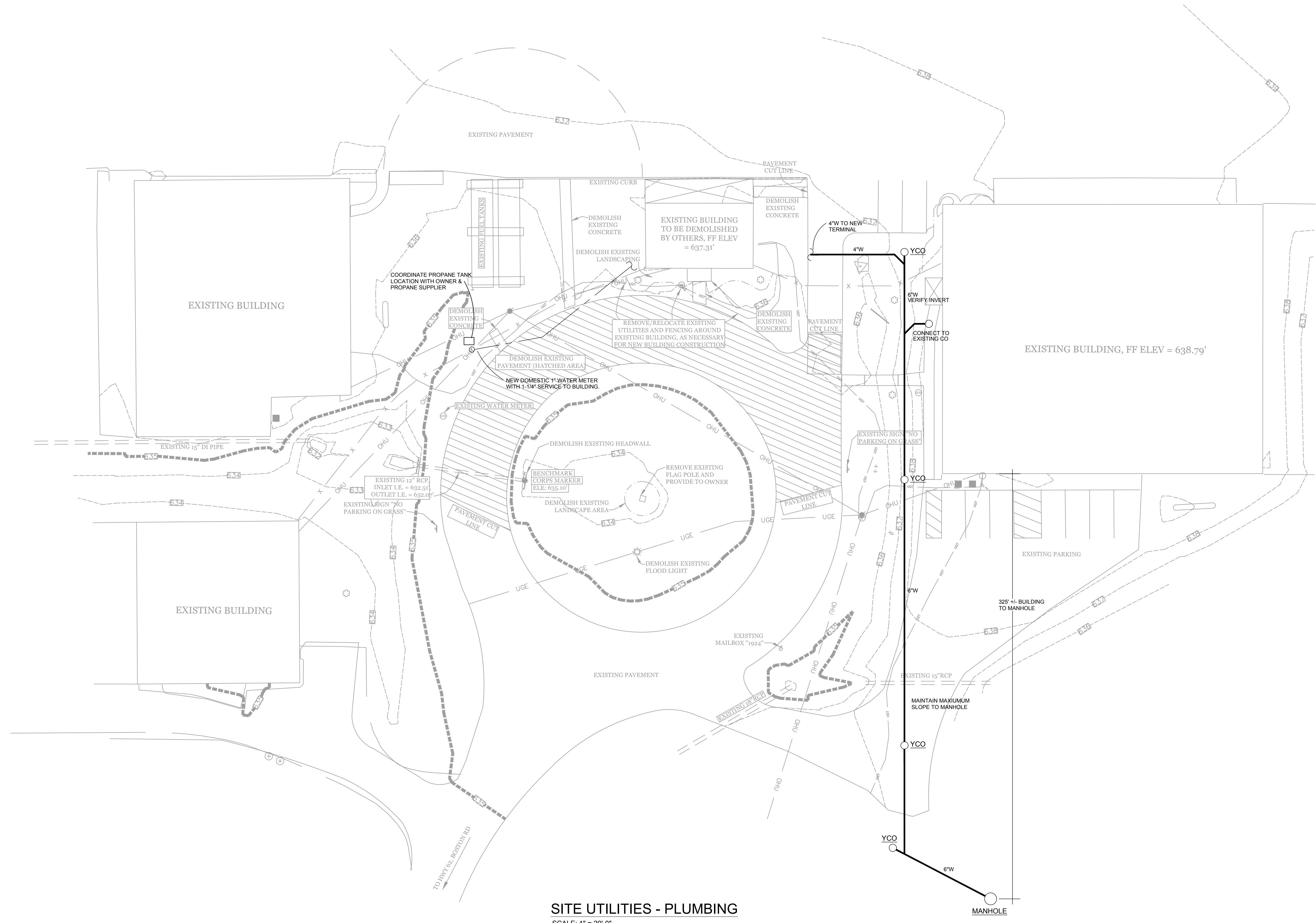
MANUFACTURER	FARR	FARR	FARR
MODEL / TYPE	30-30 DISPOSABLE	30-30 DISPOSABLE	30-30 DISPOSABLE
EFFICIENCY / TEST METHOD	30%-ASHRAE 52-70	30%-ASHRAE 52-70	30%-ASHRAE 52-70
CFM / MAX VELOCITY	2,000 / 377 FPM	800 / 200 FPM	1,200 / 300 FPM
SIZE (FACE AREA)	5.3 SF	4.0 SF	4.0 SF

- REMARKS:
- UNIT SHALL BE BUILT FOR OUTDOOR/ROOFTOP INSTALLATION. PROVIDE WITH INSULATED ZINC COATED HEAVY GAUGE GALVANIZED STEEL WITH WEATHER-RESISTANT BAKED ENAMEL FINISH.
  - PROVIDE WITH A STAINLESS STEEL IAQ CONDENSATE DRAIN PAN. ENTIRE DRAIN SHALL BE PITCHED TO THE DRAIN.
  - PROVIDE WITH STAINLESS STEEL EVAPORATOR CASING AND STAINLESS STEEL HEAT EXCHANGER.
  - PROVIDE A CONDENSATE DRAIN SIZED AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE WITH CONDENSATE OVERFLOW SWITCH.
  - PROVIDE WITH 4 SETS OF FILTERS. PROVIDE WITH SPARE SET OF FAN BELTS. TURN OVER TO OWNER.
  - PROVIDE UNIT WITH THE FOLLOWING ADDITIONAL OPTIONS: LOW AMBIENT KIT, HORIZONTAL ECONOMIZER WITH RAINHOOD AND BAROMETRIC RELIEF, MOTORIZED OUTSIDE AIR DAMPER, HALLGUARD, HINGED ACCESS DOORS, FILTER RACK, FACTORY MOUNTED NON-FUSED DISCONNECT, AND FAN/MOTOR VIBRATION ISOLATORS.
  - ANY UNIT EXCEEDING THE DIMENSIONS OR WEIGHTS LISTED SHALL BE SUBMITTED TO THE GENERAL CONTRACTOR FOR REVIEW.
  - WHERE INDICATED PROVIDE UNIT WITH AVERAGING TEMPERATURE SENSORS. REFER TO DRAWINGS FOR LOCATIONS.
  - PROVIDE 1-YEAR PARTS AND LABOR WARRANTY FOR ENTIRE UNIT. PROVIDE 5-YEAR PARTS AND LABOR WARRANTY ON COMPRESSOR.
  - PROVIDE AVERAGING THERMOSTATIC CONTROL FOR ANY SPACE SERVED BY MULTIPLE TEMPERATURE SENSORS. THERMOSTAT CONTROLLER SHALL BE CAPABLE OF AVERAGING TEMPERATURE SENSORS. INDEPENDENT TEMPERATURE SENSING, AND VENTILATION (FAN ONLY) CONTROLS FOR UNITS AS INDICATED ON THE FLOOR PLANS. BASIS OF DESIGN IS HONEYWELL VISION PRO 8000.
  - CONTRACTOR TO SUBMIT ALTERNATE MANUFACTURER AND UNIT SELECTION FOR APPROVAL.

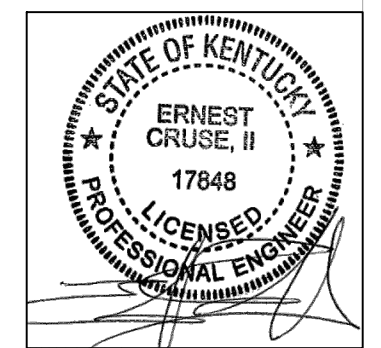


KEYES ARCHITECTS & ASSOCIATES  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION  
NELSON COUNTY  
AIRPORT TERMINAL



**SITE UTILITIES - PLUMBING**  
SCALE: 1" = 20'-0"



**KEYES ARCHITECTS & ASSOCIATES**  
3005 TAYLOR BOULEVARD  
LOUISVILLE, KENTUCKY 40208 (502) 636-5113

**NEW CONSTRUCTION**  
**BARDSTOWN NELSON**  
**COUNTY AIRPORT**  
**TERMINAL**

## PLUMBING SPECIFICATIONS

WITHIN THE FOOT PRINT OF THE PROPOSED NEW TERMINAL BLDG, THERE IS AN EXISTING BUILDING THAT SHALL BE DEMOLISHED, BY OTHERS.

PROJECT IS A FUNCTIONING AIRPORT FACILITY AND CAUTION SHOULD BE UTILIZED TO MAINTAIN EMERGENCY ENTRIES TO THE RUNWAYS, AND ANY OPERATIONAL FACILITIES. YOU WILL BE WORKING UNDER THE GUIDELINES OF THE FEDERAL AVIATION AUTHORITY, WHILE ON SITE.

ALL WORK FOR THE PROJECT SHALL BE ACCORDING OSHA REGULATIONS, AND ANY LAWS, RULES, CODES AND REGULATIONS THAT MAY BE IN EFFECT AT THE TIME OF CONSTRUCTION.

NOTIFY OWNER/OWNER'S AGENT OF ANY DISRUPTION OF UTILITIES THAT MAY BE REQUIRED FOR CONNECTIONS OR ALTERATION OF UTILITIES FOR THE PROJECT.

IF ROCK MAY BE ENCOUNTERED DURING PLUMBING EXCAVATIONS, NOTIFY OWNER/OWNER'S AGENT FOR DIRECTIONS, PRIOR TO PROCEEDING ANY FURTHER WITH CONSTRUCTION.

IN THE EVENT ROCK IS ENCOUNTERED IN EXCAVATIONS FOR PLUMBING, GENERAL CONTRACTOR SHALL EXPEDITE REMOVAL OF SAME, OR ASK PLUMBING CONTRACTOR FOR PRICING AND DISPOSAL OF ENCOUNTERED ROCK.

MAINTAIN MINIMUM OF 6" COMPACTED GRANULAR FILL MATERIAL BENEATH ANY PIPING AND EXCAVATED TRENCH BOTTOM. MINIMUM 12" CLEARANCE ON LATERAL SIDES OF UTILITY IN TRENCH. MAINTAIN DEWATERING AS NEEDED FOR ALL TRENCHES.

MAINTAIN PROPER CLEARANCE AND SEGREGATIONS, PER CODES AND REGULATIONS, FROM ALL ADJACENT UTILITIES.

PERSONNEL ON PROJECT SHALL BE LICENSED, PER ALL REGULATIONS AND JURISDICTIONS, TO ALLOW FOR PERFORMANCE OF THEIR RESPECTIVE TRADE.

DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY NOT INDICATE ALL BENDS OR FITTINGS REQUIRED FOR ACTUAL FIELD INSTALLATION, BUT THESE ITEMS SHALL BE INCLUDED AND CONSIDERED IN PROJECT PRICING.

ALL EQUIPMENT AND PLUMBING FIXTURES SHALL BE PROVIDED TO FIT ACTUAL SPACE ALLOCATED FOR SAME.

CO-ORDINATE ALL PROJECT INSTALLATIONS WITH OTHER TRADES AND RESPECT THEIR SYSTEM INSTALLATIONS.

PLUMBING SUBMITTALS MAY BE ELECTRONIC, FOR PROPOSED EQUIPMENT AND FIXTURES SHALL BE PROVIDED FOR REVIEW AND COMMENT. AN APPROVED COPY OF SAME SHALL BE MADE AVAILABLE ON SITE, FOR REFERENCE BY OTHER CONTRACTORS AND TRADES AS NEEDED.

PLAN COPIES SHALL BE SUBMITTED TO LOCAL REGULATORY AGENCIES FOR PLUMBING REVIEW AND/OR APPROVALS BY GENERAL CONTRACTOR, ALONG WITH APPLICABLE FEES AND FORMS FOR REVIEW.

ALL WORK SHALL BE TESTED AND INSPECTED, PER CODES AND INDUSTRY STANDARDS, PRIOR TO COVERING, INSULATING OR CONCEALING SAME.

IF THERE MAY BE ANY CHANGES IN PROJECT DOCUMENTS, THERE SHALL BE NOTATIONS OF SAME ON PROJECT DRAWINGS MAINTAINED ON SITE, TO ALLOW FOR "RECORD DRAWINGS" INDICATING THESE CHANGES. PRESENT A COPY OF THESE "RECORD DRAWINGS" TO THE OWNER, AT THE COMPLETION OF ALL PLUMBING INSPECTIONS ON THE PROJECT, FOR OWNER'S RETENTION AND FUTURE REFERENCE.

PLUMBING FIXTURES ARE NOT BRAND SPECIFIC, YET SHALL SUITE SERVICEABILITY AND FUNCTIONALITY, AS REQUIRED.

PROVIDE ALL FIXTURES WITH HOT WATER ON THE LEFT AND COLD WATER ON THE RIGHT.

PROVIDE BRAIDED SUPPLY LINES, CHROME PLATED BRASS FEMALE IRON PIPE ANGLE STOPS, CHROME PLATED BRASS NIPPLES, UNDER COUNTER TEMPERING VALVES, PVC TUBULAR P TRAP AND FLEXIBLE STOP & PROTECTOR KITS FOR PLUMBING FIXTURES, AS REQUIRED BY CODES.

WARRANTY PERIOD SHALL BE ONE YEAR FROM DATE OF FINAL PLUMBING INSPECTION, FOR LABOR AND MATERIALS PROVIDED WITHIN THE PLUMBING CONTRACT. STANDARD MANUFACTURER'S WARRANTIES SHALL APPLY.

BACKFLOW PREVENTION DEVICES SHALL BE CERTIFIED AND TESTED, WITH PROPER CODE APPROVED AND ADEQUATE SIZE DRAIN FOR DEVICE DISCHARGE, TO AN ADEQUATE DRAIN OR SPACE. PAPERWORK FOR DEVICE SHALL BE SUBMITTED TO GOVERNING AGENCIES AS REQUIRED.

PLUMBING SCOPE AND DESIGN FOR THIS PROJECT, SHALL EXCLUDE ANY IRRIGATION, FIRE PROTECTION OR SPRINKLER SYSTEMS AND/OR COMPONENTS.

PENETRATION OF ANY FIRE RATED STRUCTURE OR WALL SHALL BE MAINTAINED TO ORIGINAL RATING UPON COMPLETION, BY THE CONTRACTOR PERFORMING THE PENETRATION. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO SLEEVES- SMOKE CAULK- FIRE CAULK AND ANY OTHER REQUIRED PROTECTIONS. ENSURE THAT THERE WILL BE NO OVERSIZE OPENINGS CUT OR DRILLED FOR PIPING PENETRATIONS, SO AS TO ALLOW FOR PROPER FIRE CAULK, SMOKE CAULK OR OTHER PROTECTION.

ROOF PENETRATIONS SHALL BE MADE WATERTIGHT BY THE INSTALLING ROOFING CONTRACTOR. PLUMBING CONTRACTOR IS TO PROVIDE CODE APPROVED FLASHINGS TO ROOFER FOR ROOFING CONTRACTOR'S INSTALLATION OF SAME.

FLUSHING MECHANISM FOR ADA TOILETS SHALL BE ON THE " WIDE " SIDE OF TOILET SPACE.

THERE SHALL BE NO CUTTING OR ALTERING OF STRUCTURAL MEMBERS FOR PIPING, WITHOUT WRITTEN AUTHORIZATION OF ARCHITECT OR OWNER'S REPRESENTATIVE.

ANY EXTERIOR BLK. STEEL GAS PIPING SHALL BE PAINTED BY PAINTING CONTRACTOR- ONE PRIME AND TWO FINISH COATS- COLOR TO BE SELECTED BY ARCHITECT.

LOCATION OF PROPANE GAS TANK, SHALL BE COORDINATED WITH PROPANE SUPPLIER, IN LOCATION AGREED UPON BY OWNER. PROPANE GAS PIPING IS TO BE INSTALLED BY PLUMBING CONTRACTOR HAVING A CURRENT PROPANE INSTALLERS CERTIFICATION. ALL PROPANE PIPING TO BE UNDER THE GUIDELINES AND REGULATIONS OF AGA AND NFPA.

OWNER SELECTED PROPANE SUPPLIER SHALL PROVIDE PIE BOLLARDS AS NEEDED, SET TANK, FILL TANK WITH PROPANE, PROVIDE AND CONNECT PROPANE PIPING FROM TANK TO THE NEW BUILDING, ALONG WITH PROPERLY SIZED PROPANE REGULATOR, LOCATED ON EXTERIOR OF NEW BLDG., FOR PLUMBER'S GAS PIPING CONNECTION.

SUPPORT FOR ANY PIPING SHALL BE MATERIALS COMPATIBLE WITH THE TYPE OF PIPE BEING INSTALLED, PER MANUFACTURER'S RECOMMENDATIONS.

VERIFY CONDITION, LOCATION AND INVERT OF EXISTING SANITARY SEWER AT EXISTING MANHOLE, PRIOR TO NEW CONSTRUCTION.

PLUMBING CONTRACTOR SHALL CORE DRILL MANHOLE WALL, INSTALL A CORE-N-SEAL FLEXIBLE BOOT CAPABLE OF RECEIVING SANITARY SEWER PIPING. REWORK TABLE OF MANHOLE TO ALLOW FOR PROPER FLOW THROUGH THE MANHOLE, WITH REVISED OR NEW FLOW LINE CHANNEL.

NEW SIX INCH SANITARY MAIN, SHALL SERVE NEW TERMINAL PLUMBING AND EXISTING BLUEGRASS AVIATION BLDG. PLUMBING.VERIFY INVERTS PRIOR TO ANY CONSTRUCTION OF NEW SANITARY OR SANITARY MAIN.

PROVIDE 4" CLEANOUTS TO GRADE, ON SANITARY MAIN, AT CHANGES IN DIRECTION, MINIMUM EVERY 100 LINEAL FEET, AND WHERE CONNECTING TO NEW OR EXISTING SANITARY PIPING, PROVIDE 24" X 24" X8" DEEP CONCRETE SLAB ON GRADE AT THESE CLEANOUTS THAT OCCUR IN UNPAVED AREAS.

NOTIFY OWNER/OWNER'S AGENT OF ANY UNANTICIPATED PROBLEM DISCOVERED. EXISTING AND NEW WASTE SYSTEMS SHALL CONNECT TO NEW SANITARY PRIVATE SEWER MAIN. OWNER SHALL PAY CITY OF BARDSTOWN ANY FEES, RELATIVE TO THIS SANITARY CONNECTION THE THE EXISTING MANHOLE. ANY FEES FOR METERS, TAPS OR SERVICES, SHALL BE PROVIDED IN PLUMBING PROPOSAL AS A "LINE ITEM", TO ALLOW FOR OWNER'S DECISION AS TO MAKING THESE ITEMS A PART OF THE PLUMBING CONTRACT, OR PAYING DIRECTLY TO THE UTILITY PROVIDER.

MATERIALS AND INSTALLATION FOR SANITARY SEWER SHALL MEET ALL CODES, RULES LAWS AND REGULATIONS, BASED UPON AREA OF INSTALLATION.

PROTECT ALL UTILITIES THAT ARE TO REMAIN ON SITE.

NOTIFY "BEFORE YOU DIG" 811 AGENCY, FOR LOCAL UTILITY SITE LOCATIONS, PRIOR TO ANY CONSTRUCTION, PER STATE LAW. IF THERE MAY BE UTILITIES THIS AGENCY DOES NOT LOCATE, PLBG. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES, DISRUPTION OF SERVICE COSTS AND/OR REPAIRS TO ORIGINAL CONDITION, OF UTILITIES ENCOUNTERED.

FURNISH AND INSTALL NEW 1 1/4" DOMESTIC WATER SERVICE INTO BUILDING CONNECTING TO NEW 1" DOMESTIC WATER METER AT AREA OF EXISTING CUL-DE-SAC.COORDINATE WITH LOCAL UTILITY FOR METER INSTALLATION.

COORDINATE WITH LOCAL WATER CO., FOR SERVICE APPLICATIONS, FOR CONNECTION, ALTERATION, RELOCATION,REMOVAL, PRICING OR REPLACEMENT OF DOMESTIC WATER METER ( S ), AS REQUIRED.

CONFIRM EXISTING WATER DELIVERY PRESSURE SHALL BE ADEQUATE FOR PROVIDING NEEDED VOLUME FOR NEW PLUMBING. IF FOUND TO BE DEFICIENT, ADVISE OWNER/ARCHITECT THAT THERE MAY BE A NEED FOR A DOMESTIC WATER BOOSTER PUMP SYSTEM AND COMPONENTS. IN THE EVENT DOMESTIC WATER DELIVERY PRESSURE EXCEEDS 80 PSI STATIC, PROVIDE ALTERNATE PRICING FOR A PRESSURE REDUCING VALVE ON MAIN WATER SERVICE. PROVIDE PRICING FOR THESE ITEMS, IF REQUIRED, AT TIMES OF DISCUSSIONS AND PROPOSAL PRICING.

ALL EXCAVATIONS BENEATH AREAS OF CONCRETE OR PAVEMENT, SHALL BE BACK FILLED TO SUB GRADE, COMPACTED AS NEEDED, TO ALLOW FOR NEW OR RESTORED FINISHES. MAINTAIN A 95% PROCTOR.

THESE FINISHES AND SEEDING OR SOD TO RESTORE TO ORIGINAL CONDITION, SHALL BE PERFORMED BY OTHERS.

PLUMBING CONTRACTOR SHALL SCRIBE CUT, BREAK AND REMOVE CONCRETE OR PAVEMENT FOR ALL NEW PLUMBING, AS NEEDED.

PROVIDE PROPANE GAS PIPING OF THE PROPER SIZE AND CONFIGURATION TO SUIT BTU GAS LOAD AND DELIVERY PRESSURE, FOR THE GAS FIRED EQUIPMENT AS NEEDED.

STANDARD GAS DELIVERY PRESSURE SHALL BE 7" - 11" WATER COLUMN. CONSULT GAS EQUIPMENT SPECIFICATIONS, FOR ANY ADDITIONAL INFORMATION OR REQUIREMENTS.

SANITARY WASTE AND VENT SYSTEMS SHALL MEET ALL CODES. PVC SCH 40 DWV SOLVENT WELD PIPE AND COMPATIBLE FITTINGS IS THE BASIS OF DESIGN OF SANITARY SYSTEM, INSTALLED TO MEET CODE. CAST IRON NO-HUB PIPE AND FITTINGS MAY BE UTILIZED FOR ALL ABOVE GRADE WASTE AND VENT SYSTEMS PIPING ALSO.

NON-METALLIC PIPING SHALL NOT BE INSTALLED IN PLENUM-RATED SPACES.

HOT, COLD AND HOT WATER RE-CIRCULATING WATER PIPING MATERIALS MAY BE THE FOLLOWING, ALL ARE TO BE INSTALLED PER CODE AND MANUFACTURER'S RECOMMENDATIONS: TYPE "L" COPPER ABOVE GRADE - CPVC SCH 80 PIPE AND FITTINGS - PEX PIPE AND FITTINGS

BRAZED OR SILVER SOLDER JOINTS, SHALL BE KEPT AT A MINIMUM, IF COPPER PIPING IS BENEATH FLOOR OR PAVEMENT, AND THAT PIPING SHALL BE TYPE "K" COPPER  
1/2" PEX TO BE UTILIZED AS FIXTURE BRANCH ONLY - 1" & 3/4" SUPPLY PEX PIPE AND FITTINGS ARE TO BE UP-SIZED ONE PIPE SIZE - UPONOR PIPE AND FITTINGS MAY BE UTILIZED.  
ANY SOLDER OR VALVES UTILIZED IN PLUMBING ON THE PROJECT, SHALL CONFORM TO THE REQUIRED LEAD CONTENT PER CODES, RULES AND REGULATIONS.

BALL VALVES SHALL BE PROVIDED ON BRANCH WATER PIPING TO ALLOW FOR MAINTENANCE AND UNIT ISOLATION.

PROVIDE 1" BRASS VALVE TAGS, ATTACHED TO DOMESTIC WATER VALVES IN SYSTEM, AND VALVE CHART, AS TO LOCATION OF SAME, UPON COMPLETION OF PROJECT.

PROVIDE INSTRUCTION FOR OWNER'S PERSONNEL, FOR PLUMBING SYSTEMS MAINTENANCE, UPON COMPLETION OF PROJECT.

PROVIDE CERTIFICATE OR CORPORATE LETTER, OF FINAL INSPECTION OF PLUMBING ON PROJECT. PROVIDE "OPERATION AND MAINTENANCE MANUAL" TO ARCHITECT FOR OWNER, UPON COMPLETION OF PROJECT. THIS SHALL CONTAIN LITERATURE OF INSTALLED PLUMBING ITEMS, BASED UPON APPROVED FIXTURE SUBMITTALS, FOR OWNER'S FUTURE REFERENCE. IF A FIXTURE IS CHANGED AFTER SUBMITTAL APPROVAL, THIS SHALL BE NOTED IN THE OPERATION AND MAINTENANCE MANUAL.

PROPERLY SIZED WATER HAMMER ARRESTORS SHALL BE INSTALLED ON ALL "QUICK - CLOSING " DEVICES.

ALL FITTINGS SHALL BE COMPATIBLE WITH SELECTED PIPING.

ALL WATER PIPING INSTALLED, SHALL BE INSULATED AFTER TESTING TO MEET AWWA STANDARDS, AND INSPECTIONS, WITH 1/2" FLEXIBLE WALL FOAM PIPE INSULATION, MAXIMUM FLAME SPREAD OF 25.

SUPPORT FOR ALL PIPING SYSTEMS SHALL BE PER CODE AND PER MANUFACTURER'S RECOMMENDATIONS.

INTERIOR PROPANE GAS PIPING 2" AND SMALLER SHALL BE SCH. 40 BLK. THREAD AND COUPLE PIPE AND STD. 125 # BLACK MALLEABLE FITTINGS.

UNIONS SHALL NOT BE CONCEALED AND SHALL BE 150 # GROUND JOINT RATED FITTINGS.

NIPPLES SHALL BE SCH 40 BLK. NO "ALL-THREAD" NIPPLES SHALL BE ALLOWED IN PROPANE SYSTEM.

FINAL CONNECTIONS TO GAS EQUIPMENT SHALL BE PROVIDED BY PLBG. CONTRACTOR, AND SHALL HAVE AN AGA APPROVED GAS VALVE, UNION AND AN ADEQUATE DRIP LEG CONFIGURATION, WITHIN THAT CONNECTION.

FLEXIBLE GAS CONNECTIONS SHALL BE PROPER LENGTH FOR MAINTENANCE AND SHALL BE AGA APPROVED ITEMS. FLEXIBLE CONNECTION SHALL BE ON EXTERIOR OF GAS EQUIPMENT CABINET.

ALL VALVES IN GAS SYSTEM SHALL BE AGA APPROVED AND COMPATIBLE WITH PROPOSED SERVICE AND ALL GAS CODES, RULES AND REGULATIONS.

PROVIDE DIELECTRIC CONNECTIONS, AT ALL DISSIMILAR METALS, IN ALL PIPING SYSTEMS.

ALL PLUMBING PIPING TO BE CONCEALED WHERE POSSIBLE, UNLESS OTHERWISE NOTED. ALL PIPING TO BE SECURED, TO PREVENT STRAIN AND/OR MOVEMENT.

SPOILS OR REMOVED MATERIALS SHALL BE PLACED IN DUMPSTER OR IN STOCK PILE, ON SITE PROVIDED FOR PLUMBING CONTRACTORS USE BY GENERAL CONTRACTOR.

COORDINATE ANY UTILITY INTERRUPTION FOR TIE-INS, WITH ON-SITE PERSONNEL IN CHARGE. MINIMIZE DOWN TIME FOR THIS PROCEDURE.

ALL FLOOR DRAINS, OPEN RECEPTACLES AND ANY DRAIN THAT COULD POSSIBLY HAVE TRAP EVAPORATION, SHALL BE FITTED WITH PROPER TRAP PRIMER DEVICE. PROVIDE ACCESS TO TRAP PRIMER WITH RATED ACCESS PANEL, AS REQUIRED. SERVICE OF TRAP PRIMERS TO MULTIPLE FIXTURE IN SAME AREA MAY BE PROVIDED BY DISTRIBUTION UNIT FROM MANUFACTURER.

BLOCKING FOR ANY SUPPORT OF PLUMBING OR FIXTURES, SHALL BE BY THE GENERAL CONTRACTOR, WITH COORDINATION WITH PLUMBING CONTRACTOR.

ALL PIPING IN SYSTEMS SHALL BE INSTALLED PLUMB, TRUE AND STRAIGHT, WITH PROPER SLOPE.

ACCESS PANELS TO MATCH RATING OF STRUCTURE, SHALL BE PROVIDED AS REQUIRED, FOR ACCESS TO CLEANOUTS OR VALVES.

COORDINATE WITH GENERAL CONTRACTOR, ANY NEED FOR ADDITIONAL CHASES OR SOFFITS, REQUIRED FOR PLUMBING INSTALLATIONS.

CONSERVATION OF WATER AND ENERGY CODES SHALL BE CONSIDERED WHEN SELECTING PLUMBING EQUIPMENT AND FIXTURES.

THREADS OF CLEANOUT PLUGS TO BE TREATED WITH A NON- HARDENING THREAD SEALANT, TO ALLOW FOR REMOVAL AND REPLACEMENT, AFTER PERFORMANCE OF MAINTENANCE.

FIXTURES FOR THE PROJECT SHALL NOT BE ANY SPECIFIC BRAND, BUT SERVICEABILITY OF SAME SHALL BE CONSIDERED. ACCEPTABLE BRANDS ARE AS FOLLOWS. SUBJECT TO APPROVALS: KOHLER - MANSFIELD - AMERICAN STANDARD - PRO FLO- DAYTON- ELKAY- SMITH- ZURN- PLASTIC ODDITIES - SIOUX CHIEF - STATE - BRADFORD WHITE - WILKINS - PRIME RITE - OATEY - DELTA - SPEED FLEX - EASTMAN - BELL & GOSSETT - AQUASTAT - GRUNDFOS

ALL PLUMBING FIXTURES SHALL HAVE F.I.P. BRASS STOPS AND BRASS NIPPLES & BRAIDED SUPPLIES- PVC TUBULAR P-TRAPS - STOP AND SUPPLY PROTECTOR KIT - TEMPERING VALVES - ALL AS REQUIRED TO MEET CODES AND CONDITIONS.

C-1 FLOOR SET TANK TYPE WHITE ELONGATED ADA HEIGHT CLOSET COMBINATION- WHITE OPEN FRONT ELONGATED SEAT LESS LID- WAX RING SEAL- CLOSET BOLT, NUT AND WASHER SET (FLUSHING MECHANISM ON "WIDE SIDE " OF TOILET AREA )

C-2 SAME AS C-1, BUT REGULAR HEIGHT

L-1 SOLID SURFACE INTEGRAL BOWL WITH 4" CENTERSET DRILLINGS( BY CASE WORK CONTRACTOR ) - 1 1/4" GRID DRAIN- TUBULAR P TRAP- TEMPERING VALVE - SINGLE LEVER CHROME FINISH, 4" CENTER ADA LAV. FTG.

U-1 WHITE WALL HUNG CONCEALED TRAP URINAL WITH ADA MANUAL FLUSH VALVE WITH VAC BRKR - 2" PVC URINAL WASTE CONNECTION KIT

MS SINGLE BOWL FIAT OR EQUAL, MOP BASIN ON LEGS -CHROME DECK MOUNTED FAUCET WITH INTEGRAL VAC. BREAKER AND SWING SPOUT- 1 1/2" PVC TUBULAR P- TRAP

S-1 33" X 22" ADA STLS STEEL SINK - SINGLE LEVER ADA FAUCET WITH SPRAY- BASKET STRAINERS- PVC CONTINUOUS WASTE - PVC TUBULAR P TRAP - TEMPERING VALVE- STOPS AND SUPPLIES

HWH 40 GALLON PROPANE WTR HTR - PROPERLY SIZED THERMAL EXPANSION TANK - RELIEF VALVE SHALL DISCHARGE FULL SIZE TO FLOOR DRAIN, PER PLBG. CODE. PROVIDE PROPER COMBUSTION AIR AND VENTING OF HOT WATER HEATER, TO MEET CODE. IF LOCATED IN MECHANICAL ROOM, THERE SHALL BE AN ADEQUATE SIZED, CODE APPROVED, LOUVER IN DOOR FOR SAME.

RCP GRUNDFOS OR BELL & GOSSETT HOT WATER RECIRCULATING PUMP - CONTROLLED BY AQUASTAT AND PROGRAMMABLE TIMER

B&G CIRCUIT SETTER INSTALLED TO BALANCE HOT WATER RECIRCULATION PIPING SYSTEM TO DESIRED TEMPERATURE

RPZ 1 1/4" WATTS OR WILKINS REDUCED PRESSURE PRINCIPLE BACK FLOW PREVENTION DEVICE WITH STRAINER AND AIR GAP FITTING, \*DESIGNED FOR VERTICAL INSTALLATION, \*ON MAIN WATER SERVICE ENTRY - PROVIDE SAFE AND ADEQUATE SIZE DRAIN TO EXTERIOR OR PROPER POINT OF DISCHARGE, FOR DEVICE.

EWV BI-LEVEL ADA ELECTRIC WATER COOLER - PVC TUBULAR P TRAP - STOP AND SUPPLY

ICM ICE MAKER VALVE KIT FOR REFRIGERATOR ( NO CONNECTION OF OR FURNISHING APPLIANCE)

FD 3" OR 4" PVC ADJUSTABLE METAL TOP FLOOR DRAIN, WITH 1/2" F.I.P. TRAP PRIMER OPENING

FCO 3" OR 4" ADJUSTABLE METAL TOP, PVC BODY FLOOR CLEANOUT

YCO 3" OF 4 " ADJUSTABLE METAL TOP, PVC BODY YARD CLEANOUT

TWCO 4" TWO WAY CLEANOUT IN SIDEWALK ON SANITARY SEWER WITH 10" CAST IRON MANHOLE SET FLUSH WITH GRADE IN WALK OR PAVEMENT

TP PRIME RITE OR EQUAL TRAP PRIMER VALVE - UTILIZE DISTRIBUTION UNIT TO SERVE MORE THAN ONE DRAIN IF IN SAME AREA OF SERVICE.

FPWH ZURN Z 1300 12" WALL HYDRANT WITH INTEGRAL VAC. BRKR AND LOOSE KEY OPERATION

HB 1/2 " FLANGED CHROME HOSE BIBB WITH VAC BRKR

ESP ZOELLER OR EQUAL, OIL MINDER ELEVATOR SUMP AND PUMP, FITTED WITH HIGH LEVEL LITE AND ALARM AND DISCHARGE TO A SPLASH BLOCK OR DRAIN INTO EXISTING DRAINAGE SWALE ON SITE, NEAR CONSTRUCTION SITE OF NEW BLDG.

PROJECT NO:

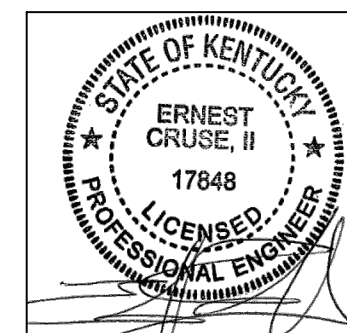
21-4140

DRAWN BY:

CH/SS

DATE:

5/23/2021



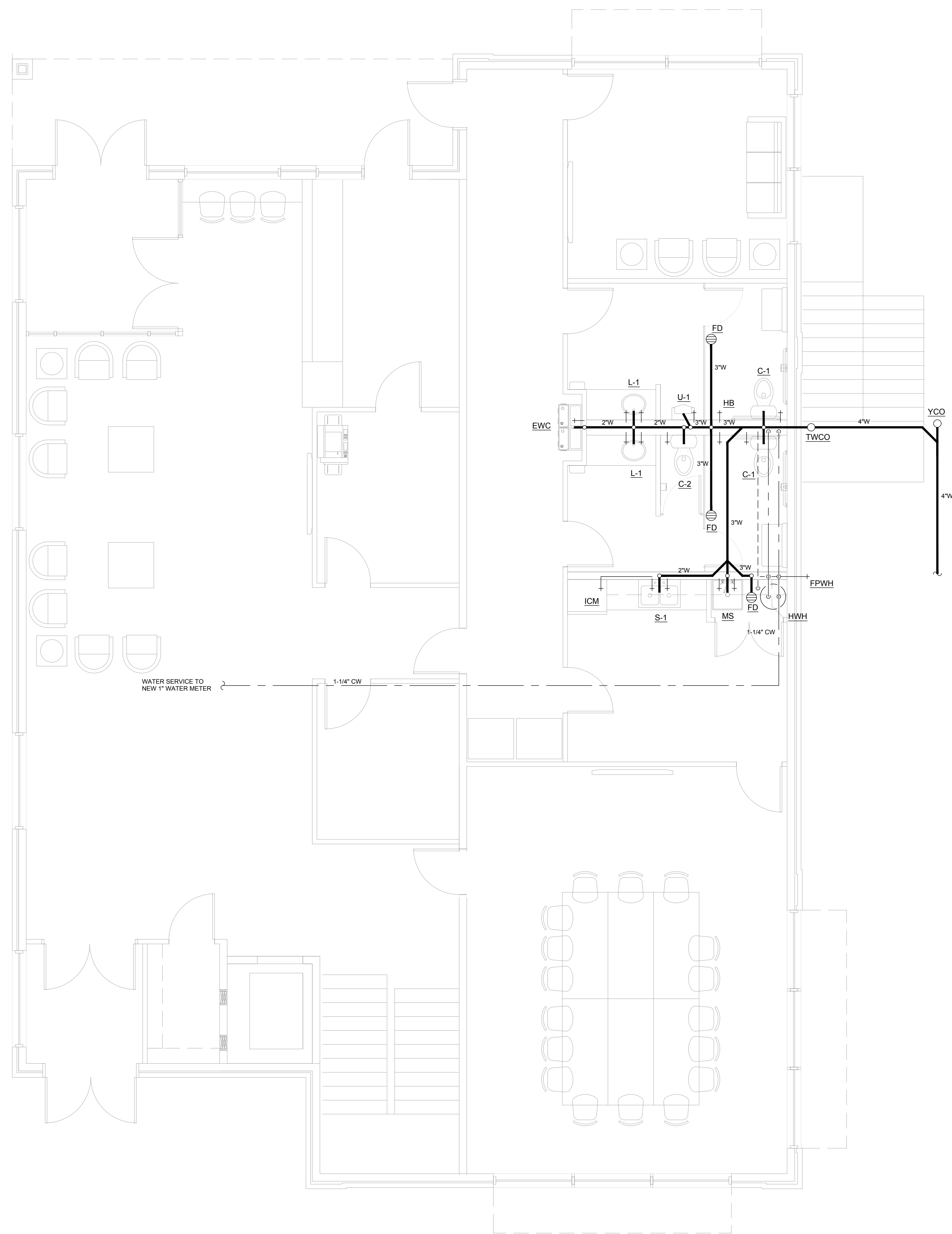
KEYES ARCHITECTS & ASSOCIATES  
3005 TAYLOR BOULEVARD  
LOUISVILLE, KENTUCKY 40208 (502) 636-5113

NEW CONSTRUCTION  
BARDSTOWN NELSON  
COUNTY AIRPORT  
TERMINAL

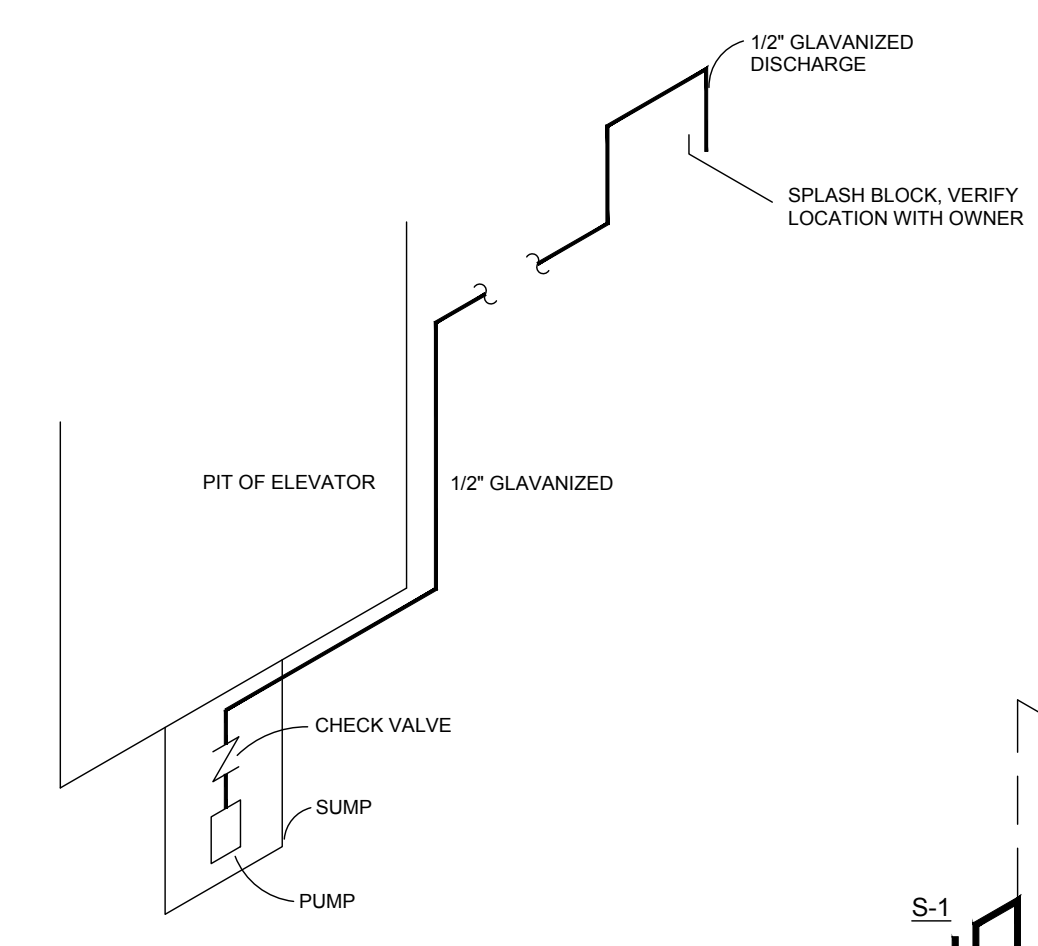
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SHEET TITLE  
PLUMBING SPECS

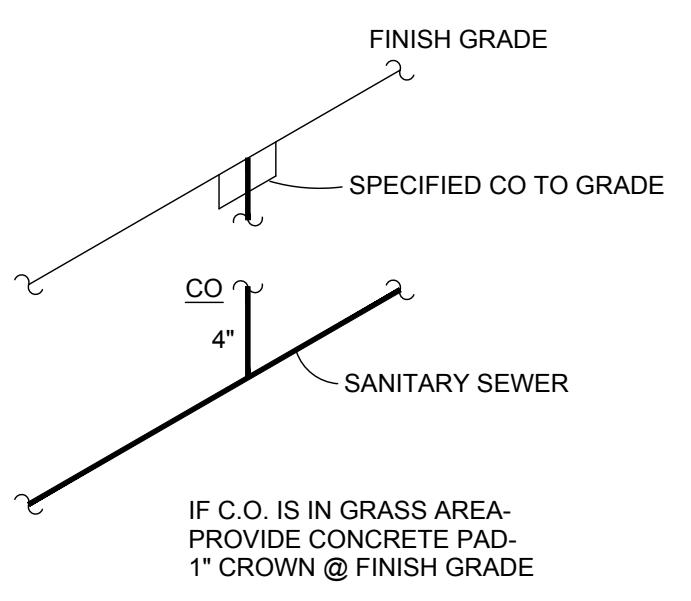
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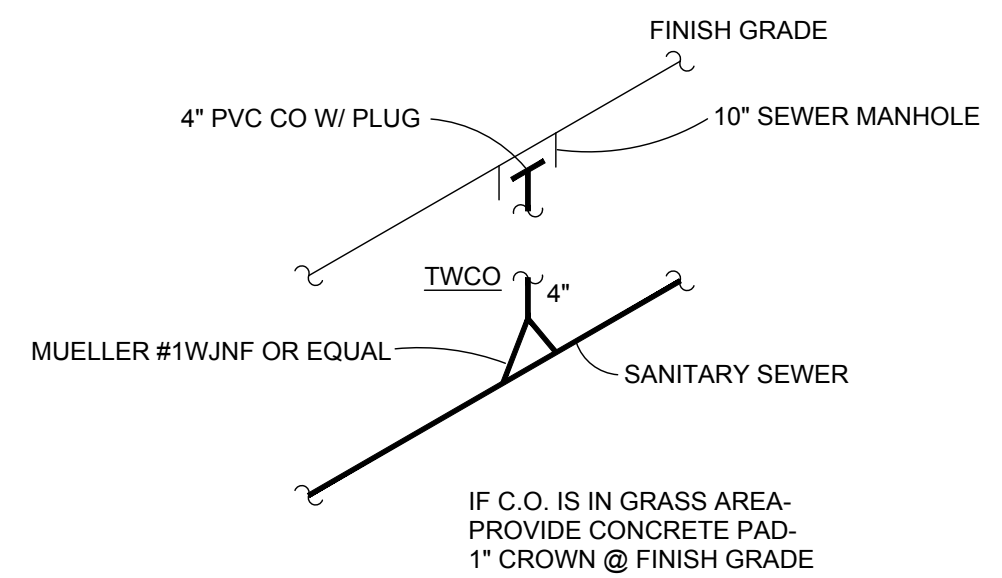
**FIRST FLOOR PLAN - PLUMBING**  
SCALE: 1/4" = 1'-0"



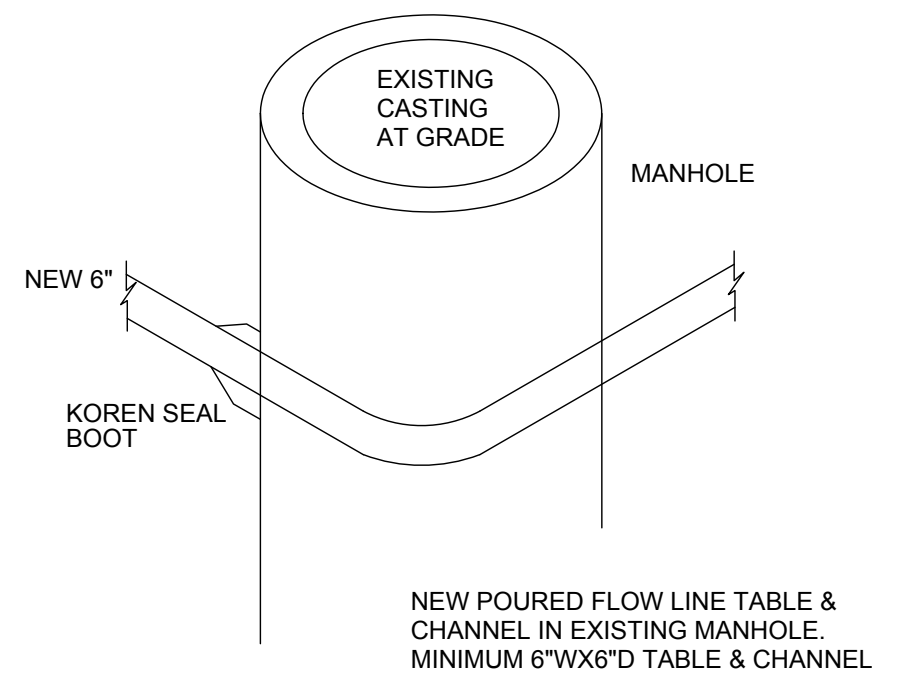
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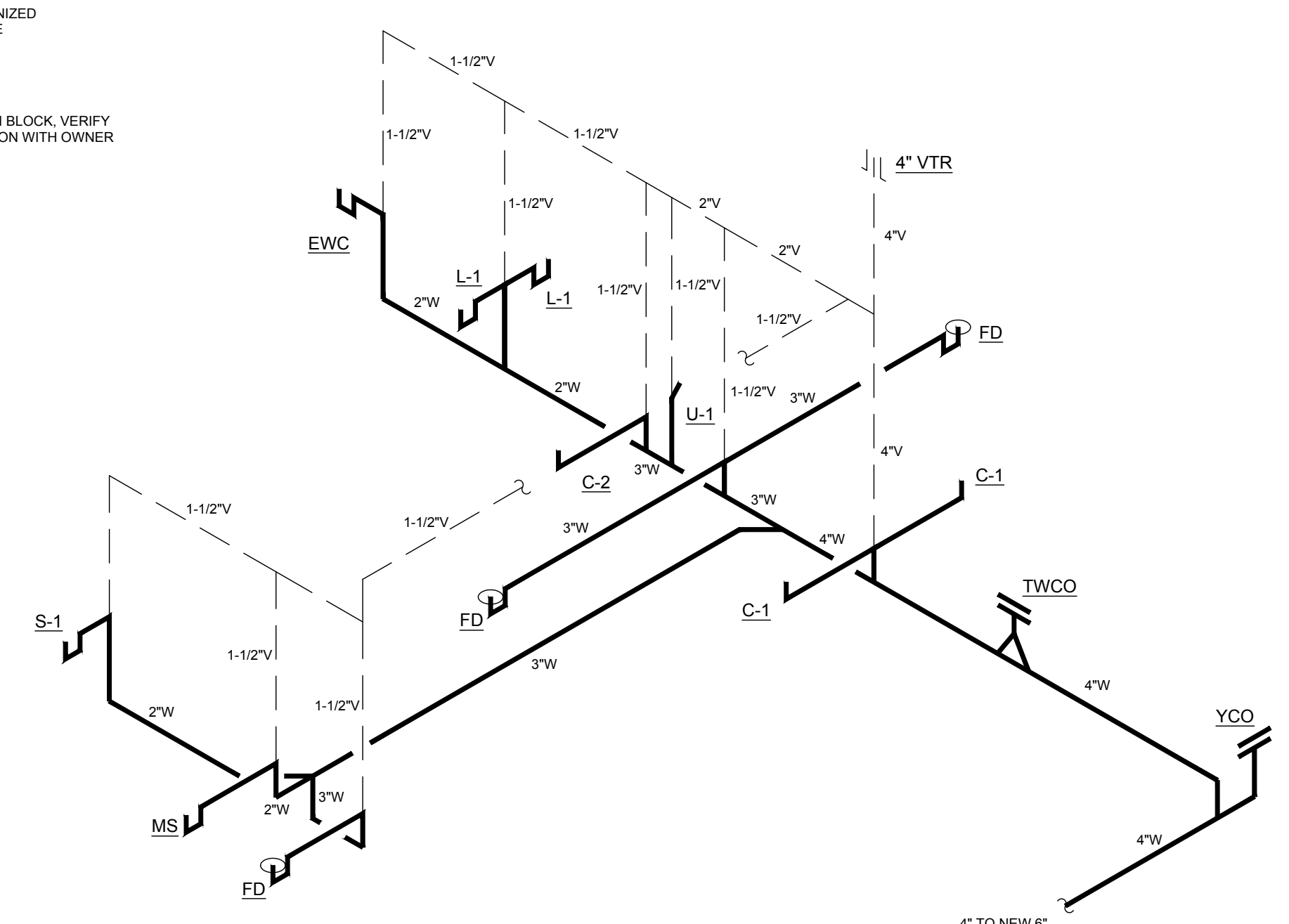
**CO DETAIL**  
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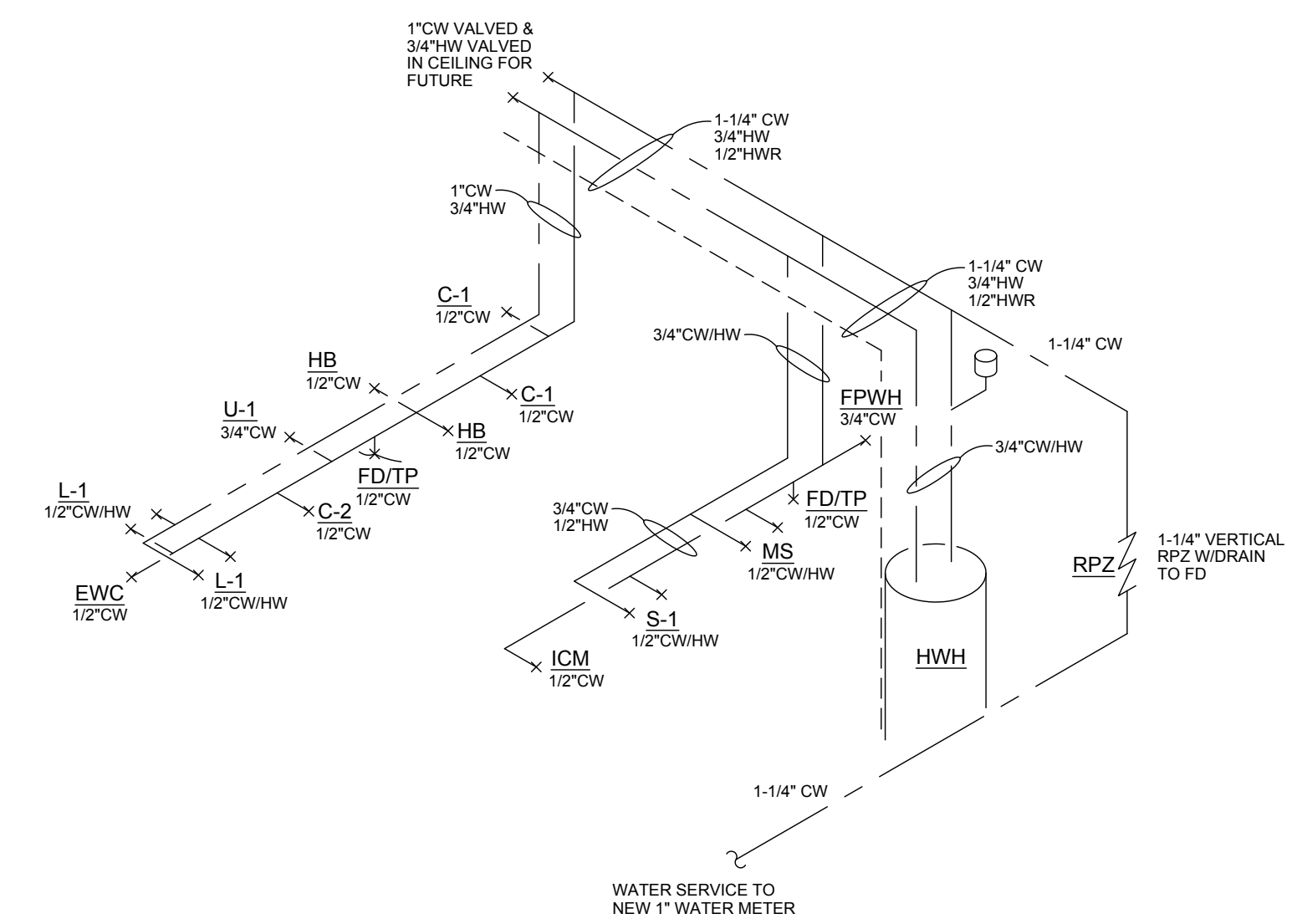
**TWCO DETAIL**  
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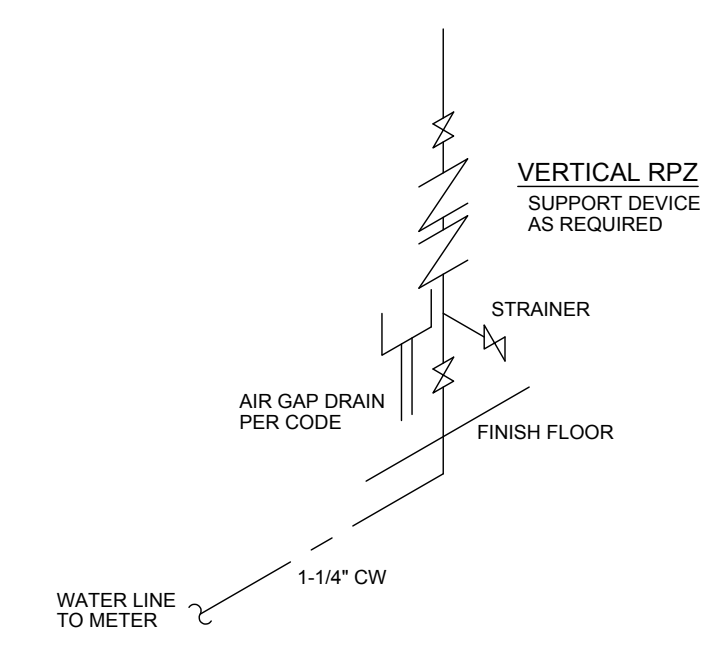
**TABLE & CHANNEL MANHOLE DETAIL**  
NO SCALE



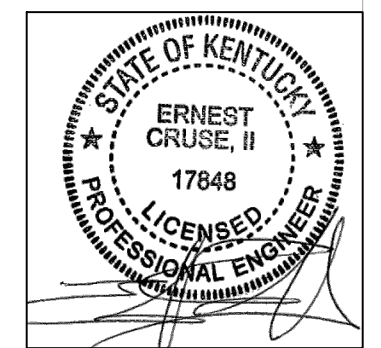
**WASTE & VENT RISER**  
NO SCALE



**WASTE & VENT RISER**  
NO SCALE



**RPZ DETAIL**  
NO SCALE

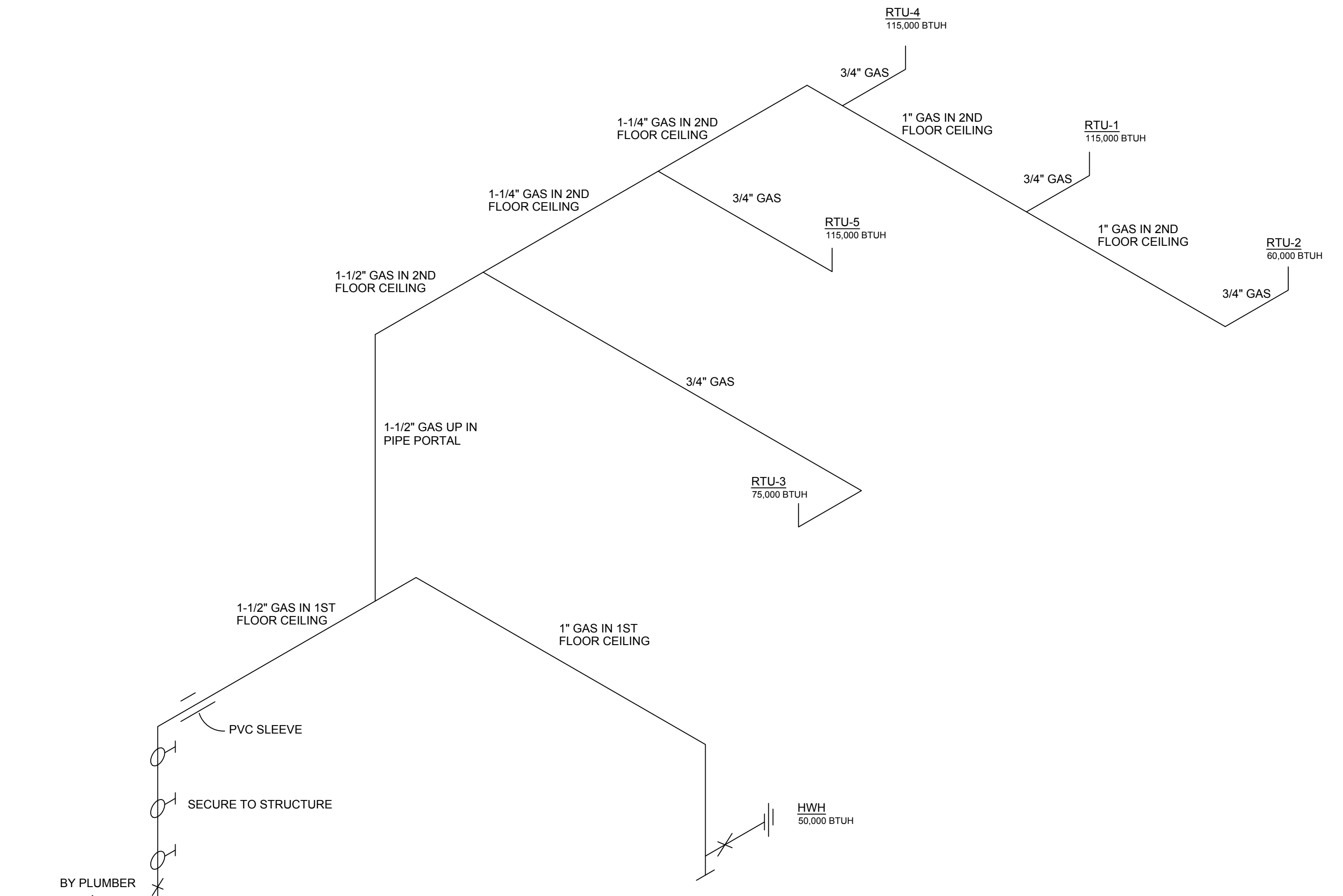


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LOUISVILLE, KENTUCKY 40208 (502) 636-5113

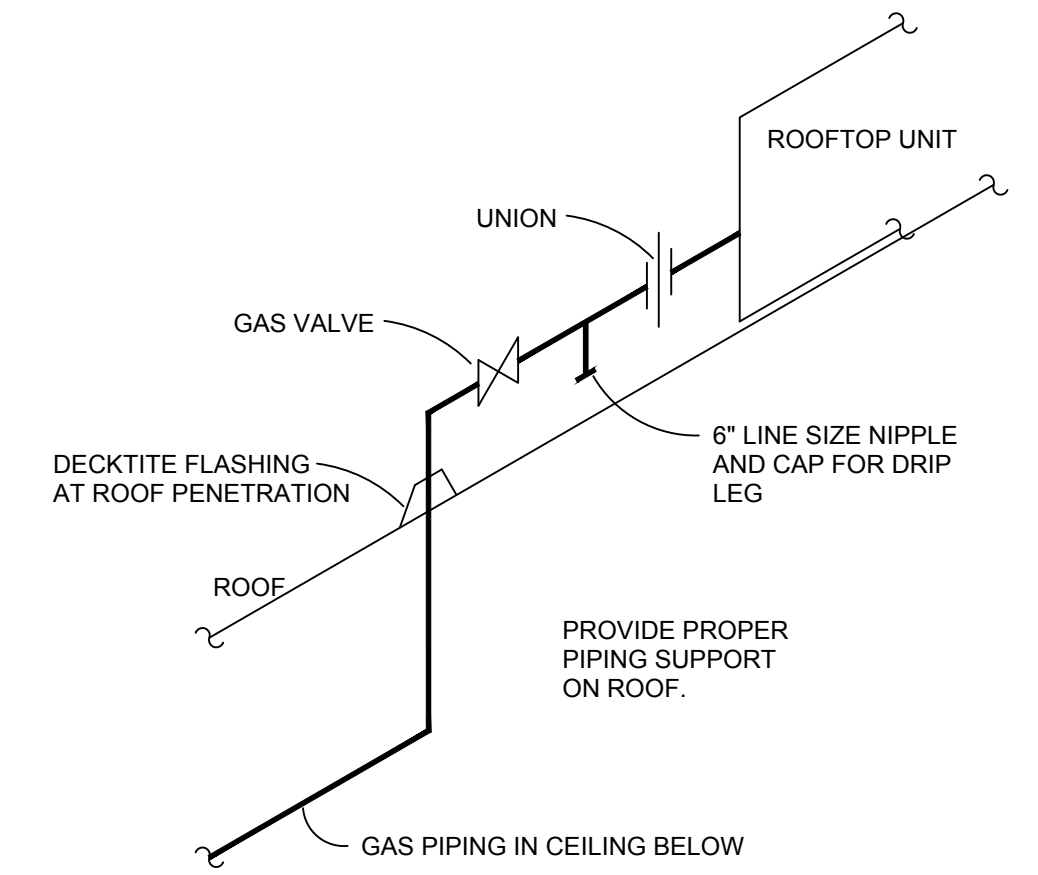
**NEW CONSTRUCTION**  
**BARDSTOWN NELSON**  
**COUNTY AIRPORT**  
**TERMINAL**



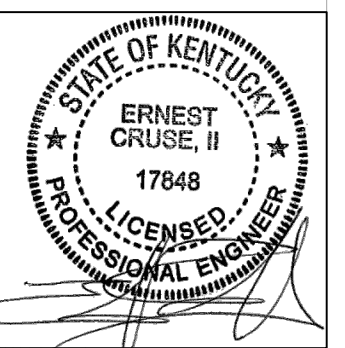
**2ND FLOOR PLAN - PROPANE**  
SCALE: 1/4" = 1'-0"



**PROPANE GAS RISER**  
NO SCALE



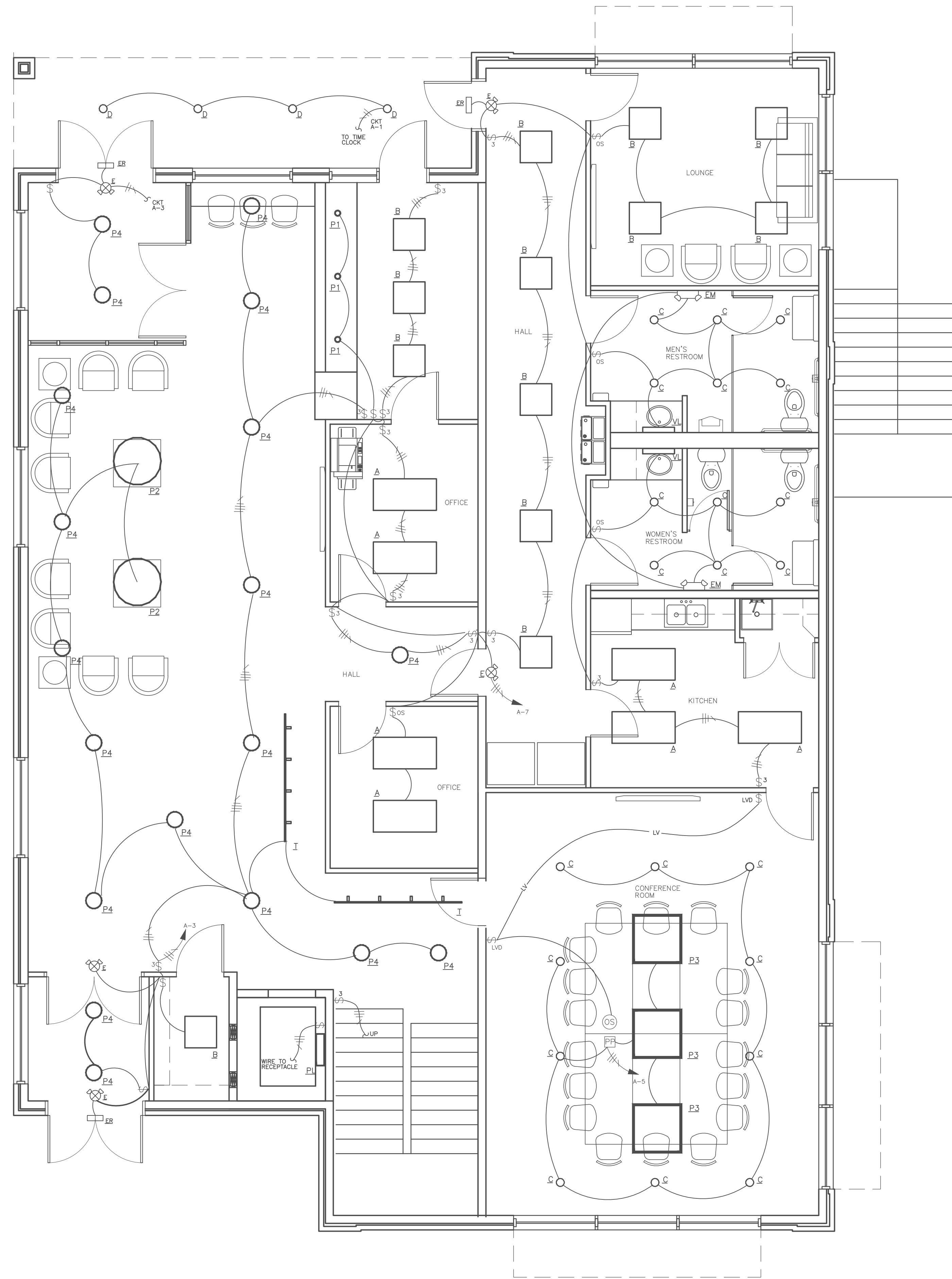
**RTU GAS CONNECTION DETAIL**  
NO SCALE



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**NEW CONSTRUCTION**  
**BARDSTOWN NELSON**  
**COUNTY AIRPORT**  
**TERMINAL**





**01** FIRST FLOOR PLAN - LIGHTING  
SCALE: 1/4" = 1'-0"

LIGHT FIXTURE SCHEDULE :

TYPE	DESCRIPTION	MODEL	LUMENS/COLOR TEMP	REMARKS	VOLTAGE
A	RECESSED 2'x4' LED VOLUMETRIC TROFFER WITH CENTER BASKET LENS	COLUMBIA # CCL24-5035 COOPER # 24CZ2-50-UNV-L835-CD1-U	5000 LUMENS 3500 KELVIN	PROVIDE TWO CEILING WIRES TO SUPPORT FIXTURE AT TWO CORNERS TO STRUCTURE ABOVE	120V
B	RECESSED 2'x2' LED VOLUMETRIC TROFFER WITH CENTER BASKET LENS	COLUMBIA # CCL22-5335 COOPER # 22CZ2-34-UNV-L835-CD1-U	3300 LUMENS 3500 KELVIN	PROVIDE TWO CEILING WIRES TO SUPPORT FIXTURE AT TWO CORNERS TO STRUCTURE ABOVE	120V
C	RECESSED 6" LED DOWN LIGHT WITH HAZE ALUMINUM FINISH TRIM	PRESCOLITE # LTRURHMLDM1/LTR6RD-TML258MDS5-WT-B24 COOPER # HC620-D010-HM612835-61MD-H	2000 LUMENS 3500 KELVIN	LIGHTTOUER # EQUAL	120V
D	RECESSED 6" LED DOWN LIGHT WITH HAZE ALUMINUM FINISH TRIM	PRESCOLITE # LTRURHMLDM1/LTR6RD-TML258MDS5-WT-B24 COOPER # HC620-D010-HM612835-61MD-H	2000 LUMENS 3500 KELVIN	LIGHTTOUER # EQUAL	120V
E	COMBINATION EXIT EMERGENCY LIGHT WITH TWO LED HEADS	HUBBLE # COR COOPER # APCH70R	INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
EM	SELF CONTAINED SURFACE EMERGENCY FIXTURE WITH TWIN 5 WATT HEADS AND MAINTENANCE FREE BATTERY.	HUBBLE # CU2 COOPER # APEL	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
ER	EXTERIOR WET LOCATION 2 HEADED REMOTE EMERGENCY EGRESS LIGHT	HUBBLE # CUS00B COOPER # SELW25	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
F	LINEAR LED STRIP LIGHT WITH LENS	COLUMBIA # CSL4-LSCS COOPER # 4STL4040R	4000 LUMENS 4000 KELVIN	LIGHTTOUER # EQUAL	120V
PL	2' SURFACE MOUNTED LED VAPOR TIGHT LIGHT WITH FROSTED LENS	COLUMBIA # LXEM-240-RFA-E-U COOPER # 4STL4040R	2300 LUMENS 4000 KELVIN	LIGHTTOUER # EQUAL	120V
P1	SMALL SUSPENDED DECORATIVE PENDANT	KUZCO # PD1706-BK TECH LIGHTING EQUAL MODERN FORMS # PD-52708-8"-GL	300 LUMENS 3000 KELVIN	SUSPEND TO A POINT ABOVE COUNTER PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P2	32" ROUNDED SUSPENDED DECORATIVE PENDANT	KUZCO # PD12732-BK	10000 LUMENS 3000 KELVIN	PRIOR APPROVAL REQUIRED FOR EQUIVALENT PROPOSALS SUSPEND TO A POINT ABOVE FLOOR PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P3	36" SQUARE DECORATIVE PENDANT WITH WOOD GRAIN FINISH AND UP/DOWN LIGHT DISTRIBUTION AND REMOTE ABOVE CEILING DRIVER	BETA CALCO # FT0IP03-LMA0540-CTA35-VI-DA01-SS2-FA28-CFD01	5400 LUMENS 3500 KELVIN	PRIOR APPROVAL REQUIRED FOR EQUIVALENT PROPOSALS SUSPEND TO A POINT ABOVE TABLE PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P4	CORD SUSPENDED RLM WAREHOUSE SHADE WITH LED A LAMP	HI-LITES # H-15112-91/CBB-91-INC BASELITE # W513-BLK-BLC-BLK	A19 LED LAMP 3000 KELVIN	SUSPEND TO A POINT ABOVE FLOOR PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
WP	LARGE WALL MOUNTED FULL CUT OFF LED WALL PACK	HUBBLE # LMC-30LU4K20BS COOPER # AXCL6A ILP # EQUAL	7000 LUMENS 4000 KELVIN		120V
WP-1	SMALL WALL MOUNTED FULL CUT OFF LED WALL PACK	HUBBLE # LNC-12LU-4K-3-DB COOPER # AXCS2A ILP # EQUAL	2600 LUMENS 4000 KELVIN		120V
VL	2' VANITY LIGHT WITH CYLINDRICAL BARS AND FINISHED ACCENTS	TERON LIGHTING # RTR5-L17.0-L1700-120VORB-35K EFFICIENT LIGHTING # EL228L TECH LIGHTING # EQUAL	2000 LUMENS 3500 KELVIN	MOUNT FIXTURE OVER MIRROR ABOVE VANITY	120V
T	6" BLACK TRACK WITH 4 ADJUSTABLE LED HEADS	HALO # LZRT08MB/LZR200MB/(4)812MB ELITE LIGHTING # EQUAL WAC LIGHTING # EQUAL	1000 LUMENS PER HEAD 3000 KELVIN	MOUNT TO BOTTOM OF STRUCTURAL JOISTS	120V

GENERAL LIGHTING NOTES (APPLIES TO ALL LIGHTING PLANS)

- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- WIRE ALL EMERGENCY LIGHTING FIXTURES AHEAD OF LOCAL AREA SWITCHING.
- COORDINATE EXACT FIXTURE PLACEMENT WITH OTHER EQUIPMENT IN THE CEILING SPACE SPECIFICALLY HVAC DUCT WORK.
- MINIMUM WIRE SIZE SHALL BE #12 COPPER. MAXIMUM 3 CIRCUITS PER HOME RUN EACH SHALL HAVE SEPARATE NEUTRAL.
- VERIFY FINAL MOUNTING HEIGHTS OF ALL BUILDING MOUNTED EXTERIOR LIGHTS AND SUSPENSION HEIGHTS OF INTERIOR FIXTURES WITH ARCHITECT PRIOR TO ANY ROUGH-INS.
- MOUNT J-BOXES FOR FIXTURES IN EXPOSED AREAS OF CEILINGS TO COORDINATE WITH FINAL PLACEMENT OF FIXTURES. WHERE POSSIBLE UTILIZE STRUCTURAL MEMBERS IF NECESSARY PROVIDE UNI-STRUT SUPPORTS WHERE LOCATION DICTATES.
- NOTE ALL DETAILS AND NOTES ON LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL REQUIREMENTS.

PROJECT NO:  
21-4140  
DRAWN BY:  
STAFF  
DATE:  
05/17/2021



**KEYES ARCHITECTS & ASSOCIATES**  
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LOUISVILLE, KENTUCKY 40213 (502) 636-5113

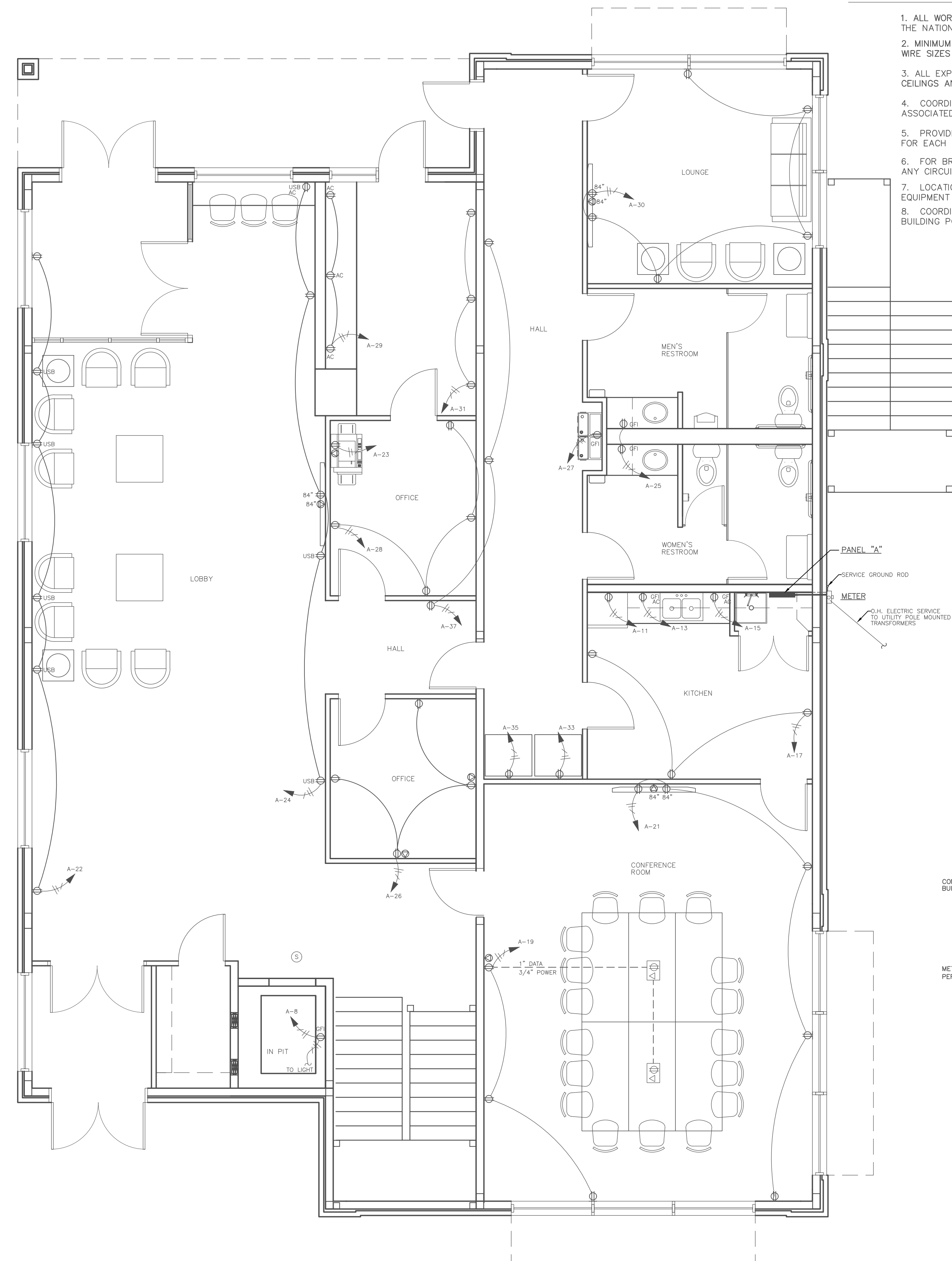
NEW CONSTRUCTION:  
**BARDSTWON NELSON  
COUNTY AIRPORT  
TERMINAL**  
1924 BOSTON ROAD BARDSTOWN, KY 40004

FIRST FLOOR  
PLAN - LIGHTING

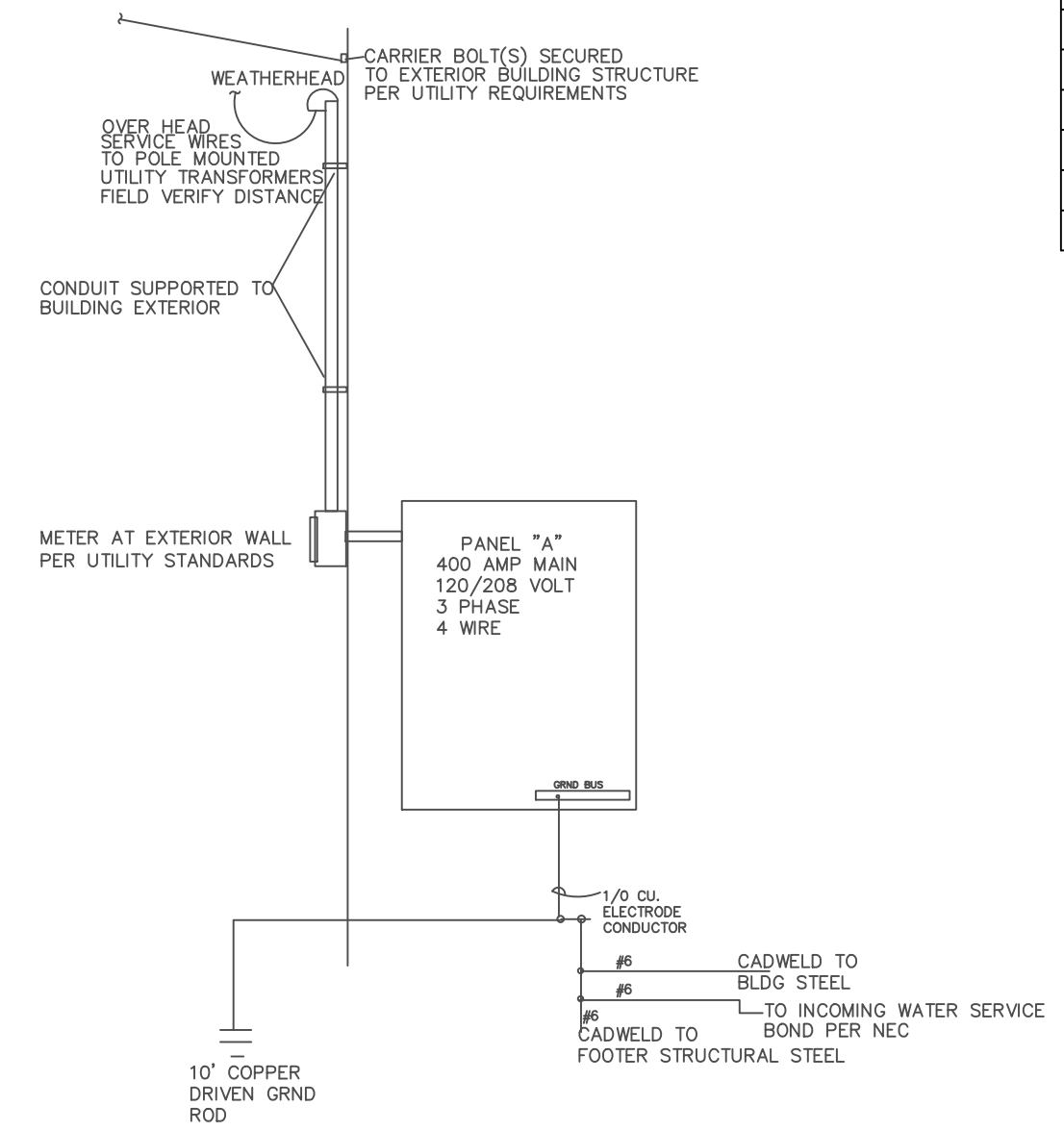
GENERAL POWER NOTES(APPLY TO ALL POWER PLANS)

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
2. MINIMUM WIRE SIZE SHALL BE #12 COPPER. COORDINATE WITH EQUIPMENT ACTUAL WIRE SIZES BASED ON EQUIPMENT NAME PLATE RATINGS.
3. ALL EXPOSED CONDUIT BELOW 10' SHALL BE EMT TYPE. MC CABLE ALLOWED ABOVE CEILINGS AND IN STRUCTURAL AREA OF CEILINGS. SCHEDULE 40 PVC FOR U.G. CONDUIT.
4. COORDINATE WITH MECHANICAL CONTRACTOR FOR REQUIRED CONTROL WIRING ASSOCIATED WITH HVAC EQUIPMENT.
5. PROVIDE PANELBOARD CIRCUIT DIRECTORIES WHICH MATCH FIELD WIRING/CIRCUITING FOR EACH POWER DISTRIBUTION PANEL.
6. FOR BRANCH CIRCUITS -NO MORE THAN THREE CIRCUITS PER CONDUIT HOMERUN. ANY CIRCUIT WIRING LARGER THAN #10 SHALL HAVE DEDICATED EMT CONDUIT HOMERUNS.
7. LOCATIONS OF MECHANICAL EQUIPMENT ARE DIAGRAMMATIC. FIELD VERIFY FINAL EQUIPMENT LOCATIONS WITH MECHANICAL CONTRACTOR.
8. COORDINATE WITH LOCAL UTILITY FOR SPECIFIC REQUIREMENTS ASSOCIATED WITH NEW BUILDING POWER SERVICE ENTRANCE.

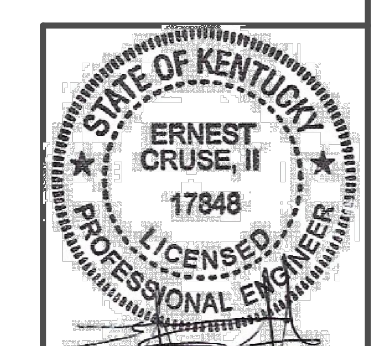
ELECTRICAL SYMBOLS LEGEND	
ITEM	DESCRIPTION
	DUPLEX OUTLET @ 15" A.A.F. UNLESS OTHERWISE NOTED
	DATA/TV OUTLET WITH CONDUIT STUB TO ACCESSIBLE POINT ABOVE LAY-IN CEILING
	DUPLEX RECEPTACLE WITH INTEGRAL USB CHARGING PORTS
	ABOVE COUNTER
	GROUND FAULT TYPE RECEPTACLE
	FLOOR BOX COMBINATION POWER/DATA OUTLET
	CIRCUIT HOMERUN TO POWER PANEL
	CEILING SMOKE DETECTOR
	HEAT DETECTOR
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM CONTROL PANEL
	CEILING OCCUPANCY SENSOR DUAL TECHNOLOGY
	2 ZONE DIGITAL DIMMING POWER PACK EQUAL TO WATTSTOPPER LMRC-213
	LOW VOLTAGE DIGITAL DIMMER SWITCH EQUAL TO WATTSTOPPER EMSW-104
	LOW VOLTAGE CAT 5 CABLE WITH RJ45 CONNECTORS
	LINE VOLTAGE SPEC. GRADE SWITCH
	LINE VOLTAGE SPEC. GRADE 3-WAY SWITCH
	LINE VOLTAGE I/R OCCUPANCY SENSOR SWITCH



A	120/208V 1 PH 3W	400aBUS	400 amp MAIN BKR	22,000 AIC MIN		
LOAD DESCRIPTION	FEEDER	CB/POLE	CIRC. NO.	CB/POLE	FEEDER	LOAD DESCRIPTION
EXTERIOR LIGHTS	#12	20 1P	1 2	30 2P	#10	ELEVATOR
LOBBY LIGHTS	#12	20 1P	3 4	-	#10	-
CONF. LIGHTS	#12	20 1P	5 6	20 1P	#12	ELEVATOR LIGHTS
OFFICE LIGHTS	#12	20 1P	7 8	20 1P	#12	ELEV. PIT REC.
SHELL LIGHTS	#12	20 1P	9 10	50 2P	#8	RTU-4
KITCHEN RECEPT.	#12	20 1P	11 12	-	#8	-
KITCHEN RECEPT.	#12	20 1P	13 14	50 2P	#8	RTU-5
KITCHEN RECEPT.	#12	20 1P	15 16	-	#8	-
KITCHEN RECEPT.	#12	20 1P	17 18	50 2P	#8	RTU-1
CONF. RM. RECEPT.	#12	20 1P	19 20	-	#8	-
CONF. RM. RECEPT.	#12	20 1P	21 22	20 1P	#12	LOBBY RECEPT.
COPIER RECEPT.	#12	20 1P	23 24	20 1P	#12	LOBBY RECEPT.
RESTROOM RECEPT.	#12	20 1P	25 26	20 1P	#12	OFFICE RECEPT.
DRINKING FOUNTAIN	#12	20 1P	27 28	20 1P	#12	OFFICE RECEPT.
RECEPT. REC	#12	20 1P	29 30	20 1P	#12	LOUNGE RECEPT.
RECEPT. REC	#12	20 1P	31 32	30 2P	#10	RTU-2
VENDING REC	#12	20 1P	33 34	-	#10	-
VENDING REC	#12	20 1P	35 36	30 2P	#10	RTU-3
HALL RECEPT.	#12	20 1P	37 38	-	#10	-
SPARE	-	20 1P	39 40	20 1P	#12	EF-1
SPARE	-	20 1P	41 42	20 2P	#12	MINI-SPLIT
SPARE	-	20 1P	43 44	-	#12	-
SPARE	-	20 1P	45 46	20 2P	#12	MINI-SPLIT
SPARE	-	20 1P	47 48	-	#12	-
SPARE	-	20 1P	49 50	-	-	-
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			57 58			
			59 60			



POWER RISER DIAGRAM  
N.T.S.



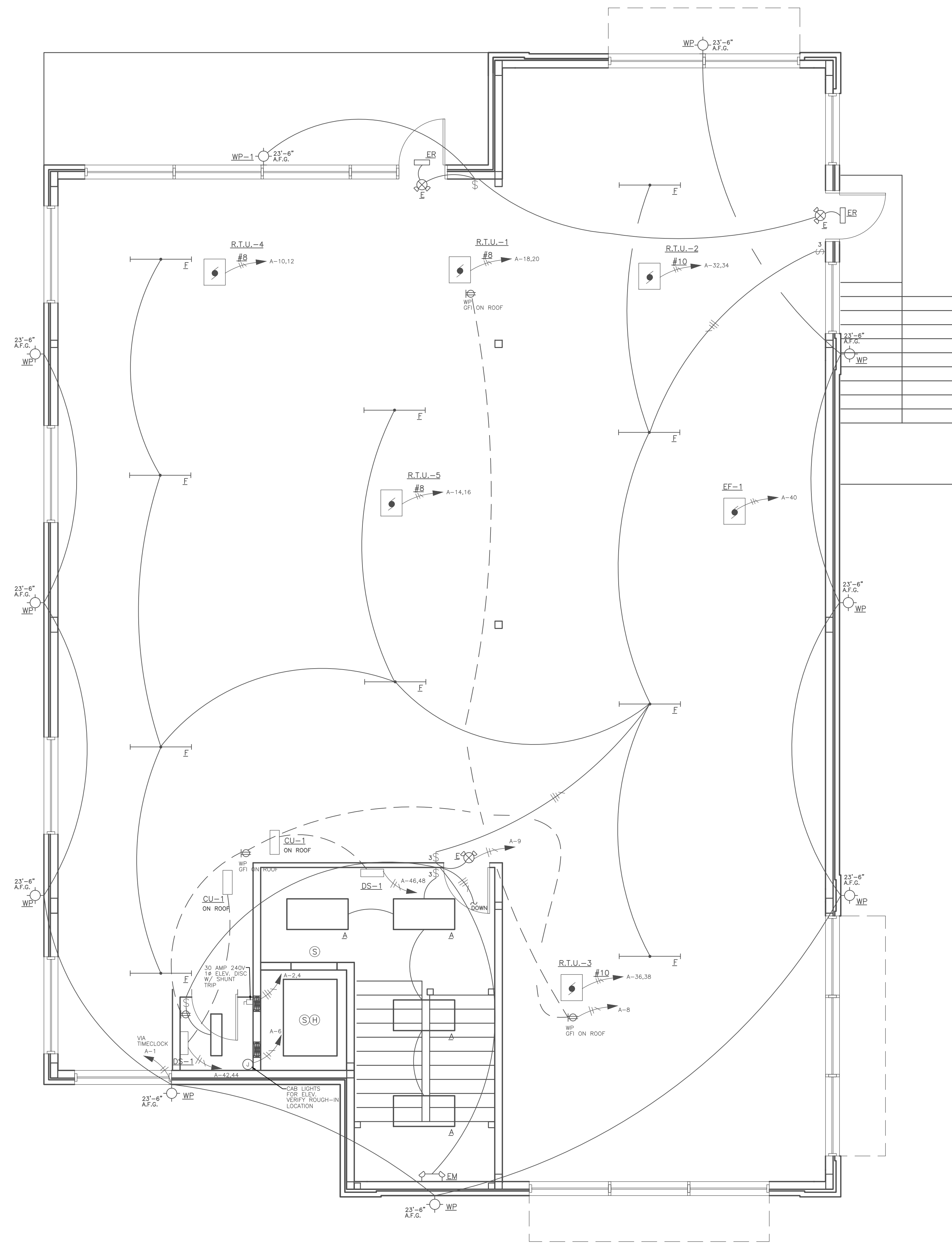
**KEYES ARCHITECTS & ASSOCIATES**  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION:  
**BARDSTWON NELSON**  
**COUNTY AIRPORT**  
**TERMINAL**  
1924 BOSTON ROAD BARDSTOWN, KY 40004

LIGHT FIXTURE SCHEDULE :

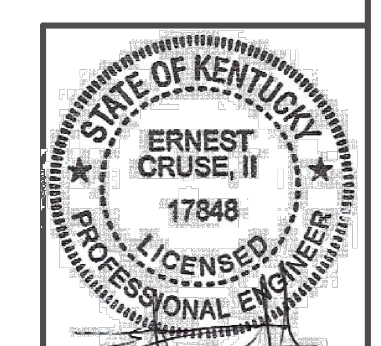
TYPE	DESCRIPTION	MODEL	LUMENS/COLOR TEMP	REMARKS	VOLTAGE
A	RECESSED 2X4 LED VOLUMETRIC TROFFER WITH CENTER BASKET LENS	COLUMBIA # CCL24-5035 COOPER # 24C22-50-UNV-L835-CD1-U LIGHTOLIER # EQUAL	5000 LUMENS 3500 KELVIN	PROVIDE TWO CEILING WIRES TO SUPPORT FIXTURE AT TWO CORNERS TO STRUCTURE ABOVE	120V
B	RECESSED 2X2 LED VOLUMETRIC TROFFER WITH CENTER BASKET LENS	COLUMBIA # CCL22-5335 COOPER # 22C22-34-UNV-L835-CD1-U LIGHTOLIER # EQUAL	3300 LUMENS 3500 KELVIN	PROVIDE TWO CEILING WIRES TO SUPPORT FIXTURE AT TWO CORNERS TO STRUCTURE ABOVE	120V
C	RECESSED 6" LED DOWN LIGHT WITH HAZE ALUMINUM FINISH TRIM	PRESOLITE # LTR6RDHMLDM1/LTR6RD-TML258MDSS-WT-B24 COOPER # HC620-D010-HM612835-61MD-H LIGHTOLIER # EQUAL	2000 LUMENS 3500 KELVIN		120V
D	RECESSED 6" LED DOWN LIGHT WITH HAZE ALUMINUM FINISH TRIM	PRESOLITE # LTR6RDHMLDM1/LTR6RD-TML258MDSS-WT-B24 COOPER # HC620-D010-HM612835-61MD-H LIGHTOLIER # EQUAL	2000 LUMENS 3500 KELVIN		120V
E	COMBINATION EXIT EMERGENCY LIGHT WITH TWO LED HEADS	HUBBLE # COR COOPER # APCH70R LIGHTOLIER # EQUAL	INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
EM	SELF CONTAINED SURFACE EMERGENCY FIXTURE WITH TWIN 8 WATT HEADS AND MAINTENANCE FREE BATTERY.	HUBBLE # CU2 COOPER # APEL LIGHTOLIER # EQUAL	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
ER	EXTERIOR WET LOCATION 2 HEADED REMOTE EMERGENCY EGRESS LIGHT	HUBBLE # CUS0DB COOPER # SELW25 LIGHTOLIER # EQUAL	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO FIXTURE	120V
F	LINEAR LED STRIP LIGHT WITH LENS	COLUMBIA # CSL4-LSCS COOPER # 4ST2L4040R LIGHTOLIER # EQUAL	4000 LUMENS 4000 KELVIN		120V
PL	2' SURFACE MOUNTED LED VAPOR TIGHT LIGHT WITH FROSTED LENS	COLUMBIA # LXEM-240-RFA-E-U COOPER # 4ST2L4040R LIGHTOLIER # EQUAL	2300 LUMENS 4000 KELVIN		120V
P1	SMALL SUSPENDED DECORATIVE PENDANT	KUZCO # PD1706-BK TECH LIGHTING EQUAL MODERN FORMS # PD-52708-8"-GL	300 LUMENS 3000 KELVIN	SUSPEND TO A POINT ABOVE COUNTER PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P2	32" ROUNDED SUSPENDED DECORATIVE PENDANT	KUZCO # PD12732-BK PRIOR APPROVAL REQUIRED FOR EQUIVALENT PROPOSALS	10000 LUMENS 3000 KELVIN	SUSPEND TO A POINT ABOVE FLOOR PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P3	36" SQUARE DECORATIVE PENDANT WITH WOOD GRAIN FINISH AND UP/DOWN LIGHT DISTRIBUTION AND REMOTE ABOVE CEILING DRIVER	BETA CALCO # FTORP03-LMA0540-CTA35-V1-DA01-SS2-FA28-CFD01 PRIOR APPROVAL REQUIRED FOR EQUIVALENT PROPOSALS	5400 LUMENS 3500 KELVIN	SUSPEND TO A POINT ABOVE TABLE PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
P4	CORD SUSPENDED RLM WAREHOUSE SHADE WITH LED A LAMP	HI-LITES # H-15112-91/CBB-91-INC BASELITE # W513-BLK-BLC-BLK	A19 LED LAMP	SUSPEND TO A POINT ABOVE FLOOR PER ARCHITECT- FINISH SELECTED BY ARCHITECT	120V
WP	LARGE WALL MOUNTED FULL CUT OFF LED WALL PACK	HUBBEL # LMC-30LU4K2DBS COOPER # AXCL6A ILP # EQUAL	7000 LUMENS 4000 KELVIN		120V
WP-1	SMALL WALL MOUNTED FULL CUT OFF LED WALL PACK	HUBBEL # LNC-12LU-4K-3-DB COOPER # AXCS2A ILP # EQUAL	2600 LUMENS 4000 KELVIN		120V
VL	2' VANITY LIGHT WITH CYLINDRICAL BARS AND FINISHED ACCENTS	TERON LIGHTING # RTRS-L17.0-L1700-120VORB-35K EFFICIENT LIGHTING # EL228L TECH LIGHTING # EQUAL	2000 LUMENS 3500 KELVIN	MOUNT FIXTURE OVER MIRROR ABOVE VANITY	120V

ELECTRICAL SYMBOLS LEGEND			
ITEM	DESCRIPTION	ITEM	DESCRIPTION
	DUPLEX OUTLET @ 15" A.A.F. UNLESS OTHERWISE NOTED		FIRE ALARM MANUAL PULL STATION
	DATA/TV OUTLET WITH CONDUIT STUB TO ACCESSIBLE POINT ABOVE LAY-IN CEILING		FIRE ALARM CONTROL PANEL
	DUPLEX RECEPTACLE WITH INTEGRAL USB CHARGING PORTS		CEILING OCCUPANCY SENSOR DUAL TECHNOLOGY
	ABOVE COUNTER		2 ZONE DIGITAL DIMMING POWER PACK EQUAL TO WATTSTOPPER LMRC-21.3
	GROUND FAULT TYPE RECEPTACLE		LOW VOLTAGE DIGITAL DIMMER SWITCH EQUAL TO WATTSTOPPER EMSW-104
	FLOOR BOX COMBINATION POWER/DATA OUTLET		LOW VOLTAGE CAT 5 CABLE WITH RJ&S CONNECTORS
	CIRCUIT HOMERUN TO POWER PANEL		LINE VOLTAGE SPEC. GRADE SWITCH
	CEILING SMOKE DETECTOR		LINE VOLTAGE SPEC. GRADE 3-WAY SWITCH
	HEAT DETECTOR		LINE VOLTAGE 1/R OCCUPANCY SENSOR SWITCH



**01** SECOND FLOOR SHELL PLAN - LIGHTING & POWER  
SCALE: 1/4" = 1'-0"

PROJECT NO:  
21-4140  
DRAWN BY:  
STAFF  
DATE:  
05/17/2021



**KEYES ARCHITECTS & ASSOCIATES**  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION:  
**BARDSTWON NELSON**  
COUNTY AIRPORT  
TERMINAL  
1924 BOSTON ROAD BARDSTOWN, KY 40004

SECOND FLOOR SHELL PLAN - LIGHTING & POWER  
**E1.03**

SECTION 16A - ELECTRICAL GENERAL REQUIREMENTS

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS  
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, and Mechanical General Requirements apply to the work specified in this and other sections of Division 16.
- 1.2 WORK INCLUDED  
A. Furnish all materials, labor and equipment necessary to construct a complete and functional electrical system as further described in these specifications and on design drawings.  
B. Work under this section shall include final electrical connections to all equipment furnished under other sections of these specifications.  
C. Contractor shall furnish and install all miscellaneous equipment, material and labor which, though not specifically called for in this specification, is necessary for a complete and satisfactory operating installation. Contractor shall leave his work in operating condition.  
D. This section (Electrical General Requirements) applies equally to electrical, heating, ventilating, air conditioning, and plumbing.
- 1.3 MATERIALS, EQUIPMENT AND WORKMANSHIP  
A. Materials and equipment used throughout shall be new and of the best of their respective kinds. No substitutions, other than those specified, shall be used unless approved by the Architect and Engineer. All work shall be executed with speed and consistent with safety and good workmanship. Substitutions of equal equipment will be acceptable only if approved in writing by Architect and Engineer 10-days prior to bid.  
B. All materials shall bear the UL label where such standards has been established and listed by Underwriters Laboratories, Inc.  
C. Competent workmen shall be employed on all phases of the work. Poor workmanship will be rejected and will constitute cause for removal of the individual performing the work.  
D. All material, equipment and locations of same shall at least conform with the standards of the Underwriters Laboratories, Inc. whenever applicable.  
E. Should any dispute arise as to the quality or fitness of materials, equipment or workmanship, the decision rests strictly with the Architect.
- 1.4 REFERENCES  
A. Utilize the following abbreviations and definitions for dissemination within the Drawings and Specifications.  
1. Abbreviations:  
a. NEC/National Electrical Code.  
b. OSHA Occupational Safety and Health Act.  
c. ANSI American National Standards Institute.  
d. NFPA National Fire Protection Association.  
e. ASA American Standards Association.  
f. IEEE Institute of Electrical and Electronics Engineers.  
g. NEMA National Electrical Manufacturers Association.  
h. UL Underwriters Laboratories, Inc.  
i. ICANational Cable Engineers Association.  
j. ASTM American Society of Testing Materials.  
k. ETL Electrical Testing Laboratories, Inc.
- 1.5 PERMITS, CODES AND INSPECTIONS  
A. Electrical Contractor shall obtain and pay for all permits and inspections required for electrical installation.  
B. All work shall be in accordance with the latest edition of the National Electrical Code (NEC), National Fire Protection Association (NFPA), Occupational Safety and Health Administration (OSHA) and local utility company requirements.  
C. Electrical Contractor shall furnish final inspection certification to the Owner upon completion of work. Certificate shall be from local inspection authority.  
D. Where apparent contradictions are discovered between local codes, NEC, specifications and drawings, most stringent or safest requirement will prevail. Beyond this, order of compliance shall be:  
1. Local Codes/Inspector  
2. National Electrical Code  
3. Specifications and Drawings
- 1.6 DRAWINGS AND SPECIFICATIONS  
A. DO NOT SCALE DRAWINGS. Scale of drawings is approximate. Exact locations, distances, levels and other conditions shall be governed by field conditions.  
B. For purpose of clearness and legibility, the drawings are essentially diagrammatic. Although size and location of the equipment is drawn to scale wherever possible.  
C. The drawings and specifications are intended to cover all work enumerated under the respective headings. The Sub-Contractors shall not take advantage of conflict or error between drawings and specifications, but shall request a clarification of such before making his proposal should this condition exist.  
D. Contractors shall obtain a set of the Architectural drawings and specifications, and consult with the Architect and General Contractor as to the general construction of the building and the order and time of placement of all electrical work.  
E. The drawings accompanying these specifications determine the general design of the equipment. Exact disposition of the equipment is subject to the requirements and construction of the manufacturer's standard, but the space occupied and general design shall correspond to that shown on the plans.  
F. Submit a complete list within fifteen (15) calendar days after award of contract, for all materials to be used. Note any deviations from specifications or proposed "equipments" and include Manufacturer's name, catalog number and descriptive literature for each.
- 1.7 SUBMITTALS  
A. Electrical Contractor shall refer to electrical submittal registry which is located at the end of this section. Sections identified within the registry indicate an overview of the products to be submitted. The Contractor shall reference each identified section for the specific items to be included in the submittal.  
B. Electrical Contractor shall provide submittals for review and approval on equipment and material listed in the Individual technical sections of Division 16.  
C. Submittals shall clearly indicate electrical characteristics, physical dimensions and pertinent data which indicate that item meets all requirements specified on drawings and in technical specifications.  
D. Each Sub-Contractor shall submit to the General Contractor review within thirty (30) days after the date of the contract, seven (7) sets of complete catalogue data and/or shop drawings for each item of material or piece of equipment. Catalogue data shall include name of the manufacturer, trade names, performance data, descriptive material (sufficient to identify each item), and specify performance of the products. Shop drawings shall include specified catalogue data and shall show equipment in detail, arrangement and disposition for this particular project design.  
E. The Architect and/or Engineer checking and reviewing of the Contractor's and Sub-Contractor's drawings and/or equipment details does not relieve the Contractor or Sub-Contractor from responsibility for errors, omissions or equipment furnished in accordance with such checked or reviewed drawings. Where such errors or omissions are later discovered, they shall be made good by the respective Sub-Contractor irrespective of any review by the Architect or Engineer.
- 1.8 SITE EXAMINATION  
A. Each Contractor shall, before submitting a proposal, visit and examine the site to satisfy themselves as to materials and scope of the construction, alterations and remodeling, any difficulty attending the performance of the work, storage of material, access to any and all areas, etc.  
B. The submission of a proposal will be construed as evidence that such an examination has been made. Claims made subsequent to the time of submission of the proposal for labor, equipment and material required for difficulties encountered, which could have been foreseen had an examination been made, will not be recognized.
- 1.9 QUALIFICATIONS  
A. Contractors must have five (5) years minimum experience, has a satisfactory work resume with comparable projects listed, has a sound financial basis, and is technically competent.  
B. Equipment Manufacturers must have five (5) years of successful experience, be technically competent, and be industrial financially stable.  
C. Owner reserves the right to review and determine if the Contractors and Manufacturers meet the above categories to his satisfaction. The Owner has the authority to reject any equipment and bids if the above standards are not met.
- 1.10 TEMPORARY ELECTRICAL SERVICE  
A. Electrical Contractor shall provide a complete temporary power system for use during construction by all trades.  
B. Temporary service shall be sized to handle construction equipment and temporary lighting during construction. Electrical Contractor shall coordinate connection point for electrical service with General Contractor.  
C. Electrical Contractor shall install a temporary lighting system for use during construction to maintain twenty (20) foot candles indoors during working hours and five (5) foot candles outdoors around equipment storage at night.  
D. Temporary power system shall include all circuit breakers necessary, including ground fault interrupting breakers where required by codes. System shall also include an adequate number of receptacles, meeting OSHA requirements, for use by all trades.  
E. Individual trades shall furnish any extension cords and special lighting required for their work.
- 1.11 FACILITY ELECTRICAL SERVICE  
A. Electrical Contractor shall be responsible for providing complete, permanent and operating electrical service to the facility at the voltage, ampacity and manner indicated on the drawings.  
B. Electrical Contractor shall be responsible for coordinating local utility requirements for primary ducts, transformer pads, service poles, metering, etc., in order to determine any requirements beyond work shown on drawings.  
C. Electrical Contractor shall be responsible for coordinating with local utility planned routing of primary ductwork, service transformer pad, service pole locations and secondary service connection requirements prior to beginning any work.  
D. Electrical Contractor shall provide Duke Energy plan showing routing of primary ductwork between point of origin and transformer pad. Plan shall provide call and bearings of duct line and be certified by Licensed Land Surveyor. Plan shall be submitted to Duke Energy and Owner in a timely fashion to prevent delay of permanent service connection.

- 1.11 DEBRIS, CUTTING AND PATCHING  
A. Electrical Contractor shall be responsible for removing any dirt, boxes, paper or other debris present as a result of his work.  
B. Work areas shall be maintained in a clean and orderly condition at all times.  
C. Electrical Contractor shall be responsible for all cutting and patching required for his work. All work shall be by skilled Craftsmen.  
D. No more cutting shall be done than is absolutely necessary. Cutting of a structural member or exposed surface of concrete will not be permitted without written approval of the Architect and Structural Engineer.  
E. Conduit openings in floor slabs shall be cut with core drill. Edges of trenches or openings in slabs shall be scribe cut with masonry saw.  
F. Each Sub-Contractor will be required to notify other trades in due time where he will require openings or chases in new masonry. Each Sub-Contractor shall also set all concrete inserts and sleeves for his work in new construction. Failing to do this, he shall cut openings for his work and patch as required at his own expense.  
G. All cutting and patching shall be done in a neat and workmanlike manner by men skilled in the various trades and with written permission from the Architect.
- 1.12 WARRANTY  
A. The Electrical Contractor shall warrant all material and labor for a period of one (1) year from the date of Owner's acceptance except where warranties for longer terms are specified herein, such longer term to apply.  
B. The Electrical Contractor shall replace defective parts or equipment promptly without any cost to the Owner and done to the Owner's satisfaction.
- 1.13 DELIVERY, STORAGE, AND HANDLING  
A. Deliver, store, protect, and handle products to the project site properly identified with manufacturers identification, model number, types, grades, compliance labels, and other information needed for identification.  
B. Protect products from weather, construction traffic, dirt, water chemicals, and mechanical damage by storing in original packaging.  
C. If products and materials are specified or indicated on the Drawings for a specific item or system, use those products or materials. If products and materials are not listed in either of the above, use first class products and materials, subject to approval of Shop Drawings where Shop Drawings are required or as approved in writing where Shop Drawings are not required.
- 1.14 AS-BUILT DRAWINGS  
A. Maintain an accurate set of "as built" drawings and record any deviations from contract drawings. Submit two (2) sets of drawings (marked to show all deviations) upon completion of work to General Contractor.  
B. As-built drawings shall show all changes, additions, deletions, and deviations from contract drawings noted plainly thereon. Special emphasis is placed on recording the exact location of all underground utilities by offset distances to building corners, walls, curbs, etc.

- PART 2 - PRODUCTS
- 2.1 MATERIALS  
A. If materials and equipment installed shall be new and free of defects and shall be the product of a reputable manufacturer and subject to approval.  
B. Applicable equipment and materials shall be listed by Underwriters Laboratories and Manufactured in accordance with ASME, NEMA, ANSI and IEEE standards, and as approved by local authorities having jurisdiction as mentioned in Division 1.  
C. If products and materials are specified or indicated on the Drawings for a specific item or system, use those products or materials. If products and materials are not listed in either of the above, use first class products and materials, subject to approval of Shop Drawings where Shop Drawings are required or as approved in writing where Shop Drawings are not required.
- 2.2 MISCELLANEOUS STEEL  
A. Provide all necessary miscellaneous steel as required for mounting, hanging or otherwise supporting panelboards, wall-mounted transformers, light fixtures, conduits, etc. installed by Electrical Contractor.  
B. Supports shall be suitably fastened to structural members as approved by Architect and Structural Engineer.
- 2.3 IDENTIFICATION, NAMEPLATES AND LABELING  
A. Provide typewritten circuit directories in panels with clear plastic protection shields and mounted in card holders. Indicate circuit number, device or equipment being serviced. Final directories shall reflect final "as-built" conditions.  
B. Label all panels, starters, and switchboards with panel designation in one-half inch (1/2") letters and voltage in one-quarter inch (1/4") letters. Use engraved lamacoid plates with black background and white letters. Fasten plate above door on panel trim by using aluminum screws.

- PART 3 - EXECUTION
- 3.1 ROUGH-IN  
A. Verify final locations for rough-in with field measurements and with the shop drawing requirements of the actual equipment to be connected.
- 3.2 ELECTRICAL INSTALLATION  
A. Follow manufacturer's instructions for installing, connecting, and adjusting all equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Provide all special supports, connections, wiring, accessories, etc.  
B. General: Unless otherwise indicated, hook up all equipment requiring electrical services, whether such equipment is furnished under this Section or furnished by others. Comply with the following requirements:  
1. Work specified under this Section may be affected by work and materials specified under other Sections of these Specifications. The Contractor shall be responsible for coordination of work described under this Section with the other Sections.  
2. Verify all dimensions by field measurements.  
3. Allow for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.  
4. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.  
5. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the work.  
6. Coordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.  
7. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Engineer/Owner.  
8. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.  
9. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
- 3.3 WORKMANSHIP, COOPERATION AND COORDINATION  
A. All work under this section shall be completed by Workmen skilled in their respective trades.  
B. Workmen shall be thoroughly trained and familiar with Manufacturer's recommended methods of installation.  
C. Any installation which does not present an appearance of the best trade practices shall be repaired, removed or replaced as directed by Owners Representative.  
D. Electrical Contractor shall coordinate with other trades to obtain most practical arrangement of work.  
E. Electrical Contractor shall cooperate installation with other trades to minimize interferences. "First to install" will not be justification for interferences.

- 3.4 CLEANING AND TESTING  
A. Clean all equipment, panels, disconnects, light fixtures, device outlets and plates, raceway systems and other electrical components after construction completion and prior to Owner's acceptance.  
B. Test complete electrical system and all components to assure proper operation. Furnish to Architect/Engineer any test results required to prove proper system operation.
- 3.5 EQUIPMENT CONNECTIONS  
A. Electrical Contractor shall connect all power wiring to any equipment furnished by Others, unless indicated otherwise.  
B. Mechanical Contractor shall install all relays and control interlocks required for his equipment. Mechanical Contractor shall also furnish any magnetic starters required for his equipment to Electrical Contractor for installation by Electrical Contractor.  
C. Electrical Contractor shall furnish all materials (i.e. disconnect switches, junction boxes, receptacles, cords, plugs, etc.) and labor necessary to complete final connections to all equipment.  
D. Electrical Contractor shall be responsible for making final connection to all Owner furnished equipment indicated on plans. Contractor shall check list from Owner with drawings and inform Owner of any discrepancies.  
E. Electrical Contractor shall obtain shop drawings and/or cut sheets for all equipment supplied by others which requires electrical connections prior to rough-in. Electrical Contractor shall confirm that electrical services provided for equipment on drawings are correct for equipment to be installed. Inform Engineer of any discrepancies. Any work installed which does not match the requirements of the equipment to be installed shall be removed at the expense of the Electrical Contractor.  
F. Before connecting any piece of equipment, check the name plate data against the information shown on the Drawings and call to the Architect or the Engineer any discrepancies thereto. Any equipment installed which does not meet the requirements of the equipment to be installed shall be removed at the expense of the Contractor.
- 3.6 ELECTRICAL FOR HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT  
A. The Mechanical Contractor shall furnish and install all air conditioning equipment, air handling units, exhaust fans, etc. The Mechanical Contractor shall provide starters for all HVAC equipment requiring starters, unless otherwise indicated. The Electrical Contractor shall mount and connect all starters and shall furnish all branch circuit wiring, motor disconnects, local and final electrical connections as required for proper operation. Mechanical Contractor shall furnish and install all controls and control wiring, unless otherwise indicated on drawings.

- 3.8 PAINTING  
A. All painting of electrical system shall be by others.  
B. Contractor shall be responsible for all touch-up painting. Touch-up painting shall be per manufacturers recommendation.
- END OF SECTION

SECTION 16B - GROUNDING AND BONDING

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS  
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division-1 General Requirements and Specification Sections, apply to the work specified in this Section.  
B. Division-16 Electrical General Requirements section applies to the work specified in this section.
- 1.2 SUMMARY  
A. This Section includes grounding of electrical systems and equipment. Grounding requirements specified in this Section may be supplemented by special requirements of systems described in other Sections.
- 1.3 SUBMITTALS  
A. Product Data: For the following:  
1. Ground rods.  
2. Ground bus, pre-drilled.  
B. Qualification Data: For firms and persons specified in "Quality Assurance" Article.  
C. Field Test Reports: Submit written test reports to include the following:  
1. Test procedures used.  
2. Test results that comply with requirements.  
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- 1.4 QUALITY ASSURANCE  
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.  
1. Comply with UL 467.

- PART 2 - PRODUCTS
- 2.1 MANUFACTURERS  
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:  
1. Grounding Conductors, Cables, Connectors, and Rods:  
a. Apache Grounding/Erico Inc.  
b. Chance/Hubbell.  
c. Copperwell Corp.  
d. Erico Inc./Electrical Products Group.  
e. ILSOCO.  
f. O-Z/Dedney Co.; a business of the EDS Electrical Group.  
g. Rezo, Inc.; Division of Hubbell.  
h. Salisbury W. H. Salisbury & Co.  
i. Superior Grounding Systems, Inc.  
j. Thomas & Betts, Electrical.

- 2.2 GROUNDING CONDUCTORS  
A. For insulated conductors, comply with Division 16 Section "Conductors and Cables."  
B. Material: Copper.  
C. Equipment Grounding Conductors: Insulated with green-colored insulation.  
D. Insulated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green and two bands of yellow.  
E. Grounding Electrode Conductors: Stranded cable.  
F. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.  
G. Bare Copper Conductors: Comply with the following:  
1. Solid Conductors: ASTM B 3.  
2. Assembly of Stranded Conductors: ASTM B 8.  
3. Tinned Conductors: ASTM B 33.  
H. Copper Bonding Conductors: As follows:  
1. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG copper conductor, 1/4 inch (6.4 mm) in diameter.  
2. Bonding Conductor: No. 4 or No. 6 AWG, stranded copper conductor.  
3. Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick.  
4. Tinned Bonding Jumper: Tinned-copper tape, braided copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick.  
I. Grounding Bus: Bare, annealed copper bars of rectangular 1/4" cross section, with insulators, pre-drilled.

- 2.3 CONNECTOR PRODUCTS  
A. Comply with IEEE B37 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items.  
B. Bolted Connectors: Bolted-pressure-type connectors, or compression type.  
C. Welded Connectors: Electroarc-welded type, in kit form, and selected per manufacturer's written instructions.

- PART 3 - EXECUTION
- 3.1 APPLICATION  
A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.  
B. In raceways, use insulated equipment grounding conductors.  
C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections, except those at test wells.  
D. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.  
E. Grounding Bus: Install in Data Center Rooms, in rooms housing service equipment, and elsewhere as indicated.  
1. Use insulated spacer; space 1 inch (25.4 mm) from wall and support from wall 8 inches (150 mm) above finished floor, unless otherwise indicated.  
2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the specified height above the floor.

- 3.2 EQUIPMENT GROUNDING CONDUCTORS  
A. Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.  
B. Install equipment grounding conductors in all feeders and circuits.  
C. Install insulated equipment grounding conductor with circuit conductors for the following items, in addition to those required by NEC:  
1. Feeders and branch circuits.  
2. Lighting circuits.  
3. Receptacle circuits.  
4. Single-phase motor and appliance branch circuits.  
5. Three-phase motor and appliance branch circuits.  
6. Flexible raceway runs.  
7. Armored and metal-clad cable runs.  
D. Computer Outlet Circuits: Install insulated equipment grounding conductor in branch-circuit runs from computer-area power panels or power-distribution units.  
E. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.  
1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-1/2-inch (6.4-by-50-by-300-mm) grounding bus.  
2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.  
3. Cable Tray: Provide an insulated #10 awg grounding conductor along the full length of the cable tray. Bond at all junctions.

- 3.3 INSTALLATION  
A. Bond interior metal piping systems and metal air ducts to equipment grounding conductors of associated pumps, fans, blowers, electric heaters, and air cleaners. Use braided-type bonding straps.  
3.4 CONNECTIONS  
A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.  
1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.  
2. Make connections with clean, bare metal at points of contact.  
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.  
4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.  
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.  
B. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.  
C. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.

- D. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushing with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.  
E. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a viable indication that a connector has been adequately compressed on grounding conductor.  
F. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.
- 3.5 FIELD QUALITY CONTROL  
A. Testing: Perform the following field quality-control testing:  
1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance with requirements.  
2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells. Measure ground resistance not less than two full days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests, by the fall-of-potential method according to IEEE 81. Electrical service ground and generator counterpoise ground soil measure 10 ohms or less.  
3. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION

SECTION 16C - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

- PART 1 - GENERAL
- 1.1 SUMMARY  
A. This Section includes the following:  
1. Building wires and cables rated 600 V and less.  
2. Connectors, splices, and terminations rated 600 V and less.  
3. Sleeves and sleeve seals for cables.
- 1.2 SUBMITTALS  
A. Product Data: For each type of product indicated.  
B. Field quality-control test reports.
- 1.3 QUALITY ASSURANCE  
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.  
B. Comply with NFPA 70.
- PART 2 - PRODUCTS
- 2.1 CONDUCTORS AND CABLES  
A. Copper Conductors: Comply with NEMA WC 70.  
B. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN.
- 2.2 CONNECTORS AND SPLICES  
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:  
1. AFC Cable Systems, Inc.  
2. Hubbell Wiring Systems, Inc.  
3. O-Z/Dedney; EDS Electrical Group LLC.  
4. 3M Electrical Products Division.  
5. Tyco Electronics Corp.  
B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

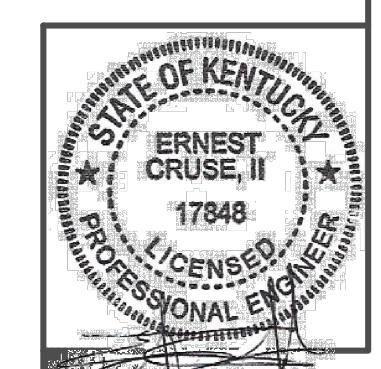
- PART 3 - EXECUTION
- 3.1 CONDUCTOR MATERIAL APPLICATIONS  
A. Feeders: Copper Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.  
B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- 3.2 CONDUCTOR INSULATION APPLICATIONS AND WIRING METHODS  
A. Exposed Feeders: Type THHN-THWN, single conductors in raceway.  
B. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspace: Type THHN-THWN, single conductors in raceway.  
C. Exposed Branch Circuits: Type THHN-THWN, single conductors in raceway.  
D. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.  
E. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- 3.3 INSTALLATION OF CONDUCTORS AND CABLES  
A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.  
B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.  
C. Use lifting means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.  
D. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."  
E. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.  
F. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

- END OF SECTION
- SECTION 16D - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
- PART 1 - GENERAL
- 1.1 RELATED DOCUMENTS  
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- 1.2 SUMMARY  
A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.
- 1.3 DEFINITIONS  
A. EMT: Electrical metallic tubing.  
B. EPDM: Ethylene-propylene-diene terpolymer rubber.  
C. EMT-FC: Flexible electrical metallic conduit.  
D. IMC: Intermediate metal conduit.  
E. LFMC: Liquidtight flexible metal conduit.  
F. LFNC: Liquidtight flexible nonmetallic conduit.  
G. NBR: Acrylonitrile-butadiene rubber.  
H. RNC: Rigid nonmetallic conduit.

- 1.4 SUBMITTALS  
A. Product Data: For each type of raceway, surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- 1.5 QUALITY ASSURANCE  
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.  
B. Comply with NFPA 70.

- PART 2 - PRODUCTS
- 2.1 METAL CONDUIT AND TUBING  
A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:  
1. AFC Cable Systems, Inc.  
2. Altec Inc.  
3. Allied Tube & Conduit; a Tyco International Ltd. Co.  
4. Anomet Electrical, Inc.; Anaconda Metal Hose.  
5. Electric-Flex Co.  
6. Moverick Tube Corporation.  
7. O-Z Dedney; a unit of General Signal.  
8. Wheelabrator Tube Company.  
B. Rigid Steel Conduit: ANSI C80.1.  
C. IMC: ANSI C80.4.  
D. EMT: ANSI C80.3.  
E. LFMC: Flexible metal conduit with PVC jacket.  
F. Fittings for Conduit (including all Types and Flexible and Liquidtight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.  
1. Fittings for EMT: Steel set-screw or compression type.  
2. Joint Compound for Rigid Steel Conduit or IMC: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

- 2.2 SLEEVES FOR RACEWAYS  
A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.  
B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.  
C. Sleeves for Rectangular Openings: Galvanized sheet steel with minimum 0.052- or 0.138-inch thickness as indicated and of length to suit application.



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NEW CONSTRUCTION:  
BARDSTWON NELSON  
COUNTY AIRPORT  
TERMINAL  
1924 BOSTON ROAD BARDSTOWN, KY 40004

SECTION 16J SWITCHBOARDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division-1 General Requirements and Specification Sections, apply to the work specified in this Section.
- B. Division-16 Electrical General Requirements section applies to the work specified in this section.

1.02 SUMMARY

- A. This Section includes service and distribution switchboards rated 600 V and less.

1.03 REFERENCES

- A. General: For all reference publications listed below, refer and comply to editions currently adopted by federal, state, and local government agencies with jurisdiction over the project. For references that are not part of government codes, refer and comply to most recent editions.
  - 1. American National Standards Institute:
    - a. ANSI C12.1 - Code for Electricity Metering.
    - b. ANSI C38.1 - Requirements, Electrical Analog Indicating Instruments.
  - C. Institute of Electrical and Electronics Engineers:
    - 1. IEEE C57.13 - Standard Requirements for Instrument Transformers.
    - 2. IEEE C62.41 - Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
  - D. National Electrical Manufacturers Association:
    - 1. NEMA AB 1 - Molded Case Circuit Breakers and Molded Case Switches.
    - 2. NEMA FU 1 - Low Voltage Cartridge Fuses.
    - 3. NEMA KS 1 - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
    - 4. NEMA PB 2 - Deadfront Distribution Switchboards.
    - 5. NEMA PB 2.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less.
  - E. International Electrical Testing Association:
    - 1. IEC 60883 - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
  - F. ANSI/NFPA 70 - National Electrical Code.

1.04 DEFINITIONS

- A. EMI: Electromagnetic interference.
- B. GFCI: Ground-fault circuit interrupter.
- C. RF: Radio-frequency interference.
- D. RMS: Root mean square.
- E. SPD: Single pole, double throw.

1.05 SUBMITTALS

- A. Product Data: For each type of switchboard, overcurrent protective device, transient voltage suppression device, ground-fault protector, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: For each switchboard and related equipment.
  - 1. Dimensional plans, elevations, sections, and details, including clearances and service space around equipment. Show tabulations of installed devices, equipment features, and ratings. Include the following:
    - a. Enclosure types and details for types other than NEMA 250, Type 1.
    - b. Bus configuration, current, and voltage ratings.
    - c. Short-circuit current rating of switchboards and overcurrent protective devices.
    - d. Descriptive documentation of optional barriers specified for electrical insulation and isolation.
    - e. Utility company's metering provisions with indication of approval by utility company.
    - f. Mimic-bus diagram.
    - g. UL listing for series rating of installed devices.
    - h. Features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
  - 2. Wiring Diagrams: Power, signal, and control wiring.
  - 3. Samples: Representative portion of mimic bus with specified finish, for color selection.
  - 4. Qualification Data: For testing agency.
  - 5. Field quality-control test reports including the following:
    - 1. Test procedures used.
    - 2. Test results that comply with requirements.
    - 3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- F. Operation and Maintenance Data: For switchboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Closeout Procedures" and Operation and Maintenance Data," include the following:
  - 1. Routine maintenance requirements for switchboards and all installed components.
  - 2. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
  - 3. Time-current curves, including selectable ranges for each type of overcurrent protective device.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
  - 1. Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.
  - 2. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7.
  - 3. Source Limitations: Obtain switchboards through one source from a single manufacturer.
  - 4. Product Selection for Restricted Spaces: Drawings indicate maximum dimensions for switchboards including clearances between switchboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.
  - 5. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NEMA PB 2, "Deadfront Distribution Switchboards."
- C. Comply with NFPA 70.

1.07 QUALIFICATIONS

- A. Manufacturers: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver in sections or lengths that can be moved past obstructions in delivery path.
- B. Store indoors in clean dry space with uniform temperature to prevent condensation. Protect from exposure to dirt, fumes, water, corrosive substances, and physical damage.
- C. If stored in areas subjected to weather, protect switchboards to provide protection from weather, dirt, dust, corrosive substances, and physical damage. Remove loose packing and flammable materials from inside switchboards; install electric heating (250 W per section) to prevent condensation.
- D. Handle switchboards according to NEMA PB 2.1 and NEMA 400.

1.09 PROJECT CONDITIONS

- A. Installation Pathway: Remove and replace access fencing, doors, lift-out panels, and structures to provide pathway for moving switchboards into place.
- B. Environmental Limitations: Place equipment for continuous operation under the following conditions, unless otherwise indicated:
  - 1. Ambient Temperature: Not exceeding 104 deg F (40 deg C).
  - 2. Altitude: Not exceeding 6600 feet (2000 m).
  - 3. Service Conditions: NEMA PB 2, usual service conditions, as follows:
    - 1. Ambient temperatures within limits specified.
    - 2. Altitude not exceeding 6600 feet (2000 m).

1.10 COORDINATION

- A. Coordinate layout and installation of switchboards and components with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
- B. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 3.

1.11 WARRANTY

- A. Manufacturer warrants equipment to be free from defects in materials and workmanship for 1-year from date of Owner's acceptance.

1.12 MAINTENANCE SERVICES

- A. Furnish complete service and maintenance for switchboards for 1-year from date of substantial completion.

1.13 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.02 MANUFACTURED UNITS

- A. Manufacturers:
  - 1. Eaton Corporation; Cutler-Hammer Products.
  - 2. Square D.
  - 3. Siemens Energy & Automation, Inc.
  - 4. General Electric Co.; Electrical Distribution & Protection Div.
- B. Front-Connected, Front-Accessible Switchboard: Panel-mounted main device, panel-mounted branches, and sections rear aligned.
- C. Front- and Side-Accessible Switchboard: Fixed, individually mounted main device; panel-mounted branches; and sections rear aligned.
- D. Nominal System Voltage: As indicated on drawings.
- E. Main-Bus Continuity: As indicated on drawings.
- F. Enclosure: Steel, NEMA 250, Type 1 or 3R as indicated on drawings.
- G. Enclosure Finish for Outdoor Units: Factory-applied finish in manufacturer's standard color, undersurfaces treated with corrosion-resistant undercoating.
- H. Enclosure Finish for Indoor Units: Factory-applied finish in manufacturer's standard gray finish over a rust-inhibiting primer on treated metal surface.
- I. Barriers: Between adjacent switchboard sections.

SECTION 16K - WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Receptacles with integral GFCI, and associated device plates.
  - 2. Snap switches.
  - 3. Wall-switch and ceiling occupancy sensors.
  - 4. Pole-through assemblies.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- C. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with NFPA 70.

1.5 COORDINATION

- A. Receptacles for Owner-Furnished Equipment: Match plug configurations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
  - 1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
  - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
  - 3. Pass & Seymour/Lagrand; Wiring Devices & Accessories (Pass & Seymour).

2.2 STRAIGHT BLADE RECEPTABLES

- A. Convenience Receptables, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Cooper: 5351 (single), 5352 (duplex).
    - b. Hubbell: HEL5351 (single), CS352 (duplex).
    - c. Pass & Seymour: 5381 (single), 5352 (duplex).

2.3 GFCI RECEPTABLES

- A. General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A and include indicator light that is lit when device is tripped.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Cooper: GF20.
    - b. Pass & Seymour: 2084.
    - c. Hubbell: GFRB300.

2.4 SNAP SWITCHES

- A. Comply with NEMA WD 1 and UL 20.
  - 1. Switches, 120/277 V, 20 A:
    - 1. Products: Subject to compliance with requirements, provide one of the following:
      - a. Cooper: 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).
      - b. Hubbell: CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way).
      - c. Pass & Seymour: 20A21 (single pole), 20A22 (two pole), 20A23 (three way), 20A24 (four way).

2.5 WALL PLATES

- A. Single and combination types to match corresponding wiring devices.
  - 1. Plate-Securing Screws: Metal with head color to match plate finish.
  - 2. Material for Finished Spaces: Smooth, high-impact thermoplastic.
  - 3. Material for Unfinished Spaces: Galvanized steel.
  - 4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations."

2.6 SAFETY SWITCHES

- A. Characteristics:
  - 1. Enclosure - Heavy Duty, NEMA Type 1, 12 or 3R, as indicated on drawings, fabricated from code grade steel. Finish in gray enamel applied by baking process after steel has been thoroughly degreased. NEMA 3R switches shall have 3R rating clearly displayed. Altered NEMA 12 switches will not be accepted as substitute for 3R rating.
  - 2. Provide provisions for three (3) padlocks when handle is in the "OFF" position.

2.7 MOTOR RATED SWITCHES

- A. Switches provided to serve as motor disconnects for furnace motors shall be single pole, 120 VAC, toggle switch type manual switch with heater elements. Switch shall be provided with heater elements providing Class 20 protection. Provide Allen Bradley 600-TA04 with type W heater elements or equal. Contractor shall size and submit heater elements based upon furnace full load amps.
- B. Approved Manufacturers: Square D, Siemens and General Electric.

2.8 FINISHES

- A. Color: Wiring device catalog numbers in Section Text do not designate device color.
  - 1. Wiring Devices and associated coverplates Connected to Normal Power System: WHITE or As selected by Owner or Architect, unless otherwise indicated or required by NFPA 70 or device listing. Device plate color shall match device color.
  - 2. Wiring Devices and associated coverplates Connected to Emergency Power System shall be red.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Interior elements and surfaces to receive switchboards for compliance with installation tolerances and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install switchboards and accessories according to NEMA PB 2.1 and NECA 40.
  - 1. Install and anchor switchboards level on concrete bases, 4-inch (100-mm) nominal thickness. Concrete base is specified in Division 10 Section "Basic Electrical Materials and Methods," and concrete materials and installation requirements are specified in Division 3.
  - 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around full perimeter of base.
  - 3. For switchboards, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
  - 4. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  - 5. Install anchor bolts to elevations required for proper attachment to switchboards.
  - 6. Comply with mounting and anchoring requirements specified in Division 16 Section "Seismic Controls for Electrical Work."
  - 7. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchboard units and components.
  - 8. Operating Instructions: Frame and mount the printed basic operating instructions for switchboards, including control and key interlocking sequences and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of switchboards.
  - 9. Install overcurrent protective devices, transient voltage suppression devices, and instrumentation.
  - 10. Set field-adjustable switches and circuit-breaker trip ranges.
  - 11. Install spare-fuse cabinet.

3.3 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 16 Section "Electrical Identification."
- B. Switchboard Nameplates: Label each switchboard compartment with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws.

3.4 FIELD QUALITY CONTROL

- A. Prepare for acceptance tests as follows:
  - 1. Test insulation resistance for each switchboard bus, component, connecting supply, feeder, and control circuit.
  - 2. Test continuity of each circuit.
  - 3. Perform the following field tests and inspections and prepare test reports:
    - 1. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Sections 7.1, 7.5, 7.6, 7.9, 7.10, 7.11, and 7.14 as appropriate. Certify compliance with test parameters.
    - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain switchboards, overcurrent protective devices, instrumentation, and accessories. Refer to Division 1 Section "Closeout Procedures and Demonstration and Training."

END OF SECTION

D. Device Installation:

- 1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
- 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
- 3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
- 4. Connect devices to branch circuits using pigtail that are not less than 6 inches (152 mm) in length.
- 5. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
- 6. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in place, allowing metal-to-metal contact.
- E. Contractor shall coordinate exact location of poke-through with Architect and furniture supplier.
- F. Receptacle Orientation:
  - 1. Install ground pin of vertically mounted receptacles down, and on a horizontally mounted receptacles to the right.
  - 2. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

3.2 FIELD QUALITY CONTROL

- A. Tests for Convenience Receptacles:
  - 1. Line Voltage: Acceptable range is 105 to 132 V.
  - 2. Ground Impedance: Values of up to 2 ohms are acceptable.
  - 3. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
  - 4. Using the test plug, verify that the device and its outlet box are securely mounted.

END OF SECTION

SECTION 16L - LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
  - 1. Interior lighting fixtures, lamps, and ballasts.
  - 2. Exit signs.

1.2 SUBMITTALS

- A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes.
- B. Shop Drawings: Show details of nonstandard or custom lighting fixtures. Indicate dimensions, weights, methods of field assembly, components, features, and accessories.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In Interior Lighting Fixture Schedule where titles below are column or row headings that introduce lists, the following requirements apply to product selection:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

- A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.
- B. Fluorescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as applicable.
- C. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging.
- D. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.
- E. Reflecting Surfaces shall have minimum reflectance as follows, unless otherwise indicated:
  - 1. White Surfaces: 85 percent.
  - 2. Specular Surfaces: 83 percent.
  - 3. Diffusing Specular Surfaces: 75 percent.
  - 4. Laminated Silver Metallized Film: 90 percent.

2.4 EXIT SIGNS

- A. Internally Lighted Signs: Comply with UL 924; for sign colors, visibility, luminance, and lettering size, comply with authorities having jurisdiction.
  - 1. Lamps for AC Operation: LEDA, 70,000 hours minimum rated lamp life.

2.5 LAMPS

- A. Approved Manufacturers:
  - 1. Orion Sylvania.
  - 2. Philips.
  - 3. General Electric.
- B. TB Rapid-Start low-mercury Fluorescent Lamps: Rated 32 W maximum, nominal length 48 inches, 2800 initial lumens (minimum), CR1 82 (minimum), color temperature 3500 K, and average rated life 20,000 hours, unless otherwise indicated.

2.6 LIGHTING FIXTURE SUPPORT COMPONENTS

- A. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as fixture.
- B. Twin-Stem Hangers: Two, 1/2-inch steel tubes with single canopy designed to mount a single fixture. Finish same as fixture.
- C. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage.
- D. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel rod.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. All equipment, wiring and installation shall be in accordance with the National Electrical Code, applicable local codes, and accepted industry standard of care and practice, and shall be thoroughly protected where necessary and shall not void any UL listings or labels. This shall include the integration of lighting equipment and controls.
- B. Install light fixtures and equipment at locations and heights as indicated, in accordance with fixture manufacturer's written instructions and recommendations, applicable requirements of NEC, NECA's "Standard of Installation," NEMA standards and with recognized industry practices to ensure that light fixtures fulfill requirements.
- C. Set light fixtures level, plumb and square with ceiling and walls.
- D. Secure all fixtures to structural support members of building. Provide all steel supports necessary for lighting fixtures in addition to those specified under general building construction.
- E. Support light fixtures independent of ceiling framing.
- F. Support surface mounted light fixtures greater than 2 feet in length at a point in addition to the outlet box fixture stud.
- G. Exposed Grid Ceilings: Support surface-mounted light fixtures on grid ceiling directly from building structure.
- H. Fasten light fixtures securely to indicated structural supports; and ensure that pendant fixtures are plumb and level. Provide individually mounted pendant fixtures longer than 2 feet with twin stem hangers. Provide stem hanger with ball adjusters and provisions for minimum one inch vertical adjustment. Mount continuous rows of fixtures with an additional stem hanger greater than number of light fixtures in the row.
- I. Fluorescent light fixtures installed in lay-in ceilings shall be supported by additional wire support at two corners attached to ceiling grid, and anchored to structural member. This additional wire support shall be the responsibility of the Electrical Contractor and is not considered part of general grid support.
- J. Install recessed light fixtures using accessories and firestopping materials to meet regulatory requirements for fire rating.
- K. Install clips to secure recessed grid-supported light fixtures in place.
- L. Install wall-mounted light fixtures at height as scheduled.
- M. Install accessories furnished with each light fixture.
- N. Connect recessed fixtures with flexible metallic conduit of approximately 6-feet in length to an accessible junction box above ceiling.
- O. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within light fixture.
- P. Install surface-mounted exit signs plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- Q. Air-Handling Lighting Fixtures: Install with dampers closed and ready for adjustment.
- R. Light fixture whips shall be supported from the building structure. Do not clip to lay-in ceiling support wires.

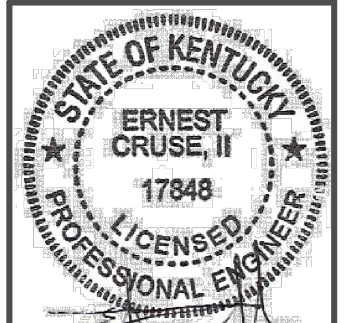
3.2 FIELD QUALITY CONTROL

- A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- B. Operate each light fixture after installation and connection. Inspect for proper connection and operation.
- C. Reballast light fixtures having failed ballasts at Substantial Completion.
- D. Relamp light fixtures and exit signs having failed lamps or which are observed to be noticeably dimmed, as judged by Architect or Engineer, at Substantial Completion.
- E. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retrainer to normal.

3.3 CLEANING

- A. All light fixtures and accessories shall be thoroughly cleaned after being installed. All fingerprints, dirt, tar, smudges, drywall mud and dust, etc. shall be removed by the Contractor from the light fixture bodies and lens/lower material prior to final acceptance. All reflectors shall be free of point other than factory-applied, if any. All optical reflectors, cones and lenses shall be cleaned only according to manufacturers' instructions.

END OF SECTION



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NEW CONSTRUCTION:  
BARDSTWON NELSON  
COUNTY AIRPORT  
TERMINAL  
1924 BOSTON ROAD BARDSTOWN, KY 40004

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: SP1.03 Specifications.dwg - DATE: Jun 29, 2021 11:56AM - BY: DEBBY BIRD

**Nelson County Airport Terminal**

**Project #: 21-4140**

**GENERAL NOTES AND SPECIFICATIONS**

**01000 GENERAL**

- A. These drawings and specifications are for general guidance, with the understanding that the Owner will negotiate directly with a contractor for proper execution of work to assure completeness and code compliance.
- B. All contractors are to guarantee their work for a minimum of one year from date of acceptance and turnover of a completed project. Longer guarantees are required where specified elsewhere in these documents .
- C. Contractor to verify the information contained in these plans in field (V.I.F.) and immediately notify the Architect of any discrepancies.
- D. The Contractor shall carefully study and compare these contract documents and shall at once report and discovered items to the Owner and Architect any errors, inconsistency , or omissions that cannot be resolved by standard industry practices. Do not proceed with work until clarifications have been made by the Architect and notification has been given to proceed .
- E. Keyes Architects & Associates has a set number of drawing sets that we have guaranteed the owner / client by contract. These documents are the owner's / client's to use as they see fit but it was intended for their use to create additional documents and for permitting purposes. In addition, Keyes will supply at no additional charge a PDF set of the supplied paper set of drawings to the owner / client. Any additional sets beyond the sets supplied will be considered extras and will be billed accordingly by Keyes Architects & Associates current rates table. It is the responsibility of the General Contractor to acquire this PDF set from the owner for the purposes of making additional sets and to pay for all needed construction sets.
- F. Before bidding, General Contractor and all Subcontractors are responsible for obtaining all bid documents including but not limited to construction documents and specifications. Contractor is responsible for reviewing other trades work that directly affects their trade, to ensure that no conflict is present. Should a conflict arise as a result of design difference with other trades, subcontractor should use industry standard practices to bid and create a product to accomplish the design intent of the construction documents and include it as part of their bid. Then the General Contractor shall be notified of the intended changes in order that these changes can be discussed with the architect and coordinated with other trades that are affected.
- G. Where drawings do not specifically show how work is to be executed, the subcontractor responsible for the work will be responsible for figuring out and bidding an acceptable industry standard method of completing the work.
- H. Where plans and specifications conflict, specifications shall supersede plans. Where plans and details conflict, the more detailed (larger scaled) item will take precedence. If it is unclear as to the intent of the work due to the conflict, notify the Architect immediately before proceeding.
- I. Contractors are not to scale the plans for missing or unclear information. Where plans are unclear, verify with architect before proceeding .
- J. Contractor's bids are to be complete and to include all material, labor , and facilities required to complete the work shown on drawings and specified herein.
- K. All Subcontractor questions concerning bidding, the drawings, or site visits shall be directed to the General Contractor.
- L. All Subcontractors shall obtain any specific permits and code review for their trade. General Contractor will obtain overall construction permit.
- M. The Owners may have other contractors, workers and suppliers engaged on this project. Verify exact limits of responsibility during bidding and coordinate with all work being conducted under other contracts.
- N. Payment of Monthly Draws for work completed to date is based upon receipt of lien releases and site inspections. Items listed as complete on the draw but not completed to the owner's and architect's satisfaction, must be completed or removed from the draw before payment will be made. All outstanding invoices for this project from all subcontractors and suppliers will be paid and a lien release issued from the general contractor in charge before payment will be made.
- O. Final Payment of all portions of this project is based upon receipt of lien releases, warranties and maintenance/operations manuals for all items.
- P. For all sections in these documents where multiple colors, finishes, and/or material choices occur and where the owner can only make these choices after the contract has been awarded , this contract is to include the most restrictive and/or expensive of the choices given so the owner can make a choice at a later time without change orders. Should the owner make a choice that is less expensive than what were bid, then the owner is to be credited back the difference between what was specified and what was selected .
- Q. Value engineered items and/or approved equals are to be submitted as part of the bid package for approval by the owner and architect. Due to limited bidding time, owner and architect cannot/will not review products during bidding for equality or equivalency to these documents. Owner and architect will approve these items as part of the bid review and may ask for proof of product equality, product specification and clarification, resubmittal of original items, or other requirements as a condition of acceptance of any and all bids. Items not listed on bid forms and submitted as part of bid package are assumed to be as specified in these documents and any item not meeting these documents can be asked to be replaced or a change order applied to the project in the amount of the difference of the original item specified at the owner's and architect's discretion.

**01001 TAX EXEMPT PROJECT**

- A. This project is being bid to a Tax Exempt Organization, here forward known as the "Client", with federal and/or state approved tax exempt status. The following shall apply to the entirety of this project, unless otherwise stated herein:
  1. All labor and materials necessary to complete this project are to be included as part of this bid package.
  2. The tax exemption status of the Client will only apply to material purchases made through a wholesaler or retailer for the use on this project. Materials directly purchased by the General Contractor or Subs through their offices for use on this project will not qualify for exemption.
  3. The awarded General Contractor and their Subs will be responsible for setting up the Client's tax exempt information with all material suppliers.
  4. All materials are to be invoiced to the Client, care of the General Contractor or Subs.
  5. General Contractor or Subs to be responsible for the shipping, handling, storage and installation of all materials for the duration of the project, until the final project is turned over to the Client.
  6. Any deliveries made to anywhere other than to the project site, to the General Contractor or the Sub-contractor responsible for the materials, will be returned to the shipper at the General Contractor's expense.
  7. All material invoices are to be routed through the General Contractor and any invoices sent directly to the Client will be returned to the issuer. The General Contractor shall be responsible for any late fees or penalties that should be incurred as a result of these returned invoices.
  8. As part of their monthly pay application / monthly draw, the General Contractor will submit materials invoices to be paid along with their draw.

Issued as part of this monthly draw shall be a list of how much money is to be paid to the General

Contractor as well as a list of all invoices to be paid, including Name of the Payee, any Purchase Order #s and the amount to be paid. A single check will be issued to Suppliers with multiple PO submitted as a part of this draw.

A Change Order will also be issued reducing the amount of the General Contractor's project cost by the dollar amount of the material invoices being paid as part of the current draw.

9. Monthly draws will be approved by the Client and all issued material supplier checks will be given to the care of the General Contractor.

It will be the responsibility of the General Contractor to make sure payment is delivered to the material suppliers in an expedient and timely manner.

Any late fees or penalties that occur as a result to deliver these checks, will be the responsibility of the General Contractor, unless these fees can be documented as not being incurred as a fault of General Contractor or Subs.

**01500 DEMOLITIONS**

- A. General contractor shall be responsible for all demolition work unless otherwise noted. Sub-contractors shall be responsible for all demolition that pertains to their trade and not covered by the General Contractor. All demolition shall conform to O.S.H.A., state and local permit and safety codes.
- B. Verify structural integrity before & during construction. Provide temporary support as required.
- C. Contractors shall provide for dust/debris control, cleanup and protection of other personnel and visitors as needed. Dust control to include but is not limited to creating a temporary structure between any spaces to remain occupied and work space, covering doors/vents/windows as needed to prevent the passage of dust, and cleaning up any accumulation of dust.
- D. The site is to be left "broom" clean and secure from intruders at the end of each day.
- E. Contractor to properly remove and properly dispose of all debris and demolished items except items specifically listed to be delivered to owner.
- F. All items or utilities "capped" after demolition shall be in a neat manner, paint to match adjoining or conceal behind finished area. All "capped" items to meet applicable codes and industry standard practices .
- G. Remove and properly dispose of all unused (or no longer used) brackets, supports, misc. items, and equipment from the project areas. This includes all electrical, HVAC and plumbing items. As directed herein, turn over specific items to owner and dispose of all others.

**02000 SITE-WORK/FOUNDATIONS**

- B. Perform all excavations, backfilling and grading, as well as paving, required to complete work shown. Contractors shall take this data and submit in their bid any changes necessary for completion of the project. Provide positive drainage throughout the site from the parking areas and away from the building.
- C. Protect against damage to any lawns, shrubs, trees, roads, walks, signs, underground tanks , etc., and other work that is to remain in place.
- D. Materials to be excavated are assumed to be earth or other materials that can be removed by power shovel or other normal excavating equipment, but not requiring the use of explosives or drills. If other conditions are encountered within the limits of the excavation, notify Architect immediately.
- E. All building and column footings shall bear directly on undisturbed soil, unless specifically designed otherwise herein to bear on other subsurface.
- F. Assumed bearing capacity as indicated by Owner is 2,000 lbs. s.f., unless otherwise noted on the plans or by Geotechnical reporting. If this bearing capacity is not encountered at the depth shown on drawings, the site contractor shall notify the general contractor. The general contractor, architect, engineer, and other parties will then establish an additional volume of excavation.
- G. Building slab areas, drives, walks and parking areas that require undercutting or fill are to be backfilled with lean clay or granular fill, uniformly compacted to at least 95% standard proctor (ASTM D698). Periodic field density testing to be performed during construction if required and paid for by the Owner.
- H. General Contractor to include additional cost breakout in their initial bid for either the trench excavation or mass excavation of rock if it is determined to be necessary. Bids are to include all markup, overhead, disposal , and grading at lower areas of this site.
- I. Furnish and install all site items as shown on the drawings or list herein .
- J. Furnish and install sod within 3' of all concrete walks and building areas. Seed and straw all other disturbed earth areas.
- K. Contractor to include all erosion control measures necessary. Erosion control measures are to follow those policies, standards and practices as set forth by the civil plan and/or all federal, state, and local requirements. The contractor will be responsible for maintaining all erosion control measures and maintaining all documentation as required. Any penalties occurred as a result of failure to maintain these controls shall be the responsibility of the contractor and the owner shall bare no responsibility for these penalties unless there is documented proof that these penalties were as a result of neglect from the owner or his representatives.
- L. If a landscaping plan has not been provided as part of these documents and a cost determination cannot be made, an allowance of \$10,000.00 is to be included in the bid to furnish and install landscaping as to be determined by the owner.
- M. All existing excavated material that cannot be used as fill will be wasted on site in areas as directed by owner. The material will be spread, compacted, smoothed and disced. The excavated material will then be seed and straw as indicated above.
- N. Foundation excavation
  1. Follow OSHA and local requirements for determining the angle of repose. No angle of repose can be assumed when soil is under adverse moisture conditions. Use forms where concrete surfaces are shown vertical or steeper than the angle of repose.
  2. Cut earth neatly for grade beams and footings, excavate by hand if necessary, to remove all loose material and disturbed earth.
  3. Replace disturbed earth and over-excavated locations with fill concrete.
  4. Keep excavations constantly shored and dewatered.
  5. Pour footings only after excavations have been individually inspected and approved.
  6. After inspection and approval, place concrete promptly before any change in excavation conditions occur.
- O. Trenching and backfilling for drain pipes
  1. Commence from low point so excavation and pipe can be kept drained at all times.
  2. Width to be sufficient to make joints and compact backfill under pipe.
  3. Final excavation to be done by hand so pipe rests continuously on solid earth except where backfilled with cement stabilized sand.
  4. After placing pipe, immediately place some backfill to hold the pipe; compact sufficient backfill under the pipe to hold it securely against any possible movement; do not cover until inspected.

**02741 ASPHALT PAVING**

- A. If paving details are not specified on the site plan, then new paved areas shall have a minimum 6" thick DGA with a minimum 2" layer of asphalt binder course and 1" layer of asphalt surface course rolled separately. All new paving heights to be adjusted as required in order to match the existing pavement height.
- B. Existing paved areas to be repaved, shall have all damaged areas removed and then be reconstructed to match the above. Install minimum 1" thick topping over existing paved areas to remain.
- C. All paving shall conform to State Highway specifications for material and installation.
- D. If Paving is anticipated in winter, the surface coat may have to wait until spring. Cost of paving to be completed may be held by the owner (if necessary) until final completion.

**03000 CONCRETE**

- A. Follow KYTC specifications for Concrete, A copy can be obtained at <https://transportation.ky.gov/Construction/Standard%20and%20Supplemental%20Specifications/600%20Structures%20and%20Concrete%202019.pdf>
- B. Concrete to be dimensions shown on drawings and reinforced as detailed.
- C. Concrete shall develop a minimum compressive strength of 4000 psi at 28 days.
- D. Contractor to make (3) concrete cylinder samples for every 150 cubic yards (or fraction thereof) of concrete placed per day. Concrete cylinders are to follow the practices set forth in ASTM C31 for Standard Practice for Making and Curing Concrete Test Specimens in the Field and ASTM C172 for Standard Practices for Sampling Freshly Mixed Concrete. Samples are to be taken from the middle of a truck load and not the beginning or ending portions. All cylinders are to be labeled, dated and stored on site in the same environment as the concrete placed. Owner, architect or construction manager may call for testing of these samples at any time. Owner will pay for testing as needed.
- E. Interior floor slabs are to receive smooth trowel finish.
- F. Exterior concrete drives, walks and stoops are to be light broom finished in the direction of water flow, unless noted otherwise.
- G. Concrete Curing and Sealing Compounds are to be surface applied solvent which cures, seals, hardens, and dustproofs.
  1. Unfinished Exposed Interior Concrete Floors are to receive "Intraseal" by Comspec or approved equal. Verify existing conditions before starting work. Apply product per manufacturer's requirements and recommendations.
  2. All other concrete slabs to receive "Cure 'N Seal" by Sakrete, "Seal Cure-25" by W. R. Meadows or approved equal. Verify existing conditions before starting work. Apply product per manufacturer's requirements and recommendations. Before starting work, verify that selected cure and seal product is compatible with the anticipated finished floor and sub finishes.
- G. All concrete floors are to have a vapor retarder installed before the concrete is placed. Vapor retarder is to be as specified in the latest ASTM E 1745 and have the following properties: a minimum of 0.03 permeability, 5lb puncture resistance, and 45.0 lb./in tensile strength. Retarder to be installed per manufacturer's recommendations and specifications.
- H. Materials and construction methods shall conform to the latest requirements of ACI 318-83.
- I. All exposed 90-degree edges of vertical and horizontal corners of concrete shall have tooled edges, unless indicated otherwise.
- J. Reinforcing steel shall be A615-83 Grade 60. Contractor may use Fibermesh equivalent reinforcing in 4" slabs on grade, but elevated slabs must have wire reinforcing as shown.
- K. Welding of or to reinforcing bars without prior approval of engineer is prohibited except where specified on the drawings.
- L. All reinforcing bars are to be supported in the form and spaced with wire bars supports meeting the requirements of the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315-latest edition).

- M. All detailing, fabrication and erection of reinforcing bars, unless otherwise noted, must follow the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315-latest edition).
- N. Concrete walks shall have molded expansion joint material as shown. Final joint layout to be approved by Owner.
- O. Control joints (C.J.) shall be saw-cut a minimum of 1/4 of slab thickness and with a maximum spacing as shown on the drawings.
- P. Isolation joints (I.J.) if required shall receive 1/2" thick expansion joint filler extending from bottom of slab to 1/2" below top of slab and the top 1/2" filled with Polyurethane joint sealant, unless otherwise noted.
- Q. Construction joints (Const. J.), if required, shall be formed using "Key-Loc Joint System" manufactured by Form-A-Key.
- R. All dimensions and grades shall be verified in the field (V.I.F.) by the contractor and any discrepancies or interferences shall be reported to the Architect before proceeding with affected work.
- S. Where shown, all junctions of walls, piers and floors to have 1/2" wide expansion joints, filled with elastic expansion joint material.
- T. Exposed piers and foundation walls to have rubbed finish. Any honeycombing that occurs that is less than 4" in diameter is to be filled and finished with a non-expanding grout. Contact the architect immediately for any honeycombing that is 4" or greater in diameter, for review of the concrete and resolution of the issue.
- U. Concrete Contractor to place all exterior equipment pads unless otherwise directed during bidding. Coordinate final size, details and locations with the applicable sub-trades.

**04000 MASONRY**

- A. Mortar to be type "M or S" complying with ASTM C-90-97. If veneer contains an integral water repellent, then the mortar is to receive a water repellent additive as approved by the block / veneer manufacturer.
- B. Provide 3/8" thick mortar joints between units with full mortar coverage on the vertical and horizontal face shells only, except for this first bed course shall be laid in a full mortar bed.
- C. Brick materials allowance to be \$400.00 per 1000, delivered. Color and style to be selected by owner.
- D. In veneer walls, furnish and install galvanized, corrugated masonry anchors at 16" on center horizontally, 24" on center vertically and on each side of masonry control joint at 24" on center vertical .
- E. In all veneer walls, provide weep holes at 24" on center and continuous 8" high membrane flashing along bottom row, at or above grade.
- F. Masonry subcontractor to be responsible for water-tightness of his work.
- G. Workmanship, including joint reinforcement and cold weather installation shall comply with National Masonry Associations applicable recommendations.
- H. Masonry contractor to brush clean final surfaces and prepare exterior faces for paint or sealer as called out.
- I. Provide control joints as indicated on elevations, with backer rod and paintable elastomeric caulk.

**05000 METALS**

- A. Provide structural and miscellaneous metal items as shown on drawings, and as required to complete the project.
- B. Furnish shop drawings to satisfy local code requirements, fabricate materials and install all metal work as needed. This shall include structural steel and miscellaneous steel items.
- C. Take field measurements prior to fabrication. Subcontractor shall be responsible for the accuracy of all such measurements and the precise fitting and assembly of the finished products.
- D. Use materials of size and thickness indicated or, if not indicated, as required to develop the maximum loads in the member. Weld corners and seams continuously, complying with AWS recommendations. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
- E. Clean and Shop paint miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded unless otherwise indicated.
- F. Furnish bent or otherwise custom fabricated, plates, anchors, hangers, dowels and other miscellaneous steel shapes as required.
- G. Provide loose bearing and leveling plates for steel items bearing on masonry, concrete construction, or other portions of the structure as indicated.
- H. Provide miscellaneous steel elements, framing and supports that are not a part of structural steel framework, as required to complete work.
- I. Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; including, threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.
- J. Provide A-325 bolts as shown on the plans or as required to develop the maximum capacity of the connection shown.
- K. Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications.
- L. Field Welding shall comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.
- M. Set loose leveling and bearing plates on wedges, or other adjustable devices. After the bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims, but if protruding, cut-off flush with the edge of the bearing plate before packing with grout. Use metallic non-shrink grout in concealed locations where not exposed to moisture; use non-metallic non-shrink grout in exposed locations, unless otherwise indicated. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.
- N. Touch-Up Painting immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.

**O. Miscellaneous Items:**

1. Steel Plates, Shapes and Bars: ASTM A-36
2. Cold formed Steel Tubing use ASTM A-506
3. Hot-rolled Steel Tubing use ASTM A- 501
4. Hot-rolled Structural Steel Sheet use ASTM A-570 . Class 1 or grade required for design loading.
5. Cold-rolled Structural Steel Sheet use ASTM A-611 . Class 1 or grade required for design loading.
6. Non-Shrink Metallic Grout to be pre-mixed, factory-packaged, non- staining, non-corrosive, non-gaseous grout complying with CE CRD-C588. Provide grout specifically recommended by manufacturer for interior and exterior applications.
7. Zinc-coated fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required.

**05210 STEEL JOISTS**

- A. Furnish and install fabricated joists in compliance with the Steel Joist Institute (SJI) Standard Specifications.
- B. Submit shop drawings and details, manufacturer's specifications, and installation instructions for each type of joist and accessories.
- C. Use horizontal bridging in accordance with standard specifications, attached by welding. To be installed before any construction loads are applied. Anchor ends of bridging lines at top and bottom chords where terminating at walls.
 

NOTE: Contractors must use special care when backfilling joists, deck and floor in place.

**05400 \_ LIGHT GAUGE METAL FRAMING**

- A. The work included under this Section consists of providing all materials, equipment and labor required to install walls.
- B. All work shall be carefully and properly executed in such manner as to insure the greatest stability and support. A sufficient number of fasteners and hangers shall be used to insure the rigidity of all parts of the work.
- C. Quality assurance product numbers specified are based off U.S. Gypsum products to establish basis of design. Acceptable manufacturers are to U.S. Gypsum, Inryco/Milcor, and Dale Industries.
- D. General Supplier to design and fabricate system to support the weight as shown on the plans. All structural members shall be designed in accordance with American Iron and Steel Institute (AISI) "Specification for the Design of Cold Formed Steel Structural Members" latest edition.
- E. All studs and/or joists shall be formed from corrosion resistant steel, corresponding to the requirements of ASTM A446, and ASTM C645 with a min. yield of 40ksi for members, 33ksi for runners.
- F. All framing components shall be cut square for attachment to perpendicular members or as required for an angular fit against abutting members.
- G. Fastening of components shall be by means of self-drilling screws or welding. Screws or welds shall be of sufficient size to insure the strength of the connection. Wire tying of components shall not be permitted. All welds shall be touched up with a zinc rich paint.
- H. Clean Up, Remove all scrap and debris generated by this work from the project site.
- I. Install all materials per manufacturer's installation instructions and details.
- J. At gypsum board ceilings, position and level joists for proper ceiling heights.
- K. Provide clearance as required between joists and abutting walls or partitions.
- L. Install joists at as shown on plans.
- M. Add additional channels or supports to insure stability at ceiling openings for lighting, grilles, and etc. Coordinate additional required framing for all surfaces mounted and recessed items such as lighting fixtures. Verify all drawing sheets for additional supports .

**05511 FIXED VERTICAL LADDER**

- A. The system is an aluminum (6005-T5) ladder designed to be attached to a wall.

PROJECT NO:  
21-4140

DRAWN BY:  
DLB/

DATE:  
5/26/21



**KEYES ARCHITECTS & ASSOCIATES**  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION

**SAMUELS FIELD AIRPORT TERMINAL**

BARDESTOWN, KY 40004  
1924 BOSTON RD

SPECIFICATIONS

**SP1.01**

- B. Floor mounted brackets are furnished when ladder bottom is at floor level.
- C. Safety caps will be installed at the top of the stringers if furnished on ladders requiring same.
- D. Standard riser height is 12".
- E. Verify all requirements with federal, state and local codes.
- F. Under normal usage, the ladder shall require no preventive maintenance.
- G. Unit to be by Precision Ladders, LLC or approved equal.
- H. Product to be built and installed per manufacturer's specifications and instructions to meet Federal, State and Local code.
- I. All products inspected at factory in ISO 9002 certified environment.

**06000 CARPENTRY**

- A. All wood in contact with concrete or masonry or to be exposed on the exterior to be pressure treated against decay and insects.
- B. Carpenter shall furnish all necessary blocking and grounds for all tops, cabinetry items, handrails, casework and other miscellaneous items as needed.
- C. Provide small areas of wood framing where shown for shelves or equipment by owner.
- D. Carpenter to furnish & install all moldings, trim work and finish hardware (at windows, doors, handrails, and platform areas). Also, shelving, brackets, rods and hangers as shown. Exposed wood trim and moldings to be paint grade spruce or fir, (knets and allowed).
- E. Furnish and install all rough & finish carpentry including rough hardware, form work indicated and required to complete the project.
- F. Remove all wood including form lumber, scrap lumber, shavings, and sawdust in contact with the ground. Leave no wood buried in any fill.
- G. All lumber and plywood shall be graded and marked in accordance with the latest grading rules of the Manufacturer's Association having jurisdiction. Plywood decking shall be tongue and groove or to be blocked at all joints, and to be glued to all supporting members.
- H. All materials shall be delivered and stored to insure proper protection from damage. All material shall be well seasoned.
- I. Exterior O.S.B. sheathing to be nailed to studs at 12" o.c. staggered.

**06410 WOOD CASEWORK**

- A. Furnish and install a complete system for cabinets and casework following the standards set forth by AWI and millwork best practices.
- B. Cabinets to be oak finish MDF board with overlay doors, wire pulls and fully adjustable plywood shelves, by "Merillat" or approved equal.
- C. Tops to be square edge, plastic laminate covered with 4" splash at all walls, scribe fit. Colors to be selected by owner from standard lines.
- D. Provide elevations and shop drawings for review by owner.

**07000 MOISTURE PROTECTION**

- A. Insulation:
  1. Roll glass fiber insulation to be thickness and type shown on drawings for specific uses, to be "Fiberglass" or "Celotex".
  2. Rigid below grade insulation at foundation and basement walls to be extruded, expanded polystyrene 2" thick (R-value: 5), unless otherwise noted on the plans.
- B. Caulking:
  1. Use Sherwin Williams 950A silicized acrylic latex caulk, GE Silicone II or approved equal. Color to match surrounding area being caulked. Caulk all exterior joints and both sides of all door and window frames.
  2. All Equipment, Mechanical, Plumbing and Electrical Contractors shall supply all flashings and curbs for roof or wall penetrations to the building erector. Building erector shall install and flash all building penetrations as part of their bid project.
  3. Where called out on the drawings, fire caulk to meet all ASTM requirements for fire and smoke barrier. Product to be 3M Fire Barrier Sealant CP 25WB+ or approved equal .
- C. All exterior masonry to receive stain or sealer as per finishes in section 9,000.

**07250 WEATHER BARRIER - VAPOR BARRIER**

- A. Building vapor barrier to be commercial grade weather barrier Tyvek CommercialWrap by DuPont or approved equal.
- B. All joints are to be lapped minimum 3" and taped as specified by manufacturer.
- C. All penetrations are to be taped around entire perimeter.
- D. Tape to be 3" wide Tyvek Tape for commercial applications by DuPont or approved equal.
- E. Barrier to be anchored in wood with 1" plastic caps fasteners with min 5/8" penetration.
- F. Barrier to be anchored in metal with 1-5/8" rust resistant screw with 2" plastic cap.

**07530 ELASTOMERIC SHEET ROOFING (EPDM)**

- A. Contractors shall field verify all conditions and submit shop drawings for all details and material before ordering the roof components.
- B. System to be Versico talc-free black 50-mil EPDM Membrane System installed over 1/2" recovery board and metal batten strips as required, or approved equal.
- C. System and application shall exceed all State Building Codes, local ordinances and these construction documents.
- D. Provide written 10-year manufacturer and installer's warranties/guarantees from the date of the Owner's written final acceptance of the installation.
- E. Install additional blocking and nailers as required, Grade #2 or better lumber, pressure-treated for fire and rot resistance with a salt-based preservative (Wolmanized). Creosote and asphaltic-based preservatives are not acceptable.
- F. Insulation under Membrane to be Extruded Expanded Polystyrene Insulation boards shall be tightly butted together and installed in a staggered pattern. Sloped or tapered insulation may be installed in a soldier or staggered pattern. Gaps at board joints greater than 1/4" in width shall be filled with insulation. Insulation to have a Min 5" thick; Min R 20; tapered to provided 1/4" in 12" slope. Install insulation in moderate contact (without forcing) stagger end joints; provide a smooth surface to accept roof membrane. Install tapered insulation according to insulation manufacturer's shop drawings. Install only as much insulation as can be covered with roof membrane on the same day. Install 1/2" Perlitic Retro-fit Board as an insulation overlay,

- where required by membrane manufacturer for specified system.
- G. Non-skid white molded rubber walk pads, 3/8" x 36" x 44" and 3/8" x 36" x 22", for roof protection are to be provided from the roof access to all roof top units.
- H. Install roof top curbs supplied by the HVAC contractor.
- I. Install flashing as required by the manufacturer's details and contract drawing details.

**07723 ROOF ACCESS HATCH**

- A. BILCO Type E roof hatch, 36" x 36" Or Approved Equal
- B. Provide telescoping safety Post permanently mounted to the fixed ladder.
- C. Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.
- D. Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge. Submit executed copy of manufacturer's standard warranty.
- E. Manufacturer shall provide compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe [for aluminum construction: welded to the curb assembly; for steel construction: through bolted to the curb assembly].
- F. Follow all Manufacturers recommendations for proper installation and adjusting.

**08000 DOORS AND WINDOWS**

- A. Doors, frames, windows and glazing to be as shown on drawings. Finish hardware to comply with building code.
- B. All door and window glazing to conform to section 08800 Glazing.
- C. Egress doors shall be able to be opened from inside without a key or special knowledge.
- D. All exterior outward swinging hinged doors are to have Non-Removable Pin (NRP) hinges, unless otherwise specified on the drawings.
- E. Hollow metal frames shall be standard profile, 16ga. shop primed. Three (3) anchors each side, one (1) at head. Use wrap around frames at Gypsum board partitions.
- F. Hollow metal doors shall be flush, 18 GA., 1 3/4" thick, exterior doors to be insulated with rigid bd. insulation. Head of doors to be solid and flush. Doors to be shop primed.
- G. Wood doors shall be 1 3/4" solid core (particle bd. core) as indicated with flush stain grade veneer. Doors to be job stained and sealed, color as selected.
- H. Finish hardware shall be medium grade commercial products by Stanley, Schlage, Von Duprin, Yale or an approved equal. Finish to be selected by owner. U.L. rated and Handicapped accessible hardware as required. See door schedule.

**08410 ALUMINUM STOREFRONT SYSTEM**

- A. Exterior frame are to be thermally broken aluminum frames.
- B. Frames to be black, bronze, white or clear anodized (as selected by owner).
- C. Aluminum storefront system to be "Kawneer 451T" or approved equal .
- D. Glazing contractor shall be responsible to securely anchor units to framing or masonry as needed to transfer loads to the building.
- E. All glazing to conform to section 08800 Glazing.

**08800 GLAZING**

- A. Unless specified herein, all glazing is per door and window schedules located on the construction documents.
- B. All glazing to comply with safety glazing laws. Installer to verify requirements before ordering and installing all glazing.
- C. All insulated glazing units, Low-E finishing and glaze tinting are to carry a minimum of a 10 year warranty from date of acceptance of project.
- D. Where glazing is specified to be Low-E and Tinted, glazing is to be tempered as per glazing types below.
- E. All glazing to follow Standard Specifications for ASTM C 1036, ASTM C 1048 and ASTM E 774.
- F. Glazing to be by PPG, LOF, Guardian Industries, Ford Glass, Hordis Brothers Inc., or equal. Provide all tinted and Low-E glass from the same manufacturer for the entire project.

- G. Glazing:
  1. Exterior glazing to be 1", double layer insulated glazing.
- H. Glazing Types:
  1. Tempered: As specified for clear annealed except fully tempered to conform to ASTM C 1048, Kind FT.
- I. Glazing Finish Types:
  1. Low-E: PPG "Sungate 500(2)" or equal, clear float glass with transparent reflective coating on inboard (No. 2) surface, conforming to glass type.
- J. Tint Finish Types - Glare reducing float glass to be: PPG "Solargray", gray color , PPG "Solarbrnze", bronze color, or equal.
- K. Configuration to be per Window Schedule located in the Construction Documents .
- L. Glazing materials and accessories shall be fully compatible with the materials and finishes with which they are in contact. Neoprene and EPDM materials shall not come in contact with silicone sealant materials. Silicone rubber spacers, setting and edge blocks and gaskets shall be either Type I (designed to prevent adhesion) or Type II (designed for adhesion) as per glazing system manufacturer's recommendations for each condition of use.

**09000 FINISHES**

- A. All finishes shall be as called for and specified on drawings.
- B. Inspection of finished surfaces for blemishes and defect at the end of the project shall follow the generally accepted standard - PDCA (P1-09) Industry Standards for reviewing finished surfaces. Viewing and inspection of finished surfaces shall be at a distance of thirty-nine (39) inches from the surface under finished lighting or natural lighting without the use of any optic magnifications or enhanced lighting. Any blemishes or defects detected at this range shall be removed or repaired and patched to

- match the surrounding."
- C. Gypsum Board:
  1. All gypsum board to be 5/8" thick and installed per U.S. Gypsum association standards and best industry practices .
  2. Use mold / moisture-resistant gypsum board ("Green" Board or equal) in all toilet rooms and within 4'-0" of all plumbing fixtures such as sinks, drinking fountains, washing machines or any other equipment not listed here in .
  3. Where indicated on plans all fire rated assemblies are to use 5/8" Type 'X' gypsum board, installed per details and best industry practices.
  4. Furnish and install metal or plastic corner bead at all outside corners and "J" mold at all exposed edges.
  5. Control Joints: All walls are to follow the latest ASTM C840-08 and GA-216 as it pertains to control joint placement. Unless shown on the plans differently, all walls and ceilings greater than (30) linear feet in any direction are to have a control joint every 30'-0" O.C. All control joints are to receive a metal or plastic control joint strip, installed per manufacturer's recommendations.
- D. Ceramic floor tile to be 12"x12"x5/16" thin set tile by StonePeak or approved equal, with cap tile along edges and base. Install with C-Cure grout, 100% epoxy additive. Install per manufacturer's recommendations and installation instructions. Tile and grout colors to be selected by owner from standard architectural line (maximum three tile colors).
- E. Vinyl plank flooring is to be nominal 0.125" thick vinyl with a minimum 0.02" wear layer. Tile to be 48" in length, 6" to 9" in width, and shall be laid in a straight pattern. Owner to select final product from a standard list of manufacturer's product in a minimum of (2) colors. Product to be I.D. Freedom by Tarkett, Classics V5000 by J+J Flooring or approved equal. Product to be glued down using a standard adhesive recommended by manufacturer.
- F. Vinyl base to be 4" high, 1/8" thick by Tarkett, Roppe, or approved equal. Use coved at vinyl floor tile and coveless at carpet. Stairs shall receive Vinyl treads and backs, treads shall have replaceable slip resistant strip at nosing. Colors as selected by Owner from standard architectural line. Installed per manufacturer's instructions.
- G. Floor transitions shall be vinyl as recommended for the specific material transitions. Material shall be by Tarkett, Roppe or approved equal selected from full architectural color lines.
- H. Coating Schedule:
  1. Surfaces not to be painted are floor coverings, items with factory applied final finish, concealed ducts, pipes and conduit, acoustical ceiling tiles, items with pre-finished surfaces, aluminum windows and door frames, and all items called not to be painted on plans.
  2. Surfaces to be painted:
    - Note: consult with Owner for final colors and finishes.
    - a) Exposed interior Drywall:
      - 1st coat: Latex Wall Primer.
      - 2nd coat: Latex eggshell or Alkyd based enamel as called for.
      - 3rd coat: Latex eggshell or Alkyd based enamel as called for.
    - b) Interior Wood or Masonite (Painted):
      - 1st coat: Wall and Wood Primer
      - 2nd coat: Semi-Gloss Alkyd Enamel
      - 3rd coat: Semi-Gloss Alkyd Enamel
    - c) Interior Metal:
      - 1st coat: Metal Primer
      - 2nd coat: Semi-Gloss Alkyd Enamel
      - 3rd coat: Semi-Gloss Alkyd Enamel
    - d) Exterior Metal:
      - 1st coat: Metal Primer
      - 2nd coat: Semi-Gloss Alkyd Enamel
      - 3rd coat: Semi-Gloss Alkyd Enamel
    - e) Asphalt Striping:
      - Install 4" wide Bright White stripes at all shown parking spaces.
      - Install 4" wide Safety Yellow stripes at Handicapped parking and loading areas.
      - Directional arrows where shown, to be Safety Yellow.
      - All Striping and marking to be straight, perpendicular and uniform.

**09511 ACOUSTICAL CEILING TILES**

- A. Ceiling grids to be standard 2'x2' by Donn, Armstrong, or approved equal.
- B. Ceiling tiles to be 2'x2' vinyl faced square edge, standard fissured square edge, or standard fissured regular panels by Armstrong, U.S.G., or approved equal .
- C. Acoustical sound panels to be 2'x2' colored Acoustone panels by U.S.G. or approved equal.
- D. Wet areas such as kitchens, restrooms, and wash rooms are to receive a smooth texture 2'x2' washable, scratch resistant, and anti-microbial acoustical tile. Tile to be Kitchen Zone - 672 by Armstrong or approved equal.
- E. Grid and panels are to be white unless otherwise noted on the finish schedule.

**10000 SPECIALTIES**

- A. Storage shelving, where shown on drawings shall be plastic coated wire systems by ClosetMaid, Schulte, K&V, or approved equal. Each location shall have a fully adjustable track system with a minimum of six shelves. Final styles of the supplied shelves to be selected (Some areas may receive only a rod and shelf).
- B. Fire extinguisher and cabinets to be by owner as required by code and by the fire inspector.
- C. Toilet accessories: The following list of new items shall be furnished and installed:
  - (2) Fixed standard mirror(s) 48"x36" - Bobrick B-165 B 4836
  - (2) 18" vertical grab bar(s) - Bobrick B-6806x18
  - (2) 36" horizontal grab bar(s) - Bobrick B-6806x36
  - (2) 42" horizontal grab bar(s) - Bobrick B-6806x42
  - (3) Toilet paper holder(s) - Bobrick B-2888
  - (2) Paper towel dispenser(s) - Bobrick B-262
  - (2) Wall mounted soap dispenser(s) - Bobrick B-5050

**10155 METAL TOILET PARTITIONS**

- A. All baked enamel metal toilet partitions shall be floor supported as manufactured by General Partitions Mfg. Corp., or approved equal. Provide handicapped systems as required.

- B. Construction shall be 1" @ thick with two sheets, of galvanized and bonderized steel formed and, bonded together before attaching die drawn molding on all four sides of panels. Mitered reinforcements fused to corners for added structural strength. Fillers shall be Generals Ribcore sound-deadening insulation or approved equal.
- C. Doors to be same construction as panels.
- D. Pilasters-shall be 1-1/4" @ thick with two sheets of galvanized and bonderized steel, bonded before attaching die drawn molding to both sides and top, mitered reinforcements fused on both corners for added structural strength. Same construction as panel specification outlines above. Pilasters are to be anchored to floor with standard 3/8" threaded rod, hex nuts, and washers to provide vertical adjustment and necessary strength.
- E. Use concealed latch, coat hooks, hinge brackets, doorstop and keeper, heavy casting nonferrous alloy, chrome-plated. Concealed hinge works on opposing nylon cams under spring tension. Top pivot pin, mounted within door having bearing points above and below hinge bracket.
- F. Wall connection brackets for panels and pilasters to be high strength heavy chrome plated. Pilaster trim to be 3" high, 0.031" stainless steel. All hardware and fittings to be secured with chrome plated one-way vandal proof sex bolts or No. 14 plated steel metal screws of proper lengths.

**10440 FIRE AND/OR SMOKE BARRIER PROTECTION SIGNAGE**

- A. This project will require a "Fire Wall", "Fire Barrier", and/or "Smoke Barrier" as part of the scope of work. Per the building code, signage will be required on these walls identifying these walls as needing to be protected.
- B. Signage will be required as listed below unless otherwise specified by these drawings or by a local building code.
- C. Where Required: Where there is an accessible concealed floor, floor-ceiling or attic space, fire walls, fire barriers, fire partitions, smoke barrier and smoke partitions, or any wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling in the concealed space.
- D. Signage Location: Signs will be located within 15 feet of the end of each wall and at intervals not exceeding 30 feet on center measured horizontally along the wall or partition.
- E. Signage Requirement: Include lettering not less than 3 inches in height with a minimum 3/8 inch stroke in a contrasting color incorporating the suggested wording, "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," or other wording. Signs to be worded with the identification of the wall rating being applied to.
- F. Where stenciling is allowed by local codes and owners, lettering to be concise and clear applied to a smooth surface.
- G. Where signage is required by local code and owners, signage to be made of high durability vinyl or sheet metal with a permanent adhesive or a minimum of (4) screws.

**10530 FABRIC AWNINGS AND CANOPIES**

- A. Awnings and Canopies to be sizes shown on plans and profile shown on elevations and details. Final design to be by fabricator to meet all federal, state and local codes using the design intent on the plans.
- B. Awning fabric to be Sunbrella 100 percent acrylic fiber or approved equal, color as selected by owner.
- C. Seams are to be primarily RF welded or wedge welded with thermal bonding tape. Use M1000 Gore Tenara thread or approved equal for seams as needed.
- D. Steel plates, shapes and bars are to follow ASTM A36.
- E. All frames are to be 1"x1"x1/16" square 6063-T5 aluminum extrusion mill finish.
- F. Fabric to be attached by of the the following two methods:
  1. 1/2" long galvanized staples at 1 1/2" on center. Staples to be covered with a PVC trim and all joints to be uniformly finished.
  2. 3/4" long zinc coated self-tapping screws at no more than 6" on center.
- G. Product to be installed using manufacturer's instructions and recommendations, following industry standard best practices.

**11000 EQUIPMENT**

- A. General contractor to install all equipment so listed on drawings, verify and coordinate requirements with suppliers during bidding.
- B. Owner to supply and install all equipment not required or listed herein. See equipment schedules.

**12000 FURNISHINGS**

- A. Owner to furnish and install all furnishings not required or listed herein.

**14000 CONVEYING EQUIPMENT - LIMITED USE / LIMITED APPLICATION ELEVATOR**

- A. Submit manufacturer's installation instructions including preparation, and equipment handling requirements. Submit Shop Drawings, Showing typical details of assembly, erection and anchorage, include wiring diagrams for power, control, and signal systems.
- B. Manufacturer: Company shall contain personnel with not less than ten (10) years of experience in the design and fabrication of LU/LA elevators. Technical Services: Manufacturer and authorized dealer shall work with architects, engineers and contractors to adapt the LU/LA elevator to the design and structural requirements of the building, site, and code requirements. Unit shall be tested in the factory before shipment. Elevator equipment shall meet or exceed the National and Local standards. All load ratings and safety factors shall meet or exceed those specified by all governing agencies and be certified by an independent professional engineer. Installer Qualifications: Factory trained and licensed to install equipment of this scope, with evidence of experience with specified equipment. Installing company shall have qualified people available to ensure fulfillment of maintenance and callback service.
- C. Products stored in manufacturer's unopened packaging until ready for installation. Components stored off the ground in a dry covered space, protected from weather conditions.
- D. Unit shall have a THREE (3) year limited parts warranty covering replacement of defective parts of the basic unit, including all electrical and drive system components, at no cost. Labor costs required to replace parts is not included. Preventative maintenance agreement required.
- E. Basis of Design: Symmetry Elevating Solutions Local Dealer: Executive Elevator Contact: J.W. Moore Phone: 502-636-1993 Email: jwm@exelevator.com Website: [www.symmetryelevators.com](http://www.symmetryelevators.com)
  1. Capacity 1400 pounds
  2. Car Size maximum of 48 inches by 54 inches.
  3. Platform Configuration Single opening Rail Left/Right
  4. Travel distance 14' with two stops

PROJECT: SAMUELS FIELD AIRPORT TERMINAL - FILE: SP1.03 Specifications.dwg - DATE: Jun 29, 2021 11:56AM - BY: DEBBY BIRD

PROJECT NO:  
21-4140  
DRAWN BY:  
DLB/  
DATE:  
5/26/21



**KEYES ARCHITECTS & ASSOCIATES**  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

**SAMUELS FIELD AIRPORT TERMINAL**  
NEW CONSTRUCTION  
BARDSTOWN, KY 40004  
1924 BOSTON RD

SPECIFICATIONS

**SP1.02**

5. Hydraulic Power unit with 4 HP high efficiency, low power consumption motor.

F. Substitutions must be approved by architect.

G. Do not begin installation until preliminary work including hoistway, landings and machine space has been properly prepared. Verify shaft and machine space are of correct size and within tolerance. Verify required landings and openings are of correct size and within tolerances. Verify hoistway shaft and machine room temperature is designed to have maintainable temperatures between 50 degrees F and 90 degrees F. Verify machine room, when required, is provided with lighting, light switch, convenience outlets and meets the clear space requirements of ASME A17.1 & NEC. Verify hoistway and openings are of correct size and within tolerance. Verify electrical power is available and of correct characteristics. If preliminary work is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

H. Adjust for smooth acceleration and deceleration. Adjust automatic floor leveling feature at each floor to provide stopping zone of ¼ inch. Adjust door operation.

**SPECIAL NOTE:**

A. Final detailed layout of Steel Structures, Plumbing, Mechanical, Fire Suppression and Electrical systems are by separate Engineers or installers, it is the responsibility of the owner and General Contractor to coordinate all work with affected other trades to assure completeness and code compliance.

B. It is the responsibility of the General Contractor and the Mechanical, Electrical, and Plumbing Contractors to ensure that all parts of their work is to be accessible as per Federal ADAAG Guidelines and all State / Local Guidelines. This includes but is not limited to Electrical Controls such as Thermostats or Lighting Controls, Light Switches, Outlet Plugs, Hand Dryers, and Faucet Controls. If there are concerns about how to determine reach ranges, equipment clearance or other accessibility items, contact the architect immediately before work begins for guidance.

**END OF SPECIFICATIONS**

**ABBREVIATIONS**

These are abbreviations used on the plans and in these specifications. Not all items may be use and are for reference only.

ACT - Acoustical Ceiling Tile

AFF - Above Finished Floor

CJ - Control Joint

E.I.F.S. - Exterior Insulation and Finish System

FRP - Fiberglass Reinforced Panels

Gyp. Bd. - Gypsum Board

I.B.C. - International Building Code

MAX - Maximum

MIN - Minimum

NRP - Non-Removable Pin

O.C. - On Center

VCT - Vinyl Composite Tile

VET - Vinyl Enhanced Tile

V.I.F. - Verify In Field

V.I.G.

PROJECT NO:

21-4140

DRAWN BY:

DLB/

DATE:

5/26/21



**KEYES ARCHITECTS & ASSOCIATES**  
4717 PRESTON HIGHWAY  
LOUISVILLE, KENTUCKY 40213 (502) 636-5113

NEW CONSTRUCTION  
**SAMUELS FIELD AIRPORT  
TERMINAL**  
BARDSTOWN, KY 40004  
1924 BOSTON RD

SPECIFICATIONS

**SP1.03**



**RFQ # 21-001-Attachment C  
Acknowledgement of Addendum Form**

**Nelson County Airport Terminal**

The offeror has examined and carefully studied the information provided in the RFQ and any following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledgement \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledgement \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledgement \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledgement \_\_\_\_\_

**Offerors must acknowledge any issued addenda. Submittals which fail to acknowledge the offeror's receipt of any addendum will result in the rejection of the submittal.**

**RFQ # 21-001-Attachment D  
Reference Survey Form**

**Nelson County Airport Terminal**

**Offeror:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**Scheduled Project Duration:** \_\_\_\_\_

**Description of the Project:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

	Disagree				Agree	
Completed work on time:	1	2	3	4	5	N/A
Completed work withing budget:	1	2	3	4	5	N/A
Provided timely and accurate information:	1	2	3	4	5	N/A
Worked well with Owner's staff:	1	2	3	4	5	N/A
Exercised project safely:	1	2	3	4	5	N/A
Provided quality materials and workmanship:	1	2	3	4	5	N/A
Would use firm again:	1	2	3	4	5	N/A

Completed By: Name: \_\_\_\_\_

Entity: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**RFQ # 21-001-Attachment E  
Project Schedule**

**Nelson County Airport Terminal**

**Project Delivery Process**

CM Award:	August 12, 2021
Pre-Construction / GMP Contract	September 12, 2021
Construction Completion:	July 31, 2022

**RFQ # 21-001-Attachment F**  
**Construction Management Contract (Sample)**  
**Nelson County Airport Terminal**



# AIA<sup>®</sup> Document A133<sup>™</sup> – 2019

## *Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price*

AGREEMENT made as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_  
*(In words, indicate day, month, and year.)*

BETWEEN the Owner:  
*(Name, legal status, address, and other information)*

and the Construction Manager:  
*(Name, legal status, address, and other information)*

for the following Project:  
*(Name, location, and detailed description)*

The Architect:  
*(Name, legal status, address, and other information)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201<sup>™</sup>–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

The Owner and Construction Manager agree as follows.

## TABLE OF ARTICLES

- 1 INITIAL INFORMATION
- 2 GENERAL PROVISIONS
- 3 CONSTRUCTION MANAGER'S RESPONSIBILITIES
- 4 OWNER'S RESPONSIBILITIES
- 5 COMPENSATION AND PAYMENTS FOR PRECONSTRUCTION PHASE SERVICES
- 6 COMPENSATION FOR CONSTRUCTION PHASE SERVICES
- 7 COST OF THE WORK FOR CONSTRUCTION PHASE
- 8 DISCOUNTS, REBATES, AND REFUNDS
- 9 SUBCONTRACTS AND OTHER AGREEMENTS
- 10 ACCOUNTING RECORDS
- 11 PAYMENTS FOR CONSTRUCTION PHASE SERVICES
- 12 DISPUTE RESOLUTION
- 13 TERMINATION OR SUSPENSION
- 14 MISCELLANEOUS PROVISIONS
- 15 SCOPE OF THE AGREEMENT

EXHIBIT A GUARANTEED MAXIMUM PRICE AMENDMENT

EXHIBIT B INSURANCE AND BONDS

### ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Section 1.1.

*(For each item in this section, insert the information or a statement such as "not applicable" or "unknown at time of execution.")*

§ 1.1.1 The Owner's program for the Project, as described in Section 4.1.1:

*(Insert the Owner's program, identify documentation that establishes the Owner's program, or state the manner in which the program will be developed.)*

§ 1.1.2 The Project's physical characteristics:

*(Identify or describe pertinent information about the Project's physical characteristics, such as size; location; dimensions; geotechnical reports; site boundaries; topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site, etc.)*

§ 1.1.3 The Owner's budget for the Guaranteed Maximum Price, as defined in Article 6:  
(Provide total and, if known, a line item breakdown.)

§ 1.1.4 The Owner's anticipated design and construction milestone dates:

- .1 Design phase milestone dates, if any:
- .2 Construction commencement date:
- .3 Substantial Completion date or dates:
- .4 Other milestone dates:

§ 1.1.5 The Owner's requirements for accelerated or fast-track scheduling, or phased construction, are set forth below:  
(Identify any requirements for fast-track scheduling or phased construction.)

§ 1.1.6 The Owner's anticipated Sustainable Objective for the Project:  
(Identify and describe the Owner's Sustainable Objective for the Project, if any.)

§ 1.1.6.1 If the Owner identifies a Sustainable Objective, the Owner and Construction Manager shall complete and incorporate AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, into this Agreement to define the terms, conditions and services related to the Owner's Sustainable Objective. If E234–2019 is incorporated into this agreement, the Owner and Construction Manager shall incorporate the completed E234–2019 into the agreements with the consultants and contractors performing services or Work in any way associated with the Sustainable Objective.

§ 1.1.7 Other Project information:  
(Identify special characteristics or needs of the Project not provided elsewhere.)

§ 1.1.8 The Owner identifies the following representative in accordance with Section 4.2:  
(List name, address, and other contact information.)





§ 1.1.14 The Owner's requirements for subcontractor procurement for the performance of the Work:  
(List any Owner-specific requirements for subcontractor procurement.)

§ 1.1.15 Other Initial Information on which this Agreement is based:

§ 1.2 The Owner and Construction Manager may rely on the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Construction Manager shall appropriately adjust the Project schedule, the Construction Manager's services, and the Construction Manager's compensation. The Owner shall adjust the Owner's budget for the Guaranteed Maximum Price and the Owner's anticipated design and construction milestones, as necessary, to accommodate material changes in the Initial Information.

§ 1.3 Neither the Owner's nor the Construction Manager's representative shall be changed without ten days' prior notice to the other party.

## ARTICLE 2 GENERAL PROVISIONS

### § 2.1 The Contract Documents

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract and are as fully a part of the Contract as if attached to this Agreement or repeated herein. Upon the Owner's acceptance of the Construction Manager's Guaranteed Maximum Price proposal, the Contract Documents will also include the documents described in Section 3.2.3 and identified in the Guaranteed Maximum Price Amendment and revisions prepared by the Architect and furnished by the Owner as described in Section 3.2.8. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. If anything in the other Contract Documents, other than a Modification, is inconsistent with this Agreement, this Agreement shall govern. An enumeration of the Contract Documents, other than a Modification, appears in Article 15.

### § 2.2 Relationship of the Parties

The Construction Manager accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Construction Manager's skill and judgment in furthering the interests of the Owner to furnish efficient construction administration, management services, and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish or approve, in a timely manner, information required by the Construction Manager and to make payments to the Construction Manager in accordance with the requirements of the Contract Documents.

### § 2.3 General Conditions

§ 2.3.1 For the Preconstruction Phase, AIA Document A201™–2017, General Conditions of the Contract for Construction, shall apply as follows: Section 1.5, Ownership and Use of Documents; Section 1.7, Digital Data Use and Transmission; Section 1.8, Building Information Model Use and Reliance; Section 2.2.4, Confidential Information; Section 3.12.10, Professional Services; Section 10.3, Hazardous Materials; Section 13.1, Governing Law. The term "Contractor" as used in A201–2017 shall mean the Construction Manager.

§ 2.3.2 For the Construction Phase, the general conditions of the contract shall be as set forth in A201–2017, which document is incorporated herein by reference. The term "Contractor" as used in A201–2017 shall mean the Construction Manager.

## ARTICLE 3 CONSTRUCTION MANAGER'S RESPONSIBILITIES

The Construction Manager's Preconstruction Phase responsibilities are set forth in Sections 3.1 and 3.2, and in the applicable provisions of A201-2017 referenced in Section 2.3.1. The Construction Manager's Construction Phase responsibilities are set forth in Section 3.3. The Owner and Construction Manager may agree, in consultation with the Architect, for the Construction Phase to commence prior to completion of the Preconstruction Phase, in which case, both phases will proceed concurrently. The Construction Manager shall identify a representative authorized to act on behalf of the Construction Manager with respect to the Project.

### § 3.1 Preconstruction Phase

#### § 3.1.1 Extent of Responsibility

The Construction Manager shall exercise reasonable care in performing its Preconstruction Services. The Owner and Architect shall be entitled to rely on, and shall not be responsible for, the accuracy, completeness, and timeliness of services and information furnished by the Construction Manager. The Construction Manager, however, does not warrant or guarantee estimates and schedules except as may be included as part of the Guaranteed Maximum Price. The Construction Manager is not required to ascertain that the Drawings and Specifications are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Construction Manager shall promptly report to the Architect and Owner any nonconformity discovered by or made known to the Construction Manager as a request for information in such form as the Architect may require.

§ 3.1.2 The Construction Manager shall provide a preliminary evaluation of the Owner's program, schedule and construction budget requirements, each in terms of the other.

#### § 3.1.3 Consultation

§ 3.1.3.1 The Construction Manager shall schedule and conduct meetings with the Architect and Owner to discuss such matters as procedures, progress, coordination, and scheduling of the Work.

§ 3.1.3.2 The Construction Manager shall advise the Owner and Architect on proposed site use and improvements, selection of materials, building systems, and equipment. The Construction Manager shall also provide recommendations to the Owner and Architect, consistent with the Project requirements, on constructability; availability of materials and labor; time requirements for procurement, installation and construction; prefabrication; and factors related to construction cost including, but not limited to, costs of alternative designs or materials, preliminary budgets, life-cycle data, and possible cost reductions. The Construction Manager shall consult with the Architect regarding professional services to be provided by the Construction Manager during the Construction Phase.

§ 3.1.3.3 The Construction Manager shall assist the Owner and Architect in establishing building information modeling and digital data protocols for the Project, using AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

#### § 3.1.4 Project Schedule

When Project requirements in Section 4.1.1 have been sufficiently identified, the Construction Manager shall prepare and periodically update a Project schedule for the Architect's review and the Owner's acceptance. The Construction Manager shall obtain the Architect's approval for the portion of the Project schedule relating to the performance of the Architect's services. The Project schedule shall coordinate and integrate the Construction Manager's services, the Architect's services, other Owner consultants' services, and the Owner's responsibilities; and identify items that affect the Project's timely completion. The updated Project schedule shall include the following: submission of the Guaranteed Maximum Price proposal; components of the Work; times of commencement and completion required of each Subcontractor; ordering and delivery of products, including those that must be ordered in advance of construction; and the occupancy requirements of the Owner.

#### § 3.1.5 Phased Construction

The Construction Manager, in consultation with the Architect, shall provide recommendations with regard to accelerated or fast-track scheduling, procurement, and sequencing for phased construction. The Construction Manager shall take into consideration cost reductions, cost information, constructability, provisions for temporary facilities, and procurement and construction scheduling issues.

#### § 3.1.6 Cost Estimates

§ 3.1.6.1 Based on the preliminary design and other design criteria prepared by the Architect, the Construction Manager shall prepare, for the Architect's review and the Owner's approval, preliminary estimates of the Cost of the Work or the

cost of program requirements using area, volume, or similar conceptual estimating techniques. If the Architect or Construction Manager suggests alternative materials and systems, the Construction Manager shall provide cost evaluations of those alternative materials and systems.

§ 3.1.6.2 As the Architect progresses with the preparation of the Schematic Design, Design Development and Construction Documents, the Construction Manager shall prepare and update, at appropriate intervals agreed to by the Owner, Construction Manager and Architect, an estimate of the Cost of the Work with increasing detail and refinement. The Construction Manager shall include in the estimate those costs to allow for the further development of the design, price escalation, and market conditions, until such time as the Owner and Construction Manager agree on a Guaranteed Maximum Price for the Work. The estimate shall be provided for the Architect's review and the Owner's approval. The Construction Manager shall inform the Owner and Architect in the event that the estimate of the Cost of the Work exceeds the latest approved Project budget, and make recommendations for corrective action.

§ 3.1.6.3 If the Architect is providing cost estimating services as a Supplemental Service, and a discrepancy exists between the Construction Manager's cost estimates and the Architect's cost estimates, the Construction Manager and the Architect shall work together to reconcile the cost estimates.

§ 3.1.7 As the Architect progresses with the preparation of the Schematic Design, Design Development and Construction Documents, the Construction Manager shall consult with the Owner and Architect and make recommendations regarding constructability and schedules, for the Architect's review and the Owner's approval.

§ 3.1.8 The Construction Manager shall provide recommendations and information to the Owner and Architect regarding equipment, materials, services, and temporary Project facilities.

§ 3.1.9 The Construction Manager shall provide a staffing plan for Preconstruction Phase services for the Owner's review and approval.

§ 3.1.10 If the Owner identified a Sustainable Objective in Article 1, the Construction Manager shall fulfill its Preconstruction Phase responsibilities as required in AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, attached to this Agreement.

#### § 3.1.11 Subcontractors and Suppliers

§ 3.1.11.1 If the Owner has provided requirements for subcontractor procurement in section 1.1.14, the Construction Manager shall provide a subcontracting plan, addressing the Owner's requirements, for the Owner's review and approval.

§ 3.1.11.2 The Construction Manager shall develop bidders' interest in the Project.

§ 3.1.11.3 The processes described in Article 9 shall apply if bid packages will be issued during the Preconstruction Phase.

#### § 3.1.12 Procurement

The Construction Manager shall prepare, for the Architect's review and the Owner's acceptance, a procurement schedule for items that must be ordered in advance of construction. The Construction Manager shall expedite and coordinate the ordering and delivery of materials that must be ordered in advance of construction. If the Owner agrees to procure any items prior to the establishment of the Guaranteed Maximum Price, the Owner shall procure the items on terms and conditions acceptable to the Construction Manager. Upon the establishment of the Guaranteed Maximum Price, the Owner shall assign all contracts for these items to the Construction Manager and the Construction Manager shall thereafter accept responsibility for them.

#### § 3.1.13 Compliance with Laws

The Construction Manager shall comply with applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to its performance under this Contract, and with equal employment opportunity programs, and other programs as may be required by governmental and quasi-governmental authorities.

#### § 3.1.14 Other Preconstruction Services

Insert a description of any other Preconstruction Phase services to be provided by the Construction Manager, or reference an exhibit attached to this document

*(Describe any other Preconstruction Phase services, such as providing cash flow projections, development of a project information management system, early selection or procurement of subcontractors, etc.)*

### § 3.2 Guaranteed Maximum Price Proposal

§ 3.2.1 At a time to be mutually agreed upon by the Owner and the Construction Manager, the Construction Manager shall prepare a Guaranteed Maximum Price proposal for the Owner's and Architect's review, and the Owner's acceptance. The Guaranteed Maximum Price in the proposal shall be the sum of the Construction Manager's estimate of the Cost of the Work, the Construction Manager's contingency described in Section 3.2.4, and the Construction Manager's Fee described in Section 6.1.2.

§ 3.2.2 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes, or equipment, all of which, if required, shall be incorporated by Change Order.

§ 3.2.3 The Construction Manager shall include with the Guaranteed Maximum Price proposal a written statement of its basis, which shall include the following:

- .1 A list of the Drawings and Specifications, including all Addenda thereto, and the Conditions of the Contract;
- .2 A list of the clarifications and assumptions made by the Construction Manager in the preparation of the Guaranteed Maximum Price proposal, including assumptions under Section 3.2.2;
- .3 A statement of the proposed Guaranteed Maximum Price, including a statement of the estimated Cost of the Work organized by trade categories or systems, including allowances; the Construction Manager's contingency set forth in Section 3.2.4; and the Construction Manager's Fee;
- .4 The anticipated date of Substantial Completion upon which the proposed Guaranteed Maximum Price is based; and
- .5 A date by which the Owner must accept the Guaranteed Maximum Price.

§ 3.2.4 In preparing the Construction Manager's Guaranteed Maximum Price proposal, the Construction Manager shall include a contingency for the Construction Manager's exclusive use to cover those costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order.

§ 3.2.5 The Construction Manager shall meet with the Owner and Architect to review the Guaranteed Maximum Price proposal. In the event that the Owner or Architect discover any inconsistencies or inaccuracies in the information presented, they shall promptly notify the Construction Manager, who shall make appropriate adjustments to the Guaranteed Maximum Price proposal, its basis, or both.

§ 3.2.6 If the Owner notifies the Construction Manager that the Owner has accepted the Guaranteed Maximum Price proposal in writing before the date specified in the Guaranteed Maximum Price proposal, the Guaranteed Maximum Price proposal shall be deemed effective without further acceptance from the Construction Manager. Following acceptance of a Guaranteed Maximum Price, the Owner and Construction Manager shall execute the Guaranteed Maximum Price Amendment amending this Agreement, a copy of which the Owner shall provide to the Architect. The Guaranteed Maximum Price Amendment shall set forth the agreed upon Guaranteed Maximum Price with the information and assumptions upon which it is based.

§ 3.2.7 The Construction Manager shall not incur any cost to be reimbursed as part of the Cost of the Work prior to the execution of the Guaranteed Maximum Price Amendment, unless the Owner provides prior written authorization for such costs.

§ 3.2.8 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions and clarifications contained in the Guaranteed Maximum Price Amendment. The Owner shall promptly furnish such revised Contract Documents to the Construction Manager. The Construction Manager shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions and clarifications contained in the Guaranteed Maximum Price Amendment and the revised Contract Documents.

§ 3.2.9 The Construction Manager shall include in the Guaranteed Maximum Price all sales, consumer, use and similar taxes for the Work provided by the Construction Manager that are legally enacted, whether or not yet effective, at the time the Guaranteed Maximum Price Amendment is executed.

### § 3.3 Construction Phase

#### § 3.3.1 General

§ 3.3.1.1 For purposes of Section 8.1.2 of A201–2017, the date of commencement of the Work shall mean the date of commencement of the Construction Phase.

§ 3.3.1.2 The Construction Phase shall commence upon the Owner’s execution of the Guaranteed Maximum Price Amendment or, prior to acceptance of the Guaranteed Maximum Price proposal, by written agreement of the parties. The written agreement shall set forth a description of the Work to be performed by the Construction Manager, and any insurance and bond requirements for Work performed prior to execution of the Guaranteed Maximum Price Amendment.

#### § 3.3.2 Administration

§ 3.3.2.1 The Construction Manager shall schedule and conduct meetings to discuss such matters as procedures, progress, coordination, scheduling, and status of the Work. The Construction Manager shall prepare and promptly distribute minutes of the meetings to the Owner and Architect.

§ 3.3.2.2 Upon the execution of the Guaranteed Maximum Price Amendment, the Construction Manager shall prepare and submit to the Owner and Architect a construction schedule for the Work and a submittal schedule in accordance with Section 3.10 of A201–2017.

#### § 3.3.2.3 Monthly Report

The Construction Manager shall record the progress of the Project. On a monthly basis, or otherwise as agreed to by the Owner, the Construction Manager shall submit written progress reports to the Owner and Architect, showing percentages of completion and other information required by the Owner.

#### § 3.3.2.4 Daily Logs

The Construction Manager shall keep, and make available to the Owner and Architect, a daily log containing a record for each day of weather, portions of the Work in progress, number of workers on site, identification of equipment on site, problems that might affect progress of the work, accidents, injuries, and other information required by the Owner.

#### § 3.3.2.5 Cost Control

The Construction Manager shall develop a system of cost control for the Work, including regular monitoring of actual costs for activities in progress and estimates for uncompleted tasks and proposed changes. The Construction Manager shall identify variances between actual and estimated costs and report the variances to the Owner and Architect, and shall provide this information in its monthly reports to the Owner and Architect, in accordance with Section 3.3.2.3 above.

## ARTICLE 4 OWNER’S RESPONSIBILITIES

### § 4.1 Information and Services Required of the Owner

§ 4.1.1 The Owner shall provide information with reasonable promptness, regarding requirements for and limitations on the Project, including a written program which shall set forth the Owner’s objectives, constraints, and criteria, including schedule, space requirements and relationships, flexibility and expandability, special equipment, systems, sustainability and site requirements.

§ 4.1.2 Prior to the execution of the Guaranteed Maximum Price Amendment, the Construction Manager may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner’s obligations under the Contract. After execution of the Guaranteed Maximum Price Amendment, the Construction Manager may request such information as set forth in A201-2017 Section 2.2.

§ 4.1.3 The Owner shall establish and periodically update the Owner’s budget for the Project, including (1) the budget for the Cost of the Work as defined in Article 7, (2) the Owner’s other costs, and (3) reasonable contingencies related to all of these costs. If the Owner significantly increases or decreases the Owner’s budget for the Cost of the Work, the Owner shall notify the Construction Manager and Architect. The Owner and the Architect, in consultation with the Construction Manager, shall thereafter agree to a corresponding change in the Project’s scope and quality.

§ 4.1.4 Structural and Environmental Tests, Surveys and Reports. During the Preconstruction Phase, the Owner shall furnish the following information or services with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Construction Manager's performance of the Work with reasonable promptness after receiving the Construction Manager's written request for such information or services. The Construction Manager shall be entitled to rely on the accuracy of information and services furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 4.1.4.1 The Owner shall furnish tests, inspections, and reports, required by law and as otherwise agreed to by the parties, such as structural, mechanical, and chemical tests, tests for air and water pollution, and tests for hazardous materials.

§ 4.1.4.2 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions and other necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 4.1.4.3 The Owner, when such services are requested, shall furnish services of geotechnical engineers, which may include test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous materials, seismic evaluation, ground corrosion tests and resistivity tests, including necessary operations for anticipating subsoil conditions, with written reports and appropriate recommendations.

§ 4.1.5 During the Construction Phase, the Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Construction Manager's performance of the Work with reasonable promptness after receiving the Construction Manager's written request for such information or services.

§ 4.1.6 If the Owner identified a Sustainable Objective in Article 1, the Owner shall fulfill its responsibilities as required in AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, attached to this Agreement.

#### § 4.2 Owner's Designated Representative

The Owner shall identify a representative authorized to act on behalf of the Owner with respect to the Project. The Owner's representative shall render decisions promptly and furnish information expeditiously, so as to avoid unreasonable delay in the services or Work of the Construction Manager. Except as otherwise provided in Section 4.2.1 of A201–2017, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 4.2.1 Legal Requirements. The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project to meet the Owner's needs and interests.

#### § 4.3 Architect

The Owner shall retain an Architect to provide services, duties and responsibilities as described in AIA Document B133™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Constructor Edition, including any additional services requested by the Construction Manager that are necessary for the Preconstruction and Construction Phase services under this Agreement. The Owner shall provide the Construction Manager with a copy of the scope of services in the executed agreement between the Owner and the Architect, and any further modifications to the Architect's scope of services in the agreement.

### ARTICLE 5 COMPENSATION AND PAYMENTS FOR PRECONSTRUCTION PHASE SERVICES

#### § 5.1 Compensation

§ 5.1.1 For the Construction Manager's Preconstruction Phase services described in Sections 3.1 and 3.2, the Owner shall compensate the Construction Manager as follows:

*(Insert amount of, or basis for, compensation and include a list of reimbursable cost items, as applicable.)*

§ 5.1.2 The hourly billing rates for Preconstruction Phase services of the Construction Manager and the Construction Manager's Consultants and Subcontractors, if any, are set forth below.  
(If applicable, attach an exhibit of hourly billing rates or insert them below.)

Individual or Position

Rate

§ 5.1.2.1 Hourly billing rates for Preconstruction Phase services include all costs to be paid or incurred by the Construction Manager, as required by law or collective bargaining agreements, for taxes, insurance, contributions, assessments and benefits and, for personnel not covered by collective bargaining agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, and shall remain unchanged unless the parties execute a Modification.

§ 5.1.3 If the Preconstruction Phase services covered by this Agreement have not been completed within \_\_\_\_\_ ( \_\_\_ ) months of the date of this Agreement, through no fault of the Construction Manager, the Construction Manager's compensation for Preconstruction Phase services shall be equitably adjusted.

## § 5.2 Payments

§ 5.2.1 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed.

§ 5.2.2 Payments are due and payable upon presentation of the Construction Manager's invoice. Amounts unpaid \_\_\_\_\_ ( \_\_\_ ) days after the invoice date shall bear interest at the rate entered below, or in the absence thereof at the legal rate prevailing from time to time at the principal place of business of the Construction Manager.  
(Insert rate of monthly or annual interest agreed upon.)

\_\_\_\_\_ % \_\_\_\_\_

## ARTICLE 6 COMPENSATION FOR CONSTRUCTION PHASE SERVICES

### § 6.1 Contract Sum

§ 6.1.1 The Owner shall pay the Construction Manager the Contract Sum in current funds for the Construction Manager's performance of the Contract after execution of the Guaranteed Maximum Price Amendment. The Contract Sum is the Cost of the Work as defined in Article 7 plus the Construction Manager's Fee.

### § 6.1.2 The Construction Manager's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Construction Manager's Fee.)

§ 6.1.3 The method of adjustment of the Construction Manager's Fee for changes in the Work:

§ 6.1.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

§ 6.1.5 Rental rates for Construction Manager-owned equipment shall not exceed \_\_\_\_\_ percent ( \_\_\_\_\_ %) of the standard rental rate paid at the place of the Project.

§ 6.1.6 Liquidated damages, if any:  
(Insert terms and conditions for liquidated damages, if any.)

§ 6.1.7 Other:  
(Insert provisions for bonus, cost savings or other incentives, if any, that might result in a change to the Contract Sum.)

## § 6.2 Guaranteed Maximum Price

The Construction Manager guarantees that the Contract Sum shall not exceed the Guaranteed Maximum Price set forth in the Guaranteed Maximum Price Amendment, subject to additions and deductions by Change Order as provided in the Contract Documents. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Construction Manager without reimbursement by the Owner.

## § 6.3 Changes in the Work

§ 6.3.1 The Owner may, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions. The Owner shall issue such changes in writing. The Construction Manager may be entitled to an equitable adjustment in the Contract Time as a result of changes in the Work.

§ 6.3.1.1 The Architect may order minor changes in the Work as provided in Article 7 of AIA Document A201–2017, General Conditions of the Contract for Construction.

§ 6.3.2 Adjustments to the Guaranteed Maximum Price on account of changes in the Work subsequent to the execution of the Guaranteed Maximum Price Amendment may be determined by any of the methods listed in Article 7 of AIA Document A201–2017, General Conditions of the Contract for Construction.

§ 6.3.3 Adjustments to subcontracts awarded on the basis of a stipulated sum shall be determined in accordance with Article 7 of A201–2017, as they refer to “cost” and “fee,” and not by Articles 6 and 7 of this Agreement. Adjustments to subcontracts awarded with the Owner’s prior written consent on the basis of cost plus a fee shall be calculated in accordance with the terms of those subcontracts.

§ 6.3.4 In calculating adjustments to the Guaranteed Maximum Price, the terms “cost” and “costs” as used in Article 7 of AIA Document A201–2017 shall mean the Cost of the Work as defined in Article 7 of this Agreement and the term “fee” shall mean the Construction Manager’s Fee as defined in Section 6.1.2 of this Agreement.

§ 6.3.5 If no specific provision is made in Section 6.1.3 for adjustment of the Construction Manager’s Fee in the case of changes in the Work, or if the extent of such changes is such, in the aggregate, that application of the adjustment provisions of Section 6.1.3 will cause substantial inequity to the Owner or Construction Manager, the Construction Manager’s Fee shall be equitably adjusted on the same basis that was used to establish the Fee for the original Work, and the Guaranteed Maximum Price shall be adjusted accordingly.

## ARTICLE 7 COST OF THE WORK FOR CONSTRUCTION PHASE

### § 7.1 Costs to Be Reimbursed

§ 7.1.1 The term Cost of the Work shall mean costs necessarily incurred by the Construction Manager in the proper performance of the Work. The Cost of the Work shall include only the items set forth in Sections 7.1 through 7.7.

§ 7.1.2 Where, pursuant to the Contract Documents, any cost is subject to the Owner’s prior approval, the Construction Manager shall obtain such approval in writing prior to incurring the cost.



§ 7.1.3 Costs shall be at rates not higher than the standard rates paid at the place of the Project, except with prior approval of the Owner.

## § 7.2 Labor Costs

§ 7.2.1 Wages or salaries of construction workers directly employed by the Construction Manager to perform the construction of the Work at the site or, with the Owner's prior approval, at off-site workshops.

§ 7.2.2 Wages or salaries of the Construction Manager's supervisory and administrative personnel when stationed at the site and performing Work, with the Owner's prior approval.

§ 7.2.2.1 Wages or salaries of the Construction Manager's supervisory and administrative personnel when performing Work and stationed at a location other than the site, but only for that portion of time required for the Work, and limited to the personnel and activities listed below:

*(Identify the personnel, type of activity and, if applicable, any agreed upon percentage of time to be devoted to the Work.)*

§ 7.2.3 Wages and salaries of the Construction Manager's supervisory or administrative personnel engaged at factories, workshops or while traveling, in expediting the production or transportation of materials or equipment required for the Work, but only for that portion of their time required for the Work.

§ 7.2.4 Costs paid or incurred by the Construction Manager, as required by law or collective bargaining agreements, for taxes, insurance, contributions, assessments and benefits and, for personnel not covered by collective bargaining agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, provided such costs are based on wages and salaries included in the Cost of the Work under Sections 7.2.1 through 7.2.3.

§ 7.2.5 If agreed rates for labor costs, in lieu of actual costs, are provided in this Agreement, the rates shall remain unchanged throughout the duration of this Agreement, unless the parties execute a Modification.

## § 7.3 Subcontract Costs

Payments made by the Construction Manager to Subcontractors in accordance with the requirements of the subcontracts and this Agreement.

## § 7.4 Costs of Materials and Equipment Incorporated in the Completed Construction

§ 7.4.1 Costs, including transportation and storage at the site, of materials and equipment incorporated, or to be incorporated, in the completed construction.

§ 7.4.2 Costs of materials described in the preceding Section 7.4.1 in excess of those actually installed to allow for reasonable waste and spoilage. Unused excess materials, if any, shall become the Owner's property at the completion of the Work or, at the Owner's option, shall be sold by the Construction Manager. Any amounts realized from such sales shall be credited to the Owner as a deduction from the Cost of the Work.

## § 7.5 Costs of Other Materials and Equipment, Temporary Facilities and Related Items

§ 7.5.1 Costs of transportation, storage, installation, dismantling, maintenance, and removal of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers that are provided by the Construction Manager at the site and fully consumed in the performance of the Work. Costs of materials, supplies, temporary facilities, machinery, equipment, and tools, that are not fully consumed, shall be based on the cost or value of the item at the time it is first used on the Project site less the value of the item when it is no longer used at the Project site. Costs for items not fully consumed by the Construction Manager shall mean fair market value.

§ 7.5.2 Rental charges for temporary facilities, machinery, equipment, and hand tools not customarily owned by construction workers that are provided by the Construction Manager at the site, and the costs of transportation, installation, dismantling, minor repairs, and removal of such temporary facilities, machinery, equipment, and hand tools. Rates and quantities of equipment owned by the Construction Manager, or a related party as defined in Section 7.8,

shall be subject to the Owner's prior approval. The total rental cost of any such equipment may not exceed the purchase price of any comparable item.

§ 7.5.3 Costs of removal of debris from the site of the Work and its proper and legal disposal.

§ 7.5.4 Costs of the Construction Manager's site office, including general office equipment and supplies.

§ 7.5.5 Costs of materials and equipment suitably stored off the site at a mutually acceptable location, subject to the Owner's prior approval.

#### § 7.6 Miscellaneous Costs

§ 7.6.1 Premiums for that portion of insurance and bonds required by the Contract Documents that can be directly attributed to this Contract.

§ 7.6.1.1 Costs for self-insurance, for either full or partial amounts of the coverages required by the Contract Documents, with the Owner's prior approval.

§ 7.6.1.2 Costs for insurance through a captive insurer owned or controlled by the Construction Manager, with the Owner's prior approval.

§ 7.6.2 Sales, use, or similar taxes, imposed by a governmental authority, that are related to the Work and for which the Construction Manager is liable.

§ 7.6.3 Fees and assessments for the building permit, and for other permits, licenses, and inspections, for which the Construction Manager is required by the Contract Documents to pay.

§ 7.6.4 Fees of laboratories for tests required by the Contract Documents; except those related to defective or nonconforming Work for which reimbursement is excluded under Article 13 of AIA Document A201–2017 or by other provisions of the Contract Documents, and which do not fall within the scope of Section 7.7.3.

§ 7.6.5 Royalties and license fees paid for the use of a particular design, process, or product, required by the Contract Documents.

§ 7.6.5.1 The cost of defending suits or claims for infringement of patent rights arising from requirements of the Contract Documents, payments made in accordance with legal judgments against the Construction Manager resulting from such suits or claims, and payments of settlements made with the Owner's consent, unless the Construction Manager had reason to believe that the required design, process, or product was an infringement of a copyright or a patent, and the Construction Manager failed to promptly furnish such information to the Architect as required by Article 3 of AIA Document A201–2017. The costs of legal defenses, judgments, and settlements shall not be included in the Cost of the Work used to calculate the Construction Manager's Fee or subject to the Guaranteed Maximum Price.

§ 7.6.6 Costs for communications services, electronic equipment, and software, directly related to the Work and located at the site, with the Owner's prior approval.

§ 7.6.7 Costs of document reproductions and delivery charges.

§ 7.6.8 Deposits lost for causes other than the Construction Manager's negligence or failure to fulfill a specific responsibility in the Contract Documents.

§ 7.6.9 Legal, mediation and arbitration costs, including attorneys' fees, other than those arising from disputes between the Owner and Construction Manager, reasonably incurred by the Construction Manager after the execution of this Agreement in the performance of the Work and with the Owner's prior approval, which shall not be unreasonably withheld.

§ 7.6.10 Expenses incurred in accordance with the Construction Manager's standard written personnel policy for relocation and temporary living allowances of the Construction Manager's personnel required for the Work, with the Owner's prior approval.

§ 7.6.11 That portion of the reasonable expenses of the Construction Manager's supervisory or administrative personnel incurred while traveling in discharge of duties connected with the Work.

## § 7.7 Other Costs and Emergencies

§ 7.7.1 Other costs incurred in the performance of the Work, with the Owner's prior approval.

§ 7.7.2 Costs incurred in taking action to prevent threatened damage, injury, or loss, in case of an emergency affecting the safety of persons and property, as provided in Article 10 of AIA Document A201–2017.

§ 7.7.3 Costs of repairing or correcting damaged or nonconforming Work executed by the Construction Manager, Subcontractors, or suppliers, provided that such damaged or nonconforming Work was not caused by the negligence of, or failure to fulfill a specific responsibility by, the Construction Manager, and only to the extent that the cost of repair or correction is not recovered by the Construction Manager from insurance, sureties, Subcontractors, suppliers, or others.

§ 7.7.4 The costs described in Sections 7.1 through 7.7 shall be included in the Cost of the Work, notwithstanding any provision of AIA Document A201–2017 or other Conditions of the Contract which may require the Construction Manager to pay such costs, unless such costs are excluded by the provisions of Section 7.9.

## § 7.8 Related Party Transactions

§ 7.8.1 For purposes of this Section 7.8, the term “related party” shall mean (1) a parent, subsidiary, affiliate, or other entity having common ownership of, or sharing common management with, the Construction Manager; (2) any entity in which any stockholder in, or management employee of, the Construction Manager holds an equity interest in excess of ten percent in the aggregate; (3) any entity which has the right to control the business or affairs of the Construction Manager; or (4) any person, or any member of the immediate family of any person, who has the right to control the business or affairs of the Construction Manager.

§ 7.8.2 If any of the costs to be reimbursed arise from a transaction between the Construction Manager and a related party, the Construction Manager shall notify the Owner of the specific nature of the contemplated transaction, including the identity of the related party and the anticipated cost to be incurred, before any such transaction is consummated or cost incurred. If the Owner, after such notification, authorizes the proposed transaction in writing, then the cost incurred shall be included as a cost to be reimbursed, and the Construction Manager shall procure the Work, equipment, goods, or service, from the related party, as a Subcontractor, according to the terms of Article 9. If the Owner fails to authorize the transaction in writing, the Construction Manager shall procure the Work, equipment, goods, or service from some person or entity other than a related party according to the terms of Article 9.

## § 7.9 Costs Not To Be Reimbursed

§ 7.9.1 The Cost of the Work shall not include the items listed below:

- .1 Salaries and other compensation of the Construction Manager's personnel stationed at the Construction Manager's principal office or offices other than the site office, except as specifically provided in Section 7.2, or as may be provided in Article 14;
- .2 Bonuses, profit sharing, incentive compensation, and any other discretionary payments, paid to anyone hired by the Construction Manager or paid to any Subcontractor or vendor, unless the Owner has provided prior approval;
- .3 Expenses of the Construction Manager's principal office and offices other than the site office;
- .4 Overhead and general expenses, except as may be expressly included in Sections 7.1 to 7.7;
- .5 The Construction Manager's capital expenses, including interest on the Construction Manager's capital employed for the Work;
- .6 Except as provided in Section 7.7.3 of this Agreement, costs due to the negligence of, or failure to fulfill a specific responsibility of the Contract by, the Construction Manager, Subcontractors, and suppliers, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable;
- .7 Any cost not specifically and expressly described in Sections 7.1 to 7.7;
- .8 Costs, other than costs included in Change Orders approved by the Owner, that would cause the Guaranteed Maximum Price to be exceeded; and
- .9 Costs for services incurred during the Preconstruction Phase.

## ARTICLE 8 DISCOUNTS, REBATES, AND REFUNDS

§ 8.1 Cash discounts obtained on payments made by the Construction Manager shall accrue to the Owner if (1) before making the payment, the Construction Manager included the amount to be paid, less such discount, in an Application for Payment and received payment from the Owner, or (2) the Owner has deposited funds with the Construction Manager with which to make payments; otherwise, cash discounts shall accrue to the Construction Manager. Trade discounts, rebates, refunds, and amounts received from sales of surplus materials and equipment shall accrue to the Owner, and the Construction Manager shall make provisions so that they can be obtained.

§ 8.2 Amounts that accrue to the Owner in accordance with the provisions of Section 8.1 shall be credited to the Owner as a deduction from the Cost of the Work.

## ARTICLE 9 SUBCONTRACTS AND OTHER AGREEMENTS

§ 9.1 Those portions of the Work that the Construction Manager does not customarily perform with the Construction Manager's own personnel shall be performed under subcontracts or other appropriate agreements with the Construction Manager. The Owner may designate specific persons from whom, or entities from which, the Construction Manager shall obtain bids. The Construction Manager shall obtain bids from Subcontractors, and from suppliers of materials or equipment fabricated especially for the Work, who are qualified to perform that portion of the Work in accordance with the requirements of the Contract Documents. The Construction Manager shall deliver such bids to the Architect and Owner with an indication as to which bids the Construction Manager intends to accept. The Owner then has the right to review the Construction Manager's list of proposed subcontractors and suppliers in consultation with the Architect and, subject to Section 9.1.1, to object to any subcontractor or supplier. Any advice of the Architect, or approval or objection by the Owner, shall not relieve the Construction Manager of its responsibility to perform the Work in accordance with the Contract Documents. The Construction Manager shall not be required to contract with anyone to whom the Construction Manager has reasonable objection.

§ 9.1.1 When a specific subcontractor or supplier (1) is recommended to the Owner by the Construction Manager; (2) is qualified to perform that portion of the Work; and (3) has submitted a bid that conforms to the requirements of the Contract Documents without reservations or exceptions, but the Owner requires that another bid be accepted, then the Construction Manager may require that a Change Order be issued to adjust the Guaranteed Maximum Price by the difference between the bid of the person or entity recommended to the Owner by the Construction Manager and the amount of the subcontract or other agreement actually signed with the person or entity designated by the Owner.

§ 9.2 Subcontracts or other agreements shall conform to the applicable payment provisions of this Agreement, and shall not be awarded on the basis of cost plus a fee without the Owner's prior written approval. If a subcontract is awarded on the basis of cost plus a fee, the Construction Manager shall provide in the subcontract for the Owner to receive the same audit rights with regard to the Subcontractor as the Owner receives with regard to the Construction Manager in Article 10.

## ARTICLE 10 ACCOUNTING RECORDS

The Construction Manager shall keep full and detailed records and accounts related to the Cost of the Work, and exercise such controls, as may be necessary for proper financial management under this Contract and to substantiate all costs incurred. The accounting and control systems shall be satisfactory to the Owner. The Owner and the Owner's auditors shall, during regular business hours and upon reasonable notice, be afforded access to, and shall be permitted to audit and copy, the Construction Manager's records and accounts, including complete documentation supporting accounting entries, books, job cost reports, correspondence, instructions, drawings, receipts, subcontracts, Subcontractor's proposals, Subcontractor's invoices, purchase orders, vouchers, memoranda, and other data relating to this Contract. The Construction Manager shall preserve these records for a period of three years after final payment, or for such longer period as may be required by law.

## ARTICLE 11 PAYMENTS FOR CONSTRUCTION PHASE SERVICES

### § 11.1 Progress Payments

§ 11.1.1 Based upon Applications for Payment submitted to the Architect by the Construction Manager, and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum, to the Construction Manager, as provided below and elsewhere in the Contract Documents.

§ 11.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 11.1.3 Provided that an Application for Payment is received by the Architect not later than the \_\_\_\_\_ day of a month, the Owner shall make payment of the amount certified to the Construction Manager not later than the \_\_\_\_\_ day of the \_\_\_\_\_ month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than \_\_\_\_\_ ( \_\_\_ ) days after the Architect receives the Application for Payment.

*(Federal, state or local laws may require payment within a certain period of time.)*

§ 11.1.4 With each Application for Payment, the Construction Manager shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner or Architect to demonstrate that payments already made by the Construction Manager on account of the Cost of the Work equal or exceed progress payments already received by the Construction Manager, plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Construction Manager's Fee.

§ 11.1.5 Each Application for Payment shall be based on the most recent schedule of values submitted by the Construction Manager in accordance with the Contract Documents. The schedule of values shall allocate the entire Guaranteed Maximum Price among: (1) the various portions of the Work; (2) any contingency for costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order; and (3) the Construction Manager's Fee.

§ 11.1.5.1 The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. The schedule of values shall be used as a basis for reviewing the Construction Manager's Applications for Payment.

§ 11.1.5.2 The allocation of the Guaranteed Maximum Price under this Section 11.1.5 shall not constitute a separate guaranteed maximum price for the Cost of the Work of each individual line item in the schedule of values.

§ 11.1.5.3 When the Construction Manager allocates costs from a contingency to another line item in the schedule of values, the Construction Manager shall submit supporting documentation to the Architect.

§ 11.1.6 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed, or (2) the percentage obtained by dividing (a) the expense that has actually been incurred by the Construction Manager on account of that portion of the Work and for which the Construction Manager has made payment or intends to make payment prior to the next Application for Payment, by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ 11.1.7 In accordance with AIA Document A201–2017 and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 11.1.7.1 The amount of each progress payment shall first include:

- .1 That portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the most recent schedule of values;
- .2 That portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction or, if approved in writing in advance by the Owner, suitably stored off the site at a location agreed upon in writing;
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and
- .4 The Construction Manager's Fee, computed upon the Cost of the Work described in the preceding Sections 11.1.7.1.1 and 11.1.7.1.2 at the rate stated in Section 6.1.2 or, if the Construction Manager's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work included in Sections 11.1.7.1.1 and 11.1.7.1.2 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 11.1.7.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Construction Manager does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Construction Manager intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017;

- .5 The shortfall, if any, indicated by the Construction Manager in the documentation required by Section 11.1.4 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and
- .6 Retainage withheld pursuant to Section 11.1.8.

#### § 11.1.8 Retainage

§ 11.1.8.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*

§ 11.1.8.1.1 The following items are not subject to retainage:

*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*

§ 11.1.8.2 Reduction or limitation of retainage, if any, shall be as follows:

*(If the retainage established in Section 11.1.8.1 is to be modified prior to Substantial Completion of the entire Work, insert provisions for such modification.)*

§ 11.1.8.3 Except as set forth in this Section 11.1.8.3, upon Substantial Completion of the Work, the Construction Manager may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 11.1.8. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

*(Insert any other conditions for release of retainage, such as upon completion of the Owner's audit and reconciliation, upon Substantial Completion.)*

§ 11.1.9 If final completion of the Work is materially delayed through no fault of the Construction Manager, the Owner shall pay the Construction Manager any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 11.1.10 Except with the Owner's prior written approval, the Construction Manager shall not make advance payments to suppliers for materials or equipment which have not been delivered and suitably stored at the site.

§ 11.1.11 The Owner and the Construction Manager shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors, and the percentage of retainage held on Subcontracts, and the Construction Manager shall execute subcontracts in accordance with those agreements.

§ 11.1.12 In taking action on the Construction Manager's Applications for Payment the Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Construction Manager, and such action shall not be deemed to be a representation that (1) the Architect has made a detailed examination, audit, or arithmetic verification, of the documentation submitted in accordance with Section 11.1.4 or other supporting data; (2) that the Architect has made exhaustive or continuous on-site inspections; or (3) that the Architect has made examinations to ascertain how or for what purposes the Construction Manager has used amounts previously paid on account of the Contract. Such examinations, audits, and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

## § 11.2 Final Payment

§ 11.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Construction Manager when

- .1 the Construction Manager has fully performed the Contract, except for the Construction Manager's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Construction Manager has submitted a final accounting for the Cost of the Work and a final Application for Payment; and
- .3 a final Certificate for Payment has been issued by the Architect in accordance with Section 11.2.2.2.

§ 11.2.2 Within 30 days of the Owner's receipt of the Construction Manager's final accounting for the Cost of the Work, the Owner shall conduct an audit of the Cost of the Work or notify the Architect that it will not conduct an audit.

§ 11.2.2.1 If the Owner conducts an audit of the Cost of the Work, the Owner shall, within 10 days after completion of the audit, submit a written report based upon the auditors' findings to the Architect.

§ 11.2.2.2 Within seven days after receipt of the written report described in Section 11.2.2.1, or receipt of notice that the Owner will not conduct an audit, and provided that the other conditions of Section 11.2.1 have been met, the Architect will either issue to the Owner a final Certificate for Payment with a copy to the Construction Manager, or notify the Construction Manager and Owner in writing of the Architect's reasons for withholding a certificate as provided in Article 9 of AIA Document A201–2017. The time periods stated in this Section 11.2.2 supersede those stated in Article 9 of AIA Document A201–2017. The Architect is not responsible for verifying the accuracy of the Construction Manager's final accounting.

§ 11.2.2.3 If the Owner's auditors' report concludes that the Cost of the Work, as substantiated by the Construction Manager's final accounting, is less than claimed by the Construction Manager, the Construction Manager shall be entitled to request mediation of the disputed amount without seeking an initial decision pursuant to Article 15 of AIA Document A201–2017. A request for mediation shall be made by the Construction Manager within 30 days after the Construction Manager's receipt of a copy of the Architect's final Certificate for Payment. Failure to request mediation within this 30-day period shall result in the substantiated amount reported by the Owner's auditors becoming binding on the Construction Manager. Pending a final resolution of the disputed amount, the Owner shall pay the Construction Manager the amount certified in the Architect's final Certificate for Payment.

§ 11.2.3 The Owner's final payment to the Construction Manager shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 11.2.4 If, subsequent to final payment, and at the Owner's request, the Construction Manager incurs costs, described in Sections 7.1 through 7.7, and not excluded by Section 7.9, to correct defective or nonconforming Work, the Owner shall reimburse the Construction Manager for such costs, and the Construction Manager's Fee applicable thereto, on the same basis as if such costs had been incurred prior to final payment, but not in excess of the Guaranteed Maximum Price. If adjustments to the Contract Sum are provided for in Section 6.1.7, the amount of those adjustments shall be recalculated, taking into account any reimbursements made pursuant to this Section 11.2.4 in determining the net amount to be paid by the Owner to the Construction Manager.

## § 11.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

*(Insert rate of interest agreed upon, if any.)*

\_\_\_\_\_ % \_\_\_\_\_

## ARTICLE 12 DISPUTE RESOLUTION

### § 12.1 Initial Decision Maker

§ 12.1.1 Any Claim between the Owner and Construction Manager shall be resolved in accordance with the provisions set forth in this Article 12 and Article 15 of A201–2017. However, for Claims arising from or relating to the

Construction Manager's Preconstruction Phase services, no decision by the Initial Decision Maker shall be required as a condition precedent to mediation or binding dispute resolution, and Section 12.1.2 of this Agreement shall not apply.

§ 12.1.2 The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017 for Claims arising from or relating to the Construction Manager's Construction Phase services, unless the parties appoint below another individual, not a party to the Agreement, to serve as the Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

## § 12.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box.)*

- Arbitration pursuant to Article 15 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other: *(Specify)*

If the Owner and Construction Manager do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

## ARTICLE 13 TERMINATION OR SUSPENSION

### § 13.1 Termination Prior to Execution of the Guaranteed Maximum Price Amendment

§ 13.1.1 If the Owner and the Construction Manager do not reach an agreement on the Guaranteed Maximum Price, the Owner may terminate this Agreement upon not less than seven days' written notice to the Construction Manager, and the Construction Manager may terminate this Agreement, upon not less than seven days' written notice to the Owner.

§ 13.1.2 In the event of termination of this Agreement pursuant to Section 13.1.1, the Construction Manager shall be compensated for Preconstruction Phase services and Work performed prior to receipt of a notice of termination, in accordance with the terms of this Agreement. In no event shall the Construction Manager's compensation under this Section exceed the compensation set forth in Section 5.1.

§ 13.1.3 Prior to the execution of the Guaranteed Maximum Price Amendment, the Owner may terminate this Agreement upon not less than seven days' written notice to the Construction Manager for the Owner's convenience and without cause, and the Construction Manager may terminate this Agreement, upon not less than seven days' written notice to the Owner, for the reasons set forth in Article 14 of A201–2017.

§ 13.1.4 In the event of termination of this Agreement pursuant to Section 13.1.3, the Construction Manager shall be equitably compensated for Preconstruction Phase services and Work performed prior to receipt of a notice of termination. In no event shall the Construction Manager's compensation under this Section exceed the compensation set forth in Section 5.1.

§ 13.1.5 If the Owner terminates the Contract pursuant to Section 13.1.3 after the commencement of the Construction Phase but prior to the execution of the Guaranteed Maximum Price Amendment, the Owner shall pay to the Construction Manager an amount calculated as follows, which amount shall be in addition to any compensation paid to the Construction Manager under Section 13.1.4:

- .1 Take the Cost of the Work incurred by the Construction Manager to the date of termination;



- .2 Add the Construction Manager's Fee computed upon the Cost of the Work to the date of termination at the rate stated in Section 6.1 or, if the Construction Manager's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion; and
- .3 Subtract the aggregate of previous payments made by the Owner for Construction Phase services.

§ 13.1.6 The Owner shall also pay the Construction Manager fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Construction Manager that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 13.1.5.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Construction Manager shall, as a condition of receiving the payments referred to in this Article 13, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Construction Manager, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Construction Manager under such subcontracts or purchase orders. All Subcontracts, purchase orders and rental agreements entered into by the Construction Manager will contain provisions allowing for assignment to the Owner as described above.

§ 13.1.6.1 If the Owner accepts assignment of subcontracts, purchase orders or rental agreements as described above, the Owner will reimburse or indemnify the Construction Manager for all costs arising under the subcontract, purchase order or rental agreement, if those costs would have been reimbursable as Cost of the Work if the contract had not been terminated. If the Owner chooses not to accept assignment of any subcontract, purchase order or rental agreement that would have constituted a Cost of the Work had this agreement not been terminated, the Construction Manager will terminate the subcontract, purchase order or rental agreement and the Owner will pay the Construction Manager the costs necessarily incurred by the Construction Manager because of such termination.

## § 13.2 Termination or Suspension Following Execution of the Guaranteed Maximum Price Amendment

### § 13.2.1 Termination

The Contract may be terminated by the Owner or the Construction Manager as provided in Article 14 of AIA Document A201–2017.

### § 13.2.2 Termination by the Owner for Cause

§ 13.2.2.1 If the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A201–2017, the amount, if any, to be paid to the Construction Manager under Article 14 of AIA Document A201–2017 shall not cause the Guaranteed Maximum Price to be exceeded, nor shall it exceed an amount calculated as follows:

- .1 Take the Cost of the Work incurred by the Construction Manager to the date of termination;
- .2 Add the Construction Manager's Fee, computed upon the Cost of the Work to the date of termination at the rate stated in Section 6.1 or, if the Construction Manager's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion;
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract the costs and damages incurred, or to be incurred, by the Owner under Article 14 of AIA Document A201–2017.

§ 13.2.2.2 The Owner shall also pay the Construction Manager fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Construction Manager that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 13.2.2.1.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Construction Manager shall, as a condition of receiving the payments referred to in this Article 13, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Construction Manager, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Construction Manager under such subcontracts or purchase orders.

### § 13.2.3 Termination by the Owner for Convenience

If the Owner terminates the Contract for convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Construction Manager a termination fee as follows:

*(Insert the amount of or method for determining the fee, if any, payable to the Construction Manager following a termination for the Owner's convenience.)*

### § 13.3 Suspension

The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017; in such case, the Guaranteed Maximum Price and Contract Time shall be increased as provided in Article 14 of AIA Document A201–2017, except that the term “profit” shall be understood to mean the Construction Manager’s Fee as described in Sections 6.1 and 6.3.5 of this Agreement.

## ARTICLE 14 MISCELLANEOUS PROVISIONS

§ 14.1 Terms in this Agreement shall have the same meaning as those in A201–2017. Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

### § 14.2 Successors and Assigns

§ 14.2.1 The Owner and Construction Manager, respectively, bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 14.2.2 of this Agreement, and in Section 13.2.2 of A201–2017, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 14.2.2 The Owner may, without consent of the Construction Manager, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner’s rights and obligations under the Contract Documents. The Construction Manager shall execute all consents reasonably required to facilitate the assignment.

### § 14.3 Insurance and Bonds

#### § 14.3.1 Preconstruction Phase

The Construction Manager shall maintain the following insurance for the duration of the Preconstruction Services performed under this Agreement. If any of the requirements set forth below exceed the types and limits the Construction Manager normally maintains, the Owner shall reimburse the Construction Manager for any additional cost.

§ 14.3.1.1 Commercial General Liability with policy limits of not less than \_\_\_\_\_ (\$ \_\_\_) for each occurrence and \_\_\_\_\_ (\$ \_\_\_) in the aggregate for bodily injury and property damage.

§ 14.3.1.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Construction Manager with policy limits of not less than \_\_\_\_\_ (\$ \_\_\_) per accident for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles, along with any other statutorily required automobile coverage.

§ 14.3.1.3 The Construction Manager may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided that such primary and excess or umbrella liability insurance policies result in the same or greater coverage as the coverages required under Sections 14.3.1.1 and 14.3.1.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 14.3.1.4 Workers’ Compensation at statutory limits and Employers Liability with policy limits not less than \_\_\_\_\_ (\$ \_\_\_) each accident, \_\_\_\_\_ (\$ \_\_\_) each employee, and \_\_\_\_\_ (\$ \_\_\_) policy limit.

§ 14.3.1.5 Professional Liability covering negligent acts, errors and omissions in the performance of professional services, with policy limits of not less than \_\_\_\_\_ (\$ \_\_\_) per claim and \_\_\_\_\_ (\$ \_\_\_) in the aggregate

#### § 14.3.1.6 Other Insurance

*(List below any other insurance coverage to be provided by the Construction Manager and any applicable limits.)*

Coverage

Limits

§ 14.3.1.7 **Additional Insured Obligations.** To the fullest extent permitted by law, the Construction Manager shall cause the primary and excess or umbrella policies for Commercial General Liability and Automobile Liability to include the Owner as an additional insured for claims caused in whole or in part by the Construction Manager's negligent acts or omissions. The additional insured coverage shall be primary and non-contributory to any of the Owner's insurance policies and shall apply to both ongoing and completed operations.

§ 14.3.1.8 The Construction Manager shall provide certificates of insurance to the Owner that evidence compliance with the requirements in this Section 14.3.1.

#### § 14.3.2 Construction Phase

After execution of the Guaranteed Maximum Price Amendment, the Owner and the Construction Manager shall purchase and maintain insurance as set forth in AIA Document A133™-2019, Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price, Exhibit B, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 14.3.2.1 The Construction Manager shall provide bonds as set forth in AIA Document A133™-2019 Exhibit B, and elsewhere in the Contract Documents.

§ 14.4 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

*(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*

§ 14.5 Other provisions:

### ARTICLE 15 SCOPE OF THE AGREEMENT

§ 15.1 This Agreement represents the entire and integrated agreement between the Owner and the Construction Manager and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Construction Manager.

§ 15.2 The following documents comprise the Agreement:

- .1 AIA Document A133™-2019, Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price
- .2 AIA Document A133™-2019, Exhibit A, Guaranteed Maximum Price Amendment, if executed
- .3 AIA Document A133™-2019, Exhibit B, Insurance and Bonds
- .4 AIA Document A201™-2017, General Conditions of the Contract for Construction
- .5 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:  
*(Insert the date of the E203-2013 incorporated into this Agreement.)*
- .6 Other Exhibits:  
*(Check all boxes that apply.)*

AIA Document E234™-2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, dated as indicated below:  
*(Insert the date of the E234-2019 incorporated into this Agreement.)*

[ ] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.7 Other documents, if any, listed below:

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Construction Manager’s bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*

This Agreement is entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
CONSTRUCTION MANAGER (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

Init.