ADDENDUM NO. 02

July 16, 2025

ZCS New Early Learning Center/Educational Services Center
TBD
Zionsville, IN 46077

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated June 24, 2025, by Fanning Howey Associates (Architect). Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 2 - 1 through ADD 2 - 4 and attached Fanning Howey Associates, Inc., Addendum No. 02, July 16, 2025, consisting of 12 items, 4 pages, New Project Manual Sections 32 18 13 – Synthetic Turf Safety Surfaces 32 31 21 – Decorative Metal Gates and 88 drawings.

A. 00 20 01 – INFORMATION AVAILABLE TO BIDDERS

1. Revised specification section added in entirety and published as part of Addendum 02. This section shall be reviewed by all Bidding Contractors.

   Section includes added reference to the following:
   - "Performance Bond for Storm Water Improvements"
   - "Town of Zionsville Record Drawing and Digital Data Submittal Requirements"
   - "Construction Site Inspection and Maintenance Log"

B. 00 83 00 – SCHEDULE OF PROJECT CONSTRUCTION WAGES

1. Added specification section to be included in Contract Documents.

C. 01 12 00 – MULTIPLE CONTRACT SUMMARY

3.03 BID CATEGORIES

1. Revised specification section and reissued in entirety. Specific changes are noted below for reference. All Bidder Contractors shall review and incorporate revisions.

A. Bid Category #01- General Trades

Add the following specification sections:
Section 05 73 13 Glazed Decorative Metal Railings

Delete the following specification sections:
Section 08 81 13 Decorative Glass Glazing

Add the following clarifications:
Clarification #'s 36, 37, 38, 39 & 40.

Revise the following clarifications:
Clarification #'s 35.

B. Bid Category #02 – Asphalt Paving

Add the following clarifications:
Clarification #'s 7 & 8.

Revise the following clarifications:
Clarification #'s 1 & 2.

D. Bid Category #04 – Structural Steel

Add the following clarifications:
Clarification #'s 6.

F. Bid Category #06 – Metal Studs, Drywall & Acoustic Ceilings

Add the following specification sections:
Section 09 84 33 Sound-Absorbing Wall Units

G. Bid Category #07 – Aluminum Storefront & Glazing

Add the following specification sections:
Section 08 81 13 Decorative Glass Glazing

Add the following clarifications:
Clarification #'s 7.

I. Bid Category #09 – Painting

Add the following clarifications:
Clarification #'s 2.

K. Bid Category #11 – Food Service Equipment

Add the following clarifications:
Clarification #'s 1, 2, 3, 4 & 5.

L. Bid Category #12 – Fire Suppression

Add the following clarifications:
Clarification #'s 8, 9, & 10.

M. Bid Category #13 - Plumbing

Add the following specification sections:
Section 00 83 00 Schedule of Project Construction Wages

Add the following clarifications:
Clarification #'s 13, 14, & 15.

N. Bid Category #14 - HVAC

Add the following specification sections:
Section 00 83 00 Schedule of Project Construction Wages

Add the following clarifications:
Clarification #'s 16, 17, & 18.

O. Bid Category #15 – Electrical & Technology

Add the following specification sections:
Section 00 83 00 Schedule of Project Construction Wages

Add the following clarifications:
Clarification #'s 16 & 17.

D 01 23 00 – ALTERNATES

1. Revise paragraph 1.04.C to read as follows:

ALTERNATE NO. 3: Epoxy Resin Terrazzo Flooring
Base Bid: Provide resilient floor tile in Corridors A101, B101, C101, D102, D121, D129, and D138, E101, F101, G101 as indicated on the Finish Drawings with wood base.

Alternate Bid: Provide Epoxy Resin Terrazzo Flooring in lieu of Resilient Floor Tile in Corridors A101, B101, C101, D102, D121, D129, and D138, E101, F101, G101 as indicated on the Finish Drawings. Wood base shall be included in base bid for both types of flooring.

E 01 32 00 – SCHEDULES AND REPORTS

1. The Guideline Schedule is included as attachment within Addendum 01. All Bidding Contractors shall review the Guideline Schedule for familiarity and bidding purposes.

F 01 55 00 – ACCESS ROADS AND PARKING AREAS & GROUNDSKEEPING

1. The "Asphalt Paving Sequence Plan" has been revised dated 7/14/25 and included as part of Addendum 02 for incorporation into Construction Documents and reference by all bidding Contractors.

SECTION 00 20 00 - INFORMATION AVAILABLE TO BIDDERS

A. "General Guidelines for Right-of-Way Activities": This document provides guidance and minimum requirements on a variety of Work activities regarding Countrymark Refining and Logistics, LLC (Countrymark) pipelines, facilities, and right-of way (ROW). Contractors shall meet or exceed the Project's, Owner's, Regulatory Agencies' (local, state, or federal, as applicable), or Utility Owners', most stringent safety requirements.

B. "Zionsville CS New ELC / ESC Owner's Project Requirements – Design Phase" includes additional information related to 01 91 13 – General Commissioning Requirements. This document is not a part of the Construction Documents and is enclosed for informational use only.

C. "Zionsville CS New ELC / ESC Commissioning Plan – Design Phase" includes additional information related to 01 91 13 – General Commissioning Requirements. This document is not a part of the Construction Documents and is enclosed for informational use only.

D. Pre-Award Meetings will be held virtually via Microsoft Teams. Specific links to each meeting will be distributed after Bid Opening.

Bid Category No. 01	July 29, 2025	3:00 PM
Bid Category No. 02	July 28, 2025	8:00 AM
Bid Category No. 03	July 28, 2025	9:00 AM
Bid Category No. 04	July 28, 2025	10:00 AM
Bid Category No. 05	July 28, 2025	11:00 AM
Bid Category No. 06	July 28, 2025	12:30 PM
Bid Category No. 07	July 28, 2025	1:30 PM
Bid Category No. 08	July 28, 2025	2:30 PM
Bid Category No. 09	July 28, 2025	3:30 PM
Bid Category No. 10	July 29, 2025	8:00 AM
Bid Category No. 11	July 29, 2025	9:00 AM
Bid Category No. 12	July 29, 2025	10:00 AM
Bid Category No. 13	July 29, 2025	11:00 PM
Bid Category No. 14	July 29, 2025	1:00 PM
Bid Category No. 15	July 29, 2025	2:00 PM

E. "Performance Bond for Storm Water Improvements" includes information required by the General Trades Contractor to provide a Performance Bond to Town of Zionsville.

F. "Town of Zionsville Record Drawing and Digital Data Submittal Requirements" includes additional information related digital data submission required by the General Trades Contractor for submission to Town of Zionsville at conclusion of project.

G. "CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG" is included as an example of regular required SWPPP inspection form or checklist to be submitted to Town of Zionsville by General Trades Contractor.

END OF SECTION 00 20 00

PERFORMANCE BOND
FOR
STORM WATER IMPROVEMENTS

This Performance Bond (the "Bond"), is hereby presented by _____, (the "Principal"), and _____, (the "Surety Company") to the Town of Zionsville ("Town") this ____ day of _____, _____, to induce the Town to issue a Storm Water Permit for development of land located at _____, with project name and description as follows: _____ (the "Project").

WHEREAS, the installation of storm water management improvements required by the Town of Zionsville Storm Water Ordinance (Zionsville Ordinance No. 2013-17 as may be amended from time to time) (the "Storm Water Ordinance") and the installation of improvements required by the Town as a condition of the Storm Water Permit have not been completed, constructed, and installed as required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan; and

WHEREAS, Surety Company has pledged surety for the actions of the Principal related to the completion, construction and installation of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan; and

WHEREAS, Surety Company and Principal agree that the covenants contained herein shall (i) run with the land and (ii) jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Town of Zionsville, Boone County, Indiana for the completion, construction and installation of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan.

NOW, THEREFORE, Principal and Surety agree to the following obligations for the completion, construction, installation and ongoing monitoring and maintenance of the storm water management improvements related to the "Project":

1. Principal shall construct, install and provide ongoing monitoring and maintenance of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan relating to the

Project and guarantees a good faith execution of all requirements contained therein relating to the Project.

2. The total cost of all storm water management measures for the entire Project, as determined by an estimate prepared by _____ (registered Engineer or Land Surveyor) are $_____. Said costs shall be for the installation and ongoing monitoring and maintenance of erosion control measures and the construction and ongoing monitoring and maintenance of storm drainage infrastructure, detention/retention facilities and storm water quality Best Management Practices (BMPs), as regulated by the Storm Water Ordinance, until the construction is completed, the site is stabilized and as-built plans are accepted by the Town.

3. The Principal and Surety jointly and severally bind themselves, their heirs, executors, administrators, successors and assigns to the Town of Zionsville for the payment of the sum of $_____ ("Bond Amount"), which represents 110% of the total cost of all storm water management measures for the entire project as illustrated in paragraph 2 herein OR the sum of five thousand dollars ($5,000.00), whichever is greater.

4. Upon receipt by the Surety Company of written notice from the Town stating that the Principal has failed to complete, construct and install the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan, the Surety Company shall, at the option and direction of the Town, promptly and at the Surety Company's expense take one of the following actions:

a. Arrange for the Principal, with consent of the Town, to perform and complete the construction and installation of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan;

b. Undertake to perform and complete the construction and installation of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water Quality Management Plan; or,

c. Make payment to the Town in the amount to be incurred by the Town to complete the construction and installation of the storm water management improvements required by the Storm Water Ordinance, the Storm Water Permit, the Storm Water Drainage Plan, the Storm Water Pollution Prevention Plan and the Storm Water

Quality Management Plan, and the amount of this Bond shall be credited for any payments made in good faith by the Surety Company, provided that the Surety Company's obligations under this paragraph shall not exceed the Bond Amount.

5. If Surety Company does not proceed as provided for above with reasonable promptness, but in all events within thirty (30) days of receipt of notice as described in paragraph 4 herein, the Surety Company shall be deemed to be in default on this Bond fifteen (15) days after receipt of an additional written notice from the Town to the Surety Company demanding that the Surety Company perform its obligations under this Bond, and the Town shall be entitled to enforce any remedy available to the Town.

6. Upon compliance with the terms and provisions of this Bond, the Principal's submittal of the required maintenance bond, and the execution of a written Release of Performance Bond by the Town, this Bond shall become null and void.

(REST OF PAGE INTENTIONALLY LEFT BLANK)

IN WITNESS WHEREOF, the undersigned have executed this instrument this day of _____, _____.

__(Principal)_____ **__(Surety Company)**

By:_____ By:_____
Signature Signature

Printed:_____ Printed:_____

Title:_____ Title:_____

Notice
Address: _____ Notice
Address: _____

TOWN OF ZIONSVILLE

Approved this _____ day of _____, _____.

By:_____

Printed:_____

_____,
Town of Zionsville, Boone County, Indiana

ZIONSVILLE

Town of Zionsville 1100 West Oak Street Zionsville, Indiana 46077 www.zionsville-in.gov

Town of Zionsville Record Drawing and Digital Data Submittal Requirements

March 2022

Purpose:

This document outlines the submittal requirements and process for providing Record Drawings and associated Digital Data to the Town of Zionsville for any new Street, Sanitary Sewer and Stormwater infrastructure that is constructed within the Town of Zionsville.

Submission Requirements:

Within 60 days of final completion of construction, the responsible entity (Developer, Contractor, etc.) or their designee shall submit the required data to the Town of Zionville, Public Works Department, Engineering Division. The required data shall consist of:

a. Record Drawings in PDF format
b. Digital Data for incorporation into the Town's GIS system for all Stormwater infrastructure within the Town Limits and any Sanitary Sewers within the Town's Service area.

Record Drawings:

Record Drawings shall consist of a set of the project Construction Drawings in Adobe PDF format meeting the following requirements:

a. Each page stamped by the preparer indicating the drawings to be Record Drawings and certifying their accuracy.
b. The drawings shall be the approved Construction Drawings with legible red-line mark-ups of any changes as made during construction. Changes include any substantive modification in the project such as locations, elevations, slopes, pipe sizes, materials, structure or casting types, or any other aspects of the project that are covered by the plans.
c. Final elevations and locations shall be as surveyed following construction. The final elevations, lengths and slopes shall be indicated next to marked-out design values on each plan sheet. If locations changed, the new location shall be shown in red and the original location marked-out.
d. All changes and final elevations shall be red in color on the pdf document.
e. The submitted .pdf file must be legible, contain all As-Built data including the profile sheets, and be reproducible to scale. The files must be a minimum of 300 dpi and rotated properly.

Stormwater requirements: The Town's Stormwater Ordinance (Sec 50.098) lists specific requirements of information to be included on the "as-built" plans. These include:

1. Pipe size and pipe material;
2. Invert elevations;
3. Top rim elevations;
4. Elevation of the emergency overflow (spillway) for ponds;
5. Grades along the emergency flood routing path(s);
6. Pipe structure lengths;
7. BMP types, dimensions and boundaries/easements;
8. "As-planted" plans for BMPs, as applicable;
9. Data and calculations showing detention basin storage volume;
10. Data and calculations showing BMP treatment capacity; and
11. Certified statement on plans stating the completed storm drainage system and storm water management facilities substantially comply with construction plans and the storm water management permit as approved by the Town. (See certificate in the *Storm Water Technical Standards Manual*.)

Note that if there are any significant discrepancies in the as-built conditions when compared to the design plans, the Town may request that the Design Engineer provide additional supporting documentation indicating that the project will perform in an acceptable manner.

Digital Data:

Digital Data for incorporation into the Town's GIS system shall also be provided. The Digital Data shall have the construction changes incorporated, (as noted in the Record Drawing mark-ups).

a. The data shall be provided in two formats:
    1. an Autocad Map .dwg file utilizing Object Data Tables. A template drawing with the appropriate Object Data Tables created is included with these standards.
    2. ESRI Shape files. An individual set of shapefiles shall be created for each applicable layer on which data is present.
b. The object data tables and shape files shall be populated in accordance with the attached Layer and Attribute List which provides definitions and parameters for the attributes on each layer.
c. The coordinate system for the drawing shall be: Indiana State Plane – West – NAD 83 – US Feet.
d. Storm - Data shall be provided for all public and private storm drainage systems and BMP's
e. Sanitary - Data shall be provided for all sanitary sewer facilities served by the Town's wastewater utility.
f. Infrastructure line work must be continuous polylines with a beginning and ending at a structure insertion point, connecting only two structures per line. Lines must be drawn with the direction of flow.

Attachments:

- Zionsville Digital Data Submission Layer and Attribute List
- TOZ ODT Template 2022.dwg

TOWN OF ZIONSVILLE
Digital Data Submission Layer and Attribute List

In the entries below, the layers to be provided are listed in bold. The attributes to be provided for each layer are listed beneath it along with definitions describing the data to be provided for each.

Storm Sewers

Storm Pipes	Object Type - POLYLINE
Number	Unique ID# to be assigned by TOZ - Leave Blank
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. RCP, PVC, HDPE, CMP, DI - If other, use most common abbreviation
Length	Nominal Length of Pipe in Whole Feet
Calc_Lnth	Length of Pipe as drafting program
Location	Desciption of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Upstr_Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Dwnstr_Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Date_Inst	Date of Installation - MM/DD/YYYY
Storm Structures	Object Type - POINT
Str_Number	Unique ID# to be assigned by TOZ - Leave Blank
Arch_Number	ID# of structure on costruction plans
Lid_Type	Grate or Solid
Str_Type	Manhole or Inlet
Str_Material	Structure Material - Precast, Cast-in-Place, Brick, Block, Other
Str_Dim	Structure Dimensions - round structures: 48" DIAM; Squre or Rect: 30" x 30"
Str_Depth	Structure Depth in Inches - XX.X
Sump	Is the structure sumped - Yes or No
Cast_Type	Casting Type - Model Number or INDOT Casting No.
Cast_Dim	Nominal Dimensions of Casting in inches
Location	Desciption of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Condition Rating	Leave Blank for New Infrastructure
Rim_Elev	Rim Elevation in Feet - XXX.XX
Inv_1_Out	Invert Elevation of Pipe leaving the Structure - XXX.XX
Inv_2	Add additional Invert Elevations of incoming Pipes listed clockwise from the outlet pipe - XXX.XX
Inv_3	
Inv_4	
Inv_5	
Curb_Elev	Leave Blank for New Infrastructure
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Str_Found	Leave Blank for New Infrastructure
Date_Inst	Date of Installation - MM/DD/YYYY
Latitude	Leave Blank for New Infrastructure
Longitude	Leave Blank for New Infrastructure

Storm Outfalls	Object Type - POINT
Number	Unique ID# to be assigned by TOZ - Leave Blank
Drawing Number	Drawing Number where Outfall is shown in Plan Set
Material	Pipe Material. RCP, PVC, HDPE, CMP, DI - If other, use most common abbreviation
Diameter	Nominal Pipe Diameter in Inches
Invert	Invert Elevation - XXX.XX
Location	Desciption of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Descr	Description of Oufall - "Outlet to Pond No. 3" or "Outlet to Eagle Creek", etc.
Condition	Leave Blank for New Infrastructure
End_Sect	End Section Present - Yes or No.
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Latitude	Provide in decimal format to 6 digits XX.XXXXXX
Longitude	Provide in decimal format to 6 digits XX.XXXXXX
Subsurface Drains	Object Type - POLYLINE
Number	Unique ID# to be assigned by TOZ - Leave Blank
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. PVC or HDPE If other, use most common abbreviation
Length	Nominal Length of Pipe in whole Feet
Calc_Lenth	Length of Pipe as drafting program
Location	Desciption of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Upstr_Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Dwnstr_Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Date_Inst	Date of Installation - MM/DD/YYYY
Storm Cleanouts	Object Type - POINT
Number	Unique ID# to be assigned by TOZ - Leave Blank
Description	Desciption of Locaiton - Subdivision and/or Street Name
Stormwater BMP's	Object Type - POINT for individual structures; POLYLINE outline for ponds
Number	Unique ID# to be assigned by TOZ - Leave Blank
Project Name	Name of Project or Subdivision
Address/Location	Closest Street Addresss or "Common Property"
Ownership	Public or Private
Type	Type of BMP - Wet Detention, Dry Detention, Sump/Snout Catch, Hydrodynamic Separator, Bio-Retention, etc. Use names as included in the Indiana Storm Water Quality Manual as applicable.
Model	Model Number if Manufactured Unit
Contact Name	Name of Contact Responsible for Maintenance
Owner Name	Association, Company or Individual
Owner Address 1	Mailing Address of Owner
Owner Address 2	City, State and Zip of Owner
Year Installed	Year of Installation
Inspection Date	Leave Blank for New Infrastructure
Maintenance Date	Leave Blank for New Infrastructure
Comments	Leave Blank for New Infrastructure
O&M On File	Yes or No
Str_Number	Cross Reference to Drainage Strucutre No. if Applicable, Leave Blanks
Normal Pool Elev	Normal Pool Elevation if Wet Detention - XXX.XX
100 Yr Elev	100 yr Pool Elevation if Wet or Dry Detention - XXX.XX
Top of Bank Elev	Top of Bank Elevation if Wet or Dry Detention - XXX.XX

Sanitary Sewers

San Pipes	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ = to Upstram MH Number - Leave Blank
Arch_Number	ID# of upstream MH structure on costruction plans
Ownership	Public or Private
Size	Nominal Pipe Diameter in Inches
Type	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
Calculated Length	Length of Pipe as drafting program
Date Installed	Date of Installation - MM/DD/YYYY
CIPP	Leave Blank for New Infrastructure
Comments	Leave Blank for New Infrastructure
Location	Desciption of Location - Subdivision and/or Street Name
Basin	Leave Blank - To be Populated by TOZ
Checked	Leave Blank for New Infrastructure
Source Length	Nominal Length of Pipe in Whole Feet
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Downstream ID	To be assigned by TOZ - Leave Blank
Class	Indicate Pipe Thickness - PVC SDR 35 or SDR 26, HDPE DR XX,
Avg Depth	Average Depth in Feet - X.X
Upstream Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Downstream Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Project	Name of Project or Subdivision
Source	For new infrastructure fill in - Record Drawings
Ver Ref	Leave Blank for New Infrastructure
Eng Comp	Design Engineering Company Name
San Force Main	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ = to Upstram MH Number - Leave Blank
Ownership	Public or Private
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
Class	Indicate Pipe Thickness - PVC SDR 35 or SDR 26, HDPE DR XX,
Length (calc)	Nominal Length of Pipe in Whole Feet
Location	Desciption of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure

San Manhole	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ = to Upstram MH Number - Leave Blank
Arch_Number	ID# of structure on costruction plans
Ownership	Publlc or Private
Curb Elev.	Leave Blank for New Infrastructure
T.C.	Rim Elevation in Feet - XXX.XX
Numb Inverts	Total number of pipes entering and Leaving the structure.
Invert .1	Invert Elevation of Pipe leaving the Structure - XXX.XX
Invert .1 Dir	Direction of Pipe Leaving the Structure (N,W,S,E, etc)
Invert .2	Add additional Invert Elevations and Direction of incoming Pipes listed clockwise from the outlet pipe - XXX.XX
Invert .2 Dir	
Invert .3	
Invert .3 Dir	
Invert .4	
Invert .4 Dir	
Ground Elev.	Elevation of Ground at MH if different than Rim XXX.XX
Frame Bolt Down	Yes or No
Lid	For new Infrastruction - "Closed"
Structure Type	Structure Material - Precast, Cast-in-Place, Brick, Block, Other
Steps	Yes or No
Condition of Steps	Leave Blank for New Infrastructure
Condition of MH	Leave Blank for New Infrastructure
MH Found	Leave Blank for New Infrastructure
Date Installed	Date of Installation - MM/DD/YYYY
Comments	Leave Blank for New Infrastructure
Location	Desciption of Location - Subdivision and/or Street Name
Depth Measure Down	Leave Blank for New Infrastructure
Barrel Diameter	Interior Diameter of MH in Inches
Barrel Material	Indicate MH Material - Should be RCP for new MH's
Wall	Entries in existing say "No"
Wall Type	Leave Blank for New Infrastructure
Prop Manhole	Leave Blank for New Infrastructure
Rehabbed	Leave Blank for New Infrastructure
Rehab Date	Leave Blank for New Infrastructure
MH Depth Calc	Difference between Rim Elevation and Lowest Invert in feet - X.X
MH Depth Measured	Leave Blank for New Infrastructure
Drop MH	Yes or No
San Laterals	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Ownership	Public or Private
LOT_NUM	Subdivision Lot Number Served
ADDRESS	Address Served
TYPE	Residential, Commercial, Industrial or Other
MAIN_ID	To be assigned by TOZ = to upstram MH number
DIST_BACK	Distance of Lateral From Downstream MH
PIPE_LEN	Lateral Length in Feet from Main
DIAMETER	Nominal Pipe Diameter in Inches
MATER	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
CONNECT	Connection Type - WYE or TEE
ENG_CMPY	Design Engineering Company Name
AB_ID	Name of Record Drawing Plan Set
DEVELOPER	Name of Developer
Comments	Leave Blank for New Infrastructure

San Cleanouts	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Cleanout ID	Leave Blank for New Infrastructure
Ownership	Public or Private
Comments	Plan Set Were the Cleanout is Shown.
Sanitary Valve	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Ownership	Public or Private
Feature Name	Number or Label on Design Plans - ARV-01, etc.
Type	Valve Type - ARV, Plug Valve, Check Valve, etc.
T.C.	Rim Elevation in Feet - XXX.XX
Inv.	Invert of Pipe at Valve - XXX.XX
Location	Desciption of Location - Subdivision and/or Street Name
Source	For new infrastructure fill in - Record Drawings
Comment	Leave Blank for New Infrastructure
Lift Stations	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ = to Upstram MH Number - Leave Blank
Lift Station Name	Name of Lift Station - Consult with Town
Address/Nearest Int	Closest Street Addresss or Street Intersection
Ownership	Public or Private
Type	Lift Station Type - Submersible, Dry Pit, Etc.
Number of pumps	Indicate All Information as Available
Pump Manufacturer	
Pump Model	
Impeller	
SN1	
SN2	
HP	
Voltage	
Phase	
Force Main Size(in)	Nominal Force Main Diameter in Inches
Install Date	Date of Installation - MM/DD/YYYY
Gen. Mfg.	Generator Manufacturer
Gen. Model	Generator Model No.
SN3	Serial Number of 3rd Pump, if applicable
SN4	Serial Number of 4th Pump, if applicable
SN5	Serial Number of 5th Pump, if applicable
Designed Pump Rate	Design Pumping Rate in GPM
TDH	Total Dynamic Head Rating at Deisgn Pumping Rate - FT
Wet Well Diameter	Wet Well Diameter in Inches
Inv 1 Measure Down	Indicate Invert Elevation of Incoming Sewer No. 1
Inv 2 Measure Down	Indicate Invert Elevation of Incoming Sewer No. 2, if applicable
Wet Well Depth	Depth in Feet from Rim to Floor - X.X
RPM	Pump Motor RPM
Comments	Indicate other Pertinent Informaiton - Are Pumps on VFD's

Date: _____
Project: _____
Inspected by: _____

Type of Inspection: ☐ Scheduled Weekly ☐ Rain Event

ZIONSVILLE

CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG
(To be Completed by Property Owner or Agent)

All stormwater pollution prevention BMP's shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and a Notice of Termination has been issued. An inspection of the project site must be completed by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the accepted site plans. This log shall be kept as a permanent record and must be made available to the Town of Zionsville, in an organized fashion, within forty-eight (48) hours of a request.

Yes	No	N/A	
			1. Is the Rule 5 NOI and other required site information posted at the entrance?
			2. Is a construction entrance installed and functioning properly?
			3. Are construction staging & parking areas restricted to areas designated on the plans?
			4. Are public and private streets clean of sediment, debris and mud?
			5. Are appropriate practices installed where storm water leaves the site?
			6. Are all stormwater discharge points (outfalls) adequately stabilized, free of erosion and sediment transport?
			7. Has all silt fence been installed properly and being maintained? (entrenched - upright - fabric not torn - terminated to higher ground - properly joined at ends)
			8. Are other sediment control barriers in place and functioning properly?
			9. Are appropriate perimeter protections in place and functioning properly?
			10. Are check dams, sediment basins & traps installed according to plan and properly maintained?
			11. Is inlet protection installed properly on all inlets & being maintained?
			12. Have swales and ditches been stabilized or protected?
			13. Has temporary stabilization of disturbed ground been addressed? (dormant for 15 days?)
			14. Is permanent stabilization of disturbed ground progressing on all completed areas?
			15. Do water pumping operations have a protected outlet and discharge clear water?
			16. Are all dewatering structures functioning properly?
			17. Is a designated concrete/equipment washout area established, clearly marked and being utilized?
			18. Is solid waste properly contained & a stable access provided to the storage & pickup area?
			19. Are fuel tanks and other hazardous materials safely stored and protected?
			20. Is spill response equipment on-site and easily accessible?
			21. Are temporary soil stockpiles in approved areas & properly protected?
			22. Are diversion swales and/or waterbars installed to plan & protected?

If you answered “no” to any of the above questions, describe any corrective action which must be taken to remedy the problem and when the corrective actions are completed.

Corrective Action Log

Date	Location	Correction Needed	Date Completed	Initials	Notes

I certify under penalty of law that this document was completed to the best of my knowledge and belief on the date listed below per my signature. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Inspector: Date:

SECTION 00 83 00 – SCHEDULE OF PROJECT CONSTRUCTION WAGES

Project is being funded in whole in or in part with funds made available by the Inflation Reduction Act of 2022 (IRA).

The contractors subject to the IRA requirements shall certify that they have followed the provisions as required in the Inflation Reduction Act in determining their bid for each classification(s) of work needed to complete the project in accordance with the contract and shall also require its sub-contractors and suppliers to comply.

Prevailing Wage & Apprenticeship Compliance
Contractor and all subcontractors shall comply with all applicable requirements of the IRA, including but not limited to:

- Payment of prevailing wages as defined under the Davis-Bacon Act for all laborers and mechanics employed on the project.
- Utilization of registered apprentices such that no less than [insert applicable threshold, e.g., 15%] of total labor hours are performed by qualified apprentices.
- Maintenance and submittal of detailed records showing hours worked, wage rates, fringe benefits, and apprentice classifications.
- Cooperation with the Owner in producing records necessary for certification of IRA-related tax credits. Failure to comply shall constitute a breach of contract and may result in withholding of payment, penalties, or contract termination.

Weekly Payroll & Hours Log
Use a spreadsheet or payroll system with columns for:

- Worker (name/ID), Classification (e.g. Electrician Journeyman/Apprentice)
- Total hours; Apprentice hours; Journeyman hours
- Hourly wage; Fringe breakouts
- Apprentice ratio compliance (e.g., Journeyman-to-Apprentice)
- Source of wage determination (e.g. SAM.gov ID)
- Subcontractor signer attesting weekly compliance

Prevailing Wage Posting & Worker Acknowledgement

- Prominently post the current Davis–Bacon wage determination at jobsite. (SAM.gov)
- Include a simple **handout** for workers defining prevailing wage + apprenticeship ratios, and sign-off logsheet to confirm they've read it Apprenticeship.gov+4

Apprenticeship Ratio Tracking and Certification

- Indicate on the report whether each apprentice worked under the required ratio each day (per 29 CFR 5.5(a)(4)(i)).
- Define journeyworker to apprentice numbers: e.g., "1:1 for up to first year apprentice."
- Provide monthly certificate showing at least 15% total labor hours by apprentices.

Material Supplier Domestic Content Affidavit*)*

- Include supplier affidavits stating materials meet **IRA domestic content standards**

CERTIFICATES OF COMPLIANCE WITH INFLATION REDUCTION ACT OF 2022

Monthly Apprenticeship Ratio Compliance Certification
I, [Contractor Name], certify that for the period [Start Date] to [End Date], a total of [XX] labor hours were performed on the project titled [Project Name], and [XX]% of those hours were completed by registered apprentices, in compliance with IRA requirements.
Signature: _____
Name: _____
Title: _____
Date: _____

Worker Acknowledgement of Wage & Apprenticeship Requirements
Worker IRA Compliance Acknowledgement
I acknowledge that I have received information regarding the prevailing wage and apprenticeship requirements under the Inflation Reduction Act (IRA). I understand the wage classification applicable to my work and that I may be asked to verify my hours and classification.
Worker Name: _____
Classification: _____
Date: _____
Signature: _____

Domestic Content Supplier Affidavit
Affidavit of Compliance with Domestic Content Requirements
I, [Supplier Name], certify that the materials provided for the project titled [Project Name] meet the Domestic Content Requirements as outlined in the Inflation Reduction Act of 2022. The iron, steel, manufactured products, and construction materials supplied are produced in the United States in accordance with IRA provisions.
Product(s) Supplied: _____
Origin: _____
Signature: _____
Name: _____
Title: _____
Date: _____

Weekly Payroll & Labor Hour Log
Provide on DOL spreadsheet.

Davis Bacon Wage Determination is online through the Federal Governments Portal:

https://sam.gov/wage-determination/IN20250002/16

See attached following this section.

END OF SECTION 00 83 00

"General Decision Number: IN20250002 07/11/2025

Superseded General Decision Number: IN20240002

State: Indiana

Construction Type: Building

Counties: Adams, Allen, Bartholomew, Benton, Blackford, Boone, Carroll, Cass, Clinton, DeKalb, Delaware, Fountain, Fulton, Grant, Hamilton, Hancock, Hendricks, Howard, Huntington, Jay, Johnson, Madison, Marion, Miami, Monroe, Montgomery, Morgan, Noble, Shelby, Steuben, Tippecanoe, Tipton, Wabash, Warren, Wells, White and Whitley Counties in Indiana.

BUILDING CONSTRUCTION(does not include single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at

http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	01/17/2025
2	01/31/2025
3	02/21/2025
4	03/07/2025
5	03/14/2025
6	04/04/2025
7	04/18/2025
8	05/09/2025
9	05/16/2025
10	05/23/2025
11	05/30/2025
12	06/06/2025
13	06/13/2025
14	06/27/2025
15	07/04/2025
16	07/11/2025

ASBE0018-004 06/01/2024

BARTHOLOMEW, BENTON, BOONE, CARROLL, CLINTON, DELAWARE, FOUNTAIN, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JOHNSON, MADISON, MARION, MONROE, MONTGOMERY, MORGAN, SHELBY, TIPPECANOE, TIPTON, AND WARREN COUNTIES:

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	$ 38.55	23.53
HAZARDOUS MATERIAL HANDLER (includes preparation, wettings, stripping, removal, scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems)	$ 23.00	14.40

ASBE0041-002 03/01/2025

ADAMS, ALLEN, BLACKFORD, DE KALB, GRANT, HUNTINGTON, JAY, MIAMI, NOBLE, STEUBEN, WABASH, WELLS AND WHITLEY COUNTIES:

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	$ 34.75	13.85
HAZARDOUS MATERIAL HANDLER (includes preparation,		

wettings, stripping, removal, scrapping, vaccuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems).....$ 35.10 19.39

ASBE0075-003 06/01/2024

CASS, FULTON and WHITE COUNTIES

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	$ 39.50	28.19
HAZARDOUS MATERIAL HANDLER (includes preparation, wetting, stripping, removal, scrapping, vaccuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems)	$ 39.50	28.19

BOIL0374-002 05/01/2025

	Rates	Fringes
BOILERMAKER	$ 43.24	38.17

BRIN0003-001 06/01/2023

INDIANAPOLIS
BOONE, HANCOCK, HENDRICKS, JOHNSON, MARION, MONTGOMERY, MORGAN and SHELBY COUNTIES

	Rates	Fringes
Bricklayer, Stone Mason, Pointer, Caulking	$ 36.24	17.39
TERRAZZO FINISHER	$ 23.38	13.15
TERRAZZO WORKER/SETTER	$ 36.38	17.24
Tile & Marble Finisher	$ 24.33	13.16
Tile, Marble Setter	$ 35.63	17.23

BRIN0004-004 06/01/2024

FORT WAYNE
ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS AND WHITLEY COUNTIES:

	Rates	Fringes
BRICKLAYER (STONE MASON, MARBLE MASONS, POINTER, CLEANER, AND CAULKER)	$ 35.00	21.60
Terrazzo Grinder Finisher	$ 31.00	17.89
Terrazzo Worker Mechanic	$ 36.30	22.04

Tile Setter & Marble Mason Mechanic	$ 31.55	19.08
Tile, Marble & Terrazzo Finisher	$ 31.55	19.08

BRIN0004-021 06/01/2024

BARTHOLOMEW and MONROE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 35.21	18.19
TERRAZZO FINISHER	$ 25.33	14.19
TERRAZZO WORKER/SETTER	$ 37.97	18.06
Tile & Marble Finisher	$ 25.33	14.19
Tile & Marble Setter; Mosaic Worker	$ 37.22	18.05

BRIN0011-001 06/01/2023

LAFAYETTE
BENTON, CARROLL, CLINTON, FOUNTAIN, TIPPECANOE, WARREN and WHITE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner	$ 33.75	20.12
TERRAZZO FINISHER	$ 23.38	13.15
TERRAZZO WORKER/SETTER	$ 36.38	17.24
Tile & Marble Finisher	$ 24.33	13.16
Tile & Marble Setter; Mosaic Worker	$ 35.63	17.23

BRIN0018-001 06/01/2023

CASS, FULTON, GRANT, HOWARD, MIAMI and WABASH COUNTIES

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner	$ 34.00	19.71
Terrazzo Worker Finisher	$ 35.50	23.62
TERRAZZO WORKER/SETTER	$ 33.50	23.62
Tile & Marble Finisher	$ 34.50	23.62
Tile, Marble Setter	$ 34.50	23.62

BRIN0019-001 06/01/2023

MUNCIE CHAPTER
BLACKFORD, DELAWARE, HAMILTON, JAY, MADISON AND TIPTON COUNTIES:

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner	$ 33.83	20.14
TERRAZZO FINISHER	$ 23.38	13.15
TERRAZZO WORKER/SETTER	$ 36.38	17.24
Tile & Marble Finisher	$ 23.38	13.15
Tile & Marble Setter; Mosaic Worker	$ 35.63	17.23

CARP0215-001 06/01/2024

BENTON, CARROLL, CLINTON, TIPPECANOE, WARREN AND WHITE COUNTIES:

	Rates	Fringes
CARPENTER	$ 34.99	25.27
MILLWRIGHT	$ 36.94	25.82

CARP0232-001 06/01/2024

ALLEN, DEKALB, NOBLE, STEUBEN and WHITLEY COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 31.74	24.48

CARP0615-001 06/01/2024

ADAMS, CASS, FULTON, GRANT, HOWARD, HUNTINGTON, MIAMI, TIPTON, WABASH and WELLS COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 31.95	24.20

CARP0912-001 06/01/2024

	Rates	Fringes
CARPENTER		
ZONE 2: BOONE, FOUNTAIN, HENDRICKS, MONROE, MONTGOMERY AND MORGAN COUNTIES		
Carpenters, Drywall	$ 35.55	24.21
Millwright	$ 36.94	25.82
ZONE 4: BLACKFORD, DELAWARE, JAY AND MADISON COUNTIES		
Carpenters, Drywall	$ 35.26	24.21
Millwright	$ 36.94	25.82

CARP0912-002 10/01/2024

HAMILTON, HANCOCK, JOHNSON (Townships of White River, Pleasant and Clark), MARION

	Rates	Fringes
Carpenters:		
Carpenters, Drywall Installers, Piledrivers	$ 37.06	24.21
Millwright	$ 36.94	25.82
Soft Floor Layers	$ 34.45	21.08

CARP0999-008 10/01/2024

BARTHOLOMEW, JOHNSON (Townships of Union, Hensley, Franklin, Nineva, Needham and Blue River), SHELBY COUNTIES

	Rates	Fringes
Carpenters:		
Carpenters, Drywall Installers, Piledriver	$ 34.04	24.21
Millwright	$ 36.94	25.82
Soft Floor Layers	$ 34.95	21.30

CARP1029-001 06/01/2024

ADAMS, ALLEN, CASS, DEKALB, ELKHART, FULTON, GRANT, HOWARD, HUNTINGTON, KOSCIUSKO, LAGRANGE, MARSHALL, MIAMI, NOBLE, ST. JOSEPH, STEUBEN, TIPTON, WABASH, WELLS and WHITLEY COUNTIES

	Rates	Fringes
MILLWRIGHT	$ 33.90	29.08

ELEC0305-002 12/01/2024

ADAMS, ALLEN, DE KALB, HUNTINGTON, NOBLE, STEUBEN, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 40.18	27.43%+12.16

ELEC0481-005 05/31/2024

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MADISON, MARION, MONTGOMERY, MORGAN AND SHELBY COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 42.15	26.88

ELEC0538-006 06/01/2024

FOUNTAIN AND WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 40.00	26.01

ELEC0668-002 06/01/2024

BENTON, CARROLL, CASS, FULTON, TIPPECANOE and WHITE COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 39.33	23.05

FOOTNOTE: a. PAID HOLIDAYS: New Years Day, Memorial Day, July 4th, Labor Day, Veterans Day Thanksgiving Day and Christmas Day

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ELEC0725-006 06/01/2022

MONROE COUNTY

	Rates	Fringes

Communication Technician.....$ 30.00 18.07

Includes the installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound and vision production and reproduction apparatus, equipment and appliances used for domestic, commercial, education, entertainment and private telephone systems.

ELEC0725-011 10/01/2024

MONROE COUNTY:

	Rates	Fringes
ELECTRICIAN.....	$ 43.30	25.32

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* ELEC0855-003 06/01/2025

BLACKFORD, DELAWARE, AND JAY COUNTIES

	Rates	Fringes
ELECTRICIAN.....	$ 40.18	22.15

ELEC0873-002 03/01/2025

CLINTON, GRANT, HOWARD, MIAMI, TIPTON AND WABASH COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	$ 42.02	23.07

ELEV0034-001 01/01/2025

BARTHOLOMEW, BENTON, BLACKFORD, BOONE, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, FULTON, GRANT, HAMILTON, HANCOCK, HENDRICKS, HOWARD,JAY, JOHNSON, MADISON, MARION, MIAMI, MONROE, MONTGOMERY, MORGAN, SHELBY, TIPPECANOE, TIPTON, WARREN and WHITE COUNTIES

	Rates	Fringes
ELEVATOR MECHANIC.....	$ 60.17	38.435+a+b

a) PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b) Employer contributes 8% of regular hourly rate to vacation pay credit for employee with more than 5 years of service; 6% for less than 5 years' service.

ELEV0044-002 01/01/2025

ADAMS, ALLEN, DeKALB, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLS, WHITLEY COUNTIES

	Rates	Fringes

ELEVATOR MECHANIC.....$ 62.27 38.435+a+b

a) PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b) Employer contributes 8% of regular hourly rate to vacation pay credit for employee with more than 5 years of service; 6% for less than 5 years' service.

ENGI0103-001 04/01/2025

BENTON, CARROLL, CASS, CLINTON, GRANT, HOWARD, MIAMI, TIPPECANOE, TIPTON, WABASH, and WHITE COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 38.70	23.95
GROUP 2	$ 35.70	23.95
GROUP 3	$ 35.00	23.95
GROUP 4	$ 30.43	23.95

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: A-Frame Winch Truck, Air Compressors over 600 cu.ft., Air Tugger, Autograde (CMI), Auto Patrol, Backhoe, Ballast Regulator (RR), Batcher Plant (electricial control concrete), Bending Machine (pipe), Bituminous Plant (engineer), Bituminous Plant, Bituminous Mixer Travel Plant, Bituminous Paver, Bituminous Roller, Buck Hoist, Bull Dozer, Cable Way, Chicago Boom, Clamshell, Concrete Mixer (21 cu. ft. or over), Concrete Paver, Concrete Pump(crete), Crane, Craneman, Crusher Plant, Derrick, Derrick Boat, Dinkey, Dope Pots (pipeline), Dragline, Dredge Operator, Dredge Engineer, Drill Operator,, Elevating Grader, Elevator, Ford Hoe (or similar type equipment), Forklift, Formless Paver, Gantry Crane, Gradall, Grademan, Grout Pump, Helicopter Crew, Heterington Paver, High-Lift, Hoist, Hopto, Hough Loader (or similar type), Hydro Crane, Hydro Hammer, Locomotive Crane, Locomotive, Mechanic, Mobile Mixer, Motor Crane, Mucking Machine, Multiple Tamping Machine (rr), Overhead Crane, Pile Driver, Pulls, Push Dozer, Push Boats, Roller (sheep foot), Ross Carrier, Scoop, Shovel, Side Boom, Swing Crane, Tail Boom, Tar Machine (pipeline), Throttle Valve, Tower Crane, Trench Machine, Welder (heavy duty), Truck Mounted Concrete Pump, Truck-Mounted Drill, Well Point, Whirleys

GROUP 2: Air Compressor (up to 600 cu. ft.), Brakeman, Bull Float, Concrete Mixer (over 10s and under 21s), Concrete Spreader or Puddler, Deck Engine, Drill Helper, Electic Vibrator Kompactor (earth or rock), Finishing Machine, Gireman, Greaser (on grease facilities servicing heavy equipment), Material Pump, Motor Boats, Motor Crane Oiler, Portable Loader, Post Hole Digger, Power Broom, Rock Roller, Roller-Wobble Whell (earth or rock), Spike Machine (RR) Seamen Tiller, Spreader Rock, Sub Grader, Tamping Machine, Truck Mounted Drill Oiler, Welding Machine, Widener (apsco or similar type)

GROUP 3: Air Compressor 210 cu ft & over, Bituminous Distributor, Chair Cart, Concrete Curing Machine, Concrete

Saw, Dope Pot Power Agitated, Flex Plane, Form Grader, Hydrohammer, Jacks Hydraulic Power Driven, Paving Joint Machine, Post Hole Digger, Roller Earth, Throttle Valve, Track Jack Power Driven, Tractor Farm Type, Truck Crane Driver

GROUP 4: Air Compressor (under 200 cu. fr. per min), Bituminous Distributor, Cement Gun, Concrete Saw, Conveyor, Deck Hand Oiler, Earth Roller, Form Grader, Generator, Guardrail Driver, Heater, Oiler, Paving Joint Machine, Power Traffic Signals, Steam Jenny, Vibrator, Water Pump, ""JLG"" Lifts and ""Scissor"" Lift or similar machine

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ENGI0103-002 04/01/2021

BLACKFORD, DELAWARE, HAMILTON, HANCOCK, JAY, JOHNSON, MADISON, MARION, and SHELBY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 37.08	19.96
GROUP 2	$ 36.13	19.96
GROUP 3	$ 32.08	19.96
GROUP 4	$ 28.30	19.96

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Air Compressor (pressurizing shafts, tunnels & drivers); Air Tugger; Auto Patrol; Back Filler; Back Hoe; Boom Cat; Boring Machine; Bull Dozer; Caisson Drilling Machine; Cherry Picker; Compactor (with dozer blade); Concrete Mixer (dual drum); Concrete plant; Concrete Pump; Crane with all attachments; Crane- Electric overhead; Derrick; Ditching Machine (18' and over); Dredge; Elevators (when hoisting material or tools); Fork Lift (machinery); Formless Paver; Generator (power for welders of compressor); Gradall; Helicopter; Helicopter Winch Operator; High Lift-Front End Loader; Hoist-Material and/or Personnel over 3 Floors; Locomotive; Mechanic on job site; Mucking Machine; Panel Board Concrete Plant; Pile Driver; Push Cat; Scoop & Tractor; Scraper-Rubber Tired; Spreader-Tractor Mounted; Straddle Carrier-Ross Type; Sub Base Finish Machine (C.M.I. or smiliar); Tower Crane; Tractor with Backhoe (over 1/2 yard); Welder (craft)

GROUP 2: A Frame Truck; Batcher Plant (automatic dry batch); Bending Machine-Power Driven; Bituminous Mixer; Bituminous Paver; Bituminous Plant Engineer; Boatman; Bull Float; Compactor or Tamper-Self Propelled; Concrete Mixer (21 cu. ft. or over); Concrete Spreader-Power Driven; Dinkey Engine; Ditching Machine; Ditching Machine (less than 18""); Drilling Machine; Finish Machine & Bull Float; Finishing Machine; Fireman-Pile Driving and Boilers; Fork Lift-Masonry & Material; Gunite Machine; Head Greaser; Hoist-Material and/or personnel 3 floors and under; Mechanic in shop; Mesh Depresser-Mesh Placer; P.C.C. Concrete Belt Placer; Ruller-Asphalt, stone & sub base; Sheepsfoot Roller- Self Propelled; Shop Mule; Spreader or Base Paver-Self Propelled; Sub Grader; Throttle valve with air compressor or boiler; Tractor with Backhoe (1/2 yard & under); Tractor-high lift-farm type; Tractor-Industrial Type; Tractor with Winch; Well Points; Winch Trick

GROUP 3: Air Compressor (210 cu. ft. & over); bituminous Distributor; Chair Cart; Concrete Curing Machine; Concrete Saw; Dope Pot Power Agitated; Flex Plane; Form Grader; Hydrohammer; Jacks-Hydraulic-Power Driven; Minor Equipment opr. 3,4, or 5; Paving Joint Machine; Post Hole Digger; Roller-Earth; Throttle Valve; Track Jack-Power Driven; Tractor-Farm Type; Truck Crane Driver

GROUP 4: Air Compressor (less than 210 cu. ft.); Concrete Mixer (under 21cu. ft.); Conveyor; Generator; Mechanical Heater; Oiler; Operator-2 pieces of miner equipment; Power Broom; Pump; Welding Machine

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ENGI0103-007 04/01/2025

ADAMS, ALLEN, DEKALB, HUNTINGTON, STEUBEN, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 38.95	23.30
GROUP 2	$ 38.00	23.30
GROUP 3	$ 35.00	23.30
GROUP 4	$ 31.50	23.30

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Air Tugger; Auto Patrol, Back Filler; Back Hoe; Boom Cat; Boring Machine; Bull Dozer; Caisson Drilling Machine; Cherry Picker; Compactor (with dozer blade); Concrete Mixer (dual drum); Concrete Plant; Concrete Pump; Crane with all attachments; Crane Electric overhead; Derrick; Ditching Machine (18"" and over); Dredge; Fork Lift (machinery); Formless Paver; Gradall; Helicopter; Helicopter Winch Operator; High Lift Front End Loader; Hoist Material and/or personnel over 3 floors; Locomotive; Mechanic on Job Site; Mucking Machine; Panel Board Concrete Plant; Pile Driver; Push Cat; Scoop & Tractor; Scraper Tubber Tired; Skid Steer Machine (grading and back hoe); Spreader Tractor Mounted; Straddle Carrier Ross Type; Sub Base Finish Machine (C.M.I.or similar); Tower Crane; Tractor with backhoe (over 1/2 yard); Welder for Craft Work.

GROUP 2: A-Frame Truck; Batcher Plant (automatic dry batch); Bending Machine Power Driven; Bituminous Mixer; Bituminous Paver; Bituminous Plant Engineer; Boatman; Bull Float; Compactor or Tamper Riding Only; Concrete Mixer (21 cu. ft. or over); Concrete Spreader Power Driven; Dinkey Engine; Ditching Machine (less than 18"" riding only); Drilling Machine; Elevators (when hoisting material or tools); Finish Machine and bull Float (excluding trowelling machine); Fireman Pile Driving and Boilers; Gunite Machine; Head Greaser; Hoist Material and/or personnel 3 floors and under; Mesh Depressor Mesh Placer; P.C.C. Concrete Belt Placer; Roller Asphalt, Stone & Sub Base; Sheepsfoot Roller Self Propelled; Shop Mule; Spreader or Base Paver Self Propelled; Sub Grader; Throttle Valve with Air Compressor or Boiler; Tractor with Backhoe (1/2 yard & under); Tractor High Lift Farm Type; Tractor Industrial Type; Tractor with Winch; Winch Truck.

GROUP 3: Bituminous Distributor; Chair Cart; Concrete Cuting Machine; Dewatering Sytems; Dope Pot Power Agitated; Flex Plane; Fork Lift (masonry and material); Form Grader; Hydrohammer; Jacks Hydraulic Power Driven; Paving Joint Machine; Post Hole Digger (machine Mounted); Roller Earth; Skid Steer Machine (fork lift and trasporting); Throttle Valve; Track Jack Power Driven; Tractor Farm Type.

GROUP 4: Air Compressor (pressurizing shafts, tunnels and divers); Air Compressor (over 210 cu. ft.); Concrete Saw; Conveyor; Generators; Oiler; Operating minor equipment; Power Broom; Truck Crane Driver; Welding Machines over 300 amps (2 or more).

ENGI0150-017 06/01/2024

FULTON and NOBLE COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 33.15	37.30
GROUP 2	$ 31.80	37.30
GROUP 3	$ 31.00	37.30
GROUP 4	$ 30.20	37.30
GROUP 5	$ 27.60	37.30

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Mechanic, Asphalt Plant, Asphalt Spreader, Auto Grader; Batch Plant, Benoto (requires 2 Engineers), Boiler and Throttle Valve, Boring Machine (road), Bulldozers (with engines of 140 net horse power or more) Caisson Rigs, Central Redi-mix Plant, Concrete Conveyor Systems, Concrete Power (over 27E cu. ft.), Concrete Paver (27E cu. ft. and under), Concrete Pumps/Grout cncrete placer (Truck Mounted), Concrete Tower, Cranes and backhoes (all), Cranes, Hammerhead Tower, Creter Crane, Derricks (all), Forklift (capble of hoisting and mechanically moving forks horizontally), Grader, Elevating, Highlift Shovels or Front End Loaders (over 3 yd bucket), Hoists (2 or more drums), Locomotives (all), Laser screed, Motor Patrol, Pile Drivers and Skid Rig, Pre-Stress Machines, Pump Cretes & Similar Types, Rock Drill (Self-Propelled), Rock Drill (self propelled Truck Mounted), Scoops (tractor drawn), Slip-Form Paver, Tournapull, Tractor with Boom & Side Boom, Trenching Machine (12 or more inches in width), Combination Backhoe Front End Loader Machine with backhoe 1/2 yd bucket or attachments.

GROUP 2: Air Compressor (600 cu. ft. and over), Bob Cat (over 3/4 cu. yd.), Boilers, Broom (all powered propelled), Bull Dozers with engines of less than 140 net horsepower, combination backhoe front end loader 1/2 yf bskhhoe or under, Compressor and Throttle Valve, Concrete Breaker (truck mounted), Concrete Mixer (of moore than 21 cu. ft. capacity), Forklift (with fixed or tilt mast), Greaser Engineer, Highlift shovel or front endloader 3 yd bucket and under, Hoists (1 drum), Hydrulic Boom Truck, Post Hole Digger (vehicle mounted), Pump Cretes (squeze crete type pumps, Gypsum, bulker , Rollers(all), Steam Generators, Stone Crushers, Stradddle Buggies, Tractors, Winch Trucks (with ""a"" frame.

GROUP 3: Buck Hoist, Combination (small equipment operator), .Conveyor (portable), Grouting Machine, Hoist Elevators (material and personnel), Hydraulic Power Units, Grouting and Pile Driving, Stud Welder, Trenching Machines less than 12 inches in width, Welding Machines (8 through 15).

GROUP 4: Bobcat (up to and including 3/4 cu. yd.). Compressor (over 210 cu. ft. and less than 600 cu. ft.), Generator (over 50 kw.), Heaters, Mechanical, Hoists (all elevator, permanent installation), Hoist (automatic), Hoist (tugger single drum), Oilers, Pumps, Well Points and electric submersible, Small Rubber Tired End Loaders (1/4 cu. yd. and under), Tractors (farm type) Welding Machines (2 through 8).

GROUP 5: Bobcats and forklifts (commercial or residential).

ENGI0181-004 04/01/2025

BARTHOLOMEW COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP A	$ 43.43	19.60
GROUP B	$ 35.30	19.60

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP A: A-frame winch truck, articulating dump, autograde (CMI), auto patrol, ballast regulator (RR), batcher plant (electrical control concrete), bending machine (pipe), bituminous plant (engineer), bituminous plant, bituminous mixer travel plant, bituminous paver, bituminous roller, boring machine, buck hoist, bull dozer, cable way, Chicago boom, chimney hoist, clamshell, concrete mixer (21 cu.ft. or over), concrete paver, concrete pump (crete), construction elevator (Allmac or similar) creane, creaneman, crawler backhoe, bcreawler high-lift, crusher plant, derrick, derrick boat, dinkey, directional/boring machine, dope pots (pipeline), double drum tugger (electric or air), dragline, dredge operator, dredge engineer, drill operator, elevating grader, extendable boom forklift, formless paver, gantry crane, gator (or similar type tiller), gradeall, grader, grademan, greaser (on grease facility servicing heavy equipment), G.P.S. System (on equipment within the classificaitons), grout pump, head greaser, helicopter crew, Hetherington paver, hoist (motorized, gas or disel), hydraulic crane, ghdro blaster, Industrial type forklift (over 9,000 lbs.), laser concrete screed, laser or remote controlled equipment (within the classifications), locomotive crane, locomotive, mechanic, mobile mixer, botor creane, mucking machine, multiple tamping machine (RR) overhead crane, pile driver, pulls, push dozer, push boats, roller (sheep foot), rough terrain crain, R.T. backhoe, R.T. endloader, Ross carrier, scoop, shovel, side boom, skidsteer loader (bobcat or similar type), swing crane, tail boom, tar machine (pipeline), tower crane, trench machine, welder (heavy duty), truck mounted concrete pump, truck-mounted drill, vacuum truck, well point, whirleys

GROUP B: Air compressor (1 or more, 600 cfm and over), air compressor with throttle valve, bituminous distributor,

brakeman, bullfloat, cement gun, concret mixer, concrete say, soncrete spreader or puddlers, conveyor, deck hand oiler, deck engine, drill helper, earth roller electric vibrator compactor (earth or rock), elevator (in-plant, automatic), finishing machine fireman, form grader, generator, guard-rail driver, heater, oiler, Industrial type forklift (9,000 lbs and under), aterail pump, motor boats, paving joint machine, post hole digger, power broom, power traffic signals, rock roller, rock spreader, Roller (earth or rock), spike machine (RR), steam jenny, sub grader, taping machine, gruck crane oiler, truck mounted drill oiler Tugger (one-drum, air or electric)vibrator, vibro-piling hammer- hydraulic hammer or auger, water pump, widener (apsco or similar type) welding machine, JLG lifts and scissor lifts or similar machine.

ENGI0841-008 04/01/2023

BOONE, FOUNTAIN, HENDRICKS, MONROE, MONGOMERY, MORGAN, and WARREN COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 33.90	23.00
GROUP 2	$ 26.75	23.00

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Power Cranes, Draglines, Derricks, Shovels, Gradalls, Mechanics, Tractor Highlift, Tournadozer. Concret Mixers with Skip Tournamixer, Two-Drum Machine, One-Drum Hoist with Tower or Boom, Cableways, Tower Machines, Motor Patrol, Boo Tractor, Boom or Winch Truck, Winch or Hydraulic Boom Truck, Truck Crane, Tournapull, Tractor Operating Scoops, Bulldozer, Push Tractor, Asphalt Planer, Finishing Machine on Asphalt, Large Rollers on Earth, Rollers on Asphalt Mix, Ross Carrier or Similar Machine, Gravel Processing Machine, Asphalt Plant Engineer, Paver Operator, Farm Tractor with Half Yard Bucket and/or Backhoe Attachments, Dredge Engineer, or Dredge Operator, Central Mix Plant Engineer, CMI or Similar Type Machine, Truck or Skid Mounted Concrete Pump, Tower Crane, Engine or Rock Crusher Plant, Concrete Plant Engineer, Ditching Machine with Dual Attachment, Tractor Mounted Loaders, Cherry Picker, Hydro Crane, Standard or Dinkey Locomotives, Scoopmobiles, Euclid Loader, Soil Cement Machine, Back Filler, Elevating Machine, Power Blade, Drilling Machines including Well Testing, Caissons, Shaft or any similartype Drilling Machines, Motor Driven Paint Machine, Pipe Cleaning Machine, Pipe Wrapping Machine, Pipe Bending Machine, Apsco Paver, Boring Machine, (Equipment Greased), Barber-Greene Loaders, Formless Paver, (Well Point System), Concrete Spreader, Hydra Ax, Span Saw and Similar Types, Marine Scoops, Brush Mulcher, Brush Burner, Mesh Placer, Tree Mover, Helicopter Crew (3), Piledriver-Skid or Crawler, Stump Remover, Root Rake, Tug Boat Operator, Refrigerating Machine, Freezing Operator, Chair Cart-Self Propelled, Hydra Seeder, Straw Blower Power Sub Grader, Bull Float, Finishing Machine, Self-Propelled Pavement Breaker (Backhoe Attached), Lull (or Similar Type Machine), Two Air Compressors, Compressors Hooked in Manifold, Overhead Crane, Chip Spreader, Mud Cat, Sull-Air Fork Lifts

(Except when used for Landscaping Work), Soil Stablilizer (Seaman Tiller, Bo Mag, Rago Gator and Similar types or Equipment), Tube Float, Spray Machine, Curing Machine, Concrete or Asphalt Milling Machine, Snooper Truck Operator.

GROUP 2: Concrete Mixers without Skips, Rock Crusher, Ditching Machine Under 6', Curbing Machine, One Drum Machines without Tower or Boom, Air Tugger, Self-Propelled Concrete Saw, Machin- Mounted Post Hole Digger, Two to Four Generators, Water Pumps, or Welding Machines, with 400 ft., Air Compressor 600 cu. ft. and Under, Rollers on Aggregate and Seal Coat Surfaces, Fork Lifts (When used for Landscaping Work), Concrete and Blacktop Curb Machine, Farm Tractor with less than Half Yard Bucket, One Water Pump, Iolers, Air Valves or Steam Valves, One Welding Machine, Truck Jack, Mud Jack, Gunnite Machine, House Elevators when used for Hoisting Material, Engine Tenders, Wagon Drill, Flex Plane, Conveyor, Siphons nad Pulsometer, Switchman, Fireman on Paint Pots, Fireman on Asphalt Plants, Distributor Operators on Trucks, Tampers, Self-Propelled Power Broom, Striping Machine (motor driven), Form Tamper, Bulk Cement Plan Equipment Greaser, Deck Hands, Truck Crane Oiler Driver, Cement Blimps, Form Grader, Temporary Heat, Throttle Valve, Farm Tractor, Super Sucker (and similar type of equipment). FOOTNOTE: Employees operating booms from 149 ft. to 199 ft. including jib, shall receive an additional seventy five cents (.75)per hour above the rate. Employees operating booms over 199 ft. including jib, shall receive an additional one dollar and twenty-five cents ($1.25) per hour above the regular rate.

IRON0022-004 06/01/2024

BARTHOLOMEW; BENTON, BOONE; CARROLL; CASS; CLINTON; DELAWARE (S 2/3); FOUNTAIN; FULTON (SW 1/4 OF COUNTY); GRANT (SW PORTION); HAMILTON; HANCOCK; HENDRICKS; HOWARD; JOHNSON; MADISON; MARION; MIAMI; MONROE; MONTGOMERY; MORGAN; SHELBY; TIPPECANOE; TIPTON; WARREN AND WHITE COUNTIES

	Rates	Fringes
IRONWORKER	$ 36.70	26.09

The following holidays shall be observed: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after Thanksgiving and Christmas Day. Any holiday which occurs on a Sunday shall be observed the following Monday, unless the legal observance of these holidays is changed by law.

IRON0147-004 06/01/2024

ADAMS, ALLEN, BLACKFORD, DEKALB, DELAWARE (NORTHEAST THIRD OF COUNTY), FULTON (EASTERN PART), GRANT (EXCLUDING SOUTHWEST PORTION), HUNTINGTON, JAY, MIAMI (NORTHEAST HALF), NOBLE (EXCLUDING NORTHEAST TIP), STEUBEN, WABASH, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
IRONWORKER	$ 34.20	26.39

IRON0292-006 06/01/2024

FULTON (Remainder of County) and NOBLE (Northeastern Tip) COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.83	24.75

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* LABO0120-001 06/01/2025

MARION and SHELBY COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 29.64	18.55
GROUP 2	$ 30.39	18.55
GROUP 3	$ 31.64	18.55

LABORER CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Chain Saw and Demolition Saw; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Concrete Conveyor Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Asbestos Removal and Hazardous Waste Removal.

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers and Masons; Water Blast Machine.

GROUP 3: Dynamite men, Mason Tenders; Drillers-air track or wagon drilling for explosives.

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* LABO0204-001 06/01/2025

FOUNTAIN, HENDRICKS, and WARREN COUNTIES

	Rates	Fringes
Laborers:		
Caisson and Tunnel Work in Compressed and Free Air		

GROUP 1	$ 23.18	16.00
GROUP 2	$ 23.93	16.00
GROUP 3	$ 24.18	16.00
GROUP 4	$ 23.13	16.00
LABORERS		
GROUP 1	$ 28.43	18.55
GROUP 2	$ 29.18	18.55
GROUP 3	$ 30.43	18.55

LABORER CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Chain Saw and Demolition Saw; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Concrete Conveyor Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non- metallic); Screed Man or Screw Operator on Asphalt Paver, Asbestos Removal, Hazardous Waste Removal.

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers and Masons; Water Blast Machine.

GROUP 3: Dynamite men, Mason Tenders; Drillers-air track or wagon drilling for explosives.

LABORER CLASSIFICATIONS For CAISSON AND TUNNEL WORK In COMPRESSED and FREE AIR

GROUP 1: Cage Tenders, Dump Men, Flagman, Signalman, Top Laborers, Rod Men.

GROUP 2: Concrete Repairmen, Lock Tenders (pressure side), Motor men, Muckers, Grout Machine, Track Layers, Air Hoist, Key Board, Agitator Car, Car Pushers, Concrete Laborers, Grout Laborers, Lock Tenders (free air side), Steel Setters, Tuggers, Switchmen.

GROUP 3: Mucking Machine, Laser Beam, Liner Plate & Ring Setter, Shield Drivers, Power Knife, Welders Burners, Pipe Jacking Machine, Skinners, Maintenance Technician, Miner, Bricklayer Tenders, Concrete Blowers, DRillers, Erectors, Form Men, Jackhammermen, Mining Machine.

GROUP 4: Dynamite Men, Drillers air track or wagon drilling for explosives.

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* LABO0213-001 06/01/2025

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLS AND WHITLEY COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 26.38	18.45
GROUP 2	$ 26.88	18.45
GROUP 3	$ 28.88	18.45

LABORERS CLASSIFICATION

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking; Screed Man or Screw Operator on Asphalt Paver; Chain and Demolition Saw Operators; Concrete Conveyor Assemblers

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers; Water Blast Machine

GROUP 3: Dynamite men-drillers-air track or wagon drilling for explosives

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* LABO0274-001 06/01/2025

BENTON, BOONE, CARROLL, CASS, CLINTON, FULTON, HOWARD, MIAMI, MONTGOMERY, TIPPECANOE, TIPTON, and WHITE COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 28.48	18.55
GROUP 2	$ 29.23	18.55
GROUP 3	$ 30.48	18.55

LABORER CLASSIFICATIONS

GROUP 1: Building and construction laborers; Scaffold builders (other than for masons or plasterers); Railroad Workers; Masonry Wall Washers (interior & exterior); All Portable Water Pumps with Discharge of Up to Three (3) Inches; Handling of Creosote Lumber or Like Treated

Material (excluding railroad material); Asphalt Rakers and Lutemen; Earth Compactors; Jackmen and Sheetmen Working Ditches Deeper than Six (6) Feet in Depth; Laborers Working Ditches Six (6) Feet in Depth or Deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layers (metallic or non-metallic); Motor Driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handler (bulk or bag); Handling of Toxic Material Damaging to Clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Chain Saw and Demolition Saw Operators; Concrete Saw; Concrete Conveyor Assemblers; Applying of Curing Compound; Sinking of Wellpoints; Dewatering Header Systems

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operators; Scaffold Builders for Plasterers; Scaffold Builders for Masons; Water Blast Machine Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos Removal; Hazardous Waste Removal; All Boiler Setters Laborers, including Expediters, Bottom Men and Bell Men.

GROUP 3: Dynamite man, Mason Tenders; Drillers-air track or wagon for explosives.

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* LABO0741-003 06/01/2025

BARTHOLOMEW, JOHNSON, MONROE, and MORGAN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 28.38	18.55
GROUP 2	$ 29.13	18.55
GROUP 3	$ 30.38	18.55

LABORERS CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for masons or plastersrs); Railroad Workers; Masonry Wall Washers (interior & exterior); Portable Water Pumps with Discharge up to three (3)inches; Handling of Creosote Lumber or Like Treated Material (excluding railroad material); Asphalt Rakers and Lutemen; Earth Compactors; Jackmen and Sheetmen Working Ditches Deeper than Six (6) Feet in Depth; Laborers Working Ditches Six (6) Feet in Depth or Deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layers (metallic or non-metallic); Motor Driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handler (bulk or bag); Handling of Toxic Material Damaging to Clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Chain Saw and Demolition Saw Operators; Concrete Saw; Concrete Conveyor Assemblers; Applying of Curing Compound; Sinking of Wellpoints; Dewatering Header Systems

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (acetylene

or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operators; Scaffold Builders for Plasterers; Scaffold Builders for Masons; Water Blast Machine Operators; Air Tool Operators and all Pneumatic Tool Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos Removal; Hazardous Waste Removal; Biler Setters Laborers, including expediters, bottom men and bell men.

GROUP 3: Dynamite men; Mason Tenders; Drillers-air track or wagon drilling for explosives

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* LABO1112-001 06/01/2025

BLACKFORD, DELAWARE, GRANT, HAMILTON, HANCOCK, HENRY, JAY, & MADISON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 28.06	18.55
GROUP 2	$ 28.81	18.55
GROUP 3	$ 30.06	18.55

LABORER CLASSIFICATIONS

GROUP 1: Building and construction laborers, scaffold builders (other than for masons of plasterers), mechanic tenders, window washers and cleaners, railroad workers, masonry wall washers, portable water pumps with discharge up to 3 inches, signal & flag person, Waterproofing, hauling of creosote lumber or like treated material (excluding railroad material), asphlat rakers and lutemen, kettlemen, air tool operator, pneumatic tool operator, air & electric vibrators and chipping hammer operator, earth compactors, jackman & sheetmen in ditches more than 6 feet deep, laborers in ditches 6' deep or deeper, assembly of unicrete pump, tile layers (sewer or field), sewer pipe layers, motor- driven wheelbarrows and concrete buggies, hyster operator, pumpcrete assemblers, core drill operator, cement, lime or silica clay handlers, handling of toxic materials damaging to clothing, pneumatic spikers, deck engine & winch operator, water main & cable ducking, screed man or screw operator on asphalt paver, chain saw & demolition saw operator, concrete conveyor assembler

GROUP 2: Plaster tenders; mortar mixers; welders (acetylene or electric); cutting torch or burner; cement nozzle laborers; cement gun operators; scaffold builders for plasterers; scaffold builders for masons; water blast machine operator; Air tool Operators and all Pnuematic Tool Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos removal; Hazardous waste removal; All Boiler Setters Laborers, including expediters, bottom men and bell men.

GROUP 3: Mason Tenders and Dynamite men-drillers-air track or wagon drilling for explosives

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PAIN0047-003 06/01/2024

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON,

MARION, MONROE, MORGAN AND SHELBY COUNTIES:

	Rates	Fringes
PAINTER		
Brush and Roller	$ 31.02	16.86
Spray and Sandblasting	$ 32.02	16.86

PAIN0080-001 06/01/2025

BENTON, CARROLL, CASS, CLINTON, FOUNTAIN, MONTGOMERY TIPPECANOE AND WARREN COUNTIES

	Rates	Fringes
PAINTER		
Brush and Roller	$ 31.15	18.91
Spray and Sandblasting	$ 32.10	18.91

PAIN0091-005 06/01/2025

FULTON COUNTY

	Rates	Fringes
PAINTER		
Brush & Roller, Drywall Taping & Finishing, Vinyl/Paper Hanging	$ 32.50	19.86
Spray	$ 33.00	19.86

PAIN0460-002 06/01/2025

WHITE COUNTY

	Rates	Fringes
Painters:		
Brush & Roller	$ 41.00	31.26
Drywall Finisher	$ 41.80	31.26

PAIN0469-001 06/01/2025

ADAMS, ALLEN, DEKALB, GRANT, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLLS, and WHITLEY COUNTIES

	Rates	Fringes
Painters:		
Brush, Roller, Paperhanger, & Drywall Finishing	$ 27.04	16.27
Lead Abatement	$ 32.24	16.27
Spray & Sandblast Pot Tenders and Ground Personnel	$ 27.04	16.27
Spray, Sandblast, Power Tools, Waterblast, & Steam Cleaning	$ 27.04	16.27

PAIN0669-001 05/01/2024

BLACKFORD, DELAWARE, FAYETTE, FRANKLIN, HENRY, HOWARD, JAY, MADISON, MIAMI, RANDOLPH, RUSH, TIPTON, UNION and WAYNE COUNTIES

	Rates	Fringes
Painters:		
Brush; Roller; Paperhanging; Drywall Finishers	$ 25.10	16.39
Spray/Waterblasting; Sandblasting	$ 26.10	16.39

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* PAIN1165-010 07/01/2025

FULTON COUNTY

	Rates	Fringes
GLAZIER	$ 34.22	24.67

PAIN1165-013 07/01/2024

ADAMS, ALLEN, BLACKFORD, DEKALB, GRANT, HUNTINGTON, JAY, NOBLE, STEUBEN, WABASH, WELLS, WHITLEY

	Rates	Fringes
GLAZIER	$ 28.75	18.72

PAIN1165-016 01/01/2025

BARTHOLOMEW, BENTON, BOONE, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JOHNSON, MADISON, MARION, MIAMI, MONROE, MONTGOMERY, MORGAN, SHELBY, TIPPECANOE, TIPTON, WARREN, and WHITE COUNTIES

	Rates	Fringes
GLAZIER	$ 36.03	20.55

PLAS0101-002 06/01/2018

FULTON COUNTY

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 28.84	14.48
PLASTERER	$ 26.81	12.40

PLAS0101-003 06/01/2014

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS AND WHITLEY COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 23.38	11.94
PLASTERER	$ 25.69	11.75

PLAS0692-006 06/01/2024

AREA #46

BARTHOLOMEW, BOONE, HENDRICKS, JOHNSON, MARION, MONROE, MORGAN and SHELBY COUNTIES

	Rates	Fringes
PLASTERER	$ 30.50	17.62

PLAS0692-007 06/01/2024

AREA #75

MONROE COUNTY

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 30.40	17.80

PLAS0692-009 06/01/2024

AREA #83

BLACKFORD, DELAWARE, GRANT, HAMILTON (Northern Part), HANCOCK (Northern Part), JAY, MADISON, TIPTON, and WABASH COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 31.25	20.34
PLASTERER	$ 29.99	16.60

PLAS0692-015 06/01/2024

AREA #121

BENTON, CARROLL, CASS, CLINTON, FOUNTAIN, HOWARD, MIAMI, MONTGOMERY, TIPPECANOE, WARREN, WHITE and VERMILLION (Northern Part) COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 31.25	20.20
PLASTERER	$ 33.76	20.05

PLAS0692-023 06/01/2024

AREA #532

BOONE, HAMILTON (SOUTH HALF OF COUNTY NORTH TO NEW ROUTE INDIANA #32 INCLUDING NOBLESVILLE); HANCOCK COUNTY (SOUTHERN AND WESTERN PART OF HANCOCK COUNTY, NORTH TO BUT NOT INCLUDING FORTVILLE); HENDRICKS, JOHNSON, MARION and MORGAN COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 33.15	20.06
Slip Form Shift Work	$ 33.00	19.56
Swinging/Suspended Scaffold	$ 32.25	19.56

PLAS0821-001 05/01/2019

BARTHOLEMEW AND SHELBY COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 24.58	14.99

PLUM0136-006 04/01/2025

MONROE COUNTY

	Rates	Fringes
Plumbers and Pipefitters	$ 46.42	21.33

PLUM0157-002 01/01/2025

BENTON, CARROLL, CLINTON, FOUNTAIN, MONTGOMERY, TIPPECANOE, WARREN AND WHITE COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 45.45	22.50

PLUM0166-001 06/01/2025

ADAMS, ALLEN, BLACKFORD, DE KALB, GRANT, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
Plumber and Steamfitter	$ 45.06	23.16

PLUM0172-002 06/01/2024

CASS and FULTON COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 40.78	23.09

PLUM0440-002 06/04/2025

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JOHNSON AND MARION COUNTIES; MIAMI COUNTY (SOUTH OF A STRAIGHT LINE WHERE ROUTE 218 ENTERS W. BOUNDARY); MORGAN, SHELBY and TIPTON COUNTIES

	Rates	Fringes
Plumbers and Pipefitters	$ 50.02	20.39

PLUM0440-003 06/04/2025

DELAWARE, JAY and MADISON COUNTIES

	Rates	Fringes
Plumber and Steamfitter	$ 50.02	20.39

ROOF0023-003 06/01/2024

ALLEN, DEKALB, NOBLE, STEUBEN, and WHITLEY COUNTIES

	Rates	Fringes
ROOFER		
COMPOSITION	$ 34.55	21.04
SLATE & TILE	$ 36.05	21.04

ROOF0023-007 06/01/2024

FULTON COUNTY

	Rates	Fringes
ROOFER		
COMPOSITION	$ 34.55	21.04
SLATE & TILE	$ 36.05	21.04

ROOF0023-010 06/01/2024

ADAMS, HUNTINGTON, MIAMI, WABASH, and WELLS COUNTIES

	Rates	Fringes
ROOFER		
COMPOSITION	$ 34.55	21.04
SLATE & TILE	$ 36.05	21.04

ROOF0119-003 09/01/2024

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MARION, MONROE, MORGAN and SHELBY COUNTIES

	Rates	Fringes
Roofers:	$ 31.00	14.21

ROOF0119-005 09/01/2024

	Rates	Fringes
ROOFER	$ 31.00	14.21

SFIN0669-002 04/01/2025

	Rates	Fringes
SPRINKLER FITTER	$ 45.40	27.88

SHEE0020-003 07/01/2023

	Rates	Fringes
Sheet metal worker (HVAC Duct Work)	$ 34.58	29.98

SHEE0020-004 07/01/2022

BARTHOLOMEW, BOONE, DELAWARE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MADISON, MARION, MONROE, MORGAN, SHELBY AND TIPTON COUNTIES

	Rates	Fringes

Sheet metal worker (Including HVAC Duct Work)	$ 38.83	23.84

SHEE0020-016 07/01/2023

FULTON COUNTY

	Rates	Fringes
SHEET METAL WORKER	$ 38.40	28.05

SHEE0020-020 07/01/2023

BENTON, CARROLL, CLINTON, FOUNTAIN, MONTGOMERY, TIPPECANOE, WARREN AND WHITE COUNTIES

	Rates	Fringes
Sheet metal worker (Including HVAC Duct Work)	$ 39.78	26.33

TEAM0135-001 06/01/2024

BARTHOLOMEW, BENTON, BLACKFORD, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, GRANT, HOWARD, JAY, MADISON, MARION, MIAMI, MONROE, MONTGOMERY, TIPPECANOE, TIPTON, WABASH, WARREN, & WHITE COUNTIES

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 32.10	a
GROUP 2	$ 32.60	a
GROUP 3	$ 32.80	a
GROUP 4	$ 32.95	a
GROUP 5	$ 33.45	a

A: $36.40 PER DAY & 450.00 PER WEEK.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Single Axle Trucks, seven (7) cu. yds. or less than ten and one-half (10 1/2) tons, dupsters, scoop-mobiles five (5) cu.yds. and under or less than seven and one-half (7 1/2) tons, mixer trucks three (3) cu.yds. and under, air compressors and welding machines, including those pulled by separate units, batch trucks-wet or dry- 2""34-E"" batches or less, truck driver helpers, warehousemen, mechanic's helpers, greasers and tiremen, all pick-up trucks and other vehicles. Drivers on dumpsters or similar dumpsters, mounted on four (4) wheel truck rated two (2) cu.yds. or less, and small pallet type fork-lift operator and drivers on pallet jacks or similar type equipment.

GROUP 2: Drivers on tandem axle eighteen (18) cu.yds. or twenty- four (24) tons gross, six (6) wheel trucks, Koehring or similar dumpsters, tract trucks, Euclids, hug bottom dumps, tournapulls, trounatrailers, tournarockers, or similar equipment when used for transportation purposes under nine (9) cu.yds. or less than thirteen and one-half (13 1/2) tons, tandems and semi-trailer service trucks, mixer trucks over three (3) cu.yds. and including six and

one-half (6 1/2) cu.yds., fork lift, four (4) wheel A-frame trucks when used for transportation purposes, four (4) wheel winch trucks, pavement breakers, batch trucks-wet or dry- over 2 up to and including 4-""34-E"" batches two (2) men oil distributors, fork-lift under four (4) ton and vacuum trucks.

GROUP 3: Koehring or similar dumpsters, tract trucks, semi-trailer water trucks, Euclids, hug bottom dumps, tournapulls, tournatrailers, tournarockers, tractor trailers, tandems, Q- frame winch trucks, hydrolift turcks or similar equipment when used for transportation purposes, mixer trucks over six and one- half (6 1/2) cu.yds, batch trucks wet or dry over 4 - ""34-E"" batches single equipment operated by employees withing this Bargaining unit. Six (6) wheel pole trailers and one (1) man oil distributors, fork-lift over four (4) ton and mobile mixers.

GROUP 4: Drivers on heavy equipment over sixteen (16) cu.yds. or twenty-four (24) ton, such as Koehring or similar dumpsters, tract trucks, Euclids, hug bottom dumps, tournapulls, tournarockers or similar equipment when used for transportation purposes, pole trailers over six (6) wheels, water pulls, low-boy trailers tandem axles, quad axle or more no-weight limitation, diesel and/or heavy equipment mechanics.

GROUP 5: Mechanic furnishing his own tools.

TEAM0135-012 04/01/2025

HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MORGAN, AND SHELTBY COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1	$ 32.67	a
Group 2	$ 33.17	a

A: $36.40 PER DAY & $450.00 PER WEEK

TRUCK DRIVER CLASSIFICATIONS:

GROUP 1: Truck Driver Helper
GROUP 2: Truck Driver on Fork Lifts & Truck Driver on Tandem, Semi, or Tri-axle

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TEAM0364-002 06/01/2025

FULTON COUNTY

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 33.75	A+B
GROUP 2	$ 33.95	A+B
GROUP 3	$ 34.25	A+B
GROUP 4	$ 34.75	A+B

FOOTNOTE:

a. FRINGE BENEFITS: $422.50 per week

B. HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Pick-up Trucks
GROUP 2: Single Axle Trucks
GROUP 3: Tandem, Tri-axle and Fuel Trucks
GROUP 4: Semi-trailer Trucks

TEAM0414-001 07/01/2024

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS, AND WHITLEY COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1	$ 39.42	838.45/WK
Group 2	$ 39.61	838.45/WK
Group 3	$ 39.71	838.45/WK
Group 4	$ 39.81	838.45/WK
Group 5	$ 39.91	838.45/WK

TRUCK DRIVER CLASSIFICATIONS:

GROUP 1: Truck Driver Helper
GROUP 2: Truck Driver on Fork Lifts
GROUP 3: Truck Driver on Tandem, Semi, or Tri-axle
GROUP 4: Truck Driver on Water Trucks and Mechanic
GROUP 5: Truck Driver Euclid/Earth Movers

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date,

6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of the Prime Contract, including amended General Conditions and other Division 1 Specification Sections, apply to Work of this Section.

1.02 SUMMARY

A. The intent of this Section is to indicate the Work required by the Contractors and to provide information regarding the duties, responsibilities, and cooperation required by the Contractors, with similar requirements for the subcontractors and suppliers.

B. Owners right to maintain current operations

C. Occupancy requirements

D. Work by Owner

E. Permits, fees, and notices

F. Labor and materials

G. Verifications of existing dimensions

H. Project security

I. Coordination of work

J. Time of commencement and completion

K. Schedule of contract responsibilities

1.03 WORK UNDER SEPARATE CONTRACTS

A. Prime Contracts are defined to include the following contracts described in the Schedule of Contract Responsibilities included hereinafter; and each is recognized to be a major part of the project, with Work to be performed concurrently and in close coordination with Work of other Prime Contracts.

B. The "Contract Documents," as defined in the General Conditions, include "the Drawings." Although Drawings are grouped and identified by classification of the Work, Contractors shall be responsible for their Work as specified herein and as

indicated on the Drawings. Although the majority of the Drawings are "to scale," Contractors are directed to use indicated dimensions for determining material quantities and for other reasons. No additional monies will be allowed due to Contractors using "scaling instruments" to determine material quantities or for other reasons.

C. Separate prime contracts will be awarded as per the **"Schedule of Contract Responsibilities"** (see Part 3 – Execution). Contractors shall include Work required by the Specifications and Drawings for each contract area defined in the Schedule.

D. Work for the complete construction of the Project will be under multiple prime contracts with the Owner. The Construction Manager will manage the construction of the Project.

E. Each Contractor shall be responsible for demolition and disposal of existing items relative to his Contract.

1.04 ADMINISTRATIVE RESPONSIBILITIES OF PRIME CONTRACTORS AND CM

A. The Construction Manager shall be responsible for the maintenance of the Construction Schedule and management of every phase of the Work.
   1. Each Contractor shall read the Specifications and Drawings for other separate Contracts for fixed equipment and the like to be incorporated or attached or built into the Work; and familiarize himself with the requirements and responsibilities of other Contracts to enable the required coordination and supervision.
   2. Each Contractor shall also familiarize himself with other items to be incorporated into the Work including equipment and Work by the Owner.
   3. Each Contractor shall cooperate with the Construction Manager in notifying him when the Work is at a stage to require the services of other Contractors and shall notify the Construction Manager in the event that such other Contractors do not carry out their responsibilities in connection with such notification.

B. Contractors shall cooperate with and assist the Construction Manager in the preparation of construction progress and procedures, schedule of product deliveries, and their effect on the overall project progress and completion. Other Contractors shall cooperate in getting their Work and the Work of their subcontractors completed according to the schedule as prepared and maintained by the Construction Manager. Each Contractor shall immediately notify the Construction Manager of a delay in delivery of products or the scheduled date of completion that may affect the total progress of construction.

C. The Owner will furnish the topographical survey, either as a part of these Drawings or separately, giving the general topographical lines existing at the site and the property lines.

D. Contractors required to make connections to existing utilities, especially sewerage where gravity flow occurs, shall verify grades and locations at points of such connections and shall notify the Construction Manager of circumstances which would adversely affect the proper flow or connection to such facilities.

1.05 PRIME CONTRACTORS USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
   1. Owner Occupancy: Allow for Owner occupancy and use by the public.
   2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

B. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

C. The erection of signage other than what is specified in the contract documents is prohibited.

D. The use of drones on the property is restricted without prior written permission. Operators must be licensed and have insurance specific to the operation of aerial drones.

E. Photographs or other imagery of the work in progress or renderings of the project shall not include any personal identifiable information of the project, the property, the Owner, or any occupants.

1.06 OWNERS RIGHT TO MAINTAIN OPERATIONS

A. During the course of this Project, normal and customary functions and operations must be maintained. The Contract Documents are intended to define a strict separation between the school activities of students and staff from the activities of the construction project.

B. The Construction Manager, Architect, and Owner will not tolerate any visible or audible actions initiated or responded to by any employees of Contractors on this Project toward any students, teachers, or staff members at the school system. Violators shall be promptly removed from the site.

C. The Owner intends to instruct students, teachers, and staff to refrain from communications with Contractor's personnel working on this Project. All communication with Owner and staff shall be through the Construction Manager.

D. Contractors must expend their best effort toward protection of the health, safety, and welfare of occupants on the Owner's property during the course of Work on this Project.

1.07 OCCUPANCY REQUIREMENTS

A. Full Owner Occupancy: The Owner will occupy the site and existing building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations.

B. Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
   1. The Construction Manager will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.
   2. Party which obtained general building permit shall obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.
   3. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain mechanical and electrical systems serving occupied portions of the building.
   4. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the building.

1.08 WORK BY OWNER

A. The Owner intends to complete the following items of Work outside the provisions of these Contract Documents. Contractors shall not restrict or interfere with the Owner's right to the Project to accomplish this Work.
   1. Equipment and furniture except as scheduled and specified under Divisions 11 and 12 and shown on the Drawings.

2. Items which may be deleted from Contracts for Work as required by the Contract Documents.
3. Existing school maintenance work.
4. The purchase and supplying of certain materials as noted in the Project Manual.
5. The Owner, under separate contract, shall provide removal of identified asbestos containing materials from the existing structure. The asbestos report is available through the Construction Manager upon request.

1.09 PERMITS, FEES, AND NOTICES

A. The Construction Manager will secure the general building permit for the Owner. Each Contractor shall secure and pay for other permits, governmental fees, and licenses necessary for the proper execution and completion of his Work, which are applicable at the time the bids are also received. Fees to relocate utilities on Owner's property shall be included in the bid of the Contractor doing the relocation.
   1. State filing fees for plan approval are the responsibility of the Owner and will be paid by the Owner.

B. Utility Tie-Ins: Shall be arranged with local utility company and other involved parties for minimum interruption of service.

C. Shutdowns of existing systems shall be limited to minimum time required and scheduled with other involved parties. Provide 2 days written notice of shutdown to Construction Manager and Owner.

D. Inspections of installed work shall be performed by the governing authority as arranged for by the Contractor. Work shall not be covered until approved.

E. Each Contractor shall give notices and comply with laws, ordinances, rules, regulations, and orders of public authorities bearing on the performance of his Work. If a Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Construction Manager in writing, and necessary changes shall be adjusted by appropriate notification. If a Contractor performs Work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Construction Manager, he shall assume full responsibility therefore and shall bear the costs attributable thereto.

1.10 LABOR AND MATERIALS

A. Unless otherwise specifically noted, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of his Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

B. Each Contractor shall enforce strict discipline and good order among his employees or other persons carrying out Work of his Contract and shall not permit employment of unfit person or persons or anyone not skilled in the task assigned to them.

C. Contractors and Subcontractors shall be subject to such rules and regulations for the conduct of the Work as the Owner may establish. Employees shall be properly and completely clothed while working. Bare torsos, legs and feet will not be allowed. Possession or consumption of alcoholic beverages or drugs, tobacco or other noxious behavior on the site is strictly prohibited. Violators shall be promptly removed from the site. Smoking is not permitted on school property or within school buildings.

D. Contractors will conduct criminal background checks (extent of and/or service to be used will be established by the Owner) on every employee assigned to work on the Project and clear them through the National Sex Offender Registry prior to their assignment to Project. Contractors will require the same of sub-contractors.

E. ID Badges will be issued by The Skillman Corporation upon receipt of verification from the Contractor that the employee/subcontractor employee or independent contractor has a satisfactory record to work on the Project.

F. E-Verify Compliance: Pursuant to I.C. 22-5-1.7, Contractor shall enroll in and verify the work eligibility status of all newly hired employees of Contractor through the E-Verify Program (Program). Contractor is not required to verify the work eligibility status of all newly hired employees through the Program if the Program no longer exists. Also pursuant to I.C. 22-5-1.7, Contractor must execute an affidavit affirming that the Contractor does not knowingly employ an unauthorized alien and confirming Contractor's enrollment in the Program, unless the Program no longer exists, shall be filed with the Owner prior to the execution of this contract. This contract shall not be deemed fully executed until such affidavit is delivered to the Owner.

Contractor and its subcontractors shall not knowingly employ or contract with an unauthorized alien or retain an employee or contract with a person that contractor or its subcontractor subsequently learns is an unauthorized alien. If Contractor violates this provision the Owner shall require Contractor to remedy the violation not later than thirty (30) days after the Owner notifies Contractor. If Contractor fails to remedy the violation within the thirty (30) day period, the Owner shall terminate the contract for breach of contract. If Owner terminates the contract, Contractor shall be liable to the Owner for actual damages in addition to any other contractual remedies. There is a rebuttable presumption that Contractor did not knowingly employ an unauthorized alien if Contractor verified the work eligibility status of the employee through the Program.

Prior to performing any work, Contractor shall require each subcontractor to certify to Contractor that the subcontractor does not knowingly employ or contract with an unauthorized alien and has enrolled in the Program. Contractor shall maintain on file a certification from each subcontractor throughout the duration of this contract or project which is the subject of this contract. If Contractor determines that a subcontractor is in violation of this provision, Contractor may terminate its contract with the subcontractor for such violation. In Accordance with I.C. 5-16-13 Contractor must provide the E-Verify Case Number of every employee that works on the project. This requirement includes the contractor's subs and suppliers to the fourth (4^{th}) tier.

G. The Owner is requiring that all contractors' personnel and their onsite employees and subcontractors submit to expanded history and child protection index check. Contractors shall enroll in the Safe Vendor Program through Safe Hiring Solutions www.safehiringsolutions.com. Enrollment in Safe Vendor will ensure contractors employees are vetted in accordance with I.C. 20-26-5-10 for expanded criminal history and expanded child protection index check. Contractor is responsible for the cost of enrollment and employee background check. All contractors' personnel and employees, once cleared for work will be issued a project identification badge that must be worn at all times while on site. All contractors/subcontractors employees shall provide name, address, picture state driver's license or picture identification card and/or Safe Vendor Card to The Skillman Corporation Site Manager upon request.

H. Pursuant to Indiana Code 5-16-13 Requirements for Contractors on Public Works Projects enacted by the Indiana Legislator requires, in addition to requirements already in effect, contractors to comply with the following:

1. Tier 1 –General/Prime Contractors to self-perform 15% of their total Contract.
2. Qualification thru the Department of Administration or INDOT requirement in accordance with IC 4-13.6-4.
    a. **Bids shall not be considered unless (1) the Prime Bidder and (2) all lower tiered subcontractors whose subcontract value is estimated to be $300,000 or more are qualified at the time of the bid in accordance with IC 4 – 13.6 – 4.**
3. Include Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6 with Bid.
4. Minimum Insurance Requirements $1M/occurrence $2M/aggregate. However, check your bidding requirements as the Owners may have higher limit requirements.
5. Mandatory enrollment in E-Verify by all contractors down to the 4th Tier Sub Contracts and must provide the case verification number of all employees working on the project.

6. Prohibits contractors down to the 4th Tier Sub Contract from paying employees in cash.
7. Requirement to retain payroll records for 3 years
8. All contractors down to the 4th Tier Sub Contract must comply with Fair Labor Act, Indiana's Workers Compensation and Unemployment Compensation Insurance.
9. Mandatory Training Requirements based upon number of employees.
10. Failure to comply may result in debarment from public works projects for up to 4 years.

I. All contractors down to the 4th Tier Sub Contract must maintain general liability insurance in at least the following amounts: Each Occurrence Limit of $1,000,000 and General Aggregate Limit of $2,000,000. Other requirements and limits may apply see specification section 00 50 00 Schedule of Insurance Requirements.

1.11 CUTTING AND PATCHING

A. Refer to Section 01 73 10 – Cutting and Patching, for provisions on this subject.

1.12 VERIFICATIONS OF EXISTING DIMENSIONS

A. When verification of existing dimensions is required, the Contractor requiring said verification for the construction or fabrication of his material shall be the Contractor responsible for the procurement of the field information.

1.13 PROJECT SECURITY

A. Each Prime Contractor shall take all reasonable precautions to prevent injury, damage or loss to people and property in, on and adjacent to the project. This shall include not only their own work or property but that of other contractors and the Owner.

B. If deemed necessary by The Construction Manager a project wide security program may be developed for the purpose of preventing damage or loss at the project site or property adjacent thereto. Once accepted by the Owner, contractors shall comply.

1.14 SCHEDULE OF CONTRACT RESPONSIBILITIES - SCOPE

A. Contractors shall submit their proposals based on the work included under each contract area as listed herein. Include Work necessary for a complete project, as shown on the Drawings and called for in the Specifications.

B. Questions concerning the phasing or "Schedule of Contract Responsibilities" should be directed to the Construction Manager, who will be the interpreter and be responsible for this Schedule of Contract Responsibilities and Contract Breakdown, prior to submitting proposals and during construction.

C. The requirements of Division 1 are a part of the Work of each and every contract area. The Contractor for any one contract area shall be familiar with the Work and requirements of all other contract areas.

D. Certain Specification Sections describe Work to be performed under several contract areas. (Example: 06 10 00 - Rough Carpentry.) Provide Work of this nature as required for each contract area whether or not enumerated in the Schedule of Contract Responsibilities.

E. The following contract areas are broken down by Specifications Section conforming basically to the CSI format.

F. The Drawings and Specifications as furnished for each of the Contracts is for the convenience of the Contractor in preparing a proposal for this Project. However, each Contractor is responsible to review the complete set of Drawings and Specifications to assure that Work required to be installed to complete his phase of the Work is included in his proposal. This "Schedule of Contract Responsibilities" is a definition of the work as it is to be bid in separate contracts. Where a specific item of Work is not defined, but is normally inherent to a trade, or is included in the scope of the applicable technical revision, it will be the responsibility of that Contractor to include the Work in his proposal.

G. This "Schedule of Contract Responsibilities" is to aid each Contractor in defining the Scope of Work to be included in his proposal. However, omissions from this "Schedule of Responsibilities" do not relieve the Contractor from including in his proposal that Work which will be required to complete his Contract. Each Contractor should read the "Schedule of Contract Responsibilities" completely to familiarize himself with the Work of other Contractors that may have Work in adjacent areas and to coordinate the interfacing problems that may occur as the work is assembled and constructed.

H. Where specific Work is to be completed under a particular phase of the Project and the Work is wholly or partially completed by other trades because of the type of work involved or jurisdictional trade agreements, the Contractor will be responsible to subcontract the Work as necessary to complete the Work included in his Contract. No delay in the Work will be allowed due to the failure of the Contractor to subcontract related work required by jurisdictional trade agreements.

1.15 COORDINATION OF WORK

A. Each Contractor is responsible to coordinate his Work with the Work of other trades and other Contractors and requirements of the school system. The Contractor must make space allowances for Work of other Contractors; provide necessary openings where indicated or implied by the Drawings and Specifications. Each Contractor is responsible to protect his own Work.

1.16 TIME OF COMMENCEMENT AND COMPLETION

A. The Contractor shall commence work within ten (10) days after being notified in writing to proceed and shall complete the Work within the time limitations established in the Form of Agreement.
   1. It is anticipated that construction will start within **60** calendar days after receipt of bids.
   2. Construction shall be complete within **689** consecutive calendar days, or earlier, after Notice to Proceed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SCHEDULE OF CONTRACT RESPONSIBILITIES

3.02 GENERAL REQUIREMENTS

A. PROVIDED BY OWNER THROUGH THE CONSTRUCTION MANAGER

Section	01 32 00	Schedules and Reports
Section	01 45 10	Testing Laboratory Services
Section	01 59 10	Project Office
Section	01 71 50	Final Cleaning
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	23 05 93	Testing, Adjusting, and Balancing for HVAC

B. PROVIDED BY ALL CONTRACTORS AS APPLICABLE

Section	01 12 00	Multiple Contract Summary
Section	01 2 300	Alternates
Section	01 25 00	Contract Modification Procedures
Section	01 28 00	Schedule of Values
Section	01 29 00	Applications for Payment
Section	01 31 00	Project Meetings
Section	01 32 00	Schedules and Reports
Section	01 33 00	Submittal Procedures
Section	01 40 00	Quality Requirements
Section	01 45 10	Testing Laboratory Services (Paragraph 1.05)
Section	01 50 50	Temporary Facilities and Controls
Section	01 54 60	Environment Protection
Section	01 54 80	Utility Protection
Section	01 56 30	Water Control
Section	01 56 90	Housekeeping & Safety
Section	01 59 20	Offices and Sheds
Section	01 60 00	Product Requirements
Section	01 72 50	Work Layout
Section	01 73 29	Cutting and Patching
Section	01 77 00	Contract Closeout

Section	01 91 13	General Commissioning Requirements

All Contractors shall provide their Superintendents with radios capable of handling multiple channels and compatible with radios used by the Construction Manager.

Autodesk Build is replacing **PlanGrid**. **Autodesk Build** does not require users to purchase a license. **Contractors** will be invited to the project and required to use this tool. **Autodesk Build** will be used as the **Current Set** and **As-Built Record Drawings.** Additionally, it will be used to track **Issues** for **Safety**, **QA/QC**, **Non-Compliance Issues**, **Work Completion List** and **Punch List**.

C. PROVIDED BY DESIGNATED CONTRACTORS

Section	01 21 00	Allowances
Section	01 51 10	Temporary Electricity, Lighting and Warning Systems
Section	01 51 30	Temporary Heating, Ventilation and Cooling
Section	01 51 50	Temporary Water
Section	01 51 60	Temporary Sanitary Facilities
Section	01 51 80	Temporary Fire Protection
Section	01 52 10	Construction Aids and Temporary Enclosures
Section	01 52 60	Rubbish Container
Section	01 53 10	Fences (Temporary Security)
Section	01 53 20	Tree and Plant Protection
Section	01 53 30	Barricades
Section	01 55 00	Access Roads and Parking Areas
Section	01 56 20	Dust Control
Section	01 56 30	Water Control
Section	01 56 80	Erosion Control
Section	01 57 60	Project Signs
Section	01 72 00	Field Engineering

3.03 BID CATEGORIES

A. BID CATEGORY NO. 1 – GENERAL TRADES

General Requirements in Paragraph 3.02.B above.

Section	01 51 50	Temporary Water
Section	01 51 60	Temporary Sanitary Facilities
Section	01 51 80	Temporary Fire Protection
Section	01 52 10	Construction Aids and Temporary Enclosures
Section	01 52 60	Rubbish Container
Section	01 53 10	Fences (Temporary Security) (ADD per Add. 01)
Section	01 53 20	Tree and Plant Protection (ADD per Add. 01)
Section	01 53 30	Barricades
Section	01 55 00	Access Roads and Parking Areas
Section	01 56 20	Dust Control

Section	01 56 80	Erosion Control
Section	01 57 60	Project Signs
Section	01 72 00	Field Engineering
Section	03 06 30.01	Concrete Schedule
Section	03 30 00	Cast-in-Place Concrete
Section	05 58 13	Column Covers
Section	05 73 00	Decorative Metal Railings
Section	05 73 13	Glazed Decorative Metal Railings (ADDED per. Add. 02)
Section	06 10 00	Rough Carpentry
Section	06 16 00	Sheathing
Section	06 20 23	Interior Finish Carpentry
Section	06 42 00	Wood Paneling
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	07 13 00	Sheet Waterproofing
Section	07 84 13	Penetration Firestopping
Section	07 84 43	Joint Firestopping
Section	07 92 00	Joint Sealants
Section	07 95 13.13	Interior Expansion Joint Cover Assemblies
Section	08 11 13	Hollow Metal Doors and Frames
Section	08 14 16	Flush Wood Doors
Section	08 31 13	Access Doors and Frames
Section	08 33 13	Coiling Counter Doors
Section	08 33 23	Overhead Coiling Doors
Section	08 36 13	Sectional Doors
Section	08 71 00	Door Hardware
~~Section~~	~~08 81 13~~	~~Decorative Glass Glazing~~ (DELETE per Add. 01)
Section	08 91 19	Fixed Louvers
Section	09 66 23	Resinous Matrix Terrazzo Flooring
Section	09 67 11	Fluid-Applied Cementitious Urethane Flooring
Section	09 67 12	Fluid-Applied Epoxy Aggregate Flooring
Section	09 67 23	Decorative Resinous Flooring (Aggregate)
Section	10 11 00	Visual Display Units
Section	10 14 19	Dimensional Letter Signage
Section	10 14 23.16	Interior Panel Signage
Section	10 21 13.19	Solid Polymer Toilet Compartments
Section	10 21 23	Cubicles
Section	10 22 39	Operable (Folding Panel) Partitions
Section	10 26 00	Wall and Door Protection
Section	10 28 00	Toilet, Bath, and Laundry Accessories
Section	10 41 16	Lock Box
Section	10 43 13	Defibrillator Cabinets
Section	10 44 13	Fire Extinguisher Cabinets
Section	10 44 16	Fire Extinguishers
Section	11 13 00	Loading Dock Equipment
Section	11 31 00	Residential Appliances

Section	11 52 13	Front Projection Screens
Section	11 68 13	Playground Equipment and Structures
Section	12 21 13	Horizontal Louver Blinds
Section	12 24 13	Roller Window Shades
Section	12 93 00	Site Furnishings and Amenities
Section	14 24 00	Hydraulic Elevators
Section	22 13 23	Sanitary Waste Interceptors (ADDED per Add. 01)
Section	31 10 00	Site Clearing
Section	31 20 00	Earth Moving
Section	31 23 19	Dewatering
Section	31 25 00	Erosion Control
Section	31 32 00	Geotextile
Section	31 50 00	Excavation Support and Protection
Section	32 13 13.	Concrete Paving
Section	32 18 13	Synthetic Turf Safety Surface (ADDED per Add. 02)
Section	32 18 16	Playground Protective Surfacing
Section	32 31 13	Chain Link Fences and Gates
Section	32 31 19	Decorative Metal Fences and Gates
Section	32 31 21	Decorative Metal Gates
Section	32 91 13	Soil Preparation
Section	32 92 00	Turf and Grasses
Section	32 93 00	Plants
Section	33 05 00	Common Work Results for Utilities
Section	33 11 13	Facility Water Distribution Piping
Section	33 13 13	Facility Sanitary Sewers
Section	33 41 00	Storm Utility Drainage Piping
Section	33 46 00	Subdrainage

Clarifications:

1. Contractor is responsible for private utility locates prior to any excavation or earthmoving. In locations where anticipated utility cannot be located, Contractor shall hydro-vacuum excavate to locate unknown utility.
2. Contractor is responsible to supply dumpsters and rubbish containers for all Contractors and Work for duration of the project. Masonry and Metal Stud & Drywall Contractors are to provide their own dumpsters for their Work.
3. Provide road and parking lot cleaning and sweeping for the duration of the project.
4. Provide and maintain all erosion control measures, including all inspections and documentation required by IDEM following rain events.
5. Provide temporary sanitary facilities for all Contractors for duration of project. Placement of sanitary facilities to be coordinated with Construction Manager.
6. Contractor is responsible to provide and maintain concrete washout for all concrete spoils.
7. All in wall blocking is the responsibility of the Metal Studs & Drywall Contractor. "Wall blocking" is to be considered any dimensional lumber,

sheathing, plywood, danbacking, metal strapping or similar material. Specific locations of wood products by this Contractor are noted in other clarifications.

8. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finished face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
9. Contractor is responsible to provide (6) knock down fames with temporary doors and locking hardware for use in temporary partitions as directed by the Construction Manager.
10. Furnish and provide all FRP and Store Front Door hardware to the Aluminum Storefront & Glazing Contractor. This material is to be shipped directly from the supplier to Storefront & Glazing Contractor's shop.
11. Contractor to include sweeping compound and 500 man hours for general building, site cleanup, or other work to be performed by a Skilled Laborer at the direction of Construction Manager.
12. Contractor to include 200 man hours for Skilled Carpenter for use at the discretion of the Construction Manager.
13. This Contractor is responsible for all 07 84 13 – Penetration Firestopping and 07 84 43 – Joint Firestopping for the entire project. This includes top and bottom wall conditions and wall penetrations. This Contractor shall coordinate with other Prime Contractors in order to install this Work prior to access being covered or restricted.
14. This Contractor is responsible for all joint sealants excluding 00 42 00 – Unit Masonry Systems, 07 24 19 – EIFS Systems, 08 41 13 – Aluminum Framed Entrances and Storefront Systems and 09 96 63 – Interior Finish Systems (interior and exterior seal).
15. Contractor is responsible for all access doors noted on Architectural Drawings. Any access doors required to support MEPF equipment access not noted on Architectural Drawings is the responsibility of MEPF Contractor installing the equipment.
16. General Trades Contractor shall coordinate with Asphalt Contractor during the cement stabilization process to verify that parking lot and drive subgrade is accurate to 0.1'.
17. Contractor shall include the door hardware allowance of $35,000 as noted in 01 21 00 – Contract Allowances.
18. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
19. Contractor is responsible for pouring concrete at all metal pan stair locations.
20. Contractor is responsible to install, maintain and remove temporary elevator shaft platforms for all Prime Contractors to work from during installation of any Work at top of elevator shaft.

21. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.
22. This Contractor is responsible for all concrete Work noted for the entire project excluding dedicated equipment pads for MEPF Contractors.
23. The General Trades Contractor shall refer to Guideline Schedule and include in their bid all necessary cold weather concrete procedures or admixtures as required to meet the schedule.
24. All embedded metal fabrications including, but not limited to, anchor bolts, weld plates, angles, and leveling plates, will be furnished by the Structural Steel Contractor and installed by the General Trades Contractor. Installation shall be within required tolerances and anchor bolt assemblies shall be placed with templates only. General Trades Contractor shall supply as-built drawings to steel erector for coordination prior to steel placement.
25. Grouting of base plates will be by the Structural Steel Contractor.
26. Masonry reinforcement shall be furnished and installed by the Masonry Contractor.
27. Section 07 21 00 – Thermal Insulation that is below finished slab on grade elevation shall be provided by the General Trades Contractor. Section 07 21 00 Thermal Insulation cavity wall insulation behind the masonry veneer shall be provided by the Masonry Contractor. All other Section 07 21 00 Thermal Insulation shall be provided by Drywall Contractor.
28. In reference to Detail 19 / A-502 (typical), the Metal Studs, Drywall & Acoustic Ceiling Contractor is responsible for 6” cold formed metal framing, batt insulation, 5/8” glass-mat gypsum wall sheathing, 5/8” wall sheathing, 5/8” gypsum wallboard, 2x wood-preservative treated lumber, plywood faced foam insulation/sheathing (4.1”) vapor-permeable, fluid-applied membrane air barrier and air barrier transition membrane.
29. In reference to Detail 20 / A-502 (typical), the General Trades Contractor is responsible for 2.5” thick polyisocyanurate board insulation, air / vapor barrier transition membrane and thermal break unfaced mineral wool insulation board.
30. The General Trades Contractor shall coordinate with Utility Companies for services as it pertains to this contractor’s scope of work, as necessary.
31. Contractor shall include any sleeves indicated per plans passing through their work.
32. All metal bollards and covers shall be furnished by the Structural Steel Contractor for installation by the General Trades Contractor.
33. Unless noted otherwise, General Trades Contractor shall remove from site and properly dispose of all demolition debris and material.
34. General Trades Contractor shall provide and install the downspout boot tie-ins for the storm sewer system.
35. Contractor is responsible to saw cut, demolish and dispose of over paved stone and binder asphalt. Reference ~~Exterior Site Logistics Plan~~ Asphalt Paving Sequence Plan for locations of over paving. (REVISED per Addendum 01.)
36. Door lite and side lite glazing for all openings is to be provided and installed by Aluminum Storefront & Glazing Contractor. (ADDED per Addendum 01.)

37. General Trades Contractor shall include 18" depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
38. Unless otherwise noted, the General Trades Contractor shall provide all new water distribution piping and related components for combined, domestic water, and services lines, storm piping, and sanitary piping (including sanitary waste interceptors), to within 5' of the building limits. The Plumbing and HVAC Contractors shall coordinate hand-off with the General Trades Contractor. (ADDED per Addendum 01.)
39. The General Trades Contractor shall provide incoming fire protection water service up to the flange/spigot 12" above finished floor at riser. (Reference Detail 1 / FP501). (ADDED per Addendum 01.)
40. The General Trades Contractor is responsible for establishing and maintaining compacted subgrade which the Asphalt Paving Contractor is responsible for the compacted aggregate and asphalt. Reference typical asphalt details on G4-00. (ADDED per Addendum 01.)
41. The General Trades Contractor shall furnish the Town of Zionsville Subdivision Bond Requirements a Performance Bond for Storm Water Improvements to guarantee against defects in the construction or equipment furnished under the project for the periods of time specified as applicable to their scope of work. An example of the Bond requirements are included as part of 00 20 21 – Information Available to Bidders. (ADDED per Addendum 02).
42. The General Trades Contractor is responsible for regular SWPPP inspections required by Town of Zionsville for the duration of the project. An example checklist is included as part of 00 20 21 – Information Available to Bidders. These inspection reports are to be performed by competent person or accredited third-party entity approved by the Construction Manager. (ADDED per Addendum 02).
43. The General Trades Contractor is responsible for submission of *"Town of Zionsville Record Drawing and Digital Data Submittal Requirements"* to Town of Zionsville at conclusion of the project. Contractor shall reference the requirements for this submission included as part of 00 20 01 – Information Available to Bidders included as part of Addendum 02. (ADDED per Addendum 02).
44. In reference to Clarification #37 above, the cement stabilization shall only be applied to locations of permanent asphalt. Locations of over paving such as landscape islands and 2'-0" over paving shall not receive cement stabilization. (ADDED per Addendum 02).
45. In the case that cement stabilization is applied to any areas that receive landscaping (seed, sod, plantings, etc.) it is the responsibility of General Trades Contractor to completely remove cement stabilized material and provide appropriate fill and soils per landscape details.
46. The Asphalt Contractor is responsible for patching of select asphalt locations such as tight curb radii where demolition of over paving is performed by General Trades Contractor. General Trades Contractor shall coordinate with

Asphalt Contractor to minimize need of patching. The asphalt patching is anticipated to occur at the time of surface coat. (ADDED per Addendum 02.)

47. The General Trades Contractor is responsible for the grass mat paver(s) noted on the Site Plans and Detail V / G4-00. (Added per Addendum 02.)
48. The General Trades Contractor shall coordinate with the Plumbing Contractor for the transition of work related to the grease interceptor noted on SU1-4 and PF10D. The Plumbing Contractor is responsible to stub foundation plumbing lines out of the building to the first cleanout on either side of grease interceptor and sampling port. The General Trades Contractors is responsible for all work in between these two indicated cleanouts including the grease interceptor and sampling port / sampling manhole. (ADDED per Addendum 02.)
49. At the geothermal well field, the General Trades Contractor is responsible to excavate and haul a mass excavation of 175' N/S and 225' E/W. The depth is to be uniform at 4'-0" below proposed subgrade. Excavation is to occur in advance of HVAC Contractor drilling the well field. Following well field operations, the General Trades Contractor is responsible for backfill and compaction of this mass excavation using drainage course stone up to original proposed subgrade. (ADDED per Addendum 02.)
50. HVAC Contractor is responsible for sump pump and associated discharge pipe that supports the geothermal well field manifold. HVAC Contractor shall coordinate with General Trades Contractor for tie-in of discharge pipe into Structure-66. Reference Plan Note 17 on SU1-3. (ADDED per Addendum 02.)

B. <u>BID CATEGORY NO. 2 – ASPHALT PAVING</u>

General Requirements in Paragraph 3.02.B above.

Section	31 20 00	Earth Moving
Section	32 12 16	Asphalt Paving
Section	32 17 13	Parking Bumpers
Section	32 17 23	Pavement Markings

<u>Clarifications:</u>

1. Contractor is responsible to over pave select locations with stone and binder by 2'-0". See ~~Exterior Site Logistics Plan~~ Asphalt Paving Sequence Plan for locations of over paving. (REVISED per Addendum 01.)
2. Contractor is responsible to pave through parking lot islands with stone and binder course asphalt. See ~~Exterior Site Logistics Plan~~ Asphalt Paving Sequence Plan for locations of over paving. (REVISED per Addendum 01.)
3. Contractor shall include in base bid the cost of additional mobilizations to complete paving work as outlined in Guideline Schedule.
4. Contractor shall include in base bid the cost to clean and properly prepare binder course asphalt to receive surface course.
5. Asphalt Contractor shall coordinate with General Trades Contractor during the cement stabilization process to verify that parking lot and drive subgrade is accurate to 0.1'.
6. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.

7. This Contractor shall be aware of the General Trades Contractor performing 18" depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
8. The General Trades Contractor is responsible for establishing and maintaining compacted subgrade which the Asphalt Paving Contractor is responsible for the compacted aggregate and asphalt. Reference typical asphalt details on G4-00. (ADDED per Addendum 01.)
9. The Asphalt Contractor is responsible for patching of select asphalt locations such as tight curb radii where demolition of over paving is performed by General Trades Contractor. General Trades Contractor shall coordinate with Asphalt Contractor to minimize need of patching. The asphalt patching is anticipated to occur at the time of surface coat. (ADDED per Addendum 02.)
10. Asphalt Contractor shall utilize profile noted in Detail C / G4-00 for asphalt work in Right of Way. (ADDED per Addendum 02.)

C. BID CATEGORY NO. 3 – MASONRY

General Requirements in Paragraph 3.02.B above.

Section	01 52 60	Rubbish Container
Section	04 20 00	Unit Masonry
Section	04 72 00	Cast Stone Masonry
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	07 21 00	Thermal Insulation
Section	07 92 00	Joint Sealants

Clarifications:

1. Contractor is responsible for all joint sealant work specific to the masonry system(s).
2. Contractor is responsible for dumpsters and rubbish containers for own Work.
3. At the conclusion of masonry work (or phase), this Contractor shall repair construction areas damaged by Masonry Equipment. The expectation is filling ruts and back dragging stone areas to achieve pre-work conditions.
4. Contractor shall prepare punched openings at guaranteed dimensions within the tolerance of Aluminum Storefront & Glazing Contractor. Contractor shall construct to approved aluminum storefront shop drawings.
5. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
6. Masonry reinforcement shall be furnished and installed by the Masonry Contractor.

7. Section 07 21 00 Thermal Insulation that is below grade shall be provided by the General Trades Contractor. Section 07 21 00 Thermal Insulation cavity wall insulation behind the masonry veneer shall be provided by the Masonry Contractor. All other Section 07 21 00 Thermal Insulation shall be provided by Drywall Contractor.
8. In reference to Detail 20 / A-502 (typical), the General Trades Contractor is responsible for 2.5" thick polyisocyanurate board insulation, air / vapor barrier transition membrane and thermal break unfaced mineral wool insulation board.
9. Contractor shall refer to Guideline Schedule and include in their bid all necessary cold weather masonry installation procedures and mortar admixtures as required to meet schedule.
10. Contractor shall include any sleeves indicated per plans passing through their work.
11. Masonry Contractor is responsible for fabrication and installation of loose lintels for the Masonry scope of work.
12. Masonry Contractor is responsible to provide temporary construction water for their Work.
13. Contractor shall review and include Door and Frame Schedules on A-601 and A-602 for any notes or remarks that may be applicable to Masonry Scope of Work. (ADDED per Addendum 02.)

D. BID CATEGORY NO. 4 - STRUCTURAL STEEL & GLUE LAMINATE

General Requirements in Paragraph 3.02.B above.

Section	01 53 30	Barricades
Section	05 12 00	Structural Steel Framing
Section	05 31 00	Steel Decking
Section	05 50 00	Metal Fabrications
Section	05 51 00	Metal Stairs
Section	05 52 13	Pipe and Tube Railings
Section	06 15 15	Wood Roof Decking (REVISED per Add. 02)
Section	06 18 00	Glued-Laminated Construction

Clarifications:

1. Grouting of base plates will be by the Structural Steel Contractor.
2. All embedded metal fabrications including, but not limited to, anchor bolts, weld plates, angles, and leveling plates, will be furnished by the Structural Steel Contractor and installed by the General Trades Contractor.
3. All metal bollards and covers shall be furnished by the Structural Steel Contractor for installation by the General Trades Contractor.
4. The Structural Steel, Roofing, Mechanical, Electrical and Plumbing Contractors shall coordinate with each other regarding roof penetration frames.
5. Contractor is responsible for protection of wood roof decking as portrayed in drawing details and outlined in specifications.
6. Contractor shall review Guideline Schedule for timing and sequence of steel

erection and detailing. The expectation is multiple crews will work simultaneously to ensure detailing of prior building unit does not impede on erection of subsequent building unit. For example, detailing and inspections of Building Unit D must occur simultaneously with steel erection of Building Unit C. (ADDED per Addendum 01.)

7. Contractor may utilize the contact information noted below as a resource for the glue-laminated construction and wood decking portion of Work. Note, this is not a sole source contact for this Work but rather an option for all Bidding Contractors. (ADDED per Addendum 02).

   Kyle Heminger, Sales/Co-Owner
   Glue-Lam Erectors, Inc.
   723 E Park Street
   PO Box 10
   Trafalgar, IN 46181
   P: (317) 878-9717 / F: (317) 878-9727 / C: (317) 508-2454
   gle@gluelamerectors.com
   www.glue-lamerectorsinc.com

8. The Structural Steel Contractor is responsible for procurement and installation of steel mezzanine guardrails. Refer to Structural Drawings, particularly Second Floor Framing Plans and Detail 16 on S-503 for extents. This rail is also noted by Note 21 on Second Floor Architectural Plans. (ADDED per Addendum 02).

E. BID CATEGORY NO. 5 - ROOFING

General requirements in Paragraph 3.02.B above.

Section	06 16 00	Sheathing
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	07 21 00	Thermal Insulation
Section	07 31 13	Asphalt Shingles
Section	07 54 00	Thermoplastic Membrane Roofing (PVC and KEE)
Section	07 62 00	Sheet Metal Flashing and Trim
Section	07 71 00	Roof Specialties
Section	07 72 00	Roof Accessories
Section	07 92 00	Joint Sealants

Clarifications:

1. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
2. Roofing Contractor is responsible for all wood blocking, sheathing, insulation and plywood required for roof systems including MEP curbs, metal roof coping,

flashings, gutters, roof hatches, or the like, interfacing with roofing.

3. Roofing Contractor shall coordinate roof penetrations with the appropriate trades and ensure that all penetrations conform with the roof systems installation requirements. Provide all material necessary to seal these penetrations.
4. Roofing Contractor to provide roofing gutters and downspouts and include tie into storm piping system. Downspout boots shall be provided by the General Trades Contractor.
5. Roofing Contractor is responsible for top of wall parapets at all walls (both metal stud and masonry walls). This includes the plywood or sheathing, blocking or nailers, membrane flashing, metal coping and flashings, and all necessary fasteners and joint sealants.
6. In reference to wood blocking and sheathing at or above roof elevation, the Metal Stud & Drywall Contractor is responsible for all wood blocking and sheathing products inside of the vapor retarder (or air and vapor barrier) as noted by blue dashed line. The Roofing Contractor is responsible for all wood blocking or sheathing products outside of this delineation mark. See Drawing Sheets AR104 & AR105 for more information. (ADDED via Addendum 02.)
7. In addition to Clarification #6 above, any wood blocking or sheathing at roof elevation that is outside the vapor retarder (or air and vapor barrier) is the responsibility of the Roofing Contractor. (ADDED via Addendum 02.)
8. The Roofing Contractor is responsible for all wood blocking or sheathing where roofing materials (metal coping, gutters, vents, fascia, roof deck, etc.) directly fasten to the wood product. (ADDED per Addendum 02.)
9. The Roofing Contractor is responsible for the knee walls within the roofing system as indicated by Detail 9 on AR105. (ADDED per Addendum 02.)

F. <u>BID CATEGORY NO. 6 – METAL STUDS, DRYWALL & ACOUSTIC CEILINGS</u>

General Requirements in Paragraph 3.02.B above.

Section	01 52 60	Rubbish Container
Section	05 40 00	Cold-Formed Metal Framing
Section	06 16 00	Sheathing
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	07 21 00	Thermal Insulation
Section	07 24 19	Water-Drainage Exterior Insulation and Finish System
Section	07 27 13	Self-Adhering Air Barriers
Section	07 27 26.02	Vapor-Permeable, Fluid-Applied Membrane Air Barrier
Section	07 42 13.23	Metal Composite Material Wall Panels
Section	07 92 00	Joint Sealants
Section	07 92 19	Acoustical Joint Sealants
Section	08 31 13	Access Doors and Frames
Section	09 21 16	Gypsum Board Assemblies
Section	09 51 13	Acoustical Panel Ceilings
Section	09 54 23	Linear Metal Ceilings

Section	09 84 33	Sound-Absorbing Wall Units (ADDED per Add. 01)
Section	09 84 33.13	Abuse-Resistant Sound-Absorbing Wall Unit
Section	09 84 36	Sound-Absorbing Ceiling Units
Section	09 96 63	Interior Finish System

Clarifications:

1. All in wall blocking is the responsibility of the Metal Studs & Drywall Contractor. "Wall blocking" is to be considered any dimensional lumber, sheathing, plywood, danbacking, metal strapping or similar material.
2. All wall blocking is to be coordinated with MEP Contractors to ensure rough-in routing is maintained.
3. All wall blocking for items such as casework, restroom accessories, furniture, electronics, etc. is to be installed following review and coordination with approved submittals and shop drawings.
4. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
5. Contractor is responsible for dumpsters and rubbish containers for own Work.
6. Contractor to include 250 man hours by Skilled Carpenter for use at discretion of the Construction Manager.
7. Contractor to include 250 man hours by Skilled Drywall Finisher for use at discretion of the Construction Manager.
8. Contractor to include 5,000 SF ACT-1 materials and installation for use at discretion of the Construction Manager.
9. Metal Stud and Drywall Contractor is responsible for the tile backer board at all tiling locations. Reference Specification Section 09 30 00 – Tiling for additional information.
10. Contractor is responsible for joint sealants for complete 07 24 19 - Water-Drainage Exterior Insulation and Finish System.
11. Contractor is responsible for joint sealants for complete 09 96 63 - Interior Finish System.
12. Contractor shall prepare punched openings at guaranteed dimensions within the tolerance of Aluminum Storefront & Glazing Contractor.
13. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
14. Section 07 21 00 – Thermal Insulation that is below finished slab on grade elevation shall be provided by the General Trades Contractor. Section 07 21 00 Thermal Insulation cavity wall insulation behind the masonry veneer shall be provided by the Masonry Contractor. All other Section 07 21 00 Thermal Insulation shall be provided by Drywall Contractor.
15. In reference to Detail 19 / A-502 (typical), the Metal Studs, Drywall &

Acoustic Ceiling Contractor is responsible for 6" cold formed metal framing, batt insulation, 5/8" glass-mat gypsum wall sheathing, 5/8" wall sheathing, 5/8" gypsum wallboard, 2x wood-preservative treated lumber, plywood faced foam insulation/sheathing (4.1") vapor-permeable, fluid-applied membrane air barrier and air barrier transition membrane.

16. In reference to Detail 20 / A-502 (typical), the General Trades Contractor is responsible for 2.5" thick polyisocyanurate board insulation, air / vapor barrier transition membrane and thermal break unfaced mineral wool insulation board.
17. Provide clips, anchors, supports and other accessories that interface between steel framing and steel studding.
18. Contractor shall include Type XP (or similar) mold and mildew resistant drywall for the entire project.
19. Contractor shall include galvanized metal strapping at all transitions or corners of plywood face foam insulation/sheathing. This allows for proper anchoring of metal panels mechanical fasteners at these locations.
20. In reference to wood blocking and sheathing at or above roof elevation, the Metal Stud & Drywall Contractor is responsible for all wood blocking and sheathing products inside of the vapor retarder (or air and vapor barrier) as noted by blue dashed line. The Roofing Contractor is responsible for all wood blocking or sheathing products outside of this delineation mark. See Drawing Sheets AR104 & AR105 for more information. (ADDED via Addendum 02.)
21. In addition to Clarification #20 above, any wood blocking or sheathing at roof elevation that is outside the vapor retarder (or air and vapor barrier) is the responsibility of the Roofing Contractor. (ADDED via Addendum 02.)
22. The Metal Studs, Drywall & Acoustic Ceilings Contractor is responsible for the knee wall indicated by Detail 1 on AR105. (ADDED per Addendum 02.)

G. <u>BID CATEGORY NO. 7 – ALUMINUM STOREFRONT & GLAZING</u>

General Requirements in Paragraph 3.02.B above.

Section	05 73 13	Glazed Decorative Metal Railings
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	07 21 00	Thermal Insulation
Section	07 92 00	Joint Sealants
Section	08 16 13	Fiberglass Doors
Section	08 41 13	Aluminum-Framed Entrances and Storefronts
Section	08 56 00	Special Function Windows
Section	08 80 00	Glazing
Section	08 81 13	Decorative Glass Glazing (ADD per Add. 01)
Section	08 88 53.01	Security Glazing – Forced Entry Resistance
Section	09 84 53	Sound Barrier Mullion Trim Cap

<u>Clarifications:</u>

1. Contractor is responsible for shims, aluminum sill, aluminum flashing, and all interior/exterior backer rod and sealant at all window locations. This is to include "joint sealant, fill shim space with sprayed polyurethane foam sealant" as noted in Detail 19 / A-502 (typical).
2. Contractor is responsible to install all aluminum door hardware furnished by the General Trades Contractor.
3. Include all access control/electrified door hardware wiring internal to aluminum frames and doors to nearest accessible ceilings. Final connection and power supply to be provided by Electrical/Technology Contractor.
4. Contractor is responsible for interior and exterior sealant at perimeter of all aluminum frames to create sealed building envelop.
5. Contractor is expected to expedite procurement and shipping of frames and glazing at all punched openings. Punched openings to be installed with guaranteed dimensions.
6. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
7. Door lite and side lite glazing for all openings is to be provided and installed by this Contractor. (ADDED per Addendum 01.)
8. Contractor shall review and include Door and Frame Schedules on A-601 and A-602 for any notes or remarks that may be applicable to Aluminum Storefront and Glazing Scope of Work. (ADDED per Addendum 02.)

H. BID CATEGORY NO. 8 – FLOORING

General Requirements in Paragraph 3.02.B above.

Section	09 01 91	Moisture Resistant/Water-Proof Flooring Adhesive For Concrete Slabs
Section	09 30 00	Tiling
Section	09 65 13	Resilient Base and Accessories
Section	09 65 19	Resilient Tile Flooring
Section	09 68 13	Tile Carpeting
Section	12 48 26.01	Entrance Carpet Tile

Clarifications:

1. Include 120 hours of additional floor preparation over above requirements noted in drawings and specifications.

I. BID CATEGORY NO. 9 – PAINTING

General Requirements in Paragraph 3.02.B above.

Section	09 91 23	Interior Painting
Section	09 96 00	High-Performance Coatings
Section	9 72 16	Vinyl-Coated Fabric Wall Coverings

Clarifications:

1. Contractor to include 400 man hours by Skilled Painter for use at discretion of the Construction Manager.
2. The Painting Contractor shall be responsible for painting mechanical, electrical plumbing, and fire suppression work in MEPF rooms, and MEPF work exposed to view in interior occupied spaces, exterior walls and roof. (ADDED per Addendum 01.)

J. BID CATEGORY NO. 10 – CASEWORK

General Requirements in Paragraph 3.02.B above.

Section	06 41 13	Wood-Veneer-Faced Architectural Cabinets
Section	06 61 16	Solid Surface Fabrications
Section	12 32 16	Manufactured Plastic Laminate-Faced (Educational) Casework

Clarifications:

1. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
2. Contractor is responsible for wood blocking / shims at base of all casework products.
3. Contractor shall install chain stops (or similar per submittal review) at every casework door opening toward an adjacent wall surface.

K. BID CATEGORY NO. 11 – FOOD SERVICE EQUIPMENT

General Requirements in Paragraph 3.02.B above.

Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	11 40 00	Food Service Equipment

Clarifications:

1. Regarding any references to “Food Service Contractor” indicated on the Contract Documents, this work is the responsibility of this bid category. (ADDED per Addendum 01.)
2. All final connections (not integral to food service equipment) shall be made by the Electrical, Mechanical, Plumbing, or Fire Suppression Contractors, as applicable. Coordinate with other trades as necessary. (ADDED per Addendum 01.)
3. Provide coordinated shop drawings that indicate all MEPF requirements and accurately reflect the actual conditions and spacing of the area. (ADDED per Addendum 01.)
4. Obtain approvals and permits and coordinate inspections and testing with governing local and state agencies in relation to this scope of work. (ADDED per Addendum 01.)
5. Equipment bases and pads shall be provided by the Contractor installing the equipment. (ADDED per Addendum 01.)

L. BID CATEGORY NO. 12 – FIRE SUPPRESSION

General Requirements in Paragraph 3.02.B above.

Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	21 05 00	Common Work Results for Fire Suppression
Section	21 10 00	Water-Based Fire Suppression Systems

Clarifications:

1. All wall blocking is to be coordinated with MEP Contractors to ensure rough-in routing is maintained.
2. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
3. Contractor is responsible for all sleeves and seals required for their own penetrations.
4. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
5. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.
6. Contractor is responsible for concrete equipment pads for their own work.
7. Contractor is responsible to provide exact locations of required sleeves to Contractor responsible for footing, foundation, or wall construction.
8. This Contractor shall be aware of the General Trades Contractor performing 18” depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
9. The General Trades Contractor shall provide incoming fire protection water service up to the flange/spigot 12” above finished floor at riser. (Reference Detail 1 / FP501). (ADDED per Addendum 01.)
10. All final connections to food service equipment (not integral to food service equipment) shall be made by the Electrical, HVAC, Plumbing, or Fire Suppression Contractors, as applicable. Coordinate with other trades as necessary. Reference approved kitchen equipment shop drawings for installation. (ADDED per Addendum 01.)

M. BID CATEGORY NO. 13 – PLUMBING

General Requirements in Paragraph 3.02.B above.

Section	00 83 00	Schedule of Project Construction Wages (ADDED

		per Add. 02)
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	08 31 13	Access Doors and Frames
Section	22 05 00	Common Work Results for Plumbing
Section	22 05 01	Basic Plumbing Materials and Methods
Section	22 05 13	Common Motor Requirements for Plumbing Equipment
Section	22 05 19	Meters and Gages for Plumbing Piping
Section	22 05 23	General-Duty Valves for Plumbing Piping
Section	22 05 29	Hangers and Supports for Plumbing Piping and Equipment
Section	22 05 53	Identification for Plumbing Piping and Equipment
Section	22 07 00	Plumbing Insulation
Section	22 08 00	Commissioning of Plumbing Systems
Section	22 11 13	Facility Water Distribution Piping
Section	22 11 16	Domestic Water Piping
Section	22 11 19	Domestic Water Piping Specialties
Section	22 11 23	Domestic Water Pumps
Section	22 11 24	Domestic-Water Packaged Booster Pumps
Section	22 12 16	Above-Ground, Potable-Water Storage Tanks
Section	22 13 16	Sanitary, Waste, and Vent Piping System
~~Section~~	~~22 13 23~~	~~Sanitary Waste Interceptors~~ (DELETE per Add.01)
Section	22 14 13	Facility Storm Drainage Piping
Section	22 14 29	Sump Pumps
Section	22 31 00	Domestic Water Softeners
Section	22 33 00	Electric Domestic Water Heaters
Section	22 40 00	Plumbing Fixtures
Section	22 47 00	Drinking Fountains and Water Coolers

Clarifications:

1. Contractor to include all temporary patching and sealing of roof system for their roof penetrations to ensure watertight conditions during construction.
2. Contractor is responsible for roof curbs for equipment within scope of work.
3. Contractor is responsible for own equipment pads.
4. Critical long-lead equipment items are to have all submittals and shop drawings submitted for review within four weeks of Notice to Proceed. Equipment includes, but not limited to: Water Heaters, Hydronic Pumps, Water Softeners, etc.
5. All wall blocking is to be coordinated with MEP Contractors to ensure rough-in routing is maintained.
6. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
7. Reference kitchen equipment drawings for plumbing requirements.

8. Contractor is responsible for all sleeves and seals required for their own penetrations.
9. Contractor is responsible for access doors and frames not noted on Architectural Drawings but required to access work in this contract. Install as outlined in specifications.
10. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
11. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.
12. Contractor is responsible to provide exact locations of required sleeves to Contractor responsible for footing, foundation, or wall construction.
13. This Contractor shall be aware of the General Trades Contractor performing 18" depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
14. Unless otherwise noted, the General Trades Contractor shall provide all new water distribution piping and related components for combined, domestic water, and services lines, storm piping, and sanitary piping (including sanitary waste interceptors), to within 5' of the building limits. The Plumbing and HVAC Contractors shall coordinate hand-off with the General Trades Contractor. (ADDED per Addendum 01.)
15. All final connections to food service equipment (not integral to food service equipment) shall be made by the Electrical, HVAC, Plumbing, or Fire Suppression Contractors, as applicable. Coordinate with other trades as necessary. Reference approved kitchen equipment shop drawings for installation. (ADDED per Addendum 01.)
16. Davis-Bacon requirements are applicable to this category. Reference specification section 00 83 00. (ADDED per Addendum 02).
17. The Plumbing Contractor shall coordinate with the General Trades Contractor for the transition of work related to the grease interceptor noted on SU1-4 and PF10D. The Plumbing Contractor is responsible to stub foundation plumbing lines out of the building to the first cleanout on either side of grease interceptor and sampling port. The General Trades Contractors is responsible for all work in between these two indicated cleanouts. (ADDED per Addendum 02.)

N. <u>BID CATEGORY NO. 14 – HVAC</u>

General Requirements in Paragraph 3.02.B above.

Section	00 83 00	Schedule of Project Construction Wages (ADDED per Add. 02)
Section	07 05 23	Pressure Testing an Air Barrier System for

		Air Tightness
Section	08 31 13	Access Doors and Frames
Section	23 05 00	Common Work Results for HVAC
Section	23 05 13	Common Motor Requirements for HVAC Equipment
Section	23 05 19	Meters and Gages for HVAC Piping
Section	23 05 23	General-Duty Valves for HVAC Piping
Section	23 05 29	Hangers and Supports for HVAC Piping and Equipment
Section	23 05 48	Vibration Controls for HVAC Piping and Equipment
Section	23 05 53	Identification for HVAC Piping and Equipment
Section	23 07 00	HVAC Insulation
Section	23 08 00	Commissioning of HVAC Systems
Section	23 09 00	Instrumentation and Control for HVAC
Section	23 09 93	HVAC Sequence of Operation
Section	23 21 13	Hydronic Piping
Section	23 21 16	Geothermal Loop Heat Exchanger
Section	23 21 23	Hydronic Pumps
Section	23 23 00	Refrigerant Piping
Section	23 25 00	HVAC Water Treatment
Section	23 29 23	Variable-Frequency Motor Controllers
Section	23 31 13	Metal Ducts
Section	23 33 00	Air Duct Accessories
Section	23 34 23	HVAC Power Ventilators
Section	23 37 13	Diffusers, Registers, and Grilles
Section	23 37 23	HVAC Gravity Ventilators
Section	23 73 14	Custom Indoor Air Handling Units
Section	23 81 00	Ground Source Heat Pumps
Section	23 81 23	Computer-Room Air-Conditioners
Section	23 82 39	Unit Heaters
Section	31 23 19	Dewatering

Clarifications:

1. Contractor to include all temporary patching and sealing of roof system for their roof penetrations to ensure watertight conditions during construction.
2. Contractor is responsible for roof curbs for equipment within scope of work.
3. Electrical Contractor is responsible for all in wall rough-in locations for temperature control. Low voltage wiring for temperature control is by the HVAC Contractor.
4. Contractor is responsible for own equipment pads.
5. Critical long-lead equipment items are to have all submittals and shop drawings submitted for review within four weeks of Notice to Proceed. Equipment includes, but not limited to: Chillers, AHUs, ACUs, Hydronic Pumps, VAVs, VFDs, etc.
6. All wall blocking is to be coordinated with MEP Contractors to ensure rough-in routing is maintained.

7. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.
8. Reference kitchen equipment drawings for HVAC requirements.
9. Contractor is responsible for all sleeves and seals required for their own penetrations.
10. Contractor is responsible for access doors and frames not noted on Architectural Drawings but required to access work on this contract. Install as outlined in specifications.
11. Contractor is responsible for dewatering required for excavation and drilling of the well field.
12. Contractor is responsible for access doors and frames not noted on Architectural Drawings but required to access work in this contract. Install as outlined in specifications.
13. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
14. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.
15. Contractor is responsible to provide exact locations of required sleeves to Contractor responsible for footing, foundation, or wall construction.
16. This Contractor shall be aware of the General Trades Contractor performing 18” depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
17. Unless otherwise noted, the General Trades Contractor shall provide all new water distribution piping and related components for combined, domestic water, and services lines, storm piping, and sanitary piping (including sanitary waste interceptors), to within 5’ of the building limits. The Plumbing and HVAC Contractors shall coordinate hand-off with the General Trades Contractor. (ADDED per Addendum 01.)
18. All final connections to food service equipment (not integral to food service equipment) shall be made by the Electrical, HVAC, Plumbing, or Fire Suppression Contractors, as applicable. Coordinate with other trades as necessary. Reference approved kitchen equipment shop drawings for installation. (ADDED per Addendum 01.)
19. Davis-Bacon requirements are applicable to this category. Reference specification section 00 83 00. (ADDED per Addendum 02).
20. At the geothermal well field, the General Trades Contractor is responsible to excavate and haul a mass excavation of 175’ E/W and 225’ N/S. The depth is to be uniform at 4’-0” below proposed subgrade. Excavation is to occur in advance of HVAC Contractor drilling the well field. Following well field

operations, the General Trades Contractor is responsible for backfill and compaction of this mass excavation using drainage course stone up to original proposed subgrade. (ADDED per Addendum 02.)

21. HVAC Contractor is responsible for sump pump and associated discharge pipe that supports the geothermal well field manifold. HVAC Contractor shall coordinate with General Trades Contractor for tie-in of discharge pipe into Structure-66. Reference Plan Note 17 on SU1-3. (ADDED per Addendum 02.)

O. BID CATEGORY NO. 15 – ELECTRICAL & TECHNOLOGY

General Requirements in Paragraph 3.02.B above.

Section	00 83 00	Schedule of Project Construction Wages (ADDED per Add. 02)
Section	01 51 10	Temporary Electricity, Lighting and Warning Systems
Section	07 05 23	Pressure Testing an Air Barrier System for Air Tightness
Section	08 31 13	Access Doors and Frames
Section	26 00 50	General Electrical Requirements
Section	26 05 05	Electrical Testing
Section	26 05 19	Low-Voltage Electrical Power Conductors and Cables
Section	26 05 26	Grounding and Bonding for Electrical Systems
Section	26 05 29	Hangers and Supports for Electrical Systems
Section	26 05 33	Conduit and Boxes for Electrical Systems
Section	26 05 37	Wire Mesh Type Cable Trays
Section	26 05 43	Underground Ducts and Raceways for Electrical Systems
Section	26 05 53	Identification for Electrical Systems
Section	26 05 73	Power System Studies
Section	26 08 00	Commissioning of Electrical Systems
Section	26 09 13	Electrical Power Monitoring
Section	26 09 23	Lighting Control Devices
Section	26 22 00	Low-Voltage Transformers
Section	26 24 13	Switchboards
Section	26 24 16	Panelboards
Section	26 27 13	Utility Electric Metering
Section	26 27 26	Wiring Devices
Section	26 28 13	Fuses
Section	26 28 16	Enclosed Switches and Circuit Breakers
Section	26 29 13	Enclosed Controllers
Section	26 31 00	Photovoltaic Collectors
Section	26 32 13	Engine Generators
Section	26 36 00	Transfer Switches
Section	26 40 02	Underground Electrical Service
Section	26 51 00	Interior Lighting
Section	26 56 00	Exterior Lighting

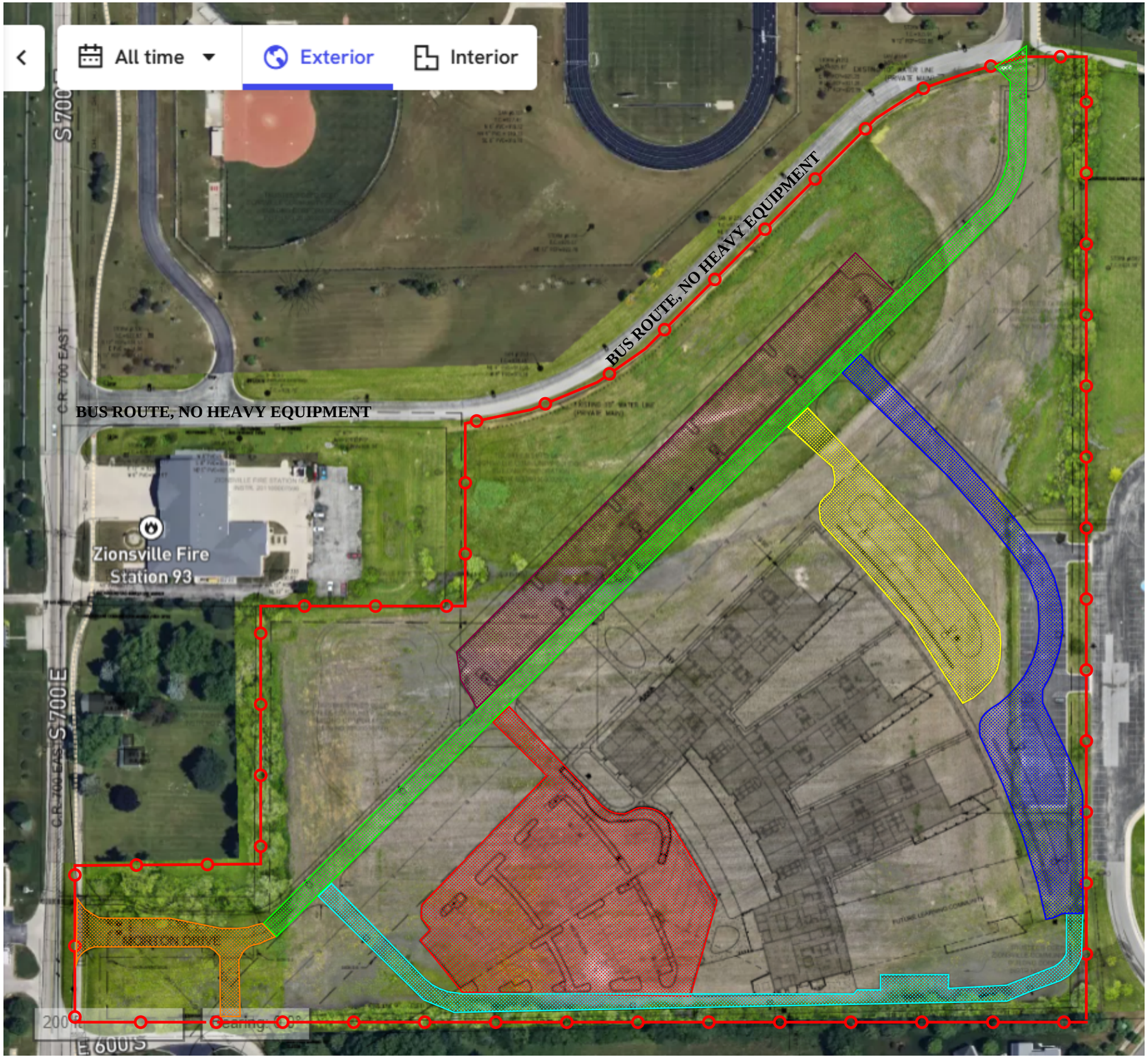
Section	27 01 00	Operation and Maintenance of Communications Systems
Section	27 01 11	Demonstration, Training and Warranty of Communications Systems
Section	27 05 00	Common Work Results for Communications
Section	27 05 26	Grounding and Bonding for Communications Systems
Section	27 05 28	Pathways for Communications Systems
Section	27 05 53	Identification for Communications Systems
Section	27 11 00	Communications Equipment Room Fittings
Section	27 11 13	Communications Entrance Protection
Section	27 13 23	Communications Fiber Optical Backbone Cabling
Section	27 15 11	Conductors and Cables for Intercom, Public Address and Mass Notification Systems
Section	27 15 17	Communications Copper Horizontal Cabling (Augmented Cat 6A)
Section	27 15 53	Misc. Communications Audio/Video Cabling
Section	27 41 12	Communications Audio-Video Mounts
Section	27 41 17	Integrated A/V Control System and Equipment (Boardroom & Safety Room)
Section	27 51 17	Classroom Sound Reinforcement Systems
Section	27 51 24	Multipurpose Audio Video Systems
Section	27 51 25	IP Based Intercommunications and Program Systems (ELC & ESC)
Section	28 05 10	Common Work Results for Electronic Safety and Security
Section	28 05 23	Conductors and Cables for Electronic Safety and Security
Section	28 31 11	Digital, Addressable Fire-Alarm System
Section	28 48 00	Emergency Responder Radio Communication System Testing
Section	28 48 10	Emergency Responder Radio Communication System Installation

Clarifications:

1. Contractor to include all temporary patching and sealing of roof system for their roof penetrations to ensure watertight conditions during construction.
2. Contractor is responsible for all in wall rough-in locations for temperature control. Low voltage wiring for temperature control is by the HVAC Contractor
3. Contractor is responsible for own equipment pads.
4. Contractor is responsible for final connection of all hard-wired equipment and furnishings, either Contractor or Owner provided.
5. All wall blocking is to be coordinated with MEP Contractors to ensure rough-in routing is maintained.
6. In locations where clips, sheathing, nailers, etc. are depicted outside of the wall line (finish face) to support a finish material or product, the Contractor installing the finish material or product is also responsible for all substrate materials.

7. Reference kitchen equipment drawings for electrical and technology requirements.
8. Contractor is responsible for all sleeves and seals required for their own penetrations.
9. Critical long-lead equipment items are to have all submittals and shop drawings submitted for review within four weeks of Notice to Proceed. Equipment includes, but not limited to: Switchgear, Generator, Transformer, etc.
10. Contractor shall not install any raceways, cabling, gear or equipment service the elevator(s) until directed by Construction Manager following approval of elevator shop drawings and pre-installation meetings.
11. Contractor is responsible for access doors and frames not noted on Architectural Drawings but required to access work in this contract. Install as outlined in specifications.
12. In regards to 07 05 23 – Pressure Testing an Air Barrier System for Air Tightness, the Owner / Construction Manager is responsible for hiring and paying for CMTA service. This Contractor shall review this specification in detail and perform Work as part of this Contract in accordance to this specification to achieve the desired test result. Costs related to rework or corrective action as part of this Contract due to failed pressure test is the responsibility of this Contractor.
13. Contractor is responsible for hauling excavation spoils created by their own Work. All spoils are to be removed from site.
14. Contractor is responsible to provide exact locations of required sleeves to Contractor responsible for footing, foundation, or wall construction.
15. Contractor is responsible for final connection of all hard-wired equipment and furnishings, either Contractor or Owner provided.
16. This Contractor shall be aware of the General Trades Contractor performing 18” depth with 5% spread rate of cement stabilization at all asphalt drives, parking lots, building pad and playground locations. Actual application depth and spread rate to be determined by Third Party Testing Agency. (ADDED per Addendum 01.)
17. All final connections to food service equipment (not integral to food service equipment) shall be made by the Electrical, HVAC, Plumbing, or Fire Suppression Contractors, as applicable. Coordinate with other trades as necessary. Reference approved kitchen equipment shop drawings for installation. (ADDED per Addendum 01.)
18. Contractor shall review Door and Frame Schedules on A-601 and A-602 for any notes or remarks that may be applicable to Electrical & Technology scope of Work. Contractor shall include materials, equipment and manpower to install Work required to support remarks noted on Door and Frame Schedules. Not all remarks on Door and Frame Schedule may appear on Electrical or Technology Discipline drawings. (ADDED per Addendum 02.)
19. Davis-Bacon requirements are applicable to this category. Reference specification section 00 83 00. (ADDED per Addendum 02).

END OF SECTION 01 12 00



Sequence #01: Fall 2025
- Over pave binder course by 2'-0" in all directions
- To be used as primary haul road by all trades.

Sequence #02: Fall 2025
- Over pave binder course by 2'-0" in all directions,
- Over pave through landscape islands.
- To be used as Contractor parking

Sequence #03: Spring 2026
- Over pave binder course by 2'-0" in all directions,
- To be used as secondary haul road by all trades.
- Stone & Binder in Fall 2025 if possible.

Sequence #04: Spring 2026
- Over pave binder course by 2'-0" in all directions.
- Over pave through landscape islands.
- Paving operations to follow site utilities, including well field.
- Stone & Binder in Fall 2025 if possible.

200'-0"
Apprx. Scale

Sequence #05: Summer 2026
- Over pave binder course by 2'-0" in each direction.
- Do not over pave through entire landscape island.

Sequence #06: Summer 2026
- Over pave binder course by 2'-0" in each direction.
- Do not over pave through entire landscape island.

Sequence #07: Spring 2027
- Install stone and binder.
- No overpaving.
- Install concrete curbs ahead of asphalt.

Sequence #08: Spring 2027
-Saw cut and demolish all over paved locations.
- Install all concrete curbs

Sequence #09: Summer 2027
- Clean and prepare all asphalt surfaces for wearing course
- Install all wearing course asphalt
- Install all signage and bumpers
- Stripe all asphalt

ASPHALT PAVING SEQUENCE PLAN

Dated: July 14, 2025

Updated as part of Addendum 02

A D D E N D U M N O. 2

Zionsville Community Schools New Early Learning Center/Educational Services Center

Zionsville Community Schools
Zionsville, Indiana

Project No. 224033.00

Index of Contents

Addendum No. 2, 12 items, 4 pages
New Project Manual Section: 32 18 13 – Synthetic Turf Safety Surface and 32 31 21 – Decorative Metal Gates
Revised Project Manual Sections: 11 68 13 – Playground Equipment and Structures, 12 93 00 – Site Furnishings and Amenities, 26 09 13 – Electrical Power Monitoring, 26 24 16 – Panelboards, 31 20 00 – Earth Moving, 32 18 16 – Playground Protective Surfacing, and 32 31 19 – Decorative Metal Fences and Gates
Revised Drawing Sheets: Index A, G0-01, GD1-0, G1-00, G1-01, G1-03, G1-04, G1-05, G1-06, G1-07, G2-00, G2-01, G2-03, G2-04, G4-00, G4-01, SU1-0, SU1-1, SU1-3, SU1-4, SU2-02, SU2-03, S-001, AE101, AE103, AE107, AE109, AE110, AE111, AE113, AE401, AE501, AE503, AE504, AC108, AC109, AC110, AC501, AR101, AR102, AR104, AR105, A-201, A-202, A-203, A-310, A-315, A-316, A-318, A-503, A-601, A-602, A-603, IF108, IN601, Q-108, Q-109, Q-110, Q-202, QE601, MV11D, MV12B, M-601, M-602, ES001, EL11A, EL12C, EP11A, EP11G, EP12A, EP12E, EP12F, EP12G, E-401, E-601, E-602, E-603, E-604, E-605, E-606, E-607, E-608, E-701, T-11A, T-11D, T-12A, T-12C, and T-502
Pre-Bid Clarification Log

Date: July 16, 2025

I hereby certify that this Addendum was prepared by me or under my direct supervision and that I am a duly registered Architect/Engineer under the Laws of the State of Indiana.

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS

Paul A. Miller
Registration Number AR10800161

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2 to Drawings and Project Manual, dated June 24, 2025, for Zionsville Community Schools New Early Learning Center/Educational Services Center for Zionsville Community Schools, 900 Mulberry Street, Zionsville, Indiana, 46077; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana.
This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. PROJECT MANUAL, TABLE OF CONTENTS

A. Volume #3, Page 00 00 20-8, DIVISION 32: Add Section 32 18 13 – Synthetic Turf Safety Surface.

ITEM NO. 2. NEW PROJECT MANUAL SECTIONS

A. New Project Manual Section 32 18 13 – Synthetic Turf Safety Surface and 32 31 21 – Decorative Metal Gates are included with and hereby made a part of this Addendum.

ITEM NO. 3. REVISED PROJECT MANUAL SECTIONS

A. 11 68 13 – Playground Equipment and Structures, 12 93 00 – Site Furnishings and Amenities, 26 09 13 – Electrical Power Monitoring, 26 24 16 – Panelboards, 31 20 00 – Earth Moving, 32 18 16 – Playground Protective Surfacing, and 32 31 19 – Decorative Metal Fences and Gates have been revised, dated 7/16/25, and are included with and hereby made a part of this Addendum.

ITEM NO. 4. PROJECT MANUAL, SECTION 03 30 00 – CAST-IN-PLACE CONCRETE

A. Delete 3.12, C., 3., in its entirety.

ITEM NO. 5. PROJECT MANUAL, SECTION 04 20 00 – UNIT MASONRY

A. Replace 2.15, F., 3., as follows:

"3. Color: As selected by A/E."

B. Delete 3.3, F., in its entirety.

C. Replace 3.16, B., as follows:

"B. Inspections: Level B special inspection according to the "TMS 402", unless otherwise noted.
1. Begin masonry construction only after inspectors have verified proportions of site prepared mortar.

2. Place grouts only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
3. Place grout only after inspectors have verified proportions of site-prepared grout.

ITEM NO. 6. PROJECT MANUAL, SECTION 06 16 00 - SHEATHING

A. Add 1.3, C., as follows:

"C. Delegated-Design Submittal: For Plywood-Surfaced Polyisocyanurate-Foam Sheathing required to comply with performance requirements including anchorages, connections, and fasteners for exterior wall assemblies and support of other exterior wall components, provide analysis and calculations performed, signed, and sealed by a qualified Design Professional in the project jurisdiction.
1. Indicate locations of sheathing, type, magnitude, and direction of imposed loads on the exterior wall assemblies.
2. Engineering interpretations for this specific project of manufacturer's testing and performance reports are acceptable.

B. Add 1.4, B., 2., as follows:

"2. Engineering Responsibility: For Plywood-Surfaced Polyisocyanurate-Foam Sheathing a Professional Engineer legally authorized in the jurisdiction where Project is located to prepare design calculations and engineering analysis of manufacturer's materials and assemblies in order to comply with performance requirements.

C. Article 2.3, D., 1., c.: Delete "or Grade 3 (25 psi)" from end of sentence.

D. Add 2.3, E., as follows:

"E. Structural Performance (Wall Sheathing): Provide plywood-surfaced polyisocyanurate-foam sheathing assemblies capable of withstanding the effects of the following loads and stresses within limits and under conditions indicated, based on testing in accordance with ASTM E1592:
1. Wind Loads: Determine loads based on the following minimum design wind pressures:
a. Uniform pressure as indicated on Drawings.
2. Deflection Limits: Sheathing assemblies shall withstand wind loads with horizontal deflections no greater than 1/18o of the span."

E. Replace 2.9, A., 2., a., as follows:

"a. Insulation Thickness: 3.5 inches of polyisocyanurate foam insulation plus additional layer of 2 inch thick polyisocyanurate foam insulation.

ITEM NO. 7. PROJECT MANUAL, SECTION 07 54 00 – THERMOPLASTIC MEMBRANE ROOFING

A. Replace 1.11, A., 4., as follows:

"4. Warranty Period: 30 years from date of Substantial Completion."

B. Repalce 2.3, A., 1., a., c., and e, as follows:

"a. SureFlex KEE HP Membrane; Carlise SynTec Systems."
c. Sarnafil-G410; Sika-Sarnafil, Inc.
e. JMPVC 80 mil with Evaloy/KEE; Johns Manville, Inc."

C. Add 2.7, C., 1., c., as follows:

"c. Specific locations on the Drawings (canopies) require less insulation thickness as indicated on the Drawings."

ITEM NO. 8. PROJECT MANUAL, SECTION 07 62 00 – SHEEET METAL FLASHING AND TRIM

A. Add 2.3, B., 1., b., as follows:

"b. Color: Match "Classic Bronze" by Metal Era at steep slope flashings."

ITEM NO. 9. PROJECT MANUAL, SECTION 11 40 00 – FOOD SERVICE

A. Article 3.09: Replace Item No. 11 as follows:

"Item #11 Single Door Pass-Thru Refrigerator
MFGR: Traulsen, True, Continental or Pre-Approved Equal
Model: RHT132WP-FHG
Quantity: One (1)

Provide and set in place per plan. To include:
a. Five (5) additional shelves per unit.
b. One (1) only digital display on kitchen side.
c. One (1) only full-height glass door on kitchen side.
d. One (1) only full-height glass door on serving side.
e. One (1) set only 5 inch casters, front locking.
f. Cam-lift hinges on all doors.
g. Door hinged as shown on Drawings."

ITEM NO. 10. PROJECT MANUAL, SECTION 28 31 11 – DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

A. Sub paragraph 2.4, A, 1. Change, "Single-action mechanism" to read as: "Dual-action mechanism".

B. Sub paragraph 2.4, A, 3. Delete in it's entirety.

ITEM NO. 11. ACCEPTABLE MANUFACTURERS

The following manufacturers are to be considered acceptable manufacturers (suppliers and fabricators) for the Sections of the Specifications listed. Listed manufacturers are required to bid on products equal in type and design, size, function, and quality to that originally specified. Final decision as to equality of products specified versus those proposed shall be made by the Architect.

Section 05 73 00 – Decorative Metal Railings
- Superior Aluminum Products, Russia, Ohio (Series 5 railings)

Section 06 42 00 – Wood Paneling
- CertainTeed Architectural, Malvern, Pennsylvania (Wood Grille Walls)

Section 07 42 13.23 – Metal Composite Material Wall Panels
- TFC Canopy, Garrett, Indiana (Fabricators)(TFC Series 2000)
- Alcotex Aluminum Composite Materials, London, Ontario (2.3, A., 2., MCM Panel Supplier)

Section 07 95 13.13 – Interior Expansion Joint Cover Assemblies
- Erie Metal Specialties, Akron, New York.

Section 32 18 16 – Playground Protective Surfacing
- Forever Lawn, Louisville, Ohio (Apex Playground Grass)

ITEM NO. 12. REVISED DRAWING SHEETS

A. Drawing Sheets: Index A, G0-01, GD1-0, G1-00, G1-01, G1-03, G1-04, G1-05, G1-06, G1-07, G2-00, G2-01, G2-03, G2-04, G4-00, G4-01, SU1-0, SU1-1, SU1-3, SU1-4, SU2-02, SU2-03, S-001, AE101, AE103, AE107, AE109, AE110, AE111, AE113, AE401, AE501, AE503, AE504, AC108, AC109, AC110, AC501, AR101, AR102, AR104, AR105, A-201, A-202, A-203, A-310, A-315, A-316, A-318, A-503, A-601, A-602, A-603, IF108, IN601, Q-108, Q-109, Q-110, Q-202, QE601, MV11D, MV12B, M-601, M-602, ES001, EL11A, EL12C, EP11A, EP11G, EP12A, EP12E, EP12F, EP12G, E-401, E-601, E-602, E-603, E-604, E-605, E-606, E-607, E-608, E-701, T-11A, T-11D, T-12A, T-12C, and T-502 have been revised, dated 7/16/25, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

SECTION 11 68 13 - PLAYGROUND EQUIPMENT AND STRUCTURES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes: Playground equipment consisting of the following types of play structures:
   1. Freestanding.
   2. Composite.

B. Related Sections:
   1. Section 31 20 00 – Earth Moving: For filling and grading work.
   2. Section 32 18 16 – Playground Protective Surfacing: For protective surfacing under and around playground equipment.
   3. Section 03 30 00 – Cast-in-Place Concrete: For concrete footings.

1.03 DEFINITIONS

A. Composite Play Structures: According to ASTM F 1487, this means “two or more play structures, attached or functionally linked,” creating one integral unit with more than one play activity.

B. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur".

C. Fall Height: According to ASTM F 1487, this means "the vertical distance between a designated play surface and the protective surfacing beneath it." The fall height of playground equipment should not exceed the Critical Height of the protective surfacing beneath it.

D. HDPE: High-density polyethylene.

E. IPEMA: International Play Equipment Manufacturers Association.

F. LLDPE: Linear low-density polyethylene.

G. MDPE: Medium-density polyethylene.

H. Play Structure: According to ASTM F 1487, this is "a free-standing structure with one or more components and their supporting members".

I. Protective Surfacing: According to ASTM F 1487, this means impact-attenuating "materials to be used within the use zone of any playground equipment" for playground surface systems.

J. PVC: Polyvinyl chloride.

K. Transfer Point: According to ASTM F 1487, this is "a platform or deck along an accessible route of travel or an accessible platform provided to allow a child in a wheelchair to transfer from the chair onto the equipment".

L. Use Zone: According to ASTM F 1487, this is "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface, it is predicted that a user would land when falling from or exiting the equipment".

1.04 DESIGN REQUIREMENTS

A. Applicable technical for Public Playground Equipment by the U.S. Consumer Product Safety Commission.

B. Contractor is to install and maintain temporary fencing around playground areas while under construction until the play equipment has been inspected and released by the Architect and representative of the manufacturer. Play areas are to be marked by visible, easily readable signs identifying the area as "Area Under Construction, Do Not Enter".

C. Manufacturer shall conform to ADA (Americans with Disabilities Act) requirements that will be in effect at the time of bidding. ADA requirements supersede Technical Specifications in this Section.
   1. Playground equipment and entire area shall conform to the accessibility requirements of the ADA Guidelines including Section 15.6.

D. Manufacturer shall conform to Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, ASTM F-1487-01, or most current version of this guideline.
   1. Third party certification is required to guarantee compliance with ASTM Standards.

1.05 SUBMITTALS

A. Samples for Initial Selection: Manufacturer's color charts.

B. Samples for Verification: For the following products, for each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected. Architect reserves the right to require additional Samples that show fabrication techniques, workmanship, and design of playground equipment.
   1. Posts and Rails: Not less than 6 inches long.
   2. Platforms: Not less than 6 inches square.
   3. Molded Plastic: Not less than 3 inches square.

C. Quality Assurance/Control Submittals
   1. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
   2. Product Certificates: Signed by manufacturers of playground equipment certifying that products furnished comply with requirements.
   3. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements and qualification data.
   4. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements. Letter from manufacturer, or their representative, that installation meets manufacturer’s recommendations.
   5. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements.
      a. Paints and similar finishes.
      b. Recycled plastic.
   6. Coordination Drawings: Layout plans and elevations drawn to scale and coordinating playground equipment with playground surface systems. Show playground equipment locations, use zones, fall heights, extent of protective surfacing, and Critical Heights.

D. Closeout Submittals
   1. Maintenance Data: For playground equipment and finishes to include in maintenance manuals specified in Division 1.
   2. Warranty: Special warranties specified in this Section.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer of playground equipment.

B. Manufacturer Qualifications: A firm whose playground equipment components have been certified by IPEMA's "3rd Party Certification" service or JMP Inc., Consultant Engineers.
   1. Provide only playground equipment and play structure components bearing the IPEMA Certification Seal.

C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

D. Standards and Guidelines: Provide playground equipment complying with or exceeding requirements in the following:
   1. CPSC No. 325, "Handbook for Public Playground Safety".

E. Pre-Installation Conference: As soon as possible after award of playground equipment work, meet with Installer, and installers of substrate construction, such as pour in place surfacing, and loose fill soft surface (including drainage stone and underdrain tubing), Architect and Owner. Coordinate finish elevation of playground surfacing with recommended play equipment installation height/depth following manufacturer's recommendation and in compliance with recommended ranges as defined by ASTM F-1487-93.
   1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, and proposed installation procedures.

1.07 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Architect at least two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without or Architect's written permission.
   3. Before excavating, contact utility-locator service for area where Project is located.

1.08 SEQUENCING

A. Coordinate construction of equipment use zones and fall heights during installation of playground equipment with installation of protective surfacing specified in Section 32 18 16 – Playground Protective Surfacing. Sequence work so protective surfacing can be installed immediately after concrete footings has set.

1.09 WARRANTY

A. Contractor is to warrant equipment for a period of one year from the date of Substantial Completion against defects in material and workmanship. The Contractor will furnish new replacement parts and labor required to remove defective parts and reinstall replacement parts without cost to the Owner.

B. In addition, the Contractor is to warrant all steel and plastic (polyethylene) components and vinyl coating for a minimum period of 15 years from the date of Substantial Completion against structural failure due to corrosion, deterioration or manufacturing defects. Contractor will furnish new replacement parts and labor required to remove defective parts and reinstall replacement parts without cost to the Owner.

C. In addition, the Contractor is to warrant all aluminum posts, clamps, beams and caps for a period of 5 years from the date of Substantial Completion against structural failure due to corrosion, deterioration, or workmanship. New replacement parts are to be furnished for 5 years and labor required to remove defective parts and reinstall replacement parts will be furnished by the Contractor for the first 2 years without cost to Owner.

D. Contractor is to warrant paint systems for a period of one year from date of Substantial Completion against cracking and chipping. Contractor will furnish touch-up paint and labor without cost to the Owner. In addition, touch-up paint kits in colors to match the play structure must be available to the Owner for a period of not less than 10 years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design for freestanding and composite play equipment: Playworld Systems, Inc., Lewisburg, PA Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

B. Comparable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Landscape Structures, Inc., Delano, Minnesota
2. Playground Equipment.com, Greenfield, Indiana
3. GameTime, Inc., Fort Payne, Alabama
4. Little Tikes Commercial Play Systems, Inc., Monett, Missouri
5. Miracle Recreation Equipment Co.; a division of PlayPower, Inc., Monett, Missouri
6. Columbia Cascade, Portland, Oregon
7. Play & Park Structures, Chattanooga Tennessee

2.02 PLAYGROUND EQUIPMENT, GENERAL

A. Colors: As selected by Architect from manufacturer’s full range.

2.03 MATERIALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and to comply with performance requirements for structural aluminum; mill finish or decorative baked-enamel powder-coat finish.
1. Extruded Bars, Profiles, and Tubes: ASTM B 221.
   a. Tubing: Minimum yield strength of 35,000 lbf/sq. in. and minimum tensile strength of 38,000 lbf/sq. in.
2. Cast Aluminum: ASTM B 179.

B. Steel: Comply with the following:
1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M, hot-dip galvanized.
2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53 or electric-resistance-welded pipe complying with ASTM A 135, with a minimum yield strength of 30,000 lbf/sq. in.; hot-dip galvanized internally and externally.

3. Steel Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513 or steel tubing fabricated from steel complying with ASTM A 569/A 569M and complying with the dimensional tolerances in ASTM A 500; with a minimum yield strength of 40,000 lbf/sq. in. and a minimum tensile strength of 45,000 lbf/sq. in.; zinc coated internally and externally.
4. Steel Sheet: Commercial steel sheet complying with ASTM A 569/A 569M.
5. Galvanized Steel Sheet: Commercial steel sheet, hot-dip galvanized, complying with ASTM A 653/A 653M for not less than G60 coating designation; mill phosphatized.
6. Perforated Metal: From steel sheet not less than 0.0897-inch nominal thickness in manufacturer's standard perforation pattern.
7. Expanded Metal: Not acceptable.

C. 100 Percent Recycled Structural Plastic: All RSP components must comply with ASTM F1487.12 for structural integrity. Composite: 95 percent high density polyethelyne (HDPE), 4 percent polypropylene, .25 percent recyclostabilizer additive, .25 percent UV protectant additive. Structural bend resistance rate shall meet a maximum deflection rate of 1/240. Structural members shall meet a stress level of 2610.00 psi.

D. Stainless-Steel Sheet: Type 304, complying with ASTM A 240/A 240M or ASTM A 666; cold rolled and finished on exposed faces with No. 2B finish.

E. Opaque Plastic: Color impregnated, UV stabilized, and mold resistant.
1. Polyethylene: Fabricated from virgin plastic resin; rotationally molded LLDPE or MDPE with not less than 1/4-inch wall thickness or molded HDPE.
2. Recycled Polyethylene: Fabricated from not less than 96 percent recycled, purified, fractional-melt plastic resin for not less than 90 percent recycled postconsumer waste by weight content HDPE.

F. Transparent Plastic: Clear, colorless abrasion-resistant, UV-stabilized monolithic polycarbonate sheet, not less than 3/16 inch thick.

G. Swing Chain and Fittings: 4/0 or 5/0, welded-straight-link coil chain complying with ASTM A 467/A 467M, Class CS. PVC color coated with colors as selected by Architect from manufacturer's full range. With commercial-quality, hot-dip galvanized steel connectors and swing or ring hangars.

H. Post Caps: Cast aluminum or color-impregnated, UV-stabilized, mold-resistant polyethylene or polypropylene; color to match posts.

I. Platform Clamps and Hangers: Cast aluminum or not less than 0.105 inch nominal thickness, zinc-plated steel.

J. Hardware: Manufacturer’s standard, commercial-quality, corrosion-resistant, hot-dip galvanized steel and iron, stainless steel, or aluminum; secure, vandal-resistant design.
1. All hardware shall be assembled such that no protrusion hazards or sharp edges exist.

K. Fasteners: Manufacturer’s standard, corrosion-resistant, hot-dip galvanized or plated steel and iron, or stainless steel; permanently capped; theft resistant.

L. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate, Size No. 57, with 100 percent passing 1-1/2 inch sieve and not more than 5 percent passing No. 8 sieve.

M. Galvanizing: Where indicated for steel and iron components, provide the following protective zinc coating applied to components after fabrication.
   1. Hot-Dip Galvanizing: According to ASTM A 123/A 123M, ASTM A 153/A 153M, or ASTM A 924/A 924M.

N. Paint and PVC-Coat Finish: Comply with 16 CFR 1303 for limiting lead in paint.

2.04 FABRICATION

A. General: Provide sizes, strengths, thicknesses, wall thickness, and weights of components as indicated but not less than required to comply with structural performance and other requirements in ASTM F 1487. Factory drill components for field assembly. Unnecessary holes in components, not required for field assembly, are not permitted. Provide complete play structure, including supporting members and connections, means of access and egress, designated play surfaces, barriers, guardrails, handrails, handholds, and other components indicated or required to comply with referenced standards for equipment indicated.
   1. Composite Play Structure: Provide complete play structure, designed to be modular, linked, and expandable, forming one integral unit for more than one play activity.

B. Frame: Fabricate main-frame upright support posts from pipe or tubing with cross-section profile and dimensions as indicated in the Playground Equipment Schedule. Fabricate secondary frame members, bracing, and connections from either steel, aluminum, or structural plastic. Unless otherwise indicated, provide each pipe or tubing main-frame member with manufacturer's standard drainable bottom plate or support flange.

C. Wood frame is not an acceptable alternative for structural, play, or platform components.

D. Rung Ladders, Stepladders, Stairways, Ramps, Step Platforms, and Transfer Points: Provide complete means of access and egress, with evenly spaced treads and rungs, easily grasped handholds, and slip-resistant foot surfaces; fabricated from manufacturer's standard materials complying with requirements indicated and compatible with frame and play surfaces. Provide closed risers and protective barriers if indicated or required by referenced standard[s]. Comply with the following:
   1. Maximum Stairway Slope: Less than 35 degree incline.

E. Play Surfaces: Provide elevated decks, platforms, landings, walkways, ramps, and similar transitional play surfaces, designed and framed to withstand loads and allowing for drainage; fabricated from [steel expanded metal welded to welded steel frame] [perforated steel sheet with roll-formed edges] [perforated steel sheet reinforced by steel strip welded to underside, with roll-formed edges] steel frame].Fabricate units in manufacturer's standard modular sizes and shapes, to form assembled play surfaces of dimensions indicated on Drawings.
   1. Elevated Play Surfaces: Provide protective devices, completely surrounding play surface except for access openings, on all decks exceeding 20 inches in height above protective surfacing.
   2. Stepped Play Surfaces: Provide protective infill between all stepped platforms according to referenced standards and where indicated on Drawings.

F. Protective Barriers: Fabricated from [welded metal pipe or tubing with vertical bars, unless otherwise noted on Drawings] [sheet steel with openings for vision and ventilation] [metal-pipe or -tubing-framed, welded wire] [solid-plastic panels] [plastic panels with openings for vision and ventilation] [plastic panels with flat, circular window made from transparent plastic] [plastic panels with circular, three-dimensional bubble window made from transparent plastic] [vertical recycled polymer rails] and fabricated with any openings within the barrier and between the barrier and the play surface precluding passage of the torso probe according to CPSC No. 325. Provide barriers designed to minimize the possibility of climbing, free of hand and footholds, and configured to

completely surround the protected area except for access openings. Extend barriers to the following height above the protected elevated surface for use by age group indicated:
1. Two through Five Years: Top surfaces not less than 29 inches high.
2. Five through Twelve Years: Top surface not less than 38 inches high.

G. Guardrails: Provide guardrails configured to completely surround the protected area except for access openings. Extend guardrails over the following expanse above the protected elevated surface for use by age group indicated:
1. Two through Five Years: Top surface at not less than 29 inches and lower edge at not more than 23 inches.
2. Five through Twelve Years: Top surface at not less than 38 inches and lower edge at not more than 28 inches.

H. Handrails: OD between 0.095 to 1.55 inches. Provide handrails at height between the following dimensions for use by age group indicated:
1. Two through Five Years: 22 to 26 inches.
2. Five through Twelve Years: 22 to 38 inches.

I. Structural Plastic Panels, Tubes, Tunnels and Slide Chutes: Opaque plastic, unless transparent plastic is indicated.

J. Swing Seats: Fabricated from flexible molded EPDM or plastic, encapsulating a slash-resistant metal insert, securely attached at each end to [galvanized steel] [stainless-steel] end plates with galvanized steel fittings for attaching chains. Provide seat cushioned with soft edges, in style indicated, designed to accommodate one child at a time.

K. Equipment for Users Two through Five Years Old: Comply with the following:
1. Infant/Tot Swing Seats: Provide encircling, full-bucket-type swing seats designed to support a child on all sides with no danger of strangulation or entrapment when tested according to ASTM F 1487. Provide chains and fittings or other means to suspend seat so the underside of the occupied seat is no less than 24 inches above protective surfacing.
2. Swings: Design single-axis swings with pivot points for suspended swing seats at no greater than 8 feet above protective surfacing.
3. Overhead Fixed Horizontal Equipment: Design equipment with horizontal members spaced apart no more than 12 inches o.c.

L. Climbing Ropes, Cables, and Chains: Designed to be secured at both ends so length cannot be looped back on itself creating a loop with an inside perimeter greater than 5 inches. Ropes, cables, and chains with length 7 inches or less may be attached at one end only.

M. Flexible Climbers: Designed to securely connect flexible-climber components used as access to other components at both ends. For components with one end connected to ground level, provide flexible climbers designed with the anchoring connection to ground placed beneath the base of protective surfacing.

N. Steel and Iron Components: Galvanized, galvanized and color coated, or color coated. Bare metal steel or iron components are not permitted.
1. Color-Coated Pipe and Tubing for Main Frame: Galvanized before applying baked-enamel powder coating.
2. Play Surfaces: PVC- or baked-polyester-enamel powder-coated steel.
3. Color-Coated Pipe and Tubing for Component Frames: PVC-coat or baked-enamel powder coat applied to steel or galvanized steel.

2.05 CAST-IN-PLACE CONCRETE

A. Concrete Materials and Properties: Provide one of the following:

1. Comply with requirements in ACI 301 to produce normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3000 psi, 3 inch slump, and 1 inch maximum size aggregate.
2. Dry-packaged concrete mix complying with ASTM C 387 and mixed at the site and potable water, according to manufacturer’s written instructions, to produce normal-weight concrete with a minimum 28-day compressive strength of 3000 psi, 3 inch slump, and 1 inch maximum size aggregate.

2.06 METAL FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating metal finishes.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.07 ALUMINUM FINISHES

A. Baked-Enamel Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness of 3 to 5 mils.

2.08 STEEL AND GALVANIZED STEEL FINISHES

A. Baked-Enamel Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness of 3 to 5 mils.

B. PVC Finish: Manufacturer's standard, UV-stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish, with flame retardant added, complying with coating manufacturer's written instructions for pretreatment, application, and minimum dry film thickness of 80 mils.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, site surface and subgrade drainage, and other conditions affecting performance.
1. Do not begin installation before final grading required for placing protective surfacing is completed, unless otherwise permitted by Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Verify locations of playground perimeter and pathways. Verify that playground layout and equipment locations comply with requirements for each type and component of equipment. Verify depth/thickness for all surfaces, finished grade, subbase, base, and finished elevations.

3.03 INSTALLATION, GENERAL

A. General: Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated on Shop Drawings.
   1. Maximum Equipment Height: Coordinate installed heights of equipment and components with installation of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.
   2. Install items in strict accordance with the manufacturer's written instructions and as indicated on the Drawings.
   3. There shall be no exposed bolt ends more than 2 threads, sharp edges, or protruding points remaining on any post or surface which could be accessible to children.

B. Post and Footing Excavation: Hand-excavate holes for posts and footings to dimensions, profile, spacing, and in locations indicated on Drawings, in firm, undisturbed or compacted subgrade soil. Level bearing surfaces with drainage fill to required elevation.
   1. General: Concrete footings are to be minimum 6 inches or as noted below resilient surface ("soft surface" – see Drawings). Coordinate installation of inserts with cast-in-place concrete work.

C. Post Setting: Set main-frame equipment posts in concrete footing. Protect portion of posts above footing from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Verify that posts are set plumb or at the correct angle and are aligned and at the correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.
   1. Concrete Footings: Smooth top and shape to shed water.
   2. Coordinate depth of post with fall height requirements. Manufacturer shall indicate correct depth with a sticker or mark on the post. This shall indicate correct depth of play surfaces.

3.04 FIELD QUALITY CONTROL

A. Arrange for playground equipment manufacturer's technical personnel to inspect playground and playground equipment and components at final completion and to certify compliance with the following:
   1. CPSC No. 325.

B. Notify CM, Architect, and Owner 48 hours in advance of date and time of final inspection.

3.05 ADJUSTING

A. Adjust movable playground equipment components to operate smoothly, easily, and quietly, free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range.

3.06 CLEANING

A. After completing playground equipment installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION 11 68 13

SECTION 12 93 00 - SITE IMPROVEMENTS AND AMENITIES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The provisions of the General Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section as though bound herein.

1.02 SUMMARY

A. Section Includes: Site improvements and amenities, including the following.
   1. Flagpole, ground set
   2. Post and panel signs (Site Signage)
      a. Non-illuminated, hollow-box-type.
   3. Traffic control signage
   4. Benches, trash receptacles
   5. Exterior barrier posts

B. Related Sections:
   1. Section 31 2000 – Earth Moving: For excavation for installation of concrete footings.
   2. Section 033000 – Cast-in-Place Concrete: For building identification signage foundation and other footings and miscellaneous concrete required.
   3. Section 099114 – Paints.

1.03 SYSTEM DESCRIPTION

A. Accessibility Requirements: Provide site improvements to conform to the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and State and Local Regulations. These requirements supersede Technical Specifications in this Section.

B. Structural Performance:
   1. Provide flagpole assemblies, including anchorages and supports, capable of withstanding the affects of wind loads, determined according to NAAMM FP 1001, “Guide Specifications for Design of Metal Flagpoles”.
      a. Base flagpole design or polyester flags of maximum size suitable for use with flagpole or flag size indicated, whichever is more stringent.
      b. Basic Wind Speed: 90 mph minimum; 3-second gust speed at 33 feet aboveground, unless otherwise noted as a greater wind speed.
   2. Post and panel signs capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, determined according to ASCE 7, “Minimum Design Loads for Buildings and Other Structures”.
      a. Wind Loads: 90 mph, unless otherwise noted.
   3. Provide exterior directories capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
      a. Wind Loads: Determine loads based on the following minimum design wind pressures:
         1) Uniform pressure as indicated on Drawings.

C. Thermal Movements: Provide exterior directories that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation of surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F., ambient; 180 deg F., material surfaces.

1.04 SUBMITTALS

A. Shop Drawings: For items included in this Section. Include types of materials, construction details, sizes and layout, and complete information on hardware and accessories.
   1. Exterior traffic control signage drawings shall be to scale.
   2. Include message list, with details of wording and lettering layout, at least half-size. Include full-size details of graphics.
   3. Include details of foundation system.
   4. Wiring Diagrams: Power, signal, and control wiring for illuminated units.

B. Samples for Initial Selection: For each painted item, submit manufacturer's standard color chart.

C. Quality Assurance/Control Submittals
   1. Product Data: Submit manufacturer's current product literature for each manufactured product specified herein.
   2. Material Certificates: For site and street furnishings, signed by manufacturers.
      a. Recycled plastic.
   3. Structural Calculations: For flagpoles indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Closeout Submittals
   1. Maintenance Data: For site and street furnishings and directions to include in maintenance manuals.

1.05 QUALITY ASSURANCE

A. Preliminary Coordination Conference: As soon as possible after award of site improvement work, meet with Installer, and installers of substrate construction, and other related work including penetrating work, Architect and Owner.
   1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, and proposed installation procedures.

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.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General: Spiral-wrap flagpoles with heavy paper and enclosed in a hard fiber tube or other protective container.
   1. Pending installation, store flagpoles in area protected from weather, moisture, and damage, as recommended by pole manufacturer.

B. Deliver post and panel signs, benches and tables in protective covering and crating to protect sign components and surfaces against damage.

1.07 SEQUENCING

A. Coordinate installation of anchorage. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and such items with integral anchors that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.08 MAINTENANCE

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Message Strips: Full-size, blank strips equal to 10 percent of amount installed for each size indicated, but no fewer than 20 strips.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Where a model number is used on the Drawings, it refers to the manufacturer and product listed which is specified as the type, size, function, and quality required for this Project.

B. The Architect will consider for acceptance products of other manufacturers provided they equal or exceed the material requirements and functional qualities of the specified product. The “Substitution Request Form” and complete technical data for evaluation must accompany requests for A/E’s approval. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.02 FLAGPOLE

A. Manufacturers: Subject to compliance with requirements, provide one of the following:
   1. Baartol Co., Lexington Kentucky
   2. Morgan-Francis Flagpoles and Accessories, Muncie Indiana
   3. Pole-Tech Flagpole Manufacturer, East Setauket, New York.
   4. Ewing International Corp., Buffalo, New York.
   5. American Flagpole; Abingdon, Virginia.
   6. Eder Flag Manufacturing Co., Inc., Oak Creek, Wisconsin.
   7. Interstate Pole Industries, Carpinteria, California.

B. Exposed Height: 30 feet, unless otherwise noted.

C. Aluminum Flagpoles: Provide cone-tapered flagpoles fabricated from seamless extruded tubing complying with ASTM B 241, Alloy 6063, with a minimum wall thickness of 3/16 inch. Heat treat after fabrication to comply with ASTM B 597, Temper T6.

D. Foundation Tube: Galvanized corrugated-steel foundation tube, 0.064-inch minimum nominal wall thickness. Provide with 1/4 inch steel bottom plate and support plate; 3/4-inch diameter, steel ground spike; and steel centering wedges all welded together. Galvanize steel parts, including foundation tube, after assembly. Provide loose hardware wedges at top of foundation tube for plumbing pole.
   1. Provide flashing collar of same material and finish as flagpole.
   2. Overall length of embedded ground-set poles to provide setting depth of not less than 10 percent of exposed length.

E. Fittings
   1. Finial Ball: Manufacturer’s standard flush-seam ball, sized as indicated or, if not indicated, to match flagpole-butt diameter.
      a. Finish: To match pole, unless otherwise noted.

F. External Halyard: Ball-bearing, nonfouling, revolving truck assembly of cast metal with continuous 5/16 inch diameter, braided polypropylene halyard and 9 inch cast-metal cleats with fasteners. Finish exposed metal surfaces to match flagpole.
      b. Provide one halyard and one cleat at each flagpole.
      c. Provide cast-metal cleat covers, finished to match flagpole, secured with cylinder locks.
      d. Provide halyard covers consisting of a 2 inch channel, 60 inches long, finished to match flagpole.

F. Finishes
1. Metal Finishes, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
2. Aluminum: Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
a. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: Nonspecular as fabricated; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
1) Color: As selected by Architect from manufacturer's full range.

2.03 SITE SIGNAGE

A. Post and Panel Signs
1. Manufacturers: Subject to compliance with requirements, provide one of the following:
a. ASI Sign Systems, Inc., Indianapolis, Indiana.
b. Innerface Sign Systems, Inc., Liburn, Georgia.
c. Nelson-Harkings Industries, Chicago, Illinois.
d. Essential Architectural Signs Inc., Indianapolis, Indiana.
2. Posts
a. Direct-Burial Method: Provide posts 36 inches longer than height of sign, unless otherwise required to meet structural performance values, to permit direct embedment in concrete foundations.
b. Aluminum Posts: Manufacturers standard minimum 0.125 inch thick, extruded aluminum tubing, with vertical slots to engage sign panels. Provide stop blocks in slots to hold panels in position. Include post caps, fillers, spacers, and related accessories required for complete installation.
1) Rectangular Posts: 2 by 3-1/4 inches, unless otherwise required to meet structural performance values.
3. Hollow-Box-Type Panels: Provide hollow-box-type sign message panels formed from 0.090-inch thick aluminum sheet with ends flanged to engage slots in posts or attached to posts with extruded-aluminum fittings. Close top and bottom edges of panels with welded seams or extrusions, as standard with manufacturer.
4. High-Performance Organic Coating Finish (Fluoropolymer Two-Coat System): AA-C12C40R1x. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions and AAMA 2605.
a. Color and Gloss: As selected by Architect from manufacturer's full range.
5. Graphic Application: Surface-Applied, Die-Cut Vinyl Copy: Provide die-cut characters from reflective vinyl film with pressure-sensitive adhesive backing. Apply copy to exposed face of sign panel. Color to be white.
6. Typestyle: Helvetica Medium.
7. Installation Method: Permanent concrete foundation with a 36-inch minimum embedment of concrete is to be 6 inches minimum below bottom of post for an overall 42 inch footing depth. Contractor is to install per manufacturers recommendations in the event that the manufacturer requires greater embedment or footing depth.

2.04 TRAFFIC CONTROL SIGNAGE

A. Sign material shall consist of 18-gauge bonderized steel or .063-inch aluminum and .080-inch aluminum for stop, yield, and do not enter signs. Signs shall have white baked enamel surface and screen print copy, symbols and border. Corners shall have 1-inch radius.
   1. U-channel posts in galvanized steel, 10’-0” length, using standard mounting hardware of galvanized steel carriage bolts.

B. Exterior Traffic Control Signage: Refer to Drawings.

C. Exterior "Accessible Parking" Signs: Refer to Drawings.

D. Stop Signs: Refer to Drawings.

2.05 BUILDING IDENTIFICATION SIGNS (DIRECTORIES)

A. Non-Illuminated, Aluminum box sign with reflective surface applied vinyl lettering: Factory-fabricated unit consisting of .125 inch thick fabricated aluminum box sign with removable panels. Surface shall have an exterior polyurethane finish in manufacturers standard colors as selected by the Architect. Two additional panels shall also be supplied by the contractor with wording as noted.

2.06 BENCHES, WOOD BARRIER POSTS, BICYCLE RACKS AND TRASH RECEPTACLES

A. New benches and trash receptacles, as indicated on drawings.
B. Wood barrier posts, as indicated on drawings
C. New bicycle racks, as indicated on drawings

2.07 EXTERIOR BARRIER POSTS

A. Provide standard weight 8 inch diameter steel pipe with hot dip 2.0 ounces per square foot galvanized coating after having been cut to lengths as indicated. Ground mount each post in 18 inch cylinder of air entrained 6 bag mix concrete and afterwards entirely fill with same concrete, neatly rounding top to drain water. See Drawings for detail and locations.

2.09 FABRICATION

A. Metal Components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

C. Pipes and Tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.

D. Steel and Iron Components: Galvanized, galvanized and color coated, or color coated (plastisol). Bare metal steel or iron components are not permitted.

E. Preservative-Treated Wood Components: Complete fabrication of treated items before treatment if possible. If cut after treatment, apply field treatment complying with AWPA M4 to cut surfaces.

F. Exposed Surfaces: Polished, sanded, or otherwise finished; smooth all surfaces, free from burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

G. Factory Assembly: Assemble components in the factory to the greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.08 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Complete field assembly of site and street furnishings, where required.

B. Unless otherwise indicated, install site and street furnishings after landscaping and paving have been completed.

C. Install site and street furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

D. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

E. Posts Set into Voids in Concrete: Form or core-drill holes for installing posts in concrete to depth recommended in writing by manufacturer of site and street furnishings and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with anchoring cement mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

F. Pipe Sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

3.03 INSTALLATION

A. Flagpole Installation
   1. Preparation
      a. Prepare uncoated metal flagpoles that are set in foundation tubes by painting below-grade portions with a heavy coat of bituminous paint.

b. Foundation Excavation: Excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete.

c. Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure and brace forms and foundation tube, sleeve, or anchor bolts in position, to prevent displacement during concreting.

d. Place concrete immediately after mixing. Compact concrete in place by using vibrators. Moist-cure exposed concrete for not less than seven days or use nonstaining clear curing compound.

e. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks, and uniform in texture and appearance. Provide positive slope for water runoff to perimeter of concrete base.

2. Installation: Install flagpoles where shown and according to Shop Drawings and manufacturer's written instructions.

a. Foundation-Tube Installation: Install flagpole tube, seated on bottom plate between steel centering wedges. Plumb flagpole and install hardwood wedges to secure flagpole in place. Place and compact sand in foundation tube and remove hardwood wedges. Seal top of foundation tube with a 2-inch layer of elastomeric joint sealant and cover with flashing collar.

1) Provide proper lighting ground for each flagpole, if required.

B. Post and panel signs, exterior accessible parking signs, stop signs, traffic control signage, and building identification signs to be installed in strict accordance with Drawings.

1. Excavation: In firm, undisturbed or compacted soil, drill or (using a post-hole digger) hand-excavate holes for each post to minimum diameter recommended by sign manufacturer, but at least four times the largest post cross-section.

a. Excavate hole depths minimum 39 inches below finished grade.

2. Setting Posts: Center and align posts in holes 3 inches above bottom of excavation.

a. Protect portion of posts above ground from concrete splatter. Place concrete and vibrate or tamp for consolidation. Check posts for alignment and hold in position until concrete has achieved its initial set.

3. Install signs level, plumb, and at height indicated, with surfaces free from distortion or other defects in appearance.

C. Install accessible parking signs and traffic control signage in accordance with manufacturer's recommendations and as indicated.

D. Install new benches and trash receptacles in strict accordance with manufacturer's recommendations and as indicated.

E. Installing Exterior Barrier Posts

1. Anchor exterior barrier posts with one of the following methods or as indicated:

a. Anchor exterior barrier posts in concrete in formed or core-drilled holes not less than 8 inches deep and 3/4 inch greater than OD of bollard. After bollards have been inserted into holes, fill annular space surrounding bollard solidly with nonshrink, nonmetallic grout, mixed and placed to comply with grout manufactured written instructions. Slope grout up approximately 1/8 inch toward bollard.

2. Fill exterior barrier post solidly with concrete, mounding top surface.

3.04 CLEANING

A. After completing site and street furnishing installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION 12 93 00

SECTION 260913 - ELECTRICAL POWER MONITORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Multifunction energy meters.
2. Power meters.
3. Panelboard based branch circuit meters.
4. Panel server (energy hub / server)
5. Power monitoring and control software.
6. Network configuration software.
7. Monitoring and control of power distribution equipment.
8. System operator interfaces.
9. Wires and cables.
10. Surge protection devices.

B. Related Requirements:

1. Section 26 24 13 Switchboards
2. Section 26 24 16 Panelboards

1.2 DEFINITIONS

A. Active Power: The average power consumed by a unit. Also known as "real power."

B. Analog: A continuously varying signal value, such as current, flow, pressure, or temperature.

C. Apparent (Phasor) Power: "S = VI" where "S" is the apparent power, "V" is the RMS value of the voltage, and "I" is the RMS value of the current.

D. Firmware: Software (programs or data) that has been written onto read-only memory (ROM). Firmware is a combination of software and hardware. Storage media with ROMs that have data or programs recorded on them are firmware.

E. KY Pulse: A method of measuring consumption of electricity that is based on a relay operating like a SPST switch.

F. KYZ Pulse: A method of measuring consumption of electricity based on a relay operating like a SPDT switch.

G. L-G: Line to ground.

H. L-L: Line to line.

I. L-N: Line to neutral.

J. MODBUS TCP/IP: An open protocol for exchange of process data.

K. Monitoring: Acquisition, processing, communication, and display of equipment status data, metered electrical parameter values, power quality evaluation data, event and alarm signals, tabulated reports, and event logs.

L. N-G: Neutral to ground.

M. Power Factor: The ratio of active power to apparent power, sometimes expressed in percentage.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Multifunction energy meters.
2. Power meters.
3. Panelboard based branch circuit metering.
4. Panel server (energy hub / server)
5. Circuit meters and monitors.
6. Circuit meter and explorer.
7. Power monitoring and control software.
8. Network configuration software.
9. Monitoring and control of power distribution equipment.
10. System operator interfaces.
11. Wires and cables.
12. Surge protection devices.

B. Shop Drawings: For power monitoring and control equipment.

1. Include plans, elevations, sections, and attachment details.
2. Include details of equipment assemblies. Indicate dimensions, method of field assembly, components, and location and size of each field connection.

    a. Attach copies of approved Product Data submittals for products (such as switchboards, switchgear, and motor-control centers) that describe the following:

        1) Location of the meters and gateways, and routing of the connecting wiring.
        2) Details of power monitoring and control features to illustrate coordination among related equipment and power monitoring and control.

3. Block Diagram: Show interconnections between components specified in this Section and devices furnished with power distribution system components. Indicate data communication paths and identify networks, data buses, data gateways, concentrators, and other devices to be used. Describe characteristics

of network and other data communication lines.
4. Network naming and numbering scheme.
5. Include diagrams for power, signal, and control wiring. Coordinate nomenclature and presentation with a block diagram.
6. Specifications for workstations.
7. UPS sizing calculations for workstation.
8. Surge Suppressors: Data for each device used and where applied.

1.4 INFORMATIONAL SUBMITTALS

A. Commissioning plan including signoff from commissioning agent and Construction Manager.

B. Field quality-control reports.

C. Design Data:

1. Manufacturer's system installation and setup guides, with data forms to plan and record options and setup decisions.

a. Project Record Drawings of as-built versions of submittal Shop Drawings provided in electronic PDF format on compact disk or portable storage device with a USB interface.
b. Testing and commissioning reports and checklists of completed final versions of reports, checklists, and trend logs.
c. As-built versions of submittal Product Data.
d. Names, addresses, e-mail addresses, and 24-hour telephone numbers of Installer and service representatives for the system and products.
e. Operator's manual with procedures for operating control systems including logging on and off, handling alarms, producing point reports, trending data, overriding computer control, and changing set points and variables.
f. Programming manuals with description of programming language and syntax, of statements for algorithms and calculations used, of point database creation and modification, of program creation and modification, and of editor use.
g. Engineering, installation, and maintenance manuals that explain how to do the following:

1) Design and install new points, panels, and other hardware.
2) Perform preventive maintenance and calibration.
3) Debug hardware problems.
4) Repair or replace hardware.

h. Documentation of programs created using custom programming language including set points, tuning parameters, and object database.
i. Backup copy of graphic files, programs, and database on compact disk or portable storage device with a USB interface.
j. Complete original-issue documentation, installation, and maintenance information for furnished third-party hardware including computer equipment and sensors.

k. Complete original-issue copies of furnished software, including operating systems, custom programming language, workstation software, and graphics software on compact disk or portable storage device with a USB interface.
l. Recommended preventive maintenance procedures for system components, including schedule of tasks such as inspection, cleaning, and calibration; time between tasks; and task descriptions.
m. Owner training materials.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Provide minimum spare parts recommended by manufacturer.
2. Fuses: One set of each type of power and control fuse installed within equipment.
3. Package and mark spare parts for long-term storage. Provide separate anti-static containers for printed circuit boards.

B. Tools: Manufacturer-specific special tools required to install, remove, test, and maintain metering components.

1. Equipment Configuration Software: PC-based application; provide one of each different communication interface cable required to connect computer/device configuration and programming.
2. Equipment Configuration Files: For future upload into replaced/repaired components, in media format acceptable by Owner.

1.6 COORDINATION

A. Coordinate features of distribution equipment and power monitoring and control components to form an integrated interconnection of compatible components.

1. Match components and interconnections for optimum performance of specified functions.

B. Coordinate Work of this Section with those in Sections specifying distribution components that are monitored or controlled by power monitoring and control equipment.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. Microprocessor-based monitoring and control of electrical power distribution system(s) that includes the following:

1. Metering to validate and monitor the production of rooftop solar as well as validate and monitor the consumption of energy by various load types as defined further in this section. Metering shall be configured as directed by Owner or his agent for practical review of energy consumption and to verify utility charges and credits.
2. Metering system shall be a unified system from one manufacturer with independent meters as well as branch panel circuit based metering (noted as “Intelligent Panelboards” in the documents. System shall be capable of reporting, tracking, and displaying energy consumption and production data in an easy to read format.
3. Electrical meters that monitor, control, and connect to the data transmission network.
4. LAN: High-speed, multi-access, open, nonproprietary, industry-standard communication protocols.
5. System software must be based on server thin-client architecture, designed around open standards of internet technology.
6. Intent of thin-client architecture is to provide operators complete access to power monitoring and control system via an Internet browser. No special software other than an Internet browser must be required to access graphics, point displays, and trends; to configure trends, points, and controllers; and to edit programming.
7. Internet access must be password protected.

B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with UL 61010-1 and marked for intended location and application.

2.2 PERFORMANCE REQUIREMENTS

A. Surge Protection: For external wiring of each conductor entry connection to components to protect components from voltage surges originating external to equipment housing and entering through power, communication, signal, control, or sensing leads.

1. Minimum Protection for Power Lines 120 V and More: SPDs complying with UL 1449, listed and labeled for intended use by an NRTL acceptable to authorities having jurisdiction.
2. Minimum Protection for Communication, Signal, Control, and Low-Voltage Power Lines: Comply with requirements as recommended by manufacturer for type of line being protected.

B. Addressable Devices: Transmitters and receivers must communicate unique device identification and status reports to monitoring and control clients.

C. Interface with DDC System for HVAC: Provide factory-installed hardware and software to enable the DDC system for HVAC to monitor, display, and record data for use in processing reports.

1. Hardwired Monitoring Points: Electrical power demand (kilowatts), electrical power consumption (kilowatt-hours)**,** power factor.

D. Backup Power Source:

1. Electrical power distribution equipment served by a backup power source for controls must have associated power monitoring and control system products that monitor and control such systems and equipment also served from a backup power source.

2.3 MULTIFUNCTION ENERGY METER, SWITCHBOARD “MSB” – METER ‘DM’

A. Basis-of-Design Product: Subject to compliance with requirements, provide Square D PM5563 or comparable product by one of the following:

1. Eaton
2. Leviton Manufacturing Co., Inc.
3. Siemens

B. Capable of monitoring for network management, energy cost management, energy allocation, and operational efficiency.

C. Construction:

1. Form Factor: 1/4 DIN with cut-out of 3.6 by 3.6 inches (92 by 92 mm) and panel-mount integrated display of 3.8 by 3.8 inches (96 by 96 mm).
2. Capable of mounting in enclosure panel/door without tools.
3. Provide removable connectors for voltage inputs, control power, communications, and auxiliary inputs/outputs.

D. Voltage and Current Inputs:

1. Support direct connection of low-voltage circuits up to 600 VAC without requiring voltage (potential) transformers.
2. Provide four metered 5 A nominal current inputs for 3-phase measurement plus neutral.

E. Control Power: 100-480 VAC/125-250 VDC

F. Measured and Calculated Metering Parameters: Support full range of 3-phase voltage, current, power, and energy measurements, power factor, frequency, total harmonic distortion (THD), and individual power harmonics readings (up to 63rd order).

G. Measurement Accuracy:

1. Provide four-quadrant metering and sample current/voltage simultaneously without gaps with 64 samples per cycle (zero blind).
2. ANSI C12.20; Class 0.2.
3. IEC 61557-12; Class 0.2.

H. Display:

1. Provide backlit dot-matrix LCD, anti-glare and scratch resistant with minimum of 128 by 128 pixels.
2. Capable of displaying four values per screen.

3. Provide summary screen to view snapshot of system.
4. Support integrated or remote display.

I. Input/Outputs:

1. Support four digital inputs for demand sync pulse, time sync input, and conditional energy control.
2. Provide two digital outputs that operate by user command sent over communication link or in response to user-defined alarm/event.
3. Provide four digital inputs configurable for input metering with on-board pulse weight calculation and conversion to standard units for external water, air, gas, electrical, or steam (WAGES) meters.

L. Communications:

1. Support serial RS485 Modbus, Ethernet Modbus TCP, Ethernet BACnet IP (BTL listed), DNP over Ethernet, and Ethernet IP.
2. Provide two Ethernet ports for daisy-chain wiring from meter to meter.
3. Support serving data over Ethernet network accessible through web browser with default pages from factory.
4. Support upgradeable firmware to enhance functionality through Ethernet or serial communication connection for upgrades of individual meters or groups.
5. Provide integrated gateway functionality to enable connection via Ethernet to downstream, serially connected devices.

M. Onboard Logging:

1. Provide capability to log data, alarms, and events, including data logs, minimum/maximum log files of selected parameter values, and alarm logs for each user-defined alarm/event.
2. Nonvolatile Memory: Support 14 parameters every 15 minutes for 90 days.

N. Alarming:

1. Support 29 setpoint-driven alarms, 4 digital alarms, 4 unary alarms, 10 Boolean alarms and 5 custom alarms.
2. Support user-definable alarm events.
3. Support setpoint-driven alarms for voltage/current parameters, input status, and end-of-interval status.
4. Support generation of email/text message notifications upon alarm condition via simple mail transfer protocol (SMTP).
5. Support management and monitoring of devices on IP network via simple network management protocol (SNMP) with delivery of alarm condition by SNMP traps.

2.4 POWER METERS – SWITCHBOARD “MSB” METERS ‘MK1’, ‘MK2’, ‘ME1’ AND ‘ME2’

A. Basis-of-Design Product: Subject to compliance with requirements, provide Square D EM3570 or comparable product by one of the following:

1. Eaton
2. Leviton Manufacturing Co., Inc.
3. Siemens Industry, Inc., Energy Management Division

B. Capable of monitoring medium-voltage and low-voltage mains for grid revenue, network management, energy cost allocation, power quality analysis, asset management, operational efficiency, and compliance reporting.

C. List as complying with UL 2808 and UL 61010-1; designed in accordance with IEC 61010-2-030.

D. UL 50E Rating:

1. Indoor: Type 1.
2. Outdoor: Type 4X.

E. Voltage and Current Inputs:

1. Provide 3-phase inputs.
2. Provide minimum of three current inputs that support x/0.33 V and x/1.0 V low-voltage current transformers (LVCT) or Rogowski coil-type sensors.
3. Support direct connection of low-voltage circuits up to 600 V without requiring voltage (potential) transformers.
4. Support connection of medium and high-voltage circuits through voltage (potential) transformers, and provide user definable primary and secondary transformer ratios.
5. Provide 5 A nominal current inputs.

F. Measured and Calculated Metering Parameters: Support four-quadrant metering, full range of 3-phase voltage, current, power, and energy measurements, power factor (true and displacement, per phase and three-phase), and demand (minimum/maximum, present demand interval, and peak demand).

G. Measurement Accuracy:

1. ANSI C12.20; Class 0.5.
2. IEC 61557-12; Class 0.5S.

H. Display:

1. Provide backlit LED monochrome, with 126 by 94 pixels.
2. Construction:

    a. Size: 1.7 inches (43 mm) by 1.4 inches (35 mm).
    b. Provide IP40 front and IP20 rear side casing.

3. User-programmable to display up to four parameters per screen.
4. Capable of displaying real time measurement and energy data.

I. Inputs/Outputs:

1. Provide integrated I/O with minimum of two digital inputs and one relay output for equipment status/position monitoring and equipment control/interface with timestamping; user configurable.

J. Communications:

1. Provide dual-port Ethernet that support IPv4 and IPv6 with DHCP IP address assignment and customizable webpage; SNMP network management with traps.
2. Communications Protocols: Modbus TCP/IP and BACnetIP.
3. Capable of self-identification on Ethernet network without device configuration or user interaction.

K. Cybersecurity: Comply with IEC 62443-4-2 Security Level 1 (SL1).

L. Onboard Logging:

1. Provide nonvolatile timestamps with onboard logging of input/output (I/O) conditions, minimum/maximum values, energy and demand, alarms, and measured parameters; capable of logging data for up to three years.
2. Programmable number of records (depth) and overflow conditions (stop-when-full or circular), limited only by available memory.

M. Onboard Web Server: Provide access to real-time values, power quality information, and basic meter configuration through web browser.

N. Alarming:

1. Support setpoint-driven alarming.
2. Timestamp Resolution: One millisecond.

O. Event Log:

1. Provide time-stamped event log.
2. For each event, record date/time, cause/effect, and priority.
3. Record events relating to setpoint activity, relay operation, and self-diagnostics.

2.5 PANELBOARD BASED BRANCH CIRCUIT METERING – FOR PANELBOARDS LISTED HEREIN: 1DH1, 1DL1, 1DH2, 1DL2, 1EH1, 1EL1, 1EL2, 1FH1, 1FL1, 1FL2, 1GH1, 1GL1, 1GL2, 2AH1, 2AL1, 2AH2, 2BH1, 2BL1, 2BH2, 2CH1, 2CL1, 2CH2, XDH1, XAH1, XDL1, SBDH1, SBDL1

A. Basis-of-Design Product: Subject to compliance with requirements, provide Square D HDPM6000 series equipment or comparable product by one of the following:

1. Eaton
2. Leviton
3. Siemens Industry, Inc., Energy Management Division

B. Capable of monitoring multiple circuits for network management, energy cost management, energy allocation, and operational efficiency.

C. Form Factor: DIN rail mounting.

D. Voltage and Current Inputs:

1. Support direct connection of low-voltage circuits up to 480 VAC without requiring voltage (potential) transformers.
2. Provide terminal block for voltage inputs and removable connectors for control power and communications.
3. Provide 250 mV current transformer inputs to support CTs up to 6,000 A.

E. Control Power: Support low-voltage input of 24 VDC or up to 480 VAC/250 VDC through external power supply.

F. Measured and Calculated Metering Parameters:

1. Support full range of 3-phase voltage, current, power, and energy measurements, power factor, frequency, total harmonic distortion (THD), and individual power harmonics readings (up to 63rd order).
2. Branch Circuit and Busway Monitoring: Support up to 192 monitored circuits with current, power, and energy measurements, power factor, frequency, total harmonic distortion (THD), and individual power harmonics (up to 63rd order).

G. Display: 4.3-inch (109 mm), 480x272 resolution or 7-inch (178 mm), 800x480 resolution TFT backlit touch screen; capable of displaying main or branch circuit values.

H. Inputs/Outputs: Support two digital inputs and one digital output.

I. Communications:

1. Support serial RS485 Modbus, Ethernet Modbus TCP, and IPv6.
2. Provide two Ethernet ports for daisy-chain wiring from meter to meter, used as switch or separated ports (one IP address for each); independently controllable to enable/disable or specify protocols.
3. Support network automatic discovery on Ethernet network without requiring user configuration or interaction.
4. Support serving data over Ethernet network accessible through web browser with default pages from factory.
5. Provide native BACnet/IP support, capable of communicating via Modbus TCP/IP and BACnet/IP simultaneously.
6. Provide native SNMP support, capable of communicating via Modbus TCP/IP and SNMP simultaneously.
7. Support upgradeable firmware to enhance functionality through Ethernet connection.

J. Onboard Logging:

1. Support logging nonvolatile event and 20 user-configurable data logs.
2. Provide 8 GB of storage for logged data and waveform captures.

K. Alarming: Provide user-defined alarms for low/high voltage, high current, and tripped

breaker detected.

L. Disturbance Detection: Provide voltage sag and swell detection with waveform capture for both current and voltage channels at 133 samples per cycle.

M. Capable of monitoring branch circuits for network management, energy cost allocation, and compliance reporting.

N. Operating Conditions:

1. Temperature: Between 32 degrees F (0 degrees C) and 140 degrees F (60 degrees C); less than 95 percent RH, noncondensing.
2. Humidity: Less than 95 percent RH noncondensing.

O. Current Transformers:

1. Provide two or four strips of solid-core, tombstone-type CTs mounted to circuit-board-based strips.
2. Calibrate for system accuracy.
3. Connect to main circuit board of meter via standard 50-pin connector ribbon cable up to 20 feet (6 m).
4. Center interval spacings available at 3/4 inches (19 mm), 1 inch (25 mm), and 0.7 inch (18 mm) to align with panelboard branch circuit breakers.
5. Support configuration via free software for stacked (in-line) or parallel panelboards circuits numbered in series or in even/odd configurations.
6. Design to use manufacturer-supplied mounting brackets to accommodate variety of manufacturers' panelboards, power distribution units (PDUs), or remote power panels (RPPs).

P. Voltage and Current Inputs:

1. Models available for reading metered/calculated values for 24, 36, 42, 48, 72, and 84 branch circuits.
2. Provide auxiliary inputs for one or two 3-phase main device(s) and one or two neutral(s).
3. Measurement Input Voltage Range: 90-277 VAC, 50/60 Hz.
4. Overload Capability: 22 kA.

Q. Control Power: 100-277 VAC.

R. Measured and Calculated Metering Parameters:

1. Main Device: Support full range of per phase current, power (kW, kVA), and energy measurements, per-phase demand values, power factor, phase angles, voltages (line-line and line-neutral), current phase angle, and frequency.
2. Branch Circuits: Support full range of per-branch currents, demand, power (kW, kVA), energy, current phase angle, and power factor.

S. Programming Capability:

1. Provide upgradable and field-programmable firmware to support updating the

following configuration parameters via supported protocols (stored in nonvolatile memory):

a. CT configuration and channel numbering.
b. Breaker size used for each channel, alarm thresholds, and delay settings.
c. Logical circuit assignments for multi-phase loads.
d. Channel phase assignments.
e. Settings to enable advanced features.

T. Measurement Accuracy:

1. ANSI C12.1 and IEC 62053-21, Class 1 (at panelboard level), including branch CTs.
2. Measure current with 0.5 percent accuracy, including branch CTs.

2.6 PANEL SERVER (ENERGY SERVER)

A. General Requirements:
1. Form Factor:
a. Compatible with type-O DIN rail.
b. Size: Not greater than 2.83 inches (72 mm) on DIN rail.
c. Provide removable screw connectors or plug-in connectors for easy connection.
d. Provide automatic grounding connection point through DIN rail.
2. Communications:
a. Provide two Ethernet ports capable of bridging or isolating networks; support DHCP or static IP addressing.
b. Support Modbus serial communications with 4-pin screw connector.
c. Wi-Fi:
1. Comply with IEEE 802.11.
2. Support configuration as access point without infrastructure for setup or by connecting through Wi-Fi network for monitoring.
3. Support configuration as Wi-Fi device capable of connecting through Wi-Fi network to monitoring system.
d. Zigbee Wireless Communication:
1. Comply with IEEE 802.15.4.
2. Encryption: AES 128-bit CCM using star topology.
3. Provide limited isotropic radiated power up to 0 dBm/1mW to prevent undesired radio emissions.
4. Support communication with up to 100 wireless devices.
e. Capable of serving as Modbus serial to Modbus TCP/IP gateway for connected software.
f. Capable of acting as solution/services enabler for local or remote energy/asset management systems.
g. Support multiple concurrent connections and up to 64 concurrent TCP sessions.
3. Cybersecurity:
a. Designed through secure development lifecycle in accordance with IEC 62443-4-1.

b. Support user passwords stored encrypted, requiring password containing letters, numbers, and special characters for gateway in operation phase.
c. Provide unique device genuineness certificate from manufacturer, stored in EAL6+ certified security controller.
d. Provide access to login page using HTTPS protocol.
e. Provide capability to install web server certificates.
f. Only accept signed firmware from manufacturer.
g. Provide option to disable wireless connections, ports, or protocols not used.

4. Alarming:
   a. Support customizable thresholds for alarms for electrical and environmental measurements.
   b. Support user notifications of alerts and alarms via email.
5. Configuration:
   a. Support backup-up/restore of settings and commissioning for multiple devices using configuration software.
   b. Settings accessible through onboard web pages.
   c. Support Devices Profile for Web Services (DPWS) with discovery and identification web services.
   d. Support automatic discovery of wireless devices and custom labeling/identification for each wireless monitoring device.
6. Troubleshooting:
   a. Provide visible indicator on front face to indicate nominal operation, minor malfunction requiring service, or major malfunction requiring replacement.
   b. Detect and report device communication loss, CPU overuse, and memory overuse.
   c. Log internal diagnostics events for troubleshooting.
   d. Provide embedded webpages for diagnostics and troubleshooting.

B. Panel Servers:
1. Models available to operate on wide range of power supplies:
   a. 110 to 277 VAC/VDC.
   b. 24 VDC.
2. 24 VDC Models: Provide two digital inputs complying with IEC 62052-11.
3. Provide embedded web pages for real-time information monitoring and alarm display for connected devices by usage.
4. Data Logging: Comply with IEC 62974-1.
5. Products:
   a. Schneider Electric; EcoStruxure Site Server.

2.6 NETWORKED PC OPERATING SYSTEM SOFTWARE – ENERGY HUB

A. Description: System software must monitor, analyze, display, control, and save parameters and features available at each of the connected meters.

B. Software: Configured to run on a single PC, with capability for accessing multiple devices simultaneously. Software must include interactive graphics client and must be web enabled.

C. System Software Minimum Requirements:

1. Real-time multitasking and multiuser 64-bit operating system that allows concurrent multiple workstations operating and concurrent execution of multiple real-time programs and custom program development.
2. Operating system must be capable of operating Microsoft Windows applications.
3. Database management software must manage data on an integrated and non-redundant basis. Additions and deletions to database must be without detriment to existing data. Include cross linkages so no data required by a program can be deleted by an operator until that data have been deleted from respective programs.
4. Scheduling software must schedule centrally based time and event, temporary, and exception day programs.

D. Operator Interface Software:

1. Minimize operator training through use of English language prorating and English language point identification.
2. Minimize use of a typewriter-style keyboard through use of a pointing device, touchscreen, or mouse.
3. Operator sign-off must be a manual operation or, if no keyboard or mouse activity takes place, an automatic sign-off.
4. Automatic sign-off period must be programmable from 1 to 60 minutes in 1-minute increments on a per operator basis.
5. Record operator sign-on and sign-off activity.
6. Security Access:

    a. Operator access to electrical monitoring and control system must be under password control.
    b. An alphanumeric password must be user assignable to each operator.
    c. Software must have at least five access levels.

        1) View - View information. No change privileges allowed.
        2) User - Same as View, but is able to initiate control functions.
        3) Controller - Same as User, but is able to initiate communications.
        4) Operator - Same as Controller, but is able to modify configurations.
        5) Supervisor - Same as Operator, but is able to administer security privileges.

    d. Each menu item must be assigned an access level so that a one-for-one correspondence between operator-assigned access level(s) and menu-item access level(s) is required to gain access to menu item.
    e. Display menu items to operator with those menu items capable of access highlighted. Menu and operator access level assignments must be online programmable and under password control.

E. Graphic Interface Software:

1. Include a full interactive graphical selection means of accessing and displaying system data to operator.
2. Descriptors for graphics, points, alarms, and such must be modified through workstation under password control.
3. Display operator accessed data on the monitor.

4. Help Features: On-line context-sensitive help utility to facilitate operator training and understanding.
5. **Provide dashboards for public display of energy produced, consumed, and other system attributes as may be determined by Owner. Provide at least three pages for rotating information on public display, such as amount of energy generated last month, last year, how it relates to reduction in CO2 emissions, what the building is using monthly and annually for the various categories of loads (ie. lighting, plug loads, mechanical heating / cooling, plumbing, kitchen and elevator loads). Coordinate dashboard graphics with Architect and Owner and provide sample slides for review prior to programming.**

2.7 POWER MONITORING AND CONTROL SOFTWARE

A. Data Storage and Data Sharing:

1. Query and download logs of interval data stored on metering devices.
2. Query and download logs of alarm and event data stored on metering devices.
3. Query and download logs of waveform capture data stored on metering devices.
4. Query and download logs of interval data generated by the software and calculated by the meters.
5. Query and download logs of alarm and event data generated by the software and calculated by the meters.
6. Automatically re-arm the waveform recorders, on upload of information.
7. Provide a facility to archive, trim, and back up the database on demand, or on a schedule.
8. Provide a facility to view historical data from archived databases.
9. Support user changes to the database.

    a. Support on-line changes while the data storage/retrieval application is running.
    b. Suffer no interruption to its operation while changes are being made.
    c. Require no restart once the configuration has been performed.

B. Project-Specific Graphics: Graphics documentation including, but not limited to, the following:

1. Site plan showing each building, and additional site elements, which are being controlled or monitored by the electrical power monitoring and control system.
2. Plan for each building floor, showing the following:

    a. Locations and identification of monitored and controlled electrical equipment.

3. Control schematic for each device that is controlled by the meters of this Section, including a graphic system schematic representation, similar to that indicated on Drawings, with device identification.
4. Graphic display for each piece of equipment connected to the electrical monitoring and control system through a data link.
5. Electrical power monitoring and control system network riser diagram that shows

schematic layout for entire system including meters, gateways and other network devices.

2.8 NETWORK CONFIGURATION SOFTWARE

A. Network Management Graphical Interface Features:

1. Add and remove devices in the power monitoring and control network.
2. Application for naming devices based on a user-defined naming scheme.
3. Add and remove I/O servers in the power monitoring and control network.
4. Edit communication properties for devices including timeouts and delays.
5. Display mandatory fields when adding a new device.
6. Allow to manually connect and disconnect serial, Ethernet, modem, and Ethernet gateway sites.
7. Enable and disable devices and sites in the power monitoring and control network without interruption to other devices or sites.
8. Pool modem resources so that the software uses any available modem.
9. Monitor the following diagnostics:

    a. Communication request/response and error rates, and timeouts.
    b. Log acquisition services.

B. Database Maintenance Features:

1. Backup, archive, and trim data, event, and waveform logs.

    a. Record start and end date for operation.
    b. Allow copying data to another database.
    c. Be capable of selecting logs specified for the meters that are Work of this Section.

        1) Data logs.
        2) Event logs.
        3) Waveform logs.

C. Web Reporter: Allow viewing historical data in preformatted report templates via a web browser.

1. Features:

    a. User-configurable report generator to trigger on event, based on a schedule, or manual initiation.
    b. Format reports in HTML, PDF, TIF, Excel, XML, or user-selected printer, or network folder.
    c. Distribution of reports via email.

2. Report on power and demand profiles.
3. Power quality report with CBEMA evaluation.
4. EN 50160 compliance report.
5. 100 ms PQ report.

6. Energy over Period Report:

    a. User-defined rollup interval by day, week, month, or year.
    b. Compare daily energy to the following:

        1) Previous day.
        2) Same day, previous week.
        3) Same day, previous month.
        4) User-defined specific day.

    c. Compare weekly energy to the following:

        1) Previous week.
        2) Same week from previous month.
        3) Same week from previous year.
        4) User-defined specific week.

    d. Compare monthly energy to the following:

        1) Previous month.
        2) Same month from previous year.
        3) User-defined specific month.

    e. Compare annual energy to the following:

        1) Previous year.
        2) User-defined specific year.

7. Energy by daily period report for the user-defined periods. Aggregate consumption of the periods by the day, week, and year.
8. Tabular Report: Show values for multiple measurements and measurements from multiple devices in tabular format.
9. Trend Report:

    a. Show values for multiple measurements and measurements from multiple devices in the following graphical formats:

        1) Line chart.
        2) Pie graph.
        3) Bar chart.
        4) Column chart.
        5) Smooth line chart.
        6) Stacked column chart.
        7) Stacked bar chart.

10. Alarm and Event History: User formatted, based on the meters and priority; and with user-defined alarm and event reports.
11. System Configuration Report:

    a. Device name.
    b. Device type.

c. Device address.
d. Connection status.
e. Device protocol.
f. Device description.

12. Each default report must include the following:

a. Summary aggregation of data from the selected devices.
b. Individual device information.
c. Raw data.

13. The reporting tool must provide a graphical interface to create and manage multiple Time of Use schedules:

a. Tariffs including energy cost rates per kWh, kVARh, and kVAh, and demand charges per kW, kVAR, and kVA.
b. Off-peak and on-peak times.

2.9 MONITORING AND CONTROL OF POWER DISTRIBUTION EQUIPMENT

A. Power Distribution Equipment: Web-enabled, direct connected to the LAN or intranet.

B. Instrument Transformers: Comply with IEEE C57.13.

1. Potential Transformers: Secondary voltage rating of 120 V and NEMA C12.11 accuracy class of 0.3 with burdens of W, X, and Y.

~~Coordinate "Current Transformers" Subparagraph below with Drawings.~~

2. Current Transformers: Burden and accuracy class suitable for connected relays, meters, and instruments.

C. Ethernet Connectivity:

~~Note that first subparagraph below requires that power distribution devices that connect to the communications network include instrument transformers and compatible metering as part of the device.~~

1. A multipoint, MODBUS TIA-485 serial communications network must be included within the equipment to interconnect breaker trip units, protective relays, drives, and metering devices equipped with communications.
2. Serial communications network must be wired to an Ethernet server in the incoming section of the equipment. Hardware and cabling required for the connection to the network must be included within the power distribution equipment.
3. Serial communications devices within the equipment must be factory addressed and tested to verify reliable communications to the equipment's Ethernet Server.

D. Ethernet Gateways:

1. User configurable; complying with UL 60950-1, and IEEE 802.3, Class 3 PoE.

2. Include provisions to set initial Ethernet parameters via a local operator interface, or standard (8PSJ) Ethernet port, that is accessible from the front of the equipment. Initial setup must be limited to basic Ethernet addressing parameters, as assigned by Owner.
3. Common Gateway Features:

    a. User configurable, with secure password-protected login process.
    b. Include communications diagnostic information for serial and Ethernet ports as well as internal health status and memory management information through embedded HTML web pages for viewing using a standard web browser.
    c. Include embedded HTML pages providing real-time information from devices connected to the Ethernet gateway's TIA-485 port(s) through a standard web browser.
    d. Allow firmware upgrades through the communications port.

4. Include a "Quick-Start" guide with the equipment to describe the commissioning process for setting the equipment's Ethernet network address and for ensuring trouble-free data access from any PC on the network, using a standard web browser.
5. Implement a common user interface ("look and feel") across different styles of power equipment.

E. Distribution Equipment Monitoring:

1. Main menu and summary pages, factory configured, to display data for each communicating device within the power equipment lineup.
2. Display Data:

    a. Circuit summary page to display circuit name, three-phase average RMS current, real power (kW), power factor, and breaker status (if applicable).
    b. Load current summary page to display circuit name, and phase a, b, and c RMS current values.
    c. Demand current summary page to display circuit name, and phase a, b, and c average demand current values.
    d. Power summary page to display circuit name, present demand power (kW), peak demand power (kW), and recorded time and date.
    e. Energy summary page to display circuit name, real energy (kWh), reactive energy (kVARh), and time/date of last reset.
    ~~f. For unit substations equipped with dry-type transformer(s) and microbased temperature controller(s), the circuit summary web page listed above must be augmented with transformer coil temperatures, phase a, b and c current values, and cooling fan status (on/off).~~
    ~~g. For motor-control centers, the circuit summary web page must be tailored specifically for this application, to display circuit name, three-phase average RMS current, thermal capacity (percentage), drive output frequency (in Hertz, where applicable), and contactor status.~~

2.10 SYSTEM OPERATOR INTERFACES

A. Operator means of system access must be through the following:

1. Portable terminal with hardwired connection through LAN port at each meter.
2. Remote connection using outside of system PC, tablet, or phone using an internet portal.

2.11 RACEWAYS AND BOXES

A. Comply with requirements in Section 26 05 33 "Conduits and Boxes for Electrical Systems" for raceways for electrical power wiring and NFPA 70 Class 1 remote-control and signaling circuits.

B. Comply with requirements in Section 27 05 28 "Pathways for Communications Systems" for control wiring, TIA-232 cable, and NFPA 70 Class 2 remote-control and signaling circuits.

2.12 WIRES AND CABLES

A. Electrical Power Wiring: Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

1. Copper conductors are Type THHN/THWN-2.

B. Control Wiring: Comply with requirements in Section 260523 "Control-Voltage Electrical Power Cables."

1. Optical-Fiber Cable: Multimode, 50/125 micrometer OM3, six-fiber, [**nonconductive,**]tight-buffer, optical-fiber cable, with aqua jacket.

~~For "Balanced Twisted Pair Cable" Subparagraph below, Category 5e and Category 6 are listed in current standards; however, lesser-category cabling is generally available and is suitable for 10BaseT transmission. See the "Product Characteristics" Article in the Evaluations in Section 271513 "Communications Copper Horizontal Cabling" for discussion of options in subparagraph below.~~

2. Balanced Twisted Pair Cable: 100 ohm, four-pair Category 6A, see section 27 15 17.
3. Workstation Outlets: Four-port-connector assemblies mounted in single or multigang faceplate. Coordinate color and labels with Section 262726 "Wiring Devices."
4. TIA-485 Cable: Paired, one pair or two pairs as required, twisted, No. 22 AWG, stranded (7x30) tinned-copper conductors.
5. Control-Voltage Cable: Multiple conductor, color-coded, No. 20 AWG copper, minimum.

a. Sheath: PVC; except in plenum-type spaces, use sheath listed for plenums.

b. Ordinary Switching Circuits: Three conductors unless otherwise indicated.
c. Switching Circuits with Pilot Lights or Locator Feature: Five conductors unless otherwise indicated.

C. TIA-232 Cable:

1. PVC-Jacketed, TIA-232 Cable: Paired, two pairs, No. 22 AWG, stranded (7x30) tinned copper conductors, polypropylene insulation, and individual aluminum foil-polyester tape shielded pairs with 100 percent shield coverage; PVC jacket. Pairs are cabled on common axis with No. 24 AWG, stranded (7x32) tinned copper drain wire.

   a. Type CM.
   b. Flame Resistance: UL 1581, vertical tray.

2. Plenum-Type, TIA-232 Cable: Paired, two pairs, No. 22 AWG, stranded (7x30) tinned copper conductors, plastic insulation, and individual aluminum foil-polyester tape shielded pairs with 100 percent shield coverage; plastic jacket. Pairs are cabled on common axis with No. 24 AWG, stranded (7x32) tinned copper drain wire.

   a. Type CMP.
   b. Flame Resistance: NFPA 262, flame test.

~~2.13 SURGE PROTECTION DEVICES~~

~~Retain "Manufacturers" Paragraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.~~

~~A. Manufacturers: Subject to compliance with requirements, [**provide products by the following**][**provide products by one of the following**][**available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following**]:~~

~~1. [**ABB, Electrification Business**]~~
~~2. [**Advanced Protection Technologies Inc. (APT)**]~~
~~3. [**ALLTEC LLC**]~~
~~4. [**Eaton**]~~
~~5. [**Emerson Electric Co., Automation Solutions**]~~
~~6. [**LEA International**]~~
~~7. [**Leviton Manufacturing Co., Inc.**]~~
~~8. [**Mersen USA**]~~
~~9. [**PowerLogics, Inc./PQ Protection**]~~
~~10. [**Schneider Electric USA, Inc.**]~~
~~11. [**Siemens Industry, Inc., Energy Management Division**]~~
~~12. **<Insert manufacturer's name>**~~

~~Retain "Basis-of-Design Product" Paragraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed.~~

B. Basis-of-Design Product: Subject to compliance with requirements, provide **<Insert manufacturer's name; product name or designation>** or comparable product by one of the following:

1. [**ABB, Electrification Business**]
2. [**Advanced Protection Technologies Inc. (APT)**]
3. [**ALLTEC LLC**]
4. [**Eaton**]
5. [**Emerson Electric Co., Automation Solutions**]
6. [**LEA International**]
7. [**Leviton Manufacturing Co., Inc.**]
8. [**Mersen USA**]
9. [**PowerLogics, Inc./PQ Protection**]
10. [**Schneider Electric USA, Inc.**]
11. [**Siemens Industry, Inc., Energy Management Division**]
12. **<Insert manufacturer's name>**

C. SPDs: Comply with UL 1449, [**Type 1**][**Type 2**].

1. Include LED indicator lights for power and protection status.

Retain first subparagraph below to disconnect the SPD when low-current, high-impedance faults occur.

2. Internal thermal protection that disconnects the SPD before damaging internal suppressor components.
3. Include Form-C contacts rated at 5 A and 250 V(ac), one normally open and one normally closed, for remote monitoring of protection status.[**Contacts must reverse on failure of surge diversion module or on opening of current-limiting device. Coordinate with building power monitoring and control system.**]

Generally, available surge current ratings are 300, 250, 200, 150, and 100 kA.

D. Peak Surge Current Rating: The minimum single-pulse surge current withstand rating per phase must not be less than [**100 kA**]**<Insert value>**. The peak surge current rating must be the arithmetic sum of the ratings of the individual metal-oxide varistors in a given mode.

Retain first paragraph below to require Type 2 SPDs to be co-listed as electromagnetic and radio-frequency interference filters.

E. Comply with UL 1283.

Retain one of first two paragraphs below. Verify compatibility of peak surge current rating and clamping voltage. Reference to UL 1449 is to its third edition.

F. Protection modes and UL 1449 SPD for grounded wye circuits with [**480Y/277 V**][**208Y/120 V**], three-phase, four-wire circuits must not exceed the following:

1. L-N: [**1200 V for 480Y/277 V**][**700 V for 208Y/120 V**].

2. L-G: [**1200 V for 480Y/277 V**][**700 V for 208Y/120 V**].
3. N-G: [**1200 V for 480Y/277 V**][**700 V for 208Y/120 V**].
4. L-L: [**2000 V for 480Y/277 V**][**1200 V for 208Y/120 V**].

G. Protection modes and UL 1449 SPD for 240/120 V, single-phase, three-wire circuits must not exceed the following:

1. L-N: 700 V.
2. L-G: 700 V.
3. N-G: 700 V.
4. L-L: 1200 V.

H. SCCR: Equal or exceed **100** kA.

I. Nominal Rating: [**20**][**10**] kA.

J. Indoor Enclosures: NEMA 250, Type 1.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine pathway elements intended for cables. Check raceways, cable trays, and other elements for compliance with space allocations, installation tolerances, hazards to cable installation, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF POWER MONITORING AND CONTROL SYSTEMS

A. Wiring Method: Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters. Conceal raceway and cables except in unfinished spaces.

B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.

C. Wiring and Cabling Installation:

1. Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for electrical power wiring.

D. Raceways Installation:

1. Comply with Section 260533 "Conduits and Boxes for Electrical Systems" for electrical power wiring and NFPA 70 Class 1 remote-control and signaling circuits.
2. Comply with Section 270528 "Pathways for Communications Systems" for

control wiring, TIA-232 cable, and NFPA 70 Class 2 remote-control and signaling circuits.

E. Identification Installation:

1. Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for electrical power wiring.
2. Comply with Section 271513 "Communications Copper Horizontal Cabling" for identification products and cable management system requirements for twisted pair cable, TIA-485 cable, control-voltage cable, and TIA-232 cable.
3. Comply with Section 271523 "Communications Optical Fiber Horizontal Cabling" for identification products and cable management system requirements for optical-fiber cable.

3.3 INSTALLATION

A. Graphics Application:

1. Use system schematics indicated as starting point to create graphics.
2. Develop Project-specific library of symbols for representing system equipment and products.
3. Incorporate digital images of Project-completed installation into graphics where beneficial to enhance effect.
4. Submit sketch of graphic layout with description of text for each graphic for Owner's and Architect's review before creating graphic using graphics software.
5. Seek Owner input in graphics development once using graphics software.
6. Final editing must be done on-site with Owner's review and feedback.
7. Refine graphics as necessary for Owner acceptance.
8. On receiving Owner acceptance, print a hard copy to include in operation and maintenance manual. Prepare a scanned copy PDF file of each graphic and include with softcopy of the system operation and maintenance manual.

3.4 NETWORK NAMING AND NUMBERING

A. Coordinate with Owner and provide unique naming and addressing for networks and devices.

3.5 GROUNDING

A. For data communication wiring, comply with BICSI N1.

B. For control-voltage wiring and cabling, comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."

3.6 FIELD QUALITY CONTROL

A. Field tests and inspections must be witnessed by Architect, Commissioning Agent, and Construction Manager.

B. Tests and Inspections:

1. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
2. Visually inspect balanced twisted pair cabling and optical-fiber cable jacket materials for UL or third-party certification markings. Inspect cabling terminations to confirm color-coding for pin assignments, and inspect cabling connections to confirm compliance with TIA-568-C.1.
3. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of components.
4. Test balanced twisted pair cabling for direct-current loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination, but not after cross-connection.

    a. Test instruments must meet or exceed applicable requirements in TIA-568-C.2. Perform tests with a tester that complies with performance requirements in its "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in its "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
    b. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.

5. Optical-Fiber Cable Tests:

    a. Test instruments must meet or exceed applicable requirements in TIA-568-C.0. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
    b. Link End-to-End Attenuation Tests:

        1) Multimode Link Measurements: Test at 850 or 1300 nm in one direction according to IEC 61280-4-1.
        2) Attenuation test results for links must be less than that calculated according to equation in TIA-568-C.0.

    c. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.

6. Power Monitoring and Control System Tests.

    a. Test Analog Signals:

        1) Check analog voltage signals using a precision voltage meter at zero, 50, and 100 percent.
        2) Check analog current signals using a precision current meter at zero, 50, and 100 percent.

3) Check resistance signals for temperature sensors at zero, 50, and 100 percent of operating span using a precision-resistant source.

b. Test Digital Signals:

1) Check digital signals using a jumper wire.
2) Check digital signals using an ohmmeter to test for contact making or breaking.

c. I/O Control Loop Tests:

1) Test every I/O point to verify that safety and operating control set points are as indicated and as required to operate controlled system safely and at optimum performance.
2) Test every I/O point throughout its full operating range.
3) Test every control loop to verify that operation is stable and accurate.
4) Adjust control loop proportional, integral, and derivative settings to achieve optimum performance while complying with performance requirements indicated. Document testing of each control loop's precision and stability via trend logs.
5) Test and adjust every control loop for proper operation according to sequence of operation.
6) Test software and hardware interlocks for proper operation.
7) Operate each analog point at the following:

a) Upper quarter of range.
b) Lower quarter of range.
c) At midpoint of range.

8) Exercise each binary point.
9) For every I/O point in the system, read and record each value at workstation, at controller, and at field instrument simultaneously. Value displayed at workstation and at field instrument must match.
10) Prepare and submit a report documenting results for each I/O point in the system, and include in each I/O point a description of corrective measures and adjustments made to achieve desire results.

C. Nonconforming Work:

1. Wiring and cabling will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.7 FINAL REVIEW

A. Submit written request to Architect and Construction Manager when the power monitoring and control system is ready for final review. Written request must state the following:

1. The system has been thoroughly inspected for compliance with Contract Documents and found to be in full compliance.
2. The system has been calibrated, adjusted, and tested and found to comply with requirements of operational stability, accuracy, speed, and other performance requirements indicated.
3. The system monitoring and control of electrical distribution systems results in operation according to sequences of operation indicated.
4. The system is complete and ready for final review.

B. Review by Architect and Construction Manager will be made after receipt of written request. A field report must be issued to document observations and deficiencies.

C. Take prompt action to remedy deficiencies indicated in field report and submit a second written request when deficiencies have been corrected. Repeat process until no deficiencies are reported.

D. Final review must include a demonstration to parties participating in final review.

3.8 MAINTENANCE SERVICE

A. Beginning at Substantial Completion, maintenance service must include [~~**three**~~][~~**six**~~][~~**nine**~~][~~**12**~~] months' full maintenance by manufacturer's authorized service representative. Include [~~**quarterly**~~][**semiannual**][~~**annual**~~] preventive maintenance, repair or replacement of defective components, cleaning, and adjusting as required for proper system operation. Parts and supplies must be manufacturer's authorized replacement parts and supplies.

3.9 SOFTWARE SERVICE AGREEMENT

A. Technical Support: Beginning at Substantial Completion, service agreement must include software support for three years.

B. Upgrade Service: At Substantial Completion, update software to latest version. Install and program software upgrades that become available within three years from date of Substantial Completion. Upgrading software must include operating system and new or revised licenses for using software.

1. Upgrade Notice: At least 30 days to allow Owner to schedule and access the system and to upgrade computer equipment if necessary.

3.10 TRAINING

A. Attendee Training Manuals:

1. Provide each attendee with a color hard copy of training materials and visual presentations.
2. Hard-copy materials must be organized in a three-ring binder with table of contents and individual divider tabs marked for each logical grouping of subject

matter. Organize material to provide space for attendees to take handwritten notes within training manuals.

3. In addition to hard-copy materials included in training manual, provide each binder with a sleeve or pocket that includes a DVD or flash drive with PDF copy of hard-copy materials.

B. On-Site Training:

1. Owner will provide conditioned classroom or workspace with ample desks or tables, chairs, power, and data connectivity for instructor and each attendee.
2. Instructor must provide training materials, projector, and other audiovisual equipment used in training.
3. Provide as much of training located on-site as deemed feasible and practical by Owner.
4. On-site training must include regular walk-through tours, as required, to observe each unique product type installed with hands-on review of operation, calibration, and service requirements.
5. The system server provided with the system must be used in training.

C. At Completion of Training: Staff familiar with the system installed are capable of demonstrating operation of the system during final review.

D. Demonstration must include, but not be limited to, the following:

1. Accuracy and calibration of fifty (50) I/O points randomly selected by reviewers. If review finds that some I/O points are not properly calibrated and not satisfying performance requirements indicated, additional I/O points may be selected by reviewers until total I/O points being reviewed that satisfy requirements equals quantity indicated.
2. Reporting of alarm conditions for randomly selected alarms, including different classes of alarms, to ensure that alarms are properly received by operators and workstations.
3. Trends, summaries, logs, and reports set-up for Project.
4. Software's ability to communicate with controllers, workstations, and uploading and downloading of control programs.
5. Software's ability to edit control programs off-line.
6. Data entry to show Project-specific customizing capability including parameter changes.
7. Step through penetration tree, display graphics, demonstrate dynamic update, and direct access to graphics.
8. Execution of digital and analog commands in graphic mode.
9. Spreadsheet and curve plot software and its integration with database.
10. Online user guide and help functions.
11. For Each Meter:

    a. Memory: Programmed data, parameters, trend, and alarm history collected during normal operation is not lost during power failure.
    b. Operator Interface: Ability to connect directly to each meter with a portable workstation.
    c. Wiring Labels: Match control drawings.
    d. Network Communication: Ability to locate a meter on the network.

Communication architecture matches Shop Drawings.

e. Nameplates and Tags: Accurate and permanently attached to control panel doors, instrument, actuators, and devices.

12. For System Server:

a. I/O point lists agree with naming conventions.
b. Graphics are complete.
c. UPS unit, if applicable, operates.

END OF SECTION 260913

SECTION 26 24 16 - PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Lighting and appliance branch-circuit panelboards.
   2. Surge suppression panelboards.
   3. Intelligent Panelboards (identified on panelboard schedules and / or one-line diagram(s).

1.2 DEFINITIONS

A. EMI: Electromagnetic interference.

B. GFCI: Ground-fault circuit interrupter.

C. RFI: Radio-frequency interference.

1.3 SUBMITTALS

A. Shop Drawings: For each panelboard and related equipment.
   1. Dimensioned plans, elevations, sections, and details. 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 panelboards and overcurrent protective devices.
      d. Features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
   2. Wiring Diagrams: Power, signal, and control wiring.
   3. Refer to section 26 09 13 Electrical Power Monitoring for additional requirements.

B. Quality Assurance/Control Submittals:
   1. Product Data: For each type of panelboard, overcurrent protective device, surge protective device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
   2. Field quality-control test reports including the following:
      a. Test procedures used.
      b. Test results that comply with requirements.
      c. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
   3. Panelboard Schedules: For installation in panelboards.

1.4 CLOSEOUT DOCUMENTS

A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals:
   1. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
      a. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
      b. Time-current curves, including selectable ranges for each type of overcurrent protective device.
   2. If available from manufacturer, provide PC-based configuration software tool and a minimum of [one] communication interface cable for each type of cable required to connect a PC-based computer to the devices specified herein for configuration and programming.
   3. Electronic configuration files, in a media format acceptable by the Owner (e.g. CD, USB stick, etc.), updated to an as-installed and commissioned state.

4. Extra Materials: Receipt for extra materials.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories through one source from a single manufacturer.

B. Product Options: Drawings indicate size, profiles, and dimensional requirements of panelboards and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."

C. 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.

D. Comply with NEMA PB 1.

E. Comply with NFPA 70.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation under the following conditions, unless otherwise indicated:
1. Ambient Temperature: Not exceeding 104 deg F.
2. Altitude: Not exceeding 6600 feet.

B. Service Conditions: NEMA PB 1, usual service conditions, as follows:
1. Ambient temperatures within limits specified.
2. Altitude not exceeding 6600 feet.

1.7 COORDINATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.

B. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

1.8 WARRANTY

A. Special Warranty for Surge Protective Devices: Manufacturer's standard form in which manufacturer agrees to repair or replace components that fail in materials or workmanship within specified warranty period.
1. Warranty Period: 5 years from date of Substantial Completion.

1.9 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Keys: Six spares for each type of panelboard cabinet lock.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Eaton Corporation; Cutler-Hammer Products.

2. Siemens Energy & Automation, Inc.
3. Square D; Schneider Electric.

B. Products of other manufacturers will be considered for acceptance only when allowed in Section 260050, General Electrical Requirements.

2.2 MANUFACTURED UNITS

A. Enclosures: Flush- and surface-mounted cabinets. NEMA PB 1, Type 1. Intelligent panelboards shall use standard boxes, interiors, and trims. Panelboards shall not require different construction for control components. Control components shall not restrict wire gutter space and shall mount onto standard interiors.
1. Rated for environmental conditions at installed location.
a. Outdoor Locations: NEMA 250, Type 3R.
b. Kitchen Areas: NEMA 250, Type 4X, stainless steel.
c. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
2. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
3. Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
4. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.
5. Directory Card: With transparent protective cover, mounted in metal frame, inside panelboard door.

B. Phase and Ground Buses:
1. Material: Hard-drawn copper, 98 percent conductivity; or tin-plated aluminum.
2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.
3. Split Bus: Vertical buses divided into individual vertical sections.

C. Conductor Connectors: Suitable for use with conductor material.
1. Main and Neutral Lugs: Mechanical type.
2. Ground Lugs and Bus Configured Terminators: Mechanical type.
3. Feed-Through Lugs: Mechanical type suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.

D. Service Equipment Label: UL labeled for use as service equipment for panelboards with main service disconnect switches.

2.3 PANELBOARD SHORT-CIRCUIT RATING

A. Short-Circuit Current Rating: Refer to drawings for RMS symmetrical, ampere AIC ratings.
1. Series-connected ratings are not permitted.

2.4 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

B. Main Overcurrent Devices: Thermal-magnetic circuit breaker.

C. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

D. Circuit Identification: Panelboards shall have each circuit number permanently identified, factory installed label, adjacent to breaker. Identification shall stamped into trim or installed engraved circuit numbers or paper labels. If paper labels are used, they must be covered with a continuous, clear, self adhesive, protective plastic sheet.

2.5 SURGE SUPPRESSION PANELBOARDS

A. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

B. Main Overcurrent Devices: Thermal-magnetic circuit breaker.

C. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

D. Surge Protective Device: IEEE C62.41, integrally mounted, solid-state, parallel-connected, sine-wave tracking suppression and filtering modules.
   1. Maximum Continuous Operation Voltage (MCOV) Rating: Not less than 115 percent of nominal system operating voltage.
   2. UL 1449 Application Designation: Type 1 or Type 2.
   3. Short-Circuit Current Rating (SCCR): 100,000 A RMS symmetrical.
   4. Nominal Discharge Current (In) Rating: 20 kA.
   5. LED indicator lights for power and protection status.
   6. Audible alarm activated on failure of any surge diversion module.
   7. Minimum Single-Impulse Current Ratings:
      a. Line to Neutral: 50,000 A.
      b. Line to Ground: 50,000 A.
      c. Neutral to Ground: 50,000 A.
   8. Protection modes shall be as follows:
      a. Line to neutral.
      b. Line to ground.
      c. Neutral to ground.
   9. Maximum UL 1449 voltage protection rating (VPR) shall not exceed 700 V, line to neutral and line to ground on 120/208 V systems; 1200 V, line to neutral and line to ground on 277/480 V systems.
   10. Provide integrally mounted three pole disconnecting device with overcurrent protection properly sized for the SPD provided.

2.6 INTELLIGENT PANELBOARDS

~~**A. All intelligent panelboards shall be provided with remotely operated circuit breakers and intelligent control bus providing interface to remotely operable circuit breakers.**~~

B. Intelligent Panelboards – Square D Powerlink or approved equal from Cutler Hammer or Siemens. Intelligent panelboards shall include metering fully compatible with section 26 09 13 system. Mixing and matching between metering vendors is not acceptable.

C. Intelligent panelboard systems shall be comprised of master and optional sub-panel panelboards.
   1. Master intelligent panelboards shall be further provided with a system power supply and a controller with integral time clock. Master panelboards shall not require manually setting a sub-panel address.
   2. Sub-panel panelboards shall obtain control power and control signals from the master panelboard or a separate, remotely-mounted controller and power supply.
      a. Sub-panel panelboards shall be provided with an easily readable and settable numeric address wheel. Systems with binary-coded DIP-switch address selectors shall not be accepted.
      b. Panelboards marked as sub-panel panelboards shall contain the necessary busses and network hardware to allow connection of the sub-net wiring between panelboards.
      c. Sub-panel panelboards shall contain a nameplate label, located on the panel trim indicating its designation and the designations and address of its associated master panel.
      d. Sub-net wiring connections shall allow connection of wiring to a terminal that can be removed from the panel without interrupting the communications to other panelboards.
      e. Powered sub-panel panelboards shall further include a power supply to extend capacity of the system.

D. System Power Supply: The system power supply shall mount on the panelboard interior and be fed directly from the panelboard bus without external wiring or fuses. The power supply shall provide isolated Class 1 and Class 2 sources to allow field wiring to meet NEC requirements. Each power supply shall provide

E. Panelboards shall accept ~~a mix of~~ standard ~~and remotely~~ operated circuit breakers.

~~1. Remotely Operated Circuit Breakers~~

~~a. Remotely operated branch circuit breakers shall provide overload and short circuit protection suitable for the location in the electrical system, as defined in the panelboard schedules. Remotely operated power switching devices shall have the following:~~

~~1) Integral branch circuit overcurrent protection as required by the NEC. Circuit breakers shall have a UL-listed interrupting rating sufficient for the application or UL-listed series connected ratings for the maximum available fault current at that point in the system. Submittals reflecting the use of relays or contactors to perform remote switching shall show evidence in writing that the relays or contactors are listed to withstand the available fault current.~~

~~2) UL-listed SWD ratings for 15 ampere, 20 ampere, and 30 ampere 1-pole, 2-pole, and 3-pole branch devices, HID ratings, and HACR ratings.~~

~~3) Handle operator that shall mechanically open the power switching device contacts when moved to the OFF position and disable the contacts from being remotely closed. Handle operator shall accept field-installable handle tie to allow application where a handle tie is required by the NEC.~~

~~4) Manual override switch to enable or disable the remote operation of the device and allow circuit breaker handle to fully control the on/off state of the circuit breaker. Override shall fully disengage remote operation of the circuit breaker mechanism. Device utilizing one-shot or temporary overrides shall not be accepted.~~

~~5) Visible flag that clearly indicates the status of the circuit breaker contacts with the panel trim installed. Flag shall indicate ON, OFF, and TRIPPED circuit breaker states. The visible flag shall be mechanical in nature, directly tied to the circuit breaker mechanism, and shall be provided in addition to any status indicator supplied by the system electronics.~~

~~6) Voltage status signal to indicate the presence or absence of voltage at the load terminal as a true indication of the on/off status of the connected circuit to aid in identifying wiring errors, such as a back-feed or disconnected neutral conductor.~~

~~7) Circuit to indicate the number of poles of the remotely operable circuit breaker.~~

~~8) Integral control connector to simplify and speed installation and eliminate wiring errors such that the control connection is made automatically when installing the breaker in the panelboard. Connection to the breaker shall not introduce control wiring into the panelboard gutter space. Control connections shall be rated NEC Class 1 to eliminate the requirement for barriers in the gutter space such that control connections may reside with electrical power circuit conductors.~~

~~9) Switching full load endurance rating of 200,000 open/close/open remote operations.~~

2.7 Master panelboard controller

A. The master panelboard controller shall provide the following:

1. Logical control capability for 336 remotely controllable circuit breakers.

~~2. Auxiliary control power source for powering external control devices such as occupancy sensors and low voltage photo sensors, as indicated on the Drawings.~~

~~3. Programmable input timers to permit timed override periods.~~

~~4. Adjustable blink notice.~~

5. Event logging to track circuit breaker, input, and zone state; schedule periods; bus operational status; and circuit breaker on-time.

6. Capability for accepting downloadable firmware without removing controller.
~~7. Time scheduling including, but not limited to, the following:~~
   ~~a. Sixty-four (64) independent schedules, each configurable into 100 distinct periods.~~
   ~~b. Clock configurable for 12-hour (AM/PM) or 24-hour format. Clock shall retain time for at least 21 days in the absence of power. Clock back-up circuit shall be maintenance free.~~
   ~~c. Schedule periods settable to the minute.~~
   ~~d. 365-day calendar, with automatic daylight savings and leap year adjustments.~~
   ~~e. Day-of-week, day-of-month, day-of-year with one-time or repeating capability.~~
   ~~f. Ninety-six (96) special event periods with 14 pre-programmed holidays.~~
   ~~g. Astronomical tracker to automatically adjust sunrise and sunset times throughout the year.~~
~~8. Sixteen hard-wired terminals configurable for either 16 two-wire inputs, eight three-wire inputs, or eight two-wire inputs with status feedback for pilot LED's (four Analog input terminals, each configurable to 0-5v, 0-10v, or 4-20ma with 256 possible thresholds). Configurations shall allow either momentary or maintained control devices to be attached. These inputs shall be configured according to the Owner's requirements and shall be capable of providing the following capabilities:~~
   ~~a. Two-hundred-fifty-six (256) communication inputs available for network connections.~~
   ~~b. Input synchronization service to synch inputs with other inputs, zones, time schedules, or remote sources. This synchronization service shall be used to control input state, input inhibit mode (enable/disable), or sync timers (enable/disable).~~
   ~~c. Boolean custom controls, including, but not limited to, configuring sources. Sources shall include, but shall not be limited to, inputs, time schedules, or status. Up to four sources shall be permitted in a custom configurable logic arrangement configured up to 256 zones.~~
~~9. Zone priorities, assignable to each zone, such that the particular zone shall have priority over other zones. Zones priorities shall be capable of forcing all circuit breakers in the zone to an ON state or an OFF state depending on the particular configuration.~~
10. Ethernet communications. Each panel controller shall allow networking with other master panel controllers in a peer-to-peer configuration using an Ethernet 100Base-T full duplex network.
    a. Each panel controller shall support three (3) Ethernet ports communicating using Modbus TCP/IP and/or BACnet/IP protocols.
    b. Each input connected to the controller shall be capable of controlling any branch circuit connected to any other controller.
    c. A schedule programmed in one controller shall be capable of controlling any branch circuit connected to any other controller.
    d. Means for setting initial Ethernet parameters via a local operator interface without having to employ special software or configuration tools.
    e. Each panel controller shall be capable of operating in a pass-through mode for Modbus connected devices, such as meters, whereby the information is automatically ported to the Modbus TCP/IP port without separate gateway devices.
11. Each panel controller shall incorporate a time synchronization service to update controller clock to a network time server. The time synchronization service shall incorporate both a primary and secondary source. The update interval shall be settable from 1 to 24 hours.
12. Embedded web server. Each panel controllers shall incorporate a web-enabled server for displaying information over a standard web browser. Web-accessible information shall include:
    a. A secure, password protected login screen for modifying operational parameters to ensure only authorized access. Password administration shall be accessible to authorized users via web page interface.
    b. Separate web pages for each panel with the arrangement of circuit breakers on the page matching the physical appearance of the panel. Panel status pages shall also include, but shall not be limited to, circuit breaker nametags, pole configuration, location in panel, and actual contact state (on/off/tripped/manual) for the master panel

and each associated sub- panel. The web page shall also provide the ability to observe circuit breaker on-time and blink information in real time.

c. Panel summary showing the master and sub-panel panelboards connected to the controller.

d. Controller summary showing controller diagnostic information.

e. Panel mimic screens for setting up controller parameters, input types, zones, and operating schedules. Mimic screens shall also allow direct circuit breaker control and zone overrides.

f. Alarm and email notification. Each master controller shall incorporate an alarm and automated email notification service. These services shall be capable of automatically initiating alarms based on preconfigured conditions and routing alarm alerts as directed by the Owner.

13. Alarms shall be configurable for the following parameters:

a. Global alarms (power loss, non-responding circuit breakers, loss and restoration of sub-net communications, loss and restoration of serial port communications, and loss and restoration of Modbus TCP Ethernet commands).

b. Specific alarms (input status, zone status, circuit breaker status on-time (0 to 99,999 hours), and strike counter).

c. Email notification service shall include, but shall not be limited to, the ability to automatically route an email message to five individual email addresses. Within the body text of the email, provide a link that shall automatically redirect the user to the associated panelboard's status web page.

14. BACnet Conformance:

a. Reference BACnet Standard, ASHRAE 135.

b. Each panel controller shall, at a minimum, support serial BACnet MS/TP and Ethernet BACnet/IP communications.

c. Each panel controller shall be able to communicate directly via BACnet RS-485 serial networks and Ethernet 100Base-T networks as a native BACnet device.

d. Each panel controller shall comply with Annex J of ASHRAE 135 for IP connections.

e. Each panel controller shall function as a BACnet application specific controller in accordance with Annex L of ASHRAE 135, and shall support the following BACnet interoperability building blocks:

1) Data Sharing - Read Property - B.
2) Data Sharing - Read Property Multiple - B.
3) Data Sharing - Write Property - B.
4) Data Sharing - Write Property Multiple - B.
5) Device Management - Dynamic Device Binding - B.
6) Device Management - Dynamic Object Binding - B.
7) Device Management - Device Communication Control - B.
8) Device Management - Time Synchronization - B.
9) Device Management - UTC Time Synchronization - B.
10) Device Management - Reinitialize Device - B.

f. Standard BACnet object types supported shall include, but shall not be limited to, analog value, binary value, multi-state value, and multi-state output.

15. Optical isolation: The controller shall provide a dedicated, optically-isolated RS-485 port for connection to Class 1 control busses in master and sub-panel panelboards. Systems without physical barriers between power and Class 2 circuits shall provide an optical isolator between controller and control uses and a separate power source to the controller.

2.8 Networks:

A. Sub-Net:

1. Provide sub-net wiring between master and sub-panel panelboards as indicated on the Drawings. Sub-net wiring shall permit sub-panel panelboards to receive power and control data from the master panelboard. No more than eight control busses shall be connected to the sub-net. If a powered sub-panel panelboard with second power supply is provided, then no more than 16 control busses shall be connected to the sub-net.

2. Sub-net communications shall follow Class 1 wiring practices. Sub-net shall be allowed to occupy the same conduit, enclosure, or raceway as functionally associated Class 1 and

power circuits. Communications conductors shall be Belden 27326 or equal having the same voltage rating as the branch circuit conductors.

3. Wiring distances shall not exceed the manufacturer's recommendations. Maximum subnet distance shall be 400 feet from the master panelboard in two directions for a total length of 800 feet.
4. Sub-net panelboards shall allow more than two control busses per panelboard.
5. Sub-net shall not require the field installation of termination resistors.

B. RS-232 and RS-485 Serial Network:
1. Provide serial communication wiring between master panelboards and other master panelboards or other building controllers as indicated on the Drawings.
2. Total RS-485 network length shall be up to 5000 feet (1524 m).
3. Connected devices shall support baud rates of 4800, 9600, 19200, 38400 76800, and 115200.
4. Network shall support up to 32 devices.
5. Serial communications shall allow the use of both RS-232 and RS-485 simultaneously with independent protocol configuration.
6. Network cable shall be shielded two-conductor twisted pair (Belden 9841 or equivalent), or shielded three-conductor with twisted pair (Belden 8723 or equivalent).

C. Ethernet Network:
1. Installing contractor shall coordinate work with the network administrator to assure that proper connection points are available. The installing contractor shall also secure static IP address for each individual master controller and power monitoring web server.
2. Network shall support Ethernet 100Base-T communications.
3. Communications wiring to master panelboards shall be Category 5 cable having eight-position eight contact (8P8C) modular plugs terminated using the T568A or T568B pin/pair assignments as defined in TIA 568.
4. Shall utilize the three (3) Ethernet ports to create an independent Ethernet network.

D. Future integration and service shall be promoted by using only open communication protocols between **intelligent ~~lighting control~~** panelboards. An open protocol is one that has specifications published in the public domain and that is used by more than 10 manufacturers. Modbus (TCP/IP), Modbus (ASCII/RTU), BACnet IP, BACnet MS/TP, and DMX, are considered acceptable. Submittals listing any other protocol shall not be considered unless they demonstrate that these criteria are met. The same open protocol shall be used over all media that are part of the system, including, but not limited to, serial busses, the LAN, or other connections.

E. Installation of additional special purpose networks shall be minimized by using the existing facility Ethernet LAN to connect various **intelligent ~~lighting~~** panelboards or groups of **intelligent ~~lighting~~** panelboards as shown on the Drawings. Equipment shall be compatible with industry standard TCP/IP protocols.

F. Power monitoring metering devices as shown on the Drawings shall connect using the same network as the **intelligent ~~lighting control~~** panelboards. The controller shall provide a pass-through mode for Modbus connected meters whereby the information shall be automatically ported to the Modbus TCP/IP port without separate gateway devices.

G. Communications wiring to master panelboards shall use Category **~~5~~** cabling **as specified in Division 27**. Installing Contractor shall coordinate work with the network administrator to assure that proper connection points are available. The installing Contractor shall also secure one static IP address for each master controller.

H. Provide with voltage, phase, main lug / main circuit breaker, integral surge suppression and / or other parameters as indicated on drawings.

I. When a Surge Protective Device is required as shown on drawings, provide an internal, factory supplied SPD per paragraph above.

J. For each intelligent panelboard indicated on the Drawings, provide power metering for main and branch circuits. Branch circuit metering CT's shall be arranged so that the branch circuit being metered is clearly associated with the metering CT.

K. Power meter shall provide data using RS-485 Modbus RTU protocol. Data shall be updated at 1 second intervals.

L. Main and individual branch circuit metering values shall include, but shall not be limited to, current, current demand, kilowatt hours, kilowatt demand, power factor, voltage, and frequency.

M. Power metering shall monitor the following alarm parameters:
   1. Voltage over/under.
   2. Over/under currents.
   3. Phase loss.

N. Configuration software shall be designed specifically for the lighting control system and supported by the manufacturer. Software shall support system configuration, printing of configuration records, and monitoring and control functions in a Windows environment. Support for remote system dial-up shall be incorporated into the software package.

O. For basic setup and control, the software shall serve as a configuration and diagnostic utility. Basic features shall include, but shall not be limited to, support for configuring inputs, zones, circuit breaker actions, and time schedules. Software shall be able to monitor the status of the system and provide visual indication of input status, circuit breaker status, and operational parameters. Software shall be able to establish connections to the system through a controller RS232 port, RS485 port, and Ethernet front port. Support for remote system dial-up shall be incorporated into the software package.

2.9 OVERCURRENT PROTECTIVE DEVICES

A. Molded-Case Circuit Breaker: UL 489, with interrupting capacity to meet available fault currents.
   1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
   2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
   3. GFCI Circuit Breakers: Single- and two-pole configurations with 5-mA trip sensitivity.

B. Molded-Case Circuit-Breaker Features and Accessories: Standard frame sizes, trip ratings, and number of poles.
   1. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
   2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.
   3. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
   4. Shunt Trip: 120-V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.

C. Fused Switch: NEMA KS 1, Type HD; clips to accommodate specified fuses; lockable handle.

D. Fuses are specified in Division 26 Section "Fuses."

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 407.

B. Install panelboards and accessories according to NEMA PB 1.1.

C. In addition to the requirements specified herein, execution shall be in accordance with the requirements of Specification Section and Drawings.

D. Functional testing, commissioning, and first parameter adjusting shall be carried out by a factory trained manufacturer's representative field service engineer and / or the commission agent as described in specification section 26 08 00. Test and adjust controls and safeties. Replace damaged or malfunctioning controls and equipment. Report to the Engineer any discrepancies or issues with the installation.

E. Comply with mounting and anchoring requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."

F. Mount top of trim 74 inches above finished floor, unless otherwise indicated.

G. Mount plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.

H. Install overcurrent protective devices and controllers.
   1. Set field-adjustable switches and circuit-breaker trip ranges.

I. Install filler plates in unused spaces.

J. Flush Panelboards: Stub four 1-inch empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch empty conduits into raised floor space or below slab not on grade.

K. Arrange conductors in gutters into groups and bundle and wrap with wire ties.

L. Panelboards shall not be used as junction boxes, auxiliary gutters, or raceways for conductors feeding through or tapping off to other switches or overcurrent devices. Splices shall not be allowed in any panelboard. Phase conductors shall terminate on breakers and then leave the panelboard either grouped in three phase configuration or with associated neutrals and routed into the branch circuit conduit out to the load.

3.2 IDENTIFICATION

A. Refer to Division 260533 Section "Identification for Electrical Systems." Provide all identification for field-installed conductors in panels, labels, nameplates, warning signs, etc. including, but not limited to:
   1. Equipment Identification Label
   2. Nominal System Voltage Identification Label
   3. Electrical Energy Source Identification Label
   4. Panelboards shall have circuit Directories
   5. Distribution Panelboards shall have Load Identification Labels for each Feeder and Branch Circuit
   6. Provide nameplates on panels where solar inverters are connected that indicate "MULTIPLE POWER SOURCES" as well other information as specified in Arcticle 690 and section 705.10 in the National Electrical Code, 2023 Edition.

B. Provide Factory installed nameplates.

3.3 CONNECTIONS

A. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

B. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.4 FIELD QUALITY CONTROL

A. Prepare for acceptance tests as follows:
   1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
   2. Test continuity of each circuit.

B. 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, Section 7.5 for switches and Section 7.6 for molded-case circuit breakers. 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 CLEANING

A. On completion of installation, inspect interior and exterior of panelboards. Remove paint splatters and other spots. Repair exposed surfaces to match original finish.

B. Vacuum interior of panels to remove dirt and debris; do not use compressed air to assist in cleaning.

END OF SECTION 26 24 16

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Section Includes:

1. Preparing subgrades for slabs on grade, walks, pavements, and turf and grasses.
2. Excavation and backfilling for buildings and structures
3. Drainage course for concrete slabs-on-grade
4. Excavating and backfilling for buildings and structures demolition.
5. Subbase course for concrete walks and concrete pavement.
6. Subbase course and base course for asphalt paving.
7. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.2 RELATED DOCUMENTS

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

B. Additional information concerning Earth Moving may be found in the Geotechnical Engineering Evaluation Report prepared by Alt & Witzig, Inc. dated November 27, 2024. All requirements of the Geotechnical Engineering Evaluation shall be followed. The information shown in the evaluation is for information only and it shall be the contractors responsibility to field verifies conditions indicated. In case of conflict between the drawings, Geotechnical Engineering Evaluation, and this Earth Moving specification, the more stringent requirements shall govern.

C. Related Sections:
1. Section 03 30 00 – Cast-in-Place Concrete
2. Section 31 10 00 – Site Clearing
3. Section 31 50 00 – Excavation Support and Protection
4. Section 32 12 16 – Asphalt Paving
5. Section 32 13 13 – Concrete Paving
6. Section 32 91 13 – Soil Preparation
7. Section 32 92 00 – Turf and Grasses
8. Section 32 93 00 – Plants
9. Section 33 11 13 – Facility Water Distribution Piping
10. Section 33 13 13 – Facility Sanitary Sewers
11. Section 33 41 00 – Storm Utility Drainage Piping
12. Section 33 46 00 – Subdrainage

1.3 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and concrete paving or hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Drainage Fill: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

E. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Soils Consultant. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Soils Consultant. Unauthorized excavation, as well as remedial work directed by Soils Consultant, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

L. Protection Zones: Groups of trees, shrubs and plants or other sensitive areas delineated on the Demolition Plans which must be protected throughout the project.

1.4 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.

B. Materials specified must comply with the Indiana Department of Transportation (INDOT) gradations.

C. Pre-excavation Conference: Conduct conference at Project site.

1.5 SUBMITTALS

A. Submittal procedures and requirements shall comply with Division 01 Specification Sections.

B. Product Data: For each type of the following manufactured products required:
1. Certificate of Gradation of materials
2. Geotextiles.
3. Controlled low-strength material, including design mixture.
4. Warning tapes.

C. Material Test Reports: For each borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
2. Laboratory compaction curve according to ASTM D 1557.

1.6 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify "Indiana 811" by calling 811 and scheduling public utility locates for the area where Project is located before beginning earth moving operations. The contractor is responsible for locating onsite private utility mains and service lines.

C. Do not commence earth moving operations until temporary erosion and sedimentation control measures, specified in Section 31 25 00 “Erosion Control” are in place.

D. Do not commence earth moving operations until plant-protection measures are in place.

E. The following practices are prohibited within the protection zones as delineated on the project site demolition plans:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digs unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

F. Do not direct vehicle or equipment exhaust towards protection zones.

G. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 10 percent passing a No. 200 sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

H. Drainage Fill: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel with 100 percent passing a 1 inch sieve and 0 to 5 percent passing a No. 8 sieve.

I. Sand: ASTM C 33; fine aggregate.

J. Rip Rap : Aggregates shall be broken stone or rock, Class I in accordance with Section 904.04 of the Indiana Department of Transportation Standard Specifications. Gradation of the material shall comply with the following requirements:

1. 100% shall pass a 24-inch sieve.
2. 85-100% shall pass an 18-inch sieve.
3. 35-50% shall pass a 12-inch sieve.
4. 10-30% shall pass a 6-inch sieve.
5. 0-10% shall pass a 3 inch sieve.

Reasonable care shall be taken in loading to obtain a similar gradation for consecutive loads.

Sizes of Fine Aggregates - INDOT Spec. 904.02 (h)

SIZES (PERCENT PASSING)						
Sieve Sizes	23	24	15	16	PP	S&I
3/8 in. (9.5 mm)	100	100				100
No. 4 (4.75 mm)	95-100	95-100			100	
No. 6 (3.35 mm)			100			
No. 8 (2.36 mm)	80-100	70-100	90-100		85-95	
No. 16 (1.18 mm)	50-85	40-80	050-75			
No. 30 (600 um)	25-60	20-60	15-40	100	50-65	
No. 50 (300 um)	5-30	7-40			15-25	0-30
No. 80 (180 um)			0-10	95-100		
No. 100 (150 um)	0-10	1-20	0-3		0-10	
No. 200 (75 um)[2]	0-3	0-6		65-100		0-7

Sizes of Coarse Aggregates - INDOT Spec. 904.03 (e)

Sieve Sizes	COARSE AGGREGATE SIZES (PERCENT PASSING)									
	COARSE GRADED								DENSE GRADED	
	2	5	8	9	11	12	43[1]	91	53[1]	73[1]
4 in. (100 mm)										
3 1/2 in. (90 mm)										
2 1/2 in. (63 mm)	100									
2 in (50 mm)	80-100									
1 1/2 in. (37.5 mm)		100					100		100	
1 in. (25 mm)	0-25	85-98	100				70-90	100	80-100	100
3/4 in. (19 mm)	0-10	60-85	75-95	100			50-70		70-90	90-100
1/2 in. (12.5 mm)	0-7	30-60	40-70	60-85	100	100	35-50		55-80	60-90
3/8 in. (9.5 mm)		15-45	20-50	30-60	75-95	95-100				
No. 4 (4.75 mm)		0-15	0-15	0-15	10-30	50-80	20-40		35-60	35-60
No. 8 (2.36 mm)		0-10	0-10	0-10	0-10	0-35	15-35		25-50	
No. 30 (600 um)						0-4	5-20		12-30	12-30
No. 200 (75 um)[2]							0-6.0		5.0-10.0[4]	5.0-12.0
Decant (PCC)[3]		0-1.5	0-1.5	0-1.5	0-1.5	0-1.5		0-1.5		
Decant (Non-PCC)	0-2.5	0-2.5	0-3.0	0-2.5	0-2.5	0-2.0		0-2.5		

Notes:
1. The liquid limit shall not exceed 25 (35 if slag) and the plasticity index shall not exceed 5. The liquid limit shall be determined in accordance with AASHTO T 89 and the plsticity index in accordance with AASHTO T 90.
2. Includes the total amount passing the No. 200 (75 um) sieve as determined by AASHTO T 11 and T27.
3. Decant may be 0-2.5 for stone and slag.
4. When slag is used for separation layers as defined in 302.01, the total amount passing the No. 200 (75 um) sieve

J. Topsoil: Loose, friable soil of loamy character, graded free from subsoil, clay lumps, vegetation, weeds, debris, rocks larger than one inch in any dimension and excessive amounts of smaller rocks, or other material detrimental to proper vegetative growth. Topsoil shall have a pH range of 5.5 to 7.5, 4% organic material minimum. Remove any unsuitable topsoil from the site. Dispose of excess topsoil

offsite (on-site where directed by Owner.) Any additional topsoil required shall meet this specification and shall be from a source approved by the Architect/Engineer.

2.2 CONTROLLED LOW-STRENGTH MATERIAL (FLOWABLE FILL)

A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:

1. Portland cement: ASTM C 150, Type II.
2. Fly Ash: ASTM C 618, Class C or F.
3. Normal-Weight Aggregate: ASTM C 33, 3/4-inch nominal maximum aggregate size.
4. Foaming Agent: ASTM C 869.
5. Water: ASTM C 94/C 94M.
6. Air-Entraining Admixture: ASTM C 260.

B. Produce conventional-weight, controlled low-strength material with 80-psi compressive strength when tested according to ASTM C 495.

2.3 CHEMICAL STABILIZATION

A. Chemical product based on Geotechnical Engineer recommendation and site conditions.

B. Refer to geotechnical report prepared by Alt & Witzig, Inc. dated November 27, 2024 for material, incorporation rate, and depth. Material and installation shall conform to current INDOT standards.

2.4 ACCESSORIES

A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area. Refer to the Dewatering Specification Section 31 23 19 for additional information.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.5 EXCAVATION FOR STRUCTURES

A. Excavations for Footings and Foundations:
1. Excavate to indicated elevations and dimensions with a tolerance of plus or minus 1 inch.
2. Footings shall bear on firm undisturbed material. If unsuitable material is discovered, re-establish the bearing elevation of the footing by localized undercutting and filling with suitable engineered fill or concrete as recommended by the Geotechnical Engineer.
3. Place all footings the same day excavations are opened. If this is not possible, adequately protect the exposed material in the bases of the footing excavations from any detrimental changes in condition such as from disturbance, rain, or freezing. Surface runoff shall not be allowed to enter excavations.

B. Excavation of Existing Construction:

1. Excavations for Footings and Foundations: Do not over excavate in areas of foundation removals and leave solid base to receive other work. Any portions of the below grade structures approved by the Owner to remain shall be noted on the as-built drawings.

C. Excavations at Edges of Tree- and Plant-Protection Zones:

1. Excavate by hand to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to depth and width necessary to remove indicated utility.

B. Excavate trenches to indicated gradients, lines, depths, and elevations.

1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

C. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit or as indicated.

D. Trench Bottoms: Excavate trenches 4 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.

1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

E. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicated lines cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

3.8 SUBGRADE INSPECTION

A. Notify Geotechnical Engineer when excavations have reached required subgrade.

B. If Geotechnical Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.
2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Geotechnical Engineer, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Soils Consultant, without additional compensation.

F. Place geotextile soil reinforcing where indicated on drawings, or a directed by the Geotechnical Engineer, on prepared subgrade. Lap joints a minimum of 24 inches, and protect from damage during granular base installation.

3.9 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Geotechnical Engineer.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Soils Consultant.

3.10 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.11 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

C. The top and bottom supporting slabs for all concrete walls retaining earth must be placed and have reached at least 75 percent of their specified compressive strength prior to placing backfill.
1. All concrete walls retaining earth must have reached at least 75 percent of their specified compressive strength prior to placing backfill.

D. All backfill placed against concrete walls shall be Drainage Fill.

3.12 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03 30 00 "Cast-in-Place Concrete"

D. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or

conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Section 03 30 00 "Cast-in-Place Concrete"

E. Backfill voids with satisfactory soil while removing shoring and bracing.

F. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

G. Place and compact final backfill of satisfactory soil to final subgrade elevation.

H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.13 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 6 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under foundations, test subgrade and compact each layer of engineered fill at 97 percent.
3. Under running track asphalt pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
4. Under artificial turf system scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
5. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
6. Under natural turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
7. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.
8. Compaction by flooding is not acceptable.

D. At end of each of filling and compaction operations, proof roll with smooth tired vehicle to leave smooth surface sealed to shed water.

E. Prior to preparing formwork for the foundations, the excavation shall be inspected as specified in the soils report and any action required will be done as described therein.

3.16 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from paved areas and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch above or below required subgrade elevations.
2. Walks: Shape surface of areas under walks to line, grade and cross-section with finish surface not more than 0.10 ft. above or below required subgrade elevation.
3. Pavements: Shape surface of areas under pavement to line, grade and cross-section with finish surface not more than 1/2 inch above or below required subgrade elevation.

3.17 SUBSURFACE DRAINAGE

A. Subdrainage Pipe: Specified in Section 33 46 00 "Subdrainage."

B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches of filter material, placed in compacted layers 6 inches thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches.

3.18 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
1. Place base course material over subbase course under hot-mix asphalt pavement.
2. Shape subbase course and base course to required crown elevations and cross-slope grades.

3. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
4. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
5. Compact subbase course and base course with a minimum 10-ton roller, to an optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
6. Perform hand tamping in areas inaccessible to mechanized compaction equipment.
7. Place earth or other approved materials along the edges of the base course so that at least one foot of the shoulder is rolled and compacted simultaneously with the rolling and compacting of each base course layer.

3.19 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage fill on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage fill under cast-in-place concrete slabs-on-grade as follows:

1. Place drainage fill that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
2. Maintain optimum moisture content for compacting material during placement operations. Compact to the specified density.

3.20 FIELD QUALITY CONTROL

A. Special Inspections: Owner or Owner's Agent will engage a qualified Testing Agency to perform the following special inspections:

1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
2. Determine that fill material and maximum lift thickness comply with requirements.
3. Determine, at the required frequency, that in-place density of compacted fill complies with requirements.

B. Testing Agency: Owner or Owner's Agent will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

D. Footing Subgrade: Verify by testing that the soil bearing capacity is acceptable at each column footing and at 8'-0" intervals along wall footings at the indicated bearing elevations.

E. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable.

1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.
2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for every 100 feet or less of wall length, but no fewer than two tests.
3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests.

F. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained. Additional compaction and testing will be done at no additional expense to the Owner.

G. Test finished granular base course surface with a 16 foot straight edge applied parallel and at right angles of centerline of area to be paved.
   1. Correct any surface deficiencies greater than ½" by loosening, adding or removing material, and reshaping and re-compacting.

3.21 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

   1. Scarify or remove and replace soil material to depth as directed by Soils Consultant; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

D. Positive drainage of surface water, including existing and new building downspout discharge, shall be maintained away from structure foundations to avoid wetting and weakening of foundation soils both during construction and after construction is complete.

3.22 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 20 00

SECTION 321813 – SYNTHETIC TURF SAFETY SURFACE

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes: Playground synthetic grass playground safety surfacess ystem as follows: A complete synthetic grass system, consisting of a synthetic grass with a pile height of at least 1 1/8 inches long and not to exceed 1 3/8 inches long, 100% monofilament polyethylene fibers and polyethylene/polyester thatch layer, tufted on a 3/8" tufting machine with a minimum face weight of 55 ounces of yarn per square yard. The fibers shall include anti-static yarns, anti-bacterial additives and “cool grass” reflective pigments to reduce the surface temperature. Synthetic turf products utilizing nylon blades or nylon thatch layers will not be acceptable. The system should be infilled with between 1.5 to 2.0 pounds per square foot of acrylic coated sand (commonly known as ToCool®) infill or a combination thereof as accepted by the managing architect. Systems utilizing granular rubber products made of recycled tires infilled in the grass blades will not be acceptable. The system shall include a single, dimensionally stable, two-component primary backing and have a minimum of 20 ounces of secondary polyurethane backing per square yard. The finished product shall also include perforations in a 2” by 2” pattern to ensure excellent surface drainage.

B. Related Sections
1. Section 31 10 00 – Site Clearing: For stripping, grubbing, removing topsoil, and protecting trees to remain.

2. Section 31 20 00 – Earth Moving: For excavation, filling, and grading work, including compacted subgrades and subbase courses, and dewatering.

3. Section 33 46 00 – Subdrainage: For landscape subdrainage system, including geosynthetics.

4. Section 11 68 00 – Playground Equipment and Structures: For structures installed only over protective use zones, at appropriate fall heights.

1.03 DEFINITIONS

A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means “the fall heights below which a life-threatening head injury would not be expected to occur.”

B. Fall Height: According to ASTM F 1487, this means “the vertical distance between a designated play surface and the protective surfacing beneath it.” The fall height of playground equipment should not exceed the critical height of the protective surfacing beneath it.

C. Use Zone: According to ASTM F 1487, this means “the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment.”

1.04 PERFORMANCE REQUIREMENTS

A. Impact Attenuation: According to ASTM F 1292.

B. Accessibility of Surface Systems: According to ASTM F 1951.

C. Minimum Characteristics for Organic Loose-Fill Surfaces: According to ASTM F 2075.

D. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.

E. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.

F. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.

G. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.

H. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

1.05 SUBMITTALS

A. The turf installer will provide submittals of turf, shock pad, glue and seam materials as detailed in the submittals section of the specifications. These details should include the following ASTM test method for the complete system.

1. ASTM F1292-17a, Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment

2. ASTM F1951-14: Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment

B. Submit one 12” by 12” sample of the synthetic turf and the underlayment padding to be installed. A submission of at least one pound of the infill material to be used is also required.

C. Submit manufacturer’s certification that the products and materials comply with the requirements of these specifications. Submit test results showing compliance with the reference standards as listed in the specifications.

D. Documentation: Submit warranty and ensure that forms have been completed in Owner's name and registered with approved manufacturer. The installer of the infill turf system must accept the aggregate base as completed to standards prior to installation of the synthetic turf system.

E. Closeout Submittals

1. Maintenance Data: For playground surface system to include in maintenance manuals specified in Division 1
.
2. Warranty: Special warranty specified in this Section.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and whose work has resulted in installations with a record of successful in-service performance.

1. Engage an installer who employs workers trained and approved by playground surface system manufacturer to install manufacturer's products.

B. Standards and Guidelines: Provide playground surface systems complying with applicable provisions of the following, unless more stringent provisions are indicated:

1. CPSC No. 325, "Handbook for Public Playground Safety"; ASTM F 1292; and ASTM F 1487.

C. Testing Agency Qualifications: An independent agency qualified according to ANSI Z34.1 for testing indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver manufactured materials in original packages with seals unbroken and bearing manufacturer's labels indicating brand name and directions for storing.

B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Store manufactured materials in a clean, dry location, protected from the weather and deterioration, and complying with manufacturer's written instructions for minimum and maximum temperature requirements for storage.

D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

E. Store units on flat surfaces.

1.08 PROJECT CONDITIONS

A. The turf installer shall strictly adhere to the installation procedures outlined under these sections. Any variance from these requirements shall be accepted in writing by the manufacturer's representative, and submitted to the architect/owner, verifying that the changes do not in any way affect the warranty.

1. The turf installer will accept the stone base substrate prior to the installation of the synthetic turf system.

2. Extreme care should be taken to avoid disturbing the substrate in regard to planarity.

3. Playground pad shall be laid out and cut around the playground equipment so as not to leave gaps greater than ¼" between the post and the pad. [Alternate poured rubber base layer should be poured to touch the equipment poles with no gaps between the posts and the rubber.

4. The full width rolls of synthetic grass shall be laid out across the area, utilizing standard state-of-the-art gluing procedures each roll shall be seamed to the next.

5. This is a 100% glued installation. Sewing of seams will not be permitted. The seaming tape and glue shall be intended for installation of outdoor synthetic turf surfaces. The adhesive must be a polyurethane-based adhesive, latex-based adhesives are not acceptable.

6. The synthetic turf will be fastened to perimeter nail boards with triple coated 1" construction lag screws every 4"-5" around the perimeter.

7. The play area will be infilled with 1.5 - 2 pounds per square foot of rounded ToCool infill (or alternative infill as specified by the architect and/or owner) and brushed with a motorized rotary nylon broom to stand up the fibers and allow the infill to settle to the bottom of the turf upon completion of the installation.

1.09 SEQUENCING

A. Coordinate construction of playground surface systems with installation of playground equipment, including accurate use zones and fall heights, specified in Section 116800 – Playground Equipment.

1.10 WARRANTY

A. The bidder and/or the turf manufacturer must provide the following:

1. The turf manufacturer shall provide a warranty to the owner that covers defects in materials and workmanship of the turf for a period of at least 10 years from the date of Substantial Completion. A ten (10) year "UV stabilization" warranty shall be included in the warranty.

2. The manufacturer’s warranty shall include damage caused from UV degradation. The warranty shall specifically exclude vandalism, acts of War and acts of God beyond the control of the owner, installer, general contractor or the manufacturer.

3. The bidder shall provide a warranty to the owner that covers defects in the installation workmanship for a period of at least 2 years, and further warrant the installation was done in accordance with the manufacturer’s recommendations.

4. All turf warranties shall be limited to repair or replacement of the affected areas and shall include all necessary materials, labor, transportation costs, and other associated costs to complete said repairs. All warranties are contingent on the full payment by the owner of all pertinent invoices.

5. The turf installer and/or manufacturer’s rep will provide on-site maintenance training upon substantial completion of the project. Optional maintenance equipment will be demonstrated and discussed at that time.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Approved synthetic turf products are:

1 PerfectPlay® Playground Safety Surface Manufactured by Perfect Turf LLC, Rolling Meadows, IL 60008, Contact: 888-SYN-TURF (888-796-8873)
The PerfectPlay® System consist of:

a) Perfect Turf® PlayGround Turf 55™
   i. Face Weight: 55 oz.
   ii. Pile Height: 1.2”
   iii. Roll Width: 15’ (180”)
   iv. Yarn Color: Two-tone green with green/tan thatch, contact manufacturer for availability of other colors
   v. Yarn type: 9000 denier two-tone Polyethylene blades with a texturized polyester thatch layer.
   vi. Construction Details: Type - tufted | Gauge: 3/8”.

vii. Primary backing: 2 layers 13 pic polybac.
viii. Secondary backing: min. 20 oz. Polyurethane.
ix. Perforations: Yes, 2x2 inches on center.
x. Infill requirements: Yes, 2lbs/sf of infill based on customer preference.
xi. Warranty: 10 years manufacturer's warranty

2. Perfect Turf® Playground Padding (manufactured by Schmitz Foam) or Perfect Turf Unitary Base as manufactured by Pro-Techs Surfacing or approved poured in place rubber manufacturer or approved equivalent upon approval from the principal architect. The synthetic turf material shall be in accordance with the following:

3. The long fiber shall be a minimum 9,000 denier, minimum 240-micron thickness,100% true monofilament polyethylene, low friction fiber, measuring not less than 1-1/8 inches high and not more than 1 3/8 inches high. The thatch fiber shall be a minimum 4,000 denier, minimum 140-micronthickness, 100% polyethylene and polyester fiber. These material specifications will be confirmed by providing the following independent lab testing:

a) ASTM D1577 Standard Test Method for Linear Density of Yarn by the Short Method (Denier)

b) ASTM D3218 Standard Specification of Polyolefin Monofilaments (Ribbon Thickness & Width)

c) ASTM D5823 Standard Test Method for Tuft Height of Pile Yarn Floorcovering

4. The polyester in the thatch zone fiber is required for anti-static properties. The silver-oxide based antimicrobial additives in the yarn are designed to keep the surface more sanitary for children. The "cool grass" reflective pigments in the yarn are designed to keep the turf cooler to the touch. Any synthetic turf without these properties built into the yarn will not be acceptable. Infills and/or sprays designed to provide these properties will not be acceptable.

5. The PlayGround Turf 55™ fiber shall be a two-tone grass blade, green in color with a tan/green thatch fiber to simulate natural grass as closely as possible and treated with UV inhibitor, guaranteed for a minimum of ten years.

6. The tufted fiber weight (aka face weight) shall not be less than 55 ounces per square yard. The fiber shall be tufted on a 3/8" tufting machine. The low friction non-abrasive fiber shall be 100% monofilament polyethylene, treated with a UV inhibitor. These material specifications will be confirmed by independent lab testing:

a) ASTM D5848-10e1 Standard Test Method for Mass Per Unit Area of Pile Yarn Floorcoverings

7. The primary backing shall consist of a two-part polypropylene primary backing. The secondary backing shall consist of an application of a minimum of 20 ounces of coating per square yard heat activated to permanently lock fiber tufts in place. The total backing weight shall not be less than 26 ounces. The synthetic grass system shall be perforated at a minimum of 2" by 2" on center to provide for excellent drainage. Non-perforated systems shall not be acceptable alternates for purposes of this specification. The turf shall have a minimum drainage rate of 250 inches per hour. These material specifications will be confirmed by independent lab testing:

a) ASTM F1551 Standard Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials

8. The carpet rolls shall be of sufficient length to go from side to side of the play area. Full head seams will not be acceptable unless as required to cut around equipment posts.

9. The shock attenuation pad shall be a 100% recycled, post-industrial cross linked, closed cell polyethylene-polyolefin foam material. The pad should allow for vertical and horizontal drainage. The pad should come with a 25-year manufacturer's warranty.

10. The alternate shock attenuation layer of unitary rubber buffing's should be either EPDM, SBR or a combination mixed with aliphatic urethane binder.

11. The non-rubber infill shall be an acrylic polymer coated sand, commonly known as ToCool. No other infills will be accepted without prior written approval by the architect and/or owner.

2.02 DRAINAGE SYSTEM

A. Drainage Stone: Clean, washed, angular stone of uniform size, 1/2-inch diameter, plus or minus. Install below wood fiber in a minimum 4-inch depth.

B. Underdrain Tubing: 4-inch diameter PVC, perforated tubing.

2.03 LOOSE FILL ACCESSORIES

A. Edgings: Provide concrete edgings and containment curbs as indicated on plans.

Protective rubber mat (stabilizing mats) are to meet requirements of an 8-foot critical fall height and are to be installed at the base of each slide and centered under each swing seat. Locate tiles on top of the geotextile and below the 18-inch deep wood fiber surfacing. Provide in minimum four foot square area below slide exit and in 6 foot wide by length of swing beam. Stabilizing mats are to conform to ASTM F1292-93 conforming to shock alteration values of less than 200 G-max and less than 1000 HIC for critical height of 8 feet. Shop drawing submittals are to include documentation of test data as done by an independent testing laboratory. Product is to be warranted against defects in material and workmanship and shall include conformance to ASTM F1292-93 during the warranty period of 5 years. Mats (materials and installation) are to be warranted against defects caused by peeling or raveling of shredded rubber or granules; and defects that could cause a child to trip.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions with Installer present, for compliance with requirements for subgrade and substrate conditions, for compliance with playground surface system manufacturer's requirements, and for other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Stake locations of playground perimeter, playground equipment, use zones, and pathways. Clearly indicate locations of utilities, lawn sprinkler system, subgrade drainage systems, and underground structures.

B. General: Prepare fill, patch, clean, remove high spots and ridges, and remove incompatible coatings from substrates to receive surfacing products according to playground surface system manufacturer's written instructions. Verify that substrates are sound without high spots, ridges, holes, and depressions.

3.03 INSTALLATION, GENERAL

A. General: Comply with playground surface system manufacturer's written installation instructions. Install playground surface system over area and in thickness indicated and as required to comply with specified requirements for impact-attenuation performance and, where indicated, for accessibility.

3.04 GEOSYNTHETIC INSTALLATION

A. General: Install geosynthetics according to playground surface system manufacturer's and geosynthetic manufacturer's most stringent written instructions, and as follows:
   1. Geotextiles: Completely cover area indicated, overlapping lapping edges a minimum of 8 inches with manufacturer's standard treatment for seams.
   2. Layer under hardwood fiber surface system.
   3. Layer under and contain drainage stone.
   4. As indicated on Drawings.

3.05 INSTALLATION OF LOOSE FILL PLAYGROUND SURFACE SYSTEMS

A. Loose Fill: Place playground surfacing materials in excavations promptly, including manufacturer's standard amount of excess material for compacting mechanically to required elevations, but not before the following have occurred:
   1. Completion of subgrade construction, including drainage/separation geosynthetic layer including weed barrier.
   2. Installation of playground equipment support posts and foundations.
   3. Installation of containment edgings.
   4. Removal of obstructions, trash, debris, and waste fill materials.

B. Stabilizing Mats: Coordinate installation of mat anchoring system and mats with placing and compacting of fill.

C. Compacting and Grading: Uniformly compact and grade areas according to manufacturer's written instructions to an even surface free from irregular surface changes and to cross sections, lines, and elevations indicated. Unless otherwise indicated, provide a smooth transition between adjacent existing grades and new grades.

D. Finish Grading: Hand rake to a smooth finished surface and to required elevations with zero tolerance.

3.06 INSTALLATION OF NON-LOOSE FILL PLAYGROUND SURFACE SYSTEMS

A. Poured-In-Place Playground Surfacing: Comply with the instructions and recommendations of the playground surfacing manufacturer.
   1. Surface Preparation: Using a brush or short nap roller, apply primer to the substrate perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft2/gal.
   2. Basemat Installation:
      a. Using screeds and hand trowels, install the basemat at a consistent density of 29 pounds, 1 ounce per cubic foot (466 kg/m3) to the specified thickness.

b. Allow basemat to cure for sufficient time so that indentations are not left in the basemat from applicator foot traffic or equipment.

c. Do not allow foot traffic or use of the basemat surface until it is sufficiently cured.

3. Primer Application: Using a brush or short nap roller, apply primer to the basemat perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft2/gal.

4. Top Surface Installation:
   a. Using a hand trowel, install top surface at a consistent density of 58 pounds, 9 ounces per cubic foot to a nominal thickness of 1/2".
   b. Allow top surface to cure for a minimum of 48 hours.
   c. At the end of the minimum curing period, verify that the top surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface.
   d. Do not allow foot traffic or use of the surface until it is sufficiently cured.

3.07 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing Services: Testing and inspecting of completed applications of playground surface system shall take place according to ASTM F 1292.

C. Remove and replace applications of playground surface system where test results indicate that it does not comply with requirements.

3.08 CLEANING AND PROTECTION

A. Loose Fill Systems: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Replenish with matching material, repair, and reestablish densities and finish elevations where surfaces become eroded, rutted, or settled or where they lose compaction and depth, until date of Substantial Completion.

B. Non-Loose Fill Systems: Prevent traffic over system for not less than 48 hours after installation. Protect playground surface system from damage and wear during the remainder of construction period. Clean playground surface system after time period recommended in writing by playground surface system manufacturer but not more than 4 days before dates scheduled for inspections intended to establish date of Substantial Completion. Use cleaning materials and procedures recommended in writing by playground surface system manufacturer.

END OF SECTION 32 18 13

SECTION 321816 - PLAYGROUND SURFACE SYSTEMS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes: Playground surface systems and accessories as follows:
   1. Non-loose fill systems.
      a. 2-Layer Rubber Urethane Playground Surfacing System
      b. Protective rubber mat
   2. Geosynthetics.

B. Related Sections
   1. Section 31 10 00 – Site Clearing: For stripping, grubbing, removing topsoil, and protecting trees to remain.
   2. Section 31 20 00 – Earth Moving: For excavation, filling, and grading work, including compacted subgrades and subbase courses, and dewatering.
   3. Section 33 46 00 – Subdrainage: For landscape subdrainage system, including geosynthetics.
   4. Section 11 68 00 – Playground Equipment and Structures: For structures installed only over protective use zones, at appropriate fall heights.

1.03 DEFINITIONS

A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means “the fall heights below which a life-threatening head injury would not be expected to occur.”

B. Fall Height: According to ASTM F 1487, this means “the vertical distance between a designated play surface and the protective surfacing beneath it.” The fall height of playground equipment should not exceed the critical height of the protective surfacing beneath it.

C. SBR: Styrene butadiene rubber.

D. Use Zone: According to ASTM F 1487, this means “the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment.”

1.04 PERFORMANCE REQUIREMENTS

A. Impact Attenuation: According to ASTM F 1292.

B. Accessibility of Surface Systems: According to ASTM F 1951.

C. Minimum Characteristics for Organic Loose-Fill Surfaces: According to ASTM F 2075.

D. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.

E. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.

F. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.

G. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.

H. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

1.05 SUBMITTALS

A. Color Samples for Verification: For the following products, for each type of exposed finish required, prepared on samples of size indicated below and of same thickness and material indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.
   1. Minimum 6 inch by 6 inch square sample of non-loose fill surfacing.

B. Quality Assurance/Control Submittals
   1. Product Data: For each type of product indicated. Include material descriptions and construction details for each component of playground surface system.
   2. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements and qualification requirements.
   3. Product Certificates: Signed by manufacturers of playground surface systems certifying that protective surfacing furnished comply with requirements.
   4. Coordination Drawings: Layout plans and elevations drawn to scale and coordinating installation of playground surface systems with playground equipment. Show playground equipment locations, use zones, fall heights, extent of protective surfacing, and critical heights.
   5. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:
      a. Hardwood fiber surfacing.
      b. Protective Rubber Mat
      c. 2-Layer Rubber Urethane Playground Surfacing System
   6. Field quality-control test reports.

C. Closeout Submittals
   1. Maintenance Data: For playground surface system to include in maintenance manuals specified in Division 1.
   2. Warranty: Special warranty specified in this Section.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and whose work has resulted in installations with a record of successful in-service performance.
   1. Engage an installer who employs workers trained and approved by playground surface system manufacturer to install manufacturer's products.

B. Standards and Guidelines: Provide playground surface systems complying with applicable provisions of the following, unless more stringent provisions are indicated:
   1. CPSC No. 325, "Handbook for Public Playground Safety"; ASTM F 1292; and ASTM F 1487.

C. Testing Agency Qualifications: An independent agency qualified according to ANSI Z34.1 for testing indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver manufactured materials in original packages with seals unbroken and bearing manufacturer's labels indicating brand name and directions for storing.

B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Store manufactured materials in a clean, dry location, protected from the weather and deterioration, and complying with manufacturer's written instructions for minimum and maximum temperature requirements for storage.

D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

E. Store units on flat surfaces.

1.08 PROJECT CONDITIONS

A. Environmental Limitations: Do not apply playground surface system materials or components over wet, frozen, or excessively damp substrates if prohibited by manufacturer's written instructions or warranty requirements.

B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit playground surface system to be performed according to manufacturer's written instructions or warranty requirements.

C. Field Measurements: Where playground surface system is indicated to fit to other construction, verify dimensions of other construction by field measurements.

D. Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C) and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in steady or heavy rain.

1.09 SEQUENCING

A. Coordinate construction of playground surface systems with installation of playground equipment, including accurate use zones and fall heights, specified in Section 116800 – Playground Equipment.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of playground surface system that fails in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Reduction in impact attenuation.
      b. Deterioration of surface and other materials beyond normal weathering.
   2. Warranty Period: Seven years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Poured-in-Place Playground Surfacing Systems Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Poured-in-Place Playground Surfacing Systems
      a. Perma-Play 2-Layer Poured-In-Place playground surface w/Aliphatic Urethane – Pro-Techs Surfacing, LLC Copley, Ohio
      b. Poured in Place Rubber - GameTime, Fort Payne. Alabama

c. Poured-In-Place 2-Layer Rubber – Playground Equipment, Greenfield, Indiana

B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. The "Substitution Request Form" and complete technical data for evaluation must accompany request for A/E's approval All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.02 PLAYGROUND SURFACE SYSTEMS, GENERAL

A. Accessibility: Provide playground surface systems determined to be accessible when tested according to ASTM PS 83 and designed to comply with requirements for an accessible route as recommended by U.S. Architectural & Transportation Barriers Compliance Board's "ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)".

2.03 NON-LOOSE FILL PLAYGROUND SURFACE SYSTEMS

A. 2-Layer rubber-urethane Playground Surfacing system Performance Requirements
1. Shock Attenuation (ASTM F1292)
   a. Gmax: Less than 200
   b. Head Injury Criteria: 1000 or less
2. Flammability (ASTM D2859): Pass
3. Tensile Strength (ASTM D412): 96.4 psi
4. Tear Resistance (ASTM D624): 37.3 psi
5. Water Permeability: 417.9 gal/yd2/minute
6. Accessibility: Comply with requirements of ASTM 1951-14
   a. Straight Baseline Propulsion – 5.35 lbs.Work/ft-Force
   b. Turning Baseline Propulsion – 7.23 lbs. Work/ft-Force
7. Poured-in-place Primer: Urethane
8. Poured-in-place Basemat:
   a. Material: blend of 100% recycled SBR (stryrene butadiene rubber) and Urethane
   b. Thickness per detail on drawings
   c. Formulation Components: Blend of strand and granular material.
9. Poured-In-Place Top Surface:
   a. Material: Blend of recycled EPDM (ethylene propylene diene monomer) rubber and aliphatic urethane binder.
   b. Thickness: Nominal 1/2" (12.7 mm), minimum 3/8" (9.5 mm), maximum 5/8" (15.9 mm).
   c. Color to be selected by owner
10. Dry Static Coefficient of Friction (ASTM D2047): 0.7scof.
11. Wet Static Coefficient of Friction (ASTM D2047): 0.8scof.
12. Dry Skid Resistance (ASTM E303):
   a. Initial Dry: 100.8 BPN Avg
   b. 90-Degree Dry: 103.0 BPN Avg.
13. Wet Skid Resistance (ASTM E303):
   a. Initial Dry: 49.5 BPN Avg.
   b. 90-Degree Wet: 50.8 BPN Avg.
14. Mixes (Required mix proportions by weight)
   a. Buffing – 16% polyurethane, 100# rubber.
   b. Wear Course – 18 – 22% polyurethane, 110# rubber.

2.04 GEOSYNTHETICS

A. Drainage/Separation Fabric: Nonwoven needle-punched geotextile, specifically manufactured as a drainage geotextile; made from polyolefins or polyesters; complying with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:

1. Weight: 4 oz./sq.yd. according to ASTM D 5261.
2. Water Flow Rate: 100 gpm per sq. ft. according to ASTM D 4491.

B. Weed-Control Barrier: Composite fabric geotextile consisting of woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, weighing not less than 4.8 oz./sq.yd.

2.05 DRAINAGE SYSTEM

A. Drainage Stone: Clean, washed, angular stone of uniform size, 1/2-inch diameter, plus or minus. Install below wood fiber in a minimum 4-inch depth.

B. Underdrain Tubing: 4-inch diameter PVC, perforated tubing.

2.06 LOOSE FILL ACCESSORIES

A. Edgings: Provide concrete edgings and containment curbs as indicated on plans.

B. Protective rubber mat (stabilizing mats) are to meet requirements of an 8-foot critical fall height and are to be installed at the base of each slide and centered under each swing seat. Locate tiles on top of the geotextile and below the 18-inch deep wood fiber surfacing. Provide in minimum four foot square area below slide exit and in 6 foot wide by length of swing beam.
1. Stabilizing mats are to conform to ASTM F1292-93 conforming to shock alteration values of less than 200 G-max and less than 1000 HIC for critical height of 8 feet. Shop drawing submittals are to include documentation of test data as done by an independent testing laboratory. Product is to be warranted against defects in material and workmanship and shall include conformance to ASTM F1292-93 during the warranty period of 5 years. Mats (materials and installation) are to be warranted against defects caused by peeling or raveling of shredded rubber or granules; and defects that could cause a child to trip.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions with Installer present, for compliance with requirements for subgrade and substrate conditions, for compliance with playground surface system manufacturer’s requirements, and for other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Stake locations of playground perimeter, playground equipment, use zones, and pathways. Clearly indicate locations of utilities, lawn sprinkler system, subgrade drainage systems, and underground structures.

B. General: Prepare fill, patch, clean, remove high spots and ridges, and remove incompatible coatings from substrates to receive surfacing products according to playground surface system manufacturer’s written instructions. Verify that substrates are sound without high spots, ridges, holes, and depressions.

3.03 INSTALLATION, GENERAL

A. General: Comply with playground surface system manufacturer’s written installation instructions. Install playground surface system over area and in thickness indicated and as

required to comply with specified requirements for impact-attenuation performance and, where indicated, for accessibility.

3.04 GEOSYNTHETIC INSTALLATION

A. General: Install geosynthetics according to playground surface system manufacturer's and geosynthetic manufacturer's most stringent written instructions, and as follows:
   1. Geotextiles: Completely cover area indicated, overlapping lapping edges a minimum of 8 inches with manufacturer's standard treatment for seams.
   2. Layer under hardwood fiber surface system.
   3. Layer under and contain drainage stone.
   4. As indicated on Drawings.

END OF SECTION 32 18 16

3.05 INSTALLATION OF NON-LOOSE FILL PLAYGROUND SURFACE SYSTEMS

A. Poured-In-Place Playground Surfacing: Comply with the instructions and recommendations of the playground surfacing manufacturer.
   1. Surface Preparation: Using a brush or short nap roller, apply primer to the substrate perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft2/gal.
   2. Basemat Installation:
      a. Using screeds and hand trowels, install the basemat at a consistent density of 29 pounds, 1 ounce per cubic foot (466 kg/m3) to the specified thickness.
      b. Allow basemat to cure for sufficient time so that indentations are not left in the basemat from applicator foot traffic or equipment.
      c. Do not allow foot traffic or use of the basemat surface until it is sufficiently cured.
   3. Primer Application: Using a brush or short nap roller, apply primer to the basemat perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft2/gal.
   4. Top Surface Installation:
      a. Using a hand trowel, install top surface at a consistent density of 58 pounds, 9 ounces per cubic foot to a nominal thickness of 1/2".
      b. Allow top surface to cure for a minimum of 48 hours.
      c. At the end of the minimum curing period, verify that the top surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface.
      d. Do not allow foot traffic or use of the surface until it is sufficiently cured.

3.06 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing Services: Testing and inspecting of completed applications of playground surface system shall take place according to ASTM F 1292.

C. Remove and replace applications of playground surface system where test results indicate that it does not comply with requirements.

3.07 CLEANING AND PROTECTION

A. Loose Fill Systems: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Replenish with matching material, repair, and reestablish densities and finish elevations where surfaces become eroded, rutted, or settled or where they lose compaction and depth, until date of Substantial Completion.

B. Non-Loose Fill Systems: Prevent traffic over system for not less than 48 hours after installation. Protect playground surface system from damage and wear during the remainder of construction period. Clean playground surface system after time period recommended in writing by playground surface system manufacturer but not more than 4 days before dates scheduled for inspections intended to establish date of Substantial Completion. Use cleaning materials and procedures recommended in writing by playground surface system manufacturer.

END OF SECTION 32 18 16

SECTION 32 31 19 – DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 01 Specification Sections, and Division 08 Section Door Hardware Schedule, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Industrial ornamental aluminum fence
2. Swing gates.

B. Related Sections:

1. Section 033000 "Cast-in-Place Concrete" for concrete post concrete fill.
2. Section 312000 "Earth Moving" for site excavation, fill, and backfill where decorative metal fences and gates are located.

1.3 PERFORMANCE REQUIREMENTS

A. Lightning-Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For gates. Include plans, elevations, sections, details, and attachments to other work.

C. Samples: Provide paint color selections.

1.5 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for ornamental picket fences, including finish, indicating compliance with referenced standard and other specified requirements.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code – Steel or AWS D1.2/D1.2M, "Structural Welding Code – Aluminum", depending upon selected material type.

C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Include 10-foot length of fence complying with requirements.
2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

D. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

E. Preinstallation Conference: Conduct conference at Project site.

1.7 PRODUCT HANDLING AND STORAGE

A. Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. The industrial ornamental aluminum fence and gate system shall conform to Ameristar Echelon II Majestic 4-Rail style manufactured by Ameristar Fence Products, Inc., in Tulsa, Oklahoma, or approved equal.

B. The ornamental fence panels shall conform to Parasoleil Lunar Screen System, manufactured by Parasoleil, in Westminster, Colorado, or approved equal.

2.2 MATERIALS

A. Aluminum material for fence framework (i.e., tubular pickets, rails and posts) shall conform to the requirements of ASTM B221. The aluminum extrusions for posts and rails shall be Alloy and Temper Designation 6005-T52. The aluminum extrusions for pickets shall be Alloy and Temper Designation 6063-T52.

B. The manufactured framework shall be subjected to the Ameristar thermal stratification coating process (high-temperature, in-line, multi-stage, and multi-layer) including, as a minimum, a six-stage pretreatment/wash and an electrostatic spray application of a polyester finish. The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The color shall be Black. The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2.

C. Material for fence pickets shall be 1" square x 0.062" thick (.125” wall for Invincible) extruded

tubing. The cross-sectional shape of the rails shall conform to the manufacturer's ForeRunner™ design with outside cross-section dimensions of 1.75" square. The top wall and internal web of the rail shall be 0.070" thick; the sidewalls shall be 0.070" thick for superior vertical load strength. Picket holes in the ForeRunner rail shall be spaced 4.715” o.c., except for Invincible style 6’ long, which shall be, spaced 4.98” o.c. Picket retaining rods shall be 0.125” diameter galvanized steel. Fence posts and gate posts shall meet the minimum size requirements of Table 1. High quality PVC grommets shall be supplied to seal all picket-to-rail intersections.

D. Bracket to rail attachments shall be made using specially designed one-way tamperproof security nuts with carriage bolt. Bracket to post connections shall be made using self-drilling hex-head screws.

E. Aluminum castings shall be used for all rings, post caps, finials, and miscellaneous adornments.

2.3 FABRICATION

A. Pickets, rails and posts shall be pre-cut to specified lengths. ForeRunner rails shall be pre-punched to accept pickets.

B. The rail inner slide shall be fully inserted into the rail outer channel to form the raceway for the internal retaining rod. Grommets shall be inserted into the pre-punched holes in the rails, and pickets shall be inserted through the grommets so that pre-drilled picket holes align with the internal raceway of the two-part ForeRunner rails. (Note: This can best be accomplished by using an alignment template). Retaining rods shall be inserted into each ForeRunner rail so that they pass through the pre-drilled holes in each picket, thus completing the panel assembly.

C. Completed panels shall be capable of supporting a 300 lb. load (applied at midspan) without permanent deformation. Panels shall be biasable to a 25% change in grade.

D. Gates shall be fabricated using 1.75” sq. reinforced ForeRunner rail material, 2” sq. x .250” gate ends, and 1” sq. x .125” pickets. All rail and upright intersections shall be joined by welding. All picket and rail intersections shall be joined by welding.

2.4 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.

B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 033000 "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3500 psi, 3-inch slump, and 1-inch maximum aggregate size.

C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107 and specifically recommended by manufacturer for exterior applications.

D. Lexan panels for gates. Per detail.

2.5 GROUNDING MATERIALS

A. Grounding Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.

1. Material above Finished Grade: Copper.

2. Material on or below Finished Grade: Copper.
3. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

B. Grounding Connectors and Grounding Rods: Comply with UL 467.

1. Connectors for Below-Grade Use: Exothermic-welded type.
2. Grounding Rods: Copper-clad steel.

a. Size: 5/8 by 96 inches.

2.6 MINIMUM POST SIZES

Table 1 – Minimum Sizes for Echelon II Posts

Fence Posts	Panel Height
2-1/2" x 2-1/2" x .080" Alum. w/ reinforced web	Up to & Including 6' Height
3" x 3" x .120" Alum.	Over 6' Up to & Including 8' Height
4" x 4" x .250" Alum.	Over 8' Height Up to 10'

Gate Leaf	Gate Height			
	Up to & Including 4'	Over 4' Up to & Including 6'	Over 6' Up to & Including 8'	Over 8' Up to & Including 10'
Up to 4'	3" x 3" x .120" Alum.	4" x 4" x .250 Alum. or 3" x 12 Ga. steel	4" x 11 Ga. steel	4" x 11 Ga. steel
4'1" to 6'	4" x 4" x .250 Alum. or 3" x 12Ga. steel	3" x 12 Ga. steel	4" x 11 Ga. steel	4" x 11 Ga. steel
6'1" to 8'	4" x 11 Ga. steel	4" x 11 Ga. steel	4" x 11 Ga. steel	6" x 3/16" steel
8'1" to 10'	4" x 11 Ga. steel	4" x 11 Ga. steel	6" x 3/16" steel	6" x 3/16" steel
10'1" to 12'	4" x 11 Ga. steel	6" x 3/16" steel	6" x 3/16" steel	6" x 3/16" steel
12'1" to 14'	6" x 3/16" steel	6" x 3/16" steel	6" x 3/16" steel	6" x 3/16" steel

2.7 COATING PERFORMANCE REQUIREMENTS

Table 2 – Coating Performance Requirements		
Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117 & D1654	Corrosion Resistance over 1,000 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625" ball).
Weathering Resistance	D822 D2244, D523 (60˚ Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

2.8 ECHELON II – POST SPACING BY BRACKET TYPE

Span	For CLASSIC, GENESIS, & MAJESTIC 8' Nominal (92.625" Rail)					
Post Size	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"
Bracket Type	Industrial Universal (BB302)	Industrial Universal (BB303)	Industrial Flat Mount (BB301)		Industrial Swivel (BB304)*	
Post Settings ± ½" O.C.	96"	96.5"	96"	96-1/2"	*97.5"	*98"
Span	For CLASSIC, GENESIS, & MAJESTIC 6' Nominal (67.75" Rail)					
Post Size	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"
Bracket Type	Industrial Universal (BB302)	Industrial Universal (BB303)	Industrial Flat Mount (BB301)		Industrial Swivel (BB304)*	
Post Settings +/-1/2" O.C.	71.5"	72"	71.5""	72"	*73"	*73.5"

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.

B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

1. Construction layout and field engineering are specified in Section 017300 "Execution."

3.3 DECORATIVE FENCE INSTALLATION

A. Install fences according to manufacturer's written instructions.

B. Fence posts shall be spaced according to Table above, plus or minus ½”.

C. For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade.

D. Fence panels shall be attached to posts with brackets supplied by the manufacturer

E. Post Excavation: Drill or hand-excavate holes for posts in firm, undisturbed soil. Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 24 inches plus 3 inches for each foot or fraction of a foot that fence height exceeds 4 feet.

F. Post Setting: Set posts in concrete at manufacturer’s recommended depth into firm, undisturbed soil.

1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.

2. Concrete Fill: Place concrete around posts and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.

a. Exposed Concrete: Extend to finish grade. Finish and slope top surface to drain water away from post.

G. When cutting/drilling rails or posts adhere to the following steps to seal the exposed surfaces;

1. Remove all metal shavings from cut area.

2. Apply custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1& 2 above will negate warranty. Ameristar spray cans or paint pens shall be used

to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Ameristar parts or components will negate the manufactures' warranty.

3.4 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

B. Gate posts shall be spaced according to the manufacturers' gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quantity of gate hinges shall be based on the application; weight, height, and number of gate cycles. The manufacturers' gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacture of the gate and shall be installed per manufacturer's recommendations.

3.5 GROUNDING AND BONDING

A. Fence Grounding: Install at maximum intervals of 1500 feet except as follows:

1. Fences within 100 Feet of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet.

    a. Gates and Other Fence Openings: Ground fence on each side of opening.

        1) Bond metal gates to gate posts.
        2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.

B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.

C. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location.

D. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.

E. Connections: Make connections so possibility of galvanic action or electrolysis 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 in 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.

F. Bonding to Lightning-Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning-protection down conductor or lightning-protection grounding conductor, complying with NFPA 780.

3.6 FIELD QUALITY CONTROL

A. Grounding-Resistance Testing: Owner will engage a qualified testing agency to perform tests and inspections.

1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.7 ADJUSTING

A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

END OF SECTION 32 31 19

SECTION 32 31 21 - DECORATIVE METAL GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Swing gates with decorative steel fence infill.
   2. Swing gate hardware.

B. Related Sections:
   1. Division 03 Section "Cast-in-Place Concrete."
   2. Division 08 Section "Door Hardware" for key cylinder.

1.3 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section “Quality Requirements,” to design chain-link fence, gate frameworks, and concrete foundations for gate supports.

B. Structural Performance: Chain-link fence and gate frameworks shall withstand the design wind loads and stresses for fence height(s) and water explosive conditions indicated according to ASCE/SEI 7.
   1. Design Wind Load: 25 psi, unless otherwise noted.
      a. Minimum Post Size and Maximum Spacing: Determine according to CLFMI WLG 2445, based on mesh size and pattern specified.

1.4 SUBMITTALS

A. Shop Drawings: For gates. Include plans, elevations, sections, details, and attachments to other work.

B. Samples: For each fence material and for each color specified.
   1. Color samples approximately 8 inches by 8 inches.

C. Quality Assurance/Control Submittals:
   1. Product Data: For each type of product indicated.
      a. Gates and hardware
   2. Qualification Data: For professional engineer.
   3. Delegated-Design Submittal: For fences and gates framework indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
      a. Delegated-design should include concrete foundations for gate supports.

1.5 CLOSEOUT DOCUMENTS

A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals:
   1. Maintenance Data: For gate operators to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code – Steel or AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

C. UL Standard: Provide gate operators that comply with UL 325.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

B. Interruption of Existing Utility Service: Do not interrupt utility services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect no fewer than two days in advance of proposed interruption of utility services.
2. Do not proceed with interruption of utility services without Architect's written permission.

1.8 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of fences and gates that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
a. Failure to comply with performance requirements.
b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: Gates five (5) and infill components fifteen (15) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design: Bennington Architectural Fence and Infinity Double Swing Gate System as manufactured by BASTEEL Perimeter Systems.
1. Subject to compliance with requirements, provide or comparable product by one of the following:
a. Ametco Manufacturing Corp.
b. Barnett Bates Corp.

2.2 STEEL AND IRON

A. Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Tubing: ASTM A 500, cold formed steel tubing.

C. Galvanized-Steel Sheet: ASTM A 653/A 653M, structural quality, Grade 50, with G90 coating.

D. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality, Grade 50, with AZ60 coating.

E. Castings: Either gray or malleable iron unless otherwise indicated.
1. Gray Iron: ASTM A 48/A 48M, Class 30.
2. Malleable Iron: ASTM A 47/A 47M.

2.3 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Division 03 Section "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch maximum aggregate size.

C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107 and specifically recommended by manufacturer for exterior applications.

2.4 DECORATIVE STEEL FENCES

A. Infill Pickets: 5 inches in width, liquid color-coated and then roll formed from minimum 0.017 inch thick full-hard 80,000 psi minimum yield strength steel in accordance with ASTM A653.
   1. Bennington Style as manufactured by BASTEEL Perimeter Systems.
   2. Protective Coating: Hot dipped galvanized zinc G-90 under coat.
   3. Paint System: Two-coat thermocured paint system consisting of a primer bottom coat and a fluoropolymer top coat.
      a. Fluoropolymer top coat shall contain not less than 70 percent polyvinylidene difluoride by weight complying with physical properties and coating performance requirements of AAMA 621.

B. Roll formed C-channel rails for attachment to gate frame and acceptance of infill pickets.

C. Fasteners: Series 302 stainless-steel 6-lobe pin-in security truss head, fully body shouldered conforming to ANSI B1.13M with minimum pull out tensile strength of 5,500 N. All other fasteners shall be corrosion resistant.

D. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.
   1. Hot-dip galvanize rail and picket assemblies after fabrication.

2.5 SWING GATES

A. Gate Configuration and size: As indicated.
   1. Two gate locations required.

B. Gate Frame: Steel tubing, minimum of 2 inch x 4 inch x .073 inch wall (14 gauge) reinforced with 1 inch x 2 inch x .060 inch wall (16 gauge) minimum, 50,000 psi minimum yield strength steel tubing in accordance with ASTM A500, zinc coating in accordance with ASTM F1043B.

C. Gate Posts: Conform to ASTM A500.
   1. 6 inch x 6 inch steel, hot dip galvanized to minimum 1.8 oz. per square foot per side. Post
   2. Provide concrete foundation in accordance with Division 03 Section “Cast-in-Place Concrete”.
   3. Gate posts can be anchored to adjacent masonry wall where available for additional horizontal support.

D. Additional Rails or framing: Provide as required by gate size and configuration.

E. Heady duty gate hinge assembly shall be designed for continuous duty and shall utilize precision-ground pre-lubricated sealed bearing assemblies, shielded to protect against normal ambient environmental conditions.
   1. Size: 4 inch bearing.
   2. Hinge welded to gate frame.
   3. Provide hinge strap full perimeter of gate post and secured.

F. Hardware: Manufacturer’s standard hardware including exterior use hinges as required by size of gates, slide bolts, cane rods and lock box.
   1. Two heavy-duty industrial cane rod assemblies for each pair of gates consisting of 1 inch diameter stainless steel cane rod with heavy duty nylon guides.

a. Provide stainless steel receivers at both open and closed positions for each gate for engaging cane rods.

2. One heavy-duty stainless steel slid bolt assembly consisting of 1-inch diameter stainless steel slide bolt with provisions for padlocking in closed position.
3. Locking shall be fabricated to accept padlock by others.

G. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M unless otherwise indicated. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.

2.6 FABRICATION

A. Gate frame, gate hinge assemblies, stainless steel cane rod, gate latch, posts, gate infill material and accessories shall be provided as integral components of an engineered gate system as detailed in Manufacturer shop drawings.
1. Gate frame shall be designed and constructed so as to be rigid and self-supporting over the life of product without need for tension cables or turnbuckles to maintain overall squareness.
2. Gate frame perimeter shall utilize miter cut corners and be free of sharp edges, cuts, bends and weld splatter prior to factory finish being applied.
3. Gate frame welds shall utilize silicon bronze welding wire conforming to AWS A5.7/ER CUSI-A so as to inhibit corrosion.
4. Infill materials shall be incased on four sides by gate frame perimeter.

2.7 METALLIC-COATED STEEL FINISHES

A. Galvanized Finish: Clean welds, mechanical connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

B. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a zinc-phosphate conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

C. High-Performance Coating: Manufacturer’s two-coat thermocured paint system consisting of primer bottom coat and a fluoropolymer top coat. Fluoropolymer top coat shall contain not less than 70 percent polyvinylidene difluoride by weight, similar to Kyner 500 PVDF, complying with physical properties and coating performance requirements of AAMA 621.
1. All exposed surfaces shall receive the high performance coating.
2. Custom color as selected by Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.

B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
1. Construction layout and field engineering are specified in Division 01 Section "Execution"

3.3 GATE/FENCE INSTALLATION

A. Install gates and fences according to manufacturer's written instructions.

B. Install fences by setting posts as indicated and fastening rails and infill panels to posts. Peen threads of bolts after assembly to prevent removal.

C. Post Excavation: Drill or hand-excavate holes for posts in firm, undisturbed soil. Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 24 inches plus 3 inches for each foot or fraction of a foot that fence height exceeds 4 feet.

D. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
   1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
   2. Concrete Fill: Place concrete around posts and sleeves and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
      a. Exposed Concrete, where noted: Extend 2 inches above grade. Finish and slope top surface to drain water away from post.
   3. Posts Set in Concrete, unless otherwise noted: Extend post to within 6 inches of specified excavation depth, but not closer than 3 inches to bottom of concrete.

E. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.4 ADJUSTING

A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

C. Touch-up painting: Where surfaces impacted during installation utilize manufacturer’s supplied touch-up paint in two coats.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates.

END OF SECTION 32 31 19

FANNING HOWEY

PRE-BID REQUEST FOR INTERPRETATION/CLARIFICATION LOG				
RFI#	**Date Received**	**Request for Interpretation Item**	**Dwg./Spec.**	**Response**
ADDENDUM NO. 1				
1	6/30/25	1. Sheet S-104 shows several Exterior Trench Footings denoted 'ETF-5', however in reviewing the Exterior Trench Footing Schedule on Sheet S-301 (Foundation Details), no 'ETF-5' is shown. Can this ETF type be shown in the Schedule in a forthcoming addendum to ensure bidding contractors can account for all work and accessories associated with this ETF type? 2. Sheet S-104 also shows an Exterior Trench Footing denoted as 'ETF-2.5A'. While there is an 'ETF-2.5' shown on the Exterior Trench Footing Schedule on Sheet S-301, there is not an 'ETF-2.5A' shown within the schedule. Can the design team please advise as to what the added 'A' entails?		1. ETF-5 will be added to schedule at 2/S-301. 2. ETF-2.5A can be found at 15/S-301.
2	7/1/25	Linear Metal Ceiling (LMC) is noted as Unperforated on IN601 List of Finishes. Spec 095423 Linear Metal Ceilings indicates Microperforated. What is correct ?		Refer to Addendum No. 1
3	6/30/25	1. Playground equipment - The plans (G1-05) call out equipment from Midstates Recreation but then give no details on any of the equipment. The specs call out Burke as the basis of design, but again with no details on any of the equipment. We handle Burke equipment but I can't quote anything (or submit a substitution request as an equal) without any equipment details. 2. Shade Sails - Likewise the plans note several shade sails but there is nothing on the plans or specs with any details on these 3. Playground surfacing - plans show poured in place rubber surfacing and playground turf with manufacturers listed on G1-05. Specs then list something different on manufacturers with no information on the turf.		Refer to Addendum No. 1 ***and No. 2.***
4	7/1/25	I understand the solar panel provider is responsible for their support rail and attachment however the Roofing Contractor will need to quantify and qualify their associated work.		Refer to Addendum No. 1. Mounting to shingle roof responsibility of the Photovoltaic Collector provider/installer.
5	7/1/25	On the luminaire schedule (E-601), the 'CVLX' does not have a description or manufacture catalog #. Is it possible to receive information on this light? It looks like		Refer to Addendum No. 1.

		it is just a surface mounted linear fixture, but a catalog # would help get an accurate price.		
6	7/2/25	1. While no specification for Glazing, aside from the Decorative Glass Glazing specification, is included within the Bid Category #01: General Trades scope of work, there seems to be a lack of clarity regarding whether door lite and side lite glass is provided/installed by Bid Category #01 or Bid Category #07. Could the design team or construction manager please advise as to who is responsible for both the supply and installation of the door lite and side lite glass within all frame types? This scope question also involves any associated sealants. 2. Specification 12 93 00, Section 2.06 states that all site furnishing benches, tables, and trash receptacles are to be provided as indicated on the drawings. In reviewing the drawings, there do not appear to be clear basis-of-design products or details shown. Could the design team and construction manager please advise as to what manufacturer and models, in addition to quantities, are to be used in bidding for all of these furnishings? 3. Keynote #19 on Site Plan Sheets such as Sheet G1.01 call out Detail X on Sheet G4-00 for the bike rack site furnishings. In reviewing the Sheet, there does not appear to be a Detail X. Could a Detail X please be provided for clarity on pricing the bike rack construction? 4. The Multiple Contract Summary, in both Bid Category #01 and Bid Category #02, states that the General Trades and Asphalt Paving contractors are to coordinate on the cement stabilization process to verify subgrade for the parking lot and drives. We are presenting three (3) questions related to this scope: a. Which package bears the responsibility of completing the cement stabilization process? b. While the 01 12 00 Multiple Contract Summary uses the term “Cement Stabilization”, both Specification 31 20 00, Section 2.3 and Structural General Notes Sheet S-001, Note 17 state a “Lime By-Product” are to be used for soil stabilization. Could the design team and construction manager please advise as to		1. N/A 2. Refer to forthcoming Addendum 3. Refer to forthcoming Addendum 4.a. N/A 4.b. Refer to forthcoming Addendum 4.c. Refer to forthcoming Addendum

		whether lime or cement is required for stabilization on this project? This information is contradictory and the price difference/schedule disparity between applying these two products could be substantial. c. Based on the language of Note 17 on Sheet S-001, should all bidding contractors assume soil stabilization (whether with lime by-product or cement based on the previous question) throughout all drives, parking lots, and other paved areas? This note could be interpreted in a multitude of ways and we seek to ensure that all contractors are bidding this scope in alignment for a fair, competitive bidding process.		
7	7/2/25	1. Spec Section 12 93 00 – Site Furnishings & Amenities a. This spec section seems to be way off from what is shown in the drawings. The spec has athletic equipment, metal arched roof structure, benches, brick dust, etc. but nothing is shown on the drawings. 2. Spec Section 11 68 13 – Playground Equipment & Structures a. There are multiple playground equipment manufacturers specified as equal to the basis of design (Burke); however the specs nor the drawings provide equipment types/models/etc. that others can price off of. G1-05 just points to the items as "Playground Equipment". Can more information be provided so other specified manufacturers can bid?		1. Spec section will be revised as part of the upcoming addendum. 2. Spec section will be revised as part of the upcoming addendum 1.
ADDENDUM NO. 2				
8	7/8/25	1. Are any curbs required to be painted in this area or anywhere else? 2. What are these below?		1. Curbs are not required to be painted. 2. Refer to Addendum No. 2 drawings – concrete center curb with turnout.
9	7/8/25	1. Please provide a solar panel to asphalt shingle roof attachment detail. 2. Please provide a solar panel to TPO roof assembly attachment detail. 3. The pressure testing and air barrier system spec is in the roofing bid category. Does this apply to general trades or metal studs and drywall? There is no mention of roofing testing in the specification. 4. Bid category line item 5 states the roofing contractor is responsible for top of wall parapets.		1. Not required, review spec section 26 31 00. 2. Not required, review spec section 26 31 00. 3. X 4. X 5. X 6. Refer to Addendum No. 2. 7. Refer to Addendum No. 2 8. Only required where specifically specified elsewhere in Section 2.7 D. 9. Refer to Section 06 16 00, 2.15 B., and 3.5.

		Please confirm this only applies to the rough carpentry portion of those details. 5. Please provide direction on who is to provide the rough carpentry on the attached details. 6. Please indicate the total thickness of nailbase insulation for the shingle roof? Spec section 06 16 00 2.9.A.2 states the R value should be 31.9. This equals 5.5" of insulation but the spec also states to add another layer of 2" insulation. Is the intent to have 7.5" of insulation? This is approximately a R44 assembly. 7. The nailabse spec 06 16 00 2.3.D.1 states both 20 psi and 25 psi insulation. Please confirm 20 psi is acceptable as this is the most standard nailbase product. 8. The nailbase spec 06 16 00 2.3.D.2 is calling for fire treated plywood. This is significantly more expensive. Please confirm fire treated plywood surface is required. 9. The asphalt shingle roof description on sheet AR101 note 1 states a vapor retarder is required but I don't find a spec listing this product in the nailbase or asphalt shingle spec section. What product is desired in this assembly? The addition of a vapor retarder in a ventilated nailbase should be very carefully calculated and added only if necessary. The ventilation of a nailbase is a complex issue and problems will be excacerbated with the addition of a vapor retarder. 10. The TPO spec 07 54 00 is calling for a 20 year warranty including the edge metal. The membrane thickness is 80 MIL. If the owner is spending the money on 80 MIL membrane and spending the money to have the edge metal included, do you want to increase the warranty duration to 30 years? If not, you could use a 60 MIL membrane for a 20 year warranty and save money. Is 60 MIL acceptable and only change to 80 MIL if there are solar panels? 11. The roof description on sheet AR101 - Note 2 states the minimum R Value for the membrane roof should be R14. Spec section 07 54 00 2.7.C states the average R value is R30 minimum. Which is correct?		10. Refer to Addendum No. 2. 11. Refer to Addendum No. 2.

10	7/8/25	1. Many of the Site Plan sheets show an Area #2 on the keyplans to the east of Area #1 and north of Area #4. There do not appear to be any sheets within the drawing set detailing this area, including the Overall Site Plan shown on Sheet G1-00. Will sheets be issued for Area #2? Is Area #2 part of the contractual scope of work? If so, please provide sheets so this area may be priced. 2. Will a copy of Sheet G1-05 that is scaled for takeoff be provided in a future addendum?		
11	7/8/25	1. We are requesting equaling of our surfacing product, by ProTechs. PIP – Perma Play. Turf – Perma Turf. Specs attached. (Protechs is who was also used on the previous projects) 2. The specification for the PIP calls for aromatic OR aliphatic. Aromatic is lesser cost than Aliphatic, but it is important to note that it will amber during the curing process. It is a chemical reaction with the sun. It is always temporary, with weather and wear the color comes back 100% of the time. You will only get aromatic bids if you do not clarify which is your preference. The previous Zionsville projects utilized Aliphatic to prevent the ambering. 3. I did not find specifications for the synthetic turf within the plans. Typically, it is section 32 18 13. Please let me know if it has been included in a different spec section. 4. It is going to be most affordable to have the GC construction the mounds rather than the playground crew. Our turf supplier requires the mounds to be encapsulated by shotcrete to prevent erosion under the turf and to provide the best adhesion to the mound to reduce rippling. 5. You will need the cushioning layer under the turf to be rubber buffings, the same material as the cushioning layer for the PIP. This allows adhesion to the mounds and it allows for a seamless transition in the cushioning layer between the PIP and the turf, creating a stronger seam. This also eliminates nailerboards for the turf and allows those transitions to occur within the use zones. Nailerboards cannot be used within the use zones and all of the turf/PIP transitions occur within use zones. 6. Areas of the underdrain will conflict with footers.		1. Refer to Addendum No. 2. 2. Refer to Addendum No. 2. 3. Refer to Addendum No. 2. 4. Refer to Addendum No. 2. 5. Refer to Addendum No. 2. 6. Refer to Addendum No. 2.

12	7/9/25	Item #11 is specified as being a Pass-Thru Heated Cabinet, but the floor plan designates item # (11) with a (R) which typically stands for a Refrigerator. Can you please confirm that this item is supposed to be a Pass-Thru Heated Cabinet, and not a Pass-Thru Refrigerator?		Refer to Addendum No. 2
13	7/10/25	Section 23 34 23, 2.3 – proposed Acme Engineering		The substitution request **IS NOT** accepted.
14	7/10/25	In the 23 09 00 specifications for this project, under 2.1 A, E-Solutions is listed as an acceptable control's contractor with Distech Controls. Unfortunately, Distech is not a line we represent. We would be more than happy to provide a controls price utilizing one of the below lines we offer: -Honeywell -Johnson Control Facility Explorer -KMC		Refer to Addendum No. 1
15	7/10/25	On drawing E-701, the type of secondary feeder needed from the Utility Transformer to the Switchboard MSB does not have a size indicated. Is it possible to receive a feeder type for the secondary conduits and feeders from the transformer to MSB?		Yes Dual-Action manual pull stations are acceptable. This will be addressed in addendum no. 2. Refer to Addendum No. 1
16	7/10/25	1. Work Room A111 has a call button and VC but no speaker shown. Should a speaker be added to the room? Floor Plan Drawing T-11A 2. Technology D112 has a VC, but no speaker is shown. Should a speaker be added to the room? Floor Plan Drawing T-11D 3. Future Office C223 shows a call button and Volume Control. Should a speaker be added to the room? Floor Plan Drawing T12C 4. Spec 27 51 25-9 calls for 3 admin consoles at the reception desk and one at the SRO Office. Only locations shown are SRO A104 and Reception A107. Please confirm the locations for the two other reception desk locations. Possible Reception Desk D102? 5. Please confirm the location of the roof-mounted AM, FM, and Weather Radio Antenna. Detail Drawing T-502.6 6. Please confirm the location of the Remote Desk Intercom Cabinet “Source Rack”. Detail Drawing T-502.5 7. Specification 27 51 25-14 3.1C indicates wiring to the nearest TR/MC/ER. Technology riser drawing T-701 and Intercom Riser T-502 imply all cables are home run to the ER A115 intercom racks. Is		1. Refer to Addendum No. 2. 2. Refer to Addendum No. 2. 3. Refer to Addendum No. 2. 4. Refer to Addendum No. 2. 5. As stated in Section 27 51 25, 2.5, C.21 “Mount antenna, per the manufacturer’s recommendations. This location will need to be field verified and coordinated with Division 26 for best reception. 6. As stated in Section 27 51 25, 2.5, F.2 “The desk cabinet shall be mounted at the receptionist desk (D102 in this case) or where directed by the Owner. 7. Distributed to TR equipment is preferred.

		a homerun to a central cabinet or distributed to wall mount equipment in each TR preferred?		
17	7/10/25	1. Can a detailed plan sheet be provided of the asphalt work that will be required on CR 700 and Morton drive? The lane widening at Morton drive is showing heavy duty pavement and not ROW pavement. Is this correct? Also the plans do not show the beginning and end of the turn lane on CR 700 where Morton drive meets it. 2. Can we have a more detailed plan sheet for the striping details on CR 700 East at the intersection of Morton Dr.. Along with paving limits on CR 700 E to show if there any need to have removals of existing conflicting pavement markings? 3. Is there any need for grooving of longitudinal pavement markings on CR 700 E and on Morton Dr? 4. Site Detail plan sheet G4-01 calls out for the lane indication arrows to be yellow, I believe you would want white lane indication arrows to match the white "ONLY" on Morton Dr.		1, 2, 4 Refer to Addendum No. 2 #3 - No
18	7/10/25	IMI only trains union companies. Does the A/E have similar programs approved and if so who are they?		These statements have been part of FH masonry specifications for a number of years, no new requirements have been added for this project. Specific to flashing, the language provides an option of training programs provided by the flashing manufacturer. Similar flashing specific training available to masonry industry by masonry industry organizations would also be acceptable. Specific to Grouting and Reinforcing, language provides 2 options. Training program by any of the grout manufacturers along with any masonry industry organization with training similar to IMI would also be acceptable.
19	7/10/25	1. Will the Bid Category #1 contractor be required to obtain stormwater bonds through the Town of Zionsville for this project? If so, is there a pre-defined amount that needs to be carried in bids for these bonds? 2. Will regular SWPP inspections be the responsibility of the Bid Category #1 contractor? a. If so, is there any requirement for contractors to contract with a third-party agency for inspections/creation of a SWQCP? b. Will there be a stormwater management budget		

		for the project or are all items to be figured in bids as shown on the SWPP plans? 3. Who is responsible for the Digital Data Submission Requirements associated with the stormwater?		
20	7/9/25	Section 28 31 11 Addressable Fire-Alarm System 1. I see Notifier is currently the only approved manufacture. Under paragraph 2.4 Manual Pull Station is stated to be a Single-Action with integral addressable module. The addressable manual pull station by Notifier is Dual-Action. a. Are addressable Dual-Action manual pull stations acceptable? 2. Paragraph 2.4A.3 indicates weatherproof protective shields for manual pull stations and does not indicate to provide where shown on drawings.		Refer to Addendum No. 2
21	7/10/25	Section 06 42 00, 2.4A – proposed Wood Grille Walls by CertainTeed Architectural		Approved
22	7/10/25	Please clarify what the inside air film is on AE501. The arrow is kind of floating and pointing below the steel deck. I also could not quickly find information for it in the specifications.		The “inside air film” is not a product that is to be provided as a part of this project. The “inside air film” refers to the thin air layer directly adjacent to the surface of the wall/roof assembly, which contributes to the overall R-value of the assembly. This “film” is used for thermal calculations only.
23	7/10/25	What % of black do you want us to price for the PIP? When it is not listed, 50% black is quoted as a cost savings. The previous Zionsville projects were 70% standard color and 30% black. Having a bit of black in the surfacing helps hide dirt and scuff marks that will ultimately happen from use. 100% color looks great at initial install but will show use over time – it is also most expensive.		Refer to Addendum No. 2
24	7/10/25	Reference print M-503 Detail 2 and geothermal specifications 232116-6, 3.3, G. Detail 2 does not show circuit balancing valves on the geothermal vault headers but they are called out in the specs. Are circuit balancing valves required to be installed on the return headers in the geothermal vault?		Yes
25	7/11/25	Spec section 27 41 17 Part 1 B Summary indicates work for the Boardroom and 2nd Floor A205 Safety room; however, specifications and diagrams do not include Safety Room 205. Is this room to be included? If so, what are the requirements?		Refer to sheet T-12A and detail 4 on sheet T-502 as well as specification section 27 41 17 for information related to the equipment required in room A205.
26	7/11/25	1. On G1-03 it appears the ROW hatching is shown at intersection of CR 700 East and Morton Drive however the hatching is very faint and hard to		1. This item will be addressed in Addendum No. 2 – line weights will be adjusted to read better on prints.

		decipher. Can the line weight or hatching be adjusted to define the extents of ROW paving more clearly? 2. The locations of ROW hatching include Keynote #9 calling for heavy duty asphalt. Which is correct, ROW asphalt profile or heavy duty in this location? Please address accordingly. 3. Please add match lines to the sitework drawings to ensure Bidding Contractors have the correct takeoff.		2. Please note that pavement hatching in the legend also have detail references, these are correct and should be used. 3. This item will be addressed in Addendum No. 2 – match lines will be added.
27	7/11/25	1. The following items are specified but not identified on the plans. Please clarify: 129300.102.A7 - Basketball Goals A8 - Brick Dust A9 - Pitching Rubbers and Bases A10 - Soccer Goal A11 - Gaga Pits A12 - Cantilever Single Column Fabric Structure A13 - Metal Arched Roof Structure 2. Sheet G1.05, site note #7 - Bunny. 6 are indicated but this seems incorrect. Please verify. 3. G1-05, site note #18 - First Play #5. None indicated. Please verify. 4. G1-04, note #14 - 6" diameter steel pipe. Actual detail indicates 8" diameter. Please clarify. 5. There are no steel pipe bollards indicated on Plans. Are they the 'dots' on sheet G1-04 on sidewalk by drive? There are 46 ea. We'll need a detail for the installation at the walk. Please clarify.		1. Refer to Addendum No. 2, the spec sections listed are eliminated. 2. Refer to Addendum No. 2, keynote has been corrected. 3. Refer to Addendum No. 2, keynote has been corrected. 4. Refer to Addendum No. 2, keynote has been corrected. 5. Refer to Addendum No. 2, keynotes have been added at trash enclosure and mechanical yard screen wall.
28		Not Used		
29	7/11/25	1. In reviewing the Trowel Finish Level 3 (Tr-Fn3) requirements in Specification Section 03 30 00, it does not appear there are any surfaces specified to receive this level of finish. Could the design team please advise if a Level 3 Trowel Finish will be required anywhere? 2. We have reviewed the IDEM portal for the area and were unable to locate an active NOI or CSGP in the area for this project. Is there a timeline for getting an NOI and CSGP so there is no delay to the schedule for this procurement?		1. Refer to Addendum No. 2.
30	7/14/25	1. MP11B (typical of most piping plans) - Note P16 states provide control valve and is shown as a hand valve on the drawing. Is this a manual isolation hand valve for the heat pumps which is separate		1. Yes, this should be separate. 2. Note T3 indiacated approcaimate location of heat pump control panel. The note on M701 is for an additional controller(we intended for

		from the "control valve" provided internally with the WSHP? 2. M401 Detail 1 – Note T3 states approximate location of heat pump unit control panel. Is this the "Additional Heat Pump Control Panel" mentioned on sheet M701 to handle additional I/O that is not provided in the factory provided WSHP controller? 3. M401 Detail 1 – If the above answer is yes, Is it permissible to have only have one controller for multiple heat pumps as this layout would suggest? If only one controller is provided and it fails, you will lose some data from ALL heat pumps that are fed out of that room. 4. M701 – Exhaust Fan Schedule on M602 shows two control methods. A. Auto operation by local temp control zone. We interpret this as occupied/unoccupied via relay based on the TOD schedule of that area and monitoring via current switch. Is that correct? 5. M701 – Exhaust Fan Schedule on M602 shows two control methods. M701 shows a detail for CO2 and a detail for Div 26 control. Do either of these apply anywhere on this project? 6. M701 - M701 Exhaust Fan Schematic - The detail with reverse acting thermostat insinuates that it is connected to the BAS as an analog input, digital output, and fan status. Are these line-voltage thermostats (operating standalone) or sensors with full DDC control? 6. M-602 – Unit Heater Schedule - The first three unit heaters do not specify a thermostat or sensor type. What is desired? Is it standalone or on the BAS? 7. M-602 – Unit Heater Schedule - The fourth unit heater specifies low-voltage wall mounted 2-stage sensor. Is this standalone or on the BAS as depicted in M701? 8. 230900 1.14D – AFMS are shown in the Products Not Furnished By TCC Section but integrated section of the TCC spec. The AFMS are shown in the ductwork (Note T8 on MV Series drawings), not in the units, as shown on the ventilation drawings. These can't be provided by the unit manufacturer as they not in the unit. Please advise. Recommend adding a note to M701 on Exhaust Air Side to state Field-Mounted AFMS (Verify Exact Number With		each heatpump to have their own additional controller). If TCC needs additional wall space for TC they will need find the space in the project and provide all additional costs as part of their bid. 3. See above. 4. Yes 5. No 6. Sensors with full DDC control. 7. Factory installed internal sensor, BAS. 8. BAS 9. All the AFMS are field mounted. AFMS monitoring OA is in the room near the units wehre the exhaust AHMS are located throughohut the building. For example AFMS assocaited with DOAS-E01 is above the hallway in room No. E137. near MD-E10. 10. Coordinate with commissioning documents. 11. Yes, transducers are required to properly control the pumps in conjunction with the differential pressure transmitter. 12. Yes

		Plans.) 9. 230900 2.9U – Brent Leinenbach is listed as the contact with CMTA for commissioning. Is there a standard amount of hours for commissioning that all contractors should carry to keep the allocations consistent? 10. 230993 2.2D – Sequence for Loop Pump System mentions Supply Water and Return Water Pressure Limits, but M701 does not show Pressure Transducers, only the DPT sensor. Are supply and return pressure transducers required? 11. 230993 2.4G4 - Condensate Overflow Switches are not shown on M701 but mentioned in the sequence. Are they required?		
31	7/11/25	Section 32 18 16, 2.01 – proposed Forever Lawn Section 32 18 16, 2.01 – proposed Surface America Section 11 68 13 – 2.01 – proposed USA Shade Inc. Section 11 68 13 – 2.01 – proposed BCI Burke Co.		32 18 16 – refer to addendum 2 32 18 16 – not approved 11 68 13 – not approved 11 68 13 – not approved
32	7/11/25	Section 11 68 13 – proposed Playcraft Systems		Not approved
33	7/11/25	1. Specification 32 18 16 states an aliphatic or aromatic binder is to be used for the project play surfacing. There is a substantial difference in both cost and quality with these two products. Could the design and construction management teams please advise which option is desired? 2. What blend % of color is required for bidding in the poured-in-place wear layer? Typical is "50% Standard Color / 50% Black". The more % of color granules, the more expensive the surfacing will be. This could equate to thousands of dollars in difference and we would request this is clarified in advance of bidding.		Refer to Addendum No. 2
34	7/11/25	In the panelboard specifications, there is a section related to “Intelligent Panelboards” (2.6). This section also references spec section 26.09.13 for metering. Is the requirement to have the metering AND breaker controls for the 27 panels referenced? Siemens can provide the panel/breaker metering but cannot provide a panel with remotely operable circuit breakers. Please advise if the panel metering only is acceptable or if the remotely operable circuit breakers are also required.		Refer to Addendum No. 2.
35	7/15/25	The above area is currently marked as Right of Way Asphalt Pavement. The above detail is what is provided on Addendum 1 Sheet G4-00. Is this the correct detail to use for all of the Right of Way area? The note, circled in		Refer to Addendum No. 2

		red, is confusing us. Or should we be using the Local Street spec from Town of Zionsville?		

ARCHITECTURAL/SITE ABBREVIATIONS

ABBREVIATIONS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

@	AT
AC	AIR CONDITIONING
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFP	ACCORDION FOLDING PARTITION
AGG	AGGREGATE
ALT	ALTERNATIVE
AL	ALUMINUM
AP	ACCESS PANEL
APROX	APPROXIMATE
AR	ACID RESISTANT
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AV	AUDIO-VISUAL
AWG	AMERICAN WIRE GUAGE
AWT	ACCOUSTICAL WALL TREATMENT
L	ANGLE
&	AND
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCH MARK / BEAM
B.O.	BOTTOM OF
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BUR	BUILT-UP ROOF
CAB	CABINET
CAR	CARPET
CAT	CATALOG
CB	CHALKBOARD / CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CLG	CEILING
CMP	CORRUGATED METAL PIPE
CMT	CERAMIC MOSAIC TILE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMP	COMPACTED
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS/CONTINUE
CONTR	CONTRACTOR
CORR	CORRUGATED
CT	CERAMIC TILE
C TO C	CENTER TO CENTER
CSK	COUNTER SINK
CU FT/CF	CUBIC FEET
CU IN/CI	CUBIC INCH
CU YD/CY	CUBIC YARD
CUSP	CUSPIDOR
CW	COLD WATER
CWF	CEMENTITIOUS WOOD FIBER
d	PENNY (NAILS, ETC.)
D	DEPTH/DEEP
°	DEGREE
DC	DISPLAY CASE
DEPT	DEPT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA/ Ø	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DWG	DRAWING
DS	DOWNSPOUT
DWC	DRINKING WATER COOLER
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
ENGR	ENGINEER
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EFS (or DEFS)	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTN	EXTENSION
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN FL	FINISH FLOOR
FLR	FLOOR
FDN	FOUNDATION
FSR	FLEXIBLE SHEET ROOFING
FSSK	FLOOR SERVICE SINK
FT	FEET
FTG	FOOTING
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
GA	GAUGE
GALV	GALVANIZED(D)
GB	GRAB BAR
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GFRGU	GLASS FIBER REINFORCED GYPSUM UNIT
GL	GLASS
GWB	GYPSUM WALLBOARD
H	HEIGHT/HIGH
HB	HOSE BIB
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HS	HIGH STRENGTH
HTG	HEATING
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
HWY	HIGHWAY
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
JS	JOIST SUBSTITUTE
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH
LAM	LAMINATE(D)
LAV	LAVATORY
LB/#	POUND
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVR	LOUVER
LW	LONG WAY
M	METER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MOP HOLDER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MASONRY OPENING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO/#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
O.H.	OPPOSITE HAND
O TO O	OUT TO OUT
OW	OPERABLE WALL
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PERF	PERFORATED
PLAS	PLASTIC
PL	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSS	PENCIL SHARPENER SUPPORT
PT	PORCELAIN TILA
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RISER
RA	RETURN AIR
RAD/R	RADIUS
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISION(S)
RM	ROOM
R.O.	ROUGH OPENING
ROW	RIGHT-OF-WAY
S	SOUTH
SA	SUPPLY AIR
SAN	SANITARY
SCHED	SCHEDULE
SD	STORM DRAIN / SMOKE DETECTOR
SECT	SECTION
SEW	SEWER
SGFT	STRUCTURAL GLAZED FACING TILE
SHT	SHEET
SIM	SIMILAR
SP	SPACE
SPEC(S)	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SQ FT/SF	SQUARE FEET
SQ IN/SI	SQUARE INCHES
SQ YD/SY	SQUARE YARDS
SS	STAINLESS STEEL
ST	STORM/STREET
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SHORT WAY / SIDEWALK
SYMM	SYMMETRY(ICAL)
SYNTH	SYNTHETIC
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TA	TOILET ACCESSORY(IES)
TB	TACKBOARD
TC	TOP OF CURB
TEL	TELEPHONE
TERR	TERRAZZO
T.O	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TV	TELEVISION
TYP	TYPICAL
TWS	TACKABLE WALL SURFACE
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
UR	URINAL
VCT	VINYL COMPOSITE TILE
VCGWB	VINYL COVERED GYPSUM WALLBOARD
VERT	VERTICAL
VFWC	VINYL FABRIC WALLCOVERING
VIF	VERIFY IN FIELD
VIT	VITREOUS
VOL	VOLUME
VR	VAPOR RETARDER
VRB	VENTED RESILIENT BASE
VS	VENT STACK
VT	VINYL STACK
W	WEST / WIDE / WIDTH
W/	WITH
W/O	WITHOUT
WA	WARDROBE ACCESSORIES
WB	WOOD BASE
WC	WATER CLOSET / WIND COLUMN
WD	WOOD
WH	WATER HEATER
WP	WORKING POINT
WSSK	WALL SERVICE SINK
WWF	WELDED WIRE FABRIC
YD	YARD / YARD DRAIN

MATERIAL SYMBOLS LEGEND

MATERIAL SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

- ASPHALT
- EARTH
- GRAVEL, STONE, OR DRAINAGE FILL
- SAND, GROUT, PLASTER, GWB, OR PLAN VIEW OF SIDEWALK
- CONCRETE
- TERRAZZO
- CUT STONE
- MARBLE
- SLATE
- FACE BRICK (PLAN)
- GLAZED BRICK
- CONCRETE MASONRY UNIT (PLAN)
- CONCRETE MASONRY UNIT (SECTION)
- CONCRETE MASONRY UNIT (SOLID, IN SECTION)
- SPRAY-ON INSULATION OR FIRE PROTECTION
- WIRE FENCE OR PARTITION
- METAL ROOF DECK
- LAMINATED WOOD BEAM (SMALL SCALE, SECTION)
- BATT INSULATION
- RIGID INSULATION
- ROUGH WOOD
- FINISH WOOD
- WOOD OTHER THAN NOMINAL
- PLYWOOD
- GYPSUM WALLBOARD (LARGE SCALE)
- STUD WALL (PLAN) - DIMENSIONS TAKEN TO FINISH FACE OF WALL - SEE WALL TYPES
- SOLID PANEL FOLDING PARTITION OR OPERABLE WALL
- FABRIC ACCORDION FOLDING PARTITION
- ACOUSTICAL TILE CEILING
- EXTERIROR INSULATION FINISH SYSTEM

DRAWING SYMBOLS LEGEND

DRAWING SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

- SIM 1A A-400 — CALLOUT
- 1 — REVISION TAG
- A — ROOF TYPE TAG
- 1t — EQUIPMENT TAG
- SIM 1A A-300 — BUILDING/WALL SECTION
- X1 — CEILING TAG
- ? — KEY NOTE TAG
- SIM 1A A-300 — DETAIL SECTION
- XXXX — DOOR TAG
- SLOPE 1/12 — ROOF SLOPE TAG
- X AX.XX X / X Ref — EXTERIOR ELEVATION
- X / X### — MATCHLINE VIEW REFERENCE
- X Ref AX.XX X Ref / X Ref — INTERIOR ELEVATION
- W##X — WALL TAG
- X — GRID HEAD
- 11 — STOREFRONT TAG
- Name EL XXX'-XX" — LEVEL LINE
- XX — WINDOW TAG
- 101 — ROOM TAG
- 811 — EXISTING CONTOUR
- 811 — NEW CONTOUR
- TB#1 — TEST BORING & NO.
- 811.9 — EXISTING POINT ELEVATION
- 811.9 — NEW POINT ELEVATION
- STORM SEWER INLETS

SHEET INDEX

VOLUME A

VOLUME B

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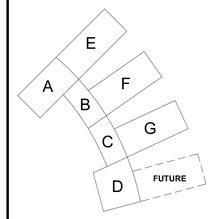

KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

ABBREVIATIONS & INDEX

INDEX A

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GENERAL NOTES

GENERAL

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, COUNTY, CITY, AND LOCAL PERMITS FOR ANY AND ALL WORK REQUIRED UNLESS OTHERWISE NOTED. THIS SHALL INCLUDE ALL SUBMITTALS AS REQUIRED INCLUDING STORMWATER RUNOFF CONTROL (RULE 5). THE CONTRACTOR IS RESPONSIBLE FOR PAYING FOR ALL REQUIRED PERMITS BY ANY OR ALL AGENCIES MENTIONED ABOVE UNLESS OTHERWISE NOTED BY THE CONTRACT OR SPECIFICATIONS.
3. CONTRACTOR SHALL VERIFY DATE OF PLANS WITH ENGINEER PRIOR TO CONSTRUCTION TO ENSURE USE OF CURRENT PLANS.
4. ALL QUANTITIES PROVIDED ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
5. ADDITIONAL INFORMATION CONCERNING EARTH MOVING MAY BE FOUND IN THE GEOTECHNICAL ENGINEERING INVESTIGATION BY ALT & WITZIG DATED 11/27/2024. ALL REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING INVESTIGATION SHALL BE FOLLOWED. THE INFORMATION SHOWN IN THE GEOTECHNICAL ENGINEERING INVESTIGATION IS FOR INFORMATION ONLY AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS. IN CASE OF CONFLICT BETWEEN THE CONSTRUCTION DOCUMENTS AND THE GEOTECHNICAL ENGINEERING INVESTIGATION, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
6. PROPERTY ZONING IS SU-2.
7. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
8. ALL SITEWORK TO BE COMPLETED WITHIN THE COUNTRYMARK GAS PIPELINE EASEMENT SHALL BE COMPLETED IN ACCORDANCE WITH COUNTRYMARKS GENERAL GUIDELINES FOR RIGHT OF WAY ACTIVITIES AND THE APPROVED PLANS. 48 HOURS NOTICE SHALL BE GIVEN TO COUNTRYMARK BY CALLING THEIR ONE-CALL CENTER AT 812-838-5000. A COUNTRYMARK REPRESENTATIVE MUST BE PRESENT WHEN THE WORK IS PERFORMED.

DEMOLITION

1. DEMOLITION PERMIT WILL BE PROCURED BY THE SUBCONTRACTOR AND COST SHALL BE INCLUDED AS PART OF THEIR WORK.
2. DURING DEMOLITION PROCESS, EROSION CONTROL MEASURES SHALL BE ESTABLISHED. THESE SHALL INCLUDE TREATMENT OF DUST AND POTENTIAL STORMWATER DISCHARGE. REFER TO EROSION CONTROL DRAWINGS.
3. REMOVAL OF THE EXISTING IMPROVEMENTS ARE AS NOTED ON THE PLANS OR AS REQUIRED BY THE PROJECT. THE MATERIALS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN A PROPER AND LEGAL MANNER PER FEDERAL, STATE, AND OR LOCAL LAWS AND ORDINANCES.
4. EXISTING ITEMS TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE DURING CONSTRUCTION SHALL BE RESTORED, RECONSTRUCTED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL DAMAGES SHALL BE RESTORED OR REPLACED TO AT LEAST THEIR ORIGINAL CONDITION OR AS REQUIRED OR DICTATED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL REGULATIONS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL THE UTILITY COMPANIES AND DEPARTMENTS 72 HOURS BEFORE DEMOLITION IS TO START TO VERIFY ANY UTILITIES THAT MAY BE PRESENT ON SITE. ALL VERIFICATIONS, LOCATIONS, SIZE AND DEPTHS SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES OR DEPARTMENTS. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THE UTILITY MAY BE PRESENT DURING THE EXCAVATION TO INSTRUCT AND OBSERVE DURING THE EXCAVATION.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH EACH UTILITY COMPANY AND OR AGENT WHO IS RESPONSIBLE TO REMOVE OR RELOCATE EACH EXISTING UTILITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR THE COST FOR THE REMOVAL, TERMINATION OR RELOCATION OF UTILITIES IF THE RESPONSIBILITY IS NOT COVERED BY THE UTILITY COMPANY.
7. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE.
8. REMOVAL OF EXISTING CONCRETE OR OTHER PAVED AREAS INDICATED ON THE PLANS SHALL INCLUDE ALL AGGREGATE BASE MATERIALS. AREAS TO BE REMOVED SHALL BE SAW CUT CLEAN, NEAT AND TRUE TO LINE. REMOVE ALL NON-ORGANIC MATTER THAT WOULD INTERFERE WITH THE GROWTH OF TURF OR PLANT MATERIAL.
9. ALL CONTRACTORS MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. ACTUAL FIELD LOCATIONS OF ALL EXISTING UTILITIES ARE THE CONTRACTORS RESPONSIBILITY AND MUST BE LOCATED EITHER BY THE REPRESENTATIVE OF THE UTILITY COMPANY OR BY A PRIVATE UNDERGROUND UTILITY LOCATING COMPANY PRIOR TO THE START OF DEMOLITION ACTIVITIES.
10. SAW CUT THE EDGES OF PAVED AREAS CLEAN, NEAT AND TRUE TO LINE SO NO UNWANTED CHIPPING OR BREAKING OF EXISTING PAVEMENT TO REMAIN WILL OCCUR.
11. UNLESS EXISTING FULL-DEPTH JOINTS COINCIDE WITH LINE OF DEMOLITION, NEATLY SAW-CUT ALONG LINE OF EXISTING PAVEMENT TO REMAIN BEFORE REMOVING ADJACENT EXISTING PAVEMENT. SAW-CUT FACES VERTICALLY.
12. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION TO ACCUMULATE ON THE JOB SITE FOR MORE THAN 48 HOURS. REMOVE AND DISPOSE OF IN A LEGAL MANNER.
13. GRIND DOWN STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS TO A DEPTH OF 18 INCHES BELOW EXPOSED SUBGRADE.
14. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
15. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT EACH DAY AND REMOVE ALL MUD, DIRT, GRAVEL AND LOOSE MATERIALS TRACKED, DUMPED, SPILLED OR WIND BLOWN FROM THIS SITE ONTO OTHER SITES, RIGHT OF WAYS, PUBLIC OR PRIVATE STREETS OR ROADS, DRIVEWAYS, YARDS OR SIDEWALKS. THE CONTRACTOR MUST CLEAN OR PICK UP DAILY IF NECESSARY. THE CONTRACTOR SHALL REDUCE THE AIRBORNE DUST DURING THE ENTIRE DEMOLITION SCHEDULE. WATER MAY BE USED AS A REDUCER.
16. THE CONTRACTOR SHALL DOCUMENT THE FINAL DISPOSITION OF ALL MATERIALS REMOVED FROM THE SITE.
17. DEMOLITION ITEMS INCLUDE BUT ARE NOT LIMITED TO DEMOLITION ITEMS INDICATED ON THESE DRAWINGS. IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE OR RELOCATE ITEMS WHICH INTERFERE WITH NEW CONSTRUCTION.

SITE LAYOUT

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM THE ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. DO NOT LOCATE OR STAKE BUILDING FROM SITE/CIVIL PLANS. USE ARCHITECTURAL AND STRUCTURAL PLANS. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, EXIT PORCHES, TRUCK DOCK, BUILDING DIMENSIONS AND BUILDING UTILITY ENTRANCE LOCATIONS.
3. DIMENSIONS SHOWN ARE TO FACE OF CURB AND TO FACE OF BUILDING UNLESS NOTED OTHERWISE.
4. RADII NOT DIMENSIONED ARE TO BE 5'.
5. ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
6. REFER TO APPROPRIATE SITE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
7. TAPER CURB HEIGHT TO 1" IN FINAL 2' OF ALL CURB ENDINGS.
8. EXACT LOCATION OF SIGNS TO BE COORDINATED WITH OWNER AND APPROVED PRIOR TO INSTALLATION.
9. SITE BOUNDARY, TOPOGRAPHY, UTILITY, STRUCTURES AND ROAD INFORMATION TAKEN FROM A SURVEY PREPARED BY SURVEY FIRST, DATED 07/09/2024.
10. FIRST FLOOR ACTUAL ELEVATION 929.50' SHOWN ON SITE AND UTILITY DRAWINGS = 100'-0" ASSUMED ON STRUCTURAL AND ARCHITECTURAL DRAWINGS.

GRADING AND EARTHWORK

1. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA. EXISTING UTILITY STRUCTURES ARE SHOWN IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH THE APPLICABLE UTILITY COMPANY) IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
3. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS PRIOR TO BIDDING.
5. CONTRACTOR SHALL VERIFY WITH OWNER EXACT LOCATION AND DEPTH OF ALL PRIVATE/OWNER INSTALLED UTILITIES PRIOR TO CONSTRUCTION.
6. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE AS REQUIRED.
7. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTOR AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
8. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATIONS, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
9. EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS.
10. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING THE PROJECT SITE AND SURROUNDING AREA. REROUTE SURFACE WATER RUNOFF AWAY FROM EXCAVATED AREAS. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. DO NOT USE EXCAVATED TRENCHES AS TEMPORARY DRAINAGE DITCHES.
11. STOCKPILE BULK MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST AND EROSION BY WATER. DO NOT STORE WITHIN DRIP LINE OF TREES THAT WILL REMAIN.
12. CONTRACTOR SHALL INSTALL ALL SLEEVES/CONDUITS AS REQUIRED BY THE UTILITY COMPANIES. COORDINATE FINAL LOCATIONS WITH THE UTILITY COMPANIES.
13. THE CONTRACTOR SHALL PROVIDE AT LEAST 18" OF COVER OVER ALL STORM SEWERS, UNLESS OTHERWISE INDICATED BY PLANS.
14. PROVIDE COMPACTED "B" BORROW BACKFILL OVER ALL UTILITIES IN PAVED AREAS.
15. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
16. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.
17. ALL EXISTING MANHOLE AND CATCH BASIN CASTINGS, WATER OR GAS VALVE BOXES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION.
18. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, "BIRD BATH" CONDITIONS.
19. MAXIMUM LAWN SLOPE IS 3:1.
20. DURING FINISH GRADING, ELIMINATE RILLS AND GULLIES. REMOVE ALL STONES, RUBBLE, STICKS, WIRE, PLANT MASS AND DEBRIS OVER 1 INCH IN ANY DIMENSION, AS WELL AS OBVIOUS QUANTITIES OF SMALL STONE.
21. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE COMPACTION IS LOST DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER CONDITIONS.
22. ADD ADDITIONAL TOPSOIL AND GRADE AS NECESSARY IN AREAS OF SETTLEMENT AND EROSION, AND AS REQUIRED TO MEET FINISH GRADE.
23. HEAVY EQUIPMENT SHALL NOT BE DRIVEN ACROSS THE COUNTRYMARK PIPELINE EXCEPT AS APPROVED AND PRESCRIBED BY COUNTRYMARK.

2

EROSION CONTROL

1. ALL EROSION CONTROL PLANNING AND IMPLEMENTATION OF PROTECTIVE MEASURES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND PROCEDURES OUTLINED IN THE IDEM "INDIANA STORM WATER QUALITY MANUAL".
2. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPAIR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES DURING EARTHMOVING OPERATIONS.
3. DURING CONSTRUCTION KEEP PAVEMENTS AND SIDEWALKS CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. CLEAN WHEELS OF VEHICLES BEFORE LEAVING SITE TO AVOID TRACKING SOIL ONTO ROADS, WALKS, OR OTHER PAVED AREAS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL AND LIMIT THE TRACKING OF SILT AND SEDIMENT OFFSITE. THE CONTRACTOR SHALL BROOM AND COLLECT TRACKED SILT AND SEDIMENT IMMEDIATELY UPON DISCOVERY THE MATERIAL.
5. DO NOT COMMENCE SITE CLEARING OR EARTH MOVING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
6. DUST CONTROL IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL INCLUDE CONSTANT AND REPETITIVE APPLICATION OF WATERING AND STREET SWEEPING.
7. THE CONTRACTOR SHALL TEMPORARILY SEED ALL DISTURBED AREAS PLANNED FOR A PERIOD OF INACTIVITY EXCEEDING 15 DAYS.

SITE UTILITIES

1. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE ENGINEER DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION MADE AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL VERIFY EXISTING STORM SEWER AND SANITARY SEWER CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION TO ENSURE THAT THE NEW SEWERS CAN BE CONSTRUCTED AS SHOWN ON THESE PLANS. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. CONSTRUCTION OF ALL STORM AND SANITARY SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODES, RULES AND REGULATIONS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY AND COORDINATE CONSTRUCTION WITH ALL RESPECTIVE UTILITIES.
5. EXISTING UTILITY STRUCTURES ARE SHOWN IN ACCORDANCE WITH AVAILABLE INFORMATION. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. CONTRACTOR SHALL INSTALL ALL SLEEVES/CONDUITS AS REQUIRED BY THE UTILITY COMPANIES. COORDINATE FINAL LOCATIONS WITH THE UTILITY COMPANIES. CONTRACTOR SHALL SLEEVE ALL PIPING AT FOOTINGS AND BELOW GRADE WALLS. SLEEVES SHALL BE WATER TIGHT. COORDINATE ALL WALL PENETRATIONS WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING PLANS.
7. CONTRACTOR SHALL VERIFY WITH OWNER THE EXACT LOCATION AND DEPTH OF ALL PRIVATE/OWNER-INSTALLED UTILITIES PRIOR TO CONSTRUCTION.
8. CONTRACTORS SHALL CONSULT ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL PLANS FOR INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES, STORM LINES, SANITARY LINES, GAS LINES, ELECTRICAL LINES, TELECOM LINES, TRANSFORMER PADS OR POLES, ETC.
9. ALL SITE WATER SERVICE LINES, SANITARY SEWER SERVICE LINES AND STORM SEWER LINES END 5' OUTSIDE THE BUILDING LINE.
10. SEE PLUMBING DRAWINGS FOR CONTINUATION OF WATER PIPING, SANITARY SEWER AND STORM SEWER INTO THE BUILDING.
11. SEE SITE ELECTRICAL PLANS FOR SITE LIGHTING, POWER AND TELECOM.
12. INSTALL PIPING BEGINNING AT LOW POINT, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND COUPLINGS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR USE OF LUBRICANTS, CEMENTS, AND OTHER INSTALLATION REQUIREMENTS.
13. INSTALL MANHOLES FOR CHANGES IN DIRECTION UNLESS FITTINGS ARE INDICATED. USE FITTINGS FOR BRANCH CONNECTIONS UNLESS DIRECT TAP INTO EXISTING SEWER IS INDICATED.
14. PVC AND HDPE STORM SEWER PIPE TO BE INSTALLED ONLY AT LOCATIONS INDICATED AND SHALL NOT BE SUBSTITUTED FOR LOCATIONS WHERE RCP PIPE IS SPECIFIED.
15. THE CONTRACTOR SHALL PROVIDE AT LEAST 18" OF COVER OVER ALL STORM SEWERS, UNLESS OTHERWISE INDICATED BY PLANS.
16. WATER LINES AND FIRE PROTECTION LINES SHALL BE INSTALLED WITH A MINIMUM BURY OF 5'-0" OR AS PER LOCAL UTILITY COMPANY REQUIREMENTS.
17. WHERE WATER LINES AND SEWERS CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE OR BELOW THE SEWER WITH A MINIMUM OF 18" VERTICAL CLEARANCE, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC PRESSURE (SDR 21) SEWER PIPE WITH GASKETED, COMPRESSION TYPE JOINTS WITHIN 10' OF THE WATER LINE. THE WATER LINES SHALL BE INSTALLED ABOVE THE SEWER WHEREVER POSSIBLE.
18. WHERE WATER LINES AND SEWERS RUN PARALLEL AND A MINIMUM SEPARATION DISTANCE OF 10' CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC PRESSURE SEWER PIPE WITH GASKETED, COMPRESSION TYPE JOINTS.
19. ALL EXISTING MANHOLE AND CATCH BASIN CASTINGS, WATER OR GAS VALVE BOXES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION.
20. ANY STORM DRAIN, FIELD TILE, OR UTILITY ENCOUNTERED DURING CONSTRUCTION SHALL BE RELOCATED AND POSITIVE DRAINAGE MAINTAINED UNLESS OTHERWISE NOTED TO REMAIN. NOTIFY ENGINEER IF ANY DRAINS ARE ENCOUNTERED.
21. ALL PAVEMENT CUT DUE TO UTILITY INSTALLATION, CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS THE EXISTING SECTION.
22. ANY EXCAVATION WITHIN 24 INCHES OF THE COUNTRYMARK PIPELINE SHALL BE HAND EXCAVATED AND A COUNTRYMARK REPRESENTATIVE MUST BE PRESENT.

LANDSCAPING

1. PRIOR TO CONSTRUCTION, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES & SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY & ALL DAMAGE TO THE UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
2. LANDSCAPE CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK.
3. THE PLANT COUNTS INDICATED ON DRAWINGS ARE FOR LANDSCAPE ARCHITECT'S USE ONLY. LANDSCAPE CONTRACTOR SHALL MAKE THEIR OWN PLANT QUANTITY TAKEOFFS USING DRAWINGS, SPECIFICATIONS, AND PLANT SCHEDULE REQUIREMENTS (I.E., SPACING), UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. CONTRACTOR TO VERIFY BED MEASUREMENTS AND INSTALL APPROPRIATE QUANTITIES AS GOVERNED BY PLANT SPACING PER SCHEDULE. PLANT MATERIAL QUANTITIES SHOWN ON PLAN ARE MINIMUM QUANTITIES. ADDITIONAL MATERIAL MAY BE NEEDED TO MEET SPACING REQUIREMENTS AND FIELD CONDITIONS. IN CASE OF DISCREPANCIES BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL DICTATE.
4. NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS ARE SHOWN TO BE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BID DATE IN WRITING.
5. DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
6. PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED.
7. SUSPEND PLANTING OPERATIONS DURING PERIODS OF EXCESSIVE SOIL MOISTURE UNTIL THE MOISTURE CONTENT REACHES ACCEPTABLE LEVELS TO ATTAIN THE REQUIRED RESULTS.
8. UNIFORMLY MOISTEN EXCESSIVELY DRY SOIL THAT IS NOT WORKABLE OR WHICH IS DUSTY.
9. DURING CONSTRUCTION KEEP PAVEMENTS AND SIDEWALKS CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
10. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS AND FROM HYDROSEEDING AND HYDROMULCHING OVERSPRAY. PROMPTLY REPAIR ANY DAMAGE CAUSED BY PLANTING OPERATIONS.
11. ESTABLISH TREE PROTECTIONS ZONES AS REQUIRED BY SPECIFICATIONS.
12. EARTHWORK CONTRACTOR SHALL INSTALL 12" OF TOPSOIL IN ALL PROPOSED BED AREAS. CONTRACTOR SHALL COORDINATE QUANTITY AND PLACEMENT OF TOPSOIL. SUBCONTRACTOR SHALL VERIFY DEPTH OF TOPSOIL PRIOR TO PLANT INSTALLATION. REFER TO SPECIFICATIONS FOR TOPSOIL TESTING AND PLACEMENT REQUIREMENTS. REPLACEMENT SOIL SHALL BE COMPRISED OF 1 PART ORIGINAL, 2 PARTS HUMUS, 1 PART COMPOSTED CATTLE MANURE, 1 PART CLEAN COARSE CUT SAND, AND 1 POUND OF FERTILIZER (12-12-12 NPK BALANCED) PER 10 SQ. FT. - WORKED WELL INTO SOIL.
13. RECONDITION SOIL AND SEED/RE-SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT ARE NOT TO RECEIVE OTHER SURFACE TREATMENT (I.E., ASPHALT PAVEMENT, CONCRETE SLAB, PLANTING BED ETC.). ALL DISTURBED LAWN AREAS TO RECEIVE 4" OF TOPSOIL IN ADDITION TO SOIL AMENDMENTS AS PART OF RECONDITIONING.
14. ALL PLANTS & PLANTING AREAS TO RECEIVE 3" MINIMUM OF SHREDDED HARDWOOD BARK MULCH (UNLESS OTHERWISE NOTED). MULCH SHALL BE UNIFORM IN TEXTURE AND COLOR. NO PROCESSED TREE TRIMMINGS WILL BE ALLOWED.
15. ALL DISTURBED AREAS SHALL BE SEEDED/SODDED PER SPECIFICATIONS.
16. ALL GRASS AND/OR LANDSCAPING DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

MAINTENANCE OF TRAFFIC

1. THE MAINTENANCE OF TRAFFIC (MOT) EFFORTS CONDUCTED BY THE CONTRACTOR WILL INCLUDE PROVIDING, MANAGING AND MAINTAINING EQUIPMENT AND PERSONNEL NECESSARY FOR MAINTAINING SAFE TRAFFIC CONDITIONS AT ALL TIMES DURING THE PROJECT. TRAFFIC MAINTENANCE INCLUDES BOTH PROTECTING THE TRAVELING PUBLIC APPROACHING THE SITE AND INCORPORATING SAFE AND EFFICIENT CIRCULATION WITHIN THE CONSTRUCTION AREA.
2. THE CONTRACTOR SHALL FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES DURING THE HOURS OF CONSTRUCTION OPERATIONS AND AT ALL OTHER TIMES IN ACCORDANCE WITH LOCAL AND INDOT STANDARDS. IN ADDITION TO THE LOCAL AND STATE STANDARDS, THE CONTRACTOR SHALL CONSULT THE U.S. DOT, FHA, AND MUTCD REGULATIONS REGARDING THE TYPE AND PLACEMENT OF TRAFFIC CONTROL DEVICES.
3. THE CONTRACTOR SHALL PROVIDE ALL DEVICES NECESSARY AND INSTALL TEMPORARY VEHICLE ROUTES, DETOURS AND RUNAROUNDS TO MAINTAIN THE OWNER'S ONGOING ACTIVITIES. MODIFICATIONS AND TEMPORARY SHUTDOWNS FOR THESE TRAFFIC ROUTES SHALL FIRST BE COORDINATED WITH THE OWNER.
4. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.
5. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY OWNER OR AUTHORITIES HAVING JURISDICTION.
6. ALL SIDEWALK CLOSURES REQUIRE A SIGNED ALTERNATIVE ROUTE FOR PEDESTRIANS.
7. MAINTAIN FIRE, AMBULANCE AND POLICE VEHICLE ACCESS TO THE BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
8. ALL REQUIRED COMMUNICATION, PERMITS OR NOTICES NEEDED BY THE LOCAL FIRE, POLICE AND CITY OFFICES WILL REMAIN THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL DETERMINE IF ANY LOCAL ROAD RESTRICTIONS ON WEIGHT OR OTHERWISE EXISTS BEFORE DIRECTING INCOMING AND OUTGOING CONSTRUCTION TRAFFIC.
9. SIGNS AND DEVICES SHOWN ON THE MAINTENANCE OF TRAFFIC PLAN REPRESENT THE MINIMUM STANDARDS. ADDITIONAL SIGNS AND ADJUSTMENTS TO LOCATION MAY BE REQUIRED TO ADDRESS CHANGING FIELD CONDITIONS.
10. PROMPTLY REMOVE TEMPORARY TRAFFIC CONTROL WHEN SIGNS AND DEVICES NO LONGER SERVE ANY PURPOSE.
11. TEMPORARY FACILITIES, INCLUDING REROUTING PEDESTRIAN PATHS AROUND THE WORK SITE ARE THE CONTRACTOR'S RESPONSIBILITY AND WILL BE BASED ON THE OWNER'S NEEDS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING SITE ACCESS AND PEDESTRIAN MOVEMENT AROUND THE CONSTRUCTION SITE PRIOR TO PLACING CONSTRUCTION FENCING, GATES AND EQUIPMENT OR MATERIALS ON SITE.
12. THE LOCATION OF CONSTRUCTION LAYDOWN AREAS MUST FIRST BE APPROVED BY THE OWNER. LAYDOWN AREAS SHALL BE FENCED AND PROTECTED FROM THE SURROUNDING PROPERTIES.
13. CONSTRUCTION ONSITE JOB TRAILERS SHALL BE COORDINATED WITH THE OWNER. FOR TRAILERS WITH PLUMBING, THE UNITS SHALL BE SERVED BY EITHER A PROPERLY PERMITTED SANITARY SEWER LATERAL OR TEMPORARY WASTE STORAGE REVIEWED AND APPROVED BY BOTH THE OWNER AND THE LOCAL AUTHORITIES.

LEGEND

SYMBOLS & ABBREVIATIONS

▨	INDICATES AREA OF CONCRETE REMOVAL
▩	INDICATES AREA OF ASPHALT REMOVAL
□	PROPOSED ASPHALT
■	PROPOSED BUILDING
▦	NEW CONCRETE PAVEMENT / SIDEWALK
▦	NEW GRAVEL SURFACE
□	AREA TO BE SEEDED/SODDED/LANDSCAPED SEE LANDSCAPE PLAN
▧	EROSION CONTROL BLANKET
⯃	CONCRETE WASHOUT AREA
SF SF	SILT FENCE
□	SEDIMENT BAG
T.C.	TOP OF CASTING (GUTTER LINE FOR CURB INLETS)
× 728.30	EXISTING SPOT ELEVATION
MEG	MATCH EXISTING GRADE
650.00	PROPOSED SPOT ELEVATION
600.50 / 600.00 TOP OF CURB ELEV. GUTTER ELEV.	PROPOSED SPOT ELEVATION
— — 730 — — —	EXISTING CONTOUR W/ ELEVATION
—650—	PROPOSED CONTOUR W/ ELEVATION
—— X ——	EXISTING CHAIN LINK FENCE
—X—X—X—	PROPOSED CHAIN LINK FENCE
▥ ⊜ ⊙ C.O. ▷	PROPOSED SEWER INLET STRUCTURES AND END SECTIONS
—— UD ——	UNDERDRAIN
—— ST ——	PROPOSED STORM
—— SS ——	PROPOSED SANITARY SEWER
—— FP ——	PROPOSED FIRE PROTECTION LINE
—— W ——	PROPOSED WATER LINE
—— E ——	PROPOSED ELECTRIC LINE
—— G ——	PROPOSED GAS LINE
—— – – ——	PROPERTY LINE (RIGHT-OF-WAY)
➤- - -➤- - -➤	UNDERDRAINS
7 / PA	# OF PLANTS REQUIRED ABBREVIATION FROM PLANT SCHEDULE
-o-	SIGN
♿	ADA PARKING SYMBOL
BOC	BACK OF CURB
⊕	BENCHMARK
✿	DECIDUOUS TREE
✹	CONIFEROUS TREE

NOTE:
SEE TOPOGRAPHIC SURVEY FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS

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S 700 E AND E 550 S
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ARCHITECT

FANNING HOWEY

317.848.0966 **WWW.FHAI.COM**
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT
No. PE10606090

Kris Grant

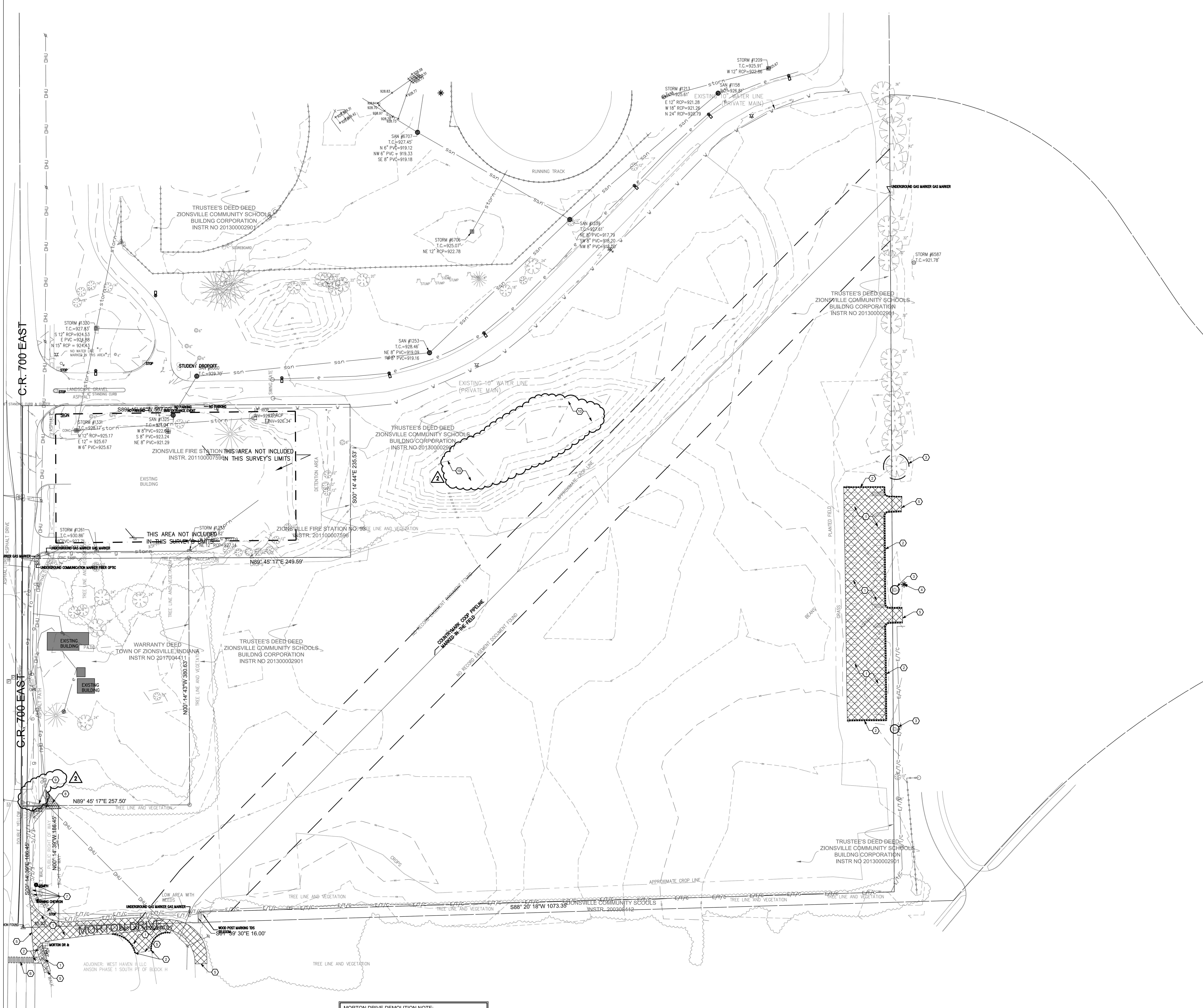
DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO.△	DESCRIPTION	DATE
2	ADDENDUM 2	07-16-2025

GENERAL NOTES & LEGEND

G0-01

Drawing Path: P:\2024\200\206\CAD\Civil\Active\2 - 2024-206 - G0-01 - General Notes.dwg
Plotted By: mtodd Time of Plot: 7/15/25 - 2:23pm Last Edited: 7/15/25 - 2:23pm



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DEMOLITION NOTE:

DEMOLITION ITEMS INCLUDE BUT ARE NOT LIMITED TO DEMOLITION ITEMS INDICATED ON THIS PLAN. IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE OR RELOCATE ALL ITEMS WHICH INTERFERE NEW CONSTRUCTION.

DEMOLITION KEYNOTES

1. REMOVE EXISTING ASPHALT PAVEMENT
2. REMOVE EXISTING CONCRETE CURB
3. PROTECT EXISTING TREES TO REMAIN
4. EXISTING LIGHT POLE TO REMAIN
5. SAWCUT EXISTING PAVEMENT
6. REMOVE CROSSWALK STRIPING
7. REMOVE EXISTING SIGNS
8. REMOVE EXISTING TREES/VEGETATION FROM CLEAR SIGHT TRIANGLE OF PROPOSED DRIVE
9. COORDINATE WITH UTILITIES FOR RELOCATION OF EXISTING SUPPORT GUY WIRES ON EXISTING POLE TO PROVIDE CLEARANCE FOR NEW DRIVE.
10. EXISTING TOPSOIL STOCKPILE MOUND - CONTRACTOR SHALL SHALL REFER TO GEOTECHNICAL REPORT AND/OR CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE IF MATERIAL IS SUITABLE FOR CONSTRUCTION. IF IT IS NOT, THE MATERIAL MUST BE DISPOSED OF IN A SUITABLE MANNER

DEMOLITION LEGEND

- APPROXIMATE LIMITS OF CONCRETE PAVEMENT REMOVAL
- APPROXIMATE LIMITS OF ASPHALT PAVEMENT REMOVAL
- TREE PROTECTION REQUIRED
- APPROXIMATE LIMITS OF CONCRETE CURB REMOVAL

MORTON DRIVE DEMOLITION NOTE:

DEMOLITION OF MORTON DRIVE CANNOT BE STARTED UNTIL CONSTRUCTION OF THE NEW SITE DRIVE IS COMPLETE. DEMOLITION AND RECONSTRUCTION WILL REQUIRE PERMITS FROM WHITESTOWN DPW AND/OR BOONE COUNTY HIGHWAY DEPARTMENT

811

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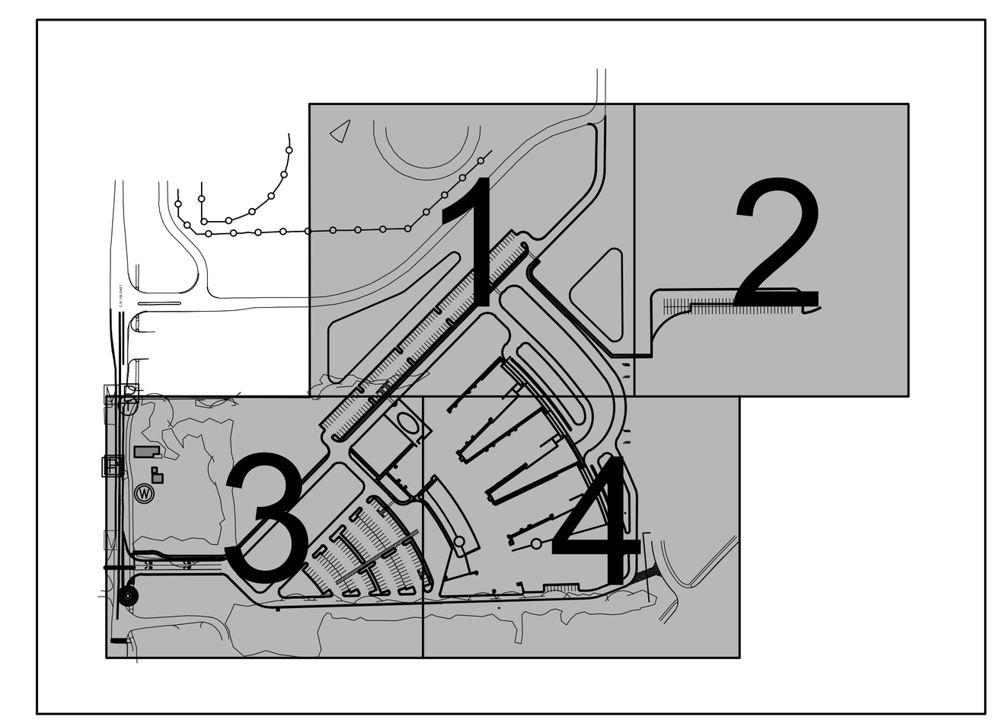

KEYPLAN

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

S 700 E AND E 550 S
ZIONSVILLE, INDIANA 46077

ZIONSVILLE COMMUNITY SCHOOLS

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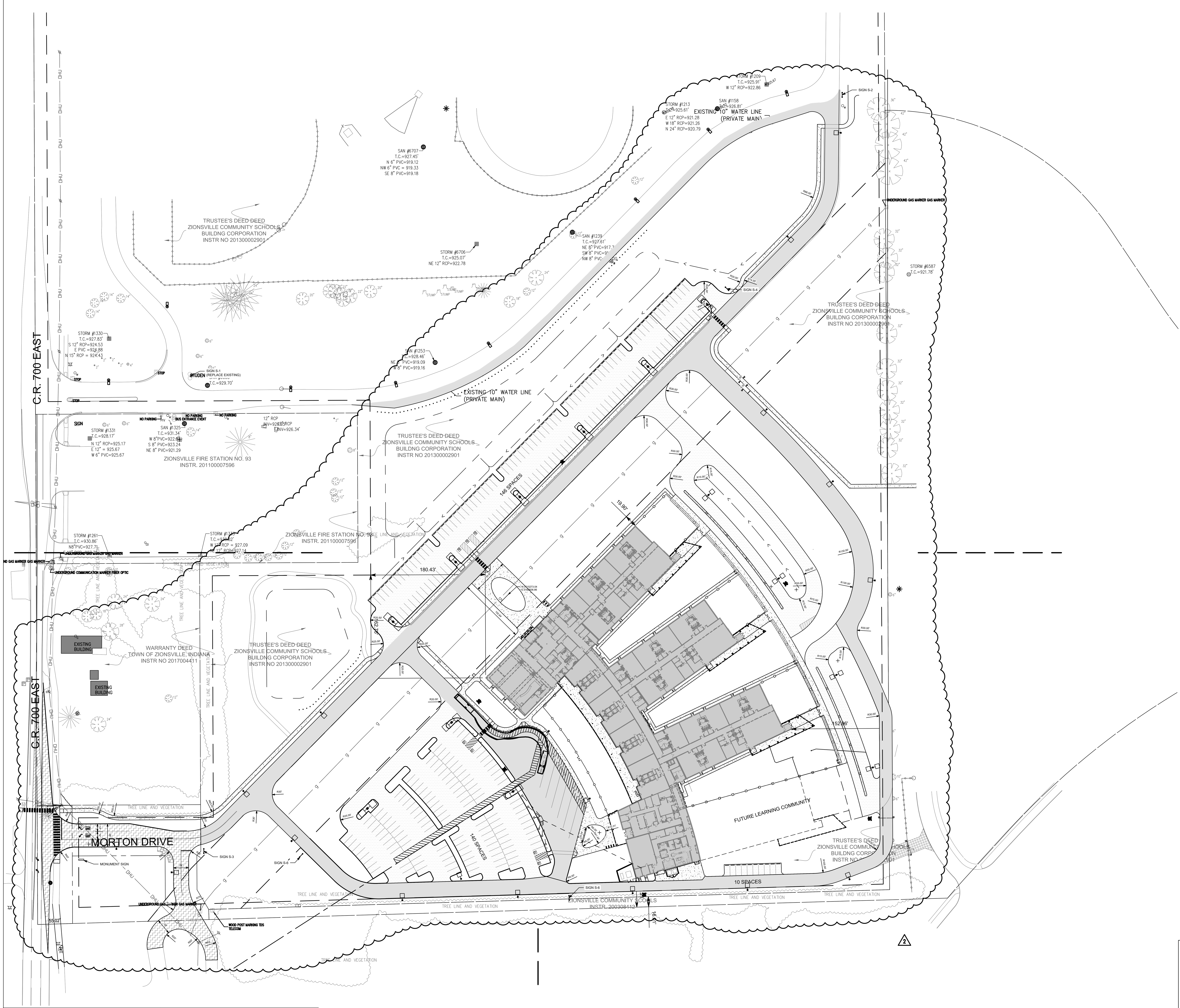
EXISTING CONDITIONS/DEMO PLAN

GD1-0



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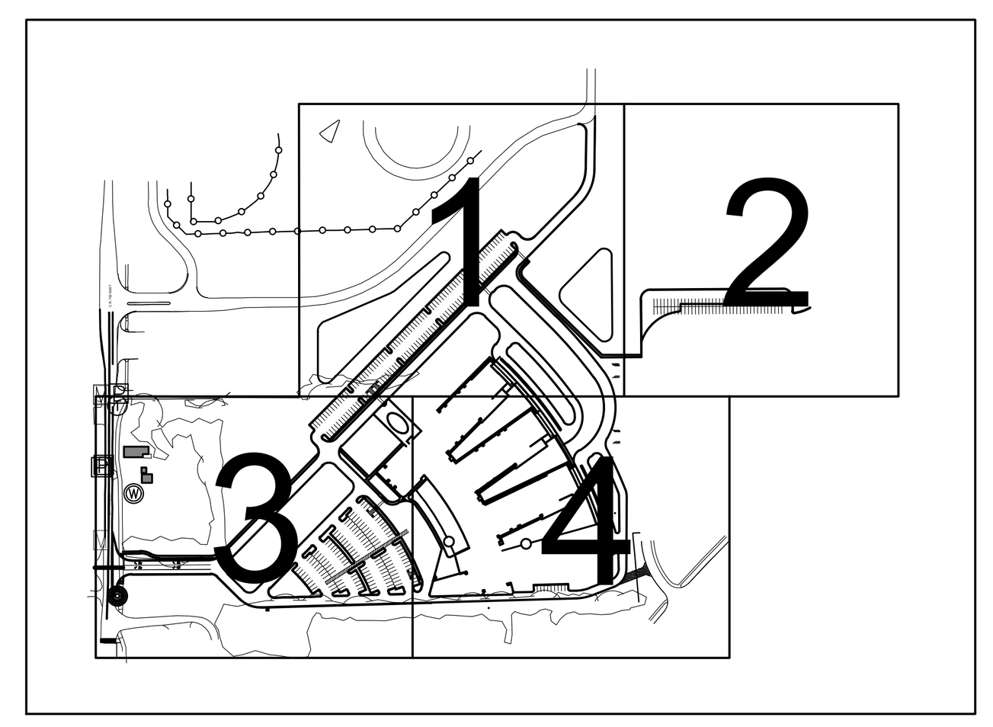
- BUILDING
- CONCRETE SIDEWALK/PAVEMENT
- RIGHT OF WAY ASPHALT PAVEMENT - SEE DETAIL C/G4-00
- HEAVY DUTY ASPHALT PAVEMENT - SEE DETAIL B/G4-00
- LIGHT DUTY ASPHALT PAVEMENT - SEE DETAIL A/G4-00
- HEAVY DUTY GRASS MAT PAVERS - SEE DETAIL V/G4-00 (2)

PARKING SUMMARY

REQUIRED PARKING (RURAL USES)	
6 SPACES PER CLASSROOM (29 CLASSROOMS)	174
3.5 SPACES/1,000 S.F. OFFICE (29,000 S.F.)	102
TOTAL PARKING REQUIRED	276
REQUIRED PARKING (URBAN USES)	
1 SPACE PER 8 PUPILS (600 PUPILS MAX. TOTAL)	75
3.5 SPACES/1,000 S.F. OFFICE (29,000 S.F.)	102
TOTAL PARKING REQUIRED	177
PROPOSED PARKING (BASED ON FACILITY NEEDS)	
ELC STAFF	80
ESC STAFF	52
FOOD SERVICE/CUSTODIAL STAFF	10
VISITORS (INCLUDES DAY-CARE DROP-OFF & EVENT PARKING)	154
ADA PARKING SPACES	7
TOTAL PROPOSED PARKING SPACES	296



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SITE PLAN

G1-00

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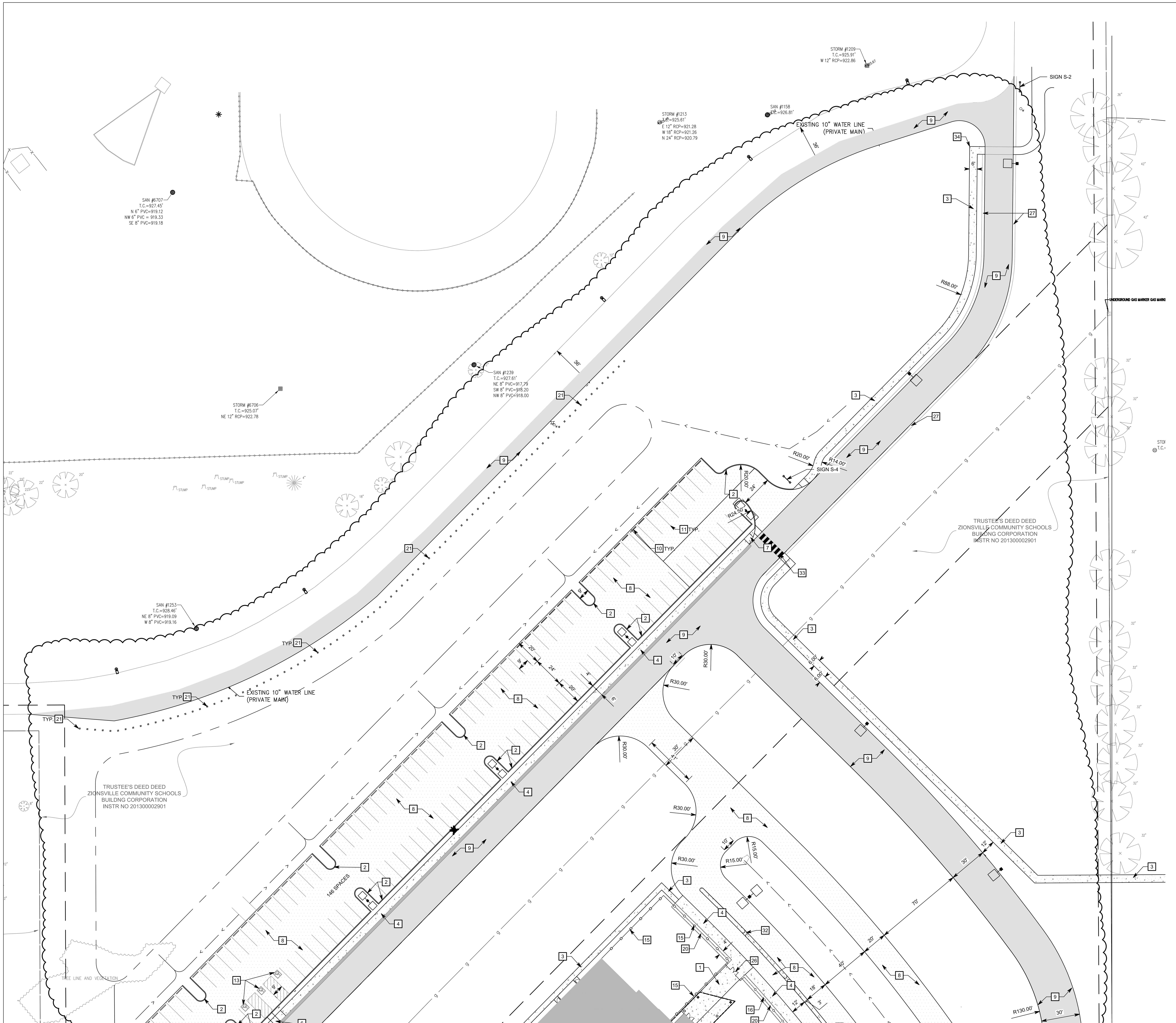

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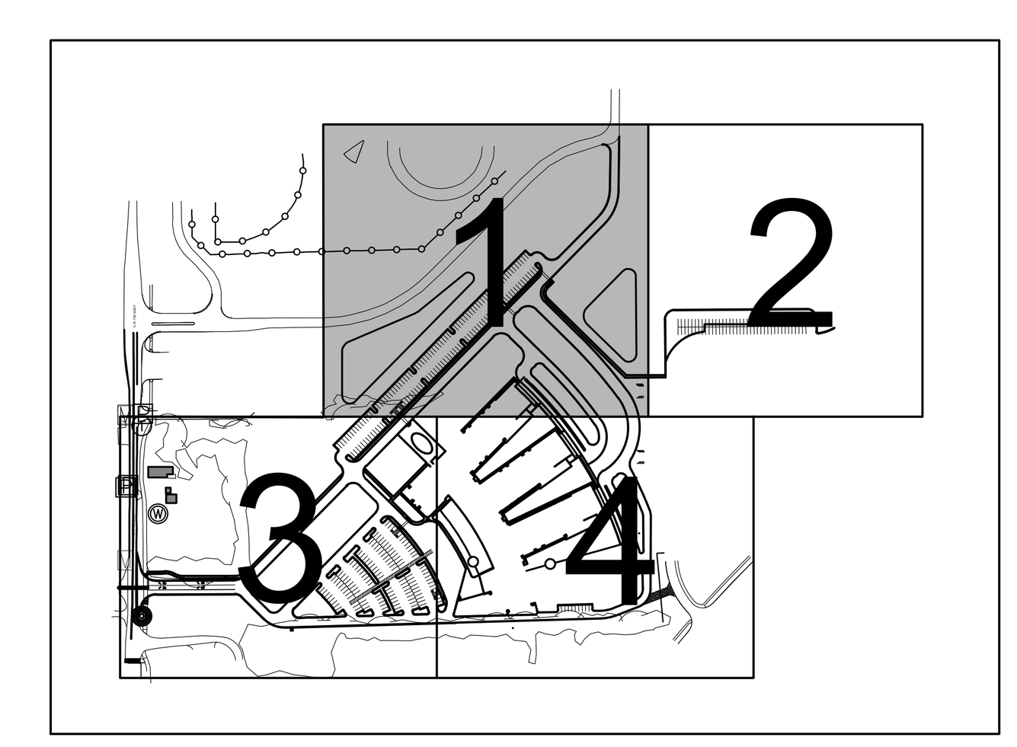

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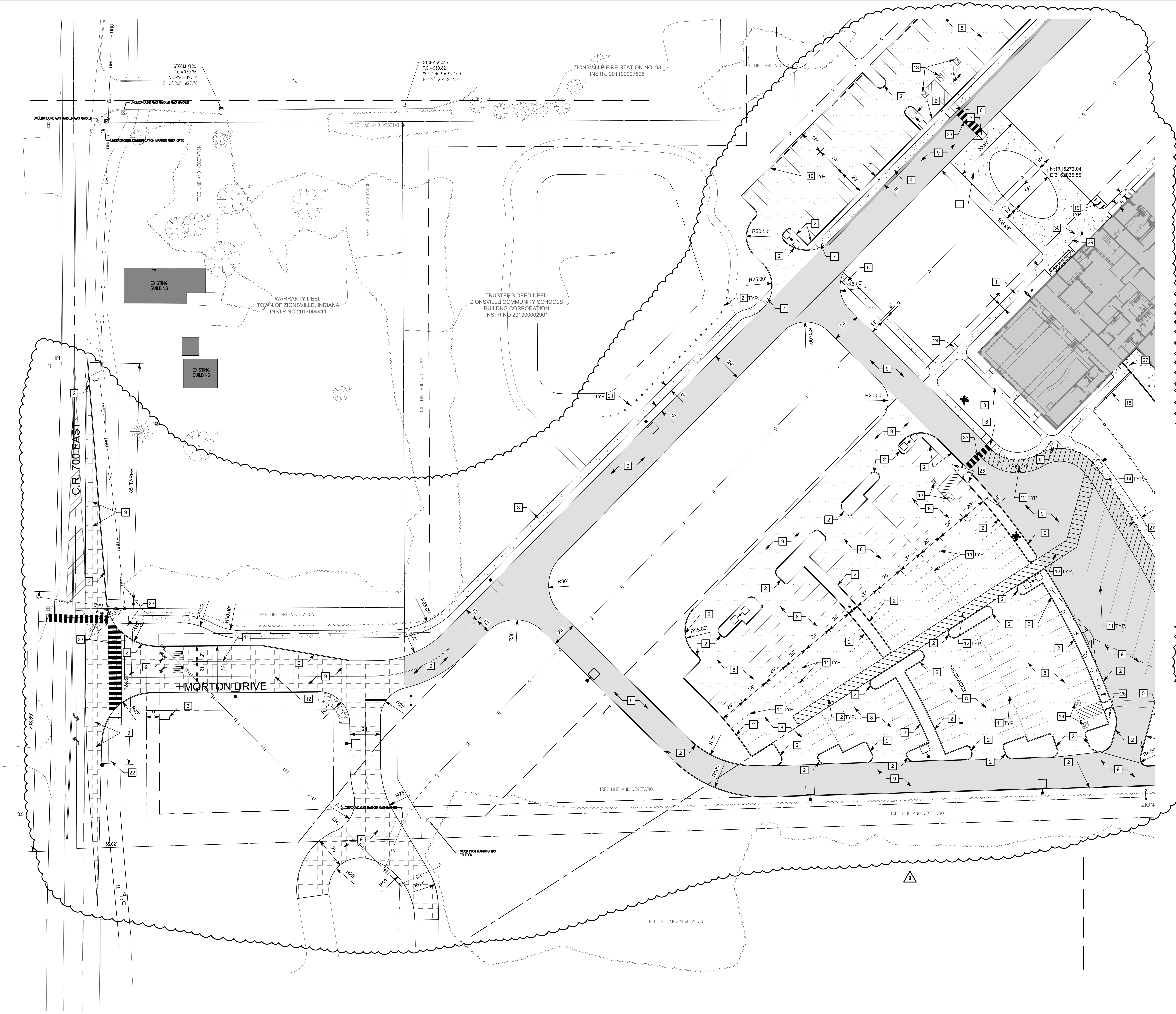
SITE PLAN - AREA 1

G1-01



NORTH

30 0 30 60 90

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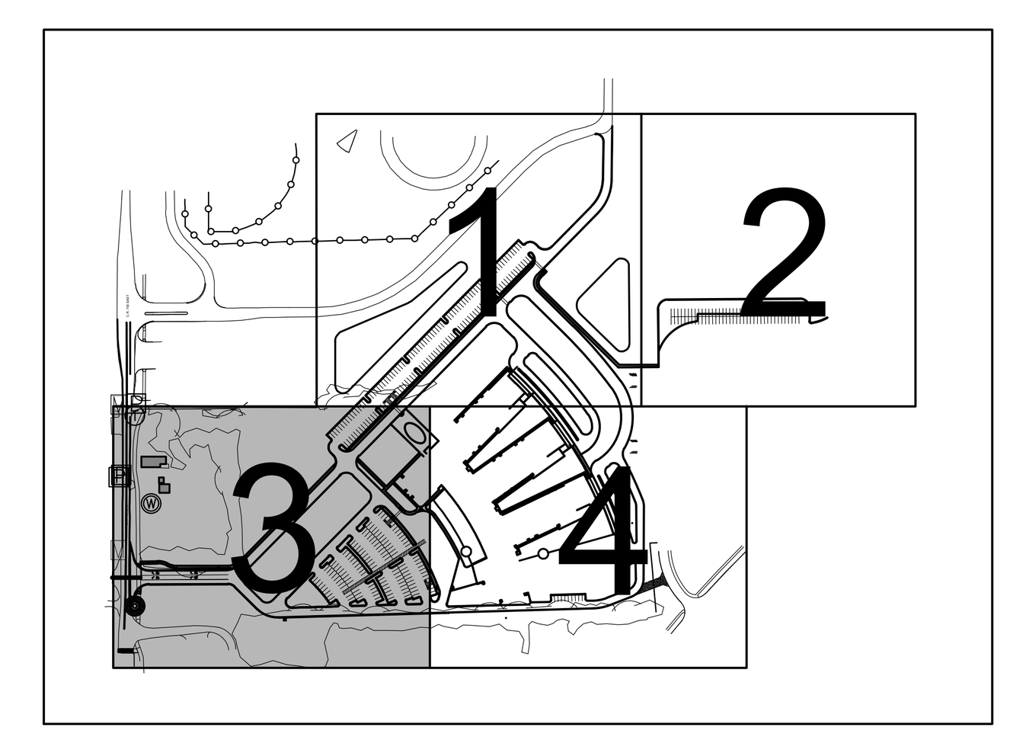

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SITE PLAN - AREA 3

G1-03

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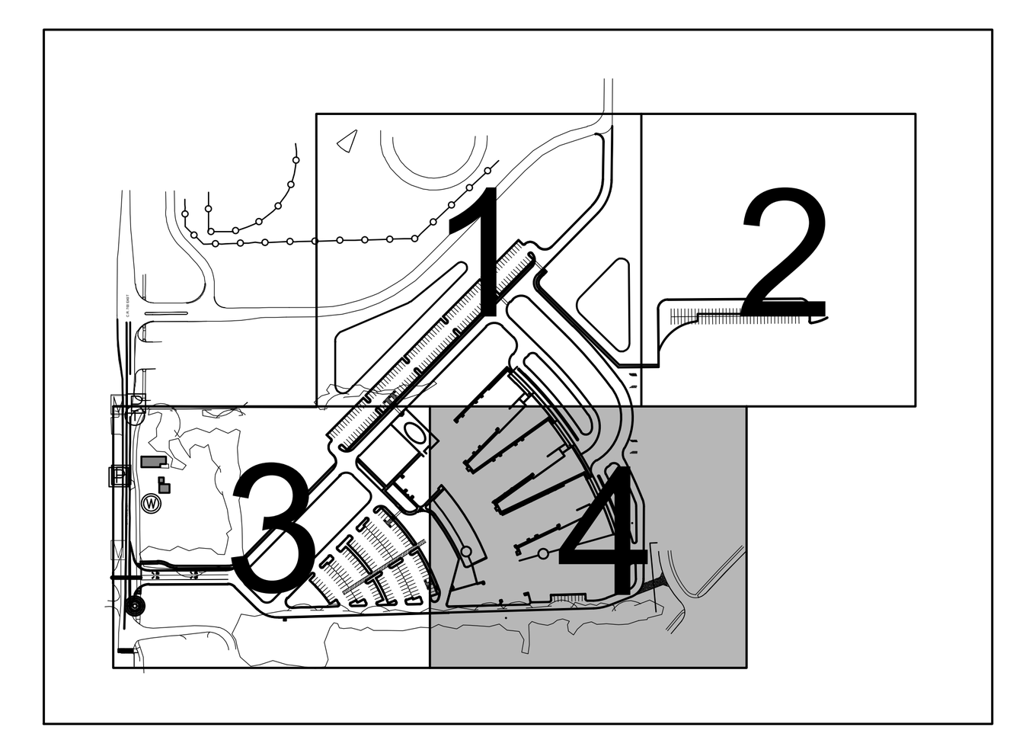
- HEAVY DUTY GRASS MAT PAVERS - SEE DETAIL V/G4-00

2



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ARCHITECT

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CONSULTANT

TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT
REGISTERED
No. PE10606090
STATE OF INDIANA
PROFESSIONAL ENGINEER

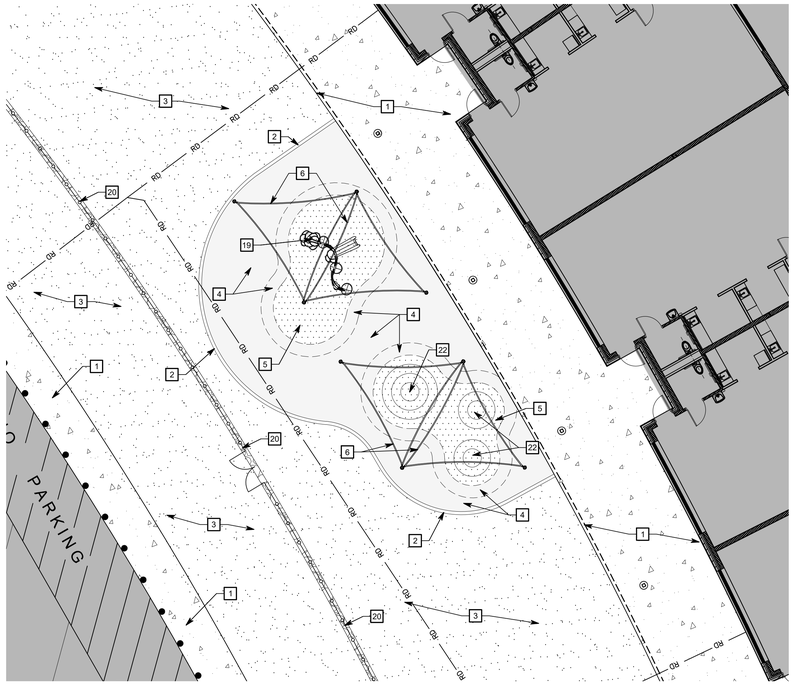
DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 1	07.09.2025
2	ADDENDUM 2	07-16-2025

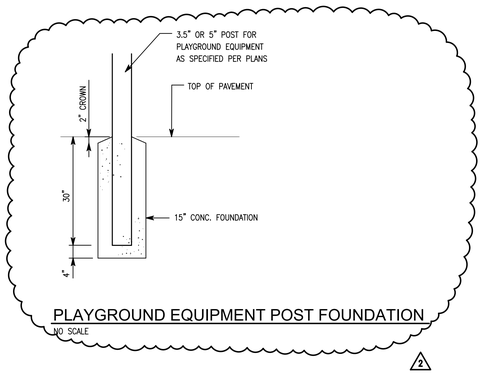
SITE PLAN - AREA 4

G1-04

PRESCHOOL PLAYGROUND ENLARGEMENT (TYPICAL)



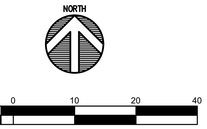
DAYCARE PLAYGROUND ENLARGEMENT



PLAYGROUND EQUIPMENT POST FOUNDATION

NO SCALE

2



GENERAL NOTES

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3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE PROJECT AREA INCLUDING UNDERGROUND UTILITY CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
4. PLAYGROUND EQUIPMENT AVAILABLE FROM MIDSTATES RECREATION.
5. SITE CONTRACTOR SHALL CONSTRUCT SUBGRADE FOR PLAYGROUND MOUNDS FROM AGGREGATE MATERIAL, COMPACTED IN LIFTS, WITH MINIMUM 3" THICK LAYER OF SHOT-CRETE (OR AS RECOMMENDED BY PLAYGROUND CONTRACTOR), BUFFING AND TURF SURFACE TO BE INSTALLED BY PLAYGROUND CONTRACTOR.

2

SITE KEYNOTES

2

1. CONCRETE SIDEWALK
2. 6" WIDE X 18" DEEP CONCRETE STRAIGHT CURB
3. SEEDED LAWN
4. PROTECHS (BASIS OF DESIGN) ALIPHATIC POURED IN PLACE PLAY SURFACE (DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS) OVER AGGREGATE BASE WITH UNDERDRAINS
5. PTS "PERMA" SYNTHETIC TURF SYSTEM WITH SAND INFILL (DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS) OVER AGGREGATE BASE WITH UNDERDRAINS
6. 20' SHADE CANOPY - PLAYWORLD ZZPM9699
7. BUNNY - PLAYWORLD ZZTP2104M
8. SMALL CABASA - PLAYWORLD ZZXX0660
9. 5 CONGAS - PLAYWORLD ZZXX0665
10. GARDEN SENSORY WALL w/MAGIC MUSIC INSERT - PLAYWORLD ZZXX0260, ZZXX0818
11. BENCH BOULDER - PLAYWORLD ZZBD0012
12. PICNIC BOULDER - PLAYWORLD ZZBD0013
13. SINGLE POST SWINGS w/SEATBELT - PLAYWORLD ZZXX0260, ZZXX0818
14. PLAYWORLD CUSTOM 2-5 STRUCTURE w/5" POSTS
15. ADA BUGS PANEL - PLAYWORLD ZZPM4408
16. 12" PILLARS PLAYWORLD ZZUN8801
17. LOG CRAWL - PLAYWORLD ZZUN8807
18. FIRST PLAY #5 - PLAYWORLD FP-252
19. PLAYWORLD CUSTOM 0-2 STRUCTURE w/3.5" POSTS
20. MOWSTRIP AT FENCE - SEE DETAIL G/L2-01
21. 4" WASHED RIVER ROCK BED - SEE DETAIL E/L2-01
22. MOUND - SEE DETAIL THIS SHEET

PROPOSED SITE LEGEND

- BUILDING
- SEEDED LAWN
- ALIPHATIC POURED IN PLACE PLAY SURFACE
- SYNTHETIC TURF
- WASHED RIVER ROCK

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ISSUED FOR BID

CHRISTOPHER S. GRANT REGISTERED No. PE10606090 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DBS

PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)

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SITE PLAN - PLAYGROUNDS

G1-05

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Drawing Path: P:\2024\2000-2050\2400 Civil\Active\4 - 2024-206 - G1-05 - Playground Plans.dwg
Plotted By: mmead Time of Plot: 7/15/25 - 5:00pm Last Edited: 7/15/25 - 4:59pm

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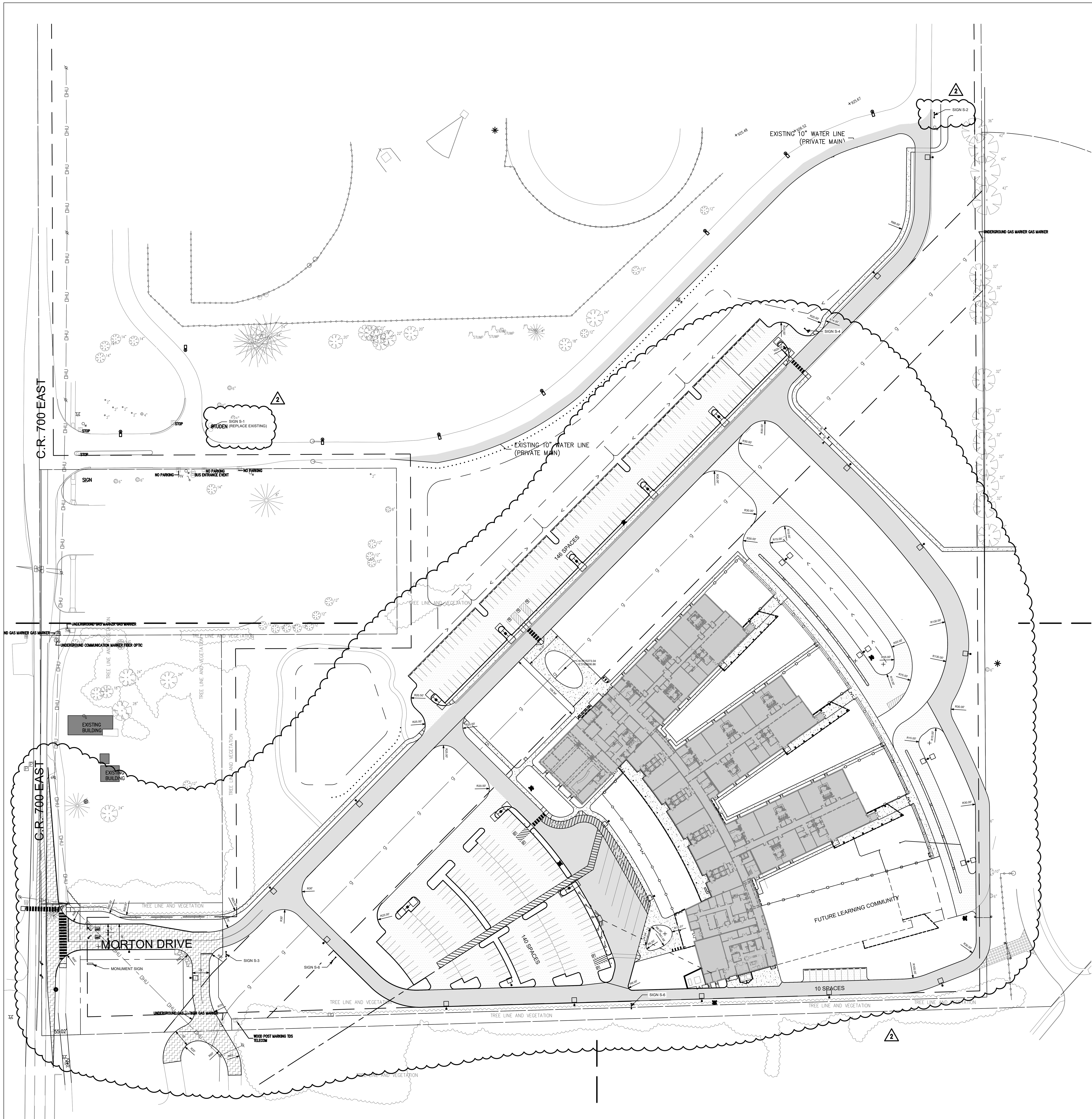
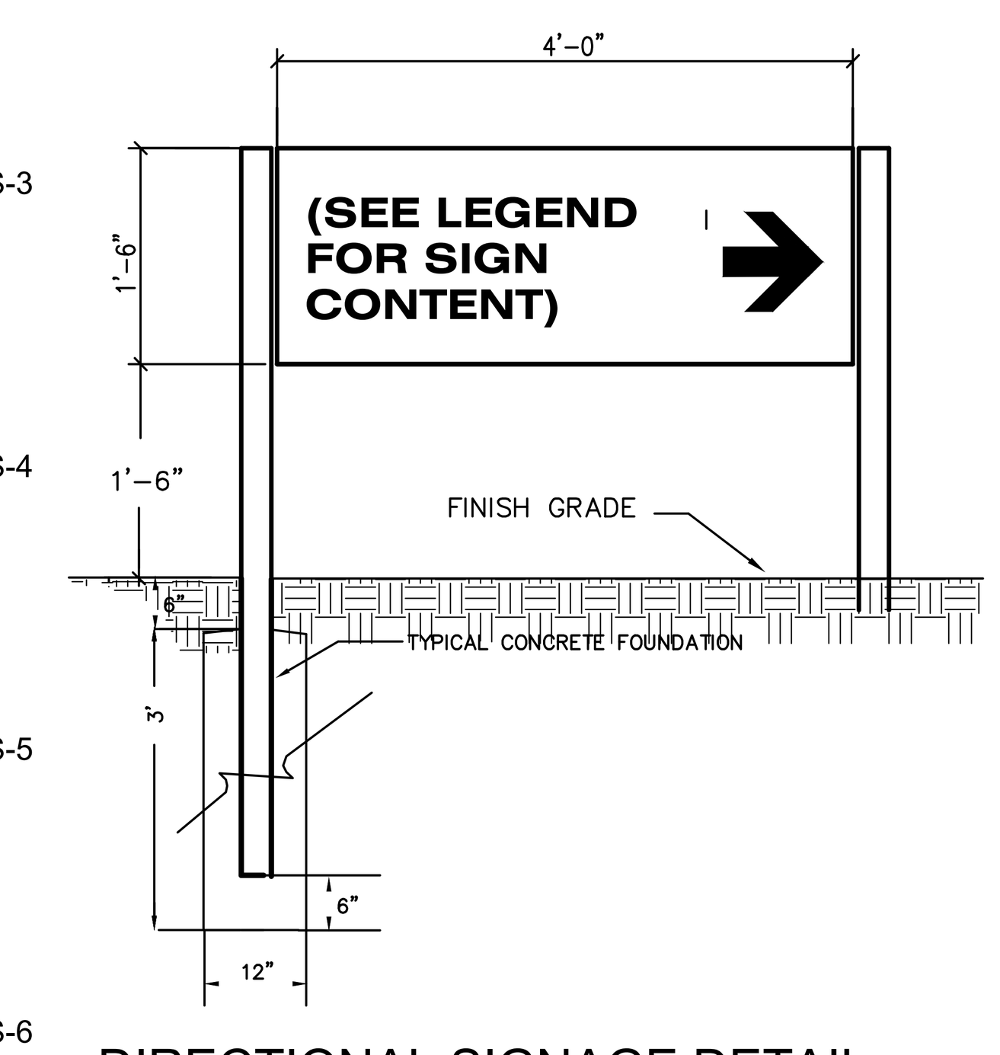


DIRECTIONAL SIGNAGE LEGEND

Sign content	Sign
← ZWEST STUDENT DROP OFF ↑ ELC PRE-SCHOOL DROP OFF (ALL WINGS)	SIGN S-1
← ZWEST STUDENT DROP OFF → ELC PRE-SCHOOL DROP OFF (ALL WINGS)	SIGN S-2
← ESC PARKING ↑ ELC PARKING & DAYCARE DROP OFF	SIGN S-3
ELC PRE-SCHOOL DROP OFF (WINGS A & B) ← ELC PRE-SCHOOL DROP OFF (WINGS C & D) → ESC PARKING	SIGN S-4
← ELC PRE-SCHOOL DROP OFF (WINGS A & B)	SIGN S-5
↑ ALL DELIVERIES	SIGN S-6

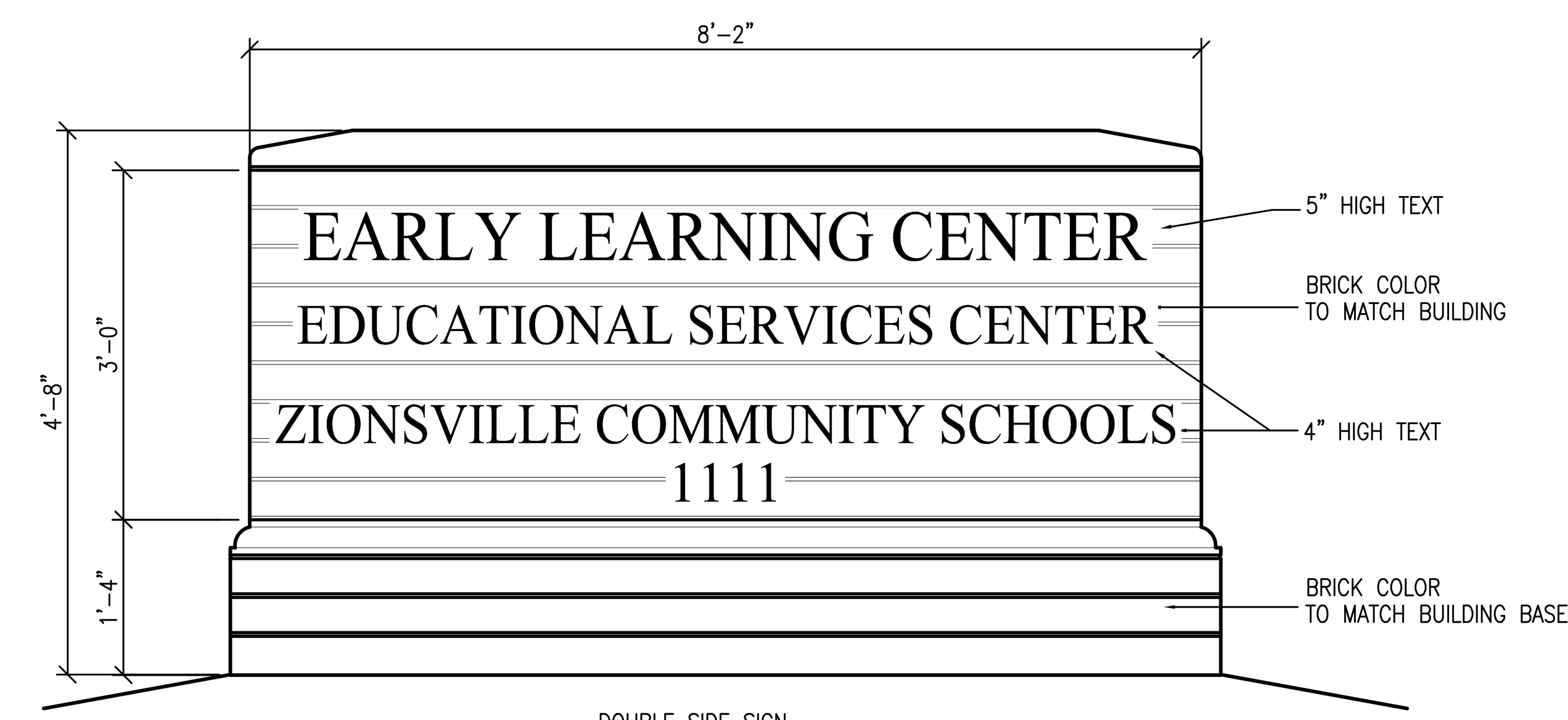
NORTH

60 0 60 120 180



DIRECTIONAL SIGNAGE DETAIL

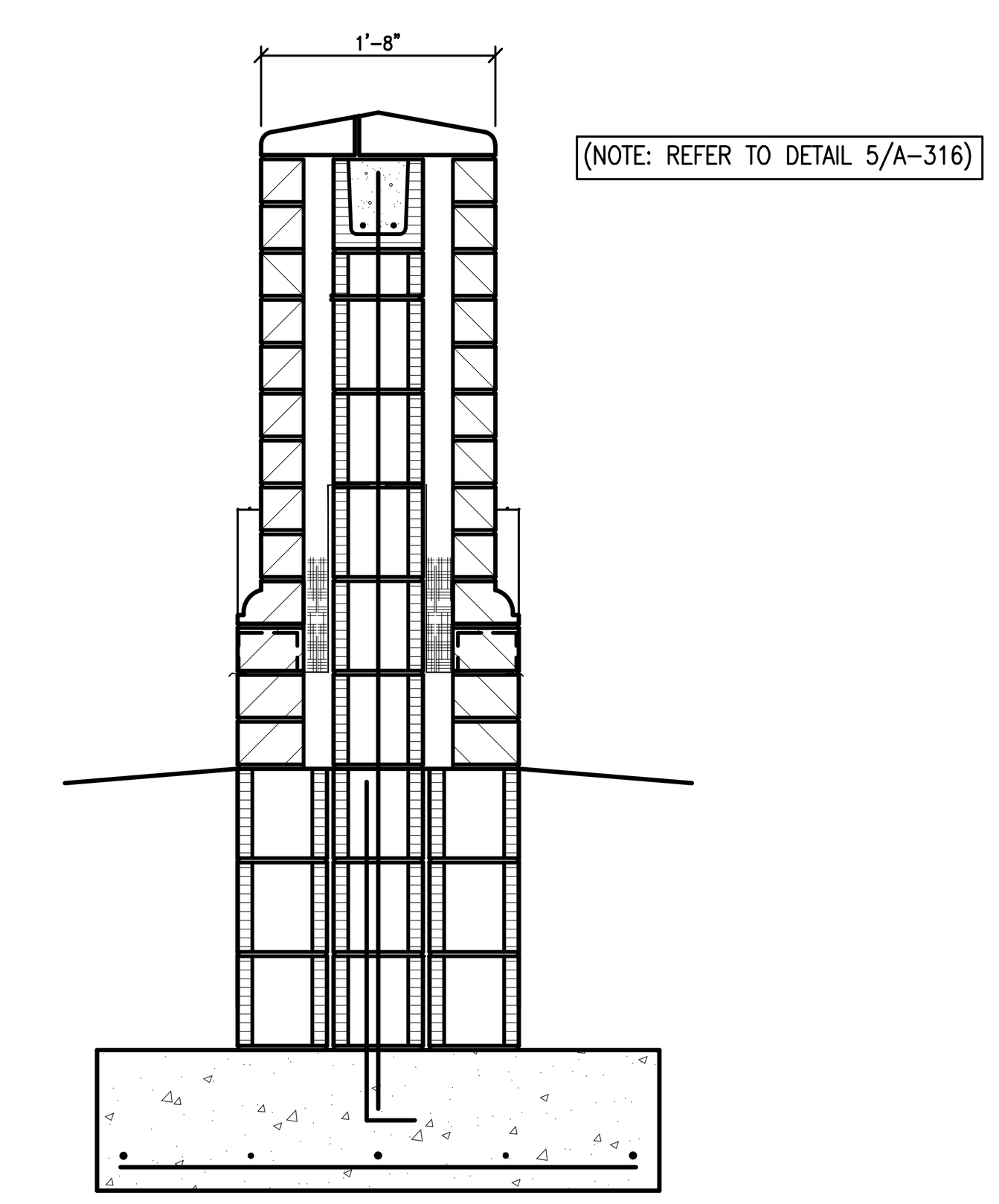
NO SCALE



DOUBLE SIDE SIGN
24.5 SQUARE FEET PER SIDE

(NOTE: BOTH SIDES OF SIGN ARE THE SAME)

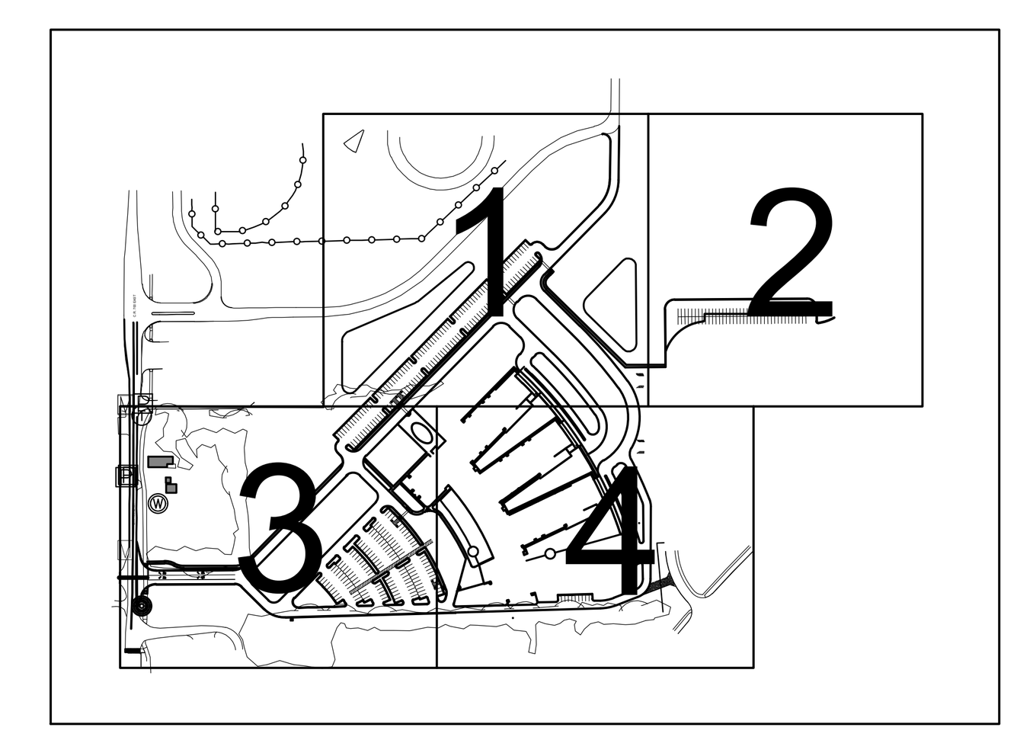
ELEVATION



SECTION

MONUMENT SIGN DETAIL

NO SCALE



KEYPLAN

ARCHITECT

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OVERALL SIGNAGE PLAN

G1-06

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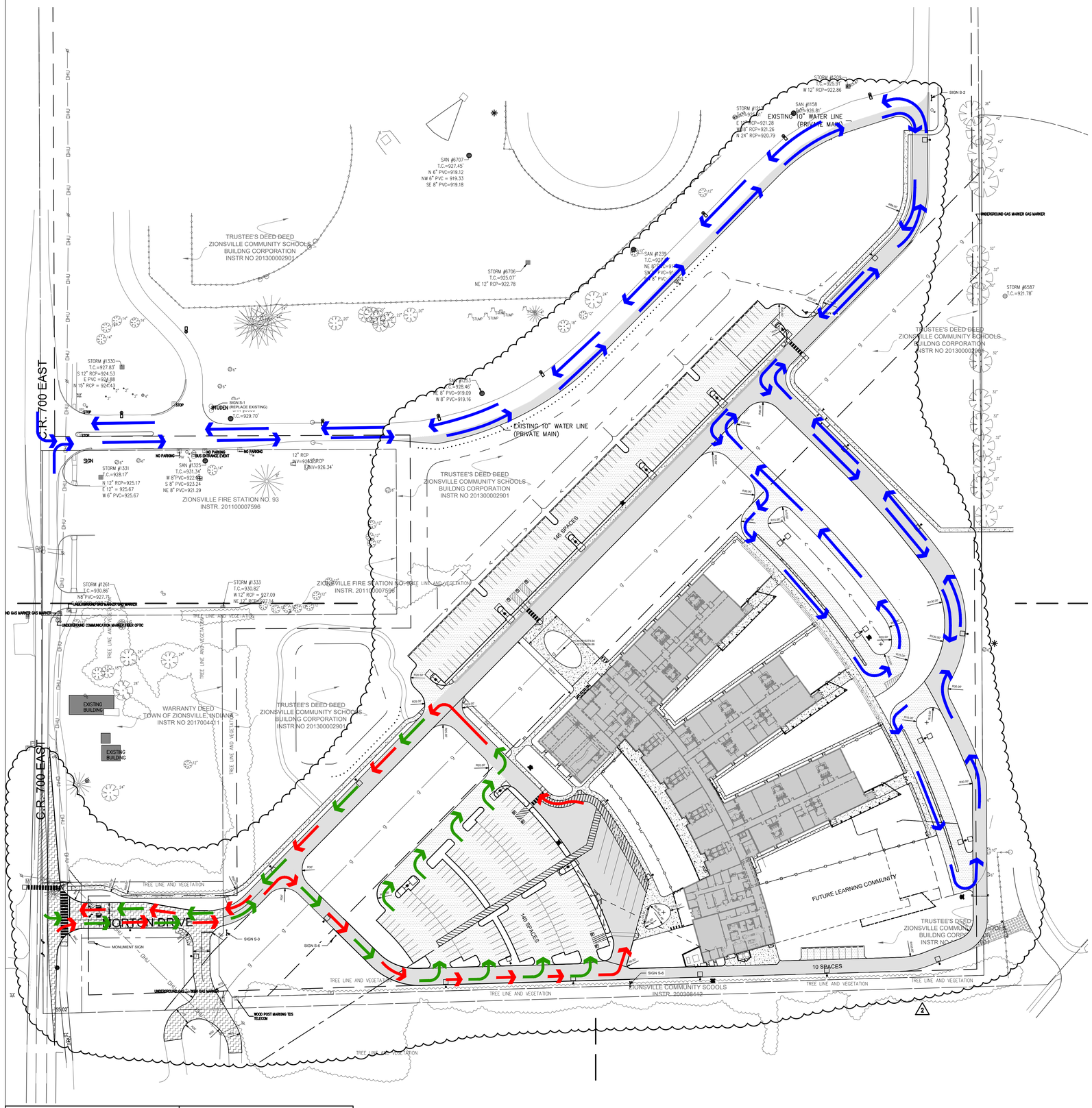
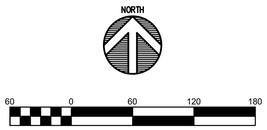
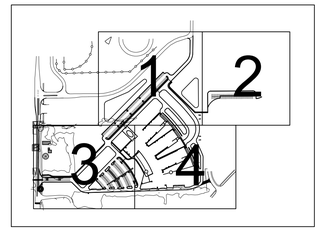




LEGEND

- PRE-SCHOOL PICKUP/DROP-OFF CIRCULATION
- DAYCARE PICKUP/DROP-OFF CIRCULATION
- BUS PICKUP/DROP-OFF CIRCULATION



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TRAFFIC CIRCULATION PLAN

G1-07

Drawing Path: P:\\2024\206_Civil_active\4 - 2024-206 - G1-00 to G1-04 - Site Plans.dwg
Plotted By: mmead Time of Plot: 7/11/25 - 5:51pm Last Edited: 7/11/25 - 5:52pm

60 0 60 120 180

GENERAL NOTES

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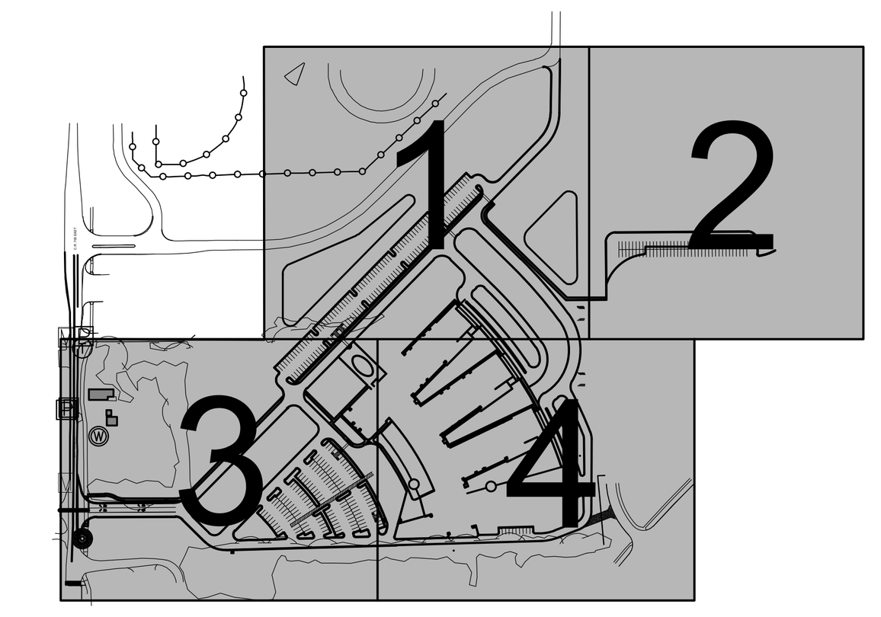
GRADING PLAN LEGEND

→ EMERGENCY OVERFLOW ROUTING

SURVEY NOTE:
THE TOPOGRAPHIC DATA WAS GATHERED USING 3D HIGH DEFINITION LASER SCANNING, AND BY GLOBAL POSITIONING EQUIPMENT, UTILIZING THE REAL TIME KINEMATIC ROVERS ON THE INDIANA GPS NETWORK, NTRIP USING STATE PLANE NAD83 AND NAVD88 GEIOD12.

CONTROL POINT INFORMATION				
POINT #	RAW DESCTIPTION	ELEVATION	NORTHING	EASTING
100	CONTROL POINT REBAR WITH RED CAP	927.376	1716599.2198	3163242.7208
101	CONTROL POINT REBAR RED CAP "SURVEY	927.320	1716033.6674	3163315.8189
102	CONTROL POINT MAG NAIL FOUND	928.248	1716073.3310	3163369.1725
103	CONTROL POINT REBAR W/ RED CAP	927.450	1715996.0561	3163113.5671
1006	CONTROL POINT ICPS	935.391	1715458.8578	3162730.0675
1007	CONTROL POINT MNS	928.244	1715727.1522	3162911.2361
1101	CONTROL POINT 101 MNS	928.097	1715727.2047	3162911.2535
1160	CONTROL POINT MNS	926.679	1714773.9851	3162122.4426
1161	CONTROL POINT MNS	930.828	1715254.7964	3162113.2690
6701	CONTROL POINT REBAR WITH RED CAP	927.376	1716599.2198	3163242.7208



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Drawing Path: P:\2024\200\206\CAD\Civil\Active\5 - 2024-206 - G2-00 to G2-04 - Grading Plans.dwg
Plotted By: mtodd Time of Plot: 7/16/25 - 10:20am Last Edited: 7/16/25 - 10:20am

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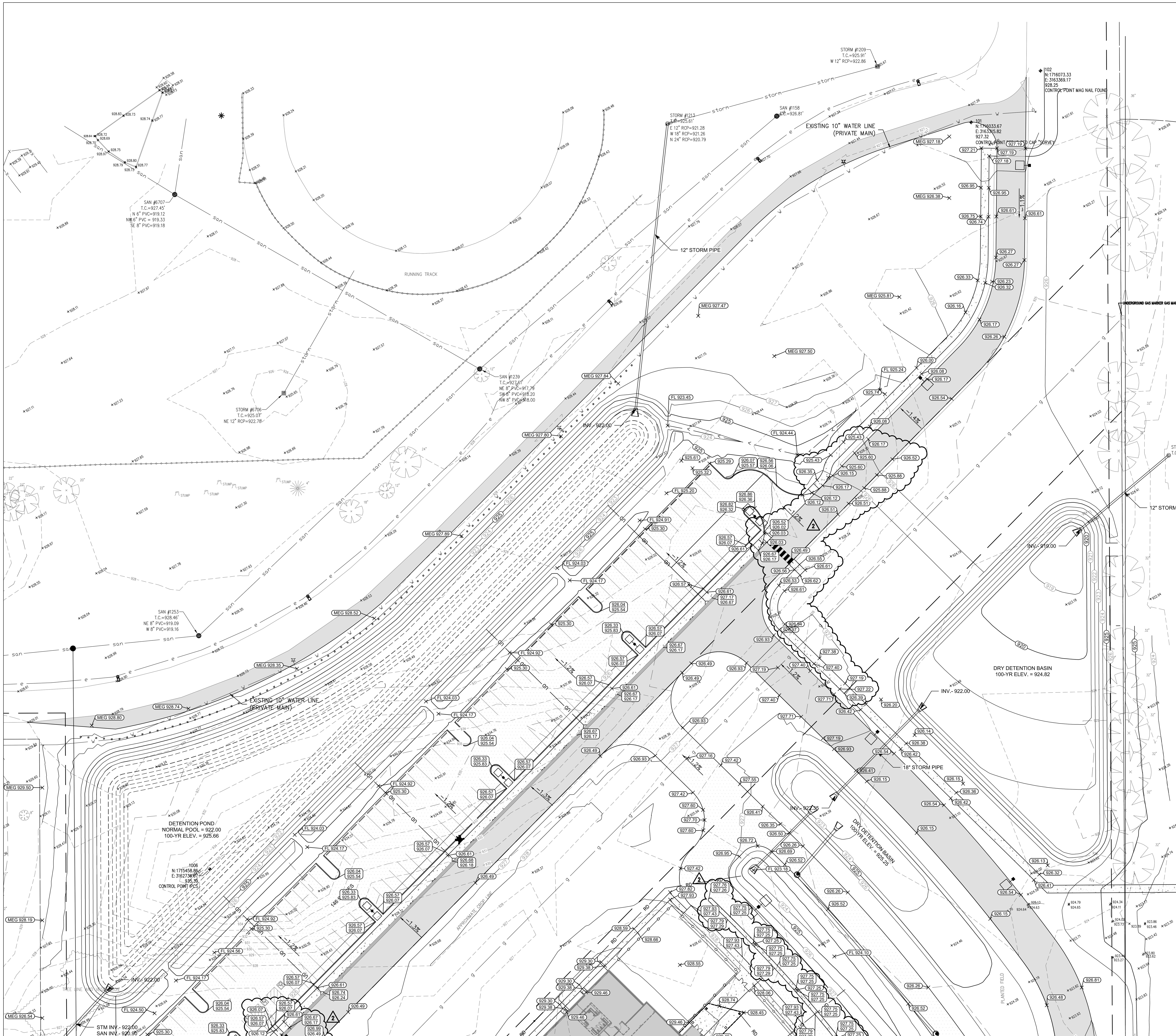
OVERALL GRADING PLAN

G2-00



30 0 30 60 90

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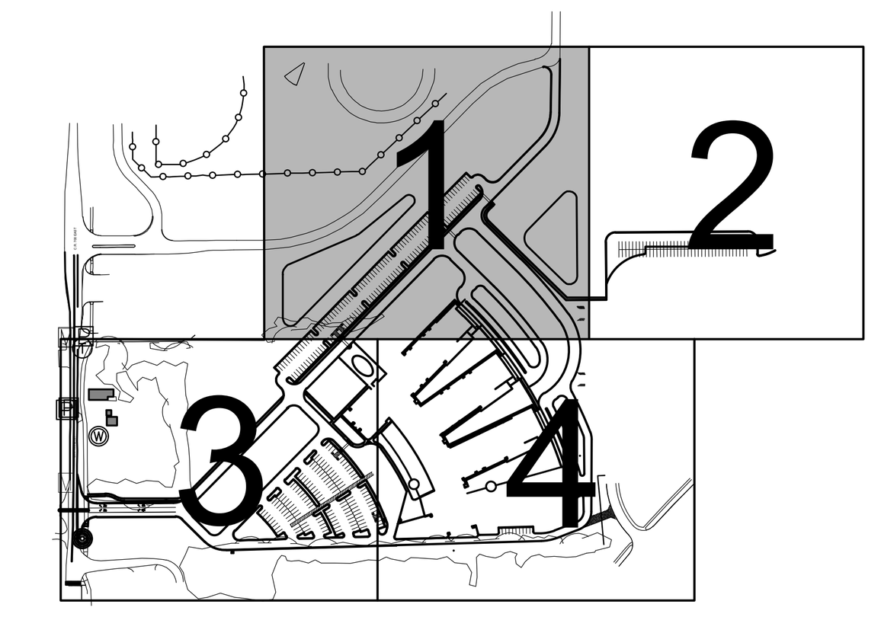
GRADING PLAN LEGEND

+ 728.30	EXISTING SPOT ELEVATION
MEG	MATCH EXISTING GRADE
TC	TOP OF CURB
BC	BOTTOM OF CURB
EP	EDGE OF PAVEMENT
FL	FLOWLINE
730	EXISTING CONTOUR W/ ELEVATION
735	PROPOSED CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION



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Kris Grant

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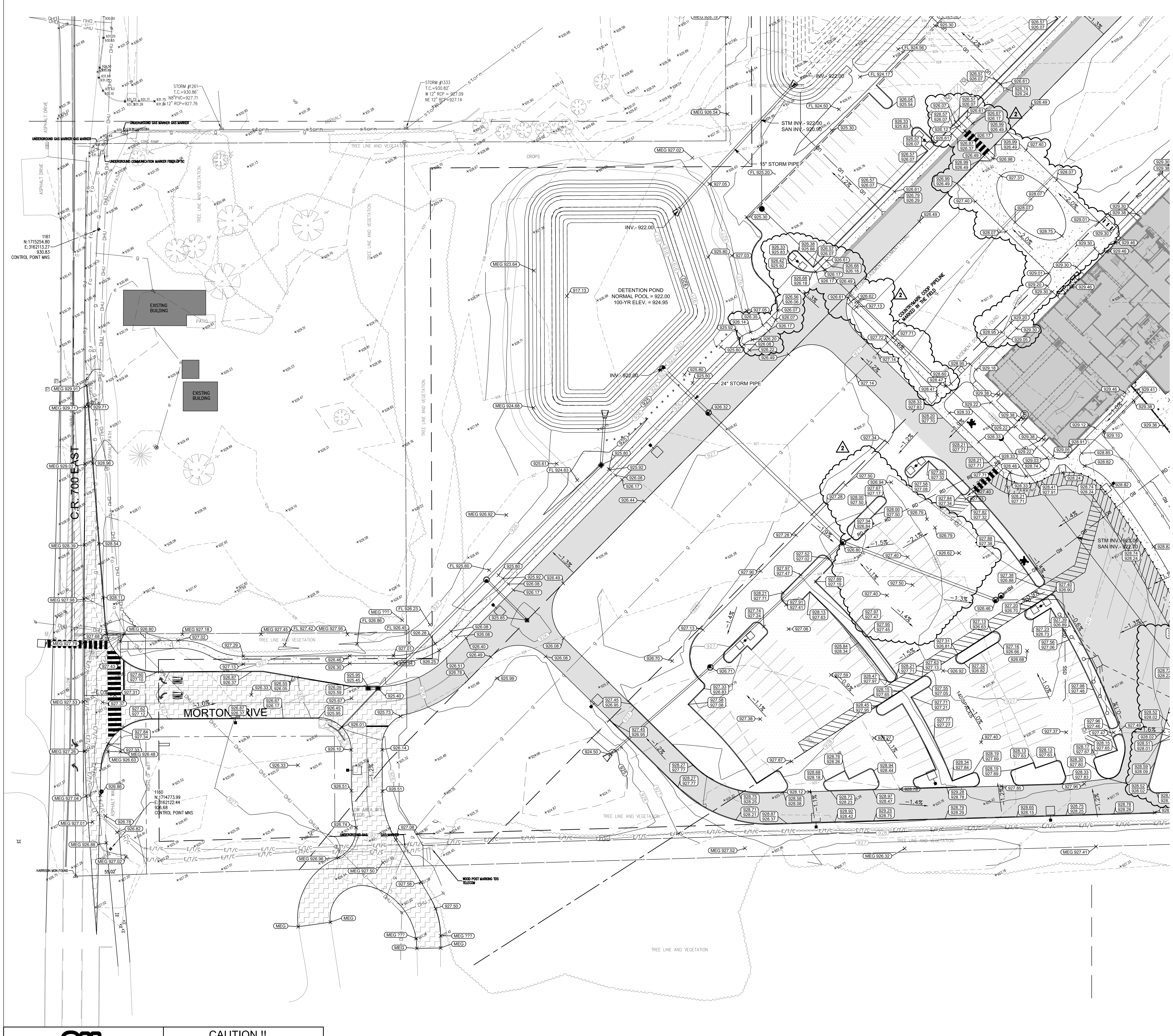
GRADING PLAN - AREA 1

G2-01



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Symbol	Description
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MEG	MATCH EXISTING GRADE
TC	TOP OF CURB
BC	BOTTOM OF CURB
EP	EDGE OF PAVEMENT
FL	FLOWLINE
730	EXISTING CONTOUR W/ ELEVATION
735	PROPOSED CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION

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ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

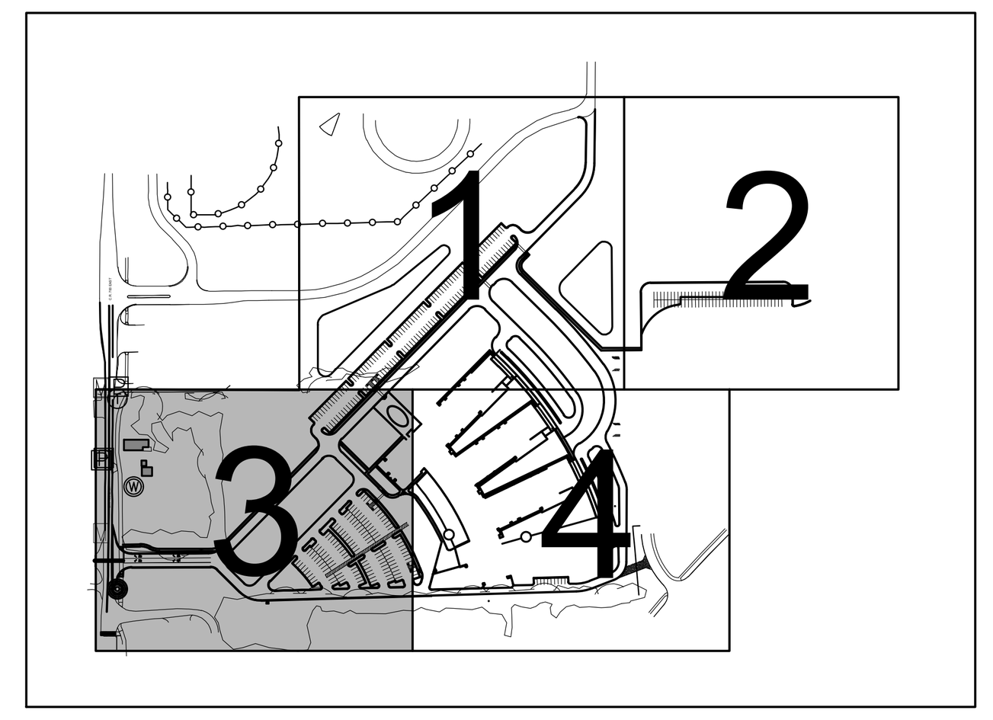
TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT
REGISTERED
No. PE10606090
STATE OF INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
2	ADDENDUM 2	07.16.2025



KEYPLAN

GRADING PLAN - AREA 3

G2-03

CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

811
Know what's **below.**
Call before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project.
Call 48 hours or 2 working days before you dig.
It's Fast, It's Easy and It's the Law in the state of Indiana!

Drawing Path: P:\2024\200\206\CAD\Civil\Active\5 - 2024-206 - G2-00 to G2-04 - Grading Plans.dwg
Plotted By: mtodd Time of Plot: 7/15/25 - 6:00pm Last Edited: 7/15/25 - 5:59pm

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

S 700 E AND E 550 S
ZIONSVILLE, INDIANA 46077

ZIONSVILLE COMMUNITY SCHOOLS

ZIONSVILLE COMMUNITY SCHOOLS

NORTH

30 0 30 60 90

GENERAL NOTES

1. SEE DRAWING G0-01 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY SURVEY FIRST LLC, DATED 07-09-2024. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
3. REFER TO DRAWING G2-00 FOR BENCHMARK AND CONTROL POINT LOCATIONS AND ELEVATIONS.
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE PROJECT AREA INCLUDING UNDERGROUND UTILITY CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.

GRADING PLAN LEGEND

+735.30	EXISTING SPOT ELEVATION
MEG	MATCH EXISTING GRADE
TC	TOP OF CURB
BC	BOTTOM OF CURB
EP	EDGE OF PAVEMENT
FL	FLOWLINE
730	EXISTING CONTOUR W/ ELEVATION
735	PROPOSED CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION

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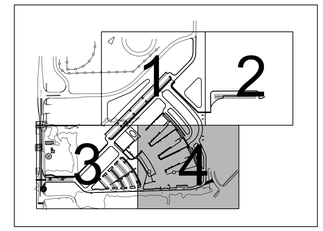
GRADING PLAN - AREA 4

G2-04



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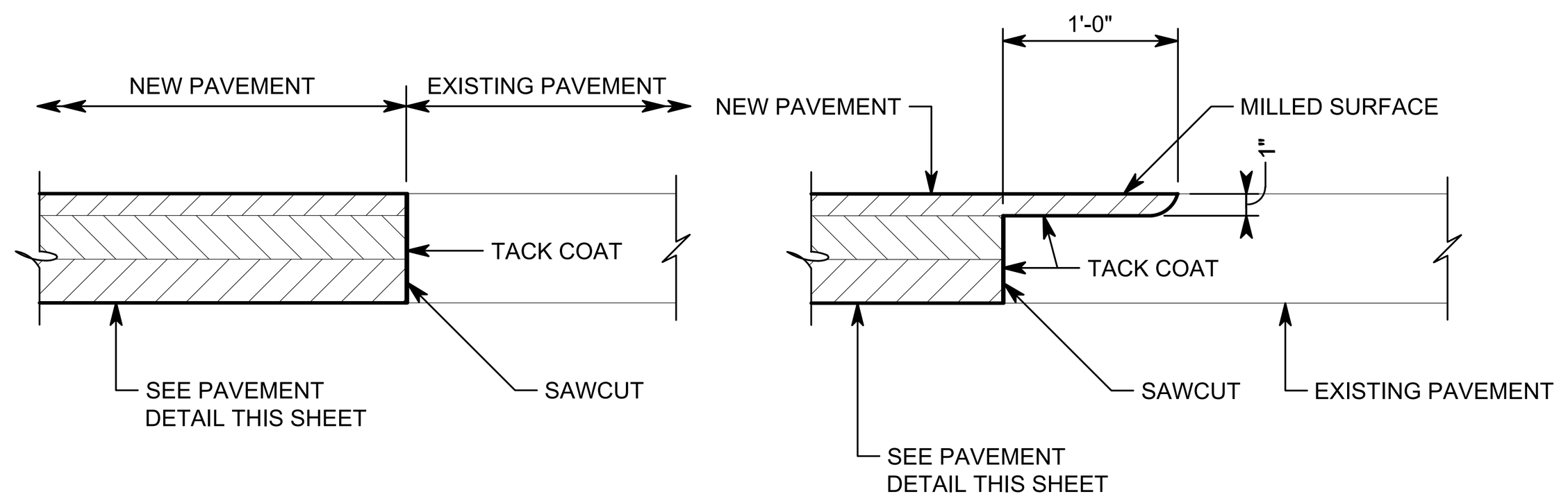
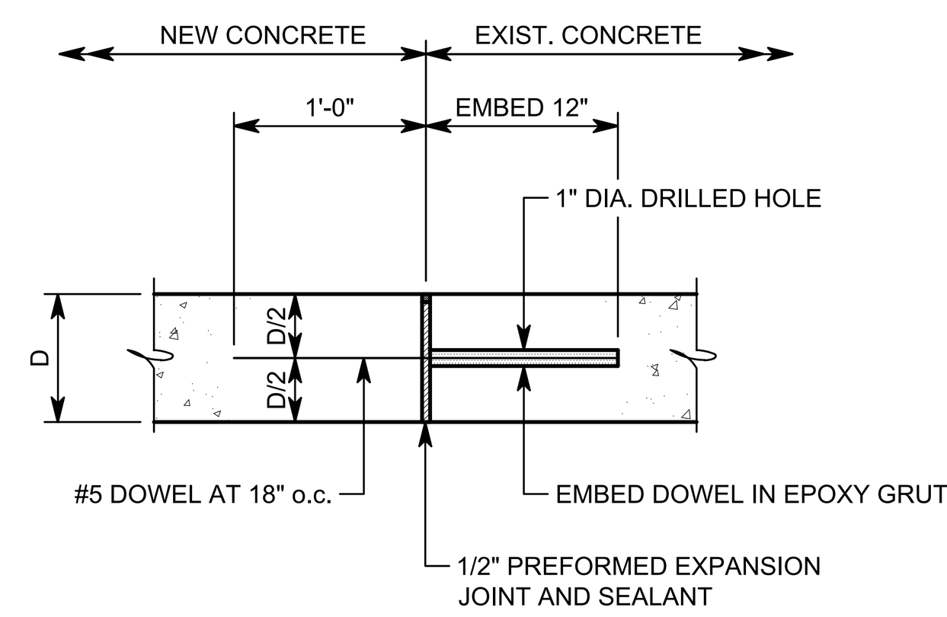
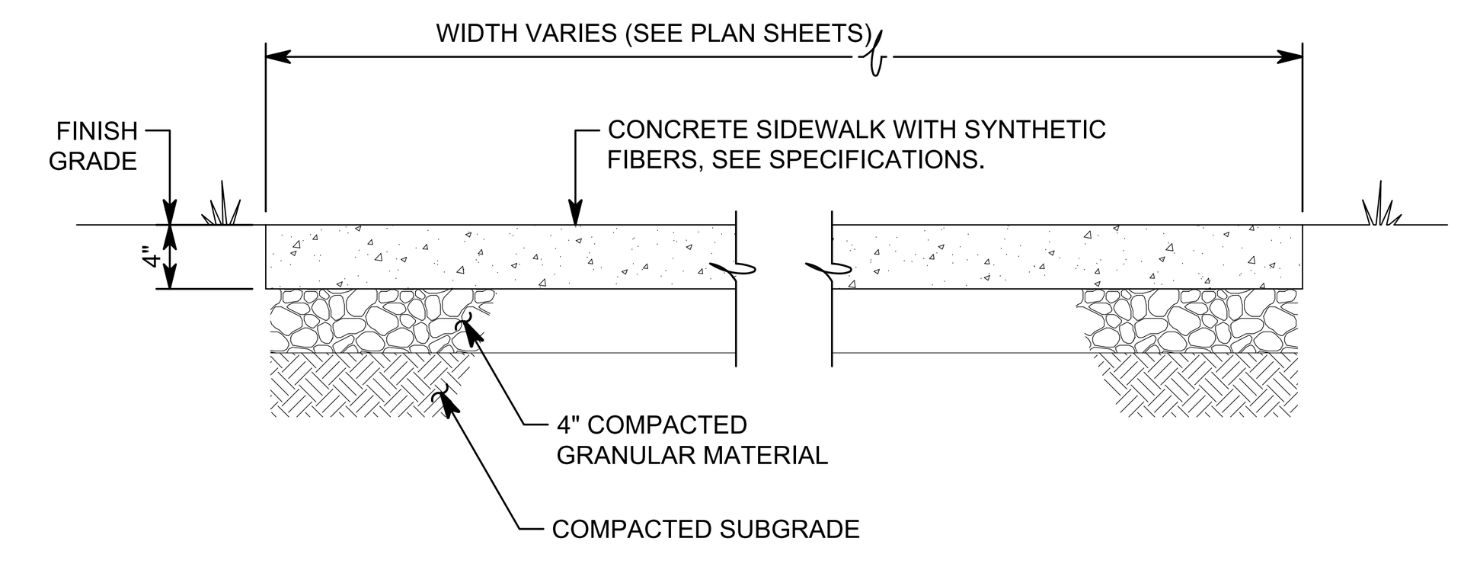
Drawing Path: P:\2024\2000_2063\CAD\Civil\active\5 - 2024-206 - G2-00 to G2-04 - Grading Plans.dwg
Plotted By: timlud Date of Plot: 7/15/25 - 6:01pm Last Edited: 7/15/25 - 6:01pm



PAVEMENT INTERFACE - DETAIL N
1" = 1'-0"

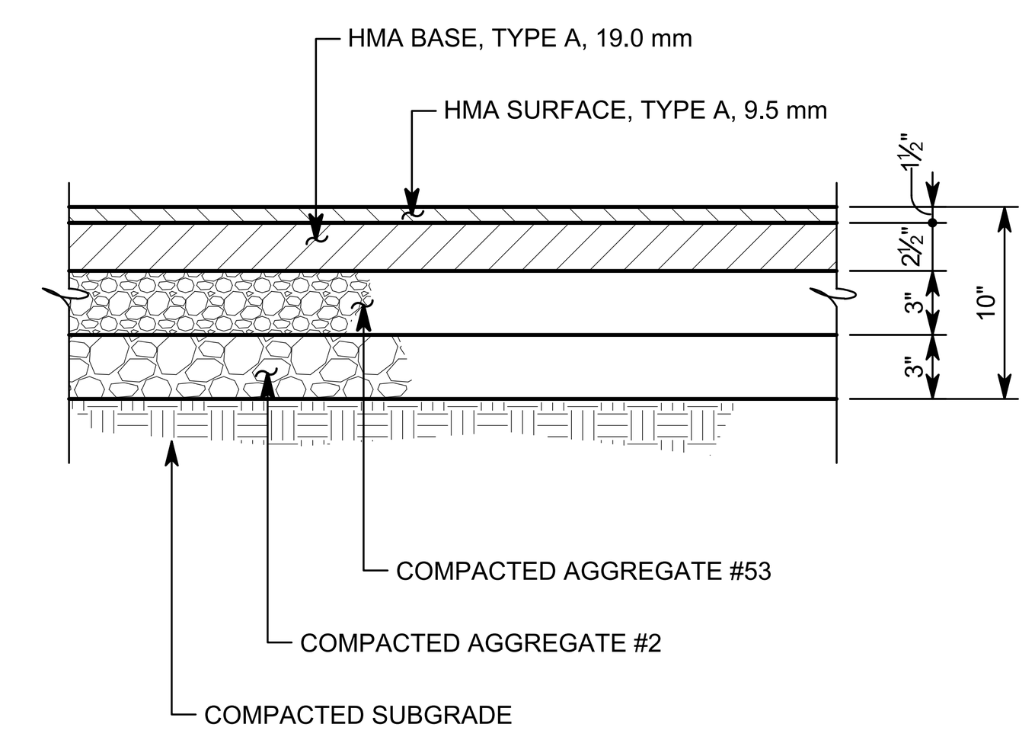


CONCRETE CONNECTION - DETAIL J
1" = 1'-0"

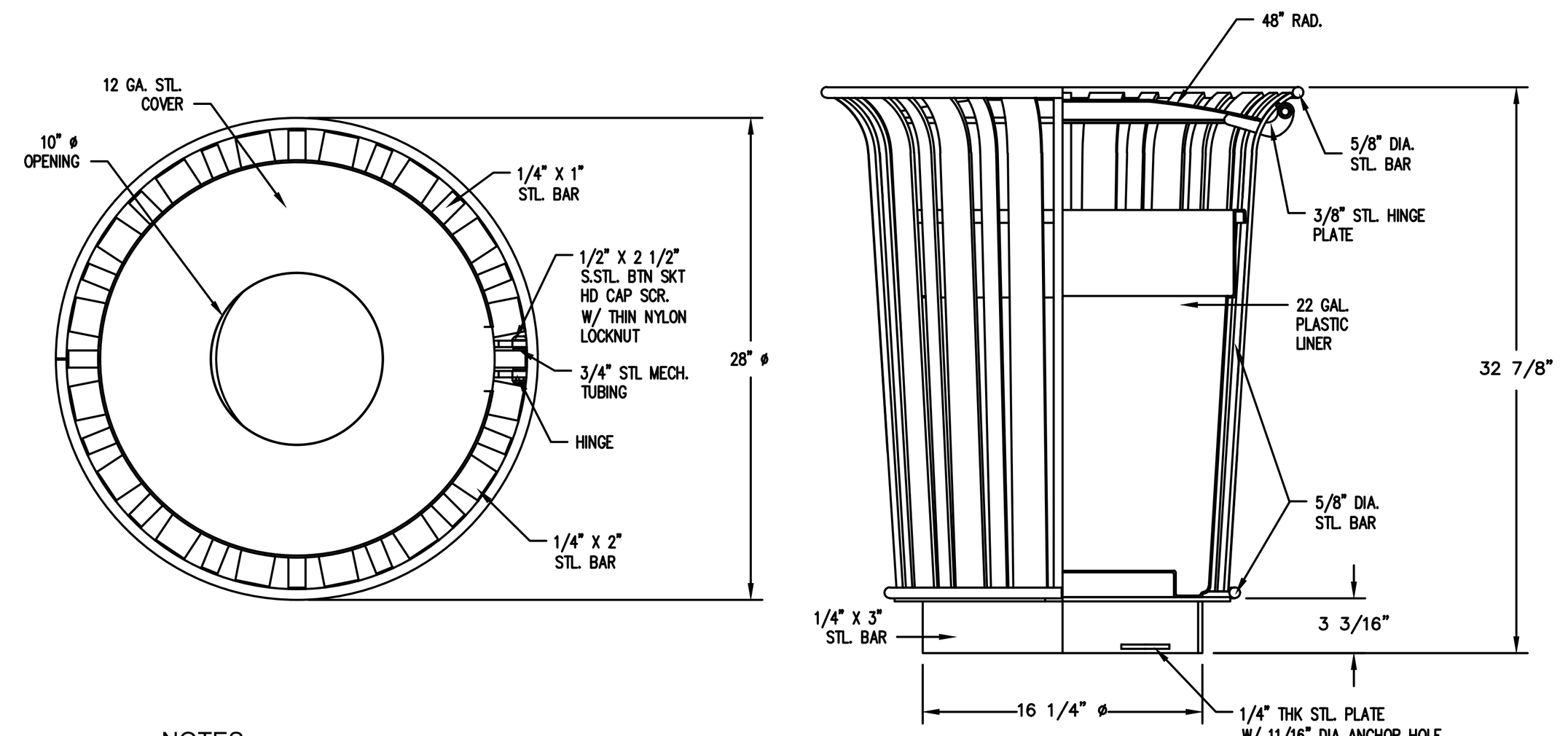


NOTES:
1. CONTROL JOINTS, EXPANSION JOINTS AND EDGES OF SIDEWALK SHALL BE HAND-TOOLED AFTER EACH FINISHING OPERATION.
2. PROVIDE EXPANSION JOINT AT INTERSECTION WITH ANOTHER SIDEWALK, BETWEEN WALKS AND BUILDINGS AND AT SUCH OTHER POINTS AS INDICATED ON THE DRAWINGS.
3. SIDEWALK SHALL HAVE 1/2" EXP. JTS. @ 48' MAX. & CONTROL JOINTS @ 6' MAX.

CONCRETE SIDEWALK WITH FIBER - DETAIL E
1" = 1'-0"

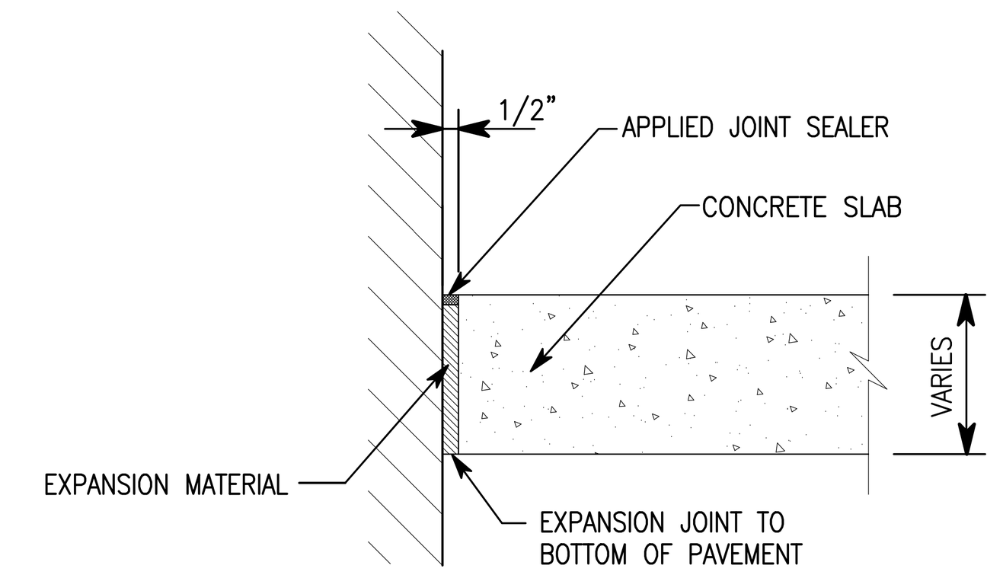


STANDARD DUTY H.A.C. PAVEMENT - DETAIL A
1" = 1'-0"

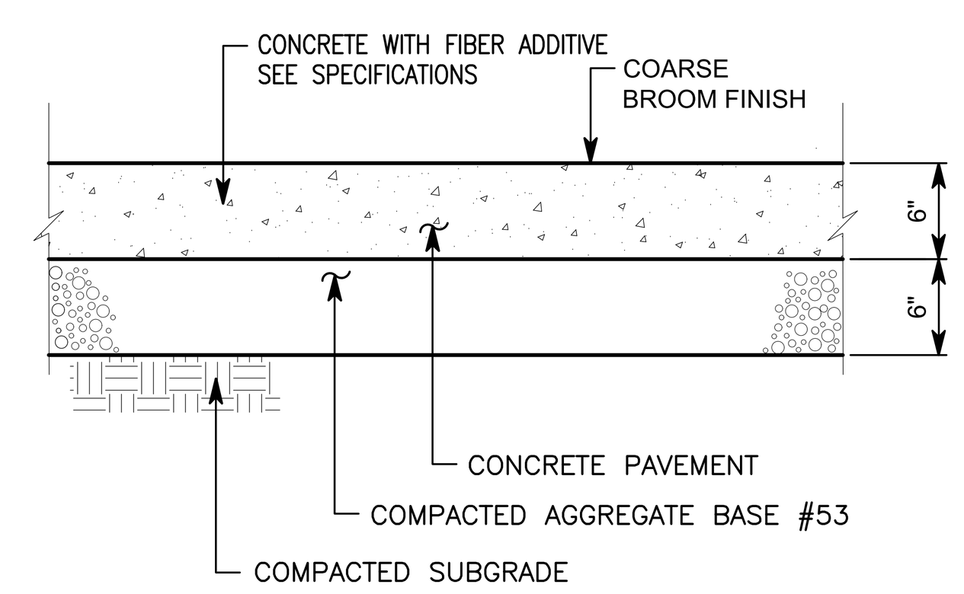


NOTES
1. TRASH RECEPTACLE. MODEL #87-22 BY DUMOR INC. CONTACT SERVICE SUPPLY CO.,COLUMBUS, OH. 1-800-848-7556 (IN) OR 1-800-282-1900 (OH).
2. COLORS TO BE SELECTED BY OWNER.
3. SURFACE MOUNT.
4. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
5. 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.

TRASH RECEPTACLE - DETAIL R
NO SCALE

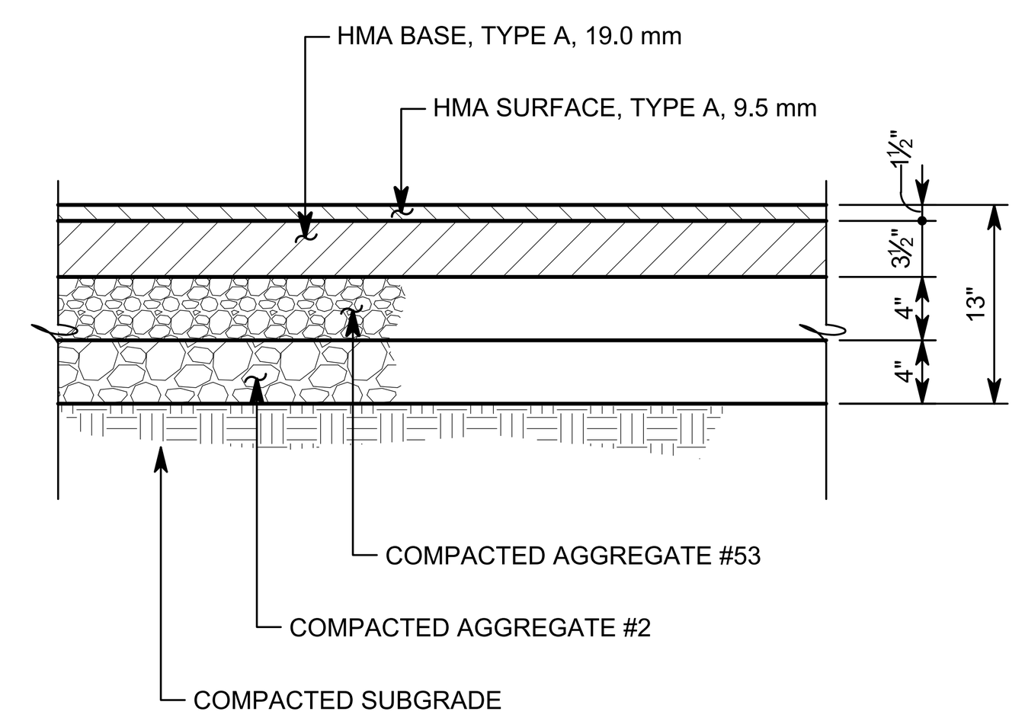


ISOLATION JOINT - DETAIL K
NO SCALE

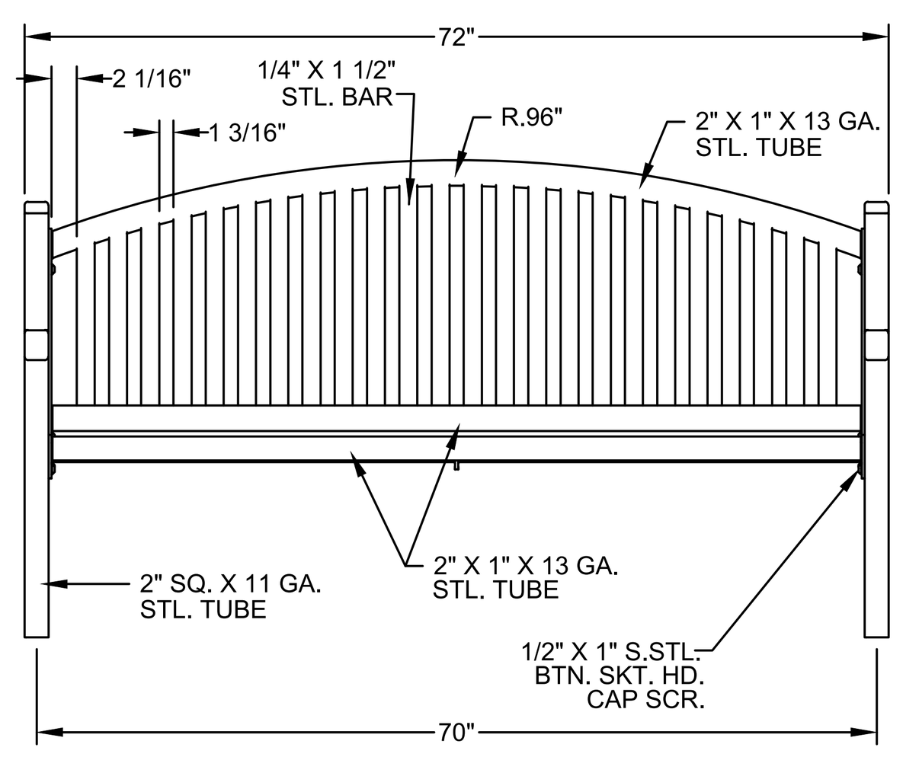


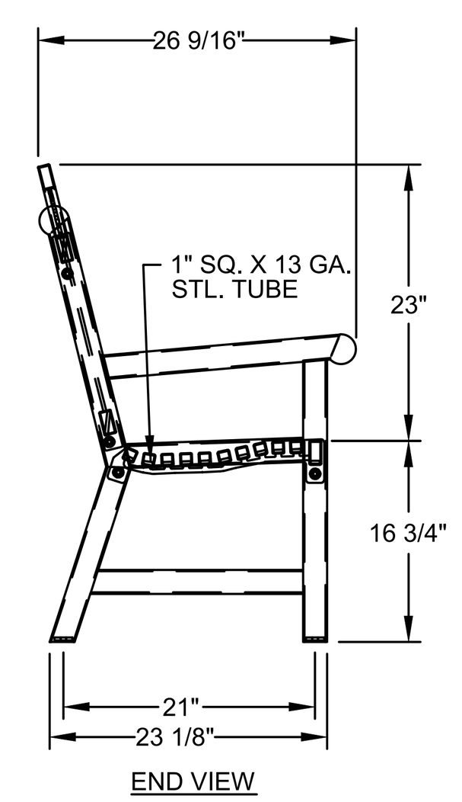
NOTES:
1. CONTROL JOINTS, EXPANSION JOINTS AND EDGES OF SIDEWALK SHALL BE HAND-TOOLED AFTER EACH FINISHING OPERATION.
2. PROVIDE EXPANSION JOINT AT INTERSECTION WITH ANOTHER SIDEWALK, BETWEEN WALKS AND BUILDINGS AND AT SUCH OTHER POINTS AS INDICATED ON THE DRAWINGS.
3. PAVEMENT SHALL HAVE 1/2" EXPANSION JOINTS AT 80' MAX. AND CONTROL JOINTS AT 15' MAX.
4. FIBER ADDITIVE: VIRGIN NYLON FIBERS. 3/4" LENGTH, NYCON BY NYCON INC., OR FORTA NYLON BY FORTA CORPORATION, ADDED AT THE BATCH PLANT AT 1 LB. PER CU. YD. OF CONCRETE.

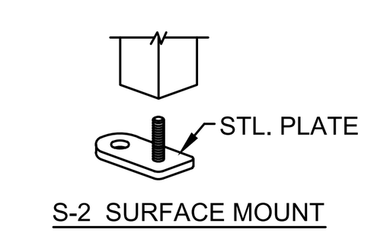
CONCRETE PAVEMENT WITH FIBER- DETAIL F
SCALE: 1" = 1'-0"



HEAVY DUTY H.A.C. PAVEMENT - DETAIL B
1" = 1'-0"

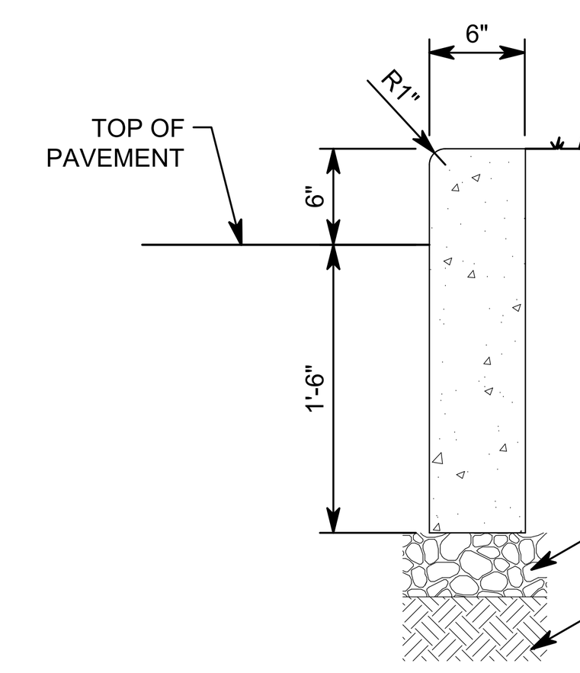






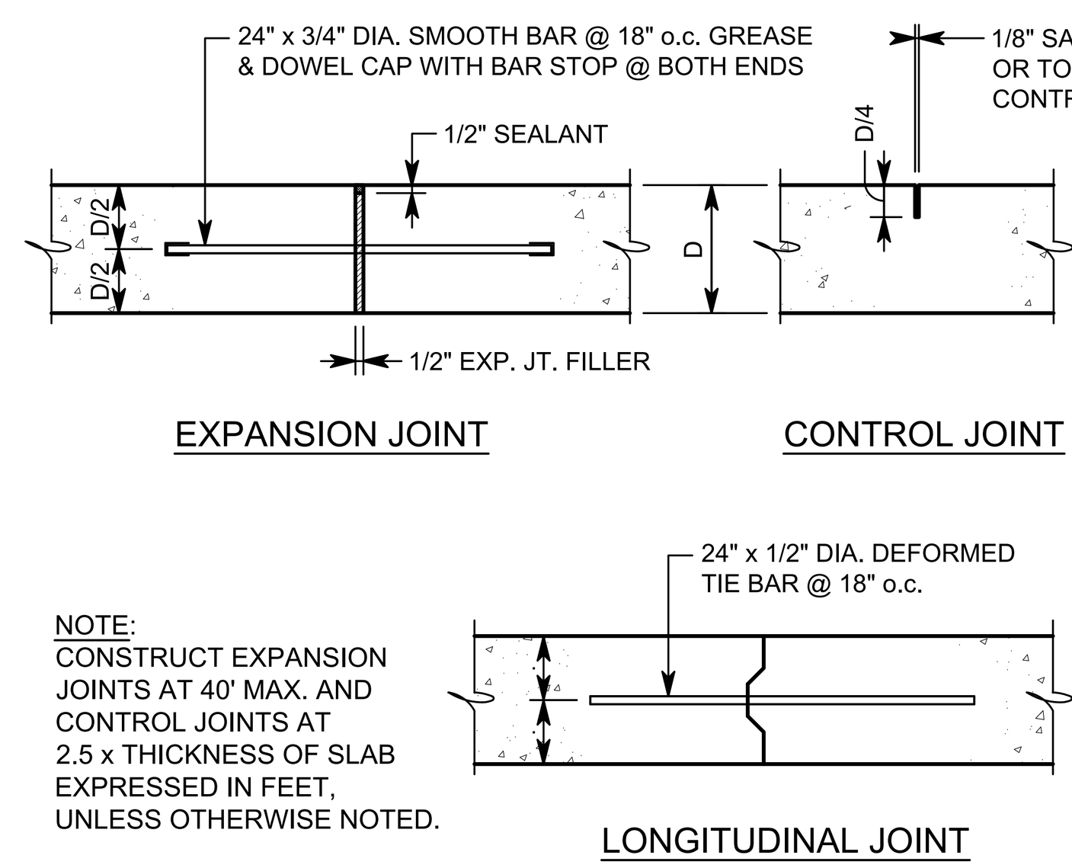
NOTES
1. 6' LONG METAL BENCH. MODEL #118-60 BY DUMOR INC. CONTACT SERVICE SUPPLY CO.,COLUMBUS, OH. 1-800-848-7556 (IN) OR 1-800-282-1900 (OH).
2. COLORS TO BE SELECTED BY OWNER.
3. S-2 SURFACE MOUNT.
4. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
5. 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR S-2 OPTION.

6' LONG METAL BENCH - DETAIL S
NO SCALE



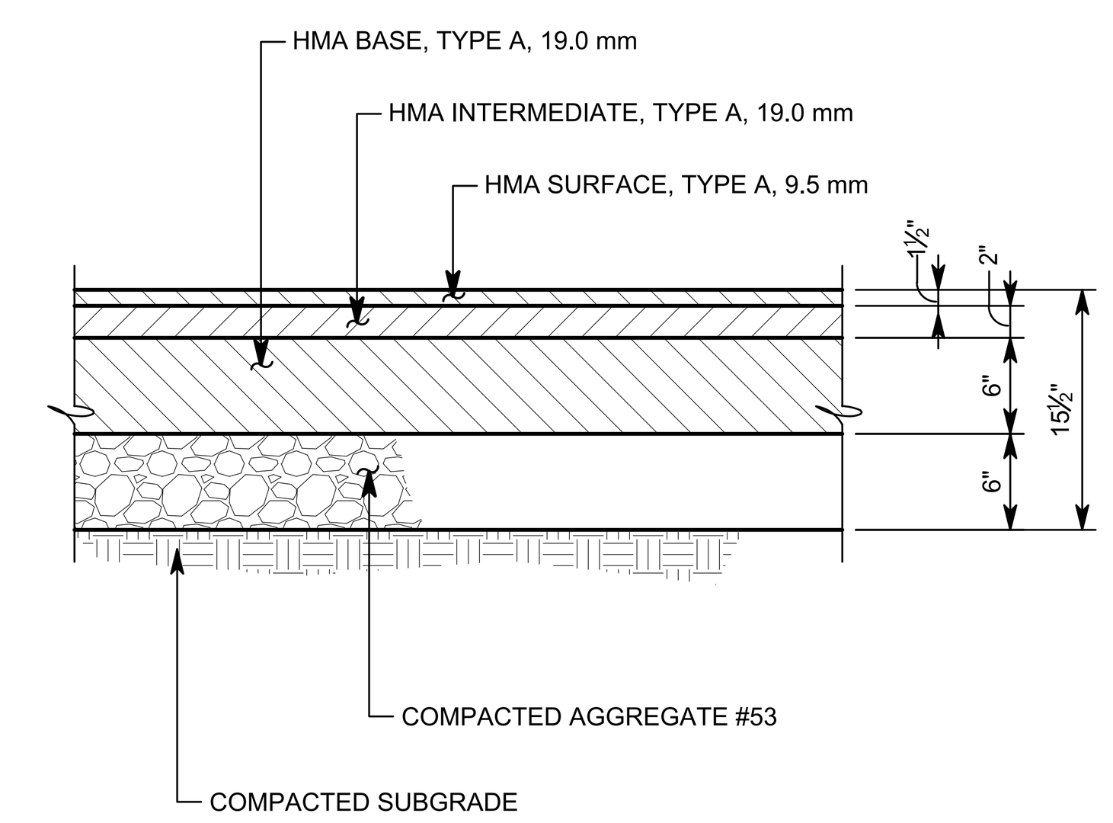
NOTES:
1. PROVIDE CONTROL JOINTS AT 10' MAX. SPACING.
2. PROVIDE EXPANSION JOINTS AT 80' MAX. SPACING AND AT ENDS OF ALL RADII.

STRAIGHT CURB - DETAIL L
1" = 1'-0"



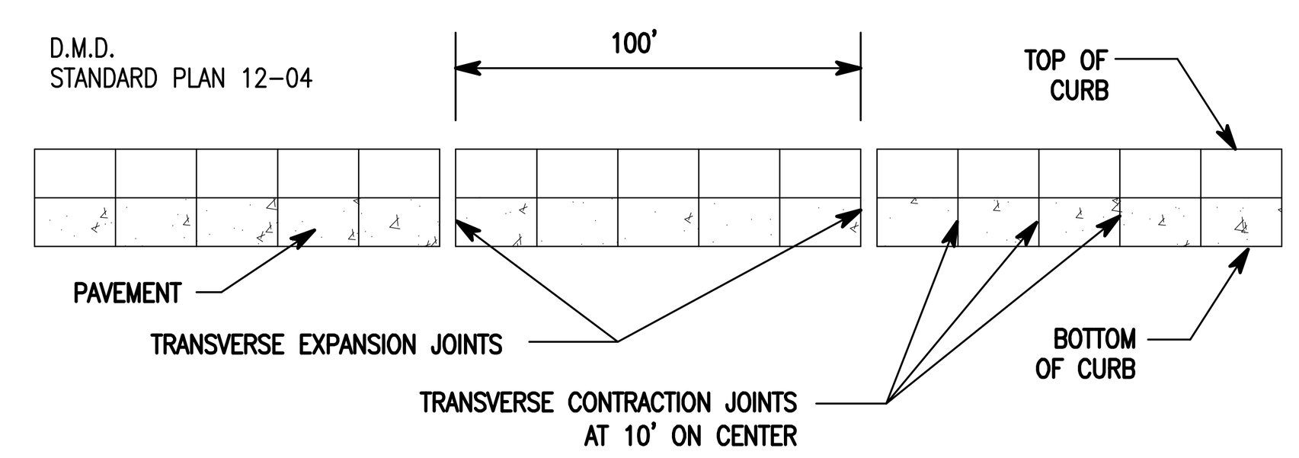
NOTE:
CONSTRUCT EXPANSION JOINTS AT 40' MAX. AND CONTROL JOINTS AT 2.5 x THICKNESS OF SLAB EXPRESSED IN FEET, UNLESS OTHERWISE NOTED.

CONCRETE JOINTS - DETAIL G
1" = 1'-0"

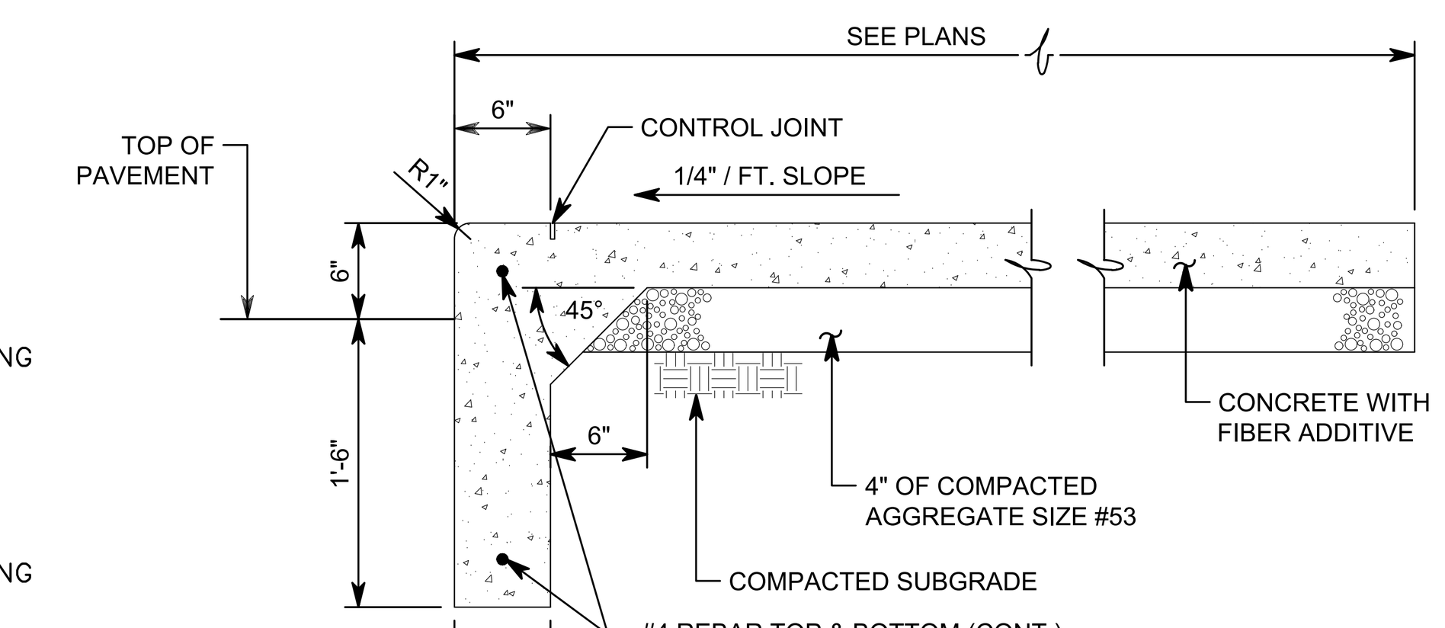


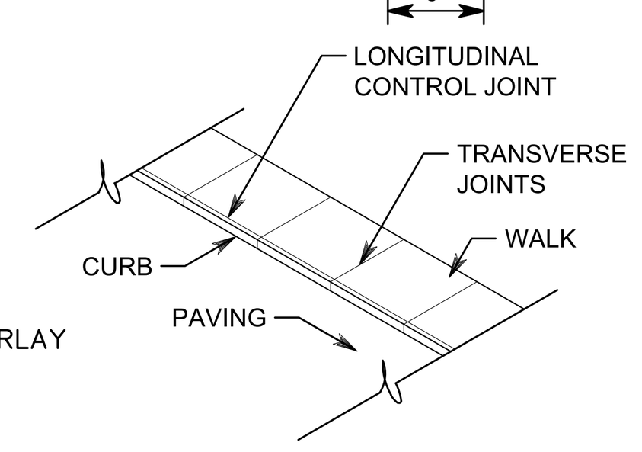
RIGHT OF WAY ASPHALT PAVEMENT - DETAIL C
1" = 1'-0"

(NOTE: ASPHALT ALTERNATIVE FOR USE ON TOWN OF ZIONSVILLE LOCAL STREET)



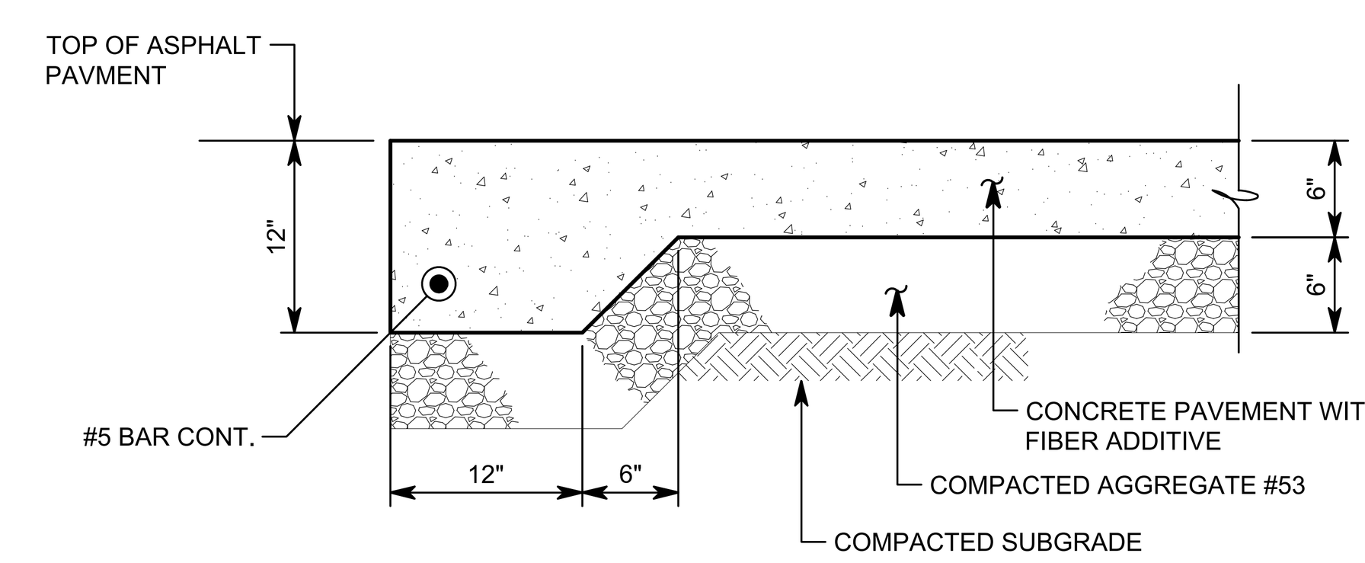
CURB JOINT - DETAIL M
NO SCALE





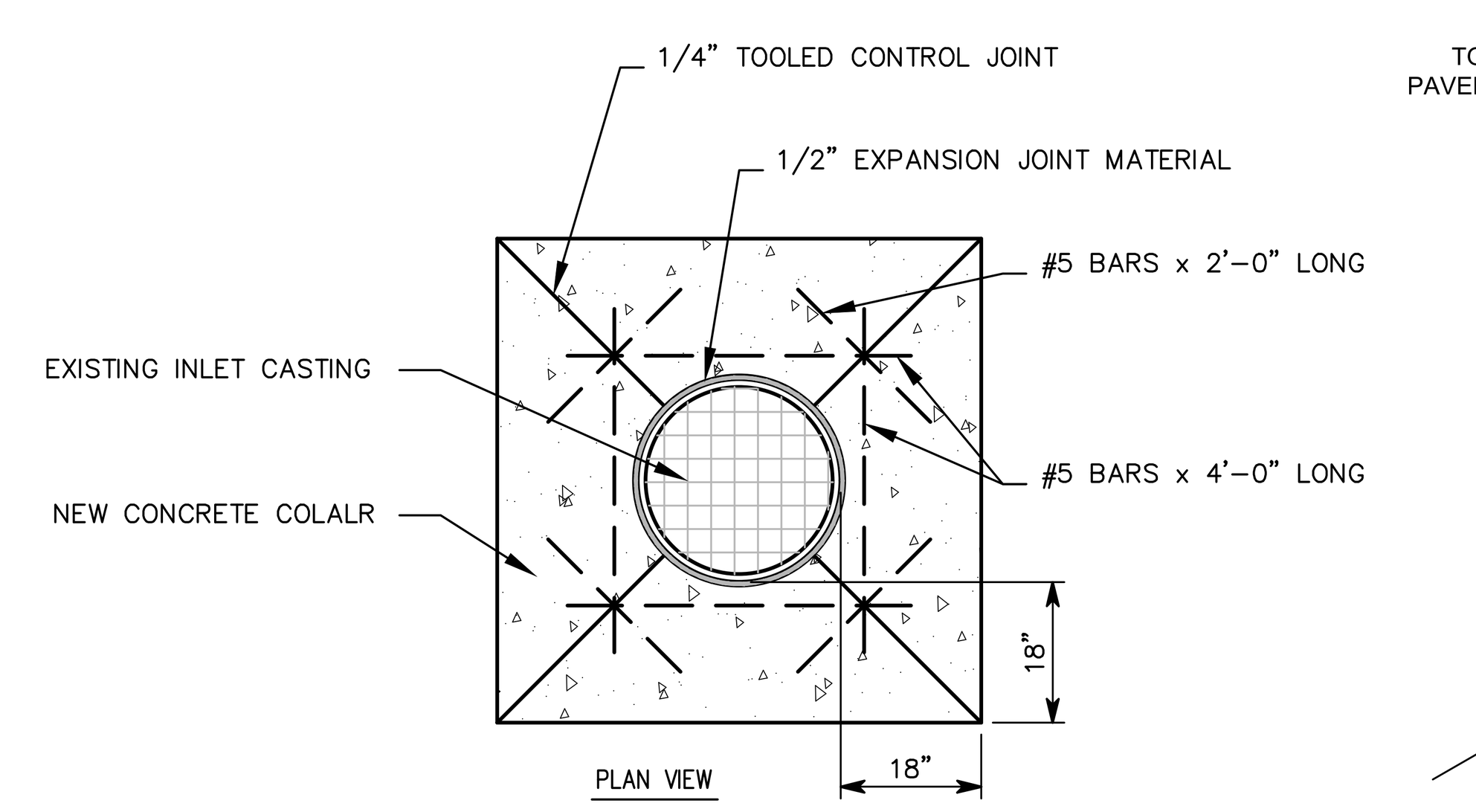
NOTES:
1. CURB SHALL HAVE 1/2" EXPANSION JOINTS AT 48'-0" MAX. AND AT ENDS OF RADII. CONTROL JOINTS AT 6'-0" MAX. UNLESS OTHERWISE NOTED.
2. CONTROL JOINTS SHALL BE CUT 1/4 DEPTH OF TOTAL THICKNESS OF SLAB.
3. FIBER ADDITIVE: VIRGIN NYLON FIBERS. 3/4" LENGTH NYCON BY NYCON, INC., OR FORTA NYLON BY FORTA CORPORATION, ADDED AT THE BATCH PLANT AT 1 LB. PER CU. YD. OF CONCRETE.

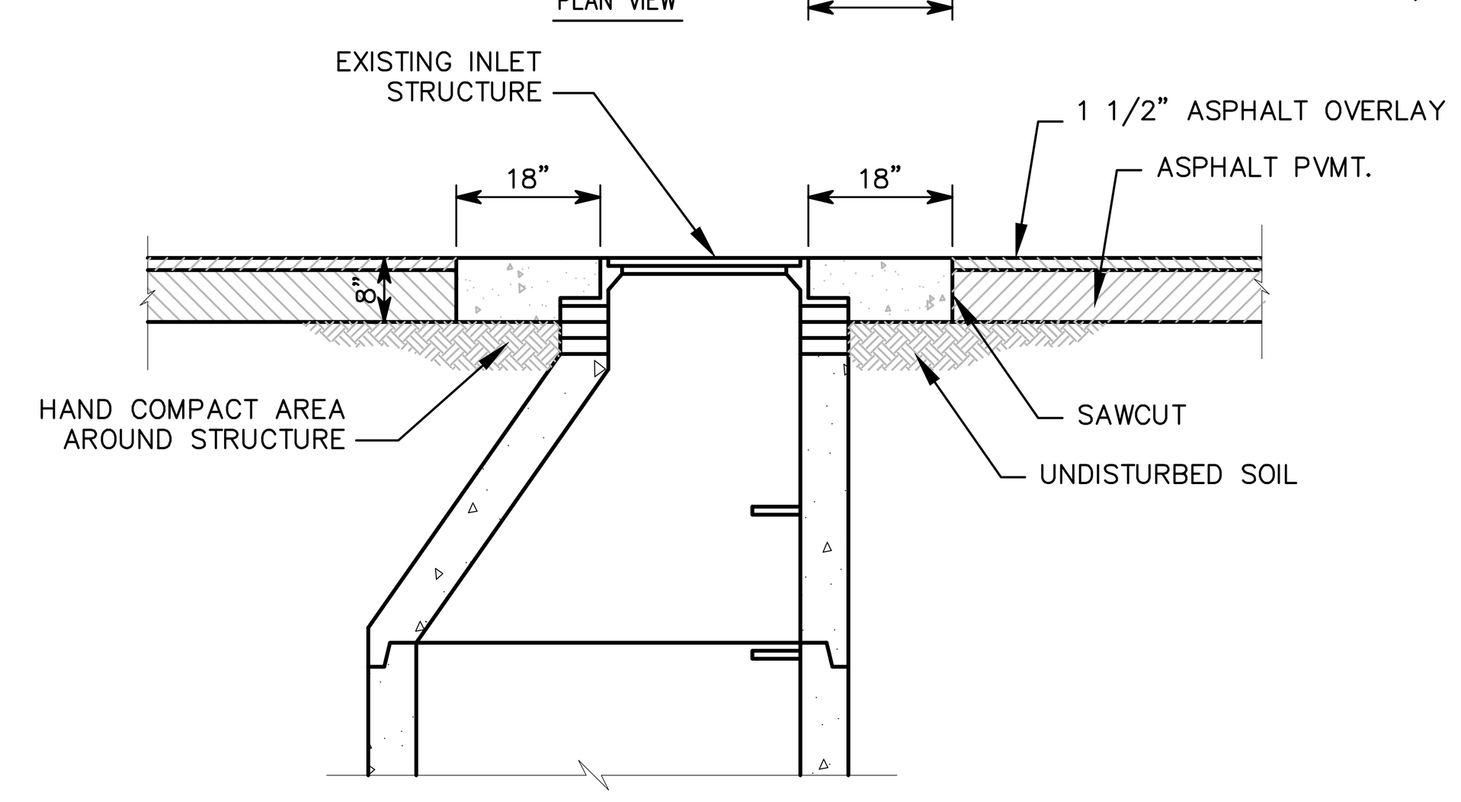
MONOLITHIC CURB AND WALK - DETAIL H
1" = 1'-0" (18" CURB)



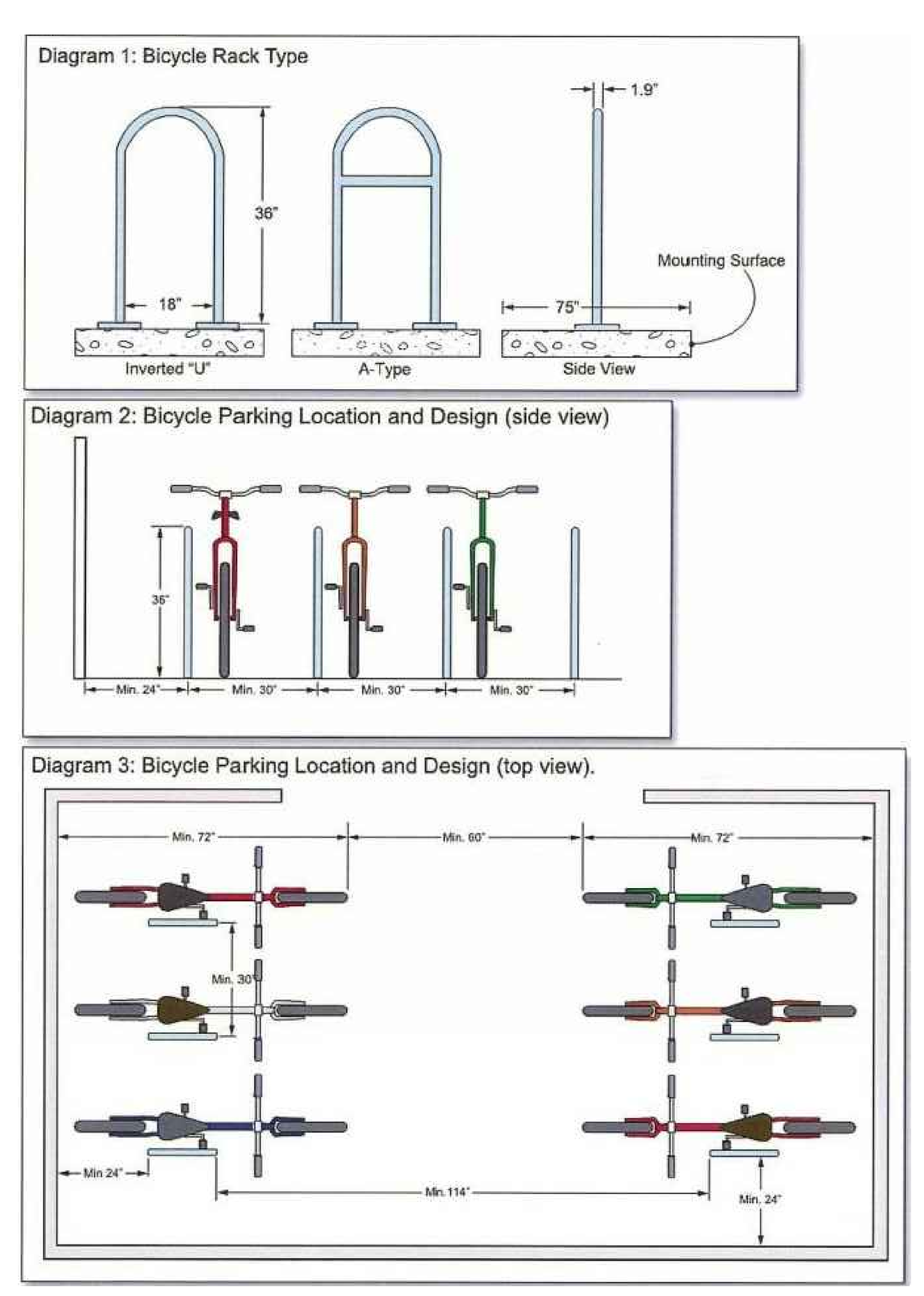
FIBER ADDITIVE: VIRGIN NYLON FIBERS, 3/4" LENGTH, NYCON BY NYCON INC., OR FORTA NYLON BY FORTA CORPORATION, ADDED AT THE BATCH PLANT AT 1 LB. PER CU. YD. OF CONCRETE.

CONCRETE / ASPHALT PAVEMENT INTERFACE - DETAIL D
1" = 1'-0"



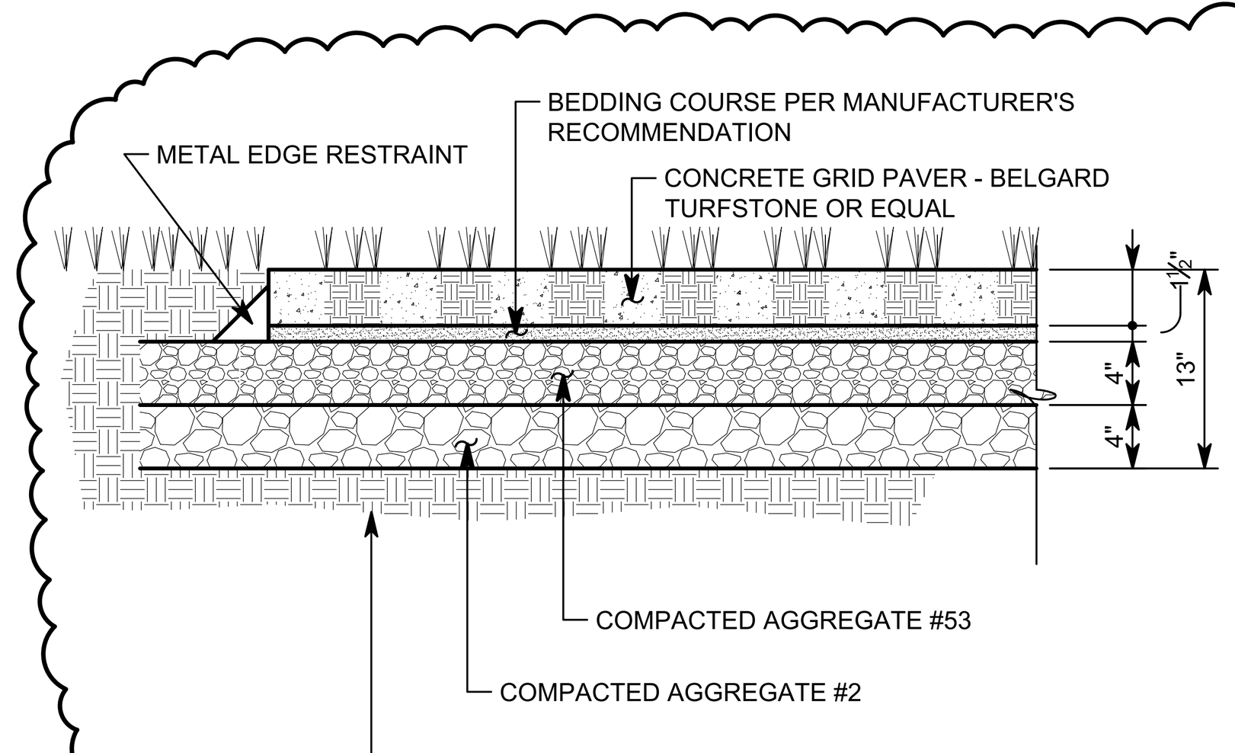


CONCRETE STORM INLET COLLAR - DETAIL P
NONE



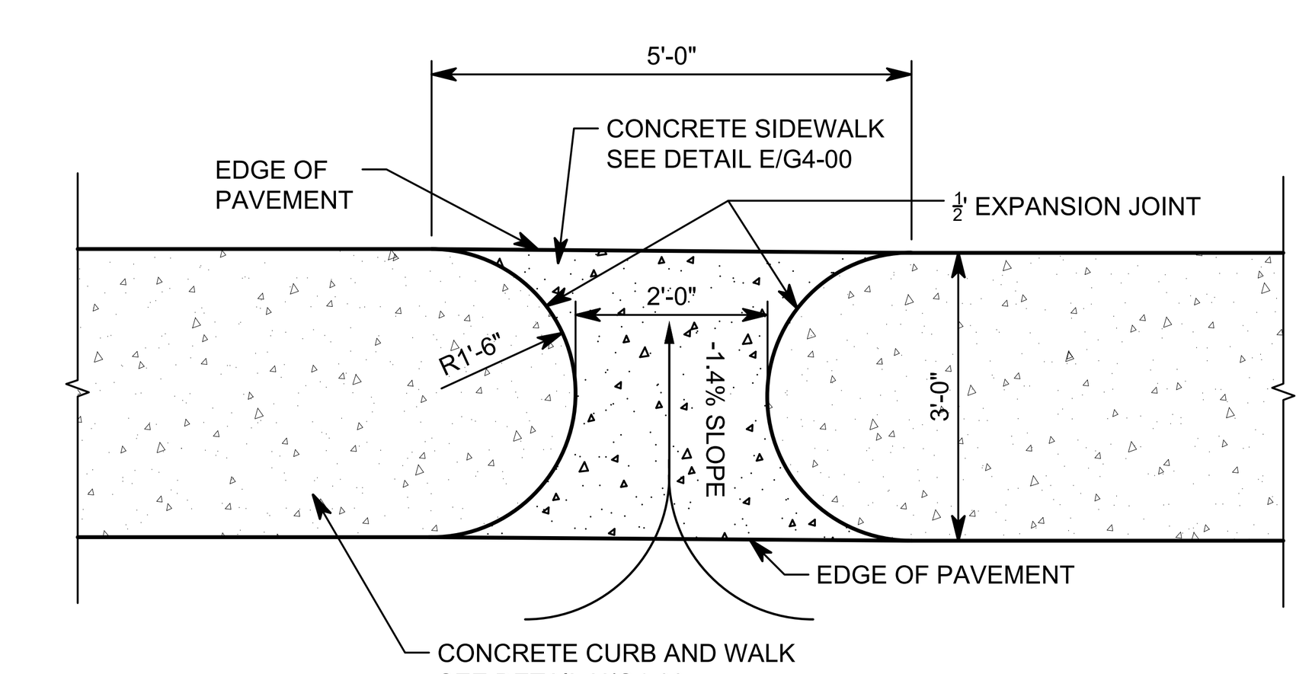
NOTE:
- BIKE RACKS TO BE APEX INVERTED U BIKE RACK AVAILABLE FROM SITESCAPES (888-331-9464) P.O. BOX 22326 LINCOLN, NE 68542. COLOR TO BE SELECTED BY OWNER.
- BIKE RACKS TO BE SURFACE MOUNTED.

BIKE RACK - DETAIL T
NO SCALE



2

GRASS MAT PAVER - DETAIL V
1" = 1'-0"



CONCRETE CENTER CURB W/TURNOUT - DETAIL U
1/2" = 1'-0"

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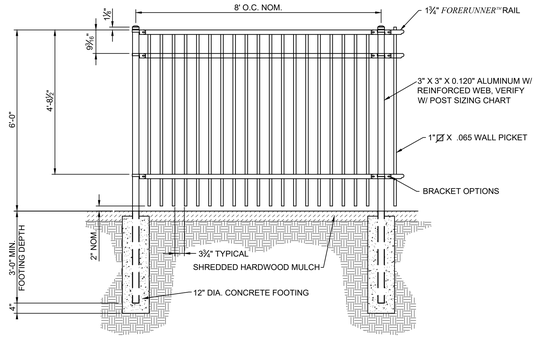
SITE DETAILS

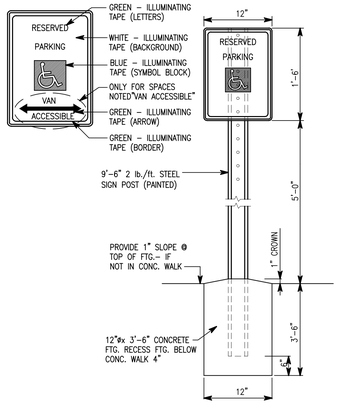
G4-00

Drawing Path: P:\2024\200\206\CAD\Civil\Active\7 - 2024-206 - G4-00 - Site Details.dwg
Plotted By: dschnur Time of Plot: 7/15/25 - 6:03pm Last Edited: 7/15/25 - 5:59pm

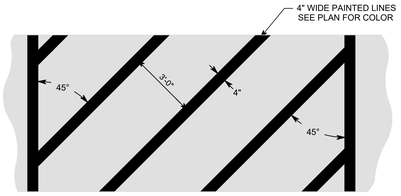


NOTE:
1. VERIFY POST SIZING W/ MANUFACTURERS POST SIZING CHART.
2. FENCE TO BE 3 RAIL ECHELON II MAJESTIC FENCE AVAILABLE FROM AMERISTAR FENCE, OR APPROVED EQUAL.
3. COLOR TO BE SELECTED BY OWNER.

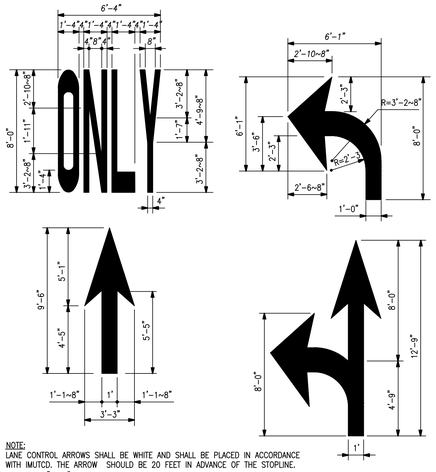
ORNAMENTAL FENCE - DETAIL N
1/2" = 1'-0"



A.D.A. PARKING SIGN - DETAIL K
NO SCALE

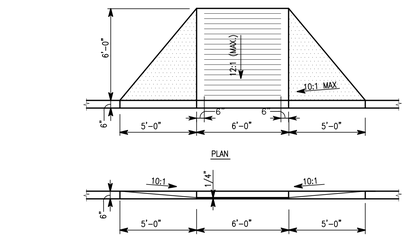


PAINTED PARKING ISLANDS - DETAIL F
NO SCALE

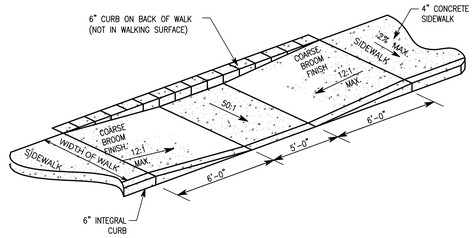


NOTE:
LANE CONTROL ARROWS SHALL BE WHITE AND SHALL BE PLACED IN ACCORDANCE WITH IMUTCD. THE ARROW SHOULD BE 20 FEET IN ADVANCE OF THE STOPLINE. THE WORD "ONLY" SHOULD BE LOCATED IN ADVANCE OF THE PAVEMENT ARROW.

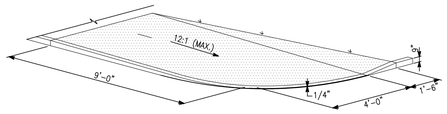
TRAFFIC MARKINGS - DETAIL G
NO SCALE



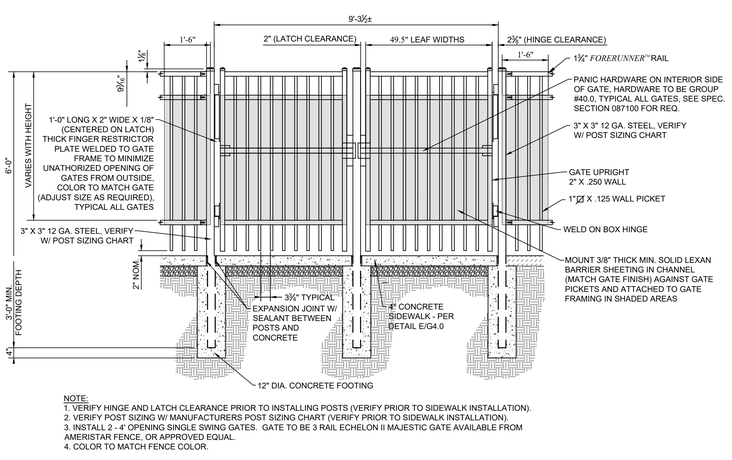
ADA RAMP - TYPE 1 - DETAIL A
1/4"=1'-0"



ADA RAMP - TYPE 2- DETAIL B
NONE

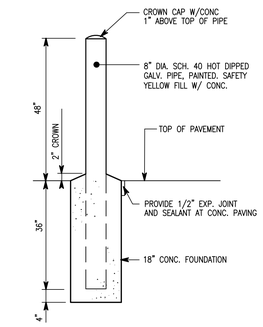


HANDICAP RAMP - TYPE 3 - DETAIL C
SCALE: NONE

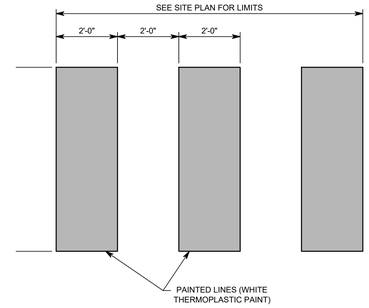


NOTE:
1. VERIFY HINGE AND LATCH CLEARANCE PRIOR TO INSTALLING POSTS (VERIFY PRIOR TO SIDEWALK INSTALLATION).
2. VERIFY POST SIZING W/ MANUFACTURERS POST SIZING CHART (VERIFY PRIOR TO SIDEWALK INSTALLATION).
3. INSTALL 2 - 4' OPENING SINGLE SWING GATES. GATE TO BE 3 RAIL ECHELON II MAJESTIC GATE AVAILABLE FROM AMERISTAR FENCE, OR APPROVED EQUAL.
4. COLOR TO MATCH FENCE COLOR.

ORNAMENTAL GATES AT DROP-OFF - DETAIL P
1/2" = 1'-0"



8" BARRIER POST - DETAIL L
NO SCALE

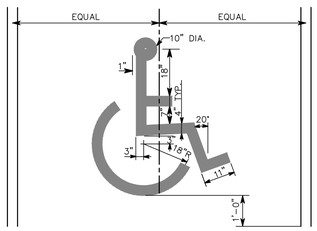


CROSSWALK STRIPE - DETAIL H
SCALE: 1/2" = 1'-0"

NOTE
1. 30' FLAGPOLE PER SPECIFICATIONS.

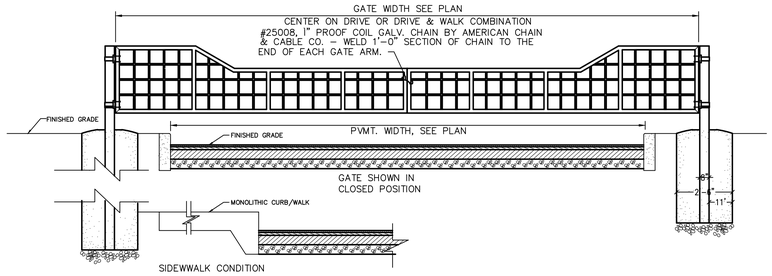
FLAG POLE FOUNDATION - DETAIL D
NO SCALE

DETAIL T - NOT USED
2

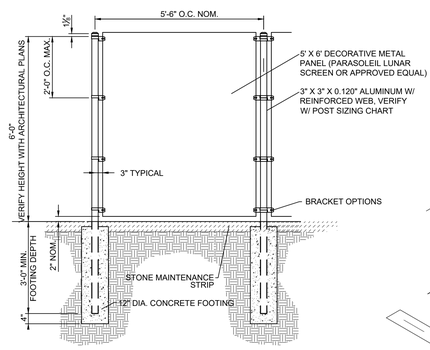


NOTE:
1. SEE SPECIFICATIONS SECTION 321723 FOR PAINT REQUIREMENTS.

PAINTED A.D.A. SYMBOL- DETAIL J
NONE

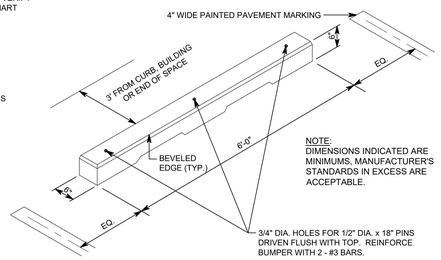


TRAFFIC CONTROL GATE - DETAIL S
NO SCALE



NOTE:
1. VERIFY POST SIZING W/ MANUFACTURERS POST SIZING CHART.
2. FENCE PANELS TO BE PARASOLEIL DECORATIVE FENCE PANELS, OR APPROVED EQUAL.
3. PANEL MOUNTING SHALL BE PER MANUFACTURER'S RECOMMENDATION
4. PATTERN AND STANDARD COLOR TO BE SELECTED BY OWNER.

METAL PANEL FENCE - DETAIL R
1/2" = 1'-0"



NOTE:
DIMENSIONS INDICATED ARE MINIMUMS, MANUFACTURER'S STANDARDS IN EXCESS ARE ACCEPTABLE.

PARKING BUMPER - DETAIL E
NO SCALE

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CONSULTANT

TLF

TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

CHRISTOPHER S. GRANT REGISTERED No. PE10606090 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DBS

PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)

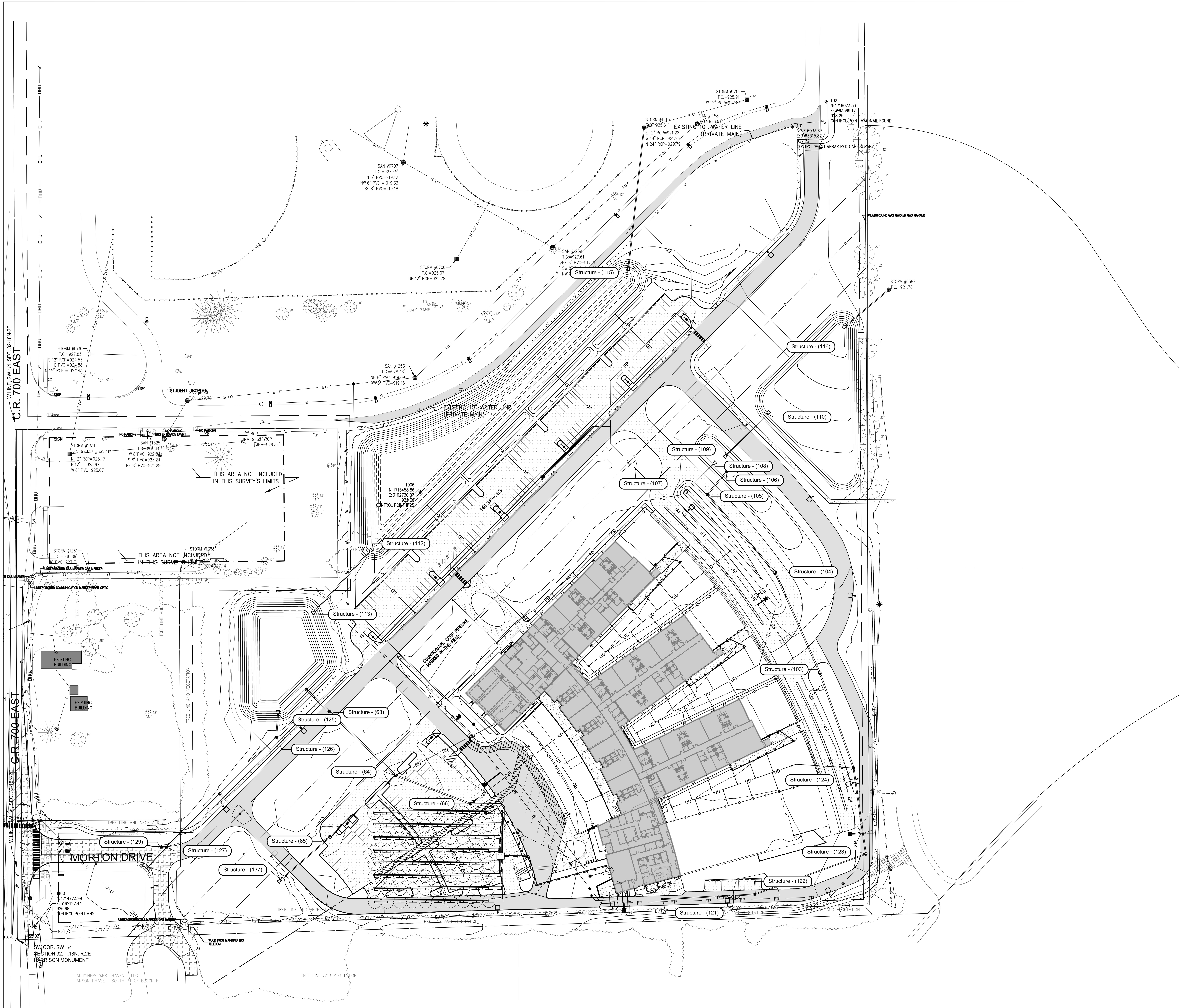
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 1	07.09.2025
2	ADDENDUM 2	07.16.2025

SITE DETAILS

G4-01

Drawing Path: P:\2024\206\CAD\Civil\Active\ - 2024-206 - G4-00 - Site Details.dwg
Plotted By: dschnur Time of Plot: 7/15/25 - 6:01pm Last Edited: 7/15/25 - 6:01pm



NORTH

60 0 60 120 180

GENERAL NOTES

1. SEE DRAWING G0-01 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
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UTILITY LEGEND

Symbol	Description
COMM	PROPOSED COMMUNICATION LINE
UE	PROPOSED UNDERGROUND ELECTRICAL LINE
FO	PROPOSED FIBER OPTIC LINE
FP	PROPOSED FIRE PROTECTION LINE
SAN	PROPOSED SANITARY SEWER LINE
ST	PROPOSED STORM SEWER LINE
DSP	PROPOSED DOWNSPOUT LINE
T	PROPOSED TELEPHONE LINE
W	PROPOSED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED FIRE DEPARTMENT CONNECTION
	PROPOSED STORM INLET
	PROPOSED STORM MANHOLE
	PROPOSED LIGHT POLE
OHU	EXISTING OVERHEAD UTILITY LINE
g	EXISTING GAS LINE
	EXISTING GAS PIPELINE
fo	EXISTING UNDERGROUND ELECTRIC/FIBER/COMM LINE
w	EXISTING WATER LINE
san	EXISTING SANITARY SEWER
storm	EXISTING STORM SEWER

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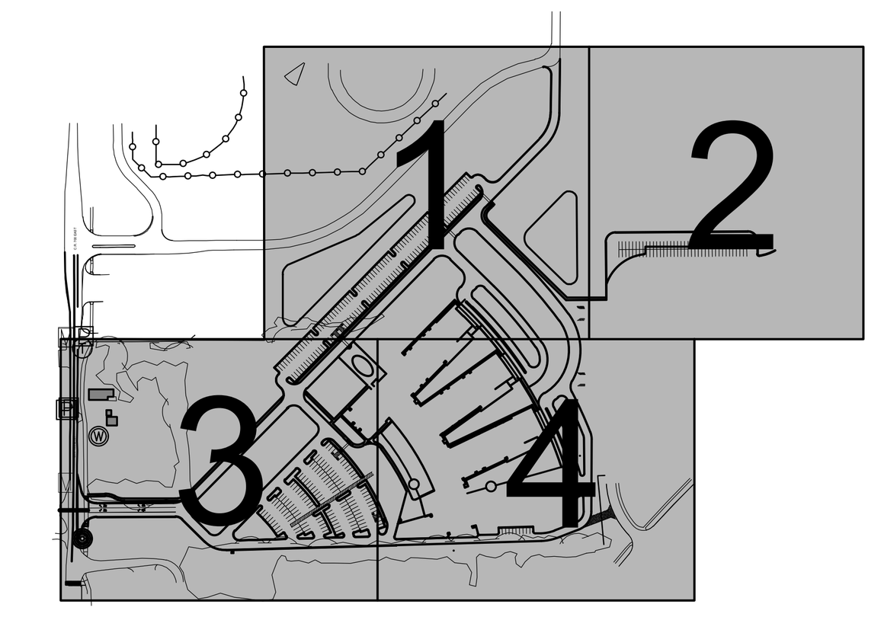

KEYPLAN

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

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ZIONSVILLE COMMUNITY SCHOOLS

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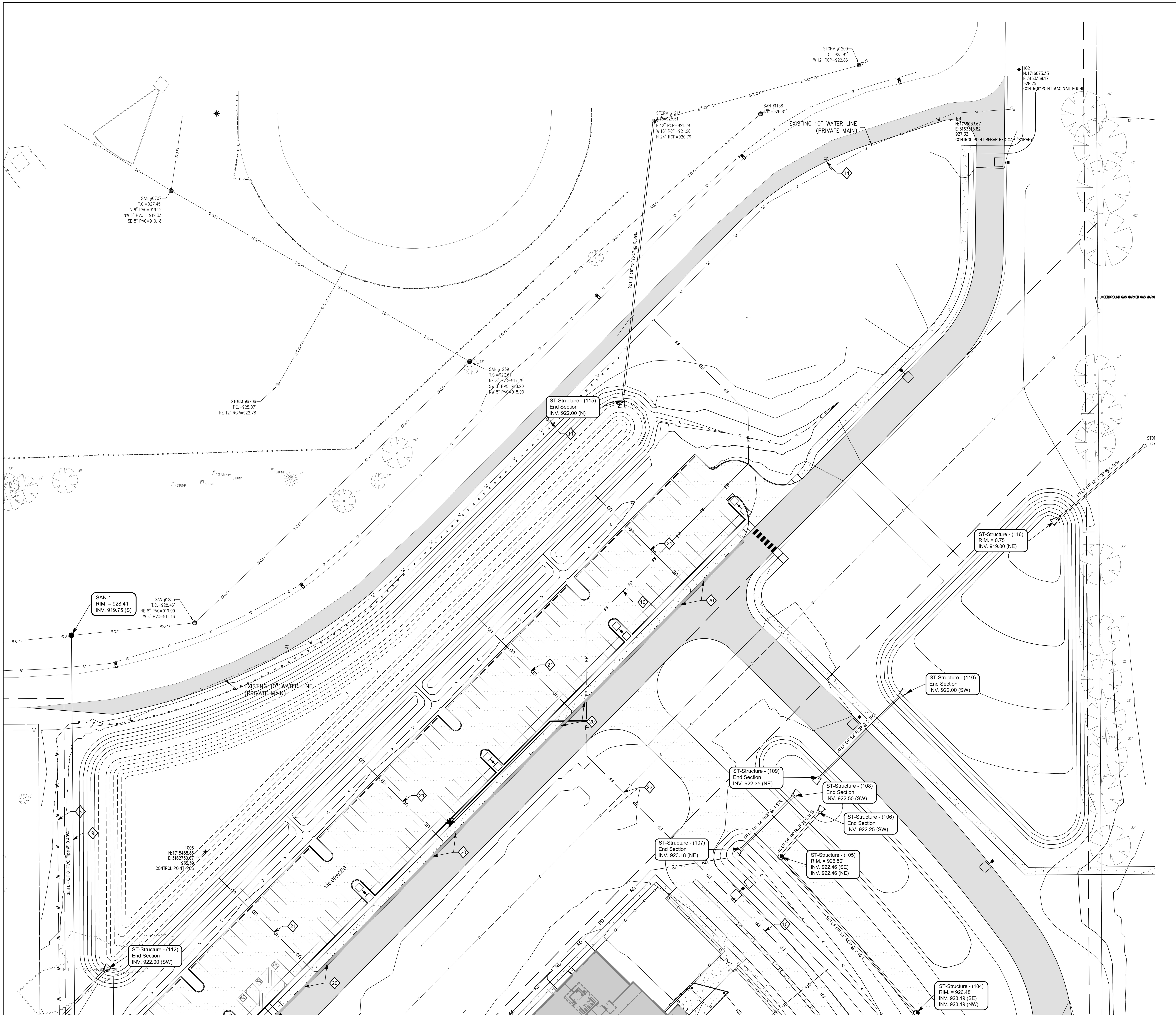
DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
2	ADDENDUM 2	07-16-2025

OVERALL UTILITY PLAN

SU1-0



NORTH

30 0 30 60 90

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5. 8" PVC STORM CLEANOUT - SEE DETAIL A/SU2-00
6. FIRE HYDRANT & VALVE ASSEMBLY - SEE DETAIL F/SU2-00
7. WATER VALVE
8. WATER METER
9. 8" C900 PVC WATER SERVICE LINE - SEE DETAIL F/SU2-00
10. 8" C900 PVC FIRE PROTECTION LINE - SEE DETAIL F/SU2-00
11. RELOCATE EXISTING HYDRANT & VALVE ASSEMBLY 6' BEHIND NEW EDGE OF PAVEMENT
12. UNDERGROUND ELECTRIC LINE (SEE ELECTRICAL SITE PLAN)
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14. TELEPHONE LINE (SEE TECHNOLOGY SITE PLAN)
15. 1,000-GALLON GREASE TRAP - SEE PLUMBING PLANS
16. SAMPLING MANHOLE - SEE PLUMBING PLANS
17. 1½" PVC SUMP PUMP DISCHARGE PIPE
18. FIRE DEPARTMENT CONNECTION
19. COORDINATE WITH BOONE COUNTY REMC FOR RELOCATION OF SUPPORT GUY WIRES ON EXISTING POLE TO PROVIDE CLEARANCE FOR NEW DRIVE.
20. PERVIOUS PAVER STRIP WITH UNDERDRAIN - SEE DETAIL E/SU2-02
21. 6" PVC SUBSURFACE DRAIN @ 0.5% SLOPE
22. INFILTRATION BASIN WITH UNDERDRAIN - SEE DETAIL D/SU2-02
23. 45° VERTICAL BENDS REQUIRED ON WATER LINE TO PROVIDE MIN. 2' CLEARANCE FROM GAS PIPELINE
24. CONCRETE CRADLE REQUIRED IF MIN. 2' VERTICAL CLEARANCE CANNOT BE ACHIEVED AT PIPELINE CROSSING - SEE DETAIL F/SU2-02

UTILITY LEGEND

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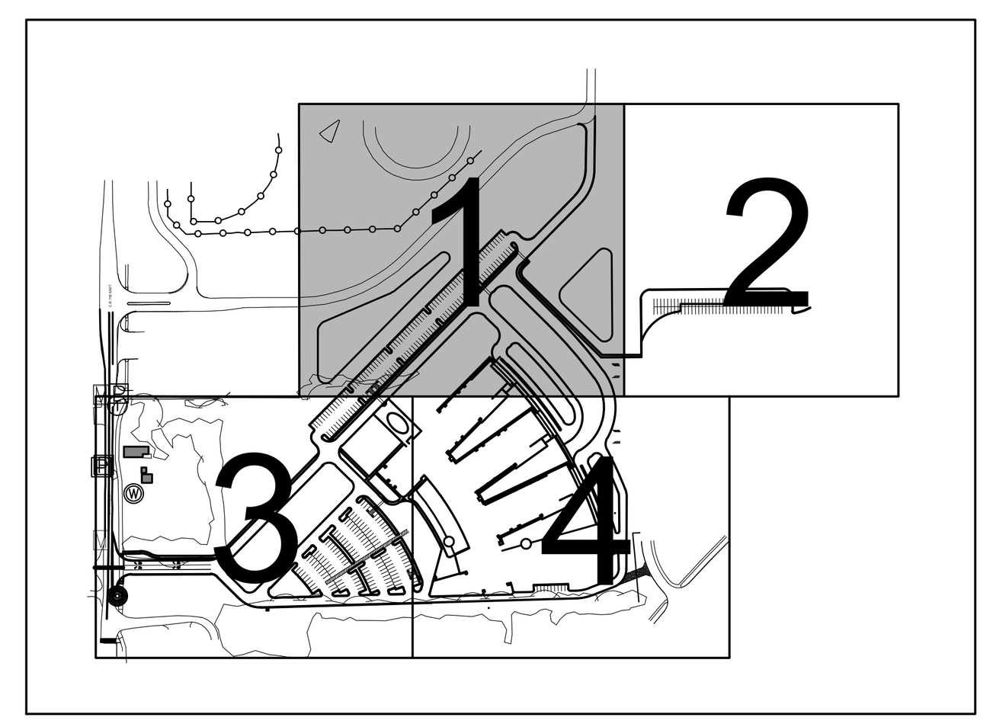

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ISSUED FOR BID

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DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
1	ADDENDUM 1	07.09.2025
2	ADDENDUM 2	07-16-2025

UTILITY PLAN - AREA 1

SU1-1

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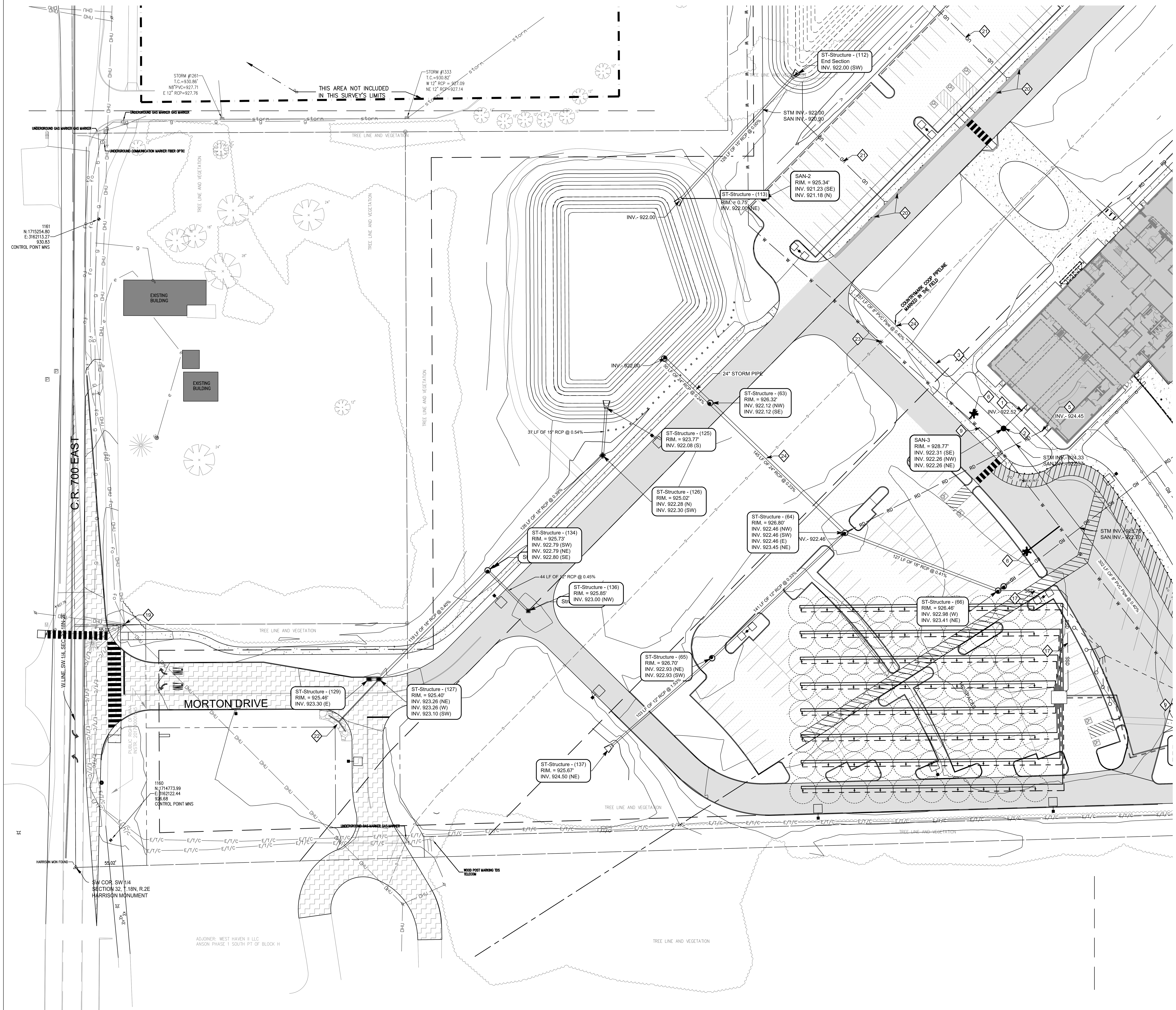
COMMUNITY SCHOOLS



NORTH

30 0 30 60 90

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UTILITY LEGEND

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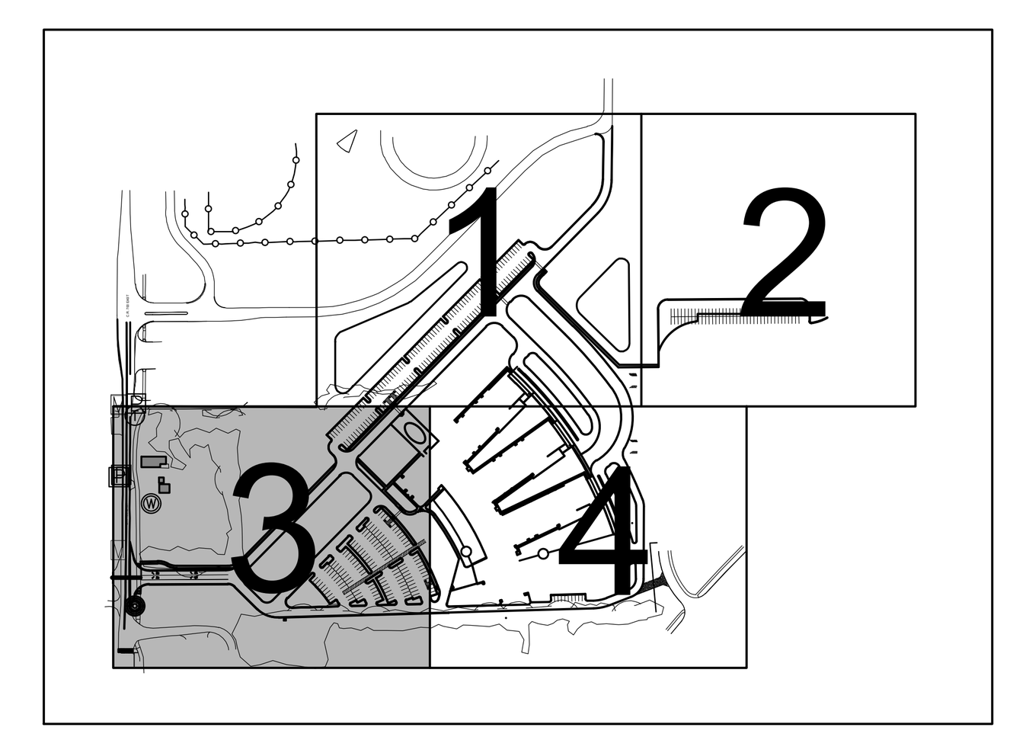

KEYPLAN

ARCHITECT

FANNING HOWEY

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Phone: 317-334-1500
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TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT REGISTERED No. PE10606090 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
1	ADDENDUM 1	07.09.2025
2	ADDENDUM 2	07-16-2025

UTILITY PLAN - AREA 3

SU1-3

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NORTH

30 0 30 60 90

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2

UTILITY LEGEND

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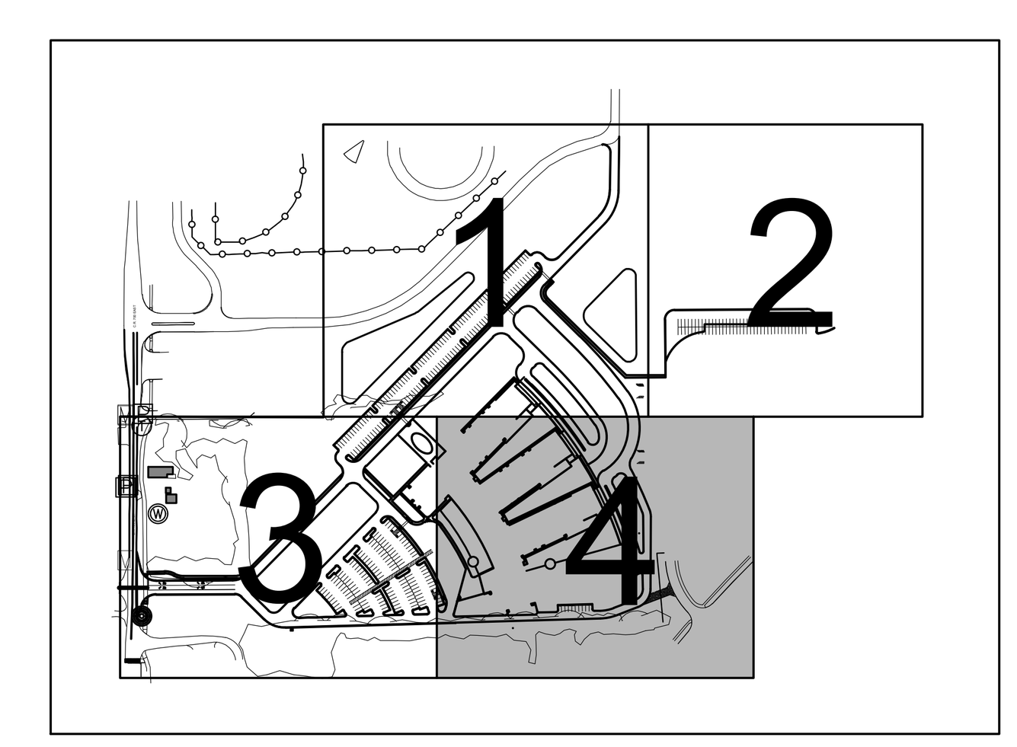

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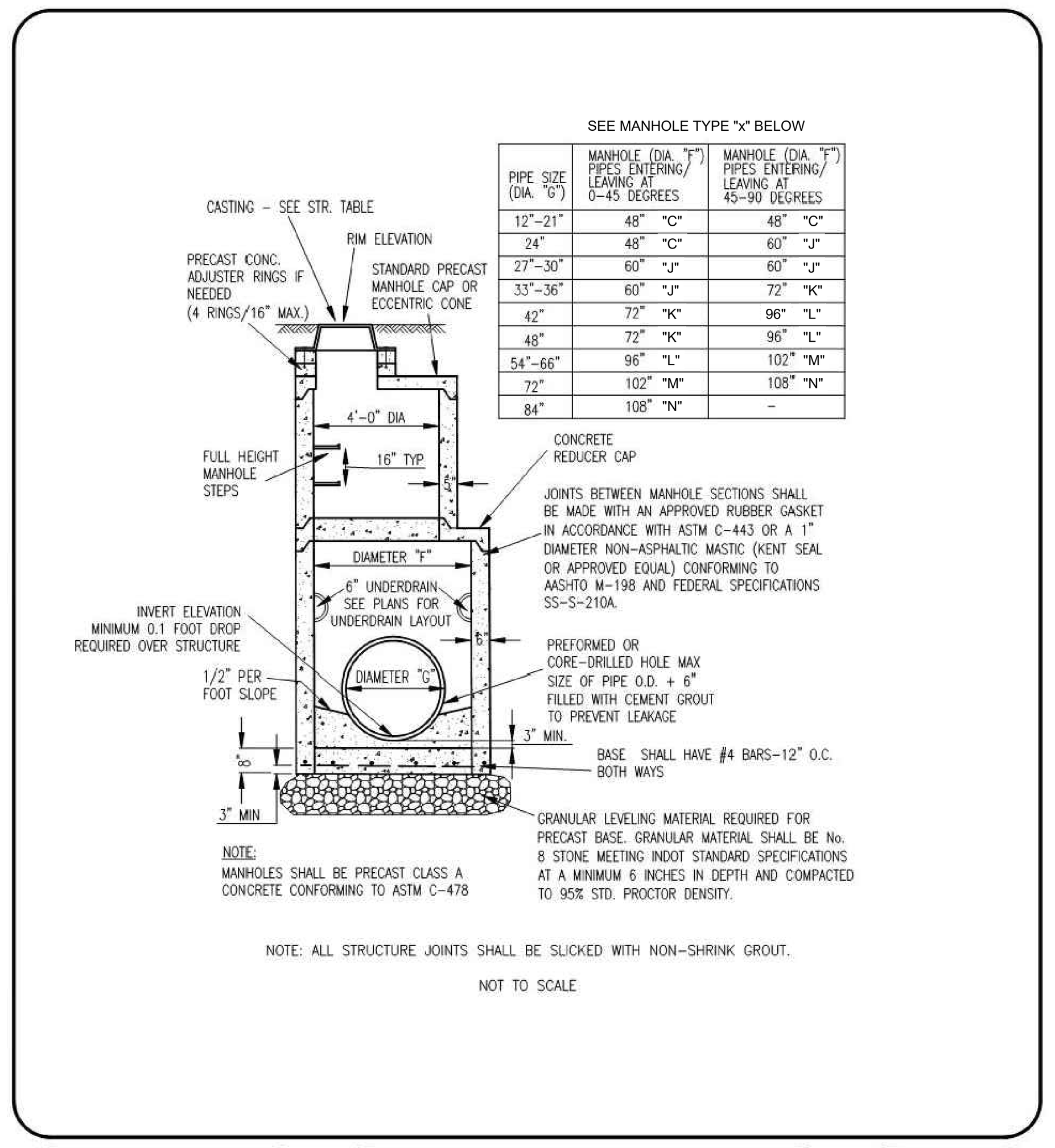
2	ADDENDUM 2	07-16-2025

UTILITY PLAN - AREA 4

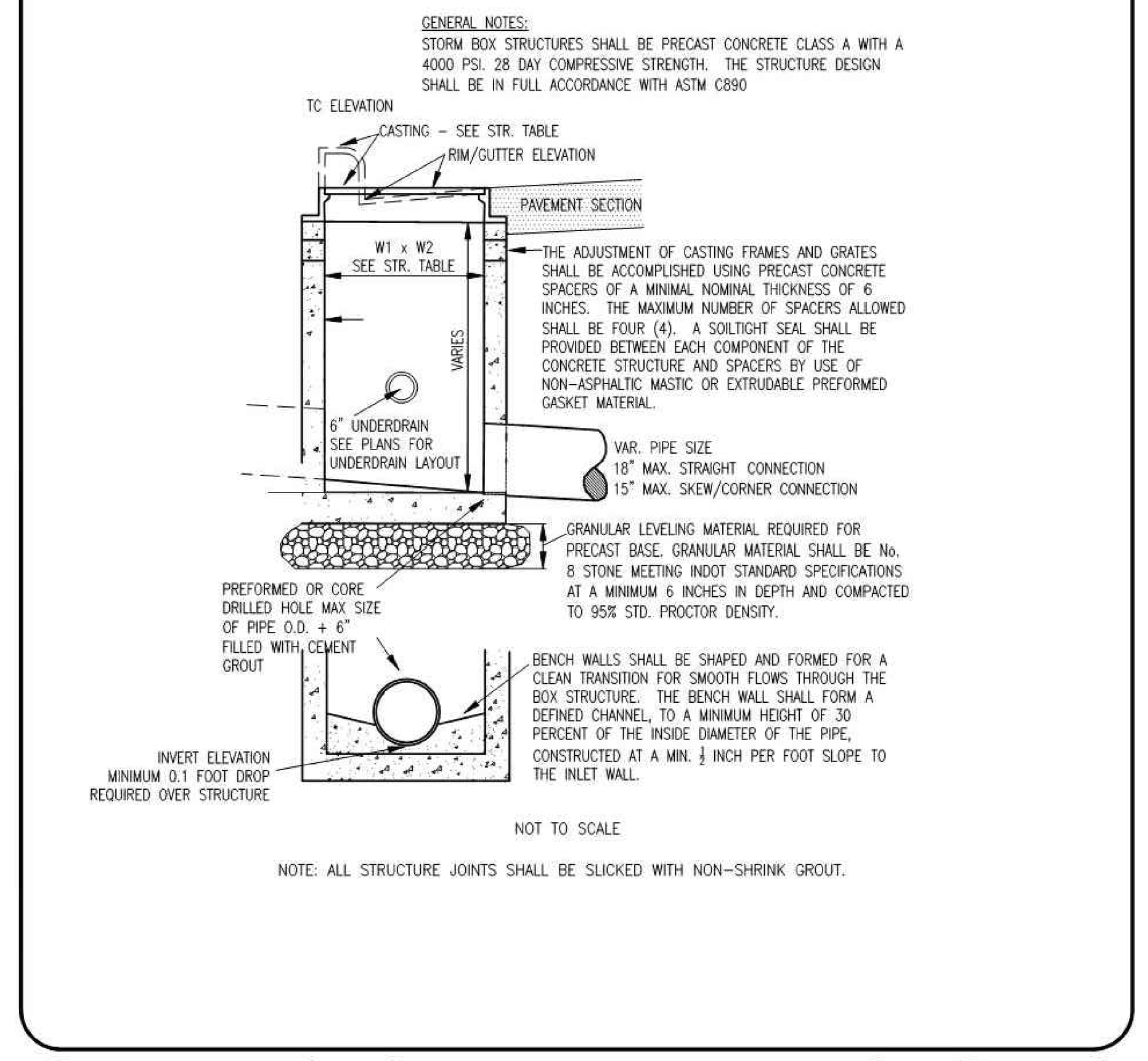
SU1-4

STRUCTURE SIZING CHART

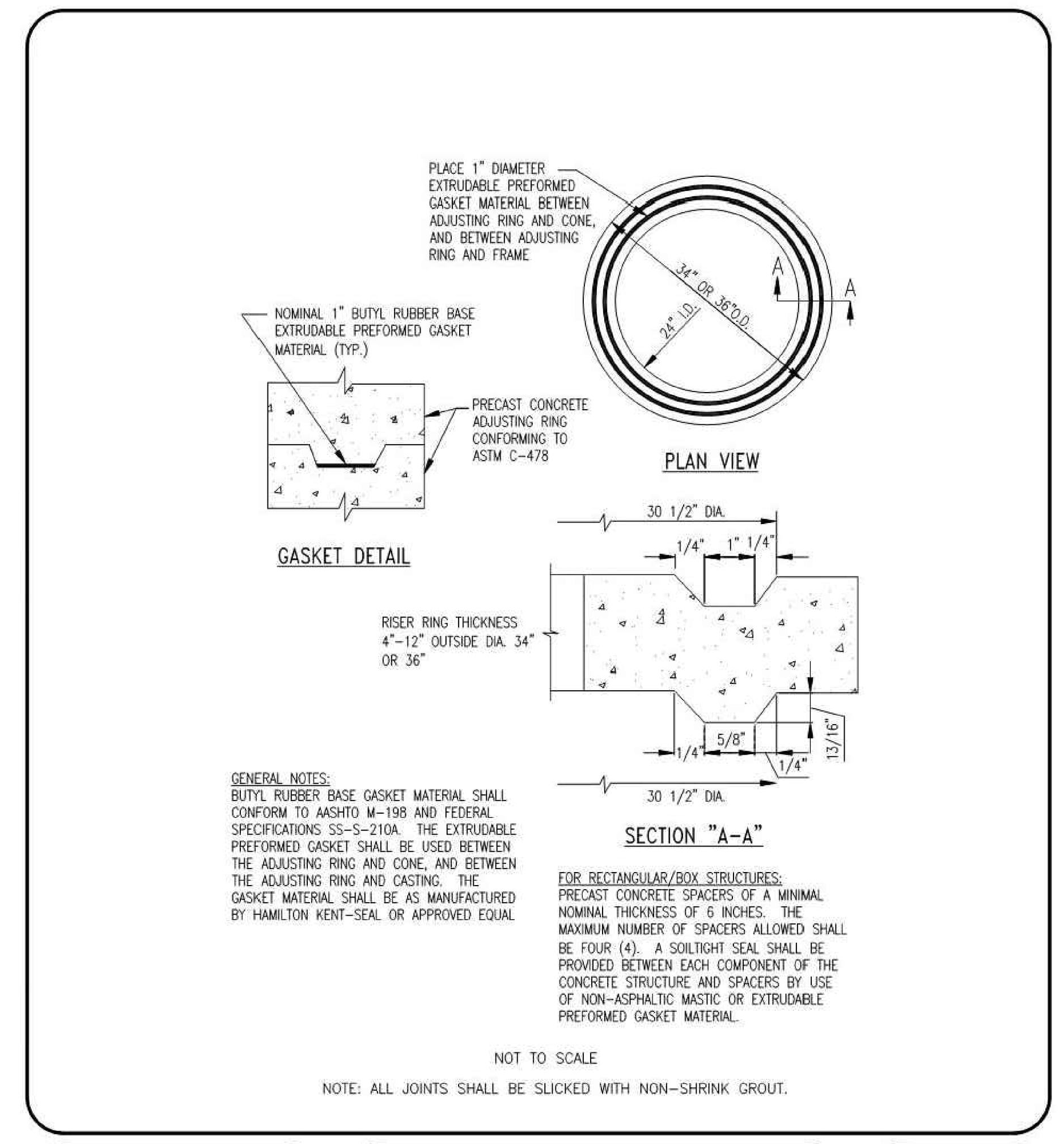
INSIDE DIMENSIONS	INLET TYPE	COMMENTS
24" X 24"	"A"	18" MAX. STRAIGHT CONNECT 15" MAX. SKEW/CORNER
24" X 36"	"M"	18" MAX. SHORT WALL STRAIGHT CONNECT 27" MAX. LONG WALL STRAIGHT CONNECT 15" MAX. SHORT WALL/SKEW, CORNER 18" MAX. LONG WALL/SKEW, CORNER
30" X 30"	"B"	24" MAX. STRAIGHT CONNECT 15" MAX. SKEW/CORNER



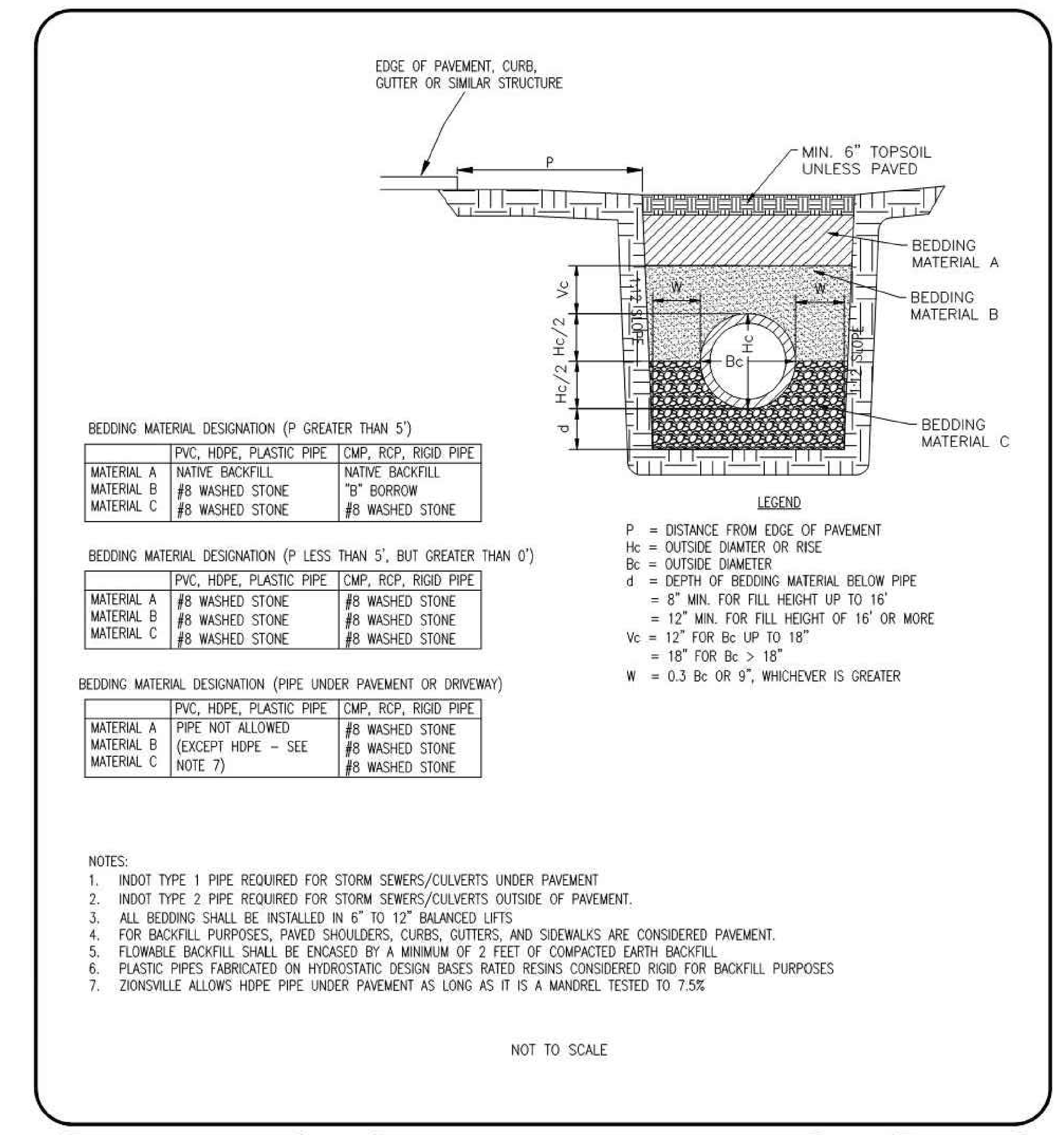
STANDARD PRECAST MANHOLE
TOWN OF ZIONSVILLE, INDIANA
STANDARD DETAIL
FIGURE NO. ST-1



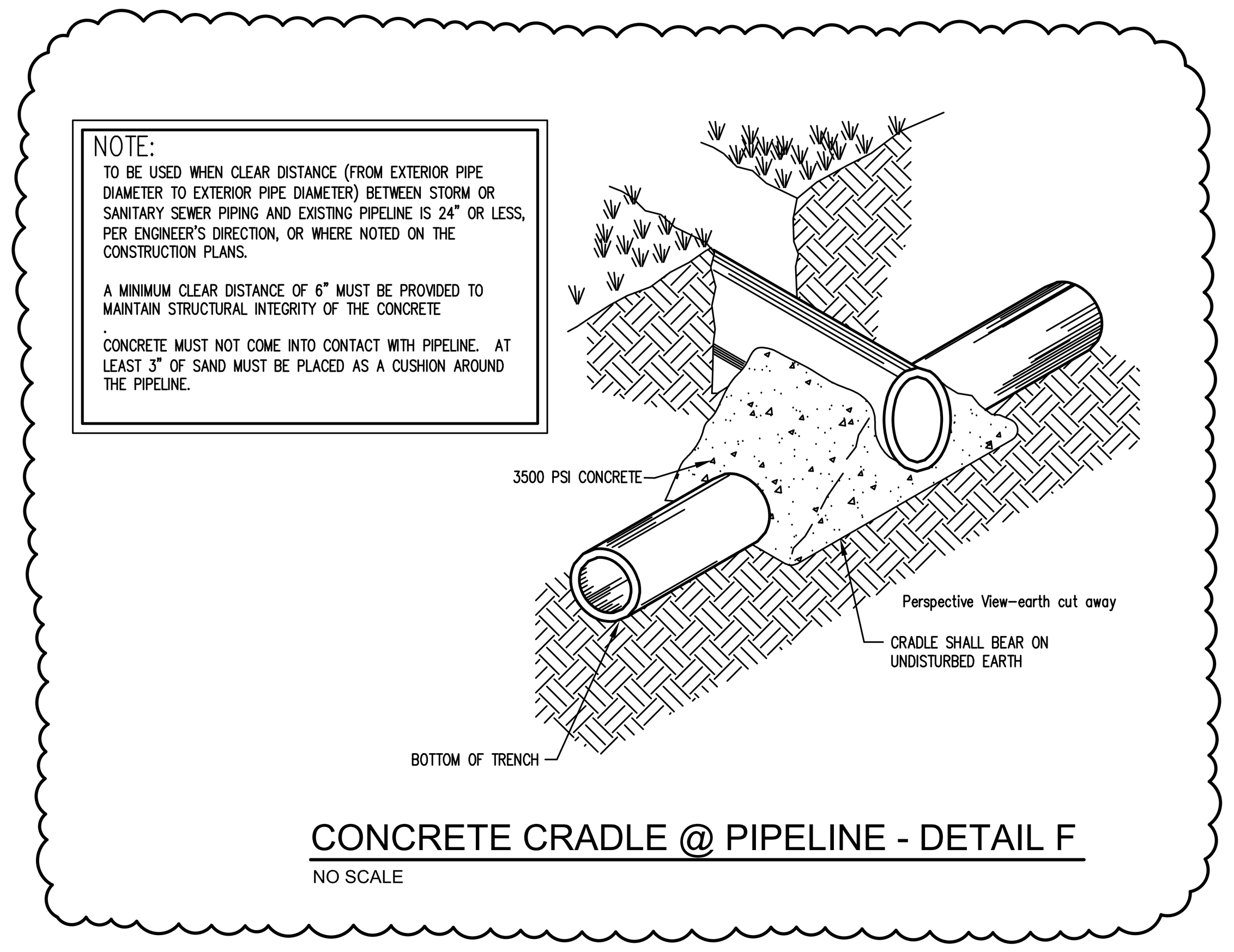
STORM BOX STRUCTURE
TOWN OF ZIONSVILLE, INDIANA
STANDARD DETAIL
FIGURE NO. ST-2



SPACER RINGS/RISER RINGS
TOWN OF ZIONSVILLE, INDIANA
STANDARD DETAIL
FIGURE NO. ST-3



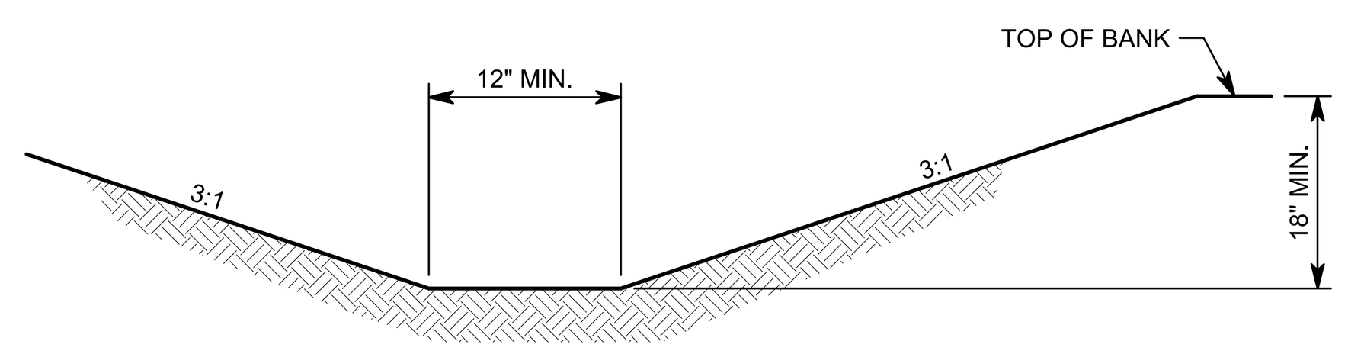
BEDDING AND BACKFILL SECTION
TOWN OF ZIONSVILLE, INDIANA
STANDARD DETAIL
FIGURE NO. ST-8



CONCRETE CRADLE @ PIPELINE - DETAIL F

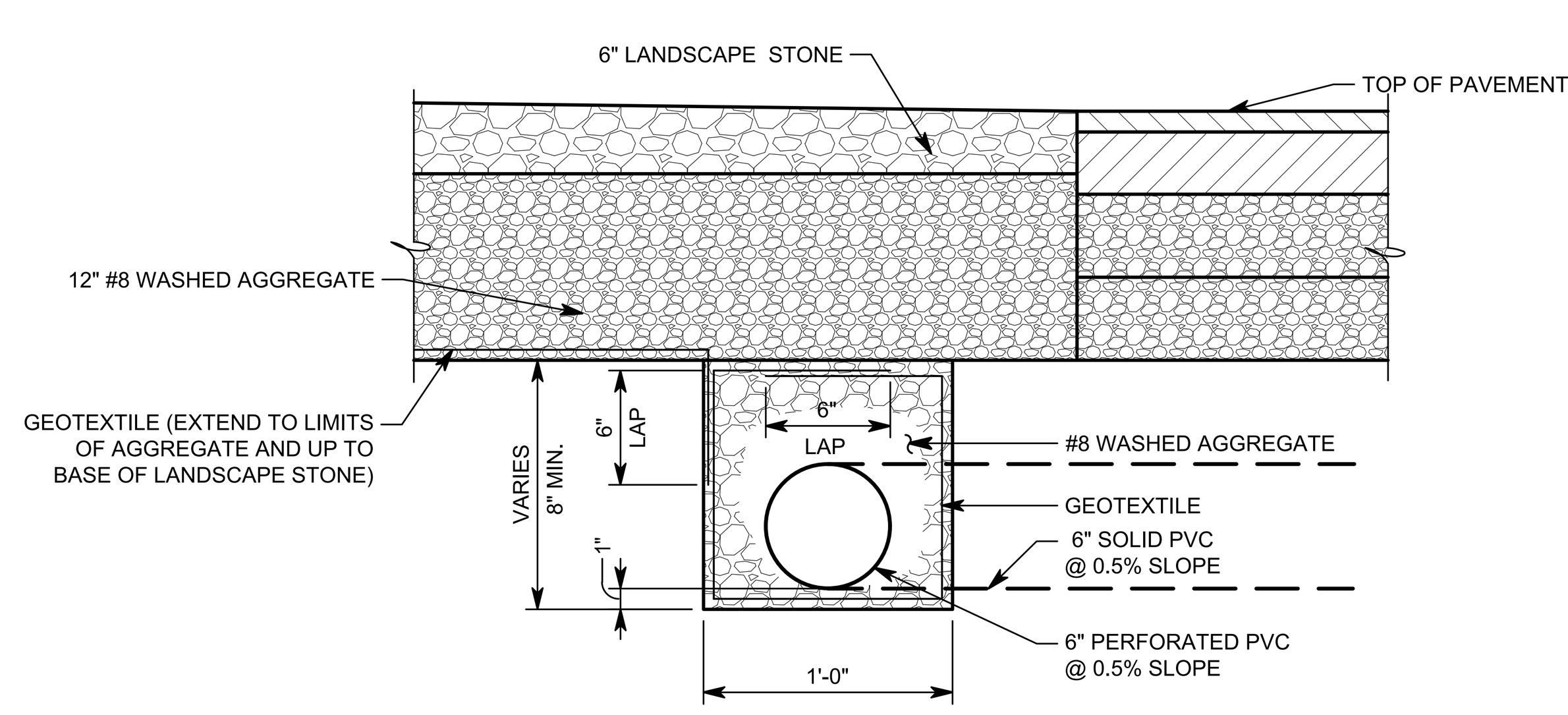
NO SCALE

2



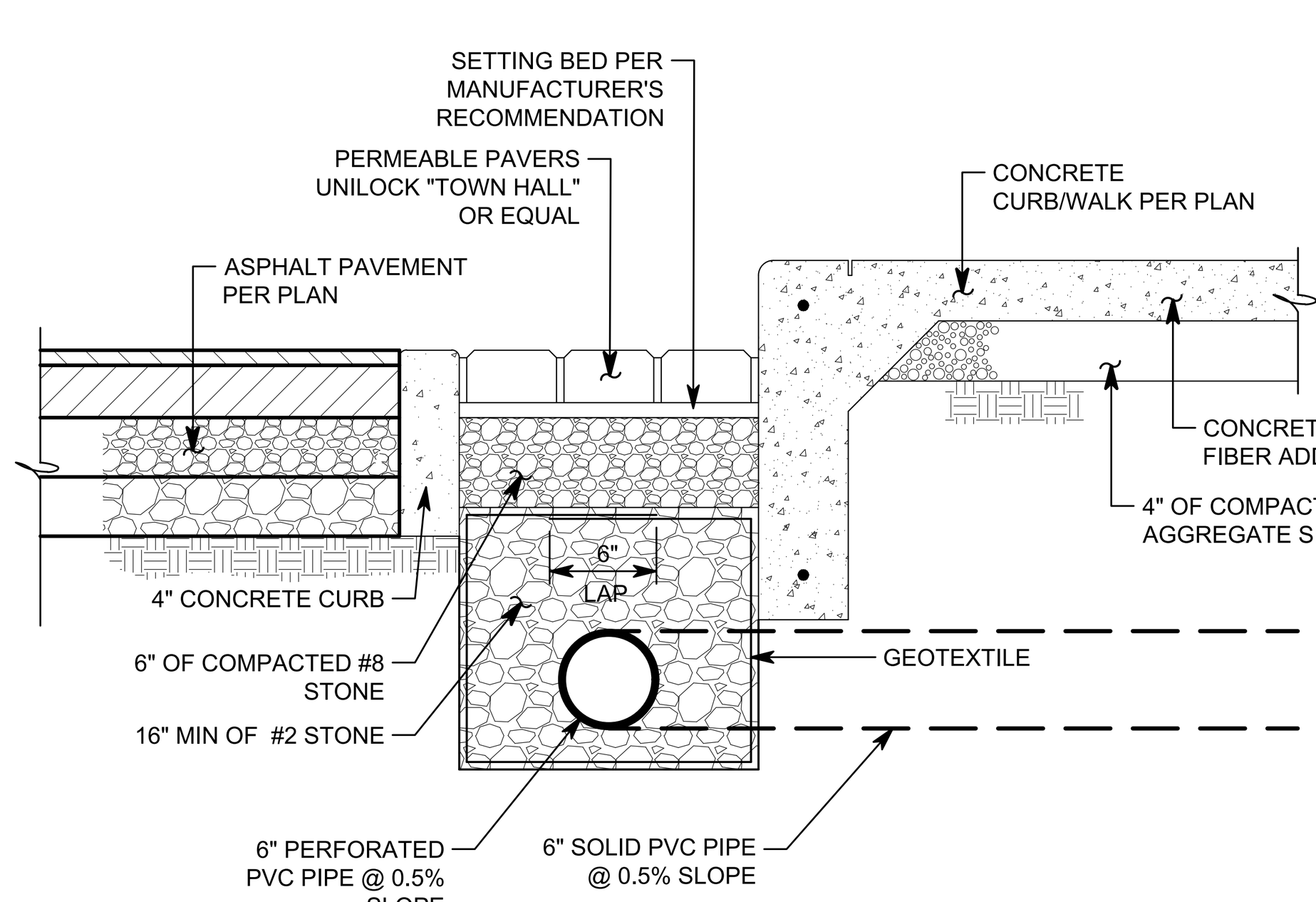
TYPICAL SWALE SECTION - DETAIL C

NOT TO SCALE



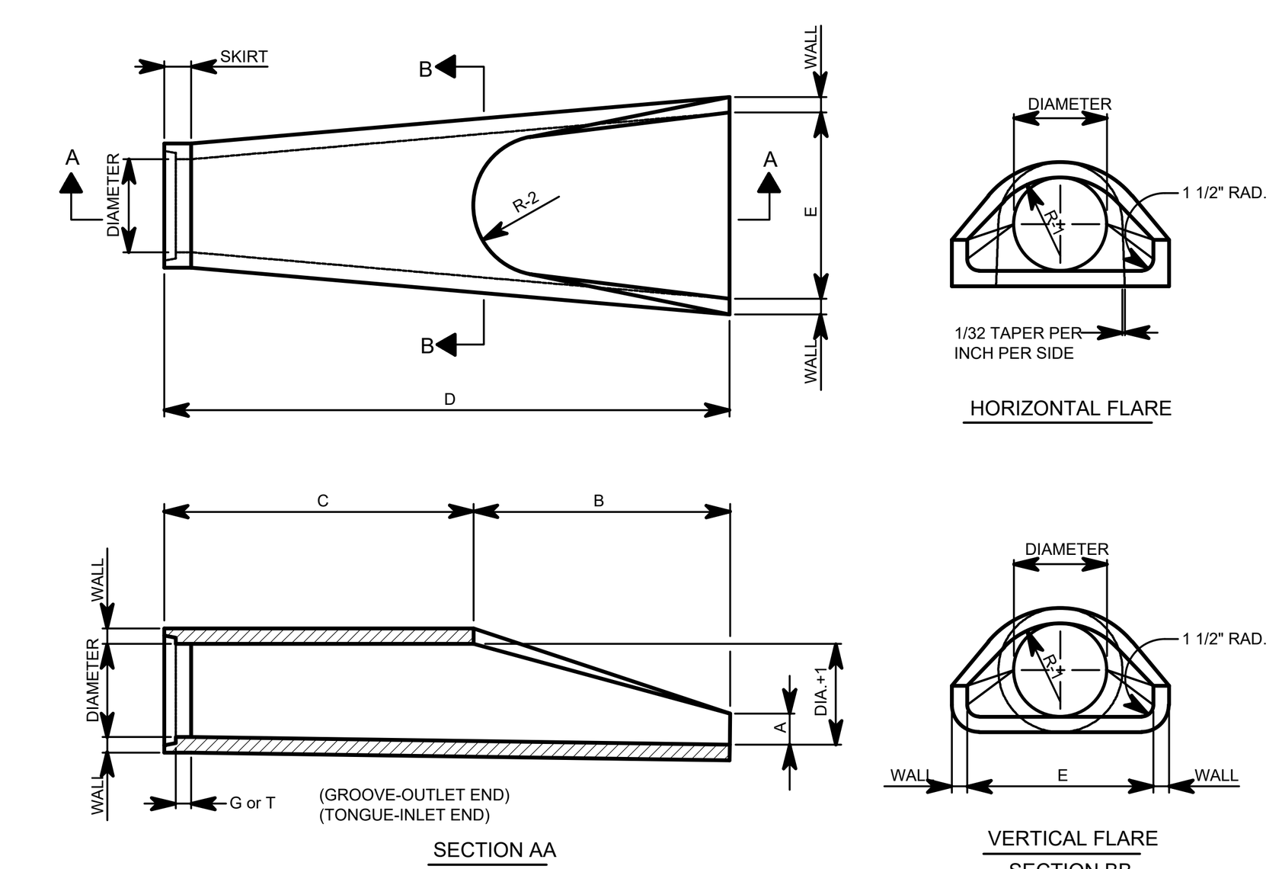
INFILTRATION BASIN w/UNDERDRAIN - DETAIL D

1 1/2" = 1'-0"



PERVIOUS PAVEMENT STRIP - DETAIL E

1" = 1'-0"

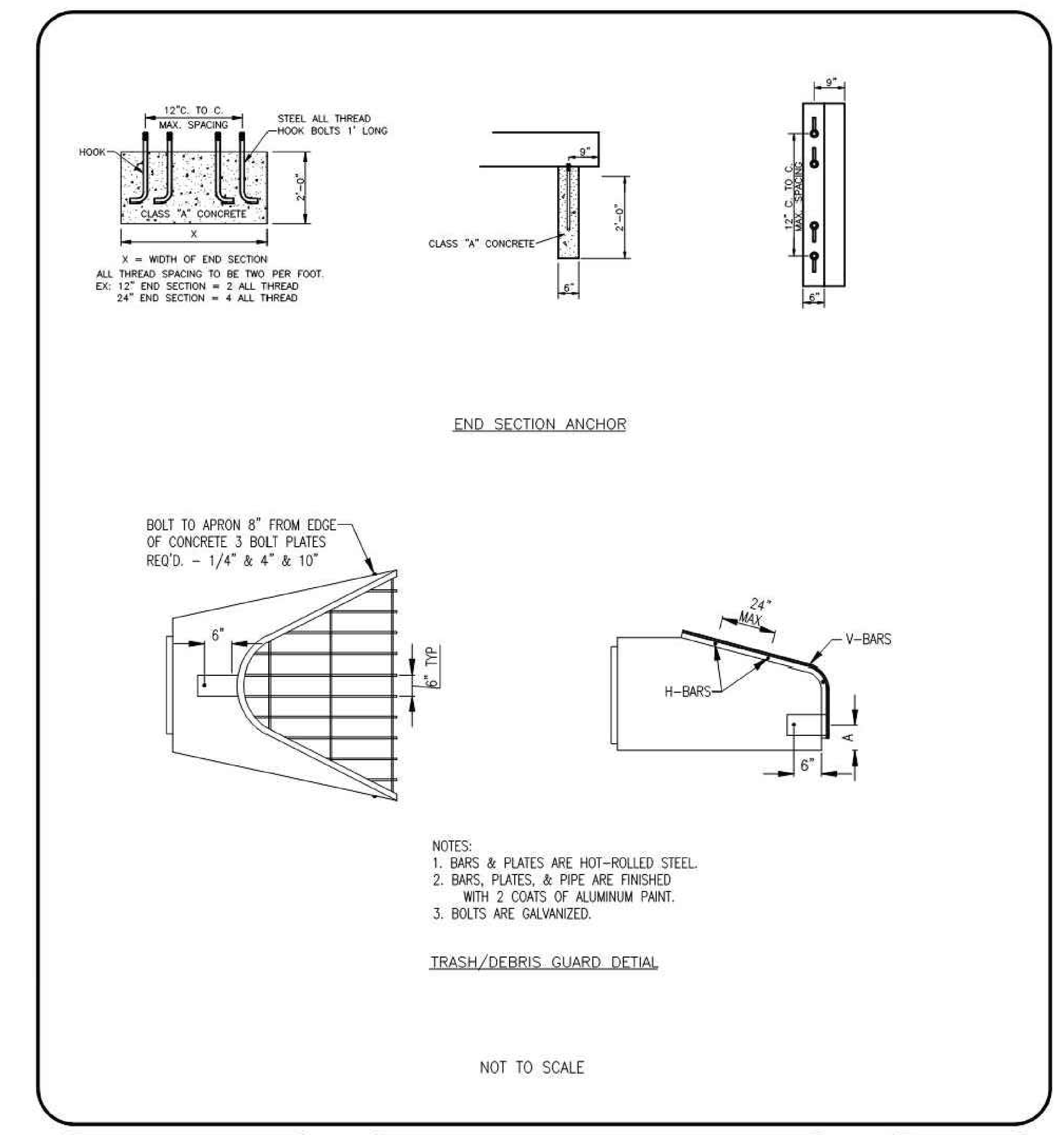


SIZE SCHEDULE												
DIA.	WALL	G or T	WT. SEC	A	B	C	D	E	DIA.+1	R-1	R-2	SKIRT
12	2	1 1/2	530	4	24	48 7/8	72 7/8	24	13	10 1/16	9	3 1/2
15	2 1/4	2	740	6	27	46	73	30	16	12 1/2	11	3 1/2
18	2 1/2	2 1/2	990	9	27	46	73	36	19	15 1/2	12	4
21	2 3/4	2 1/4	1280	9	35	38	73	42	22	16 1/8	13	4
24	3	2 1/2	1520	9 1/2	43 1/2	30	73 1/2	48	25	16 11/16	14	4 1/2
27	3 1/4	2 1/2	1930	10 1/2	48	25 1/2	73 1/2	54	28	17 3/4	14 1/2	4 1/2
30	3 1/2	3	2190	12	54	19 3/4	73 3/4	60	31	18 5/16	15	5
33	3 3/4	3 3/8	3150	13 1/2	58 1/2	39 1/4	97 3/4	66	34	23 3/4	17 1/2	5 1/2
36	4	3 1/2	4100	15	63	34 3/4	97 3/4	72	37	24 1/16	20	5 1/2
42	4 1/2	3 3/4	5380	21	63	35	98	78	43	27 1/4	22	5 1/2
48	5	4 1/4	6550	24	72	26	98	84	49	28 1/8	22	5 3/4
54	5 1/2	4 3/4	8040	27	65	35	100	90	55	32 7/8	24	6 1/4
60	6	5	8750	30	60	39	99	96	61	36 3/4	24	6 3/4
66	6 1/2	5 1/2	10630	24	78	21	99	102	67	35 11/16	24	7 1/4
72	7	6	12520	34	78	21	99	108	73	38 5/8	24	7 3/4
78	7 1/2	6 1/2	14430	24	78	21	99	114	79	41 15/16	24	8 1/2
84	8	7	16350	24	78	21	99	120	85	44 13/16	24	9

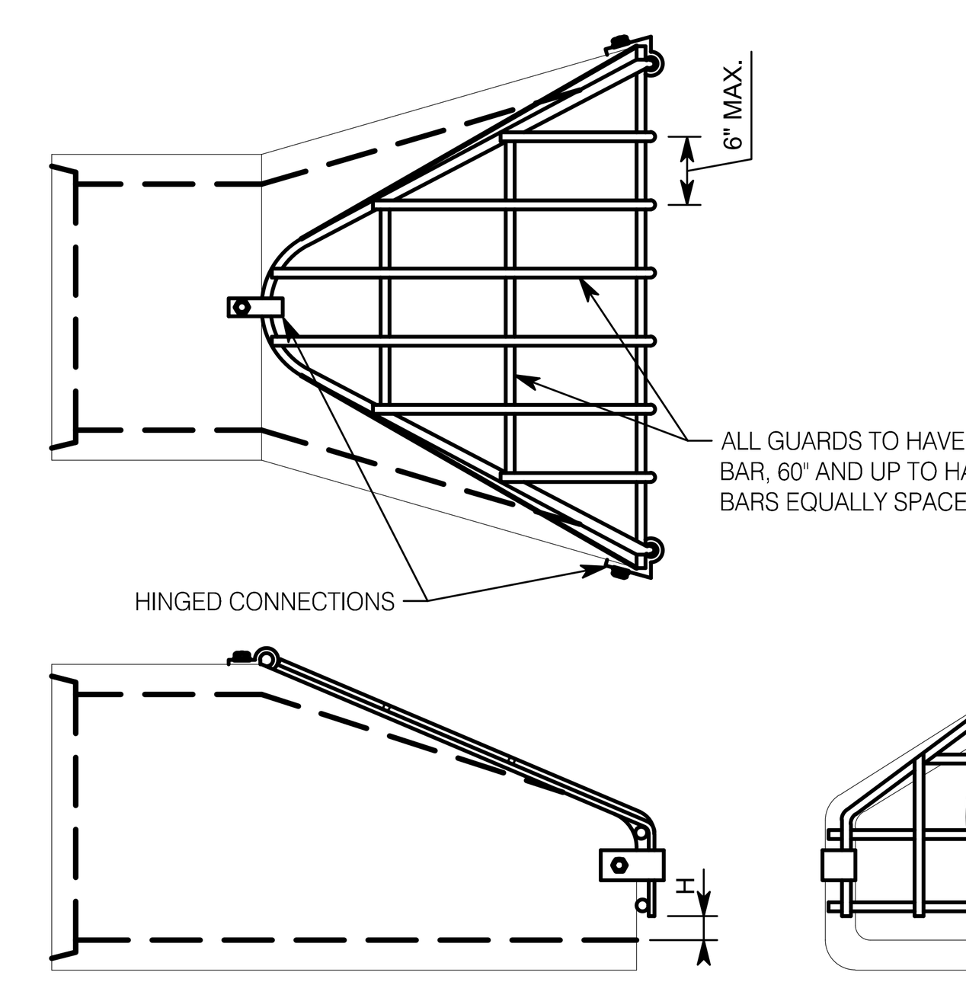
NOTE: MANUFACTURER OF END SECTION IS IN ACCORDANCE WITH APPLICABLE PORTIONS OF A.S.T.M. SPECIFICATION C76.

PRECAST FLARED END SECTION - DETAIL A

NO SCALE



PRE CAST CONCRETE END SECTION
TOWN OF ZIONSVILLE, INDIANA
STANDARD DETAIL
FIGURE NO. ST-9



ROUND	
PIPE SIZE	H
12"	2 1/2"
15"	3"
18"-24"	4"
27"-36"	5"
42"-54"	6"
60"-72"	7"
78"-90"	8"

Note:
Hot dip galvanized per ASTM A153.

BAR SIZES							
STANDARD DESIGN				HEAVY DESIGN			
PIPE SIZE	HOLE DIA. REQ'D	BOLT DIA.	BAR SIZE	PIPE SIZE	HOLE DIA. REQ'D	BOLT DIA.	BAR SIZE
12"-24"	3/4"	5/8"	5/8"	12"-18"	3/4"	5/8"	3/4"
27"-48"	7/8"	3/4"	3/4"	21"-42"	7/8"	3/4"	1"
54"-90"	1 1/8"	1"	1"	48"-90"	1 1/8"	1"	1 1/4"
BOLT LENGTH = PIPE WALL THICKNESS + 2 1/2"							

TRASH GUARD FOR FLARED END SECTIONS - DETAIL B

NOT TO SCALE

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Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT REGISTERED No. PE10606090 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
1	ADDENDUM 1	07.09.2025
2	ADDENDUM 2	07-16-2025

UTILITY DETAILS

SU2-02

STORM STRUCTURE TABLE

STR. NO.	STRUCTURE	CASTING TYPE	RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE	CONNECT TO STR.	REMARKS	NORTHING	EASTING
Structure - (62)	Type "C" Manhole	R-2564	922.00							-	1715146.86	3162550.73
Structure - (63)	Type "C" Manhole	R-2564	926.32	24" RCP 922.12 (SE) [Structure - (64)]	24" 24" RCP 922.12 (NW) []	50'	24"	0.24%		-	1715112.49	3162586.39
Structure - (64)	Type "C" Manhole	R-2564	926.80	12" RCP 922.46 (SW) [Structure - (65)] 18" RCP 922.46 (E) [Structure - (66)] 8" HDPE Pipe 923.45 (NE) []	24" 24" RCP 922.46 (NW) [Structure - (63)]	145'	24"	0.23%	Structure - (63)	-	1715011.93	3162690.75
Structure - (65)	Type "C" Manhole	R-2564	926.70	12" RCP 922.93 (SW) [Structure - (137)]	12" 12" RCP 922.93 (NE) [Structure - (64)]	141'	12"	0.33%	Structure - (64)	-	1714914.88	3162587.81
Structure - (66)	Type "C" Manhole	R-3405	926.46	12" RCP 923.41 (NE) [Structure - (133)]	18" 18" RCP 922.98 (W) [Structure - (64)]	127'	18"	0.41%	Structure - (64)	-	1714967.16	3162809.14
Structure - (103)	Type "C" Manhole	R-1772	926.53	18" RCP 923.97 (S) [Structure - (124)]	18" 18" RCP 923.97 (NW) [Structure - (104)]	174'	18"	0.45%	Structure - (104)	-	1715173.01	3163359.25
Structure - (104)	Type "C" Manhole	R-1772	926.48	18" RCP 923.19 (SE) [Structure - (103)]	18" 18" RCP 923.19 (NW) [Structure - (105)]	163'	18"	0.45%	Structure - (105)	-	1715332.04	3163288.69
Structure - (105)	Type "C" Manhole	R-1772	926.50	18" RCP 922.46 (SE) [Structure - (104)]	18" 18" RCP 922.46 (NE) [Structure - (106)]	46'	18"	0.45%	Structure - (106)	-	1715454.65	3163181.93
Structure - (106)	End Section	N/A	923.50	18" RCP 922.25 (SW) [Structure - (105)]							1715489.48	3163211.55
Structure - (107)	End Section	N/A	924.41		12" 12" RCP 923.18 (NE) [Structure - (108)]	58'	12"	1.17%	Structure - (108)		1715461.05	3163151.01
Structure - (108)	End Section	N/A	923.75	12" RCP 922.50 (SW) [Structure - (107)]							1715502.27	3163191.67
Structure - (109)	End Section	N/A	923.60		12" 12" RCP 922.35 (NE) [Structure - (110)]	90'	12"	0.39%	Structure - (110)		1715517.14	3163212.66
Structure - (110)	End Section	N/A	923.25	12" RCP 922.00 (SW) [Structure - (109)]							1715581.37	3163275.86
Structure - (112)	End Section	N/A	0.75		15" 15" RCP 922.00 (SW) [Structure - (113)]	128'	15"	0.00%	Structure - (113)		1715364.94	3162650.29
Structure - (113)	End Section	N/A	0.75	15" RCP 922.00 (NE) [Structure - (112)]							1715270.78	3162564.12
Structure - (115)	End Section	N/A	0.75		12" 12" RCP 922.00 (N) []	221'	12"	0.55%			1715813.03	3163057.75
Structure - (116)	End Section	N/A	0.75		12" 12" RCP 919.00 (NE) []	89'	12"	0.56%			1715720.38	3163399.88
Structure - (121)	Inlet Type "A"	R-4342	928.76		12" 12" RCP 926.72 (E) [Structure - (122)]	146'	12"	0.40%	Structure - (122)	-	1714816.93	3163110.21
Structure - (122)	Inlet Type "A"	R-4342	927.74	12" RCP 926.14 (W) [Structure - (121)]	12" 12" RCP 926.14 (E) [Structure - (123)]	186'	12"	0.45%	Structure - (123)	-	1714824.43	3163256.49
Structure - (123)	Type "C" Manhole	R-2502	927.30	12" RCP 925.30 (W) [Structure - (122)]	15" 15" RCP 925.30 (N) [Structure - (124)]	137'	15"	0.45%	Structure - (124)	-	1714888.09	3163431.49
Structure - (124)	Type "C" Manhole	R-2502	926.95	15" RCP 924.68 (S) [Structure - (123)]	18" 18" RCP 924.68 (N) [Structure - (103)]	159'	18"	0.45%	Structure - (103)	-	1715023.56	3163412.25
Structure - (125)	End Section	N/A	923.77	15" RCP 922.08 (S) [Structure - (126)]							1715108.72	3162505.82
Structure - (126)	Inlet Type "F"	R-4215-C	925.02	18" RCP 922.30 (SW) [Structure - (134)]	15" 15" RCP 922.28 (N) [Structure - (125)]	37'	15"	0.54%	Structure - (125)	-	1715071.89	3162503.01
Structure - (127)	Inlet Type "M"	R-3455-C	925.40	12" RCP 923.26 (W) [Structure - (129)] 6" HDPE Pipe 923.10 (SW) [Structure - (149)]	18" 18" RCP 923.26 (NE) [Structure - (134)]	119'	18"	0.40%	Structure - (134)	-	1714898.53	3162329.96
Structure - (129)	Inlet Type "M"	R-3455-C	925.46		12" 12" RCP 923.30 (E) [Structure - (127)]	8'	12"	0.52%	Structure - (127)	-	1714898.52	3162322.29
Structure - (133)	Type "C" Manhole	R-3405	926.56	12" RCP 923.42 (NE) []	12" 12" RCP 923.42 (SW) [Structure - (66)]	5'	12"	0.13%	Structure - (66)	-	1714970.48	3162813.47
Structure - (134)	Type "C" Manhole	R-1772	925.73	18" RCP 922.79 (SW) [Structure - (127)] 12" RCP 922.80 (SE) [Structure - (136)]	18" 18" RCP 922.79 (NE) [Structure - (126)]	126'	18"	0.39%	Structure - (126)	-	1714982.85	3162414.13
Structure - (136)	Inlet Type "A"	R-3472	925.85		12" 12" RCP 923.00 (NW) [Structure - (134)]	44'	12"	0.45%	Structure - (134)	-	1714951.52	3162445.52
Structure - (137)	End Section	N/A	925.67		12" 12" RCP 924.50 (NE) [Structure - (65)]	103'	12"	1.53%	Structure - (65)		1714847.33	3162510.24

SANITARY STRUCTURE TABLE

STR. NO.	STRUCTURE	CASTING TYPE	RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE	CONNECT TO STR.	REMARKS	NORTHING	EASTING
SAN-1	Reinforced Concrete	S-7/SU2-01	928.41	8" 8" PVC Pipe 919.75 (S) [SAN-2]						S-1/SU2-01	1715628.76	3162624.77
SAN-2	Reinforced Concrete	S-7/SU2-01	925.34	8" 8" PVC Pipe 921.23 (SE) [SAN-3]	8" 8" PVC Pipe 921.18 (N) [SAN-1]	358'	8"	0.40%	SAN-1	S-1/SU2-01	1715270.65	3162627.74
SAN-3	Reinforced Concrete	S-7/SU2-01	928.77	8" 8" PVC Pipe 922.31 (SE) [SAN-4] 6" 6" PVC Pipe 922.26 (NE) [SAN-CO1]	8" 8" PVC Pipe 922.26 (NW) [SAN-2]	257'	8"	0.40%	SAN-2	S-1/SU2-01	1715092.70	3162813.42
SAN-4	Reinforced Concrete	S-7/SU2-01	929.28	6" 6" PVC Pipe 923.52 (E) [SAN-CO2]	8" 8" PVC Pipe 923.52 (NW) [SAN-3]	302'	8"	0.40%	SAN-3	S-1/SU2-01	1714853.32	3162997.24
SAN-CO1		Standard	929.33	6" 6" PVC Pipe 922.26 (NE) [Structure - (99)]	6" 6" PVC Pipe 922.26 (SW) [SAN-3]	20'	6"	0.00%	SAN-3	Standard	1715106.72	3162827.29
SAN-CO2		Standard	929.47	6" 6" PVC Pipe 923.52 (E) [Structure - (93)]	6" 6" PVC Pipe 923.52 (W) [SAN-4]	26'	6"	0.00%	SAN-4	Standard	1714860.32	3163022.25

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Phone: 317-334-1500
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TLF Job No: 2024-206

ISSUED FOR BID

KRISTOPHER S. GRANT REGISTERED No. PE10606090 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DBS
PROJECT NUMBER: 224033.00 (TLF JOB #2024-206)
PROJECT ISSUE DATE: 06.24.2025

REV. NO.△	DESCRIPTION	DATE
2	ADDENDUM 2	07.16.2025

UTILITY DETAILS

SU2-03

GENERAL NOTES

DESIGN DATA:

1. CODES AND STANDARDS: (ALL WORK SHALL CONFORM WITH THE FOLLOWING BUILDING CODES AND STANDARDS)
    - A.) GENERAL DESIGN: INTERNATIONAL BUILDING CODE, 2012 EDITION (IBC), IN ACCORDANCE WITH INDIANA 2014 BUILDING CODE WITH AMENDMENTS.
    - B.) DESIGN LOADS: ASCE'S " MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ASCE/SEI 7-10).
    - C.) REINFORCED CONCRETE DESIGN: ACI'S "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-11).
    - D.) STRUCTURAL MASONRY: THE MASONRY SOCIETY'S "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (TMS 402-11/ACI 530-11/ASCE 5-11) AND THE MASONRY SOCIETY'S SPECIFICATION FOR MASONRY STRUCTURES" (TMS 602-11/ACI 530.1-1 ASCE 6-11).
    - E.) STRUCTURAL STEEL DESIGN: AISC'S "STEEL CONSTRUCTION MANUAL, 14TH EDITION."
    - F.) STEEL DECK: STEEL DECK INSTITUTE STANDARDS C-2011 "STANDARD FOR COMPOSITE STEEL FLOOR DECK-SLABS", NC-2010 "STANDARD FOR NON-COMPOSITE STEEL FLOOR DECK", RD-2010 "STANDARD FOR STEEL ROOF DECK", AND QA/QC-2011 "STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK".
    - G.) STEEL JOISTS: SJI'S "STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS" (43RD EDITION).
    - H.) STRUCTURAL PRECAST FRAMING: PCI'S "PCI DESIGN HANDBOOK - PRECAST AND PRE-STRESSED CONCRETE" (PCI MNL 120).
    - I.) COLD FORMED METAL FRAMING: AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" (AISI S100-12).
    - J.) NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2012 SUPPLEMENT (NDS-2012).
    - K.) STANDARD FOR WOOD PRODUCTS - STRUCTURAL GLUED LAMINATED TIMBER (ANSI/AITC A190.1-07).

2. SOIL INFORMATION:

ALLOWABLE NET BEARING PRESSURE, COLUMN FOOTING — 2500 PSF
ALLOWABLE NET BEARING PRESSURE, WALL FOOTING — 2000 PSF
SUB-GRADE REACTION [K30]
FOUNDATION FROST DEPTH — 30 IN

SOILS REPORT PREPARED BY ALT & WITZIG ENGINEERING, INC., DATED 11-27-24.

3. RISK CATEGORY (IBC TABLE 1604.5) — CATEGORY III

4. LIVE LOADS: (IBC TABLE 1607.1)

ASSEMBLY AREA — 100 PSF
CLASSROOMS (CODE MINIMUM = 40 PSF) — 50 PSF (FOR FUTURE FLEXIBILITY)
CORRIDORS (FIRST FLOOR) — 100 PSF
CORRIDORS (ABOVE FIRST FLOOR) — 80 PSF
MULTIPURPOSE ROOM — 100 PSF
MECHANICAL ROOMS — 125 PSF
ELEVATED PLATFORM — 60 PSF + EQUIPMENT
OFFICES — 50 PSF + PARTITIONS
PARTITIONS (WHERE APPLICABLE) — 15 PSF
PUBLIC AREAS / LOBBY — 100 PSF
ROOF — 20 PSF + SNOW DRIFT CONSIDERATIONS
STAIRS — 100 PSF
STORAGE — 125 PSF

5. WIND LOADS: (IBC SECTION 1609 AND ASCE 7)

BASIC WIND SPEED / ULTIMATE DESIGN WIND SPEED — 115 MPH
EXPOSURE — B
INTERNAL PRESSURE COEFFICIENT, GCPI — +/- 0.18

COMPONENTS AND CLADDING WIND PRESSURE (PSF)

		ROOF (NO OVERHANGS)						WALL			
		ZONE 1		ZONE 2		ZONE 3		ZONE 4		ZONE 5	
		+	-	+	-	+	-	+	-	+	-
EFFECTIVE WIND AREA (SQ. FT.)	≤10	15	36	15	61	15	91	33	36	33	44
	20	14	35	14	54	14	75	32	35	32	41
	50	13	34	13	46	13	55	30	33	33	37
	≥100	12	33	12	39	12	39	28	31	28	35

2

6. SEISMIC LOADS: FOR PRIMARY SYSTEMS (IBC SECTION 1613 AND ASCE 7)

IMPORTANCE FACTOR (DETERMINED FROM RISK CATEGORY) — 1.25
SITE CLASS (USE CLASS 'D' UNLESS SOIL REPORT PROVIDES) — D
DESIGN SPECTRAL RESPONSE ACCELERATIONS
  SHORT PERIOD, S_{DS} — 0.165
  1-SECOND PERIOD, S_{D1} — 0.133
SEISMIC DESIGN CATEGORY — B
DESIGN SPECTRAL RESPONSE COEFFICIENTS, S_S — 0.155
DESIGN SPECTRAL RESPONSE COEFFICIENTS, S_1 — 0.083
RESPONSE MODIFICATION FACTOR, R — 3
BASIC STRUCTRAL SYSTEM AND SEISMIC RESISTING SYSTEM
  H.1. STEEL SYSTEMS NOT SPECFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN SPECTRAL RESPONSE COEFFICIENTS, C_S — 0.07
DESIGN BASE SHEAR, V — 0.07 W
ANALYSIS PROCEDURE UTILIZED — EQUIVALENT LATERAL FORCE PROCEDURE

7. SUPERIMPOSED DEAD LOADS:

	GENERAL	CORRIDOR	MECHANICAL
ROOF LOADS (LOW SLOPED):	GENERAL	CORRIDOR	MECHANICAL
TOTAL DEAD LOAD ON DECK	25 PSF	25 PSF	25 PSF
TOTAL DEAD LOAD ON FRAMING	35 PSF	65 PSF	65 PSF
ROOF LOADS (SLOPED; NO SOLAR):	GENERAL	CORRIDOR	MECHANICAL
TOTAL DEAD LOAD ON DECK	20 PSF	20 PSF	20 PSF
TOTAL DEAD LOAD ON FRAMING	35 PSF	60 PSF	60 PSF
ROOF LOADS (SLOPED; W/ SOLAR):	GENERAL	CORRIDOR	MECHANICAL
TOTAL DEAD LOAD ON DECK	25 PSF	25 PSF	25 PSF
TOTAL DEAD LOAD ON FRAMING	40 PSF	65 PSF	65 PSF
FLOOR LOADS:	GENERAL	CORRIDOR	MECHANICAL
TOTAL DEAD LOAD ON DECK	45 PSF	45 PSF	40 PSF
TOTAL DEAD LOAD ON FRAMING	55 PSF	85 PSF	130 PSF

8. SNOW DESIGN CRITERIA (IBC SECTION 1608 AND ASCE 7)

GROUND SNOW LOAD, PG — 20 PSF
IMPORTANCE FACTOR, I — 1.10
THERMAL FACTOR — 1.00
THERMAL FACTOR AT CANOPIES — 1.20
EXPOSURE FACTOR — 1.00
FLAT ROOF SNOW LOAD, PF — 20 PSF
DRIFTING SNOW — PER IBC AND ASCE 7

9. DEFLECTION CRITERIA (IBC TABLE 1604.3)

FLOOR LIVE LOAD — L / 360
FLOOR DEAD AND LIVE LOAD — L / 240
ROOF SNOW LOAD WITH CEILINGS — L / 360
ROOF SNOW LOAD WITHOUT CEILINGS — L / 240
ROOF DEAD AND LIVE LOAD WITH CEILINGS — L / 240
ROOF DEAD AND LIVE LOAD WITHOUT CEILINGS — L / 180
EXTERIOR AND INTERIOR WALLS (BRITTLE FINISHES) — L / 240
EXTERIOR AND INTERIOR WALLS (FLEXIBLE FINISHES) — L / 120
EXTERIOR WALLS FOR BRICK BACKUP (ACI 530 COMMENTARY 6.1.2) — L / 600
VERTICAL MASONRY SUPPORT (PER ACI 530 SECTION 1.10.1) — L / 600

MATERIALS:

1. CONCRETE:

PORTLAND CEMENT (GRAY) — ASTM C150 TYPE I OR III
WATER — CLEAN AND POTABLE
COARSE AGGREGATE — CRUSHED STONE, OR GRAVEL INDOT SIZE #8, ASTM C33
FINE AGGREGATE — SAND, INDOT SIZE #23, ASTM C33
AIR ENTRAINING ADMIXTURE — ASTM C260
HIGH RANGE WATER REDUCING ADMIXTURE — ASTM C494, TYPE F OR G

2. REINFORCING STEEL:

STIRRUPS, TIES, AND MAIN REINFORCING BARS — ASTM A615, GRADE 60, Fy = 60 KSI
WELDED WIRE FABRIC — ASTM A1064

3. STRUCTURAL STEEL:

WIDE FLANGE MEMBERS AND "WT" SHAPES — ASTM A992, Fy = 50 KSI
ANGLES, CHANNELS, AND PLATES — ASTM A36, Fy = 36 KSI
"M" AND "S" SHAPES — ASTM A36, Fy = 36 KSI
RECTANGULAR (HSS) — ASTM A500, GRADE B, Fy = 46 KSI
ROUND (HSS) — ASTM A500, GRADE B, Fy = 42 KSI
STRUCTURAL PIPE MEMBERS — ASTM A53, GRADE B, Fy = 35 KSI
BASE PLATES — ASTM A36, Fy = 36 KSI
ALL OTHER MEMBERS — ASTM A36, Fy = 36 KSI
HEADED STUD CONNECTIONS — ASTM A108, 3/4" DIA. x 4 1/2" LONG (U.O.N.)
CONNECTION BOLTS — 3/4" DIA. ASTM F3125-A325 TYPE 1 OR 3/4" DIA. F1852 TYPE 1 HEAVY HEX TWIST OFF TENSION CONTROL BOLTS WITH STANDARD 13/16" DIA. HOLES (U.O.N.)
ANCHOR RODS — ASTM F1554, GRADE 36, OR ASTM A36
NUTS — ASTM A563 HEAVY HEX NUTS
WASHERS — ASTM F436 TYPE 1 HARDENED CARBON STEEL WASHERS OR ASTM F959 TYPE 1 DIRECT TENSION INDICATOR WASHERS
WELDING ELECTRODES FOR CARBON STEEL — AWS E70XX
GROUT UNDER BASE PLATES — HIGH-STRENGTH, NON-METALLIC, NON-SHRINK

4. STEEL DECK:

ALL DECK — ASTM A653, STRUCTURAL QUALITY, Fy (MIN.) = 33 KSI
WELDING ELECTRODES — AWS E6022

5. MASONRY:
    - A.) HOLLOW LOAD BEARING BLOCK TO BE ASTM C90, NOMINAL FACE DIMENSIONS 8" x 16". PROVIDE NORMAL WEIGHT UNITS BELOW GRADE AND LIGHTWEIGHT UNITS ABOVE GRADE, UNLESS OTHERWISE NOTED. PROVIDE CONCRETE MASONRY UNITS WITH A NET AREA COMPRESSIVE STRENGTH OF NOT LESS THAN 2800 PSI. (Fm = 2000 PSI FOR TYPE 'S' MORTAR).
    - B.) MORTAR SHALL BE TYPE `S' MORTAR CONFORMING WITH ASTM C270. MORTAR PROPORTIONS SHALL CONFORM WITH MORTAR PROPORTION REQUIREMENTS OF ASTM C270.
    - C.) HORIZONTAL JOINT REINFORCEMENT SHALL BE PLACED EVERY OTHER COURSE. USE STANDARD LADDER TYPE REINFORCEMENT (#9 SIDE RODS AND #9 CROSS RODS) UNLESS OTHERWISE NOTED.
    - D.) UNLESS OTHERWISE NOTED, MASONRY CORES (WHERE SPECIFIED ON DRAWINGS) AND BOND BEAMS SHALL BE FILLED WITH CONCRETE GROUT MEETING THE FOLLOWING REQUIREMENTS: (ASTM C476) MINIMUM 2500 PSI 28-DAY COMPRESSIVE STRENGTH.

6. POST INSTALLED ANCHORS:
    - A.) ALTERNATE ANCHORS SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
    - B.) ADHESIVE:
        - 1.) HILTI HIT-HY 200 FOR CONCRETE
        - 2.) HILTI HIT-HY 270 FOR MASONRY
    - C.) THREADED RODS:
        - 1.) HILTI HAS-E
        - 2.) HILTI HIT-Z
        - 3.) ASTM A193, GRADE B7
        - 4.) ASTM F1554, GRADE 55
    - D.) MECHANICAL ANCHORS:
        - 1.) HILTI KWIK BOLT-TZ
        - 2.) HILTI KWIK BOLT HUS-EZ
        - 3.) HILTI HDA UNDERCUT ANCHOR

SPECIAL NOTES:

1. WHERE DISCREPANCY MAY OCCUR BETWEEN THE DRAWINGS AND A GENERAL NOTE OR TYPICAL DETAIL THE DRAWINGS SHALL PREVAIL.
2. THE CONTRACTOR SHALL VERIFY RESPONSIBILITY FOR CONTRACTING TESTING AND INSPECTION SERVICES AS DEFINED IN THESE NOTES.
3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO, THE ADDITION OF SHEETING, SHORING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING NECESSARY TO PROTECT EXISTING AND ADJACENT STRUCTURES.
4. STRUCTURAL DOCUMENTS SHALL BE USED WITH OTHER CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, M.E.P., AND SITE DOCUMENTS. COORDINATE WITH THESE DOCUMENTS, ALL FLOOR AND ROOF OPENINGS, DEPRESSIONS, AND SLOPES, ETC. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING CONSTRUCTION LOADS SUCH THAT THESE LOADS DO NOT EXCEED THE DESIGN LIVE LOADS NOTED ABOVE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AS REQUIRED DURING CONSTRUCTION TO SUPPORT CONSTRUCTION LOADS UNTIL SUCH TIME THAT THE STRUCTURE IS ABLE TO SUPPORT THE DESIGN LIVE LOADS NOTED.

EXISTING CONDITIONS:

1. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS BEFORE PROCEEDING WITH NEW CONSTRUCTION. NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. PREVENT UNDERMINING OF EXISTING ROADWAYS AND THE FOUNDATIONS OF EXISTING STRUCTURES. TAKE PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE EXISTING FACILITIES. DO NOT EXCAVATE BELOW THE BOTTOM OF EXISTING FOUNDATION WITHOUT FIRST UNDERPINNING THEM.
3. UNDERPIN WHERE NECESSARY IN ALTERNATING INCREMENTS SMALL ENOUGH TO ALLOW THE EXISTING FOUNDATIONS OR ROADWAYS TO BRIDGE THE GAPS CREATED BY THE REQUIRED EXCAVATION.
4. SUBMIT TO THE ARCHITECT / ENGINEER THE UNDERPINNING DESIGN, PREPARED BY A REGISTERED PROFESSIONAL ENGINEER FOR REVIEW PRIOR TO STARTING WORK. INCLUDE AND OUTLINE PROCEDURE AND PERTINENT DETAILS FOR THE UNDERPINNING OPERATION.

COORDINATE WITH OTHER TRADES:

1. THE GENERAL CONTRACTOR SHALL COORDINATE AND CHECK ALL DIMENSIONS RELATING TO ARCHITECTURAL FINISHES, MECHANICAL OPENINGS, EQUIPMENT, ETC. THE ARCHITECT / ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. PROVIDE SUPPORT FRAMING FOR ALL MECHANICAL UNITS HANGING FROM THE STEEL FRAMING (INCLUDING ANY NOT SHOWN ON THE STRUCTURAL DRAWINGS) AS INDICATED ON THE TYPICAL DETAIL FOR HANGING MECHANICAL UNITS.
3. THE MECHANICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY PIPING OR MECHANICAL UNIT SUPPORTED BY THE STRUCTURE PER THE FOLLOWING:
    - A.) ANY UNIT WHOSE ACTUAL WEIGHT IS GREATER THAN THE WEIGHT SHOWN ON THE PLANS.
    - B.) ANY UNIT NOT SHOWN ON THE STRUCTURAL PLANS WHOSE WEIGHT IS GREATER THAN 300 LBS.
4. THE MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL MECHANICAL UNITS SUPPORTED BY THE STEEL FRAMING ARE CAPABLE OF SPANNING THE DISTANCE BETWEEN THE SUPPORT FRAMING PROVIDED FOR BY THE STRUCTURAL DRAWINGS. THE MECHANICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SUPPORT FRAMING AS NEEDED.
5. PROVIDE SUPPORT FRAMING FOR ALL MECHANICAL OPENINGS THROUGH ROOF AREAS SUPPORTED BY STEEL FRAMING (INCLUDING ANY NOT SHOWN ON THE STRUCTURAL DRAWINGS) AS INDICATED ON THE TYPICAL ROOF OPENING FRAMING DETAIL.
6. THERE SHALL BE NO VERTICAL OR HORIZONTAL SLEEVES SET, OR HOLES CUT OR DRILLED IN ANY JOIST, BEAM OR COLUMN UNLESS IT IS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ARCHITECT / ENGINEER IN WRITING.
7. MECHANICAL OPENINGS THROUGH CONCRETE SLABS AND WALLS LARGER THAN 8" IN DIAMETER, NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE ARCHITECT / ENGINEER. ALL OPENINGS 8" IN DIAMETER OR LESS SHALL HAVE AT LEAST 1'-0" CLEAR BETWEEN THE OPENINGS UNLESS APPROVED BY THE ARCHITECT / ENGINEER.
8. DO NOT SUSPEND PIPING, CONDUIT, DUCTWORK, LIGHTING, OR OTHER LOADS DIRECTLY FROM STEEL DECK.
9. DO NOT INSTALL ELECTRICAL CONDUIT IN ELEVATED SLABS, OR SLAB-ON-GRADE UNLESS APPROVED BY THE ENGINEER.

FOUNDATIONS AND EARTHWORK:

1. PREPARE ALL AREAS OF THE SITE SUPPORTING STRUCTURE BY REMOVING ALL TOP SOIL, EXISTING FILL, ORGANIC MATERIAL, OR FROZEN WET, SOFT, LOOSE OR OTHERWISE UNSUITABLE MATERIALS.
2. PROOF ROLL THE EXPOSED SUB-GRADE BELOW DRIVES, WALLS, AND BUILDING FLOOR SLABS WITH A LOADED DUMP TRUCK TO DETERMINE IF ANY POCKETS OF SOFT, UNSUITABLE MATERIAL EXIST BENEATH THE EXPOSED SUB-GRADE. REMOVE ANY UNSUITABLE MATERIAL ENCOUNTERED AND REPLACE WITH PROPERLY COMPACTED GRANULAR FILL MATERIAL. COMPACT SUB-GRADE TO 95% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557).
3. COMPACT ALL FILL MATERIALS BENEATH SLAB-ON-GRADE, SIDEWALKS, AND PAVEMENT, OR OVER FOOTINGS TO 95% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557). INCREASE THE COMPACTION REQUIREMENTS FOR ENGINEERED FILL SUPPORTING FOOTINGS TO 97% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557). COMPACT ALL BACKFILL NOT SUPPORTING SLAB, PAVEMENT OR FOOTING TO 90% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557). PLACEMENT, COMPACTION, AND MATERIAL USED FOR FILL SHALL BE APPROVED AND OVERSEEN BY THE TESTING AGENCY.
4. COMPACTION FOR ALL FOOTINGS, SLABS AND PAVEMENTS CAN ALTERNATELY BE ALLOWED TO MEET 98% STANDARD PROCTOR. MAXIMUM DRY DENSITY IF SUBSTANTIATED BY THE PROJECT SOIL REPORT PROVIDED.
5. PLACE ALL FILL MATERIALS IN LAYERS NOT EXCEEDING 6" IN LOOSE THICKNESS AND NOT MORE THAN 4" IN LOOSE THICKNESS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS. MECHANICALLY COMPACT EACH LAYER TO AT LEAST THE REQUIRED MINIMUM DRY DENSITY. FIELD DENSITY TESTS WILL BE PERFORMED ON EACH LIFT AS REQUIRED TO ENSURE ADEQUATE MOISTURE LEVELS AND COMPACTION ARE ACHIEVED. PLACEMENT, COMPACTION, AND MATERIAL USED FOR FILL SHALL BE APPROVED AND OVERSEEN BY THE TESTING AGENCY.
6. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED MATERIAL. IF UNSUITABLE MATERIAL IS ENCOUNTERED, RE-ESTABLISH THE BEARING ELEVATION OF THE FOOTING BY LOCALIZED UNDER-CUTTING AND FILLING WITH SUITABLE ENGINEERED FILL OR CONCRETE AS RECOMMENDED BY THE TESTING AGENCY.
7. A TESTING AGENCY SHALL VERIFY THAT THE SOIL BEARING CAPACITY IS ACCEPTABLE AT EACH COLUMN FOOTING AND AT 8'-0" INTERVALS ALONG WALL FOOTINGS AT THE INDICATED BEARING ELEVATIONS.
8. PLACE FOOTINGS THE SAME DAY EXCAVATIONS ARE OPENED. IF THIS IS NOT POSSIBLE, ADEQUATELY PROTECT THE EXPOSED MATERIAL IN THE BASES OF THE FOOTING EXCAVATIONS FROM ANY DETRIMENTAL CHANGE IN CONDITION SUCH AS FROM DISTURBANCE, RAIN, OR FREEZING. SURFACE RUNOFF SHALL NOT BE ALLOWED TO ENTER EXCAVATIONS.
9. PLACE ALL FOOTINGS IN WOOD FORMS (UNLESS SPECIFIC APPROVAL IS RECEIVED FROM THE ENGINEER OF RECORD).
10. CENTER ALL COLUMN AND WALL FOOTINGS UNDER THE COLUMN OR WALL ABOVE UNLESS OTHERWISE INDICATED.
11. TOP AND BOTTOM SUPPORTING SLABS FOR ALL CONCRETE WALLS RETAINING EARTH MUST BE PLACED AND HAVE REACHED 75% OF THEIR REQUIRED 28-DAY COMPRESSIVE STRENGTH BEFORE BACKFILLING OPERATIONS BEGIN.
12. ALL CONCRETE WALLS RETAINING EARTH MUST HAVE REACHED 75% OF THE REQUIRED 28-DAY COMPRESSIVE STRENGTH BEFORE BACKFILLING OPERATIONS BEGIN.
13. ALL BACKFILL PLACED AGAINST CONCRETE WALLS SHALL BE DRAINAGE FILL MATERIAL.
14. PLACE SLAB-ON-GRADE ON 6" OF PROPERLY COMPACTED, DRAINAGE FILL MATERIAL.
15. ENGINEERED FILL SHALL BE CLEAN, WELL GRADED AND FREE DRAINING IN ITS COMPACTED STATE. THE MATERIAL SHALL BE APPROVED BY THE TESTING AGENCY. IN LIEU OF TESTING AGENCY RECOMMENDATIONS, PROVIDE ONE OF THE FOLLOWING MATERIALS FOR ENGINEERED FILL:
    - A.) CLASS 'A' CONCRETE.
    - B.) WELL GRADED MIXTURE OF GRAVEL OR CRUSHED STONE AND NATURAL OR CRUSHED SAND, ASTM D2940, WITH 100% PASSING 1 1/2" SIEVE AND NOT MORE THAN 10% PASSING A NO.200 SIEVE.
16. DRAINAGE FILL SHALL BE COARSE GRADED CRUSHED STONE OR PIT RUN GRAVEL. MATERIAL MUST HAVE 100% PASSING A 1" SIEVE AND A MAXIMUM OF 5% PASSING THE NO.8 SIEVE (INDOT #8 COARSE AGGREGATE).
17. IF CONSTRUCTION OCCURS WITH THE COOLER, WETTER MONTHS, IT SHOULD BE ANTICIPATED THAT A COMBINATION OF SOIL AND SEASONAL WEATHER CONDITIONS WILL BE PRESENT DURING CONSTRUCTION THAT WILL RESULT IN SUB-GRADE THAT IS EXCESSIVELY WET, SOFT OR YIELDING. THIS CONDITION MAY BE MITIGATED BY SCARIFYING AND DRYING, OR USING CHEMICAL STABILIZATION BASED ON GEOTECHNICAL ENGINEER RECOMMENDATION AND SITE CONDITIONS.
    - A.) THE CONTRACTOR IS RESPONSIBLE FOR WORKING WITH THE GEOTECHNICAL ENGINEER AND DETERMINING WHETHER OR NOT TO EMPLOY SOIL STABILIZATION MEASURES, AND IF SO, FOR DETERMINING WHICH MEASURES ARE MOST APPROPRIATE FOR THIS PROJECT.
    - B.) THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF ANY STABILIZATION MEASURES AS DEFINED IN DIVISION 01 OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

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18. POSITIVE DRAINAGE OF SURFACE WATER, INCLUDING EXISTING AND NEW BUILDING DOWNSPOUT DISCHARGE, SHALL BE MAINTAINED AWAY FROM STRUCTURE FOUNDATIONS TO AVOID WETTING AND WEAKENING OF FOUNDATION SOILS BOTH DURING CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION OF ANY APPROPRIATE DEWATERING NEEDED.
19. COORDINATE WITH THE PROJECT MANUAL FOR INSTALLATION OF ALL REQUIRED SLEEVES, INSERTS, ETC.
20. ALL PIPES BURIED IN THE SOIL THAT CROSS FOOTINGS/FOUNDATIONS SHALL PASS THROUGH THE FOUNDATION WALL OR BELOW FOOTING (NOT THROUGH FOOTING). WHERE PIPE ELEVATION CONFLICTS WITH FOOTING, STEP FOOTING DOWN AT 1:2 SLOPE EACH SIDE OF PIPE.

CONCRETE:

1. ALL CONCRETE MATERIALS AND THE MIXING, HANDLING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE REQUIREMENTS AND ACI 301, 305, 306, AND 318.
2. DO NOT PLACE DURING RAIN, SLEET OR SNOW WITHOUT ADEQUATE PROTECTION.
3. SUBMIT A MIX DESIGN FOR EACH CLASS OF CONCRETE SPECIFIED.
4. PROVIDE ADEQUATE TESTING AND REPORTS FOR ALL CLASSES OF CONCRETE FROM AN APPROVED TESTING LABORATORY.
5. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CORNERS OF CONCRETE EXCEPT THOSE ABUTTING MASONRY.
6. ALL CONCRETE EXPOSED TO WEATHER, PERMANENT OR TEMPORARY, SHALL BE AIR ENTRAINED EXCEPT SLABS WITH A TROWEL FINISH.
7. THE INDEPENDENT TESTING LABORATORY SHALL VERIFY AND REPORT THE PLACEMENT OF REINFORCING STEEL IN ALL CONCRETE STRUCTURES TO INCLUDE BAR SIZE AND GRADE, MEASURED LAP, SPACING, AND CONCRETE COVER.

REINFORCING STEEL:

1. ALL REINFORCING STEEL BENDS, HOOKS, LAP SPLICES AND MINIMUM CONCRETE COVER SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL REINFORCED CONCRETE" (ACI 318) UNLESS OTHERWISE INDICATED.
2. SLAB BOLSTERS, HIGH CHAIRS, BEAM BOLSTERS, AND ALL OTHER ACCESSORIES IN CONTACT WITH THE FORMS FOR EXPOSED CONCRETE, BOTH INTERIOR AND EXTERIOR, SHALL BE PLASTIC TIPPED. SUCH ACCESSORIES SHALL HAVE TURNED UP LEGS.
3. ALL DETAILS OF REINFORCING STEEL FABRICATION AND PLACEMENT SHALL CONFORM TO ACI "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) UNLESS OTHERWISE INDICATED. ALL REINFORCING STEEL SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL OF STANDARD PRACTICE".
4. THE SHOP DRAWINGS FOR REINFORCING STEEL INCLUDE 1/4" SCALE ELEVATIONS OF ALL CONCRETE WALLS AND BEAMS AND ALL SECTIONS REQUIRED TO MAKE CLEAR THE LOCATION OF THE REINFORCING STEEL. SHOW SLAB BAR SUPPORTS ON SHOP DRAWINGS. USE ONLY #5 BARS WITH INDIVIDUAL HIGH CHAIRS FOR SUPPORT OF THE TOP SLAB BARS. ANCHOR ALL TOP BARS BY STANDARD EMBEDMENT OR 90° HOOK UNLESS OTHERWISE DETAILED. OVERHANGING TAILS SHALL BE SUPPORTED POSITIVELY.
5. ALL CONCRETE REINFORCEMENT MATERIALS SHALL BE NEW, FREE FROM RUST AND ANY SUBSTANCE THAT WOULD PREVENT BONDING OF THE CONCRETE TO THE STEEL.
6. CONCRETE REINFORCING SHALL HAVE THE FOLLOWING MINIMUM PROTECTION (U.O.N.):
    - A.) CONCRETE PLACED AGAINST AND PERMANENTLY EXPOSED TO EARTH — 3"
    - B.) CONCRETE PLACED IN FORMS BUT EXPOSED TO EARTH OR WEATHER
        - 1.) #5 BARS AND SMALLER — 1 1/2"
        - 2.) #6 BARS AND LARGER — 2"
    - C.) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND
        - 1.) SLABS, WALLS AND JOISTS
            - a.) #11 BARS AND SMALLER — 3/4"
            - b.) #14 AND #18 BARS — 1 1/2"
        - 2.) BEAMS, COLUMNS PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS — 1 1/2"
7. SET DOWELS, COLUMNS OR PIER MAIN BARS, AND ANCHOR RODS WITH WOOD POSITIONING TEMPLATES AT TOP OF FOOTING AND AT FLOOR LEVELS AND BRACE AGAINST DISPLACEMENT.
8. PROVIDE FOOTING DOWELS FOR ALL VERTICAL WALL REINFORCEMENT. DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT, UNLESS OTHERWISE NOTED. WITH LAP SPLICES AS INDICATED.
9. POSITION DOWELS FOR VERTICAL WALL REINFORCEMENT IN COLUMN FOOTINGS AND WALL FOOTING STEPS WITH 6" MAXIMUM BOTTOM COVER.

REINFORCING STEEL (CONT.):

10. PROVIDE CLASS 'B' TENSION LAP SPLICES FOR ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

CLASS 'B' TENSION LAP SPLICE SCHEDULE

BAR SIZE	LAP LENGTH
#3 BAR	19"
#4 BAR	25"
#5 BAR	31"
#6 BAR	37"
#7 BAR	54"
#8 BAR	62"
#9 BAR	70"
#10 BAR	79"

NOTES:

1. PROVIDE SCHEDULED LAP LENGTH UNLESS OTHERWISE NOTED ON DRAWINGS.
2. ALL LAPS ARE FOR 4000 PSI CONCRETE OR STRONGER INCREASE LAPS BY 15% FOR 3000 PSI CONCRETE.
3. INCREASE LAPS BY 30% FOR HORIZONTAL LAP SPLICES WITH MORE THAN 1'-0" OF FRESH CONCRETE PLACED BELOW THE LAPPED BARS.
4. INCREASE LAPS BY 50% FOR EPOXY COATED BARS.
5. INCREASE LAPS BY 33% FOR LIGHTWEIGHT CONCRETE
6. INCREASE LAPS BY 50% WHERE CLEAR SPACING BETWEEN BARS IS LESS THAN (2)-BAR DIAMETERS OR CLEAR COVER IS LESS THAN (1)-BAR DIAMETER.

11. SPREAD REINFORCING STEEL AROUND SMALL OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT, IN FULL LENGTH BARS, DISTRIBUTING ONE-HALF EACH SIDE OF THE OPENING. WHERE TEMPERATURE REINFORCING IS INTERRUPTED, ADD (2)-#5 BARS x OPENING DIMENSION + 4'-0" IN THE BOTTOM ON EACH SIDE OF THE OPENING. PROVIDE (2)-#5 DIAGONAL BARS x 4'-0" IN BOTH FACES AT EACH CORNER OF OPENINGS LARGER THAN 12" IN ANY DIRECTION.
12. PROVIDE #4 TOP BARS AT 12" SPACING IN SOLID SLABS OVER SUPPORTS UNLESS OTHERWISE SIMILARLY REINFORCED. EXTEND THESE BARS 2'-0" BEYOND EACH SUPPORT FACE, PROVIDING 90° HOOKS AT SPANDREL CONDITIONS.

STRUCTURAL MASONRY:

1. MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 21 OF THE 2012 EDITION OF THE INTERNATIONAL BUILDING CODE AND TMS 402 AND 602.
2. GROUT PROPORTIONS SHALL CONFORM TO ASTM C476. PLACEMENT OF GROUT SHALL CONFORM TO TABLE 7 OF THE CURRENT EDITION OF ACI 530.1 "SPECIFICATION FOR MASONRY STRUCTURES".
3. GROUT CMU CORES 2 COURSES BELOW BEARING OF ALL SCHEDULED STEEL LINTELS AS INDICATED IN THE STEEL LINTEL SCHEDULE AND 'L' SERIES CMU LINTELS AS SHOWN IN THE CMU LINTEL SCHEDULE. GROUT CMU CORES FULL HEIGHT BELOW BEARING OF SPECIAL LINTELS (SL-1, ETC.) AS INDICATED IN THE SPECIAL LINTEL SCHEDULE AND ALL 'ML' AND 'HL' SERIES CMU LINTELS AS SHOWN ON THE CMU LINTEL SCHEDULE.
4. MASONRY WALLS SHOWN ON ARCHITECTURAL DRAWINGS BUT NOT ON STRUCTURAL MASONRY PLAN SHALL HAVE HORIZONTAL JOINT REINFORCING AS REQUIRED BY THE PROJECT MANUAL.
5. UNLESS OTHERWISE NOTED, CENTER ALL VERTICAL REINFORCING IN CMU CORE AND HOLD IN POSITION WITH CAGING DEVICES. SEE TYPICAL DETAILS AND PROJECT MANUAL.
6. THE MINIMUM LENGTH OF LAP FOR REINFORCING IN MASONRY WALLS 8" OR WIDER AND A MAXIMUM OF (1)-BAR IN A CELL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

BAR SIZE	LAP LENGTH
#3	12"
#4	16"
#5	22" (28" FOR (2)-BARS PER CELL)
#6	42" FOR 8" CMU AND 32" FOR 10" OR WIDER (51" FOR (2)-BARS PER CELL)
#7	60" FOR 8" CMU AND 45" FOR 10" OR WIDER (70" FOR (2)-BARS PER CELL)

IN LIEU OF LAP SPLICES, PROVIDE TYPE 2 MECHANICAL SPLICES PER 21.2.6.1 OF ACI 318.

7. ALL BOND BEAMS SHALL BE CONTINUOUS AND SHALL BE FILLED WITH GROUT AND REINFORCED AS FOLLOWS, UNLESS OTHERWISE NOTED:

BOND BEAM	REINFORCING
6" CMU	(1)-#4 BAR
8" CMU	(2)-#5 BARS
10" CMU	(2)-#6 BARS
12" CMU	(2)-#7 BARS
14" CMU	(2)-#7 BARS

REINFORCING SHALL BE CONTINUOUS, EXCEPT AT VERTICAL CONTROL JOINTS UNLESS OTHERWISE NOTED. PROVIDE 3/4" DIAMETER x 1'-0" LONG SMOOTH GREASED DOWELS (ONE WRAP PER REBAR) ACROSS CONTROL JOINTS. PROVIDE DOWELS AT CORNERS TO MAINTAIN CONTINUOUS REINFORCING. SEE TYPICAL DETAILS.

8. GROUT SHALL BE PLACED IN THE VERTICAL CORES OF THE MASONRY UNITS UTILIZING THE LOW LIFT GROUTING METHOD SET FORTH IN NCMA-TEK 23A.
    - A.) GROUT SHALL COMPLY WITH ASTM C476 (MORTAR OR CONCRETE SHALL NOT BE USED TO FILL CMU CORES). SEE PROJECT MANUAL.
    - B.) WEBS ADJACENT TO CORES TO BE GROUTED SHALL BE MORTARED. MORTAR SHALL BE STRUCK FLUSH WITH THE INSIDE FACE OF CORES TO BE GROUTED. CORES TO BE GROUTED SHALL BE CLEANED OF ALL MORTAR DROPPINGS AND OTHER DEBRIS PRIOR TO GROUTING.
    - C.) THE MAXIMUM HEIGHT OF A GROUT LIFT SHALL BE 4'-0".
    - D.) STOP GROUT POURS 1 1/2" BELOW THE UPPERMOST PORTION OF THE CAVITY BEING FILLED TO PROVIDE A KEY FOR THE NEXT LIFT OR POUR.
    - E.) CONSOLIDATE GROUT BY VIBRATING WITH A MECHANICAL VIBRATOR EACH LIFT. COMPLETELY RECONSOLIDATE GROUT APPROXIMATELY 20 MINUTES AFTER GROUT IS INSTALLED.
    - F.) ALL REINFORCING STEEL SHALL BE IN PLACE AND INSPECTED BEFORE GROUTING AND THERE SHALL BE CONTINUOUS INSPECTION DURING THE GROUTING OPERATION.
    - G.) PLACING REINFORCING AFTER GROUTING IS NOT PERMITTED.
9. IN EXTERIOR WALLS PLACE ONE REINFORCING BAR (SAME SIZE AS IN ADJACENT WALL) IN GROUTED CORE EXTENDING FULL HEIGHT OF WALL FOR ALL WINDOW AND DOOR OPENINGS UP TO 8'-0" WIDE. FOR OPENINGS 8'-0" TO 16'-0" WIDE PLACE TWO REINFORCING BARS IN TWO GROUTED CORES EACH SIDE OF OPENING.
10. ALL MASONRY WALLS (INTERIOR AND EXTERIOR) SHALL BE ANCHORED TO STEEL COLUMNS AND BEAMS WHICH DIRECTLY ABUT THE ENDS OR SIDES OF THE WALL. MASONRY WALLS SHALL ALSO BE ANCHORED TO STEEL LINTELS. SEE PROJECT MANUAL.
11. PROVIDE ONE VERTICAL REINFORCING BAR (SAME SIZE AS ADJACENT WALL) FULL HEIGHT OF THE WALL AT CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARINGS, JAMBS, AND EACH SIDE OF CONTROL JOINTS IN ALL INTERIOR AND EXTERIOR WALLS ON FOUNDATIONS UNLESS OTHERWISE NOTED.
12. SUBMIT SHOP DRAWINGS DETAILING ALL REINFORCING STEEL IN REINFORCED MASONRY CONSTRUCTION INCLUDING DETAILS OF ALL BENT BARS, VERTICAL REINFORCING AND HORIZONTAL BOND BEAM REINFORCING. INCLUDE PLANS AND ELEVATIONS AS REQUIRED TO CLEARLY SHOW ALL REINFORCING, INCLUDING BOND BEAMS, MASONRY LINTELS, AND ALL VERTICAL BARS.
13. ALL HORIZONTAL JOINT REINFORCING SHALL BE CONTINUOUS THROUGH ALL CORNERS AND INTERSECTIONS, EXCEPT AT CONTROL JOINTS. USE PREFORMED CORNER AND INTERSECTION SECTIONS FURNISHED BY JOINT REINFORCING SUPPLIER.
14. SEE PROJECT MANUAL FOR MANDATORY INSPECTION REQUIREMENTS FOR MASONRY CONSTRUCTION.
15. ALL LOOSE LINTELS AND CONTINUOUS RELIEF ANGLES SHALL BE HOT-DIP GALVANIZED AND PROVIDE 8" MINIMUM BEARING.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDING".
2. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AND THE PROJECT MANUAL. SEE PROJECT MANUAL FOR SHOP DRAWING REQUIREMENTS.
3. ALL JOISTS AND BEAMS BEARING ON MASONRY REQUIRE MASONRY BEARING PLATES.
4. SHOP CONNECTIONS, UNLESS OTHERWISE SHOWN, MAY BE EITHER BOLTED OR WELDED. ALL FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS.
5. BOLTED CONNECTIONS SHALL BE SNUG TIGHTENED JOINTS UNLESS OTHERWISE NOTED. BOLTED HANGER TYPE CONNECTIONS, WHERE BOLTS ARE PLACED IN TENSION, AND BOLTED CONNECTIONS IN STRUCTURES SUPPORTING VIBRATING OR ROTATING MACHINERY SHALL BE PRE-TENSIONED JOINTS. BOLTED CONNECTIONS WITH OVERSIZED OR SLOTTED HOLES, BOLTED DIAGONAL BRACING CONNECTIONS, AND BOLTED CRANE RAIL CONNECTIONS SHALL BE SLIP CRITICAL JOINTS, USE 3/4" DIAMETER BOLTS WITH STANDARD 13/16" DIAMETER HOLES, UNLESS OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS. ALL SLIP CRITICAL JOINTS SHALL HAVE LOAD INDICATING WASHERS (OR TWIST OFF TENSION CONTROL BOLTS), AND MUST NOT HAVE PAINT OR FOREIGN MATERIAL BETWEEN THE CONTACTING SURFACES OF THE CONNECTIONS. BOLTED CONNECTION SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, LATEST EDITION.
6. CONNECTIONS NOT FULLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL". SIMPLE SPAN CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS INDICATED AT THE BEAM ENDS ON THE FRAMING PLANS. WHERE SUCH REACTIONS HAVE NOT BEEN INDICATED THE CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM SHEAR REACTION OF 15 KIPS (ASD) OR 20 KIPS (LRFD). SHEAR CONNECTIONS SHALL BE DOUBLE ANGLES WITH 5/16" MINIMUM THICKNESS OR SHEAR TABS WITH 3/8" PLATE THICKNESS UNLESS OTHERWISE NOTED. ALL SHEAR CONNECTIONS SHALL HAVE A MINIMUM OF (2)-BOLTS, TYPICAL.
7. FOR ALL BEAMS FRAMING OVER THE TOP OF A COLUMN, PROVIDE 1/4" STIFFENER PLATES EACH SIDE OF THE BEAM WEB UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. BURNING OF HOLES IN STRUCTURAL STEEL SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE ENGINEER.
9. VERIFY LINES, LEVELS, ANCHOR ROD SETTINGS, EMBEDS, GENERAL FIELD CONDITIONS AND EXISTING DIMENSIONS PRIOR TO PREPARATION OF SHOP DRAWINGS. REPORT DISCREPANCIES TO THE ENGINEER.
10. GROUT UNDER COLUMN BASE PLATES SHALL BE HIGH-STRENGTH, NON-METALLIC, NON-SHRINK.
11. FABRICATE SIMPLE SPAN BEAMS WITH NATURAL OR SPECIFIED CAMBER UPWARD.
12. AN APPROVED AND RECOGNIZED TESTING AGENCY SHALL INSPECT THE HIGH STRENGTH BOLT INSTALLATION. THE TESTING AGENCY SHALL ALSO VISUALLY INSPECT ALL FIELD WELDS AND SHALL TEST 20% OF ALL FILLET WELDS AND 100% OF ALL PARTIAL AND FULL PENETRATION WELDS.

POST INSTALLED ANCHORS:

1. INSTALLERS OF DRILLED IN ADHESIVE ANCHORS SHALL BE CERTIFIED BY AN ACI OR CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR SHALL BE TRAINED ON SITE BY THE ADHESIVE ANCHOR MANUFACTURER SPECIFICALLY FOR THE PROJECT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANCHOR LOCATIONS AT ALL MASONRY WALLS. MASONRY WALLS SHALL BE GROUTED SOLID AT ALL ANCHOR LOCATIONS FOR A MINIMUM OF 12" IN ALL DIRECTIONS FROM ANCHOR CENTERLINE.
3. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S SPECIFICATIONS.
4. UNLESS OTHERWISE NOTED ALL ANCHORS SHALL HAVE STANDARD EMBEDMENT DEPTH AS DEFINED BY THE ANCHOR MANUFACTURER.
5. WHERE ANCHORS ARE TO BE INSTALLED INTO EXISTING MASONRY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD TESTING THE ANCHORS PRIOR TO THE FABRICATION OF ANY MATERIALS TO VERIFY THAT THE ALLOWABLE LOADS AS PUBLISHED BY THE ANCHOR MANUFACTURER, OR THOSE INDICATED ON THE STRUCTURAL DRAWINGS, ARE OBTAINABLE. THE CONTRACTOR SHALL SUBMIT RESULTS OF THESE TESTS TO THE ENGINEER FOR REVIEW AND APPROVAL. THE ANCHOR SIZES AND SPACINGS AS SHOWN IN THESE DOCUMENTS ARE SUBJECT TO CHANGE BASED ON THE RESULTS OF THE FIELD TESTS.

STEEL DECK:

1. STEEL DECK CONSTRUCTION SHALL CONFORM TO THE STEEL DECK INSTITUTE (SDI) STANDARDS LISTED UNDER DESIGN DATA.
2. ALL DECK SHALL BE THREE OR MORE SPANS CONTINUOUS WHERE POSSIBLE. WHERE THREE (3) CONTINUOUS SPANS ARE NOT PROVIDED, THE DECK SUPPLIER SHALL PROVIDE DECK WITH SUFFICIENT GAUGE TO SUPPORT CONSTRUCTION LOADS. ANY SUCH VARIATION IN THE DECK SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

    ROOF DECK:
    - A.) STEEL ROOF DECK SHALL BE 1 1/2" STANDARD WIDE RIB DECK (WR20), GALVANIZED 20 GAGE CONFORMING TO THE STEEL DECK INSTITUE SPECIFICATIONS AND COMMENTARY. TYPICAL ALL ROOF AREAS UNLESS OTHERWISE NOTED.

    FLOOR DECK:
    - A.) STEEL FLOOR DECK SHALL BE 1 1/2" DEEP GALVANIZED RIBBED COMPOSITE STEEL DECKING, 20 GAGE CONFORMING TO THE STEEL DECK INSTITUTE. TYPICAL ALL FLOOR AREAS UNLESS OTHERWISE NOTED.
3. WELDING ALL DECK SHALL BE ACCOMPLISHED BY WELDERS CERTIFIED FOR THE TYPES INVOLVED ACCORDING TO THE CURRENT EDITION OF AWS D1.3 "STRUCTURAL WELDING CODE-SHEET STEEL".
4. WELD STEEL ROOF DECK TO EACH SUPPORT AT 12"o.c. AND AT 6"o.c. AT THE ROOF DECK PERIMETER UNLESS OTHERWISE NOTED AND IN STRICT COMPLIANCE WITH THE DECK MANUFACTURER'S SPECIFICATIONS AND ERECTION DRAWINGS WELDS SHALL BE AT LEAST 5/8" DIAMETER PUDDLE WELDS OR EQUIVALENT. CONNECT SIDELAPS AT ONE-THIRD POINTS OF SPAN UNLESS NOTED OTHERWISE WITH SELF-TAPPING SCREWS NOT SMALLER THAN #10 OR BY WELDING IF THE DECK IS 18 GAUGE OR HEAVIER. LAP ENDS NOT LESS THAN 2" OVER SUPPORTS.
5. WELD STEEL FLOOR DECK TO EACH SUPPORT AT 12"o.c. UNLESS OTHERWISE NOTED AND IN STRICT COMPLIANCE WITH THE DECK MANUFACTURER'S SPECIFICATIONS AND ERECTION DRAWINGS. WELDS SHALL BE AT LEAST 5/8" DIAMETER PUDDLE WELDS OR EQUIVALENT. CONNECT SIDELAPS BETWEEN SUPPORTS AT INTERVALS NOT EXCEEDING 36" USING SELF-TAPPING #10 OR LARGER.
6. CLEAN ALL SOILED METAL DECK PRIOR TO INSTALLATION.
7. PROVIDE WELDED WIRE FABRIC REINFORCING FOR ELEVATED CONCRETE FLOOR SLABS ON COMPOSITE TYPE METAL DECK. IF NOT OTHERWISE SPECIFIED, WELDED WIRE FABRIC REINFORCING SHALL HAVE A MINIMUM CROSS SECTION AREA OF 0.00075 TIMES THE CROSS SECTIONAL AREA OF CONCRETE ABOVE THE DECK BUT SHALL NOT BE LESS THAN 6x6 W1.4xW1.4 WELD WIRE FABRIC.
8. MECHANICAL FASTENERS MAY BE SUBSTITUTED FOR WELDED DECK ATTACHMENT. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS DOCUMENTING THAT THE PROPOSED MECHANICAL FASTENERS PROVIDE EQUIVALENT DIAPHRAGM AND UPLIFT STRENGTH TO THE SPECIFIED WELDS.

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CONSULTANT

TLF

TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2024-206

ISSUED FOR BID

TRACY A. CHARITON
No. 10708203

DRAWN BY: TLF
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO. △	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

GENERAL NOTES

S-001

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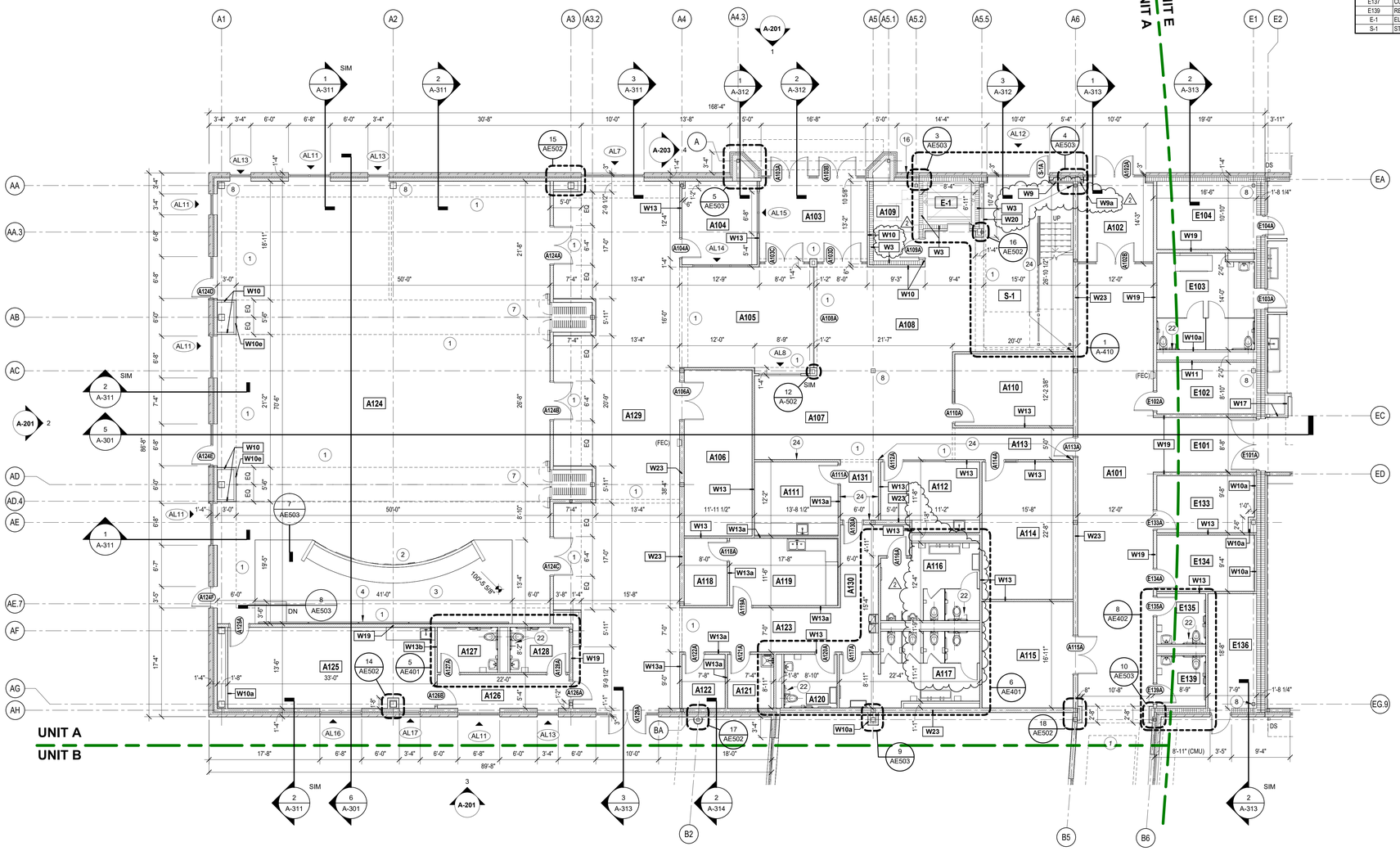

1 FIRST FLOOR ARCHITECTURAL PLAN - UNIT A

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A101	CORRIDOR	868 SF
A102	VESTIBULE	155 SF
A103	VESTIBULE	222 SF
A104	SRO	158 SF
A105	LOBBY	358 SF
A106	STORAGE	265 SF
A107	RECEPTION	260 SF
A108	LOBBY	665 SF
A109	ELEVATOR EQUIPMENT	92 SF
A110	COMMUNITY RELATIONS OFFICE	214 SF
A111	WORKROOM	156 SF
A112	CONFERENCE ROOM	167 SF
A113	PASSAGE	91 SF
A114	ZEF FOUNDATION OFFICE	317 SF
A115	TECHNOLOGY	245 SF
A116	MEN'S RESTROOM	182 SF
A117	WOMEN'S RESTROOM	233 SF
A118	STORAGE	73 SF
A119	CATERING/KITCHENETTE	184 SF
A120	FAMILY RESTROOM	72 SF
A121	CUSTODIAL	63 SF
A122	STORAGE	59 SF
A123	PASSAGE	177 SF
A124	BOARD ROOM	3,703 SF
A125	CONFERENCE ROOM	423 SF
A126	PASSAGE	112 SF
A127	RESTROOM	69 SF
A128	RESTROOM	67 SF
A129	CORRIDOR	1,544 SF
A130	PASSAGE	146 SF
A131	PASSAGE	58 SF
E101	CORRIDOR	142 SF
E102	ELECTRICAL	131 SF
E103	RESTROOM	233 SF
E104	STORAGE	172 SF
E133	OT/PT/SPEECH OFFICE	138 SF
E134	OT/PT/SPEECH OFFICE	139 SF
E135	RESTROOM	62 SF
E136	OUTDOOR STORAGE	142 SF
E137	CORRIDOR	931 SF
E139	RESTROOM	62 SF
E-1	ELEVATOR	58 SF
S-1	STAIR	382 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL., AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

1 DASHED LINE INDICATES BULKHEAD ABOVE - REFER TO REFELECTED CEILING PLAN FOR DETAILS
2 BOARD ROOM DIAS REFER TO SHEET AE503 FOR DETAILS
3 PLATFORM @ 100'-8" A.F.F. - REFER TO AE503 FOR DETAILS
4 WOOD GRILLE WALL - REFER TO FINISH PLANS AND INTERIOR ELEVATIONS FOR EXTENTS AND DETAILS
7 OPERABLE WALL (CONTINUOUSLY-HINGED, ELECTRIC) - REFER TO REFLECTED CEILING PLAN
8 EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
16 BUILDING LOCKBOX LOCATION
22 12"X12" ACCESS PANEL BOTTOM @ 40" A.F.F
24 WALL TO RECEIVE LEVEL 5 FINISH PRIOR TO PAINT. REFER TO FINISH PLANS FOR WALL TREATMENT

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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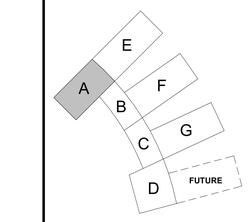

KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FIRST FLOOR ARCHITECTURE PLAN - UNIT A

AE101

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
C101	CORRIDOR	1,627 SF
C102	DAYCARE INFANTS/TODDLERS	1,175 SF
C103	HEAT PUMP CLOSET	55 SF
C104	STORAGE	25 SF
C105	TOILET	40 SF
C106	DAYCARE INFANTS/TODDLERS	1,175 SF
C107	STORAGE	25 SF
C108	TOILET	40 SF
C109	DAYCARE INFANTS/TODDLERS	1,175 SF
C110	HEAT PUMP CLOSET	55 SF
C111	STORAGE	25 SF
C112	TOILET	40 SF
C113	DAYCARE INFANTS/TODDLERS	1,116 SF
C114	STORAGE	25 SF
C115	TOILET	40 SF
D103	OFFICE	116 SF
E-2	ELEVATOR	75 SF
G101	CORRIDOR	132 SF
G102	ELECTRICAL	121 SF
G103	RESTROOM	220 SF
G104	STORAGE	169 SF
G133	ELEVATOR EQUIPMENT	122 SF
G134	CORRIDOR	931 SF
S-2	STAIR	346 SF

1 FIRST FLOOR ARCHITECTURAL PLAN - UNIT C

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

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	NOTE
1	DASHED LINE INDICATES BULKHEAD ABOVE - REFER TO REFELECTED CEILING PLAN FOR DETAILS
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
15	DASHED LINE INDICATES ROOF ABOVE - REFER TO ROOF PLAN
20	DASHED LINE INDICATES SECOND FLOOR OVERHANG ABOVE
22	12"X12" ACCESS PANEL BOTTOM @ 40" A.F.F
24	WALL TO RECEIVE LEVEL 5 FINISH PRIOR TO PAINT. REFER TO FINISH PLANS FOR WALL TREATMENT

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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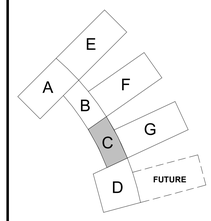


KEY PLAN

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

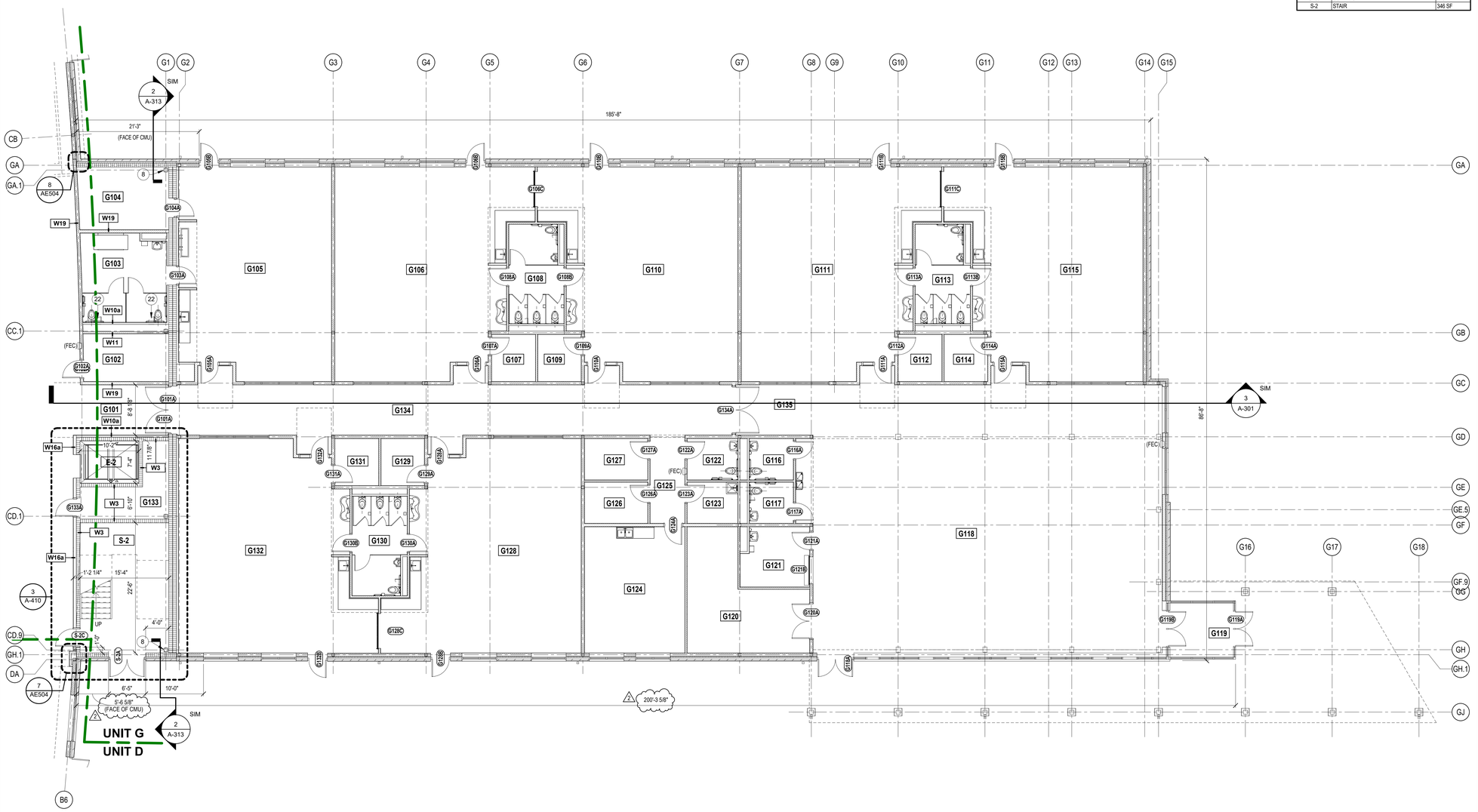
PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FIRST FLOOR ARCHITECTURE PLAN - UNIT C

AE103

NOTE: CLASSROOM UNITS E-G ARE IDENTICAL (UNO). REFER TO UNIT E FLOOR PLAN, AE105, FOR DETAILS.



1 FIRST FLOOR ARCHITECTURAL PLAN - UNIT G

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
D129	CORRIDOR	885 SF
E-2	ELEVATOR	75 SF
G101	CORRIDOR	132 SF
G102	ELECTRICAL	121 SF
G103	RESTROOM	220 SF
G104	STORAGE	169 SF
G105	CLASSROOM	943 SF
G106	CLASSROOM	1,095 SF
G107	STORAGE	61 SF
G108	RESTROOM	156 SF
G109	STORAGE	61 SF
G110	CLASSROOM	1,095 SF
G111	CLASSROOM	1,095 SF
G112	STORAGE	61 SF
G113	RESTROOM	155 SF
G114	STORAGE	61 SF
G115	CLASSROOM	1,087 SF
G116	TOILET	54 SF
G117	TOILET	54 SF
G118	MULTI-PURPOSE	2,879 SF
G119	VESTIBULE	111 SF
G120	STORAGE	327 SF
G121	PANTRY	117 SF
G122	STAFF TOILET	63 SF
G123	CUSTODIAL	62 SF
G124	STAFF WORKROOM	378 SF
G125	PASSAGE	91 SF
G126	BREAKOUT	77 SF
G127	TECHNOLOGY	78 SF
G128	CLASSROOM	1,096 SF
G129	STORAGE	61 SF
G130	RESTROOM	155 SF
G131	STORAGE	61 SF
G132	CLASSROOM	1,093 SF
G133	ELEVATOR EQUIPMENT	122 SF
G134	CORRIDOR	931 SF
G135	CORRIDOR	116 SF
S-2	STAIR	346 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL., AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
22	12"X12" ACCESS PANEL BOTTOM @ 40" A.F.F

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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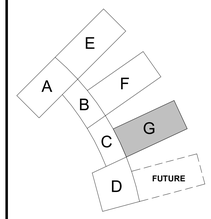


KEY PLAN

ISSUED FOR BID

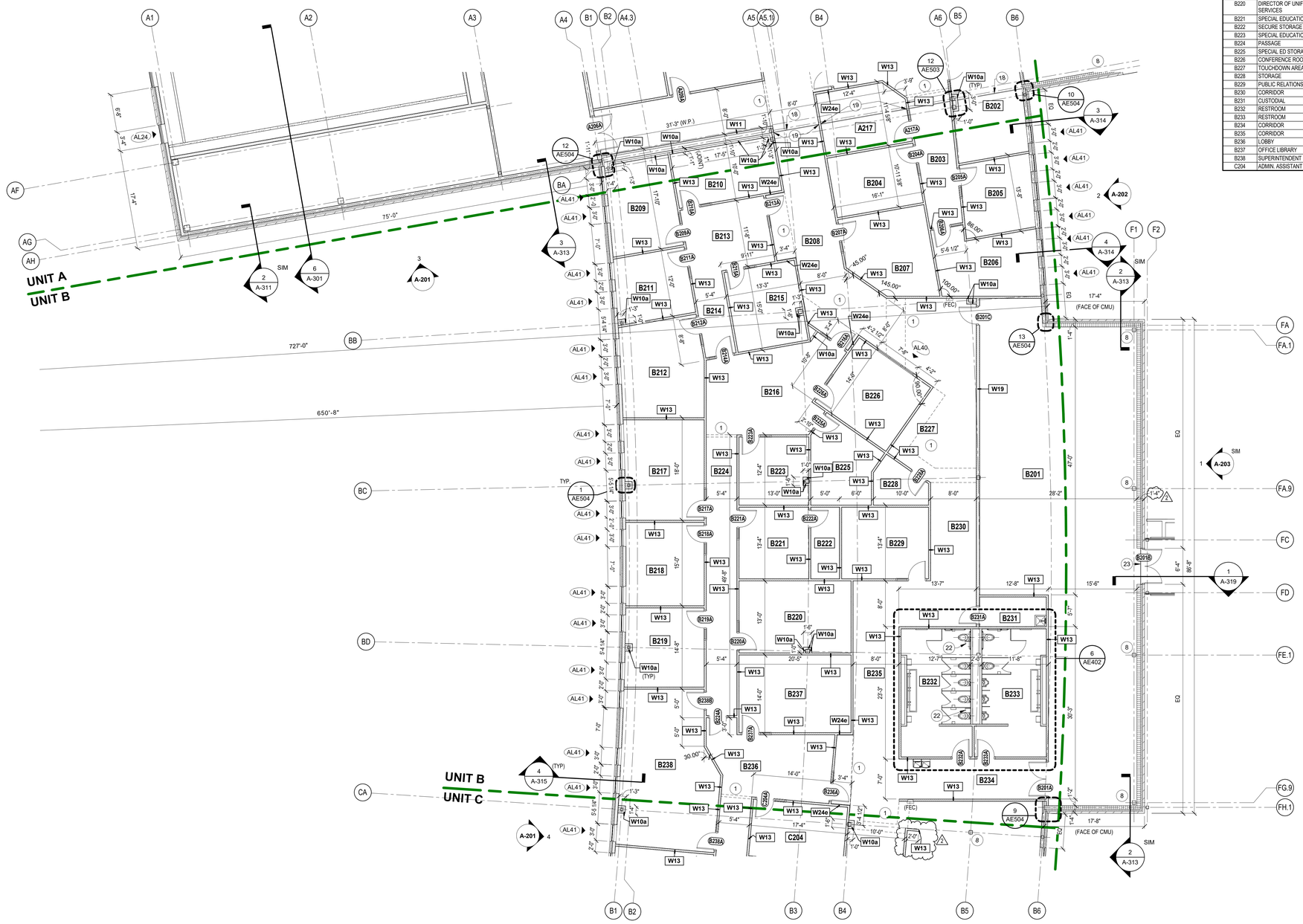
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FIRST FLOOR ARCHITECTURE PLAN - UNIT G

AE107



ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A129	CORRIDOR	1,544 SF
A217	OFFICE	161 SF
B201	MECHANICAL ROOM	1,923 SF
B202	DIRECTOR	224 SF
B203	PASSAGE	156 SF
B204	OFFICE	161 SF
B205	OFFICE	160 SF
B206	HR COORDINATION	199 SF
B207	DIRECTOR OF SAFETY	212 SF
B208	CORRIDOR	384 SF
B209	DIRECTOR OF CURRICULUM	188 SF
B210	CURRICULUM OFFICE	173 SF
B211	CURRICULUM OFFICE	151 SF
B212	DIRECTOR OF CURRICULUM	243 SF
B213	LOBBY	173 SF
B214	PASSAGE	78 SF
B215	CURRICULUM ADMIN ASST	175 SF
B216	LOBBY	316 SF
B217	PROGRAM DIRECTOR OF STUDENT SERVICES	243 SF
B218	ASSISTANT DIRECTOR	200 SF
B219	ASSISTANT DIRECTOR	190 SF
B220	DIRECTOR OF UNIFIED STUDENT SERVICES	245 SF
B221	SPECIAL EDUCATION OFFICE	153 SF
B222	SECURE STORAGE	63 SF
B223	SPECIAL EDUCATION ADMIN ASST	144 SF
B224	PASSAGE	263 SF
B225	SPECIAL ED STORAGE	151 SF
B226	CONFERENCE ROOM	206 SF
B227	TOUCHDOWN AREA	72 SF
B228	STORAGE	63 SF
B229	PUBLIC RELATIONS	190 SF
B230	CORRIDOR	569 SF
B231	CUSTODIAL	60 SF
B232	RESTROOM	260 SF
B233	RESTROOM	245 SF
B234	CORRIDOR	170 SF
B235	CORRIDOR	414 SF
B236	LOBBY	246 SF
B237	OFFICE LIBRARY	266 SF
B238	SUPERINTENDENT	445 SF
C204	ADMIN. ASSISTANT	164 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL., AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
1	DASHED LINE INDICATES BULKHEAD ABOVE - REFER TO REFELECTED CEILING PLAN FOR DETAILS
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
18	1" BUILDING EXPANSION JOINT
19	1" WALL TO WALL BUILDING EXPANSION JOINT COVER
22	12"X12" ACCESS PANEL BOTTOM @ 40" A.F.F
23	FIRE-RATED EXPANSION JOINT COVER ASSEMBLY - REFER TO SECTION 1/A319 FOR EXTENTS

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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ARCHITECT

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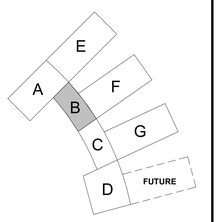


KEY PLAN

ISSUED FOR BID

PAUL A. MILLER
REGISTERED
No. AR10800161
STATE OF INDIANA
ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

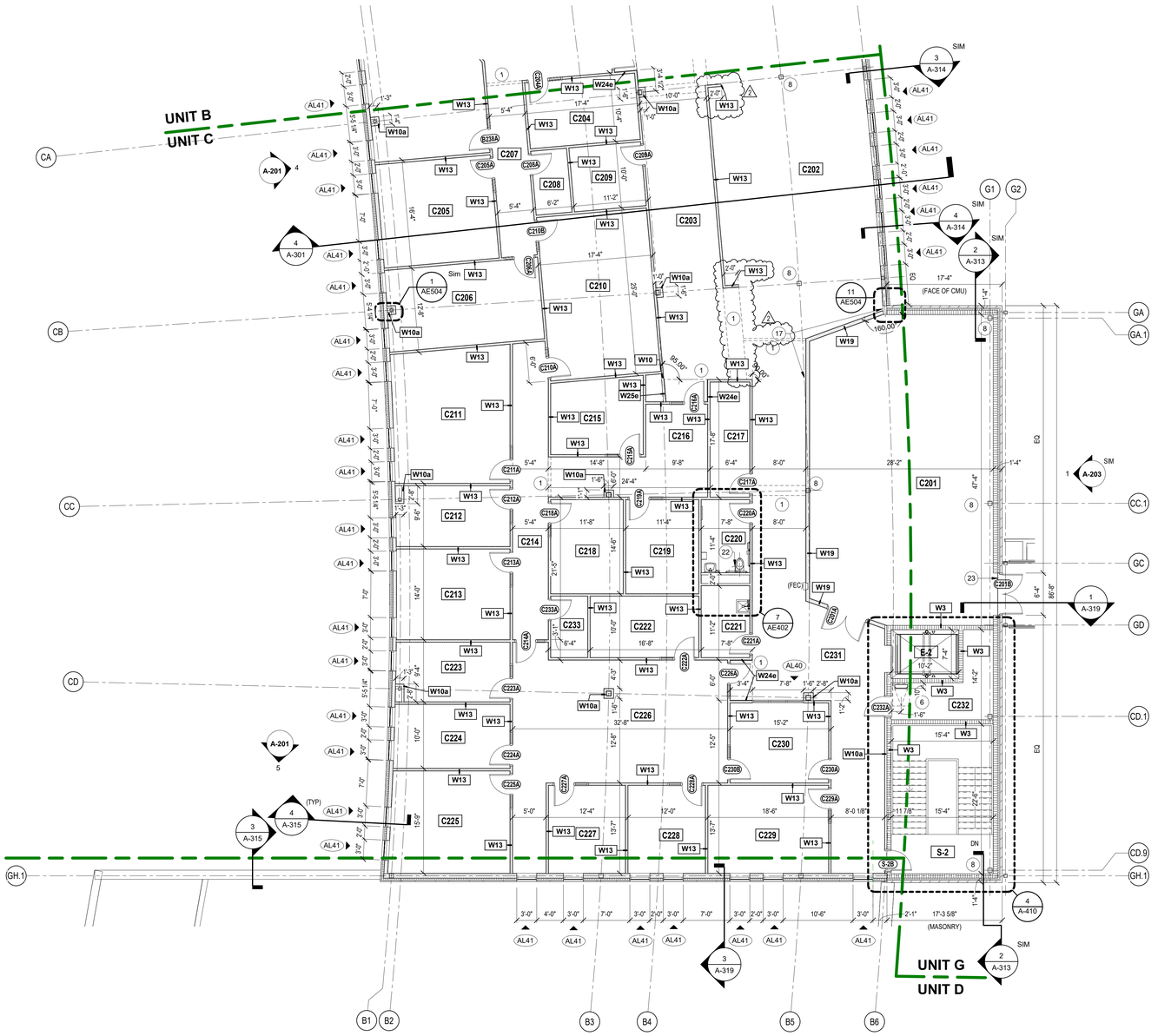
REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR ARCHITECTURE PLAN - UNIT B

AE109

1 SECOND FLOOR ARCHITECTURAL PLAN - UNIT B

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



ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
C201	MECHANICAL ROOM	1,241 SF
C202	LOUNGE	988 SF
C203	TOUCHDOWN AREA	606 SF
C204	ADMIN. ASSISTANT	164 SF
C205	ASSISTANT SUPERINTENDENT	268 SF
C206	ASSISTANT SUPERINTENDENT	282 SF
C207	PASSAGE	138 SF
C208	HEAT PUMP CLOSET	51 SF
C209	STORAGE	103 SF
C210	SHARED CONFERENCE	406 SF
C211	CFO	353 SF
C212	BUSINESS OFFICE	152 SF
C213	BUSINESS OFFICE	231 SF
C214	CORRIDOR	236 SF
C215	BUSINESS OFFICE	156 SF
C216	LOBBY	215 SF
C217	STORAGE	102 SF
C218	BUSINESS OFFICE	153 SF
C219	BUSINESS OFFICE	154 SF
C220	TOILET	79 SF
C221	CUSTODIAL	78 SF
C222	SECURE STORAGE	149 SF
C223	FUTURE OFFICE	149 SF
C224	OPERATIONS OFFICE	167 SF
C225	DIRECTOR OF OPERATIONS	275 SF
C226	OPEN OFFICE	674 SF
C227	OFFICE	152 SF
C228	FUTURE OFFICE	153 SF
C229	CHIEF TECHNOLOGY OFFICER	238 SF
C230	TECH CONFERENCE	177 SF
C231	CORRIDOR	765 SF
C232	STORAGE	121 SF
C233	HEAT PUMP CLOSET	51 SF
E-2	ELEVATOR	75 SF
S-2	STAIR	346 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL., AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
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L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
1	DASHED LINE INDICATES BULKHEAD ABOVE - REFER TO REFELECTED CEILING PLAN FOR DETAILS
6	ROOF ACCESS LADDER - REFER TO ROOF PLAN AND DETAILS
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
17	PROVIDE ACOUSTICAL JOINT SEALANT AT ALL WALL PENETRATIONS AND AT INTERSECTION OF WALL TO FLOOR/ROOF DECK.
22	2'-0"x2'-0" ACCESS PANEL BOTTOM @ 40' A.F.F
23	FIRE-RATED EXPANSION JOINT COVER ASSEMBLY - REFER TO SECTION 1/A319 FOR EXTENTS

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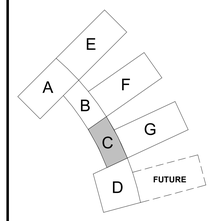

KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

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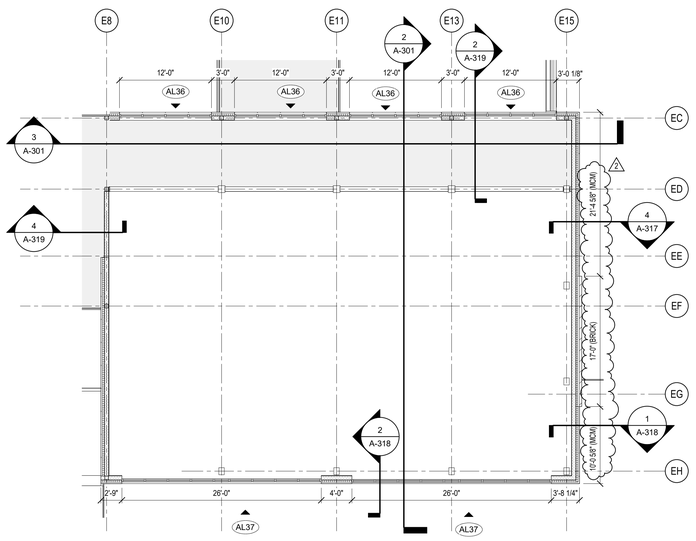
1 SECOND FLOOR ARCHITECTURAL PLAN - UNIT C

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

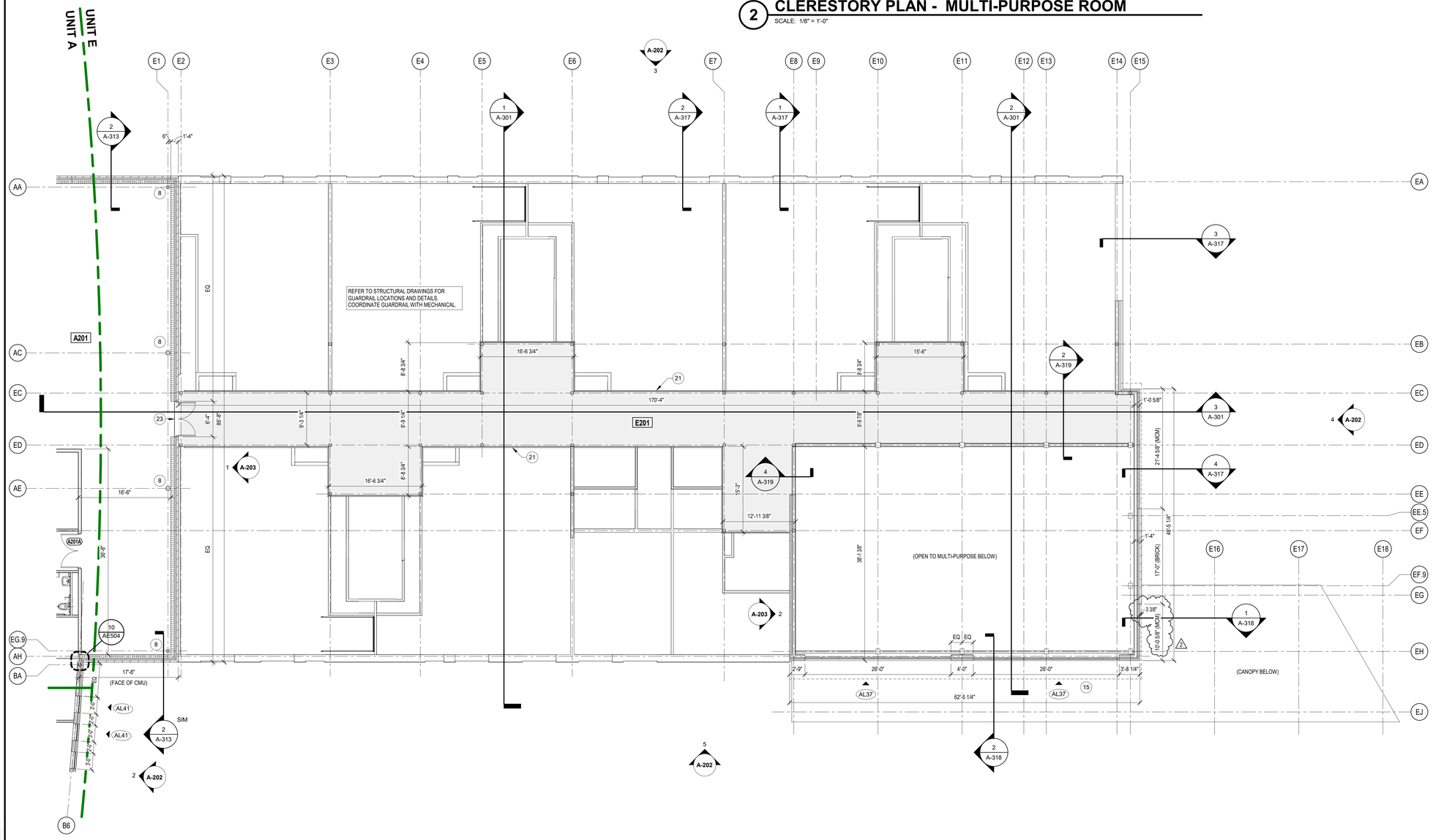
SECOND FLOOR ARCHITECTURE PLAN - UNIT C

AE110



2 CLERESTORY PLAN - MULTI-PURPOSE ROOM

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



1 SECOND FLOOR ARCHITECTURAL PLAN - UNIT E

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

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A201	MECHANICAL ROOM	1,932 SF
A213	STORAGE	164 SF
E201	INTERSTITIAL SPACE	2,258 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
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H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
15	DASHED LINE INDICATES ROOF ABOVE - REFER TO ROOF PLAN
21	CONTINUOUS GUARDRAIL, PAINT.
23	FIRE-RATED EXPANSION JOINT COVER ASSEMBLY - REFER TO SECTION 1/A319 FOR EXTENTS

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

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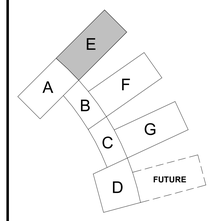


KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

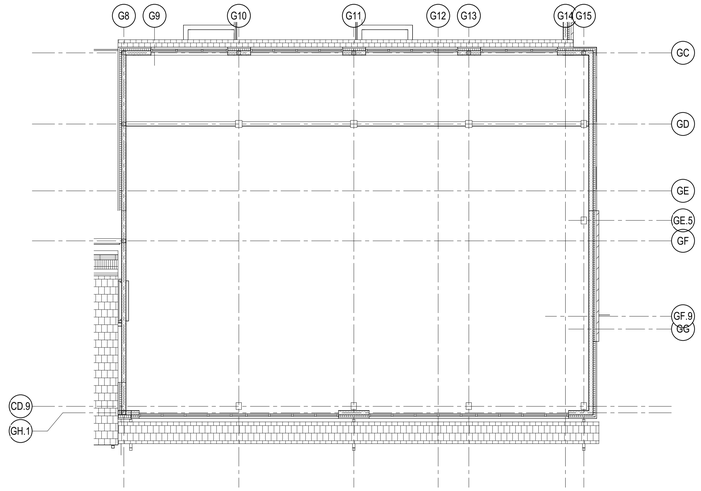
PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR ARCHITECTURE PLAN - UNIT E

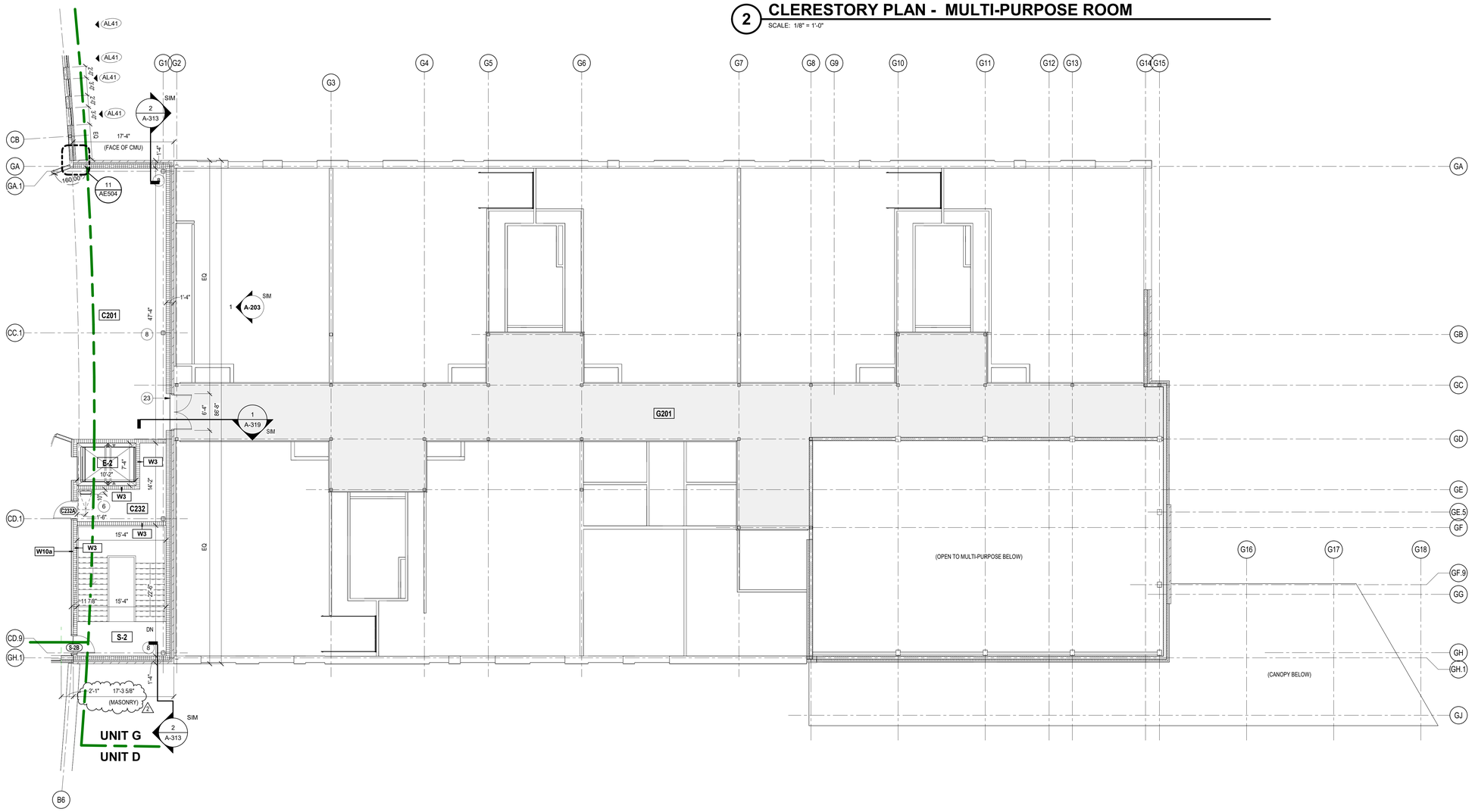
AE111

NOTE: CLASSROOM UNITS E-G ARE IDENTICAL (UNO). REFER TO UNIT E FLOOR PLAN, AE111, FOR DETAILS.



2 CLERESTORY PLAN - MULTI-PURPOSE ROOM

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



1 SECOND FLOOR ARCHITECTURAL PLAN - UNIT G

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
C201	MECHANICAL ROOM	1,241 SF
C203	TOUCHDOWN AREA	606 SF
C232	STORAGE	121 SF
E-2	ELEVATOR	75 SF
G118	MULTI-PURPOSE	2,879 SF
G201	INTERSTITIAL SPACE	2,246 SF
S-2	STAIR	346 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL., AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET AE502.
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L. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
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N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING AE501 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
6	ROOF ACCESS LADDER - REFER TO ROOF PLAN AND DETAILS
8	EXPOSED STEEL COLUMN, PAINT REFER TO FINISH SCHEDULE
23	FIRE-RATED EXPANSION JOINT COVER ASSEMBLY - REFER TO SECTION 1/A318 FOR EXTENTS

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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ARCHITECT

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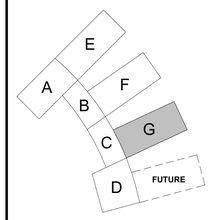


KEY PLAN

N

ISSUED FOR BID

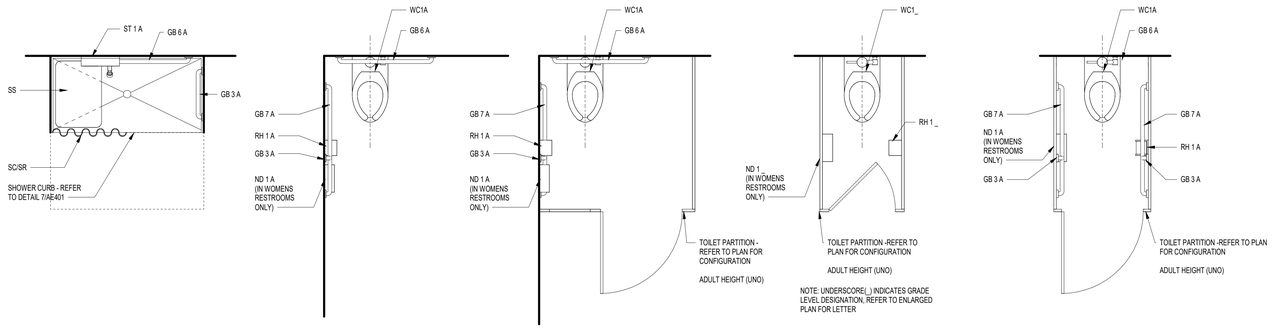
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR ARCHITECTURE PLAN - UNIT G

AE113



SHOWER STALL
SH 3 A

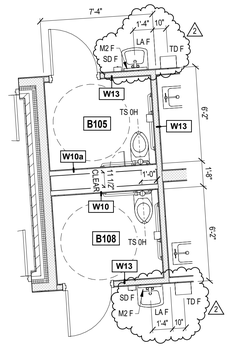
TOILET STALL TS
0 _

TOILET STALL TS
1 _

TOILET STALL TS
2 _

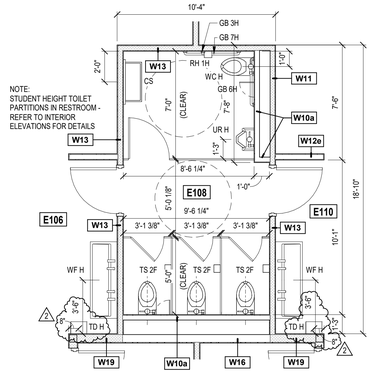
TOILET STALL TS
3 _

LEGEND - TOILET AND SHOWER STALL



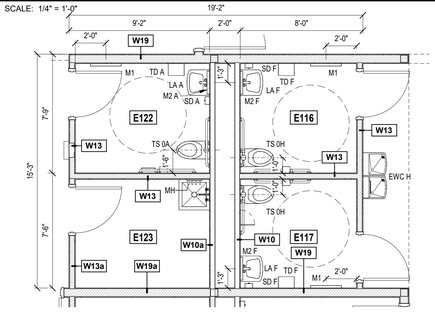
1 ENLARGED PLAN - TYP. DAYCARE RESTROOM

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



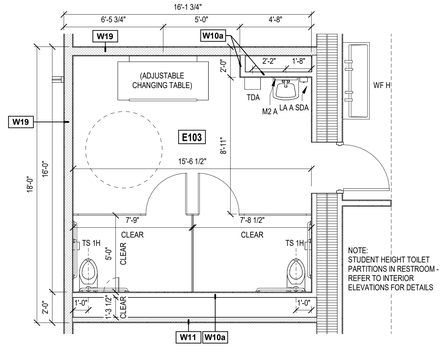
2 ENLARGED PLAN - TYP. PRESCHOOL CLASSROOM RESTROOM

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



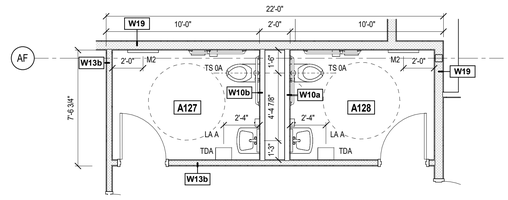
ENLARGED PLAN - TYPICAL PRESCHOOL MULTI-PURPOSE ROOM TOLIETS

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



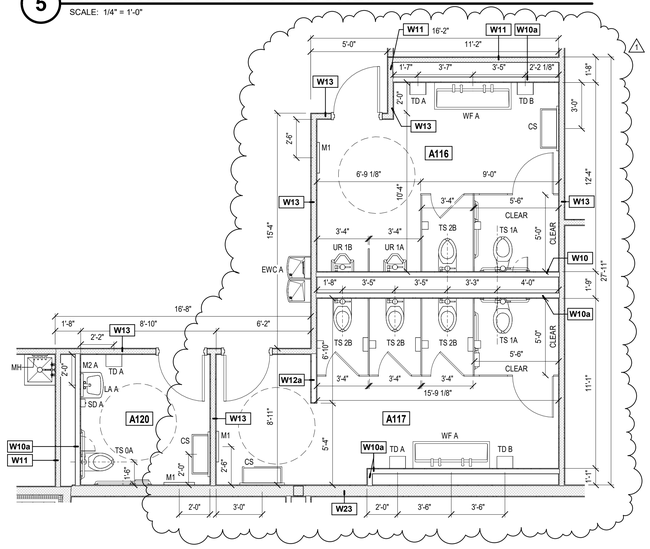
4 ENLARGED PLAN - TYP. DEVELOPMENTAL CLASSROOM RESTROOM

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



5 ENLARGED PLAN - A127/A128

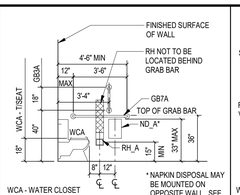
SCALE: 1/4" = 1'-0"



6 ENLARGED PLAN - A116/A117/A120

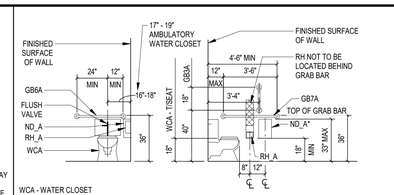
SCALE: 1/4" = 1'-0"

WATER CLOSETS AND ACCESSORIES



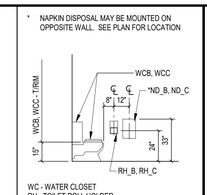
WCA - WATER CLOSET
GB_A - GRAB BAR
RH_A - TOILET ROLL HOLDER
ND_A - SANITARY NAPKIN DISPOSAL

AMBULATORY ADULT ADA WATER CLOSETS



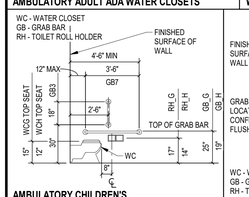
WCA - WATER CLOSET
GB_A - GRAB BAR
RH_A - TOILET ROLL HOLDER
ND_A - SANITARY NAPKIN DISPOSAL

WHEELCHAIR ADULT ADA WATER CLOSETS

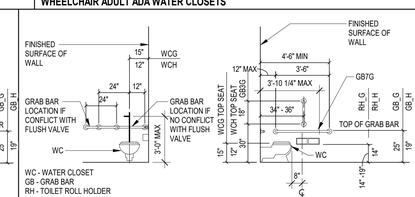


WC - WATER CLOSET
RH - TOILET ROLL HOLDER
ND - SANITARY NAPKIN DISPOSAL

STANDARD WATER CLOSETS
GRADES 7 AND ABOVE

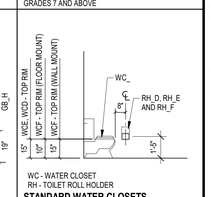


AMBULATORY CHILDREN'S ADA WATER CLOSETS



WC - WATER CLOSET
GB - GRAB BAR
RH - TOILET ROLL HOLDER

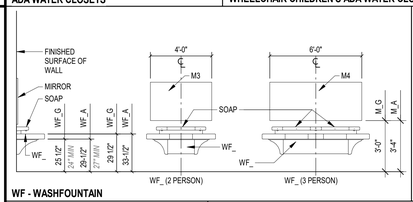
WHEELCHAIR CHILDREN'S ADA WATER CLOSETS



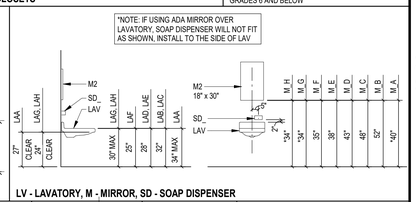
WC - WATER CLOSET
RH - TOILET ROLL HOLDER

STANDARD WATER CLOSETS
GRADES 6 AND BELOW

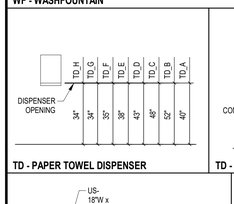
OTHER MISC. EQUIPMENT



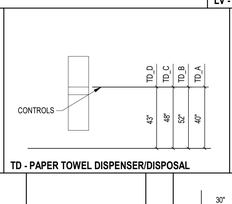
WF - WASHFOUNTAIN



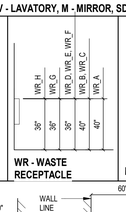
LV - LAVATORY, M - MIRROR, SD - SOAP DISPENSER



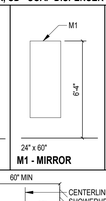
TD - PAPER TOWEL DISPENSER



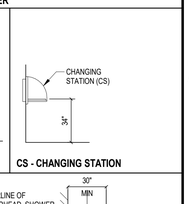
TD - PAPER TOWEL DISPENSER/DISPOSAL



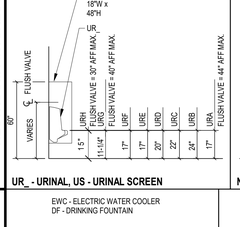
WR - WASTE RECEPTACLE



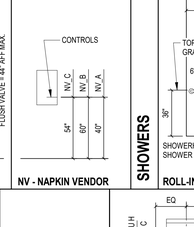
M1 - MIRROR



CS - CHANGING STATION

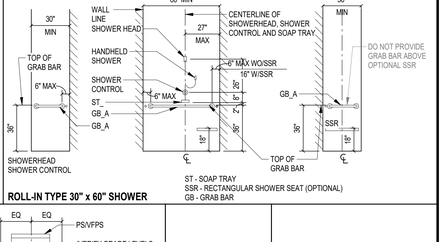


UR_ - URINAL, US - URINAL SCREEN



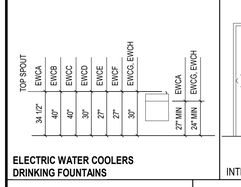
NV - NAPKIN VENDOR

SHOWERS

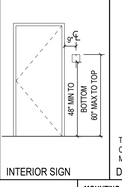


ROLL-IN TYPE 30" x 60" SHOWER

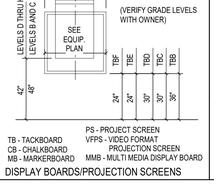
ST - SOAP TRAY
SSR - RECTANGULAR SHOWER SEAT (OPTIONAL)
GB - GRAB BAR



ELECTRIC WATER COOLERS DRINKING FOUNTAINS

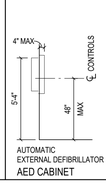


INTERIOR SIGN



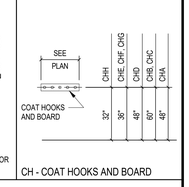
TB - TACKBOARD
CB - CHALKBOARD
MB - MARKERBOARD
PS - PROJECT SCREEN
VFPS - VIDEO FORMAT PROJECTION SCREEN
MMB - MULTI MEDIA DISPLAY BOARD

DISPLAY BOARDS/PROJECTION SCREENS

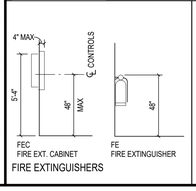


AUTOMATIC EXTERNAL DEFIBRILLATOR

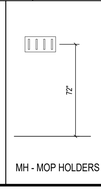
AED CABINET



CH - COAT HOOKS AND BOARD



FIRE EXTINGUISHERS



MH - MOP HOLDERS

MOUNTING HEIGHT NOTES:

1. MOUNTING HEIGHTS ARE BASED UPON THE FOLLOWING: TOILET, BATH AND LAUNDRY EQUIPMENT (ACCESSORIES), BOBRICK WASHROOM EQUIPMENT, INC. ; LAVATORIES, URINALS AND WATER CLOSETS, AMERICAN STANDARD, INC. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MOUNTING HEIGHTS OF TOILET ACCESSORIES SUPPLIED BY OTHER MANUFACTURERS.
2. MOUNTING HEIGHT DRAWING INDICATES A TWO PIECE GRAB BAR. GRAB BAR MAY BE A ONE PIECE OR A TWO PIECE GRAB BAR. REFER TO SPECIFICATIONS FOR SPECIFIC TYPE OF GRAB BAR TO BE USED.
3. UNDERSCORE (_): REFER TO ENLARGED PLANS FOR MISSING NUMBER IDENTIFYNG THE SPECIFIC TYPE OF TOILET ACCESSORY

GRAB BAR SCHEDULE
(ALL SIZES MAY NOT BE USED ON THIS PROJECT)

GB1 - 36" x 54" TWO WALL
GB2 - 36"x36" TWO WALL
GB3 - 18" STRAIGHT
GB4 - 24" STRAIGHT
GB5 - 30" STRAIGHT
GB6 - 36" STRAIGHT
GB7 - 42" STRAIGHT
GB8 - 48" STRAIGHT

MIRROR SCHEDULE
(ALL SIZES MAY NOT BE USED ON THIS PROJECT)

M1 - 24"W x 60"H
M2 - 18"W x 30"H
M3 - 48"W x 30"H
M4 - 60"W x 30"H

SAMPLE TOILET ACCESSORY LABELING:

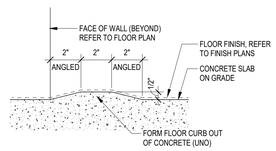
RH1A

RH INDICATES TOILET ACCESSORY NAME (RH = TOILET ROLL HOLDER
1 INDICATES TOILET ACCESSORY TYPE WHEN MORE THAN ONE TYPE IS SPECIFIED (IF NO NUMBER IS USED, ONLY ONE TYPE IS SPECIFIED)
A INDICATES THE GRADE LEVEL, WHICH DETERMINES THE MOUNTING HEIGHT

W/CA INDICATES PLUMBING FIXTURE AT MOUNTING HEIGHT "A". REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURE SCHEDULE

GRADE LEVEL LEGEND:

A. ADULT ACCESSIBLE (ADA) HEIGHTS (GRADES 7 AND ABOVE)
B. GRADES 9 AND ABOVE (ADULTS)
C. GRADES 7-8
D. GRADES 4-6
E. GRADES 1-3
F. PRESCHOOL-KINDERGARTEN
G. CHILDREN'S ACCESSIBLE (ADA) HEIGHTS (K-6)
H. CHILDREN'S ACCESSIBLE (ADA) HEIGHTS (PRESCHOOL)



7 DETAIL - SHOWER CURB

SCALE: 3" = 1'-0"

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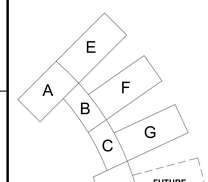


KEY PLAN

N

ISSUED FOR BID

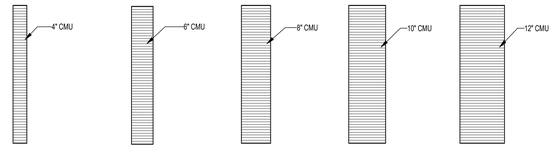
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

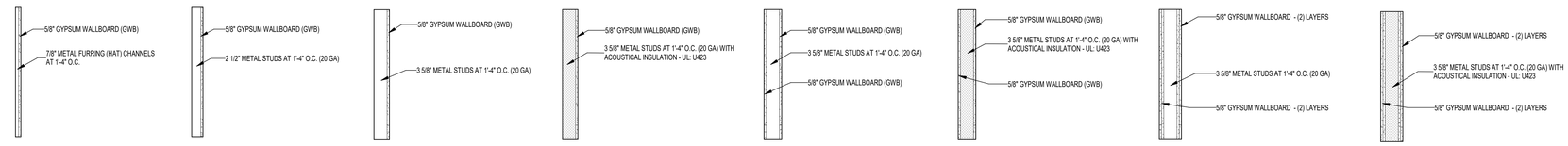
REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

ENLARGED TOILET ROOM PLANS

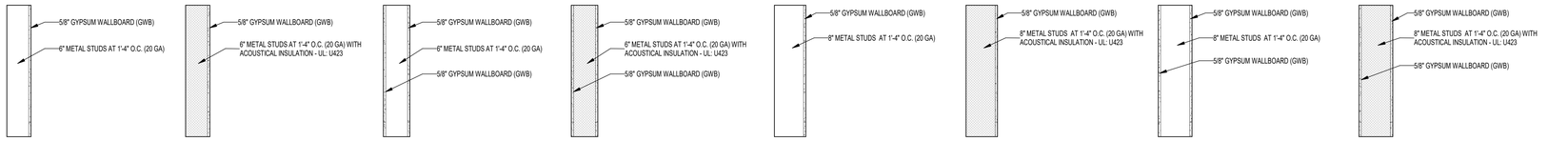
AE401



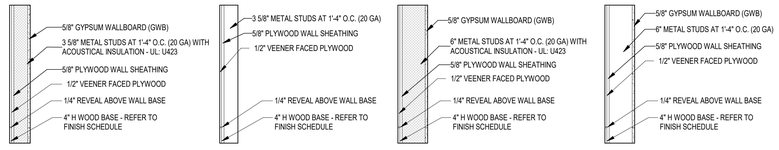
W1 W2 W3 W4 W5



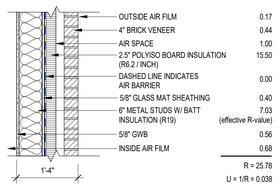
W8 W9 W10 W11 W12 W13 W14 W15



W16 W17 W18 W19 W20 W21 W22 W23

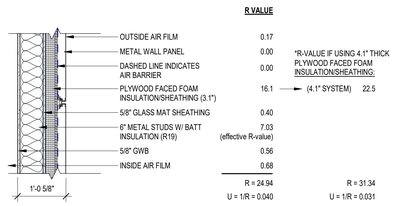


W24 W25 W26 W27



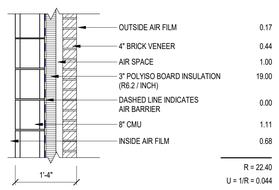
TYPICAL EXTERIOR WALL ASSEMBLY (6" METAL STUD / BRICK)

EXACT COMPOSITION MAY VARY BASED ON AIR BARRIER/INSULATION SYSTEM SELECTED



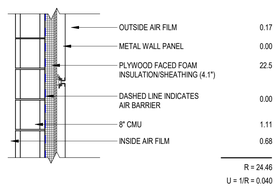
TYPICAL EXTERIOR WALL ASSEMBLY (6" METAL STUD / METAL WALL PANEL)

EXACT COMPOSITION MAY VARY BASED ON AIR BARRIER/INSULATION SYSTEM SELECTED



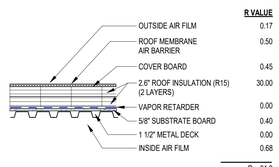
TYPICAL EXTERIOR WALL ASSEMBLY (8" CMU / BRICK)

EXACT COMPOSITION MAY VARY BASED ON AIR BARRIER/INSULATION SYSTEM SELECTED



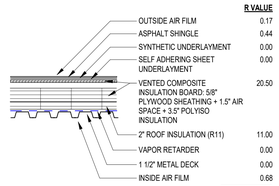
TYPICAL EXTERIOR WALL ASSEMBLY (8" CMU / METAL WALL PANEL)

EXACT COMPOSITION MAY VARY BASED ON AIR BARRIER/INSULATION SYSTEM SELECTED

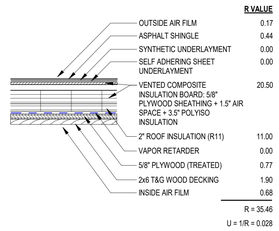


TYPICAL LOW SLOPE ROOF ASSEMBLY

EXACT VALUE VARIES BASED ON TAPERED INSULATION THICKNESS



TYPICAL ASPHALT SHINGLE ON METAL DECK



TYPICAL ASPHALT SHINGLE ON T&G DECK

ROOF/WALL ASSEMBLIES

GYPSUM WALLBOARD SCHEDULE

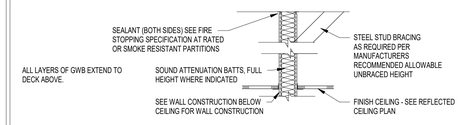
LOCATION / TYPE	MOISTURE-AND-MOLD-RESISTANT GYPSUM BOARD (WGWB)	ABUSE RESISTANT AND MOISTURE-AND-MOLD-RESISTANT GYPSUM BOARD [ARGB] TO 8'-0" AFF. MOISTURE-AND-RESISTANT GYPSUM BOARD ABOVE 8'-0" AFF	GLASS-MAT WATER RESISTANT TILE BACKING BOARD BEHIND AREAS TO RECEIVE TILE	CEMENTITIOUS BACKING BOARD BEHIND AREAS TO RECEIVE TILE ("WET WALLS")
CLASSROOMS, LABS, COLLABORATION, AND OTHER STUDENT OCCUPIED SPACES		●		
STUDENT RESTROOMS (EXCEPT WET WALLS)		●	●	
PLUMBING FIXTURE WALLS IN RESTROOMS (WET WALLS)				●
MULTI-PURPOSE		●		
STAFF OFFICES, STAFF HALLWAYS, WORKROOMS, RECEPTION AND WAITING AREAS, CLINIC AND COUNSELING	●			
STAFF AND SINGLE STALL RESTROOMS (EXCEPT WET WALLS THAT RECEIVE TILE)	●		●	
LOBBIES, VESTIBULES, CORRIDORS, STAIRWELLS AND HALLWAYS			●	
MECHANICAL, ELECTRICAL, DATA, CUSTODIAL AND STORAGE ROOMS	●			
BULKHEADS AND CEILINGS	●			

NOTES:
1. WET WALLS: WALLS WITH PLUMBING FIXTURES MOUNTED ON THEM AND WALLS IN SHOWER OR SIMILAR AREAS THAT WILL BE INTERMITTENTLY WET.
2. REFER TO INTERIOR DRAWINGS FOR LOCATIONS DIRECTED TO RECEIVE TILE.
3. * AT ABUSE RESISTANT GWB LOCATIONS WITH (2) LAYERS OF GYPSUM BOARD, ONLY THE OUTSIDE LAYER OF GYPSUM BOARD SHALL BE ABUSE RESISTANT. INNER LAYER SHALL BE MOISTURE-AND-MOLD-RESISTANT GWB.

WALL CONSTRUCTION ABOVE CEILING

NOTES: ALL WALLTYPES WITHOUT AN ABOVE CEILING LETTER SHALL EXTEND TO ROOF OR FLOOR DECK ABOVE IN THEIR ENTIRETY.

AN (*) AFTER THE WALLTYPE NUMBER INDICATES WALL TO BE GROUTED SOLID FOR SOUND DEADENING PURPOSES. REFER TO STRUCTURAL DRAWINGS FOR OTHER GROUTING AND REINFORCING REQUIREMENTS.



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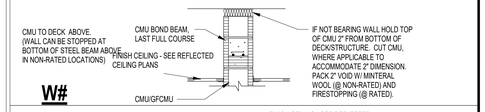

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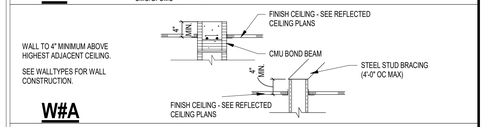

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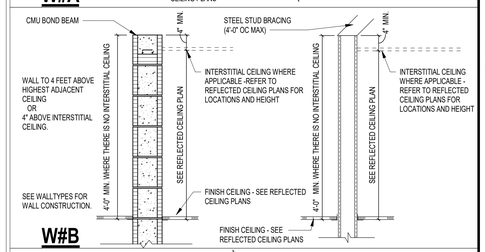

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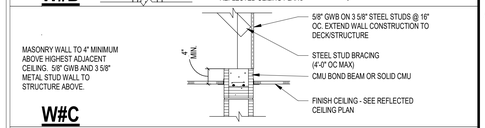

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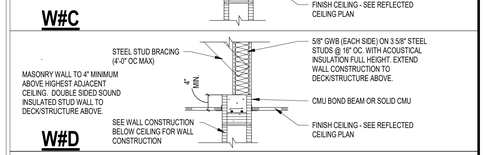
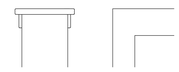


WALL DOES NOT EXTEND TO CEILING. WALL EXTENDS TO A CAP, FLOATING BULKHEAD, OR STOPS AT A SPECIFIC ELEVATION. REFER TO INTERIOR ELEVATIONS AND DETAILS.



W#E

W1A

WALL TYPE GENERAL NOTES

1. WALL TYPE AS SHOWN "1" REFERS TO WALL CONSTRUCTION BELOW CEILING, "A" REFERS TO WALL CONSTRUCTION ABOVE CEILING
2. REFER TO CODE PLANS FOR RATED WALLS EXTENDING TO DECK.
3. REFER TO INTERIOR FINISH PLANS AND LIST OF FINISHES FOR WALL FINISHES.
4. REFER TO STRUCTURAL DRAWINGS FOR HORIZONTAL AND VERTICAL REINFORCING AT MASONRY WALLS.
5. PROVIDE DEEP LEG TRACK AT ALL STEEL STUDS THAT EXTEND TO DECK/STRUCTURE ABOVE (UNO).
6. PACK VOIDS AT NON-RATED WALLS W/ MINERAL WOOL.
7. PROVIDE SOUND ATTENUATION BLANKETS AT WALLS THAT REQUIRE ACOUSTICAL INSULATION OR SOUND RATED CONSTRUCTION.
8. REFER TO INTERIOR ENLARGED AND INTERIOR ELEVATIONS FOR LOCATION OF GROUND FACE & SPLIT FACE CMU.

2

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ARCHITECT

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350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

ISSUED FOR BID

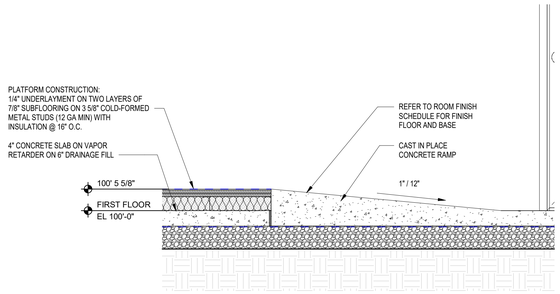
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

WALL TYPES AND DETAILS

AE501



8 BOARDROOM RAMP SECTION

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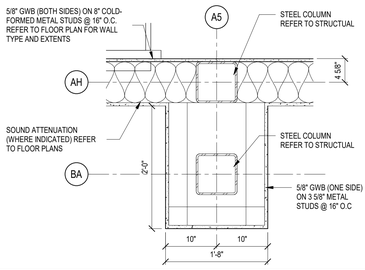

9 DETAIL

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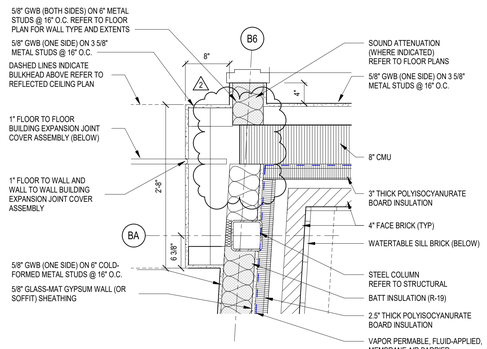

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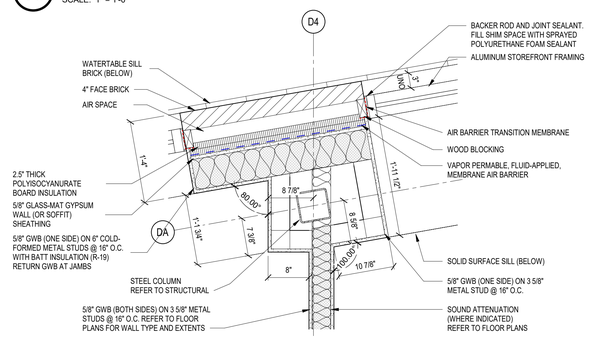

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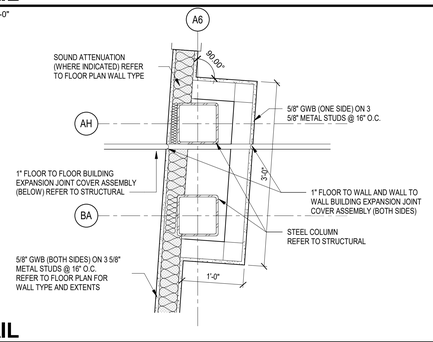

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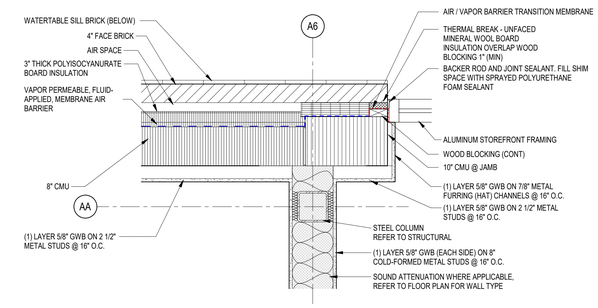

4 PLAN DETAIL

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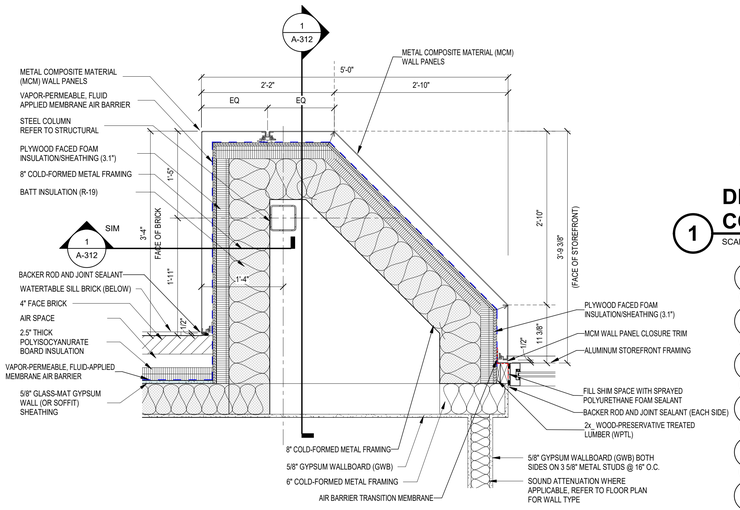

5 PLAN DETAIL - MCM PANEL PROJECTION

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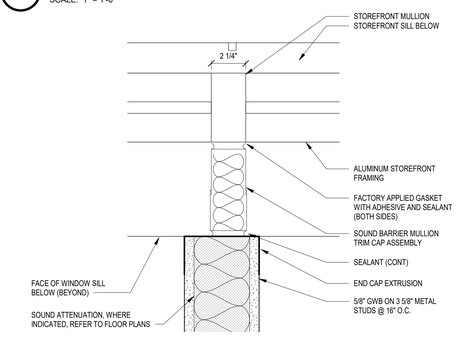

6 DETAIL

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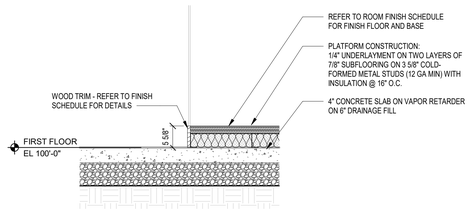

7 PLATFORM DETAIL

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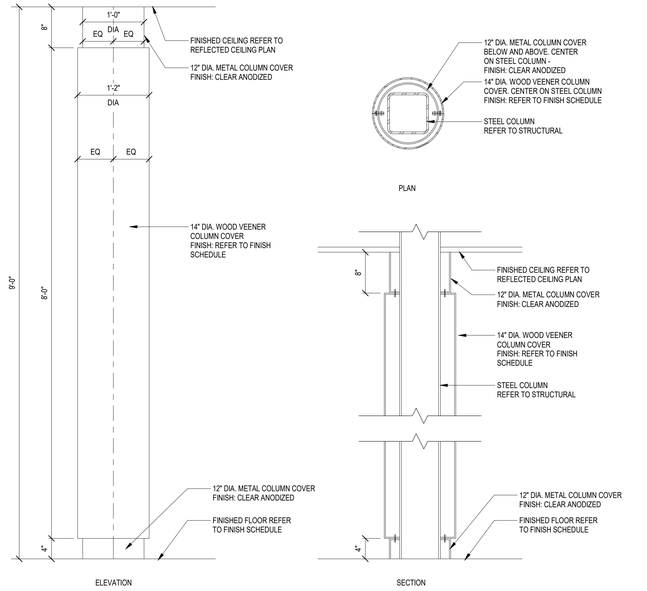

1 DETAIL - INTERIOR WOOD VENEER COLUMN COVER

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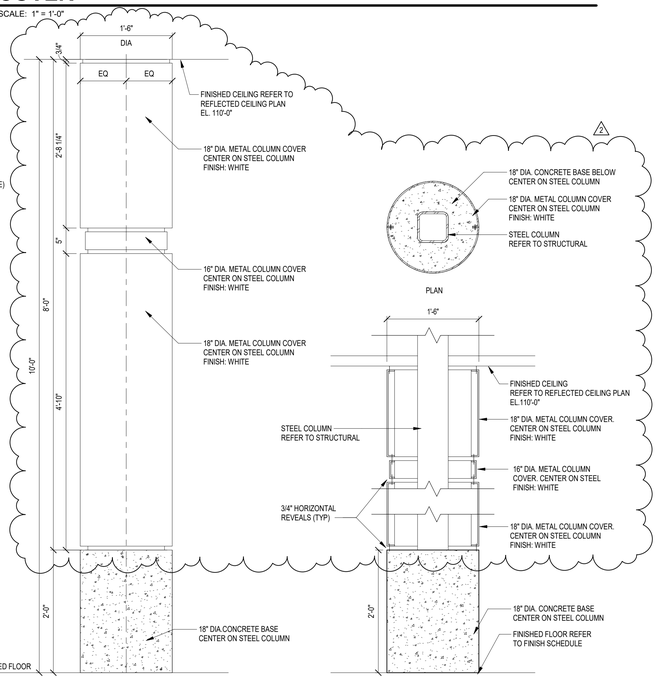

2 DETAIL - EXTERIOR METAL COLUMN COVER

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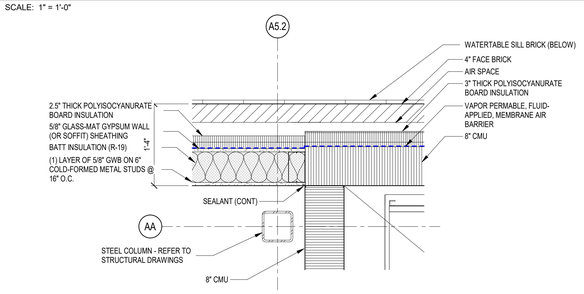

3 PLAN DETAIL

SCALE: 1" = 1'-0"

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DETAILS

AE503

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DETAILS

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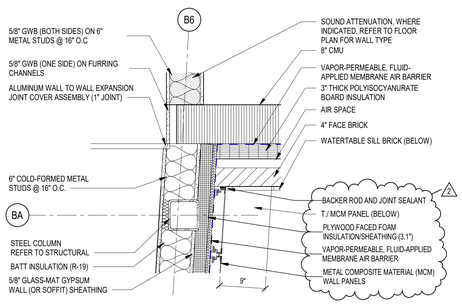

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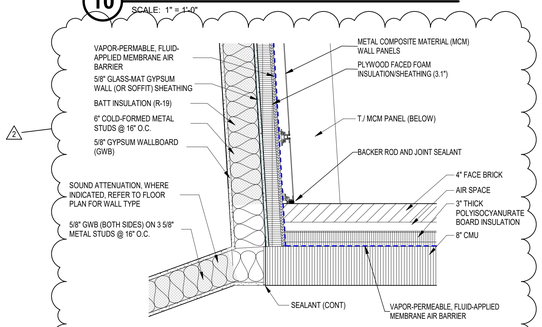

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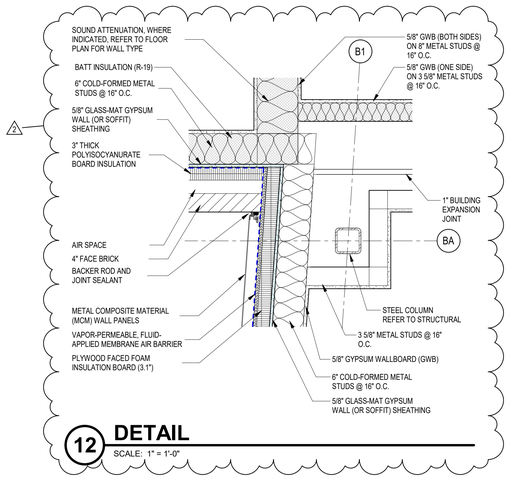

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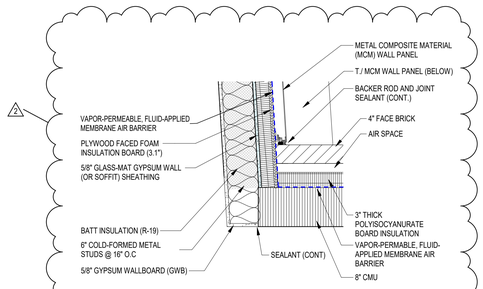

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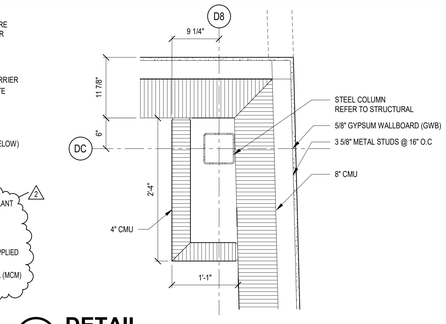

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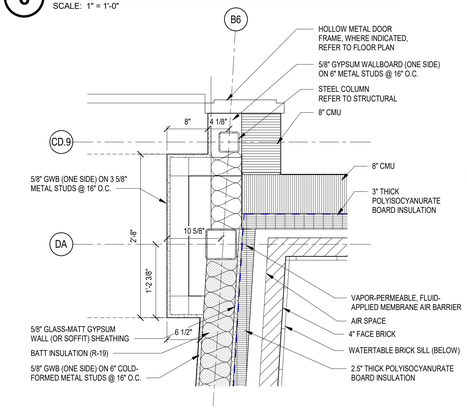

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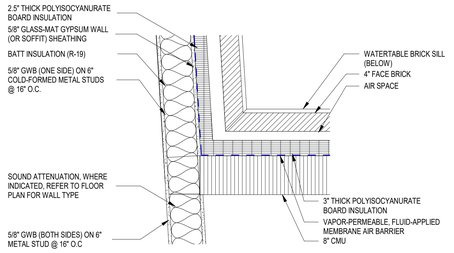

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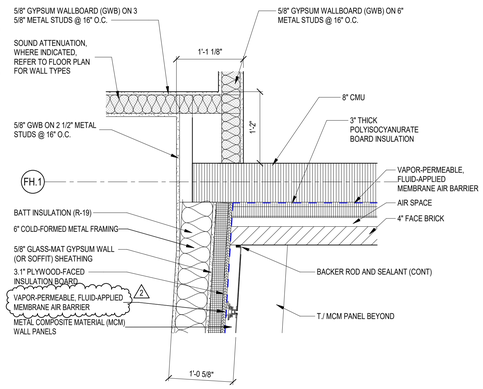

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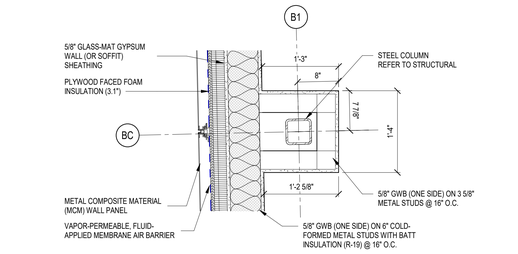

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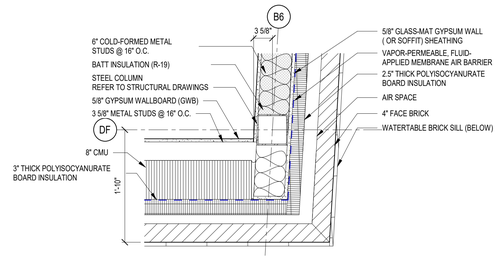

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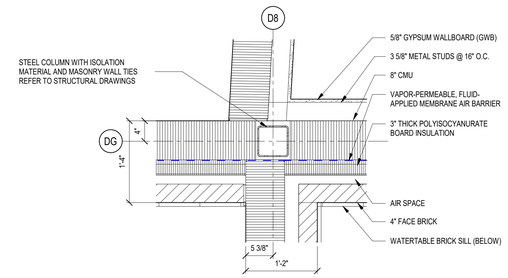

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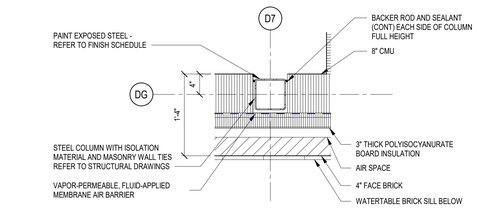

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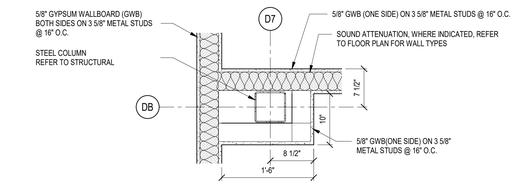

5 DETAIL
SCALE: 1" = 1'-0"

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1 SECOND FLOOR CEILING PLAN - UNIT A

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A124	BOARD ROOM	3,703 SF
A129	CORRIDOR	1,544 SF
A201	MECHANICAL ROOM	1,932 SF
A202	LOBBY	457 SF
A203	CONFERENCE ROOM	316 SF
A204	CONFERENCE ROOM	600 SF
A205	TEAM SAFETY	1,067 SF
A206	MECHANICAL ROOM	556 SF
A207	CORRIDOR	244 SF
A208	SAFETY STORAGE	155 SF
A209	STORAGE	192 SF
A210	CORRIDOR	596 SF
A211	HR CONFERENCE	164 SF
A212	TOUCHDOWN OFFICE	150 SF
A213	STORAGE	164 SF
A214	CORRIDOR	230 SF
A215	TOILET	77 SF
A216	LOBBY	227 SF
A217	OFFICE	161 SF
A218	STORAGE	166 SF
B202	DIRECTOR	224 SF
B203	PASSAGE	156 SF
B204	OFFICE	161 SF
B205	OFFICE	160 SF
B208	CORRIDOR	384 SF
B209	DIRECTOR OF CURRICULUM	188 SF
B210	CURRICULUM OFFICE	173 SF
B213	LOBBY	173 SF
E201	INTERSTITIAL SPACE	2,258 SF
E-1	ELEVATOR	58 SF
S-1	STAIR	382 SF

REFLECTED CEILING PLAN NOTES

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAIL ??-A9.1.

B. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK

REFLECTED CEILING NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	FINISH CEILING CLOUD WITH 4" PERIMETER TRIM
2	LINEAR METAL CEILING CLOUD WITH 4" PERIMETER TRIM
3	GWB BULKHEAD, REFER TO 15/A-501
9	GWB BULKHEAD, REFER TO 5/AC501
11	GWB BULKHEAD, REFER TO 7/AC501
13	GWB BULKHEAD, REFER TO 9/AC501
17	WOOD VENEER BULKHEAD, REFER TO 10/AC501
20	1" ACT TO ACT BUILDING EXPANSION JOINT COVER
27	1" ACT TO GWB WALL BUILDING EXPANSION JOINT COVER

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- XX'-XX" — INDICATES CEILING HEIGHT
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- IC — RECESSED CEILING SPEAKER
- M — MOTION DETECTOR
- CEILING MOUNTED EXIT LIGHT
- CAM — CEILING MOUNTED CAMERA
- W — WIRELESS ACCESS POINT (WAP)
- CJ — CONTROL JOINT IN GYPSUM BOARD CEILING OR BULKHEAD
- S — SOUND REINFORCEMENT SPEAKER
- H — FIRE ALARM HEAT DETECTOR
- F — FIRE ALARM HORN STROBE
- S — FIRE ALARM SPEAKER STROBE
- F — FIRE ALARM STROBE
- P — FIRE ALARM SMOKE DETECTOR
- OCCUPANCY SENSOR
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING
- INTERIOR FINISH SYSTEM (IFS)
- LINEAR METAL CEILING
- EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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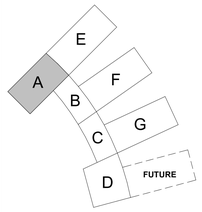

KEY PLAN

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PROJECT ISSUE DATE: 06.24.2025

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2	ADDENDUM #2	07.16.2025

SECOND FLOOR REFLECTED CEILING PLAN - UNIT A

AC108

1 SECOND FLOOR CEILING PLAN - UNIT B

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A124	BOARD ROOM	3,703 SF
A129	CORRIDOR	1,544 SF
A207	CORRIDOR	244 SF
A208	SAFETY STORAGE	155 SF
A209	STORAGE	192 SF
A210	CORRIDOR	596 SF
A217	OFFICE	161 SF
B201	MECHANICAL ROOM	1,923 SF
B202	DIRECTOR	224 SF
B203	PASSAGE	156 SF
B204	OFFICE	161 SF
B205	OFFICE	160 SF
B206	HR COORDINATION	199 SF
B207	DIRECTOR OF SAFETY	212 SF
B208	CORRIDOR	384 SF
B209	DIRECTOR OF CURRICULUM	188 SF
B210	CURRICULUM OFFICE	173 SF
B211	CURRICULUM OFFICE	151 SF
B212	DIRECTOR OF CURRICULUM	243 SF
B213	LOBBY	173 SF
B214	PASSAGE	78 SF
B215	CURRICULUM ADMIN ASST	175 SF
B216	LOBBY	316 SF
B217	PROGRAM DIRECTOR OF STUDENT SERVICES	243 SF
B218	ASSISTANT DIRECTOR	200 SF
B219	ASSISTANT DIRECTOR	190 SF
B220	DIRECTOR OF UNIFIED STUDENT SERVICES	245 SF
B221	SPECIAL EDUCATION OFFICE	153 SF
B222	SECURE STORAGE	63 SF
B223	SPECIAL EDUCATION ADMIN ASST	144 SF
B224	PASSAGE	263 SF
B225	SPECIAL ED STORAGE	151 SF
B226	CONFERENCE ROOM	206 SF
B227	TOUCHDOWN AREA	72 SF
B228	STORAGE	63 SF
B229	PUBLIC RELATIONS	190 SF
B230	CORRIDOR	569 SF
B231	CUSTODIAL	60 SF
B232	RESTROOM	260 SF
B233	RESTROOM	245 SF
B234	CORRIDOR	170 SF
B235	CORRIDOR	414 SF
B236	LOBBY	246 SF
B237	OFFICE LIBRARY	266 SF
B238	SUPERINTENDENT	445 SF
C204	ADMIN. ASSISTANT	164 SF
C207	PASSAGE	138 SF

REFLECTED CEILING PLAN NOTES

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAIL ??-A9.1.

B. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK

REFLECTED CEILING NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
6	GWB BULKHEAD, REFER TO 1/AC501
9	GWB BULKHEAD, REFER TO 5/AC501
11	GWB BULKHEAD, REFER TO 7/AC501
15	OPEN TO STRUCTURE ABOVE - PAINT EXPOSED , REFER TO FINISH SCHEDULE
17	WOOD VENEER BULKHEAD, REFER TO 10/AC501
20	1" ACT TO ACT BUILDING EXPANSION JOINT COVER
27	1" ACT TO GWB WALL BUILDING EXPANSION JOINT COVER
28	GWB BULKHEAD, REFER TO 12/AC501

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- XX'-XX" — INDICATES CEILING HEIGHT
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- IC — RECESSED CEILING SPEAKER
- M — MOTION DETECTOR
- CEILING MOUNTED EXIT LIGHT
- CAM — CEILING MOUNTED CAMERA
- W — WIRELESS ACCESS POINT (WAP)
- CJ — CONTROL JOINT IN GYPSUM BOARD CEILING OR BULKHEAD
- S — SOUND REINFORCEMENT SPEAKER
- H — FIRE ALARM HEAT DETECTOR
- F — FIRE ALARM HORN STROBE
- S — FIRE ALARM SPEAKER STROBE
- V — FIRE ALARM STROBE
- P — FIRE ALARM SMOKE DETECTOR
- OCCUPANCY SENSOR
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING
- INTERIOR FINISH SYSTEM (IFS)
- LINEAR METAL CEILING
- EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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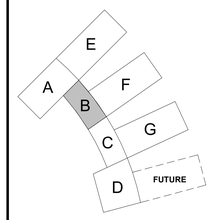

KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT/BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR REFLECTED CEILING PLAN - UNIT B

AC109

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1 SECOND FLOOR CEILING PLAN - UNIT C

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
B234	CORRIDOR	170 SF
B235	CORRIDOR	414 SF
C201	MECHANICAL ROOM	1,241 SF
C202	LOUNGE	988 SF
C203	TOUCHDOWN AREA	606 SF
C204	ADMIN. ASSISTANT	164 SF
C205	ASSISTANT SUPERINTENDENT	268 SF
C206	ASSISTANT SUPERINTENDENT	282 SF
C207	PASSAGE	138 SF
C208	HEAT PUMP CLOSET	51 SF
C209	STORAGE	103 SF
C210	SHARED CONFERENCE	406 SF
C211	CFO	353 SF
C212	BUSINESS OFFICE	152 SF
C213	BUSINESS OFFICE	231 SF
C214	CORRIDOR	236 SF
C215	BUSINESS OFFICE	156 SF
C216	LOBBY	215 SF
C217	STORAGE	102 SF
C218	BUSINESS OFFICE	153 SF
C219	BUSINESS OFFICE	154 SF
C220	TOILET	79 SF
C221	CUSTODIAL	78 SF
C222	SECURE STORAGE	149 SF
C223	FUTURE OFFICE	149 SF
C224	OPERATIONS OFFICE	167 SF
C225	DIRECTOR OF OPERATIONS	275 SF
C226	OPEN OFFICE	674 SF
C227	OFFICE	152 SF
C228	FUTURE OFFICE	153 SF
C229	CHIEF TECHNOLOGY OFFICER	238 SF
C230	TECH CONFERENCE	177 SF
C231	CORRIDOR	765 SF
C232	STORAGE	121 SF
C233	HEAT PUMP CLOSET	51 SF
E-2	ELEVATOR	75 SF
F201	INTERSTITIAL SPACE	2,246 SF
S-2	STAIR	346 SF

REFLECTED CEILING PLAN NOTES

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE.
B. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK

REFLECTED CEILING NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
8	GWB BULKHEAD, REFER TO 4/AC501
9	GWB BULKHEAD, REFER TO 5/AC501
11	GWB BULKHEAD, REFER TO 7/AC501
15	OPEN TO STRUCTURE ABOVE - PAINT EXPOSED , REFER TO FINISH SCHEDULE
16	CEILING BAFFLES - REFER TO FINISH SCHEDULE
17	WOOD VENEER BULKHEAD, REFER TO 10/AC501
28	GWB BULKHEAD, REFER TO 12/AC501 (2)

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- XX'-XX" — INDICATES CEILING HEIGHT
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- IC — RECESSED CEILING SPEAKER
- M — MOTION DETECTOR
- CEILING MOUNTED EXIT LIGHT
- CAM — CEILING MOUNTED CAMERA
- W — WIRELESS ACCESS POINT (WAP)
- CJ — CONTROL JOINT IN GYPSUM BOARD CEILING OR BULKHEAD
- S — SOUND REINFORCEMENT SPEAKER
- H — FIRE ALARM HEAT DETECTOR
- F — FIRE ALARM HORN STROBE
- FS — FIRE ALARM SPEAKER STROBE
- FV — FIRE ALARM STROBE
- P — FIRE ALARM SMOKE DETECTOR
- OCCUPANCY SENSOR
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING
- INTERIOR FINISH SYSTEM (IFS)
- LINEAR METAL CEILING
- EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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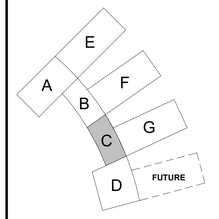


KEY PLAN

N

ISSUED FOR BID

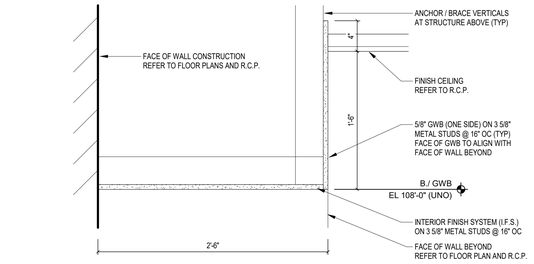
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT/BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

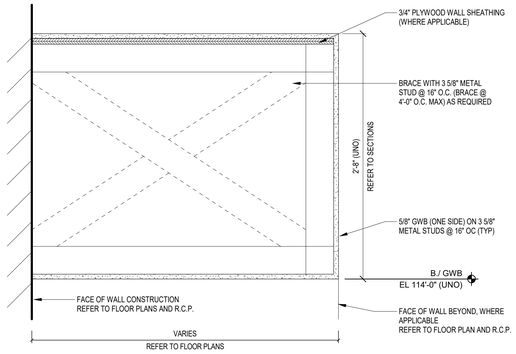
REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR REFLECTED CEILING PLAN - UNIT C

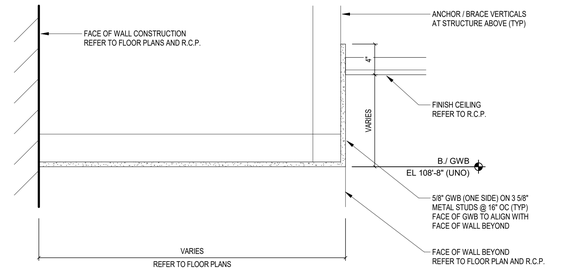
AC110



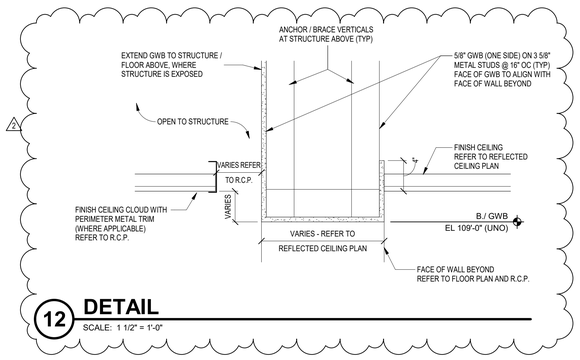
11 **DETAIL**
SCALE: 1 1/2" = 1'-0"



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



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



12 **DETAIL**
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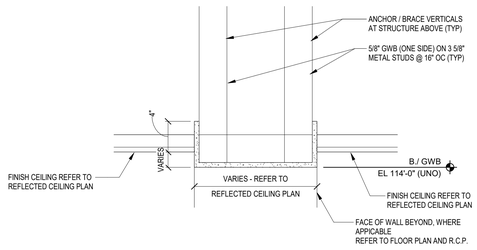
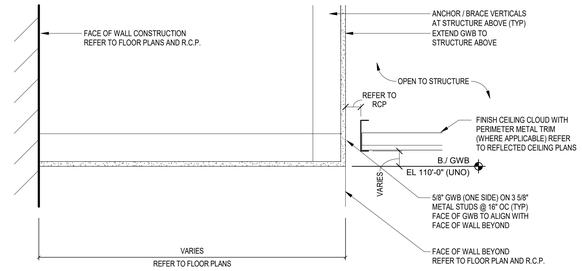
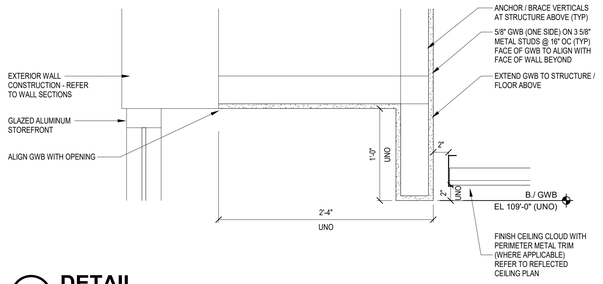


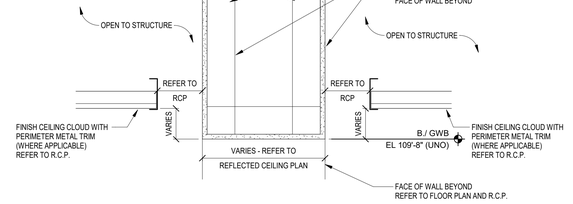
7 **DETAIL**
SCALE: 1 1/2" = 1'-0"



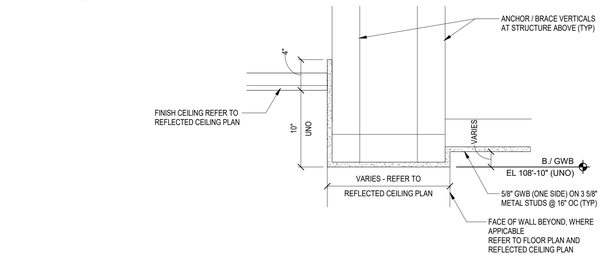
2 **DETAIL**
SCALE: 1 1/2" = 1'-0"



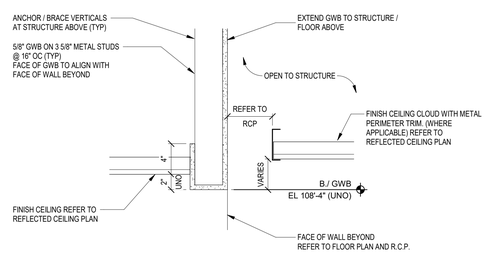
8 **DETAIL**
SCALE: 1 1/2" = 1'-0"



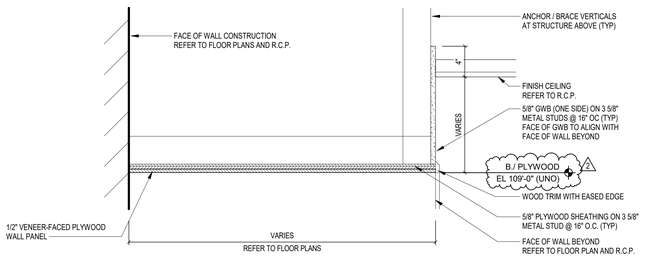
3 **DETAIL**
SCALE: 1 1/2" = 1'-0"



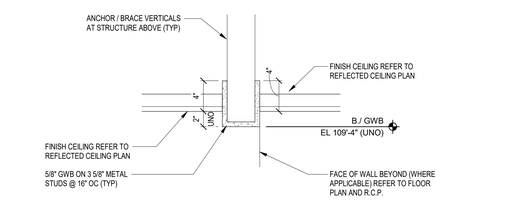
9 **DETAIL**
SCALE: 1 1/2" = 1'-0"



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



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



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

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ISSUED FOR BID

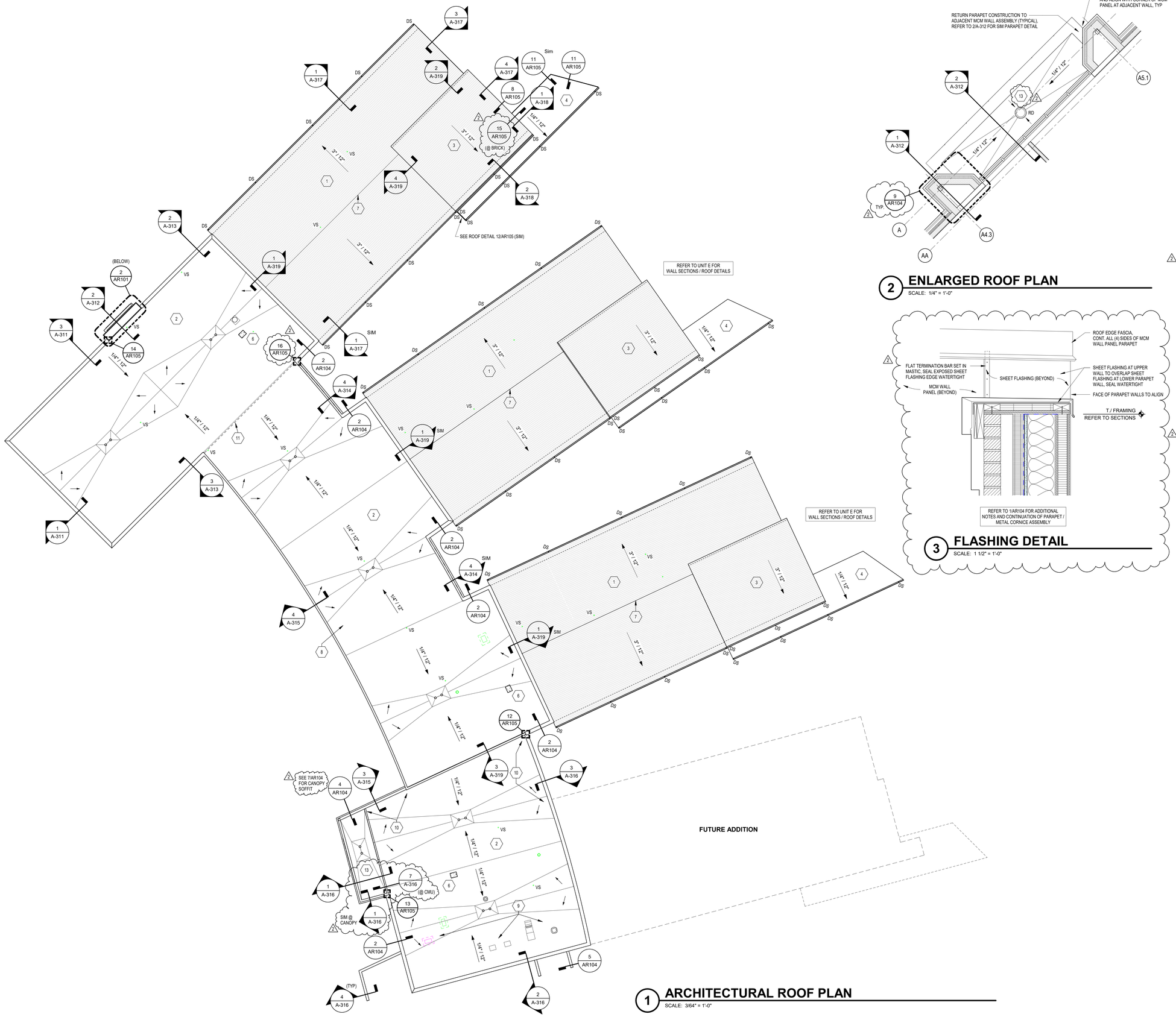
PAUL A. MILLER
REGISTERED
No. AR10800161
STATE OF
INDIANA
ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

CEILING DETAILS

AC501



1 ARCHITECTURAL ROOF PLAN

SCALE: 3/64" = 1'-0"

2 ENLARGED ROOF PLAN

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

3 FLASHING DETAIL

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

ROOF PLAN GENERAL NOTES

A. ALL DETAILS SHOWN ARE FOR GENERAL INFORMATION. ALL FINAL FLASHING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE ROOF INSTALLER, AND SHALL MEET APPROVAL OF ROOF MANUFACTURER.

B. ALL DETAIL MODIFICATIONS MUST HAVE SHOP DRAWINGS APPROVAL. CONTRACTOR SHALL INSPECT AND VERIFY ALL EXISTING FIELD CONDITIONS, CLEARANCES, AND DIMENSIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT ARCHITECT BEFORE PROCEEDING WITH ANY FURTHER WORK.

C. OPENINGS IN ROOF WILL BE CUT BY ROOF CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE LOCATION OF OPENING IN ROOF WITH ROOF CONTRACTOR. CURB TO BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY ROOF CONTRACTOR.

D. PROVIDE FLASHING AND SADDLES FOR ALL EQUIPMENT PROVIDED UNDER MECHANICAL.

E. SADDLES AND TAPERED INSULATION SYMBOLS INDICATE DESIGN INTENT TO SLOPE TO DRAIN. CONTRACTOR SHALL PROVIDE SUBMITTAL DRAWINGS FOR TAPERED INSULATION AND SADDLES TO INSURE POSITIVE SLOPE.

F. THE ROOF CONTRACTOR SHALL PROTECT ALL ROOF DRAINS, SCUPPERS, AND DOWNSPOUTS FROM DEBRIS CREATED DURING DEMOLITION AND CONSTRUCTION. THE ROOF CONTRACTOR SHALL INSPECT AND CLEAR ALL DRAINS, SCUPPERS, AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY.

G. MECHANICAL, ELECTRICAL AND PLUMBING INFORMATION SHOWN ON THIS PLAN IS GENERAL IN NATURE. REFER TO P, M AND E DRAWINGS FOR FURTHER INFORMATION AND COORDINATE ALL REQUIRED ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT.

ROOF PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	ROOF TYPE: SHINGLES ON SYNTHETIC UNDERLAYMENT ON SELF-ADHERING SHEET UNDERLAYMENT ON VENTED COMPOSITE NAIL BASE INSULATED ROOF SHEATHING ON VAPOR RETARDER ON SLOPING METAL ROOF DECK
2	ROOF TYPE: MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER TAPERED (1/4" / FT) ROOF INSULATION (R-VALUE: MIN. R14 AT ROOF DRAINS, R30 AVERAGE FOR TAPERED ASSEMBLY) ON VAPOR RETARDER OVER 5/8" SUBSTRATE BOARD ON FLAT METAL ROOF DECK
3	ROOF TYPE: SHINGLES ON SYNTHETIC UNDERLAYMENT ON SELF-ADHERING SHEET UNDERLAYMENT ON VENTED COMPOSITE NAIL BASE INSULATED ROOF SHEATHING ON VAPOR RETARDER OVER 5/8" EXTERIOR GRADE PLYWOOD ROOF SHEATHING ON 2x6 T&G WOOD DECKING
4	ROOF TYPE: MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER TAPERED (1/4" / FT) ROOF INSULATION MIN. 1/2" THICKNESS AT GUTTER ON VAPOR RETARDER OVER 5/8" EXTERIOR GRADE PLYWOOD ROOF SHEATHING ON 2x6 T&G WOOD DECKING
6	ROOF ACCESS HATCH AND LADDER (30x40) - REFER TO DETAIL 10/AR103 AND FLOOR PLAN FOR LOCATION
7	RIDGE VENT SYSTEM - REFER TO 10/AR105
8	PROVIDE ROOF ANCHOR POINTS ALONG ENTIRE ROOF PERIMETER @ 12'-0" MAX. SPACING. COORDINATE ANCHOR LOCATIONS WITH PHOTOVOLTAIC PANELS AND OTHER ROOFTOP EQUIPMENT
9	PROVIDE SINGLE ROOF ANCHOR POINT ADJACENT TO ROOFTOP EQUIPMENT (AS INDICATED)
10	PROVIDE ROOF ANCHOR POINTS ALONG ROOF PERIMETER (AS INDICATED) @ 12'-0" MAX. SPACING. COORDINATE ANCHOR LOCATIONS WITH ROOFTOP EQUIPMENT. ROOF ANCHORS SHOULD ANTICIPATE FUTURE PHOTOVOLTAIC PANELS TO BE INSTALLED ON THIS ROOF.
11	ROOF EXPANSION JOINT - REFER TO 9/AR105
13	ROOF TYPE: MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER TAPERED (1/4" / FT) ROOF INSULATION (MIN. 1/2" THICKNESS AT ROOF DRAIN) ON VAPOR RETARDER OVER 5/8" SUBSTRATE BOARD ON FLAT METAL ROOF DECK

ROOF PLAN LEGEND

- 12'-0" (UNO) / 12'-0" (UNO): INDICATES ROOF DRAIN (RD) AND OVERFLOW DRAIN (OD). (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.) REFER TO DETAIL 7/AR103
- VS: INDICATES VENT STACK - REFER TO PLUMBING DRAWINGS AND 3/AR103
- FL: INDICATES FLUE - REFER TO MECHANICAL DRAWINGS AND 3/AR103 (SIM)
- INDICATES MECHANICAL EQUIPMENT - REFER TO MECHANICAL DRAWINGS AND 2/AR103
- INDICATES ROOF SLOPE
- INDICATES ROOF SADDLE - REFER TO PROJECT MANUAL.
- INDICATES EXPANSION JOINT - REFER TO ROOF PLAN AND WALL SECTIONS.
- INDICATES WALL LINE BELOW - REFER TO ARCHITECTURAL FLOOR PLANS
- DS: INDICATES METAL DOWNSPOUT (4x4). REFER TO ROOF PLAN AND BUILDING ELEVATIONS FOR LOCATIONS.
- INDICATES WALKWAY PADS -REFER TO PROJECT MANUAL

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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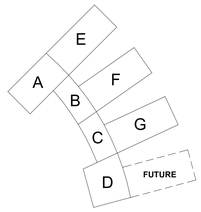


KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM

DRAWN BY: KT

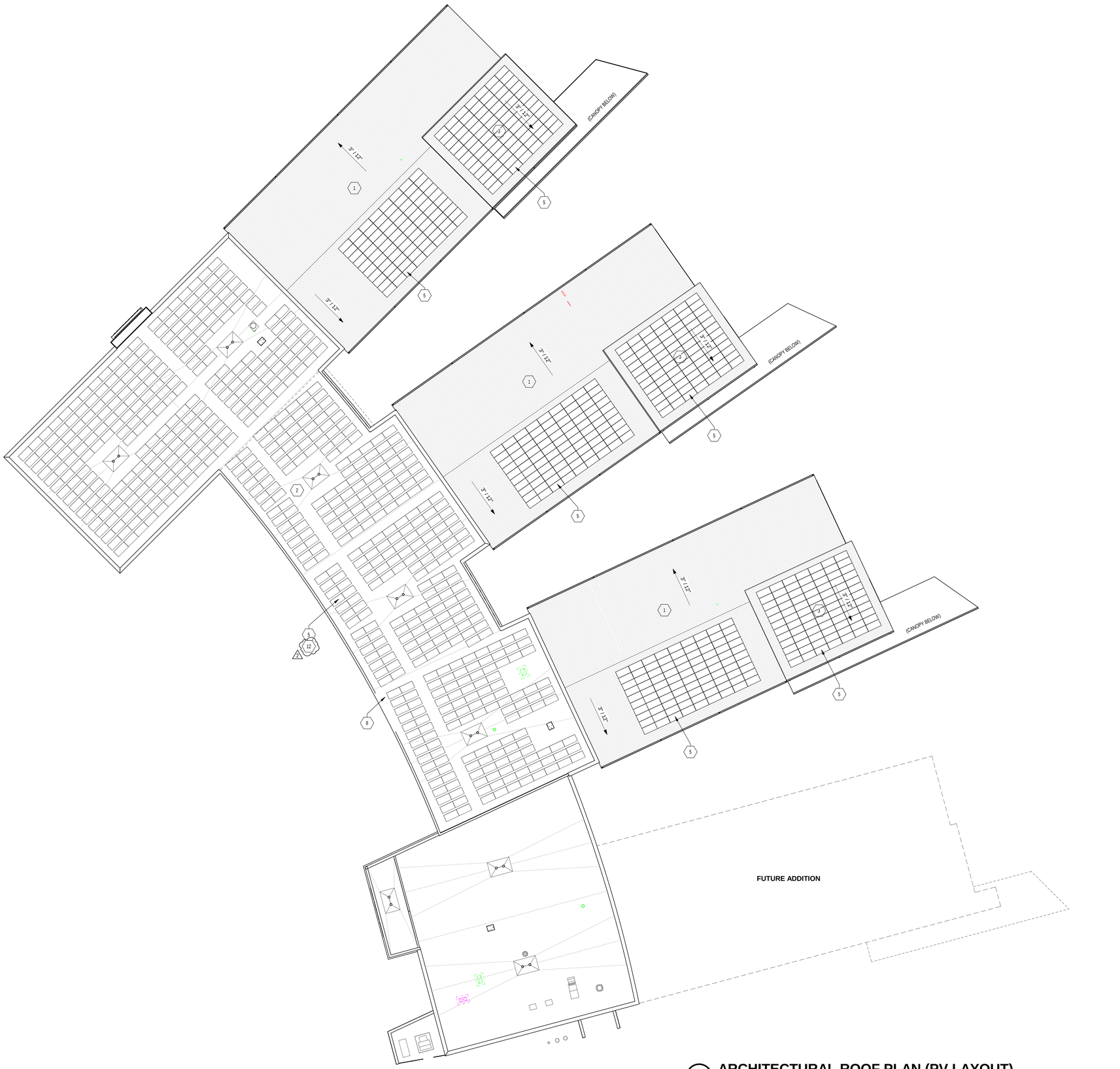
PROJECT NUMBER: 224033.00

PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

ROOF PLAN

AR101



1 ARCHITECTURAL ROOF PLAN (PV LAYOUT)

SCALE: 3/64" = 1'-0"

ROOF PLAN GENERAL NOTES

A. ALL DETAILS SHOWN ARE FOR GENERAL INFORMATION. ALL FINAL FLASHING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE ROOF INSTALLER, AND SHALL MEET APPROVAL OF ROOF MANUFACTURER.

B. ALL DETAIL MODIFICATIONS MUST HAVE SHOP DRAWINGS APPROVAL. CONTRACTOR SHALL INSPECT AND VERIFY ALL EXISTING FIELD CONDITIONS, CLEARANCES, AND DIMENSIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT ARCHITECT BEFORE PROCEEDING WITH ANY FURTHER WORK.

C. OPENINGS IN ROOF WILL BE CUT BY ROOF CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE LOCATION OF OPENING IN ROOF WITH ROOF CONTRACTOR. CURB TO BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY ROOF CONTRACTOR.

D. PROVIDE FLASHING AND SADDLES FOR ALL EQUIPMENT PROVIDED UNDER MECHANICAL.

E. SADDLES AND TAPERED INSULATION SYMBOLS INDICATE DESIGN INTENT TO SLOPE TO DRAIN. CONTRACTOR SHALL PROVIDE SUBMITTAL DRAWINGS FOR TAPERED INSULATION AND SADDLES TO INSURE POSITIVE SLOPE.

F. THE ROOF CONTRACTOR SHALL PROTECT ALL ROOF DRAINS, SCUPPERS, AND DOWNSPOUTS FROM DEBRIS CREATED DURING DEMOLITION AND CONSTRUCTION. THE ROOF CONTRACTOR SHALL INSPECT AND CLEAR ALL DRAINS, SCUPPERS, AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY.

G. MECHANICAL, ELECTRICAL AND PLUMBING INFORMATION SHOWN ON THIS PLAN IS GENERAL IN NATURE. REFER TO P, M AND E DRAWINGS FOR FURTHER INFORMATION AND COORDINATE ALL REQUIRED ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT.

ROOF PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	ROOF TYPE: SHINGLES ON SYNTHETIC UNDERLAYMENT ON SELF-ADHERING SHEET UNDERLAYMENT ON VENTED COMPOSITE NAIL BASE INSULATED ROOF SHEATHING ON VAPOR RETARDER ON SLOPING METAL ROOF DECK
2	ROOF TYPE: MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER TAPERED (1/4" / FT) ROOF INSULATION (R-VALUE: MIN. R14 AT ROOF DRAINS, R30 AVERAGE FOR TAPERED ASSEMBLY) ON VAPOR RETARDER OVER 5/8" SUBSTRATE BOARD ON FLAT METAL ROOF DECK
3	ROOF TYPE: SHINGLES ON SYNTHETIC UNDERLAYMENT ON SELF-ADHERING SHEET UNDERLAYMENT ON VENTED COMPOSITE NAIL BASE INSULATED ROOF SHEATHING ON VAPOR RETARDER OVER 5/8" EXTERIOR GRADE PLYWOOD ROOF SHEATHING ON 2x6 T&G WOOD DECKING
5	PHOTOVOLTAIC PANELS - REFER TO ELECTRICAL DRAWINGS
8	PROVIDE ROOF ANCHOR POINTS ALONG ENTIRE ROOF PERIMETER @ 12'-0" MAX. SPACING. COORDINATE ANCHOR LOCATIONS WITH PHOTOVOLTAIC PANELS AND OTHER ROOFTOP EQUIPMENT.
12	AS PART OF PHOTOVOLTAIC PANEL ASSEMBLY ALTERNATE, PROVIDE A PROTECTION SHEET MEMBRANE UNDER EACH ROW OR GROUPING OF PANEL ASSEMBLIES ON LOW-SLOPE MEMBRANE ROOF AREA ONLY

ROOF PLAN LEGEND

- 12'-0" (UNO) / 12'-0" (UNO): INDICATES ROOF DRAIN (RD) AND OVERFLOW DRAIN (OD). (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.) REFER TO DETAIL 7/AR103
- VS: INDICATES VENT STACK - REFER TO PLUMBING DRAWINGS AND 3/AR103
- FL: INDICATES FLUE - REFER TO MECHANICAL DRAWINGS AND 3/AR103 (SIM)
- INDICATES MECHANICAL EQUIPMENT - REFER TO MECHANICAL DRAWINGS AND 2/AR103
- INDICATES ROOF SLOPE
- INDICATES ROOF SADDLE - REFER TO PROJECT MANUAL.
- INDICATES EXPANSION JOINT - REFER TO ROOF PLAN AND WALL SECTIONS.
- INDICATES WALL LINE BELOW - REFER TO ARCHITECTURAL FLOOR PLANS
- DS: INDICATES METAL DOWNSPOUT (4x4). REFER TO ROOF PLAN AND BUILDING ELEVATIONS FOR LOCATIONS.
- INDICATES WALKWAY PADS -REFER TO PROJECT MANUAL

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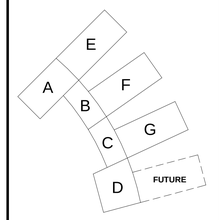


KEY PLAN

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM

DRAWN BY: KT

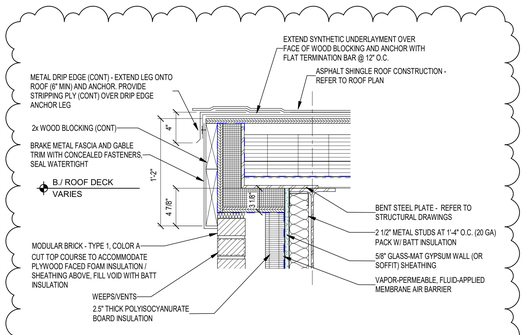
PROJECT NUMBER: 224033.00

PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

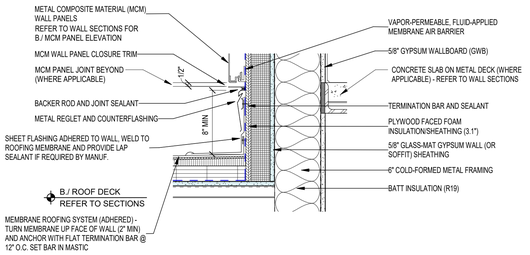
ROOF PLAN (PV LAYOUT)

AR102



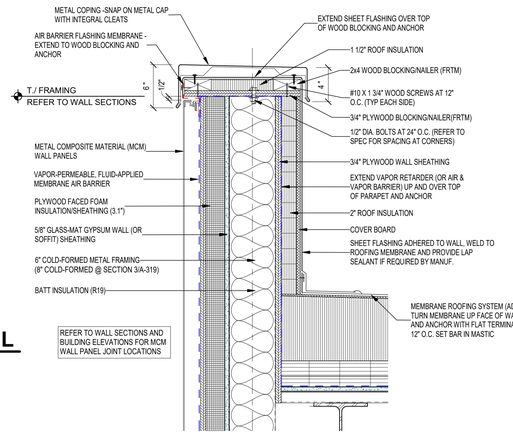
10 GABLE TRIM DETAIL (METAL DECK)

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



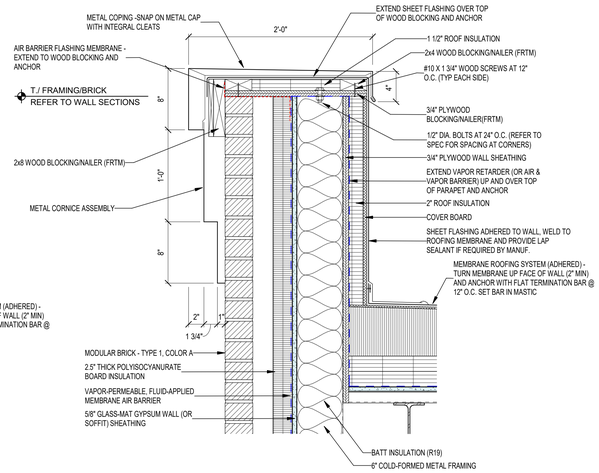
6 FLASHING DETAIL - MEMBRANE / MCM PANEL

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



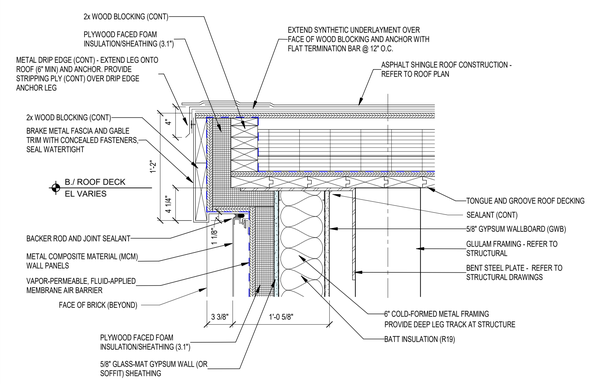
4 COPING DETAIL - MCM WALL PANEL

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



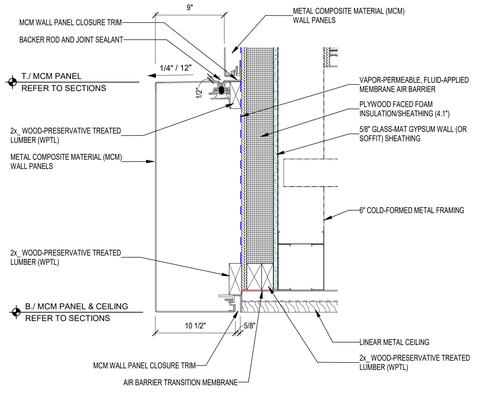
1 COPING/FASCIA DETAIL - STUDS

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



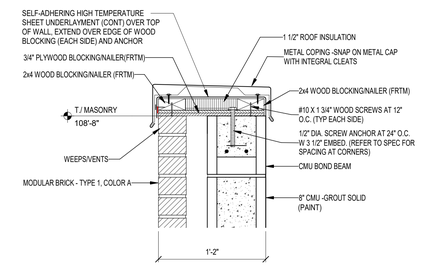
11 GABLE TRIM DETAIL (WOOD DECK)

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



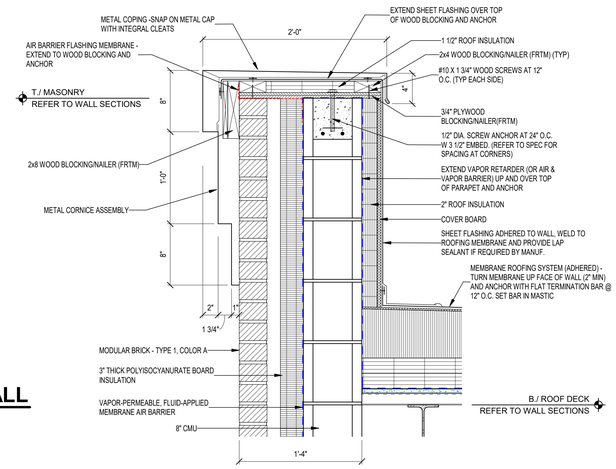
7 CANOPY SOFFIT EDGE DETAIL

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



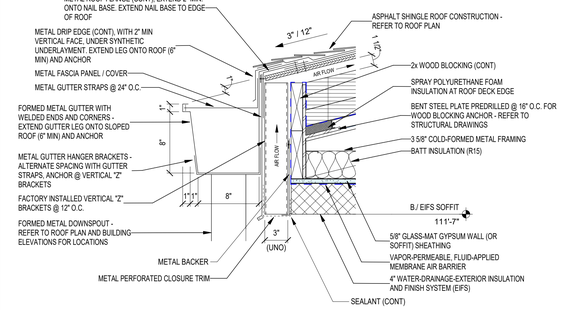
5 COPING DETAIL - MASONRY SCREEN WALL

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



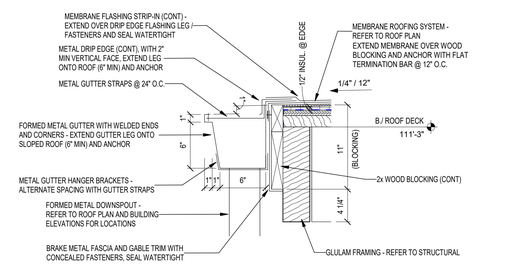
2 COPING/FASCIA DETAIL - CMU

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



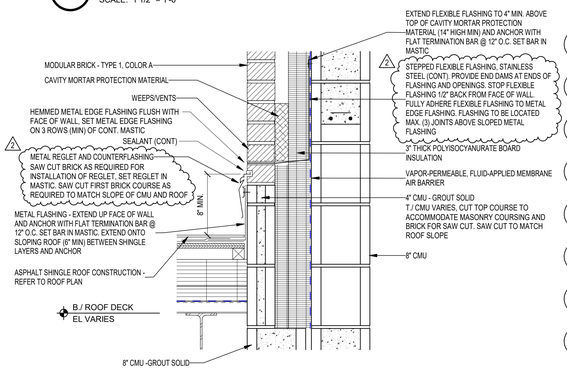
12 GUTTER DETAIL (METAL DECK)

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



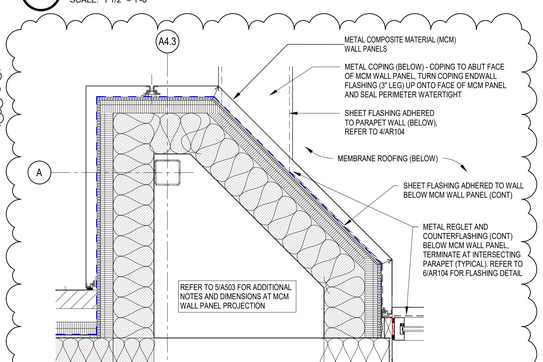
8 GUTTER DETAIL - CANOPY

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



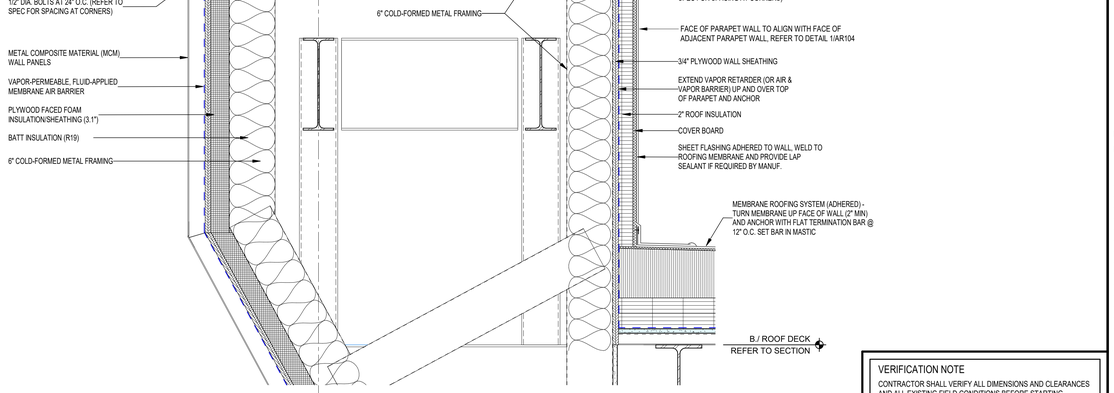
13 FLASHING DETAIL - SHINGLE / BRICK

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



9 ROOF PLAN DETAIL - PROJECTION

SCALE: 1" = 1'-0"



3 PARAPET DETAIL

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

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PAULA MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

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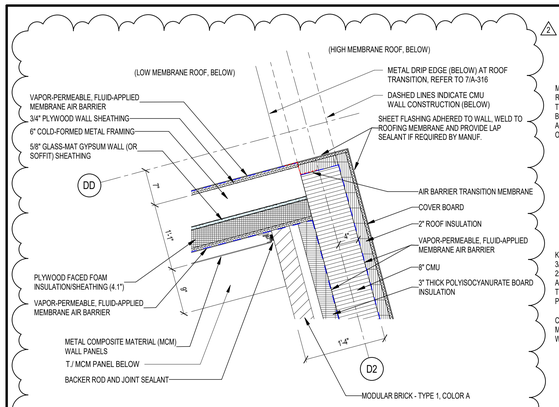
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

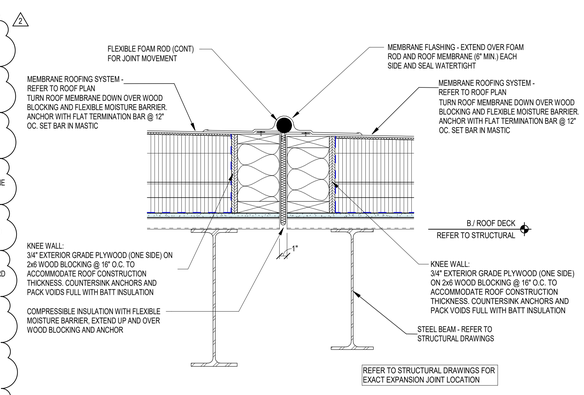
ROOF DETAILS

AR104



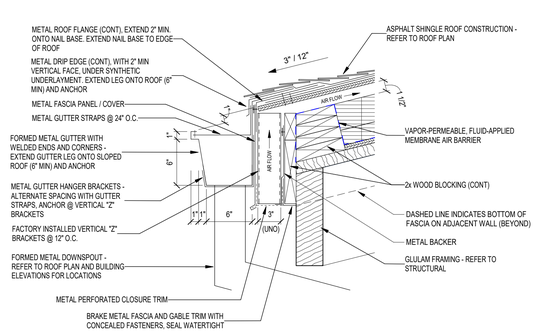
13 ROOF PLAN DETAIL

SCALE: 1" = 1'-0"



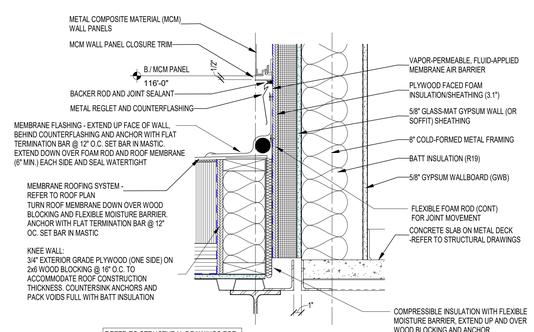
9 MEMBRANE ROOF EXPANSION JOINT

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



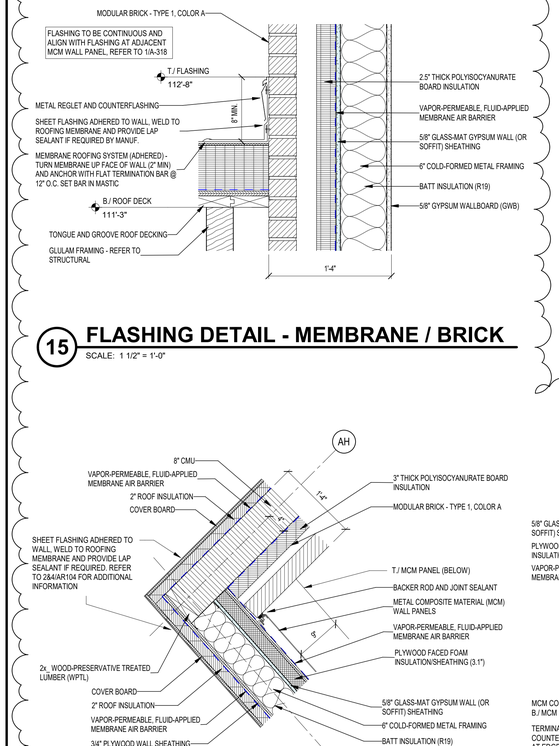
5 GUTTER DETAIL (WOOD DECK)

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



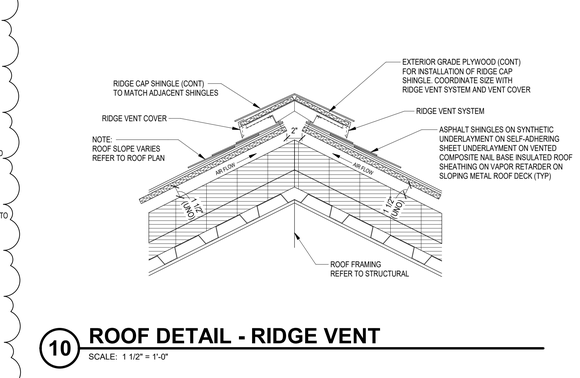
1 FLASHING DETAIL - MEMBRANE / MCM (EXPANSION JOINT)

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



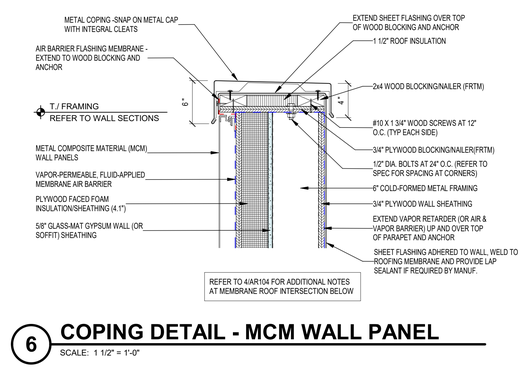
14 ROOF PLAN DETAIL

SCALE: 1" = 1'-0"



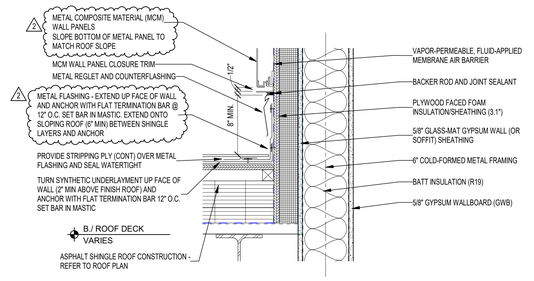
10 ROOF DETAIL - RIDGE VENT

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



6 COPING DETAIL - MCM WALL PANEL

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

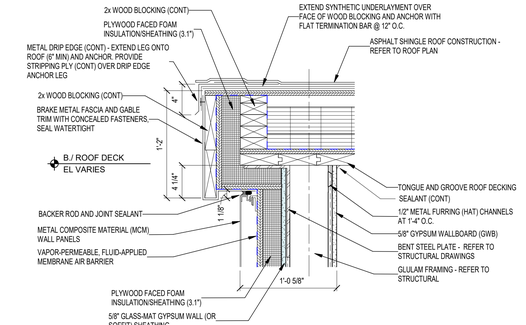


2 FLASHING DETAIL - SHINGLE / MCM PANEL

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

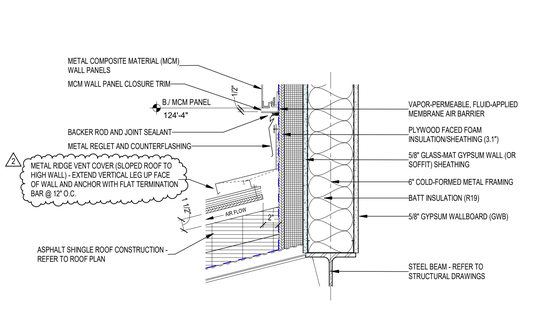
15 FLASHING DETAIL - MEMBRANE / BRICK

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



7 GABLE TRIM DETAIL (WOOD DECK - WEST)

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

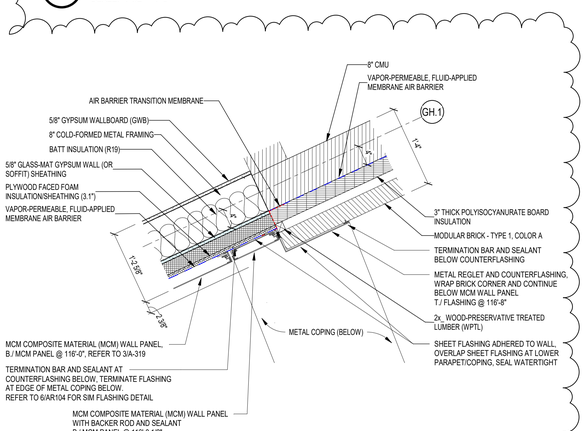


3 FLASHING DETAIL - SHINGLE TO MCM (VENT)

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

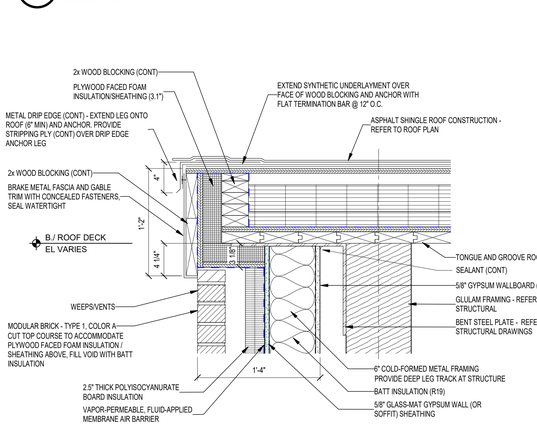
16 ROOF PLAN DETAIL

SCALE: 1" = 1'-0"



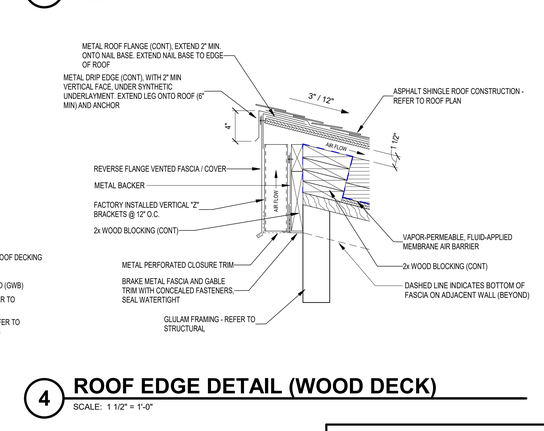
11 ROOF EDGE DETAIL - CANOPY

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



8 GABLE TRIM DETAIL (WOOD DECK @ BRICK)

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



4 ROOF EDGE DETAIL (WOOD DECK)

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

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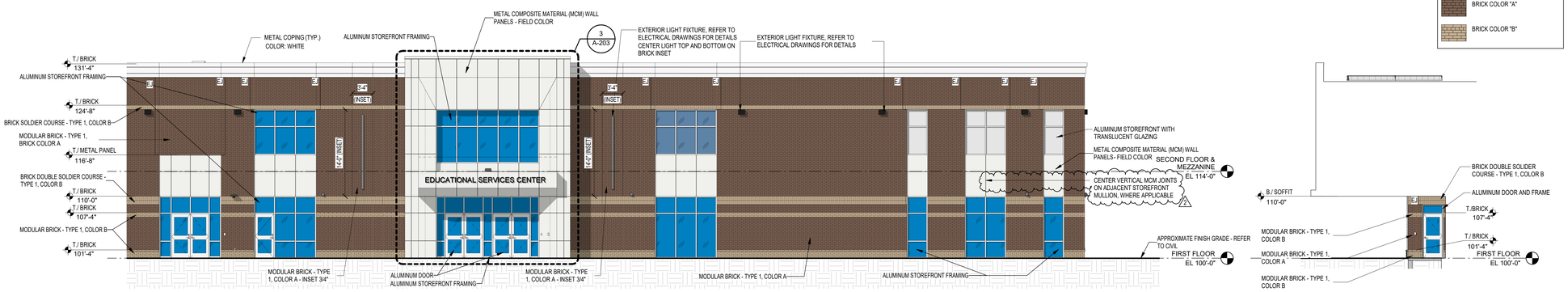
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

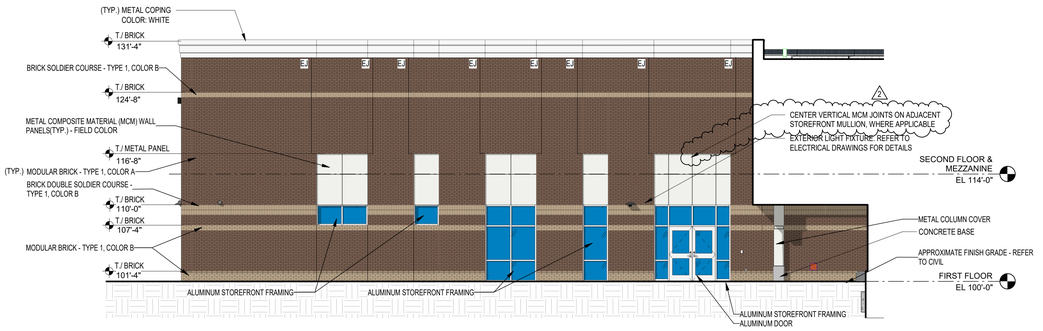
ROOF DETAILS

AR105



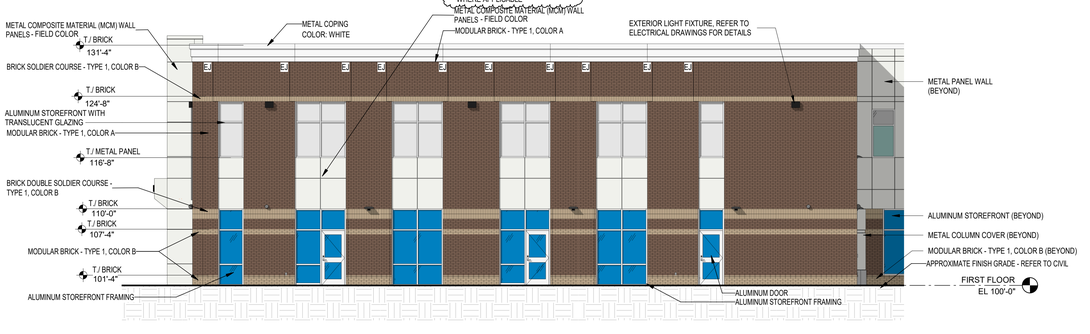
1 NORTH ELEVATION - UNIT A

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



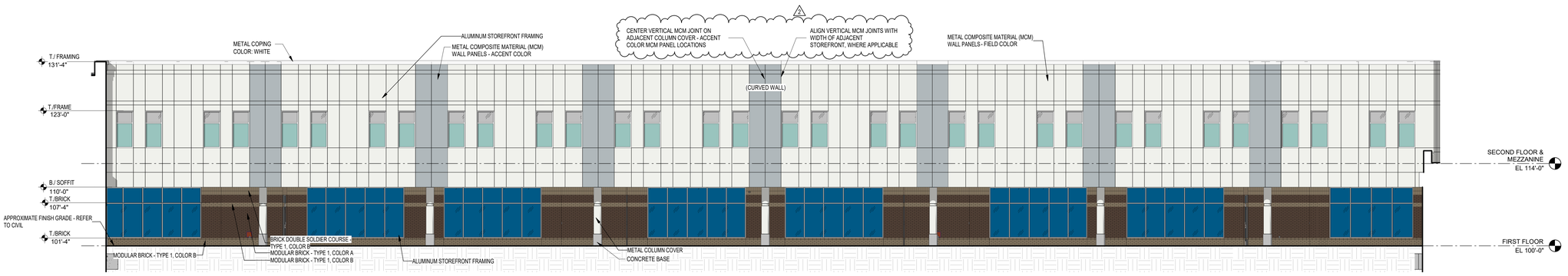
3 SOUTH ELEVATION - UNIT A

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



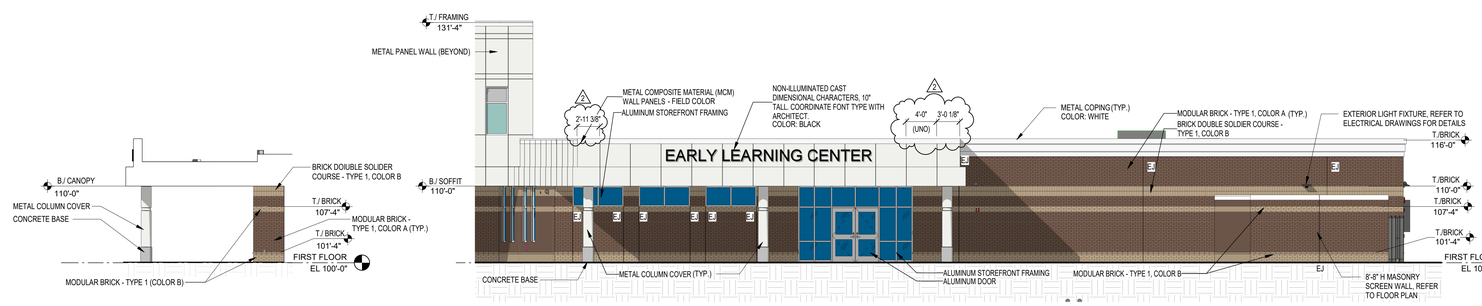
2 WEST ELEVATION - UNIT A

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



4 WEST ELEVATION - UNITS B & C

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

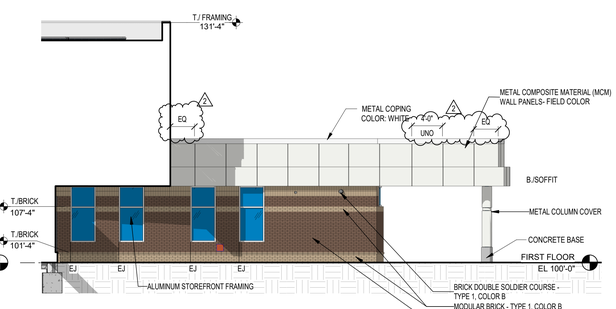


7 NORTH / SOUTH ELEVATION - UNIT D

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

6 WEST ELEVATION - UNIT D

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



5 NORTH ELEVATION - UNIT D

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

8 DAYCARE PLAYGROUND DOOR (TYPICAL)

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

BRICK COLOR LEGEND - SEE SPECIFICATIONS

- BRICK COLOR "A"
- BRICK COLOR "B"

ELEVATIONS GENERAL NOTES

A. REFER TO THE ELECTRICAL AND TECHNOLOGY DRAWINGS FOR CAMERA, LOCATIONS, SECURITY DEVICES, RECEPTACLES, LIGHT FIXTURES, ETC. COORDINATE LOCATIONS WITH VENEER COURSING TO PROVIDE CONSISTENT MOUNTING HEIGHTS.

B. REFER TO PLUMBING DRAWINGS FOR EXTERIOR WALL HYDRANTS, SECONDARY ROOF DRAIN OUTLETS, ETC. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.

C. REFER TO MECHANICAL DRAWINGS FOR EXTERIOR LOUVER LOCATIONS LOCATED IN EXTERIOR WALL AND EXTERIOR SOFFITS. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.

D. BRICK TO BE SIMILAR BRICK COLOR AT STONEGATE ELEMENTARY SCHOOL.

E. ASPHALT SHINGLES TO MATCH SHINGLE COLOR AT STONEGATE ELEMENTARY SCHOOL.

VERIFICATION NOTE

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ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
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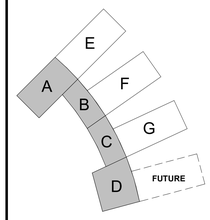


KEY PLAN

ISSUED FOR BID

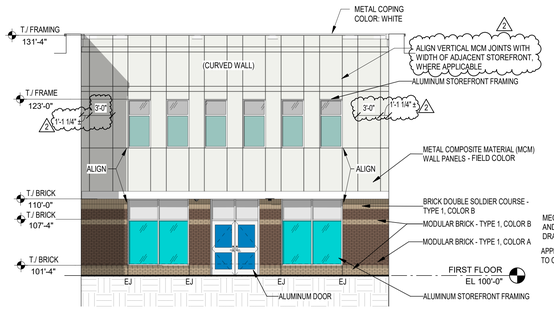
PAULA MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT/BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

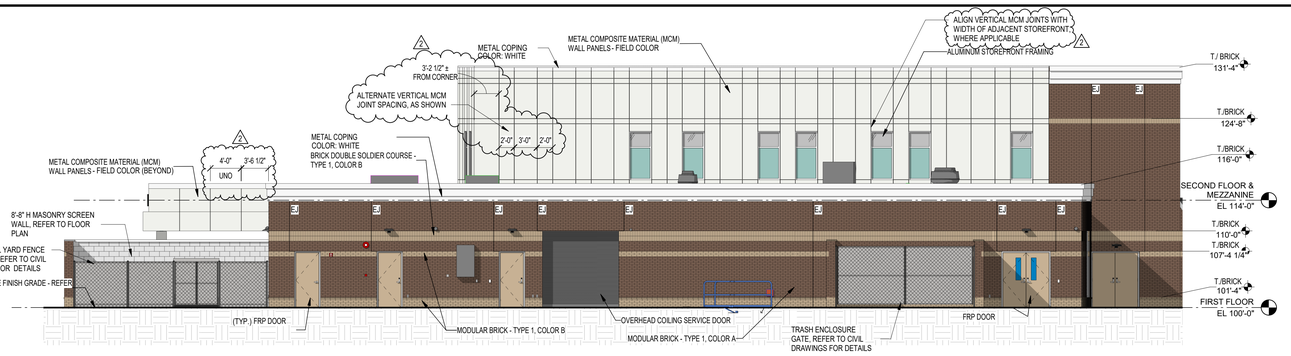
BUILDING ELEVATIONS

A-201



2 EAST ELEVATION - BETWEEN WINGS (TYPICAL)

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



1 SOUTH ELEVATION - UNIT D

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

ELEVATIONS GENERAL NOTES

A. REFER TO THE ELECTRICAL AND TECHNOLOGY DRAWINGS FOR CAMERA, LOCATIONS, SECURITY DEVICES, RECEPTACLES, LIGHT FIXTURES, ETC. COORDINATE LOCATIONS WITH VENEER COURSING TO PROVIDE CONSISTENT MOUNTING HEIGHTS.

B. REFER TO PLUMBING DRAWINGS FOR EXTERIOR WALL HYDRANTS, SECONDARY ROOF DRAIN OUTLETS, ETC. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.

C. REFER TO MECHANICAL DRAWINGS FOR EXTERIOR LOUVER LOCATIONS LOCATED IN EXTERIOR WALL AND EXTERIOR SOFFITS. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.

D. BRICK TO BE SIMILAR BRICK COLOR AT STONEGATE ELEMENTARY SCHOOL.

E. ASPHALT SHINGLES TO MATCH SHINGLE COLOR AT STONEGATE ELEMENTARY SCHOOL.

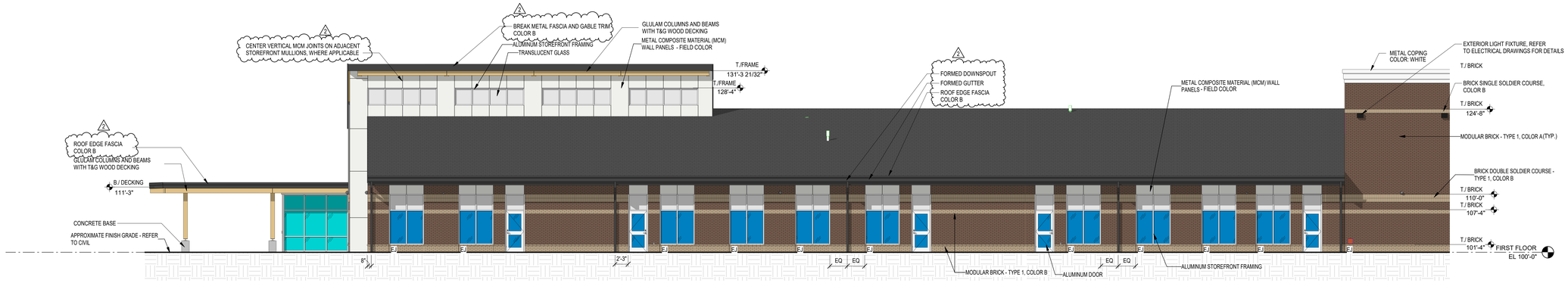
VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

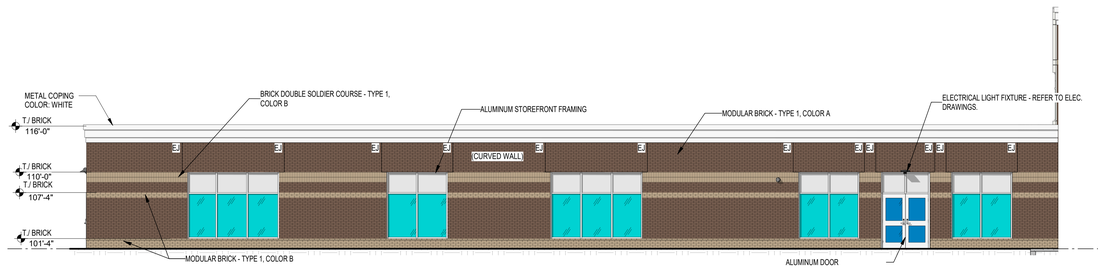
BRICK COLOR LEGEND - SEE SPECIFICATIONS

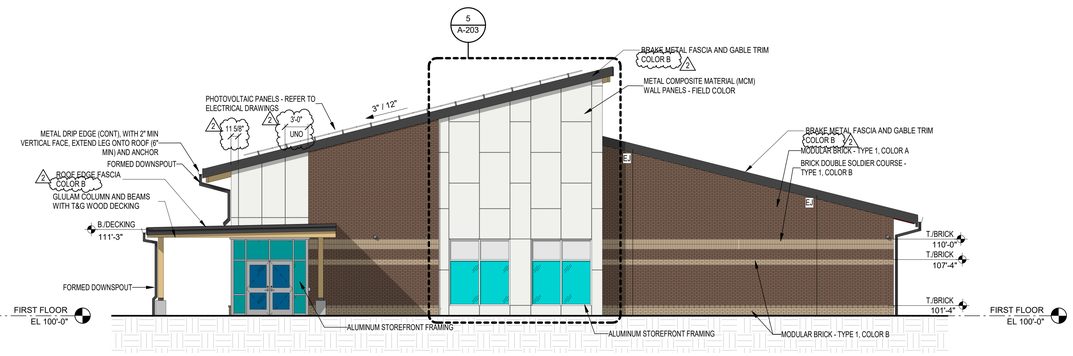
- BRICK COLOR "A"
- BRICK COLOR "B"



3 NORTH ELEVATION - CLASSROOM WING (TYPICAL)

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



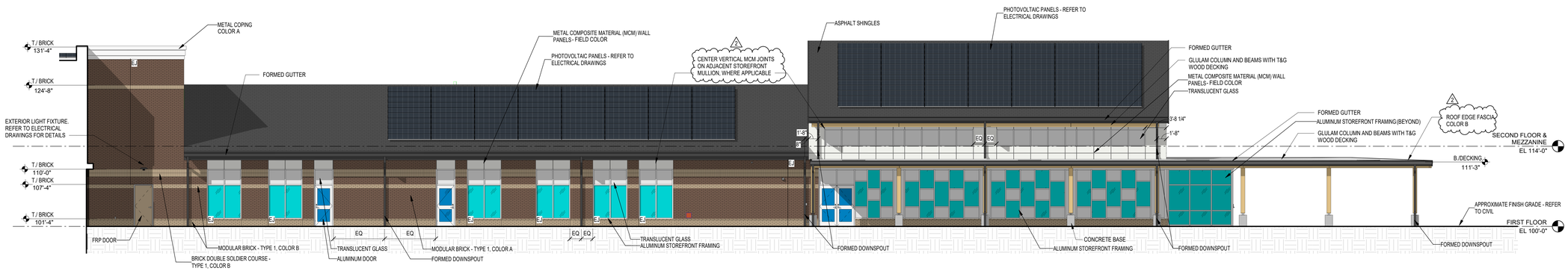


6 EAST ELEVATION - UNIT D

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

4 EAST ELEVATION - CLASSROOM WING (TYPICAL)

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



5 SOUTH ELEVATION - CLASSROOM WING (TYPICAL)

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

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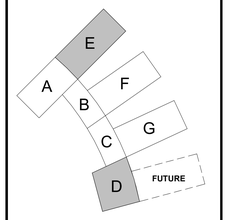


KEY PLAN

N

ISSUED FOR BID

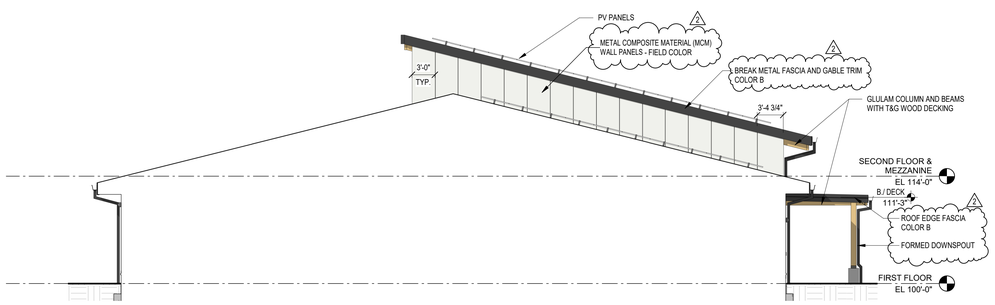
PAULA A. MILLER
REGISTERED
No. AR10800161
STATE OF
INDIANA
ARCHITECT

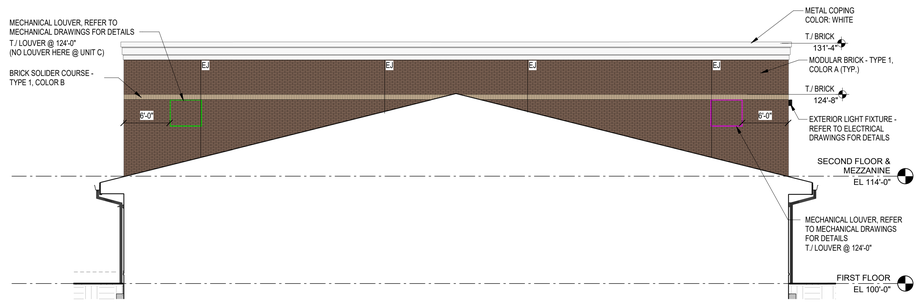
PROJECT MANAGER: JM
DRAWN BY: KT/BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

BUILDING ELEVATIONS

A-202





ELEVATIONS GENERAL NOTES

A. REFER TO THE ELECTRICAL AND TECHNOLOGY DRAWINGS FOR CAMERA, LOCATIONS, SECURITY DEVICES, RECEPTACLES, LIGHT FIXTURES, ETC. COORDINATE LOCATIONS WITH VENEER COURSING TO PROVIDE CONSISTENT MOUNTING HEIGHTS.

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C. REFER TO MECHANICAL DRAWINGS FOR EXTERIOR LOUVER LOCATIONS LOCATED IN EXTERIOR WALL AND EXTERIOR SOFFITS. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.

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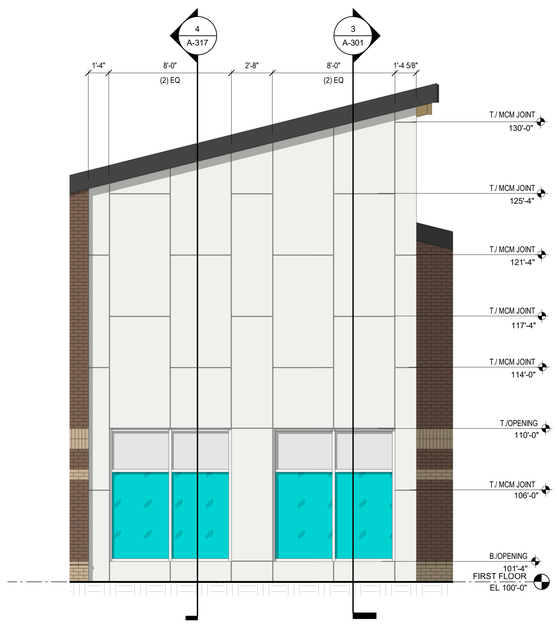
BRICK COLOR LEGEND - SEE SPECIFICATIONS

- BRICK COLOR "A"
- BRICK COLOR "B"

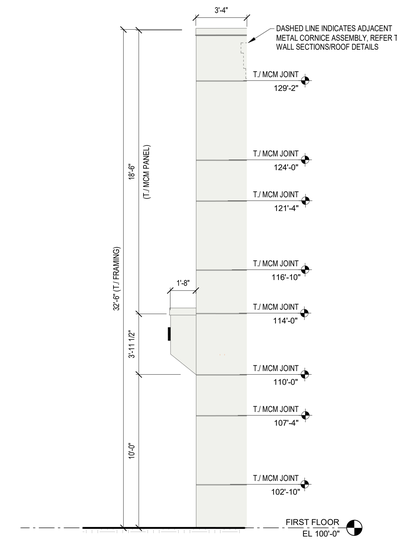
2 WEST ELEVATION - MULTI-PURPOSE (TYPICAL)

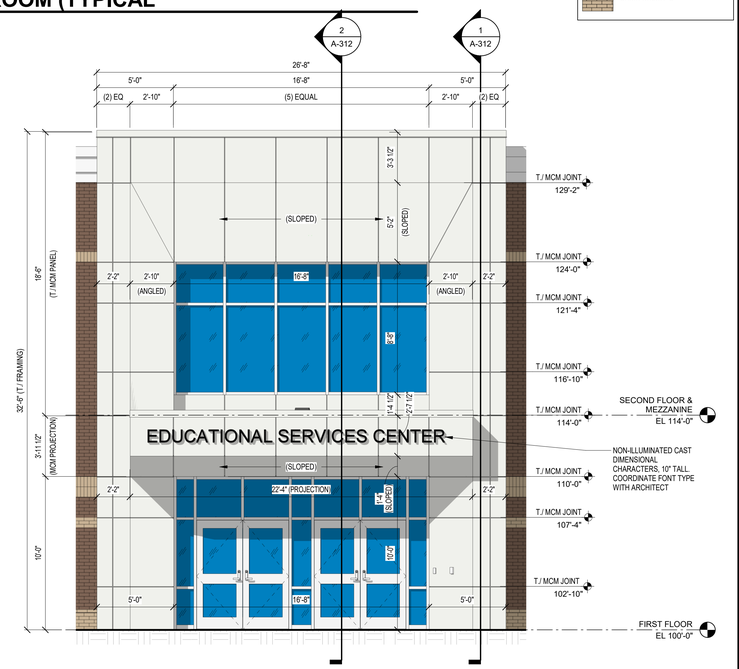
SCALE: 1/8" = 1'-0"



1 EAST ELEVATION - MECHANICAL ROOM (TYPICAL

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





5 ENLARGED ELEVATION - MCM PANEL JOINTS

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

4 ENLARGED ELEVATION - ENTRY EYEBROW SIDE

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

3 ENLARGED ELEVATION - ENTRY EYEBROW

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

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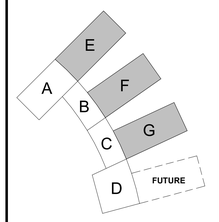


KEY PLAN

N

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

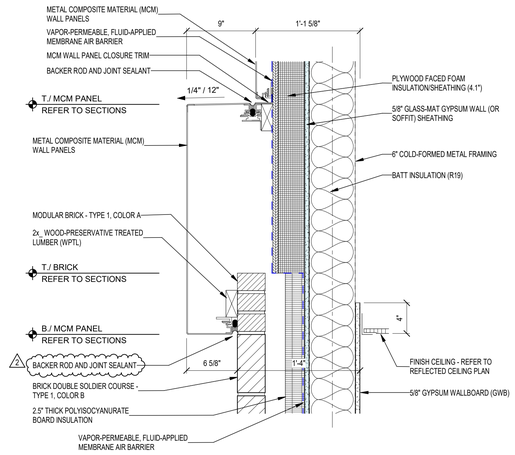
PROJECT MANAGER: JM
DRAWN BY: BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

BUILDING ELEVATIONS

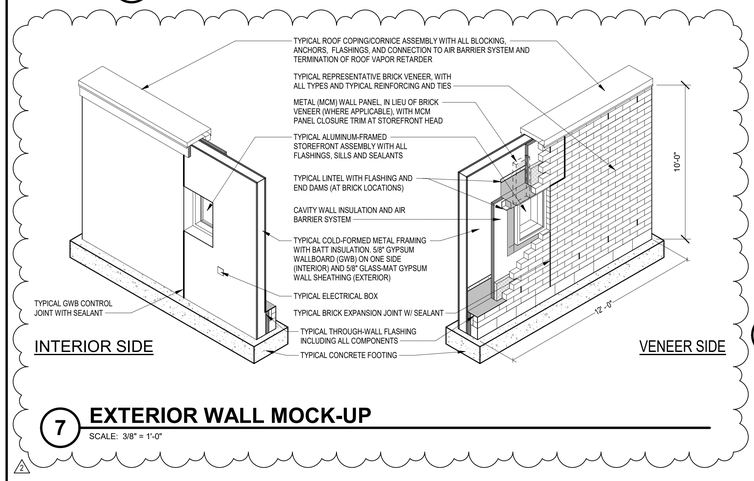
A-203

Autodesk Docs://Zionsville ELC/2023_ARCH_224033.00.rvt
7/14/2025 2:06:37 PM



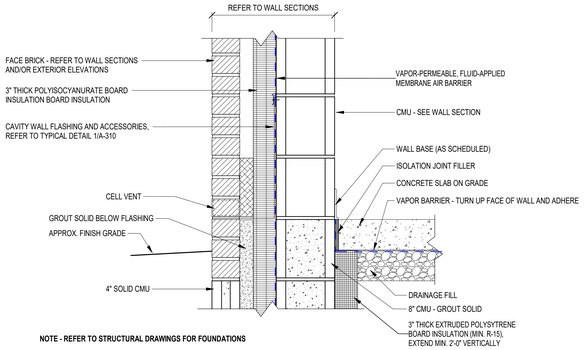
6 DETAIL

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



7 EXTERIOR WALL MOCK-UP

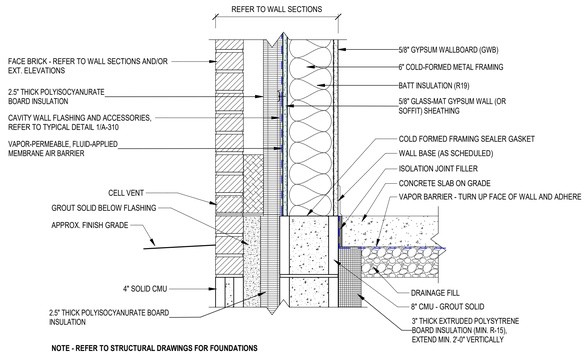
SCALE: 3/8" = 1'-0"



NOTE - REFER TO STRUCTURAL DRAWINGS FOR FOUNDATIONS

3 BRICK ON CMU WALL AT FLOOR

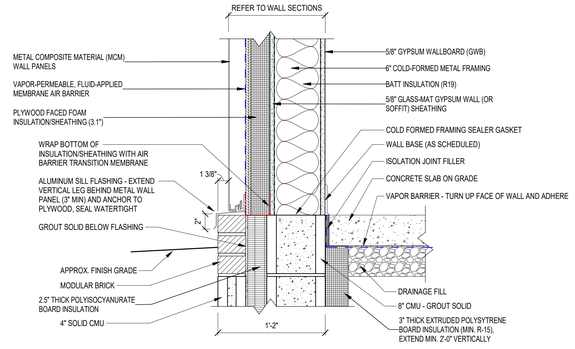
SCALE: 1 1/2" = 1'-0"



NOTE - REFER TO STRUCTURAL DRAWINGS FOR FOUNDATIONS

4 BRICK ON METAL STUD WALL AT FLOOR

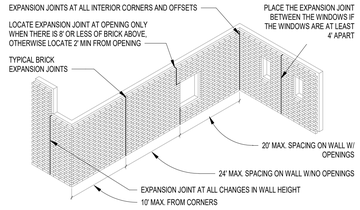
SCALE: 1 1/2" = 1'-0"



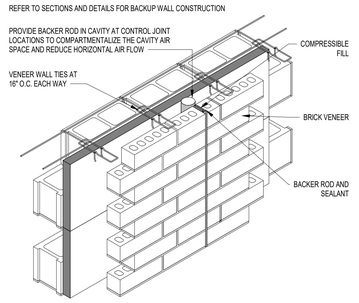
NOTE - REFER TO STRUCTURAL DRAWINGS FOR FOUNDATIONS

5 MCM PANEL ON METAL STUD WALL AT FLOOR

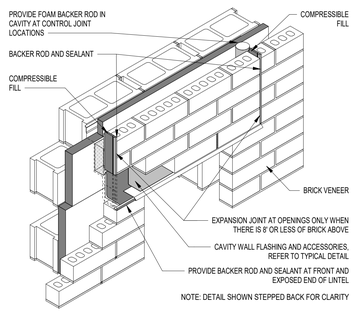
SCALE: 1 1/2" = 1'-0"



TYPICAL BRICK EXPANSION JOINT (EJ) LOCATIONS



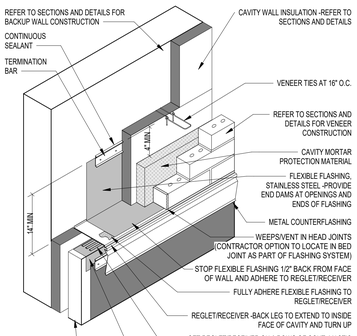
TYPICAL BRICK EXPANSION JOINT DETAIL



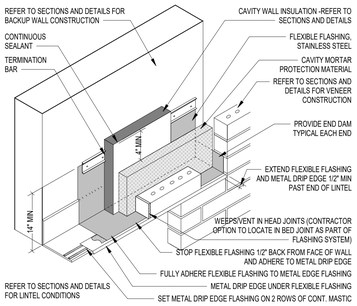
TYPICAL BRICK EXPANSION JOINT AT OPENINGS

2 TYPICAL BRICK EXPANSION JOINTS

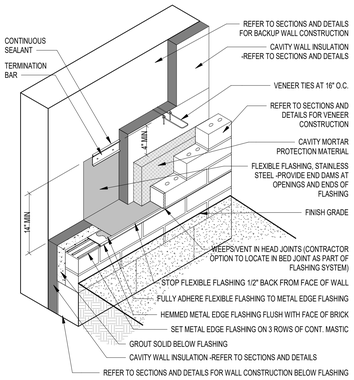
SCALE: 1" = 1'-0"



TYPICAL CAVITY WALL FLASHING AT ROOF TO WALL



TYPICAL CAVITY WALL FLASHING ABOVE OPENINGS



TYPICAL CAVITY WALL FLASHING AT BASE OF WALL

1 TYPICAL CAVITY WALL FLASHINGS

SCALE: 1" = 1'-0"

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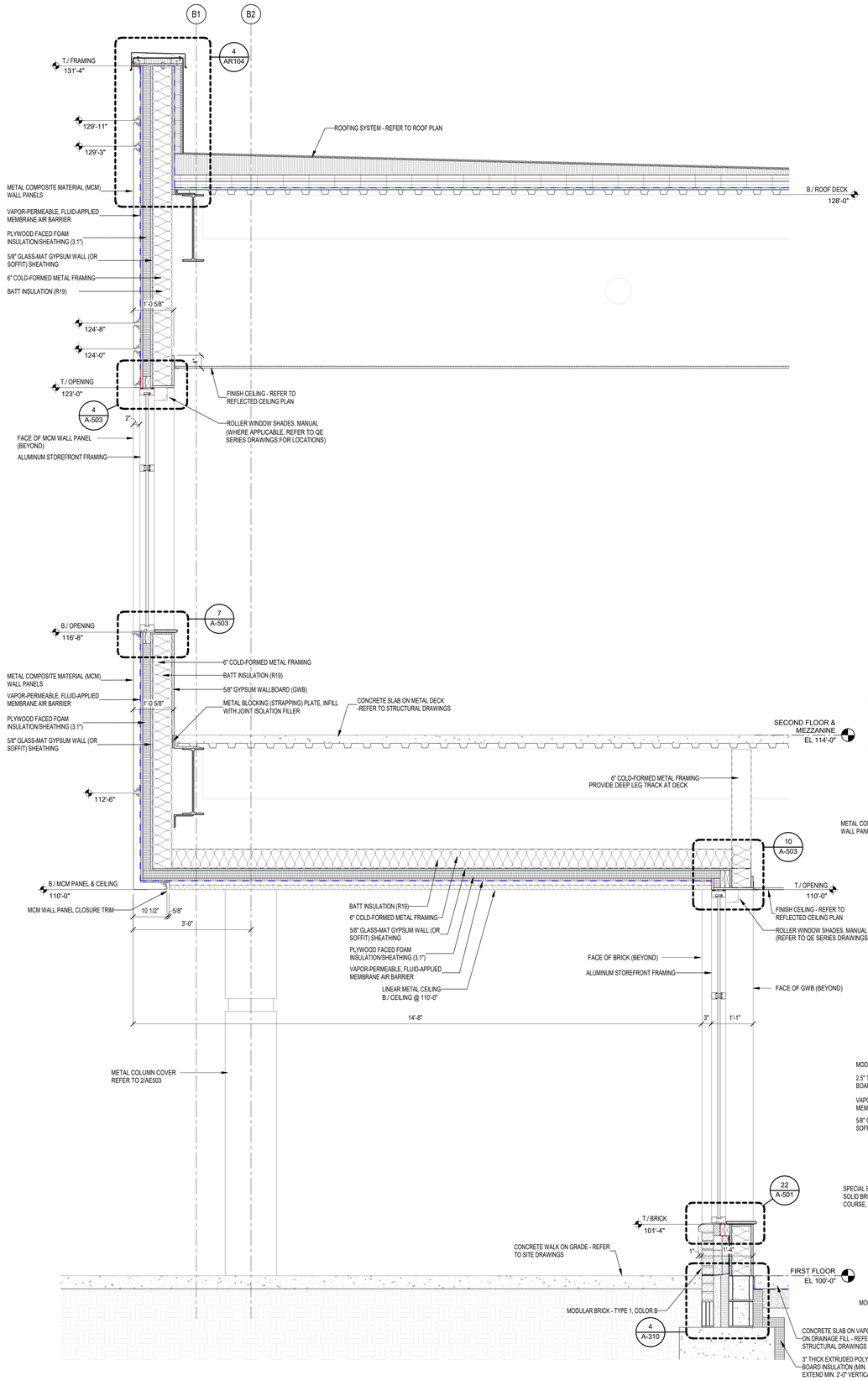
REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECTION DETAILS

A-310



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

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

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

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

GENERAL NOTES

A. COORDINATE ALL LINTEL AND BOND BEAM REQUIREMENTS WITH STRUCTURAL DRAWINGS AND PROJECT MANUAL.
B. REFER TO THE STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND FOOTING CONDITIONS.
C. PROVIDE HORIZ. JOINT REFINFORCING, TIES, AND OTHER ANCHORAGE/REINFORCEMENT ITEMS AS REQ'D. PER PROJECT MANUAL.
D. ROOF TO EXTERIOR WALL JUNCTIONS: REFER TO DIVISION 07 SECTION "THERMAL INSULATION" FOR SPRAY POLYURETHANE INULATION REQUIRED AT THESE LOCATIONS.
E. WALL INSULATION PENETRATIONS: PROVIDE SPRAY POLYURETHANE INSULATION OR SEALANT AROUND ALL PENETRATIONS OF THE WALL INSULATION BY PIPING, CONDUITS, FRAMING, STRUCTURE, ETC.
F. PROVIDE SPRAYED POLYURETHANE FOAM INSULATION OR FOAM SEALANT AT ALL GAPS BETWEEN OPENING FRAMING AND WALL CONSTRUCTION FULL PERIMETER OF OPENING PRIOR TO FINAL SEALANT INSTALLATION.

VERIFICATION NOTE

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REV. NO.	DESCRIPTION	DATE
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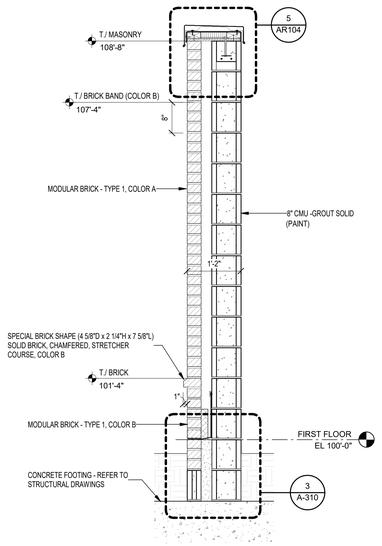
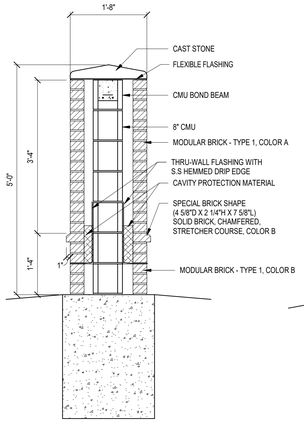
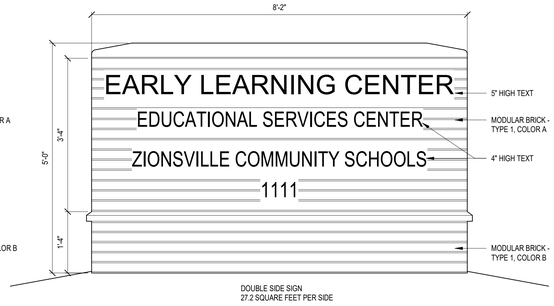
WALL SECTIONS

A-315





SECTION

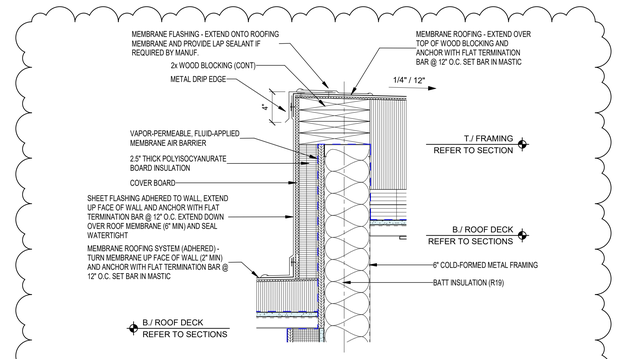


(NOTE: BOTH SIDES OF SIGN ARE THE SAME)

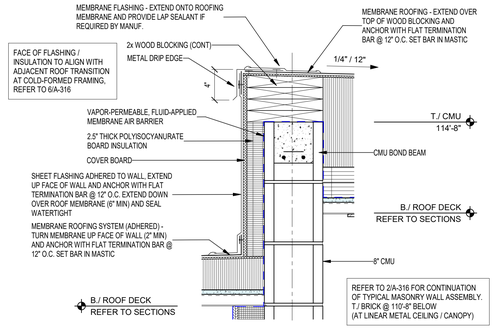
ELEVATION

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

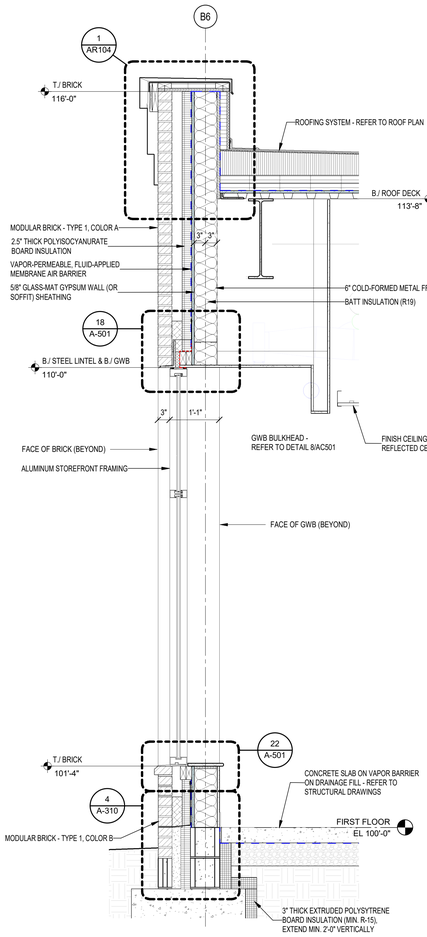
5 WALL SECTION - MONUMENT SIGN
SCALE: 3/4" = 1'-0"



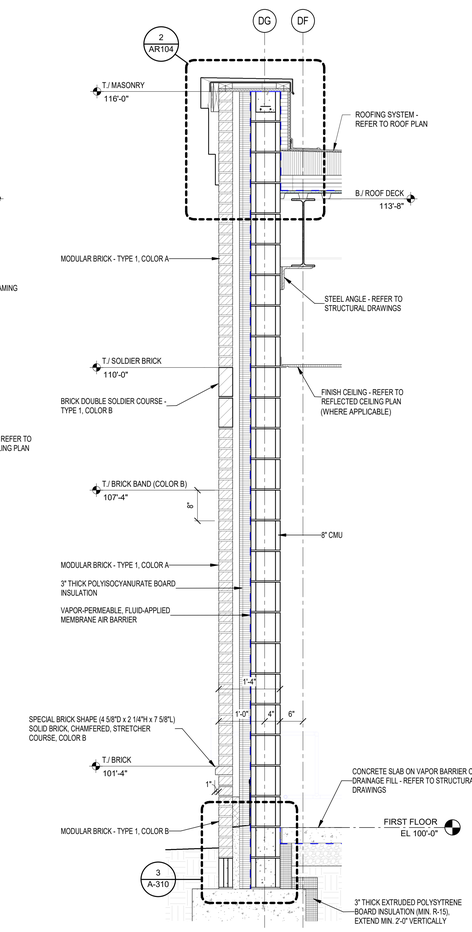
6 ROOF TRANSITION DETAIL
SCALE: 1 1/2" = 1'-0"



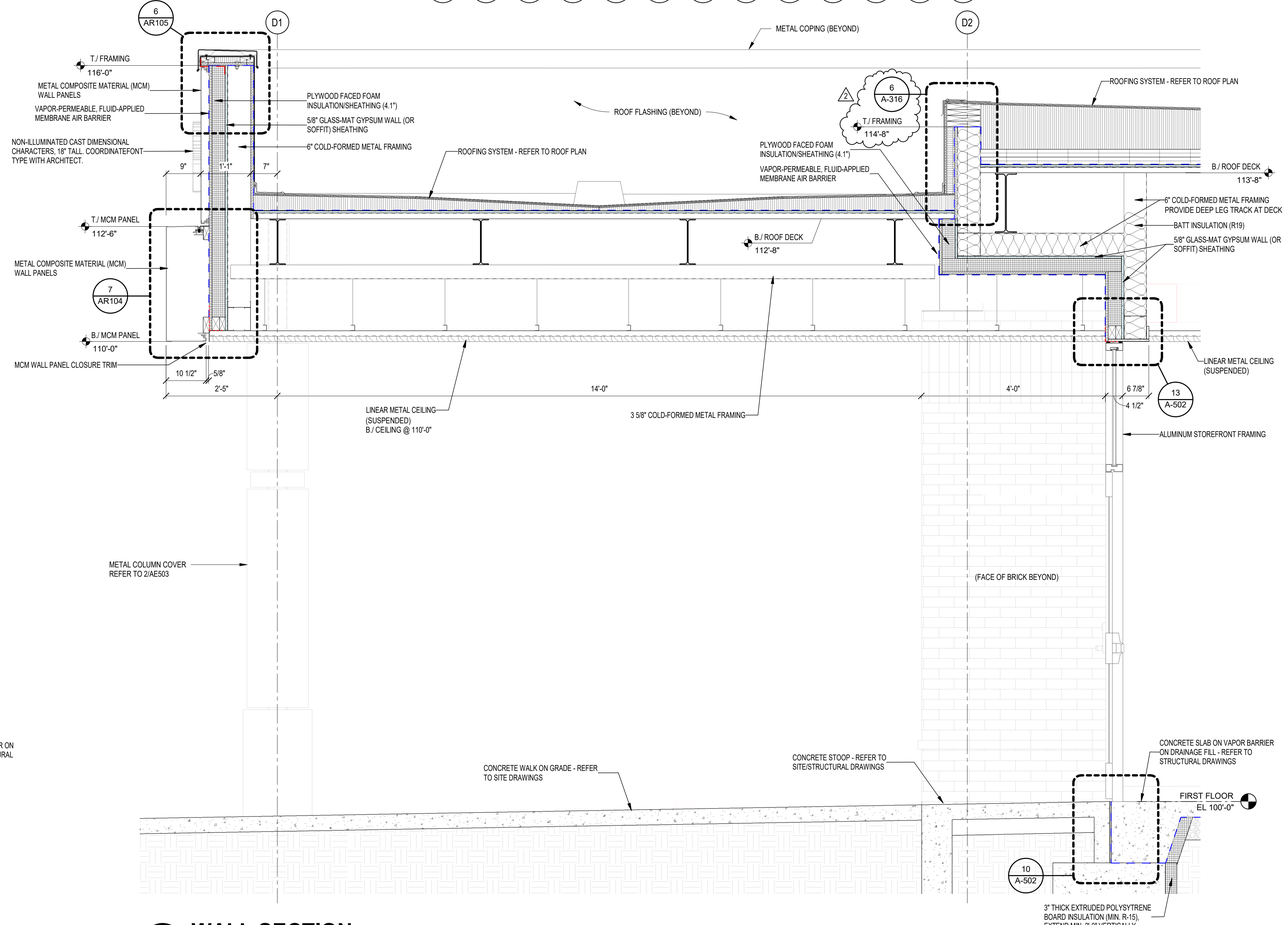
7 ROOF TRANSITION DETAIL
SCALE: 1 1/2" = 1'-0"



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



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



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VERIFICATION NOTE

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SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

S 700 E AND E 550 S
ZIONSVILLE, INDIANA 46077

ZIONSVILLE COMMUNITY SCHOOLS

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ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

ISSUED FOR BID

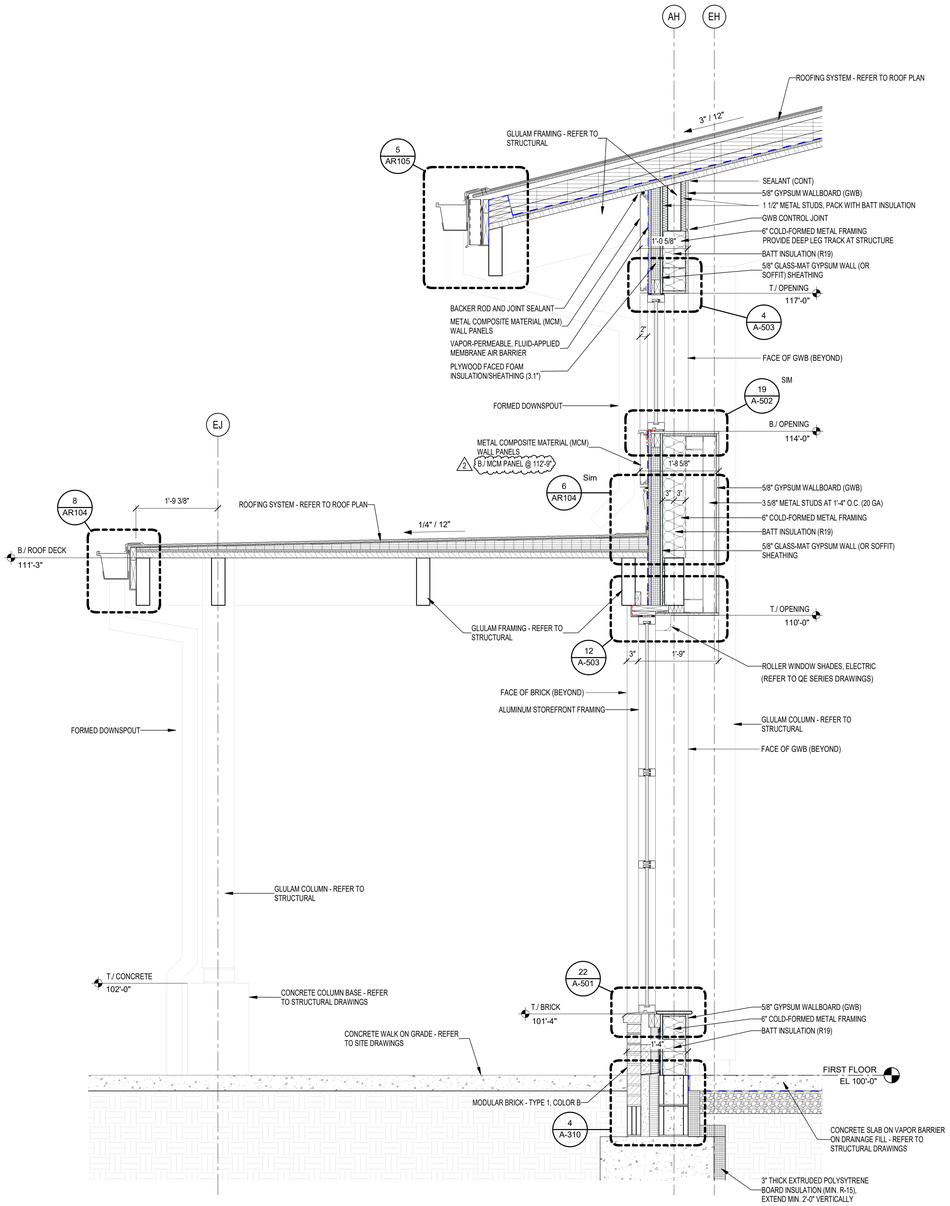
PAULA MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: KT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

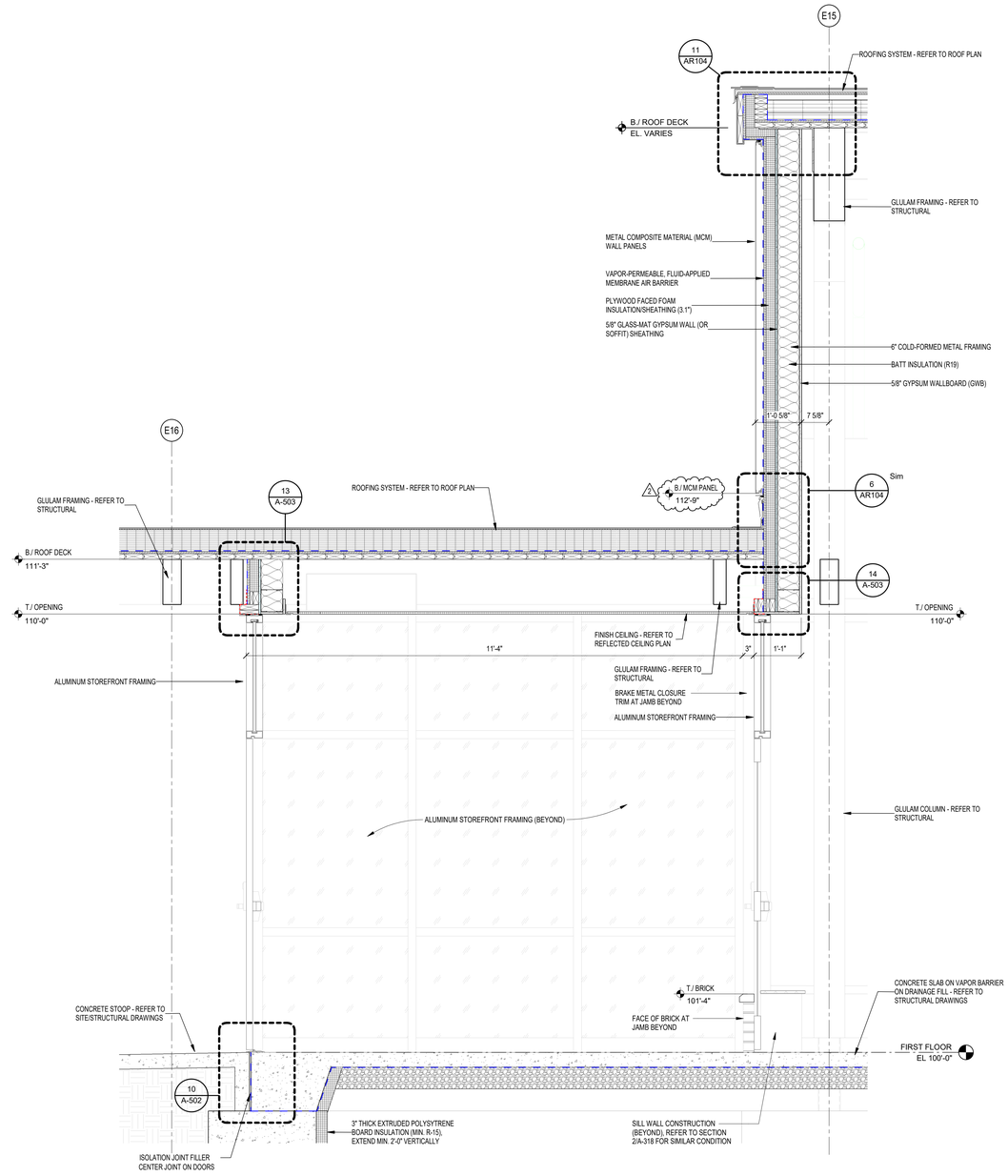
WALL SECTIONS

A-316



2 WALL SECTION

SCALE: 3/4" = 1'-0"



1 WALL SECTION

SCALE: 3/4" = 1'-0"

GENERAL NOTES

A. COORDINATE ALL LINTEL AND BOND BEAM REQUIREMENTS WITH STRUCTURAL DRAWINGS AND PROJECT MANUAL.
B. REFER TO THE STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND FOOTING CONDITIONS.
C. PROVIDE HORIZ. JOINT REFINFORCING, TIES, AND OTHER ANCHORAGE/REINFORCEMENT ITEMS AS REQ'D. PER PROJECT MANUAL.
D. ROOF TO EXTERIOR WALL JUNCTIONS: REFER TO DIVISION 07 SECTION "THERMAL INSULATION" FOR SPRAY POLYURETHANE INULATION REQUIRED AT THESE LOCATIONS.
E. WALL INSULATION PENETRATIONS: PROVIDE SPRAY POLYURETHANE INSULATION OR SEALANT AROUND ALL PENETRATIONS OF THE WALL INSULATION BY PIPING, CONDUITS, FRAMING, STRUCTURE, ETC.
F. PROVIDE SPRAYED POLYURETHANE FOAM INSULATION OR FOAM SEALANT AT ALL GAPS BETWEEN OPENING FRAMING AND WALL CONSTRUCTION FULL PERIMETER OF OPENING PRIOR TO FINAL SEALANT INSTALLATION.

VERIFICATION NOTE

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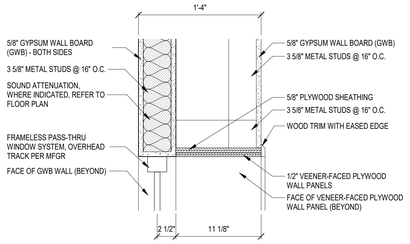
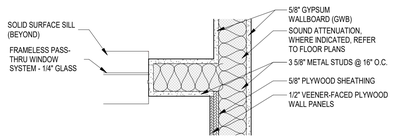
WALL SECTIONS

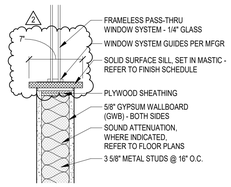
A-318



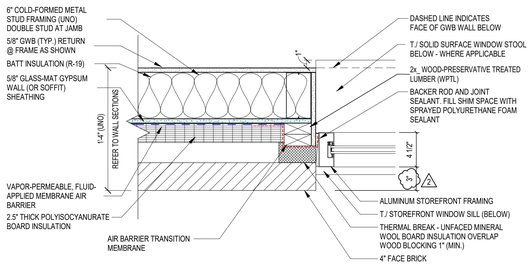
16 HEAD
SCALE: 1 1/2" = 1'-0"



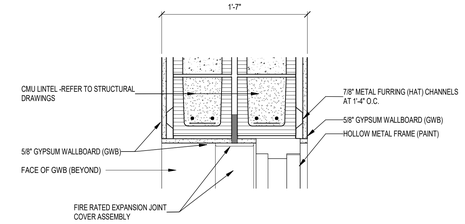
17 JAMB
SCALE: 1 1/2" = 1'-0"



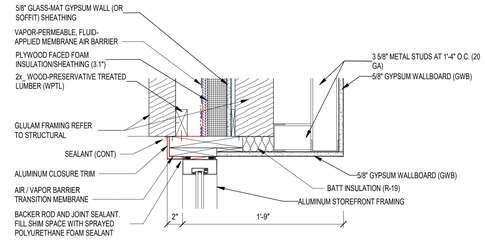
18 SILL
SCALE: 1 1/2" = 1'-0"



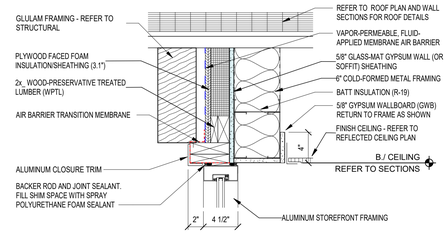
19 JAMB
SCALE: 1 1/2" = 1'-0"



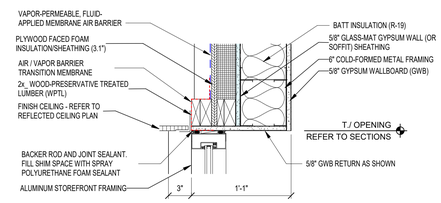
11 HEAD (JAMB SIM)
SCALE: 1 1/2" = 1'-0"



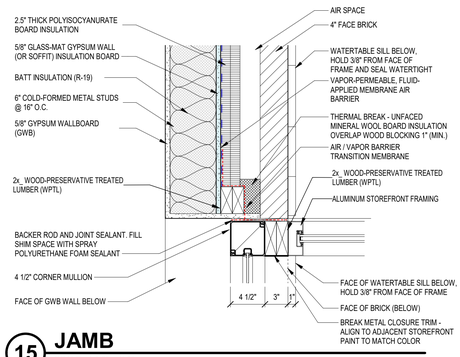
12 HEAD
SCALE: 1 1/2" = 1'-0"



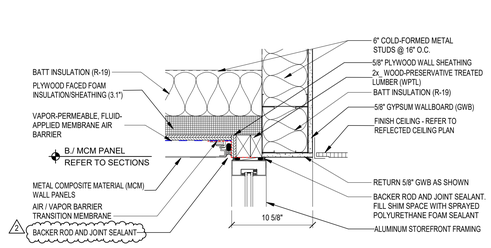
13 HEAD
SCALE: 1 1/2" = 1'-0"



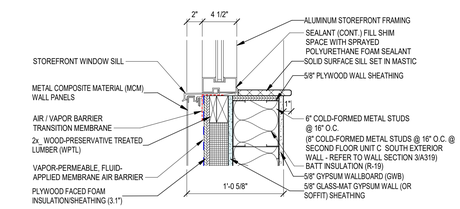
14 HEAD
SCALE: 1 1/2" = 1'-0"



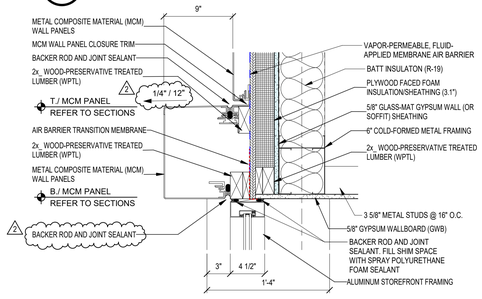
15 JAMB
SCALE: 1 1/2" = 1'-0"



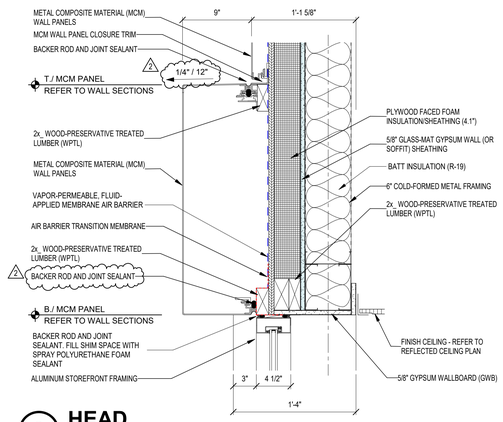
6 HEAD
SCALE: 1 1/2" = 1'-0"



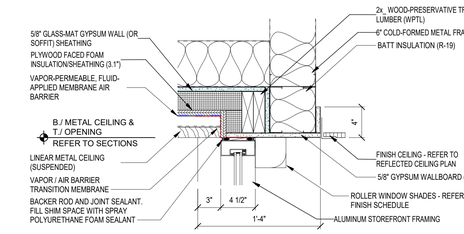
7 SILL
SCALE: 1 1/2" = 1'-0"



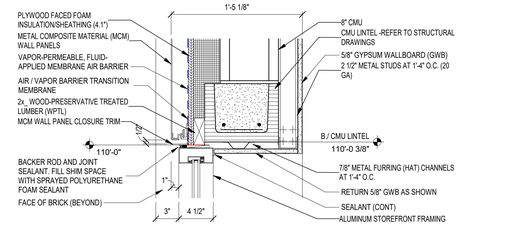
8 HEAD
SCALE: 1 1/2" = 1'-0"



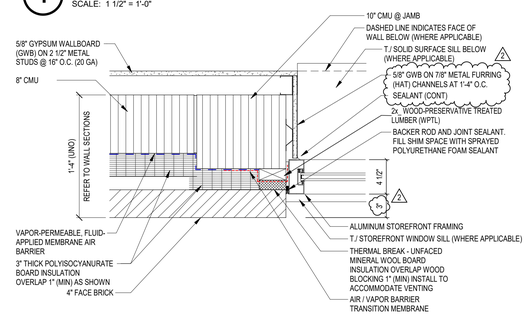
9 HEAD
SCALE: 1 1/2" = 1'-0"



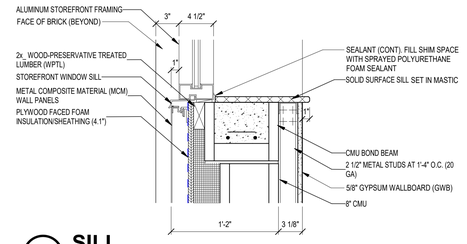
10 HEAD
SCALE: 1 1/2" = 1'-0"



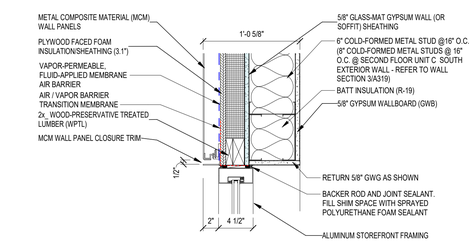
1 HEAD
SCALE: 1 1/2" = 1'-0"



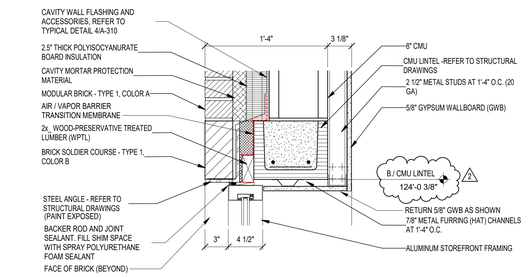
2 JAMB
SCALE: 1 1/2" = 1'-0"



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



4 HEAD (JAMB SIM)
SCALE: 1 1/2" = 1'-0"



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

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REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FRAME DETAILS

A-503

DOOR AND FRAME SCHEDULE

DOOR MARK	DOORS		FRAME						FIRE RATING	HARDWARE		STC RATING	REMARKS	DOOR MARK
	DOOR SIZE (WxH)	DOOR TYPE	FRAME MATERIAL	FRAME ELEVATION	JAMB DEPTH	DETAILS				SET NO.	KEYSIDE ROOM			
						HEAD	JAMB	SILL						
GATES														
D-1	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	D-1
D-2	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		SERVICE GATE NO HARDWARE NEEDED - REFER TO CIVIL FOR DETAILS	D-2
D-3	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	D-3
E-1	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	E-1
E-2	3'-0" x 6'-0"		STL	GATE - SINGLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	E-2
F-1	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	F-1
F-2	3'-0" x 6'-0"		STL	GATE - SINGLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	F-2
G-1	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	G-1
G-2	3'-0" x 6'-0"		STL	GATE - SINGLE		-	-	-		46.0	EXT		EGRESS GATE WITH PANIC HARDWARE - REFER TO CIVIL FOR DETAILS	G-2
MECH YARD	6'-0" x 6'-0"		STL	GATE - DOUBLE		-	-	-		-			SERVICE GATE NO HARDWARE NEEDED - REFER TO CIVIL FOR DETAILS	MECH YARD
TRASH	18'-0" x 8'-0"		STL	GATE - DOUBLE		-	-	-		-			SERVICE GATE NO HARDWARE NEEDED - REFER TO CIVIL FOR DETAILS	TRASH
UNIT A														
A102A	PR 3'-0" x 7'-2"	FGAL2	AL	AL3	4 1/2"	1/A-503	2/A-503	10/A-502		2.0	EXT		2.1,2.5,2.18	A102A
A102B	PR 3'-0" x 7'-2"	FGAL2	AL	AL4	4 1/2"	16/A-501	17/A-501	-		15.0	A102		2.5, 2.18	A102B
A103A	PR 3'-0" x 7'-2"	FGAL2	AL	AL5	4 1/2"	6/A-503	5/AE503	10/A-502		1.0	EXT		2.1, 2.4, 2.5, 2.18	A103A
A103B	PR 3'-0" x 7'-2"	FGAL2	AL	AL5	4 1/2"	6/A-503	5/AE503	10/A-502		4.0	EXT		2.1, 2.18	A103B
A103C	PR 3'-0" x 7'-2"	FGAL2	AL	AL6	4 1/2"	15/A-501	17/A-501	-		12.0	A103		2.4, 2.5, 2.18	A103C
A103D	PR 3'-0" x 7'-2"	FGAL2	AL	AL6	4 1/2"	15/A-501	17/A-501	-		15.0	A103		2.5, 2.18	A103D
A104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		33.0	A129			A104A
A106A	PR 3'-0" x 7'-2"	F WD	HM	HM2	10 3/8"	1/A-501	2/A-501	-		27.0	A129			A106A
A108A	16'-0" x 9'-8"	OHCD	STL	-	2"	11/A-502	12/A-502	-		47.0	A105			A108A
A109A	3'-0" x 7'-2"	F WD	HM	HM1	1'-1"	7/A-501	8/A-501	-	90	29.0	A108			A109A
A110A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	A108			A110A
A111A	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	A131			A111A
A112A	3'-0" x 7'-2"	FG2 WD	AL	AL10	4 1/2"	11/A-501	11/A-501 SIM	-		43.0	A108			A112A
A113A	3'-0" x 7'-2"	N WD	HM	HM1	10 3/8"	1/A-501	2/A-501	-		22.0	A113		2.5	A113A
A114A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	A113			A114A
A115A	PR 3'-0" x 7'-2"	F WD	HM	HM2	10 3/8"	1/A-501	2/A-501	-		27.0	A101			A115A
A116A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		45.0	A130			A116A
A117A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		45.0	A130			A117A
A118A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A119			A118A
A119A	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	A123			A119A
A120A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	A123			A120A
A121A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A123			A121A
A122A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A123			A122A
A124A	PR 3'-0" x 7'-2"	FG2 WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		18.0	A129			A124A
A124B	PR 3'-0" x 7'-2"	FG2 WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		18.0	A129			A124B
A124C	PR 3'-0" x 7'-2"	FG2 WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		18.0	A129			A124C
A124D	3'-0" x 7'-2"	FGAL2	AL	AL9	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	A124D
A124E	3'-0" x 7'-2"	FGAL2	AL	AL9	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	A124E
A124F	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	A124F
A125A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		34.0	A124			A125A
A126A	3'-0" x 7'-2"	N WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		23.0	A129		2.5	A126A
A126B	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		43.0	A126			A126B
A127A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	A126			A127A
A128A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	A126			A128A
A129A	PR 3'-0" x 7'-2"	FGAL2	AL	AL3	4 1/2"	18/A-502	19/A-501	10/A-502		3.0	EXT		2.1,2.5,2.18	A129A
A130A	3'-0" x 7'-2"	N WD	HM	HM1	10 3/8"	1/A-501	2/A-501	-		22.0	A131		2.5	A130A
A201A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	A214			A201A
A201B	PR 3'-0" x 7'-2"	F HM	HM	HM2	5 3/4"	10/A-501	10/A-501 SIM	-	90	26.0	E201			A201B
A201C	3'-0" x 7'-2"	F HM	HM	HM1	10 3/8"	1/A-501	2/A-501	-		38.0	A202		2.20	A201C
A202A	PR 3'-0" x 7'-2"	FG2 WD	AL	AL42	4 1/2"	15/A-501	17/A-501	-		17.0	A202		2.5	A202A
A203A	3'-0" x 7'-2"	FG2 WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	A210			A203A
A204A	3'-0" x 7'-2"	FG2 WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	A210			A204A
A205A	3'-0" x 7'-2"	FG2 WD	HM	HM3	10 3/8"	1/A-501	2/A-501	-		28.0	A210			A205A
A205B	3'-0" x 7'-2"	FG2 WD	HM	HM3	10 3/8"	1/A-501	2/A-501	-		28.0	A210			A205B
A206A	PR 3'-0" x 7'-2"	F WD	HM	HM2	10 3/8"	1/A-501	2/A-501	-		27.0	A207			A206A
A208A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A205			A208A
A209A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A207			A209A
A211A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	A214			A211A
A212A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	A214			A212A
A213A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A214			A213A
A215A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	A214			A215A
A216A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	A210			A216A
A217A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B203			A217A
A218A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	A210			A218A
S-1A	3'-0" x 7'-2"	FGAL2	AL	AL12	4 1/2"	1/A-503	2/A-503	10/A-502		8.0	EXT		2.20	S-1A
UNIT B														
B101A	PR 3'-0" x 7'-2"	FGAL2	AL	AL19	4 1/2"	8/A-503	19/A-501	10/A-502		5.0	EXT		2.18	B101A
B102A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	B101			B102A
B102B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	B102B
B103A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	B101			B103A
B104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B102			B104A
B105A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	B102			B105A
B106A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	B101			B106A
B106B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	B106B
B107A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B106			B107A
B108A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	B106			B108A
B109A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	B101			B109A
B109B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	B109B
B110A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	B101			B110A
B111A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B109			B111A
B112A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	B109			B112A
B113A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	B101			B113A
B113B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	B113B
B114A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B113			B114A
B115A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	B113			B115A
B201A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	B234			B201A
B201B	PR 3'-0" x 7'-2"	F HM	HM	HM2	5 3/4"	10/A-501	10/A-501 SIM	-	90	26.0	F201			B201B
B201C	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		38.0	B230		2.20	B201C
B202A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	A216			B202A
B204A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B203			B204A
B205A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B203			B205A
B206A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B203			B206A
B207A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B208			B207A
B209A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B213			B209A
B210A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B213			B210A
B211A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B213			B211A
B212A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B214			B212A
B213A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	B213			B213A
B214A	3'-0" x 7'-2"	F WD	HM	HM4	5 3/4"	1/A-501	2/A-501	-		32.0	B214			B214A
B215A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B213			B215A
B216A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	B208			B216A
B217A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B217A
B218A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B218A
B219A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B219A
B220A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B220A
B221A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B221A
B222A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B221			B222A
B223A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B216			B223A
B224A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		32.0	B236			B224A
B225A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	B216			B225A
B226A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	B226			B226A
B228A	3'-0" x 7'-2"	F WD	HM	HM1	4 1/2"	1/A-501	2/A-501	-		31.0	B230			B228A
B229A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B229			B229A
B231A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	B230			B231A
B232A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		45.0	B232			B232A
B233A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		45.0	B233			B233A
B236A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	B236			B236A
B237A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		36.0	B236			B237A
B238A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C207			B238A
B238B	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		33.0	B224			B238B
UNIT C														
C101A	PR 3'-0" x 7'-2"	FGAL2	AL	AL19	4 1/2"	8/A-503	19/A-501	10/A-502		5.0	EXT		2.18	C101A
C102A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	C101			C102A
C102B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	C102B
C103A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	C101			C103A
C104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C102			C104A
C105A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	C102			C105A
C106A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	C101			C106A
C106B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	C106B
C107A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C106			C107A
C108A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	C106			C108A
C109A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	C101			C109A
C109B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	C109B
C110A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	C101			C110A
C111A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C109			C111A
C112A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	C109			C112A
C113A	3'-0" x 7'-2"	F WD	HM	HM5	5 3/4"	1/A-501	2/A-501	-		34.0	C101			C113A
C113B	3'-0" x 7'-2"	FGAL2	AL	AL35	4 1/2"	18/A-501	19/A-501	10/A-502		6.0	EXT		2.5	C113B
C114A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C113			C114A
C115A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		41.0	C113			C115A
C201A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		27.0	C231			C201A
C201B	PR 3'-0" x 7'-2"	F HM	HM	HM2	5 3/4"	10/A-501	10/A-501 SIM	-	90	26.0	G201			C201B
C204A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	B236			C204A
C205A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C207			C205A
C206A	3'-0" x 7'-2"	F WD	HM	HM4	5 3/4"	1/A-501	2/A-501	-		33.0	C207			C206A
C208A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		28.0	C207			C208A
C209A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C203			C209A
C210A	3'-0" x 7'-2"	F WD	HM	HM4	5 3/4"	1/A-501	2/A-501	-		33.0	C214			C210A
C210B	3'-0" x 7'-2"	F WD	HM	HM4	5 3/4"	1/A-501	2/A-501	-		33.0	C207			C210B
C211A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C214			C211A
C212A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C214			C212A
C213A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C214			C213A
C214A	3'-0" x 7'-2"	F WD	HM	HM4	5 3/4"	1/A-501	2/A-501	-		32.0	C226			C214A
C215A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C216			C215A
C216A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	C216			C216A
C217A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C231			C217A
C218A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C214			C218A
C219A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C216			C219A
C220A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	C231			C220A
C221A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	C231			C221A
C222A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		31.0	C226			C222A
C223A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C226			C223A
C224A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C226			C224A
C225A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C226			C225A
C226A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	C231			C226A
C227A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C226			C227A
C228A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C226			C228A
C229A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	C231			C229A
C230A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		33.0	C231			C230A
C230B	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	C226			C230B
C232A	3'-0" x 7'-2"	F WD	HM	HM1	1'-1"	7/A-501	8/A-501	-		31.0	C231			C232A
C233A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		28.0	C214			C233A
S-2A	PR 3'-0" x 7'-2"	F FRP	AL	AL2	4 1/2"	20/A-501	21/A-501	10/A-502		5.0	EXT		2.18	S-2A
S-2B	3'-0" x 7'-2"	F WD	HM	HM1	1'-1"	7/A-501	8/A-501	-		20.0	C231			S-2B
S-2C	3'-0" x 7'-2"	F WD	HM	HM1	1'-3 1/2"	7/A-501	8/A-501	-		21.0	C101		2.5	S-2C
UNIT D														
D101A	PR 3'-0" x 7'-2"	FGAL2	AL	AL26	4 1/2"	13/A-502	14/A-502, 15/A-502	10/A-502		1.0	EXT		2.1, 2.4, 2.5, 2.18	D101A
D101B	PR 3'-0" x 7'-2"	FGAL2	AL	AL26 SIM	4 1/2"	15/A-501	17/A-501	-		13.0	D101		2.4, 2.5, 2.18	D101B
D102A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D102			D102A
D103A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D108			D103A
D104A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D108			D104A
D105A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D108			D105A
D106A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D108			D106A
D107A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		33.0	D108			D107A
D108A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		22.0	D102			D108A
D109A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		43.0	D108			D109A
D110A	3'-0" x 7'-2"	F WD	HM	HM1	10 3/8"	1/A-501	2/A-501	-		36.0	D129			D110A
D111A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	D115			D111A
D112A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		28.0	D121			D112A
D113A	3'-0" x 7'-2"	F WD	HM	HM1	10 3/8"	1/A-501	2/A-501	-		39.0	D129			D113A
D114A	3'-0" x 7'-2"	F WD	HM	HM1	10 3/8"	1/A-501	2/A-501	-		39.0	D129			D114A
D115A	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	D108			D115A
D115B	3'-0" x 7'-2"	N WD	HM	HM4	10 3/8"	1/A-501	2/A-501	-		36.0	D129			D115B
D116A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	D121			D116A
D117A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	D118			D117A
D118A	3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	1/A-501	2/A-501	-		32.0	D121			D118A
D119A	3'-0" x 7'-2"	N WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		34.0	D102			D119A
D119B	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		34.0	D121			D119B
D120A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	D121			D120A
D121A	PR 3'-0" x 7'-2"	FG2 WD	AL	AL28	4 1/2"	16/A-501	17/A-501	-		14.0	D102		2.4, 2.5	D121A
D122A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	4/A-501	5/A-501	-		36.0	D125			D122A
D123A	PR 3'-0" x 7'-2"	F WD	HM	HM2	8 3/4"	4/A-501	5/A-501	-		27.0	D125			D123A
D124A	PR 3'-0" x 7'-2"	F WD	HM	HM2	8 3/4"	4/A-501	5/A-501	-		27.0	D125			D124A
D125A	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	7/A-501	8/A-501	-		44.0	D125			D125A
D126A	PR 3'-0" x 7'-2"	F HM	HM	HM2	8 3/4"	4/A-501	5/A-501	-		27.0	D127			D126A
D127A	PR 3'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	4/A-501	5/A-501	-		25.0	EXT		2.5	D127A
D127B	10'-0" x 10'-0"	OHCD	STL	-	2"	1/A-502	2/A-502	3/A-502		47.0	D127		2.10	D127B
D127C	3'-0" x 7'-2"	F FRP	AL	AL1	4 1/2"	20/A-501	21/A-501	10/A-502		6.0	EXT		2.5	D127C
D128A	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	7/A-501	8/A-501	-		44.0	D138			D128A
D128B	3'-0" x 7'-2"	N WD	HM	HM1	8 3/4"	4/A-501	5/A-501	-		36.0	D125			D128B
D128C	4'-0" x 7'-2"	N WD	HM	HM1	8 3/4"	4/A-501	5/A-501	-		24.0	D127		2.5	D128C
D129A	PR 3'-0" x 7'-2"	FGAL2	AL	AL19	4 1/2"	18/A-501	19/A-501	10/A-502		5.0	EXT		2.18	D129A
D129B	PR 3'-0" x 7'-2"	N FRP	AL	AL2	4 1/2"	20/A-501	21/A-501	10/A-502		5.0	EXT		2.1, 2.5, 2.18	D129B
D130A	3'-0" x 7'-2"	N HM	HM	HM1	8 3/4"	4/A-501	5/A-501	-		33.0	D128			D130A
D130B	3'-4" x 4'-0"		HM	HM7	8 3/4"	4/A-501	5/A-501	6/A-501		-	D128			D130B
D131A	3'-0" x 7'-2"	N HM	HM	HM1	8 3/4"	4/A-501	5/A-501	-		43.0	D128			D131A
D133A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	4/A-501	5/A-501	-		39.0	D131			D133A
D134A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	4/A-501	5/A-501	-		34.0	D128			D134A
D135A	3'-0" x 7'-2"	F FRP	AL	AL1	4 1/2"	20/A-501	21/A-501	10/A-502		9.0	EXT			D135A
D136A	3'-0" x 7'-2"	F HM	HM	HM1	8 3/4"	4/A-501	5/A-501	-		30.0	D126			D136A
D136B	3'-0" x 7'-2"	F FRP	AL	AL1	4 1/2"	20/A-501	21/A-501	10/A-502		7.0	EXT			D136B
D137A	3'-0" x 7'-2"	F HM	HM	HM1	8 3/4"	4/A-501	5/A-501	-		30.0	D127			D137A
D138A	PR 3'-0" x 7'-2"	N WD	HM	HM2	5 3/4"	1/A-501	2/A-501	-		44.0	D129			D138A
UNIT E														
E101A	PR 4'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	11/A-503	11/A-503 SIM.	-	90	16.0	E101		2.5, 2.7	E101A
E102A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		30.0	A101			E102A
E103A	3'-0" x 7'-2"	N1 WD	HM	HM1	5 3/8"	9/A-501	9/A-501 SIM	-	90	40.0	E105			E103A
E104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	9/A-501	9/A-501 SIM	-	90	29.0				E104A
E105A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	E137			E105A
E105B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E105B
E106A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	E137			E106A
E106B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E106B
E106C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	E106		2.10	E106C
E107A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E106			E107A
E108A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E106			E108A
E108B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E110			E108B
E109A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E110			E109A
E110A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	E137			E110A
E110B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E110B
E111A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	E118	30	2.8, 2.9	E111A
E111B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E111B
E111C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	E115		2.10	E111C
E112A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E112			E112A
E113A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E111			E113A
E113B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E115			E113B
E114A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E115			E114A
E115A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	E118	30	2.8, 2.9	E115A
E115B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E115B
E116A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	E118			E116A
E117A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	E118			E117A
E118A	PR 3'-0" x 7'-2"	FGAL2	AL	AL34	4 1/2"	12/A-503	19/A-501	10/A-502		3.0	EXT		2.1,2.5,2.18	E118A
E119A	PR 3'-0" x 7'-2"	FGAL2	AL	AL32	4 1/2"	13/A-503	16/A-502	10/A-502		3.0	EXT		2.1,2.5,2.18	E119A
E119B	PR 3'-0" x 7'-2"	FGAL2	AL	AL33	4 1/2"	14/A-503	15/A-503,17/A-502	-		15.0	EXT		2.5, 2.18	E119B
E120A	PR 3'-0" x 7'-2"	F WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		27.0	E118			E120A
E121A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		36.0	E118			E121A
E121B	4'-8" x 4'-8"	CCD	STL	-	2"	4/A-502	5/A-502	6/A-502		47.0	E121			E121B
E122A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	E125			E122A
E123A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E125			E123A
E124A	3'-0" x 7'-2"	N WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		34.0	E125			E124A
E126A	3'-0" x 7'-2"	N WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	E125			E126A
E127A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E125			E127A
E128A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	E137			E128A
E128B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E128B
E128C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	E128		2.10	E128C
E129A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E128			E129A
E130A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E128			E130A
E130B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	E132			E130B
E131A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	E132			E131A
E132A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	E137			E132A
E132B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	E132B
E133A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		33.0	A101			E133A
E134A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		33.0	A101			E134A
E135A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		39.0	A101			E135A
E136A	3'-0" x 7'-2"	F FRP	AL	AL1	4 1/2"	20/A501	21/A501	10/A-502		11.0	EXT			E136A
E137A	PR 4'-0" x 7'-2"	N WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		19.0	E138	30	2.6, 2.8, 2.9	E137A
E139A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		39.0	A101			E139A

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KEY PLAN

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PAUL A. MILLER
No. AR10800161

PROJECT MANAGER: JM
DRAWN BY: BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

DOOR AND FRAME SCHEDULE

A-601

Autodesk Docs://Zionsville ELC/2023_ARCH_224033.00.rvt
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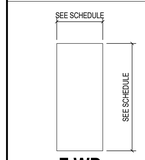
DOOR AND FRAME SCHEDULE

DOOR MARK	DOORS: DOOR SIZE (WxH)	DOORS: DOOR TYPE	FRAME: FRAME MATERIAL	FRAME: FRAME ELEVATION	FRAME: JAMB DEPTH	FRAME: DETAILS: HEAD	FRAME: DETAILS: JAMB	FRAME: DETAILS: SILL	FIRE RATING	HARDWARE: SET NO.	HARDWARE: KEYSIDE ROOM	STC RATING	REMARKS	DOOR MARK
UNIT F														
F101A	PR 4'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	11/A-503	11/A-503 SIM.	-	90	16.0	F101		2.5, 2.7	F101A
F102A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		30.0	B101			F102A
F103A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	9/A-501	9/A-501 SIM	-	90	40.0	F105			F103A
F104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	9/A-501	9/A-501 SIM	-	90	29.0				F104A
F105A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	F137			F105A
F105B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F105B
F106A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	F137			F106A
F106B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F106B
F106C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	F106		2.10	F106C
F107A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F106			F107A
F108A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F106			F108A
F108B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F110			F108B
F109A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F110			F109A
F110A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	F137			F110A
F110B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F110B
F111A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	F118	30	2.8, 2.9	F111A
F111B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F111B
F111C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	F115		2.10	F111C
F112A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F111			F112A
F113A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F111			F113A
F113B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F115			F113B
F114A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F115			F114A
F115A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	F118	30	2.8, 2.9	F115A
F115B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F115B
F116A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	F118			F116A
F117A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	F118			F117A
F118A	PR 3'-0" x 7'-2"	FGAL2	AL	AL34	4 1/2"	12/A-503	19/A-501	10/A-502		3.0	EXT		2.1,2.5,2.18	F118A
F119A	PR 3'-0" x 7'-2"	FGAL2	AL	AL32	4 1/2"	13/A-503	16/A-502	10/A-502		3.0	EXT		2.1,2.5,2.18	F119A
F119B	PR 3'-0" x 7'-2"	FGAL2	AL	AL33	4 1/2"	14/A-503	15/A-503,17/A-502	-		15.0	F119		2.5, 2.18	F119B
F120A	PR 3'-0" x 7'-2"	F WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		27.0	F118			F120A
F121A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		36.0	F118			F121A
F121B	4'-8" x 4'-8"	CCD	STL	-	2"	4/A-502	5/A-502	6/A-502		47.0	F121			F121B
F122A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	F125			F122A
F123A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F125			F123A
F124A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		34.0	F125			F124A
F126A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	F125			F126A
F127A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F125			F127A
F128A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	F137			F128A
F128B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F128B
F128C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0			2.10	F128C
F129A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F128			F129A
F130A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F128			F130A
F130B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	F132			F130B
F131A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	F132			F131A
F132A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	F137			F132A
F132B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	F132B
F133A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		33.0	B101			F133A
F134A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	B101			F134A
F135A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		37.0	B101			F135A
F136A	PR 3'-0" x 7'-2"	F FRP	AL	AL2	4 1/2"	20/A501	21/A501			10.0	EXT			F136A
F137A	PR 4'-0" x 7'-2"	FG2 WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		19.0	F138	30	2.6, 2.8, 2.9	F137A
UNIT G														
G101A	PR 4'-0" x 7'-2"	F WD	HM	HM2	5 3/4"	11/A-503	11/A-503 SIM.	-	90	16.0	G101		2.5, 2.7	G101A
G102A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		30.0	C101			G102A
G103A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	9/A-501	9/A-501 SIM	-	90	40.0	G105			G103A
G104A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	9/A-501	9/A-501 SIM	-	90	29.0				G104A
G105A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	G134			G105A
G105B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G105B
G106A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	G134			G106A
G106B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G106B
G106C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	G106		2.10	G106C
G107A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G106			G107A
G108A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G106			G108A
G108B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G110			G108B
G109A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G110			G109A
G110A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	G134			G110A
G110B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G110B
G111A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	G118	30	2.8, 2.9	G111A
G111B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G111B
G111C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	G115		2.10	G111C
G112A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G111			G112A
G113A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G111			G113A
G113B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G115			G113B
G114A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G115			G114A
G115A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		35.0	G118	30	2.8, 2.9	G115A
G115B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G115B
G116A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	G118			G116A
G117A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	G118			G117A
G118A	PR 3'-0" x 7'-2"	FGAL2	AL	AL34	4 1/2"	12/A-503	19/A-501	10/A-502		3.0	EXT			G118A
G119A	PR 3'-0" x 7'-2"	FGAL2	AL	AL32	4 1/2"	13/A-503	16/A-502	10/A-502		3.0	EXT		2.1, 2.5, 2.18	G119A
G119B	PR 3'-0" x 7'-2"	FGAL2	AL	AL33	4 1/2"	14/A-503	15/A-503,17/A-502	-		15.0	G119		2.5, 2.18	G119B
G120A	PR 3'-0" x 7'-2"	F WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		27.0	G118			G120A
G121A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		36.0	G118			G121A
G121B	4'-8" x 4'-8"	CCD	STL	-	2"	4/A-502	5/A-502	6/A-502		47.0	G121			G121B
G122A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		39.0	G125			G122A
G123A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	G125			G123A
G124A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		34.0	G125			G124A
G126A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		36.0	G125			G126A
G127A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		31.0	G125			G127A
G128A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	G134			G128A
G128B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G128B
G128C	8'-0" x 8'-0"	SOHD	AL	-		8/A-502	9/A-502	-		47.0	G128		2.10	G128C
G129A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G128			G129A
G130A	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G128			G130A
G130B	3'-0" x 7'-2"	D WD	HM	HM1	5 3/4"	1/A-501	2/A-501	-		42.0	G132			G130B
G131A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/8"	1/A-501	2/A-501	-		31.0	G132			G131A
G132A	3'-0" x 7'-2"	F WD	HM	HM8	8 3/8"	1/A-501	2/A-501	-		34.0	G134			G132A
G132B	3'-0" x 7'-2"	FGAL2	AL	AL30	4 1/2"	18/A-502	19/A-501	10/A-502		8.0	EXT		2.20	G132B
G133A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	7/A-501	8/A-501	-	90	29.0	C101			G133A
G134A	PR 4'-0" x 7'-2"	FG2 WD	HM	HM2	8 3/8"	1/A-501	2/A-501	-		19.0	G135	30	2.6, 2.8, 2.9	G134A

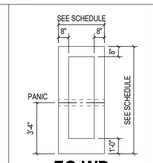
FIRE RATING IN MINUTES

20 - 20 MINUTE
45 - C LABEL 3/4 HOUR (INTERIOR); E LABEL 3/4 HOUR (EXTERIOR)
60 - B LABEL 1 HOUR
90 - B LABEL 1-1/2 HOUR (INTERIOR); D LABEL 1-1/2 HOUR (EXTERIOR)
180 - A LABEL 3 HOUR
S - S LABEL (SMOKE) I.E. 20/S, ETC.

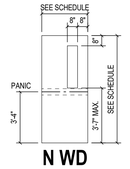
WOOD DOORS



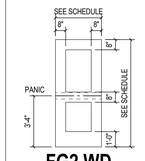
F WD
FLUSH DOOR



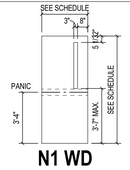
FG WD
FULL GLASS WOOD



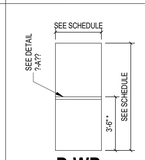
N WD
NARROW LITE



FG2 WD
FULL GLASS 2 WOOD

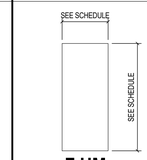


N1 WD
NARROW LITE FIRE DOOR FOR (B60 &B90) 3 x 33

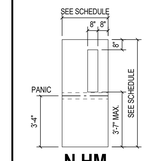


D WD
DUTCH DOOR

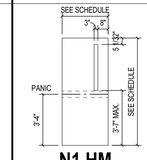
HM DOORS



F HM
FLUSH DOOR

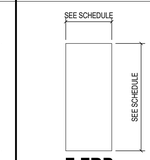


N HM
NARROW LITE



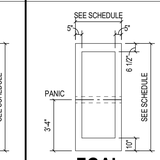
N1 HM
NARROW LITE FIRE DOOR FOR (B60 &B90) 3 x 33

FRP DOORS

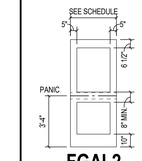


F FRP
FLUSH DOOR

ALUMINUM DOORS

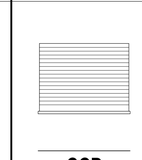


FGAL
FULL GLASS

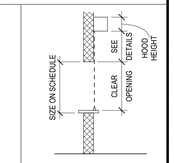


FGAL2
FULL GLASS 2

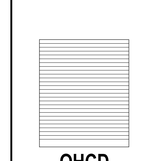
OTHER



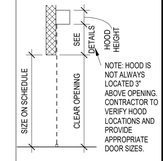
CCD
COILING COUNTER DOOR



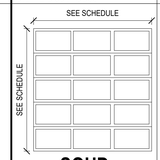
COILING COUNTER DOORS -FACE MOUNTED SECTION



OHCD
OVERHEAD COILING DOOR



OVERHEAD COILING DOORS AND GRILLES - FACE MOUNTED SECTION



SOHD
SECTIONAL OVERHEAD DOOR

GENERAL NOTES AND LEGEND

DOOR MATERIAL

HM - STEEL DOOR
AL - ALUMINUM DOOR
FAL - FLUSH ALUMINUM DOOR
FWD - FLUSH WOOD DOORS
FRP - FIBERGLASS DOORS
TGD - TEMPERED GLASS DOOR
SS - STAINLESS STEEL
DCGD - DISPLAY CASE GLASS DOOR
SGD - SLIDING GLASS DOOR
WMP - WIRE MESH PARTITION GATE

FRAME MATERIAL

HM - HOLLOW METAL FRAME
AL - ALUMINUM FRAME
SS - STAINLESS STEEL

GENERAL

ETR - EXISTING TO REMAIN
EXT - EXTERIOR
GL - GLASS
OH - OVERHEAD
PR - PAIR
SIM - SIMILAR
CCD - COILING COUNTER DOOR
OHCD - OVERHEAD COILING DOOR
OHCG - OVERHEAD COILING GRILLE

DOOR SCHEDULE REMARKS

2.1 Provide door undercut as required for door bottom sweep, by door supplier, with ADA compliant threshold as scheduled.

2.2 Threshold to run from masonry to masonry, notch around frame.

2.3 Threshold to run continuous with "RCE", returned closed ends, at the sidelite(s).

2.4 Automatic Door Operator, see Division 08 Section "Door Hardware". Division 26 to provide keyed disconnect switch for automatic door operator.

2.5 Door with security access system and electronic door hardware. See Division 08 Section "Door Hardware" and electrical & technology drawings. Division 08, Division 26, Division 28, and security access contractor to coordinate for location and installation of conduit/wiring required for electrified hardware items mounted to doors and frames, including, but not limited to, cutting/drilling any access holes required for pulling wires through frame head/jambs to the electrified hardware items.

2.6 Wall mounted electromagnetic door holder(s) by Division 26. Door mounted armature shall be installed by hardware installer.

2.7 Electronic door closer. See Division 08 Section "Door Hardware". Remote smoke detectors and connections to fire alarm by others.

2.8 1-3/4 inch wood sound door, see Division 08 Section "Flush Wood Doors". Sound gasketing and automatic door bottom(s) by door supplier.

2.9 See Division 08 Section "Sound Door and Windows". Door, frame, and hardware by Division 08. Lockset and cylinder by Division 08 Section "Door Hardware"

2.10 See Division 08 Section "Overhead Coiling Doors" for **[service doors] [insulated service doors] [counter doors]**

2.11 See Division 08 Section "Overhead Coiling Grilles" for **motorized**.

2.12 14 gauge steel overlapping "Z" astragal by door supplier, factory prepared for hardware as specified. Astragal to be on key side of door.

2.13 Pair of label doors with 2 vertical rod exit devices tested without an overlapping steel astragal. Door clearances shall be as required by NFPA 80.

2.14 Undercut door(s) as required for vertical rod exit device and flush floor strike(s).

2.15 Exterior aluminum door and framing. Provide rough-in for security system door contact switch. Coordinate installation with Electrical Contractor. Door monitor switch by others.

2.16 Provide insulated glass in door.

2.17 Provide S Label for smoke and draft positive pressure tested corridor door(s).

2.18 Hardware mullion by Division 08 Section "Door Hardware". Mullion to be field-painted to match aluminum door and frame finish.

2.19 The opening size indicated is masonry/rough opening. The hood, motor, etc. of coiling door is to be mounted above the ceiling. Verify dimension from opening lintel to ceiling and provide additional track and curtain length as required. Refer to Reflected Ceiling Plan for ceiling height.

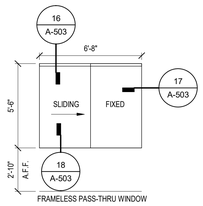
2.20 Exit Only - Panic Hardware on the interior side no handle or hardware on the exterior side of door.

EXTERIOR GLAZING TYPES

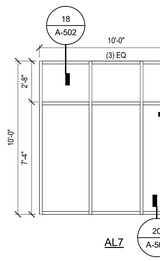
- GT-1: STANDARD GLAZING
- GT-2: HIGH PERFORMANCE GLAZING
- GT-3: TRANSLUCENT GLAZING
- GT-4: DOOR GLAZING (TO MATCH ADJACENT GLAZING)
- * GT-5: SECURITY GLAZING

DFO: DECORATIVE FILM OVERLAY - REFER TO FINISH SCHEDULE

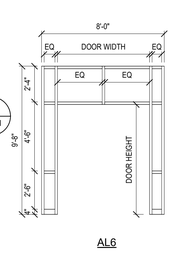
NOTE: ALL EXTERIOR GLAZING TO BE GT-1 (UNO)
REFER TO SPECS FOR GLAZING INFORMATION



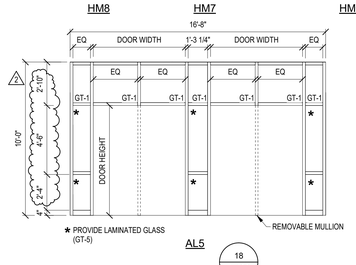
AL8 FRAMELESS PASS-THRU WINDOW



AL7

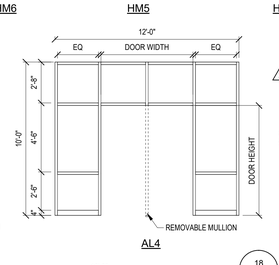


AL6

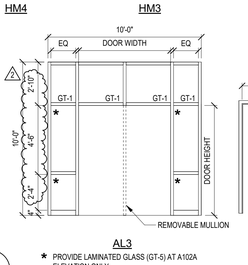


★ PROVIDE LAMINATED GLASS (GT-5)

AL5

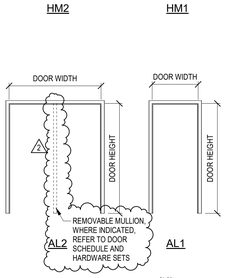


AL4

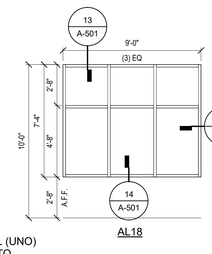


★ PROVIDE LAMINATED GLASS (GT-5) AT A102A ELEVATION ONLY. GT-1 (ALL OTHER LOCATIONS)

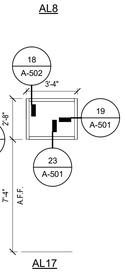
AL3



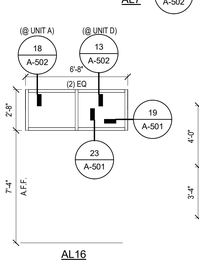
AL2 AL1



AL18



AL17



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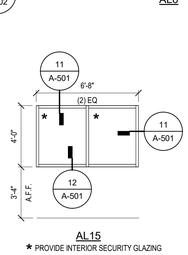
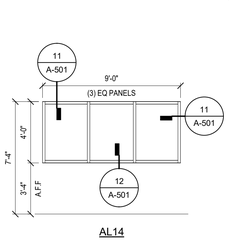


★ PROVIDE INTERIOR SECURITY GLAZING

AL15



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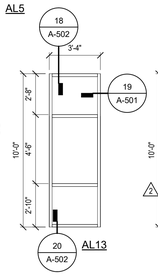

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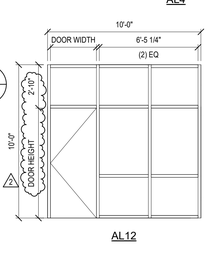
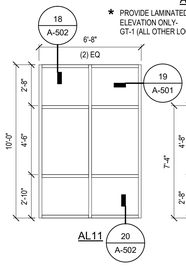


AL12



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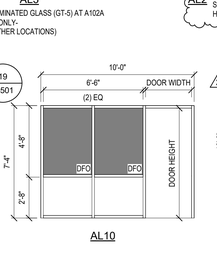

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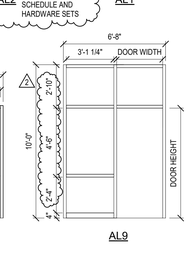

AL9

ALL DIMENSIONS SHOWN ARE NOMINAL (UNO)
FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION / INSTALLATION
REFER TO DOOR AND FRAME SCHEDULE FOR ADDITIONAL INFORMATION

FRAME ELEVATIONS

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

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ARCHITECT

FANNING HOWEY

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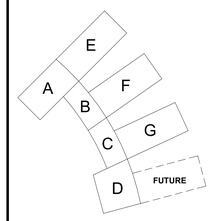


KEY PLAN

ISSUED FOR BID

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

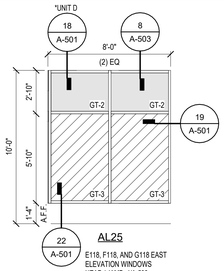
PROJECT MANAGER: JM
DRAWN BY: BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

DOOR AND FRAME SCHEDULE, DOOR TYPES

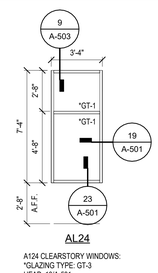
A-602

Autodesk Docs://Zionsville ELC/2023_ARCH_224033.00.rvt
7/15/2025 10:21:47 AM



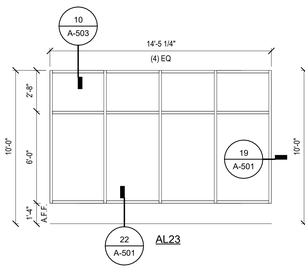
AL25

E118, F118, AND G118 EAST ELEVATION WINDOWS
HEAD / JAMB: 4/A-503
SILL: 7/A-503



AL24

A124 CLEARSTORY WINDOWS:
*GLAZING TYPE: GT-3
HEAD: 18/A-501
JAMB: 19/A-501
SILL: 19/A-502



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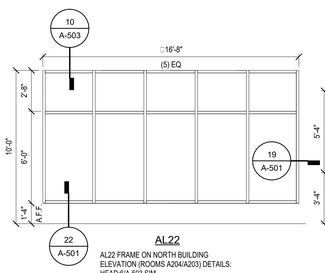
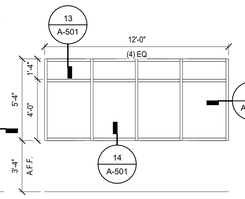


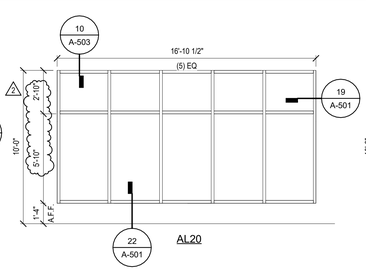
AL22

AL22 FRAME ON NORTH BUILDING
ELEVATION (ROOMS A204/A203) DETAILS:
HEAD:6/A-503 SIM.
JAMB: 5/AE503 SIM.
SILL: 7/A-503

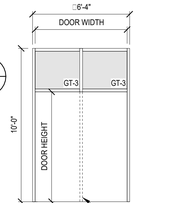


AL21

4'-0" A.F.F. @ UNIT E,F & G CORRIDORS

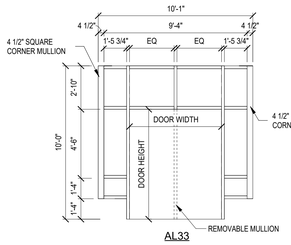


AL20

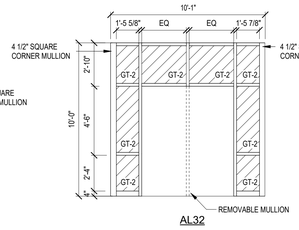


AL19

GLAZING TYPE: ALL LOCATIONS
GT-1 (DOOR)
GT-3 (TRANSOM)

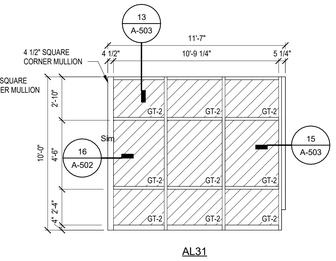


AL33

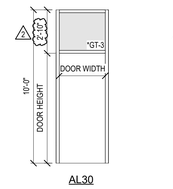


AL32

GLAZING TYPE: GT-2 (DOOR)

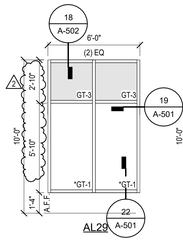


AL31



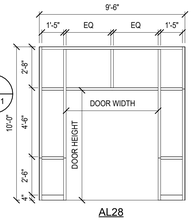
AL30

GLAZING TYPE: DOORS (UNO)
GT-1 (NORTH FACING CLASSROOMS)
GT-2 (EQUAL FACING CLASSROOMS)
*GLAZING TYPE AT DOOR A124F TO BE GT-1
FOR BOTH TRANSOM AND DOOR

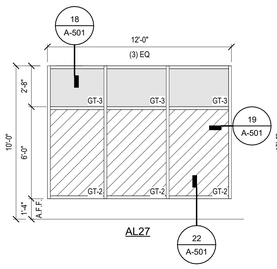


AL29

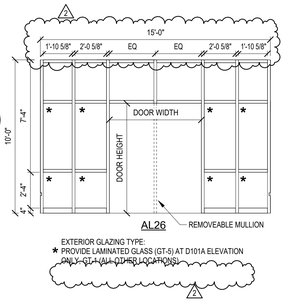
* GLAZING TYPE: GT-2 (SOUTH FACING CLASSROOMS)



AL28

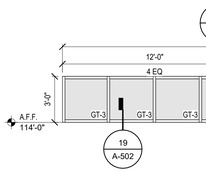


AL27

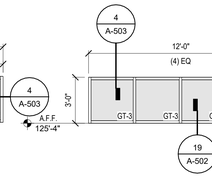


AL26

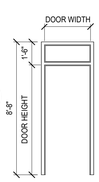
EXTERIOR GLAZING TYPE:
★ PROVIDE LAMINATED GLASS (GT-5) AT D101A ELEVATION
ONLY - GT-1 (ALL OTHER LOCATIONS)



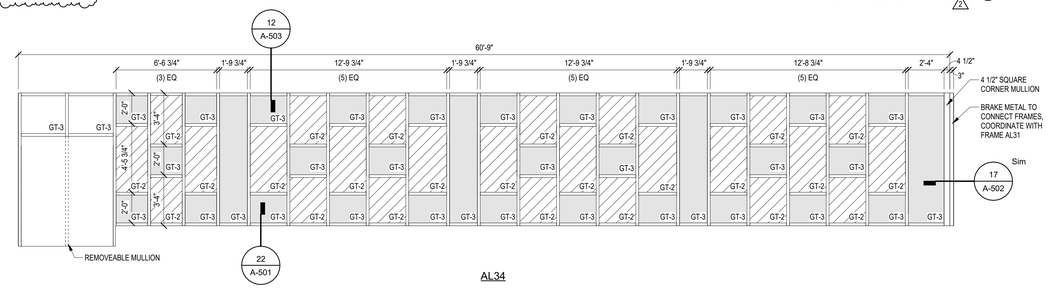
AL37



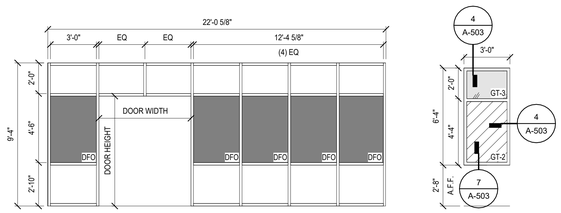
AL36



AL35

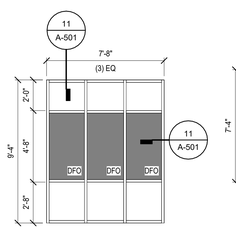


AL34

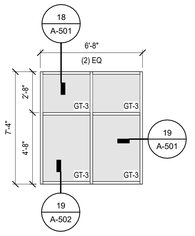


AL42

AL41



AL40



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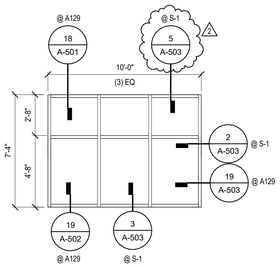
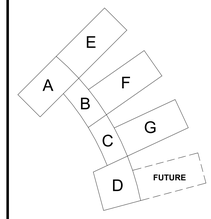


AL38



KEY PLAN

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ISSUED FOR BID

PAUL A. MILLER
REGISTERED
No. AR10800161
STATE OF
INDIANA
ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: BNC
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FRAME ELEVATIONS

A-603

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

S 700 E AND E 550 S
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ZIONSVILLE COMMUNITY SCHOOLS

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ARCHITECT

FANNING HOWEY

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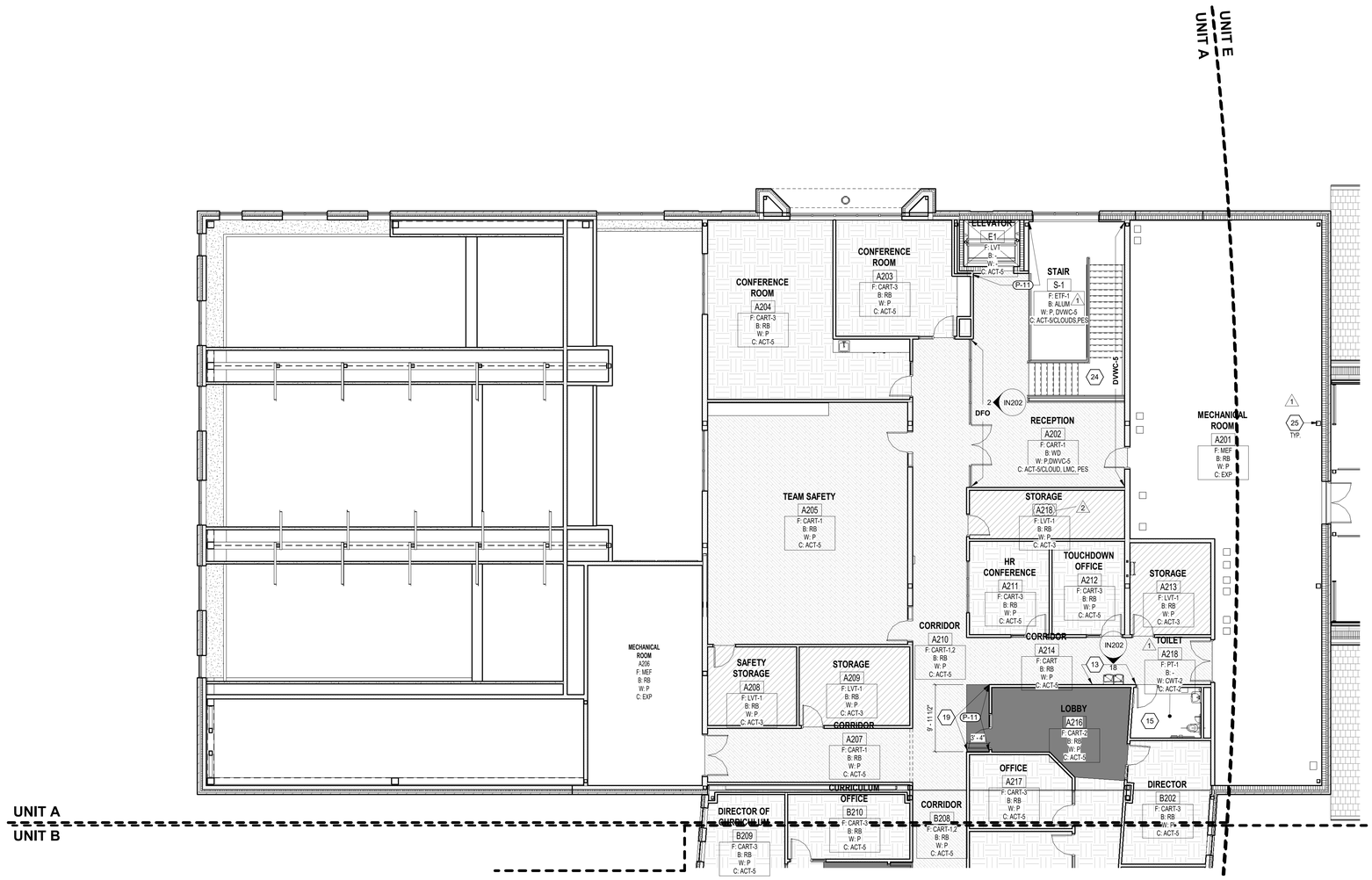

GENERAL FINISH NOTES

A. SEALANT SHALL BE APPLIED AT ALL MATERIAL TRANSITIONS, BACKSPLASHES, AND DOOR FRAMES. ALL LOCATIONS WHERE NEW FINISH ABUTS A DISSIMILAR MATERIAL.
B. PAINT ALL SIDES (VERT. AND HORZ.) OF BULKHEAD/SOFFIT COLOR INDICATED (UNO).
C. PROVIDE RESILIENT TRANSITION STRIPS BETWEEN FLOOR FINISH TYPES.
D. PAINT HOLLOW METAL (HM) DOOR FRAMES TO MATCH ADJACENT WALL COLOR (UNO).
E. PAINT ALL EXPOSED STRUCTURE P-11 UNLESS OTHERWISE NOTED ON FINISH PLANS, CEILING PLANS, OR INTERIOR ELEVATIONS.
F. PROVIDE SATIN ANODIZED ALUMINUM SPECIAL PROFILE TRIM AT THE FOLLOWING LOCATIONS (TYPICAL): 1
   - BETWEEN RUBBER FLOOR TILE AND CERAMIC WALL TILE: SCHLUTER DILEX-AHKA OR APPROVED EQUAL.
   - BETWEEN DRY RESINOUS BASE AND CERAMIC WALL TILE: SCHLUTER-JOLLY PROFILE.
   - AT TERMINATION OF PARTIAL HEIGHT CERAMIC TILED WALLS.
   - AT CERAMIC WALL TILE CORNERS: SCHLUTER-QUADEC: SCHLUTER-JOLLY CAP.
G. PROVIDE OUTSIDE CORNER TRIM CS CONSTRUCTION SPECIALTIES - ACROVYN (WCOS) AT IMPACT RESISTANT WALLCOVERING (IRWC) AS INDICATED ON ELEVATION ON 8/IN201.

FLOOR PATTERN/FINISH KEY NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET) 1

1 CERAMIC WALL TILE (CWT-2) FLOOR TO CEILING ON THREE SIDES OF ALCOVE.
2 MANUFACTURER BOUND 10'-0" DIAMETER ROUND AREA RUG WITH MANUFACTURER'S RECOMMENDED BACKING FOR LVT FLOORING, MADE FROM CART-4. REFER TO LIST OF FINISHES.
3 PAINT HORIZONTAL AND VERTICAL FACES OF BULKHEAD ACCENT COLOR AS INDICATED ON PLANS.
4 ALIGN RFT WITH CORNER OF WALL.
5 IMPACT RESISTANT WALL COVERING (IRWC-1) AND WOOD CHAIR RAIL TRIM TERMINATE AT CORNER (TYP.) REFER TO DETAIL ON QE501.
6 ACCENT PAINT IN ALCOVE TO MATCH ACCENT PAINT ON BULKHEAD ABOVE.
7 START WITH FULL RUBBER FLOOR TILE.
8 WOOD VENEER GRILLE SYSTEM (WGS). REFER TO ELEVATION.
9 FLOORING EXTENDS UNDER THE MILLWORK DESK. REFER TO FINISH PLANS FOR FLOORING MATERIAL.
10 AR-AWT ON WALL ABOVE. REFER TO ELEVATION. 1
11 PAINT UNDERSIDE OF BULKHEAD ACCENT COLOR. VARIES PER WING.
12 [ALTERNATE] INSTALL ETF-1,2,3,4,5,6 INSTEAD OF RFT IN CORRIDORS: A101, B101, C101, D129, D138.
   ETF-1 REPLACES RFT-15
   ETF-2 REPLACES RFT-14
   ETF-3 REPLACES RFT-1
   ETF-4 REPLACES RFT-2
   ETF-5 REPLACES RFT-5
   ETF-6 REPLACES RFT-6 1
13 CERAMIC WALL TILE (CWT-1,2) ON ALL WALLS, FLOOR TO CEILING. EXTENTS AS INDICATED ON FINISH PLANS.
14 CARPET EXTENDS TO WALL UNDER COUNTERTOP. 1
15 CERAMIC WALL TILE (CWT-X) ON ALL WALLS. FLOOR TO CEILING WITH SCHLUTER TRIM (REFER TO GENERAL FINISH NOTES). REFER TO PLANS FOR FINISH SELECTION.
16 CERAMIC WALL TILE (CWT-X) ON ALL WALLS. FLOOR TO CEILING WITH DRF BASE. REFER TO PLANS FOR FINISH SELECTION.
17 PAINT EXPOSED COLUMN P-11.
18 DIGITAL VINYL FILM (DVF-X) TO WRAP DOUBLE DOORS AND MOUNTED ON WALL. PAINT DOOR FRAMES TO MATCH ADJACENT ACCENT WALL. 1
19 WOOD VENEER PANELS (WVP) ON SIDE WALL(S) AND BULKHEAD. REFER TO PLANS, WALL PANEL MAY ONLY BE ON ONE WALL. REFER TO IN501 AND ARCHITECTURAL PLAN/BULKHEAD DETAILS.
20 PAINT BULKHEAD UNDERSIDE TO MATCH SIDE WALL ACCENT COLOR AS SHOWN ON PLANS.
21 PAINT RAILING ASSEMBLY AND EXPOSED COLUMNS P-11 UP TO 8'-0". 1
22 SLIDING WINDOW WITH SOLID SURFACE SILL (SSM-2). REFER TO ARCH DWGS FOR DETAILS.
23 ALIGNT CARPET TILES WITH NORTH WALL.
24 TERRAZZO PRECAST TREADS AND RISERS. 1
25 PAINT EXPOSED COLUMNS P-11 UP TO 8'-0".

FLOOR PATTERN LEGEND

CART-1	LVT-1
CART-2	LVT-2
CART-3	RFT-1 / ETF-3
CART-4	RFT-2, 5, 8, 11
CART-5	RFT-3, 6, 9
DRF-1	RFT-4, 7, 10, 13
ECT-1	RFT-14 / ETF-2
FS	RFT-15 / ETF-1
	RTAF-1

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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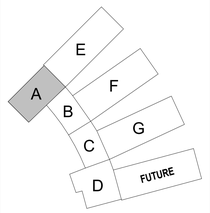

KEY PLAN

N

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

SECOND FLOOR FINISH PLAN - UNIT A

IF108

LIST OF FINISHES

FLOOR MATERIALS

CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CART-1 (ADMIN/MAIN CORRIDOR)	INTERFACE/WW880	105364 NATURAL LOOM
CART-2 (ADMIN ENTRY/LOBBIES)	INTERFACE/WW890	105385 CHARCOAL DOBBY
CART-3 (ADMIN/PRIVATE OFC)	INTERFACE/WW870	105348 NATURAL LOOM
CART-4 (ADMIN ACCENT RUG)	INTERFACE FLOR/ MOD CAFE	CHARCOAL 21-1447-03
CART-5 (GREEN STRIPE)	INTERFACE / CUSTOM UPLOAD M1284	106297 LIGHT BLUE, ACCENT COLOR REPLACED 276064-001.
CART-6 (BLUE STRIPE)	INTERFACE / CUSTOM UPLOAD M1284	106297 LIGHT BLUE, ACCENT COLOR REPLACED W/ 276064-003.
CART-7 (TERRACOTTA STRIPE)	INTERFACE / CUSTOM UPLOAD M1284	106297 LIGHT BLUE, ACCENT COLOR REPLACED W/ 276064-004.
CART-8 (GOLD STRIPE)	INTERFACE / CUSTOM UPLOAD M1284	106297 LIGHT BLUE, ACCENT COLOR REPLACED W/ 276064-005.

- ALL CARPET BACKING TO HAVE A MOISTURE RESISTANT BARRIER.
- INSTALLATION METHOD TO BE ASHLAR, UNLESS OTHERWISE NOTED.
- SUBMIT DRAWINGS INDICATING DIRECTION & LAYOUT OF CARPET TILE FOR APPROVAL PRIOR TO INSTALLATION.

DECORATIVE RESINOUS FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DRF-1	SW RESUFLOR DECO QUARTZ DB23	STORMY EVENING

ENTRANCE CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ECT-1	TANDUS "ABRASIVE ACTION II" 02578 SHAW CONTRACT "PATH TILE" INTERFACE "ENTRY LEVEL"	TO BE SELECTED FROM MFR STDS TO BE SELECTED FROM MFR STDS TO BE SELECTED FROM MFR STDS

EPOXY TERRAZZO FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ETF-1 (LIGHT GREY)	PER SPECIFICATIONS	33% GEORGIA WHITE #2 33% GEORGIA WHITE #1 33% GEORGIA WHITE #0 10% POOL MIX GP 653 WHITE ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.
ETF-2 (MEDIUM GREY)	PER SPECIFICATIONS	ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.
ETF-3 (DARK GREY)	PER SPECIFICATIONS	ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.
ETF-4 (GREEN)	PER SPECIFICATIONS	ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.
ETF-5 (BLUE)	PER SPECIFICATIONS	ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.
ETF-6 (TERRACOTTA)	PER SPECIFICATIONS	ARCHITECT TO CUSTOM SELECT MATRIX MIX COLOR & DISTRIBUTION / % OF DOMESTIC EXPOSED MATRIX CHIP SAMPLES.

- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 3 CHIP COLORS/CHIP SIZES PER MATRIX COLOR TO BE SIZES #0, #1, & #2.
- COORDINATE COLOR SELECTION/VERIFICATION WITH ARCHITECT.
- MANUFACTURER TO SUBMIT ACTUAL PRODUCT SAMPLES AFTER SELECTION OF ALL TERR COLORS FOR VERIFICATION AND APPROVAL.

FLOOR SEALER

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
FS	PER SPECIFICATIONS	

FLUID APPLIED CEMENTITIOUS URETHANE FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
EUF	PER SPECIFICATIONS	TO BE SELECTED FROM MFR STDS

FLUID APPLIED EPOXY AGGREGATE FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
MEF	PER SPECIFICATIONS	TO BE SELECTED FROM MFR STDS

LUXURY VINYL TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
LVT-1	ARMSTRONG / PARALELL 12mil 18" x 18"	J5162 HAVANA BISCUIT BEIGE
LVT-2	ARMSTRONG / PARALELL 12mil 18" x 18"	J5161 HAVANA HEATHER

PORCELAIN TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PT	CROSSVILLE / READY TO WEAR 12X24	AV317 FLANNEL SUIT

RESILIENT TREADS & RISERS/ RESILIENT STAIR ACCESSORIES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RTR/RSA-1	NORA/ GRANO/ T 5049	5304 BLACK PEPPER

- BLACK VISUALLY IMPAIRED CONTRASTING STRIP ON TREADS TO HAVE A SMOOTH, NON-GRIT FINISH.

RUBBER FLOOR TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RFT-1 (GREY - DARK)	NORAMENT / GRANO	5304 BLACK PEPPER
RFT-2 (GREEN DARK)	NORAMENT / SATURA	5275 LEO
RFT-3 (GREEN MED)	NORAMENT / SATURA	5189 VIRGO
RFT-4 (GREEN LIGHT)	NORAMENT / SATURA	5270 TUCANA
RFT-5 (BLUE DARK)	NORAMENT / SATURA	5273 DORADO
RFT-6 (BLUE MED)	NORAMENT / GRANO	5319 SPIKENARD
RFT-7 (BLUE LIGHT)	NORAMENT / SATURA	5122 EARTH
RFT-8 (TERRACOTTA DARK)	NORAMENT / SATURA	5276 PHOENIX
RFT-9 (TERRACOTTA MED)	NORAMENT / SATURA	5271 ARIES
RFT-10 (TERRACOTTA LIGHT)	NORAMENT / SATURA	5274 APUS
RFT-11 (GOLD DARK)	NORAMENT / GRANO	5330 CASSIA
~~RFT-12 (GOLD MED)~~	~~NORAMENT / SATURA~~	~~5272 CARINA~~ FOR FUTURE WING ONLY
RFT-13 (GOLD LIGHT)	NORAMENT / GRANO	5329 BERGAMOT
RFT-14 (GREY - MED)	NORAMENT / GRANO	5306 CAMPHOR
RFT-15 (GREY - LIGHT)	NORAMENT / GRANO	5305 AGAR

RUBBER TILE ATHLETIC FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RTAF-1	JOHNSONITE INERTIA HAMMERED MICROTONE INRH	RAINSTORM LB9

TERRAZZO TREADS (PRECAST)

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
TERR	PER SPECIFICATION	MATCH ETF-1

BASE MATERIALS

RESILIENT BASE

COVE BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RB	JOHNSONITE 4" COVE	20 CHARCOAL WG

DECORATIVE RESINOUS BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DRF	SW RESUFLOR DECO QUARTZ DB23	STORMY EVENING

WOOD BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
WB	TYPE: NOMINAL 1"X4" MAPLE WOOD BASE	STAINED TO MATCH DOORS

WALL FINISHES

ABUSE RESISTANT - ACOUSTICAL WALL TILES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
AR-AWT-1 (DARK GREEN)	ARMSTRONG / TECTUM / 2" THICK	MATCH P-2
AR-AWT-2 (DARK BLUE)	ARMSTRONG / TECTUM / 2" THICK	MATCH P-4
AR-AWT-3 (DARK TERRACOTTA)	ARMSTRONG / TECTUM / 2" THICK	MATCH P-6

ACOUSTIC WALL TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
AWT-1 (DARK GREEN)	DESIGNTEX / DOVETAIL 8571 / 2" THICK	TO BE SELECTED FROM MFR STDS
AWT-2 (LIGHT GREEN)	DESIGNTEX / DOVETAIL 8571 / 2" THICK	TO BE SELECTED FROM MFR STDS

CERAMIC WALL TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CWT-1 (ADMIN)	PLATFORM SURFACES / COLORAZZO	AVORIO / 3"x9"
CWT-2 (GREEN DARK)	PLATFORM SURFACES / COLORAZZO	SALVIA / 3"x9"
CWT-3 (GREEN LIGHT)	PLATFORM SURFACES / STRIPES	VERDE MENTA / 3"x12"
CWT-4 (BLUE DARK)	PLATFORM SURFACES / STRIPES	PRUSSIA GLOSSY / 3"x12"
CWT-5 (BLUE LIGHT)	PLATFORM SURFACES / BRICK ENVY	SERENA / 3"x9"
CWT-6 (TERRACOTTA DARK)	PLATFORM SURFACES / COLORAZZO	ROSSO CURORE / 3"x9"
CWT-7 (TERRACOTTA LIGHT)	PLATFORM SURFACES / BRICK ENVY	AMSTERDAM / 3"x9"
CWT-8 (GOLD DARK)	PLATFORM SURFACES / BRICK ENVY	DIJON / 3"x9"
CWT-9 (GOLD LIGHT)	PLATFORM SURFACES / BRICK ENVY	GOLDEN COAST / 3"x9"

DECORATIVE FILM OVERLAY

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DFO	3M / CRYSTAL GLASS FINISH	FROSTED CRYSTAL, 7725SE-324

DIGITAL VINYL WALL COVERING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DVWC-5 (ADMIN STAIRS)	MDC/ LEVEL / KOROSEAL	CUSTOM IMAGE BY ARCHITECT
DVWC-6 (DAYCARE RECEPTION)	MDC/ LEVEL / KOROSEAL	CUSTOM IMAGE BY ARCHITECT

DIGITAL VINYL FILM

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DVF-1 (DAYCARE 1)	3M	CUSTOM IMAGE BY ARCHITECT
DVF-2 (DAYCARE 2)	3M	CUSTOM IMAGE BY ARCHITECT
DVF-3 (DAYCARE 3)	3M	CUSTOM IMAGE BY ARCHITECT
DVF-4 (DAYCARE 4)	3M	CUSTOM IMAGE BY ARCHITECT

IMPACT RESISTANT WALL COVERING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
IRWC-1	CS ACROVYN BY DESIGN / WAVE WEAVE MINI	OYSTER 20047

PAINT

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
P-1 (FIELD)	SHERWIN WILLIAMS	SW 7009 PEARLY WHITE
P-2 (DARK GREEN)	SHERWIN WILLIAMS	SW 6215 ROCKY RIVER
P-3 (LIGHT GREEN)	SHERWIN WILLIAMS	SW 2812 ROOKWOOD JADE
P-4 (DARK BLUE)	BENJAMIN MOORE	1679 BEDFORD BLUE
P-5 (LIGHT BLUE)	BENJAMIN MOORE	1677 COLONIAL BLUE
P-6 (DARK TERRACOTTA)	SHERWIN WILLIAMS	SW 0008 CAJUN RED
P-7 (LIGHT TERRACOTTA)	SHERWIN WILLIAMS	SW 6354 ARMAGNAC
P-8 (DARK GOLD)	SHERWIN WILLIAMS	SW 6683 BEE
P-9 (LIGHT GOLD)	BENJAMIN MOORE	298 BROADWAY LIGHTS
P-11 (CHARCOAL GRAY)	SHERWIN WILLIAMS	SW 7674 PEPPERCORN
P-12 (CEILINGS)	SHERWIN WILLIAMS	SW7005 PURE WHITE

VINYL WALL COVERING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
VWC-1 (ADMIN)	MDC INTERIOR SOLUTIONS / CLAYTON	BREEZEWAY DGC1301

WOOD GRILLE WALL SYSTEM

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
WGS	ARMSTRONG/ WOODWORKS GRILLE FORTE SOLID WALL PANELS SLAT WIDTH - 3/4" / SLAT HEIGHT - 2-1/4" SLATS PER PANEL - VARIES (FIELD VERIFY) SPACE BETWEEN SLATS - 3/4"	CUSTOM PLAIN SLICED WHITE MAPLE

WOOD VENEER WALL PANELS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
WVP	REFER TO SPECS	PLAIN SLICED WHITE MAPLE

* REFER TO DETAIL ON SHEET

CEILING FINISHES

ACOUSTICAL CEILING TILES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ACT-1 (FIELD)	ARMSTRONG / SCHOOL ZONE FINE FISSURED 1713	WHITE / 2'X2'
ACT-2 (RESTROOMS)	ARMSTRONG / TUNDRA #301	WHITE / 2'X2'
ACT-3 (STORAGE)	ARMSRTONG / FINE FISSURED #1726	WHITE / 2'X2'
ACT-4 (KITCHEN)	ARMSTRONG / CLEAN ROOM VL #868	WHITE / 2'X2'
ACT-5 (OFFICES)	ARMSTRONG / OPTIMA #3354	WHITE / 2'X2'

SOUND-ABSORBING CEILING UNITS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
SAB	ARMSTRONG / SOUNDSCAPE BLADES	TBD/ 16"HX46L

LINEAR METAL CEILING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
LMC	ARMSTRONG / METALWORKS LINEAR CLASSIC 6"W PERFORATED PLANKS	EFFECTS CHERRY FXCH

MISCELLANEOUS & EQUIPMENT FINISHES

CORNER GUARDS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CG-1 (ADMIN)	CS ACROVYN / LG SERIES / 1"LEG/ 4'H	CLEAR
CG-2	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-2)
CG-3	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-3)
CG-4	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-4)
CG-5	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-5)
CG-6	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-6)
CG-7	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-7)
CG-8	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-8)
CG-9	CS ACROVYN / SSM-20AN / 2"LEG/ 4'H	TO MATCH PAINT COLOR (P-9)

CUBICLE CURTAIN

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CC-1	MAHARAM / SING 511490	TBD

INTERIOR WOOD DOORS/ INTERIOR WOOD TRIM

- WOOD DOORS: VT INDUSTRIES/ PL SL WHITE MAPLE/ FINISH: GARDALL 01 NATURAL
- PROVIDE WOOD STAIN SAMPLES FOR VERIFICATION.
- WOOD TRIM/BASE: MATCH WOOD DOORS

INTERIOR WOOD VENEER COLUMN COVERS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
WCC	ARMSTRONG/ CUSTOM WOODWORKS COLUMNS COVERS	TBD (LIGHT MAPLE VENEER)

MARKERBOARD

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
MB	PER SPECIFICATIONS	WHITE

MOTOR OPERATED / ELECTRIC ROLLER WINDOW SHADES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ERWS-1 (MP ROOM)	PER SPECIFICATIONS 5% OPENNESS	TBD
ERWS-2 (BOARD ROOM)	PER SPECIFICATIONS 1% OPENNESS	TBD

OPERABLE PANEL PARTITION

OP-1 (BOARDROOM)	REFER TO SPECIFICATIONS	

- ARCHITECT TO SELECT FROM MANUFACTURER'S FULL RANGE OF STANDARD AND DESIGNER FINISHES FOR VINYL WALL COVERINGS.

PLASTIC LAMINATE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PL-1 (CASEWORK)	FORMICA	FUSION MAPLE 7909-60

ROLLER WINDOW SHADES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RWS-1 (CLASSROOMS)	PER SPECIFICATIONS 1% OPENNESS	TBD
RWS-2 (OFFICES)	PER SPECIFICATIONS 5% OPENNESS	TBD

SOLID SURFACE MATERIAL

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
SSM-1 (GEN COUNTERTOPS)	STARON / TEMPEST	FP100 PEAK
SSM-2 (VERTICAL WHITE)	FORMICA	408 LUNE BRITE WHITE
SSM-3 (VERTICAL GREY)	FORMICA	775 LUNA STORM

TACKBOARD / TACKABLE WALL SURFACE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
TB	FORBO / BULLETIN BOARD	TO BE SELECTED FROM MFR STDS
TWS-1 (NEUTRAL)	CARNEGIE XOREL / STRIE 6423	817
TWS-2 (GREEN DARK)	CARNEGIE XOREL / METEOR 6427	2019
TWS-3 (GREEN LIGHT)	CARNEGIE XOREL / METEOR 6427	2015
TWS-4 (BLUE DARK)	CARNEGIE XOREL / METEOR 6427	2031
TWS-5 (BLUE LIGHT)	CARNEGIE XOREL / METEOR 6427	2025
TWS-6 (TERRACOTTA DARK)	CARNEGIE XOREL / METEOR 6427	726
TWS-7 (TERRACOTTA LIGHT)	CARNEGIE XOREL / METEOR 6427	718

TOILET PARTITIONS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
TP-1	PER SPECIFICATIONS	TO BE SELECTED FROM MFR STDS

WASH FOUNTAINS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
WF-1 (RESTROOMS)	BRADLEY VERGE LVRD2	SOLID SURFACE: TBD / SURROUND: TBD
WF-2 (PREK CLASSROOMS)	BRADLEY VERGE LVRD3	SOLID SURFACE: TBD / SURROUND: TBD

WOOD VENEER (MILLWORK)

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
MATCH SPECIES OF WOOD DOORS	REFER TO SPECS	

PAINT TYPE GENERAL NOTES

A. UNDER SECTION 099123 - INTERIOR PAINTING, PAINT EXPOSED PIPES, DUCTWORK, BREACHING, CONDUIT, INSULATED PIPES, CONDUIT HANGERS, SUPPORTS, BRACING, ETC., WHICH OCCURS IN SPACES DESIGNATED TO BE PAINTED IN PART OR WHOLE.
B. PAINTING AND FINISHING OF EXTERIOR SURFACES AS DESIGNATED. DETAILS SHALL BE UNDER THE WORK SECTION 0991113 - EXTERIOR PAINTING.
C. ALL GYPSUM BOARD WALLS SHALL BE PAINTED WITH INTERIOR PAINT TYPE #9.23 (SEMI-GLOSS) UNLESS OTHERWISE INDICATED.
D. ALL GYPSUM BOARD CEILINGS AND SOFFITS SHALL BE PAINTED WITH PAINT TYPE #9.21 (FLAT) UNLESS OTHERWISE INDICATED.
E. PAINT ALL NON-INTEGRALLY COLORED CMU WALLS WITH INTERIOR PAINT TYPE #4.14 (SEMI-GLOSS), UNLESS OTHERWISE INDICATED.
F. IN THE FOLLOWING ROOMS PAINT WITH PAINT CODE #4.224 (EPOXY-SEMI-GLOSS). REFER TO SECTION 099600 - HIGH PERFORMANCE COATINGS. **B102, B108, B112, B115, C105, C108, C112, C115, D122, D126, D126, D127, D128, D131, D132, D133, D134, D135, D136, D137, E103, E113, E116, E117, E130, E139, F103, F108, F113, F116, F117, F130, G103, G108, G113, G116, G117, G130, A201, B201, C235**
G. ALL EXPOSED STEEL COLUMNS SHALL BE PAINTED WITH PAINT CODE #5.221 (EPOXY-GLOSS). REFER TO SECTION 099600 - HIGH PERFORMANCE COATINGS.
H. ALL FERROUS METAL (EXCLUDING STRUCTURE) SHALL BE PAINTED INTERIOR PAINT TYPE #5.12.
I. ALL GALVANIZED METAL (EXCLUDING STRUCTURE) SHALL BE PAINTED INTERIOR PAINT TYPE #5.32.
J. ALL EXPOSED STEEL (FERROUS) STRUCTURE SHALL BE PAINTED INTERIOR PAINT TYPE #5.11.
K. ALL EXPOSED GALVANIZED-METAL STRUCTURE SHALL BE PAINTED INTERIOR PAINT TYPE #5.31.
L. ALL ABUSE RESISTANT ACOUSTICAL WALL PANELS (AR-AWT) SHALL BE PAINTED WITH INTERIOR PAINT CODE #11.0.
M. ALL WALLS ARE TO RECEIVE A SEMI-GLOSS FINISH AND ALL CEILINGS/BULKHEADS ARE TO RECEIVE A FLAT FINISH.

PAINT COLOR GENERAL NOTES

A. ALL INTERIOR WALLS SHALL BE PAINTED P-1, UNLESS OTHERWISE INDICATED ON FINISH PLANS OR INTERIOR ELEVATIONS.
B. PAINT ALL EXPOSED STEEL ON STAIRS, RAILS, AND STRINGERS P-11.
C. PAINT ALL GWB SOFFITS P-12 UNLESS OTHERWISE NOTED ON FINISH PLANS OR INTERIOR ELEVATIONS.
D. PAINT ALL SIDES (HORIZ. AND VERT.) OF SOFFIT INDICATED COLOR, UNLESS OTHERWISE NOTED.
E. PAINT ALL PAINTED EXPOSED CEILINGS P-11 UNLESS OTHERWISE NOTED ON FINISH PLANS, CEILING PLANS, OR INTERIOR ELEVATIONS.
F. ALL INTERIOR HOLLOW METAL FRAMES AND DOOR FRAMES TO BE PAINTED TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED.
G. ALL EXPOSED INTERIOR STEEL COLUMNS SHALL BE PAINTED P-11 UNLESS OTHERWISE INDICATED ON INTERIOR ELEVATIONS OR FINISH PLANS.
H. STAIN ALL WOOD TRIM/ RAILS/ DOORS/ ETC. TO MATCH PLASTIC LAMINATE PL-1.

EQUIPMENT MATERIAL & FINISH GENERAL NOTES

A. COLOR SELECTION OF ALL FINISHES FOR ARCHITECTURAL WOODWORK/CUSTOM CASEWORK ITEMS ARE NOTED ON CASEWORK ELEVATIONS AND DETAIL DRAWINGS.
B. EDUCATION CASEWORK FINISHES ARE AS FOLLOWS (UNLESS OTHERWISE NOTED):
- CASEWORK CASEWORK TO BE PL-1, UNLESS OTHERWISE NOTED.
- PLASTIC LAMINATE SURFACE AT BOOKCASES (PL-1) WITH 3MM EDGES TO MATCH TOP.
- INTERIOR MELAMINE TO BE WHITE.
- HANDLES TO BE SILVER METALLIC POWDERCOAT.
- HINGES TO BE SILVER METALLIC POWDERCOAT.
- GROMMETS TO BE SELECTED.
- SOLID SURFACE COUNTERTOPS ARE TO BE SSM-1, UNLESS OTHERWISE NOTED.

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100% CONSTRUCTION DOCUMENTS

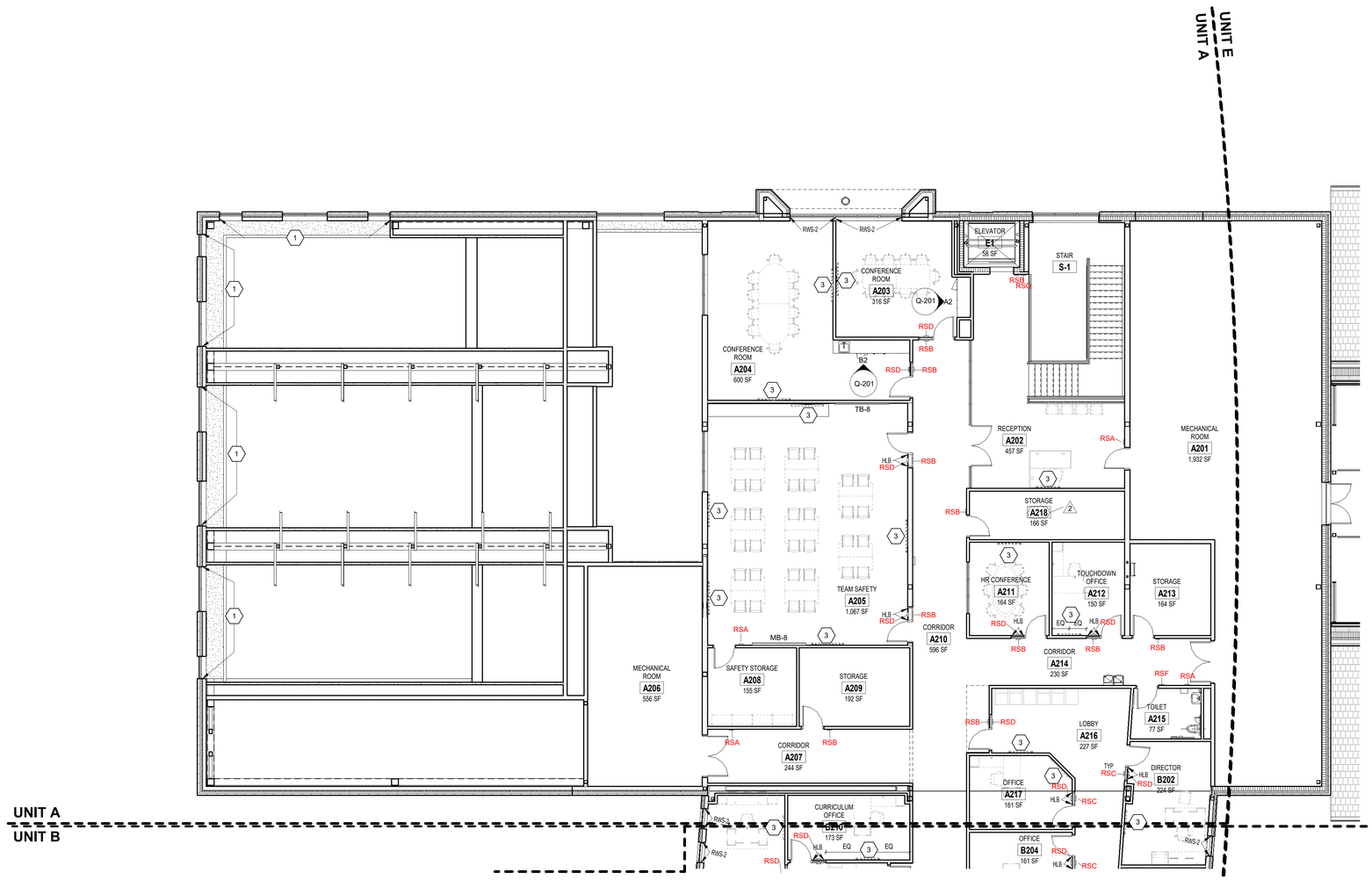
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

LIST OF FINISHES

IN601



SECOND FLOOR EQUIPMENT PLAN - UNIT A

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

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE.
B. HIDDEN LINES (- - - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (- - - -) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. (TB) INDICATES 4' HIGH TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
D. (MB) INDICATES 4' HIGH TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
E. (TWS) INDICATES TACKABLE WALL SURFACE. FIELD VERIFY OUTLET AND LIGHT SWITCH LOCATIONS; TRIM TWS ACCORDINGLY.
F. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
G. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
H. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
I. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
J. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
K. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
L. (RWS) INDICATES ROLLER WINDOW SHADE.
M. (ERWS) INDICATED MOTORIZED ROLLER WINDOW SHADES.
N. REFER TO LIST OF FINISHES FOR COLOR SELECTIONS.
O. (HLB) REFERS TO HORIZONTAL LOUVER BLINDS.
P. (CG) INDICATES CORNER GUARD; REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND I-12F LIST OF FINISHES FOR COLOR SELECTIONS.
Q. PROVIDE CONCEALED COUNTERTOP SUPPORT BRACKETS AT ALL COUNTERS. MILLWORK DESKS. BASIS OF DESIGN: RAKKS CONCEALED EH COUNTERTOP SUPPORT BRACKET OR EQUAL (EH-XXXXFM).
R. (RSX) INDICATES WALL MOUNTED SIGNAGE. REFER TO QG501.

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 MOTORIZED ROLLER WINDOW SHADES (ERWS-2) INSTALLED AT UPPER & LOWER WINDOWS.
2 MOTORIZED ROLLER WINDOW SHADES (ERWS-1) INSTALLED AT LOWER WINDOWS.
3 WALL MOUNTED MONITOR. BY OWNER.
4 CUBICLE CURTAINS AND TRACK. REFER TO QE502 FOR TRACK DETAIL.
5 SOLID SURFACE (SSM-1) COUNTERTOP AT 34"H. NO BACKSPLASH.
6 RECESSED CEILING MOUNTED PROJECTION SCREENS. REFER TO TECHNOLOGY DRAWINGS.
7 WALL MOUNTED PROJECTION SCREEN. REFER TO TECHNOLOGY DRAWINGS.
8 REFER TO FOOD SERVICE EQUIPMENT DRAWINGS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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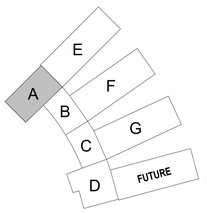

KEY PLAN

N

100% CONSTRUCTION DOCUMENTS

PAULA A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR EQUIPMENT PLAN - UNIT A

Q-108

SECOND FLOOR EQUIPMENT PLAN - UNIT B

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

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE.
B. HIDDEN LINES (- - - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (- - - -) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. (TB) INDICATES 4' HIGH TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
D. (MB) INDICATES 4' HIGH TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
E. (TWS) INDICATES TACKABLE WALL SURFACE. FIELD VERIFY OUTLET AND LIGHT SWITCH LOCATIONS; TRIM TWS ACCORDINGLY.
F. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
G. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
H. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
I. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
J. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
K. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
L. (RWS) INDICATES ROLLER WINDOW SHADE.
M. (ERWS) INDICATED MOTORIZED ROLLER WINDOW SHADES.
N. REFER TO LIST OF FINISHES FOR COLOR SELECTIONS.
O. (HLB) REFERS TO HORIZONTAL LOUVER BLINDS.
P. (CG) INDICATES CORNER GUARD; REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND I-12F LIST OF FINISHES FOR COLOR SELECTIONS.
Q. PROVIDE CONCEALED COUNTERTOP SUPPORT BRACKETS AT ALL COUNTERS. MILLWORK DESKS. BASIS OF DESIGN: RAKKS CONCEALED EH COUNTERTOP SUPPORT BRACKET OR EQUAL (EH-XXXFM).
R. (RSX) INDICATES WALL MOUNTED SIGNAGE. REFER TO QG501.

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 MOTORIZED ROLLER WINDOW SHADES (ERWS-2) INSTALLED AT UPPER & LOWER WINDOWS.
2 MOTORIZED ROLLER WINDOW SHADES (ERWS-1) INSTALLED AT LOWER WINDOWS.
3 WALL MOUNTED MONITOR. BY OWNER.
4 CUBICLE CURTAINS AND TRACK, REFER TO QE502 FOR TRACK DETAIL.
5 SOLID SURFACE (SSM-1) COUNTERTOP AT 34"H. NO BACKSPLASH.
6 RECESSED CEILING MOUNTED PROJECTION SCREENS. REFER TO TECHNOLOGY DRAWINGS.
7 WALL MOUNTED PROJECTION SCREEN. REFER TO TECHNOLOGY DRAWINGS.
8 REFER TO FOOD SERVICE EQUIPMENT DRAWINGS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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ZIONSVILLE, INDIANA 46077

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ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
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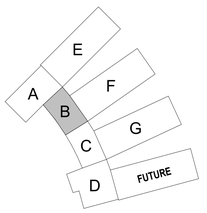

KEY PLAN

N

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

SECOND FLOOR EQUIPMENT PLAN - UNIT B

Q-109

SECOND FLOOR EQUIPMENT PLAN - UNIT C

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

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE.
B. HIDDEN LINES (- - - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (- - - -) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. (TB) INDICATES **4' HIGH** TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
D. (MB) INDICATES **4' HIGH** TACK BOARD LENGTH AS INDICATED. DISPLAY BOARDS TO BE MOUNTED AT 3'-0" IN ALL ADMIN AREAS, AND 2'-0" IN CLASSROOMS U.N.O.
E. (TWS) INDICATES TACKABLE WALL SURFACE. FIELD VERIFY OUTLET AND LIGHT SWITCH LOCATIONS; TRIM TWS ACCORDINGLY.
F. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
G. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
H. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
I. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
J. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
K. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
L. (RWS) INDICATES ROLLER WINDOW SHADE.
M. (ERWS) INDICATED MOTORIZED ROLLER WINDOW SHADES.
N. REFER TO LIST OF FINISHES FOR COLOR SELECTIONS.
O. (HLB) REFERS TO HORIZONTAL LOUVER BLINDS.
P. (CG) INDICATES CORNER GUARD; REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND I-12F LIST OF FINISHES FOR COLOR SELECTIONS.
Q. PROVIDE CONCEALED COUNTERTOP SUPPORT BRACKETS AT ALL COUNTERS. MILLWORK DESKS. BASIS OF DESIGN: RAKKS CONCEALED EH COUNTERTOP SUPPORT BRACKET OR EQUAL (EH-XXXXFM).
R. (RSX) INDICATES WALL MOUNTED SIGNAGE. REFER TO QG501.

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 MOTORIZED ROLLER WINDOW SHADES (ERWS-2) INSTALLED AT UPPER & LOWER WINDOWS.
2 MOTORIZED ROLLER WINDOW SHADES (ERWS-1) INSTALLED AT LOWER WINDOWS.
3 WALL MOUNTED MONITOR BY OWNER.
4 CUBICLE CURTAINS AND TRACK, REFER TO QE502 FOR TRACK DETAIL.
5 SOLID SURFACE (SSM-1) COUNTERTOP AT 34"H. NO BACKSPLASH.
6 RECESSED CEILING MOUNTED PROJECTION SCREENS. REFER TO TECHNOLOGY DRAWINGS.
7 WALL MOUNTED PROJECTION SCREEN. REFER TO TECHNOLOGY DRAWINGS.
8 REFER TO FOOD SERVICE EQUIPMENT DRAWINGS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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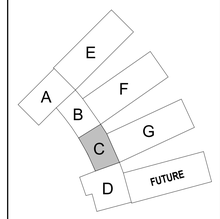


KEY PLAN

N

100% CONSTRUCTION DOCUMENTS

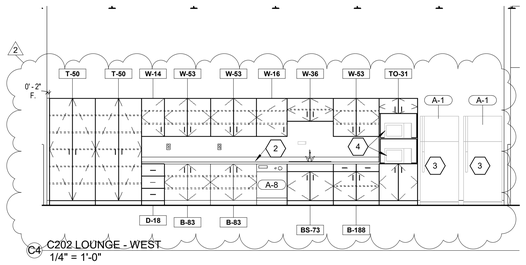
PAUL A. MILLER REGISTERED No. AR10800181 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

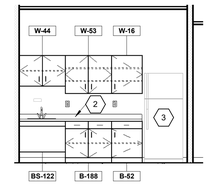
REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

SECOND FLOOR EQUIPMENT PLAN - UNIT C

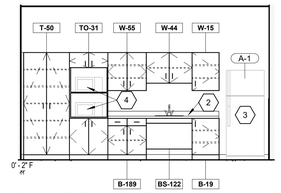
Q-110



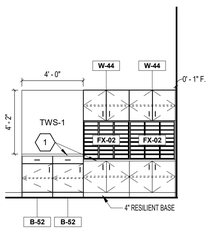
C4 C202 LOUNGE - WEST
1/4" = 1'-0"



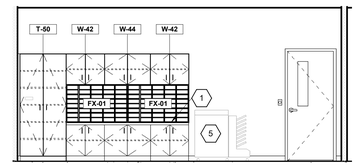
E1 D115 CLINIC - CASEWORK
1/4" = 1'-0"



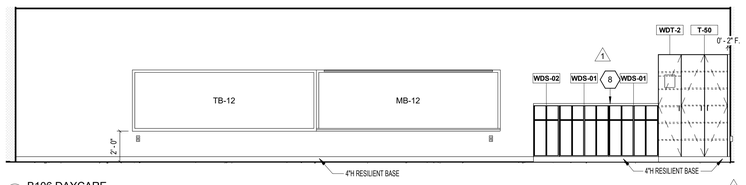
D1 D119 WORKROOM - EAST
1/4" = 1'-0"



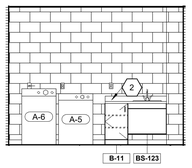
C3 C202 LOUNGE - NORTH
1/4" = 1'-0"



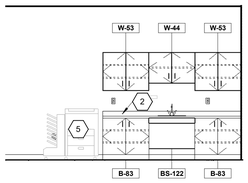
C1 D119 WORKROOM - WEST
1/4" = 1'-0"



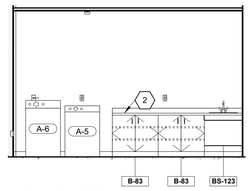
B3 B106 DAYCARE
1/4" = 1'-0"



B2 D122 LAUNDRY/CUSTODIAL
1/4" = 1'-0"



A3 D110 TEACHER PREP
1/4" = 1'-0"



A2 F135 DAYCARE LAUNDRY
1/4" = 1'-0"

INTERIOR ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. PLASTIC LAMINATE (PL-1) CASEWORK WITH SOLID SURFACE (SSM-1) TOP/NO BACKSPLASH.
2. PLASTIC LAMINATE (PL-1) CASEWORK WITH SOLID SURFACE (SSM-1) TOP AND 4"H BACKSPLASH.
3. REFRIGERATOR, BY OWNER. REFER TO SCHEDULE ON QE603.
4. MICROWAVE, BY OWNER. REFER TO SCHEDULE ON QE603.
5. COPIER. BY OWNER.
6. UNDERCOUNTER REFRIGERATOR, OWNER PROVIDED.
7. 5 BURNER ELECTRIC COOKTOP. REFER TO SCHEDULE ON QE603.
8. SOLID SURFACE (SSM-1) TOP. NO BACKSPLASH.

VERIFICATION NOTE

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100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

CASEWORK & EQUIPMENT ELEVATIONS

Q-202

CASEWORK SCHEDULE

TYPE	NO.	SIZE W	SIZE D	SIZE H	DESCRIPTION
B	3	1' - 3"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND ONE HINGED DOOR.
B	11	1' - 6"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND ONE HINGED DOOR.
B	19	1' - 9"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND ONE HINGED DOOR.
B	34	1' - 3"	2' - 0"	2' - 10"	BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
B	52	2' - 0"	2' - 0"	2' - 10"	BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
B	59	2' - 3"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	66	2' - 6"	2' - 0"	2' - 6"	BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	67	2' - 6"	2' - 0"	2' - 10"	BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	68	2' - 5"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	75	2' - 9"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	82	3' - 0"	2' - 0"	2' - 6"	BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	83	3' - 0"	2' - 0"	2' - 10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	188	3' - 0"	2' - 0"	2' - 10"	BASE UNIT WITH TWO DRAWERS, ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	189	2' - 6"	2' - 0"	2' - 10"	BASE UNIT WITH TWO DRAWERS, ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	201	3' - 6"	2' - 0"	2' - 10"	BASE UNIT WITH TWO DRAWERS, ONE VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
BB	3	3' - 9"	2' - 0"	2' - 10"	BLIND CORNER BASE UNIT WITH TWO ADJUSTABLE SHELVES AND ONE HINGED DOOR.
BO	88	3' - 4"	2' - 0"	2' - 10"	OPEN BASE UNIT WITH TWO ADJUSTABLE SHELVES, DIVIDER IN CENTER. OPEN FROM FRONT AND ONE SIDE. INCLUDES ROUND METAL TUBE ON CORNER.
BS	71	2' - 6"	2' - 0"	2' - 10"	SINK BASE UNIT WITH TWO HINGED DOORS AND ONE BLANK DRAWER PANEL.
BS	73	3' - 0"	2' - 0"	2' - 10"	SINK BASE UNIT WITH TWO HINGED DOORS AND ONE BLANK DRAWER PANEL.
BS	74	3' - 3"	2' - 0"	2' - 10"	SINK BASE UNIT WITH TWO POCKET DOORS, ONE BLANK DRAWER PANEL AND ACCESS PANEL.
BS	122	3' - 0"	2' - 0"	2' - 0"	ADULT ADA SINK BASE UNIT WITH A REMOVABLE ACCESS PANEL.
BS	123	2' - 6"	2' - 0"	2' - 0"	ADULT ADA SINK BASE UNIT WITH A REMOVABLE ACCESS PANEL.
D	18	1' - 6"	2' - 0"	2' - 10"	DRAWER UNIT WITH THREE EQUAL DRAWERS. 6-1/2 INCHES DEEP INSIDE. (2)
EP	1	0' - 0 3/4"	2' - 0"	2' - 10"	3/4" THICK END PANEL
FX	01	4' - 0"	1' - 0 3/4"	2' - 6"	MAILBOX UNIT WITH 40 OPENINGS, REFER TO DETAIL ON QE501.
FX	02	3' - 0"	1' - 0 3/4"	2' - 6"	MAILBOX UNIT WITH 27 OPENINGS, REFER TO DETAIL ON QE501.
T	50	3' - 0"	2' - 0"	7' - 0"	TALL UNIT WITH FIVE ADJUSTABLE SHELVES AND TWO HINGED DOORS. SHELVES TO HAVE NOTCHED OUT RADIUS IN REAR FOR CABLE PASSTHROUGH. POWER/DATA RECEPTACLE LOCATED AT 64" A.F.F. COORDINATE CUTOUT IN FIELD. POWER/DATA RECEPTACLES TO BE MOUNTED SO THAT FACEPLATE IS FLUSH WITH BACKSIDE OF CABINET. RECEPTACLES AND CUTOUT TO BE CENTERED HORIZONTALLY IN REAR OF WARDROBE CABINET. REFER TO ELECTRICAL/TECHNOLOGY DRAWINGS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. (1)
TO	31	2' - 6"	2' - 0"	7' - 0"	TALL DOOR/OPEN UNIT. TWO DOOR UPPER CABINET. OPEN CABINET IN MIDDLE WITH ONE ADJUSTABLE SHELF AND ONE FIXED SHELF.
W	9	1' - 3"	1' - 2"	2' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	12	2' - 0"	1' - 2"	2' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	13	1' - 3"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	14	1' - 6"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR. (2)
W	15	1' - 9"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	16	2' - 0"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	34	2' - 6"	1' - 2"	1' - 6"	WALL UNIT WITH TWO HINGED DOORS.
W	36	3' - 0"	1' - 2"	1' - 6"	WALL UNIT WITH TWO HINGED DOORS.
W	42	2' - 6"	1' - 2"	2' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS
W	43	2' - 9"	1' - 2"	2' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS
W	44	3' - 0"	1' - 2"	2' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS
W	45	2' - 3"	1' - 2"	1' - 4"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS
W	49	2' - 3"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	52	3' - 0"	1' - 2"	3' - 0"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	53	3' - 0"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	54	3' - 6"	1' - 2"	2' - 6"	WALL UNIT WITH ONE VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	55	2' - 6"	1' - 2"	2' - 6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	66	2' - 5"	1' - 2"	3' - 6"	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	67	2' - 9"	1' - 2"	3' - 6"	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	68	3' - 0"	1' - 2"	3' - 6"	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
WC	4	1' - 2"	2' - 0"	2' - 6"	WALL CORNER UNIT WITH DIAGONAL FACE, ONE ADJUSTABLE SHELF, AND ONE HINGED DOOR.
WDS	00	3' - 3 3/4"	1' - 3"	4' - 0"	4 UNIT WIDE STUDENT WARDROBE WITH FIXED UPPER SHELF, 9 INCH WIDE COAT COMPARTMENT AND A DOUBLE COAT HOOK.
WDS	01	3' - 3 1/2"	1' - 3"	3' - 8 1/2"	4 UNIT WIDE STUDENT WARDROBE WITH FIXED UPPER SHELF, 9 INCH WIDE COAT COMPARTMENT AND A DOUBLE COAT HOOK.
WDS	2	1' - 0"	1' - 3"	4' - 0"	1 UNIT WIDE STUDENT WARDROBE WITH FIXED UPPER SHELF, 12 INCH WIDE COAT COMPARTMENT AND A DOUBLE COAT HOOK.
WDS	02	1' - 8 1/4"	1' - 3"	3' - 8 1/2"	2 UNIT WIDE STUDENT WARDROBE WITH FIXED UPPER SHELF, 9 INCH WIDE COAT COMPARTMENT AND A DOUBLE COAT HOOK.
WDT	2	1' - 6"	2' - 0"	7' - 0"	TALL TEACHER WARDROBE CABINET WITH 5 ADJUSTABLE SHELVES, REMOVABLE COAT ROD AND MIRROR. INCLUDE LOCK ON THIS CABINET.
WM	X	2' - 6"	1' - 2"	1' - 4"	MICROWAVE CABINET WITH 2 UPPER DOORS AND 22"D OPEN SHELF BELOW. INCLUDE CUTOUT FOR OUTLET.
WO	20	3' - 0"	1' - 2"	1' - 6"	OPEN WALL UNIT.
WO	32	3' - 0"	1' - 2"	2' - 0"	OPEN WALL DIAPER STORAGE UNIT WITH CENTER DIVIDER ON BOTTOM SHELF AND SIX EQUALLY SPACED SLOTS FOR DIAPER STORAGE ABOVE. REFER TO DETAIL ON SHEET QE502.
WO	68	2' - 5"	1' - 2"	3' - 6"	OPEN WALL UNIT WITH TWO ADJUSTABLE SHELVES.
WT	01	3' - 0"	2' - 0"	7' - 0"	TALL STORAGE/TECHNOLOGY CABINET WITH ONE FIXED VERTICAL PANEL. INCLUDE 5 ADJUSTABLE SHELVES, AND FILING DRAWERS. REFER TO DETAIL ON QE501. INCLUDE LOCK ON THIS CABINET. (1)

RESIDENTIAL APPLIANCE SCHEDULE

ITEM NO.	ITEM DESCRIPTION	ELEC. FIELD CONNECTION	MECH. FIELD CONNECTION	PLUMB. FIELD CONNECTION	OWNER PROVIDED	CONTRACTOR PROVIDED
A-1	**REFRIGERATOR WITH TOP FREEZER** • 18 CU.FT. • REVERSIBLE HINGES • DOES NOT INCLUDE ICE MAKER • ENERGY STAR QUALIFIED • 66.375"H x 30"W x 30.375"D • COLOR: FINGERPRINT-RESISTANT STAINLESS STEEL • BASIS OF DESIGN FRIGIDAIRE FFHT1835VS	115V, 60Hz, 15AMPS		X	X	
A-2	**MICROWAVE** • 1.6 CU.FT. • RECESSED GLASS TURNTABLE • ELECTRONIC DIGITAL DISPLAY WITH CLOCK • MULTIPLE POWER LEVELS, SENSOR COOKING CONTROLS • 21.75"W x 12.25"H X 18.31"D • COLOR: STAINLESS STEEL • BASIS OF DESIGN WHIRLPOOL WMCS7022PZ	1200W			X	
A-3	**UNDER-COUNTER REFRIGERATOR** • 3.87 CU.FT. • REVERSIBLE HINGES • ENERGY STAR QUALIFIED • 23.4"W x 31.5"H x 24.7"D • COLOR: STAINLESS STEEL • BASIS OF DESIGN: HOSHIZAKI HR24C-G	115V, 60Hz, 15/20AMPS				X
A-4	**REFRIGERATOR (DAYCARE)** • 18 CU.FT. • ENERGY STAR QUALIFIED • 66.2"H x 27.8"W x 30.8"D • COLOR: FINGERPRINT-RESISTANT STAINLESS STEEL • BASIS OF DESIGN FRIGIDAIRE FFHT1822UV	120V, 60Hz, 15AMPS			X	
A-5	**FRONT LOAD WASHER** • 4.3 CU.FT. • MULTIPLE CYCLES • ADA COMPLIANT • ENERGY STAR QUALIFIED • 27"W x 38"H x 31"D • COLOR: WHITE • BASIS OF DESIGN WHIRPOOL WFW560CH	120V, 15/20AMPS		X		X
A-6	**FRONT LOAD ELECTRIC DRYER** • 7.5 CU.FT. • MULTIPLE CYCLES • ADA COMPLIANT • ENERGY STAR QUALIFIED • 27"W x 38.75"H x 31.5"D • COLOR: WHITE • BASIS OF DESIGN WHIRPOOL WED5620HW	240V, 60Hz, 30AMPS	X			X
A-7	**ELECTRIC COOKTOP** • 4.8 CU.FT. • CERAMIC GLASS COOKTOP w/ 5 BURNERS • ADA COMPLIANT KNOBS AT FRONT OF COOKTOP • 29.75"W x 21.4"D • COLOR: STAINLESS STEEL & BLACK • BASIS OF DESIGN: GE JEP5030DTBB	240V, 60Hz, 40AMPS				X
A-8	**DISHWASHER** • 1-HOUR WASH CYCLE • ADA COMPLIANT • 23.5"W x 32.5"H x 24"D • COLOR: STAINLESS STEEL • BASIS OF DESIGN: WHIRLPOOL WDF550SAHS	120V, 60Hz, 15/20AMPS		X		X
A-9	**REFRIGERATOR (3-DOOR FRENCH) WITH ICE MAKER** • 27 CU.FT. • ENERGY STAR QUALIFIED • 69.75"H x 36"W x 34"D • COLOR: FINGERPRINT-RESISTANT STAINLESS STEEL • BASIS OF DESIGN GE GNE27JYMFS	120V, 60Hz, 15AMPS		X	X	
A-10	**RECIRCULATING RANGE HOOD** • LED LIGHT • 3-SPEED CONTROL • ADD WALL SWITCH IN ADA APPLICATION • 30"W x 5"H x 19.88"D • USE NON-DUCTED FILTER (HPF30) • COLOR: STAINLESS STEEL • BASIS OF DESIGN: BROAN SAHALE SERIES BKDEG130SS	120V, 60Hz 0.65AMPS				X (1)

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100% CONSTRUCTION DOCUMENTS

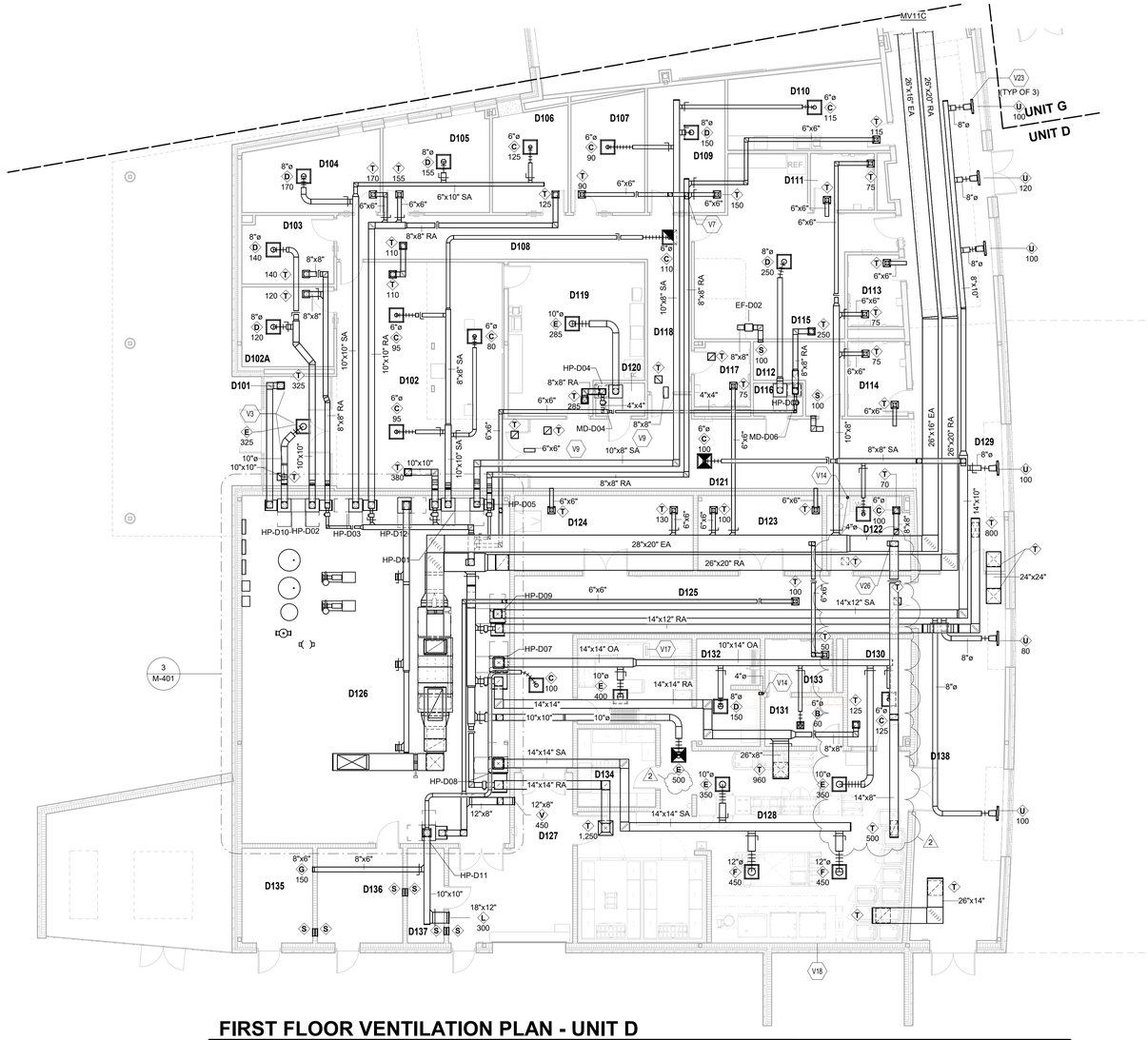
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: VLM
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO. (1)	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

EDUCATIONAL CASEWORK SCHEDULES

QE601



FIRST FLOOR VENTILATION PLAN - UNIT D

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

ROOM LEGEND - UNIT D

ROOM NO.	ROOM NAME	AREA (SF)
D101	VESTIBULE	140 SF
D102	RECEPTION	753 SF
D102A	OFFICE	138 SF
D103	OFFICE	116 SF
D104	OFFICE	186 SF
D105	OFFICE	187 SF
D106	OFFICE	143 SF
D107	OFFICE	159 SF
D108	CORRIDOR	292 SF
D109	CONFERENCE ROOM	186 SF
D110	TEACHER PREP	235 SF
D111	TOILET	68 SF
D112	TECHNOLOGY	92 SF
D113	TOILET	72 SF
D114	TOILET	83 SF
D115	CLINIC	481 SF
D116	HEAT PUMP CLOSET	31 SF
D117	TOILET	67 SF
D118	CORRIDOR	109 SF
D119	WORKROOM	359 SF
D120	HEAT PUMP CLOSET	30 SF
D121	CORRIDOR	520 SF
D122	LAUNDRY / CUSTODIAL	116 SF
D123	STORAGE	177 SF
D124	STORAGE	254 SF
D125	CORRIDOR	582 SF
D126	MECHANICAL / ELECTRICAL	1750 SF
D127	RECEIVING	304 SF
D128	FOOD SERVICE	1282 SF
D129	CORRIDOR	885 SF
D130	OFFICE	126 SF
D131	PASSAGE	72 SF
D132	CART WASH / LAUNDRY	129 SF
D133	TOILET	70 SF
D134	DRY STORAGE	115 SF
D135	FIRE RISER	126 SF
D136	ELECTRICAL	152 SF
D137	ELECTRICAL	65 SF
D138	CORRIDOR	599 SF

VENTILATION PLAN GENERAL NOTES

A. ALL DUCTWORK, PIPING AND VALVES SHALL BE CONCEALED ABOVE THE CEILING AND WITHIN WALLS, UNLESS OTHERWISE NOTED.
B. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS RELATED TO EQUIPMENT QUALITY, CONSTRUCTION AND FINISH OF MATERIALS.
C. ARRANGE DUCTWORK, PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OBSTRUCTIONS.
D. SEAL DUCT PENETRATIONS THROUGH THE FLOOR AND/OR WALLS IN ACCORDANCE WITH MECHANICAL CODE AND SMACNA REQUIREMENTS. SEAL DUCT PENETRATIONS THROUGH FIRE RATED FLOORS AND/OR WALLS WITH A MATERIAL HAVING SAME FIRE RATING AS THE WALL AND/OR FLOOR.
E. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
F. ALL RECTANGULAR SHEET METAL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. ALL ROUND DUCT SIZES SHOWN ARE INSIDE DIAMETERS.
G. PROVIDE BALANCING DAMPER AT EACH DUCT BRANCH, SERVING DIFFUSER, GRILLE AND REGISTER.
H. INSTALL WALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC. 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS.
I. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
J. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, FIRE PROTECTION AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.

VENTILATION PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
V3	PAINT AIR DEVICES TO COLOR SELECTED BY ARCHITECT.
V7	PROVIDE VOLUME DAMPER IN VERTICAL DUCTWORK TO AIR DEVICE.
V9	WALL OPENING LOCATED ABOVE THE CEILING. IF OPENING SIZE IS UNABLE TO BE ACCOMMODATED, THE SAME QUANTITY OF OPENING FREE AREA WILL BE ACCEPTABLE TO ACCOMMODATE AIR TRANSFER. COORDINATE EXACT LOCATION WITH ALL TRADES.
V14	APPROXIMATE LOCATION OF WASHER/DRYER PROVIDED BY OWNER. 4" DIAMETER VENT ROUTED FROM DRYER LOCATION UP THROUGH THE ROOF ABOVE AND TERMINATED ON FLAT WITH PREFABRICATED DRYER VENT WITH INTEGRAL DAMPER SIMILAR TO DRYER JACK (488U) BY INOVATE. STANDARD COLOR TO BE SELECTED BY THE ARCHITECT. VENT ROUTED EXPOSED AGAINST THE WALL AND PAINTED TO MATCH ADJACENT WALL. SECURELY FASTEN TO THE WALL. PROVIDE CLEANOUTS AT EACH CHANGE OF DIRECTION ELBOW. REFER TO DETAIL.
V17	DISHWASHER EXHAUST FAN BY OTHERS.
V18	KITCHEN EXHAUST FAN BY OTHERS.
V23	BALANCE DAMPER ACCESSIBLE THROUGH THE FACE OF THE GRILLE.
V26	TRANSITION DUCTWORK UP TO ROOF MOUNTED EXHAUST FAN. COORDINATE WITH STRUCTURAL IN AREA.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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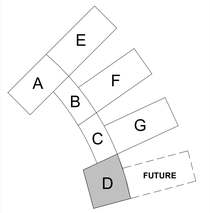

KEY PLAN

ISSUED FOR BID

MARK Z. HOPE REGISTERED No. PE 12006101 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: DJA
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

FIRST FLOOR VENTILATION PLAN - UNIT D

MV11D

SECOND FLOOR VENTILATION PLAN - UNIT B

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

ROOM LEGEND - UNIT B

ROOM NO.	ROOM NAME	AREA (SF)
B201	MECHANICAL ROOM	1923 SF
B202	DIRECTOR	224 SF
B203	PASSAGE	156 SF
B204	OFFICE	161 SF
B205	OFFICE	160 SF
B206	HR COORDINATION	199 SF
B207	DIRECTOR OF SAFETY	212 SF
B208	CORRIDOR	384 SF
B209	DIRECTOR OF CURRICULUM	188 SF
B210	CURRICULUM OFFICE	173 SF
B211	CURRICULUM OFFICE	151 SF
B212	DIRECTOR OF CURRICULUM	243 SF
B213	LOBBY	173 SF
B214	PASSAGE	78 SF
B215	CURRICULUM ADMIN ASST	175 SF
B216	LOBBY	316 SF
B217	PROGRAM DIRECTOR OF STUDENT SERVICES	243 SF
B218	ASSISTANT DIRECTOR	200 SF
B219	ASSISTANT DIRECTOR	190 SF
B220	DIRECTOR OF UNIFIED STUDENT SERVICES	245 SF
B221	SPECIAL EDUCATION OFFICE	153 SF
B222	SECURE STORAGE	63 SF
B223	SPECIAL EDUCATION ADMIN ASST	144 SF
B224	PASSAGE	263 SF
B225	SPECIAL ED STORAGE	151 SF
B226	CONFERENCE ROOM	206 SF
B227	TOUCHDOWN AREA	72 SF
B228	STORAGE	63 SF
B229	PUBLIC RELATIONS	190 SF
B230	CORRIDOR	569 SF
B231	CUSTODIAL	60 SF
B232	RESTROOM	260 SF
B233	RESTROOM	245 SF
B234	CORRIDOR	170 SF
B235	CORRIDOR	414 SF
B236	LOBBY	246 SF
B237	OFFICE LIBRARY	266 SF
B238	SUPERINTENDENT	445 SF

VENTILATION PLAN GENERAL NOTES

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C. ARRANGE DUCTWORK, PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OBSTRUCTIONS.
D. SEAL DUCT PENETRATIONS THROUGH THE FLOOR AND/OR WALLS IN ACCORDANCE WITH MECHANICAL CODE AND SMACNA REQUIREMENTS. SEAL DUCT PENETRATIONS THROUGH FIRE RATED FLOORS AND/OR WALLS WITH A MATERIAL HAVING SAME FIRE RATING AS THE WALL AND/OR FLOOR.
E. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
F. ALL RECTANGULAR SHEET METAL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. ALL ROUND DUCT SIZES SHOWN ARE INSIDE DIAMETERS.
G. PROVIDE BALANCING DAMPER AT EACH DUCT BRANCH, SERVING DIFFUSER, GRILLE AND REGISTER.
H. INSTALL WALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC. 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS.
I. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
J. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, FIRE PROTECTION AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.

VENTILATION PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
T8	ELECTRONIC AIRFLOW MEASURING STATION MOUNTED IN DUCTWORK. STATION PROVIDED BY TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH UNIT MANUFACTURER.
V2	MECHANICAL CONTRACTOR SHALL INSTALL AN ACCESS DOOR IN DUCTWORK TO ACCESS THE AIRFLOW MEASURING STATION AND/OR FIRE DAMPER. INSTALL GASKETING AROUND THE DOOR FOR AIR-TIGHT INSTALLATION. PROVIDE CONTINUOUS HINGE. REINFORCE DUCTWORK AS REQUIRED.
V6	END OF DUCT OPEN TO PLENUM SPACE ABOVE CEILING. OPENING TO BE PROTECTED WITH BIRDSCREEN.
V9	WALL OPENING LOCATED ABOVE THE CEILING. IF OPENING SIZE IS UNABLE TO BE ACCOMMODATED, THE SAME QUANTITY OF OPENING FREE AREA WILL BE ACCEPTABLE TO ACCOMMODATE AIR TRANSFER. COORDINATE EXACT LOCATION WITH ALL TRADES.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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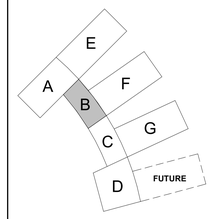

KEY PLAN

N

ISSUED FOR BID

MARK Z. HOOF REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: DJA
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR VENTILATION PLAN - UNIT B

MV12B

23.33.00 - MODULATING MOTORIZED DAMPER SCHEDULE

MARK	AIR FLOW	OVERALL SIZE	SYSTEM TYPE	NOTES
MD-A01	125 CFM	6" x 6"	Outdoor Air (OA)	1
MD-A02	80 CFM	6" x 4"	Outdoor Air (OA)	1
MD-A03	45 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A05	125 CFM	6" x 6"	Outdoor Air (OA)	1
MD-A06	105 CFM	6" x 6"	Outdoor Air (OA)	1
MD-A07	145 CFM	6" x 6"	Outdoor Air (OA)	1
MD-A08	250 CFM	8"	Return Air (RA)	1
MD-A09	250 CFM	8"	Return Air (RA)	1
MD-A10	250 CFM	8"	Return Air (RA)	1
MD-A11	55 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A12	55 CFM	4" x 4"	Return Air (RA)	1
MD-A13	170 CFM	6" x 8"	Outdoor Air (OA)	1
MD-A14	370 CFM	10" x 8"	Return Air (RA)	1
MD-A15	105 CFM	6" x 6"	Outdoor Air (OA)	1
MD-A16	85 CFM	6" x 4"	Outdoor Air (OA)	1
MD-A18	90 CFM	6" x 4"	Outdoor Air (OA)	1
MD-A20	70 CFM	6" x 4"	Outdoor Air (OA)	1
MD-A21	25 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A22	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A23	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A24	65 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A25	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-A26	25 CFM	4" x 4"	Outdoor Air (OA)	1
MD-B01	500 CFM	10"	Outdoor Air (OA)	1
MD-B02	475 CFM	10"	Outdoor Air (OA)	1
MD-B03	475 CFM	10"	Outdoor Air (OA)	1
MD-B04	475 CFM	10"	Outdoor Air (OA)	1
MD-B05	130 CFM	6" x 6"	Outdoor Air (OA)	1
MD-B07	25 CFM	4" x 4"	Outdoor Air (OA)	1
MD-B08	75 CFM	6" x 4"	Outdoor Air (OA)	1
MD-B09	110 CFM	6" x 6"	Outdoor Air (OA)	1
MD-B10	70 CFM	6" x 4"	Outdoor Air (OA)	1
MD-B11	65 CFM	6" x 4"	Outdoor Air (OA)	1
MD-B12	90 CFM	6" x 4"	Outdoor Air (OA)	1
MD-B13	75 CFM	6" x 4"	Outdoor Air (OA)	1
MD-B14	50 CFM	4" x 4"	Outdoor Air (OA)	1
MD-B15	50 CFM	4" x 4"	Outdoor Air (OA)	1
MD-B16	130 CFM	6" x 6"	Outdoor Air (OA)	1
MD-B17	1400 CFM	16" x 14"	Exhaust Air (EA)	1
MD-B18	735 CFM	14" x 10"	Exhaust Air (EA)	1
MD-C01	475 CFM	10"	Outdoor Air (OA)	1
MD-C02	475 CFM	10"	Outdoor Air (OA)	1
MD-C03	475 CFM	10"	Outdoor Air (OA)	1
MD-C04	475 CFM	10"	Outdoor Air (OA)	1
MD-C05	95 CFM	6" x 4"	Outdoor Air (OA)	1
MD-C06	185 CFM	8" x 6"	Outdoor Air (OA)	1
MD-C07	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C08	115 CFM	6" x 6"	Return Air (RA)	1
MD-C09	100 CFM	6" x 4"	Outdoor Air (OA)	1
MD-C10	90 CFM	4" x 6"	Outdoor Air (OA)	1
MD-C11	55 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C12	35 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C13	60 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C14	50 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C15	45 CFM	4" x 4"	Return Air (RA)	1
MD-C16	35 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C17	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-C18	1400 CFM	20" x 14"	Exhaust Air (EA)	2
MD-D01	115 CFM	6" x 6"	Outdoor Air (OA)	1
MD-D02	40 CFM	4" x 4"	Outdoor Air (OA)	1
MD-D03	60 CFM	4" x 4"	Outdoor Air (OA)	1
MD-D04	35 CFM	4" x 4"	Outdoor Air (OA)	1
MD-D05	95 CFM	4" x 6"	Outdoor Air (OA)	1
MD-D06	55 CFM	4" x 4"	Outdoor Air (OA)	1
MD-D07	290 CFM	8" x 8"	Outdoor Air (OA)	3
MD-D08	290 CFM	8" x 8"	Outdoor Air (OA)	3
MD-D09	205 CFM	6" x 6"	Outdoor Air (OA)	1
MD-D10	500 CFM	10" x 10"	Return Air (RA)	4
MD-E01	435 CFM	10"	Outdoor Air (OA)	1
MD-E02	460 CFM	10"	Outdoor Air (OA)	1
MD-E03	460 CFM	10"	Outdoor Air (OA)	1
MD-E04	460 CFM	10"	Outdoor Air (OA)	1
MD-E05	460 CFM	10"	Outdoor Air (OA)	1
MD-E06	460 CFM	10"	Outdoor Air (OA)	1
MD-E07	460 CFM	10"	Outdoor Air (OA)	1
MD-E08	130 CFM	6"	Outdoor Air (OA)	1
MD-E09	690 CFM	12" x 12"	Outdoor Air (OA)	1
MD-E10	1840 CFM	16" x 16"	Exhaust Air (EA)	2
MD-F01	435 CFM	10"	Outdoor Air (OA)	1
MD-F02	460 CFM	10"	Outdoor Air (OA)	1
MD-F03	460 CFM	10"	Outdoor Air (OA)	1
MD-F04	460 CFM	10"	Outdoor Air (OA)	1
MD-F05	460 CFM	10"	Outdoor Air (OA)	1
MD-F06	460 CFM	10"	Outdoor Air (OA)	1
MD-F07	460 CFM	10"	Outdoor Air (OA)	1
MD-F08	130 CFM	6"	Outdoor Air (OA)	1
MD-F09	690 CFM	12" x 12"	Outdoor Air (OA)	1
MD-F10	1765 CFM	16" x 16"	Exhaust Air (EA)	2
MD-G01	435 CFM	10"	Outdoor Air (OA)	1
MD-G02	460 CFM	10"	Outdoor Air (OA)	1
MD-G03	460 CFM	10"	Outdoor Air (OA)	1
MD-G04	460 CFM	10"	Outdoor Air (OA)	1
MD-G05	460 CFM	10"	Outdoor Air (OA)	1
MD-G06	460 CFM	10"	Outdoor Air (OA)	1
MD-G07	460 CFM	10"	Outdoor Air (OA)	1
MD-G08	130 CFM	6"	Outdoor Air (OA)	1
MD-G09	690 CFM	12" x 12"	Outdoor Air (OA)	1
MD-G10	1765 CFM	16" x 16"	Exhaust Air (EA)	2

NOTES

1 PROVIDE AN ADJUSTABLE GLOBAL (PER AIR HANDLER) MINIMUM POSITION SET POINT. SET MINIMUM POSITION AT 50%.
2 SET MINIMUM DAMPER POSITION AT 0% (ADJ.).
3 SET MINIMUM DAMPER POSITION AT 100% (ADJ.).
4 INTERLOCK TO DISHWASHER EXHAUST FAN.

23.81.46 - WATER-SOURCE HEAT PUMP SCHEDULE LITE

IDENTITY DATA				ELECTRICAL					SUPPLY FAN		COOLING										HEATING							CONDENSER COIL							UNIT SIZE (IN)				
MARK	MANUFACTURER	MODEL	LOCATION # NAME	VOLT.	PH.	HZ	MCA (A)	MOCP (A)	NOMINAL (CFM)	ESP (IN-WG)	TOT. CAP. (MBH)	SENS. CAP. (MBH)	HEAT OF REJECTION (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	EWT (°F)	LWT (°F)	EER	CAP. (MBH)	HEAT OF ABSORPTION (MBH)	EAT DB (°F)	LAT DB (°F)	EWT (°F)	LWT (°F)	COP	FLOW (GPM)	COOLING WPD (FT-WG)	HEATING WPD (FT-WG)	GLYCOL TYPE	GLYCOL %	REFRIG. TYPE	REFRIG. VOLUME (OZ)	L	W	H	OPER. WT. (LBS.)	NOTES
HP-A01	CLIMATEMASTER	SEV009	A201 MECHANICAL ROOM	277	1	60	6.9	15	375	0.60	9.0	7.5	11.1	75	63	56	54	80	89.9	15.1	8.9	6.5	68	90	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A02	CLIMATEMASTER	SEV009	A201 MECHANICAL ROOM	277	1	60	6.9	15	285	0.70	8.7	6.8	11.1	75	63	53	52	80	89.7	15.4	8.7	6.5	68	96	45	39	3.8	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A03	CLIMATEMASTER	SEV006	A201 MECHANICAL ROOM	277	1	60	4.5	15	300	0.60	5.8	5.6	7.1	75	63	58	56	80	89.5	15.7	6.1	4.5	68	87	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-A04	CLIMATEMASTER	SEV009	A201 MECHANICAL ROOM	277	1	60	6.9	15	325	0.55	8.9	7.2	11.1	75	63	55	53	80	89.8	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A05	CLIMATEMASTER	SEV012	A206 MECHANICAL ROOM	277	1	60	8.3	15	415	0.60	11.0	8.7	13.7	75	63	56	53	80	89.3	14	11.5	8.4	68	94	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-A06	CLIMATEMASTER	SEV018	A206 MECHANICAL ROOM	277	1	60	11.6	15	800	0.60	18.1	17.1	21.6	75	63	55	55	80	90.1	14.1	17.8	12.8	68	89	45	39	4.4	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-A07	CLIMATEMASTER	SEV012	A206 MECHANICAL ROOM	277	1	60	8.3	15	435	0.60	11.1	8.8	13.7	75	63	56	54	80	89.3	14	11.5	8.4	68	93	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-A08	CLIMATEMASTER	SEV024	A206 MECHANICAL ROOM	277	1	60	13.3	20	850	0.75	25.0	18.5	29.9	75	63	55	52	80	90.1	16.4	23.9	18.2	68	94	45	39	4.6	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-A09	CLIMATEMASTER	SEV024	A206 MECHANICAL ROOM	277	1	60	13.3	20	850	0.75	25.0	18.5	29.9	75	63	55	52	80	90.1	16.4	23.9	18.2	68	94	45	39	4.6	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-A10	CLIMATEMASTER	SEV024	A206 MECHANICAL ROOM	277	1	60	13.3	20	850	0.75	25.0	18.5	29.9	75	63	55	52	80	90.1	16.4	23.9	18.2	68	94	45	39	4.6	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-A11	CLIMATEMASTER	SEV006	A206 MECHANICAL ROOM	277	1	60	4.5	15	285	0.60	5.8	5.6	7.1	75	63	57	56	80	89.5	15.7	6.1	4.5	68	88	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-A12	CLIMATEMASTER	SEV018	A201 MECHANICAL ROOM	277	1	60	11.6	15	650	0.60	17.9	16.4	21.6	75	63	52	53	80	90.0	14.4	17.6	12.8	68	93	45	39	4.4	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-A13	CLIMATEMASTER	SEV012	A201 MECHANICAL ROOM	277	1	60	8.3	15	450	0.65	11.1	8.8	13.7	75	63	57	54	80	89.3	14	11.5	8.4	68	92	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-A14	CLIMATEMASTER	SEV024	A206 MECHANICAL ROOM	277	1	60	13.3	20	815	0.55	24.8	18.2	29.9	75	63	54	52	80	90.1	16.5	23.7	18.2	68	95	45	39	4.6	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-A15	CLIMATEMASTER	SEV018	A201 MECHANICAL ROOM	277	1	60	11.6	15	520	0.55	17.2	14.8	21.6	75	63	49	51	80	89.7	14.4	17.1	12.8	68	98	45	39	4	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-A16	CLIMATEMASTER	SEV012	A201 MECHANICAL ROOM	277	1	60	8.3	15	390	0.50	11.0	8.5	13.7	75	63	55	53	80	89.2	14.2	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-A17	CLIMATEMASTER	SEV024	A201 MECHANICAL ROOM	277	1	60	13.3	20	760	0.35	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-A18	CLIMATEMASTER	SEV009	A201 MECHANICAL ROOM	277	1	60	6.9	15	335	0.60	8.9	7.3	11.1	75	63	55	53	80	89.9	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A19	CLIMATEMASTER	SEV024	A206 MECHANICAL ROOM	277	1	60	13.3	20	700	0.80	24.4	17.0	29.9	75	63	53	50	80	89.9	17	23.1	18.2	68	99	45	39	4.4	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-A20	CLIMATEMASTER	SEV012	A201 MECHANICAL ROOM	277	1	60	8.3	15	385	0.60	11.0	8.4	13.7	75	63	55	52	80	89.2	14.2	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-A21	CLIMATEMASTER	SEV006	A201 MECHANICAL ROOM	277	1	60	4.5	15	250	0.50	5.7	5.3	7.1	75	63	55	55	80	89.4	16.1	6.1	4.5	68	90	45	39	3.9	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-A22	CLIMATEMASTER	SEV009	A201 MECHANICAL ROOM	277	1	60	6.9	15	370	0.70	9.0	7.5	11.1	75	63	56	54	80	89.9	15.1	8.9	6.5	68	90	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A23	CLIMATEMASTER	SEV006	A201 MECHANICAL ROOM	277	1	60	4.5	15	270	0.60	5.7	5.5	7.1	75	63	56	55	80	89.4	15.9	6.1	4.5	68	89	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-A24	CLIMATEMASTER	SEV009	A206 MECHANICAL ROOM	277	1	60	6.9	15	340	0.65	8.9	7.4	11.1	75	63	55	53	80	89.9	15.2	8.8	6.5	68	92	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A25	CLIMATEMASTER	SEV009	A206 MECHANICAL ROOM	277	1	60	6.9	15	370	0.60	9.0	7.5	11.1	75	63	56	54	80	89.9	15.1	8.9	6.5	68	90	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A26	CLIMATEMASTER	SEV009	A206 MECHANICAL ROOM	277	1	60	6.9	15	250	0.60	8.5	6.4	11.1	75	63	51	50	80	89.5	15.3	8.5	6.5	68	100	45	39	3.6	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-A27	CLIMATEMASTER	SEV012	A201 MECHANICAL ROOM	277	1	60	8.3	15	350	0.70	10.8	8.1	13.7	75	63	54	52	80	89.1	14.3	11.3	8.4	68	98	45	39	3.9	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-B01	CLIMATEMASTER	SEV024	B103 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-B02	CLIMATEMASTER	SEV024	B103 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-B03	CLIMATEMASTER	SEV024	B110 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-B04	CLIMATEMASTER	SEV024	B110 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-B05	CLIMATEMASTER	SEV012	B201 MECHANICAL ROOM	277	1	60	8.3	15	400	0.50	11.0	8.6	13.7	75	63	55	53	80	89.2	14.1	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-B06	CLIMATEMASTER	SEV024	B201 MECHANICAL ROOM	277	1	60	13.3	20	760	0.30	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-B07	CLIMATEMASTER	SEV009	B201 MECHANICAL ROOM	277	1	60	6.9	15	340	0.55	8.9	7.4	11.1	75	63	55	53	80	89.9	15.2	8.8	6.5	68	92	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-B08	CLIMATEMASTER	SEV009	B201 MECHANICAL ROOM	277	1	60	6.9	15	300	0.55	8.8	7.0	11.1	75	63	54	52	80	89.7	15.4	8.7	6.5	68	95	45	39	3.9	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-B09	CLIMATEMASTER	SEV012	B201 MECHANICAL ROOM	277	1	60	8.3	15	445	0.50	11.1	8.8	13.7	75	63	57	54	80	89.3	14	11.5	8.4	68	92	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-B10	CLIMATEMASTER	SEV009	B201 MECHANICAL ROOM	277	1	60	6.9	15	325	0.50	8.9	7.2	11.1	75	63	55	53	80	89.8	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-B11	CLIMATEMASTER	SEV018	B201 MECHANICAL ROOM	277	1	60	11.6	15	620	0.65	17.8	16.0	21.6	75	63	51	52	80	89.9	14.4	17.5	12.8	68	94	45	39	4.3	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-B12	CLIMATEMASTER	SEV006	B201 MECHANICAL ROOM	277	1	60	4.5	15	285	0.50	5.8	5.6	7.1	75	63	57	56	80	89.5	15.7	6.1	4.5	68	88	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-B13	CLIMATEMASTER	SEV006	B201 MECHANICAL ROOM	277	1	60	4.5	15	300	0.55	5.8	5.6	7.1	75	63	58	56	80	89.5	15.7	6.1	4.5	68	87	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-B14	CLIMATEMASTER	SEV006	B201 MECHANICAL ROOM	277	1	60	4.5	15	300	0.60	5.8	5.6	7.1	75	63	58	56	80	89.5	15.7	6.1	4.5	68	87	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-B15	CLIMATEMASTER	SEV006	B201 MECHANICAL ROOM	277	1	60	4.5	15	300	0.60	5.8	5.6	7.1	75	63	58	56	80	89.5	15.7	6.1	4.5	68	87	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-B16	CLIMATEMASTER	SEV012	B201 MECHANICAL ROOM	277	1	60	8.3	15	400	0.55	11.0	8.6	13.7	75	63	55	53	80	89.2	14.1	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C01	CLIMATEMASTER	SEV024	C103 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-C02	CLIMATEMASTER	SEV024	C103 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-C03	CLIMATEMASTER	SEV024	C110 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-C04	CLIMATEMASTER	SEV024	C110 H.P.	277	1	60	13.3	20	760	0.55	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-C05	CLIMATEMASTER	SEV009	C201 MECHANICAL ROOM	277	1	60	6.9	15	375	0.55	8.9	7.4	11.1	75	63	55	53	80	89.9	15.2	8.8	6.5	68	92	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-C06	CLIMATEMASTER	SEV024	C201 MECHANICAL ROOM	277	1	60	13.3	20	800	0.50	24.8	18.0	29.9	75	63	54	51	80	90.0	16.6	23.6	18.2	68	95	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-C07	CLIMATEMASTER	SEV009	C201 MECHANICAL ROOM	277	1	60	6.9	15	320	0.65	8.9	7.2	11.1	75	63	54	53	80	89.8	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-C08	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.3	15	450	0.50	11.1	8.8	13.7	75	63	57	54	80	89.3	14	11.5	8.4	68	92	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C09	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.3	15	400	0.60	11.0	8.6	13.7	75	63	55	53	80	89.2	14.1	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C10	CLIMATEMASTER	SEV009	C201 MECHANICAL ROOM	277	1	60	6.9	15	300	0.70	8.8	7.0	11.1	75	63	54	52	80	89.7	15.4	8.7	6.5	68	95	45	39	3.9	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-C11	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.3	15	420	0.55	11.1	8.8	13.7	75	63	56	53	80	89.3	14	11.5	8.4	68	93	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C12	CLIMATEMASTER	SEV009	C201 MECHANICAL ROOM	277	1	60	6.9	15	340	0.50	8.9	7.4	11.1	75	63	55	53	80	89.9	15.2	8.8	6.5	68	92	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-C13	CLIMATEMASTER	SEV018	C208 HVAC	277	1	60	11.6	15	500	0.50	17.0	14.5	21.6	75	63	48	50	80	89.6	14.3	17.0	12.8	68	100	45	39	3.9	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-C14	CLIMATEMASTER	SEV012	C208 HVAC	277	1	60	8.3	15	400	0.50	11.0	8.6	13.7	75	63	55	53	80	89.2	14.1	11.4	8.4	68	95	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C15	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.3	15	425	0.55	10.9	8.4	13.7	75	63	55	52	80	89.2	14.2	11.4	8.4	68	96	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C16	CLIMATEMASTER	SEV012	C233 HVAC	277	1	60	8.3	15	330	0.55	10.7	7.9	13.7	75	63	53	51	80	89.0	14.3	11.2	8.4	68	99	45	40	3.8	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C17	CLIMATEMASTER	SEV009	C233 HVAC	277	1	60	6.9	15	320	0.55	8.9	7.2	11.1	75	63	54	53	80	89.8	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-C18	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.3	15	380	0.30	10.9	8.4	13.7	75	63	55	52	80	89.2	14.2	11.4	8.4	68	96	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-C19	CLIMATEMASTER	SEV012	C201 MECHANICAL ROOM	277	1	60	8.0	15	350	0.50	10.8	8.1	13.7	75	63	54	52	80	89.1	14.3	11.3	8.4	68	98	45	39	3.9	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-D01	CLIMATEMASTER	SEV012	D126 MECHANICAL / ELECTRICAL	277	1	60	8.3	15	380	0.50	10.9	8.4	13.7	75	63	55	52	80	89.2	14.2	11.4	8.4	68	96	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-D02	CLIMATEMASTER	SEV006	D126 MECHANICAL / ELECTRICAL	277	1	60	4.5	15	260	0.60	5.7	5.4	7.1	75	63	56	55	80	89.4	16	6.1	4.5	68	90	45	39	3.9	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-D03	CLIMATEMASTER	SEV012	D126 MECHANICAL / ELECTRICAL	277	1	60	8.3	15	450	0.65	11.1	8.8	13.7	75	63	57	54	80	89.3	14	11.5	8.4	68	92	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-D04	CLIMATEMASTER	SEV006	D120 HEATPUMP	277	1	60	4.5	15	285	0.45	5.8	5.6	7.1	75	63	57	56	80	89.5	15.7	6.1	4.5	68	88	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-D05	CLIMATEMASTER	SEV012	D126 MECHANICAL / ELECTRICAL	277	1	60	8.3	15	365	0.80	10.9	8.2	13.7	75	63	54	52	80	89.2	14.3	11.3	8.4	68	97	45	39	4	3.00	5.30	6.10	PROPYLENE GLYCOL	25	R-454B	27	22	22	35	160	1,2,3,4,5
HP-D06	CLIMATEMASTER	SEV006	D116 HEATPUMP	277	1	60	4.5	15	285	0.40	5.8	5.6	7.1	75	63	57	56	80	89.5	15.7	6.1	4.5	68	88	45	39	4	1.50	2.50	3.40	PROPYLENE GLYCOL	25	R-454B	19	22	22	35	136	1,2,3,4,5
HP-D07	CLIMATEMASTER	SEV036	D126 MECHANICAL / ELECTRICAL	277	1	60	16.2	25	1055	0.60	37.0	24.6	45.3	75	63	54	50	80	89.9	18.4	35.2	28.8	68	99	45	39	4.8	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	31	25	51	359	1,2,3,4,5
HP-D08	CLIMATEMASTER	SEV036	D126 MECHANICAL / ELECTRICAL	277	1	60	16.2	25	1250	0.60	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	31	25	51	359	1,2,3,4,5
HP-D09	CLIMATEMASTER	SEV024	D126 MECHANICAL / ELECTRICAL	277	1	60	13.3	20	800	0.65	24.8	18.0	29.9	75	63	54	51	80	90.0	16.6	23.6	18.2	68	95	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-D10	CLIMATEMASTER	SEV009	D126 MECHANICAL / ELECTRICAL	277	1	60	6.9	15	325	0.50	8.9	7.2	11.1	75	63	55	53	80	89.8	15.3	8.8	6.5	68	93	45	39	4	2.25	3.40	3.80	PROPYLENE GLYCOL	25	R-454B	26	22	22	35	156	1,2,3,4,5
HP-D11	CLIMATEMASTER	SEV018	D126 MECHANICAL / ELECTRICAL	277	1	60	11.6	15	550	0.80	17.4	15.1	21.6	75	63	50	51	80	89.8	14.4	17.2	12.8	68	97	45	39	4.1	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-D12	CLIMATEMASTER	SEV018	D126 MECHANICAL / ELECTRICAL	277	1	60	11.6	15	480	0.30	16.9	14.3	21.6	75	63	48	50	80	89.6	14.3	17.0	12.8	68	101	45	39	3.9	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	26	22	45	257	1,2,3,4,5
HP-E01	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	675	0.70	24.3	16.8	29.9	75	63	52	49	80	89.8	17.1	22.9	18.2	68	99	45	39	4.4	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-E02	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-E03	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-E04	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-E05	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-E06	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-E07	CLIMATEMASTER	SEV024	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-E08	CLIMATEMASTER	SEH018	E201 INTERSTITIAL SPACE	277	1	60	13.3	20	700	0.60	18.0	16.9	22.7	75	63	53	54	80	90.1	14.2	23.0	13.6	68	91	45	39	5.2	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	62	22	19	298	1,2,3,4,5
HP-E09	CLIMATEMASTER	SEH036	E201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.45	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5
HP-E10	CLIMATEMASTER	SEH036	E201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.40	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5
HP-F01	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	675	0.70	24.3	16.8	29.9	75	63	52	49	80	89.8	17.1	22.9	18.2	68	99	45	39	4.4	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-F02	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-F03	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-F04	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-F05	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-F06	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-F07	CLIMATEMASTER	SEV024	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-F08	CLIMATEMASTER	SEH018	F201 INTERSTITIAL SPACE	277	1	60	13.3	20	700	0.60	18.0	16.9	22.7	75	63	53	54	80	90.1	14.2	23.0	13.6	68	91	45	39	5.2	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	62	22	19	298	1,2,3,4,5
HP-F09	CLIMATEMASTER	SEH036	F201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.45	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5
HP-F10	CLIMATEMASTER	SEH036	F201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.40	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5
HP-G01	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	675	0.70	24.3	16.8	29.9	75	63	52	49	80	89.8	17.1	22.9	18.2	68	99	45	39	4.4	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-G02	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-G03	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-G04	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-G05	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	22	49	298	1,2,3,4,5
HP-G06	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	26	22	49	298	1,2,3,4,5
HP-G07	CLIMATEMASTER	SEV024	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	760	0.60	24.6	17.6	29.9	75	63	54	51	80	90.0	16.8	23.4	18.2	68	97	45	39	4.5	6.00	1.80	2.00	PROPYLENE GLYCOL	25	R-454B	34	31	25	51	359	1,2,3,4,5
HP-G08	CLIMATEMASTER	SEH018	G201 INTERSTITIAL SPACE	277	1	60	13.3	20	700	0.60	18.0	16.9	22.7	75	63	53	54	80	90.1	14.2	23.0	13.6	68	91	45	39	5.2	4.50	3.70	5.00	PROPYLENE GLYCOL	25	R-454B	40	62	22	19	298	1,2,3,4,5
HP-G09	CLIMATEMASTER	SEH036	G201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.45	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5
HP-G10	CLIMATEMASTER	SEH036	G201 INTERSTITIAL SPACE	277	1	60	16.2	25	1250	0.40	37.7	26.4	45.3	75	63	56	52	80	90.1	17.8	36.2	28.8	68	95	45	39	5	9.00	6.50	6.50	PROPYLENE GLYCOL	25	R-454B	43	71	25	21	359	1,2,3,4,5

NOTES

1 REFER TO SPECIFICATION 238100.
2 PROVIDE 2" MERV 8 PREFILTER.
3 MOUNT ON 3-1/2" CONCRETE HOUSEKEEPING PAD.

NOTES

4 INCLUDE FACTORY MOUNTED DISCONNECT.
5 UNIT SHALL BE PROVIDED WITH VIBRATION PAD.
6 UNIT SHALL BE PROVIDED WITH A NEURTAL WIRE. COORDINATE WITH DIVISION 26 CONTRACTOR.

GENERAL NOTE:
AIRFLOW SETPOINT FOR THE FREE AIR MODE SHALL BE INCREASED AT EACH UNIT TO BE NO LESS THEN THE OUTSIDE AIRFLOW PROVIDED TO THE UNIT.

23.81.23 - EVAPORATIVE COOLING UNIT

IDENTITY			ELECTRICAL					SUPPLY FAN			COOLING									ELECTRIC REHEAT			HUMIDIFIER		UNIT SIZE (IN)				
											EVAPORATOR COIL						COMPRESSOR												
MARK	MFG	MODEL	VOLT.	PH	HZ	FLA	MOCP	EQUIPMENT NOMINAL (CFM)	TYPE	ESP (IN-WG)	TOT. CAP. (BTU/H)	SENS. CAP. (BTU/H)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	DESCRIPTION	REFRIG.	TYPE	MODULATION	DESCRIPTION	CAPACITY (KW)	CONTROL STEPS	DESCRIPTION	CAPACITY (lb/H)	W	D	H	DRY WT (LB)	NOTES
EVCU-1	LIEBERT	PX011UA1AD	460 V	3	60 Hz	14.90 A	25.00 A	1800	EC BLOWER	0.20	43700	38200	75.0	61.0	52.0	DX COIL	R-410A	DIGITAL SCROLL	20-100%	S.S. FINNED TUBULAR	6	2	INFRARED QUARTZ	7.7	31.75	34.50	77.63	600	1,2,3,4,5,6,7,8,9

NOTES:

1 INCLUDE FACTORY UNIT DISCONNECT SWITCH.
2 INCLUDE FACTORY FLAT (NON-ASSEMBLED) VERTICAL PLENUM DISCHARGE (18" HEIGHT). PLENUM TO BE ASSEMBLED ON SITE ACCORDING TO MANUFACTURER REQUIREMENTS.
3 INCLUDE FACTORY SMOKE SENSOR AND LEAK DETECTION SYSTEM.
4 INCLUDE FACTORY-INSTALLED DUAL FLOAT CONDENSATE PUMP COMPLETE WITH INTEGRAL PRIMARY AND SECONDARY FLOAT SWITCHES, PUMP, MOTOR ASSEMBLY AND RESERVOIR.

NOTES:

5 INCLUDE FACTORY LIEBERT® iCOM™ BACNET CONTROLLER FOR INTEGRATION INTO BMS. REFER TO SPECIFICATIONS.
6 PROVIDE INLINE WATER FILTER TO HUMIDIFIER WATER SUPPLY. REFER TO KEYNOTES.
7 INCLUDE FACTORY LIEBERT® iCOM™ CONTROL SYSTEM. REFER TO SPECIFICATIONS. MOUNT CONTROL SYSTEM AS SPECIFIED ON DRAWINGS.

NOTES:

8 PROVIDE VAPURE WATER TREATMENT SYSTEM WITH INTEGRAL PUMP TO HUMIDIFIER PAN. INSTALL PER MANUFACTURER REQUIREMENTS. SYSTEM SHALL BE CONCEALED AND ACCESSIBLE IN UNIT CASING.
9 CONTRACTOR MAY SUBMIT AN EQUIVALENT PRODUCT CAPABLE OF HANDLING A MINIMUM LOAD OF 24 MBH UP TO A MAXIMUM OF 48 MBH. COORDINATE WITH SPECIFICATIONS AND ALL TRADES IF CAPACITY IS CHANGED.CONTRACTOR MAY SUBMIT AN EQUIVALENT PRODUCT CAPABLE OF HANDLING A MINIMUM LOAD OF 24 MBH UP TO A MAXIMUM OF 48 MBH. COORDINATE WITH SPECIFICATIONS AND ALL TRADES IF CAPACITY IS CHANGED.

23.63.13 - AIR-COOLED CONDENSING UNIT SCHEDULE

IDENTITY DATA				PERFORMANCE DATA			CONDENSER							UNIT DIMENSIONS				ELECTRICAL DATA					
								FAN		PIPING													
MARK	MANUFACTURER	MODEL	DRY WEIGHT (LBS)	REFRIG TYPE	MIN. OA TEMP	DESIGN DB TEMP	COILS	QTY	TYPE	HOT GAS LINE (IN.)	LIQUID LINE (IN.)	SATURATED SUCTION TEMP (F)	SATURATED DISCHARGE TEMP (F)	L (IN.)	W (IN.)	H (IN.)	LEG HEIGHT	VOLTAGE	PH	FREQ	FLA	MOCP	NOTES
ACCU-1	LIEBERT	MCS028E1AD	225	R-410A	-20 °F	95 °F	ALUMINUM MICRO-CHANNEL	1	VARIABLE SPEED EC	5/8"	1/2"	40.0	115.0	44"	46 1/4"	40	18 In.	460	3	60	1.4	15.00 A	1,2,3,4

NOTES:

1 INCLUDE FACTORY MOUNTED UNIT DISCONNECT SWITCH.
2 REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

NOTES:

3 PROVIDE LOW AMBIENT OPTION.
4 REFRIGERANT PIPING SIZE AND QUANTITY PER MANUFACTURER'S REQUIREMENTS.

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KEY PLAN

ISSUED FOR BID

MARK Z. HOPF
PE 12000601

PROJECT MANAGER: JM
DRAWN BY: DJA
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

MECHANICAL SCHEDULES

M-601

Autodesk Docs://Zionsville ELC/2023_MECH_224033.00.rvt
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23.73.13 - AIR HANDLING UNIT SCHEDULE

IDENTITY				SUPPLY FAN	SUPPLY FAN							EXHAUST FAN							ELECTRICAL				COOLING								HEATING					GENERAL COIL PERFORMANCE								HOT GAS REHEAT COIL			UNIT SIZE (IN)			
									MOTOR							MOTOR																																		
MARK	MFG	MODEL	# NAME	EQUIPMENT NOMINAL (CFM)	MIN OSA (CFM)	ESP (IN-WG)	FAN RPM	DRIVE	QTY	KW	FLA	AIRFLOW (CFM)	ESP (IN-WG)	FAN RPM	DRIVE	QTY	KW	FLA	MCA	MOCP	VOLT.	PH	TOT. CAP. (BTU/H)	SENS. CAP. (BTU/H)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	EWT (°F)	LWT (°F)	CAP. (BTU/H)	EAT DB (°F)	LAT DB (°F)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FLOW (GPM)	GLYCOL TYPE	GLYCOL %	REFRIG.	CHARGE PER CIRCUIT (LBS-OZ)	COMP. QTY	FACE VEL. (FPM)	CAP. (BTU/H)	EAT DB (°F)	LAT DB (°F)	L	W	H	OPER. WT (LB)
DOAS-D01	UNITED COOLAIR	VZWHL15G4ATBC-C-ER	D126 MECHANICAL / ELECTRICAL	5000	2600	2.25	2482	ECM	2	4.4	5.9	3,800	1.6	2278	ECM	2	4.4	5.9	52 A	60 A	460 V	3	219752	134710	81.3	70.7	57.9	57.7	80	91.6	170240	42.0	72.2	45.0	38.3	11.90	45.0	PG	25	R-454B	7-0	2	370	89886	58	74	174.0	55.5	88.1	4275
DOAS-E01	UNITED COOLAIR	VZWHL15G4ATBC-C-ER	A201 MECHANICAL ROOM	4000	2000	1.50	2088	ECM	2	4.4	5.9	3,400	1.25	2149	ECM	2	4.4	5.9	52 A	60 A	460 V	3	203986	118374	80.8	70.2	55.4	55.3	80	90.8	164210	44.1	80.5	45.0	38.7	11.90	45.0	PG	25	R-454B	7-0	2	331	81752	55	73	174.0	55.5	88.1	4275
DOAS-F01	UNITED COOLAIR	VZWHL20G4ATBC-C-ER	B201 MECHANICAL ROOM	5800	2800	1.50	2349	ECM	2	5.9	8	5,000	1.25	1891	ECM	2	5.9	8	63 A	70 A	460 V	3	241632	163068	79.1	67.2	54.5	54.2	80	89.6	209618	47.7	80.0	45.0	38.9	12.40	60.0	PG	25	R-454B	10-13	2	347	116291	56	74	176.5	65.5	93.0	5280
DOAS-G01	UNITED COOLAIR	VZWHL20G4ATBC-C-ER	C201 MECHANICAL ROOM	5800	2800	1.50	2349	ECM	2	5.9	8	5,000	1.25	1887	ECM	2	5.9	8	63 A	70 A	460 V	3	242024	163022	79.2	67.3	54.6	54.3	80	89.6	209618	47.7	80.0	45.0	38.9	12.40	60.0	PG	25	R-454B	10-13	2	347	116291	56	74	176.5	65.5	93.0	5280

NOTES:

1 REFER TO PROJECT MANUAL SECTION 237316 FOR ADDITIONAL REQUIREMENTS.
2 REFER TO PLANS & SCHEMATIC SHEETS FOR UNIT LAYOUT DETAILS.
3 PROVIDE FACTORY MOUNTED CONVENIENCE OUTLETS AND INTERNAL LIGHTS AT EACH ACCESS DOOR. PROVIDE CONVENIENCE OUTLET AND LIGHTS ON SEPARATE CIRCUIT.
4 MAXIMUM HEATING/COOLING COIL FACE VELOCITY SHALL BE 500 FPM.
5 MAXIMUM PRE FILTER AND PRIMARY FILTER FACE VELOCITY SHALL BE 500 FPM.

NOTES:

6 UNIT SHALL BE PROVIDED WITH INTERNAL REFRIGERANT LEAK DETECTION AND MITIGATION SYSTEM.
7 INCLUDE MODULATING HOT GAS REHEAT COIL.
8 HEAT WHEEL SHALL BE PROVIDED WITH PURGE PROTECTOR.
9 SINGLE POINT ELECTRICAL CONNECTION TO UNITS.
10 ENERGY RECOVERY SELECTED WITH A HEAT WHEEL WITH FACTORY INSTALLED VFD.
11 PROVIDE WITH 65 KAIC SCCR RATING.
12 PROVIDE WITH 15 KAIC SCCR RATING.

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23.72.00 - AIR-TO-AIR ENERGY RECOVERY EQUIPMENT SCHEDULE

		SUPPLY AIR DATA										EXHAUST AIR DATA						HEAT WHEEL				
		AIR FLOW		SUMMER				WINTER				AIR FLOW		SUMMER		WINTER			ELECTRICAL			
				EAT (°F)		LAT (°F)		EAT (°F)		LAT (°F)				EAT (°F)		EAT (°F)						
MARK	TYPE	CFM IN	CFM OUT	DB	WB	DB	WB	DB	WB	DB	WB	CFM IN	CFM OUT	DB	WB	DB	WB	HP	V	PH	Hz	NOTES
DOAS-D01	ENTHALPY WHEEL	5,000	5,200	90.1	75.2	81.3	70.4	0	-2	42	34	3,800	3,600	75	62.5	68	51.6	0.25	460	3	60	1,2,3,4,5,6,7,8,9,10,11
DOAS-E01	ENTHALPY WHEEL	4,000	4,200	90.1	75.2	80.8	70.2	0	-2	44.4	35.4	3,400	3,200	75	62.5	68	51.6	0.25	460	3	60	1,2,3,4,5,6,7,8,9,10,12
DOAS-F01	ENTHALPY WHEEL	5,800	6,000	90.1	75.2	80	69.5	0	-2	47.7	37.9	5,000	4,800	75	62.5	68	51.6	0.50	460	3	60	1,2,3,4,5,6,7,8,9,10,12
DOAS-G01	ENTHALPY WHEEL	5,800	6,000	90.1	75.2	80	69.5	0	-2	47.7	37.9	5,000	4,800	75	62.5	68	51.6	0.50	460	3	60	1,2,3,4,5,6,7,8,9,10,12

23.37.13 - DIFFUSERS, REGISTERS, AND GRILLES SCHEDULE

IDENTITY DATA			NECK SIZE	FACE SIZE		MAX CORE/ NECK VELO.	AIR FLOW	MAX N.C.	FRAME/ MOUNTING	REMARKS
MARK	DESCRIPTION	MANUFACTURER		W	L		MAX			
A	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	5"ø	12"	12"	800 FPM	100	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
B	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	6"ø	12"	12"	800 FPM	150	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
C	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	6"ø	24"	24"	800 FPM	150	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
D	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	8"ø	24"	24"	800 FPM	300	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
E	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	10"ø	24"	24"	800 FPM	450	25	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
F	SQUARE PLAQUE CIELING DIFFUSER	TITUS OMNI	12"ø	24"	24"	800 FPM	625	25	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
G	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	8"x6"	8"	6"	700 FPM	175	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	45 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
H	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	10"x6"	10"	6"	700 FPM	225	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
I	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	10"x10"	10"	10"	600 FPM	350	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
J	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	12"x8"	12"	8"	600 FPM	350	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
K	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	12"x10"	12"	10"	600 FPM	475	25	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
L	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	18"x12"	18"	12"	500 FPM	700	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
M	HIGH CAPACITY LINEAR 1-SLOT DIFFUSER	TITUS FL	6"/5"	24"	3"	800 FPM	300	20	REFER TO REFLECTED CEILING PLAN	HIGHTHROW WITH INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT.
N	HIGH CAPACITY LINEAR 1-SLOT DIFFUSER	TITUS FL	6"/5"	48"	3"	800 FPM	300	20	REFER TO REFLECTED CEILING PLAN	HIGHTHROW WITH INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT.
O	HIGH CAPACITY LINEAR 1-SLOT DIFFUSER	TITUS FL	9"/5"	48"	3"	800 FPM	300	25	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT.
P	HIGH CAPACITY LINEAR 2-SLOT DIFFUSER	TITUS FL	13"/5"	48"	12"	800 FPM	475	25	REFER TO REFLECTED CEILING PLAN	HIGHTHROW WITH INSULATED PLENUM 2.5" SLOT WIDTH, TOTAL OF 2 SLOT.
Q	HIGH CAPACITY LINEAR 2-SLOT DIFFUSER	TITUS FL	14"/8"	48"	10"	800 FPM	415	20	REFER TO REFLECTED CEILING PLAN	HIGHTHROW WITH INSULATED PLENUM 2.0" SLOT WIDTH, TOTAL OF 2 SLOT.
R	HIGH CAPACITY LINEAR 1-SLOT DIFFUSER	TITUS FL	24"x4"	24"	4"	800 FPM	200	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	JET THROW 1.5" SLOT WIDTH, TOTAL OF 1 SLOT.
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	6"x6"	6"	6"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	8"x8"	8"	8"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	12"x8"	12"	8"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	12"x10"	12"	10"	500 FPM		25	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	18"x12"	18"	12"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	24"x12"	24"	8"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
S	SIDEWALL - RETURN/EXHAUST GRILLE	TITUS 350RL	36"x20"	36"	20"	500 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	FIXED 35 (DEGREE) DEFLECTION BLADES
T	RETURN/EXHAUST GRILLE	TITUS 355RL	12"x12"	12"	12"	500 FPM		20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
T	RETURN/EXHAUST GRILLE	TITUS 355RL	12"x24"	12"	24"	500 FPM		20	REFER TO REFLECTED CEILING PLAN	<varies>
T	RETURN/EXHAUST GRILLE	TITUS 355RL	24"x24"	24"	24"	500 FPM		20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
U	HIGH CAPACITY LINEAR 1-SLOT DIFFUSER	TITUS FL	9"/5"	24"	3"	800 FPM	300	25	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT.
V	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	12"x8"	12"	8"	600 FPM	350	20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
W	SIDEWALL - SUPPLY GRILLE	TITUS 300RL	6"x6"	6"	6"	600 FPM		20	DUCT OR SIDEWALL; REFER TO FLOOR PLAN.	22.5 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN

23.34.23 - HVAC POWER VENTILATOR SCHEDULE

IDENTITY DATA					DESCRIPTION	PERFORMANCE DATA				ELECTRICAL DATA							
MARK	MANUFACTURER	MODEL	WEIGHT (LBS)	TYPE	DRIVE	CFM	RPM	ESP (IN-WG)	MOTOR HP	VOLTS	PH	FREQ	FLA (A)	MCA (A)	DISCONNECT	CONTROLS	NOTES
EF-A01	GREENHECK	SP-A125	17	CEILING EXHAUST FAN	DIRECT	75	1100	0.35	0.06	115 V	1	60	0.18	0.2	FACTORY MOUNTED	A	1,2,4
EF-A02	GREENHECK	SQ-80-VG	34	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	300	1300	0.15	0.16	115 V	1	60	2.8	3.5	FACTORY MOUNTED	B	1,2,3,4,6
EF-B01	GREENHECK	SP-A110	17	CEILING EXHAUST FAN	DIRECT	75	950	0.3	0.06	115 V	1	60	0.19	0.2	FACTORY MOUNTED	A	1,2,4
EF-C01	GREENHECK	G-060-VG	35	DIRECT DRIVE ROOF MOUNTED FAN	DIRECT	100	1600	0.3	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	A	1,2,4,5,6
EF-D01	GREENHECK	G-060-VG	35	DIRECT DRIVE ROOF MOUNTED FAN	DIRECT	100	1600	0.3	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	A	1,2,4,5,6
EF-D02	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-E01	GREENHECK	SP-A125	17	CEILING EXHAUST FAN	DIRECT	75	1100	0.35	0.06	115 V	1	60	0.18	0.2	FACTORY MOUNTED	A	1,2,4
EF-E02	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-E03	GREENHECK	SQ-80-VG	34	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	400	1600	0.15	0.16	115 V	1	60	2.8	3.5	FACTORY MOUNTED	B	1,2,3,4,6
EF-E04	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-F01	GREENHECK	SP-A125	17	CEILING EXHAUST FAN	DIRECT	75	1100	0.35	0.06	115 V	1	60	0.18	0.2	FACTORY MOUNTED	A	1,2,4
EF-F02	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-F03	GREENHECK	SQ-80-VG	34	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	400	1600	0.15	0.16	115 V	1	60	2.8	3.5	FACTORY MOUNTED	B	1,2,3,4,6
EF-F04	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-G01	GREENHECK	SP-A125	17	CEILING EXHAUST FAN	DIRECT	75	1100	0.35	0.06	115 V	1	60	0.18	0.2	FACTORY MOUNTED	A	1,2,4
EF-G02	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6
EF-G03	GREENHECK	SQ-80-VG	34	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	400	1600	0.15	0.16	115 V	1	60	2.8	3.5	FACTORY MOUNTED	B	1,2,3,4,6
EF-G04	GREENHECK	SQ-60-VG	27	DIRECT DRIVE CENTRIFUGAL INLINE FAN	DIRECT	100	1310	0.15	0.06	115 V	1	60	1.3	1.6	FACTORY MOUNTED	B	1,2,3,4,6

NOTES:

1 INCLUDE FACTORY MOUNTED DISCONNECT SWITCH.
2 INCLUDE BACKDRAFT DAMPER.
3 SUPPORT FROM STRUCTURE ABOVE WITH VIBRATION ISOLATORS.
4 REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
5 MOUNT ON 12" HIGH ROOF CURB, UNLESS OTHERWISE NOTED.
6 INCLUDE FACTORY MOUNTED AND WIRED SPEED CONTROL.

CONTROLS:

A AUTOMATIC OCCUPIED OPERATION BY LOCAL TEMPERATURE CONTROL ZONE
B AUTOMATIC OPERATION BY REVERSE-ACTING THERMOSTAT

23.82.39 - UNIT HEATER SCHEDULE

IDENTITY DATA					UNIT DIMENSIONS			FAN DATA			HEATING PERFORMANCE				ELECTIC HEAT		ELECTRICAL DATA			
MARK	MFG	MODEL	WEIGHT (LBS)	TYPE	W	L	H	CFM	RPM	HP	HEAT SOURCE	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	HEAT (kW)	NO. OF CONTOL STEPS	VOLTS	PH	FREQ	NOTES
CUH-E01	TRANE	FFEB0402	78	HORIZONTAL RECESSED	30"	38"	11"	500	1235	0.1	ELECTRIC	19240.0 Btu/h	60	95.5	5.7	2	208 V	1	60	1,2,4,5
CUH-F01	TRANE	FFEB0402	78	HORIZONTAL RECESSED	30"	38"	11"	500	1235	0.1	ELECTRIC	19240.0 Btu/h	60	95.5	5.7	2	208 V	1	60	1,2,4,5
CUH-G01	TRANE	FFEB0402	78	HORIZONTAL RECESSED	30"	38"	11"	500	1235	0.1	ELECTRIC	19240.0 Btu/h	60	95.5	5.7	2	208 V	1	60	1,2,4,5
CUH-G02	TRANE	FFBB0302	97	VERTICAL CABINET	25"	33"	10"	250	725	0.1	ELECTRIC	7690.0 Btu/h	60	88.4	2.2	1	208 V	1	60	1,2,3,5

NOTES:

1 CUSTOM COLOR TO BE AS SPECIFIED BY ARCHITECT.
2 INCLUDE FACTORY MOUNTED DISCONNECT.
3 LOW VOLTAGE WALL MOUNTED 2-STAGE TEMPERATURE SENSOR BY THE TCC.
4 UNIT SCHEDULED WITH BOTTOM STAMPED INLET AND OUTLET.
5 UNIT SCHEDULED WITH FONT STAMPED LOUVER AND FRONT TOE SPACE.
6 INCLUDE FACTORY INSTALLED TEMPERATURE SENSOR.

23.29.23 - VARIABLE-FREQUENCY MOTOR CONTROLLER SCHEDULE

IDENTITY DATA		SERVICE	MOTOR BHP	MOTOR HP	INTEGRAL BYPASS	ELECTRICAL		NOTES
MARK	EQUIPMENT SERVING					VOLTS	PH	
VFD-P-1	CONDENSER WATER PUMP	P-1	37.1	50	Yes	480 V	3	1,2,3,4,5,6
VFD-P-2	CONDENSER WATER PUMP	P-2	37.1	50	Yes	480 V	3	1,2,3,4,5,6

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NOTES:

1 DRIVE PROVIDED AND INSTALLED BY THE DIVISION 23 - HVAC CONTRACTOR.
2 DIVISION 26 - ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING TO VFC AND FROM VFC TO MOTOR(S).
3 TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE ALL TEMPERATURE CONTROL WIRING.
4 REFER TO SPECIFICATION SECTION 232923.
5 PROVIDED WITH A FACTORY MOUNTED DISCONNECT.
6 PROVIDE WITH 65 KAIC SCCR RATING.

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23.21.23 - HYDRONIC PUMP SCHEDULE

IDENTITY DATA					LOCATION	PERFORMANCE DATA								ELECTRICAL DATA			
						FLOW RATE (GPM)											
MARK	MANUFACTURER	MODEL	WEIGHT (LBS)	TYPE	# NAME	PER PUMP	HEAD (ftH20)	NPSH	Brake HP	MOTOR HP	PUMP η (%)	SUCT. X DISCH.	IMPELLER DIAMETER	VOLTS	PH	FREQ	NOTES
P-1	Bell & Gossett	E-1510-4GC	520	BASE MOUNTED END SUCTION HIGH EFFICIENCY PUMP	D126 MECHANICAL / ELECTRICAL	700	165	9.7	37.1	50	80.1%	5 x 4	13.375	460 V	3	60	1,2,3,4,5,6
P-2	Bell & Gossett	E-1510-4GC	520	BASE MOUNTED END SUCTION HIGH EFFICIENCY PUMP	D126 MECHANICAL / ELECTRICAL	700	165	9.7	37.1	50	80.1%	5 x 4	13.375	460 V	3	60	1,2,3,4,5,6

NOTES:

1 REFER TO PROJECT MANUAL SECTION 232123.
2 PUMP CONTROLLED BY VARIABLE FREQUENCY CONTROLLER.
3 SINGLE POINT POWER CONNECTION TO THE PUMP. PUMP DISCONNECT AND WIRING BETWEEN PUMP AND VFC BY DIVISION 26.
4 MOUNT ON 3-1/2" CONCRETE HOUSEKEEPING PAD.

NOTES:

5 PUMPS WILL OPERATE LEAD/STANDBY (N+1).
6 PUMP WILL OPERATE WITH 25% PROPYLENE GLYCOL.

HVAC MISC. EQUIPMENT SCHEDULE

IDENTITY DATA		DESCRIPTION	NOTES
MARK	MANUFACTURER		
ADS-01	BELL & GOSSETT	6" COALESCING AIR & DIRT SEPARATOR, 700 GPM.	2,4
GT-01	VENTURE	GLYCOL FEED SYSTEM, 50 GALLONS	1,3
ST-01	MILLER - LEAMAN	HYDRONIC WATER SYSTEM STRAINER, 700 GPM MINIMUM. MODEL - MLS-6	1,2

NOTES:

1 MOUNT ON 3-1/2" CONCRETE HOUSEKEEPING PAD.
2 REFER TO SPECIFICATION SECTION 232113.
3 REFER TO SPECIFICATION SECTION 232500.
4 SUPPORT FROM STRUCTURE ABOVE.

23.21.13 - EXPANSION TANK SCHEDULE

IDENTITY DATA				SYSTEM	SYSTEM VOLUME (GAL.)	SYSTEM TEMP. RANGE (F)		PRV FILL PRESSURE AT TANK (PSIG)	MAX. OPERATING PRESSURE (PSIG)		MIN. TANK VOLUME (GAL)	MIN ACCEPT. VOLUME (GAL)	WEIGHT (LBS)	NOTES
MARK	MANUFACTURER	MODEL	TYPE			MIN	MAX		RELIEF VALVE	AT EXP. TANK				
ET-01	BELL & GOSSETT	B1000	BLADDER	CONDENSER WATER	14000.0	35	105	12	40	35	451.3	231	2,751	1,2
ET-02	BELL & GOSSETT	B1000	BLADDER	CONDENSER WATER	14000.0	35	105	12	40	35	451.3	231	2,751	1,2

NOTES

1 REFER TO SPECIFICATION 232113.
2 EXPANSION TANKS SHALL BE SELECTED WITH 25% PROPYLENE GLYCOL.

23.37.23 - HVAC GRAVITY VENTILATOR SCHEDULE

IDENTITY DATA				LOCATION	MAX CORE VELOCITY (FPM)	THROAT SIZE		OVERALL SIZE			WEIGHT (LBS)	NOTES
MARK	MANUFACTURER	MODEL	TYPE			W	L	W	L	H		
RV-C01	GREENHECK	FGR-30x42	EXHAUST AIR	ROOF	606	30"	42"	46"	63"	31"	151	1,3,4
RV-D01	GREENHECK	FGI-24x48	OUTSIDE AIR	ROOF	587	24"	48"	41"	63"	31"	146	1,2,4
RV-D02	GREENHECK	FGR-24x48	EXHAUST AIR	ROOF	522	24"	48"	41"	63"	31"	146	1,3,4

NOTES:

1 REFER TO SPECIFICATION SECTION 233723.
2 INTAKE HOODS TO BE MOUNTED ON MINIMUM 24" HIGH ROOF CURB.
3 EXHAUST AND RELIEF HOODS TO BE MOUNTED ON A MINIMUM 12" HIGH ROOF CURB.
4 CUSTOM COLOR AS SELECTED BY ARCHITECT/ENGINEER.

23.37.13 - EXTERIOR LOUVER SCHEDULE

IDENTITY DATA			AIRFLOW (CFM)	NECK SIZE	MIN FREE AREA (SF)	FREE AREA VELO. (FPM)	STATIC PD (IN-WC)	LOUVER TYPE	NOTES
MARK	DESCRIPTION	SERVICE							
WL-A1	DRAINABLE WALL LOUVER	OUTSIDE AIR	4,000	48"x40"	7.2	557 FPM	0.05	WIND-DRIVEN RAIN	1,2,3,4,5
WL-A2	DRAINABLE WALL LOUVER	EXHAUST AIR	3,600	48"x40"	7.2	501 FPM	0.04	WIND-DRIVEN RAIN	1,2,3,4,5
WL-B1	DRAINABLE WALL LOUVER	OUTSIDE AIR	5,800	48"x48"	8.9	650 FPM	0.07	WIND-DRIVEN RAIN	1,2,3,4,5
WL-B2	DRAINABLE WALL LOUVER	EXHAUST AIR	5,400	48"x48"	8.9	650 FPM	0.06	WIND-DRIVEN RAIN	1,2,3,4,5
WL-C1	DRAINABLE WALL LOUVER	OUTSIDE AIR	5,800	48"x48"	8.9	650 FPM	0.07	WIND-DRIVEN RAIN	1,2,3,4,5

NOTES:

1 REFER TO SPECIFICATION SECTION 089119.
2 SEAL ALL AROUND WITH SILICONE.
3 REFER TO INSTALLATION DETAILS AND ARCHITECTURAL DRAWINGS.
4 CUSTOM COLOR TO BE SELECTED BY THE ARCHITECT/ENGINEER.
5 COORDINATE SIZE AND LOCATION WITH ALL TRADES AND ARCHITECTURAL ELEVATIONS.

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KEY PLAN

ISSUED FOR BID

MARK Z. HOPF
PE 12000601

PROJECT MANAGER: JM
DRAWN BY: DJA
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

MECHANICAL SCHEDULES

M-602

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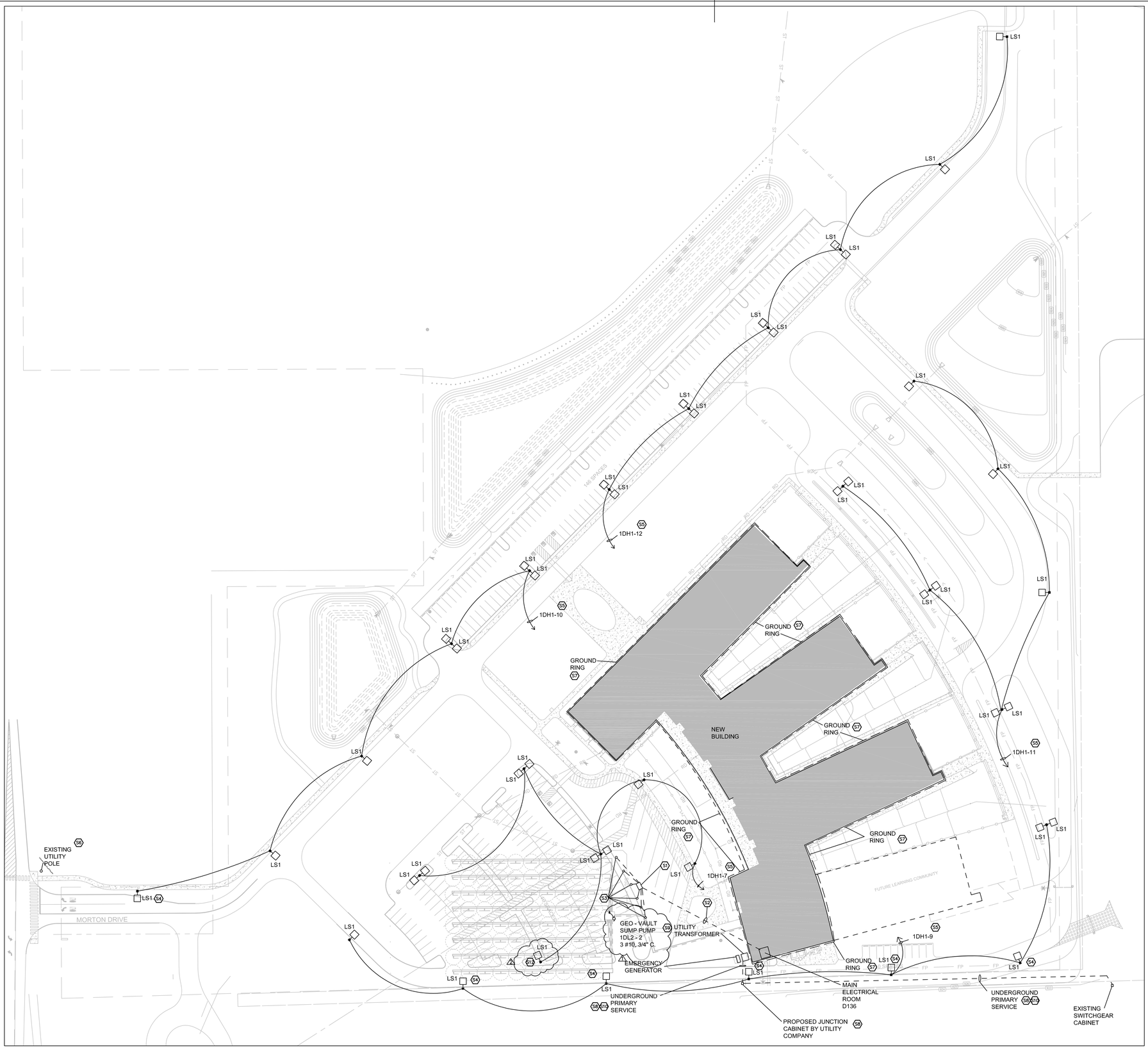

ELECTRICAL SITE PLAN

1" = 50'-0"

GENERAL SITE PLAN NOTES:

2. 1. REFER TO SITE UTILITY PLANS TO COORDINATE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENT.
   2. SEE GENERAL NOTE B ON SHEET G0-01 FOR WORK WITHIN THE NATURAL GAS EASEMENT. PROVIDE WORK AS REQUIRED FOR CONDUIT CROSSING.

PLAN NOTES:

S1 PROVIDE A FLUSH GROUND MOUNTED PULL BOX AT THIS LOCATION FOR THE ELECTRIC CAR CHARGING STATIONS.

S2 RUN A 4-INCH CONDUIT UNDERGROUND FROM THE GROUND MOUNTED PULLBOX, BACK TO THE BUILDINGS MAIN ELECTRICAL ROOM "D136"

S3 STUB OUT A 2-INCH CONDUIT FROM THE GROUND MOUNTED PULL BOX TO THE LOCATION OF THE CAR CHARGING STATION.

S4 PROVIDE THIS LIGHT FIXTURE HEAD WITH A HOUSE SIDE SHIELD.

S5 SITE LIGHTING IS TO BE WIRED THROUGH THE MECHANICAL BAS SYSTEM VIA LIGHTING CONTACTOR "LC-6" IN ROOM D137.

1 S6 EXISTING UTILITY POLE AT THIS LOCATION IS TO BE PROTECTED DURING CONSTRUCTION FROM DAMAGE AND IS TO BE RESUPPORTED BY THE UTILITY COMPANY AS THE NEW TURN LANE IS CONTRUCTED.

S7 PROVIDE A GROUND RING AROUND THE PERIMETER OF THE BUILDING. REFER TO DRAWING SHEET "E-501" FOR DETAILS AND ADDITIONAL REQUIREMENTS.

S8 ALL UTILITY COMPANY SERVICE INSTALLATION IS TO BE PROVIDED AND INSTALLED BY THE UTILITY COMPANY.

S9 EXISTING UTILITY POLE AT THIS LOCATION IS TO BE PROTECTED DURING CONSTRUCTION FROM DAMAGE AND IS TO BE RESUPPORTED BY THE UTILITY COMPANY AS THE NEW TURN LANE IS CONSTRUCTED.

S10 DIVISION 26 CONTRACOTR TO PROVIDE TWO 4-INCH PVC CONDUITS FOR THE UTILITY COMPANIES PRIMARY FEEDERS.

S11 PROVIDE ALL SECONDARY CONDUITS AND FEEDERS. REFER TO DRAWING SHEET "E101" FOR SIZES AND QUANTITIES.

2 S12 COORDINATE POLE BASE AND CONDUIT WITH WELL FIELD INSTALLER AND MAKE SLIGHT ADJUSTMENTS AS NECESSARY.

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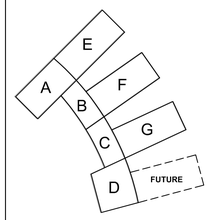


KEY PLAN

N

ISSUED FOR BID

DRAWN BY: RDR

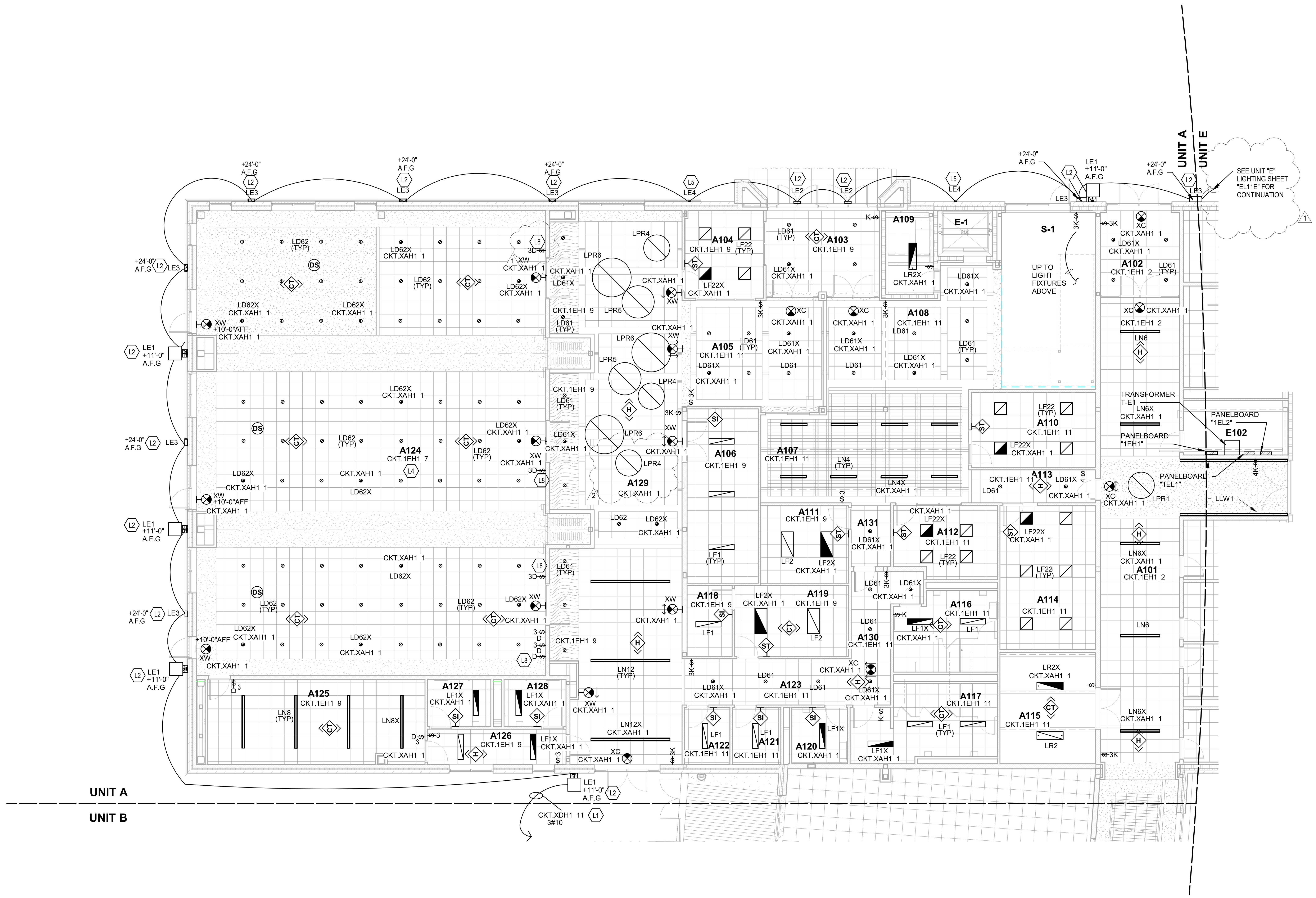
PROJECT NUMBER: 224033.00

PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	07.09.2025
2	ADDENDUM NO. 2	07.16.2025

ELECTRICAL SITE PLAN

ES001



FIRST FLOOR LIGHTING PLAN - UNIT A

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

ROOM LEGEND UNIT A			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101		CORRIDOR	868 SF
A102		VESTIBULE	155 SF
A103		VESTIBULE	222 SF
A104		SRO	158 SF
A105		LOBBY	358 SF
A106		STORAGE	285 SF
A107		RECEPTION	260 SF
A108		LOBBY	665 SF
A109		ELEVATOR EQUIPMENT	92 SF
A110		COMMUNITY RELATIONS OFFICE	214 SF
A111		WORKROOM	156 SF
A112		CONFERENCE ROOM	167 SF
A113		PASSAGE	91 SF
A114		ZEF FOUNDATION OFFICE	317 SF
A115		TECHNOLOGY	245 SF
A116		MEN'S RESTROOM	182 SF
A117		WOMEN'S RESTROOM	233 SF
A118		STORAGE	73 SF
A119		CATERING/KITCHENETTE	184 SF
A120		FAMILY RESTROOM	72 SF
A121		CUSTODIAL	63 SF
A122		STORAGE	59 SF
A123		PASSAGE	177 SF
A124		BOARD ROOM	3703 SF
A125		CONFERENCE ROOM	423 SF
A126		PASSAGE	112 SF
A127		RESTROOM	69 SF
A128		RESTROOM	67 SF
A129		CORRIDOR	1544 SF
A130		PASSAGE	146 SF
A131		PASSAGE	58 SF

ROOM LEGEND STAIRS			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
S-1		STAIR	382 SF

ROOM LEGEND ELEVATOR			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E-1		ELEVATOR	58 SF

LIGHTING PLAN GENERAL NOTES

1. GENERATOR TRANSFER DEVICE TO TAKE FIXTURE TO 100% IN EMERGENCY CONDITION.
2. FINALCONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LUMINAIRES. COORDINATE LOCATION OF LUMINAIRES, LOUDSPEAKERS, DIFFUSERS, GRILLES, AND OTHER CEILING INSTALLED ELEMENTS WITH THEIR RESPECTIVE INSTALLERS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE TO DETERMINE PROPER TYPE OF LUMINAIRE TRIM REQUIRED FOR CEILING TYPE PRIOR TO ORDERING LUMINAIRES. PROVIDE LUMINAIRES COMPATIBLE WITH CEILING TYPE.
5. RECESSED LUMINAIRE IN GRID CEILING SYSTEMS SHALL BE PROVIDED WITH SEISMIC CLIPS OR PROVIDE ATTACHMENT TO CEILING GRID SYSTEM AND SUPPORTED PER PROJECT MANUAL AND DETAIL "1C/E-503".
6. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
7. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.
8. EMERGENCY LIGHT FIXTURES THAT ARE IN THE PATH OF EGRESS DO NOT REQUIRE AN EMERGENCY TRANSFER DEVICE.
9. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSABLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES	
L1	EXTERIOR BUILDING SECURITY LIGHTING IS TO BE WIRED THROUGH THE MECHANICAL BAS SYSTEM VIA LIGHTING CONTACTOR "LC-8" IN ROOM D137.
L2	REFER TO THE ARCHITECTURAL EXTERIOR ELEVATIONS DRAWING SHEETS FOR EXACT MOUNTING HEIGHT AND MOUNTING LOCATION OF THIS LIGHTING FIXTURE MOUNTING HEIGHT SHOWN IS TO THE TOP OF THE FIXTURE.
L4	PROVIDE A SLOPED CEILING ADAPTER FOR THE LD62 AND LD62X LIGHT FIXTURES IN THIS ROOM. DETERMINE CEILING SLOPE ANGLE IN THE FIELD.
L5	LIGHT FIXTURE TYPE LE4 IS TO BE CENTERED IN THE BRICK INSET. REFER TO NORTH ELEVATION - UNIT A ON ARCHITECTURAL DRAWING SHEET A-201 FOR EXACT HEIGHT AND LOCATION.
L8	LOCATION OF DIMMER CONTROL SWITCH FOR EACH LIGHTING BAY, WITH AN ADDITIONAL 3-WAY SWITCH AT THE FRONT END OF THE ROOM.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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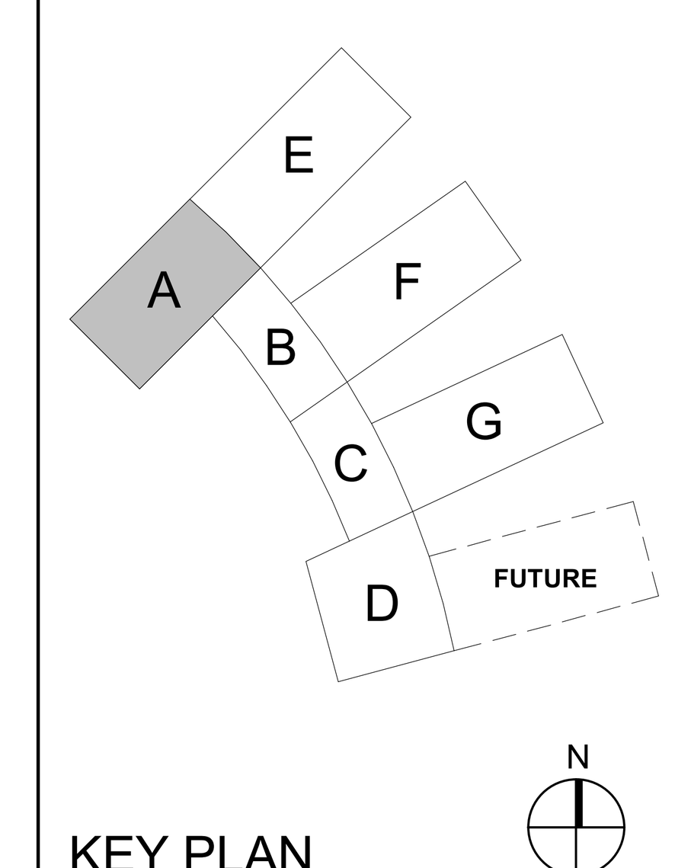
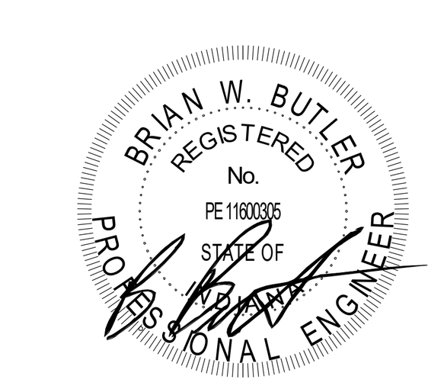


KEY PLAN

ISSUED FOR BID



PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

FIRST FLOOR LIGHTING PLAN - UNIT A

EL11A

SECOND FLOOR LIGHTING PLAN - UNIT C

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

ROOM LEGEND UNIT C SECOND FLOOR

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
C201		MECHANICAL ROOM	1241 SF
C202		LOUNGE	988 SF
C203		TOUCHDOWN AREA	606 SF
C204		ADMIN. ASSISTANT	164 SF
C205		ASSISTANT SUPERINTENDENT	268 SF
C206		ASSISTANT SUPERINTENDENT	282 SF
C207		PASSAGE	138 SF
C208		HEAT PUMP CLOSET	51 SF
C209		STORAGE	103 SF
C210		SHARED CONFERENCE	406 SF
C211		CFO	353 SF
C212		BUSINESS OFFICE	152 SF
C213		BUSINESS OFFICE	231 SF
C214		CORRIDOR	236 SF
C215		BUSINESS OFFICE	156 SF
C216		LOBBY	215 SF
C217		STORAGE	102 SF
C218		BUSINESS OFFICE	153 SF
C219		BUSINESS OFFICE	154 SF
C220		TOILET	79 SF
C221		CUSTODIAL	78 SF
C222		SECURE STORAGE	149 SF
C223		FUTURE OFFICE	149 SF
C224		OPERATIONS OFFICE	167 SF
C225		DIRECTOR OF OPERATIONS	275 SF
C226		OPEN OFFICE	674 SF
C227		OFFICE	152 SF
C228		FUTURE OFFICE	153 SF
C229		CHIEF TECHNOLOGY OFFICER	238 SF
C230		TECH CONFERENCE	177 SF
C231		CORRIDOR	765 SF
C232		STORAGE	121 SF
C233		HEAT PUMP CLOSET	51 SF

ROOM LEGEND STAIRS

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
S-2		STAIR	346 SF

ROOM LEGEND ELEVATOR

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E-2		ELEVATOR	75 SF

LIGHTING PLAN GENERAL NOTES

1. GENERATOR TRANSFER DEVICE TO TAKE FIXTURE TO 100% IN EMERGENCY CONDITION.
2. FINALCONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LUMINAIRES. COORDINATE LOCATION OF LUMINAIRES, LOUDSPEAKERS, DIFFUSERS, GRILLES, AND OTHER CEILING INSTALLED ELEMENTS WITH THEIR RESPECTIVE INSTALLERS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE TO DETERMINE PROPER TYPE OF LUMINAIRE TRIM REQUIRED FOR CEILING TYPE PRIOR TO ORDERING LUMINAIRES. PROVIDE LUMINAIRES COMPATIBLE WITH CEILING TYPE.
5. RECESSED LUMINAIRE IN GRID CEILING SYSTEMS SHALL BE PROVIDED WITH SEISMIC CLIPS OR PROVIDE ATTACHMENT TO CEILING GRID SYSTEM AND SUPPORTED PER PROJECT MANUAL AND DETAIL "1C/E-503".
6. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
7. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.
8. EMERGENCY LIGHT FIXTURES THAT ARE IN THE PATH OF EGRESS DO NOT REQUIRE AN EMERGENCY TRANSFER DEVICE.
9. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSABLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES

L3	MOUNT LIGHT FIXTURES IN THE ROOM TO MISS MECHANICAL EQUIPMENT.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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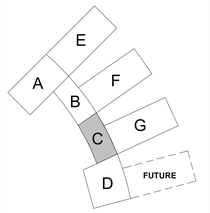


KEY PLAN

N

ISSUED FOR BID

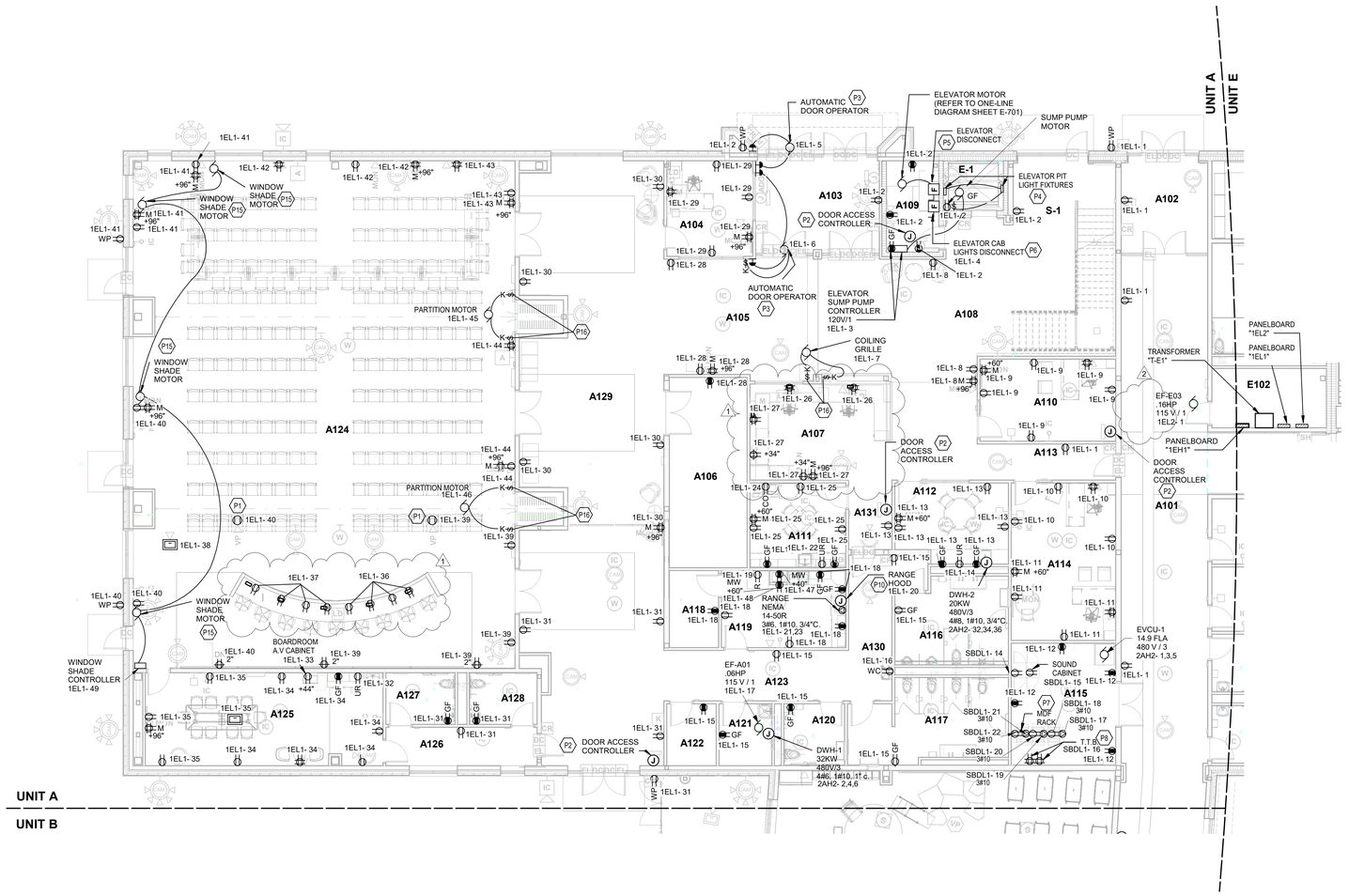
BRIAN W. BUTLER REGISTERED No. PE10809 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

SECOND FLOOR LIGHTING PLAN - UNIT C

EL12C



FIRST FLOOR POWER PLAN - UNIT A

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

ROOM LEGEND UNIT A

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101		CORRIDOR	868 SF
A102		VESTIBULE	155 SF
A103		VESTIBULE	222 SF
A104		SRO	158 SF
A105		<varies>	358 SF
A106		STORAGE	285 SF
A107		<varies>	<varies>
A108		LOBBY	<varies>
A109		ELEVATOR EQUIPMENT	92 SF
A110		COMMUNITY RELATIONS OFFICE	214 SF
A111		WORKROOM	156 SF
A112		CONFERENCE ROOM	167 SF
A113		PASSAGE	91 SF
A114		ZEF FOUNDATION OFFICE	317 SF
A115		TECHNOLOGY	245 SF
A116		MEN'S RESTROOM	<varies>
A117		WOMEN'S RESTROOM	233 SF
A118		STORAGE	73 SF
A119		CATERING/KITCHENETTE	184 SF
A120		FAMILY RESTROOM	72 SF
A121		CUSTODIAL	63 SF
A122		STORAGE	59 SF
A123		PASSAGE	177 SF
A124		BOARD ROOM	<varies>
A125		CONFERENCE ROOM	423 SF
A126		PASSAGE	112 SF
A127		RESTROOM	69 SF
A128		RESTROOM	67 SF
A129		CORRIDOR	1544 SF
A130		PASSAGE	146 SF
A131		PASSAGE	58 SF

ROOM LEGEND STAIRS

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
S-1		STAIR	382 SF

ROOM LEGEND ELEVATOR

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E-1		ELEVATOR	58 SF

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.
10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES

P1	CEILING MOUNTED DUPLEX RECEPTACLE TO BE MOUNTED ADJACENT TO CEILING MOUNTED VIDEO PROJECTOR. VERIFY EXACT LOCATION IN THE FIELD.
P2	DOOR ACCESS CONTROLLER JUNCTION BOX MOUNTED ABOVE THE CEILINGS FOR THE DOOR SECURITY DEVICES AND POWER. WIRE TO THE NEAREST RECEPTACLE CIRCUIT.
P3	AUTOMATIC DOOR OPERATOR MOTOR, PUSH BUTTONS, AND KEYED SWITCH BY THE UNIT MANUFACTURER. CONDUITS, WIRING, AND BACKBOXES BY THE DIVISION 26 CONTRACTORS PER THE MANUFACTURERS REQUIREMENT. VERIFY THE EXACT LOCATION OF DEVICES PRIOR TO ROUGH-IN.
P4	COORDINATE LOCATION OF LIGHT SWITCH AND LIGHT FIXTURES IN THE ELEVATOR PIT WITH THE ELEVATOR INSTALLER PRIOR TO ROUGH-IN. TAP THE SOURCE SIDE OF THE PIT RECEPTACLE FOR THE 120V LIGHT FIXTURES. LIGHT FIXTURE IS TO BE A 54 WATT, LED, 120V, 4-FOOT LONG, WALL MOUNTED, VANDAL RESISTANT WRAP AROUND FOR HIGH ABUSE AREAS. PROVIDE WITH AN EMERGENCY BATTERY BACKUP. MANUFACTURERS FAIL-SAFE FPS SERIES, KENALL 1048 SERIES, LUMINAIRE LED/LVP751 SERIES, COLUMBIA LXEM SERIES, AND ECLIPSE 714 LED SERIES.
P5	PROVIDE AN ELEVATOR DISCONNECT PER THE MANUFACTURERS RECOMMENDATIONS, WITH A SHUNT-TRIP DEVICE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL CODE REQUIREMENTS.
P6	PROVIDE AN ELEVATOR CAB LIGHTS DISCONNECT SWITCH PER THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODE REQUIREMENTS.
P7	TECHNOLOGY RACK RECEPTACLES. COORDINATE MOUNTING LOCATIONS AND INSTALLATION REQUIREMENTS WITH THE TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE NO. 10 CONDUCTORS.
P8	MAIN TECHNOLOGY RACK(MDF) BACKBOARD RECEPTACLES. REFER TO DETAIL "1B/E-501" FOR MOUNTING LOCATIONS AND ADDITIONAL REQUIREMENTS. PROVIDE NO. 10 CONDUCTORS.
P10	REFER TO THE ARCHITECTURAL EQUIPMENT DRAWING SHEETS AND DETAILS FOR EXACT MOUNTING HEIGHT OF THE RANGEHOOD PRIOR TO ROUGH-IN OF THE JUNCTION BOX.
P15	WINDOW SHADES AND CONTROLLER ARE BY THE UNIT MANUFACTURER. CONDUITS, WIRING, AND BACKBOXES ARE BY DIVISION 26 CONTRACTOR PER THE MANUFACTURERS REQUIREMENTS.
P16	CONTROLLER IS BY THE UNIT MANUFACTURER, CONDUITS, WIRING AND BACKBOXES ARE BY DIVISION 26 CONTRACTOR PER THE MANUFACTURERS REQUIREMENTS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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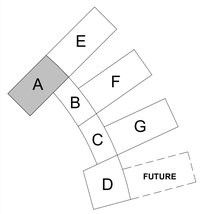
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

ISSUED FOR BID

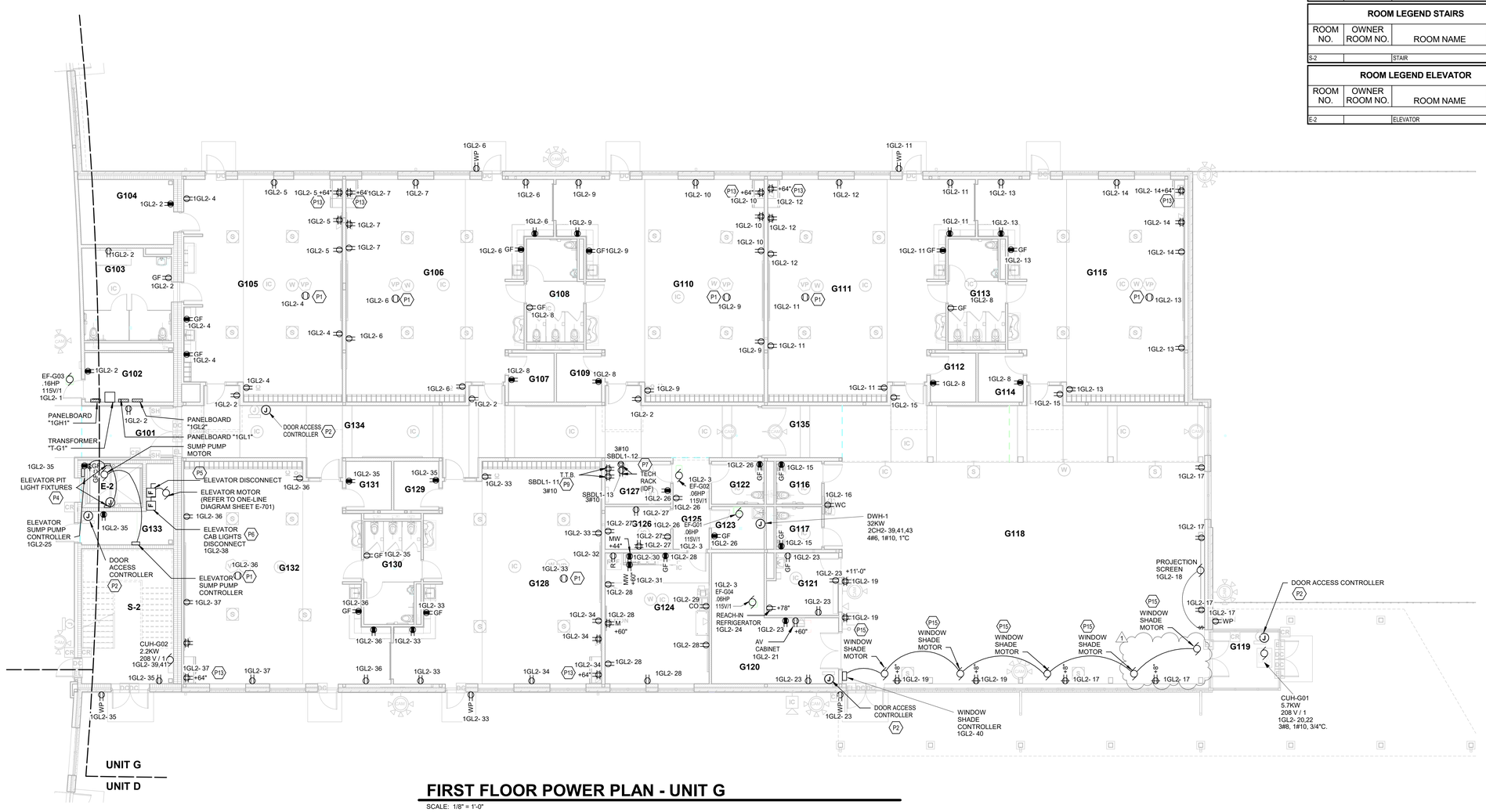
BRIAN W. BUTLER REGISTERED No. PE10800 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

FIRST FLOOR POWER PLAN - UNIT A

EP11A



FIRST FLOOR POWER PLAN - UNIT G

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

ROOM LEGEND UNIT G

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
G101		CORRIDOR	132 SF
G102		ELECTRICAL	121 SF
G103		RESTROOM	220 SF
G104		STORAGE	169 SF
G105		CLASSROOM	943 SF
G106		CLASSROOM	1095 SF
G107		STORAGE	61 SF
G108		RESTROOM	156 SF
G109		STORAGE	61 SF
G110		CLASSROOM	1095 SF
G111		CLASSROOM	1095 SF
G112		STORAGE	61 SF
G113		RESTROOM	155 SF
G114		STORAGE	61 SF
G115		CLASSROOM	1087 SF
G116		TOILET	54 SF
G117		TOILET	54 SF
G118		MULTI-PURPOSE	2879 SF
G119		VESTIBULE	111 SF
G120		STORAGE	327 SF
G121		PANTRY	117 SF
G122		STAFF TOILET	63 SF
G123		CUSTODIAL	62 SF
G124		STAFF WORKROOM	378 SF
G125		PASSAGE	91 SF
G126		BREAKOUT	77 SF
G127		TECHNOLOGY	78 SF
G128		CLASSROOM	1096 SF
G129		STORAGE	61 SF
G130		RESTROOM	155 SF
G131		STORAGE	61 SF
G132		CLASSROOM	1093 SF
G133		ELEVATOR EQUIPMENT	122 SF
G134		CORRIDOR	931 SF
G135		CORRIDOR	116 SF

ROOM LEGEND STAIRS

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
S-2		STAIR	346 SF

ROOM LEGEND ELEVATOR

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E-2		ELEVATOR	75 SF

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.
10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES

P1	CEILING MOUNTED DUPLEX RECEPTACLE TO BE MOUNTED ADJACENT TO CEILING MOUNTED VIDEO PROJECTOR. VERIFY EXACT LOCATION IN THE FIELD.
P2	DOOR ACCESS CONTROLLER, JUNCTION BOX MOUNTED ABOVE THE CEILINGS FOR THE DOOR SECURITY DEVICES AND POWER, WIRE TO THE NEAREST RECEPTACLE CIRCUIT.
P4	COORDINATE LOCATION OF LIGHT SWITCH AND LIGHT FIXTURES IN THE ELEVATOR PIT WITH THE ELEVATOR INSTALLER PRIOR TO ROUGH-IN. TAP THE SOURCE SIDE OF THE PIT RECEPTACLE FOR THE 120V LIGHT FIXTURES. LIGHT FIXTURE IS TO BE A 54 WATT, LED, 120V, 4-FOOT LONG, WALL MOUNTED. VANDAL RESISTANT WRAP AROUND FOR HIGH ABUSE AREAS. PROVIDE WITH AN EMERGENCY BATTERY BACKUP. MANUFACTURERS FAIL-SAFE FPS SERIES, KENALL N1048 SERIES, LUMINAIRE LEDLVP751 SERIES, COLUMBIA LXEM SERIES, AND ECLIPSE 714 LED SERIES.
P5	PROVIDE AN ELEVATOR DISCONNECT PER THE MANUFACTURERS RECOMMENDATIONS, WITH A SHUNT-TRIP DEVICE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL CODE REQUIREMENTS.
P6	PROVIDE AN ELEVATOR CAB LIGHTS DISCONNECT SWITCH PER THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODE REQUIREMENTS.
P7	TECHNOLOGY RACK RECEPTACLES. COORDINATE MOUNTING LOCATIONS AND INSTALLATION REQUIREMENTS WITH THE TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE NO. 10 CONDUCTORS.
P9	TECHNOLOGY RACK (IDF) BACKBOARD RECEPTACLES. REFER TO DETAIL "1C/E501" FOR MOUNTING LOCATIONS AND ADDITIONAL REQUIREMENTS. PROVIDE NO. 10 CONDUCTORS.
P13	TEACHER WARDROBE/TECHNOLOGY CABINET POWER RECEPTACLES. REFER TO ARCHITECTURAL EQUIPMENT DRAWING SHEETS AND DETAILS FOR LOCATION OF THE OUTLETS IN THE BACK SIDE OF THE UNIT PRIOR TO ROUGH-IN OF THE RECEPTACLES BACKBOXES.
P15	WINDOW SHADES AND CONTROLLER ARE BY THE UNIT MANUFACTURER. CONDUITS, WIRING, AND BACKBOXES ARE BY DIVISION 26 CONTRACTOR PER THE MANUFACTURERS REQUIREMENTS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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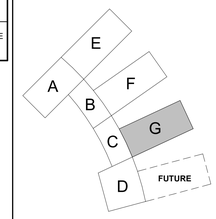

KEY PLAN

N

ISSUED FOR BID

BRIAN W. BUTLER
REGISTERED
No.
PE 10000
STATE OF
PROFESSIONAL ENGINEER

PROJECT MANAGER: JM

DRAWN BY: RDR

PROJECT NUMBER: 224033.00

PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

FIRST FLOOR POWER PLAN - UNIT G

EP11G

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ROOM LEGEND UNIT A SECOND FLOOR			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A201		MECHANICAL ROOM	1932 SF
A202		<varies>	457 SF
A203		CONFERENCE ROOM	316 SF
A204		CONFERENCE ROOM	600 SF
A205		TEAM SAFETY	1067 SF
A206		MECHANICAL ROOM	556 SF
A207		CORRIDOR	244 SF
A208		SAFETY STORAGE	155 SF
A209		STORAGE	192 SF
A210		CORRIDOR	596 SF
A211		HR CONFERENCE	164 SF
A212		TOUCHDOWN OFFICE	150 SF
A213		STORAGE	164 SF
A214		CORRIDOR	230 SF
A215		TOILET	77 SF
A216		LOBBY	227 SF
A217		OFFICE	161 SF
A218		<varies>	<varies>

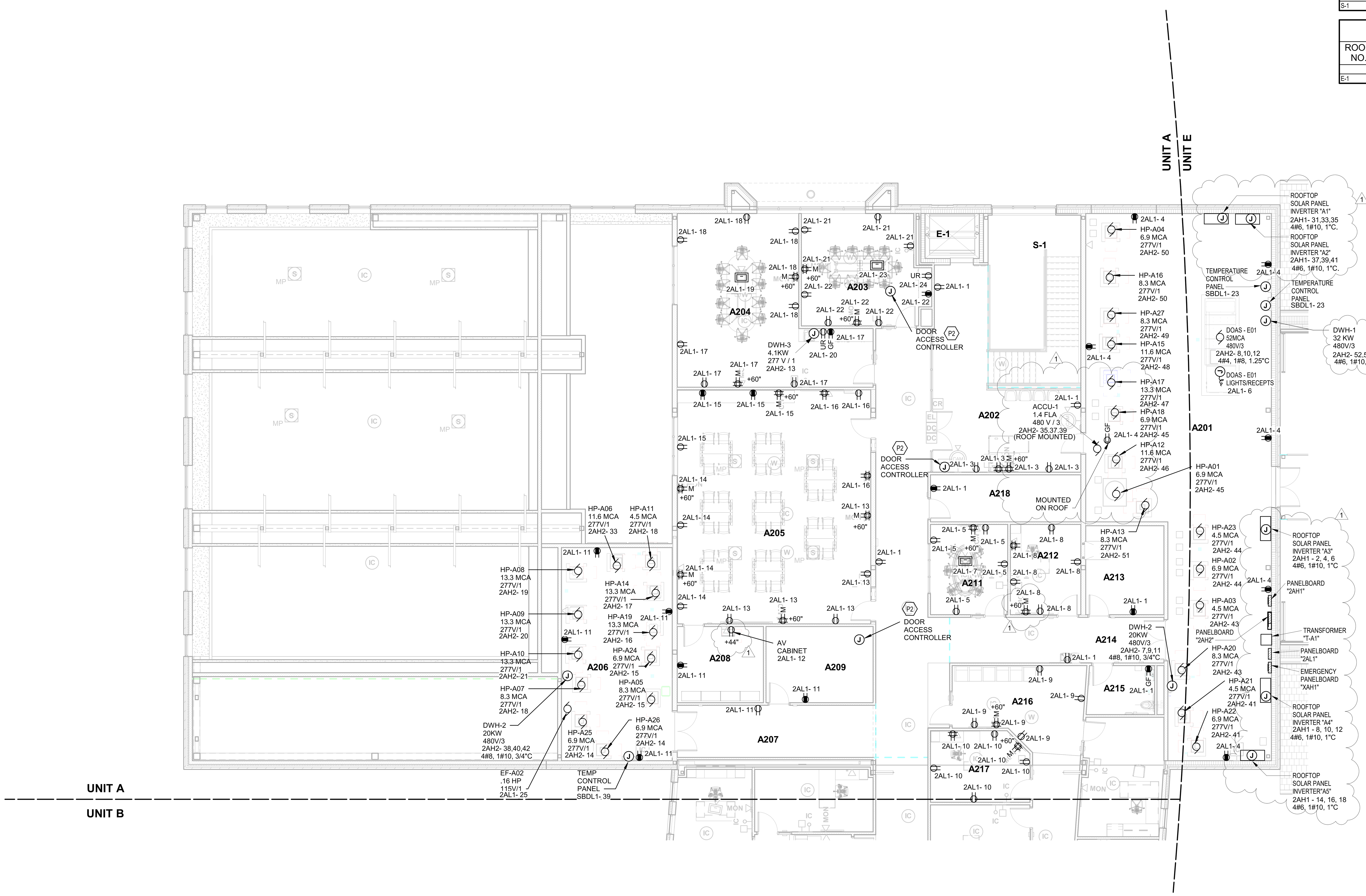
ROOM LEGEND STAIRS			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
S-1		STAIR	382 SF

ROOM LEGEND ELEVATOR			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E-1		ELEVATOR	58 SF

POWER PLAN GENERAL NOTES

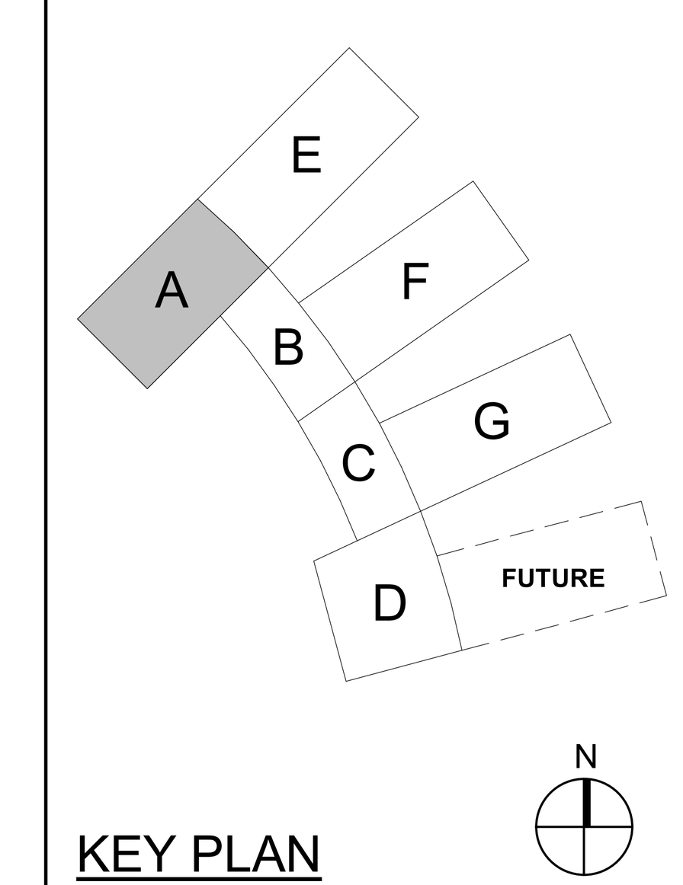
1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.
10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES	
P2	DOOR ACCESS CONTROLLER JUNCTION BOX MOUNTED ABOVE THE CEILINGS FOR THE DOOR SECURITY DEVICES AND POWER. WIRE TO THE NEAREST RECEPTACLE CIRCUIT.



SECOND FLOOR POWER PLAN - UNIT A

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



KEY PLAN

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE 11600305 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

VERIFICATION NOTE

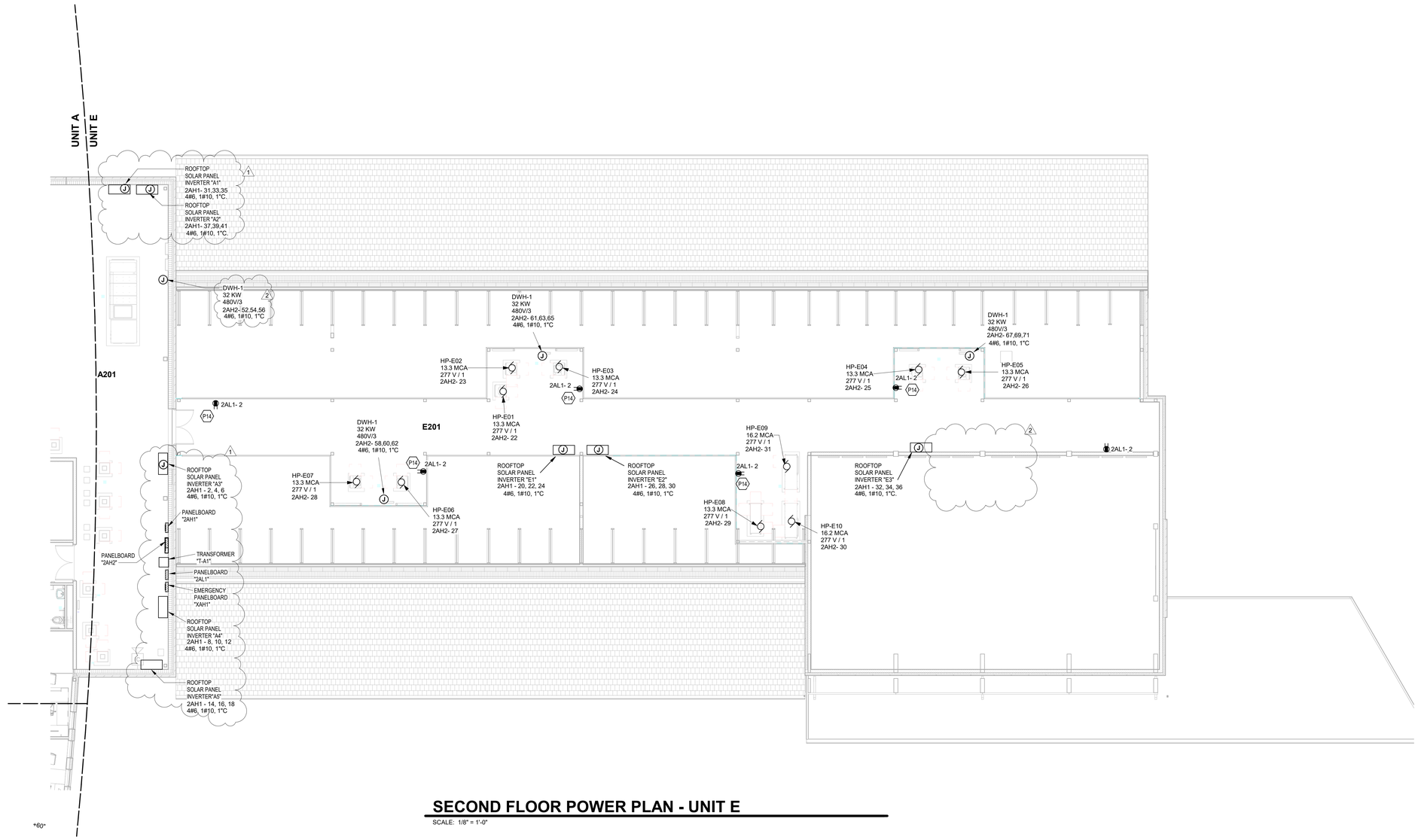
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

SECOND FLOOR POWER PLAN - UNIT A

EP12A

ROOM LEGEND UNIT E SECOND FLOOR			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
E201		INTERSTITIAL SPACE	2258 SF



SECOND FLOOR POWER PLAN - UNIT E

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

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 /N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.
10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES

P14	MOUNT DUPLEX RECEPTACLE TO THE RAILING AT 44-INCHES A.F.F AT THIS LOCATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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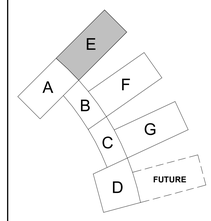


KEY PLAN

N

ISSUED FOR BID

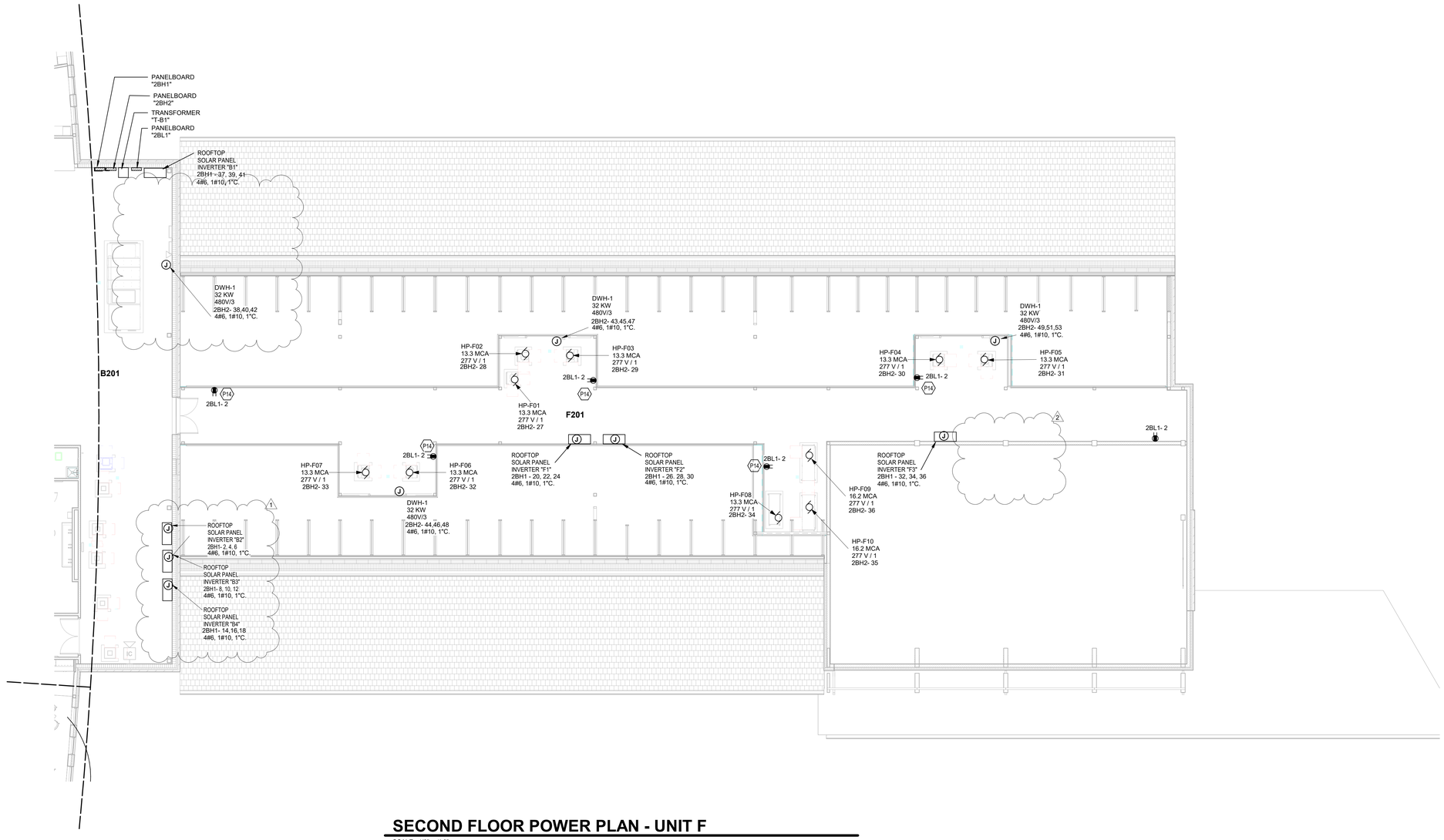
BRIAN W. BUTLER REGISTERED No. PE10800005 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

SECOND FLOOR POWER PLAN - UNIT E

EP12E



SECOND FLOOR POWER PLAN - UNIT F

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

ROOM LEGEND UNIT F SECOND FLOOR

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
F201		INTERSTITIAL SPACE	2246 SF

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 /N.E.C./ REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
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10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES

P14	MOUNT DUPLEX RECEPTACLE TO THE RAILING AT 44-INCHES A.F.F AT THIS LOCATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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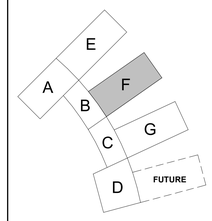


KEY PLAN

N

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10000265 STATE OF INDIANA PROFESSIONAL ENGINEER

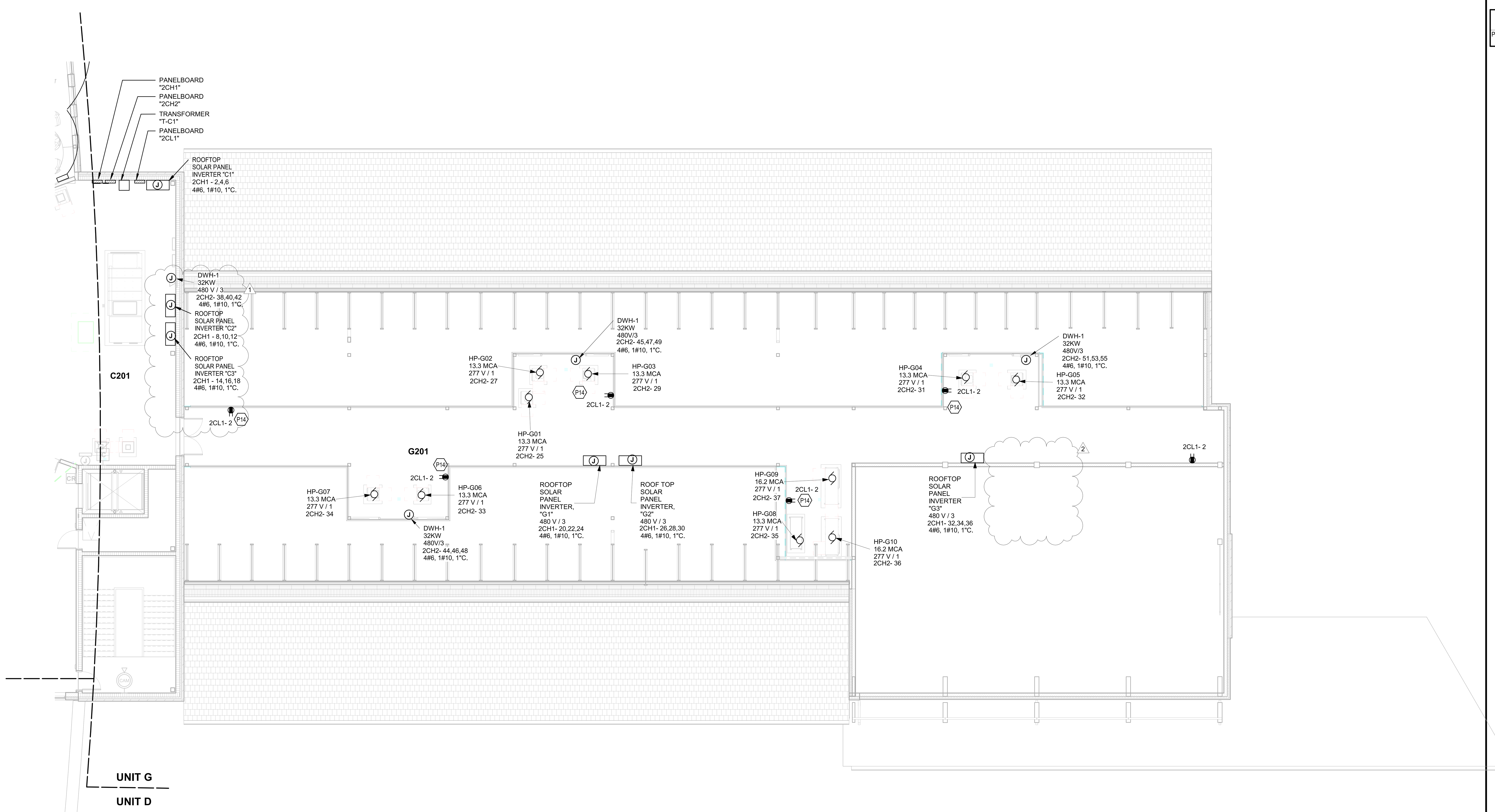
PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

SECOND FLOOR POWER PLAN - UNIT F

EP12F

ROOM LEGEND UNIT G SECOND FLOOR			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
G201		INTERSTITIAL SPACE	2246 SF



SECOND FLOOR POWER PLAN - UNIT G

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

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
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6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.
10. ALL DUPLEX RECEPTACLES IN THE BUILDING ARE TO BE TAMPER RESISTANT.
11. MC CABLING CAN BE USED IN SPACES ABOVE ACCESSIBLE CEILINGS FOR BRANCH WIRING. IN CONCRETE MASONRY WALLS, EXPOSED AREAS AND ALL TECHNOLOGY CABINETS CONDUITS ARE TO BE PROVIDED.

SHEET KEYNOTES	
P14	MOUNT DUPLEX RECEPTACLE TO THE RAILING AT 44-INCHES A.F.F AT THIS LOCATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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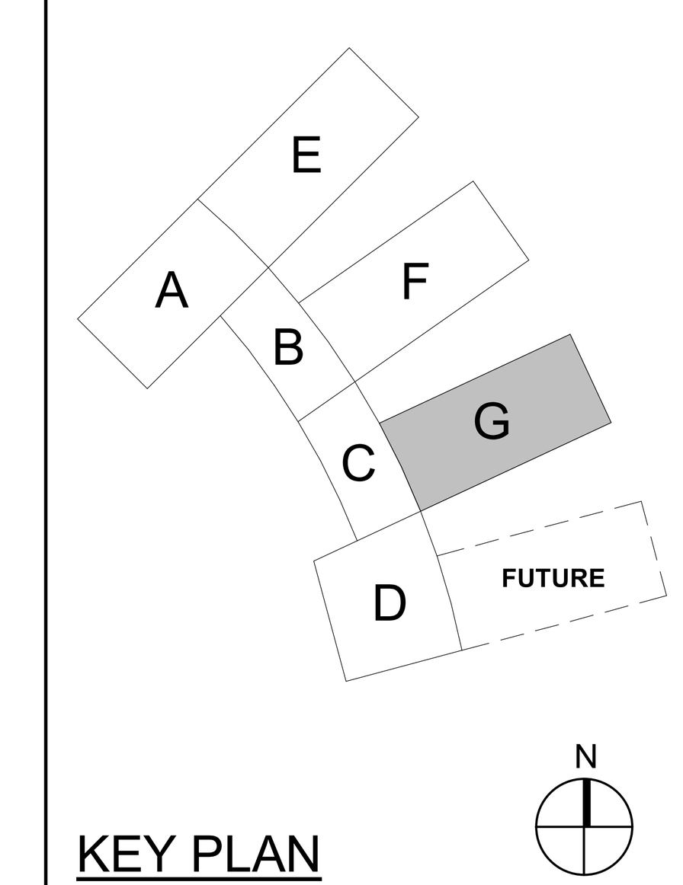

KEY PLAN

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE 11600305 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

SECOND FLOOR POWER PLAN - UNIT G

EP12G

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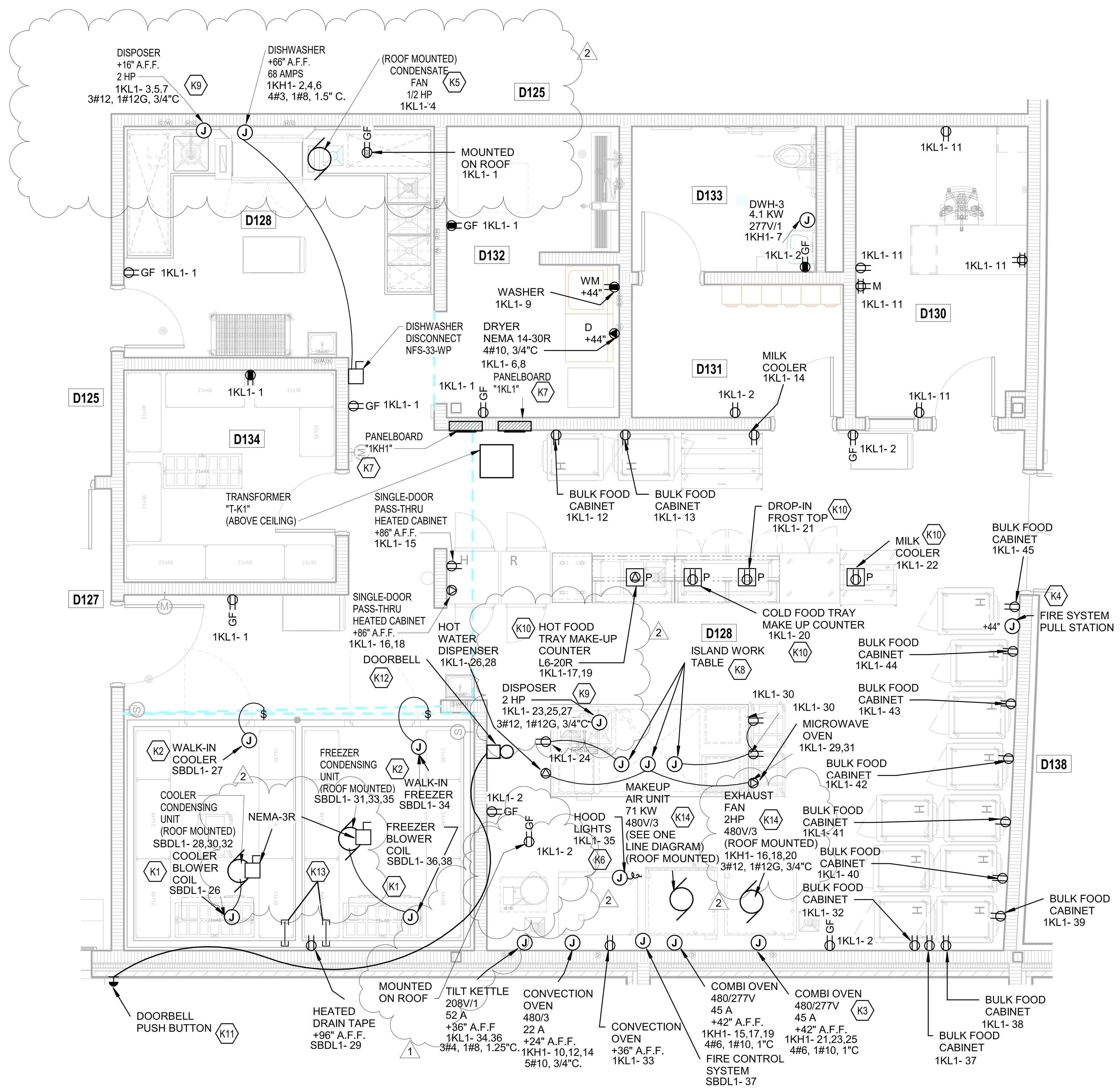

KITCHEN POWER PLAN

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

ROOM LEGEND			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
D125		CORRIDOR	582 SF
D126		MECHANICAL / ELECTRICAL	1750 SF
D127		RECEIVING	304 SF
D128		FOOD SERVICE	1282 SF
D130		OFFICE	126 SF
D131		PASSAGE	72 SF
D132		CART WASH / LAUNDRY	129 SF
D133		TOILET	70 SF
D134		DRY STORAGE	115 SF
D138		CORRIDOR	599 SF

KITCHEN PLAN GENERAL NOTES

1. EXPOSED CONDUIT SHALL BE THREADED, GALVANIZED RIGID STEEL, OR IMMEDIATE METAL. CONDUIT SHALL BE MOUNTED TO WALLS WITH ONE-HOLE STRAPS. STRAPS WITH SHARP EDGES PROTRUDING FROM THE WALL SHALL NOT BE PERMITTED.
2. FLEXIBLE CONNECTIONS SHALL BE MADE WITH NEOPRENE, JACKETED, FLEXIBLE METAL.
3. COORDINATE ROUGH-IN LOCATIONS, MOUNTING HEIGHT AND CONFIGURATIONS WITH KITCHEN EQUIPMENT SHOP DRAWING PRIOR TO ROUGH-IN
4. ALL EXPOSED WIRING IN KITCHEN SHALL BE INSTALLED IN LIQUID TIGHT FLEXIBLE METAL CONDUIT. ALL JUNCTION BOXES AND FITTING CONNECTIONS SHALL BE WATER PROOF.
5. FIELD VERIFY THE RATING AND NEMA CONFIGURATION OF ALL SPECIAL PURPOSE RECEPTACLE OUTLETS WITH PLUG PROVIDED WITH KITCHEN EQUIPMENT.
6. REFER TO "FS" (FOOD SERVICE PLANS) ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING PLANS FOR ALL ADDITIONAL ELECTRICAL REQUIREMENTS.
7. ALL "WP" TYPE DISCONNECTS SHOWN IN KITCHEN AREA SHALL BE NEMA TYPE 4.

SHEET KEYNOTES	
K1	PROVIDE CONDUIT AND WIRING TO THERMOSTAT, SOLENOID, DRAIN LINE HEATER AND REMOTE TIMER ON COMPRESSOR. REFER TO THE WIRING DIAGRAM ON THE "FS" DRAWING SHEETS.
K2	PROVIDE BRANCH CIRCUIT WIRING TO UNIT MOUNTED JUNCTION BOX, FROM JUNCTION BOX TO LIGHT FIXTURES, PERIMETER DOOR HEATERS AND AIR RELIEF VENT HEATERS. WIRING SHALL BE INSTALLED OUTSIDE OF COOLER/FREEZER WALLS AND CEILINGS. FINAL CONNECTION PENETRATIONS SHALL BE PROVIDED WITH SEAL-OFFS.
K3	FIRE CONTROL SYSTEM.
K4	PROVIDE A 4" OCTAGON JUNCTION BOX, FLUSH MOUNTED AT 44" A.F.F. PROVIDE A 1/2" CONDUIT STUBBED UP 6" ABOVE LAY-IN CEILING FOR USE BY OTHERS. VERIFY LOCATION WITH FOOD SERVICE EQUIPMENT CONTRACTOR PRIOR TO ROUGH-IN.
K5	WIRE TO DISHWASHER CONTROL PANEL.
K6	PROVIDE WIRING FROM JUNCTION BOX TO CANOPY LIGHT FIXTURES AND TO CANOPY LIGHT FIXTURES AND TO CANOPY LIGHT SWITCH. VERIFY EXACT LOCATION IN THE FIELD.
K7	PROVIDE KITCHEN PANELBOARD WITH STAINLESS STEEL DOORS AND COVERS.
K8	EXTEND BRANCH CIRCUIT WIRING TO JUNCTION BOX PREMOUNTED ON TABLE AND CONNECT TO PREWIRED TABLE MOUNTED RECEPTACLES.
K9	PROVIDE WIRING FROM JUNCTION BOX TO CONTROL PANEL AND TO SOLENOID AND DISPOSER.
K10	PROVIDE A PEDESTAL TYPE FLOOR RECEPTACLE AT THIS LOCATION.
K11	PROVIDE A HEAVY DUTY, NON-ILLUMINATED MOMENTARY PUSH BUTTON. PROVIDE A FULL GUARD, BLACK PUSH BUTTON, 1 N.O. AND 1 N.C. CONTACT. DEVICE TO BE A SQUARE-D #9001KRIB-KRIBH13.
K12	PROVIDE A BEIGE 4 INCH SURFACE MOUNTED 120V BELL THAT IS RATED 80-DB AT 10 FEET.
K13	STUB A 3/4" CONDUIT FROM COMPRESSOR TO INSIDE OF THE BUILDING ABOVE THE CEILING FOR THE WARNING ALARMS.
K14	PROVIDE WIRING FROM CONTROLS TO THE ROOF MOUNTED VENTILATION SYSTEM.

VERIFICATION NOTE

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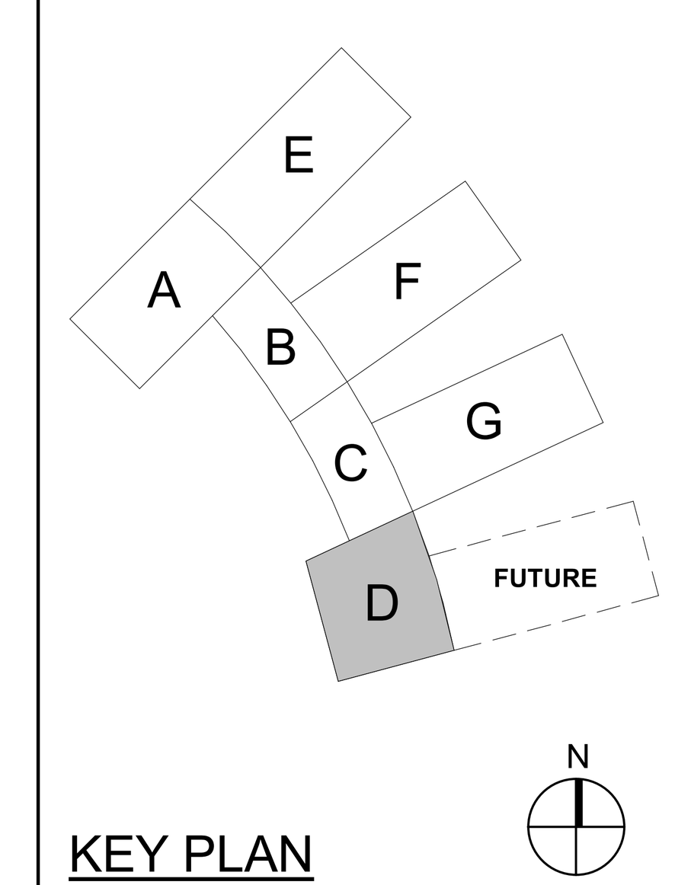

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REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
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KITCHEN POWER PLAN

E-401

LUMINAIRE SCHEDULE

PLAN TYPE	MANUFACTURER/CATALOG	MOUNTING	NO.	LAMPS WATTS	LAMPS TYPE	LAMPS LUMENS	APPLIED VOLTAGE	DESCRIPTION	VA LOAD
CVL1	SOLID STATE LUMINAIRES CVL SERIES ECOSENSE LIGHTING L30 SERIES LUMENCORE LVC SERIES	SURFACE	1	44 W	LED	4000 lm	277 V	4-FOOT LONG LED COVELIGHT FIXTURE, 0-10V DC DIMMING, WIDE BEAM ANGLE.	44 VA
CVL1X	SOLID STATE LUMINAIRES CVL SERIES ECOSENSE LIGHTING L30 SERIES LUMENCORE LVC SERIES	SURFACE	1	44 W	LED	4000 lm	277 V	4-FOOT LONG LED COVELIGHT FIXTURE, 0-10V DC DIMMING, WITH EMERGENCY TRANSFER DEVICE, WIDE BEAM ANGLE.	44 VA
CVL2	LUMENWERX EVOQ SERIES MARK LIGHTING 504 SERIES CURRENT LIGHTING COVE30 SERIES	SURFACE	1	44 W	LED	4000 lm	277 V	4-FOOT LONG LED FIXTURE DIRECT MOUNTED TO WALL WITH ADJUSTABLE OPTION. 0-10V DC DIMMING	44 VA
CVL2X	LUMENWERX EVOQ SERIES MARK LIGHTING 504 SERIES CURRENT LIGHTING COVE30 SERIES	SURFACE	1	44 W	LED	4000 lm	277 V	4-FOOT LONG LED FIXTURE DIRECT MOUNTED TO WALL WITH ADJUSTABLE OPTION. 0-10V DC DIMMING, WITH EMERGENCY TRANSFER DEVICE	44 VA
LD41	LITHONIA LDN4 SERIES HALO HC4 SERIES PRESCOLITE LF4-4RD LED SERIES	RECESSED	1	14 W	LED	900 lm	277 V	4-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY.	14 VA
LD41X	LITHONIA LDN4 SERIES HALO HC4 SERIES PRESCOLITE LF4-4RD LED SERIES	RECESSED	1	14 W	LED	900 lm	277 V	4-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY.	14 VA
LD61	HALO HC6 SERIES LITHONIA LDN6 SERIES PRESCOLITE LF6-6RD SERIES	RECESSED	1	18 W	LED	1500 lm	277 V	6-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY. ALL OTHER INSTANCES TO BE 4000K	18 VA
LD61X	HALO HC6 SERIES LITHONIA LDN6 SERIES PRESCOLITE LF6-6RD SERIES	RECESSED	1	18 W	LED	1500 lm	277 V	6-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY, WITH EMERGENCY TRANSFER DEVICE.	18 VA
LD62	HALO HC6 SERIES LITHONIA LDN6 SERIES PRESCOLITE LF6-6RD SERIES	RECESSED	1	18 W	LED	3000 lm	277 V	6-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY. ALL OTHER INSTANCES TO BE 4000K	18 VA
LD62X	HALO HC6 SERIES LITHONIA LDN6 SERIES PRESCOLITE LF6-6RD SERIES	RECESSED	1	18 W	LED	3000 lm	277 V	6-INCH ROUND APERTURE OPEN REFLECTOR LED DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR FINISH, SELF-FLANGED, 0-10VDC DIMMING, BAR HANGER ACCESSORY. ALL OTHER INSTANCES TO BE 4000K, WITH EMERGENCY TRANSFER DEVICE	18 VA
LDS61	RAYON LIGHTING RSL7 SERIES DMF LIGHTING S SERIES JUNO CTLB SERIES	SURFACE	1	12 W	LED	1245 lm	277 V	7-INCH ROUND CELING SURFACE MOUNTED	18 VA
LDW41	LITHONIA LDN6 SERIES PORTFOLIO LD6B SERIES PRESCOLITE LFR-6RD SERIES	RECESSED	1	18 W	LED	1000 lm	277 V	4-INCH ROUND APERTURE LED SHOWER LIGHT WITH REGRESSED LENS REFLECTOR, WHITE REFLECTOR AND TRIM, SELF-FLANGED, IP65 WET LOCATION LISTED.	8 VA
LDW61	LITHONIA LDN6 SERIES PORTFOLIO LD6B SERIES PRESCOLITE LFR-6RD SERIES	RECESSED	1	18 W	LED	1000 lm	277 V	6-INCH ROUND APERTURE LED SHOWER LIGHT WITH REGRESSED LENS REFLECTOR, WHITE REFLECTOR AND TRIM, SELF-FLANGED, IP65 WET LOCATION LISTED.	8 VA
LE1	McGRAW-EDISON IMPACT SERIES LITHONIA ARC 2 LED SERIES BEACON RWL1 SERIES	SURFACE WALL	1	24 W	LED	3000 lm	277 V	HALF-CYLINDER LED WALL MOUNTED LUMINAIRE WITH DIE CAST ALUMINUM HOUSING, BOTTOM DIFFUSER FLUSH WITH THE DIE CASTING, TYPE 3 DISTRIBUTION, 70 CRI LEDs. LUMINAIRE COLOR: FROM MANUFACTURER STANDARD COLORS. MOUNT ONTO JUNCTION BOX. FIXTURES ON HIGH SCHOOL TO BE CONTROLLED BY BAS. VANDAL RESISTANT.	38 VA
LE2	MARK ARCHITECTURAL SLOT 1 SERIES LITECONTROL MOD 4L SERIES STARTEK R BEAM SERIES	RECESSED	1	24 W	LED	2400 lm	277 V	4" BY 2-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT	24 VA
LE3	LITHONIA WPX1 SERIES LUMARK AXCENT SERIES GARDCO GEOFORM BLOCK SERIES CURRENT PRL SERIES	SURFACE WALL	1	24 W	LED	2900 lm	277 V	SURFACE WALL PACK LED, NARROW BEAM	24 VA
LE4	NOVUS DECOR ARMOR SERIES SONNEMAN 345897 SERIES	SURFACE WALL	1	18 W	LED	1245 lm	277 V	94.5" LONG BACK LIT WALL SCONCE	18 VA
LF1	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	29 W	LED	3000 lm	277 V	1 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING.	29 VA
LF1X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	29 W	LED	3000 lm	277 V	1 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING, EMERGENCY TRANSFER DEVICE.	29 VA
LF2	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	35 W	LED	4000 lm	277 V	2 BY 4-FOO BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING.	35 VA
LF2X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	35 W	LED	4000 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING,EMERGENCY TRANSFER DEVICE	35 VA
LF3	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	40 W	LED	4800 lm	277 V	2 BY 4-FOO BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING.	40 VA
LF3X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	40 W	LED	4800 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING, EMERGENCY TRANSFER DEVICE, SELF-DIAGNOSTIC	40 VA
LF4	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	41 W	LED	6000 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING.	41 VA
LF4X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	41 W	LED	6000 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING,EMERGENCY TRANSFER DEVICE	41 VA
LF22	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	15 W	LED	2000 lm	277 V	2 BY 2-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING.	15 VA
LF22X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	15 W	LED	2000 lm	277 V	2 BY 2-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 1% 0-10V DIMMING, EMERGENCY TRANSFER DEVICE.	15 VA
LFW4	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	41 W	LED	6000 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 10% DIMMING.	41 VA

LUMINAIRE SCHEDULE

PLAN TYPE	MANUFACTURER/CATALOG	MOUNTING	NO.	LAMPS WATTS	LAMPS TYPE	LAMPS LUMENS	APPLIED VOLTAGE	DESCRIPTION	VA LOAD
LFW4X	LITHONIA CPX SERIES COLUMBIA CBT SERIES EATON METALUX CGT SERIES	RECESSED	1	41 W	LED	6000 lm	277 V	2 BY 4-FOOT BACK LIT FLAT PANEL WITH ALUMINUM FRAME, 10% DIMMING,EMERGENCY TRANSFER DEVICE	41 VA
LLW4	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	SURFACE	1	24 W	LED	2400 lm	277 V	Slot 4 LED 4ft Length, SURFACE MOUNTED, FLUSHED LENS POSITION, 80CRI 4000K LED BOARDS 600LMF, DAMP LOCATION LISTED	24 VA
LN4	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	24 W	LED	2400 lm	277 V	4" BY 4-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT	24 VA
LN4X	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	24 W	LED	2400 lm	277 V	4" BY 4-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT. EMERGENCY TRANSFER DEVICE	24 VA
LN6	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	36 W	LED	3600 lm	277 V	4" BY 6-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT	36 VA
LN6X	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	36 W	LED	3600 lm	277 V	4" BY 6-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT. EMERGENCY TRANSFER DEVICE	36 VA
LN8	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	48 W	LED	4800 lm	277 V	4" BY 8-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT	48 VA
LN8X	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	48 W	LED	4800 lm	277 V	4" BY 8-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT. EMERGENCY TRANSFER DEVICE	48 VA
LN12	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	72 W	LED	7200 lm	277 V	4" BY 12-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT	72 VA
LN12X	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	RECESSED	1	72 W	LED	7200 lm	277 V	4" BY 12-FOOT LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT. EMERGENCY TRANSFER DEVICE	72 VA
LNP4	MARK ARCHITECTURAL SLOT 4 SERIES LITECONTROL MOD 4L SERIES STARTEK RBEAM SERIES	PENDANT	1	24 W PER FOOT	LED	1600 lm	277 V	4" BY 4-FOOT LINEAR PENDANT MOUNTED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 400 LUMENS PER FOOT	24 VA PER FOOT
LPD8	PORTFOLIO LSR8A SERIES GOTHAM IVO6CYL SERIES PRESCOLITE LTC-6RD SERIES	PENDANT	1	93 W	LED	6000 lm	277 V	8-INCH APERATURE OPEN REFLECTOR LED CYLINDER DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR REFLECTOR, 0-10VDC DIMMING. FIXTURE HOUSING WHITE IN COLOR. PROVIDE WITH SWIVEL HANGER AND FIELD PROVIDED CONDUIT PENDANT, LENGTH AS REQUIRED TO MOUNT SO THAT BOTTOM OF FIXTURE IS AT MOUNTING HEIGHT INDICATED ON PLANS. FIELD PAINT CONDUIT PENDANT SAME COLOR AS FIXTURE.	93 VA
LPD8X	PORTFOLIO LSR8A SERIES GOTHAM IC06CYL SERIES PRESCOLITE LTC-6RD SERIES	PENDANT	1	93 W	LED	6000 lm	277 V	8-INCH APERATURE OPEN REFLECTOR LED CYLINDER DOWNLIGHT, MEDIUM DISTRIBUTION, CLEAR SPECULAR REFLECTOR, 0-10VDC DIMMING. FIXTURE HOUSING WHITE IN COLOR. PROVIDE WITH SWIVEL HANGER AND FIELD PROVIDED CONDUIT PENDANT, LENGTH AS REQUIRED TO MOUNT SO THAT BOTTOM OF FIXTURE IS AT MOUNTING HEIGHT INDICATED ON PLANS. FIELD PAINT CONDUIT PENDANT SAME COLOR AS FIXTURE. PROVIDE WITH EMERGENCY TRANSFER DEVICE.	93 VA
LPR1	MARK LIGHTING FCL SERIES LUMENWERX CURVIA4 SERIES LITECONTROL 88L BEND SERIES	RECESSED	1	24 W	LED	651 lm	277 V	4" DIAMETER FULL CIRCLE RECESSED LED FIXTURE, FLUSH LENS, 0-10VDC DIMMING	24 VA
LPR4	OCL GL1 GLOWRING SERIES CAMMAN LIGHTING P2440 SERIES G LIGHTING ORBIS II SERIES	SUSPENDED	1	75 W	LED	7875 lm	277 V	4' DIAMETER ROUND SUSPENDED LED FIXTURE, FLAT OPAL LENS, 0-10VDC DIMMING, AIRCRAFT CABLE SUSPENSION IN LENGTH AS REQUIRED TO MOUNT AT HEIGHT(S) INDICATED ON DRAWINGS. MOUNTED AT 22' A.F.F. TO BOTTOM OF THE FIXTURE	75 VA
LPR5	OCL GL1 GLOWRING SERIES CAMMAN LIGHTING P2440 SERIES G LIGHTING ORBIS II SERIES	SUSPENDED	1	95 W	LED	9975 lm	277 V	5' DIAMETER ROUND SUSPENDED LED FIXTURE, 0-10VDC DIMMING, AIRCRAFT CABLE SUSPENSION IN LENGTH AS REQUIRED TO MOUNT AT HEIGHT(S) INDICATED ON DRAWINGS. MOUNTED AT 21' A.F.F. TO BOTTOM OF THE FIXTURE	95 VA
LPR6	OCL GL1 GLOWRING SERIES CAMMAN LIGHTING P2440 SERIES G LIGHTING ORBIS II SERIES	SUSPENDED	1	115 W	LED	12075 lm	277 V	6' DIAMETER ROUND SUSPENDED LED FIXTURE, 0-10VDC DIMMING, AIRCRAFT CABLE SUSPENSION IN LENGTH AS REQUIRED TO MOUNT AT HEIGHT(S) INDICATED ON DRAWINGS. MOUNTED AT 20' A.F.F. TO BOTTOM OF THE FIXTURE	115 VA
LR2	METALUX WNLED SERIES LITHONIA SBL SERIES COLUMBIA LAW SERIES	SUSPENDED	1	48 W	LED	4000 lm	277 V	4-FOOT LED WRAP AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING. IF SUSPENDED, INSTALL AT 10-FOOT AFF WITH CONDUIT STEMS (UNO)	27 VA
LR2X	METALUX WNLED SERIES LITHONIA SBL SERIES COLUMBIA LAW SERIES	SUSPENDED	1	48 W	LED	4000 lm	277 V	4-FOOT LED WRAP AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING, WITH EMERGENCY TRANSFER DEVICE. IF SUSPENDED, INSTALL AT 10-FOOT AFF WITH CONDUIT STEMS (UNO).	27 VA
LS1	LITHONIA RSX2 SERIES MCGRAW EDISON GALEON SERIES BEACON VIPER L SERIES HUBBELL AIRO SERIES	20'-0" SQUARE STEEL POLE	1	270 W	LED	27301 lm	277 V	POLE MOUNTED LED FIXTURE ON A 20'-0" TALL POLE. CLEAR LENS, 70+CRI, 4000K, TYPE 2 DISTRIBUTION.	270 VA
LWW1	FOCAL POINT FSM4FL LED SERIES STARTEK R-BEAM SERIES LITECONTROL MOD 4L SERIES MARK LIGHTING SL4L SERIES	RECESSED	1	24 W PER FOOT	LED	600 lm PER FOOT	277 V	4" LED LINEAR RECESSED FIXTURE, FLUSH LENS, 80 CRI, 4000K, 600 LUMENS PER FOOT, LENGTH PER DRAWINGS. PROVIDE GYPBOARD CEILING KIT WHERE CALLED FOR IN GYPBOARD CEILING.	24 VA
LWW2	FOCAL POINT FSM4PL LED SERIES STARTEK RBEAM SERIES LITECONTROL 4L-WSD SERIES MARK LIGHTING S4WID SERIES	RECESSED	1	24 W PER FOOT	LED	600 lm PER FOOT	277 V	4" LED LINEAR FIXTURE, FLUSH LENS, WALL MOUNTED ABOVE CEILING, 80 CRI, 4000K, 600 LUMENS PER FOOT, LENGTH PER DRAWINGS. COVE MOUNTED WALL WASH FIXTURE	24 VA
XC	SURE-LITES CX SERIES LITHONIA SIGNATURE SERIES DUAL-LITE SEMPRA SERIES	SURFACE CEILING	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA
XW	SURE-LITES CX SERIES LITHONIA SIGNATURE SERIES DUAL-LITE SEMPRA SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA

LUMINAIRE SCHEDULE - GENERAL NOTES

1. SEE SPECIFICATIONS FOR DRIVER REQUIREMENTS.
2. FOR ALL DOWNLIGHTING FIXTURES, PROVIDE REQUIRED MOUNTING HARDWARE FOR MOUNTING IN LAY-IN TYPE CEILINGS.
3. CONTRACTOR TO VERIFY TYPES AND QUANTITY OF LIGHT FIXTURES REQUIRING EMERGENCY TRANSFER DEVICES AND PROVIDE REQUIRED QUANTITY OF EMERGENCY TRANSFER DEVICES. LABOR, MATERIAL, ETC. IN THE PROJECT BID FOR FIELD INSTALLATION OF EMERGENCY TRANSFER DEVICES.
4. LIGHT FIXTURE SUBMITTALS TO INCLUDE DATA SHEETS FOR ALL FIXTURE TYPES, INCLUDING ADDITIONAL DATA SHEETS FOR DRIVER COMBINATIONS REQUIRED TO MEET THE INSTALLATION REQUIREMENTS OF THE VARIOUS FIXTURE TYPES INDICATED IN THE REMARKS COLUMN OF THE FIXTURE SCHEDULES OR ON THE DRAWINGS. SUBMITTALS SHALL ALSO INDICATE COLOR FOR ANY CUSTOM COLOR LIGHT FIXTURES.
5. THE COLOR TEMPERATURE OF ALL LIGHT FIXTURES IS TO BE 4,000K UNLESS NOTED OTHERWISE.

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

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ZIONSVILLE, INDIANA 46077

ZIONSVILLE COMMUNITY SCHOOLS

ZIONSVILLE COMMUNITY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE19900005 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

LUMINAIRE SCHEDULES

E-601

ZIONSVILLE CS NEW EARLY LEARNING CENTER / EDUCATIONAL SERVICES CENTER

S 700 E AND E 550 S
ZIONSVILLE, INDIANA 46077

ZIONSVILLE COMMUNITY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

Branch Panel: 1DH1

Location:	ROOM D136	Volts:	480/277 Wye	A.I.C. Rating:	65K
Supply From:	MSB	Phases:	3	Mains Type:	MLO
Mounting:	SURFACE	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	.

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-D1 Rm. D136	100 A	3	16544 VA	655 VA					1	20 A	RM D122-D127, D135-137 LIGHTS	2
3	75 kVA, 277 V/480 V, Three Phase, 4 Wires, Wye	--	--			12004 VA	608 VA			1	20 A	RM D101-103, D102A, D108, D118-D120 LIGHTS	4
5	--	--	--					15349 VA	412 VA	1	20 A	RM D104-D117 LIGHTS	6
7	SITE LIGHTING	20 A	1	270 VA	274 VA					1	20 A	RM D121, D129, D138 LIGHTS	8
9	SITE LIGHTING	20 A	1			270 VA	270 VA			1	20 A	SITE LIGHTING	10
11	SITE LIGHTING	20 A	1					270 VA	270 VA	1	20 A	SITE LIGHTING	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	17743 VA		13152 VA		16301 VA					
			Total Amps:	66 A		47 A		61 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	7447 VA	120.18%	8950 VA		
Other	2500 VA	100.00%	2500 VA	Total Conn. Load:	47196 VA
Receptacle	14870 VA	83.62%	12435 VA	Total Est. Demand:	42668 VA
Power	0 VA	0.00%	0 VA	Total Conn.:	57 A
Lighting	3299 VA	125.00%	4123 VA	Total Est. Demand:	51 A
Receptacle - Convenience	17880 VA	77.96%	13940 VA		
Receptacle - Washing Machine	1200 VA	60.00%	720 VA		

Notes:

Branch Panel: 1DH2

Location:	ROOM D136	Volts:	480/277 Wye	A.I.C. Rating:	65K
Supply From:	MSB	Phases:	3	Mains Type:	MLO
Mounting:	Surface	Wires:	4	Mains Rating:	400 A
Enclosure:	Type 1			MCB Rating:	.

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-D2 RM D136	100 A	3	610 VA	10667 VA					3	50 A	DWH-1 32kW RM D122	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			0 VA	10667 VA			--	--	32 KW	4
5	--	--	--					0 VA	10667 VA	--	--	RM. D122	6
7	DWH-1 32 kW D116	50 A	3	10667 VA	4100 VA					1	20 A	DWH-3, 4.1KW, RM.D110	8
9	32 KW	--	--			10667 VA	4100 VA			1	20 A	DWH-3, 4.1KW, RM.D111	10
11	RM. D116	--	--					10667 VA	4100 VA	1	20 A	DWH-3, 4.1KW, RM.D115	12
13	HP-D04 RM.D120, HP-D06 RM.D116	20 A	1	2490 VA	3213 VA					1	20 A	HP-D11 RM. D126	14
15	HP-D08 RM.D126	20 A	1			4487 VA	4487 VA			1	20 A	HP-D07 RM. D126	16
17	HP-D09 RM. D126	20 A	1					3684 VA	2299 VA	1	20 A	HP-D05 RM D126	18
19	HP-DO1 RM.D126	20 A	1	2299 VA	3213 VA					1	20 A	HP-D12 RM.D126	20
21	HP-D03 RM.D126	20 A	1			2299 VA	3156 VA			1	20 A	HP-D02, HP-D10 RM.D126	22
23	DWHP-1, DWHP-2 RM.D126	20 A	3					613 VA	14410 VA	3	80 A	DOAS-D01 52 MCA RM D126	24
25	.25 HP X(4)	--	--	613 VA	14410 VA					--	--	52 MCA	26
27	RM. D126	--	--			613 VA	14410 VA			--	--	RM. D126	28
29	DWBP-1 7.5 HP RM D126	20 A	3					3047 VA	3047 VA	3	20 A	DWBP-1 7.5 HP RM D126	30
31	7.5 HP	--	--	3047 VA	3047 VA					--	--	7.5 HP	32
33	RM. D126	--	--			3047 VA	3047 VA			--	--	RM. D126	34
35	DWBP-1 7.5 HP RM D126	20 A	3					3047 VA	18005 VA	3	100 A	PUMP P-2 50 HP RM D126	36
37	7.5 HP	--	--	3047 VA	18005 VA					--	--	50 HP	38
39	RM. D126	--	--			3047 VA	18005 VA			--	--	RM. D126	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
43	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	79428 VA		82032 VA		73586 VA					
			Total Amps:	290 A		299 A		266 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	158136 VA	108.54%	171640 VA		
Other	76550 VA	100.00%	76550 VA	Total Conn. Load:	235046 VA
Receptacle - Convenience	360 VA	100.00%	360 VA	Total Est. Demand:	248550 VA
				Total Conn.:	283 A
				Total Est. Demand:	299 A

Notes:

Branch Panel: 1EH1

Location:	ROOM E102	Volts:	480/277 Wye	A.I.C. Rating:	14K
Supply From:	MSB	Phases:	3	Mains Type:	MLO
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	.

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-E1 Rm. E102	175 A	3	31305 VA	582 VA					1	20 A	RM C101, E101, E125, E137 LIGHTS	2
3	112.5 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			32516 VA	884 VA			1	20 A	RM E102-E108 LIGHTS	4
5	--	--	--					33867 VA	1037 VA	1	20 A	RM E124, E126-E136, E139 LIGHTS	6
7	RM A124 LIGHTS	20 A	1	1068 VA	1242 VA					1	20 A	RM E110-E115 LIGHTS	8
9	RM A103, A104, 106,A111,A129, A118, A119 LTS	20 A	1			1501 VA	900 VA			1	20 A	RM E116-E123, E138 LIGHTS	10
11	RM A107-A110,A105,A112-A117,A131,A120-A123, A130 LTS	20 A	1					832 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	34197 VA		35801 VA		35736 VA					
			Total Amps:	123 A		130 A		130 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	13078 VA	110.90%	14503 VA		
Other	500 VA	100.00%	500 VA	Total Conn. Load:	105733 VA
Receptacle	31350 VA	65.95%	20675 VA	Total Est. Demand:	79514 VA
Power	0 VA	0.00%	0 VA	Total Conn.:	127 A
Lighting	8045 VA	125.00%	10056 VA	Total Est. Demand:	96 A
Receptacle - Convenience	44760 VA	61.17%	27380 VA		
Receptacle - Special	8000 VA	80.00%	6400 VA		

Notes:

Branch Panel: 1FH1

Location:	ROOM F102	Volts:	480/277 Wye	A.I.C. Rating:	14K
Supply From:	MSB	Phases:	3	Mains Type:	MLO
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	.

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-F1 Rm. F102	175 A	3	24955 VA	851 VA					1	20 A	RM B102- B108 LIGHTS	2
3	112.5 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			22700 VA	851 VA			1	20 A	RM B109-B115 LIGHTS	4
5	--	--	--					22322 VA	458 VA	1	20 A	RM B101, F101, F125, F137 LIGHTS	6
7	RM F102-F108 LIGHTS	20 A	1	884 VA	1045 VA					1	20 A	RM F124, F126-F136 LIGHTS	8
9	RM F109-F115 LIGHTS	20 A	1			1242 VA	900 VA			1	20 A	RM F116-F123, F138 LIGHTS	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	27735 VA		25693 VA		22780 VA					
			Total Amps:	102 A		94 A		82 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	8117 VA	117.56%	9542 VA		
Other	2500 VA	100.00%	2500 VA	Total Conn. Load:	76208 VA
Receptacle	24620 VA	70.31%	17310 VA	Total Est. Demand:	59630 VA
Lighting	6231 VA	125.00%	7788 VA	Total Conn.:	92 A
Receptacle - Convenience	33540 VA	64.91%	21770 VA	Total Est. Demand:	72 A
Receptacle - Washing Machine	1200 VA	60.00%	720 VA		

Notes:

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE 11600305 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-602

Autodesk Docs://Zionsville ELC/2023_ELEC_224033.00.rvt
7/14/2025 3:20:13 PM

Branch Panel: 1GH1

Location: ROOM G102
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 200 A
MCB Rating: .

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-G1 Rm. G102	175 A	3	23183 VA	851 VA					1	20 A	RM C102-C108 LIGHTS	2
3	112.5 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			22300 VA	851 VA			1	20 A	RM C109-C115 LIGHTS	4
5	--	--	--					21827 VA	148 VA	1	20 A	RM G134, G125, A101, A102	6
7	RM G102 - G108 LIGHTS	20 A	1	884 VA	1242 VA					1	20 A	RM G109 - G115 LIGHTS	8
9	RM G124, G126 - G133 LIGHTS	20 A	1			1012 VA	900 VA			1	20 A	RM G116 - G123, LIGHTS	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	26160 VA		25063 VA		21975 VA					
			Total Amps:	96 A		92 A		79 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	11580 VA	112.31%	13005 VA		
Other	35 VA	100.00%	35 VA	**Total Conn. Load:**	73198 VA
Receptacle	23450 VA	71.32%	16725 VA	**Total Est. Demand:**	58221 VA
Lighting	5853 VA	125.00%	7316 VA	**Total Conn.:**	88 A
Receptacle - Convenience	32280 VA	65.49%	21140 VA	**Total Est. Demand:**	70 A

Notes:

Branch Panel: 2AH1

Location: ROOM A201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: .

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-A1 Rm. A201	100 A	3	8995 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER "A3"	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			9180 VA	0 VA			--	--	--	4
5	--	--	--					6670 VA	0 VA	--	--	--	6
7	RM. A203 - A210, B208 LIGHTS	20 A	1	1015 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER "A4"	8
9	RM. S-1, A218, A211 - A216,LIGHTS	20 A	1			609 VA	0 VA			--	--	--	10
11	RM. A201, E201 LIGHTS	20 A	1					513 VA	0 VA	--	--	--	12
13	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER "A5"	14
15	Spare	20 A	1			0 VA	0 VA			--	--	--	16
17	Spare	20 A	1					0 VA	0 VA	--	--	--	18
19	Spare	20 A	1	0 VA	0 VA					3	20 A	ROOFTOP SOLAR PANEL INVERTER "E1"	20
21	Spare	20 A	1			0 VA	0 VA			--	--	--	22
23	Spare	20 A	1					0 VA	0 VA	--	--	--	24
25	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER "E2"	26
27	Spare	20 A	1			0 VA	0 VA			--	--	--	28
29	Spare	20 A	1					0 VA	0 VA	--	--	--	30
31	ROOFTOP SOLAR PANEL INVERTER "A1"	45 A	3	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER "E3"	32
33	--	--	--			0 VA	0 VA			--	--	--	34
35	--	--	--					0 VA	0 VA	--	--	--	36
37	ROOFTOP SOLAR PANEL INVERTER "A2"	45 A	3	0 VA	0 VA					3	45 A	Spare	38
39	--	--	--			0 VA	0 VA			--	--	--	40
41	--	--	--					0 VA	0 VA	--	--	--	42
			Total Load:	10010 VA		9789 VA		7183 VA					
			Total Amps:	38 A		37 A		26 A					

2

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	345 VA	125.00%	431 VA		
Other	35 VA	100.00%	35 VA	**Total Conn. Load:**	26982 VA
Receptacle	10100 VA	99.50%	10050 VA	**Total Est. Demand:**	25344 VA
Lighting	2102 VA	125.00%	2628 VA	**Total Conn.:**	32 A
Receptacle - Convenience	14400 VA	84.72%	12200 VA	**Total Est. Demand:**	30 A

Notes:

Branch Panel: 2AH2

Location: ROOM A201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: .

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EVCU-1	20 A	3	4126 VA	10667 VA					3	50 A	DWH-1	2
3	14.9 FLA	--	--			4126 VA	10667 VA			--	--	32 KW	4
5	RM. A115	--	--					4126 VA	10667 VA	--	--	RM. A121	6
7	DWH-2	40 A	3	6667 VA	14410 VA					3	80 A	DOAS - E01	8
9	20 KW	--	--			6667 VA	14410 VA			--	--	52 MCA	10
11	RM. A201	--	--					6667 VA	14410 VA	--	--	RM. A201	12
13	DWH-3 4.1KW RM. A204	20 A	1	20000 VA	3822 VA					1	20 A	HP-A25, HP-A26 RM. A206	14
15	HP-A05, HP-A24 RM. A206	20 A	1			4210 VA	3684 VA			1	20 A	HP-A19 RM. A206	16
17	HP-14 RM. A206	20 A	1					3684 VA	3544 VA	1	20 A	HP-A07, HP-A11 RM. A206	18
19	HP-A08 RM. A206	20 A	1	3684 VA	3684 VA					1	20 A	HP-A09 RM. A206	20
21	HP-A10 RM. A206	20 A	1			3684 VA	3684 VA			1	20 A	HP-E01 RM. E201	22
23	HP-E02 RM. E201	20 A	1					3684 VA	3684 VA	1	20 A	HP-E03 RM. E201	24
25	HP-E04 RM. E201	20 A	1	3684 VA	3684 VA					1	20 A	HP-E05 RM. E201	26
27	HP-E06 RM. E201	20 A	1			3684 VA	3684 VA			1	20 A	HP-E07 RM. E201	28
29	HP-E08 RM. E201	20 A	1					3684 VA	4487 VA	1	20 A	HP-E09 RN. E201	30
31	HP-E10 RM. E201	20 A	1	4487 VA	6667 VA					3	40 A	DWH-2	32
33	HP-A06 RM. A206	20 A	1			3213 VA	6667 VA			--	--	20 KW	34
35	ACCU-1 RM. A201	20 A	3					387 VA	6667 VA	--	--	RM. A112	36
37	ROOFTOP	--	--	387 VA	6667 VA					3	40 A	DWH-2	38
39	1.4 FLA	--	--			387 VA	6667 VA			--	--	20 KW	40
41	HP-A21, HP-A22 RM. A206	20 A	1					3156 VA	6667 VA	--	--	RM. A206	42
43	HP-A03, HP-A20 RM. A201	20 A	1	3544 VA	3156 VA					1	20 A	HP-A02, HP-A23 RM. A201	44
45	HP-A01, HP-A18 RM. A201	20 A	1			3822 VA	3213 VA			1	20 A	HP-A12 RM. A201	46
47	HP-A17 RM. A201	20 A	1					3684 VA	3213 VA	1	20 A	HP-A15 RM. A201	48
49	HP-A27 RM. A201	20 A	1	2299 VA	4210 VA					1	20 A	HP-A04, HP-A16 RM.A201	50
51	HP-A13 RM. A201	20 A	1			2299 VA	10667 VA			3	50 A	DWH-1 32KW RM. A201	52
53	Spare	20 A	1					0 VA	10667 VA	--	--	--	54
55	DWH-1 32KW RM. E123	50 A	3	10667 VA	10667 VA					--	--	--	56
57	--	--	--			10667 VA	10667 VA			3	50 A	DWH-1 32KW RM. A201	58
59	--	--	--					10667 VA	10667 VA	--	--	--	60
61	DWH-1 32KW RM. E201	50 A	3	10667 VA	10667 VA					--	--	--	62
63	--	--	--			10667 VA	0 VA			1	20 A	Spare	64
65	--	--	--					10667 VA	0 VA	1	20 A	Spare	66
67	DWH-1 32KW RM. E201	50 A	3	10667 VA	0 VA					1	20 A	Spare	68
69	--	--	--			10667 VA	0 VA			1	20 A	Spare	70
71	--	--	--					10667 VA	0 VA	1	20 A	Spare	72
73	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	74
75	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	76
77	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	78
79	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	80
81	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	82
83	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	84
			Total Load:	159177 VA		138100 VA		135743 VA					
			Total Amps:	576 A		500 A		490 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	161021 VA	106.71%	171829 VA		
Other	272000 VA	100.00%	272000 VA	**Total Conn. Load:**	433021 VA
				Total Est. Demand:	443829 VA
				Total Conn.:	521 A
				Total Est. Demand:	534 A

Notes:

Branch Panel: 2BH1

Location: ROOM B201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: .

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-B1 Rm. B201	100 A	3	13050 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER B2	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			14760 VA	0 VA			--	--	--	4
5	--	--	--					13700 VA	0 VA	--	--	--	6
7	RM. B202-B207, B216, B221- B223, B225-B230 LIGHTS	20 A	1	656 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER B3	8
9	RM. B209-B215, B217-B219, B224, B238 LIGHTS	20 A	1			675 VA	0 VA			--	--	--	10
11	RM. B220, B231 - B237 LIGHTS	20 A	1					444 VA	0 VA	--	--	--	12
13	RM. B201, F201 LIGHTS	20 A	1	459 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER B4	14
15	Spare	20 A	1			0 VA	0 VA			--	--	--	16
17	Spare	20 A	1					0 VA	0 VA	--	--	--	18
19	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER F1	20
21	Spare	20 A	1			0 VA	0 VA			--	--	--	22
23	Spare	20 A	1					0 VA	0 VA	--	--	--	24
25	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER F2	26
27	Spare	20 A	1			0 VA	0 VA			--	--	--	28
29	Spare	20 A	1					0 VA	0 VA	--	--	--	30
31	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOFTOP SOLAR PANEL INVERTER F3	32
33	Spare	20 A	1			0 VA	0 VA			--	--	--	34
35	Spare	20 A	1					0 VA	0 VA	--	--	--	36
37	ROOFTOP SOLAR PANEL INVERTER B1	45 A	3	0 VA	0 VA					3	45 A	Spare	38
39	--	--	--			0 VA	0 VA			--	--	--	40
41	--	--	--					0 VA	0 VA	--	--	--	42
			Total Load:	14165 VA		15435 VA		14144 VA					
			Total Amps:	51 A		56 A		51 A					

2

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	200 VA	125.00%	250 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	43744 VA
Receptacle	18270 VA	77.37%	14135 VA	**Total Est. Demand:**	33698 VA
Lighting	2234 VA	125.00%	2793 VA	**Total Conn.:**	53 A
Receptacle - Convenience	23040 VA	71.70%	16520 VA	**Total Est. Demand:**	41 A

Notes:

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STATE OF
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PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-603

Branch Panel: 2BH2

Location: ROOM B201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: .

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	HP-B02 RM. B103	20 A	1	3684 VA	3684 VA					1	20 A	HP-B02 RM. B103	2
3	HP-B03 RM. B110	20 A	1			3684 VA	3684 VA			1	20 A	HP-B04 RM. B110	4
5	DWH-1, 32KW, RM. B103	50 A	3					10667 VA	10667 VA	3	50 A	DWH-1, 32KW, RM. B110	6
7	--	--	--	10667 VA	10667 VA					--	--	--	8
9	--	--	--			10667 VA	10667 VA			--	--	--	10
11	DWH-1, 32KW, RM. B201	50 A	3					10667 VA	6667 VA	3	40 A	DWH-2, 20KW, RM. B231	12
13	--	--	--	10667 VA	6667 VA					--	--	--	14
15	--	--	--			10667 VA	6667 VA			--	--	--	16
17	HP-B14, HP-B16, RM. B201	20 A	1					3544 VA	14404 VA	3	80 A	DOAS F01, 63 MCA, RM. B201	18
19	HP-B07, HP-B08, RM. B201	20 A	1	3822 VA	14404 VA					--	--	--	20
21	HP-B10, HP-B15, RM. B201	20 A	1			3156 VA	14404 VA			--	--	--	22
23	HP-B06, RM.B201	20 A	1					3684 VA	3544 VA	1	20 A	HP-B09, HP-B12, RM. B201	24
25	HP-B11, RM.B201	20 A	1	3213 VA	3544 VA					1	20 A	HP-B05, HP-B13, RM. B201	26
27	HP-F01, RM. F201	20 A	1			3684 VA	3684 VA			1	20 A	HP-F02, RM. F201	28
29	HP-F03, RM. F201	20 A	1					3684 VA	3684 VA	1	20 A	HP-F04, RM. F201	30
31	HP-F05, RM. F201	20 A	1	3684 VA	3684 VA					1	20 A	HP-F06, RM. F201	32
33	HP-F07, RM. F201	20 A	1			3684 VA	3684 VA			1	20 A	HP-F08, RM. F201	34
35	HP-F09, RM. F201	20 A	1					4487 VA	4487 VA	1	20 A	HP-F10, RM. F201	36
37	DWH-1, 32KW, RM. F123	50 A	3	10667 VA	10667 VA					3	50 A	DWH-1, 32 KW, RM. B201	38
39	--	--	--			10667 VA	10667 VA			--	--	--	40
41	--	--	--					10667 VA	10667 VA	--	--	--	42
43	DWH-1, 32 KW, RM. F201	50 A	3	10667 VA	10667 VA					3	50 A	DWH-1, 32 KW, RM. F201	44
45	--	--	--			10667 VA	10667 VA			--	--	--	46
47	--	--	--					10667 VA	10667 VA	--	--	--	48
49	DWH-1, 32KW, RM, F201	50 A	3	10667 VA	0 VA					1	20 A	Spare	50
51	--	--	--			10667 VA	0 VA			1	20 A	Spare	52
53	--	--	--					10667 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
61	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	62
63	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	64
65	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	66
		Total Load:		131719 VA		131664 VA		133518 VA					
		Total Amps:		476 A		475 A		482 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	120901 VA	108.94%	131704 VA		
Other	276000 VA	100.00%	276000 VA	**Total Conn. Load:**	396901 VA
				Total Est. Demand:	407704 VA
				Total Conn.:	477 A
				Total Est. Demand:	490 A

Notes:

Branch Panel: 2CH1

Location: ROOM C201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14K
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: .

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-C1 Rm. A201	100 A	3	17330 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "C1"	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			17915 VA	0 VA			--	--	--	4
5	--	--	--					14430 VA	0 VA	--	--	--	6
7	RM.C202-C204,C208-C210,C215-C217,C231 LTS	20 A	1	1114 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "C2"	8
9	RM. C205 - C207, C211-213, C223- C225 LIGHTS	20 A	1			513 VA	0 VA			--	--	--	10
11	RM. C214, C218-C222, C226-233 LIGHTS	20 A	1					695 VA	0 VA	--	--	--	12
13	RM. C201, G201 LIGHTS	20 A	1	432 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "C3"	14
15	Spare	20 A	1			0 VA	0 VA			--	--	--	16
17	Spare	20 A	1					0 VA	0 VA	--	--	--	18
19	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "G1"	20
21	Spare	20 A	1			0 VA	0 VA			--	--	--	22
23	Spare	20 A	1					0 VA	0 VA	--	--	--	24
25	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "G2"	26
27	Spare	20 A	1			0 VA	0 VA			--	--	--	28
29	Spare	20 A	1					0 VA	0 VA	--	--	--	30
31	Spare	20 A	1	0 VA	0 VA					3	45 A	ROOF TOP SOLAR PANEL INVERTER, "G3"	32
33	Spare	20 A	1			0 VA	0 VA			--	--	--	34
35	Spare	20 A	1					0 VA	0 VA	--	--	--	36
37	Spare	20 A	1	0 VA	0 VA					3	45 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			--	--	--	40
41	Spare	20 A	1					0 VA	0 VA	--	--	--	42
		Total Load:		18876 VA		18428 VA		15125 VA					
		Total Amps:		70 A		68 A		55 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	545 VA	115.83%	631 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	52428 VA
Receptacle	24590 VA	70.33%	17295 VA	**Total Est. Demand:**	38638 VA
Lighting	2753 VA	125.00%	3441 VA	**Total Conn.:**	63 A
Receptacle - Convenience	24540 VA	70.37%	17270 VA	**Total Est. Demand:**	46 A

Notes:

Branch Panel: 2CH2

Location: ROOM C201
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25K
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: .

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	HP-CO1, RM. C103	20 A	1	3684 VA	3684 VA					1	20 A	HP-C02 RM. C103	2
3	HP-C03, RM. C110	20 A	1			3684 VA	3684 VA			1	20 A	HP-C04 RM. C110	4
5	DWH-1, 32 KW, RM. C103	50 A	3					10667 VA	10667 VA	3	50 A	DWH-1, 32 KW, RM. C110	6
7	--	--	--	10667 VA	10667 VA					--	--	--	8
9	--	--	--			10667 VA	10667 VA			--	--	--	10
11	DWH-2, 20KW, RM. C221	40 A	3					6667 VA	4100 VA	1	20 A	DWH-3, 4.1 KW RM. C202	12
13	--	--	--	6667 VA	2299 VA					1	20 A	HP-C14 RM. C208	14
15	--	--	--			6667 VA	3213 VA			1	20 A	HP-C13 RM. C208	16
17	HP-C16, HP-C17, RM. C233	20 A	1					4210 VA	3213 VA	1	20 A	HP-C19 RM. C201	18
19	HP-C07, HP-C15, RM. C201	20 A	1	4210 VA	4210 VA					1	20 A	HP-C09, HP-C10, RM. C201	20
21	HP-C08, HP-C12, RM. C201	20 A	1			4210 VA	4210 VA			1	20 A	HP-C05, HP-C11, RM. C201	22
23	HP-C18, RM. C201	20 A	1					2299 VA	3684 VA	1	20 A	HP-C06, RM. C201	24
25	HP-G01, RM. G201	20 A	1	3684 VA	14404 VA					3	80 A	DOAS - G01, 63 MCA, RM. C201	26
27	HP-G02, RM. G201	20 A	1			3684 VA	14404 VA			--	--	--	28
29	HP-G03, RM. G201	20 A	1					3684 VA	14404 VA	--	--	--	30
31	HP-G04, RM. G201	20 A	1	3684 VA	3684 VA					1	20 A	HP-G05, RM. G201	32
33	HP-G06, RM. G201	20 A	1			3684 VA	3684 VA			1	20 A	HP-G07, RM. G201	34
35	HP-G08, RM. G201	20 A	1					3684 VA	4487 VA	1	20 A	HP-G09, RM. G201	36
37	HP-G10, RM. G201	20 A	1	4487 VA	10667 VA					3	50 A	DWH-1, 32 KW, RM. C201	38
39	DWH-1, 32 KW, RM. G123	50 A	3			0 VA	10667 VA			--	--	--	40
41	--	--	--					0 VA	10667 VA	--	--	--	42
43	--	--	--	0 VA	10667 VA					3	50 A	DWH-1, 32 KW, RM. G201	44
45	DWH-1, 32 KW, RM. G201	50 A	3			10667 VA	10667 VA			--	--	--	46
47	--	--	--					10667 VA	10667 VA	--	--	--	48
49	--	--	--	10667 VA	0 VA					1	20 A	Spare	50
51	DWH-1, 32 KW, RM. G201	50 A	3			10667 VA	0 VA			1	20 A	Spare	52
53	--	--	--					10667 VA	0 VA	1	20 A	Spare	54
55	--	--	--	10667 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
61	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	62
63	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	64
65	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	66
		Total Load:		118697 VA		115124 VA		114432 VA					
		Total Amps:		429 A		416 A		413 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	132152 VA	108.17%	142955 VA		
Other	216100 VA	100.00%	216100 VA	**Total Conn. Load:**	348252 VA
				Total Est. Demand:	359055 VA
				Total Conn.:	419 A
				Total Est. Demand:	432 A

Notes:

Branch Panel: 1KH1

Location: ROOM D128
Supply From: MSB
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65K
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 400 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-K1 Rm. D128	100 A	3	17128 VA	18845 VA					3	100 A	DISHWASHER RM. D128	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			17546 VA	18845 VA			--	--	--	4
5	--	--	--					16934 VA	18845 VA	--	--	--	6
7	DWH-3 RM. D133	20 A	1	4180 VA	830 VA					1	20 A	RM D128, D130-D134 LIGHTS	8
9	Spare	20 A	1			0 VA	6089 VA			3	30 A	CONVECTION OVEN RM. D128 (NOTE 1)	10
11	Spare	20 A	1					0 VA	6089 VA	--	--	--	12
13	Spare	20 A	1	0 VA	6089 VA					--	--	--	14
15	COMBI OVEN RM. D128 (NOTE 1)	60 A	3			12456 VA	942 VA			3	20 A	EXHAUST FAN RM. D128	16
17	--	--	--					12456 VA	942 VA	--	--	2 HP	18
19	--	--	--	12456 VA	942 VA					--	--	--	20
21	COMBI OVEN RM. D128 (NOTE 1)	60 A	3			12456 VA	0 VA			1	20 A	Spare	22
23	--	--	--					12456 VA	0 VA	1	20 A	Spare	24
25	--	--	--	12456 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
		Total Load:		72846 VA		68334 VA		67422 VA					
		Total Amps:		263 A		247 A		243 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	3952 VA	117.87%	4658 VA		
Other	171599 VA	100.00%	171599 VA	**Total Conn. Load:**	208602 VA
Receptacle	810 VA	100.00%	810 VA	**Total Est. Demand:**	202410 VA
Lighting	503 VA	125.00%	629 VA	**Total Conn.:**	251 A
Receptacle - Convenience	18122 VA	77.59%	14061 VA	**Total Est. Demand:**	243 A
Receptacle - Special	12416 VA	80.00%	9933 VA		
Receptacle - Washing Machine	1200 VA	60.00%	720 VA		

Notes:
1. PROVIDE SHUNT TRIP STYLE CIRCUIT BREAKER INTERCONNECTED TO KITCHEN HOOD CONTROLLER.

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ARCHITECT

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ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10800 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-604

Branch Panel: 1DL1

Location: ROOM D136
Supply From: T-D1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM. D135 - D137	20 A	1	1260 VA	1260 VA					1	20 A	RECEPTS RM. D126	2
3	GENERATOR - BLOCKHEATER	20 A	1			0 VA	0 VA			1	20 A	GENERATOR-BATTERY CHARGER	4
5	RECEPTS RM D125, D127	20 A	1					1080 VA	345 VA	1	20 A	OVERHEAD DOOR RM D127	6
7	RECEPTS RM D122 - D124	20 A	1	900 VA	1200 VA					1	20 A	WASHER RM D122	8
9	DRYER RM D122	30 A	2			1250 VA	1080 VA			1	20 A	RECEPTS RM D113, D114, D129, D138	10
11	--	--	--					1250 VA	180 VA	1	20 A	W.C. RM D129 (NOTE 1)	12
13	RECEPTS RM D108, D112, D116-D118,D120	20 A	1	1440 VA	1080 VA					1	20 A	RECEPTS RM D11, D115	14
15	RECEPTS RM D115	20 A	1			1080 VA	200 VA			1	20 A	E.F. D02. RM D115	16
17	REFRIG. RM D117	20 A	1					1000 VA	1500 VA	1	20 A	COPIER RM D110	18
19	RECEPTS RM D110	20 A	1	1080 VA	1530 VA					1	20 A	RECEPTS RM D109	20
21	RECEPTS RM D107	20 A	1			1350 VA	1350 VA			1	20 A	RECEPTS RM D106	22
23	RECEPTS RM D105	20 A	1					1350 VA	1350 VA	1	20 A	RECEPTS RM D104	24
25	RECEPTS RM D103	20 A	1	1350 VA	1350 VA					1	20 A	RECEPTS RM D102A	26
27	COPIER RM D119	20 A	1			1500 VA	1500 VA			1	20 A	MICROWAVE RM D119	28
29	MICROWAVE RM D119	20 A	1					1500 VA	1000 VA	1	20 A	REFRIG. RM D119	30
31	RECEPTS RM D119	20 A	1	990 VA	900 VA					1	20 A	RECEPTS RM D119	32
33	AUTOMATIC DOOR RM D102	20 A	1			345 VA	345 VA			1	20 A	AUTOMATIC DOOR D101	34
35	RECEPTS RM D101, D102	20 A	1					1260 VA	1530 VA	1	20 A	RECEPTS RM D102	36
37	EF-D01 RM. D122	20 A	1	200 VA	0 VA					1	20 A	Spare	38
39	DOCK LIFT	30 A	3			2004 VA	0 VA			1	20 A	Spare	40
41	5 HP	--	--					2004 VA	0 VA	1	20 A	Spare	42
43	--	--	--	2004 VA	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	16544 VA		12004 VA		15349 VA					
			Total Amps:	142 A		100 A		132 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	7447 VA	120.18%	8950 VA		
Other	2500 VA	100.00%	2500 VA	**Total Conn. Load:**	43897 VA
Receptacle	14870 VA	83.62%	12435 VA	**Total Est. Demand:**	38545 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	122 A
Receptacle - Convenience	17880 VA	77.96%	13940 VA	**Total Est. Demand:**	107 A
Receptacle - Washing Machine	1200 VA	60.00%	720 VA		

Notes:
1. GFCI CIRCUIT BREAKER 5 mA

Branch Panel: 1DL2

Location: ROOM D136
Supply From: T-D2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	WATER SOFTENER RM D126	20 A	1	360 VA	250 VA					1	20 A	LTS AND RECEPTS - DOAS-D01 RM. D126	2
3	PIT SUMP PUMP (NOTE 1)	20 A	1			0 VA	0 VA			1	20 A	Spare	4
5	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	610 VA		0 VA		0 VA					
			Total Amps:	5 A		0 A		0 A					

1

Legend:

1. GFC1 CIRCUIT BREAKER

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	250 VA	100.00%	250 VA		
Receptacle - Convenience	360 VA	100.00%	360 VA	**Total Conn. Load:**	610 VA
				Total Est. Demand:	610 VA
				Total Conn.:	2 A
				Total Est. Demand:	2 A

Notes:

Branch Panel: 1EL1

Location: ROOM E102
Supply From: T-E1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM A101-A102, A113, S-1	20 A	1	900 VA	1260 VA					1	20 A	RECEPTS RM A108, A109, E-1, S-1	2
3	SUMP PUMP RM E-1	20 A	1			1307 VA	0 VA			1	20 A	ELEVATOR CAB. LIGHTS RM A109	4
5	AUTOMATIC DOOR OPERATOR RM A103	20 A	1					345 VA	345 VA	1	20 A	AUTOMATIC DOOR OPERATOR RM A103	6
7	COILING GRILLE RM A105	20 A	1	345 VA	810 VA					1	20 A	RECEPTS RM A108	8
9	RECEPTS RM A110	20 A	1			1530 VA	900 VA			1	20 A	RECEPTS RM A114	10
11	RECEPTS RM A114	20 A	1					1170 VA	720 VA	1	20 A	RECEPTS RM A115	12
13	RECEPTS RM A112, A131	20 A	1	1530 VA	1000 VA					1	20 A	RECEPTS RM A112	14
15	RECEPTS RM A116, A117, A120-123, A130	20 A	1			1260 VA	180 VA			1	20 A	W.C. RM A130 (NOTE 1)	16
17	EF-A01 RM A123	20 A	1					200 VA	1080 VA	1	20 A	RECEPTS RM A118, A119	18
19	REFRIG. RM A119	20 A	1	1000 VA	500 VA					1	20 A	RANGE HOOD RM A119	20
21	RANGE RM A119	50 A	2			4000 VA	1000 VA			1	20 A	REFRIG. RM A111	22
23	--	--	--					4000 VA	1500 VA	1	20 A	COPIER RM A111	24
25	RECEPTS RM A111	20 A	1	1350 VA	720 VA					1	20 A	RECEPTS RM A107	26
27	RECEPTS RM A107	20 A	1			1170 VA	990 VA			1	20 A	RECEPTS RM A105, A106	28
29	RECEPTS RM A104	20 A	1					1350 VA	1170 VA	1	20 A	RECEPTS RM A129	30
31	RECEPTS RM A126-A129	20 A	1	1260 VA	1000 VA					1	20 A	REFRIG. RM A125	32
33	AV CABINET RM A125	20 A	1			180 VA	1260 VA			1	20 A	RECEPTS RM A125	34
35	RECEPTS RM A125	20 A	1					1710 VA	720 VA	1	20 A	RECEPTS RM A124	36
37	RECEPTS RM A124	20 A	1	720 VA	720 VA					1	20 A	RECEPTS RM A124	38
39	RECEPTS RM A124	20 A	1			900 VA	1350 VA			1	20 A	RECEPTS RM A124	40
41	RECEPTS RM A124	20 A	1					1440 VA	990 VA	1	20 A	RECEPTS RM A124	42
43	RECEPTS RM A124	20 A	1	990 VA	990 VA					1	20 A	RECEPTS RM A124	44
45	PARTITION MOTOR RM A124	20 A	1			1127 VA	1127 VA			1	20 A	PARTITION MOTOR RM A124	46
47	MICROWAVE RM. A119	20 A	1					1500 VA	1500 VA	1	20 A	MICROWAVE RM. A119	48
49	WINDOW SHADES RM. A124	20 A	1	345 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	15440 VA		18281 VA		19740 VA					
			Total Amps:	129 A		156 A		168 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	4961 VA	105.68%	5243 VA		
Other	500 VA	100.00%	500 VA	**Total Conn. Load:**	53461 VA
Receptacle	18160 VA	77.53%	14080 VA	**Total Est. Demand:**	42143 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	148 A
Receptacle - Convenience	21840 VA	72.89%	15920 VA	**Total Est. Demand:**	117 A
Receptacle - Special	8000 VA	80.00%	6400 VA		

Notes: 1. GFCI Circuit breaks 5 mA

Branch Panel: 1EL2

Location: ROOM E102
Supply From: T-E1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

2

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EF-E03 RM A101	20 A	1	345 VA	1440 VA					1	20 A	RECEPTS RM E102-E104, E137	2
3	EF-E04 RME120,EF-E01 RM E123, EF-E02RM E125	20 A	1			600 VA	1080 VA			1	20 A	RECEPTS RM E105	4
5	RECEPTS RM E105	20 A	1					1080 VA	1260 VA	1	20 A	RECEPTS E106	6
7	RECEPTS RM E106	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM E107-E109, E112, E113	8
9	RECEPTS RM E110	20 A	1			1080 VA	1080 VA			1	20 A	RECEPTS RM E110	10
11	RECEPTS RM E111	20 A	1					1260 VA	1080 VA	1	20 A	RECEPTS RM E111	12
13	RECEPTS RM E115	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM E115	14
15	RECEPTS RM E116, E117, E138	20 A	1			720 VA	180 VA			1	20 A	W.C. RM E118 (NOTE 1)	16
17	RECEPTS RM E118	20 A	1					1080 VA	1127 VA	1	20 A	PROJECTION SCREEN RM E118	18
19	RECEPTS RM E118	20 A	1	1080 VA	2850 VA					2	40 A	CUH-E01,5.7KW RM E119	20
21	AV CABINET RM E120	20 A	1			180 VA	2850 VA			--	--	--	22
23	RECEPTS RM. E120, E121	20 A	1					900 VA	1000 VA	1	20 A	REACH-IN FRIG. RM E121	24
25	Spare	20 A	1	0 VA	720 VA					1	20 A	RECEPTS RM E122, E123, E125, E127	26
27	RECEPTS RM E128	20 A	1			900 VA	1350 VA			1	20 A	RECEPTS E124	28
29	COPIER RM E124	20 A	1					1500 VA	1500 VA	1	20 A	MICROWAVE RM E124	30
31	MICROWAVE RM E124	20 A	1	1500 VA	1000 VA					1	20 A	REFRIG. RM E124	32
33	RECEPTS RM E128	20 A	1			1260 VA	1080 VA			1	20 A	RECEPTS RM E128	34
35	RECEPTS RM E129-E131, E135, E136, E139	20 A	1					1260 VA	1080 VA	1	20 A	RECEPTS RM E132	36
37	RECEPTS RM E132	20 A	1	1080 VA	1530 VA					1	20 A	RECEPTS RM E133	38
39	RECEPTS RM E134	20 A	1			1530 VA	345 VA			1	20 A	WINDOW SHADES RM. E118	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
43	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	15865 VA		14235 VA		14127 VA					
			Total Amps:	132 A		119 A		118 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	8117 VA	117.56%	9542 VA		
Receptacle	13190 VA	87.91%	11595 VA	**Total Conn. Load:**	44227 VA
Receptacle - Convenience	22920 VA	71.82%	16460 VA	**Total Est. Demand:**	37597 VA
				Total Conn.:	123 A
				Total Est. Demand:	104 A

Notes:
1. GFCI CIRCUIT BREAKER 5mA

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ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10500 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-605

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ARCHITECT

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Branch Panel: 1FL1

Location:	ROOM F102	Volts:	120/208 Wye	A.I.C. Rating:	10K
Supply From:	T-F1	Phases:	3	Mains Type:	MCB
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM B101, B103, B110	20 A	1	720 VA	1080 VA					1	20 A	RECEPTS RM B102	2
3	RECEPTS RM B102	20 A	1			1080 VA	1080 VA			1	20 A	RECEPTS RM B102, B104	4
5	REFRIG. RM B102	20 A	1					1000 VA	1500 VA	1	20 A	MICROWAVE RM B102	6
7	RECEPTS RM B106	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM B106	8
9	RECEPTS RM B106, B107	20 A	1			900 VA	1000 VA			1	20 A	REFRIG. RM B106	10
11	MICROWAVE RM B106	20 A	1					1500 VA	1080 VA	1	20 A	RECEPTS RM B109	12
13	RECEPTS RM B109	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM B109, B111	14
15	REFRIG. RM B109	20 A	1			1000 VA	1500 VA			1	20 A	MICROWAVE RM B109	16
17	RECEPTS RM B113	20 A	1					1080 VA	1080 VA	1	20 A	RECEPTS RM B113	18
19	RECEPTS RM B113, B114	20 A	1	900 VA	1000 VA					1	20 A	REFRIG. RM B113	20
21	MICROWAVE B113	20 A	1			1500 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	8020 VA		8060 VA		7240 VA					
			Total Amps:	68 A		68 A		60 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	12880 VA	88.82%	11440 VA		
Receptacle - Convenience	10440 VA	97.89%	10220 VA	Total Conn. Load:	23320 VA
				Total Est. Demand:	21660 VA
				Total Conn.:	65 A
				Total Est. Demand:	60 A

Notes:

Branch Panel: 1FL2

Location:	ROOM F102	Volts:	120/208 Wye	A.I.C. Rating:	10K
Supply From:	T-F1	Phases:	3	Mains Type:	MCB
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	200 A

Notes:
INTEGRAL SURGE PROTECTOR

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EF-F03 RM B101	20 A	1	345 VA	1260...					1	20 A	RECEPTS RM F101-F104, F137	2
3	EF-F04 RM F120, EF-F01 RM 123, EF-F02 RM...	20 A	1			600 VA	1080...			1	20 A	RECEPTS RM F105	4
5	RECEPTS RM F105	20 A	1					1080...	1260...	1	20 A	RECEPTS RM F106	6
7	RECEPTS RM 106	20 A	1	1080...	1080...					1	20 A	RECEPTS RM F107-F109, F112-F114	8
9	RECEPTS RM 110	20 A	1			1080...	1080...			1	20 A	RECEPTS RM F110	10
11	RECEPTS RM F111	20 A	1					1260...	1080...	1	20 A	RECEPTS RM F111	12
13	RECEPTS RM F115	20 A	1	1080...	1080...					1	20 A	RECEPTS RM F115	14
15	RECEPTS RM F116, F117, F138	20 A	1			720 VA	180 VA			1	20 A	W.C. RM F118 (NOTE 1)	16
17	RECEPTS RM F118	20 A	1					1080...	1127...	1	20 A	PROJECTION SCREEN RM F118	18
19	RECEPTS RM F118	20 A	1	1080...	2850...					2	40 A	CUH-F01, 5.7KW RM F119	20
21	AV CABINET RM F120	20 A	1			180 VA	2850...			--	--	--	22
23	RECEPTS RM F120, F121	20 A	1					900 VA	180 VA	1	20 A	REFRIG. RM F120	24
25	Spare	20 A	1	0 VA	720 VA					1	20 A	RECEPTS RM F122,F123,F125,F127	26
27	RECEPTS RM F126	20 A	1			900 VA	1350...			1	20 A	RECEPTS RM F124	28
29	COPIER RM F124	20 A	1					1500...	1500...	1	20 A	MICROWAVE RM F124	30
31	MICROWAVE RM F124	20 A	1	1500...	1000...					1	20 A	REFRIG. RM F124	32
33	RECEPTS RM F128	20 A	1			1260...	1080...			1	20 A	RECEPTS RM F128	34
35	RECEPTS RM F129, F130, F135, F136	20 A	1					1440...	1080...	1	20 A	RECEPTS RM F132	36
37	RECEPTS RM F132	20 A	1	1080...	1530...					1	20 A	RECEPTS RM F133	38
39	RECEPTS RM F134	20 A	1			1080...	1200...			1	20 A	WASHER RM F135	40
41	DRYER RM F135	30 A	2					1250...	345 VA	1	20 A	WINDOW SHADES RM. F118	42
43	--	--	--	1250...	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	16935 VA		14640 VA		15082 VA					
			Total Amps:	142 A		122 A		126 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	8117 VA	117.56%	9542 VA		
Other	2500 VA	100.00%	2500 VA	Total Conn. Load:	46657 VA
Receptacle	11740 VA	92.59%	10870 VA	Total Est. Demand:	40182 VA
Receptacle - Convenience	23100 VA	71.65%	16550 VA	Total Conn.:	130 A
Receptacle - Washing Machine	1200 VA	60.00%	720 VA	Total Est. Demand:	112 A

Notes:
1. GFCI CIRCUIT BREAKER 5 mA

Branch Panel: 1GL1

Location:	ROOM G102	Volts:	120/208 Wye	A.I.C. Rating:	10K
Supply From:	T-G1	Phases:	3	Mains Type:	MCB
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM C101, C103, C110	20 A	1	720 VA	1080 VA					1	20 A	RECEPTS RM C102	2
3	RECEPTS RM C102	20 A	1			1080 VA	1080 VA			1	20 A	RECEPTS RM C102, C104	4
5	REFRIG. RM C102	20 A	1					1000 VA	1500 VA	1	20 A	MICROWAVE RM C102	6
7	RECEPTS RM C106	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM C106	8
9	RECEPTS RM C106, C107	20 A	1			900 VA	1000 VA			1	20 A	REFRIG. RM C106	10
11	MICROWAVE RM C106	20 A	1					1500 VA	1080 VA	1	20 A	RECEPTS RM C109	12
13	RECEPTS RM C109	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM C109, C111	14
15	REFRIG. RM C109	20 A	1			1000 VA	1500 VA			1	20 A	MICROWAVE RM C109	16
17	RECEPTS RM C113	20 A	1					1080 VA	1080 VA	1	20 A	RECEPTS RM C113	18
19	RECPTS RM C113, C114	20 A	1	900 VA	1000 VA					1	20 A	REFRIG. RM C113	20
21	MICROWAVE RM C113	20 A	1			1500 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	8020 VA		8060 VA		7240 VA					
			Total Amps:	68 A		68 A		60 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	12880 VA	88.82%	11440 VA		
Receptacle - Convenience	10440 VA	97.89%	10220 VA	Total Conn. Load:	23320 VA
				Total Est. Demand:	21660 VA
				Total Conn.:	65 A
				Total Est. Demand:	60 A

Notes:

Branch Panel: 1GL2

Location:	ROOM G102	Volts:	120/208 Wye	A.I.C. Rating:	10K
Supply From:	T-G1	Phases:	3	Mains Type:	MCB
Mounting:	Surface	Wires:	4	Mains Rating:	200 A
Enclosure:	Type 1			MCB Rating:	200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EF-G03 RM C101	20 A	1	345 VA	1440 VA					1	20 A	RECEPTS RM. G101-G104,G134	2
3	EF-G04RM.G120,EF-GO1RM.G123,EF-G02 RM.G125	20 A	1			1035 VA	1080 VA			1	20 A	RECEPTS RM. RM G105	4
5	RECEPTS RM. G105	20 A	1					1080 VA	1260 VA	1	20 A	RECEPTS RM. G106	6
7	RECEPTS RM G106	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM. G107-G109, G112-G114	8
9	RECEPTS RM G110	20 A	1			1080 VA	1080 VA			1	20 A	RECEPTS RM. G110	10
11	RECEPTS RM G111	20 A	1					1260 VA	1080 VA	1	20 A	RECEPTS RM. G111	12
13	RECEPTS RM G115	20 A	1	1080 VA	1080 VA					1	20 A	RECEPTS RM G115	14
15	RECEPTS RM G116-G118, G135	20 A	1			720 VA	180 VA			1	20 A	W.C. RM. G118 (NOTE 1)	16
17	RECEPTS RM G118	20 A	1					1080 VA	1127 VA	1	20 A	PROJECTION SCREEN RM. G118	18
19	RECEPTS RM G118	20 A	1	1080 VA	2850 VA					2	40 A	CUH-G01, 5.7KW RM. G119	20
21	AV CABINET RM G120	20 A	1			180 VA	2850 VA			--	--	--	22
23	RECEPTS RM G120, G121	20 A	1					1080 VA	180 VA	1	20 A	REFRIG. RM G121	24
25	SUMP PUMP RM. E2	20 A	1	828 VA	720 VA					1	20 A	RECEPTS RM. G122, G123, G125, G127	26
27	RECEPTS RM G126	20 A	1			900 VA	1350 VA			1	20 A	RECEPTS RM. G124	28
29	COPIER RM G124	20 A	1					1500 VA	1500 VA	1	20 A	MICROWAVE RM G124	30
31	MICROWAVE RM G124	20 A	1	1500 VA	1000 VA					1	20 A	REFRIG. RM G124	32
33	RECEPTS RM G128	20 A	1			1260 VA	1080 VA			1	20 A	RECEPTS RM G128	34
35	RECEPTS RM G129-G131, G133, E-2, S-2	20 A	1					1260 VA	1080 VA	1	20 A	RECEPTS RM G132	36
37	RECEPTS RM G132	20 A	1	1080 VA	0 VA					1	20 A	ELEVATOR CAB LIGHTS RM. G133	38
39	CUH-G02, 2.2KW, RM. S-2	20 A	2			1100 VA	345 VA			1	20 A	WINDOW SHADE RM. G118	40
41	--	--	--					1100 VA	0 VA	1	20 A	Spare	42
43	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	15163 VA		14240 VA		14587 VA					
			Total Amps:	127 A		119 A		122 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	11580 VA	112.31%	13005 VA		
Other	0 VA	0.00%	0 VA	Total Conn. Load:	43990 VA
Receptacle	10570 VA	97.30%	10285 VA	Total Est. Demand:	39210 VA
Receptacle - Convenience	21840 VA	72.89%	15920 VA	Total Conn.:	122 A
				Total Est. Demand:	109 A

Notes:
1. GFCI CIRCUIT BREAKER - 5mA

ISSUED FOR BID

BRIAN W. BUTLER
REGISTERED
No.
PE 11600305
STATE OF
INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-606

Branch Panel: 2AL1

Location: ROOM A201
Supply From: T-A1
Mounting: SURFACE
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM A210, A213, A214, A218, S-1	20 A	1	1260 VA	1080 VA					1	20 A	RECEPTS RM E201	2
3	RECEPTS RM S-1	20 A	1			1170 VA	1260 VA			1	20 A	RECEPTS RM A201	4
5	RECEPTS RM A211	20 A	1					1170 VA	0 VA	1	20 A	DOAS E01 LTS/ RECEPTS RM A201	6
7	RECEPTS RM A211	20 A	1	360 VA	1530 VA					1	20 A	RECEPTS RM A212	8
9	RECEPTS RM A216	20 A	1			1170 VA	1530 VA			1	20 A	RECEPTS RM A217	10
11	RECEPTS RM A206- A209	20 A	1					1260 VA	180 VA	1	20 A	AV CABINET RM A208	12
13	RECEPTS RM A205	20 A	1	1440 VA	1260 VA					1	20 A	RECEPTS RM A205	14
15	RECEPTS RM A205	20 A	1			990 VA	900 VA			1	20 A	RECEPTS RM A205	16
17	RECEPTS RM A204	20 A	1					1170 VA	1170 VA	1	20 A	RECEPTS RM A204	18
19	RECEPTS RM A204	20 A	1	720 VA	1000 VA					1	20 A	REFRIG. RM A204	20
21	RECEPTS RM A203	20 A	1			990 VA	1170 VA			1	20 A	RECEPTS RM A203	22
23	RECEPTS RM A203	20 A	1					720 VA	1000 VA	1	20 A	REFRIG. RM A203	24
25	EF-A02 RM. A206	20 A	1	345 VA	0 VA					1	20 A	Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	30
31	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	32
33	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	8995 VA		9180 VA		6670 VA					
			Total Amps:	78 A		79 A		56 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	345 VA	125.00%	431 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	24845 VA
Receptacle	10100 VA	99.50%	10050 VA	**Total Est. Demand:**	22681 VA
Receptacle - Convenience	14400 VA	84.72%	12200 VA	**Total Conn.:**	69 A
				Total Est. Demand:	63 A

Notes:

Branch Panel: 2BL1

Location: ROOM B201
Supply From: T-B1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM B206	20 A	1	1530 VA	1080 VA					1	20 A	RECEPTS RM F201	2
3	RECEPTS RM B205	20 A	1			1530 VA	900 VA			1	20 A	RECEPTS RM B201	4
5	RECEPTS RM B202	20 A	1					1530 VA	0 VA	1	20 A	DOAS FO1 LTS/ RECEPTS ROOM B201	6
7	RECEPTS RM B204	20 A	1	900 VA	990 VA					1	20 A	RECEPTS RM B204	8
9	RECEPTS RM B207	20 A	1			990 VA	900 VA			1	20 A	RECEPTS RM B207	10
11	RECEPTS RM B208, B213, B114, B230	20 A	1					1260 VA	1530 VA	1	20 A	RECEPTS RM B210	12
13	RECEPTS RM B209	20 A	1	990 VA	720 VA					1	20 A	RECEPTS RM B209	14
15	RECEPTS RM B211	20 A	1			1530 VA	1530 VA			1	20 A	RECEPTS RM B215	16
17	RECEPTS RM B212	20 A	1					1530 VA	1350 VA	1	20 A	RECEPTS RM B216, B224	18
19	RECEPTS RM B226	20 A	1	360 VA	1170 VA					1	20 A	RECEPTS RM B226	20
21	RECEPTS RM B227	20 A	1			1080 VA	900 VA			1	20 A	RECEPTS RM B222, B225, B228, B230	22
23	RECEPTS RM B231-B235	20 A	1					900 VA	200 VA	1	20 A	EF-B01 RM B231	24
25	RECEPTS RM B217	20 A	1	1530 VA	1530 VA					1	20 A	RECEPTS RM B218	26
27	RECEPTS RM B223	20 A	1			1530 VA	1530 VA			1	20 A	RECEPTS RM B221	28
29	RECEPTS RM B229	20 A	1					1530 VA	1530 VA	1	20 A	RECEPTS RM B219	30
31	RECEPTS RM B220	20 A	1	1530 VA	720 VA					1	20 A	RECEPTS RM B237	32
33	RECEPTS RM B237	20 A	1			1170 VA	1170 VA			1	20 A	RECEPTS RM B236	34
35	RECEPTS RM B238	20 A	1					1080 VA	1260 VA	1	20 A	RECEPTS RM B238	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	13050 VA		14760 VA		13700 VA					
			Total Amps:	109 A		124 A		115 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	200 VA	125.00%	250 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	41510 VA
Receptacle	18270 VA	77.37%	14135 VA	**Total Est. Demand:**	30905 VA
Receptacle - Convenience	23040 VA	71.70%	16520 VA	**Total Conn.:**	115 A
				Total Est. Demand:	86 A

Notes:

Branch Panel: 2CL1

Location: ROOM C201
Supply From: T-C1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTS RM C202	20 A	1	810 VA	1080 VA					1	20 A	RECEPTS RM G201	2
3	RECEPTS RM C202	20 A	1			1080 VA	720 VA			1	20 A	RECEPTS RM C201	4
5	DISHWASHER RM C202	20 A	1					180 VA	0 VA	1	20 A	DOAS LTS/ RECPTS RM C201	6
7	MICROWAVE RM C202	20 A	1	1500 VA	1500 VA					1	20 A	MICROWAVE RM C202	8
9	REFRIG. RM C202	20 A	1			1000 VA	1000 VA			1	20 A	REFRIG. RM C202	10
11	COPIER RM C292	20 A	1					1500 VA	1500 VA	1	20 A	COPIER RM C202	12
13	RECEPTS RM C203, C207 - C209	20 A	1	1260 VA	1080 VA					1	20 A	RECEPTS RM C203	14
15	RECEPTS RM C204	20 A	1			1530 VA	1530 VA			1	20 A	RECEPTS RM C205	16
17	RECEPTS RM C206	20 A	1					1530 VA	1440 VA	1	20 A	RECEPTS RM C210	18
19	RECEPTS RM C210	20 A	1	900 VA	990 VA					1	20 A	RECEPTS RM C211	20
21	RECEPTS RM C211	20 A	1			990 VA	1710 VA			1	20 A	RECEPTS RM C215	22
23	RECEPTS RM C216	20 A	1					1080 VA	990 VA	1	20 A	RECEPTS RM C212	24
25	RECEPTS RM C212	20 A	1	900 VA	1530 VA					1	20 A	RECEPTS RM C219	26
27	RECEPTS RM C218	20 A	1			1710 VA	990 VA			1	20 A	RECEPTS RM C213	28
29	RECEPTS RM C213	20 A	1					900 VA	1440 VA	1	20 A	RECEPTS RM C220, C221, C231, C232, S-2	30
31	RECEPTS RM C223	20 A	1	1530 VA	1530 VA					1	20 A	RECEPTS RM C224	32
33	RECEPTS RM C222, C223, C226	20 A	1			1080 VA	1170 VA			1	20 A	RECEPTS RM C226	34
35	RECEPTS RM C226	20 A	1					720 VA	720 VA	1	20 A	RECEPTS RM C226	36
37	RECEPTS RM C230	20 A	1	1170 VA	360 VA					1	20 A	RECEPTS RM C230	38
39	RECEPTS RM C225	20 A	1			1530 VA	1530 VA			1	20 A	RECEPTS RM C227	40
41	RECEPTS RM C228	20 A	1					1530 VA	900 VA	1	20 A	RECEPTS RM C229	42
43	RECEPTS RM C229	20 A	1	990 VA	200 VA					1	20 A	EF-C01 RM C221	44
45	WINDOW SHADES RM. C202	20 A	1			345 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	17330 VA		17915 VA		14430 VA					
			Total Amps:	148 A		153 A		120 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	545 VA	115.83%	631 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	49675 VA
Receptacle	24590 VA	70.33%	17295 VA	**Total Est. Demand:**	35196 VA
Receptacle - Convenience	24540 VA	70.37%	17270 VA	**Total Conn.:**	138 A
				Total Est. Demand:	98 A

Notes:

Branch Panel: 1KL1

Location: ROOM D128
Supply From: T-K1
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22K
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:
INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTACLES	20 A	1	1260...	1080...					1	20 A	RECEPTACLES	2
3	DISPOSER RM. D128	20 A	3			720 VA	1127...			1	20 A	CONDENSATE FAN RM. D128	4
5	--	--	--					720 VA	1250...	2	30 A	DRYER RM. D128	6
7	--	--	--	720 VA	1250...					--	--	--	8
9	WASHING MACHINE RM. D132	20 A	1			1200...	0 VA			1	20 A	Spare	10
11	RECEPTACLES RM. D130	20 A	1					1350...	552 VA	1	20 A	BULK FOOD CABINET RM. D128	12
13	BULK FOOD CABINET RM. D128	20 A	1	552 VA	180 VA					1	20 A	MILK COOLER RM. D128	14
15	HEATED CABINET D128	20 A	1			996 VA	800 VA			2	20 A	HEATED CABINET D128	16
17	HOT FOOD COUNTER D128	20 A	2					1279...	800 VA	--	--	--	18
19	--	--	--	1279...	1920...					1	20 A	COLD FOOD COUNTER D128	20
21	DROP IN FROST TOP D128	20 A	1			180 VA	324 VA			1	20 A	MILK COOLER RM. D128	22
23	DISPOSER RM. D128	20 A	3					720 VA	180 VA	1	20 A	WORK TABLE RECEPTACLE RM. D128	24
25	--	--	--	720 VA	2496...					2	20 A	HOT WATER DISPENSER RM. D128	26
27	--	--	--			720 VA	2496...			--	--	--	28
29	MICROWAVE RM. D128	40 A	2					2912...	360 VA	1	20 A	WORK TABLE RECEPTACLE RM. D128	30
31	--	--	--	2912...	552 VA					1	20 A	BULK FOOD CABINET RM. D128	32
33	CONVECTION OVEN RM. D128 (NOTE 1)	20 A	1			1920...	5408...			2	80 A	TILT KETTLE RM. D128 (NOTE 1)	34
35	HOOD LIGHTS RM. D128	20 A	1					0 VA	5408...	--	--	--	36
37	BULK FOOD CABINET RM. D128	20 A	1	552 VA	552 VA					1	20 A	BULK FOOD CABINET RM. D128	38
39	BULK FOOD CABINET RM. D128	20 A	1			552 VA	552 VA			1	20 A	BULK FOOD CABINET RM. D128	40
41	BULK FOOD CABINET RM. D128	20 A	1					552 VA	552 VA	1	20 A	BULK FOOD CABINET RM. D128	42
43	BULK FOOD CABINET RM. D128	20 A	1	552 VA	552 VA					1	20 A	BULK FOOD CABINET RM. D128	44
45	BULK FOOD CABINET RM. D128	20 A	1			552 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
			Total Load:	17128 VA		17546 VA		16634 VA					
			Total Amps:	143 A		147 A		139 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	1127 VA	125.00%	1409 VA		
Other	17634 VA	100.00%	17634 VA	**Total Conn. Load:**	51309 VA
Receptacle	810 VA	100.00%	810 VA	**Total Est. Demand:**	44567 VA
Receptacle - Convenience	18122 VA	77.59%	14061 VA	**Total Conn.:**	142 A
Receptacle - Special	12416 VA	80.00%	9933 VA	**Total Est. Demand:**	124 A
Receptacle - Washing Machine	1200 VA	60.00%	720 VA		

Notes:
1. PROVIDE SHUNT TRIP STYLE CIRCUIT BREAKER INTERCONNECTED TO KITCHEN HOOD CONTROLLER.

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ARCHITECT

FANNING HOWEY

317.848.0966 **WWW.FHAI.COM**
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10000 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-607

Branch Panel: XAH1

Location: ROOM A201 | **Supply From:** XDH1 | **Mounting:** Surface | **Enclosure:** Type 1

Volts: 480/277 Wye | **Phases:** 3 | **Wires:** 4

A.I.C. Rating: 35K | **Mains Type:** MCB | **Mains Rating:** 100 A | **MCB Rating:** 100 A

2

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EMERG. + EXIT LIGHT. UNIT A 1ST FLOOR	20 A	1	1137 VA	696 VA					1	20 A	EMERG. + EXIT LIGHT. UNIT B 1ST FLOOR	2
3	EMERG. + EXIT LIGHT. UNIT E 1ST FLOOR	20 A	1			1186 VA	1163 VA			1	20 A	EMERG. + EXIT LIGHT. UNIT F 1ST FLOOR	4
5	EMERG. EXIT LIGHTS UNIT A + E 2ND FLOOR	20 A	1					630 VA	724 VA	1	20 A	EMERG. + EXIT LIGHT. UNITS B+F 2ND FLOOR	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
			Total Load:	1833 VA		2349 VA		1353 VA					
			Total Amps:	7 A		9 A		5 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	5535 VA	125.00%	6918 VA		
				Total Conn. Load:	5535 VA
				Total Est. Demand:	6918 VA
				Total Conn.:	7 A
				Total Est. Demand:	8 A

Notes:

Branch Panel: XDH1

Location: ROOM D137 | **Supply From:** MSB | **Mounting:** Surface | **Enclosure:** Type 1

Volts: 480/277 Wye | **Phases:** 3 | **Wires:** 4

A.I.C. Rating: 35K | **Mains Type:** MCB | **Mains Rating:** 100 A | **MCB Rating:** 100 A

2

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-X1 Rm. D132	60 A	3	0 VA	1833 VA					3	100 A	XAH1 PANELBOARD RM. A201	2
3	15 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			0 VA	2349 VA			--	--	--	4
5	--	--	--					0 VA	1353 VA	--	--	--	6
7	EMERG. + EXIT LIGHT. UNIT C 1ST FLOOR	20 A	1	696 VA	1459 VA					1	20 A	EMERG. + EXIT LIGHT. UNIT D 1ST FLOOR	8
9	EMERG. + EXIT LIGHT. UNIT G 1ST FLOOR	20 A	1			1128 VA	938 VA			1	20 A	EMERG. + EXIT LIGHT. UNIT C + G 2ND FLOOR	10
11	EXTERIOR BUILDING LIGHT. UNIT A	20 A	1					335 VA	216 VA	1	20 A	EXTERIOR BUILDING LIGHT. UNITS B + C	12
13	EXTERIOR BUILDING LIGHT. UNIT D	20 A	1	220 VA	212 VA					1	20 A	EXTERIOR BUILDING LIGHT. UNIT E	14
15	EXTERIOR BUILDING LIGHT. UNIT F	20 A	1			212 VA	204 VA			1	20 A	EXTERIOR BUILDING LIGHT. UNIT G	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
			Total Load:	4420 VA		4831 VA		1904 VA					
			Total Amps:	17 A		19 A		7 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Lighting	11154 VA	125.00%	13943 VA	Total Conn. Load:	11154 VA
				Total Est. Demand:	13943 VA
				Total Conn.:	13 A
				Total Est. Demand:	17 A

Notes:

Branch Panel: XDL1

Location: ROOM D137 | **Supply From:** T-X1 | **Mounting:** Surface | **Enclosure:** Type 1

Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4

A.I.C. Rating: 10K | **Mains Type:** MCB | **Mains Rating:** 60 A | **MCB Rating:** 60 A

2

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	FIRE ALARM PANEL RM D126	20 A	1	0 VA	0 VA					1	20 A	Spare	2
3	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	4
5	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
			Total Load:	0 VA		0 VA		0 VA					
			Total Amps:	0 A		0 A		0 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn.:	0 A
				Total Est. Demand:	0 A

Notes:

Branch Panel: SBDH1

Location: ROOM D137 | **Supply From:** ATS#2 | **Mounting:** Surface | **Enclosure:** Type 1

Volts: 480/277 Wye | **Phases:** 3 | **Wires:** 4

A.I.C. Rating: 65K | **Mains Type:** MLO | **Mains Rating:** 200 A | **MCB Rating:** 200 A

2

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-SB1 Rm. D137	100 A	3	8540 VA	18005 VA					3	100 A	PUMP P-1 50 HP RM D126	2
3	75 kVA,277 V/480 V,Three Phase,4 Wires,Wye	--	--			10680 VA	18005 VA			--	--	--	4
5	--	--	--					8420 VA	18005 VA	--	--	--	6
7	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	16
17	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	18
19	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
			Total Load:	26545 VA		28685 VA		26425 VA					
			Total Amps:	96 A		104 A		95 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	66974 VA	120.16%	80478 VA		
Other	7121 VA	100.00%	7121 VA	Total Conn. Load:	81655 VA
Receptacle	3240 VA	100.00%	3240 VA	Total Est. Demand:	94655 VA
Receptacle - Convenience	1800 VA	100.00%	1800 VA	Total Conn.:	98 A
Receptacle - Special	2520 VA	80.00%	2016 VA	Total Est. Demand:	114 A

Notes:

Branch Panel: SBDL1

Location: ROOM D137 | **Supply From:** T-SB1 | **Mounting:** Surface | **Enclosure:** Type 1

Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4

A.I.C. Rating: 22K | **Mains Type:** MCB | **Mains Rating:** 200 A | **MCB Rating:** 200 A

2

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	TEMP CONTROL PANELS RM.D126	20 A	1	0 VA	720 VA					1	20 A	T.T.B. RM D112	2
3	TECH RACK (IDF) RM D112	20 A	1			180 VA	360 VA			1	30 A	TECH RACK (IDF) RM D112	4
5	T.T.T. RM E127	20 A	1					720 VA	360 VA	1	30 A	TECH RACK (IDF) RM E127	6
7	TECH RACK (IDF) RM E127	20 A	1	180 VA	720 VA					1	20 A	T.T.B. RM F127	8
9	TECH RACK (IDF) RM F127	30 A	1			360 VA	180 VA			1	20 A	TECH RACK (IDF) RM F127	10
11	T.T.B. RM G127	20 A	1					360 VA	360 VA	1	30 A	TECH RACK (IDF) RM G127	12
13	TECH RACK (IDF) RM G127	20 A	1	180 VA	180 VA					1	20 A	SOUND RACK RM A115	14
15	SOUND RACK RM A115	20 A	1			180 VA	720 VA			1	20 A	T.T.B. RM A115	16
17	TECH RACK (MDF) RM A115	30 A	1					360 VA	180 VA	1	20 A	TECH RACK (MDF) RM A115	18
19	TECH RACK (MDF) RM A115	30 A	1	360 VA	180 VA					1	20 A	TECH RACK (MDF) RM A115	20
21	TECH RACK (MDF) RM A115	30 A	1			360 VA	180 VA			1	20 A	TECH RACK (MDF) RM A115	22
23	TEMP. CONTROL PANELS RM A201	20 A	1					0 VA	0 VA	1	20 A	TEMP. CONTROL PANELS RM B201	24
25	TEMP. CONTROL PANELS RM C201	20 A	1	0 VA	120 VA					1	20 A	COOLER BLOWER COIL RM. D128	26
27	WALK IN COOLER RM. D128	20 A	1			1920 VA	624 VA			3	20 A	COOLER CONDENSING UNIT RM. D128	28
29	HEATED DRAIN TAPE RM. D128	20 A	1					180 VA	624 VA	--	--	--	30
31	FREEZER CONDENSING UNIT	40 A	3	3696 VA	624 VA					--	--	--	32
33	--	--	--			3696 VA	1920 VA			1	20 A	WALK IN FREEZER	34
35	--	--	--					3696 VA	1581 VA	2	20 A	FREEZER BLOWER COIL	36
37	FIRE CONTROL SYSTEM	20 A	1	0 VA	1581 VA					--	--	--	38
39	TEMPERATURE CONTROL PANEL RM.A206	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
			Total Load:	8540 VA		10680 VA		8420 VA					
			Total Amps:	71 A		89 A		70 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	12959 VA	121.39%	15731 VA		
Other	7121 VA	100.00%	7121 VA	Total Conn. Load:	27640 VA
Receptacle	3240 VA	100.00%	3240 VA	Total Est. Demand:	29908 VA
Receptacle - Convenience	1800 VA	100.00%	1800 VA	Total Conn.:	77 A
Receptacle - Special	2520 VA	80.00%	2016 VA	Total Est. Demand:	83 A

Notes:

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COMMUNITY SCHOOLS

ARCHITECT

FANNING HOWEY

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350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

ISSUED FOR BID

BRIAN W. BUTLER
REGISTERED
No.
PE 11600305
STATE OF
INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM NO.2	07.16.2025

PANELBOARD SCHEDULES

E-608

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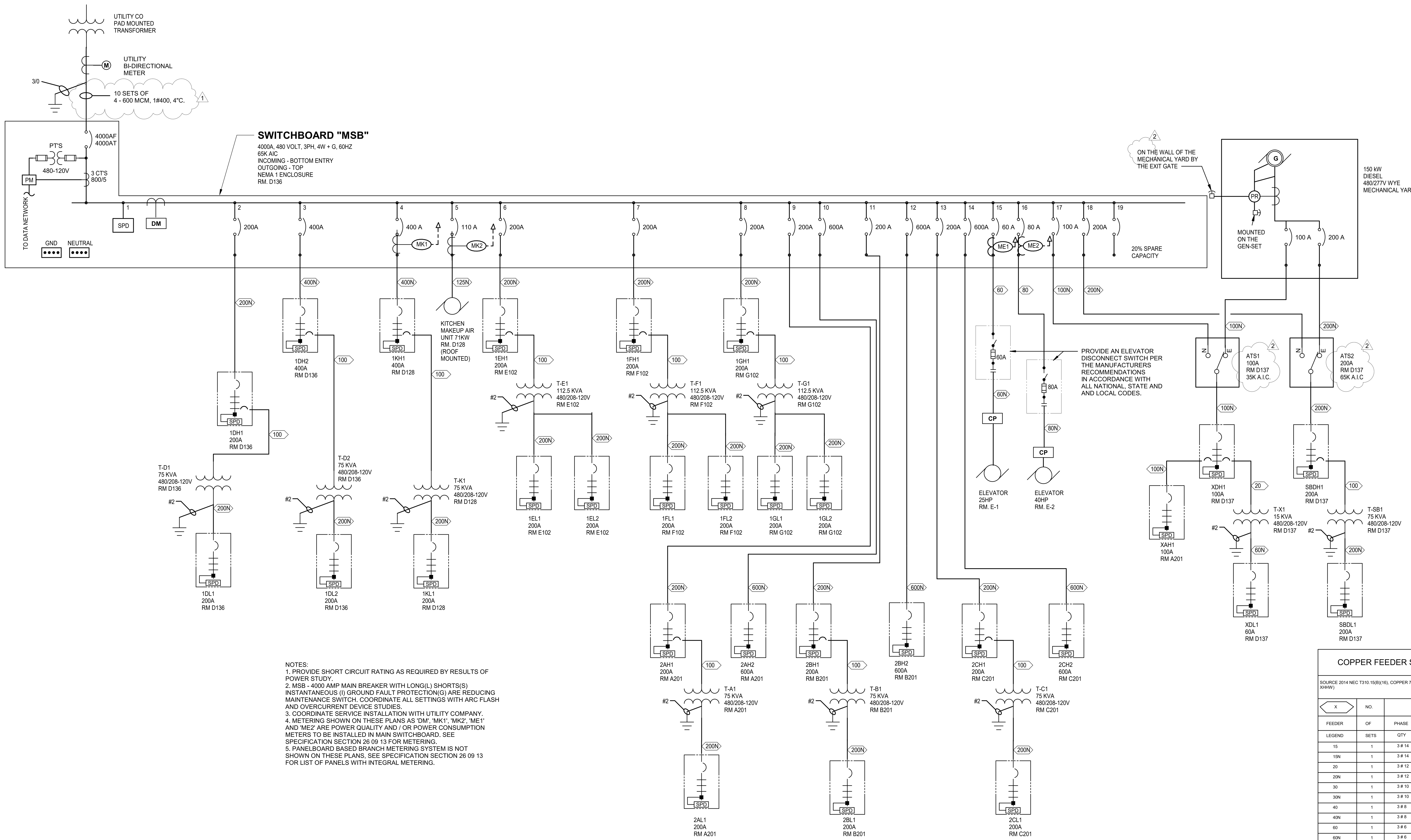
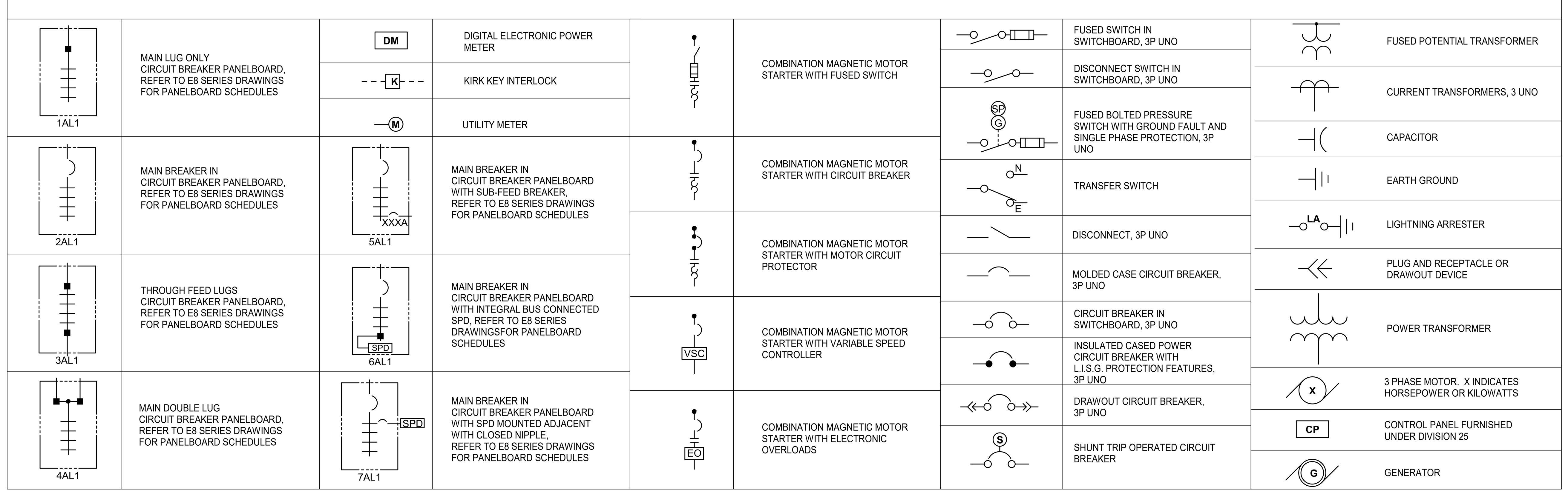


NOTES:
1. PROVIDE SHORT CIRCUIT RATING AS REQUIRED BY RESULTS OF POWER STUDY.
2. MSB - 4000 AMP MAIN BREAKER WITH LONG(L) SHORTS(S) INSTANTANEOUS (I) GROUND FAULT PROTECTION(G) ARE REDUCING MAINTENANCE SWITCH. COORDINATE ALL SETTINGS WITH ARC FLASH AND OVERCURRENT DEVICE STUDIES.
3. COORDINATE SERVICE INSTALLATION WITH UTILITY COMPANY.
4. METERING SHOWN ON THESE PLANS AS 'DM', 'MK1', 'MK2', 'ME1' AND 'ME2' ARE POWER QUALITY AND / OR POWER CONSUMPTION METERS TO BE INSTALLED IN MAIN SWITCHBOARD. SEE SPECIFICATION SECTION 26 09 13 FOR METERING.
5. PANELBOARD BASED BRANCH METERING SYSTEM IS NOT SHOWN ON THESE PLANS, SEE SPECIFICATION SECTION 26 09 13 FOR LIST OF PANELS WITH INTEGRAL METERING.

ONE LINE DIAGRAM SYMBOLS



COPPER FEEDER SCHEDULE

SOURCE 2014 NEC T310.15(B)(16), COPPER 75C, (THHW, THW, THWN, XHHW)

X	NO.	CONDUCTOR SIZE			CONDUIT
FEEDER	OF	PHASE	NEUTRAL	GROUND	SIZE
LEGEND	SETS	QTY	(1)	(1)	Inches
15	1	3 # 14		#14	3/4
15N	1	3 # 14	#14	#14	3/4
20	1	3 # 12		#12	3/4
20N	1	3 # 12	#12	#12	3/4
30	1	3 # 10		#10	3/4
30N	1	3 # 10	#10	#10	3/4
40	1	3 # 8		#10	3/4
40N	1	3 # 8	#8	#10	3/4
60	1	3 # 6		#10	1
60N	1	3 # 6	#6	#10	1
80	1	3 # 4		#8	1 1/4
80N	1	3 # 4	#4	#8	1 1/4
100	1	3 # 3		#8	1 1/2
100N	1	3 # 3	#3	#8	1 1/2
125	1	3 # 1		#6	2
125N	1	3 # 1	#1	#6	2
150	1	3 # 1/0		#6	2
150N	1	3 # 1/0	#1/0	#6	2
175	1	3 # 2/0		#6	2
175N	1	3 # 2/0	#2/0	#6	2
200	1	3 # 3/0		#6	2
200N	1	3 # 3/0	#3/0	#6	2
225	1	3 # 4/0		#4	2 1/2
225N	1	3 # 4/0	#4/0	#4	2 1/2
250	1	3 # 250		#4	2 1/2
250N	1	3 # 250	#250	#4	2 1/2
300	1	3 # 350		#3	3
300N	1	3 # 350	#350	#3	3
350	1	3 # 500		#3	4
350N	1	3 # 500	#500	#3	4
400	1	3 # 600		#3	4
400N	1	3 # 600	#600	#3	4
500	2	3 # 250		#2	2 1/2
500N	2	3 # 250	#250	#2	2 1/2
600	2	3 # 350		#1	3
600N	2	3 # 350	#350	#1	3
800	2	3 # 600		#1/0	4
800N	2	3 # 600	#600	#1/0	4
1000	3	3 # 400		#2/0	3
1000N	3	3 # 400	#400	#2/0	3
1200	3	3 # 600		#3/0	4
1200N	3	3 # 600	#600	#3/0	4
1600	4	3 # 600		#4/0	4
1600N	4	3 # 600	#600	#4/0	4
2000	5	3 # 600		#250	4
2000N	5	3 # 600	#600	#250	4
2500	6	3 # 600		#350	4
2500N	6	3 # 600	#600	#350	4

ZIONSVILLE COMMUNITY SCHOOLS

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No.
PE 11600305
STATE OF
INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: RDR
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM NO.1	07.09.2025
2	ADDENDUM NO.2	07.16.2025

ELECTRICAL SCHEMATICS

E-701

Autodesk Docs://Zionsville ELC/2023_ELEC_224033.00.rvt
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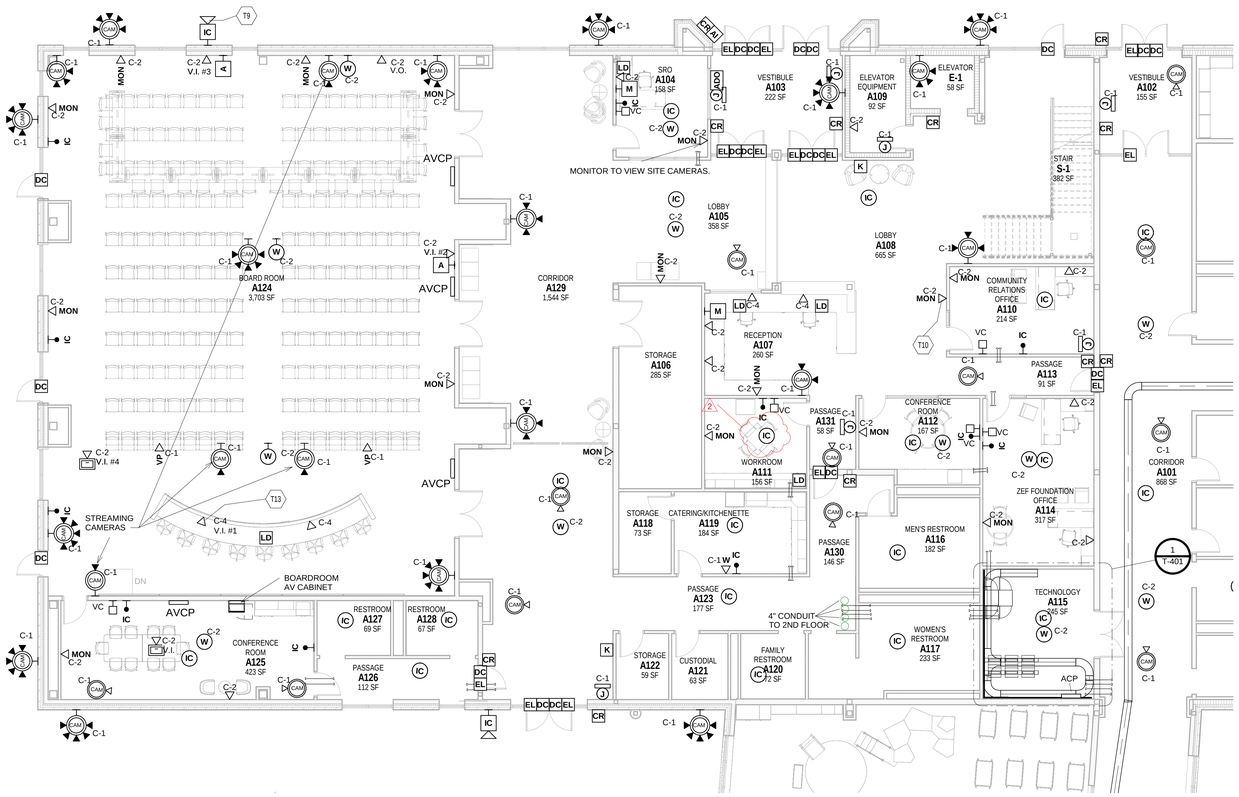

1 FIRST FLOOR TECHNOLOGY PLAN - UNIT A

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
A101		CORRIDOR	868 SF
A102		VESTIBULE	155 SF
A103		VESTIBULE	222 SF
A104		SRO	158 SF
A105		<varies>	358 SF
A106		STORAGE	285 SF
A107		<varies>	<varies>
A108		LOBBY	<varies>
A109		ELEVATOR EQUIPMENT	92 SF
A110		COMMUNITY RELATIONS OFFICE	214 SF
A111		WORKROOM	156 SF
A112		CONFERENCE ROOM	167 SF
A113		PASSAGE	91 SF
A114		ZEF FOUNDATION OFFICE	317 SF
A115		TECHNOLOGY	245 SF
A116		MEN'S RESTROOM	<varies>
A117		WOMEN'S RESTROOM	233 SF
A118		STORAGE	73 SF
A119		CATERING/KITCHENETTE	184 SF
A120		FAMILY RESTROOM	72 SF
A121		CUSTODIAL	63 SF
A122		STORAGE	59 SF
A123		PASSAGE	177 SF
A124		BOARD ROOM	<varies>
A125		CONFERENCE ROOM	423 SF
A126		PASSAGE	112 SF
A127		RESTROOM	69 SF
A128		RESTROOM	67 SF
A129		CORRIDOR	1544 SF
A130		PASSAGE	146 SF
A131		PASSAGE	58 SF
B101		CORRIDOR	1654 SF
B102		DAYCARE INFANTS/TODDLERS	1303 SF
E1		ELEVATOR	58 SF
E101		CORRIDOR	142 SF
E102		ELECTRICAL	131 SF
E103		RESTROOM	233 SF
E104		STORAGE	172 SF
E105		CLASSROOM	943 SF
E132		CLASSROOM	1093 SF
E133		OT/PT/SPEECH OFFICE	138 SF
E134		OT/PT/SPEECH OFFICE	139 SF
E135		RESTROOM	62 SF
E136		OUTDOOR STORAGE	142 SF
E139		RESTROOM	62 SF
E143		CORRIDOR	868 SF
E-1		ELEVATOR	58 SF
S-1		STAIR	382 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T9	EXTERIOR INTERCOM SPEAKERS SHOULD BE PROGRAMMED TO SEPARATE ZONE IN CAREHAWK SOFTWARE WITH ADJUSTABLE VOLUME CONTROL.
T10	PROVIDE ONE FIBER HDMI CABLE FROM THIS MONITOR LOCATION BACK TO THE MAIN CLOSET. THIS MONITOR IS FOR THE ENERGY DASBOARD VIEWING LOCATION.
T13	BOARD ROOM WILL HAVE A FULL AV SYSTEM INSTALLED. INCLUDES SHURE MICROFLEX AUDIO SYSTEM ALONG WITH AN AHMEXTRON AV SYSTEM THAT WOULD ENABLE WEB STREAMING AND RECORDING.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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ARCHITECT

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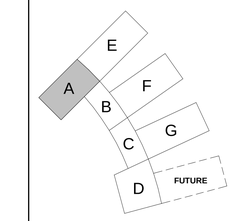

KEY PLAN

N

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10800025 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: CDT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

FIRST FLOOR TECHNOLOGY PLAN - UNIT A

T-11A

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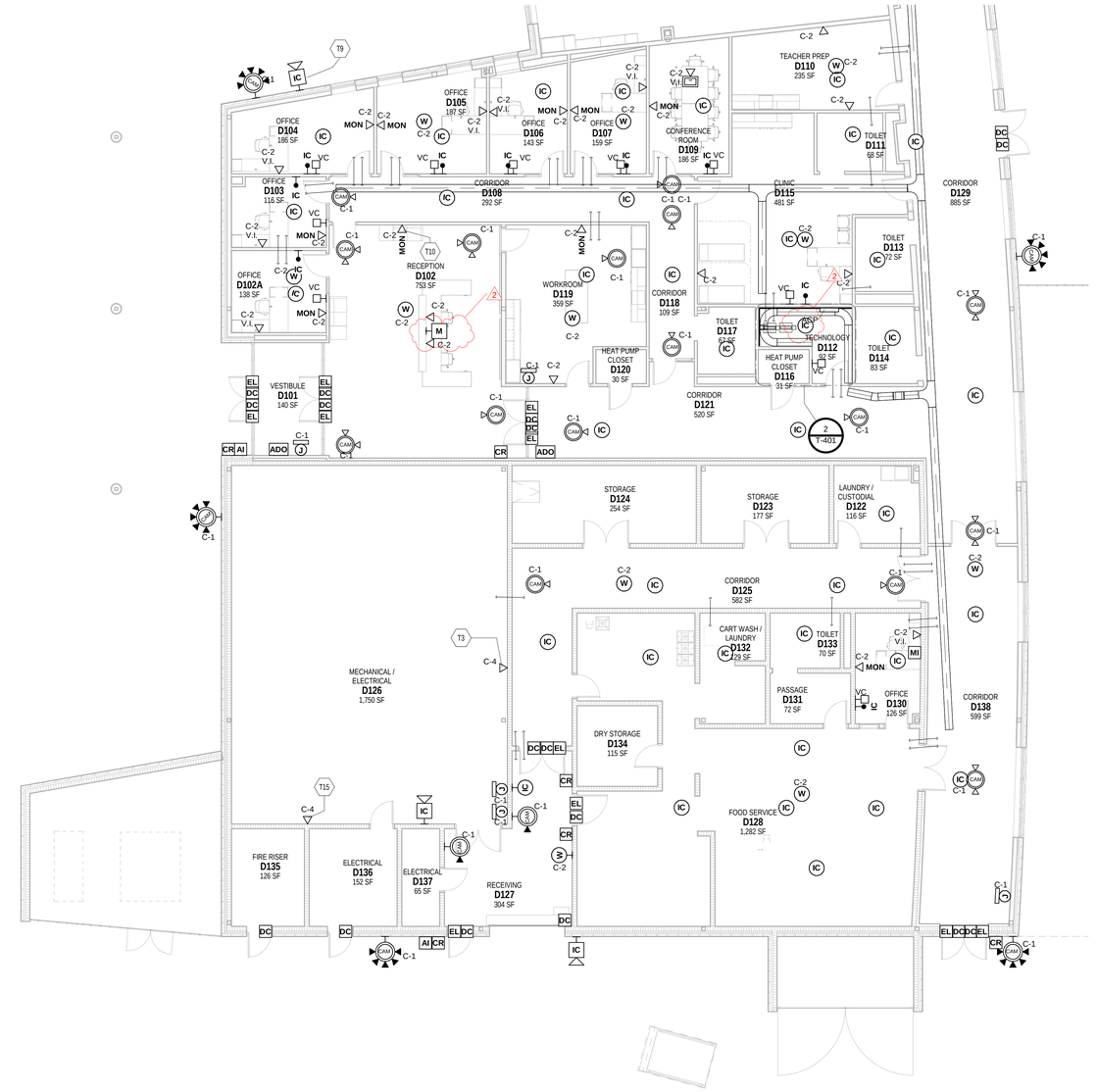

1 FIRST FLOOR TECHNOLOGY PLAN - UNIT D

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
C101		CORRIDOR	1627 SF
C113		DAYCARE INFANTS/TODDLERS	1116 SF
D101		VESTIBULE	140 SF
D102		RECEPTION	753 SF
D102A		OFFICE	138 SF
D103		OFFICE	116 SF
D104		OFFICE	186 SF
D105		OFFICE	187 SF
D106		OFFICE	143 SF
D107		OFFICE	159 SF
D108		CORRIDOR	292 SF
D109		<varies>	186 SF
D110		TEACHER PREP	235 SF
D111		TOILET	68 SF
D112		TECHNOLOGY	92 SF
D113		TOILET	72 SF
D114		TOILET	83 SF
D115		CLINIC	481 SF
D116		HEAT PUMP CLOSET	31 SF
D117		TOILET	67 SF
D118		CORRIDOR	109 SF
D119		WORKROOM	359 SF
D120		HEAT PUMP CLOSET	30 SF
D121		CORRIDOR	520 SF
D122		LAUNDRY / CUSTODIAL	116 SF
D123		STORAGE	177 SF
D124		STORAGE	254 SF
D125		CORRIDOR	582 SF
D126		MECHANICAL / ELECTRICAL	1750 SF
D127		RECEIVING	304 SF
D128		FOOD SERVICE	1282 SF
D129		CORRIDOR	885 SF
D130		OFFICE	126 SF
D131		PASSAGE	72 SF
D132		CART WASH / LAUNDRY	129 SF
D133		TOILET	70 SF
D134		DRY STORAGE	115 SF
D135		FIRE RISER	126 SF
D136		ELECTRICAL	152 SF
D137		ELECTRICAL	65 SF
D138		CORRIDOR	599 SF
G132		CLASSROOM	1093 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T3	PROVIDE CABLES FOR HVAC CONTROL PANELS. COORDINATE AND CONFIRM LOCATION WITH HVAC CONTRACTOR.
T9	EXTERIOR INTERCOM SPEAKERS SHOULD BE PROGRAMMED TO SEPARATE ZONE IN CAREHAWK SOFTWARE WITH ADJUSTABLE VOLUME CONTROL.
T10	PROVIDE ONE FIBER HDMI CABLE FROM THIS MONITOR LOCATION BACK TO THE MAIN CLOSET. THIS MONITOR IS FOR THE ENERGY DASBOARD VIEWING LOCATION.
T15	PROVIDE MAIN ELECTRICAL SWITCHBOARD NETWORK CABLE LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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ZIONSVILLE COMMUNITY SCHOOLS

ARCHITECT

FANNING HOWEY

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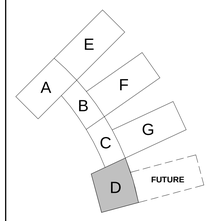

KEY PLAN

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10800005 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: CDT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	07.09.2025
2	ADDENDUM #2	07.16.2025

FIRST FLOOR TECHNOLOGY PLAN - UNIT D

T-11D

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
A129		CORRIDOR	1544 SF
E1		ELEVATOR	58 SF
E-1		ELEVATOR	58 SF
S-1		STAIR	382 SF
SECOND FLOOR & MEZZANINE			
A201		MECHANICAL ROOM	1932 SF
A202		<varies>	457 SF
A203		CONFERENCE ROOM	316 SF
A204		CONFERENCE ROOM	600 SF
A205		TEAM SAFETY	1067 SF
A206		MECHANICAL ROOM	556 SF
A207		CORRIDOR	244 SF
A208		SAFETY STORAGE	155 SF
A209		STORAGE	192 SF
A210		CORRIDOR	596 SF
A211		HR CONFERENCE	164 SF
A212		TOUCHDOWN OFFICE	150 SF
A213		STORAGE	164 SF
A214		CORRIDOR	230 SF
A215		TOILET	77 SF
A216		LOBBY	227 SF
A217		OFFICE	161 SF
A218		<varies>	<varies>
A226		LOBBY	173 SF
B202		DIRECTOR	224 SF
B203		PASSAGE	156 SF
B204		OFFICE	161 SF
B205		OFFICE	160 SF
B207		DIRECTOR OF SAFETY	212 SF
B208		CORRIDOR	384 SF
B209		DIRECTOR OF CURRICULUM	188 SF
B210		CURRICULUM OFFICE	173 SF
B211		CURRICULUM OFFICE	151 SF
B213		LOBBY	173 SF
E201		INTERSTITIAL SPACE	2256 SF

1 SECOND FLOOR TECHNOLOGY PLAN - UNIT A

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

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T3	PROVIDE CABLES FOR HVAC CONTROL PANELS. COORDINATE AND CONFIRM LOCATION WITH HVAC CONTRACTOR.

VERIFICATION NOTE

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SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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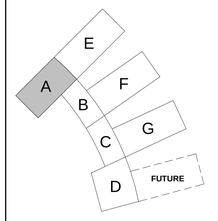

KEY PLAN

N

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10800026 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: CDT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR TECHNOLOGY PLAN - UNIT A

T-12A

1 SECOND FLOOR TECHNOLOGY PLAN - UNIT C

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
E141		STAIR	346 SF
E-2		ELEVATOR	75 SF
S-2		STAIR	346 SF
SECOND FLOOR & MEZZANINE			
B201		MECHANICAL ROOM	1923 SF
B234		CORRIDOR	170 SF
B235		CORRIDOR	416 SF
B236		LOBBY	246 SF
B238		SUPERINTENDENT	445 SF
C201		MECHANICAL ROOM	1241 SF
C202		LOUNGE	989 SF
C203		TOUCHDOWN AREA	606 SF
C204		ADMIN. ASSISTANT	164 SF
C205		ASSISTANT SUPERINTENDENT	268 SF
C206		ASSISTANT SUPERINTENDENT	282 SF
C207		PASSAGE	138 SF
C208		HEAT PUMP CLOSET	51 SF
C209		STORAGE	103 SF
C210		SHARED CONFERENCE	406 SF
C211		CFO	353 SF
C212		BUSINESS OFFICE	152 SF
C213		BUSINESS OFFICE	231 SF
C214		CORRIDOR	236 SF
C215		BUSINESS OFFICE	156 SF
C216		LOBBY	215 SF
C217		STORAGE	102 SF
C218		BUSINESS OFFICE	153 SF
C219		BUSINESS OFFICE	154 SF
C220		TOILET	79 SF
C221		CUSTODIAL	78 SF
C222		SECURE STORAGE	149 SF
C223		FUTURE OFFICE	149 SF
C224		OPERATIONS OFFICE	167 SF
C225		DIRECTOR OF OPERATIONS	275 SF
C226		OPEN OFFICE	674 SF
C227		OFFICE	152 SF
C228		FUTURE OFFICE	153 SF
C229		CHIEF TECHNOLOGY OFFICER	238 SF
C230		TECH CONFERENCE	177 SF
C231		CORRIDOR	765 SF
C232		STORAGE	121 SF
C233		HEAT PUMP CLOSET	51 SF
E-2		ELEVATOR	75 SF
F201		INTERSTITIAL SPACE	2246 SF
G201		INTERSTITIAL SPACE	2246 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T3	PROVIDE CABLES FOR HVAC CONTROL PANELS. COORDINATE AND CONFIRM LOCATION WITH HVAC CONTRACTOR.

VERIFICATION NOTE

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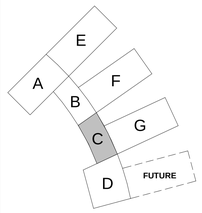

KEY PLAN

N

ISSUED FOR BID

BRIAN W. BUTLER REGISTERED No. PE10800026 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JM
DRAWN BY: CDT
PROJECT NUMBER: 224033.00
PROJECT ISSUE DATE: 06.24.2025

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	07.16.2025

SECOND FLOOR TECHNOLOGY PLAN - UNIT C

T-12C

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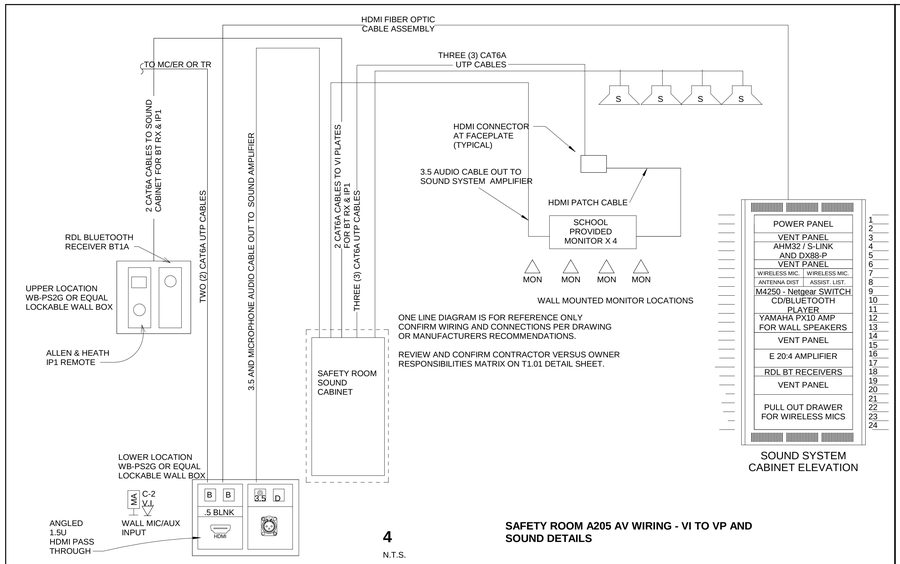
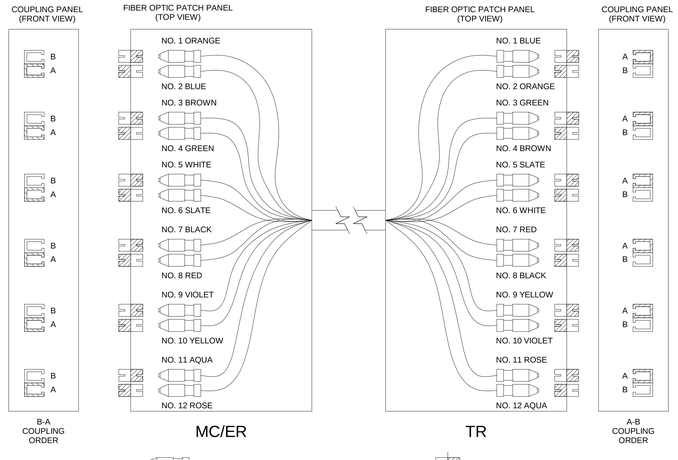


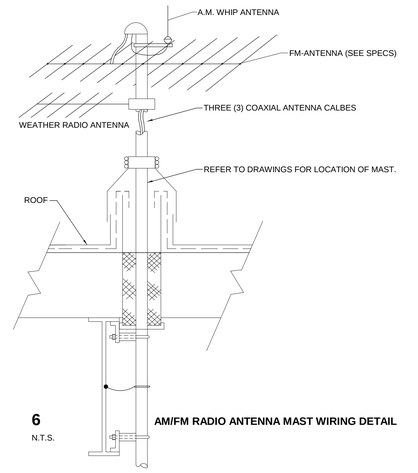
4 N.T.S.

SAFETY ROOM A205 AV WIRING - VI TO VP AND SOUND DETAILS



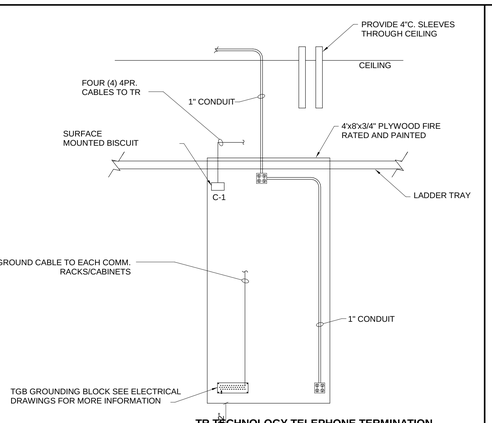
1 N.T.S.

CROSSOVER IMPLEMENTATION DIAGRAM



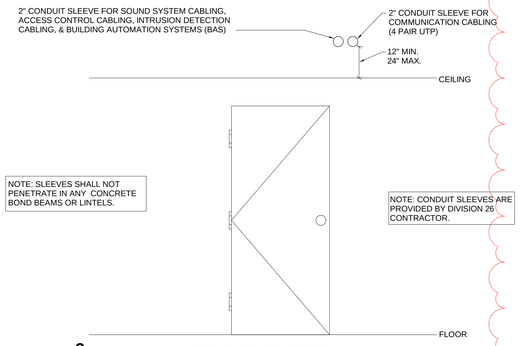
6 N.T.S.

AM/FM RADIO ANTENNA MAST WIRING DETAIL



7 N.T.S.

TR TECHNOLOGY TELEPHONE TERMINATION BOARD



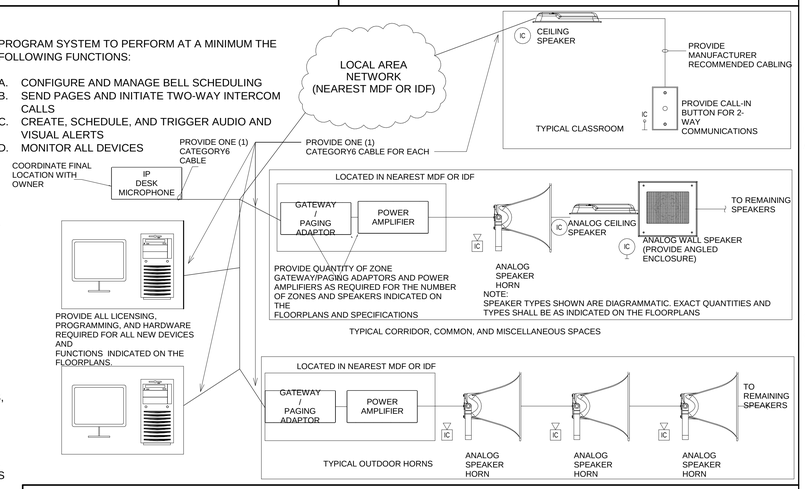
3 N.T.S.

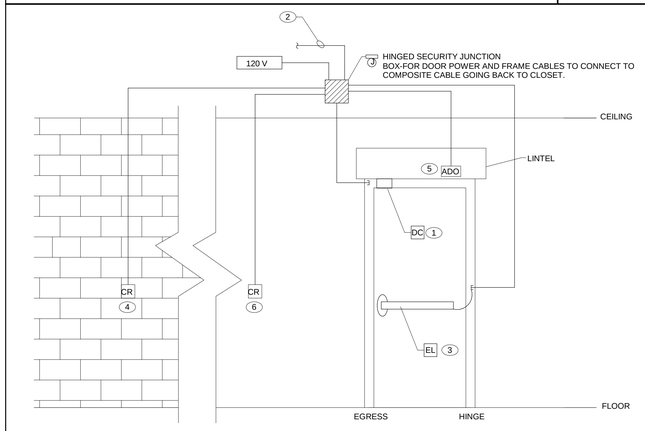
CONDUIT SLEEVES DETAIL

GENERAL NOTES:

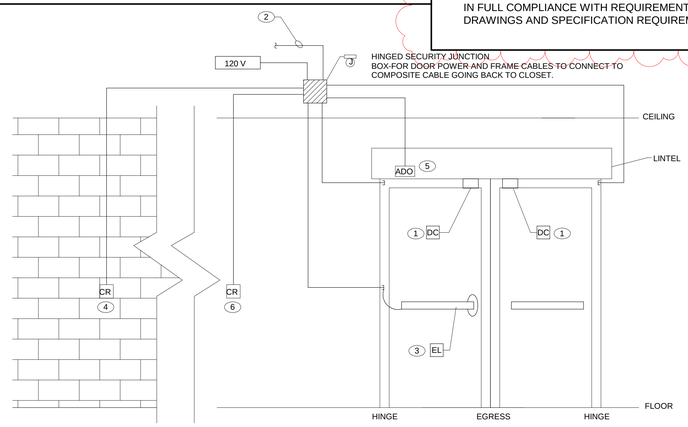
1. REFER TO FLOOR PLAN DRAWINGS FOR EXACT QUANTITY OF SPEAKERS AND DEVICES.
2. ALL SPEAKERS SHALL BE ON THE ALL CALL SPEAKER ZONE.
3. SYSTEM SHALL BE CONFIGURED FOR A MINIMUM OF THE FOLLOWING ZONES:
   1) ALL CALL (ALL INTERIOR AND EXTERIOR SPEAKERS)
   2) ALL INTERIOR SPEAKERS.
   3) ALL EXTERIOR SPEAKERS.
   4) EACH SEPARATE INSTRUCTION AREA (CLASSROOM, COLLABORATION, ETC.)
   5) EACH OUTDOOR CLASSROOM/LEARNING AREA.
   6) COMMONS/MULTI-PURPOSE.
   7) CONTRACTOR SHALL HAVE A PROGRAMMING MEETING PRIOR TO INSTALLATION TO DETERMINE ANY ADDITIONAL ZONES REQUIRED BY OWNER.
4. RECOMMENDED ANALOG SPEAKER TAP SETTINGS:
   1) HALLWAY SPEAKERS - 1 WATT MAXIMUM
   2) OUTSIDE HORNS - 3.75 WATTS MAXIMUM
   3) LARGE ROOMS - 2 WATTS MAXIMUM

   CONTRACTOR SHALL VERIFY TAP SETTINGS LOUDNESS LEVEL AND PROVIDE ANY ADJUSTMENTS REQUIRED.
5. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE AND USABLE WORK PER CONTRACT DOCUMENTS. ALL MATERIALS AND EQUIPMENT SHALL BE PROVIDED WITH ALL ACCESSORIES AND ADDITIONAL WORK REQUIRED FOR FIELD CONDITIONS, AS WELL AS ADDITIONAL WORK AND ACCESSORIES REQUIRED FOR COMPLETE, USABLE, AND FULLY FUNCTIONAL CONSTRUCTION AND SYSTEMS, EVEN IF NOT EXPLICITLY SPECIFIED OR INDICATED. COMMUNICATIONS SYSTEM IN THIS CONTRACT SHALL BE PROVIDED AS COMPLETE AND OPERABLE SYSTEMS IN FULL COMPLIANCE WITH REQUIREMENTS ON DRAWINGS AND SPECIFICATION REQUIREMENTS.
6. PROGRAM SYSTEM TO PERFORM AT A MINIMUM THE FOLLOWING FUNCTIONS:
   A. CONFIGURE AND MANAGE BELL SCHEDULING
   B. SEND PAGES AND INITIATE TWO-WAY INTERCOM CALLS
   C. CREATE, SCHEDULE, AND TRIGGER AUDIO AND VISUAL ALERTS
   D. MONITOR ALL DEVICES

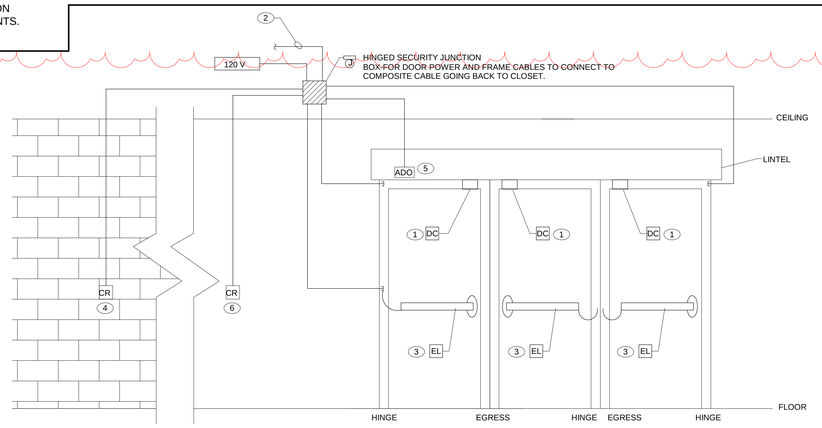




SINGLE DOOR ENTRY



DOUBLE DOOR ENTRY



MULTIPLE DOOR ENTRY

DOOR SECURITY WIRING LEGEND

1. PROVIDE 22/2 AWG TO DOOR HARDWARE CONTRACTOR PROVIDED DOOR CONTACT TO HINGED SECURITY JUNCTION BOX.
2. PROVIDE SECURITY & ACCESS CONTROL MULTI-CONDUCTOR COMPOSITE CABLE TO EXTEND ANY ACCESS/SECURITY DEVICES BACK TO CLOSET AND ONE UTP CABLES FROM HINGED SECURITY JUNCTION BOX TO NEAREST TR OR MC/ER.
3. PROVIDE 18/6 AWG FOR POWER TRANSFER/ELECTRIC LATCH & REQUEST FOR EXIT MICRO SWITCH TO HINGED SECURITY JUNCTION BOX AND CONNECT TO COMPOSITE CABLE GOING BACK TO NEAREST TR OR MC/ER.
4. PROVIDE 22/6 AWG FOR CARD READER TO HINGED SECURITY JUNCTION BOX AND CONNECT TO COMPOSITE CABLE GOING BACK TO NEAREST TR OR MC/ER.
5. PROVIDE 22/4 AWG FROM ADO OPERATOR TO HINGED SECURITY JUNCTION BOX.
6. PROVIDE 22/6 AWG FOR CARD READER TO HINGED SECURITY JUNCTION BOX. INTERFACE CARD READER WITH INTRUSION DETECTION SYSTEM TO DISABLE ALARM SYSTEM.

NOTE: TYPICAL DOOR WIRING SCOPE BY THE DIVISION 28 CONTRACTOR. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND DOOR CONFIGURATIONS.

DOOR CONTROLLER AND ANY ACCESS CONTROL/SECURITY CLOSET CONNECTIONS/PROGRAMMING IS PROVIDED BY OWNER WHO USES VERKADA.

CABLES NEED TERMINATED AND LABELED CLEARLY TO THE DOOR DEVICES (ELECTRIC STRIKE AND DOOR CONTACT BY DOOR HARDWARE CONTRACTOR) AND CABLES LEFT UNTERMINATED AND LABELED CLEARLY AT THE ROUGH IN BOX (CARD READER BY OWNER) NEED TO BE RAN BACK, LABELED CLEARLY AND COILED INTO THE NEAREST MC/ER OR TR DATA CLOSET FOR FUTURE ACCESS CONTROL PANEL TERMINATIONS BY OWNER.

ANY DOORS NOT HAVING ACCESS CONTROL AND ONLY DOOR CONTACT MONITORING NEEDS THOSE CABLES RAN BACK, LABELED CLEARLY AND COILED INTO THE NEAREST MC/ER OR TR DATA CLOSET FOR FUTURE SECURITY CONTROL PANEL TERMINATIONS BY OWNER.

2 N.T.S.

DOOR SECURITY HARDWARE WIRING DETAILS

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TECHNOLOGY DETAILS

T-502