ADDENDUM NO. 3

December 16, 2022

BAILLY ELEMENTARY SCHOOL ADDITIONS AND RENOVATIONS
Chesterton, IN 46304

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated November 14, 2022 by Gibraltar Design. 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 3-1 through 3-2 and attached Addendum No. 3 from Gibraltar Design dated December 14, 2022 and consisting of 7 pages, 12 added Specification Sections, Revised Specification Section 08 71 00 - Door Hardware, and 30 drawings.

A. SPECIFICATION SECTION 00 00 10 - TABLE OF CONTENTS

1. **Add:**

Specification Section 05 12 00 - Structural Steel
Specification Section 05 31 21 - Steel Roof Deck
Specification Section 31 10 00 - Site Clearing
Specification Section 31 20 00 - Earthwork
Specification Section 31 25 13 - Soil Erosion Control
Specification Section 32 12 16 - Asphaltic Concrete Paving
Specification Section 32 17 23 - Roadway and Paving Marking
Specification Section 32 91 13 - Soil Preparation
Specification Section 32 92 19 - Seeding
Specification Section 33 11 00 - Water Distribution Systems
Specification Section 33 11 50 - Exterior Water Lines, Fire Lines, and Facilities
Specification Section 33 13 00 - Disinfection of Water Distribution System

B. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

1. BID CATEGORY NO. 1 - GENERAL TRADES

a. **Add:**

Specification Section 05 12 00 - Structural Steel
Specification Section 05 31 21 - Steel Roof Deck
Specification Section 31 10 00 - Site Clearing
Specification Section 31 20 00 - Earthwork
Specification Section 31 25 13 - Soil Erosion Control
Specification Section 32 12 16 - Asphaltic Concrete Paving
Specification Section 32 17 23 - Roadway and Paving Marking
Specification Section 32 91 13 - Soil Preparation
Specification Section 32 92 19 - Seeding
Specification Section 33 11 00 - Water Distribution Systems
Specification Section 33 11 50 - Exterior Water Lines, Fire Lines, and Facilities
Specification Section 33 13 00 - Disinfection of Water Distribution System

C. SPECIFICATION SECTION 01 52 60 - RUBBISH CONTAINER

1. **Replace:**

Under Part 1 - General

1.02 RUBBISH CONTAINER

A. The **Bid Category No. 1 Contractor** is to provide one hundred and fifty (150), thirty (30) CY rubbish containers for the Project waste, debris, and rubbish for the life of the project except as specified in 1.02.B and 1.02.C below.

ADDENDUM THREE

Addendum Three (AD.03) to the drawings and specifications prepared by Gibraltar Design for **Bailly Elementary School Renovations** for Duneland School Corporation, Chesterton, Indiana.

All Contractors bidding on this project shall read all of the items covered below and shall comply with all of the requirements as set forth, including any necessary refinements or additions generated by this Addendum and required by the intent of the original contract documents. All Contractors shall acknowledge on their bid form that they have received this Addendum, Addendum One and Addendum Two, and include the appropriate content of same within their bid proposal.

SPECIFICATIONS

1. **Specification Section 00 01 10 Table of Contents**
   - A. Add Specification Section 05 12 00 Structural Steel to the Table of Contents.
   - B. Add Specification Section 05 31 23 Steel Roof Deck to the Table of Contents.
   - C. Add Specification Section 31 10 00 Site Clearing to the Table of Contents.
   - D. Add Specification Section 31 20 00 Earthwork to the Table of Contents.
   - E. Add Specification Section 31 25 13 Soil Erosion Control to the Table of Contents.
   - F. Add Specification Section 32 12 16 Asphaltic Concrete Paving to the Table of Contents.
   - G. Add Specification Section 32 17 23 Roadway and Paving Marking to the Table of Contents.
   - H. Add Specification Section 32 91 13 Soil Preparation to the Table of Contents.
   - I. Add Specification Section 32 92 19 Seeding to the Table of Contents.
   - J. Add Specification Section 33 11 00 Water Distribution Systems to the Table of Contents.
   - K. Add Specification Section 33 11 50 Exterior Water Lines, Fire Lines, and Facilities to the Table of Contents.
   - L. Add Specification Section 33 13 00 Disinfection of Water Distribution System to the Table of Contents.
2. **Specification Section 03 30 00 Concrete**
   - A. Add Paragraphs 2.5.H and 2.5.I to read:

     "H. Underlayment compound and Slab Leveler: Free flowing, self-leveling, pumpable cementitious base compound.

     1. LeveLayer 11 as manufactured by Dayton-Superior.
     2. Flo-Top as manufactured by Euclid Chemical Co.
     3. Levelex as manufactured by L & M Construction Chemicals, Inc.
     4. Or approved equal.

"I. Repair Topping: Self-Leveling, polymer modified, high strength topping. Thin-top as manufactured by Euclid Chemical Co."

3. Specification Section 05 12 00 Structural Steel

A. Add Specification Section 05 12 00, Structural Steel, included in this Addendum, to the Project Manual.

4. Specification Section 05 31 23 Steel Roof Deck

A. Add Specification Section 05 31 23, Steel Roof Deck, included in this Addendum, to the Project Manual.

5. Specification Section 08 71 00 Door Hardware

A. Replace in project manual specification section 087100 Door hardware with the attached complete specification included in this addendum.

6. Specification Section 09 29 00 Gypsum Board

A. Add Paragraph 2.3 G. to read:

"G. Joint compound: As recommended for conditions present by manufacturer for skim coat over CMU."

7. Specification Section 09 51 00 Acoustical Ceilings

A. Revise Section 2.2 B.1 to read:

"1. Size 24 inches by 48 inches."

B. Revise Paragraph 2.2 C.1 to read:

"1. Size 24 inches by 48 inches."

C. Revise Paragraph 2.2 B.12 to read:

"12.Product Name: Fine Fissured with HumiGuard Plus Performance (A) Fine Fissured with BioShield Option (C); Radar ClimaPlus. Note: Match existing ceiling pad manufacturer and type complete where existing ceiling pads remain or are damaged beyond repair where otherwise indicated to remain or be modified."

8. Specification Section 11 40 00 Food Service Equipment

A. Revise Item #1 – Walk-In Cooler/Freezer to read:

"FLOOR CONSTRUCTION: Floor panel construction shall be prefabricated, insulated sections. Install and level 4" concrete floor topping over pre-fabricated insulated floor panels to be flush with kitchen floor slab. Finish interior of cooler/freezer floor to match main kitchen finish. Provide coved floor base board at least 4" high to match balance of kitchen floor finish."

9. Specification Section 31 10 00 Site Clearing

A. Add Specification Section 31 10 00, Site Clearing, included in this Addendum, to the Project Manual.

10. Specification Section 31 20 00 Earthwork

A. Add Specification Section 31 20 00, Earthwork, included in this Addendum, to the Project Manual.

11. Specification Section 31 25 13 Soil Erosion Control

A. Add Specification Section 31 25 13, Soil Erosion Control, included in this Addendum, to the Project Manual.

12. Specification Section 32 12 16 — Asphaltic Concrete Paving

A. Add Specification Section 32 12 16, Asphaltic Concrete Paving, included in this Addendum, to the Project Manual.

13. Specification Section 32 17 23 — Roadway and Paving Marking

A. Add Specification Section 32 17 23, Roadway and Paving Marking, included in this Addendum, to the Project Manual.

14. Specification Section 32 91 13 — Soil Preparation

A. Add Specification Section 32 91 13, Soil Preparation, included in this Addendum, to the Project Manual.

15. Specification Section 32 92 19 — Seeding

A. Add Specification Section 32 92 19, Seeding, included in this Addendum, to the Project Manual.

16. Specification Section 33 11 00 — Water Distribution Systems

A. Add Specification Section 33 11 00, Water Distribution Systems, included in this Addendum, to the Project Manual.

17. Specification Section 33 11 50 — Exterior Water Lines, Fire Lines, And Facilities

A. Add Specification Section 33 11 50, Exterior Water Lines, Fire Lines and Facilities, included in this Addendum, to the Project Manual.

18. Specification Section 33 13 00 — Disinfection of Water Distribution System

A. Add Specification Section 33 13 00, Disinfection of Water Distribution System, included in this Addendum, to the Project Manual.

DRAWINGS

1. Sheet G-102

A. Add the following sheets to the Sheet Index:

1. C-101 Site and Water Main Plan
2. C-102 Topographical Survey
3. C-501 Typical Details
4. E-604 Electrical Schedules.

2. Sheet G-201

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Update First Floor Life Safety Plan to include Maximum Occupant Load of Room.
2. Update Mech. Mezzanine Life Safety Plan to include Maximum Occupant Load of Room.
3. Update Life Safety Plan legend as indicated.
4. General updates as indicated.

3. Sheets C-101, C-102, C-501

A. Refer to three (3) revised full size drawings included in this addendum for addition of water service intended for fire protection at school.

4. Sheet S-401

A. Refer to revised full size drawing included in this addendum for revised Detail 2/S-401. the following revisions:

1. Update to title.
2. Update to notes as indicated.

5. Sheets AD-101, AD-102, AD-103, AD-104, AD-105

A. Revise the following Demolition Plan Note on sheets AD-101, AD-102, AD-103, AD-104, AD-105 to read as follows:

1. Plan Note 110 - "Load bearing wall to be modified for new openings. Provide new lintel spanning new door and alcove. Refer to S-401 for lintel size and bearing details. Shore all existing construction as required during demolition and installation of new lintel."

6. Sheet AD101

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Update to Plan Note 110.

7. Sheet AD104

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Plan Note 110 added to additional locations indicated.

8. Sheets A-101, A-102, A-103, A-104, A-105

A. Revise the following Plan Note on sheets A-101, A-102, A-103, A-104, A-105 to read as follows:

1. Plan Note 43 shall be changed to read: "Infill wall opening with CMU. Skim coat CMU for smooth level finish matching existing adjacent walls. Prep to receive new finishes."

9. Sheet A-201

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Added Exhaust fans.
2. Added relief air.
3. Added condensing units.
4. Added outside air intake.
5. Added General Note "W" clarifying roof penetrations as indicated.

10. Sheet A-210

A. Revise the following details 2/A210 and 3/A210 for the following revisions:

1. Revise Detail 2/A210 as follows: Replace "Adhere walkway pads to TPO membrane. Follow manufacturer's recommendations for lap splice" with "Adhere walkway pads to membrane. Follow manufacturer's recommendations for lap splice at membrane."
2. Revise Detail 3/A210 as follows: Replace Note "EPDM Membrane Flashing" with "Membrane Flashing".

11. Sheet K-100

A. Refer to revised full size drawings included in this addendum for the following revisions:

1. Revise all General Notes as indicated to replace "General Contractor" with "Contractor."

12. Sheet K-101

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Revise Equipment Schedule Items #2, #3, #6 and #7 to remove reference to K-400 sheet.
2. Revise Equipment Floor Plan to remove ramp reference in both Walk-In cooler and Freezer.

13. Sheet K-102

A. Refer to revised full size drawings included in this addendum for the following revisions:

1. Revise Hood Detail to reference downblast direct drive fan called out in Addendum Two.
2. Add Cooler/Freezer section detail with recessed slab – KEC to confirm overall height with existing ceiling structure.
3. Revise Special Conditions Plan to include slab recess dimensions and coordination notes.

14. Sheet FP-001

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Fire Protection Service Diagram revised to show cut and patch of existing concrete floor.

15. Sheet M-501

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Revised UV-2 and UV-4 in Mechanical Equipment Schedule.

16. Sheet M-602

A. Refer to revised full size drawing included in this addendum for added fan coil detail.

17. Sheets ED-101, ED-102, ED-103, ED-104, ED-105

A. Refer to five (5) revised full size drawings included in this addendum for clarification of demo panel designation.

18. Sheets EL-103 and EL-104

A. Refer to two (2) full size drawings included in this addendum which reflect the most current base plan update.

19. Sheet EP-103

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Add wheelchair lift.
2. Add overhead door power for Serving C-120.

20. Sheet EP-104

A. Refer to revised full size drawing included in this addendum for extra panels deleted from Tech-D109.

21. Sheet EP-105

A. Refer to revised full size drawing included in this addendum for clarification to existing panel designation.

22. Sheet E-603

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Add hand dryers to C-123, C-134, and C-137.
2. Add Overhead door power at Kitchen Serving.

23. Sheet E-604

A. Refer to revised full size drawing included in this addendum for one-line diagram added.

24. Sheet T-100

A. Refer to revised full size drawings included in this addendum for the following revisions:

1. Add General Note to read: "Doors showing security devices are existing doors in existing frames except where noted as a new door."
2. Add Plan Note 7 to read: "New door see rough-in details."
3. Plan note added at door from Vestibule C-101 into Reception C-104.
4. Plan note added at exit door from Storage E-109.

25. Sheet T-102

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. SGI B-105: Moving data/local input from the wall to a floor box located in the center of the room.
2. Art B-112: Plan note added in door exiting Art B-112.

26. Sheet T-103

A. Refer to revised full size drawings included in this addendum for the following revisions:

1. Vestibule C-101: Add Plan Note 7 to two doors.
2. Reception C-104: Add Plan Note 7 to door leading into reception from Vestibule C-101.

27. Sheet T-105

A. Refer to revised full size drawing included in this addendum for the following revisions:

1. Room E-102:
    a. Remove projector rough-in.
    b. Add location for existing TV.
    c. Eliminate floor outlet.
    d. Add wall outlet for teacher.
2. Room E-107:
    a. Remove projector rough-in and add location for existing TV.
    b. Eliminate floor outlet.
    c. Add wall outlet for teacher.
3. Storage E-109: Add Plan Note 7 leading from Storage E-109 to building exit.

Pages 1 through 7, inclusive, Specification Sections 05 12 00, 05 31 23, 08 71 00, 31 10 00 , 31 20 00 , 31 25 13 , 32 12 16 , 32 17 23 , 32 91 13 , 32 92 19 , 33 11 00 , 33 11 50, 33 13 00 and Thirty (30) Full-Size Drawings, constitute the total makeup of **Addendum Three**.

GIBRALTAR DESIGN

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SECTION 05 12 00
STRUCTURAL STEEL

1 General

1.1 Section Includes

A. Structural steel items shown on the structural drawings, including anchor bolts and washers, leveling plates, columns, beams, trusses, structural members of various combinations of shapes, bearing plates, needle beams, steel floor deck opening frames, roof opening frames, deck anchors, joist anchors, deck support frames, closure plates, and all required connections and accessories.

B. Steel lintels as covered in the Lintel Schedule and as required for all openings, including mechanical and electrical openings.

1.2 Products Furnished But Not Installed Under This Section

A. Section 03 30 00 - Concrete: Anchorages cast in concrete.

B. Section 04 20 00 - Unit Masonry: Lintels, joist and deck anchors, and wall strap anchors embedded in masonry.

C. Deliver work to be installed under other sections to the project site.

1. The contractor installing the material will unload it.

1.3 Related Sections

A. Section 03 30 00 - Concrete: Grouting base plates and bearing plates.

B. Section 05 21 00 - Steel Joists.

C. Section 05 31 23 - Steel Roof Deck.

D. Section 05 36 00 - Steel Composite Floor Deck.

E. Section 05 50 00 - Miscellaneous Metals: Non-framing steel fabrications affecting structural steel work.

1.4 References

A. Perform all work and furnish all material in accordance with the following references.

1. ASTM A36 - Structural Steel.

2. ASTM A53 - Pipe, Steel, Black and Hot Dipped, Zinc-Coated Welded and Seamless.

3. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
4. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
5. ASTM - A325 - High strength Bolts for Structural Steel Joints.
6. ASTM A490 - Quenched and tempered alloy Steel Bolts for Structural Steel Joints.
7. ASTM - A500 - Cold Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
8. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
9. ASTM A992 – Structural Steel Shapes.
10. ASTM F436 - Hardened Steel Washers.
11. ASTM F1554 – Anchor Bolt, Steel, 36 KSI Yield Strength.
12. AWS D1.1 - Structural Welding Code - Steel.
13. AISC - Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design.
14. AISC – Specification for Structural Steel Buildings – Load and Resistance Factor Design.
15. Code of Standard Practice for Steel Buildings and Bridges.

B. Perform all work in accordance with the above codes and standards which hereby become a part of this section of specifications unless specified otherwise herein.

1.5 Design Requirements

A. Type 2 construction as defined by AISC Specification, Section A2.2., unless noted otherwise on Drawings.

B. High strength bolts are to be in bearing type connections with threads included in the shear plane, unless noted otherwise on Drawings.

1.6 Submittals

A. Submit shop drawings under provisions of Division 1.

1. Prepare shop drawings in accordance with the procedures and recommendations of "Detailing for Steel Construction" and "Engineering for Steel Construction" published by the American Institute of Steel Construction.

    a. Sepia reproducibles of the framing plans, for use by the fabricator as erection plans may be obtained from the Architect's office on request for the cost of the prints plus a handling fee.

2. Complete the design of members and the design of connections where such designs are not indicated on Drawings.

    a. For structural steel connections indicated on Drawings to comply with design loads, include analysis data signed and sealed by the qualified professional engineer who is registered in the state of Indiana and responsible for their preparation.

3. Architect's Review:

    a. Review of shop drawings will be only for general conformance with design concept and compliance with the requirements given in the Contract Documents.

    b. If after the first review it becomes necessary to correct, change, or add a detail which had been approved or did not appear on a previous submittal, said change or addition is to be hi-lighted in a manner that can be readily identified.

        1) Any changes or additions made without proper identification are not subject to the Architect's review of the shop drawings.

B. Submit templates and instructions for the setting of structural steel items to be installed by others.

1.7 Quality Assurance

A. Fabricator Qualifications: A steel fabricator who has a minimum of ten years of experience in installations of this type and shall employ laber and supervisory personnel familiar with the type of installation, experienced in fabrication and erection of structural steel for projects of similar size and complexity.

B. Installer Qualifications: A qualified installer who has a minimum of ten years of experience eerecting structural steel for structures of this type and complexity.

C. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M.

1.8 Testing And Inspection

A. Perform testing and inspection under the provisions of Division 1.

B. Test and inspect the following:

1. General: All structural field connections utilizing high strength bolts and/or welds shall be visually inspected.

2. Welds:

a. Inspect all moment connection field welds using ultrasonic means in accordance with AWS D1.1.

b. Inspect twenty percent of all field welds (other than moment connection field welds) using non-destructive means in accordance with applicable AWS D1.1 provisions.

3. Bolts: Inspect all field bolts in slip-critical connections for proper bolt type, washer use, and required tension.

C. Inspector Qualifications:

1. Ultrasonic Inspection of Moment Connection Field Welds: Performed by an AWS Certified Welding Inspector.

2. Inspection Other Than Ultrasonic Inspection of Moment Connection Field Welds: Performed by an engineer or technician who, by training or experience, or both, in metals fabrication, inspection, and testing is competent to perform the work.

D. Report inspection results to the Architect and Contractor within 24 hours after inspections are made.

2 Products

2.1 Materials

A. Structural Steel Members: ASTM A992 (F_Y=50 Ksi, F_U=65 Ksi for W and WT Shapes) or ASTM A36 (F_Y=36 Ksi Fu=50 Ksi for M, MT, S, ST, and HP Shapes, Channels and Angles).

B. Structural Tubing: ASTM A500, Grade C.

C. Steel Pipe: ASTM A501 or ASTM A53, Grade B.

D. Welding Materials: AWS D1.1; type required for materials being welded.

E. Shear Connectors (Studs): AWS D1.1.

1. General Purpose: Type A.

2. Composite Beam Construction: Type B.

F. High Strength Bolts: ASTM A325.

G. Anchor Bolts: ASTM F1554 Grade 36, unless indicated otherwise on Drawings.

H. Adhesive Anchors: Minimum 3/4 inch diameter (unless shown or noted otherwise on Drawings) standard anchor rod with nut, washer, and adhesive capsule such as:

1. Concrete Base: HIT-HY 200 system as manufactured by Hilti, or an approved equal.

2. Grouted Masonry Base: HIT-HY 270 system as manufactured by Hilti, or an approved equal.

I. Expansion Anchors: Minimum 3/4 inch diameter (unless shown or noted otherwise on Drawings) Kwik Bolt or Sleeve Anchor as manufactured by Hilti, or an approved equal.

1. Provide stainless steel anchors for anchors located below the ground floor and other anchors as noted on Drawings.

J. Screw Anchors: Minimm 3/4 inch diameter (unless shown or noted otherwise on Drawings) KH-EZ Screw Anchor as manufactured by Hilti, or an approved equal.

K. Galvanizing:

1. Steel Shapes and Assemblies: ASTM A123.

2. Steel Hardware: ASTM A153.

L. Primer: Rust inhibitive primer meeting or exceeding the performance requirements of Federal Specification TT-P-636 and the Steel Structure Painting Council - Paint Specification #15, Type 1.

M. Primer Color: Prime all steel left exposed with a gray primer.

N. Preformed Joint Material: Provide closed cell polyethylene expansion joint material equal to the following.

1. Sonoflex as manufactured by Sonneborn Building Products.

2. Deck-O-Foam as manufactured by W. R. Meadows, Inc.

2.2 Fabrication

A. Fabricate structural steel members in accordance with AISC Specifications.

1. Fabrication before Architect's review of shop drawings is entirely at the Contractor's risk.

B. Connections:

1. General: Shop weld and field bolt connections, unless noted otherwise.

a. Use 3/4 inch bolts, unless otherwise noted.

b. Do not use slotted or oversized holes, unless otherwise noted.

c. Bevel or shim connections for members which meet at other than right angles to prevent permanent erection deformation stresses.

d. Do not use one sided or eccentric connections unless shown in detail on Drawings.

e. Grind smooth all welds left exposed in finished surfaces.

f. Provide single web splice plates where beams butt at columns.

2. Shear Connections: Design shear connections for one half of the total allowable uniform load capacity shown in the Allowable Uniform Load Tables, Part 2, of AISC Manual, Allowable Stress Design, Thirteenth Edition, unless reactions are provided on Drawings.

a. Preferable connection is connection angles shop welded to beam and field bolted to column.

b. For tube or pipe columns, top plate or structural tee to column is preferred, note bracing requirements shown and noted on Drawings for beams over the top of columns.

c. Shear tabs may be used as approved by the Architect.

3. Slip Critical Connections: Connections noted on Drawings as "Slip Critical" shall meet the requirements of "Specification for Structural Joints Using ASTM A325 or A490 Bolts", AISC - (Latest Edition), for bolt tensioning and washer use.

a. Installation and tightening of the bolts may be by any of the four methods specified.

4. Existing Member Reinforcement or Connection to Existing: All welding shall be accomplished by welders certified for the type of weld to be performed.

a. All existing materials and surfaces are to be protected from damage and any damaged areas caused by welding procedures are to be repaired and paid for by this Contractor.

b. Protect all existing materials and surfaces from damage and repair any damaged areas caused by welding procedures.

C. Other Trades: Provide holes for the attachment of work by other trades.

1. Templates or similar information will be furnished by the trade requiring the hole.

D. Joist Field Connections: Where steel columns are not braced in at least two directions by structural steel members, provide two 1/2 inch bolts to connect the nearest joist in the unbraced direction to the beam or column.

2.3 Finish

A. Preparation: Clean, prepare, and shop prime or galvanize structural steel members, unless specified to be unprotected.

B. Protection: Protect machine finished surfaces against corrosion. Coat all steel encased in concrete below adjacent slab on grade with tar.

C. Painting: Shop paint all structural steel, except as noted below.

1. Spread paint at a minimum rate of 400 square feet per gallon and produce a 2 mil dry film thickness.

2. In exposed steel construction, coordinate the primer type and color with the Painting Contractor.

D. Unprotected Steel: Do not paint the following surfaces.

1. Steel column leveling plates.

2. Steel column base plate bearing surface.

3. Steel encased in concrete for composite construction.

4. Surfaces to be field welded.

5. Steel members to receive sprayed-on fireproofing.

E. Galvanizing: After fabrication, galvanize all sections noted on Drawings, including connection angles and fasteners.

3 Execution

3.1 General

A. Notify the ArchitectConstruction Manager at least forty-eight (48) hours in advance of the start of erection.

1. Notify Architect and obtain further instructions before proceeding with items not covered by drawings or specifications.

B. Field verify any dimensions required for material length.

C. Deliver and unload material in the proper sequence to keep pace with the general construction work.

D. Secure approval from the ArchitectConstruction Manager's Field Representative for the location of on-site storage of materials and equipment.

E. Place material to be stored on site on substantial blocks of sufficient size and strength to prevent contact with the ground.

1. Place material to prevent bending, twisting, or other damage during storage.

3.2 Erection

A. Access will be provided and maintained on the site for delivery and movement of erection equipment.

B. Coordinate with the ArchitectConstruction Manager's Field Representative and other Contractors as to the sequencing, equipment, and method of erection.

C. Take care to prevent damage to the work of other Contractors; repair of same is this Contractor's responsibility.

D. Protection: Provide all barricades, scaffolding, and other means of protection required to comply with OSHA and State and Municipal Ordinances, and to adequately safeguard property and persons.

1. The enforcement of all of the above is the definite responsibility of the Contractor.

2. Make every effort and safeguard to ascertain compliance with all of said rules and regulations.

E. Bracing: Make provision for erection loads and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection, which includes roof metal deck diaphragm installed, and installation of permanent bracing.

F. Connections: Connect members with sufficient temporary bolts to insure the safety of the structure until permanent connections have been made.

1. Install high strength bolts in accordance with "Specification for Structural Joints Using ASTM A325 or A490 Bolts", AISC - (Latest Edition).

G. Moment Connections: Weld moment connections in accordance with AWS D1.1 specification, using only welders qualified to perform the required weld procedures.

H. Fitting: Do not field cut or alter structural members without the written approval of the Architect.

I. Steel Roof Deck Accessories: Erect all deck support frames, opening frames, roof deck closure plates, and other accessories necessary to complete the metal deck installation.

1. Install accessories in accordance with requirements of Section 05 31 23.

J. Steel Floor Deck Accessories: Erect all deck support frames, opening frames, structural steel slab edge angles, and other accessories necessary to complete the metal deck installation.

1. Install accessories in accordance with requirements of Section 05 31 3305 36 00.

K. Paint Repair: After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces specified to be unprotected.

1. Use a primer consistent with shop finish.

L. Field Quality Control

M. If tests or inspections indicate work does not meet specified requirements, remove work and replace at no additional cost to the Owner.

3.3 Equipment

A. Removal: Remove all equipment from the site promptly after erection is complete.

3.4 Additional Requirements

A. Restoration: Restore subgrades and finish grades damaged during execution of the Work of this Section as approved by the ArchitectConstruction Manager.

1. During work, keep areas free of ruts and standing water. Keep pavements clean and work area in an orderly condition.

END OF SECTION

SECTION 05 31 23
STEEL ROOF DECK

1 General

1.1 Section Includes

A. Steel roof deck and all required accessories shown on the Drawings and herein specified.

1.2 Related Sections

A. Section 05 12 00 - Structural Steel: Roof opening frames, deck support frames, and deck anchors.

B. Section 05 21 00 - Steel joists.

C. Section 07 53 23 – Roof Patching.

1.3 References

A. Perform all work and furnish all material in accordance with the following references.

1. AISI - Specification for the Design of Cold-Formed Steel Structural Members.

2. ASTM A653 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

3. ASTM 1008 - Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.

4. AWS D1.3 - Structural Welding Code - Sheet Steel.

5. SDI - Design Manual for Composite Decks, Form Decks and Roof Decks.

6. SDI - Diaphragm Design Manual.

1.4 Roof Assembly

A. The steel roof deck configuration and its installation is to conform to all requirements of Factory Mutual Corporation (FM) or Underwriters' Laboratories, Inc. (UL) as specified in Division 7. If not indicated provide as indicated by owner.

1.5 Submittals

A. Submit shop drawings under provisions of Division 1.

1. Indicate name of deck manufacturer.

2. Indicate type of deck, gage, section properties, and finish of deck material.

3. Show all details of construction and installation, including piece marks, erection sequence, location and end elevations of supports, and anchorage pattern, consistent with the design drawings and specifications.

4. Provide details of all deck accessories.

5. Arrange roof deck forming a warped surface to prevent buckling during erection or tensile stresses in connections after erection.

6. Span three or more supports, unless noted otherwise on Drawings, and lap ends 2 inches directly over the supports.

B. Submit test data for mechanical fasteners if used in lieu of welding for fastening deck to supports.

1.6 Certificates

A. When painted steel roof deck is submitted to be used as a part of a rated assembly requiring sprayed-on fireproofing, submit certified statements by the manufacturer to the following:

1. Paint specification.

2. That proposed deck and applied shop paint are UL approved products for the application of sprayed-on fireproofing.

3. That applied shop paint is in conformance with the submitted paint specification.

1.7 Quality Assurance

A. Qualify welding processes and welding operators in accordance with AWS D1.3.

1.8 Delivery, Storage, And Handling

A. Deliver and unload material in proper sequence to keep pace with the general construction work.

B. Secure approval from the ArchitectConstruction Manager's Field Representative for the location of on-site storage of materials and equipment.

C. Carefully handle and stack material to avoid damage to surface coatings or distortion.

1. Store off the ground with one end elevated to provide drainage and protect from the elements with a waterproof covering, ventilated to avoid condensation.

1.9 Job Conditions

A. Verify field established dimensions which affect the length of materials at the elevation of work.

2 Products

2.1 Steel Roof Deck - Acceptable Manufacturers

A. Epic Metals Corporation.

B. New Millennium Building Systems, LLC.

C. Canam Steel, Inc..

D. Vulcraft, Division of Nucor Corporation.

2.2 Materials

A. Sheet Steel: Conforming to ASTM A1008, Class SS, with minimum yield strength of 33 ksi.

B. Sheet Steel: Conforming to ASTM A653, Structural Quality, with minimum yield strength of 33 ksi.

C. Welding Materials: Conforming to AWS D1.3.

D. Cell Closures: Closed cell foam rubber, 1 inch thick, profiled to the decking.

E. Metal Closures, Cover Plates, and Related Accessories: sheet steel equal to decking quality.

F. Primer: Sheets phosphatized and primed with rust inhibitive baked enamel primer.

G. Galvanizing: Conforming to ASTM A653, coating class G90G60.

H. Acoustical Insulation: Inert, non-organic mineral fiber or glass fiber, sound absorbing batts compatible with the indicated fire rating requirements and having a minimum 0.85 noise reduction coefficient.

I. Touch-up Primer: Compatible and of equal quality to manufacturer's shop coat.

2.3 Design

A. Deck Configuration:

1. Depth and Gage of Deck: As shown on Drawings or to match existing.

B. Deck Accessories:

1. Cover plates, 9 inches wide.

2. Cant and valley plates, with a minimum 3 inch surface to each plane.

3. Recessed sump pan, as indicated on the Drawings.

2.4 Fabrication

A. Fabricate steel deck and accessories in accordance with approved shop drawings, design drawings, and specifications.

B. End lap joints are to provide a flush surface without any offset other than the material thickness.

2.5 Finishing

A. Provide all steel roof deck with the specified prime paint, except as specified below.

B. Chemically clean steel deck and accessories of all oil, grease, and dirt before priming.

C. In areas noted to be fireproofed, provide steel deck finish with one of the following finishes.

1. Painted, meeting the requirements set forth in Paragraph 1.6.

2. The specified galvanized finish.

3 Execution

3.1 Safety

A. Provide barricades, scaffolding, and other protection required to comply with OSHA, state laws, and municipal ordinances.

B. Provide additional safety devices as necessary to safeguard property and persons.

C. Enforce compliance with all rules and regulations governing the work.

3.2 Installation

A. Perform installation of the steel deck in accordance with approved shop drawings and in conformance with the deck manufacturer's standards.

B. Cut steel deck to fit openings located or dimensioned on the Drawings.

1. For reinforcement for these openings, see Section 05120.

C. Cut holes, and reinforce if necessary, required by other trades but not located or dimensioned on Drawings.

1. Cost of additional holes is the responsibility of the Contractor requiring the hole.

D. Bring to the attention of the proper parties supports not in proper alignment or of proper level.

1. Make correction prior to final placement of steel roof units.

E. Install steel deck accessories where shown on Drawings or specified below.

1. Cover Plates: Provide at all points where deck changes direction, unless a roof expansion joint is detailed at that point, and at any location where it is required to cut the deck across two or more flutes to accommodate deck warpage.

2. Cant and Valley Plates: Provide where adjoining deck surfaces are not in the same plane or elevation.

F. Method of Fastening: Anchor steel deck units to supporting members, including masonry walls, to provide lateral stability to these supporting members.

1. The steel deck units have been designed to function as a horizontal diaphragm as defined in the SDI-Diaphragm Design Manual.

2. Deck Attachment:

a. The basic welds for fastening steel deck units to supports are 5/8 inch diameter puddle welds by certified welders in accordance with AWS D1.3.

b. Weld each steel deck unit to each supporting member (joist, beam, angle, wall, etc.) in a pattern as indicated on the Drawings.

c. Provide intermediate fastening of side laps between supports as indicated on the Drawings.

1) Side Lap Fasteners Off of the Support: Self tapping screws, unless noted otherwise.

d. Weld coverplates and cant and valley plates to the steel deck with 5/8 inch diameter puddle welds at 6 inches on center, unless noted otherwise.

e. Securely weld or screw other accessories to adjoining surfaces.

3. Optional Attachment: Mechanical fasteners may be used in lieu of welding the decking to the supporting members.

    a. Fasteners: As recommended by the manufacturer for the thickness of the materials being fastened with equal or greater load capacity than the welding attachment indicated above.

    b. Provide fastener number and spacing equal to welds indicated on the Drawings.

G. Field Touch-Up Of Shop Paint: Paint all defective or damaged areas of the shop finish and all welds or fasteners immediately after erection of deck and accessories.

END OF SECTION

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware for:

a. Swinging doors.

2. Electronic access control system components, including:

a. Electronic access control devices.

3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.
4. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
3. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
4. Division 26 sections for connections to electrical power system and for low-voltage wiring.
5. Division 28 sections for coordination with other components of electronic access control system.

1.03 REFERENCES

A. UL - Underwriters Laboratories

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Key Systems and Nomenclature

C. ANSI - American National Standards Institute

1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.04 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 requirements.
2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

B. Action Submittals:

1. Product Data: Technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:
1) Details of interface of electrified door hardware and building safety and security systems.
2) Schematic diagram of systems that interface with electrified door hardware.
3) Point-to-point wiring.
4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.

a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:

    a. Door Index; include door number, heading number, and Architects hardware set number.
    b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
    c. Quantity, type, style, function, size, and finish of each hardware item.
    d. Name and manufacturer of each item.
    e. Fastenings and other pertinent information.
    f. Location of each hardware set cross-referenced to indications on Drawings.
    g. Explanation of all abbreviations, symbols, and codes contained in schedule.
    h. Mounting locations for hardware.
    i. Door and frame sizes and materials.
    j. Name and phone number for local manufacturer's representative for each product.
    k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.
    l. Submittal Sequence: After field verifying existing conditions, submit door hardware schedule, including and noting any adjustments required based on field verification of existing conditions, concurrent with submissions of Product Data, Samples, and Shop Drawings; Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:

    a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
    b. Use ANSI/BHMA A156.28 “Recommended Practices for Keying Systems” as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
    c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
    d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
    e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
        1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

    f. Prepare key schedule by or under supervision of supplier, detailing Owner’s final keying instructions for locks.

6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.

C. Informational Submittals:

1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product data for electrified door hardware:

    a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.

3. Certificates of Compliance:

    a. UL listings for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
    b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in “QUALITY ASSURANCE” article, herein.
    c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in “QUALITY ASSURANCE” article, herein.

4. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

    a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
    b. Catalog pages for each product.
    c. Factory order acknowledgement numbers (for warranty and service)
    d. Name, address, and phone number of local representative for each manufacturer.
    e. Parts list for each product.
    f. Final approved hardware schedule, edited to reflect conditions as-installed.
    g. Final keying schedule
    h. Copies of floor plans with keying nomenclature
    i. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
    j. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.05 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies:

1. Furnish finish hardware to comply with the requirements of laws, codes, ordinances, and regulations of the governmental authorities having jurisdiction where such requirements exceed the requirements of the Specifications.
2. Furnish finish hardware to comply with the requirements of the regulations for public building accommodations for physically handicapped persons of the governmental authority having jurisdiction and to comply with Americans with Disabilities Act.
3. Provide hardware for fire rated openings in compliance with NFPA 80 and state and local building code requirements. Provide only hardware that has been tested and listed by UL for types and sizes of doors required and complies with requirements of door and door frame labels.

B. Supplier:

1. Mechanical Hardware

    a. Shall be an established firm dealing in contract builders' hardware. Distributor must have adequate inventory, qualified personnel on staff and be located within 100 miles of the project. The distributor must be a factory-authorized dealer for all materials required. The supplier shall be or have in employment an Architectural Hardware Consultant (AHC).
    b. Door Hardware distributor/supplier listed on the Bid Form shall be a factory authorized distributor for the hardware specified. This requirement will not be allowed to be med by a non-factory authorized dealer subcontracting to a factory authorized dealer. Any submitted bid that attempts to circumvent this requirement will be considered non-response and will be removed from consideration.

2. Electrified Hardware:

    a. Shall be an experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials. The supplier must be a factory-authorized distributor for all materials required.
    b. Shall prepare data for electrified door hardware, including shop drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this project.
    c. Shall have experience in providing consulting services for electrified door hardware installations.

C. Installer Qualifications:

1. Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.

D. Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
2. Can provide installation and technical data to Architect and other related subcontractors.
3. Can inspect and verify components are in working order upon completion of installation.
4. Capable of producing wiring diagrams.
5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.

E. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

F. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

G. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

H. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in “REFERENCES” article, herein.

I. Field Verification Conference

1. To ensure design intent can be met after verification of existing conditions, conduct an onsite door by door review of the submittal
2. Conduct the meeting with the architect and the owner to complete a final verification of how each door will function, including product to be supplied.

J. Keying Conference

1. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
b. Preliminary key system schematic diagram.
c. Requirements for key control system.
d. Requirements for access control.
e. Address for delivery of keys.

2. Attendees of Keying Conference: Owner, Contractor, Architect, Installer, Owner’s security consultant and Supplier’s Architectural Hardware Consultant.

K. Pre-installation Conference

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.

L. Coordination Conferences:

1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

1. Deliver each article of hardware in manufacturer’s original packaging.

C. Project Conditions:

1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

D. Protection and Damage:

1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

E. Deliver keys to Owner by registered mail or overnight package service.

1.07 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, access control, and keying with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.08 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.

a. Closers:
1) Mechanical: 30 years.

b. Automatic Operators: 2 years.
c. Exit Devices:
1) Mechanical: 3 years.
2) Electrified: 1 year.

d. Locksets:
   1) Mechanical: 3 years; Schlage ND series, 10 years
   2) Electrified: 1 year.

e. Continuous Hinges: Lifetime warranty.
f. Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.09 MAINTENANCE

A. Maintenance Tools: Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to insure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: “No Substitute.”

   1. Where “No Substitute” is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as “Scheduled Manufacturer” or “Acceptable Manufacturers” in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.

C. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fasteners

   1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
   2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
   3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not

use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
2. Use materials which match materials of adjacent modified areas.
3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Ives 5BB series.
2. Acceptable Manufacturers and Products: Hager BB series (ECBB series not approved), McKinney TA/T4A series (MacPro series not approved).

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:

a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

3. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:

a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
b. Interior: Heavy weight, steel, 5 inches (127 mm) high

4. 2 inches or thicker doors:

a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
b. Interior: Heavy weight, steel, 5 inches (127 mm) high

5. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
6. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
7. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

a. Steel Hinges: Steel pins
b. Non-Ferrous Hinges: Stainless steel pins
c. Out-Swinging Exterior Doors: Non-removable pins

d. Out-Swinging Interior Lockable Doors: Non-removable pins
e. Interior Non-lockable Doors: Non-rising pins

8. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.

2.04 CONTINUOUS HINGES

A. Aluminum Geared

1. Manufacturers:

a. Scheduled Manufacturer: Ives.
b. Acceptable Manufacturers: Pemko, Select.

2. Requirements:

a. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
b. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
c. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
d. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
e. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
f. Install hinges with fasteners supplied by manufacturer.
g. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 ELECTRIC POWER TRANSFER

A. Manufacturers:

a. Scheduled Manufacturer: Von Duprin EPT-10.
b. Acceptable Manufacturers: Precision EPT-12C, Securitron CEPT-10.

B. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires sufficient to accommodate electric function of specified hardware.

C. Locate electric power transfer per manufacturer’s template and UL requirements, unless interference with operation of door or other hardware items.

2.06 DOOR CORDS

A. Manufacturers:

a. Scheduled Manufacturer: Schlage 788/798 Series.

b. Acceptable Manufacturers: Securitron TSB Series, Locknetics DC Series, Precision EPT-2.

B. Provide door cords with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.

C. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

2.07 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Burns, Rockwood.

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.08 COORDINATORS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.
2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers, surface vertical rod exit device strikes or other stop mounted hardware. Factory-prepared coordinators for vertical rod devices as specified.

2.09 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage L9000 series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3 hour fire doors.

2. Indicators: Where specified, provide indicator window measuring a minimum 2 inch x 1/2 inch with 180 degree visibility. Provide messages color-coded with full text and/or symbols, as scheduled, for easy visibility.

    a. Inside Security Indicator: Provide indicator above cylinder or thumbturn for visibility during lockdown that identifies the outside trim as locked/unlocked status of the door.
    b. Outside Status Indicator: Provide indicator above cylinder for visibility that identifies the outside trim as locked/unlocked status of the door.
    c. Outside Occupancy Indicator: Provide indicator above cylinder or emergency release for visibility while operating the lock that identifies an occupied/unoccupied status of the lock or latch.

3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to “KEYING” article, herein.
5. Verify lock functions with owner prior to ordering.
6. Install thumb turns so they are in vertical position when doors are unlocked and in horizontal position when doors are locked.
7. Install thumb turns so they are in vertical position when doors are unlocked and in horizontal position when doors are locked.
8. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
9. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
10. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.
11. Provide motor based electrified locksets with electrified options as scheduled in the hardware sets and comply with the following requirements:

    a. Universal input voltage – single chassis accepts 12 or 24V DC to allow for changes in the field without changing lock chassis.
    b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case
    c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.
    d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate “hot levers” in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
    e. Request to Exit Switch (RX) –
        1) Modular Design – provide electrified locks capable of using, adding, or changing a modular RX switch without opening the lock case.
        2) Monitoring – where scheduled, provide a request to exit (RX) switch that detects rotation of the inside lever.

    f. Door Position Sensor (DPS) –
        1) Monitoring – where scheduled, provide a door position sensor (DPS) switch that detects the position of the door in relation to the frame.

    g. Connections – provide quick-connect Molex system standard.

12. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.

    a. Lever Design: Schlage 06N.

b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.10 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage ND series.
2. ~~2.~~ Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3 hour fire doors.
2. Cylinders: Refer to “KEYING” article, herein.
3. Verify lock functions with owner prior to ordering.
4. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
5. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
6. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

a. Lever Design: Schlage Rhodes.
b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.11 AUXILIARY LOCKS

A. Deadbolts:

1. Manufacturers and Products:

a. Scheduled Manufacturer and Product: Schlage B600 Series.
b. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

2. Requirements:

a. Provide deadbolt series conforming to ANSI/BHMA A156 and function as specified.
b. Cylinders: Refer to “KEYING” article, herein.
c. Provide deadbolts with standard 2-3/4 inches (70 mm) backset. Provide 2-3/8 inches (60 mm) where noted or if door or frame detail requires. Provide deadbolt with full 1 inch (25 mm) throw, constructed of steel alloy.
d. Provide manufacturer’s standard strike.

2.12 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Von Duprin 99/33A series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to “KEYING” article, herein.
3. Verify exit device functions with owner prior to ordering.
4. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
5. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
6. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer’s approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double or single tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

    a. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.13 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Von Duprin 6000 Series.
2. Acceptable Manufacturers and Products: Folger Adam 300 Series, HES 1006 Series.

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary-resistant.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.14 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage or Von Duprin PS900 series
2. Acceptable Manufacturers and Products: No Substitutions

B. Requirements:

1. Provide power supplies, recommended and approved by manufacturer of electrified locking component, for operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring power supply.
2. Provide appropriate quantity and size of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide appropriate option boards for power supplies necessary for proper operation of the electrified locking components as recommended by the manufacturer of the electrified locking components with consideration for each electrified component used in the system.
4. Provide regulated and filtered 24 VDC power supply and UL class 2 listed.
5. Options:

    a. Provide power supply, where specified, with internal capability of charging sealed backup batteries 24 VDC, in addition to operating DC load.
    b. Provide sealed batteries for battery back-up at each power supply where specified.
    c. Provide keyed power supply cabinet.

6. Provide power supply in an enclosure, complete, and requiring 120VAC to fused input.
7. Provide power supply with emergency release terminals, where specified, that allow release of all devices upon activation of fire alarm system complete with fire alarm input for initiating “no delay” exiting mode.

2.15 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer: Schlage
2. Acceptable Manufacturers: No Substitutions – Facility Standard

B. Requirements:

1. Provide cylinders/cores, from the same manufacturer of locksets, compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder face finished to match lockset, manufacturer’s series as indicated. Refer to “KEYING” article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. Match owner’s existing system.
    b. Cylinder/Core Type: Large Format or Full Size Interchangeable Core (LFIC/FSIC).
    c. Keyway/Security Type: Restricted/Patented.

3. Nickel silver bottom pins.
4. Replaceable Construction Cores.

    a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
        1) 2 construction control keys.
        2) 12 construction change (day) keys.

2.16 KEYING

A. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Provide keying system capable of multiplex masterkeying.
2. Permanent cylinders/cores keyed by the manufacturer according to the following key system.

    a. Keying system as directed by the Owner.
    b. Match Owner's existing system.
    c. (Great)Grand Master Key System: Cylinders/cores operated by change (day) keys and subsequent masters (including grand/great grand) keys.

3. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements shall be cause for replacement of cylinders/cores involved at no additional cost to Owner.
4. Provide keys with the following features:

    a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm).
    b. Restricted/Patented Keyway.

5. Identification:

    a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication "Keying Systems and Nomenclature" for identification. Blind code marks shall not include actual key cuts.
    b. Identification stamping provisions must be approved by the Architect and Owner.
    c. Stamp keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE".
    d. Failure to comply with stamping requirements shall be cause for replacement of keys involved at no additional cost to Owner.
    e. Verify with owner if permanent cylinders/cores and/or keys are to be shipped directly to Owner or to Contractor.

6. Quantity: Furnish in the following quantities.

    a. Change (Day) Keys: 3 per cylinder/core.
    b. Permanent Control Keys: 3 (if required).
    c. Master Keys: 6 per master.
    d. Unused balance of key blanks shall be furnished to Owner with the cut keys.

2.17 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4040XP series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.18 ELECTRO-HYDRAULIC AUTOMATIC OPERATORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4600 series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide low energy automatic operator units with hydraulic closer complying with ANSI/BHMA A156.19.
2. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
3. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check, and opening and closing speed adjustment valves to control door
4. Provide units with on/off switch for manual operation, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay.
5. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check valve, sweep valve, latch valve to control door.
6. Provide drop plates, brackets, or adapters for arms as required for details.

7. Provide hard-wired actuator switches for operation as specified.
8. Provide weather-resistant actuators at exterior applications.
9. Provide key switches with LED's, recommended and approved by manufacturer of automatic operator as required for function described in operation description of hardware group below. Cylinders: Refer to "KEYING" article, herein.
10. Provide complete assemblies of controls, switches, power supplies, relays, and parts/material recommended and approved by manufacturer of automatic operator for each individual leaf. Actuators control both doors simultaneously at pairs. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings as directed by Architect. Locate actuators, key switches, and other controls as directed by Architect.
11. Provide units with vestibule inputs that allow sequencing operation of two units, and SPDT relay for interfacing with latching or locking devices.

2.19 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
7. Provide wire pulls of solid bar stock, diameter and length as scheduled.
8. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.20 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:

a. Kick Plates: 10 inches (254 mm) high by 1.5 inches (38 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
b. Mop Plates: 4 inches (102 mm) high by 1.5 inches (38 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
c. Armor Plates: 36 inches (914 mm) high by 1.5 inches (38 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.21 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers: Glynn-Johnson.
2. Acceptable Manufacturers: ABH, Dorma.

B. Requirements:

1. Provide heavy duty concealed mounted overhead stop or holder as specified for exterior and interior vestibule single acting doors.
2. Provide heavy duty concealed mounted overhead stop or holder as specified for double acting doors.
3. Provide heavy or medium duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking wall, open against equipment, casework, sidelights, and where conditions do not allow wall stop or floor stop presents tripping hazard.
4. Where overhead holders are specified provide friction type at doors without closer and positive type at doors with closer.

2.22 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.23 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: Zero International.
2. Acceptable Manufacturers: National Guard, Reese.

B. Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Size of thresholds:

    a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
    b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width

4. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.24 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Steelcraft, Trimco.

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.25 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer: Schlage.
2. Acceptable Manufacturers: GE-Interlogix.

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches between switch and magnetic locking device.

2.26 FINISHES

A. Provide finish for each item as indicated in the sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.

C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.02 PREPARATION

A. Where on-site modification of doors and frames is required:

1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
2. Field modify and prepare existing door and frame for new hardware being installed.
3. When modifications are exposed to view, use concealed fasteners, when possible.
4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:

    a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
    b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
    c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.03 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install each hardware item in compliance with manufacturer’s instructions and recommendations, using only fasteners provided by manufacturer.

C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

H. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as indicated in keying section.

I. Wiring: Coordinate with Division 26, ELECTRICAL sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Testing and labeling wires with Architect’s opening number.
6. Connections to panel interface modules, controllers and gateways

J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

L. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

M. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

N. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

O. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

P. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

Q. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

R. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.04 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant: Engage qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.05 FIELD INSPECTIONS:

A. Fire Door Assembly Inspection and Testing: Provide functional testing and inspection of fire door assemblies in accordance with NFPA 80-2007/2010. Inspections shall be performed by individuals certified by Intertek as a Fire Door Assembly Inspector, using reporting forms provided by the Door and Hardware Institute (DHI). Alternatively, inspections may be performed by individuals acceptable to the Architect, who have knowledge and understanding of the operating components of the applicable door type, and who have experience in preparing written reports of testing and inspection results.

1. Schedule fire door assembly inspection within 90 days of Substantial Completion of the Project.
2. Submit a signed, written final report as specified in Paragraph 1.4: Submittals.
3. Contractor shall correct all deficiencies and schedule a reinspection of fire door assemblies which were noted as deficient on the inspection report.
4. Inspector shall reinspect fire door assemblies after repairs are made.
5. Additional reinspections which are required due to incomplete repairs will be performed by the inspector at the expense of the Contractor.

B. Provide inspection of required egress door assemblies by a qualified person in accordance with NFPA 101.

1. Schedule egress door assembly inspection within 90 days of Substantial Completion of the Project for the required openings.
2. Submit a signed, written final report as specified in Paragraph 1.03.E.2.
3. Correct all deficiencies and schedule a reinspection of egress door assemblies noted as deficient on the inspection report.
4. Inspector to reinspect required egress door assemblies after repairs are made.

3.06 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, Installer's Architectural Hardware Consultant must examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.07 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.08 DEMONSTRATION

A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.09 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier’s responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application

C. Hardware items are referenced in the following hardware. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets:

82171 OPT0301419 Version 2

HARDWARE GROUP NO. 01

For use on Door #(s):
B-116A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PASSAGE SET	L9010 06N	612	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 02

For use on Door #(s):
C-104B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	CLASSROOM X STORERM	ND70X80CD RHO XN12-006	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE	630	VON
1	EA	OH STOP	90S	630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DOOR CONTACT	7766	628	SCE
1	EA	REMOTE RELEASE	SPECIFIED WITH DOOR C-101D		
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR CLOSED AND ALWAYS LOCKED FROM RECEPTION SIDE. DOOR UNLOCKED FROM CORRIDOR SIDE DURING SCHOOL HOURS AND LOCKED FROM CORRIDOR SIDE AFTER HOURS AND ON WEEKENDS.

VALID CREDENTIAL OR PUSH BUTTON AT RECEPTION DESK MOMENTARILY UNLOCKS DOOR ALLOWING ENTRY. DOOR REMAINS LOCKED UPON LOSS OF POWER. DOOR CONTACT TO MONITOR DOOR POSITION.

NOTE: VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

DESK CONSOLE CONTROLS DOORS C-101D, C-104A AND C-104B. EACH DOOR CONTROLED INDIVIDUALLY.

HARDWARE GROUP NO. 03

For use on Door #(s):
E-106A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PRIVACY LOCK	L9040 06N L583-363 L283-722	612	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	GASKETING	488SCL PSA	CL	ZER

HARDWARE GROUP NO. 04

For use on Door #(s):
C-123A C-134A C-137A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PRIVACY LOCK	L9040 06N L583-363 L283-722	612	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
1	EA	GASKETING	488SCL PSA	CL	ZER

NOTE: VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

HARDWARE GROUP NO. 05

For use on Door #(s):
C-108A C-112A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06N L583-363	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 06

For use on Door #(s):
C-122A D-114A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06N L583-363	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 07

For use on Door #(s):
B-113A B-114A C-111A E-124A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 08

For use on Door #(s):
C-121AA

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	SGL CYL DEADBOLT	B660T	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	STOREROOM LOCK	L9080T 06N	613	SCH
1	EA	OH STOP	90S	612	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 09

For use on Door #(s):
C-120A D-107AB E-125A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 09A

For use on Door #(s):
C-105A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS401/402CVX	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 10

For use on Door #(s):
C-143A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	WALL STOP	WS401/402CVX	626	IVE

HARDWARE GROUP NO. 11

For use on Door #(s):
A-107A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 12

For use on Door #(s):
B-119A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 13

For use on Door #(s):
C-104A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	EU MORTISE LOCK	L9092TEU 06N RX DPS	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	WALL STOP	WS401/402CVX	626	IVE
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	REMOTE RELEASE	SPECIFIED WITH DOOR C-101D		
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. VALID CREDENTIAL OR PUSH BUTTON AT RECEPTION DESK MOMENTARILY UNLOCKS DOOR ALLOWING ENTRY. DOOR REMAINS LOCKED UPON LOSS OF POWER. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

RX SWITCH AND DOOR CONTACT ARE INTEGRAL TO LOCK SET.

DESK CONSOLE CONTROLS DOORS C-101D, C-104A AND C-104B. EACH DOOR CONTROLED INDIVIDUALLY.

HARDWARE GROUP NO. 14

For use on Door #(s):
A-106A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 15

For use on Door #(s):
B-105A B-105BA B-115A D-109A D-111A D-113A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 16

For use on Door #(s):
C-136A D-108A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4041 DEL RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 17

For use on Door #(s):
E-109A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY	628	IVE
1	EA	AUTO FLUSH BOLT	FB31P/FB41P AS REQ'D	612	IVE
1	EA	DUST PROOF STRIKE	DP2	612	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	COORDINATOR	COR X FL (MB/MBF AS REQ'D)	628	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	691	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	612	IVE
1	EA	RAIN DRIP	142AA	AA	ZER
2	EA	MEETING STILE	328AA-S	AA	ZER
1	EA	GASKETING	429AA	AA	ZER
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

NOTE: VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 18

For use on Door #(s):
E-122A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	PANIC HARDWARE	99-NL	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 19

For use on Door #(s):
B-112A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-NL	612	VON
1	EA	RIM HOUSING	20-079	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 20

For use on Door #(s):
C-101D

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	DOOR CORD/POWER TRANSFER	788C-18/EPT-10 (VERIFY IF EXISTING FRAME HAS PREP FOR EPT OR PROVIDE DOOR CORDS)	626	SCE
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	OH STOP	90S	630	GLY
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
2	EA	ACTUATOR, TOUCH	8310-853T	630	LCN
1	EA	RAIN DRIP	142AA	AA	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	CONSOLE	8204 M M M M		SCE
1	EA	AI PHONE	BY ACCESS CONTROL PROVIDER		
1	EA	DOOR CONTACT	7766	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL [COORINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOOR CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

LOCKED HOURS: VALID CREDENTIAL OR REMOTE RELEASE MOMENTARILY UNLOCKS DOOR AND ACTIVATES EXTERIOR ACTUATOR. WHEN ACTIVE, PRESSING EXTERIOR ACTUATOR CYCLES AUTOMATIC OPERATOR AND MONETARILY OPENS DOOR. INTERIOR ACTUATOR ALWAYS ACTIVE.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

DESK CONSOLE CONTROLS DOORS C-101D, C-104A AND C-104B.

HARDWARE GROUP NO. 21

For use on Door #(s):
C-101H

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	DOOR CORD/POWER TRANSFER	788C-18/EPT-10 (VERIFY IF EXISTING FRAME HAS PREP FOR EPT OR PROVIDE DOOR CORDS)	626	SCE
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	OH STOP	90S	630	GLY
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
2	EA	ACTUATOR, TOUCH	8310-853T	630	LCN
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DOOR CONTACT	7766	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL [COORINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOOR CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

LOCKED HOURS: VALID CREDENTIAL MOMENTARILY UNLOCKS DOOR AND ACTIVATES EXTERIOR ACTUATOR. WHEN ACTIVE, PRESSING EXTERIOR ACTUATOR CYCLES AUTOMATIC OPERATOR AND MONETARILY OPENS DOOR. INTERIOR ACTUATOR ALWAYS ACTIVE.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

HARDWARE GROUP NO. 22

For use on Door #(s):
B-112B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	PANIC HARDWARE	CD-99-NL-OP-110MD	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094 X XQ11-948 36-083	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	RAIN DRIP	142AA	AA	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 23

For use on Door #(s):
C-101B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	MORTISE CYLINDER	26-094	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	RAIN DRIP	142AA	AA	ZER
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 24

For use on Door #(s):
C-101A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	RAIN DRIP	142AA	AA	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOOR CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 25

For use on Door #(s):
C-105B D-113B E-122B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	EA	NOTE	NO HARDWARE REQUIRED (BORROWED LITE)		

HARDWARE GROUP NO. 26

For use on Door #(s):
C-120B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CYLINDER	RIM/MORTISE CYLINDER AS REQ'D	612	SCH
	EA	NOTE	BALANCE OF HARDWARE BY DOOR MFR		

HARDWARE GROUP NO. 27

For use on Door #(s):
D-119A D-124A E-102A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	9975-NL	612	VON
1	EA	MORTISE CYLINDER	26-094	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	691	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	612	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

NOTE: VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

END OF SECTION

SECTION 31 10 00
SITE CLEARING

1 General

1.1 Section Includes

A. Clear site of plant life and grass.

B. Remove root system of trees and shrubs.

C. Remove surface debris.

D. Remove all obstructions within limits of construction, unless specifically noted to remain.

1.2 Related Sections

A. Section 02 41 00 - Building Demolition.

B. Section 02 41 20 - Removals: Removal of pavement, equipment, poles, etc.

1.3 Regulatory Requirements

A. Conform to applicable local code for disposal of debris burning debris on site.

2 Products

Not Used.

3 Execution

3.1 Site Clearing

A. Clear areas required for access to site and execution of Work.

B. Remove trees and shrubs within marked areas.

C. Grub out stumps, surface rock, and roots.

D. Clear undergrowth and deadwood, without disturbing subsoil.

3.2 Protection

A. Protect plant growth and features remaining as final landscaping.

B. Protect bench marks and existing work from damage or displacement.

C. Maintain designated site access for vehicle and pedestrian traffic.

3.3 Removal

A. Remove debris from site.

END OF SECTION

SECTION 31 20 00
EARTHWORK

1 General

1.1 Section Includes

A. Remove and stockpile topsoil.

B. Excavate and stockpile subsoil.

C. Grade and rough contour site.

D. Building excavation.

E. Shoring excavations.

F. Building perimeter backfilling.

G. Fill under buildings and slabs-on-grade.

H. Compaction requirements.

I. Excavate trenches for utilities.

J. Compacted bed and compacted fill over utilities.

K. Subgrade ready for paving.

L. Subgrade ready for topsoil.

M. Finish grade and proof roll subsoil.

N. Place and level stockpiled topsoil.

O. Rip-Rap and accessories.

P. Lime byproduct stabilization.

Q. Provide, place, and level imported topsoil.

R. Fill planters and pots tree grate pits with topsoil.

1.2 Related Sections

A. Division 0 - Soil Investigation Data: Bore hole locations and findings of soil and subsurface report.

B. Division 1 - Quality Control: Inspection and testing.

C. Division 1 - Construction Facilities and Temporary Controls: Dewatering excavations.

D. Division 1 - Field Engineering: Establishing lines and levels.

E. Section 02 41 30 - Minor Demolition for Remodeling

F. Section 31 10 00 - Site Clearing.

G. Section 33 11 00 - Water Distribution Systems.

H. Section 31 25 13 - Soil Erosion Control.

I. Section 32 91 13 - Soil Preparation.

J. Section 22 10 00 - Plumbing Piping.

K. Section 26 05 00 - Basic Electrical Requirements.

1.3 References

A. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates.

B. ASTM D698 - Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.

C. ASTM D1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.

D. ASTM D2922 - Density of Soil and Soil-Aggregate in Place by Nuclear Methods.

E. ASTM D3017 - Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods.

F. INDOT Standards – Latest edition Indiana Department of Transportation Standard Specifications, including Supplements.

1.4 Submittals

A. Submit samples and product data under provisions of Division 1.

B. Furnish certification of gradation sieve analysis by independent testing laboratory for all select fill/backfill materials.

C. Furnish a 5 pound sample of each type of imported fill for approval by Architect/Engineer.

D. Provide record drawings for storm and sanitary sewers prepared by a registered engineer or land surveyor, within ten days of installation and testing.

E. Imported Topsoil:

1. Submit the location of proposed site of imported topsoil excavation to the Architect.

    a. List crops grown during the past two (2) years.

b. Submit before delivery of topsoil.

2. Test imported topsoil for N-P-K requirements, organic matter content, pH, and sand/silt/and clay analysis.

   a. Document soil type.

   b. Submit test results to the Architect for approval.

3. Test composite soil slices made up of ten cores per acre.

   a. Test soil samples from each area from which topsoil is removed.

   b. Test topsoil immediately upon receipt of the Contract.

4. Submit written analysis listing topsoil testing lab's recommendations for additions of fertilizer and organic matter as well as methods for adjusting pH, if required.

   a. Submit sand/silt/clay analysis and documentation of soil type.

   b. Test for lawn as the proposed crop.

F. Imported Sandy Loam:

1. Submit the location of proposed site of imported sandy loam excavation to the Architect.

2. Test imported sandy loam for N-P-K requirements, organic matter content, pH, and sand/silt/clay analysis.

   a. Document soil type and USDA textural class analysis.

3. Submit written analysis listing testing laboratory's recommendations for additions of fertilizer and organic matter as well as methods for adjusting pH if required.

   a. Submit sand/silt/clay analysis and documentation of soil type.

   b. Submit 5 pound sample.

G. Submit 5 pound sample of brick dust.

1.5 Project Record Documents

A. Submit record documents under provisions of Division 1.

B. Accurately record location of utilities remaining and rerouted utilities by horizontal dimensions, elevations or inverts, and slope gradients.

C. Within 10 days of installation of work in this section, submit one electronic file and one mylar drawing, certified by licensed engineer or surveyor, indicating date, and labeled "As-Built Drawings."

1.6 Tests

A. Perform tests and analysis of fill materials in accordance with ASTM D698D1557 and under provisions of Division 1.

1.7 Existing Conditions

A. Beginning work of this section means acceptance of existing conditions.

1.8 Protection

A. Protect trees, shrubs, lawns, rock outcropping, and other features remaining as portion of final landscaping.

B. Protect bench marks, existing structures, fences, roads, sidewalks, paving, and curbs from damage.

C. Determine location of underground utilities and perform work in a manner which will avoid possible damage.

1. Hand excavate as required.

D. Repair any damage incurred during construction at no cost to the Owner.

E. Provide any required dams, fills, temporary trenches, as required to protect any adjacent property from damage due to accelerated or undesirable surface water runoff from construction site.

F. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect Construction Manager before proceeding.

G. Protect excavations by shoring, bracing, sheet piling, underpinning, or other methods required to prevent cave-in or loose soil from falling into excavation.

H. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.

I. Notify Construction Manager of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.

J. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.

K. Grade top perimeter of excavation to prevent surface water runoff into excavation.

L. Keep subgrades shaped and drained until placement of the succeeding course.

1. Do not store or stockpile material on the subgrades.

M. Repair any broken or interrupted field tile.

1. Reroute as required to maintain drainage.

2. See Section 33 46 00 for pipe material.

1.9 Sequencing And Scheduling

A. Coordinate work under provisions of Division 1.

B. Coordinate the work of this Section with installation of underground utilities, irrigation system, and remainder of site work.

2 Products

2.1 Common Materials

A. Topsoil: Excavated material, graded free of roots, rocks larger than one inch, subsoil, debris, and large weeds.

B. Subsoil: Excavated material, graded free of lumps larger than 6 inches, rocks larger than 3 inches, and debris.

C. Imported Topsoil: Dry, natural, uncompacted, silty clayloam/clayloam, neutral pH with minimum 5 percent organic matter, and free of debris from location approved by the Architect, tested as part of this section.

D. Site Fill: Earth reasonably free of roots, trash, frozen material, and stones larger than 6 inches.

E. Pavement Subgrade Fill: Any fill material approved by the Architect, free of organic material and debris, with a plasticity index less than 30, maximum particle size of 3 inches, maximum dry density in excess of 100 pounds per cubic foot, and capable of being compacted to 95 percent of the maximum dry density in accordance with ASTM D698D1557.

1. Use of on-site material is subject to approval of the Architect and testing laboratory to ensure conformance with these specifications.

2.2 Select Fill/Backfill Materials

A. Type A - Structural Fill: Bank run gravel or sand, free of shale, clay, friable materials, and debris.

1. Plasticity index less than 25.

2. Maximum particle size of 3 inches.

3. Maximum dry density in excess of 100 pounds per cubic foot capable of being compacted to 95 percent of the maximum dry density in accordance with ASTM D698D1557.

4. Import bank run from an approved source off site.

B. Type A - Structural Fill: Any fill material free of organic material and debris.

1. Plasticity index less than 30.

2. Maximum particle size of 3 inches.

3. Maximum dry density in excess of 100 pounds per cubic foot capable of being compacted to 95 percent of the maximum dry density in accordance with ASTM D698D1557.

C. Type B - Drainage Fill: Clean sand capable of being compacted to 95 percent of maximum dry density in accordance with ASTM D698D1557.

1. Containing less than 6 percent passing the No. 200 sieve.

2. Crushed stone or gravel is not acceptable.

D. Type C - Fuel Tank Backfill: Pea Gravel, natural stone; washed free of clay, loam, friable or soluble materials, and organic matter.

1. 1/4 inch minimum to 5/8 inch maximum size.

2. Graded in accordance with ASTM C136.

2.3 Select Bed And Fill/Backfill Materials For Utilities

A. Type A: Pit run gravel or crushed stone, free of shale, clay, friable materials and debris; graded in accordance with ASTM C136 within the following limits:

Sieve Size	Percent Passing
1 1/2"	100
1"	80 to 100
3/4"	60 to 95
1/2"	30 to 80
No. 4	0 to 60
No. 8	0 to 50
No. 200	0 to 10

B. Type B and Select Bed: Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, or organic matter; graded in accordance with ASTM C136 within the following limits:

Sieve Size	Percent Passing
No. 4	95 to 100
No. 16	10 to 100
No. 50	5 to 50
No. 100	0 to 30
No. 200	0 to 6

C. No. 8 stone for sanitary and storm sewers in Marion County.

2.4 Sandy Loam

A. Imported Sandy Loam: Dry, natural, uncompacted, sandy loam, with moderately coarse texture

1. 15 percent to 20 percent clay, 50 percent to 70 percent sand, 10 percent to 35 percent silt.

2. Neutral pH with 5 percent organic matter, and free of debris.

3. From location approved the Architect, tested as part of this section.

2.5 Rip-Rap

A. 6 inch to 12 inch stone, Indiana Department of Transportation (INDOT) Standard Specifications, Section 616.

B. Filter Fabric: Nonwoven.

1. 180N as manufactured by Nicolon Corporation, Norcross, Georgia.

2. 4553 as manufactured by Amoco Fabrics and Fibers Company, Atlanta, Georgia.

3. FX-70HS as manufactured by Carthage Mills, Cincinnati, Ohio.

2.6 Lime Byproduct

A. Kiln dust from hydrated lime process.

2.7 Preparation

A. Identify required lines, levels, contours, and datum.

1. Coordinate with Division 1.

B. Identify known below grade utilities.

1. Stake and flag locations.

C. Identify and flag above grade utilities.

D. Notify utility company to remove and relocate utilities.

E. Upon discovery of unknown utility or concealed conditions, discontinue affected work; notify Construction Manager.

F. When necessary, compact subgrade surfaces to density requirements for subsequent backfill material.

G. Proof roll subgrade.

1. Cut out soft areas of subgrade not readily capable of insitu compaction.

2. See Division 1 “Unit Prices” for removal of soft subgrade and backfill.

3. Backfill with Type A material and compact to density equal to requirements for subsequent backfill material.

2.8 Inspection

A. Verify stockpiled fill to be reused is approved.

B. Verify foundation perimeter drainage installation has been inspected.

C. Verify perimeter insulation is installed and approved.

D. Verify termite control treatment has been performed.

E. Verify dampproofing is applied and approved.

F. Verify foundation or basement walls are braced to support surcharge forces imposed by backfilling operations.

G. Verify areas to be backfilled are free of debris, snow, ice, or water, and ground surfaces are not frozen.

2.9 Topsoil Excavation

A. Excavate a minimum of 6 inches of topsoil from areas to be further excavated, relandscaped, or regraded marked areas entire site and stockpile in area designated on site remove from site.

1. Based upon the Soil Investigation Data, stripping of 6 inches to 12 inches is anticipated.

B. Do not excavate wet topsoil.

C. Stockpile topsoil to depth not exceeding 8 feet.

D. Cover to protect from erosion.

2.10 Excavation

A. Excavate subsoil required for building foundations, construction operations, and other work.

1. Excavate subsoil from areas to be landscaped or regraded.

B. Excavate subsoil required for piping and utilities.

C. Cut trenches sufficiently wide to enable installation of utilities and to allow for inspection, and required compaction with suitable equipment.

D. Hand trim excavation and leave free of loose matter.

1. Hand trim for bell and spigot pipe joints.

E. Excavate soft or otherwise undesirable material.

F. Extend excavation in cut areas a sufficient distance beyond the pavement edge to allow for compaction and temporary lateral grade transitions.

G. Excavate to working elevation for piling work.

1. Coordinate special requirements for piling.

H. Machine slope banks to angle of repose or less until shored.

1. Comply with OSHA requirements and other authorities having jurisdiction.

I. Excavation shall not interfere with normal 45 degree bearing splay of any foundation.

J. Remove lumped subsoil, rock up to 1/3 cubic yard, measured by volume, and boulders.

K. Correct unauthorized excavation at no cost to Owner.

L. Fill over-excavated areas under structure bearing surfaces in accordance with direction by Architect/EngineerConstruction Manager.

M. Excavate trenches for masonry wall footings wide enough to allow mason to install his work.

N. In cut areas, scarify upper 6 inches of subgrade under pavement and re-compact to 95 percent.

O. Remove or break off boulders or ledge stone to a depth of not less than 6 inches below the subgrade.

P. Remove excavated material not suitable for fill from the site.

Q. Stockpile excess material to be reused as backfill or site fill at areas designated on the site.

R. Stockpile subsoil to depth not exceeding 8 feet.

1. Remove any excess excavated material from the site, unless otherwise noted.

S. Finish grades shown on Drawings may be adjusted as approved by the Architect to compensate for excess or deficient material.

2.11 Filling And Backfilling

A. Backfill areas to contours and elevations.

1. Use unfrozen materials.

B. Backfill systematically, as early as possible, to allow maximum time for natural settlement.

1. Do not backfill over porous, wet, or spongy subgrade surfaces.

C. Place and compact select fill materials in continuous layers not exceeding 68 inches loose depth.

D. Place and compact common fill materials in continuous layers not exceeding 812 inches loose depth.

E. Employ a placement method so as not to disturb or damage foundation perimeter drainage foundation dampproofing foundation waterproofing and protective cover utilities in trenches.

F. Maintain optimum moisture content of backfill materials to attain required compaction density.

G. Backfill against supported foundation walls.

1. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.

H. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise.

I. Make changes in grade gradual.

1. Blend slopes into level areas.

J. Leave stockpile areas completely free of excess fill materials.

2.12 Site Filling

A. Plow, step, or break up sloped ground surfaces steeper than one vertical to four horizontal on which fill is to be placed so that the fill will bond with the existing surface.

B. Place site fill in layers not exceeding 12 inches.

1. Compact each layer with at least four passes of an approved tandem or three-wheeled power roller prior to placing the next layer.

C. Proof roll subgrade.

1. Cut out soft areas not capable of insitu compaction.

2. See Division 0 for unit price for removal of soft subgrade and backfill with compacted pavement subgrade fill.

D. Place pavement subgrade fill in layers not exceeding 8 inches.

1. Spread each layer with a road machine or other approved device and compact prior to placing next layer.

E. Compact subgrades and subgrade fills with an approved tandem or three-wheeled power roller weighing not less than 10 tons.

1. Extend compaction a minimum of one foot beyond the pavement edges.

2. Compact to 95 percent of dry density as determined by ASTM D698D1557.

F. Compact subgrades for pavement or sidewalk replacement areas by mechanical tampers or machine methods as appropriate for the accessibility of the area.

G. Additional Fill: Provide all additional fill material required from an approved source off of the site.

2.13 Placing Topsoil

A. Scarify subgrade areas to a minimum depth of 2 inches.

1. Repeat cultivation in areas where equipment has compacted subgrade.

2. Remove stones over 1 1/2 inches in any dimension as well as sticks, roots, rubbish, and other extraneous matter.

3. Limit preparation to areas which will be planted promptly after preparation.

B. Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows.

1. Remove existing grass, vegetation, and turf, taking care not to impact existing vegetation to remain.

2. Properly dispose of removed material on site as directed by ArchitectOwnerConstruction Manager outside of Owner's property; do not turn over into soil being prepared for lawns.

3. Till to a depth of not less than 6 inches, except where existing vegetation prohibits extensive disturbance of soil.

4. Remove high areas and fill in depressions.

5. Till soil to a homogeneous mixture of fine texture, free of lumps, clods, stones, roots, and other extraneous matter.

C. Remove contaminated subsoil.

D. Place topsoil in areas where seeding sodding planting is scheduled.

E. Use topsoil in relatively dry state.

1. Place during dry weather.

F. Fine grade topsoil eliminating rough or low areas.

1. Maintain levels, profiles, and contours of subgrade.

2. Regrade areas disturbed by utility and irrigation trenching.

G. Remove stone, roots, grass, weeds, debris, and foreign material while spreading.

H. Manually spread topsoil around trees, plants, and building.

I. Finish ground level firm and sufficient to prevent shrinkage pockets when irrigation is applied.

J. Remove surplus topsoil from site, unless otherwise noted.

K. Leave stockpile area and site clean and raked, ready to receive landscaping.

2.14 Rip-Rap

A. Place filter fabric on prepared surface.

1. Overlap 18 inches and secure with steel U-pins.

B. Rip-Rap: Install by dumping hand-laying hand-laying and grouting in accordance with INDOT Section 616.

2.15 Schedule Of Locations

A. The paragraphs below identify location, fill material to be used (identified from lower to upper fill type), compacted thickness of each fill, and compaction expressed as a percentage of maximum density and optimum moisture in comparison with ASTM D698D1557.

B. Under Foundations: Type A select fill, 6 inch thick layers, compacted to 95 percent.

C. Retaining Walls: Type A select fill, to subgrade elevation, each lift compacted to 9095 percent.

D. Building Perimeter Backfill Under Grassed Areas: Subsoil fill, to 6 inches below finish grade, each lift compacted to 90 percent.

E. Building Perimeter Backfill Under Landscaped Areas: Subsoil fill, to 18__ inches below finish grade, each lift compacted to 90 percent.

F. Fill Under Asphalt or Concrete Paving: Pavement subgrade fill placed in layers not to exceed 8 inches in thickness, each lift compacted to 95 percent.

G. Fill Under Interlocking Pavers: Pavement subgrade fill, to underside of sand leveling bed (Section 02518), each lift compacted to 95 percent.

H. Utility Trench Fill/Backfill Under Paving, Slabs, Foundations, or Walks: Type B to 12 inches above pipe, then Type A to the bottom side of the granular base course, each lift compacted to 95 percent.

I. Utility Trench Fill/Backfill Under Grassed Areas: Type B to 12 inches above pipe, then subsoil fill to 6 inches below finish grade, each lift compacted to 90 percent.

J. Utility Trench Fill/Backfill Under Landscaped Areas: Type B to 12 inches above pipe, then subsoil fill to 18 inches below finish grade, each lift compacted to 90 percent.

2.16 Topsoil Schedule Of Locations

A. The following paragraphs identify minimum compacted topsoil thickness for various locations.

B. Seeded Grass: 6 inches

C. Sod: 6 inches.

D. Shrub Beds: 18 inches.

E. Flower Beds: 18 inches.

F. Tree Grate Pits: 36 inches.

G. PlantersPots: Within 6 inches of the rim.

2.17 Lime Byproduct Stabilization

A. Install lime byproduct at a minimum rate of 60 pounds per square yard at 16 inch treatment depth.

1. Shape soil subgrade to its proper grade lines and cross sections prior to application of the lime.

2. Scarify the subgrade prior to application of the lime to remove all root systems, rock, or other objectionable material.

3. Exercise special care to avoid loosening of the soil below the 16 inch depth.

B. Spread the lime byproduct over the subgrade to be treated using equipment to ensure even distribution of the material at the desired rate of application.

1. Do not apply the lime when wind conditions are such that blowing lime becomes objectionable to traffic and/or adjacent property.

C. Mix the lime byproduct with the soil using a road mixer or other similar equipment which will thoroughly blend the soil, lime, and water.

1. Continue blending and mixing of the materials until 100 percent of the soil will pass the 1 inch sieve and at least 40 percent of the material will pass the No. 4 sieve.

D. Begin compaction of the mixture immediately after final mixing operations and pulverization requirements are obtained.

1. Thoroughly compact mixture, taking special care along edges and beside existing structures to ensure proper compaction throughout the entire area.

2. Final acceptance will be based on a proofroll observation of the treated area which shall be done as soon as possible after final compaction and grading operation.

E. Soils Testing Engineer shall be on site during the site stabilization process to ensure compliance with these specifications.

2.18 Tolerances

A. Subgrades: One-tenth foot above or below.

B. Site Earthwork: Fifteen hundredths foot above or below.

C. Top of Topsoil: 1/2 inch above or below.

2.19 Field Quality Control

A. Perform compaction testing in accordance with ASTM D2922 and ASTM D3017 and under provisions of Division 1.

B. Provide for visual inspection of bearing surfaces.

C. The Owner's RepresentativeConstruction Manager will direct the performance of compaction tests.

D. Perform compaction tests as requested by the Construction Manager.

1. Pavement: One test per every 5000 square feet area or fraction thereof with a minimum of two tests per site.

2. Concrete Slabs-On-Grade: One test per every 1000 square feet area or fraction thereof.

3. Continuous Footings: Tests to be performed at corners and at 100 foot distances or fractions thereof.

4. Individual Footings: One test for footings up to 100 square feet in area or less.

a. Additional tests for every 100 square feet area or fraction thereof.

5. Appurtenant Structures: Such as manholes, etc.

    a. For areas up to 100 square feet, one test.

    b. Additional tests for every 100 square feet area or fraction thereof.

6. General Site: One test per every 10,000 square feet area or fraction thereof, but not less than one test per day.

7. Utility Trenches: One test per every 100 lineal feet or fraction thereof.

E. In all of the above items, perform the density-moisture tests on subgrade, subbase, base, and every lift of fill and backfill material.

    1. Recompact failed tested areas and retest until the test results meet specifications.

F. Correct any areas found to have inadequate compaction or surface tolerances.

    1. Correct and re-test at no cost to the Owner.

2.20 Restoration

A. Restore pavement, concrete, grassed areas, planted areas, and structures damaged during execution of work of this Section, as approved by the ArchitectConstruction Manager.

B. During work, keep pavements clean and work area in an orderly condition.

END OF SECTION

SECTION 31 25 13
SOIL EROSION CONTROL

1 General

1.1 Section Includes

A. Catch basin/inlet sediment traps.

B. Silt fence.

C. Temporary seeding and/or hydroseeding.

D. Sediment removal.

E. Maintain until approved by Architect.

1.2 Related Sections

A. Section 31 20 00 - Earthwork.

B. Section 32 92 19 - Seeding.

1.3 Submittals

A. Make submittals under provisions of Division 1.

B. Submit silt fence and geotextile product data.

C. Submit a complete list of seed mix to be used, including botanical and common names, percent purity, percent germination, and percent maximum weed seed.

D. Submit mulch and hydromulch product data and source.

E. Submit chemical product data.

F. Contractor shall submit Notice of Intent letter and Notice of Termination letter to the Indiana Department of Environmental Management for land disturbances of one acre or more.

1.4 Quality Assurance

A. Provide for site visit with the ArchitectConstruction Manager to verify locations of soil erosion controls.

1. Contact the ArchitectConstruction Manager a minimum of ten (10) days before installation of soil erosion controls.

1.5 Delivery, Storage, And Handling

A. Make deliveries under provisions of Division 1.

B. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging.

C. Deliver products in waterproof containers showing weight, chemical analysis, and name of manufacturer.

D. Damaged containers are not acceptable.

1.6 Job Conditions

A. Proceed with erosion control measures as rapidly as portions of the site become available.

1. Install before earthwork starts.

1.7 Sequencing And Scheduling

A. Coordinate work under provisions of Division 1.

B. Coordinate the work of this Section with installation of underground utilities and remainder of site work.

1.8 Maintenance

A. Maintain and keep clean all catch basin/inlet sediment traps, and silt fence until permanent vegetation is established, and as approved by the ArchitectConstruction Manager.

B. Maintain and keep covered all exposed earth and stockpiles with mulch and/or hydromulch as described herein.

C. Maintain sediment free at all times all roads, street and drives affected by work.

2 Products

2.1 Catch Basin/Inlet Sediment Traps

A. Geotextile: Nonwoven.

1. Geolon N40 as manufactured by Nicolon Corporation, Norcross, Georgia.

2. 311 as manufactured by Synthetic Industries, Chattanooga, Tennessee.

3. 4545 as manufactured by Amoco Fabrics and Fibers Company, Atlanta, Georgia.

4. Trevira 011/140 as manufactured by Hoechst Celanese Corporation, Spartanburg, South Carolina.

B. Welded Wire Fabric: 2 inch by 2 inch mesh spacing.

C. Aggregate: No. 2 stone.

2.2 Silt Fence

A. Geotextile: Nonwoven.

1. Geolon N40 as manufactured by Nicolon Corporation, Norcross, Georgia.
2. 311 as manufactured by Synthetic Industries, Chattanooga, Tennessee.
3. 4545 as manufactured by Amoco Fabrics and Fibers Company, Atlanta, Georgia.
4. Trevira 011/140 as manufactured by Hoechst Celanese Corporation, Spartanburg, South Carolina.
5. Polyfelt TS500 as manufactured by Nicolon Corporation, Norcross, Georgia.

B. Posts: 2 inch by 2 inch by 3 foot long wood stakes.

2.3 Temporary Seeding And/Or Hydroseeding

A. Seed: Annual Ryegrass, Winter Wheat, or Winter Rye.

B. Mulch: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition.

C. Hydromulch: Wood or wood cellulose fiber, free of growth or germination inhibiting ingredients.

D. Water: Clean, fresh, and free of substances or matter which would inhibit vigorous growth of grass.

E. Chemicals: Tackifying agent.

3 Execution

3.1 Catch Basin/Inlet Sediment Traps

A. If casting is not installed first, place welded wire fabric over opening, extending a minimum of 1 foot beyond opening perimeter.

B. Place geotextile over casting or welded wire fabric, extending a minimum of 1 foot beyond casting or opening perimeter.

C. Place ring of aggregate fill along perimeter of geotextile to secure in place.

3.2 Silt Fence

A. Cut 6 inch to 8 inch deep trench along fence line.

1. Drape end of geotextile into trench and backfill and compact trench with soil.

B. Install posts at maximum 5 feet on center on downhill side of trench and drive a minimum of 18 inches into the ground.

C. Place geotextile continuous towards uphill side of slope with a minimum of joints.

1. Locate joints at posts; lap geotextile a minimum of 6 inches, and secure.

D. Attach geotextile to posts with lath and staples or tie wires.

3.3 Temporary Seeding

A. Apply temporary seeding to all disturbed areas within 14 days after activity ceasing that will not receive permanent vegetation or additional construction activity within 21 days after completion of earthwork.

B. Apply winter wheat or rye at a rate of 3.5 pounds per 1,000 square feet or annual ryegrass at 1 pound per 1,000 square feet.

1. Rake in wheat or rye seed to a depth of 1 inch to 1-1/2 inches.

2. Rake in annual ryegrass to 1/4 inch depth.

C. Apply mulch at a rate of 1,000 pounds per acre.

1. Spray area with a tackifying agent.

3.4 Temporary Hydroseeding

A. Apply temporary hydroseeding to all disturbed areas within 14 days after activity ceasing that will not receive permanent vegetation or additional construction activity within 21 days after completion of earthwork.

B. Apply seeded slurry at a rate of 1,000 pounds per acre, with a seed rate for winter wheat or rye at a rate of 3.5 pounds per 1,000 square feet or annual ryegrass at one pound per 1,000 square feet.

3.5 Sediment Removal

A. Sediment tracked onto streets, roads, and drives shall be removed by mechanical methods.

END OF SECTION

SECTION 32 12 16
ASPHALTIC CONCRETE PAVING

1 General

1.1 Section Includes

A. Asphaltic concrete paving.

B. Surface sealer.

C. Seal coat.

1.2 Related Sections

A. Section 31 20 00 - Earthwork.

B. Section 32 11 16 - Granular Base Course: Prepared base.

C. Section 32 13 13 - Portland Cement Concrete Paving: Concrete paving and curbs.

D. Section 32 17 23 - Roadway and Paving Marking: Pavement markings.

1.3 References

A. INDOT Standards – Latest edition Indiana Department of Transportation Standard Specifications, including Supplements.

1.4 Quality Assurance

A. Perform work in accordance with INDOT standards.

B. Mixing Plant: Conform to INDOT standards.

C. Approval of Materials: Conform to INDOT Section 401.03.

1.5 Regulatory Requirements

A. Conform to applicable standards for paving workon public property within the right-of-way.

1.6 Tests

A. Testing organization will take samples and perform tests in accordance Division 1.

B. Test asphalt for correct thickness.

C. Test asphalt temperature at time of placement.

D. Perform two extraction tests per day per course.

E. Provide nuclear density testing in accordance with Indiana Test Method No. 577.

1.7 Submittals

A. Submit product data under provisions of Division 1.

B. Submit manufacturers' instructions under provisions of Division 1.

C. Submit proposed mix design of each class of mix for review prior to commencement of work.

D. Provide product data and Certificate of Conformance for surface sealer.

1.8 Environmental Requirements

A. Do not place asphalt when air or base temperature is less than 45 degrees F when or during other unfavorable weather conditions.

B. Conform to INDOT 404.04 for seal coat placement.

1.9 Warranty

A. Extended Warranty: Warrant completed work for two (2) years.

B. Repair or replace any pavement failure other than that due to normal wear and tear or abuse during guarantee period.

2 Products

2.1 Materials

A. Bituminous Base, Binder, Surface, Leveling Courses: INDOT, Section 401.03.

1. Base and Binder may contain up to a maximum of 25 percent of reclaimed asphalt pavement (RAP) in accordance with Section 401.06.

B. Tack Coat: INDOT, Section 406.02.

C. Asphalt Cement: INDOT, Section 904.01.

D. Aggregate for Base Course Mix: INDOT, Section 904.02.

E. Aggregate for Binder Course Mix: INDOT, Section 902.01.

F. Aggregate for Surface Course Mix: INDOT, Section 904.02, except that a minimum of 85 percent shall be crushed.

G. Aggregate for Leveling Course Mix: INDOT, Section 904.02

H. Surface Sealer:

1. Advanced Formula J-16 Pavement Sealer, Maintenance, Inc. with FSA sealing additive.

2. Jennite NJ-S1 Pavement Sealer, Neyra Industries, Inc.

I. Crack Filler: Conforming to ASTM D1190, as specified or as approved by the Architect.

1. Thermo-Seal Spec Plus D3405, Neyra Industries.

2. Crafco hot rubber sealant.

J. Mixing Plant: Conform to INDOT 408.02, except that requirements for plant scales and plant laboratory are optional.

K. Hauling Equipment: Conform to INDOT 408.03b.

L. Pavers and Rollers: Conform to INDOT 408.03c and 408.03d.

M. Seal Coat: Conform to INDOT 402.03, 402.04, 402.05, 402.07.

2.2 Asphalt Paving Mix

A. Refer to INDOT, Sections 904.01 and 904.02.

B. Base - #5#5D.

C. Binder - #9.

D. Surface - #11.

E. Leveling - #12.

3 Execution

3.1 Inspection

A. Notify ArchitectOwnerConstruction Manager forty-eight (48) hours prior to starting work.

B. Inspect the site in company with the Architect'sOwner'sConstruction Manager's Field Representative prior to starting work.

C. Verify compacted subgrade granular base stabilized soil is dust dry, free of loose or foreign material, and ready to support paving and imposed loads.

D. Verify gradients and elevations of base are correct.

E. Beginning of installation means acceptance of substrate.

3.2 Preparation

A. Existing pavement to receive surface course.

1. Clean out all cracks.

2. Fill cracks smaller than 1/2 inch with a mixture of AE-150 and sand.

3. Fill cracks larger than 1/2 inch with Crafco sealant.

4. Clean surface with power equipment.

5. Apply tack coat in accordance with INDOT, Sections 406.01, 406.02, 406.03, 406.04, 406.05.

6. Apply uniform spray of tack coat at a rate of 0.20 to 0.25 gallons per square yard.

7. Proceed immediately with surface course placement.

B. Existing pavement to receive surface sealer.

1. Clean out all cracks.

2. Apply an approved soil poisoner.

3. Fill cracks smaller than 1/2 inch with a mixture of AE-150 and sand.

4. Fill cracks larger than 1/2 inch with Crafco sealant.

5. Clean surface thoroughly with hand or power broom.

a. Flush with clear water.

6. Scrape off accumulations of oil or grease and clean pavement with caustic solution.

a. Flush away caustic solution residue.

C. Seal Coat: Conform to INDOT Section 404.02, 404.03, 404.06, 404.07, and 404.08.

3.3 Placing Asphalt Pavement

A. Do not haul mixture in excess of 35 miles.

B. Base, Binder, Surface, Leveling Courses: INDOT, Sections 402.09, 402.10, 402.11, 402.12, 402.13, 404.06, 404.07, 404.08.

C. Seal Coat: INDOT 404.02, 404.03, 404.06, 404.07, 404.08.

D. Weather Limitations: INDOT 404.04, 405.04.

3.4 Tolerances

A. Flatness: Maximum variation of 1/8 inch measured with 10 foot straight edge parallel to the center line of the lay, and no more than 1/4 inch in any direction.

B. Compacted Thickness: Within 1/4 inch of design thickness.

C. Variation from True Elevation: Within 1/2 inch.

3.5 Surface Sealer

A. Allow asphaltic concrete to cure for not less than 30 days.

B. Clean surface and leave oil free.

C. Stir materials in their containers with power mixer or mortar hoe to a creamy homogeneous consistency.

1. Prepare materials in accordance with manufacturer's instructions.

2. Do not add adulterants.

D. Add sand at a rate of 5 to 6 pounds per gallon of sealer.

E. Apply one coat of primer per manufacturer's recommendation.

F. Apply two uniform coatings of material with the second coating applied at 90 degrees to the first.

1. Apply material in accordance with manufacturer's instructions.

2. Apply a total of 0.20 gallons per square yard.

G. Do not apply when ambient or pavement temperature falls below 50 degrees F in a 24 hour period or when rain is expected within 24 hours.

3.6 Field Quality Control

A. Flood surface with water in presence of Construction Manager.

1. Mark and repair any depressions more than 3/16 inch in depth or bird-baths.

B. Field inspection and testing will be performed under provisions of Division 1.

3.7 Patching Existing Pavement

A. Utility Cuts: Where shown on Drawings, provide new base, binder, and surface courses where contractor has cut existing pavement, installed utility, and backfilled to bottom of base course.

B. Pavement Removed: Where shown on Drawings, provide new base, binder, and surface courses where deteriorated pavement has been removed.

3.8 Reconditioning Of Base Binder Course

A. Where base binder course has been used for the Contractor's area, clean with power equipment and tack coat before placing succeeding course.

1. Other reconditioning of base binder course is at the Contractor's expense.

B. Where surface course is not placed immediately after the binder course, clean with power equipment and tack coat before placing the surface course.

3.9 Protection

A. Immediately after placement, protect pavement under provisions of Division 1 from mechanical injury for 5 days.

END OF SECTION

SECTION 32 17 23
ROADWAY AND PAVING MARKING

1 General

1.1 Section Includes

A. Mark parking spaces.

B. Mark handicapped ramps.

C. Mark handicapped symbols.

D. Islands and handicapped aisles.

E. Stop bars and directional arrows.

1.2 Related Sections

A. Section 32 12 16 - Asphaltic Concrete Paving: Surface to receive markings.

B. Section 32 13 13 - Portland Cement Concrete Paving: Surface to receive markings.

1.3 References

A. INDOT Standards – Latest edition Indiana Department of Transportation Standard Specifications, including Supplements.

1.4 Submittals

A. Submit paint product data under provisions of Division 1.

2 Products

2.1 Materials

A. Paint: Quick drying yellow and white paint conforming to INDOT Standard Specifications Section 909.05.

1. Handicapped symbols: Standard blue.

B. Thermoplastic Markings: INDOT Standard Specifications Section 913.14(b)1.

3 Execution

3.1 Preparation

A. Allow asphaltic concrete pavement to cure for at least one week.

B. Clean surface of dirt, grease, oil, acid, or any foreign matter.

3.2 Installation

A. Delineate parking spaces by lines parallel to length and one line at forward end as indicated on Drawings.

1. Adjacent spaces may share a common line.

2. End and side lines are not required at pavement edges.

B. Pressure spray lines 4 inches wide with true and even edges.

1. Apply paint at rate of 300 lineal feet of line per gallon of paint.

C. Paint handicapped symbols in center of parking space.

1. Symbol shall be the International Symbol of Accessibility in accordance with ANSI A117.1.

D. Mark islands and handicapped aisles with 4 inch wide stripes at 2 feet on center.

E. Paint handicap ramps with yellow paint.

1. Flared side slopes do not require paint.

F. Apply thermoplastic markings in accordance with INDOT Section 808.06(b)1.

G. Mark temporary pavement stripes in right-of-way as required by agency having jurisdiction over construction.

END OF SECTION

SECTION 32 91 13
SOIL PREPARATION

1 General

1.1 Section Includes

A. Prepare seed and sod beds.

B. Prepare topsoil backfill for trees and shrubs.

C. Prepare planting beds for group plantings.

D. Maintain beds and backfill from erosion.

1.2 Related Sections

A. Section 31 20 00 - Earthwork.

B. Section 31 25 13 - Soil Erosion Control.

C. Section 32 92 19 - Seeding.

1.3 Submittals

A. Make submittals under provisions of Division 1.

B. Submit fertilizer data and source.

C. Submit amendment data and source.

1.4 Quality Assurance

A. Work in this section shall be accomplished by a recognized Landscape Contractor with a minimum of three (3) years experience.

1.5 Delivery, Storage, And Handling

A. Deliver products to site under provisions of Division 1.

B. Deliver products in waterproof containers showing weight, chemical analysis, and name of manufacturer.

1. Damaged containers are unacceptable.

C. Store and protect products under provisions of Division 1.

1.6 Existing Conditions

A. Beginning of work of this section means acceptance of existing conditions.

B. Verify that topsoil has been placed, leveled, and clear of debris.

1.7 Job Conditions

A. Proceed with and complete work as rapidly as portions of site become available, working within seasonal and climatic limitations.

1. Do not work topsoil in a wet or frozen condition.

B. Determine location of underground utilities and perform work in a manner which will avoid possible damage.

1. Hand excavate as required.

2. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.

C. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect before proceeding.

1.8 Protection

A. Protect existing and new structures, fences, roads, sidewalks, paving, curbs, and landscaping and other features remaining as final work.

1.9 Regulatory Requirements

A. Comply with regulatory requirements for fertilizer composition.

1.10 Environmental Requirements

A. Do not work topsoil in a muddy condition.

B. Do not work topsoil in a frozen condition.

1.11 Sequencing And Scheduling

A. Coordinate work under provisions of Division 1.

B. Coordinate the work of this section with installations of underground utilities, irrigation system and remainder of site work.

C. Coordinate quantity of topsoil backfill required with contractor responsible for Section 32 93 00.

1.12 Maintenance

A. Maintain surfaces and supply additional topsoil and amendments where necessary, including areas affected by erosion until which time Contractors responsible for Sections 32 92 19, and 32 92 23 begins work.

B. Maintain topsoil backfill stockpile and protect from erosion until which time Contractor responsible for Section 32 93 00 begins work.

2 Products

2.1 Fertilizer

A. Sod Fertilizer: Provide common fertilizer with an N-P-K ratio of 12-12-12. Provide nitrogen in a form at least 50 percent of nitrogen to be derived from organic sources.

B. Seed Fertilizer: Provide common starter fertilizer with an N-P-K ratio of 12-12-12.

1. Provide nitrogen in a form that will be available to lawn during initial period of growth; at least 50 percent of nitrogen to be derived from organic sources.

C. Planting Bed Fertilizer: Provide common fertilizer with an N-P-K ratio of 12-12-12.

1. Provide nitrogen in a form at least 50 percent of nitrogen to be derived from organic sources.

2.2 Amendments

A. Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve.

B. Aluminum Sulfate: Commercial grade.

C. Humus: Well rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials and containing no chemicals or ingredients harmful to plants.

D. Peat: Sphagnum Peat Moss commercial grade with a pH range of 5.9 to 7.0.

E. Sand: Hard, granular natural sand, washed free of impurities, chemicals, or organic matter.

F. Bone Meal: Commercial, raw, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.

G. Superphosphate: Soluble mixture of treated minerals; 20 percent available phosphoric acid.

H. Vermiculite: Horticultural grade, free of toxic substances.

3 Execution

3.1 Seed Bed Preparation

A. Scarify soil to a depth of 6 inches. Till to a smooth, homogeneous mix.

B. Eliminate rills and gullies. Remove all stones, rubble, sticks, wire, plant mass, and debris over 2 inches in any dimension, as well as obvious quantities of small stone.

C. Add additional topsoil and grade as necessary in areas of settlement and erosion, and as required to meet finish grade.

D. Apply seed fertilizer and amendments at rates as follows:

1. Fertilizer at 20 pounds per 1,000 square feet.

E. Mix fertilizer and amendments thoroughly into top 3 inches of topsoil.

F. Roll seed bed in two directions at right angles with roller weighing between 60 and 90 pounds per linear foot of roller.

3.2 Sod Bed Preparation

A. Scarify soil to a depth of 6 inches.

1. Till to a smooth, homogeneous mix.

B. Eliminate rills and gullies.

1. Remove all stones, rubble, sticks, wire, plant mass, and debris over 2 inches in any dimension, as well as obvious quantities of small stone.

C. Add additional topsoil and grade as necessary in areas of settlement and erosion, and as required to meet finish grade.

D. Apply sod fertilizer and amendments at rates as follows:

1. Fertilizer at 20 pounds per 1,000 square feet.

E. Mix fertilizer and amendments thoroughly into top 3 inches of topsoil.

F. Roll sod bed in two directions at right angles with roller weighing between 60 and 90 pounds per linear foot of roller.

3.3 Planting Bed Preparation

A. Scarify soil to a depth of 12 inches. Till to a smooth homogeneous mix.

B. Eliminate rills and gullies.

1. Remove all stones, rubble, sticks, wire, plant mass, and debris over 2 inches in any dimension, as well as obvious quantities of small stone.

C. Add additional topsoil and grade as necessary in areas of settlement and erosion, and as required to meet finish grade.

D. Apply fertilizer and amendments at rates as follows:

1. Humus to a depth of 2 inches.

E. Mix fertilizer and amendments thoroughly into top 8 inches of topsoil.

3.4 Tree And Shrub Topsoil Backfill

A. Secure area on site where topsoil and amendments can be mixed and stored for use by Contractor during work in Section 02950.

B. Break up topsoil and remove all stones, rubble, sticks, wire, plant mass, and debris over 2 inches in any dimension.

C. Apply specified amendments and mix to a smooth homogeneous mix.

D. Apply amendments at rates as follows:

1. Humus at a ratio of one part Humus to three parts topsoil.

E. Stockpiled topsoil backfill not to exceed 8 feet height.

3.5 Restoration

A. Restore existing and new structures, fences, roads, sidewalks, paving, curbs, and landscaping damaged during execution of work of this Section, as approved by the ArchitectConstruction Manager.

B. During work, keep surfaces clean and work area in an orderly condition.

3.6 Tolerances

A. Topsoil in Areas to Receive Lawn: Plus or minus 1/2 inch.

B. Hold topsoil adjacent walks, curbs, and pavement in areas to be seeded to 1/2 inch below.

C. Hold topsoil adjacent walks, curbs, and pavement in areas to be sodded to 2 inches below.

D. Hold topsoil adjacent walks, curbs, and pavement in planting beds to be mulched to 4 inches below.

END OF SECTION

SECTION 32 92 19
SEEDING

1 General

1.1 Section Includes

A. Seeding or hydroseeding.

B. Seed protection on slopes and swales.

C. Establishment blanket.

D. Maintain seeded areas until the date of substantial completion.

1.2 Related Sections

A. Section 31 25 13 - Soil Erosion Control.

B. Section 32 91 13 - Soil Preparation.

1.3 References

A. FSO-F-241 - Fertilizers, Mixed, Commercial.

1.4 Definitions

A. Weeds: Dandelion, crabgrass, clover, etc., and any other plant which is not specified herein and/or on Drawings.

B. Substantial Completion: Time at which grass is in a vigorous growing condition with no eroded areas, no more than one weed per square yard, and no bare spots larger than 4 inches in any dimension.

1.5 Submittals

A. Make submittals under provisions of Division 1.

B. Submit a complete list of seed mixes to be used, including botanical and common names, percent purity, percent germination, and percent maximum weed seed, before seeding.

C. Submit typewritten instructions recommending procedures to be established by Owner for maintenance of lawns for one full calendar year.

1. Provide instructions in calendar format.

2. Include mowing, fertilization, weeding, pesticide control, aeration, thatch, watering, and all maintenance requirements to maintain vigorous growing.

3. Bind in binder.

D. Submit establishment blanket product data and installation instructions for establishment blanket.

E. Submit pesticide product data.

F. Submit chemical product data.

G. Submit mulch and hydromulch product data and source.

H. Submit written, itemized statement of maintenance work completed for each time the maintenance is performed, including time at site.

1.6 Quality Assurance

A. Work in this section shall be accomplished by a recognized Landscape Contractor with a minimum of three (3) years experience.

B. Pesticides shall be applied by an individual licensed by the State and shall comply with all local codes.

1.7 Regulatory Requirements

A. Comply with regulatory requirements for fertilizer and pesticide composition.

B. Application of pesticides only by individuals licensed by the State and conforming to all Local Codes.

C. Seed: Labeled in accordance with the U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act.

1.8 Delivery, Storage, And Handling

A. Make deliveries under provisions of Division 1.

B. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging.

C. Deliver products in waterproof containers showing weight, chemical analysis, and name of manufacturer.

D. Damaged containers are not acceptable.

1.9 Existing Conditions

A. Beginning work of this Section means acceptance of existing conditions.

1.10 Job Conditions

A. Proceed with and complete work as rapidly as portions of site become available, working within seasonal limitations.

B. Determine location of underground utilities and perform work in a manner which will avoid possible damage.

1. Hand excavate, as required.

2. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.

C. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify ArchitectConstruction Manager before proceeding.

D. Unless otherwise approved by the ArchitectConstruction Manager, install lawns after trees, shrubs, and ground cover.

1.11 Protection

A. Protect landscaping and other features remaining as final work.

B. Protect existing structures, fences, roads, sidewalks, paving, and curbs.

1.12 Environmental Requirements

A. Do not seed when ambient temperatures are below 35 degrees F, or above 90 degrees F.

B. Do not seed when wind velocity exceeds 10 mph.

C. Do not seed in muddy conditions.

D. Seeding Seasons:

1. February 15 to March 31.

2. September 1 to October 15.

1.13 Sequencing And Scheduling

A. Coordinate work under provisions of Division 1.

B. Coordinate the work of this Section with installation of underground utilities, irrigation system, and remainder of site work.

C. Coordinate any pesticide application with the Owner Architect Construction Manager.

1. Notify the OwnerArchitectConstruction Manager three (3) days before any pesticide application.

1.14 Warranty And Maintenance

A. Warranty: Provide a thick, lush, pest free lawn in a vigorous, healthy growing condition.

1. When the lawn is established, contact ArchitectConstruction Manager to document the date of substantial completion in writing.

B. Maintenance: Maintain lawn to the date of substantial completion.

2 Products

2.1 Amendments

A. Fertilizer: Provide common fertilizer with an N-P-K ratio of 12-12-12.

1. Provide in a form at least 50 percent of nitrogen to be derived from organic sources.

B. Pesticides: Herbicides, insecticides, and fungicides as required to maintain a healthy lawn.

2.2 Seed

A. Provide fresh, clean, new crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America.

1. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed as specified.

B. Schedule of grass seed mixtures is indicated on Drawings. as follows.

1. Seed Mixture 1 :

100 percent Turf Type Tall Fescue (blend three improved varieties)
Seed at 7 pounds/1000 square feet

2.3 Accessories

A. Mulch: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition.

B. Hydromulch for Seeded Slurry: Wood or wood cellulose fiber not dyed, free of growth or germination inhibiting ingredients.

C. Hydromulch for Seedless Slurry: Wood or wood cellulose fiber dyed green, free of growth or germination inhibiting ingredients.

D. Straw Establishment Blanket: Straw Blanket No. S75 S150 DS150 as manufactured by North American Green, Evansville, Indiana, (800)772-2040.

E. Water: Clean, fresh, and free of substances or matter which would inhibit vigorous growth of grass.

F. Chemicals: Tackifying agent.

3 Execution

3.1 Seed Bed Preparation

A. Verify work in Section 02920 has been completed.

B. Rake soil lightly to break up any surface crust.

C. Lightly water soil to provide moist soil for seed.

3.2 Seeding

A. Sow seed evenly in two intersecting directions. Rake in lightly.

B. Roll seeded area with roller weighing 60 to 90 pounds per linear foot of roller.

C. Apply water with fine spray immediately after each area has been sown.

D. Mulch with straw immediately at a rate of 1,500 pounds per acre. Spray area with a tackifying agent.

E. Do not seed area in excess of that which can be mulched on same day.

3.3 Hydroseeding

A. Apply slurry at rate of 500 pounds of seeded slurry per acre.

B. Immediately after hydroseeding, mulch areas by means of seedless slurry at a rate of 1,000 pounds per acre.

C. Do not seed area in excess of that which can be mulched on same day.

3.4 Seed Protection On Slopes

A. Cover seeded slopes where grade is 3:1 or greater and in determined drainage swales areas shown on Drawings with establishment blanket.

B. Lay blanket smoothly over seed and secure according to manufacturers recommendations.

3.5 Maintenance

A. Begin maintenance immediately after planting.

B. Maintain surfaces and promptly supply additional topsoil, seed, and mulch where necessary, including areas affected by erosion.

C. Water to ensure uniform seed germination and to keep surface of soil damp.

D. Apply water at a rate not to exceed 1/4 inch per hour.

E. Mow grass to a minimum of 3 inches.

1. Mow at regular intervals as required when grass reaches 4 inches in height.

2. Immediately remove heavy clippings after mowing and trimming.

3. Sweep or blow clippings which fall on any pavement or walks.

F. After first mowing, water when required and in sufficient quantity to supplement natural rainfall to a depth of 1 inch per week during growing season at a rate not to exceed 1/4 inch per hour.

G. Apply herbicides when weeds start developing, according to manufacturers recommendations.

1. Apply insecticides and fungicides as necessary to maintain plant vigor.

H. Apply fertilizer just before the date of substantial completion at a rate recommended by manufacturer.

3.6 Restoration

A. Restore pavement, concrete, grassed areas, planted areas, and structures damaged during execution of work of this Section as directed by the ArchitectConstruction Manager.

B. During work, keep pavements clean and work area in an orderly condition.

END OF SECTION

SECTION 33 11 00
WATER DISTRIBUTION SYSTEMS

1 General

1.1 Section Includes

A. Fire water piping, fittings, and accessories.

B. Potable water piping, fittings, and accessories.

C. Connection of building system to Municipal Water System

1.2 Related Sections

A. Section 31 20 00 - Earthwork: Trenching and backfill for water distribution systems.

B. Section 32 13 80 - Exterior Concrete: Concrete type for water system construction.

C. Section 33 13 00 - Disinfection of Water Distribution System.

1.3 References

A. ANSI B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.

B. ASTM A126 - Standard Specifications for Gray Iron Castings for Valves, Flanges, and Fittings.

C. ASTM A197 - Standard Specifications for Cupola Malleable Iron.

D. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs.

E. ASTM A506 - Standard Specifications for Steel, Sheet and Strip.

F. ASTM A575 - Standard Specification for Steel Bars.

G. ASTM B88 - Standard Specification for Seamless Copper Water Tube.

H. AWWA C104 - Cement Water Lining for Ductile Iron Pipe and Fittings.

I. AWWA C110 - Ductile and Gray Iron Fittings.

J. AWWA C111 - Rubber Gasket Joints for Ductile Iron and Gray Iron Pipe.

K. AWWA C151 - Ductile Iron Pipe.

L. AWWA C500 - Gate Valves.

M. AWWA C504 - Standard for Rubber Seated Butterfly Valves.

N. AWWA C508 - Standard for Swing Check Valves.

O. AWWA C600 - Standard for Installation of Ductile Iron Water Mains and Their Appurtenances.

P. AWWA C651 - Standard for Disinfecting Water Mains.

Q. AWWA C900 - Standard for Polyvinyl Chloride Pressure Pipe.

R. AWWA M17 - Installation, Field Testing, and Maintenance of Fire Hydrants.

S. NFPA 24 - Standard for Installation of Private Fire Service Mains and Their Appurtenances.

T. UL 246 - Hydrants for Fire Protection Service.

1.4 Regulatory Requirements

A. Conform to Indiana BOCA National Plumbing Code for materials and installation of work of this Section.

B. Conform to requirements of Water Utility Company supplying water to project; obtain required permits and inspections.

C. Install fire water system in accordance with NFPA 24.

D. Conform with local Fire Department regulations pertaining to hydrants, including hose unit threading.

E. Provide fire hydrants that comply with UL 246 and are listed by UL.

1.5 Submittals

A. Submit product data under provisions of Division 1.

B. Submit product data for pipe, pipe accessories.

1.6 Project Record Documents

A. Submit documents under provisions of Division 1.

1. Accurately record locations of pipe runs, connections, valves and hydrants.

2. Maintain accurate as-built drawings as project progresses, on a set of project drawings.

3. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

4. Upon completion of project, submit one set of reproducible mylar drawings and two sets of blueline prints, with Contractor's stamp indicating date and labeled "Record Documents."

2 Products

2.1 Potable Water Piping Materials

A. Ductile Iron Pipe: AWWA C151, with cement mortar lining complying with AWWA C104; Class 51 for 3 inch and 4 inch pipe, and Class 50 for 6 inch and larger pipe.

1. Fittings: Ductile iron, AWWA C110; cement lined, AWWA C104; and rubber gasket joints, AWWA C111.

B. Polyvinyl Chloride Pipe: AWWA C900 for 4 inch through 12 inch sizes; Class 100.

1. Fittings: Mechanical joint ductile iron complying with AWWA C110, with AWWA C104 cement mortar lining and retainer gland.

C. Copper Tube: ASTM B88; Type K, soft annealed temper.

1. Wrought copper solder joint fittings, ANSI B16.22; soldered joints.

2.2 Fire Water Piping Materials

A. Ductile Iron Pipe: AWWA C151 with cement mortar lining complying with AWWA C104; Class 50.

1. Fittings: Ductile iron, AWWA C110; cement lined, AWWA C104; and rubber gasket joints, AWWA C111.

B. Polyvinyl Chloride Pipe: AWWA C900 for 4 inch to 12 inch sizes; Class 150; bell and spigot with rubber sealing ring.

1. Fittings: Mechanical joint ductile iron complying with AWWA C110, with AWWA C104 cement mortar lining and retainer gland.

2.3 Potable Water System Valves

A. Gate Valve: AWWA C500, 175 psi working pressure.

1. Provide threaded, flanged, hub, or other end configuration to suit size of valve and piping connection.

B. Valve Box: Cast iron adjustable arch base with drop in lid for use with buried gate valves.

C. Butterfly Valve: AWWA C504, 150 psi working pressure, iron body, bronze disc, stainless steel stem, and metal-reinforced EPDM seat.

D. Check Valve: AWWA C508, 150 psi working pressure, iron body, cast iron disc, bolted cap.

2.4 Fire Water System Valves

A. Gate Valve: UL listed, FM approved, 175 psi working pressure for 12 inches and smaller, 150 psi for sizes larger than 12 inches.

1. Provide threaded, flanged, hub, or other end configurations to suit size of valve and piping connection.

2. Provide inside screw type for use with indicator post, iron body, bronze mounted, non-rising, stem with operating nut, solid wedge disc.

B. Indicator Posts: UL listed FM approved, designed for use with underground gate valves to provide above ground means for operating valves and indicating position of valves.

1. Provide telescoping barrel type with indicating target, intended for use with gate valves 4 inches through 14 inches, with operating wrench.

2. Provide electrically supervised valves.

C. Valve Box: Cast iron adjustable arch base with buried gate valves.

D. Butterfly Valves: UL listed, FM approved, 175 psi working pressure for 2 inches through 12 inches, 150 psi for sizes larger than 12 inches.

1. Provide gear actuator with detachable crank, position indicator, and fail safe torque spring.

E. Detector Check Valve: UL listed, FM approved, 175 psi working pressure for 2 inches through 12 inches, 150 psi for sizes larger than 12 inches.

1. Provide swing type, iron body bronze mounted with metal to metal or rubber faced checks.

2. Provide threaded, flanged, or hub end, to suit size and piping connection.

2.5 Fire Hydrants

A. Provide UL listed, FM approved, cast iron body, compression type fire hydrants, opening against pressure and closing against pressure, base valve design, 150 psi working pressure, with 1/4 inch gage topping and bronze plug in standpipe.

B. Size: 5 1/4 inch valve opening.

C. Direction to Open Hydrant: As required by Local Fire Department and Utility Company.

D. Size and Shape of Operating and Cap Nuts: As required by Local Fire Department and Utility Company.

E. Hose Nozzles and Thread Standards: As required by Local Fire Department and Utility Company.

F. Pumper Nozzles and Thread Standards: As required by Local Fire Department and Utility Company.

G. Depth of Trench: 5 feet.

H. Connection to Main: 6 inch mechanical joint.

2.6 Hydrant Hose Houses

A. Provide hose houses as indicated, FM approved, constructed of 16 gage steel, weatherproof sloping top, front overhang, double-panel reinforced doors, continuous hinges, hasp for padlock, and ventilated design.

1. Prime coat and finish in red baked enamel.

2. Provide the following equipment, and hooks for its storage:

Quantity	Item
1	Gated wye, 2 1/2" by 1 1/2" by 1 1/2" brass.
2	Fog nozzles, 2 1/2" brass.
1	Fog nozzle, 1 1/2" Lexan.
1	Reducer, 2 1/2" to 1 1/2" brass.
2	Hydrant wrenches.
4	Spanner wrenches, 2 1/2".
2	Spanner wrenches, 1 1/2".
4	50' by 2 1/2" Single jacket lined hose with brass couplings.
2	50' by 1 1/2" Single jacket lined hose with brass couplings.
1	Fire ax.

2.7 Reaction Anchors

A. Provide concrete thrust blocking or joint harness for all pressure piping in accordance with NFPA 24.

B. Thrust Blocking: Sufficient mass of concrete bearing on solid undisturbed earth, to resist hydraulic thrust at maximum pressure pipe will be subjected to, 150 psi minimum.

1. Refer to Detail and Schedule on Drawings.

C. Joint Harness: Steel straps and rods across joints, securely anchored on pipe or other adequate anchorage, to resist hydraulic thrust at maximum pressure pipe will be subjected to, 150 psi minimum.

1. Coal Tar Coating: Carboline Bitumastic 50.

2. Clamps, Straps, and Washers: Steel, ASTM A506.

3. Rods: Steel, ASTM A575.

4. Rod Couplings: Malleable Iron ASTM A197.

5. Bolts: Steel ASTM A307.

6. Cast Iron Washers: Gray-iron ASTM A126.

2.8 Fire Department Connection

A. Provide Y-type cast brass sidewalk Siamese connection, escutcheon plate and sleeve assembly; with two 90 degree, 2 1/2 inch fire department inlets with female hose connection, 4 inch inlet pipe, plugs and chain.

1. Provide inlet connection with type and number of threads per inch to match those of the local fire department.

2.9 Valve Pits

A. Provide valve pits as indicated, constructed of poured in place or precast concrete.

1. Construct of dimensions indicated with manhole access, ladder, and drain.

2. Provide sleeves for pipe entry and exit, provide waterproof sleeve seals.

3 Execution

3.1 Examination

A. Verify that trench cut is ready to receive work, and excavations, dimensions, and elevations are as indicated on Drawings.

B. Beginning of installation means acceptance of existing conditions.

3.2 Preparation

A. Hand trim excavations to required elevations.

1. Correct over excavation with fill material.

B. Remove large stones or other hard matter which could damage water pipe or impede consistent backfilling or compaction.

3.3 Installation - Pipe

A. Copper Pipe: Install in accordance with CDA Copper Tube Handbook.

B. Ductile-Iron Pipe: Install in accordance with AWWA C600.

C. Polyvinyl Chloride Pipe: Install in accordance with manufacturer's installation instructions.

D. Depth of Cover: Install yard and lead-in piping at minimum 5 foot depth of bury.

E. Water Main Connection: Arrange and pay for tap in water main, of size and location as indicated, from Water Utility Company.

F. Water Service Termination: Terminate potable water piping outside inside building where indicated.

1. Provide line sized gate valve, 3/4 inch valved test tee, and pressure gage.

2. Provide reaction anchors.

G. Water lines and sewers shall not be laid in the same trench.

1. Maintain a horizontal separation of 10 feet.

H. Increase compaction of each successive lift.

1. Refer to Section 31 20 00 for compaction requirements.

2. Do not displace or damage pipe when compacting.

3.4 Reaction Anchors

A. Use concrete thrust blocking where solid undisturbed earth is available.

B. Use joint harness in other areas.

C. If back of solid undisturbed earth is due to improper trench excavation, provide joint harness at no extra cost.

D. Coat underground metal surfaces not encased in concrete with Carboline Bitumastic 50.

1. Apply to clean, dry surface.

2. Allow first coat to dry hard; apply second coat.

3.5 Installation - Valves

A. Provide valve box for underground potable water valves.

B. Install post indicator valve at each fire water connection into building, locate 40 feet from building outside wall or as indicated.

C. Install shut-off valve with valve box ahead of each hydrant.

1. Provide valve key and stem.

3.6 Installation Of Hydrants

A. Install Fire Hydrants in accordance with AWWA M17.

3.7 Field Quality Control

A. Field inspection will be performed under provisions of Division 1.

3.8 Protection

A. Protect finished installation under provisions of Division 1.

B. Protect pipe from damage or displacement until backfilling operation is in progress.

3.9 Disinfection Of Water Piping System

A. AWWA C651 - Standard for Disinfecting Water Mains.

END OF SECTION

SECTION 33 11 50
EXTERIOR WATER LINES, FIRE LINES, AND FACILITIES

1 General

1.1 Section Includes

A. The work covered by this section of the specifications and the accompanying Drawings consist of the furnishing of all labor, equipment, appliances, and material, and performing all operations in connection with the construction of all exterior water lines, fire lines, fire hydrants, valves, facilities, etc.

B. Install in a manner that each section of the work is complete in every detail and meets or exceeds all of the laws, ordinances, rules and regulations in effect in the State and local requirements which apply.

1.2 Fees

A. Pay all tapping and service fees and all other costs, not borne by the Water Company, which are required to provide a complete domestic water and fire line service.

1.3 Concrete

A. All concrete required for the work under this heading shall conform to Section 03 30 00.

1.4 Painting

A. All finish painting will be done by the Painting Contractor under another contract.

1.5 Clean-Up

A. Remove all debris and surplus materials from the premises.

1.6 Seeding And Sodding

A. Seeding and sodding within the limits of the property will be done under another contract.

1.7 Streets, Sidewalks, Drives, Paving, And Repair

A. Repair or replace all streets, sidewalks, drives, curbs, drainage structures, which are damaged due to any work included under this contract.

2 Products

2.1 Exterior Water Lines

A. Provide all new exterior water mains and branches 3 inches and larger as manufactured by James B. Clow and Sons; ductile iron pipe with super bell-tight push on joints and cement lining as manufactured by U.S. Piping and Foundry Class 50, or American Piping Class 50.

1. All Fittings: Push-on gasket type cast iron fittings.

2. All Cast Iron Pipe, Fittings, Joint Gaskets and Installation: Meet the requirements of ASA A2l.5l, AWWA 151.

B. All new exterior water mains and branches 2 1/2 inches and smaller Type "K" hard copper tubing with copper or wrought brass fittings.

1. Copper piping and fittings furnished and installed as specified under in Division 15.

2.2 Vacuum Breakers And Relief Valves

A. Provide valves of proper size and type to relieve excess pressure and prevent the formation of a vacuum.

B. Provide valves to automatically remove air from the lines when the lines are being filled with water, and admit air into the lines when water is being withdrawn in excess of the inflow.

2.3 Exterior Gate Valves

A. Valves: Iron-body, brass mounted and conforming to the Standard Specifications of the AWWA 7F.1.

B. Design exterior gate valves for a minimum water working pressure of 150 pounds per square inch.

C. Provide gate valves with a clear waterway equal to the full nominal diameter of the valve, and which open by turning counterclockwise.

D. Provide an operating nut or wheel with an arrow, cast in the metal, indicating the direction of opening.

E. Identify each valve with the maker's initials and pressure rating cast on the body.

F. Prior to shipment from the factory, test each valve by hydraulic pressure equal to twice the specified water working pressure.

2.4 Valve Boxes

A. Valve Boxes: Cast iron of the extension type having screw or slide type adjustment end with flared base.

1. Minimum Metal Thickness: 3/16 inch.

2. Provide cover with the word "WATER" cast in the metal.

3. Provide boxes of such lengths to provide, without extensions, a cover of not less than 4'-6" over the pipe.

2.5 Lawn Hydrants

A. Lawn Hydrants: Automatic nonfreezing "Government Pattern" street washer type, as manufactured by J. R. Smith Manufacturing Company, No. 5810 or an approved equal, with a 3/4 inch hose and inlet connection.

1. Furnish a detachable "T" handle to the Owner for each hydrant installed.

2. Provide a vacuum breaker in each water line serving lawn hydrants at the point where it leaves the building and elsewhere where required by State and Local Codes.

2.6 Fire Hydrants

A. Provide all fire hydrants of the type and the exact standard as established by the local Fire Department.

B. Providing there is no local standard, then the fire hydrants be compression type, Safetop fire hydrants as manufactured by the Kennedy Valve Manufacturing Co., or an approved equal.

1. Constructed hydrants in such a manner that there will be no interruption of water service or loss of water should the hydrant be broken, and upon impact the entire top section shall break cleanly at the "safety breakable section".

2. Provide fire hydrants with a 6 inch bell connection, two 2 1/2 inch hose connections, one 4 1/2 inch hose connection, and one 4 1/2 inch pumper connection.

3. Provide hose and pumper connections with the type and number of threads per inch to match those of the local fire department.

C. Design hydrants for 175 pounds working pressure or 300 pounds hydrostatic test pressure, and conform to the latest specifications of the American Water Works Association.

1. Provide bronze working parts.

2. Connect hydrants to the mains by 6 inch diameter pipes.

3. Provide design, material, and workmanship similar and equal to the latest stock pattern ordinarily produced by the manufacturer, having an arrow indicating direction of opening, and opening in the direction required by the local fire department.

4. Paint hydrants one coat of red lead paint and two finish coats of approved paint of the color approved by the Architect.

5. Provide hydrants with 5 inch valve openings.

6. Install hydrants in accordance with the manufacturer's recommendations and the applicable requirements hereinafter noted.

7. Provide a gate valve and valve box ahead of each fire hydrant.

3 Execution

3.1 General Installation

A. Rest the full length of each section of pipe solidly upon the pipe bed, with recesses excavated to accommodate the joints.

B. Take up and re-lay any pipe that has the grade or joint disturbed after laying.

C. Thoroughly clean the interior of the pipe of all foreign matter before lowering into the trench, and keep clean with plugs or other approved methods.

D. Do not lay the pipe in water, or when trench or weather conditions are unsuitable for the work, except by special permission of the Architect.

E. Keep water out of the trench until each joint is made watertight.

F. When work is not in progress, keep open ends of pipe and fittings securely closed so that no trench water, earth, or other substance will enter the pipes or fittings.

3.2 Domestic Water Service And Fire Lines

A. Wet Tap: Relocate or extend existing water mains as shown and noted on Drawings.

B. Provide new domestic water service and fire lines to the point of connection to the building piping being installed under the Mechanical Base Bid.

3.3 Domestic Water Service

A. Provide a new domestic water service to the point of connection to the building piping.

B. Connect to the well as shown and noted on Drawings.

C. After testing, flush all new domestic water lines and sterilize as follows:

1. Sterilize each unit of the completed water line with chlorine before acceptance for domestic operation.

2. Provide amount of chlorine for a dosage of 50 parts per million.

3. Introduce the chlorinating material into the water lines and distribution systems in an approved manner.

4. After a contact period of 8 hours, flush the system with clean water until the residual chlorine content is not greater than 0.2 parts per million.

5. Open and close all valves in the lines being sterilized several times during the contact period.

3.4 Installation

A. Handle pipe and accessories in such a manner as to insure delivery of the work in sound, undamaged condition.

1. Provide 4'-6" minimum cover, after final grading, over all new exterior water mains.

B. Cut pipe in a neat and workmanlike manner without damage to the pipe.

1. Cut with an approved mechanical cutter.

2. Wheel cutters may be used when practicable.

C. While suspended in the sling and before lowering into the trench, inspect the pipe for defects and tap with a light hammer to detect cracks.

1. Defective, damaged, or unsound pipe will be rejected.

2. Deflections from a straight line or grade, as required by vertical curves, horizontal curves, or offsets, shall not exceed 6/D inches per linear foot of pipe for pipe less than 14 inches in nominal diameter, where D represents the nominal diameter of the pipe expressed in inches, between the center lines extended, of any two connecting pipes.

3. If the alignment requires deflections in excess of these limitations provide angular deflections within the limit set forth.

D. Where pipe ends are left for future connections; valve, plug or cap and mark.

E. Where connections are made between this work and work under another contract, make the connections by using special end fittings to suit the actual conditions.

F. After the pipe is laid, the joints completed, and the trench partially backfilled, leaving the joints exposed for examination, the newly laid piping or any valved section of piping shall be subjected to a pressure test of 50 pounds per square inch in excess of the static pressure.

1. Carefully examine all exposed pipe, joints, fittings, valves, and hydrants during the open trench test.

2. Replace cracked or defective pipe, fittings, valves, or hydrants disclosed in the pressure test and repeat the test until the test results are satisfactory.

3. Where the actual visible inspection of each joint cannot be made because of the necessity for immediate backfilling or where the line is laid below water level and it is impracticable to lower the water level by pumping, the Contractor shall provide suitable means for determining the quantity of water lost by leakage under normal operating pressure.

4. No piping installation will be accepted until or unless this leakage (evaluated on a pressure basis of 150 pounds per square inch) is less than 100 US gallons per 24 hours per mile of pipe per inch nominal diameter for pipe in 12 foot lengths; 75 gallons for pipe in 16 foot lengths and proportionately varied for other lengths of pipe.

5. In calculating leakage, the Architect will make allowance for added joints in the pipe line above normal for unit lengths of pipe.

6. Should any test of combined sections of pipe line disclose leakage per mile greater than that herein specified, or if individual sections show leakage greater than that herein specified, the Contractor shall locate and repair the defective joints.

3.5 Vacuum Breakers And Relief Valves

A. Install vacuum breaker and relief valves at high points in the water mains.

3.6 Valve Boxes

A. Install boxes over each outside gate valve.

B. Where water mains are located in paved streets or drives, locate the boxes directly back of the curbs.

C. Where no curbing exists, install service boxes in accessible locations, beyond the limits of streets, walks and driveways.

3.7 Lawn Hydrants

A. Length below grade shall be 48 inches and the hinged cover set 1 inch below finished grade.

B. Install lawn hydrants complete where shown on Drawings.

3.8 Setting Lawn And Fire Hydrants, Valves, And Valve Boxes

A. Install hydrants, valves, and valve boxes in the lines as shown on Drawings.

B. Set hydrants, valves, and valve boxes plumb and centered, with valve boxes directly over the valves.

C. Locate valve boxes, if possible, outside the area of drives, sidewalks, and streets.

D. Carefully tamp earth fill around the valve box to a distance of 4 feet on all sides of the box, or to the undisturbed trench face if less than 4 feet.

E. Set hydrants at such elevations that the connecting pipe will have the same depth of cover as the distributing mains.

F. Set the hydrant on a concrete slab not less than 4 inches thick and 15 inches square.

G. Firmly wedge the back of the hydrant, opposite the pipe connection, against the vertical face of the trench to prevent the hydrant from blowing off the line.

H. If the character of the soil is such that, in the opinion of the Architect, the hydrant cannot be securely wedged, bridle rods and rod collars shall be used.

1. Provide bridle rods and rod collars not less than 3/4 inch stock and protect by a coat of acid-resisting paint.

2. Place not less than 7 cubic feet of broken stone around hydrant to insure drainage.

3. Thoroughly compact the backfill around hydrants to the grade line in a manner satisfactory to the Architect.

4. Clean interiors of hydrants and valves of all foreign matter before installation.

5. Tighten stuffing boxes and inspect the hydrant or valve in opened and closed positions, to see that all parts are in working condition.

3.9 Standard Valve Manholes

A. Provide standard valve manholes constructed at locations shown on Drawings or as required by the nature of the installation.

END OF SECTION

SECTION 33 13 00
DISINFECTION OF WATER DISTRIBUTION SYSTEM

1 General

1.1 Section Includes

A. Disinfection of potable water distribution and transmission system.

B. Test and report results.

1.2 Related Sections

A. Section 33 11 00 - Water Distribution Systems.

B. Section 22 10 00 - Plumbing Piping: Disinfection of building domestic water piping system.

1.3 References

A. AWWA C651 - Standard for Disinfecting Water Mains.

1.4 Submittals

A. Submit name of treatment firm and evidence of qualification.

B. Submit name of testing laboratory and evidence of qualification.

C. Submit three copies of reports.

1.5 Project Record Documents

A. Submit reports under provisions of Division 1.

B. Disinfection report; accurately record:

1. Type and form of disinfectant used.
2. Date and time of disinfectant injection start and time of completion.
3. Test locations.
4. Initial and 24 hour disinfectant residuals (quantity in treated water) in ppm for each outlet tested.
5. Date and time of flushing start and completion.
6. Disinfectant residual after flushing in ppm for each outlet tested.

C. Bacteriological report; accurately record:

1. Date issued, project name, and testing laboratory name, address, and telephone number.
2. Time and date of water sample collection.
3. Name of person collecting samples.
4. Test locations.
5. Initial and 24 hour disinfectant residuals in ppm for each outlet tested.
6. Coliform bacteria test results for each outlet tested.
7. Certification that water conforms, or fails to conform, to bacterial standards.
8. Bacteriologist's signature.

1.6 Quality Assurance

A. Water Treatment Firm: Certified for disinfection by an approved company; specializing in this work with five (5) years experience.

B. Testing Laboratory: Certified and approved for examination of drinking water in compliance with applicable legislation of the State of Indiana.

1.7 Regulatory Requirements

A. Conform to Indiana Plumbing Code or regulations for work of this Section.

2 Products

Not Used.

3 Execution

3.1 Preparation

A. Verify that piping system has been cleaned, inspected, and pressure tested.

B. Beginning of treatment and testing means acceptance of existing piped system.

C. Perform scheduling and disinfection activity with startup, testing, adjusting, and balancing, and demonstration procedures, including coordination with related systems.

3.2 Execution

A. Provide and attach equipment required to execute work of this Section.

B. Inject treatment disinfectant into piping system.

C. Circulate and flush repeatedly until required cleanliness is achieved.

D. Flush and clean with municipal domestic water.

E. Replace permanent system devices removed for disinfection.

F. Pressure test system as required by the utility company.

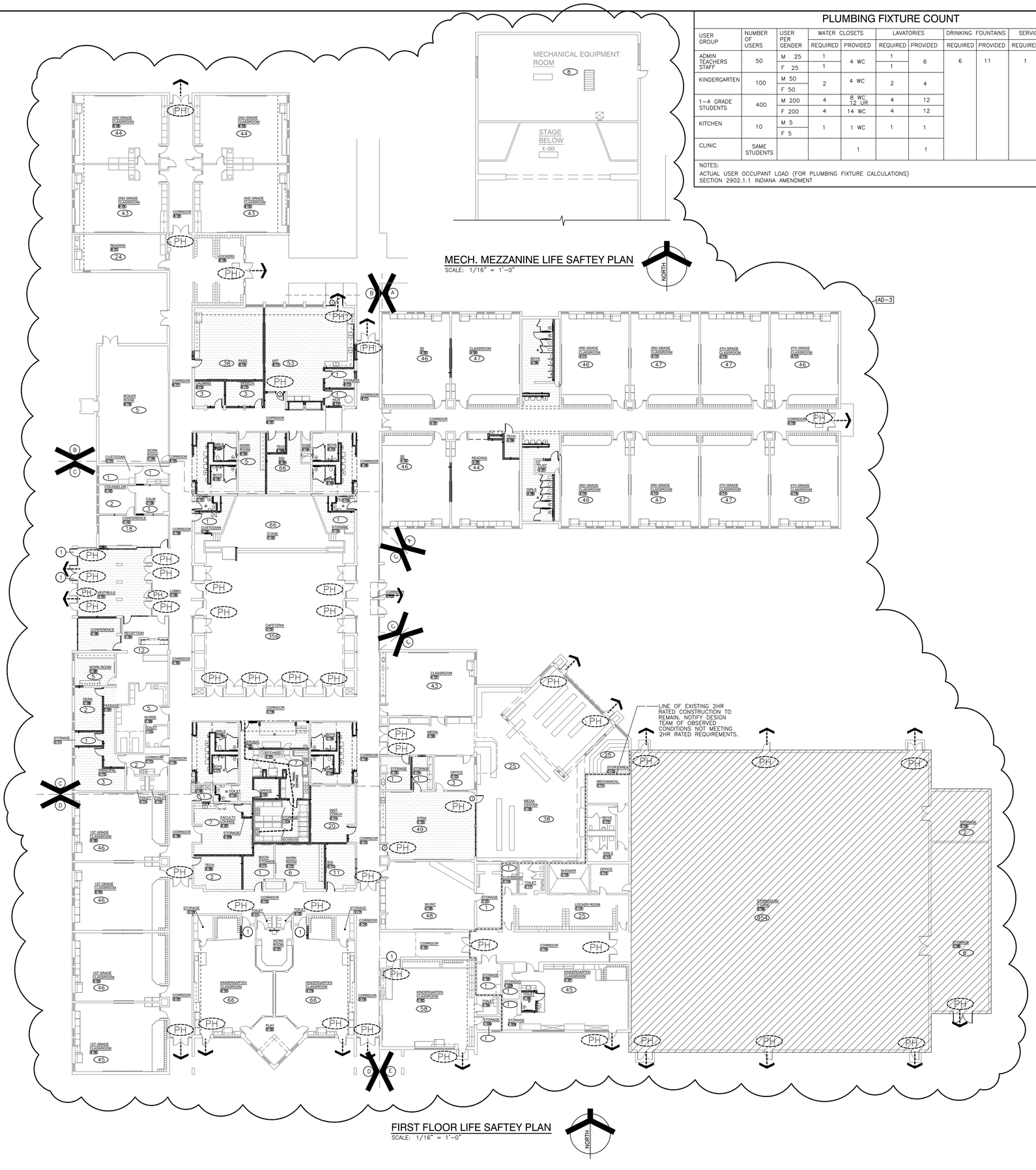
1. Repair leaks and retest.

3.3 Tests

A. Provide analysis and testing of treated water under provisions Division 1.

B. Test samples in accordance with AWWA C651.

END OF SECTION



PLUMBING FIXTURE COUNT

USER GROUP	NUMBER OF USERS	USER PER GENDER	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS		SERVICE SINKS	
			REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
ADMIN TEACHERS STAFF	50	M 25	1	4 WC	1	6	6	11	1	4
		F 25	1		1					
KINDERGARTEN	100	M 50	2	4 WC	2	4				
		F 50								
1-4 GRADE STUDENTS	400	M 200	4	8 WC 12 UR	4	12				
		F 200	4	14 WC	4	12				
KITCHEN	10	M 5	1	1 WC	1	1				
		F 5								
CLINIC	SAME STUDENTS			1		1				

NOTES:
ACTUAL USER OCCUPANT LOAD (FOR PLUMBING FIXTURE CALCULATIONS)
SECTION 2902.1.1 INDIANA AMENDMENT

LIFE SAFETY GENERAL NOTE:

LIFE SAFETY INFORMATION IS PROVIDED FOR USE BY ALL CONTRACTORS. CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH CODE REQUIREMENTS (INCLUDING BUT NOT LIMITED TO: RATED ASSEMBLIES, FIRE PROTECTION, FIRESTOPPING, DAMPERS, AND HARDWARE) INDICATED INCLUDING CONDITIONS WHERE THESE REQUIREMENTS ARE NOT DETAILED. REPORT CONFLICTS OR DISCREPANCIES TO THE ARCHITECT FOR RESOLUTION PRIOR TO STARTING WORK.

Applicable Code:	2014 Indiana Building Code (IBC 2012)
Occupancy Classifications:	Educational use areas for elementary school students – E Occupancy [305.1] Assembly uses accessory to an E Occupancy are not considered separate occupancies [303.1.3]
Scope of Project:	The project involves renovation of a 1 story School Building. An Automatic Sprinkler System will be provided throughout the Building w/ Exception of Gymnasium E-108
Code Strategy:	The existing building does not have sprinkler system. A sprinkler system will be added with exception of Gymnasium E-108 totaling 16,709 SF. Toilet Rooms A-108, A-109, B-102, B-103, B-109, B-110, C-117, C-119, C-129, C-130 and Serving C-120 will be open to corridor.
Construction Type:	Type II B (unprotected) Construction permitted based upon allowable area. [503.1]
Allowable Area:	Tabular Area: 14,500 sf [Table 503] Sprinkler Increase: 29,000 sf [506.3] Allowable Area: 29,000 sf per floor [506.2] Actual Area: 13,327 sf
Allowable Height:	3 Stories allowed [504.2] 1 Story existing & mechanical mezzanine actual
Building Elements – Fire Resistive Requirements:	Bearing walls, structural frame, floor assemblies, and roof assembly are permitted to be of nonrated noncombustible construction [Table 601] Exterior walls are permitted to be nonrated based upon having a fire separation distance of 10 feet or more [Table 602] 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 All annular space at floor penetrations and floor openings in new construction and areas of renovation shall be filled with an approved non-combustible material (fireblocking per project manual) to resist the free passage of flame and the product of combustion [713.4.2]
Incidental Use Separations:	None applicable to this project [Table 509.2]
Occupant Load Factors:	Gymnasium – row seating 7 sf per occupant Bleachers – fixed seating 1 person per 18" of length Platform 15 sf per occupant Office 100 sf per occupant Storage/Mechanical 300 sf per occupant
Egress Corridors:	Corridors is permitted to be of nonrated construction, based upon sprinkler protection. [Table 1018.1]
Means of Egress:	2 means of egress are required from rooms with a calculated occupant load of 50 or more, or where exceeding 75 feet common path of travel in E Occupancy spaces and 100 feet in B Occupancy spaces [1015.1]
Exit Access Travel Distance:	The maximum travel distance to an exterior exit is permitted to be a maximum of 250 feet [1016.1] The maximum travel distance to an exterior exit is permitted to be a maximum of 200 feet [1016.1]
Panic Hardware:	Panic hardware is required on all means of egress doors serving an occupant load of 50 or more [1008.1.9]
Automatic Sprinklers:	Automatic sprinklers are required throughout due to E Occupancy fire area exceeding 12,000 sq ft [903.2.3] Existing Gymnasium totaling 16,709 SF shall remain un-sprinkled.
Standpipes:	Class I Standpipes not required based automatic sprinkler protection throughout the building [905.3.1.1]
Fire Alarm System:	Fire alarm system required throughout – manual pull stations are not required based upon automatic sprinkler initiation of the system. [907.2.9, exc. 3]
Smoke Detectors:	Smoke detectors are required for HVAC shutdown for systems delivering in excess of 2,000 cfm. [606.1, IMC]

LIFE SAFETY PLAN LEGEND

AD-3 DOORS WITH PANIC HARDWARE AD-3 PH

DOORS IN SCOPE W/ PANIC HARDWARE 1

MAJOR EGRESS ROUTES

EXISTING RATED CONSTRUCTION

AD-3 MAXIMUM OCCUPANT LOAD OF ROOM XX

AREA OF CONSTRUCTION NOT SPRINKLED

SHADED AREA INDICATES AREAS OF MAJOR RENOVATION
NOTE: SPRINKLER UPGRADES WILL TAKE PLACE THROUGHOUT –
NOTE: AREAS NOT SHADED ALSO RECEIVE RENOVATION

SQUARE FOOTAGE ANALYSIS

EXISTING FIRST FLOOR	89,145 SQ. FT.
EXISTING FIRST FLOOR TOTAL	89,145 SQ. FT.
EXISTING MECHANICAL MEZZANINE	2,387 SQ. FT.
EXISTING MECH MEZZ. TOTAL	2,387 SQ. FT.
EXISTING TOTAL	91,532 SQ. FT.
REMODELED FIRST FLOOR	67,463 SQ. FT.
REMODELED MECHANICAL MEZZ.	2,387 SQ. FT.
REMODELED TOTAL	69,860 SQ. FT.

AD-3 YEAR BUILT 1965+– ADDITION – 1967 ADDITION – 1994 LIBRARY, SOUTH KINDERGARTEN ADDITION – 2000 GYM

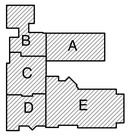
ROOM OCCUPANT LOADS

ASSEMBLY CHAIRS ONLY – NOT FIXED	7 S.F. NET
ASSEMBLY WITH TABLE AND CHAIRS	15 S.F. NET
ASSEMBLY STANDING SPACE	5 S.F. NET
ASSEMBLY (WITH FIXED SPECTATOR SEATING)	ACTUAL
LIBRARY (READING ROOM)	50 S.F. NET
LIBRARY (STACKS)	100 S.F. GROSS
BUSINESS AREA	100 S.F. GROSS
LOCKER ROOMS	50 S.F. GROSS
EXERCISE ROOMS	50 S.F. GROSS
EDUCATIONAL CLASSROOM	20 S.F. NET
STORAGE	300 S.F. GROSS
KITCHEN	200 S.F. GROSS
UTILITY (MECH/ELEC/TECH)	300 S.F. GROSS
PLATFORM	15 S.F. NET

(E) — OCCUPANT TYPE

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY MMM
DRAWN BY MMM
CHECKED BY DJW

DALE J. WAGNER REGISTERED NO. 19600171 STATE OF INDIANA ARCHITECT

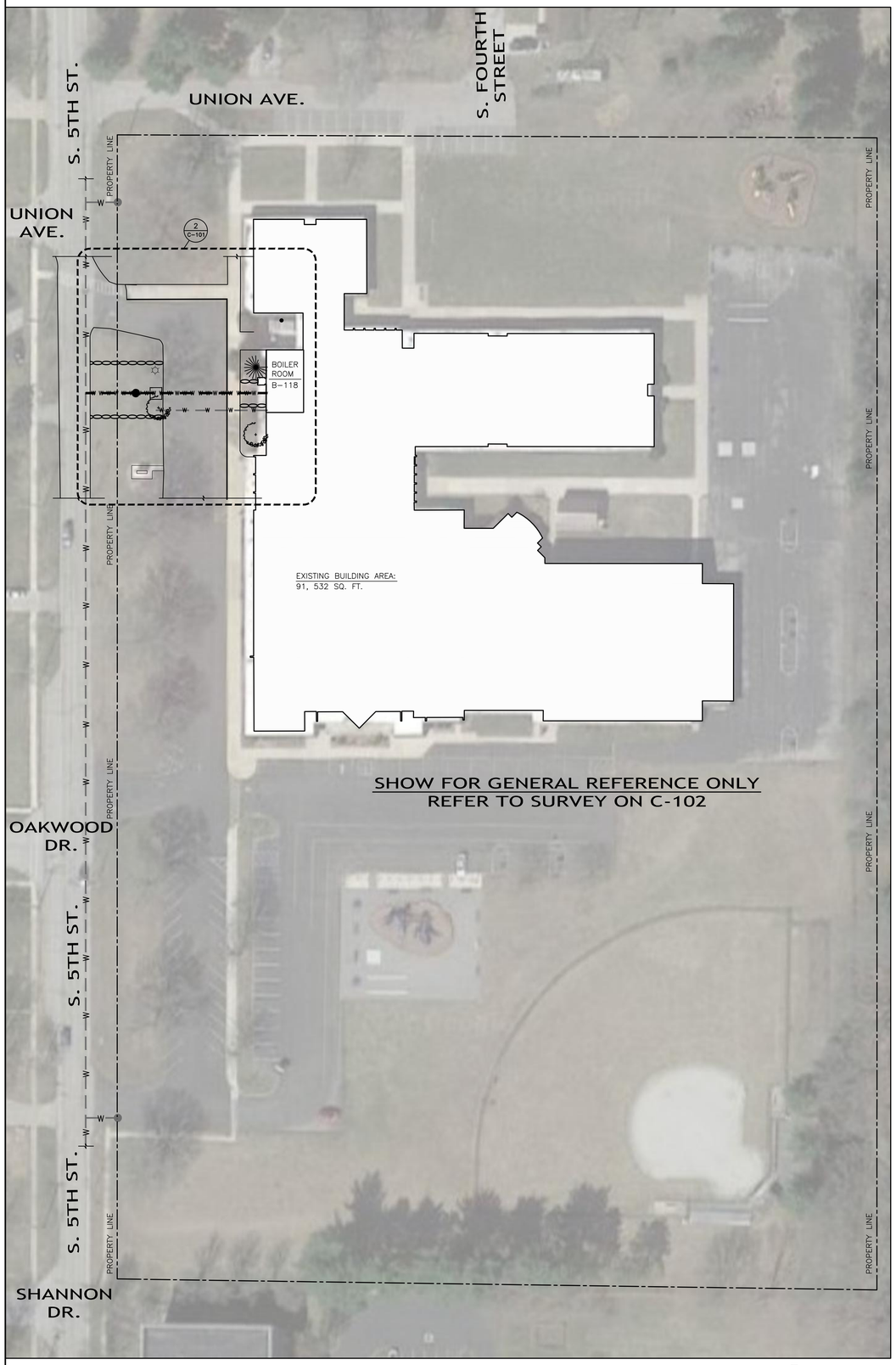
REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
FIRST FLOOR LIFE SAFETY PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
G-201



OVERALL ARCHITECTURAL SITE & WATER MAIN PLAN
SCALE: 1" = 40'-0"

NORTH 1 C-101

EROSION CONTROL MAINTENANCE

EROSION CONTROL BLANKET

1. DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET
2. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND STAPLE THE BLANKET.
3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.

PERMANENT SEEDING

1. INSPECT PERIODICALLY, ESPECIALLY AFTER STORM EVENTS, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED.
2. PLAN TO ADD FERTILIZER THE FOLLOWING GROWING SEASON ACCORDING TO SOIL TEST RECOMMENDATIONS.
3. REPAIR DAMAGED, BARE, OR SPARSE AREAS BY FILLING ANY GULLIES, RE-FERTILIZING, OVER OR RE-SEEDING, AND MULCHING.

SILT FENCE

1. INSPECT THE SILT FENCE/ EROSION BERM PERIODICALLY AND AFTER EACH STORM EVENT.
2. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE THE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING FABRIC TO BULGE.
4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

EROSION CONTROL LEGEND

(A) SEED OR MULCH ALL DISTURBED AREAS NOT TO BE PAVED OR DAMAGED DURING DEMO OR INSTALLATION OF NEW CONCRETE. REFER TO SPECIFICATIONS FOR SEED MIXTURES.

(B) INSTALL SILT FENCING ALONG THE LOWER EDGE OF ALL DISTURBED AREAS NOT TO BE IMMEDIATELY PAVED
SYMBOL=

(C) CONTRACTOR SHALL PROVIDE EROSION CONTROL AND MAINTENANCE MEASURES AT DRIVEWAYS SUCH AS DAILY SWEEPING AND BARRIERS TO PREVENT SEDIMENT FROM ENTERING PUBLIC RIGHT-OF-WAY.

DEMOLITION PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. SAW CUT AND REMOVE EXISTING PORTION CONCRETE SIDEWALK AND INTEGRAL CURB AS NEEDED TO INSTALL NEW PIPING.
2. SAW CUT AND REMOVE EXISTING PORTION OF ASPHALT DRIVE AS NEEDED TO INSTALL NEW PIPING.
3. EXISTING MONUMENT SIGN, FLAG POLE. AND WALK TO REMAIN.
4. EXISTING LARGE DECIDUOUS TREE AND STUMP TO BE REMOVED.
5. EXISTING LARGE SHRUBS TO BE REMOVED.
6. EXISTING LIGHT POLE TO REMAIN.
7. SAW CUT AND REMOVE EXISTING STREET AND BASE FOR ACCESS TO WATER LINE. VERIFY EXACT LOCATION – REFER TO 5/C-501 FOR DETAILS. CONFIRM FINAL DETAIL USED WITH JURISDICTION HAVING AUTHORITY.

PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

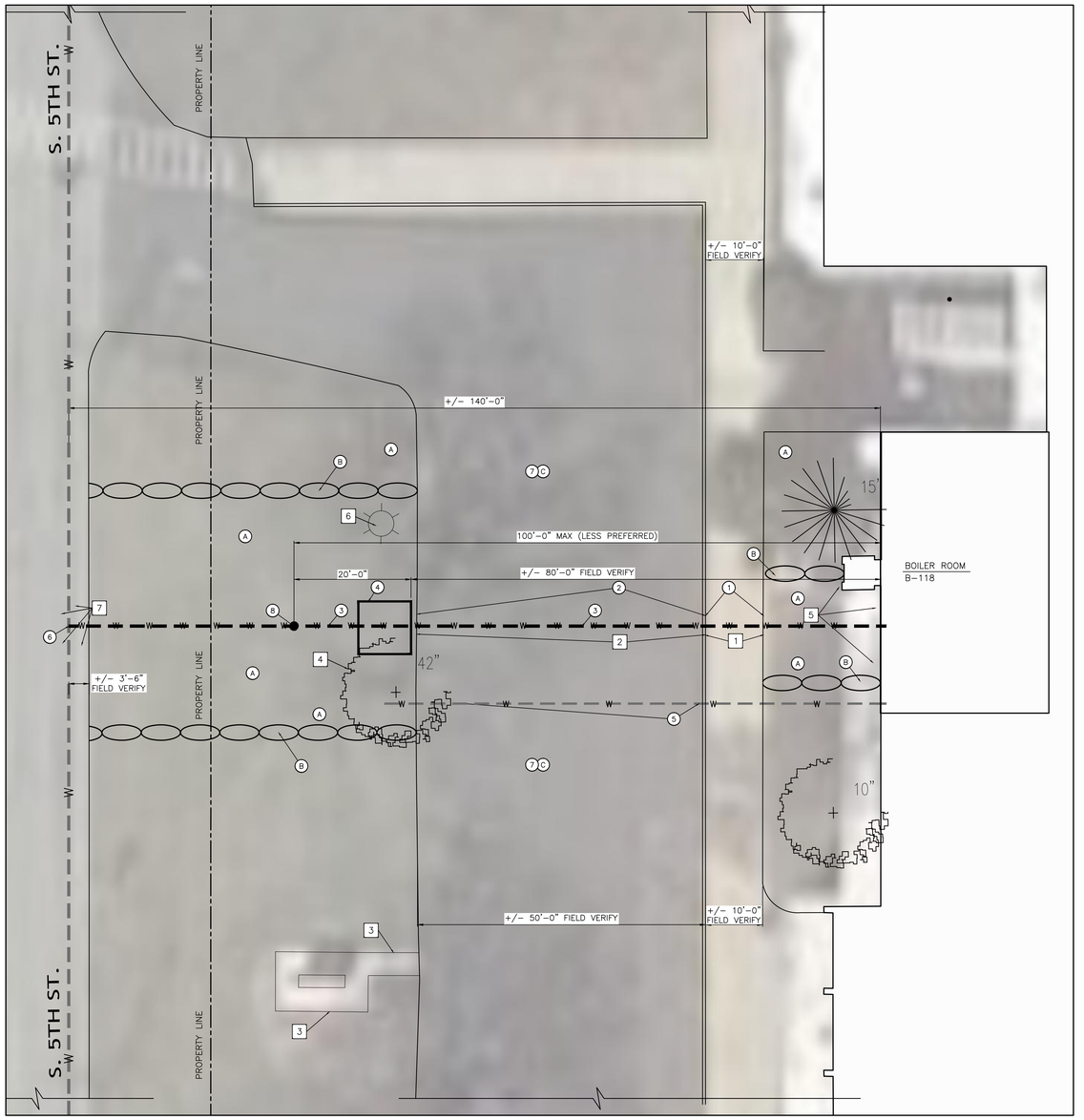
1. INSTALL NEW 4" GRANULAR FILL, SIDEWALK, AND CURB TO MATCH EXISTING. REFER TO 2/C-501 AND 4/C-501.
2. NEW HEAVY DUTY ASPHALT. REFER TO 3/C-501
3. 6" WATER SUPPLY FOR FIRE PROTECTION. FIELD VERIFY EXISTING 4" MAIN LOCATION
4. 9'X9' +/- CONCRETE VAULT. REFER 1/C-501
5. APPROXIMATE LOCATION OF EXISTING 4" DOMESTIC SERVICE
6. CONNECT TO EXISTING WATER MAIN, VERIFY LOCATION.
7. RESTORE PAVING DAMAGED OR REMOVED FOR CONSTRUCTION.
8. NEW FIRE HYDRANT.

GENERAL SITE AND WATER MAIN NOTES:

1. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT.
2. CONTRACTOR RESPONSIBLE TO VERIFY AND LOCATE ALL SITE UTILITIES.
3. CONTRACTOR TO COORDINATE WITH ALL JURISDICTION HAVING AUTHORITY REQUIREMENTS FOR ALL SITE WORK.
4. EXISTING SITE DRAINAGE TO REMAIN. SITE DRAINAGE SHALL NOT BE MODIFIED.
5. IF UTILITY LINE REMOVAL IS REQUIRED, ALL UTILITY LINE REMOVAL SHALL BE COORDINATED WITH UTILITY COMPANY.
6. CONTRACTOR SHALL NOTIFY JURISDICTION HAVING AUTHORITY OF ANY DISCREPANCIES IN SITE CONDITIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING WORK.
8. CONTRACTOR SHALL PROVIDE ADEQUATE SIGNAGE, BARRICADES, AND RELATED EQUIPMENT FOR PUBLIC SAFETY.
9. REFER TO SHEET C-102 FOR SURVEY.

SITE AND WATER MAIN LEGEND:

PROPOSED WATER MAIN
EXISTING WATER MAIN
EXISTING WATER DOMESTIC SERVICE
EXISTING FIRE HYDRANT
NEW FIRE HYDRANT

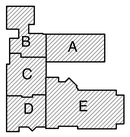


ARCHITECTURAL SITE & WATER MAIN ENLARGED PLAN
SCALE: 1" = 10'-0"

NORTH 2 C-101

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM NO. 3

FOR BIDDING PURPOSES ONLY

DRAWING
SITE & WATER MAIN PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
C-101

Wednesday, 12/14/2022 - 9:28 AM - LAST SAVED BY:NWESLEY
Y:\21-145 DUNELAND SC - BAILLY ES ADDITIONS AND RENOVATIONS\21-145 DRAWINGS\02 GENR\CIVIL DRAWING\C-101.DWG

BAILLY ELEMENTARY SCHOOL
TOPOGRAPHICAL SURVEY

LEGAL DESCRIPTIONS:

PARCEL 1 (TAKEN FROM

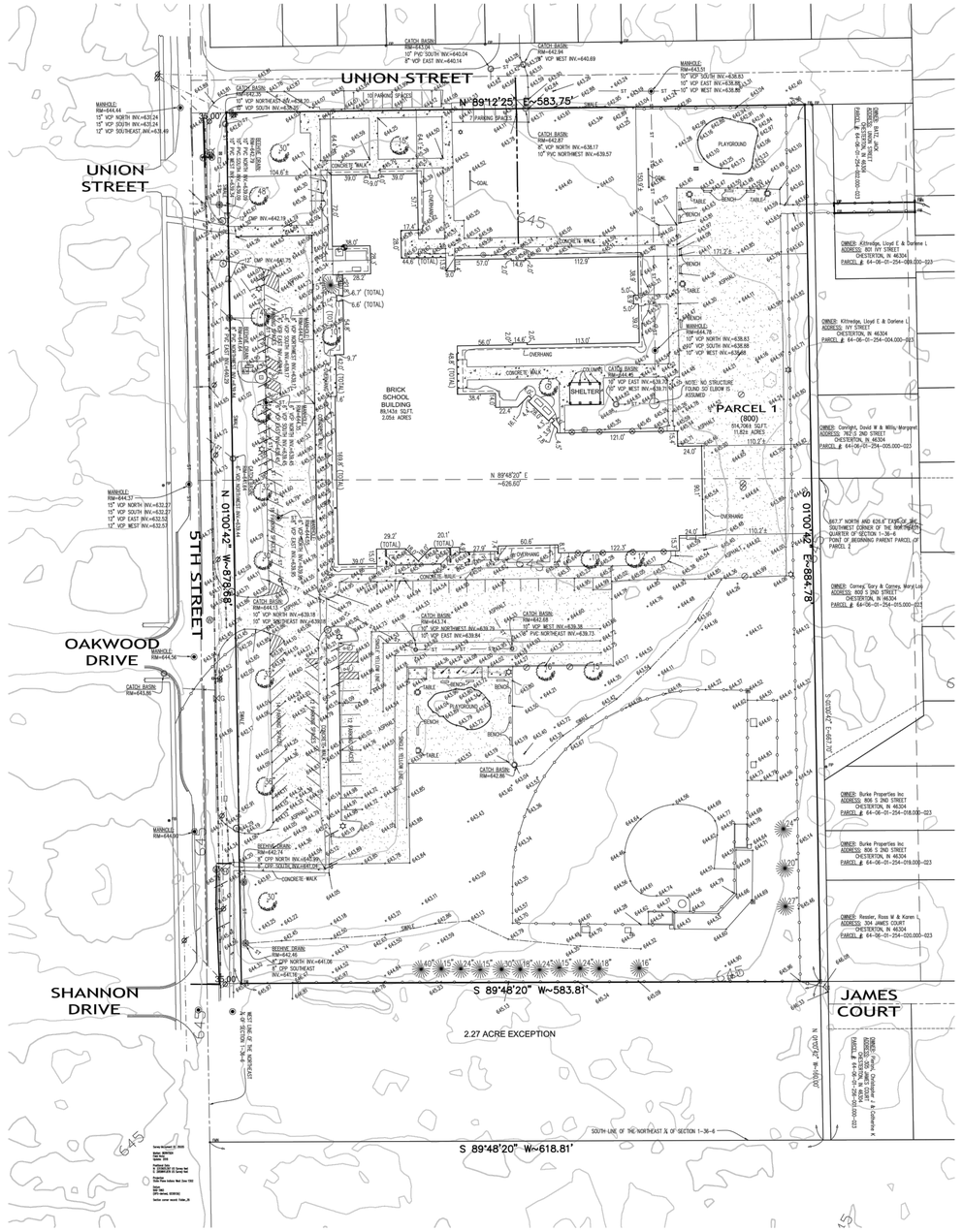
THE SOUTH HALF OF THE WEST 37½ RODS OF THE NORTH EAST QUARTER OF SECTION 1, TOWNSHIP 36 NORTH. RANGE 6 WEST, EXCEPT THE NORTH 33 FEET THEREOF AND EXCEPT 2.27 ACRES OFF FROM THE SOUTH SIDE THEREOF, SUBJECT TO ALL LEGAL HIGHWAYS.

PARCEL 2 (TAKEN FROM

THE NORTH 10 FEET OF THE FOLLOWING DESCRIBED REAL ESTATE: THE EAST 81 FEET BETWEEN THE SOUTH LINE OF UNION AVENUE EXCEPT THE NORTH 100 FEET IN A PARCEL OF LAND DESCRIBED AS FOLLOWS: A PARCEL OF LAND BEGINNING AT AN IRON PIPE WHICH IS LOCATED 667.7 FEET NORTH AND 626.6 FEET EAST BY RECTANGULAR MEASUREMENT FROM THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 36 NORTH, RANGE 6 WEST OF THE SECOND PRINCIPAL MERIDIAN IN THE TOWN OF CHESTERTON, PORTER COUNTY, INDIANA; THENCE RUNNING EAST 101 FEET TO AN IRON PIPE WHICH IS 254 FEET WEST OF THE CENTERLINE OF SECOND STREET IN THE TOWN OF CHESTERTON; THENCE NORTH PARALLEL TO AND 254 FEET WEST OF SECOND STREET A DISTANCE OF 370.5 FEET, MORE OR LESS, TO THE SOUTH LINE OF UNION AVENUE; THENCE WEST ALONG THE SOUTH LINE OF UNION AVENUE 101 FEET; THENCE SOUTH 370 FEET TO THE POINT OF BEGINNING.

VICINITY MAP

THIS PROPERTY IS LOCATED IN FLOOD ZONE(S) X (UNSHADED) AS DETERMINED BY USING SCALE MEASUREMENT FOR LOCATION UPON THE APPLICABLE FLOOD INSURANCE RATE MAP FOR CHESTERTON , PORTER COUNTY, INDIANA AS SHOWN IN COMMUNITY PANEL(S) 18127C0131D , EFFECTIVE SEPTEMBER 30, 2015 . TRACTS OF LAND LOCATED IN FLOOD ZONE X (UNSHADED) ARE AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD HAZARD.



LEGEND:

- POWER POLE
- POWER POLE / ANCHOR
- LIGHT POLE
- POWER POLE w/ LIGHT
- CATCH BASIN/INLET
- MANHOLE
- END SECTION
- BEEHIVE CATCH BASIN
- TELEPHONE PEDESTAL
- ELECTRIC JUNCTION BOX
- ELECTRIC TRANSFORMER
- ELECTRIC METER
- GAS METER
- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- CLEAN OUT
- FIBER OPTIC BOX
- FIBER OPTIC MARKER
- BASKETBALL POST
- FLAG POLE
- TRAFFIC MANHOLE
- SIGNS (STOP, YIELD, etc.)
- B-BOX
- VENT PIPE
- STEEL POST/BOLLARD
- ELECTRIC MANHOLE
- ELECTRIC VAULT
- ROOF DRAIN
- DRAIN
- ELECTRIC OUTLET
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION

CLIENT: SKILLMAN CORP.	DATE: DECEMBER 22, 2021	TOPOGRAPHICAL SURVEY PART OF THE N.E. 1/4 OF SECTION 01-36-06 800 S 5TH STREET IN THE TOWN OF CHESTERTON PORTER COUNTY, INDIANA	TORRENGA SURVEYING, LLC PROFESSIONAL LAND SURVEYORS 907 RIDGE ROAD, MUNSTER, INDIANA 46321 TEL. No.: (219) 836-8918 WEBSITE: WWW.TORRENGA.COM
JOB NO: 2021-0933 DRAWN: CRA/RP			
SCALE: 1"=60'			
Z:\S01 T36 R06 NE 1815\dwg\2021-0933.dwg 12/22/2021 11:36:28 AM CST			

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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AD-3	12/14/22	ADDENDUM NO. 3

FOR BIDDING PURPOSES ONLY

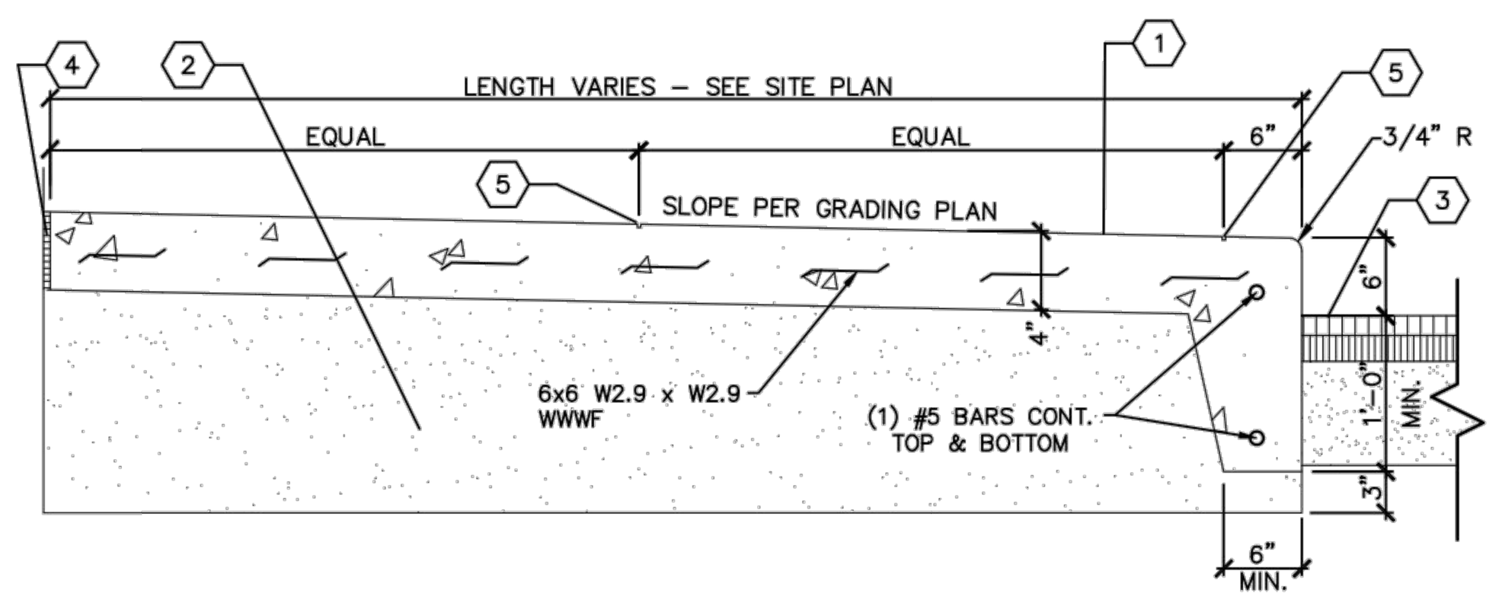
DRAWING

TOPOGRAPHICAL SURVEY

PROJECT
BAILLY ES - RENOVATIONS

SHEET

C-102



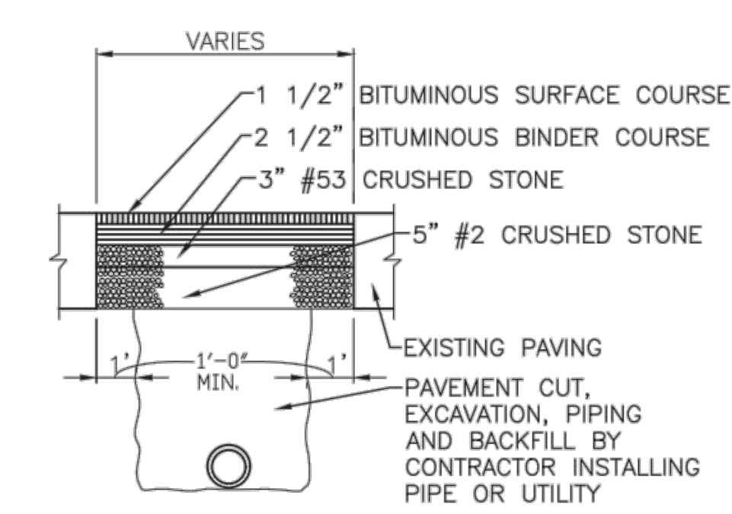
KEYED NOTES

1. 4" THICK CONC. BROOM FINISH WITH 6X6 W2.9XW2.9 WWWF
2. 6" COMPACTED GRANULAR FILL
3. PROPOSED PAVEMENT
4. COMPRESSIBLE FILLER (3/4" MAXIMUM). CUT BACK AND PROVIDE SEALANT, TYPICAL, AT ALL JOINTS WITH FILLER. (BUTTING BUILDING ONLY)
5. 1/4" TOOLED JOINT (SEE TYPICAL SIDEWALK DETAIL)

TYPICAL PERIMETER SIDEWALK

SCALE: NOT TO SCALE

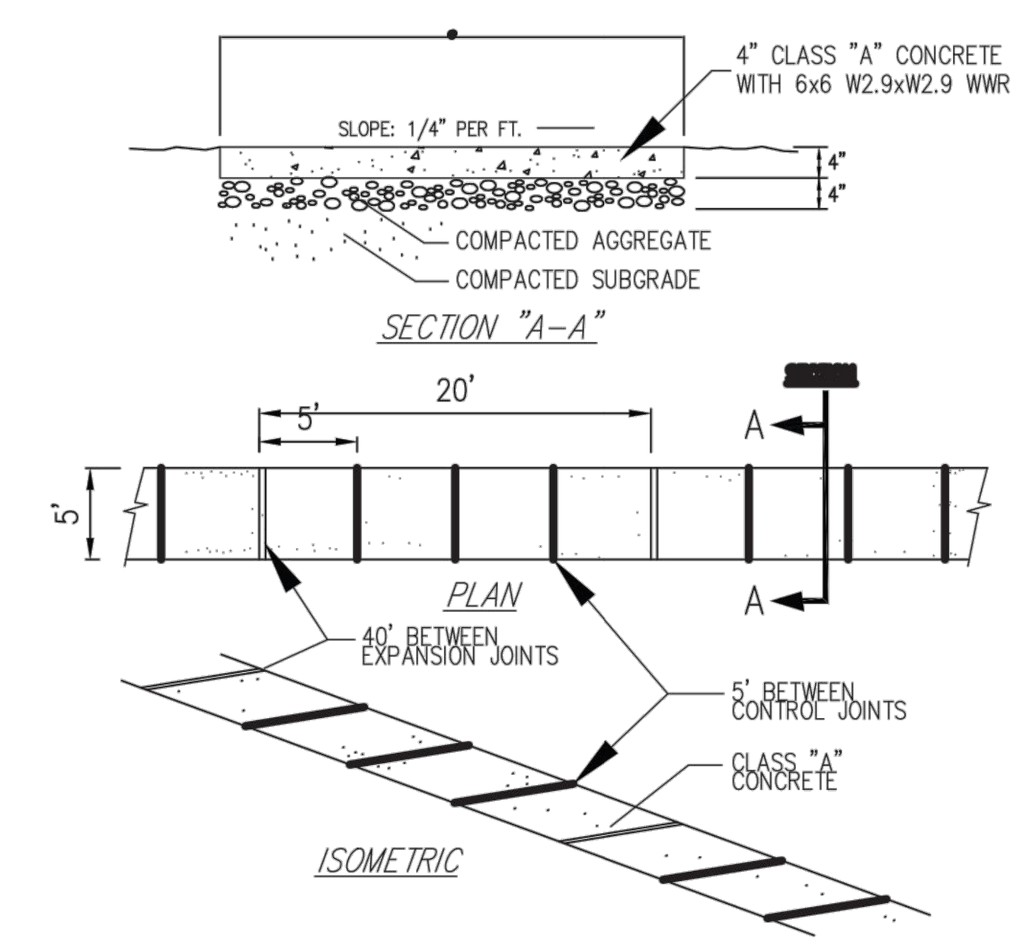
4 / C-501



HEAVY DUTY PAVEMENT REPAIR

SCALE: NOT TO SCALE

3 / C-501

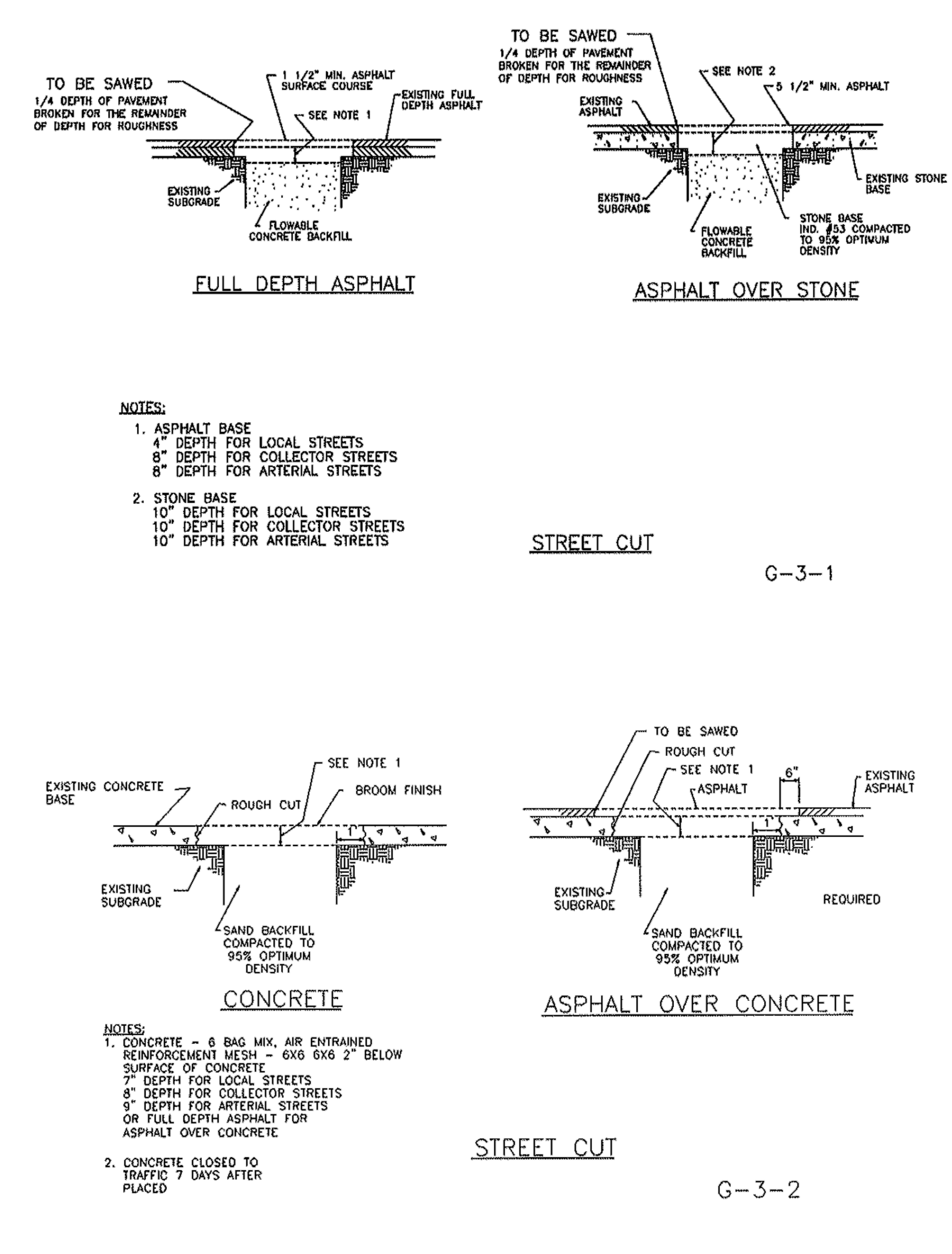


CONCRETE SIDEWALK DETAIL

SCALE: NOT TO SCALE

2 / C-501

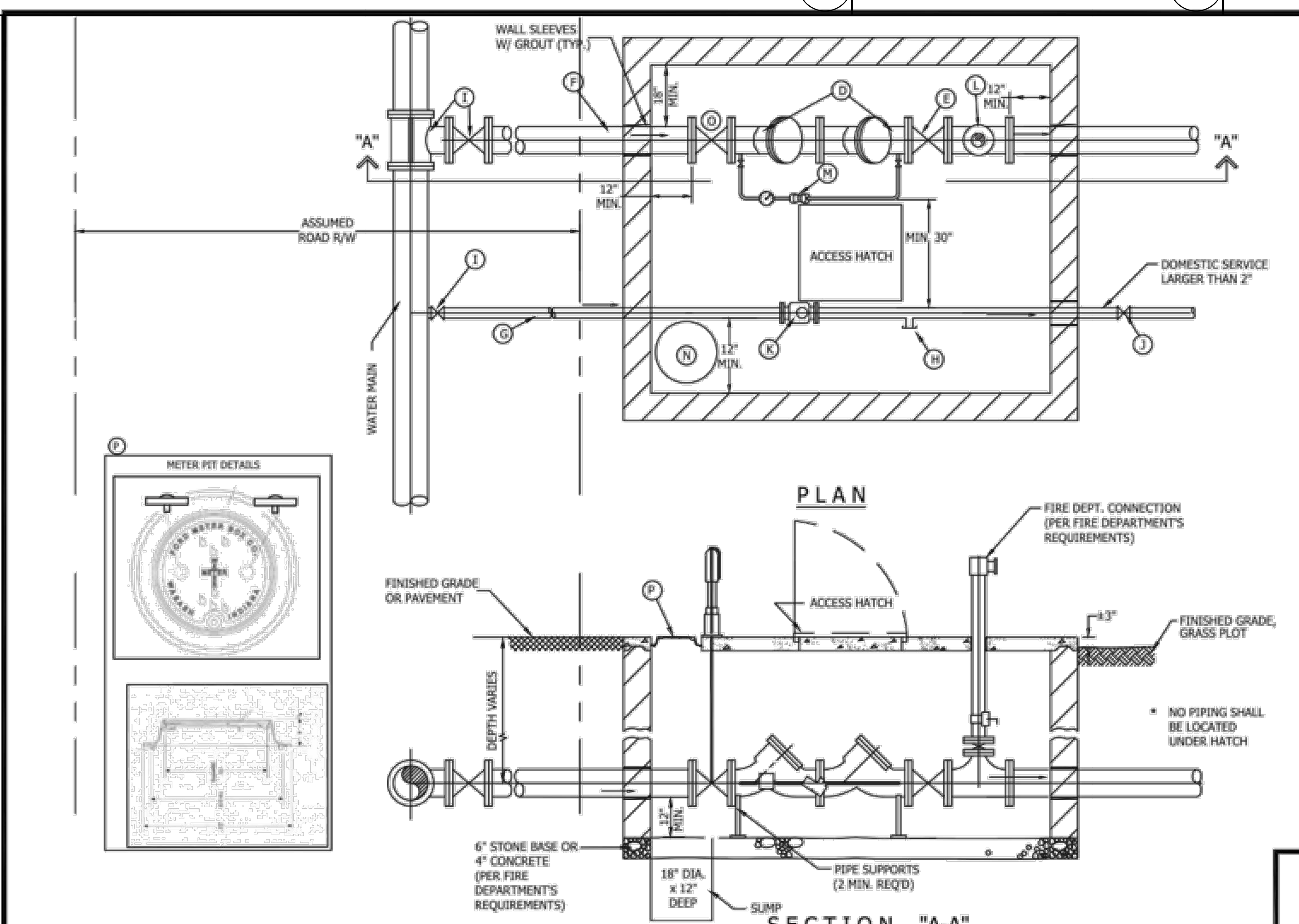
USE DETAIL AS DIRECTED BY JURISDICTION HAVING AUTHORITY REQUIREMENTS FOR CONDITIONS PRESENT. ASSUME WORST CASE SCENARIO FOR COSTING PURPOSES.



TOWN OF CHESTERTON ROAD PATCHING DETAIL

SCALE: NOT TO SCALE

5 / C-501



SECTION "A-A"

LEGEND

(A)	NOT USED	(F)	FIRE LINE	(K)	DOMESTIC SERVICE METER (SEE NOTE 8)	(P)	SUMP PUMP LID
(B)	NOT USED	(G)	DOMESTIC SERVICE (SEE NOTE 8)	(L)	FLANGED TEE		
(C)	NOT USED	(H)	2" TEST PLUG (SEE NOTE 8)	(M)	DETECTOR METER (SEE NOTE 8)		
(D)	DOUBLE CHECK DETECTOR ASSEMBLY	(I)	TAPPING SLEEVE W/ TAPPING VALVE & BOX (COORDINATE W/ LOCAL UTILITY SUPERINTENDENT/MANAGER)	(N)	SUMP PIT		
(E)	FLANGED OS & Y VALVE	(J)	RJDI GATE VALVE	(O)	FLANGED OS&Y VALVE WITH PIT TYPE POST INDICATOR		

NOTES:

1. CUSTOMER SHALL FURNISH & INSTALL VAULT, INCLUDING ALL APPERTENCES EXCEPT AS NOTED BELOW.
2. VAULT CONSTRUCTION MATERIALS SHALL BE 8"x8"x16" CMU, OR PRECAST, OR CAST-IN-PLACE CONCRETE AT CUSTOMER'S SELECTION.
3. INSIDE DIMENSIONS PER DRAWING NOTES. VAULT TO BE SET LENGTHWISE WITH SERVICE.
4. TOP OF VAULT TO BE CONCRETE, AT LEAST 4" THICK WITH REINFORCING SUITABLE FOR ANTICIPATED LOADING. WHEN VAULT IS CONSTRUCTED IN PAVED AREAS, PAVEMENT IS TO BE LEVEL WITH TOP OF VAULT, AND THE TOP REINFORCED AS REQUIRED TO SUPPORT TRAFFIC LOADS (i.e. H-20 WHEEL LOADS). WHEN VAULT IS CONSTRUCTED IN GRASS PLOT, TOP OF VAULT SHALL BE 3" ABOVE FINISHED GRADE.
5. BOTTOM OF VAULT TO BE EITHER A MINIMUM OF 6" OF CRUSHED STONE OR 4" CONCRETE PER FIRE DEPARTMENT'S REQUIREMENT. MINIMUM CLEARANCE OF 12" BELOW BOTTOM OF FIRE SERVICE AND DOMESTIC SERVICE LINES IS REQUIRED.
6. DOUBLE CHECK DETECTOR ASSEMBLY SHALL BE A MODEL APPROVED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, WITH FLANGED OS&Y GATE VALVE ON INLET & OUTLET SIDES. DETECTOR METER IS FURNISHED BY UTILITY AND INSTALLED BY CUSTOMER. STAINLESS STEEL BOLTS ARE REQUIRED.
7. ACCESS HATCH IN TOP OF VAULT SHALL BE 30"x30" ALUMINUM BILCO J-2AL, BILCO PCM-2, HALLIDAY W1S3030 OR EQUAL. ACCESS HATCH SHALL HAVE SAME OR GREATER LOADING CAPACITY AS VAULT LID. PIPE HATCH FRAME DRAIN TO VAULT FLOOR OR SUMP, AS APPLICABLE. IF THE LOCAL FIRE DEPARTMENT REQUIRES A SUMP PUMP IN THE VAULT, ELECTRICAL DISCONNECT IS REQUIRED ON TOP OF VAULT, INSTALLED ABOVE GRADE, PER LOCAL ELECTRICAL CODE.
8. A COMBINATION VAULT CAN BE USED ONLY IF METER IS LARGER THAN 2".
   a. METERS TO BE LOCATED A MAXIMUM 18" FROM HINGE SIDE OF HATCH.
   b. A 2" TEST PLUG SHALL BE INSTALLED AT LEAST 2 PIPE DIAMETERS DOWNSTREAM OF 3" OR LARGER METERS.
9. AS DIRECTED BY LOCAL OPERATIONS, ADDITIONAL PIPE SUPPORTS MAY BE REQUIRED.
10. THE LID AND RING THAT WILL BE REQUIRED IS FORD A53-TT OR FORD A53-T. THE A53-TT WILL BE USED FOR ALL VAULTS WITH THE DOMESTIC METER INSIDE. THE A53-T WITH BE USED FOR ALL VAULTS WITH THE DCDA ONLY LOCATED INSIDE THE VAULT.

INDIANA AMERICAN WATER

SCALE: NO SCALE	SHORT SIDE VAULT DETAIL
REVISIONS	STANDARD FOR COMBINED FIRE SERVICE & METER VAULT FOR 3" AND LARGER SINGLE METER CONFIGURATION
DRAWN BY: R.K.B. DATE: 2/2017 CHECKED: 4.C.	1 of 1

SHORT SIDE VAULT DETAIL

SCALE: NOT TO SCALE

1 / C-501

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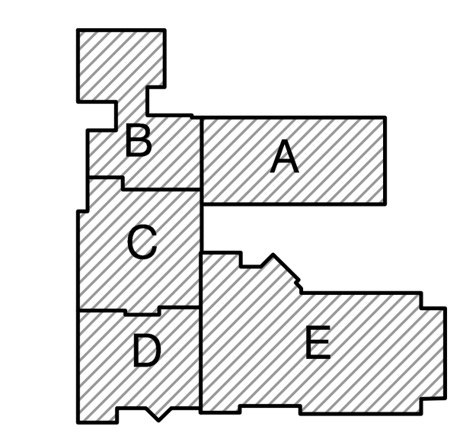
PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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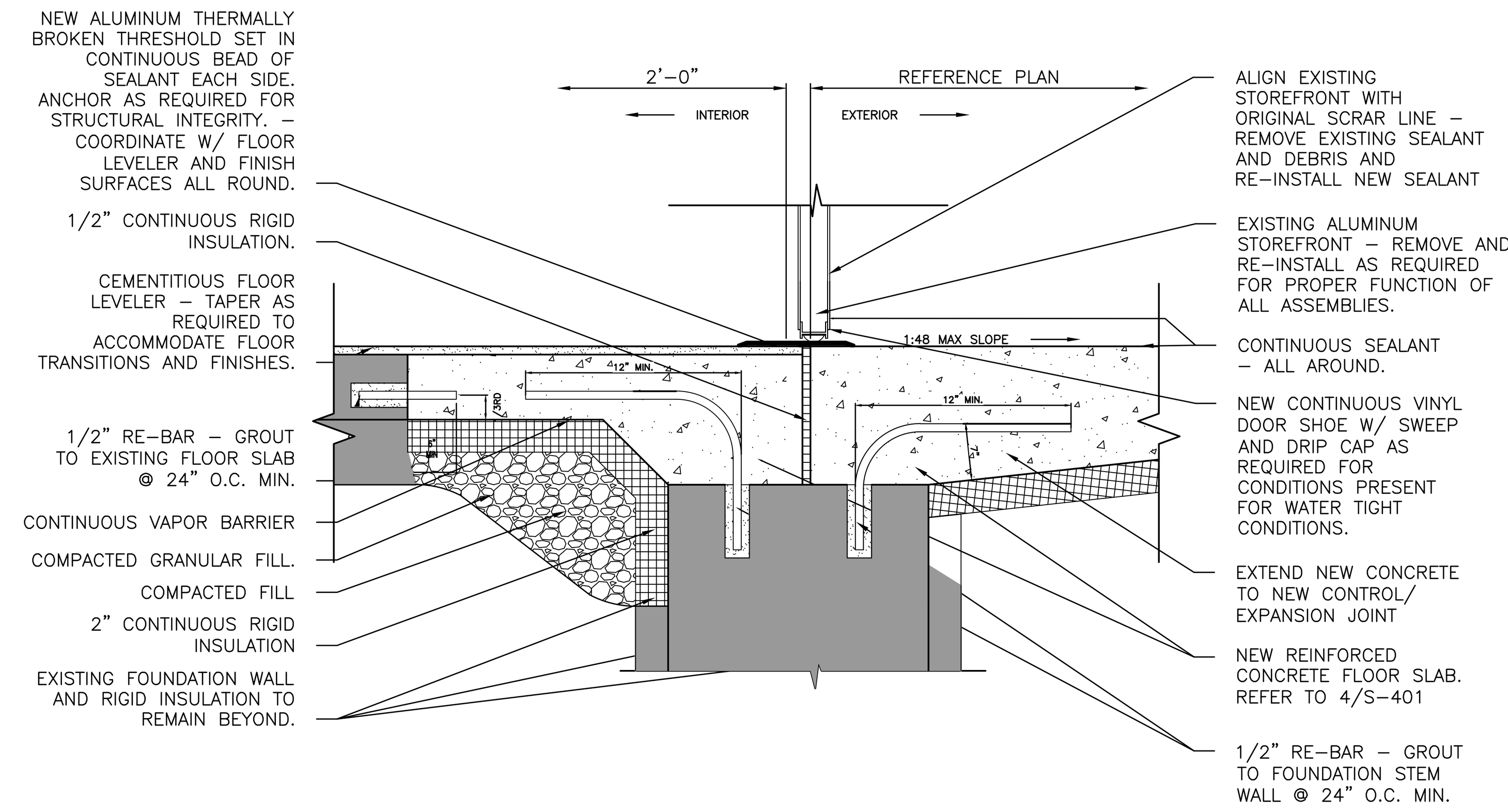
DRAWING
TYPICAL DETAILS

PROJECT
BAILLY ES - RENOVATIONS

SHEET
C-501

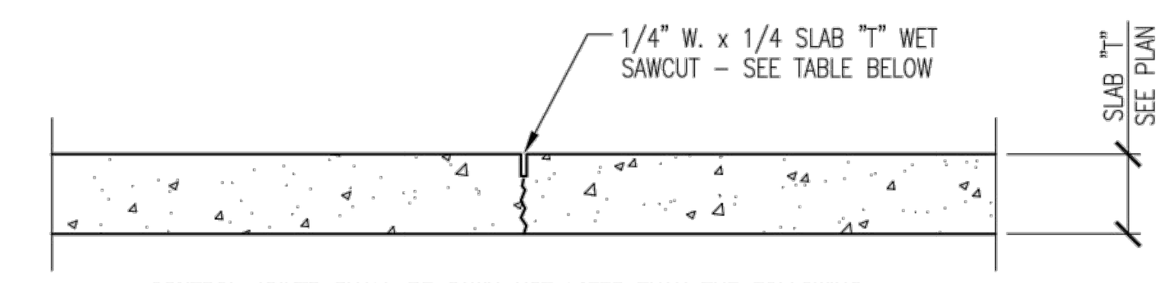
Wednesday, 12/14/2022 – 9:28 AM – LAST SAVED BY:NWESLEY
Y:\21-145 DUNELAND SC – BAILLY ES ADDITIONS AND RENOVATIONS\21-145 DRAWINGS\02 GEN\CIVIL DRAWING\C-501.DWG



SECTION DETAIL

SCALE: 1 1/2" = 1'–0"

6 / S–401



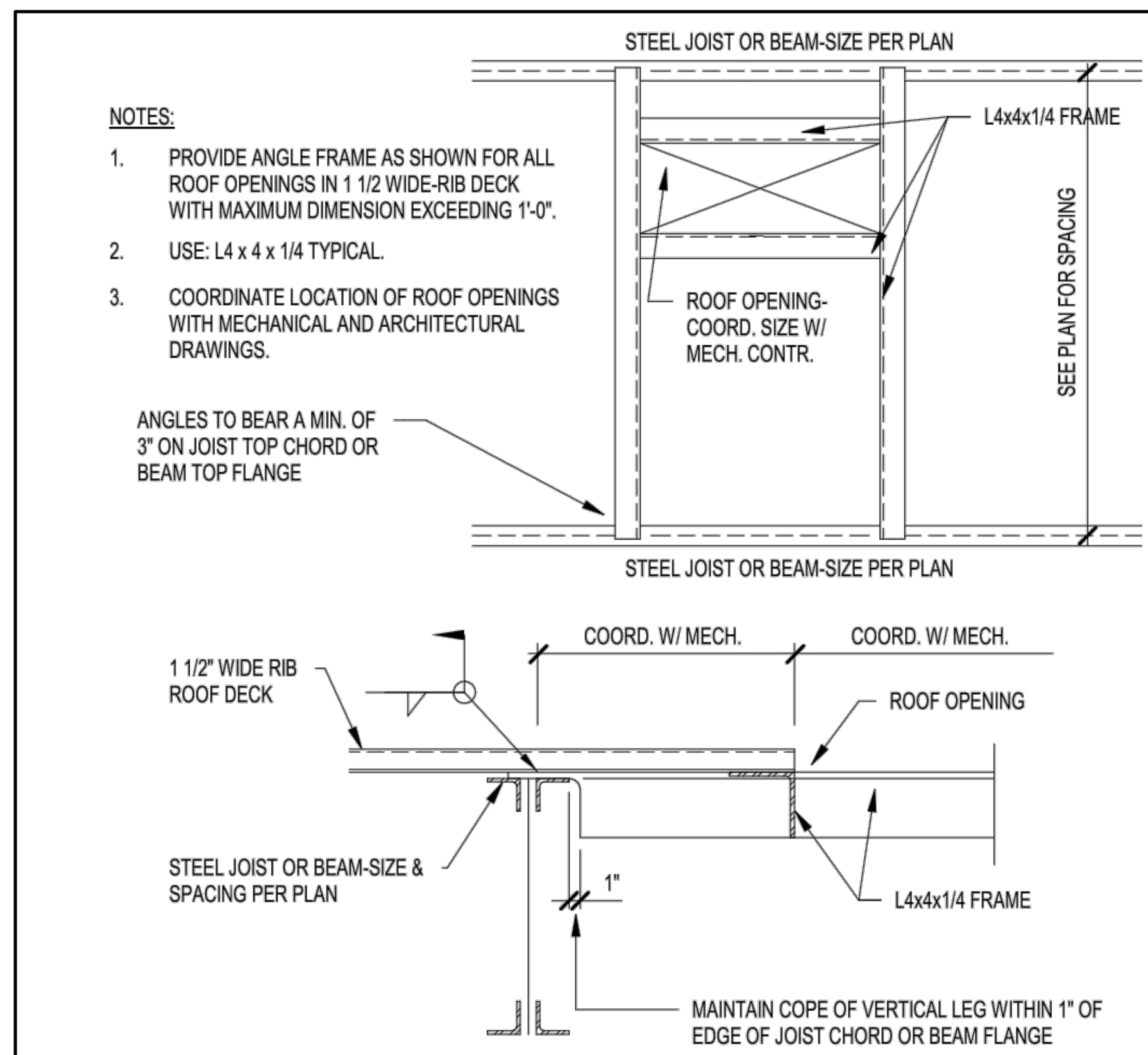
CONTROL JOINTS SHALL BE SAWN NOT LATER THAN THE FOLLOWING TABLE, OR 16 HOURS AFTER FINAL TROWELING (WHICHEVER IS LESS). WHERE "T" EQUALS THE AMBIENT TEMPERATURE IN DEGREES FAHRENHEIT AT THE TIME OF FINAL TROWELING. SAWCUTTING SHALL BE SUSPENDED ONLY IF THE LARGE AGGREGATE IS DISLODGED OR LOOSENED.
ALTERNATE: USE PRE–FORMED JOINT FORMER.

TEMP, °F	TIME, HOURS
< 40°	16
50°	14
60°	8½
70°	5½
80°	4
90°	3

SLAB ON GRADE CONTROL/ CONTRACTION JOINT DETAIL

SCALE: NOT TO SCALE

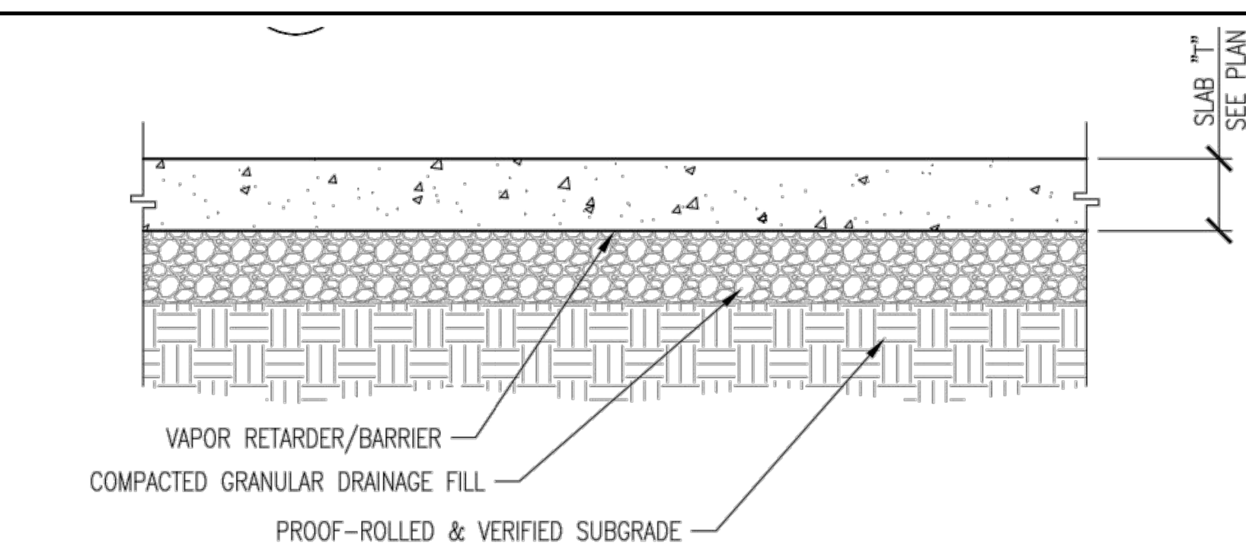
5 / S–401



ROOF OPENING FRAME 1.5" DECK

SCALE: NOT TO SCALE

8 / S–401

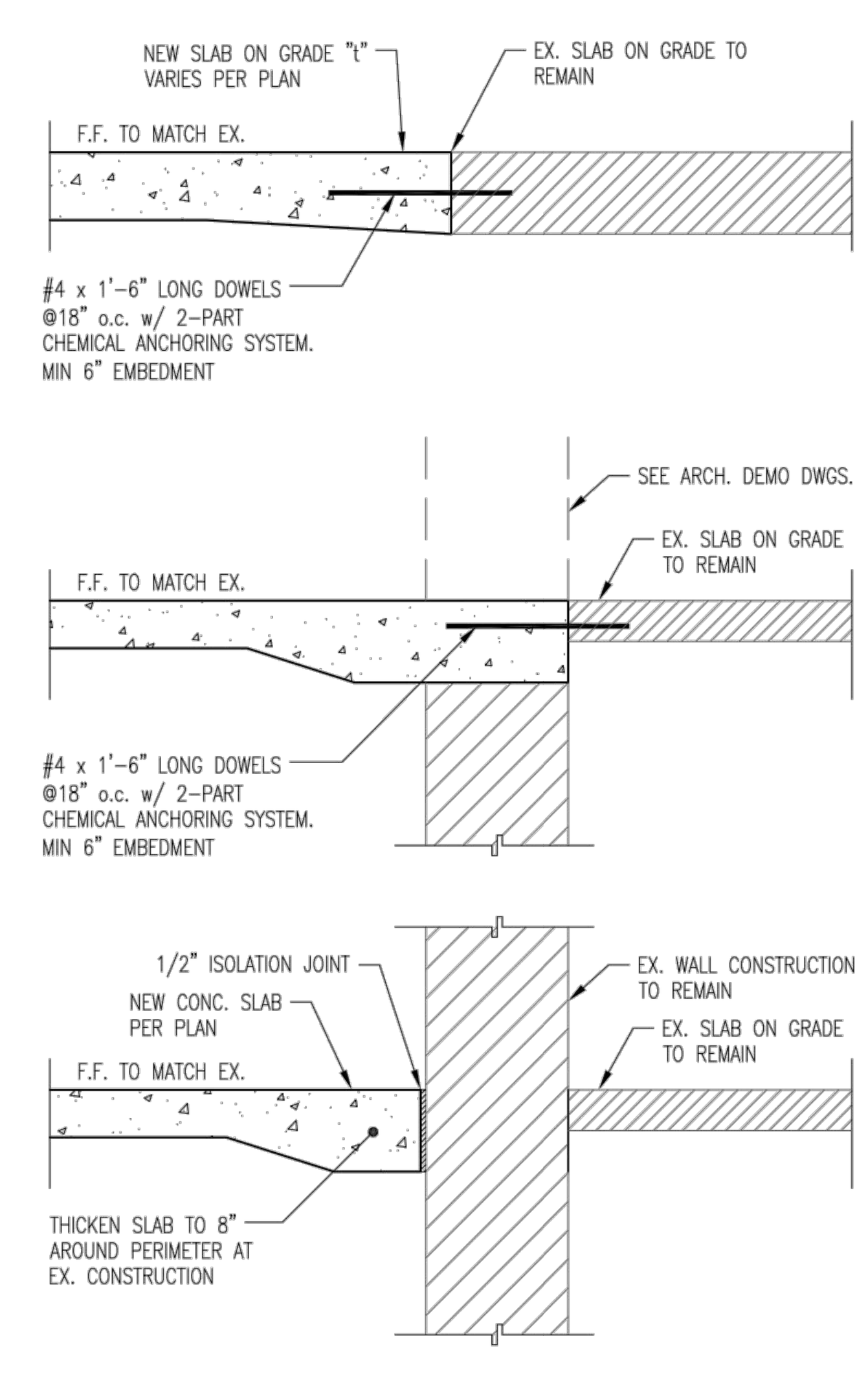


1. LOCATE WELDED WIRE FABRIC IN UPPER THIRD OF SLAB. SUPPORT ON BOLSTERS, CHAIRS, OR CONCRETE BRICKS.
2. LAP WELDED WIRE FABRIC A MIN. OF ONE FULL MESH SPACING.
3. THE USE OF NYLON OR POLYPROPYLENE FIBER IN LIEU OF WELDED WIRE FABRIC AS A SECONDARY REINFORCEMENT IS PERMISSIBLE, UNLESS OTHERWISE NOTED.
   NOTE: FIBER MAY NOT BE SUBSTITUTED FOR W.W.F. IN SUPPORTED SLABS.
4. SEE PLANS, NOTES, AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS SUCH AS FINISH, JOINTING, CURING, ETC.

SLAB ON GRADE CONSTRUCTION

SCALE: NOT TO SCALE

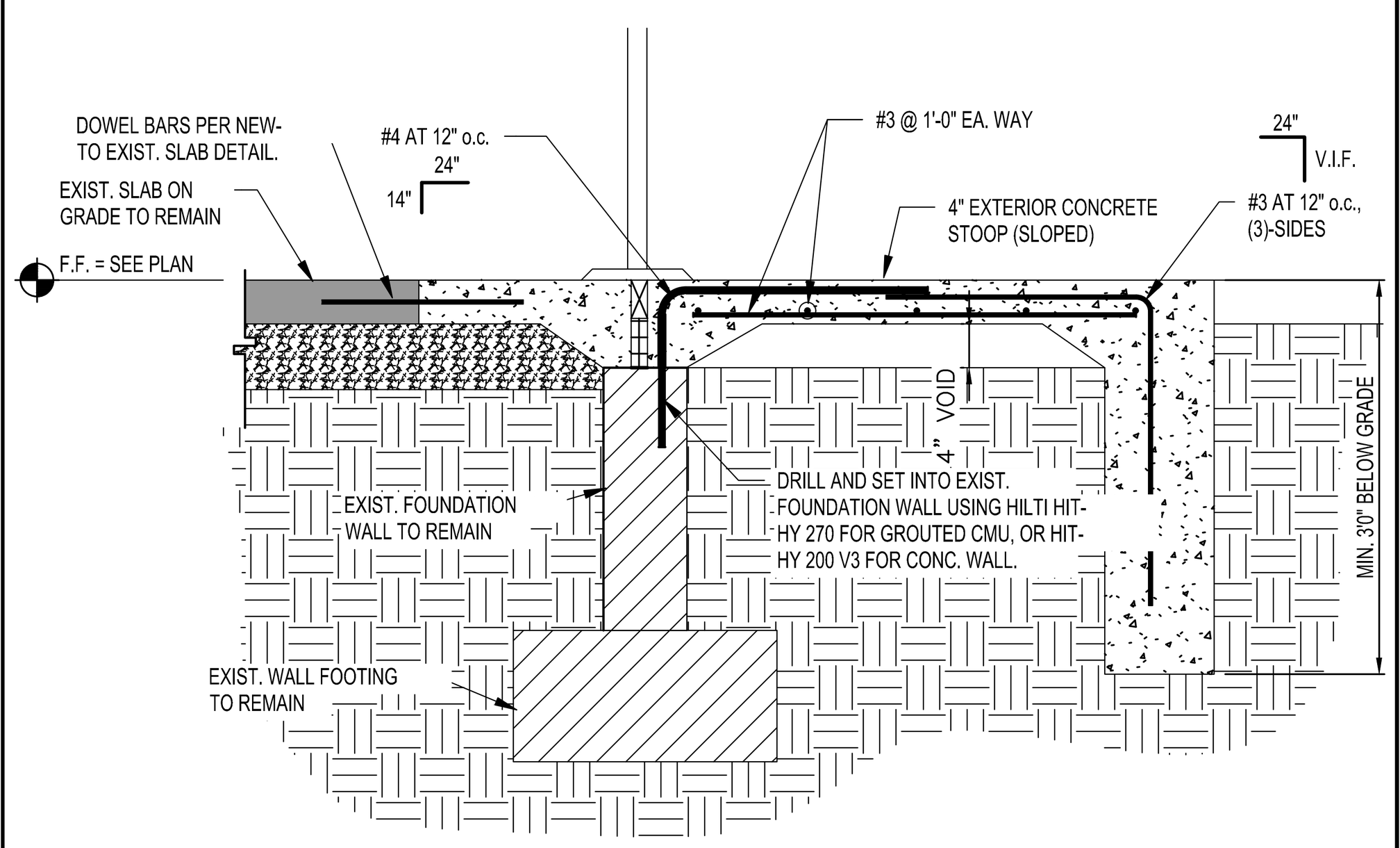
5 / S–401



NEW-TO-EXISTING SLAB-ON-GRADE DETAILS

SCALE: NOT TO SCALE

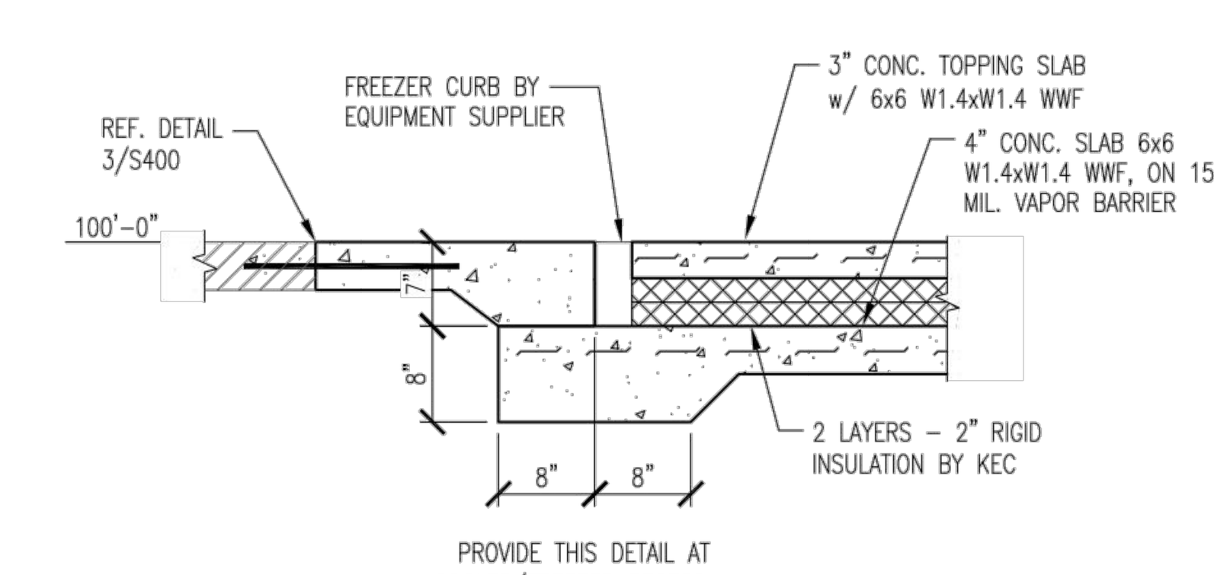
7 / S–401



FOUNDATION SECTION

SCALE: NOT TO SCALE

4 / S–401



FOUNDATION SECTION

SCALE: NOT TO SCALE

3 / S–401

LINTEL SCHEDULE

AD–3

1. Where lintels are not specifically shown or noted on the Structural or Architectural Drawings, provide the following lintels over all openings and recesses in both interior and exterior non-load-bearing and load bearing walls.
   A) Brick:

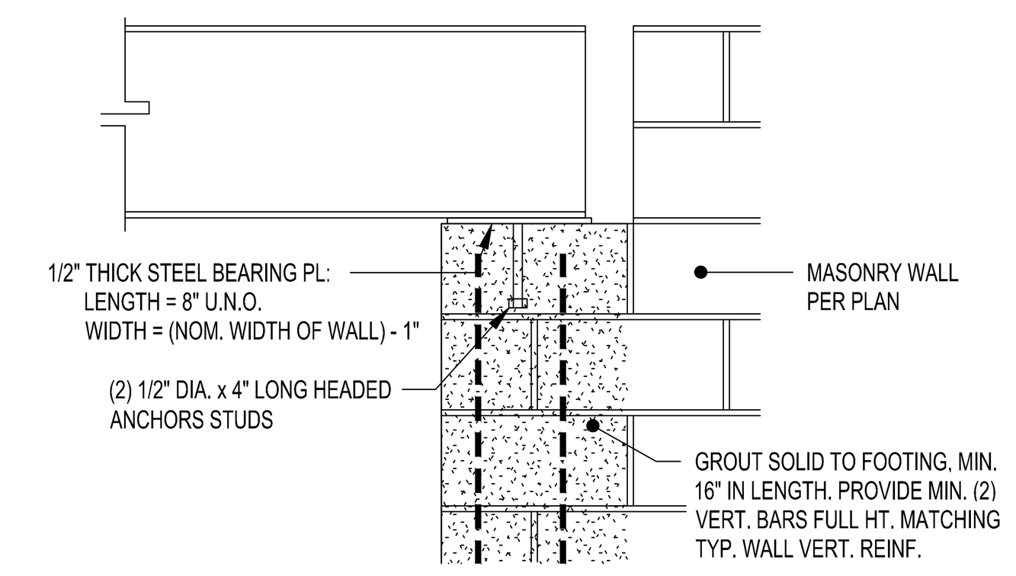
Masonry Opening	Angle Size
Up to 5'-0"	L4x4x5/16
Over 5'-0" & up to 7'-0"	L6x4x5/16
Over 7'-0"	L7x4x3/8

   All angles are LLV (long leg vertical), unless noted otherwise. Provide 1" of bearing per foot of span each end with minimum 8".
   B) Block: For openings up to 8'-0" long exposed in the finished room, use lintel block filled with grout. Grout all exposed joints and reinforce as follows:
      1) For 6" thick block: 1 - #5 bar
      2) For 8" thick block: 2 - #5 bars
      3) For 10" thick block: 2 - #6 bars
      4) For 12" thick block: 2 - #6 bars
   C) Block: For openings over 8'-0" & up to 12'-0" long exposed in the finished room, use lintel block filled with grout. Grout all exposed joints and reinforce per the "Long Masonry Lintel Detail" on the Typical Masonry Detail Drawing.
   D) Block (stack bond openings over 4'-0"): See framing plans for steel beam lintels. Where not shown on plan, the criteria in the following table shall be used. Contact Structural Engineer of Record for lintels not shown on plan which do not meet this criteria. See architectural drawings for opening quantities, sizes, locations, heights of wall above, etc.

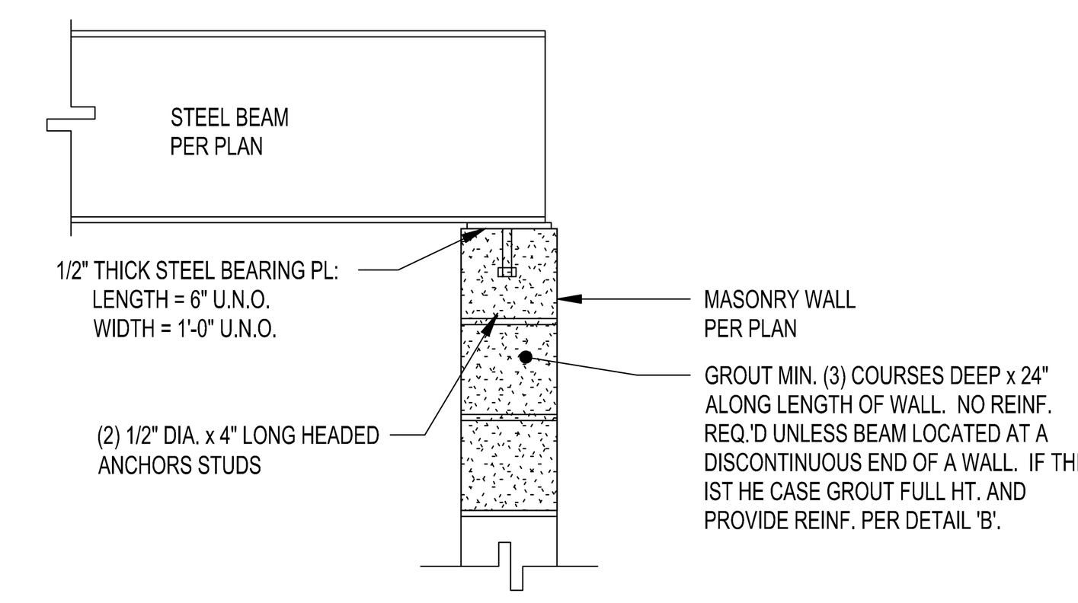
Block 't'	LINTEL	WIDTH OF OPENING	MAX. ALLOW. HEIGHT OF CMU ABOVE LINTEL
6"	C8x11.5 w/ CONTIN. PL 3/8 x 5	≤ 8'-0"	30'-0"
		≤ 12'-0"	8'-0"
8"	W8x13 w/ CONTIN. PL 3/8 x7	≤ 8'-0"	30'-0"
		≤ 12'-0"	8'-0"
10"	W8x13 w/ CONTIN. PL 3/8 x 9	≤ 8'-0"	25'-0"
		≤ 12'-0"	8'-0"
12"	W8x28 w/ CONTIN. PL 3/8 x11	≤ 8'-0"	40'-0"
		≤ 12'-0"	18'-0"

AD–3

2. For all new openings in existing masonry walls not specifically shown in the drawings (i.e. for HVAC, Plumbing, Door Openings and other penetrations, etc.):
   A. Openings > 8" BUT < 6'-0", use W8x18 lintels w/ 3/8" bottom plates.
   B. Openings > 6'-0" BUT <=12'-0", use W8x28 lintels w/ 3/8" bottom plates.
   C. Openings > 12'-0" use W16x40 lintels w/ 3/8" botom plates.
   Field verify all existing wall widths. New bottom plate width = (exist. wall width) - 1". All lintels to have min. 8" bearing on each end.
3. All lintels in exterior walls are to be hot-dip gavanized.
4. All existing construction must be shored during demolition and installation of any new lintels located in existing walls. Shoring design, layout, etc. by contractor.



DETAIL B: BEAM PARALLEL TO WALL



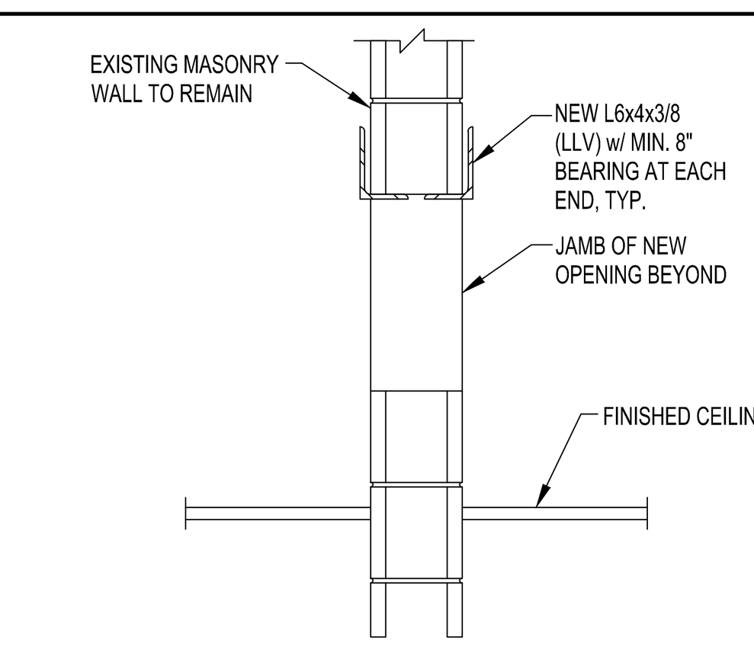
DETAIL A: BEAM PERPENDICULAR TO WALL

STEEL LINTEL SCHEDULE & BEARING DETAILS

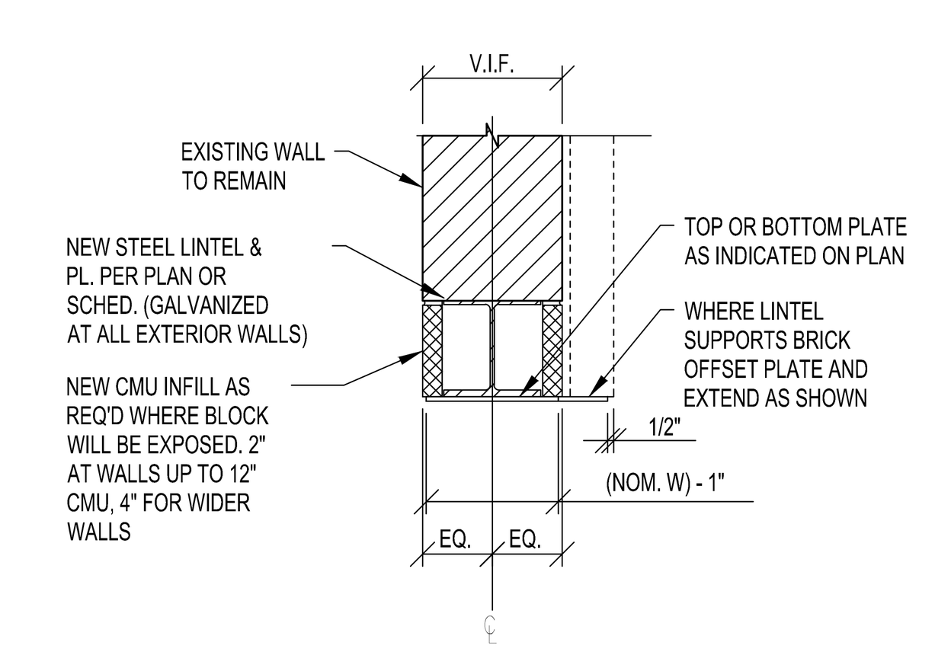
SCALE: NONE

AD–3

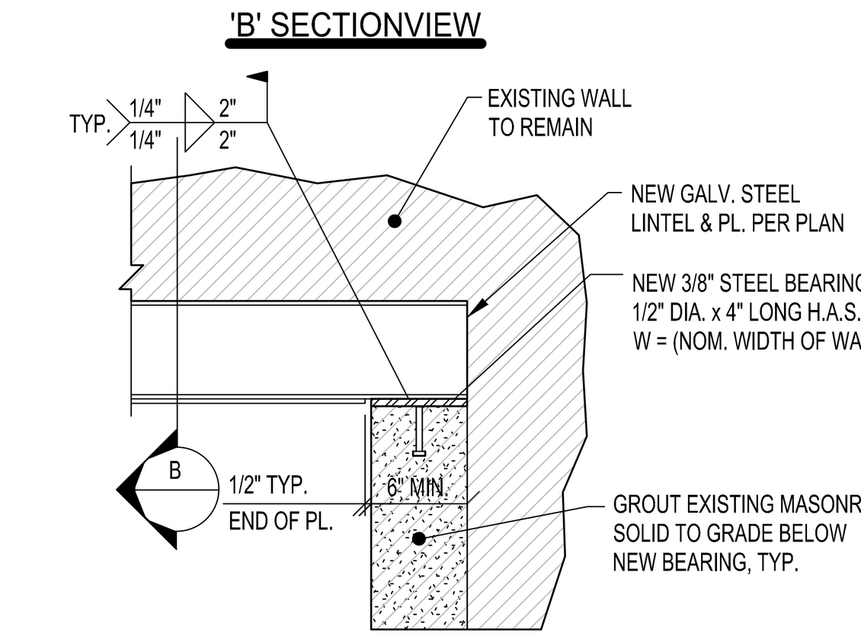
2 / S–401



'C' OPENING ABOVE CEILING < 32" WIDE



'B' SECTIONVIEW



'A' ELEVATION VIEW

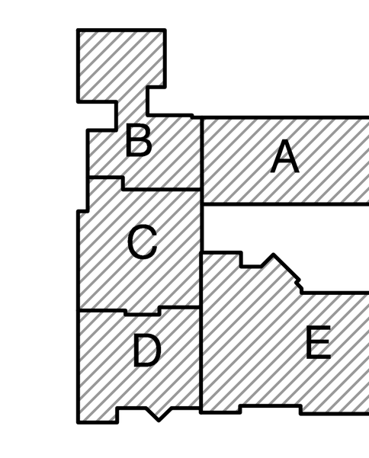
NEW LINTELS IN EXISTING WALLS

SCALE: NONE

1 / S–401

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21–145
DATE 11/14/22
COORDINATED BY JMG
DRAWN BY SAC
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD–3	12/14/22	ADDENDUM NO. 3

DRAWING
LINTEL SCHEDULE AND DETAILS

PROJECT
BAILLY ES - RENOVATIONS

SHEET
S-401

Wednesday, 12/14/2022 – 12:09 PM – LAST SAVED BY:NWESLEY
Y:\21–145 DUNELAND SC – BAILLY ES ADDITIONS AND RENOVATIONS\03 DRAWINGS\03 ARCH\S–401.DWG

96 REMOVE ALL CARPET FLOOR FINISHES. EXISTING WOOD WALL BASE TO REMAIN. PROTECT WALL BASE AND PATCH AND REPAIR TO RETURN TO LIKE NEW CONDITIONS.

97 REMOVE ALL CARPET AND ASSOCIATED FINISHES TO SMALL COLUMN PLATFORM. PREP TO RECEIVE NEW FINISHES.

98 REMOVE EXISTING LIGHTING AND ACOUSTICAL PANEL AT NEW CONSTRUCTION. REFER TO MEP AND FIRE PROTECTION FOR ADDITIONAL INFORMATION.

99 MODIFY EXISTING CMU WALLS TO PROVIDE SMOOTH FINISHED SURFACE FREE OF DIVOTS AND PUCK MARKS. PREP AND FILL EXISTING DIVOTS AND PUCK MARKS COMPLETE AT EXISTING CMU WALLS FOR SMOOTH LIKE NEW FINISH. MORTAR JOINTS TO REMAIN.

100 REMOVE EXISTING DAMAGED GYPSUM BOARD WALL CONSTRUCTION. PREP TO RECEIVE NEW GYPSUM BOARD AND CEMENT BOARD LAMINATED TO EXISTING WALL BACKER

101 SALVAGE AND REINSTALL BOTTLE FILLER. REFER TO MEP

102 PROTECT AND MODIFY STAGE EDGE, TRIM, AND FINISHES TO RECEIVE NEW LIFT.

103 CAREFULLY MODIFY EXISTING CARPET AND FINISHES TO REMAIN TO RECEIVE NEW LIFT.

104 PROTECT AND MODIFY WOOD FLOOR AND BASE TO RECEIVE NEW LIFT, RETURN TO LIKE NEW CONDITIONS.

105 MODIFY BOTTOM OF TERRAZZO BASE TO RECEIVE CONSTRUCTION.

106 MODIFY GYPSUM BULKHEAD CONSTRUCTION TO PRODUCE SMOOTH FINISHED SURFACE, FREE OF DIVOTS AND PUCK MARKS. PREP AND SKIM COAT COMPLETE FOR RETURN TO LIKE NEW CONDITION.

AD-2 / AD-3

107 EXISTING MECHANICAL UNIT TO BE REMOVED. EXISTING EXPOSED COVER TO REMAIN. CASE TO REMAIN AS REQUIRED FOR SECURE ATTACHMENT OF COVER. REFER TO MEP.

108 EXISTING FLOOR MOUNTED MECHANICAL UNIT TO BE DEMOLISHED. REMOVE ALL SCAR LINES. REFER TO MEP FOR NEW CONSTRUCTION IN AREA.

109 EXISTING CEILING MOUNTED MECHANICAL UNIT TO BE REMOVED. REFER TO MEP/ REFLECTED CEILING PLANS.

110 LOAD BEARING WALL TO BE MODIFIED FOR NEW OPENINGS. PROVIDE NEW LINTEL SPANNING NEW DOOR AND FLOOR. REFER TO S-401 FOR LINTEL SIZE AND BEARING DETAILS. SHORE ALL EXISTING CONSTRUCTION AS REQUIRED DURING DEMOLITION AND INSTALLATION OF NEW LINTEL.

111 REMOVE EXISTING FLOOR FINISHES, CONCRETE SLAB, WALL CONSTRUCTION, AND BASE FOR NEW RECESSED FLOOR MOUNTED ELECTRICAL OR TECHNOLOGY DEVICE.

112 REMOVE EXISTING WALL CONSTRUCTION TO RECEIVE NEW PLUMBING FIXTURE AND CARRIER.

74 REMOVE ½ HEIGHT CMU WALL AND ASSOCIATED CERAMIC TILE IN ITS ENTIRETY. PATCH AND REPAIR ADJACENT FLOOR AND WALL AS REQUIRED TO ACCEPT NEW FINISHES.

75 REMOVE EXISTING HOLLOW METAL FRAME AND GLAZING COMPLETE.

76 REMOVE EXISTING HOLLOW METAL FRAME GLAZING DOOR AND HARDWARE COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

77 DEMOLISH COUNTER SYSTEM COMPLETE.

78 REMOVE ACOUSTICAL BOARD CEILING BULKHEAD, GRID AND SUSPENSION SYSTEM IN ITS ENTIRETY.

79 DEMOLISH FALSE WALL ABOVE EXISTING CASEWORK COMPLETE.

80 EXISTING ELECTRIC POWER POLE TO BE DEMOLISHED.

81 EXISTING CIRCULATION DESK TO BE PROTECTED DURING CONSTRUCTION. RELOCATE FOR INSTALL OF NEW FLOOR AND WALL FINISHES. PROTECT DURING CONSTRUCTION AND REINSTALL.

82 EXISTING LIGHT SWITCH TO BE REMOVED AND RELOCATED

83 REMOVE GYPSUM BOARD BULKHEAD COMPLETE.

84 TOOTH IN MATCHING VCT AND INSTALL NEW VINYL BASE TO MATCH EXISTING

85 REMOVE CONCRETE SLAB FOR NEW KITCHEN.

86 REMOVE EXISTING KITCHEN AND ALL ASSOCIATED FIXTURES, EQUIPMENT, RELATED DUCTWORK, AND ACCESSORIES COMPLETE.

87 REMOVE EXISTING DEPRESSED MATT, FRAME AND SLAB RECESS COMPLETE.

88 REMOVE THRESHOLD JAMB AND ALUMINUM HEAD.

89 RELOCATE EXISTING LIBRARY SHELVING FOR INSTALL OF NEW FLOOR AND WALL FINISHES. PROTECT DURING CONSTRUCTION AND REINSTALL.

90 NOT USED

AD-2

91 EXISTING LAY-IN CEILING GRID AND SUSPENSION SYSTEM TO REMAIN. MODIFY TO ACCOMMODATE NEW MEP, FP, AND TECH AT AND ABOVE CEILING. REINSTALL ASSEMBLIES TO RETURN TO LIKE NEW CONDITION. SALVAGE CEILING PADS FOR REINSTALL.

92 REMOVE TERRAZZO FLOORING SYSTEM, INCLUDING SETTING BED TO ACCOMMODATE NEW CONSTRUCTION.

93 REMOVE TERRAZZO FLOOR/ CONCRETE SLAB FOR NEW PLUMBING. SAW CUT STRAIGHT/ EVEN AND COORDINATE WITH NEW FINISHES. RETURN TO LIKE NEW CONDITION.

94 EXISTING TERRAZZO BASE TO REMAIN

95 SALVAGE EXISTING STAINED WOOD WALL BASE FOR RE-USE. RE-USE PRIMARILY INTENDED AT PASSAGE E-113, MEDIA CENTER, AND NEW STEM LAB AND AS NECESSARY TO RETURN EXISTING WOOD BASEBOARDS TO LIKE NEW CONDITION ELSEWHERE IN MEDIA CENTER AREA. TOUCH UP ALL EXISTING BASE BOARDS TO RETURN TO LIKE NEW CONDITIONS.

57 EXISTING CERAMIC TILE STOOP TO BE DEMOLISHED COMPLETE.

58 EXISTING BRICK MASONRY WALL TO REMAIN. CAREFULLY PATCH AND REPAIR DAMAGE TO RETURN TO LIKE NEW CONDITION.

59 REMOVE SHELVING AND COUNTER TOP SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR FLOOR TO RECEIVE NEW FINISHES.

60 REMOVE EXISTING KILN AND HOOD IN ITS ENTIRETY. SALVAGE EACH FOR REINSTALLATION. REPAIR OPENING IN ROOF DECK/ MEMBRANE COMPLETE.

61 REMOVE EXISTING CABINETRY

62 REMOVE EXISTING WHEELCHAIR LIFT. PREP AND BUILD OUT AREA TO RECEIVE NEW WHEELCHAIR LIFT IN SAME LOCATION. REFER TO SPECIFICATIONS.

63 EXISTING WALL CONSTRUCTION TO REMAIN. INFILL DAMAGED WALL TO RECEIVE NEW FINISHES. PREP WALL AND SURROUNDING AREAS TO RECEIVE NEW FINISHES. ENSURE SMOOTH FINISH.

64 REMOVE EXISTING TRUSS STUD PLASTER/ LATH AND CERAMIC TILE WALL COMPLETE. PATCH AND REPAIR ADJACENT FLOOR AND WALL TO RECEIVE NEW FINISHES.

65 REMOVE EXISTING ½ HEIGHT LAV WALL, COUNTER TOP, CERAMIC TILE FINISHES, SOLID SURFACE COUNTER, LAVS PLUMBING FIXTURES AND PLUMBING THIS AREA COMPLETE. CUT AND CAP LINES BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES. INFILL OPENING LEFT IN WALL BEYOND WITH CMU MATCHING EXISTING COMPLETE. FURR OUT TO RECEIVE NEW FINISHES.

66 REMOVE EXISTING CERAMIC WALL TILE TO RECEIVE NEW WALL CONSTRUCTION.

67 REMOVE EXISTING DOOR, FRAME AND HARDWARE SYSTEM IN ITS ENTIRETY.

68 REMOVE PLUMBING FIXTURES IN THEIR ENTIRETY. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS NOTED OTHERWISE ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/OR WALL AS REQUIRED TO ACCEPT NEW FINISHES.

69 REMOVE EXISTING DOOR HARDWARE AND TRANSOM IF PRESENT IN ITS ENTIRETY, EXISTING FRAME TO REMAIN. PREPARE FRAME TO RECEIVE NEW DOOR CONSTRUCTION.

70 REMOVE EXISTING FLOOR FINISH AND CONCRETE SLAB FOR NEW TOILET ROOM. REFER TO MEP DRAWINGS.

71 REMOVE EXTERIOR STOREFRONT, DOOR AND GLAZING ASSEMBLY COMPLETE. PREP EXISTING STOREFRONT ASSEMBLY TO RECEIVE NEW MULLIONS AND GLAZING INFILL TO MATCH EXISTING ADJACENT.

72 REMOVE EXISTING STOREFRONT, GLASS AND BASE ASSEMBLY. PREP FLOOR TO RECEIVE NEW FINISHES. REPAIR MASONRY AND PLASTER/ GYPSUM WALL TO RETURN TO LIKE NEW CONDITIONS.

73 REMOVE EXISTING STOREFRONT, GLASS AND TRANSACTION ASSEMBLIES COMPLETE. PREP FLOOR TO RECEIVE NEW FINISHES. REPAIR PLASTER/ GYPSUM WALL TO RETURN TO LIKE NEW CONDITIONS.

35 REMOVE TV ASSEMBLY COMPLETE. PATCH AND REPAIR WALL TO RECEIVE NEW FINISHES.

36 REMOVE EXISTING STOREFRONT/ WINDOW ASSEMBLY COMPLETE IN EXISTING MASONRY OPENING.

37 REMOVE EXISTING HEATING DEVICE, ALL ASSOCIATED EQUIPMENT, SILL COVER, MASONRY SILL COMPLETE TO RECEIVE NEW WALL AND DOOR CONSTRUCTION.

38 REMOVE EXISTING BRICK / CMU INTERIOR WALL CONSTRUCTION COMPLETE. PREP FLOOR TO RECEIVE NEW FINISHES.

39 REFER TO ELECTRICAL DRAWINGS. COORDINATE REMOVAL OF ELECTRICAL PANEL.

40 REMOVE EXISTING INTERIOR STOREFRONT GLASS AND BASE ASSEMBLY. PREP FLOOR TO RECEIVE NEW FINISHES.

41 REMOVE EXISTING SPEAKER ASSEMBLY IN ITS ENTIRETY.

42 REMOVE EXISTING DEPRESSED MAT IN ITS ENTIRETY. PREPARE SUBSTRATE FOR NEW FINISH WITHIN EXISTING OPENING.

43 REMOVE EXISTING CUBBIES COMPLETE. PATCH AND REPAIR EXISTING BRICK MASONRY WALL TO REMAIN.

44 REMOVE SECTION OF WALL TO CREATE OPENING FOR NEW DOOR.

45 REMOVE EXISTING BASE CABINETS, WALL CABINETS AND PLUMBING FIXTURES COMPLETE. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS, PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES.

46 REMOVE EXISTING DOOR, FRAME AND HARDWARE SYSTEM COMPLETE. PREP WALL TO RECEIVE NEW INFILL.

47 MODIFY EXISTING BULKHEAD ABOVE TO RECEIVE NEW UNIT VENTILATOR CONSTRUCTION. RETURN TO LIKE NEW CONDITION.

48 REMOVE TOILET ACCESSORIES AND TURN OVER TO OWNER.

49 SALVAGE EXISTING FLUSH VALVES AND CHINA FOR REUSE THIS PROJECT.

50 REMOVE TOILET PARTITIONS IN THEIR ENTIRETY.

51 REMOVE CERAMIC OR PORCELAIN TILE FLOORING SYSTEM INCLUDING SETTING BED IN ITS ENTIRETY.

52 REMOVE TERRAZZO OR CERAMIC TILE WALL BASE COMPLETE TO RECEIVE NEW FINISHES.

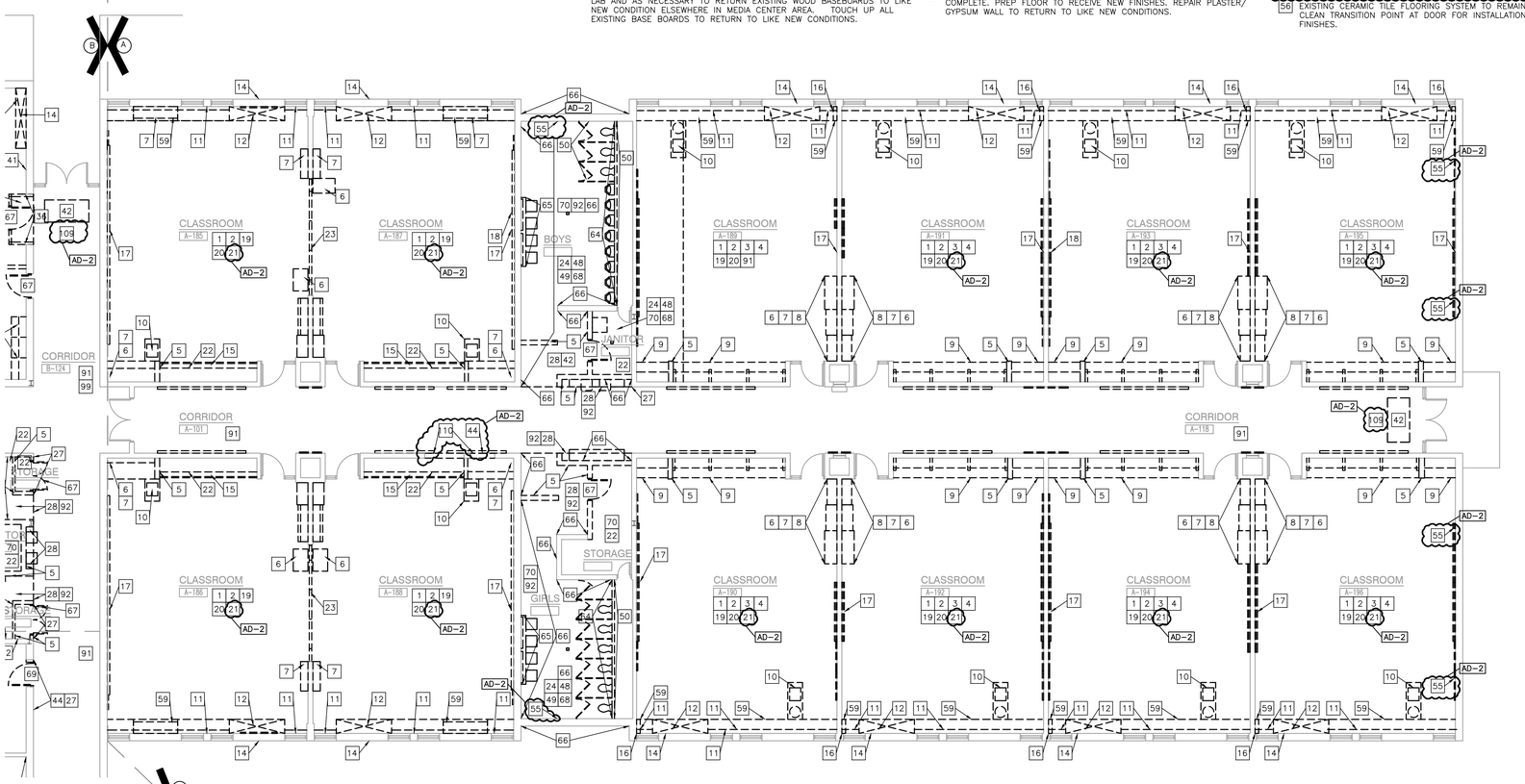
53 REMOVE EXISTING COUNTER AND ½ HEIGHT CMU WALL. PATCH AND REPAIR ADJACENT FLOOR AND WALL TO ACCEPT NEW FINISHES.

AD-2

54 PREP EXISTING CONCRETE AND CERAMIC TILE TO RECEIVE NEW CUBBIES ABOVE. PREP CONCRETE AND CERAMIC TILE TO RECEIVE NEW FINISHES.

55 REMOVE EXISTING MECHANICAL UNIT COMPLETE. PATCH AND REPAIR/ WALL AS REQUIRED TO ACCEPT NEW FINISHES. REFER TO MEP.

56 EXISTING CERAMIC TILE FLOORING SYSTEM TO REMAIN. DEMOLISH TO CLEAN TRANSITION POINT AT DOOR FOR INSTALLATION OF NEW ADJACENT FINISHES.



UNIT "A" ARCHITECTURAL FIRST FLOOR DEMOLITION PLAN

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

NORTH

GENERAL DEMOLITION NOTES:

A. FOR GENERAL PROJECT NOTES, MATERIAL INDICATIONS LEGEND, SYMBOL LEGEND, ABBREVIATIONS, ETC., REFER TO G SERIES SHEETS.

B. UNLESS NOTED OTHERWISE ON THIS SHEET, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL WORK INDICATED ON THIS SHEET.

C. CONTRACTORS ENCOUNTERING EXISTING MATERIAL WHICH IS SUSPECTED OF CONTAINING ASBESTOS SHALL STOP WORK IMMEDIATELY AND NOTIFY THE OWNER AND THE OWNERS REPRESENTATIVE.

D. BOLD DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXTENT OF DEMOLITION WORK PRIOR TO BIDDING AND FOR COORDINATING THE EXTENT OF DEMOLITION WITH THE INSTALLATION OF NEW SYSTEMS.

E. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION APPLICABLE TO THEIR SCOPE OF WORK AND AS REQUIRED FOR INSTALLATION OF NEW WORK WHETHER OR NOT IT IS SPECIFICALLY INDICATED OR NOTED IN THESE DOCUMENTS.

F. REMOVE ALL ITEMS AND FINISHES MADE OBSOLETE BY NEW CONSTRUCTION. VERIFY ITEMS DEEMED OBSOLETE WITH ARCHITECT PRIOR TO REMOVAL. REFER TO NEW CONSTRUCTION DRAWINGS FOR DEMOLITION REQUIRED NOT SHOWN ON DEMOLITION PLANS.

G. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR OFF SITE REMOVAL OF ALL DEMOLITION MATERIALS AND/OR ITEMS UNLESS NOTED OTHERWISE OR DIRECTED BY THE OWNER.

H. PRIOR TO STARTING DEMOLITION, CONSTRUCT DUST CONTROL BARRIERS AS REQUIRED TO PREVENT THE SPREAD OF DUST INTO SURROUNDING AREAS (WHERE APPLICABLE).

I. WHERE BUILDING EGRESS IS REQUIRED TO PASS THROUGH DEMOLITION, CONSTRUCTION, AND NEW CONSTRUCTION AREAS, PROVIDE APPROVED BARRIERS, ETC. TO ENSURE SAFETY OF THE PUBLIC.

J. RELOCATED ITEMS SHALL BE CLEANED AND PLACED IN STORAGE, PER OWNERS' DIRECTION, UNTIL ITEMS ARE READY TO BE INSTALLED. IF ITEMS ARE DAMAGED DURING DEMOLITION OR RELOCATION, THEY SHALL BE REPAIRED OR REPLACED WITH NEW ITEMS AS APPROVED.

K. DEMOLITION SHALL BE PERFORMED WITHOUT DAMAGE TO EXISTING CONSTRUCTION TO REMAIN. WHERE SUCH DAMAGE OCCURS, PATCH, REPAIR, OR RESTORE WALLS, FLOORS, CEILING, ETC. NEATLY TO MATCH EXISTING ADJACENT SURFACE. PROVIDE SHORING, BRACING, OR SUPPORT AS REQUIRED TO PREVENT MOVEMENT OR SETTLEMENT OF EXISTING STRUCTURES.

L. EACH CONTRACTOR IS RESPONSIBLE FOR CUTTING, PATCHING, AND DISCONNECTION OF ITEMS APPLICABLE TO THEIR SCOPE OF WORK. WHERE EXISTING SERVICES ARE ABANDONED, CAP AT LEAST 1" BEHIND NEW FINISHES AND/OR EXISTING SURFACE AND PATCH AS REQUIRED TO RECEIVE NEW FINISHES OR MATCH EXISTING FINISH.

M. ON WALLS THAT ARE TO RECEIVE NEW FINISHES, REMOVE AND REINSTALL EXISTING EQUIPMENT TO REMAIN AS REQUIRED FOR INSTALLATION OF NEW FINISHES.

N. WHERE WALLS OR BULKHEADS ARE REMOVED, PATCH FLOORS, CEILINGS, AND ADJACENT WALLS AS REQUIRED TO MATCH EXISTING OR RECEIVE NEW FINISHES WHERE APPLICABLE. WHERE EXISTING DUCTWORK, PIPING, OR EQUIPMENT IS REMOVED, PATCH OPENINGS AND/OR SURFACES AS REQUIRED TO MATCH ADJACENT SURFACES OR RECEIVE NEW FINISHES WHERE APPLICABLE. REFER TO ALL DEMOLITION DRAWINGS FOR EXTENT OF ITEMS TO REMOVED.

O. OVER CUT NEW OPENINGS IN EXISTING WALL AS REQUIRED FOR NEW CONSTRUCTION. PATCH AND REPAIR WALLS AS REQUIRED TO MATCH EXISTING. WHERE APPLICABLE, TOOTH NEW MASONRY INTO EXISTING MASONRY.

P. ALL EQUIPMENT AND FURNITURE WHICH ARE CONSIDERED LOOSE FURNISHING SHALL BE REMOVED BY THE OWNER PRIOR TO DEMOLITION.

Q. MASONRY WALLS TO BE REMOVED SHALL BE REMOVED TO A POINT 2" MINIMUM BELOW THE EXISTING FLOOR SLAB UNLESS SETTING ON A SLAB OR SPECIFICALLY NOTED OTHERWISE. PATCH WITH NEW CONCRETE TO BE FLUSH WITH THE EXISTING FLOOR SLAB.

R. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL REVIEW OF DEMOLITION NOTES AND GENERAL DEMOLITION NOTES AS THEY APPLY TO THEIR SCOPE OF WORK.

S. THE OWNER SHALL RESERVE THE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.

T. REFER TO THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND TECHNOLOGY DOCUMENTS FOR COMPLETE SCOPE OF DEMOLITION WORK.

U. "FLOORING" DENOTES FLOOR COVERING MATERIALS INCLUDING BACKING, ADHESIVES, AND BASES DOWN TO BUT EXCLUSIVE OF FLOOR SLABS AND STRUCTURAL MATERIALS UNLESS NOTED OTHERWISE.

V. DEMOLITION IS TO FOLLOW ESTABLISHED CONSTRUCTION SEQUENCE. REFER TO SPECIFICATIONS AND DRAWINGS FOR REQUIREMENTS AND SPECIAL CONDITIONS.

W. WHERE APPLICABLE SALVAGE EXISTING MASONRY (FACE BRICK, GLAZED CMU, FACING TILE) AS REQUIRED FOR PATCHING AND INFILL IN RENOVATED AREAS WHERE INDICATED. DISCARD UNUSED PORTION OFF SITE.

X. REFER TO S-401 FOR OPENINGS CREATED IN EXISTING MASONRY WALLS FOR LINTELS

DEMOLITION PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1 REMOVE EXISTING FLOOR FINISHES AND WALL BASE IN ITS ENTIRETY. PREP FOR NEW FINISHES.

2 REMOVE MARKERBOARD/ TACKBOARD/ CHALKBOARD IN ITS ENTIRETY, PREP WALL FOR NEW FINISHES.

3 REMOVE WALL MOUNTING EQUIPMENT TRACK ASSEMBLY COMPLETE. PREP FOR NEW FINISHES.

4 REMOVE EXISTING FABRIC WALL COVERING. PREP WALLS FOR NEW FINISHES

5 REMOVE MASONRY WALL PATCH AND REPAIR ADJACENT FLOOR AND WALL AS REQUIRED TO ACCEPT NEW FINISHES.

6 REMOVE BASE CABINETS AND COUNTERTOP SYSTEM COMPLETE. PATCH AND REPAIR WALL AND FLOOR AS REQUIRED TO RECEIVE NEW FINISHES.

7 REMOVE WALL CABINET SYSTEM COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

8 REMOVE SHELVING SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

9 REMOVE BUILT IN CUBBIES, CABINETRY WING WALLS, SHELVING, WARDROBE/ STORAGE/ UPPER CABINET AND TRIM COMPLETE. PREP WALLS AND FLOOR TO RECEIVE NEW CONSTRUCTION.

10 REMOVE EXISTING PLUMBING FIXTURES AND ASSOCIATED CABINETRY AND COUNTER IN THEIR ENTIRETY. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/OR WALL AS REQUIRED TO ACCEPT NEW FINISHES

11 REMOVE EXISTING FIN TUBE COVER/ SHROUD AND PIPING COMPLETE. CUT AND CAP PIPING NOT IN USE OR NO-LONGER TO BE IN USE AT INACCESSIBLE CHASE/ FLOOR LINE. UNLESS OTHERWISE NOTED ON MEP DRAWINGS, PATCH AND REPAIR FLOOR AND/OR WALLS AS REQUIRED TO RECEIVE NEW FINISHES.

12 REMOVE UNIT VENTILATOR SYSTEM IN ITS ENTIRETY. PREP EXISTING WALL OPENING TO EXTERIOR TO RECEIVE NEW CONSTRUCTION.

13 EXISTING METAL LOUVER SYSTEM TO REMAIN. PREP TO RECEIVE NEW CONSTRUCTION.

14 EXISTING MASONRY OPENING FOR FRESH AIR TO REMAIN. PREP TO RECEIVE NEW CONSTRUCTION.

15 REMOVE EXISTING SHELVING/ CABINETRY SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

16 EXISTING PIPE CHASE COVER TO BE REMOVED. PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES MATCHING EXISTING ADJACENT CONSTRUCTION.

17 REMOVE EXISTING BUILT-IN SPEAKER AND CLOCK. INFILL OPENING WITH CMU AND PREP TO RECEIVE NEW EQUIPMENT.

18 REMOVE MOUNTED PROJECTOR/ SPEAKER ASSEMBLY IN ITS ENTIRETY.

19 REMOVE TECHNOLOGY ASSEMBLIES. REFER TO TECHNOLOGY AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.

20 REMOVE EXISTING CEILING FAN IN ITS ENTIRETY.

21 REMOVE ACOUSTICAL BOARD CEILING, GRID AND SUSPENSION SYSTEM IN ITS ENTIRETY.

22 REMOVE EXISTING GYPSUM/ OR PLASTER CEILING SYSTEM IN ITS ENTIRETY.

23 REMOVE MOVABLE PARTITION IN ITS ENTIRETY INCLUDING STEEL FRAMING TRACK SUPPORT. PREP FLOOR AND WALL FOR NEW CONSTRUCTION AND FINISHES.

24 REMOVE EXISTING SPLINE CEILING SYSTEM IN ITS ENTIRETY.

25 REMOVE EXISTING CERAMIC TILE WALL FINISH. PREP TO RECEIVE NEW FINISHES.

26 SELECTIVELY REMOVE CERAMIC TILE WALL FINISH. PEP TO RECEIVE NEW FINISHES.

27 SELECTIVELY REMOVE TERRAZZO BASE SMOOTH AND VERTICAL. PREP TO RECEIVE NEW ADJACENT FINISHES.

28 BUSH HAMMER EXISTING FLOOR FINISH TO RECEIVE NEW FLOOR FINISH. NEW AND EXISTING FLOOR FINISHES TO BE FLUSH.

29 REMOVE EXISTING VINYL FLOOR FINISH. PREP FOR NEW FINISHES.

30 REMOVE EXISTING FLOOR FINISH BELOW EXISTING TO CONCRETE. PREP FOR NEW FINISHES.

31 REMOVE DEMOUNTABLE PARTITION IN ITS ENTIRETY INCLUDING STEEL FRAMING TRACK SUPPORT DOOR, DOOR FRAME AND HARDWARE ASSEMBLIES COMPLETE. PREP FLOOR AND WALL FOR NEW CONSTRUCTION AND FINISHES.

32 REMOVE EXISTING WALL AND FINISH ASSEMBLIES COMPLETE.

33 REMOVE WALL PARTITION, GLAZING AND ALL ASSOCIATED FRAMING AND SUPPORT STRUCTURE.

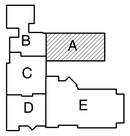
34 REMOVE STOREFRONT, DOOR AND GLAZING ASSEMBLY COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY TA
DRAWN BY NJW
CHECKED BY DJW

DALE J. WACKER REGISTERED NO. 19600171 STATE OF INDIANA ARCHITECT

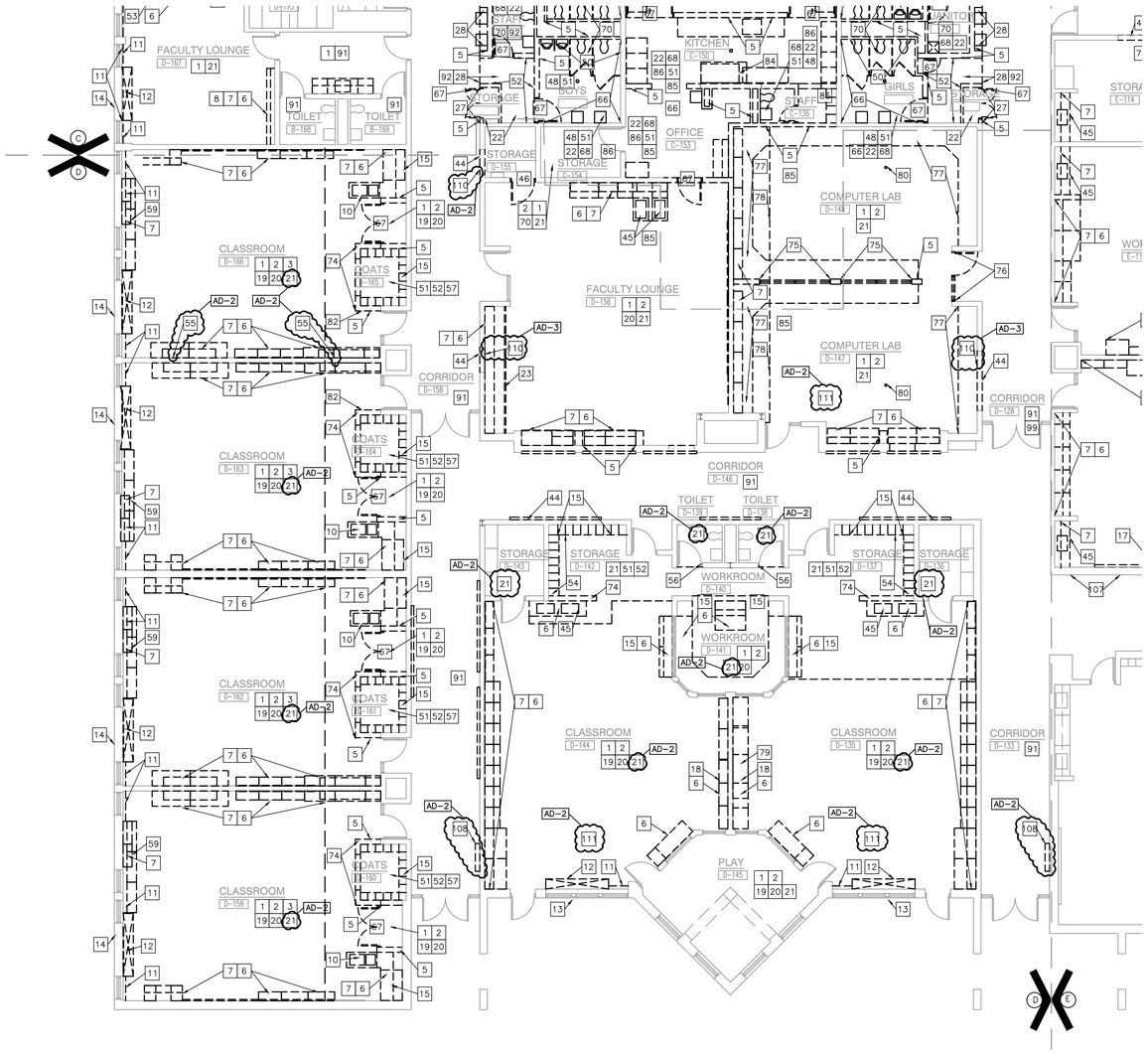
REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "A" ARCHITECTURAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
A AD101



UNIT "D" ARCHITECTURAL FIRST FLOOR DEMOLITION PLAN

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

AD-2

102 PROTECT AND MODIFY STAGE EDGE, TRIM, AND FINISHES TO RECEIVE NEW LIFT.

103 CAREFULLY MODIFY EXISTING CARPET AND FINISHES TO REMAIN TO RECEIVE NEW LIFT.

104 PROTECT AND MODIFY WOOD FLOOR AND BASE TO RECEIVE NEW LIFT, RETURN TO LIKE NEW CONDITIONS.

105 MODIFY BOTTOM OF TERRAZZO BASE TO RECEIVE CONSTRUCTION.

106 MODIFY GYPSUM BULKHEAD CONSTRUCTION TO PRODUCE SMOOTH FINISHED SURFACE, FREE OF DIVOTS AND PUCK MARKS. PREP AND SKIM COAT COMPLETE FOR RETURN TO LIKE NEW CONDITION.

AD-2

107 EXISTING MECHANICAL UNIT TO BE REMOVED. EXISTING EXPOSED COVER TO REMAIN. CASE TO REMAIN AS REQUIRED FOR SECURE ATTACHMENT OF COVER. REFER TO MEP.

108 EXISTING FLOOR MOUNTED MECHANICAL UNIT TO BE DEMOLISHED. REMOVE ALL SCAR LINES. REFER TO MEP FOR NEW CONSTRUCTION IN AREA.

109 EXISTING CEILING MOUNTED MECHANICAL UNIT TO BE REMOVED. REFER TO MEP/ REFLECTED CEILING PLANS.

AD-3

110 LOAD BEARING WALL TO BE MODIFIED FOR NEW OPENING. PROVIDE NEW LINTEL SPANNING NEW DOOR AND ALCOVE. REFER TO S-401 FOR LINTEL SIZE AND BEARING DETAILS. SHORE ALL EXISTING CONSTRUCTION AS REQUIRED DURING DEMOLITION AND INSTALLATION OF NEW LINTEL.

111 REMOVE EXISTING FLOOR FINISHES, CONCRETE SLAB, WALL CONSTRUCTION, AND BASE FOR NEW RECESSED FLOOR MOUNTED ELECTRICAL OR TELECOMMUNICATIONS DEVICE.

112 REMOVE EXISTING WALL CONSTRUCTION TO RECEIVE NEW PLUMBING FIXTURE AND CARRIER.

35 REMOVE TV ASSEMBLY COMPLETE. PATCH AND REPAIR WALL TO RECEIVE NEW FINISHES.

36 REMOVE EXISTING STOREFRONT/ WINDOW ASSEMBLY COMPLETE IN EXISTING MASONRY OPENING.

37 REMOVE EXISTING HEATING DEVICE, ALL ASSOCIATED EQUIPMENT, SILL COVER, MASONRY SILL COMPLETE TO RECEIVE NEW WALL AND DOOR CONSTRUCTION.

38 REMOVE EXISTING BRICK / CMU INTERIOR WALL CONSTRUCTION COMPLETE. PREP FLOOR TO RECEIVE NEW FINISHES.

39 REFER TO ELECTRICAL DRAWINGS. COORDINATE REMOVAL OF ELECTRICAL PANEL.

40 REMOVE EXISTING INTERIOR STOREFRONT GLASS AND BASE ASSEMBLY. PREP FLOOR TO RECEIVE NEW FINISHES.

41 REMOVE EXISTING SPEAKER ASSEMBLY IN ITS ENTIRETY.

42 REMOVE EXISTING DEPRESSED MAT IN ITS ENTIRETY. PREPARE SUBSTRATE FOR NEW FINISH WITHIN EXISTING OPENING.

43 REMOVE EXISTING CUBBIES COMPLETE. PATCH AND REPAIR EXISTING BRICK MASONRY WALL TO REMAIN.

44 REMOVE SECTION OF WALL TO CREATE OPENING FOR NEW DOOR.

45 REMOVE EXISTING BASE CABINETS, WALL CABINETS AND PLUMBING FIXTURES COMPLETE. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS, PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES.

46 REMOVE EXISTING DOOR, FRAME AND HARDWARE SYSTEM COMPLETE. PREP WALL TO RECEIVE NEW INFILL.

47 MODIFY EXISTING BULKHEAD ABOVE TO RECEIVE NEW UNIT VENTILATOR CONSTRUCTION. RETURN TO LIKE NEW CONDITION.

48 REMOVE TOILET ACCESSORIES AND TURN OVER TO OWNER.

49 SALVAGE EXISTING FLUSH VALVES AND CHINA FOR REUSE THIS PROJECT.

50 REMOVE TOILET PARTITIONS IN THEIR ENTIRETY.

51 REMOVE CERAMIC OR PORCELAIN TILE FLOORING SYSTEM INCLUDING SETTING BED IN ITS ENTIRETY.

52 REMOVE TERRAZZO OR CERAMIC TILE WALL BASE COMPLETE TO RECEIVE NEW FINISHES.

53 REMOVE EXISTING COUNTER AND ½ HEIGHT CMU WALL. PATCH AND REPAIR ADJACENT FLOOR AND WALL TO ACCEPT NEW FINISHES.

AD-2

54 PREP EXISTING CONCRETE AND CERAMIC TILE TO RECEIVE NEW CUBBIES ABOVE. PREP CONCRETE AND CERAMIC TILE TO RECEIVE NEW FINISHES.

55 REMOVE EXISTING MECHANICAL UNIT COMPLETE. PATCH AND REPAIR/ WALL AS REQUIRED TO ACCEPT NEW FINISHES. REFER TO MEP.

56 EXISTING CERAMIC TILE FLOORING SYSTEM TO REMAIN. DEMOLISH TO CLEAN TRANSITION POINT AT DOOR FOR INSTALLATION OF NEW ADJACENT FINISHES.

57 EXISTING CERAMIC TILE STOOP TO BE DEMOLISHED COMPLETE.

58 EXISTING BRICK MASONRY WALL TO REMAIN. CAREFULLY PATCH AND REPAIR DAMAGE TO RETURN TO LIKE NEW CONDITION.

59 REMOVE SHELVING AND COUNTER TOP SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR FLOOR TO RECEIVE NEW FINISHES.

60 REMOVE EXISTING KILN AND HOOD IN ITS ENTIRETY. SALVAGE EACH FOR REINSTALLATION. REPAIR OPENING IN ROOF DECK/ MEMBRANE COMPLETE.

61 REMOVE EXISTING CABINETRY

62 REMOVE EXISTING WHEELCHAIR LIFT. PREP AND BUILD OUT AREA TO RECEIVE NEW WHEELCHAIR LIFT IN SAME LOCATION. REFER TO SPECIFICATIONS.

63 EXISTING WALL CONSTRUCTION TO REMAIN. INFILL DAMAGED WALL TO RECEIVE NEW FINISHES. PREP WALL AND SURROUNDING AREAS TO RECEIVE NEW FINISHES. ENSURE SMOOTH FINISH.

64 REMOVE EXISTING TRUSS STUD PLASTER/ LATH AND CERAMIC TILE WALL COMPLETE. PATCH AND REPAIR ADJACENT FLOOR AND WALL TO RECEIVE NEW FINISHES.

65 REMOVE EXISTING ½ HEIGHT LAV WALL, COUNTER TOP, CERAMIC TILE FINISHES, SOLID SURFACE COUNTER, LAVS PLUMBING FIXTURES AND PLUMBING THIS AREA COMPLETE. CUT AND CAP LINES BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES. INFILL OPENING LEFT IN WALL BEYOND WITH CMU MATCHING EXISTING COMPLETE. FURR OUT TO RECEIVE NEW FINISHES.

66 REMOVE EXISTING CERAMIC WALL TILE TO RECEIVE NEW WALL CONSTRUCTION.

67 REMOVE EXISTING DOOR, FRAME AND HARDWARE SYSTEM IN ITS ENTIRETY.

68 REMOVE PLUMBING FIXTURES IN THEIR ENTIRETY. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS NOTED OTHERWISE ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/OR WALL AS REQUIRED TO ACCEPT NEW FINISHES.

69 REMOVE EXISTING DOOR HARDWARE AND TRANSOM IF PRESENT IN ITS ENTIRETY. EXISTING FRAME TO REMAIN. PREPARE FRAME TO RECEIVE NEW DOOR CONSTRUCTION.

70 REMOVE EXISTING FLOOR FINISH AND CONCRETE SLAB FOR NEW TOILET ROOM. REFER TO MEP DRAWINGS.

71 REMOVE EXTERIOR STOREFRONT, DOOR AND GLAZING ASSEMBLY COMPLETE. PREP EXISTING STOREFRONT ASSEMBLY TO RECEIVE NEW MULLIONS AND GLAZING INFILL TO MATCH EXISTING ADJACENT.

72 REMOVE EXISTING STOREFRONT, GLASS AND BASE ASSEMBLY. PREP FLOOR TO RECEIVE NEW FINISHES. REPAIR MASONRY AND PLASTER/ GYPSUM WALL TO RETURN TO LIKE NEW CONDITIONS.

73 REMOVE EXISTING STOREFRONT, GLASS AND TRANSACTION ASSEMBLIES COMPLETE. PREP FLOOR TO RECEIVE NEW FINISHES. REPAIR PLASTER/ GYPSUM WALL TO RETURN TO LIKE NEW CONDITIONS.

74 REMOVE ½ HEIGHT CMU WALL AND ASSOCIATED CERAMIC TILE IN ITS ENTIRETY. PATCH AND REPAIR ADJACENT FLOOR AND WALL AS REQUIRED TO ACCEPT NEW FINISHES.

75 REMOVE EXISTING HOLLOW METAL FRAME AND GLAZING COMPLETE.

76 REMOVE EXISTING HOLLOW METAL FRAME GLAZING DOOR AND HARDWARE COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

77 DEMOLISH COUNTER SYSTEM COMPLETE.

78 REMOVE ACOUSTICAL BOARD CEILING BULKHEAD, GRID AND SUSPENSION SYSTEM IN ITS ENTIRETY.

79 DEMOLISH FALSE WALL ABOVE EXISTING CASEWORK COMPLETE.

80 EXISTING ELECTRIC POWER POLE TO BE DEMOLISHED.

81 EXISTING CIRCULATION DESK TO BE PROTECTED DURING CONSTRUCTION. RELOCATE FOR INSTALL OF NEW FLOOR AND WALL FINISHES. PROTECT DURING CONSTRUCTION AND REINSTALL.

82 EXISTING LIGHT SWITCH TO BE REMOVED AND RELOCATED

83 REMOVE GYPSUM BOARD BULKHEAD COMPLETE.

84 TOOTH IN MATCHING VCT AND INSTALL NEW VINYL BASE TO MATCH EXISTING

85 REMOVE CONCRETE SLAB FOR NEW KITCHEN.

86 REMOVE EXISTING KITCHEN AND ALL ASSOCIATED FIXTURES, EQUIPMENT, RELATED DUCTWORK, AND ACCESSORIES COMPLETE.

87 REMOVE EXISTING DEPRESSED MATT, FRAME AND SLAB RECESS COMPLETE.

88 REMOVE THRESHOLD JAMB AND ALUMINUM HEAD.

89 RELOCATE EXISTING LIBRARY SHELVING FOR INSTALL OF NEW FLOOR AND WALL FINISHES. PROTECT DURING CONSTRUCTION AND REINSTALL.

90 NOT USED

AD-2

91 EXISTING LAY-IN CEILING GRID AND SUSPENSION SYSTEM TO REMAIN. MODIFY TO ACCOMMODATE NEW MEP, FP, AND TECH AT AND ABOVE CEILING. REINSTALL ASSEMBLIES TO RETURN TO LIKE NEW CONDITION. SALVAGE CEILING PADS FOR REINSTALL.

92 REMOVE TERRAZZO FLOORING SYSTEM, INCLUDING SETTING BED TO ACCOMMODATE NEW CONSTRUCTION.

93 REMOVE TERRAZZO FLOOR/ CONCRETE SLAB FOR NEW PLUMBING. SAW CUT STRAIGHT/ EVEN AND COORDINATE WITH NEW FINISHES. RETURN TO LIKE NEW CONDITION.

94 EXISTING TERRAZZO BASE TO REMAIN

95 SALVAGE EXISTING STAINED WOOD WALL BASE FOR RE-USE. RE-USE PRIMARILY INTENDED AT PASSAGE E-113, MEDIA CENTER, AND NEW STEM LAB AND AS NECESSARY TO RETURN EXISTING WOOD BASEBOARDS TO LIKE NEW CONDITION ELSEWHERE IN MEDIA CENTER AREA. TOUCH UP ALL EXISTING BASE BOARDS TO RETURN TO LIKE NEW CONDITIONS.

96 REMOVE ALL CARPET FLOOR FINISHES. EXISTING WOOD WALL BASE TO REMAIN. PROTECT WALL BASE AND PATCH AND REPAIR TO RETURN TO LIKE NEW CONDITIONS.

97 REMOVE ALL CARPET AND ASSOCIATED FINISHES TO SMALL COLUMN PLATFORM. PREP TO RECEIVE NEW FINISHES.

98 REMOVE EXISTING LIGHTING AND ACOUSTICAL PANEL AT NEW CONSTRUCTION. REFER TO MEP AND FIRE PROTECTION FOR ADDITIONAL INFORMATION.

99 MODIFY EXISTING CMU WALLS TO PROVIDE SMOOTH FINISHED SURFACE FREE OF DIVOTS AND PUCK MARKS. PREP AND FILL EXISTING DIVOTS AND PUCK MARKS COMPLETE AT EXISTING CMU WALLS FOR SMOOTH LIKE NEW FINISH. MORTAR JOINTS TO REMAIN.

100 REMOVE EXISTING DAMAGED GYPSUM BOARD WALL CONSTRUCTION. PREP TO RECEIVE NEW GYPSUM BOARD AND CEMENT BOARD LAMINATED TO EXISTING WALL BACKER

101 SALVAGE AND REINSTALL BOTTLE FILLER. REFER TO MEP

GENERAL DEMOLITION NOTES:

A. FOR GENERAL PROJECT NOTES, MATERIAL INDICATIONS LEGEND, SYMBOL LEGEND, ABBREVIATIONS, ETC., REFER TO G SERIES SHEETS.

B. UNLESS NOTED OTHERWISE ON THIS SHEET, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL WORK INDICATED ON THIS SHEET.

C. CONTRACTORS ENCOUNTERING EXISTING MATERIAL WHICH IS SUSPECTED OF CONTAINING ASBESTOS SHALL STOP WORK IMMEDIATELY AND NOTIFY THE OWNER AND THE OWNERS REPRESENTATIVE.

D. BOLD DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXTENT OF DEMOLITION WORK PRIOR TO BIDDING AND FOR COORDINATING THE EXTENT OF DEMOLITION WITH THE INSTALLATION OF NEW SYSTEMS.

E. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION APPLICABLE TO THEIR SCOPE OF WORK AND AS REQUIRED FOR INSTALLATION OF NEW WORK WHETHER OR NOT IT IS SPECIFICALLY INDICATED OR NOTED IN THESE DOCUMENTS.

F. REMOVE ALL ITEMS AND FINISHES MADE OBSOLETE BY NEW CONSTRUCTION. VERIFY ITEMS DEEMED OBSOLETE WITH ARCHITECT PRIOR TO REMOVAL. REFER TO NEW CONSTRUCTION DRAWINGS FOR DEMOLITION REQUIRED NOT SHOWN ON DEMOLITION PLANS.

G. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR OFF SITE REMOVAL OF ALL DEMOLITION MATERIALS AND/OR ITEMS UNLESS NOTED OTHERWISE OR DIRECTED BY THE OWNER.

H. PRIOR TO STARTING DEMOLITION, CONSTRUCT DUST CONTROL BARRIERS AS REQUIRED TO PREVENT THE SPREAD OF DUST INTO SURROUNDING AREAS (WHERE APPLICABLE).

I. WHERE BUILDING EGRESS IS REQUIRED TO PASS THROUGH DEMOLITION, CONSTRUCTION, AND NEW CONSTRUCTION AREAS, PROVIDE APPROVED BARRIERS, ETC. TO ENSURE SAFETY OF THE PUBLIC.

J. RELOCATED ITEMS SHALL BE CLEANED AND PLACED IN STORAGE, PER OWNERS' DIRECTION, UNTIL ITEMS ARE READY TO BE INSTALLED. IF ITEMS ARE DAMAGED DURING DEMOLITION OR RELOCATION, THEY SHALL BE REPAIRED OR REPLACED WITH NEW ITEMS AS APPROVED.

K. DEMOLITION SHALL BE PERFORMED WITHOUT DAMAGE TO EXISTING CONSTRUCTION TO REMAIN. WHERE SUCH DAMAGE OCCURS, PATCH, REPAIR, OR RESTORE WALLS, FLOORS, CEILING, ETC. NEATLY TO MATCH EXISTING ADJACENT SURFACE. PROVIDE SHORING, BRACING, OR SUPPORT AS REQUIRED TO PREVENT MOVEMENT OR SETTLEMENT OF EXISTING STRUCTURES.

L. EACH CONTRACTOR IS RESPONSIBLE FOR CUTTING, PATCHING, AND DISCONNECTION OF ITEMS APPLICABLE TO THEIR SCOPE OF WORK. WHERE EXISTING SERVICES ARE ABANDONED, CAP AT LEAST 1" BEHIND NEW FINISHES AND/OR EXISTING SURFACE AND PATCH AS REQUIRED TO RECEIVE NEW FINISHES OR MATCH EXISTING FINISH.

M. ON WALLS THAT ARE TO RECEIVE NEW FINISHES, REMOVE AND REINSTALL EXISTING EQUIPMENT TO REMAIN AS REQUIRED FOR INSTALLATION OF NEW FINISHES.

N. WHERE WALLS OR BULKHEADS ARE REMOVED, PATCH FLOORS, CEILINGS, AND ADJACENT WALLS AS REQUIRED TO MATCH EXISTING OR RECEIVE NEW FINISHES WHERE APPLICABLE. WHERE EXISTING DUCTWORK, PIPING, OR EQUIPMENT IS REMOVED, PATCH OPENINGS AND/OR SURFACES AS REQUIRED TO MATCH ADJACENT SURFACES OR RECEIVE NEW FINISHES WHERE APPLICABLE. REFER TO ALL DEMOLITION DRAWINGS FOR EXTENT OF ITEMS TO REMOVED.

O. OVER CUT NEW OPENINGS IN EXISTING WALL AS REQUIRED FOR NEW CONSTRUCTION. PATCH AND REPAIR WALLS AS REQUIRED TO MATCH EXISTING. WHERE APPLICABLE, TOOTH NEW MASONRY INTO EXISTING MASONRY.

P. ALL EQUIPMENT AND FURNITURE WHICH ARE CONSIDERED LOOSE FURNISHING SHALL BE REMOVED BY THE OWNER PRIOR TO DEMOLITION.

Q. MASONRY WALLS TO BE REMOVED SHALL BE REMOVED TO A POINT 2" MINIMUM BELOW THE EXISTING FLOOR SLAB UNLESS SETTING ON A SLAB OR SPECIFICALLY NOTED OTHERWISE. PATCH WITH NEW CONCRETE TO BE FLUSH WITH THE EXISTING FLOOR SLAB.

R. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL REVIEW OF DEMOLITION NOTES AND GENERAL DEMOLITION NOTES AS THEY APPLY TO THEIR SCOPE OF WORK.

S. THE OWNER SHALL RESERVE THE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.

T. REFER TO THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND TECHNOLOGY DOCUMENTS FOR COMPLETE SCOPE OF DEMOLITION WORK.

U. "FLOORING" DENOTES FLOOR COVERING MATERIALS INCLUDING BACKING, ADHESIVES, AND BASES DOWN TO BUT EXCLUSIVE OF FLOOR SLABS AND STRUCTURAL MATERIALS UNLESS NOTED OTHERWISE.

V. DEMOLITION IS TO FOLLOW ESTABLISHED CONSTRUCTION SEQUENCE. REFER TO SPECIFICATIONS AND DRAWINGS FOR REQUIREMENTS AND SPECIAL CONDITIONS.

W. WHERE APPLICABLE SALVAGE EXISTING MASONRY (FACE BRICK, GLAZED CMU, FACING TILE) AS REQUIRED FOR PATCHING AND INFILL IN RENOVATED AREAS WHERE INDICATED. DISCARD UNUSED PORTION OFF SITE.

X. REFER TO S-401 FOR OPENINGS CREATED IN EXISTING MASONRY WALLS FOR LINTELS

DEMOLITION PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1 REMOVE EXISTING FLOOR FINISHES AND WALL BASE IN ITS ENTIRETY. PREP FOR NEW FINISHES.

2 REMOVE MARKERBOARD/ TACKBOARD/ CHALKBOARD IN ITS ENTIRETY, PREP WALL FOR NEW FINISHES.

3 REMOVE WALL MOUNTING EQUIPMENT TRACK ASSEMBLY COMPLETE. PREP FOR NEW FINISHES.

4 REMOVE EXISTING FABRIC WALL COVERING. PREP WALLS FOR NEW FINISHES

5 REMOVE MASONRY WALL. PATCH AND REPAIR ADJACENT FLOOR AND WALL AS REQUIRED TO ACCEPT NEW FINISHES.

6 REMOVE BASE CABINETS AND COUNTERTOP SYSTEM COMPLETE. PATCH AND REPAIR WALL AND FLOOR AS REQUIRED TO RECEIVE NEW FINISHES.

7 REMOVE WALL CABINET SYSTEM COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

8 REMOVE SHELVING SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

9 REMOVE BUILT IN CUBBIES, CABINETRY WING WALLS, SHELVING, WARDROBE/ STORAGE/ UPPER CABINET AND TRIM COMPLETE. PREP WALLS AND FLOOR TO RECEIVE NEW CONSTRUCTION.

10 REMOVE EXISTING PLUMBING FIXTURES AND ASSOCIATED CABINETRY AND COUNTER IN THEIR ENTIRETY. CUT AND CAP LINE BELOW WALL OR FLOOR SURFACE. UNLESS OTHERWISE NOTED ON PLUMBING DRAWINGS PATCH AND REPAIR FLOOR AND/OR WALL AS REQUIRED TO ACCEPT NEW FINISHES

11 REMOVE EXISTING FIN TUBE COVER/ SHROUD AND PIPING COMPLETE. CUT AND CAP PIPING NOT IN USE OR NO-LONGER TO BE IN USE AT INACCESSIBLE CHASE/ FLOOR LINE. UNLESS OTHERWISE NOTED ON MEP DRAWINGS, PATCH AND REPAIR FLOOR AND/OR WALLS AS REQUIRED TO RECEIVE NEW FINISHES.

12 REMOVE UNIT VENTILATOR SYSTEM IN ITS ENTIRETY. PREP EXISTING WALL OPENING TO EXTERIOR TO RECEIVE NEW CONSTRUCTION.

13 EXISTING METAL LOUVER SYSTEM TO REMAIN. PREP TO RECEIVE NEW CONSTRUCTION.

14 EXISTING MASONRY OPENING FOR FRESH AIR TO REMAIN. PREP TO RECEIVE NEW CONSTRUCTION.

15 REMOVE EXISTING SHELVING/ CABINETRY SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

16 EXISTING PIPE CHASE COVER TO BE REMOVED. PATCH AND REPAIR FLOOR AND/ OR WALL AS REQUIRED TO ACCEPT NEW FINISHES MATCHING EXISTING ADJACENT CONSTRUCTION.

17 REMOVE EXISTING BUILT-IN SPEAKER AND CLOCK. INFILL OPENING WITH CMU AND PREP TO RECEIVE NEW EQUIPMENT.

18 REMOVE MOUNTED PROJECTOR/ SPEAKER ASSEMBLY IN ITS ENTIRETY.

19 REMOVE TECHNOLOGY ASSEMBLIES. REFER TO TECHNOLOGY AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.

20 REMOVE EXISTING CEILING FAN IN ITS ENTIRETY.

21 REMOVE ACOUSTICAL BOARD CEILING, GRID AND SUSPENSION SYSTEM IN ITS ENTIRETY.

22 REMOVE EXISTING GYPSUM/ OR PLASTER CEILING SYSTEM IN ITS ENTIRETY.

23 REMOVE MOVABLE PARTITION IN ITS ENTIRETY INCLUDING STEEL FRAMING TRACK SUPPORT. PREP FLOOR AND WALL FOR NEW CONSTRUCTION AND FINISHES.

24 REMOVE EXISTING SPLINE CEILING SYSTEM IN ITS ENTIRETY.

25 REMOVE EXISTING CERAMIC TILE WALL FINISH. PREP TO RECEIVE NEW FINISHES.

26 SELECTIVELY REMOVE CERAMIC TILE WALL FINISH. PEP TO RECEIVE NEW FINISHES.

27 SELECTIVELY REMOVE TERRAZZO BASE SMOOTH AND VERTICAL. PREP TO RECEIVE NEW ADJACENT FINISHES.

28 BUSH HAMMER EXISTING FLOOR FINISH TO RECEIVE NEW FLOOR FINISH. NEW AND EXISTING FLOOR FINISHES TO BE FLUSH.

29 REMOVE EXISTING VINYL FLOOR FINISH. PREP FOR NEW FINISHES.

30 REMOVE EXISTING FLOOR FINISH BELOW EXISTING TO CONCRETE. PREP FOR NEW FINISHES.

31 REMOVE DEMOUNTABLE PARTITION IN ITS ENTIRETY INCLUDING STEEL FRAMING TRACK SUPPORT DOOR, DOOR FRAME AND HARDWARE ASSEMBLIES COMPLETE. PREP FLOOR AND WALL FOR NEW CONSTRUCTION AND FINISHES.

32 REMOVE EXISTING WALL AND FINISH ASSEMBLIES COMPLETE.

33 REMOVE WALL PARTITION, GLAZING AND ALL ASSOCIATED FRAMING AND SUPPORT STRUCTURE.

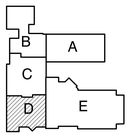
34 REMOVE STOREFRONT, DOOR AND GLAZING ASSEMBLY COMPLETE. PATCH AND REPAIR WALL AND FLOOR TO RECEIVE NEW FINISHES.

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY TA
DRAWN BY NJW
CHECKED BY DJW

DALE J. WAGNER REGISTERED NO. 19600171 STATE OF INDIANA ARCHITECT

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
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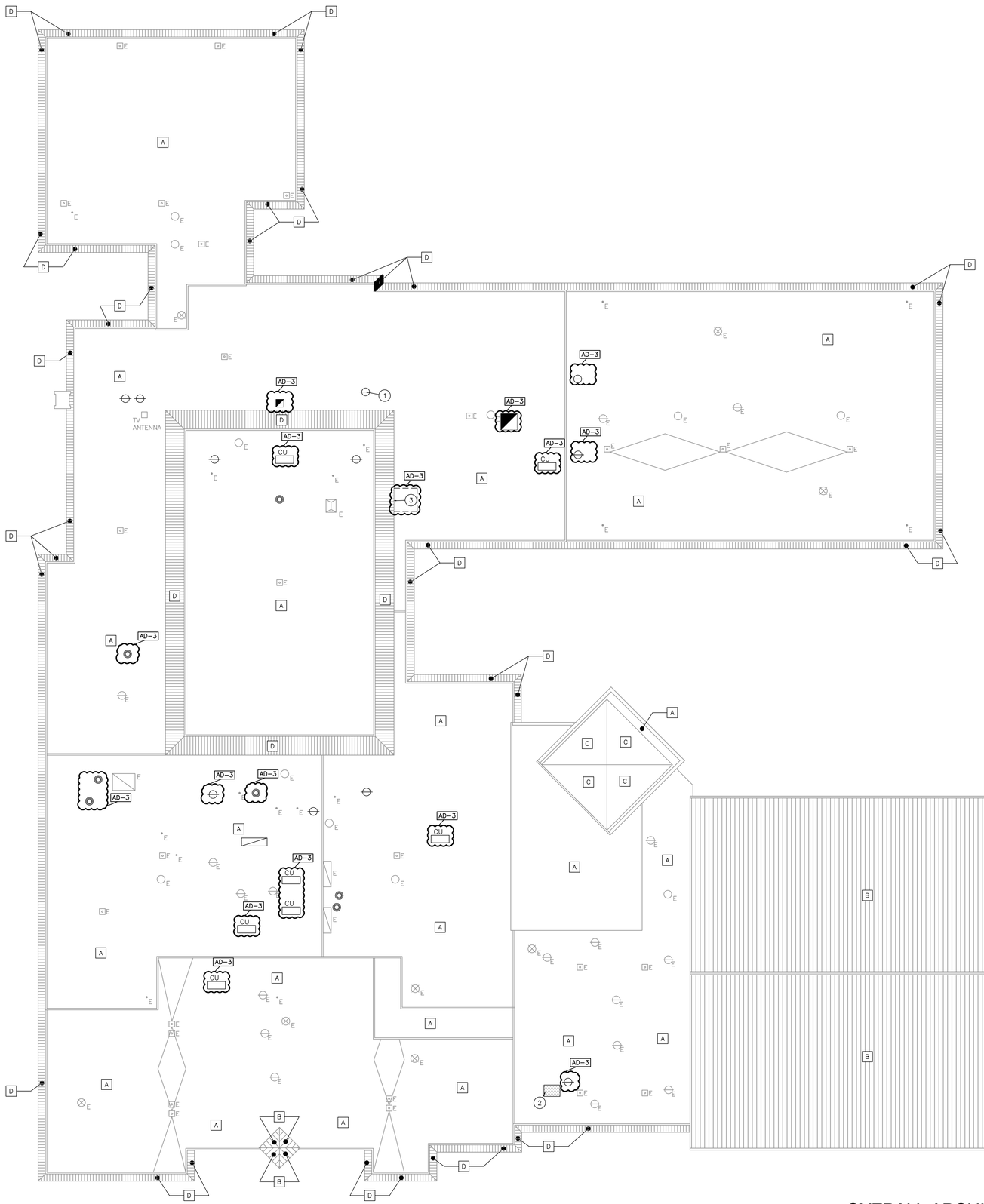
DRAWING
UNIT "D" ARCHITECTURAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
D
AD104

Wednesday, 12/14/2022 - 12:07 PM - LAST SAVED BY:NWESLEY
Y:\21-145 DUNELAND SC - BAILLY ES ADDITIONS AND RENOVATIONS\21-145 DRAWINGS\05 ARCH\AD104.DWG



OVERALL ARCHITECTURAL ROOF PLAN

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

NORTH

GENERAL ROOF PLAN NOTES:

A. FOR GENERAL NOTES, MATERIAL INDICATIONS LEGEND, SYMBOL LEGEND, ABBREVIATIONS, ETC. SEE SHEET G-301.

B. THERE MAY BE LOCATIONS ON NEW AND/OR EXISTING ROOF WHERE THE ROOF DECK MAY NOT BE STRUCTURALLY SOUND. CONTRACTORS SHOULD USE EXTREME CAUTION IN WORKING THESE ROOF AREAS TO MAINTAIN SAFE WORKING CONDITIONS.

C. THE ROOFING INSTALLER SHALL VERIFY ALL DIMENSIONS, 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.

D. THE ROOFING INSTALLER SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL DAMAGE CAUSED BY THE IMPROPER STORAGE OR STACKING OF ROOFING MATERIALS.

E. ALL DIMENSIONS INDICATED ON THE ROOF PLAN ARE APPROXIMATE. THE ROOFING INSTALLER IS RESPONSIBLE FOR OBTAINING ACCURATE FIELD MEASUREMENTS FOR THE EXECUTION OF HIS WORK AND PRIOR TO ANY FABRICATION OF THE VARIOUS MATERIALS.

F. THE ROOFING INSTALLER SHALL PROTECT ALL ROOF DRAINS, SCUPPERS AND DOWNSPOUTS FROM DEBRIS CREATED DURING DEMOLITION AND/OR NEW CONSTRUCTION. THE ROOFING INSTALLER SHALL INSPECT AND CLEAR ALL DRAINS, SCUPPERS AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY.

G. ROOF DRAIN LOCATION INDICATE DESIGN INTENT. COORDINATE LOCATIONS WITH STRUCTURAL AND MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND TRADES.

H. FOR LOCATION AND QUANTITY OF ALL ROOFTOP MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS.

I. FOR LOCATION OF ALL NEW AND/OR EXISTING PLUMBING VENTS, REFER TO MECHANICAL ROOF PLANS.

J. EXTEND ALL PLUMBING VENTS SO THAT THE TOP IS A MINIMUM OF 12" ABOVE THE ROOFING MEMBRANE.

K. PROVIDE NEW FLASHING AND TWO PIECE COUNTER-FLASHING WHERE NEW ROOFING ABUTS A NEW OR EXISTING WALL, UNLESS OTHERWISE NOTED OR DETAILED.

L. PROVIDE FLASHING AND SADDLES FOR ALL EQUIPMENT PROVIDED UNDER MECHANICAL.

M. PROVIDE FLASHING OF ALL VENTS, FAN CURBS, MASONRY WALLS, FLUES, DRAINS, FASCIAS, ETC. IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS, AND WITH ROOFING MANUFACTURERS STANDARD DETAILS AND SPECIFICATIONS.

N. CONTRACTOR TO PROVIDE CRICKETS AND/OR ROOF SADDLES AS REQUIRED TO PROMOTE POSITIVE DRAINAGE AROUND ALL ROOF TOP PENETRATIONS.

O. SADDLES AND TAPERED INSULATION SYMBOLS INDICATE DESIGN INTENT TO SLOPES TO DRAIN. ROOFING INSTALLER SHALL PROVIDE SUBMITTAL DRAWINGS FOR TAPERED INSULATION AND SADDLES TO ENSURE POSITIVE SLOPE.

P. ALL NEW WOOD BLOCKING AND NAILERS SHALL BE FIRE/MOISTURE TREATED WOOD.

Q. ANCHOR ALL ROOFING EDGE WOOD BLOCKING AND STRUCTURAL INSULATED SHEATHING FOR COPINGS, FASCIA, AND EXPANSION JOINT COMPRESSIBLE TUBES AS REQUIRED TO CONFORM TO STATE AND LOCAL CODES.

R. REFER TO ARCHITECTURAL FLOOR PLAN FOR LOCATION OF SECTION CUTS FOR ADDITIONAL INFORMATION.

S. REMOVE ALL ROOF GRAVEL, RESIDUE, AND ALL PROJECTIONS WHICH WOULD PREVENT THE NEW ROOF INSULATION FROM LAYING FLAT OVER THE ROOF SURFACES.

T. AT ALL NEW ROOF DRAINS AND/OR EXISTING ROOF DRAINS AT AREAS TO BE RE-ROOFED, REMOVE AND CLEAN ROOF DRAIN STRAINERS AND CLAMP RINGS. REINSTALL AFTER NEW ROOF INSULATION AND ROOFING MEMBRANE ARE IN PLACE, ANY BROKEN OR MISSING ROOF DRAIN STRAINER SHALL BE REPLACED WITH A NEW STRAINER.

U. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF ROOF TOP EQUIPMENT TO BE REMOVED.

V. ALL ROOF SADDLE SLOPES SHALL BE 1/3" PER 12".

W. PROVIDE STRUCTURAL REINFORCEMENT AS INDICATED ON 8/S-401 AT ALL ROOF PENETRATIONS AND ROOF MOUNTED EQUIPMENT.

ROOF LEGEND:

- RELIEF VENT — 5/A-210
- EXHAUST FAN — 5/A-210
- OUTSIDE AIR INTAKE — 5/A-210
- GRAVITY VENT — 5/A-210
- PLUMBING VENT — 3/A-210
- MECHANICAL UNIT — 5/A-210
- ROOF WALKWAY PADS — 2/A-210
- HATCH PATTERN INDICATES NEW ROOFING SYSTEM.
- CONDENSING UNIT — 4/A-210
- RELIEF DUCT — AD-3, 5/A-210
- E EXISTING RELIEF VENT
- E EXISTING EXHAUST FAN
- E EXISTING GRAVITY VENT
- E EXISTING ROOF DRAIN
- E EXISTING PLUMBING VENT
- E EXISTING PITCH POCKET
- E EXISTING ROOF DRAINAGE SADDLE
- E EXISTING MECHANICAL UNIT
- E EXISTING ROOF HATCH

ROOF TYPES:

A EXISTING MEMBRANE ROOF SYSTEM SHALL REMAIN EXCEPT AS NOTED. PROTECT FROM ADJACENT ROOF WORK.

B EXISTING STANDING SEAM METAL ROOF SYSTEM SHALL REMAIN EXCEPT AS NOTED. PROTECT FROM ADJACENT ROOF WORK.

C EXISTING SHINGLE ROOF SYSTEM SHALL REMAIN EXCEPT AS NOTED. PROTECT FROM ADJACENT ROOF WORK.

D EXISTING SLOPED METAL PANEL SYSTEM SHALL REMAIN EXCEPT AS NOTED. PROTECT FROM ADJACENT ROOF WORK.

ROOF PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. ROOF PENETRATION FOR NEW KILN. REFER TO 8/S-401.
2. ROOF INFILL FOR OLD KILN. INSTALL METAL DECK FROM EXISTING ROOF JOIST TO ROOF JOIST W/ 6" OVERLAP MINIMUM EACH WAY. OVERLAY RIGID INSULATION, 1/2" MEMBRANE, COVER BOARD, AND ROOF MEMBRANE MATCHING EXISTING. SLOPE TO DRAIN. INSTALL FOR WATER TIGHT CONDITIONS AND TO MATCH EXISTING ROOF SYSTEM WARRANTY REQUIREMENTS.
3. WALKWAY PADS 8'X8' SECTION EXTEND BEYOND EXISTING, REFER 2/A-210 — AD-3

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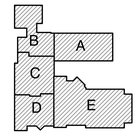
PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY TA
DRAWN BY NJW
CHECKED BY MLR

DALE J. WAGNER REGISTERED NO. 19600171 STATE OF INDIANA ARCHITECT

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
OVERALL ARCHITECTURAL ROOF PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
A-201

Wednesday, 12/14/2022 - 12:08 PM - LAST SAVED BY:NWESLEY
Y:\21-145 DUNELAND SC - BAILLY ES ADDITIONS AND RENOVATIONS\21-145 DRAWINGS\05 ARCH\A-201.DWG

GENERAL SYMBOL LEGEND

1	EQUIPMENT ITEM NUMBER
K700	ENLARGED PLAN CALL OUT
1 / K700	EQUIPMENT ELEVATION CALL OUT
1 / K700	EQUIPMENT DETAIL CALL OUT
1 / K700	EQUIPMENT SECTION CALL OUT
E1	SPOT LOCATION CALL OUT

PLUMBING LEGEND

Ⓗ	SINGLE HOT WATER CONNECTION
Ⓒ	SINGLE COLD WATER CONNECTION
Ⓗ Ⓒ	DOUBLE HOT & COLD WATER CONNECTION
Ⓦ	DIRECT WASTE CONNECTION
	INDIRECT FLOOR DRAIN
	INDIRECT 12"x12" FLOOR SINK
	INDIRECT 12"x12" FLOOR SINK WITH HALF GRATE
Ⓖ	GAS CONNECTION
Ⓢ	STEAM SUPPLY CONNECTION
Ⓡ	STEAM RETURN CONNECTION
Ⓐ	COMPRESSED AIR CONNECTION
⬢	REFER TO ELECTRICAL/PLUMBING SCHEDULES FOR MORE INFORMATION ON THIS EQUIPMENT

ELECTRICAL LEGEND

▶	DEDICATED ELECTRICAL CONNECTION
◎	DEDICATED ELECTRICAL CONNECTION (DFA)
◉	DEDICATED ELECTRICAL CONNECTION (STUB)
	DUPLEX CONVENIENCE OUTLET
	SPECIAL PURPOSE CONVENIENCE OUTLET
	FIRE SUPPRESSION SYSTEM PULL STATION
J	JUNCTION BOX LOCATED ON EQUIPMENT
D	DISCONNECT SWITCH LOCATED ON EQUIPMENT
T	DEFROST TIME CLOCK LOCATED ON EQUIPMENT
	EQUIPMENT MOUNTED RECEPTACLE
Ⓓ	TELEPHONE/DATA CONNECTION
⬢	REFER TO ELECTRICAL/PLUMBING SCHEDULES FOR MORE INFORMATION ON THIS EQUIPMENT

NOTE CALLOUT LEGEND

Ⓐ	EQUIPMENT REQUIRING WATER FILTRATION
Ⓑ	STAINLESS STEEL UTILITY CHASE
Ⓒ	FIRE SUPPRESSION SYSTEM CABINET
Ⓓ	WALK-IN COOLER/FREEZER COMPRESSOR

DRAWING SHEET INDEX

ABBREVIATION LEGEND

AFF	ABOVE FINISHED FLOOR
AGA	AMERICAN GAS ASSOCIATION
AMPS	AMPERAGE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONST	CONSTRUCTION
CW	COLD WATER
DCO	DUPLEX CONVENIENCE OUTLET
DFA	DROP FROM ABOVE
DIM	DIMENSION
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ED	ELECTRICAL DIVISION
ELEC	ELECTRIC, ELECTRICAL
EXIST	EXISTING
FLR DRN	FLOOR DRAIN
FLR SINK	FLOOR SINK
FLR TRGH	FLOOR TROUGH
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GD	GENERAL DIVISION
GPH	GALLONS PER HOUR
HP	HORSEPOWER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
KEC	KITCHEN EQUIPMENT CONTRACTOR
KW	KILOWATT
MAX	MAXIMUM
MBTU	1,000 BTU'S
MC	MECHANICAL CONTRACTOR
MD	MECHANICAL DIVISION
MECH	MECHANICAL
MFG	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	PLUMBING CONTRACTOR
PD	PLUMBING DIVISION
PH	PHASE
PSI	POUNDS PER SQUARE INCH
R	RADIUS
ST STL	STAINLESS STEEL
SHT	SHEET
S/S	STAINLESS STEEL
STD	STANDARD
STUB	STUB UP FROM FLOOR
TYP	TYPICAL
V	VOLTAGE
VOLT	VOLTAGE

GENERAL DRAWING SET NOTES

1. THESE DRAWINGS HAVE BEEN PRODUCED USING A GENERAL ARRANGEMENT OF EQUIPMENT FROM ONLY THE INFORMATION THAT WAS MADE AVAILABLE. THESE DRAWINGS ARE INFORMATIONAL BY NATURE FOR BIDDING PURPOSES ONLY AND ARE NOT TO BE USED IN ANY WAY FOR CONSTRUCTION. REITANO DESIGN GROUP ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF MEASUREMENTS TAKEN FROM THESE DRAWINGS. FABRICATORS, CONTRACTORS AND OTHER PARTIES UTILIZING THESE PLANS, IN CONNECTION WITH THIS JOB, ARE RESPONSIBLE FOR SECURING THEIR OWN MEASUREMENTS.
2. THE KITCHEN EQUIPMENT CONTRACTOR IS RESPONSIBLE TO REVIEW THE PLANS FOR ACCURACY AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO THE FABRICATION OF ANY EQUIPMENT. VERIFY ALL EQUIPMENT CLEARANCES THRU BUILDING DOORS, HALLWAYS OR ENTRY POINTS AS NOT ALL EQUIPMENT WILL FIT THRU STANDARD OPENINGS. THE KITCHEN EQUIPMENT CONTRACTOR IS TO NOTIFY REITANO DESIGN GROUP OF ANY ERRORS, OMISSIONS, AMBIGUITIES, DISCREPANCIES OR IRREGULARITIES PRIOR TO START OF CONSTRUCTION.
3. THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS MUST BE CONSIDERED A COMPLETE BODY OF WORK. ALL WORK IS TO BE COMPLETED IN A CRAFTSMAN LIKE MANNER AND CONFORM TO ALL APPLICABLE BUILDING AND SAFETY CODES. ANY WORK CALLED FOR IN THE DRAWINGS OR SPECIFICATIONS, INCLUDING ANY WORK THAT CAN REASONABLY BE CONSIDERED A PART OF INSTALLATION AND NECESSARY TO COMPLETE THE PROJECT, SHALL BE INCLUDED.
4. ANY DISCREPANCIES BETWEEN THESE DRAWINGS, BUILDING AND LOCAL CODE REQUIREMENTS THAT MAY AFFECT INSTALLATION, FABRICATION AND/OR OVERALL WORK IN ANY WAY SHALL BE BROUGHT TO THE ATTENTION OF REITANO DESIGN GROUP. REITANO DESIGN GROUP ASSUMES NO RESPONSIBILITY FOR ANY CHANGES MADE NECESSARY BY THE LOCAL BUILDING CODES, ORDINANCES, STRUCTURAL CONDITIONS OR CHANGES MADE NECESSARY IN EQUIPMENT SHOWN ON THESE DRAWINGS.
5. THESE DRAWINGS REFER TO WORK TO BE PERFORMED BY OTHER TRADES NOT INTENDED TO BE PART OF THE KITCHEN EQUIPMENT CONTRACTOR'S SCOPE OF WORK. THESE TRADES ARE REFERENCED USING THE GENERALLY ACCEPTED TITLES FOUND IN THE ABBREVIATION LEGEND. IT IS NOT THE INTENT OF THESE TITLES TO ASSIGN WORK, BUT RATHER TO CLARIFY COORDINATION BETWEEN THE KITCHEN EQUIPMENT CONTRACTOR AND OTHER TRADES. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL NOTES ON THESE DRAWINGS AND TRANSMITTING THE REQUIRED INFORMATION TO THE RESPECTIVE SUBCONTRACTORS.
6. THE BASIS OF DESIGN FOR ALL DRAWINGS, SPECIFICATIONS, AND DETAIL REFERENCES IS THE FIRST MANUFACTURER AND MODEL LISTED. IF ANOTHER LISTED MANUFACTURER IS CHOSEN BY THE KITCHEN EQUIPMENT CONTRACTOR, IT IS THE RESPONSIBILITY OF THE KITCHEN EQUIPMENT CONTRACTOR TO PROVIDE A MODEL THAT IS EQUAL IN PRODUCTION CAPABILITIES, CAPACITY, AND PERFORMANCE TO THE FIRST MANUFACTURER AND MODEL LISTED. THE KITCHEN EQUIPMENT CONTRACTOR IS ALSO TO VERIFY, COORDINATE, AND ALLOW FOR PROPER INSTALLATION OF EQUIPMENT; TAKING INTO ACCOUNT POSSIBLE REVISIONS FOR UTILITY CONNECTIONS, LOADS, AND PHYSICAL SIZES. IN THE EVENT THERE ARE ANY UP CHARGES OR CHANGE ORDERS BY OTHER TRADES AS A RESULT OF THE KITCHEN EQUIPMENT CONTRACTOR SUBMITTING ANOTHER LISTED MANUFACTURER, THOSE CHARGES SHALL BE THE SOLE RESPONSIBILITY OF THE KITCHEN EQUIPMENT CONTRACTOR
7. THE CONCEPTS, DESIGNS, PLANS, DETAILS, ETC. SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF REITANO DESIGN GROUP, AND WERE CREATED FOR USE ON THIS SPECIFIC PROJECT. NONE OF THIS INFORMATION SHALL BE USED BY ANY PERSON OR FIRM FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF REITANO DESIGN GROUP. THE OWNER MAY RETAIN COPIES FOR INFORMATION AND REFERENCE IN CONNECTION ONLY WITH THIS PROJECT.

GENERAL ENVIRONMENTAL NOTES

1. CONTRACTOR TO PROVIDE SMOOTH AND LEVEL FLOORS BELOW ALL KITCHEN EQUIPMENT UNLESS THESE DRAWINGS SHOW OTHERWISE. FLOORS SHALL BE IMPERVIOUS TO WATER, GREASE, AND ACID AND OF EASILY CLEANABLE CONSTRUCTION. FLOORS IN ALL AREAS WHERE FOOD IS PREPARED, PACKAGED OR STORED OR WHERE REFUSE OR GARBAGE IS STORED, JANITORIAL FACILITIES AND IN ALL TOILET AND HAND WASHING AREAS, SHALL BE AN APPROVED TYPE THAT CONTINUES UP THE WALL 6" WITH A MINIMUM 3/8" RADIUS COVE BASE.
2. CONTRACTOR TO PROVIDE SMOOTH AND NON-ABSORBENT WALLS IN ALL FOOD PREPARATION AND DISHWASHING AREAS. WALLS TO BE PROVIDED WITH A LIGHT COLORED, EASILY CLEANABLE FINISH. ALL PAINTED SURFACES SHALL BE SEALED WITH A GLOSS OR SEMI-GLOSS ENAMEL. ALL WALLS WITHIN A.G.A. CLEARANCE REQUIREMENTS FOR COOKING EQUIPMENT SHALL BE CONSTRUCTED OF HEAT PROOF, NON-COMBUSTIBLE MATERIALS. GENERAL CONTRACTOR TO VERIFY CONSTRUCTION PER LOCAL CODES.
3. CONTRACTOR TO PROVIDE SMOOTH AND NON-ABSORBENT CEILINGS IN IN ALL FOOD PREPARATION AND DISHWASHING AREAS. CEILINGS TO BE PROVIDED WITH A LIGHT COLORED, EASILY CLEANABLE FINISH. ALL PAINTED SURFACES SHALL BE SEALED WITH A GLOSS OR SEMI-GLOSS FINISH.
4. IN EVERY ROOM AND AREA WHICH FOOD IS PREPARED, MANUFACTURED, PROCESSED OR PACKAGED, OR IN WHICH UTENSILS ARE CLEANED, LIGHTING SHALL BE PROVIDED TO PRODUCE AN INTENSITY OF NOT LESS THAN 70 FOOTCANDLES AS MEASURED THIRTY INCHES (30") ABOVE THE FLOOR. FOOD AND UTENSIL STORAGE ROOMS, REFRIGERATION STORAGE, TOILET AND DRESSING ROOMS SHALL BE PROVIDED WITH AT LEAST 20 FOOTCANDLES OF LIGHT. LIGHT FIXTURES IN AREAS WHERE FOOD IS PREPARED, OR WHERE OPEN FOOD IS STORED, OR WHERE UTENSILS ARE CLEANED, SHALL BE OF SHATTERPROOF CONSTRUCTION OR SHALL BE PROTECTED WITH SHATTERPROOF SHIELDS AND SHALL BE READILY CLEANABLE.
5. ALL DELIVERY DOORS LEADING TO THE OUTSIDE SHALL OPEN OUTWARD, BE SELF CLOSING, AND SHALL BE PROVIDED WITH AN OVERHEAD AIR CURTAIN. AIR CURTAIN SHALL PRODUCE A DOWNWARD AND OUTWARD AIRFLOW NOT LESS THAN 3" THICK AT THE NOZZLE WITH AN AIR VELOCITY OF NOT LESS THAN 1600 FPM ACROSS ENTIRE OPENING.
6. TOILET FACILITIES SHALL BE PROVIDED WITHIN EACH FOOD ESTABLISHMENT CONVENIENT FOR THE EMPLOYEES. ALL TOILET ROOMS SHALL BE PROVIDED WITH MECHANICAL VENTILATION APPROVED BY THE HEALTH DEPARTMENT. A ROOM OR ENCLOSURE AT LEAST 5'X5', SEPARATED FROM TOILETS, FOOD STORAGE OR FOOD PREP AREAS SHALL BE PROVIDED WHERE EMPLOYEES MAY CHANGE AND STORE THEIR CLOTHES AND PERSONAL BELONGINGS.
7. LAVATORY SINKS SHALL BE PROVIDED IN ALL FOOD PREPARATION AND DISHWASHING AREAS. SOAP AND SANITARY TOWELS SHALL BE PROVIDED IN SINGLE SERVICE, PERMANENTLY INSTALLED, DISPENSERS AT THE LAVATORY SINKS.
8. CONTRACTOR TO BE RESPONSIBLE FOR ADA CLEARANCE REQUIREMENTS FOR ALL SPACES, DOOR STRIKES, EXITS, AND AISLE WAYS AS THEY PERTAIN TO CODE ENFORCEMENT AND INTERPRETATION.
9. ALL WORK SHALL CONFORM TO LOCAL BUILDING, SAFETY, FIRE, AND HEALTH REGULATIONS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LICENSES AND BUILDING REQUIREMENTS, PAYING FEES, AND PASSING INSPECTION. IT IS HIS RESPONSIBILITY TO VERIFY ALL NECESSARY CODES AND REQUIREMENTS PRIOR TO IMPLEMENTATION.
10. ALL PUBLIC USE AREAS ARE TO BE PROVIDED WITH HEATED AND REFRIGERATED CONDITIONING DESIGNED TO PROVIDE A POSITIVE PRESSURE AT OUTSIDE DOORS. (PROVIDED AND INSTALLED BY HVAC CONTRACTOR.)
11. INTENDED ENVIRONMENT FOR REFRIGERATED GLASS FRONT & OPEN FRONT DISPLAY CASES TO BE 75°F/55% RELATIVE HUMIDITY.

GENERAL EQUIPMENT NOTES

1. EQUIPMENT WHICH IS FIXED AND WHERE IT ABUTTS OTHER FIXED EQUIPMENT, BUILDING WALLS OR FLOOR SHALL BE SEALED THERETO WITH SILICONE. GAPS BETWEEN EQUIPMENT EXCEEDING 1/8" IN WIDTH MUST BE TRIMMED OUT WITH STAINLESS STEEL ANGLED TRIM OR MATCHING MATERIAL TRIM PRIOR TO BEING SEALED.
2. HOT WATER SUPPLY TO ALL FOOD PREPARATION AND THREE COMPARTMENT SINKS SHALL BE 120 DEGREES MINIMUM. HOT WATER SUPPLY TO ALL DISHMACHINES SHALL BE 140 DEGREES MINIMUM.
3. ALL COUNTERS ARE TO BE FABRICATED PROPERLY TO SUPPORT THE SPECIFIED COUNTER TOP MATERIAL IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S GUIDELINES. ALL "DROP-IN" EQUIPMENT AND OTHER EQUIPMENT "ATTACHED TO", "SET ON" OR "BUILT-IN" TO THE COUNTER TOP MATERIAL TO BE INSTALLED IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S GUIDELINES AND TECHNICAL BULLETINS FOR THE INSTALLATION OF COMMERCIAL FOOD SERVICE EQUIPMENT.
4. ALL FOOD SERVICE EQUIPMENT SHALL BE MANUFACTURED, FABRICATED, FURNISHED & INSTALLED IN STRICT ACCORDANCE WITH, AND BEAR THE EMBLEM OF, THE NATIONAL SANITATION FOUNDATION (NSF) AS WELL AS ANY FEDERAL, STATE & LOCAL CODE REQUIREMENTS.
5. ALL REFRIGERATION EQUIPMENT SHALL HAVE A THERMOMETER WHICH IS EASILY READABLE IN PROPER WORKING CONDITION.

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PROJECT
BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9402 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY
DRAWN BY
CHECKED BY

REVISIONS

MARK	DATE	ISSUED FOR
ADD3	12/14/22	ADDENDUM 03

DRAWING
FOODSERVICE EQUIPMENT GENERAL NOTES & SHEET INDEX

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

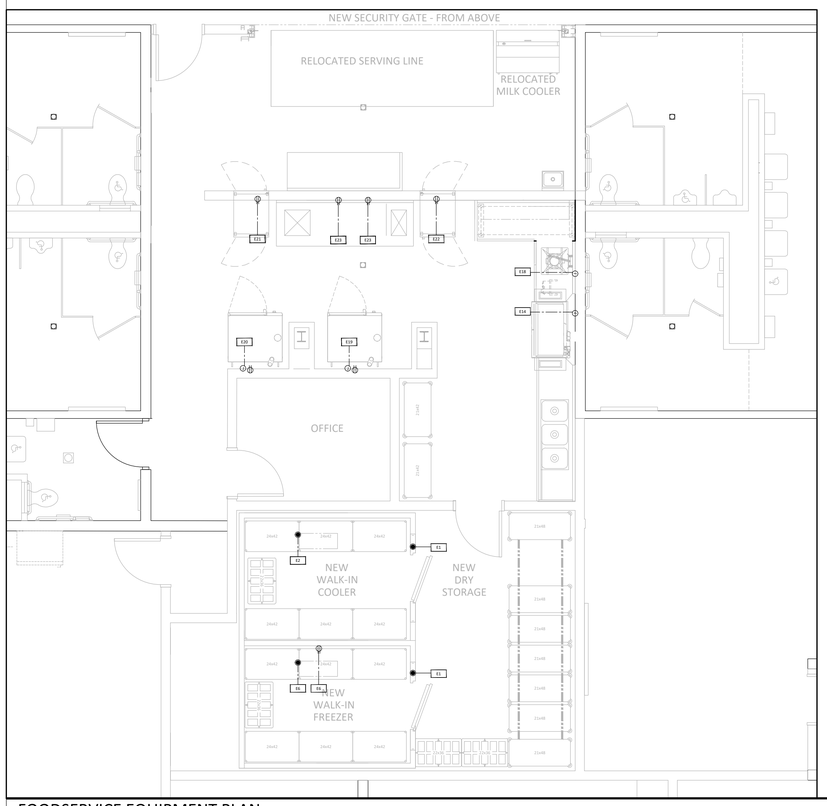
SHEET
K-100

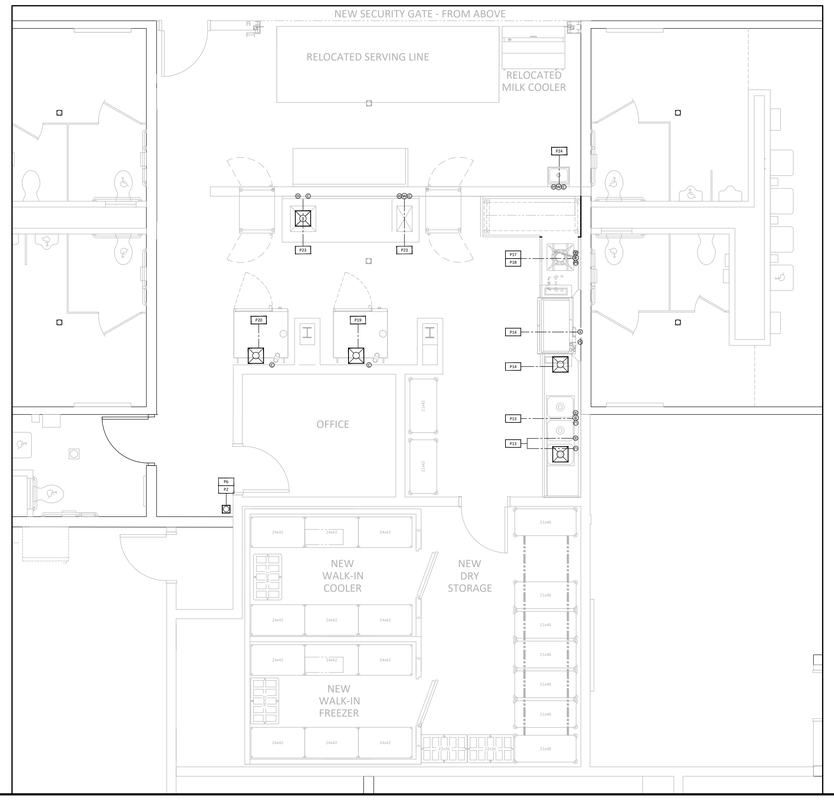
WALK-IN COOLER/FREEZER CONDENSING UNITS TO BE CURB MOUNTED ON FLAT ROOFTOP ABOVE WALK-INS. CONTRACTOR RESPONSIBLE TO PROVIDE AND INSTALL CURB AS COORDINATED WITH FIELD CONDITIONS AND KITCHEN EQUIPMENT. COORDINATE INSTALLATION OF CURB WITH ALL EQUIPMENT AND ADJACENT WORK ASSOCIATED WITH ROOF CONSTRUCTION AS REQUIRED FOR WATERTIGHT CONSTRUCTION.

DISH EXHAUST FAN TO BE LOCATED ON PLATFORM MOUNTED ON FLAT ROOF DIRECTLY ABOVE DISH MACHINE; COORDINATE DUCT RUNS AND FINAL PLACEMENT AS REQUIRED FOR PROPER FITMENT AND WATER TIGHT CONDITIONS.

EQUIPMENT / MECHANICAL / ELECTRICAL

ITEM NUMBER	QUANTITY	DESCRIPTION (NIKEC= NOT IN KITCHEN EQUIPMENT CONTRACT)	SOURCE	MECHANICAL: HOT	COLD	AFF	GAS: CONN. SIZE	GAS: M BTU	GAS: AFF	WASTE	AFF	REMARKS	ELECTRICAL: VOLTAGE	KW	AMPS	HP	PHASE	CONN.	AFF	REMARKS
1	1	WALK-IN COOLER	CUSTOM FABRICATED										120 120		15.0 15.0		1 D 1 D	DFA DFA	FOR LIGHTS AND DOOR FRAME HEATER FOR LIGHTS AND DOOR FRAME HEATER
2	1	WALK-IN COOLER COIL	PART OF ITEM #1							0.75	FD	DRAIN TO FLOOR DRAIN	120		5.0		1 D	DFA	
3	1	WALK IN COOLER COMPRESSOR	PART OF ITEM #1										208		7.7	1.5	3 D	SU	
4	6	COOLER SHELVING	INTERMETRO SUPER ERECTA PRO																
5	1	COOLER DUNNAGE SHELVING	INTERMETRO HP2236PDMB																
6	1	WALK-IN FREEZER COIL	PART OF ITEM #1							0.75	FD	DRAIN TO FLOOR DRAIN	208 208 120		5.0 14.3 15.0		1 D 1 D 1 D	DFA DFA 96"	 NEMA 5-15P FOR DRAIN LINE HEAT TAPE
7	1	WALK IN FREEZER COMPRESSOR	PART OF ITEM #1										208		17.1	4.5	1 D	ROOF	SEE SHEET K-400 FOR ADDITIONAL DETAILS
8	6	FREEZER SHELVING	INTERMETRO SUPER ERECTA PRO																
9	1	FREEZER DUNNAGE SHELVING	INTERMETRO HP2236PDMB																
10	2	DISH SHELVING	INTERMETRO SUPER ERECTA PRO																
11	LOT	HI DENSITY SHELVING	INTERMETRO SUPER ERECTA																
12	2	STORAGE DUNNAGE	INTERMETRO HP2236PDMB																
13	1	THREE COMP SINK WITH FAUCETS	CUSTOM FABRICATED	0.50	0.50	18				1.50	FS	EXTEND DRAINS TO FLOOR SINK							
14	1	DISH MACHINE W/BOOSTER HEATER	HOBART CL44EN-BAS	0.50	0.50	14				2.00	FS	120° MINIMUM HOT WATER REQ. W/ 70° RISE BOOSTER. DRAIN TO FLOOR SINK	208		133		3 D	60	150 AMP BREAKER REQUIRED
15	2	VENT RISER	FABRICATED CUSTOM																
16	1	SOILED DISHTABLE	CUSTOM ST.STL.																
17	1	SPLASH MOUNT PRE RINSE FAUCET	T&S BRASS B-0133-CR-B-SWV	0.50	0.50	14													
18	1	GARBAGE DISPOSAL SYSTEM	INSINKERATOR SS-200-7-AS101		0.50	14				2.00	6		208		3.20		3 D	36	
19	1	VENTLESS COMBI OVEN SIX PAN FULL (ELECTRIC)	RATIONAL ICC-6 FULL E		0.75	48				2.0	FS	EXTEND SERVICE TO FILTER FOR STEAM EXTEND DRAIN TO FLOOR SINK	208 120		62.2 15.0		3 D 1 P	36 54	70 AMP DEDICATED CIRCUIT REQUIRED NEMA 5-15P FOR HOOD
20	1	VENTLESS COMBI OVEN SIX PAN FULL (ELECTRIC)	RATIONAL ICC-6 FULL E		0.75	48				2.0	FS	EXTEND SERVICE TO FILTER FOR STEAM EXTEND DRAIN TO FLOOR SINK	208 120		62.2 15.0		3 D 1 P	36 54	70 AMP DEDICATED CIRCUIT REQUIRED NEMA 5-15P FOR HOOD
21	1	SINGLE DOOR PASS-THRU REFRIGERATOR	TRUE STA1RPT-1G-1S-HC										120		3.8		1 P	86	NEMA 5-15P MOUNT RECEPTACLE IN SOFFIT ABOVE UNIT
22	1	SINGLE DOOR PASS-THRU HEATED CABINET	TRUE STA1HPT-1G-1S										208		7.21		1 P	86	NEMA 6-15P MOUNT RECEPTACLE IN SOFFIT ABOVE UNIT
23	1	WORKTABLE W/ PREP SINK AND HAND SINK	CUSTOM ST. STL.	0.50 0.50	0.50 0.50	14 14				1.50 1.50	FS 8	DRAIN TO FLOOR SINK DRAIN HAND SINK TO DIRECT WASTE	120		16.0		1 P	48	PROVIDE (2) 20 AMP DUPLEX RECEPTACLES ABOVE WORK TABLE BACK SPLASH
24	1	HAND SINK WITH FAUCET	JOHN BOOS HAND SINK	0.50	0.50	18				1.50	FS	EXTEND DRAINS TO FLOOR SINK							
25	1	DISH MACHINE EXHAUST FAN	CUSTOM ST. STL										120		7.5	1.0	1 D	ROOF	ROOF MOUNTED CONDENSATE EXHAUST
26	1	PREP TABLE	EXISTING RELOCATED																
27	1	SERVING LINE	EXISTING																
28	1	MILK COOLER	EXISTING																





FOODSERVICE EQUIPMENT PLAN

SCALE 1/4" = 1'-0"

A

GIBRALTAR DESIGN
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PROJECT

BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY
DRAWN BY
CHECKED BY

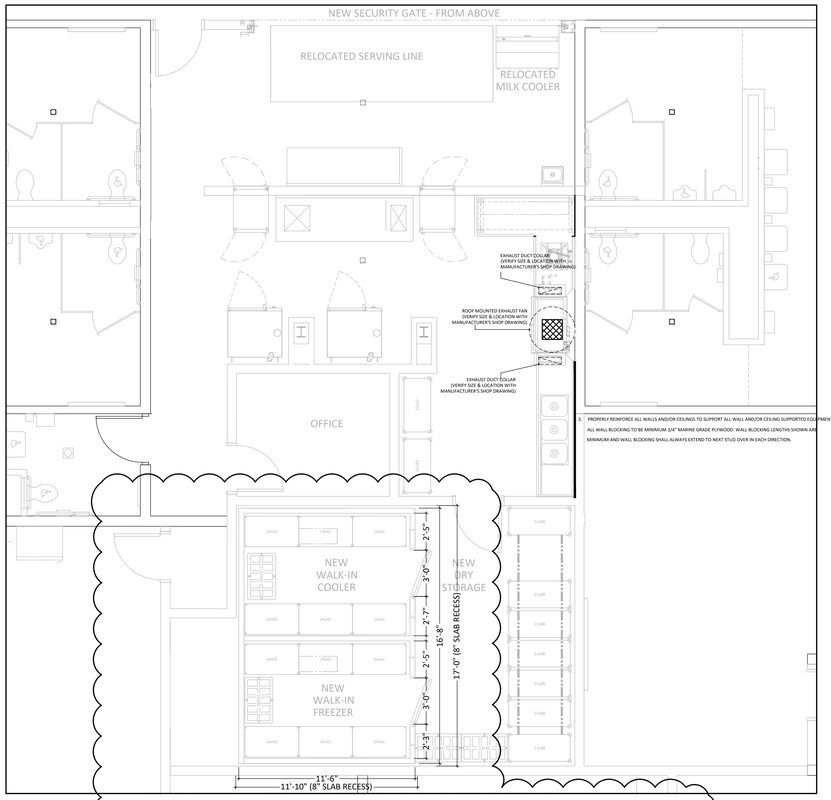
REVISIONS

MARK	DATE	ISSUED FOR
AD03	12/14/22	ADDENDUM 03

DRAWING
FOODSERVICE EQUIPMENT PLAN, SCHEDULE, AND SPOT LOCATIONS

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET
K-101

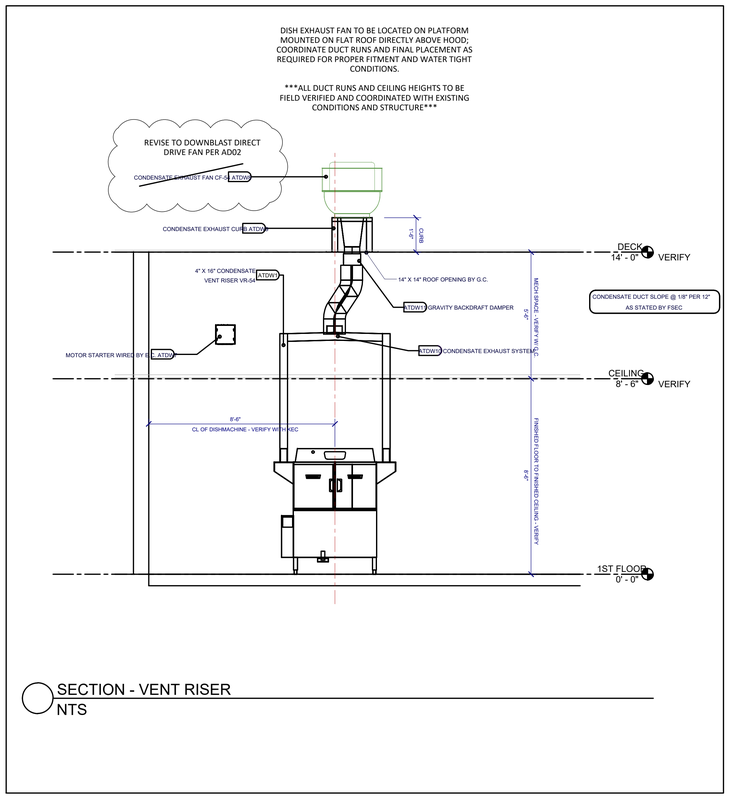


1. PROPERLY REINFORCE ALL WALLS AND/OR CEILINGS TO SUPPORT ALL WALL AND/OR CEILING SUPPORTED EQUIPMENT. ALL WALL BLOCKING TO BE MINIMUM 3/4" MARINE GRADE PLYWOOD. WALL BLOCKING LENGTHS SHOWN ARE MINIMUM AND WALL BLOCKING SHALL ALWAYS EXTEND TO NEXT STUD OVER IN EACH DIRECTION.

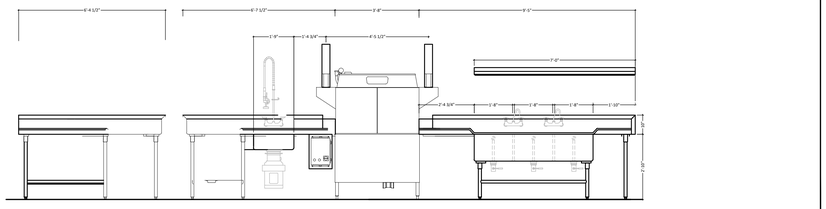
RECESS AND TRANSIT LEVEL ENTIRE WALK-IN COOLER/FREEZER AREA TO A DEPTH OF 8" TO RECEIVE WALK-IN COOLER/FREEZER INSULATED FLOOR PANELS. DEPRESSION TO BE CONSTRUCTED AS TO PROVIDE A LEVEL TRANSITION FROM FLOOR FINISH IN KITCHEN AREA TO THE FLOOR FINISH IN WALK-IN COOLER/FREEZER. (VERIFY REQUIRED DEPRESSION THICKNESS WITH WALK-IN MANUFACTURER'S SHOP DRAWING AND ARCHITECTURAL FLOOR FINISH SCHEDULE)
KEC TO COORDINATE RECESS REQUIREMENTS W/CONTRACTOR; TRANSITION FROM KITCHEN INTO WALK-IN WILL BE SMOOTH THE USE OF RAMPS/SLOPED FLOORS WILL NOT BE ACCEPTABLE.

DISH EXHAUST FAN TO BE LOCATED ON PLATFORM MOUNTED ON FLAT ROOF DIRECTLY ABOVE HOOD; COORDINATE DUCT RUNS AND FINAL PLACEMENT AS REQUIRED FOR PROPER FITMENT AND WATER TIGHT CONDITIONS.

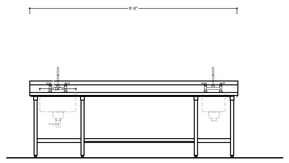
ALL DUCT RUNS AND CEILING HEIGHTS TO BE FIELD VERIFIED AND COORDINATED WITH EXISTING CONDITIONS AND STRUCTURE



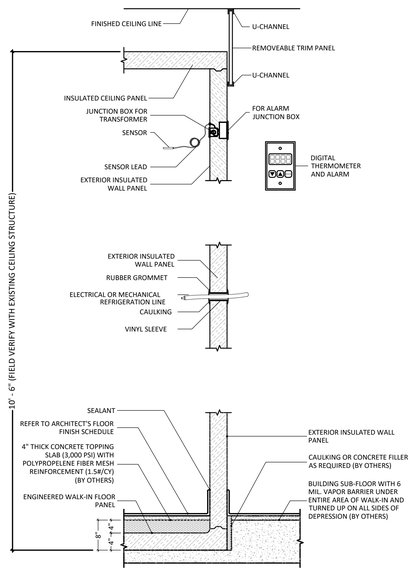
SECTION - VENT RISER
NTS



ITEM #13 & 16 - CLEAN & SOILED DISH TABLE — 1/4"=1'-0" — A



ITEM #23 PREP TABLE — 1/4"=1'-0" — B



NOTES:
1. FLOOR FINISH THICKNESS TO BE VERIFIED TO CREATE A LEVEL TRANSITION BETWEEN KITCHEN AND WALK-IN.

WALK-IN WALL SECTION DETAIL — NOT TO SCALE

FOODSERVICE EQUIPMENT PLAN — SCALE 1/4" = 1'-0" — A

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PROJECT
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DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21—145
DATE 11/14/22
COORDINATED BY
DRAWN BY
CHECKED BY

REVISIONS

MARK	DATE	ISSUED FOR
AD03	12/14/22	ADDENDUM 03

DRAWING
FOODSERVICE EQUIPMENT ELEVATIONS AND EXHAUST DETAILS

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET
K-102

GENERAL NOTES

A. WORK SHALL COMPLY WITH LOCAL, MUNICIPAL, STATE FIRE PROTECTION CODES, THE LATEST NFPA 13 REQUIREMENTS.

B. THE SCOPE OF WORK SPECIFIED HEREIN AND IN THE SPECIFICATIONS SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER - REFER TO THE SCOPE OF WORK FOR EACH TRADE. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND CONSTRUCTION MANAGERS SCOPE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR CLARIFICATION. THE ARCHITECT/ENGINEER'S DECISION SHALL BE FINAL.

C. THE REMODELED AREA SHALL HAVE THE EXISTING SPRINKLER SYSTEM MODIFIED WITH NEW SPRINKLER HEADS DESIGNED TO DELIVER A DENSITY OF .10 GPM OVER THE MOST REMOTE 1500 SQFT. CALCULATIONS SHALL BE IN ACCORDANCE WITH THE LATEST NFPA #13 CHAPTER FOR LIGHT HAZARD.

D. VERIFY IF EXISTING ASBESTOS WILL BE ENCOUNTERED PRIOR TO STARTING ANY WORK. IF ASBESTOS IS PRESENT, THE OWNER WILL PROVIDE FOR THE REMOVAL OF ANY MATERIAL CONTAINING ASBESTOS. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

E. COORDINATE PHASING OF WORK AND PROVIDE TEMPORARY PIPING AND SERVICES AS REQUIRED FOR THE IMPLEMENTATION OF WORK WHILE MAINTAINING SERVICES TO PORTIONS OF BUILDING TO REMAIN OCCUPIED.

F. SCHEDULE WORK TO AVOID DOWNTIME AND INCONVENIENCE TO OWNER. OWNER'S EXISTING FACILITY SHALL REMAIN IN OPERATION AT TIMES. REQUIRED SHUTDOWN OF EXISTING UTILITIES SHALL BE SCHEDULED WITH OWNER'S OPERATING PERSONNEL. NOTIFY OWNER'S REPRESENTATIVE 48 HOURS IN ADVANCE PRIOR TO ANY SHUTDOWN OF EXISTING SYSTEMS.

G. FIRE PROTECTION PIPING ROUTING TO BE FIELD COORDINATED WITH NEW AND EXISTING HVAC DUCTWORK, HVAC PIPING, PLUMBING PIPING AND STRUCTURE TO ENSURE NO CONFLICTS WILL OCCUR DUE TO INTERFERENCE.

H. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR HVAC DIFFUSER LAYOUT AND ELECTRICAL SPECIALTY DEVICES IN CONJUCTION WITH ELECTRICAL LIGHTING, SPRINKLER HEAD LAYOUT, AND CEILING GRID SYSTEM.

I. VISIT SITE PRIOR TO BIDDING TO DETERMINE FIELD CONDITIONS. COORDINATE NEW INSTALLATIONS WITH EXISTING SYSTEMS. EXISTING CONDUIT, PIPING, DUCTWORK, EQUIPMENT, ETC., SHALL BE REWORKED AS REQUIRED TO AVOID CONFLICTS WITH THE INSTALLATION OF THE NEW FIRE PROTECTION SYSTEMS. NO EXTRAS WILL BE ALLOWED AFTER BIDDING FOR ANY REWORK OF EXISTING FIELD CONDITIONS TO RESOLVE CONFLICTS OR NOT FULLY UNDERSTANDING THE SCOPE OF THE WORK REQUIRED.

J. EXISTING INFORMATION IDENTIFIED ON THE CONTRACT DOCUMENTS IS SCHEMATIC ONLY AS AN AID TO THE CONTRACTOR. PROPERLY ADDRESS EXISTING CONDITIONS FOR A COMPLETE AND PROPER INSTALLATION OF NEW SYSTEMS. EXISTING EQUIPMENT NOT IDENTIFIED SHALL BE REPORTED IN WRITTEN FORM FOR REVIEW AS TO WHETHER THE EQUIPMENT SHALL REMAIN AND BE RECONNECTED TO THE NEW SERVICES, BE RELOCATED, BE ABANDONED, ETC.

K. HIDDEN CONDITIONS IDENTIFIED THROUGH THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY REPORTED IN WRITTEN FORM FOR REVIEW AND DIRECTION. FAILURE TO DO SO SHALL MAKE THE CONTRACTOR RESPONSIBLE FOR REQUIRED CHANGES AND COSTS TO CORRECT SAID HIDDEN CONDITION.

L. COORDINATE NEW INSTALLATIONS WITH EXISTING SYSTEMS. EXISTING CONDUIT, PIPING, DUCTWORK, EQUIPMENT, ETC., SHALL BE REWORKED AS REQUIRED TO AVOID CONFLICTS WITH THE INSTALLATION OF THE NEW FIRE PROTECTION SYSTEMS. NO EXTRAS WILL BE ALLOWED AFTER BIDDING FOR ANY REWORK OF EXISTING FIELD CONDITIONS TO RESOLVE CONFLICTS OR NOT FULLY UNDERSTANDING THE SCOPE OF THE WORK REQUIRED.

M. REMOVE EXISTING CEILINGS REQUIRED FOR INSTALLATION OF NEW WORK. REINSTALL CEILING UPON COMPLETION OF WORK - REPLACE DAMAGED CEILING MATERIALS TO MATCH EXISTING. GYPSUM BOARD CEILINGS: PROVIDE CONCEALED CONTROL JOINT AT EDGES ABUTTING EXISTING GYPSUM BOARD CEILINGS. TAPE IN NEW AREAS TO EXISTING FLUSH - PROVIDE TEXTURE TO MATCH EXISTING.

N. REMOVE EXISTING CEILINGS AND LIGHT FIXTURES REQUIRED FOR INSTALLATION OF NEW WORK. REINSTALL CEILING AND LIGHT FIXTURES UPON COMPLETION OF WORK REPLACE DAMAGED CEILING MATERIALS TO MATCH EXISTING.

O. CUT OR CHANNEL INTO EXISTING WALL CONSTRUCTIONS AS REQUIRED FOR INSTALLATION OF NEW PIPING WITHIN EXISTING WALLS. PATCH WALL SURFACES AND FINISH AS REQUIRED TO MATCH EXISTING CONDITIONS.

P. SPRINKLER HEADS IN FINISHED CEILING SPACES SHALL BE CONCEALED TYPE. SPRINKLER HEADS IN UNFINISHED SPACES SHALL BE PENDENT, UPRIGHT, OR SIDEWALL TYPE.

Q. SPRINKLER HEADS LOCATED IN SUSPENDED LAY-IN CEILING SYSTEMS SHALL BE CENTERED IN EACH RESPECTIVE TILE. PROVIDE 6' SWINGS TO PLACE THE SPRINKLER IN THE CENTER OF THE TILE.

R. PIPING SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI OVER THE MAXIMUM OPERATING PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF TWO HOURS.

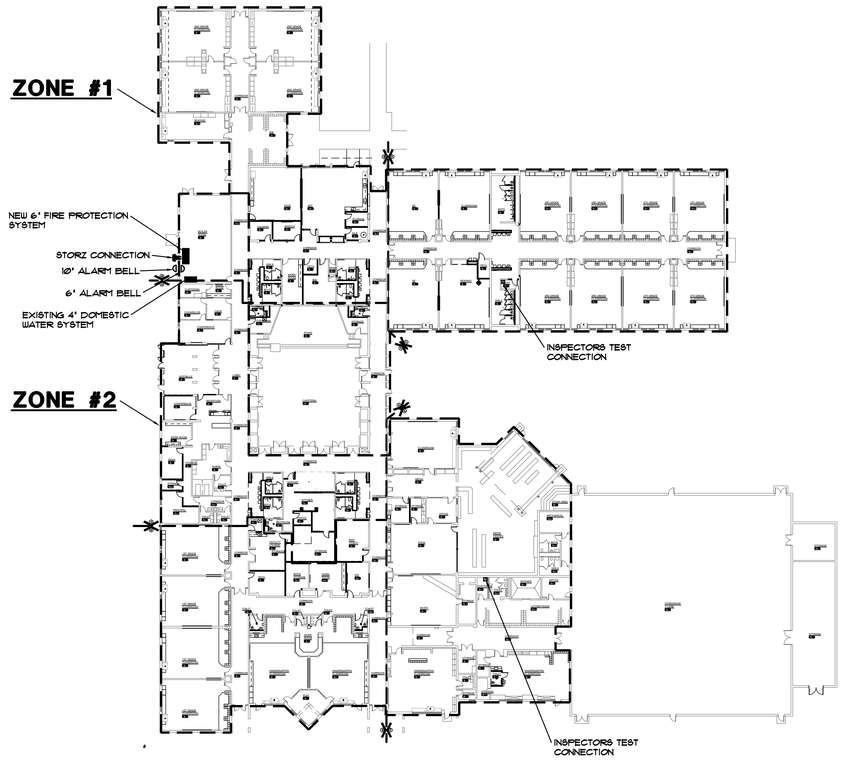
S. PIPES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN ACCORDANCE WITH THE LATEST NFPA #13.

T. PIPING, EQUIPMENT, ETC. SHALL NOT BE SUPPORTED FROM THE BOTTOM CHORD OF ENGINEERED JOISTS WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

U. WET SYSTEM PIPING SHALL BE INSTALLED LEVEL, TO DRAIN BACK TO THE SYSTEM RISER. TRAPPED SECTIONS OF PIPING SHALL HAVE AUXILLIARY DRAIN CONNECTIONS IN ACCORDANCE WITH LATEST NFPA #13.

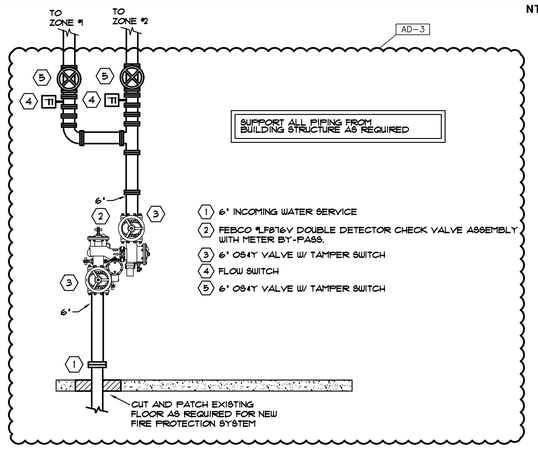
V. PROVIDE EXTENDED COVERAGE HEADS IN CORRIDORS WIDER THAN 15'-0".

FIRE PROTECTION PLAN ZONING PLAN / INSPECTOR TEST CONNECTION



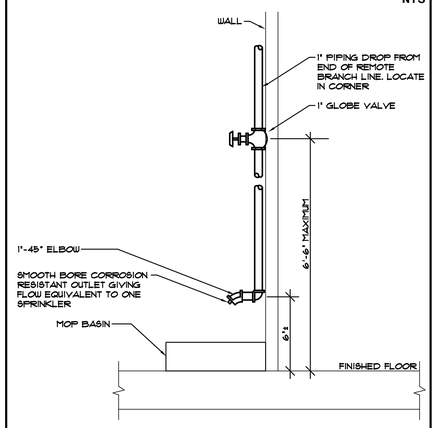
FIRE PROTECTION SERVICE DIAGRAM

NTS



INSPECTOR'S TEST PIPE DETAIL

NTS



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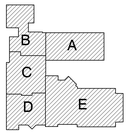
MILLIES ENGINEERING GROUP (219) 924-5400 www.milliesengineeringgroup.com

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MDG
CHECKED BY DJ

REGISTERED DAVID G. JANNEY NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
FIRE PROTECTION DIAGRAMS, NOTES, SYMBOLS, & ABBREVIATIONS

PROJECT
BAILLY ES - RENOVATIONS

SHEET
FP-001

MECHANICAL EQUIPMENT SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	DESCRIPTION	FAN MOTOR DATA								CHILLED WATER COOLING EQUIPMENT/COIL DATA										DX COOLING DATA			HOT WATER HEATING EQUIPMENT/COIL DATA							ELECTRICAL DATA									UNITS CONTROLLED BY	EQUIPMENT WEIGHT	REMARKS
				CFM	MIN OAI CFM HIGH	MIN OAI CFM LOW	TSP	ESP	BHP	HP	RPM	MBH	SHC	GPM	EDB	EWB	LDB	LWB	EWT	LWT	MAX WPD	CAT	MBH	SHC	CAT	MBH (OUT)	GPM	EAT	LAT	EWT	LWT	MAX WPD	LOAD HP	MCA	FLA	AMPS	STARTER: MC.	STARTER: EC.	MOCP	VOLT	PHASE	HZ.			
C-1	TRANE	RAUC	GRADE MOUNTED AIR COOLED CHILLER	-	-	-	-	-	-	-	-	1129	-	264	-	-	-	-	55	45	15	-	-	-	-	-	-	-	-	-	-	-	-	484	-	-	500	208	3	60	X	-	FMS	5539	NOTE 1
UV-1	ENGINEERED AIR	RUV-800	AD-3 VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	800	50	-	-	0.45	-	1/2	-	29.9	20.4	6	80.0	67.0	56.3	55.0	44	54	15	-	-	-	-	45.9	4.6	44	93	160	140	15	1/2	-	-	-	-	120	1	60	X	-	FMS	535	NOTE 2
UV-2	ENGINEERED AIR	RUV-1200	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1200	480	120	-	0.45	-	3/4	-	44.2	31.1	9	80.0	67.0	56.0	55.3	44	54	15	-	-	-	-	64.6	6.6	40	89.9	160	140	15	3/4	-	-	-	-	120	1	60	X	-	FMS	590	NOTE 2
UV-3	ENGINEERED AIR	RUV-1400	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1400	530	140	-	0.45	-	3/4	-	52.3	36.5	10	80.0	67.0	55.8	55.0	44	54	15	-	-	-	-	79.9	8	40	92.8	160	140	15	3/4	-	-	-	-	120	1	60	X	-	FMS	645	NOTE 2
UV-4	ENGINEERED AIR	RUV-1600	AD-3 VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1600	425	160	-	0.45	-	1	-	62.8	43	12	80	67.0	55.0	54.0	44	54	15	-	-	-	-	107	10.8	40	94.9	160	140	15	1	-	-	-	-	120	1	60	X	-	FMS	700	NOTE 2
FC-1	TRANE	FCCB010	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	150	-	-	0.4	-	-	1/8	-	3.5	2.81	0.83	75.6	63.3	58.0	55.4	44	54	5	-	-	-	-	4	0.17	69.8	94.3	160	140	5	1/8	-	-	-	15	208	1	60	X	-	FMS	81	NOTE 3
FC-2	TRANE	FCCB010	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	220	35	-	0.4	-	-	1/6	-	3.5	3.4	0.46	77.5	64.7	62.7	59.6	45	55	5	-	-	-	-	5	0.17	57.9	78.9	160	140	5	1/6	-	-	-	15	208	1	60	X	-	FMS	81	NOTE 3
FC-3	TRANE	FCCB060	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	520	190	-	0.4	-	-	1/4	-	19.6	13.8	6.26	80.0	66.8	55.6	54.4	45	55	5	-	-	-	-	19.5	0.79	42	76.6	160	140	5	1/4	-	-	-	15	208	1	60	X	-	FMS	139	NOTE 3
FC-4	TRANE	FCCB060	AD-1 HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	540	25	-	0.4	-	-	1/4	-	14.5	12.3	3.96	76.3	63.3	55.4	54.1	45	55	5	-	-	-	-	6.9	0.19	66.5	78.3	160	140	5	1/4	-	-	-	15	208	1	60	X	-	FMS	139	NOTE 3
FC-5	TRANE	FCCB060	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	630	60	-	0.4	-	-	1/4	-	18	15.9	5.71	76.8	63.0	55.7	54.0	45	55	5	-	-	-	-	19.1	1.04	63.5	89	160	140	5	1/4	-	-	-	15	208	1	60	X	-	FMS	139	NOTE 3
FC-6	TRANE	FCCB060	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	600	185	-	0.4	-	-	1/4	-	17.5	14.8	5.49	78.1	63.9	55.4	54.0	45	55	5	-	-	-	-	16.7	0.64	56.9	82.6	160	140	5	1/4	-	-	-	15	208	1	60	X	-	FMS	139	NOTE 3
GEF-1	TWIN CITY	DCRD-140BE	ROOF MTD GENERAL EXHAUST FAN- CONSTANT EXH REF EXH SYSTEM (BOILER ROOM B-106)	970	-	-	0.3	-	-	3/4	900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	-	-	-	15	120	1	60	X	-	CONTINUOUS	75	NOTE 4
GEF-2	TWIN CITY	DCRD-120BE	ROOF MTD GENERAL EXHAUST FAN - REFRIGERANT EXH SYSTEM (BOILER ROOM B-106)	650	-	-	0.3	-	-	1/2	1018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	-	-	-	15	120	1	60	X	-	REFR CON'L PNL	75	NOTE 4
GEF-3	TWIN CITY	DCRD-120BE	ROOF MTD GENERAL EXHAUST FAN (KILN ROOM B-118B)	400	-	-	0.3	-	-	1/2	905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	-	-	-	15	120	1	60	X	-	REV ACT'G T-STAT	75	NOTE 4
GEF-4	TWIN CITY	DCRU-120BE	ROOF MTD GENERAL EXHAUST FAN (KITCHEN C-135)	600	-	-	0.65	-	-	1/2	1336	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	-	-	-	15	120	1	60	X	-	DISHW'R SWITCH	75	NOTE 4
TEF-1	TWIN CITY	DCRD-140BE	ROOF MOUNTED TOILET EXHAUST FAN	900	-	-	0.6	-	-	3/4	1132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-2	TWIN CITY	DCRD-140BE	ROOF MOUNTED TOILET EXHAUST FAN	900	-	-	0.6	-	-	3/4	1132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-3	TWIN CITY	DCRD-140BE	ROOF MOUNTED TOILET EXHAUST FAN	900	-	-	0.6	-	-	3/4	1132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-4	TWIN CITY	DCRD-140BE	ROOF MOUNTED TOILET EXHAUST FAN	900	-	-	0.6	-	-	3/4	1132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-5	TWIN CITY	DCRD-120BE	ROOF MOUNTED TOILET EXHAUST FAN	700	-	-	0.6	-	-	1/2	1355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-6	TWIN CITY	DCRD-120BE	ROOF MOUNTED TOILET EXHAUST FAN	600	-	-	0.6	-	-	1/2	1315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	-	-	-	15	120	1	60	X	-	FMS	75	NOTE 4
TEF-7	TWIN CITY	VC-085	ROOF MOUNTED TOILET EXHAUST FAN	100	-	-	0.3	-	-	1/6	1304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/6	-	-	-	15	120	1	60	X	-	FMS	35	NOTE 4
CH-1	VULCAN	F-03	FLOOR MOUNTED HOT WATER HEATING CABINET HEATER	335	-	-	-	-	-	1/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.5	2	60	100	160	140	5	-	-	-	0.8	15	120	1	60	X	-	T-STAT	75	NOTE 5
CH-2	VULCAN	RC-08	AD-2 RECESSED CEILING MOUNTED HOT WATER HEATING CABINET HEATER	860	-	-	-	-	-	(2)1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46.1	4.7	60	100	160	140	5	-	-	-	2.2	15	120	1	60	X	-	T-STAT	185	NOTE 6
CH-3	VULCAN	F-12	FLOOR MOUNTED HOT WATER HEATING CABINET HEATER	1230	-	-	-	-	-	(2)1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	5.4	60	100	160	140	5	-	-	-	2.8	15	120	1	60	X	-	T-STAT	136	NOTE 5
AC-1/CU-1	MITSUBISHI	TPKA0A024/TRUYA024	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	18.5	95	-	-	-	-	-	-	-	19	-	-	26	208	1	60	X	-	T-STAT	46/151	NOTE 7
AC-2/CU-2	MITSUBISHI	TPKA0A024/TRUYA024	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	18.5	95	-	-	-	-	-	-	-	19	-	-	26	208	1	60	X	-	T-STAT	46/151	NOTE 7
AC-3/CU-3	MITSUBISHI	TPKA0A024/TRUYA024	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	18.5	95	-	-	-	-	-	-	-	19	-	-	26	208	1	60	X	-	T-STAT	46/151	NOTE 7
AC-4/CU-4	MITSUBISHI	TPKA0A024/TRUYA024	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	18.5	95	-	-	-	-	-	-	-	19	-	-	26	208	1	60	X	-	T-STAT	46/151	NOTE 7
AC-5/CU-5	MITSUBISHI	TPKA0A012/TRUYA012	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	9.7	95	-	-	-	-	-	-	-	11	-	-	28	208	1	60	X	-	T-STAT	29/92	NOTE 7

NOTES:

1. PROVIDE WITH:
   - SOUND ATTENUATION KIT
   - HEAT TRACE ON EXTERIOR CHW PIPING

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE WITH:
   - INTEGRATED ENTHALPY ECONOMIZER
   - DISCONNECT SWITCH
   - FACE/BYPASS DAMPER
   - FILTERS
   - PROVIDE 10" WIDE SIDE MOUNTED PIPE CHASE WITH ACCESS DOOR
   - PROVIDE 10" DEEP FALSEBACK FOR UNITS WITH DUCTED OUTSIDE AIR CONNECTIONS

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE WITH:
   - VIBRATION ISOLATION HANGERS
   - INTEGRAL S/A & R/A GRILLE
   - DISCONNECT SWITCH
   - CONDENSATE PUMP
   - UNIT CONFIGURATION:
     - ** FRONT S/A DUCT COLLAR
     - ** BACK OAI DUCT COLLAR

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. PROVIDE WITH:
   - DISCONNECT SWITCH
   - ECM MOTOR WITH POTENTIOMETER SPEED CONTROLLER
   - MOTORIZED DAMPER
   - BIRD SCREEN
   - ROOF CURB

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. PROVIDE WITH:
   - DISCONNECT SWITCH
   - INTEGRAL THERMOSTAT

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
6. PROVIDE WITH:
   - DISCONNECT SWITCH
   - VIBRATION ISOLATION HANGERS
   - INTEGRAL THERMOSTAT

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. PROVIDE INDOOR AC WITH:
   - WIRED THERMOSTAT
   - MINIMUM 30" CONDENSATE LIFT (CEILING CASSETTE ONLY)
   - CONDENSATE PUMP (WALL MOUNTED UNITS ONLY)
   - VIBRATION ISOLATION HANGERS

   PROVIDE OUTDOOR CU WITH:
   - LOW AMBIENT CONTROLS FOR 100% COOLING CAPACITY DOWN TO -10°F
   - WIND BAFFLES
   - HAIL GUARDS
   - 18" HIGH EQUIPMENT SUPPORT RAILS WITH SPRING ISOLATORS

   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AD-1

PUMP SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	DESCRIPTION	GPM	HEAD (FT.)	PUMP MOTOR DATA HP	RPM	VOLT	PHASE	HZ.	STARTER: MC.	STARTER: EC.	SUCTION/ DISCHARGE SIZE	REMARKS
CP-1	BELL & GOSSETT	SERIES 80; 4x4x7B	SUSPENDED INLINE CHILLED WATER RECIRCULATION PUMP (C-1)	264	35	5	1750	208	3	60	X	-	4" / 4"	-
CWP-1	BELL & GOSSETT	SERIES 1510; 2EB	BASE MOUNTED CHILLED WATER DISTRIBUTION PUMP	132	80	7 1/2	1750	208	3	60	X	-	3" / 2"	CHILLED WATER PRIMARY PUMPS W/VFD OPERATING IN PARALLEL, 264 GPM AT 80 FT. HD. WITH DUAL POWER FEEDERS
CWP-2	BELL & GOSSETT	SERIES 1510; 2EB	BASE MOUNTED CHILLED WATER DISTRIBUTION PUMP	132	80	7 1/2	1750	208	3	60	X	-	3" / 2"	

INTAKE/RELIEF HOOD SCHEDULE

TAG	MANUFACTURER	MODEL #	THROAT SIZE	DESCRIPTION	HOOD LOCATION	REMARKS
IH-1	ACME	*TIV	SEE PLANS	OUTSIDE AIR INTAKE HOOD FOR FC-2, FC-3, FC-4	SEE PLANS	PROVIDE W/ BIRDSCREEN, AND 18" HIGH ROOF CURB
RH-1	ACME	*TIV	SEE PLANS	AD-1 RELIEF AIR HOOD FOR CLASSROOM LV'S	SEE PLANS	PROVIDE W/ BIRDSCREEN, BAROMETRIC RELIEF DAMPER AND 18" HIGH ROOF CURB.

GRILLE, REGISTER & DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	DESCRIPTION	AIR PATTERN	MOUNTING	SIZE	TYPE OF CONTROL	REMARKS
A3	NAILOR	6500-O	SUPPLY CEILING DIFFUSER	3-WAY	2' X 2' LAY-IN PANEL	SEE PLANS	O.B.D.	-
A4	NAILOR	6500-O	SUPPLY CEILING DIFFUSER	4-WAY	2' X 2' LAY-IN PANEL	SEE PLANS	O.B.D.	-
A9	NAILOR	6500-O	SUPPLY CEILING DIFFUSER	4-WAY	2' X 1' LAY-IN PANEL	SEE PLANS	O.B.D.	-
E1	NAILOR	61DH-O	SUPPLY CEILING REGISTER	DOUBLE DEFLECTION	2' X 1' LAY-IN PANEL	SEE PLANS	O.B.D.	HORIZONTAL FRONT BARS, VERTICAL BACK BARS
E2	NAILOR	61DH-O	SUPPLY CEILING REGISTER	DOUBLE DEFLECTION	SURFACE MOUNTED	SEE PLANS	O.B.D.	HORIZONTAL FRONT BARS, VERTICAL BACK BARS
R1	NAILOR	6145H-O	RETURN/EXHAUST REGISTER	LOUVERED GRILLE	LAY-IN PANEL	SEE PLANS	O.B.D.	-
R2	NAILOR	6145H-O	RETURN/EXHAUST REGISTER	LOUVERED GRILLE	SURFACE MOUNTED	SEE PLANS	-	-
T1	NAILOR	6145H	RETURN/EXHAUST/T.A. GRILLE	LOUVERED GRILLE	LAY-IN PANEL	SEE PLANS	-	-
T2	NAILOR	6145H	RETURN/EXHAUST/T.A. GRILLE	LOUVERED GRILLE	SURFACE MOUNTED	SEE PLANS	-	-

* ALL DIFFUSERS AND REGISTERS SHALL HAVE A WHITE FINISH UNLESS OTHERWISE NOTED

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN
MILLIES ENGINEERING GROUP
(219) 934-8400
www.milliesengineeringgroup.com

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY GL,BAK
CHECKED BY DJ

REGISTERED DAVID G. JANNEY NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	11/30/22	ADDENDUM NO. 1
AD-2	12/06/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
MECHANICAL SCHEDULE

PROJECT
BAILLY ES - RENOVATIONS

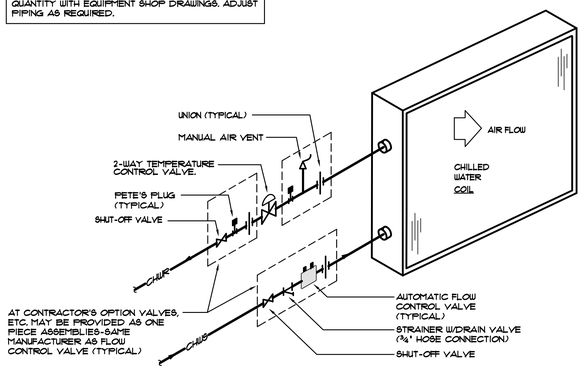
SHEET
M-501

CHILLED WATER COIL PIPING DIAGRAM

SCHEMATIC ONLY

TYPICAL PIPING DIAGRAM FOR COOLING COILS @ UNIT VENTILATORS W/ 2-WAY CONTROL VALVE.

NOTE:
VERIFY EXACT COIL CONNECTION LOCATION AND QUANTITY WITH EQUIPMENT SHOP DRAWINGS. ADJUST PIPING AS REQUIRED.

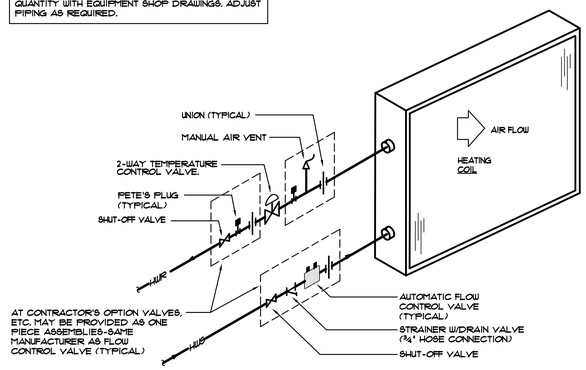


HOT WATER COIL PIPING DIAGRAM

SCHEMATIC ONLY

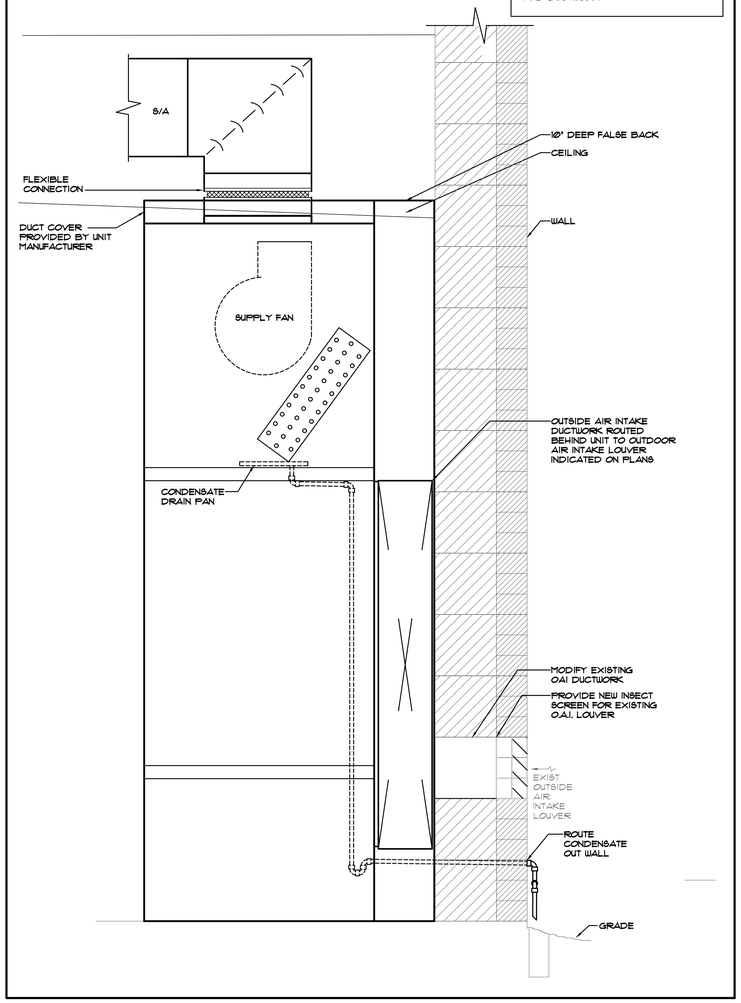
TYPICAL PIPING DIAGRAM FOR HEATING COILS @ UNIT VENTILATORS W/ 2-WAY CONTROL VALVE.

NOTE:
VERIFY EXACT COIL CONNECTION LOCATION AND QUANTITY WITH EQUIPMENT SHOP DRAWINGS. ADJUST PIPING AS REQUIRED.



TYPICAL UNIT VENTILATOR OFFSET LOUVER DETAIL N.T.S.

NOTES:
1. COORDINATE WITH ACTUAL FIELD CONDITIONS PRIOR TO INSTALLATION.
2. SEE MECHANICAL PLANS FOR SIZES AND DIMENSIONS OF EQUIPMENT AND DUCTWORK.



CHILLED WATER COIL PIPING DIAGRAM

SCHEMATIC ONLY

TYPICAL PIPING DIAGRAM FOR COOLING COILS @ UNIT VENTILATORS W/ 3-WAY CONTROL VALVE AS NOTED ON PLANS.

NOTE:
VERIFY EXACT COIL CONNECTION LOCATION AND QUANTITY WITH EQUIPMENT SHOP DRAWINGS. ADJUST PIPING AS REQUIRED.

HOT WATER COIL PIPING DIAGRAM

SCHEMATIC ONLY

TYPICAL PIPING DIAGRAM FOR HEATING COILS @ UNIT VENTILATORS W/ 3-WAY CONTROL VALVE AS NOTED ON PLANS.

NOTE:
VERIFY EXACT COIL CONNECTION LOCATION AND QUANTITY WITH EQUIPMENT SHOP DRAWINGS. ADJUST PIPING AS REQUIRED.

FAN COIL CONNECTION DETAIL (N.T.S.)

NOTES:
- DETAIL TYPICAL FOR ALL FAN COIL UNITS
- VERIFY ALL SIZES ON PLANS AND WITH ACTUAL EQUIPMENT PROVIDED.

AD-3

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PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY KS
CHECKED BY DJ

DAVID G. JANNEY REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
MECHANICAL DIAGRAMS & DETAILS

PROJECT
BAILLY ES - RENOVATIONS

SHEET
M-602

KP-1

TOTAL KW: 101.2 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 400
FEEDER: 4 #500MCM & 1 #3 GRD. - 3"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
CONV RECEPT	20	1	800			1	2	1200			20	1	SERVING CABINET
C-122 RECEPT	20	1		400		3	4		1200		20	1	
C-122 RECEPT	20	1			600	5	6			1200	20	1	MILK COOLER
CONV RECEPT	20	1	800			7	8	800			20	1	PREP TABLE
CONV RECEPT	20	1		800		9	10		800		20	1	CONV RECEPT
CONV RECEPT	20	1			800	11	12			1600	30		CABINET
			12000			13	14	1600				2	
DISHWASHER	150	3		12000		15	16		1600		30		CABINET
					12000	17	18			1600		2	
			1200			19	20	4100			50		COMBI
COOLER	20	3		1200		21	22		4100			2	
					1200	23	24			4100	50		COMBI
			1200			25	26	4100				2	
FREEZER	20	3		1200		27	28		4100		50		COMBI
					1200	29	30			4100		2	
			1200			31	32	4100			50		COMBI
FREEZER	20	3		1200		33	34		4100			2	
					1200	35	36				20	1	SPARE
HAND DRYER - C-123	20	1	1200			37	38	1000					
OH DOOR	25			1600		39	40		1000		20	3	DISPOSAL
SPACE						41	42			1000			
SPACE						43	44				20	1	SPARE
SPACE						45	46				20	1	SPARE
SPACE						47	48				20	1	SPARE
SPACE						49	50				20	1	SPARE
SPACE						51	52				20	1	SPARE
SPACE						53	54				20	1	SPARE
			18400	18400	11000			16300	16300	13600			

A= 35,300
B= 35,300
C= 30,600
TOTAL= 101,200

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

PP-1

TOTAL KW: 57.4 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
RM 102 RECEPTS	20	1	800			1	2	800			20	1	RM A-103 RECEPTS
RM 102 RECEPTS	20	1		900		3	4		900		20	1	RM A-103 RECEPTS
RM 102 RECEPTS	20	1			1200	5	6			1200	20	1	RM A-103 RECEPTS
RM 104 RECEPTS	20	1	800			7	8	800			20	1	RM A-105 RECEPTS
RM 104 RECEPTS	20	1		900		9	10		900		20	1	RM A-105 RECEPTS
RM 104 RECEPTS	20	1			1200	11	12			1200	20	1	RM A-105 RECEPTS
RM A-111 RECEPTS	20	1	800			13	14	800			20	1	RM A-110 RECEPTS
RM A-111 RECEPTS	20	1		900		15	16		900		20	1	RM A-110 RECEPTS
RM A-111 RECEPTS	20	1			1200	17	18			1200	20	1	RM A-110 RECEPTS
RM A-113 RECEPTS	20	1	800			19	20	800			20	1	RM A-112 RECEPTS
RM A-113 RECEPTS	20	1		900		21	22		900		20	1	RM A-112 RECEPTS
RM A-113 RECEPTS	20	1			1200	23	24			1200	20	1	RM A-112 RECEPTS
RM A-115 RECEPTS	20	1	800			25	26	800			20	1	RM A-114 RECEPTS
RM A-115 RECEPTS	20	1		900		27	28		900		20	1	RM A-114 RECEPTS
RM A-115 RECEPTS	20	1			1200	29	30			1200	20	1	RM A-114 RECEPTS
RM A-117 RECEPTS	20	1	800			31	32	800			20	1	RM A-116 RECEPTS
RM A-117 RECEPTS	20	1		900		33	34		900		20	1	RM A-116 RECEPTS
RM A-117 RECEPTS	20	1			1200	35	36			1200	20	1	RM A-116 RECEPTS
UV-2	20	1	1200			37	38	800			20	1	EWC
UV-2	20	1		1200		39	40		800		20	1	EWC
UV-2	20	1			1200	41	42			1200	20	1	EWC
UV-2	20	1	1200			43	44	1200			20	1	UV-2
UV-2	20	1		1200		45	46		1200		20	1	UV-2
UV-2	20	1			1200	47	48			1200	20	1	UV-2
AC-2/CU-2	30		1976			49	50	1200			20	1	UV-2
		2		1976		51	52		1200		20	1	UV-2
TEF-5	20	1			1176	53	54						SPACE
TEF-6	20	1	1176			55	56						SPACE
CH-2	20	1		264		57	58						SPACE
SPARE	20	1				59	60						SPACE
SPARE	20	1				61	62						SPACE
SPARE	20	1				63	64						SPACE
SPARE	20	1				65	66						SPACE
SPARE	20	1				67	68						SPACE
SPARE	20	1				69	70						SPACE
SPARE	20	1				71	72						SPACE
			10352	10040	10776			8000	8600	9600			

A= 18,352
B= 18,640
C= 20,376
TOTAL= 57,368

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

PP-2

TOTAL KW: 53.5 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
B-123/125 RECEPTS	20	1	1200			1	2	1200			20	1	B-124/126 RECEPTS
UV-2	20	1		1200		3	4		1200		20	1	UV-2
UV-2	20	1			1200	5	6			1200	20	1	UV-2
B-112 RECEPTS	20	1	800			7	8	1200			20	1	UV-1
B-112 RECEPTS	20	1		400		9	10		800		20	1	B-119 RECEPTS
B-112 RECEPTS	20	1			800	11	12			1200	20	1	B-119 RECEPTS
B-112 RECEPTS	20	1	800			13	14	1000			20	1	B-119 RECEPTS
B-112 RECEPTS	20	1		1000		15	16		1400		20	1	B-115 RECEPTS
UV-3	20	1			1200	17	18			1200	20	1	UV-2
B-113/114 RECEPTS	20	1	800			19	20	800			20	1	B-104 RECEPTS
KILN	50			4100		21	22		1200		20		COPIER
		2			4100	23	24			1200		2	
B-105 RECEPTS			1100			25	26	600			20	1	B-104 RECEPTS
B-105 RECEPTS				600		27	28		800		20	1	EWC
FC-1	20				800	29	30			800	20	1	EWC
		2	800			31	32	800			20		FC-1
EWC	20	1		800		33	34		800			2	
EWC	20	1			800	35	36			1656	25	1	GEF-1
B-121 RECEPTS	20	1	1000			37	38	1176			20	1	GEF-2
FC-3	20			264		39	40		1656		25	1	TEF-1
		2			264	41	42			1656	25	1	TEF-2
SPACE						43	44	1176			20	1	GEF-3
SPACE						45	46		1976		30		CU-1
SPACE						47	48			1976		2	
SPACE						49	50	792			20	1	CH-2
SPACE						51	52				20	1	SPARE
SPACE						53	54				20	1	SPARE
			6500	8364	9164			8744	9832	10888			

A= 15,244
B= 18,196
C= 20,092
TOTAL= 53,432

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

PP-3

TOTAL KW: 27.0 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD. - 1 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
TOILET RECEPT	20	1	200			1	2	800			20	1	EWC
C-142 RECEPT	20	1		800		3	4		800		20	1	EWC
C-142 RECEPT	20	1			1200	5	6			700	20	1	C-108 RECEPTS
C-143 RECEPTS	20	1	1200			7	8	800			20	1	C-108 RECEPTS
C-109 RECEPTS	20	1		500		9	10		700		20	1	C-112 RECEPTS
C-105 RECEPTS	20	1			800	11	12			800	20	1	SPARE
EWC	20	1	800			13	14				20	1	SPARE
EWC	20	1		800		15	16		800		20	1	C-112 RECEPTS
ADA LIFT	20	1			1440	17	18			1200	20	1	UV-1
HAND DRYER - C134	20	1	1200			19	20	600			20	1	STOR RECEPTS
HAND DRYER - C137	20	1		1200		21	22			1200	20	1	SPARE
ADA DOOR OPERATOR	20	1			1200	23	24		600		20	1	C-106 RECEPTS
SPARE	20	1				25	26	1200			20		COPIER
SPARE	20	1				27	28		1200			2	
SPARE	20	1				29	30			800	20	1	C-104 RECEPTS
CH-2	20	1	1056			31	32	264			20		FC-1
FC-6	20			348		33	34		264			2	
		2			348	35	36			264	20		FC-1
FC-5	20		348			37	38	264				2	
		2		348		39	40		348		20		FC-3
C-104 RECEPTS	20	1			600	41	42			348		2	
			4824	3996	6288			3928	4112	3912			

A= 8,132
B= 8,108
C= 10,200
TOTAL= 27,240

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

PP-4

TOTAL KW: 42.3 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
D-119 RECEPTS	20	1	800			1	2	800			20	1	D-105 RECEPTS
D-119 RECEPTS	20	1		800		3	4		900		20	1	D-105 RECEPTS
D-119 RECEPTS	20	1			900	5	6			1200	20	1	D-105 RECEPTS
D-119 RECEPTS	20	1	1200			7	8	800			20	1	D-104 RECEPTS
UV-3	20	1		1200		9	10		400		20	1	D-104 RECEPTS
COPIER	20				1200	11	12			800	20	1	D-104 RECEPTS
		2	1200			13	14	800			20	1	D-104 RECEPTS
TOILET RECEPTS	20	1		600		15	16		800		20	1	D-103 RECEPTS
D-112 RECEPTS	20	1			1000	17	18			900	20	1	D-103 RECEPTS
D-107 RECEPTS	20	1	800			19	20	1200			20	1	D-103 RECEPTS
FRIDGE	20	1		800		21	22		800		20	1	D-102 RECEPTS
D-107 RECEPTS	20	1			1000	23	24			900	20	1	D-102 RECEPTS
D-107 RECEPTS	20	1	700			25	26	1200			20	1	D-102 RECEPTS
D-112 RECEPTS	20	1		1000		27	28		800		20	1	D-124 RECEPTS
D-114 RECEPTS	20	1			400	29	30			900	20	1	D-124 RECEPTS
D-114 RECEPTS	20	1	700			31	32	1200			20	1	D-124 RECEPTS
D-114 RECEPTS	20	1		400		33	34		1200		20	1	UV-2
D-114 RECEPTS	20	1			600	35	36			1200	20	1	UV-2
D-113 RECEPTS	20	1	1000			37	38	1200			20	1	UV-2
D-113 RECEPTS	20	1		800		39	40		1200		20	1	UV-2
D-112 RECEPTS	20	1			600	41	42			192	20	1	CH-1
UV-3	20	1	1200			43	44				20	1	SPARE
FC-3	20			1000		45	46				20	1	SPARE
		2			1000	47	48				20	1	SPARE
FC-2	20		1000			49	50				20	1	SPARE
		2		1000		51	52				20	1	SPARE
SPACE						53	54				20	1	SPARE
			8600	7600	6700			7200	6100	6032			

A= 15,800
B= 13,700
C= 12,792
TOTAL= 42,292

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

PP-5

TOTAL KW: 42.0 | ENCLOSURE: NEMA-1 | PHASE: 3φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: **** AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A*	LOAD B*	LOAD C*	CCT. NO.		LOAD A*	LOAD B*	LOAD C*	C/B TRIP	C/B POLE	LOAD DESCRIPTION
STOR RECEPTS	20	1	1000			1	2	800			20	1	E-121 RECEPTS
E-125 RECEPTS	20	1		600		3	4		900		20	1	E-121 RECEPTS
E-122 RECEPTS	20	1			800	5	6			800	20	1	E-121 RECEPTS
E-122 RECEPTS	20	1	1400			7	8	1200			20	1	E-121 RECEPTS
E-122 RECEPTS	20	1		800		9	10		800		20	1	E-128 RECEPTS
E-122 RECEPTS	20	1			1200	11	12			1200	20	1	E-128 RECEPTS
			1600			13	14	800			20	1	E-123 RECEPTS
ROBOTICS	30	3		1600		15	16		800		20	1	E-120 RECEPTS
					1600	17	18			900	20	1	E-120 RECEPTS
E-128 RECEPTS	20	1	400			19	20	1200			20	1	E-120 RECEPTS
E-128 RECEPTS	20	1		400		21	22		1200		20	1	UV-4
E-122 RECEPTS	20	1			1200	23	24			1176	20	1	GEF-4
E-122 RECEPTS	20	1	1200			25	26	1976			30		CU-5
E-122 RECEPTS	20	1		1200		27	28		1976			2	
TEF-3	20	1			1656	29	30			1976	30		CU-4
TEF-4	20	1	1656			31	32	1976				2	
TEF-7	20	1		528		33	34		1144		30		CU-3
UV-5					1176	35	36			1144		2	
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			7256	5128	7632			7952	6820	7196			

A= 15,208
B= 11,948
C= 14,828
TOTAL= 41,984

NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION

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www.milliesengineeringgroup.com

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

DAVID G. JANNEY REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
ELECTRICAL SCHEDULES

PROJECT
BAILLY ES - RENOVATIONS

SHEET
E-603

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

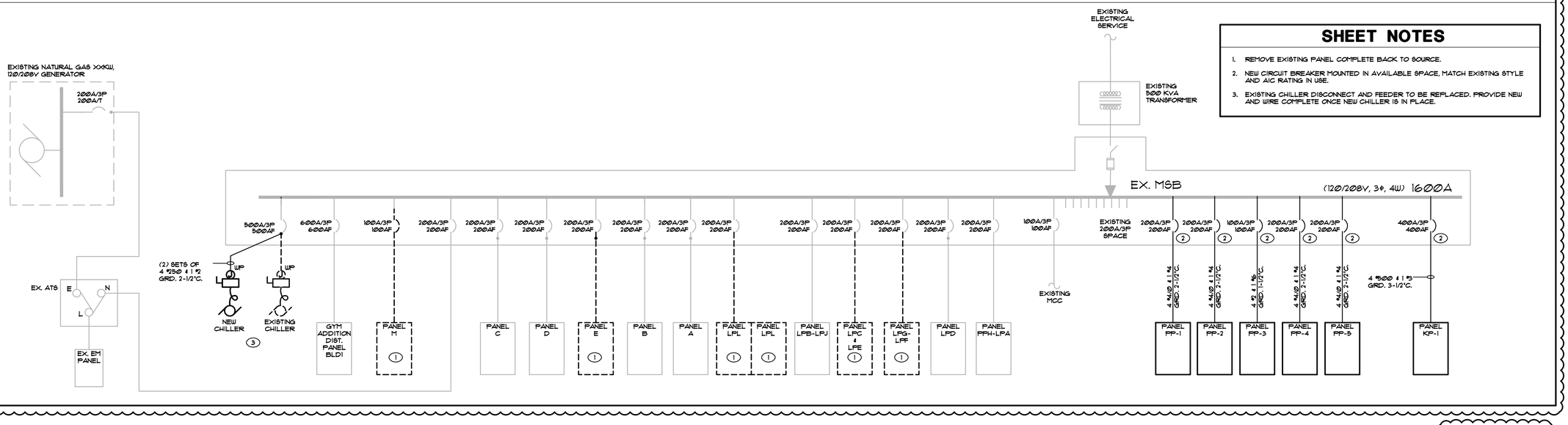
TAG	DESCRIPTION	LOAD				MOCP	VOLT	PHASE	PANEL	CKT. NO.	FUSED SWITCH	FEEDER		STARTER BY:		LOCATION	REMARKS
		WATTS	HP	MCA	FLA	AMPS					C/B	CABLE	C	MC.	EC.		
C-1	GRADE MOUNTED AIR COOLED CHILLER	174163	-	484	-	-	500	208	3	MSB	-	500	2 SETS OF 4#250 & 1#2G	2.5"	X	-	-	-
UV-1	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1176	1/2	-	-	-	-	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
UV-2	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1176	1/2	-	-	-	-	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
UV-3	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1656	3/4	-	-	-	-	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	25	2#10 & 1#10G	3/4"	X	-	-	-
UV-4	VERTICAL UNIT VENTILATOR - 4 PIPE HOT/CHILLED WATER	1656	3/4	-	-	-	-	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	25	2#10 & 1#10G	3/4"	X	-	-	-
FC-1	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	528	1/8	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
FC-2	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	528	1/6	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
FC-3	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	697	1/4	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
FC-4	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	697	1/4	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
FC-5	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	697	1/4	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
FC-6	HORIZONTAL CONCEALED FAN COIL UNIT - 4 PIPE HOT/CHILLED WATER	697	1/4	-	-	-	15	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	3#12 & 1#12G	3/4"	X	-	-	-
GEF-1	ROOF MTD GENERAL EXHAUST FAN- CONSTANT EXH REF EXH SYSTEM (BOILER ROOM B-106)	1656	3/4	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
GEF-2	ROOF MTD GENERAL EXHAUST FAN - REFRIGERANT EXH SYSTEM (BOILER ROOM B-106)	1176	1/2	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
GEF-3	ROOF MTD GENERAL EXHAUST FAN (KILN ROOM B-118B)	1176	1/2	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
GEF-4	ROOF MTD GENERAL EXHAUST FAN (KITCHEN C-135)	1176	1/2	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-1	ROOF MOUNTED TOILET EXHAUST FAN	1656	3/4	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-2	ROOF MOUNTED TOILET EXHAUST FAN	1656	3/4	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-3	ROOF MOUNTED TOILET EXHAUST FAN	1656	3/4	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-4	ROOF MOUNTED TOILET EXHAUST FAN	1656	3/4	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-5	ROOF MOUNTED TOILET EXHAUST FAN	1176	1/2	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-6	ROOF MOUNTED TOILET EXHAUST FAN	1176	1/2	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
TEF-7	ROOF MOUNTED TOILET EXHAUST FAN	528	1/6	-	-	-	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12G	3/4"	X	-	-	-
CH-1	FLOOR MOUNTED HOT WATER HEATING CABINET HEATER	96	-	-	-	0.8	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12 GRD	3/4"	X	-	-	-
CH-2	RECESSED CEILING MOUNTED HOT WATER HEATING CABINET HEATER	264	-	-	-	2.2	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12 GRD	3/4"	X	-	-	-
CH-3	FLOOR MOUNTED HOT WATER HEATING CABINET HEATER	336	-	-	-	2.8	15	120	1	SEE FLOOR PLAN	SEE FLOOR PLAN	20	2#12 & 1#12 GRD	3/4"	X	-	-	-
AC-1/CU-1	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	3952	-	19	-	-	26	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	30	3#10 & 1#2 GRD	3/4"	X	-	-	-
AC-2/CU-2	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	3952	-	19	-	-	26	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	30	3#10 & 1#2 GRD	3/4"	X	-	-	-
AC-3/CU-3	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	3952	-	19	-	-	26	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	30	3#10 & 1#2 GRD	3/4"	X	-	-	-
AC-4/CU-4	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	3952	-	19	-	-	26	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	30	3#10 & 1#2 GRD	3/4"	X	-	-	-
AC-5/CU-5	WALL MOUNTED COOLING ONLY UNIT/ROOF MOUNTED AIR-COOLED CONDENSING UNIT	2288	-	11	-	-	28	208	1	SEE FLOOR PLAN	SEE FLOOR PLAN	30	3#10 & 1#2 GRD	3/4"	X	-	-	-

PUMP EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOAD WATTS	HP	MOCP	VOLT	PHASE	PANEL	CKT. NO.	FUSED SWITCH C/B	FEEDER CABLE	FEEDER C	STARTED BY: MC.	STARTED BY: EC.	LOCATION	REMARKS
CP-1	SUSPENDED INLINE CHILLED WATER RECIRCULATION PUMP (C-1)	6009	5	-	208	3	SEE FLOOR PLAN	SEE FLOOR PLAN	35A/3P	4#8 & 1#10 GRD	3/4"	-	-	-	-
CWP-1	BASE MOUNTED CHILLED WATER DISTRIBUTION PUMP	8108	7 1/2	-	208	3	SEE FLOOR PLAN	SEE FLOOR PLAN	50A/3P	4#6 & 1#10 GRD	3/4"	-	-	-	-
CWP-2	BASE MOUNTED CHILLED WATER DISTRIBUTION PUMP	8108	7 1/2	-	208	3	SEE FLOOR PLAN	SEE FLOOR PLAN	50A/3P	4#6 & 1#10 GRD	3/4"	-	-	-	-

AD-3

ELECTRICAL ONE-LINE SCHEMATIC DIAGRAM



SHEET NOTES

1. REMOVE EXISTING PANEL COMPLETE BACK TO SOURCE.
2. NEW CIRCUIT BREAKER MOUNTED IN AVAILABLE SPACE, MATCH EXISTING STYLE AND AIC RATING IN USE.
3. EXISTING CHILLER DISCONNECT AND FEEDER TO BE REPLACED. PROVIDE NEW AND WIRE COMPLETE ONCE NEW CHILLER IS IN PLACE.

AD-2 — NEW SHEET ADDED TO CONSTRUCTION DOCUMENTS IN THIS ADDENDUM

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PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

DAVID G. JANNEY — REGISTERED — NO. 10302590 — STATE OF INDIANA — PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
ELECTRICAL SCHEDULES

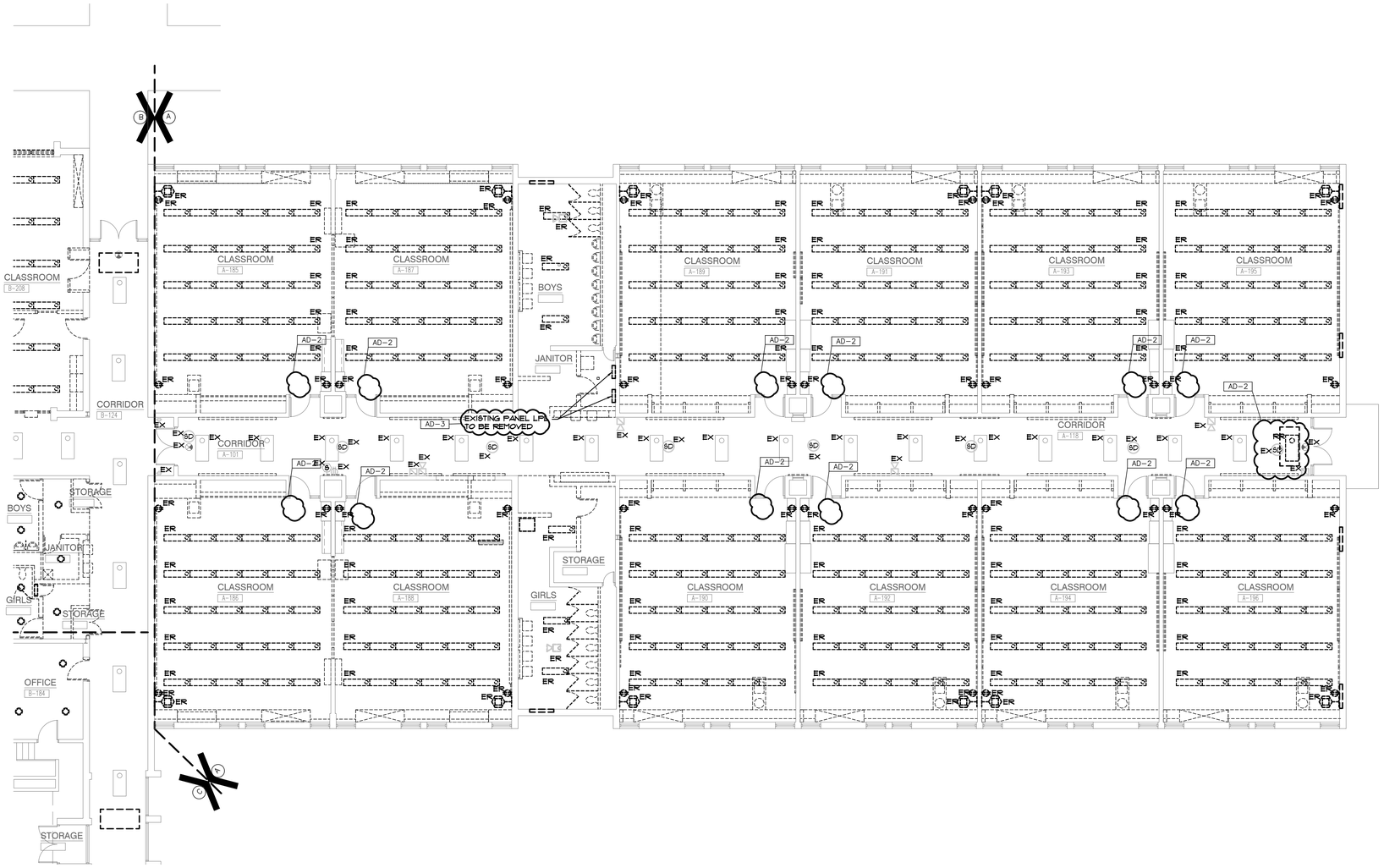
PROJECT
BAILLY ES - RENOVATIONS

SHEET
E-604

GENERAL NOTES

1. THE DEVICES SHOWN ON THE DRAWINGS HAVE BEEN LOCATED AS A SERVICE TO THE CONTRACTOR AND MAY NOT INDICATE THE COMPLETE SCOPE OF DEMOLITION WORK. CONTRACTOR SHALL FIELD VERIFY ALL DEVICES AND VERIFY THE COMPLETE SCOPE OF DEMOLITION WORK WITH ARCHITECT.
2. DISCONNECT AND REMOVE EXISTING LIGHTING (LABELED AND SHOWN AS 'ER') AND RELATED CIRCUITRY BACK TO NEAREST JUNCTION BOX, COMPLETE AS REQUIRED. RETAIN ALL ASSOCIATED WIRING, CONDUIT, ETC. FOR USE WITH NEW LIGHTING AND CONTROLS.
3. CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW CEILINGS WILL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
4. ALL LIGHT SWITCHES, SENSORS AND CONTROL DEVICES THAT BECOME ABANDONED AS PART OF THE WORK SHALL BE REMOVED.
5. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT THAT ARE REMOVED AS PART OF THIS WORK OR HAS BEEN PREVIOUSLY REMOVED BY OTHERS. ALL ABANDONED ELECTRICAL CONNECTIONS, WIRING, ACCESSIBLE CONDUIT, ETC. ARE TO BE REMOVED BACK TO SOURCE PANEL, COMPLETE AS REQUIRED.
6. EXISTING FIRE ALARM DEVICES SHALL BE REMOVED COMPLETE WITHIN RENOVATION AREAS. EXISTING DEVICES REMAINING OUTSIDE OF PROJECT AREA SHALL BE RE-USED WITH NEW FIRE ALARM CONTROL PANEL. CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN EXISTING DEVICES AND NEW CONTROL PANEL.
7. REFER TO LOW VOLTAGE DRAWINGS FOR DEMOLITION SCOPE OF WORK ASSOCIATED WITH ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT.

AD-2



UNIT "A" ELECTRICAL FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

NORTH

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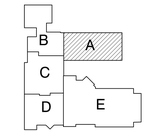
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

DAVID G. JANKE REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "A" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

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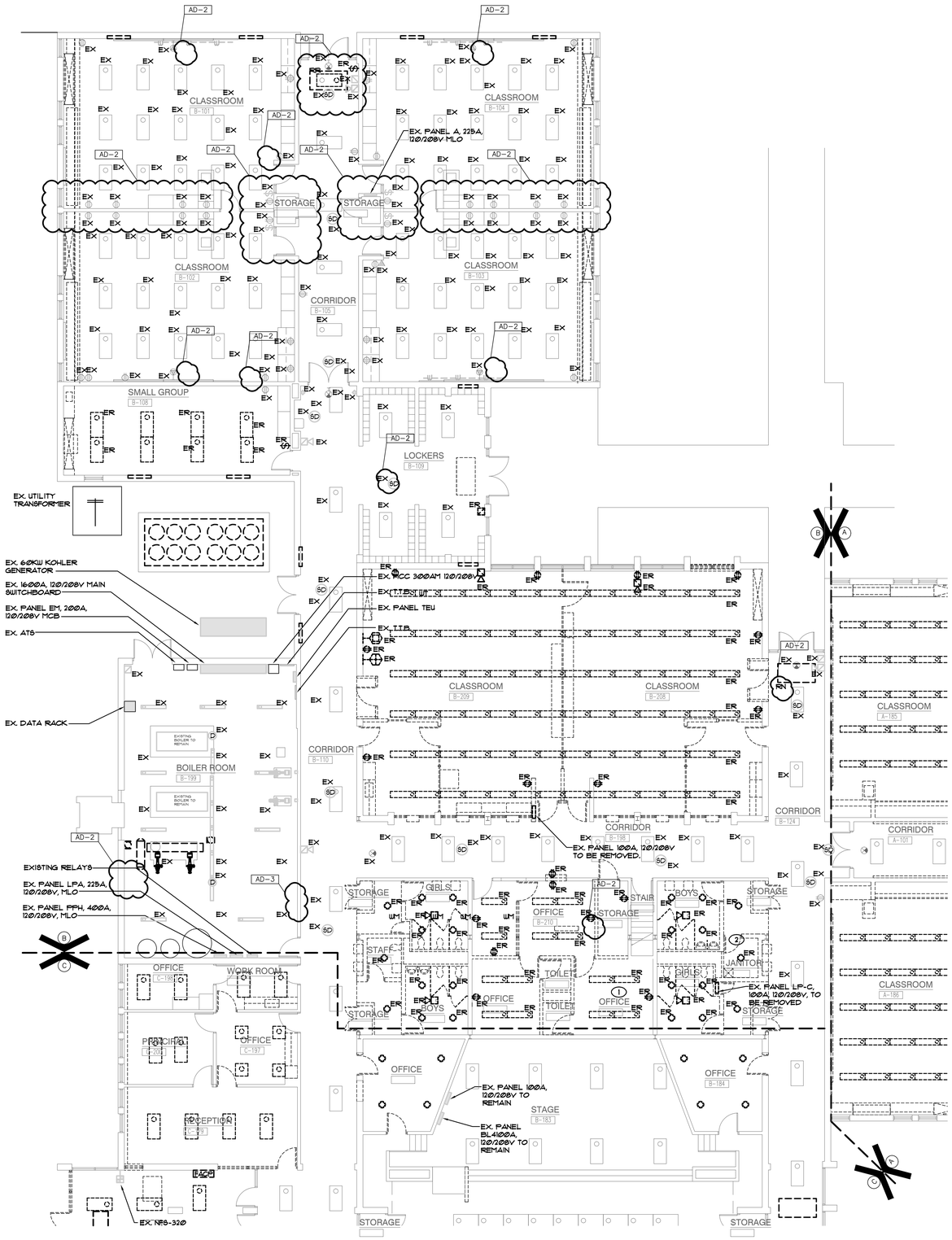
SHEET
A ED101



UNIT "B" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

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

GENERAL NOTES

1. THE DEVICES SHOWN ON THE DRAWINGS HAVE BEEN LOCATED AS A SERVICE TO THE CONTRACTOR AND MAY NOT INDICATE THE COMPLETE SCOPE OF DEMOLITION WORK. CONTRACTOR SHALL FIELD VERIFY ALL DEVICES AND VERIFY THE COMPLETE SCOPE OF DEMOLITION WORK WITH ARCHITECT.
2. DISCONNECT AND REMOVE EXISTING LIGHTING (LABELED AND SHOWN AS 'ER') AND RELATED CIRCUITRY BACK TO NEAREST JUNCTION BOX, COMPLETE AS REQUIRED. RETAIN ALL ASSOCIATED WIRING, CONDUIT, ETC. FOR USE WITH NEW LIGHTING AND CONTROLS.
3. CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW CEILINGS WILL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
4. ALL LIGHT SWITCHES, SENSORS AND CONTROL DEVICES THAT BECOME ABANDONED AS PART OF THE WORK SHALL BE REMOVED.
5. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT THAT ARE REMOVED AS PART OF THIS WORK OR HAS BEEN PREVIOUSLY REMOVED BY OTHERS. ALL ABANDONED ELECTRICAL CONNECTIONS, WIRING, ACCESSIBLE CONDUIT, ETC. ARE TO BE REMOVED BACK TO SOURCE PANEL, COMPLETE AS REQUIRED.
6. EXISTING FIRE ALARM DEVICES SHALL BE REMOVED COMPLETE WITHIN RENOVATION AREAS. EXISTING DEVICES REMAINING OUTSIDE OF PROJECT AREA SHALL BE RE-USED WITH NEW FIRE ALARM CONTROL PANEL. CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN EXISTING DEVICES AND NEW CONTROL PANEL.

AD-2

7. REFER TO LOW VOLTAGE DRAWINGS FOR DEMOLITION SCOPE OF WORK ASSOCIATED WITH ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT.

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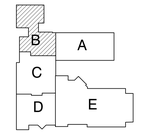
PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

DAVID G. JANNETT REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

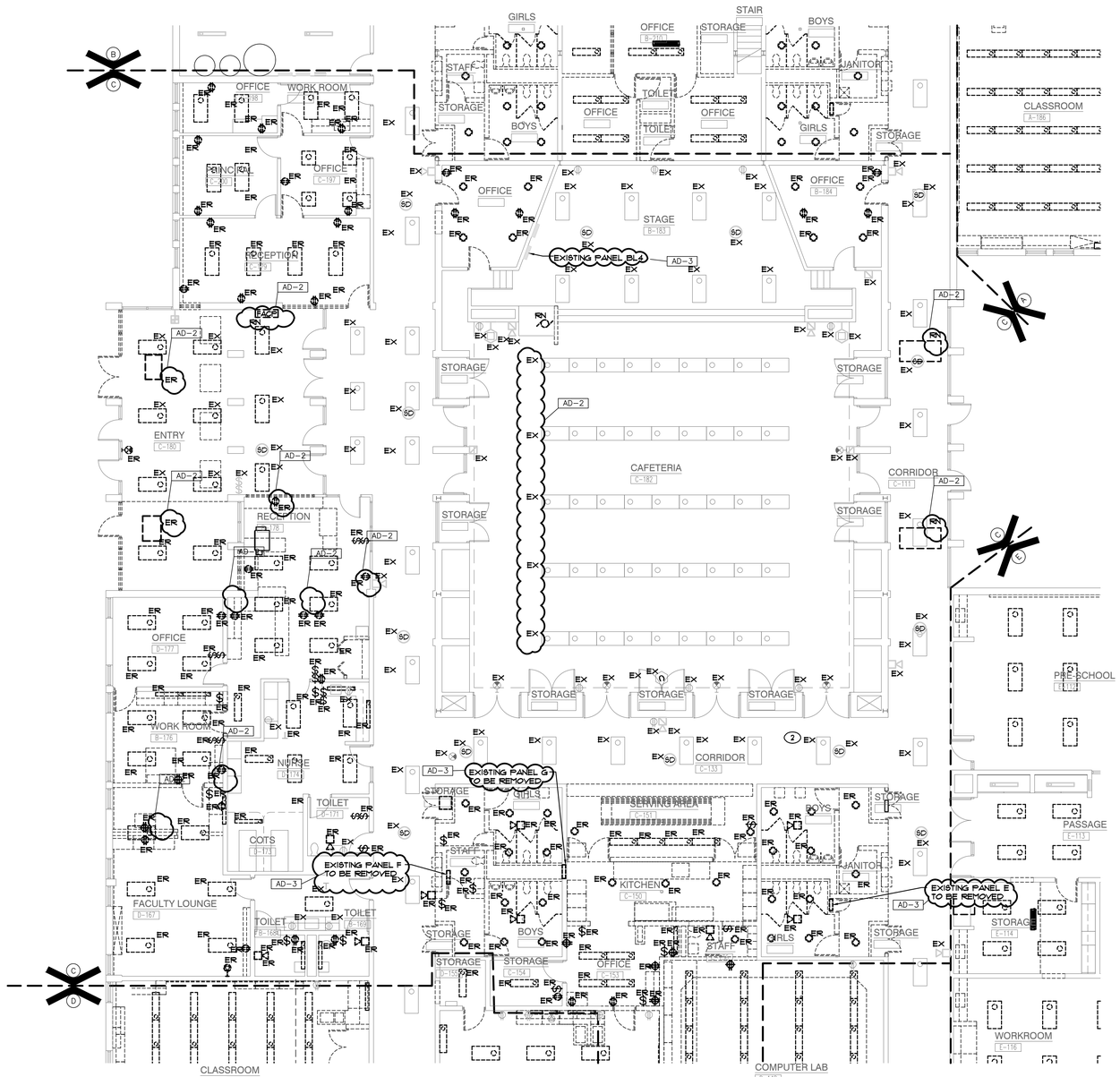
MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "B" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

B

SHEET
ED102



UNIT "C" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

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

GENERAL NOTES

1. THE DEVICES SHOWN ON THE DRAWINGS HAVE BEEN LOCATED AS A SERVICE TO THE CONTRACTOR AND MAY NOT INDICATE THE COMPLETE SCOPE OF DEMOLITION WORK. CONTRACTOR SHALL FIELD VERIFY ALL DEVICES AND VERIFY THE COMPLETE SCOPE OF DEMOLITION WORK WITH ARCHITECT.
2. DISCONNECT AND REMOVE EXISTING LIGHTING (LABELED AND SHOWN AS 'ER') AND RELATED CIRCUITRY BACK TO NEAREST JUNCTION BOX, COMPLETE AS REQUIRED. RETAIN ALL ASSOCIATED WIRING, CONDUIT, ETC. FOR USE WITH NEW LIGHTING AND CONTROLS.
3. CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW CEILINGS WILL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
4. ALL LIGHT SWITCHES, SENSORS AND CONTROL DEVICES THAT BECOME ABANDONED AS PART OF THE WORK SHALL BE REMOVED.
5. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT THAT ARE REMOVED AS PART OF THIS WORK OR HAS BEEN PREVIOUSLY REMOVED BY OTHERS. ALL ABANDONED ELECTRICAL CONNECTIONS, WIRING, ACCESSIBLE CONDUIT, ETC. ARE TO BE REMOVED BACK TO SOURCE PANEL, COMPLETE AS REQUIRED.
6. EXISTING FIRE ALARM DEVICES SHALL BE REMOVED COMPLETE WITHIN RENOVATION AREAS. EXISTING DEVICES REMAINING OUTSIDE OF PROJECT AREA SHALL BE RE-USED WITH NEW FIRE ALARM CONTROL PANEL. CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN EXISTING DEVICES AND NEW CONTROL PANEL.

AD-2

7. REFER TO LOW VOLTAGE DRAWINGS FOR DEMOLITION SCOPE OF WORK ASSOCIATED WITH ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT.

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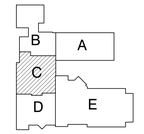
PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

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REGISTERED PROFESSIONAL ENGINEER — DAVID G. JANNETT — NO. 10302590 — STATE OF INDIANA

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DRAWING
UNIT "C" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
C
ED103

GENERAL NOTES

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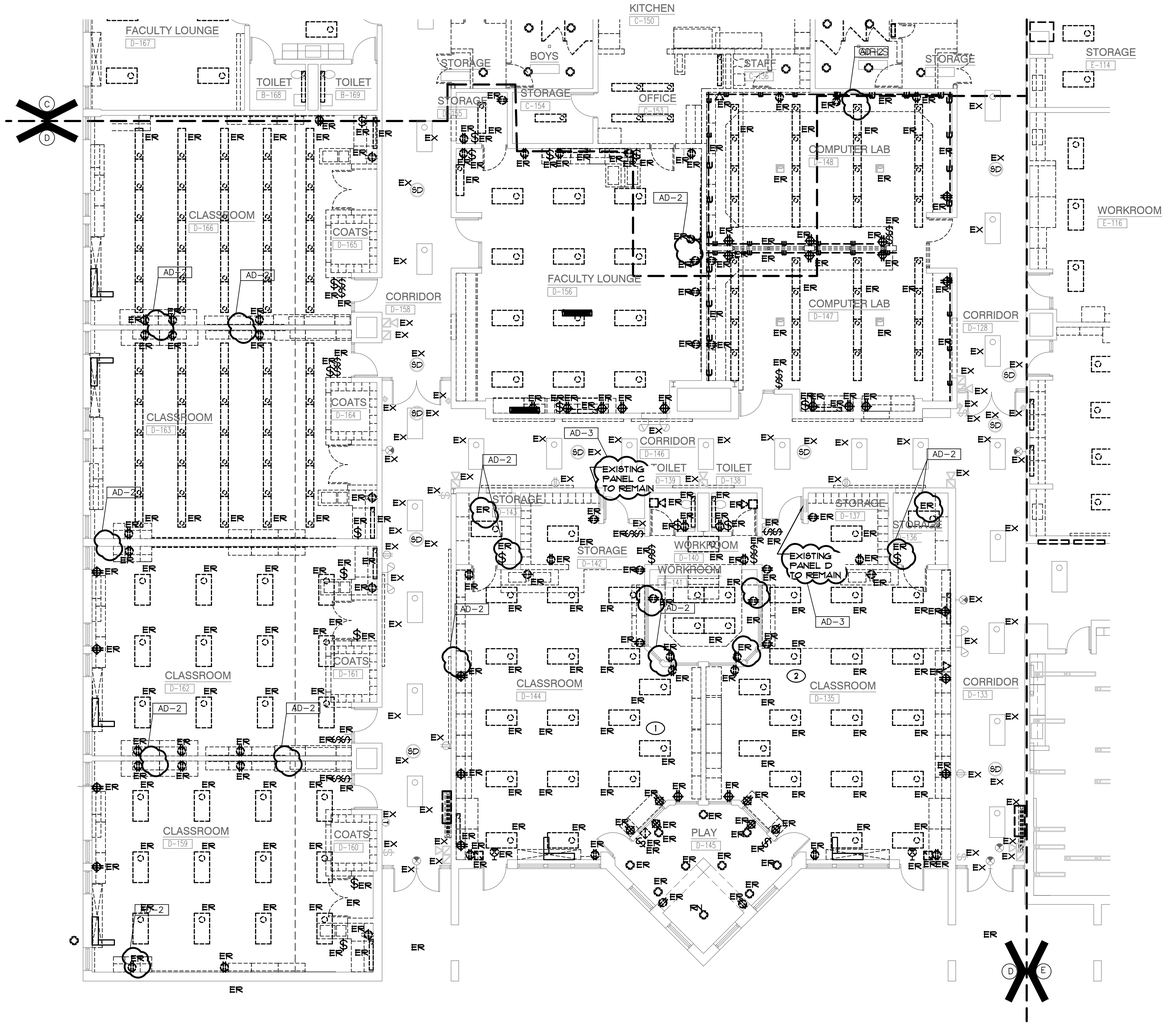
7. REFER TO LOW VOLTAGE DRAWINGS FOR DEMOLITION SCOPE OF WORK ASSOCIATED WITH ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT.

AD-2



UNIT "D" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

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

NORTH

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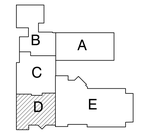
PROJECT

BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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DRAWING
UNIT "D" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

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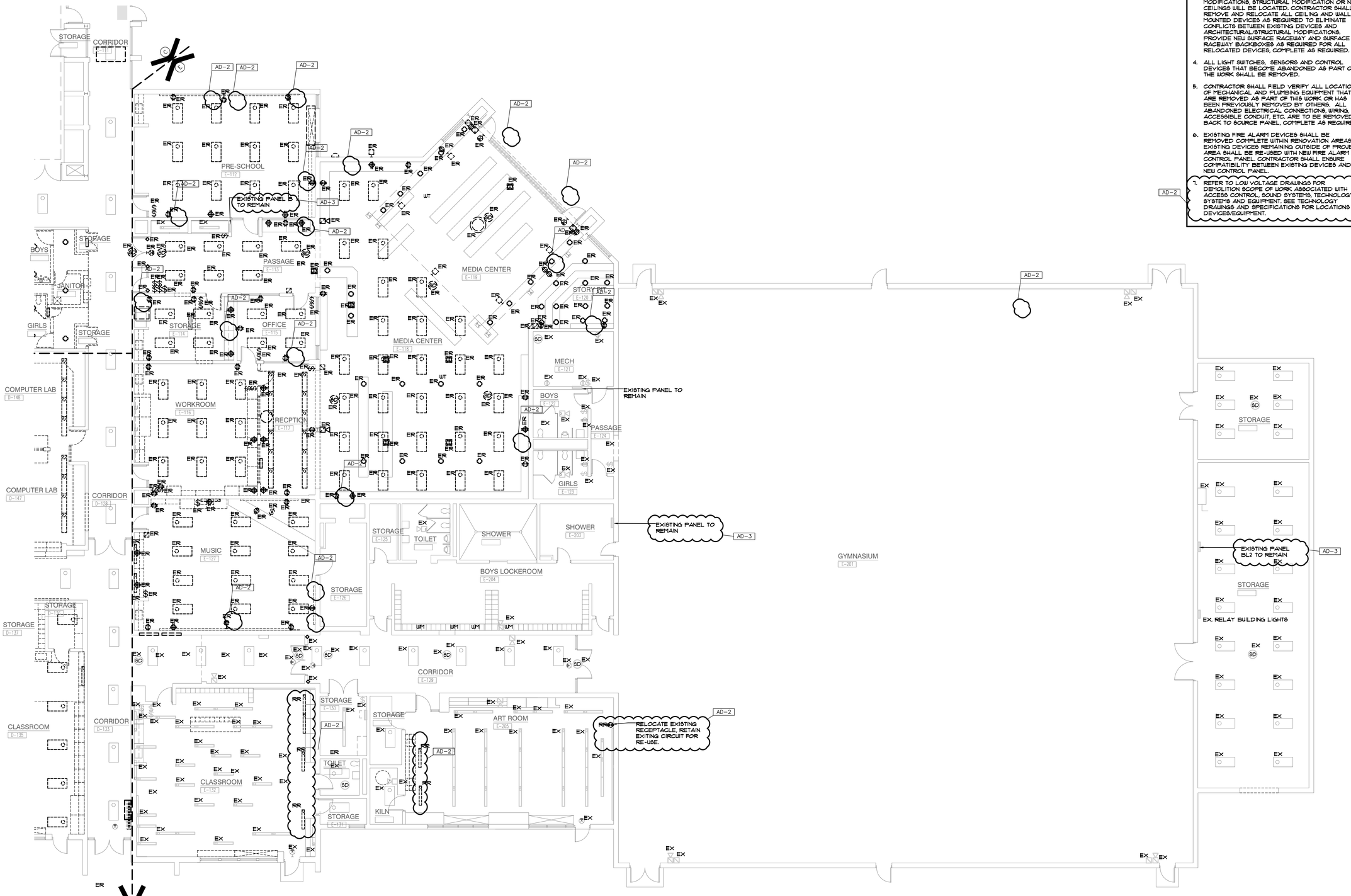

UNIT "E" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

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

NORTH

GENERAL NOTES

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2. DISCONNECT AND REMOVE EXISTING LIGHTING (LABELED AND SHOWN AS 'ER') AND RELATED CIRCUITRY BACK TO NEAREST JUNCTION BOX, COMPLETE AS REQUIRED. RETAIN ALL ASSOCIATED WIRING, CONDUIT, ETC. FOR USE WITH NEW LIGHTING AND CONTROLS.
3. CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW CEILINGS WILL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
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7. REFER TO LOW VOLTAGE DRAWINGS FOR DEMOLITION SCOPE OF WORK ASSOCIATED WITH ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT.

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PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
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Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

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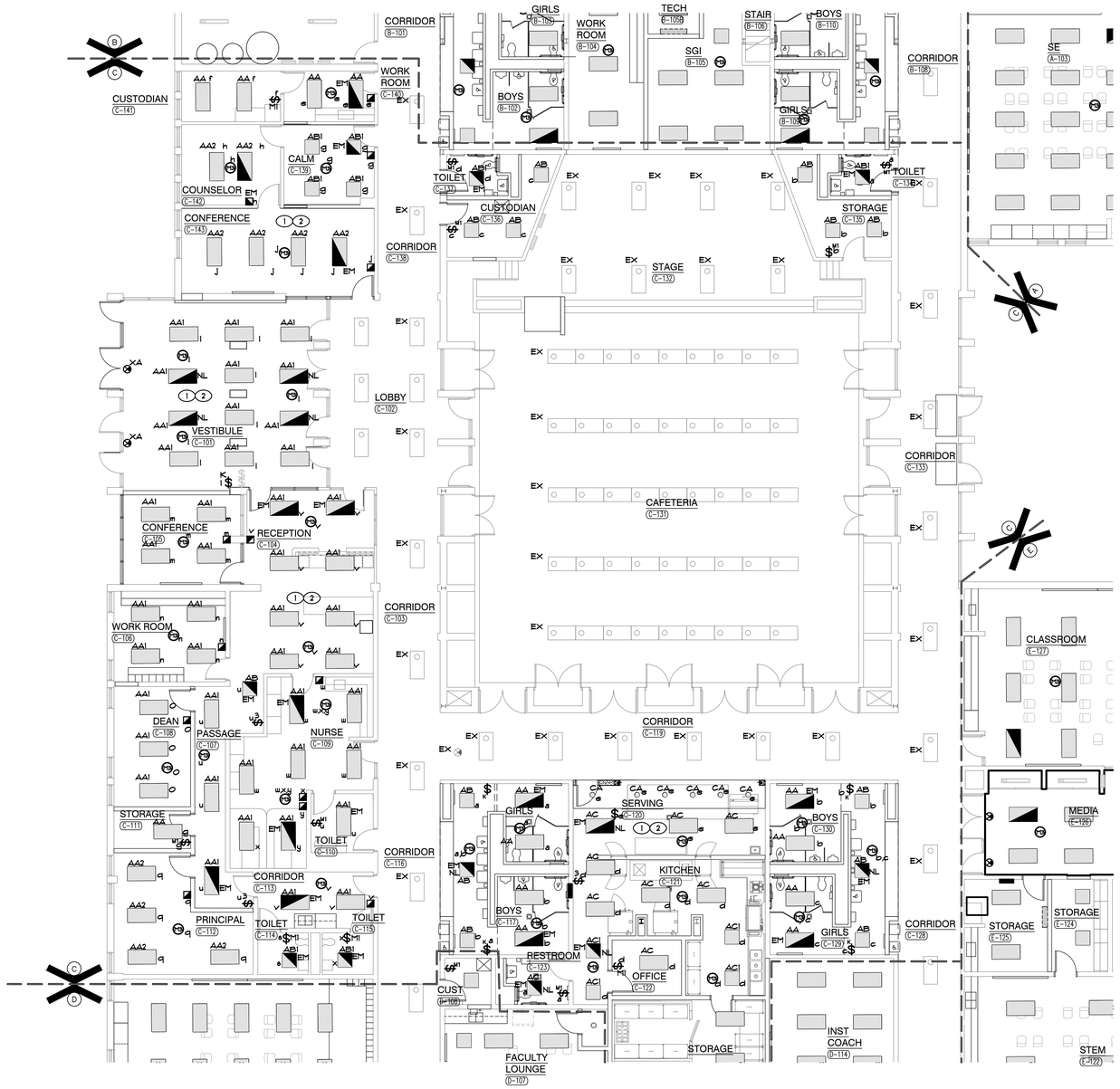
DRAWING
UNIT "E" ELECTRICAL FIRST FLOOR DEMOLITION PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
E
ED105



UNIT "C" ELECTRICAL FIRST FLOOR LIGHTING PLAN

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

GENERAL NOTES

1. SHADED FIXTURES, FIXTURES WITH 'EM' TAGS AND EXIT SIGNS SHALL BE PROVIDED WITH AN EMERGENCY LIFE SAFETY POWER SOURCE.
2. EXIT SIGNS SHALL BE CONNECTED TO CIRCUIT INDICATED IN NEAREST EMERGENCY LIFE SAFETY PANEL.
3. FIXTURES WITH A 'NL' TAG SHALL BE CONNECTED TO THE NIGHT LIGHT CIRCUIT INDICATED IN EMERGENCY LIFE SAFETY PANEL.
4. CIRCUIT TAGS WITH AN 'E' PREFIX SHOWN WITH A SWITCH LEG SHALL BE A SWITCHED EMERGENCY FIXTURE. THE FIXTURE SHALL BE PROVIDED WITH A UL924 RATED BYPASS DEVICE TO ALLOW THE FIXTURE TO BE CONTROLLED ALONG WITH THE NORMAL FIXTURES IN THE ROOM. UPON LOSS OF POWER, THE FIXTURE SHALL BE IMMEDIATELY POWERED TO 100% REGARDLESS OF SWITCH POSITION.
5. EMERGENCY SENSING LEADS SHALL BE CONNECTED TO CONSTANT HOT FEEDS FROM NORMAL LIGHTING IN ROOM. THIS FEED SHALL BE TAKEN AHEAD OF ANY EMERGENCY SHUTDOWNS, RELAYS, CONTACTORS OR SWITCHES.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED LIGHT FIXTURES.
7. ROUTE CONDUIT AS TIGHT TO THE EXPOSED CEILINGS AND STRUCTURE AS POSSIBLE TO MAXIMIZE CEILING SPACE.
8. VERIFY TEACHING SURFACE WITH OWNER'S REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION AND ADJUST SWITCHING TO PROPERLY ILLUMINATE TEACHING SURFACE. CAREFULLY COORDINATE FINAL SWITCHING WITH FINAL FURNITURE PLANS AND TEACHING WALL LOCATIONS.

SHEET NOTES

1. RECONNECT NEW LIGHTING FIXTURES IN THIS SPACE TO EXISTING LIGHTING CIRCUITRY AND NEW SWITCHING DEVICES. COMPLETE AS REQUIRED, MAXIMUM 1920W PER 120 VOLT CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING PANEL, AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
2. RECONNECT NEW EMERGENCY LIGHTING FIXTURES TO EXISTING EMERGENCY LIGHTING CIRCUITRY AND NEW SWITCHING DEVICES. COMPLETE AS REQUIRED, MAXIMUM 1920W PER 120 VOLT CIRCUIT. PROVIDE UL924 RELAY DEVICE AS REQUIRED TO ACCOMPLISH REQUIRED EMERGENCY SWITCHING. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING EMERGENCY PANEL, AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
3. RECONNECT NEW EXIT SIGN LIGHTING FIXTURES TO EXISTING EXIT SIGN EMERGENCY LIGHTING CIRCUITRY COMPLETE AS REQUIRED, MAXIMUM 1920W PER 120 VOLT CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING PANEL, AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.

AD-3
AD-2

ENTIRE SHEET REVISED IN THIS ADDENDUM

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PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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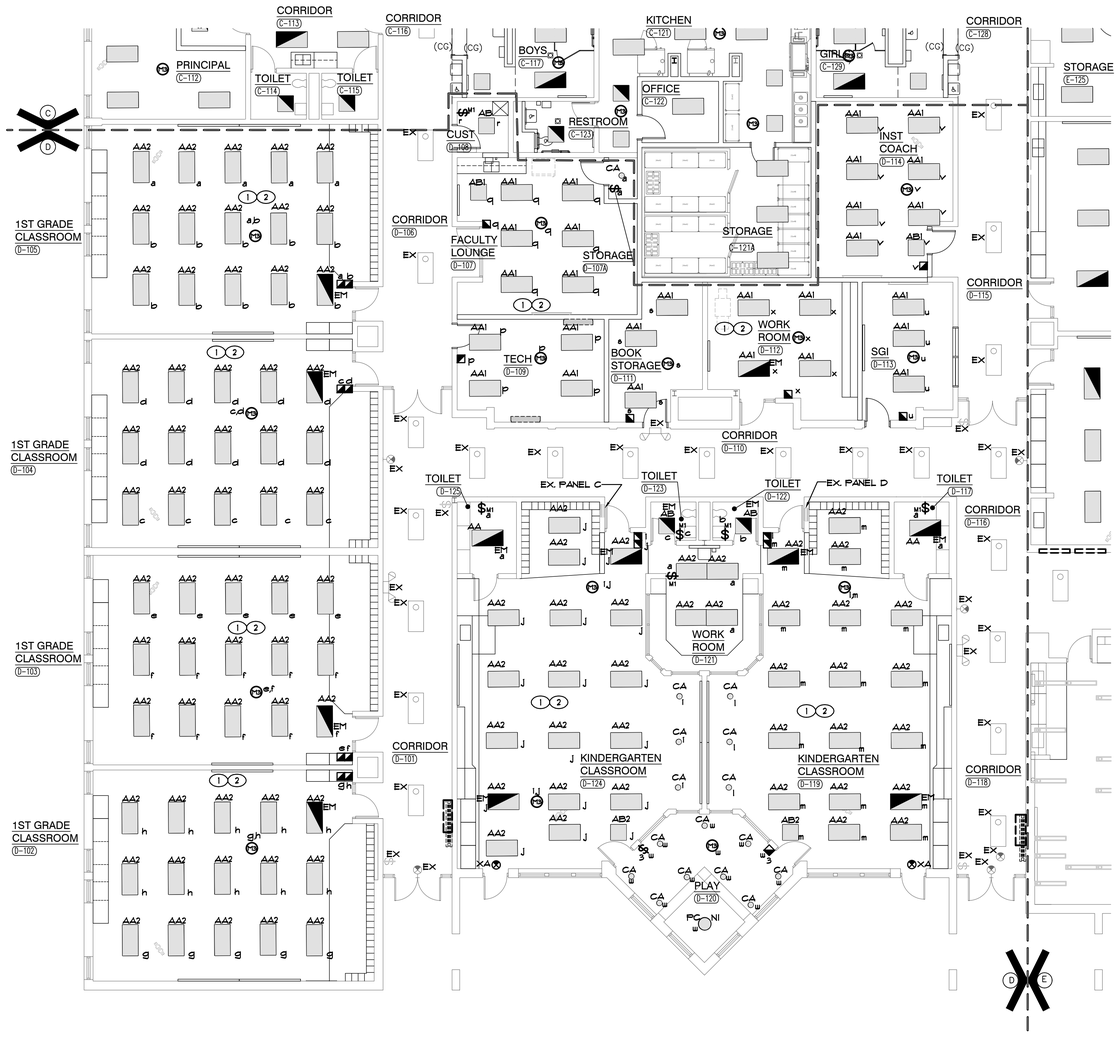
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "C" ELECTRICAL FIRST FLOOR LIGHTING PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET C EL103



UNIT "D" ELECTRICAL FIRST FLOOR LIGHTING PLAN

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

GENERAL NOTES

1. SHADED FIXTURES, FIXTURES WITH 'EM' TAGS AND EXIT SIGNS SHALL BE PROVIDED WITH AN EMERGENCY LIFE SAFETY POWER SOURCE.
2. EXIT SIGNS SHALL BE CONNECTED TO CIRCUIT INDICATED IN NEAREST EMERGENCY LIFE SAFETY PANEL.
3. FIXTURES WITH A 'NL' TAG SHALL BE CONNECTED TO THE NIGHT LIGHT CIRCUIT INDICATED IN EMERGENCY LIFE SAFETY PANEL.
4. CIRCUIT TAGS WITH AN 'E' PREFIX SHOWN WITH A SWITCH LEG SHALL BE A SWITCHED EMERGENCY FIXTURE. THE FIXTURE SHALL BE PROVIDED WITH A UL924 RATED BYPASS DEVICE TO ALLOW THE FIXTURE TO BE CONTROLLED ALONG WITH THE NORMAL FIXTURES IN THE ROOM. UPON LOSS OF POWER, THE FIXTURE SHALL BE IMMEDIATELY POWERED TO 100% REGARDLESS OF SWITCH POSITION.
5. EMERGENCY SENSING LEADS SHALL BE CONNECTED TO CONSTANT HOT FEEDS FROM NORMAL LIGHTING IN ROOM. THIS FEED SHALL BE TAKEN AHEAD OF ANY EMERGENCY SHUTDOWNS, RELAYS, CONTACTORS OR SWITCHES.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED LIGHT FIXTURES.
7. ROUTE CONDUIT AS TIGHT TO THE EXPOSED CEILINGS AND STRUCTURE AS POSSIBLE TO MAXIMIZE CEILING SPACE.
8. VERIFY TEACHING SURFACE WITH OWNER'S REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION AND ADJUST SWITCHING TO PROPERLY ILLUMINATE TEACHING SURFACE. CAREFULLY COORDINATE FINAL SWITCHING WITH FINAL FURNITURE PLANS AND TEACHING WALL LOCATIONS.

SHEET NOTES

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2. RECONNECT NEW EMERGENCY LIGHTING FIXTURES TO EXISTING EMERGENCY LIGHTING CIRCUITRY AND NEW SWITCHING DEVICES. COMPLETE AS REQUIRED, MAXIMUM 1920W PER 120 VOLT CIRCUIT. PROVIDE UL924 RELAY DEVICE AS REQUIRED TO ACCOMPLISH REQUIRED EMERGENCY SWITCHING. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING EMERGENCY PANEL, AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
3. RECONNECT NEW EXIT SIGN LIGHTING FIXTURES TO EXISTING EXIT SIGN EMERGENCY LIGHTING CIRCUITRY COMPLETE AS REQUIRED, MAXIMUM 1920W PER 120 VOLT CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING PANEL, AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.

AD-3
AD-2
ENTIRE SHEET REVISED IN THIS ADDENDUM

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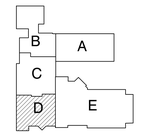

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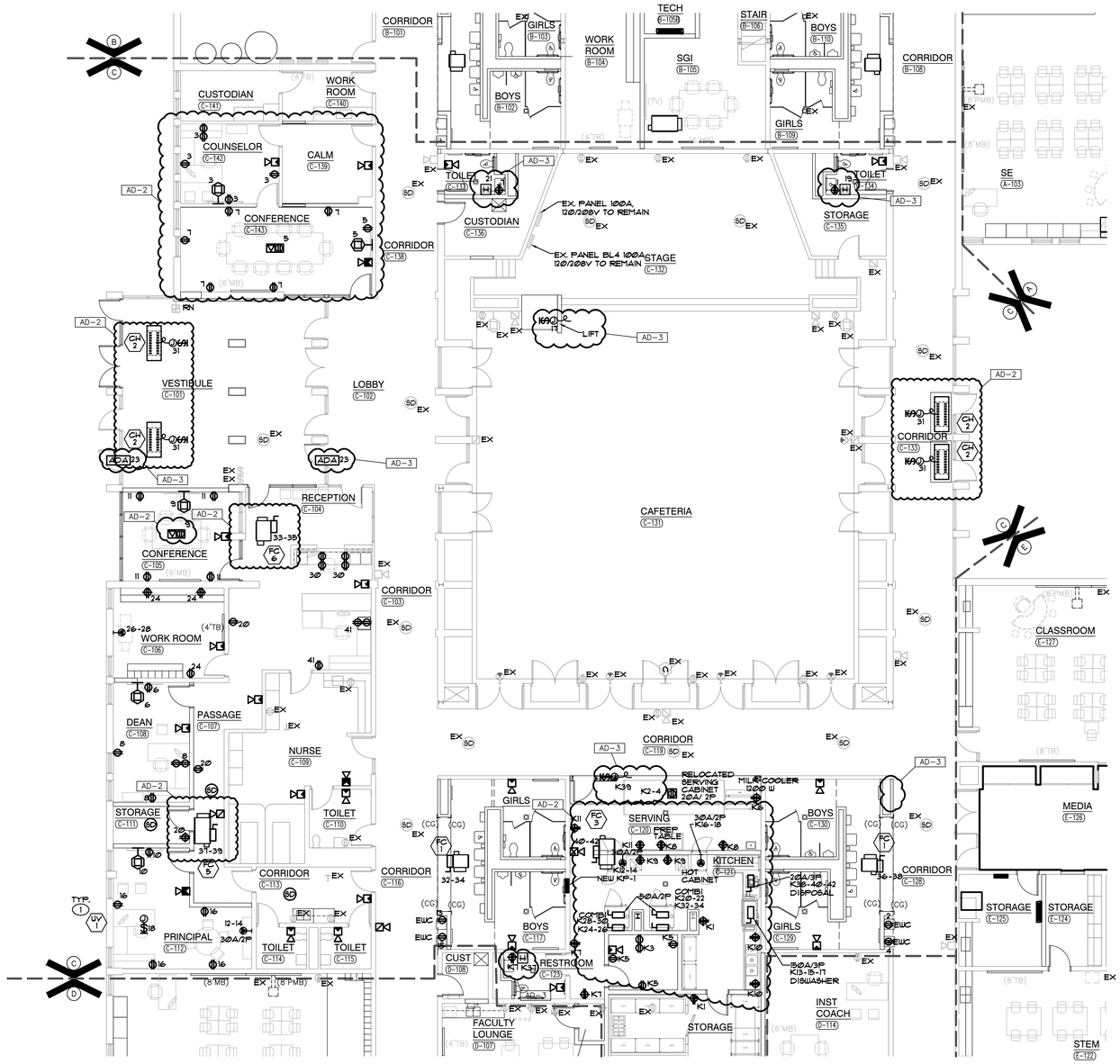
DRAWING
UNIT "D" ELECTRICAL FIRST FLOOR LIGHTING PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
D
EL104



UNIT "C" ELECTRICAL FIRST FLOOR POWER PLAN

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

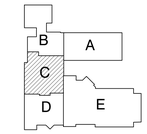
GENERAL NOTES

1. REFER TO LOW VOLTAGE DRAWING FOR ROUGH-IN AND RACEWAY INFORMATION FOR ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS. COORDINATE AND VERIFY EXACT LOCATIONS OF ALL OF THESE ROUGH-INS AND REQUIREMENTS WITH TECH DYNE, ARCHITECT, OWNER, CONSTRUCTION MANAGER AND DIVISION 27 CONTRACTOR PRIOR TO ROUGH-IN.
2. ALL DEVICES WITH BOX BAGES SHALL BE SURFACE MOUNTED TO THE EXISTING WALL. CONTRACTOR SHALL PROVIDE NEW NEATLY ROUTED SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES FOR NEW DEVICES LOCATED ON EXISTING WALLS. CONTRACTOR SHALL VERIFY EXACT ROUTING OF SURFACE RACEWAY WITH ARCHITECT PRIOR TO INSTALLATION.
3. CIRCUIT ALL DEVICES TO NEW PANEL FP-3 UNLESS OTHERWISE NOTED. K PREFIX CIRCUIT TAGS SHALL BE CONNECTED TO PANEL KP-1. E PREFIX CIRCUIT TAG NUMBERS SHALL BE CONNECTED TO EXISTING EMERGENCY PANEL. EMERGENCY CIRCUIT NUMBERS ARE ARBITRARY AND ARE ONLY SHOWN TO INDICATE CIRCUITING REQUIREMENTS. NEW CIRCUIT BREAKERS SHALL MATCH THE MAKE, MODEL AND WITHSTAND RATING OF THE EXISTING PANELBOARD. VERIFY EXACT CONDITIONS AND REQUIREMENTS IN FIELD.

SHEET NOTES

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL CIRCUITING AND WIRING REQUIREMENTS.

KEY PLAN



GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21-145
DATE
11/14/22
COORDINATED BY
JC
DRAWN BY
MS
CHECKED BY
DJ

DAVID G. JANNEY REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "C" ELECTRICAL FIRST FLOOR POWER PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
EP103

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN
MILLIES ENGINEERING GROUP (219) 934-5400 www.milliesengineeringgroup.com

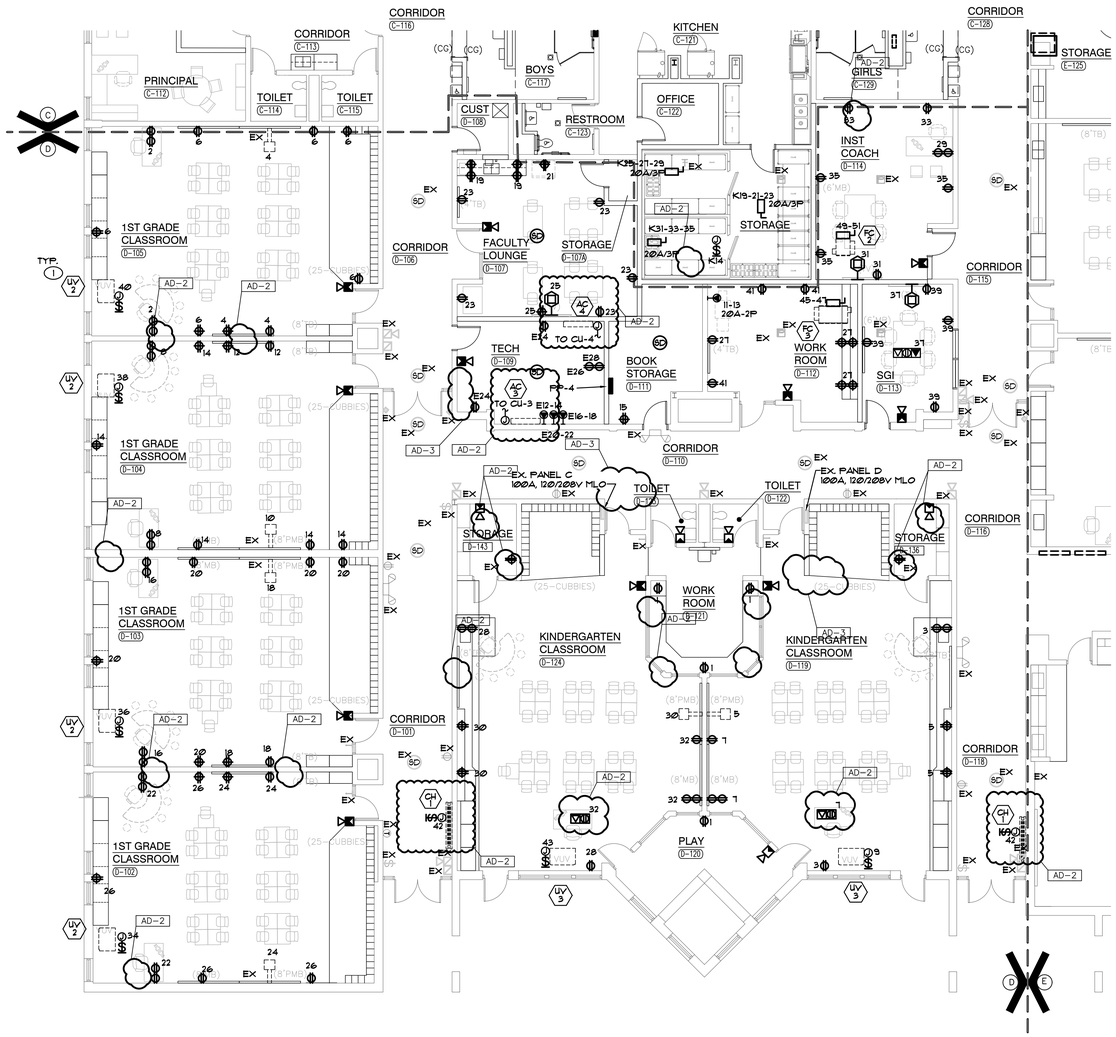
PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

GENERAL NOTES

1. REFER TO LOW VOLTAGE DRAWING FOR ROUGH-IN AND RACEWAY INFORMATION FOR ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS. COORDINATE AND VERIFY EXACT LOCATIONS OF ALL OF THESE ROUGH-INS AND REQUIREMENTS WITH TECH DYNE, ARCHITECT, OWNER, CONSTRUCTION MANAGER AND DIVISION 21 CONTRACTOR PRIOR TO ROUGH-IN.
2. ALL DEVICES WITH BOX BAGES SHALL BE SURFACE MOUNTED TO THE EXISTING WALL. CONTRACTOR SHALL PROVIDE NEW NEATLY ROUTED SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES FOR NEW DEVICES LOCATED ON EXISTING WALLS. CONTRACTOR SHALL VERIFY EXACT ROUTING OF SURFACE RACEWAY WITH ARCHITECT PRIOR TO INSTALLATION.
3. CIRCUIT ALL DEVICES TO NEW PANEL FP-4 UNLESS OTHERWISE NOTED. K PREFIX CIRCUIT TAGS SHALL BE CONNECTED TO PANEL KP-1. E PREFIX CIRCUIT TAG NUMBERS SHALL BE CONNECTED TO EXISTING EMERGENCY PANEL. EMERGENCY CIRCUIT NUMBERS ARE ARBITRARY AND ARE ONLY SHOWN TO INDICATE CIRCUITING REQUIREMENTS. NEW CIRCUIT BREAKERS SHALL MATCH THE MAKE, MODEL AND WITHSTAND RATING OF THE EXISTING PANELBOARD. VERIFY EXACT CONDITIONS AND REQUIREMENTS IN FIELD.

SHEET NOTES

AD-2 REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL CIRCUITING AND WIRING REQUIREMENTS.



UNIT "D" ELECTRICAL FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

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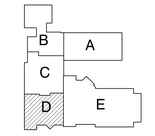
PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

REGISTERED DAVID G. JANKE NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "D" ELECTRICAL FIRST FLOOR POWER PLAN

PROJECT
BAILLY ES - RENOVATIONS

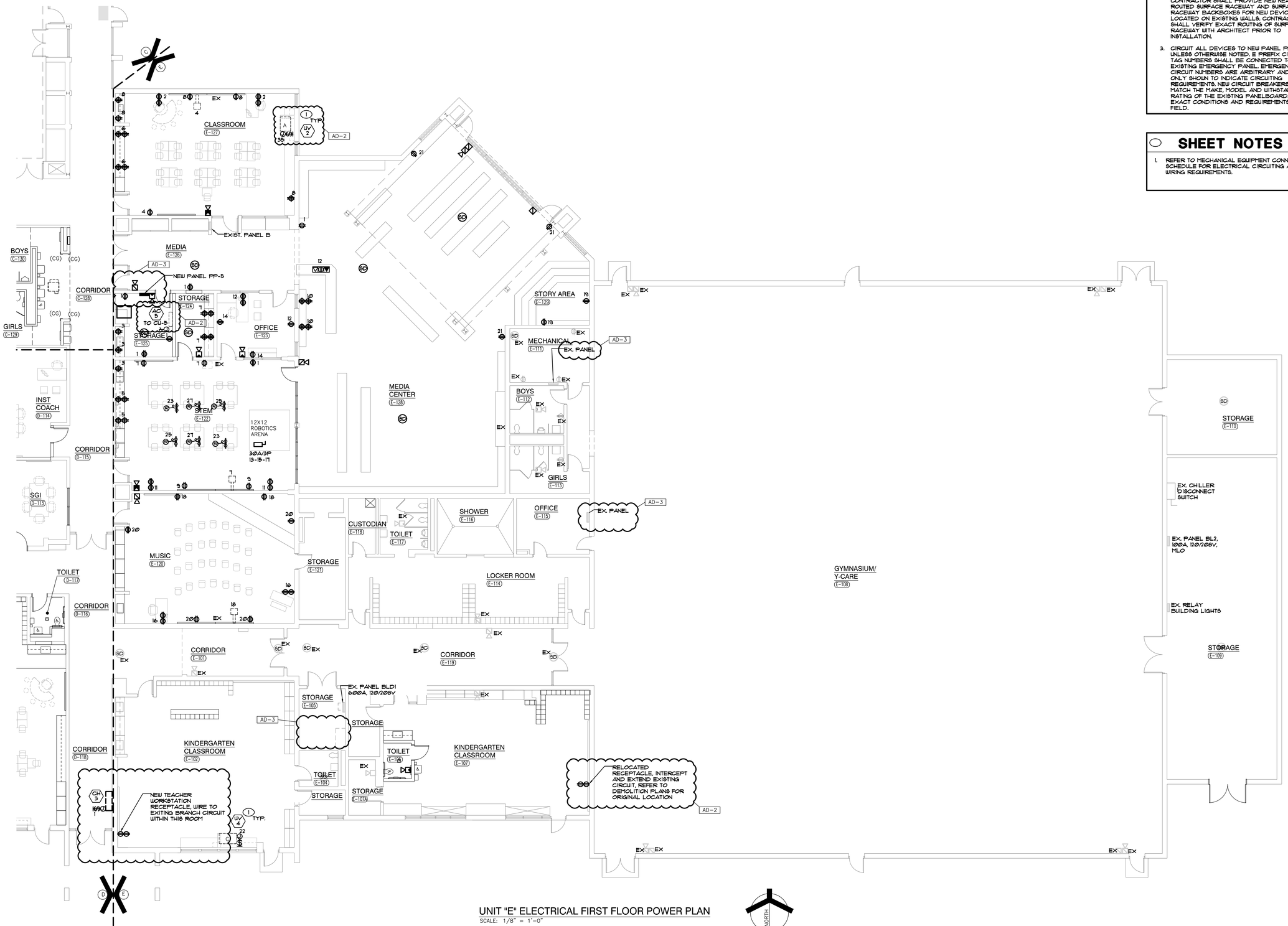
SHEET
EP104

GENERAL NOTES

1. REFER TO LOW VOLTAGE DRAWING FOR ROUGH-IN AND RACEWAY INFORMATION FOR ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS. COORDINATE AND VERIFY EXACT LOCATIONS OF ALL OF THESE ROUGH-INS AND REQUIREMENTS WITH TECH DYNE, ARCHITECT, OWNER, CONSTRUCTION MANAGER AND DIVISION 27 CONTRACTOR PRIOR TO ROUGH-IN.
2. ALL DEVICES WITH BOX BASES SHALL BE SURFACE MOUNTED TO THE EXISTING WALL. CONTRACTOR SHALL PROVIDE NEW NEATLY ROUTED SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES FOR NEW DEVICES LOCATED ON EXISTING WALLS. CONTRACTOR SHALL VERIFY EXACT ROUTING OF SURFACE RACEWAY WITH ARCHITECT PRIOR TO INSTALLATION.
3. CIRCUIT ALL DEVICES TO NEW PANEL PP-5 UNLESS OTHERWISE NOTED. E PREFIX CIRCUIT TAG NUMBERS SHALL BE CONNECTED TO EXISTING EMERGENCY PANEL. EMERGENCY CIRCUIT NUMBERS ARE ARBITRARY AND ARE ONLY SHOWN TO INDICATE CIRCUITING REQUIREMENTS. NEW CIRCUIT BREAKERS SHALL MATCH THE MAKE, MODEL AND WITHSTAND RATING OF THE EXISTING PANELBOARD. VERIFY EXACT CONDITIONS AND REQUIREMENTS IN FIELD.

SHEET NOTES

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL CIRCUITING AND WIRING REQUIREMENTS.



UNIT "E" ELECTRICAL FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

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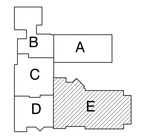
MILLIES ENGINEERING GROUP (219) 934-8400 www.milliesengineeringgroup.com

PROJECT
BAILLY ELEMENTARY SCHOOL - RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

REGISTERED DAVID G. JANNETT NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

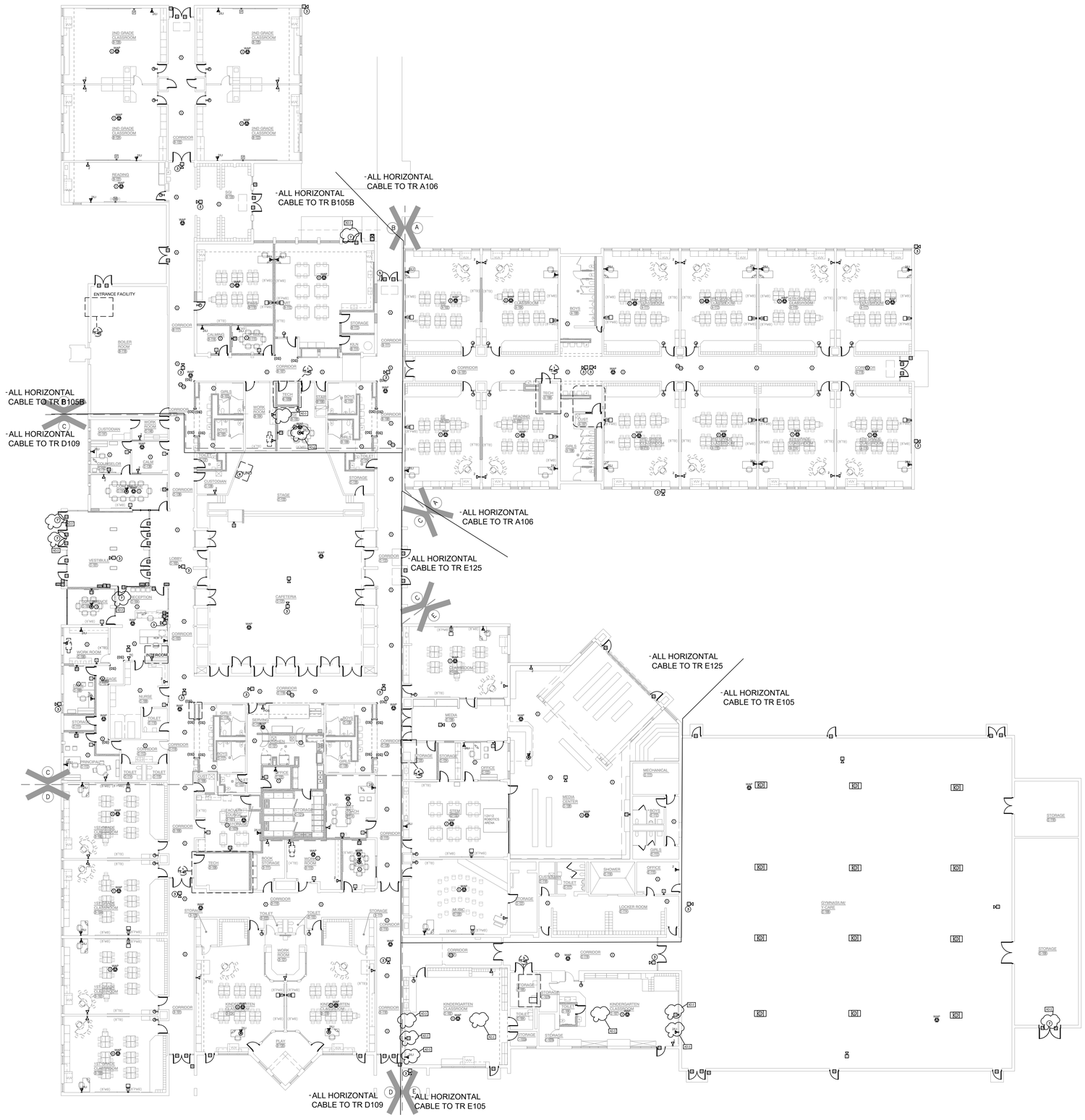
REVISIONS

MARK	DATE	ISSUED FOR
AD-2	12/07/22	ADDENDUM NO. 2
AD-3	12/14/22	ADDENDUM NO. 3

DRAWING
UNIT "E" ELECTRICAL FIRST FLOOR POWER PLAN

PROJECT
BAILLY ES - RENOVATIONS

SHEET
E
EP105



OVERALL TELECOMMUNICATIONS FIRST FLOOR PLAN

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

GENERAL NOTES:

(A) DOORS SHOWING SECURITY DEVICES ARE EXISTING DOORS IN EXISTING FRAMES EXCEPT WHERE NOTED AS A NEW DOOR.

AD-3

PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. FOR NEW TELECOMMUNICATIONS OUTLETS BEING INSTALLED IN EXISTING WALLS RE-USE AND/OR MODIFY EXISTING RACEWAY WHERE POSSIBLE. IF NOT PROVIDE NEW SURFACE RACEWAY
2. EXISTING WIRELESS ACCESS POINT(S) TO BE RE-CABLED AND RE-INSTALLED IN NEW CEILING.
3. EXISTING SECURITY CAMERA(S), RE-INSTALL IN NEW CEILING.
4. EXISTING INTERCOM SPEAKER TO BE RE-INSTALLED IN NEW CEILING.
5. EXISTING DOOR BELL TO REMAIN.
6. EXISTING SOUND CABINET TO REMAIN.
7. NEW DOOR SEE ROUGH-IN DETAILS.

AD-3

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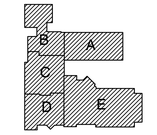
PROJECT

BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY BKS
DRAWN BY ZHW-TKP
CHECKED BY BKS

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI ID # 1140358
Brian K Scott
EXPIRES 12-31-24
RCDD

REVISIONS

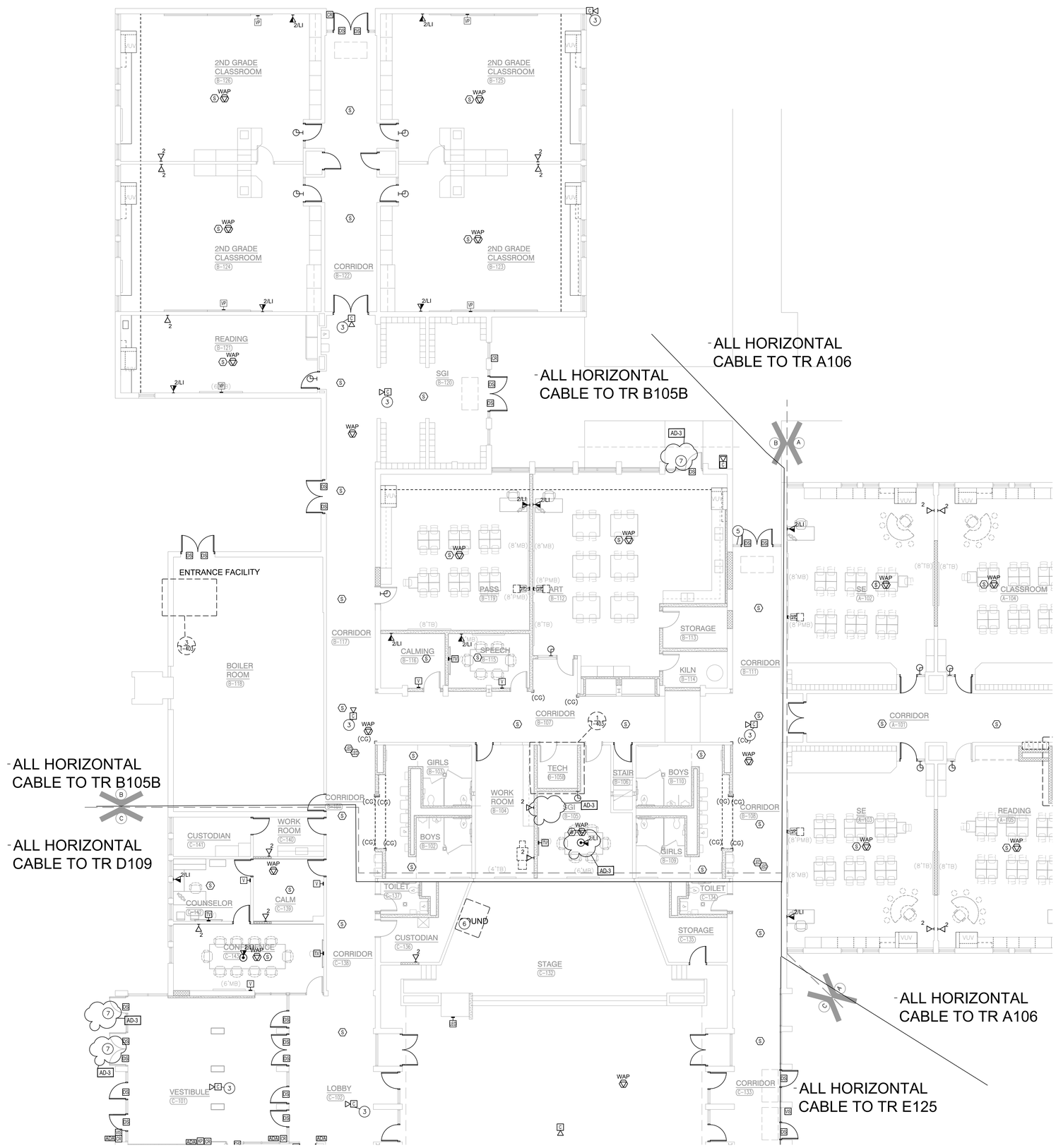
MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM 3

DRAWING
OVERALL TELECOMMUNICATIONS FIRST FLOOR PLAN

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET
T-100

Wednesday, 12/14/2022 - 9:33 AM - LAST SAVED BY:TKPOO
C:\USERS\ZACH\DROPBOX\DUNELAND SCHOOL CORPORATION\BAILLY ELEMENTARY SCHOOL\DRAWINGS\T-DRAWINGS\T-100.DWG



UNIT "B" TELECOMMUNICATIONS FIRST FLOOR PLAN

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

GENERAL NOTES:

(A) DOORS SHOWING SECURITY DEVICES ARE EXISTING DOORS IN EXISTING FRAMES EXCEPT WHERE NOTED AS A NEW DOOR.

PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. FOR NEW TELECOMMUNICATIONS OUTLETS BEING INSTALLED IN EXISTING WALLS RE-USE AND/OR MODIFY EXISTING RACEWAY WHERE POSSIBLE. IF NOT PROVIDE NEW SURFACE RACEWAY
2. EXISTING WIRELESS ACCESS POINT(S) TO BE RE-CABLED AND RE-INSTALLED IN NEW CEILING.
3. EXISTING SECURITY CAMERA(S), RE-INSTALL IN NEW CEILING.
4. EXISTING INTERCOM SPEAKER TO BE RE-INSTALLED IN NEW CEILING.
5. EXISTING DOOR BELL TO REMAIN.
6. EXISTING SOUND CABINET TO REMAIN.
7. NEW DOOR SEE ROUGH-IN DETAILS.

AD-3

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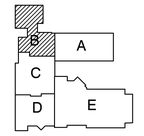
PROJECT

BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY BKS
DRAWN BY ZHW-TKP
CHECKED BY BKS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI Brian K Scott
BICSI ID # 1140338
EXPIRES 12-31-24
RCDD

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM 3

DRAWING
UNIT "B" TELECOMMUNICATIONS FIRST FLOOR PLAN

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET
B
T-102

Wednesday, 12/14/2022 - 9:37 AM - LAST SAVED BY:ZACH
C:\USERS\ZACH\DROPBOX\DUNELAND SCHOOL CORPORATION\BAILLY ELEMENTARY SCHOOL\DRAWINGS\T-102.DWG

GENERAL NOTES:

(A) DOORS SHOWING SECURITY DEVICES ARE EXISTING DOORS IN EXISTING FRAMES EXCEPT WHERE NOTED AS A NEW DOOR.

AD-3

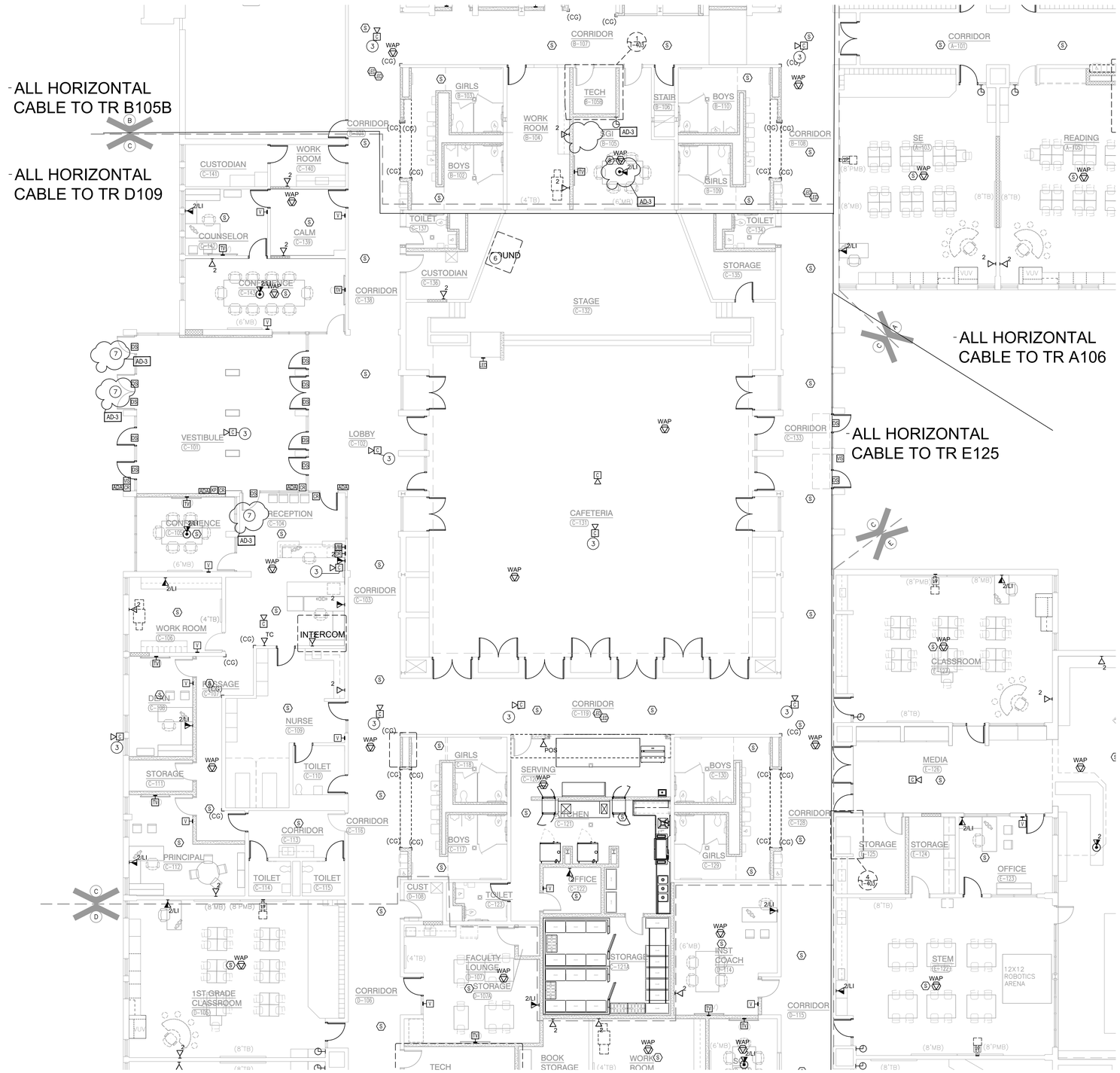
PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. FOR NEW TELECOMMUNICATIONS OUTLETS BEING INSTALLED IN EXISTING WALLS RE-USE AND/OR MODIFY EXISTING RACEWAY WHERE POSSIBLE. IF NOT PROVIDE NEW SURFACE RACEWAY
2. EXISTING WIRELESS ACCESS POINT(S) TO BE RE-CABLED AND RE-INSTALLED IN NEW CEILING.
3. EXISTING SECURITY CAMERA(S), RE-INSTALL IN NEW CEILING.
4. EXISTING INTERCOM SPEAKER TO BE RE-INSTALLED IN NEW CEILING.
5. EXISTING DOOR BELL TO REMAIN.
6. EXISTING SOUND CABINET TO REMAIN.
7. NEW DOOR SEE ROUGH-IN DETAILS.

AD-3

- ALL HORIZONTAL CABLE TO TR B105B
- ALL HORIZONTAL CABLE TO TR D109
- ALL HORIZONTAL CABLE TO TR A106
- ALL HORIZONTAL CABLE TO TR E125



UNIT "C" TELECOMMUNICATIONS FIRST FLOOR PLAN

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

NORTH

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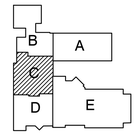
www.techdyn.net

PROJECT

BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY BKS
DRAWN BY ZHW-TKP
CHECKED BY BKS

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER RCDD
Brian K. Scott
BICSI ID # 114038
EXPIRES 12-31-24

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM 3

DRAWING
UNIT "C" TELECOMMUNICATIONS FIRST FLOOR PLAN

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET C T-103

Wednesday, 12/14/2022 - 9:39 AM - LAST SAVED BY:TKPOO
C:\USERS\ZACH\DROPBOX\DUNELAND SCHOOL CORPORATION\BAILLY ES - ADDITIONS & RENOVATIONS\SCHOOL\DRAWINGS\T-DRAWINGS\T-103.DWG

GENERAL NOTES:

(A) DOORS SHOWING SECURITY DEVICES ARE EXISTING DOORS IN EXISTING FRAMES EXCEPT WHERE NOTED AS A NEW DOOR.

AD-3

PLAN NOTES:

(ALL PLAN NOTES MAY NOT BE INDICATED ON THIS SHEET.)

1. FOR NEW TELECOMMUNICATIONS OUTLETS BEING INSTALLED IN EXISTING WALLS RE-USE AND/OR MODIFY EXISTING RACEWAY WHERE POSSIBLE. IF NOT PROVIDE NEW SURFACE RACEWAY
2. EXISTING WIRELESS ACCESS POINT(S) TO BE RE-CABLED AND RE-INSTALLED IN NEW CEILING.
3. EXISTING SECURITY CAMERA(S), RE-INSTALL IN NEW CEILING.
4. EXISTING INTERCOM SPEAKER TO BE RE-INSTALLED IN NEW CEILING.
5. EXISTING DOOR BELL TO REMAIN.
6. EXISTING SOUND CABINET TO REMAIN.
7. NEW DOOR SEE ROUGH-IN DETAILS.

AD-3

- ALL HORIZONTAL CABLE TO TR E125
- ALL HORIZONTAL CABLE TO TR E105

UNIT "E" TELECOMMUNICATIONS FIRST FLOOR PLAN

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

NORTH

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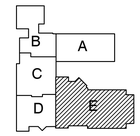
PROJECT

BAILLY ELEMENTARY SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-145
DATE 11/14/22
COORDINATED BY BKS
DRAWN BY ZHW-TKP
CHECKED BY BKS

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Brian K Scott
BICSI ID # 1140358
EXPIRES 12-31-24
RCDD

REVISIONS

MARK	DATE	ISSUED FOR
AD-3	12/14/22	ADDENDUM 3

DRAWING
UNIT "E" TELECOMMUNICATIONS FIRST FLOOR PLAN

PROJECT
BAILLY ES - ADDITIONS & RENOVATIONS

SHEET
E
T-105

Wednesday, 12/14/2022 - 9:41 AM - LAST SAVED BY:TKPOO
C:\USERS\ZACH\DROPBOX\DUNELAND SCHOOL CORPORATION\BAILLY ELEMENTARY SCHOOL\DRAWINGS\T-DRAWINGS\T-105.DWG