ADDENDUM NO. 1

January 6, 2023

Carmel High School Greyhound Activity Center
E. Smoky Row Rd
Carmel, IN 46033

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, Specifications, and Drawings dated December 1, 2022, by Fanning Howey. 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. 1-1 thru ADD. 1-3 and attached Fanning Howey Addendum No. 1 dated January 6th, 2023, Specification Sections 26 56 00 – Exterior Lighting and 33 29 00 – Well Abandonment, Revised Project Manual Sections: 08 45 13 – Structured-Polycarbonate-Panel Assemblies and 32 92 00 – Turf and Grasses, Revised Drawing Sheets: Cover, Index, GD1.3, G1.3, G2.3, G4.1, G4.2, G4.3, G4.4, G5.2, SU1.0, SU1.3, SU1.5, SU2.1, SU2.2, S1.02, A1.01, A1.02, A1.03, A3.01, A5.01, A6.01, A7.01, A8.01, A8.03, A9.01, PFP.01, P2.00, P2.01, P2.02, P3.02, P4.01, M2.01, M5.01, E1.1, E1.2, E2.1, E3.01, E3.17, E4.1, E5.1, E6.1, E7.1, T1.01, T2.01 and T3.01.

A. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

1. Paragraph 3.03 Bid Categories

B. Bid Category No. 2 – General Trades

Add the following Specifications

Section	06 20 23	Interior Finish Carpentry
Section	10 11 00	Visual Display Units
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 29 00	Well Abandonment
Section	33 46 00	Subdrainage

Revise the following Clarifications

15. Contractor to construct the building pad to 12" below finished floor elevation and then cap with 6" of #53 crushed stone (top of stone to be 6" below FFE). Soil separator fabric to be installed under stone base within the turf footprint of the building. Work to be completed prior to Bid Category No. 1 Metal Building Contractor starting erection of the metal building.

16. Bid Category No. 7 responsible for stone base and fine crushed limestone leveling course starting from -6" to finish floor elevation in the synthetic turf footprint only. Bid Category No. 2 General trades is responsible for the stone base under slabs and concrete within the remainder of the building footprint.

Add the following Clarifications

17. General Trades Contractor will be responsible to touch up the stone base within the turf field to -6" from finish floor elevation prior to Bid Category No. 7 – Synthetic Turf contractor mobilizing.

D. Bid Category No. 4 – Metal Studs, Drywall, and Ceilings

Delete the following Specifications

Section 06 20 23 Interior Finish Carpentry

Add the following Clarifications

5. All blocking required for the metal liner panel or additional mid-span supports attached to the metal studs are to be provided by the Bid Category No. 1 – Metal Building Contractor

G. Bid Category No. 7 – Synthetic Turf

Add the following Clarification

3. Provide underdrain system on west side of building under synthetic turf grass belt as shown in Detail L on Sheet G4.1

J. Bid Category No. 10 – Electrical and Technology

Add the following Specifications

Section 26 55 00 Exterior Lighting

B. SPECIFICATION SECTION 01 21 00 – ALLOWANCES

Replace

1. Part 3 – Execution

   Paragraph 3.02 – Contingency Allowances

A. Bid Category No. 2 General Trades	$200,000
B. Bid Category No. 3 Masonry	$20,000
C. Bid Category No. 4 Metal Stud, Drywall, and Ceilings	$15,000
D. Bid Category No. 5 Glass and Glazing	$15,000
E. Bid Category No. 6 Painting	$15,000
F. Bid Category No. 7 Synthetic Turf	$20,000
G. Bid Category No. 8 Fire Protection	$15,000
H. Bid Category No. 9 Mechanical and Plumbing	$50,000
I. Bid Category No. 10 Electrical and Technology	$50,000

C. SPECIFICATION SECTION 01 53 10 – FENCES

Part 2 – Products

2.01 Materials

Delete

A. The last sentence. (Allow for 500 Lineal Feet)

A D D E N D U M N O. 1

Carmel High School – Greyhound Activity Center

Project No. 222063.00

Carmel Clay Schools
Carmel, Indiana

Index of Contents

Addendum No. 1, 14 items, 6 pages
New Project Manual Sections: 26 56 00 – Exterior Lighting and 33 29 00 – Well Abandonment
Revised Project Manual Sections: 08 45 13 – Structured-Polycarbonate-Panel Assemblies and 32 92 00 – Turf and Grasses
Revised Drawing Sheets: Cover, Index, GD1.3, G1.3, G2.3, G4.1, G4.2, G4.3, G4.4, G5.2, SU1.0, SU1.3, SU1.5, SU2.1, SU2.2, S1.02, A1.01, A1.02, A1.03, A3.01, A5.01, A6.01, A7.01, A8.01, A8.03, A9.01, PFP.01, P2.00, P2.01, P2.02, P3.02, P4.01, M2.01, M5.01, E1.1, E1.2, E2.1, E3.01, E3.17, E4.1, E5.1, E6.1, E7.1, T1.01, T2.01 and T3.01

Date: January 6, 2023

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

William E. Payne, AIA
Indiana Registration No. 4169

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 1 to Drawings and Project Manual, dated December 1, 2022 for Carmel High School – Greyhound Activity Center for Carmel Clay Schools, 5201 East Main Street, Carmel, Indiana 46033; 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. Book 3, Page 00 01 10-1, DIVISION 26: Add Section 26 56 00 – Exterior Lighting

B. Book 3, Page 00 01 10-2, DIVISION 33: Add Section 33 29 00 – Well Abandonment

ITEM NO. 2. NEW PROJECT MANUAL SECTION(S)

A. New Project Manual Sections 26 56 00 – Exterior Lighting and 33 29 00 – Well Abandonment, dated 1/6/23, are included with and hereby made a part of this Addendum.

ITEM NO. 3. REVISED PROJECT MANUAL SECTIONS

A. Section 08 45 13 – Structured-Polycarbonate-Panel Assemblies and 32 92 00 – Turf and Grasses have been revised, dated 1/6/23, and is included with and hereby made a part of this Addendum.

ITEM NO. 4. PROJECT MANUAL, SECTION 07 27 26.02 – VAPOR-PERMEABLE FLUID-APPLIED MEMBRANE AIR BARRIER

A. Article 2.3, A., 3: Change “Perm-A-Barrier VP” to “Perm-A-Barrier VPL 50RS” at beginning of paragraph.

B. Article 2.3, A., 4: Change “90 mils (wet)” to “manufacturers standard 20 mils (wet/dry)”.

ITEM NO. 5. PROJECT MANUAL, SECTION 10 28 00 – TOILET, BATH, AND LAUNDRY ACCESSORIES

A. Add 1.1, A., 4., as follows:

“4. Childcare/special needs accessories.”

B. Add Article 2.6 as follows:

2.6 CHILDCARE/SPECIAL NEEDS ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of following:
1. AJW Architectural Products.
2. American Infant Care Products Inc.
3. American Specialties, Inc.
4. Foundations Worldwide Inc.
5. Koala Corporation; KB 200.
6. Safe-Strap Company, Inc.

B. Diaper-Changing Station (DCS):
1. Horizontal, Surface-Mounted Unit: Diaper-changing station with surface-mounted, mildew-resistant, molded-polyethylene body that folds horizontally against wall when not in use; projects not more than 4 inches from wall when closed; and is engineered to support a minimum of 250-pound static weight when opened. Provide unit with pneumatic shock-absorbing operating mechanism and built-in dispenser for sanitary liners.
a. Color shall be selected by A/E from manufacturer's standards.

C. Add 3.2, D., as follows:

"D. Changing Stations: Install in accordance with manufactured instructions.
1. Changing stations and other accessories shall be installed to comply with requirements for accessible mounting heights, protrusions into accessible routes, and other requirements of ICC/ANSI A117.1.
2. Install units so they are level, plumb, and secure.
3. After installation, open and close units a minimum of 3 times. Verify units operate smoothly and properly latch. Adjust as required for proper safe use.
4. Wash exposed surfaces using a solution of mild detergent in warm water, applied with soft, clean cloths. Do not use abrasives."

ITEM NO. 6. <u>PROJECT MANUAL, SECTION 10 43 13 – DEFIBRILLATOR CABINETS</u>

A. Add 2.3, B., as follows:

"B. Alarm System: System shall activate for a minimum of 2 minutes when door is opened – and stop when door is closed. System shall be turned on or off using a key.
1. Audible Alarm: Horn emitting a minimum of 85 decibels.
2. Visual Alarm: Flashing strobe light.
3. Power Source: Replaceable battery with low-power indicator.
4. Provide total six (6) keys for each unit.

ITEM NO. 7. <u>PROJECT MANUAL, SECTION 11 66 00.00 – ATHLETIC EQUIPMENT</u>

A. Add 1.1, A., 3., as follows:

"3. Wall safety padding."

B. Add Article 2.5 as follows:

2.5 WALL-MOUNTED AND POST COLUMN SAFETY PADS

A. Wall Pads, General: All pads shall meet or exceed requirements of ASTM F2440-11.

B. Safety Pad Surface-Burning Characteristics: Provide safety pads with flame-spread index of 25 or less and smoke-developed index of 450 or less, as determined by testing identical products per ASTM E 84 or NFPA 255 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

C. Pad Covers: Provide safety pad fabric covers fabricated from puncture-and tear-resistant, not less than 14 oz. PVC-coated polyester or nylon-reinforced PVC fabric treated with fungicide for mildew resistance, (lined with fire-retardant liner, where required to meet rating).
   5. Flame-Resistance Ratings: Passes NFPA 255.

D. Wall Safety Pads: Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board with visible surfaces fully covered by seamless fabric cover, free from sag and wrinkles and firmly attached to back of backer board.
   1. Backer Board: Not less than 3/8 inch thick plywood, mat-formed, or composite panel, or fire-retardant-treated plywood per AWPA C27, Interior Type A.
   6. Fill: Multiple-impact-resistant foam not less than 2 inch thick bonded polyurethane, 6 lb. density.
   7. Size: Each panel section 24 inches wide by not less than 72 inches long, unless otherwise indicated on Drawings.
   8. Number of Panel Sections: As indicated on Drawings, modular panel sections.
   9. Installation Method: Concealed mounting Z-clips.
   10. Fabric Cover Colors: As selected by A/E from manufacturer's full range – not just one "standard".

E. Column Safety Pads: Pads covering exposed flange of 6 to 8 inch wide flange columns to height indicated, consisting of not less than 1-1/4 inch thick, multiple-impact-resistant, closed-cell polyethylene foam filler, covered both sides and all edges of pad by fabric cover with self-adhesive hook-and-loop attachment to exposed face of column.
   1. Length: Each pad not less than 72 inches, unless otherwise noted.
   2. Fabric Cover Color: Match color of wall safety pads.
   3. At structure main frame tapered columns, provide blocking/sheathing as required to provide continuous surface for padding and flush condition along with solid cap between webs of structure. Padding shall be vertical for the height of the padding at the front face.

F. Products: Subject to compliance with requirements, provide either the scheduled product or a comparable product by one of the following:
   1. Porter
   2. Draper
   3. Performance Sports
   4. Jaypro Sports
   5. ADP Lemco

ITEM NO. 8. PROJECT MANUAL, SECTION 12 93 00 – SITE FURNISHINGS AND AMENITIES

A. Delete this Section in its entirety.

ITEM NO. 9. PROJECT MANUAL, SECTION 23 09 00 - HVAC Direct Digital Controls

A. Article 2.1 A.1.; delete Siemens Desigo as installed by Siemens Factory Branch.

ITEM NO. 10. PROJECT MANUAL, SECTION 28 13 10 ACCESS CONTROL

A. Paragraph 2.1, A, 1; remove and replace with the following: “RS2 Technologies – Access It!, no equals. Contact Central Indiana Hardware, the district’s preferred vendor, for pricing. Damir Husejnovic, Office: 317-558-5700, Mobile: 317-989-1514, Email: husejnovicd@cih-inc.com”

ITEM NO. 11. PROJECT MANUAL, SECTION 31 20 00 – EARTH MOVING

A. Add 1.1, A., 6., as follows:

“6. Subbase course and topping course for synthetic grass surfacing.”

B. Add 2.1, K. (after second J.), as follows:

“K. Synthetic Grass Surfacing Base Materials: The base materials are critical to the performance of the entire system and should contain the necessary components and characteristics to satisfy local conditions.

1. Soil Separator: A geo-textile fabric shall be placed over the entire subgrade and within the pipe trenches prior to the installation of the base materials to minimize contamination of the aggregate and possible clogging of the perforated drainage pipes. Where soil conditions warrant, a polyethylene, PVC or other impermeable sheet liner may be used in lieu of the geo-textile to inhibit storm water infiltration into the subsoil.
2. Aggregate: The aggregate materials utilized to construct the field base must be a properly, graded, crushed stone to provide a balance between stability and permeability. A highly fractured material is desirable to provide the surface stability required for the synthetic turf surfacing, supplemental padding or porous paving as applicable. The graded aggregate particle sizes must be tightly controlled to fall within the bandwidth for all specified sieve sizes with just enough fines to provide stability while still allowing for sufficient drainage. Minimum stability and permeability requirements should be determined and confirmed by an independent certified laboratory prior to construction of the base course.
   a. Subbase material shall be 1 inch diameter, maximum as indicated on Drawings.
   b. Topping course shall be open graded fine crushed stone as indicated on Drawings.
3. Compaction: The base materials should be thoroughly compacted to prevent differential settlement across the field area. Minimum compaction levels should not be less than 90 percent density as measured by a standard proctor test. Special attention should be given to backfill compaction of any utility trenches that cross the field area.

C. Add 2.3, B., as follows:

“B. Separation Geotextile (Synthetic Grass Surfacing): Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 247lbf; ASTM D 4632.
3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.
5. Puncture Strength: 90 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours’ exposure; ASTM D 4355.

D. Add 3.1, D., as follows:

"D. Synthetic Grass Surfacing Subgrade Preparation: The subgrade should provide a stabilized foundation upon which base materials and subsequent components of playing field systems will be installed.

1. Function: It should also provide the pitched surface on which storm water is directed toward the active drainage system for evacuation.
2. Shape and Compaction: Prior to placement of base materials, the subgrade should be shaped to an appropriate profile and compacted by proof rolling to obtain a firm even surface. Depressed areas should be filled and unsuitable materials removed and replaced with clean fill or aggregate. Compaction should be performed to achieve a minimum of 90 percent in accordance with ASTM D698 Standard Proctor Method. The appropriate moisture content must be maintained in the field subgrade to allow for optimal levels of compaction.
3. Subgrade (Rough) Planarity: The tolerances for the finished subgrade should not exceed one inch as measured by a 10 foot straight edge. Grading of the subgrade shall minimize ponding to the extent practical.
4. Proof-roll the subgrade in presence of Owner's Testing Agency and Synthetic Grass Surfacing Manufacturer to assure a consistent and uniform compaction of the entire field. The Synthetic Grass Surfacing Manufacturer must approve the subgrade preparation before commencing drainage installation and aggregate subbase installation."

E. Add 3.18 C., as follows:

"C. Synthetic Grass Surfacing Aggregate Subbase: Installation of the aggregate base should provide a close, evenly textured surface meeting the required tolerances.

1. Construction: Extreme care should be taken to ensure that there is no disturbance to the subgrade and that there is no displacement of the soil separator. All disturbed, displaced, or damaged material is to be repaired or replaced.
2. Placement: The aggregate base should be placed in a manner that will produce an evenly graded mass to the depth specified. The material should be constructed in successive horizontal layers not over six (6) inches in depth when compacting across the entire field area when spread by appropriate equipment and methods, and should be thoroughly and uniformly compacted with a self-propelled roller to achieve the specified density. The material should be placed and distributed so that there will be no pockets of uniform size solid material. Any pockets resulting from segregation of the stone during installation should be reworked.
3. Compaction: The field base materials should be thoroughly compacted to prevent any significant differential settlement across the area of synthetic turf surfacing. Typical minimum compaction levels are 90 percent Standard Proctor for the base materials. The appropriate moisture content must be maintained in the base materials to allow for optimal levels of compaction.
4. Finish-Grade Planarity (surface tolerances): Irregularities in the surface of the base materials are typically reflected in the finished field surface. Therefore it is important to install the base materials to controlled tolerances. The local deviation of the finished surface of the base stone should not exceed 1/4 inch in any direction when measured beneath a 10 foot long straight edge. Hollows and depressions, which may have developed during the process of compacting the base, should be filled with acceptable material and recompacted."

ITEM NO. 12. PROJECT MANUAL, SECTION 32 17 13 – PARKING BUMPERS

A. Add 1.1, B., as follows:

"B. Bollards."

B. Add 2.1, B., as follows:

"B. Bollards: Refer to Site Drawings and Details for Bollard manufacturer and model number."

ITEM NO. 13. 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

Section 08 12 13 – Hollow Metal Frames
- De La Fontaine, Quebec, Canada

Section 08 91 19 – Fixed Louvers
- Pottorff

Section 23 33 00 – Air Duct Accessories
- Pottorf; a division of PCI Industries (Article 2.6 A.)
- Pottorf; a division of PCI Industries (Article 2.7 A.)

ITEM NO. 14. REVISED DRAWING SHEETS

A. Drawing Sheets: Cover, Index, GD1.3, G1.3, G2.3, G4.1, G4.2, G4.3, G4.4, G5.2, SU1.0, SU1.3, SU1.5, SU2.1, SU2.2, S1.02, A1.01, A1.02, A1.03, A3.01, A5.01, A6.01, A7.01, A8.01, A8.03, A9.01, PFP.01, P2.00, P2.01, P2.02, P3.02, P4.01, M2.01, M5.01, E1.1, E1.2, E2.1, E3.01, E3.17, E4.1, E5.1, E6.1, E7.1, T1.01, T2.01 and T3.01 have been revised, dated 1/6/23, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

SECTION 08 45 13 - STRUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Structured-Polycarbonate-Panel Assemblies: Insulated translucent wall panel system:
   1. Vertical wall system glazed with translucent multi-wall polycarbonate interlocking panels incorporated into a complete aluminum framed system that has been tested and warranted by the manufacturer.
   2. All anchors, brackets, and hardware attachments necessary to complete the specified structural assembly, weatherability and water-tightness performance requirements. All flashings up to but not penetrating adjoining work are also required as part of the system and shall be included.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. ICC-ES report for glazing panels.
   2. Test reports for glazing panels.
   3. Include construction details, material descriptions, dimensions of individual components, profiles and finishes for aluminum components of panel assemblies.
   4. Qualification Data: For qualified Installer.
   5. Product Test Reports: For each structured-polycarbonate-panel assembly, for tests performed by a qualified testing agency.
   6. Sample Warranties: For special warranties.

B. Shop Drawings: For panel assemblies.
   1. Include plans, elevations, sections, details, and attachments to other work.
   2. Include details of provisions for assembly expansion and contraction and for draining moisture within the assembly to the exterior.

C. Delegated-Design Submittal: For panel assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 CLOSEOUT SUBMITTALS

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 panel assemblies to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

B. Glazing panels must be evaluated and listed by recognized building code evaluation organization: International Code Council Evaluation Services, Inc.

C. Manufacturer: Responsible for engineering, configuration and fabrication of the complete panel system.

D. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
   1. Build mockup of typical panel assemblies.
   2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of panel assemblies that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures including, but not limited to, excessive deflection.
      b. Deterioration of metals and other materials beyond normal weathering.
      c. Water leakage.
   2. Warranty Period: Five years from date of Substantial Completion.

B. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace structured-polycarbonate panels that exhibit defects in materials or workmanship within specified warranty period.
   1. Defects include, but are not limited to, the following:
      a. Change in light transmission of no more than 6% per ASTM D-1003.
      b. No delamination of panel affecting appearance, performance or structural integrity of the panel or the system.
      c. Thermal aging: Light transmission and color shall not change after exposure to heat of 300 degrees F for 25 minutes when measured per ASTM D-1003 and ASTM D-2244 respectively.
   2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STRUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

A. Structured-Polycarbonate-Panel Assemblies: Dual wall fully fabricated translucent assemblies consisting of inner and outer panels with interlocking connectors or H battens that are supported by aluminum framing and glazed with structured-polycarbonate panels.
   1. Individual panel thickness: Nominal 10 mm.
   2. Overall assembly thickness: Nominal 4 inches.
   3. Products:
      a. UniQuad, Kingspan Light and Air.
      b. Lightwall 210, Extech Exterior Technologies.
      c. Thermalite Plus, Crystal Structures.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design structured-polycarbonate-panel assemblies.
   1. Design, engineer, manufacture and installation of glazed insulated translucent wall-light system.
   2. Provide framing system and glazing capable of withstanding loads as defined by the local codes having jurisdiction where units are to be installed without failure.

B. Structural Loads: As indicated on Drawings.

C. Deflection Limits:
   1. Vertical Panel Assemblies: Limited to 1/100 of clear span for each assembly component.

D. Structural-Test Performance: Panel assemblies tested according to ASTM E 330, as follows:
   1. When tested at positive and negative wind-load design pressures, assemblies do not show evidence of deflection exceeding specified deflection limits.

E. Water Penetration under Static Pressure: Provide panel assemblies that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.

F. Thermal Movements: Allow for thermal movements from ambient-and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change: 120 deg. F, ambient; 180 deg. F, material surfaces.

G. Energy Performance: Provide panel assemblies with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below and certified and labeled according to NFRC:
   1. Thermal Transmittance (U-Factor): Fixed glazing and framing areas shall have U-factor of not more than 0.23 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
   2. Solar-Heat-Gain Coefficient (SHGC): Fixed glazing and framing areas shall have an SHGC of no greater than 0.34 as determined according to NFRC 200.
   3. Visible Light Transmission – per ASTM E972 ASTM & E1084.

H. Weatherability:
   1. Light transmission shall not decrease more than 6% as measured by ASTM D-1003 over 10 years, or after exposure to temperature of 300 degrees F for 25 minutes.
   2. Panels must be manufactured from polycarbonate resin with a permanent, co-extruded ultra-violet protective layer. Post-applied coatings or films of dissimilar materials are unacceptable.
   3. Faces shall not become readily detached when exposed to temperature of 300 degrees F and 0 degrees F for 25 minutes.
   4. Thermal Aging: Interior and exterior panel shall not change color in excess of 0.75 Delta E per ASTM D2244 and shall not darken more than 0.3 units Delta L per ASTM D2244 and shall show no cracking or crazing when exposed to 300 degrees F for 25 minutes.

2.3 STRUCTURED-POLYCARBONATE PANELS

A. Structured-Polycarbonate Panels: translucent, extruded-polycarbonate sheet with multiwall cellular cross section that provides isolated airspaces and that is coextruded with a UV-protective layer.

B. Assembly Thickness: Nominal 4 inch deep, two panel system with concealed interlocking connector or H battens.

C. Sheet Thickness for inner and outer panels: Nominal 10 mm.

D. Sheet Width: Manufacturer’s standard.

E. Profile: Tongue and groove.

F. UV Resistance: On both surfaces.

G. Interior/Exterior panel Color: Clear Matte.

H. Panel Performance:
   1. Plastic Self-Ignition Temperature: 650 deg F or more according to ASTM D 1929.
   2. Smoke-Developed Index: 450 or less according to ASTM E 84, or 75 or less according to ASTM D 2843.
   3. Combustibility Classification: Class CC1 based on testing according to ASTM D 635.
   4. Interior Finish Classification: Class A based on testing according to ASTM E 84.
   5. Color Change: Not more than 3.0 units Delta E, when measured according to ASTM D 2244, after outdoor weathering compliant with procedures in ASTM D 1435
   6. Impact Resistance: No failure at impact of 200 ft. x lbf according to freefalling-ball impact test using a 3-1/2-inch- diameter, 6.3-lb ball.
   7. Haze Factor: Greater than 90 percent when tested according to ASTM D 1003.

I. Panel Joint System:
   1. Panel shall be extruded in one single formable length. Transverse connections are not acceptable.
   2. The panels should be manufactured with grip-lock double tooth upstands that are integral to the unit. The upstands shall be 90 degrees to the panel face.
   3. Metal H battens shall consist of 2 pieces, male/female concept with built in silicone gasket, allowing for a unitized panel assembly.

2.4 ALUMINUM FRAMING SYSTEMS

A. Components: Manufacturer's standard extruded-aluminum members of thickness required and reinforced as required to support imposed loads.
   1. Construction: Thermally broken, extruded aluminum.
      a. Fabricate frame with poured and de-bridged polyurethane thermal breaks.

B. Aluminum: Alloy and temper recommended in writing by manufacturer for type of use and finish indicated.
   1. Sheet and Plate: ASTM B 209.
   2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 22.
   3. Extruded Structural Pipe and Tubes: ASTM B 429.
   4. Structural Profiles: ASTM B 308..

C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning skylight components.

D. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, nonstaining, and nonbleeding fasteners and accessories; compatible with adjacent materials.
   1. At closures, retaining caps, or battens, use ASTM A 193, 300 series stainless-steel screws.
   2. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
   3. At movement joints, use slip-joint linings, spacers, and sleeves of material and type recommended in writing by manufacturer.
   4. Provide Manufacturer’s standard intermediate support framing, anchor clips and clip fasteners where panels have to be supported at intermediate points due to spanning capabilities.
   5. Installation accessories: Where required to attach to building structure, provide strap installation components at head and jambs, made of 1/8 inch thick aluminum plate with countersunk flat head mechanical fasteners.

E. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123 or ASTM A 153 requirements.

F. Anchor Bolts: ASTM A 307, Grade A, galvanized steel.

G. Concealed Flashing: Corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.

H. Exposed Flashing and Closures: Aluminum sheet not less than 0.050 inch or 0.063 inch thick as required by span of flashing, finished to match framing.
   1. Sill flashing and closure trim as required by Drawings.
   2. Subsill extrusions: Manufacturer's standard with provisions for weep drainage to exterior.

I. Framing Gaskets: Manufacturer's standard gasket system with low-friction surface treatment designed specifically for retaining structured-polycarbonate panels.

J. Frame-System Sealants: As recommended in writing by manufacturer.

K. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 FABRICATION

A. Fabricate aluminum components that, when assembled, have the following characteristics:
   1. Profiles that are sharp, straight, and free of defects or deformations.
   2. Accurately fitted joints with ends coped or mitered.
   3. Internal guttering systems or other means to drain water passing through joints and moisture migrating within assembly to exterior.

B. Fabricate aluminum sill closures with weep holes and for installation as continuous component.

C. Reinforce aluminum components as required to receive fastener threads.

2.6 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

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

3.2 INSTALLATION

A. General: Comply with manufacturer's written instructions.
   1. Do not install damaged components.
   2. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
   3. Rigidly secure nonmovement joints.
   4. Install anchors with separators and isolators to prevent metal corrosion, electrolytic deterioration, and immobilization of moving joints.
   5. Seal joints watertight unless otherwise indicated.

B. Metal Protection: Where aluminum components will contact dissimilar materials, protect against galvanic action by painting contact surfaces with corrosion-resistant coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.

C. Install components plumb and true in alignment with established lines and elevations.

D. Erection Tolerances: Install panel assemblies to comply with the following maximum tolerances:
   1. Alignment: Limit offset from true alignment to 1/32 inch where surfaces abut in line, edge to edge, at corners, or where a reveal or protruding element separates aligned surfaces by less than 3 inches; otherwise, limit offset to 1/8 inch.
   2. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet, but no greater than 1/2 inch over total length.

END OF SECTION 08 45 13

SECTION 26 56 00 - EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Exterior luminaires with lamps, ballasts, and solid-state lighting drivers.
   2. Luminaire-mounted photoelectric relays.
   3. Poles and accessories.

B. Related Sections include the following:
   1. Division 26 Section "Interior Lighting" for exterior luminaires normally mounted on exterior surfaces of buildings.
   2. Division 26 Section "Lighting Control Devices" for automatic control of lighting, including time switches, photoelectric relays, occupancy sensors, emergency transfer devices and multipole lighting relays and contactors.

1.2 DEFINITIONS

A. CRI: Color-rendering index.

B. HID: High-intensity discharge.

C. LED: Light-emitting diode.

D. Luminaire: Complete lighting fixture, including ballast and SSL driver housing if provided.

E. Pole: Luminaire support structure, including tower used for large area illumination.

F. SSL: Solid-state lighting.

G. Standard: Same definition as "Pole" above.

1.3 STRUCTURAL ANALYSIS CRITERIA FOR POLE SELECTION

A. Dead Load: Weight of luminaire and its horizontal and vertical supports, and supporting structure, applied as stated in AASHTO LTS-5.

B. Ice Load: Load of 3 lbf/sq. ft., applied as stated in AASHTO LTS-5.

C. Wind Load: Pressure of wind on pole and luminaire, calculated and applied as stated in AASHTO LTS-5.
   1. Basic wind speed for calculating wind load for poles 50 feet or less in height is 90 mph.
      a. Wind Importance Factor: 1.0.
      b. Minimum Design Life: 50 years.
      c. Velocity Conversion Factors: 1.0.

1.4 SUBMITTALS

A. Quality Assurance/Control Submittals:
   1. Product Data: For each luminaire, pole, and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
      a. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
      b. Details of attaching luminaires and accessories.
      c. Details of installation and construction.
      d. Luminaire materials.

e. Photometric data based on laboratory tests of each luminaire type, complete with indicated lamps, ballasts, SSL drivers, and accessories.
   1) Photometric data shall be certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
   2) Manufacturer's test data for IESNA TM-15-07: Backlight, Uplight, and Glare (BUG) Ratings for each specified plan type luminaire.
f. Photoelectric relays.
g. Ballasts and SSL Drivers, including energy-efficiency data.
h. Lamps, including life, output, and energy-efficiency data.
i. Materials, dimensions, and finishes of poles.
j. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.
k. Anchor bolts for poles.

2. Pole and Support Component Certificates: Signed by manufacturers of poles, certifying that products are designed for indicated load requirements in AASHTO LTS-5 and that load imposed by luminaire has been included in design.
3. Field quality-control test reports.

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. Operation and Maintenance Data: For luminaires and poles to include in operation and maintenance manuals.
   2. Warranty: Special warranty specified in this Section.
   3. Extra Materials: Receipt for extra materials.

1.6 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.

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

C. Comply with IEEE C2, "National Electrical Safety Code."

D. Comply with NFPA 70.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Package aluminum poles for shipping according to ASTM B 660.

B. Store poles on decay-resistant-treated skids at least 12 inches above grade and vegetation. Support poles to prevent distortion and arrange to provide free air circulation.

C. Retain factory-applied pole wrappings on metal poles until right before pole installation. For poles with nonmetallic finishes, handle with web fabric straps.

1.8 WARRANTY

A. Special Warranty for SSL Luminaires and Drivers: Manufacturer's standard form in which manufacturer of lighting unit agrees to repair or replace components that fail in materials or workmanship within specified warranty period.
   1. Warranty Period for SSL Luminaires and Drivers: 5 years from date of Substantial Completion.

B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.
   1. Warranty Period for Luminaires: One year from date of Substantial Completion.
   2. Warranty Period for Metal Corrosion: One year from date of Substantial Completion.
   3. Warranty Period for Color Retention: One year from date of Substantial Completion.
   4. Warranty Period for Lamps: Replace lamps and fuses that fail within 12 months from date of Substantial Completion; furnish replacement lamps and fuses that fail within the second 12 months from date of Substantial Completion.
   5. Warranty Period for Poles: Repair or replace lighting poles and standards that fail in finish, materials, and workmanship within manufacturer's standard warranty period, but not less than one year 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. Lamps: 10 for every 100 of each type and rating installed. Furnish at least one of each type.
   2. Glass and Plastic Lenses, Covers, and Other Optical Parts: 10 for every 100 of each type and rating installed. Furnish at least one of each type.
   3. Ballasts and SSL Drivers: 10 for every 100 of each type and rating installed. Furnish at least one of each type.
   4. Globes and Guards: 10 for every 20 of each type and rating installed. Furnish at least one of each type.
   5. LED Packages, Arrays and Modules: 1 for every 100 of each type and rating installed. Furnish at least one of each type.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

B. Products of other manufacturers will be considered for acceptance only when allowed in Section 260050, General Electrical Requirements.

2.2 LUMINAIRES, GENERAL REQUIREMENTS

A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.

B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.

C. Metal Parts: Free of burrs and sharp corners and edges.

D. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.

E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.

F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast and SSL driver when door opens.

G. Exposed Hardware Material: Stainless steel.

H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.

J. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:
   1. White Surfaces: 85 percent.
   2. Specular Surfaces: 83 percent.
   3. Diffusing Specular Surfaces: 75 percent.

K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

L. Factory-Applied Finish for Steel and Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," or SSPC-SP 10/NACE No. 2, "Near-White Blast Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
   2. Exterior Surfaces: Manufacturer's standard finish consisting of electro-statically coated urethane polyester thermosetting powder at least 3.0 mils thick, cured in a convection oven at 400 degrees F.
      a. Color: As selected from manufacturer's standard catalog of colors.
      b. Color: Match Architect/Engineer's sample of custom color.
      c. Color: As selected by Architect/Engineer from manufacturer's full range of standard and optional colors.

2.3 SSL LUMINAIRES

A. LED Package (Component) Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers: Manufacturers of LED drivers and LED modules shall be tested by the Luminaire Manufacturers and the stated warranty shall be based on the compatibility of the tested components, and substituted manufacturers will not be allowed. Refer to the list of approved LED drivers above.

B. LED Luminaires: Comply with UL 1598, in addition to the requirements contained in UL Subject 8750. Photometric data complying with IES LM-79, Energy Star rated by the U.S. Department of Energy, CRI 75 (minimum), color temperature 4000 K, white light produced by binary complementary wavelength conversion. Color mixing red, green, and blue LEDs is not acceptable. Listed for damp or wet locations according to application.
   1. LED Packages, Arrays, and Modules: Binned for color consistency per NEMA SSL 3; and B50, L70 rating of at least 50,000 hours when tested according to IES LM-80.
   2. LED packages, arrays or modules shall be field replaceable without having to replace the entire luminaire.

2.4 LUMINAIRE-MOUNTED PHOTOELECTRIC RELAYS

A. Selected luminaires as shown on the drawings shall have a photoelectric relay installed at the factory, to automatically de-energize the luminaire after a period of time when there is sufficient daylight and the luminaire does not need to operate. Refer to Division 26 Section "Lighting Control Devices" for additional details.

2.5 LUMINAIRE-MOUNTED OCCUPANCY SENSOR

A. Selected luminaires as shown on the drawings shall have an integral occupancy sensor installed at the factory, to automatically de-energize the luminaire, after an adjustable period of time, when the area is not occupied. Refer to Division 26 Section "Lighting Control Devices" for additional details.

2.6 EMERGENCY TRANSFER DEVICE, GENERATOR TRANSFER DEVICE, and WHOLE CIRCUIT TRANSFER DEVICES.

A. Selected luminaires as shown on the drawings shall have a transfer device installed at the factory, or a whole circuit device installed in the field, to automatically transfer the branch circuit from a normal source to an emergency source. Refer to Division 26 Section "Lighting Control Devices" for additional details.

2.7 DRIVERS FOR SSL LUMINAIRES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:
   1. Sylvania.
   2. Philips Lighting Co.
   3. EldoLED (Acuity Brand).
   4. Energy Recovery Products (Cooper Brand).
   5. Thomas Research Products (Hubbell Brand).
   6. Lutron (1% dimming).

B. Electronic Drivers: Comply with ANSI C82.11, NEMA SSL 1, and UL 935 in addition to the requirements contained in UL Subject 8750; UL Class 2 listed power supply, isolated output, and designed for type and quantity of LEDs served, listed for damp or wet locations according to application.
   1. Input Rating: 120 to 277 V, 60 Hz, plus or minus 10 percent.
   2. Output Rating: 12 or 24 V dc, 350 mA, plus or minus 5 percent.
   3. Sound Rating: Class A.
   4. Total Harmonic Distortion Rating: Less than 20 percent.
   5. Transient Voltage Protection: IEEE C62.41, Category A or better.
   6. Minimum Operating Temperature: minus 40 deg F.
   7. Power Factor: 0.90 or higher.

C. Drivers for Dimmer-Controlled Lighting Fixtures: Electronic type.
   1. Dimming Range: 100 to 10 percent of rated LED lumens.
   2. Driver Input Watts: Can be reduced to 25 percent of normal.
   3. Compatibility: Certified by manufacturer for use with specific dimming control system and lamp type indicated.
   4. Control: 0 to 10 V dc.

2.8 POLES AND SUPPORT COMPONENTS, GENERAL REQUIREMENTS

A. Structural Characteristics: Comply with AASHTO LTS-5.
   1. Wind-Load Strength of Poles: Adequate at indicated heights above grade without failure, permanent deflection, or whipping in steady winds of speed indicated in Part 1 "Structural Analysis Criteria for Pole Selection" Article, with a 3-s gust effect factor of 1.14.

B. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts, unless otherwise indicated.

C. Mountings, Fasteners, and Appurtenances: Corrosion-resistant items compatible with support components.
   1. Materials: Shall not cause galvanic action at contact points.
   2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication, unless stainless-steel items are indicated.
   3. Anchor-Bolt Template: Plywood or steel.

D. Concrete Pole Foundations: Cast in place, with anchor bolts to match pole-base flange. Concrete, reinforcement, and formwork are specified in Division 03 Section "Cast-in-Place Concrete."

2.9 ALUMINUM POLES

A. Poles: Seamless, extruded structural tube complying with ASTM B 429/B 429M, Alloy 6063-T6 with access handhole in pole wall.
   1. Shape: Round, straight.
   2. Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.

B. Grounding and Bonding Lugs: Welded 1/2-inch (13-mm) threaded lug, complying with requirements in Division 26 Section "Grounding and Bonding for Electrical Systems," listed for attaching grounding and bonding conductors of type and size listed in that Section, and accessible through handhole.

C. Brackets for Luminaires: Detachable, with pole and adapter fittings of cast aluminum. Adapter fitting welded to pole and bracket, then bolted together with stainless-steel bolts.
   1. Tapered oval cross section, with straight tubular end section to accommodate luminaire.
   2. Finish: Same as luminaire.

D. Aluminum Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
   2. Color: Match finish process and color of luminaire.

E. Vibration Dampening: Units selected by manufacturer to limit induced harmonic pole vibration.

2.10 POLE ACCESSORIES

A. Base Covers: Manufacturers' standard metal units, arranged to cover pole's mounting bolts and nuts. Finish same as pole.

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

A. Comply with NECA 501.

B. Install lamps in each luminaire.

C. Fasten luminaire to indicated structural supports.
   1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.

D. Adjust luminaires that require field adjustment or aiming. Include adjustment of photoelectric device to prevent false operation of relay by artificial light sources.

3.2 POLE INSTALLATION

A. Align pole foundations and poles for optimum directional alignment of luminaires and their mounting provisions on the pole.

B. Clearances: Maintain the following minimum horizontal distances of poles from surface and underground features, unless otherwise indicated on Drawings:
   1. Fire Hydrants and Storm Drainage Piping: 60 inches.
   2. Water, Gas, Electric, Communication, and Sewer Lines: 10 feet.
   3. Trees: 15 feet.

C. Concrete Pole Foundations: Set anchor bolts according to anchor-bolt templates furnished by pole manufacturer. Concrete materials, installation, and finishing requirements are specified in Division 03 Section "Cast-in-Place Concrete."
   1. Finish: Smooth-rubbed finish as specified in Division 03 Section “Cast-in-Place Concrete.”

D. Foundation-Mounted Poles: Mount pole with leveling nuts, and tighten top nuts to torque level recommended by pole manufacturer.
   1. Use anchor bolts and nuts selected to resist seismic forces defined for the application and approved by manufacturer.
   2. Grout void between pole base and foundation. Use nonshrink or expanding concrete grout firmly packed to fill space.
   3. Install base covers, unless otherwise indicated.
   4. Use a short piece of 1/2-inch-diameter pipe to make a drain hole through grout. Arrange to drain condensation from interior of pole.

E. Poles and Pole Foundations Set in Concrete Paved Areas: Install poles with minimum of 6-inch-wide, unpaved gap between the pole or pole foundation and the edge of adjacent concrete slab. Fill unpaved ring with pea gravel to a level 1 inch below top of concrete slab.

F. Raise and set poles using web fabric slings (not chain or cable).

G. Install vibration dampening devices.

3.3 INSTALLATION OF INDIVIDUAL GROUND-MOUNTING LUMINAIRES

A. Install on concrete base with top 4 inches above finished grade or surface at luminaire location. Cast conduit into base, and finish by troweling and rubbing smooth. Concrete materials, installation, and finishing are specified in Division 03 Section "Cast-in-Place Concrete."

3.4 CORROSION PREVENTION

A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

B. Steel Conduits: Comply with Division 26 Section "Raceway and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch-thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.5 GROUNDING

A. Ground metal poles and support structures according to Division 26 Section "Grounding and Bonding for Electrical Systems."
   1. Install grounding electrode for each pole, unless otherwise indicated.
   2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.

B. Ground nonmetallic poles and support structures according to Division 26 Section "Grounding and Bonding for Electrical Systems."
   1. Install grounding electrode for each pole.
   2. Install grounding conductor and conductor protector.

3. Ground metallic components of pole accessories and foundations.

3.6 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.
   1. Verify operation of photoelectric controls.

C. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

END OF SECTION 26 56 00

SECTION 32 92 00 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Seeding.
2. Hydroseeding.
3. Sodding
4. Turf renovation
5. Native Plantings

B. Related requirements:

1. Section 329300 "Plants" for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.
2. Section 312000 "Earth Moving" for subgrade preparation, fill material, and topsoil.
3. Section 329113 “Soil Preparation” for the preparation of planting beds and soil for tree pits.

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" and drawing designations for planting soils.

E. Top Soil: Loose, friable soil of loamy character, graded free from subsoil, clay lumps, vegetation, weeds, debris, rocks larger than one inch in any dimension, or other material detrimental to proper vegetative growth. Topsoil shall comply with ASTM D 5268 having a pH range of 5.5 to 7.5 and minimum 4% organic material. Topsoil shall meet this specification and shall be from a source approved by the architect/engineer.

F. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For landscape Installer.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Submit sod data and source.
   1. Submit shipping orders from sod delivery truck showing sod origin and date of cutting. Note the time of delivery on the shipping orders.
   2. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.

D. Product Certificates: For fertilizers, from manufacturer.

E. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

F. Certification of Native Seed: From seed vendor for each seed mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf and meadow establishment.
   1. Experience: Three years' experience in turf installation in addition to requirements in Section 014000 "Quality Requirements."
   2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
   3. Pesticide Applicator: State licensed, commercial and shall conform to all local ordinances.

B. Topsoil Testing: Take samples of the topsoil and have tests made (such as "Quick Test" to determine if lime should be used), using methods approved by the Association of Agricultural Chemists or the State Agricultural Experiment Station. Preparation work necessary to bring the topsoil into proper condition to receive seeding shall be made in accordance with said tests at no additional cost to the Owner. Copy of the said tests and recommendations are to be submitted to the Architect for approval prior to starting of Work under this Section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in Section 4: Specifications for Turfgrass Sod Materials and Section 5: Transplanting and Installation in TPI's (Turfgrass Producers International) "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
   1. Deliver sod on covered pallets in rolls. Protect exposed roots from dehydration. Do not deliver more sod than can be laid on delivery date. Uncovered and dried out sod will be rejected upon arrival.

C. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

1.7 FIELD CONDITIONS

A. Contractor will be notified in writing by Architect/Engineer when Work on this Project has progressed sufficiently to commence work of seeding. Thereafter, seeding operations shall be conducted under favorable weather conditions during next season or seasons which are normal for such work as determined by accepted practice in locality of Project. At option and on full responsibility of Contractor, seeding operations may be conducted under unseasonable conditions without additional compensation.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species: (select species for application)
1. Quality: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
2. Sun and shade (medium maintenance)
   a. 36 percent creeping red fescue (2 varieties)
   b. 36 percent perennial ryegrass (2 varieties)
   c. 28 percent kentucky bluegrass (3 varieties)

2.2 TURFGRASS SOD

A. Turfgrass Sod: Certified, complying with Section 4: Specifications for Turfgrass Sod Materials in TPI's (Turfgrass Producers International) "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.

B. Sod Species: (select species for application)
1. Sun and Partial Shade (Medium Maintenance Area): Blend of Tall Fescue and Kentucky Bluegrass

C. Thickness of cut: Sod shall be machine cut at a uniform soil thickness of 5/8 inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.

D. Pad size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus ½" on width and plus or minus 5% on length. Broken pads and torn or uneven ends will not be acceptable.

E. Strength of sod section: Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10% of the section.

F. Moisture content: Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

G. Thatch: Sod shall be relatively free of thatch, up to ½" allowable (uncompressed).

H. Diseases, Nematodes, and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects.

I. Weeds:
   1. Sod shall be free of objectionable grassy and broad leaf weeds. Sod shall be considered free of such weeds if less than 5 such plants are found per 100 sq. ft. of area.

J. Sod shall be delivered within eight (8) hours of cut from the nursery field.

2.3 FERTILIZERS

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

   1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
   2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.4 MULCHES

A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

2.5 PESTICIDES

A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.6 COMPOST

A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:

1. Feedstock: Limited to leaves and may include animal waste.
2. Reaction: pH of 5.5 to 8.
3. Soluble-Salt Concentration: Less than 4 dS/m.
4. Moisture Content: 35 to 55 percent by weight.
5. Organic-Matter Content: 50 to 60 percent of dry weight.
6. Particle Size: Minimum of 98 percent passing through a 1/2-inch sieve.

2.7 NATIVE SEED MIX

A. Native Seed: Fresh, clean, and dry new six of mixed species as follows:
1. Slope Stabilization Seed Mix available from Carndo Native Plant Nursery or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
4. Determine location of all underground utilities and perform work to avoid possible damage. If required, hand work should be used to prepare the soil for seeding operations. All grade stakes should be maintained until directed by the Owner for removal.

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

C. Proceed with and complete seeding as rapidly as portions of site become available, working within the seasonal limitations.

D. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

A. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.

B. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
2. Protect grade stakes set by others until directed to remove them.

C. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

A. General: Prepare planting area according to Section 312000 "Earth Moving" and Section 329113 "Soil Preparation."

B. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.

1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
2. Do not use wet seed or seed that is moldy or otherwise damaged.
3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.

B. Sow seed at a total rate of 8 lb/1000 sq. ft. in lawn areas

C. Sow seed at a total rate of 12 lb/1000 sq. ft. in athletic fields

D. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.

E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.

1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
2. Bond straw mulch by spraying with asphalt emulsion at a rate of 10 to 13 gal./1000 sq. ft.. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

F. Protect seeded areas with slopes exceeding 1:4 with erosion-control blankets and 1:6 with erosion-control fiber mesh installed and stapled according to manufacturer's written instructions.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, commercial fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Mix slurry with nonasphaltic tackifier.
2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.6 SODDING

A. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by Architect prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.

B. Comply with requirements in Section 5: Transplanting and Installation in TPI's (Turfgrass Producers International) "Guideline Specifications to Turfgrass Sodding."

C. Rake soil lightly to break up any surface crust. Lightly moisten soil where sod will be laid.

D. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. If there is a slope, run the sod perpendicular to the slope.
2. Lay sod across slopes exceeding 1:6.
3. Anchor sod on slopes exceeding 1:3 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.

E. Saturate sod with fine water spray within two hours of planting. Water in sufficient amounts to saturate sod and upper 3 inches of soil. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

F. After sod and soil have dried sufficiently to prevent damage, roll sodded areas with roller weighing 60 to 90 pounds per linear foot of roller.

G. Warning Cords
1. Install warning cords immediately after installation of sod where indicated on drawings.
2. Drive stakes twelve inches (12”) into the ground, along the perimeter of the sod; string cord from stake to stake. Securely tie at each stake.
3. Tie a piece of brightly colored plastic tape to the chord every thirty-six (36”) inches.

3.7 TURF RENOVATION

A. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
2. Install new planting soil as required.

B. Renovate existing turf where indicated.

C. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.

D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

E. Mow, dethatch, core aerate, and rake existing turf.

F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.

G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.

H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.

I. Apply initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches of existing soil. Install new planting soil to fill low spots and meet finish grades.
   1. Initial Fertilizer: Commercial fertilizer applied according to manufacturer's recommendations.

J. Apply seed and protect with straw mulch as required for new turf.

K. Water newly planted areas and keep moist until new turf is established.

3.8 TURF MAINTENANCE

A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

   1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
   2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
   3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
   4. Roll when required to remove minor depressions or irregularities.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.

   1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Immediately remove heavy clippings after mowing and

trimming. Sweep or blow clippings which fall on any pavement or walks. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

1. Mow Kentucky bluegrass to a height of 1-1/2 to 2 inches.
2. Mow turf-type tall fescue to a height of 2 to 3 inches.

D. Turf Post fertilization: Apply commercial fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that provides actual nitrogen of at least 1 lb/1000 sq. ft. to turf area.

3.9 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Architect:

1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.10 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner three (3) days before each application is performed.

B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.11 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

D. Remove non-degradable erosion-control measures after grass establishment period.

3.12 MAINTENANCE SERVICE

A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:

1. Seeded Turf: 90 days from date of planting completion.

    a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

2. Sodded Turf: 60 days from date of planting completion.

B. Native Seed Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Native Seeding Maintenance". Begin maintenance immediately after each area is planted and continue until acceptable native seed is established, but for not less than maintenance period below.

1. Maintenance Period: 60 days from date of Substantial Completion.

3.13 NATIVE SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.

1. Before sowing, mix seed with seed carrier at a ratio of not less than three parts seed carrier to one part seed.
2. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
3. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at a total rate recommended by seed supplier.

C. Brush seed into top 1/16 inch of soil, roll lightly, and water with fine spray.

D. Protect seeded areas from hot, dry weather or drying winds by applying peat or compost mulch within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

E. Water newly planted areas and keep moist until meadow is established.

3.14 NATIVE SEED MAINTENANCE

A. Maintain and establish native seeding by watering, weeding, mowing, trimming, replanting, and performing other operations as required to establish a healthy, viable native planting. Roll, regrade, and replant bare or eroded areas and remulch. Provide materials and installation the same as those used in the original installation.

1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and native seeding damaged or lost in areas of subsidence.
2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
3. Apply treatments as required to keep native seeding and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and native seed-watering equipment to convey water from sources and to keep native seeding uniformly moist.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water native seeding with fine spray at a minimum rate of 1/2 inch per week for eight weeks after planting unless rainfall precipitation is adequate.

END OF SECTION 32 92 00

SECTION 33 29 00–WELL ABANDONMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Well abandonment.

1.2 PERFORMANCE REQUIREMENTS

A. A well taken out of service shall be sealed by a licensed will driller in the State of Indiana. Wells shall be sealed per Section 312 IAC, Rule 10 of the Indiana Administrative Code and any additional local jurisdiction requirements.

1.3 SUBMITTALS

A. Quality Assurance/Control Submittals:
   1. Well sealing report

PART 2 - PRODUCTS

2.1 MATERIALS

A. The following materials shall be used for sealing wells and dry holes:
   1. Cement grouts which meet current ASTM standard C150 and NSF standard sixty and include:
      a. Type I, general-purpose cement;
      b. Type II, for use in waters with moderate sulfate content, and conditions requiring lower heat of hydration;
      c. Type III, for use in conditions requiring high early strength;
      d. Type IV, for use in conditions requiring low heat of hydration;
      e. Type V, for use in ground waters with a high sulfate content;
      f. Concrete grout for special sealing conditions.
   2. Bentonite based grouts that meet NSF standard sixty and include:
      a. High solids bentonite grout using powdered bentonite-clay or granular bentonite.
      b. Coarse grade bentonite.
      c. Pelletized bentonite.

PART 3 - EXECUTION

3.1 WELL ABANDONMENT

A. Follow well-abandonment procedures of authorities having jurisdiction. Restore ground surface to finished grade.

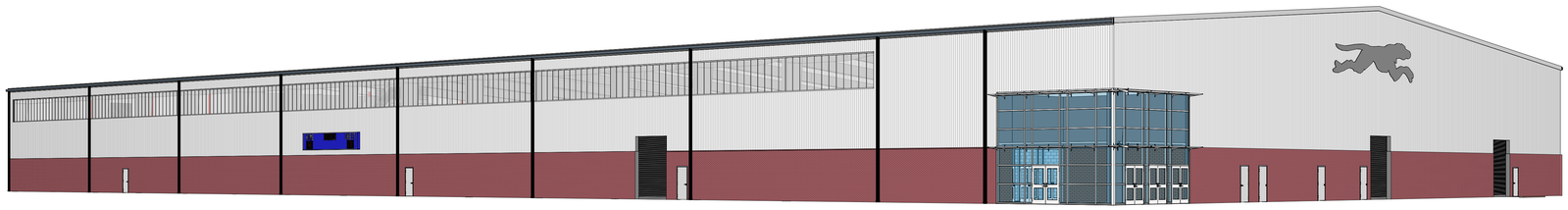
B. All wells to be sealed, dry holes, test holes, or test holes shall be sealed in accordance with the following requirements, as applicable:
   1. All obstructions shall be removed from the well including pumps and related equipment, drop pipes, pitless adapters, suction lines, trash or other debris. Pumps that cannot be removed shall be pushed to the bottom of the well, if possible or left in place if it is not possible to push it to the bottom of the well.
   2. The casing in the well should be removed, ripped or perforated to allow for sealing of the annular space.
   3. If there is water flowing from around the outside of the well casing or there is gravel packing connecting two or more hydraulic zones the well shall be overdrilled.

4. The well or dry hole shall be disinfected by adding sodium hypochlorite or calcium hypochlorite to achieve a concentration of at least one thousand milligrams per liter in the water in the well. Where the well is dry, a minimum of ten gallons of chlorine solution at one thousand milligrams per liter shall be prepared and the sides of the casing or borehole shall be rinsed.
5. Materials shall be processed and placed in the well in accordance with the following requirements:
    a. Grout shall be placed from the bottom of the well or dry hole upwards in one continuous operation until cement or bentonite based grout of approximately the same density as the grout being pumped is coming out of the top of the well or dry hole.
    b. When using cement based grouts the following requirements shall be met:
        1) Cement grouts shall be mixed using potable water according to the following specifications:
            a) Type I, II, IV, and V cement shall be mixed by adding six gallons of water per ninety-four pounds of cement with a minimum density of fifteen pounds per gallon.
            b) Type III cement shall be mixed by adding 6.3 to seven gallons of water per ninety-four pounds of cement.
            c) Concrete shall be mixed by adding ninety-four pounds of cement, an equal amount of sand, and no more than six gallons of water with a minimum density of 17.5 pounds per gallon.
            d) Cement that has calcium chloride added as an accelerator to speed up the rate of curing shall be mixed by adding two to four pounds of calcium chloride per ninety-four pounds of cement and six gallons of water with a minimum density of fifteen pounds per gal.
        2) Cement grouts shall be placed into a well by the conductor pipe pumped method of pressure grouting.
        3) Cement based grouts may be gravity poured into a dry hole where no water is present in the well or borehole.
    c. When using bentonite based grout, the following requirements shall be met:
        1) Bentonite based grout slurries shall be mixed according to the manufacturers recommendations to achieve a minimum density of 9.25 to 9.4 pounds per gallon, and a solids content of twenty-five to thirty percent bentonite by weight of water. Synthetic organic polymers that meet ANSI/NSF standard sixty may be added to bentonite slurries to suppress hydration of the bentonite particles and shall be mixed according to the manufacturer's recommendations.
        2) Bentonite grout shall be placed into the well by pressure grouting using the conductor pipe-pumped method of pressure grouting.
    d. When using course grade or pelletized bentonite the following requirements shall be met:
        1) The total volume of sealing materials used shall be within five percent of the total volume of the well or dry hole.
        2) Coarse grade or pelletized bentonite shall be poured slowly into the top of the well or dry hole to prevent bridging in the casing or borehole, in accordance with the following procedures:
            a) Coarse grade or pelletized bentonite shall be poured over a wire mesh screen to keep the fine bentonite powder from entering the well or dry hole.
            b) Course grade or pelletized bentonite shall be poured at a continuous rate no faster than three minutes per fifty pounds.
            c) The pouring process shall be halted intermittently to lower a weighted measuring tape into the well to determine the top of the sealing products and confirm that bridging has not occurred. A tamping device shall be used where possible to break any bridges that may form.
        3) Fine bentonite particles that accumulate in the shipping container shall not be used.

6. After the sealing material has been placed into the well, dry hole or test hole the sealing material shall be left a minimum of twelve hours to assess whether any settling of the sealing material has occurred. If settling has occurred, then additional grout shall be placed into the remaining void space.
7. Any remaining casing shall be cut off to a minimum depth of two feet below grade.
8. The remaining hole shall be filled with clean soil and mounded to ensure that water drains away from the sealed well or dry hole.
9. A well sealing report shall be filed with the Division of Water department with the Indiana department of natural resources, a copy provided to the well owner, and a copy retained by the registered contractor.

END OF SECTION 33 29 00

GREYHOUND ACTIVITY CENTER



OWNER
CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY ASSOCIATES INC.

CONSTRUCTION MANAGER
THE SKILLMAN CORPORATION
3834 S. EMERSON AVE., BLDG. A
INDIANAPOLIS, IN 46203
317-783-6151

The SKILLMAN Corporation
Project Administration
Construction Management

1

SITE/CIVIL ENGINEER
TLF ENGINEERS
3901 W 86th St #200, Indianapolis, IN 46268
TELEPHONE: 317-334-1500

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE
REGISTERED
No. 4169
STATE OF INDIANA
ARCHITECT

PROJECT NUMBER: 222063
PROJECT ISSUE DATE: 12-1-2022

COVER SHEET

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

\\data1\citrixprofiles$\jmoline\upm_profile\documents\222063_Greyhound Activity Centerl_jmoline6V9YA.rvt
1/6/2023 2:05:47 PM

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

Symbol	Description
SIM 1 A0.00	CALLOUT
XX'-XX"	CEILING TAG
1	CODED NOTE
XXXX	DOOR TAG
X X AX.XX X X	EXTERIOR ELEVATION
X Ref X Ref AX.XX X Ref X Ref	INTERIOR ELEVATION
X	GRID HEAD
Name EL XXX'-XX"	LEVEL LINE
1	REVISION TAG
A	ROOF TYPE TAG
SIM 1 A1.1	BUILDING/WALL SECTION
SIM 1 A1.1	DETAIL SECTION
SLOPE 1/12	ROOF SLOPE TAG
X / X### X / X###	MATCHLINE VIEW REFERENCE
W##X	WALL TAG
1t	STOREFRONT TAG
XX	WINDOW TAG
SPECIAL ED. SELF-CONTAINED CLASSROOM 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

COVER
ABBREVIATIONS AND INDEX

01 SITE

TOPO-1	SURVEY
TOPO-2	SURVEY
TOPO-3	SURVEY
TOPO-4	SURVEY
TOPO-5	SURVEY
TOPO-6	SURVEY
GD0.1	GENERAL NOTES
GD1.0	OVERAL SITE DEMOLITION PLAN
GD1.3	DEMOLITION PLAN - NORTH
GD1.5	DEMOLITION PLAN - NORTHEAST
G1.0	OVERALL SITE PLAN
G1.3	SITE PLAN - NORTH
G1.5	SITE PLAN - NORTHEAST
G2.0	OVERALL GRADING PLAN
G2.3	GRADING PLAN - NORTH
G2.5	GRADING PLAN NORTHEAST
G3.0	OVERALL EROSION CONTROL PLAN
G3.3	EROSION CONTROL PLAN - NORTH
G3.5	EROSION CONTROL PLAN NORTHEAST
G3.6	SWPPP
G3.7	EROSION CONTROL DETAILS
G4.1	SITE DETAILS
G4.2	SITE DETAILS
G4.3	SITE DETAILS
G4.4	SITE DETAILS
G5.2	ENLARGED SITE PLAN - NORTH
SU1.0	OVERALL SITE UTILITY PLAN
SU1.3	SITE UTILITY PLAN - NORTH
SU1.5	SITE UTILITY PLAN - NORTHEAST
SU2.1	SITE UTILITY DETAILS
SU2.2	SITE UTILITY DETAILS
SU2.3	SITE UTILITY DETAILS
SU2.4	SITE UTILITY DETAILS
SU3.1	STORM PLAN PROFILES
SU3.2	STORM PLAN PROFILES
SU3.3	STORM PLAN PROFILES
L1.0	OVERALL LANDSCAPE PLAN
L1.3	LANDSCAPE PLAN - NORTH
L1.5	LANDSCAPE PLAN - NORTHEAST
L2.0	LANDSCAPE DETAILS

02 STRUCTURAL

S0.01	GENERAL NOTES
S1.01	FOUNDATION PLAN
S1.02	FIRST FLOOR SLAB AND NASONRY PLAN
S3.01	FOUNDATION DETAILS
S3.02	FOUNDATION DETAILS
S3.03	FOUNDATION DETAILS
S4.01	MASONRY DETAILS
S4.02	MASONRY DETAILS
S4.03	MASONRY DETAILS

03 ARCHITECTURAL

A1.01	FIRST FLOOR OVERALL PLAN
A1.02	ENLARGED PLANS
A1.03	ENLARGED PLANS AND DETAILS
A2.01	ROOF PLAN
A3.01	BUILDING ELEVATIONS
A4.01	BUILDING SECTIONS
A5.01	WALL SECTIONS
A5.02	SECTIONS / DETAILS
A6.01	DOOR FRAMES/ SCHEDULE/ DETAILS
A7.01	FIRST FLOOR EQUIPMENT PLAN
A7.02	EQUIPMENT ELEVATIONS & DETAILS
A8.01	FIRST FLOOR FINISH PLAN
A8.02	FIELD LAYOUT & FLOORING DETAILS
A8.03	INTERIOR ELEVATIONS
A8S.01	LIST OF FINISHES
A9.01	REFLECTED CEILING PLAN

05 PLUMBING & FIRE PROTECTION

PFP.01	FIRST FLOOR FIRE PROTECTION PLAN
P1.01	SYMBOLS & ABBREVIATIONS
P2.00	OVERALL FOUNDATION PLUMBING PLAN
P2.01	FOUNDATION PLUMBING PLAN
P2.02	OVERALL FIRST FLOOR PLUMBING PLAN
P3.01	PLUMBING SCHEDULES AND DETAILS
P3.02	PLUMBING ISOMETRICS
P4.01	ENLARGED PLUMBING PLANS

06 MECHANICAL

M1.01	SYMBOLS & ABBREVIATIONS
M2.01	FIRST FLOOR MECHANICAL PLAN
M5.01	MECHANICAL SCHEDULES
M5.02	MECHANICAL DETAILS

07 ELECTRICAL

E1.1	ELECTRICAL SYMBOL LEGEND
E1.2	ELECTRICAL DETAILS & LUMINAIRE SCHEDULE
E2.1	SITE ELECTRICAL PLAN
E2.2	SITE TECHNOLOGY PLAN
E3.01	FIRST FLOOR TECHNOLOGY ROUGH-IN PLAN
E3.17	TECHNOLOGY ROUGH-IN DETAILS
E3.18	TECHNOLOGY ROUGH-IN DETAILS
E4.1	LIGHTING PLAN
E5.1	POWER PLAN
E6.1	FIRE ALARM PLAN
E7.1	RISER DIAGRAM & SCHEDULES

08 TECHNOLOGY

T1.01	TECHNOLOGY DETAILS
T1.02	TECHNOLOGY DETAILS
T3.01	FIRST FLOOR TECHNOLOGY PLAN

BUILDING CODE INFORMATION

1. BUILDING DESCRIPTION:
   EXISTING SCHOOL FACILITY BUILDING
2. APPLICABLE CODE:
   2012 INTERNATIONAL BUILDING CODE
   INDIANA BUILDING CODE 2014 EDITION
3. USE AND OCCUPANCY CLASSIFICATION INDIANA BUILDING CODE CHAPTER 3:
   A. OCCUPANCY GROUP A3 - ASSEMBLY
4. TYPE OF CONSTRUCTION INDIANA BUILDING CODE CHAPTER 6 (SEE TABLE).
   A. CONSTRUCTION TYPE: TYPE II-B (SPRINKLERED)

   FIRE-RESISTANT RATING REQUIREMENTS, INDIANA BUILDING CODE TABLE:

   REFER TO THE SITE PLAN DRAWINGS FOR LOCATION OF BUILDING(S) ON SITE; DISTANCES TO CLOSEST INTERIOR LOT LINES; TO THE CENTER OF A STREET, ALLEY OR PUBLIC WAY; OR TO AN IMAGINARY LINE BETWEEN TWO BUILDINGS ON THE SAME LOT.
5. GENERAL BUILDING HEIGHTS AND AREAS:
   AREA LIMITATION INDIANA BUILDING CODE SECTION 502:
   A. AREA LIMIATION:
      1.ALLOWABLE AREA: A3 = Unlimited per Section 507.6 Sprinkler System provided
      2.ACTUAL AREA: GROSS = 91,019 SF
   B. HEIGHT LIMITATION:
      1.ALLOWABLE HEIGHT: A3 - 2 STORY (55')
      2.ACTUAL HEIGHT: 1 STORY (42'-8")

   AN AUTOMATIC FIRE SPRINKLER SYSTEM IS USED.
6. FIRE RESISTANCE RATED CONSTRUCTION INDIANA BUILDING CODE CHAPTER 7:
   REFER TO THE CODE PLANS FOR MAXIMUM AREAS OF EXTERIOR OPENINGS BASED ON THE FIRE SEPARATION DISTANCES.
   PENETRATIONS THROUGH FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE PROVIDED WITH FIRESTOPPING PER PROJECT MANUAL.
   CEILING AND FLOOR OPENINGS THROUGH NON-FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE PROVIDED WITH FIREBLOCKING PER PROJECT MANUAL.
7. INTERIOR FINISHES TO COMPLY WITH INDIANA BUILDING CODE CHAPTER 8
8. FIRE PROTECTION SYSTEMS INDIANA BUILDING CODE CHAPTER 9:
   BUILDING IS -SPRINKLERED
9. MEANS OF EGRESS INDIANA BUILDING CODE CHAPTER 10:
   THE MEANS OF EGRESS REQUIREMENTS SHALL BE DETERMINED BY THE ACTUAL OR COMPUTED NUMBER OF OCCUPANTS WHICHEVER IS THE LARGEST NUMBER. REFER TO THE CODE PLANS FOR ROOM OCCUPANT LOADS. AREAS OR ROOMS WITH 50 OR MORE OCCUPANTS SHALL BE PROVIDED WITH TWO OR MORE MEANS OF EGRESS.
   MAIN EXIT SHALL ACCOMMODATE 50% OF EGRESS REQUIREMENT.
10. STRUCTURAL DESIGN LOADS:
   REFER TO STRUCTURAL DRAWINGS FOR CODE REQUIREMENTS

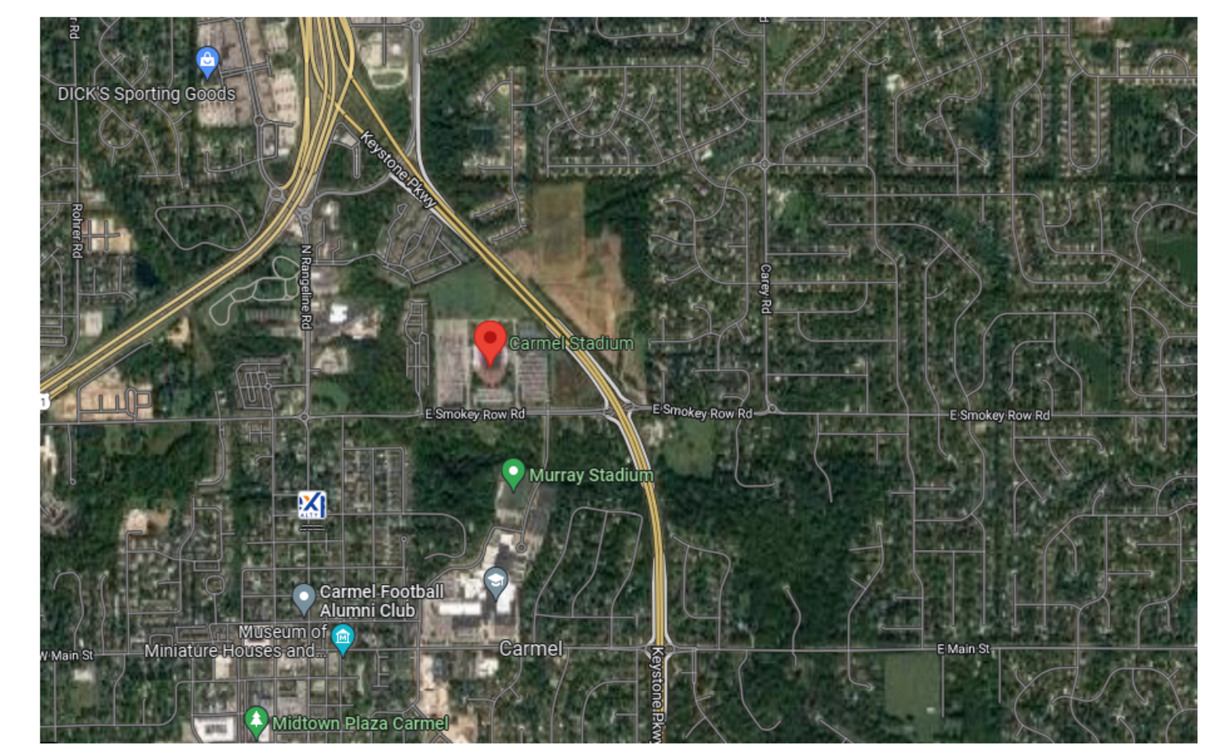
BUILDING DESIGNED FOR:
1714 OCCUPANTS

000 — ROOM NUMBER
EC — OCCUPANACY CLASS ABBREVIATION - REF TO KEY
45 — CALCULATED MAXIMUM OCCUPANT LOAD

1

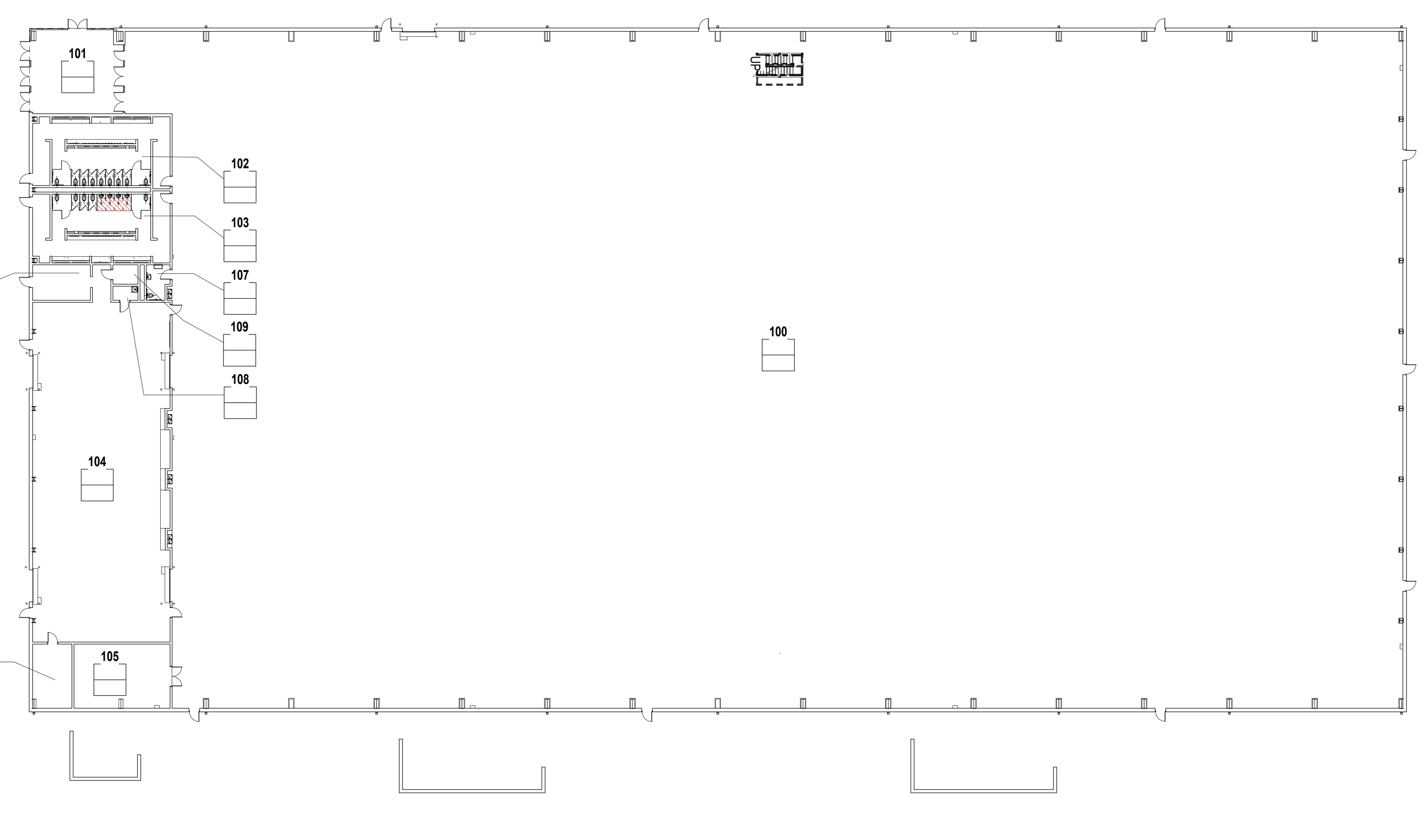
SITE LOCATION MAP

STATE MAP



VICINITY MAP

CARMEL STADIUM
2450 E 136TH ST
CARMEL, IN 46032



CODE PLAN

1

BUILDING OCCUPANCY SCHEDULE

ROOM NO.	ROOM NAME	OCCUPANCY TYPE	AREA (SF)	OCCUPANT LOAD
100	FIELD AREA	A-3	80806 SF	1617
101	VESTIBULE	--	748 SF	--
102	WOMEN'S ROOM	--	842 SF	--
103	MEN'S ROOM	--	857 SF	--
104	BAND	A-3	4551 SF	91
105	MECHANICAL	UT	596 SF	2
106	ELECTRICAL	UT	243 SF	1
107	FAMILY RESTROOM	--	74 SF	--
108	MOP SINK	UT	34 SF	1
109	IT ROOM	UT	47 SF	1
110	FIRE RISER ROOM	UT	199 SF	1
TOTAL SQUARE FOOTAGE			88997 SF	

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

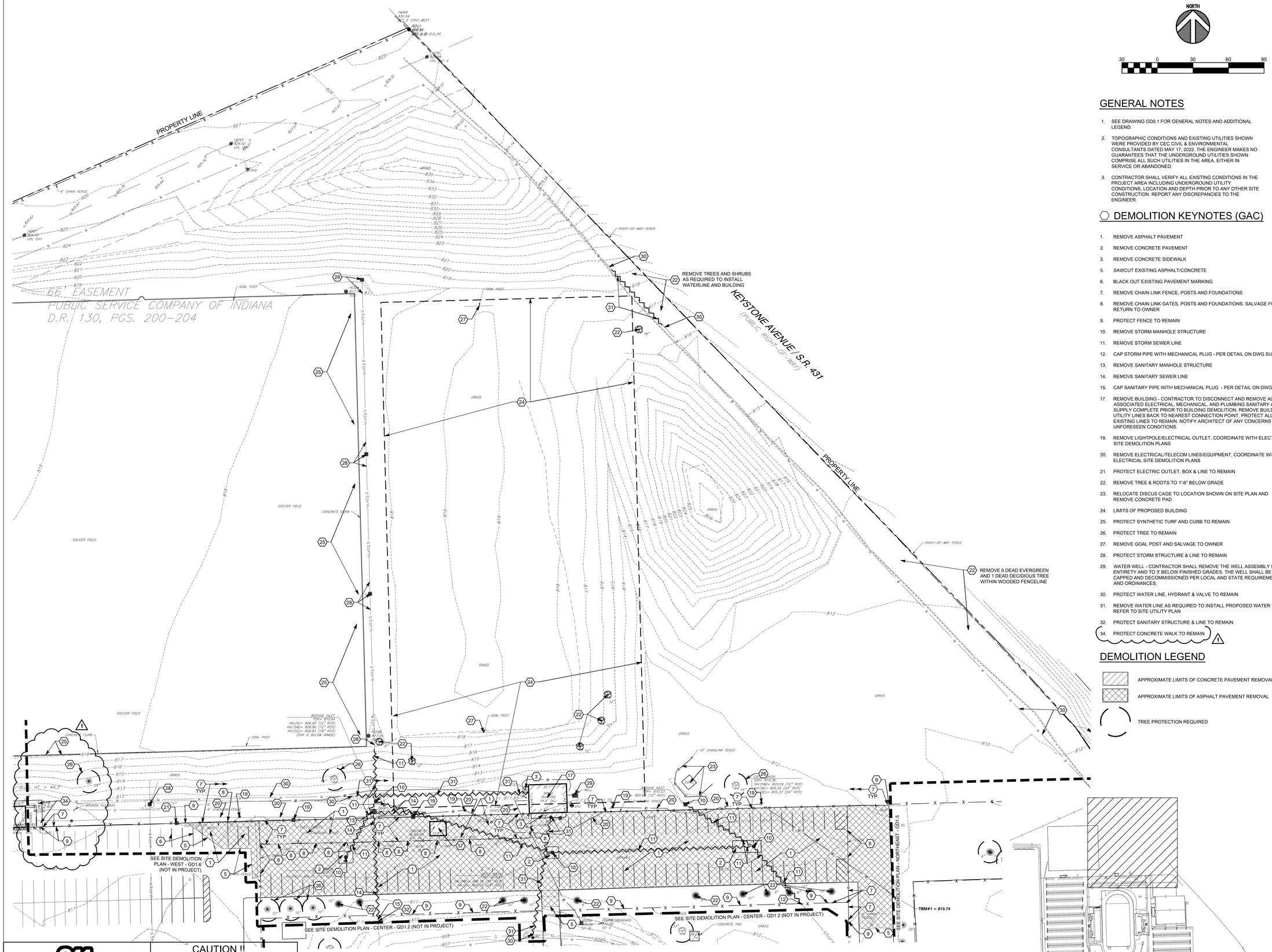
WILLIAM E. PAYNE REGISTERED No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: BB
PROJECT NUMBER: 222063
PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

INDEX, ABBREVIATIONS AND CODE PLAN

INDEX



LEGEND

NORTH

30 0 30 60 90

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

DEMOLITION KEYNOTES (GAC)

1. REMOVE ASPHALT PAVEMENT
2. REMOVE CONCRETE PAVEMENT
3. REMOVE CONCRETE SIDEWALK
5. SAWCUT EXISTING ASPHALT/CONCRETE
6. BLACK OUT EXISTING PAVEMENT MARKING
7. REMOVE CHAIN LINK FENCE, POSTS AND FOUNDATIONS
8. REMOVE CHAIN LINK GATES, POSTS AND FOUNDATIONS. SALVAGE FOR RETURN TO OWNER
9. PROTECT FENCE TO REMAIN
10. REMOVE STORM MANHOLE STRUCTURE
11. REMOVE STORM SEWER LINE
12. CAP STORM PIPE WITH MECHANICAL PLUG - PER DETAIL ON DWG SU2.1
13. REMOVE SANITARY MANHOLE STRUCTURE
14. REMOVE SANITARY SEWER LINE
15. CAP SANITARY PIPE WITH MECHANICAL PLUG - PER DETAIL ON DWG SU2.1
17. REMOVE BUILDING - CONTRACTOR TO DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL, MECHANICAL, AND PLUMBING SANITARY AND SUPPLY COMPLETE PRIOR TO BUILDING DEMOLITION. REMOVE BUILDING UTILITY LINES BACK TO NEAREST CONNECTION POINT. PROTECT ALL EXISTING LINES TO REMAIN. NOTIFY ARCHITECT OF ANY CONCERNS OR UNFORESEEN CONDITIONS.
19. REMOVE LIGHTPOLE/ELECTRICAL OUTLET, COORDINATE WITH ELECTRICAL SITE DEMOLITION PLANS
20. REMOVE ELECTRICAL/TELECOM LINES/EQUIPMENT, COORDINATE WITH ELECTRICAL SITE DEMOLITION PLANS
21. PROTECT ELECTRIC OUTLET, BOX & LINE TO REMAIN
22. REMOVE TREE & ROOTS TO 1'-6" BELOW GRADE
23. RELOCATE DISCUS CAGE TO LOCATION SHOWN ON SITE PLAN AND REMOVE CONCRETE PAD
24. LIMITS OF PROPOSED BUILDING
25. PROTECT SYNTHETIC TURF AND CURB TO REMAIN
26. PROTECT TREE TO REMAIN
27. REMOVE GOAL POST AND SALVAGE TO OWNER
28. PROTECT STORM STRUCTURE & LINE TO REMAIN
29. WATER WELL - CONTRACTOR SHALL REMOVE THE WELL ASSEMBLY IN ITS ENTIRETY AND TO 3' BELOW FINISHED GRADES. THE WELL SHALL BE CAPPED AND DECOMMISSIONED PER LOCAL AND STATE REQUIREMENTS AND ORDINANCES.
30. PROTECT WATER LINE, HYDRANT & VALVE TO REMAIN
31. REMOVE WATER LINE AS REQUIRED TO INSTALL PROPOSED WATER LINE - REFER TO SITE UTILITY PLAN
32. PROTECT SANITARY STRUCTURE & LINE TO REMAIN
34. PROTECT CONCRETE WALK TO REMAIN

DEMOLITION LEGEND

- APPROXIMATE LIMITS OF CONCRETE PAVEMENT REMOVAL
- APPROXIMATE LIMITS OF ASPHALT PAVEMENT REMOVAL
- TREE PROTECTION REQUIRED

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!

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETE MIR RICH
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

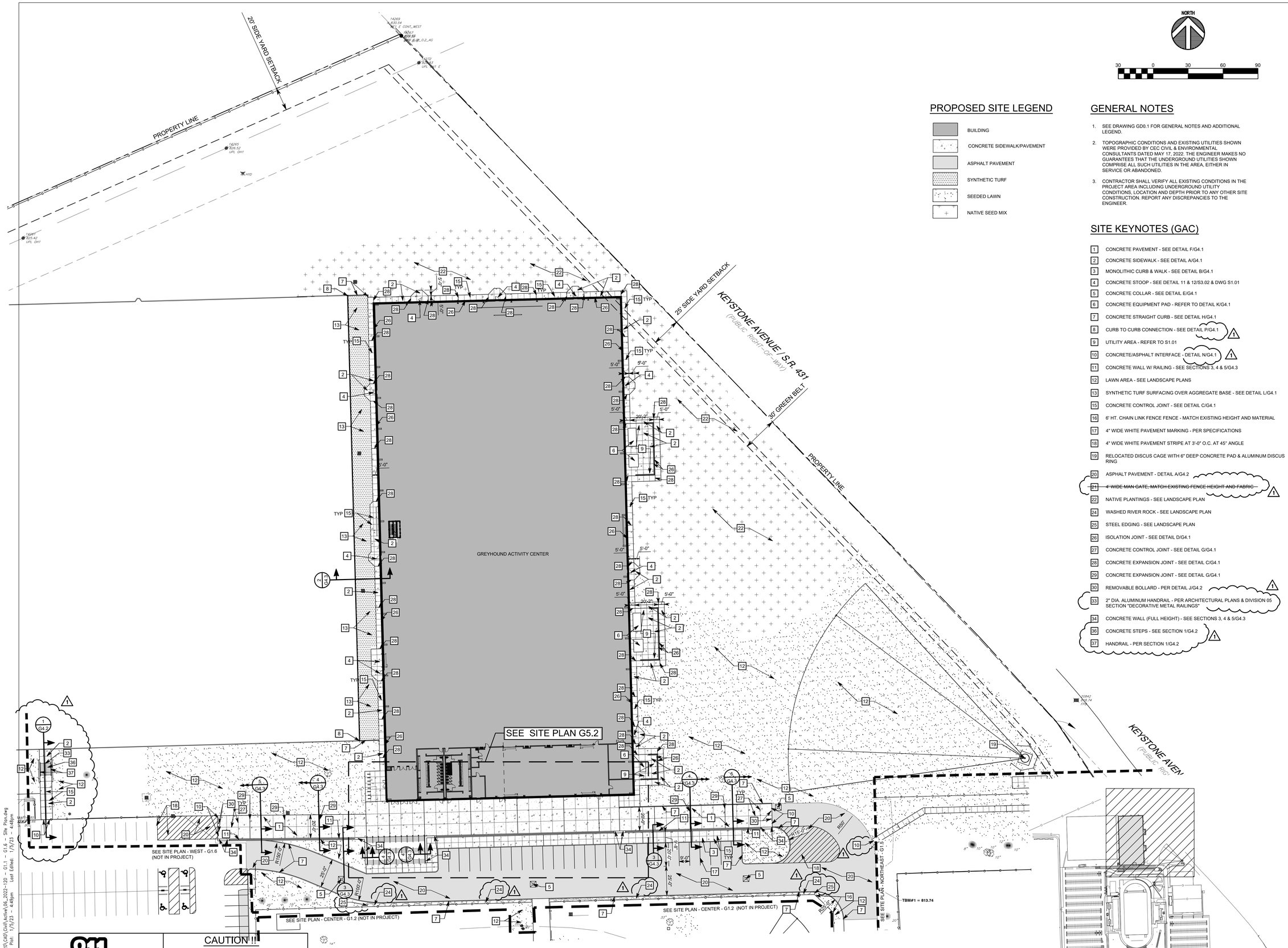
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE DEMOLITION PLAN - NORTH

GD1.3

Drawing Path: P:\2022\120\120\CAD\Civil\Active\04_2022-120 - GD1.6 - Demolition Plan.dwg
Plotted By: catheiler Time of Plot: 1/5/23 - 4:00pm Last Edited: 1/4/23 - 5:01pm



NORTH

30 0 30 60 90

PROPOSED SITE LEGEND

- BUILDING
- CONCRETE SIDEWALK/PAVEMENT
- ASPHALT PAVEMENT
- SYNTHETIC TURF
- SEEDED LAWN
- NATIVE SEED MIX

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

SITE KEYNOTES (GAC)

1 CONCRETE PAVEMENT - SEE DETAIL F/G4.1
2 CONCRETE SIDEWALK - SEE DETAIL A/G4.1
3 MONOLITHIC CURB & WALK - SEE DETAIL B/G4.1
4 CONCRETE STOOP - SEE DETAIL 11 & 12/S3.02 & DWG S1.01
5 CONCRETE COLLAR - SEE DETAIL E/G4.1
6 CONCRETE EQUIPMENT PAD - REFER TO DETAIL K/G4.1
7 CONCRETE STRAIGHT CURB - SEE DETAIL H/G4.1
8 CURB TO CURB CONNECTION - SEE DETAIL P/G4.1 (1)
9 UTILITY AREA - REFER TO S1.01
10 CONCRETE/ASPHALT INTERFACE - DETAIL N/G4.1 (1)
11 CONCRETE WALL W/ RAILING - SEE SECTIONS 3, 4 & 5/G4.3
12 LAWN AREA - SEE LANDSCAPE PLANS
13 SYNTHETIC TURF SURFACING OVER AGGREGATE BASE - SEE DETAIL L/G4.1
15 CONCRETE CONTROL JOINT - SEE DETAIL C/G4.1
16 6' HT. CHAIN LINK FENCE FENCE - MATCH EXISTING HEIGHT AND MATERIAL
17 4" WIDE WHITE PAVEMENT MARKING - PER SPECIFICATIONS
18 4" WIDE WHITE PAVEMENT STRIPE AT 3'-0" O.C. AT 45° ANGLE
19 RELOCATED DISCUS CAGE WITH 6" DEEP CONCRETE PAD & ALUMINUM DISCUS RING
20 ASPHALT PAVEMENT - DETAIL A/G4.2
~~21 4' WIDE MAN GATE, MATCH EXISTING FENCE HEIGHT AND FABRIC~~ (1)
22 NATIVE PLANTINGS - SEE LANDSCAPE PLAN
24 WASHED RIVER ROCK - SEE LANDSCAPE PLAN
25 STEEL EDGING - SEE LANDSCAPE PLAN
26 ISOLATION JOINT - SEE DETAIL D/G4.1
27 CONCRETE CONTROL JOINT - SEE DETAIL G/G4.1
28 CONCRETE EXPANSION JOINT - SEE DETAIL C/G4.1
29 CONCRETE EXPANSION JOINT - SEE DETAIL G/G4.1
30 REMOVABLE BOLLARD - PER DETAIL J/G4.2 (1)
33 2" DIA. ALUMINUM HANDRAIL - PER ARCHITECTURAL PLANS & DIVISION 05 SECTION "DECORATIVE METAL RAILINGS"
34 CONCRETE WALL (FULL HEIGHT) - SEE SECTIONS 3, 4 & 5/G4.3
36 CONCRETE STEPS - SEE SECTION 1/G4.2 (1)
37 HANDRAIL - PER SECTION 1/G4.2

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETER MICHAEL RANDLETON
REGISTERED No. 19700317 STATE OF INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

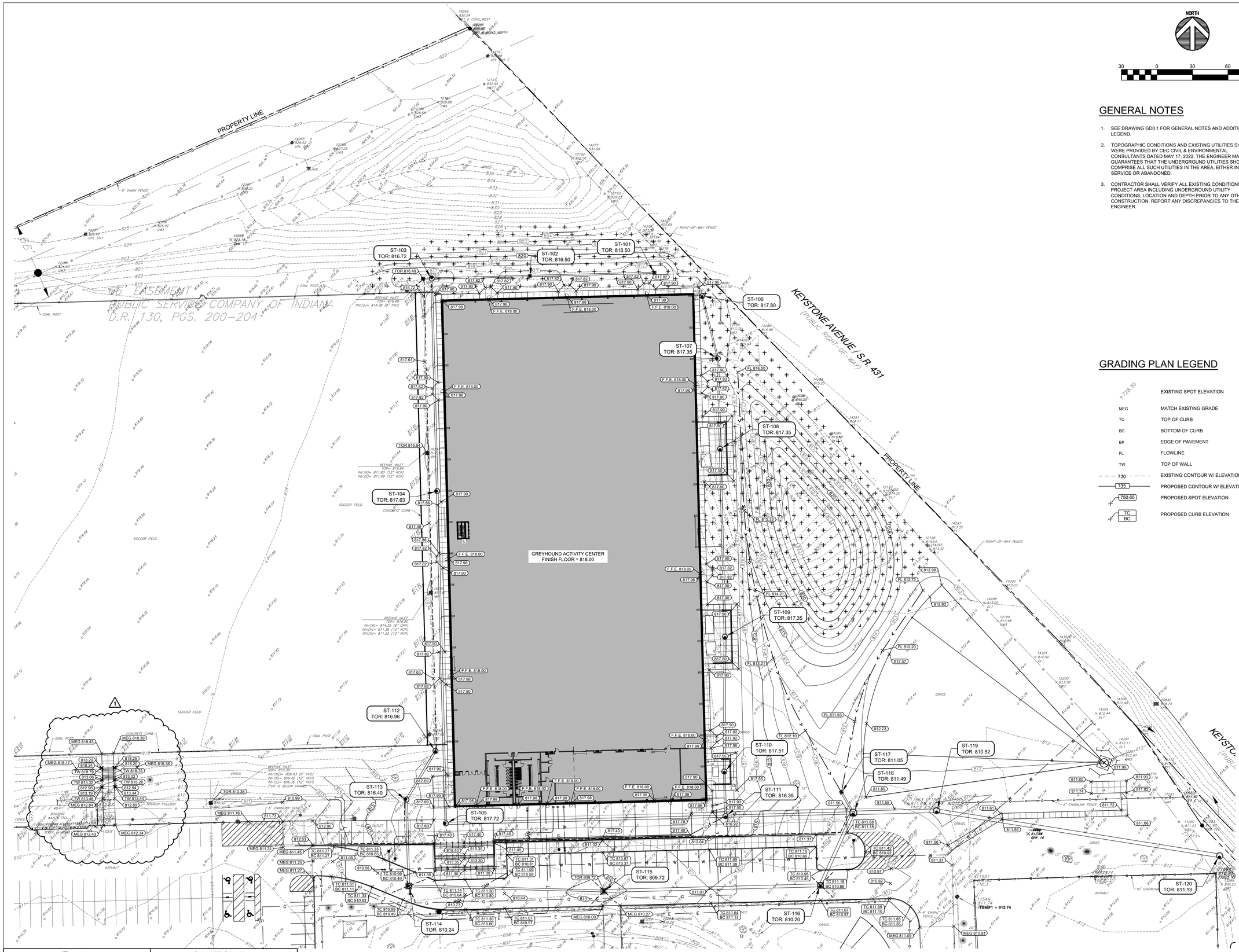
SITE PLAN - NORTH

G1.3

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!

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.

Drawing Path: P:_2022\100\120\CAD\Civil\Active\06_2022-120 - G1.1 - G1.6 - Site Plan.dwg
Plotted By: ashelter Time of Plot: 1/5/23 - 4:49pm Last Edited: 1/5/23 - 4:48pm



NORTH

30 0 30 60 90

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

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
TW	TOP OF WALL
730	EXISTING CONTOUR W/ ELEVATION
735	PROPOSED CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION

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!

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.

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETE ALOMIR RANKOVICH
REGISTERED
No.
19700317
STATE OF
INDIANA
PROFESSIONAL ENGINEER

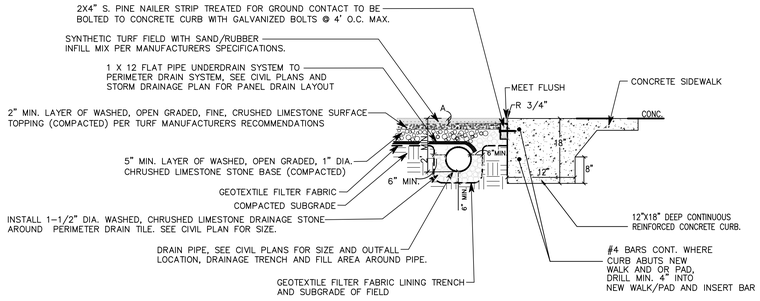
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

GRADING PLAN - NORTH

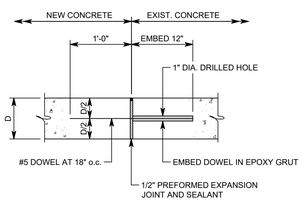
G2.3

Drawing Path: P:\2022\100\120\CAD\Craft\Active\08_2022-120 - G2.1 - Grading Plan.dwg
Plotted By: cstheiler Time of Plot: 1/5/23 - 4:02pm Last Edited: 1/5/23 - 12:43pm



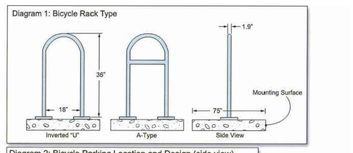
SYNTHETIC TURF - DETAIL L

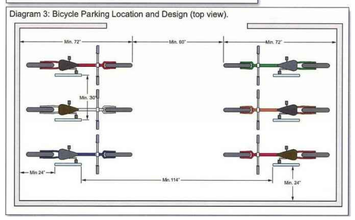
NONE



CONCRETE CONNECTION - DETAIL P

1" = 1'-0"



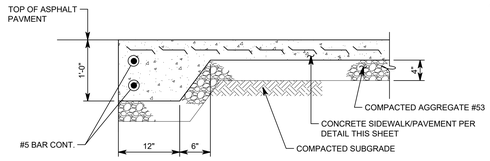


NOTE:

- INSTALLATION OF BIKE RACKS TO BE SEPARATE CONSTRUCTION CONTRACT.
- 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.

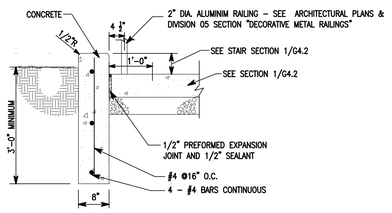
BIKE RACK - DETAIL M

NO SCALE



CONCRETE / ASPHALT PAVEMENT INTERFACE - DETAIL N

1" = 1'-0"

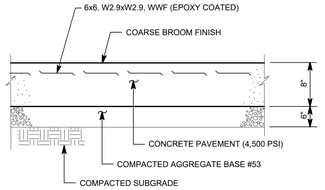


NOTES:

1. ALL REBAR TO BE EPOXY COATED.
2. STAIR SIDE WALL TO BE AT EACH END OF STAIRS.

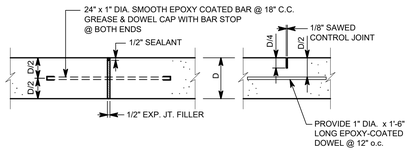
STAIR SIDE WALL - DETAIL O

NONE.



8" CONCRETE PAVEMENT - DETAIL F

NO SCALE



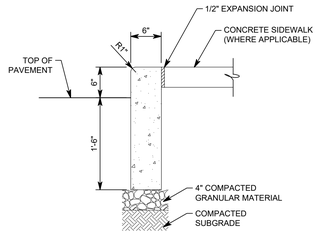
EXPANSION JOINT - "EJ" CONTROL JOINT - "CJ"

NOTE:

1. CONSTRUCT EXPANSION JOINTS @ 40' MAX. AND CONTROL JOINTS @ 10' MAX. UNLESS OTHERWISE NOTED.
2. JOINT SEALANT SHALL BE FUEL RESISTANT, TRAFFIC GRADE, POLYSULFIDE, THIOKOL 2282 OR EQUAL SEALANT PER FEDERAL SPECIFICATION SS-S-200E

CONCRETE PAVEMENT JOINT - DETAIL G

NO SCALE

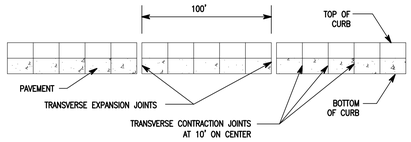


NOTES:

1. PROVIDE CONTROL JOINTS AT 10' MAX. SPACING.
2. PROVIDE EXPANSION JOINTS AT 80' MAX. SPACING AND AT ENDS OF ALL RADII.

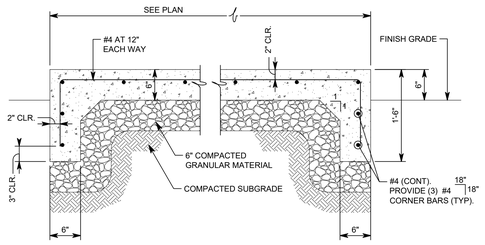
6" CONCRETE CURB (STRAIGHT) - DETAIL H

1" = 1'-0"



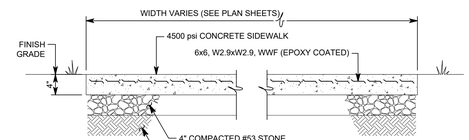
CURB JOINT - DETAIL J

NO SCALE



CONCRETE EQUIPMENT PAD - DETAIL K

1" = 1'-0"

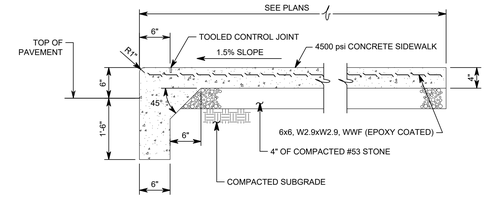


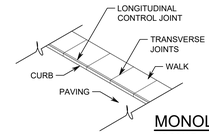
NOTES:

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.

4" CONCRETE SIDEWALK - DETAIL A

1" = 1'-0"



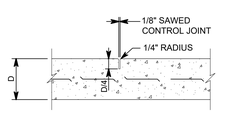


NOTES:

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 ON PLANS.
2. CONTROL JOINTS SHALL BE CUT 1/4 DEPTH OF TOTAL THICKNESS OF SLAB.

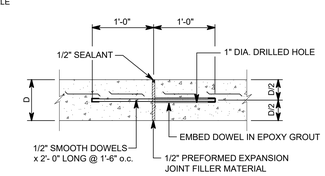
MONOLITHIC CURB AND WALK - DETAIL B

NO SCALE



NOTE:
CONSTRUCT CONTROL JOINTS AS SHOWN ON PLAN (MAX. SPACING @ 6'-0" o.c.)

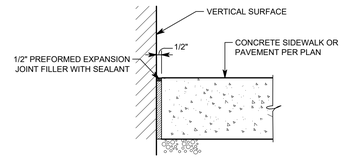
CONTROL JOINT - SJ



EXPANSION JOINT - EJ

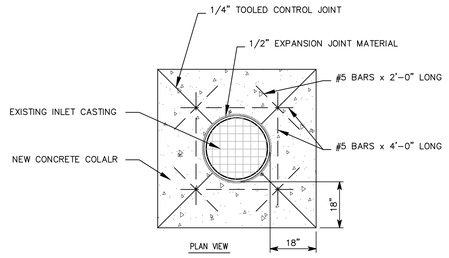
CONCRETE SIDEWALK CONTROL JOINT - DETAIL C

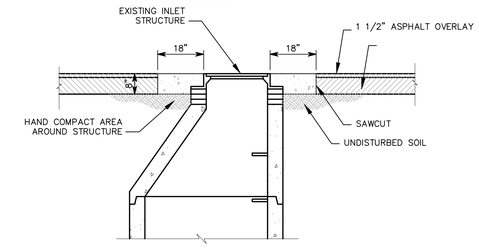
NO SCALE



PAVEMENT ISOLATION JOINT - DETAIL D

1/2" = 1'-0"





CONCRETE STORM INLET COLLAR - DETAIL E

NONE

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.

Drawing Path: P:\2022\100\120\CAD\Civil\Archive\14_2022-120 - G4.1 - Site Details.dwg
Plotted By: catheiler Time of Plot: 1/5/23 - 5:03pm Last Edited: 1/5/23 - 5:03pm

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

CONSTRUCTION DOCUMENTS

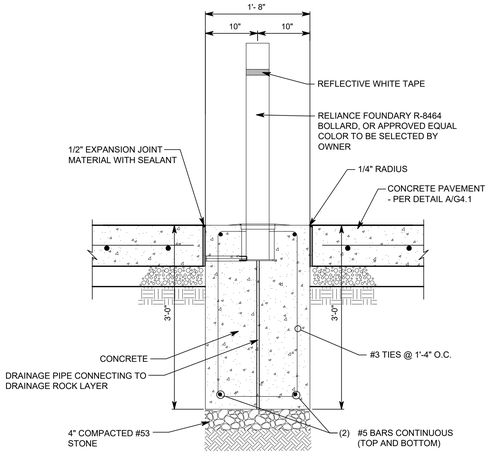
PETER MICHAEL RANKIN REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

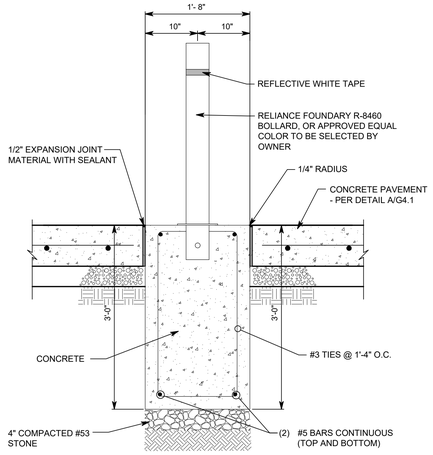
SITE DETAILS

G4.1



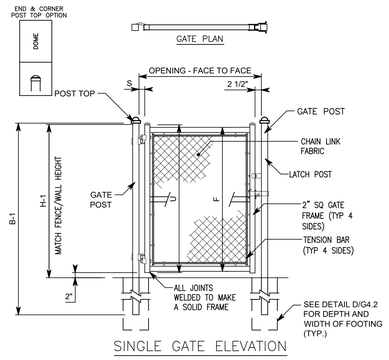
REMOVABLE BOLLARD - DETAIL J

1" = 1'-0"



BOLLARD - DETAIL H

1" = 1'-0"



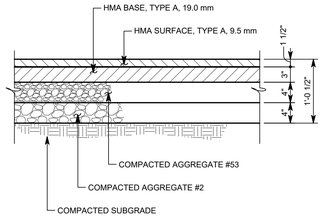
SINGLE GATE ELEVATION

USE	FABRIC UNDER 10' HT.
TOP AND BRACE RAILS	SCHED. 40 1.66" O.D.
GATE FRAME	SCHED. 40 1.90" O.D.

NOTE: 1. CHAIN LINK FENCE FABRIC SHALL HAVE BLACK PVC COATING THERMALLY FUSED TO ZINC COATED WIRE. ALL POSTS, RAILS AND BRACING SHALL ALSO HAVE BLACK PVC COATING, THERMALLY FUSED TO GALVANIZED (ZINC COATED) STEEL PIPE.
2. REFER TO SPEC. SECTION 32 31 13 CHAIN LINK FENCES AND GATES FOR POST SIZES.

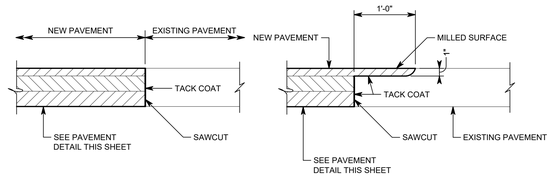
SWING GATE – DETAIL G

NTS



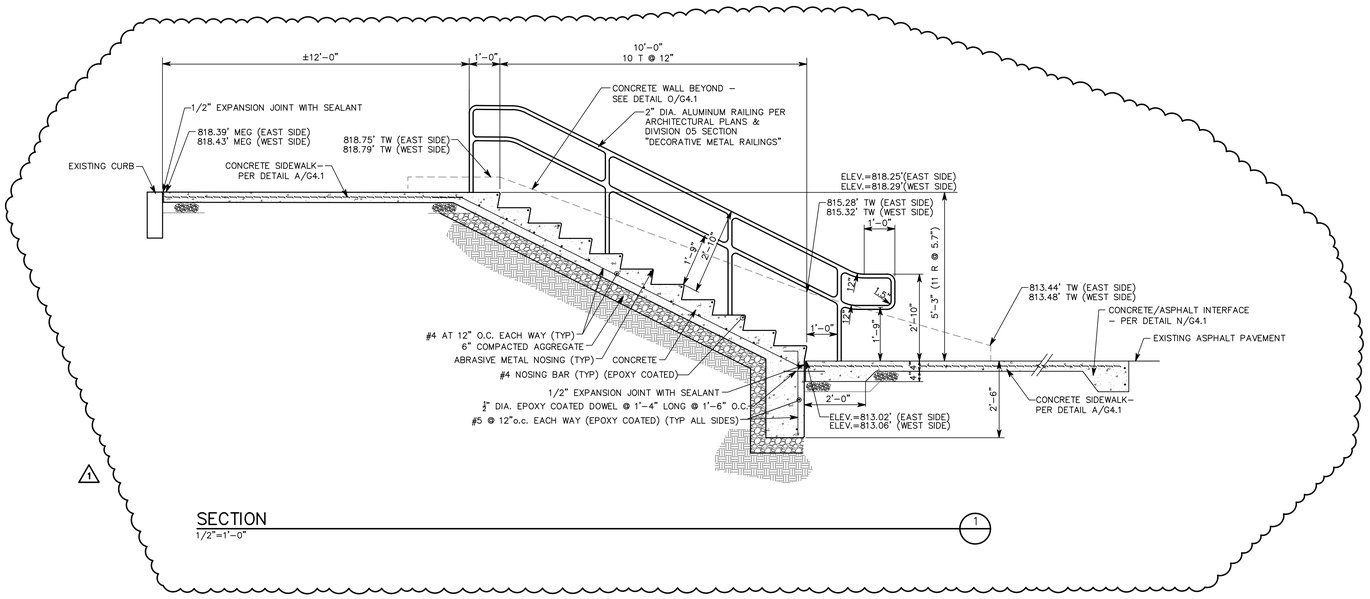
MEDIUM DUTY ASPHALT PAVEMENT - DETAIL L

1" = 1'-0"



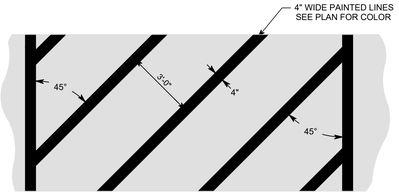
PAVEMENT INTERFACE - DETAIL B

1" = 1'-0"



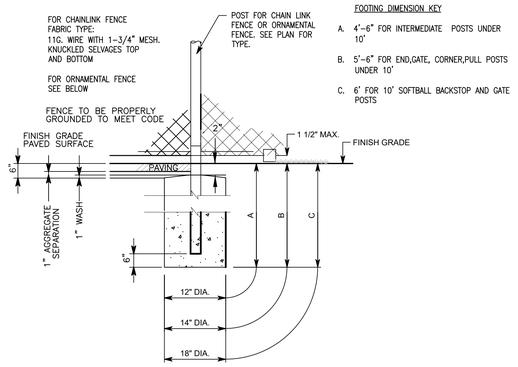
SECTION

1/2"=1'–0"



PAINTED PARKING ISLANDS - DETAIL C

NO SCALE



FENCE POST FOOTING – DETAIL D

NONE

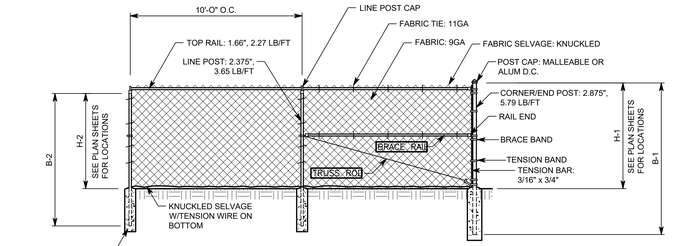


CHART A						
FENCE HEIGHT	END & CORNER POSTS			LINE POSTS		
NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	POST SIZE o.d. x wall thickness (min.)	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE	POST SIZE o.d. x wall thickness (min.)
6'-0"	10'-0"	6'-0 5/8"	2 3/8" x 0.154	8'-8"	5'-8 7/8"	2 3/8" x 0.154

BLACK VINYL LINK FENCE – DETAIL E

NONE

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!

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.

Drawing Path: P:\2022\100\120\CAD\Civil\Archive\14_2022-120 - G4.1 - Site Details.dwg
Plotted By: cstheler Time of Plot: 1/5/23 - 5:01pm Last Edited: 1/5/23 - 5:00pm

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

CONSTRUCTION DOCUMENTS

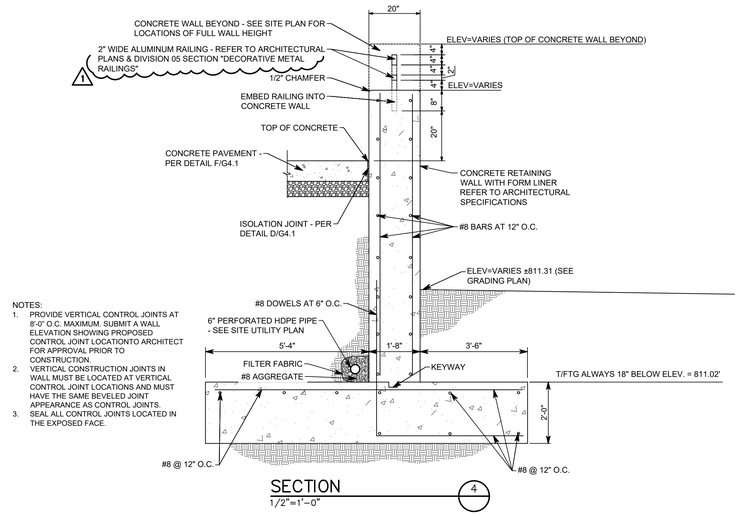
PETER WILLOMIR RANDOLPH REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

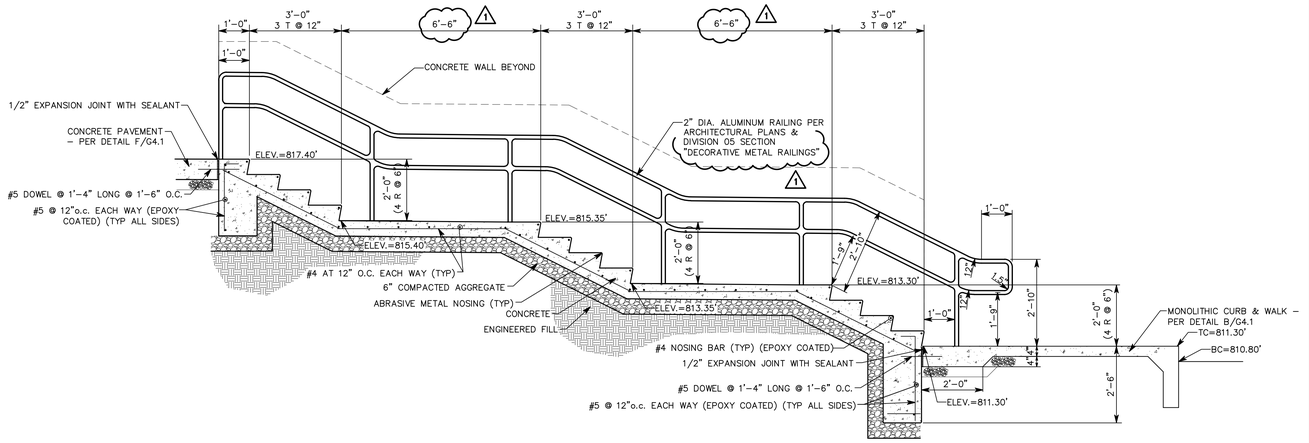
REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE DETAILS

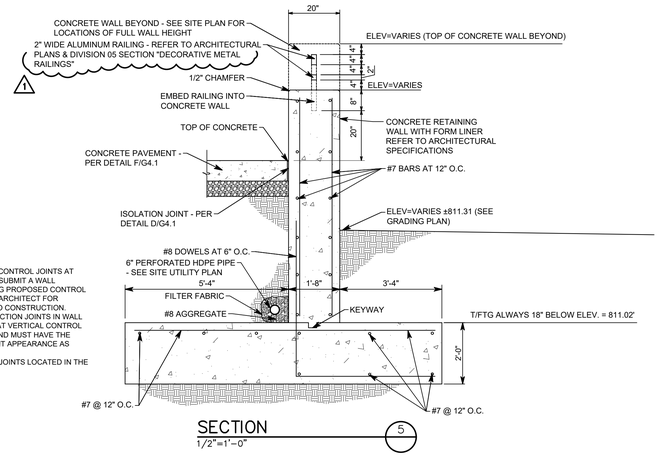
G4.2



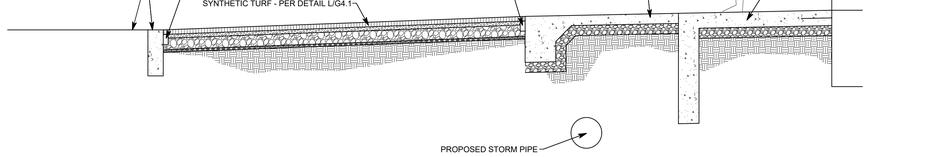
SECTION
1/2"=1'-0" 4



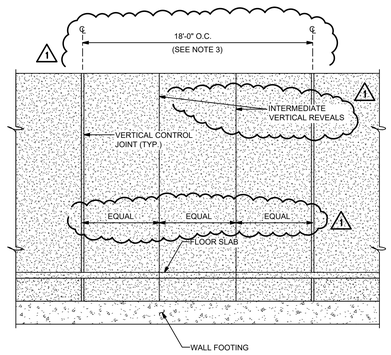
SECTION
1/2"=1'-0" 1

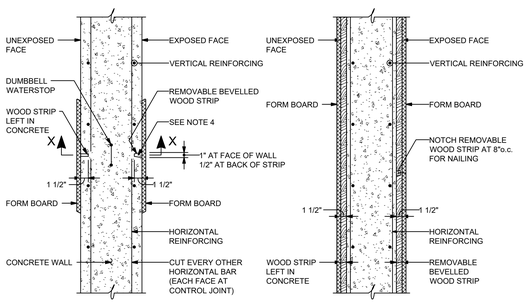


SECTION
1/2"=1'-0" 5



SECTION
1/2"=1'-0" 2





PLAN VIEW

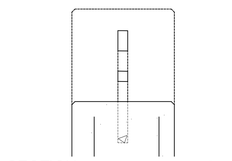
SECTION X-X

NOTES:

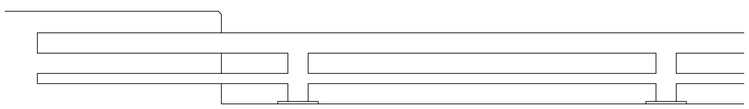
1. VERTICAL CONSTRUCTION JOINTS MUST BE LOCATED AT VERTICAL CONTROL JOINTS.
2. CONSTRUCTION JOINTS MUST HAVE THE APPEARANCE OF A CONTROL JOINT. (I.E. BEVELLED JOINT)
3. MAXIMUM SPACING OF CONTROL JOINTS SHALL BE THE SMALLER OF 20'-0" OR TWO TIMES THE WALL HEIGHT.
4. SEAL ALL CONTROL JOINTS LOCATED ON THE EXPOSED FACE.

VERTICAL CONTROL JOINT IN WALL (V.C.J.) - DETAIL A

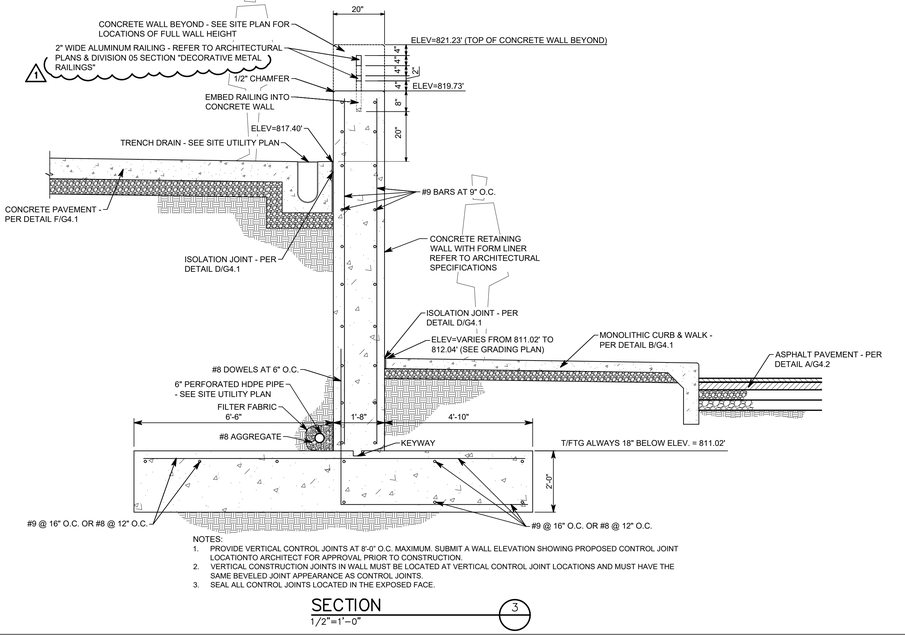
SCALE: 3/4" = 1'-0"



SECTION
1"=1'-0" 6



ELEVATION
1"=1'-0"



SECTION
1/2"=1'-0" 3

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.

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

CONSTRUCTION DOCUMENTS

PETE WILCMIR RANDOLPH
REGISTERED
No.
19700317
STATE OF
INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR

DRAWN BY: ARS

PROJECT NUMBER: 222063.00

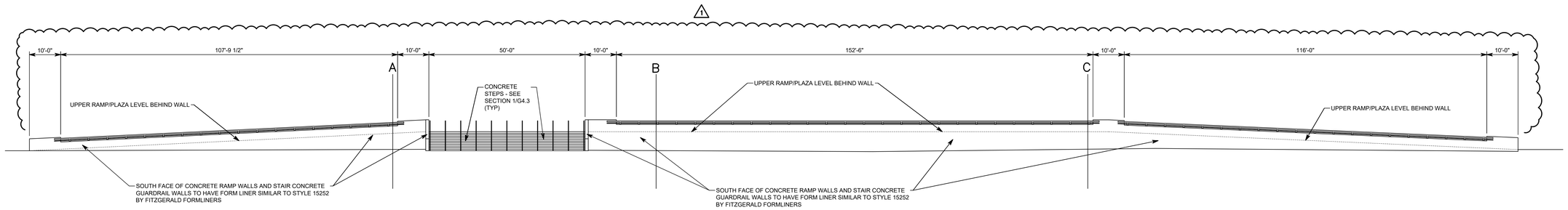
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

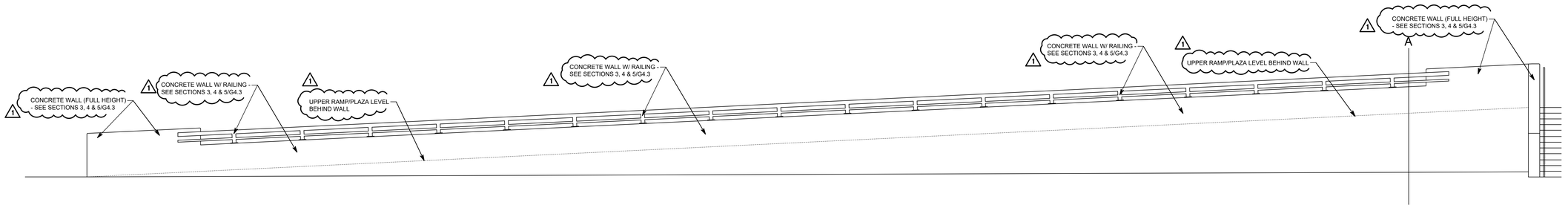
SITE DETAILS

G4.3

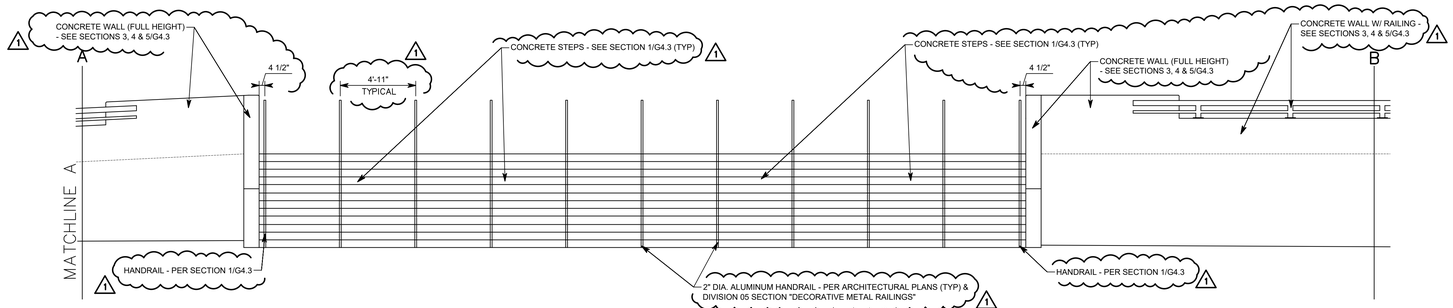
Drawing Path: P:\2022\ \100\ \200\CAD\Civil\Action\14. 2022-120 - G4.1 - Site Details.dwg
Plotted By: cshelter Time of Plot: 1/5/23 - 5:01pm Last Edited: 1/5/23 - 5:03pm



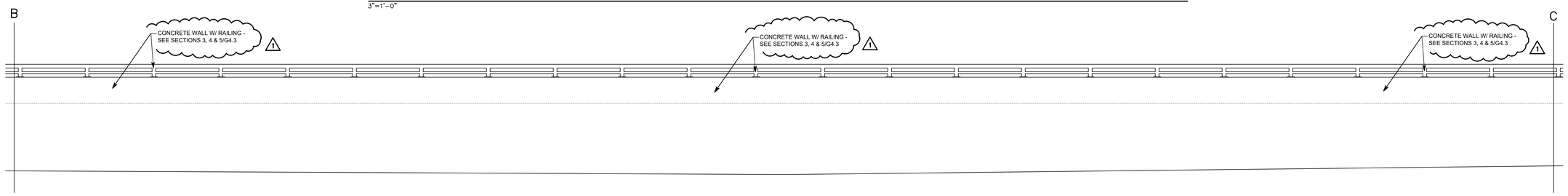
OVERALL RETAINING WALL ELEVATION
NTS



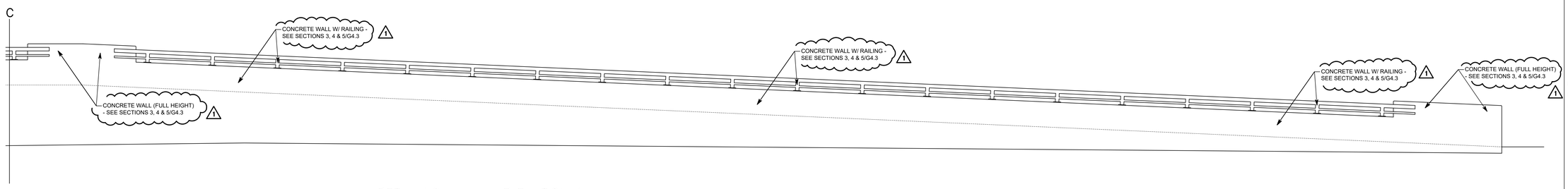
RETAINING WALL – ELEVATION 1
3"=1'–0"



RETAINING WALL – ELEVATION 2
3"=1'–0"



RETAINING WALL – ELEVATION 3
3"=1'–0"



RETAINING WALL – ELEVATION 4
3"=1'–0"

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!

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.

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETE MILOMIR RANKOVICH
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

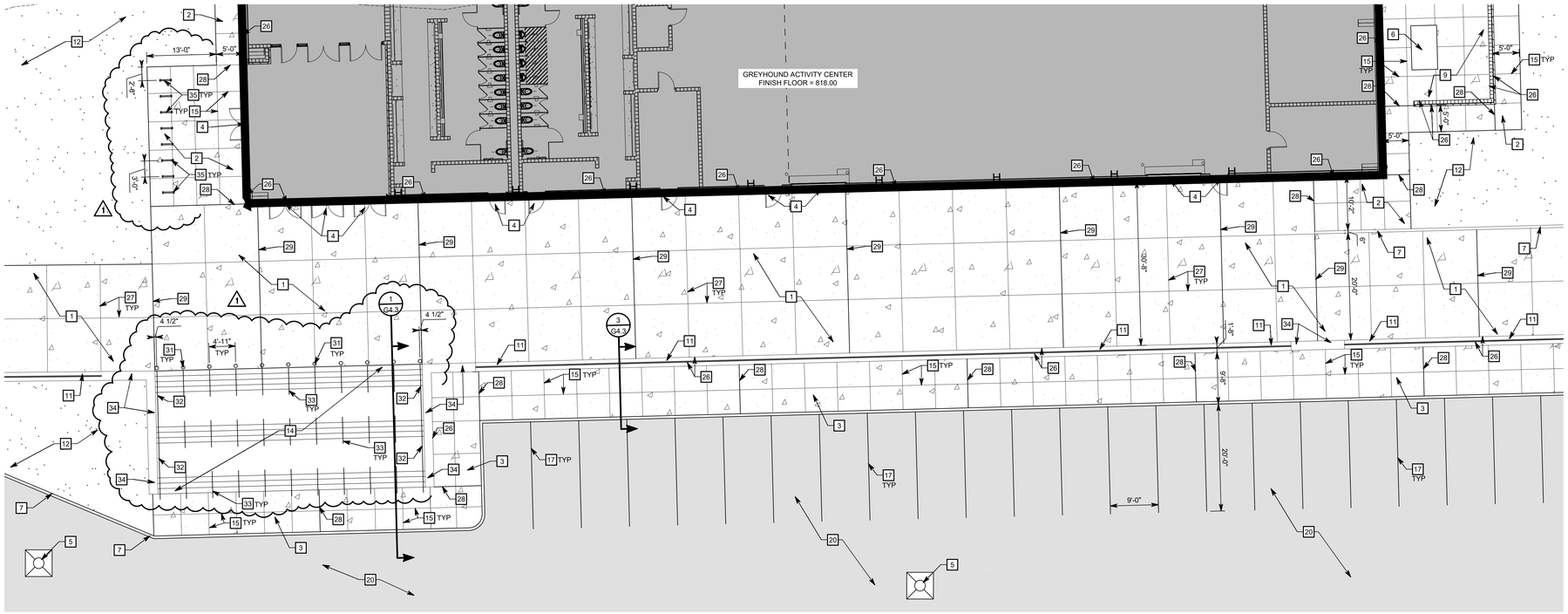
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE DETAILS

G4.4

Drawing Path: P:\2022\100\120\CAD\Cad\Active\14_2022-120 - G4.1 - Site Details.dwg
Plotted By: cstheler Time of Plot: 1/5/23 - 5:02pm Last Edited: 1/5/23 - 5:00pm



NORTH

10 0 10 20 40

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

SITE KEYNOTES (GAC)

1	CONCRETE PAVEMENT - SEE DETAIL F/G4.1
2	CONCRETE SIDEWALK - SEE DETAIL A/G4.1
3	MONOLITHIC CURB & WALK - SEE DETAIL B/G4.1
4	CONCRETE STOOP - SEE DETAIL 11 & 12/S3.02 & DWG S1.01
5	CONCRETE COLLAR - SEE DETAIL E/G4.1
6	CONCRETE EQUIPMENT PAD - REFER TO DETAIL K/G4.1
7	CONCRETE STRAIGHT CURB - SEE DETAIL H/G4.1
9	UTILITY AREA - REFER TO S1.01
11	CONCRETE WALL W/ RAILING - SEE SECTIONS 3, 4 & 5/G4.3
12	LAWN AREA - SEE LANDSCAPE PLANS
14	CONCRETE STEPS - SEE SECTION 1/G4.3
15	CONCRETE CONTROL JOINT - SEE DETAIL C/G4.1
17	4" WIDE WHITE PAVEMENT MARKING - PER SPECIFICATIONS
20	ASPHALT PAVEMENT - DETAIL A/G4.2
26	ISOLATION JOINT - SEE DETAIL D/G4.1
27	CONCRETE CONTROL JOINT - SEE DETAIL G/G4.1
28	CONCRETE EXPANSION JOINT - SEE DETAIL C/G4.1
29	CONCRETE EXPANSION JOINT - SEE DETAIL G/G4.1
31	BOLLARD - PER DETAIL H/G4.2
32	HANDRAIL - PER SECTION 1/G4.3
33	2" DIA. ALUMINUM HANDRAIL - PER ARCHITECTURAL PLANS & DIVISION 05 SECTION "DECORATIVE METAL RAILINGS"
34	CONCRETE WALL (FULL HEIGHT) - SEE SECTIONS 3, 4 & 5/G4.3
35	BIKE RACK - PER DETAIL M/G4.1

PROPOSED SITE LEGEND

- BUILDING
- CONCRETE SIDEWALK/PAVEMENT
- ASPHALT PAVEMENT
- POLYURETHANE SURFACE
- SEEDED LAWN

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

CONSTRUCTION DOCUMENTS

PETE MICHMERHUIZEN
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR

DRAWN BY: ARS

PROJECT NUMBER: 222063.00

PROJECT ISSUE DATE: 12.01.2022

REV. NO△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

ENLARGED SITE PLAN - NORTH

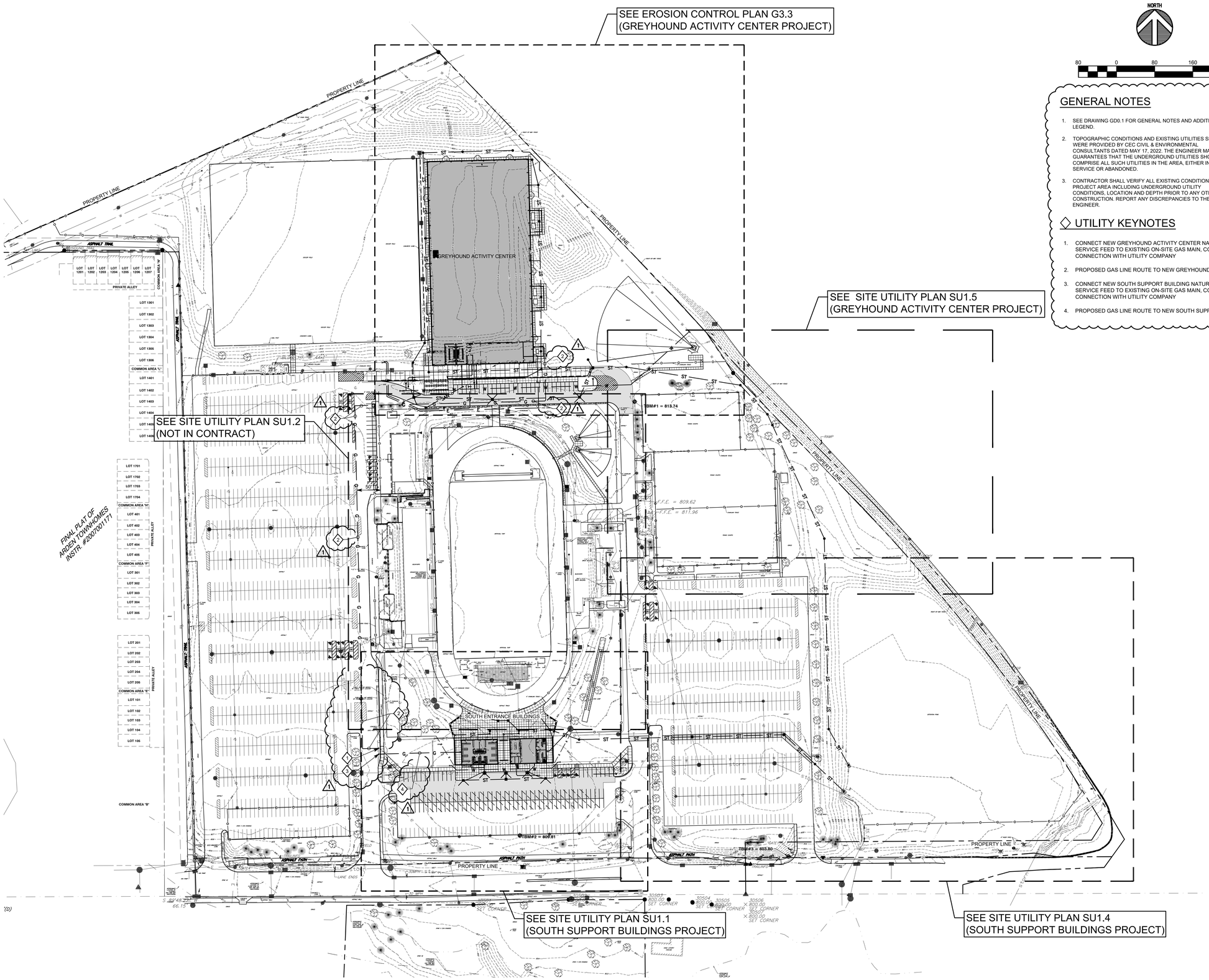
G5.2

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!

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.

Drawing Path: P:\2022\100\120\CAD\Civil\Active\15_2022-120 - G5.1 - G5.3 - Enlarged Site Plan.dwg
Plotted By: catheiler Time of Plot: 1/5/23 - 4:51pm Last Edited: 1/5/23 - 4:59pm



GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

◇ UTILITY KEYNOTES

1. CONNECT NEW GREYHOUND ACTIVITY CENTER NATURAL GAS LINE SERVICE FEED TO EXISTING ON-SITE GAS MAIN, COORDINATE CONNECTION WITH UTILITY COMPANY
2. PROPOSED GAS LINE ROUTE TO NEW GREYHOUND ACTIVITY CENTER
3. CONNECT NEW SOUTH SUPPORT BUILDING NATURAL GAS LINE SERVICE FEED TO EXISTING ON-SITE GAS MAIN, COORDINATE CONNECTION WITH UTILITY COMPANY
4. PROPOSED GAS LINE ROUTE TO NEW SOUTH SUPPORT BUILDING

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETAR MILOMIR RANKOVICH REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

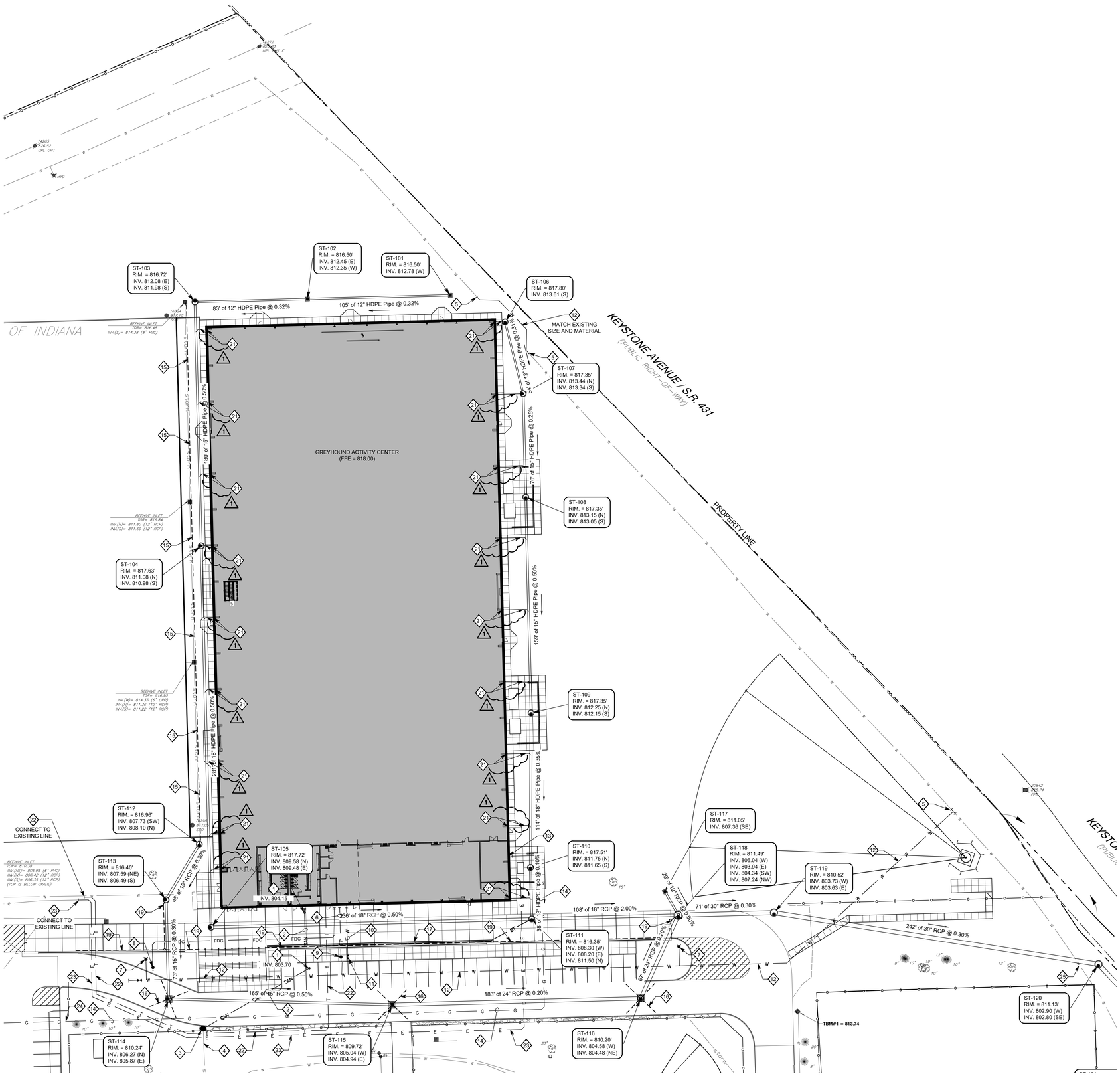
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE UTILITY PLAN - OVERALL

SU1.0

Drawing Path: P:\2022\100\120\CAD\Civil\Active\16_2022-120 - SU1.0 - Overall Site Utility Plan.dwg
Plotted By: ssheiker Time of Plot: 1/5/23 - 4:05pm Last Edited: 1/4/23 - 5:12pm



GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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. SEE SHEET SU2.1 & SU2.2 FOR DETAILS. (1)

◇ UTILITY KEYNOTES

1. PROPOSED SANITARY CLEANOUT
2. PROPOSED 6" PVC SANITARY LATERAL @ 1.04% MIN. SLOPE
3. PROPOSED SANITARY MANHOLE. CONNECT TO EXISTING 8" PVC AT INVERT 800.55. NEW 6" SANITARY LATERAL @ INV. EL. = 802.75
4. EXISTING SANITARY SEWER, VERIFY LOCATION, ELEVATION AND SIZE PRIOR TO CONSTRUCTION
5. PROPOSED CONNECTION TO EXISTING WATER LINE
6. PROPOSED 4" FIRE PROTECTION LINE
7. PROPOSED FIRE HYDRANT
8. PROPOSED FIRE DEPARTMENT CONNECTION
9. PROPOSED POST INDICATOR VALVE
10. PROPOSED 3" DOMESTIC WATER LINE
11. PROPOSED VALVE
12. PROPOSED 8" PVC WATER LINE
13. PROPOSED GAS METER LOCATION
14. PROPOSED GAS LINE PER GAS COMPANY
15. PROPOSED TURF UNDERDRAIN
16. PROPOSED PAVEMENT UNDERDRAIN
17. STORM TRENCH DRAIN
18. STORM SEWER CLEANOUT
19. 6" PERFORATED UNDERDRAIN FOR RETAINING WALL. CONNECT TO PROPOSED STORM STRUCTURE
20. AQUA-SWIRL XC-11 BMP STRUCTURE
21. DOWNSPOUT BOOT FOR 6"x 6" DOWNSPOUT. PROVIDE 8" DIP @ 2.00% SLOPE LATERAL AND CONNECT WITH WYE TO PROPOSED STORM SEWER. (1)
22. RELOCATED TELECOMMUNICATION LINE
23. RELOCATED ELECTRICAL SERVICE LINE
24. PROPOSED GAS SERVICE FEED, COORDINATE ROUTE & SIZE W/ UTILITY COMPANY (PROVIDE UTILITY ASPHALT PATCH IN ASPHALT PAVEMENT AREAS) SEE OVERALL SITE UTILITY PLAN FOR CONTINUATION
25. RELOCATE PORTION OF EXISTING WATER LINE TO ACHIEVE A MINIMUM SEPERATION OF 18" FROM PROPOSED STORM PIPE

UTILITY LEGEND

- ST — NEW STORM SEWER LINE
- FP — NEW FIRE PROTECTION LINE
- W — NEW WATER LINE
- SAN — NEW SANITARY LATERAL LINE
- storm — EXISTING STORM LINE
- w — EXISTING WATER LINE
- san — EXISTING SANITARY LINE
- e — EXISTING ELECTRICAL LINE
- NEW FIRE HYDRANT
- NEW FIRE DEPARTMENT CONNECTION

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!

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.

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETER M. RONKOWSKI — REGISTERED No. 19700317 STATE OF INDIANA — PROFESSIONAL ENGINEER

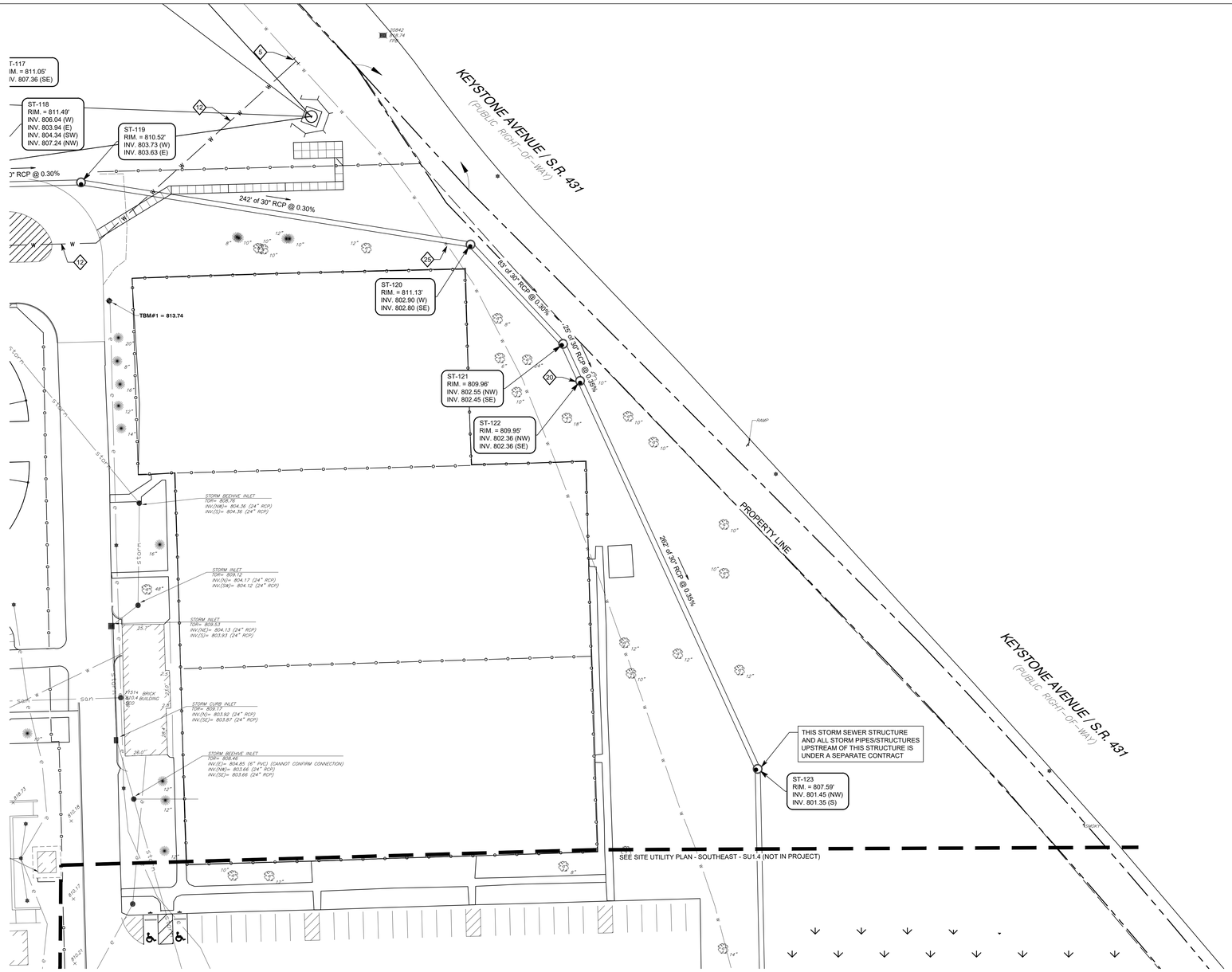
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

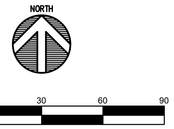
REV. NO△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE UTILITY PLAN - NORTH

SU1.3

Drawing Path: P:\2022\ 120\ 120\CAD\ Civil\ Active\ 17_2022-120 - SU1.5 - Site Utility Plan.dwg
Plotted By: cstheler Time of Plot: 1/5/23 - 4:08pm Last Edited: 1/5/23 - 3:41pm





GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC CIVIL & ENVIRONMENTAL CONSULTANTS DATED MAY 17, 2022. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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.

◇ UTILITY KEYNOTES

1. PROPOSED SANITARY CLEANOUT
2. PROPOSED 6" PVC SANITARY LATERAL @ 1.04% MIN. SLOPE
3. PROPOSED SANITARY MANHOLE. CONNECT TO EXISTING 8" PVC AT INVERT 800.55. NEW 6" SANITARY LATERAL @ INV. EL. = 802.75
4. EXISTING SANITARY SEWER, VERIFY LOCATION, ELEVATION AND SIZE PRIOR TO CONSTRUCTION
5. PROPOSED CONNECTION TO EXISTING WATER LINE
6. PROPOSED 4" FIRE PROTECTION LINE
7. PROPOSED FIRE HYDRANT
8. PROPOSED FIRE DEPARTMENT CONNECTION
9. PROPOSED POST INDICATOR VALVE
10. PROPOSED 3" DOMESTIC WATER LINE
11. PROPOSED VALVE
12. PROPOSED 8" PVC WATER LINE
13. PROPOSED GAS METER LOCATION
14. PROPOSED GAS LINE PER GAS COMPANY
15. PROPOSED TURF UNDERDRAIN
16. PROPOSED PAVEMENT UNDERDRAIN
17. STORM TRENCH DRAIN
18. STORM SEWER CLEANOUT
19. 6" PERFORATED UNDERDRAIN FOR RETAINING WALL. CONNECT TO PROPOSED STORM STRUCTURE
20. AQUA-SWIRL XC-11 BMP STRUCTURE
21. DOWNSPOUT BOOT FOR 6"x 6" DOWNSPOUT. PROVIDE 8" DIP @ 2.00% SLOPE LATERAL AND CONNECT WITH WYE TO PROPOSED STORM SEWER. ⚠1
22. RELOCATED TELECOMMUNICATION LINE
23. RELOCATED ELECTRICAL SERVICE LINE
24. PROPOSED GAS SERVICE FEED, COORDINATE ROUTE & SIZE W/ UTILITY COMPANY (PROVIDE UTILITY ASPHALT PATCH IN ASPHALT PAVEMENT AREAS) SEE OVERALL SITE UTILITY PLAN FOR CONTINUATION
25. RELOCATE PORTION OF EXISTING WATER LINE TO ACHIEVE A MINIMUM SEPERATION OF 18" FROM PROPOSED STORM PIPE

UTILITY LEGEND

ST — ST	NEW STORM SEWER LINE
FP	NEW FIRE PROTECTION LINE
W — W	NEW WATER LINE
SAN	NEW SANITARY LATERAL LINE
storm	EXISTING STORM LINE
w	EXISTING WATER LINE
san	EXISTING SANITARY LINE
e	EXISTING ELECTRICAL LINE
	NEW FIRE HYDRANT
	NEW FIRE DEPARTMENT CONNECTION

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!

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.

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETER MILOMIR RANKOVICH
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

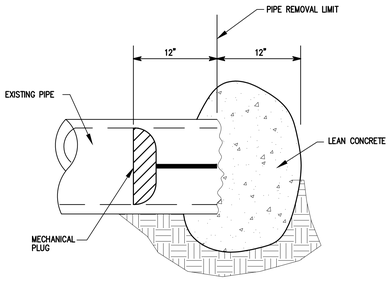
PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

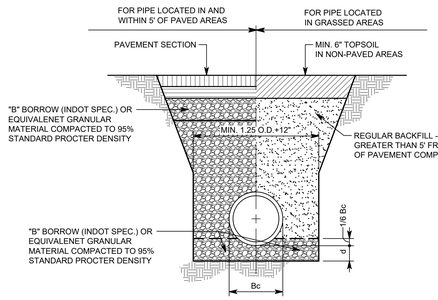
SITE UTILITY PLAN - NORTHEAST

SU1.5

Drawing Path: P:_2022\100\139\CAD\Civil\Active\17_2022-120 - SU1.1 - SU1.5 - Site Utility Plans.dwg
Plotted By: ashelker Time of Plot: 1/5/23 - 4:07pm Last Edited: 1/5/23 - 3:41pm



PIPE CAP DETAIL
NO SCALE

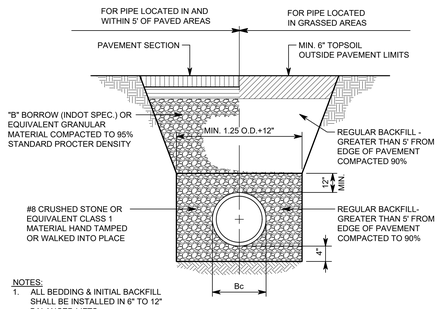


DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

NOTES:
1. ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
2. A MIN. 9" CLEARANCE EACH SIDE OR PIPE FOR 42" DIA. AND LESS.

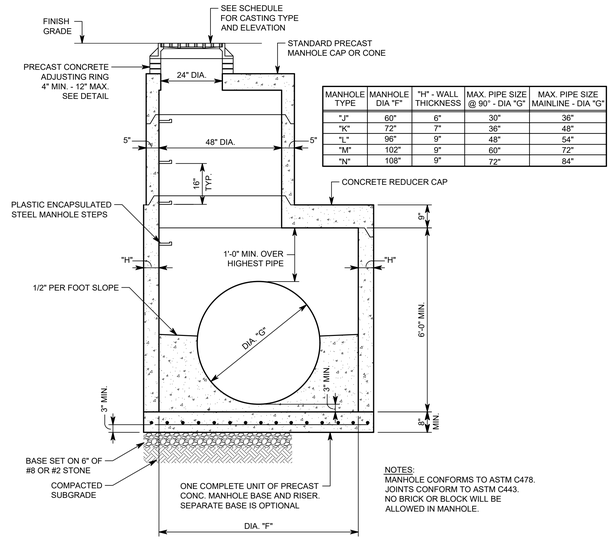
LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

STORM SEWER (RCP) TRENCH DETAIL
3/4" = 1'-0"



NOTES:
1. ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
2. A MIN. 9" CLEARANCE EACH SIDE OR PIPE FOR 42" DIA. AND LESS.

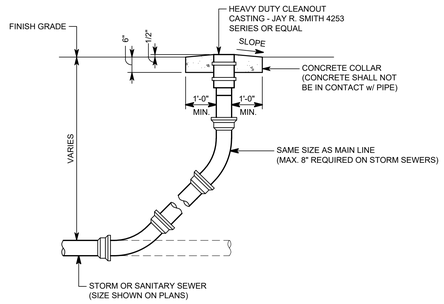
STORM SEWER (PVC & HDPE) TRENCH DETAIL
NO SCALE



MANHOLE TYPE	MANHOLE DIA "F"	"H" - WALL THICKNESS	MAX. PIPE SIZE @ 90° - DIA "G"	MAX. PIPE SIZE MAINLINE - DIA "G"
"J"	60"	6"	30"	36"
"K"	72"	7"	36"	48"
"L"	96"	9"	48"	54"
"M"	102"	9"	60"	72"
"N"	108"	9"	72"	84"

NOTES:
MANHOLE CONFORMS TO ASTM C478. JOINTS CONFORM TO ASTM C443. NO BRICK OR BLOCK WILL BE ALLOWED IN MANHOLE.

STORM MANHOLE TYPE "J - N" DETAIL
1/2" = 1'-0"

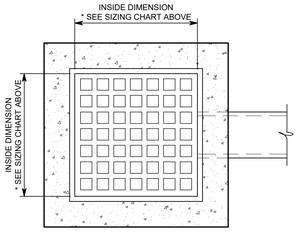


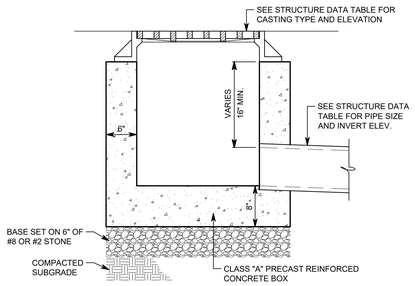
NOTE: CLEANOUTS IN PAVED AREAS TO BE ACCESSIBLE VIA YARD BOXES OR EXTENDED FLUSH WITH THE PAVING. COVER SHOULD BE THREADED TYPE, WATER TIGHT AND CAPPED.

CLEANOUT DETAIL
1/2" = 1'-0"

STRUCTURE SIZING CHART

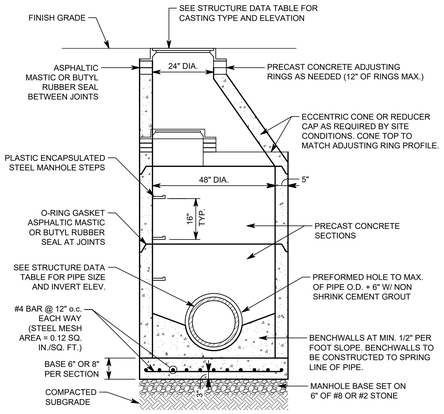
INSIDE DIMENSIONS	INLET TYPE	PIPE SIZE	MAX. NUMBER OF SIDES OF THE INLET WITH PIPES
24" X 24"	"A"	12" TO 15"	3
30" X 30"	"F"	15" TO 18"	3
24" X 36"	"M"	18" TO 24"	3





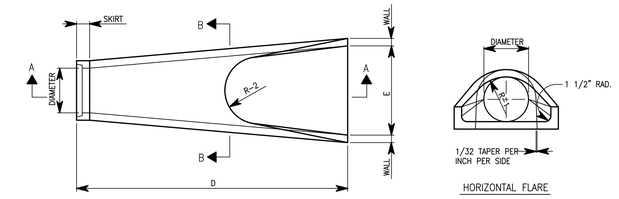
NOTES:
1. ALL STORM SEWER CASTINGS SHALL BE MARKED "DUMP NO WASTE DRAINS TO WATERWAYS".
2. SEE UTILITY PLAN FOR STORM SEWER STRUCTURE DATA TABLE.

STORM INLET DETAIL
1" = 1'-0"

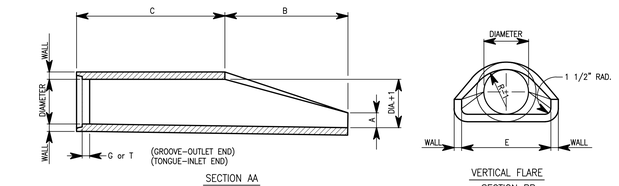


NOTES:
1. MANHOLE CONFORMS TO ASTM C478, JOINTS CONFORM TO ASTM C443.
2. ALL STORM SEWER CASTINGS SHALL BE MARKED "DUMP NO WASTE DRAINS TO WATERWAYS".
3. SEE UTILITY PLAN FOR STORM SEWER STRUCTURE DATA TABLE.

STORM MANHOLE TYPE "C" DETAIL
1/2" = 1'-0"



HORIZONTAL FLARE



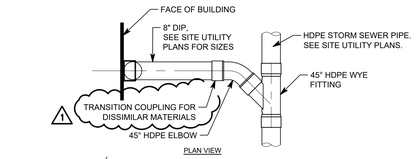
SECTION AA

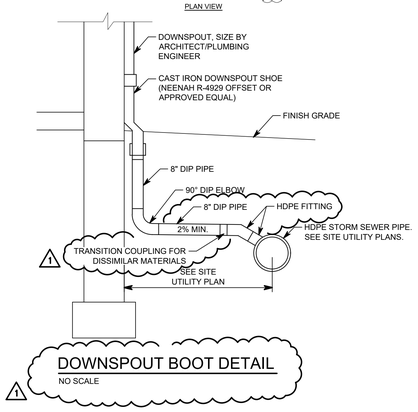
VERTICAL FLARE
SECTION BB

SIZE SCHEDULE												
DIA.	WALL	G or T	WT. SEC	A	B	C	D	E	DIA.+1	R-1	R-2	SKIRT
12	2	1½	530	4	24	48 ⅞	72 ⅞	24	13	10 5/8	9	3½
15	2¼	2	740	6	27	46	73	30	16	12½	11	3½
18	2½	2½	990	9	27	46	73	36	19	15½	12	4
21	2¾	2¼	1280	9	35	38	73	42	22	16⅜	13	4
24	3	2½	1520	9½	43½	30	73½	48	25	16 13/16	14	4½
27	3¼	2½	1930	10½	48	25½	73½	54	28	17¾	14½	4½
30	3½	3	2190	12	54	19¾	73¾	60	31	18 9/16	15	5
33	3¾	3⅜	3150	13½	58½	39¼	97¾	66	34	23¾	17½	5½
36	4	3½	4100	15	63	34¾	97¾	72	37	24 1/16	20	5½
42	4½	3¾	5380	21	63	35	98	78	43	27¼	22	5½
48	5	4¼	6550	24	72	26	98	84	49	28⅜	22	5¾
54	5½	4¾	8040	27	65	35	100	90	55	32 7/8	24	6¼
60	6	5	8750	30	60	39	99	96	61	36⅜	24	6¾
66	6½	5½	10630	24	78	21	99	102	67	35 1/16	24	7¼
72	7	6	12520	34	78	21	99	108	73	38⅜	24	7¾
78	7½	6½	14430	24	78	21	99	114	79	41 5/16	24	8½
84	8	7	16350	24	78	21	99	120	85	44 1/16	24	9

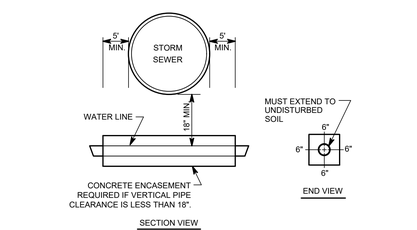
NOTE:
MANUFACTURER OF END SECTION IS IN ACCORDANCE WITH APPLICABLE PORTIONS OF A.S.T.M. SPECIFICATION C76.

PRECAST FLARED END SECTION
1" = 1'-0"

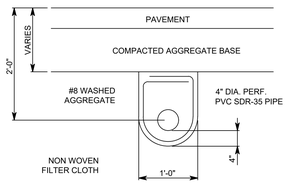


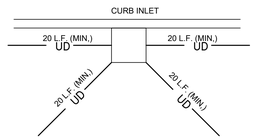


DOWNSPOUT BOOT DETAIL
NO SCALE



STORM SEWER / WATER LINE CROSSING DETAIL
NO SCALE





NOTES:
1. TAP STRUCTURES IN PAVEMENT AS SHOWN OR AS DIRECTED ON THE PLAN SHEET
2. ADJUST UNDERDRAIN AS REQUIRED TO AVOID SEWER LINES AND OTHER UTILITIES.
3. GROUT SOLID THE CONNECTION TO STORM STRUCTURE

PAVEMENT UNDERDRAIN DETAIL
NO SCALE

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT
TLF

CONSTRUCTION DOCUMENTS

PETER M. RONDINI — REGISTERED No. 19700317 — STATE OF INDIANA — PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE UTILITY DETAILS

SU2.1

Drawing Path: P:\2022\100\120\CAD\Civil\Active\18_2022-120 - SU2.1 - Site Utility Details.dwg
Plotted By: cshelor Time of Plot: 1/5/23 - 4:09pm Last Edited: 1/5/23 - 3:42pm

CARMEL HIGH SCHOOL GREYHOUND ACTIVITY CENTER

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

TLF

CONSTRUCTION DOCUMENTS

PETER M. RONKOWSKI REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: PMR
DRAWN BY: ARS
PROJECT NUMBER: 222063.00
PROJECT ISSUE DATE: 12.01.2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE UTILITY DETAILS

SU2.2

STORM STRUCTURE TABLE

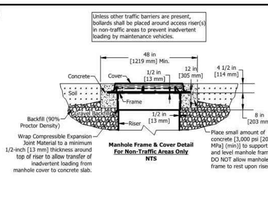
STR. NO.	STRUCTURE	STRUCTURE DETAIL REFERENCE	CASTING TYPE	RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE	CONNECT TO STR.	REMARKS
101	Inlet Type "A"		R-4342	816.50		12" HDPE Pipe 812.78 (W) [102]	105'	12"	0.32%	102	-
102	Inlet Type "A"		R-4342	816.50	12" HDPE Pipe 812.45 (E) [101]	12" HDPE Pipe 812.35 (W) [103]	83'	12"	0.32%	103	-
103	Type "C" Manhole		R-1772	816.72	12" HDPE Pipe 812.08 (E) [102]	15" HDPE Pipe 811.98 (S) [104]	180'	16"	0.50%	104	-
104	Type "C" Manhole		R-1772	817.63	15" HDPE Pipe 811.08 (N) [103]	18" HDPE Pipe 810.98 (S) [105]	281'	18"	0.50%	105	-
105	Type "C" Manhole		R-1772	817.72	18" HDPE Pipe 809.58 (N) [104]	18" RCP 809.48 (E) [111]	236'	18"	0.50%	111	-
106	Type "C" Manhole		R-1772	817.80		12" HDPE Pipe 813.61 (S) [107]	54'	12"	0.31%	107	-
107	Type "C" Manhole		R-1772	817.35	12" HDPE Pipe 813.44 (N) [106]	15" HDPE Pipe 813.34 (S) [108]	76'	16"	0.25%	108	-
108	Type "C" Manhole		R-1772	817.35	15" HDPE Pipe 813.15 (N) [107]	15" HDPE Pipe 813.05 (S) [109]	159'	16"	0.50%	109	-
109	Type "C" Manhole		R-1772	817.35	15" HDPE Pipe 812.25 (N) [108]	18" HDPE Pipe 812.15 (S) [110]	114'	18"	0.35%	110	-
110	Type "C" Manhole		R-1772	817.51	18" HDPE Pipe 811.75 (N) [109]	18" HDPE Pipe 811.65 (S) [111]	38'	18"	0.40%	111	-
111	Type "C" Manhole		R-1772	816.35	18" RCP 808.30 (W) [105] 18" HDPE Pipe 811.50 (N) [110]	18" RCP 808.20 (E) [118]	108'	18"	2.00%	118	-
112	Type "C" Manhole		R-4342	816.96	12" RCP 808.10 (N) []	15" RCP 807.73 (SW) [113]	48'	15"	0.30%	113	-
113	Type "C" Manhole		R-1772	816.40	15" RCP 807.59 (NE) [112]	15" RCP 806.49 (S) [114]	73'	15"	0.30%	114	-
114	Type "C" Manhole		R-3472	810.24	15" RCP 806.27 (N) [113]	15" RCP 805.87 (E) [115]	165'	15"	0.50%	115	-
115	Inlet Type "M"		R-3455-C	809.72	15" RCP 805.04 (W) [114]	24" RCP 804.94 (E) [116]	183'	24"	0.20%	116	-
116	Type "C" Manhole		R-3472	810.20	24" RCP 804.58 (W) [115]	24" RCP 804.48 (NE) [118]	67'	24"	0.20%	118	-
117	Inlet Type "A"		R-4342	811.05		12" RCP 807.36 (SE) [118]	20'	12"	0.60%	118	-
118	Type "K" Manhole		R-1772	811.49	18" RCP 806.04 (W) [111] 24" RCP 804.34 (SW) [116] 12" RCP 807.24 (NW) [117]	30" RCP 803.94 (E) [119]	71'	30"	0.30%	119	-
119	Type "J" Manhole		R-4342	810.52	30" RCP 803.73 (W) [118]	30" RCP 803.63 (E) [120]	242'	30"	0.30%	120	-
120	Type "J" Manhole		R-1772	811.13	30" RCP 802.90 (W) [119]	30" RCP 802.80 (SE) [121]	83'	30"	0.30%	121	-
121	Type "J" Manhole		R-1772	809.96	30" RCP 802.55 (NW) [120]	30" RCP 802.45 (SE) [122]	25'	30"	0.35%	122	-
122	Aqua Swirl XC-11		PER MAN.	809.95	30" RCP 802.36 (NW) [121]	30" RCP 802.36 (SE) [123]	262'	30"	0.35%	123	-
123	Type "J" Manhole		R-1772	807.59	30" RCP 801.45 (NW) [122]	~~30" RCP 801.35 (S) [124]~~	~~490'~~	~~30"~~	~~0.35%~~	~~124~~	-
~~124~~	~~Type "J" Manhole~~		~~R-1772~~	~~805.60~~	~~30" RCP 799.95 (N) [123]~~	~~30" RCP 799.85 (SE) [125]~~	~~88'~~	~~30"~~	~~0.35%~~	~~125~~	NOT IN CONTRACT
~~125~~	~~End Section~~	~~Undefined~~	~~N/A~~	~~1.00~~	~~30" RCP 799.54 (NW) [124]~~						NOT IN CONTRACT

1

Aqua-Swirl Polymer Coated Steel (PCS)
Stormwater Treatment System

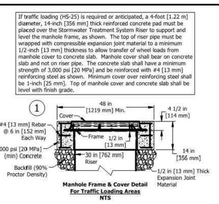
Projected View
SCALE 1:100

Unless other traffic barriers are present, bollards shall be placed around access riser(s) in non-traffic areas to prevent inadvertent loading by maintenance vehicles.



Manhole Frame & Cover Detail For Non-Traffic Areas Only NTS

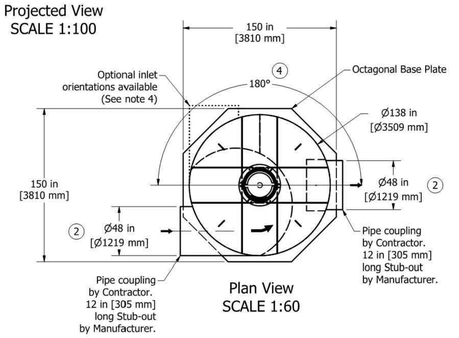
If traffic loading (HS-25) is required or anticipated, a 4-foot [1.22 m] diameter, 14-inch [356 mm] thick reinforced concrete pad must be placed over the Stormwater Treatment System Riser to support and level the manhole frame, as shown. The top of riser pipe must be wrapped with compressible expansion joint material to a minimum 1/2-inch [13 mm] thickness to allow transfer of wheel loads from manhole cover to concrete slab. Manhole cover shall bear on concrete slab and not on riser pipe. The concrete slab shall have a minimum strength of 3,000 psi [20 MPa] and be reinforced with #4 [13 mm] reinforcing steel as shown. Minimum cover over reinforcing steel shall be 1-inch [25 mm]. Top of manhole cover and concrete slab shall be level with finish grade.



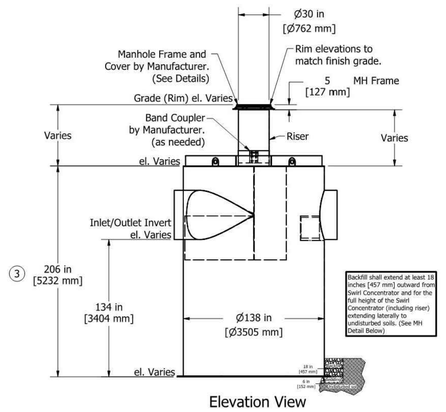
Manhole Frame & Cover Detail For Traffic Loading Areas NTS

Please see accompanied Aqua-Swirl specification notes. See Site Plan for actual System orientation. Approximate dry (pick) weight: 11500 lbs [5200 kg].

1. As an alternative, 42 in [1067 mm] diameter, HS-20/25 rated precast concrete rings may be substituted. 14 in [356 mm] thickness must be maintained.
2. XC-11 inlet/outlet pipe size ranges up to 48 in [1219 mm].
3. XC-11 chamber height may vary up to 206 in [5232 mm], depending on inlet/outlet pipe size.
4. Orientation may vary from a minimum of 90° to a maximum of 180°. Clockwise or counterclockwise orientation as needed.



Plan View
SCALE 1:60



Elevation View
SCALE 1:60

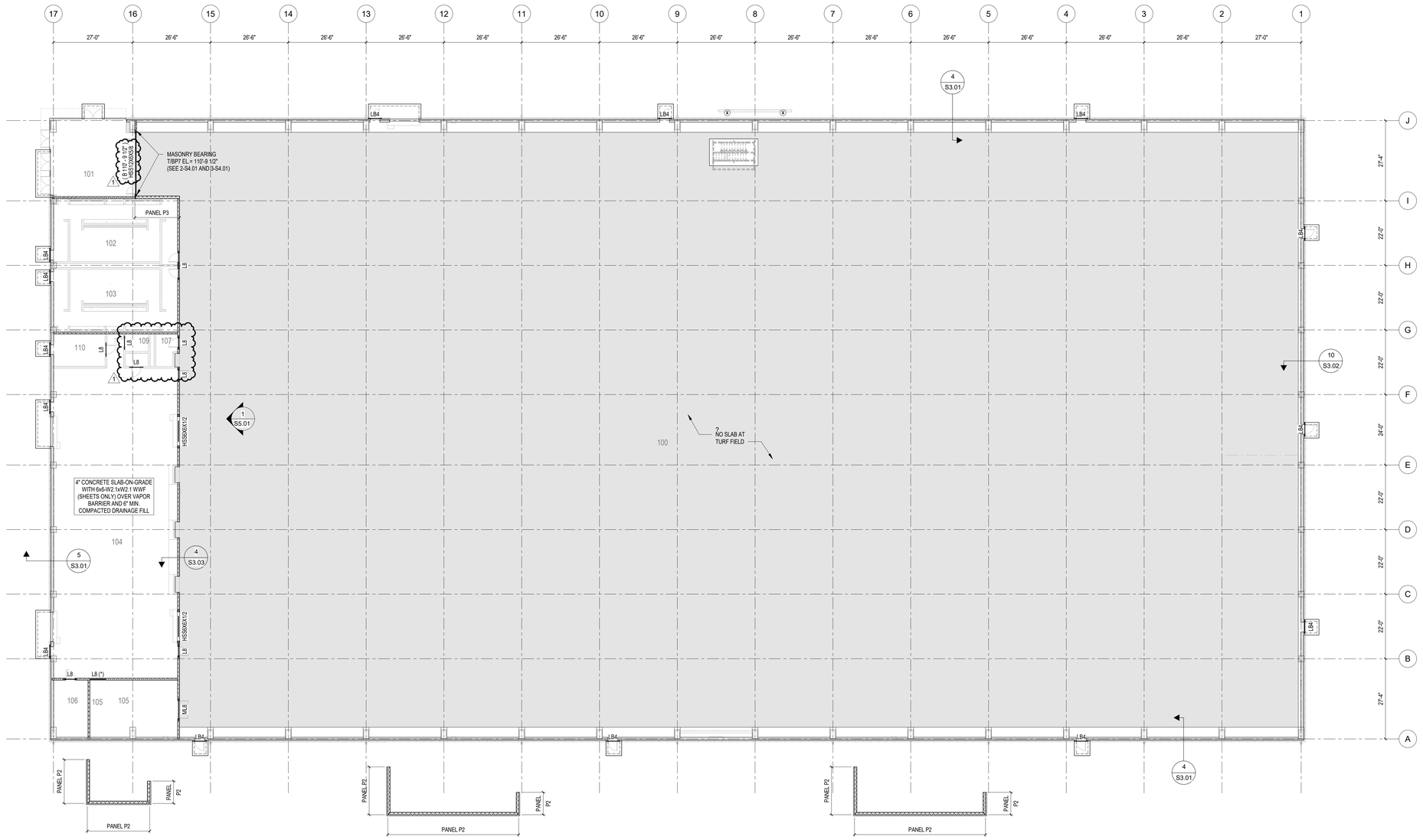
AquaShield — SIZED TO PERFECTION — 2733 Kanasita Drive, Suite 111, Chattanooga, TN 37343 Phone (888) 344-9044 Fax (423) 826-2112 www.aquashieldinc.com	Aqua-Swirl XCelerator XC-11 CCW STD Aqua-Swirl Stormwater Treatment System Standard Detail	Structure #:	XC-11 STD	Rvwed / Rvw. Date
		Drawn By:	OFlores	
		Scale:	As Shown	
		Date:	7/22/2020	

U.S. Patent No. 6524473 and other Patent Pending

1

STORM WATER QUALITY BMP STRUCTURE (ST-211)
NO SCALE
(NOT IN CONTRACT)

STORM WATER QUALITY BMP STRUCTURE (ST-122)
NO SCALE



SLAB AND MASONRY PLAN

1/16" = 1'-0"

NORTH

SLAB AND MASONRY PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (818.00' U.S.G.S.).
2. SEE SHEET S0.01 FOR GENERAL NOTES.
3. SEE S3.03 AND S4.01 THROUGH S4.03 FOR TYPICAL SLAB AND MASONRY DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS, BUT APPLY UNLESS OTHERWISE NOTED.
4. L, ML, SML INDICATES MASONRY LINTEL. SEE SHEET S4.01.
5. (*) INDICATES LINTEL REQUIRED FOR MECHANICAL OPENING, ONLY A PORTION OF THESE LINTELS REQUIRED FOR MASONRY OPENINGS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL LINTELS REQUIRED FOR MECHANICAL OPENINGS WHETHER OR NOT SHOWN ON THE PLANS. COORDINATE NUMBER, SIZE, ELEVATION, AND LOCATION OF ALL LINTELS FOR MECHANICAL OPENINGS.

   SEE 4-S4.01 AND 5-S4.01 FOR LINTELS IN NON-BEARING WALLS. SUBMIT SHOP DRAWINGS FOR REVIEW FOR LINTELS REQUIRED AT MECHANICAL OPENINGS IN BEARING WALLS AND OUTSIDE LIMITS OF 4-S4.01 AND 5-S4.01.
6. SEE THE PROJECT MANUAL FOR CONTRACTION AND CONSTRUCTION JOINT SPACING. THE CONTRACTOR IS ENCOURAGED TO SUBMIT A SLAB PLAN SHOWING ALTERNATE SPACINGS AND LOCATIONS THAT ADAPTS TO THEIR PLANNED CONSTRUCTION SEQUENCE.
7. LEGEND:

INDICATES SLAB OPENING FOR FIELD. SEE ARCHITECTURAL DRAWINGS.

PANEL XX

INDICATES MASONRY WALL SUPPORTED ON FOOTING. ALL PANELS TO BE P1 UNLESS OTHERWISE NOTED. SEE S4.01 FOR MASONRY WALL PANEL SCHEDULE.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

Owner

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

TLF, INC.
3901 West 86th Street, Suite 200
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2022-429

CONSTRUCTION DOCUMENTS

TRACY A. CHARITON REGISTERED No. 10708203 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: TLF

PROJECT NUMBER: 222063.00

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SLAB AND MASONRY PLAN

S1.02

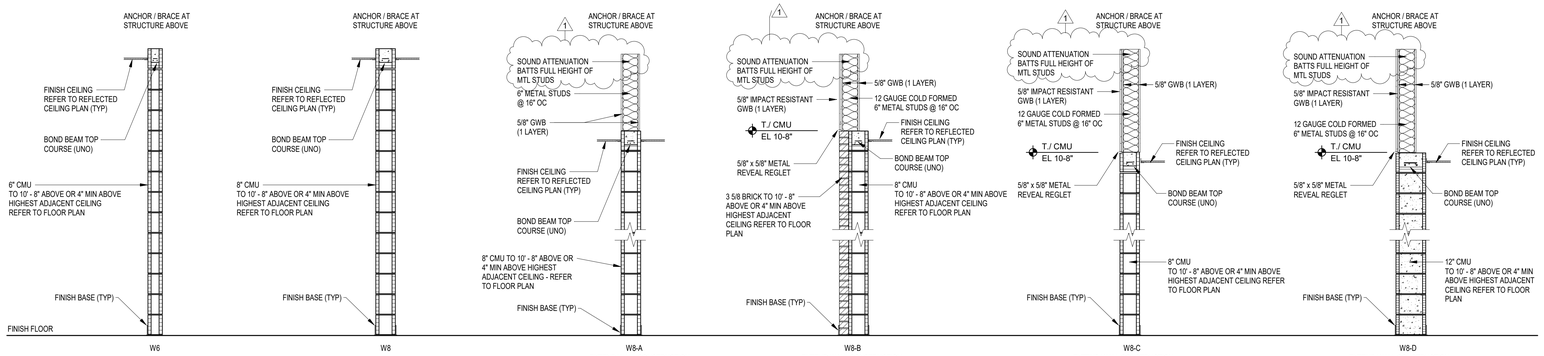
WALL TYPE GENERAL NOTES

1. WALL TYPE "W" INDICATES WALL CONSTRUCTION.
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 @ MASONRY WALLS.
5. PROVIDE DEEP LEG TRACK @ ALL STEEL STUDS THAT EXTEND TO DECK/STRUCTURE ABOVE (UNO).
6. PACK VOIDS @ NON-RATED WALLS W/ MINERAL WOOL.
7. PACK VOIDS @ RATED WALLS W/ FIRESTOPPING.
8. PROVIDE SOUND ATTENUATION BLANKETS @ WALLS THAT REQUIRE ACOUSTICAL INSULATION.

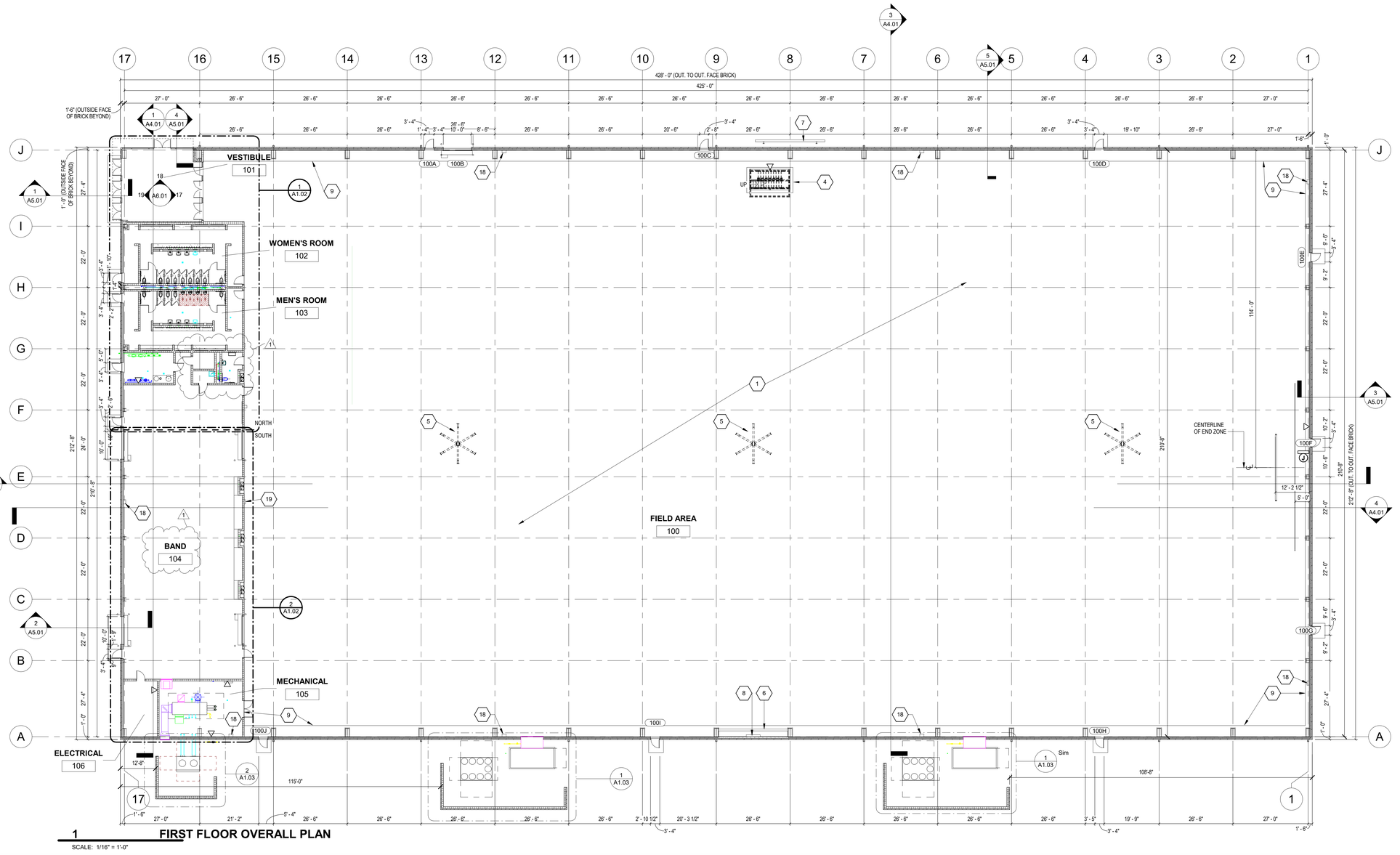
NOTE:
IF NOT BEARING WALL, AND EXTENDING TO DECK / STRUCTURE ABOVE, HOLD TOP OF CMU 2" BELOW DECK / STRUCTURE. CUT CMU TO ACCOMMODATE 2" DIMENSION. GROUT TOP COURSE SOLID. PACK VOID WITH MINERAL WOOL (NON-RATED) AND FIRESTOPPING (RATED)

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF



2 WALL TYPES



1 FIRST FLOOR OVERALL PLAN

SCALE: 1/16" = 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. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
D. 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.
E. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A1.03.
F. 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. EXTERIOR METAL STUD WALLS ARE DIMENSIONED TO INSIDE FACE OF METAL STUDS.
G. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
H. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
I. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
J. REFER TO ROOM FINISH SCHEDULE AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
K. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
L. REFER TO MASTER / CODE PLANS FOR CODE INFORMATION, FIRE RATED WALLS, AND NON-RATED WALLS EXTENDING TO THE DECK ABOVE.
M. R.B.B. - INDICATES RESILIENT BASKETBALL FLOORING. REFER TO PROJECT MANUAL
N. SF - INDICATES ALUMINUM STOREFRONT SYSTEM. REFER TO A6.01
O. R.A.F. - INDICATES RESILIENT ATHLETIC FLOORING REFER TO PROJECT MANUAL.

ARCHITECTURAL PLAN NOTES

#	NOTE
1	SYNTHETIC GRASS PLAYING SURFACE SYSTEM (SGS) WITH RUBBER / SAND MIX OVER 7" MIN FREE DRAINING AGGREGATE. REFER TO FLOOR PLANS FOR EXTENTS AND 2-A8.01
2	
2	STEEL PIPE BOLLARD (EXTERIOR) - REFER TO 7-A5.02
3	
3	STEEL PIPE BOLLARD (INTERIOR) - REFER TO 8-A5.02
4	CONCRETE PAD FOR BAND TOWER. REFER TO STRUCTURAL DRAWINGS FOR DETAILS, SIZE AND LOCATION
5	CEILING FAN. REFER TO MECHANICAL DRAWINGS.
6	INTERIOR SCOREBOARD.
7	EXTERIOR SCOREBOARD
8	TIME CLOCK.
9	SGS / CONCRETE EDGE. REFER TO DETAIL 2-A8.02 AND STRUCTURAL DETAILS
10	ALIGN MASONRY OPENING
11	PROVIDE LEVEL 5 FINISH ON ALL GWB SURFACES
12	DASHED LINE INDICATES WALL EXTENDS TO UNDERSIDE OF ROOF DECK. REFER TO WALL TYPES ON SHEET A1.01 FOR DETAILS
13	SHADING REPRESENTS CMU WALL EXTENDING TO 14'-0" AFF
14	LINE OF WALL OR SUN CONTROL SYSTEM ABOVE. REFER TO WALL SECTIONS FOR DETAILS
15	METAL LINER PANEL
16	LABELS INDICATE TOILET ACCESSORY INFORMATION. REFER TO SHEET A1.03 FOR DETAILS
17	LOUVER / GRILLE. REFER TO MECHANICAL DRAWINGS
18	FEC - SURFACE MOUNT
19	FEC - SEMI RECESSED
20	AED - SEMI RECESSED

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAVE REGISTERED No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: JAM

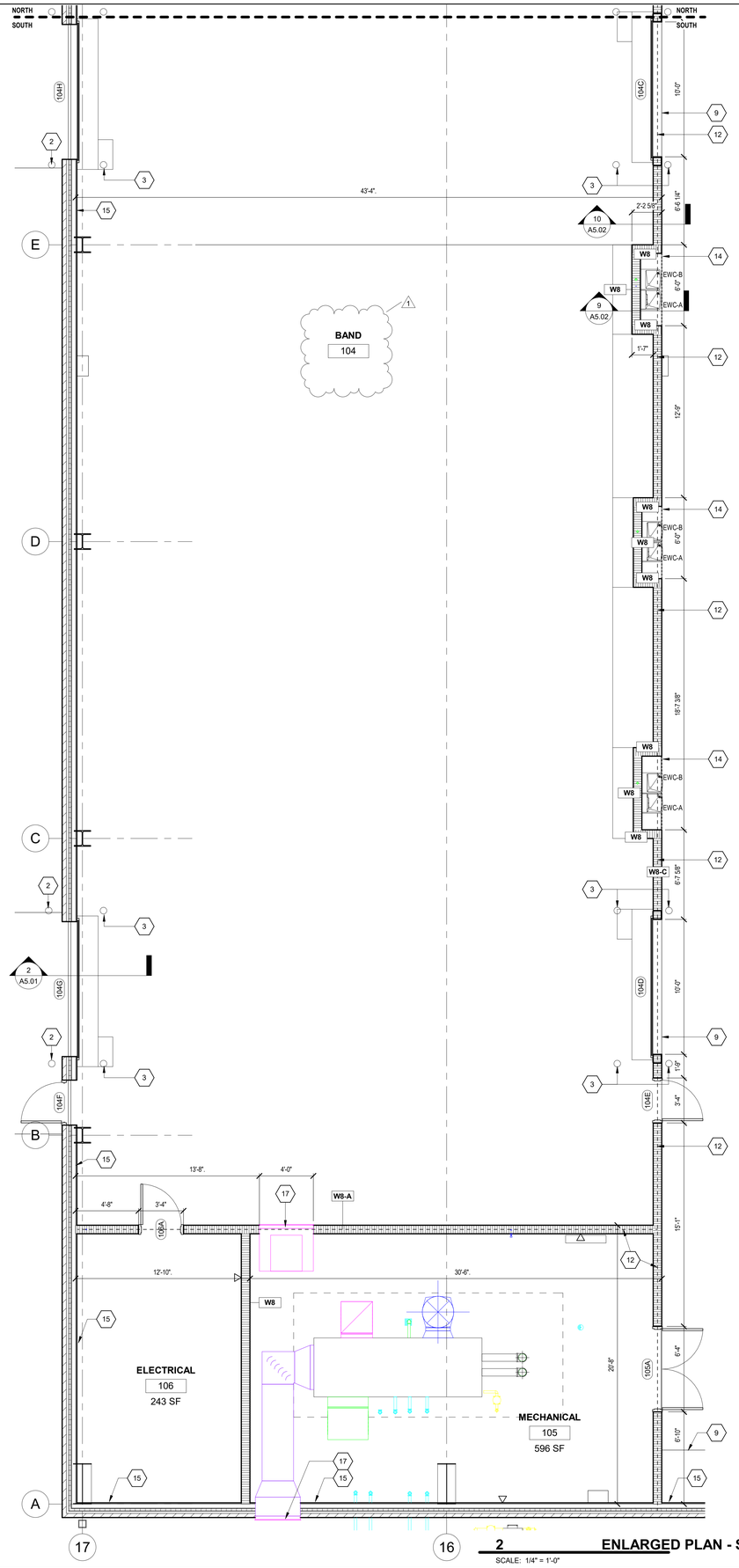
PROJECT NUMBER: 222063

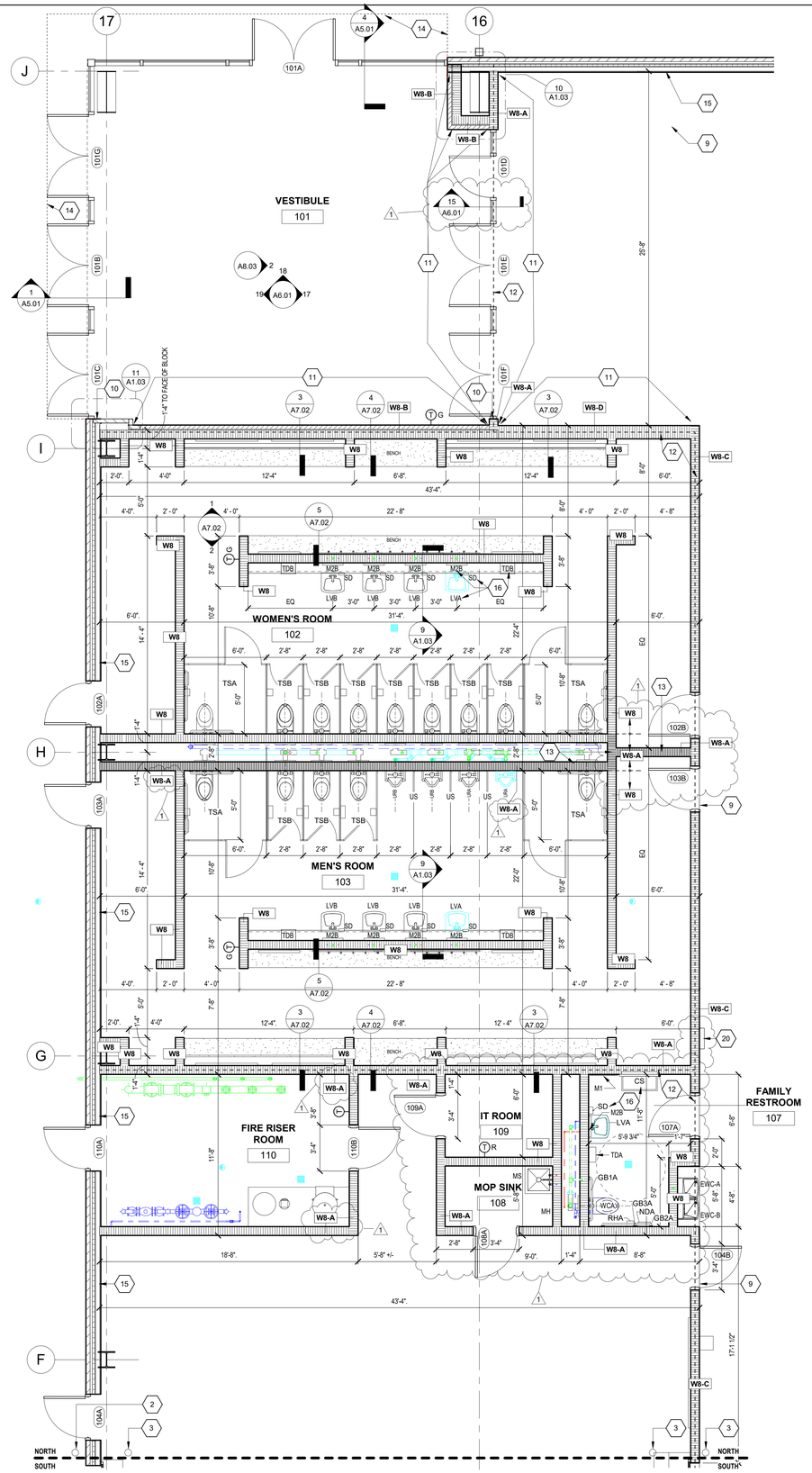
PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

FIRST FLOOR OVERALL PLAN

A1.01





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. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
D. 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.
E. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A1.03.
F. 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. EXTERIOR METAL STUD WALLS ARE DIMENSIONED TO INSIDE FACE OF METAL STUDS.
G. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
H. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE. EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
I. SEE REFLECTED CEILING PLANS FOR. BULKHEAD LOCATIONS AND DETAIL REFERENCES.
J. REFER TO ROOM FINISH SCHEDULE AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
K. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
L. REFER TO MASTER / CODE PLANS FOR CODE INFORMATION, FIRE RATED WALLS, AND NON-RATED WALLS EXTENDING TO THE DECK ABOVE.
M. R.B.B. - INDICATES RESILIENT BASKETBALL FLOORING. REFER TO PROJECT MANUAL
N. SF - INDICATES ALUMINUM STOREFRONT SYSTEM. REFER TO A6.01
O. R.A.F. - INDICATES RESILIENT ATHLETIC FLOORING REFER TO PROJECT MANUAL.

ARCHITECTURAL PLAN NOTES	
#	NOTE
1	SYNTHETIC GRASS PLAYING SURFACE SYSTEM (SGS) WITH RUBBER / SAND MIX OVER 7" MIN FREE DRAINING AGGREGATE. REFER TO FLOOR PLANS FOR EXTENTS AND 2-A8.01
2	
2	STEEL PIPE BOLLARD (EXTERIOR) - REFER TO 7-A5.02
3	
3	STEEL PIPE BOLLARD (INTERIOR) - REFER TO 8-A5.02
4	CONCRETE PAD FOR BAND TOWER. REFER TO STRUCTURAL DRAWINGS FOR DETAILS, SIZE AND LOCATION
5	CEILING FAN. REFER TO MECHANICAL DRAWINGS.
6	INTERIOR SCOREBOARD.
7	EXTERIOR SCOREBOARD
8	TIME CLOCK.
9	SGS / CONCRETE EDGE. REFER TO DETAIL 2-A8.02 AND STRUCTURAL DETAILS
10	ALIGN MASONRY OPENING
11	PROVIDE LEVEL 5 FINISH ON ALL GWB SURFACES.
12	DASHED LINE INDICATES WALL EXTENDS TO UNDERSIDE OF ROOF DECK. REFER TO WALL TYPES ON SHEET A1.01 FOR DETAILS
13	SHADING REPRESENTS CMU WALL EXTENDING TO 14'-0" AFF
14	LINE OF WALL OR SUN CONTROL SYSTEM ABOVE. REFER TO WALL SECTIONS FOR DETAILS
15	METAL LINER PANEL
16	LABELS INDICATE TOILET ACCESSORY INFORMATION. REFER TO SHEET A1.03 FOR DETAILS
17	LOUVER / GRILLE. REFER TO MECHANICAL DRAWINGS
18	FEC - SURFACE MOUNT
19	FEC - SEMI RECESSED
20	AED - SEMI RECESSED

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT
FANNING HOWEY
WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE REGISTERED No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: JAM

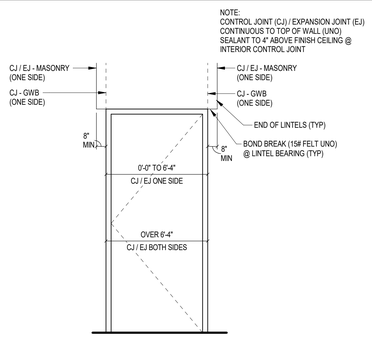
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

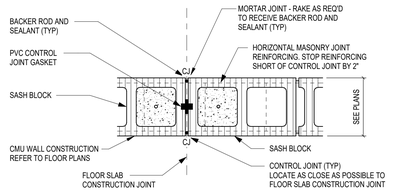
ENLARGED PLANS

A1.02



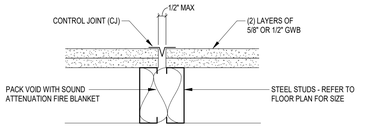
8 CONTROL JOINTS AT DOOR

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



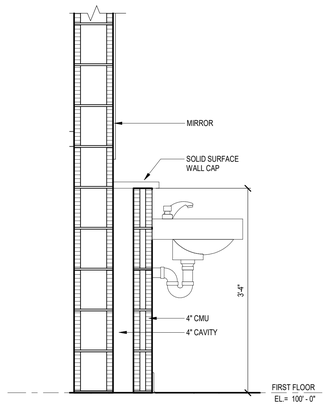
7 TYPICAL CMU CONTROL JOINT

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



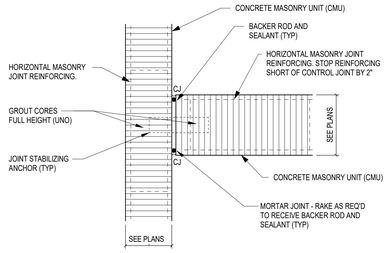
6 GWB CONTROL JOINT

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



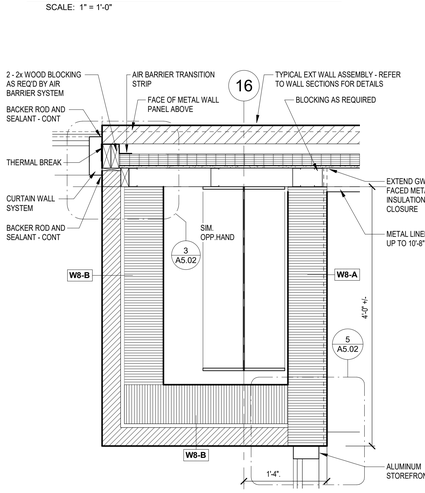
9 SECTION AT BATHROOM SINK

SCALE: 1" = 1'-0"



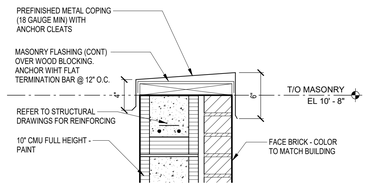
5 CONTROL JOINT AT INTERSECTING CMU WALLS

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



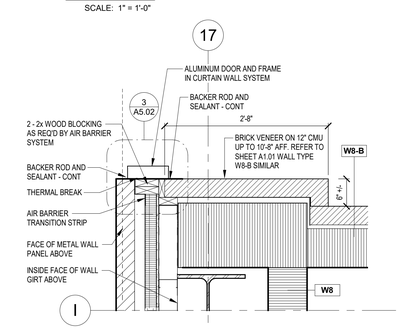
10 PLAN DETAIL

SCALE: 1" = 1'-0"



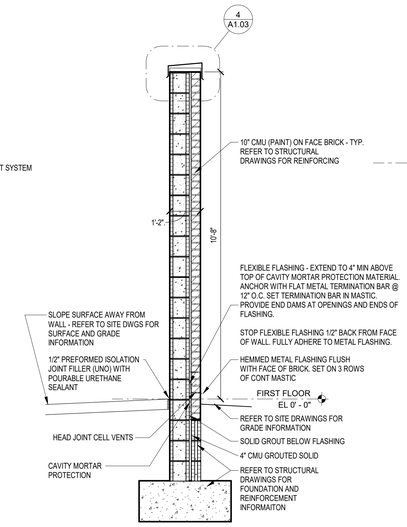
4 DETAIL

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



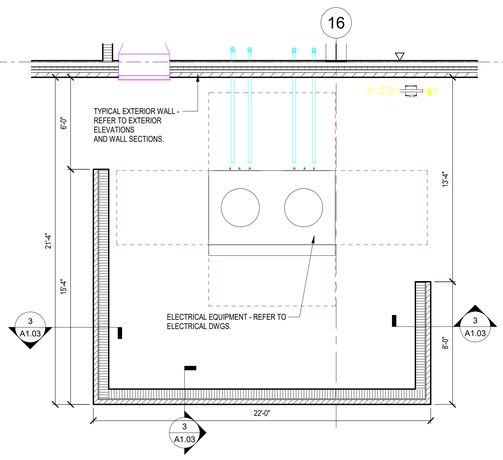
11 PLAN DETAIL

SCALE: 1" = 1'-0"



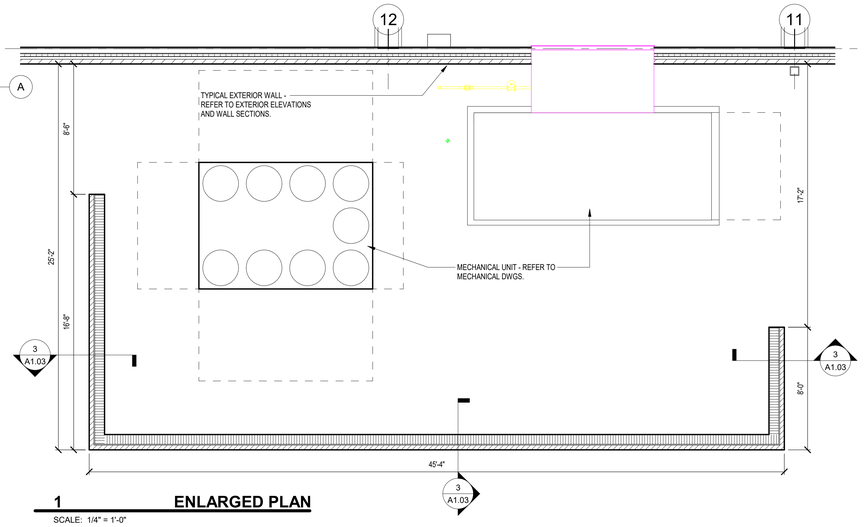
3 DETAIL

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



2 ENLARGED PLAN

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

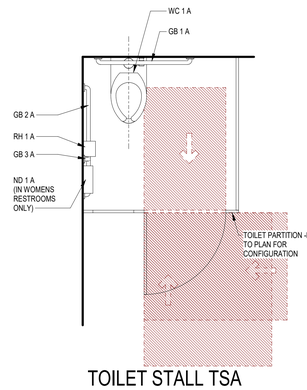


1 ENLARGED PLAN

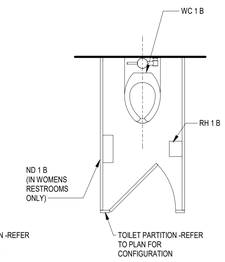
SCALE: 1/4" = 1'-0"

TOILET STALLS LEGEND

NOTE: UNDERSCORE(_) INDICATES GRADE LEVEL DESIGNATION, REFER TO ENLARGED PLAN FOR LETTER

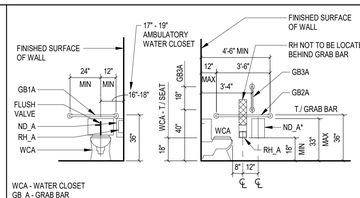


TOILET STALL TSA



TOILET STALL TSB

RESTROOM FIXTURES AND ACCESSORIES



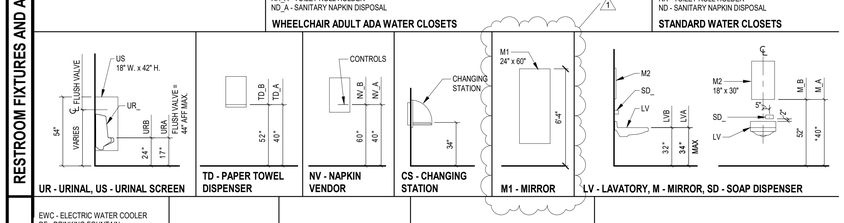
WCA - WATER CLOSET
GB_A - GRAB BAR
RH_A - TOILET ROLL HOLDER
ND_A - SANITARY NAPKIN DISPOSAL

WHEELCHAIR ADULT ADA WATER CLOSETS

* NAPKIN DISPOSAL MAY BE MOUNTED ON OPPOSITE WALL. SEE PLAN FOR LOCATION

WC - WATER CLOSET
RH - TOILET ROLL HOLDER
ND - SANITARY NAPKIN DISPOSAL

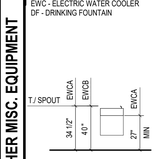
STANDARD WATER CLOSETS



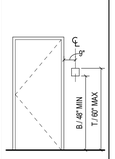
UR - URINAL, US - URINAL SCREEN | TD - PAPER TOWEL DISPENSER | NV - NAPKIN VENDOR | CS - CHANGING STATION | M1 - MIRROR | LV - LAVATORY, M - MIRROR, SD - SOAP DISPENSER

OTHER MISC. EQUIPMENT

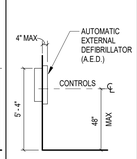
EWC - ELECTRIC WATER COOLER
DF - DRINKING FOUNTAIN



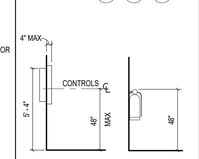
ELECTRIC WATER COOLER DRINKING FOUNTAIN



INTERIOR SIGN

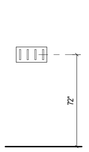


A.E.D. CABINET



FIRE EXT. CABINET (FEC) FIRE EXTINGUISHER (FE)

FIRE EXTINGUISHERS



MH - MOP HOLDERS, MS - MOP SINK

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 ONE PIECE GRAB BAR. GRAB BAR MAY BE A ONE PIECE OR A TWO PIECE. 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

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

WCA INDICATES WATER CLOSET AT MOUNTING HEIGHT "A". REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURE SCHEDULE

GRADE LEVEL LEGEND:

A. ADULT ACCESSIBLE (ADA) HEIGHTS
B. ADULTS

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

DRAWN BY: JAM

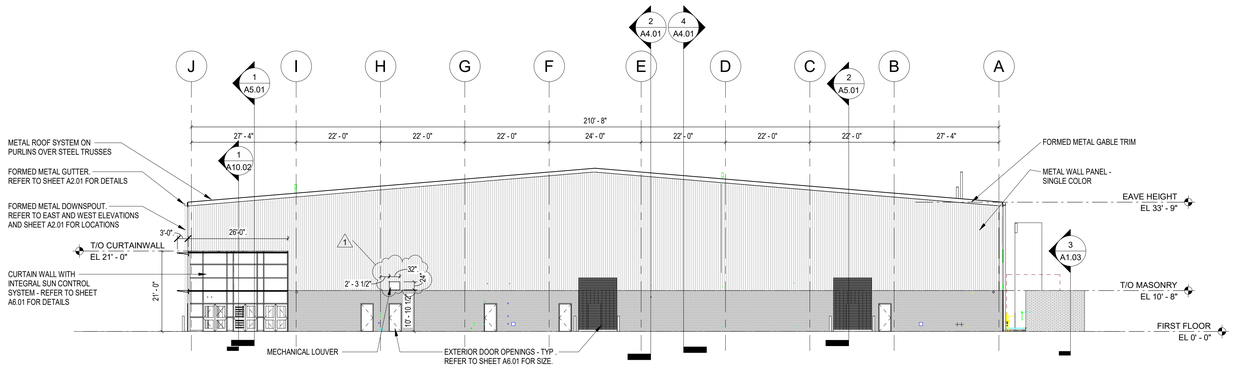
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

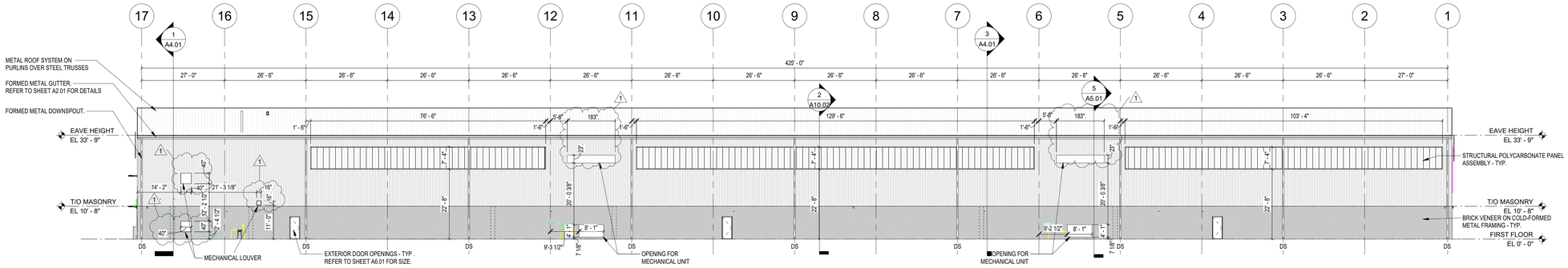
ENLARGED PLANS AND DETAILS

A1.03



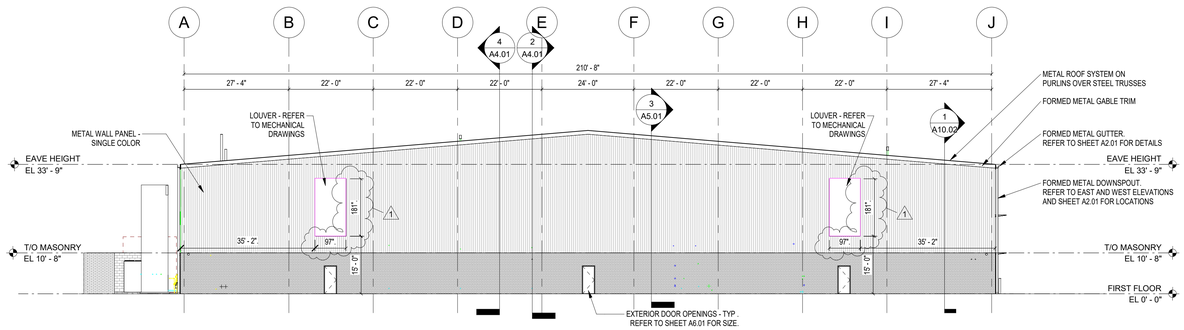
1 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"



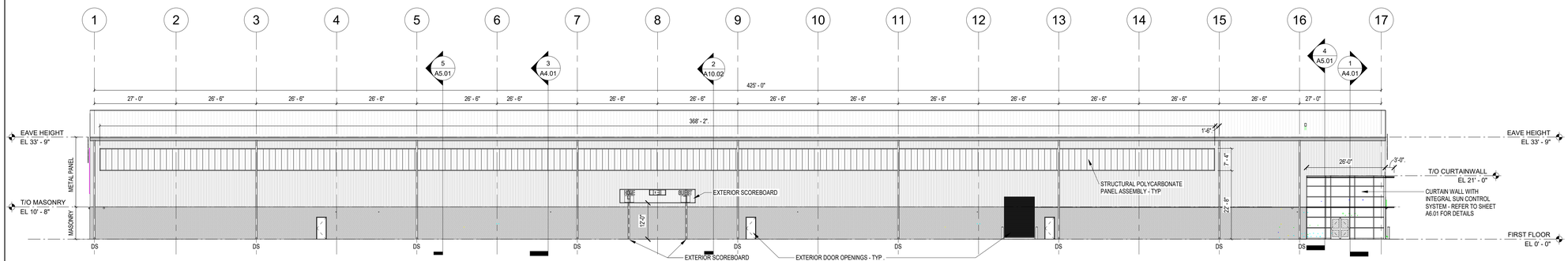
2 EAST ELEVATION

SCALE: 1/16" = 1'-0"



3 NORTH ELEVATION

SCALE: 1/16" = 1'-0"



4 WEST ELEVATION

SCALE: 1/16" = 1'-0"

ELEVATION GENERAL NOTES

1. 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.
2. 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.

BUILDING ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

DS DOWNSPOUT

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAVE REGISTERED No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: JAM

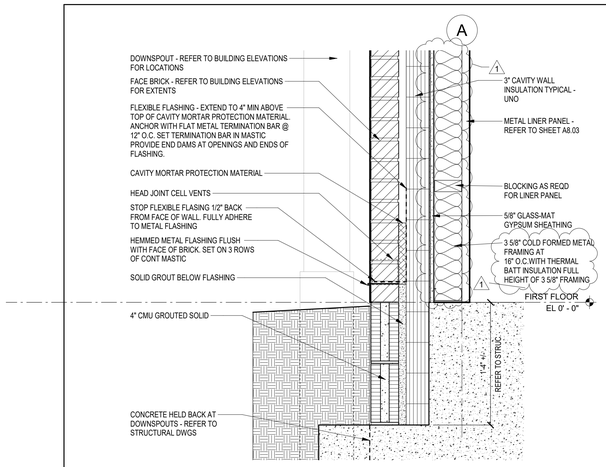
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

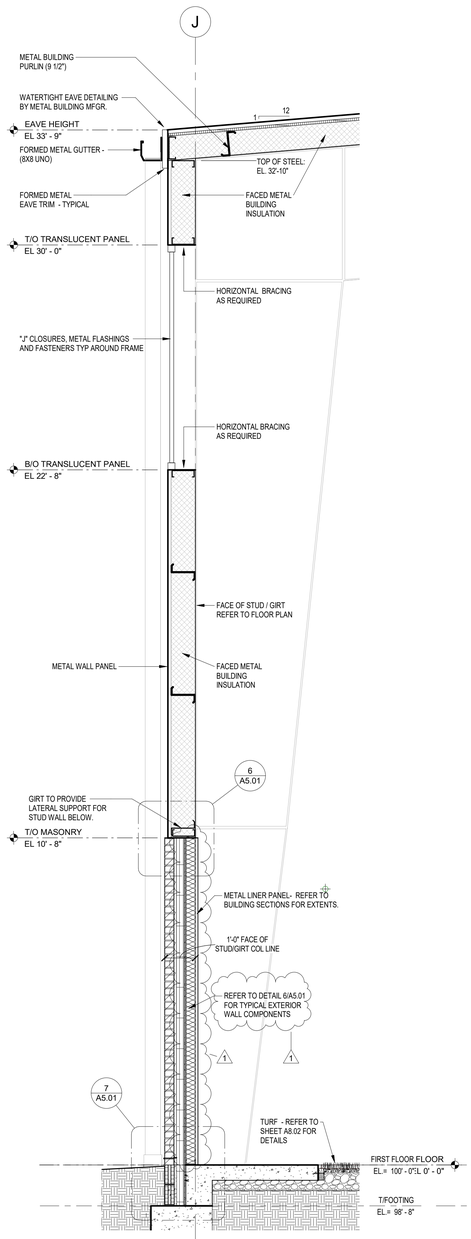
BUILDING ELEVATIONS

A3.01



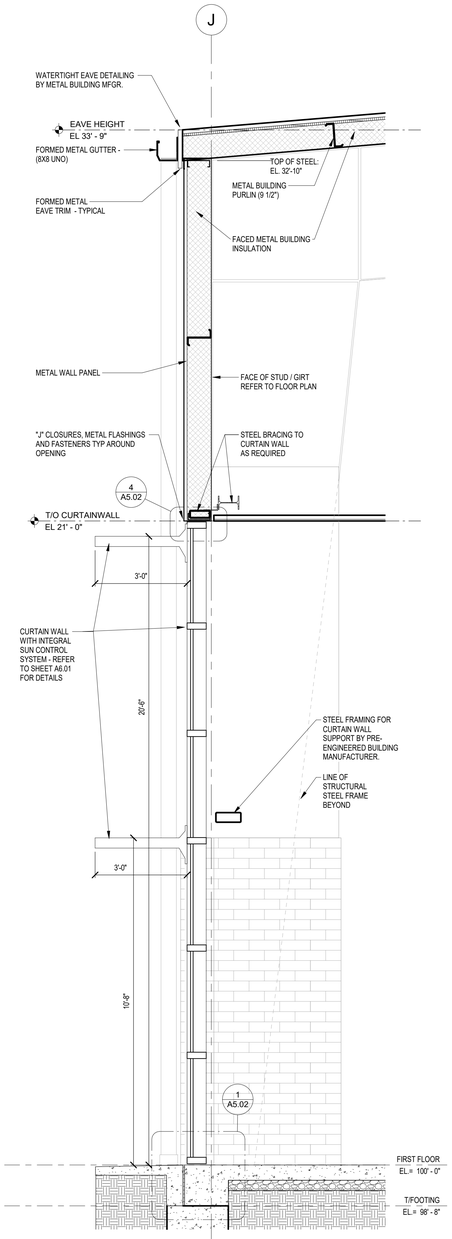
7 DETAIL - EXTERIOR FOOTING

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



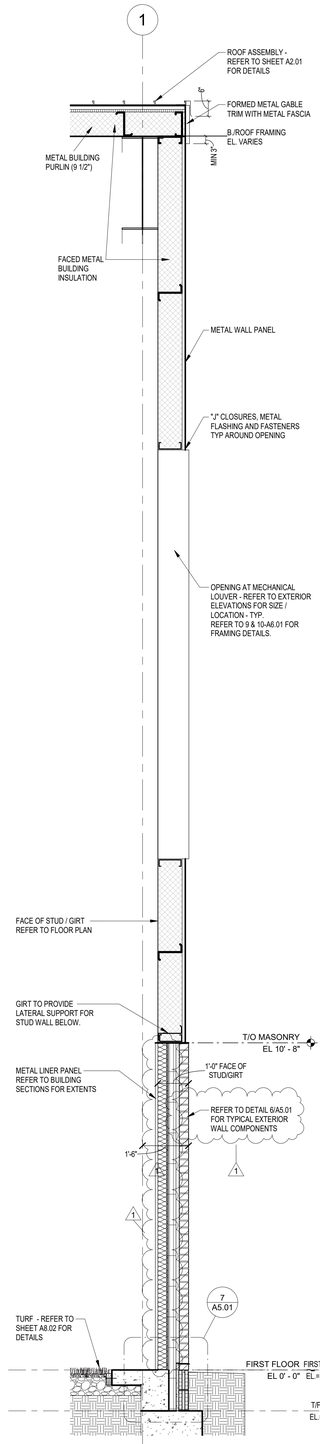
5 WALL SECTION

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



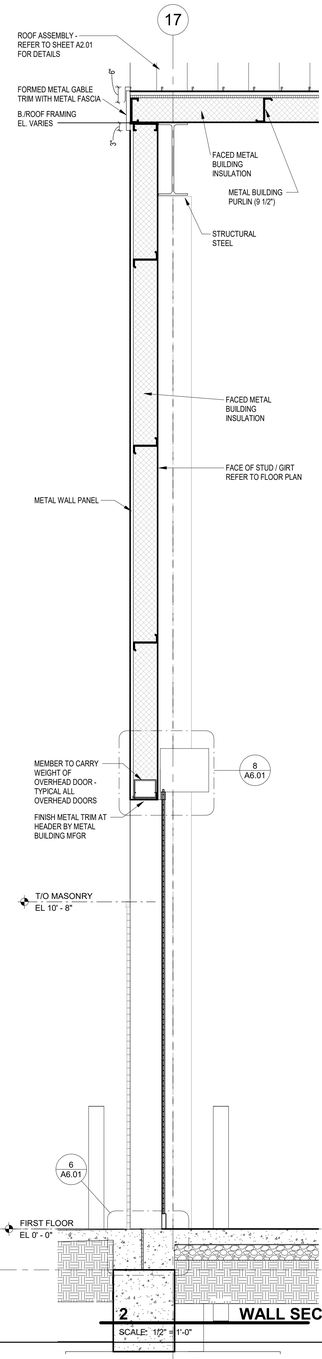
4 WALL SECTION

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



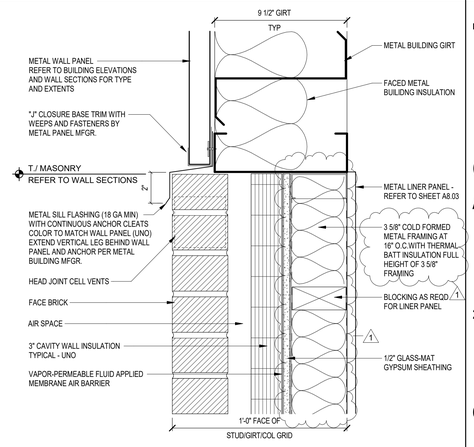
3 WALL SECTION

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



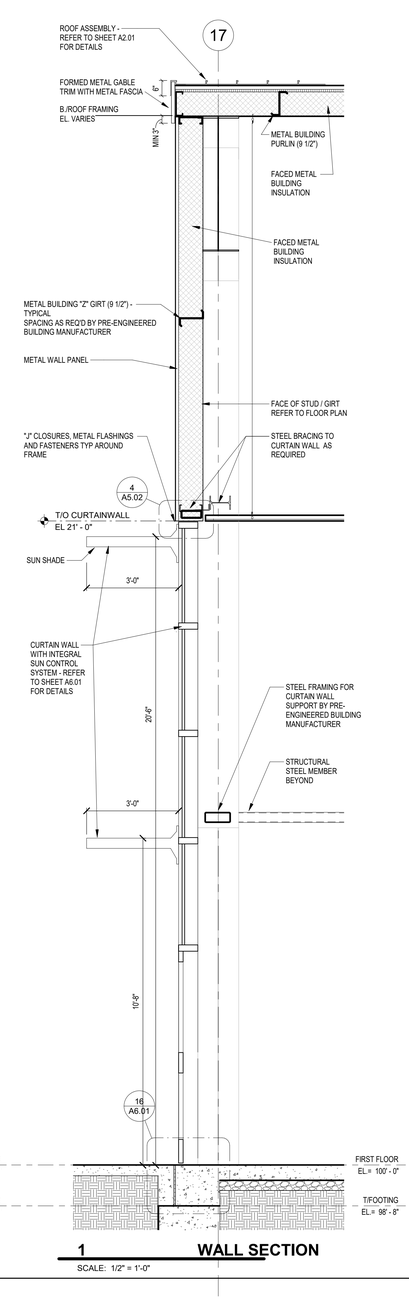
2 WALL SECTION

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



6 TYPICAL EXTERIOR WALL

SCALE: 3" = 1'-0"



1 WALL SECTION

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

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE 29501 STATE No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: JAM

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

WALL SECTIONS

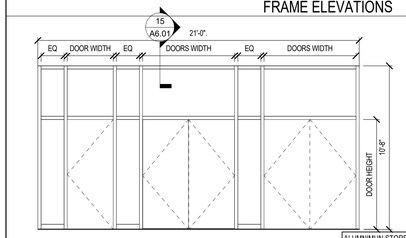
A5.01

DOOR AND FRAME SCHEDULE

DOOR NUMBER	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 IN MINS.	HARDWARE: SET NO.	HARDWARE: KEYSIDE ROOM	STC RATING	REMARKS	DOOR NUMBER
100A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		3.0	EXT			100A
100B	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01		15.0	EXT			100B
100C	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100C
100D	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100D
100E	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100E
100F	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100F
100G	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100G
100H	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100H
100I	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		4.0	EXT			100I
100J	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		3.0	EXT			100J
101A	PR 3' - 0" x 7' - 2"	FGAL2	AL	18/A6.01	0' - 4 1/2"	4/A5.02	-- /1	16/A6.01		2.0	EXT			101A
101B	PR 3' - 0" x 7' - 2"	FGAL2	AL	19/A6.01	0' - 4 1/2"	4/A5.02	--	16/A6.01		2.0	EXT			101B
101C	PR 3' - 0" x 7' - 2"	FGAL2	AL	19/A6.01	0' - 4 1/2"	4/A5.02	3/A5.02	16/A6.01		1.0	EXT			101C
101D	3' - 0" x 7' - 2"	FGAL2	AL	17/A6.01	0' - 4 1/2"	15/A6.01	--	16/A6.01 SIM		8.0	101			101D
101E	PR 3' - 0" x 7' - 2"	FGAL2	AL	17/A6.01	0' - 4 1/2"	15/A6.01	--	16/A6.01 SIM		7.0	101			101E
101F	PR 3' - 0" x 7' - 2"	FGAL2	AL	17/A6.01	0' - 4 1/2"	15/A6.01	5/A5.02 SIM	16/A6.01 SIM		7.0	101			101F
101G	PR 3' - 0" x 7' - 2"	FGAL2	AL	19/A6.01	0' - 4 1/2"	4/A5.02		16/A6.01		2.0	EXT			101G
102A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		6.0	EXT			102A
102B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		14.0	102			102B
103A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		6.0	EXT			103A
103B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		14.0	103			103B
104A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		3.0	EXT			104A
104B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		11.0	100			104B
104C	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	5/A6.01	4/A6.01	3/A6.01		15.0	EXT			104C
104D	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	5/A6.01	4/A6.01	3/A6.01		15.0	EXT			104D
104E	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		11.0	100			104E
104F	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		3.0	EXT			104F
104G	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01		15.0	EXT			104G
104H	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01		15.0	EXT			104H
105A	PR 3' - 0" x 7' - 2"	F WD	HM	HM2	0' - 8 3/4"	2/A6.01	1/A6.01	--		10.0	100			105A
106A	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		9.0	104			106A
107A	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		14.1	107			107A
108A	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"					13.0	104			108A
109A	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"					11.0	104			109A
110A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"	13/A6.01	14/A6.01	--		5.0	EXT			110A
110B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 8 3/4"	2/A6.01	1/A6.01	--		12.0	104			110B

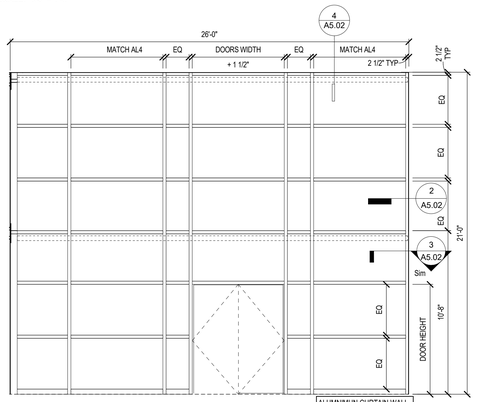
/1 SEE SCHEDULE

FRAME ELEVATIONS



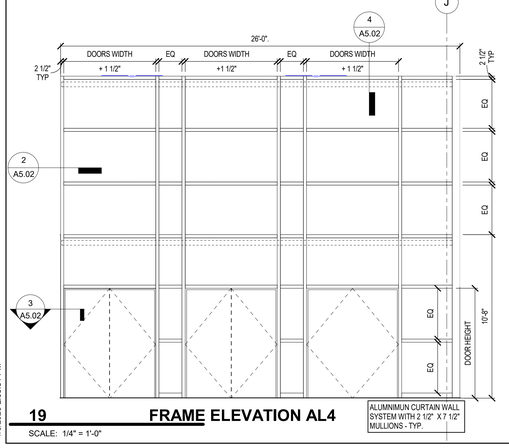
17 **FRAME ELEVATION AL2**

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



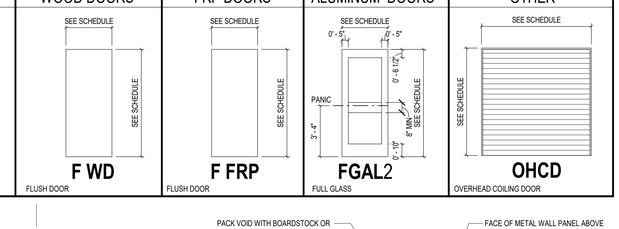
18 **FRAME ELEVATION AL3**

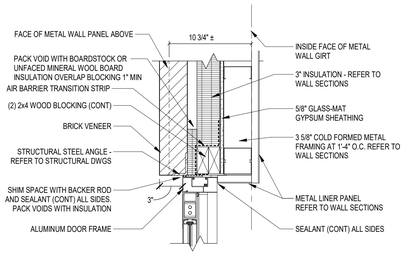
SCALE: 1/4" = 1'-0"



19 **FRAME ELEVATION AL4**

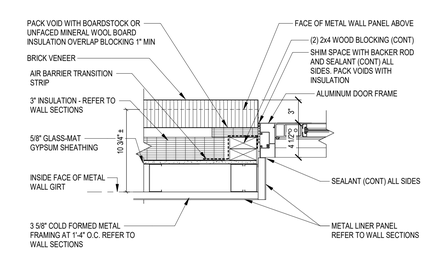
SCALE: 1/4" = 1'-0"





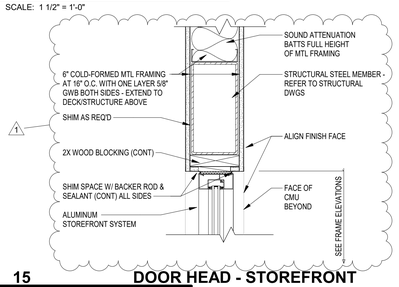
13 **HEAD - EXTERIOR DOORS**

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



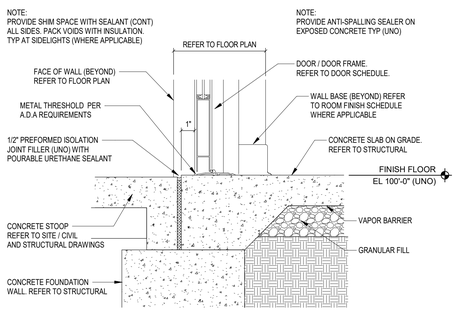
14 **JAMB - EXTERIOR DOORS**

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



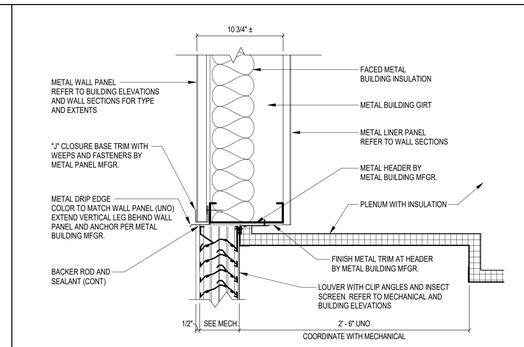
15 **DOOR HEAD - STOREFRONT**

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



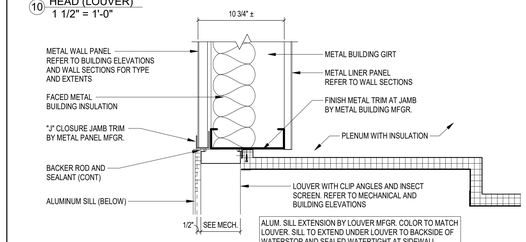
16 **DOOR THRESHOLD AND STOOP**

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

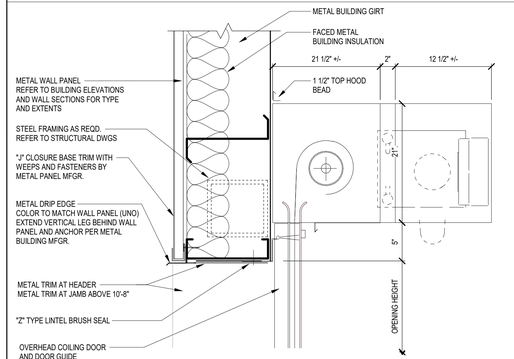


GROUT ALL VOIDS IN WALL AND SEAL AROUND LOUVER WATER TIGHT WITH NON-HARDENING SILICONE CAULK (INSIDE AND OUTSIDE)

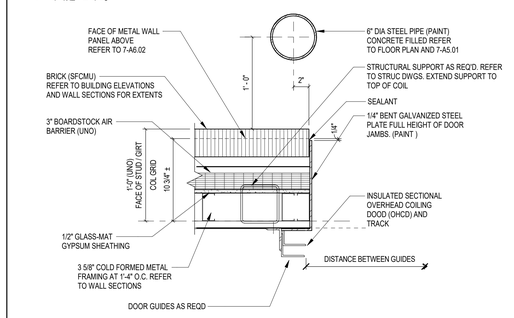
10 HEAD (LOUVER)
1 1/2" = 1'-0"



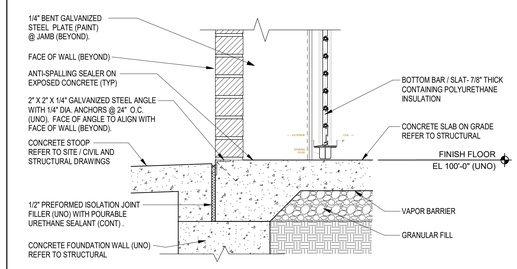
9 JAMB (LOUVER)
1 1/2" = 1'-0"



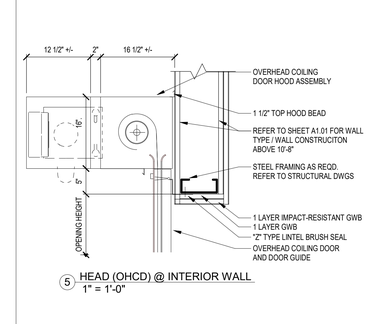
8 HEAD - SOHD @ EXTERIOR WALL
1 1/2" = 1'-0"



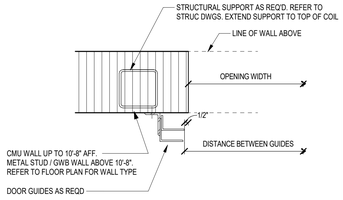
7 JAMB - SOHD @ EXTERIOR WALL
1 1/2" = 1'-0"



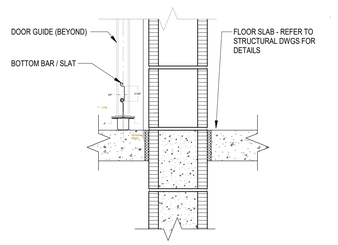
6 SILL - SOHD @ EXTERIOR WALL
1 1/2" = 1'-0"



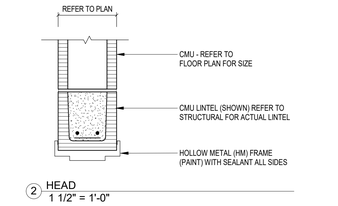
5 HEAD (OHCD) @ INTERIOR WALL
1" = 1'-0"



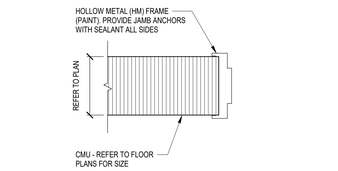
4 JAMB (OHCD) @INTERIOR WALL
1 1/2" = 1'-0"



3 SILL (OHCD) @ INTERIOR WALL
1 1/2" = 1'-0"



2 HEAD
1 1/2" = 1'-0"



1 JAMB
1 1/2" = 1'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE 2500 STATE No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: JAM

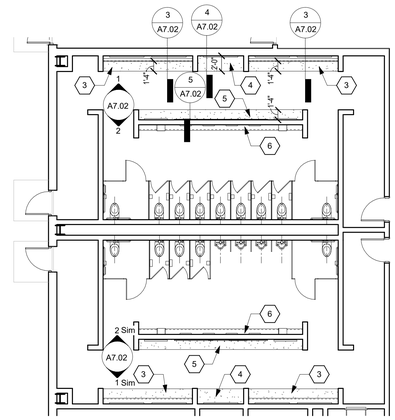
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

DOOR FRAMES/ SCHEDULE/ DETAILS

A6.01



2 ENLARGED LOCKER ROOM PLAN

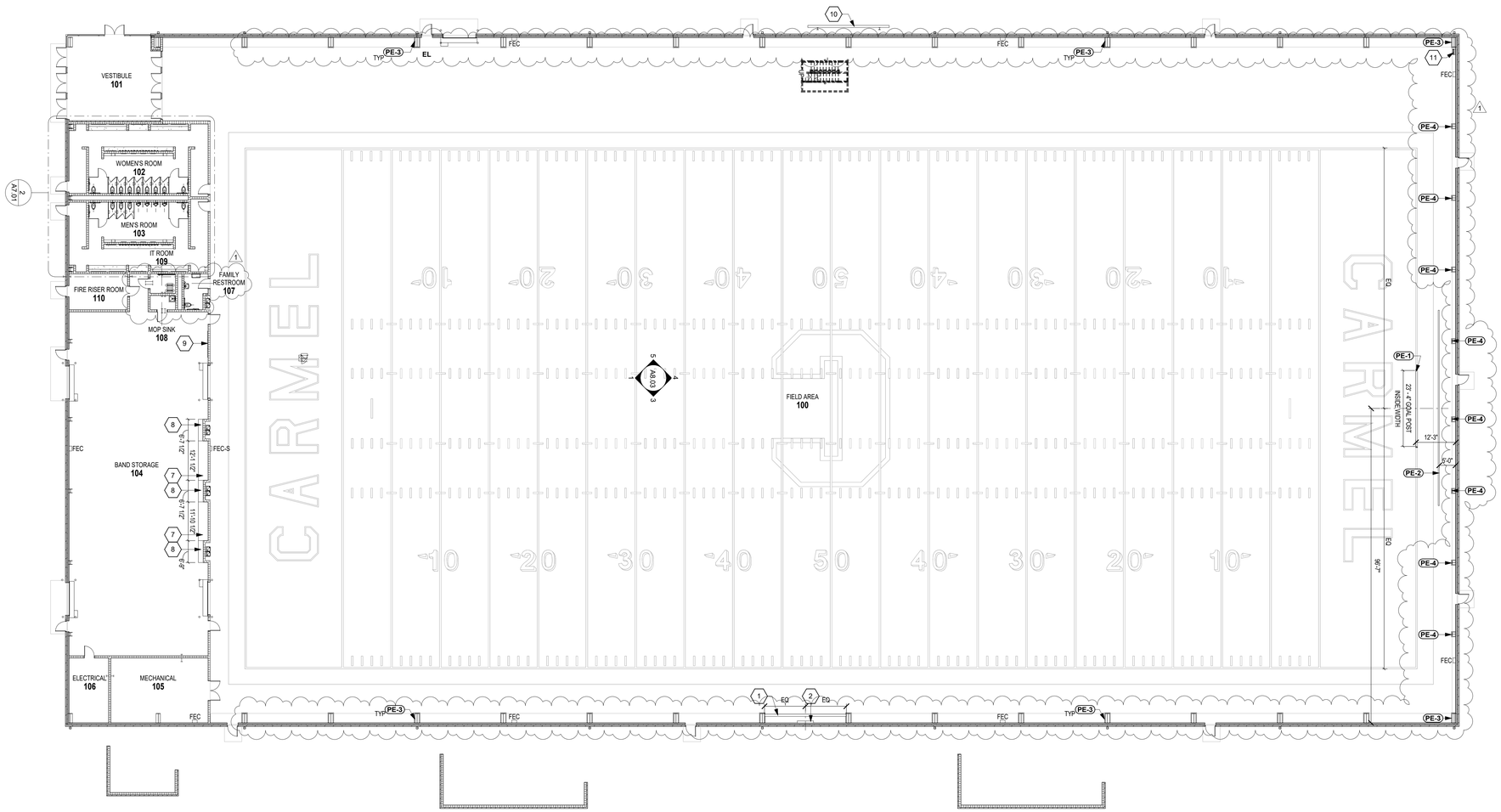
SCALE: 1/8" = 1'-0"

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF

PE EQUIPMENT SCHEDULE

PE-1	23'-4"W x 30'-0"H CEILING-SUSPENDED FIXED FOOTBALL GOAL (CROSSBAR AND UPRIGHTS). BASIS OF DESIGN IS SPORTSFIELD SPECIALTIES HANGING FOOTBALL GOAL POST IN CUSTOM HIGH SCHOOL WIDTH. SUPPORT STRUCTURE AT ROOF PROVIDED AS PART OF PRE-ENGINEERED BUILDING PACKAGE.
PE-2	25'-0" HIGH x 60'-0" WIDE CEILING-SUSPENDED FIXED BALL BARRIER NETTING SYSTEM. BASIS OF DESIGN IS SPORTSFIELD SPECIALTIES HANGING FOOTBALL SAFETY NETTING SYSTEM. SUPPORT STRUCTURE AT ROOF PROVIDED AS PART OF PRE-ENGINEERED BUILDING PACKAGE.
PE-3	2" THICK X 6'-0"H PROTECTIVE WALL PADDING. AT THE MAIN FRAMES (STRUCTURE) OF THE PRE-ENGINEERED BUILDING, PROVIDE CONTINUOUS PADDING AROUND THE TAPERED STEEL STRUCTURE. PROVIDE RIGID BLOCKING/ SHEATHING TO ACCOMODATE AND CREATE A FLUSH CONDITION AND A SOLID CAP IN BETWEEN THE WEBS OF THE STRUCTURE AND VERTICAL CONDITION FOR THE HEIGHT OF THE PADDING AT THE LEADING EDGE OF TAPERED COLUMNS.
PE-4	2" THICK X 6'-0"H PROTECTIVE WALL PADDING. AT THE COLUMNS OF THE PRE-ENGINEERED BUILDING, PROVIDE CONTINUOUS PADDING AROUND THE STEEL STRUCTURE. PROVIDE RIGID BLOCKING/ SHEATHING TO ACCOMODATE AND CREATE A FLUSH CONDITION AND A SOLID CAP IN BETWEEN THE WEBS OF THE STRUCTURE.



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. REFER TO ABS.01 LIST OF FINISHES FOR COLOR SELECTIONS.
D. SIGNAGE TO BE PROVIDED BY ALLOWANCE FIGURE. REFER TO PROJECT MANUAL FOR MORE INFORMATION.
E. (PE-X) INDICATES PE EQUIPMENT, REFER TO SCHEDULE ON THIS SHEET.
F. (FEC) INDICATES FIRE EXTINGUISHER CABINET, REFER TO SPECIFICATIONS
G. (FEC-S) INDICATES SEMI-RECESSED FIRE EXTINGUISHER CABINET, REFER TO SPECIFICATIONS

EQUIPMENT NOTES

1	ELECTRONIC INTERIOR SCOREBOARD, REFER TO PROJECT MANUAL
2	ELECTRONIC TIMER, REFER TO PROJECT MANUAL
3	STANDARD DEPTH CONCRETE BENCH WITH SSM-1 LEDGE & WALL-MOUNTED MIRRORS ABOVE, REFER TO DETAIL 3/A7.02
4	ADA CONCRETE BENCH WITH WALL-MOUNTED MIRROR ABOVE. REFER TO DETAIL 4/A7.02
5	CONCRETE BENCH WITH WALL-MOUNTED COAT HOOKS & MIRRORS ABOVE. REFER TO DETAIL 5/A7.02
6	SSM-1 WALL CAP ABOVE SINKS, REFER TO DETAIL X/A1.02
7	8' TALL X 3' DEEP OPEN SHELVING, CONSTRUCTED OF 2X6 TREATED LUMBER AND 3/4" PLYWOOD. REFER TO DETAIL 6/A7.02
8	8' TALL X 1'1" DEEP OPEN SHELVING, CONSTRUCTED OF 2X6 TREATED LUMBER AND 3/4" PLYWOOD. REFER TO DETAIL 7/A7.02
9	STEEL PEGBOARD(S), 8' WIDE X 32"H MINIMUM, B.O.D. IS (3) WALL CONTROL 30-P-3232-GV UNITS
10	ELECTRONIC EXTERIOR SCOREBOARD, REFER TO PROJECT MANUAL
11	TECHNOLOGY CABINET, REFER TO TECH 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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE 22ND STREET No. 4169 STATE OF INDIANA ARCHITECT

DRAWN BY: AML

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

FIRST FLOOR EQUIPMENT PLAN

A7.01

ROOM LEGEND

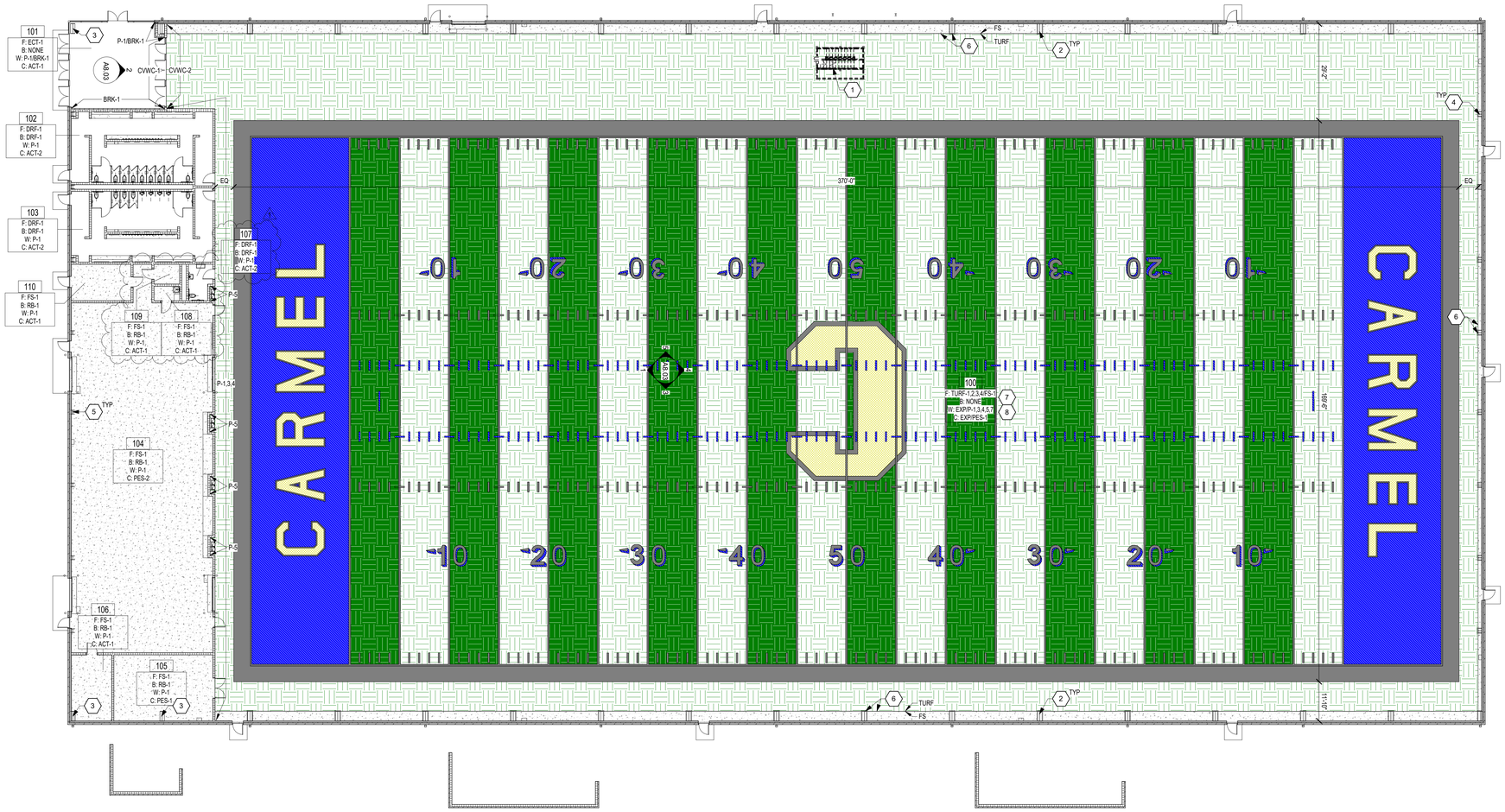
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF

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. RESILIENT TRANSITION STRIP BETWEEN NEW FLOOR FINISH.
C. PROVIDE NEW RESILIENT TRANSITION STRIPS AT EXPOSED EDGE OF NEW FLOOR FINISH TO FIELD TURF.
D. PAINT ALL SIDES (VERT. AND HORZ.) OF BULKHEAD/SOFFIT COLOR INDICATED (UNO).
E. (EXP) INDICATES EXPOSED BUILDING MATERIALS, FACTORY FINISHED/ REQUIRES NO ON-SITE FINISHING
F. DO NOT INSTALL RESILIENT BASE ON METAL LINER PANEL OR BRICK WALLS.

FLOOR PATTERN/FINISH KEY NOTES

1. STEEL BAND OBSERVATION TOWER, INCLUDED IN PROJECT ALLOWANCE AMOUNT; REFER TO SPECIFICATIONS
2. PAINT ALL SIDES OF MAIN FRAME, P-6
3. PAINT ALL SIDES OF MAIN FRAME, P-1
4. PAINT ALL SIDES OF COLUMN, P-6
5. PAINT ALL SIDES OF COLUMN, P-1
6. ALIGN EDGE OF SLAB/ FLOORING TRANSITION WITH EDGE OF MAIN FRAME/COLUMN BASE. FINAL DIMENSION OF BASE TO BE DETERMINED BY BUILDING MANUFACTURER, COORDINATE IN FIELD. REFER TO DETAIL 2/A8.02 FOR TRANSITION DETAIL
7. PAINT EXPOSED STRUCTURAL GIRTS, PURLINS, AND BRACING, P-7
8. REFER TO 1/A8.02 FOR ADDITIONAL INFORMATION ON FIELD MARKINGS



FLOOR PATTERN LEGEND

- FS-1
- TURF-1
- TURF-2
- TURF-3
- TURF-4
- TURF-5

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

WILLIAM E. PAINE — PROFESSIONAL ENGINEER — No. 4169 — STATE OF INDIANA — REGISTERED ARCHITECT

DRAWN BY: AML

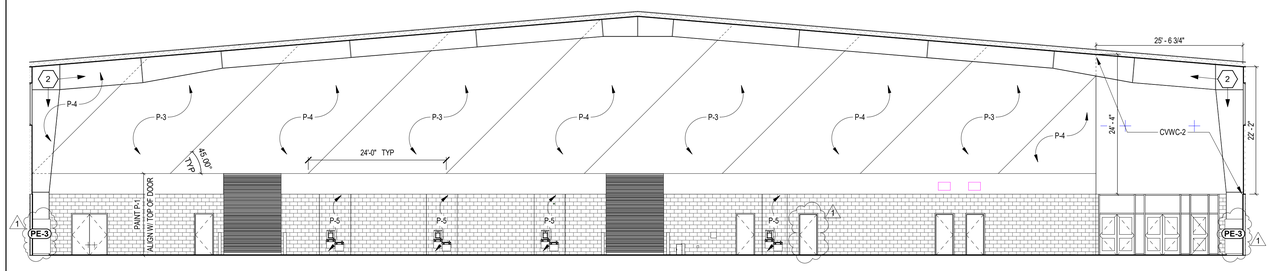
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

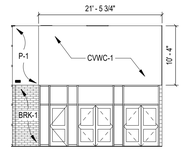
FIRST FLOOR FINISH PLAN

A8.01



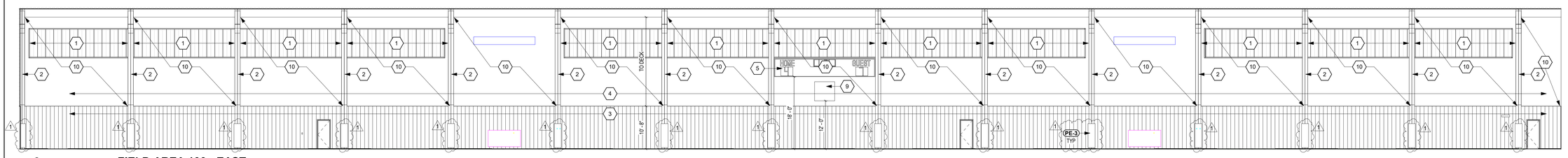
1 FIELD AREA 100 - SOUTH

SCALE: 3/32" = 1'-0"



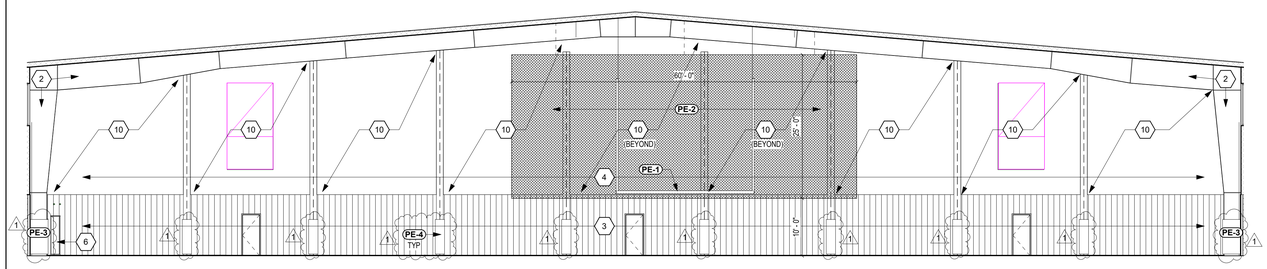
2 VESTIBULE GRAPHIC

SCALE: 3/32" = 1'-0"



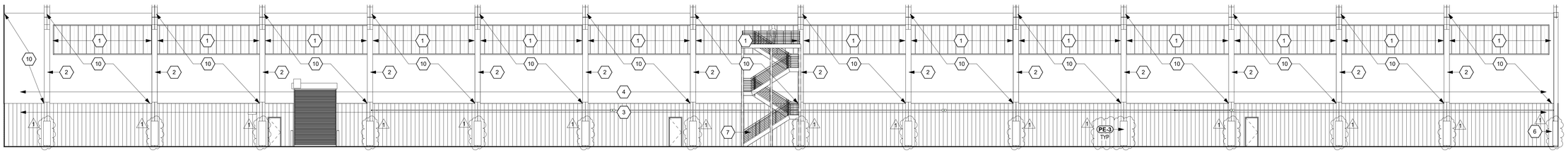
3 FIELD AREA 100 - EAST

SCALE: 3/32" = 1'-0"



4 FIELD AREA - 100 NORTH

SCALE: 3/32" = 1'-0"



5 FIELD AREA 100 - WEST

SCALE: 3/32" = 1'-0"

INTERIOR ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. TRANSLUCENT WALL PANEL SYSTEM
2. PAINT ALL SIDES OF MAIN FRAME, P-6
3. METAL LINER PANEL UP TO 10'-8", FACTORY FINISHED
4. VINYL-FACED BATT INSULATION ABOVE 10'-8" TO DECK
5. ELECTRONIC INTERIOR SCOREBOARD, REFER TO PROJECT MANUAL
6. TECHNOLOGY CABINET, REFER TO TECH DRAWINGS
7. OBSERVATION TOWER
9. ELECTRONIC TIMER, REFER TO PROJECT MANUAL
10. PAINT ALL SIDES OF STRUCTURAL GIRTS AND EXPOSED BRACING, P-7 (PART OF PRE-ENGINEERED BUILDING)

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE
2ND STREET
No. 4169
STATE OF INDIANA
ARCHITECT

DRAWN BY: AML

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

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.

INTERIOR ELEVATIONS

A8.03

REFLECTED CEILING PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

REFLECTED CEILING GENERAL NOTES

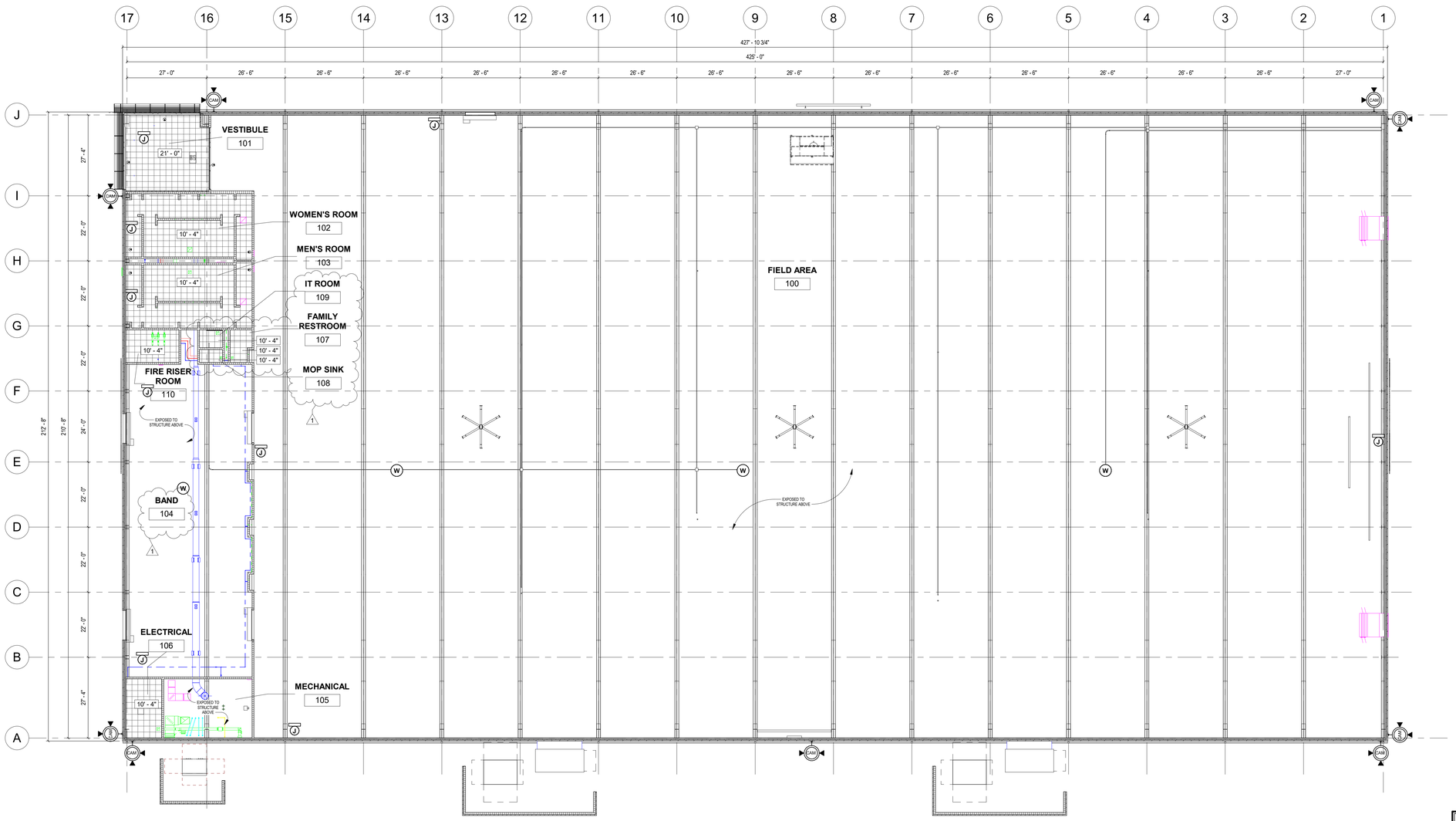
A. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK.
B. COORDINATE WITH PE EQUIPMENT MFGRS. FOR SUPPLEMENTAL FRAMING AND SUPPORT LOCATIONS WITH STRUCTURAL ROOF FRAMING OF PRE-ENGINEERED METAL BUILDING
C. COORDINATE LOADING REQUIREMENTS FOR ALL ROOF STRUCTURE SUPPORTED COMPONENTS WITH STRUCTURAL ROOF FRAMING OF PRE-ENGINEERED METAL BUILDING

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- 9'-0" — INDICATES CEILING HEIGHT
- LIGHT - REFER TO ELECTRICAL DRAWINGS
- LIGHT - REFER TO ELECTRICAL DRAWINGS
- LIGHT - 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
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING EXTERIOR FINISH SYSTEM (E.F.S.) EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.)
- INTERIOR FINISH SYSTEM (I.F.S.)

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF



\\data1\ottoprofiles$\jmoline\apm_profile\documents\222063_Greyhound Activity Center_jmoline@VSYA.rvt
1/6/2023 2:05:33 PM

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

WILLIAM E. PAYNE — REGISTERED — No. 4169 — STATE OF INDIANA — ARCHITECT

DRAWN BY: BH

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

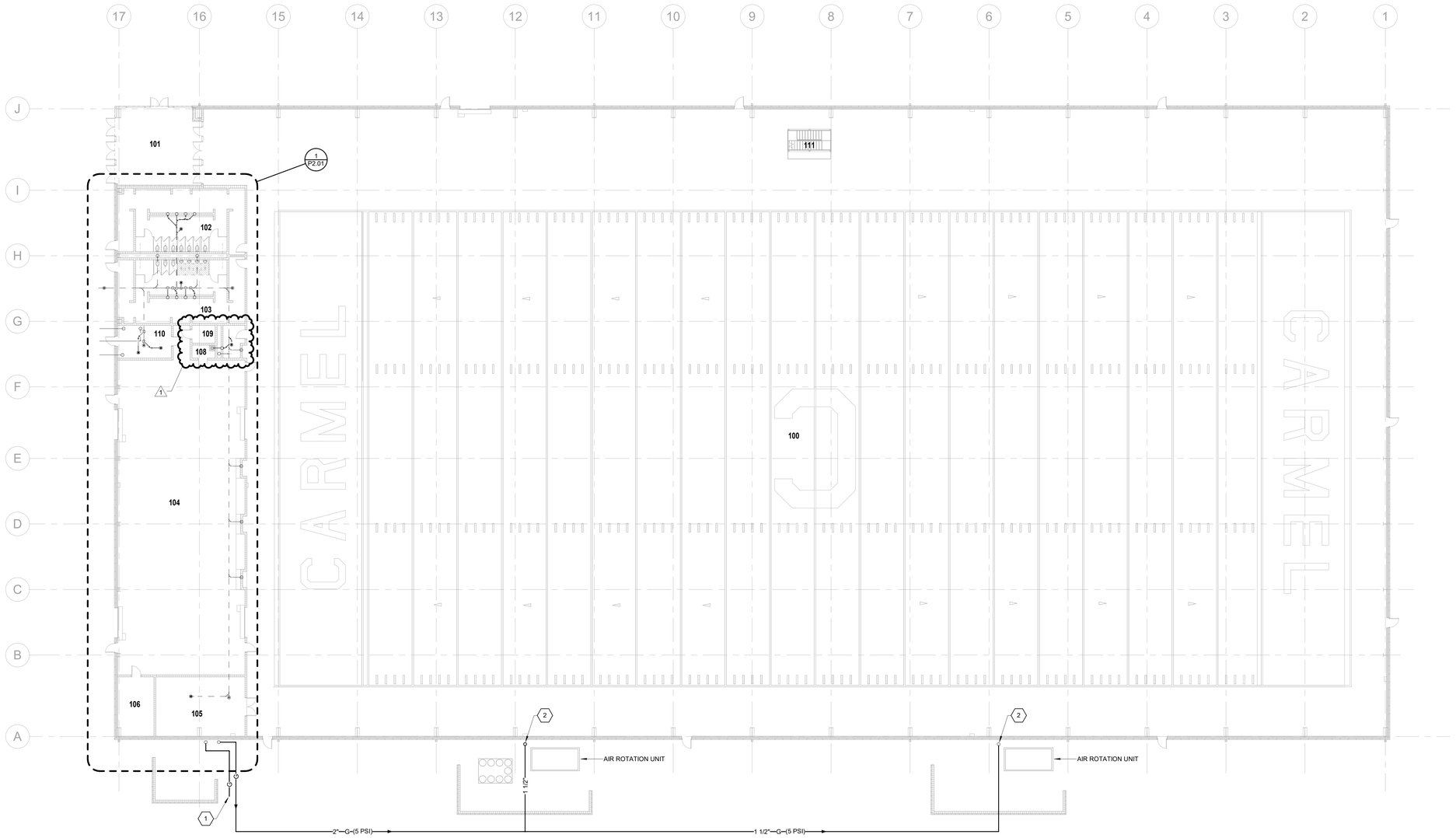
VERIFICATION NOTE

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.

REFLECTED CEILING PLAN

A9.01



OVERALL FOUNDATION PLUMBING PLAN

SCALE: 1/16" = 1'-0"

ROOM LEGEND - FIRST FLOOR

ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	ENTRY	Not Placed
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	Redundant Room
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

PLUMBING PLAN NOTES

1 REFER TO SITE/CIVIL DRAWINGS FOR CONTINUATION.

2 1 1/2" GAS (5 PSI) UP.

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

MARK Z. HOPF REGISTERED No. PE 12000301 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

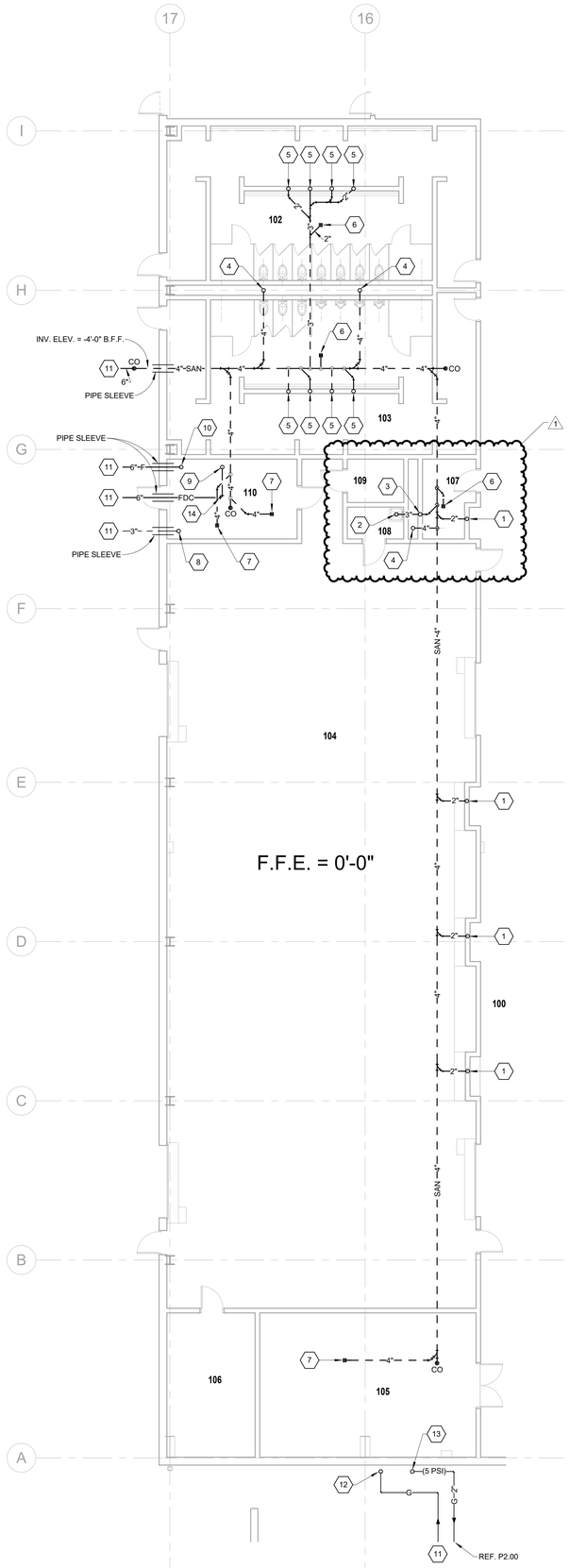
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

OVERALL FOUNDATION PLUMBING PLAN

P2.00



FOUNDATION PLUMBING PLAN

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

ROOM LEGEND - FIRST FLOOR		
ROOM NO.	ROOM NAME	AREA (SF.)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	ENTRY	Not Placed
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	Redundant Room
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

FOUNDATION PLUMBING PLAN NOTES

1 2" WASTE FROM ABOVE.

2 3" WASTE WITH DEEP SEAL P-TRAP FROM MOP BASIN ABOVE.

3 1 1/2" VENT UP.

4 4" WASTE FROM ABOVE.

5 3" WASTE FROM ABOVE.

6 2" WASTE WITH DEEP SEAL P-TRAP FROM FLOOR DRAIN ABOVE.

7 4" WASTE WITH DEEP SEAL P-TRAP FROM FLOOR DRAIN ABOVE.

8 INCOMING 3" DOMESTIC COLD WATER UP. PROVIDE THRUST BLOCK AT PIPE RISE.

9 6" FIRE LINE FROM REMOTE FIRE DEPARTMENT CONNECTION. PROVIDE THRUST BLOCK AT PIPE RISE.

10 INCOMING 6" FIRE PROTECTION SUPPLY UP. PROVIDE THRUST BLOCK AT PIPE RISE.

11 REFER TO SITE/CIVIL DRAWINGS FOR CONTINUATION.

12 2" INCOMING GAS SUPPLY UP TO GAS METER ASSEMBLY.

13 2" GAS (5 PSI) FROM ABOVE.

14 PROVIDE THRUST BLOCK AT PIPE ELBOW.

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

MARK Z. HOPE REGISTERED No. PE 12009001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

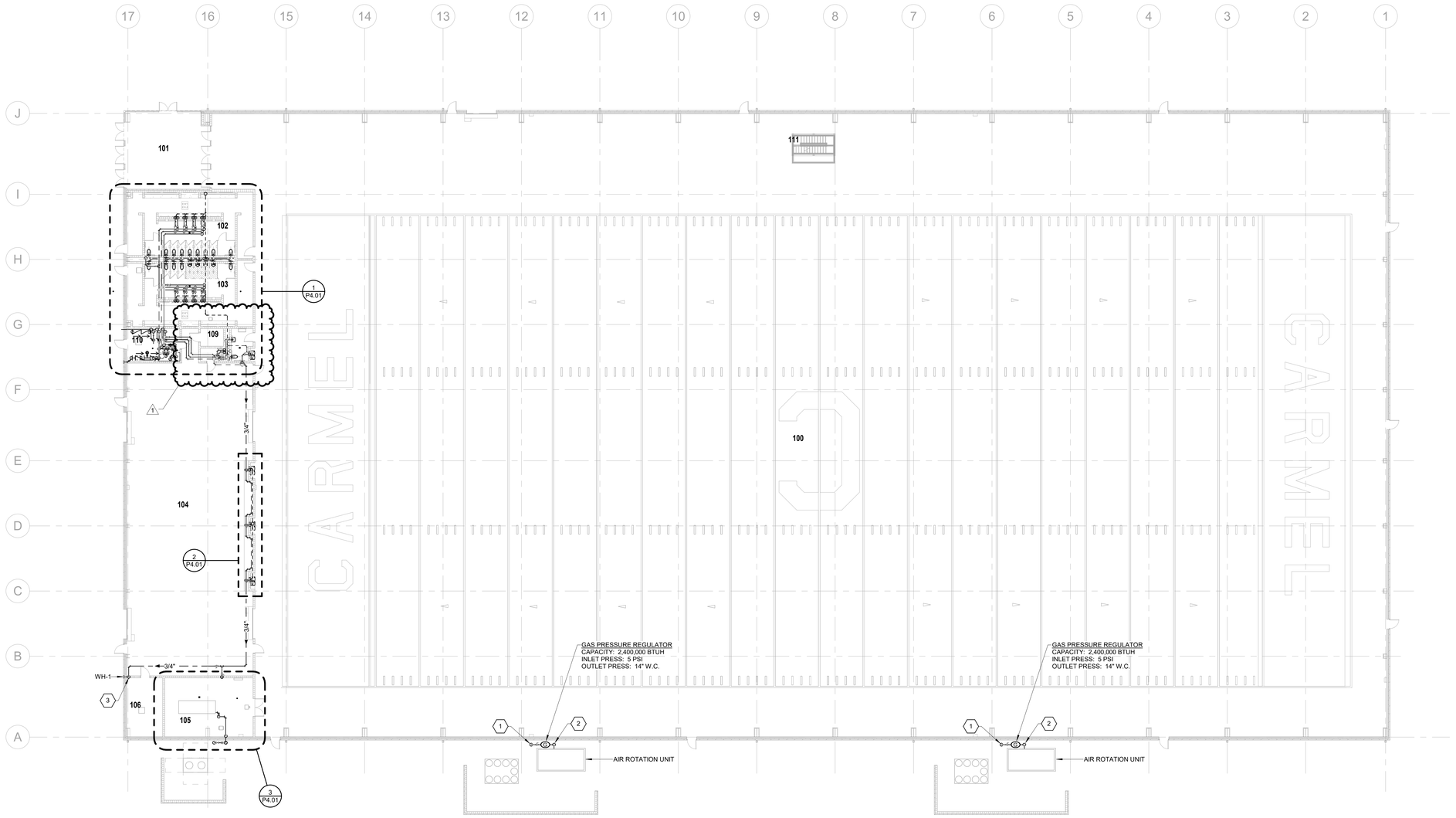
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

FOUNDATION PLUMBING PLAN

P2.01



OVERALL FIRST FLOOR PLUMBING PLAN

SCALE: 1/16" = 1'-0"

ROOM LEGEND - FIRST FLOOR		
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	ENTRY	Not Placed
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	Redundant Room
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

OVERALL FIRST FLOOR PLAN NOTES

1 1 1/2" GAS (5 PSI) FROM BELOW GRADE. REFER TO DETAIL #8 ON DRAWING P3.01 FOR MORE INFORMATION.

2 CONNECT 2" GAS (14" W.C.) TO AIR ROTATION UNIT WITH SHUTOFF VALVE, MIN. 6" DIRT LEG AND UNION. REFER TO DETAIL #10 ON DRAWING P3.01 FOR MORE INFORMATION.

3 3/4" COLD WATER DOWN TO WALL HYDRANT.

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

MARK Z. HOFF REGISTERED No. PE 12909001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

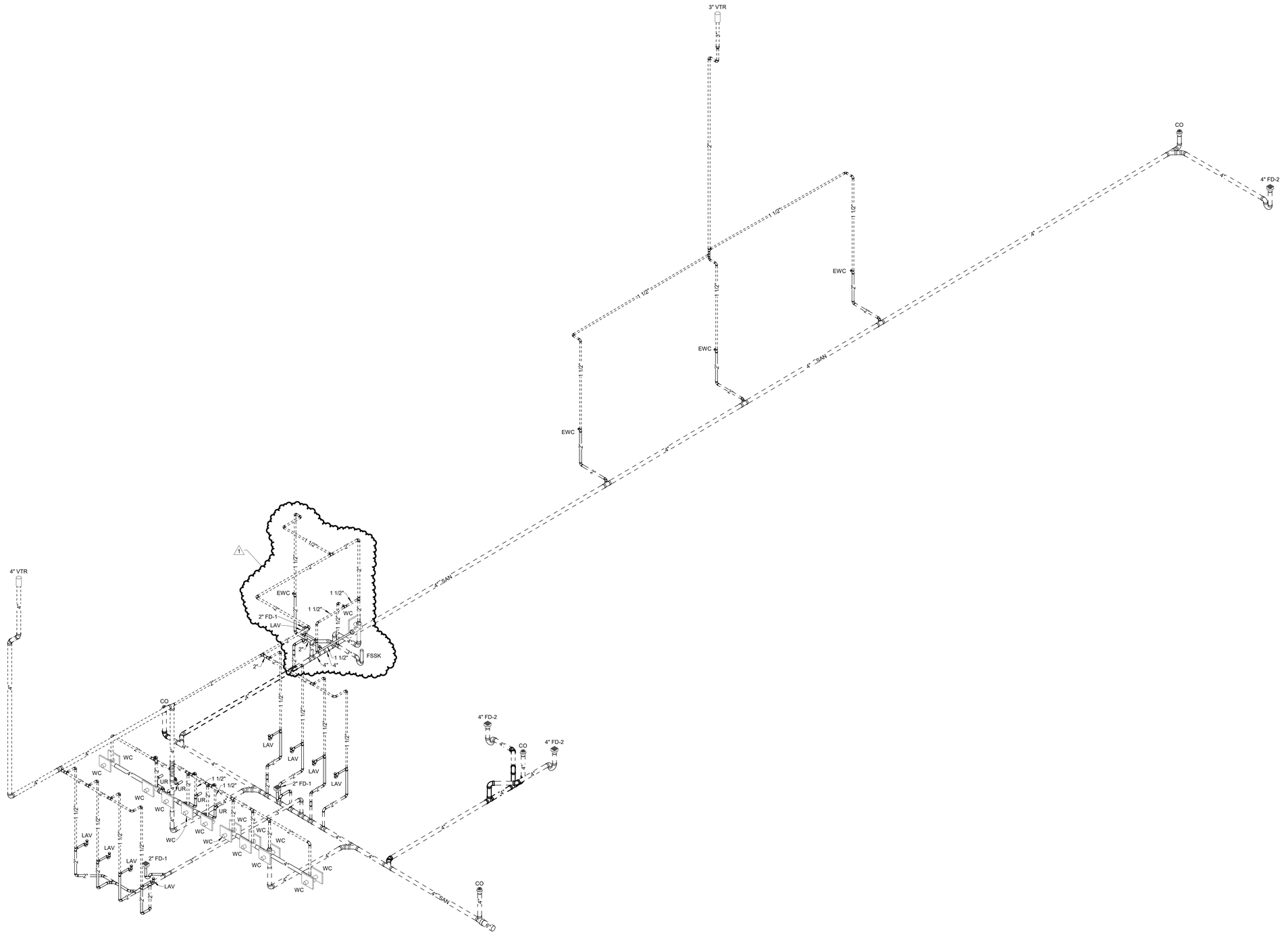
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.△	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

OVERALL FIRST FLOOR PLUMBING PLAN

P2.02



1 **OVERALL WASTE AND VENT ISOMETRIC**

N.T.S.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

MARK Z. HORF REGISTERED No. PE 12205001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

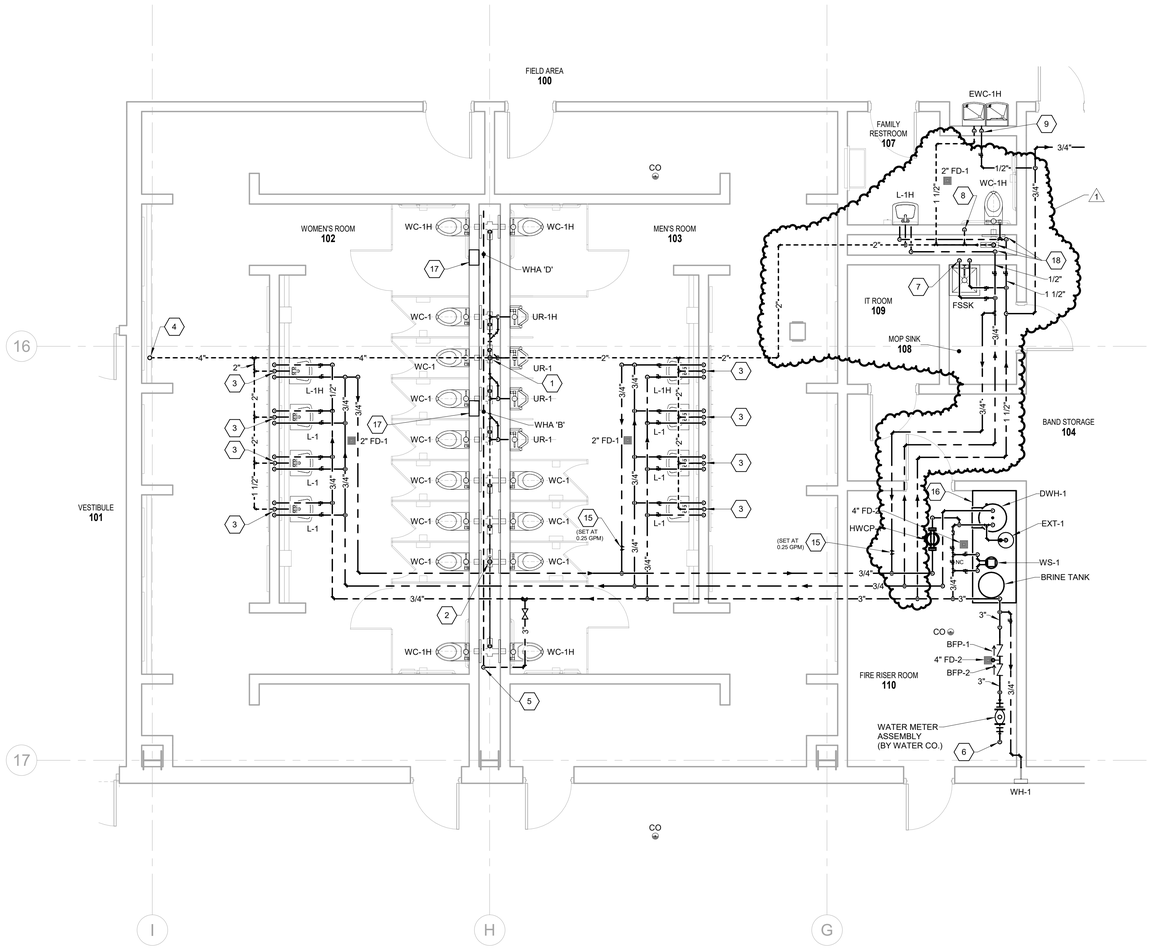
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

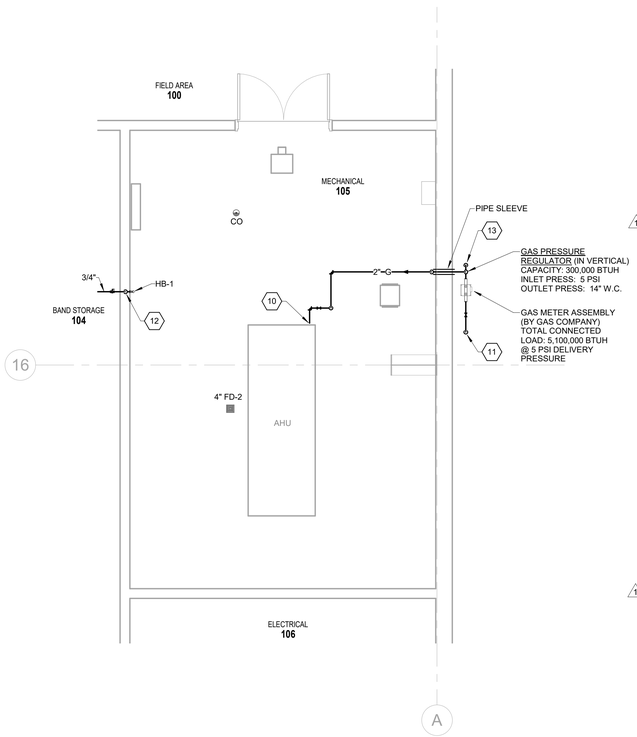
PLUMBING ISOMETRICS

P3.02



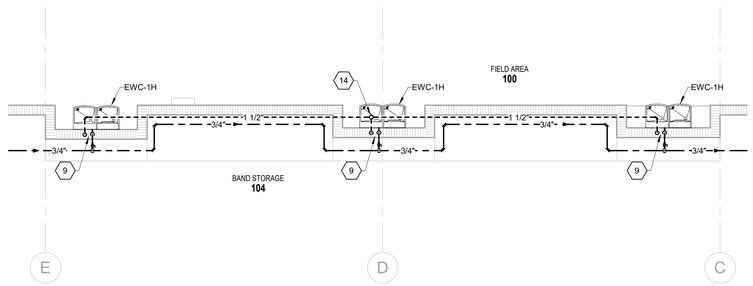
ENLARGED RESTROOMS AND MECHANICAL ROOM PLUMBING PLAN

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



ENLARGED MECHANICAL ROOM PLUMBING PLAN

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



ENLARGED WATER COOLERS PLUMBING PLAN

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

ENLARGED PLUMBING PLAN NOTES

1. 4" WASTE DOWN TO BELOW SLAB, 4" VENT UP TO ABOVE CEILING.
2. 4" WASTE DOWN TO BELOW SLAB, 2" VENT UP TO ABOVE CEILING.
3. 1/2" HOT AND COLD WATER DOWN. 2" WASTE DOWN TO BELOW SLAB, 1 1/2" VENT UP.
4. 4" VENT UP. ROUTE VENT ALONG VERTICAL WALL. OFFSET AND ROUTE TO 4" VENT THRU ROOF.
5. 3" COLD WATER DOWN IN CHASE. ROUTE COLD WATER HEADER FULL SIZE THRU ENTIRE LENGTH OF CHASE. EXTEND COLD WATER TO FIXTURES AS REQUIRED. PROVIDE ACCESSIBLE WATER HAMMER ARRESTER TYPE 'B' AT MIDPOINT OF COLD WATER HEADER AND WATER HAMMER ARRESTER TYPE 'D' AT LAST FLUSH VALVE CONNECTION.
6. INCOMING 3" DOMESTIC COLD WATER UP FROM BELOW SLAB. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION.
7. 3/4" HOT AND COLD WATER WITH SHUTOFF VALVES AND CHECK VALVES IN SUPPLIES DOWN TO MOP BASIN FAUCET.
8. 1 1/2" VENT FROM BELOW SLAB UP INTO CHASE. CONNECT TO HORIZONTAL VENT HEADER WITHIN CHASE.
9. 1/2" COLD WATER DOWN. 2" WASTE DOWN TO BELOW SLAB, 1 1/2" VENT UP.
10. 2" GAS (14" W.C.) DOWN TO AIR HANDLING UNIT. CONNECT WITH SHUTOFF VALVE, MIN. 6" DIRT LEG AND UNION. REFER TO DETAIL #10 ON DRAWING P3.01 FOR MORE INFORMATION.
11. INCOMING NATURAL GAS FROM BELOW GRADE @ 5 PSI DELIVERY PRESSURE (BY GAS COMPANY).
12. 3/4" COLD WATER DOWN TO HOSE BIBB.
13. 2" GAS (5 PSI) DOWN TO BELOW GRADE. REFER TO DETAIL #7 ON DRAWING P3.01 FOR MORE INFORMATION.
14. 2" VENT UP TO 3" VENT THRU ROOF.
15. HOT WATER RETURN BALANCE STATION. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION.
16. 4" HIGH CONCRETE EQUIPMENT PAD.
17. 12"X12" LOCKABLE ACCESS PANEL. COORDINATE LOCATION WITH ADA GRAB BARS. REFER TO ARCHITECTURAL RESTROOM ELEVATIONS AND ENLARGED PLANS FOR MORE INFORMATION.
18. 1 1/2" COLD WATER AND 1/2" HOT WATER DOWN IN CHASE. EXTEND COLD WATER SUPPLY TO FIXTURES AS REQUIRED. EXTEND 1/2" HOT WATER TO LAVATORY AS REQUIRED. PROVIDE ACCESSIBLE WATER HAMMER ARRESTER TYPE 'A' AT FLUSH VALVE CONNECTION. 4" WASTE DOWN TO BELOW SLAB, 2" VENT UP TO ABOVE CEILING.

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

MARK Z. HOPE REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

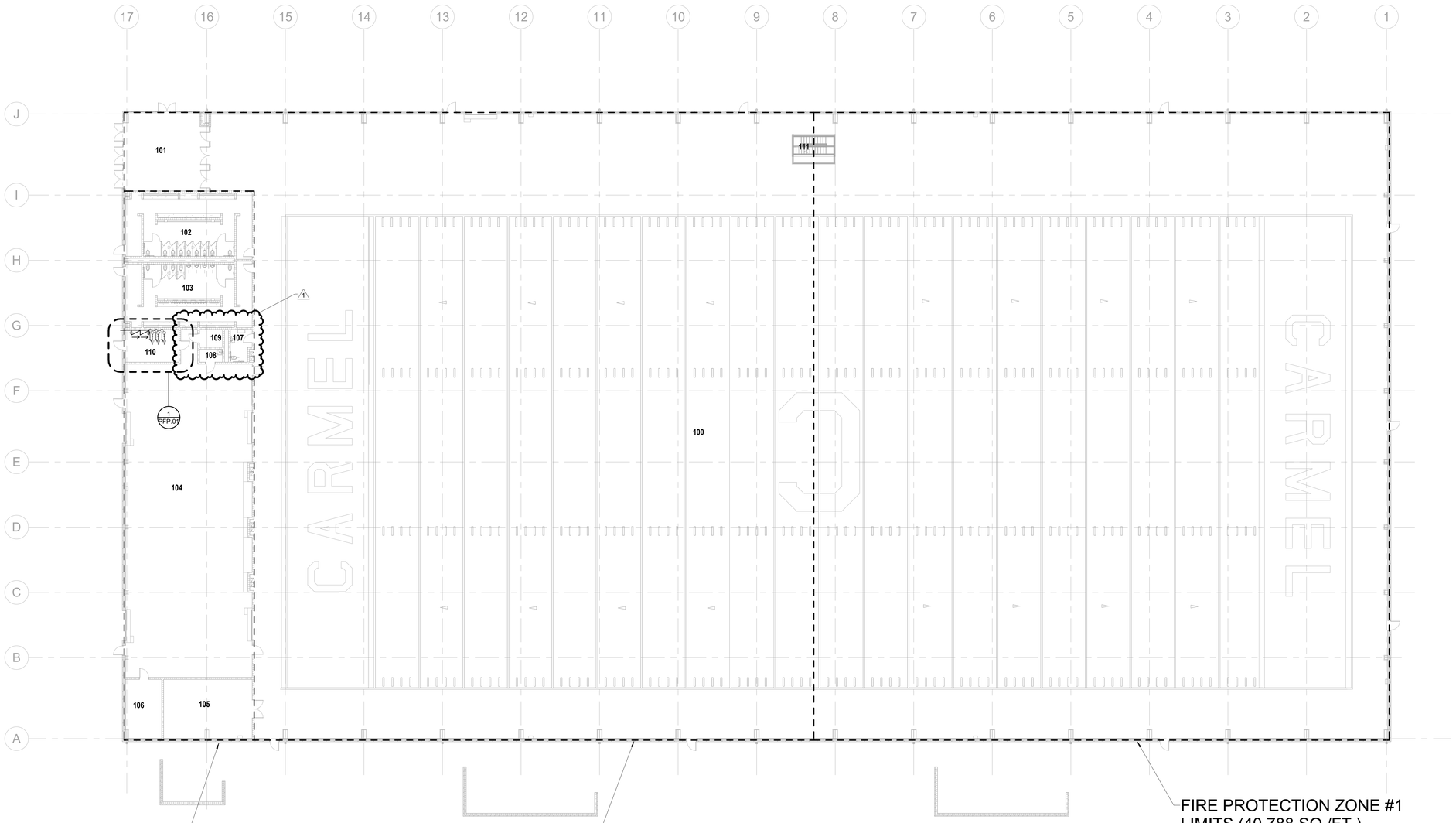
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

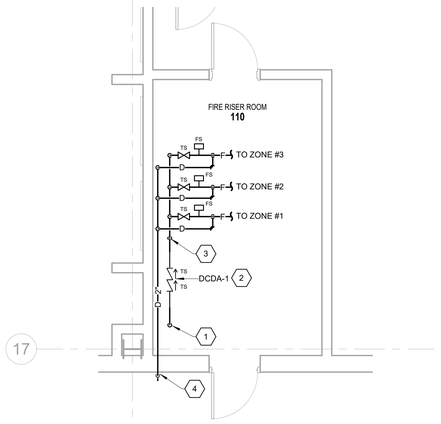
ENLARGED PLUMBING PLANS

P4.01



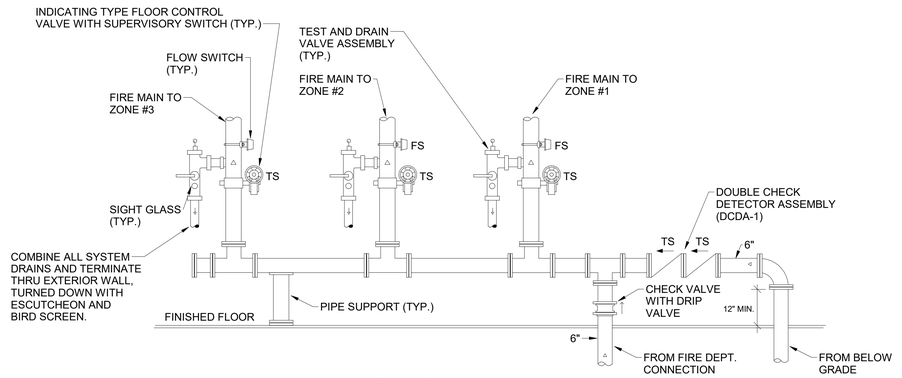
OVERALL FIRST FLOOR FIRE PROTECTION PLAN

SCALE: 1/16" = 1'-0"



1 ENLARGED FIRE RISER ROOM FIRE PROTECTION PLAN

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



2 INCOMING FIRE PROTECTION SERVICE DETAIL

N.T.S.

FIRE PROTECTION EQUIPMENT SCHEDULE

MARK	DESCRIPTION	LOCATION	MANUFACTURER/MODEL NUMBER	CAPACITY	REMARKS	ELECTRICAL DATA					COMMENTS
						HP	KW	V	AMP	PH	
DCDA-1	DOUBLE CHECK DETECTOR ASSEMBLY	FIRE RISER ROOM 110	AMES MODEL NO. 3000SS (6" SIZE)	1000 GPM @ 5 PSI DROP MAX.		-	-	-	-	-	

ROOM LEGEND - FIRST FLOOR

ROOM NO.	ROOM NAME	AREA (SF.)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	ENTRY	Not Placed
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	Redundant Room
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

GENERAL FIRE PROTECTION NOTES

A. ALL FIRE PROTECTION WORK PERFORMED ON THIS PROJECT SHALL BE SIZED PER HYDRAULIC CALCULATIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL DUCTWORK, RACEWAYS, CABLE TRAYS CONDUITS, STRUCTURAL MEMBERS, PIPING AND ARCHITECTURAL CEILING HEIGHTS AND DESIGN INTENT. ALL FIRE PROTECTION WORK SHALL BE DONE IN ACCORDANCE WITH NFPA 13, ALL APPLICABLE STATE AND LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION TO DELIVER A PENALTY FREE SYSTEM.

B. REFER TO DIVISION 21 FOR ALL AUTOMATIC WET PIPE SPRINKLER SYSTEM REQUIREMENTS.

C. ALL SPRINKLER PIPING SYSTEM INSTALLATION SHALL BE COORDINATED WITH OTHER TRADES AS IT RELATES TO ACCESS AND SERVICEABILITY OF THAT TRADES EQUIPMENT (I.E.: MECHANICAL UNITS, LIGHTS...) ANY SPRINKLER SYSTEM PIPING DETERMINED BY THE ENGINEER TO BE IN CONFLICT WITH OTHER TRADES WILL BE RELOCATED WITH ALL COST TO BE BORNE BY THE FIRE PROTECTION CONTRACTOR.

D. REFER TO ARCHITECTURAL BUILDING SECTIONS, WALL SECTIONS AND STRUCTURAL DRAWINGS FOR STRUCTURAL STEEL ELEVATIONS AND SPACE AVAILABLE ABOVE THE FINISHED CEILING. PROVIDE ALL APPROPRIATE SUPPORT AND BRACING TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION OF PIPING WITHIN THE GIVEN CONDITIONS.

FIRE PROTECTION PLAN NOTES

1 6" INCOMING FIRE PROTECTION SUPPLY FROM BELOW SLAB.

2 DOUBLE CHECK DETECTOR ASSEMBLY. REFER TO FIRE PROTECTION EQUIPMENT SCHEDULE AND DETAIL ON THIS DRAWING FOR MORE INFORMATION.

3 FIRE PROTECTION SUPPLY FROM REMOTE FIRE DEPARTMENT CONNECTION.

4 TERMINATE 2" SYSTEM DRAIN THRU WALL AND TURNED DOWN WITH BUG SCREEN. SEAL WALL PENETRATION WEATHERTIGHT.

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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

PLAN NORTH

CONSTRUCTION DOCUMENTS

MARK Z. HOPF REGISTERED No. PE 12000301 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

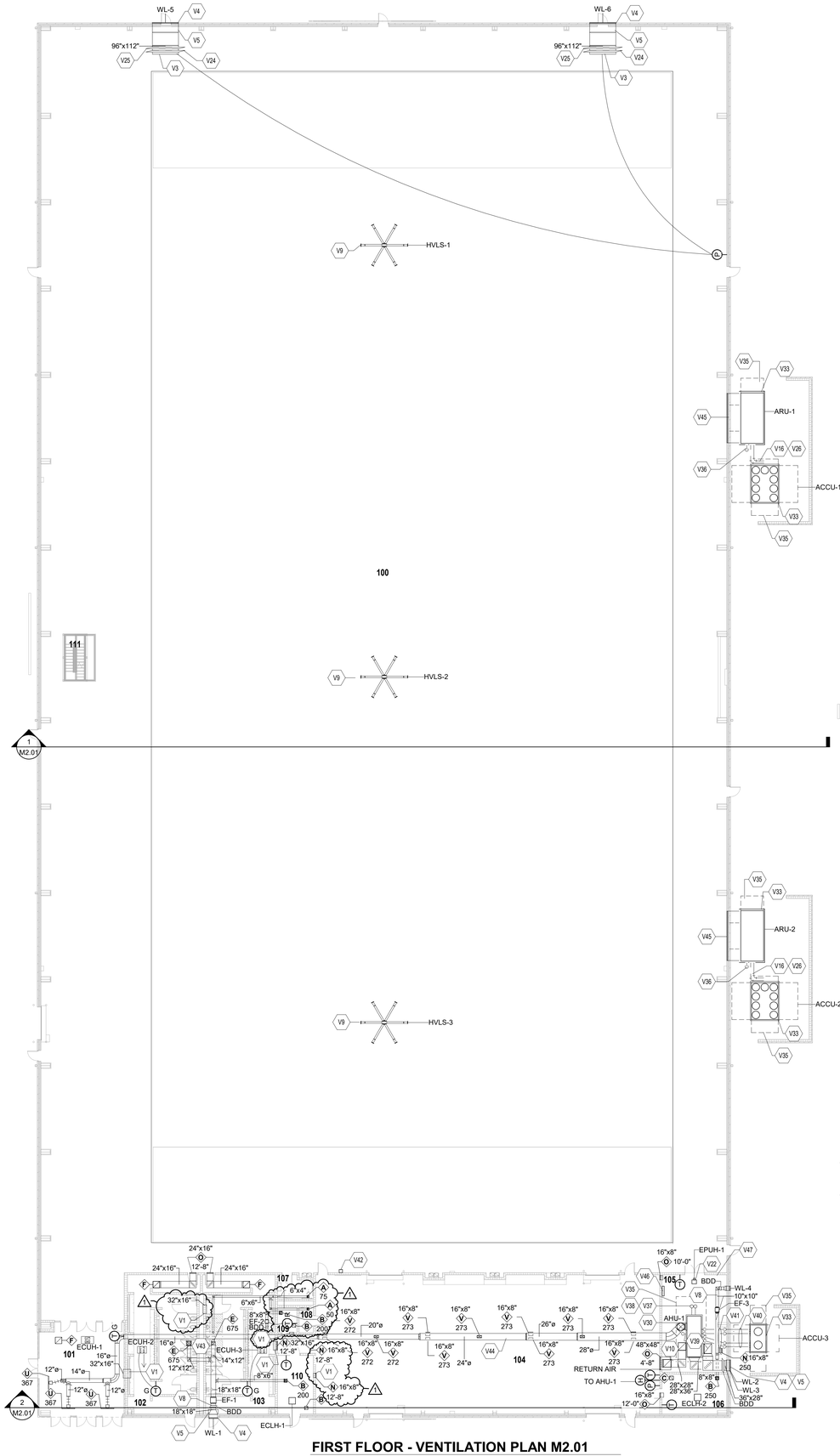
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01-06-2023

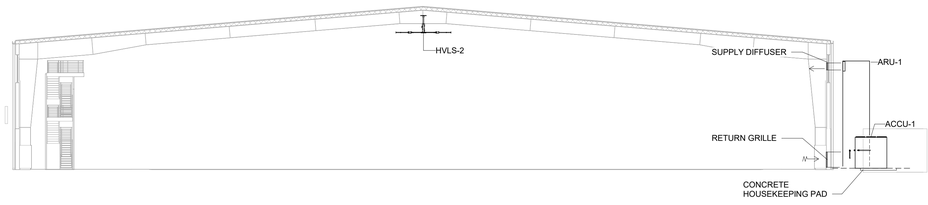
FIRST FLOOR FIRE PROTECTION PLAN

PFP.01



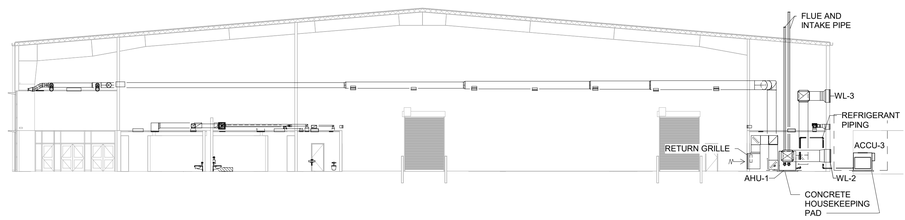
FIRST FLOOR - VENTILATION PLAN M2.01

SCALE: 1/16" = 1'-0"



Section 1

SCALE: 1/16" = 1'-0"



Section 2

SCALE: 1/16" = 1'-0"

ROOM LEGEND - FIRST FLOOR

ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

MECHANICAL 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.

MECHANICAL PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
V1	AIR TRANSFER WALL OPENING LOCATED ABOVE THE CEILING. COORDINATE EXACT LOCATION WITH ALL TRADES.
V3	END OF DUCT OPENING TO BE PROTECTED WITH BIRDSCREEN.
V4	INSULATED SHEET METAL PLENUM MOUNTED BEHIND WALL LOUVER. TRANSITION BOTTOM OF DUCT AT A SLOPE DOWNWARD TO WALL LOUVER. SEAL ALL SEAMS AND EDGES WATER TIGHT. WRAP PLENUM WITH INSULATION. REFER TO DETAIL.
V5	INSTALL DRIP PAN UNDER WALL LOUVER. PAN SHALL BE SEALED WATER TIGHT. DRIP PAN TO EXTEND A MINIMUM OF 8" BEYOND DUCTWORK.
V8	WRAP EXHAUST FAN DUCTWORK WITH INSULATION FROM WALL LOUVER TO EXHAUST FAN.
V9	COORDINATE THE INSTALLATION OF THE HVLS FANS WITH ALL TRADES. PROPER CLEARANCES SHALL BE ADHERED TO. REFER TO MANUFACTURER'S REQUIREMENTS FOR REQUIRED CLEARANCES.
V10	DUCTWORK PROVIDED WITH INTERNALLY LINED INSULATION, REFER TO SPECIFICATIONS.
V16	ALL PIPING ON THE EXTERIOR OF THE BUILDING SHALL BE WRAPPED WITH INSULATION AND THEN COVERED WITH A PVC JACKET PER THE PROJECT MANUAL. PROVIDE PIPE SUPPORTS AS REQUIRED TO PROPERLY SUPPORT THE PIPING.
V22	SUPPORT UNIT HEATER FROM STRUCTURE ABOVE OR ADJACENT WALL WITH SUPPLEMENTAL STEEL AND THREADED ROD WITH VIBRATION ISOLATORS AS REQUIRED. MOUNT BOTTOM OF UNIT AT 8'-8" AFF. REFER TO PROJECT MANUAL 238239.
V24	BAROMETRIC GRAVITY RELIEF BACKDRAFT DAMPER MOUNTED VERTICALLY IN DUCTWORK. TEST, CALIBRATE AND SET TO MAINTAIN A SLIGHT POSITIVE PRESSURE WITHIN THE SPACE PRIOR TO CONSTRUCTION SUBSTAINTIAL COMPLETION.
V25	RELIEF CONTROL DAMPER PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. CALIBRATED AND SET TO MAINTAIN A SLIGHT POSITIVE PRESSURE WITHIN THE SPACE. TEST AND CALIBRATE RELIEF CONTROL DAMPER PRIOR TO CONSTRUCTION SUBSTANTIAL COMPLETION.
V26	INSTALL ALL REFRIGERANT PIPING PER THE MANUFACTURER'S REQUIREMENTS.
V30	INSTALL EQUIPMENT ON 5 1/2" HIGH CONCRETE HOUSEKEEPING PAD. COORDINATE EXACT LOCATION AND INSTALLATION WITH ALL TRADES.
V33	INSTALL EQUIPMENT ON CONCRETE PAD. COORDINATE EXACT LOCATION AND INSTALLATION WITH ALL TRADES.
V35	FOLLOW ALL MANUFACTURERS REQUIRED CLEARANCES.
V36	CONDENSATE PIPING WITH WATERSEAL TRAP SIZED AND INSTALLED PER UNIT MANUFACTURERS REQUIREMENTS. CONDENSATE PIPING TO TURNED DOWN 8" ABOVE THE SITE DRAIN. END OF PIPE TO BE CUT AT A 45 DEGREE ANGLE. COORDINATE SITE DRAIN LOCATION WITH ALL TRADES.
V37	INSULATED STAINLESS STEEL COMBUSTION AIR INTAKE DUCT FROM UNIT CONNECTION AND TERMINATED THROUGH THE ROOF. DUCT SIZE, HEIGHT ABOVE THE ROOF, TERMINATION AND SPACING PER MANUFACTURERS REQUIREMENTS. COORDINATE EXACT LOCATION WITH ALL TRADES. REFER TO SPECIFICATION SECTION 235100.
V38	DOUBLE WALL FLUE PIPE FROM UNIT CONNECTION AND TERMINATED THROUGH THE ROOF. PIPE SIZE, HEIGHT ABOVE ROOF, TERMINATION AND SPACING PER MANUFACTURERS REQUIREMENTS. COORDINATE EXACT LOCATION WITH ALL TRADES. REFER TO SPECIFICATION SECTION 235100.
V39	CONDENSATE DRAIN PIPE WITH WATER SEAL TRAP SIZED PER MANUFACTURERS REQUIREMENTS. CUT END OF PIPE AT A 45° ANGLE. COORDINATE FLOOR DRAIN LOCATION WITH ALL TRADES.
V40	ROUTE REFRIGERANT PIPING THROUGH THE EXTERIOR WALL AND SEAL WALL PENETRATIONS WATER TIGHT. INSULATE PIPING AND PROTECT WITH PVC JACKET.
V41	INSULATED REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT. PIPE AND PIPE SPECIALITIES PER MANUFACTURERS REQUIREMENTS.
V42	APPROXIMATE LOCATION OF HIGH VOLUME LOW SPEED CEILING FAN CONTROLLER. COORDINATE EXACT LOCATION WITH ALL TRADES.
V43	PROVIDE VOLUME DAMPER IN VERTICAL DUCTWORK TO AIR DEVICE.
V44	PROVIDE DOUBLE WALL INSULATED DUCTWORK. PAINT EXPOSED DUCTWORK AND ASSOCIATED AIR DEVICES TO COLOR SELECTED BY THE ARCHITECT. COORDINATE WITH DIVISION 9.
V45	SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLE PROVIDED BY AIR ROTATION UNIT MANUFACTURER. CONTRACTOR SHALL PROVIDE INTERCONNECTING DUCTWORK BETWEEN DIFFUSER/GRILLE AND AIR ROTATION UNIT. COORDINATE DIFFUSER/GRILLE SIZES AND LOCATIONS WITH ALL TRADES.
V46	APPROXIMATE LOCATION OF TEMPERATURE CONTROL PANEL(S). COORDINATE EXACT LOCATION WITH ALL TRADES.
V47	EMERGENCY EQUIPMENT SHUT-DOWN SWITCH PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. EMERGENCY EQUIPMENT SHUT-DOWN SWITCH SHALL SEND AN ALARM TO THE BAS. COORDINATE 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.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

STATE OF OHIO · MARK Z. HOPE · E-79009 · REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JJS

PROJECT NUMBER: 222063.00

PROJECT ISSUE DATE: 12-1-22

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 1	1-6-23

FIRST FLOOR MECHANICAL PLAN

M2.01

\\data1\chproffiles$\jslechta\arm_Profile\Documents\222063_MEP1_Greyhound Activity Center_jslechtaXE4KT.rvt
1/6/2023 12:49:24 PM

PACKAGED AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER	FANS									DX COOLING COIL DATA (95 DEGREE AMBIENT)							GAS FIRED HEATING						ELECTRICAL					
		SUPPLY						EXHAUST/RELIEF			UNIT TOTAL MBH	UNIT SENS. MBH	EAT, DB °F	LAT, DB °F	MAX. VEL. FPM	ROWS	APD	EAT DB °F	LAT DB °F	INPUT MBH	OUPUT MBH	MODULATING STAGES	APD	UNIT			PRE FILTERS	FINAL FILTERS	WEIGHT, LBS	NOTES
	DAIKIN	CFM	OA CFM	EXT. S.P.	TOTAL S.P.	BHP	HP	RPM	CFM	EXT. S.P. / HP			EAT, WB °F	LAT, WB °F		FININ.								MCA	MOP	SERV			
AHU-1	VX-112-SDX-J-D1	4,100	1,025	1.25	2.99	3.28	1-5.0	2,099	0-4,100	0.50 / (1) 2.0	174.2	118.5	79.1 66.0	52.8 51.7	347	4 12	0.315	51.7	105.9	300.0	240.0	12:1 TURNDOWN	0.368	11.6	15.0	460/3	2"-MERV 8	4"-MERV 13	2282	1,2,3,4,5,6,7,8,9,10,11,12

NOTES

1. REFER TO SPECIFICATION SECTION 230993 AND 237314.
2. VARIABLE FREQUENCY CONTROLLER PROVIDED AND MOUNTED FOR SUPPLY FAN(S), AND RELIEF FAN(S) BY THE UNIT MANUFACTURER.
3. UNIT SHALL HAVE FACTORY MOUNTED CONTROLS WITH LCD DISPLAY.
4. SINGLE POINT POWER WITH NON-FUSED FACTORY MOUNTED DISCONNECT.
5. UNIT SCCR RATING TO BE 5 kAIC MINIMUM.
6. UNIT PROVIDED WITH FACTORY MOUNTED OUTSIDE AIR CONTROL DAMPER(S), RETURN AIR CONTROL DAMPER(S) AND RELIEF FAN OUTLET BACK DRAFT DAMPER(S).
7. RELIEF AIRFLOW TO BE VARIABLE VOLUME AIRFLOW WITH REMOTE SPACE PRESSURE SENSOR CONTROL. PRESSURE SENSOR BY THE TCC.
8. UNIT POWERED INTERNAL LIGHTS.
9. UNIT SCHEDULED AS MANUFACTURED BY VALENT.
10. TOTAL UNIT STATIC PRESSURE REFLECTS AVERAGE DIRTY FILTERS.
11. REFER TO PLANS AND DETAIL DRAWING FOR UNIT LAYOUT DETAILS.
12. SUMMER:
    INDOOR: 72° db/50% RH
    OUTDOOR: 91.3° db/75.0° wb
    WINTER:
    INDOOR: 70.0° db
    OUTDOOR: 2.6° db

EXTERIOR WALL LOUVER SCHEDULE

MARK	SIZE W X H	TOP OF LOUVER ELEVATION	TYPE	NOTES
WL-1	32" x 24"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5
WL-2	40" x 40"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5
WL-3	40" x 40"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5
WL-4	16" x 16"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5
WL-5	96" x 180"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5
WL-6	96" x 180"	REFER TO ARCHITECTURAL PLANS	WL-1	1,2,3,4,5

NOTES:

1. REFER TO SPECIFICATION SECTION 089119.
2. SEAL ALL AROUND WITH SILICONE.
3. REFER TO INSTALLATION DETAILS ON SHEET M5.02 AND ARCHITECTURAL DRAWINGS.
4. CUSTOM COLOR TO BE SELECTED BY THE ARCHITECT/ENGINEER.
5. COORDINATE SIZE AND LOCATION WITH ALL TRADES AND ARCHITECTURAL ELEVATIONS.

AIR ROTATION UNITS

MARK	FANS							COILS								NOTES
	SUPPLY							DX COOLING COIL				GAS FIRED HEATING COIL				
	CFM	MIN O.A. CFM	EXT. S.P.	TOTAL S.P.	HP	TYPE	ELEC.	EAT	LAT	COOLING LOAD SENS.	COOLING LOAD TOTAL	APD	EAT	LAT	INPUT MBH	OUTPUT MBH	
ARU-1	30,000	12,150	-	-	2x7.5	TEFC	460/3	79.8 / 66.5	52.5 / 52.2	885.00	1,291.00	0.481	42.7	101.7	2,400.00	1,920.00	1,2,3,4,5,6,7,8,9,10,11,12,13,14
ARU-2	30,000	12,150	-	-	2x7.5	TEFC	460/3	79.8 / 66.5	52.5 / 52.2	885.00	1,291.00	0.481	42.7	101.7	2,400.00	1,920.00	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES

1. BASIS OF DESIGN: JOHNSON AIR ROTATION.
2. 20:1 TURN DOWN - GAS HEATER.
3. MAXIMUM COOLING COIL FACE VELOCITY SHALL BE 500 FPM.
4. MAXIMUM FILTER FACE VELOCITY SHALL BE 500 FPM.
5. REFER TO PLANS & DETAIL DRAWING FOR UNIT LAYOUT DETAILS.
6. FACTORY MOUNTED VARIABLE FREQUENCY CONTROLLER (VFC) SHALL BE PROVIDED ON THE SUPPLY FAN(S).
7. REFER TO SPECIFICATION SECTION 230993 AND 237413.
8. INCLUDE FACTORY MOUNTED DISCONNECT SWITCH.
9. SINGLE-POINT POWER CONNECTION.
10. CUSTOM COLOR AS SELECTED BY THE ARCHITECT/ENGINEER.
11. 2" MERV 8 FILTERS.
12. FACTORY MOUNTED OUTSIDE AND RETURN AIR DAMPERS SIZED FOR 100% AIRFLOW.
13. MAXIMUM NOISE LEVEL SHALL BE 67 dBA WHEN STANDING 10' AWAY AT GROUND LEVEL.
14. SUMMER:
    INDOOR: 72° db/50% RH
    OUTDOOR: 91.3° db/75.0° wb
    WINTER:
    INDOOR: 70.0° db
    OUTDOOR: 2.6° db

AIR-COOLED CONDENSING UNIT SCHEDULE

MARK	MBH	NOMINAL TONS	SUCTION TEMP	AMBIENT TEMP	EER	MCA	SERVICE	MANUFACTURER & MODEL NO.	NOTES
ACCU-1	1,286.70	120.0	45.0	95.0	10.8	220.3	460/3	DAIKIN - RCS120	1,2,3,4,5,6,8,9,10
ACCU-2	1,286.70	120.0	45.0	95.0	10.8	220.3	460/3	DAIKIN - RCS120	1,2,3,4,5,6,8,9,10
ACCU-3	174.41	15.0	45.0	95.0	12.3	31.1	460/3	DAIKIN - RCS015	1,2,3,4,5,6,7,9,10

NOTES:

1. UNIT SHALL BE GROUND MOUNTED ON CONCRETE SUPPORT PAD.
2. REFER TO PROJECT MANUAL SECTION 236200.
3. INCLUDE THE FOLLOWING ACCESSORIES, HIGH AMBIENT UNLOADER PRESSURESTAT, PROTECTIVE COIL GUARDS, PHASE LOSS/VOLTAGE PROTECTION, STANDARD AMBIENT CONTROL, AND VIBRATION ISOLATORS.
4. UNIT SELECTED WITH R-410A REFRIGERANT.
5. INSTALL REFRIGERANT PIPING SIZES AND QUANTITIES PER MANUFACTURERS REQUIREMENTS.
6. PROVIDE COMPRESSOR BLANKETS FOR SOUND ATTENUATION.
7. PROVIDE DIGITAL SCROLL COMPRESSOR AND FIXED COMPRESSOR.
8. PROVIDE SIX FIXED COMPRESSORS.
9. SCCR RATING OF 10KAIC
10. INCLUDE FACTORY MOUNTED DISCONNECT SWITCH.

DIFFUSER, REGISTER, AND GRILLE SCHEDULE

MARK	TYPE	EXAMPLE MANUFACTUER MODEL NO.	NECK SIZE	OVERALL SIZE L"xW"	MAX CORE/ NECK VEL.(FPM)	MAX. CFM	MAX. NOISE CRITERIA	FRAME/ MOUNTING	REMARKS
A	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	6"x6"	8"x8"	500	100	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
B	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	10"x10"	12"x12"	500	300	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
C	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	12"x12"	14"x14"	500	425	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
D	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	14"x14"	16"x16"	500	600	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
E	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	16"x16"	18"x18"	500	800	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
F	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	22"x22"	24"x24"	500	1250	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
G	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	5"	12"x12"	800	100	18	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
H	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	12"x12"	800	150	21	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
I	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	24"x24"	900	175	17	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
J	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	8"	24"x24"	900	300	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
K	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	10"	24"x24"	800	425	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
L	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	12"	24"x24"	800	625	23	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
M	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	14"	24"x24"	700	750	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
N	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	SEE FLOOR PLANS FOR SIZE	-	500	PER PLANS	20	DUCT OR SIDEWALL	FIXED 35(DEGREE), 1/2" SPACING DEFLECTION BLADES
O	HEAVY DUTY RETURN GRILLE	TITUS 33-RL	SEE FLOOR PLANS FOR SIZE	-	———	PER PLANS	20	DUCT OR SIDEWALL	FIXED 38(DEGREE), 1/2" SPACING DEFLECTION BLADES
P	SIDEWALL SUPPLY DIFFUSER	TITUS 300-FL	SEE FLOOR PLANS FOR SIZE	-	300	PER PLANS	20	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
Q	HEAVY DUTY SUPPLY DIFFUSER	TITUS 300RL-HD	SEE FLOOR PLANS FOR SIZE	-	400	PER PLANS	20	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
R	LINEAR SLOT DIFFUSER	TITUS FL-20-HT	SEE FLOOR PLANS FOR SIZE	2-SLOT X 48"L	———	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	HIGH THROW WITH INSULATED PLENUM 2-2" SLOT WITH DIA." INLET
S	LINEAR SLOT DIFFUSER	TITUS FL-10-JT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	———	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1-1" SLOT WITH DIA." INLET
T	SUPPLY DIFFUSER	TITUS 300-FS	SEE FLOOR PLANS FOR SIZE	-	450	PER PLANS	25	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
U	LINEAR SLOT DIFFUSER	TITUS FL-15-JT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	———	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1-1.5" SLOT WITH DIA." INLET
V	SPIRAL SUPPLY DUCT GRILLE	TITUS S300-FL	SEE FLOOR PLANS FOR SIZE	-	450	PER PLANS	20	DUCT	DOUBLE DEFLECTION, ADJUSTABLE BLADES 3/4" SPACING, AIR SCOOP DEVICE
W	ROUND SUPPLY DIFFUSER	AIR CONCEPTS RDDW & RDDW-RD	SEE FLOOR PLANS FOR SIZE	-	550	PER PLANS	15	CEILING AND DUCT	ADJUSTABLE DOUBLE DEFLECTION VERTICAL AND HORIZONTAL
X	LINEAR SLOT DIFFUSER	TITUS FL-10-HT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	———	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	HIGH THROW WITH INSULATED PLENUM 1-1.0" SLOT WITH DIA." INLET

EXHAUST FAN SCHEDULE

MARK	TYPE	CFM	FRPM	EXT. S.P.	MAX. SONES	ELEC HP	ELEC SERV	CONTROL	MODEL	DRIVE	NOTES
EF-1	IN-LINE	1,675	1,711	0.500	13.3	1/2	115/1	A	SQ-120-VG	DIRECT	1,2,3,4,6,7
EF-2	IN-LINE	200	1673	0.300	5.7	1/15	115/1	C	SQ-70-VG	DIRECT	1,2,3,4,6,7
EF-3	IN-LINE	500	1214	0.350	8.7	1/4	115/1	A	SQ-99-VG	DIRECT	1,2,3,4,6,7

NOTES

1. INCLUDE DISCONNECT SWITCH.
2. INCLUDE BACKDRAFT DAMPER.
3. SUPPORT FROM STRUCTURE ABOVE WITH THREADED ROD AND VIBRATION ISOLATORS.
4. REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
5. MOUNT ON 12" HIGH ROOF CURB.
6. ALL FAN MODELS SPECIFIED AS MANUFACTURED BY GREENHECK.
7. INCLUDE FIELD MOUNTED AND WIRED SPEED CONTROL.
8. COLOR(S) TO BE SELECTED BY ARCHITECT/ENGINEER.
9. INSTALL DRIP PAN UNDER UNIT.
10. ALUMINUM WHITE ENAMEL GRILLE, ISOLATION KIT AND HOODED WALL CAP.
11. HI-PRO POLYESTER FINISH FOR HOUSING, FAN WHEEL, BACK DRAFT DAMPER AND ACCESSORIES..

CONTROL KEY:

A. AUTOMATIC OCCUPIED OPERATION BY LOCAL TEMPERATURE CONTROL ZONE.
B. MANUAL CONTROLS BY DIVISION 26.
   .1 WITH TIMER SWITCH.
   .2 WITH ON/OFF SWITCH.
   .3 WITH ROOM LIGHT SWITCH.
C. AUTOMATIC OPERATION BY REVERSE-ACTING THERMOSTAT.
D. 24 HOUR CONTINUOUS OPERATION.
E. ON/OFF CONTROL WITH FUME HOOD.
F. CONTROLS BY DISHWASHER HOOD MANUFACTURER.
G. ON/OFF CONTROL WITH KITCHEN HOOD EXHAUST FAN OPERATION.

ELECTRIC CABINET UNIT HEATER SCHEDULE

MARK	HIGH CFM	LOW CFM	HIGH KW	LOW KW	HIGH/LOW MBH	EAT	HIGH/LOW AMPS	ELEC. SERV	MODEL NO.	NOTES
ECUH-1	500	460	10.0	6.0	34.13/20.47	60	15.4/8.1	480/3	T46	1,2,3,5,6,7,8,9
ECUH-2	250	230	5.0	3.0	17.06/10.23	60	7.8/4.6	480/3	T33	1,2,3,5,6,7,8,9
ECUH-3	250	230	5.0	3.0	17.06/10.23	60	7.8/4.6	480/3	T33	1,2,3,5,6,7,8,9

NOTES

1. COLOR TO BE SELECTED BY ARCHITECT.
2. PROVIDE FACTORY DISCONNECT.
3. HORIZONTAL CEILING RECESSED UNIT.
4. HORIZONTAL EXPOSED UNIT.
5. UNIT SCHEDULED WITH BOTTOM SUPPLY AND BOTTOM RETURN.
6. LOW VOLTAGE WALL MOUNTED 2-STAGE TEMPERATURE SENSOR BY THE TCC.
7. UNITS SCHEDULED ARE AS MANUFACTURED BY RAYWALL.
8. REFER TO SPECIFICATION SECTION 238239.
9. SUPPORT HEATER FROM STRUCTURE ABOVE WITH MINIMUM OF FOUR (4), 3/8" DIAMETER THREADED RODS AND VIBRATION ISOLATORS.

ELECTRIC CEILING MOUNTED UNIT HEATER SCHEDULE

MARK	CFM	ELECTRIC HEATING BTUH	EAT	LAT	KW	ELEC SERV	MODEL NO.	NOTES
ECLH-1	600	17,000	60	97	5.0	460/3	RCH 3480 SERIES	1,2,3,4,5,6
ECLH-2	600	10,200	60	82	3.0	460/3	RCH 3480 SERIES	1,2,3,4,5,6

NOTES

1. UNITS SCHEDULED ARE AS MANUFACTURED BY RAYWALL.
2. RECESSED CEILING MOUNTED.
3. REFER TO SPECIFICATION SECTION 238239.
4. LOW VOLTAGE WALL MOUNTED TEMPERATURE SENSOR BY THE TCC.
5. FACTORY DISCONNECT SWITCH.
6. WHITE POWDER COATED GRILLE.

AHU/ACCU MAXIMUM ALLOWABLE SOUND LEVELS

MARK	UNIT SOUND	63Hz	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz
AHU-1	UNIT SUPPLY DISCHARGE	79	82	87	79	73	68	74	63
AHU-1	UNIT EXHAUST DISCHARGE	79	67	88	64	48	48	54	39
ACCU-1	RADIATED SOUND	0	99	95	93	93	91	88	84
ACCU-2	RADIATED SOUND	0	99	95	93	93	91	88	84
ACCU-3	RADIATED SOUND	0	83	77	79	82	75	71	64

ELECTRIC PROPELLER UNIT HEATER SCHEDULE

MARK	CFM	FAN SPEED (RPM)	ELECTRIC HEATING MBH	EAT	LAT	ESP	MAX KW	ELEC SERV	MODEL NO.	NOTES
EPUH-1	400	HIGH	11.20	60	86	———	3.3	460/3	5100 SERIES	1,2,3,4,5,6,7

NOTES

1. UNITS SCHEDULED ARE AS MANUFACTURED BY RAYWALL.
2. HORIZONTAL DISCHARGE.
3. REFER TO SPECIFICATION SECTION 238239.
4. SUPPORT HEATER FROM STRUCTURE ABOVE WITH MINIMUM OF TWO (2), 3/8" DIAMETER THREADED RODS AND VIBRATION ISOLATORS.
5. UNIT FURNISHED WITH ADJUSTABLE LOUVER FIN DIFFUSERS TO PROVIDE FOUR-DIRECTION AIR FLOW CONTROL.
6. LOW VOLTAGE WALL MOUNTED TEMPERATURE SENSOR BY THE TCC.
7. FACTORY DISCONNECT SWITCH.

HIGH VOLUME LOW SPEED CEILING FAN SCHEDULE

MARK	TYPE	FAN DIA.	MAX RPM	ELEC WATTS	ELEC SERV	CONTROL	DRIVE	MANUFACTURER & MODEL NO.	NOTES
HVLS-1	HIGH VOLUME LOW SPEED CEILING FAN	14'	116	1,400	480/3	A	DIRECT	BIG ASS FANS - PFX4-14	1,2,3,4,5,6,7
HVLS-2	HIGH VOLUME LOW SPEED CEILING FAN	14'	116	1,400	480/3	A	DIRECT	BIG ASS FANS - PFX4-14	1,2,3,4,5,6,7
HVLS-3	HIGH VOLUME LOW SPEED CEILING FAN	14'	116	1,400	480/3	A	DIRECT	BIG ASS FANS - PFX4-14	1,2,3,4,5,6,7

NOTES

1. REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
2. COLOR SHALL BE PROVIDED FROM MANUFACTURER'S FULL RANGE OF COLORS AS SELECTED BY ARCHITECT/ENGINEER.
3. PROVIDE ALL SUPPLEMENTAL STEEL AS REQUIRED FOR PROPER HANGING OF THE FAN. FOLLOW THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
4. FAN SHALL BE HUNG AS HIGH AS POSSIBLE.
5. VFC SHALL BE FACTORY MOUNTED TO THE MOTOR.
6. COORDINATE LOCATION OF FAN AND ALL ASSOCIATED COMPONENTS WITH ALL TRADES.
7. FANS SHALL BE INTERLOCKED TO SHUT DOWN IMMEDIATELY UPON RECEIVING A WATERFLOW SIGNAL FROM THE FIRE ALARM SYSTEM. COORDINATE WITH DIVISION 28

CONTROL KEY:

A. REMOTE TOUCHSCREEN LED WALL MOUNTED SPEED CONTROLS BY UNIT MANUFACTURER. CONTROLS SHALL BE CAPABLE OF CONTROLLING ALL THREE FANS FROM A SINGLE CONTROLLER.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

STATE OF OHIO — MARK Z. HOPP — E-79009 — REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JJS

PROJECT NUMBER: 222063.00

PROJECT ISSUE DATE: 12-1-22

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 1	1-6-23

MECHANICAL SCHEDULES

M5.01

ELECTRICAL ABBREVIATIONS

ABBREVIATIONS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

#	NUMBER
(N)P(N)W	NUMBER OF POLES, NUMBER OF WIRES
ACU	AIR CONDITIONING UNIT
AF	AMP FRAME
AFC	ABOVE FINISHED COUNTERTOP
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLER UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AI	ADDRESSABLE INTERFACE DEVICE
AR	AS REQUIRED
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
A/V	AUDIO VISUAL
B	BLANK
BPS	BOLTED-PRESSURE CONTACT SWITCH
C	CONDUIT (GENERIC TERM FOR RACEWAY, PROVIDE AS SPECIFIED)
Cd	CANDELA
CLG	CEILING MOUNTED
CAM	CAMERA
CL	LIGHTING CONTACTOR
COL	COLUMN
CMB	COMBINATION MOTOR FUSIBLE STARTER
CUH	CABINET UNIT HEATER
D	DEMO TABLE
DC	DIRECT CURRENT
DED	DEDICATED DEVICE ON INDIVIDUAL BRANCH CIRCUIT
DF	DUAL FACE
DIA	DIAMETER
DISTR	DISTRIBUTION
DPST	DOUBLE POLE SINGLE THROW
DPDT	DOUBLE POLE DOUBLE THROW
DT	DUST-TIGHT
EBJ	EQUIPMENT BONDING JUMPER ON LOAD SIDE OF AN OVER-CURRENT DEVICE
EC	ELECTRICAL CONTRACTOR
EM	WIRED ON EMERGENCY CIRCUIT
EOL	END OF LINE
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
F	FLUSH
F@	FUSED AT
FA	FIRE ALARM
FBO	FURNISHED BY OTHERS
FCU	FAN COIL UNIT
FDN	FOUNDATION
FMC	FLEXIBLE METAL CONDUIT
FRE	FIBERGLASS REINFORCED EPOXY CONDUIT
FS	FLOW SWITCH
H-O-A	HAND-OFF-AUTO
HTP	HEAT PUMP
KEC	KITCHEN EQUIPMENT CONTRACTOR
K/O	KNOCK-OUT
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LS	LIMIT SWITCH
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT TRIP ADJUSTMENTS TO BE PROVIDED ON A CIRCUIT BREAKER
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TV
MBJ	MAIN BONDING JUMPER
MC/ER	MAIN CROSS-CONNECT/EQUIPMENT ROOM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
M.H.	MANHOLE (ON SITE PLAN)
MH	MOUNTING HEIGHT (ON PLAN), ALL MOUNTING HEIGHTS FOR DEVICE BOXES ARE FROM FINISHED FLOOR TO BOTTOM OF BOX, UNO. VERIFY OUTLET LOCATIONS WITH OTHER TRADES BEFORE ROUGH-IN
MLO	MAIN LUGS ONLY
MOD	MOTOR OPERATED DISCONNECT SWITCH
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MSB	MAIN SWITCHBOARD
MSC	MOTOR STARTER CENTER
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MZU	MULTI-ZONE HVAC UNIT
N	GROUNDED CIRCUIT CONDUCTOR (NEUTRAL)
+N	INDICATES MOUNTING HEIGHT (N) TO BOTTOM OF DEVICE FROM FINISH FLOOR, UNO
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NFS	NONFUSIBLE SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NM	NONMETALLIC SHEATHED CABLE
NO	NORMALLY OPEN
NRTL	NATIONALLY RECOGNIZED TESTING LAB
NTS	NOT TO SCALE
OC	ON CENTER
OCPD	OVER-CURRENT PROTECTIVE DEVICE
PA	PUBLIC ADDRESS SYSTEM
PB	PULL BOX
PE	PNEUMATIC/ELECTRIC
PH	PROPELLER HEATER
PIV	POST INDICATING VALVE
PR	PAIR
PUH	PROPELLER UNIT HEATER
R	RELEASE
RAF	RETURN AIR FAN
RT	RAIN-TIGHT
RVS	REDUCE VOLTAGE STARTER
S	SURFACE
SBJ	SYSTEM BONDING JUMPER
SIG	SIGNAL
SN	SOLID NEUTRAL
SP	SPARE
SPL	SPLICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SS	STAINLESS STEEL
SSBJ	SUPPLY-SIDE BONDING JUMPER
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
STL	CARBON STEEL
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
TC	TELEPHONE CABINET
TCP	TEMPERATURE CONTROL PANEL
TEL/DATA	TELEPHONE/DATA
TEL	TELEPHONE
TERM	TERMINAL(S)
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TTB	TELEPHONE TERMINATION BOARD
UEF	UTILITY EXHAUST FAN
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
VG	VANDAL GUARD, POLYCARBONATE COVER
VIF	VERIFY IN FIELD
VT	VAPOR-TIGHT
WG	WIRE GUARD
WH	WATTHOUR
WM	WALL MOUNTED
WP	WEATHERPROOF
WT	WATER-TIGHT

1

POWER SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT TO BOTTOM
	CONDUIT CONCEALED ABOVE CEILING OR IN WALL	
	CONDUIT CONCEALED IN OR BELOW FLOOR, OR UNDER GROUND	
X 1AL1-1	20 AMP, 125 VOLT, NEMA 5-20R DUPLEX RECEPTACLE WITH COMMON COVER PLATE MOUNTED VERTICALLY +16" TO BOTTOM. LETTER(S) IN FRONT INDICATES LOAD TYPE, SEE BELOW. SINGLE LINE INDICATES HORIZONTAL MOUNTING, DOUBLE LINE INDICATE QUAD, DARK CENTER INDICATES ABOVE COUNTERTOP MOUNTING (44") NEMA 5-20R, UNO. CIRCUIT NUMBER (e.g. "1AL1-1") ADJACENT TO THE SYMBOL ON PLANS INDICATES PANELBOARD/CIRCUIT NUMBER SERVING RECEPTACLE, UNO.	
	CM COFFEE MAKER GF GROUND FAULT CIRCUIT INTERRUPTING TYPE M MONITOR - 60" AFF R REFRIGERATOR - 48" AFF TR TAMPER RESISTANT V VENDING MACHINE. FEED FROM 30 mA GFCI BREAKER IN PANELBOARD. VP WALL MOUNTED VIDEO PROJECTOR, 96" AFF UNO WC ELECTRIC WATER COOLER. FEED FROM 5 mA GFCI BREAKER IN PANELBOARD. WF WASHFOUNTAIN/LAVATORY. CONNECT TO NEAREST THROUGH FEED GFCI RECEPTACLE. WM WASHING MACHINE. FEED FROM 30 mA GFCI BREAKER IN PANELBOARD. WP WEATHER RESISTANT GFCI WITH IN-USE TYPE WEATHERPROOF COVER HINGED AT TOP	
	20 AMP DUPLEX RECEPTACLE FLUSH CEILING MOUNTED , NEMA 5-20R	CLG
	SPECIAL POWER RECEPTACLE, AMPS, VOLTS AND NEMA CONFIGURATION AS DEFINED ON PLANS BY CODED NOTE	16"
	SINGLE STRAIGHT BLADE, SPECIAL RECEPTACLE, 20A, 125/250 VOLT, 3P, 4W, NEMA 14-20R	16"
R	SINGLE STRAIGHT BLADE, RANGE RECEPTACLE, 50A, 125/250 VOLT, 3P, 4W, NEMA 14-50R	8"
D	SINGLE STRAIGHT BLADE, GROUNDED DRYER RECEPTACLE, 30A, 125/250 VOLT, 3P, 4W, NEMA 14-30R	32"
F	20 AMP DUPLEX RECEPTACLE IN FLUSH FLOOR MOUNTED BOX,NEMA 5-20R. USE A CAST BOX AT GRADE LEVEL, USE A STAMPED STEEL BOX FOR UPPER FLOORS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.	-
	HIGH CAPACITY FLOOR BOX WITH 4 DUPLEX RECEPTACLES, NEMA 5-20R, UNO FOR POWER AND DATA. REFER TO SPECIFICATIONS FOR REQUIREMENTS.	-
	TWO 20 AMP DUPLEX RECEPTACLES IN BOX WITH COVER PLATE, PENDANT MOUNTED WITH 3/C, SJO CORD AND STRAIN RELIEF GRIPS.	84"
	2 CHANNEL MULTIOUTLET SURFACE RACEWAY ASSEMBLY WITH DUPLEX RECEPTACLES AND DATA OUTLETS. SEE TECHNOLOGY DRAWINGS. QUANTITY AS SHOWN OR PER SPEC.	-
	SINGLE CHANNEL MULTIOUTLET SURFACE RACEWAY PRE-WIRED ASSEMBLY WITH SINGLE RECEPTACLES. QUANTITY PER SPEC.	-

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MH
AID	ADDRESSABLE INTERFACE DEVICE	-
H	HEAT DETECTOR, 190 DEGREES F FIXED TEMPERATURE (UNO), CEILING MOUNTED	CLG
P D	ROUND INDICATES CEILING MOUNTED,SQUARE INDICATES DUCT MOUNTED, PHOTOELECTRIC SMOKE DETECTOR	
C	CARBON MONOXIDE DETECTOR, CEILING MOUNTED	CLG
FAA	FIRE ALARM ANNUNCIATION PANEL	56"
FAPS	FIRE ALARM POWER SUPPLY	-
FAP	FIRE ALARM CONTROL PANEL	-
F F	AUDIBLE AND VISIBLE NOTIFICATION APPLIANCE (HORN/STROBE), CEILING MOUNTED, EXTRA LINE INDICATES WALL MOUNTING AT 80" AFF	CLG
S S	VOICE/ALARM COMMUNICATION AUDIBLE AND VISIBLE NOTIFICATION DEVICE (SPEAKER/STROBE), CEILING MOUNTED, EXTRA LINE INDICATES WALL MOUNTING AT 80" AFF	CLG
V V	VISIBLE NOTIFICATION APPLIANCE (STROBE), CEILING MOUNTED, EXTRA LINE INDICATES WALL MOUNTING AT 80" AFF	CLG
L L	VOICE/ALARM COMMUNICATIONS LOUDSPEAKER, CEILING MOUNTED, EXTRA LINE INDICATES WALL MOUNTING AT 96" AFF	CLG
F	MANUAL FIRE ALARM PULL STATION, AND AUDIBLE AND VISIBLE NOTIFICATION APPLIANCE ABOVE (HORN/STROBE), WALL MOUNTED	44"/80"
F	MANUAL FIRE ALARM PULL STATION, WALL MOUNTED	44"
S S	VOICE/ALARM COMMUNICATIONS HORN TYPE LOUDSPEAKER, CEILING MOUNTED, EXTRA LINE INDICATES WALL MOUNTING AT 96" AFF	CLG
SD	SMOKE DAMPER ACTUATOR AND ASSOCIATED SMOKE DETECTOR, TYPE PER PLANS	-
FS	WATER FLOW SWITCH CONNECTION	-
SV	SUPERVISORY VALVE TAMPER SWITCH CONNECTION	-
FH	SURFACE FIRE ALARM MAGNETIC DOOR HOLDER	6" BELOW TOP OF DOOR
SH	SURFACE SECURITY ALARM MAGNETIC DOOR HOLDER	6" BELOW TOP OF DOOR
S	ELECTRONIC RELEASE DOOR CLOSER	-
B	FIRE ALARM BELL, WALL MOUNTED, WEATHERPROOF WHERE EXTERIOR MOUNTED	96"
PV	POST INDICATOR VALVE TAMPER SWITCH	

POWER SYMBOLS

SYMBOL	DESCRIPTION	MH
	DISTRIBUTION PANEL, SEE ONE LINE DIAGRAM	-
	SURFACE CIRCUIT BREAKER PANELBOARD, SEE ONE LINE DIAGRAM	-
	FLUSH MOUNTED CIRCUIT BREAKER PANELBOARD, SEE ONE LINE DIAGRAM	-
	UTILITY METER	-
	PUSH BUTTON STATION, TYPE INDICATED	44"
	PUSH BUTTON STATION, ON/OFF	44"
	PUSH BUTTON STATION, UP/DOWN/STOP	44"
	RECESSED ADA PUSH BUTTON FOR AUTOMATIC DOOR OPERATOR, FURNISHED BY OTHERS, INSTALLED BY DIV. 26	44"
	RECESSED ADA DOUBLE PUSH BUTTON FOR DUAL AUTOMATIC DOOR OPERATORS, FURNISHED BY OTHERS, INSTALLED BY DIV. 26	44"
	RED MUSHROOM ABORT SWITCH, WALL MOUNTED	44"
FC	PHOTOCELL AIMED NORTH	-
H	RECESSED WALL BOX FOR HAND DRYER. CIRCUIT WITH 2#10, #10G IN 3/4" C TO PANEL INDICATED	-
	NON-FUSED DISCONNECT, 3 POLE, NEMA 1, UNO. 30 AMP UNO. -WP SUFFIX DESIGNATES NEMA 3R ENCLOSURE. -WP4X SUFFIX DESIGNATES NEMA 4X STAINLESS STEEL ENCLOSURE.	48"
F 100A-3P	FUSED DISCONNECT, 3 POLE, NEMA 1, UNO. 30 AMP UNO. -WP SUFFIX DESIGNATES NEMA 3R ENCLOSURE. -WP4X SUFFIX DESIGNATES NEMA 4X STAINLESS STEEL ENCLOSURE.	48"
M	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION, UNO. FLUSH MOUNTED IN FINISH SPACES.	44"
F	MANUAL MOTOR STARTER, NO OVERLOADS. FLUSH MOUNTED IN FINISH SPACES.	44"
T	SPRING WOUND TIMER, HP RATED	44"
C	CONTROL SWITCH FOR DEVICES SUCH AS MOTORIZED SHADES, SOLAR LIGHT TUBES, PROJECTION SCREENS, ETC. FURNISHED BY OTHERS, INSTALLED FLUSH MOUNTED WITH COVER PLATE AND WIRED BY DIV. 26	44"
TC	DIGITAL TIME CLOCK SWITCH	60"
VFC	VARIABLE FREQUENCY CONTROLLER, FURNISHED BY DIV. 23 CONTRACTOR, INSTALLED BY DIV. 26 CONTRACTOR, UNO. COORDINATE FINAL MOUNTING HEIGHT.	60"
ATS	AUTOMATIC TRANSFER SWITCH, REFER TO SINGLE LINE DIAGRAM. COORDINATE FINAL MOUNTING HEIGHT. REFER TO SPECIFICATIONS FOR REQUIREMENTS	60"
T	THERMOSTAT	-
	MOTOR	-
T	DRY TYPE TRANSFORMER	-
SPD	SURGE PROTECTIVE DEVICE. REFER TO SPECIFICATION FOR REQUIREMENTS.	-
GAP	GENERATOR ANNUNCIATOR PANEL	56"
	UTILITY POLE	-
J	JUNCTION BOX, PIGTAIL INDICATED FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT	-
	CEILING PADDLE FAN WITH JUNCTION BOX SECURELY MOUNTED TO STRUCTURE	CLG
SC_BD	ELECTRONIC SCOREBOARD, WALL MOUNTED. FURNISHED BY OTHERS INSTALLED BY DIV 26	-

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION	MH
HB	OCCUPANCY SENSOR - CEILING MOUNTED (UNO), HIGH BAY INFRARED, 360 DEGREE PATTERN, 36' DIA. COVERAGE PATTERN (MIN.) AT 20' MOUNTING HEIGHT. PROVIDE WITH RELAY OPTION.	CLG
CT	OCCUPANCY SENSOR - CEILING MOUNTED, DUAL TECHNOLOGY, 360 DEGREE PATTERN, 2000 S.F. COVERAGE. PROVIDE WITH RELAY OPTION. "A" PORTION OF SYMBOL INDICATES AIMING OF ULTRASONIC SENSORS.	CLG
CI	OCCUPANCY SENSOR - CEILING MOUNTED, INFRARED, 360 DEGREE PATTERN, 1200 S.F. COVERAGE (MIN.). PROVIDE WITH RELAY OPTION.	CLG
CT	OCCUPANCY SENSOR - CEILING MOUNTED, DUAL TECHNOLOGY, DIRECTIONAL/180 DEGREE PATTERN, 1200 S.F. COVERAGE (MIN.). PROVIDE WITH RELAY OPTION. PROVIDE WITH CEILING MOUNTING BRACKET ACCESSORY IF NOT SUPPLIED AS STANDARD WITH SENSOR. "A" PORTION OF SYMBOL INDICATES AIMING.	CLG
CI	OCCUPANCY SENSOR - CEILING MOUNTED, INFRARED, DIRECTIONAL/180 DEGREE PATTERN, 1200 S.F. COVERAGE (MIN.). PROVIDE WITH RELAY OPTION. PROVIDE WITH CEILING MOUNTING BRACKET ACCESSORY IF NOT SUPPLIED AS STANDARD WITH SENSOR. "A" PORTION OF SYMBOL INDICATES AIMING.	CLG
ST	OCCUPANCY SENSOR - WALL SWITCH TYPE, DUAL TECHNOLOGY WITH MANUAL OVERRIDE SWITCH	44"
SI	OCCUPANCY SENSOR - WALL SWITCH TYPE,INFRARED WITH MANUAL OVERRIDE SWITCH	44"
K	KEY OPERATED SWITCH, NUMBER INDICATES NUMBER OF POLES, 277V, 20A, FLUSH UNO	44"
3	SWITCH, NUMBER INDICATES NUMBER OF POLES, 277V, 20A, FLUSH UNO	44"
a	SINGLE POLE SWITCH, 277V, 20A, FLUSH UNO TYPICAL, SUBSCRIPT a, b, c INDICATES WHICH LUMINAIRE THAT WILL BE CONTROLLED VIA SWITCH LEG	44"
D	WALL BOX DIMMER 277V, 1200 WATT MINIMUM, FLUSH, UNO. PROVIDE WATTAGE SIZE TO EXCEED CIRCUIT LOAD	44"
LC	LIGHTING CONTACTOR, MECHANICALLY HELD, 30A - 3P WITH H-O-A SWITCH, UNO	48"
	DOWNLIGHT LUMINAIRE, APPROXIMATE SIZE INDICATED	-
	DOWNLIGHT LUMINAIRE CONNECTED TO EMERGENCY SYSTEM AS INDICATED	-
	WALL SCONCE LUMINAIRE	-
	WALL MOUNTED EXIT SIGN, DIRECTIONAL ARROWS AS SHOWN	96"
	CEILING MOUNTED EXIT SIGN, SHADED PORTION(S) INDICATES SINGLE OR DOUBLE FACE	CLG
	ARM MOUNTED AREA LUMINAIRE	-
	POLE TOP AREA LUMINAIRE	-
	WALL-BRACKET LUMINAIRE, APPROXIMATE SIZE INDICATED	-
	WALL-BRACKET LUMINAIRE CONNECTED TO EMERGENCY SYSTEM AS INDICATED	-
	RECESSED LUMINAIRE, APPROXIMATE SIZE INDICATED. ("NL", INDICATES NIGHT LIGHT FIXTURES)	CLG
	RECESSED LUMINAIRE CONNECTED TO EMERGENCY SYSTEM AS INDICATED	CLG
	SURFACE OR PENDANT MOUNTED LUMINAIRE, APPROXIMATE SIZE INDICATED	CLG
	SURFACE OR PENDANT MOUNTED LUMINAIRE CONNECTED TO EMERGENCY SYSTEM AS INDICATED	CLG
	PENDANT LUMINAIRE, APPROXIMATE SIZE INDICATED	CLG
	PENDANT LUMINAIRE CONNECTED TO EMERGENCY SYSTEM AS INDICATED	CLG

ELECTRICAL GENERAL NOTES

1. THE TERM "PROVIDE" INDICATES CONTRACTOR SHALL FURNISH AND INSTALL ITEMS AND CONNECT AS REQUIRED TO OBTAIN A COMPLETE AND OPERABLE SYSTEM.
2. COORDINATE DEVICE LOCATIONS WITH ARCHITECTURAL PLANS, CASEWORK, WINDOWS, WALL FINISHES, EQUIPMENT , AND OTHER TRADES PRIOR TO ROUGH IN. DEVICES ARE INTENDED TO BE ACCESSIBLE, DO NOT INSTALL BEHIND CASEWORK, DOORS OR EQUIPMENT UNLESS INDICATED ON PLANS. NOTIFY ARCHITECT IN WRITING OF CONFLICTS PRIOR TO PROCEEDING WITH WORK.
3. WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ALL LOCAL, STATE AND NATIONAL CODES INCLUDING, BUT NOT LIMITED TO NFPA 70 (NATIONAL ELECTRIC CODE), NFPA 72, NFPA 101, INTERNATIONAL BUILDING CODE, ETC.
4. CONFLICTS BETWEEN THE APPLICABLE CODES, STANDARDS, AND THE PLANS AND SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT IN WRITING PRIOR TO PROCEEDING WITH WORK.
5. REFER TO E7 SERIES FOR PANEL SCHEDULES.
6. E3 SERIES DRAWINGS ARE FOR TECHNOLOGY ROUGH-INS
7. REFER TO TECHNOLOGY PLANS, T1 SERIES FOR COMMUNICATIONS, SECURITY AND ACCESS CONTROL.
8. CONTRACTOR SHALL FOLLOW SEISMIC RESTRAINT AND DESIGN REQUIREMENTS CONTAINED IN LATEST ADOPTED STATE AND INTERNATIONAL BUILDING CODES WITH ALL AMENDMENTS AS ADOPTED.
9. ADDITIONAL ELECTRICAL REQUIREMENTS MAY BE SHOWN ON PLANS FROM OTHER DISCIPLINES IN THIS SET. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW ALL PLANS AND SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF THE PROJECT REQUIREMENTS.
10. WHERE CONFLICTS ARE FOUND BETWEEN DRAWINGS, DETAILS, OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY, NOTIFY ARCHITECT OF DISCREPANCY IN WRITING.
11. INITIATING WORK CONSTITUTES CONTRACTOR ACCEPTANCE OF THE EXISTING CONDITIONS ASSOCIATED WITH THE WORK IN QUESTION.
12. CONTRACTOR SHALL CONTACT UTILITIES AND VERIFY UTILITY REQUIREMENTS PRIOR TO COMMENCING CONSTRUCTION. CONFLICTS BETWEEN UTILITY REQUIREMENTS AND THE PLANS OR SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT IN WRITING PRIOR TO PROCEEDING WITH WORK. CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH THE UTILITY COMPANY TO REVIEW REQUIREMENTS. INCOMING SERVICE CONDUITS AND SUBSTRUCTURES SHALL BE INSTALLED PER UTILITY COMPANY STANDARDS.
13. THESE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFE PRACTICES.
14. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, AND CONDUIT, ETC. THE EXACT LOCATIONS AND ARRANGEMENT OF PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES. ITEMS NOT INDICATED ON DRAWINGS REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED SHALL BE FURNISHED AND INSTALLED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
15. WORK SHALL BE COORDINATED WITH EXISTING CONDITIONS, NEW CONSTRUCTION, OWNER'S VENDORS, OTHER TRADES, AND THEIR DOCUMENTS. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING HIS BID. CONTRACTOR SHALL CONTACT OWNER FOR AN APPOINTMENT TO VISIT THE SITE.
16. AN INSULATED GROUND CONDUCTOR SIZED PER NEC SHALL BE PROVIDED WITH EACH FEEDER AND BRANCH CIRCUIT.
17. PROVIDE A DEDICATED NEUTRAL FOR EACH LINE TO NEUTRAL CIRCUIT. MULTI-WIRE BRANCH CIRCUITS ARE NOT PERMITTED UNLESS SPECIFICALLY INDICATED ON PLANS.
18. MINIMUM WIRE SIZE IS #12 AWG. SEE SPECIFICATIONS FOR MINIMUM CONDUIT SIZE.
19. CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE ABOVE CEILINGS, INSIDE WALLS, OR UNDER FLOOR SLAB WHERE SHOWN ON DRAWINGS. IN AREAS WITH NO CEILING, RUN EXPOSED CONDUIT AS HIGH AS POSSIBLE AND PARALLEL TO NEARBY SURFACES OR EXISTING RACEWAYS. CONDUIT SHALL NOT BE INSTALLED IN FLOOR SLAB UNLESS SPECIFICALLY INDICATED ON PLANS AND WHERE APPROVED BY STRUCTURAL ENGINEER. DO NOT INSTALL MC CABLE IN EXPOSED LOCATIONS.
20. CONTRACTOR SHALL PROVIDE RIGID METAL SLEEVES TO FACILITATE PATHWAYS THROUGH FULL HEIGHT WALLS FOR ELECTRICAL AND TELECOMMUNICATION WIRING.
21. PROVIDE TEMPORARY OR PERMANENT END CAPS FOR STUBBED CONDUITS. PROVIDE INSULATED THROAT BUSHINGS FOR CONDUITS INTENDED TO REMAIN OPEN ENDED.
22. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE RATED ASSEMBLIES AND SMOKE BARRIERS. SEAL PENETRATIONS IN ACCORDANCE WITH UL AND PROJECT SPECIFICATIONS.
23. MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES INDICATED ABOVE FINISHED FLOOR ARE TO BOTTOM OF DEVICE UNO. MOUNTING HEIGHTS FOR CEILING SUSPENDED DEVICES ARE TO BOTTOM OF DEVICE UNO.
24. PROVIDE SOUND INSULATING PUTTY AROUND DEVICES INSTALLED ON OPPOSITE SIDES OF A WALL IN THE SAME VERTICAL CHANNEL. IF DEVICES ARE LOCATED AT LEAST 8" HORIZONTALLY APART NO SOUND INSULATING PUTTY IS REQUIRED.
25. COORDINATE CEILING MOUNTED DEVICES WITH MECHANICAL AND ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY ARCHITECT IN WRITING OF CONFLICTS PRIOR TO PROCEEDING WITH WORK.
26. JUNCTION BOXES LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE LOCATED NO MORE THAN 36" ABOVE CEILING LEVEL. LABEL EACH BOX IN AREA OF WORK WITH A PERMANENT MARKER OR IN ACCORDANCE WITH SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
27. CONDUITS DESIGNATED AS EMPTY OR FUTURE SHALL BE PROVIDED WITH A #12 PULL LINE. OPEN ENDED CONDUITS SHALL BE PROVIDED WITH INSULATED THROAT BUSHINGS.
28. FOR LUMINAIRES, CIRCUIT NUMBER IS SHOWN ONLY ONCE IN EVERY ROOM. PROVIDE CIRCUIT INDICATED TO EVERY LIGHT FIXTURE INDICATED IN SAME ROOM UNLESS OTHERWISE INDICATED.
29. QUANTITY AND LOCATION OF TAMPER AND FLOW SWITCHES IS FOR BIDDING PURPOSES ONLY. VERIFY EXACT QUANTITY AND LOCATIONS WITH SPRINKLER CONTRACTOR PRIOR TO FIRE ALARM SHOP DRAWING SUBMITTAL.
30. ELECTRICAL PANELS INCLUDING BUT NOT LIMITED TO FIRE ALARM CONTROL PANELS, LIGHTING CONTROL PANELS, POWER DISTRIBUTION WILL HAVE A MAX DEVICE HEIGHT OF 72" AFF.
31. PROVIDE GROUNDING TYPE EXPANSION FITTINGS OR OTHER APPROVED METHODS TO ALLOW FOR EXPANSION, CONTRACTION, AND DEFLECTION WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS.
32. PROVIDE SEPARATE RACEWAY FOR EMERGENCY SYSTEM WIRING PER NEC ARTICLE 700. MINIMUM WIRE SIZE #10AWG.
33. ALL CONDUITS SHALL INCLUDE AN INSULATED GROUND WIRE, SIZED PER N.E.C.
34. AUTODOORS AND WHEELCHAIR LIFT PROVIDED AND INSTALLED BY OTHERS. PROVIDE CONDUIT AND BOX ROUGH-INS FOR MOTORS AND PUSHBUTTONS. MAKE FINAL POWER CONNECTIONS. ALL CONTROL WIRING BY OTHERS.
35. **MASONRY LOAD-BEARING WALLS AND MASONRY SHEAR WALLS**: DO NOT PENETRATE CMU WALLS INDICATED AS BEARING WALLS AND SHEAR WALLS ON STRUCTURAL DRAWINGS UNLESS NOTED OTHERWISE ON PLAN. DO NOT CORE THROUGH CMU BOND BEAMS OR LINTELS. DO NOT CUT ANY VERTICAL REINFORCING IN CMU WALLS. OBTAIN PRIOR APPROVAL FROM ENGINEER BEFORE PENETRATING ANY OF THE STRUCTURAL ELEMENTS LISTED ABOVE.
36. **CONCRETE BEARING WALLS AND BEAMS**: DO NOT PENETRATE CONCRETE WALLS INDICATED AS BEARING WALLS AND SHEAR WALLS ON STRUCTURAL DRAWINGS UNLESS NOTED OTHERWISE ON PLAN. DO NOT CORE THROUGH CONCRETE BEAMS , GIRDERS, OR COLUMNS. DO NOT CUT ANY VERTICAL REINFORCING IN CONCRETE WALLS. OBTAIN PRIOR APPROVAL FROM STRUCTURAL ENGINEER BEFORE PENETRATING ANY OF THE STRUCTURAL ELEMENTS LISTED ABOVE.
37. **STEEL FRAMING**: DO NOT CUT OR CORE THROUGH ANY STRUCTURAL STEEL BEAMS, GIRDERS, OR COLUMNS UNLESS NOTED OTHERWISE ON PLAN. NOTIFY ENGINEER OF POTENTIAL CONFLICTS BETWEEN FRAMING AND ELECTRICAL WORK.
38. **CONCRETE FLOOR SYSTEMS (APPLIES TO CONCRETE BLDG. OR STEEL WITH CONCRETE DECK, MASONRY W/ CONC. FLOOR)**: DO NOT CUT HOLES OR CORE THROUGH CONCRETE FLOOR SLAB UNLESS NOTED OTHERWISE ON PLAN OR IN TYPICAL STRUCTURAL DETAILS. PENETRATIONS THROUGH EXISTING SLABS SHALL BE X-RAYED PRIOR TO CORING HOLES. NO EXISTING REINFORCEMENT SHALL BE CUT WITHOUT PERMISSION OF THE STRUCTURAL ENGINEER. PENETRATIONS THROUGH EXISTING BEAMS AND COLUMNS IS NOT PERMITTED.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE19800105 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

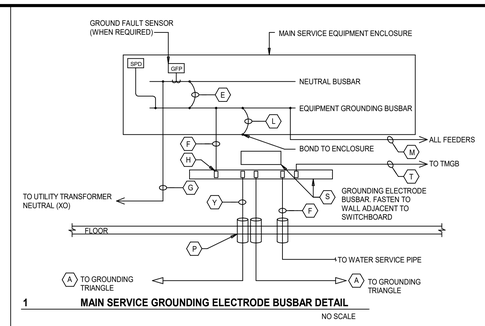
REV. NO.	DESCRIPTION	DATE

ELECTRICAL SYMBOL LEGEND

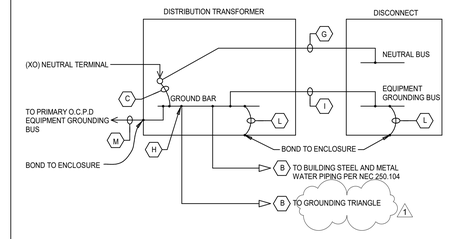
E1.1

GROUNDING CODED NOTES:

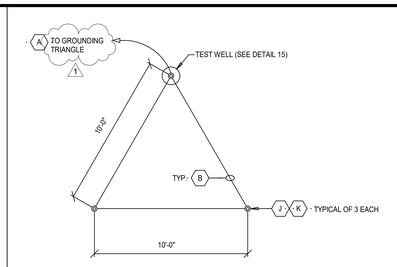
- A — GROUNDING ELECTRODE CONDUCTOR. BARE, TINNED, STRANDED, COPPER-CONDUCTOR. (30 INCHES BELOW GRADE, MIN.) (24 INCHES FROM FOUNDATION, MIN.) FOR ELECTRICAL SERVICE OF 800 AMP OR LESS USE #2/0 AWG. FOR ELECTRICAL SERVICE GREATER THAN 800 AMP USE #4/0 AWG.
- B — GROUNDING CONDUCTOR. 2/0 AWG BARE, TINNED, STRANDED, COPPER-CONDUCTOR.
- C — IRREVERSIBLE, COPPER, COMPRESSION CONNECTOR. (CABLE TO CABLE)
- D — IRREVERSIBLE, COPPER, COMPRESSION CONNECTOR. (CABLE TO TRAY) BOND EACH SECTION, TRANSISTION, RISER, TEE, ETC.
- E — MAIN BONDING JUMPER PROVIDED BY MANUFACTURER AS PART OF LISTED AND LABELED SERVICE EQUIPMENT. IF NOT PROVIDED BY MANUFACTURER, PROVIDE #4/0 BARE, TINNED, STRANDED, COPPER-CONDUCTOR.
- F — GROUNDING ELECTRODE CONDUCTOR: #4/0 AWG STRANDED, BARE, COPPER IN PVC CONDUIT.
- G — GROUNDED CONDUCTOR (NEUTRAL): (REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR SIZE).
- H — PROVIDE UL 467 LISTED COMPRESSION CONNECTORS, TWO-HOLE LUGS.
- I — SYSTEM BONDING JUMPER CONDUCTOR. SYSTEM BONDING JUMPER CONDUCTOR TO BE RUN IN EACH CONDUIT CONTAINING PHASE CONDUCTORS BETWEEN TRANSFORMER AND MAIN SECONDARY DISCONNECT. (REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR SIZE)
- JJ — 10 FOOT BY 3/4" COPPER WELD GROUND ROD. TOP OF RAD SHALL BE 12" MINIMUM BELOW FINISHED GRADE.
- J — 8 FOOT BY 5/8" COPPER WELD GROUND ROD. TOP OF ROD SHALL BE 12" MINIMUM BELOW FINISHED GRADE.
- K — PROVIDE EXOTHERMIC WELD FOR ALL CABLE TO ROD, CABLE TO CABLE, OR CABLE TO STEEL CONNECTIONS.
- L — EQUIPMENT BONDING JUMPER STRANDED, BARE, COPPER. (<110A USE #6, <410A USE #2, <810A USE #2/0, <2100A USE #4/0) SCREW OF BUSBAR MAY BE USED WHEN PROVIDED AS PART OF LISTED SERVICE EQUIPMENT.
- M — EQUIPMENT GROUNDING CONDUCTOR (REFER TO ONE LINE DIAGRAM FOR CONDUCTOR SIZE).
- N — TELECOMMUNICATIONS BONDING BACKBONE: #4/0 AWG STRANDED BARE COPPER.
- O — BONDING CONDUCTOR: 6 AWG STRANDED BARE COPPER.
- P — 1" PVC SLEEVE FOR ALL GROUNDING CONDUCTORS THROUGH FLOOR SLABS. NEVER ROUTE GROUNDING CONDUCTORS IN A METAL CONDUIT.
- Q — PROVIDE UL 467 LISTED, ELECTRO-TIN-PLATED COPPER BUSBAR, 4" x 20" x 1/4" WITH (2) 2-INCH INSULATED STANDOFF SUPPORTS. PROVIDE ENGRAVED NAMEPLATE, SCREWED TO WALL, 6" ABOVE GROUNDING BUS BAR WHICH READS "IF THESE CONNECTORS OR CABLES ARE LOOSE OR MUST BE REMOVED, PLEASE CALL THE BUILDING TELECOMMUNICATIONS MANAGER".
- R — PROVIDE UL 467 LISTED, ELECTRO-TIN-PLATED COPPER BUSBAR, 2" x 12" x 1/4" WITH (2) 2-INCH INSULATED STANDOFF SUPPORTS. PROVIDE ENGRAVED NAMEPLATE SCREWED TO WALL, 6" ABOVE GROUNDING BUS BAR WHICH READS, "IF THESE CONNECTORS OR CABLES ARE LOOSE OR MUST BE REMOVED, PLEASE CALL THE BUILDING TELECOMMUNICATIONS MANAGER".
- S — PROVIDE UL 467 LISTED, ELECTRO-TIN-PLATED COPPER BUSBAR, 4" x 20" x 1/4" WITH (2) 2-INCH INSULATED STANDOFF SUPPORTS. PROVIDE ENGRAVED NAMEPLATE, SCREWED TO WALL, 6" ABOVE GROUNDING BUS BAR WHICH READS "WARNING - SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE (GENERATOR) IS ENERGIZED".
- T — CONTINUOUS, UNSPLICED BONDING CONDUCTOR FOR TELECOMMUNICATIONS: 2/0 AWG BARE, TINNED, STRANDED, COPPER-CONDUCTOR IN CABLE TRAYS.
- U — BRAIDED ALUMINUM CABLE FOR LIGHTING DOWNRUNNER. SUPPORT SPACING PER NFPA 780.
- V — CONNECT GROUND CABLE TO EXISTING SERVICE GROUNDING ELECTRODE AT UTILITY TRANSFORMER OR MAIN SWITCHBOARD GROUND BAR.
- W — CONNECT TO EXISTING BUILDING GROUND LOOP IF FOUND, DISTURBED, OR DAMAGED, PROVIDE (K) AT ALL SPLICES AND NEW CABLE CONNECTIONS.
- X — WELD A MINIMUM 6" x 3" x 1/4" STEEL PLATE TO UNDERSIDE OF BOTTOM FLANGE OF ROOF JOIST. THE STEEL PLATE SHALL BE WELDED TO THE BOTTOM FLANGE USING A NORMAL WELDING PROCEDURE WITH WELDS PARALLEL TO THE BOTTOM FLANGE ALONG THE EDGE. THEN BOND THE GROUNDING CONDUCTOR TO THE STEEL PLATE AT LEAST 1" AWAY FROM FLANGE, USING AN EXOTHERMIC WELD.
- Y — PROVIDE WRAP AROUND PLASTIC LABEL ON EACH CONDUCTOR AT GROUND BAR. IDENTIFY WHAT THE CABLE IS CONNECTED TO.



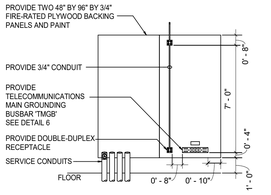
1 MAIN SERVICE GROUNDING ELECTRODE BUSBAR DETAIL
NO SCALE



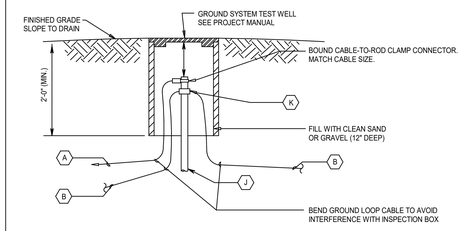
2 DISTRIBUTION TRANSFORMER GROUNDING DETAIL
NO SCALE



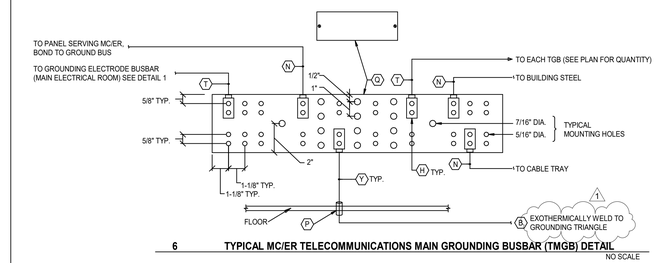
3 TYPICAL GROUNDING TRIANGLE DETAIL
INSTALL NEAR SERVICE TRANSFORMER
NO SCALE



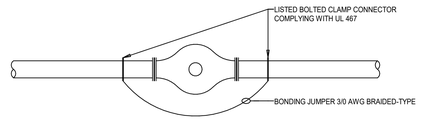
4 TYPICAL MAIN TELEPHONE/MC/ER BACKBOARD
NO SCALE



5 GROUND TEST WELL DETAIL
GROUND RESISTANCE AS MEASURED BY A GROUND MEGGER SHALL NOT BE GREATER THAN 5 OHMS
NO SCALE



6 TYPICAL MC/ER TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB) DETAIL
NO SCALE



7 TYPICAL BONDING JUMPER AT EACH WATER METER
NO SCALE

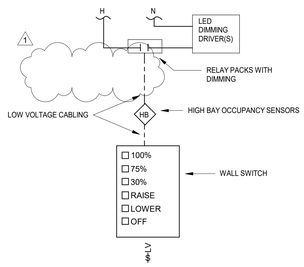
LUMINAIRE SCHEDULE

PLAN TYPE	MANUFACTURER/CATALOG	MOUNTING	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	LAMPS LUMENS	APPLIED VOLTAGE	DESCRIPTION	VA LOAD
LE1X	LITHONIA AEB SERIES EVENLITE WEATHERWAY SERIES COMPASS CUW SERIES /1	SURFACE WALL	1	11 W	SOLID STATE LED	1000 lm	277 V	OUTDOOR EMERGENCY LIGHT FIXTURE, DIE-CAST ALUMINUM HOUSING, SELF-DIAGNOSTICS, INTEGRAL PHOTOCELL, WIRED NORMALLY ON, COMPATIBLE WITH CENTRAL BATTERY INVERTER, WET LOCATION, 3200K, DARK BRONZE.	11 VA
LE2	LITHONIA DSXW2 SERIES GARDCO PWS SERIES MCGRAW-EDISON GWC SERIES BEACON GEOPAK 2 SERIES /1	SURFACE WALL	1	109 W	SOLID STATE LED	11000 lm	277 V	WALL MOUNTED LED LUMINAIRE WITH DIE CAST ALUMINUM HOUSING, BOTTOM DIFFUSER FLUSH WITH THE DIE CASTING, TYPE 2 DISTRIBUTION, 4000K, 70 CRI LEDs, BLACK FINISH. MOUNT ONTO JUNCTION BOX. PROVIDE WITH INTEGRAL PHOTOCELL AND OCCUPANCY SENSOR. FIXTURES TO BE ON/OFF TO 50% BY PHOTOCELL AND INCREASED TO 100% WHEN FIXTURE IS ON. VANDAL RESISTANT.	109 VA
LE3	LUMINIS SYS02 SERIES COOPER LIGHTING HUBBELL LIGHTING CREE LIGHTING /1	SURFACE WALL	1	64 W	LED	6600 lm	277 V	WALL SCONCE, NOMINALLY 8-INCH DIAMETER. UP/DOWN LIGHT, WALL WASH OPTICS, 4000K, 80+ CRI, ADJUSTABLE LIGHT SOURCE AIMING, WET LISTED, SILVER FINISH. MOUNT AT +9'-6" A.F.G.	64 VA
LF2	LITHONIA CPX SERIES EATON METALUX 24 FP SERIES COLUMBIA CFP SERIES ORACLE 24 SERIES	RECESSED	1	47 W	SOLID STATE LED	6000 lm	277 V	2 BY 4-FOOT EDGE LIT FLAT PANEL WITH ALUMINUM FRAME, 10% DIMMING, 4000K, 80+ CRI.	47 VA
LF2X	LITHONIA CPX SERIES EATON METALUX 24 FP SERIES COLUMBIA CFP SERIES ORACLE 24 SERIES	RECESSED	1	47 W	SOLID STATE LED	6000 lm	277 V	2 BY 4-FOOT EDGE LIT FLAT PANEL WITH ALUMINUM FRAME, 10% DIMMING, 4000K, 80+ CRI, EMERGENCY BATTERY PACK, SELF-DIAGNOSTIC, PROVIDE WITH EMERGENCY TRANSFER DEVICE SUITABLE FOR USE WITH CENTRAL BATTERY INVERTER SYSTEM	47 VA
LH24	LITHONIA CPHB SERIES EATON METALUX COLUMBIA PELA SERIES H.E. WILLIAMS GH SERIES /1	SUSPENDED	1	241 W	LED	24000 lm	277 V	LED HIGH BAY, INJECTED MOLDED REFRACTORS , WIDE DISTRIBUTION, ACRYLIC, FROSTED LENS, 0-10VDC DIMMING, 4000K, 80+ CRI, INTEGRATED WIRELESS 360 DEGREE HIGH MOUNT MOTION SENSORS SUITED FOR LARGE AND SMALL MOTION AND DIMMING PHOTOCELL WITH ADJUSTABLE MINIMUM FOOT-CANDLE SETTINGS. PROVIDE WITH ALL MOUNTING HARDWARE AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION.	241 VA
LH24X	LITHONIA CPHB SERIES EATON METALUX COLUMBIA PELA SERIES H.E. WILLIAMS GH SERIES	SUSPENDED	1	241 W	LED	24000 lm	277 V	LED HIGH BAY, INJECTED MOLDED REFRACTORS , WIDE DISTRIBUTION, ACRYLIC, FROSTED LENS, 0-10VDC DIMMING, 4000K, 80+ CRI, INTEGRATED WIRELESS 360 DEGREE HIGH MOUNT MOTION SENSORS SUITED FOR LARGE AND SMALL MOTION AND DIMMING PHOTOCELL WITH ADJUSTABLE MINIMUM FOOT-CANDLE SETTINGS. PROVIDE WITH ALL MOUNTING HARDWARE AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION. PROVIDE WITH EMERGENCY TRANSFER DEVICE SUITABLE FOR USE WITH CENTRAL BATTERY INVERTER SYSTEM.	241 VA
LH60H	LITHONIA CPHB SERIES EATON METALUX COLUMBIA ECH SERIES H.E. WILLIAMS GH SERIES	SUSPENDED	1	376 W	SOLID STATE LED	60000 lm	277 V	LED HIGH BAY, INJECTED MOLDED REFRACTORS , WIDE DISTRIBUTION, ACRYLIC, FROSTED LENS, 0-10VDC DIMMING, 4000K, 80+ CRI, INTEGRATED 360 DEGREE HIGH MOUNT MOTION SENSORS SUITED FOR LARGE AND SMALL MOTION. PROVIDE WITH ALL MOUNTING HARDWARE, WIRE GUARD AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION.	376 VA
LH60HX	LITHONIA CPHB SERIES EATON METALUX COLUMBIA ECH SERIES H.E. WILLIAMS GH SERIES	SUSPENDED	1	376 W	SOLID STATE LED	60000 lm	277 V	LED HIGH BAY, INJECTED MOLDED REFRACTORS , WIDE DISTRIBUTION, ACRYLIC, FROSTED LENS, 0-10VDC DIMMING, 4000K, 80+ CRI, INTEGRATED WIRELESS 360 DEGREE HIGH MOUNT MOTION SENSORS SUITED FOR LARGE AND SMALL MOTION. PROVIDE WITH ALL MOUNTING HARDWARE, WIRE GUARD AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION. PROVIDE WITH EMERGENCY TRANSFER DEVICE SUITABLE FOR USE WITH CENTRAL BATTERY INVERTER SYSTEM	374 VA
LS1X	COOPER INVUE MESA SERIES	15'-0" ROUND ALUMINUM POLE /1	1	171 W	LED	19000 lm	277 V	FULL CUT-OFF LED AREA LIGHT. TYPE T5MQ DISTRIBUTION AS DEFINED BY COOPER, PROVIDE WITH INTEGRAL PHOTOCELL AND OCCUPANCY SENSOR. FIXTURES TO BE ON/OFF TO 50% BY PHOTOCELL AND INCREASED TO 100% WHEN FIXTURE IS ON. 4000K, 80+ CRI, BLACK FINISH, TRANSFER DEVICE COMPATIBLE WITH CENTRAL BATTERY INVERTER.	171 VA
LS2X	COOPER INVUE MESA SERIES	15'-0" ROUND ALUMINUM POLE /1	1	171 W	LED	19000 lm	277 V	FULL CUT-OFF LED AREA LIGHT. TYPE T2 DISTRIBUTION AS DEFINED BY COOPER, PROVIDE WITH INTEGRAL PHOTOCELL AND OCCUPANCY SENSOR. FIXTURES TO BE ON/OFF TO 50% BY PHOTOCELL AND INCREASED TO 100% WHEN FIXTURE IS ON. 4000K, 80+ CRI, BLACK FINISH, TRANSFER DEVICE COMPATIBLE WITH CENTRAL BATTERY INVERTER.	171 VA
LS0423K	VISA AVATAR SERIES EVERGREEN WH SERIES G LIGHTING BEAM SERIES BROWNLEE 7612 SERIES CGF BSC SERIES SAL S9105 SERIES	SURFACE	1	11 W	LED	1500 lm	277 V	2' SURFACE MOUNT LED. 0-10 V DIMMING. 85 CRI. 3000 K COLOR TEMPERATURE, STANDARD FINISH BY A/E.	11 VA
XVW	LITHONIA LV SERIES SURE-LITES UX SERIES CHLORIDE 60 LINE SERIES DUAL-LITE SEWL SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM, VANDAL RESISTANT AC EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING,REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS. /1 /1	3 VA
XW	SURE-LITES CX SERIES CHLORIDE 55 LINE SERIES LITHONIA SIGNATURE SERIES DUAL-LITE SEMPRA SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM AC EXIT SIGN, SINGLE OR DOUBLE FACE, DIRECTIONAL ARROWS AS INDICATED, WHITE HOUSING, WIRE GUARD, BRACKETS AND ACCESSORIES AS REQUIRED.	3 VA

LUMINAIRE SCHEDULE - GENERAL NOTES

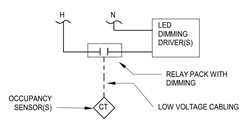
1. ALL LAMPS LISTED IN SCHEDULE ARE SYLVANNIA CATALOG NUMBERS, UNLESS OTHERWISE NOTED. EQUAL LAMPS BY MANUFACTURERS INDICATED IN SPECIFICATION SECTIONS 265600 ARE ACCEPTABLE.
2. FOR ALL DOWNLIGHTING FIXTURES, PROVIDE REQUIRED MOUNTING HARDWARE FOR MOUNTING IN LAY-IN TYPE CEILINGS.
3. CONTRACTOR TO VERIFY 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. /1

1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS AUTOMATICALLY SWITCHED ON UPON OCCUPANCY. LIGHTING IS THEN EITHER SWITCHED OFF MANUALLY OR BY OCCUPANCY SENSOR AFTER 15 MINUTES OF VACANCY.
2. ALL FIXTURES TO BE CONTROLLED TOGETHER.
3. LIGHTING TO COME ON TO 75% AS DEFAULT.
4. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO OR WHEN FIRE ALARM IS TRIGGERED, FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE OR INDIVIDUAL FIXTURE TRANSFER DEVICES. /1

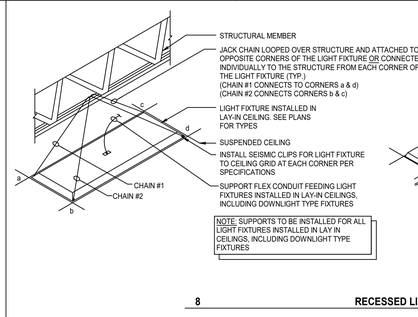


LIGHTING CONTROLS - FIELDHOUSE
SCALE: 1/8" = 1'-0"

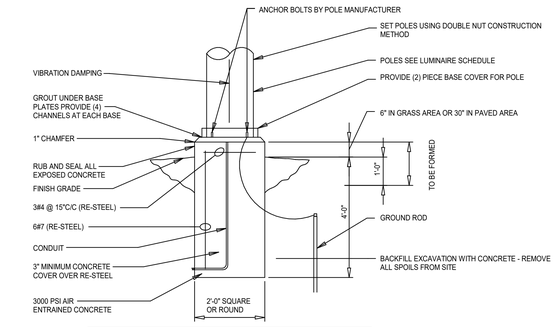
1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS AUTOMATICALLY SWITCHED ON UPON OCCUPANCY. LIGHTING IS THEN EITHER SWITCHED OFF MANUALLY OR BY OCCUPANCY SENSOR AFTER 15 MINUTES OF ROOM VACANCY.
2. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO OR WHEN FIRE ALARM IS TRIGGERED. FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE.



LIGHTING CONTROL - LOBBIES/RESTROOM
SCALE: 1/8" = 1'-0"



8 RECESSED LIGHT FIXTURE SUPPORT
NO SCALE



9 LIGHTING POLE FOUNDATION DETAIL (15'-0" HIGH OR LESS)
NO SCALE

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE19910035 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

ELECTRICAL DETAILS & LUMINAIRE SCHEDULE

E1.2

\\data1\cltdrop\office$\$amiemann\pm_profile\documents\222063_ELEC_Greyhound Activity Center_amiemann#MFNSN.rvt
1/6/2023 9:31:31 AM

PLAN NOTES:

S1 UTILITY TRANSFORMER AND METER. COORDINATE EXACT LOCATION AND CT CABINET REQUIREMENTS WITH DUKE ENERGY. PROVIDE PAD FOR TRANSFORMER PER DUKE REQUIREMENTS. (1)

S2 SECONDARY FEEDERS TO PANEL DH1. REFER TO E7.1 FOR ADDITIONAL INFORMATION.

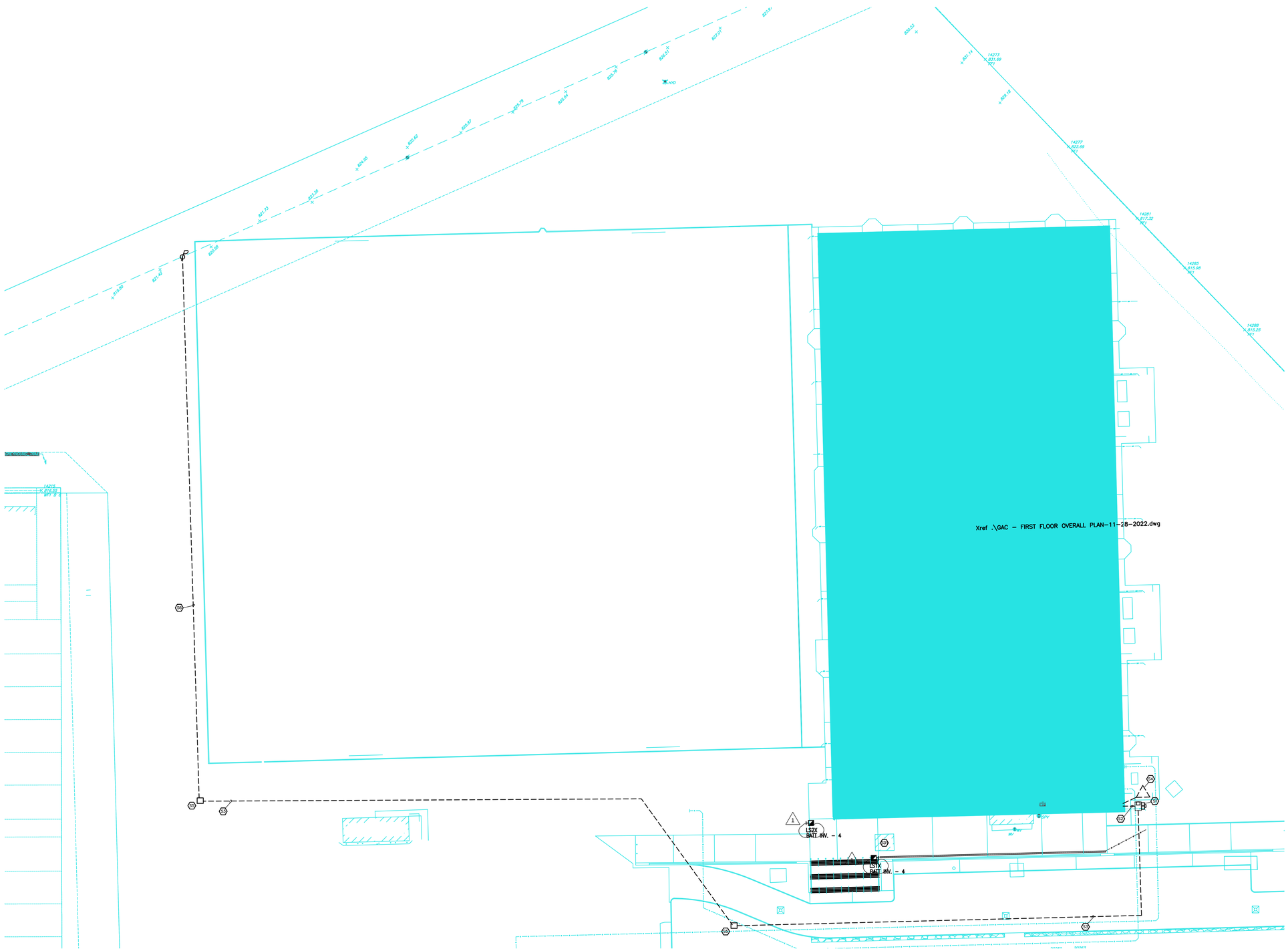
S3 ANTICIPATED ROUTING OF UTILITY PRIMARY.

S4 GROUNDING TRIANGLE LOCATION. REFER TO SHEET E1.2 FOR ADDITIONAL REQUIREMENTS.

S5 PROVIDE HANDHOLE FOR UTILITY PRIMARY. COORDINATE REQUIREMENTS WITH DUKE ENERGY.

S6 ROUTE CONDUIT AS CLOSE TO SOCCER FIELDS AS POSSIBLE TO AVOID FUTURE PAVEMENT.

S7 REMOVE ALL ELECTRICAL IN EXISTING OUTBUILDING TO BE DEMOLISHED. REMOVE UNDERGROUND ELECTRICAL TO BUILDING BACK TO SOURCE AND OUT OF THE AREA OF NEW CONSTRUCTION.



ELECTRICAL SITE PLAN NORTH

1" = 30'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

Carmel Clay Schools

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

B

A

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE 11800305 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

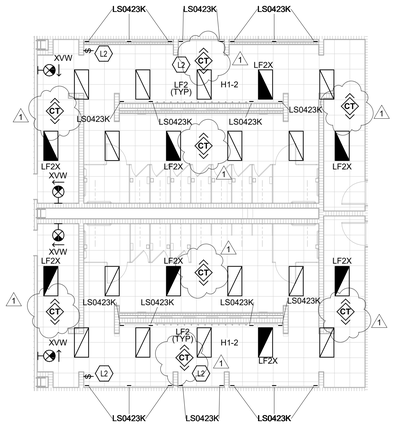
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

SITE ELECTRICAL PLAN

E2.1



2 **CHANGING ROOM LIGHTING**

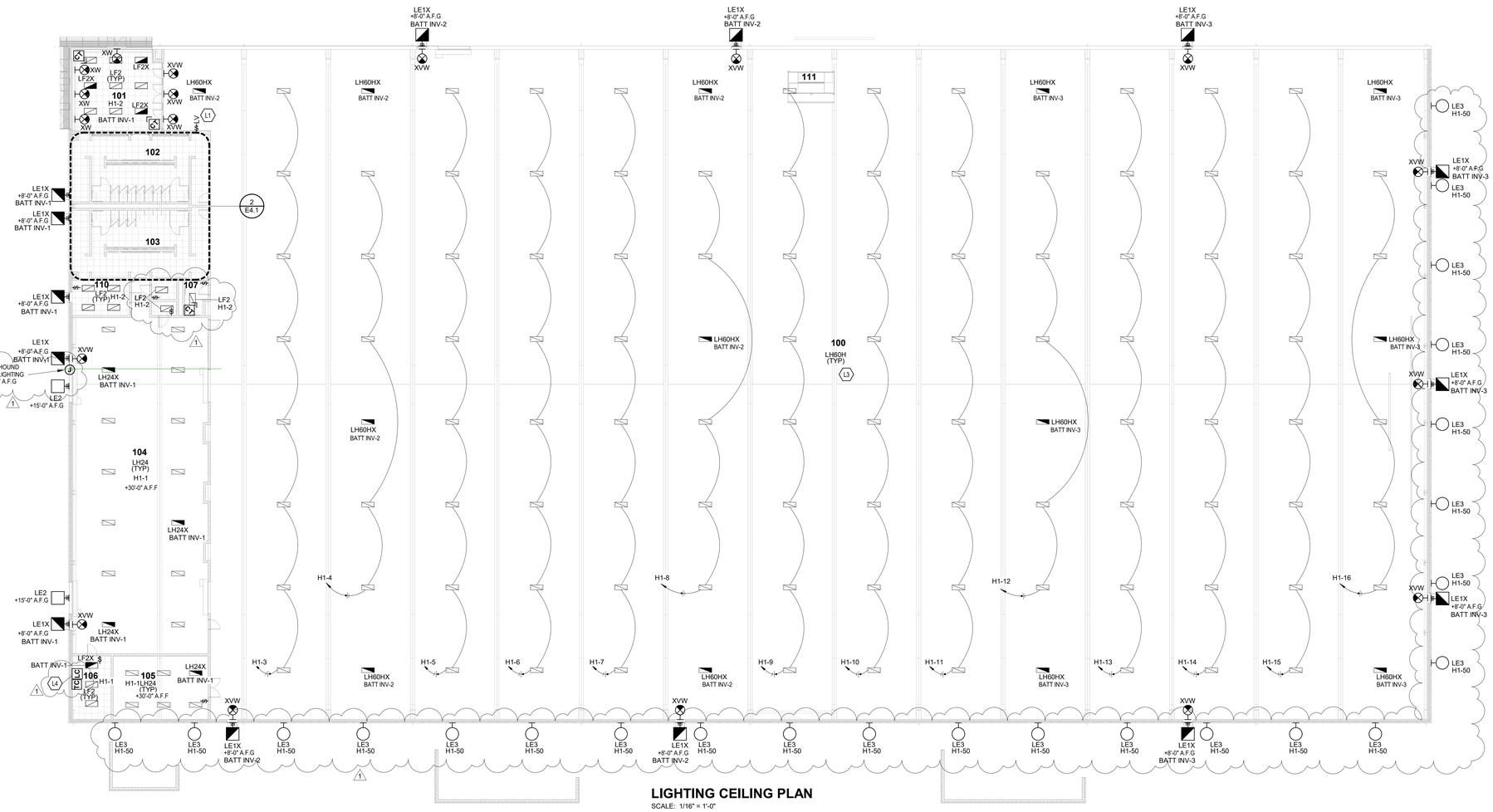
N.T.S.

ROOM LEGEND - MASTER LIST		
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

GENERAL NOTES - LIGHTING

1. FINALCONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
2. 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.
3. 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.
4. 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 **"E/E1.2".**
5. WHERE TWO SWITCHES ARE SHOWN ON PLAN CONNECTED TO THE SAME LIGHT FIXTURE, CONTRACTOR SHALL WIRE TO PROVIDE MULTI-LEVEL LIGHTING. ONE SWITCH SHALL ENERGIZE THE INBOARD LAMPS AND ONE SWITCH SHALL ENERGIZE THE OUTBOARD LAMPS. ALL ROOMS SHALL BE WIRED THE SAME. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
6. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.

KEYNOTES	
L1	PROVIDE LOCKABLE, CLEAR PROTECTIVE COVER FOR LOW VOLTAGE SWITCH.
L2	MOUNT LS0423K LIGHT FIXTURES AS SHOWN ON EACH SIDE OF THE MIRRORS IN THIS SPACE. MOUNT THE CENTER OF THE LIGHT FIXTURE EVEN WITH THE CENTERLINE OF THE MIRROR. CONNECT ALL MIRROR LIGHTS TO THE SWITCH SHOWN.
L3	MOUNT LIGHT FIXTURES IN THIS SPACE EVEN WITH THE BOTTOM CHORD OF STRUCTURE AT EACH LOCATION.
L4	PROVIDE LIGHTING CONTACTOR FOR EXTERIOR LIGHT POLE CIRCUIT AND GREYHOUND SIGN LIGHTING CIRCUIT CONTROL. CONNECT TO TIME CLOCK AT THIS LOCATION AND PROGRAM PER OWNER REQUIREMENTS.



LIGHTING CEILING PLAN

SCALE: 1/16" = 1'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10800 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

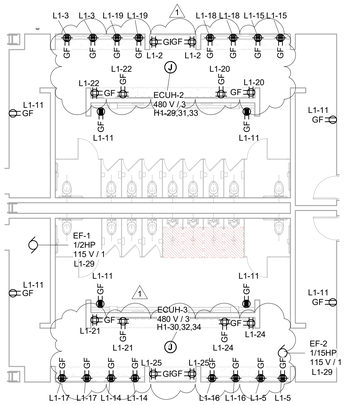
PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

LIGHTING PLAN

E4.1



2 CHANGING ROOM POWER PLAN

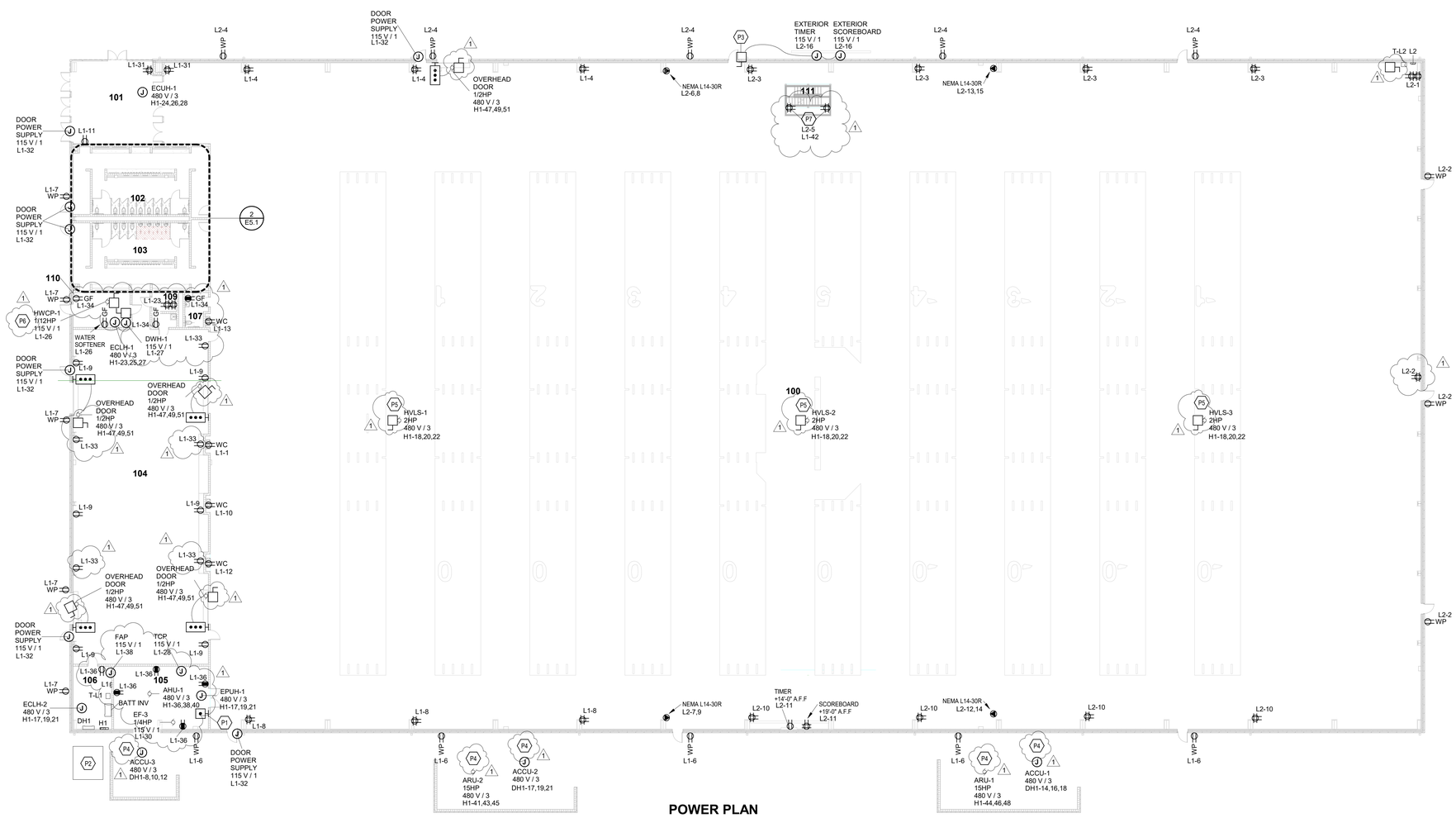
N.T.S.

ROOM LEGEND - MASTER LIST		
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

GENERAL NOTES - POWER

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.

KEYNOTES	
P1	CONNECT EMERGENCY STOP PUSHBUTTON TO SHUNT TRIP CIRCUIT BREAKER FOR AHU-1 IN PANEL H1.
P2	UTILITY TRANSFORMER AT THIS LOCATION. REFER TO E2.1 FOR ADDITIONAL INFORMATION.
P3	MOUNT NEMA 3R DISCONNECT FOR EXTERIOR SCOREBOARD AND TIMER TO THE SIDE OF THE POST FOR THE SCOREBOARD.
P4	CONNECT THROUGH FACTORY PROVIDED DISCONNECT.
P5	COORDINATE LOCATION OF FAN CONTROLLER WITH OTHER TRADES AND INSTALL COMPLETE.
P6	PROVIDE AQUASTAT CONTROL OF HOT WATER CIRCULATING PUMP.
P7	PROVIDE A PAIR OF QUAD RECEPTACLES AT BOTH BALCONY LEVELS ON THE DIRECTORS TOWER, 4 RECEPTACLES IN TOTAL. CIRCUIT RECEPTACLES TOGETHER ON EACH BALCONY. UTILIZE THE 2 CIRCUITS SHOWN.



POWER PLAN

SCALE: 1/16" = 1'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10000 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

POWER PLAN

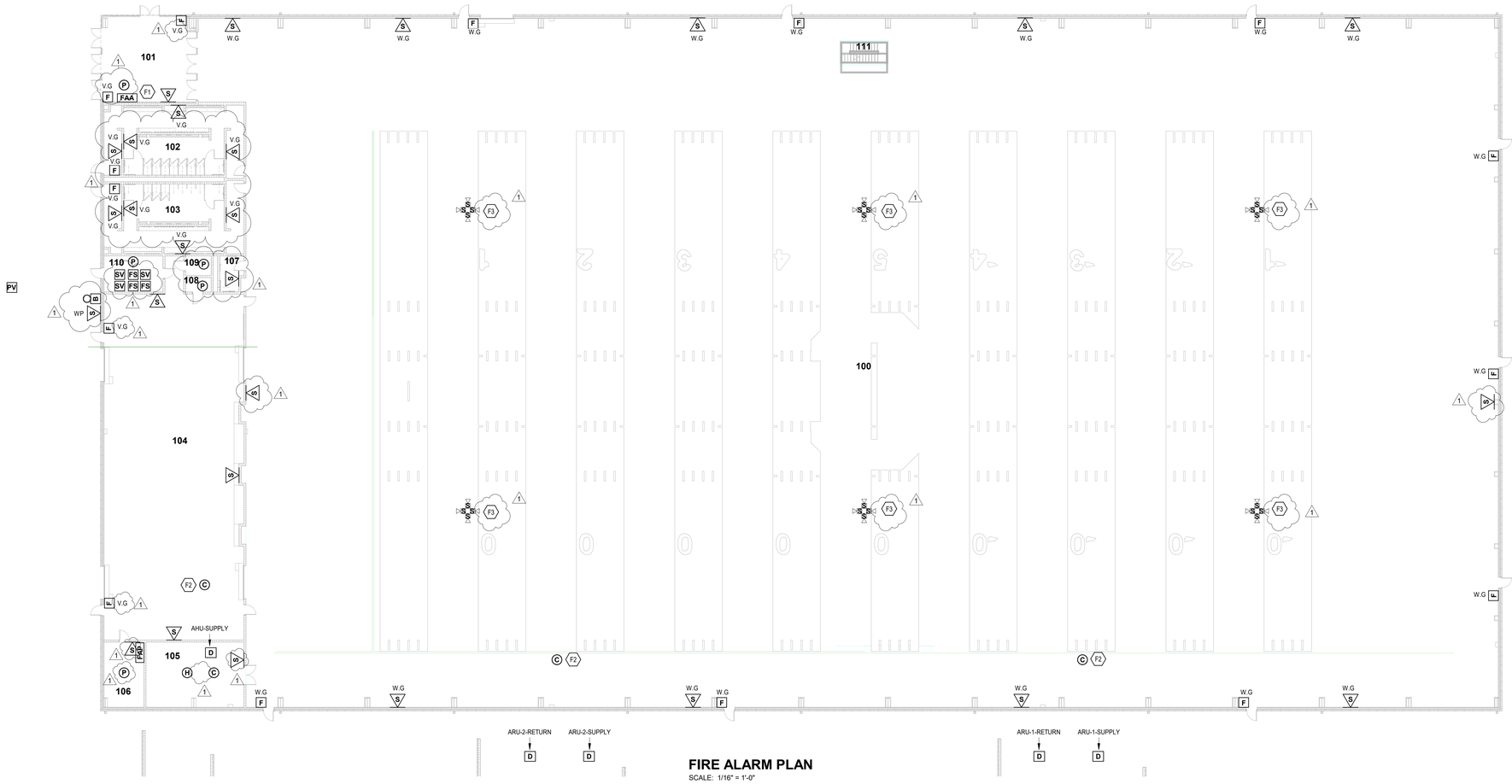
E5.1

ROOM LEGEND - MASTER LIST		
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102	WOMEN'S ROOM	842 SF
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	34 SF
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

GENERAL NOTES - FIRE ALARM

1. QUANTITY AND LOCATION OF TAMPER AND FLOW SWITCHES IS FOR BIDDING PURPOSES ONLY. VERIFY EXACT QUANTITY AND LOCATIONS WITH SPRINKLER CONTRACTOR PRIOR TO FIRE ALARM SHOP DRAWING SUBMITTAL.

KEYNOTES	
F1	PROVIDE MIRCROPHONE IN LOCKING CABINET.
F2	MOUNT CARBON MONOXIDE DETECTOR NEAR HVAC DIFFUSER.
F3	MOUNT SPEAKERS EVEN WITH THE BOTTOM CHORD OF STRUCTURE.



FIRE ALARM PLAN

SCALE: 1/16" = 1'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10000 STATE OF PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

FIRE ALARM PLAN

E6.1

Branch Panel: DH1

Location: Space 10
Supply From: UTILITY TRANSFORMER
Mounting: FLOOR
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 1200 A
MCB Rating: 1200 A

Notes: INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T-L1	60 A	3	7196	11420					3	60 A	T-L2	2
3	--	--	--			9900	9680			--	--	--	4
5	--	--	--					8504	5800	--	--	--	6
7	Space	--	1	--	8615					3	50 A	ACCU-3	8
9	Space	--	1			--	8615			--	--	--	10
11	H1	250 A	3					48543	8615	--	--	--	12
13	--	--	--	45229	61000					3	300 A	ACCU-1	14
15	--	--	--			44435	61000			--	--	--	16
17	ACCU-2	300 A	3					61000	61000	--	--	--	18
19	--	--	--	61000	0					3	125 A	Spare	20
21	--	--	--			61000	0			--	--	--	22
23	Spare	20 A	1					0	0	--	--	--	24
25	Spare	20 A	1	0	0					3	50 A	SPD	26
27	Spare	20 A	1			0	0			--	--	--	28
29	Spare	20 A	1					0	0	--	--	--	30
		Total Load:		194460 VA		194630 VA		193462 VA					
		Total Amps:		703 A		703 A		698 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	50396 VA	100.00%	50396 VA		
Motor	59012 VA	107.39%	63375 VA	**Total Conn. Load:**	582552 VA
Other	200 VA	100.00%	200 VA	**Total Est. Demand:**	525780 VA
Receptacle - Convenience	720 VA	100.00%	720 VA	**Total Conn.:**	701 A
Electric Heat	31600 VA	90.00%	28440 VA	**Total Est. Demand:**	632 A
Elec. Domestic Hot Water	3000 VA	70.00%	2100 VA		
HVAC	391844 VA	90.00%	352660 VA		
Receptacle	45780 VA	60.92%	27890 VA		

Notes:

Branch Panel: H1

Location: Space 10
Supply From: DH1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: M.L.O
Mains Rating: 250 A
MCB Rating: N/A

Notes: INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting - RM 104-106	20 A	1	3950	1486					1	20 A	Lighting - RM 101-103, 108, 110	2
3	Field Lighting #1	20 A	1			3008	1880			1	20 A	Field Lighting #2	4
5	Field Lighting #3	20 A	1					3008	3008	1	20 A	Field Lighting #4	6
7	Field Lighting #5	20 A	1	3008	1880					1	20 A	Field Lighting #6	8
9	Field Lighting #7	20 A	1			3008	3008			1	20 A	Field Lighting #8	10
11	Field Lighting #9	20 A	1					3008	1880	1	20 A	Field Lighting #10	12
13	Field Lighting #11	20 A	1	3008	3008					1	20 A	Field Lighting #12	14
15	Field Lighting #13	20 A	1			3008	1880			1	20 A	Field Lighting #14	16
17	Propeller Unit Heaters (NOTE 1)	20 A	3					2200	2825	3	20 A	High Volume Fans (NOTE 1)	18
19	--	--	--	2200	2825					--	--	--	20
21	--	--	--			2200	2825			--	--	--	22
23	Electric Heater - ECLH-1 (NOTE 1)	20 A	3					1667	3333	3	20 A	Cabinet Unit Heater ECUH-1 (NOTE 1)	24
25	--	--	--	1667	3333					--	--	--	26
27	--	--	--			1667	3333			--	--	--	28
29	Cabinet Unit Heater ECUH-2 (NOTE 1)	20 A	3					1667	1667	3	20 A	Cabinet Unit Heater ECUH-3 (NOTE 1)	30
31	--	--	--	1667	1667					--	--	--	32
33	--	--	--			1667	1667			--	--	--	34
35	BATT INV (NOTE 1)	20 A	3					4094	2567	3	20 A	Air Handling Unit AHU-1 (NOTE 1)	36
37	--	--	--	2766	2567					--	--	--	38
39	--	--	--			0	2567			--	--	--	40
41	Air Rotation Unit ARU-2	40 A	3					5817	--	1	--	SHUNT TRIP (AHU-1)	42
43	--	--	--	5817	5817					3	40 A	Air Rotation Unit ARU-1	44
45	--	--	--			5817	5817			--	--	--	46
47	Overhead Doors (NOTE 1)	20 A	3					1878	5817	--	--	--	48
49	--	--	--	1878	0					1	20 A	Spare	50
51	--	--	--			1878	0			1	20 A	Spare	52
53	Spare	20 A	1					0	0	1	20 A	Spare	54
55	Spare	20 A	1	0	0					1	20 A	Spare	56
57	Spare	20 A	1			0	0			1	20 A	Spare	58
59	Spare	20 A	1					0	0	1	20 A	Spare	60
		Total Load:		48543 VA		45229 VA		44435 VA					
		Total Amps:		176 A		164 A		160 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	49896 VA	100.00%	49896 VA		
Motor	56712 VA	107.69%	61075 VA	**Total Conn. Load:**	138208 VA
Electric Heat	31600 VA	90.00%	28440 VA	**Total Est. Demand:**	139411 VA
				Total Conn.:	166 A
				Total Est. Demand:	168 A

Notes:
NOTE 1: CONNECT WITH 4#12, #12G IN 3/4"C.
NOTE 2: CONNECT WITH 4#8, #10G IN 3/4"C.

Branch Panel: BATT INV

Location: Space 10
Supply From: H1
Mounting: FLOOR
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: N/A
Mains Type: N/A
Mains Rating: N/A
MCB Rating: N/A

10 kVA

Notes: INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A (VA)		B (VA)		C (VA)		Poles	Trip	Circuit Description	CKT
1	Em. Lighting - 101-110	20 A	1	1332	2762					1	20 A	Em Lighting - South 101	2
3	Em. Lighting - North 100	20 A	1			2424	342			1	20 A	Lighting - Exterior Poles	4
5	Spare	20 A	1					0	0	1	20 A	Spare	6
7	Spare	20 A	1	0	0					1	20 A	Spare	8
		Total Load:		4094 VA		2766 VA		0 VA					
		Total Amps:		16 A		12 A		0 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	6860 VA	100.00%	6860 VA		
				Total Conn. Load:	6860 VA
				Total Est. Demand:	6860 VA
				Total Conn.:	8 A
				Total Est. Demand:	8 A

Notes:

Branch Panel: L1

Location: Space 10
Supply From: T-L1
Mounting: Surface
Enclosure: Type 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 100 A
MCB Rating: 100 A

Notes: INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Water Cooler (NOTE 1)	20 A	1	180	720					1	20 A	Quad Receptacles #1 - RM 102	2
3	Horizontal Receptacles #1 - RM 102	20 A	1			360	1080			1	20 A	Fieldhouse Quad Receptacles #3	4
5	Horizontal Receptacles #1 - RM 103	20 A	1					360	900	1	20 A	Exterior Receptacles - East Wall	6
7	Exterior Receptacles - South Wall	20 A	1	900	1080					1	20 A	Fieldhouse Quad Receptacles #1	8
9	Receptacles - RM 104	20 A	1			1080	180			1	20 A	Water Cooler (NOTE 1)	10
11	Receptacles - RM 101-103	20 A	1					1620	180	1	20 A	Water Cooler (NOTE 1)	12
13	Water Cooler (NOTE 1)	20 A	1	180	360					1	20 A	Horizontal Receptacles #3 - RM 103	14
15	Horizontal Receptacles #4 - RM 102	20 A	1			360	360			1	20 A	Horizontal Receptacles #2 - RM 103	16
17	Horizontal Receptacles #4 - RM 103	20 A	1					360	360	1	20 A	Horizontal Receptacles #3 - RM 102	18
19	Horizontal Receptacles #2 - RM 102	20 A	1	360	720					1	20 A	Quad Receptacles #3 - RM 102	20
21	Quad Receptacles #3 - RM 103	20 A	1			720	720			1	20 A	Quad Receptacles #2 - RM 102	22
23	Technology Receptacles - RM 109	20 A	1					720	720	1	20 A	Quad Receptacles #2 - RM 103	24
25	Quad Receptacles #1 - RM 103	20 A	1	720	456					1	20 A	Water Softener & HWCP - RM 110	26
27	Elec. Water Heater - DWH-1 RM 110 (NOTE 2)	40 A	1			3000	100			1	20 A	Temperature Control Panel	28
29	Exhaust Fans - EF-1 & EF-2	20 A	1					1357	667	1	20 A	Exhaust Fan EF-3	30
31	Quad Receptacles - RM 101 & Fieldhouse	20 A	1	720	700					1	20 A	Door Power Supplies	32
33	Receptacles #2 - RM 104	20 A	1			900	540			1	20 A	Receptacles - RM 107-110	34
35	Spare	20 A	1					0	900	1	20 A	Receptacles - RM 105 & 106	36
37	Spare	20 A	1	0	100					1	20 A	Fire Alarm Panel	38
39	Spare	20 A	1			0	500			1	20 A	Greyhound Sign Lighting	40
41	Spare	20 A	1					0	360	1	20 A	Directory Tower Receptacles #2	42
43	Spare	20 A	1	0	0					1	20 A	Spare	44
45	Spare	20 A	1			0	0			1	20 A	Spare	46
47	Spare	20 A	1					0	0	1	20 A	Spare	48
49	Spare	20 A	1	0	0					1	20 A	Spare	50
51	Spare	20 A	1			0	0			1	20 A	Spare	52
53	Spare	20 A	1					0	0	1	20 A	Spare	54
		Total Load:		7196 VA		9900 VA		8504 VA					
		Total Amps:		60 A		84 A		73 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	500 VA	100.00%	500 VA		
Motor	2300 VA	112.25%	2582 VA	**Total Conn. Load:**	25600 VA
Other	200 VA	100.00%	200 VA	**Total Est. Demand:**	20542 VA
Receptacle - Convenience	720 VA	100.00%	720 VA	**Total Conn.:**	71 A
Elec. Domestic Hot Water	3000 VA	70.00%	2100 VA	**Total Est. Demand:**	57 A
Receptacle	18880 VA	76.48%	14440 VA		

Notes:
NOTE 1: PROVIDE WITH 5mA GFCI BREAKER.
NOTE 2: CONNECT WITH 3#8, #10G IN 3/4" C.

Branch Panel: L2

Location: Space 7
Supply From: T-L2
Mounting: Surface
Enclosure: Type 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 100 A
MCB Rating: 100 A

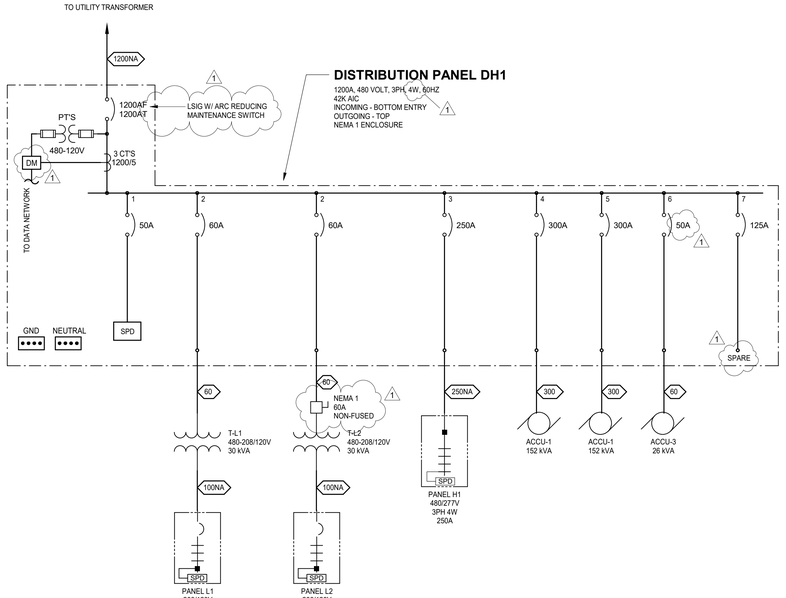
Notes: INTEGRAL SURGE PROTECTION

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Technology Receptacles - Fieldhouse	20 A	1	720	900					1	20 A	Exterior Receptacles - North Wall	2
3	Fieldhouse Quad Receptacles #4	20 A	1			1440	900			1	20 A	Exterior Receptacles - West Wall	4
5	Directors Tower Receptacles #1	20 A	1					360	2450	2	30 A	Locking Receptacle #1 (NOTE 1)	6
7	Locking Receptacle #3 (NOTE 1)	30 A	2	2450	2450					--	--	--	8
9	--	--	--			2450	1440			1	20 A	Fieldhouse Quad Receptacles #2	10
11	Scoreboard	20 A	1					540	2450	2	30 A	Locking Receptacle #4 (NOTE 1)	12
13	Locking Receptacle #2 (NOTE 1)	30 A	2	2450	2450					--	--	--	14
15	--	--	--			2450	1000			1	20 A	Exterior Scoreboard	16
17	Spare	20 A	1					0	0	1	20 A	Spare	18
19	Spare	20 A	1	0	0					1	20 A	Spare	20
21	Spare	20 A	1			0	0			1	20 A	Spare	22
23	Spare	20 A	1					0	0	1	20 A	Spare	24
		Total Load:		11420 VA		9680 VA		5800 VA					
		Total Amps:		100 A		86 A		48 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	26900 VA	68.59%	18450 VA		
				Total Conn. Load:	26900 VA
				Total Est. Demand:	18450 VA
				Total Conn.:	75 A
				Total Est. Demand:	51 A

Notes:
NOTE 1: CONNECT WITH 3#10, #10G IN 3/4"C.



ONE LINE DIAGRAM

SCALE: 12" = 1'-0"

ONE LINE DIAGRAM SYMBOLS

1AL1	MAIN LUG ONLY CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	DM	DIGITAL ELECTRONIC POWER METER		COMBINATION MAGNETIC MOTOR STARTER WITH FUSED SWITCH		FUSED SWITCH IN SWITCHBOARD, 3P UNO
		K	KIRK KEY INTERLOCK				DISCONNECT SWITCH IN SWITCHBOARD, 3P UNO
		M	UTILITY METER			S/P G	FUSED BOLTED PRESSURE SWITCH WITH GROUND FAULT AND SINGLE PHASE PROTECTION, 3P UNO
2AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD, WITH SUB-FEED BREAKER, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	XXXA	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SUB-FEED BREAKER, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES		COMBINATION MAGNETIC MOTOR STARTER WITH CIRCUIT BREAKER	E N	TRANSFER SWITCH
5AL1							DISCONNECT, 3P UNO
3AL1	THROUGH FEED LUGS CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	SPD	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH INTEGRAL BUS CONNECTED SPD, REFER TO E8 SERIES DRAWINGSFOR PANELBOARD SCHEDULES		COMBINATION MAGNETIC MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR		MOLDED CASE CIRCUIT BREAKER, 3P UNO
6AL1							CIRCUIT BREAKER IN SWITCHBOARD, 3P UNO
4AL1	MAIN DOUBLE LUG CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	SPD	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SPD MOUNTED ADJACENT WITH CLOSED NIPPLE, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	VSC	COMBINATION MAGNETIC MOTOR STARTER WITH VARIABLE SPEED CONTROLLER		INSULATED CASED POWER CIRCUIT BREAKER WITH L.I.S.G. PROTECTION FEATURES, 3P UNO
7AL1				EO	COMBINATION MAGNETIC MOTOR STARTER WITH ELECTRONIC OVERLOADS		DRAWOUT CIRCUIT BREAKER, 3P UNO
						S	SHUNT TRIP OPERATED CIRCUIT BREAKER
							FUSED POTENTIAL TRANSFORMER
							CURRENT TRANSFORMERS, 3 UNO
							CAPACITOR
							EARTH GROUND
						LA	LIGHTNING ARRESTER
							PLUG AND RECEPTACLE OR DRAWOUT DEVICE
							POWER TRANSFORMER
						X	3 PHASE MOTOR. X INDICATES HORSEPOWER OR KILOWATTS
						CP	CONTROL PANEL FURNISHED UNDER DIVISION 25
						G	GENERATOR

ALUMINUM FEEDER SCHEDULE

SOURCE 2014 NEC T310.15(B)(16), ALUMINUM 75C, (THHW, THW, THWN, XHHW)

X	NO.	CONDUCTOR SIZE			CONDUIT
FEEDER	OF	PHASE	NEUTRAL	GROUND	SIZE
LEGEND	SETS	QTY	(1)	(1)	Inches
100A	1	3 # 1/0		#4	1 1/2
100NA	1	3 # 1/0	#1/0	#4	1 1/2
125A	1	3 # 2/0		#4	2
125NA	1	3 # 2/0	#2/0	#4	2
150A	1	3 # 3/0		#4	2
150NA	1	3 # 3/0	#3/0	#4	2
175A	1	3 # 4/0		#4	2
175NA	1	3 # 4/0	#4/0	#4	2
200A	1	3 # 250		#4	2 1/2
200NA	1	3 # 250	#250	#4	2 1/2
225A	1	3 # 300		#2	3
225NA	1	3 # 300	#300	#2	3
250A	1	3 # 350		#2	3
250NA	1	3 # 350	#350	#2	3
300A	1	3 # 500		#2	3
300NA	1	3 # 500	#500	#2	3
350A	2	3 # 500		#1	2
350NA	2	3 # 500	#500	#1	2
400A	2	3 # 250		#1	2 1/2
400NA	2	3 # 250	#250	#1	2 1/2
450A	2	3 # 300		#1/0	3
450NA	2	3 # 300	#300	#1/0	3
500A	2	3 # 350		#1/0	3
500NA	2	3 # 350	#350	#1/0	3
600A	2	3 # 500		#2/0	3
600NA	2	3 # 500	#500	#2/0	3
700A	3	3 # 350		#3/0	3
700NA	3	3 # 350	#350	#3/0	3
800A	3	3 # 400		#3/0	3
800NA	3	3 # 400	#400	#3/0	3
1000A	3	3 # 600		#4/0	4
1000NA	3	3 # 600	#600	#4/0	4
1200A	4	3 # 500		#250	4
1200NA	4	3 # 500	#500	#250	4
1600A	5	3 # 600		#350	4
1600NA	5	3 # 600	#600	#350	4
2000A	6	3 # 600		#400	4
2000NA	6	3 # 600	#600	#400	4
2500A	8	3 # 600		#600	4
2500NA	8	3 # 600	#600	#600	4
3000A	9	3 # 600		#600	4
3000NA	9	3 # 600	#600	#600	4
4000A	12	3 # 600		#800	4
4000NA	12	3 # 600	#600	#800	4

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

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

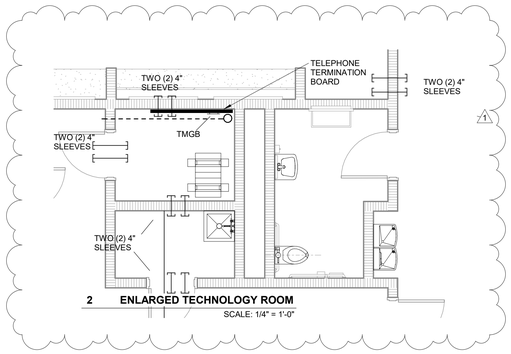
BRIAN W. BUTLER REGISTERED No. PE10010005 STATE OF PROFESSIONAL ENGINEER

DRAWN BY: AMN
PROJECT NUMBER: 222063
PROJECT ISSUE DATE: 12-1-2022

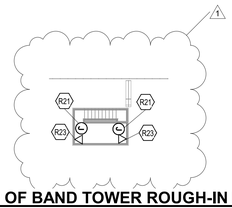
REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	1-6-2023

RISER DIAGRAM & SCHEDULES

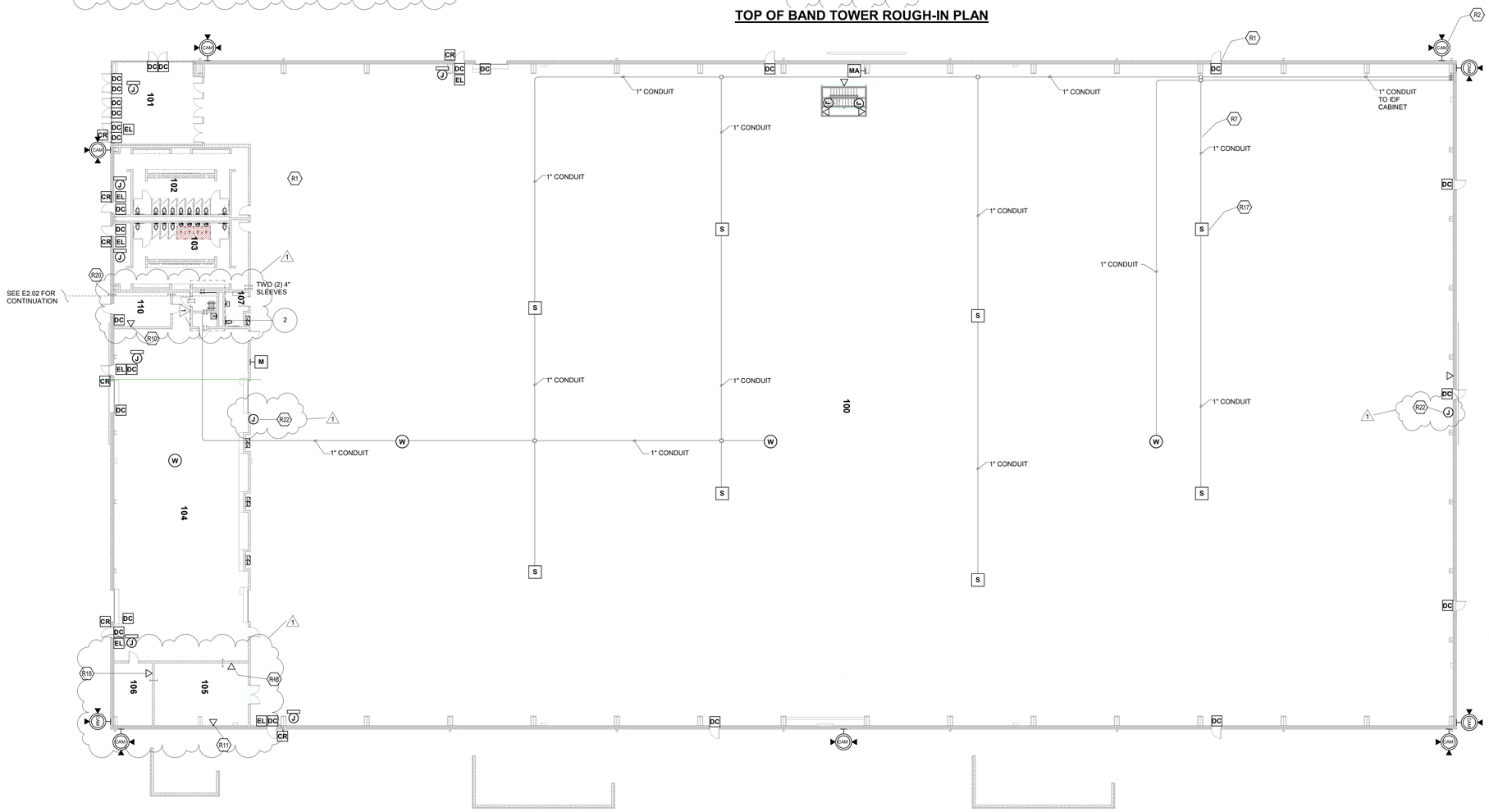
E7.1



ROOM LEGEND - FIRST FLOOR UNIT A		
ROOM NO.	ROOM NAME	AREA (SF)
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102		
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF



TOP OF BAND TOWER ROUGH-IN PLAN



ROUGH-IN PLAN NOTES

R1	PROVIDE DOOR CONTACT AS REQUIRED, COORDINATE WITH DOOR SUPPLIER.
R2	PROVIDE CAMERA ROUGH-IN, SEE DETAIL 1/E3.18.
R7	SEE DETAIL 5/E3.17 FOR SOUND SYSTEM CONDUIT RISER DIAGRAM.
R10	PROVIDE 3/4" CONDUIT TO ACCESSIBLE LAY-IN CEILING FOR WATER METER. VERIFY EXACT LOCATIONS WITH MECHANICAL CONTRACTOR.
R11	PROVIDE 3/4" CONDUIT TO ACCESSIBLE LAY-IN CEILING FOR GAS METER. VERIFY EXACT LOCATIONS WITH MECHANICAL CONTRACTOR.
R16	PROVIDE DATA BOX FOR TEMPERATURE CONTROL PANEL AND COORDINATE LOCATION WITH TEMPERATURE CONTROLS CONTRACTOR.
R17	PROVIDE JUNCTION BOX FOR SPEAKER LOCATED UP IN BAR JOIST AREA (BELOW ROOF DECK AS REQUIRED BY CODE) SO THAT BOTTOM OF SUSPENDED SPEAKER IS LOCATED ABOVE THE BOTTOM OF BAR JOIST TO REMAIN ABOVE THE NETTING. PROVIDE CONDUITS BETWEEN JUNCTION BOXES AS REQUIRED, SEE DETAILS FOR SPEAKER CONNECTIONS.
R18	PROVIDE 3/4" CONDUIT BACK TO MDF FOR FIRE ALARM DIALER. COORDINATE LOCATION WITH FIRE ALARM CONTRACTOR.
R20	PROVIDE 4" CONDUIT SLEEVES
R21	PROVIDE DOUBLE GANG BOX AND BLANK PLATE ATTACHED TO TOWER WITH 1" CONDUIT DOWN TO BELOW SLAB AND TURNED UP INTO WALL MOUNTED IDF AT EACH OF TWO BALCONIES AT TOWER (TOTAL OF FOUR(4) BOXES) FOR FUTURE VIDEO CAPTURE CAMERA
R22	PROVIDE DOUBLE GANG BOX AND BLANK PLATE ON WALL AT 20' AFF ON CENTERLINE OF ENDZONE WITH 1" CONDUIT TO WALL MOUNTED IDF FOR FUTURE VIDEO CAPTURE CAMERA
R23	PROVIDE DOUBLE GANG DATA ROUGH-IN BOX ATTACHED TO TOWER WITH 1" CONDUIT DOWN TO BELOW SLAB AND TURNED UP INTO WALL MOUNTED IDF AT EACH OF TWO BALCONIES AT TOWER (TOTAL OF FOUR (4) BOXES).

FIRST FLOOR TECHNOLOGY ROUGH-IN PLAN

SCALE: 1/16" = 1'-0"

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE19800105 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JR

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum 1	1/06/2023

FIRST FLOOR TECHNOLOGY ROUGH-IN PLAN

E3.01

COMMUNICATIONS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
◁	COMMUNICATIONS OUTLET. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	16"
◁W	WALL MOUNTED COMMUNICATIONS OUTLET. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"
	MULTI CAPACITY FLOOR BOX WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING AND ONE (1) 1" CONDUIT TO NEAREST TELECOMMUNICATIONS ROOM. PROVIDE PLASTIC BUSHINGS AND PULL STRINGS.	F
◁SR	SOUND REINFORCEMENT LOCATION. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING. COORDINATE WITH TECHNOLOGY AND ARCHITECTURAL DRAWINGS.	5'-4"
W	WALL MOUNTED WIRELESS ACCESS POINT. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	10'-0"
W	CEILING MOUNTED WIRELESS ACCESS POINT. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	C
	18" CABLE TRAY, UNLESS OTHERWISE NOTED	-
	2" CONDUIT SLEEVES BETWEEN WALLS, UNLESS OTHERWISE NOTED	-
○ ○	2 (TWO) 4" CONDUIT SLEEVES BETWEEN FLOORS	-
	4' x 8' x 3/4" FIRE RATED PLYWOOD	-
▽	POKE-THRU FLOOR BOX WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING AND ONE (1) 1" CONDUIT TO NEAREST TELECOMMUNICATIONS ROOM. PROVIDE PLASTIC BUSHINGS AND PULL STRINGS.	F

PUBLIC ADDRESS AND MASS NOTIFICATION SYSTEMS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
	SOUND SYSTEM ANTENNA. 1 GANG, 3.5" DEEP BOX WITH 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX	BETWEEN JOISTS
S	CEILING MOUNTED SOUND SYSTEM SPEAKER, 1 GANG BOX WITH 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX	-
S	WALL MOUNTED SOUND REINFORCEMENT SPEAKER BOX, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	-
M	MICROPHONE INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"
A	AUXILIARY INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"
MA	WALL MOUNTED MICROPHONE/AUXILIARY INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"
S	WALL MOUNTED SOUND SYSTEM SPEAKER OUTLET. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	NOTED ON DRAWNGS
S A	LINE ARRAY COLUMN SPEAKERS - WALL MOUNTED. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	NOTED ON DRAWNGS
	RECESSED JUNCTION BOX FOR SOUND SYSTEM. REFER TO DETAILS AND FLOORPLANS FOR SIZE.	16"
	PRODUCTION INTERCOM, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	-

INTERCOMMUNICATIONS AND PROGRAM SYSTEMS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
IC	CALL-IN SWITCH. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"
VC	VOLUME CONTROL. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"
IC	WALL MOUNTED HORN SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	96"
	SOUND SYSTEM MASTER STATION. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	-
	ROOF MOUNTED AM/FM ANTENNA	ROOF
WR	REMOTE DESK INTERCOM CABINET ROUGH-IN. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING. COORDINATE WITH CASEWORK.	-
IC	METAL SURFACE WALL MOUNTED SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	96"
IC S	SURFACE MOUNTED CEILING SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING OR RUN TO NEXT SPEAKER LOCATION. PROVIDE PLASTIC BUSHING AND PULL STRING.	-
ICS	INTERCOMM STROBE LAMP.	C

ACCESS CONTROL ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
ACP	ACCESS CONTROL PANEL, 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING WITH PULL STRING	-
CR	CARD READER. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	44"
EL	ELECTRONIC LATCH. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-
J	24" W x 24" H x 6" D JUNCTION BOX ABOVE DOOR FOR ACCESS CONTROL DOOR CONTROLLER.	ABOVE CLG.
KB	KEY BOX. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	60"
	PUSH TO RELEASE BUTTON. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"
ADO	AUTOMATIC DOOR OPERATOR, 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-
REX	REQUEST TO EXIT SWITCH, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR(LOCATED IN EXIT DOOR HARDWARE)	-

INTRUSION DETECTION ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
IDCP	INTRUSION DETECTION PANEL, 2 GANG, 3.5" DEEP BOX WITH 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING	-
DC	DOOR CONTACT ROUGH-IN	-
K	KEYPAD. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"
MD	WALL MOUNTED MOTION DETECTOR. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL STRING	NOTED ON DWGS
MD	CEILING MOUNTED MOTION DETECTOR. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL STRING	NOTED ON DWGS

AUDIO/VISUAL ACCESS CONTROL ROUGH-IN SYMBOLS

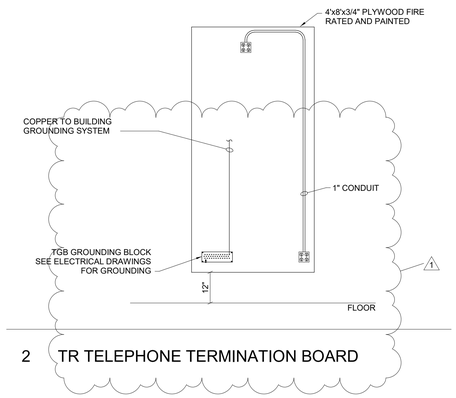
SYMBOL	DESCRIPTION	MH UNO
MI	MASTER INTERCOM. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-
IC	INTERCOM BOX. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	60"

VIDEO SURVEILLANCE CAMERA ROUGH-IN SYMBOL

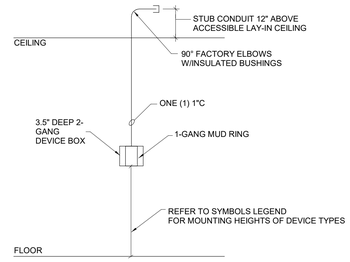
SYMBOL	DESCRIPTION	MH UNO
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERA2 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+144"
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERAS 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+144"
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERAS 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+144"
CAM W	WALL MOUNTED VIDEO SURVEILLANCE CAMERA 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+144"
WP CAM	WALL MOUNTED WEATHERPROOF VIDEO SURVEILLANCE CAMERA, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12"-16" OF CORNER WHEN APPLICABLE)	+144"

CLOCK ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO
DIG	WALL MOUNTED SINGLE-FACED DIGITAL CLOCK, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"
DIG DF	WALL MOUNTED DUAL-FACED DIGITAL CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"
	WALL MOUNTED CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"
DF	WALL MOUNTED DUAL-FACED CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"
WG	WALL MOUNTED CLOCK WITH WIRE GUARD. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"



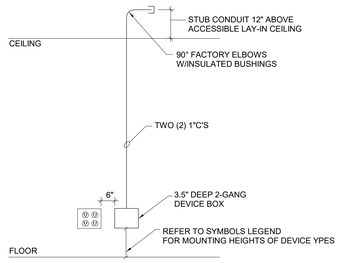
2 TR TELEPHONE TERMINATION BOARD



GENERAL NOTES:

1. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
2. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

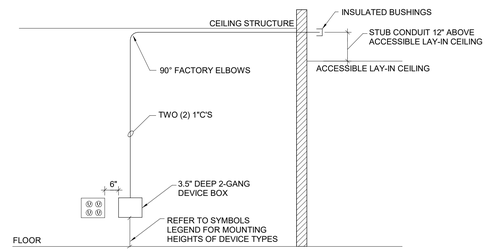
3 **TECHNOLOGY ROUGH-IN REQUIREMENTS 1-GANG WALL BOX - ACCESSIBLE LAY-IN CEILINGS**



GENERAL NOTES:

1. MOUNTING HEIGHTS AS LISTED ON THIS SHEET UNLESS NOTED OTHERWISE.
2. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
3. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
4. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

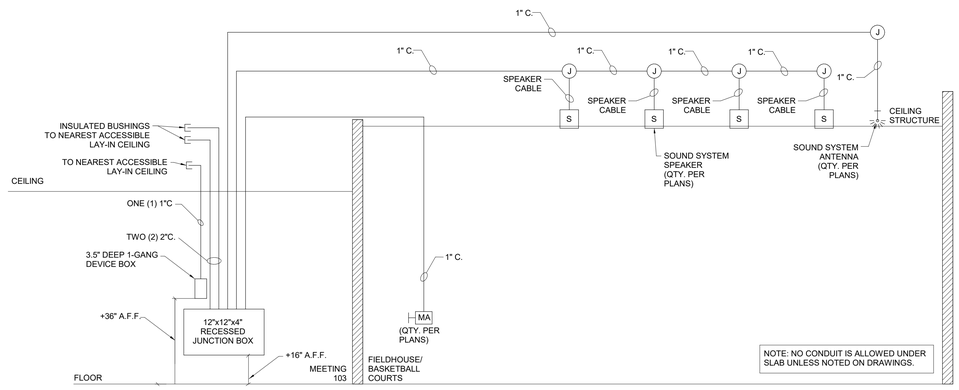
4 **TECHNOLOGY ROUGH-IN REQUIREMENTS 2-GANG WALL BOX - ACCESSIBLE LAY-IN CEILINGS**



GENERAL NOTES:

1. MOUNTING HEIGHTS AS LISTED ON THIS SHEET UNLESS NOTED OTHERWISE.
2. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
3. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
4. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

6 **TECHNOLOGY ROUGH-IN REQUIREMENTS 2-GANG WALL BOX - EXPOSED CEILINGS TO NEAREST ACCESSIBLE LAY-IN CEILING**



5 **SOUND SYSTEM CONDUIT ROUGH-IN DETAILS**

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10800108 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JR

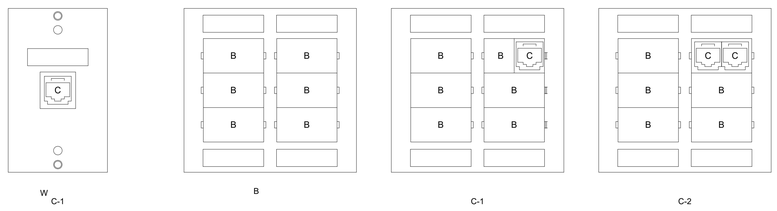
PROJECT NUMBER: 222063

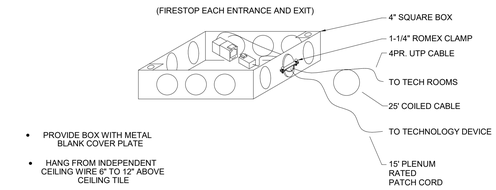
PROJECT ISSUE DATE: 12-1-2022

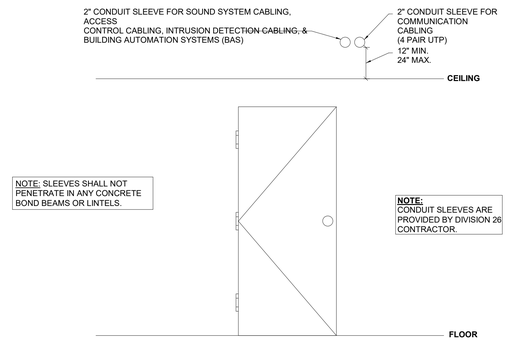
REV. NO.	DESCRIPTION	DATE
1	Addendum 1	1/06/2023

TECHNOLOGY ROUGH-IN DETAILS

E3.17







COMMUNICATIONS SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
◁	COMMUNICATIONS OUTLET. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1
◁ W	WALL MOUNTED COMMUNICATIONS OUTLET. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1
	MULTI CAPACITY FLOOR BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
□	POKE-THRU FLOOR BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
	CEILING MOUNTED PROJECTOR. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
◁ VP	WALL MOUNTED PROJECTOR. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	SEE AV WIRING DETAILS
Ⓦ	CEILING MOUNTED WIRELESS ACCESS POINT. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	2
⊢Ⓦ	WALL MOUNTED WIRELESS ACCESS POINT. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
▭	CABLE TRAY	-
▥	LADDER TRAY	-
	CONDUIT SLEEVES BETWEEN WALLS	-
○○	2 (TW0) 4" CONDUIT SLEEVES BETWEEN FLOORS	-
—	TELEPHONE TERMINATION BOARD	2 / T1.02
	TECHNOLOGY EQUIPMENT RACK	-
	TECHNOLOGY EQUIPMENT CABINET	-
▥	4-POST TECHNOLOGY EQUIPMENT RACK	-
CAM	OVERHEAD DOCUMENT CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-

PUBLIC ADDRESS AND MASS NOTIFICATION SYSTEMS

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
	ANTENNA	
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	-
S G	GYMNASIUM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	-
S MP	MULTI-PURPOSE ROOM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	-
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - WALL MOUNTED	-
S S	WALL MOUNTED SPEAKER	-
S	WALL MOUNTED SPEAKER OUTLET	-
S	CEILING MOUNTED SPEAKER OUTLET	-
S A	LINE ARRAY COLUMN SPEAKERS - WALL MOUNTED	-
	FULL RANGE CEILING SPEAKER	-
	PRODUCTION INTERCOM	-
M	WALL MICROPHONE INPUT	-
M	CEILING MICROPHONE	-
A	AUX. INPUT	-
S M	MONITOR OUTPUT	-
▨	RECESSED JUNCTION BOX FOR SOUND SYSTEM	-
SUB	SUBWOOFER	-
MA	WALL MOUNTED MICROPHONE/AUXILIARY INPUT	2 / T1.02

INTERIOR VIDEO SURVEILLANCE CAMERA SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
CAM	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
CAM	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
CAM	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
CAM	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
CAM	FISH-EYE CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	

EXTERIOR VIDEO SURVEILLANCE CAMERA SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
CAM WP	WALL MOUNTED WEATHERPROOF VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
CAM W	WALL MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	

ACCESS CONTROL SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
A.C.P.	ACCESS CONTROL PANEL	3 / T1.02
CR	CARD READER	3 / T1.02
EL	ELECTRONIC LATCH SET WITH ELECTRONIC POWER TRANSFER	3 / T1.02
⊢◗	AUTOMATIC DOOR PUSHBUTTON CEILING MOUNTED DOOR ACCESS CONTROLLER JUNCTION BOX.	3 / T1.02
▭	WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER	3 / T1.02
	HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED. PUSH TO RELEASE BUTTON	3 / T1.02
ADO	AUTOMATIC DOOR OPERATOR	3 / T1.02
LD	LOCKDOWN BUTTON	3 / T1.02
DI	DOOR INTERCOM	3 / T1.02
REX	REQUEST TO EXIT SWITCH (LOCATED IN EXIT DOOR HARDWARE)	3 / T1.02

CONTRACTOR/OWNER RESPONSIBILITIES SCHEDULE

	CONTRACTOR FURNISH	CONTRACTOR INSTALL	OWNER FURNISH	OWNER INSTALL
FIBER CONNECTORS	●	●		
FIBER BACKBONE(S)	●	●		
POE SWITCHES			●	●
COPPER HORIZONTAL CABLING	●	●		
J HOOKS	●	●		
CABLE/LADDER TRAY	●	●		
PATCH PANELS	●	●		
PATCH CABLES	●	●		
WIRELESS ACCESS POINTS			●	●
AV DISPLAY MONITORS AND MOUNTS			●	●
PROJECTOR AND MOUNTS			●	●
TECHNOLOGY BOX ROUGH-INS	●	●		
SURVEILLANCE CAMERAS			●	●
ACCESS CONTROL READERS	●	●		
ACCESS CONTROL EQUIPMENT AND CABLING	●	●		
PAGING EQUIPMENT AND CABLING	●	●		
SOUND SYSTEM(S) AND ACCESSORIES	●	●		

1

TECHNOLOGY GENERAL NOTES

A THE COMMUNICATIONS CABLING CONTRACTOR(S) IS/ARE RESPONSIBLE FOR ANY ADDITIONAL CONDUIT SLEEVES, OUTLET/JUNCTION BOXES, SURFACE RACEWAY, CABLE TRAY, DOUBLE GANG SQUARE PLASTER MUD RINGS, ETC.

B THE COMMUNICATIONS CABLING CONTRACTOR(S) IS/ARE RESPONSIBLE FOR EXTENDING THE ELECTRICAL SERVICE FROM THE ELECTRICAL JUNCTION BOX IN THE SPACE TO ALL THE COMMUNICATIONS RACKS/CABINETS.

C THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR REPLACING/REPAIRING DAMAGED CEILING GRID/TILE AS A RESULT OF THEIR INSTALLATION.

D THE CONTRACTOR SHALL VERIFY THE SURFACE RACEWAY LOCATIONS, ROUTING, OPENINGS, ETC. WITH THE BUILDING ELECTRICAL CONTRACTOR. PROVIDE PROPER COVER PLATES FOR THE DEVICES AS REQUIRED.

E THE COMMUNICATIONS CABLING CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THE VIDEO PROJECTOR WITH THE AUDIO/VIDEO EQUIPMENT CONTRACTOR AND ELECTRICAL CONTRACTOR.

TECHNOLOGY ABBREVIATIONS

ABBREVIATIONS USED ON DRAWINGS IN GENERAL ARE LISTED BELOW.

AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
B	BLANK
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
J	JUNCTION BOX
MC/ER / MDF	MAIN CROSS-CONNECT/EQUIPMENT ROOM / MAIN DISTRIBUTION FRAME
+N	INDICATES MOUNTING HEIGHT (N) TO BOTTOM OF DEVICE FROM FINISH FLOOR UNLESS NOTED OTHERWISE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
TCP	TEMPERATURE CONTROL PANEL
TR / IDF	TELECOMMUNICATIONS ROOM / INTERMEDIATE DISTRIBUTION FRAME
T.T.B.	TELEPHONE TERMINATION BOARD
TV	TELEVISION
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VC	VOLUME CONTROL
W	WALL MOUNTED
V.I.	VIDEO INPUT LOCATION
D	DEMO TABLE
WG	WIRE GUARD
R	RELEASE
DF	DUAL FACE
WP	WEATHER PROOF
VO	VIDEO OUTPUT
PTZ	PAN TILT ZOOM
ETR	EXISTING TO REMAIN
VP	VIDEO PROJECTOR
S	SURFACE MOUNTED

W C-1

WALL PLATE

B

BLANK TECHNOLOGY OUTLET

C-1

DATA PLATE

C-2

DATA PLATE

C-3

DATA PLATE

C-4

DATA PLATE

C-6

DATA PLATE

NOTE:

REFER TO AV WIRING DETAILS FOR EXACT CONFIGURATIONS OF VIDEO INPUT (V.I.), VIDEO OUTPUT (VO), AND AV CABINET LOCATIONS..

1 WALL PLATE CONFIGURATIONS

NO SCALE

TECHNOLOGY FACEPLATE ABBREVIATIONS

C - RJ45 DATA JACK
B - BLANK INSERT
WB - RJ-45 JACK FOR USB INTERACTIVITY
HD - RJ45 JACK FOR VIDEO
3.5mm - 3.5mm SOLDER JACK
HDMI - HDMI CONNECTOR

(FIRESTOP EACH ENTRANCE AND EXIT)

- PROVIDE BOX WITH METAL BLANK COVER PLATE
- HANG FROM INDEPENDENT CEILING WIRE 6" TO 12" ABOVE CEILING TILE

2 ABOVE CEILING JUNCTION BOX - WIRING DETAIL

NO SCALE

2" CONDUIT SLEEVE FOR SOUND SYSTEM CABLING, ACCESS CONTROL CABLING, INTRUSION DETECTION CABLING, & BUILDING AUTOMATION SYSTEMS (BAS)

2" CONDUIT SLEEVE FOR COMMUNICATION CABLING (4 PAIR UTP)

NOTE: SLEEVES SHALL NOT PENETRATE IN ANY CONCRETE BOND BEAMS OR LINTELS.

NOTE:
CONDUIT SLEEVES ARE PROVIDED BY DIVISION 26 CONTRACTOR.

3 CONDUIT SLEEVES DETAIL

NO SCALE

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER
PE 11600305

DRAWN BY: JR
PROJECT NUMBER: 222063
PROJECT ISSUE DATE: 12-1-2022

REV. NO.△	DESCRIPTION	DATE
1	Addendum 1	1/06/2023

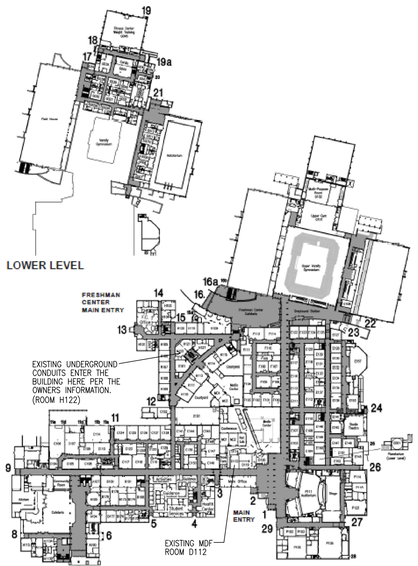
TECHNOLOGY DETAILS

T1.01

\\data1\citrixprofiles$\jegedanz\upm_profile\documents\222063_TECH_Greyhound Activity Center_jegedanzYK3F7.rvt
1/6/2023 8:39:24 AM

OVERALL TECHNOLOGY SITE PLAN

N.T.S.

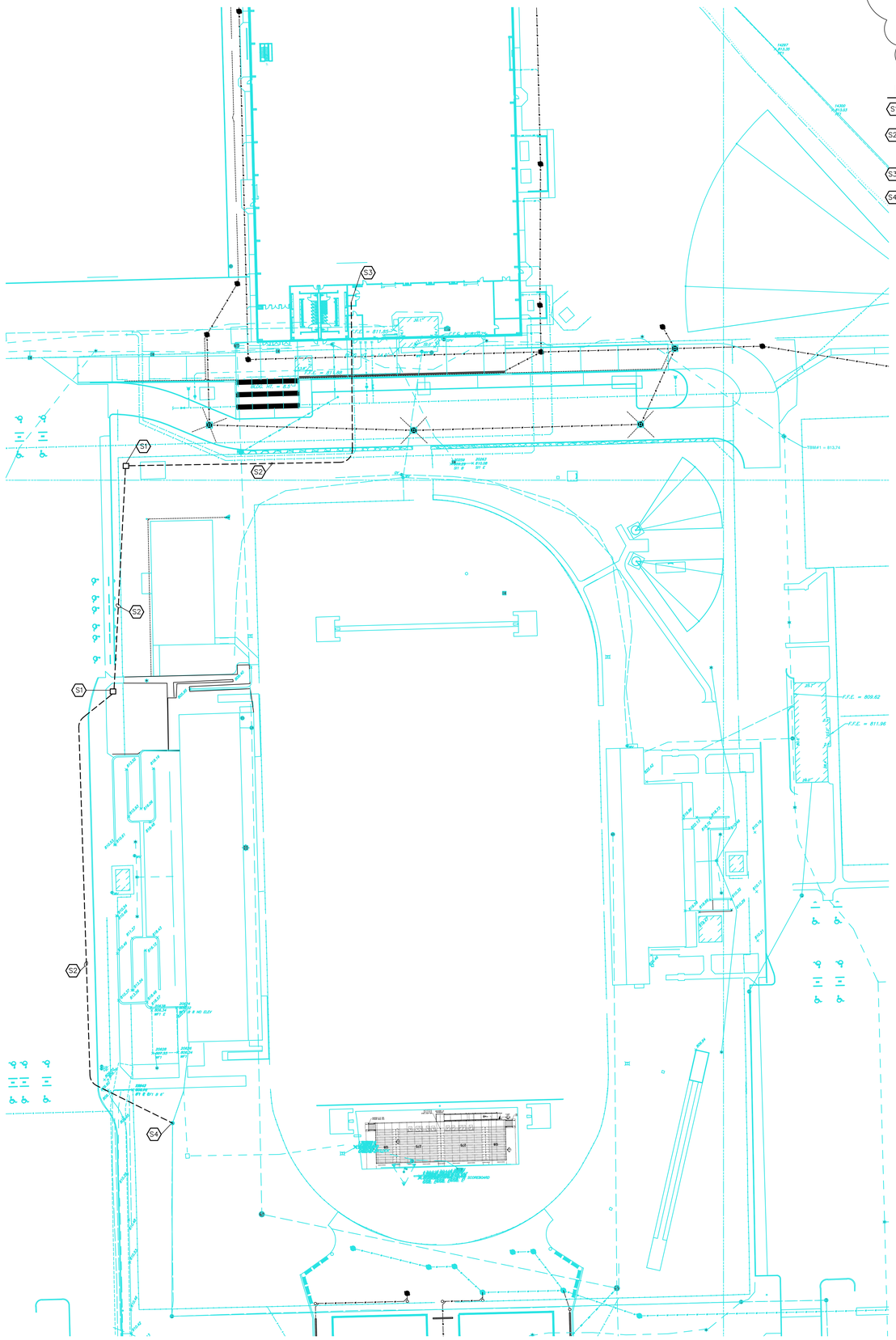


HIGH SCHOOL FLOOR PLAN

SCALE: N.T.S.

CARMEL HIGH SCHOOL

520 EAST MAIN STREET CARMEL, IN 46032 PHONE (317) 846-7721



TECHNOLOGY SITE PLAN NORTH

1" = 40'-0"

GENERAL NOTES:

1. PROVIDE NEW SINGLE MODE FIBER OPTIC CABLE (SEE SPECIFICATION SECTION 27 13 23) FROM GREYHOUND ACTIVITIES CENTER IN NEW CONDUIT (AS SHOWN ON PLAN) AND THROUGH EXISTING CONDUIT PATHWAYS BACK TO CARMEL HIGH SCHOOL BUILDING. ENTER BUILDING AT EXISTING LOCATION AND CONTINUE CABLE BACK TO EXISTING MDF AS SHOWN ON THIS PLAN. ALL CEILING PADS REMOVED FOR INSTALLATION OF FIBER OPTIC CABLING SHALL BE REPLACED TO MATCH EXISTING IF DAMAGED DURING INSTALLATION BY THIS CONTRACTOR.

PLAN NOTES:

S1 PROVIDE FLUSH CONCRETE POLYMER BOX, 24" X 36", LID ENGRAVED AS "TELECOMMUNICATIONS".

S2 PROVIDE 4" PVC CONDUIT DIRECT BURIED IN TRENCH, IN AREA OF CONSTRUCTION WHERE SOIL IS DISTURBED AND BELOW BUILDING SLAB. PROVIDE HDPE CONDUIT, DIRECTIONAL BORED BELOW EXISTING PAVEMENTS.

S3 TURN UP CONDUIT AT NEW TECHNOLOGY ROOM, SEE ENLARGED ROOM PLAN.

S4 INSTALL NEW CONDUIT THROUGH EXISTING FLUSH BOX, SEAL AFTER INSTALLATION OF CONDUIT.

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

Carmel Clay Schools

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

B

A

KEY PLAN

PLAN NORTH

100% CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE 11600205 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: BWB

PROJECT NUMBER: 222063.00

PROJECT ISSUE DATE: 12-1-2022

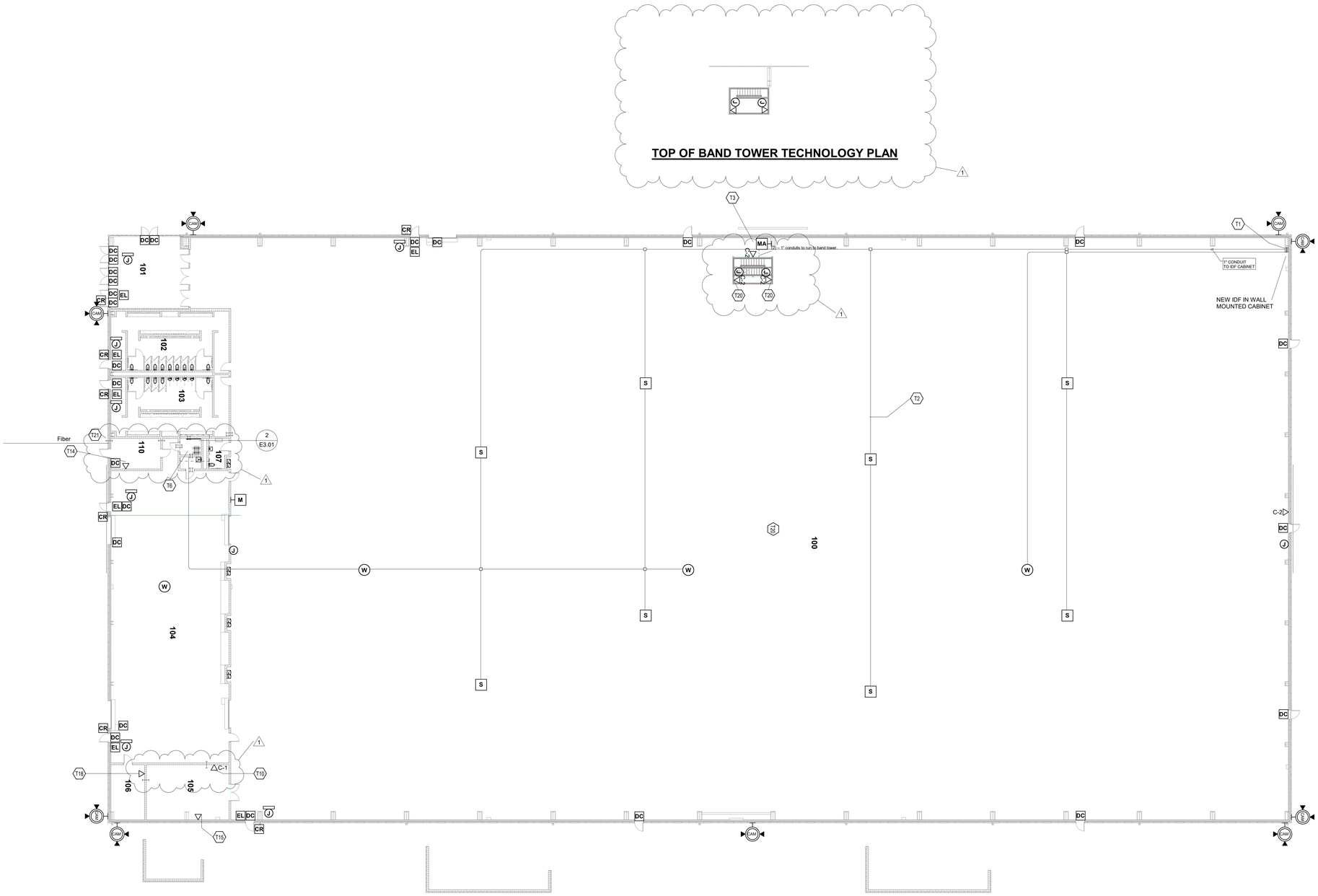
REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM 1	1/06/2023

SITE TECHNOLOGY PLAN

E2.2

ROOM LEGEND - FIRST FLOOR UNIT A		
ROOM NO.	**ROOM NAME**	**AREA (SF)**
100	FIELD AREA	80806 SF
101	VESTIBULE	748 SF
102		
103	MEN'S ROOM	857 SF
104	BAND STORAGE	4551 SF
105	MECHANICAL	596 SF
106	ELECTRICAL	243 SF
107	FAMILY RESTROOM	74 SF
108	MOP SINK	
109	IT ROOM	47 SF
110	FIRE RISER ROOM	199 SF
111	TOWER	110 SF

TOP OF BAND TOWER TECHNOLOGY PLAN



FIRST FLOOR TECHNOLOGY PLAN

SCALE: 1/16" = 1'-0"

ROUGH-IN PLAN NOTES

T1 PROVIDE WALL SWING CABINET FOR IDF AND SOUND EQUIPMENT. PROVIDE FIBER OPTIC CABLE BACK TO EXISTING MDF. COORDINATE LOCATION IN FIELD. INSTALL CABLING ABOVE ACCESSIBLE CORRIDOR CEILINGS.

T2 ROUTE CABLING IN CONDUIT PARALLEL OR PERPENDICULAR TO BAR JOISTS. ALL CONDUIT AND BOXES SHALL BE INSTALLED SO THAT EQUIPMENT IS NO LOWER THAN BOTTOM CHORD OF TRUSS.

T3 BLUETOOTH WALLPLATE TRANCIEVER AND MICROPHONE / AUX INPUT MOUNTED IN A TWO GANG TECHNOLOGY BOX. REFER TO DETAIL 1 ON SHEET T1.02.

T6 LOCATION OF MC/ER-MAIN EQUIPMENT ROOM WITH VOICE, VIDEO AND DATA EQUIPMENT WITH UPS ETC. REFERENCE TO SPECIFICATION SECTION 271100 AND DETAIL 3/T1.02 FOR MORE INFORMATION.

T10 PROVIDE CABLES FOR TEMP. CONTROL PANELS. VERIFY EXACT LOCATION WITH TEMP. CONTROL CONTRACTOR.

T14 PROVIDE CABLE FOR WATER METER WITH SECONDARY ENTRANCE PROTECTION. VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.

T15 PROVIDE CABLE FOR GAS METER WITH SECONDARY ENTRANCE PROTECTION. VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.

T18 PROVIDE CABLES FOR FIRE ALARM PANEL. COORDINATE EXACT LOCATION WITH FIRE ALARM CONTRACTOR PRIOR TO INSTALLATION.

T20 PROVIDE SURFACE MOUNTED STYLE COVERPLATES FOR EACH DATA BOX AT EACH OF TWO BALCONIES AT TOWER

T21 PROVIDE 4" CONDUIT SLEEVES

GREYHOUND ACTIVITY CENTER

2450 E 136th St, Carmel, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

WWW.FHAI.COM

CONSULTANT

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10200[illegible] STATE OF [illegible] PROFESSIONAL ENGINEER

DRAWN BY: JJR

PROJECT NUMBER: 222063

PROJECT ISSUE DATE: 12-1-2022

REV. NO.	DESCRIPTION	DATE
1	Addendum 1	1/06/2023

FIRST FLOOR TECHNOLOGY PLAN

T3.01