HOENER ASSOCIATES, INC.
ARCHITECTS

July 24, 2024

TO ALL HOLDERS OF BIDDING DOCUMENTS:

SUBJECT: NEW ORCHARD FARM ELEMENTARY SCHOOL
ORCHARD FARM R-V SCHOOL DISTRICT
ST. CHARLES, MISSOURI
PROJECT # 23-09B

Enclosed please find one (1) electronic .pdf copy of Addendum No. 1, dated July 23, 2024, for the above-named project.

Addendum No. 1 is being EMAILED to the General Contractors, Subcontractors and Plan Rooms on the Plan Holders List at Hoener Associates.

BID DATE: The bids are due at 2:00 p.m. CDT, on Thursday, August 8, 2024.

BID LOCATION: Sealed bids will be received by the Orchard Farm R-V School District, Orchard Farm Administration Office, 3489 Boschertown Road, St. Charles, MO.

Please notify the appropriate subcontractors and/or suppliers of this addendum.

Sincerely,

HOENER ASSOCIATES, INC.

Matt McDermott, Project Manager

ADDENDUM NO. 1 PROJECT 23-09B
ORCHARD FARM R-V SCHOOL DISTRICT
NEW ELEMENTARY SCHOOL
ST. CHARLES, MISSOURI JULY 23, 2024

The drawings and specifications are hereby supplemented and amended to include the following particulars:

GENERAL

ITEM NO. 1: GENERAL QUESTIONS

A. **Q:** Backsplash areas in the classrooms above the sinks, is this to be the same as in the restrooms? Should it be the main color? **A: The same tile as the restrooms and will be the field color only.**

B. **Q:** In restrooms, is it only the wet walls that get the pattern tile and the rest of the walls get one color? **A: All wet walls receive one accent tile color for the entire wall and the other walls receive the patterned wall tile.**

C. **Q:** In specification it states wall tile in vestibules, I did not see elevations for this, it is all four walls or certain walls? Or is that a mistake and it is not getting wall tile? **A: No wall tile in the main entry vestibules.**

D. **Q:** Specifications show VCT, but I do not see it in the project, is this a mistake? **A: No VCT floor tile.**

E. **Q:** In specifications I do not see Specs for the rolled rubber for the Cafeteria. Should we value engineer this? **A: No VE. See this Addendum for Specification Section 09710.**

F. **"Add" Supplementary Drawings SD 1, SD 2, and SD 3, included with this Addendum and hereby made a part of the contract documents.**

ARCHITECTURAL

ITEM NO. 2 : ARCHITECTURAL SPECIFICATION SECTION 07610 – PREFORMED METAL SIDING

A. Subparagraph 2.2: **"Add"** products of DMI metal wall panels with 6" wide, 8" wide and 12" wide panels and matching the specifications.

ITEM NO. 3: ARCHITECTURAL SPECIFICATION SECTION 09500 – ACOUSTICAL CEILINGS

A. Subparagraphs 2.3.A (2) (d) and 2.4.A (2) (a): **"Add"** products of USG Compasso Elite trim when meeting or exceeding the project specifications.

B. Subparagraph 2.3 (a) and (b): The open cell dimensions are 8" x 8".

ITEM NO. 4: ARCHITECTURAL SPECIFICATION SECTION 09710 – RUBBER FLOORING

A. **"Add"** Specification Section 09710 – Rubber Flooring to the project.

CIVIL DRAWINGS

ITEM NO. 5: CIVIL DRAWING C1.00

A. **"ADD"** Supplementary Drawing No. SD 30, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows revised grading quantity notes for base bid.

ITEM NO. 6: CIVIL DRAWING C3.00

A. **"ADD"** Supplementary Drawing No. SD 31, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows geogrid fabric added to remediation details.

ITEM NO. 7: CIVIL DRAWING C3.10

A. **"ADD"** Supplementary Drawing No. SD 32, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows size of gates added to plan.

ITEM NO. 8: CIVIL DRAWING C3.20

A. **"ADD"** Supplementary Drawing No. SD 33, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows revisions to Downspout Line "C".

ITEM NO. 9: CIVIL DRAWING C4.00

A. **"ADD"** Supplementary Drawing No. SD 34, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows revised grading limits on the south side of site.

ITEM NO. 10: CIVIL DRAWING C6.00

A. **"ADD"** Supplementary Drawing No. SD 35, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows downspout connection elevations added on storm sewer profiles.

ITEM NO. 11: CIVIL DRAWING C3.10

B. **"ADD"** Supplementary Drawing No. SD 32, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows size of gates added to plan.

ITEM NO. 12: CIVIL DRAWING C3.20

B. **"ADD"** Supplementary Drawing No. SD 33, dated July 23, 2024 included with this Addendum, and hereby made a part of the Contract Documents that shows revisions to Downspout Line "C".

MECHANICAL DRAWINGS

ITEM NO. 13 – MECHANICAL DRAWING SHEET M3.2

A. **"ADD"** Heating water piping to RTU-2.
B. **"ADD"** RLF-2 ductwork.
C. **"ADD"** Storm Shelter control damper locations.
D. **"ADD"** Exhaust duct to Custodial 300.

ITEM NO. 14 – MECHANICAL DRAWING SHEET M3.4

A. **"ADD"** Ductwork for VAV 7-14.

ITEM NO. 15 – MECHANICAL DRAWING SHEET M4.3

A. **"ADD"** Heating water piping to RTU-2.

ITEM NO. 16 – MECHANICAL DRAWING SHEET M6.1

A. **"REVISE"** VAV airflows.
B. **"REVISE"** EF-8 and EF-9.

ITEM NO. 17 – PLUMBING DRAWING SHEET P1.2

A. **"REVISE"** Underslab piping up to floor drain.

ITEM NO. 18 – PLUMBING DRAWING SHEET P1.3

A. **"REVISE"** Underslab piping up to floor drain.

ITEM NO. 19 – PLUMBING DRAWING SHEET P1.4

A. **"REVISE"** Underslab piping up to floor drain.

ITEM NO. 20 – PLUMBING DRAWING SHEET P1.5

A. **"REVISE"** Underslab piping up to floor drain.

ITEM NO. 21 – PLUMBING DRAWING SHEET P2.2

A. **"REVISE"** Floor Drain locations.

ITEM NO. 22 – PLUMBING DRAWING SHEET P2.3

A. **"REVISE"** Floor Drain locations.

ITEM NO. 23 - PLUMBING DRAWING SHEET P2.4

A. **"REVISE"** Floor Drain location.

ITEM NO. 24 – PLUMBING DRAWING SHEET P2.5

A. **"REVISE"** Floor Drain location.

ITEM NO. 25 – PLUMBING DRAWING SHEET P4.2

A. **"REVISE"** Floor Drain location.

ELECTRICAL DRAWINGS

ITEM NO. 26 – ELECTRICAL DRAWING SHEET E0.00

A. **"REVISE"** Safe Defend Subscript Tags.

ITEM NO. 27 – ELECTRICAL DRAWING SHEET E0.30 (NO DRAWING ATTACHED)

A. **"ADD"** '125N' feeder tag to feed between Panel 'EQ-HP1' and Panel 'EQ-HP2'.

ITEM NO. 28 – ELECTRICAL DRAWING SHEET E0.33

A. **"ADD"** Panel 'EQ-HP1' remarks.
B. **"ADD"** Panel 'EQ-A4' phase and wire.
C. **"ADD"** FB-B to floor box schedule.
D. **"ADD"** Generator wiring diagram.

ITEM NO. 29 – ELECTRICAL DRAWING SHEET E0.40 (NO DRAWING ATTACHED)

A. **"CHANGE"** 'CT-1 Cell #1' and 'CT-1 Cell #2' disconnect switch size from 30A to 60A.
B. **"CHANGE"** 'B-1', 'B-2', and 'B-3' disconnect switch type and size from 30A to 20A toggle switch.

ITEM NO. 30 – ELECTRICAL DRAWING SHEET E0.50

A. **"REVISE"** Low voltage responsibility matrix.
B. **"REVISE"** Typical classroom head wall rough-in.

ITEM NO. 31 – ELECTRICAL DRAWING SHEET E1.0

A. **"ADD"** Keyed note 8 callout.
B. **"ADD"** Keyed note 15.
C. **"REVISE"** Keyed note 8.
D. **"REVISE"** Keyed note 11.
E. **"REVISE"** Keyed note 14.
F. **"REVISE"** Flagpole light circuit.

ITEM NO. 32 – ELECTRICAL DRAWING SHEET E2.2

A. **"ADD"** Keyed note 4.
B. **"ADD"** Exit sign to Mech Equipment 306.

ITEM NO. 33 – ELECTRICAL DRAWING SHEET E2.3 (NO DRAWING ATTACHED)

A. **"ADD"** Exit sign above the door from Passage 127 into Passage 128.

ITEM NO. 34 – ELECTRICAL DRAWING SHEET E3.2

A. **"ADD"** Fire alarm power supply and circuit.
B. **"ADD"** Temperature control panel with circuit and 2D.
C. **"CHANGE"** Exterior receptacle outside of Vestibule 322 circuit.
D. **"ADD"** Keyed note 3 and conduit sleeve into DZ Office/Reception 321.
E. **"ADD"** Keyed note 3 and conduit sleeve into Sensory 215.
F. **"ADD"** Keyed note 33.
G. **"CLARIFICATION"** Stub up location to floor boxes in Gymnasium.
H. **"ADD"** Note to Sound 221.
I. **"REVISE"** Location of keyed note 3 and conduit sleeve in Room 303.
J. **"ADD"** Keyed note 3 and conduit sleeve into Storage 302.
K. **"CHANGE"** Keyed note on exterior receptacle outside of Vestibule 401.
L. **"ADD"** Keyed note 3 and conduit sleeve into OT/PT 301.
M. **"CHANGE"** Circuit for receptacles near Corridor 4A.
N. **"ADD"** Circuit homeruns.

ITEM NO. 35 – ELECTRICAL DRAWING SHEET E3.3

A. **"CHANGE"** Circuit for receptacles in Corridor 2A.
B. **"ADD"** Wireless access point with data in Library 200.
C. **"CHANGE"** Keyed note 24 in Meeting 201 to keyed note 25.
D. **"ADD"** Keyed note 24 and cable pathway devices into Admin Suite 103.
E. **"ADD"** Underground conduits to circulation desk in Library 200.
F. **"ADD"** Data points in Green Rm 204 and Sound Rm 203.
G. **"ADD"** Keyed note 27.
H. **"ADD"** Keyed note 27 and conduit sleeve into Storage 202, Storage 116, Cnslr 110, Cnslr 111, Office 108, Office 107, Office 105, and Work Rm 117.
I. **"REVISE"** Receptacle type to GFCI in Teacher's Lunch 129 and Nurse's Suite 125.
J. **"ADD"** Keyed note 1 in multiple locations.
K. **"ADD"** Keyed note 2 in multiple locations.
L. **"ADD"** Receptacles and floor boxes in Conference 104 and Conference 109.
M. **"ADD"** Receptacle in Reading 114.
N. **"ADD"** Wireless access point in Iten Serv 112.

ITEM NO. 36 – ELECTRICAL DRAWING SHEET E3.4 (NO DRAWING ATTACHED)

A. **"CHANGE"** Circuit to receptacle in Tlt 422 and switch outside of Tlt 422 to A5-39.
B. **"DELETE"** Two disconnects on north wall in Elec 425.
C. **"ADD"** Keyed note 3 and conduit sleeve over the doorway into Collab 430 and Collab 433.

ITEM NO.37 – ELECTRICAL DRAWING SHEET E3.5 (NO DRAWING ATTACHED)

A. **"CHANGE"** Keyed note 16 in classrooms 147, 148, 151, and 153 to keyed note 10.
B. **"DELETE"** Two disconnects on north wall in Elec 143.

ITEM NO. 38 – ELECTRICAL DRAWING SHEET E4.4 (NO DRAWING ATTACHED)

A. **"DELETE"** Two disconnects on north wall in Elec 425.

ITEM NO. 39 – ELECTRICAL DRAWING SHEET E4.5 (NO DRAWING ATTACHED)

A. **"DELETE"** Disconnects on north wall of Elec 143.

ITEM NO. 40 – ELECTRICAL DRAWING SHEET E4.12

B. **"DELETE"** Keyed note 4 on RLF-1, RLF-2, and EF-4.
C. **"ADD"** Disconnect switch for CT-1 Cell #2.
D. **"REVISE"** Circuiting for heat trace junction boxes.
E. **"ADD"** Photocell on roof.
F. **"ADD"** Cellular antenna for fire alarm dialer.
G. **"ADD"** Keyed note 10 and 11.

ITEM NO. 41- ELECTRICAL DRAWING SHEET E5.2

A. **"ADD"** Fire alarm power supply and smoke detector on mezzanine.
B. **"CHANGE"** Location of intercom in DZ Office/Reception 321.
C. **"ADD"** Keyed note 11.
D. **"ADD"** Fire alarm speaker/strobe in walk-in cooler/freezer.
E. **"ADD"** Keyed note 2 to carbon monoxide detector in Serving 315.
F. **"ADD"** Fire alarm speaker/strobe in Passage 313.
G. **"DELETE"** Intercom button in Passage 313.
H. **"ADD"** PA1 speaker in Chair Storage 308.
I. **"ADD"** Keyed note 1 to speaker in gym.
J. **"ADD"** PA4 speaker in PE Storage 223.
K. **"CHANGE"** Location of fire alarm speaker/strobe to PE Storage 223.
L. **"ADD"** PA1 speaker and fire alarm speaker/strobe in Corridor 2B.
M. **"CHANGE"** (3) fire alarm strobe only devices to (3) fire alarm speaker only devices in corridor.

ITEM NO. 42 – ELECTRICAL DRAWING SHEET E5.3

A. **"CHANGE"** (3) fire alarm strobe only devices to (3) fire alarm speaker only devices in corridor.
B. **"ADD"** PA1 speaker in Library 200.
C. **"ADD"** PA2 speaker and fire alarm speaker/strobe in South Lobby 101.
D. **"ADD"** Intercom button in Nurse's Suite 125.

ITEM NO. 43 – ELECTRICAL DRAWING SHEET E5.4

A. **"ADD"** Smoke detector in Elec 425.
B. **"DELETE"** Card reader on Alt #1 exterior door.
C. **"ADD"** Keyed note 4 to speakers in north half of Alt #2.
D. **"CHANGE"** (4) fire alarm strobe only devices to (4) fire alarm speaker only devices in corridor.

ITEM NO. 44 – ELECTRICAL DRAWING SHEET E5.5 (NO DRAWING ATTACHED)

A. **"CHANGE"** (4) fire alarm strobe only devices to (4) fire alarm speaker only devices in Corridor 1B.

ITEM NO. 45 – ELECTRICAL DRAWING SHEET E6.2

A. **"ADD"** Junction boxes and circuit for power make-up water meter and blowdown solenoid valve.
B. **"ADD"** Keyed note 10, 11, and 12.
C. **"ADD"** GFCI receptacles for water softeners and note.
D. **"ADD"** Utility meter.
E. **"ADD"** Circuit to HTCP.
F. **"CHANGE"** Circuit for overhead coiling door motor.
G. **"ADD"** GFCI receptacle on east wall in Main Mechanical 305.
H. **"ADD"** GFCI receptacle on east wall in Mech Equipment 306.
I. **"CHANGE"** Feed EMC1 and EMC2 from the same circuit.
J. **"CHANGE"** Circuit to DWCP-1 and DWCP-2.
K. **"CHANGE"** Boiler disconnects to toggle switches.
L. **"ADD"** Refrigerant alarm strobe outside south doors to Main Mechanical 305.

ITEM NO. 46 – ELECTRICAL DRAWING SHEET E6.3

A. **"DELETE"** Two disconnects on north wall in Elec 425.
B. **"DELETE"** Two disconnects on north wall in Elec 143.
C. **"ADD"** Data outlet on MSB1.
D. **"ADD"** Keyed note 9 and 1
E. **"ADD"** Temperature control panel with circuit and 2D.

END OF ADDENDUM #1

SECTION 09710 - RUBBER FLOORING (Addendum No. 1)

1. GENERAL

1.1 SCOPE

A. Furnish labor, material, services, and equipment necessary to deliver and install the resilient floor products specified herein and as indicated on the drawings.
B. Related work specified elsewhere:

(1) Section 01000 - General Provisions.
(2) Section 01030 - Alternatives.
(3) Section 03100 - Concrete and Cement Work.
(4) Section 04200 - Masonry and Mortar Material.
(5) Section 05000 - Miscellaneous Metal.
(6) Section 06100 - Carpentry.
(7) Section 06200 - Millwork.
(8) Section 07900 - Caulking and Sealants.
(9) Section 08100 - Metal Frames and Doors.
(10) Section 08400 - Aluminum Entrance Work.
(11) Section 09250 - Gypsum Wallboard (Drywall).
(12) Section 09300 - Ceramic Tile.
(13) Section 09680 - Carpeting.
(14) Section 09900 - Painting and Finishing.
(15) Section 10260 - Wall Corner Guards.
(16) Section 10500 - Lockers.
(17) Section 12300 - Casework (Ready-Made)..

1.2 SAMPLES

A. Actual color samples of each type of material shall be submitted to the Architect for color selection. Include complete color range of floor covering and accessories.

1.3 QUALIFICATIONS

A. The following manufacturers are approved for rubber floor covering:

(1) Nora Systems, Inc.
(2) Taraflex Sports Flooring.

B. The following manufacturers are approved for special flooring and miscellaneous accessories:

(1) Nora Systems, Inc.
(2) Taraflex Sports Flooring.

1.4 TEMPERATURES

A. Minimum working temperature shall be 70° F.

1.5 DELIVERY AND STORAGE

A. Materials shall be delivered to the project site in the manufacturer's original unopened containers with brand name marked clearly.
B. Store materials at 70° F minimum temperature for 48 hours before installation.

1.6 REFERENCES

A. American Society for Testing and Materials (ASTM)

(1)	ASTM D-2047	Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine
(2)	ASTM D-3389	Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double-Head Abrader)
(3)	ASTM E-84	Standard Test Method for Surface Burning Characteristics of Building Materials
(4)	ASTM E-648	Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
(5)	ASTM E-662	Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
(6)	ASTM F-150	Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
(7)	ASTM F-710	Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
(8)	ASTM F-1344	Standard Specification for Rubber Floor Tile
(9)	ASTM F-1859	Standard Specification for Rubber Sheet Floor Covering Without Backing
(10)	ASTM F-1860	Standard Specification for Rubber Sheet Floor Covering With Backing
(11)	ASTM F-1861	Standard Specification for Resilient Wall Base
(12)	ASTM F-2169	Standard Specification for Resilient Stair Treads
(13)	ASTM F-2170	Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *in situ* Probes
(14)	ASTM F-2420	Standard Test Method for Determining Relative Humidity on the Surface of Concrete Floor Slabs Using Relative Humidity Probe Measurement and Insulated Hood
(15)	ASTM F-4046 101	Static Decay
(16)	ESD S7.1 100	Resistive Characterization of Flooring Materials
(17)	EDS STM 97.2	Floor Materials and Footwear – Voltage Measurement on a Person

B. National Fire Protection Association (NFPA)

(1)	NFPA 253	Test Method for Critical Flux of Floor Covering Systems Using a Radiant Energy Source
(2)	NFPA 258	Test Method for Specific Density of Smoke Generated by Solid Materials

2. PRODUCTS

2.1 GENERAL

A. All materials shall be best quality, free from cracks, dents, spalls, or other defects.
B. Color and pattern of flooring shall be consistent throughout each area.
C. Shorts, mixed stock, or remnant materials will not be accepted or permitted for any of this work.

2.2 MATERIALS

A. Multi-Purpose/Cafeteria Floor and Stage Floor

(1) **nora sportsfloor, Article 1334**, shock absorption and ball bounce properties, extra heavy traffic, smooth surface, 6.0 mm (0.24 inches) overall thickness, 12.0 m by 1.22 m (39.3’ by 48”) roll size. Compound #700. Nora rubber content approximately 31%.

B. Adhesive: This Contractor shall include in its Bid the option to use either one of the following adhesive products listed below at no additional cost to the Owner.

(1) Waterproof cement as recommended by the manufacturer for the product, and the surface upon which it is to be installed.
(2) Mohawk Group, NU Spraylock Platinum flooring Adhesive Spray System. This product shall be installed per manufacturer?s recommendations and shall be provided with a five (5) year warranty on all adhesive breakdown.

C. Provide the floor pattern kit for the Multi-Purpose/Cafeteria court layouts.

3. EXECUTION

3.1 INSPECTION AND PREPARATION

A. Inspect sub-floors before starting work, and notify the Contractor in writing of all defects in sub-floor. A copy of such letter shall be sent to the Architect. Do not proceed until such defects as reported have been corrected. Starting of work implies acceptance of sub-floor surfaces and conditions.
B. Lay materials only when floor and wall surfaces are sufficiently dry and clean of grease, dust, etc., to insure complete adhesion.
C. Fill cracks and joints wider than 1/8" and depressions and holes larger than 3" with spackle or cement grout in accordance with the manufacturer's instructions so that surface is smooth and even.
D. Furnish full size units equal to 2 percent (2%) of quantity of resilient flooring installed as extra materials. Properly label and package extra materials. Deliver to the Owner’s designated storage area.
E. Test for moisture as detailed in ASTM F-2170. Relative humidity shall not exceed 75%. Do not proceed with work until results of moisture condition tests are acceptable.
F. Perform adhesive bond test in each major area, minimum 1 per 1,000 square feet, prior to installation. Examine after 72 hours to determine whether bond is solid and no moisture is present. Do not proceed with work until results of bond test are acceptable.

3.2 INSTALLATION

A. Install flooring in accordance with manufacturer's installation guides. Comply with the following:

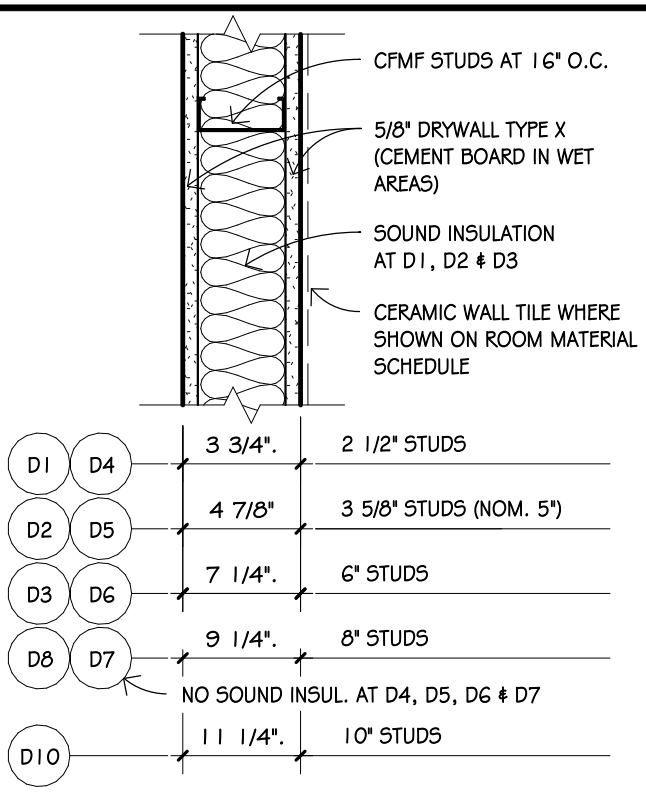
(1) Do not mix manufacturing batches of a color within the same area.
(2) Do not install flooring over building expansion joints.
(3) Do not install defective or damaged flooring.
(4) Layout flooring to provide equal size at perimeter. Adjust layout as necessary to eliminate flooring which is cut to less than half full width.
(5) Lay flooring with arrows in the same direction (excluding borders and some flash coving methods).
(6) Install flooring without cracks or voids at seams. Lay seams together without stress.
(7) Scribe flooring neatly at perimeter and obstructions.
(8) Extend flooring into reveals, closets, and similar openings.
(9) Remove excessive adhesive immediately.
(10) Install reducer strips at exposed edges.

B. **norament** SEAMLESS FLOORING INSTALLATION . Rout seams and weld together with coordinated colored cold weld compound in accordance with resilient flooring manufacturer’s installation guides.

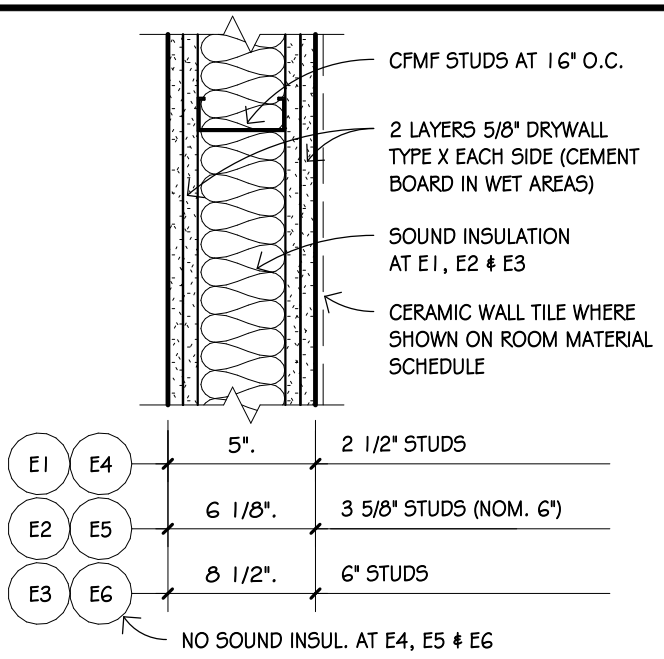
3.3 CLEANING AND PROTECTION

A. Touch-up and repair minor damage to eliminate all evidence of repair. Remove and replace work which cannot be satisfactorily repaired.
B. Clean flooring surfaces only after adhesive has fully cured, no sooner than 72 hours after installation, unless agreed with nora representative. Clean surfaces with non-abrasive materials and methods recommended by manufacturer's maintenance guide. Remove and replace work that cannot be successfully cleaned.
C. Protect completed work from damage and construction operations and inspect immediately before final acceptance of project.
D. No metal or plastic wheels, the shape of contact surfaces of equipment wheels must be flat, shore hardness "A" of the wheels' material must be $\leq$ 90. Office chairs/furniture wheels shall be soft type (W according to EN 12529).

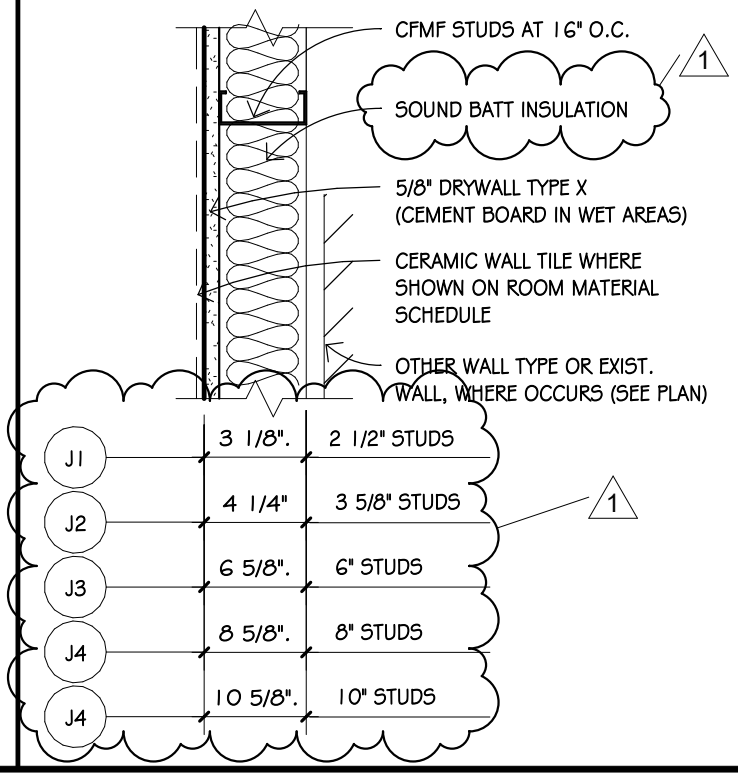
END OF SECTION 09710



SEALED AGAINST STRUCTURE ABOVE FOR 1-HOUR FIRE RATING, SOUND RATING OR APPEARANCE WHERE SHOWN ON REFLECTED CEILING PLAN. FIRE RATING PER UL DESIGN U465



SEALED AGAINST STRUCTURE ABOVE FOR 2-HOUR FIRE RATING, SOUND RATING OR APPEARANCE WHERE SHOWN ON REFLECTED CEILING PLAN. FIRE RATING PER UL DESIGN U411



HOENER ASSOCIATES, INC.
ARCHITECTS
ST. LOUIS, MISSOURI

MARK A. REUTHER
LICENSE #006452

ARCHITECTURAL CORP.
NO. 000193

PROJECT NO. 23-09B

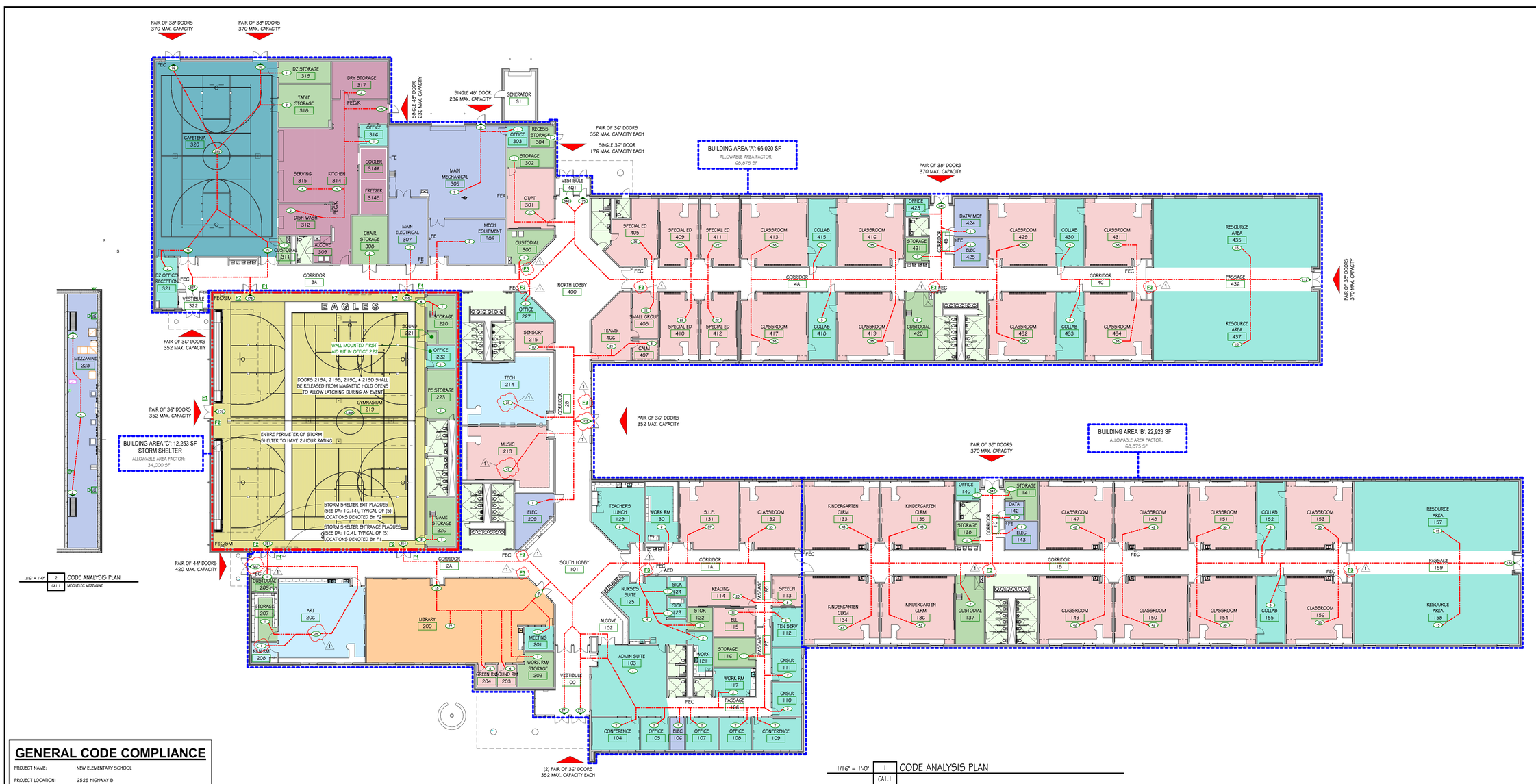
BY: AC

DATE: 07-02-2024

REV.: ADDENDUM 1 07-23-24

SD: 1

DA: 1.22



GENERAL CODE COMPLIANCE

PROJECT NAME: NEW ELEMENTARY SCHOOL

PROJECT LOCATION: 2525 HIGHWAY B
ST. CHARLES, MISSOURI

PROJECT DESCRIPTION: NEW EDUCATIONAL FACILITY

BUILDING JURISDICTION: ST. CHARLES, MISSOURI

FIRE SUPPRESSION: FULL SPRINKLER SYSTEM

BUILDING CODE IN EFFECT:

2021 INTERNATIONAL BUILDING CODE (IBC)
2021 INTERNATIONAL PLUMBING CODE (IPC)
2021 INTERNATIONAL MECHANICAL CODE (IMC)
2020 NATIONAL ELECTRICAL CODE (NEC)
ICC 500 REQUIREMENTS FOR STORM SHELTERS

BUILDING CODE INFORMATION:

TYPE OF CONSTRUCTION: 2B
USE GROUP: E (EDUCATIONAL)

BUILDING AREAS:
AREA 'A'
ALLOWABLE AREA: 68,875 S.F. ACTUAL AREA: 66,020 S.F.

AREA 'B'
ALLOWABLE AREA: 68,875 S.F. ACTUAL AREA: 22,923 S.F.

AREA 'C'
ALLOWABLE AREA: 34,000 S.F. ACTUAL AREA: 12,253 S.F.

SEE CA1.1 FOR CODE ANALYSIS PLAN
SEE CA1.2 FOR STORM SHELTER CODE COMPLIANCE INFORMATION

EXITING DIAGRAM NOTES

(20) OCCUPANCY LOAD (FOR EACH SPACE OR GROUP OF SPACES)

(A) OCCUPANCY LOAD THROUGH EACH EXTERIOR DOOR OR SET OF DOORS

250 FT FURTHEST EXIT ACCESS TRAVEL DISTANCE

EXIT CAPACITY FOR DOORS IS CALCULATED USING 0.20" PER PERSON (BASED ON IBC 2021 SECTION 1005.3.2). TYPICAL 3'-0" DOOR LEAF (35 1/4" CLEAR) DOOR CAPACITY IS 176 PEOPLE.

SEE CONSTRUCTION DOCUMENTS FOR FIRE EXTINGUISHER LOCATIONS, FIRE SEPARATIONS, AND ADDITIONAL INFORMATION. SEE ALSO CODE ANALYSIS.

OCCUPANCY LEGEND

- ASSEMBLY (A2)
- ASSEMBLY (A3)
- BUSINESS (B)
- EDUCATIONAL
- KITCHEN
- LIBRARY
- MECHANICAL, ELECTRICAL, DATA
- TOILETS
- STORAGE
- SHOP/LAB

PLUMBING FIXTURE REQUIREMENTS & CALCULATIONS

GENERAL PLUMBING REQUIREMENTS — REFERENCE CODES: 2021 IBC

FIXTURE DESCRIPTION	TYPE OF OCCUPANCY	PROPOSED OCCUPANT LOAD (MALE / FEMALE)	REQUIRED FIXTURE PER OCCUPANT		REQUIRED FIXTURE COUNT		PROPOSED FIXTURE COUNT
			MALE	FEMALE	MALE	FEMALE	
WATER CLOSETS / URINALS	ASSEMBLY	1,702 OCCUPANTS (851 M / 851 F)	1:125	1:65	7	12	
	BUSINESS	123 OCCUPANTS	1:25 FOR FIRST 50 THEN 1:50		4		
	EDUCATIONAL	1,293 OCCUPANTS (647 M / 647 F)	1:50	1:65	13	10	
	STORAGE	46 OCCUPANTS	1:100		1		
	PROPOSED TOTAL:				47		57
LAVATORIES	ASSEMBLY	1,702 OCCUPANTS	1:200		9		
	BUSINESS	123 OCCUPANTS	1:40 FOR FIRST 80 THEN 1:80		3		
	EDUCATIONAL	1,293 OCCUPANTS	1:50		26		
	STORAGE	46 OCCUPANTS	1:100		1		
	PROPOSED TOTAL:				39		55
DRINKING FOUNTAINS (ELECTRIC WATER COOLERS)	ASSEMBLY	1,702 OCCUPANTS	1:500		4		
	BUSINESS	123 OCCUPANTS	1:100		2		
	EDUCATIONAL	1,293 OCCUPANTS	1:100		13		
	STORAGE	46 OCCUPANTS	1:100		1		
	PROPOSED TOTAL:				20		20
SERVICE SINKS	ASSEMBLY	1,702 OCCUPANTS	1		1		
	BUSINESS	123 OCCUPANTS	1		1		
	EDUCATIONAL	1,293 OCCUPANTS	1		1		
	STORAGE	46 OCCUPANTS	1		1		
	PROPOSED TOTAL:				4		7

STORM SHELTER - SPECIAL INSTRUCTIONS FOR OCCUPANTS

1. OCCUPANTS SHOULD STAY MINIMUM 12" FROM EXTERIOR SHELTER WALLS DURING A HIGH WIND EVENT.
2. ALL STORM SHELTER DOORS MUST BE CLOSED, LATCHED, AND UNLOCKED PRIOR TO AND DURING A HIGH WIND EVENT.
3. DOORS ON MAGNETIC HOLD OPENS SHALL BE RELEASED FROM HOLD OPENS TO ALL LATCHING DURING AN EVENT.

LEGEND

- F1 — STORM SHELTER PERIMETER IS INDICATED BY 2HR SEPARATION LINE
- F1 — STORM SHELTER ENTRANCE PLAQUES, SEE DA: 10.14
- F2 — STORM SHELTER EXIT PLAQUES, SEE DA: 10.14
- F3 — STORM SHELTER DIRECTIONAL SIGNAGE WILL BE PROVIDED THROUGH BUILDING TO SAFELY DIRECT BUILDING OCCUPANTS TO THE NEAREST STORM SHELTER, SEE DA: 10.15

ABBREVIATIONS

FE	WALL MOUNTED FIRE EXTINGUISHER
FEC, FECK, FEC/SM	FIRE EXTINGUISHER CABINET
SSO	STORM SHELTER OCCUPANTS

STORM SHELTER CONTRACTOR RESPONSIBILITY

EACH CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-FORCE RESISTING SYSTEM OR ANY COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN BELOW SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION, THE RESPONSIBLE DESIGN PROFESSIONAL, AND THE OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.

THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN:

1. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
2. ACKNOWLEDGEMENT THAT THE CONTROL WILL BE EXERCISED TO OBTAIN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS.
4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.
5. ACKNOWLEDGEMENT THAT ALL STORM SHELTER DOORS, WINDOWS, AND OTHER ENVELOPE PENETRATIONS WILL MEET REQUIREMENTS AS SET FORTH BY CHAPTERS 3 4 6 OF THE ICC 500-2014.
6. ALL PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION SYSTEMS, INCLUDING PIPING AND UTILITY LINES, LARGER THAN 3 1/2 SQUARE INCHES (2258 MM²) IN AREA FOR RECTANGULAR PENETRATIONS OR 2 1/2" (63.5MM) IN DIAMETER, SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 306.3.

EXCEPTION: PRE-FABRICATED OR PANELIZED STORM SHELTER COMPONENTS WHICH HAVE BEEN INSPECTED AND LABELED BY AN APPROVED AGENCY MEETING THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.

STORM SHELTER DESIGN INFORMATION FOR ALL SHELTERS

THE FOLLOWING INFORMATION IS BEING PROVIDED FOR DOCUMENTATION ACCORDING TO SECTION 107 OF THE "STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS".

TYPE OF SHELTER: COMMUNITY TORNADO SHELTER

WIND DESIGN: CONFORMS TO THE PROVISIONS OF THE ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS, 2020 EDITION

DESIGN WIND SPEED: 250 MPH
INTERNAL PRESSURE COEFFICIENT: 0.55
TOPOGRAPHIC FACTOR: 1.0
DIRECTIONAL FACTOR: 1.0

WIND EXPOSURE CATEGORY: C

FLOOD PLAIN STATEMENT:
THIS SHELTER HAS NOT BEEN CONSTRUCTED WITHIN AN AREA SUSCEPTIBLE TO FLOODING IN ACCORDANCE WITH CHAPTER 4 OF THE ICC-500 STANDARDS.

BASE FLOOD ELEVATION: 453.00' (FINISH FLOOR)

BASE FLOOD ELEVATION: ABOVE THE 500-YEAR FLOOD ELEVATION

DOCUMENTATION INFORMATION:
THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING DOCUMENTATION THAT COMPONENTS OF THE SHELTER ENVELOPE WILL MEET THE PRESSURE AND MISSILE IMPACT TEST REQUIREMENTS IDENTIFIED IN CHAPTER 3 AND CHAPTER 8 OF THE ICC-500 STANDARDS.

SHELTER INFORMATION:
IN ADDITION TO THIS SHEET REFER TO SHEETS A1.2, A1.3, A1.4 4 STRUCTURAL DRAWINGS FOR ADDITIONAL BUILDING PLANS AND CONSTRUCTION INFORMATION. ALSO SEE STRUCTURAL SHEETS FOR ADDITIONAL RELATED CODE INFORMATION.

LOWEST SHELTER FLOOR ELEVATION: 651.00 (SEE CIVIL DRAWINGS)

GENERAL NOTES

1. EACH STORM SHELTER AREA SHALL BE PROVIDED WITH A CLASS 'A' FIRST AID KIT COMPLYING WITH ANSI/ISEA Z308.1 (LOCATIONS INDICATED ON PLANS)
2. OWNER SHALL PROVIDE A BUILDING PLAN INDICATING THE LOCATION OF ALL STORM SHELTERS IN THE OFFICE OF THE FACILITY MANAGER (OFFICE 303).

BUILDING AREA C - STORM SHELTER OCCUPANT LOADS

ROOM NUMBER	ROOM NAME	OCCUPANCY TYPE	IBC 2021 OCCUPANT LOADS (GENERAL EGRESS)			STORM SHELTER OCCUPANT LOADS:			
			TOTAL AREA	AREA per OCCUPANT	OCCUPANT LOAD	REDUCTION FACTOR	SHELTER AREA	AREA per OCCUPANT	OCCUPANT LOAD
219	GYMNASIUM	ASSEMBLY A-3	9826 SF	7 SF NET	1,404	15%	8,352 SF	5SF	1,670
220	STORAGE	STORAGE GROUP S	230 SF	300 SF GROSS	1	N/A			
221	SOUND	STORAGE GROUP S	23 SF	300 SF GROSS	1	N/A			
222	OFFICE	BUSINESS GROUP B	122 SF	150 SF GROSS	1	N/A			
223	PE STORAGE	STORAGE GROUP S	259 SF	300 SF GROSS	1	N/A			
224	BOYS	TOILETS	133 SF						
225	GIRLS	TOILETS	154 SF						
226	GAME STORAGE	STORAGE GROUP S	258 SF	300 SF GROSS	1	N/A			
226	MEZZANINE	MECH ELEC DATA	1399 SF	300 SF GROSS	5	N/A			

STORM SHELTER CODE COMPLIANCE

STORM SHELTER BUILDING AREA CALCULATIONS

TOTAL BUILDING AREA:	12,250 SF
GROSS FLOOR AREA (INCLUDING MECH/ELEC MEZZANINE):	12,404 SF
NON-OCCUPIABLE FLOOR AREA:	2,578 SF
TOTAL USABLE FLOOR AREA:	9,826 SF

STORM SHELTER TARGET CALCULATIONS:

STANDING OCCUPANTS:	1,662
WHEELCHAIR-BOUND OCCUPANTS:	8
MAXIMUM NUMBER OF OCCUPANTS:	1,670

STORM SHELTER PLUMBING CALCULATIONS:

OCCUPANT LOAD:	1,670
TOILETS REQUIRED (1 PER 250 FOR THE FIRST FIRST 500 OCCUPANTS AND 1 ADDITIONAL PER 500 OCCUPANTS OR PORTIONS THEREOF >500 OCCUPANTS)	5 REQD
LAVATORIES REQUIRED (1 PER 1,000 OCC.)	2 REQD
FIXTURES PROVIDED:	5 TOILETS 4 LAVATORIES
STORM SHELTER DESIGN CRITERIA:	ICC 500- 2020

INTERNATIONAL CODE COUNCIL (ICC) AND NATIONAL STORM SHELTER ASSOCIATION (NSSA) STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS

SHELTER VENTILATION RATE: 13,200 CFM

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PLUMBING
MECH / ELEC / TECHNOLOGY
FOOD SERVICE

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PROJ. NO. 23-09B

DATE ISSUED
07-02-2024

DATE REVISION
1 07-23-24 Addendum 1

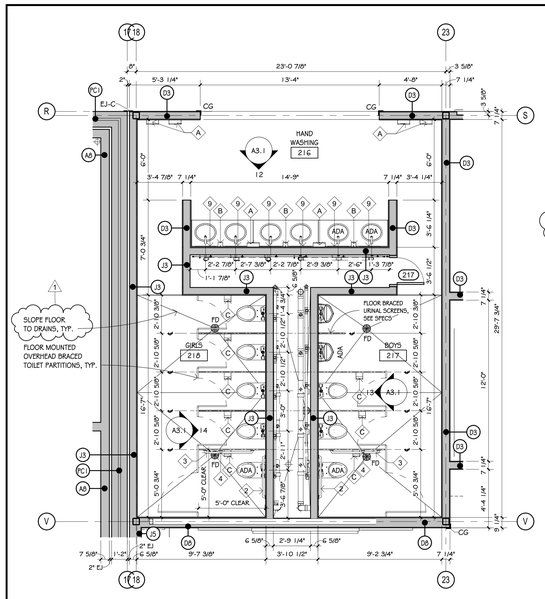
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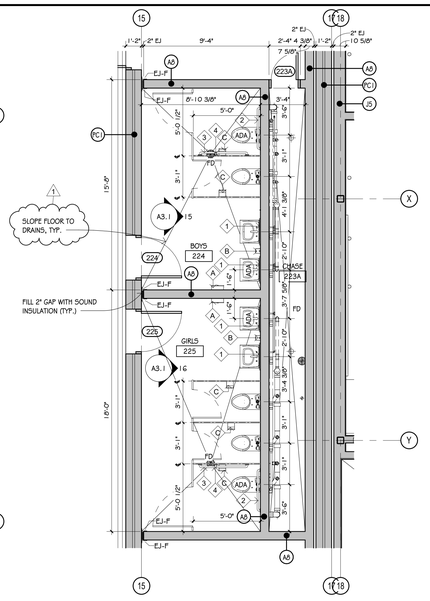
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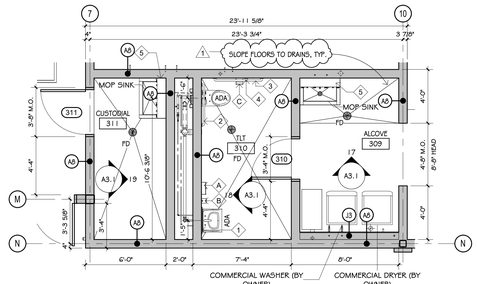
CODE ANALYSIS PLAN



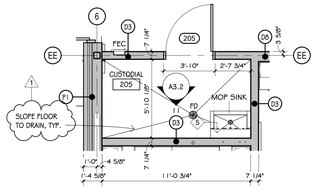
1/4" = 1'-0" 1 A3.1 HAND WASHING 216, BOYS 217, AND GIRLS 218



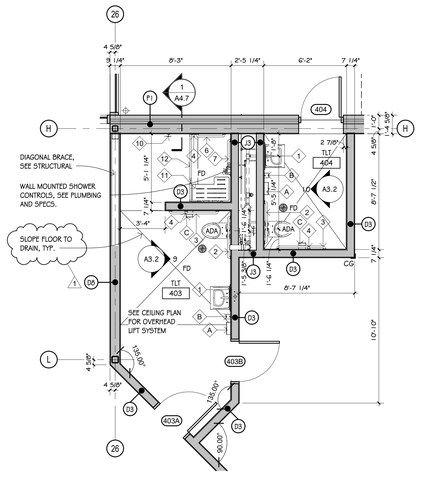
1/4" = 1'-0" 2 A3.1 BOYS 224 AND GIRLS 225



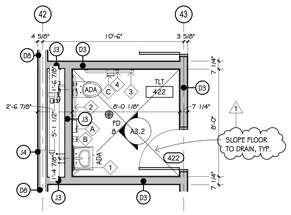
1/4" = 1'-0" 3 A3.1 ALCOVE 309, TLT 310, AND CUSTODIAL 311



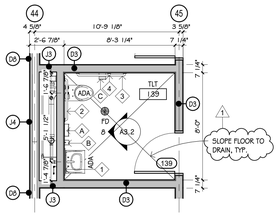
1/4" = 1'-0" 4 A3.1 CUSTODIAL 205



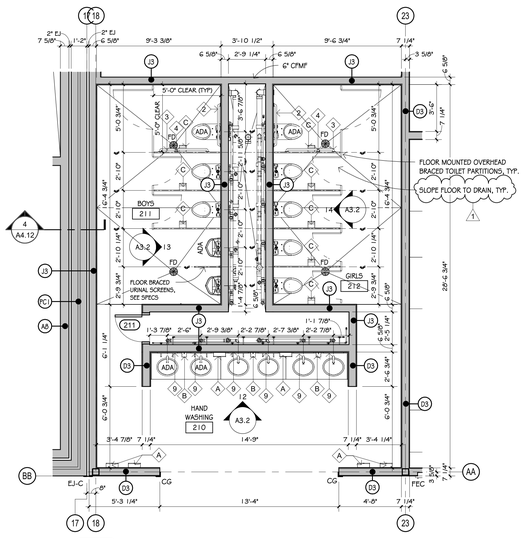
1/4" = 1'-0" 5 A3.1 TOILET 403 & TOILET 404



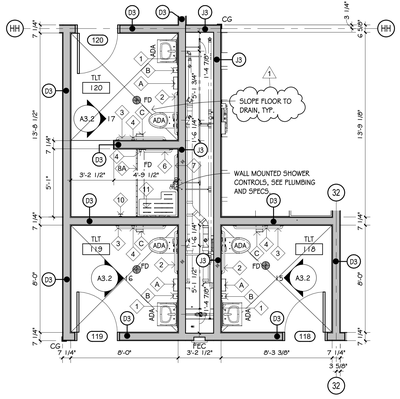
1/4" = 1'-0" 10 A3.1 TOILET 422



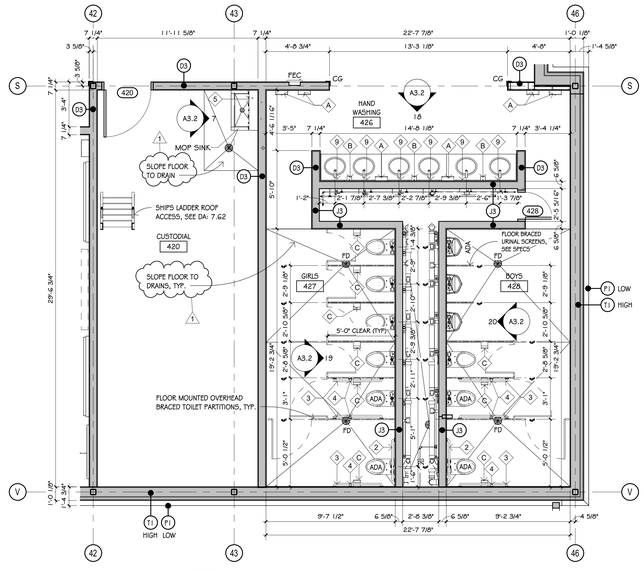
1/4" = 1'-0" 11 A3.1 TOILET 139



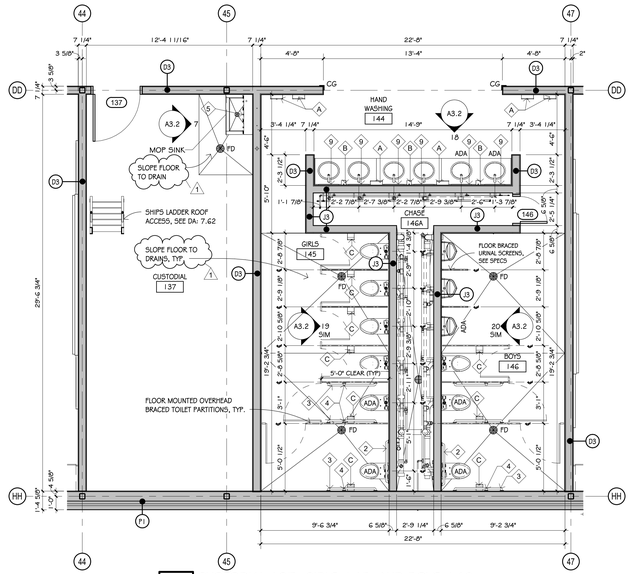
1/4" = 1'-0" 6 A3.1 HAND WASHING 210, BOYS 211, AND GIRLS 212



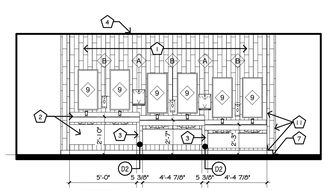
1/4" = 1'-0" 7 A3.1 TLT 118, 119, AND 120



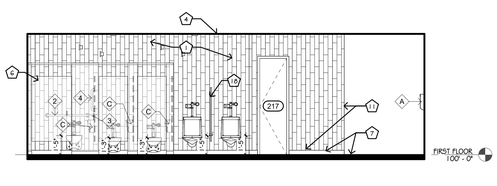
1/4" = 1'-0" 8 A3.1 CUSTODIAL 420, GIRLS 427, AND BOYS 428



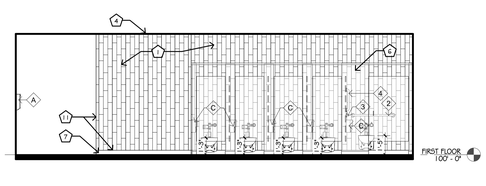
1/4" = 1'-0" 9 A3.1 CUSTODIAL 137, GIRLS 145, AND BOYS 146



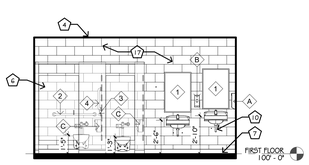
1/4" = 1'-0" 12 A3.1 AREA A HAND WASHING 216



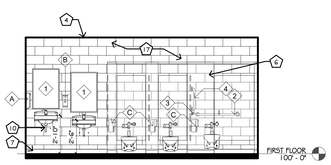
1/4" = 1'-0" 13 A3.1 AREA A BOYS 217



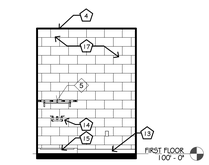
1/4" = 1'-0" 14 A3.1 AREA A GIRLS 218



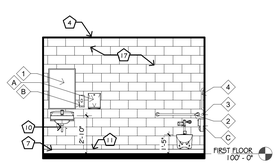
1/4" = 1'-0" 15 A3.1 AREA A BOYS 224



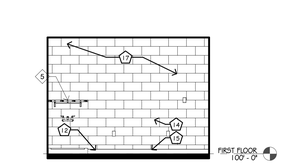
1/4" = 1'-0" 16 A3.1 AREA A GIRLS 225



1/4" = 1'-0" 17 A3.1 AREA A ALCOVE 309



1/4" = 1'-0" 18 A3.1 AREA A TLT 310



1/4" = 1'-0" 19 A3.1 AREA A CUSTODIAL 311

PLUMBING ELEVATIONS KEYED NOTES

1	INSTALL WALL TILE AT ALL WALLS FROM FLOOR TO CEILING, THROUGHOUT ENTIRE SPACE. SEE 21-24/A3.2 FOR TYPICAL TILE PATTERN THROUGHOUT.
2	SOLID SURFACE COUNTERTOPS WITH 4" BACKSPLASH & SLOPED APRON BELOW, SEE DA: 6.11-6.12.
3	SUPPORT WALL, SEE DA: 6.14.
4	ACOUSTICAL CEILING, SEE SPECS.
5	DRYWALL CEILING, SEE SPECS.
6	FLOOR MOUNTED, OVERHEAD BRACED TOILET PARTITIONS, SEE SPECS.
7	SEAMLESS EPOXY FLOORING AND BASE, SEE SPECS.
8	CEILING MOUNTED TRANSFER SYSTEM TRACK, SEE SPECS.
9	CEILING MOUNTED SHOWER CURTAIN AND TRACK. SPLIT TRACK AND CURTAIN TO ACCOMMODATE OVERHEAD TRANSFER SYSTEM.
10	INSULATE HOT WATER & DRAIN LINES (ADA APPROVED), SEE PLUMBING SPECS.
11	PROVIDE SCHLUTER 'JOLLY' METAL TRIM (OR APPROVED EQUAL) AT ALL OUTSIDE CORNERS, EDGES, AND MATERIAL TRANSITIONS (TYP.). SEE SPECS AND DIVISION 9 DETAILS.
12	RESILIENT BASE, SEE SPECS.
13	QUARRY TILE FLOOR AND BASE, SEE SPECS.
14	WALL MOUNTED FAUCET, SEE PLUMBING
15	MOPUTILITY SINK, SEE PLUMBING
16	PAINTED DRYWALL, SEE FINISH PLAN AND SCHEDULE ON A7.1
17	PAINTED CMU WALLS, SEE FINISH PLAN AND SCHEDULE ON A7.1
18	WALL MOUNTED FLOOR BRACED URINAL PARTITION, SEE SPECS.
19	TILE PLUMBING WALL AT EWC RECESS, SEE 23/A3.2 FOR TYPICAL TILE PATTERN
20	PROVIDE STAINLESS STEEL BACKSPLASH PANELS AT BACK WALL AND SIDE WALL, 60" TALL. WIDTH AND DEPTH TO MATCH UTILITY SINK SIZE.

WASHROOM ACCESSORIES NOTES

1. WASHROOM ACCESSORY SCHEDULE, SEE A3.3 AND PROJECT SPECIFICATIONS
2. ITEMS A THRU C ARE OWNER PROVIDED ACCESSORIES THAT TO BE INSTALLED BY THE GENERALL CONTRACTOR. VERIFY LOCATIONS AND QUANTITIES.
3. SEE DA: 1.11-1.13 FOR WASHROOM ACCESORY MOUNTING HEIGHTS.

WASHROOM ACCESORIES

1	ITEM 1: 24 x 36 WALL MOUNTED MIRROR
2	ITEM 2: 36" GRAB BAR
3	ITEM 3: 42" GRAB BAR
4	ITEM 4: 18" GRAB BAR
5	ITEM 5: MOP STRIP AND UTILITY SHELF
6	ITEM 6: 24" GRAB BAR
7	ITEM 7: 30" GRAB BAR
8A	ITEM 8A: 60" SHOWER ROD W/ CURTAIN
8B	ITEM 8B: 70" WIDE VINYL SHOWER CURTAIN
9	ITEM 9: 18 x 36 WALL MOUNTED MIRROR
10	ITEM 10: ROBE HOOK
11	ITEM 11: FOLDING SHOWER SEAT
12	ITEM 12: CEILING MOUNTED SHOWER CURTAIN WITH SPLIT TRACK
A	ITEM A: PAPER TOWEL DISPENSER (OWNER PROVIDED, CONTRACTOR INSTALLED)
B	ITEM B: WALL MOUNTED SOAP DISPENSER (OWNER PROVIDED, CONTRACTOR INSTALLED)
C	ITEM C: TOILET PAPER DISPENSER (OWNER PROVIDED, CONTRACTOR INSTALLED)

MARK A. REUTHER
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PROJ. NO. 23-09B

DATE ISSUED
07-02-2024

DATE REVISION
1 07-23-24 Addendum 1

DRAWN BY AC

CHECKED BY MR

SHEET NO.
A3.1
SD: 3

MECHANICAL GENERAL NOTES:

1. THESE DRAWINGS WERE PREPARED UTILIZING EXISTING DRAWINGS AND FIELD OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING WORK. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL TAKE EXTREME CARE HANDLING MATERIAL DEBRIS IN AN EFFORT TO AVOID ANY DISRUPTIONS OF ONGOING BUILDING OPERATIONS. PROJECT SHALL BE CLEANED FREE OF DUST AND DEBRIS AT THE END OF THE WORK DAY.
3. CONTRACTOR SHALL COORDINATE ANY SHUTDOWN OF UTILITIES WITH THE OWNER'S REPRESENTATIVE. NOTICE FOR SHUTDOWN SHALL BE GIVEN TO THE OWNER AT LEAST THREE DAYS PRIOR TO SHUTDOWN.
4. CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.
5. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR FIELD COORDINATION AND DIMENSIONAL VERIFICATION AS SPECIFIED IN THE PROJECT MANUAL.
6. ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS AND ALL LOCAL CODES.
7. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING PIPING AND UTILITY LINES, LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR PENETRATIONS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OF THE STORM SHELTER ENVELOPE. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF A PROTECTIVE SHROUD.

MECHANICAL KEYED NOTES:

1 PROVIDE SHROUD PROTECTION PER ICC 500 FOR PIPE PENETRATIONS THROUGH SHELTER WALL.

2 4"x4" SUPPLY DUCT TO STUB INTO CEILING SPACE TO PROVIDE 25 CFM OF FRESH AIR TO FCU.

3 COORDINATE LOCATION OF AIR DEVICE AND DUCT WITH OPERATION AND SWING OF BASKETBALL GOAL.

N
MEZZANINE PLAN - MECHANICAL
SCALE: 1/8" = 1'-0"

N
FLOOR PLAN - AREA A - MECHANICAL
SCALE: 1/8" = 1'-0"

KEY PLAN

FIRST FLOOR PLAN - AREA A - MECHANICAL

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP. NO. 000087

ST. CHARLES, MISSOURI

NEW ELEMENTARY SCHOOL - 2525 HWY B

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
ARCHITECTURE | PLANNING | INTERIOR DESIGN
ST. LOUIS, MISSOURI 63109
OFFICE: 314.781.9855

CONSULTING ENGINEERS:
ACADIA ENGINEERING
ASDG, LLC
MERCURE ENGINEERING
RENKE & CORTESE, INC.
HoenerArchitects.com

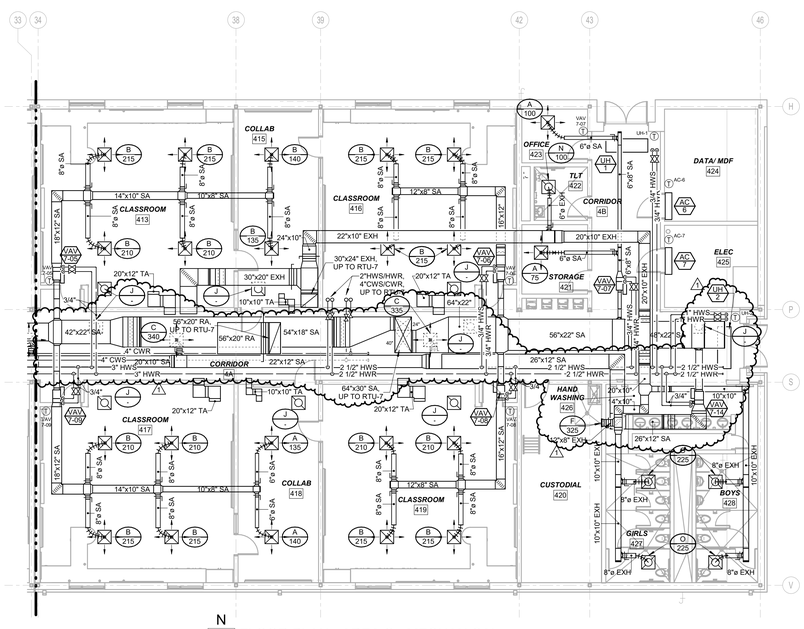
CIVIL / SURVEY
STRUCTURAL
FIRE PROTECTION
MECH / PLUMB / ELEC

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING BEFORE WORK IS EXECUTED. THIS DRAWING IS THE PROPERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

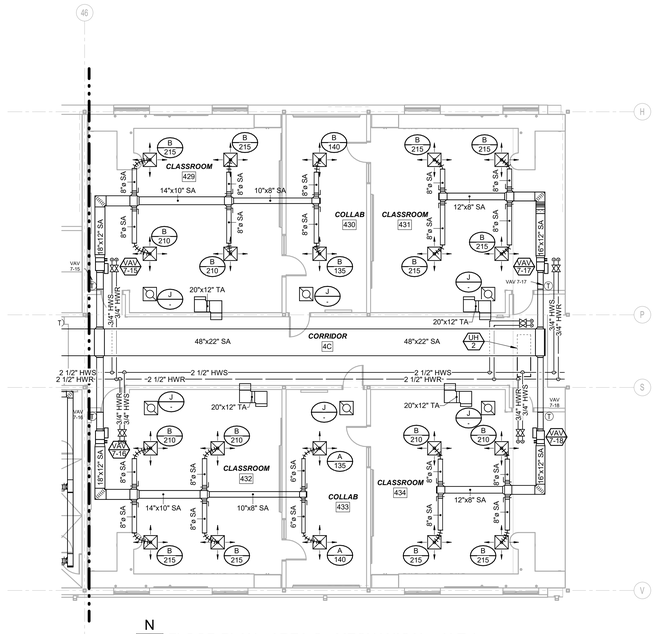
PROJ. NO.	23-09B
DATE ISSUED	
	07-02-2024
DATE REVISION	
1	07/23/24 ADDENDUM #1
DRAWN BY	Author
CHECKED BY	CW
SHEET NO.	
	M3.2
	SD: 4

MECHANICAL GENERAL NOTES:

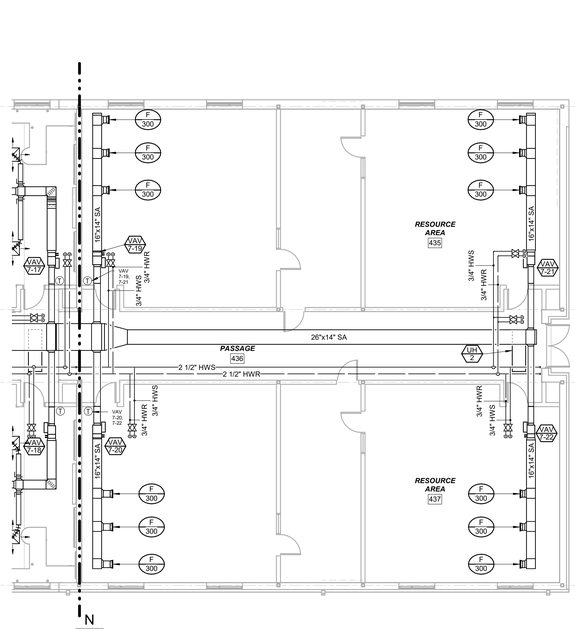
1. THESE DRAWINGS WERE PREPARED UTILIZING EXISTING DRAWINGS AND FIELD OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING WORK. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL TAKE EXTREME CARE HANDLING MATERIAL DEBRIS IN AN EFFORT TO AVOID ANY DISRUPTIONS OF ONGOING BUILDING OPERATIONS. PROJECT SHALL BE CLEANED FREE OF DUST AND DEBRIS AT THE END OF THE WORK DAY.
3. CONTRACTOR SHALL COORDINATE ANY SHUTDOWN OF UTILITIES WITH THE OWNER'S REPRESENTATIVE. NOTICE FOR SHUTDOWN SHALL BE GIVEN TO THE OWNER AT LEAST THREE DAYS PRIOR TO SHUTDOWN.
4. CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.
5. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR FIELD COORDINATION AND DIMENSIONAL VERIFICATION AS SPECIFIED IN THE PROJECT MANUAL.
6. ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS AND ALL LOCAL CODES.
7. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING PIPING AND UTILITY LINES, LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR PENETRATIONS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OF THE STORM SHELTER ENVELOPE. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF A PROTECTIVE SHROUD.



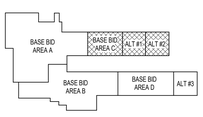
N
FLOOR PLAN - AREA C - MECHANICAL
SCALE: 1/8" = 1'-0"



N
FLOOR PLAN - AREA C - MECHANICAL - ALT 1
SCALE: 1/8" = 1'-0"



N
FLOOR PLAN - AREA C - MECHANICAL - ALT 2
SCALE: 1/8" = 1'-0"



KEY PLAN

ALEX PUGH
LICENSE #2011015789
ENGINEERING CORP. NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
1000 LAFAYETTE BLVD
ST. LOUIS, MISSOURI 63109
OFFICE: 314. 781.9955
HoenerArchitects.com

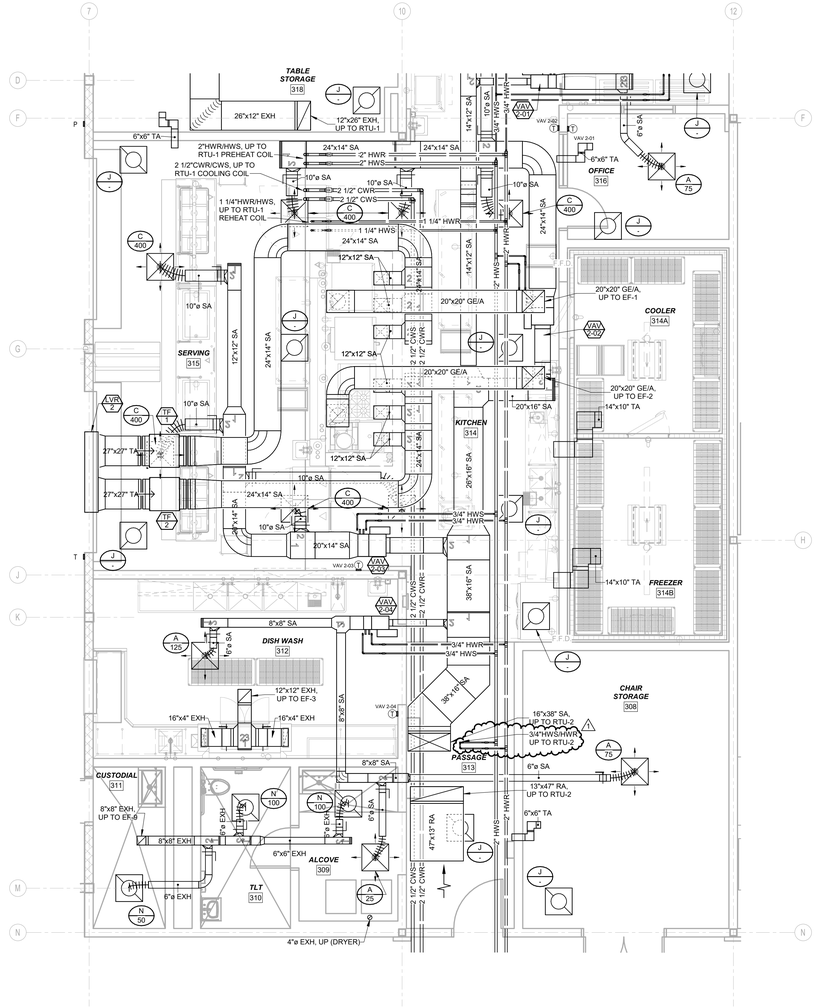
CONSULTING ENGINEERS:
CIVIL / SURVEY
RAM ENGINEERING
ASDG, LLC
STRUCTURAL
MECHANICAL
MEHLHOUSE ENGINEERING
ELECTRICAL / PLUMB
DESIGN CONSEQUENCE
FIRE PROTECTION
FOOD SERVICE

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1 07/23/24	ADDENDUM #1
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M3.4
SD: 5

FIRST FLOOR PLAN - AREA C - MECHANICAL



N

LARGE SCALE KITCHEN PLAN

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

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP.
NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
6700 PARK WOOD AVENUE
ST. LOUIS, MISSOURI 63109
OFFICE: 314. 781.9855
HoenerArchitects.com

CONSULTING ENGINEERS:
BJC CIVIL ENGINEERING
ASDG, LLC
MEDLARK ENGINEERING
DESIGN CONSTRUCT INC

CIVIL / SURVEY
STRUCTURAL
ELECTRICAL / PLUMB
MECH / FOOD SERVICE

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING BE-FORE WORK IS EXECUTED. THIS DRAWING IS THE PRO-PERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

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SHEET NO.	

M4.3
SD: 6

VARIABLE AIR VOLUME UNIT SCHEDULE

UNIT DESIG.	AHU NO.	AREA SERVED	MANUFACTURER & MODEL NO.	INLET SIZE (IN.) 1	DESIGN FLOW CONDITIONS			MAX. APD (IN. W.C.)	HEATING COIL DATA								NOTES
					COOLING MAX. FLOW (CFM)	HEATING MAX. FLOW (CFM)	MINIMUM MIN. FLOW (CFM)		HEATING FLOW (CFM)	MIN. CAPACITY (MBH)	EAT (°F)	LAT (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX. WPD (FT.)	MIN. ROWS	
VAV 2-01	RTU-2	316 OFFICE, TABLE STORAGE	TITUS DESV	8	175	150	150	0.4	150	5	55	85	130	0.5	5	2	1,2
VAV 2-02	RTU-2	KITCHEN	TITUS DESV	14	1,600	600	600	0.4	600	17	55	80	130	1.7	5	2	1,2
VAV 2-03	RTU-2	KITCHEN	TITUS DESV	14	1,600	600	600	0.4	600	17	55	80	130	1.7	5	2	1,2
VAV 2-04	RTU-2	312 DISH WASH, STORAGE	TITUS DESV	6	225	225	225	0.4	175	5	55	80	130	0.5	5	2	1,2
VAV 2-05	RTU-2	317 DRY STORAGE	TITUS DESV	6	350	350	175	0.4	350	10	55	80	130	1.0	5	2	1,2
VAV 5-01	RTU-5	215 SENSORY, 227 OFF, 2A CORR, DZ	TITUS DESV	12	1,475	1475	1475	0.4	1,475	41	55	80	130	4.1	5	2	1,2
VAV 5-02	RTU-5	214 TECH	TITUS DESV	12	1,400	800	800	0.4	800	22	55	80	130	2.2	5	2	1,2
VAV 5-03	RTU-5	213 MUSIC	TITUS DESV	12	1,100	800	800	0.4	800	22	55	80	130	2.2	5	2	1,2
VAV 5-04	RTU-5	2B CORRIDOR	TITUS DESV	10	1,000	1,000	1000	0.4	1,000	33	55	85	130	3.3	5	2	1,2
VAV 5-05	RTU-5	2A CORRIDOR	TITUS DESV	8	600	600	600	0.4	600	17	55	80	130	1.7	5	2	1,2
VAV 5-06	RTU-5	206 ART	TITUS DESV	12	1,225	885	885	0.4	885	34	55	90	130	3.4	5	2	1,2
VAV 5-07	RTU-5	200 LIBRARY	TITUS DESV	12	1,200	800	800	0.4	800	22	55	80	130	2.2	5	2	1,2
VAV 5-08	RTU-5	200 LIBRARY & MEDIA ROOMS	TITUS DESV	12	1,375	800	800	0.4	900	35	55	90	130	3.5	5	2	1,2
VAV 5-09	RTU-5	201 MEETING	TITUS DESV	6	175	120	60	0.4	120	4	55	85	130	0.4	5	2	1,2
VAV 6-01	RTU-6	129 TEACHERS LUNCH	TITUS DESV	12	1,350	425	425	0.4	425	12	55	80	130	1.2	5	2	1,2
VAV 6-02	RTU-6	130 WORK ROOM	TITUS DESV	8	450	100	100	0.4	100	3	55	80	130	0.3	5	2	1,2
VAV 6-03	RTU-6	SOUTH LOBBY	TITUS DESV	8	600	600	150	0.4	600	23	55	90	130	2.3	5	2	1,2
VAV 6-04	RTU-6	NURSE'S SUITE	TITUS DESV	8	625	625	625	0.4	625	17	55	80	130	1.7	5	2	1,2
VAV 6-05	RTU-6	114 READING & 113 SPEECH	TITUS DESV	8	700	700	700	0.4	700	19	55	80	130	1.9	5	2	1,2
VAV 6-06	RTU-6	COUNSELORS' OFFICES	TITUS DESV	8	400	200	100	0.4	200	8	55	90	130	0.8	5	2	1,2
VAV 6-07	RTU-6	115 ELL & 117 WORK ROOM	TITUS DESV	8	525	525	525	0.4	525	14	55	80	130	1.4	5	2	1,2
VAV 6-08	RTU-6	109 CONFERENCE	TITUS DESV	8	525	250	150	0.4	250	10	55	90	130	1.0	5	2	1,2
VAV 6-09	RTU-6	105, 107, 108 OFFICES	TITUS DESV	8	525	150	150	0.4	150	6	55	90	130	0.6	5	2	1,2
VAV 6-10	RTU-6	104 CONFERENCE	TITUS DESV	8	575	250	150	0.4	250	10	55	90	130	1.0	5	2	1,2
VAV 6-11	RTU-6	ADMIN SUITE	TITUS DESV	10	925	925	925	0.4	925	25	55	80	130	2.5	5	2	1,2
VAV 7-01	RTU-7	301 OT/PT	TITUS DESV	8	625	625	625	0.4	625	17	55	80	130	1.7	5	2	1,2
VAV 7-02	RTU-7	405 SPECIAL ED	TITUS DESV	8	725	500	500	0.4	500	14	55	80	130	1.4	5	2	1,2
VAV 7-03	RTU-7	409 SPECIAL ED	TITUS DESV	8	500	375	375	0.4	375	10	55	80	130	1.0	5	2	1,2
VAV 7-04	RTU-7	411 SPECIAL ED	TITUS DESV	8	500	375	375	0.4	375	10	55	80	130	1.0	5	2	1,2
VAV 7-05	RTU-7	413 CLASSROOM	TITUS DESV	10	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-06	RTU-7	416 CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 7-07	RTU-7	423 OFFICE	TITUS DESV	6	175	90	90	0.4	90	2	55	80	130	0.2	5	2	1,2
VAV 7-08	RTU-7	419 CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 7-09	RTU-7	417 CLASSROOM	TITUS DESV	10	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-10	RTU-7	412 SPECIAL ED	TITUS DESV	8	500	375	375	0.4	375	10	55	80	130	1.0	5	2	1,2
VAV 7-12	RTU-7	406 TEAMS	TITUS DESV	8	650	250	215	0.4	250	7	55	80	130	0.7	5	2	1,2
VAV 7-11	RTU-7	410 SPECIAL ED	TITUS DESV	8	500	375	375	0.4	375	10	55	80	130	1.0	5	2	1,2
VAV 7-13	RTU-7	NORTH LOBBY	TITUS DESV	8	650	650	650	0.4	650	25	55	90	130	2.5	5	2	1,2
VAV 7-14	RTU-7	4A CORRIDOR	TITUS DESV	12	1,350	1350	1350	0.4	1,350	37	55	80	130	3.7	5	2	1,2
VAV 7-15	RTU-7	ALTERNATE 1 - 429 CLASSROOM	TITUS DESV	12	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-16	RTU-7	ALTERNATE 1 - 432 CLASSROOM	TITUS DESV	12	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-17	RTU-7	ALTERNATE 1 - 431 CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 7-18	RTU-7	ALTERNATE 1 - 434 CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 7-19	RTU-7	ALTERNATE 2 - NW CLASSROOM	TITUS DESV	12	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-20	RTU-7	ALTERNATE 2 - SW CLASSROOM	TITUS DESV	12	1,125	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 7-21	RTU-7	ALTERNATE 2 - NE CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 7-22	RTU-7	ALTERNATE 2 - SE CLASSROOM	TITUS DESV	10	850	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-01	RTU-8	133 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-02	RTU-8	135 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-03	RTU-8	140 OFFICE	TITUS DESV	6	210	105	105	0.4	105	3	55	85	130	0.3	5	2	1,2
VAV 8-04	RTU-8	147 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-05	RTU-8	148 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-06	RTU-8	151 CLASSROOM	TITUS DESV	12	1,175	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 8-07	RTU-8	153 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-08	RTU-8	156 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-09	RTU-8	154 CLASSROOM	TITUS DESV	12	1,175	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 8-10	RTU-8	150 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-11	RTU-8	149 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-12	RTU-8	136 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-13	RTU-8	134 CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-14	RTU-8	1B CORRIDOR	TITUS DESV	12	1,525	1,525	1525	0.4	1,525	42	55	80	130	4.2	5	2	1,2
VAV 8-15	RTU-8	131 SIP	TITUS DESV	8	725	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-16	RTU-6	132 CLASSROOM	TITUS DESV	8	725	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-17	RTU-8	ALTERNATE 3 - NW CLASSROOM	TITUS DESV	12	1,175	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 8-18	RTU-8	ALTERNATE 3 - SW CLASSROOM	TITUS DESV	12	1,175	725	725	0.4	725	20	55	80	130	2.0	5	2	1,2
VAV 8-19	RTU-8	ALTERNATE 3 - NE CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2
VAV 8-20	RTU-8	ALTERNATE 3 - SE CLASSROOM	TITUS DESV	10	900	550	550	0.4	550	15	55	80	130	1.5	5	2	1,2

NOTES:

1. SEE SPECIFICATION FOR ROOM TEMPERATURE SENSOR TYPE.
2. MAXIMUM AIR PRESSURE DROP IS FOR THE ENTIRE ASSEMBLY.
3. PROVIDE WITH BOTTOM ACCESS DOOR
4. PROVIDE WITH 120V CONTROLS...

FAN SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	FAN TYPE	AIRFLOW (CFM)	FSP (IN. W.C.)	RPM	FAN DISCHARGE	MOTOR				UNIT CONTROL	ACCESSORIES	NOTES
									BHP	HP	RPM	VOLTS/PH			
EF-1	KITCHEN ROOF	KITCHEN HOOD	GREENHECK CUE-180HP-VG	ROOF EXHAUSTER	2200	1.75	1355	UBD	1.03	2	1590	480/3	ECM, 0-10V	2,4,6,7	A
EF-2	KITCHEN ROOF	KITCHEN HOOD	GREENHECK CUE-180HP-VG	ROOF EXHAUSTER	2200	1.75	1355	UBD	1.03	2	1590	480/3	ECM, 0-10V	2,4,6,7	A
EF-3	KITCHEN ROOF	DISHWASHER	GREENHECK CUE-100HP-VG	ROOF EXHAUSTER	300	1.00	1699	UBD	0.13	1/4	1725	115/1	ECM, POTENTIOMETER	2,4,6,7	A
EF-4	MECH ROOF	MECH RM EXHAUST	GREENHECK G-180-VG	ROOF EXHAUSTER	3000	0.50	933	DBD	0.52	1	1000	480/3	ECM, 0-10V	1,3,4,5,8	-
EF-5	KILN RM ROOF	KILN	GREENHECK G-140-VG	ROOF EXHAUSTER	1250	0.50	1000	DBD	0.20	1/2	1200	115/1	ECM, 0-10V	1,2,3,4,7	-
EF-6	ADMIN ROOF	NURSE EXHAUST	GREENHECK G-099-VG	ROOF EXHAUSTER	550	0.75	1403	DBD	0.13	1/4	1725	115/1	ECM, POTENTIOMETER	1,2,3,4,7	-
EF-7	ADMIN ROOF	KITCHEN HOOD	GREENHECK CUE-160XP-VG	ROOF EXHAUSTER	740	1.00	1484	DBD	0.27	1	2160	480/3	ECM, 0-10V	2,4,6,7	A
EF-8	SPECIAL ED 405 ROOF	RESTROOM EXHAUST	GREENHECK G-080-VG	ROOF EXHAUSTER	225	0.50	1549	DBD	0.05	1/10	1725	115/1	ECM, POTENTIOMETER	1,2,3,4,7	-
EF-9	CUSTODIAL 311 ROOF	RESTROOM EXHAUST	GREENHECK G-080-VG	ROOF EXHAUSTER	225	0.50	1549	DBD	0.05	1/10	1725	115/1	ECM, POTENTIOMETER	1,2,3,4,7	-
TF-1	KITCHEN CEILING	KITCHEN EXHAUST MAKEUP AIR	GREENHECK SQ-160-VG	INLINE	2200	1.25	1310	HM	0.78	2	1650	480/3	ECM, 0-10V	4,5,8	-
TF-2	KITCHEN CEILING	KITCHEN EXHAUST MAKEUP AIR	GREENHECK SQ-15-M2-VG	INLINE	2200	1.25	1310	HM	0.78	2	1650	480/3	ECM, 0-10V	4,5,8	-
TF-3	STORAGE CEILING	KILN EXHAUST MAKEUP AIR	GREENHECK SQ-130-VG	INLINE	1250	0.50	1219	HM	0.22	3/4	1725	115/1	ECM, 0-10V	4,5,8	-
RLF-1	CAFETERIA ROOF	CAFETERIA RELIEF	GREENHECK RE2-30-620-VG	PROPELLER	3500	0.50	802	DBD	0.73	2	1050	480/3	ECM, 0-10V	1,2,4,7	-
RLF-2	CENTRAL CORRIDOR ROOF	BUILDING RELIEF	GREENHECK RE2-48-413-VG	PROPELLER	15,000	0.50	776	DBD	2.37	5	860	480/3	ECM, 0-10V	1,2,4,7	-
RLF-3	MAIN GYM	GYM RELIEF / SHELTER EXHAUST	GREENHECK SQ-30-M2-VG	INLINE	10,000	1.00	714	HM	2.59	5	800	480/3	ECM, 0-10V	4,5,8	-
SF-1	MAIN GYM	SHELTER MODE VENTILATION AIR	GREENHECK SQ-27-M2-VG	INLINE	10,000	1.50	940	HM	3.96	10	1222	460/3	ECM, POTENTIOMETER	4,5,8	-

FAN TYPE:
CENTRIFUGAL
IN-LINE CENTRIFUGAL
ROOF EXHAUSTER
PROPELLER FAN

FAN DISCHARGE:
UBD - UP BLAST DISCHARGE
DBD - DOWN BLAST DISCHARGE
HM - HORIZONTAL MOUNT

ACCESSORIES:
1. MOTORIZED BACKDRAFT DAMPER
2. ROOF CURB
3. PROVIDE WITH HOA CONTROLLER AND CONTROLS TRANSFORMER FOR POWERING 24V ISOLATION DAMPER
4. FACTORY MOUNTED DISCONNECT
5. RESTRAINED VIBRATION ISOLATORS
6. DRAIN
7. BIRDSCREEN
8. FLEXIBLE DUCT CONNECTION

NOTES:
A. FAN SHALL BE UL 762 RATED FOR GREASE LADEN EXHAUST. PROVIDE WITH APPROPRIATE ACCESSORIES.

BOILER SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	BOILER TYPE	BURNER TYPE	FUEL TYPE	ELECTRIC		INPUT (MBH)	MIN. OUTPUT (MBH)	MIN. AFUE (%)	WORKING FLUID	EWT (°F)	LWT (°F)	DESIGN FLOW (GPM)	MIN. FLOW (GPM)	MAX PD (FT.)	RELIEF VALVE (PSIG)	VENT TYPE	STACK DIAM. (IN.)	AIR INLET DIAM. (IN.)	STACK HEIGHT (FT.)	NOTES
							FLA	VOLTS/PH															
B-1	MECH. RM	BUILDING HEATING WATER LOOP	AERCO BENCHMARK 3000	FT	FD	NG	5	460/3	3000	2820	94	WATER	120	140	200	25	10	150	AD	8	8	15	ALL
B-2	MECH. RM	BUILDING HEATING WATER LOOP	AERCO BENCHMARK 3000	FT	FD	NG	5	460/3	3000	2820	94	WATER	120	140	200	25	10	150	AD	8	8	15	ALL
B-3	MECH. RM	BUILDING HEATING WATER LOOP	AERCO BENCHMARK 3000	FT	FD	NG	5	460/3	3000	2820	94	WATER	120	140	200	25	10	150	AD	8	8	15	ALL

NOTES:

1. BOILER COMBUSTION AIR DIRECT DUCTED FROM OUTSIDE
2. BOILER MANUFACTURER TO PROVIDE AND CONTROL FIELD INSTALLED MOTORIZED ISOLATION VALVES. VALVES TO HAVE END SWITCH.
3. BOILER TO HAVE FACTORY MOUNTED CONTROLLER
4. PROVIDE WITH BACNET CONNECTION
5. BOILER HOUSEKEEPING PAD SHALL BE 8" HIGH FOR GRAVITY FLOW OF CONDENSATE.
6. BOILER MANUFACTUER SHALL PROVIDE INTEGRATED FLOW BALANCING BETWEEN BOILERS INSTALLED
7. EACH BOILER FLUE DISCHARGE SHALL EXTEND TO A MINIMUM OF 8'-0" ABOVE ROOF DECK. SEE SPECIFICATIONS FOR GUY-WIRE REQUIREMENTS
8. BOILER 3 AND HEATING WATER PUMP 3 ARE INSTALLED UNDER ALTERNATE 4.

BOILER TYPE
FT FIRE TUBE

BURNER TYPE
FD FORCED DRAFT

FUEL TYPE
NG NATURAL GAS

VENT TYPE
AD AL 4C, DOUBLE WALL

SCCR: SHORT CIRCUIT CURRENT RATING

SPLIT SYSTEM UNIT SCHEDULE

INDOOR UNIT						OUTDOOR UNIT													SEER	NOTES
UNIT DESIGNATION	SERVICE	MAKER & MODEL NO.	SUPPLY CFM	RATED COOLING CAP (TONS)	ENTERING AIR (°F) dB / wB	UNIT DESIGNATION	LOCATION	MAKER & MODEL NO.	COMPRESSOR DATA			AMBIENT (DB)		POWER						
									QTY.	TYPE	REFRIGERANT TYPE	LOW °F	HIGH °F	VOLT	PHASE	HZ	MCA	MOCP		
AC-1	ELETRICAL 106	DAIKIN FTK12AXVJU	713-H	1	80/67	CU-1	ROOF	DAIKIN RK12AXVJU	1	SWING	R-410A	0	95	208	1	60	8.7	15	19	1,2,3,4,5,6
AC-2	DATA 142	DAIKIN FTK24AXVJU	713-H	2	80/67	CU-3	ROOF	DAIKIN RK24AXVJU	1	SWING	R-410A	0	95	208	1	60	13.4	20	19	1,2,3,4,5,6
AC-3	ELECTRICAL 143	DAIKIN FTK24AXVJU	713-H	2	80/67	CU-3	ROOF	DAIKIN RK24AXVJU	1	SWING	R-410A	0	95	208	1	60	13.4	20	19	1,2,3,4,5,6
AC-4	ELECTRICAL 209	DAIKIN FTK36NVJU	915-H	3	80/67	CU-4	ROOF	DAIKIN RK36NMVJUA	1	SWING	R-410A	0	95	208	1	60	17	20	16	1,2,3,4,5,6
AC-5	MAIN ELECTRICAL 307	DAIKIN FTK24AXVJU	713-H	2	80/67	CU-5	ROOF	DAIKIN RK24AXVJU	1	SWING	R-410A	0	95	208	1	60	13.4	20	19	1,2,3,4,5,6
AC-6	DATA / MDF 424	DAIKIN FTK36NVJU	915-H	3	80/67	CU-6	ROOF	DAIKIN RK36NMVJUA	1	SWING	R-410A	0	95	208	1	60	17	20	16	1,2,3,4,5,6
AC-7	ELECTRICAL 425	DAIKIN FTK24AXVJU	713-H	2	80/67	CU-7	ROOF	DAIKIN RK24AXVJU	1	SWING	R-410A	0	95	208	1	60	13.4	20	19	1,2,3,4,5,6

NOTES:

1. PROVIDE WITH LOW AMBIENT WIND BAFFLE FOR OPERATION DOWN TO 0°F OUTSIDE AIR TEMPERATURE.
2. ALL UNITS SHALL BE PROVIDED WITH FIELD INSTALLED CONDENSATE PUMP CAPABLE OF A MINIUM 5 FT RISE. PUMP SHALL BE INSTALLED WITHIN AND POWERED THROUGH THE WALL UNIT.
3. ALL UNITS SHALL BE PROVIDED WITH A WIRED REMOTE CONTROLLER KIT. CONTROLLER SHALL BE BACNET COMPATIBLE.
4. ALL REFRIGERANT PIPING ON ROOF SHALL BE INSULATED AND INCLUDE A PROTECTIVE JACKET. REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION.
5. ALL ROOF MOUNT CONDENSING UNITS SHALL BE MOUNTED ON EQUIPMENT RAILS ANCHORED TO ROOF DECK. RAILS SHALL BE A MINIMUM OF 18" IN HEIGHT.
6. PIPING SHALL PENETRATE ROOF WITH PIPE CURB PER DETAIL.

COOLING TOWER SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	EWT (°F)	LWT (°F)	FLOW PER CELL (GPM)	CELLS	AMBIENT WB (°F)	MOTOR DATA (PER CELL)					SCCR kA	OPERATING WEIGHT (LBS)	NOTES
										HP	RPM	VOLTS / PH	UNIT CONTROL	LOCAL DISCONNECT			
CT-1	ROOF	CONDENSER WATER	MARLEY NC8405PLN2	CROSSFLOW	97	85	1,000	2	78.0	15	1200	460/3	VFD (BY DIV 26)	BY OTHERS	65	38,480	ALL

NOTES:

1. PROVIDE WITH DROP SUMP
2. PROVIDE WITH 8" EQUALIZER LINE CONNECTIONS BETWEEN CELLS
3. PROVIDE WITH SEPARATE TOWER INLET CONNECTIONS
4. PROVIDE WITH QUIET FAN
5. PROVIDE EACH CELL WITH BASIN SWEEPER
6. PROVIDE ACCESS LADDER WITH SAFETY CAGE
7. DESIGN DISTRIBUTION CUPS FOR OPERATING RANGE PER CELL OF 500 GPM TO 1000 GPM
8. TOWER SHALL BE DUAL RATED FOR 500 GPM PER CELL AT 92F WB AND 1000 GPM PER CELL AT 78F WB
9. PROVIDE ANTI-VORTEX PLATE WITH STRAINER

SCCR: SHORT CIRCUIT CURRENT RATING

AIR DOOR SCHEDULE

UNIT DESIG	SERVICE	LOCATION	MANUFACTURER MODEL NO	CFM (HIGH SPD)	NOZZLE WIDTH (IN)	EAT (°F)	MINIMUM CAPACITY (MBH)	HYDRONIC HEATING COIL DATA			MOTOR				WEIGHT (LBS)	NOTES
								FLOW (GPM)	EWT (°F)	MAX WPD (FT)	HP	RPM	V/PH	AMPS		
AD-1	KITCHEN	ABOVE EXTERIOR DOOR	POWERED AIRE CLD 1-48HW	1,745	48	65	30	6.0	140	5	1/2	1,750	120/1	2.5	225	ALL

NOTES:

1. UNIT IS RECESSED ABOVE CEILING. INSTALL CENTERED ABOVE DOOR AND PER MANUFACTURER'S INSTRUCTIONS.
2. UNIT SHALL BE A SINGLE POINT POWER CONNECTION.
3. UNIT OPERATE WHENEVER THE DOOR IS OPEN UTILIZIZING MAGNETIC DOOR SWITCH AND HEAT WHENEVER SPACE TEMPERATURE IS NOT SATISFIED.
4. PROVIDE WITH WALL MOUNT 24-VOLT THERMOSTAT UNIT TO HAVE INTEGRAL 24V TRANSFORMER. COORDINATE WITH ELECTRICAL CONTRACTOR.
5. PROVIDE WITH REMOTE HIGH/LOW/OFF MANUAL SWITCH. LOCATED IN FACTORY NEMA 12 CONTROL PANEL ENCLOSURE. ENCLOSURE TO INCLUDE DISCONNECT SWITCH.
6. PROVIDE WITH 2-WAY 24V HEATING WATER CONTROL VALVE CONTROLLED BY INTEGRAL UNIT CONTROLLER.
7. PROVIDE WITH 48" CLEANABLE FILTER

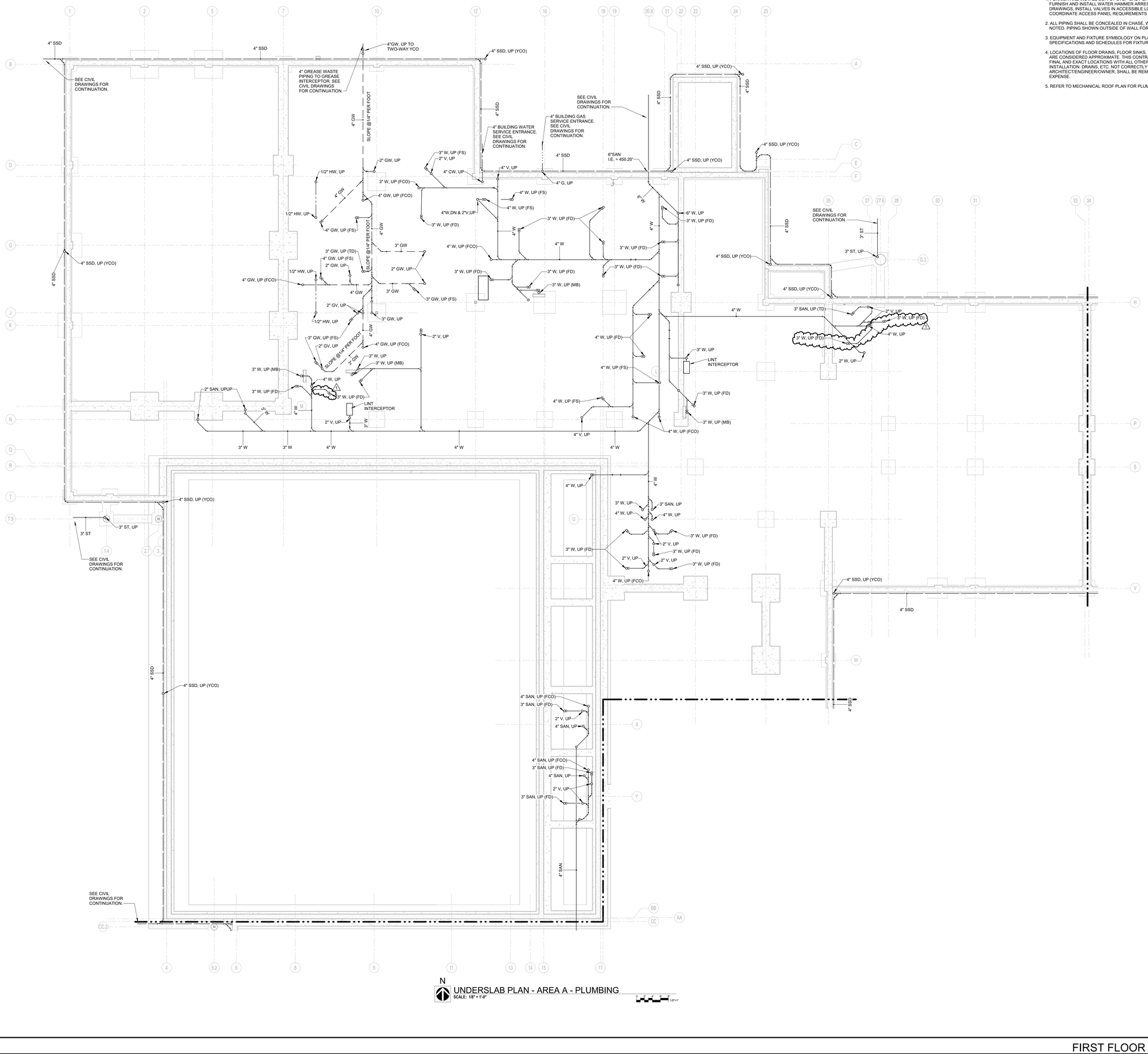
HEAT EXCHANGER SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	TYPE OF HEAD	COOLING TOWER SIDE (SHELL)				HOT WATER LOOP SIDE (TUBES)				MAX. LENGTH (INCHES)	MIN. HEATING SURFACE AREA (SQ. FT.)	FOULING FACTOR	NOTES
						EWT (°F)	LWT (°F)	FLOW (GPM)	MAX. PD (FT.)	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX. PD (FT.)				
HX-1	MECHANICAL PLANT	TOWER BASIN HEAT	BELL AND GOSSETT...	SHELL & U-TUBE	CAST IRON	45	55	20.5	5.0	140	100	6	5.0	18	5.8	0.00025	1,2,3

1. PROVIDE WITH BLUE GYLON GASKET
2. 4-PASS TUBES
3. 2" INLET ON SHELL AND 1-1/4" INLET ON TUBES

MECHANICAL PUMP SCHEDULE

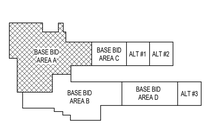
UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	PUMP DATA				MOTOR DATA				NOTES
					FLOW (GPM)	HEAD (FT.)	RPM	BHP	HP	RPM	VOLTS/PH	UNIT CONTROL	
HWP-1	MECHANICAL PLANT	HEATING WATER	ARMSTRONG 4300 0205-010.0	VIL	200	120	4300	7.8	10	4300	460/3	VFD (WITH UNIT)	1,2,3
HWP-2	MECHANICAL PLANT	HEATING WATER	ARMSTRONG 4300 0205-010.0	VIL	200	120	4300	7.8	10	4300	460/3	VFD (WITH UNIT)	1,2,3
HWP-3	MECHANICAL PLANT	HEATING WATER	ARMSTRONG 4300 0205-010.0	VIL	200	120	4300	7.8	10	4300	460/3	VFD (WITH UNIT)	1,2,3
CWP-1	MECHANICAL PLANT	CHILLED WATER	ARMSTRONG 4300 0307-015.0	VIL	400	100	2988	13.9	15	3600	460/3	VFD (WITH UNIT)	1,2,3
CWP-2	MECHANICAL PLANT	CHILLED WATER	ARMSTRONG 4300 0307-015.0	VIL	400	100	2988	13.9	15	3600	460/3	VFD (WITH UNIT)	1,2,3
CWP-3	MECHANICAL PLANT	CHILLED WATER	ARMSTRONG 4300 0307-015.0	VIL	400	100	2988	13.9	15	3600	460/3	VFD (WITH UNIT)	1,2,3
CP-1	MECHANICAL PLANT	CONDENSER WATER	ARMSTRONG



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UNDERSLAB PLAN - AREA A - PLUMBING

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



KEY PLAN

PLUMBING GENERAL NOTES:

1. FURNISH AND INSTALL SUPPLY STOP SHUT-OFF VALVES ON ALL FIXTURE WATER SUPPLY LINES. FURNISH AND INSTALL WATER HAMMER ARRESTORS PER PDI WH201 AND AS INDICATED ON DRAWINGS. INSTALL VALVES IN ACCESSIBLE LOCATIONS. IF LOCATION IS NOT READILY ACCESSIBLE, COORDINATE ACCESS PANEL REQUIREMENTS WITH GENERAL CONTRACTOR.
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5. REFER TO MECHANICAL ROOF PLAN FOR PLUMBING ROOF ITEMS.

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP.
NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

ORCHARD FARM SCHOOL DISTRICT

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KAEGEBEIN+G
ASDC, LLC
STRUCTURAL
MECHANICAL / PLUMB
MEP ENGINEERING
FIRE PROTECTION
DENNIS C. CORE, INC.
ELECTRICAL / FIRE ALARM

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1 07/23/24 ADDENDUM #1

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	SD: 8

FIRST FLOOR PLAN - AREA A - BELOW GRADE PLUMBING

PLUMBING GENERAL NOTES:

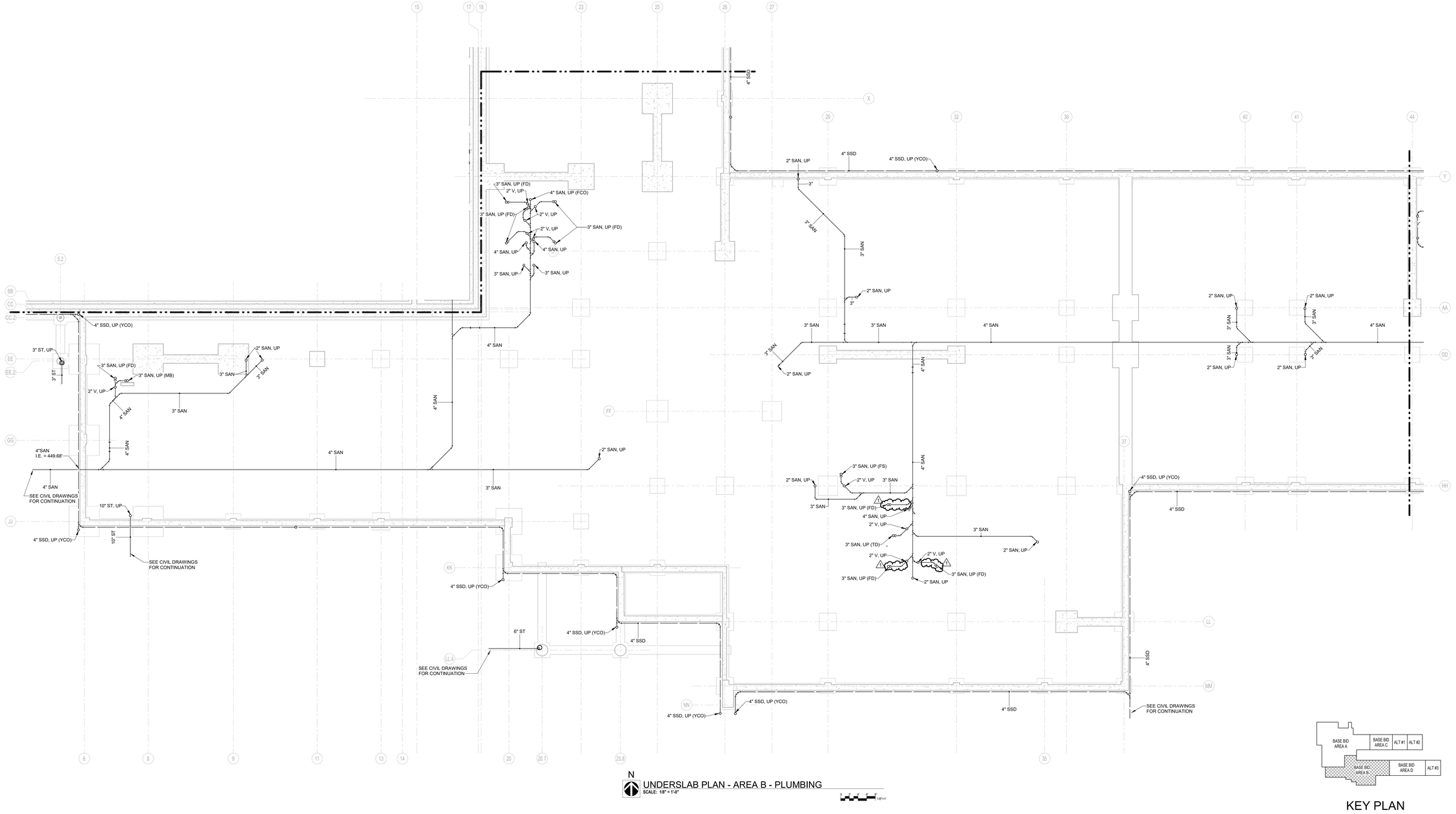
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N

UNDERSLAB PLAN - AREA B - PLUMBING
SCALE: 1/8" = 1'-0"

KEY PLAN

FIRST FLOOR PLAN - AREA B - BELOW GRADE PLUMBING

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ALEXANDER M. PUGH
NUMBER PE-2011015789
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ORCHARD FARM SCHOOL DISTRICT

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OFFICE: 314. 781.9955
HoenerArchitects.com

CONSULTING ENGINEERS:
ALVORD ENGINEERING
ASDG, LLC
MECHLINE ENGINEERING
DENNIS CORE, INC.

CIVIL / SURVEY
STRUCTURAL
IT / LOW VOLTAGE
MECH / ELEC / PLUMB
FLOOD SERVICE

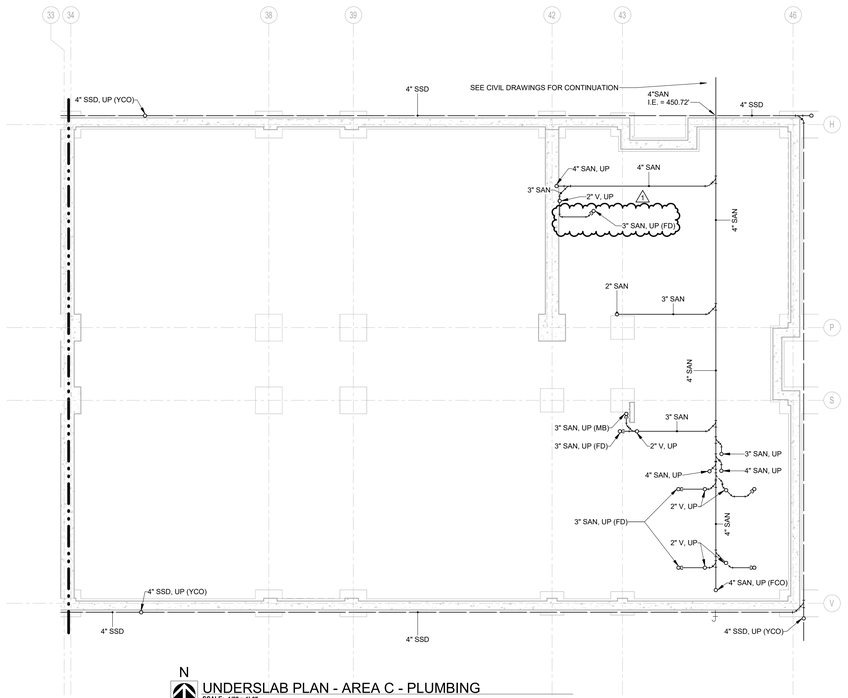
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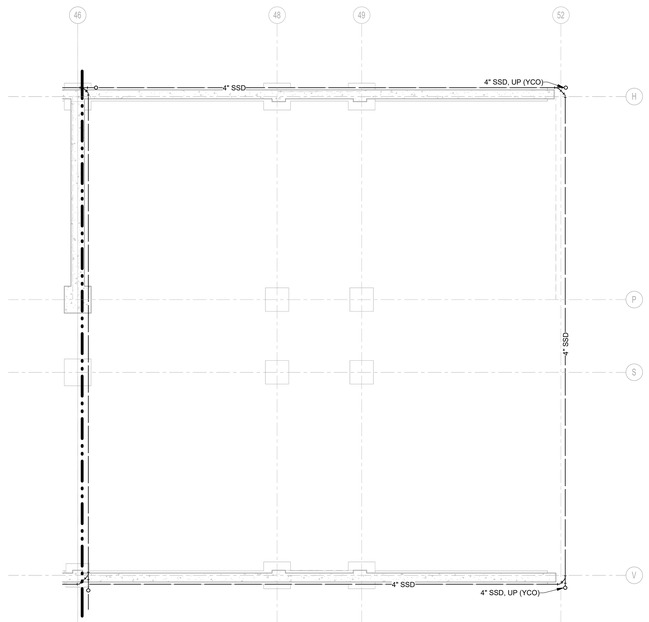
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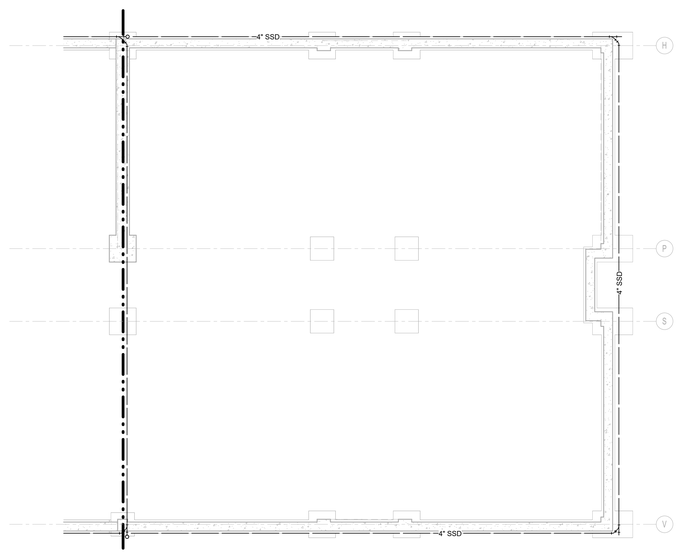
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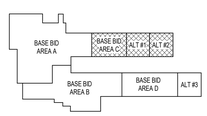
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UNDERSLAB PLAN - AREA C - PLUMBING
SCALE: 1/8" = 1'-0"



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UNDERSLAB PLAN - AREA C - PLUMBING - ALT 1
SCALE: 1/8" = 1'-0"



N
UNDERSLAB PLAN - AREA C - PLUMBING - ALT 2
SCALE: 1/8" = 1'-0"



KEY PLAN

FIRST FLOOR PLAN - AREA C - BELOW GRADE PLUMBING

ALEX PUGH
LICENSE #2011015789
ENGINEERING CORP. NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI
ORCHARD FARM SCHOOL DISTRICT

CONSULTING ENGINEERS:
CIVIL / SURVEY: ALEX PUGH ENGINEERING
STRUCTURAL: ASDG, LLC
ELECTRICAL / TECHNOLOGY: MEDLINE ENGINEERING
MECH / PLUMB / FIRE PROTECTION: DENNIS CORE INC.

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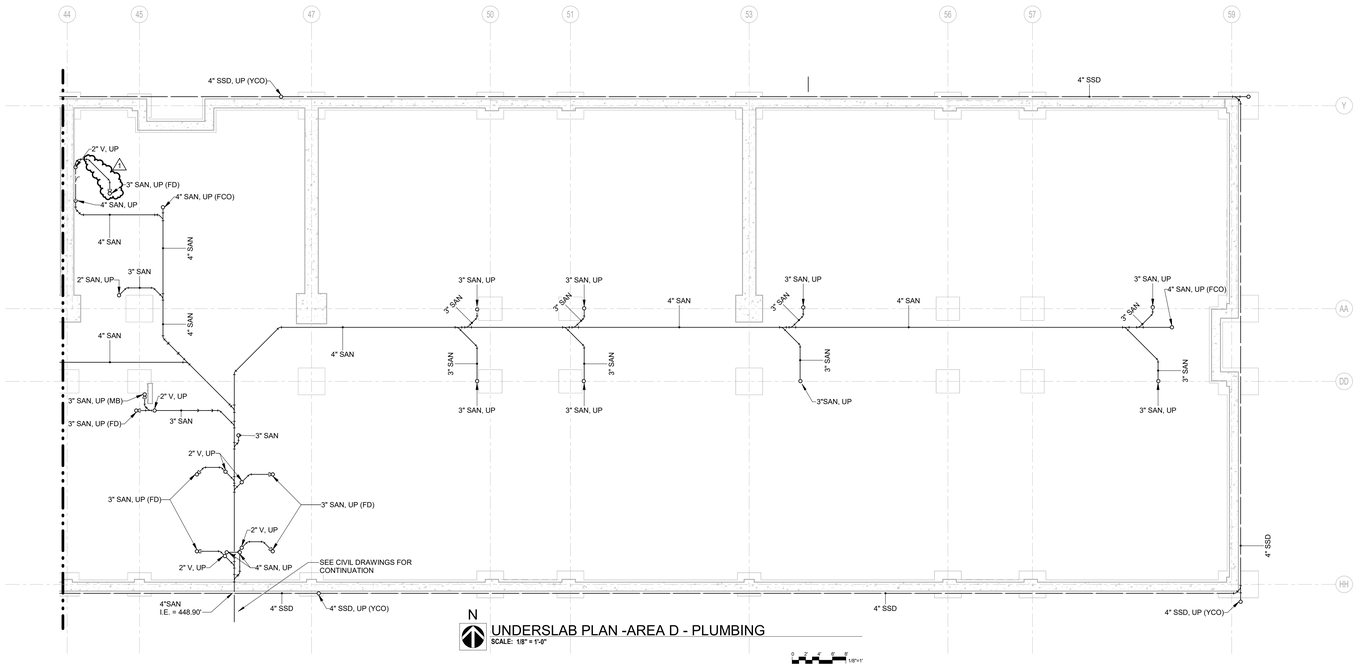
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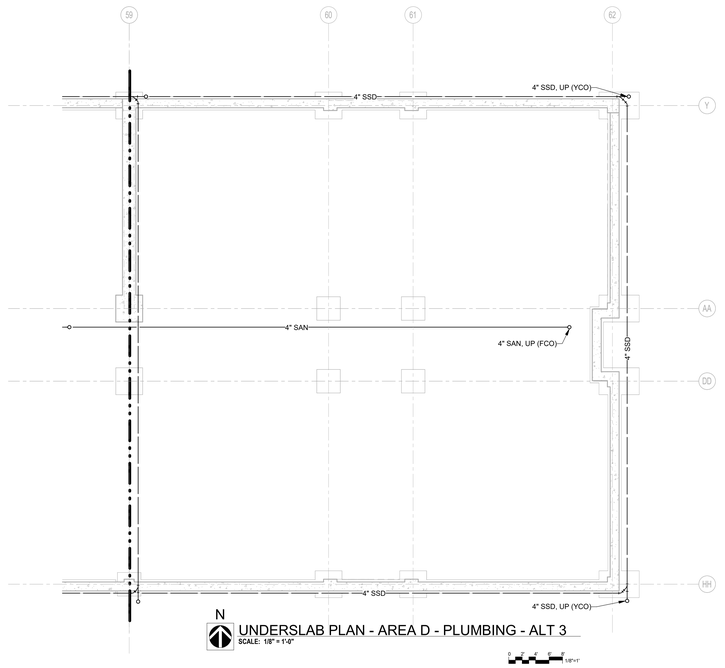
5. REFER TO MECHANICAL ROOF PLAN FOR PLUMBING ROOF ITEMS.



N

UNDERSLAB PLAN -AREA D - PLUMBING

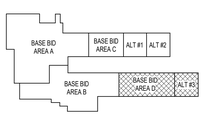
SCALE: 1/8" = 1'-0"



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UNDERSLAB PLAN - AREA D - PLUMBING - ALT 3

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



KEY PLAN

FIRST FLOOR PLAN - AREA D - BELOW GRADE PLUMBING

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP. NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

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ORCHARD FARM SCHOOL DISTRICT
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ST. CHARLES, MISSOURI 63301

HOENER ASSOCIATES, INC. - ARCHITECTS
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HoenerArchitects.com

CONSULTING ENGINEERS:
CIVIL / SURVEY
RAM ENGINEERING
ASDG, LLC
STRUCTURAL
MEADE ENGINEERING
MECH / ELEC / PLUMB
MEADE CORE INC.

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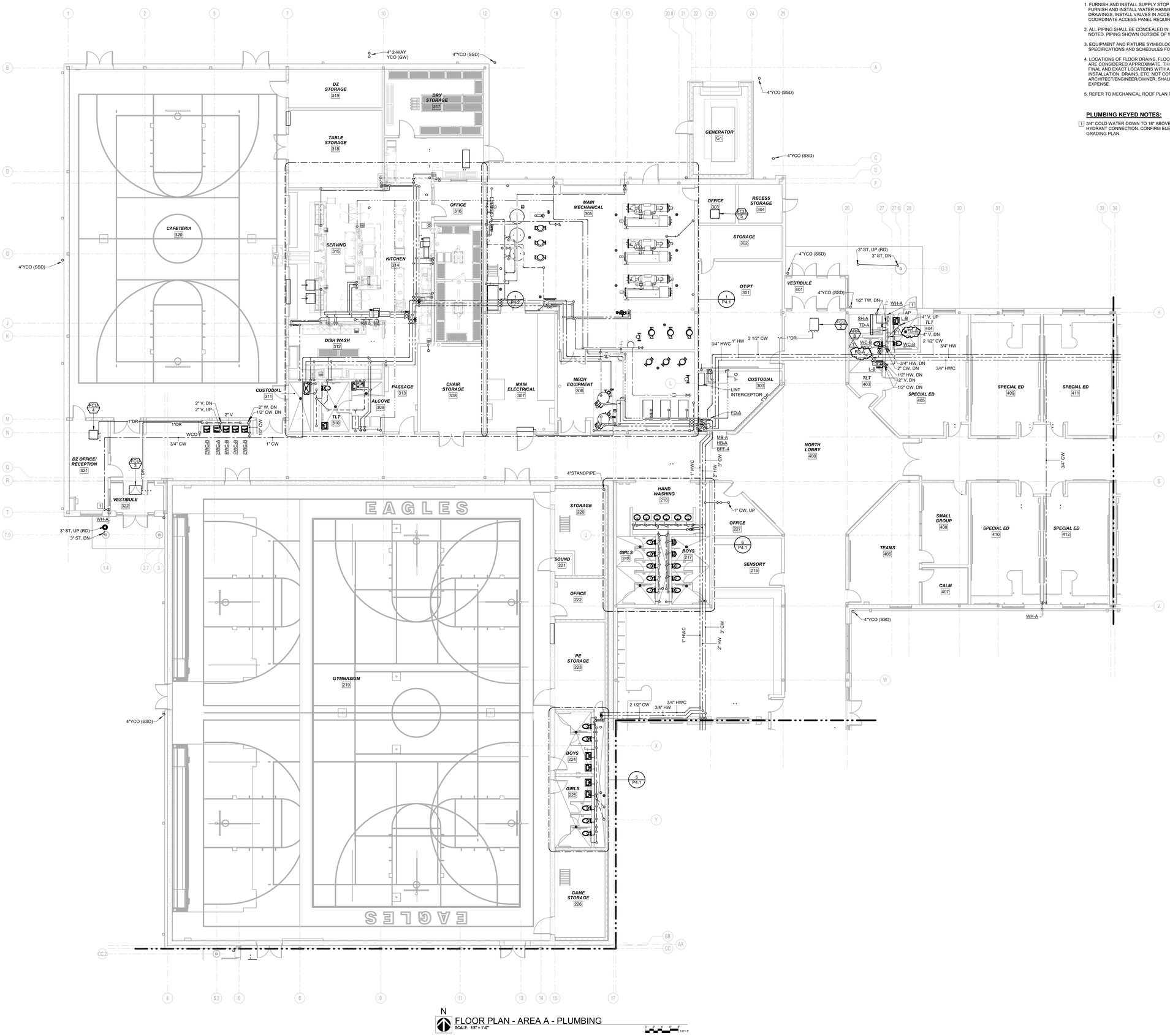
P1.5
SD: 11

PLUMBING GENERAL NOTES:

1. FURNISH AND INSTALL SUPPLY STOP SHUT-OFF VALVES ON ALL FIXTURE WATER SUPPLY LINES. FURNISH AND INSTALL WATER HAMMER ARRESTORS PER PDI WH201 AND AS INDICATED ON DRAWINGS. INSTALL VALVES IN ACCESSIBLE LOCATIONS. IF LOCATION IS NOT READILY ACCESSIBLE, COORDINATE ACCESS PANEL REQUIREMENTS WITH GENERAL CONTRACTOR.
2. ALL PIPING SHALL BE CONCEALED IN CHASE, WALL, CEILING, FLOORING, ETC. UNLESS OTHERWISE NOTED. PIPING SHOWN OUTSIDE OF WALL FOR CLARITY ONLY.
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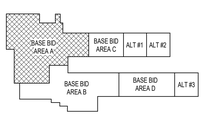
PLUMBING KEYED NOTES:

1 3/4" COLD WATER DOWN TO 18" ABOVE GRADE TO WALL HYDRANT CONNECTION. CONFIRM ELEVATION WITH GRADING PLAN.



N

FLOOR PLAN - AREA A - PLUMBING
SCALE: 1/8" = 1'-0"



KEY PLAN

FIRST FLOOR PLAN - AREA A - PLUMBING

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP. NO. 000087

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CIVIL / SURVEY: ECKENFELS ENGINEERING
STRUCTURAL: ASDG, LLC
MECH / ELEC / PLUMB: MECHLUTE ENGINEERING
FOOD SERVICE: DESIGN CONSULTING INC.

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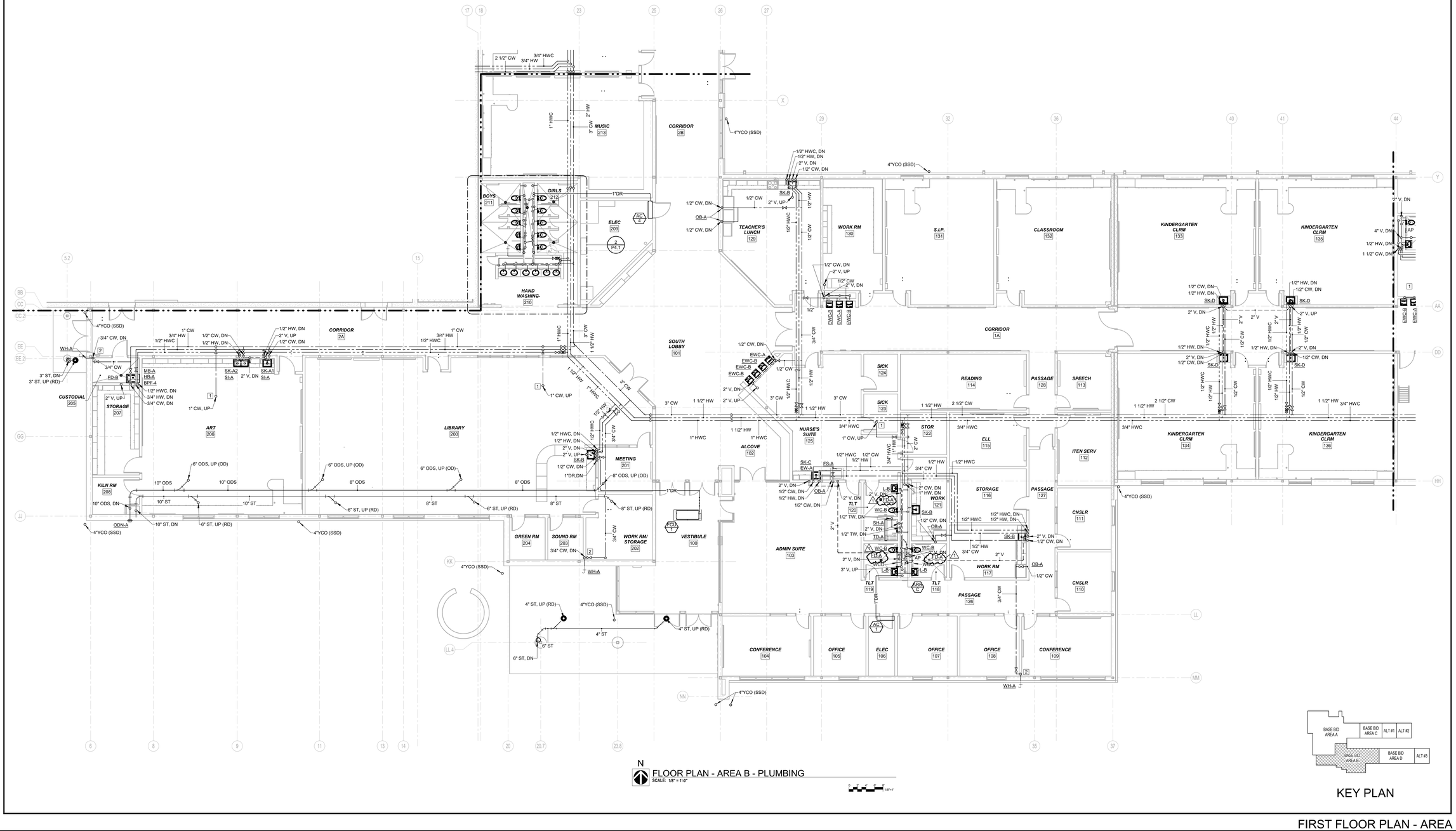
P2.2
SD: 12

PLUMBING GENERAL NOTES:

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5. REFER TO MECHANICAL ROOF PLAN FOR PLUMBING ROOF ITEMS.

PLUMBING KEYED NOTES:

1. 1" COLD WATER UP TO ROOF HYDRANT. RUN DRAIN FROM ROOF HYDRANT TO NEARBY MOP SINK, FLOOR SINK, OR STANDPIPE FOR AIR GAP DISCHARGE.
2. 3/4" COLD WATER DOWN TO 18" ABOVE GRADE TO WALL HYDRANT CONNECTION. CONFIRM ELEVATION WITH GRADING PLAN.



N

FLOOR PLAN - AREA B - PLUMBING
SCALE: 1/8" = 1'-0"

KEY PLAN

FIRST FLOOR PLAN - AREA B - PLUMBING

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
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ALEX PUGH
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ENGINEERING CORP.
NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

ORCHARD FARM SCHOOL DISTRICT

CONSULTING ENGINEERS:
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ASDG, LLC
MECHLINE ENGINEERING
DENNIS C. CARR, INC.

CIVIL / SURVEY
STRUCTURAL
ELECT / TECHNOLOGY
MECH / PLUMB / FIRE

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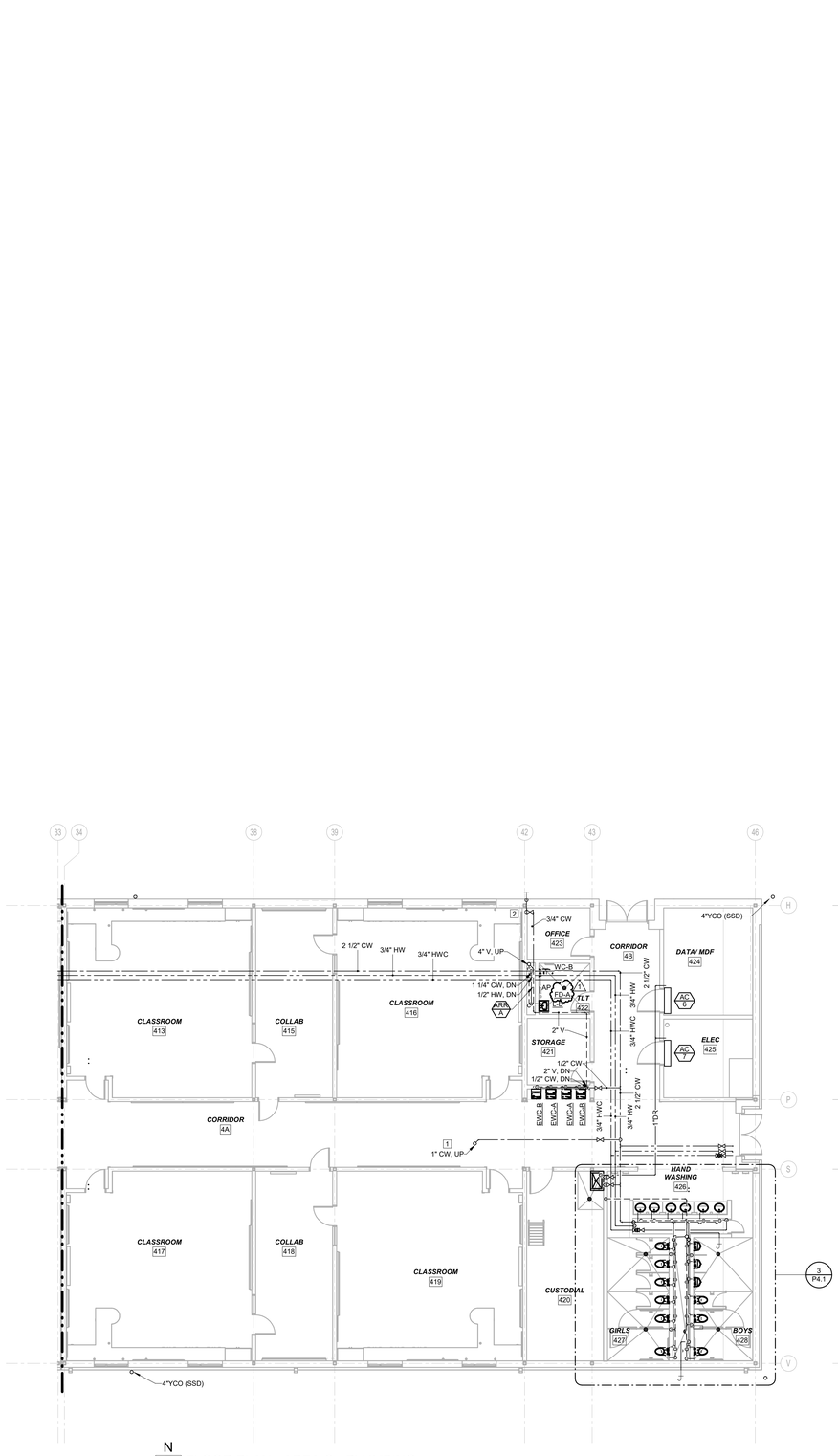
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P2.3
SD: 13

PLUMBING GENERAL NOTES:

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PLUMBING KEYED NOTES:

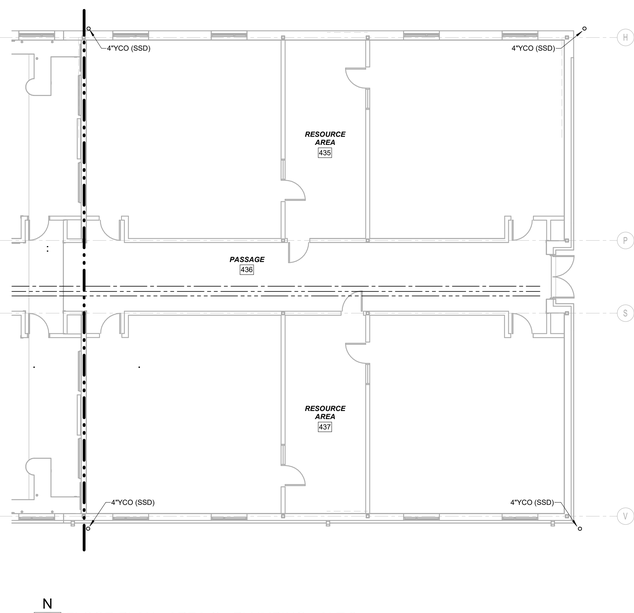
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2. 3/4" COLD WATER DOWN TO 18" ABOVE GRADE TO WALL HYDRANT CONNECTION. CONFIRM ELEVATION WITH GRADING PLAN.



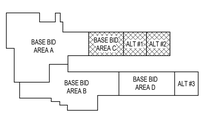
N
FLOOR PLAN - AREA C - PLUMBING
SCALE: 1/8" = 1'-0"



N
FLOOR PLAN - AREA C - PLUMBING - ALT 1
SCALE: 1/8" = 1'-0"



N
FLOOR PLAN - AREA C - PLUMBING - ALT 2
SCALE: 1/8" = 1'-0"



KEY PLAN

ALEX PUGH
LICENSE #2011015789
ENGINEERING CORP. NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

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ORCHARD FARM SCHOOL DISTRICT

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OFFICE: 314. 781.9955
HoenerArchitects.com

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CIVIL / SURVEY
KAPP ENGINEERING
STRUCTURAL
ASDG, LLC
MECH / ELEC / PLUMB
MCCLURE ENGINEERING
FLOOD SERVICE
DENNIS CORP, INC.

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SHEET NO.	P2.4
	SD: 14

FIRST FLOOR PLAN - AREA C - PLUMBING

PLUMBING GENERAL NOTES:

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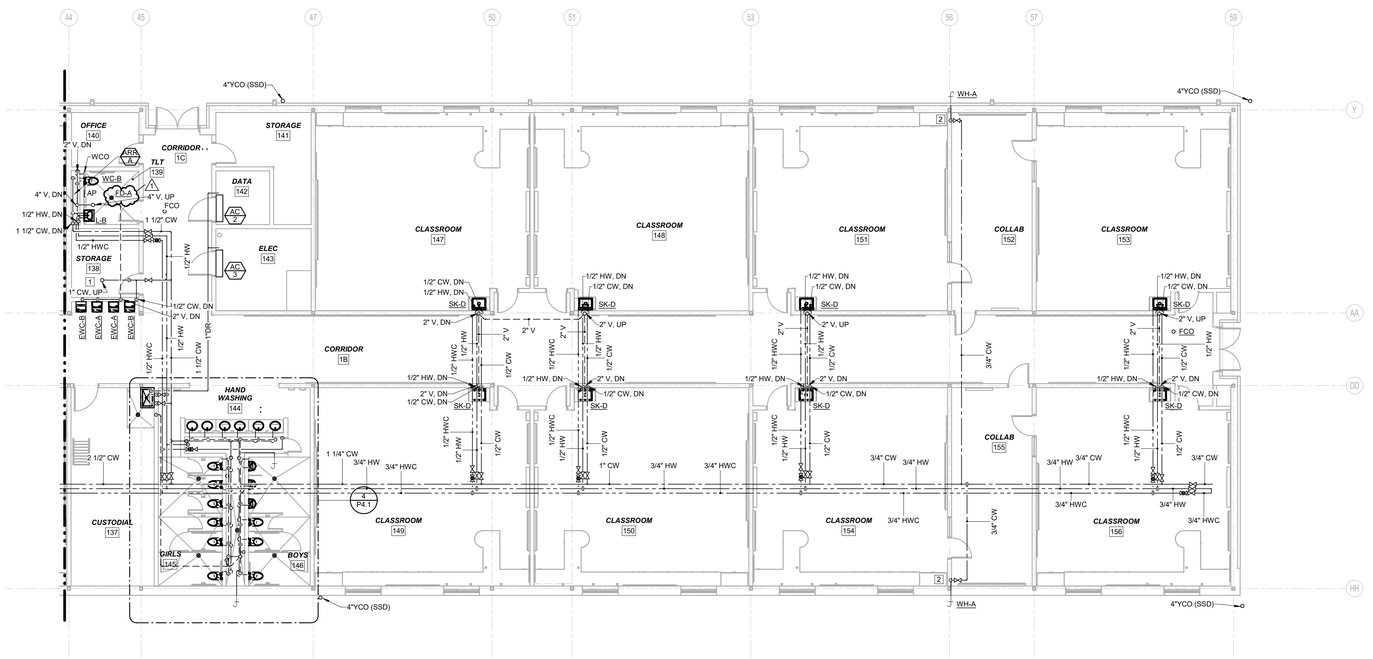
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5. REFER TO MECHANICAL ROOF PLAN FOR PLUMBING ROOF ITEMS.

PLUMBING KEYED NOTES:

1 1" COLD WATER UP TO ROOF HYDRANT. RUN DRAIN FROM ROOF HYDRANT TO NEARBY MOP SINK, FLOOR SINK, OR STANDPIPE FOR AIR GAP DISCHARGE.

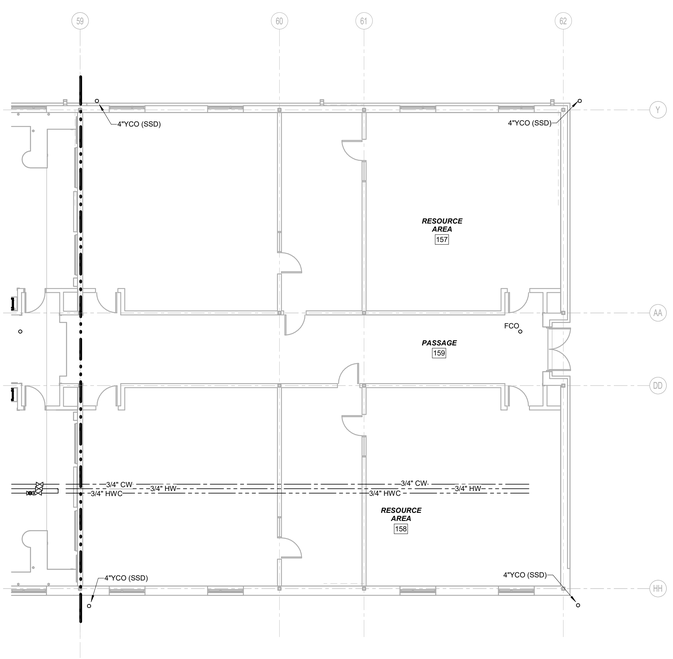
2 3/4" COLD WATER DOWN TO 18" ABOVE GRADE TO WALL HYDRANT CONNECTION. CONFIRM ELEVATION WITH GRADING PLAN.



N

FLOOR PLAN - AREA D - PLUMBING

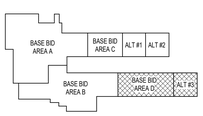
SCALE: 1/8" = 1'-0"



N

FLOOR PLAN - AREA D - PLUMBING - ALT 3

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



KEY PLAN

STATE OF MISSOURI
ALEXANDER M. PUGH
NUMBER PE-2011015789
PROFESSIONAL ENGINEER

ALEX PUGH
LICENSE #2011015789

ENGINEERING CORP. NO. 000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

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ORCHARD FARM SCHOOL DISTRICT

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CONSULTING ENGINEERS:
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FLOOD SERVICE

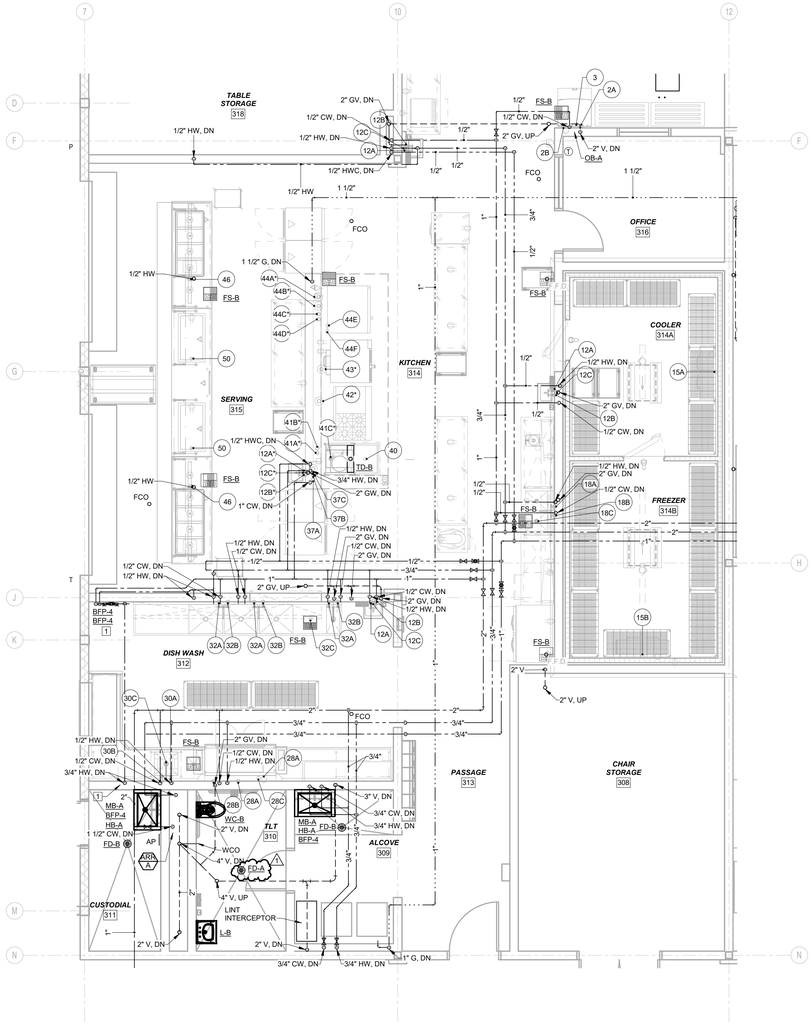
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FIRST FLOOR PLAN - AREA D - PLUMBING

FOODSERVICE PLUMBING ROUGH-IN SCHEDULE									
CONN. NO	HOT WATER SIZE	COLD WATER SIZE	DIRECT WASTE	INDIRECT WASTE	GAS SIZE	GAS MBTU'S	CONN. TYPE	HGT. A.F.F.	COMMENTS
2A		1/2"					S.O.	5' - 0"	PLUMB. CONTR. TO INTER-CONNECT FILTER SYSTEM (PROVIDED BY K.E.C.) TO ICE MACHINE INLET
2B				1/2"			F.S.	0' - 0"	PLUMB. CONTR. TO EXTEND DRAIN LINE TO FLOOR SINK
3				3/4"			F.S.	0' - 0"	PLUMB. CONTR. TO EXTEND ICE BIN DRAIN TO FLOOR SINK
12A	1/2"						S.O.	1' - 6"	
12A*	1/2"						S.O.	1' - 6"	
12B		1/2"					S.O.	1' - 6"	
12B*		1/2"					S.O.	1' - 6"	
12C			1 1/2"				S.O.	1' - 9"	
12C*			1 1/2"				S.O.	1' - 9"	
15A				1"			F.F.D.	0' - 0"	PLUMB. CONTR. TO EXTEND DRAIN LINES TO FUNNEL FLOOR DRAIN/FLOOR SINK AS REQUIRED
15B				1"			F.F.D.	0' - 0"	PLUMB. CONTR. TO EXTEND DRAIN LINE TO FUNNEL FLOOR DRAIN/FLOOR SINK AS REQUIRED.
18A		1/2"					S.O.	1' - 6"	
18B	1/2"						S.O.	1' - 6"	
18C				1 1/2"			F.S.	0' - 0"	
28A	1/2"						S.O.	1' - 6"	
28B		1/2"					S.O.	1' - 6"	DRAIN TEMPERING KIT
28C				2"			F.S.	0' - 0"	PLUMB. CONTR. TO EXTEND DRAIN LINES TO FLOOR SINK
30A	1/2"						S.O.	1' - 6"	
30B		1/2"					S.O.	1' - 6"	
30C				1 1/2"			F.S.	0' - 0"	PLUMB. CONTR. SHALL BRANCH FROM DRAIN ON EQUIPMENT TO FLOOR SINK
32A	1/2"						S.O.	1' - 6"	
32B		1/2"					S.O.	1' - 6"	
32C				1 1/2"			F.S.	0' - 0"	PLUMB. CONTR. SHALL BRANCH FROM DRAIN ON EQUIPMENT TO FLOOR SINK. PLBG. CONTR. SHALL BRANCH FROM FLOOR SINK TO GREASE TRAP. PLUMB. CONTR. SHALL SIZE, PROVIDE AND INSTALL GREASE TRAP. SIZE TRAP FOR ONE (1) APPROXIMATELY 12"X26"X4"D., THREE (3) APPROXIMATELY 24"X26"X14"D. SINKS.
37A	3/4"						S.O.	1' - 6"	
37B		3/4"					S.O.	1' - 6"	
37C					1 1/2"	0	S.O.	1' - 6"	
40				4"			F.S.	-1' - 0"	PLUMB. CONTR. & K.E.C. TO COORDINATE DRAIN REQUIREMENTS & CONNECTION DEPTH
41A*	1/2"						S.O.	1' - 6"	
41B*		1/2"					S.O.	1' - 6"	
41C*				1 1/2"			F.S.	0' - 0"	
42*					1"	270	S.O.	1' - 6"	K.E.C. TO PROVIDE PRESSURE REGULATOR, HOSE W/ QUICK DISCONNECT RESTRAINING DEVICE FOR PLUMB. CONTR. TO INSTALL
43*					3/4"	120	S.O.	1' - 6"	K.E.C. TO PROVIDE PRESSURE REGULATOR, HOSE W/ QUICK DISCONNECT & RESTRAINING DEVICE FOR PLUMB. CONTR. TO INSTALL
44A*					3/4"	106.5	S.O.	1' - 6"	K.E.C. TO PROVIDE PRESSURE REGULATOR, HOSE W/ QUICK DISCONNECT RESTRAINING DEVICE FOR PLUMB. CONTR. TO INSTALL
44B*					3/4"	106.5	S.O.	4' - 0"	K.E.C. TO PROVIDE PRESSURE REGULATOR, HOSE W/ QUICK DISCONNECT RESTRAINING DEVICE FOR PLUMB. CONTR. TO INSTALL
44C*		1/2"					S.O.	1' - 6"	
44D*		1/2"					S.O.	4' - 0"	
44E				2"			F.S.	0' - 0"	PLUMB. CONTR. TO EXTEND VENTED DRAIN LINE TO FLOOR SINK. FOLLOW MFG. DRAIN INSTALLATION INSTRUCTIONS.
44F				2"			F.S.	0' - 0"	PLUMB. CONTR. TO EXTEND VENTED DRAIN LINE TO FLOOR SINK. FOLLOW MFG. DRAIN INSTALLATION INSTRUCTIONS.
46	1/2"						S.O.	1' - 6"	FOR FILL FAUCET AT HOT WELLS.
47				3/4"			F.S.	0' - 0"	PLUMB. CONTR. SHALL BRANCH FROM DRAIN ON EQUIPMENT TO FLOOR SINK
50				3/4"			F.S.	0' - 0"	PLUMB. CONTR. SHALL BRANCH FROM DRAIN ON EQUIPMENT TO FLOOR SINK



N

LARGE SCALE KITCHEN - PLUMBING

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

PLUMBING KEYED NOTES:

1 PROVIDE TWO RZP BACKFLOW PREVENTORS, ONE FOR HOT WATER AND ONE FOR COLD WATER. MOUNTED ON THE WALL FOR CHEMICAL CONNECTIONS FOR 3-COMPARTMENT SINK AND DISHWASHER. PROVIDE VALVE AND HOSE END CONNECTION FOR OWNER FURNISHED AND INSTALLED CHEMICAL CLEANING SYSTEM.

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1 07/23/24	ADDENDUM #1
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SHEET NO.	
	P4.2
	SD: 16

ELECTRICAL SYMBOLS

LUMINAIRES - REFER TO LUMINAIRE SCHEDULE

- LIGHTING FIXTURE
- EMERGENCY LIGHTING FIXTURE
- DOWN LIGHT (OR BOLLARD ON SITE)
- EMERGENCY DOWN LIGHT
- WALL WASH DOWN LIGHT
- EXIT SIGN - CEILING MOUNTED
- EXIT SIGN - WALL, FLAT MOUNTED
- EXIT SIGN - WALL, END MOUNTED
- EXIT SIGN NOTES: SHADING INDICATES ILLUMINATED FACE(S), SEE PLANS FOR DIRECTIONAL ARROWS
- EMERGENCY BATTERY WALL PACK
- TRACK LIGHT - SEE PLANS FOR LENGTHS
- POLE MOUNTED SITE LIGHTING FIXUTRE (NUMBER OF HEADS AS SHOWN)
- CEILING FAN (WITH LIGHT SHOWS ON LIGHTING SHEET, FAN ONLY SHOWS ON POWER SHEET)

LIGHTING CONTROL

- WALL SWITCH +48" AFF
- CEILING MOUNTED OCCUPANCY SENSOR
PIR - PASSIVE INFRARED
DT - DUAL TECHNOLOGY
US - ULTRASONIC
A - ANALOG TECHNOLOGY
- OS — WALL MOUNTED OCCUPANCY SENSOR +90" AFF
- CL — CEILING MOUNTED DAYLIGHT SENSOR
- P — PHOTOCELL, WALL OR CEILING MOUNTED
- LTR — LIGHTING TRANSFER SWITCH, SWITCHES POWER SOURCE - MOUNTED ABOVE ACCESSIBLE CEILING SPACE (UL1008)
- LTR — EMERGENCY LIGHTING CONTROL BYPASS RELAY, MOUNTED ABOVE ACCESSIBLE CEILING SPACE (UL924)
- ENS — CEILING MOUNTED PARTITION WALL SENSOR, PARTITION CLOSED BREAKS LINE OF SIGHT BETWEEN 2 SENSORS
- LC1 — 1 ZONE 0-10V LIGHTING CONTROLLER
- LC2 — 2 ZONE 0-10V LIGHTING CONTROLLER
- LC3 — 3 ZONE 0-10V LIGHTING CONTROLLER
- LD1 — 1 ZONE 0-10V DIMMING LIGHTING CONTROLLER
- LD2 — 2 ZONE 0-10V DIMMING LIGHTING CONTROLLER
- LD3 — 3 ZONE 0-10V DIMMING LIGHTING CONTROLLER
- LF1 — 1 ZONE FORWARD PHASE LIGHTING CONTROLLER
- LF2 — 2 ZONE FORWARD PHASE LIGHTING CONTROLLER
- LR1 — 1 ZONE REVERSE PHASE LIGHTING CONTROLLER
- BAS — LIGHTING CONTROL RELAY FOR BAS INTEGRATION
- NB — LIGHTING CONTROL NETWORK BRIDGE
- LVR — ELECTRONIC LINE VOLTAGE TO 0-10V CONTROL RELAY
- RP# — LIGHTING RELAY PANEL - SEE RELAY PANEL SCHEDULE

LIGHTING CONTROL SUBSCRIPT TAGS

* =	BLANK = SINGLE POLE TOGGLE SWITCH
3	3-WAY TOGGLE SWITCH
4	4-WAY TOGGLE SWITCH
CP	ROOM CONTROL PANEL
CS#	DIGITAL LIGHTING CONTROL STATION # = NUMBER OF BUTTONS, UP TO 8
CSD	DIGITAL LIGHTING CONTROL STATION - DIMMING
D	DIMMER
3D	3-WAY DIMMER SWITCH
DT	DUAL TECHNOLOGY OCCUPANCY SENSOR
K	KEY OPERATED TOGGLE SWITCH
LV	LOW VOLTAGE MOMENTARY SWITCH
LVD	LOW VOLTAGE SWITCH WITH DIMMING
OS	OCCUPANCY SENSOR
OSD	OCCUPANCY SENSOR WITH DIMMMING
PIR	PASSIVE INFRARED OCCUPANCY SENSOR
PL	PILOT LIGHTED TOGGLE SWITCH
R	RELAY SWITCH, SINGLE POLE DOUBLE THROW CENTER OFF MOMENTARY SWITCH
SHC	SHADE CONTROLLER
SPC	FAN SPEED CONTROLLER
T	DIGITAL TIMER SWITCH
US	ULTRASONIC OCCUPANCY SENSOR
VS	VACANCY SENSOR
VSD	VACANCY SENSOR WITH DIMMER
WL	WIRELESS
XP	EXPLOSION PROOF

DEVICE HEIGHTS AS ABOVE UNLESS OTHERWISE NOTED ON DRAWINGS.

RECEPTACLES

- SINGLE RECEPTACLE, RECESSED WALL MOUNTED +18" AFF
- DUPLEX RECEPTACLE, RECESSED WALL MOUNTED +18" AFF
- DUPLEX RECEPTACLE, RECESSED WALL MOUNTED AT +44" AFF, UNLESS OTHERWISE NOTED
- DUPLEX RECEPTACLE WITH BOTTOM OUTLET SWITCHED, TOP OUTLET SHALL BE UNSWITCHED RECESSED WALL MOUNTED +18" AFF
- OS — CEILING MOUNTED OCCUPANCY SENSOR FOR CONTROL OF SWITCHED RECEPTACLES
- SWITCHED DUPLEX RECEPTACLE, CONTROLLED BY SWITCHED CIRCUIT, RECESSED WALL MOUNTED +18" AFF
- QUADRUPLEX RECEPTACLE, RECESSED WALL MOUNTED +18" AFF
- QUADRUPLEX RECEPTACLE, RECESSED WALL MOUNTED ABOVE COUNTER +44" AFF
- DUPLEX RECEPTACLE, RECESSED CEILING MOUNTED
- QUADRUPLEX RECEPTACLE, RECESSED CEILING MOUNTED
- NEMA X-X — SPECIAL PURPOSE RECEPTACLE, RECESSED WALL MOUNTED +18" AFF SEE PLAN FOR SIZE/TYPE
- DUPLEX RECEPTACLE, RECESSED FLOOR MOUNTED
- QUADRUPLEX RECEPTACLE, RECESSED FLOOR MOUNTED
- DEAD FRONT GFI DEVICE +18" AFF, PROTECTS DOWNSTREAM DEVICE
- 4"X4"X2" JUNCTION BOX WITH FINISHED BLANK COVER, RECESSED WALL MOUNTED 18" AFF
- PP — POWER POLE WITH DEVICES - FLOOR TO CEILING
- FB-A — FLOOR BOX - SEE FLOOR BOX SCHEDULE
- PT-A — FLOOR POKE-THRU - SEE POKE-THRU SCHEDULE

RECEPTACLE SUBSCRIPT TAGS

CR	CORD REEL, SUPPORTED FROM STRUCTURE
G	GROUND FAULT CIRCUIT INTERRUPTING
H	HORIZONTALLY ORIENTED
HG	HOSPITAL GRADE
IG	ISOLATED GROUND
P	'DOWNSTREAM PROTECTED' BY GFCI DEVICE ON SAME CIRCUIT
TR	TAMPER RESISTANT
U	DUPLEX WITH 2 USB PORTS
WP	WEATHERPROOF 'WHILE IN USE' COVER
WR	WEATHER RESISTANT
WP	WATERPROOF
XP	EXPLOSION PROOF

DEVICE HEIGHTS AS ABOVE UNLESS OTHERWISE NOTED ON DRAWINGS.

SECURITY

- CAMERA WALL MOUNTED +9'-0"AFF
F=FIXED, PTZ=PAN-TILT-ZOOM
- CAMERA CEILING MOUNTED
F=FIXED, PTZ=PAN-TILT-ZOOM
- ADA — AIPHONE DISTRIBUTION ADAPTER
- ADR — AIPHONE DOOR RELEASE
- ADS — AIPHONE DOOR STATION
- AMS — AIPHONE MASTER STATION
- APS — AIPHONE POWER SUPPLY
- ASM — AIPHONE SUB-MASTER STATION
- BR3 — DOOR INTERFACE RELAY
- CR — CARD READER
- DE — DELAY EGRESS
- DC — DOOR CONTACT / DOOR POSITION
- DPS — DOOR POWER SUPPLY
- DS — DOOR SENSOR
- DU — DOOR UNLOCK SELECTOR SWITCH
- EE — ELECTRIC EXIT
- EL — ELECTRIC LOCK
- ES — ELECTRIC STRIKE
- EA — EXIT ALARM
- ER — EXIT REQUEST
- GB — GLASS BREAKAGE DETECTOR
- KS — KEY SWITCH
- LL — LIQUID LEVEL SENSOR
- ML — MAGNETIC LOCK
- MD — MOTION DETECTOR
- LRM — LONG RANGE MOTION DETECTOR
- KP — NUMERIC KEYPAD
- PB — PANIC BUTTON
- PT — POWER TRANSFER
- RH — ROOF HATCH SENSOR
- TS — TEMPERATURE SENSOR
- VM — CCTV/SECURITY VIDEO MONITOR

DATA / COMMUNICATION DEVICES

- COMMUNICATIONS OUTLET, RECESSED WALL MOUNTED AT 18"AFF. SEE PLANS FOR NUMBER OF AND TYPES OF JACKS
- COMMUNICATIONS OUTLET, RECESSED WALL MOUNTED AT 44"AFF. SEE PLANS FOR NUMBER OF AND TYPES OF JACKS
- COMMUNICATIONS OUTLET, RECESSED FLOOR MOUNTED. SEE PLANS FOR NUMBER OF AND TYPES OF JACKS
- COMMUNICATIONS OUTLET, RECESSED IN CEILING OR SURFACE AT STRUCTURE. SEE PLANS FOR NUMBER OF AND TYPES OF JACKS

DATA / COMMUNICATIONS SUBSCRIPT TAGS

* = AOR	AREA OF REFUGE INTERCOM STATION
CAM	CAMERA ROUGH-IN
D	DATA
F	SUPPLIED BY FURNITURE MANUFACTURER, INSTALLED AND CONNECTED BY E.C.
I	INTERCOM
ICS	INTERCOM CALL-IN STATION
M	MICROPHONE
RI	ROUGH-IN ONLY WITH BLANK COVER PLATE
SD	SAFE DEFEND DEVICE (SEE LEGEND BELOW)
T	TELEPHONE
TV	TELEVISION
WAP	WIRELESS ACCESS POINT
XP	EXPLOSION PROOF

DEVICE HEIGHTS AS ABOVE UNLESS OTHERWISE NOTED ON DRAWINGS

SAFE DEFEND SUBSCRIPT TAGS

AM	ACTIVATION MODULE +46" AFF: UNO (EACH LOCATION REQUIRES '1D')
KP	KEYPAD +46" AFF (EACH LOCATION REQUIRES "1D")
SC	SAFETY CABINET +54" AFF; UNO - SEE DETAIL ON SHEET E0.32 (EACH LOCATION REQUIRES '1D')
TS	TRAINING STATION +57" AFF (EACH LOCATION REQUIRES '1D')
VM	VOICEOVER MODULE +46" AFF (EACH LOCATION REQUIRES "1D")

DEVICE HEIGHTS AS ABOVE UNLESS OTHERWISE NOTED ON DRAWINGS.

- SPEAKER RECESSED CEILING MOUNTED
- SPEAKER, WALL MOUNTED - REFER TO AUDIO/VISUAL DETAIL SHEET
- SPEAKER VOLUME CONTROL RECESSED WALL MOUNTED +54" AFF
- PROGRAM BELL WALL MOUNTED +90"AFF
- CLOCK WALL MOUNTED +90"AFF
- CLOCK OUTLET WALL MOUNTED +90"AFF
- SM — SOUND MASKING SPEAKER, CHAIN HUNG ABOVE CEILING
- IC — INTERCOM CALL STATION, 4'-0"AFF
- OPF — SOUND MASKING SYSTEM OPERATING PLATFORM, SECURED TO STRUCTURE AT 11'-0"AFF
- PS — SOUND MASKING SYSTEM POWER SUPPLY, WALL MOUNTED AT 8'-0"AFF

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ARC	ALUMINUM RIGID CONDUIT
AUX	AUXILIARY
BOF	BOTTOM OF FIXTURE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COF	CENTER OF FIXTURE
CU	COPPER
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
G	GROUND FAULT CIRCUIT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
IMC	INTERMEDIATE METAL CONDUIT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NC	NORMALLY CLOSED
NF	NON FUSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PVC	PVC CONDUIT
TOF	TOP OF FIXTURE
U	USB PORT
UCR	UNDERCABINET RECESSED
UNO	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
WPI	WEATHERPROOF IN-USE COVER

MOUNTING HEIGHTS

ALL MOUNTING HEIGHTS ARE AS GIVEN UNLESS OTHERWISE NOTED ON PLANS.

ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS OTHERWISE NOTED.

POWER EQUIPMENT

- SINGLE SECTION PANELBOARD
- TWO SECTION PANELBOARD
- DISTRIBUTION PANEL
- SWITCHBOARD
- PAD MOUNTED TRANSFORMER, SEE PLAN FOR TYPE AND SIZE
- ATS — AUTOMATIC TRANSFER SWITCH
- PWCP — FACTORY WIRED CONTROL PANEL
- VFD — VARIABLE FREQUENCY DRIVE
- M PL — SINGLE PHASE MANUAL MOTOR STARTER WITH PILOT LIGHT
- RIB — RELAY IN BOX
- DISCONNECT SWITCH
- MAGNETIC STARTER 1 PHASE
- COMBINATION MAGNETIC STARTER/ MAGNETIC STARTER 3 PHASE
- COMBINATION MAGNETIC STARTER/ DISCONNECT SWITCH 1 PHASE
- DISCONNECT SWITCH 3 PHASE
- LINE VOLTAGE THERMOSTAT
- 208V, 3 PHASE MOTOR
- 480V, 3 PHASE MOTOR
- 120V, 1 PHASE MOTOR
- 208V, 1 PHASE MOTOR
- DC MOTOR
- GB — GROUND BUS BAR AT 18"AFF
- C — CONTACTOR AT 48"AFF
- M — UTILITY METER
- RGA — REMOTE GENERATOR ANNUNCIATOR AT 48"AFF
- PUSH-BUTTON RECESSED WALL MOUNTED +48" AFF
- PUSH PLATE BUTTON RECESSED WALL MOUNTED +48" AFF
- MUSHROOM HEAD/EMERGENCY PUSH BUTTON RECESSED WALL MOUNTED +48" AFF

WIRING SYMBOLS

- CONDUIT DOWN
- CONDUIT UP
- CONDUIT CAPPED
- CONDUIT BREAK/CONTINUED
- CONDUIT STUB WITH GROMMET
- GROUND
- EXISTING
- DEMOLITION WORK
- NEW WORK
- CONDUIT CONCEALED IN SLAB OR IN ACCESSIBLE SPACE BELOW
- CONDUIT EXPOSED
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING
- WIREWAY / WIREMOLD
- WIREMOLD WITH DUPLEX RECEPTACLE (DUPLEX RECEPTACLE SYMBOL INDICATES MOUNTING HEIGHT, +18" AFF SHOWN) UNO
- 1D 1D 1D — DIVIDED WIREMOLD WITH DATA/TELEPHONE (TOP CELL) AND DUPLEX RECEPTACLE (BOTTOM CELL) OUTLETS AS INDICATED (DEVICE SYMBOLS INDICATES MOUNTING HEIGHT, +44" AFF SHOWN) UNO
- VERTICAL WIREWAY
- CABLE TRAY
- CONDUIT SLEEVE (SIZED TO 40% FILL, 2" MINIMUM) UNLESS NOTED OTHERWISE

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL
- FATP — FIRE ALARM TRANSPONDER PANEL
- FARP — FIRE ALARM REMOTE POWER SUPPLY
- FAAN — FIRE ALARM ANNUNCIATOR
- DACT — DIGITAL ALARM COMMUNICATOR TRANSMITTER
- END OF LINE RESISTOR
- S * — SMOKE DETECTOR (CEILING MOUNTED)
(SB = SOUNDER BASE / RB = RELAY BASE)
- DS * — DUCT MOUNTED SMOKE DETECTOR
(S = SUPPLY / R = RETURN)
- H * — HEAT DETECTOR (CEILING MOUNTED)
(FT = FIXED TEMPERATURE / RR = RATE OF RISE)
- COD * — CARBON MONOXIDE DETECTOR (CEILING MOUNTED)
- COMB * — COMBINATION CARBON MONOXIDE / SMOKE DETECTOR (CEILING MOUNTED)
- B H RC — BEAM SMOKE DETECTOR (RECEIVER) (CEILING MOUNTED)
- B RF — BEAM SMOKE DETECTOR (REFLECTOR) (CEILING MOUNTED)
- B TR — BEAM SMOKE DETECTOR (TRANSMITTER) (CEILING MOUNTED)
- F SD * — SMOKE DETECTOR (WALL MOUNTED)
(SB = SOUNDER BASE / RB = RELAY BASE)
- D * — DUCT SMOKE DETECTOR (WALL/VERTICALLY MOUNTED)
(S = SUPPLY / R = RETURN)
- H * — HEAT DETECTOR (WALL MOUNTED)
(FT = FIXED TEMPERATURE / RR = RATE OF RISE)
- COD * — CARBON MONOXIDE DETECTOR (WALL MOUNTED)
- COS * — COMBINATION CARBON MONOXIDE / SMOKE DETECTOR (WALL MOUNTED)
- B H RC — BEAM SMOKE DETECTOR (RECEIVER) (WALL MOUNTED)
- B H RF — BEAM SMOKE DETECTOR (REFLECTOR) (WALL MOUNTED)
- B TR — BEAM SMOKE DETECTOR (TRANSMITTER) (WALL MOUNTED)
- A — AUDIBLE NOTIFICATION APPLIANCE (HORN) (CEILING MOUNTED)
- AV * — AUDIBLE/VISUAL NOTIFICATION APPLIANCE (HORN) (CEILING MOUNTED) XX cd = CANDELA RATING
- V * — VISUAL NOTIFICATION APPLIANCE (CEILING MOUNTED) XX cd = CANDELA RATING
- SM * — SPEAKER/VISUAL NOTIFICATION APPLIANCE (VOICE) (CEILING MOUNTED) XX cd = CANDELA RATING
- SP * — SPEAKER NOTIFICATION APPLIANCE (VOICE) (CEILING MOUNTED) XW = WATTAGE TAP
- A * — AUDIBLE NOTIFICATION APPLIANCE (HORN) (WALL MOUNTED) XW = WATTAGE TAP
- AV * — AUDIBLE/VISUAL NOTIFICATION APPLIANCE (HORN) (WALL MOUNTED) XX cd = CANDELA RATING
- V * — VISUAL NOTIFICATION APPLIANCE (WALL MOUNTED) XX cd = CANDELA RATING
- SV * — SPEAKER/VISUAL NOTIFICATION APPLIANCE (VOICE) (WALL MOUNTED) XX cd = CANDELA RATING
- SP * — SPEAKER NOTIFICATION APPLIANCE (VOICE) (WALL MOUNTED) XW = WATTAGE TAP
- B * — BELL APPLIANCE (WALL MOUNTED)
- F * — MANUAL PULL STATION (C = PROTECTIVE COVER)
- R — RELAY
- MM S/D — MONITOR MODULE
(SINGLE / DUAL - SINGLE IF NOT MARKED)
- CM — CONTROL MODULE
(PROVIDE RELAY IF CONTACT RATING IS EXCEEDED)
- TS — TAMPER SWITCH (BY OTHERS)
- FS — FLOW SWITCH (BY OTHERS)
- PH — FIRE FIGHTER'S PHONE JACK
- RM — REMOTE MICROPHONE
- DH W/F — DOOR HOLDER (W = WALL MOUNTED / F = FLOOR MOUNTED - WALL IF NOT MARKED)
- RM — REMOTE MICROPHONE
- RT — REMOTE TEST STATION
- RL — REMOTE DEVICE LED INDICATOR
- IPG — IG / GSM TRANSMITTER
- PTR — PRINTER (UL LISTED FOR FIRE ALARM)
- TSM — TRANSIENT SUPPRESSION MODULE
- ISO — ISOLATION MODULE
- PSW — HI / LOW PRESSURE SWITCH (BY OTHERS)
- MSD — MOTORIZED FIRE/SMOKE DAMPER (BY OTHERS)
- PIV — POST INDICATOR VALVE (BY OTHERS)
- PSR — POWER SUPERVISION RELAY

FIRE ALARM SUBSCRIPT TAGS

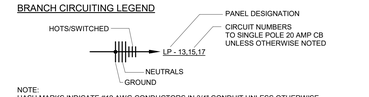
* = CV	CONVENTIONAL 120 VOLT DEVICE
WG	WIRE GUARD
WP	WEATHERPROOF
XP	EXPLOSION PROOF

DEVICE HEIGHTS AS BELOW UNLESS OTHERWISE NOTED ON DRAWINGS:

WALL MOUNTED ANNUNCIATOR +48"AFF
WALL MOUNTED MICROPHONE OR JACK +48"AFF
WALL MOUNTED NOTIFICATION DEVICE +80"AFF
WALL MOUNTED PULL STATION +48"AFF
WALL MOUNTED DETECTOR +80"AFF

COORDINATE FIRE ALARM RELAYS, MODULES, AND DUCT/PIPE MOUNTED DEVICES WITH OTHER TRADES

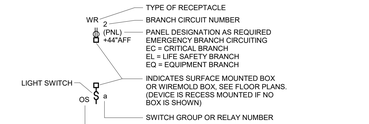
BRANCH CIRCUITING LEGEND

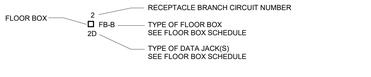


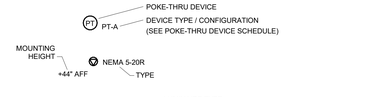
NOTE:
HASH MARKS INDICATE #12 AWG CONDUCTORS IN 3/4" CONDUIT UNLESS OTHERWISE NOTED. SEE FLOOR PLANS AND SCHEDULES FOR OTHER FEEDER CONDUCTORS AND CONDUIT SIZES.

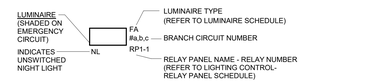
20A BRANCH CIRCUIT HOMERUNS SHALL BE SIZED AS FOLLOWS:
120V: 0-100 FEET SHALL BE #12 AWG MINIMUM
101-200 FEET SHALL BE #10 AWG MINIMUM
IN EXCESS OF 200 FEET SHALL BE #8 AWG MINIMUM

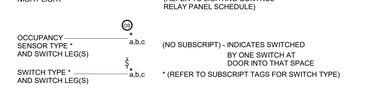
277V: 0-250 FEET SHALL BE #12 AWG MINIMUM
IN EXCESS OF 250 FEET SHALL BE #10 AWG MINIMUM

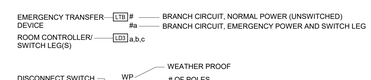


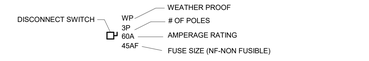


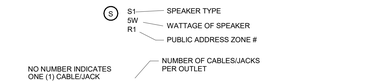


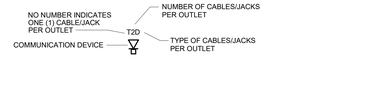


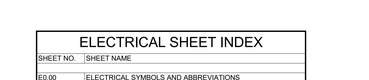


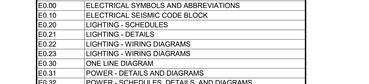












ELECTRICAL SHEET INDEX

SHEET NO.	SHEET NAME
E0.00	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E0.10	ELECTRICAL SEISMIC CODE BLOCK
E0.20	LIGHTING - SCHEDULES
E0.21	LIGHTING - DETAILS
E0.22	LIGHTING - WIRING DIAGRAMS
E0.23	LIGHTING - WIRING DIAGRAMS
E0.30	ONE LINE DIAGRAM
E0.31	POWER - DETAILS AND DIAGRAMS
E0.32	POWER - SCHEDULES, DETAILS, AND DIAGRAMS
E0.33	ELECTRICAL SCHEDULES
E0.40	MECHANICAL-ELECTRICAL INTERFACE SCHEDULE
E0.41	HVAC POWER - DETAILS AND DIAGRAMS
E0.42	HVAC POWER - DETAILS AND DIAGRAMS
E0.50	SYSTEMS - SCHEDULES, DETAILS, AND DIAGRAMS
E1.0	SITE PLAN - ELECTRICAL
E2.2	FLOOR PLAN - AREA A - LIGHTING
E2.3	FLOOR PLAN - AREA B - LIGHTING
E2.4	FLOOR PLAN - AREA C - LIGHTING
E2.5	FLOOR PLAN - AREA D - LIGHTING
E3.1	OVERALL FLOOR PLAN - ELECTRICAL
E3.2	FLOOR PLAN - AREA A - POWER AND DATA
E3.3	FLOOR PLAN - AREA B - POWER AND DATA
E3.4	FLOOR PLAN - AREA C - POWER AND DATA
E3.5	FLOOR PLAN - AREA D - POWER AND DATA
E4.2	FLOOR PLAN - AREA A - HVAC POWER
E4.3	FLOOR PLAN - AREA B - HVAC POWER
E4.4	FLOOR PLAN - AREA C - HVAC POWER
E4.5	FLOOR PLAN - AREA D - HVAC POWER
E4.12	ROOF PLAN - AREA A - ELECTRICAL
E4.13	ROOF PLAN - AREA B - ELECTRICAL
E4.14	ROOF PLAN - AREA C - ELECTRICAL
E4.15	ROOF PLAN - AREA D - ELECTRICAL
E5.2	FLOOR PLAN - AREA A - SYSTEMS
E5.3	FLOOR PLAN - AREA B - SYSTEMS
E5.4	FLOOR PLAN - AREA C - SYSTEMS
E5.5	FLOOR PLAN - AREA D - SYSTEMS
E6.1	ENLARGED PLANS - FOOD SERVICE
E6.2	ENLARGED PLANS - MAIN MECHANICAL ROOM
E6.3	ENLARGED PLANS - ELECTRICAL ROOMS

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PHILIP J. WENTZ
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PROJ. NO. 23-09B

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1	07-23-24	ADDENDUM #1

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PANELBOARD SCHEDULE

PANEL DESIGNATION	PANEL LOCATION	PANEL MOUNTING	PANEL VOLTAGE	PANEL SIZE TYPE/AMP	CIRCUIT BREAKERS 1 POLE	2 POLE	3 POLE	TOTAL POLES	KA/C RATING	REMARKS
'MP1'	MAIN ELECTRICAL 307	SURFACE	480/277V 3Ø 4W	400A MLO	12-20A -- -- --	-- -- -- --	6-20A 2-30A 1-70A 1-100A	42	65	
'MP2'	MECH EQUIPMENT 306	SURFACE	480/277V 3Ø 4W	600A MLO	15-20A -- -- -- --	-- -- -- -- --	4-20A 5-30A 10-40A 2-50A 2-60A	84	65	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1.
'HP11'	MEZZANINE 228	SURFACE	480/277V 3Ø 4W	200A MLO	9-20A -- -- -- -- --	-- -- -- -- -- --	2-20A 2-30A 2-40A 2-50A 2-60A 1-125A	42	35	
'HP12'	ELEC 425	SURFACE	480/277V 3Ø 4W	200A MLO	9-20A -- -- -- --	-- -- -- -- --	2-20A 2-30A 2-40A 2-50A 3-60A	42	22	
'HP21'	ELEC 209	SURFACE	480/277V 3Ø 4W	200A MLO	21-20A -- -- --	-- -- -- --	4-20A 1-25A 1-30A 1-35A	42	35	
'HP22'	ELEC 143	SURFACE	480/277V 3Ø 4W	200A MLO	27-20A -- -- -- --	-- -- -- -- --	1-20A 1-30A 1-40A 1-50A 1-60A	42	22	
'EQ-HP1'	MEZZANINE 228	SURFACE	480/277V 3Ø 4W	125A MCB	36-20A -- -- --	-- -- -- --	2-50A -- -- --	42	22	PANEL TO HAVE INTEGRATED SPD (TVSS). PROVIDE WITH FEED-THRU LUGS.
'EQ-HP2'	ELEC 209	SURFACE	480/277V 3Ø 4W	125A MCB	36-20A -- -- --	-- -- -- --	2-50A -- -- --	42	22	PANEL TO HAVE INTEGRATED SPD (TVSS). PROVIDE WITH FEED-THRU LUGS.
'EM-HP1'	MEZZANINE 228	SURFACE	480/277V 3Ø 4W	125A MCB	27-20A -- -- --	-- -- -- --	1-20A 1-30A 1-50A 2-100A	42	22	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EM-HP2'	ELEC 425	SURFACE	480/277V 3Ø 4W	100A MLO	42-20A -- --	-- -- --	-- -- --	42	14	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EM-HP3'	ELEC 143	SURFACE	480/277V 3Ø 4W	100A MLO	42-20A -- --	-- -- --	-- -- --	42	14	PANEL TO HAVE INTEGRATED SPD (TVSS).

PANELBOARD SCHEDULE (continued)

'A1'	MAIN ELECTRICAL 307	SURFACE	120/208V 3Ø 4W	400A MLO	72-20A 4-15A -- --	2-20A 2-30A -- --	-- -- -- --	84	22	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1. PROVIDE (4) 20A/1P, (1) 20A/2P, AND (1) 30A/2P GFCI BREAKERS.
'AZ'	MECH EQUIPMENT 306	SURFACE	120/208V 3Ø 4W	200A MLO	42-20A -- -- --	-- -- -- --	-- -- -- --	42	22	PROVIDE (4) 20A/1P 30mA GFPE BREAKERS.
'A3'	MEZZANINE 228	SURFACE	120/208V 3Ø 4W	225A MCB	71-20A 7-30A -- --	-- -- -- --	2-30A -- -- --	84	10	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1.
'A4'	ELEC 425	SURFACE	120/208V 3Ø 4W	200A MCB	2-15A 78-20A -- --	1-20A 1-30A -- --	-- -- -- --	84	14	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1.
'A5'	ELEC 425	SURFACE	120/208V 3Ø 4W	200A MCB	84-20A -- -- --	-- -- -- --	-- -- -- --	84	14	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1. PROVIDE (2) 20A/1P GFCI CIRCUIT BREAKERS.
'B1'	ELEC 209	SURFACE	120/208V 3Ø 4W	400A MLO	2-15A 77-20A -- --	1-60A -- -- --	1-60A -- -- --	84	22	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1.
'B2'	ELEC 209	SURFACE	120/208V 3Ø 4W	200A MLO	40-20A -- -- --	1-50A -- -- --	-- -- -- --	42	22	PROVIDE (1) 50A/2P SHUNT TRIP BREAKER.
'B3'	ELEC 106	SURFACE	120/208V 3Ø 4W	200A MLO	83-20A 1-15A -- --	-- -- -- --	-- -- -- --	84	22	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1. PROVIDE (4) 20A/1P GFCI CIRCUIT BREAKERS.
'B4'	ELEC 143	SURFACE	120/208V 3Ø 4W	200A MCB	2-15A 76-20A -- --	1-20A 1-30A -- --	-- -- -- --	84	14	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1.
'B5'	ELEC 143	SURFACE	120/208V 3Ø 4W	200A MCB	84-20A -- -- --	-- -- -- --	-- -- -- --	84	14	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1. PROVIDE (2) 20A/1P GFCI CIRCUIT BREAKERS.
'K1'	PASSAGE 313	SURFACE	120/208V 3Ø 4W	400A MLO	54-20A -- -- --	6-20A -- -- --	4-20A 2-50A -- --	84	22	2-SECTION PANEL; PROVIDE FEED-THRU LUGS IN SECTION #1. PROVIDE (2) 30A/2P, (2) 20A/2P, (1) 20A/3P, AND (3) 20A/1P GFCI BREAKERS. PROVIDE (1) 20A/1P SHUNT TRIP BREAKER.
'KZ'	PASSAGE 313	SURFACE	120/208V 3Ø 4W	200A MLO	30-20A -- -- --	3-20A -- -- --	2-20A 1-30A -- --	42	22	
'EQ-A1'	MEZZANINE 228	SURFACE	120/208V 3Ø 4W	100A MCB	42-20A -- -- --	-- -- -- --	-- -- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EQ-A3'	ELEC 425	SURFACE	120/208V 3Ø 4W	100A MCB	38-20A -- -- --	1-20A 1-30A -- --	-- -- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EQ-A21'	ELEC 209	SURFACE	120/208V 3Ø 4W	100A MCB	38-20A -- -- --	1-20A 1-30A -- --	-- -- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS). PROVIDE WITH FEED-THRU LUGS.
'EQ-A22'	ELEC 106	SURFACE	120/208V 3Ø 4W	100A MLO	38-20A -- -- --	1-20A 1-30A -- --	-- -- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EQ-A4'	ELEC 143	SURFACE	120/208V 3Ø 4W	100A MCB	38-20A -- --	1-20A 1-30A --	-- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS).
'EM-A1'	MEZZANINE 228	SURFACE	120/208V 3Ø 4W	100A MCB	40-20A -- --	1-20A -- --	-- -- --	42	10	PANEL TO HAVE INTEGRATED SPD (TVSS).

NOTE:
1. ALL SECTIONS OF MULTIPLE SECTION PANELBOARDS SHALL HAVE THE SAME DIMENSION.
2. PANELBOARD SECTIONS SHALL HAVE A MAXIMUM OF 42 POLES.
3. PANELBOARD COVERS TO BE DOOR-IN-DOOR TYPE.

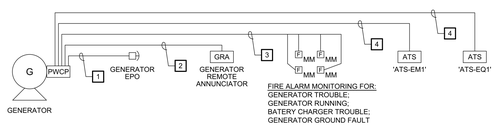
FLOOR BOX SCHEDULE

EQUIPMENT			DATA														
				SERVICES REQUIRED													
FLOORBOX ID	DESCRIPTION	BASE CATALOG # (OR EQUIV.)	DEPTH	SINGLE RECEPTACLE	DUPLEX RECPETACLE	USB DUPLEX RECPETACLE	GFCI RECPETACLE	RJ45 DATA JACKS	COAXIAL F-CONNECTOR (FEMALE)	HDMI	MICROPHONE	LOW VOLTAGE PUSH BUTTONS	POWER CONNECTION FLEXIBLE WHIP	DATA CONNECTION FLEXIBLE WHIP	FLANGE FINISH/COLOR	NOTES
FB-A	8-GANG RECTANGULAR STEEL	FSR #FL500P-8 BOX WITH HUBBELL #610GCCVRBRS COVER ON GYM WOOD FLOOR SYSTEM	V	-	2	-	-	*	-	-	-	-	-	-	COORDINATE WITH ARCHITECT	PROVIDE FINISHED COVER AND ALL NECESSARY DEVICE AND BLANK PLATES. *SEE FLOOR PLANS FOR QUANTITY OF DATA CABLES REQUIRED. REFERENCE FLOOR BOX DETAIL REGARDING MOUNTING IN GYM FLOOR
FB-B	2-GANG RECTANGULAR STEEL	WIREMOLD #RFBA2R300G BOX WITH #FPBTC(XX) COVER (COORDINATE SURFACE OR FLUSH MOUNT COVERS WITH FLOOR TYPE)	V	-	1	-	-	*	-	-	-	-	-	-	COORDINATE WITH ARCHITECT	PROVIDE FINISHED COVER AND ALL NECESSARY DEVICE AND BLANK PLATES. *SEE FLOOR PLANS FOR QUANTITY OF DATA CABLES REQUIRED.

ABBREVIATIONS:
V - VARIES, ADJUSTABLE

FINISHES:	COLORS:
AL -...	AL - ALUMINUM
BR - BRASS	BK - BLACK
BZ - BRONZE	BR - BRONZE
PL - PLASTIC	GR - GRAY
ST - STEEL	WH - WHITE

NOTES:
USE CONDUIT REDUCERS BUSHINGS AS REQUIRED



GENERATOR CONTROL WIRING DIAGRAM	
1	2#14, 1#14 GRD. - 3/4"C
2	BELDEN 9729 (COMMUNICATION). 2#14, 1#14 GRD. (POWER) - 1/4"C
3	(4) 18/2 FIRE ALARM CABLE (SPECIFIED BY FIRE ALARM VENDOR) - 1"C
4	4#14, 1#14 GRD. - 1"C (2#14 FOR START/STOP SIGNAL AND 2#14 FOR SPARE)

GENERATOR ONE-LINE DIAGRAM

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FOOD SERVICE: DESIGN CONSULTANTS, INC.

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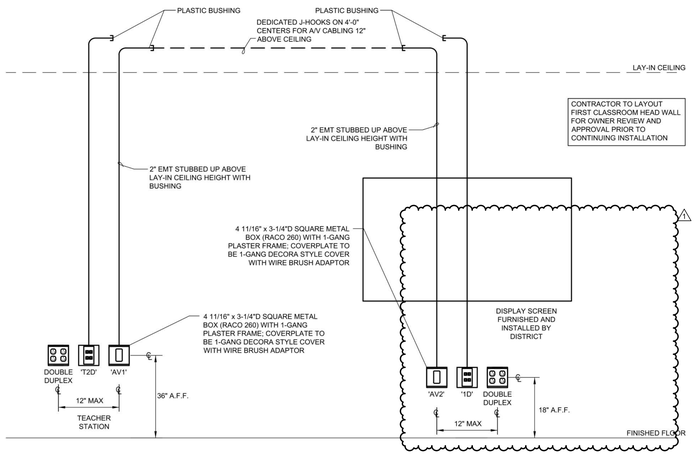
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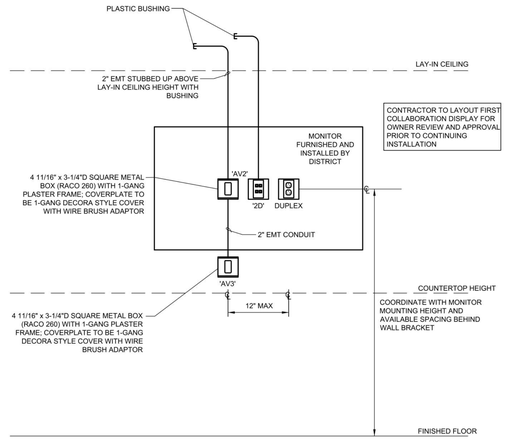
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TYPICAL CLASSROOM HEAD WALL ROUGH-IN

NOT TO SCALE



TYPICAL COLLABORATION DISPLAY ROUGH-IN

NOT TO SCALE

ORCHARD FARM ELEMENTARY SCHOOL - LOW VOLTAGE RESPONSIBILITY MATRIX							
CLASSROOM TECHNOLOGY							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Graphic Display w/ Integral Soundbar			X	X			
Wire Brush Adaptor Coverplate	X	X					
AV Cabling			X	X			
Wall Backing for Display Screen					X	X	
Testing, Commissioning and Certification			X	X			

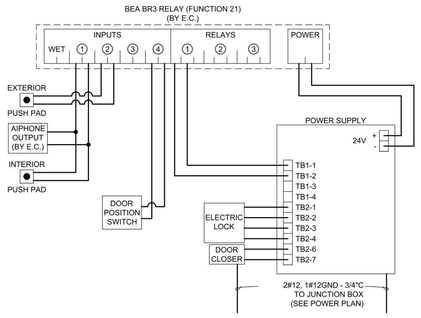
DATA / TELECOMMUNICATIONS SYSTEM							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Conduit / Backbox / Pull Strings	X	X					
Data Jacks + Data Jack Terminations	X	X					
Copper + Fiber Optic Wiring	X	X					
Patch Panel Terminations	X	X					
Punch Down Blocks	X	X					
Servers			X	X			
Patch Panels	X	X					
Patch Cords			X	X			
Telephones			X	X			
Racks and Wire Management	X	X					
Rack Mounted Power Distribution	X	X					
Wall Outlets / Faceplate / Jacks	X	X					
Testing, Commissioning and Certification	X	X					
Wireless Access Points			X	X			
Telephone Line Subscriptions			X	X			
Safe Defend Equipment			X	X			

FIRE ALARM SYSTEM							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Fire Alarm Control Panel	X	X					
Fire Alarm Devices	X	X					
Fire Alarm Wiring	X	X					
Conduit / Backbox / Pull Strings	X	X					
Power Supply Power (120V and low voltage)	X	X					
Testing, Commissioning and Certification	X	X					
Annual Testing			X	X			
Fire Alarm Monitoring and Cellular Subscription			X	X			

ACCESS CONTROL SYSTEM							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Access Control Main Control Panel	X	X					
Wiring (to and within doors)	X	X					
Power Supplies	X	X					
Power Supply Power (120V and low voltage)	X	X					
Conduit / Backbox / Pull Strings	X	X					
Plywood Board	X	X					
Testing, Commissioning and Certification	X	X					
Door Components (strikes, latches, etc.)					X	X	
Wall Outlets	X	X					
Servers			X	X			
Card Readers					X	X	
Access Control Software	X	X					
Key Cards	X	X					
Testing, Certification and Commissioning	X	X					

SECURITY CAMERA SYSTEM							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Cameras			X	X			
Conduit / Backbox / Pull Strings	X	X					
Data Jacks + Terminations + Wiring	X	X					
Camera Licenses			X	X			
Camera and Recording Software			X	X			
Testing, Commissioning and Certification			X	X			
Power Supply Power (120V and low voltage)	X	X					
Server(s)			X	X			
Testing, Certification and Commissioning			X	X			

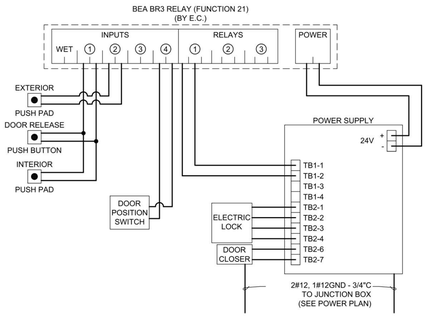
PUBLIC ADDRESS/INTERCOM SYSTEM							
SCOPE OF SYSTEM	**RESPONSIBLE PARTY**						**COMMENTS**
	ELECTRICAL CONTRACTOR		**OWNER**		**GENERAL CONTRACTOR**		
	FURNI...	**INSTALL**	**FURNI...**	**INSTALL**	**FURNI...**	**INSTALL**	
Paging Head-End	X	X					
Conduit / Backbox / Pull Strings	X	X					
Wiring	X	X					
Punch Down Blocks	X	X					
Plywood Board	X	X					
Racks and Wire Management	X	X					
Rack Mounted Power Distribution	X	X					
Power Supply Power (120V and low voltage)	X	X					
Testing, Commissioning and Certification	X	X					
Speakers	X	X					
Control Stations (desktop, wall mounted)	X	X					
Software	X	X					
Testing, Certification and Commissioning	X	X					



DOOR HARDWARE WIRING DIAGRAM

(DOOR NUMBER 100A)

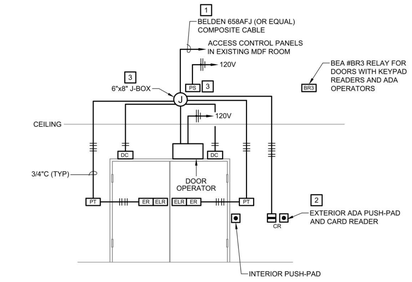
1. ALL DOOR HARDWARE DEVICES BY OTHERS UNLESS NOTED.
2. ALL WIRING AND CONNECTIONS BY ELECTRICAL CONTRACTOR.
3. ALL CONDUCTORS TO BE 16 AWG UNLESS OTHERWISE NOTED.
4. CONNECTIONS INSIDE DOOR MUST PASS THROUGH POWER TRANSFER, PROVIDED BY OTHERS.



DOOR HARDWARE WIRING DIAGRAM

(DOOR NUMBERS 100C AND 103A)

1. ALL DOOR HARDWARE DEVICES BY OTHERS UNLESS NOTED.
2. ALL WIRING AND CONNECTIONS BY ELECTRICAL CONTRACTOR.
3. ALL CONDUCTORS TO BE 16 AWG UNLESS OTHERWISE NOTED.
4. CONNECTIONS INSIDE DOOR MUST PASS THROUGH POWER TRANSFER, PROVIDED BY OTHERS.

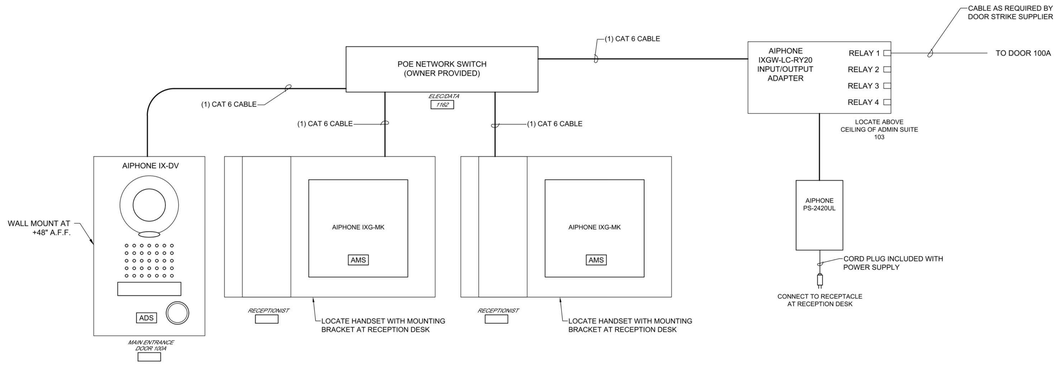


TYPICAL DOOR HARDWARE ROUGH-IN

NO SCALE

KEYED NOTES

1. INSTALL CABLING TO EACH ACCESS CONTROL AND DOOR HARDWARE DEVICE.
2. EXTERIOR MOUNTED ADA PUSH-PAD TO INTERLOCK WITH ACCESS CONTROL SYSTEM SO THAT PUSH-PAD CAN ONLY BE USED AFTER AN AUTHORIZED CARD READ DURING "SECURE" HOURS.
3. LOCATE ABOVE ACCESSIBLE CEILING SPACE NEAR CORRESPONDING DOOR.



AIPHONE RISER DIAGRAM

NO SCALE

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FLOOD STORAGE: MERSINO CARE, INC.

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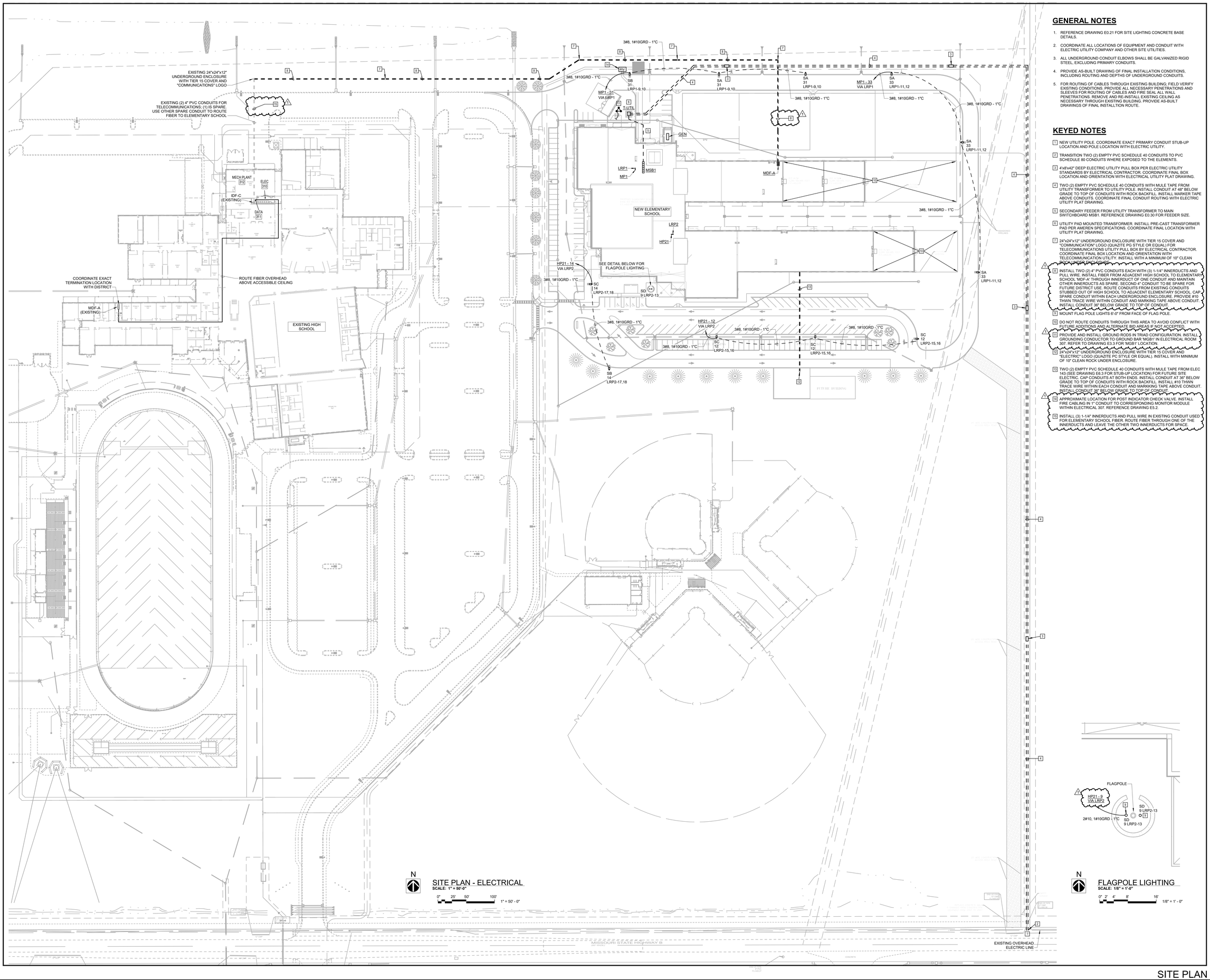
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1	07-23-24	ADDENDUM #1

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E0.50
SD: 19



GENERAL NOTES

1. REFERENCE DRAWING E0.21 FOR SITE LIGHTING CONCRETE BASE DETAILS.
2. COORDINATE ALL LOCATIONS OF EQUIPMENT AND CONDUIT WITH ELECTRIC UTILITY COMPANY AND OTHER SITE UTILITIES.
3. ALL UNDERGROUND CONDUIT ELBOWS SHALL BE GALVANIZED RIGID STEEL, EXCLUDING PRIMARY CONDUITS.
4. PROVIDE AS-BUILT DRAWING OF FINAL INSTALLATION CONDITIONS, INCLUDING ROUTING AND DEPTHS OF UNDERGROUND CONDUITS.
5. FOR ROUTING OF CABLES THROUGH EXISTING BUILDING; FIELD VERIFY EXISTING CONDITIONS. PROVIDE ALL NECESSARY PENETRATIONS AND SLEEVES FOR ROUTING OF CABLES AND FIRE SEAL ALL WALL PENETRATIONS. REMOVE AND RE-INSTALL EXISTING CEILING AS NECESSARY THROUGH EXISTING BUILDING. PROVIDE AS-BUILT DRAWINGS OF FINAL INSTALLTION ROUTE.

KEYED NOTES

1. NEW UTILITY POLE. COORDINATE EXACT PRIMARY CONDUIT STUB-UP LOCATION AND POLE LOCATION WITH ELECTRIC UTILITY.
2. TRANSITION TWO (2) EMPTY PVC SCHEDULE 40 CONDUITS TO PVC SCHEDULE 80 CONDUITS WHERE EXPOSED TO THE ELEMENTS.
3. 4'x8'x42" DEEP ELECTRIC UTILITY PULL BOX PER ELECTRIC UTILITY STANDARDS BY ELECTRICAL CONTRACTOR. COORDINATE FINAL BOX LOCATION AND ORIENTATION WITH ELECTRICAL UTILITY PLAT DRAWING.
4. TWO (2) EMPTY PVC SCHEDULE 40 CONDUITS WITH MULE TAPE FROM UTILITY TRANSFORMER TO UTILITY POLE. INSTALL CONDUIT AT 48" BELOW GRADE TO TOP OF CONDUITS WITH ROCK BACKFILL. INSTALL MARKER TAPE ABOVE CONDUITS. COORDINATE FINAL CONDUIT ROUTING WITH ELECTRIC UTILITY PLAT DRAWING.
5. SECONDARY FEEDER FROM UTILITY TRANSFORMER TO MAIN SWITCHBOARD MSB1. REFERENCE DRAWING E0.30 FOR FEEDER SIZE.
6. UTILITY PAD MOUNTED TRANSFORMER. INSTALL PRE-CAST TRANSFORMER PAD PER AMEREN SPECIFICATIONS. COORDINATE FINAL LOCATION WITH UTILITY PLAT DRAWING.
7. 24"x24"x12" UNDERGROUND ENCLOSURE WITH TIER 15 COVER AND "COMMUNICATION" LOGO (QUAZITE PG STYLE OR EQUAL) FOR TELECOMMUNICATIONS UTILITY PULL BOX BY ELECTRICAL CONTRACTOR. COORDINATE FINAL BOX LOCATION AND ORIENTATION WITH TELECOMMUNICATION UTILITY. INSTALL WITH A MINIMUM OF 10" CLEAN ROCK UNDER ENCLOSURE.
8. INSTALL TWO (2) 4" PVC CONDUITS EACH WITH (3) 1-1/4" INNERDUCTS AND PULL WIRE. INSTALL FIBER FROM ADJACENT HIGH SCHOOL TO ELEMENTARY SCHOOL 'MDF-A' THROUGH INNERDUCT OF ONE CONDUIT AND MAINTAIN OTHER INNERDUCTS AS SPARE. SECOND 4" CONDUIT TO BE SPARE FOR FUTURE DISTRICT USE. ROUTE CONDUITS FROM EXISTING CONDUITS STUBBED OUT OF HIGH SCHOOL TO ADJACENT ELEMENTARY SCHOOL. CAP SPARE CONDUIT WITHIN EACH UNDERGROUND ENCLOSURE. PROVIDE #10 THWN TRACE WIRE WITHIN CONDUIT AND MARKING TAPE ABOVE CONDUIT. INSTALL CONDUIT 36" BELOW GRADE TO TOP OF CONDUIT.
9. MOUNT FLAG POLE LIGHTS 6'-0" FROM FACE OF FLAG POLE.
10. DO NOT ROUTE CONDUITS THROUGH THIS AREA TO AVOID CONFLICT WITH FUTURE ADDITIONS AND ALTERNATE BID AREAS IF NOT ACCEPTED.
11. PROVIDE AND INSTALL GROUND RODS IN TRIAD CONFIGURATION. INSTALL GROUNDING CONDUCTOR TO GROUND BAR 'MGB1' IN ELECTRICAL ROOM 307. REFER TO DRAWING E3.3 FOR 'MGB1' LOCATION.
12. 24"x24"x12" UNDERGROUND ENCLOSURE WITH TIER 15 COVER AND "ELECTRIC" LOGO (QUAZITE PC STYLE OR EQUAL). INSTALL WITH MINIMUM OF 10" CLEAN ROCK UNDER ENCLOSURE.
13. TWO (2) EMPTY PVC SCHEDULE 40 CONDUITS WITH MULE TAPE FROM ELEC 143 (SEE DRAWING E6.3 FOR STUB-UP LOCATION) FOR FUTURE SITE ELECTRIC. CAP CONDUITS AT BOTH ENDS. INSTALL CONDUIT AT 36" BELOW GRADE TO TOP OF CONDUITS WITH ROCK BACKFILL. INSTALL #10 THWN TRACE WIRE WITHIN EACH CONDUIT AND MARKING TAPE ABOVE CONDUIT. INSTALL CONDUIT 36" BELOW GRADE TO TOP OF CONDUIT.
14. APPROXIMATE LOCATION FOR POST INDICATOR CHECK VALVE. INSTALL FIRE CABLING IN 1" CONDUIT TO CORRESPONDING MONITOR MODULE WITHIN ELECTRICAL 307. REFERENCE DRAWING E5.2.
15. INSTALL (3) 1-1/4" INNERDUCTS AND PULL WIRE IN EXISTING CONDUIT USED FOR ELEMENTARY SCHOOL FIBER. ROUTE FIBER THROUGH ONE OF THE INNERDUCTS AND LEAVE THE OTHER TWO INNERDUCTS FOR SPACE.

STATE OF MISSOURI
PHILIP J. WENTZ
NUMBER E-29111
REGISTERED PROFESSIONAL ENGINEER

PHILIP J. WENTZ
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NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI

PROJECT MANAGER: Matt McDermott, Hoener Associates, Inc.

CIVIL / SURVEY
STRUCTURAL
MECH / PLUMB / FP
ELECTRICAL

CONSULTING ENGINEERS:
EARTH ENGINEERING
ASDG, LLC
McCLURE ENGINEERING
DENNIS GORE, INC.

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
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SD: 20

STORM SHELTER NOTE:

PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING PIPING AND UTILITY LINES LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR PENETRATIONS OR 2-1/2" IN DIAMETER FOR CIRCULAR PENETRATIONS SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OF THE STORM SHELTER ENVELOPE. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF A PROTECTIVE SHROUD.

GENERAL NOTES

1. SEE E0.2" SERIES SHEETS FOR LUMINAIRE SCHEDULE, LIGHTING CONTROL MATRIX, RELAY SCHEDULES, LIGHT FIXTURE MOUNTING DETAILS, AND LIGHTING CONTROL DIAGRAMS.
2. ELECTRICAL PANELBOARD DIRECTORIES SHALL BE LABELED WITH FINAL ROOM NUMBERS.
3. INSTALL 0-10V DIMMING CONTROL WIRING FROM DIMMING CONTROLS TO CORRESPONDING LIGHT FIXTURES. ALL CONTROL WIRES TO BE PLENUM RATED.
4. ELECTRICAL CONTRACTOR SHALL PROGRAM AND MASK OCCUPANCY SENSORS FOR DESIRED OPERATION.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ARCHITECT AND LIGHTING DESIGNER IN AIMING ADJUSTABLE LIGHTS AND PROGRAMMING SETTINGS FOR LIGHTING CONTROLS.
6. E.C. SHALL COORDINATE WITH OTHER TRADES, AND ADJUST LIGHTING LOCATIONS, MOUNTING HEIGHTS, AND MOUNTING METHODS TO PROVIDE A GOOD GENERAL LIGHTING LAYOUT/COVERAGE WITHIN MECHANICAL SPACES.
7. CONDUITS IN STORM SHELTER SHALL BE ROUTED AROUND PERIMETER, HIGH ON PRECAST WALLS. FOR LIGHTS, ROUTE CONDUIT TO EACH FIXTURE IN EACH BAY OF THE DOUBLE TEES.
8. WALL MOUNT DEVICES IN GYM TO BE RECESSED IN PRE-CAST WALLS. INSTALL ROUGH-IN CONDUIT AND BOXES AT FABRICATOR SHOP OF PRE-CAST WALL CONTRACTOR. PROVIDE ALL NECESSARY TRAVEL EXPENSES.COORDINATE SCHEDULING AND ROUGH-IN LOCATIONS TO ARCHITECT / ENGINEER FOR REVIEW.

KEYED NOTES

1. COOLER/FREEZER LIGHTING AND CONTROLS BY OTHERS, CONNECTED AND INSTALLED BY E.C.
2. THREE WAY SWITCH FOR CONTROL OF MEZZANINE LIGHTING. ONE SWITCH SHALL BE PLACED AT THE TOP AND BOTTOM OF MEZZANINE STAIRS.
3. INSTALL 2-GANG RECESSED WALL BOX MOUNTING PLATE WITH COVER WITH WINDOW (FSR #WB-PR2G) OVER LIGHTING CONTROL STATIONS. DURING WALL CONSTRUCTION, COORDINATE NECESSARY OPENING AROUND WALL BOX FOR INSTALLING MOUNTING PLATE. REFERENCE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER INFORMATION.
4. ALL LOW VOLTAGE CABLING FOR LIGHTING CONTROLS TO BE INSTALLED IN CONDUIT IN THIS SPACE.

FLOOR PLAN - MECH MEZZ - LIGHTING
SCALE: 1/8" = 1'-0"

FLOOR PLAN - AREA A - LIGHTING
SCALE: 1/8" = 1'-0"

KEY PLAN

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NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI

PROJECT MANAGER: Matt McDermott, Hoener Associates, Inc.

CONSULTING ENGINEERS:
CIVIL / SURVEY
STRUCTURAL
MECH / ELECTRICAL / PLUMBING
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STORM SHELTER NOTE:

PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING PIPING AND UTILITY LINES LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR PENETRATIONS OR 2-1/2" IN DIAMETER FOR CIRCULAR PENETRATIONS SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OF THE STORM SHELTER ENVELOPE. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF A PROTECTIVE SHROUD.

GENERAL NOTES

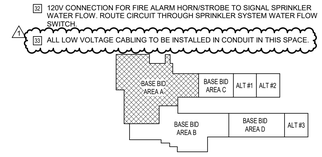
1. ELECTRICAL PANELBOARD DIRECTORIES SHALL BE LABELED WITH FINAL ROOM NUMBERS.
2. COORDINATE MOUNTING HEIGHTS OF ALL 'ABOVE COUNTER' ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
3. ALL DATA CABLING SHALL BE SUPPORTED BY J-HOOKS OR CABLE TRAY INSTALLED AT A READILY ACCESSIBLE HEIGHT ABOVE CEILING, UNLESS NOTED TO BE IN CONDUIT. ROUTE IN CORRIDORS WHERE POSSIBLE.
4. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.
5. REFERENCE SHEET E3.1 FOR DATA RACK DISTRIBUTION BOUNDARIES FOR DATA CABLE ROUTING.
6. TYPE MC CABLE IS PERMITTED FOR WIRING FROM LOCAL DISTRIBUTION JUNCTION BOXES TO DEVICES OR EQUIPMENT IN NEARBY WALLS OR CEILING SPACE. THE LOCAL DISTRIBUTION JUNCTION BOXES SHALL BE LOCATED WITHIN 20 FEET OF DEVICE OR EQUIPMENT BEING SERVED. CONDUIT AND WIRING SHALL BE USED FOR BRANCH CIRCUITING BETWEEN THE PANELS. TYPE MC CABLE IS PERMITTED TO ROUTE FROM RECEPTACLE TO RECEPTACLE THROUGH WALLS AND CEILING SPACE FOR FINAL PORTION OF BRANCH CIRCUIT WIRING BETWEEN RECEPTACLES IN ADJACENT WALLS OF THE SAME ROOM OR AREA. TYPE MC CABLING SHALL NOT BE INSTALLED WHERE EXPOSED OR IN CMU WALLS.
7. ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE UNLESS NOTED OTHERWISE.
8. ROUGH-IN ONE CLASSROOM FOR ARCHITECT AND OWNER APPROVAL PRIOR TO ROUGH-IN OF ALL CLASSROOMS.
9. COORDINATE ALL TELE/DATA WORK WITH ORCHARD FARM SCHOOL DISTRICT TECHNOLOGY DEPARTMENT.
10. CONDUITS IN STORM SHELTER SHALL BE ROUTED AROUND PERIMETER, HIGH ON PRECAST WALLS. FOR LIGHTS, ROUTE CONDUIT TO EACH FIXTURE IN EACH BAY OF THE DOUBLE TEES.
11. WALL MOUNT DEVICES IN GYM TO BE RECESSED IN PRE-CAST WALLS. INSTALL ROUGH-IN CONDUIT AND BOXES AT FABRICATOR SHOP OF PRE-CAST WALL CONTRACTOR. PROVIDE ALL NECESSARY TRAVEL EXPENSES. COORDINATE SCHEDULING AND ROUGH-IN LOCATIONS WITH PRE-CAST WALL CONTRACTOR. PROVIDE SUBMITTAL OF ROUGH-IN LOCATIONS TO ARCHITECT/ENGINEER FOR REVIEW.

KEYED NOTES

1. RECEPTACLES, DATA OUTLET AND A/V OUTLET FOR TEACHERS STATION. SEE ELEVATION DRAWING ON SHEET E0.50 FOR ADDITIONAL INFORMATION.
2. RECEPTACLES, DATA OUTLET AND A/V OUTLETS FOR DISPLAY SCREEN. SEE ELEVATION DRAWING ON SHEET E0.50 FOR ADDITIONAL INFORMATION.
3. INSTALL CABLE PATHWAY DEVICE, STI #EZDP33FWS OR EQUAL.
4. JUNCTION BOX FOR POWER AND CONTROL CONNECTIONS TO INFARED FAUCETS AND FLUSH VALVES (FURNISHED BY OTHERS). E.C. SHALL PROVIDE ALL DEVICES AND WIRING FOR A COMPLETE SYSTEM. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS, COORDINATE EXACT MOUNTING LOCATIONS WITH ARCHITECTURAL DRAWINGS.
5. PROVIDE JUNCTION BOX AND TOGGLE DISCONNECT FOR LOW VOLTAGE TRANSFORMER CONNECTION TO SENSOR CONTROLLING (INFARED) FAUCETS AND TOILET FLUSH VALVES. SEE LOW VOLTAGE TRANSFORMER SCHEMATIC ON SHEET E0.31. MOUNT ON WALL AT 9'-0"AFF OR ABOVE ACCESSIBLE CEILING.
6. ELECTRIC WATER COOLERS SHALL BE MOUNTED AT VARIOUS HEIGHTS, SEE ARCHITECTURAL DETAILS. E.C. SHALL COORDINATE RECEPTACLE MOUNTING HEIGHT (AT EACH LOCATION) WITH PLUMBING CONTRACTOR. FEED CIRCUIT FROM GFCI BREAKER.
7. PROVIDE AND INSTALL GFCI RECEPTACLE IN 8"X8" RECESSED BOX WITH LOCKABLE COVER (COOPER884-TCF OR EQUAL). COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
8. RECESS RECEPTACLE IN BRICK.
9. DUPLEX RECEPTACLE AND DATA OUTLET FOR PROJECTOR; COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL PLANS.
10. 120V POWER FOR MOTORIZED PROJECTION SCREEN; COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL PLANS.
11. 120V CONNECTION FOR PROJECTOR.
12. PROVIDE GFCI DUPLEX RECEPTACLE ON DEDICATED CIRCUIT FOR OVERHEAD TRANSFER SYSTEM CHARGING STATION. MOUNT RECEPTACLE AT 6" BELOW CEILING. COORDINATE FINAL RECEPTACLE LOCATION WITH TRANSFER SYSTEM INSTALLER PRIOR TO ROUGH-IN.
13. DUPLEX RECEPTACLE AND DATA OUTLET FOR HUDL CAMERA. COORDINATE MOUNTING HEIGHT WITH OWNER.
14. 120V CONNECTION FOR SCOREBOARD POWER AND ROUGH-IN WITH BLANK PLATE FOR FUTURE SCOREBOARD COMMUNICATION CABLES. COORDINATE EXACT PLACEMENT OF SCOREBOARD MOUNTING PRIOR TO ROUGH-IN.
15. 1" CONDUIT WITH PULL STRING TO FLOOR BOX; SEE FLOOR BOX SCHEDULE.
16. DEVICES SHALL NOT BE INSTALLED BEHIND GYM WALL PADDING. COORDINATE WITH GENERAL CONTRACTOR.
17. SWITCHES FOR BASKETBALL BACKSTOPS AND DIVIDER CURTAIN INSTALLED WITHIN FLUSH MOUNTED BOX WITH KEYED LOCKED COVER. SWITCHES FURNISHED BY OTHERS. INSTALLED AND CONNECTED BY E.C. BOX TO BE 24"Hx24"Wx4"D (COOPER #24244TCF OR EQUAL). SWITCHES TO BE STACKED AT TOP OF ENCLOSURE TO ALLOW SPACE BELOW FOR OWNER INSTALLED AV DEVICES. COORDINATE FINAL BOX INTERIOR LAYOUT WITH OWNER PRIOR TO INSTALLATION. LABEL SWITCES TO INDICATE WHAT THEY CONTROL. COORDINATE LABELING PREFERENCE WITH OWNER. ALLOW SPACE TO AHU TIME CONTROL SWITCH. COORDINATE PLACEMENT WITH MECHANICAL CONTRACTOR. INSTALL (1) 1" AND (1) 2" EMPTY CONDUITS WITH PULL STRING FROM TOP OF BOX TO BOTTOM OF ROOF STRUCTURE FOR AV CABLING BY OTHERS.

KEYED NOTES CONTINUED

18. MOUNT RECEPTACLE WITHIN WORKSTATION KNEE SPACE RECESSED IN CASEWORK. ROUTE BRANCH CIRCUIT CONCEALED THROUGH CASEWORK.
19. MOUNT RECEPTACLE AT +36" AFF. COORDINATE WITH ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF CASEWORK AND TACKBOARD.
20. DATA CABLE FOR FUTURE SAFEDEFEND CABINET. TERMINATE WITH MALE RJ45 JACK MODULE AND COIL 25 FOOT SERVICE LOOP.
21. INSTALL CABLE PATHWAY DEVICE, SPECIFIED TECHNOLOGIES INC (STI) #EZDP44S2 OR EQUIVALENT.
22. PROVIDE AND INSTALL 2" CONDUIT SLEEVES THROUGH STORM SHELTER WALL WITH STI #EZDR2000 RETROFIT FIRE PATHWAY OR EQUAL ON EACH SIDE OF WALL. SLEEVES FOR ROUTING OF LOW VOLTAGE CABLING AND SPARES FOR FUTURE DISTRICT USE. MAINTAIN A MINIMUM OF (4) SPARE SLEEVES AT EACH LOCATION.
23. WALL MOUNTED JUNCTION BOX AT +48" AFF WITH BLANK COVER AND 3/4" CONDUIT TO MOTORIZED PROJECTION SCREEN JUNCTION BOX FOR FUTURE PROJECTION SCREEN CONTROL STATION.
24. 120V CONNECTION FOR DOOR HARDWARE POWER SUPPLY.
25. INSTALL (2) 2" EMPTY SLEEVES FROM 96" AFF, UP THROUGH MEZZANINE TO BOTTOM OF GYMNASIUM ROOF STRUCTURE FOR AV CABLING BY OTHERS.
26. INSTALL (4) 2" EMPTY SLEEVES FROM 96" AFF, UP THROUGH MEZZANINE TO BOTTOM OF GYMNASIUM ROOF STRUCTURE FOR ROUTING OF LOW VOLTAGE CABLING.
27. 120V, 30A CONNECTION FOR MOTORIZED BASKETBALL HOOP BACKSTOP. VERIFY ALL REQUIREMENTS WITH MOTORIZED BASKETBALL BACKSTOP MANUFACTURER PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY WIRING FOR A COMPLETE OPERABLE SYSTEM.
28. 120V, 30A CONNECTION FOR MOTORIZED DIVIDER CURTAIN. VERIFY ALL REQUIREMENTS WITH DIVIDER CURTAIN MANUFACTURER PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY WIRING FOR A COMPLETE OPERABLE SYSTEM.
29. BLEACHER MOTOR CONTROLLER FURNISHED BY OTHERS. INSTALLED BY ELECTRICAL CONTRACTOR. VERIFY ALL REQUIREMENTS WITH BLEACHER MANUFACTURER PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY WIRING FOR A COMPLETE AND OPERABLE SYSTEM.
30. MOUNT DUPLEX RECEPTACLE FLUSH IN FACE OF BLEACHER KICKBOARD. FURNISH AND INSTALL (3)#12 'SO' CORD FROM THE WALL MOUNTED JUNCTION BOX TO DUPLEX RECEPTACLE. ATTACH 'SO' CORD TO BLEACHER STRUCTURE SO THAT CORD EXTENDS AND RETRACTS WITH THE BLEACHER.
31. REFERENCE FLOOR BOX SCHEDULE AND FLOOR BOX INSTALLATION DETAIL FOR FLOATING GYM FLOOR.
32. 120V CONNECTION FOR FIRE ALARM HORN/STROBE TO SIGNAL SPRINKLER WATER FLOW. ROUTE CIRCUIT THROUGH SPRINKLER SYSTEM WATER FLOW SWITCH.
33. ALL LOW VOLTAGE CABLING TO BE INSTALLED IN CONDUIT IN THIS SPACE.



KEY PLAN

FLOOR PLAN - MECH MEZZ - POWER AND DATA
SCALE: 1/8" = 1'-0"

FLOOR PLAN - AREA A - POWER AND DATA
SCALE: 1/8" = 1'-0"

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MECH / ELECTRICAL
MECHANICAL ENGINEERING
ASOG, LLC
McCLURE ENGINEERING
EDWARDS COOPER, INC.

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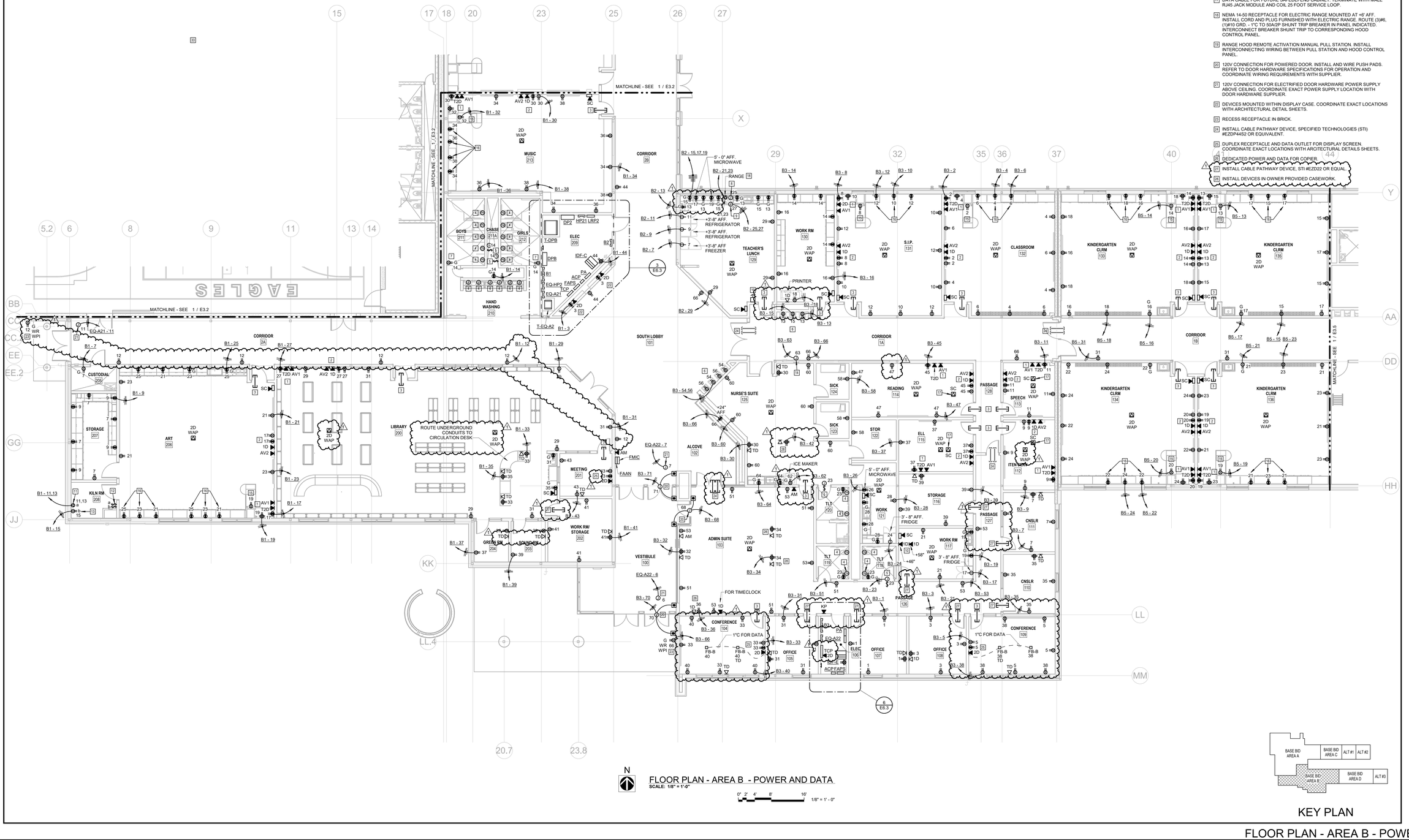
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GENERAL NOTES

1. ELECTRICAL PANELBOARD DIRECTORIES SHALL BE LABELED WITH FINAL ROOM NUMBERS.
2. COORDINATE MOUNTING HEIGHTS OF ALL 'ABOVE COUNTER' ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
3. ALL DATA CABLING SHALL BE SUPPORTED BY J-HOOKS OR CABLE TRAY INSTALLED AT A READILY ACCESSIBLE HEIGHT ABOVE CEILING, UNLESS NOTED TO BE IN CONDUIT. ROUTE IN CORRIDORS WHERE POSSIBLE.
4. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.
5. REFERENCE SHEET E3.1 FOR DATA RACK DISTRIBUTION BOUNDARIES FOR DATA CABLE ROUTING.
6. TYPE MC CABLE IS PERMITTED FOR WIRING FROM LOCAL DISTRIBUTION JUNCTION BOXES TO DEVICES OR EQUIPMENT IN NEARBY WALLS OR CEILING SPACE. THE LOCAL DISTRIBUTION JUNCTION BOXES SHALL BE LOCATED WITHIN 20 FEET OF DEVICE OR EQUIPMENT BEING SERVED. CONDUIT AND WIRING SHALL BE USED FOR BRANCH CIRCUITING BETWEEN THE PANELS. TYPE MC CABLE IS PERMITTED TO ROUTE FROM RECEPTACLE TO RECEPTACLE THROUGH WALLS AND CEILING SPACE FOR FINAL PORTION OF BRANCH CIRCUIT WIRING BETWEEN RECEPTACLES IN ADJACENT WALLS OF THE SAME ROOM OR AREA. TYPE MC CABLING SHALL NOT BE INSTALLED WHERE EXPOSED OR IN CMU WALLS.
7. ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE UNLESS NOTED OTHERWISE.
8. ROUGH-IN ONE CLASSROOM FOR ARCHITECT AND OWNER APPROVAL PRIOR TO ROUGH-IN OF ALL CLASSROOMS.
9. COORDINATE ALL TELE/DATA WORK WITH ORCHARD FARM SCHOOL DISTRICT TECHNOLOGY DEPARTMENT.

KEYED NOTES

1. RECEPTACLES, DATA OUTLET AND A/V OUTLET FOR TEACHERS STATION. SEE ELEVATION DRAWING ON SHEET E0.50 FOR ADDITIONAL INFORMATION.
2. RECEPTACLES, DATA OUTLET AND A/V OUTLETS FOR DISPLAY SCREEN. SEE ELEVATION DRAWING ON SHEET E0.50 FOR ADDITIONAL INFORMATION.
3. INSTALL CABLE PATHWAY DEVICE, STI #EZDP33FWS OR EQUAL.
4. JUNCTION BOX FOR POWER AND CONTROL CONNECTIONS TO INFARED FAUCETS AND FLUSH VALVES (FURNISHED BY OTHERS). E.C. SHALL PROVIDE ALL DEVICES AND WIRING FOR A COMPLETE SYSTEM. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE EXACT MOUNTING LOCATIONS WITH ARCHITECTURAL DRAWINGS.
5. PROVIDE JUNCTION BOX AND TOGGLE DISCONNECT FOR LOW VOLTAGE TRANSFORMER CONNECTION TO SENSOR CONTROLLING (INFARED) FAUCETS AND TOILET FLUSH VALVES. SEE LOW VOLTAGE TRANSFORMER SCHEMATIC ON SHEET E0.31. MOUNT ON WALL AT 9'-0"AFF OR ABOVE ACCESSIBLE CEILING.
6. ELECTRIC WATER COOLERS SHALL BE MOUNTED AT VARIOUS HEIGHTS, SEE ARCHITECTURAL DETAILS. E.C. SHALL COORDINATE RECEPTACLE MOUNTING HEIGHT (AT EACH LOCATION) WITH PLUMBING CONTRACTOR. FEED CIRCUIT FROM GFCI BREAKER.
7. PROVIDE AND INSTALL GFCI RECEPTACLE IN 8"x8" RECESSED BOX WITH LOCKABLE COVER (COOPER884-TCF OR EQUAL). COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
8. 120V CONNECTION FOR RANGE HOOD.
9. 120V CONNECTION FOR RANGE LIGHT AND CONTROL POWER.
10. DATA OUTLETS FOR SAFEDEFEND ENROLLMENT TRAINING MODULE AND SAFEDEFEND ENROLLMENT TRAINING SCREEN.
11. NEMA 6-50 RECEPTACLE FOR KILN. COORDINATE FINAL MOUNTING LOCATION WITH KILN PLACEMENT IN ROOM. INSTALL (2)#4, (1)#10 GRD - 1"C TO 60A/2P CIRCUIT BREAKER IN PANEL INDICATED THROUGH 60A MANUAL MOTOR SWITCH.
12. INSTALL HUBBELL #HBL7862D OR EQUAL 60A, 2-POLE MANUAL MOTOR SWITCH FOR CONTROL OF KILN RECEPTACLE.
13. SWITCHED RECEPTACLE FOR KILN VENT FAN.
14. 120V CONNECTION FOR AED.
15. MOUNT RECEPTACLE WITHIN WORKSTATON KNEE SPACE RECESSED IN CASEWORK. ROUTE BRANCH CIRCUIT CONCEALED THROUGH CASEWORK.
16. MOUNT RECEPTACLE AT 36" AFF. COORDINATE WITH ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF CASEWORK AND TACKBOARD.
17. DATA CABLE FOR FUTURE SAFEDEFEND CABINET. TERMINATE WITH MALE RJ45 JACK MODULE AND COIL 25 FOOT SERVICE LOOP.
18. NEMA 14-50 RECEPTACLE FOR ELECTRIC RANGE MOUNTED AT +6" AFF. INSTALL CORD AND PLUG FURNISHED WITH ELECTRIC RANGE. ROUTE (3)#6, (1)#10 GRD. - 1"C TO 50A/2P SHUNT TRIP BREAKER IN PANEL INDICATED. INTERCONNECT BREAKER SHUNT TRIP TO CORRESPONDING HOOD CONTROL PANEL.
19. RANGE HOOD REMOTE ACTIVATION MANUAL PULL STATION. INSTALL INTERCONNECTING WIRING BETWEEN PULL STATION AND HOOD CONTROL PANEL.
20. 120V CONNECTION FOR POWERED DOOR. INSTALL AND WIRE PUSH PADS. REFER TO DOOR HARDWARE SPECIFICATIONS FOR OPERATION AND COORDINATE WIRING REQUIREMENTS WITH SUPPLIER.
21. 120V CONNECTION FOR ELECTRIFIED DOOR HARDWARE POWER SUPPLY ABOVE CEILING. COORDINATE EXACT POWER SUPPLY LOCATION WITH DOOR HARDWARE SUPPLIER.
22. DEVICES MOUNTED WITHIN DISPLAY CASE. COORDINATE EXACT LOCATIONS WITH ARCHITECTURAL DETAIL SHEETS.
23. RECESS RECEPTACLE IN BRICK.
24. INSTALL CABLE PATHWAY DEVICE, SPECIFIED TECHNOLOGIES (STI) #EZDP4452 OR EQUIVALENT.
25. DUPLEX RECEPTACLE AND DATA OUTLET FOR DISPLAY SCREEN. COORDINATE EXACT LOCATIONS WITH ARCITECTURAL DETAILS SHEETS.
26. DEDICATED POWER AND DATA FOR COPIER.
27. INSTALL CABLE PATHWAY DEVICE, STI #EZD22 OR EQUAL
28. INSTALL DEVICES IN OWNER PROVIDED CASEWORK.



N

FLOOR PLAN - AREA B - POWER AND DATA
SCALE: 1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1' - 0"

KEY PLAN

STATE OF MISSOURI
PHILIP J. WENTZ
NUMBER E-29111
REGISTERED ENGINEER

PHILIP J. WENTZ
LICENSE #E-29111

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ACOUSTICAL
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ASDG, LLC
MEDLER ENGINEERING
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NEW ELEMENTARY SCHOOL - 2525 HWY B

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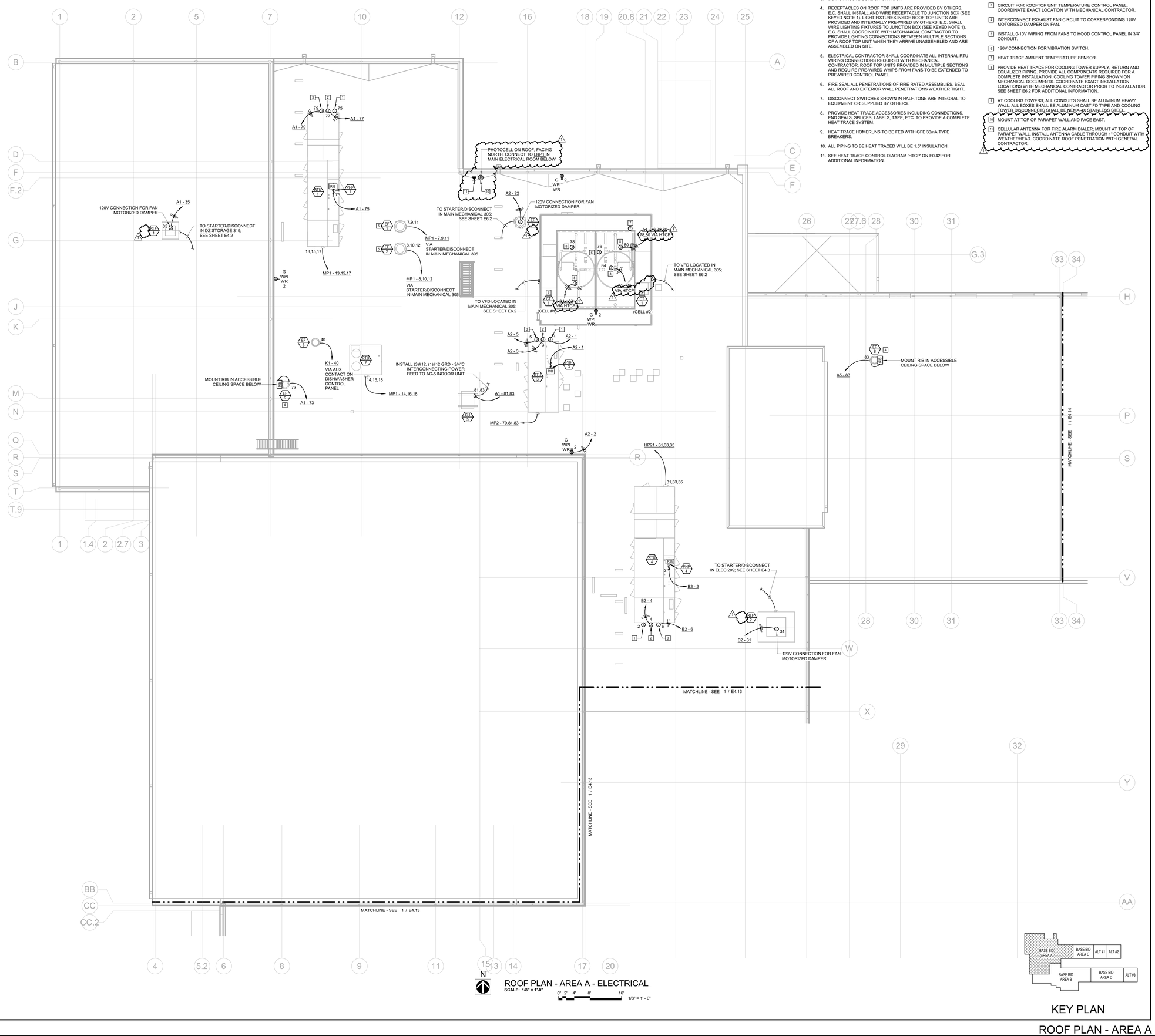
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CHECKED BY	JMW
SHEET NO.	E3.3
	SD: 23

GENERAL NOTES

1. SEE MECHANICAL-ELECTRICAL INTERFACE ON E0.4* SERIES SHEETS FOR MECHANICAL EQUIPMENT FEEDER, UNIT CONTROL, AND DISCONNECT INFORMATION.
2. ALL EXTERIOR CONDUITS SHALL BE RIGID CONDUIT.
3. DO NOT ROUTE CONDUIT ON ROOF.
4. RECEPTACLES ON ROOF TOP UNITS ARE PROVIDED BY OTHERS. E.C. SHALL INSTALL AND WIRE RECEPTACLE TO JUNCTION BOX (SEE KEYED NOTE 1). LIGHT FIXTURES INSIDE ROOF TOP UNITS ARE PROVIDED AND INTERNALLY PRE-WIRED BY OTHERS. E.C. SHALL WIRE LIGHTING FIXTURES TO JUNCTION BOX (SEE KEYED NOTE 1). E.C. SHALL COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE LIGHTING CONNECTIONS BETWEEN MULTIPLE SECTIONS OF A ROOF TOP UNIT WHEN THEY ARRIVE UNASSEMBLED AND ARE ASSEMBLED ON SITE.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL INTERNAL RTU WIRING CONNECTIONS REQUIRED WITH MECHANICAL CONTRACTOR. ROOF TOP UNITS PROVIDED IN MULTIPLE SECTIONS AND REQUIRE PRE-WIRED WHIPS FROM FANS TO BE EXTENDED TO PRE-WIRED CONTROL PANEL.
6. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.
7. DISCONNECT SWITCHES SHOWN IN HALF-TONE ARE INTEGRAL TO EQUIPMENT OR SUPPLIED BY OTHERS.
8. PROVIDE HEAT TRACE ACCESSORIES INCLUDING CONNECTIONS, END SEALS, SPLICES, LABELS, TAPE, ETC. TO PROVIDE A COMPLETE HEAT TRACE SYSTEM.
9. HEAT TRACE HOMERUNS TO BE FED WITH GFE 30mA TYPE BREAKERS.
10. ALL PIPING TO BE HEAT TRACED WILL BE 1.5" INSULATION.
11. SEE HEAT TRACE CONTROL DIAGRAM 'HTCP' ON E0.42 FOR ADDITIONAL INFORMATION.

KEYED NOTES

1. PROVIDE 2#10, 1#10GRD - 3/4"C FOR 120V CONNECTION FOR ROOF TOP UNIT PRE-HEAT COIL PUMP, LIGHTING AND RECEPTACLE CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.
2. CIRCUIT FOR ROOF TOP UNIT HEATER. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.
3. CIRCUIT FOR ROOFTOP UNIT TEMPERATURE CONTROL PANEL. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
4. INTERCONNECT EXHAUST FAN CIRCUIT TO CORRESPONDING 120V MOTORIZED DAMPER ON FAN.
5. INSTALL 0-10V WIRING FROM FANS TO HOOD CONTROL PANEL IN 3/4" CONDUIT.
6. 120V CONNECTION FOR VIBRATION SWITCH.
7. HEAT TRACE AMBIENT TEMPERATURE SENSOR.
8. PROVIDE HEAT TRACE FOR COOLING TOWER SUPPLY, RETURN AND EQUALIZER PIPING. PROVIDE ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. COOLING TOWER PIPING SHOWN ON MECHANICAL DOCUMENTS. COORDINATE EXACT INSTALLATION LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. SEE SHEET E6.2 FOR ADDITIONAL INFORMATION.
9. AT COOLING TOWERS, ALL CONDUITS SHALL BE ALUMINUM HEAVY WALL. ALL BOXES SHALL BE ALUMINUM CAST FD TYPE AND COOLING TOWER DISCONNECTS SHALL BE NEMA-4X STAINLESS STEEL.
10. MOUNT AT TOP OF PARAPET WALL AND FACE EAST.
11. CELLULAR ANTENNA FOR FIRE ALARM DIALER; MOUNT AT TOP OF PARAPET WALL. INSTALL ANTENNA CABLE THROUGH 1" CONDUIT WITH WEATHERHEAD. COORDINATE ROOF PENETRATION WITH GENERAL CONTRACTOR.



ROOF PLAN - AREA A - ELECTRICAL
SCALE: 1/8" = 1'-0"

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GENERAL NOTES

1. ALL FIRE ALARM CABLING TO BE PLENUM RATED.
2. FIRE ALARM DEVICES TO BE PROGRAMMED WITH FINAL ROOM NUMBERS.
3. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTORS SUCH THAT THEY ARE INSTALLED AT A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY AIR GRILLES.
4. ALL FIRE ALARM CABLING EXPOSED TO BE INSTALLED IN CONDUIT.
5. ALL DATA AND LOW VOLTAGE SYSTEMS CABLING TO BE SUPPORTED BY J-HOOKS OR CABLE TRAY INSTALLED AT A READILY ACCESSIBLE HEIGHT ABOVE CEILING, UNLESS NOTED TO BE IN CONDUIT. ROUTE IN CORRIDOR WHERE POSSIBLE.
6. PROVIDE DATA JACK WHERE SECURITY CAMERA SYMBOLS ARE SHOWN.
7. REFER TO SHEET E3.1 FOR DATA RACK DISTRIBUTION BOUNDARIES FOR DATA CABLE ROUTING.
8. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTION SO THAT THEY ARE INSTALLED A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY GRILLES.
9. PA SYSTEM CONTRACTOR SHALL TEST AND BALANCE ALL SPEAKER CIRCUITS SUCH THAT SOUND PRESSURE LEVELS WITHIN INTENDED COVERAGE AREAS ARE +/-2DB.
10. REFERENCE DIVISION 27 SPECIFICATIONS FOR PUBLIC ADDRESS SPEAKER INFORMATION.
11. SEE SHEET E0.50 FOR LOW VOLTAGE RESPONSIBILITY MATRIX.
12. CONDUITS IN STORM SHELTER SHALL BE ROUTED AROUND PERIMETER HIGH ON PRECAST WALLS. FOR LIGHTS, ROUTE CONDUIT TO EACH FIXTURE IN EACH BAY OF THE DOUBLE TEES.
13. WALL MOUNT DEVICES IN GYM TO BE RECESSED IN PRE-CAST WALLS. INSTALL ROUGH-IN CONDUIT AND BOXES AT FABRICATOR SHOP OF PRE-CAST WALL CONTRACTOR. PROVIDE ALL NECESSARY TRAVEL EXPENSES. COORDINATE SCHEDULING AND ROUGH-IN LOCATIONS WITH PRE-CAST WALL CONTRACTOR. PROVIDE SUBMITTAL OF ROUGH-IN LOCATIONS TO ARCHITECT/ENGINEER FOR REVIEW.

KEYED NOTES

1. PROVIDE DEVICE WITH WIRE CAGE GUARD.
2. WALL MOUNT FIRE ALARM SYSTEM CARBON MONOXIDE DETECTOR WITH SOUNDER AT +60" AFF.
3. FIRE ALARM DUCT MOUNTED SMOKE DETECTOR AND ASSOCIATED CONTROL MODULE FOR HVAC EQUIPMENT INDICATED. VERIFY EXACT MOUNTING LOCATION AT JOB SITE. MOUNT REMOTE TEST STATION RECESSED IN CEILING TILE BELOW ASSOCIATED DUCT DETECTOR LOCATON UNLESS NOTED OTHERWISE.
4. FIRE ALARM MONITOR MODULE FOR KITCHEN EXHAUST HOOD. INTERCONNECT TO HOOD CONTROL PANEL TO MONITOR POSITION OF ANSUL SYSTEM MICROSWITCH.
5. FIRE ALARM CONTROL MODULE FOR CONTROL OF POWER TO EXTERIOR WATERFLOW HORN/STROBE DEVICE.
6. EXTERIOR HORN/STROBE SHALL SIGNAL ONLY DURING ANY SPRINKLER WATER FLOW AND SHOULD NOT BE ABLE TO BE SILENCED. ROUTE 120V CIRCUIT (SEE DRAWING E3.2) FOR EXTERNAL HORN/STROBE THROUGH WATER FLOW SWITCH AT MAIN SPRINKLER WIRE.
7. INSTALL FIRE ALARM MONITOR MODULES FOR SPRINKLER VALVES. VERIFY EXACT MOUNTING LOCATION AND QUANTITY AT JOBSITE.
8. FIRE ALARM RELAY TO SHUNT DOOR HOLDER POWER SUPPLY.
9. FIRE ALARM MONITOR MODULE FOR POST INDICATOR VALVE. REFERENCE SITE DRAWINGS FOR PIV LOCATION.
10. FIRE ALARM MONITOR MODULES FOR 'GENERATOR TROUBLE', 'GENERATOR RUNNING', 'BATTERY CHARGER TROUBLE', AND 'GENERATOR GROUND FAULT'. FIELD VERIFY MOUNTING LOCATION AND VERIFY WITH ELECTRICAL DRAWINGS.
11. ALL LOW VOLTAGE CABLING TO BE INSTALLED IN CONDUIT IN THIS SPACE.

STORM SHELTER NOTE:

PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING PIPING AND UTILITY LINES LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR PENETRATIONS OR 3-1/2" IN DIAMETER FOR CIRCULAR PENETRATIONS SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OF THE STORM SHELTER ENVELOPE. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF A PROTECTIVE SHROUD.

FLOOR PLAN - MECH MEZZ - SYSTEMS
SCALE: 1/8" = 1'-0"

FLOOR PLAN - AREA A - SYSTEMS
SCALE: 1/8" = 1'-0"

KEY PLAN

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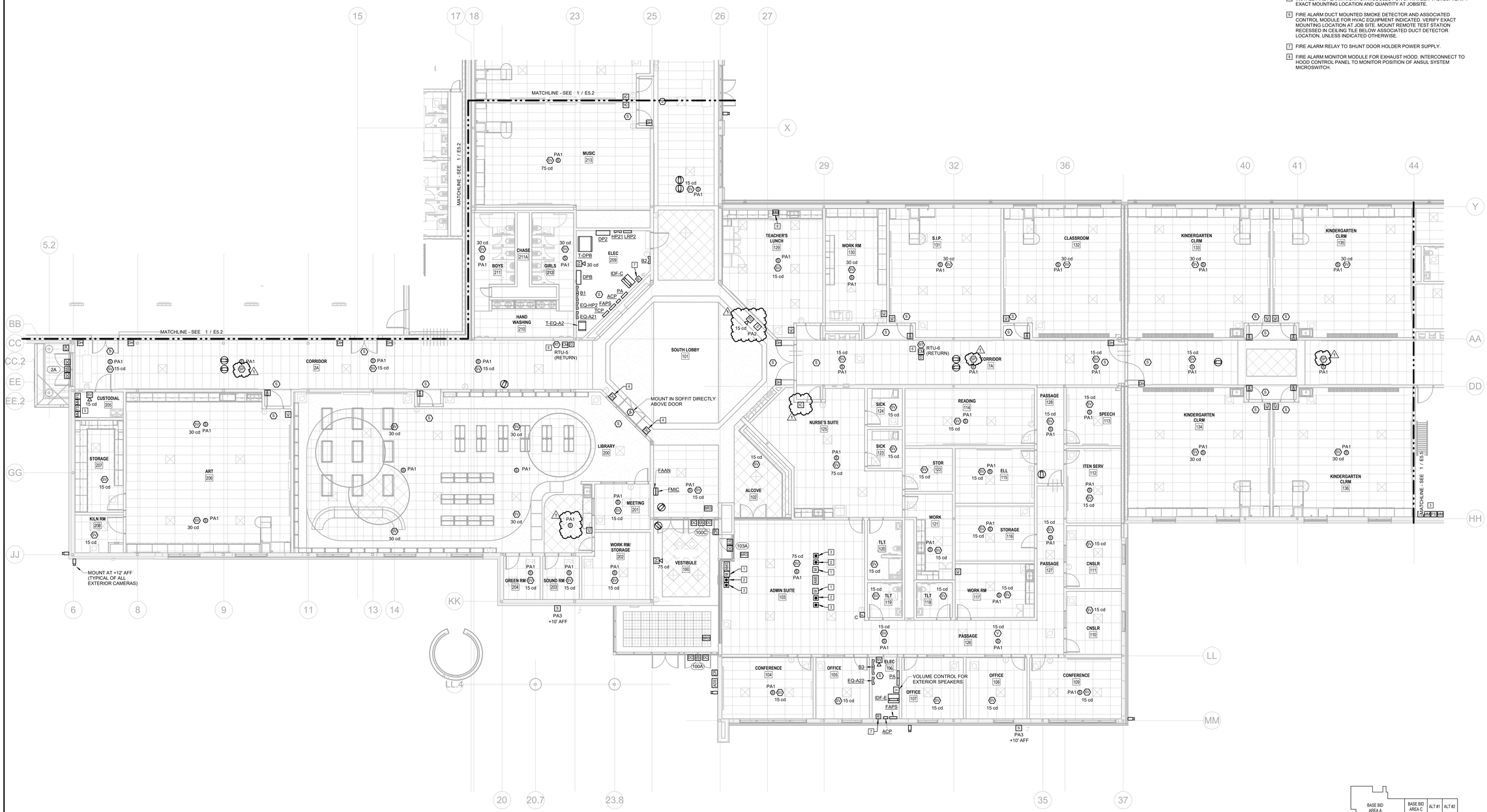
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GENERAL NOTES

1. ALL FIRE ALARM CABLING TO BE PLENUM RATED.
2. FIRE ALARM DEVICES TO BE PROGRAMMED WITH FINAL ROOM NUMBERS.
3. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTORS SUCH THAT THEY ARE INSTALLED AT A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY AIR GRILLES.
4. ALL FIRE ALARM CABLING EXPOSED TO BE INSTALLED IN CONDUIT.
5. ALL DATA AND LOW VOLTAGE SYSTEMS CABLING TO BE SUPPORTED BY J-HOOKS OR CABLE TRAY INSTALLED AT A READILY ACCESSIBLE HEIGHT ABOVE CEILING, UNLESS NOTED TO BE IN CONDUIT. ROUTE IN CORRIDOR WHERE POSSIBLE.
6. PROVIDE DATA JACK WHERE SECURITY CAMERA SYMBOLS ARE SHOWN.
7. REFER TO SHEET E3.1 FOR DATA RACK DISTRIBUTION BOUNDARIES FOR DATA CABLE ROUTING.
8. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTION SO THAT THEY ARE INSTALLED A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY GRILLES.
9. PA SYSTEM CONTRACTOR SHALL TEST AND BALANCE ALL SPEAKER CIRCUITS SUCH THAT SOUND PRESSURE LEVELS WITHIN INTENDED COVERAGE AREAS ARE +/-2DB.
10. REFERENCE DIVISION 27 SPECIFICATIONS FOR PUBLIC ADDRESS SPEAKER INFORMATION.
11. SEE SHEET E0.50 FOR LOW VOLTAGE RESPONSIBILITY MATRIX.

KEYED NOTES

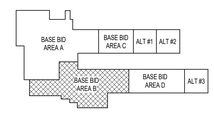
1. ADMINISTRATION PHONE LOCATION FOR PA/INTERCOM SYSTEM.
2. DOOR 100C RELEASE PUSH BUTTON TO BE LOCATED UNDER DESK. PUSH BUTTON TO BE FURNISHED BY ELECTRICAL CONTRACTOR. PUSH BUTTON TO BE SCHLAGE 660-PB OR EQUAL.
3. DOOR 103A RELEASE PUSH BUTTON TO BE LOCATED UNDER DESK. PUSH BUTTON TO BE FURNISHED BY ELECTRICAL CONTRACTOR. PUSH BUTTON TO BE SCHLAGE 660-PB OR EQUAL.
4. MOUNT MAGNETIC DOOR HOLD ON MULLION AT APPROXIMATELY 2'-9" AFF.; COORDIANTE WITH ARCHITECTURAL PLANS.
5. INSTALL FIRE ALARM MONITOR MODULES FOR SPRINKLER VALVES. VERIFY EXACT MOUNTING LOCATION AND QUANTITY AT JOBSITE.
6. FIRE ALARM DUCT MOUNTED SMOKE DETECTOR AND ASSOCIATED CONTROL MODULE FOR HVAC EQUIPMENT INDICATED. VERIFY EXACT MOUNTING LOCATION AT JOB SITE. MOUNT REMOTE TEST STATION RECESSED IN CEILING TILE BELOW ASSOCIATED DUCT DETECTOR LOCATION, UNLESS INDICATED OTHERWISE.
7. FIRE ALARM RELAY TO SHUNT DOOR HOLDER POWER SUPPLY.
8. FIRE ALARM MONITOR MODULE FOR EXHAUST HOOD. INTERCONNECT TO HOOD CONTROL PANEL TO MONITOR POSITION OF ANSUL SYSTEM MICROSWITCH.



N

FLOOR PLAN - AREA B - SYSTEMS
SCALE: 1/8" = 1'-0"

0" 2" 4" 8" 16"
1/8" = 1' - 0"



KEY PLAN

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STRUCTURAL
MECH / ELEC / PLUMB
FLOOD / SPECIAL

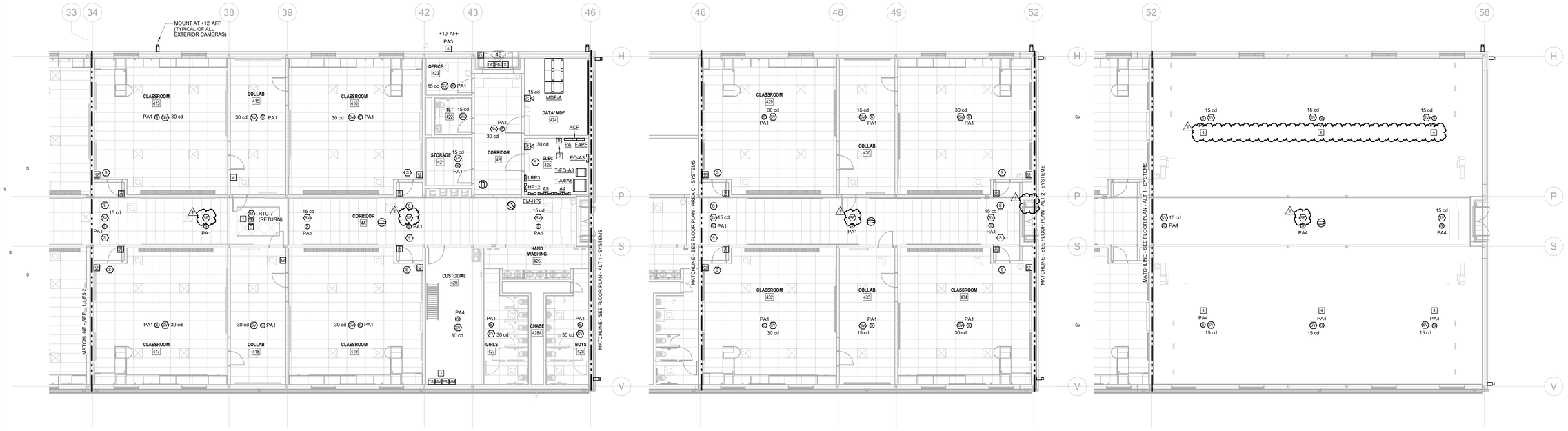
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FLOOR PLAN - AREA B - SYSTEMS



N

FLOOR PLAN - AREA C - SYSTEMS

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

0' 2' 4' 8' 16'

1/8" = 1' - 0"

N

FLOOR PLAN - ALT 1 - SYSTEMS

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

0' 2' 4' 8' 16'

1/8" = 1' - 0"

N

FLOOR PLAN - ALT 2 - SYSTEMS

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

0' 2' 4' 8' 16'

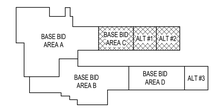
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GENERAL NOTES

1. ALL FIRE ALARM CABLING TO BE PLENUM RATED.
2. FIRE ALARM DEVICES TO BE PROGRAMMED WITH FINAL ROOM NUMBERS.
3. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTORS SUCH THAT THEY ARE INSTALLED AT A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY AIR GRILLES.
4. ALL FIRE ALARM CABLING EXPOSED TO BE INSTALLED IN CONDUIT.
5. ALL DATA AND LOW VOLTAGE SYSTEMS CABLING TO BE SUPPORTED BY J-HOOKS OR CABLE TRAY INSTALLED AT A READILY ACCESSIBLE HEIGHT ABOVE CEILING, UNLESS NOTED TO BE IN CONDUIT. ROUTE IN CORRIDOR WHERE POSSIBLE.
6. PROVIDE DATA JACK WHERE SECURITY CAMERA SYMBOLS ARE SHOWN.
7. REFER TO SHEET ES.1 FOR DATA RACK DISTRIBUTION BOUNDARIES FOR DATA CABLE ROUTING.
8. COORDINATE INSTALLATION OF FIRE ALARM SMOKE DETECTION SO THAT THEY ARE INSTALLED A MINIMUM OF 36" AWAY FROM MECHANICAL SUPPLY GRILLES.
9. PA SYSTEM CONTRACTOR SHALL TEST AND BALANCE ALL SPEAKER CIRCUITS SUCH THAT SOUND PRESSURE LEVELS WITHIN INTENDED COVERAGE AREAS ARE +/-2DB.
10. REFERENCE DIVISION 27 SPECIFICATIONS FOR PUBLIC ADDRESS SPEAKER INFORMATION.
11. SEE SHEET E0.50 FOR LOW VOLTAGE RESPONSIBILITY MATRIX.

KEYED NOTES

1. FIRE ALARM DUCT MOUNTED SMOKE DETECTOR AND ASSOCIATED CONTROL MODULE FOR HVAC EQUIPMENT INDICATED. VERIFY EXACT MOUNTING LOCATION AT JOB SITE. MOUNT REMOTE TEST STATION RECESSED IN CEILING TILE BELOW ASSOCIATED DUCT DETECTOR LOCATON UNLESS NOTED OTHERWISE.
2. FIRE ALARM RELAY TO SHUNT DOOR HOLDER POWER SUPPLY.
3. INSTALL FIRE ALARM MONITOR MODULES FOR SPRINKLER VALVES. VERIFY EXACT MOUNTING LOCATIONS AND QUANTITIES AT JOBSITE.
4. PROVIDE DEDICATED ZONE CABLING TO SPEAKER TO ACCOMMODATE FUTURE CLASSROOM.



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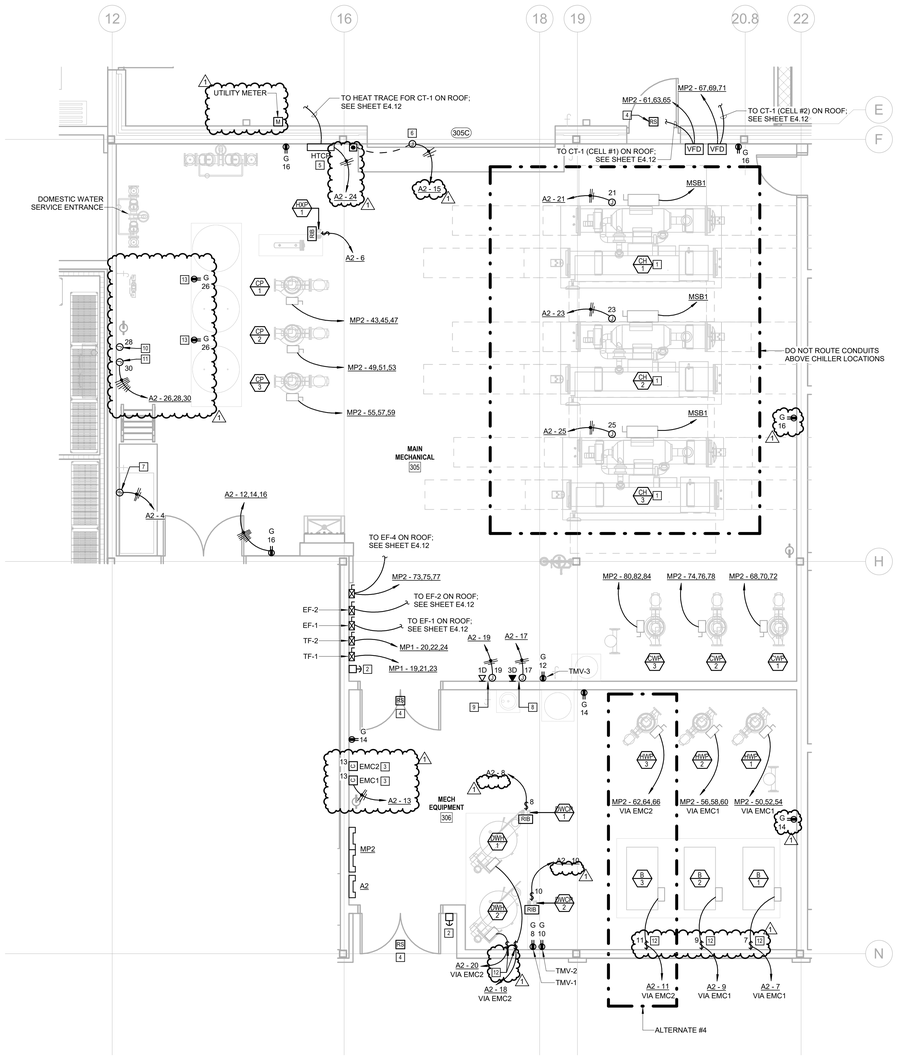
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SD: 27

GENERAL NOTES

1. COORDINATE ALL LOCATIONS, HEIGHTS AND REQUIREMENTS OF ROUGH-INS AND PATHWAYS, CONDUITS AND CABLE TRAY LOCATIONS WITH OWNER, ARCHITECT, CONSULTANTS, AND OTHER TRADES PRIOR TO ORDER AND INSTALLATION. PROVIDE NYLON GROMMETS ON EXPOSED ENDS OF ALL PATHWAY CONDUITS.
2. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.
3. PROVIDE UNISTRUT SUPPORT AS REQUIRED FOR ALL VFDS AND STARTERS.
4. REFER TO MECHANICAL / ELECTRICAL INTERFACE ON E0.4* SERIES SHEETS FOR ADDITIONAL MECHANICAL EQUIPMENT INFORMATION; FEEDER SIZE, UNIT CONTROLS, AND OVERCURRENT DETAILS.
5. COORDINATE ALL BRANCH CIRCUITING AND FEEDER CONDUITS WITH MECHANICAL PIPING AND OTHER UTILITIES.

KEYED NOTES:

1. CONDUIT SHALL BE ROUTED OVERHEAD, DROP DOWN AT EQUIPMENT, AND TRANSITION TO JACKETED FLEXIBLE STEEL CONDUIT (SEALTITE) FOR FINAL CONNECTION TO EQUIPMENT. VERTICAL CONDUIT TO BE GALVANIZED RIGID STEEL.
2. INSTALL EMERGENCY 'PUSH-OFF' PUSHBUTTON WITH STOPPER II COVER (STI #SS-2231 OR EQUAL) FOR BOILER EMERGENCY SHUT-DOWN. CUSTOM LABEL FOR PUSHBUTTON TO READ "BOILER EMERGENCY SHUT-DOWN". SEE BOILER SHUT-DOWN WIRING DIAGRAM ON SHEET E0.4* SERIES SHEETS FOR REFERENCE TO CONTROL POWER AND BOILER CONTACTOR.
3. BOILER SHUT-DOWN CONTACTOR. SEE WIRING DIAGRAM ON E0.4* SERIES SHEETS.
4. REFRIGERANT ALARM STROBE WITH PROTECTIVE COVER LOCATED OUTSIDE THE MECHANICAL ROOM.
5. HEAT TRACE CONTACTOR PANEL. SEE E0.4* SERIES SHEETS FOR DETAILS.
6. CONNECTION FOR MOTORIZED OVERHEAD COILING DOOR. INSTALL ASSOCIATED DOOR CONTROLLER, PUSH BUTTON STATION, AND SAFETY SENSORS FOR A COMPLETE INSTALLATION.
7. 120V CONNECTION FOR CHEMICAL SYSTEM CONTROL PANEL.
8. 120V CONNECTION AND DATA OUTLET FOR TEMPERATURE CONTROL PANEL. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
9. 120V CONNECTION AND DATA OUTLET FOR REFRIGERANT ALARM PANEL. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
10. TOWER MAKE-UP WATER METER. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD. INTERCONNECT TO CHEMICAL FEED CONTROLLER. SEE WIRING DIAGRAM ON E0.4* SERIES SHEETS.
11. BLOWNDOWN SOLENOID VALVE. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD. INTERCONNECT TO CHEMICAL FEED CONTROLLER. SEE WIRING DIAGRAM ON E0.4* SERIES SHEETS.
12. INSTALL HANDLE LOCKING GUARD (PASS & SEYMOUT 7801-P OR EQUAL) ON TOGGLE SWITCH.
13. RECEPTACLE SHALL BE MOUNTED ON FREE STANDING UNI-STRUT.



N

ENLARGED PLAN - MAIN MECH ROOM

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

0" 1' 2' 4' 8'

1/4" = 1' - 0"

STATE OF MISSOURI
PHILIP J. WENTZ
NUMBER E-29111
REGISTERED PROFESSIONAL ENGINEER

PHILIP J. WENTZ
LICENSE #E-29111

ENGINEERING CORP. NO. 000087

McCLURE ENGINEERING
1000 Clark Avenue
Saint Louis, Missouri 63102
T 314-645-6232
MEP Engineers:
McClure Engineering Professional Engineering Corporation
Missouri State Certificate of Authority #000087

NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI
ORCHARD FARM SCHOOL DISTRICT

PROJECT MANAGER: Matt McDermott, Hoener Associates, Inc.

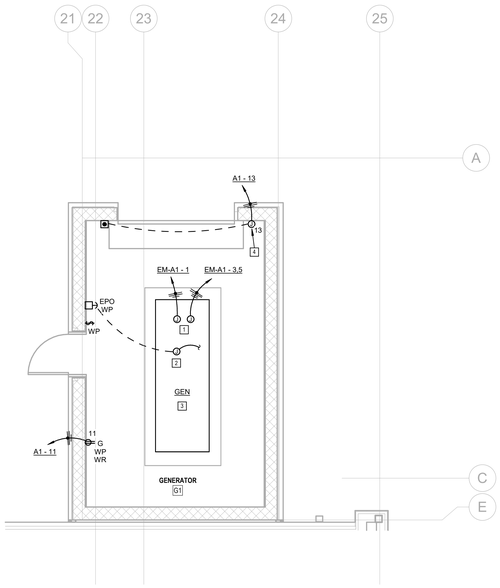
CONSULTING ENGINEERS:
CIVIL / SURVEY: EXCEL ENGINEERING
STRUCTURAL: ASDG, LLC
MECH / PLUMB / FP: MCCLURE ENGINEERING
ELECTRICAL: DESIGNS OF CONSTRUCTION INC

HOENER ASSOCIATES, INC. - ARCHITECTS
2121 LACLEDE AVENUE
ST. LOUIS, MISSOURI 63103
OFFICE: 314. 781.9855
HoenerArchitects.com

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING. BE-FORE WORK IS EXECUTED. THIS DRAWING IS THE PRO-PERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

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1 07-23-24 ADDENDUM #1	
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CHECKED BY	JMW
SHEET NO.	

E6.2
SD: 28

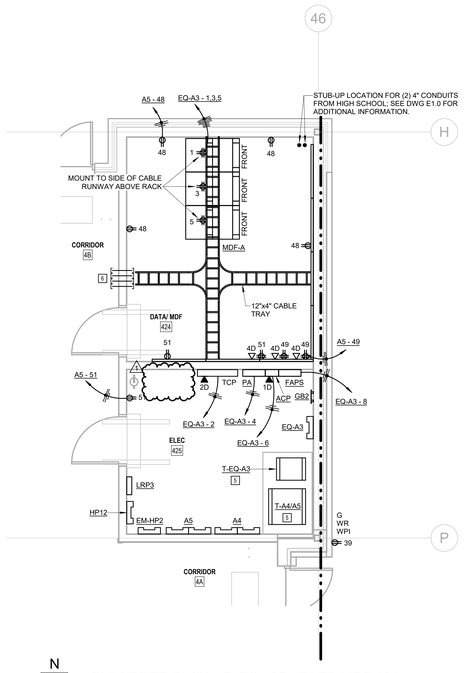


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ENLARGED PLAN - GENERATOR

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

0" 1' 2' 4' 8' 1/4" = 1' - 0"

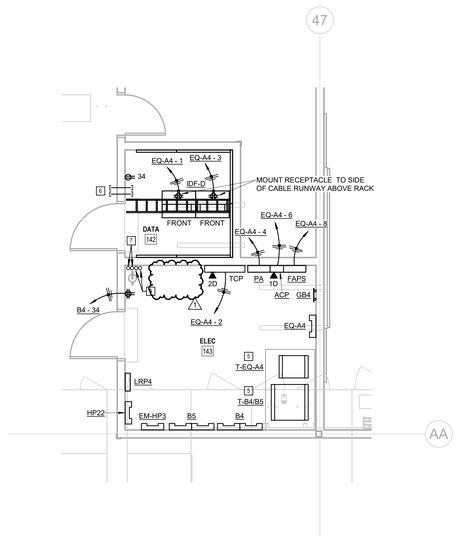


N

ENLARGED PLAN - ELEC 425 - DATA-MDF 424

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

0" 1' 2' 4' 8' 1/4" = 1' - 0"



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ENLARGED PLAN - ELEC 143 - DATA 142

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

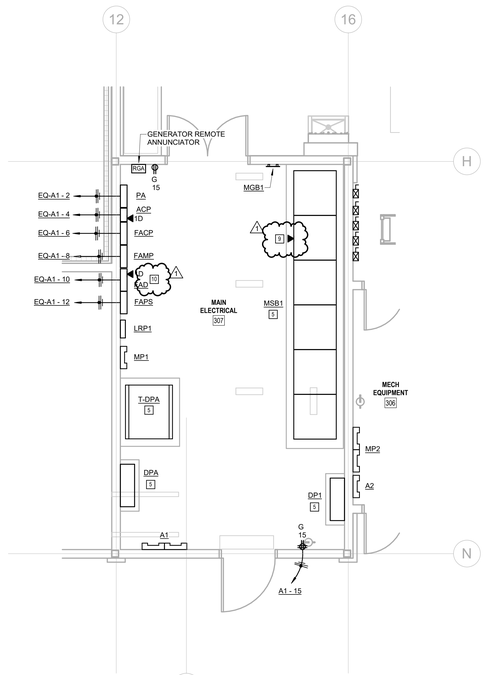
0" 1' 2' 4' 8' 1/4" = 1' - 0"

GENERAL NOTES

1. COORDINATE ALL LOCATIONS, HEIGHTS AND REQUIREMENTS OF ROUGH-INS AND PATHWAYS, CONDUITS AND CABLE TRAY LOCATIONS WITH OWNER, ARCHITECT, CONSULTANTS, AND OTHER TRADES PRIOR TO ORDER AND INSTALLATION. PROVIDE NYLON GROMMETS ON EXPOSED ENDS OF ALL PATHWAY CONDUITS.
2. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES, SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.
3. PROVIDE UNISTRUT SUPPORT AS REQUIRED FOR ALL VFDS AND STARTERS.
4. REFER TO MECHANICAL / ELECTRICAL INTERFACE ON E0.4* SERIES SHEETS FOR ADDITIONAL MECHANICAL EQUIPMENT INFORMATION; FEEDER SIZE, UNIT CONTROLS, AND OVERCURRENT DETAILS.
5. COORDINATE ALL BRANCH CIRCUITING AND FEEDER CONDUITS WITH MECHANICAL PIPING AND OTHER UTILITIES.

KEYED NOTES

1. 20A, 120V CONNECTION FOR GENERATOR BATTERY CHARGER AND 20A, 208V CONNECTION FOR GENERATOR BLOCK HEATER.
2. GENERATOR CONTROL WIRING CONNECTION FOR START/STOP SIGNAL, EPO, AND FIRE ALARM MONITORING. REFERENCE GENERATOR ONE-LINE DIAGRAM.
3. MAINTAIN MINIMUM CLEARANCES AROUND PERIMETER OF GENERATOR AS SHOWN. ORIENTATE GENERATOR SO THAT EXHAUST AND FUEL PORT ARE LOCATED ON NORTH END OF GENERATOR ENCLOSURE.
4. CONNECTION FOR MOTORIZED OVERHEAD COILING DOOR. INSTALL ASSOCIATED DOOR CONTROLLER, PUSH BUTTON STATION, AND SAFETY SENSORS FOR COMPLETE INSTALLATION.
5. INSTALL EQUIPMENT ON 4" CONCRETE HOUSEKEEPING PAD THAT PROJECTS 1-1/2" BEYOND EQUIPMENT ON ALL SIDES PER SPECIFICATIONS 260072.
6. INSTALL CABLE PATHWAY DEVICE, SPECIFIED TECHNOLOGIES INC (STI) #EZDP44S2 OR EQUIVALENT.
7. (2) 2" EMPTY UNDERGROUND CONDUITS WITH PULLSTRING FROM ELEC 209 TO ELEC 143 FOR FUTURE USE BY THE DISTRICT. STUB UP AT 36" AFF AND CAP BOTH ENDS.
8. (2) 2" EMPTY UNDERGROUND CONDUITS WITH PULLSTRING FROM ELEC 143 TO SITE FOR FUTURE USE BY THE DISTRICT. STUB UP AT 36" AFF IN ELEC 143 AND REFERENCE SITE PLAN FOR TERMINATION LOCATION ON SITE. CAP CONDUITS ON BOTH ENDS.
9. DATA DROP FOR DIGITAL METER FURNISHED WITH SWITCHBOARD. COORDINATE EXACT TERMINATION LOCATION WITH SWITCHBOARD SHOP DRAWINGS.
10. INSTALL ANTENNA CABLE IN 1" CONDUIT TO ANTENNA ON ROOF. REFERENCE DRAWING E4.12 FOR ANTENNA LOCATION.

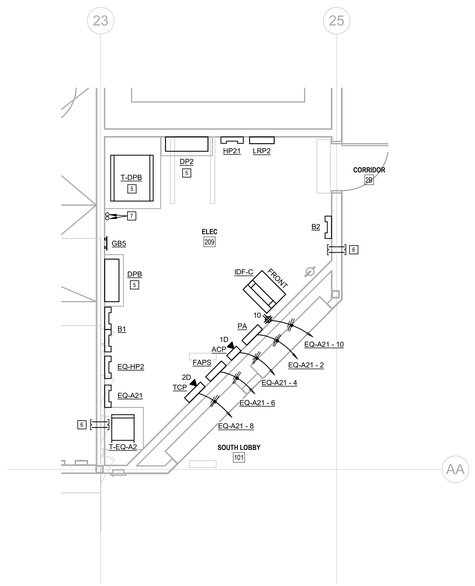


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ENLARGED PLAN - MAIN ELECTRICAL 307

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

0" 1' 2' 4' 8' 1/4" = 1' - 0"

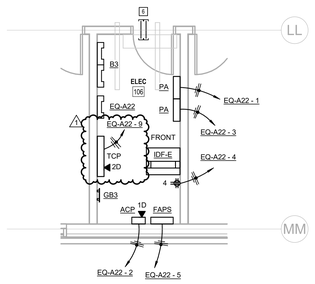


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ENLARGED PLAN - ELEC 209

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

0" 1' 2' 4' 8' 1/4" = 1' - 0"



N

ENLARGED PLAN - ELEC 106

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

0" 1' 2' 4' 8' 1/4" = 1' - 0"

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ENGINEERING CORP. NO. 000087

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McClure Engineering
Professional Engineering Corporation
Missouri State Certificate of Authority #000087

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
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ST. LOUIS, MISSOURI 63102
OFFICE: 314. 781.9955
HoenerArchitects.com

PROJECT MANAGER: Matt McDermott, Hoener Associates, Inc.

CONSULTING ENGINEERS:
CIVIL / SURVEY: KAI ENGINEERING
STRUCTURAL: ASDG, LLC
MECH / ELEC / PLUMB: MCCLURE ENGINEERING
FLOOD STUDY: DENNIS G. CORE, INC.

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⚠ DATE	REVISION
1 07-23-24	ADDENDUM #1
DRAWN BY	NAM
CHECKED BY	JMW
SHEET NO.	

E6.3
SD: 29

A SITE BUILDING PACKAGE FOR
ORCHARD FARM ELEMENTARY SCHOOL
2525 HIGHWAY B

A TRACT OF LAND BEING
PART OF U.S. SURVEYS 238, 239, 240, 241,
242, 243, 244 AND 246
OF ST. CHARLES COMMON FIELD
TOWNSHIP 47 NORTH, RANGE 5 EAST
ST. CHARLES COUNTY, MISSOURI



LOCATION MAP
NO SCALE

LEGEND:

FLARED END SECTION		SIGN	
CURB/AREA INLET		POWER POLE	
DOUBLE CURB/AREA INLET		GUY WIRE	
STORM SEWER MANHOLE		BOLLARD	
SANITARY SEWER MANHOLE		UTILITY BOX	
WATER MANHOLE		TRAFFIC SYMBOL	
PIPELINE MARKER		TREE	
FIBER OPTIC MARKER		BUSH	
CABLE TV BOX		BENCHMARK	
ELECTRIC BOX		BORE HOLE	
STREET LIGHT BOX		GRAVEL	
TRAFFIC CONTROL BOX		CONCRETE	
TELEPHONE CABLE PEDESTAL		HDPE	HIGH DENSITY POLYETHYLENE PIPE
TELEPHONE BOX		BURIED ELECTRIC	
GAS VALVE		OVERHEAD UTILITIES	
WATER VALVE		BURIED GAS	
FIRE HYDRANT		FENCE	
BURIED WATER			
BURIED TELEPHONE			
SANITARY SEWER			
FIBER OPTIC			
EXISTING CONTOUR			
PROPOSED CONTOUR			

SHEET INDEX:

C1.00	COVER SHEET
C2.00	OVERALL SITE PLAN/STAGING PLAN
C3.00	REMEDIATION PLAN
C3.10	SITE PLAN
C3.20	UTILITY PLAN
C3.30	PAVEMENT PLAN
C4.00	GRADING PLAN
C5.00	DRAINAGE AREA MAP
C6.00	STORM PROFILES
C7.00	SANITARY PROFILES
C8.00	SEWER DETAILS
C8.10	SITE DETAILS
C8.20	DETAILS
C9.00	STORM WATER POLLUTION PREVENTION PLAN
C10.00	LANDSCAPE PLAN

CITY OF SAINT CHARLES GENERAL NOTES:

1. ALL IMPROVEMENTS CONSTRUCTED HEREIN SHALL COMPLY WITH THE CODE OF ORDINANCES OF THE CITY OF ST. CHARLES.
2. IF PROPERTY IS GREATER THAN 1 ACRE, A LAND DISTURBANCE PERMIT FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES IS REQUIRED PRIOR TO COMMENCING ANY DEMOLITION, CLEARING OR CONSTRUCTION ON SITE. PROVIDE COPY OF APPROVAL FROM THE DEPARTMENT OF NATURAL RESOURCES TO THE PUBLIC WORKS DEPARTMENT. SITE HAS AN ISSUED DNR PERMIT MORA19749 WITH AN EFFECTIVE DATE OF 2-9-2022 WHICH IS SET TO EXPIRE 2-7-2027.
3. SILTATION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE SWPPP PLAN. ADDITIONAL SILTATION CONTROL MAY BE REQUIRED AS DIRECTED BY THE CITY ENGINEER. (CODE SECTION 510.090.2)
4. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, PERMANENT GRASS MUST BE ESTABLISHED TO CONTROL EROSION. (CODE SECTION 510.090.4.A)
5. ALL MUD AND DEBRIS FROM CONSTRUCTION SITE TO BE KEPT OFF OF CITY MAINTAINED STREETS. STREETS SHALL BE SWEPT TWICE DAILY. (CODE SECTION 510.090.5)
6. HANDICAP SPACES CANNOT HAVE A GRADE IN EXCESS OF 2% IN ANY DIRECTION. (CODE SECTION 400.705.B.4)
7. HANDICAP ACCESSIBLE ROUTES AND RAMPS CANNOT HAVE A CROSS SLOPE IN EXCESS OF 2%.(CODE SECTION 400.705.B.4)
8. ALL WATER MAIN CONSTRUCTION INCLUDING VALVES, SLEEVES, METERS, HYDRANTS AND FITTINGS MUST CONFORM TO CITY OF ST. CHARLES WATER SPECIFICATIONS.
9. WHEN A SANITARY SEWER LATERAL CROSSES OVER A WATER LINE, A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE PROVIDED. IF THIS CLEARANCE IS NOT POSSIBLE, THEN EITHER THE WATER LINE OR THE SEWER LINE SHALL BE CONSTRUCTED OF MECHANICAL JOINT PIPE OR CASED IN CONTINUOUS CASING UNTIL THERE IS A 10' HORIZONTAL CLEARANCE BETWEEN THE TWO LINES.
10. ALL SANITARY SEWER CONSTRUCTION MUST CONFORM TO THE LATEST VERSION OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT'S STANDARDS AND SPECIFICATIONS.
11. ALL STREET AND SIDEWALK CONSTRUCTION IS TO BE PER THE LATEST ST. CHARLES CITY STANDARDS.
12. FLOWABLE FILL BACKFILL SHALL BE USED FOR ALL BACKFILL ON SEWER TRENCHES THAT ARE UNDER CITY STREETS, FROM THE TOP OF THE BEDDING MATERIAL (6 INCHES ABOVE THE PIPE) TO THE SURFACE, OR TO WITHIN ONE FOOT OF GRADE IN LANDSCAPED AREAS. (CODE SECTION 510.280.4.A.1)
13. EARTH BACKFILL (MEETING MSD STANDARDS) MAY BE USED OUTSIDE OF PAVED AREAS, FROM THE TOP OF THE BEDDING MATERIAL TO THE SURFACE. EARTH BACKFILL SHOULD BE PLACED IN A MAXIMUM 8-INCH LOOSE LIFTS AND SHALL BE MECHANICALLY COMPACTED TO A MINIMUM DENSITY OF 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 90% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99.
14. ALL STORM SEWER DESIGN IS TO CONFORM TO THE CITY OF ST. CHARLES DESIGN REQUIREMENTS. (CODE SECTION 510.290)
15. ALL STORM SEWER CONSTRUCTION IS TO BE PER THE LATEST EDITION OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT (MSD) STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES. (CODE SECTION 510.280)
16. FOR NEW SUBDIVISIONS ONLY:
    ALL JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10 FEET WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS. TRENCH BACKFILL DEPTHS LESS THAN 8 FEET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3 FEET. TRENCH BACKFILL GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8 FEET. JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT TO BE ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATING THE TRENCH. CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAK DOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS THE WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS. (CODE SECTION 510.280)
17. ALL SANITARY AND STORM PIPE JOINTS AND JOINTS ON NEW STRUCTURES SHALL USE CITY APPROVED RUBBER COMPRESSION TYPE JOINTS. WATER STOPS ARE REQUIRED AT ALL POINTS OF CONNECTION NOT USING RUBBER COMPRESSION TYPE JOINTS SUCH AS CONNECTIONS TO EXISTING STRUCTURES. (CODE SECTION 510.280.6)
18. CONCRETE COVERS ON STRUCTURES WILL NOT BE ALLOWED. ONLY CAST IRON COVERS ARE PERMITTED. (CODE SECTION 510.280.5)
19. BRICK STORM AND SANITARY STRUCTURES WILL NOT BE ALLOWED.
20. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO PROVIDE TRAFFIC CONTROL PER THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
21. ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
22. ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99.
23. ALL FILLED PLACES IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP TO 90% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.
24. GRADES CANNOT EXCEED A 3:1 SLOPE. (CODE SECTION 510.090.1)
25. CONSTRUCTION ACTIVITIES SHALL ABIDE BY THE NOISE RESTRICTIONS AS OUTLINES IN CODE CHAPTER 230.
26. SHOP DRAWINGS AND SPECIFICATIONS FOR ALL STRUCTURES AND MATERIALS SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO DELIVERY.
27. FOR ALL SANITARY SEWERS WITHIN THE RIGHT OF WAY, A CLEAN OUT SHALL BE PROVIDED, IN THE RIGHT OF WAY, WITHIN ONE (1) FOOT OF THE PROPERTY SERVED, AND IN ADDITION TO ANY REQUIRED FOR ADHERENCE TO THE PLUMBING CODE. ALL WORK TO CONFORM TO CITY STANDARDS.

GRADING/SEDIMENT & EROSION CONTROL NOTES

1. ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
2. UPON COMPLETION OF STORM SEWERS, SILTATION CONTROL SHALL BE PROVIDED AROUND ALL OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTURBED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
3. CONTRACTOR TO SUPPLY CITY OF ST. CHARLES INSPECTOR WITH COPIES OF THE COMPACTION TEST REPORTS.
4. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). EROSION CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF ST. CHARLES. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR CITY OF ST. CHARLES MAY, AT THEIR OPTION, DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILTS OR MUD ONTO NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF ST. CHARLES.
5. INSPECTION OF SILTATION CONTROL DEVICES SHALL TAKE PLACE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF ANY ONE (1) INCH PER 24 HOUR RAIN EVENT.
6. ANY SILTATION CONTROL IN NEED OF REPAIR SHALL BE FIXED IMMEDIATELY.
7. SILT FENCES SHALL BE INSTALLED IMMEDIATELY AROUND EACH STORM SEWER STRUCTURE ONCE FINAL CONSTRUCTION OF EACH INDIVIDUAL STRUCTURE IS COMPLETE.
8. ALL SILTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SCHEDULE IMPLEMENTATION

1. CONSTRUCTION ENTRANCE IS SHOWN. ACTUAL FIELD LOCATION TO BE USED AND MAINTAINED AS REQUIRED FOR ACCESS.
2. THE CONTRACTOR SHALL:
   - INSTALL ALL PERIMETER SILTATION CONTROL.
   - STRIP TOPSOIL AND STOCKPILE FOR FINAL GRADING.
   - REMOVE ANY UNSUITABLE SOILS AS DETERMINED BY THE GEOTECHNICAL ENGINEER. RECOMPACT SOILS AS REQUIRED UNDER THEIR DIRECTION.
   - PLACE COMPACTED BASE MATERIAL FOR STORM SEWERS/SANITARY.
   - INSTALL STORM SEWERS/SANITARY AND GRANULAR BACKFILL WHERE REQUIRED.
   - GRADE SITE AND PLACE ANY TEMPORARY DRAINAGE SWALES AS REQUIRED.

SILTATION CONTROL DEVICE MAINTENANCE

1. SILT CONTROL MEASURES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
2. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED CONTROL.
3. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF SUCH SHALL BE ACCOMPLISHED PROMPTLY.
4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL.
5. REFER TO THE VEGETATIVE ESTABLISHMENT TABLE BELOW ON SEEDING RATES.

VEGETATIVE ESTABLISHMENT
For Urban Development Sites
APPENDIX A

Seeding Rates:
Permanent:
Tall Fescue – 30 lbs./ac.
Smooth Brome – 20 lbs./ac.
Combined Fescue @ 15 lbs./ac. and Brome @ 10 lbs./ac.

Temporary:
Wheat or Rye – 150 lbs./ac.
Oats – 120 lbs./ac.

Seeding Periods:
Fescue or Brome – March 1 to June 1
August 1 to October 1
Wheat or Rye – March 15 to November 1
Oats – March 15 to September 15

Mulch Rates: 100 lbs. per 1,000 sq. feet (4,356 lbs. per acre)

Fertilizer Rates: Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

CURRENT PERMITS

SITE HAS AN ISSUED DNR PERMIT MORA19749 WITH AN EFFECTIVE DATE OF 02-09-2022 WHICH IS STILL VALID FOR DISTURBANCE ON THIS SITE. PERMIT TO EXPIRE 2-7-2027.

STORM WATER POLLUTION PREVENTION PLAN

A. PURPOSE:

THE PURPOSE OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS TO INFORM THE DEVELOPER/CONTRACTOR OF THE FOLLOWING OBJECTIVES THEY ARE REQUIRED TO MEET:

- PREVENT EROSION WHERE CONSTRUCTION ACTIVITIES SHALL OCCUR.
- PREVENT POLLUTANTS FROM MIXING WITH STORM WATER.
- PREVENT POLLUTANTS FROM BEING DISCHARGED BY TRAPPING THEM ON-SITE, BEFORE THEY CAN AFFECT THE RECEIVING WATERS.
- ALL REGULATIONS OF MISSOURI DEPARTMENT OF NATURAL RESOURCES ARE MET.
- ALL REGULATIONS OF THE ENVIRONMENTAL PROTECTION AGENCY ARE MET.
- ALL REGULATIONS OF THE LOCAL MUNICIPALITY ARE MET.

B. PROJECT DESCRIPTION:

THE PROJECT IS LOCATED IN BOTH THE MISSOURI RIVER AND MISSISSIPPI RIVER TRIBUTARY WATERSHED IN ST. CHARLES COUNTY, MISSOURI. THE PROJECT DISTURBS APPROXIMATELY 11.56 ACRES OF THE 96.906 ACRE CAMPUS.

THE PROJECT ACTIVITIES CONSIST OF A CONSTRUCTION FOR A NEW ELEMENTARY SCHOOL. THE SITE WILL BE PROTECTED BY THE VARIOUS EROSION PROTECTION MEASURES LISTED BELOW:

1. SILT SOXX - THE ENTIRE PERIMETER OF THE PROJECT THAT ALLOWS STORM WATER TO EXIT WILL HAVE SILT SOXX INSTALLED. DETAILS OF THESE DEVICES ARE DEPICTED ON THE DETAIL PLANS PREPARED BY BAX ENGINEERING COMPANY, INC..
2. STABILIZED CONSTRUCTION ENTRANCE: A STABILIZED CONSTRUCTION ENTRANCE WILL BE INSTALLED AT THE SITE STAGING AREAS TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADS. THE ENTRANCE SHALL CONSIST OF 2"-3" WASHED STONE 6" THICK. A DETAIL OF THE STABILIZED CONSTRUCTION ENTRANCE IS INCLUDED WITH THE PLANS.
3. REVEGETATION: THE SITE WILL CONSIST OF VARYING GROUND SLOPES, UPON COMPLETION OF THE GRADING ACTIVITIES THE SLOPE PRONE TO EROSION WILL BE SEEDED AND STRAWED TO STABILIZE THE SLOPE AND PREVENT EROSION.

C. MAINTENANCE AND INSPECTION:

REGULAR MAINTENANCE: WEEKLY INSPECTIONS OF THE PROJECT WILL INCLUDE: (A) THE REPAIR OF ANY SEDIMENT (SILT) FENCE AND/OR SILT SOXX BARRIERS DAMAGED OR OUT OF PLACE; (B) THE REMOVAL OF ANY ACCUMULATED TRASH AND/OR DEBRIS; AND (C) THE REMOVE OF ANY EXTERNALLY DEPOSITED WASTE MATERIALS.

PERIODIC INSPECTIONS: FOLLOWING EACH RAIN OF MORE THAN 0.50 INCH IN 24 HOURS, THE SITE WILL BE INSPECTED, AND ANY NECESSARY MAINTENANCE WILL BE PROVIDED FOR A PERIOD OF ONE YEAR FOLLOWING THE COMPLETION OF THE ABOVE REMEDIATION MEASURES. SUMMARIES OF THE MAINTENANCE AND THE INSPECTIONS WILL BE MAINTAINED AND SHALL BE KEPT AVAILABLE FROM THE OWNER. AN INSPECTION REPORT SHALL BE FILLED AND KEPT ON SITE FOR EVERY INSPECTION. THE REPORT SHALL DETAIL THE FINDINGS OF THE INSPECTION AND IF ANY ACTION WAS REQUIRED. THE INSPECTION FORM NEEDS TO INCLUDE, NAME OF THE SITE, NAME OF THE INSPECTOR, PERMIT NUMBER, DATE OF INSPECTION, MAJOR OBSERVATIONS AND ACTIONS TAKEN TO CORRECT PROBLEMS AND THE SIGNATURE OF THE INSPECTOR. THE INSPECTION REPORTS NEED TO BE KEPT ON FILE BY THE PERMITTEE FOR THREE YEARS AFTER THE PROJECT IS COMPLETED.

THE FIELD INSPECTIONS WILL BE CONDUCTED IN A SYSTEMATIC MANNER TO MINIMIZE THE POSSIBILITY OF MEASURES BEING OVERLOOKED OR OVERLOOKED. A DETAILED CHECKLIST WILL BE DEVELOPED AND FOLLOWED FOR THE EXAMINATION. PARTICULAR ATTENTION WILL BE GIVEN TO DETECTING EVIDENCE OF EROSION, SLOPE INSTABILITY, UNDUE SETTLEMENT, DISPLACEMENT, AND TILTING. PHOTOGRAPHS AND SKETCHES WILL BE USED FREELY TO RECORD CONDITIONS IN ORDER TO MINIMIZE DESCRIPTIONS. THE FIELD INSPECTION WILL INCLUDE APPROPRIATE FEATURES AND ITEMS, INCLUDING POTENTIAL HAZARDS TO HUMAN LIFE OR PROPERTY.

THE CONDITION OF THE SLOPES AND VEGETATIVE COVER WILL BE EVALUATED AND EXAMINED FOR EROSION.

MEASURES WILL BE TAKEN TO PROMOTE THE GROWTH OF VEGETATION AND REPAIR OF DAMAGE CAUSED BY EROSION AND SEDIMENTATION. THE INSPECTION WILL ALSO PROVIDE RECOMMENDATIONS FOR MEASURES THAT NEED TO BE UNDERTAKEN IMMEDIATELY, BASED ON THE EXPERIENCE AND JUDGMENT OF THE INSPECTOR. NECESSARY FOLLOW UP INSPECTIONS WILL BE MADE AS NECESSARY TO VERIFY THAT ANY MAINTENANCE, ALTERATION, OR REPAIR MEASURES ARE ACCOMPLISHED BY METHODS ACCEPTABLE BY STANDARD ENGINEERING PRACTICE.

SPILL AND SITE POLLUTION:

SHOULD AN ACCIDENTAL SPILL OCCUR REFER TO MATERIAL SAFETY DATA SHEETS. ANY SPILLS OF HAZARDOUS MATERIALS IN QUANTITIES IN EXCESS OF REPORTABLE QUANTITIES AS DEFINED BY EPA OR THE STATE AGENCY REGULATIONS, SHALL BE IMMEDIATELY REPORTED TO THE EPA NATIONAL RESPONSE CENTER (800-424-8802) AND MISSOURI DEPARTMENT OF NATURAL RESOURCES (573-634-2436). REPORTABLE SPILLS FOR PETROLEUM PRODUCTS IS GREATER THAN 50 GALLONS. ALL OTHER REPORTABLE HAZARDOUS MATERIALS AND THEIR QUANTITIES MAY BE FOUND NOT HE WEB SITE AT HTTP://WWW.NRR.MO.GOV AN THE LOCAL NUMBER IS 573-840-9750. FEDERAL LAW REQUIRES THE RESPONSIBLE PARTY TO REPORT ANY RELEASE OF OIL IF IT REACHES OR THREATENS A SEWER, LAKE, CREEK, STREAM, RIVER, GROUNDWATER, WETLANDS, OR AREA LIKE A ROAD DITCH, THAT DRAINS INTO THE ABOVE.

AN EMERGENCY SPILL KIT IS REQUIRED TO BE ONSITE.

GENERAL NOTES

1. UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.
2. ALL GRADES SHALL BE WITHIN 0.1 FEET OF THOSE SHOWN ON THE GRADING PLAN.
3. ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF ST. CHARLES STANDARDS.
4. ALL CONSTRUCTION METHODS AND PRACTICES SHALL CONFORM WITH CURRENT O.S.H.A. STANDARDS.
5. ALL SIGNS ON THE SITE OR ANY STRUCTURE MUST HAVE SIGN PERMITS APPROVED BY THE CITY OF ST. CHARLES.
6. ALL NECESSARY UTILITIES (PUBLIC AND PRIVATE) WILL BE AVAILABLE, FUNCTIONING, AND USABLE AT THE TIME ANY STAGE OF THE PROJECT OR THE TOTAL PROJECT IS READY FOR OCCUPANCY.
7. DEVELOPER MUST SUPPLY THE CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
8. ALL STORM SEWER PIPES SHALL BE GASKET O-RING TYPE.
9. FORTY-EIGHT (48) HOURS NOTICE SHALL BE GIVEN TO THE CITY OF ST. CHARLES CITY ENGINEER BEFORE ANY GRADING OPERATIONS ARE TO BEGIN TO ALLOW SCHEDULING OF REQUIRED INSPECTIONS.
10. FORTY-EIGHT (48) HOURS NOTICE SHALL BE GIVEN TO THE CITY OF ST. CHARLES CITY ENGINEER BEFORE ANY STORM SEWER CONSTRUCTION IS TO BEGIN TO ALLOW SCHEDULING OF REQUIRED INSPECTIONS.

ENGINEERING DESIGN STANDARDS:

- GENERAL:
  - O ARTICLE III. OF CHAPTER 405 IN TITLE IV OF THE ST. CHARLES CITY CODE
  - O CHAPTERS 505 AND 510 OF THE ST. CHARLES CITY CODE
  - O TITLE VII OF THE ST. CHARLES CITY CODE
  - O OTHER CITY CODES THAT MAY GOVERN ENGINEERING DESIGN
  - O CITY OF ST. CHARLES PUBLIC WORKS DEPARTMENT FINAL DESIGN CHECKLIST
- TRANSPORTATION:
  - O ST. LOUIS COUNTY HIGHWAY DEPARTMENT DESIGN CRITERIA MANUAL 2011
  - O AASHTO POLICY ON GEOMETRIC DESIGN 2011
  - O AASHTO ROADSIDE DESIGN GUIDE 2011
  - O MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 WITH 2012 REV. 1 & 2
  - O ADA STANDARDS FOR TRANSPORTATION FACILITIES 2006
- STORM WATER:
  - O MSD PLAN PREPARATION GUIDELINES 2006
  - O MSD STANDARD CONSTRUCTION SPECIFICATIONS 2009
  - O CITY OF ST. CHARLES PUMP STATION DESIGN STANDARDS 2014
- SANITARY
  - O MISSOURI DNR WASTEWATER DESIGN GUIDES 10CSR-20-8
  - O TEN STATES STANDARDS 2007
  - O CITY OF ST. CHARLES PUMP STATION DESIGN STANDARDS 2014
- WATER
  - O CITY OF ST. CHARLES STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC WATER MAINS 2014
  - O MISSOURI DNR MINIMUM DESIGN STANDARDS FOR MISSOURI COMMUNITY WATER SYSTEMS 2013
  - O TEN STATES STANDARDS 2007
  - O AWWA MANUALS OF WATER SUPPLY PRACTICES 2012

FEMA FLOOD NOTES:

WE HAVE DETERMINED THE HORIZONTAL LOCATION OF THIS TRACT OF LAND IN ST. CHARLES COUNTY, MISSOURI, BY SCALING THE PROPERTY IN REFERENCE TO THE "FLOOD INSURANCE RATE MAP (FIRM), ST. CHARLES COUNTY, MISSOURI", PANEL 280 OF 525, MAP NUMBER 29183C0280 G (COMMUNITY PANEL NUMBER, ST. CHARLES COUNTY 290315 0280 G, WITH AN EFFECTIVE DATE OF JANUARY 20, 2016). BY EXPRESS REFERENCE TO THIS MAP AND ITS LEGEND, THIS TRACT IS INDICATED TO BE WITHIN THE FOLLOWING ZONES: ZONE X OTHER FLOOD AREAS.

ZONE X OTHER FLOOD AREAS IS DEFINED AS AREAS OF 0.2% CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

THE EVALUATION PROVIDED IN THIS NOTE IS RESTRICTED TO SIMPLY INDICATING THE APPARENT PHYSICAL, HORIZONTAL LOCATION OF THE PROPERTY WITH RESPECT TO THE FEATURES DISPLAYED ON THE MAP. NO FIELD STUDY OF THE DRAINAGE CHARACTERISTICS TO WHICH THIS PROPERTY MAY BE SUBJECT TO HAS BEEN CONDUCTED AND NO REPRESENTATION CONCERNING THE INSURABILITY OF THIS PROPERTY OR THE POTENTIAL OF THIS PROPERTY TO BE SUSCEPTIBLE TO FLOODING OR SUBJECT TO ANY FLOOD HAZARD HAS BEEN MADE. WE MAKE NO REPRESENTATION CONCERNING THE ACCURACY OF THIS FIRM PANEL WHICH INCLUDES A NOTE THAT, "THIS MAP IS FOR USE IN ADMINISTERING THE NATIONAL FLOOD INSURANCE PROGRAM; IT DOES NOT NECESSARILY IDENTIFY ALL AREAS SUBJECT TO FLOODING, PARTICULARLY FROM LOCAL DRAINAGE SOURCES OF SMALL SIZE, OR ALL PLANIMETRIC FEATURES OUTSIDE SPECIAL FLOOD HAZARD AREAS."

DEVELOPMENT NOTES:

1. EXISTING CAMPUS AREA OF TRACT: 96.906 ACRES
   (PROPOSED ELEMENTARY SCHOOL DISTURBED AREA 10.49 ACRES)
2. EXISTING ZONING: R-1C – SINGLE FAMILY (CITY OF ST. CHARLES)
3. PROPOSED USE: NEW ELEMENTARY SCHOOL
   AREA OF BUILDING FOOTPRINT: 101,865 SQ.FT.
4. REQUIRED BUILDING & PARKING SETBACKS FOR R-1C ZONING:
   FRONT YARD 30 FEET
   SIDE YARD 10 FEET
   REAR YARD 25 FEET
   BUILDING HEIGHT MAX = 2-1/2 STORIES OR 35 FEET
   (ANTICIPATED MAX HEIGHT TO BE 38 FEET TO PARAPET AT STORM SHELTER. PER CITY CODE 400.580A, THE EXCESS HEIGHT IS FOR ARCHITECTURAL FEATURES AND NOT INTENDED FOR HUMAN OCCUPANCY AND MAY BE CONSTRUCTED IN EXCESS OF THE HEIGHT REGULATION)
5. PARKING REQUIREMENTS & PROVISIONS:
   TOTAL STAFF =38
   TOTAL PARKING PROVIDED 38 SPACES

   REQUIRED PARKING 1 SPACE PER 10 GYM SEATS OR 2 PER CLASSROOM WHICHEVER IS MORE.

   GYM =318 SEATS/10 = 31.8 ~ 32 SPACES REQUIRED
   CLASSROOMS 26 x 2 = 52 SPACES REQUIRED
   TOTAL PARKING REQUIRED 52 SPACES

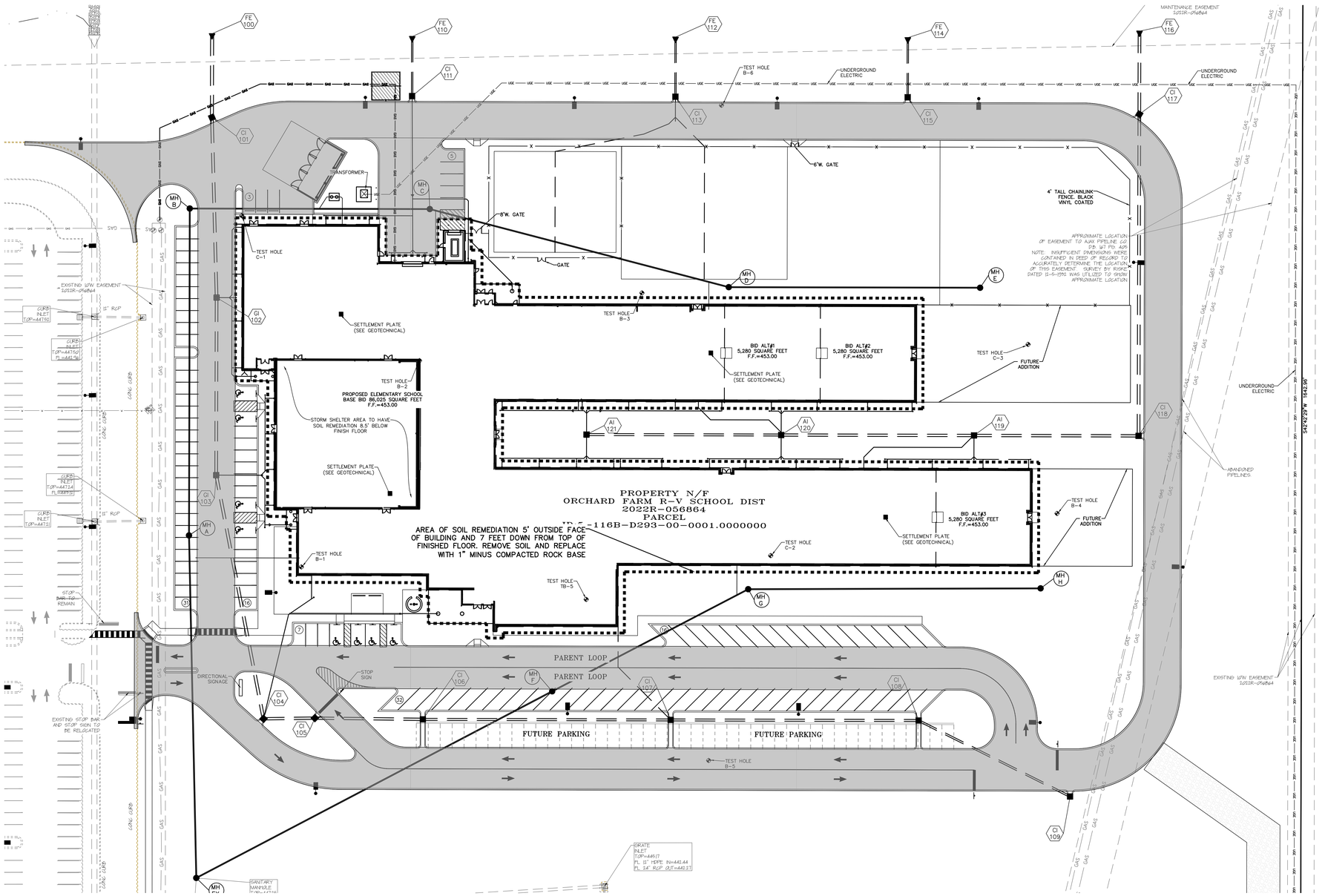
   TOTAL REQUIRED PARKING 90 SPACES
   TOTAL PROVIDED PARKING 110 SPACES
6. THIS PROPERTY IS SERVED BY THE FOLLOWING UTILITIES:

ELECTRIC COMPANY	AMERENUE	636-925-3215
TELEPHONE COMPANY	SOUTHWESTERN BELL	314-949-1315
GAS COMPANY	SPIRE	314-535-9414
SEWER DISTRICT	CITY OF ST. CHARLES	636-940-4601
WATER DISTRICT	CITY OF ST. CHARLES	636-940-4601
FIRE PROTECTION DISTRICT	CITY OF ST. CHARLES	636-949-3387

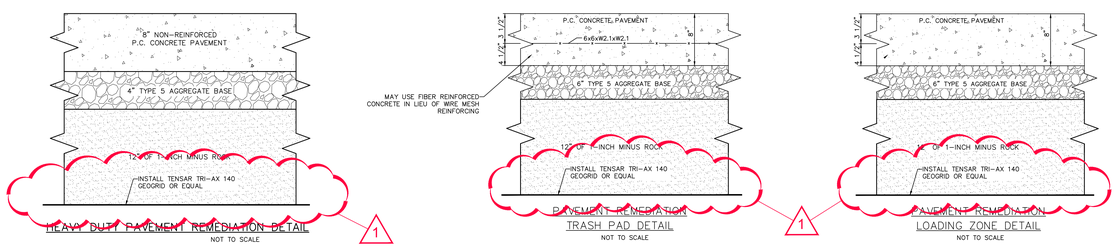
7. PROPERTY OWNER: ORCHARD FARM R-V SCHOOL DISTRICT
   3489 BOSCHERTOWN ROAD
   ST. CHARLES, MO 63301
   636-925-5400
8. ANY PROPOSED SIGNS TO BE APPROVED BY SEPARATE PERMIT.
9. ONLY ABOVE GROUND UTILITIES WHICH HAVE BEEN LOCATED ARE SHOWN ON THIS PLAN.
10. DETENTION AND WATER QUALITY ARE ADDRESSED BY A LAKE ONSITE.
11. A SITE PHOTOMETRIC LIGHTING PLAN WILL BE REQUIRED BY THE OWNER PRIOR TO THE APPROVAL OF A BUILDING PERMIT. LIGHT POLES SHOWN MAY BE MODIFIED FROM WHAT IS SHOWN IN ORDER TO OBTAIN A PLAN THAT MEETS THE CITY REQUIREMENTS FOR SITE PHOTOMETRICS. LIGHTS CURRENTLY SHOWN ONLY INDICATE THAT LIGHTING WILL BE PROVIDED.
12. ANY FUTURE BUILDING EXPANSION OR FUTURE STRUCTURES WILL REQUIRE A SEPARATE SITE PLAN REVIEW PRIOR TO CONSTRUCTION.
13. LANDSCAPING CALCULATIONS:
    1 TREE PER 50 FEET OF LOT PARKING PERIMETER
    500 L.F. ALONG SOUTH/50 = 10 TREE REQUIRED; 10 TREE PROVIDED.
    290 L.F. ALONG WEST/50 = 6 TREES REQUIRED; 6 TREES PROVIDED.
    85 L.F. ALONG NORTH/50 = 2 TREES REQUIRED; 2 TREES PROVIDED.

    NO SHRUBS PROPOSED ON CAMPUS.

    INTERIOR PARKING LOT:
    5% OF EACH PARKING SPACE (TYPICAL STALL 17.5'X9'=157.5 S.F. X 5% = 7.88 SQ.FT. REQUIRED/STALL); 111 STALLS X 7.88 SQ.FT. = 875 SQ.FT. REQUIRED. 18,415 SQUARE FEET; PROVIDED IN GREENSCAPES WITHIN PARKING AREAS. 1 TREE PER 15 PARKING STALLS ~ (111 STALLS) 7 TREES PROVIDED IN PARKING AREAS.
14. SITE HAS AN ISSUED DNR PERMIT MORA19749 WITH AN EFFECTIVE DATE OF 02-09-2022 WHICH IS STILL VALID FOR DISTURBANCE ON THIS SITE. PERMIT TO EXPIRE 2-7-2027.
15.



BASE BID TO INCLUDE PAVEMENT REMEDIATION UNDER ALL HEAVY DUTY DRIVES, TRASH PAD AND LOADING ZONE AREAS. AREAS SHALL EXTEND 1-FOOT OUTSIDE ALL DRIVES, CURBS, AND EDGE OF PAVEMENT WHERE SHOWN.



FIBER REINFORCED CONCRETE (USE AT TRASH PAD LOCATION IF NOT USING A WIRE MESH REINFORCEMENT)

A. All material shall be in accordance with Modot Standard Specifications Division 1000, Material Details, unless otherwise noted.

1. Fibers. Fibrillated polypropylene fibers shall be added at a rate of one and a half (1.5) pounds per cubic yard. All fibers shall be measurable by weight. Fibers may be measured in bags, boxes or like containers with approval from the Owner. The containers shall be sealed by the fiber manufacturer, and shall have the weight contained therein clearly marked by the manufacturer. No fraction of container delivered unsealed or left over from previous work shall be used unless weighed. Fibers shall be added to the concrete mix and mixed according to the fiber manufacturer's recommendations.
2. Water-Reducers. An approved high range water-reducer admixture may be used. When a high range water-reducing admixture is used, the slump of the concrete, achieved with water, shall not exceed three (3) inches before the admixture is added to the concrete. After it is added to the concrete, slump may be a maximum of six (6) inches at the time of placement.
3. Other admixtures may be used only with the approval by Engineer..

B. Mix Design.

1. Mix Approval. The Contractor shall submit a proposed mix design to the Owner for review and approval. The mix design shall be in accordance with the requirements of Modot Standard Specifications Section 501. The mixture shall be designed to develop a minimum strength of 4000 psi.
2. Admixtures. Any admixtures used shall be certified by the fiber manufacturer for compatibility with the fibers used in the concrete.
3. Mix Adjustments. The Contractor shall not make any mix design changes during placement of the UTW pavement without prior approval by Engineer.

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REMEDIATION PLAN

STATE OF MISSOURI
CLIFFORD L. HEITMANN
NUMBER E-29617
REGISTERED PROFESSIONAL ENGINEER
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617
ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B
ORCHARD FARM SCHOOL DISTRICT
ST. CHARLES, MISSOURI

PROJECT MANAGER:
EDIT PER PROJECT

CONSULTING ENGINEERS:
CIVIL ENGINEERING
ASSOC. LLC
DECLURE ENGINEERING
DENNIS G. SCHEC

CIVIL / SURVEY
STRUCTURAL
MECH. / ELEC
FOOD SERVICE / PLUMB

HOENER ASSOCIATES, INC. – ARCHITECTS
6707 PLANVIEW AVE.
ST. LOUIS, MISSOURI 63109
OFFICE: 314.781.9855
HoenerArchitects.com

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING BEFORE WORK IS EXECUTED. THIS DRAWING IS THE PROPERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

PROJ. NO. 23-09B

DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

DRAWN BY SWR
CHECKED BY CLH
SHEET NO.
C3.00
SD-31

PROPERTY N/F OF
BRIAN AND TAMMY OSTMANN
PARCEL
ID:5-116B-0009-00-0008.2000000
D.B. 1668 PG. 281

PROPERTY N/F
KURTZ SYDNEY M REVOC LIV TRUST
PARCEL
ID:5-116B-0009-00-0009.0000000
02021-014686

S47°19'23"E 2004.25'

S47°19'23"E 528.30'

N47°19'23"W 5229.67'

EXISTING UTILITY EASEMENT
2013R-056864

EXISTING STORMWATER FACILITY MAINTENANCE EASEMENT
2013R-056864

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

FE 100 | FE 110 | FE 112 | FE 114 | FE 116

CI 101 | CI 102 | CI 103 | CI 104 | CI 105 | CI 106 | CI 107 | CI 108 | CI 109 | CI 111 | CI 113 | CI 115 | CI 117 | CI 118

MH A | MH B | MH C | MH D | MH E | MH F | MH G | MH H | MH EX

AI 119 | AI 120 | AI 121

POSSIBLE GAS APPARATUS AREA TO BE SCREENED BY FENCE

NEW VINYL FENCE

8" CONCRETE W/6" ROCK BASE

8" CONCRETE W/6" ROCK BASE FROM HERE TO BUILDING

8" CONCRETE W/4" ROCK BASE

ADA RAMP W/DETECTABLE WARNING

LIGHT POLE

UNDERGROUND ELECTRIC

TRASH DUMPSTERS

GREASE INTERCEPTOR

TRANSFORMER

FLUSH

KINDERGARTEN SOFT PLAY AREA 8,000 S.F.

SOFT PLAY AREA 12,500 S.F.

TURF PLAYGROUND AREA (TO BE PROVIDED BY DISTRICT)

HARD PLAY AREA

GRASS PLAY AREA

8'W. GATE

ROLL UP DOOR

GATE

DOOR

DOORS

PIPE BOLLARDS

4" LINE TO GREASE INTERCEPTOR

GENERATOR BUILDING

SANITARY LATERAL

4" SAN FL=450.20

4" SAN FL=450.72

4" SAN FL=448.90

4" SAN FL=449.68

4' TALL CHAINLINK FENCE, BLACK VINYL COATED

APPROXIMATE LOCATION OF EASEMENT TO AJAX PIPELINE CO P.B. 67 PG. 429

NOTE: INSUFFICIENT DIMENSIONS WERE CONTAINED IN DEED OF RECORD TO ACCURATELY DETERMINE THE LOCATION OF THIS EASEMENT. SURVEY BY RIGHT DATED 12-9-1991 WAS UTILIZED TO SHOW APPROXIMATE LOCATION

BID ALT#1 5,280 SQUARE FEET F.F.=453.00

BID ALT#2 5,280 SQUARE FEET F.F.=453.00

BID ALT#3 5,280 SQUARE FEET F.F.=453.00

FUTURE ADDITION

ABANDONED PIPELINES

PROPOSED ELEMENTARY SCHOOL BASE BID 86,025 SQUARE FEET F.F.=453.00

PROPERTY N/F
ORCHARD FARM R-V SCHOOL DIST
2022R-056864
PARCEL
ID:5-116B-D293-00-0001.0000000

5' SIDEWALK

ADA RAMP W/DETECTABLE WARNING

8" CONCRETE W/4" ROCK BASE

CURB INLET T.OP=447.14 FL=443.91

CURB INLET T.OP=447.31

CURB INLET T.OP=447.61 FL=443.96

CURB INLET T.OP=447.51 FL=443.96

GRATED INLET T.OP=449.24

15" RCP

SEATING BENCH

CANOPY COLUMN

(2) BIKE RACKS

FLAGPOLE LIGHT

FLAGPOLE

FLUSH WALK

6' SIDEWALK

8' SIDEWALK

6" CONCRETE W/4" ROCK BASE (TYPICAL IN PARKING STALLS)

PARENT LOOP

FUTURE PARKING

STOP SIGN

STOP BAR

STOP BAR TO REMAIN

PROPOSED CROSSWALK STRIPING

DIRECTIONAL SIGNAGE

4'W. ISLAND W/MOUNTABLE CURB

EXISTING STOP BAR AND STOP SIGN TO BE RELOCATED

RELOCATED STOP BAR AND STOP SIGN

NEW WALK CONNECTION

EXTEND WALK FROM HERE TO MIDDLE SCHOOL

SANITARY MANHOLE T.OP=447.95 FL=440.95

STORM MANHOLE T.OP=449.50 UNABLE TO OPEN PER FIELD NOTES

GRATE INLET T.OP=449.17 FL 15" HDPE IN=442.44 FL 24" RCP OUT=442.37

YARD DRAIN T.OP=449.10 FL NOT MEASURED

SOFTBALL

25' WIDE CONSTRUCTION ACCESS ROCK ROAD TO BE MAINTAINED AND REMOVED AFTER AT THE CONCLUSION OF PROJECT. GRADES SHALL BE RESTORED. AREA SHALL BE SEEDED AND STRAWED

PROPERTY N/F
CITY OF ST. CHARLES
2022R-056864
PARCEL
ID:5-116B-D293-00-0002.0000000

S42°42'29"W 1642.96'

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FIRE SPRINK / PLUMB
GEOTECH
SOILS & CONC. ING.

HOENER ASSOCIATES, INC. – ARCHITECTS
607 PLANK RD
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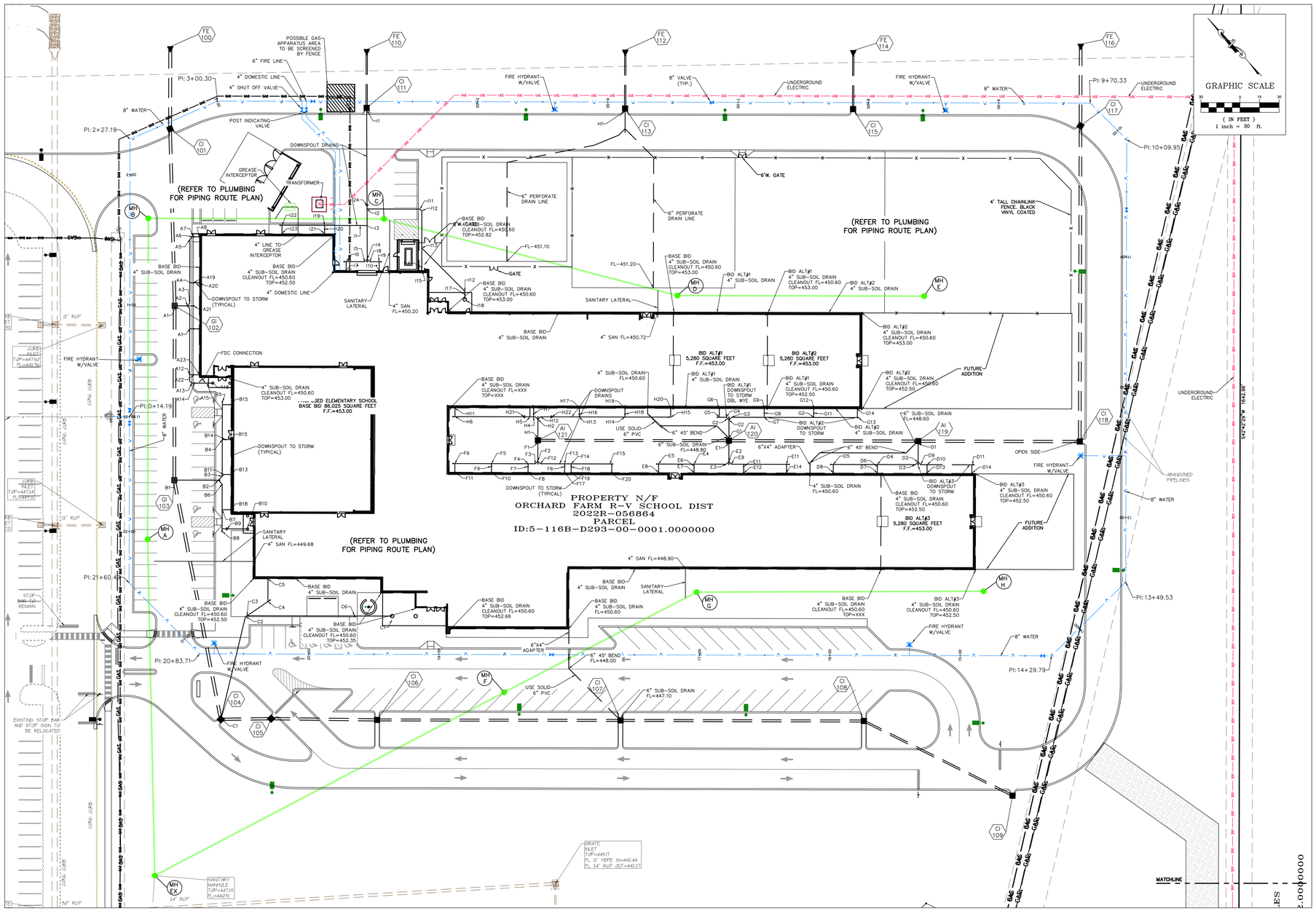
DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

DRAWN BY SWR
CHECKED BY CLH
SHEET NO.

C3.10
SD-32

SITE PLAN



DOWNSPOUT SYSTEM A

No.	Sta.	Type	Elevation
A1	0+00	8" CONNECT TO G102	FL448.00
A2	0+08L	8"X6" DOUBLE WYE	FL448.16
A3	0+11L	6" 45° BEND	FL448.22
A4	0+27L	6" TEE WYE	FL448.54
A5	0+60L	6" 45° BEND	FL449.20
A6	0+63L	6" 45° BEND	FL449.26
A7	0+64L	6" 2WAY CLEANOUT	T=452.90 FL=449.28
A8	0+68L	6" D.S. CONNECTION	FL451.25
A9	0+11R	6" 45° BEND	FL448.22
A10	0+27R	6" TEE WYE	FL448.54
A11	0+62R	6" TEE WYE	FL449.24
A12	0+66R	6" 45° BEND	FL449.32
A13	0+69R	6" 45° BEND	FL449.38
A14	0+70R	6" 2WAY CLEANOUT	T=452.90 FL=449.40
A15	0+80R	6"X3" REDUCER	FL449.60
A16	0+83R	3" D.S. CONNECTION	FL450.00
A17	A10+3'L	6" 2WAY CLEANOUT	T=452.90 FL=448.60
A18	A10+7'L	6" D.S. CONNECTION	FL451.25
A19	A4+3R	6" 2WAY CLEANOUT	T=452.90 FL=448.66
A20	A4+7'R	6" D.S. CONNECTION	FL451.25
A21	A2+5'	6" CLEANOUT	T=452.90 FL=448.26
A22	A11+3'L	6" 2WAY CLEANOUT	T=452.70 FL=448.50
A23	A11+7'L	6" D.S. CONNECTION	FL451.25

DOWNSPOUT SYSTEM B

No.	Sta.	Type	Elevation
B1	0+00	8" CONNECT TO G103	FL447.00
B2	0+32	8"X6" DBL WYE&C.O.	T=452.90 FL=447.64
B3	0+36L	6" WYE	FL447.72
B4	0+64L	6" TEE WYE	FL448.28
B5	0+91L	6" TEE WYE & C.O.	T=452.90 FL=448.82
B6	0+36R	6" 45° BEND	FL447.72
B7	0+56R	6" TEE WYE	FL448.12
B8	0+71R	6" TEE WYE & C.O.	T=452.90 FL=448.42
B9	B8+5'L	6"X3" REDUCER	FL448.52
B10	B8+18'L	3" D.S. CONNECT	FL449.50
B11	B3+2'R	6" 45° BEND	FL447.76
B12	B3+4'R	6" 2WAY CLEANOUT	T=452.90 FL=447.80
B13	B3+7'R	6" D.S. CONNECTION	FL451.00
B14	B4+3'R	6" 2WAY CLEANOUT	T=452.90 FL=448.34
B15	B4+7'R	6" D.S. CONNECTION	FL451.00
B16	B5+7'R	6" D.S. CONNECTION	FL451.00
B17	B7+4'L	6" 2WAY CLEANOUT	T=452.90 FL=448.18
B18	B7+7'L	6" D.S. CONNECTION	FL451.00

DOWNSPOUT SYSTEM C

No.	Sta.	Type	Elevation
C1	0+00	10" CONNECT TO C104	FL445.00
C2	0+79	10" 30° BEND	FL445.79
C3	0+81	10"X6" WYE	FL445.93
C4	1+01	10" WYE & C.O.	T=452.90 FL=447.50
C5	1+15	10" ROOF DRAIN CONN.	FL448.50
C6	A3+81'R	6" 2WAY CLEANOUT	T=452.90 FL=448.20
C7	A3+108'R	6" D.S. CONNECT	FL449.15

DOWNSPOUT SYSTEM D

No.	Sta.	Type	Elevation
D1	0+00	8" CONNECT TO A1119	FL449.00
D2	0+14	8"X6" DBL WYE&C.O.	T=452.50 FL=449.14
D3	0+17R	6" 45° BEND	FL449.17
D4	0+46R	6" TEE WYE	FL449.46
D5	0+79R	6" TEE WYE&C.O.	T=452.50 FL=449.79
D6	D4+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.23
D7	D4+7'L	6" D.S. CONNECTION	FL451.25
D8	D5+7'L	6" D.S. CONNECTION	FL451.25
D9 (BASE BID)	D+16L	INSTALL 6" CAP	FL449.16
D9 (ALT3)	D+17L	6" 45° BEND	FL449.17
B1(ALT3)	D+22L	6" TEE WYE	FL449.22
D11	D+57L	6" TEE WYE&C.O.	T=452.50 FL=449.57
D12	D10+3'R	6" 2WAY CLEANOUT	T=452.50 FL=449.65
D13	D10+7'R	6" D.S. CONNECTION	FL451.25
D14	D11+7'R	6" D.S. CONNECTION	FL451.25

DOWNSPOUT SYSTEM E

No.	Sta.	Type	Elevation
E1	0+00	8" CONNECT TO A1120	FL449.20
E2	0+14	8"X6" DBL WYE&C.O.	T=452.50 FL=449.34
E3	1+17R	6" 45° BEND	FL449.37
E4	0+41R	6" TEE WYE	FL449.61
E5	0+69R	8"X6" DBL WYE&C.O.	T=452.50 FL=449.89
E6	E4+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.25
E7	E4+7'L	6" D.S. CONNECTION	FL451.25
E8	E5+7'L	6" D.S. CONNECTION	FL451.25
E9	0+17L	6" 45° BEND	FL449.37
E10	0+26L	6" TEE WYE	FL449.46
E11	0+59L	8"X6" DBL WYE&C.O.	T=452.50 FL=449.79
E12	E10+3'R	6" 2WAY CLEANOUT	T=452.50 FL=450.18
E13	E10+7'R	6" D.S. CONNECTION	FL451.25
E14	E11+7'R	6" D.S. CONNECTION	FL451.25

DOWNSPOUT SYSTEM F

No.	Sta.	Type	Elevation
F1	0+00	8" CONNECT TO A1121	FL449.00
F2	0+14	8"X6" DOUBLE WYE	T=452.50 FL=449.14
F3	0+17	6" 45° BEND	FL449.17
F4	0+22	6" TEE WYE	FL449.22
F5	0+51	6" 45° BEND	FL449.51
F6	0+79	6" 45° BEND	T=452.50 FL=449.79
F7	F4+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.00
F8	F4+7'L	6" D.S. CONNECTION	FL451.25
F9	F5+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.20
F10	F5+7'L	6" D.S. CONNECTION	FL451.25
F11	F6+7'L	6" D.S. CONNECTION	FL451.25
F12	0+17L	6" 45° BEND	FL449.17
F13	0+36L	6" TEE WYE	FL449.36
F14	0+41L	6" TEE WYE	FL449.41
F15	0+72L	6" TEE WYE & C.O.	T=452.50 FL=449.72
F16	F13+3'R	6" 2WAY CLEANOUT	T=452.50 FL=450.12
F17	F13+3'R	6" D.S. CONNECTION	FL451.25
F18	F14+3'R	6" 2WAY CLEANOUT	T=452.50 FL=450.14
F19	F14+7'R	6" D.S. CONNECTION	FL451.25
F20	F15+7'R	6" D.S. CONNECTION	FL451.25

DOWNSPOUT SYSTEM G

No.	Sta.	Type	Elevation
G1	0+00	8" CONNECT TO A1120	FL449.00
G2	0+14	8"X6" WYE & C.O.	T=452.50 FL=450.18
G3 (BASE BID)	0+16R	INSTALL 6" CAP	FL449.16
G4	1+17L	6" 45° BEND	FL449.17
G5	0+23L	6" TEE WYE & C.O.	T=452.50 FL=449.23
G6	G5+7'R	6" D.S. CONNECTION	FL451.25
G3 (ALT1)	0+17R	6" 45° BEND	FL449.17
G7 (ALT1)	0+42R	6" TEE WYE W/CAP	FL449.42
G8	G7+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.15
G9	G7+7'L	6" D.S. CONNECTION	FL451.25
G7 (ALT2)	0+42R	6" TEE WYE	FL451.25
G10	0+80R	6" TEE WYE	FL449.80
G11	G10+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.40
G12	G10+7'L	6" D.S. CONNECTION	FL451.25
G13	G11+14'R	6" TEE WYE & C.O.	T=452.50 FL=450.14
G14	G13+7'L	6" D.S. CONNECTION	FL451.25

DOWNSPOUT SYSTEM H

No.	Sta.	Type	Elevation
H1	0+00	10" CONNECT TO A1121	FL449.00
H2	0+14	8"X6" DBL WYE&C.O.	T=452.50 FL=449.14
H3	0+17L	8" 45° BEND	FL449.17
H4	0+18.5L	8"X6" TEE WYE	FL449.19
H5	0+21L	8"X6" TEE WYE	FL449.21
H6	0+79L	6" TEE WYE & C.O.	T=452.50 FL=449.79
H7	H4+3'R	6" 2WAY CLEANOUT	T=452.50 FL=450.00
H8	H4+7'R	6" D.S. CONNECTION	FL451.25
H9	H5+3'R	6" 2WAY CLEANOUT	T=452.50 FL=450.00
H10	H5+7'R	6" D.S. CONNECTION	FL451.25
H11	H6+7'R	6" D.S. CONNECTION	FL451.25
H12	0+17R	8" 45° BEND	FL449.17
H13	0+47R	6" TEE WYE	FL449.47
H14	0+82R	6" TEE WYE	FL449.82
H15	1+17R	6" TEE WYE & C.O.	T=452.50 FL=450.00
H16	H13+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.20
H17	H13+7'L	6" D.S. CONNECTION	FL451.25
H18	H14+3'L	6" 2WAY CLEANOUT	T=452.50 FL=450.40
H19	H14+7'L	6" D.S. CONNECTION	FL451.25
H20	H15+7'L	6" D.S. CONNECTION	FL451.25
H21	0+24L	8"X6" REDUCER	FL449.24
H22	0+20R	8"X6" REDUCER	FL449.20

DOWNSPOUT SYSTEM I

No.	Sta.	Type	Elevation
I1	0+00	8" CONNECT TO G111	FL446.00
I2	0+75	8"X6" TEE WYE	FL446.75
I3	0+88	8"X6" TEE WYE	FL446.88
I4	1+14	6" DEL WYE W/C.O.	T=452.90 FL=447.74
I5	1+17R	6" 45° BEND	FL447.17
I6	1+31R	6" TEE WYE & C.O.	T=453.00 FL=447.31
I7	I6+7'L	6" D.S. CONNECTION	FL451.25
I8	1+17L	6" 45° BEND	FL447.17
I9	1+24L	6" TEE WYE & C.O.	T=453.00 FL=447.24
I10	I9+7'R	6" D.S. CONNECTION	FL451.25
I11	I2+41'L	6" 45° BEND	FL447.16
I12	I2+44'L	6" 45° BEND	FL447.19
I13	I2+72'L	6" WYE	FL447.47
I14	I2+86'L	6" 2WAY CLEANOUT	T=453.00 FL=450.41
I15	I2+90'L	6" D.S. CONNECTION	FL451.25
I16	I13+47'L	6" 45° BEND	FL447.94
I17	I13+50'L	6" 2WAY CLEANOUT	T=452.90 FL=449.26
I18	I13+54'L	6"X3" D.S. CONNECT.	FL451.25
I19	I3+32.5'L	6" TEE WYE	FL447.21
I20	I19+3'L	6" 2WAY CLEANOUT	T=452.50 FL=447.54
I21	I19+7'L	6" D.S. CONNECTION	FL451.25
I22	I3+65'R	6" TEE WYE & C.O.	T=452.50 FL=450.25
I23	I22+7'L	6" D.S. CONNECTION	FL451.25
I24	0+70	8"X6" REDUCER	FL446.70

LEGEND

- EXISTING ONSITE STORM
- EXISTING ELECTRIC — OHV —
- EXISTING TELEPHONE/FIBER — T —
- EXISTING ABANDONED PIPELINE — GAS — GAS —
- EXISTING GAS — GAS — GAS —
- NEW DOMESTIC/FIRE WATER LINES (C-900 DR14 PVC) — W —
- NEW SANITARY
- NEW GAS (TO BE PLACED BY SPIRE ENERGY) — GAS — GAS —
- NEW ELECTRIC LIGHTS/TRANSFORMER
- NEW UNDERGROUND ELECTRIC SERVICE — UGE —
- NEW TELECOMMUNICATIONS
- NEW STORM

REFER TO ELECTRICAL AND PLUMBING PLANS PROVIDED IN THE BID SET FOR FURTHER INSTRUCTIONS AS REQUIRED FOR SITE UTILITY INSTALLATIONS.

CALL BEFORE YOU DIG! 1-800-DIG-RITE

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER
CLIFFORD L. HEITMANN NUMBER E-29617
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617
ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B

ST. CHARLES, MISSOURI

PROJECT MANAGER:
EDIT PER PROJECT

CONSULTING ENGINEERS:
CIVIL / SURVEY
STRUCTURAL
MECH / ELEC / PLUMB
LEED ENGINEERING
ASSOC. LEED
MEASURE ENGINEERING
DESIGN, LLC (DEMO, MO)

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. - ARCHITECTS
670 DUANEWOOD AVE.
ST. LOUIS, MISSOURI 63109
OFFICE: 314.781.9855
HoenerArchitects.com

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING BEFORE WORK IS EXECUTED. THIS DRAWING IS THE PROPERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

PROJ. NO. 23-09B

DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

DRAWN BY SWR
CHECKED BY CLH
SHEET NO.

C3.20
SD-33

UTILITY PLAN

PROPERTY N/F OF
BRIAN AND TAMMY OSTMANN
PARCEL
ID:5-116B-0009-00-0008.2000000
D.B. 1668 PG. 281

PROPERTY N/F
KURTZ SYDNEY M REVOC LIV TRUST
PARCEL
ID:5-116B-0009-00-0009.0000000
02021-014686

NOTE:
ALL SPOTS ARE TOP OF PAVEMENT OR FINISH GRADE UNLESS OTHERWISE NOTED.

S47°19'23"E 2004.25'

S47°19'23"E 528.30'

N47°19'23"W 5229.67'

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

EXISTING UTILITY EASEMENT
2013R-056864

EXISTING ST. CHARLES COUNTY LEVEE MAINTENANCE EASEMENT
2013R-056864

UNDERGROUND ELECTRIC

TOP OF RAMP ELEV=451.14

6'W. GATE

TOP OF RAMP ELEV=451.14 AT GATE

4' TALL CHAINLINK FENCE, BLACK VINYL COATED

APPROXIMATE LOCATION OF EASEMENT TO KAW PIPELINE CO P.B. 97 PG. 429
NOTE: INSUFFICIENT DIMENSIONS WERE CONTAINED IN DEED OF RECORD TO ACCURATELY DETERMINE THE LOCATION OF THIS EASEMENT. SURVEY BY RIGHT DATED 12-9-1991 WAS UTILIZED TO SHOW APPROXIMATE LOCATION

8'W. GATE

GATE

TRANSFORMER

BID ALT#1
5,280 SQUARE FEET
F.F.=453.00

BID ALT#2
5,280 SQUARE FEET
F.F.=453.00

FUTURE ADDITION

GRADE BREAK

PROPOSED ELEMENTARY SCHOOL
BASE BID 86,025 SQUARE FEET
F.F.=453.00

TOP OF RAMP ELEV=452.90

TOP OF RAMP ELEV=452.75

TOP OF RAMP ELEV=452.61

PROPERTY N/F
ORCHARD FARM R-V SCHOOL DIST
2022R-056864
PARCEL
ID:5-116B-D293-00-0001.0000000

AREA OF SOIL REMEDIATION 5' OUTSIDE FACE OF BUILDING AND 7 FEET DOWN FROM TOP OF FINISHED FLOOR. REMOVE SOIL AND REPLACE WITH 1" MINUS COMPACTED ROCK BASE

BID ALT#3
5,280 SQUARE FEET
F.F.=453.00

ABANDONED PIPELINES

EXISTING UTILITY EASEMENT
2013R-056864

AREA TO BE USED BY CONTRACTOR FOR HAUL ON FROM EARLY CHILDHOOD

25' WIDE CONSTRUCTION ACCESS ROCK ROAD TO BE MAINTAINED AND REMOVED AFTER AT THE CONCLUSION OF PROJECT. GRADES SHALL BE RESTORED. AREA SHALL BE SEEDED AND STRAWED

PROPERTY N/F
ST. CHARLES
CITY OF
2022R-056864
PARCEL
ID:5-116B-D293-00-0002.0000000

S42°42'29"W 1642.96'

S42°42'29"W 1642.96'

SOFTBALL

CURB INLET TOP=447.55
FL 18" RCP=447.14
FL 24" IN 36" OUT=447.05

CURB INLET TOP=447.50
FL=447.10

CURB INLET TOP=447.74
FL=447.31

CURB INLET TOP=447.50
FL=447.10

GRATE INLET TOP=449.04

STORM MANHOLE TOP=449.50
UNABLE TO OPEN PER FIELD NOTES

YARD DRAIN / TOP=446.12
FL NOT MEASURED

STOP BAR TO REMAIN

EXISTING STOP AND STOP SIGN TO BE RELOCATED

CALL BEFORE YOU DIG!
1-800-DIG-RITE

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GRADING PLAN

STATE OF MISSOURI
CLIFFORD L. HEITMANN
NUMBER E-29617
REGISTERED PROFESSIONAL ENGINEER
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617

ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI

PROJECT MANAGER:
EDIT PER PROJECT

ENGINEERS:
CONSULTING ENGINEERING SOLUTIONS, LLC
MCCLURE ENGINEERING
CIVIL
DOUG G. DUNN, PE

CIVIL / SURVEY
STRUCTURAL
MECH. / ELEC. / PLUMB

ORCHARD FARM SCHOOL DISTRICT

HOENER ASSOCIATES, INC. – ARCHITECTS
6121 PLANTATION AVE.
ST. LOUIS, MISSOURI 63109
OFFICE: 314.781.9855
HoenerArchitects.com

ALL DIMENSIONS MUST BE VERIFIED AT BUILDING BEFORE WORK IS EXECUTED. THIS DRAWING IS THE PROPERTY OF THE ARCHITECTS AND SHALL NOT BE COPIED OR DUPLICATED WITHOUT THEIR CONSENT.

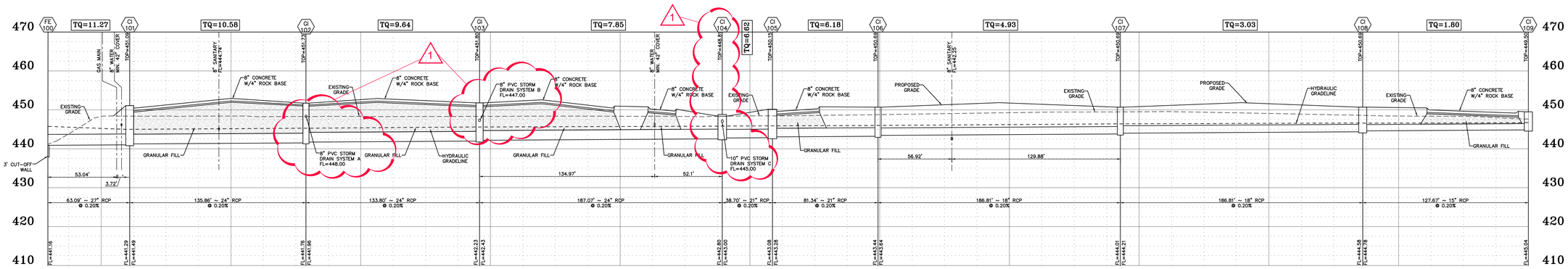
PROJ. NO. 23-09B

DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

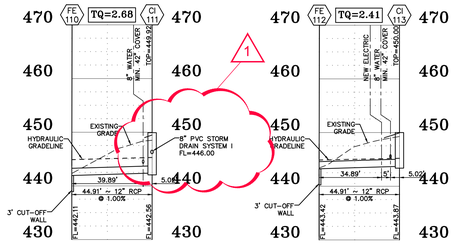
DRAWN BY SWR
CHECKED BY CLH
SHEET NO.

C4.00
SD-34



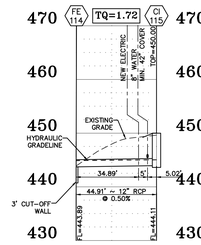
STORM PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

FOR ALL SEWERS WITH A DESIGN GRADE OF LESS THAN 1%, SLOPES SHALL BE VERIFIED PRIOR TO SURFACE RESTORATION

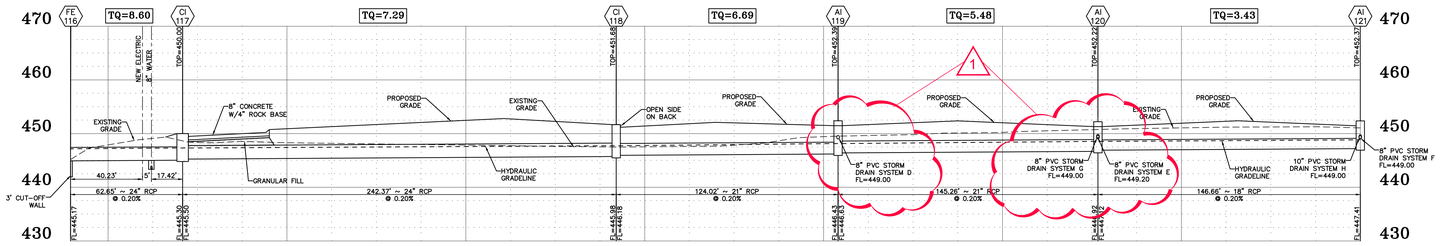


STORM PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

STORM PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'



STORM PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'



STORM PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

FOR ALL SEWERS WITH A DESIGN GRADE OF LESS THAN 1%, SLOPES SHALL BE VERIFIED PRIOR TO SURFACE RESTORATION

St Charles County Government
Hydraulic Review Output Data

\\VAULTSERVER\FileFolders\17000\17453D OFSD Elementary\Engineering\Hydraulics\17453D_HYDRAULIC_ANALYSIS.txt
7/1/2024 Calculations Under Full Flow

	Upp Str	Low Str	PL	S	Upp FL LN	Low FL LN	PS	Upp ST EL	Depth HY GR	Upp HY EL	Low HY EL	Hydr Grade	FR Head	VEL	VEL Head	Junc Loss	Turn Loss	Curve Loss	STR Grade	Inl Cap	DR Area	P.I.	Q	TQ	Pipe Cap	Remarks
1	AI121	AI120	147	18	447.41	447.12	0.20	452.37	3.53	448.84	448.62	0.00110	0.16	1.94	0.06	0.06	0.00	0.00					3.43	3.43	4.70	
2	AI120	AI119	145	21	446.92	446.63	0.20	452.22	3.67	448.55	448.38	0.00120	0.17	2.28	0.08	0.00	0.00	0.00					2.05	5.48	7.09	
3	AI119	CI118	124	21	446.43	446.18	0.20	452.39	4.24	448.15	447.93	0.00180	0.22	2.78	0.12	0.00	0.00	0.00					1.21	6.69	7.09	
4	CI118	CI117	242	24	445.98	445.50	0.20	451.68	3.94	447.74	447.50	0.00100	0.24	2.32	0.08	0.00	0.00	0.00					0.60	7.29	10.12	
5	CI117	FE116	63	24	445.30	445.17	0.21	450.00	2.68	447.32	447.17	0.00140	0.09	2.74	0.12	0.00	0.06	0.00					1.31	8.60	10.37	HW=447.17 (ITP)
6	CI109	CI108	129	15	445.04	444.78	0.20	449.50	2.78	446.72	446.59	0.00080	0.10	1.47	0.03	0.03	0.00	0.00					1.80	1.80	2.89	
7	CI108	CI107	187	18	444.58	444.21	0.20	450.69	4.10	446.59	446.44	0.00080	0.15	1.71	0.05	0.00	0.00	0.00					1.23	3.03	4.70	
8	CI107	CI106	187	18	444.04	443.64	0.21	450.69	4.25	446.44	446.01	0.00220	0.41	2.79	0.12	0.00	0.02	0.00					1.90	4.93	4.81	
9	CI106	CI105	81	21	443.44	443.28	0.20	450.69	4.68	446.01	445.89	0.00150	0.12	2.57	0.10	0.00	0.00	0.00					1.25	6.18	7.09	
10	CI105	CI104	39	21	443.08	443.00	0.21	450.15	4.26	445.89	445.82	0.00170	0.07	2.75	0.12	0.00	0.00	0.00					0.44	6.62	7.26	
11	CI104	GI103	187	24	442.80	442.43	0.20	447.81	1.99	445.82	445.60	0.00120	0.22	2.50	0.10	0.00	0.00	0.00					1.23	7.85	10.12	
12	GI103	GI102	134	24	442.23	441.96	0.20	451.80	6.20	445.60	445.29	0.00180	0.24	3.07	0.15	0.00	0.07	0.00					1.79	9.64	10.12	
13	GI102	CI101	136	24	441.76	441.49	0.20	452.23	6.94	445.29	444.97	0.00220	0.30	3.37	0.18	0.00	0.02	0.00					0.94	10.58	10.12	
14	CI101	FE100	63	27	441.29	441.16	0.21	451.09	6.12	444.97	444.89	0.00130	0.08	2.83	0.12	0.00	0.00	0.00					0.69	11.27	14.19	HW=444.89 Emergency Storm
15	CI115	FE114	35	12	444.11	443.89	0.63	450.00	4.96	445.04	444.89	0.00230	0.08	2.19	0.07	0.07	0.00	0.00					1.72	1.72	2.83	HW= 444.89 ITP/Emergency
16	CI113	FE112	35	12	443.87	443.42	1.29	450.00	4.80	445.20	444.89	0.00460	0.16	3.07	0.15	0.15	0.00	0.00					2.41	2.41	4.05	HW=444.89 Emergency Storm
17	CI111	FE110	40	12	442.56	442.11	1.13	449.92	4.62	445.30	444.89	0.00570	0.23	3.41	0.18	0.18	0.00	0.00					2.68	2.68	3.79	HW=444.89 Emergency Storm

CALL BEFORE YOU DIG! 1-800-DIG-RITE

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

STORM SEWER AND WATER LINE PROFILES

STATE OF MISSOURI
CLIFFORD L. HEITMANN NUMBER E-29617
REGISTERED PROFESSIONAL ENGINEER
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617
ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI
ORCHARD FARM SCHOOL DISTRICT

PROJECT MANAGER:
EDIT PER PROJECT

CONSULTING ENGINEERS:
CIVIL / SURVEY
STRUCTURAL / ELEC
MECH / PLUMB
ASSOC. ENGINEERING
MCCLURE ENGINEERING
DENNIS G. LOPEZ, PE

HOENER ASSOCIATES, INC. – ARCHITECTS
6707 PLANTATION AVE.
ST. LOUIS, MISSOURI 63109
OFFICE: 314.781.9855
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PROJ. NO. 23-09B

DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

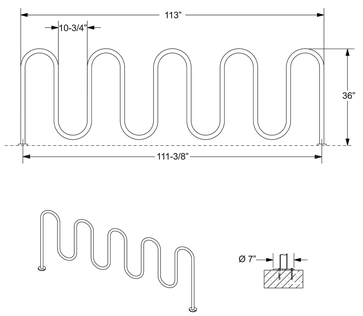
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Naperville, IL 60563
Phone: (800) 323-5664
Fax: (630) 897-0573
sales@belson.com

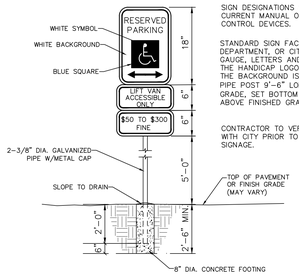
Model #WP36-11-SF-P — **Dimension Sheet**

WINDER PLUS 11 BIKE RACK



www.belson.com

BIKE RACK DETAIL
PROVIDE 2



SIGN DESIGNATIONS ARE FROM THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

STANDARD SIGN FACE, STANDARD HIGHWAY DEPARTMENT, OR CITY STREET DEPARTMENT GAUGE, LETTERS AND BORDERS ARE GREEN, THE HANDICAP LOGO SQUARE IS BLUE AND THE BACKGROUND IS WHITE, GALVANIZED PIPE POST 9'-6" LONG, SET 2'-0" INTO GRADE, SET BOTTOM OF "FINE" SIGN 5'-6" ABOVE FINISHED GRADE.

CONTRACTOR TO VERIFY ALL SIGNAGE WITH CITY PRIOR TO ORDERING ALL SIGNAGE.

SIGN TO BE CENTERED ON THE SPACE
ACCESSIBLE VAN PARKING SIGN
NOT TO SCALE

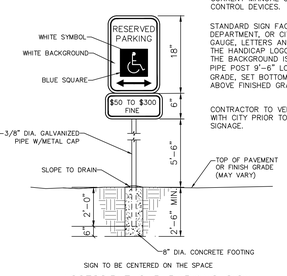


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STANDARD SIGN FACE, STANDARD HIGHWAY DEPARTMENT, OR CITY STREET DEPARTMENT GAUGE, LETTERS AND BORDERS ARE GREEN, THE HANDICAP LOGO SQUARE IS BLUE AND THE BACKGROUND IS WHITE.

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SIGN TO BE CENTERED ON THE SPACE
ACCESSIBLE VAN PARKING SIGN
NOT TO SCALE

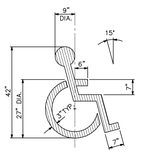


SIGN DESIGNATIONS ARE FROM THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

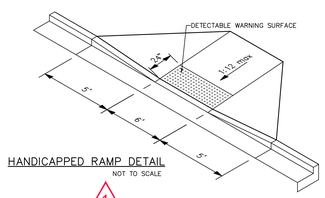
STANDARD SIGN FACE, STANDARD HIGHWAY DEPARTMENT, OR CITY STREET DEPARTMENT GAUGE, LETTERS AND BORDERS ARE GREEN, THE HANDICAP LOGO SQUARE IS BLUE AND THE BACKGROUND IS WHITE, GALVANIZED PIPE POST 9'-6" LONG, SET 2'-0" INTO GRADE, SET BOTTOM OF "FINE" SIGN 5'-6" ABOVE FINISHED GRADE.

CONTRACTOR TO VERIFY ALL SIGNAGE WITH CITY PRIOR TO ORDERING ALL SIGNAGE.

SIGN TO BE CENTERED ON THE SPACE
ACCESSIBLE CAR PARKING SIGN
NOT TO SCALE

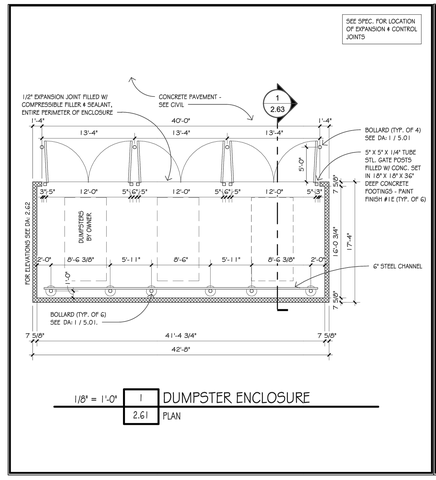


PAINTED HANDICAPPED
PARKING SYMBOL
NOT TO SCALE

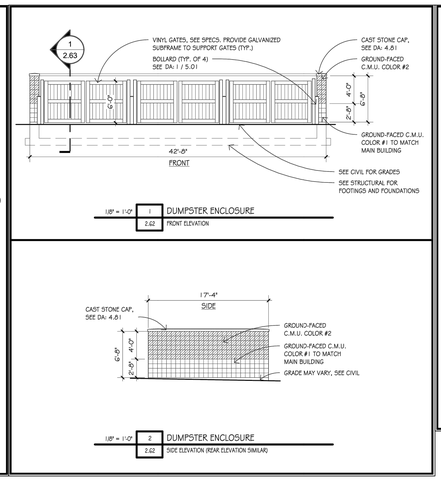


HANDICAPPED RAMP DETAIL
NOT TO SCALE

1

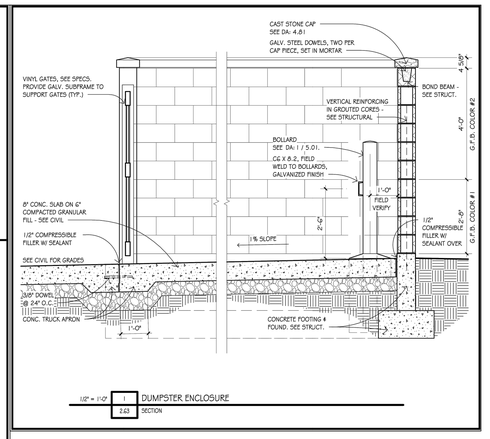


1/8" = 1'-0" | 1 | 2.61 — DUMPSTER ENCLOSURE
PLAN

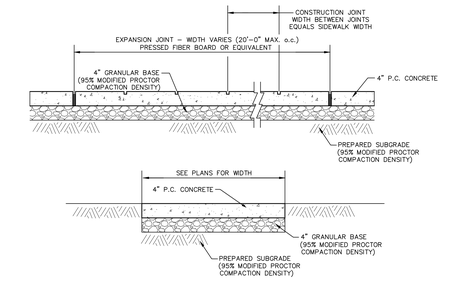


1/8" = 1'-0" | 1 | 2.62 — DUMPSTER ENCLOSURE
FRONT ELEVATION

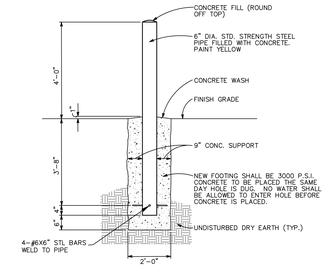
1/8" = 1'-0" | 2 | 2.62 — DUMPSTER ENCLOSURE
SIDE ELEVATION (REAR ELEVATION SIMILAR)



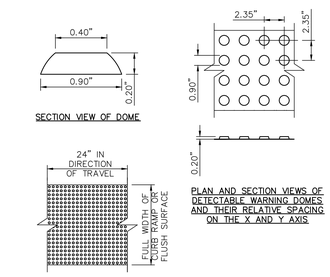
1/2" = 1'-0" | 1 | 2.63 — DUMPSTER ENCLOSURE
SECTION



CONCRETE SIDEWALK WITH BASE DETAIL
NOT TO SCALE



PIPE BOLLARD DETAIL
NOT TO SCALE

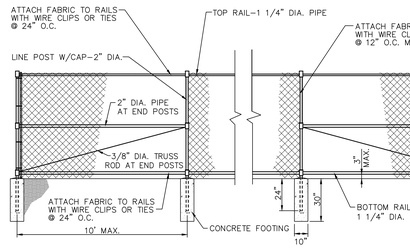


SECTION VIEW OF DOME

PLAN AND SECTION VIEWS OF DETECTABLE WARNING DOMES AND THEIR RELATIVE SPACING ON THE X AND Y AXIS

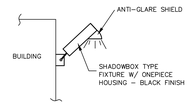
PLAN VIEW OF A DETECTABLE WARNING SURFACE SHOWING DOMES ALIGNED IN ROWS, NOT SKEWED DIAGONALLY.

TYPICAL DETAIL OF DETECTABLE WARNING SURFACE
NOT TO SCALE

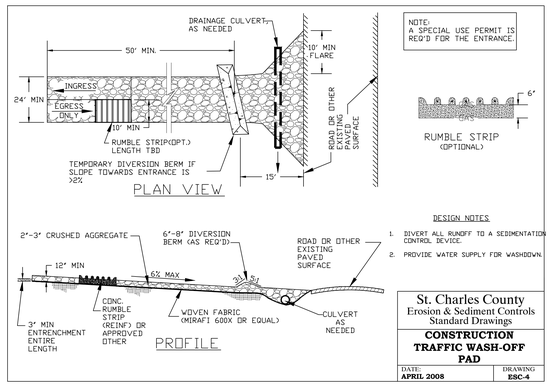


48" HEIGHT CHAIN LINK FENCE ELEVATION
AT SOFT PLAY/HARD PLAY AREAS
NOT TO SCALE

ALL FENCE MATERIALS AND HARDWARE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS. FENCE TO BE GALVANIZED AND SHALL BE BLACK IN COLOR.

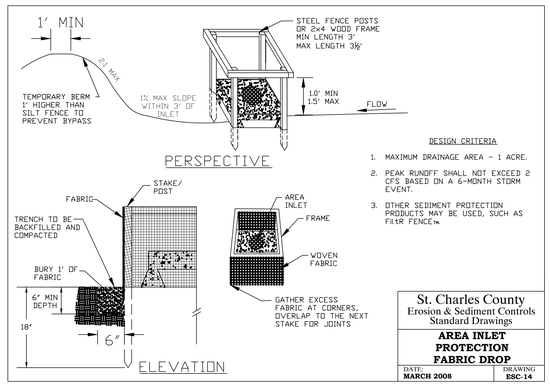


BUILDING MOUNTED LIGHT
NOT TO SCALE



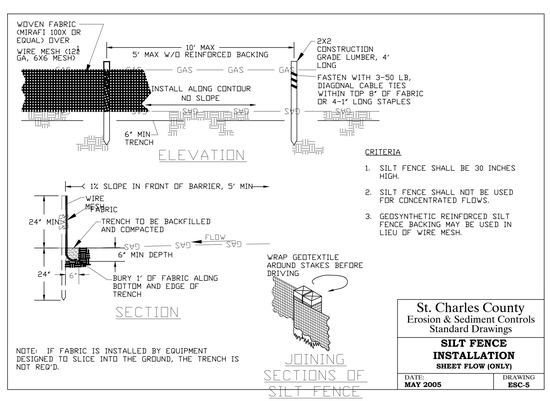
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Erosion & Sediment Controls
Standard Drawings
CONSTRUCTION TRAFFIC WASH-OFF PAD

DATE:	DRAWING
APRIL 2008	ESC-4



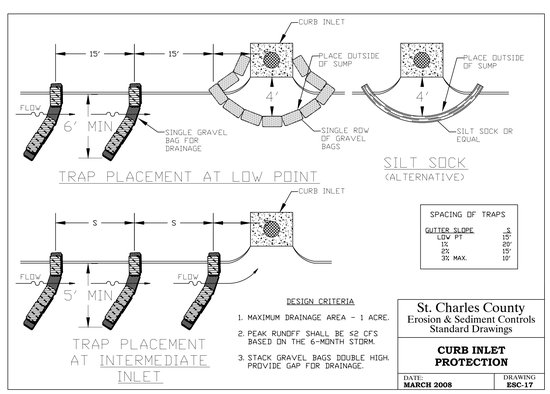
St. Charles County
Erosion & Sediment Controls
Standard Drawings
AREA INLET PROTECTION FABRIC DROP

DATE:	DRAWING
MARCH 2008	ESC-14



St. Charles County
Erosion & Sediment Controls
Standard Drawings
SILT FENCE INSTALLATION
SHEET FLOW (ONLY)

DATE:	DRAWING
MAY 2005	ESC-5



St. Charles County
Erosion & Sediment Controls
Standard Drawings
CURB INLET PROTECTION

DATE:	DRAWING
MARCH 2008	ESC-17

STATE OF MISSOURI
CLIFFORD L. HEITMANN
NUMBER E-29617
REGISTERED PROFESSIONAL ENGINEER
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617
ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B
ST. CHARLES, MISSOURI

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MECH. / ELEC
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CONSULTING ENGINEERS:
GC
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ORCHARD FARM SCHOOL DISTRICT

ARCHITECTS
HOENER ASSOCIATES, INC. –
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MEASURE ENGINEERING
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ST. LOUIS, MISSOURI 63109
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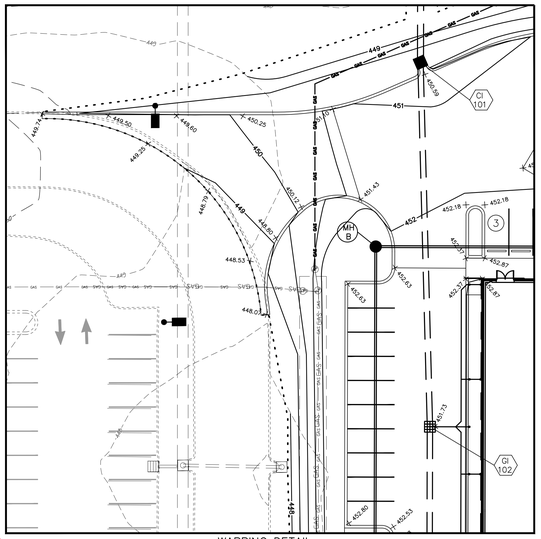
DATE ISSUED
7-2-24

DATE REVISED
1 7-23-24 ADDENDUM 1

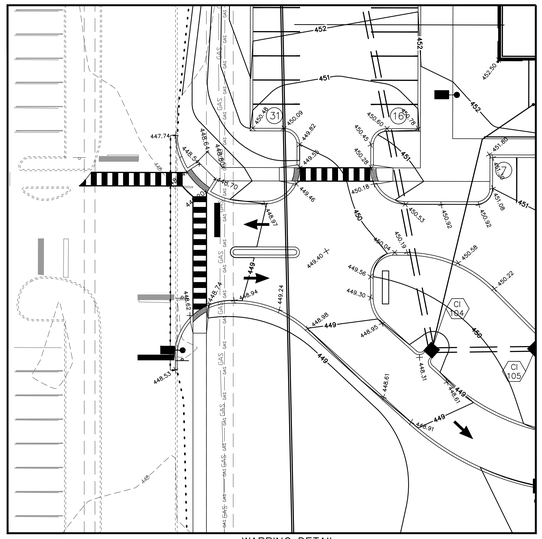
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C8.10
SD-36

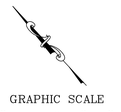
DETAILS

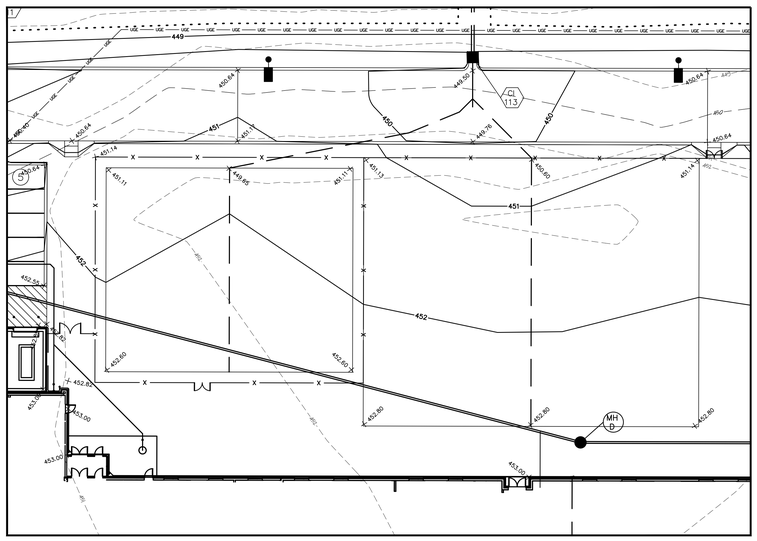


WARPING DETAIL

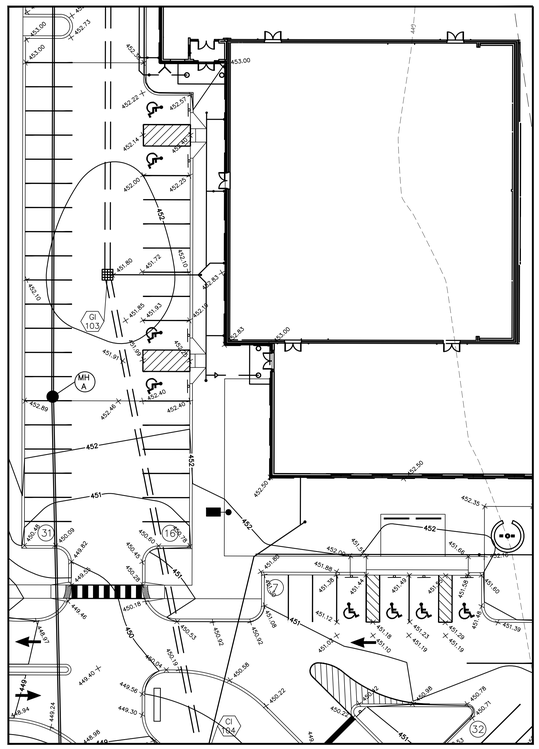


WARPING DETAIL





FENCE AT PLAY AREA BID ALT#1



ADA DETAIL

STATE OF MISSOURI
CLIFFORD L. HEITMANN NUMBER E-29617
REGISTERED PROFESSIONAL ENGINEER
7-23-24

CLIFFORD L. HEITMANN
LICENSE #E-29617

ENGINEERING CORP. NO. 000655

NEW ELEMENTARY SCHOOL - 2525 HWY B

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ORCHARD FARM SCHOOL DISTRICT

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XXX

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1 7-23-24 ADDENDUM 1

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