

**ADDENDUM
NO. 01**

July 31, 2024

Renovation of Fall Creek Intermediate School
12011 Olio Road
Fishers, IN 46038

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated July 12, 2024, by krM Architecture. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 1-1 through ADD 1-3 and attached krM Architecture Addendum No. 1 dated July 29, 2024, consisting of two pages of Civil and Architectural narrative and four pages of MEP narrative, new Specification Section 26 09 43.23 Relay Based Lighting Controls, and 73 Drawing Sheets.

A. SECTION 00 02 00 – NOTICE TO PRE-QUALIFIED BIDDERS

1. Replace specification section with updated version included as part of this Addendum.

B. SECTION 01 12 00 – MULTIPLE CONTRACT SUMMARY

3.03 BID CATEGORIES

A. BID CATEGORY NO. 1 – GENERAL TRADES

Revise the following clarifications to read as follows:

22. All Work related to temporary classrooms must start immediately following receipt of Notice to Proceed. Work must be complete by October 16, 2024.

Add the following clarifications:

28. Contractor is responsible for ¾” plywood protection at gymnasium prior to carpet installation for temporary classrooms.
29. Contractor is responsible for refinishing of the gymnasium wood flooring.

C. BID CATEGORY NO. 3 – METAL STUDS AND DRYWALL

Revise the following clarifications to read as follows:

7. All Work related to temporary classrooms must start immediately following receipt of Notice to Proceed. Work must be complete by October 16, 2024.

Add the following clarifications:

28. Contractor is responsible for ¾” plywood protection at gymnasium prior to carpet installation for temporary classrooms.
29. Contractor is responsible for refinishing of the gymnasium wood flooring.

E. BID CATEGORY NO. 5 – FLOORING

Add the following clarifications:

2. Contractor is responsible to install Owner provided carpet tile for temporary classrooms.
3. All Work related to temporary classrooms must start immediately following receipt of Notice to Proceed. Work must be complete by October 16, 2024.

J. BID CATEGORY NO. 10 – PLUMBING & HVAC

Revise the following clarifications to read as follows:

10. All Work related to temporary classrooms must start immediately following receipt of Notice to Proceed. Work must be complete by October 16, 2024.

Add the following clarifications:

28. Contractor is responsible for ¾” plywood protection at gymnasium prior to carpet installation for temporary classrooms.
29. Contractor is responsible for refinishing of the gymnasium wood flooring as noted in drawings. Specification forthcoming via future Addendum.

K. BID CATEGORY NO. 11 – ELECTRICAL

Add the following specification sections:

Section 26 09 43.23 – Relay Based Lighting Controls

Revise the following clarifications to read as follows:

6. All Work related to temporary classrooms must start immediately following receipt of Notice to Proceed. Work must be completed by October 16, 2024.

C. **SECTION 01 32 00 – SCHEDULES AND REPORTS**

1. Guideline Schedule is included as part of this Addendum.
2. Interior Logistics Plan is included as part of this Addendum.

D. **SECTION 01 55 00 – ACCESS ROADS AND PARKING AREAS**

1. Exterior Logistics Plan is included as part of this Addendum.

SECTION 00 02 00 - NOTICE TO PRE-QUALIFIED BIDDERS

NOTICE TO PRE-QUALIFIED TIER 1 BIDDERS

Notice is hereby given that sealed bids will be received for a Public CMc Project under IC 5-32:

By: The Skillman Corporation, Construction Manager

For: Renovation of Fall Creek Intermediate School

At: August 22, 2024
Hamilton Southeastern Schools, Owner
13485 Cumberland Road
Fishers, In 46038

Until: 10:00 AM (local time) Via: eBid.

Bid Opening: Bids will be publicly opened and read aloud at 10:15 AM (local time) at Hamilton Southeastern Schools, 13485 Cumberland Road, Fishers, In 46038.

All work for the complete construction of the Project will be under one or more sub-contracts with the Construction Manager based on bids received from pre-qualified tier 1 bidders and on combinations awarded. Award of contracts will be in accordance with Indiana Public Bidding Laws. The Construction Manager will not self-perform any of the work on this project.

Construction shall be in full accordance with the Bidding Documents which are on file with the Owner and Construction Manager and may be examined by prospective bidders at the following locations:

Office of the Construction Manager
The Skillman Corporation
3834 S. Emerson Avenue, Building A
Indianapolis, IN 46203

The Skillman Plan Room
www.skillmanplanroom.com

Pre-Qualified Bidders, sub-subcontractors and material suppliers must place an order on www.skillmanplanroom.com to be able to download documents electronically or request printed documents. There is no cost for downloading the bidding documents. Bidders desiring printed documents shall pay for the cost of printing, shipping and handling. Reprographic Services are provided by:

Eastern Engineering 9901 Allisonville Road, Fishers, IN 46038, Phone 317-598-0661.

A Pre-Bid Conference will be held on August 1, 2024, 1:00PM (local time), Check in will be required after entering building. Attendance by bidders is optional, but recommended, to clarify or answer questions concerning the Drawings and Project Manual for the Project.

Microsoft Teams [Need help?](#)

[Join the meeting now](#)

Meeting ID: 267 803 860 953

Passcode: MvFN5T

Dial in by phone

[+1 317-762-3960,,42730108#](#) United States, Indianapolis

[Find a local number](#)

Phone conference ID: 427 301 08#

The following bid categories are under consideration for this project:

- | | |
|--|---------------------------------|
| 1 – General Trades | 7 – Casework |
| 2 – Masonry | 8 – Food Service |
| 3 – Metal Studs & Drywall | 9 – Fire Protection |
| 4 – Aluminum Storefront & Glazing | 10 – Plumbing & HVAC |
| 5 – Flooring | 11 - Electrical |
| 6 - Painting | |

Bid security in the amount of ten percent (10%) of the Bid must accompany each Bid in accordance with the Instructions to Bidders.

The Owner and CMc reserve the right, in their sole discretion unless otherwise prohibited by law, to (i) waive any informalities and irregularities in bids received; (ii) reject any or all bids for a particular bid package; and (iii) award subcontracts to the lowest responsive and responsible bidder, provided that the bid has been submitted in accordance with the requirements of the bidding documents.

Unless otherwise prohibited by law, the Owner and CMc shall have the right to accept alternates in any order or combination, unless otherwise specifically provided in the bidding documents, and to determine the lowest responsive and responsible bidder on the basis of the sum of the base bid and alternates accepted.

The successful Bidders will be required to furnish Dual Oblige Performance and Payment Bonds for one hundred percent (100%) of their Contract amount prior to execution of Contracts.

Subcontractors submitting bids for the performance of Work as specified in this building Project should make such Bids to **The Skillman Corporation**. Contractors shall enter into a sub-contract with The Skillman Corporation as the Construction Manager CMc for the Owner.

The Owner and the Construction Manager reserve their rights to accept or reject any Bid (or combination of Bids) and to waive any irregularities in bidding. All Bids may be held for a period not to exceed **60** days before awarding contracts.

THE SKILLMAN CORPORATION
END OF SECTION 00 02 00

Notice to Sub-Contractors - Pre-Qualification

Date: July 22, 2024

Re: **Renovation of Fall Creek Intermediate
12011 Olio Road
Fishers, IN 46038**

The Skillman Corporation Project No. 223730

All first tier subcontractors wishing to bid and contract for this project must be prequalified in order to participate in the bidding process and to be considered for an award of contract. The prequalification process will be administered by the Owner's Construction Manager as Constructor (CMc), The Skillman Corporation. The following are the Bid Categories under consideration for this project.

1 – General Trades

2 – Masonry

3 – Metal Studs & Drywall

4 – Aluminum Storefront & Glazing

5 – Flooring

6 - Painting

7 – Casework

8 – Food Service

9 – Fire Protection

10 – Plumbing & HVAC

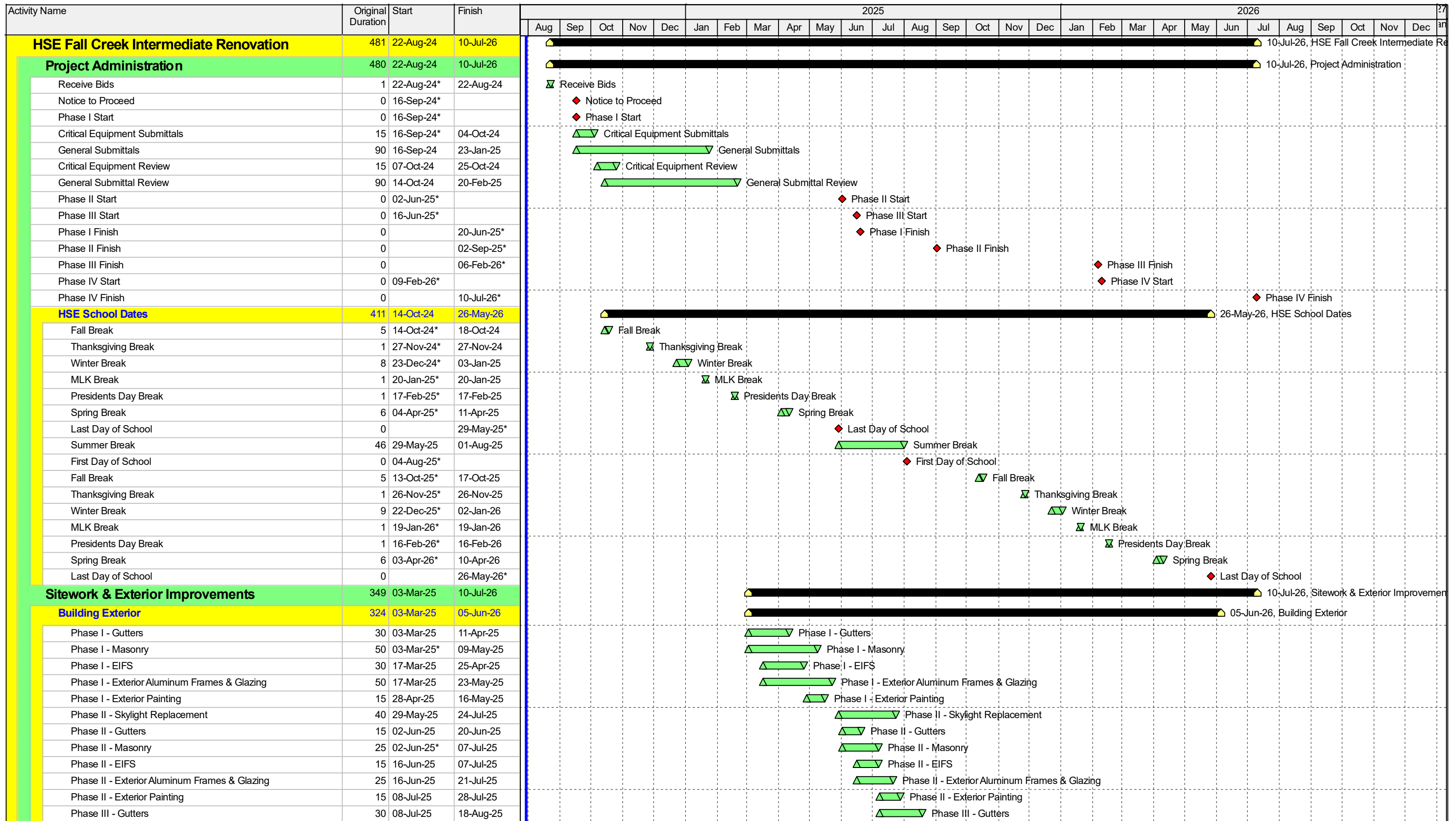
11 - Electrical

In order to prequalify, first tier subcontractors must submit their completed Prequalification Form conforming to the requirements set forth below no later than August 15, 2024. The CMc reserves the right to extend this deadline in its sole discretion. The Prequalification Form is available for pick up by interested first tier subcontractors at The Skillman Corporation's Office. Prequalification Form will also be available via email, requests shall be sent to Andrew Huehls at ahuehls@skillman.com. Bid documents will be available on or after July 25, 2024.

Prequalification requirements set forth by the CMc and Hamilton Southeastern School Corporation are as follows:

- Performance & Payment Bond from company with a rating of A+ VII, A VII or A- VII by A. M. Best and lawfully authorized to do business in the jurisdiction in which the Project is located.
- Must be able to obtain Insurance in the amount of \$3 Million Commercial General Liability; \$3 Million Aggregate; \$5 Million Umbrella from company with a rating of A+ VII, A VII or A- VII by A. M. Best and lawfully authorized to do business in the jurisdiction in which the Project is located.
- Provide an arbitration and litigation history on all construction contracts in the last 10 years.
- Provide record of safety history to include EMR, DART, TRIR and history of OSHA violations.
- Provide history of contracting with or hiring minority, women, and veteran business enterprises on prior projects and include date of projects.
- Sub-contractors must commit and be able to comply with applicable laws including but not limited to the requirements detailed in the bidding documents and found in applicable public works and contract statutes.
- First tier subcontractors may be found to be unqualified for this project if the CMc, Architect, or Owner determines that: (i) the above requirements have not been satisfied, (ii) a history of non-compliance by the first tier subcontractor that has negatively impacted the schedule, budget, safety or quality of a project, (iii) if the first tier subcontractor's experience on comparable projects is insufficient, or (iv) the first tier subcontractor's available manpower is insufficient based on its current workload.

Hamilton Southeastern Schools



- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary

HSE Fall Creek Intermediate Renovation

Guideline Schedule

Page 1 of 5



Activity Name	Original Duration	Start	Finish	2025												2026													
				Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Technology & Furniture	10	19-Aug-25	02-Sep-25																										
Owner Move-In & Occupancy	0		02-Sep-25*																										
Phase III	165	16-Jun-25	06-Feb-26																										
Mobilization	0	16-Jun-25*																											
Selective Demolition	30	16-Jun-25	28-Jul-25																										
Temporary Heat or HVAC Available	150	16-Jun-25	16-Jan-26																										
Classroom Masonry Wall Topout	40	23-Jun-25	18-Aug-25																										
Slab on Grade Demolition	15	30-Jun-25	21-Jul-25																										
Seal Air Leakage	30	30-Jun-25	11-Aug-25																										
Underground MEP Rough-In	15	08-Jul-25	28-Jul-25																										
Metal Stud Framing	20	15-Jul-25	11-Aug-25																										
Concrete Slab on Grade Infill	10	29-Jul-25	11-Aug-25																										
Overhead MEP Rough-In	50	29-Jul-25	07-Oct-25																										
Hang & Finish Drywall	30	05-Aug-25	16-Sep-25																										
Existing Wall Patching (Masonry / Drywall)	35	05-Aug-25	23-Sep-25																										
Interior Aluminum Frames & Glazing	20	26-Aug-25	23-Sep-25																										
In-Wall MEP Rough-In	25	17-Sep-25	21-Oct-25																										
Restroom Masonry Walls	30	17-Sep-25	28-Oct-25																										
First Coat Paint	15	24-Sep-25	14-Oct-25																										
Door Frames	25	24-Sep-25	28-Oct-25																										
Mezzanine MEP Rough-In	40	08-Oct-25	04-Dec-25																										
Ceiling Grid & Borders	20	15-Oct-25	11-Nov-25																										
MEP Finishes	20	22-Oct-25	18-Nov-25																										
Wall Tiling	20	29-Oct-25	25-Nov-25																										
Lighting	20	29-Oct-25	25-Nov-25																										
Ceiling Pads	10	12-Nov-25	25-Nov-25																										
Casework	30	12-Nov-25	26-Dec-25																										
Div 10 & 11 Specialties & Equipment	30	12-Nov-25	26-Dec-25																										
Resinous Flooring	15	26-Nov-25	18-Dec-25																										
Wall Coverings, Acoustics & Protection	15	26-Nov-25	18-Dec-25																										
Set AHU	5	05-Dec-25	11-Dec-25																										
AHU Final MEP Connections	10	12-Dec-25	26-Dec-25																										
Soft Good Flooring	30	12-Dec-25	23-Jan-26																										
Restroom Partitions & Fixtures	15	19-Dec-25	09-Jan-26																										
Commissioning & TAB	15	29-Dec-25	16-Jan-26																										
Final Painting	20	29-Dec-25	23-Jan-26																										
Door Slabs & Hardware	15	19-Jan-26	06-Feb-26																										
Phase I Punchlist	15	19-Jan-26	06-Feb-26																										
Technology & Furniture	10	26-Jan-26	06-Feb-26																										
Owner Move-In & Occupancy	0		06-Feb-26*																										
Phase IV	110	09-Feb-26	10-Jul-26																										
Mobilization	0	09-Feb-26*																											
MEP Demolition	10	09-Feb-26	20-Feb-26																										
Structural Demolition & Shoring	10	09-Feb-26	20-Feb-26																										
Selective Demolition	15	09-Feb-26	27-Feb-26																										
Slab on Grade Demolition	20	09-Feb-26	06-Mar-26																										
Temporary Heat or HVAC Available	97	09-Feb-26	23-Jun-26																										
Underground MEP Rough-In	15	11-Feb-26	03-Mar-26																										

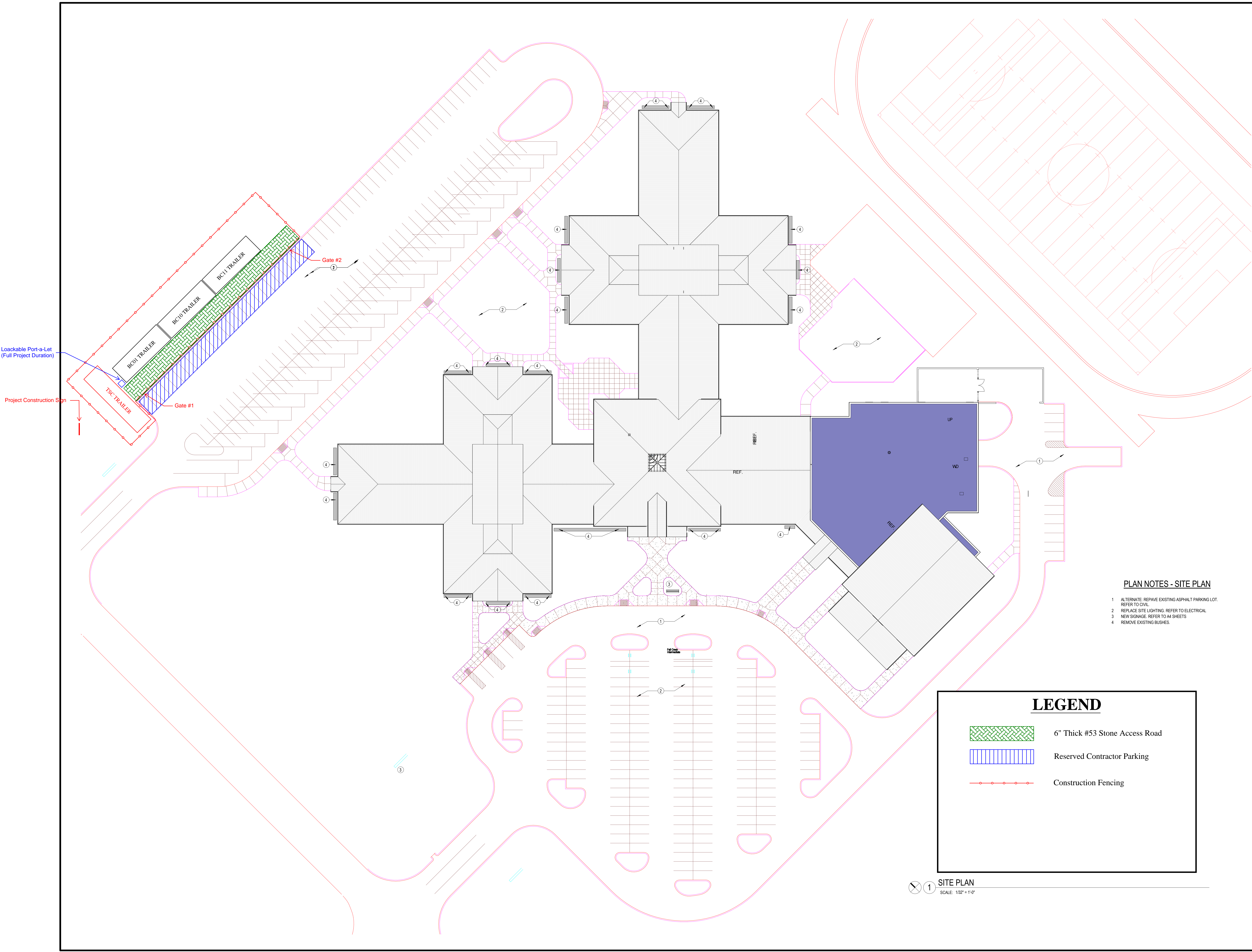
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary

HSE Fall Creek Intermediate Renovation

Guideline Schedule

Page 4 of 5





PLAN NOTES - SITE PLAN


- 1 ALTERNATE: REPAVE EXISTING ASPHALT PARKING LOT. REFER TO CIVIL.
- 2 REPLACE SITE LIGHTING. REFER TO ELECTRICAL.
- 3 NEW SIGNAGE. REFER TO A4 SHEETS.
- 4 REMOVE EXISTING BUSHES.

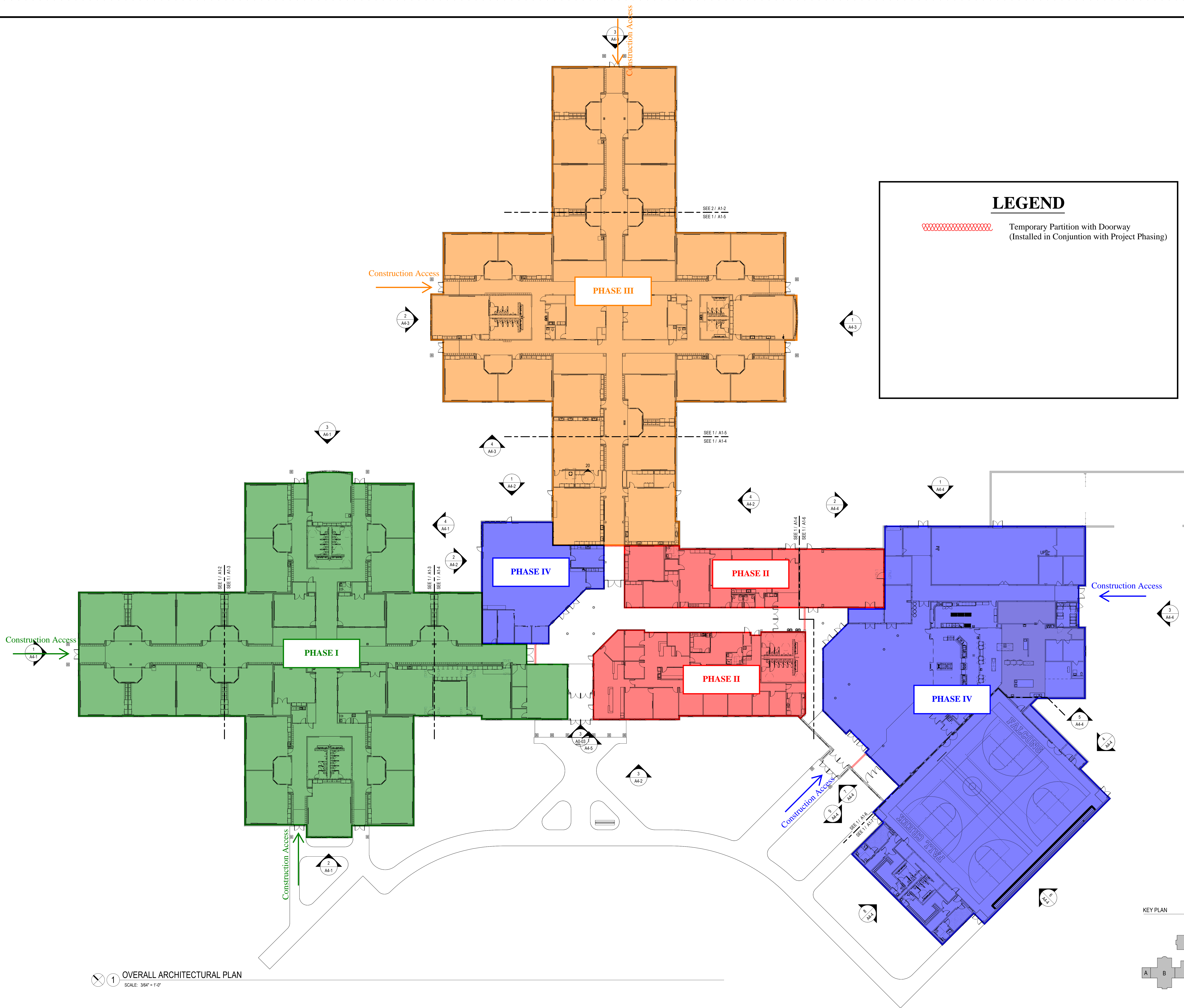
LEGEND

	6" Thick #53 Stone Access Road
	Reserved Contractor Parking
	Construction Fencing

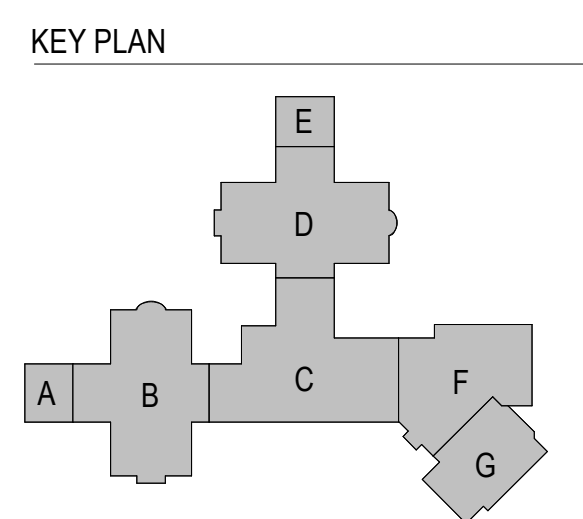
1 SITE PLAN
SCALE: 1/32" = 1'-0"

LEGEND

 Temporary Partition with Doorway
(Installed in Conjunction with Project Phasing)



1 OVERALL ARCHITECTURAL PLAN
SCALE: 3/8" = 1'-0"





**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Date: July 29, 2024
Project: Fall Creek Intermediate School
Project #: 23055
Pages: 1 of 2 pages
Bid Dates: Thursday, August 22, 2024, at 10:00AM

General Note:

The original Specifications and Drawings dated July 12, 2024, for the project referenced above are amended as noted in this Addendum No. 1. Receipt of this Addendum and any subsequent Addenda must be acknowledged on the Bid Form. Items changed or added by this addendum are to take precedence over the items or descriptions of the work in the project manual and the drawings. Items not mentioned in this addendum are to remain as described in the original plans and specifications.

Specifications Items:

Section 09 51 00 – Acoustic Ceilings

Reference 2.02 SUSPENSION SYSTEMS. Add the following:

C. Concealed Suspension System: Hot-dip galvanized steel grid and cap.

1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.

2. Products:

a. Armstrong World Industries, Inc; FrameAll Drywall Grid Solution: www.armstrongceilings.com/#sle.

Drawing Set Items:

Cover Sheet – Volume 1 & Volume 2

- Revise to include civil sheets and Fishers standard details

Sheet G0-4 Temporary Classroom Plan

- Add note to protect gymnasium floor with ¾" plywood prior to temporary carpet installation

Civil

- 11 sheets added to set. See attachments.

Fishers Standards

- 29 sheets added to set. See attachments.

Sheet A2-4 Reflected Ceiling Plan – Area D

- Adjust bulkhead ceiling height from 10'-0" to 9'-6"
- Add note number 27 to extend and match existing drywall reveals

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Historic Postal Building · 1020 Jackson Street · Anderson, IN 46016



**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Sheet A2-5 Reflected Ceiling Plan – Area F

- Add note number 26 for access panel location in wood ceiling

Sheet A6-2 Wall Sections & Details

- Add detail 4/A6-2

Sheet A8-2 Ext. Frame Elevations

- Revise detail 20/A8-2

Sheet A8-5 Int. Frame Details

- Add detail “Typ. VF-1 on Full Height Glass”

Attachments:

1. Volume 1 Cover Sheet
2. Volume 2 Cover Sheet
3. Sheet G0-4 Temporary Classroom Plan
4. Civil (C100, C101, C102, C201, C202, C301, C302, C401, C402, C403, C901)
5. Fishers Standards (1-29)
6. Sheet A2-4 Reflected Ceiling Plan – Area D
7. Sheet A2-5 Reflected Ceiling Plan – Area F
8. Sheet A6-2 Wall Sections & Details
9. Sheet A8-2 Ext. Frame Elevations
10. Sheet A8-5 Int. Frame Details

END



**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Date: July 29, 2024
Project: Fall Creek Intermediate Renovations
Project #: 23055
Pages: 1 of 4 pages
Bid Dates: **Thursday, August 22, 2024, at 10:00AM**

General Note:

The original Specifications and Drawings dated July 12th, 2024, for the project referenced above are amended as noted in this Addendum No. 1. Receipt of this Addendum and any subsequent Addenda must be acknowledged on the Bid Form. Items changed or added by this addendum are to take precedence over the items or descriptions of the work in the project manual and the drawings. Items not mentioned in this addendum are to remain as described in the original plans and specifications.

Specifications Items:

1. Specification Section 260943.23 – RELAY BASED LIGHTING CONTROLS
 - a. New section added to project.
 2. Specification Section 27 11 00 – COMMUNICATIONS EQUIPMENT ROOM FITTINGS
 - a. Added Paragraph 2.03 in its entirety.
-

Drawing Set Items:

Sheet M4-1 ENLARGED MECHANICAL PLANS

1. Added plan note #19.
2. Added low voltage controls transformer.

Sheet M4-2 ENLARGED MECHANICAL PLANS

1. Added plan note #19.
2. Added low voltage controls transformer.

Sheet M4-3 ENLARGED MECHANICAL PLANS

1. Added plan note #37, 38 & 39.
2. Added low voltage controls transformers.

Sheet M5-1 MECHANICAL DETAILS

1. Revised detail #6 – Chiller Piping Detail.



**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Sheet T4-1 TECHNOLOGY ENLARGED PLANS

1. Revised 4 post rack to be an equipment cabinet.
2. Revised equipment cabinet label.

Sheet T4-2 TECHNOLOGY ENLARGED PLANS

1. Revised 4 post rack to be an equipment cabinet.
2. Revised equipment cabinet label.
3. Revised 4 post rack to be an equipment cabinet.
4. Revised equipment cabinet label.

Sheet T5-4 TECHNOLOGY DETAILS

1. Added sound system cabinet elevation.
2. Revised cafeteria video equipment part number.

Sheet T5-5 TECHNOLOGY DETAILS

1. Revised gymnasium video equipment part number.

Sheet EP1-2

1. Revised circuit numbers for equipment shown.

Sheet EP1-3

1. Revised electrical power device layout in MDF and IDF data rooms.
2. Revised circuit numbers for equipment shown.

Sheet EP1-4

1. Revised circuit numbers for equipment shown.

Sheet EP1-5

1. Revised circuit numbers for equipment shown.

Sheet EP1-6

1. Revised electrical power device layout in the IDF room.
2. Revised circuit numbers for equipment shown.

Sheet E4-1

1. Added electrical connection for new mechanical equipment.



**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Sheet E4-2

1. Added electrical connection for new mechanical equipment.

Sheet E4-3

1. Added electrical connections for new mechanical equipment.
2. Revised circuit numbers for equipment shown.

Sheet E6-1

1. Revised electrical connection information in the Equipment Electrical Connections Schedule.

Sheet E6-2

1. Revised panel schedules for panels MDP and PDP.

Sheet E6-3

1. Revised panel schedules for panels 1CP and 1DC.

Sheet E6-4

1. Revised panel schedules for panels 2DP, 3CP, 2CP, 3BP, 2DC, and 2BP.

Sheet E6-5

1. Revised panel schedules for panels FP, CC, and 3DP.

Sheet E6-7

1. Revised panel schedules for panels T1LE.

Sheet E6-8

1. Revised panel schedules for panels M1LE and M1HE.

Sheet E9-3

1. Removed AHU-3 from New Electrical Riser Diagram - MDP. AHU-3 has been revised to be fed from panel M1HE.

Sheet E9-4

1. Revised riser diagram to include new UPS.
2. Revised name of panel C1LE to T1LE.



**Addendum #1
Hamilton Southeastern Schools
Fall Creek Intermediate Renovations**

Attachments:

1. M4-1
2. M4-2
3. M4-3
4. M5-1
5. T4-1
6. T4-2
7. T5-4
8. T5-5
9. EP1-2
10. EP1-3
11. EP1-4
12. EP1-5
13. EP1-6
14. E4-1
15. E4-2
16. E4-3
17. E6-1
18. E6-2
19. E6-3
20. E6-4
21. E6-5
22. E6-7
23. E6-8
24. E9-3
25. E9-4

END

SECTION 26 09 43.23
RELAY-BASED LIGHTING CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Lighting control relay panels.
 - 2. Manual switches and cover plates.
 - 3. Field-mounted signal sources.
 - 4. Conductors and cables.
- B. Related Requirements:
 - 1. Section 260010 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
 - 2. Section 260011 "Facility Performance Requirements for Electrical" for seismic-load, wind-load, acoustical, and other field conditions applicable to Work specified in this Section.

1.02 ACTION SUBMITTALS

- A. Product Data:
 - 1. For each type of product.
- B. Shop Drawings: For each relay panel and related equipment.
 - 1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
 - 2. Detail enclosure types and details for types other than Type 1.
 - 3. Detail wiring partition configuration, current, and voltage ratings.
 - 4. Short-circuit current rating of relays.
 - 5. Address Drawing: Reflected ceiling plan and floor plans, showing connected luminaires, address for each luminaire, and luminaire groups. Base plans on construction plans, using the same legend, symbols, and schedules.
 - 6. Point List and Data Bus Load: Summary list of all control devices, sensors, ballasts, and other loads. Include percentage of rated connected load and device addresses.
 - 7. Wire Termination Diagrams and Schedules: Coordinate nomenclature and presentation with Drawings and block diagram. Differentiate between manufacturer-installed and field-installed wiring.
 - 8. Block Diagram: Show interconnections between components specified in this Section and devices furnished with power distribution system components. Indicate data communication paths and identify networks, data buses, data gateways, concentrators, and other devices to be used. Describe characteristics of network and other data communication lines.
 - 9. Submit evidence that lighting controls are compatible with connected monitoring and control devices and systems specified.
 - a. Show interconnecting signal and control wiring, and interface devices that show compatibility of inputs and outputs.
 - b. For control interfaces and adapters, list network protocols and provide statements from manufacturers that input and output devices comply with interoperability requirements of the protocol.
- C. Field quality-control reports.

1.03 INFORMATIONAL SUBMITTALS

- A. Sample warranties.

1.04 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Lighting Control Relays: Equal to 80 percent of amount installed for each size indicated, but no fewer than 12.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Handle and prepare panels for installation in accordance with NECA 407.

1.06 WARRANTY

- A. Special Manufacturer Extended Warranty: Manufacturer warrants that components of standalone multi-preset modular dimming controls perform in accordance with specified requirements and agrees to provide repair or replacement of components that fail to perform as specified within extended warranty period.
 - 1. Initial Extended Warranty Period: Two year(s) from date of Substantial Completion, for labor, materials, and equipment.
 - 2. Follow-on Extended Warranty Period: Eight year(s) from date of Substantial Completion, for materials that failed because of transient voltage surges only, f.o.b. the nearest shipping point to Project site.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Sequence of Operations: Input signal from field-mounted manual switches, or digital signal sources, must open or close one or more lighting control relays in the lighting control panels. Any combination of inputs must be programmable to any number of control relays.
- B. Surge Protective Device: Factory installed as an integral part of control components or field-mounted surge suppressors complying with UL 1449, SPD Type 2.
- C. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70 by qualified electrical testing laboratory recognized by authorities having jurisdiction and marked for intended location and application.
- D. Comply with 47 CFR 15, Subparts A and B, for Class A digital devices.
- E. Comply with UL 916.

2.02 LIGHTING CONTROL RELAY PANELS

- A. Description: Standalone lighting control panel using mechanically latched relays to control lighting and appliances.
- B. Lighting Control Panel:
 - 1. A single enclosure with incoming lighting branch circuits, control circuits, switching relays, and on-board timing and control unit.
 - 2. A vertical barrier separating branch circuits from control wiring.
- C. Control Unit: Contain the power supply and electronic control for operating and monitoring individual relays.
 - 1. Timing Unit:
 - a. 365-day calendar, astronomical clock, and automatic adjustments for daylight savings and leap year.
 - b. Clock configurable for 12-hour (A.M./P.M.) or 24-hour format.
 - c. Four independent schedules, each having 24 time periods.
 - d. Schedule periods settable to the minute.
 - e. Day-of-week, day-of-month, day-of-year with one-time or repeating capability.
 - f. 10 special date periods.
 - 2. Sequencing Control with Override:
 - a. Automatic sequenced on and off switching of selected relays at times set at the timing unit, allowing timed overrides from external switches.
 - b. Sequencing control must operate relays one at a time, completing the operation of all connected relays in not more than 10 seconds.
 - c. Override control must allow any relay connected to it to be switched on or off by a field-deployed manual switch or by an automatic switch, such as an occupancy sensor.
 - d. Override control "blink warning" must warn occupants approximately five minutes before actuating the off sequence.
 - 3. Nonvolatile memory must retain all setup configurations. After a power failure, the controller must automatically reboot and return to normal system operation, including accurate time of day and date.
- D. Relays:
 - 1. Electrically operated, mechanically held single-pole switch, rated at 20 A at 277 V. Short-circuit current rating must be not less than 5 kA. Control must be three-wire, 24 V(ac).

- E. Power Supply: NFPA 70, Class 2, sized for connected equipment, plus 20 percent spare capacity. Powered from a dedicated branch circuit of the panelboard that supplies power to the line side of the relays, sized to provide control power for the local panel-mounted relays, bus system, control-voltage inputs, field-installed occupancy sensors, and photo sensors.
- F. Operator Interface:
 - 1. Integral alphanumeric keypad and digital display, and intuitive drop-down menus to assist in programming.
 - 2. Log and display relay on-time.
 - 3. Connect relays to one or more time and sequencing schemes.

2.03 MANUAL SWITCHES AND COVER PLATES

- A. Push-Button Switches: Modular, momentary contact, three wire, for operating one or more relays and to override automatic controls.
 - 1. Match color and style specified in Section 262726 "Wiring Devices."
 - 2. Integral green LED pilot light to indicate when circuit is on.
 - 3. Internal white LED locator light to illuminate when circuit is off.
- B. Cover Plates: Single and multigang cover plates as specified in Section 262726 "Wiring Devices."
- C. Legend: Engraved or permanently silk-screened on cover plate where indicated. Use designations indicated on Drawings.

2.04 FIELD-MOUNTED SIGNAL SOURCES

- A. Daylight Harvesting Switching Controls: Comply with Section 260923 "Lighting Control Devices." Control power may be taken from the lighting control panel, and signal must be compatible with the relays.
- B. Indoor Occupancy Sensors and Extreme-Temperature Occupancy Sensors: Comply with Section 260923 "Lighting Control Devices." Control power may be taken from the lighting control panel, and signal must be compatible with the relays.

2.05 CONDUCTORS AND CABLES

- A. Power Wiring to Supply Side of Class 2 Power Source: Not smaller than No. 12 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- B. Classes 2 and 3 Control Cables: Multiconductor cable with copper conductors not smaller than No. 18 AWG. Comply with requirements in Section 260523 "Control-Voltage Electrical Power Cables."
- C. Class 1 Control Cables: Multiconductor cable with copper conductors not smaller than No. 14 AWG. Comply with requirements in Section 260523 "Control-Voltage Electrical Power Cables."
- D. Twisted-Pair Data Cable: Category 6.
 - 1. Comply with requirements for twisted pair cabling in Section 260523 "Control-Voltage Electrical Power Cables."
 - 2. Comply with requirements in Section 271513 "Communications Copper Horizontal Cabling."

PART 3 EXECUTION

3.01 INSTALLATION OF WIRING

- A. Wiring Methods:
 - 1. Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters.
 - 2. Install cables in raceways and cable trays except within consoles, cabinets, desks, counters, accessible ceiling spaces, and gypsum board partitions where unenclosed wiring method may be used.
 - 3. Install conductors and cables concealed in accessible ceilings, walls, and floors where possible.
 - 4. Conceal raceway and cables except in unfinished spaces.
 - 5. Provide plenum-rated cable, where installed exposed or in open cable tray, within environmental airspaces, including plenum ceilings.
 - 6. Comply with requirements for cable trays specified in Section 260536 "Cable Trays for Electrical Systems."

7. Comply with requirements for raceways and boxes specified in Section 260533.13 "Conduits for Electrical Systems."

- B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.

3.02 INSTALLATION OF PANELS

- A. Install panels and accessories in accordance with NECA 407.
B. Comply with mounting and anchoring requirements specified in Section 260548.16 "Seismic Controls for Electrical Systems."
C. Mount top of trim 90 inch above finished floor unless otherwise indicated.
D. Mount panel cabinet plumb and rigid without distortion of box.
E. Install filler plates in unused spaces.

3.03 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
B. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Section 260553 "Identification for Electrical Systems."
C. Create a directory to indicate loads served by each relay; incorporate Owner's final room designations. Obtain approval before installing. Use a PC or typewriter to create directories; handwritten directories are unacceptable.
D. Lighting Control Panel Nameplates: Label each panel with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.04 FIELD QUALITY CONTROL

- A. Field tests must be witnessed by Tenant.
B. Tests and Inspections:
1. Perform each visual and mechanical inspection and electrical test for low-voltage air circuit breakers described below. Certify compliance with manufacturer's test parameters.
a. Circuit-Breaker Tests:
1) Compare nameplate with Drawings and Specifications.
2) Inspect physical and mechanical conditions.
3) Inspect anchorage and alignment.
4) Verify that the units are clean.
5) Operate the circuit breaker to ensure smooth operation.
6) Inspect bolted electrical connections for high resistance using one or more of the following methods:
a) A low-resistance ohmmeter.
b) Verify tightness of bolted electrical connections by calibrated torque wrench.
c) Thermographic survey.
7) Inspect operating mechanism, contacts, and arc chutes in unsealed units.
8) Perform adjustments for final protective device settings in accordance with the overcurrent protective device coordination study. Comply with requirements in Section 260573.16 "Coordination Studies."
9) Perform insulation resistance tests for one minute on each pole, phase-to-phase, and phase-to-ground with the circuit breaker closed and across each pole using manufacturer's published data.
10) Perform a contact/pole-resistance test.
11) Perform insulation-resistance tests on control wiring with respect to ground. Applied potential must be 500 V(dc) for 300 V rated cable and 1000 V(dc) for 600 V rated cable. Test duration must be for one minute. Follow manufacturer's instructions for solid-state units.
12) Determine long-time pickup and delay by primary current injection.
13) Determine short-time pickup and delay by primary current injection.
14) Determine ground-fault pickup and time delay by primary current injection.
15) Determine instantaneous pickup by primary current injection.
16) Test functions of the trip unit by means of secondary current injection.

- 17) Perform minimum pickup voltage tests on shunt trip and close coils in accordance with manufacturer's published data.
 - 18) Verify correct operation of auxiliary features such as trip and pickup indicators, zone interlocking, electrical close and trip operation, trip-free, anti-pump function, and trip unit battery condition. Reset trip logs and indicators.
 - 19) Verify operation of charging mechanism.
- b. Surge Arrestor Tests:
- 1) Compare nameplate with the Contract Documents.
 - 2) Inspect physical and mechanical conditions.
 - 3) Inspect anchorage, alignment, grounding, and clearances.
 - 4) Verify that the units are clean.
 - 5) Inspect bolted electrical connections for high resistance using one or more of the following methods:
 - a) Low-resistance ohmmeter.
 - b) Verify tightness of bolted electrical connections by calibrated torque wrench.
 - 6) Verify that the ground lead on each device is individually attached to a ground bus or ground electrode.
 - 7) Perform an insulation-resistance test on each arrestor, phase terminal-to-ground using voltage in accordance with manufacturer instructions.
 - 8) Comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems" for grounding tests.
- C. Nonconforming Work:
1. Lighting control panel will be considered defective if it does not pass tests and inspections.
 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- D. Prepare test and inspection reports, including a certified report that identifies lighting control panels and describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations made after remedial action.

3.05 SYSTEM STARTUP

- A. Engage a factory-authorized service representative to perform startup service.

3.06 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

3.07 MAINTENANCE

- A. Software and Firmware Service Agreement:
1. Technical Support: Beginning at Substantial Completion, verify that software and firmware service agreement includes software support for two years.
 2. Upgrade Service: At Substantial Completion, update software and firmware to latest version. Install and program software upgrades that become available within two years from date of Substantial Completion. Verify upgrading software includes operating system and new or revised licenses for using software.
 - a. Upgrade Notice: No fewer than 30 days to allow Owner to schedule and access the system and to upgrade computer equipment if necessary.
 3. Upgrade Reports: Prepare written report after each update, documenting upgrades installed.

END OF SECTION

**SECTION 27 11 00
COMMUNICATIONS EQUIPMENT ROOM FITTINGS**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes, but is not limited to:
 - 1. Equipment Cabinet
 - 2. Plywood Backboard
 - 3. Cable management
 - 4. Telecommunications room ladder trays
 - 5. Power strips
 - 6. Miscellaneous equipment and accessories
 - 7. Installation of all Communications Equipment Room Fittings
- B. Related sections include the following:
 - 1. Division 26 – Electrical
 - 2. Division 27 – Communications
 - 3. Division 28 – Electronic safety and security

1.02 DESCRIPTION OF WORK

- A. Contractor shall provide all labor, material, equipment, and accessories required for a complete installation of the Communications Equipment Room Fittings as indicated herein and on the drawings.
- B. Contractor shall be responsible for the coordination with the Electrical Contractor for all of the electrical power in the equipment room.

1.03 QUALITY ASSURANCE

- A. The Communications Equipment Room Fittings components and equipment shall be listed by Underwriters Laboratories, Inc., and the components shall bear the UL label.
- B. The Communications Equipment Room Fittings shall be installed in accordance with all requirements set by all applicable standards, codes, and regulations including but not limited to the standards referenced in Section 270500 – Common Work Results for Communications.
- C. All equipment and installation practices shall comply with the latest BICSI (TDMM) standards.
- D. Installer shall employ or have a contract with a Registered Communications Distribution Designer (RCDD) registered with the Building Industries Consulting Services International (BICSI).
- E. Installer must have personnel certified by BICSI on staff.
 - 1. Installation Supervision: Installation shall be under the direct supervision of ITS Technician
 - 2. Field Inspector: Currently registered by BICSI as an RCDD to perform the on-site inspection.

1.04 SUBMITTALS

- A. Refer to Section 270500 – Common Work Results for Communications for more information.
- B. The contractor must submit a labeling scheme to the Engineer for approval as part of the submittal documentation. The labeling scheme shall include the rack or equipment cabinet number identification. Labeling installed without the Engineers approval will be subject to removal.
- C. Provide equipment cabinet or rack layouts showing patch panels, wire managers, and open spaces for networking equipment as part of the submittals.
- D. Submittals shall be submitted in electronic format (PDF).

1.05 CLOSEOUT DOCUMENTATION

- A. Refer to Section 270500 – Common Work Results for Communications for more information.
- B. Closeout documentation shall be submitted in electronic format (PDF).

1.06 WARRANTY

- A. All components, parts, and assemblies of the Communications Equipment Room Fittings supplied by the installer shall be guaranteed against defects in materials and workmanship for a period of 5 years by the manufacturer and installer.

- B. Warranties shall include all labor, material, travel expenses, test equipment, equipment rental and any other expense required to troubleshoot, remove, repair or replace equipment or components to bring the system up to the original performance criteria and operation.
- C. Warranty services shall be provided by an installer certified by the equipment manufacturer during normal business hours.
- D. Provide warranty certificate as part of the closeout documentation.

1.07 TRAINING

- A. Refer to Section 270500 – Common Work Results for Communications for more information.
- B. Provide two (2) training hours for the Communications Equipment Room Fittings.

PART 2 PRODUCTS

2.01 NOT USED

2.02 4-POST COMMUNICATIONS RACK

- A. Each 4-post racks shall:
 - 1. Have frames manufactured of steel or aluminum.
 - 2. Have a black epoxy-polyester hybrid powder coat finish
 - 3. Be assembled with nut and bolt hardware
 - 4. Be rated for a maximum of 2,500 pounds of equipment
 - 5. Be UL listed
- B. Each 4-post rack frame will have:
 - 1. Two L-shaped top angles pre-punched for attaching cable runway with J-bolts
 - 2. Two L-shaped base angles pre-punched for attachment to the floor
 - 3. Four adjustable L-shaped equipment-mounting rails: a front pair and a rear pair
 - 4. Have four steel frame posts, the sides (webs) of which will be punched to allow:
 - a. Attachment of vertical cable managers along the sides of the frame
 - b. Frame-to-frame or frame-to-rack baying, including with a 2-post relay rack
- C. Equipment mounting rails will:
 - 1. Be L-shaped and free from the four posts
 - 2. Be adjustable front to back after the rack has been mounted to a floor
 - 3. Be punched on the front and rear flange with the universal hole pattern specified by EIA-310-D
 - 4. Have at least 45RU of useable interior height unless noted otherwise
 - 5. Have each mounting space marked and numbered on the mounting rail
 - 6. Have attachment points threaded with 12-24 roll-formed threads or square punched cage nuts
 - 7. Be spaced to allow attachment of 19-inch EIA rack-mount equipment
- D. Each 4-post rack frame will include:
 - 1. Assembly and equipment-mounting hardware that provides electrical continuity between components
 - 2. Twenty-five (25) combination pan head pilot point mounting screws or cage nuts (confirm with owner prior to ordering)
 - 3. At least fifty (50) spare screws
 - 4. One (1) horizontal power strip and one (1) vertical power strip
 - 5. One (1) vertical wire manager.
 - 6. The following miscellaneous accessories
 - a. One (1) adjustable vented shelf
 - b. One (1) light duty vented shelf
 - c. One (1) copper busbar grounding kit
- E. The assembled frame will measure 84 inches high, 23.3 inches wide, and 30 inches deep, with no more than 30 inches between the front and rear mounting surfaces of the two pairs of mounting rails unless noted otherwise.
- F. All racks shall be grounded per specification Section 270526 – Grounding and Bonding for Communications Systems, the TIA-607 standard, and per state and local codes. Provide a

grounding kit for each rack that includes a grounding busbar so that each cabinet is separately grounded. Daisy chaining the grounding for the racks will not be accepted.

G. Approved manufacturers:

1. Panduit – R4P
 - a. No approved equals

2.03 EQUIPMENT CABINET

1. Each equipment cabinet shall:
 - a. Be constructed with:
 - 1) Vertical posts and doors constructed of 16-gauge steel
 - 2) EIA adjustable mounting rails constructed of 14-gauge steel
 - 3) Side panels constructed of 20-gauge steel.
 - 4) A top constructed of 18-gauge steel
 - 5) At least 45RU of useable interior height unless noted otherwise
 - 6) Electrically-continuous inset frame
 - b. Be equipped with a single point bonding location at the top and bottom
 - c. Be UL listed
2. Each equipment cabinets shall include:
 - a. Integrated fan(s) capable of minimum of 450 CFM mounted in the top of each cabinet. Include both internal and external fan guards. Fan noise rating shall be less than 49dBA.
 - b. Side panels on each cabinet. If the cabinets are ganged together, interior side panels are not required. The color shall match the equipment cabinet.
 - c. Snap-in covers pre-installed in cable entry openings
 - d. Lockable plexiglass front and rear door. All cabinets should be keyed alike. The color shall match the equipment cabinet.
 - e. Cable organizers and front and rear cable management fingers
 - f. Twenty-five (25) combination pan head pilot point mounting screws or cage nuts (confirm with owner prior to ordering)
 - g. At least fifty (50) spare screws
 - h. One (1) horizontal power strip and one (1) vertical power strip
 - i. The following miscellaneous accessories
 - 1) One (1) adjustable vented shelf
 - 2) One (1) light duty vented shelf
 - 3) One (1) copper busbar grounding kit
3. All equipment cabinets shall be grounded and bonded per specification Section 270526 – Grounding and Bonding for Communications Systems, the TIA-607 standard, and per state and local codes. Provide a grounding kit for each cabinet that includes a grounding busbar so that each cabinet is separately grounded. Daisy chaining the grounding for the cabinets will not be accepted.
4. Enclosures shall have a 3,000 pound static load rating and 2,250 pound rolling load rating.
5. Approved manufacturers:
 - a. Hoffman ProLine S1 Cabinet – PS1C2188B (no approved equals)

2.04 NOT USED

2.05 NOT USED

2.06 PLYWOOD BACKBOARD

- A. Provide ¾" thick x 8'-0" high fire rated plywood backboard at locations indicated on the drawings.
- B. Install plywood backboard at 6" A.F.F..
- C. Plywood shall be painted white with two (2) coats of fire-retard paint and should be grade AC or better.

2.07 CABLE MANAGEMENT DEVICES

1. Provide vertical cable managers where indicated on the drawings.
2. The vertical cable manager will create a space for storing and organizing cables along the side of the rack or frame and will maintain separation between cordage and premise cables.

3. The vertical cable manager shall be manufactured of sheet steel, aluminum, or PVC and composite materials with an epoxy-polyester hybrid powder coat paint in a color that matches the rack or frame to which it is attached.
4. The vertical cable manager will be affixed to the side of racks or frames with manufacturer-supplied hardware.
5. All covers will be removable, hinged to open from the right or left side and will include a latch that will secure the cover in the closed position.
6. The vertical cable manager shall have a removable cover, hinged to open, that will snap on to secure the cover in the closed position.
7. The vertical cable manager will have cable openings along both sides of the trough.
 - a. These cable openings will be formed by evenly-spaced flag-up-shaped cable guides, made from a composite plastic material (non-metallic), that will have rounded edges to protect cables.
8. When the cable manager is attached to a rack or frame, each cable opening will align with an RU on the rail.
9. Each opening will pass a minimum of twenty-four (24) .25 inch OD patch cords.
10. The vertical cable manager will match the height of the racks or frames to which it is attached and will be of an appropriate size to accommodate the cabling. It shall be able to manage all the cables on the rack without the aid of horizontal cable managers and shall be:
 - a. 45RU high
 - b. 5.0 inches wide
 - c. 12 inches deep
- B. The initial quantity of cables in the cable manager will not exceed 40% of the interior area of the cable manager.
- C. A single vertical cable manager shall be used between bayed racks or frames and will be of an appropriate size to accommodate the total cable requirements for both racks or frames. The manufacturer's product documentation will state estimated cable fills for the cable manager.
- D. The vertical cable manager shall consist of a metal backbone with cable management fingers that:
 1. Align with EIA rack spacing
 2. Are molded out of plastic
 3. Provide integral bend radius control throughout the entire length
- E. Approved manufacturers:
 1. Panduit – WMPV45E
 - a. No approved equals
- F.

2.08 TELECOMMUNICATIONS ROOM LADDER TRAY

- A. Provide a minimum 12" wide fully welded ladder tray where indicated on the drawings. The ladder tray shall be installed above the technology racks or cabinets. In rooms with a ceiling, the ladder tray shall be installed below the ceiling tile with enough space for access to cabling.
- B. Provide all factory elbows, fittings, supports, and miscellaneous hardware for a complete installation.
- C. Provide a waterfall accessory where the ladder tray connects to the technology racks or cabinets.
- D. Provide grounding kit so that grounding is continuous throughout entire run off ladder tray. Ground to the TBB in the technology room. Ground per the manufacturers recommendations.
- E. Telecommunications room ladder tray and fittings shall:
 1. Have a black epoxy-polyester hybrid powder coat finish
 2. Be UL listed
- F. Approved manufacturers:
 1. Middle Atlantic – CLB series
 2. CPI – Universal Cable Runway series
 3. Panduit – Wyr-Grid Pathway series

4. Belden – Universal Style Cable Runway series
5. Legrand/Ortronics – OR-TRT10-12B
6. Hoffman-Universal Ladder Rack series
7. Hubbell-NextFrame Ladder Tray series

2.09 NOT USED

2.10 POWER STRIPS

- A. Provide horizontal power strips as specified herein and indicated on the drawings.
 1. The horizontal power strips shall:
 - a. Be UL listed
 - b. Be 16-gauge steel
 - c. Be black powder coated
 - d. Rack mounted and occupy 1 rack space
 - e. Shall operate on 120 volt/60Hz current
 - f. Have 10' power cord with the NEMA 5-20P plug
 - g. Have LED indicator lights for power and protection status
 - h. Have LED indicator lights for reverse polarity and open outlet ground
 - i. Have a minimum of eight (8) NEMA 5-20R output receptacles
 2. Approved manufacturers:
 - a. Middle Atlantic – PD series
 - b. CPI - 13239-757
 - c. Belden - 9BF1-101002
 - d. Leviton – P1000 series
 - e. Legrand/Ortronics – LP Series
 - f. Cyber Power Basic series

2.11 MISCELLANEOUS COMPONENTS AND ACCESSORIES

- A. Provide adjustable vented shelf as specified herein and indicated on the drawings.
 1. The adjustable vented shelf shall:
 - a. Be adjustable from 27" to 44" deep.
 - b. Be fully vented
 - c. Have a black powder coat finish
 - d. Attach to the technology rack or cabinet mounting rails so that there is support at each front corner of the shelf.
 - e. Have a support surface that extends beyond the mounting rail (cantilever)
 2. Approved manufacturers:
 - a. Middle Atlantic
 - b. Panduit
 - c. CPI
 - d. Belden
 - e. Leviton
 - f. Hoffman
- B. Provide light duty vented shelf as specified herein and indicated on the drawings.
 1. The light duty vented shelf shall:
 - a. Be fully vented
 - b. Have a black powder coat finish
 - c. Attach to the technology rack or cabinet mounting rails so that there is support at each front corner of the shelf.
 - d. Have a support surface that extends beyond the mounting rail (cantilever)
 2. Approved manufacturers:
 - a. Middle Atlantic
 - b. Panduit
 - c. CPI
 - d. Belden
 - e. Leviton
 - f. Hoffman

- g. Hubbell
- C. Provide copper busbar grounding kit as specified herein and indicated on the drawings.
 - 1. Provide one (1) copper busbar grounding kit for each rack or cabinet.
 - 2. Copper busbar grounding kit shall:
 - a. Be 1/8" thick x 1" wide and length to fit equipment rack/cabinet
 - b. Be threaded for 10-32 screws
 - c. Be from the same manufacturer as the technology rack or cabinet
 - 3. Approved manufacturers:
 - a. Middle Atlantic
 - b. Panduit
 - c. CPI
 - d. Belden
 - e. Leviton
 - f. Hoffman
 - g. Hubbell

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide all components for the communications equipment room fittings as specified herein and as shown on the drawings.
- B. The communications equipment room fittings shall be installed in accordance with TIA standards-based recommendations, the manufacturer's recommendations/installation guides, and industry best practices.
- C. Comply with BICSI TDMM for layout and installation of communications equipment rooms.
- D. Equipment racks and cabinets shall be securely attached to the concrete floors using manufacturer recommended hardware or as required by local codes.
- E. Bundle, lace, and train conductors and cables to terminal points without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.
- F. Coordinate layout and installation of communications equipment with Owner's telecommunications and LAN equipment and service suppliers. Coordinate service entrance arrangement with local service provider.
- G. Coordinate location of power raceways and receptacles with locations of communications equipment requiring electrical power to operate.
- H. All equipment cabinets and racks shall be grounded to the PBB or SBB in accordance to Section 27 05 26 – Grounding and Bonding for Communications Systems.
- I. All rack mounted equipment shall be installed in accordance with the manufacturer's recommendations and installation guides.
- J. Coordinate equipment cabinet and rack layout with owner provided equipment prior to installation.
- K. Ladder tray shall be installed in the equipment rooms per the manufacturer's recommendations. The ladder tray shall be supported at a minimum of every 5'. Where installed above equipment cabinet or racks, the ladder tray shall be secured to the cabinet or rack so that the ladder tray cannot move.
- L. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.
- M. All service loops shall be properly supported.
- N. Any cables that are damaged or exceeding the recommended installation parameters during installation shall be replaced by the installer at no cost to the owner.

3.02 LABELING

- A. Identify system components, wiring, and cabling complying with TIA-606-B and coordinate with the Engineer and Owner.
- B. Provide label for each equipment cabinet and rack.
- C. All labels shall be typed and printed. Hand written labels will not be accepted.
- D. Refer to technology drawings for more information on labeling.

E. Refer to specification section 270553 – Identification for Communications Systems for more information.

3.03 FIRESTOPPING

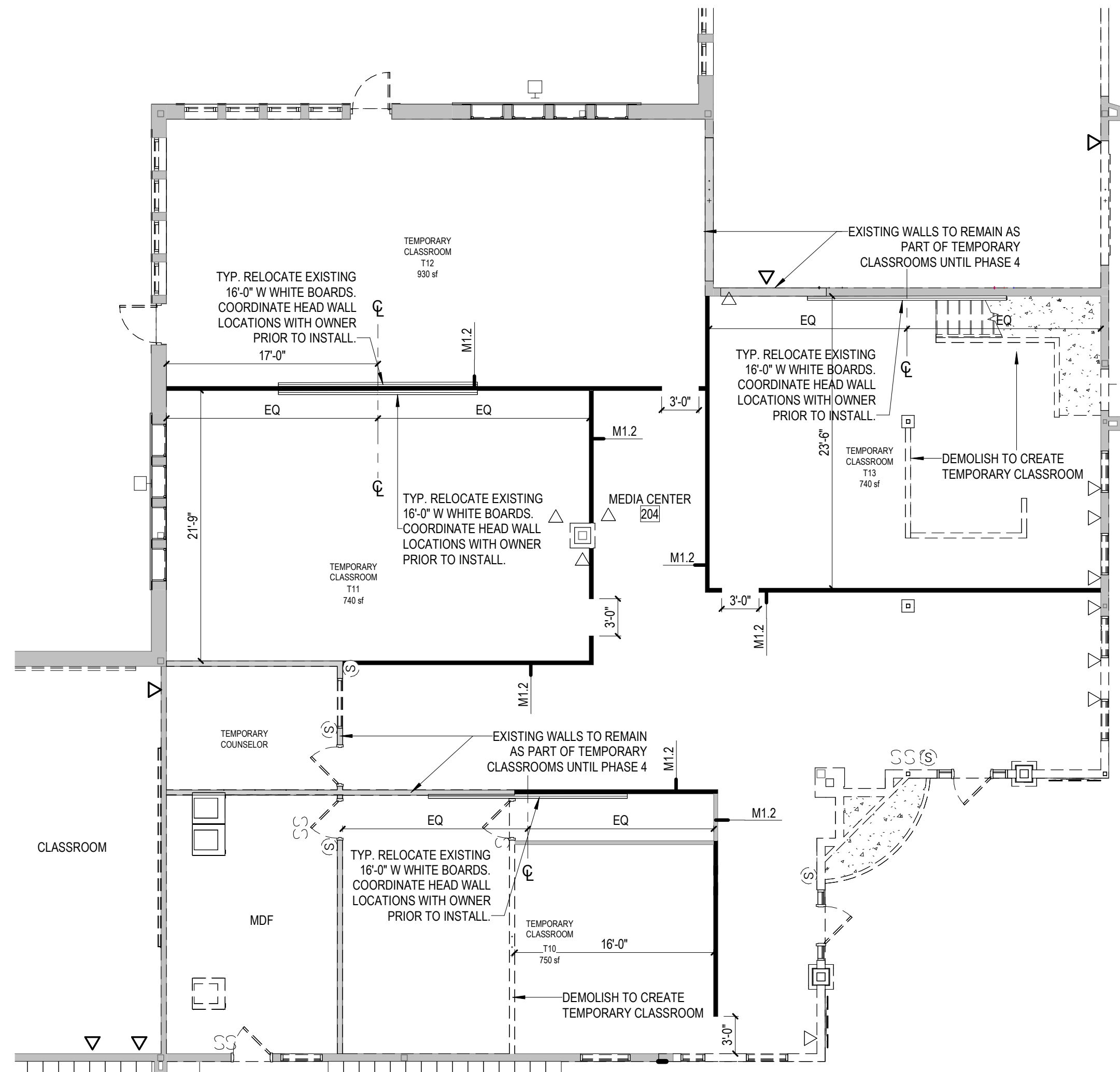
A. Comply with TIA-569-D, Annex A, "Firestopping."

B. Comply with "Firestopping Systems" Article in BISC's TDMM.

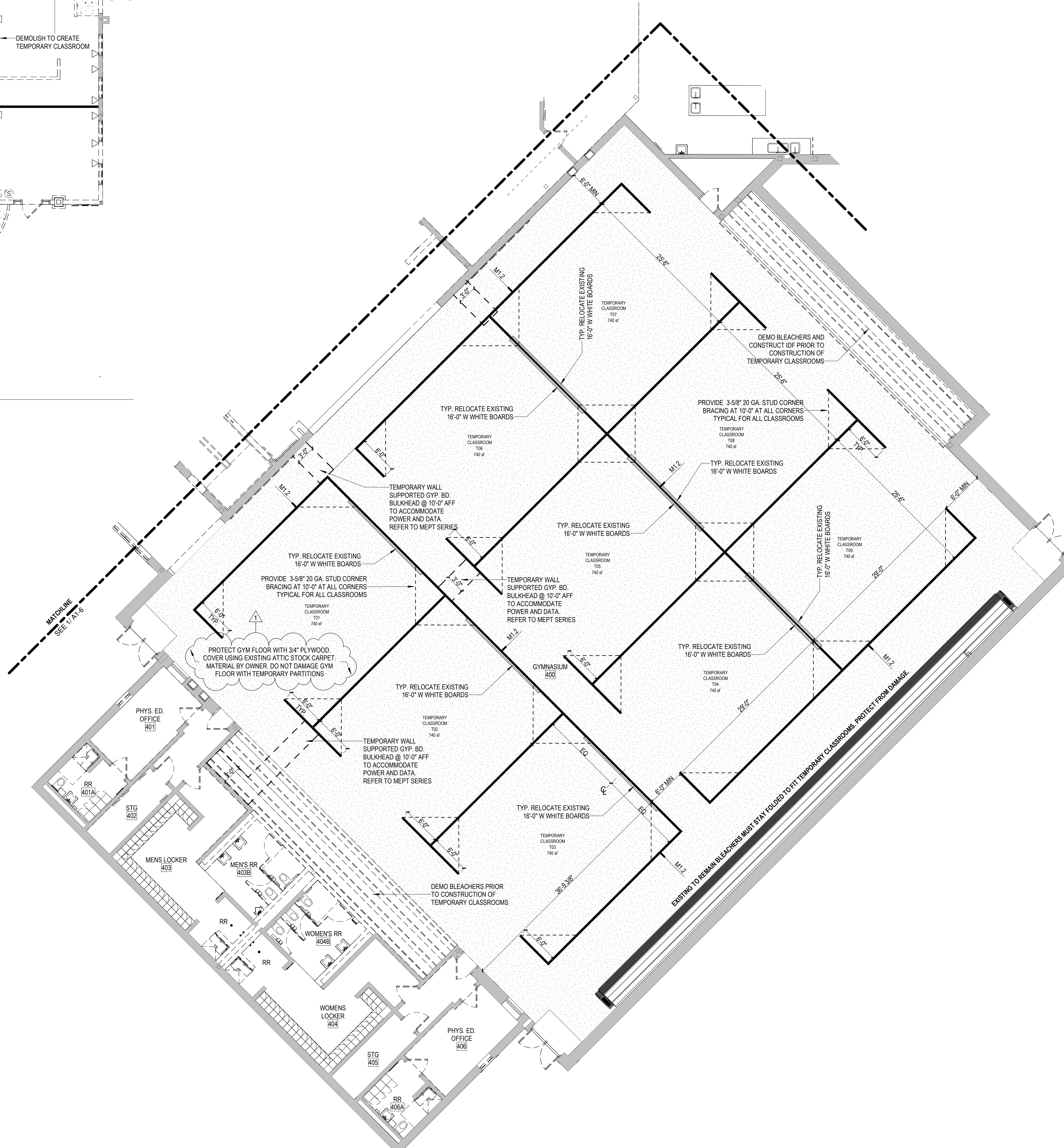
3.04 TESTING

A. Perform inspections for all the installed communications equipment room fittings.

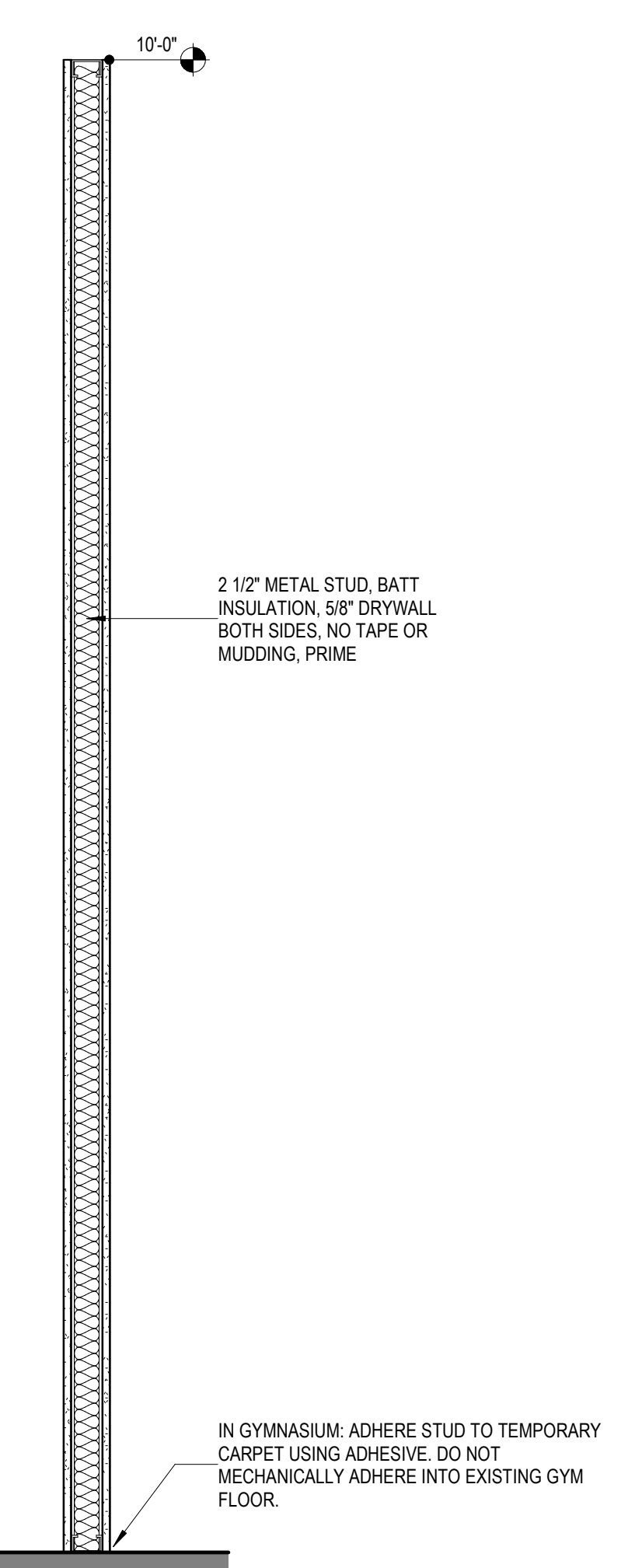
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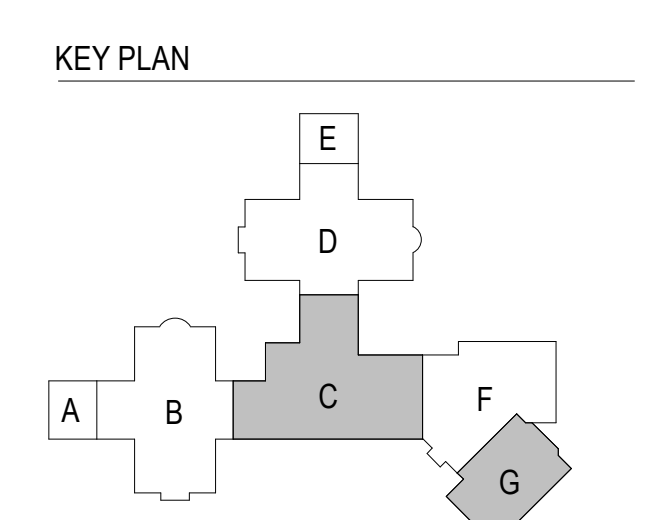
2 TEMPORARY CLASSROOM PLAN_MEDIA CENTER
SCALE: 1/8" = 1'-0"



1 TEMPORARY CLASSROOM PLAN_GYMNASIUM
SCALE: 1/8" = 1'-0"



3 TYP. TEMPORARY CLASSROOM WALL SECTION
SCALE: 1" = 1'-0"



krM
Architecture+

kbsd
CONSULTING

HB Lynch, Harrison & Brumfiel, Inc.

REVISIONS
1 07/29/24 Addendum 1

07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Ohio Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR

REGISTERED PROFESSIONAL ARCHITECT
No. 10600161
STATE OF INDIANA
Wendell Williams

CONSTRUCTION DOCUMENTS
07.12.24
HW JOB NO. 23055
DRAWN BY Cg
DRAWING NAME
TEMPORARY CLASSROOM PLAN
DRAWING NO.
G0-4

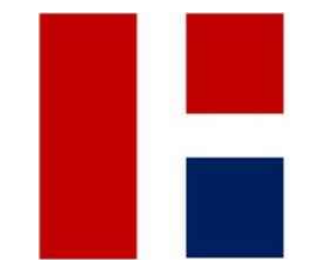
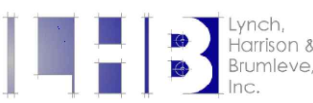
LAND DEVELOPMENT FALL CREEK INTERMEDIATE RENOVATION

12011 OLIO ROAD FISHERS, INDIANA

PROJECT DATA

Project Information:
 Project Title: 24007L FCI RENOVATION
 Address: 12011 OLIO ROAD
 City/Town: Fishers
 County: Hamilton
 Civil Township: Delaware
 Quarter: NE
 Section: 36
 Township: 18N
 Range: 5E
 Latitude: 39° 57' 31" N
 Longitude: 85° 55' 09" W

Project Description: Pavement maintenance improvements to existing parking lots and access roads.



REVISIONS
 ADDENDUM #1 07/29/24

07/12/24
 HAMILTON SOUTHEASTERN SCHOOLS
 23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Olivo Rd, Fishers, IN 46037
 CONSTRUCTION DOCUMENTS
 SET TO BE PRINTED IN COLOR



Karen Collins

CONSTRUCTION DOCUMENTS
 07/12/24
 KM JOB NO.
 23055
 DRAWN BY
 ASF

DRAWING NAME

COVER SHEET

DRAWING NO.
 C100

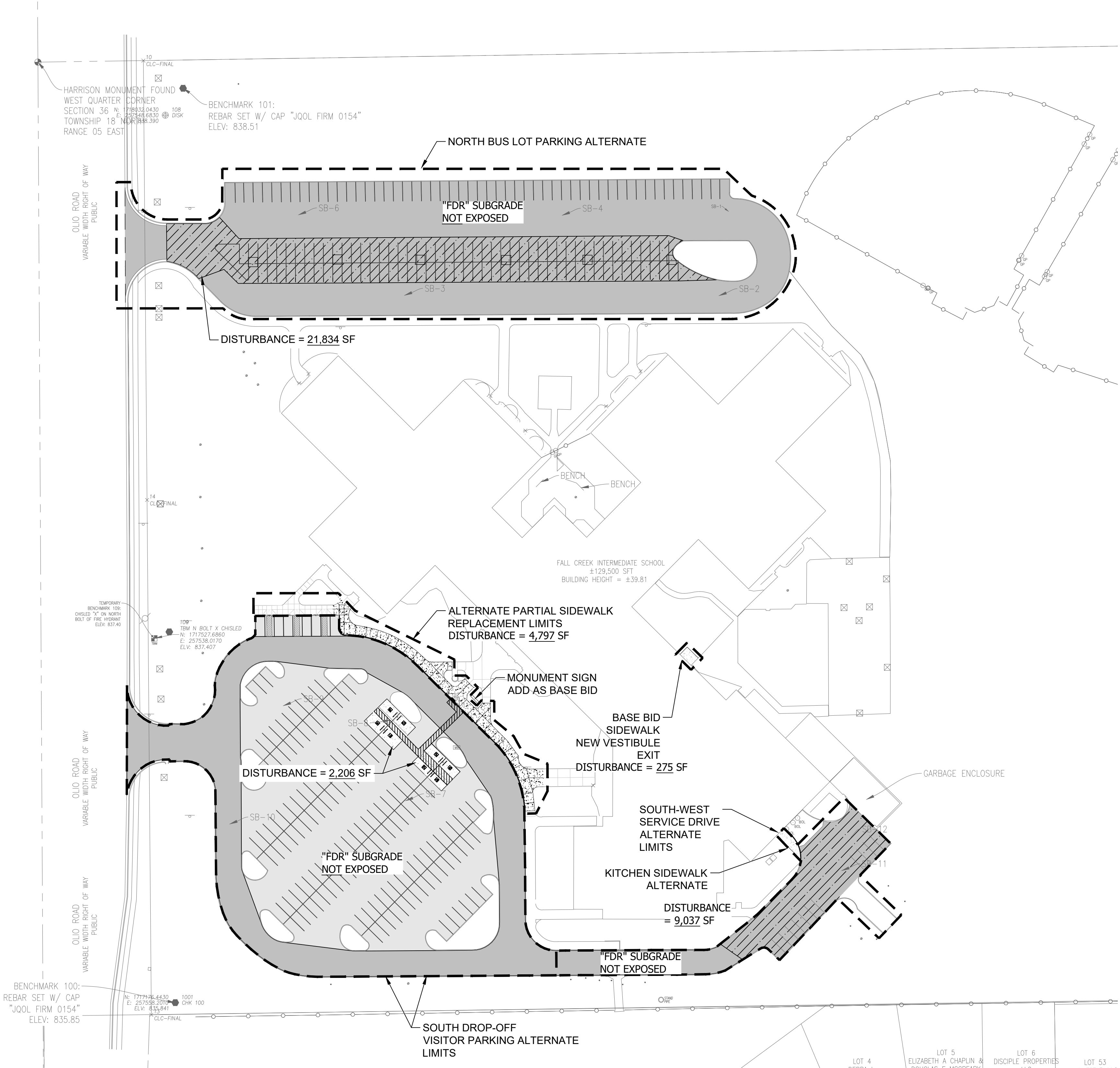
SHEET INDEX	
No.	DESCRIPTION
C100	COVER SHEET
	SURVEY
C101-C102	DEMOLITION PLAN
C201-C202	SITE PLAN
C301-C302	GRADING & UTILITY PLAN
C401	SWPPP PLAN (INITIAL)
C402	SWPPP PLAN (FINAL)
C403	SWPPP PLAN (DETAILS)
C901	SITE DETAILS
	FISHERS CONSTRUCTION DETAILS

TOTAL DISTURBANCE IF ALL ALTERNATES ARE ACCEPTED IS 0.83 AC FDR PROCESS DOES NOT EXPOSE SUBGRADE AND IS NOT INCLUDED IN THE DISTURBED AREA.

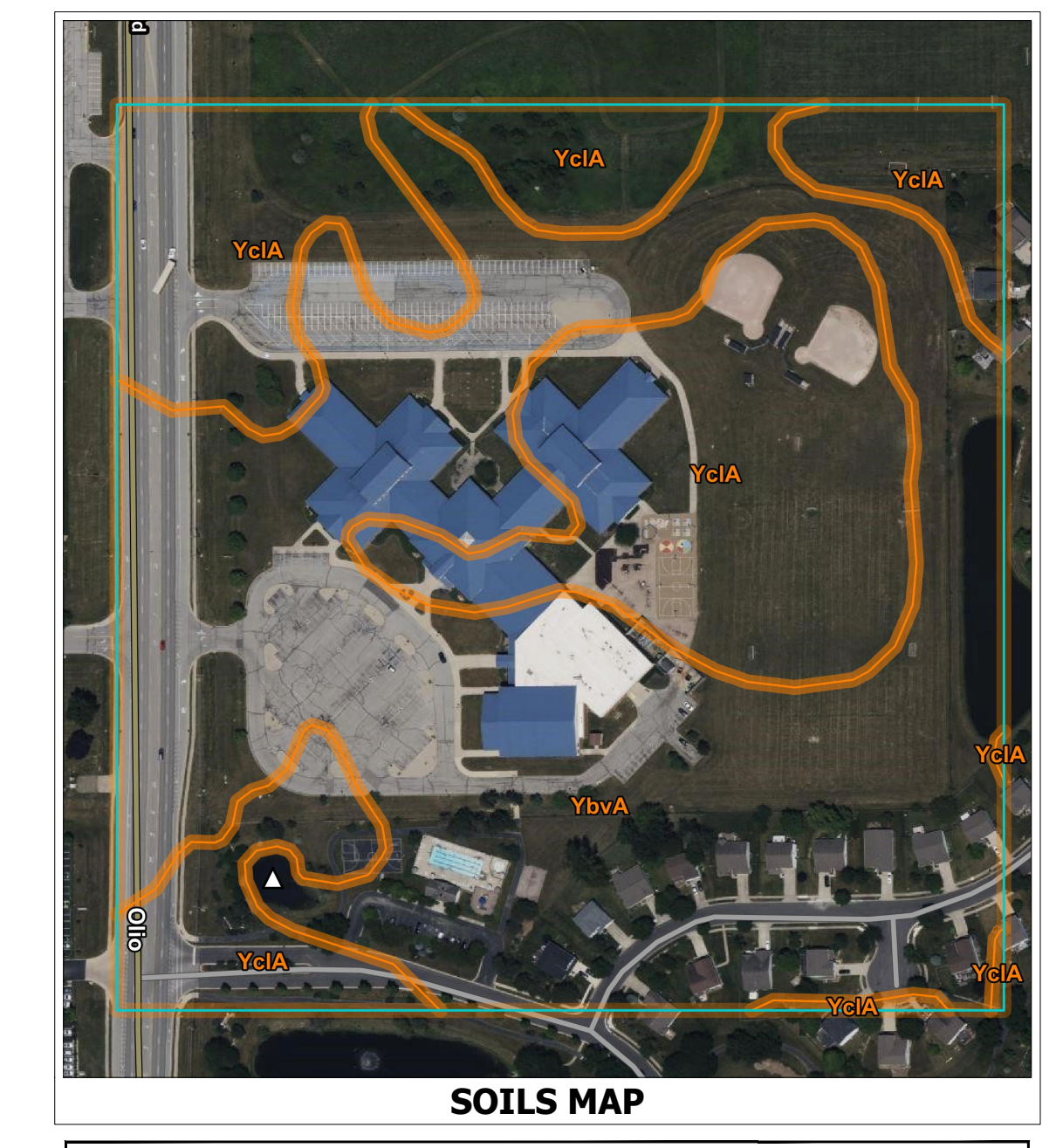
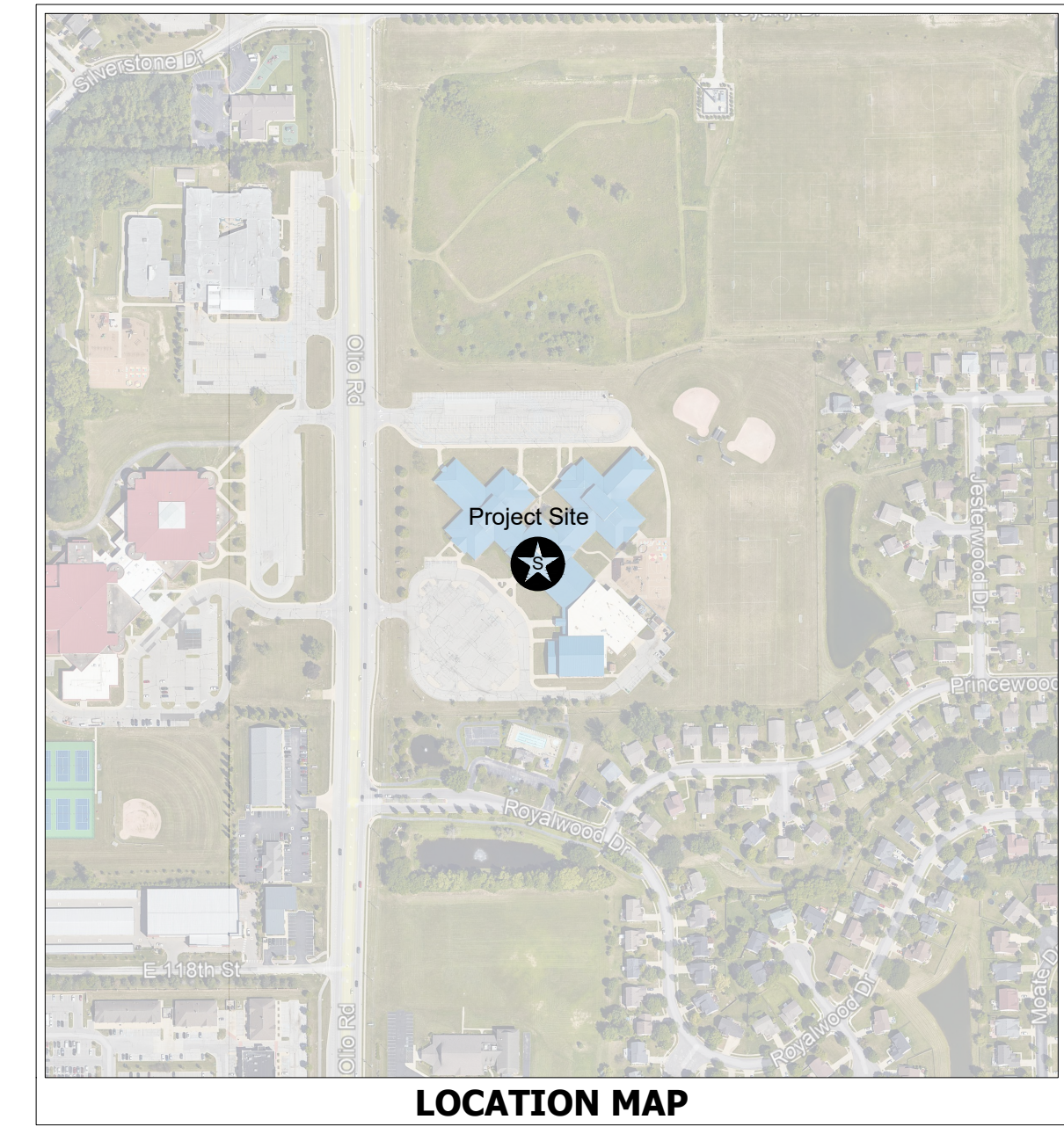
REVISIONS		
MARK	DATE	DESCRIPTION

BENCHMARKS	
BENCHMARK 100: REBAR SET W/ CAP "JQOL FIRM 0154" ELEV: 835.85	
TEMPORARY BENCHMARK 109: CHISLED "X" ON NORTH BOLT OF FIRE HYDRANT ELEV: 837.40	
BENCHMARK 101: REBAR SET W/ CAP "JQOL FIRM 0154" ELEV: 838.51	

FLOOD ZONE STATEMENT
 ALL OF THE PARCEL DESCRIBED HEREIN DOES NOT LIE WITHIN THAT SPECIAL FLOOD ZONE "A", BUT LIES WITHIN FLOOD ZONE "X". AS SAID PARCEL PLOTS ON COMMUNITY PANEL NUMBER 18057C0584G (DATED NOVEMBER 19, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR THE TOWN OF FISHERS, INDIANA, THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.



PROJECT MAP
 SCALE: 1" = 60'



PROJECT SOIL SURVEY	
YbvA	Brookston silty clay loam-Urban land complex, 0 to 2 percent slopes
Yc1A	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes

Z:\2024\24007L-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\DWG\C100 COVER SHEET.DWG plotted by NICKOLAS MACK on 7/26/2024 11:47:31 AM last saved by NMACK on 7/26/2024 11:30:28 AM
 Xref: 24007L BASE TOPOLINE & 24007L BASE SIDEWALK & 24007L TIL BLOCKING



DEMOLITION PLAN NOTES

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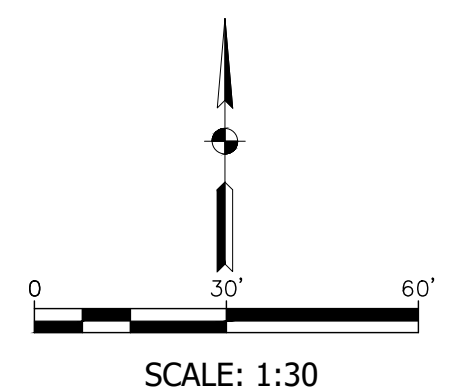
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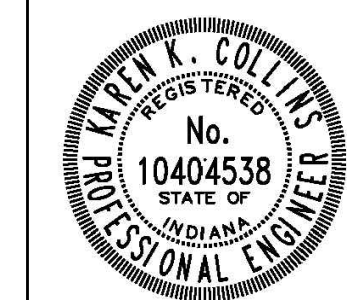
kbso
CONSULTING

HB Inc.
Karlson & Blumhew, Inc.

REVISIONS

ADDENDUM #1	07.29.24
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07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
20555 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Old Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR

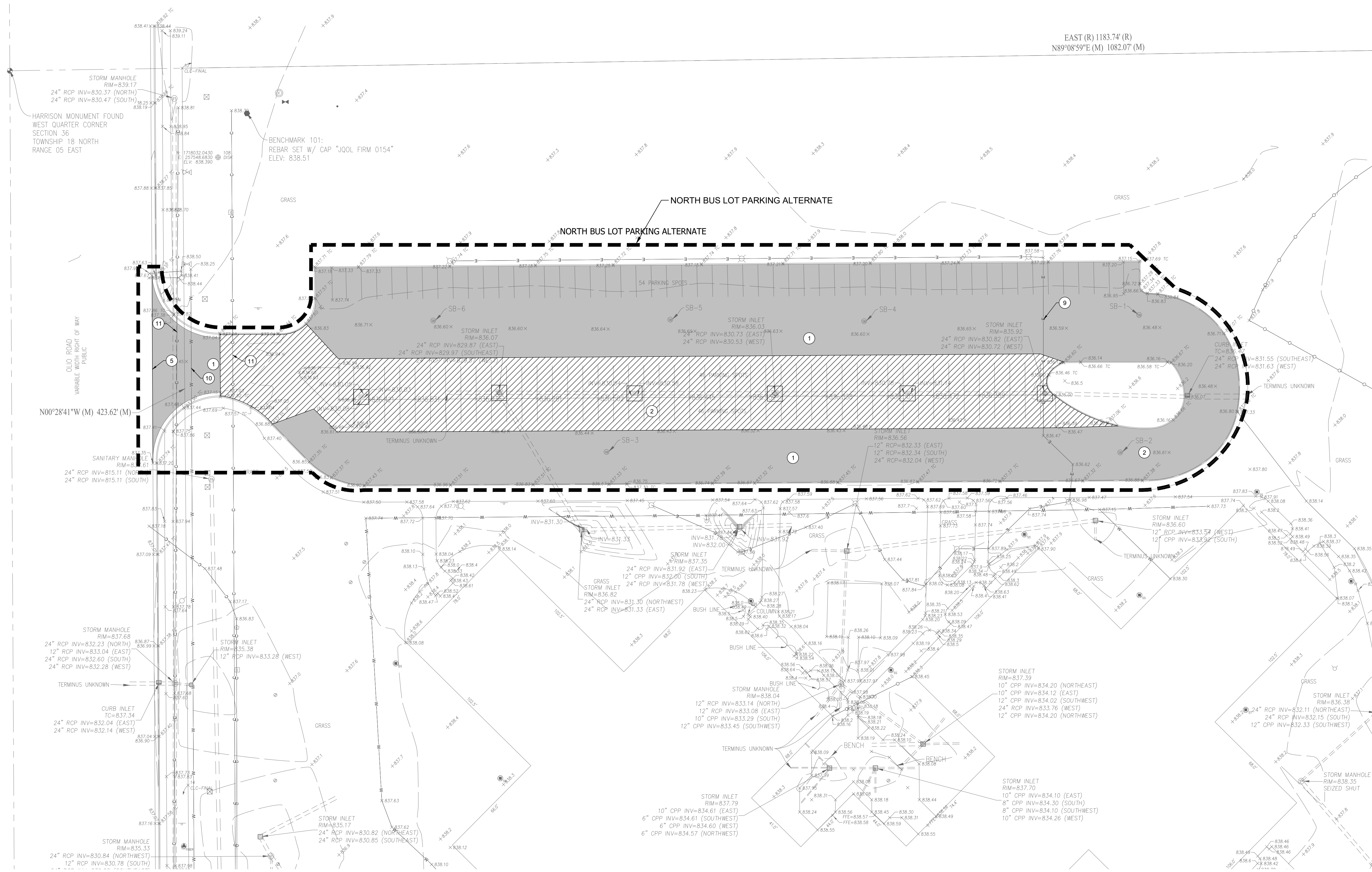


Karen Collins

CONSTRUCTION DOCUMENTS
07.12.24
kM JOB NO.
23055
DRAWN BY
A&F

DRAWING NAME
EXISTING CONDITIONS & DEMO PLAN

DRAWING NO.
C101



Z:\2024\24007-krm-ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATIONS\DWG\C101 EXISTING CONDITIONS.DWG plotted by NMACK on 7/26/2024 11:30:22 AM. File: 24007_Base_Topdown & _X_Plot_The_Blocking

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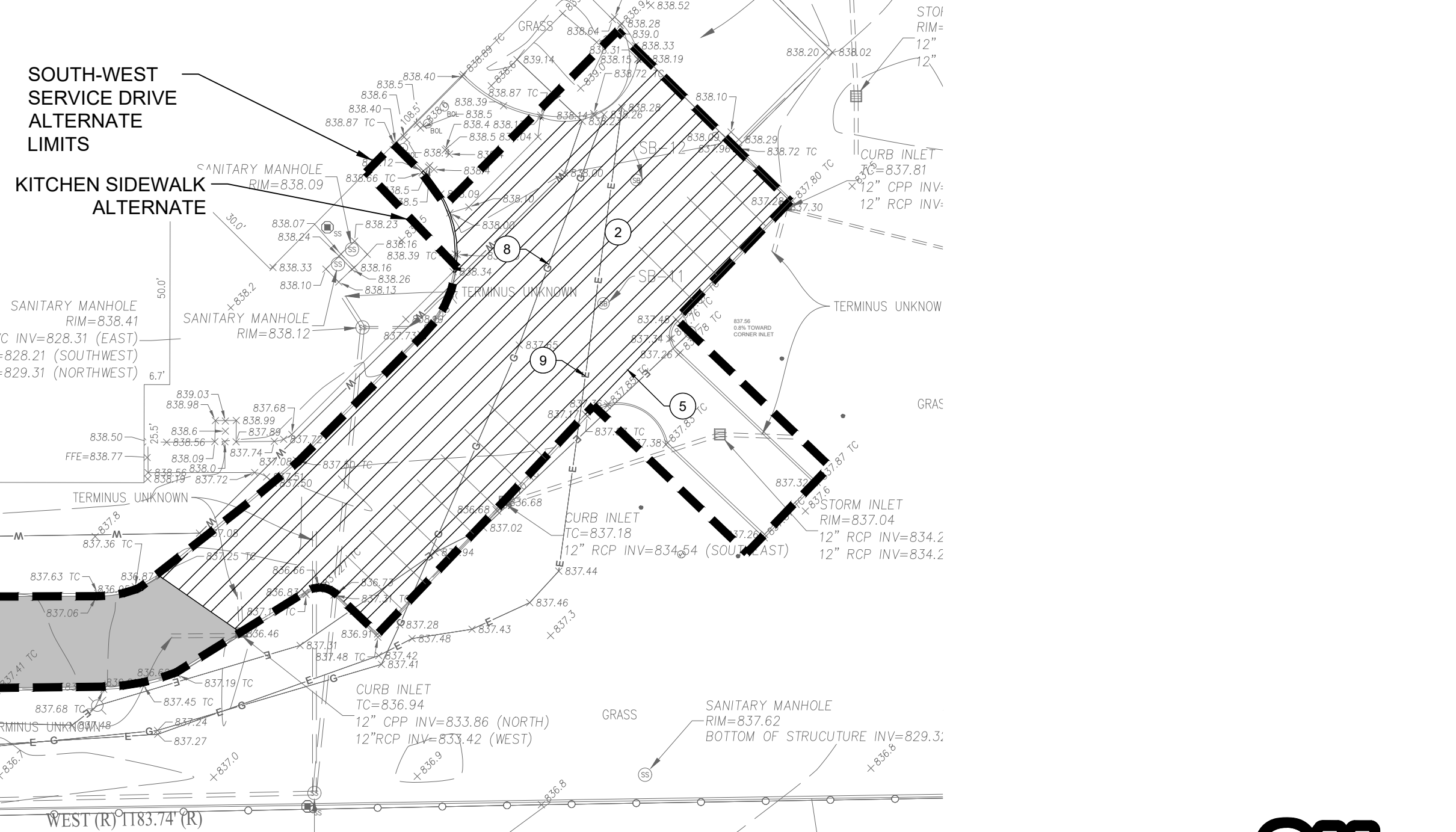
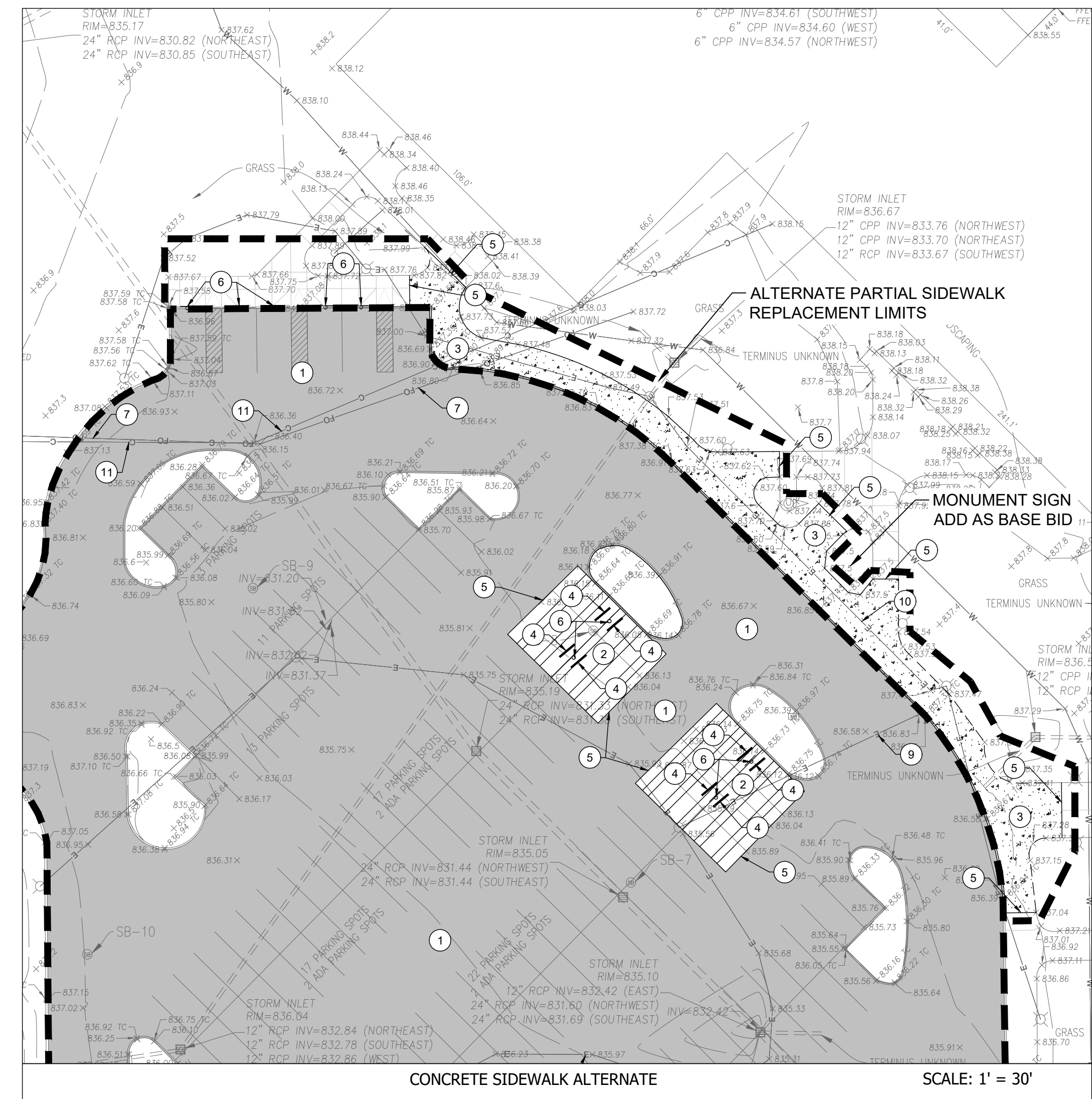
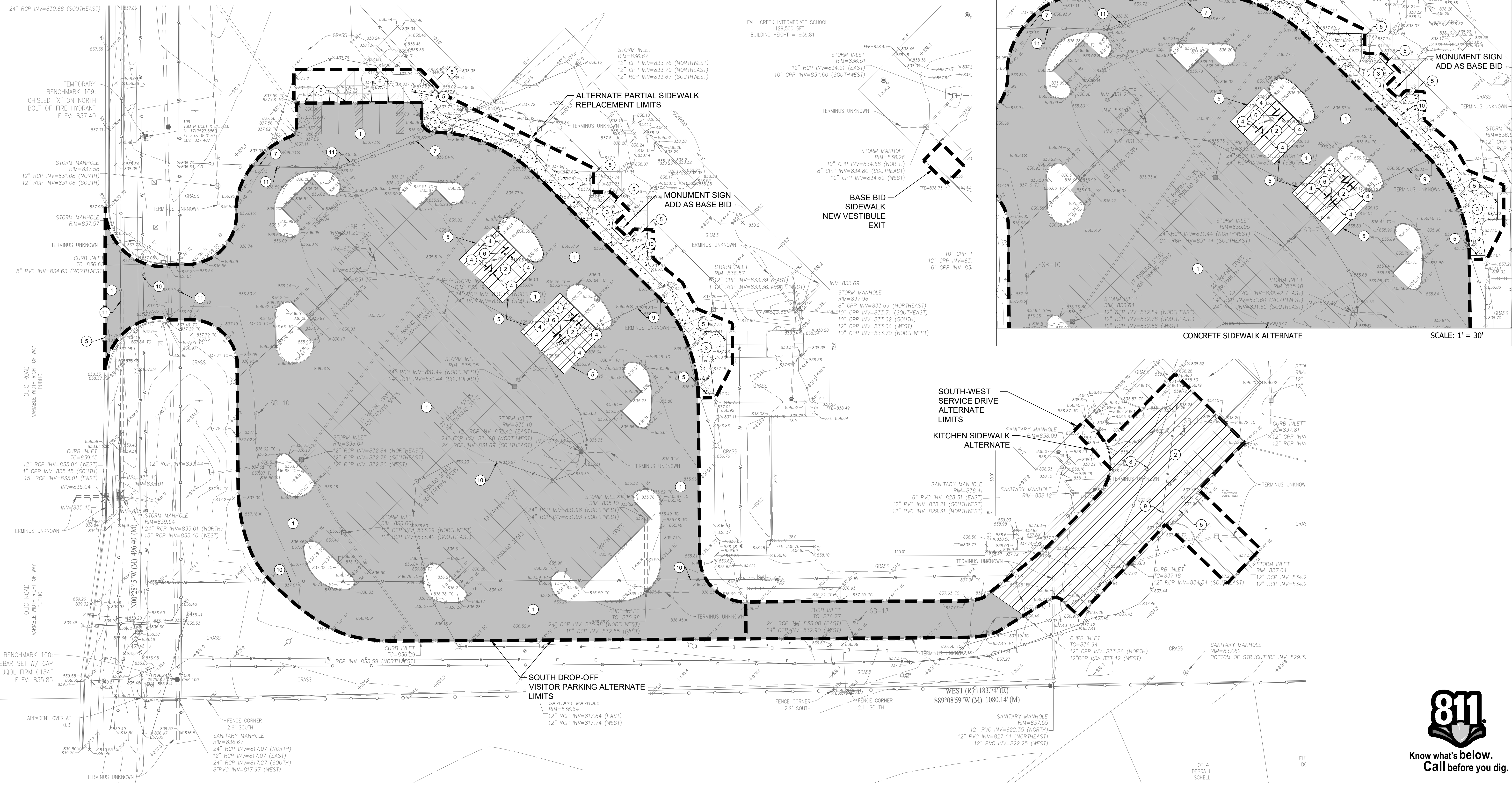
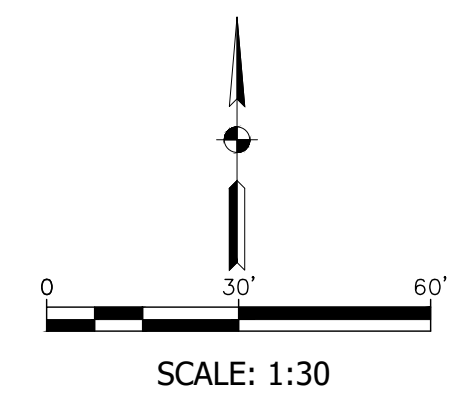
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Architectural & Planning, Inc.

REVISIONS	ADDENDUM #1	07.29.24
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20855 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Old Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS

07.12.24

HAMILTON SOUTHEASTERN SCHOOLS

20855 - FALL CREEK INTERMEDIATE RENOVATIONS

12011 Old Rd. Fishers, IN 46037

CONSTRUCTION DOCUMENTS

SET TO BE PRINTED IN COLOR

Karen Collins
REGISTERED PROFESSIONAL ENGINEER
No. 10404538
STATE OF INDIANA

CONSTRUCTION DOCUMENTS

07.12.24

km JOB NO.

23055

DRAWN BY

A&F

DRAWING NAME

EXISTING CONDITIONS & DEMO PLAN

DRAWING NO.

C102

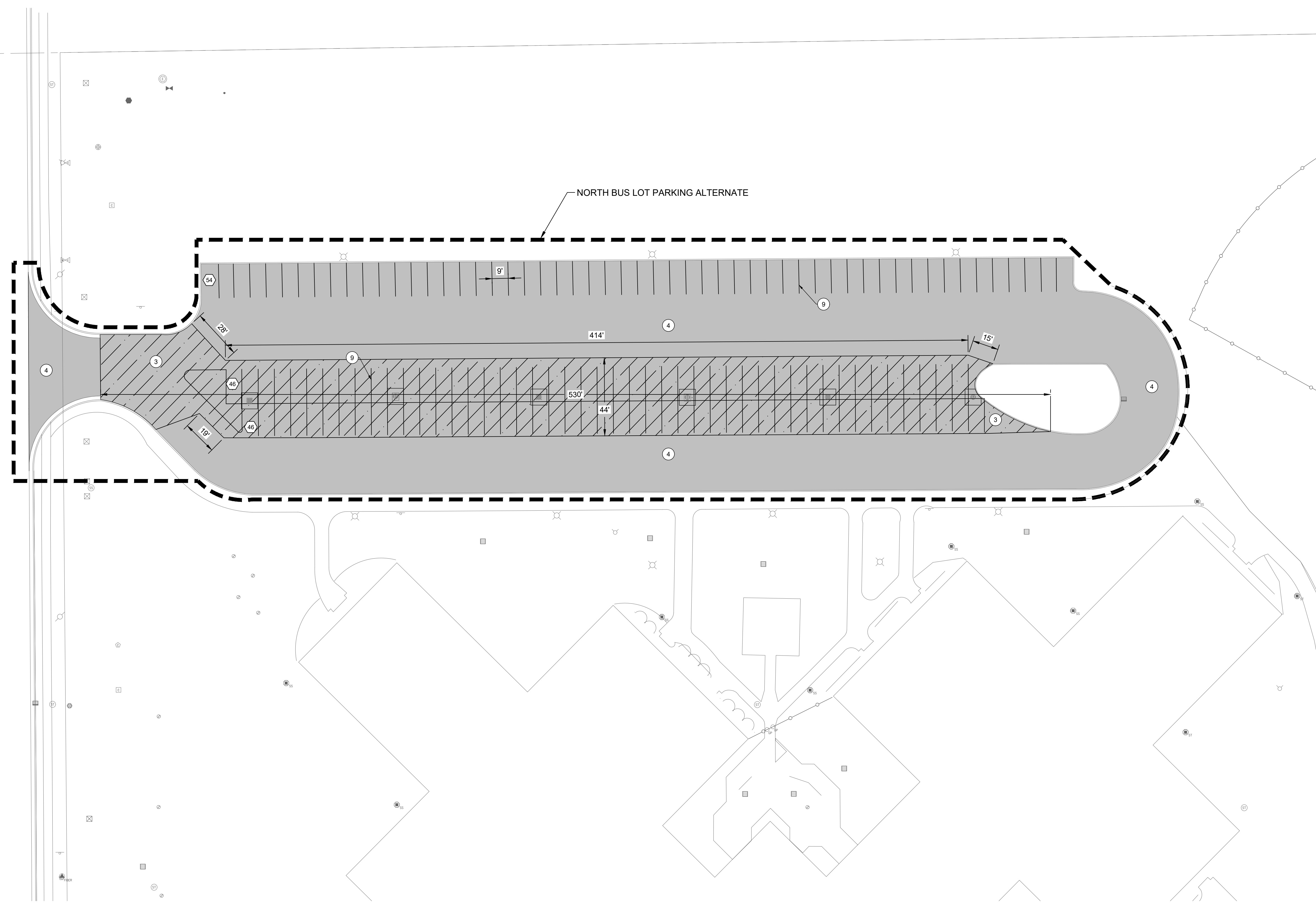
811

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Z:\2024\24007-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\DWG\C201 SITE PLAN.DWG plotted by NIMACK on 7/26/2024 11:36:42 AM
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OLIO ROAD



GENERAL SITE NOTES

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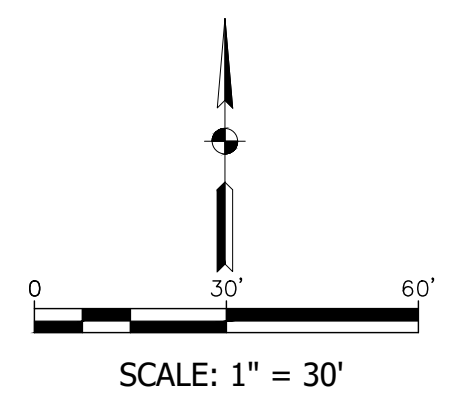
TOTAL PARKING = 306
 ADA PARKING = 8

STRIPING NOTE

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NOTE

ALL CURBS, SIDEWALKS AND POWER POLES SHALL BE POWER WASHED.



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kbso
 CONSULTING

HB Lynch, Johnston & Hummel, Inc.

REVISIONS

ADDENDUM #1	07.29.24

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DRAWING NAME
SITE PLAN

811
 Know what's below.
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C201

Z:\2024\24007-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\DWG\C201 SITE PLAN.DWG plotted by NIMACK on 7/26/2024 11:48:32 AM last saved by NIMACK on 7/26/2024 11:36:42 AM
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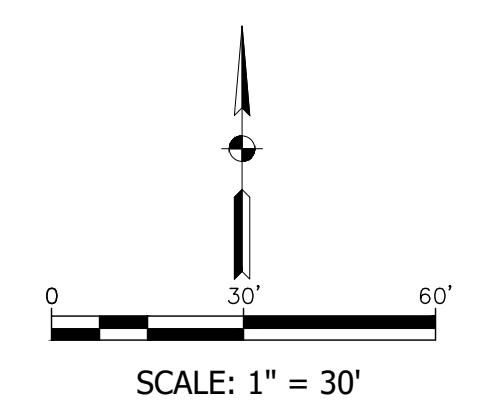
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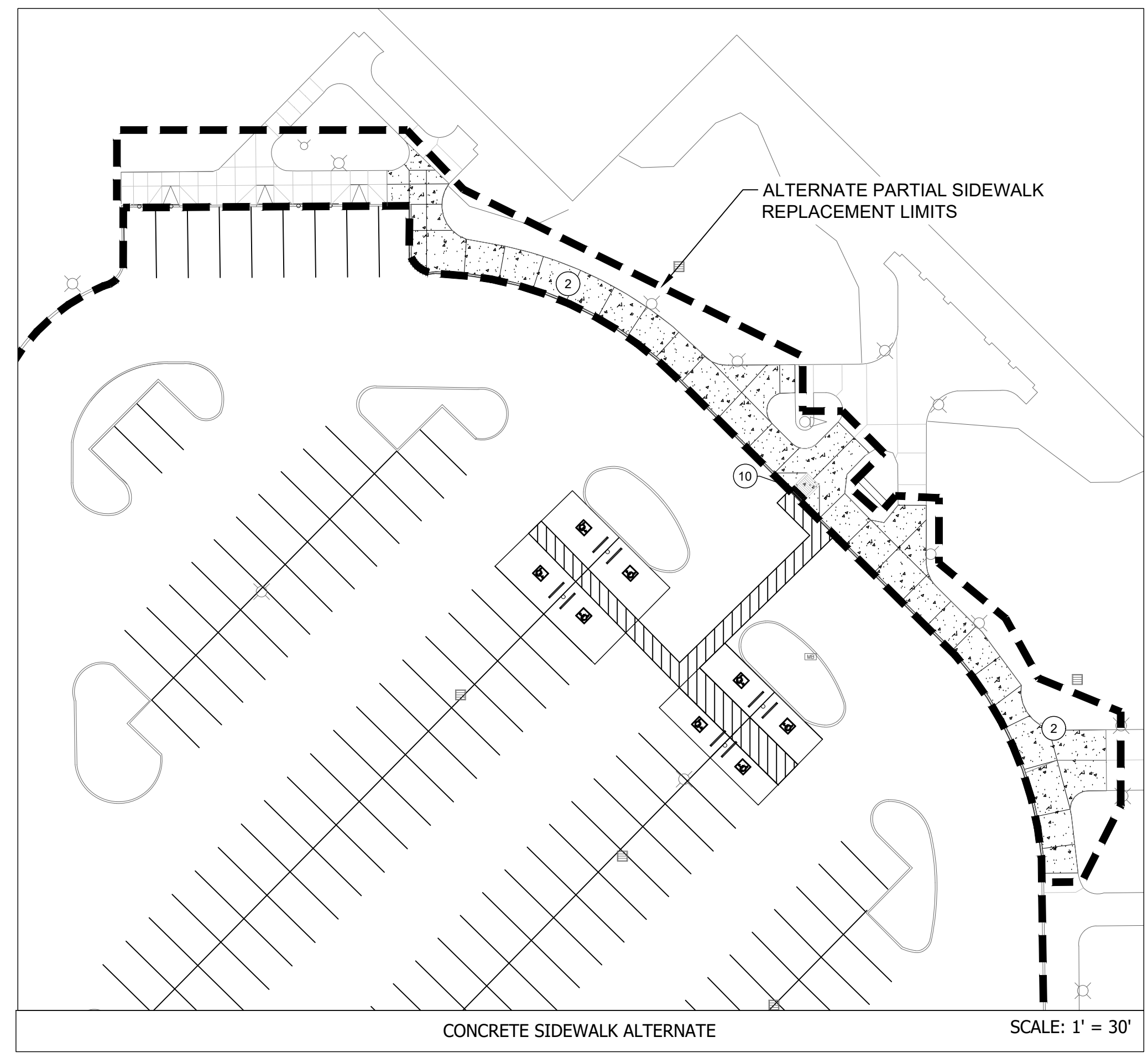
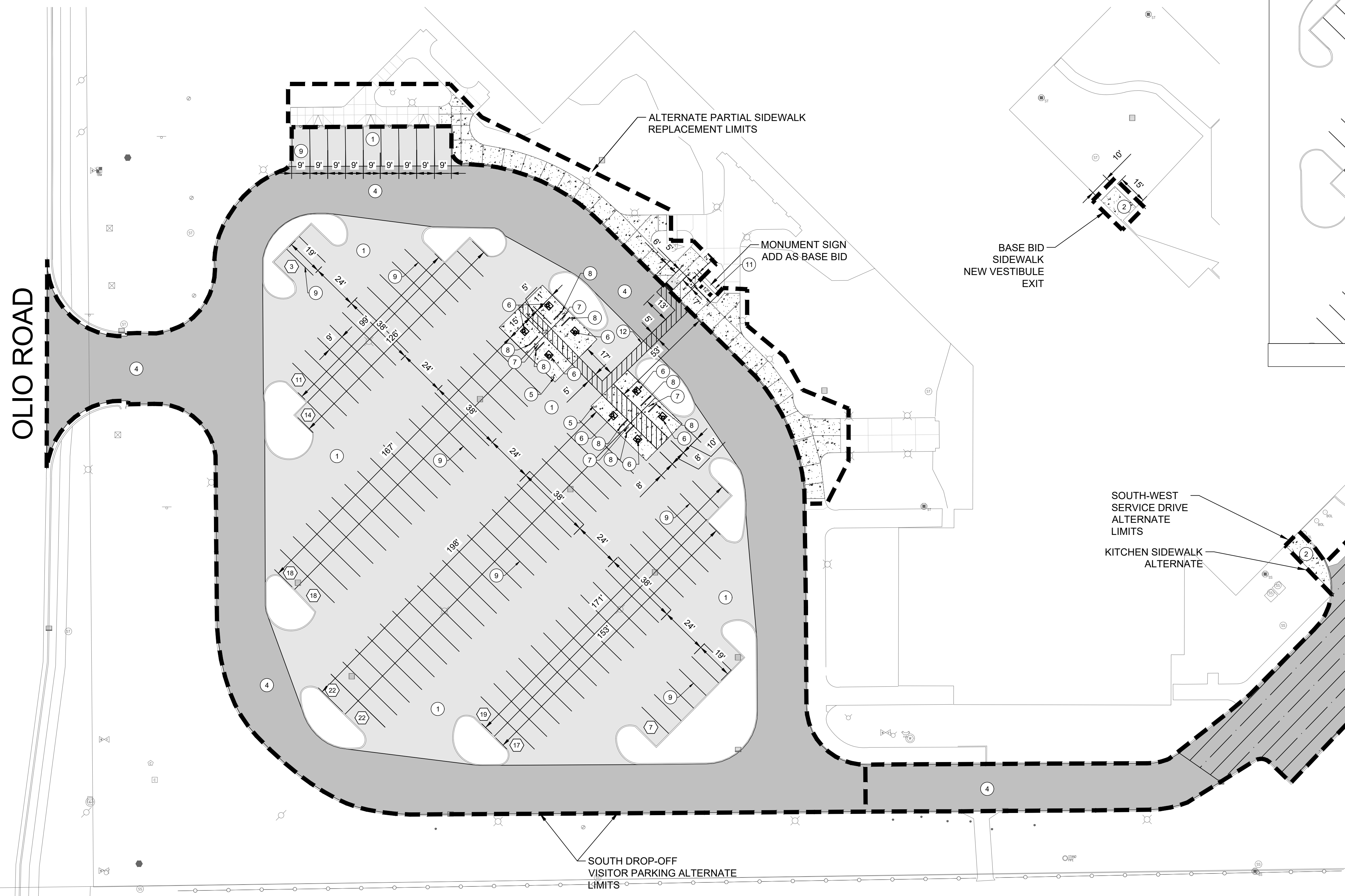
ALL STRIPING SHALL BE REPLACED TO MATCH EXISTING CONDITION EXCEPT WHERE SHOWN. ALL EXISTING WHITE AND YELLOW MARKINGS SHALL BE RETAINED. ALL CURBS THAT ARE CURRENTLY PAINTED YELLOW SHALL BE REPAINTED YELLOW PER PROJECT SPECIFICATIONS.

NOTE
 ALL CURBS, SIDEWALKS AND POWER POLES SHALL BE POWER WASHED.

TOTAL PARKING = 306
 ADA PARKING = 8



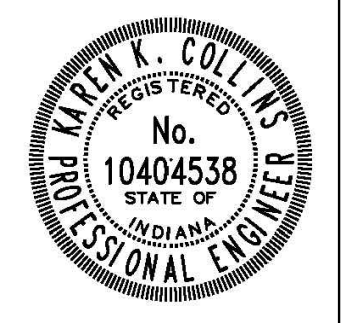
OLIO ROAD



REVISIONS

ADDENDUM #1	DATE
07.29.24	

07.12.24
 HAMILTON SOUTHEASTERN SCHOOLS
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Olio Rd, Fishers, IN 46037
 CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR



Karen Collins

CONSTRUCTION DOCUMENTS
 07.12.24
 KRM JOB NO. 23055
 DRAWN BY ASF

DRAWING NAME
SITE PLAN



DRAWING NO.
C202

EXISTING LINETYPES LEGEND

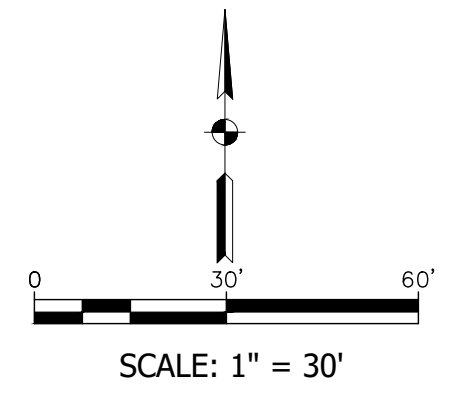
---D.S.	DOWNSPOUT
---	STORM LINE
---	SANITARY LINE
G	GAS LINE
W	WATER LINE
C	UNDERGROUND COMM LINE
E	ELECTRIC LINE
FO	FIBER OPTIC

UTILITY NOTES

- WHERE GRADE MODIFICATIONS (CUT OR FILL) ARE SHOWN ADJACENT TO EXISTING VALVE BOX COVERS AND MANHOLE CASTINGS, THE VALVE BOX COVERS AND MANHOLE CASTINGS SHALL BE ADJUSTED FLUSH WITH THE PROPOSED GRADE.
- PAVEMENTS, WALKS, CURBS AND OTHER SURFACE IMPROVEMENTS REQUIRING REMOVAL FOR INSTALLATION OF UNDERGROUND UTILITIES SHALL BE RESTORED TO THEIR PRESENT CONDITION UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS, ETC. WITHOUT INTERRUPTION UNLESS UNTIL AUTHORIZED TO DISCONNECT BY THE OWNER, UTILITY COMPANIES, AND GOVERNING AUTHORITIES. THE CONTRACTOR SHALL INSTALL AS NECESSARY, TEMPORARY SITE LIGHTING, GAS, SANITARY, WATER, STORM, ELECTRIC, TELEPHONE, AND CABLE SERVICES TO SERVICE BUILDING(S) TO REMAIN OPEN.
- CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR SITE LIGHTING PER SITE LIGHTING PLAN (BY OTHERS).
- CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR IRRIGATION PER IRRIGATION PLAN (BY OTHERS).
- CONTRACTOR WILL BE RESPONSIBLE TO REPAIR, REPLACE, AND/OR RECONNECT ANY EXISTING DRAINAGE TILES NOT SHOWN ON THE PLANS, WHICH CROSS THROUGH EXCAVATED TRENCHES. ANY DRAINAGE TILE ENCOUNTERED IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND A MEASUREMENT TAKEN FROM THE NEAREST MANHOLE OR INLET STRUCTURE TO THE CENTERLINE OF THE TILE.

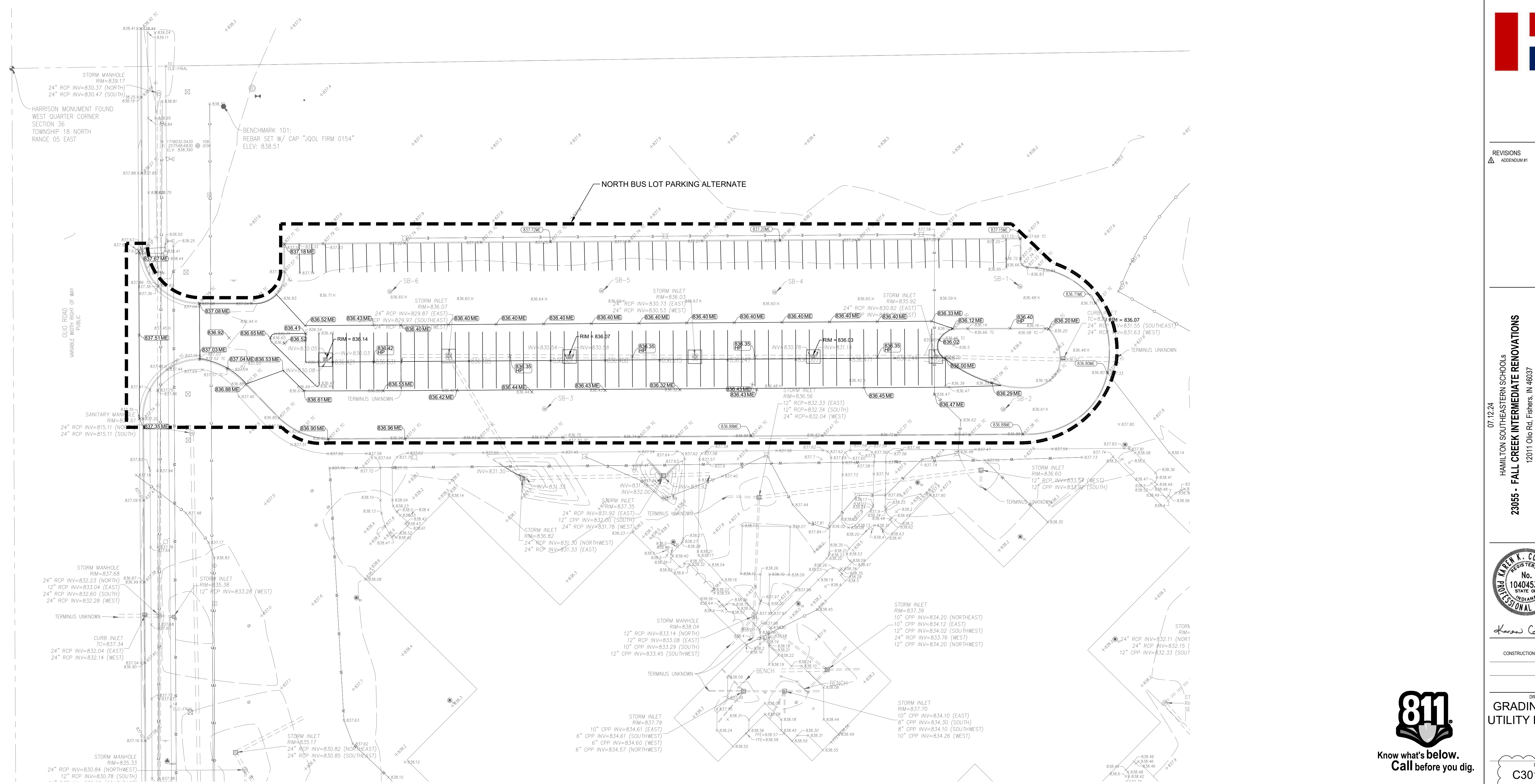
GRADING NOTES

- TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO RECEIVE PAVING AND FROM WITHIN THE LIMITS OF PROPOSED BUILDINGS AND STRUCTURES. TOPSOIL SHALL BE STRIPPED TO THE DEPTH SHOWN IN THE GEOTECHNICAL REPORT, OR TO A DEPTH OF 6 INCHES, WHICHEVER IS GREATER.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED OR SODDED UNLESS OTHERWISE SHOWN.
- FINAL GRADES AT THE PROJECT BOUNDARY SHALL MATCH EXISTING ELEVATIONS UNLESS OTHERWISE SHOWN.



GRADING PLAN LEGEND

LINE TYPE / SYMBOL	DESCRIPTION	LINE TYPE / SYMBOL	DESCRIPTION
---	MATCH EXISTING	---	FINISHED FLOOR ELEVATION
---	PAVEMENT SPOT GRADE	HP	HIGH POINT
---	PAVEMENT SPOT GRADE HIGH POINT	LP	LOW POINT
---	TOP OF CURB AND BOTTOM OF CURB	---	INTERMEDIATE CONTOUR
---	TOP OF CURB AND BOTTOM OF CURB HIGH POINT	---	INDEX CONTOUR
---	TOP OF CURB AND BOTTOM OF CURB MATCH EXISTING	---	GRADE BREAK
---	FLOW DIRECTION w/ GRADE	---	EXISTING INTERMEDIATE CONTOUR
---		---	EXISTING INDEX CONTOUR



krM Architecture+

A&F ENGINEERING
Transportation & Site Construction

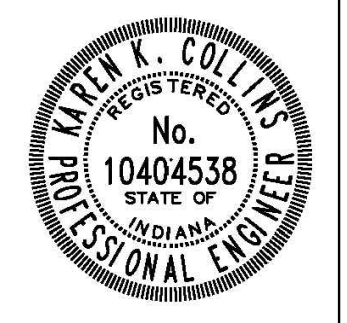
kbso CONSULTING

HB Lynch, Klutznick & Hummel, Inc.

REVISIONS

ADDENDUM #1	07.29.24
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07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
20055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Old Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR



Karen Collins

CONSTRUCTION DOCUMENTS
07.12.24
KM JOB NO.
23055
DRAWN BY
A&F

DRAWING NAME
GRADING & UTILITY PLAN



DRAWING NO.
C301

Z:\2024\24007-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATIONS\DWG\C301 GRADING & UTILITY PLAN.DWG plotted by NICHOLAS WACK on 7/26/2024 11:45:35 AM last saved by SOROURKE on 7/25/2024 4:45:06 PM Xref: 2407L Base STREDSW & 2406R TIL BLOCKING

EXISTING LINETYPES LEGEND

---	0.8" DOWNSPOUT
----	STORM LINE
====	SANITARY LINE
—G—	GAS LINE
—W—	WATER LINE
—C—	UNDERGROUND COMM LINE
—E—	ELECTRIC LINE
—FO—	FIBER OPTIC

UTILITY NOTES

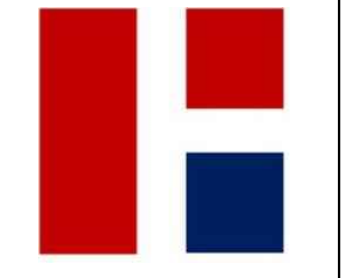
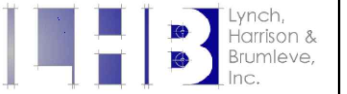
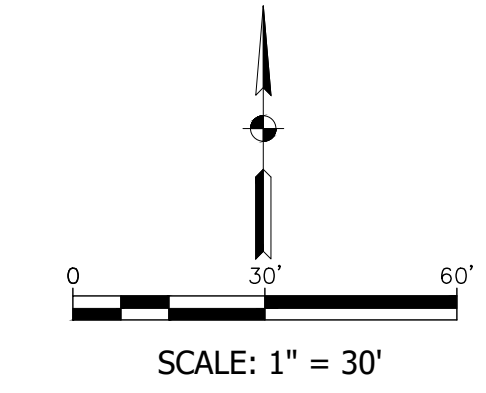
- WHERE GRADE MODIFICATIONS (CUT OR FILL) ARE SHOWN ADJACENT TO EXISTING VALVE BOX COVERS AND MANHOLE CASTINGS, THE VALVE BOX COVERS AND MANHOLE CASTINGS SHALL BE ADJUSTED FLUSH WITH THE PROPOSED GRADE.
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- CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR SITE LIGHTING PER SITE LIGHTING PLAN (BY OTHERS).
- CONTRACTOR TO PROVIDE AND INSTALL CONDUIT FOR IRRIGATION PER IRRIGATION PLAN (BY OTHERS).
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GRADING PLAN LEGEND

LINE TYPE / SYMBOL	DESCRIPTION	LINE TYPE / SYMBOL	DESCRIPTION
---	MATCH EXISTING	---	FINISHED FLOOR ELEVATION HIGH POINT
---	PAVEMENT SPOT GRADE	---	LOW POINT
---	PAVEMENT SPOT GRADE HIGH POINT	---	INTERMEDIATE CONTOUR
---	TOP OF CURB AND BOTTOM OF CURB	---	INDEX CONTOUR
---	TOP OF CURB AND BOTTOM OF CURB HIGH POINT	---	GRADE BREAK
---	TOP OF CURB AND BOTTOM OF CURB MATCH EXISTING FLOW DIRECTION W/ GRADE	---	EXISTING INTERMEDIATE CONTOUR
---		---	EXISTING INDEX CONTOUR

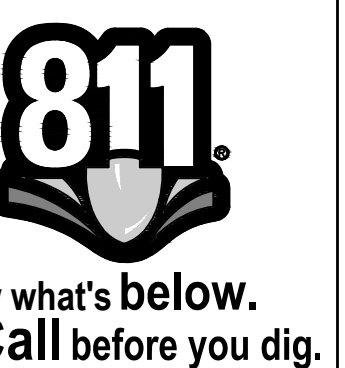
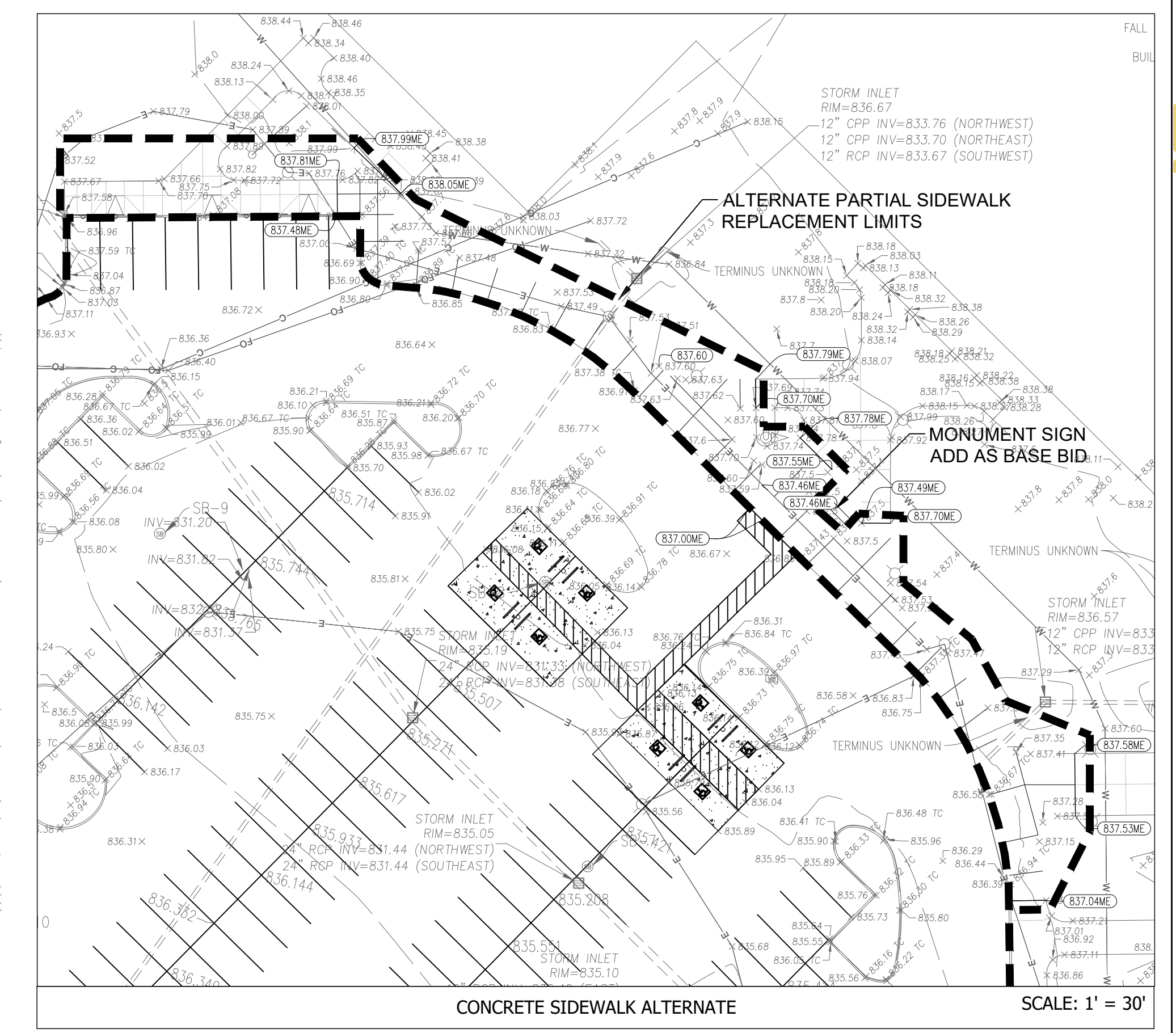
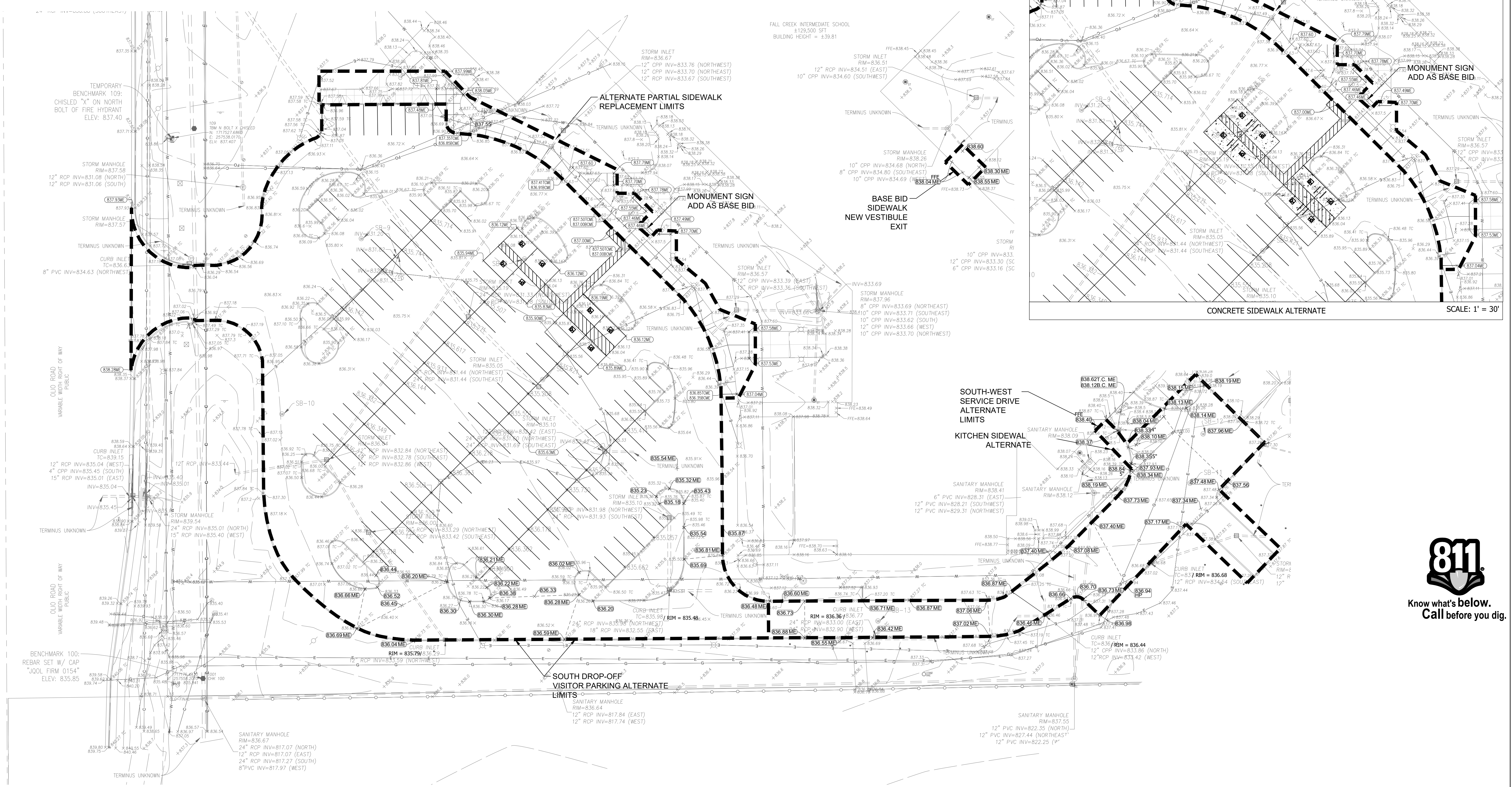
GRADING NOTES

- TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO RECEIVE PAVING AND FROM WITHIN THE LIMITS OF PROPOSED BUILDINGS AND STRUCTURES. TOPSOIL SHALL BE STRIPPED TO THE DEPTH SHOWN IN THE GEOTECHNICAL REPORT, OR TO A DEPTH OF 6 INCHES, WHICHEVER IS GREATER.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED OR SOILED UNLESS OTHERWISE SHOWN.
- FINAL GRADES AT THE PROJECT BOUNDARY SHALL MATCH EXISTING ELEVATIONS UNLESS OTHERWISE SHOWN.

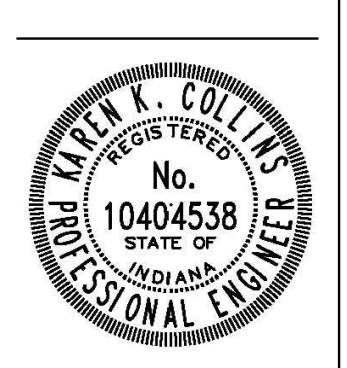


REVISIONS

ADDENDUM #1	07.29.24
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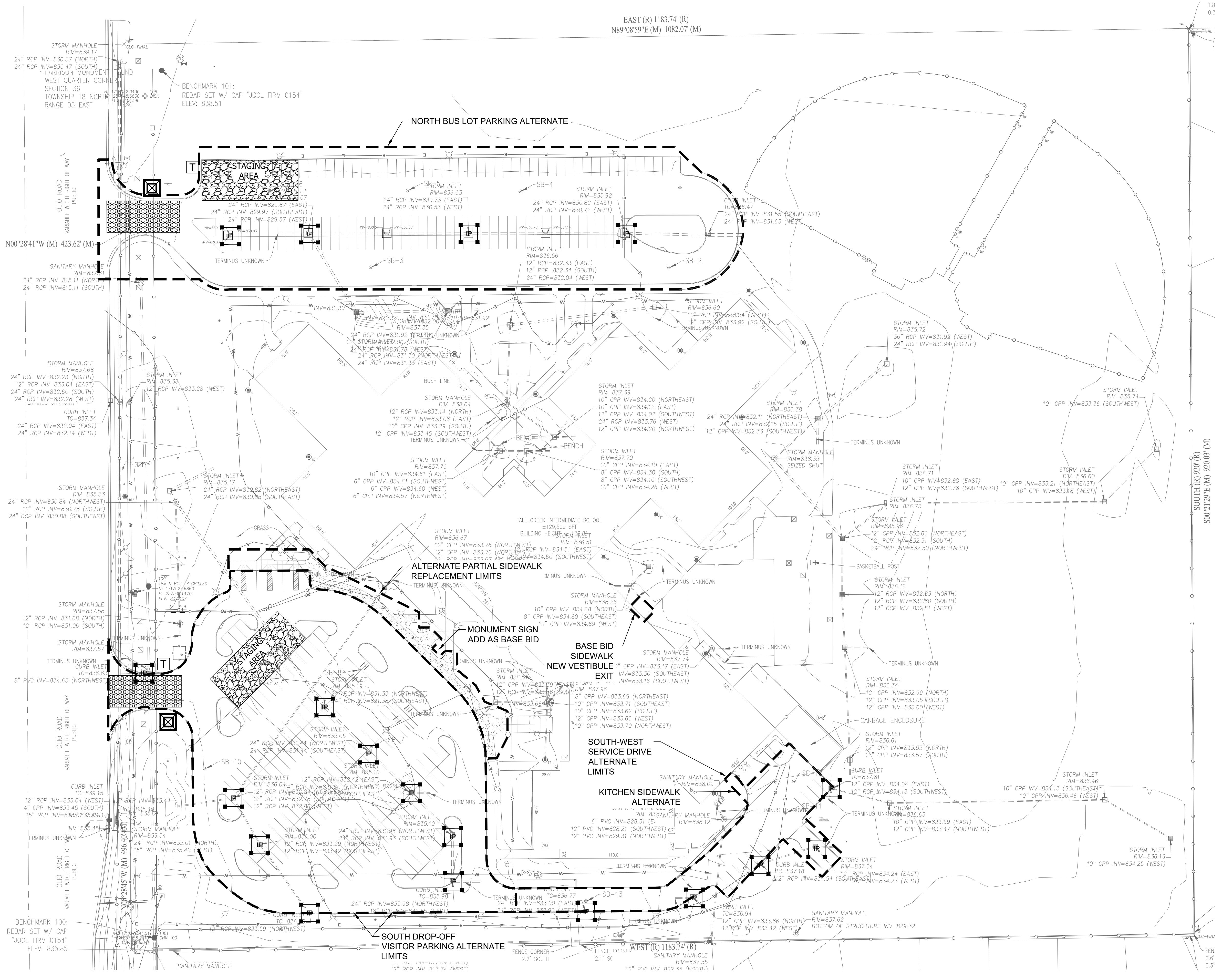
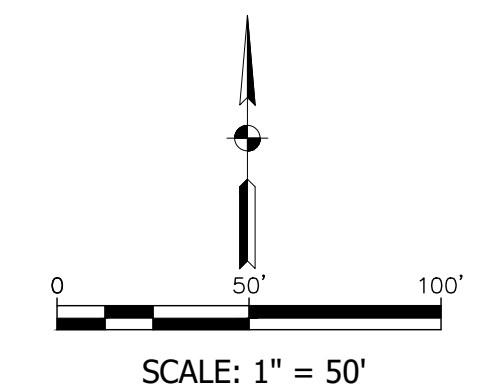


07.12.24
 HAMILTON SOUTHEASTERN SCHOOLS
 20055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Old Rd. Fishers, IN 46037
 CONSTRUCTION DOCUMENTS
 SET TO BE PRINTED IN COLOR



CONSTRUCTION DOCUMENTS 07.12.24
 kM JOB NO. Z3055
 DRAWN BY AS&F
 DRAWING NAME
GRADING & UTILITY PLAN
 DRAWING NO.
C302

Z:\2024\24007-km ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\DWG\C301 GRADING & UTILITY PLAN.DWG plotted by NICHOLAS MACK on 7/26/2024 11:44:18 AM last saved by SPOURKE on 7/25/2024 4:45:06 PM
 XREF: 24007 BASE TYPING & 24007 BASE SIDEWALK & 24007 TIL BLOCKING



- EROSION CONTROL NOTES**
- UNLESS OTHERWISE SHOWN, TEMPORARY CONTROL MEASURES SHALL BE REMOVED UPON SATISFACTORY ESTABLISHMENT OF PERMANENT VEGETATION.
 - SEE SHEET C403 FOR DETAILS AND SPECIFICATIONS REFERENCED ON THIS SHEET.
 - IN ADDITION TO THE MAINTENANCE REQUIREMENTS IDENTIFIED FOR INDIVIDUAL MEASURES, ALL EROSION CONTROL MEASURES INSTALLED UNDER THIS PROJECT SHALL BE INSPECTED WEEKLY TO ENSURE THEY ARE FUNCTIONING PROPERLY. MEASURES FOUND TO BE DEFICIENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY THEREAFTER.
 - THE CONTRACTOR SHALL MAINTAIN A STABLE CONSTRUCTION ENTRANCE AT ALL TIMES AND SHALL MAKE EFFORTS TO MINIMIZE THE ACCUMULATION OF SOIL, MUD AND DEBRIS ON ADJOINING ROADWAYS.
 - SYMBOLS FOR INLET PROTECTION MEASURES ARE SHOWN LARGER THAN ACTUAL SIZE.
 - ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.
 - PORTABLE TOILETS SHALL BE ANCHORED TO THE GROUND TO PREVENT TIPPING AND SPILLS.

EROSION CONTROL LEGEND

LINE TYPE / SYMBOL	DESCRIPTION	LINE TYPE / SYMBOL	DESCRIPTION
	TEMPORARY CONSTRUCTION ENTRANCE 6 INCHES OF 2"-3" COARSE AGGREGATE (20'W x 50'L) Minimum		TEMPORARY INLET PROTECTION
	STAGING AREA		
	CONCRETE WASHOUT		
	TEMP RESTROOM		

PEDESTRIAN SAFETY NOTES

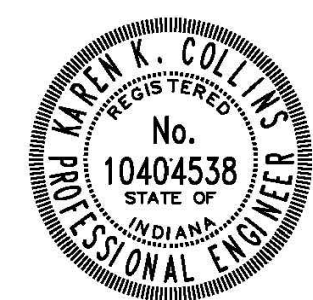
THE CONTRACTOR SHALL ENSURE THE SAFETY OF STUDENTS, STAFF, VISITORS AND PEDESTRIANS AT ALL TIMES. IF NECESSARY, ORANGE SAFETY FENCE & BARRELS SHALL BE EMPLOYED TO KEEP BY STANDARDS AWAY FROM CONSTRUCTION AREAS.

- PRE-CONSTRUCTION SEQUENCING NOTES**
- INSTALL CONSTRUCTION ENTRANCE, INLET PROTECTION AND CONCRETE WASHOUT AS SHOWN ON THE PLANS.
 - INSTALL PORT-A-LET, AND COVERED CONSTRUCTION DUMPSTER.
 - PERFORM REQUIRED SITE DEMOLITION AND CLEARING.
 - STRIP TOPSOIL AND STORE OFFSITE.
 - MAINTAIN ALL INLET PROTECTION, AND SILT FENCING ON THE SITE PROJECT BY CLEANING OUT EVERY WEEK AND AFTER EVERY RAIN EVENT OF 1/2" OR GREATER DEPTH.
 - ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

THERE SHALL BE NO DIRT, DEBRIS, OR STORAGE OF MATERIAL IN THE STREET

ADJACENT ROADS MUST BE SWEEP DAILY

07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
20555 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Old Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR



Karen Collins

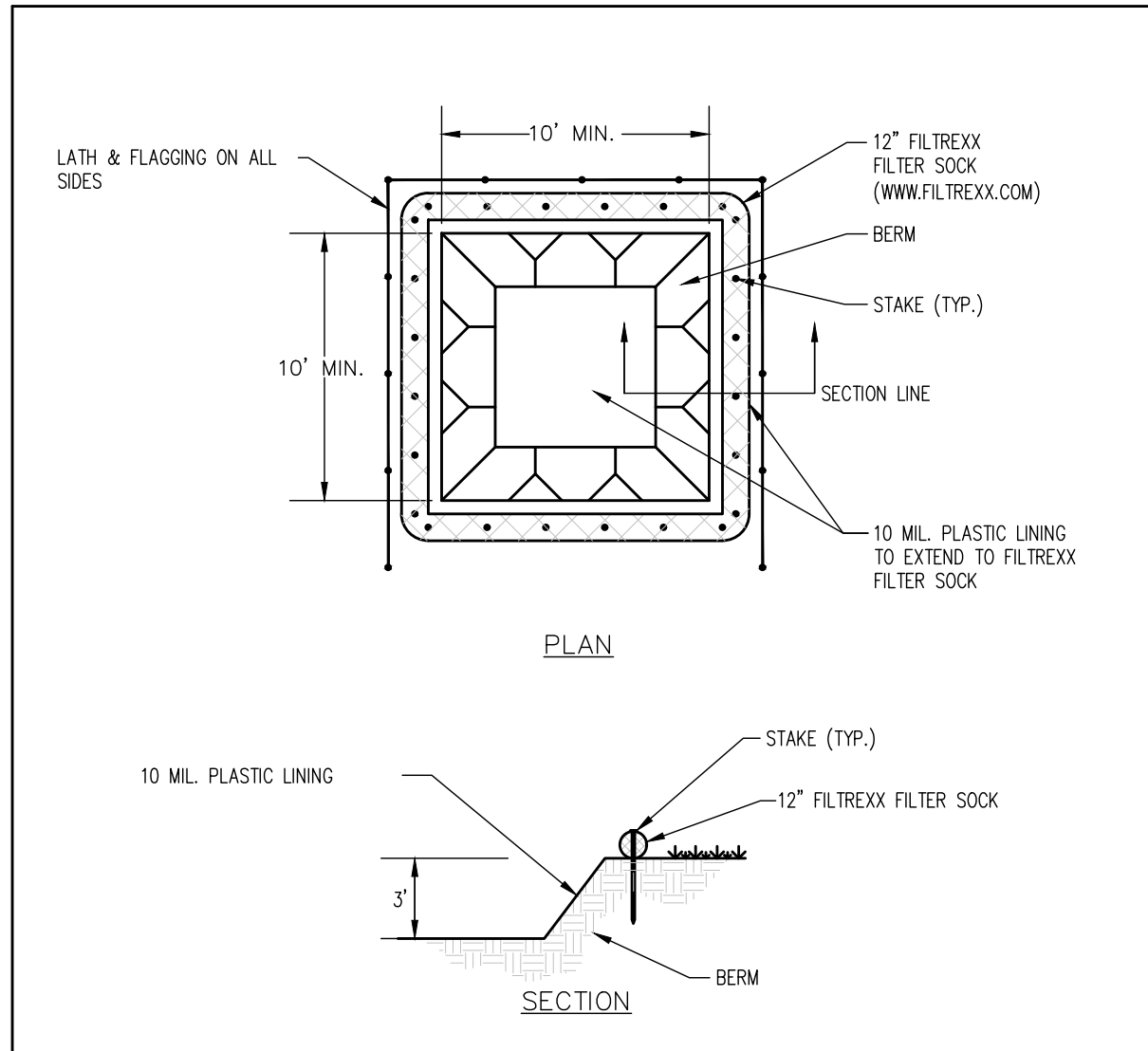
CONSTRUCTION DOCUMENTS
07.12.24
kM JOB NO.
23055
DRAWN BY
A&F

DRAWING NAME
SWPPP PLAN (INITIAL)

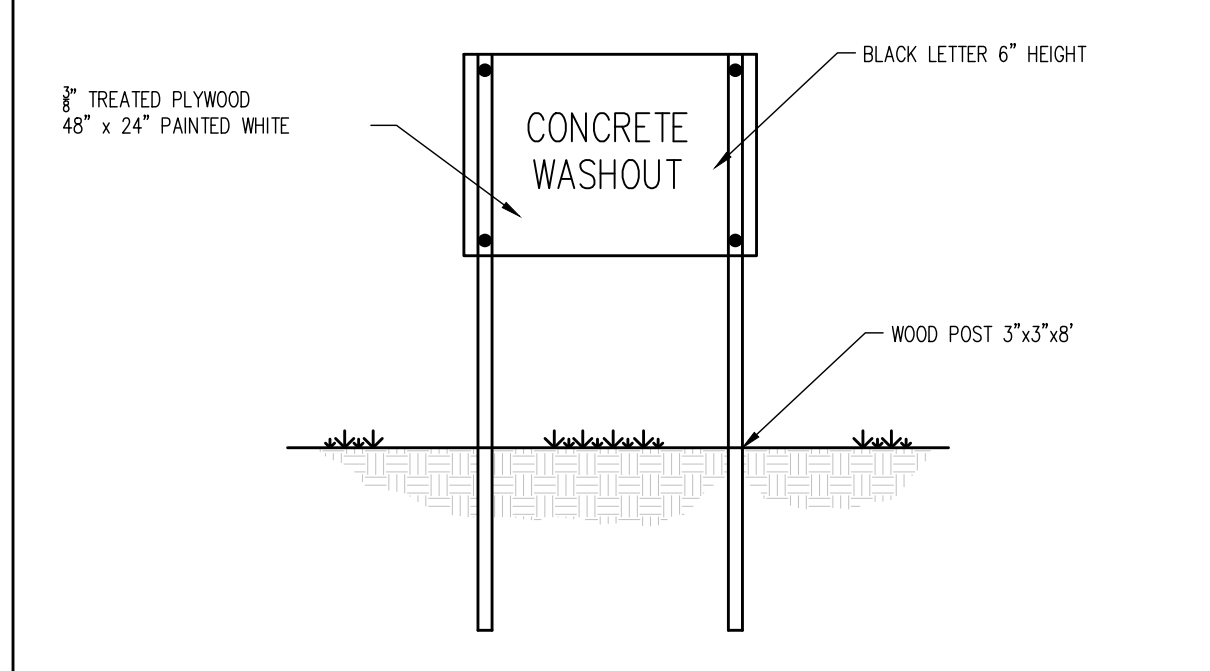


DRAWING NO.
C401

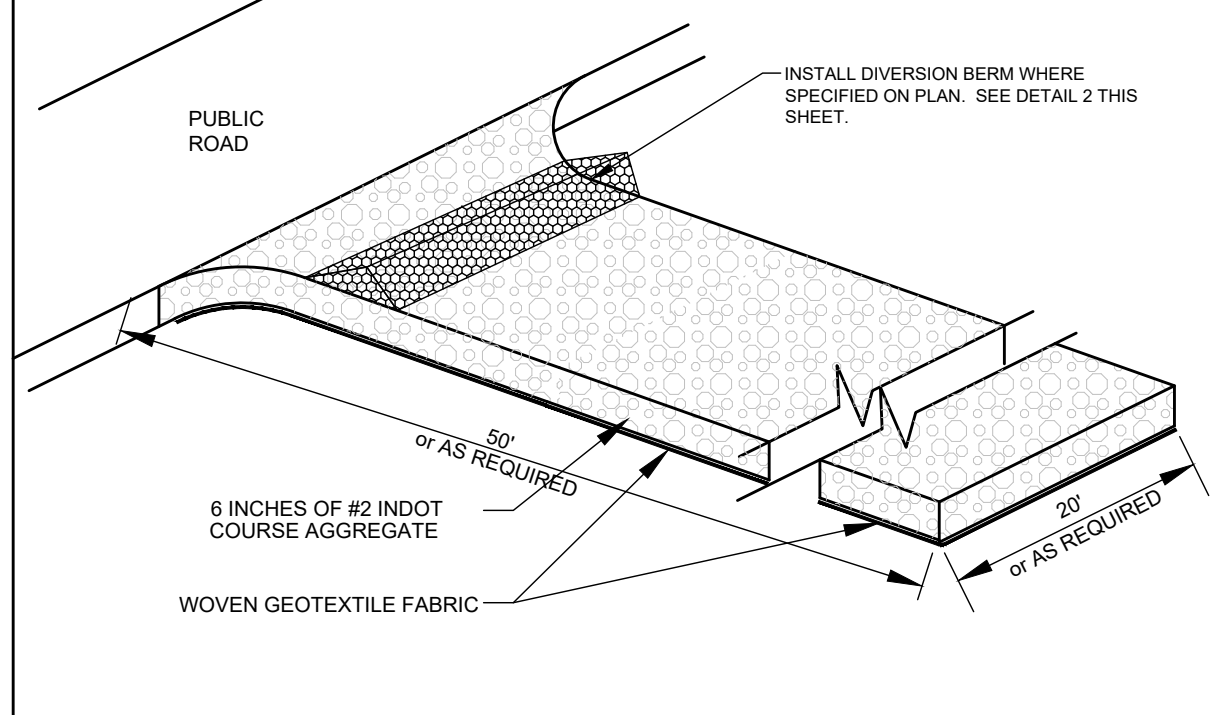
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Xref: 24007_BISE_Topline & Xref: 24007_BISE_Blocking



NOTE:
 1. WASHOUT LOCATION SHOWN ON EROSION CONTROL PLAN.
 2. DRY CONCRETE TO BE REMOVED FROM SITE PERIODICALLY AND DISPOSED OF BY APPROVED METHODS.
 3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30FT. OF THE TEMP. CONCRETE WASHOUT FACILITY.

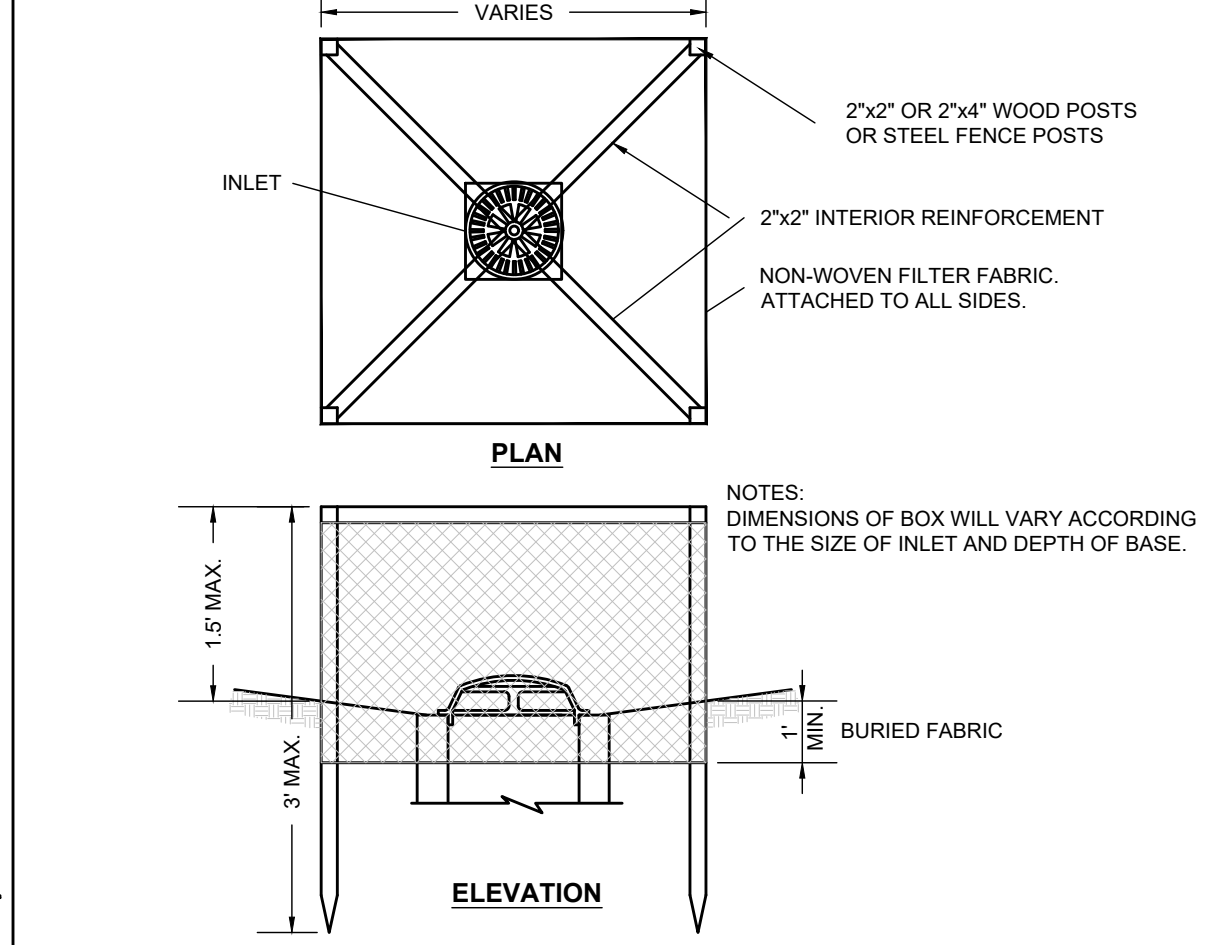


1 CONCRETE WASHOUT
SCALE: NONE

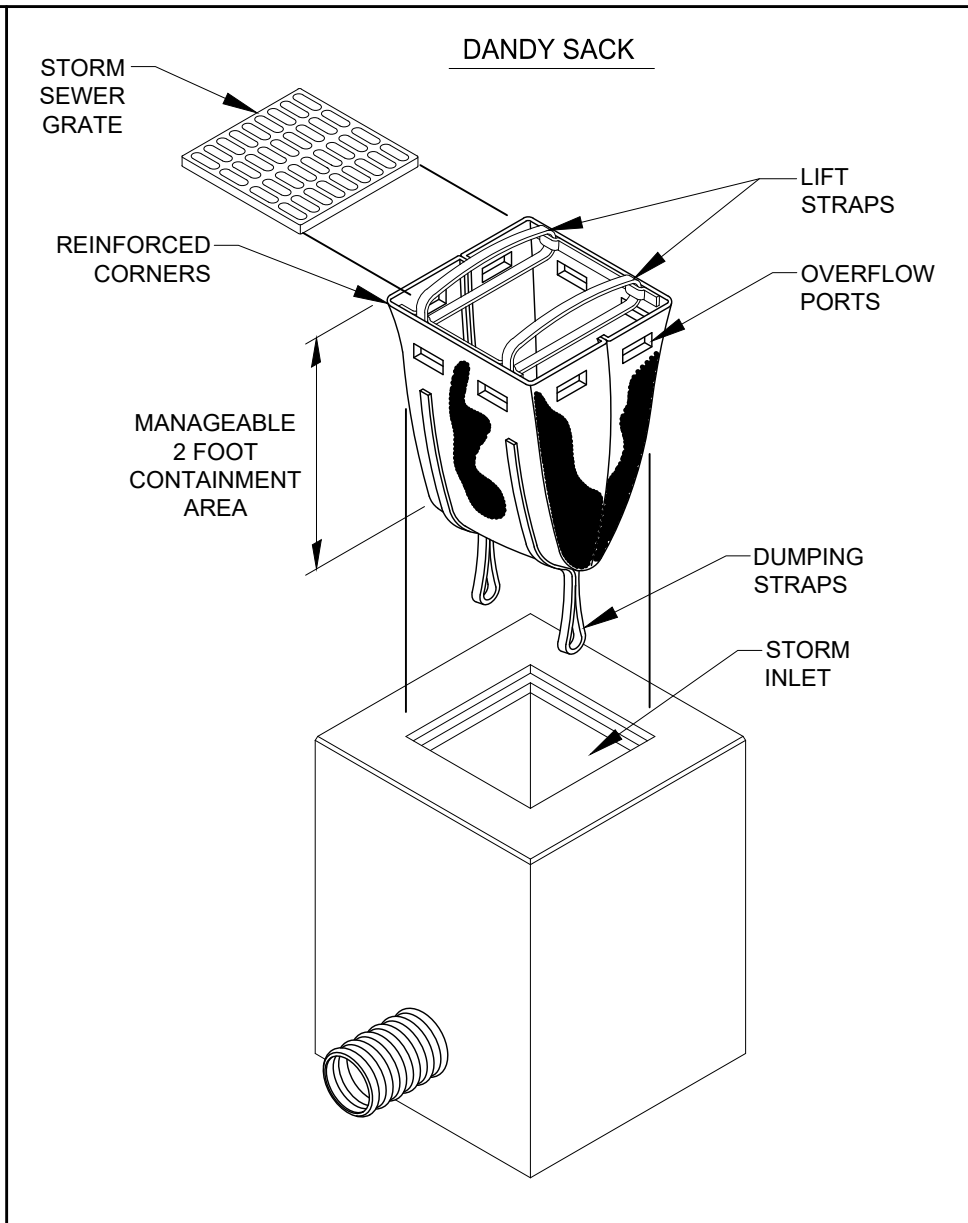


MAINTENANCE REQUIREMENTS
 1. INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY, AFTER STORM EVENTS, AND/OR HEAVY USE.
 2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
 3. TOPDRESS WITH CLEAN STONE AS NEEDED.
 4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSH ONLY IF WATER IS CONVEYED TO A SEDIMENT TRAP OR BASIN.
 5. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

2 TEMPORARY CONSTRUCTION ENTRANCE
SCALE: NONE



3 FABRIC DROP INLET PROTECTION
SCALE: NONE



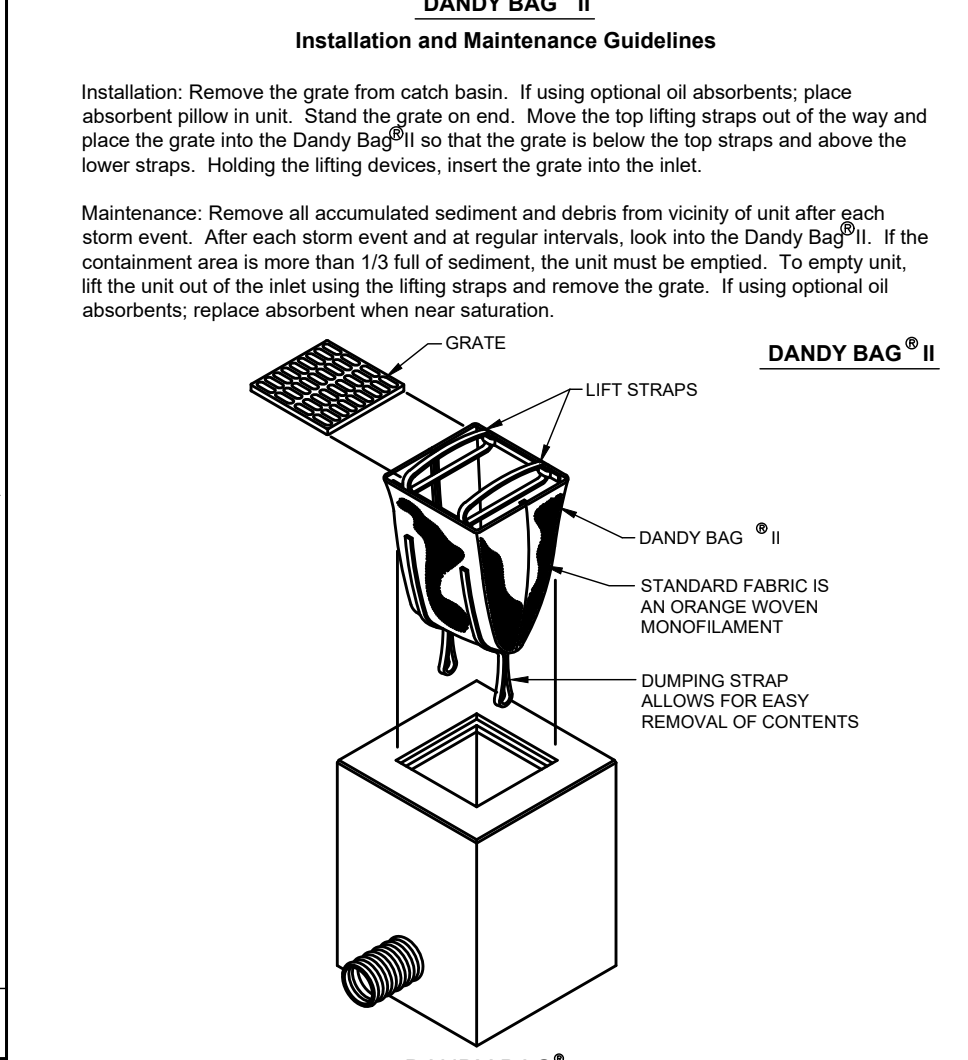
NOTE: THE DANDY SACK™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY SACK™ (BLACK)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4632	kN (lbf)	1.78 (400) x 1.40 (315)	
Grab Tensile Elongation	ASTM D 4632	%	15 x 15	
Puncture Strength	ASTM D 4833	kN (lbf)	0.67 (150)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5500 (800)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.67 (150) x 0.75 (165)	
UV Resistance	ASTM D 4355	%	90	
Apparent Opening Size	ASTM D 4751	Mm (US Std. Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m ² (gpd/min/ft ²)	2852 (70)	
Permeability	ASTM D 4491	sec.	0.90	

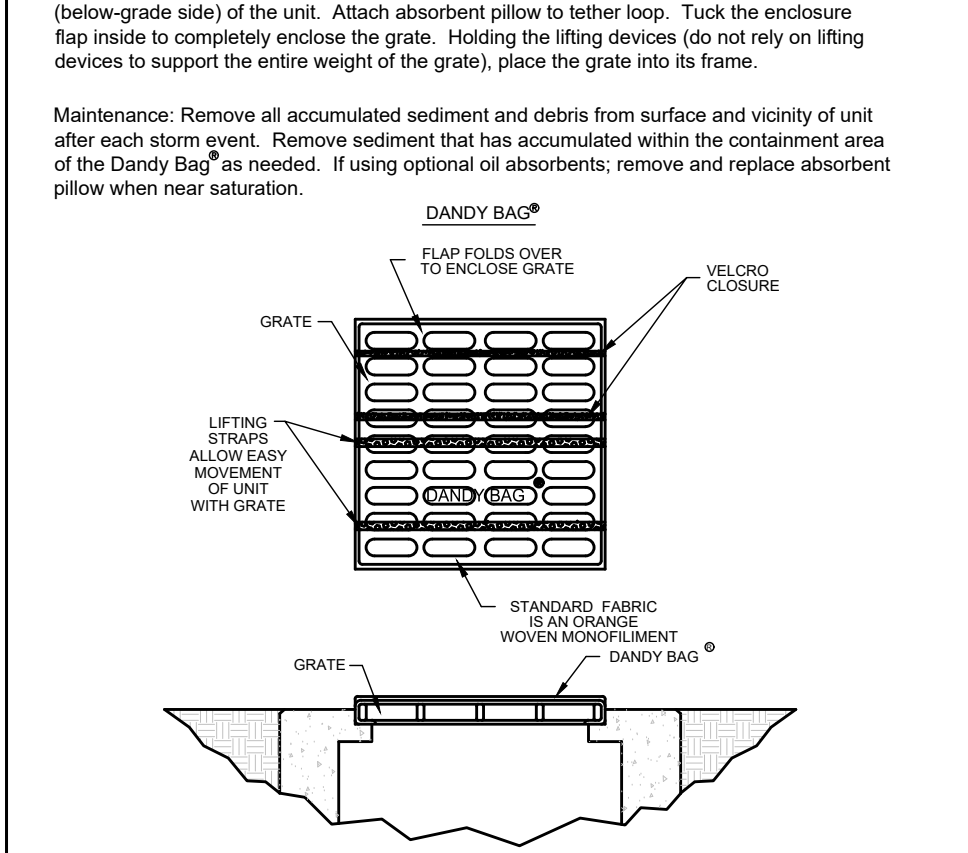
HI-FLOW DANDY SACK™ (SAFETY ORANGE)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4632	kN (lbf)	1.62 (365) x 0.89 (200)	
Grab Tensile Elongation	ASTM D 4632	%	24 x 10	
Puncture Strength	ASTM D 4833	kN (lbf)	0.40 (90)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.51 (115) x 0.33 (75)	
UV Resistance	ASTM D 4355	%	90	
Apparent Opening Size	ASTM D 4751	Mm (US Std. Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m ² (gpd/min/ft ²)	5907 (145)	
Permeability	ASTM D 4491	sec.	2.1	

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows.

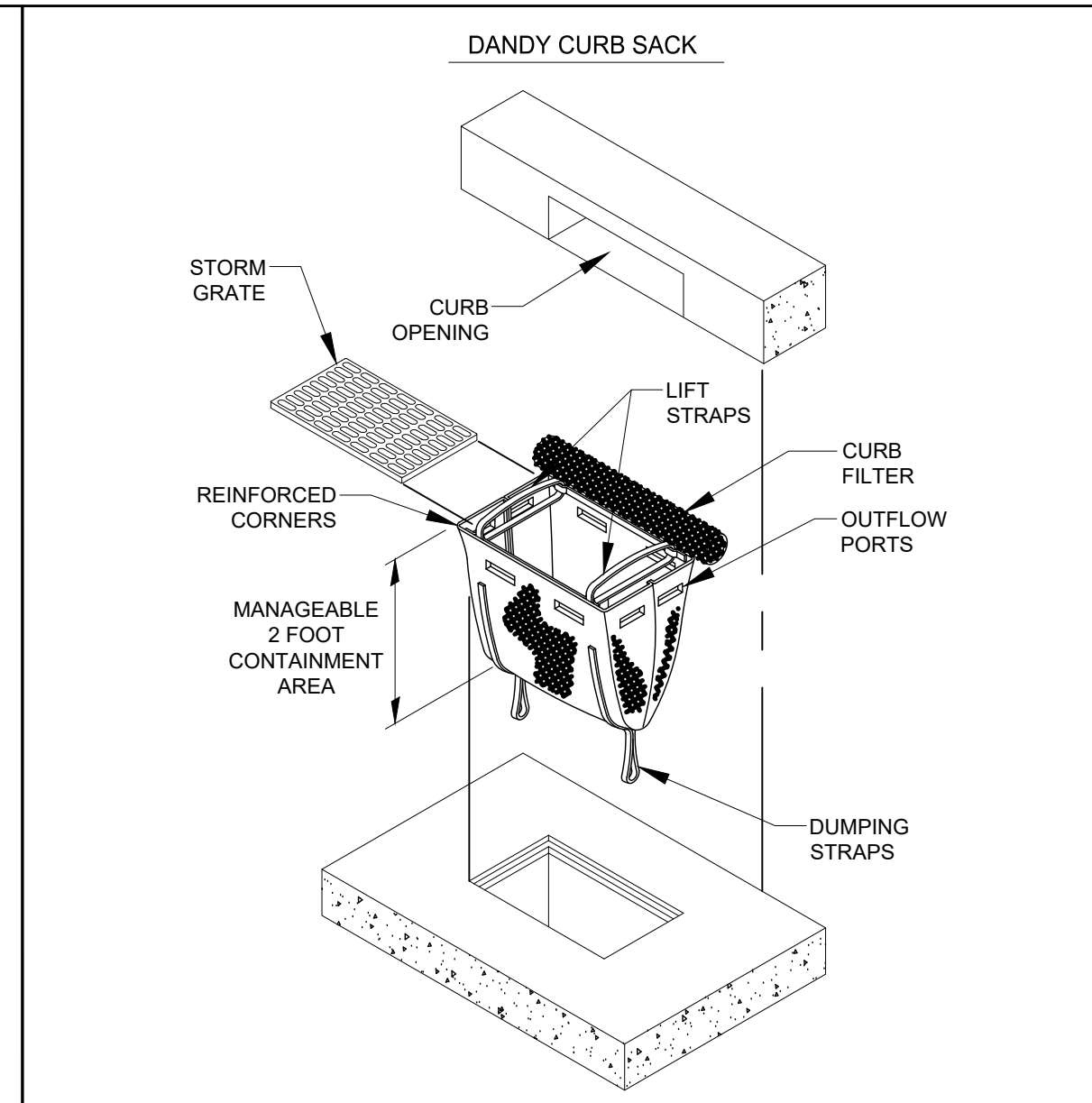
4 DROP INLET DANDY BAG PROTECTION
SCALE: NONE



5 DANDY BAG DETAILS
SCALE: NONE



5 DANDY BAG DETAILS
SCALE: NONE



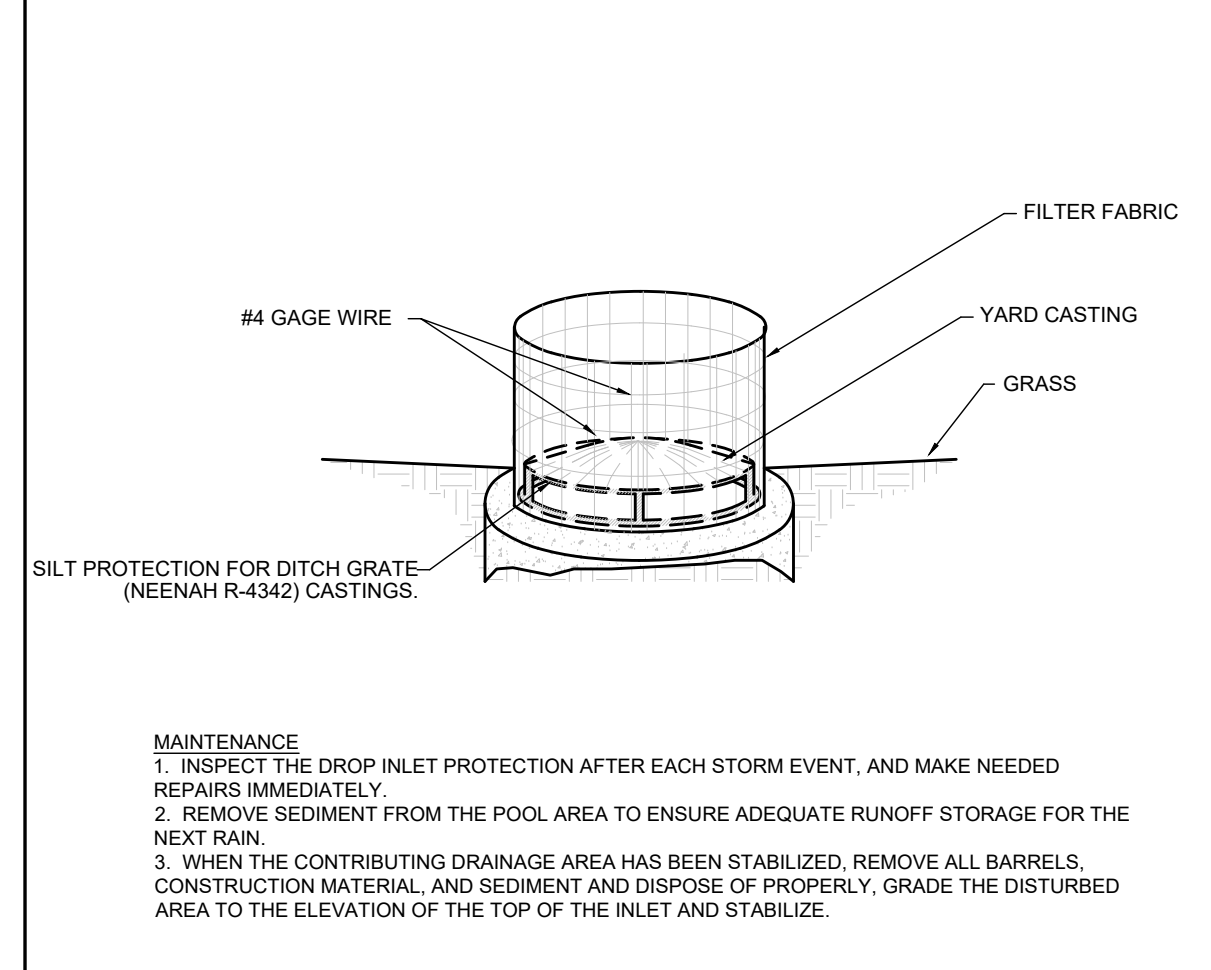
NOTE: THE DANDY CURB SACK™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY CURB SACK™ (BLACK)				
Mechanical Properties	Test Method	Units	MARV	
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Grab Tensile Elongation	ASTM D 4632	%	15 x 15	
Puncture Strength	ASTM D 4833	kN (lbf)	0.67 (150)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5500 (800)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.67 (150) x 0.75 (165)	
UV Resistance	ASTM D 4355	%	90	
Apparent Opening Size	ASTM D 4751	Mm (US Std. Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m ² (gpd/min/ft ²)	2852 (70)	
Permeability	ASTM D 4491	sec.	0.90	

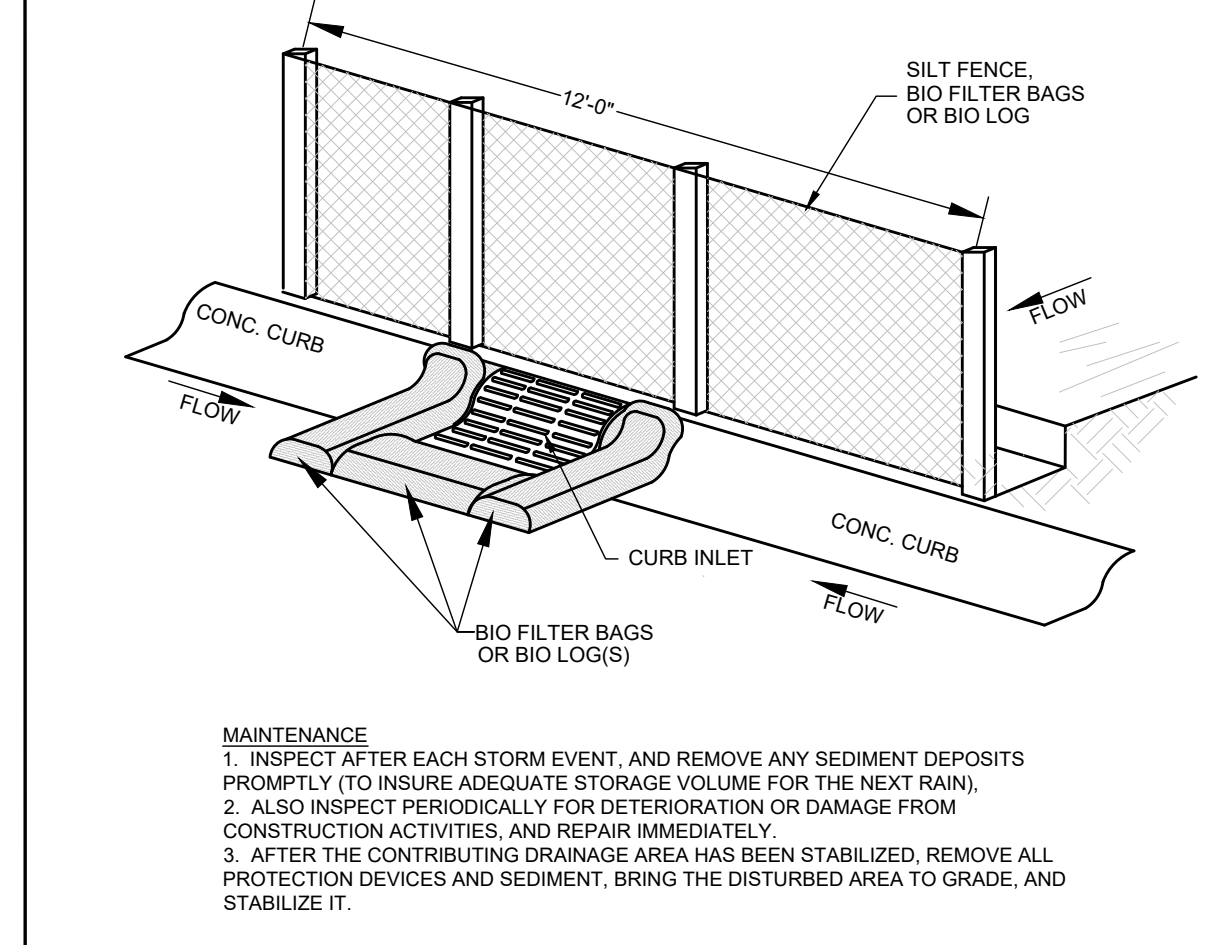
HI-FLOW DANDY CURB SACK™ (SAFETY ORANGE)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4632	kN (lbf)	1.62 (365) x 0.89 (200)	
Grab Tensile Elongation	ASTM D 4632	%	24 x 10	
Puncture Strength	ASTM D 4833	kN (lbf)	0.40 (90)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.51 (115) x 0.33 (75)	
UV Resistance	ASTM D 4355	%	90	
Apparent Opening Size	ASTM D 4751	Mm (US Std. Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m ² (gpd/min/ft ²)	5907 (145)	
Permeability	ASTM D 4491	sec.	2.1	

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows.

6 DROP INLET DANDY BAG PROTECTION WITH CURB FILTER
SCALE: NONE



7 WELDED WIRE INLET PROTECTION
SCALE: NONE



8 CURB INLET PROTECTION
SCALE: NONE

TEMPORARY SEEDING DATES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE												
OATS												
ANNUAL RYEGRASS												

PERMANENT SEEDING DATES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NON-IRRIGATED*												
IRRIGATED												
DORMANT SEEDING**												

IRRIGATION NEEDED DURING THIS PERIOD TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREAS USE MULCH
 * LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED
 ** INCREASE SEEDING APPLICATION BY 50%

TEMPORARY SEEDING RATE			
TYPE OF SEED	1,000 SF	ACRE	REMARKS
WHEAT OR RYE	3.5 LBS.	2 BU.	COVER SEED 1"-1 1/2" DEEP
SPRING OATS	2.3 LBS.	3 BU.	COVER SEED 1" DEEP
ANNUAL RYEGRASS	1 LB.	40 LB.	COVER SEED 1/4" DEEP

PERMANENT SEEDING MIXTURES					
SPECIES	SEEDING RATE		SUITABLE pH	SITE SUITABILITY*	
	LBS/ACRE	LBS/1,000 SF		DROUGHTY	WELL DRAINED
LEVEL AND SLOPING, OPEN AREAS					
1. TALL FESCUE	35	.8	5.5-8.3	2	1 2
2. TALL FESCUE	25	.6	5.5-8.3		1
RED CLOVER	5	.12			
3. KENTUCKY BLUEGRASS	15	.4	5.8-7.5	2	1
CREEPING RED FESCUE	15	.4			
STEEP BANKS AND CUTS					
4. TALL FESCUE	15	.4	5.8-7.5	2	1 2
KENTUCKY BLUEGRASS	25	.6			
5. TALL FESCUE	35	.8	5.5-8.3	2	1
EMERALD CROWNVEETCH**	10	.25			
LAINS AND HIGH MAINTENANCE AREAS					
6. KENTUCKY BLUEGRASS	40	.9	5.8-7.5	2	1
CREEPING RED FESCUE	40	.9			
7. PERENNIAL RYEGRASS	170	4.0	5.0-7.5		1
(TURF TYPE)	170	4.0	5.5-8.3	2	1 2

SEED PREPARATION
 APPLY LIME TO RAISE THE pH TO THE LEVEL NEEDED FOR SPECIES BEING SEED. APPLY 23 POUNDS OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SF (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.

WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-3 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

DO NOT USE PHOSPHOROUS CONTAINING FERTILIZERS (12-12-12) UNLESS SOIL TEST SHOW A DEFICIENCY IN PHOSPHOROUS.

SEEDING
 SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART), WHILE CONSIDERING BEST SEEDING DATES. IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE SEED TOLERANCE CHART.

9 SEASONAL SOIL PROTECTION CHART
SCALE: NONE

Z:\2024\240071-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATIONS\DWG\C-03 SWPPP PLAN (DETAILS).DWG plotted by STEVEN O'ROURKE on 7/25/2024 4:49:49 PM last saved by SOROURKE on 7/25/2024 3:56:04 PM XREF: X_24036 TILE BLOCKING

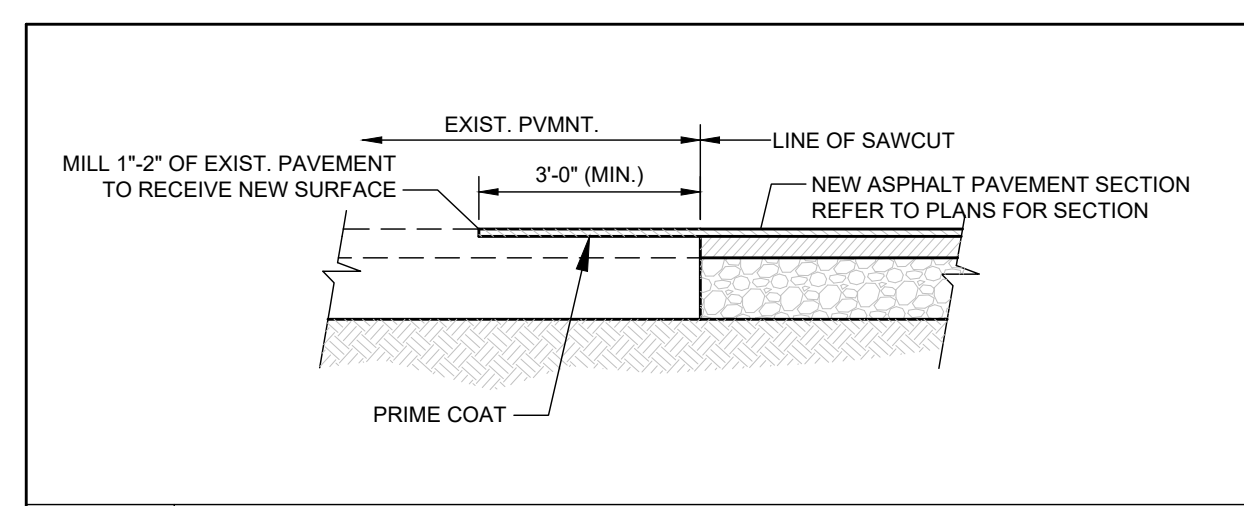
NO.	REVISIONS	DATE
1	ADDENDUM #1	07.29.24

HAMILTON SOUTHEASTERN SCHOOLS
 23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Ohio Rd. Fishers, IN 46037
 CONSTRUCTION DOCUMENTS

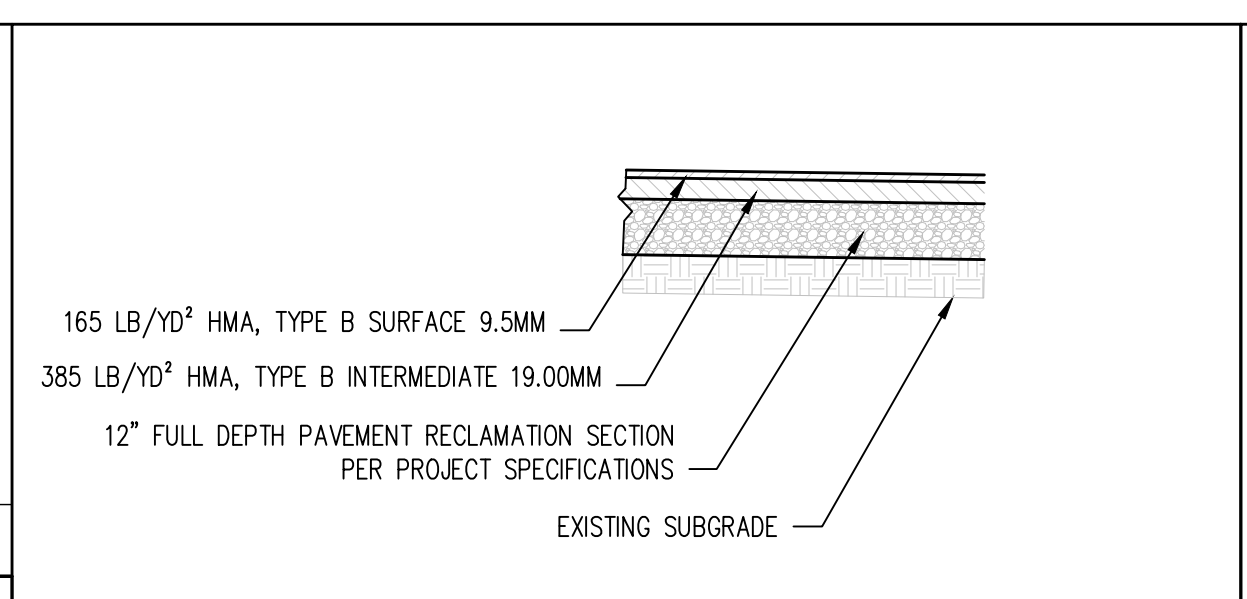
SET TO BE PRINTED IN COLOR

Karen Collins
 CONSTRUCTION DOCUMENTS
 07.12.24
 KRM JOB NO. 23055
 DRAWN BY AEF
 DRAWING NAME SWPPP PLAN (DETAILS)
 C403

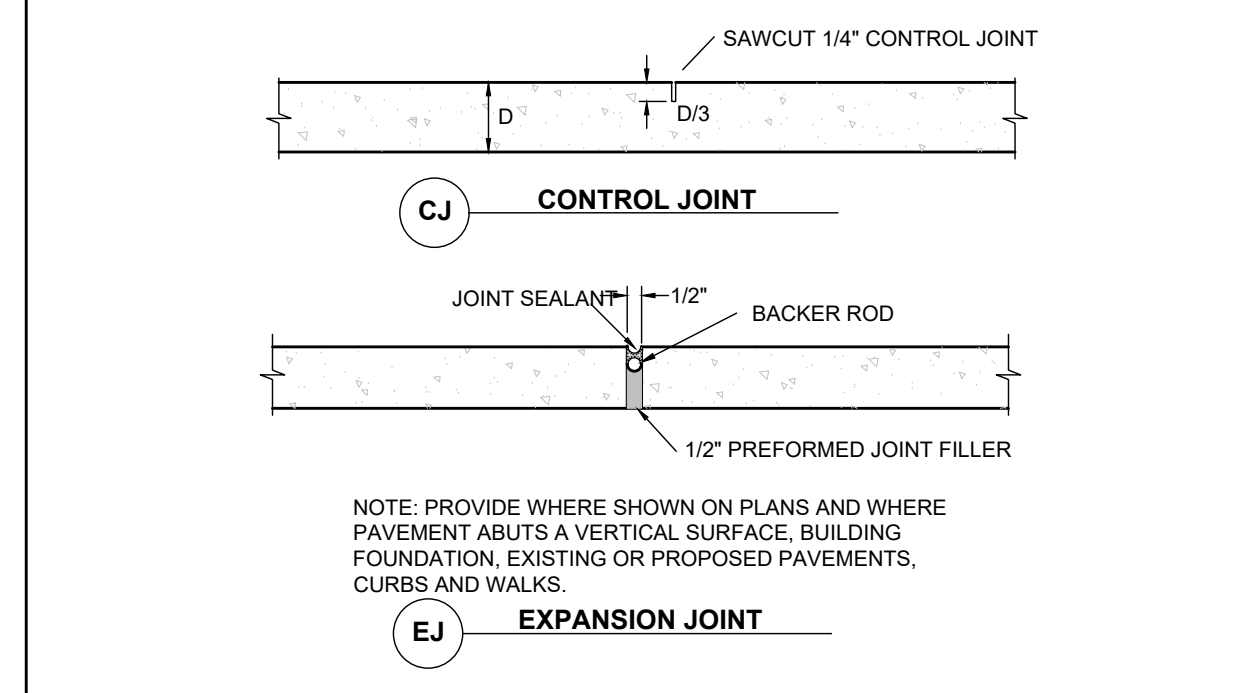
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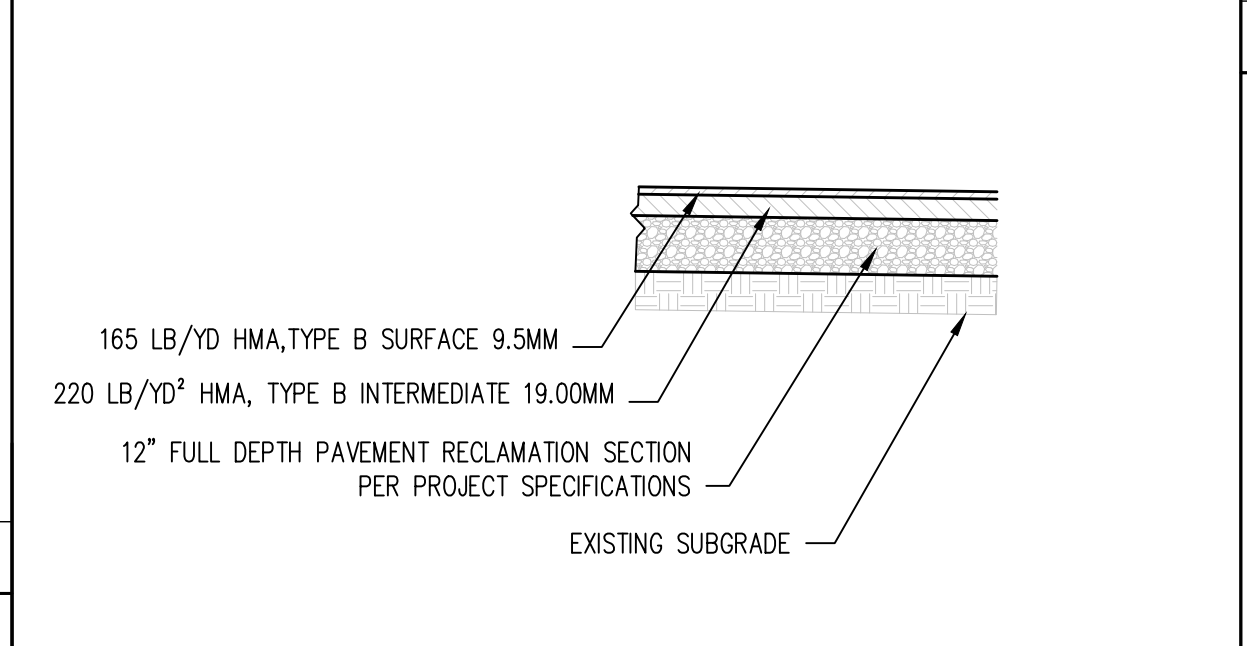
1 NEW PAVEMENT TO EXISTING PAVEMENT DETAIL
SCALE: NONE



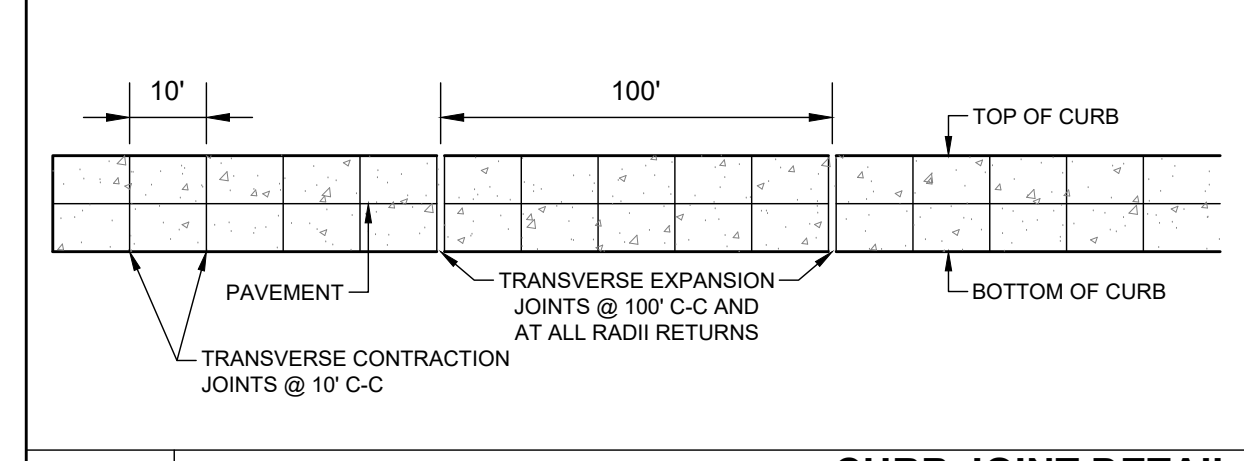
7 FULL DEPTH PAVEMENT RECLAMATION ('FDR') TYPICAL HEAVY DUTY SECTION
SCALE: NONE



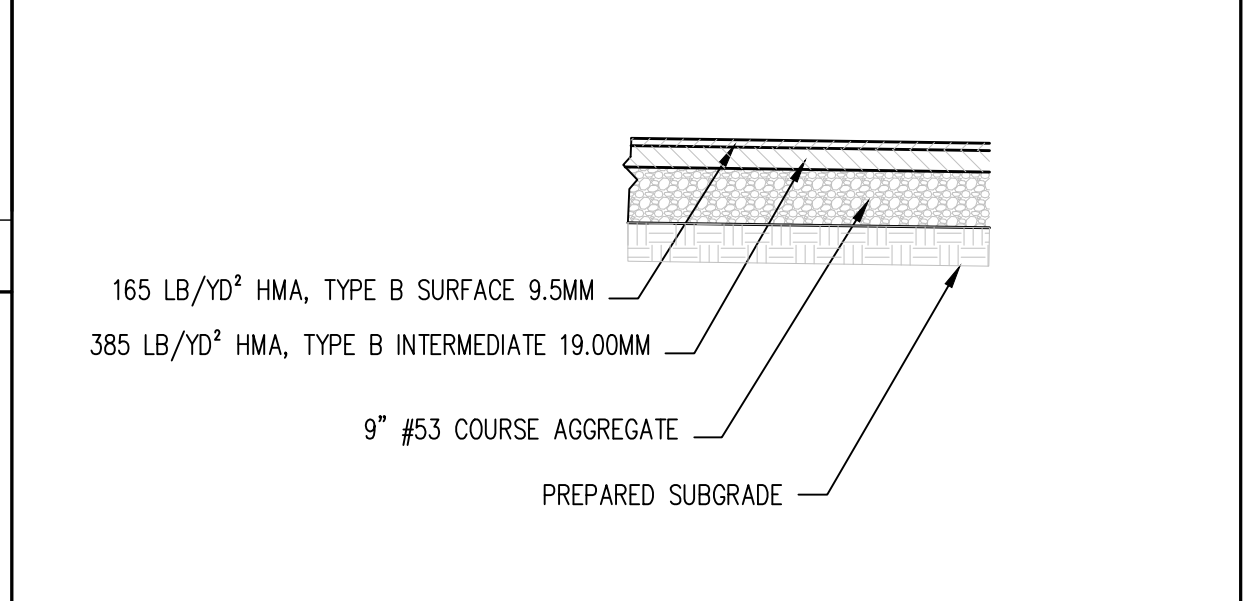
2 CONCRETE JOINT DETAILS
SCALE: NONE



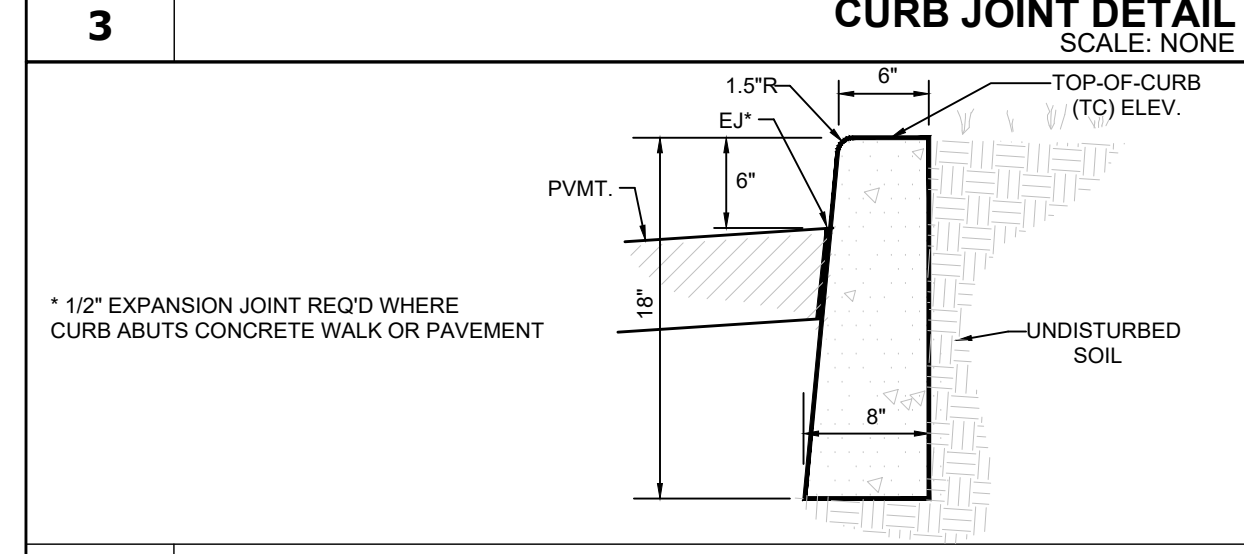
8 FULL DEPTH PAVEMENT RECLAMATION ('FDR') TYPICAL STANDARD SECTION
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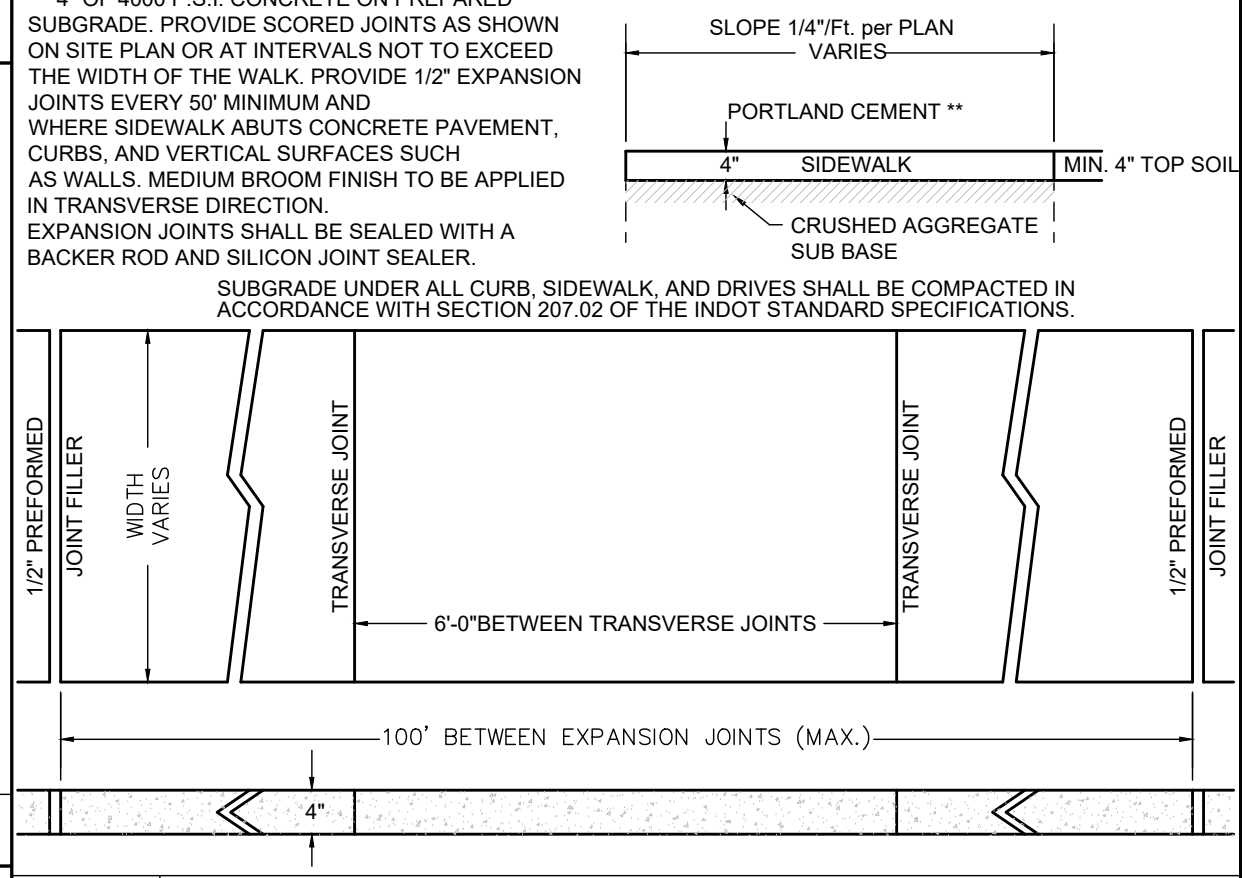
3 CURB JOINT DETAIL
SCALE: NONE



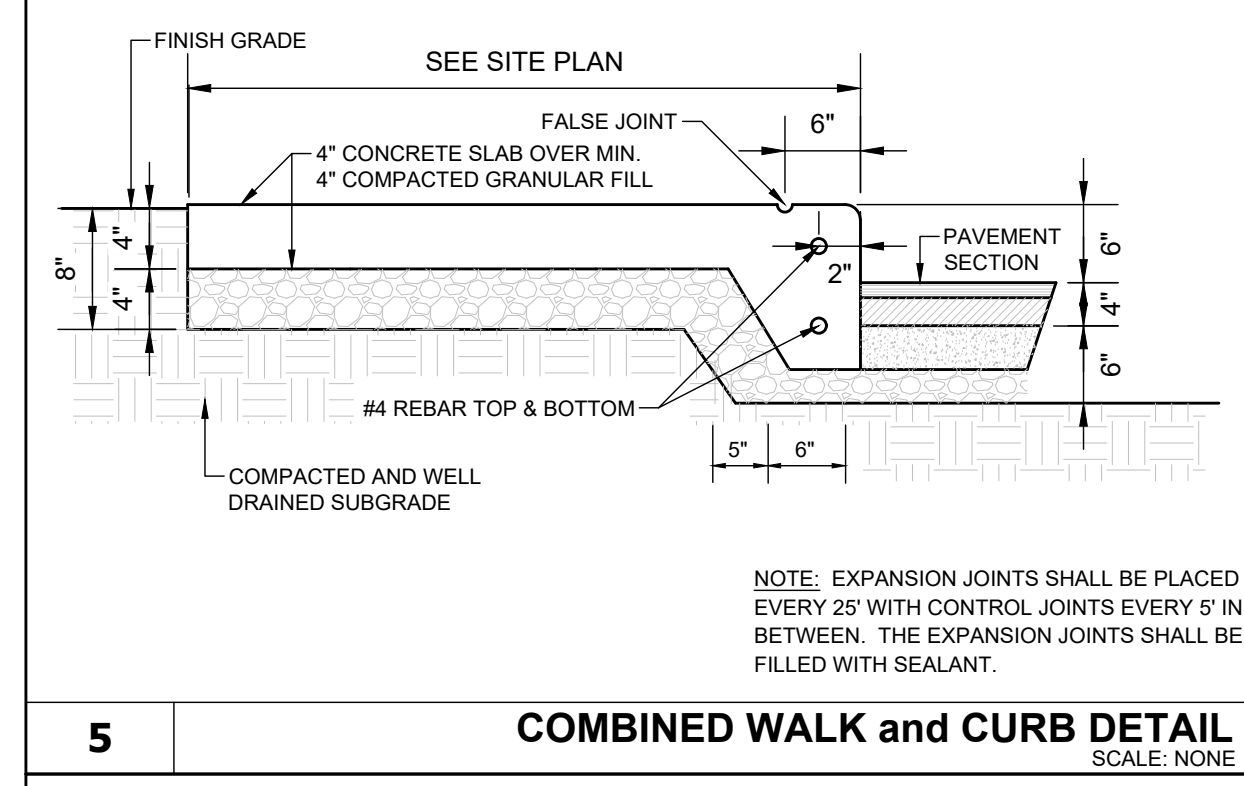
9 FULL DEPTH PAVEMENT REPLACEMENT TYPICAL HEAVY DUTY SECTION
SCALE: NONE



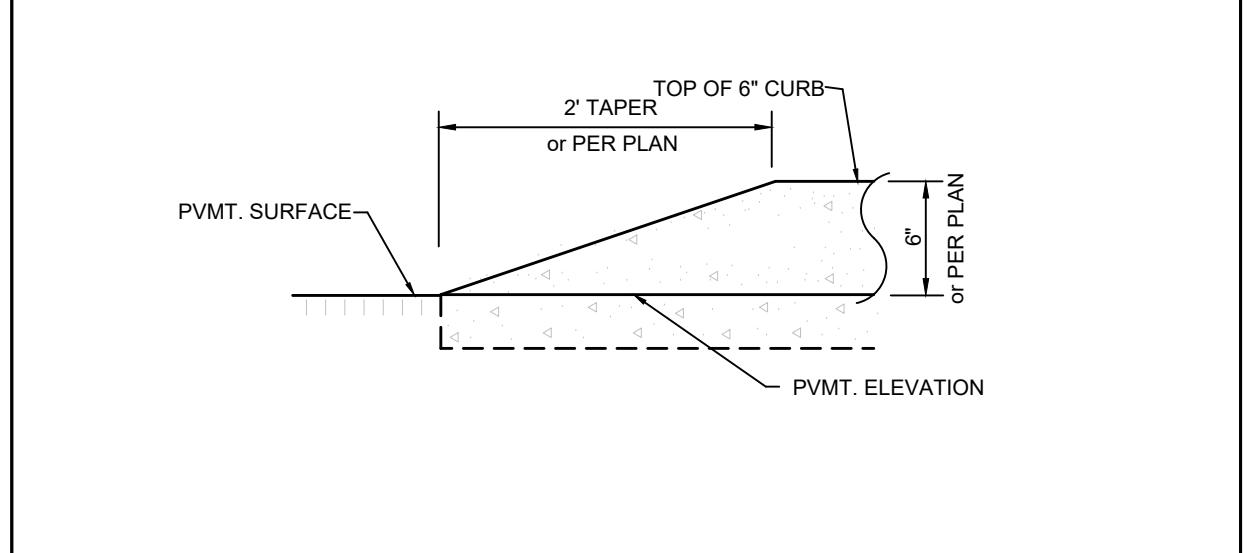
4 CONCRETE CURB
SCALE: NONE



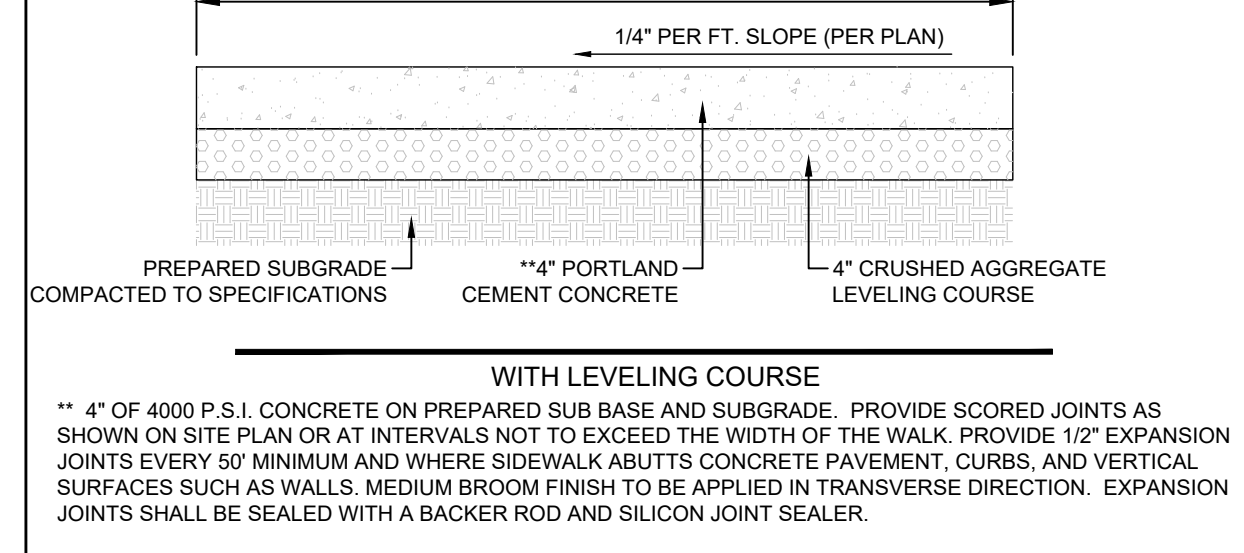
5 COMBINED WALK and CURB DETAIL
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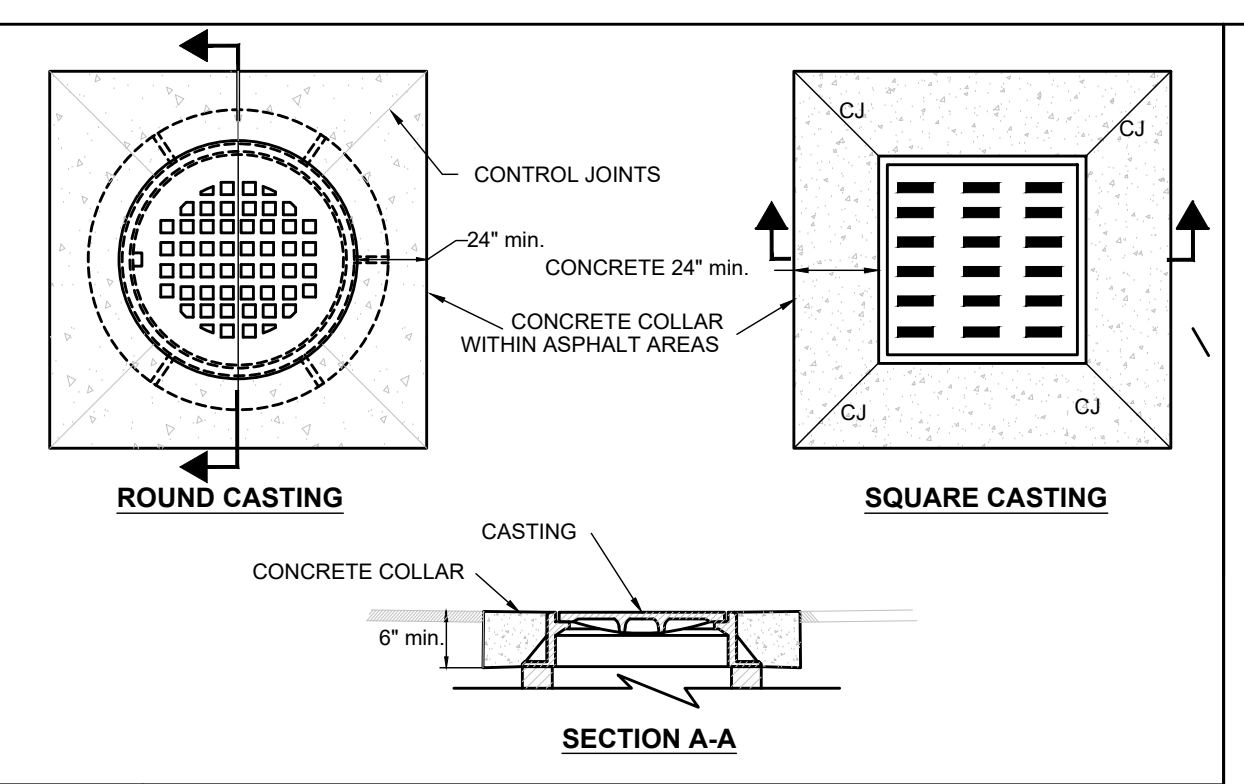
6 CONCRETE WALK
SCALE: NONE



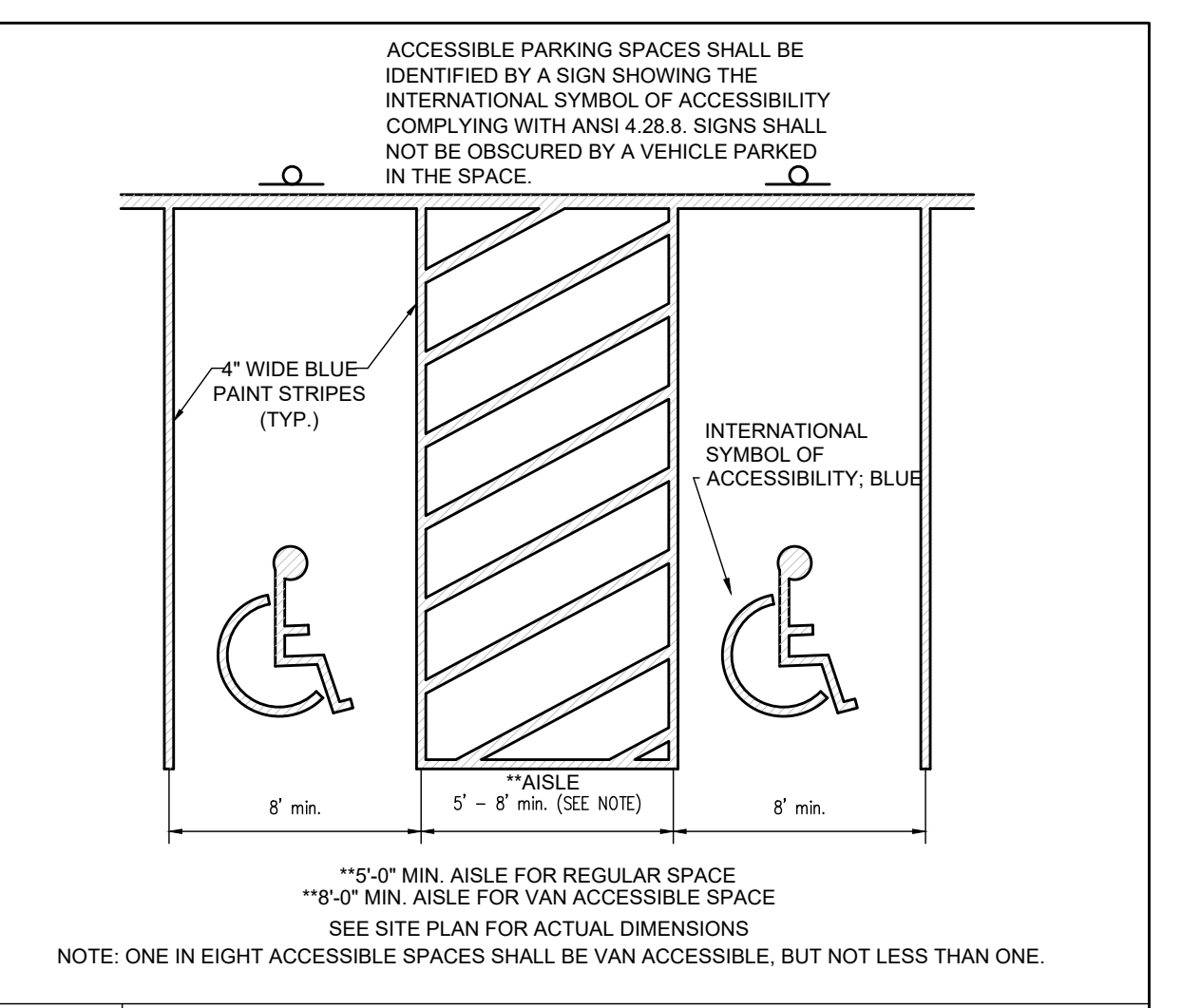
10 CONCRETE SIDEWALK DETAIL
SCALE: NONE



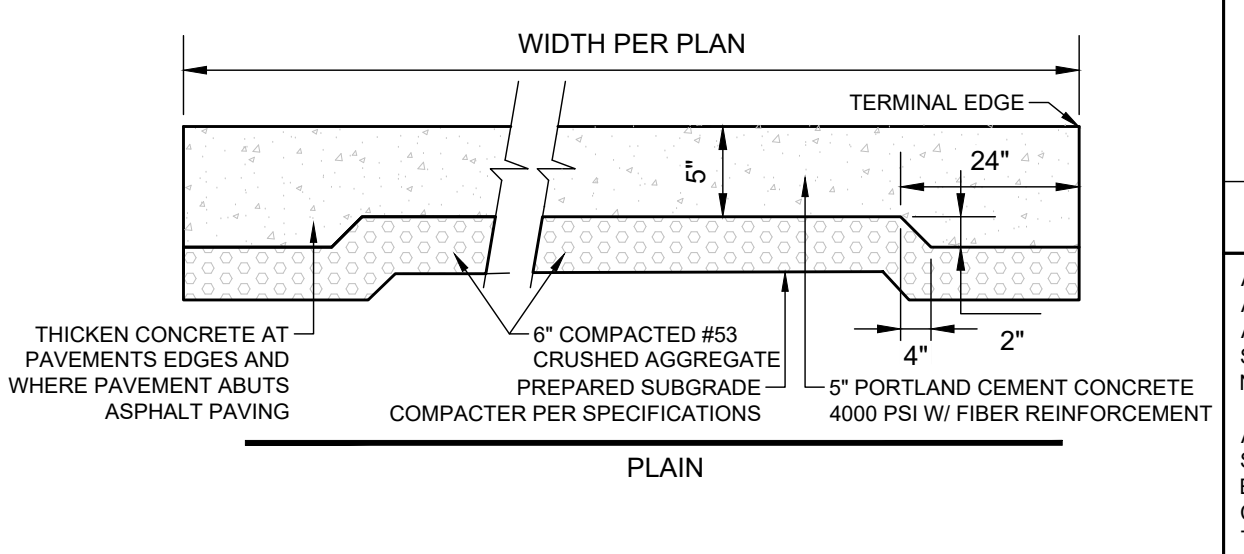
11 2-FOOT CURB TAPER OR END TRANSITION
SCALE: NONE



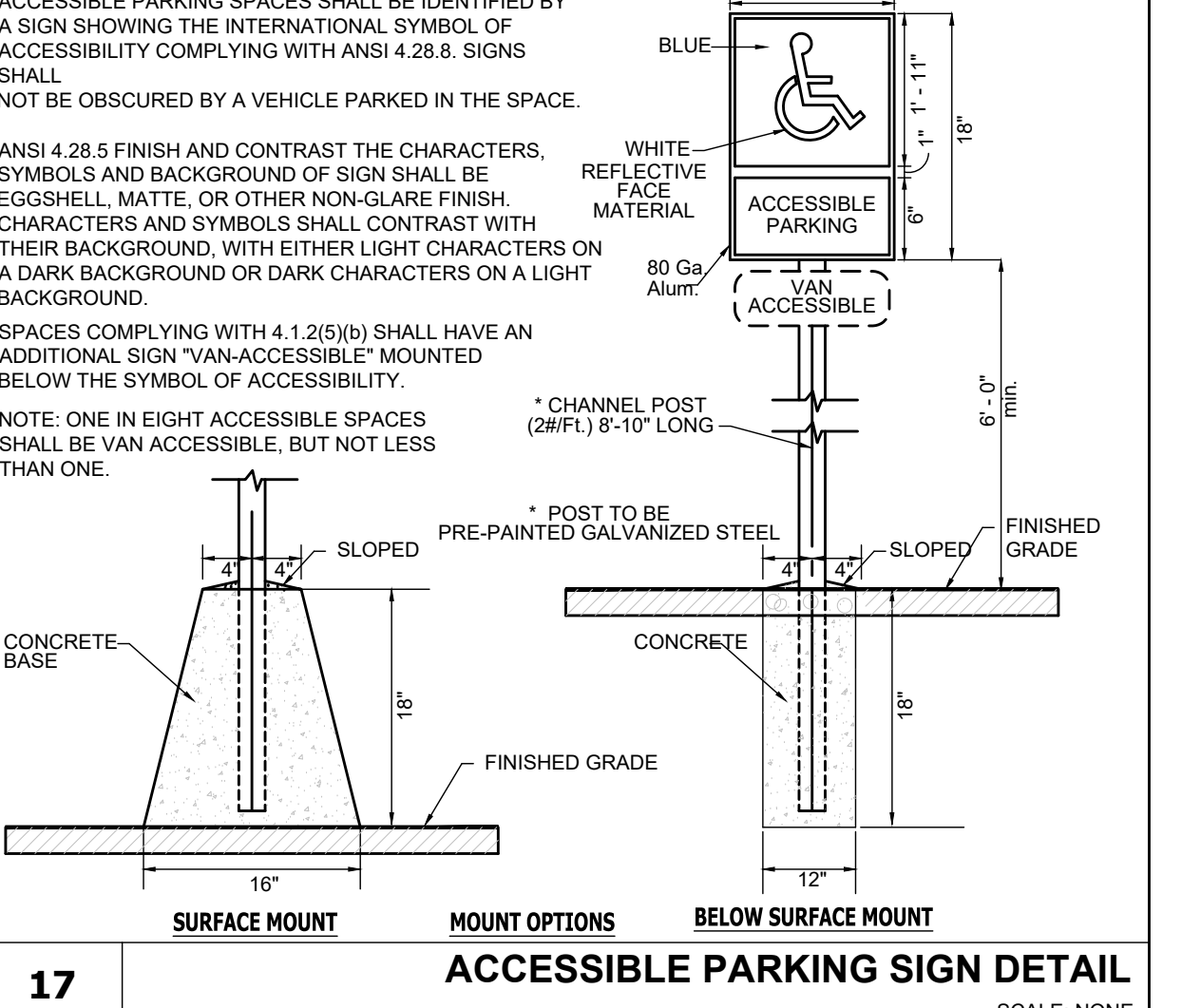
12 CONCRETE COLLAR FOR CASTINGS WITHIN ASPH.
SCALE: NONE



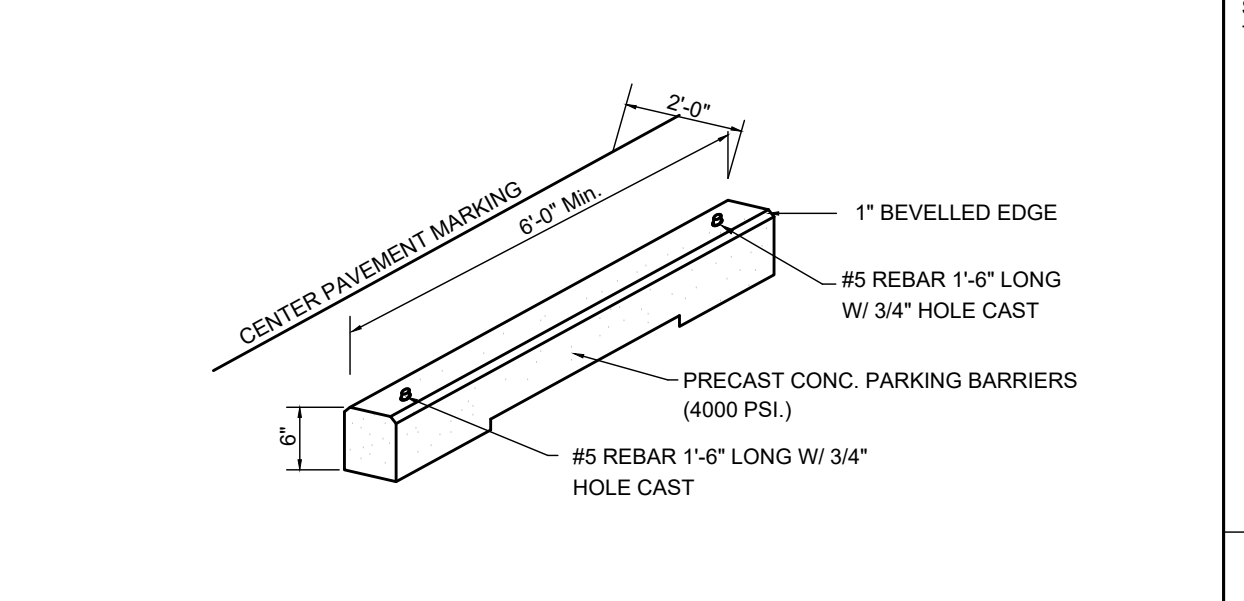
16 ACCESSIBLE PARKING SPACE
SCALE: NONE



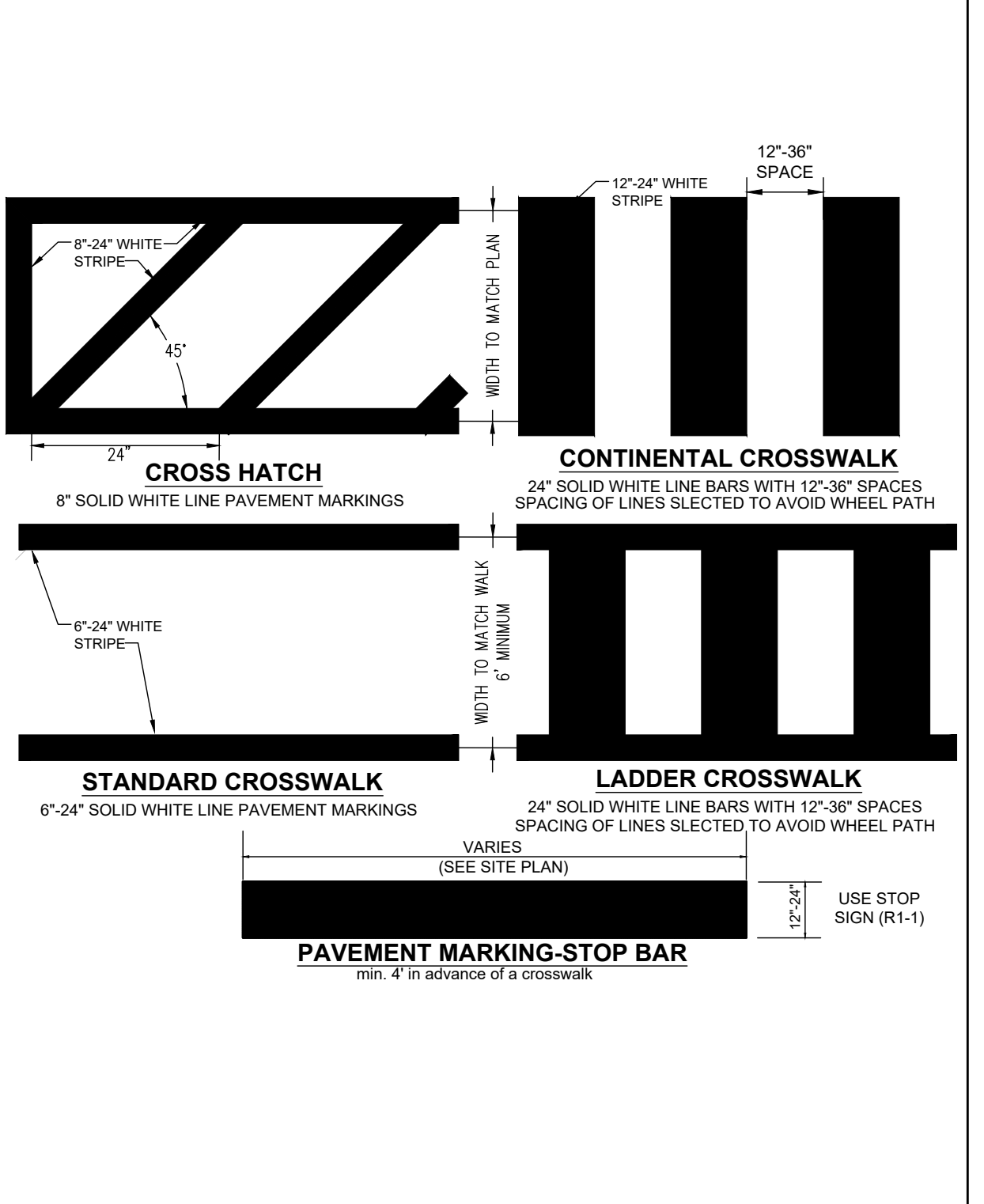
13 ADA PARKING CONCRETE PAVEMENT REPLACEMENT
SCALE: NONE



17 ACCESSIBLE PARKING SIGN DETAIL
SCALE: NONE



14 CONCRETE WHEEL STOP
SCALE: NONE



15 CROSSHATCH & CROSSWALK STRIPING DETAILS
SCALE: NONE

**CITY STANDARDS APPLY TO
PUBLIC PROPERTY & PRIVATE
PROPERTY**



STANDARD CONSTRUCTION DETAILS

AMENDED JANUARY 2022

DIRECTIONS FOR USE

- 1) Applicable sheets from the City Standards shall be attached to the construction drawings and shall be considered part thereto. Individual City Standards that do not apply may be crossed out by design engineer by placing a single large X over the detail. Minor reference notations may be placed adjacent to individual standard titles for coordination. However, the standards themselves shall not be modified in any way.
- 2) Details prepared by outside sources shall not be included in the construction drawings when said details are covered by City Standards.
- 3) Details prepared by outside sources covering work which is not covered by City Standards are the sole responsibility of the design engineer and shall be placed on sheets other than the City Standard sheets.
- 4) Failure to properly execute the above directions for use will not affect the applicability nor the enforcement of the City Standards.
- 5) City of Fishers shall be contacted when required by calling the Director of Engineering.
- 6) City Standards shall be used in conjunction with the Transportation Plan and Construction Specifications.
- 7) The use of INDOT refers to Indiana Department of Transportation Standard Drawings and Specifications (Current Version).

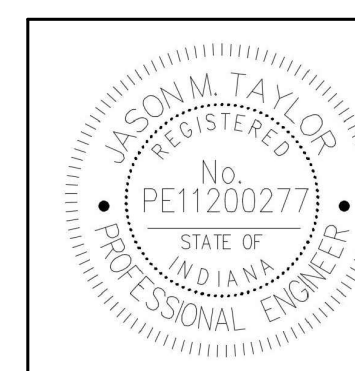
NOTES

- 1) A City of Fishers Right-of-Way Activity Permit is required for utilities crossing existing public right-of-way or encroaching into right-of-way pavement.
- 2) Utility work within existing public right-of-way or within 5 feet of existing right-of-way pavement requires removable flowable fill as backfill.

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CURB DETAILS	4
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SIDEWALK AND CURB RAMP DETAILS	6
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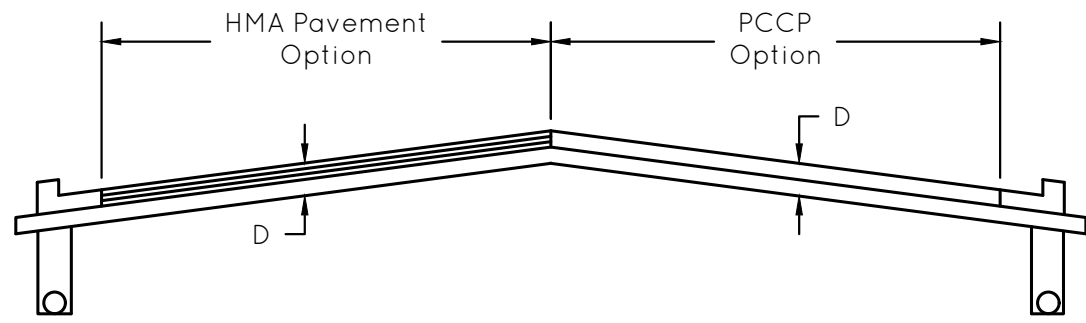
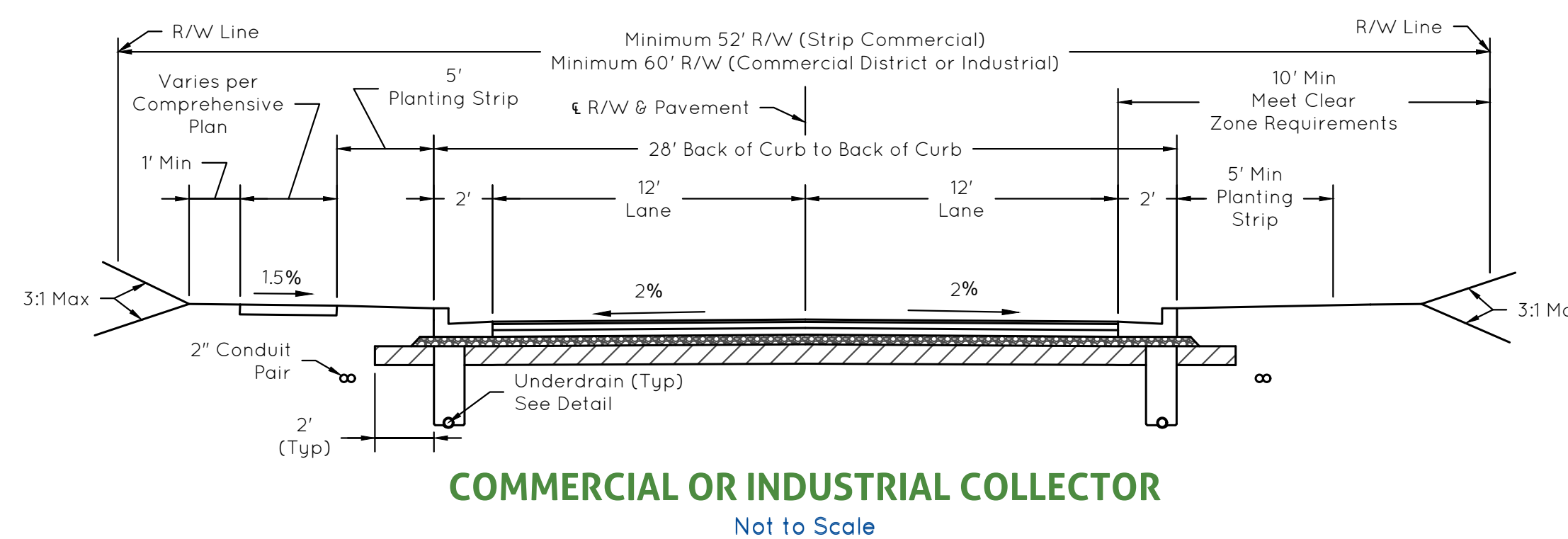
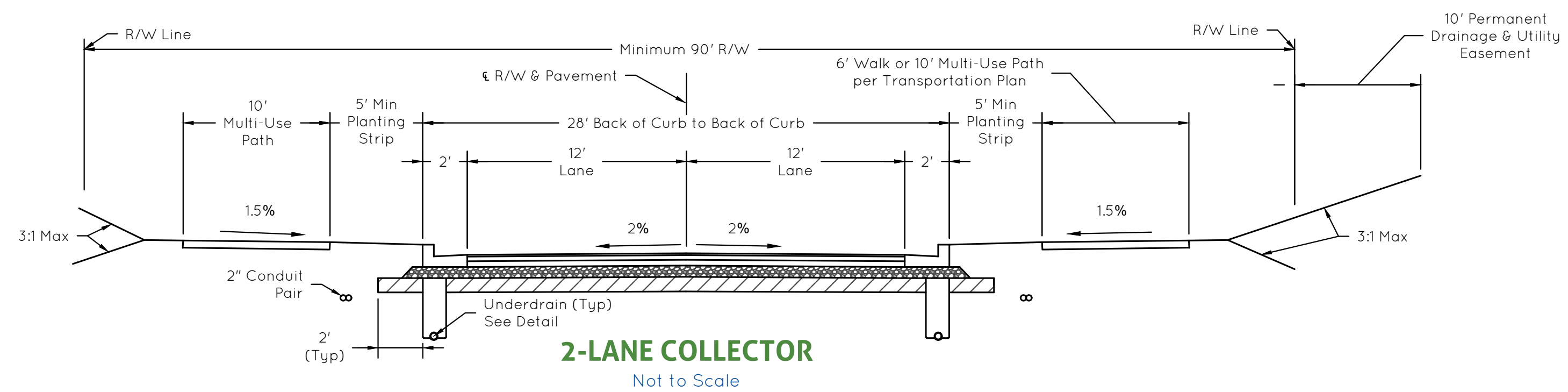
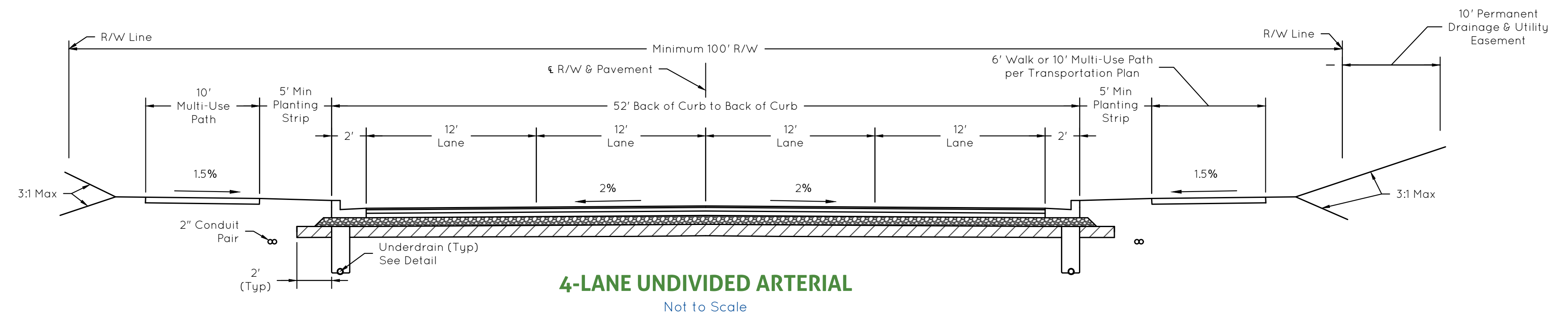
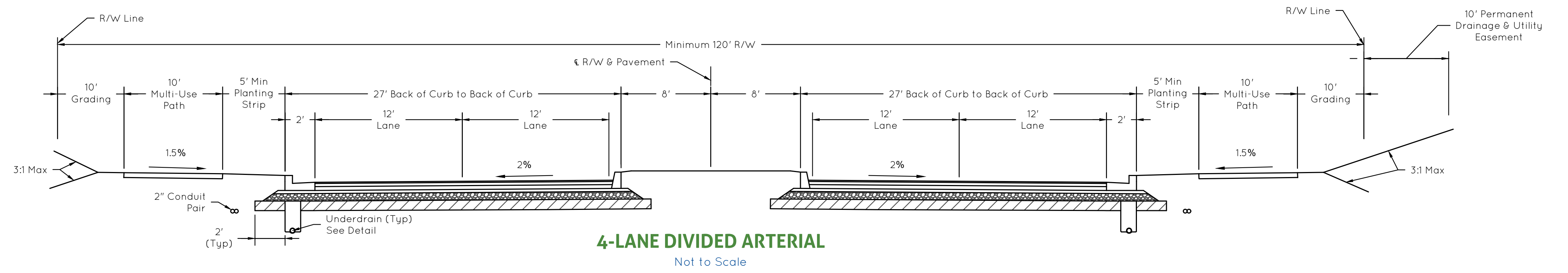
1/18/2022



CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
TITLE SHEET

R011822A
<small>RESOLUTION NO.</small>
1/18/2022
<small>DATE OF ADOPTION</small>

SHEET
1
of
29



Notes:

- 1) Asphalt pavement shall be in accordance with the most current INDOT Standard Specifications Section 401. For all local (non-Federal Aid) projects, all HMA acceptance and testing requirements shall be in accordance with Section 402. Patching and Widening shall be in accordance with Section 304.
- 2) PCCP pavement shall be in accordance with the most current INDOT Standard Specifications Section 502.
- 3) Any other pavement design will need Director of Engineering approval.
- 4) Where existing roads have SMA surface pavement, material is to be matched.

PRIMARY ARTERIAL AND COLLECTOR

HMA Pavement Option

D = 1.5" - 165lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.75" - 413lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 3" - 300lb/syd QC/QA-HMA, 3, 76, Intermediate, Base, 19.0mm, on
 6" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

PCCP Option (Requires Engineering Approval)

D = 13" - PCCP, on
 3" - Compacted Aggregate, No. 8, on
 3" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

Roundabout

D = 2" - 220lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.5" - 385lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 3" - 300lb/syd QC/QA-HMA, 3, 76, Intermediate, Base, 19.0mm, on
 6" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

SECONDARY ARTERIAL

HMA Pavement Option

D = 1.5" - 165lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.75" - 413lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 9" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

PCCP Option (Requires Engineering Approval)

D = 13" - PCCP, on
 3" - Compacted Aggregate, No. 8, on
 3" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

Roundabout

D = 2" - 220lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.5" - 385lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 9" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

COLLECTOR

HMA Pavement Option

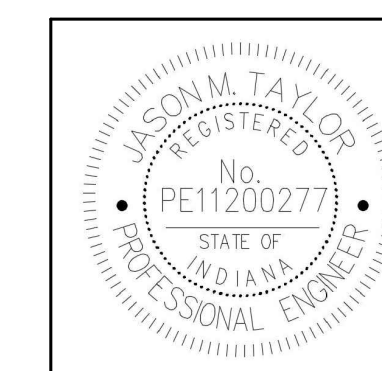
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 3.75" - 413lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 8" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

PCCP Option (Requires Engineering Approval)

D = 13" - PCCP, on
 3" - Compacted Aggregate, No. 8, on
 3" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

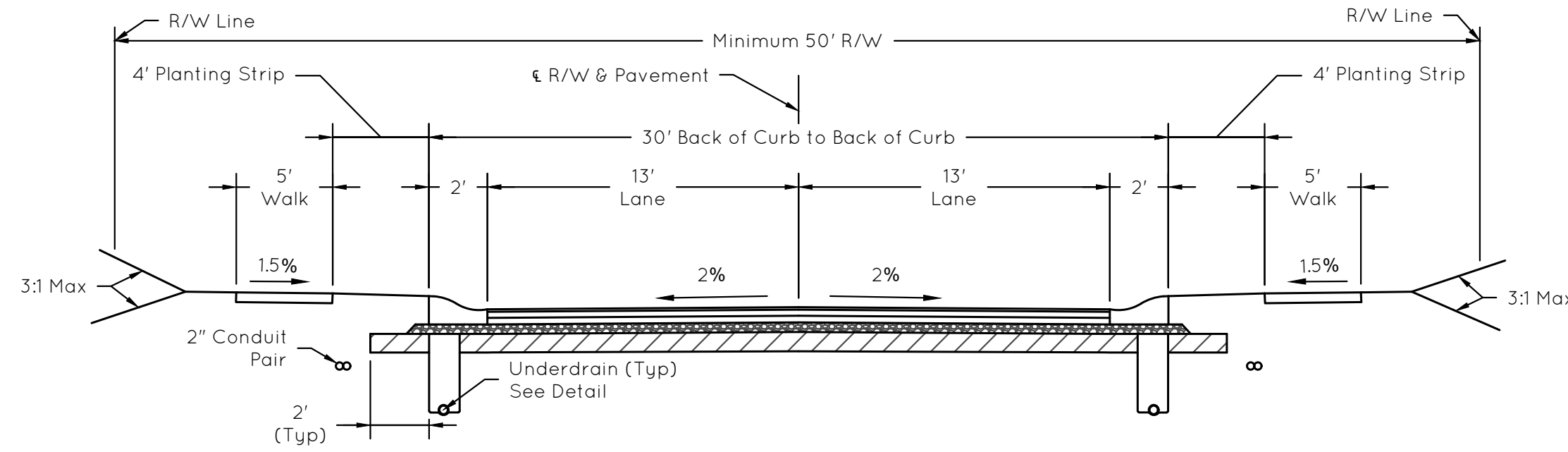
Roundabout

D = 2" - 220lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.5" - 385lb/syd QC/QA-HMA, 2, 64, Base, 25.0mm, on
 8" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

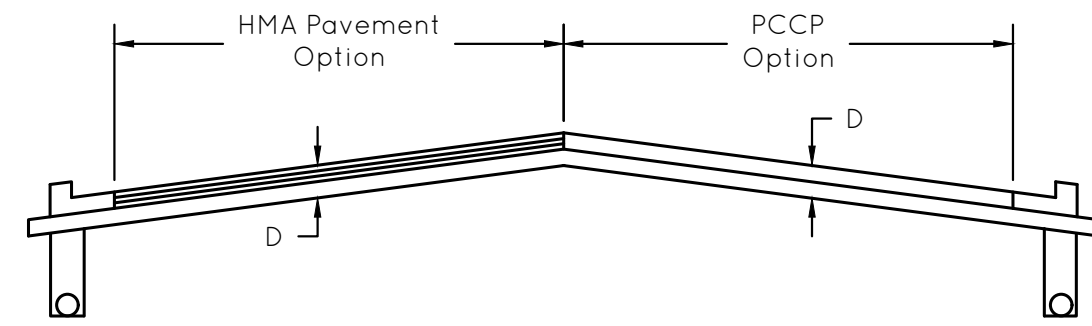


J. Taylor
1/18/2022

CITY OF FISHERS		SHEET
STANDARD CONSTRUCTION DETAILS		2
ARTERIAL AND COLLECTOR TYPICAL PAVEMENT AND ROADWAY SECTIONS		of
		29



LOCAL STREET
Not to Scale



Notes:

- 1) Asphalt pavement shall be in accordance with the most current INDOT Standard Specifications Section 401. For all local (non-Federal Aid) projects, all HMA acceptance and testing requirements shall be in accordance with Section 402. Patching and Widening shall be in accordance with Section 304.
- 2) PCCP pavement shall be in accordance with the most current INDOT Standard Specifications Section 502.
- 3) Any other pavement design will need Director of Engineering approval

LOCAL STREET

HMA Pavement Option

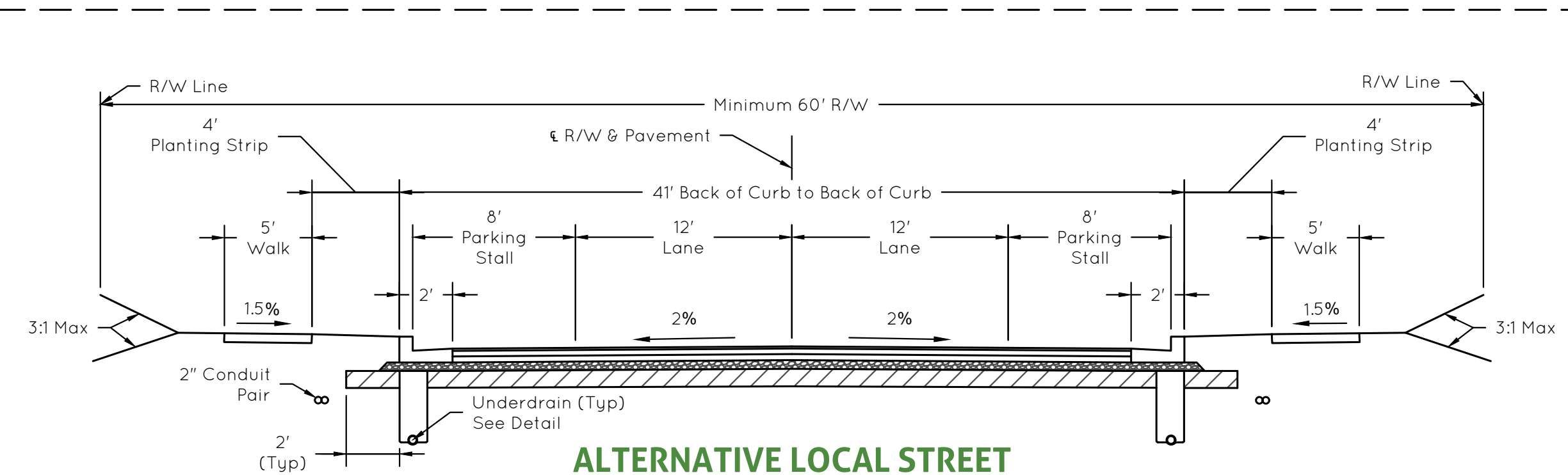
- D = 1.5" - 165lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 2.5" - 275lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 3.75" - 413lb/syd QC/QA-HMA, 2, 64, Base, 19.0mm, on
 6" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

PCCP Option (Requires Engineering Approval)

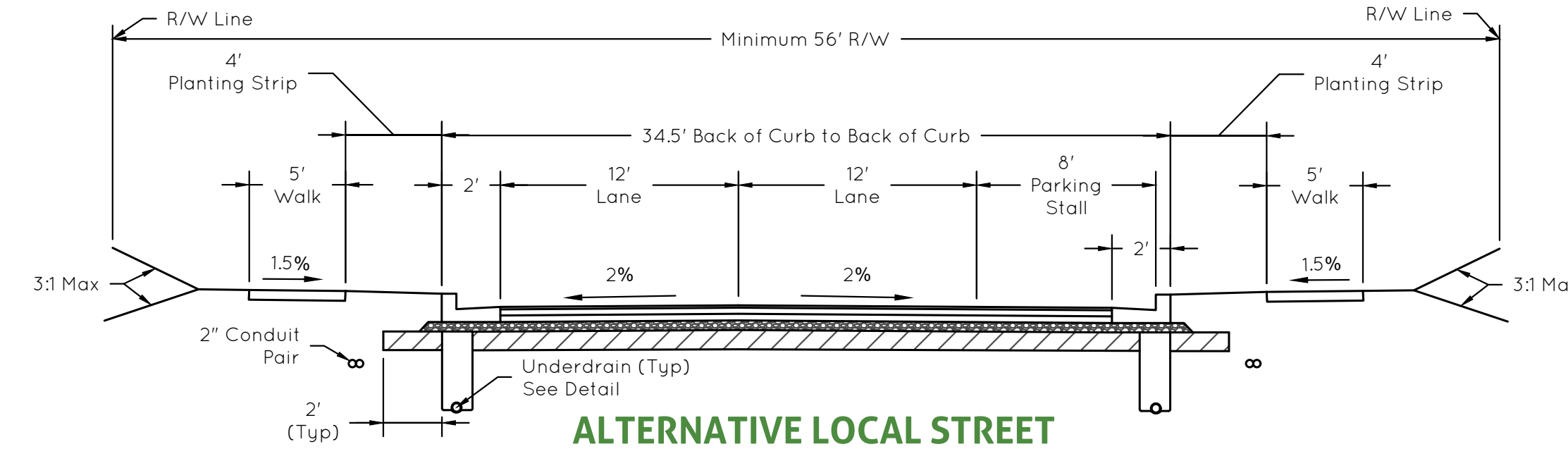
- D = 13" - PCCP, on
 3" - Compacted Aggregate, No. 8, on
 3" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

Minor Subdivision

- D = 1.5" - 165lb/syd QC/QA-HMA, 2, 64, Surface, 9.5mm, on
 3.5" - 385lb/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm, on
 12" - Compacted Aggregate, No. 53, on
 14" - INDOT Subgrade Treatment, Type IBC

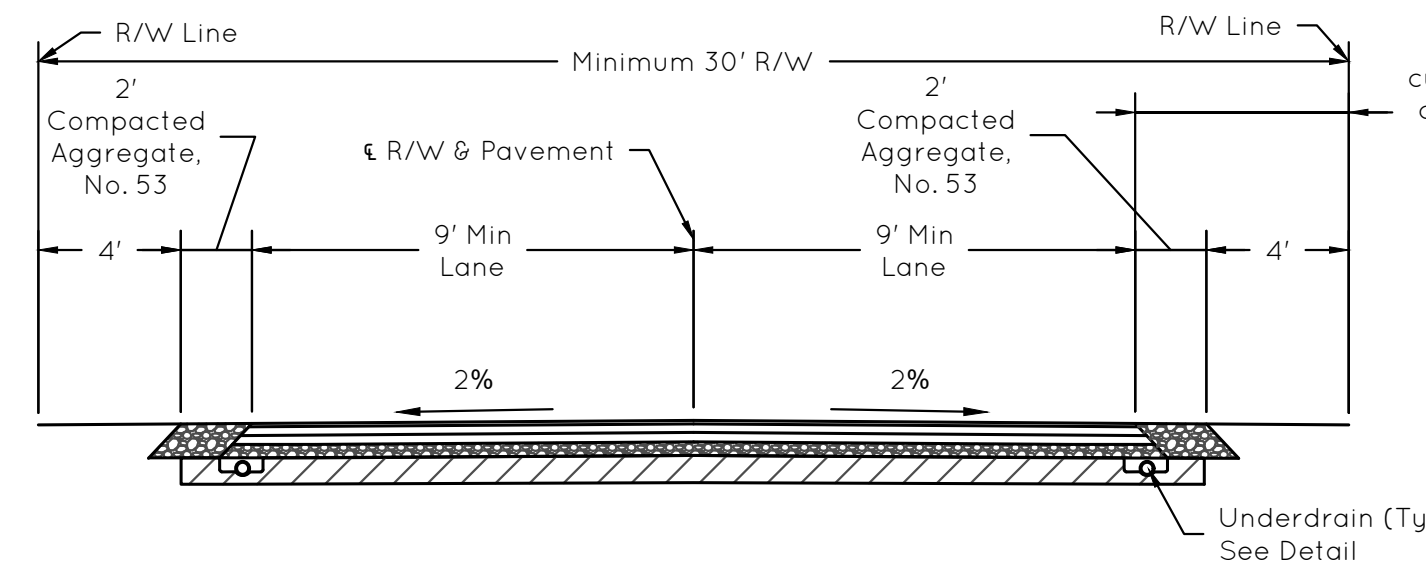


**ALTERNATIVE LOCAL STREET
TRADITIONAL SECTION WITH 2 PARKING LANES**
Not to Scale



**ALTERNATIVE LOCAL STREET
TRADITIONAL SECTION WITH 1 PARKING LANE**
Not to Scale

**MODIFICATIONS TO THESE SECTIONS
MUST BE APPROVED BY
THE DIRECTOR OF ENGINEERING**

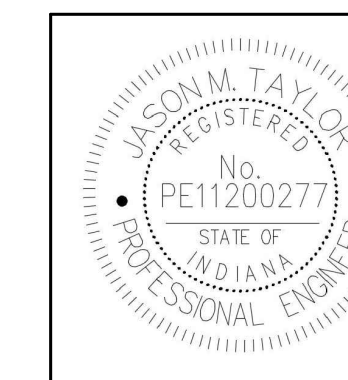


**ALTERNATIVE LOCAL STREET
MINOR SUBDIVISION**
Not to Scale

Road sections without curb shall require special consideration for storm drainage, underdrain, side ditch depth, etc.

J. Taylor

1/18/2022

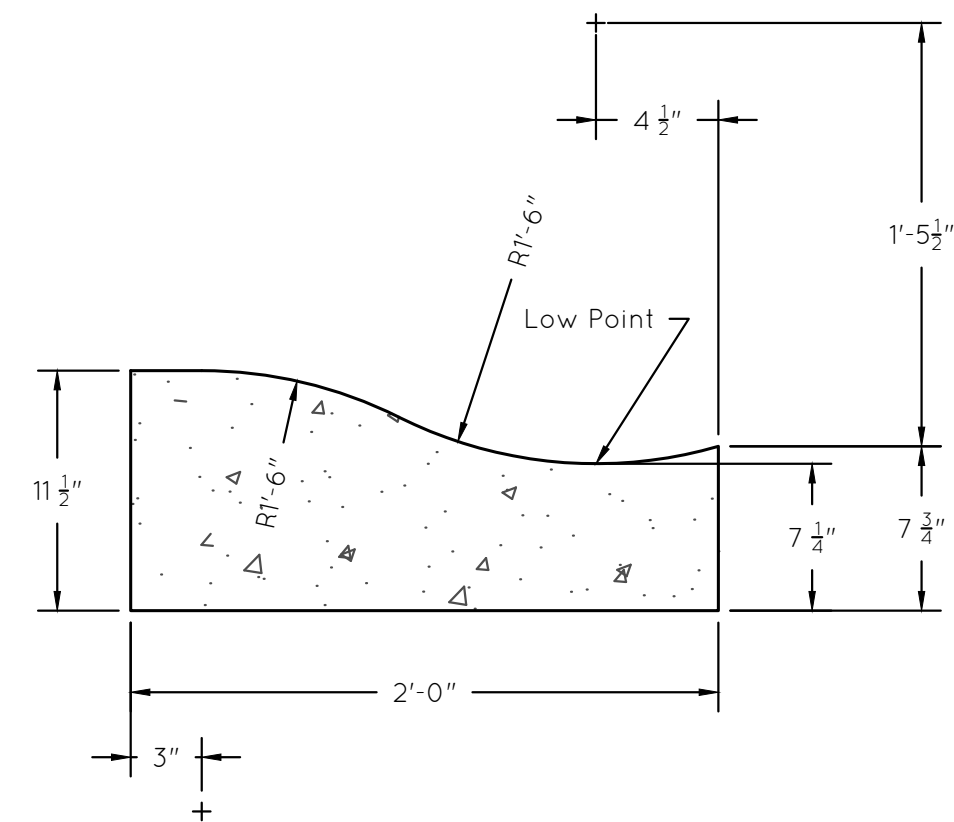


**CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS**

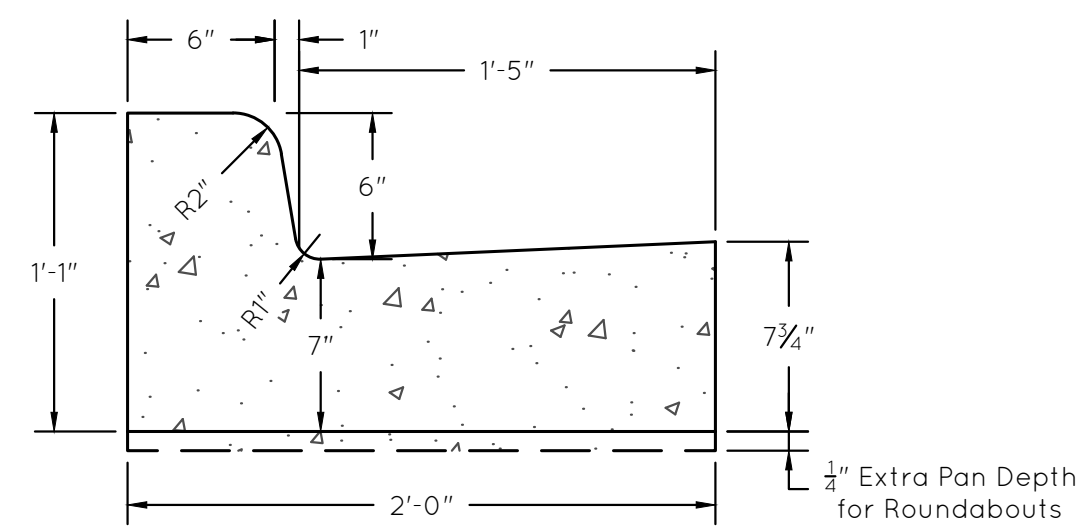
LOCAL STREET
TYPICAL PAVEMENT AND
ROADWAY SECTIONS

SHEET

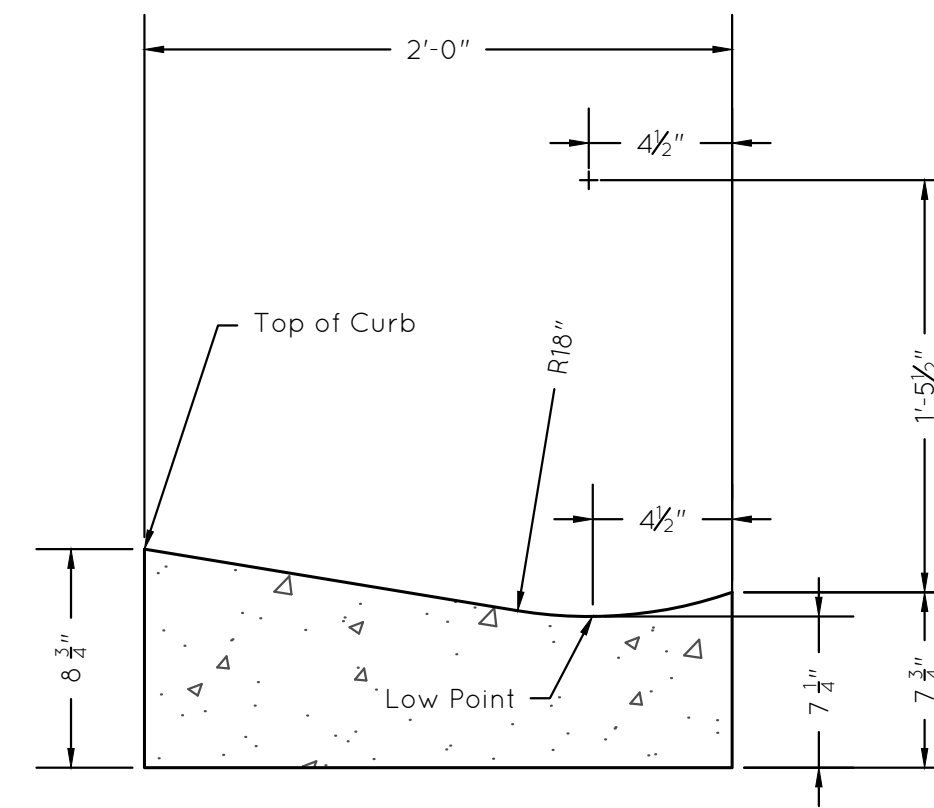
**3
of
29**



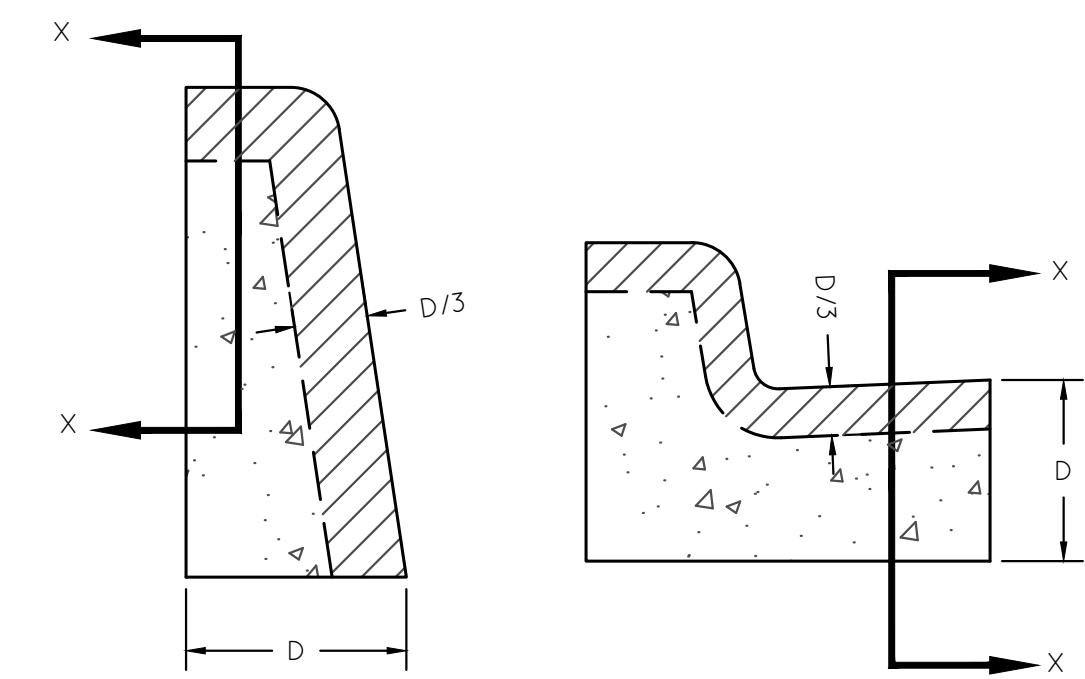
CONCRETE ROLL CURB
Not to Scale



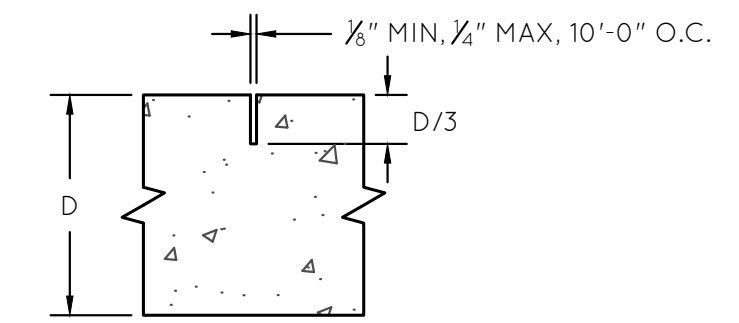
Note:
1) Provide reverse pitch curb & gutter on center islands when curb inlets are not provided for drainage and when natural flow is away from curb.
CONCRETE COMBINED CURB & GUTTER
Not to Scale



CONCRETE VALLEY GUTTER
Not to Scale



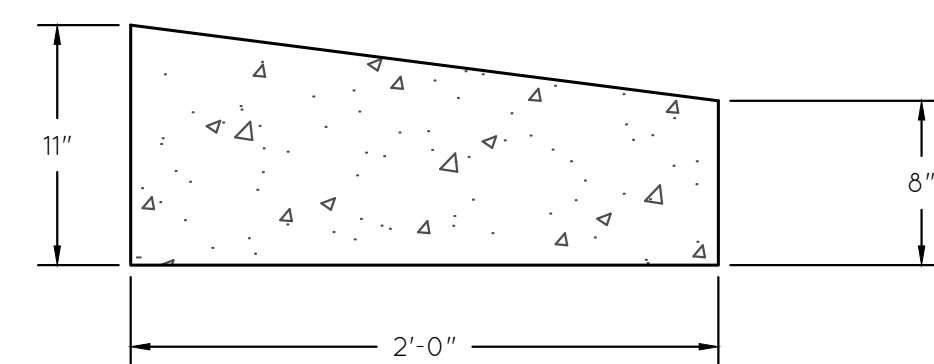
Barrier Curb Combined Curb & Gutter



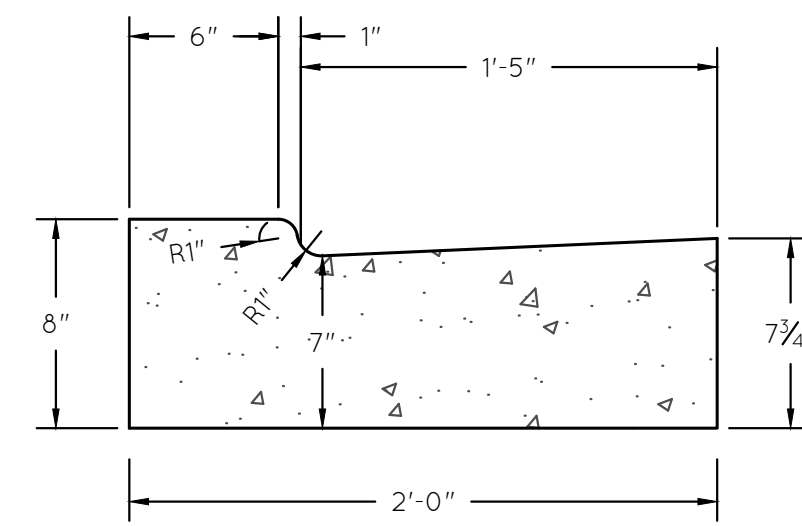
Section X-X

Note:
1) Contraction joints for concrete curbs shall be sawed at 10-ft spacing. Spacing shall be 5-ft on curves.

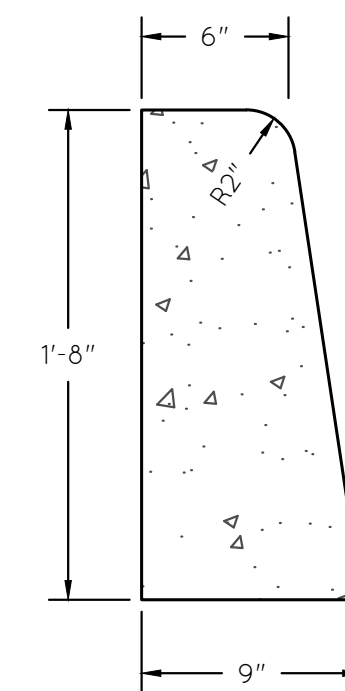
CONTRACTION JOINTS - CONCRETE CURB
Not to Scale



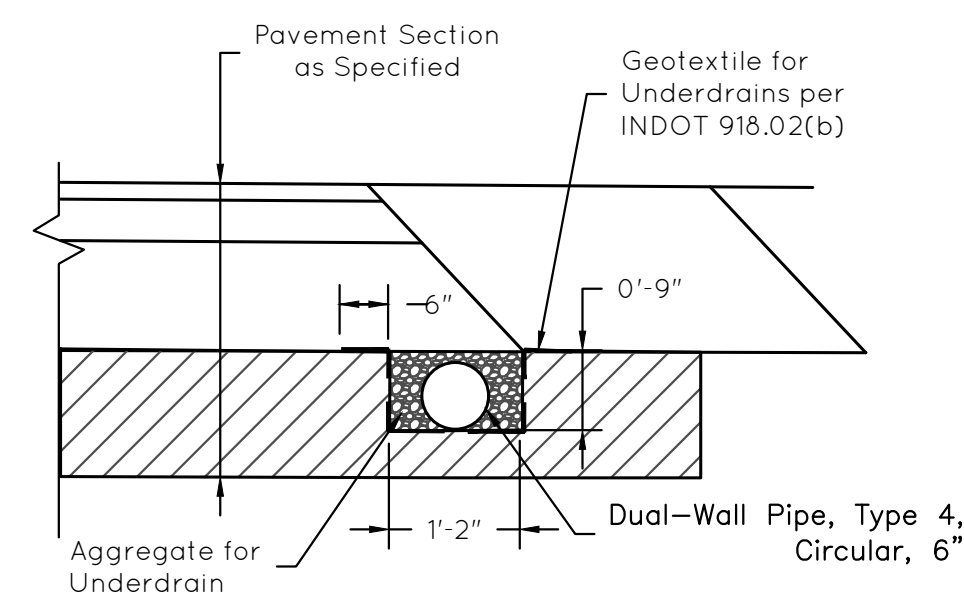
CONCRETE SLOPED CURB - FOR ROUNDABOUTS
Not to Scale



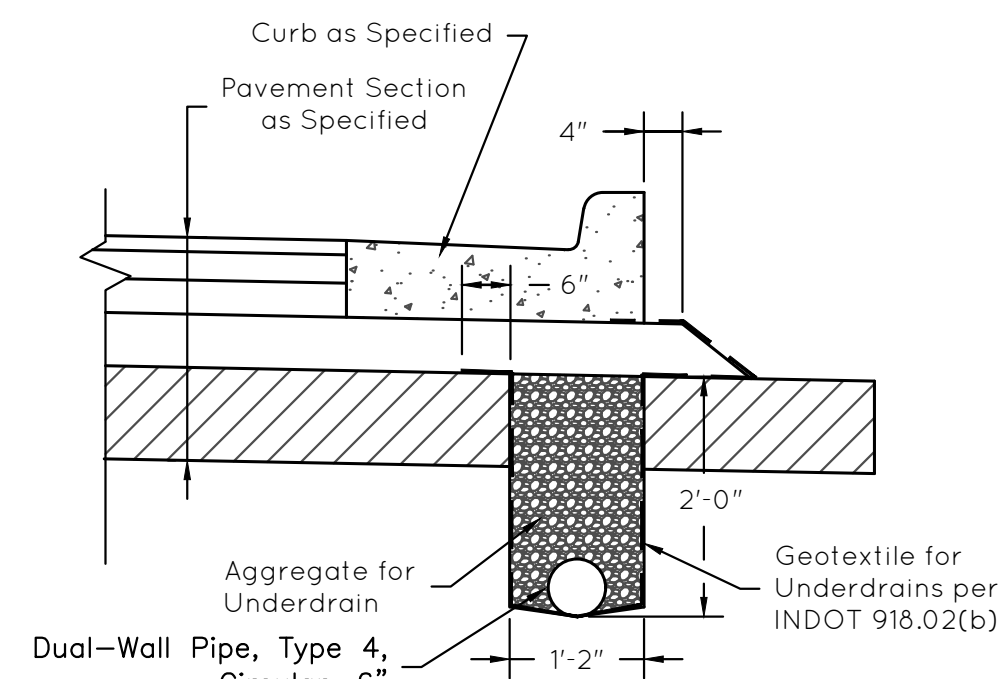
CONCRETE COMBINED CURB & GUTTER - DEPRESSED
Not to Scale



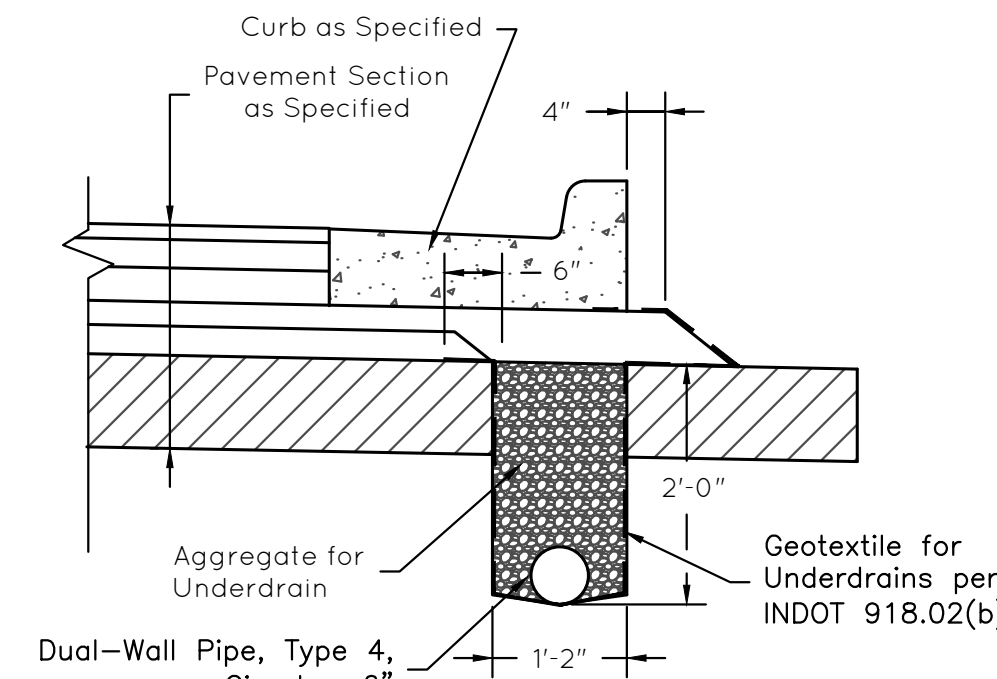
CONCRETE BARRIER CURB
Not to Scale



LOCAL STREET UNDERDRAIN
Not to Scale



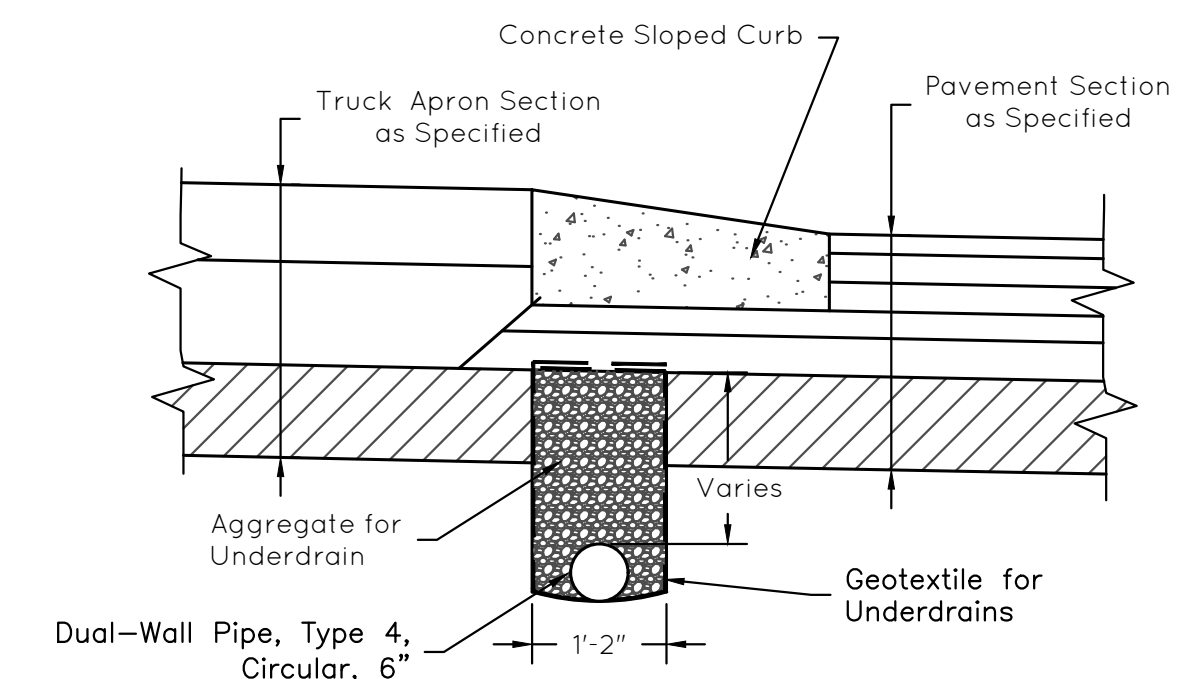
Underdrain without HMA Drainage Layer



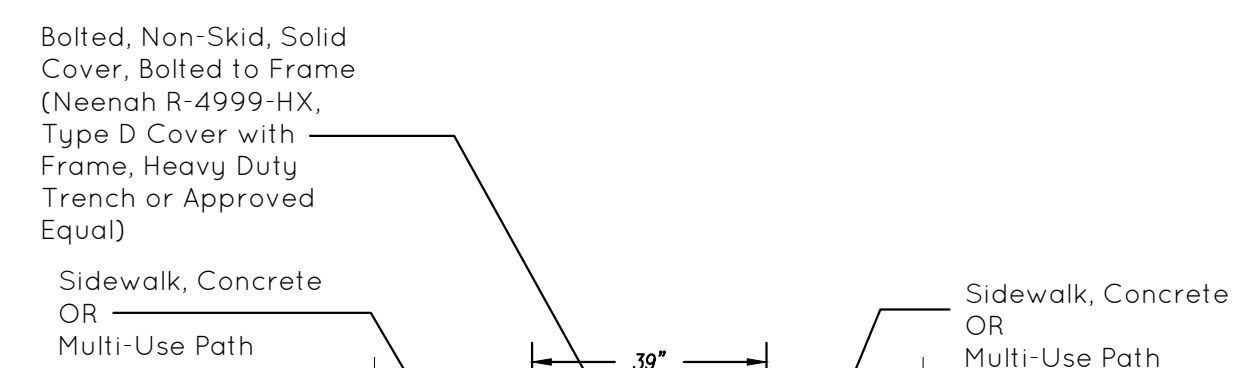
Underdrain with HMA Drainage Layer

Note:
1) No connections shall be made to curb underdrain (downspouts, sump pumps, yard drains, etc).

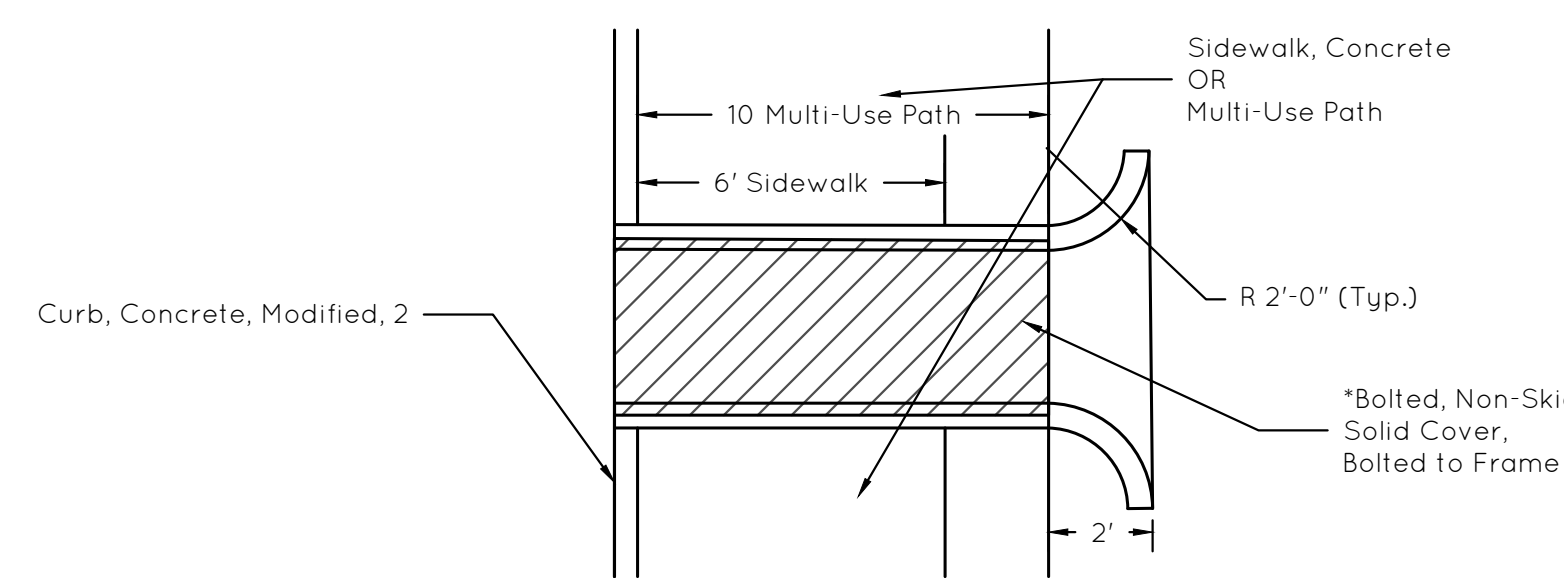
CURB UNDERDRAIN
Not to Scale



UNDERDRAIN AT ROUNDABOUTS (AS NEEDED)
Not to Scale

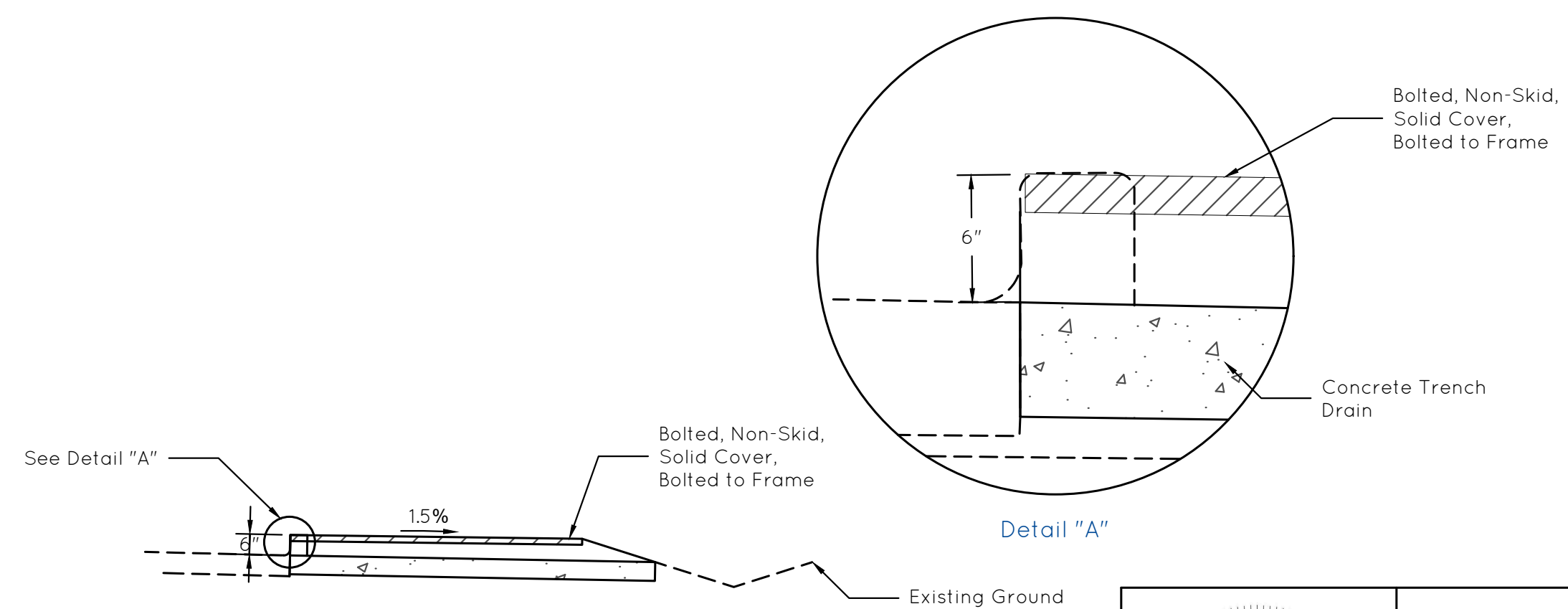


Frame and Trench Section

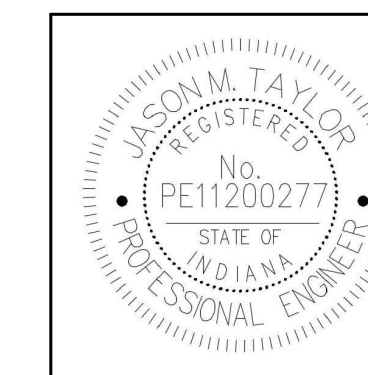


Plan View

TRENCH DRAIN DETAIL W/ SIDEWALK OR MULTI-USE PATH
Not to Scale



Walk or Path Section

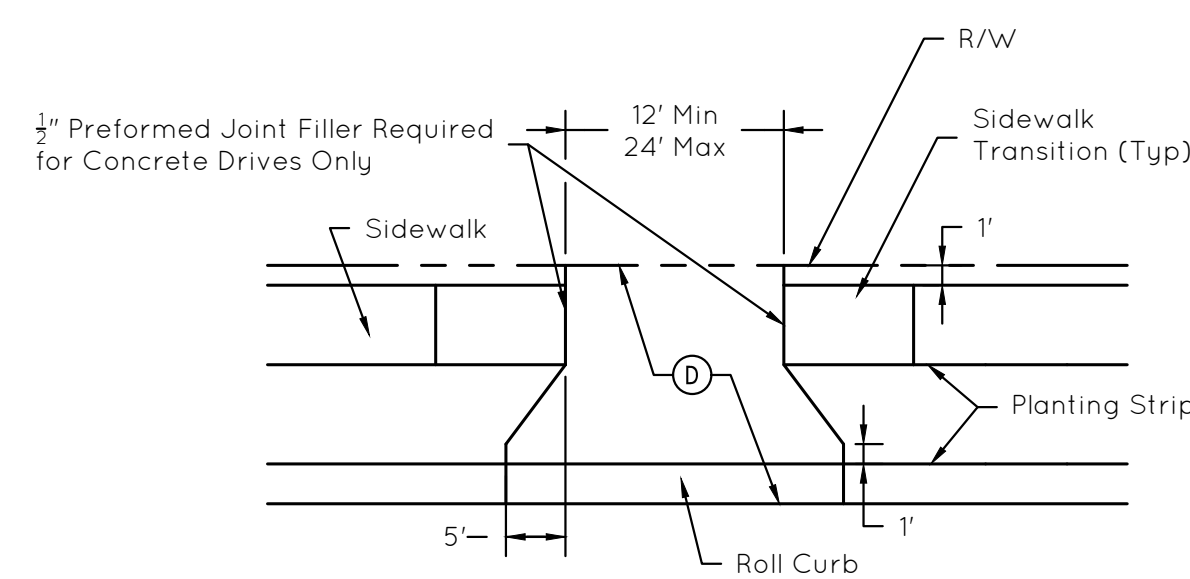


CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
CURB AND UNDERDRAIN DETAILS

SHEET

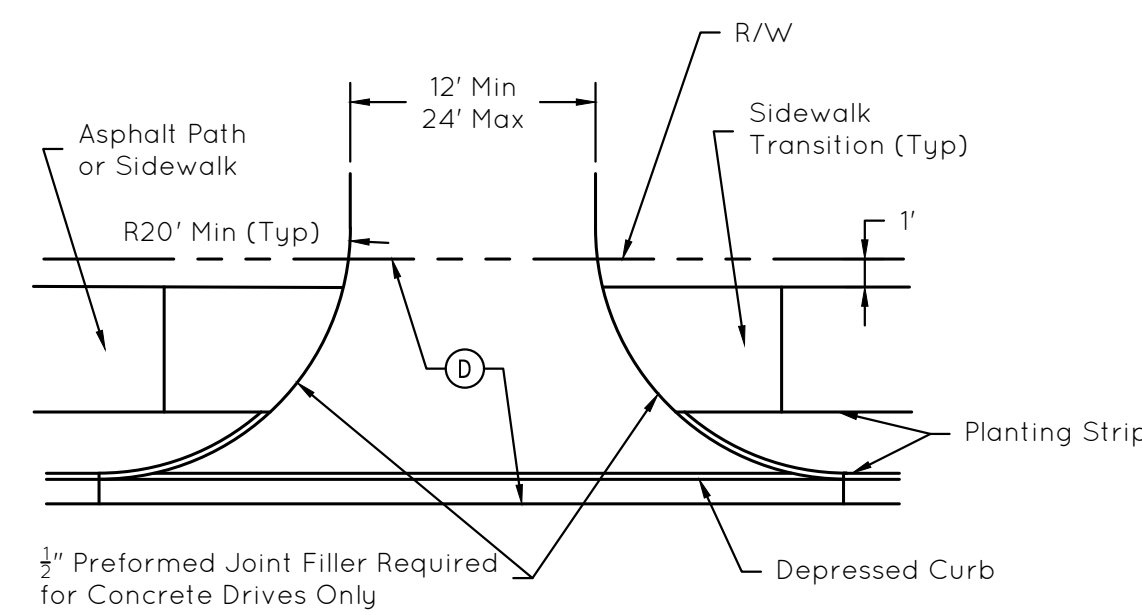
4
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29

J. Taylor
1/18/2022



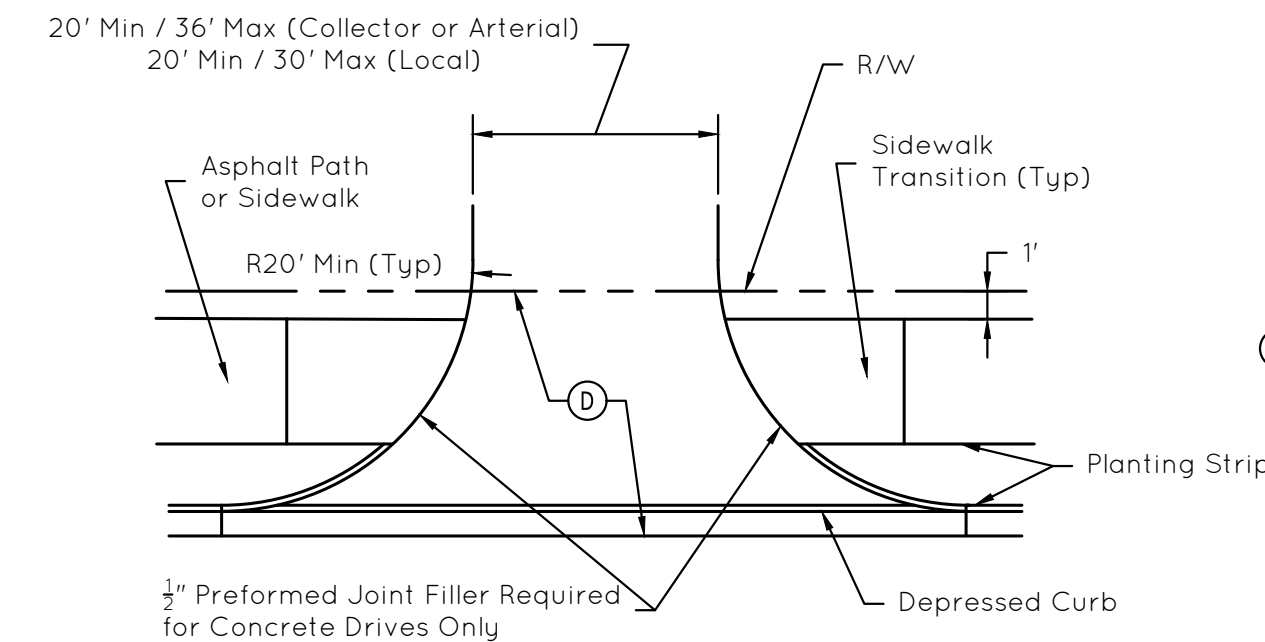
Residential Driveway on Local Road

PCCP for Approaches, 6 in., on Dense Graded Subbase, 6 in., on 6" - INDOT Subgrade Treatment, Type II
 or
 HMA for Approaches, Type B 1.5" - 165lb/syd HMA Surface, Type B on 2.5" - 275lb/syd HMA Intermediate, Type B on 6" - Compacted Aggregate, No. 53, on 6" - INDOT Subgrade Treatment, Type II



Residential Driveway on Collector, Secondary, or Primary Arterial

PCCP for Approaches, 6 in., on Dense Graded Subbase, 6 in., on 6" - INDOT Subgrade Treatment, Type II
 or
 HMA for Approaches, Type B 1.5" - 165lb/syd HMA Surface, Type B on 2.5" - 275lb/syd HMA Intermediate, Type B on 6" - Compacted Aggregate, No. 53, on 6" - INDOT Subgrade Treatment, Type II

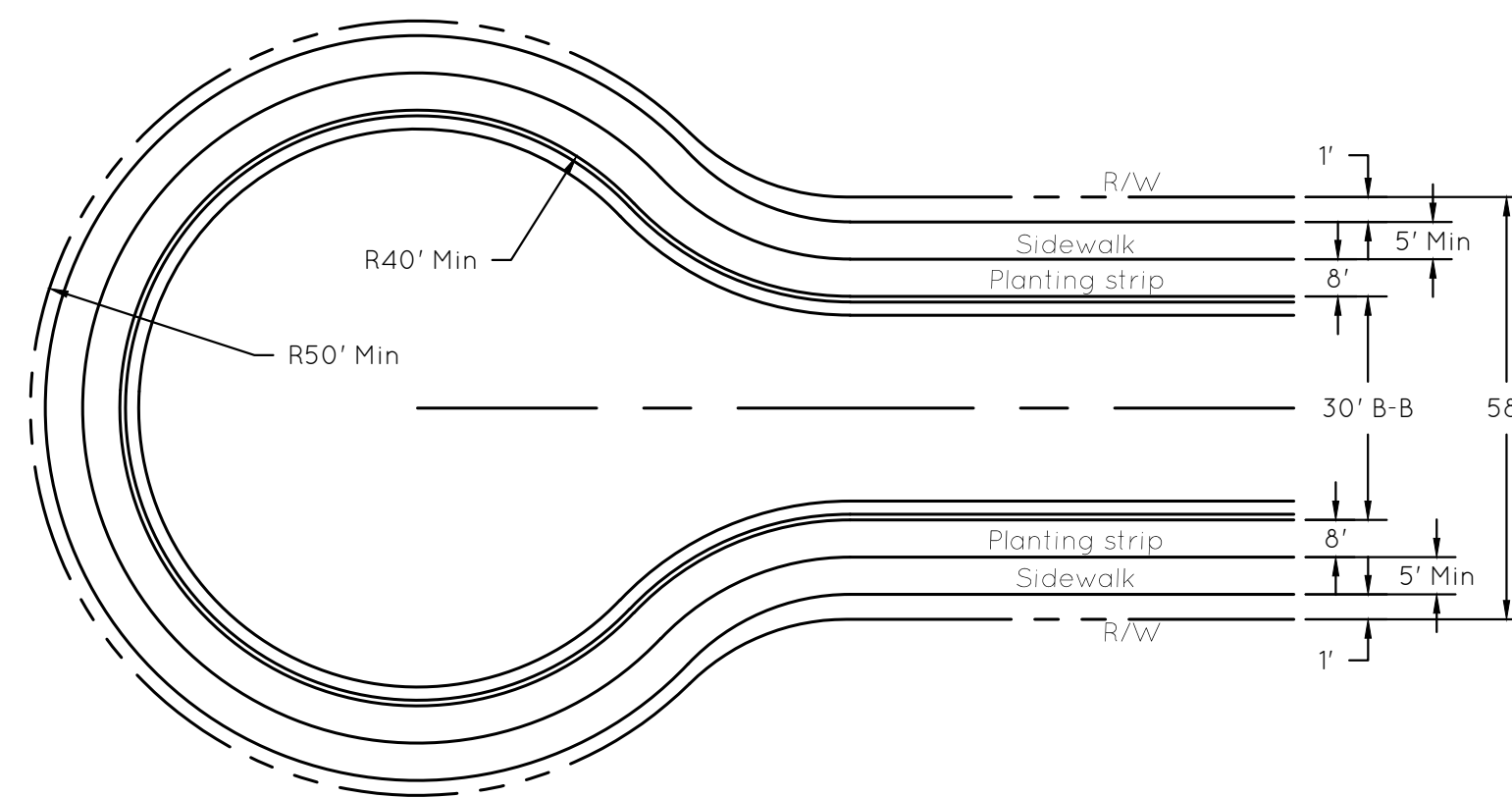


Commercial Driveway

PCCP for Approaches, 9 in., on Dense Graded Subbase, 6 in., on Geogrid, Type 1B, on 6" - INDOT Subgrade Treatment, Type II
 or
 HMA for Approaches, Type B 1.5" - 165lb/syd HMA Surface, Type B on 2.5" - 275lb/syd HMA Intermediate, Type B on 6" - 660lb/syd HMA Base, Type B on 6" - INDOT Subgrade Treatment, Type II on Geogrid, Type 1B

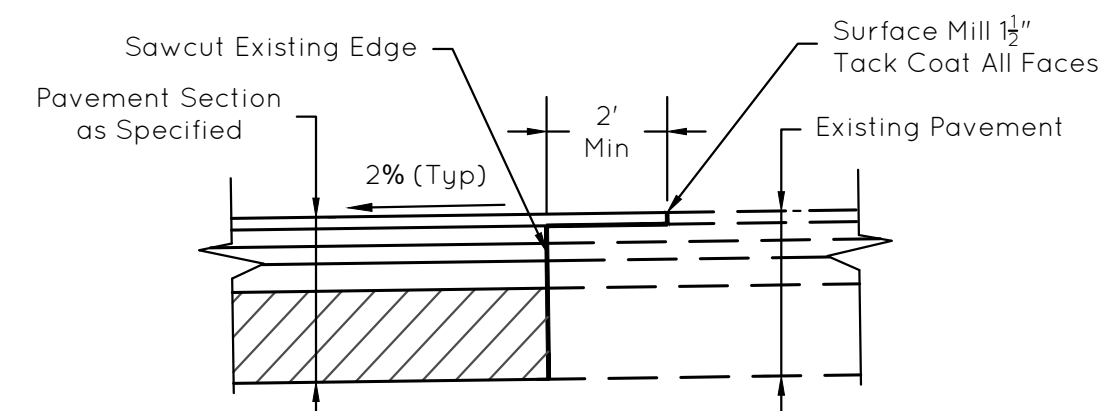
- Notes:
- 1) Details do not reflect additional road improvements (i.e., turn lanes and tapers).
 - 2) Decorative driveway aprons are not allowed except as approved by the Director of Engineering.
 - 3) Maximum driveway slope outside of right-of-way shall be 12% for minimum 10 feet beyond R/W line.
 - 4) Adjoining asphalt shall have perpendicular edges.
 - 5) Asphalt shall not be used for residential driveways on Collector, Secondary, or Primary Arterials.
 - 6) Asphalt must match adjacent mainline cross section for commercial approaches.

DRIVEWAY DETAILS
Not to Scale

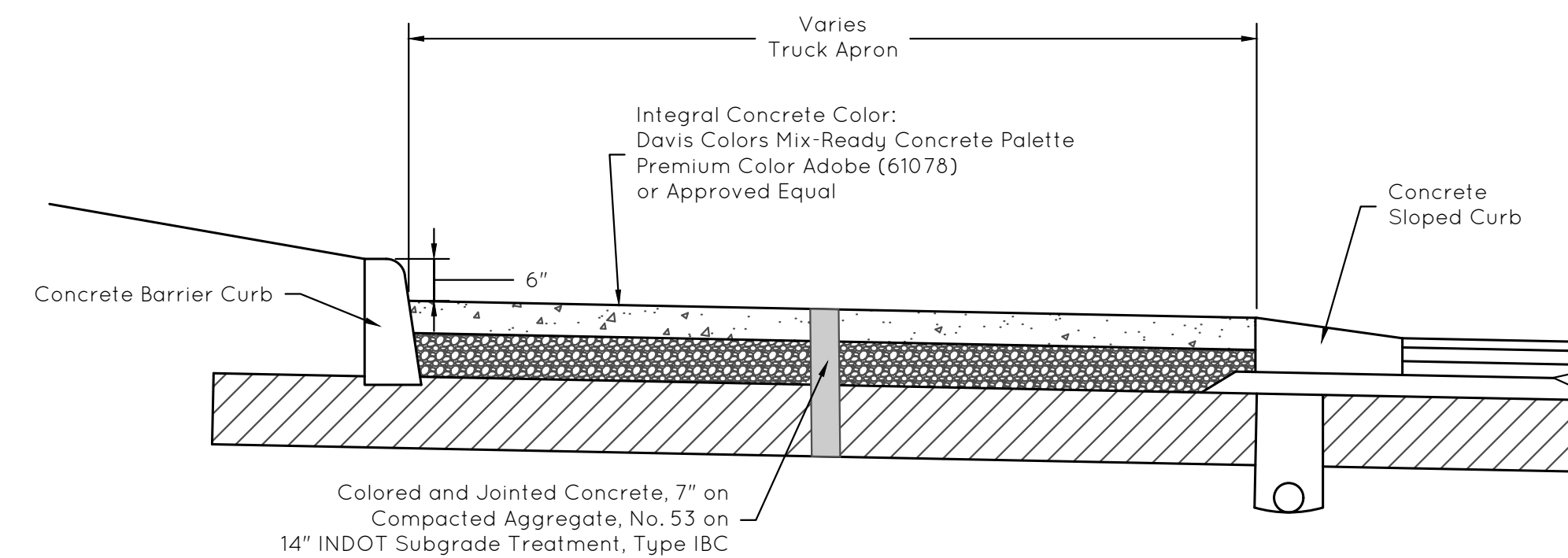


Note:
1) 'Eyebrows' are not allowed

CUL-DE-SAC
Not to Scale

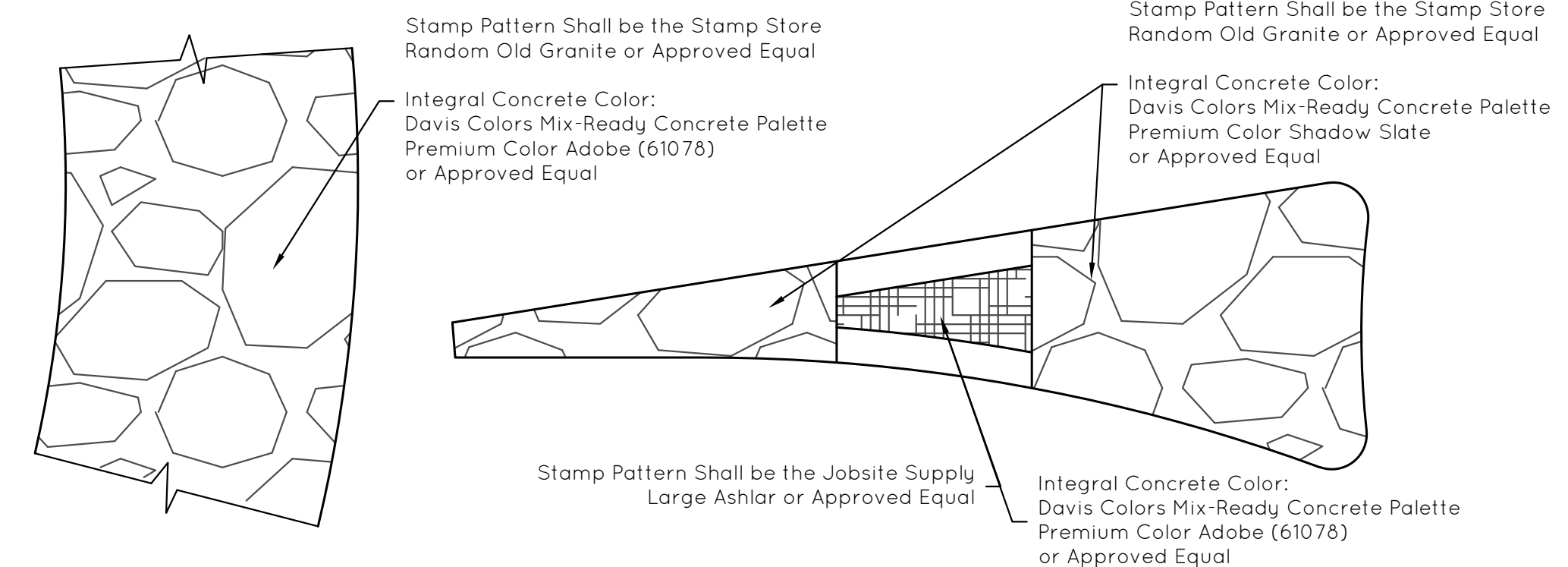


LONGITUDINAL PAVEMENT TIE-IN SECTION
Not to Scale



Note:
1) Type D-1 Contraction Joints not required unless otherwise directed by Dept. of Engineering.

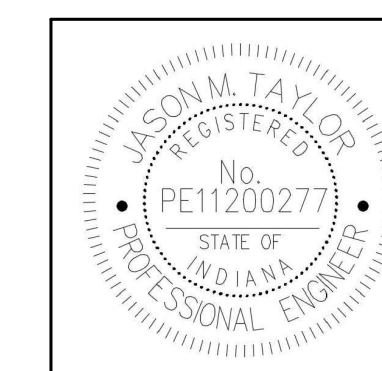
CONCRETE TRUCK APRON DETAIL
Not to Scale



Notes:
1) Pattern shall be submitted to ENGINEER prior to construction.
2) A 4' x 4' mock-up is required for ENGINEER approval.
3) Concrete shall cure for a minimum of four days prior to applying sealant.

ROUNDBOUT TRUCK APRON AND SPLITTER ISLAND STAMP DETAIL
Not to Scale

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1/18/2022

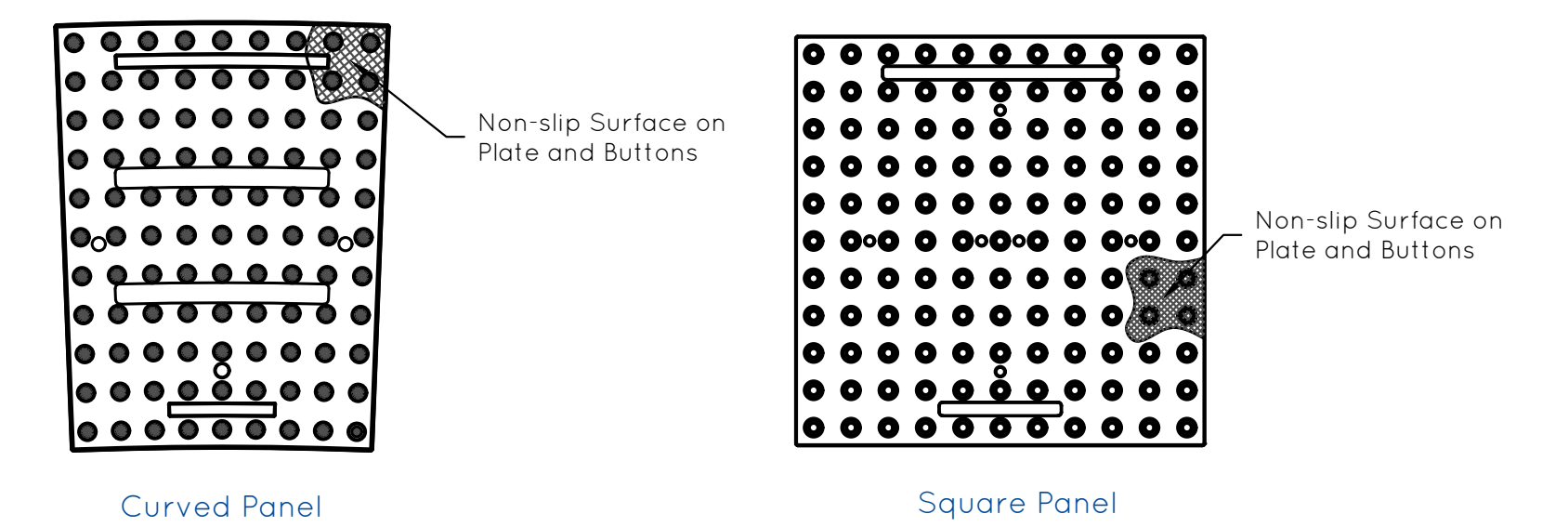
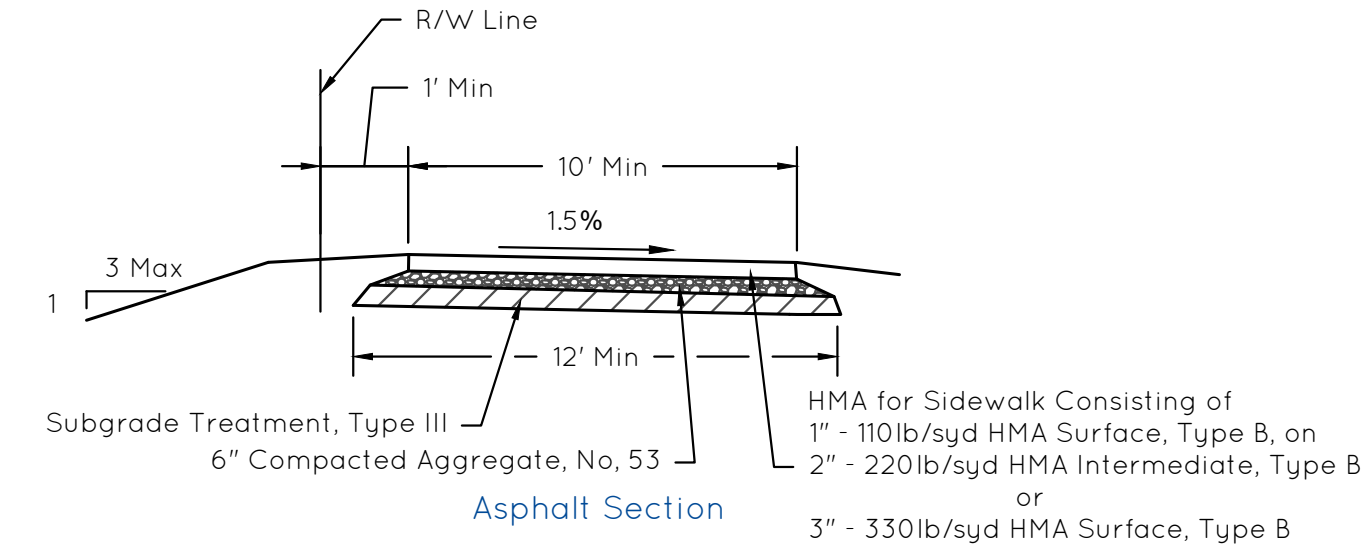
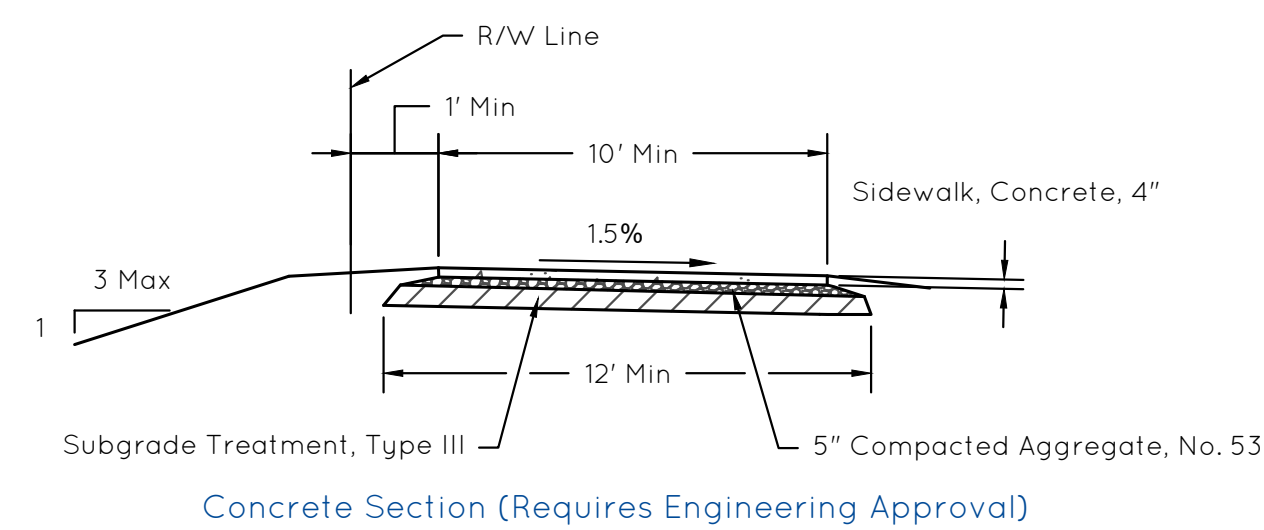
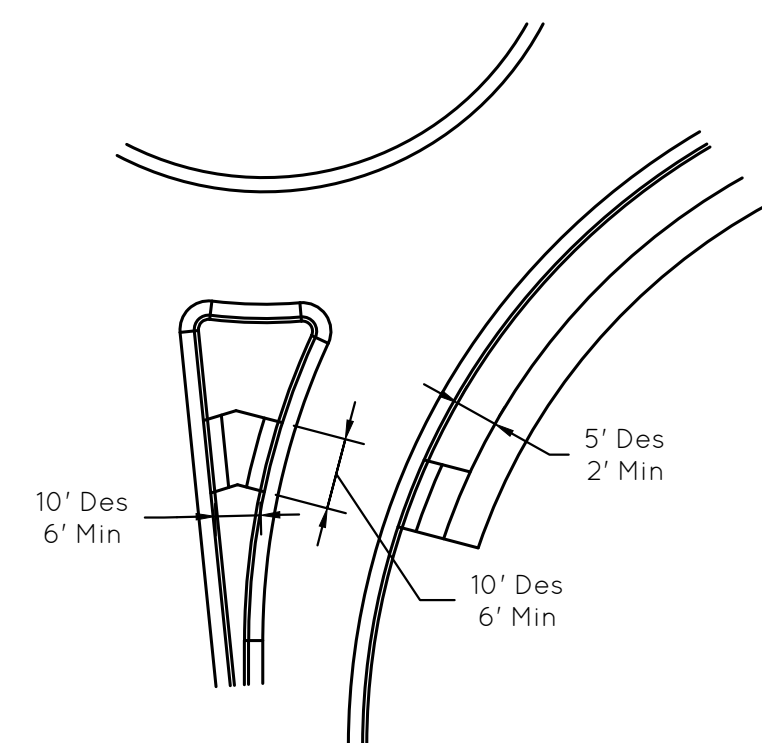
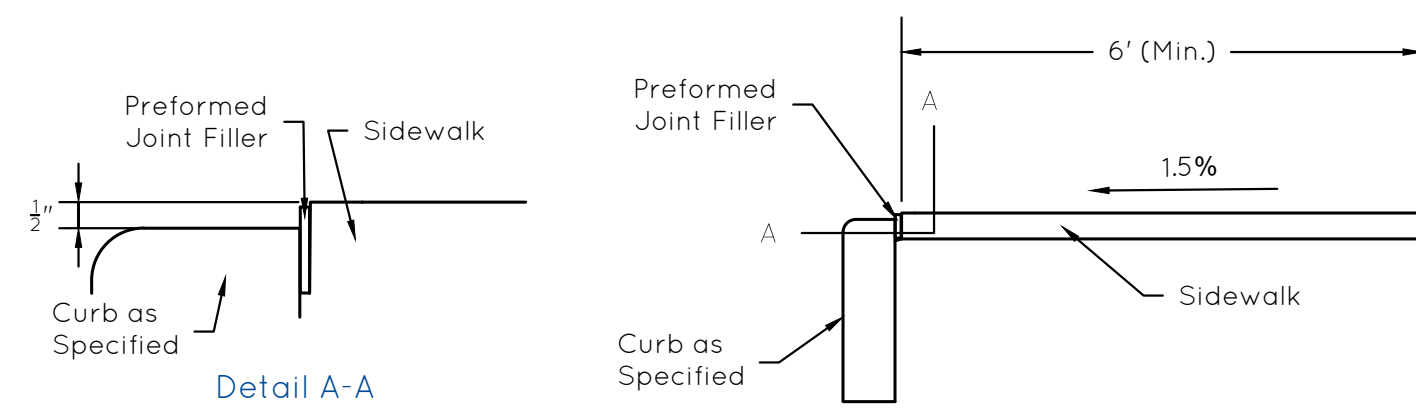
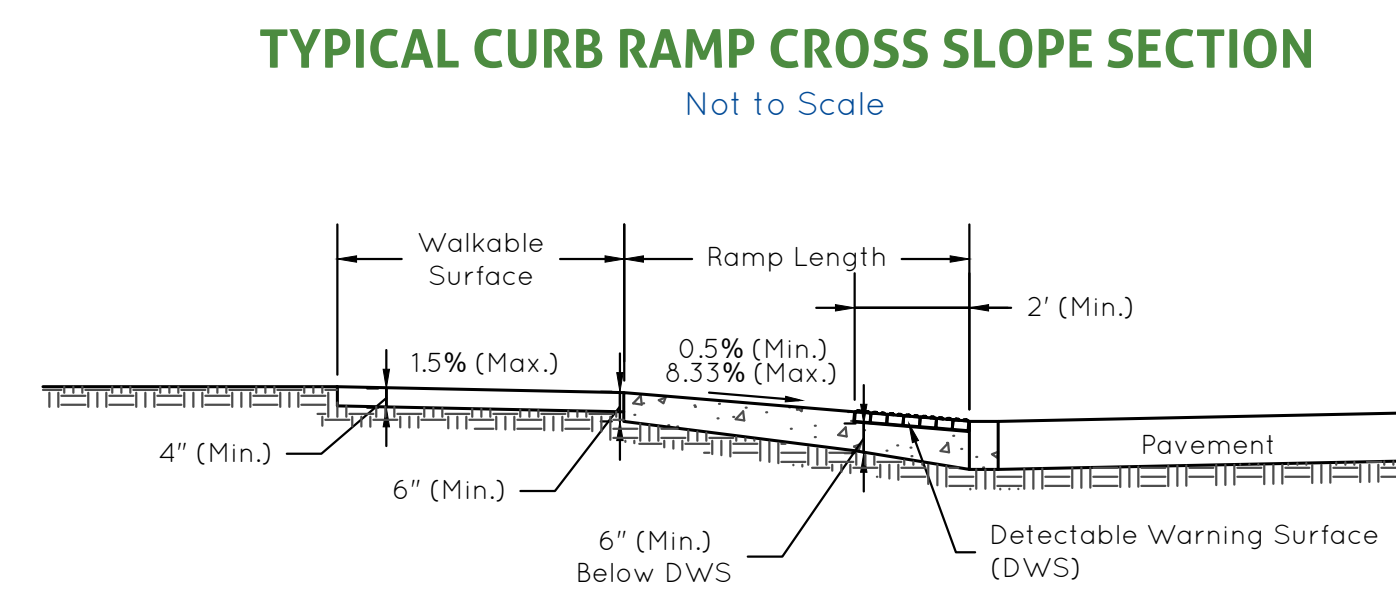
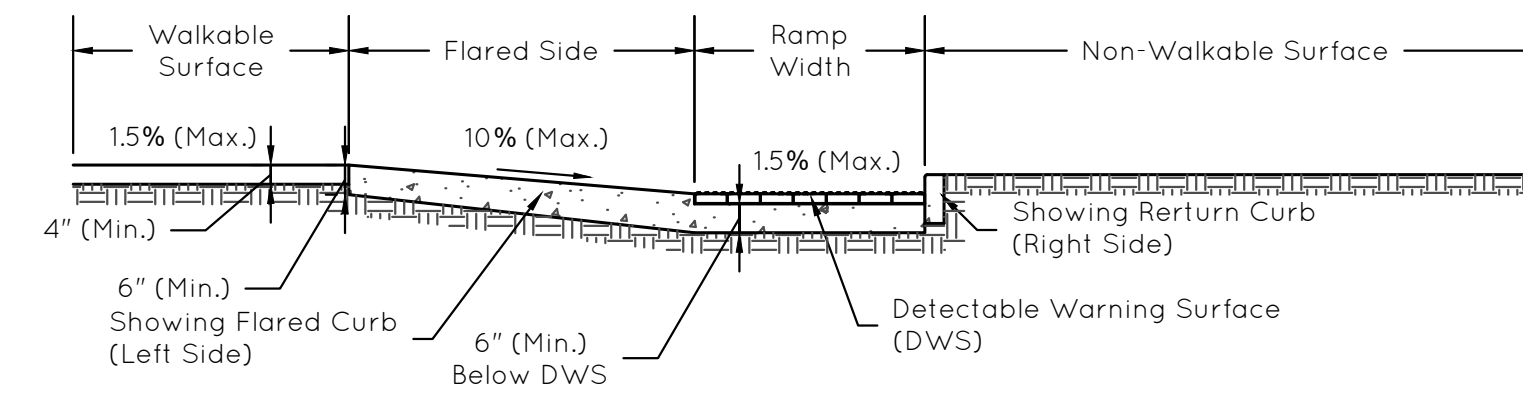
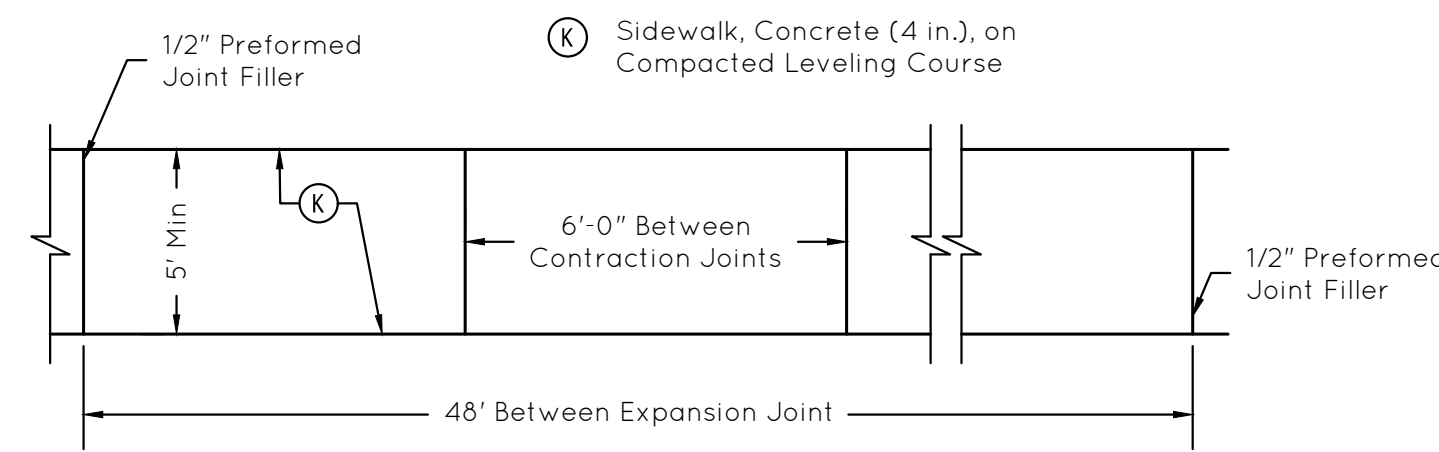
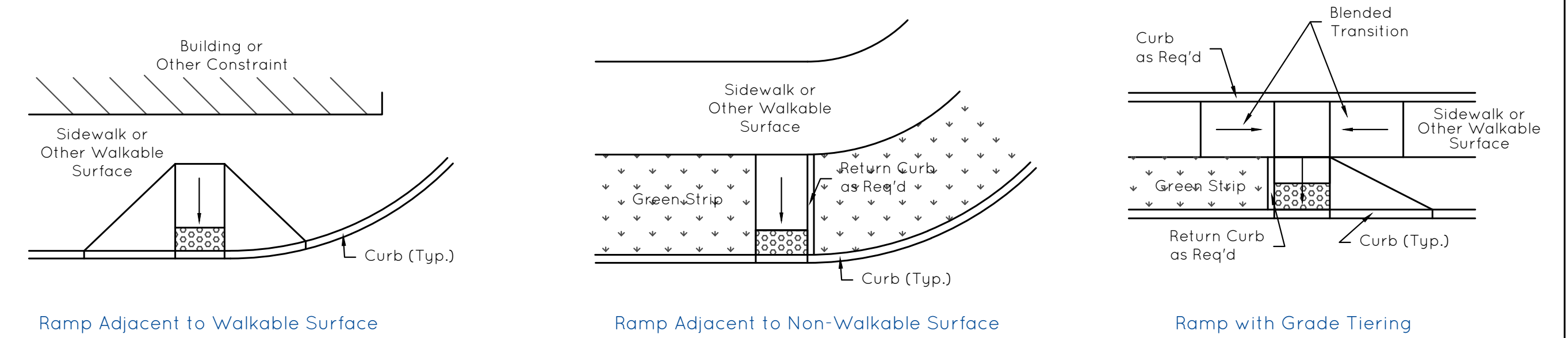
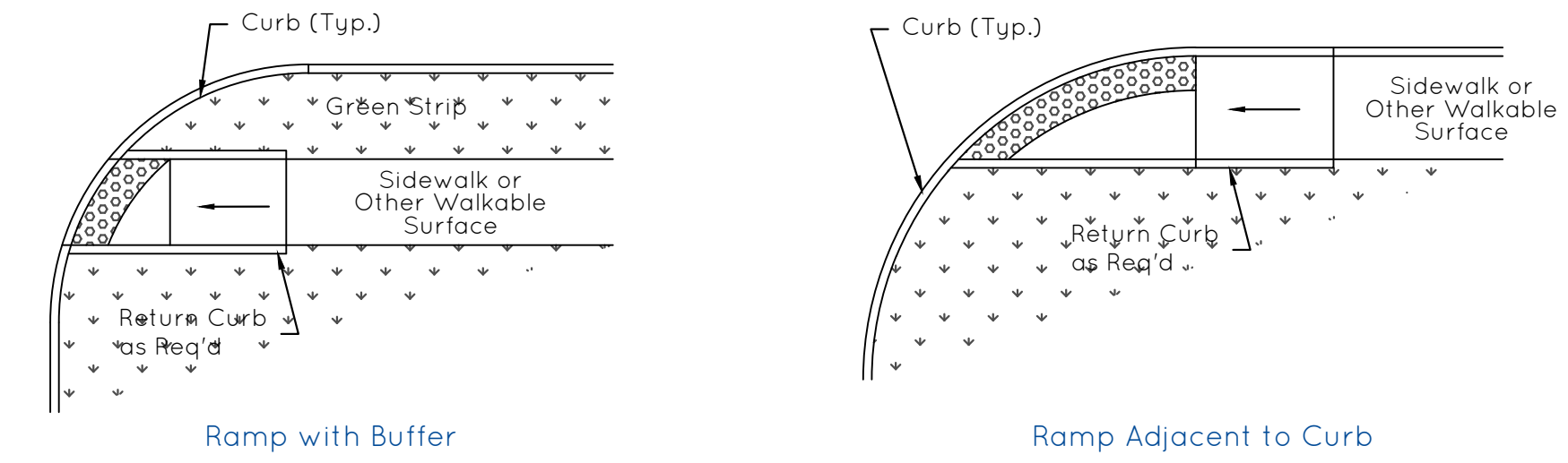
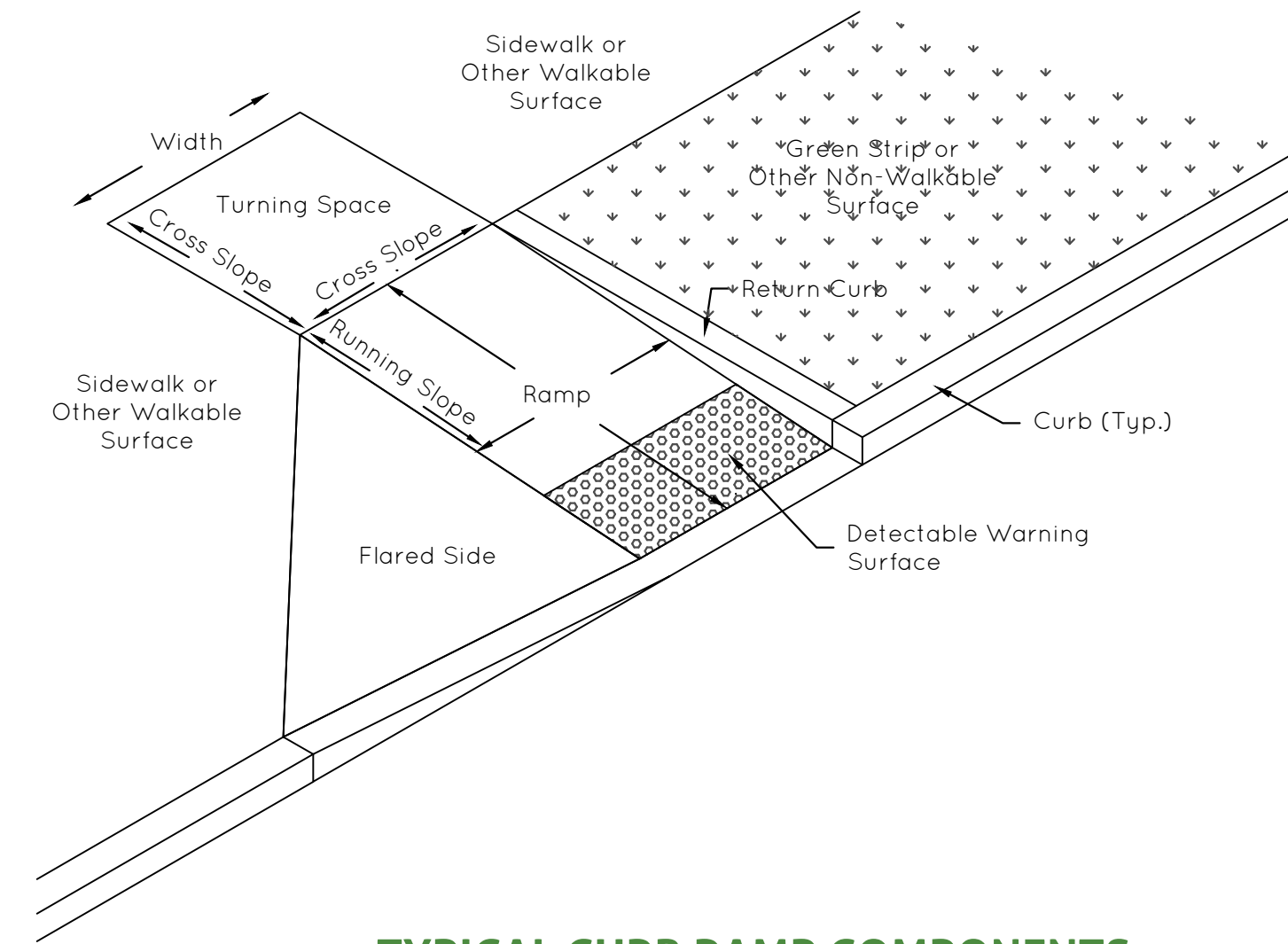


CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
DRIVEWAY, CUL-DE-SAC, AND MISC. TRANSPORTATION DETAILS

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of
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NOTES

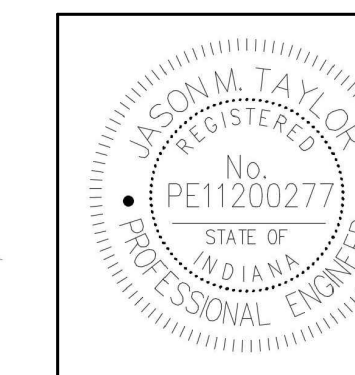
- 1) Curb ramps and sidewalks shall be constructed in accordance with INDOT Standard Specifications, Section 604.
- 2) All sidewalks and curb ramps within Fishers Right-of-Way shall be ADA compliant.
- 3) Detectable Warning Surfaces shall be cast iron type and shall be powder coated black.
- 4) Detectable Warning Surfaces shall not be installed at commercial or private driveways unless traffic warrants or approved by City Engineer.
- 5) Transverse joints shall be cut with a jointer having a radius of 1/2-inch of spacing.
- 6) Decorative sidewalks are not permitted unless prior approval has been given by the Director of Engineering.
- 7) When sidewalk is built in conjunction with concrete pavement, expansion and contraction joints should be placed at the same location as the pavement slab. The curb and gutter shall be tied to the pavement by 1/2-in round preformed epoxy coated bars at approximate 3-foot intervals. If concrete pavement is not being built at the same time the curb is constructed, expansion joints should be placed at the ends of all returns and at intervals not to exceed 100 feet. Contraction joints should be installed at 20-foot intervals.
- 8) Curb inlets shall not be allowed within 2 feet of curb ramps or at the apex of corner radii.



- Note:
- 1) Detectable warning surfaces by East Jordan Iron Works, Neenah, or approved equal shall be cast iron, have a heavy duty load rating, and be powder coated black.
 - 2) Detectable warning surfaces shall be ADA compliant.

ROUNDBOULT SIDEWALK AND CURB RAMP PLACEMENT
Not to Scale

J. Taylor
1/18/2022



CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
SIDEWALK, CURB RAMP, AND PERIMETER PATH DETAILS

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PRINCIPLES AND OBJECTIVES

Several overarching principles should guide the development of all roundabout designs. Achieving these principles should be the goal of any roundabout design:

- Provide slow entry speeds and consistent speeds through the roundabout by using deflection.
- Provide the appropriate number of lanes and lane assignment to achieve adequate capacity, lane volume balance, and lane continuity.
- Provide smooth channelization that is intuitive to drivers and results in vehicles naturally using the intended lanes.
- Provide adequate accommodation for the design vehicles.
- Design to meet the needs of pedestrians and cyclists.
- Provide appropriate sight distance and visibility for driver recognition of the intersection and conflicting users.

Note that some features of multi-lane roundabout design are significantly different from single-lane roundabout design, and some techniques used in single-lane roundabout design may not directly transfer to multi-lane design. Each of the principles described above affects the safety and operations of the roundabout. When developing a design, the trade-offs of safety, capacity, cost, and so on must be recognized and assessed throughout the design process.

DESIGN GUIDELINES

Submittals

All roundabout designs shall be submitted for review at the following stages of development:

- 1) Conceptual
 - 1)1) Preliminary layout
 - 1)2) Planned roundabout capacity analysis for construction year, 10-year, and 20-year traffic review
- 2) Stage 1 or 25% plans
 - 2)1) Refined geometrics
 - 2)2) Turning movement and design vehicle selection review
 - 2)3) Striping review
- 3) Stage 2 or 50% plans
 - 3)1) Drainage and grade review
 - 3)2) Roundabout sight distance review
- 4) Stage 3 or 75% plans
 - 4)1) Landscaping review
 - 4)2) Lighting review
 - 4)3) Signage review

Speed Management

The maximum allowable fastest path entry speeds shall be as indicated below unless prior approval has been given by the Department.

- 1) Single-lane roundabouts - 25 mph
- 2) Multi-lane roundabouts - 30 mph

Design Vehicle Selection

- 1) The WB-62 shall be the minimum design vehicle for sizing the roundabout unless prior approval has been given by the Department.
 - 1)1) At multi-lane approaches it shall be assumed that the WB-62 will straddle the lane line to make a through and right-turn movement.
- 2) At a minimum, the WB-62 shall be able to travel through a roundabout without over-tracking any curb with the exception of the truck apron roll curb unless prior approval has been given by the Department.
- 3) The circulatory roadway and all lanes within a multi-lane roundabout shall accommodate a city-bus, fire truck, and school bus unless prior approval has been given by the Department.

Inscribed Circle Diameter (ICD)

Unless prior approval is given by the Department, the smallest ICD used for design shall be 110 ft.

Entry Geometry and Path Alignment

- 1) If horizontal deflection is utilized on an approach to a roundabout it should be a 6 ft offset minimum and, ideally, 10 to 12 ft to ensure drive path is influenced.
- 2) Entries shall be designed such that path overlap is eliminated.

Profiles and Grades

Vertical profiles and roundabout grading should take into consideration low clearance vehicles especially on heavy truck routes.

Splitter Islands

- 1) Splitter islands for single-lane roundabouts should be 50 feet or greater in length and 100 feet or greater in length for multi-lane roundabouts measured from the circulatory roadway.
- 2) On high speed approaches (design speed of approaching roadways above 45 mph) consideration should be given for the splitter island length to be the SSD of that design speed.

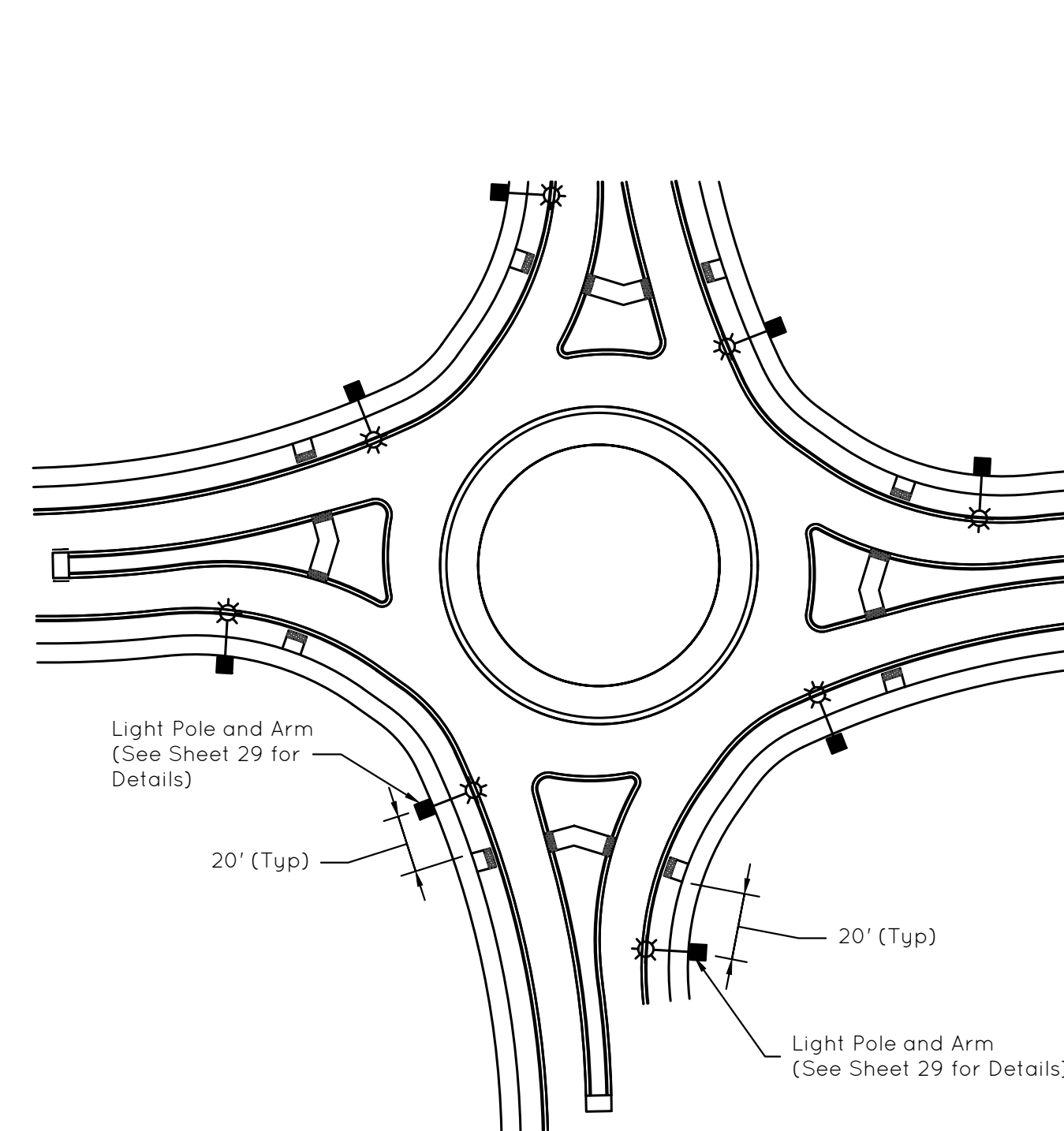
Drainage

No drainage structures shall be located within the circulatory roadway unless prior approval has been given by the Department.

Landscape

Any landscaping or object located within the center island shall be approved by the City of Fishers.

- 1) If no landscaping is proposed in the center island, fill should be placed at a 6:1 slope in order to provide a sight obstruction mound.
- 2) All splitter islands less than 8 ft in width and between the pedestrian crosswalk and circulatory roadway shall not be landscaped and shall be in stamped concrete unless prior approval has been given by the Department.
- 3) The minimum median width shall be 52 inches. If 52 inches cannot be achieved, then median must be stamped concrete or landscaped with typical Fishers narrow median landscape plan as provided by City during plan review.

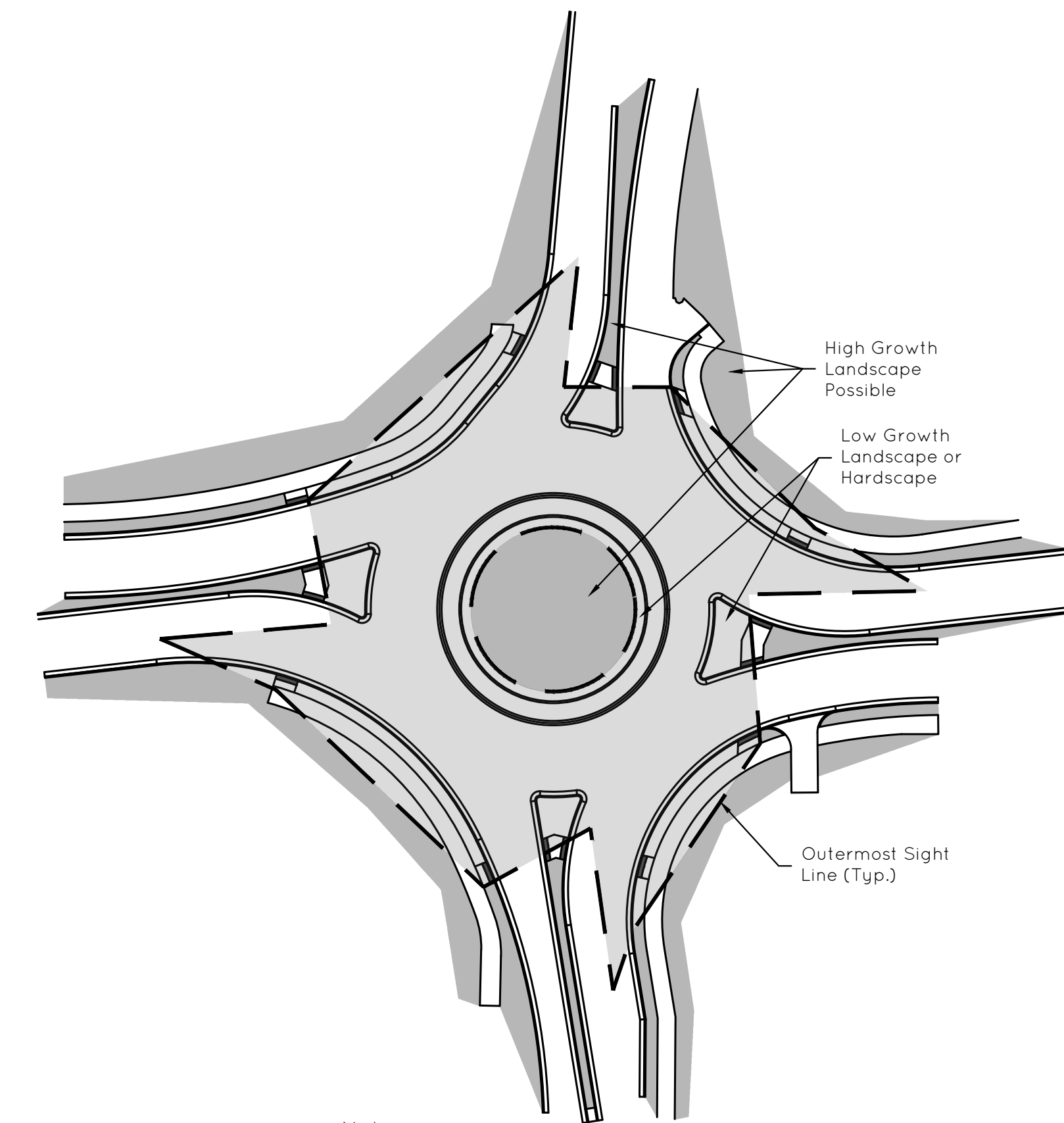


Notes:

- 1) Lighting design shall be in conformance with the IES Design Guide (IES DG-19-08) and City of Fishers standards.
- 2) Luminaire, pole, and placement shall be coordinated for installation by Duke Energy.
- 3) Do not backlight pedestrians.
- 4) The full length of splitter islands shall be illuminated unless prior approval has been given by the Department.
- 5) Additional poles should be provided as required to meet appropriate photometric results for complex geometry.

TYPICAL LIGHTING PLACEMENT

Not to Scale

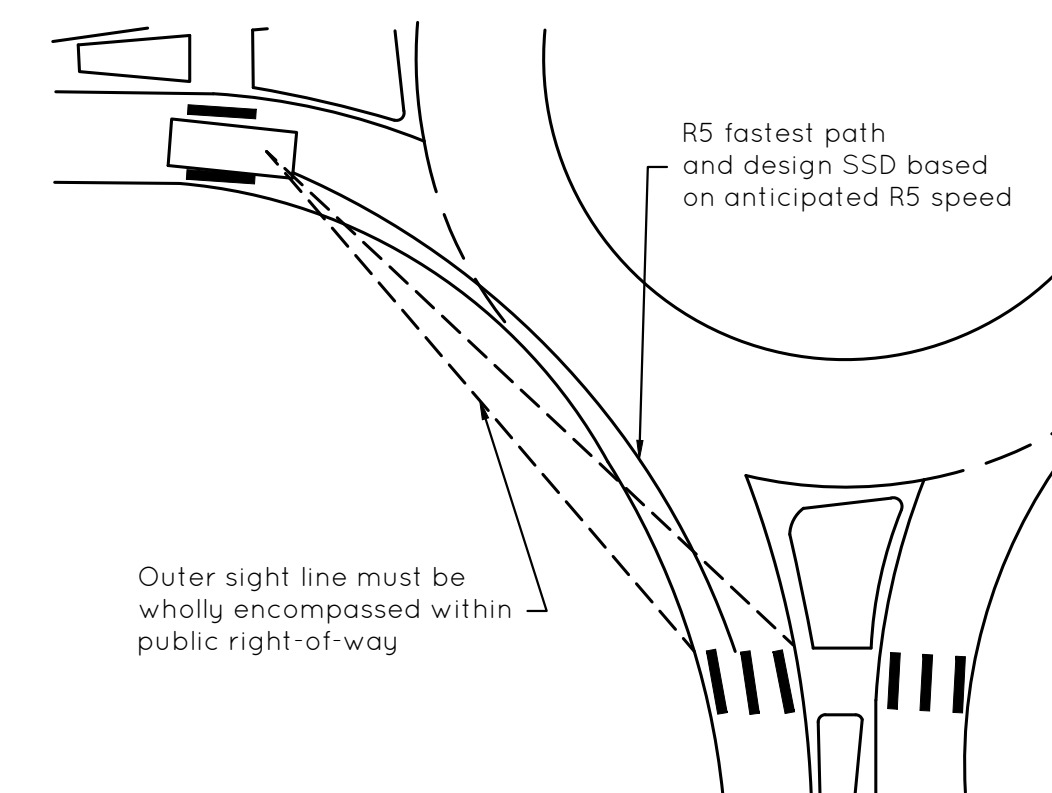


Note:

- 1) A scalable plan sheet and CAD file shall be provided to the Dept. of Engineering upon completion of final plans.

EXAMPLE LANDSCAPE AREAS DIAGRAM

Not to Scale



Notes:

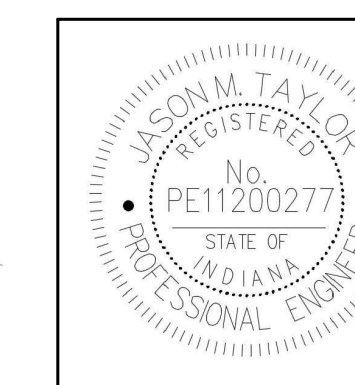
- 1) This detail is to provide additional guidance to designers. Designer shall not arbitrarily place vehicle at yield line or circulatory roadway edge line to check visibility.
- 2) All roundabout sight lines shall be checked in accordance with NCHRP 672.

STOPPING SIGHT DISTANCE (SSD) TO CROSSWALK

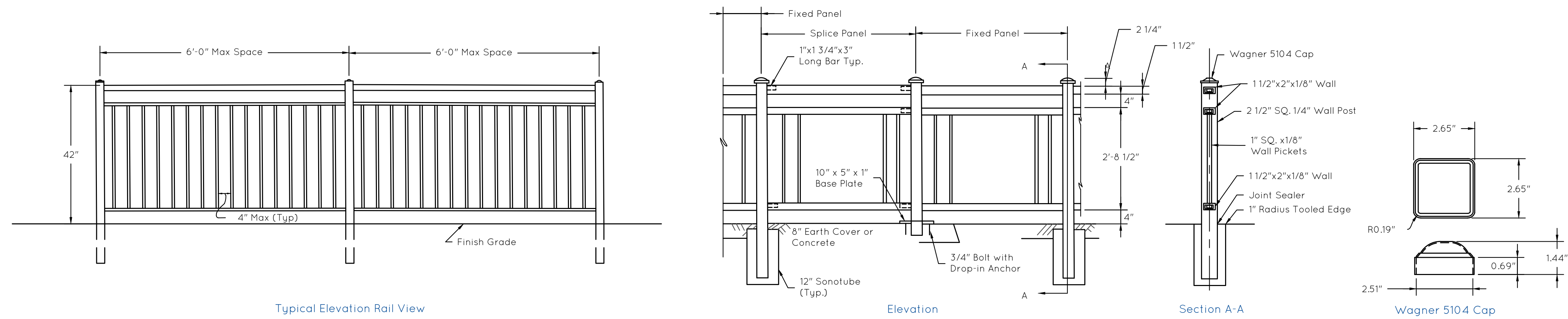
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J. Taylor

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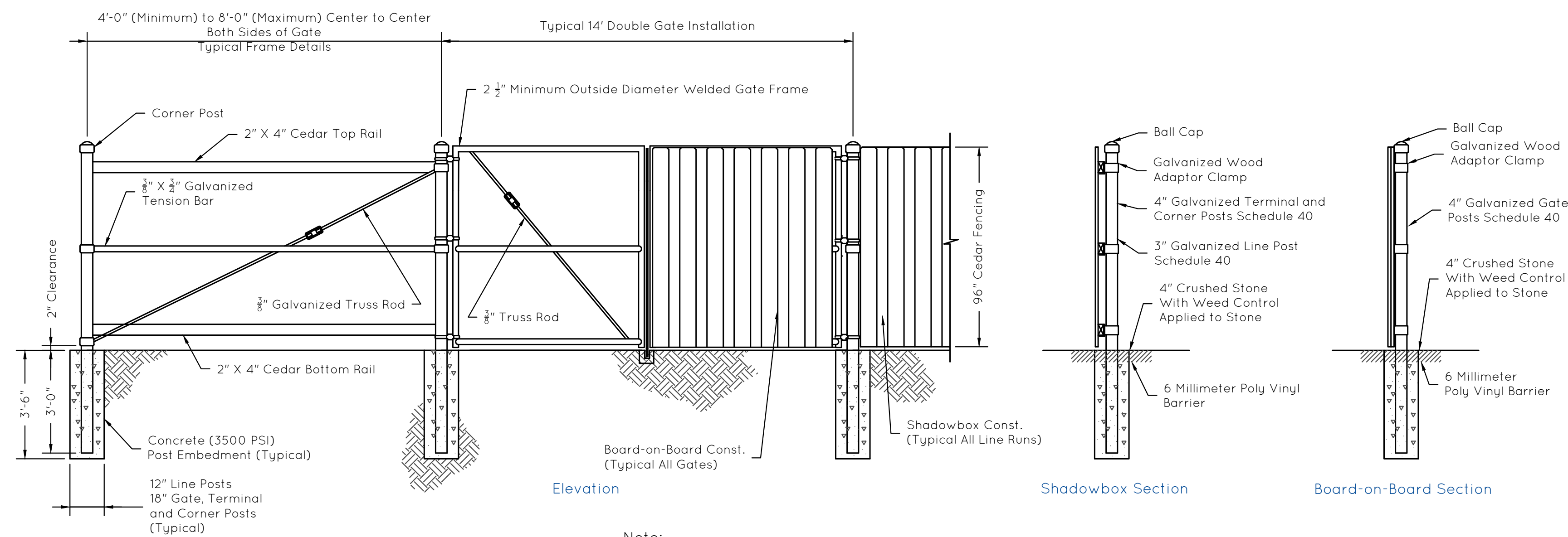


CITY OF FISHERS		SHEET
STANDARD CONSTRUCTION DETAILS		7
ROUNDABOUT DESIGN STANDARDS		of
		29



- Notes:
- 1) All extrusions aluminum 6061-T6 or 6063-T6.
 - 2) Pedestrian handrail shall be powder coated in accordance with ASTM D7803 and D3359. Powder coating color shall be Fishers Green (RAL 6004).
 - 3) Fixed panel sections will consist of two to three 6' maximum post pace sections welded as an assembly.
 - 4) Splice panel sections will consist of a loose top rail section and a welded pick panel section field assembled onto the 1" x 1 3/4" x 3" long bar supports.
 - 5) Railing connections shall be designed per AASHTO LRFD Bridge Design Specifications (Latest Edition).
 - 6) Footing and post embedment to be designed by the manufacturer. All concrete shall be Class "A" (3500 PSI). Posts may be anchored to precast concrete headwalls.
 - 7) Handrail to be used in conjunction with combined walk and retaining wall detail.

PEDESTRIAN HANDRAIL
Not to Scale

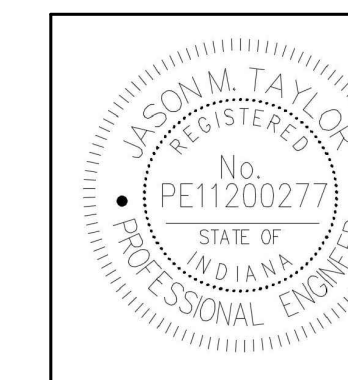


- Note:
- 1) Only for lift stations conveyed to Fishers.

CEDAR FENCE
Not to Scale

J. Taylor

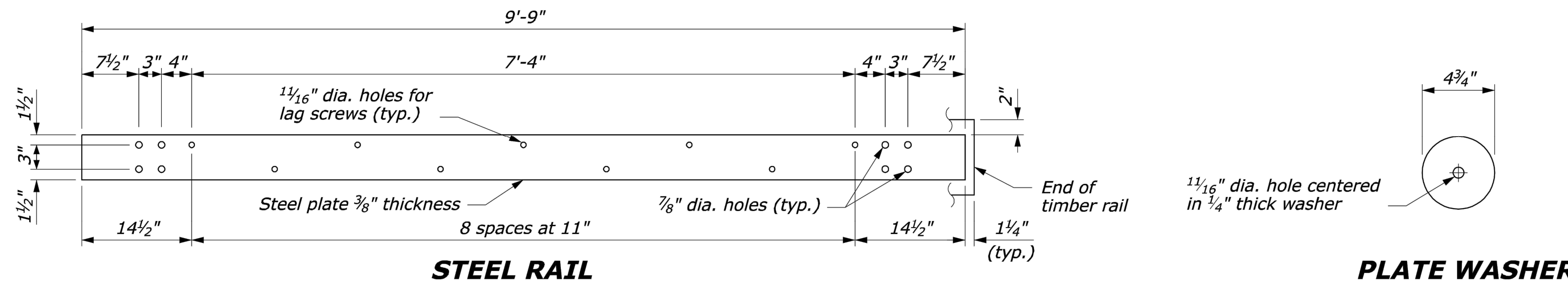
1/18/2022



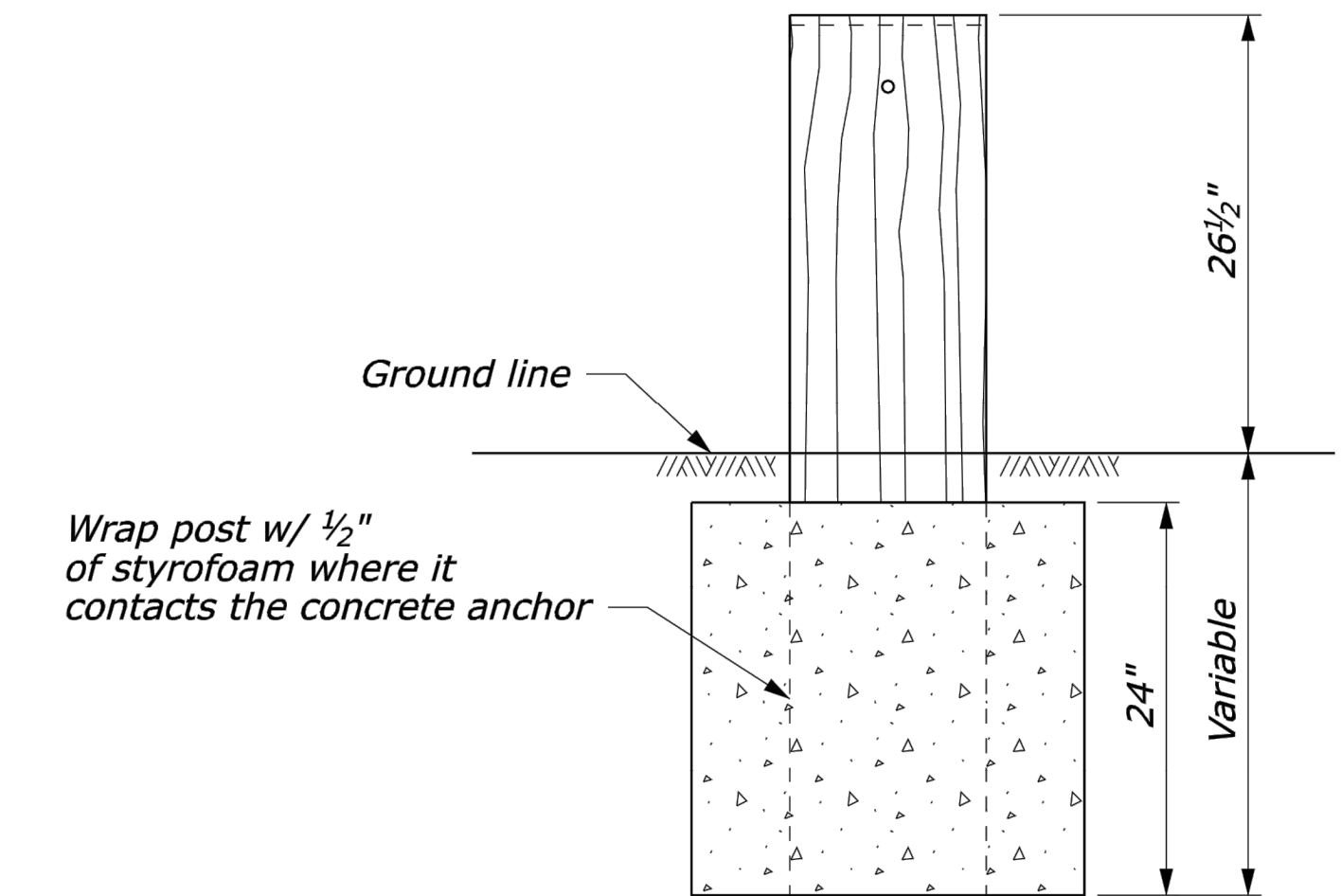
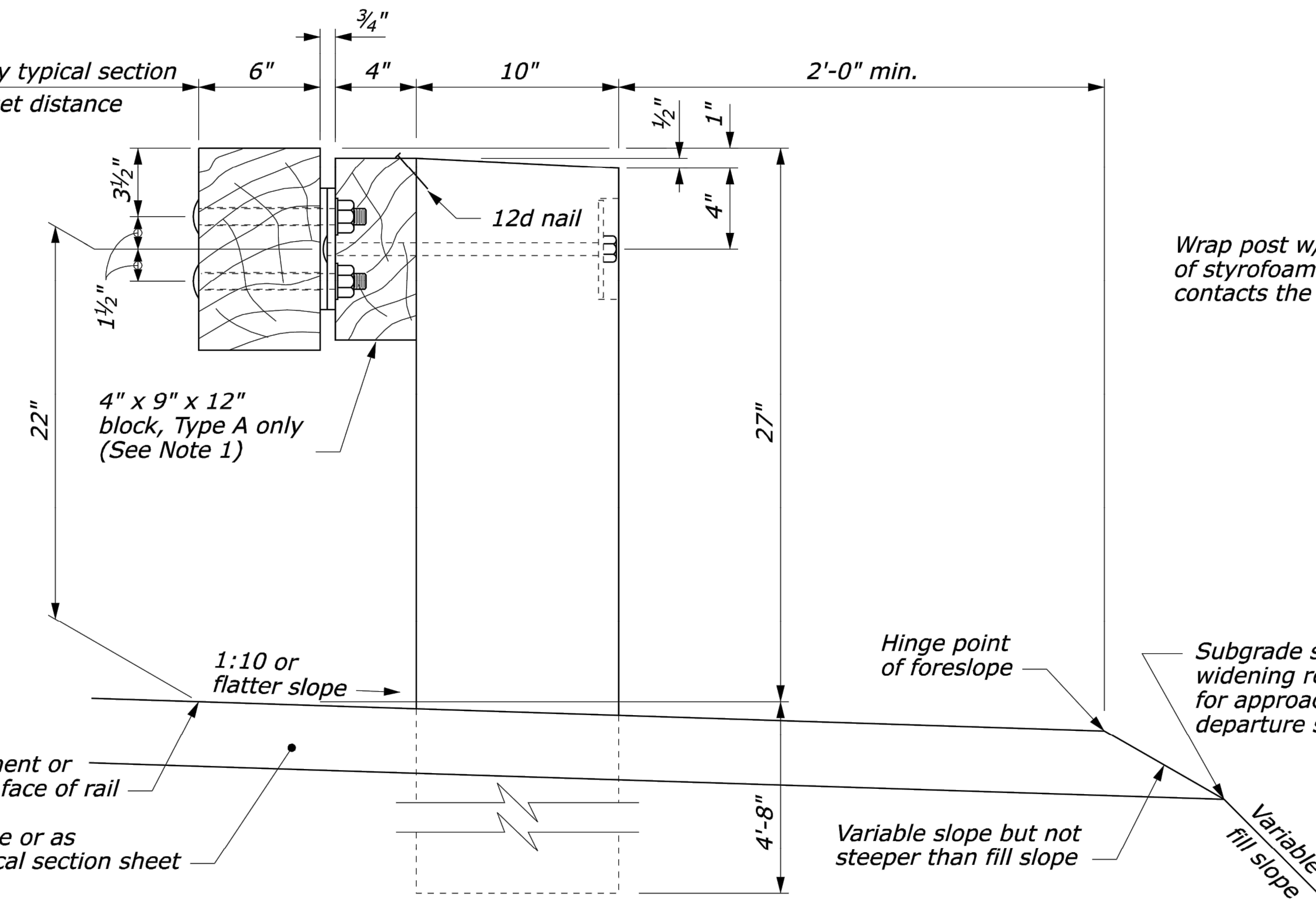
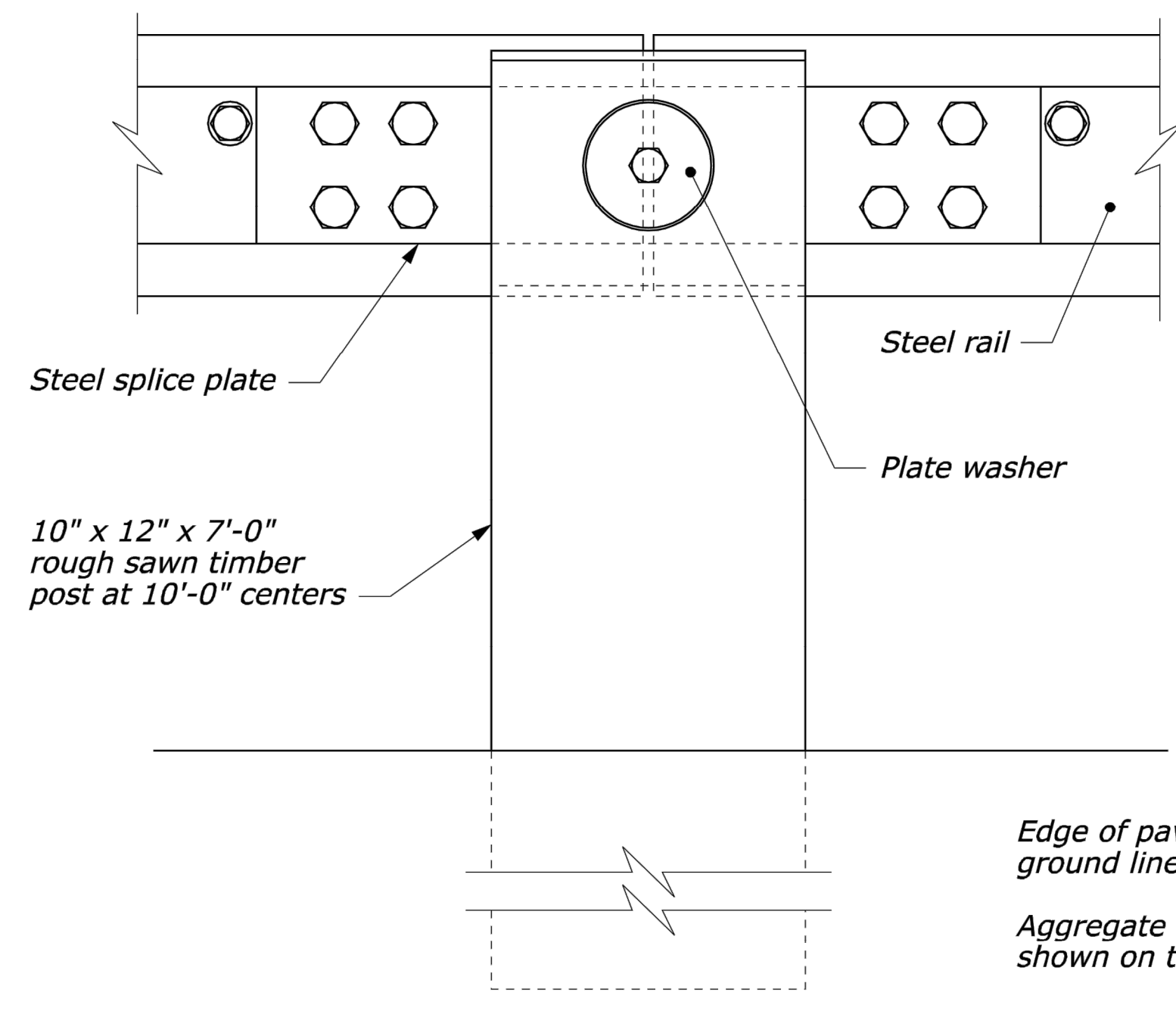
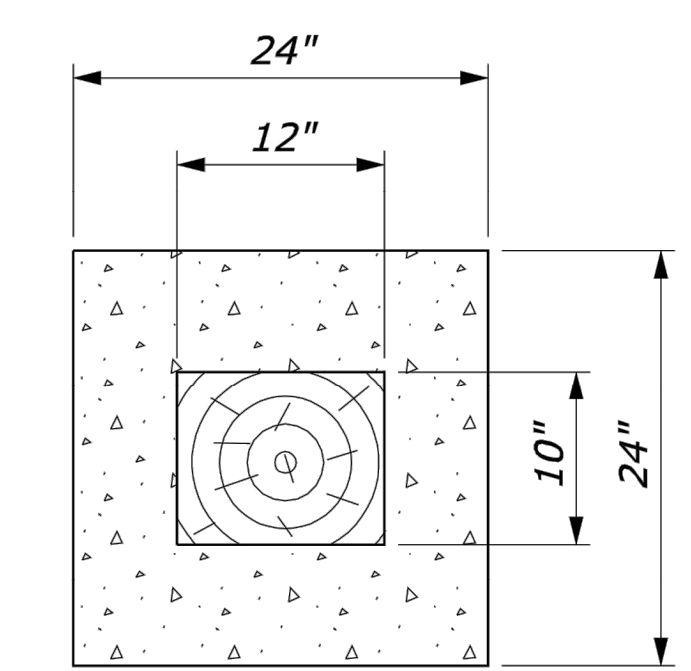
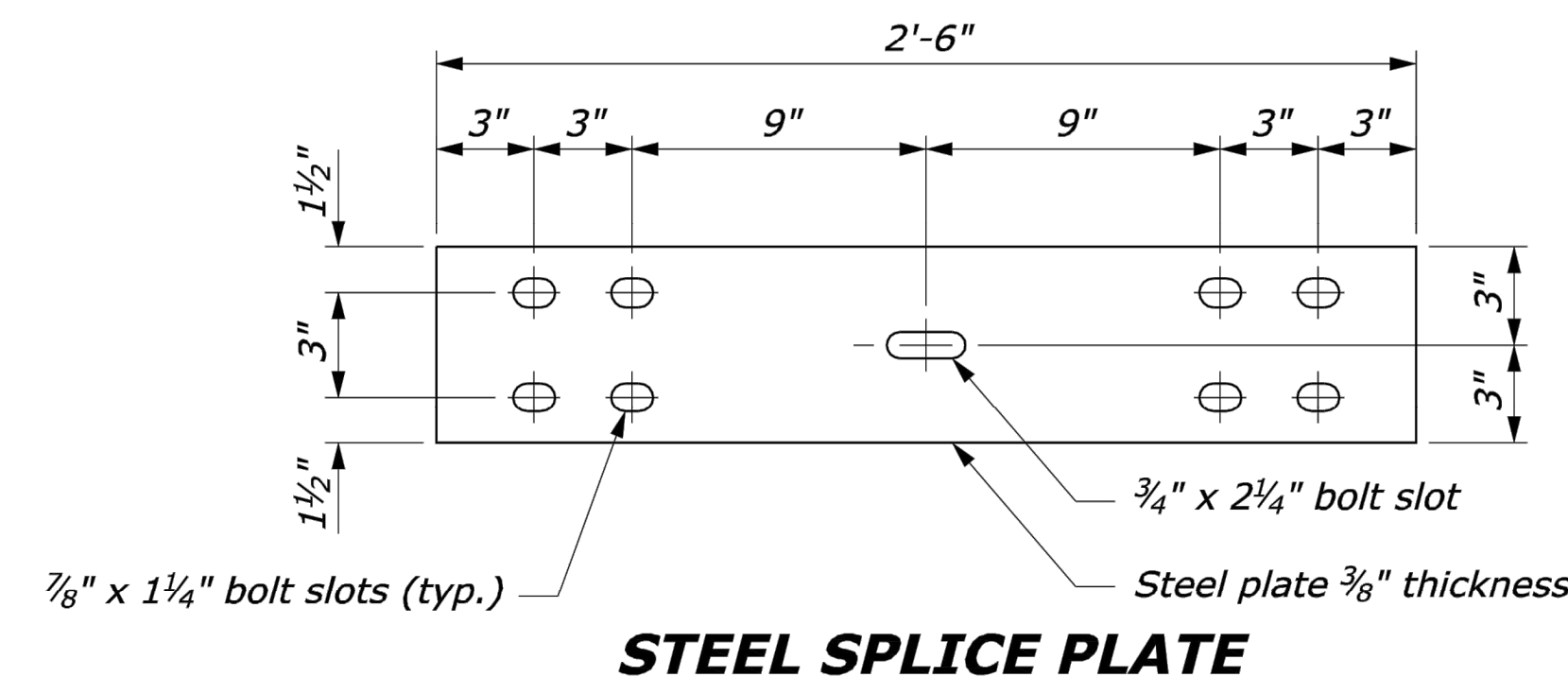
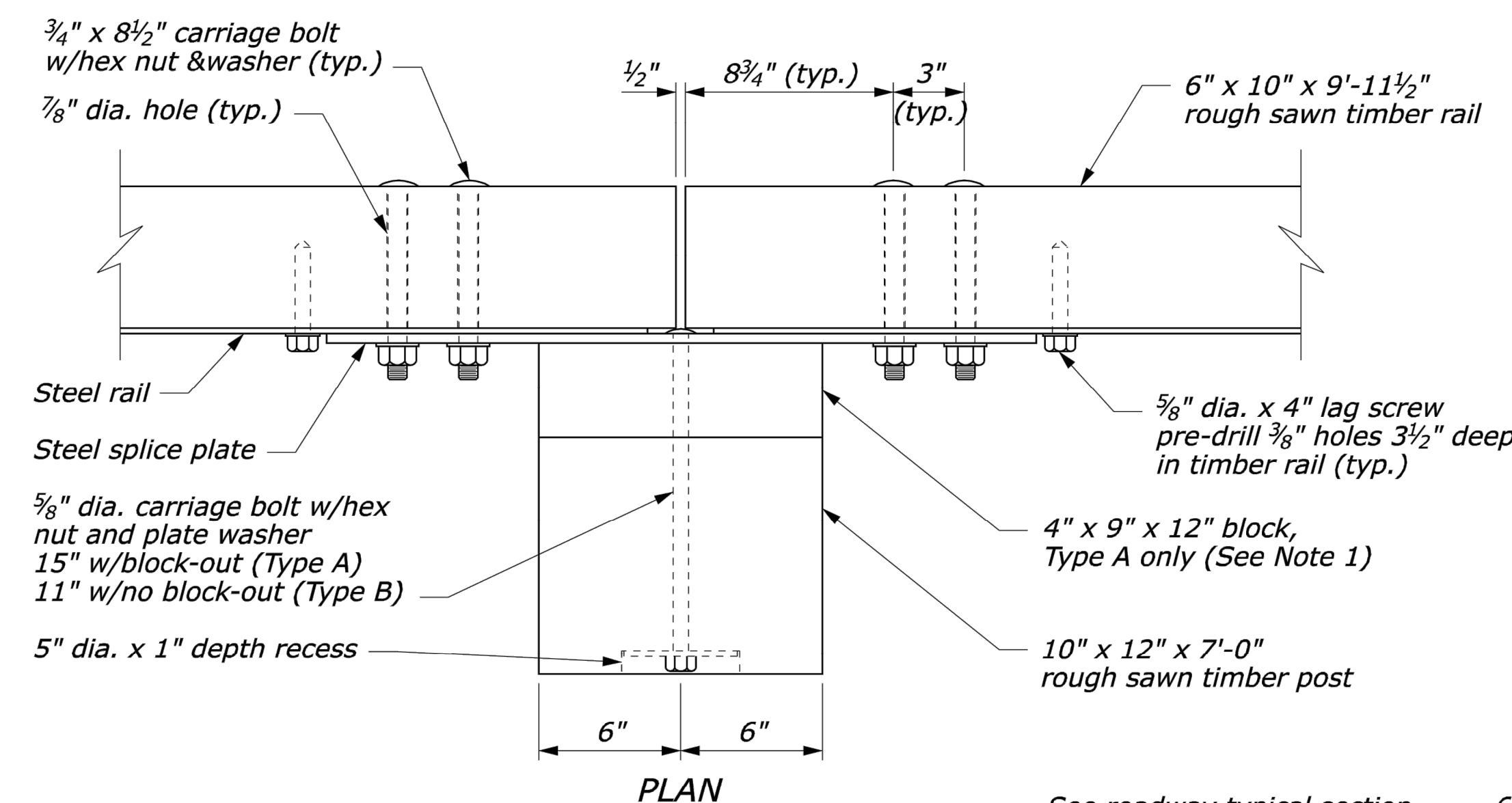
CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS

CEDAR FENCE AND PEDESTRIAN
HANDRAIL DETAILS

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of
29



- NOTE:**
1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.
 2. Use weathering steel for all structural steel and fastener hardware as specified.
 3. Place a terminal section (See Standards 617-61 and 617-62) on both approach and trailing ends of barrier installations.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

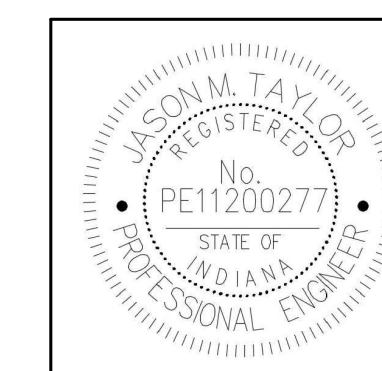
U.S. CUSTOMARY STANDARD

**STEEL-BACKED TIMBER GUARDRAIL
TYPE A & TYPE B**

STANDARD APPROVED FOR USE 3/1990	STANDARD
REVISED: 4/1994 6/2005	617-60

NO SCALE

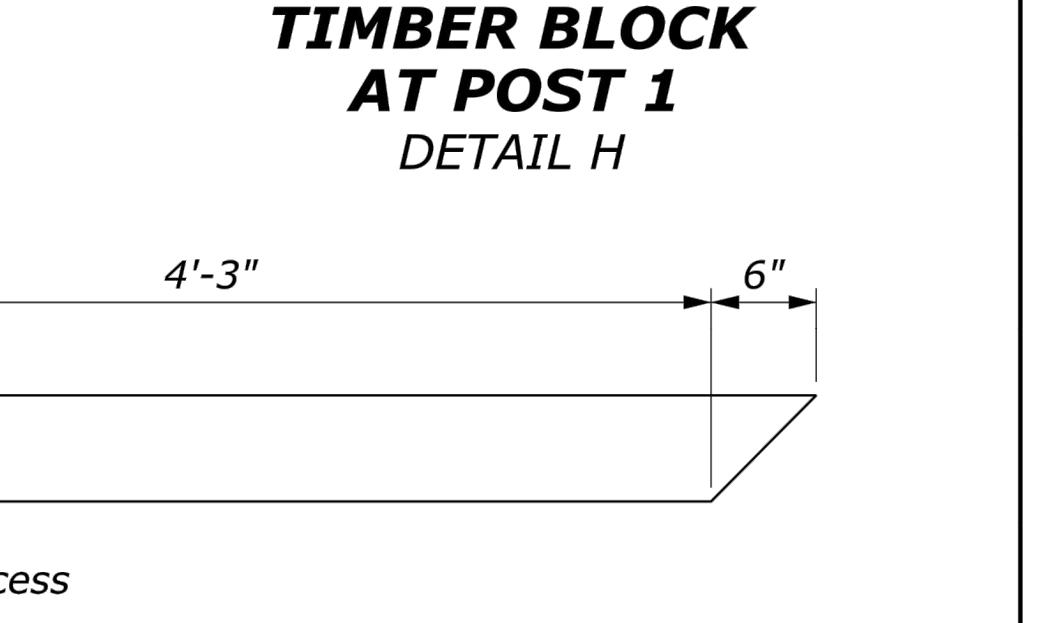
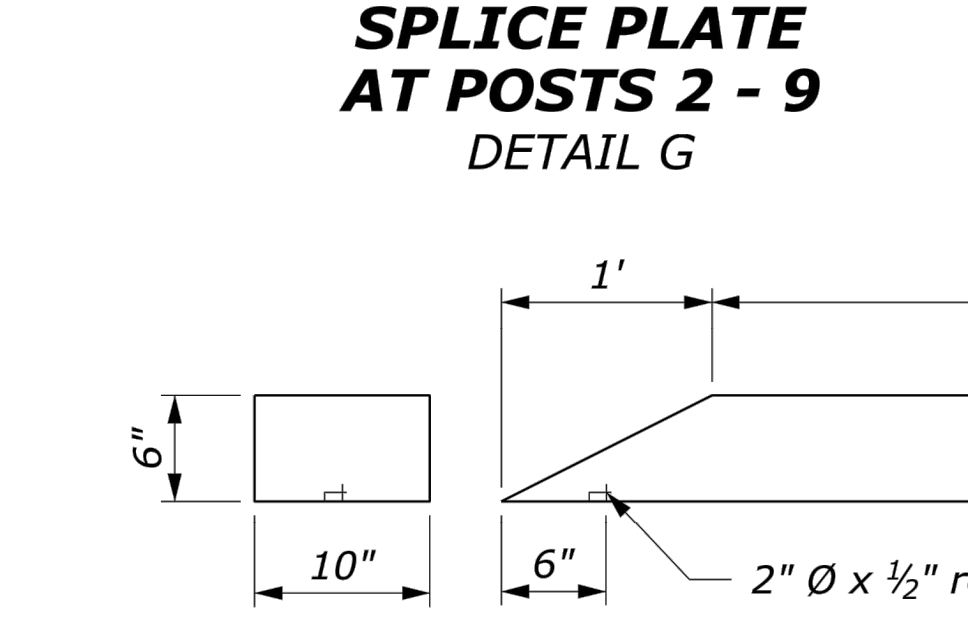
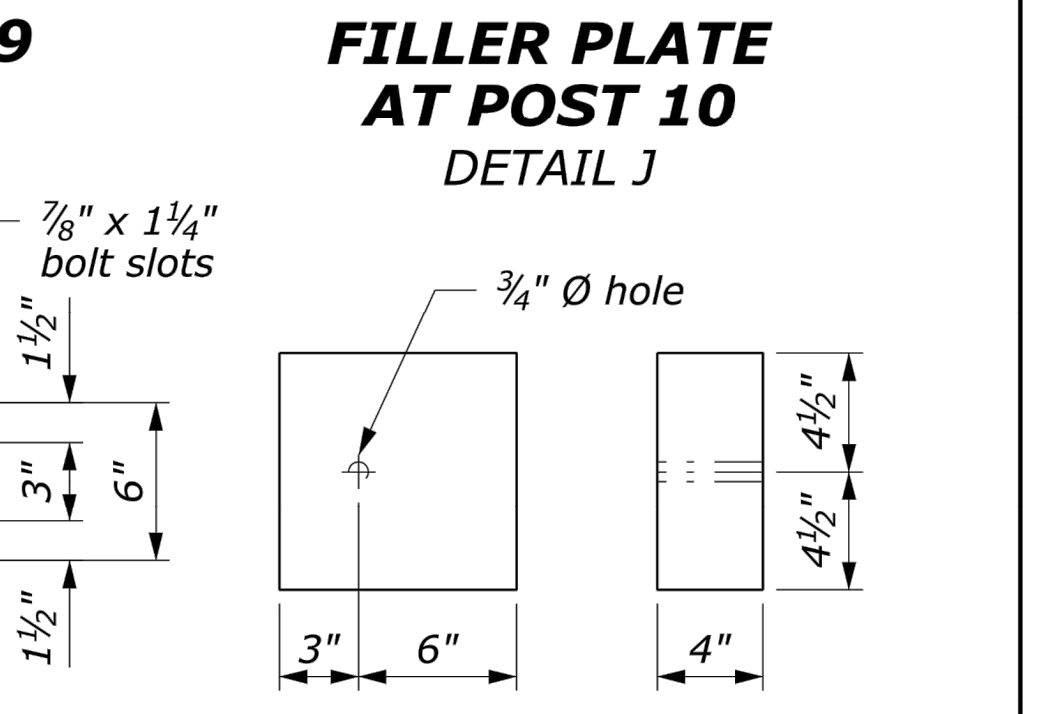
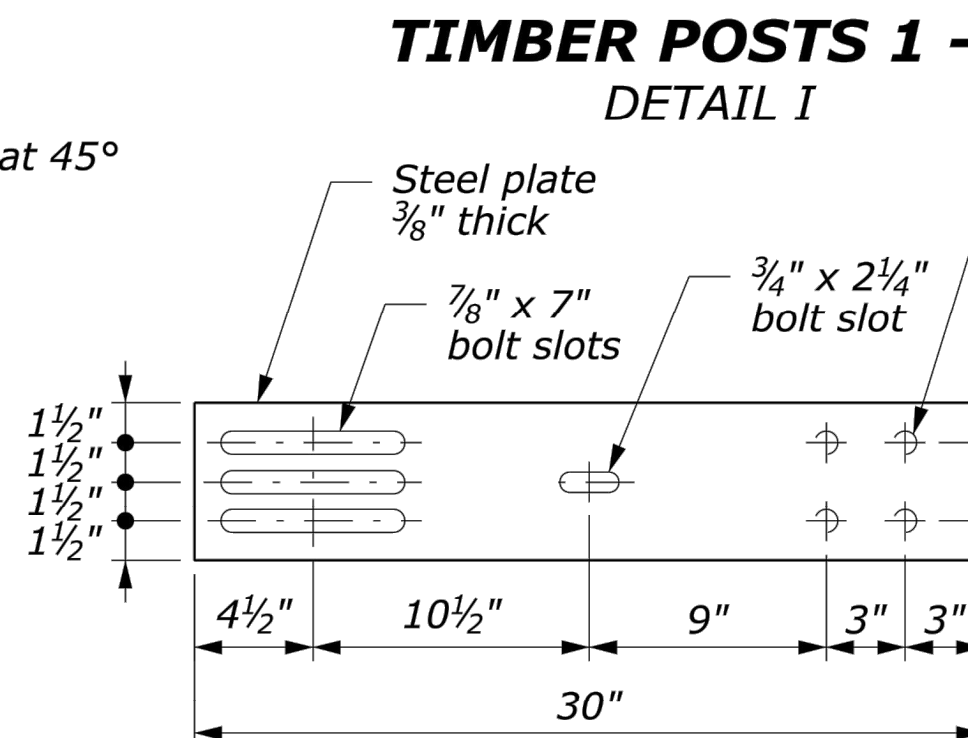
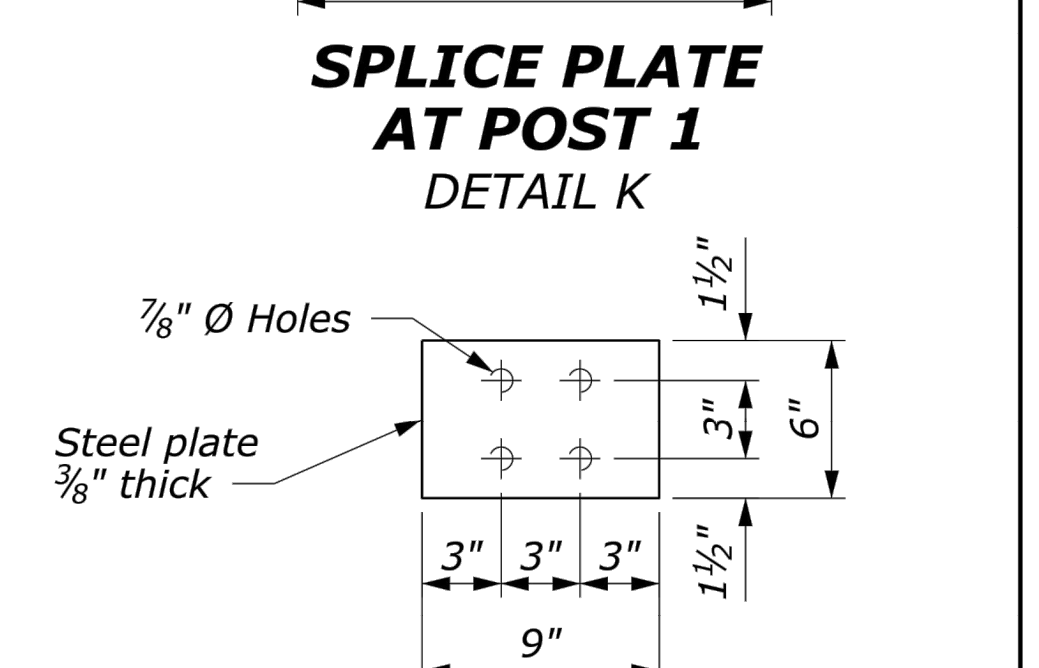
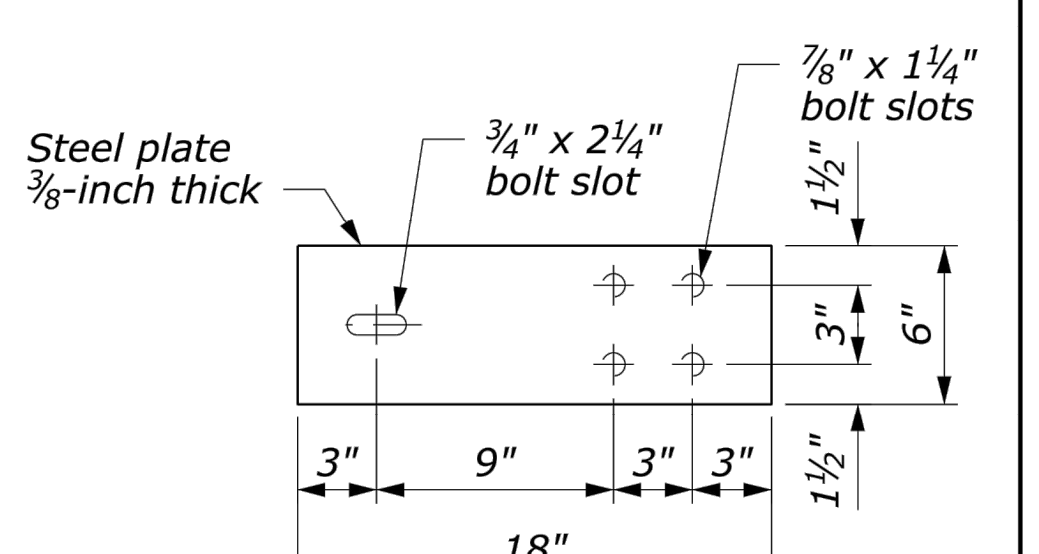
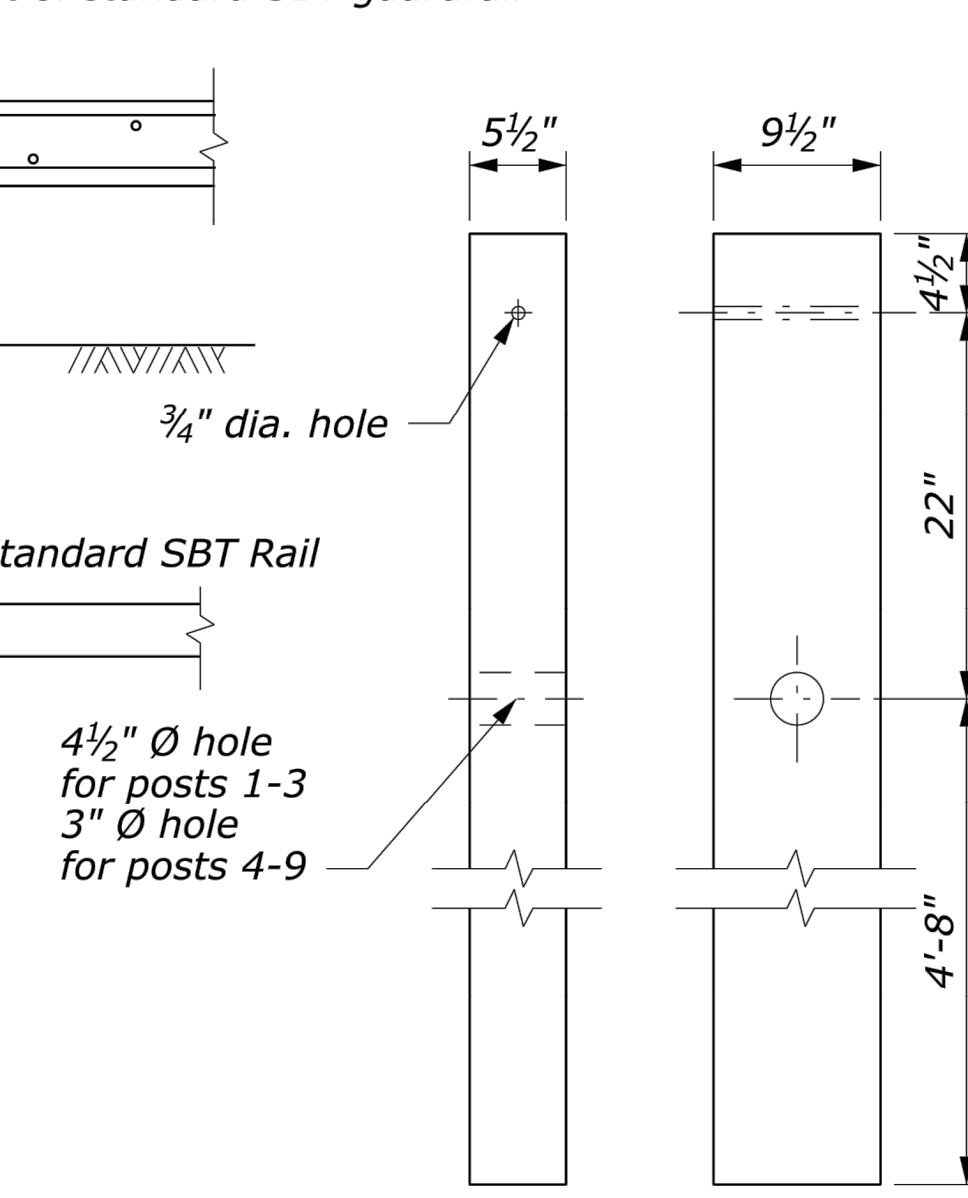
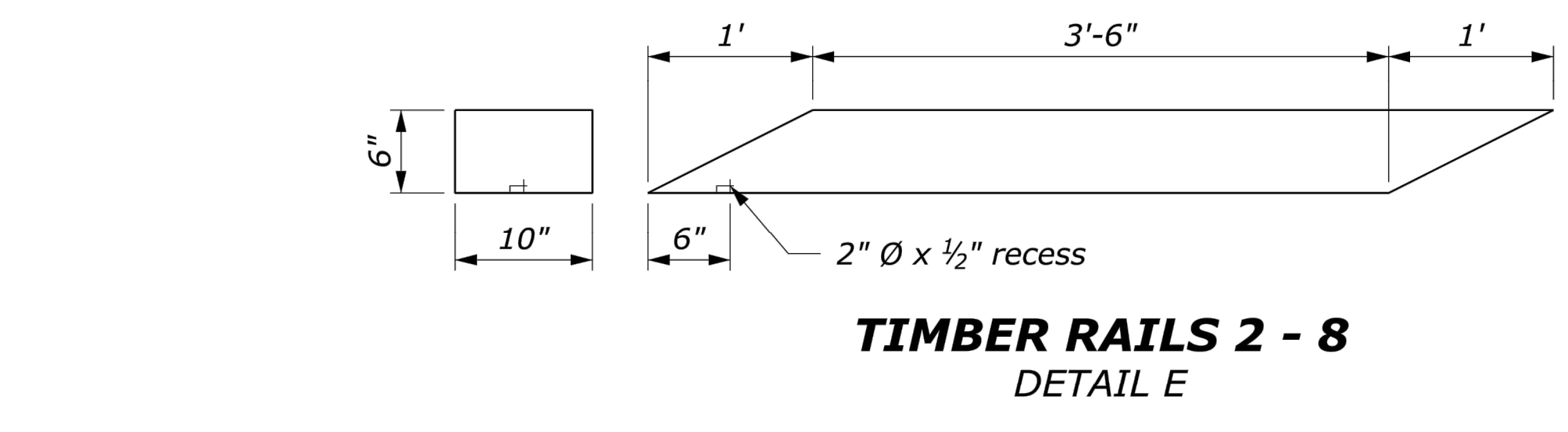
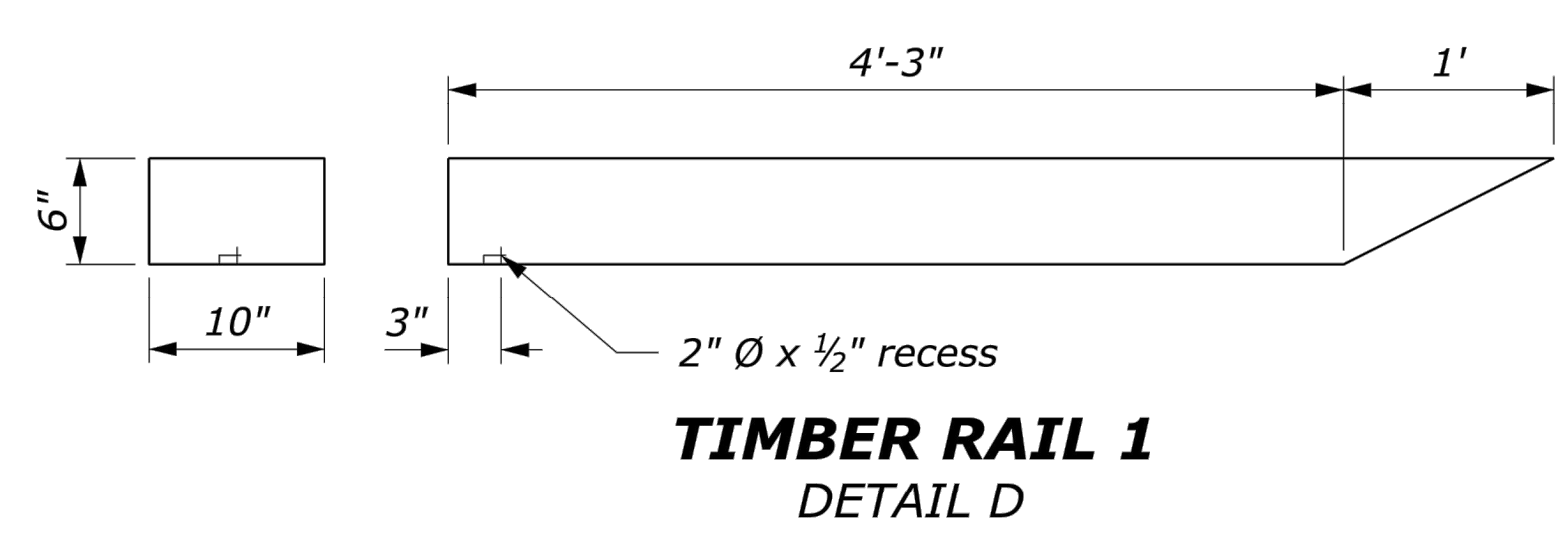
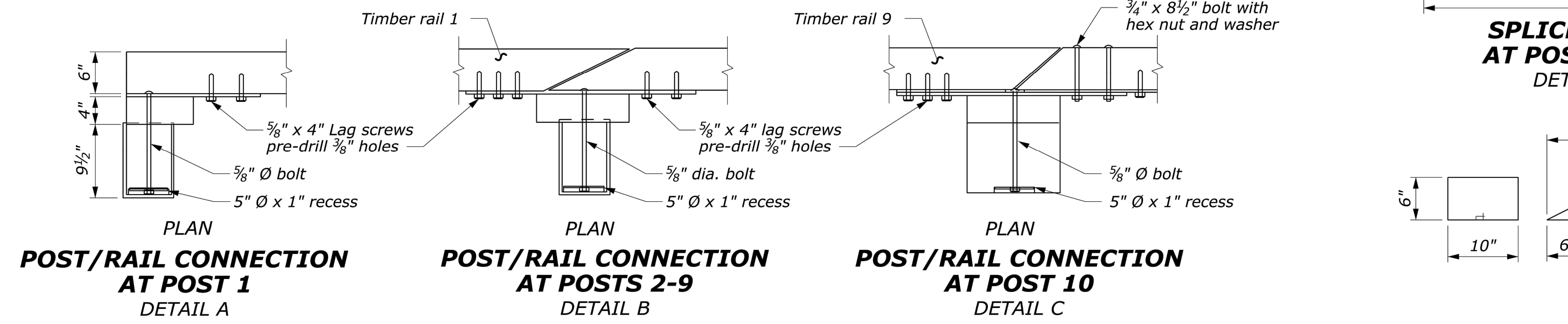
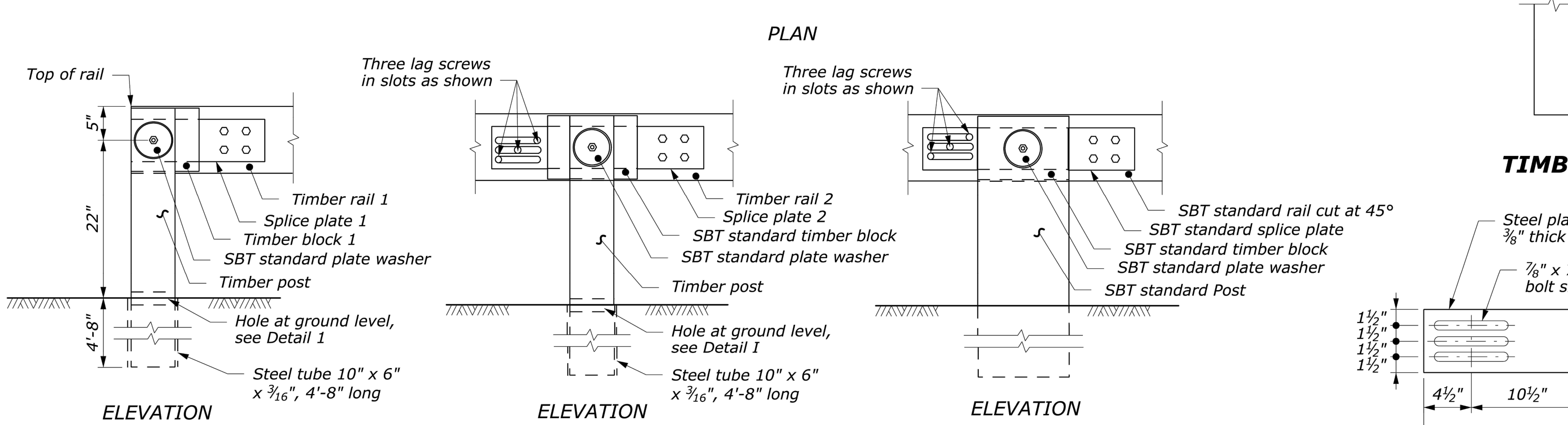
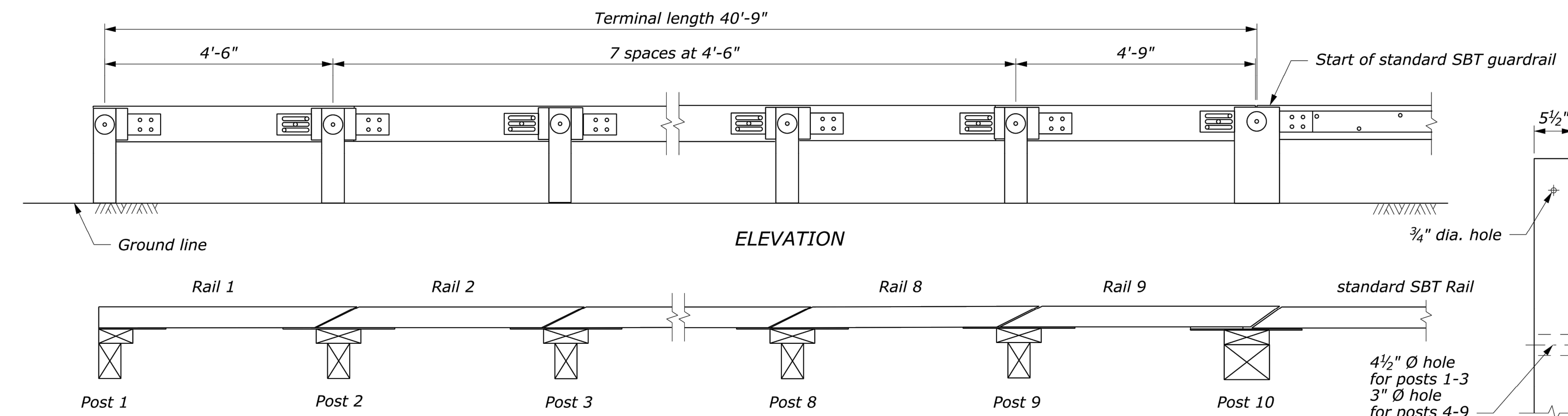
J. Taylor



CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS

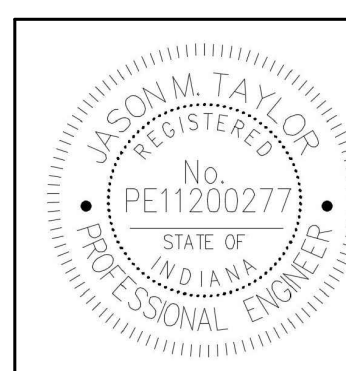
FHWA TIMBER GUARDRAIL DETAILS

STATE	PROJECT	SHEET NUMBER



U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
TL-2 END TERMINAL FOR STEEL-BACKED TIMBER GUARDRAIL	
STANDARD APPROVED FOR USE --/----	STANDARD
REVISED: DRAFT: 9/2011	617-69

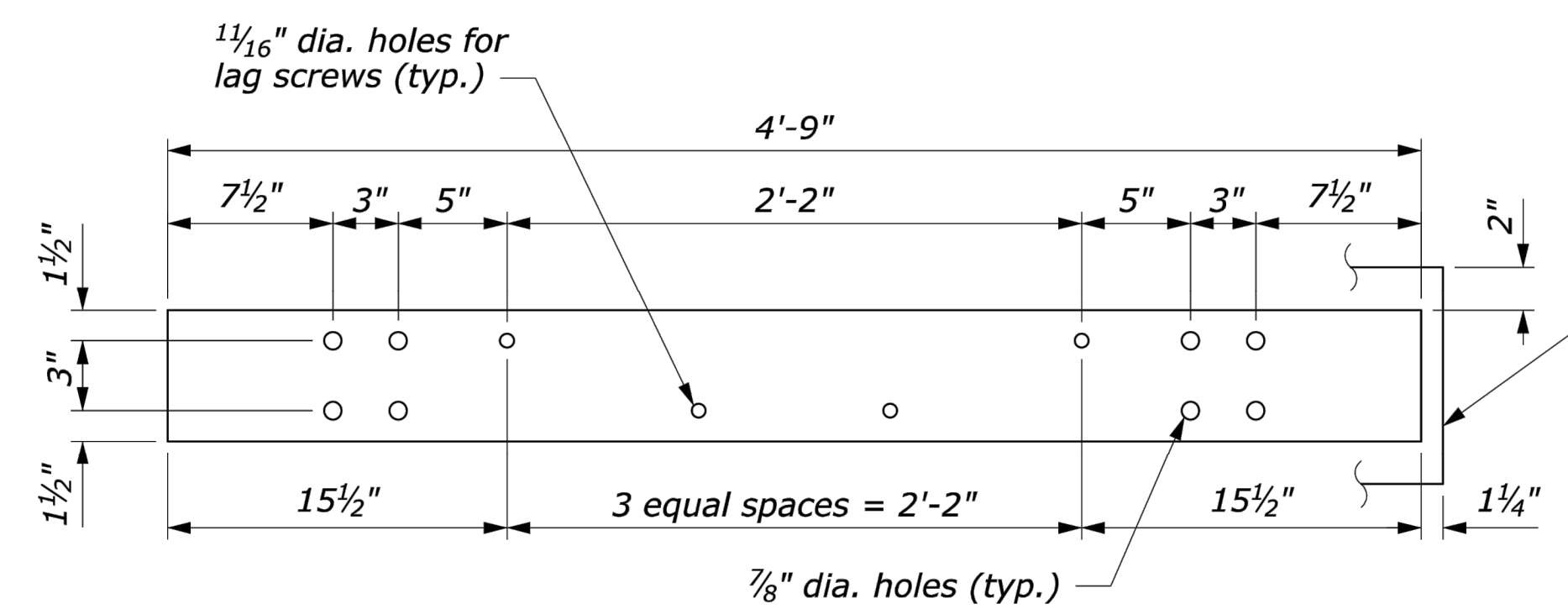
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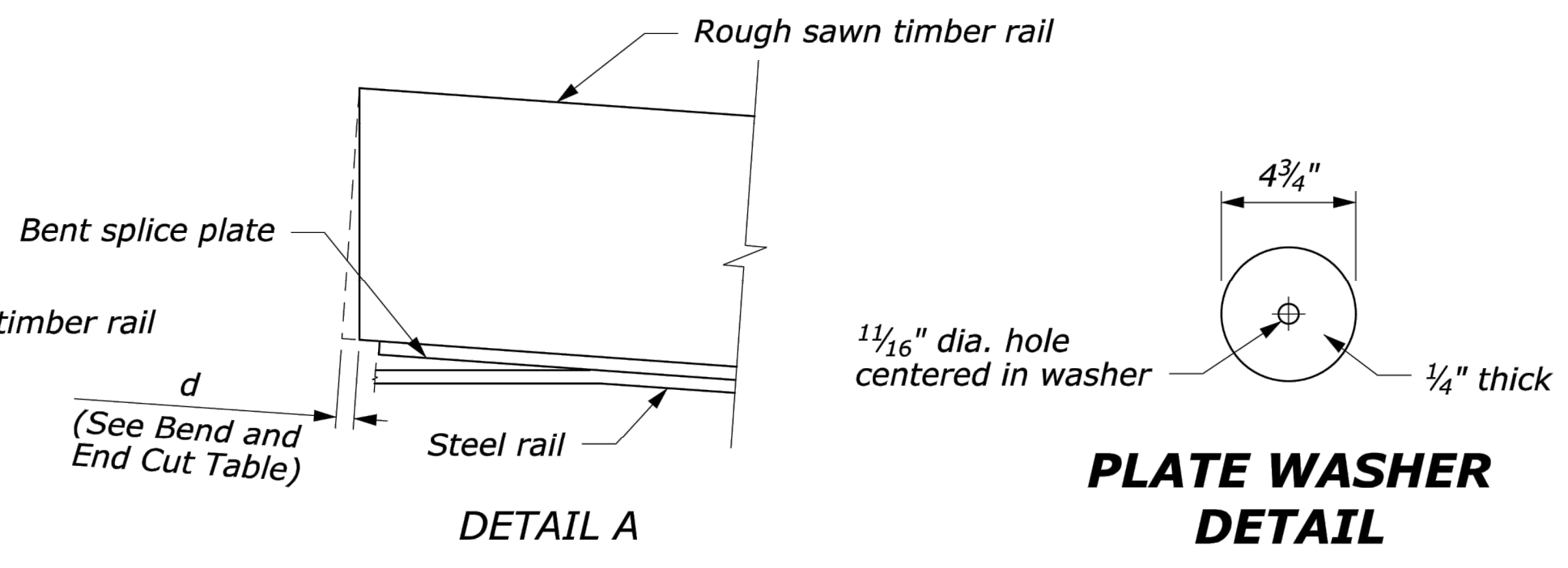
CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
FHWA TIMBER GUARDRAIL DETAILS

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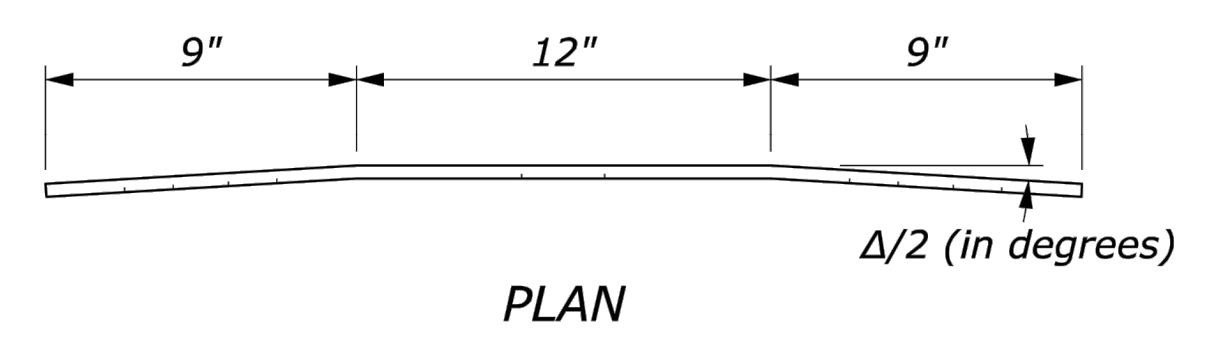
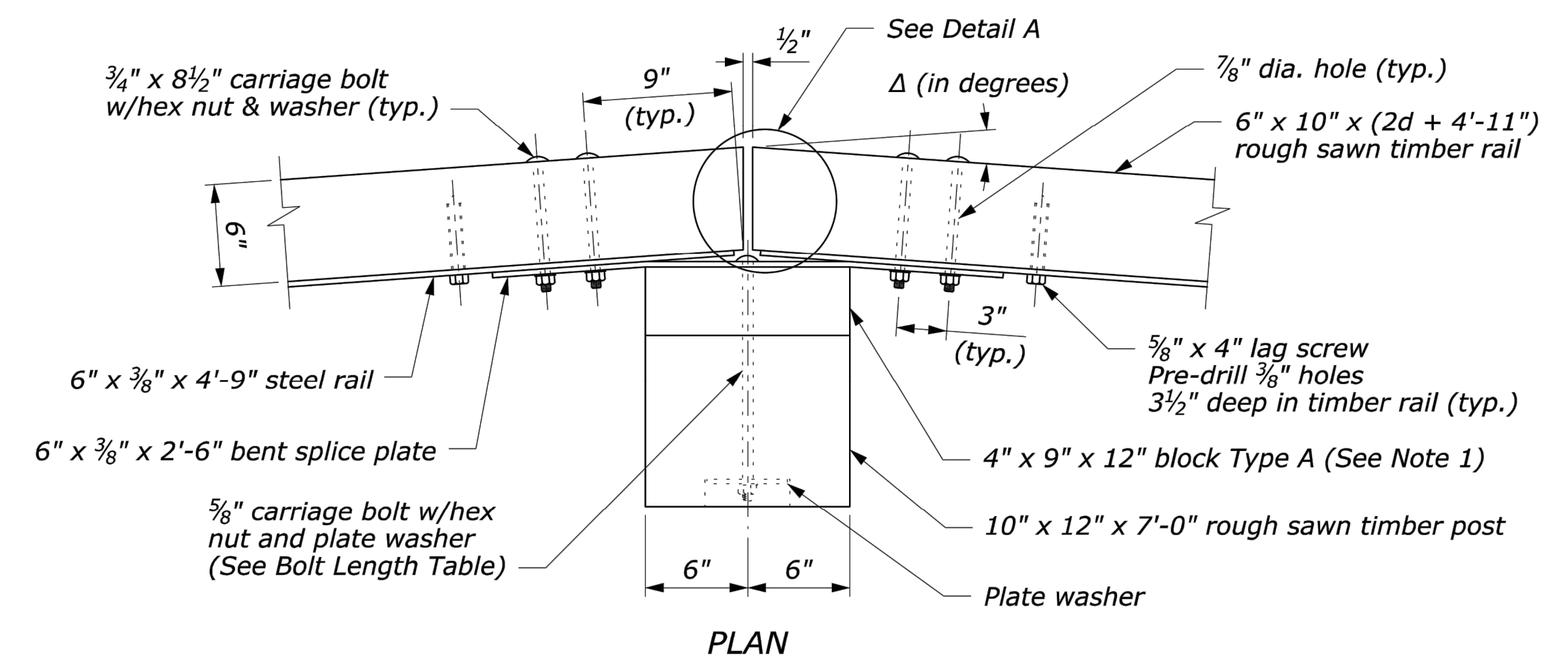


STEEL RAIL
6" x 3/8" x 4'-9"

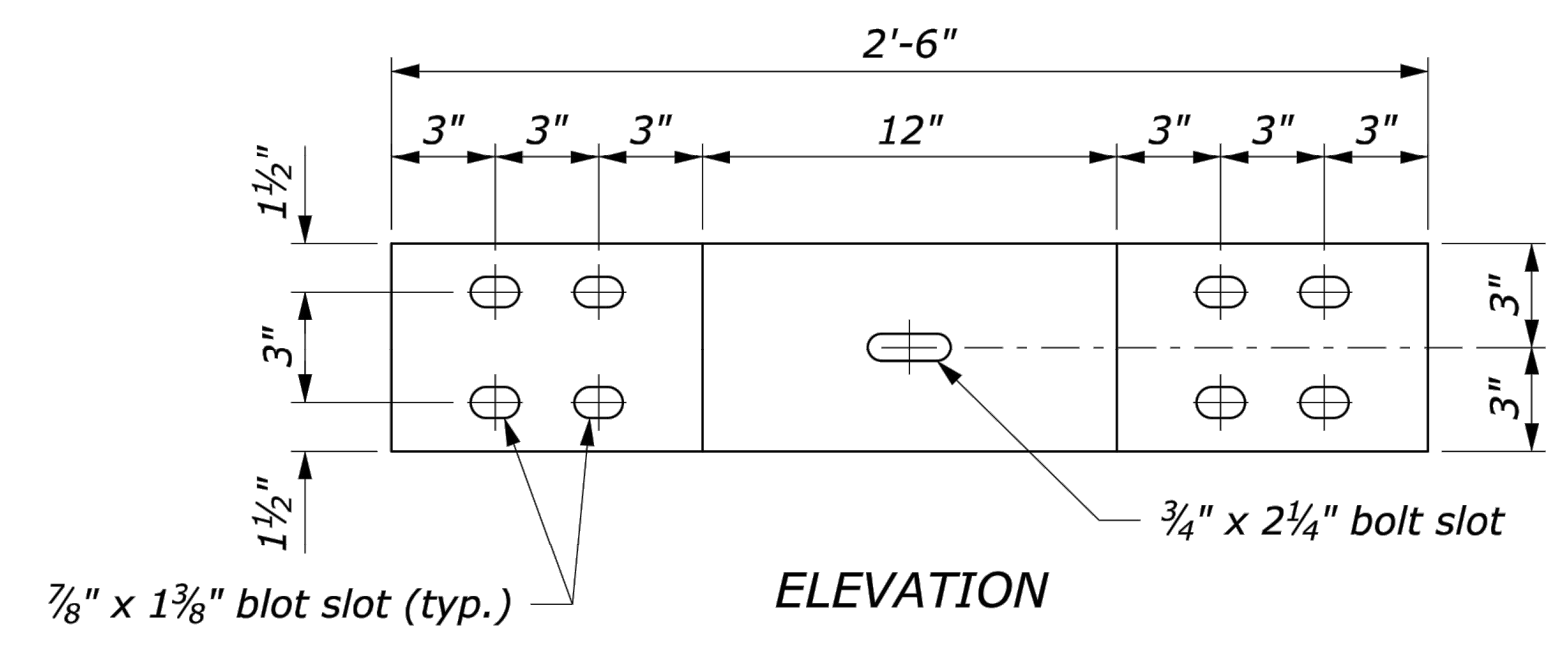


NOTE:

1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified.
2. Use the weathering steel for all structural steel and fastener hardware.
3. Furnish shop bent splice plates. Use the minimum bend angle shown in the table below.
4. See Sheet 2 of 2 for Plan View Layout.



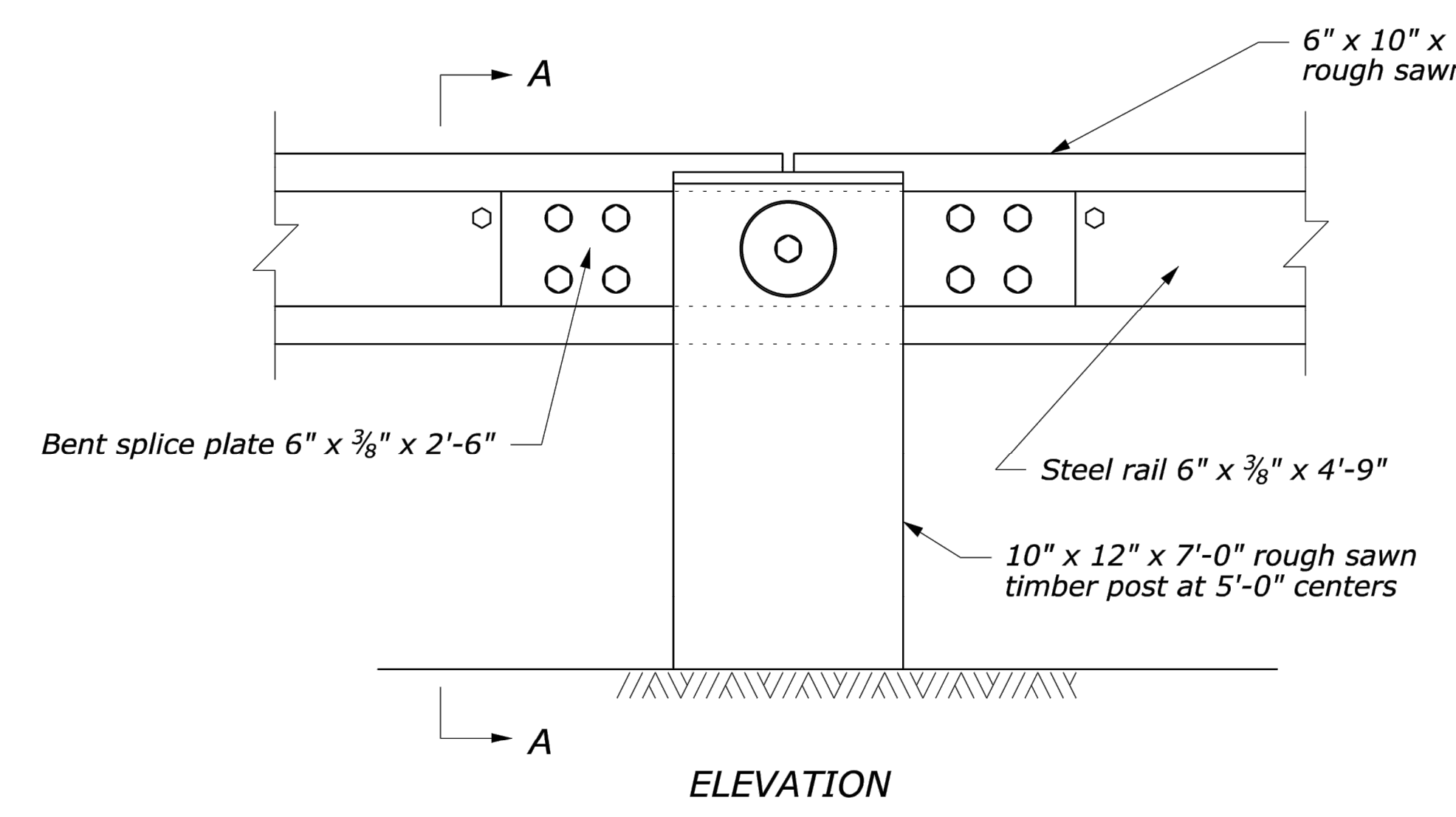
PLAN



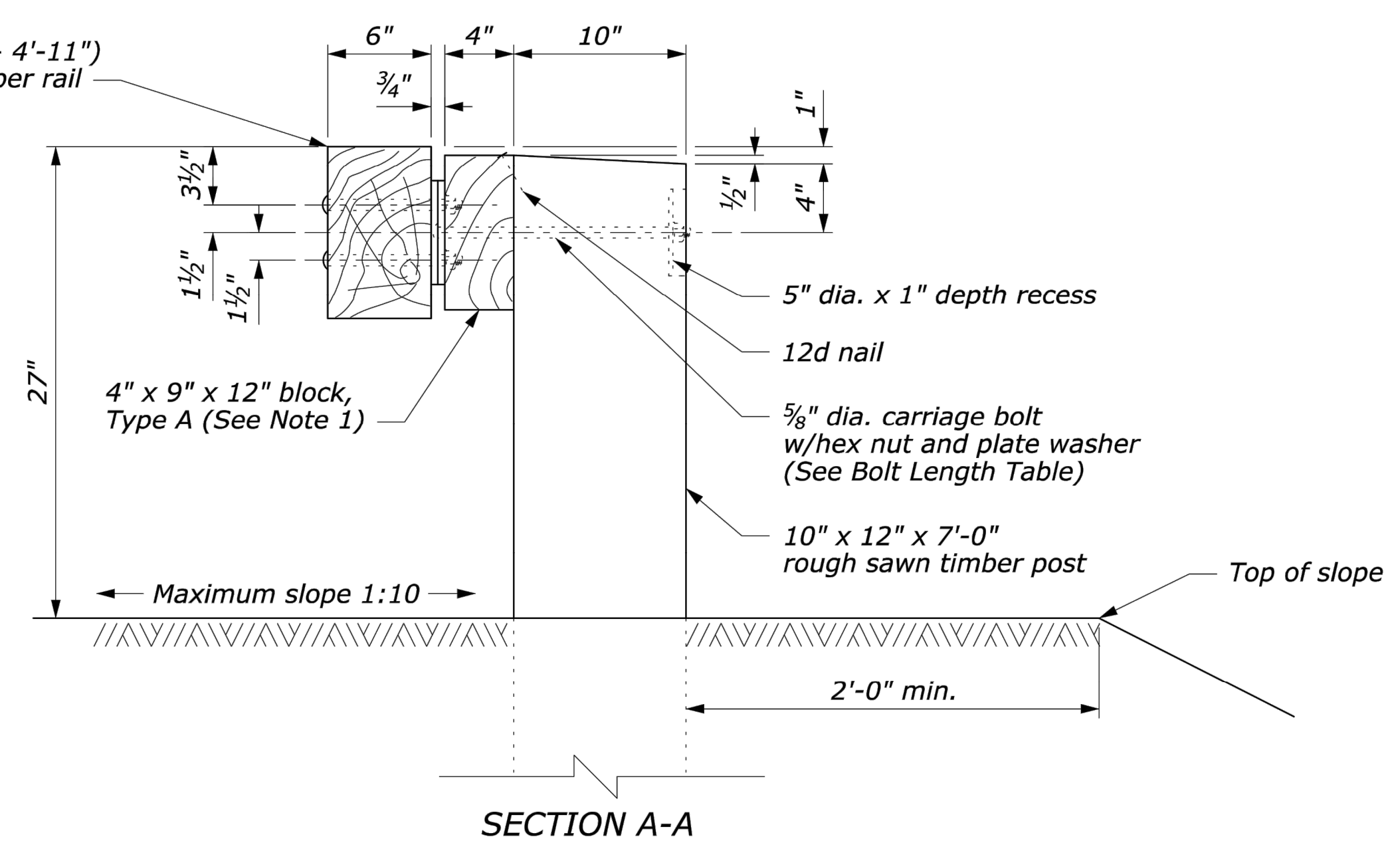
ELEVATION

BENT SPLICE PLATE
6" x 3/8" x 2'-6"

Radius R ft	Δ/2 degrees	d in
20	7.18	3/4
25	5.74	5/8
30	4.78	1/2
35	4.10	7/16
40	3.58	3/8
45	3.18	1/2
50	2.87	5/16
55	2.61	1/4
60	2.39	1/4
65	2.20	1/4
70	2.05	1/4
over 70	flat	0



ELEVATION



SECTION A-A

POST CONNECTION

Type A (Block-out)	Type B (No Block-out)
15"	11"

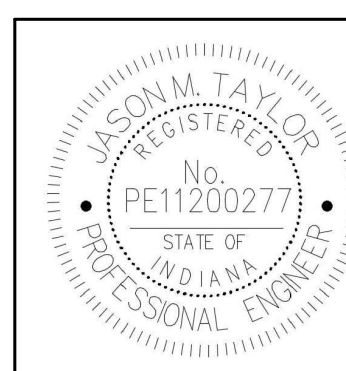
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD
**STEEL-BACKED TIMBER GUARDRAIL
AROUND CIRCULAR CURVES
70 FOOT RADIUS AND BELOW**
Sheet 1 of 2

STANDARD APPROVED FOR USE 6/2005
REVISED:

STANDARD
617-63

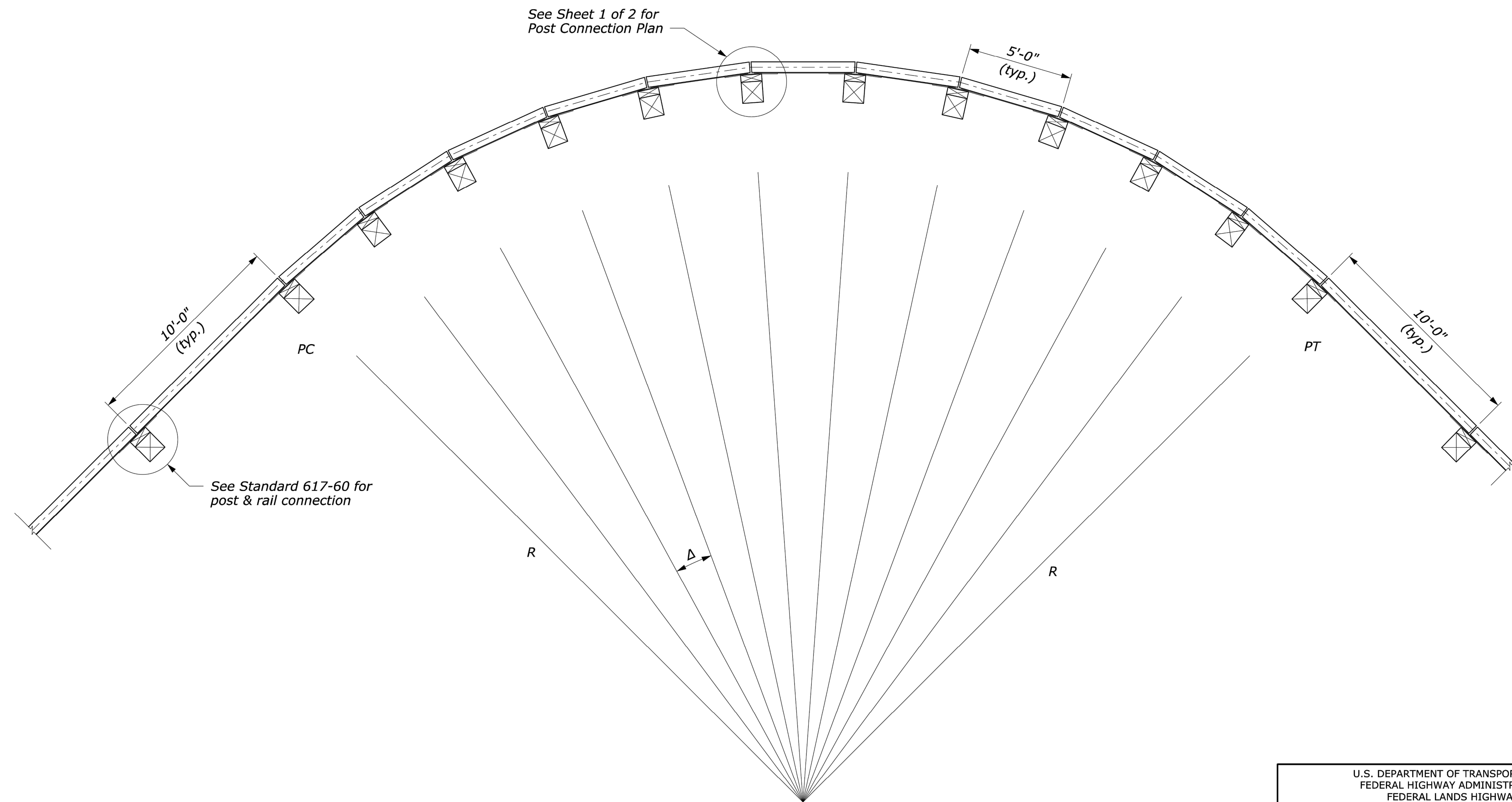
NO SCALE



STATE	PROJECT	SHEET NUMBER

NOTE:

1. Δ is the central angle which subtends a 5'-0" chord.
2. R is measured from the center of the circle to the back surface of the rough sawn timber rail.

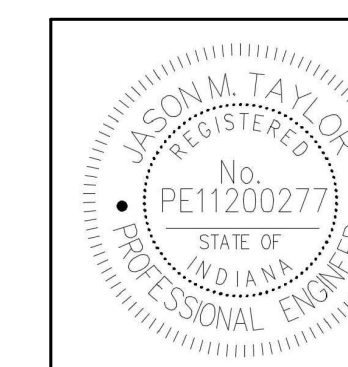


PLAN VIEW LAYOUT

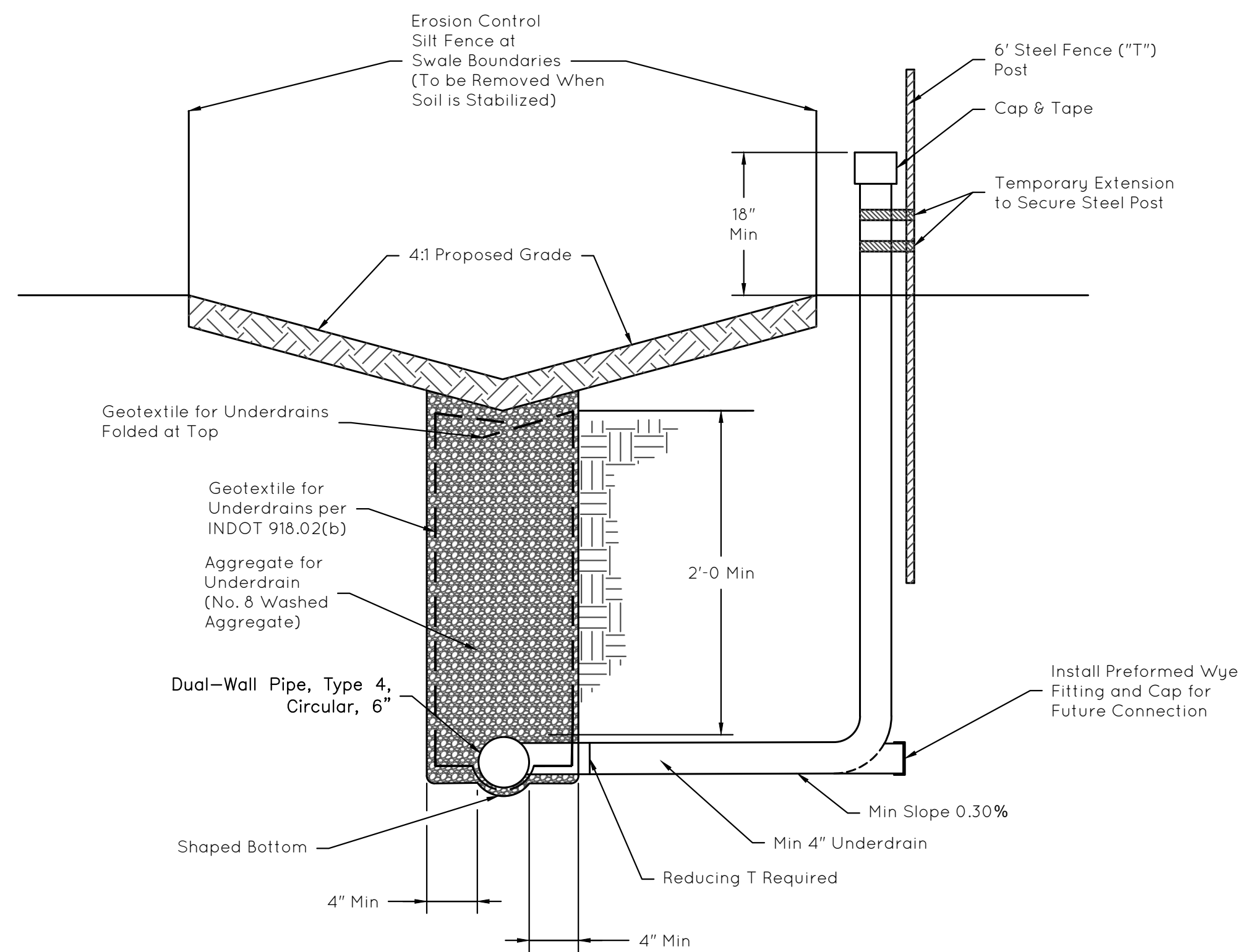
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD STEEL-BACKED TIMBER GUARDRAIL AROUND CIRCULAR CURVES 70 FOOT RADIUS AND BELOW Sheet 2 of 2	
STANDARD APPROVED FOR USE 6/2005	STANDARD 617-63

J. Taylor
1/18/2022

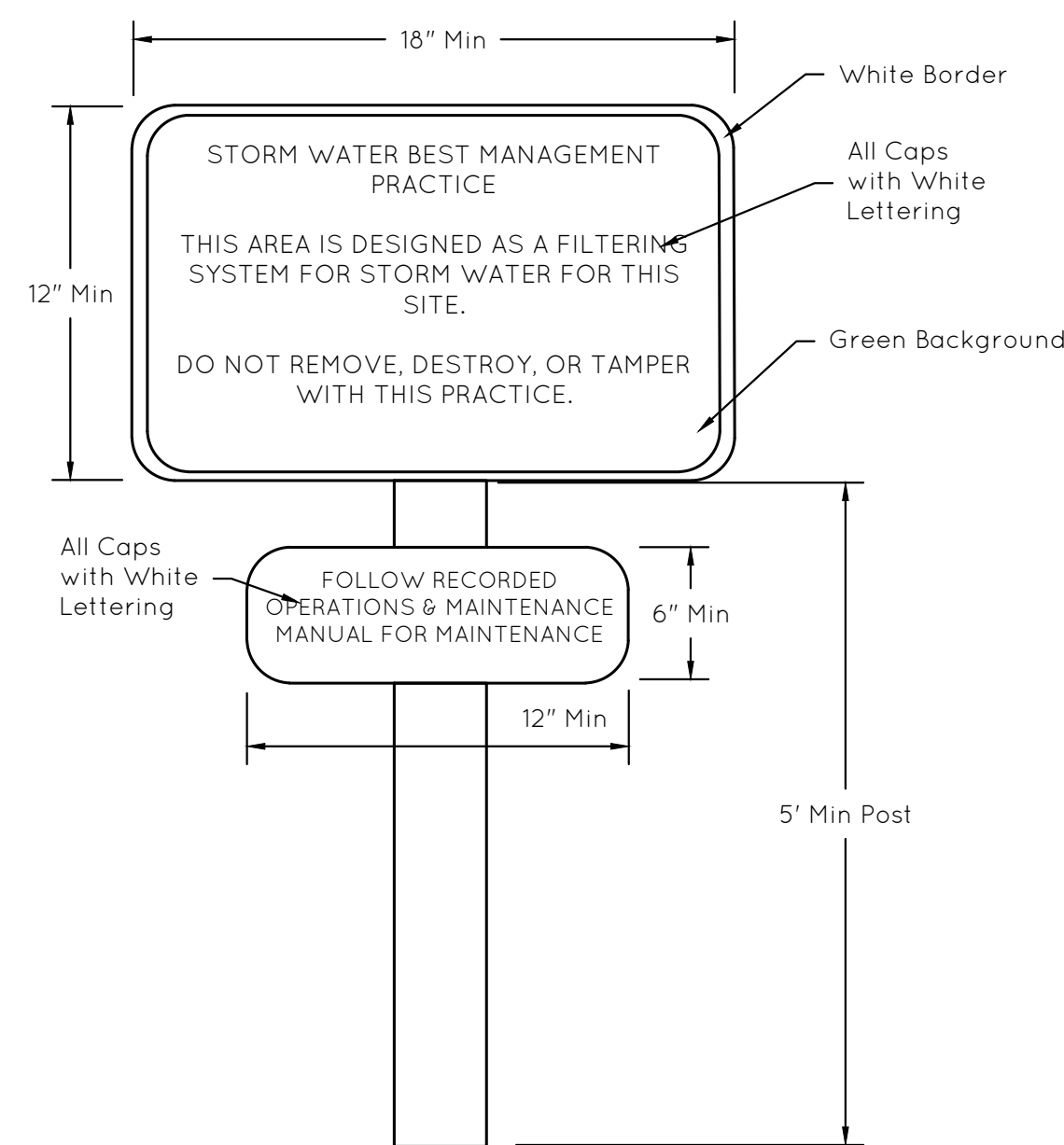


CITY OF FISHERS STANDARD CONSTRUCTION DETAILS		SHEET
FHWA TIMBER GUARDRAIL DETAILS		12 of 29



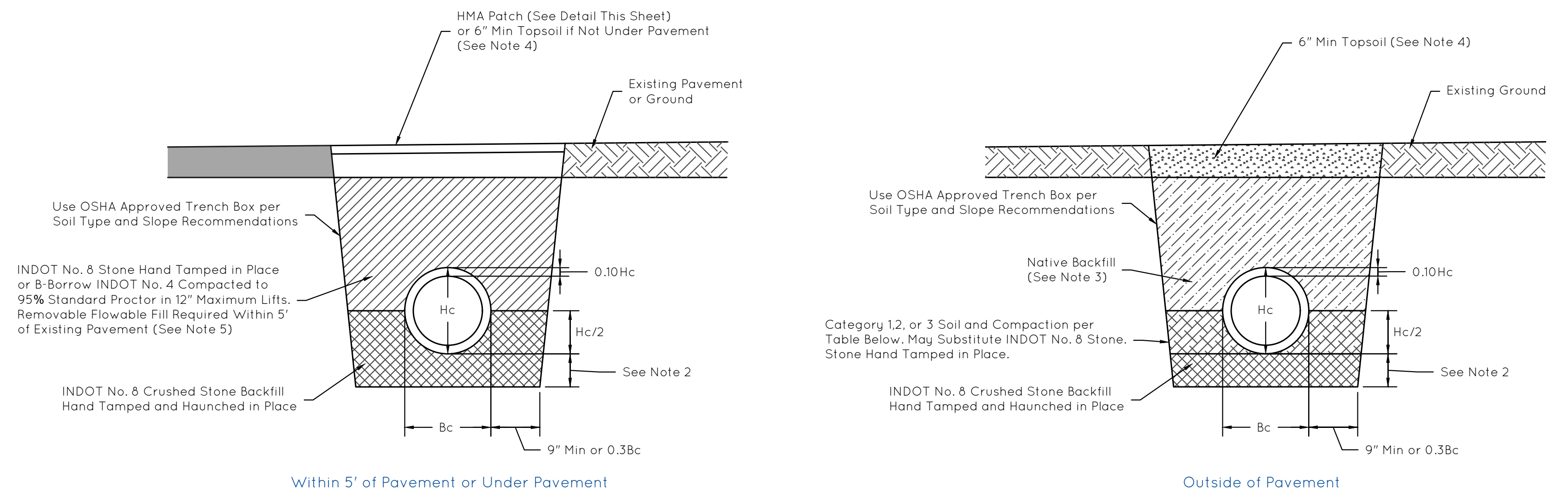
- Notes:
- 1) Temporary extension above ground to be removed upon connection to house. If extension is not utilized, it shall be capped below ground level.
 - 2) Location of structures shall be shown on as-built plans.
 - 3) Must connect sump pumps to underdrain.
 - 4) Required for all rear yard drainage swales unless waived in writing by the Director of Engineering.

REAR YARD UNDERDRAIN
Not to Scale



- Notes:
- 1) BMP signs should be placed immediately adjacent or within the practice.
 - 2) Signs should be aluminum and meet minimum IMUTCD standards.
 - 3) Total number of signs required for each BMP is subject to plan review.

BMP SIGN
Not to Scale

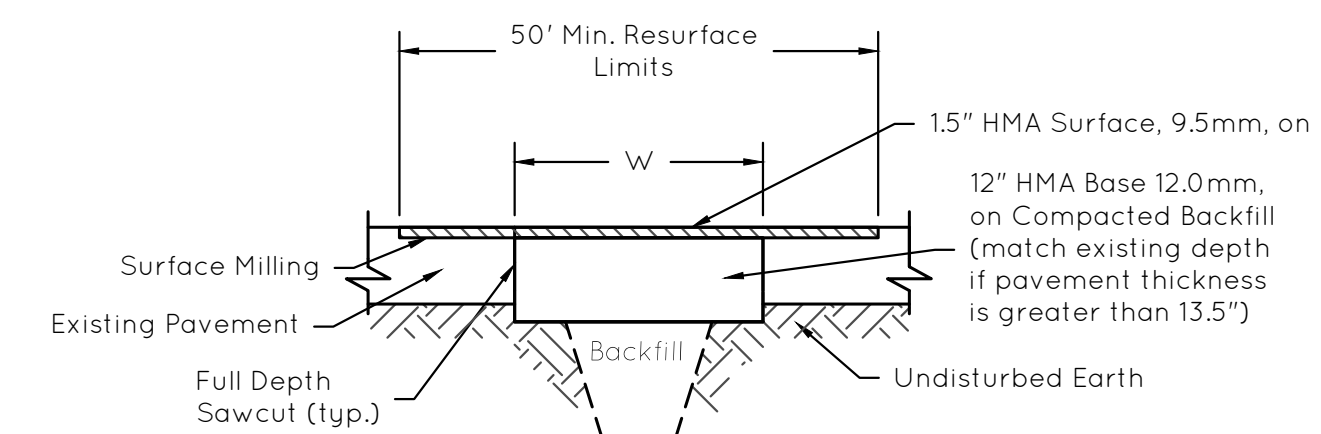


SOIL CATEGORY	SOIL NAME	USCS SOIL TYPE	AASHTO SOIL TYPE	STANDARD PROCTOR	MODIFIED PROCTOR
CATEGORY 1	CLEAN GRAVEL OR SAND	SW, SP, GW, GP	A1, A3	85	80
CATEGORY 2	SILTY GRAVEL OR SAND	GM, SM, ML & GC/SC W/LESS THAN 20% PASSING #200 SIEVE	A2, A4	90	85
CATEGORY 3	SILTY CLAY	CL, MH, GC, SC	A5, A6	95	85

Reference: American Concrete Pipe Association Standard Installation Manual

- Notes:
- 1) For backfill purposes, paved shoulders and curbs are considered pavement. If paving is to occur within 30 days of placement of INDOT No.#4 B-Borrow, contractor shall provide City of Fishers with Professional Engineer certified compaction results.
 - 2) Depth of bedding material below pipe shall be minimum of 3" or hc/24, whichever is greater.
 - 3) Native backfill material must be free of aggregate greater than 6" diameter.
 - 4) Topsoil material shall be mounded to accommodate settlement.
 - 5) Removable flowable backfill shall be required for all open cuts across existing pavement and will also be allowed as a substitute for other backfill requirements.
 - 6) Pipe and fittings used in storm sewer construction shall be RCP (AASHTO M170) and meet the fill height and load requirements according to the latest fill height tables of INDOT. Refer to Chapter 4.J of the City of Fishers Stormwater Technical Standards Manual for other approved pipe materials that may be used in commercial parking lots or private, non-paved areas. Any alternative pipe materials shall be in accordance with the requirements of Chapter 4.J, and shall be installed in accordance with manufacturer's specifications.
 - 7) A minimum of Class III RCP (D-load 1350 lb/ft/ft) is required for all pipe within the City of Fishers Right-of-Way, or areas subject to loading. An alternate pipe class (Class IV or V) may be required by the design engineer or Director of Engineering for special pavement loading circumstances.
 - 8) For pavement bores, alternative materials will be considered.
 - 9) For elliptical or arch pipe installations, see installation specifications from the American Concrete Pipe Association.
 - 10) For all excavation work, OSHA approved safety standards shall be followed.

TRENCH BACKFILL DETAILS
Not to Scale



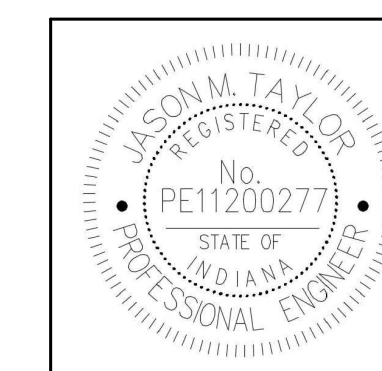
- Notes:
- 1) Sawcuts shall provide a vertical, neat, and uniform edge.
 - 2) All materials shall comply with specifications as required by the City of Fishers.
 - 3) Contractor shall surface mill (1.5") existing pavement 25 ft. in each direction from trench centerline from face-of-curb to face-of-curb or edge-of-roadway, replace with 1.5" HMA Surface, 9.5mm, and appropriate pavement markings.
 - 4) The existing milled surface and HMA Base layer is to be tack coated prior to the placement of new asphalt. The new surface pavement grade shall match the existing surface pavement grade.
 - 5) A two (2) inch wide band of crack sealant is to be applied along the joint between the existing and new asphalt surface. Sealant is to be applied in accordance with INDOT Standard Specifications, Section 305.
 - 6) Refer to Pavement Restoration Table for W.

PAVEMENT RESTORATION TABLE	
UTILITY DEPTH RANGE (FEET)	MAXIMUM TRENCH WIDTH AT FINISHED GRADE, W (FEET)
0 to 5	I.D. +5
5 to 8	I.D. +8
8 to 10	I.D. +10
10 to 12	I.D. +12
12 to 14	I.D. +14
14 to 16	I.D. +16
16 to 18	I.D. +18
18 to 20	I.D. +20

I.D. = Pipe or Conduit Inside Diameter

HMA PATCH DETAIL
Not to Scale

[Signature]
1/18/2022



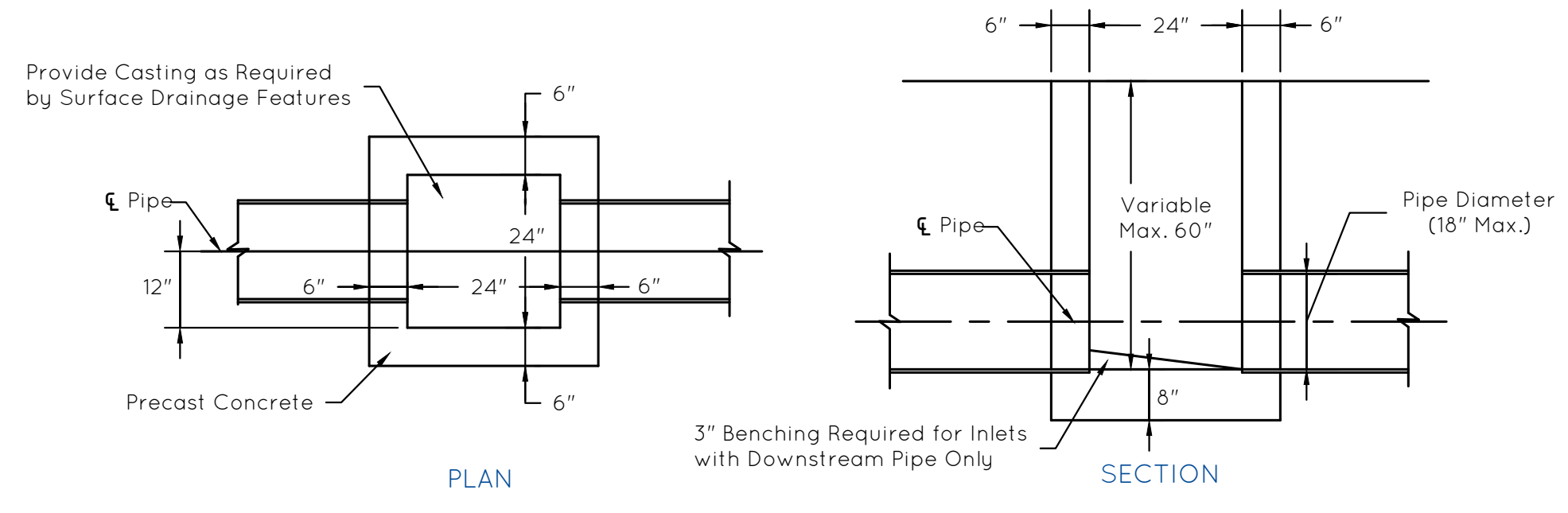
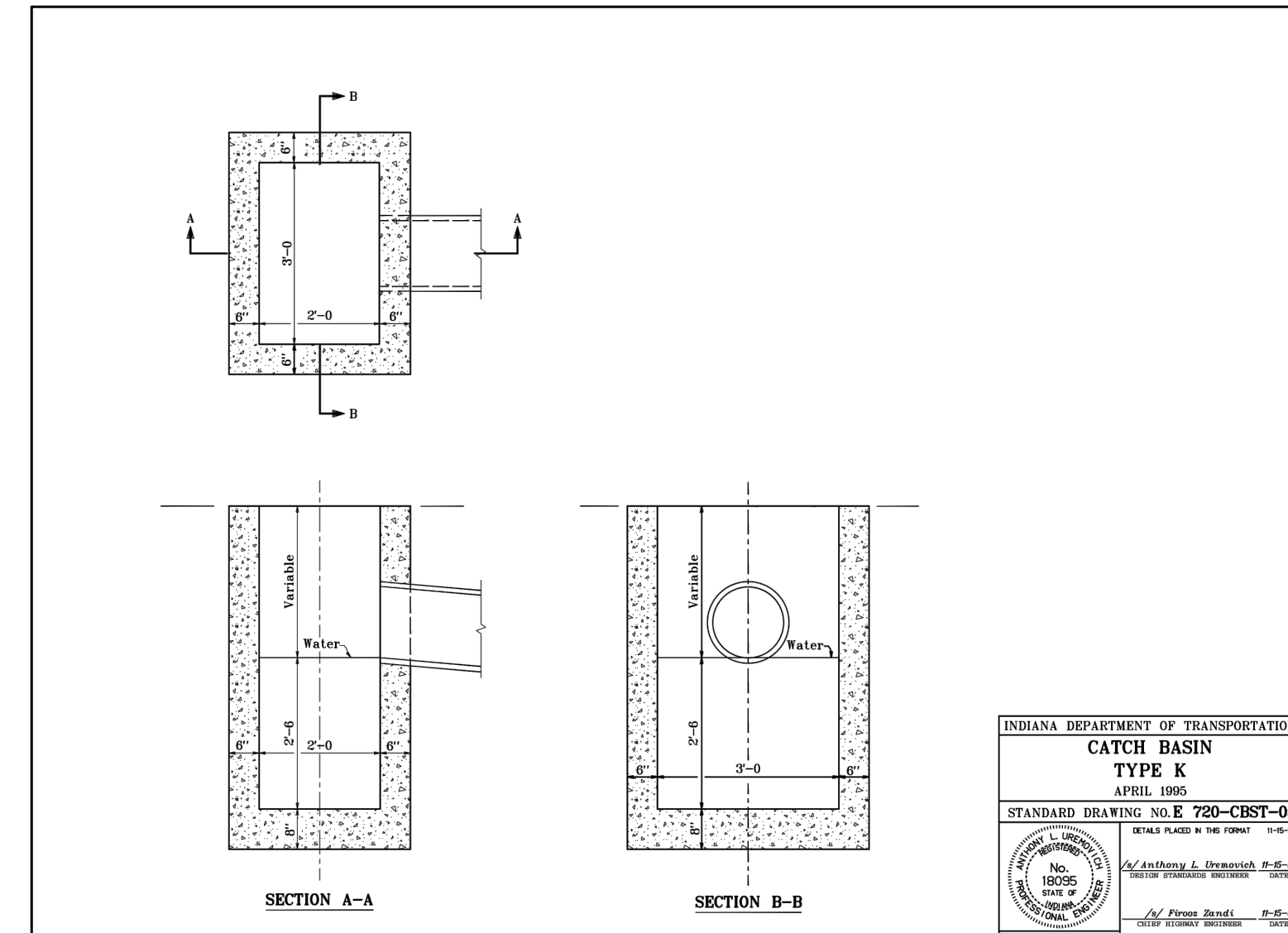
CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
STORM SEWER BACKFILL, SWALE UNDERDRAIN, EXCAVATION DETAILS AND NOTES

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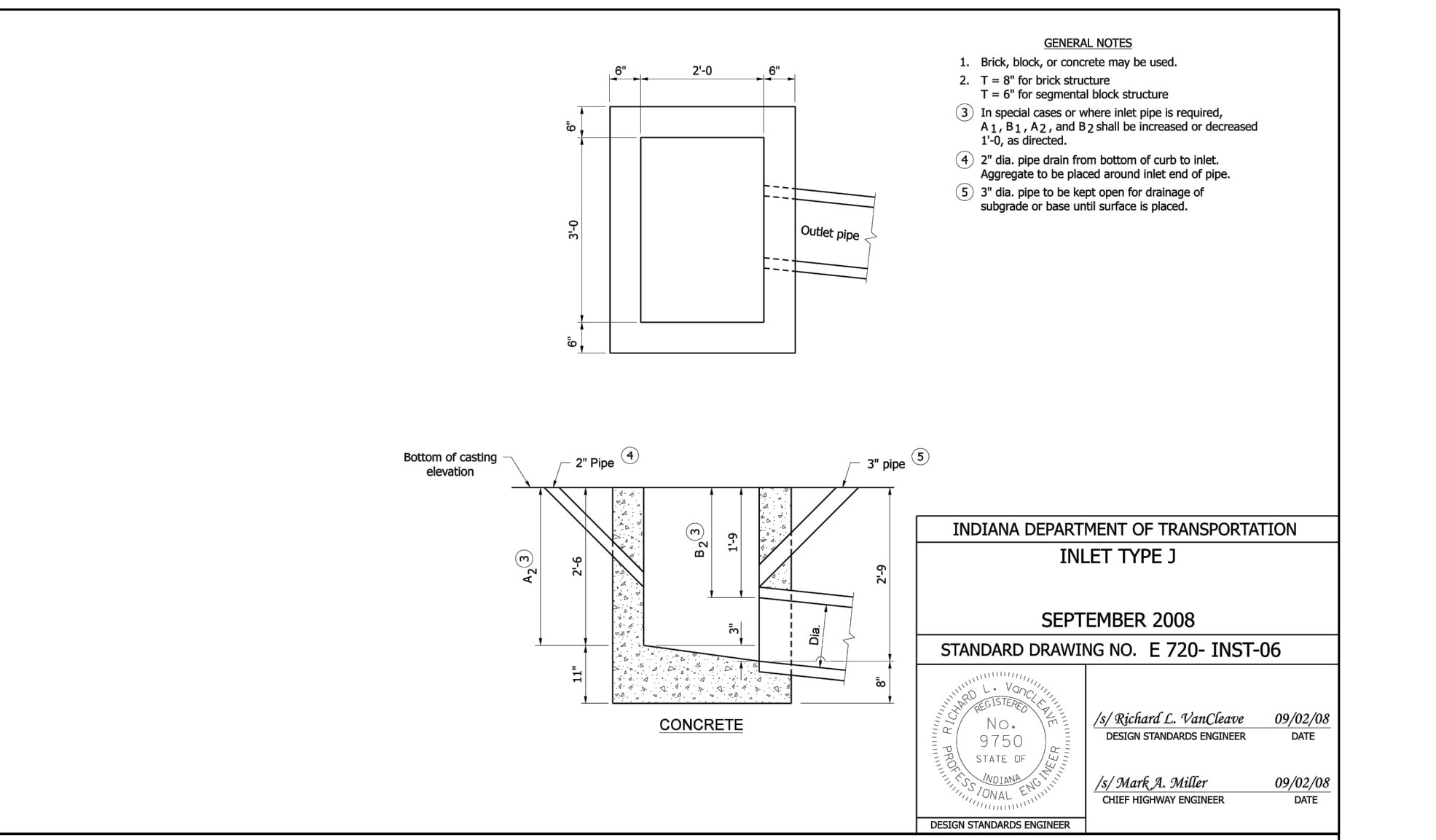
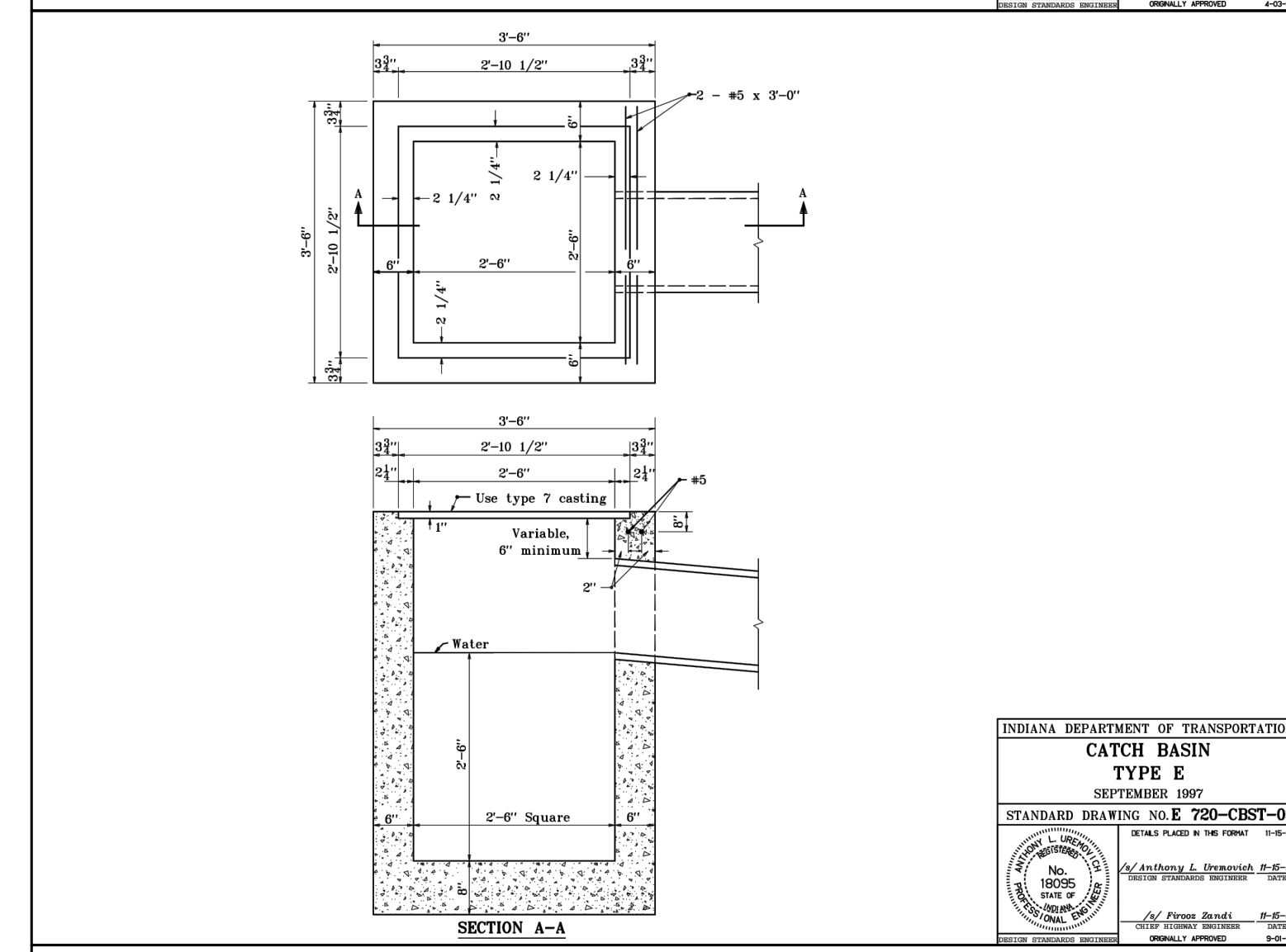
NOTES

- Inlet boxes shall not extend into the pavement section beyond the width of the wall thickness which shall be a maximum of 6 inches. Square or rectangular structures shall be utilized for all pipe connections along the curb line. The maximum inlet box size shall be limited to 24"x36". Mainline pipe shall be defined as all pipe greater than 15" in diameter. No mainline pipe shall be allowed in direct connection to the inlet box. Details and manufacturer shop drawings shall be provided for all pipe connections less than 90 degrees to the box edge. Field changes to structures shall be cut or cored. Round structures shall only be allowed for areas outside of the curb line and outside of road section pavement.
- 24"x24" inlet boxes shall be limited to depths of 5 feet. Inlet boxes greater than 5 feet in depth shall be 24"x36" (inside dimensions), or greater, and include steps.
- The downstream most structure that collects runoff from within the Right-of-Way shall be sumped (2 feet) prior to the detention basin and is required to be placed within 15 feet of the curb, where practical, and equipped with a snout to catch floatables.
- The contractor shall use precast inlets or catch basins, unless otherwise approved by the Director of Engineering, that are in accordance with INDOT Standard Specifications.
- A 6" cushion of INDOT No. 8 crushed stone shall be required when the precast bottom section is used.
- If a precast inlet, catch basin, or manhole is used and the adjoining pipes are field connected directly to the precast unit, the connection shall be made using a Class "A" concrete collar of 6" minimum longitudinal and radial thickness. Brick should be used as a filler for concrete patching for inlets that are not precast.
- Waterproofing material shall conform to AASHTO M115 and INDOT Standard Specifications.
- All curb inlets and catch basins shall be equipped for underdrains.
- All structures receiving sub-surface drain (SSD) shall have both ports core drilled. T or Y blind connections are not allowed.
- Expansion joints are required around castings for all structures located within PCCP, PCC sidewalk, PCC multi-use paths, or concrete curb and/or gutter.
- All castings shall be checked to meet inlet design and ensure compatibility with curb specified, swales, ponds, etc. All castings shall be in accordance with the Compatibility of Inlet Structures and Castings Table, this sheet, unless otherwise approved by the Director of Engineering.
- All inlet castings shall contain a "NO DUMPING, DRAINS TO WATERWAY" or equivalent clean water message to educate and warn against illegal dumping. Casting openings should be grated or otherwise designed to limit floatables and debris from entering the inlet box.
- No inlet castings shall be installed within wheel paths, unless otherwise approved by the Director of Engineering.

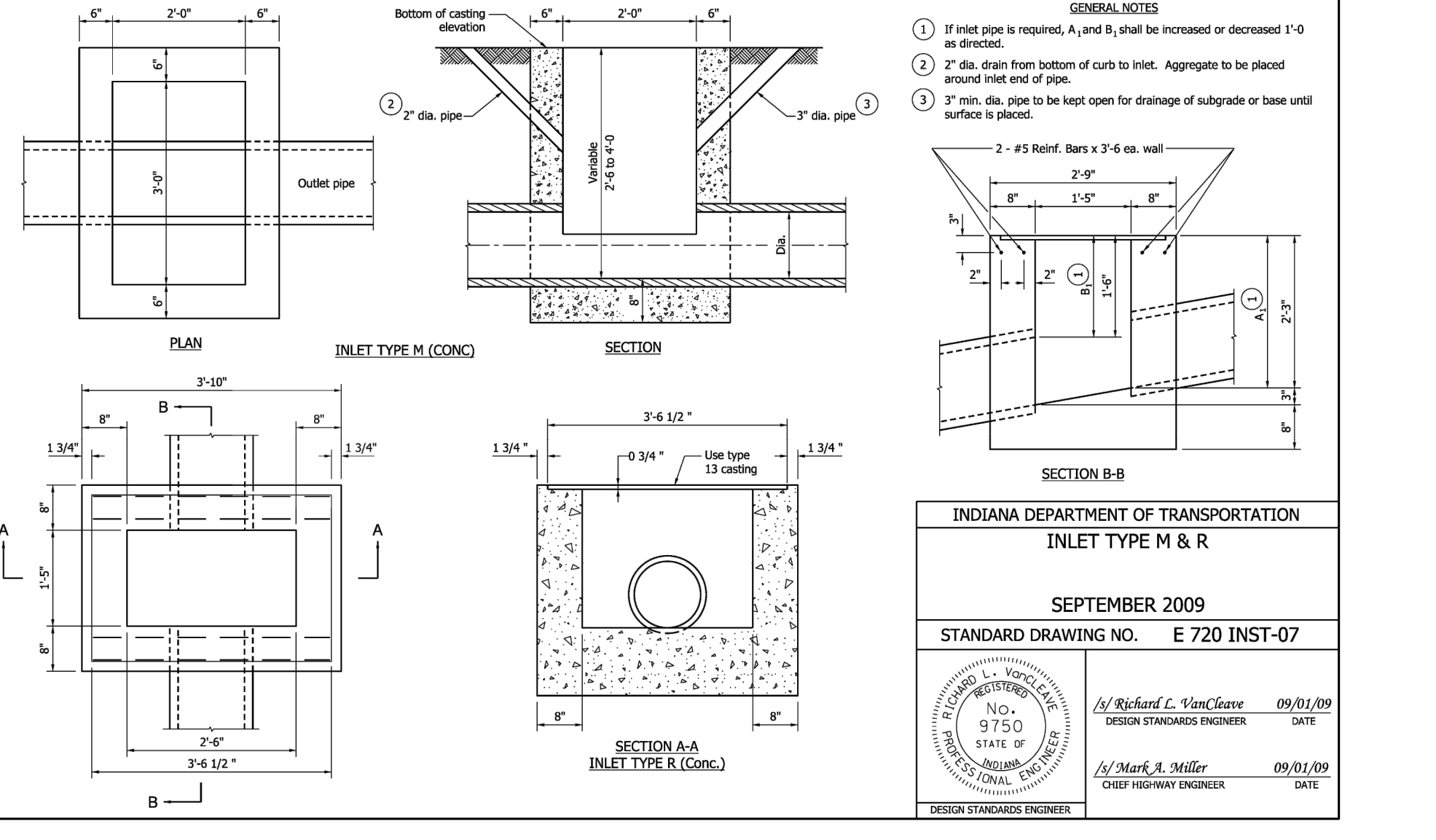
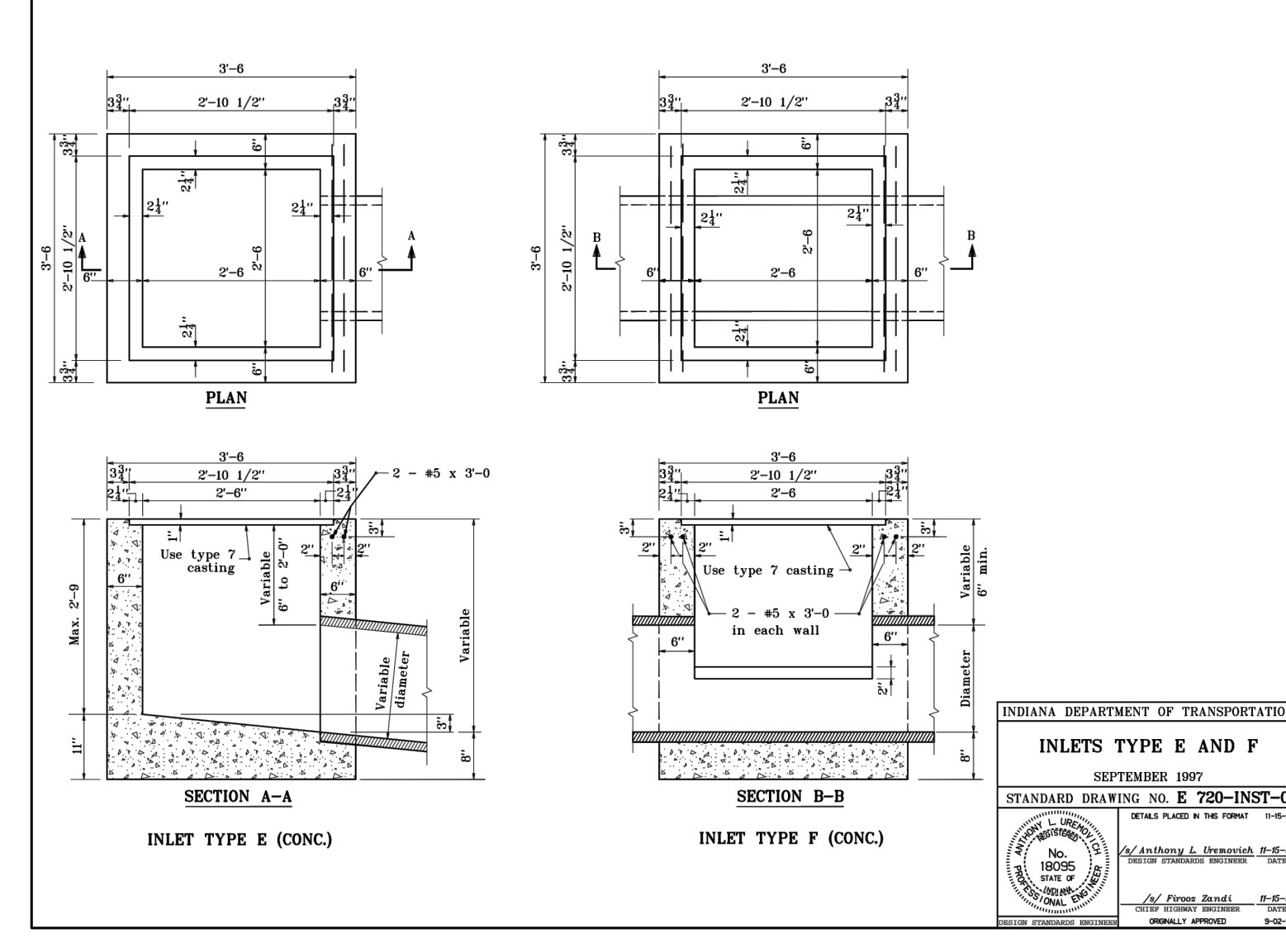
INLET TYPE	INDOT CASTING TYPES					NEENAH CASTING TYPES					EAST JORDAN IRON WORKS CASTING TYPES					
	2	3	7	8	10	R-3287-10V	R-3405-A	R-3501-TR	R-3501-TL	R-4215-C	5250	6610	7030 w/M2 Grate & T1 Back	7495M1	7495M2	7495M4
A	X	X		X			X				X					
E			X							X		X				
F			X							X		X				
J					X	X		X	X				X	X	X	X
M					X	X		X	X				X	X	X	X



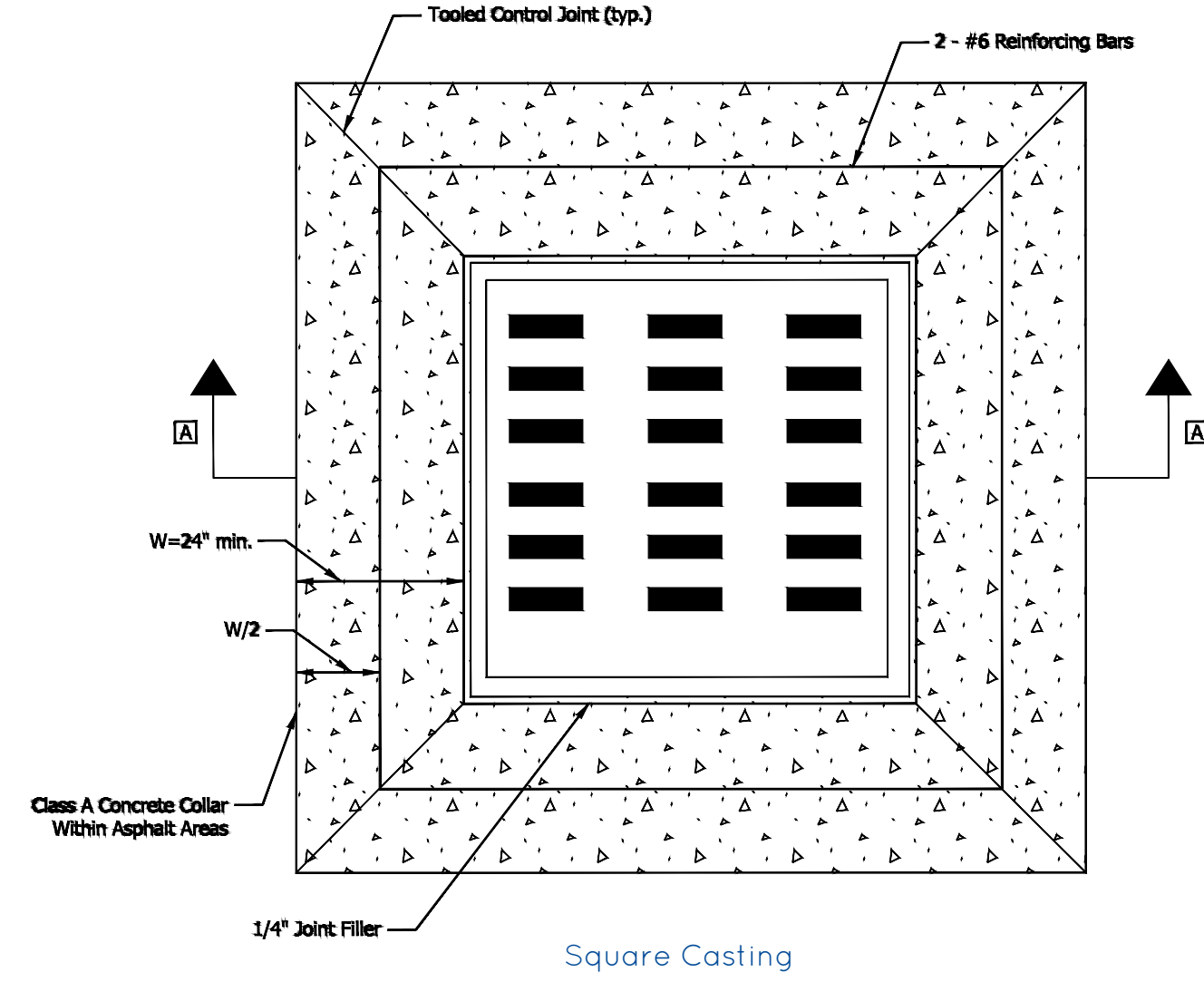
INLET, TYPE A
Not to Scale



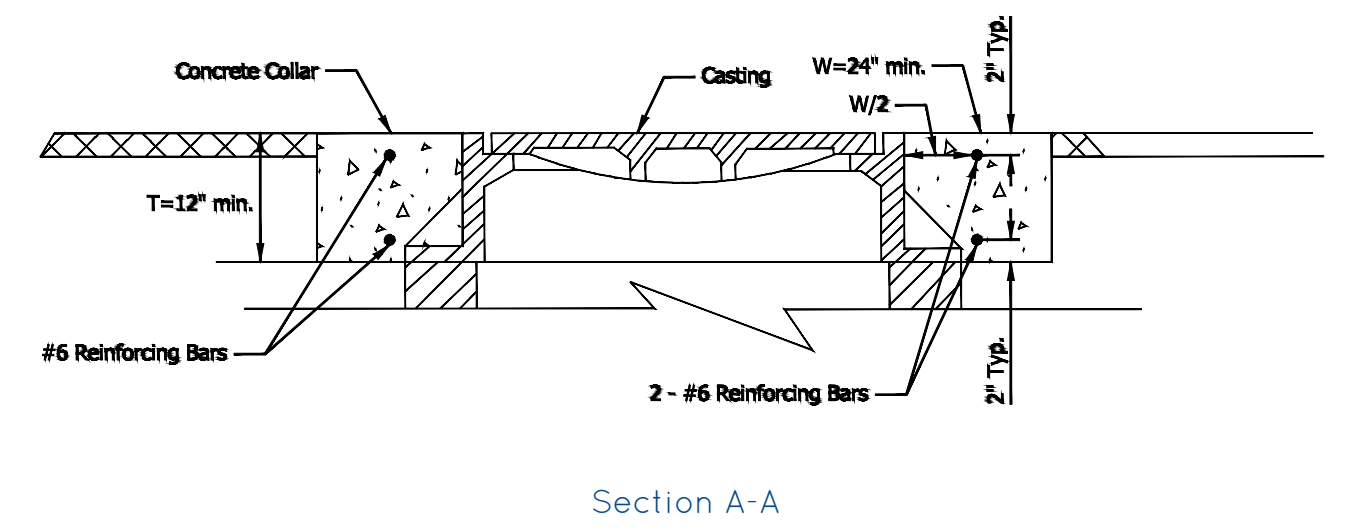
INLET TYPE J



INLET TYPE M & R



CONCRETE COLLAR FOR SQUARE CASTINGS DETAIL
Not to Scale



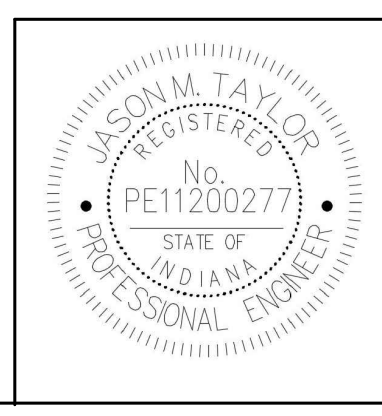
INLET LID CASTING DETAIL
Not to Scale

CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS

STORM SEWER INLET STRUCTURE
DETAILS AND NOTES

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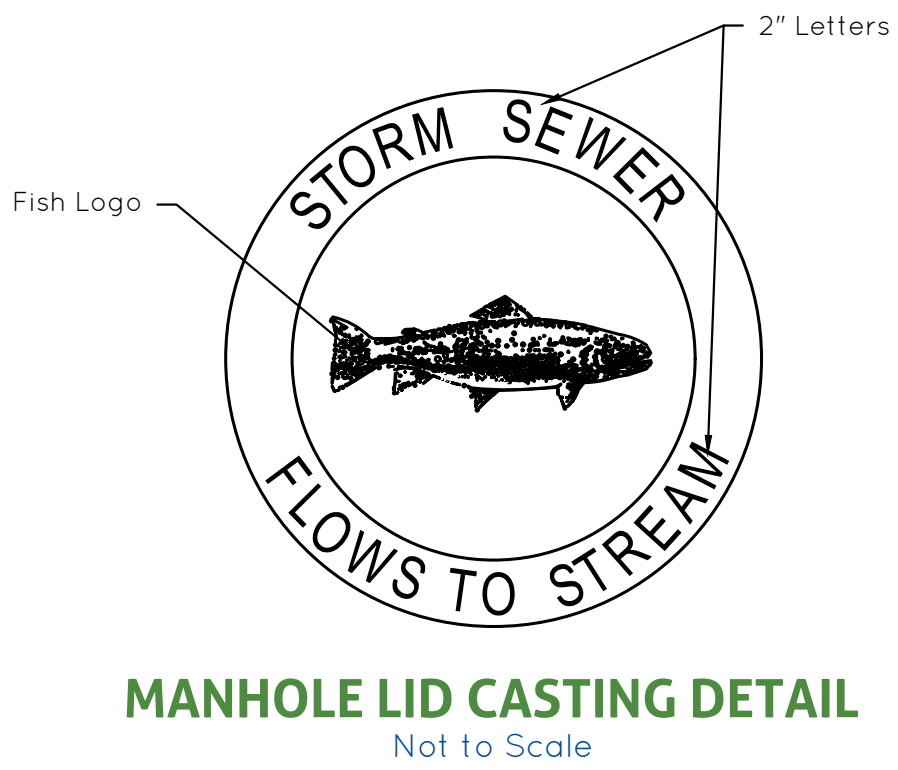
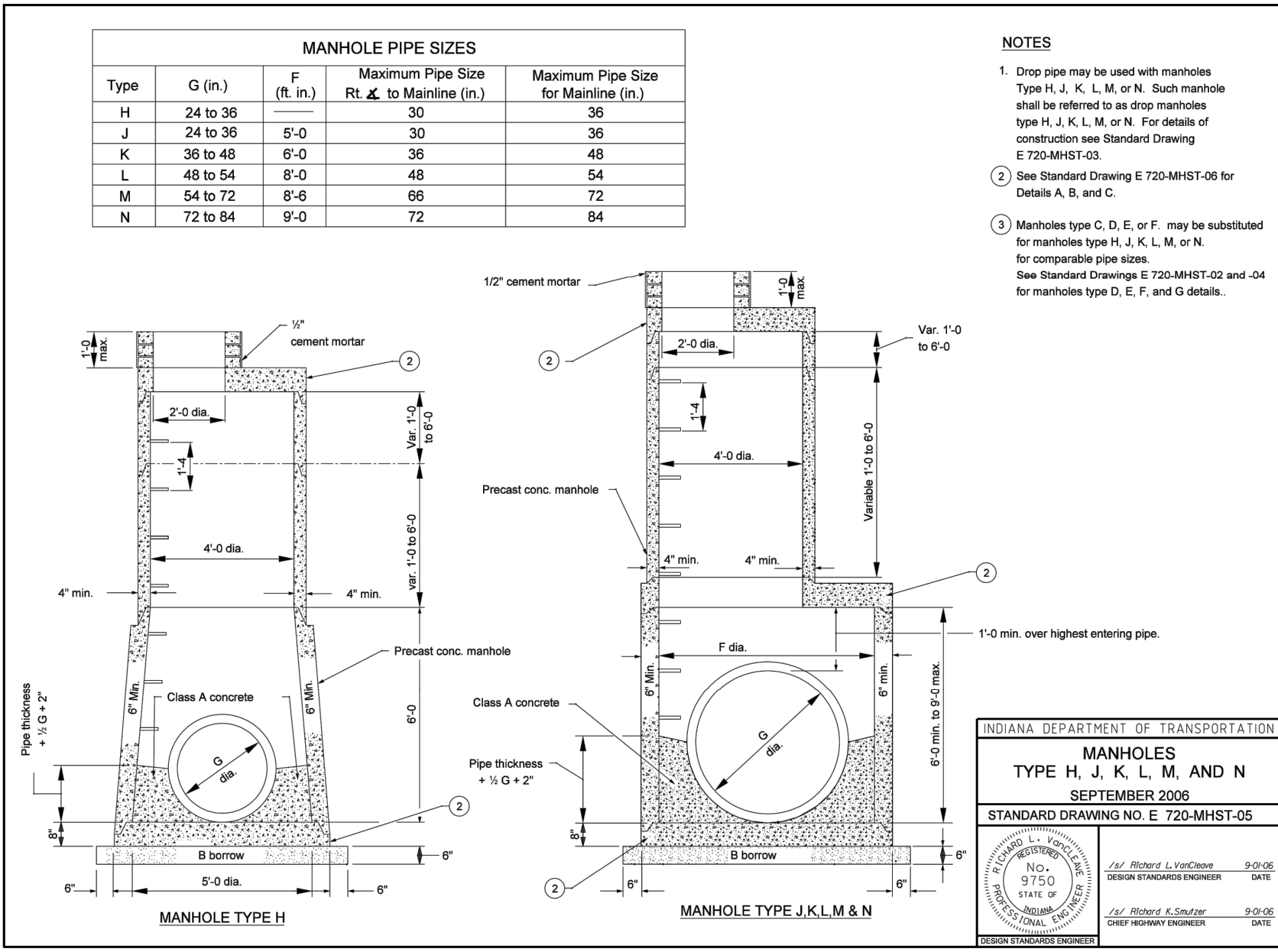
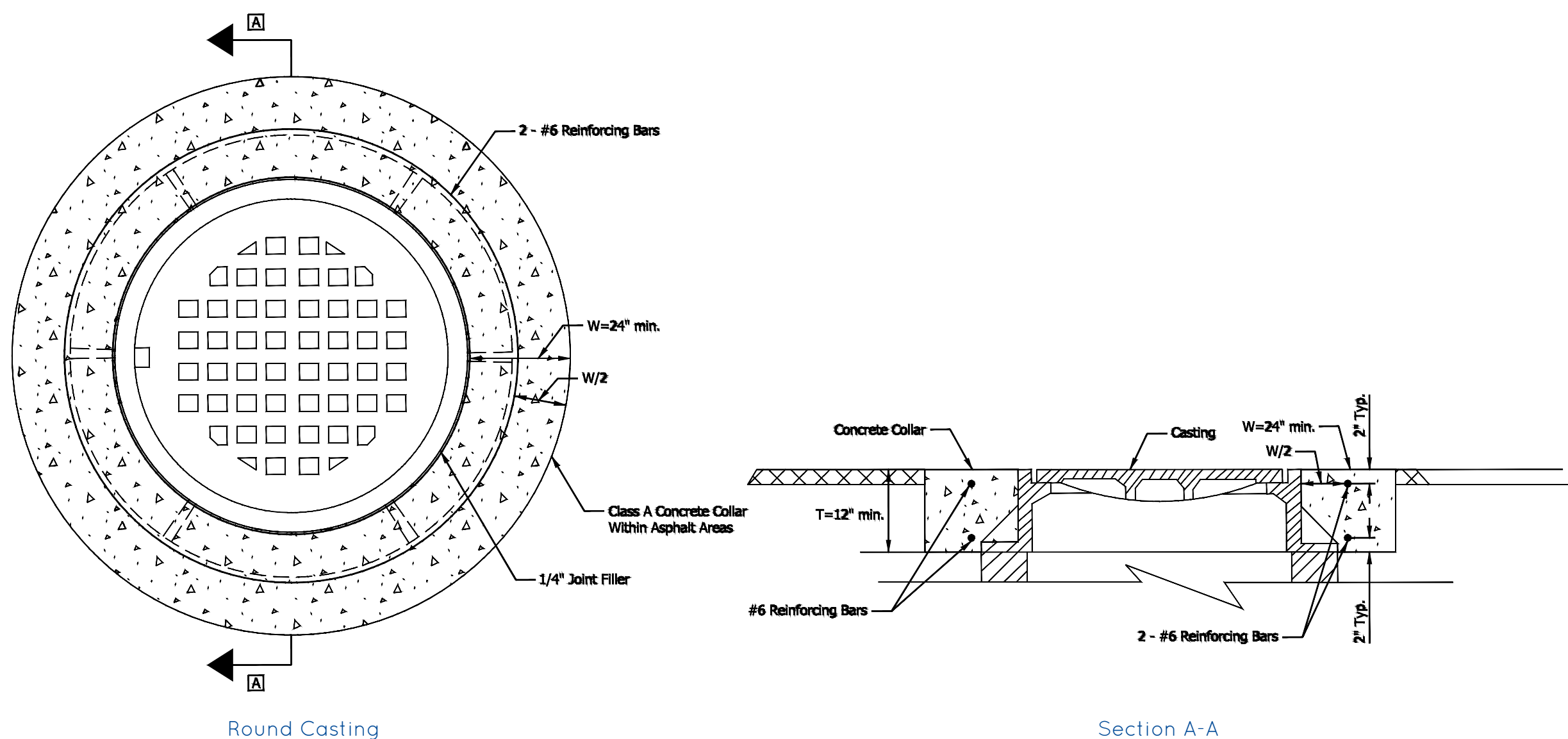
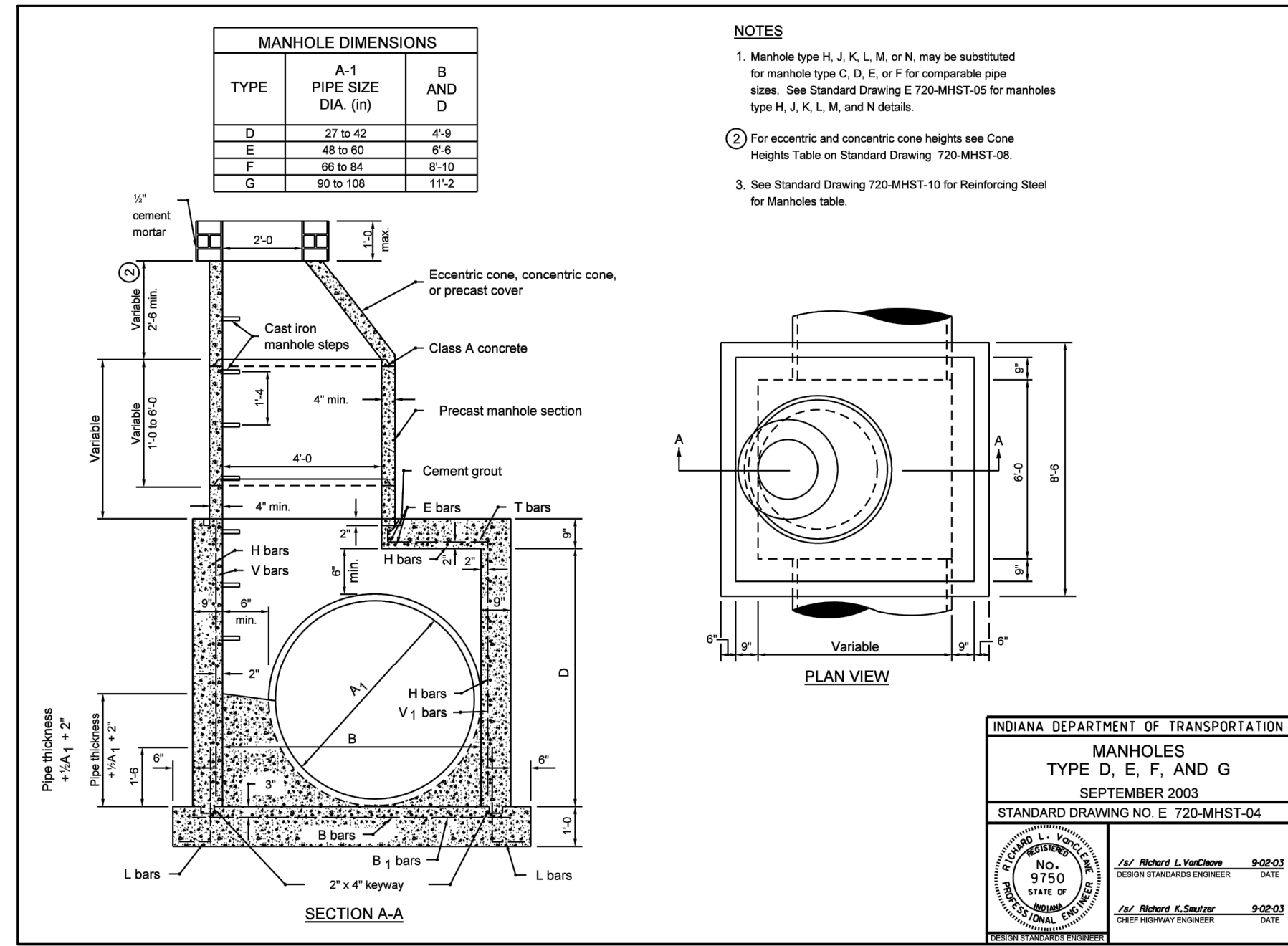
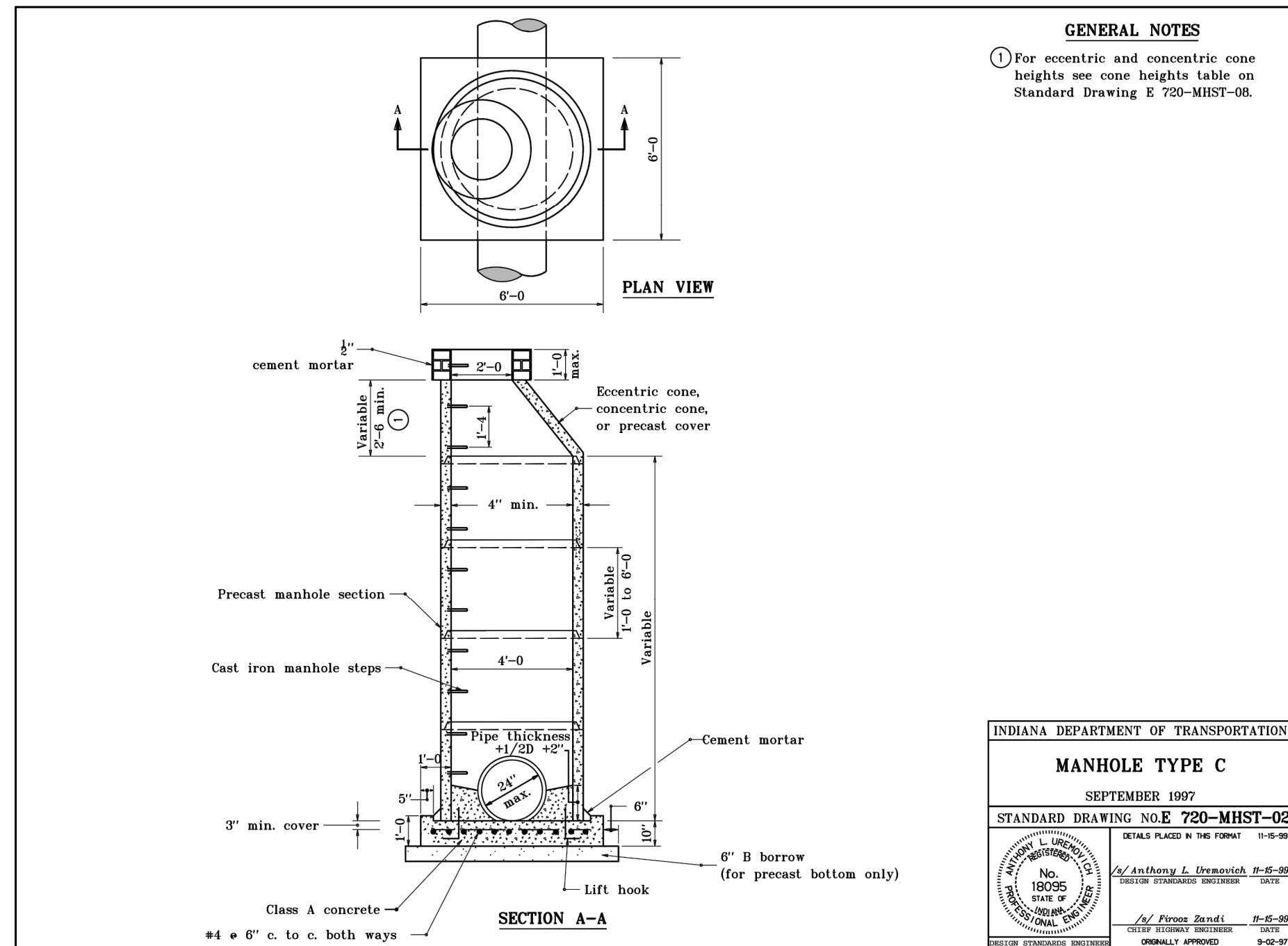
J. Taylor
1/18/2022



NOTES

- 1) All precast manhole materials shall conform to ASTM C-478 and INDOT Standard Specifications (min. sq. in. of reinforcing steel per lineal foot of barrel shall be 0.12).
- 2) A 6" cushion of INDOT No. 8 crushed stone shall be required when the precast bottom section is used.
- 3) Joints between sections of precast manholes shall be in accordance with ASTM C-443.
- 4) If the contractor uses a precast manhole and the adjoining pipes are field connected directly to the precast unit, the connection shall be made using a Class "A" concrete collar of 6" minimum longitudinal and radial thickness. Brick should be used as a filler for concrete patching for manholes that are not precast.
- 5) Drop pipe may be used with Manhole, Type D, E, F, or G and referred to as Drop Manhole, Type D, E, F, or G as approved by the Director of Engineering.
- 6) Bottom shall be constructed of precast bottom section or Class "A" concrete formed in place.
- 7) Benchwalls shall be Class "A" concrete.
- 8) Waterproofing material shall conform to AASHTO M115 and INDOT Standard Specifications.
- 9) Flat precast covers shall be used where headroom is limited.
- 10) The downstream most structure that collects runoff from within the Right-of-Way shall be sumped (2 feet) prior to the detention basin and is required to be placed within 15 feet of the curb, where practical, and equipped with a snout to catch floatables.
- 11) All structures receiving sub-surface drain (SSD) shall have both ports core drilled. T or Y blind connections are not allowed.
- 12) Expansion joints around castings are required at all structures located within PCCP, PCC sidewalk, PCC multi-use paths, or concrete curb and/or gutter.
- 13) All manhole castings shall be checked to meet inlet grate design and ensure compatibility with curb specified, swales, ponds, etc. In accordance with the Compatibility of Manhole Structures and Castings Table, this sheet, unless otherwise approved by the Director of Engineering.
- 14) All manhole castings shall contain a "NO DUMPING, DRAINS TO WATERWAY" or equivalent clean water message to educate and warn against illegal dumping. Casting openings should be grated or otherwise designed to limit floatables and debris from entering the manhole.
- 15) All manhole steps shall conform to INDOT Standard Drawing 720-MHST-09.
- 16) No manhole castings shall be installed within wheel paths, unless otherwise approved by the Director of Engineering.

MANHOLE TYPE	COMPATIBILITY OF MANHOLE STRUCTURES AND CASTINGS								
	INDOT CASTING TYPES			NEENAH CASTING TYPES			EAST JORDAN IRON WORKS CASTING TYPES		
	2	4	8	R-2502-D	R-4342	R-1772	1022 w/ Type A Lid	1022 w/ M1 or M3 Grate	6489
C	X	X	X	X	X	X	X	X	X
H	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X
L	X	X	X	X	X	X	X	X	X
M	X	X	X	X	X	X	X	X	X
N	X	X	X	X	X	X	X	X	X



J. Taylor
 1/18/2022

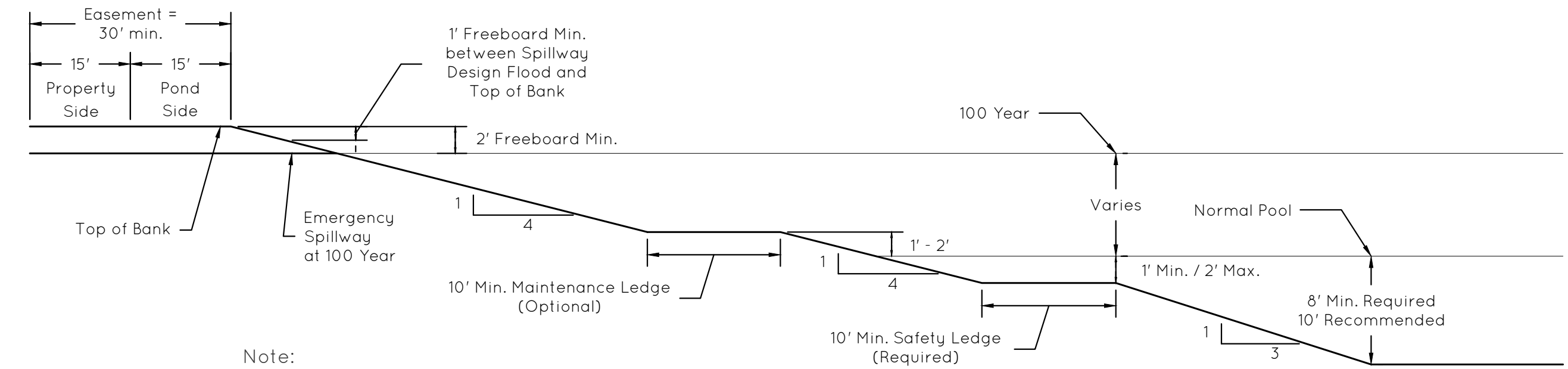
	CITY OF FISHERS STANDARD CONSTRUCTION DETAILS	SHEET 15 of 29
	STORM SEWER MANHOLE STRUCTURE DETAILS AND NOTES	

GENERAL WET-BOTTOM DETENTION BASIN NOTES

- All detention basins shall be designed in accordance with Chapters 3, 6 and 8 of the City of Fishers Stormwater Technical Standards Manual (STSM).
- Per Section 6.C.4 of the STSM, all detention facilities shall be separated from edge of pavement of parking lots by a minimum of 50 feet and a minimum of 150 feet from a roadway, unless structural measures, such as guardrails, berms, or other physical barriers are provided that prevent passage of a vehicle. See Guardrail Details, Sheets 9 - 12.
- Regardless of physical barriers, minimum separation of all stormwater detention facilities shall be according to the Minimum Detention Pond Setbacks in Table 1.
- The design of all wet-bottom detention facilities should include methods to prevent pond stagnation, including but not limited to, surface or sub-surface aeration (diffusers) or destratification facilities.

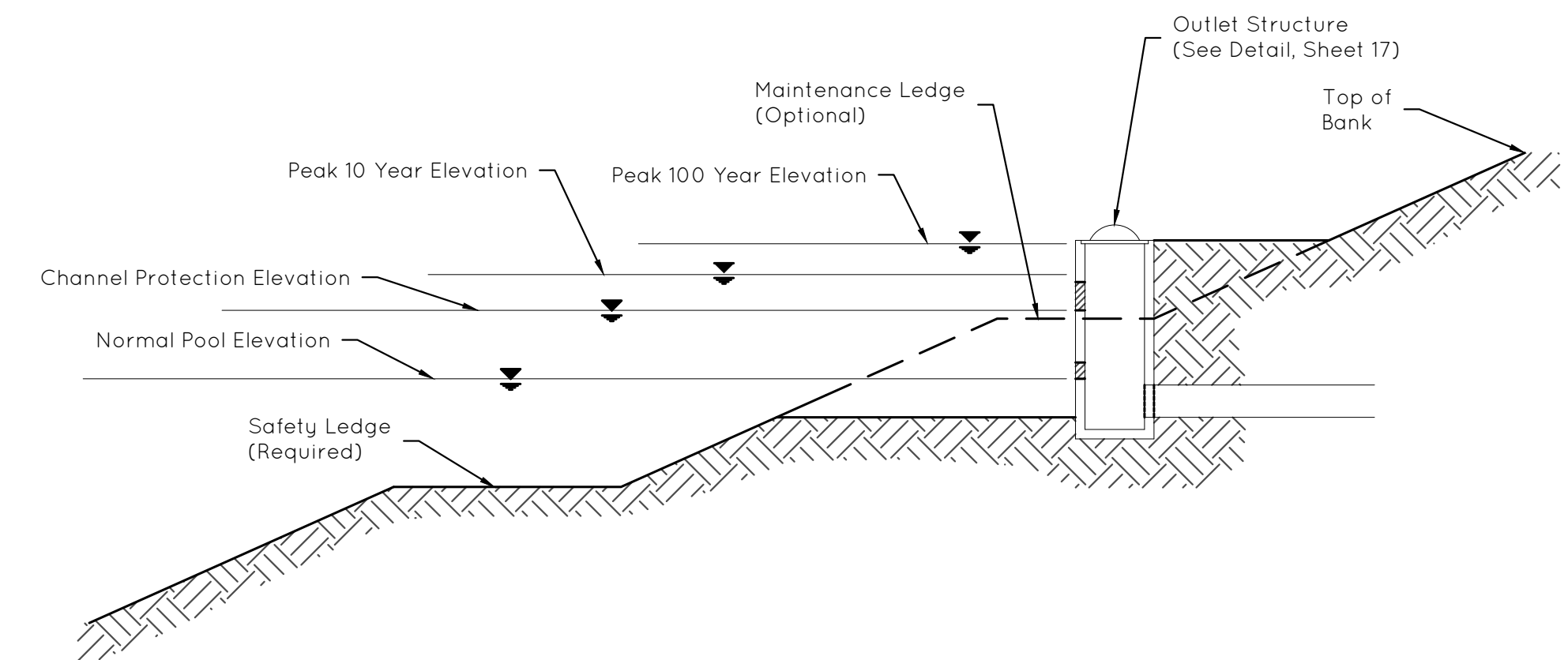
Table 1. Detention Facility Minimum Separations

FUNCTIONAL CLASSIFICATION OF ROADWAY	MINIMUM DETENTION POND SETBACK
Principal Arterial	50 Ft. From Right-of-Way to the Top of Bank -Or- 50 Ft. From Right-Of-Way to Maximum 100-Year Elevation, Whichever is Greater.
Minor Arterial	
Rural Major Collector	
Rural Minor Collector	
Urban Collector	
Local	80 Ft. From Centerline of Roadway to the Top of Bank -Or- 80 Ft. From Centerline of Roadway to Maximum 100-Year Elevation, Whichever is Greater.
Private Roadways	



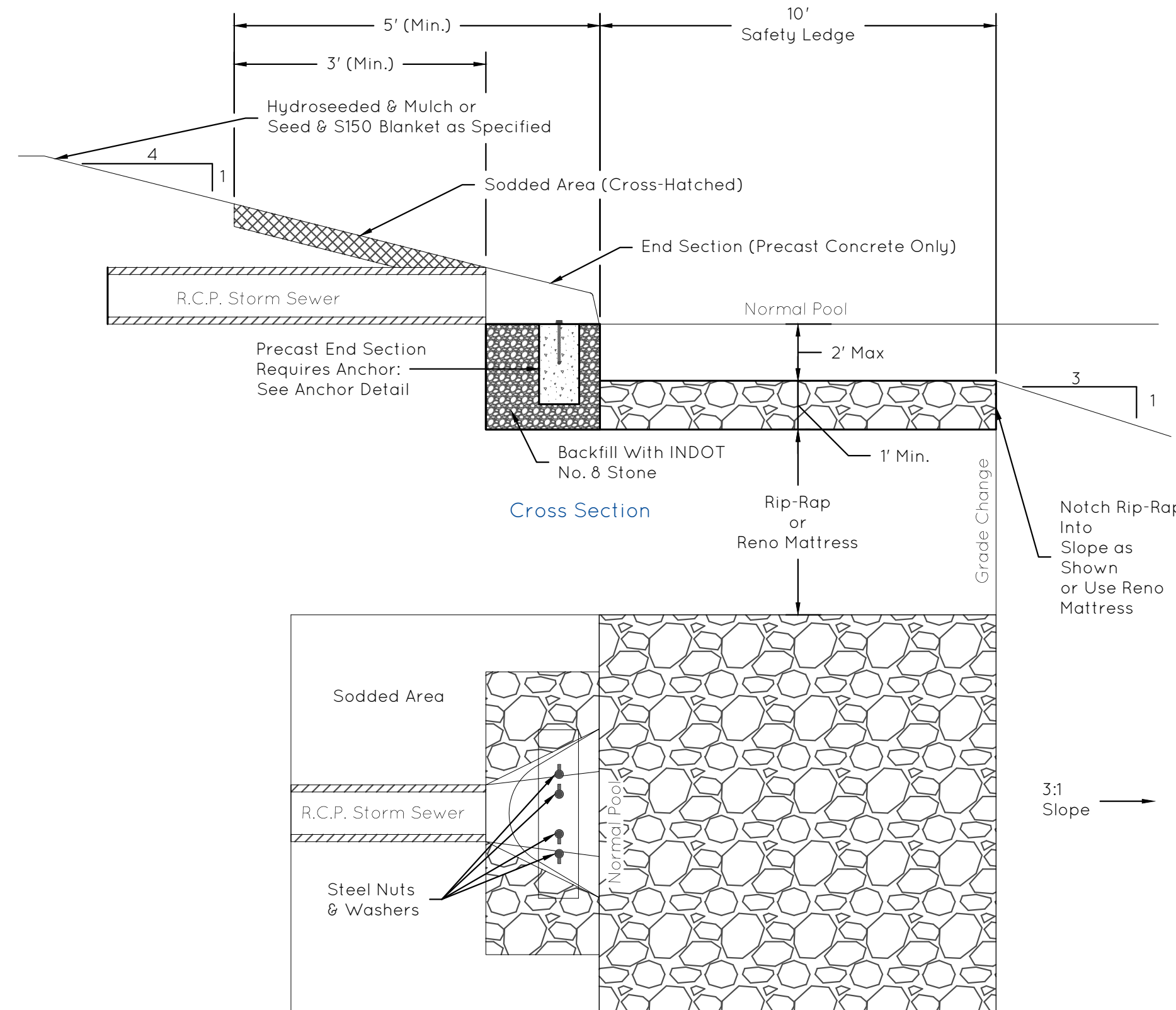
Note:
1) If a Safety Fence is Provided, Pond Slopes Above the Safety Ledge May be Changed to 3:1 Versus 4:1.

DETENTION BASIN CROSS-SECTION
Not to Scale

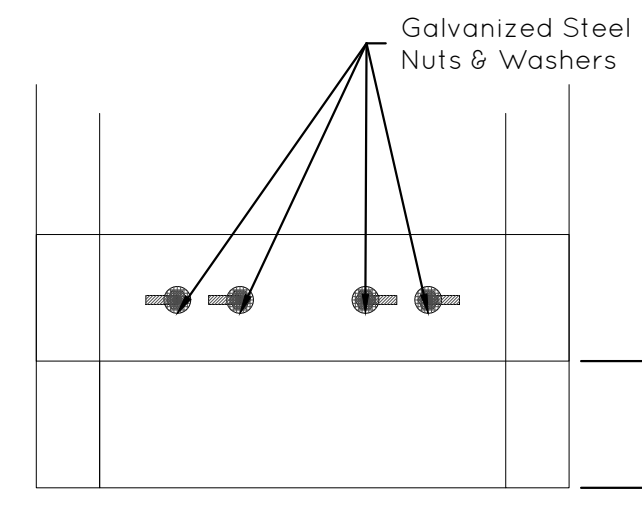


TYPICAL OUTLET STRUCTURE PLACEMENT
Not to Scale

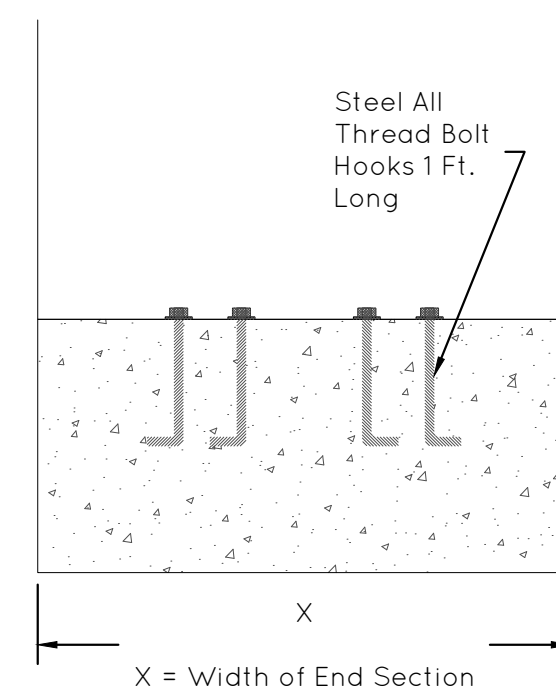
Note:
1) Underwater discharge not allowed.



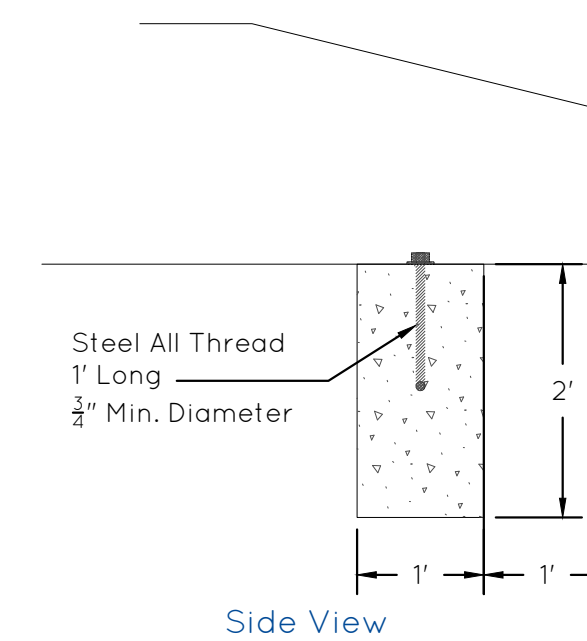
OUTLET TO DETENTION BASIN
Not to Scale



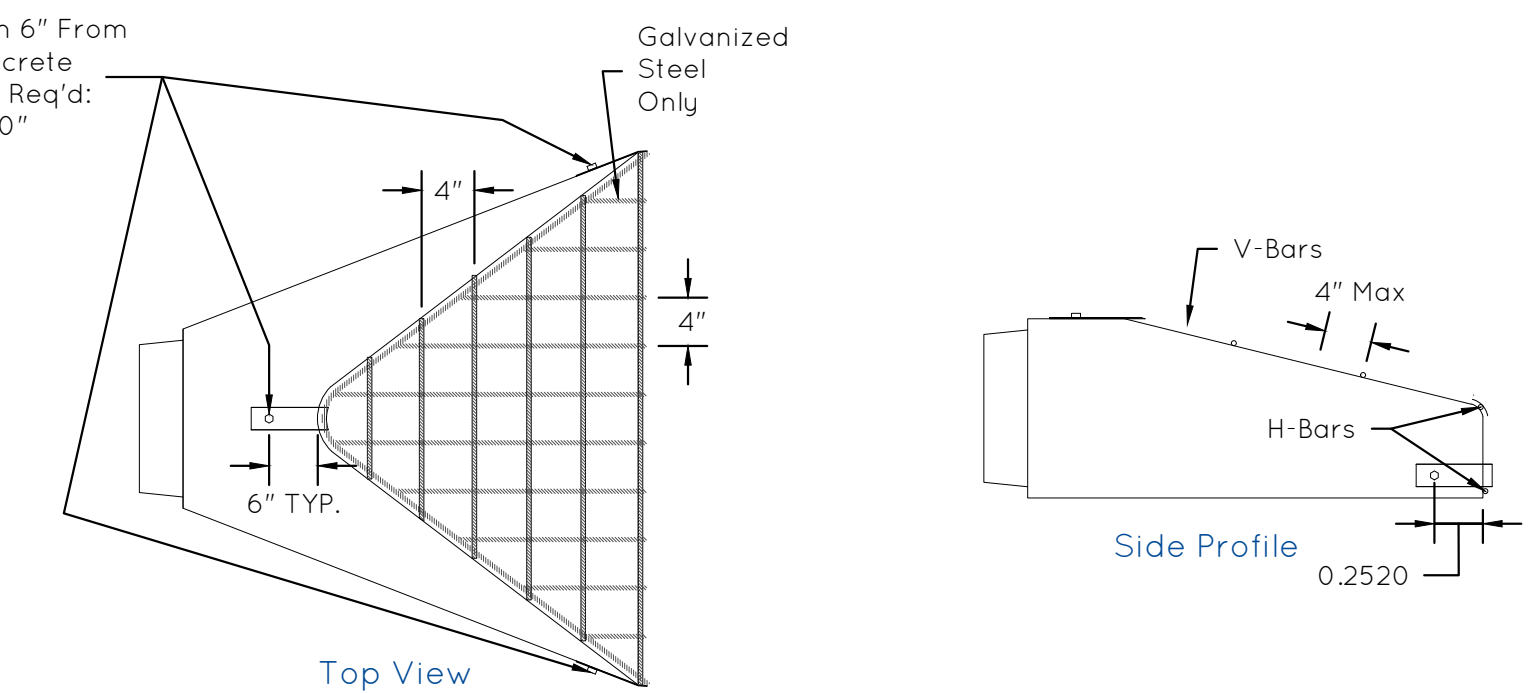
All Thread Spacing to be Two Per Foot
EX: 12" End Section = 2 All Thread
24" End Section = 4 All Thread



END SECTION ANCHOR
Not to Scale

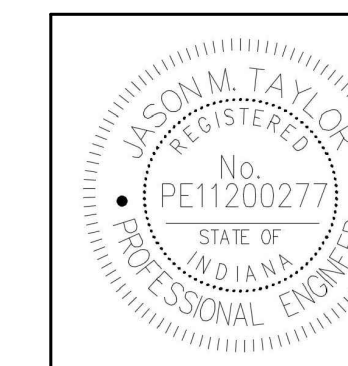


Bolt to Apron 6" From Edge of Concrete
3 Bolt Plates Req'd: 1/4" X 4" X 10"



TRASH/DEBRIS GUARD
Not to Scale

J. Taylor
1/18/2022

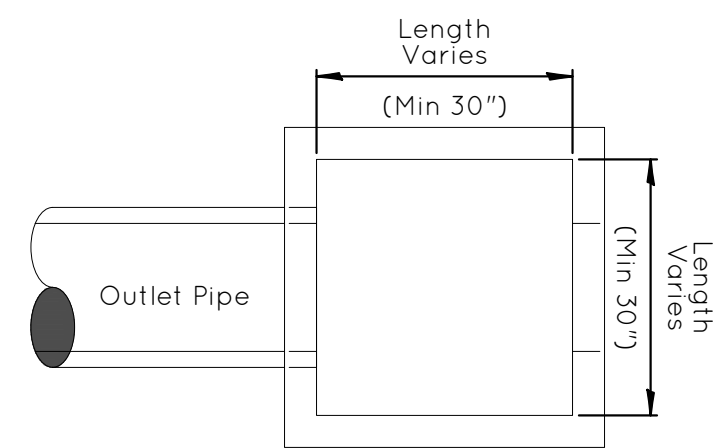


CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
DETENTION BASIN & END SECTION
DETAILS

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GENERAL OUTLET STRUCTURE NOTES

- 1) Use of a circular or rectangular orifice is at the discretion of the designer. The minimum opening height or diameter shall be 6", unless written approval of a smaller opening is provided during the stormwater review process. Openings shall be consolidated as much as is practicable while meeting the remaining requirements to reduce the potential for clogging. The minimum 6" dimension requirement does not apply to CPv or WQ orifice sizing. Coordinate with City of Fishers for minimum CPv / WQ orifice sizing.
- 2) If an overland emergency flow route cannot be created, the structure shall be sized to allow the open casting and outlet pipe to serve as a drop-inlet capable of carrying 125% of the peak inflow to the detention pond.
- 3) The maximum opening size for trash racks shall be 3" for outlets less than 24" in diameter or smaller than a 24" x 24" rectangle. Larger outlets shall have a 6" opening size.



Outlet Structure Top View

DESCRIPTION OF OUTLETS

Outlet 1: Extended Detention / Channel Protection Outlet
The purpose of this outlet is to detain the flow and provide for settlement of suspended solids and to attenuate the outflow from the detention basin to meet the water quality or channel protection requirements of Ch. 8 of the STSM.

Outlet 2: Peak Flow Control Orifice (10-year)
The purpose of this outlet is to restrict the flow leaving the detention pond when the volume of runoff exceeds the water quality or channel protection volume. This outlet is typically used to control the release of runoff for events between the 2-year and 10-year events to meet peak flow control requirements. This outlet has an invert elevation at the elevation of when the water quality or channel protection is fully stored assuming no outflow from Outlet 1.

Outlet 3: Peak Flow Control Orifice (100-year)
The purpose of this outlet is to supplement Outlet 2 when the 100-year peak flow control requirements cannot be met using a single peak flow control orifice. This outlet typically has an invert elevation above the 10-year maximum water surface elevation.

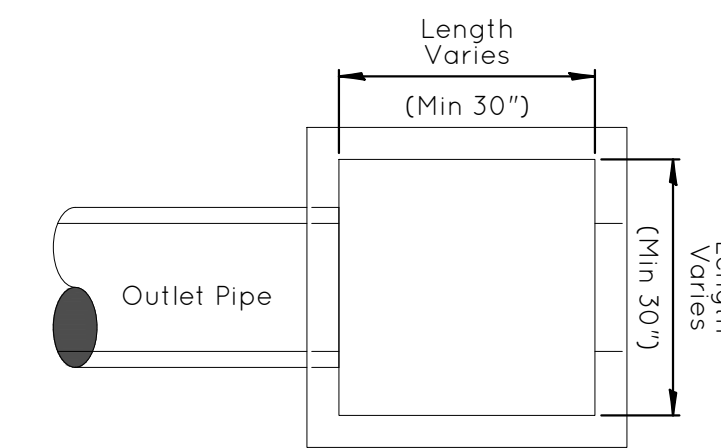
Outlet 4: Emergency Overflow
The purpose of this outlet is to allow the outlet to convey flow downstream even if the peak flow control orifice(s) are completely blocked. It may also serve as a part of the emergency flood route in special circumstances.

DESCRIPTION OF OUTLETS

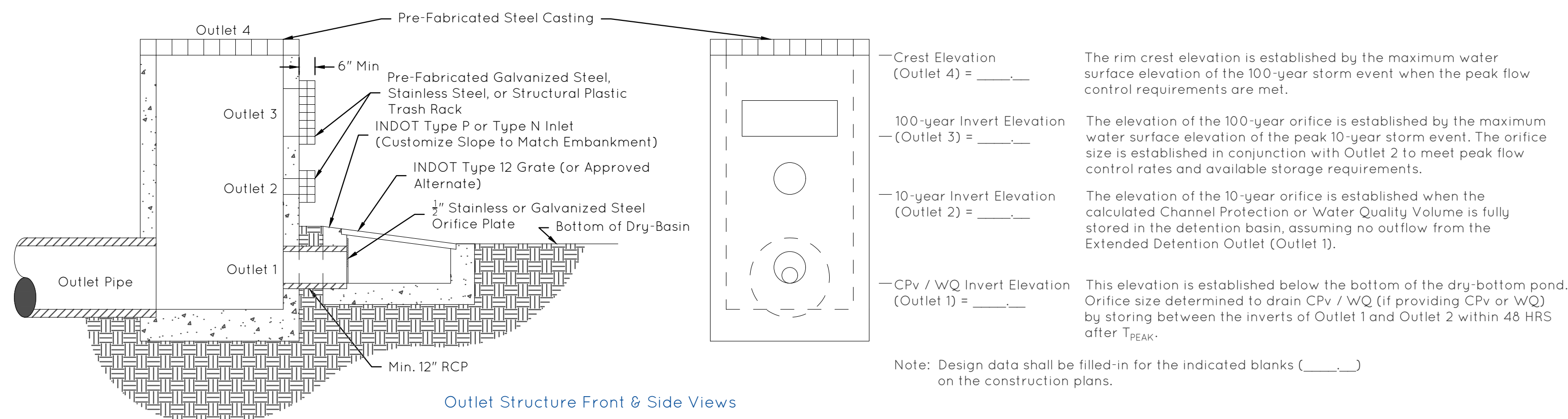
Outlet 1: Peak Flow Control Orifice (10-year)
The purpose of this outlet is to control the release of runoff for events between the 2-year and 10-year storm events to meet peak flow control requirements per Ch. 3 and 6 of the STSM. This outlet has an invert elevation at the normal pool of a wet pond or below the bottom of a dry-bottom facility.

Outlet 2: Peak Flow Control Orifice (100-year)
The purpose of this outlet is to supplement Outlet 1 when the 100-year peak flow control requirements cannot be met using a single peak flow control orifice. This outlet typically has an invert elevation above the 10-year maximum water surface elevation.

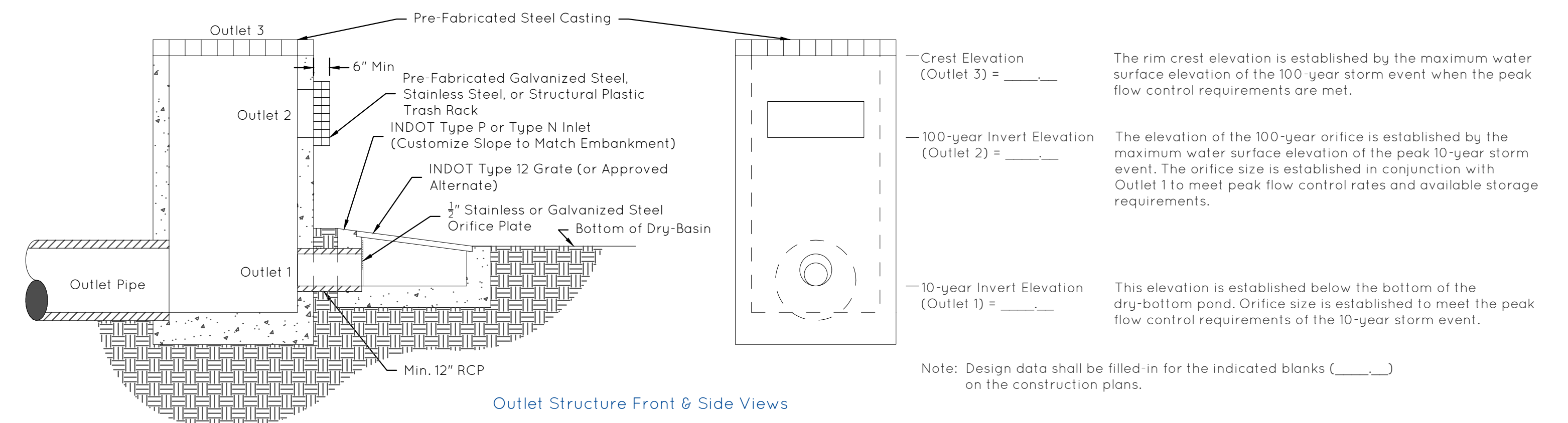
Outlet 3: Emergency Overflow
The purpose of this outlet is to allow the outlet to convey flow downstream even if the peak flow control orifice(s) are completely blocked. It may also serve as a part of the emergency flood route in special circumstances.



Outlet Structure Top View



Outlet Structure Front & Side Views



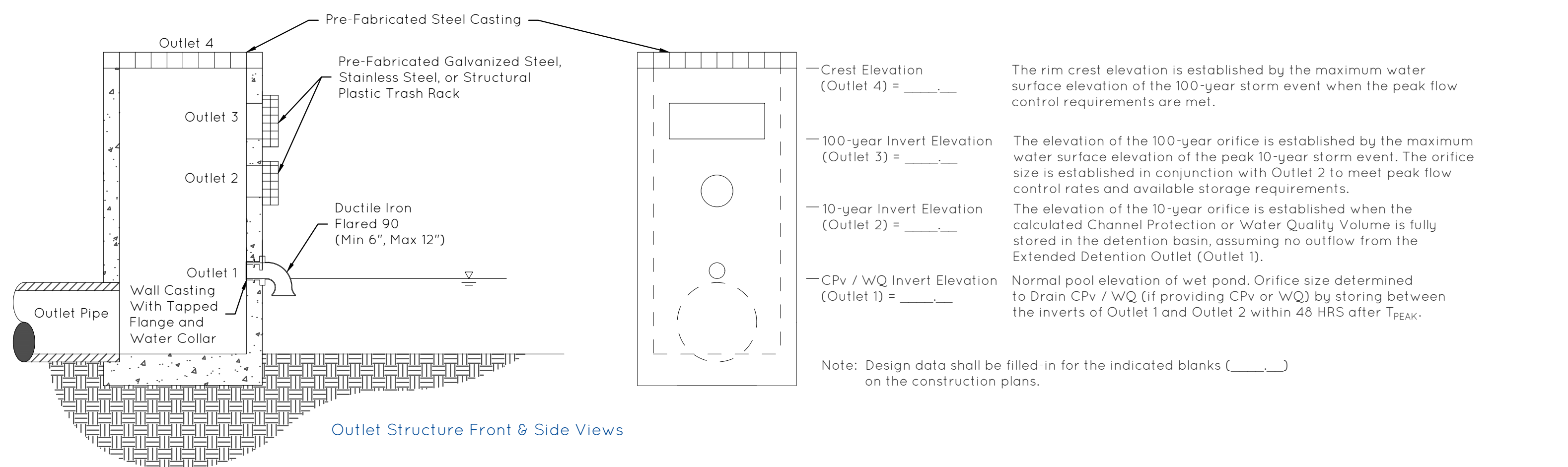
Outlet Structure Front & Side Views

DRY-BOTTOM DETENTION BASIN OUTLET DETAILS - COMBINED PEAK FLOW AND CHANNEL PROTECTION / WATER QUALITY BASIN

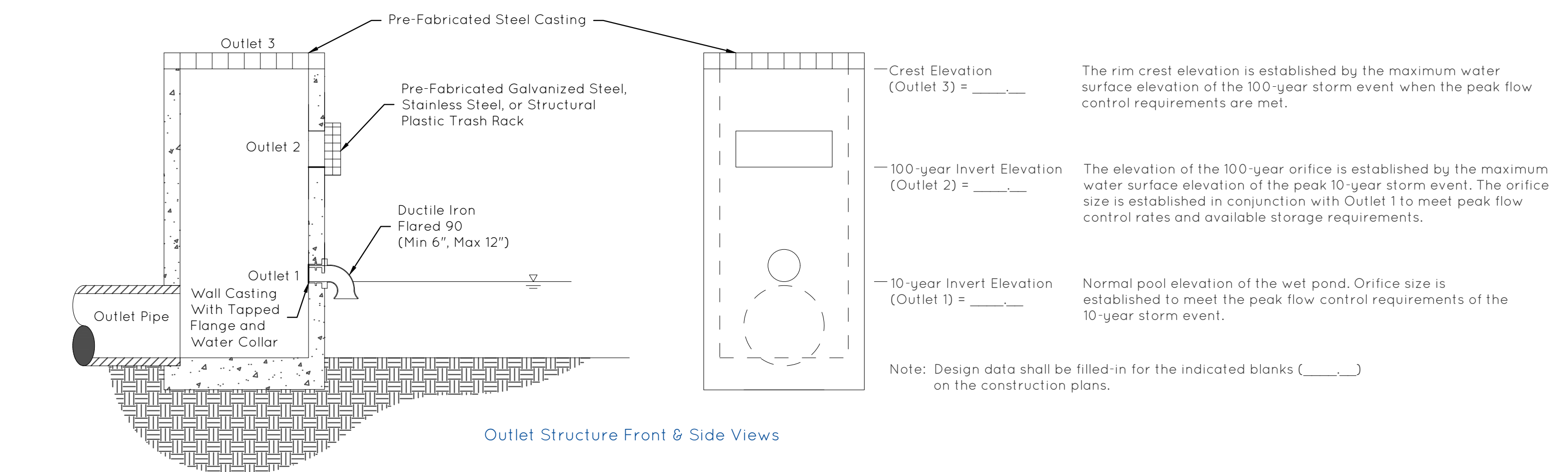
Not to Scale

DRY-BOTTOM DETENTION BASIN OUTLET DETAILS - PEAK FLOW CONTROL FACILITY (SINGLE USE)

Not to Scale



Outlet Structure Front & Side Views



Outlet Structure Front & Side Views

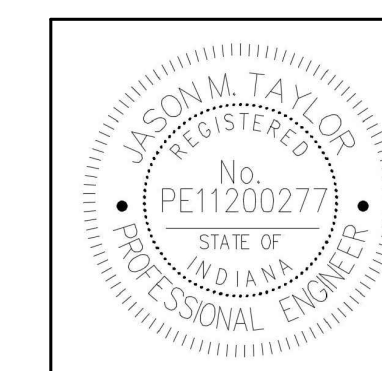
WET-BOTTOM DETENTION BASIN OUTLET DETAILS - COMBINED PEAK FLOW AND CHANNEL PROTECTION / WATER QUALITY BASIN

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WET-BOTTOM DETENTION BASIN OUTLET DETAILS - PEAK FLOW CONTROL FACILITY (SINGLE USE)

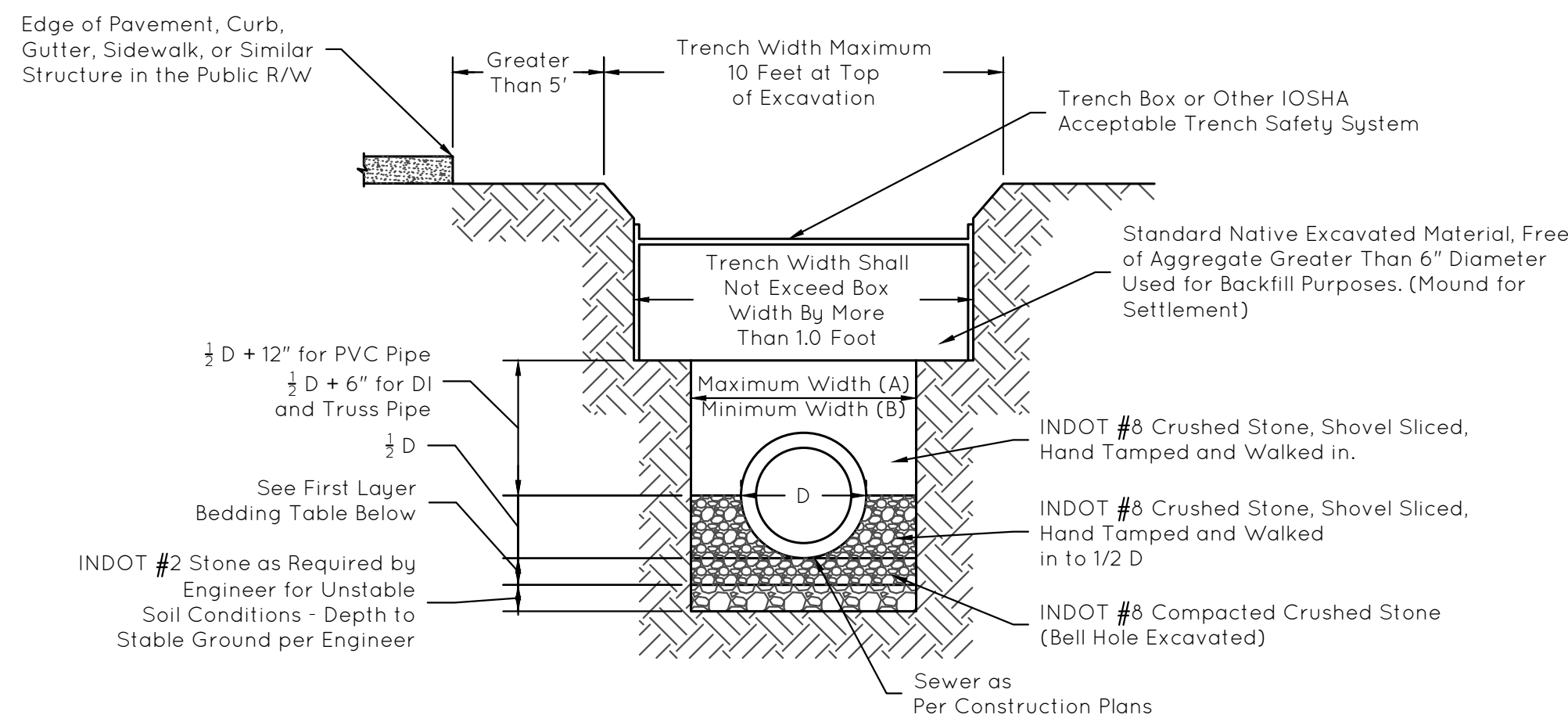
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1/18/2022



CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
DETENTION BASIN - OUTLET CONTROL STRUCTURE DETAILS

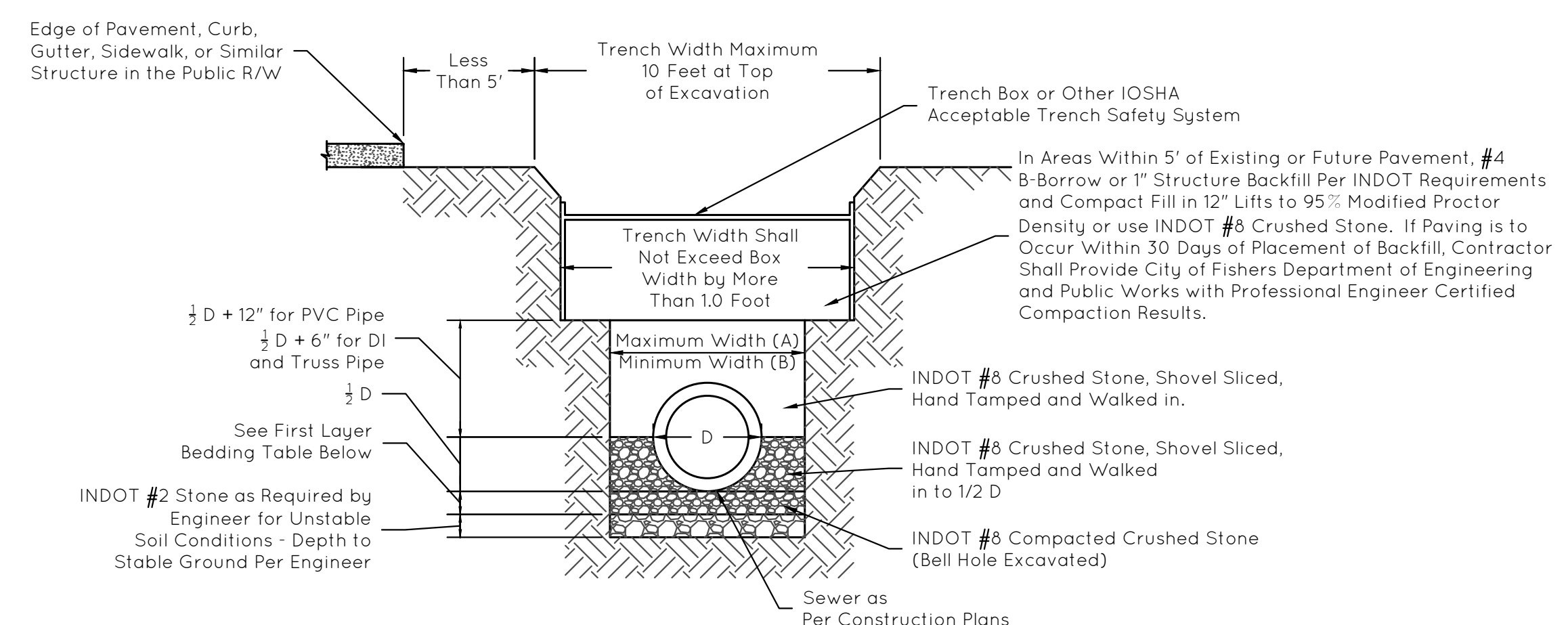
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FIRST LAYER BEDDING TABLE		
PIPE SIZE	6" TO 15"	18" & Over
Bedding Below the Pipe Barrel and Bell	Minimum = 6"	Minimum = 10"

PIPE SIZE	A	B
	Up to 18"	3' - 0"
18" and Greater	D + 24"	D + 18"

Greater Than 5' From Edge of Pavement



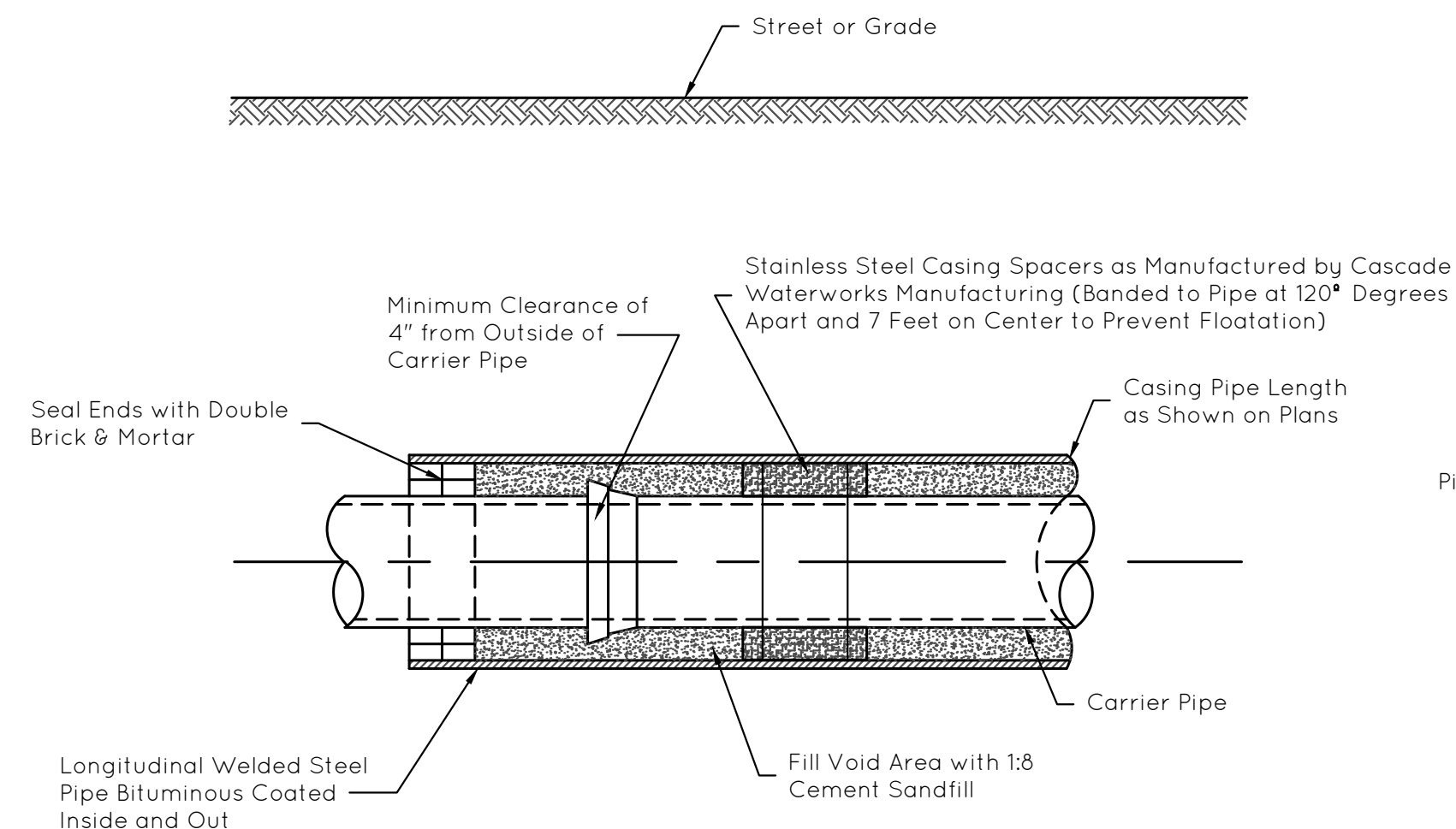
FIRST LAYER BEDDING TABLE		
PIPE SIZE	6" TO 15"	18" & Over
Bedding Below the Pipe Barrel and Bell	Minimum = 6"	Minimum = 10"

PIPE SIZE	A	B
	Up to 18"	3' - 0"
18" and Greater	D + 24"	D + 18"

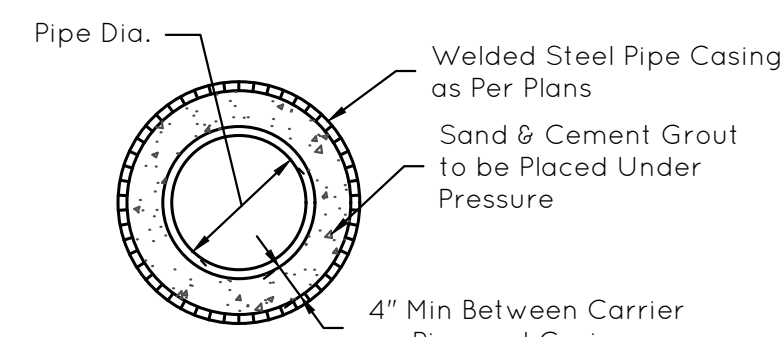
Within 5' of Existing or Future Pavement

SANITARY SEWER TRENCHING, BEDDING AND BACKFILL

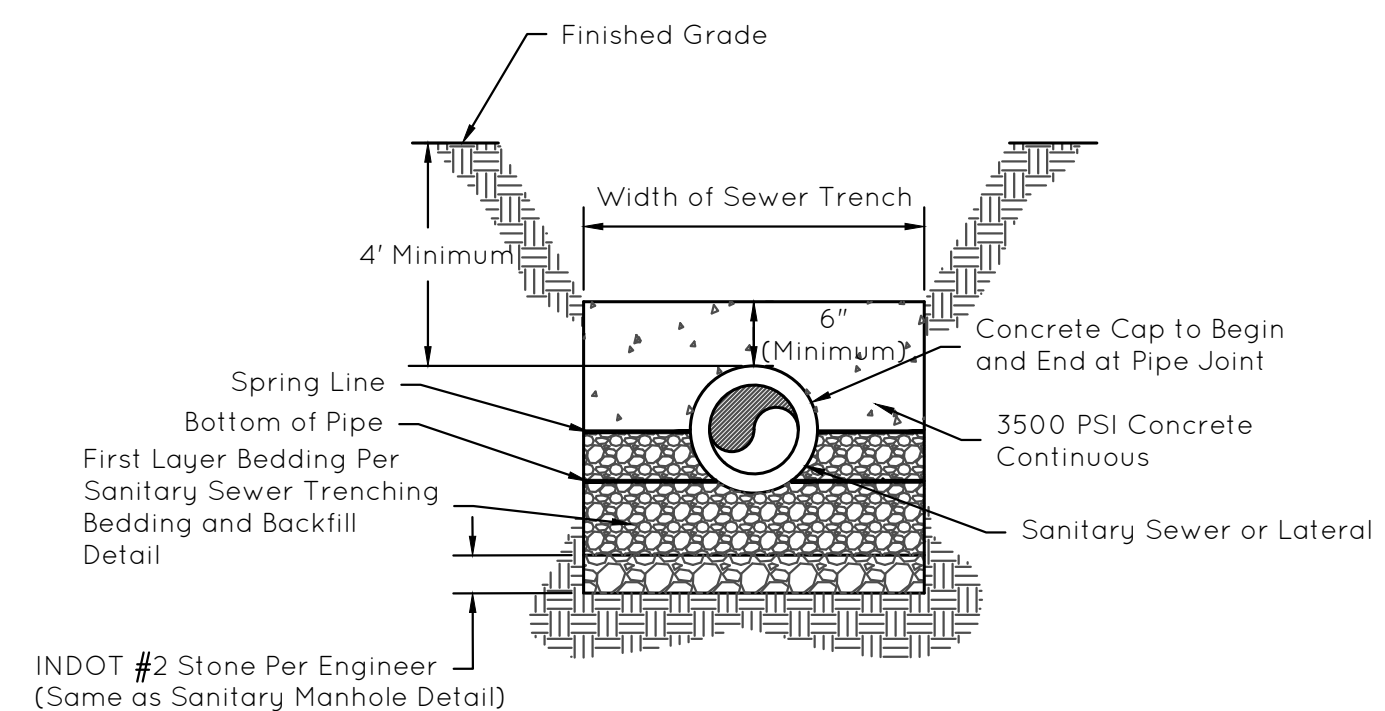
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TYPICAL STREET BORING SIDE VIEW
Not to Scale

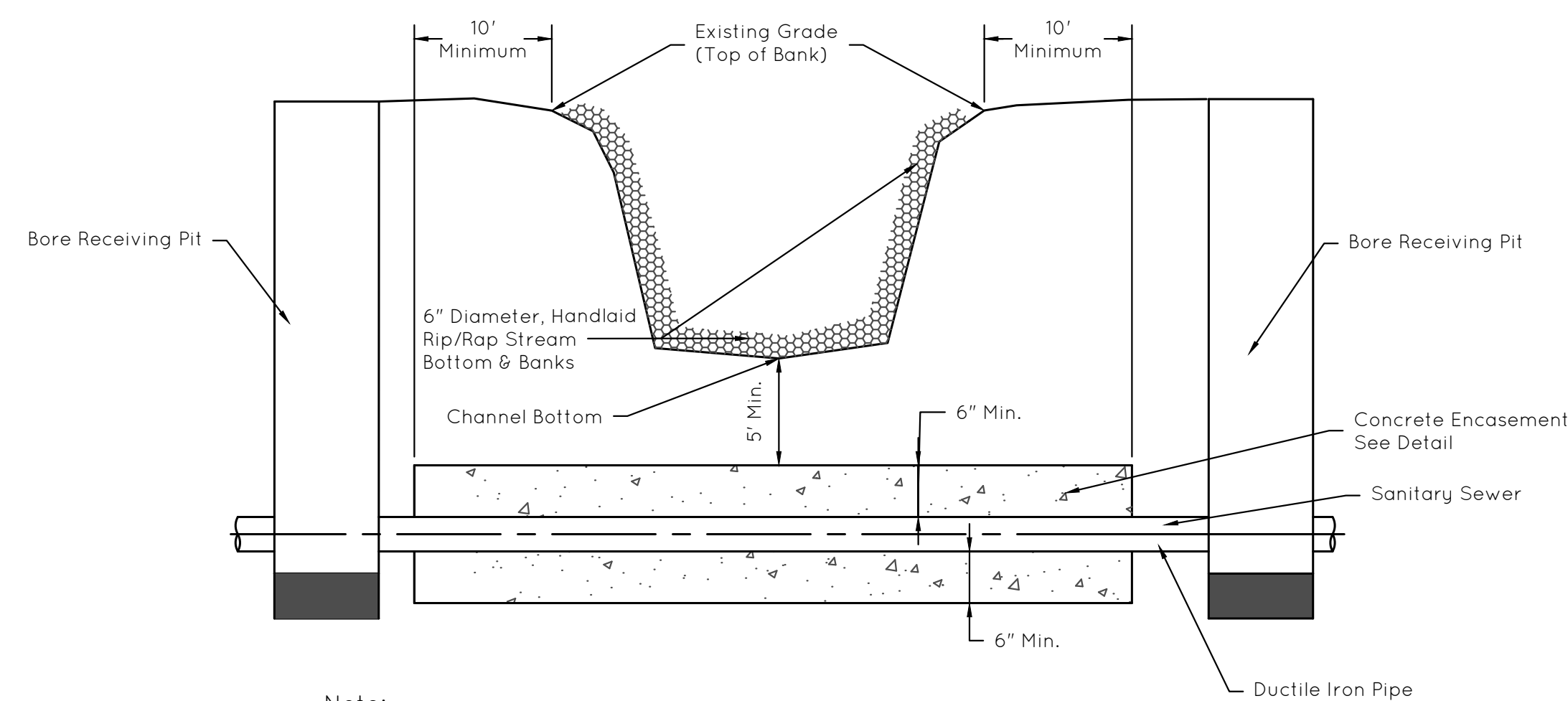


TYPICAL BORING END VIEW
Not to Scale



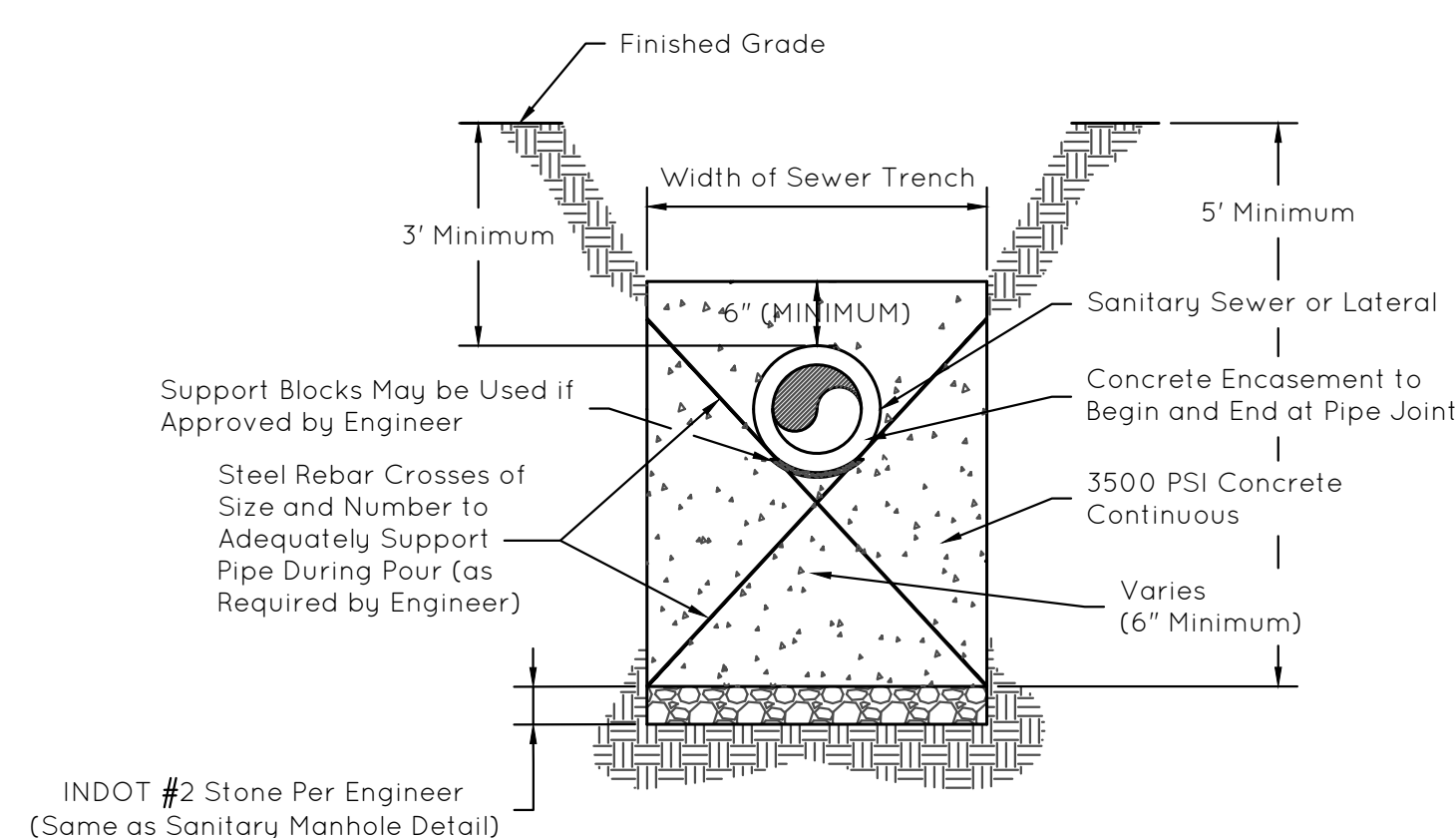
- Notes:
- Concrete shall be high-early yield and shall not be backfilled until Engineer deems the concrete adequately cured.
 - To be used when cover over top of pipe is 3-4 feet, per Engineer's direction, or where noted on the construction plans.

CONCRETE CAP
Not to Scale



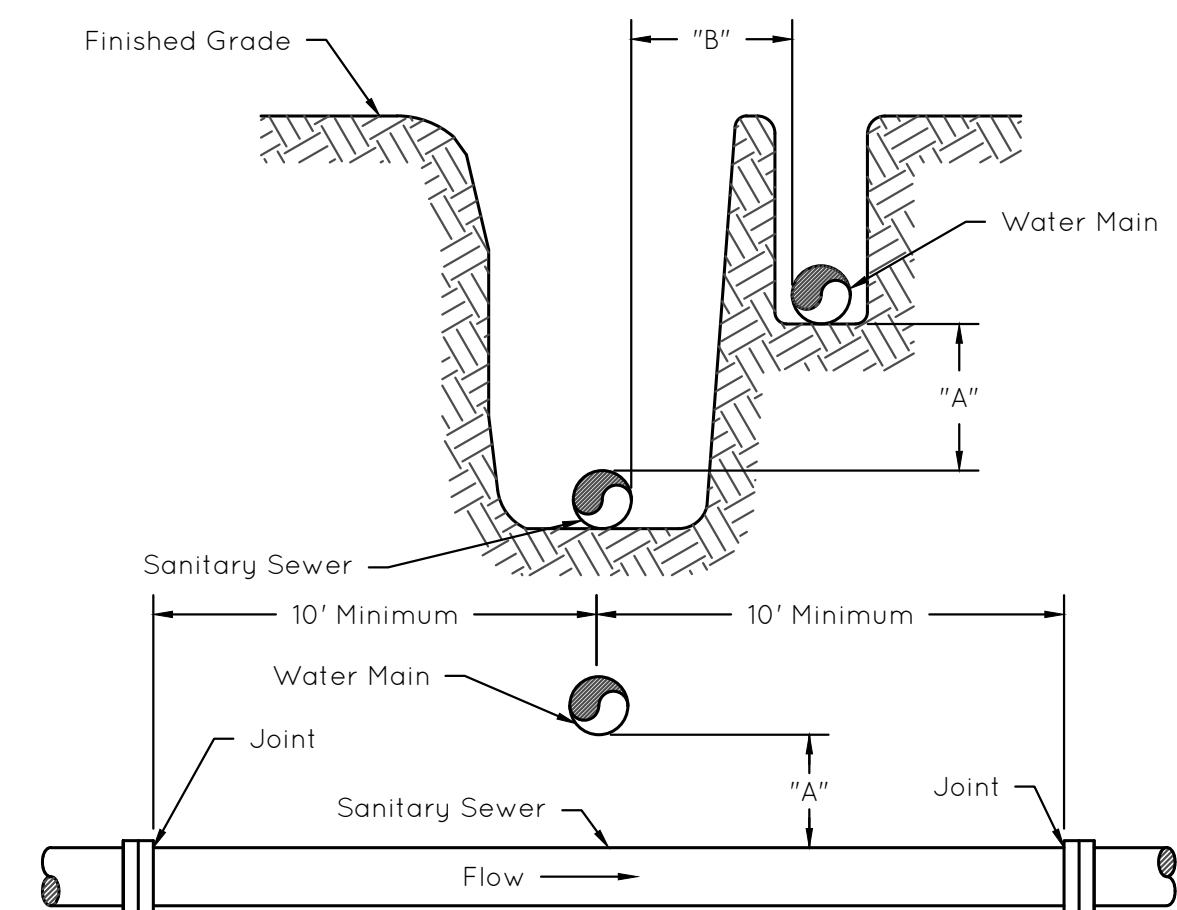
- Note:
- Stream crossing may need permit from Hamilton County Surveyor's Office. Should a county permit be necessary, refer to Hamilton County Surveyor's Office detail.

STREAM CROSSING - GRAVITY SEWER
Not to Scale



- Notes:
- Concrete shall be high-early yield and shall not be backfilled until Engineer deems the concrete adequately cured.
 - To be used when cover over top of pipe is 3-4 feet, per Engineer's direction, or where noted on the construction plans.

CONCRETE ENCASEMENT
Not to Scale



IF "A" IS	IF "B" IS	THEN SANITARY SEWER PIPE SEGMENT SHALL BE
18" or More	10' or More	No Special Pipe Material or Grade Requirements
Less Than 18"	Less Than 10'	PVC (Either ASTM D 2241 (SDR 21 Minimum) or ANSI/AWWA C900 (DR 18 Minimum) or ANSI/AWWA C905 (DR 21 Minimum)) or Ductile Iron (Class 51 Minimum)

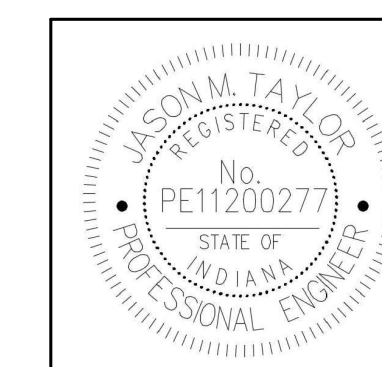
- Notes:
- Water mains shall not be located in the same trench as sanitary sewers.
 - Separation distances from water supplies and pipe classifications shall conform to Indiana State Board of Health's "On-Site Water Supply and Wastewater Disposal for Public and Commercial Establishments - Bulletin S.E. 13".

WATER SUPPLY & SEWER CROSSING
Not to Scale

THESE SANITARY SEWER DETAILS AND FISHERS SANITARY SEWER SPECIFICATIONS ARE COMPLEMENTARY IN NATURE AND SHOULD NOT BE INTERPRETED INDIVIDUALLY WITHOUT REFERENCE TO THE OTHER.

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CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS

SANITARY SEWER PIPE BEDDING & CROSSING DETAILS

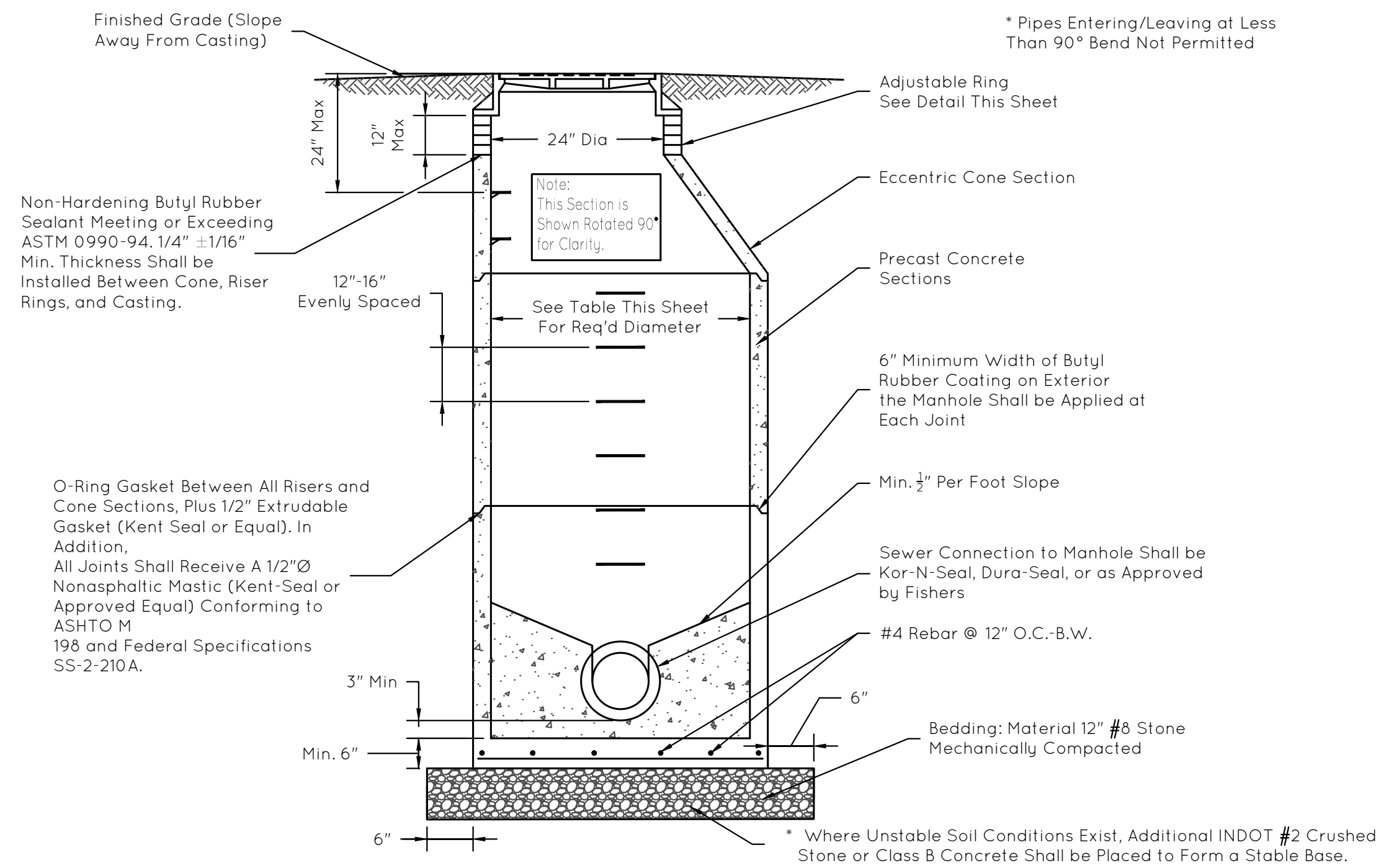
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MANHOLE DIAMETERS

Pipe Size	Pipes Entering/Leaving at *45°-90°
8"-24"	48"
27"-30"	60"

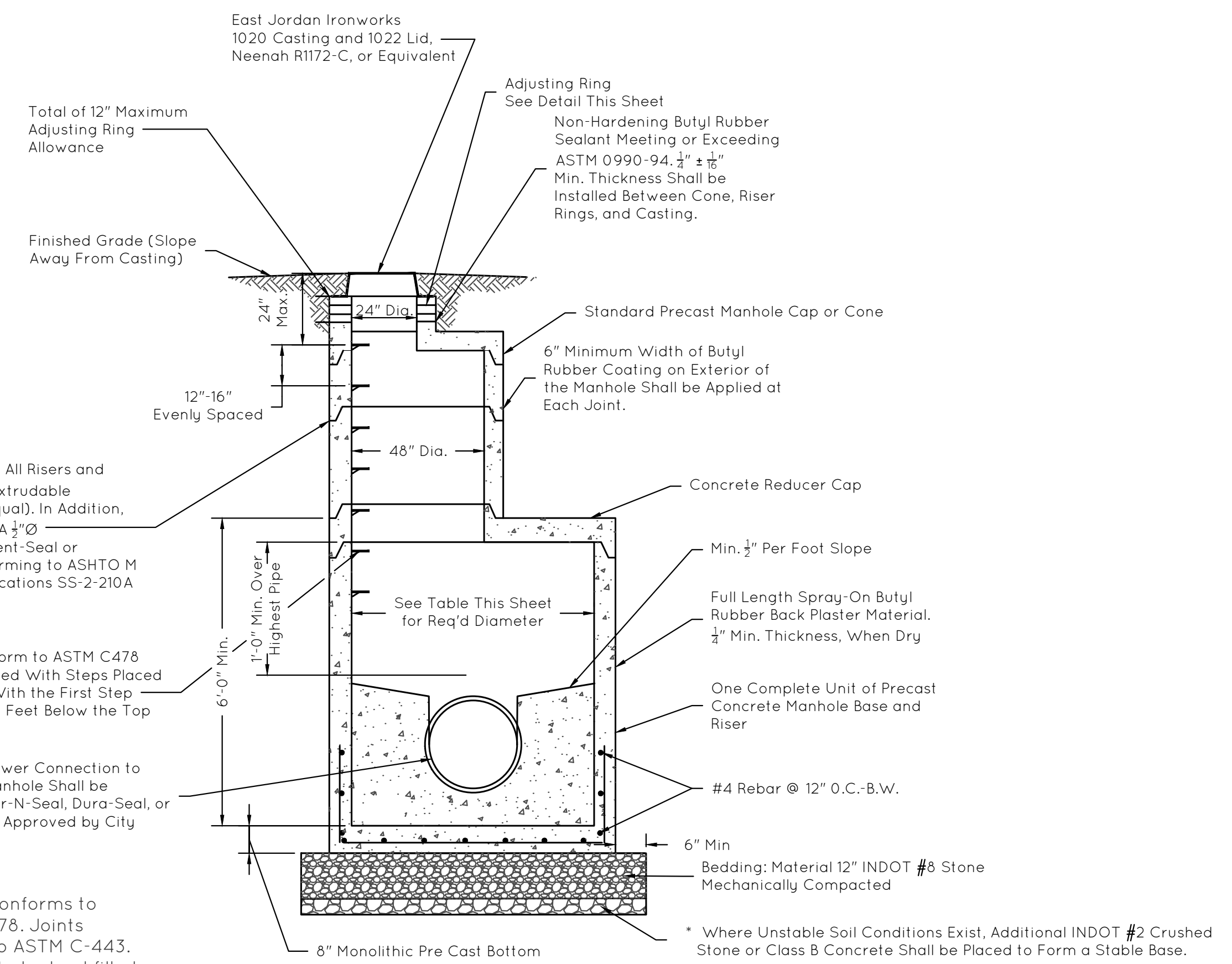
* Pipes Entering/Leaving at Less Than 90° Bend Not Permitted



Flow channels within manholes shall be an integral part of the precast base. The channels shall be shaped and formed for a clean transition with proper hydraulics to allow the smooth conveyance of the flow through the manhole. The bench wall shall be formed to the crown of the inlet and outlet pipes to form a "U" shaped channel. The bench wall shall slope back from the crown at 1/2" per foot to the manhole wall.

STANDARD MANHOLE FOR PIPE SIZES 8" THRU 24"

Not to Scale



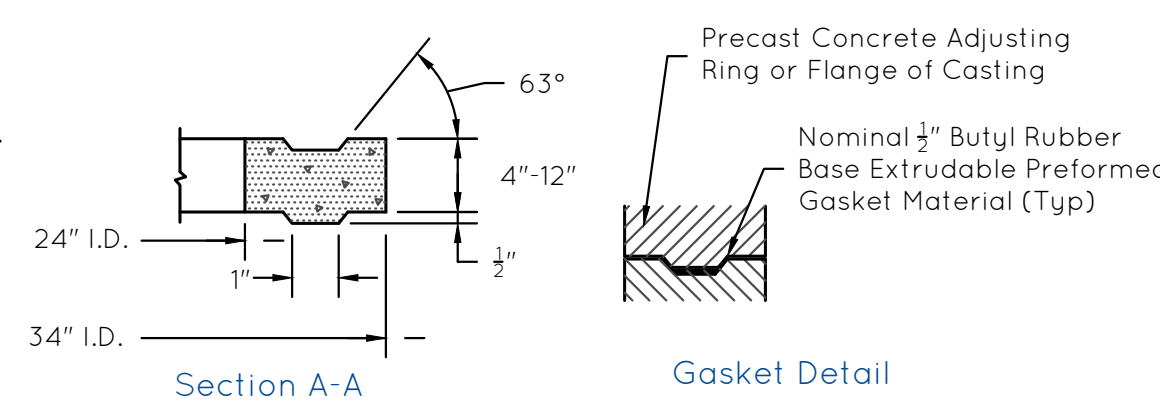
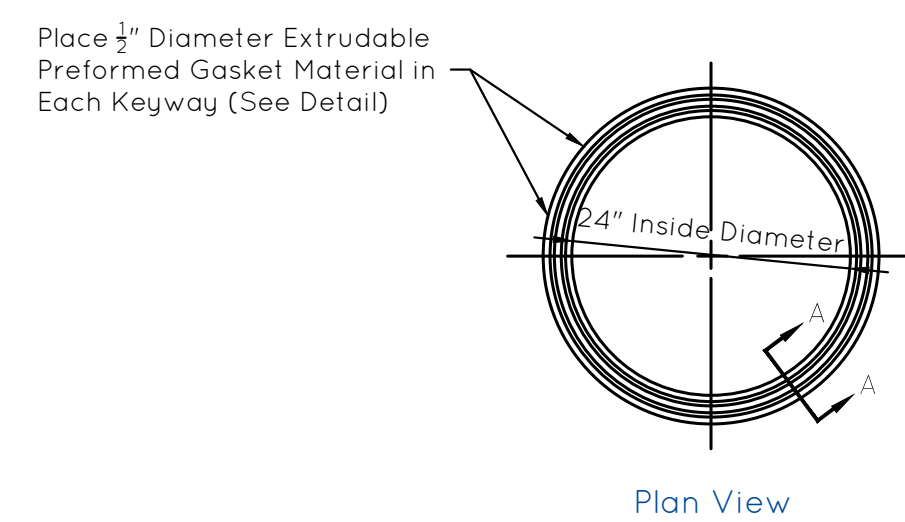
Notes:

- 1) Manhole conforms to ASTM C-478. Joints conform to ASTM C-443.
- 2) Manholes to be backfilled with INDOT #53 or INDOT #8 Crushed Stone.

Flow channels within manholes shall be an integral part of the precast base. The channels shall be shaped and formed for a clean transition with proper hydraulics to allow the smooth conveyance of the flow through the manhole. The bench wall shall be formed to the crown of the inlet and outlet pipes to form a "U" shaped channel. The bench wall shall slope back from the crown at 1/2" per foot to the manhole wall.

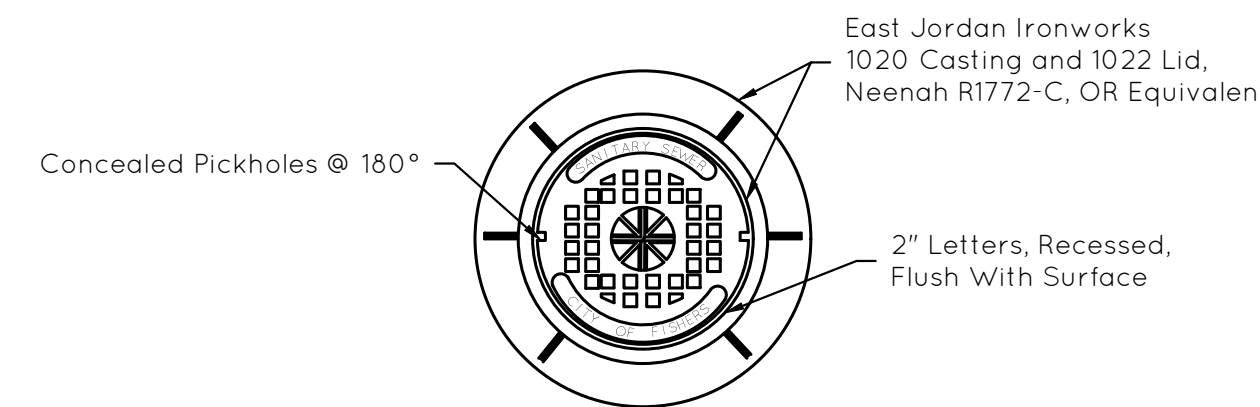
STANDARD MANHOLE FOR PIPE SIZES 27" THRU "30"

Not to Scale



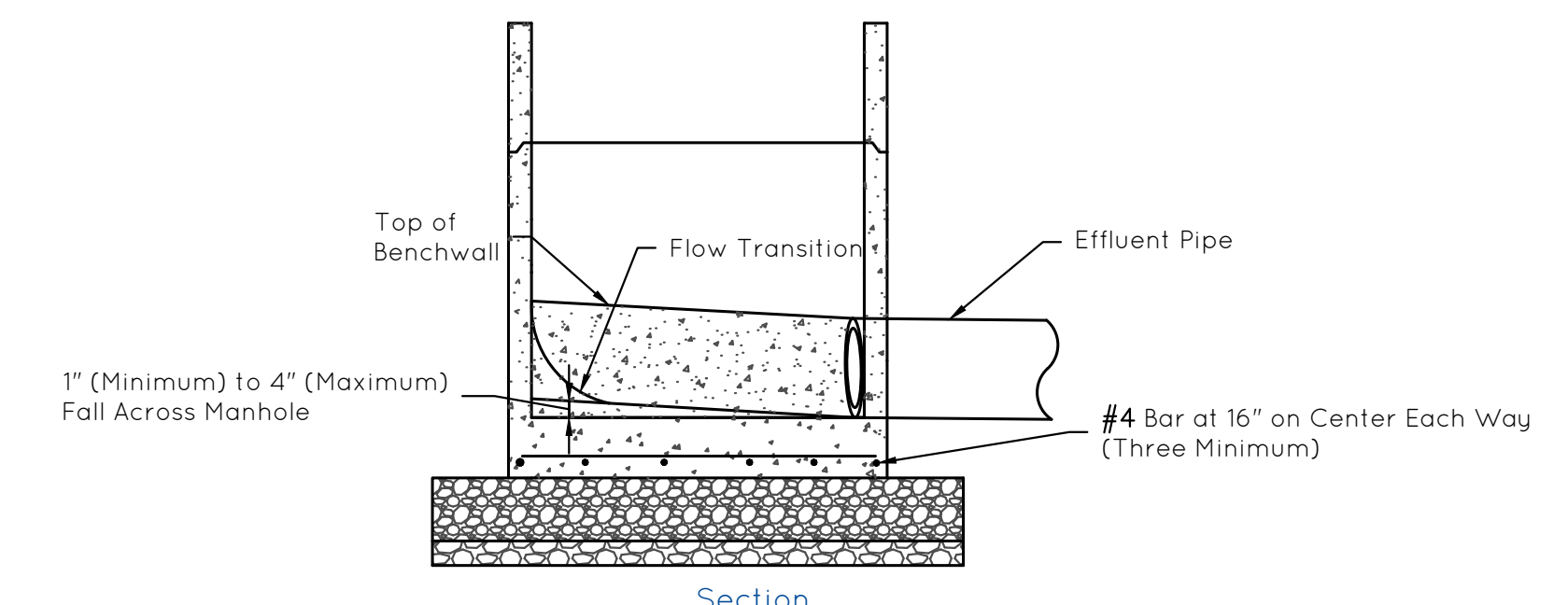
ADJUSTING RING

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FRAME AND COVER

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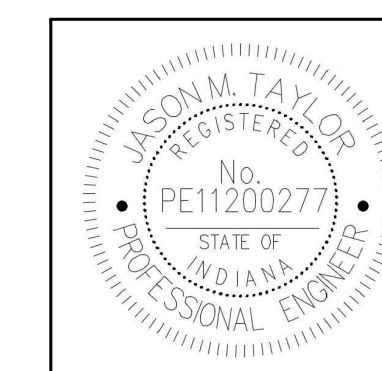
TERMINATION MANHOLE

Not to Scale

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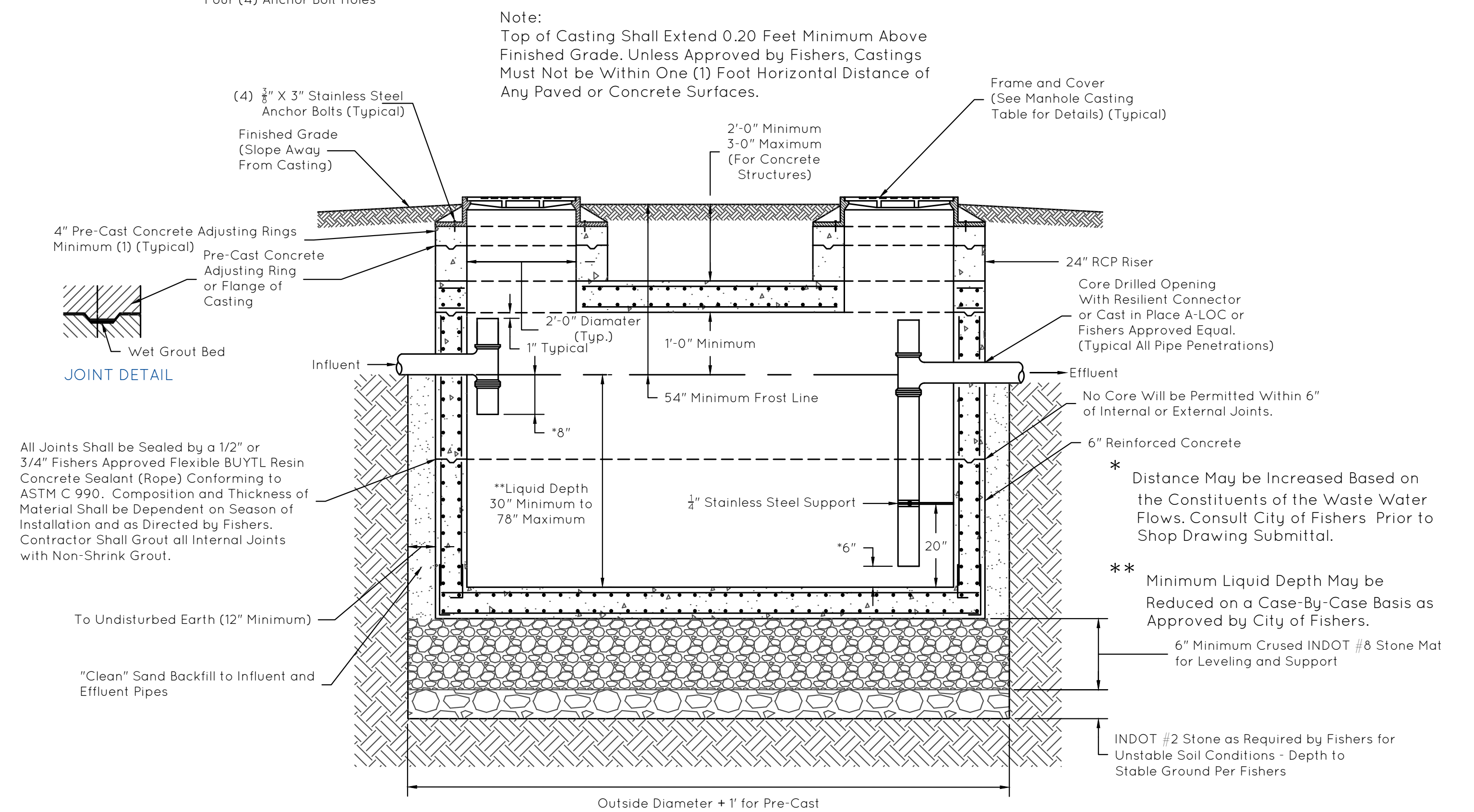
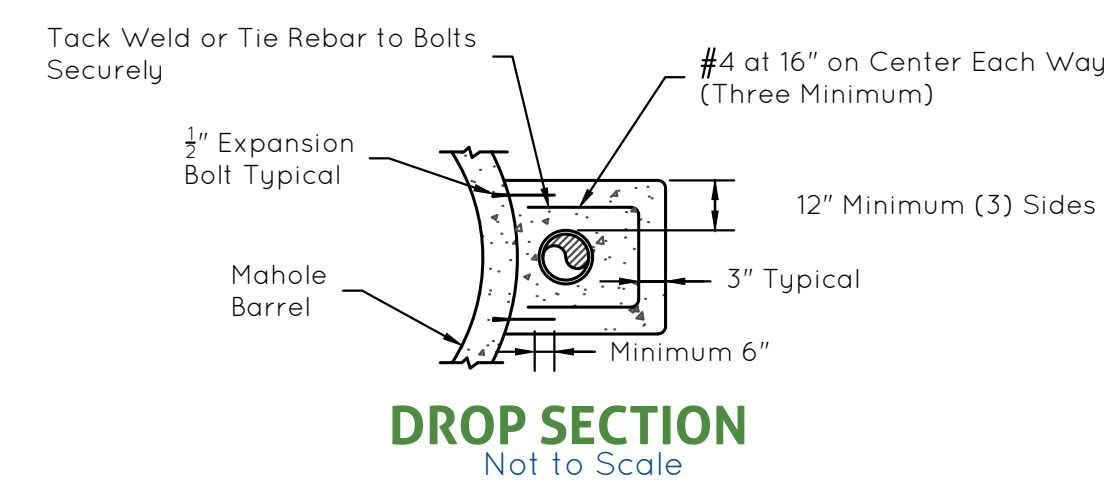
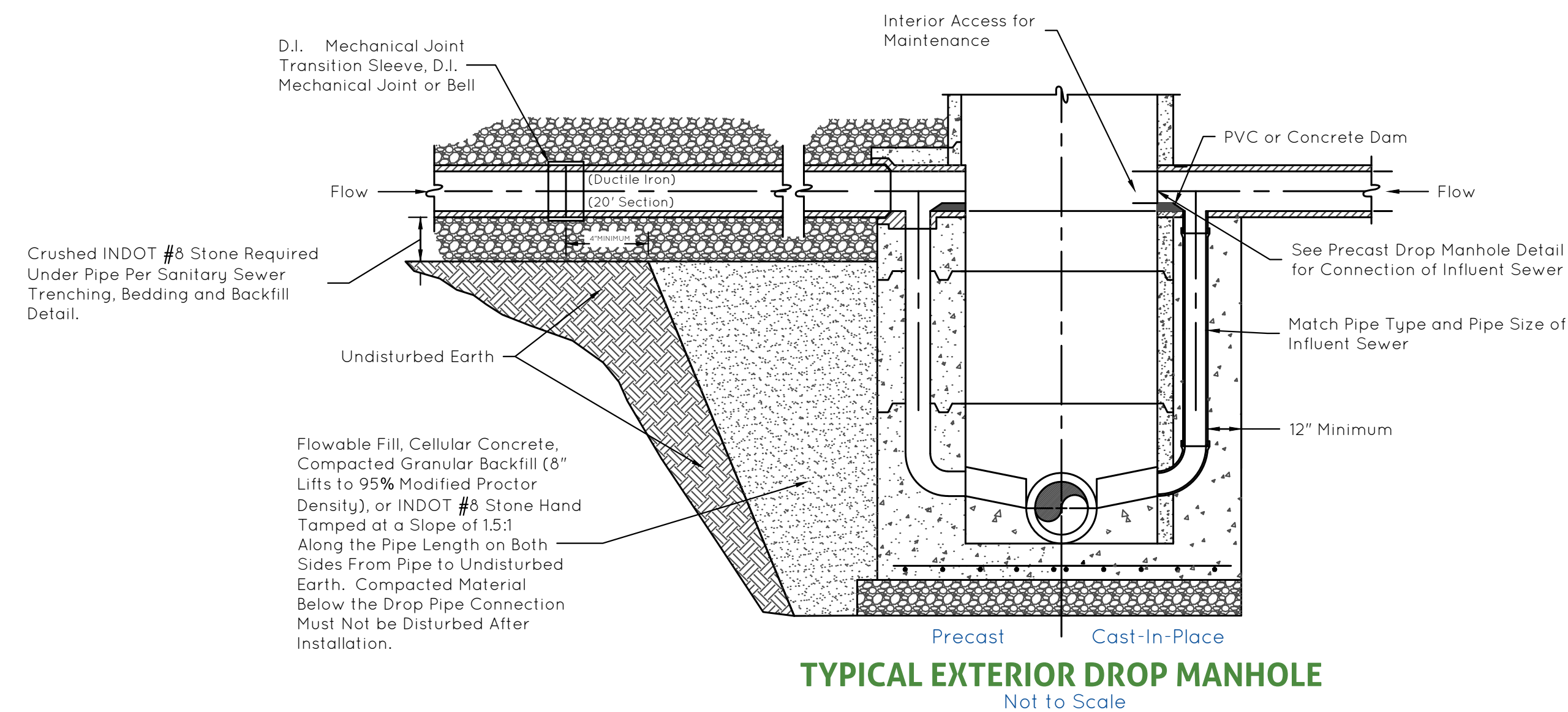
CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
SANITARY SEWER STRUCTURE
DETAILS

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MANHOLE CASTING TABLE		
LOCATION	MODEL	COVER
18" Inches or More Above 100 Year Flood Elevation of All Waterway	East Jordan 1060-Z1 or Neenah R-1712-B OR Equivalent	Heavy Duty Solid
Less Than 18" Above 100 Year Flood Elevation of All Waterways	East Jordan 1050-Z1WT OR Neenah R-1916-E OR Equivalent	Heavy Duty Solid
LID		
OWNERSHIP	LETTERING	
Private or Fishers	"Sanitary Sewer"	

All Castings to be Supplied With Four (4) Anchor Bolt Holes

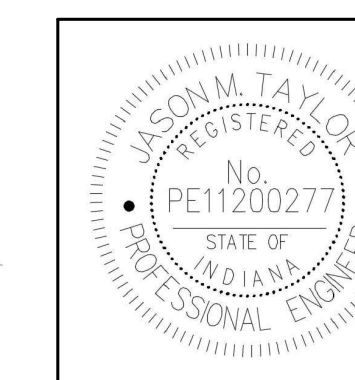
- Notes:
- Grease Trap Shall Conform to ASTM C 478 Utilizing 4,000 PSI Concrete. Contractor May Supply Grease Trap as Manufactured by ZURN Series Z-1170 or Jay R. Smith Manufacturing Company Series 8000.
 - Exterior Installation Must be Concrete or Cast Iron. Steel Grease Traps Shall Only be Installed Inside a Building.



- Notes:
- Exterior grease traps must be sized according to the Indiana State Department of Health, Environmental Public Health Division Rule 410 IAC 6-10.1, "Commercial On-Site Sewage Systems" and per local requirements and codes. The sizing method for all structures must be approved by City of Fishers.
 - Top of casting shall extend 0.20 feet minimum above finished grade. Unless approved by City of Fishers, castings must not be within one (1) foot horizontal distance of any paved or concrete surfaces.
 - Shop drawings must be submitted to City of Fishers for review and approval.
 - Alternate equivalent must be approved by Director of Public Works.

THESE SANITARY SEWER DETAILS AND FISHERS SANITARY SEWER SPECIFICATIONS ARE COMPLEMENTARY IN NATURE AND SHOULD NOT BE INTERPRETED INDIVIDUALLY WITHOUT REFERENCE TO THE OTHER.

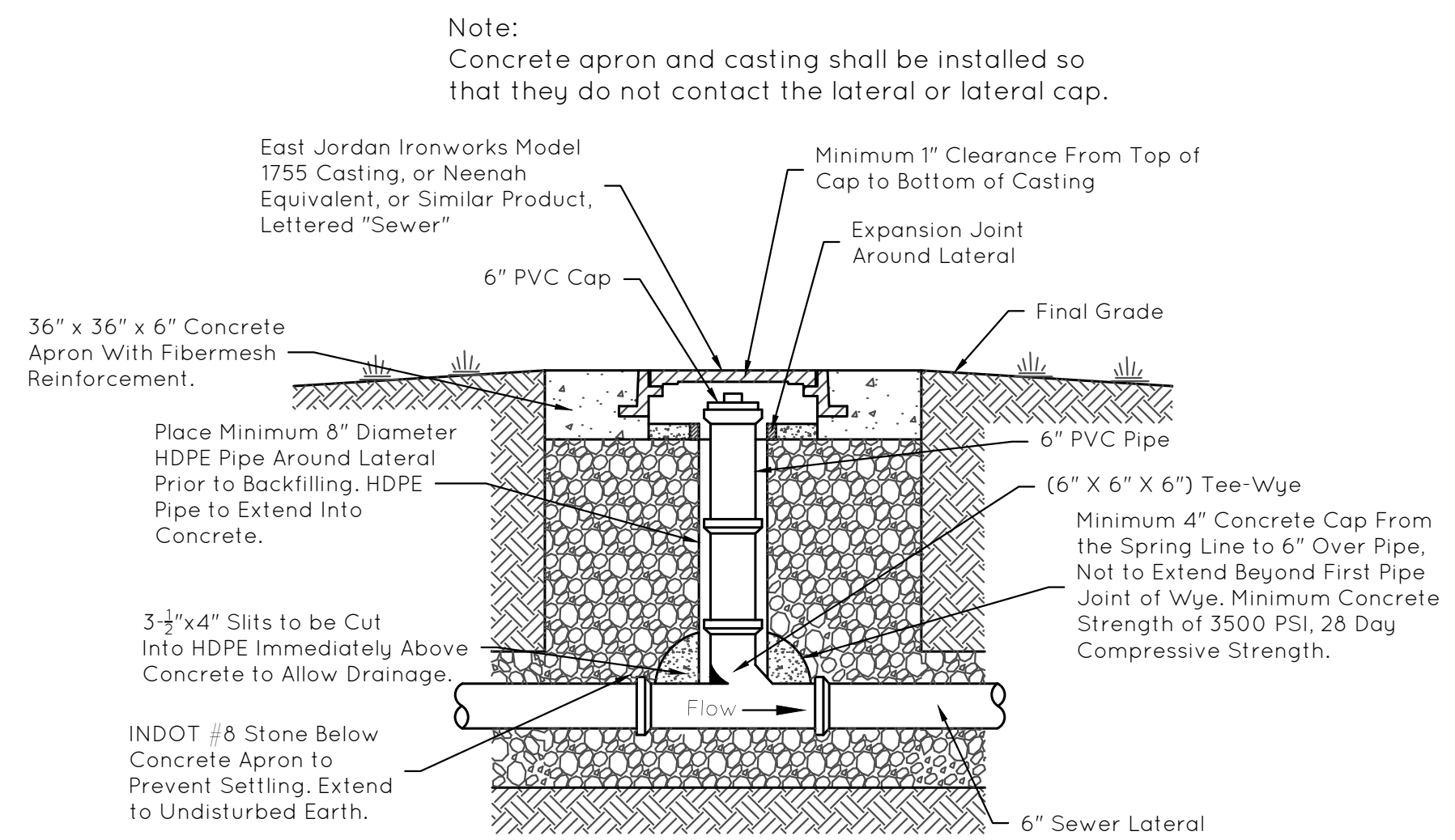
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STANDARD CONSTRUCTION DETAILS

SANITARY SEWER STRUCTURE
DETAILS

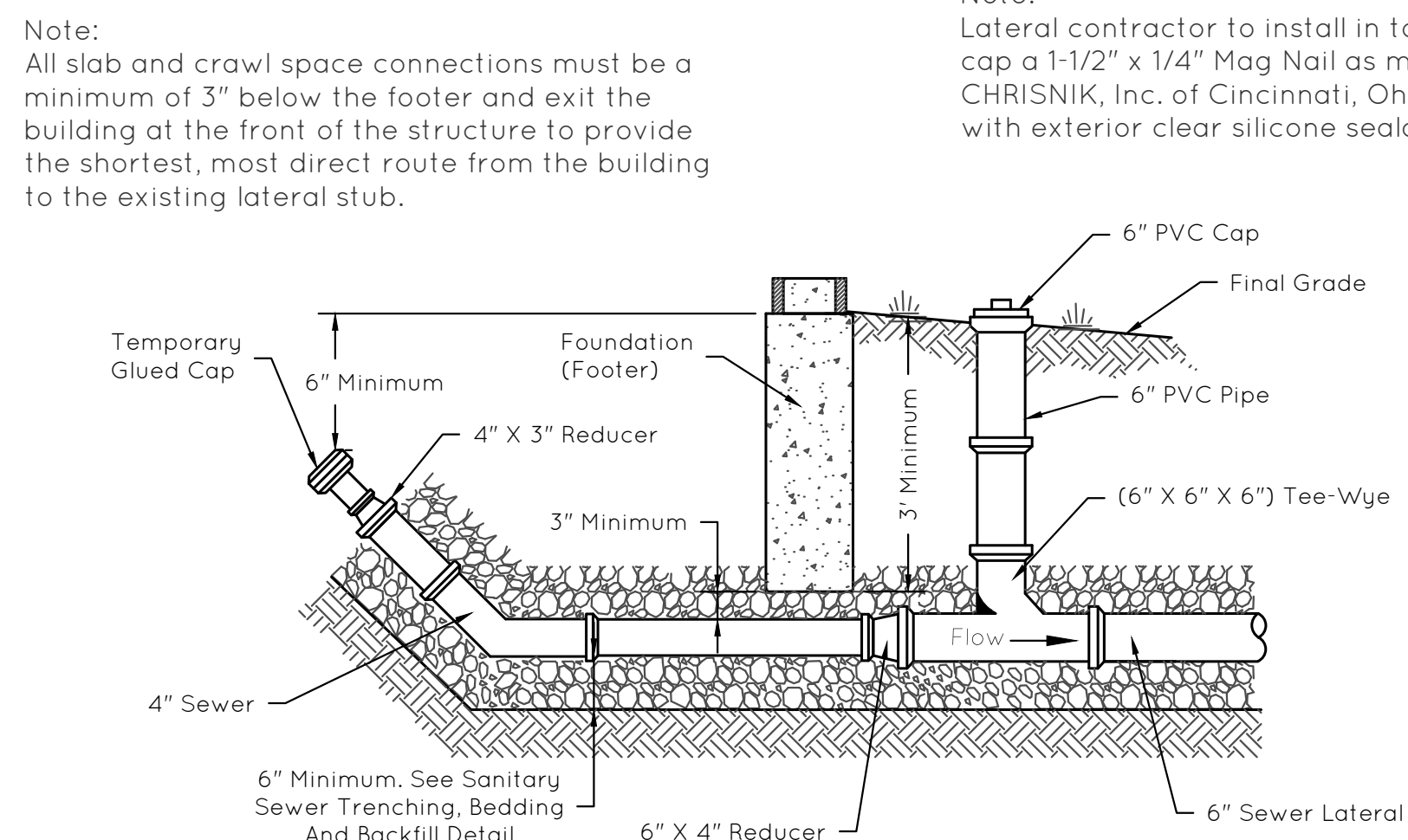
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CLEANOUT TYPE 2

(Hardscape Surfaces and All Other Installations Beyond Three Feet of Building)

- Notes:
- 1) Top of casting or cleanout cap shall extend 0.20 feet minimum above finished grade unless constructed within pedestrian or vehicular traffic way. Unless approved by Engineer, sanitary sewer castings or cleanouts must not be within one (1) foot horizontal distance of any paved or concrete surfaces.
 - 2) All cleanout pipes and fittings to be PVC Schedule 40 or SDR 35 when shallower than twelve (12) feet. At depths greater than twelve (12) feet, material of construction will be determined by Engineer.

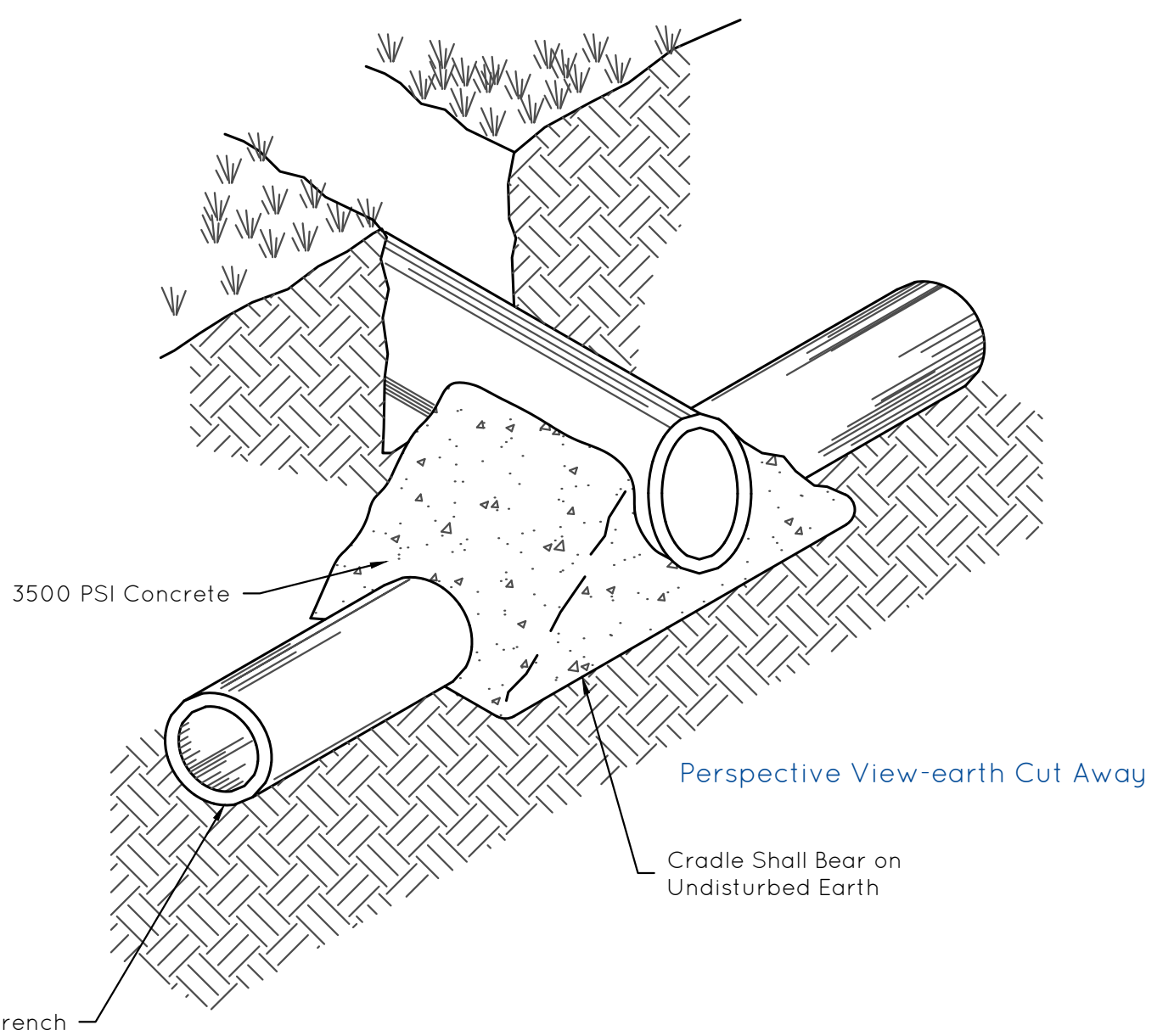


CLEANOUT TYPE 1

(Only Landscaped Surfaces Within Three Feet of Building)

TYPICAL CLEANOUTS

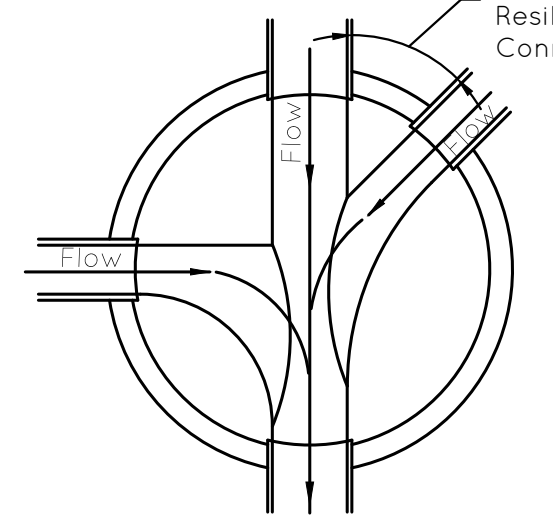
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CONCRETE CRADLE

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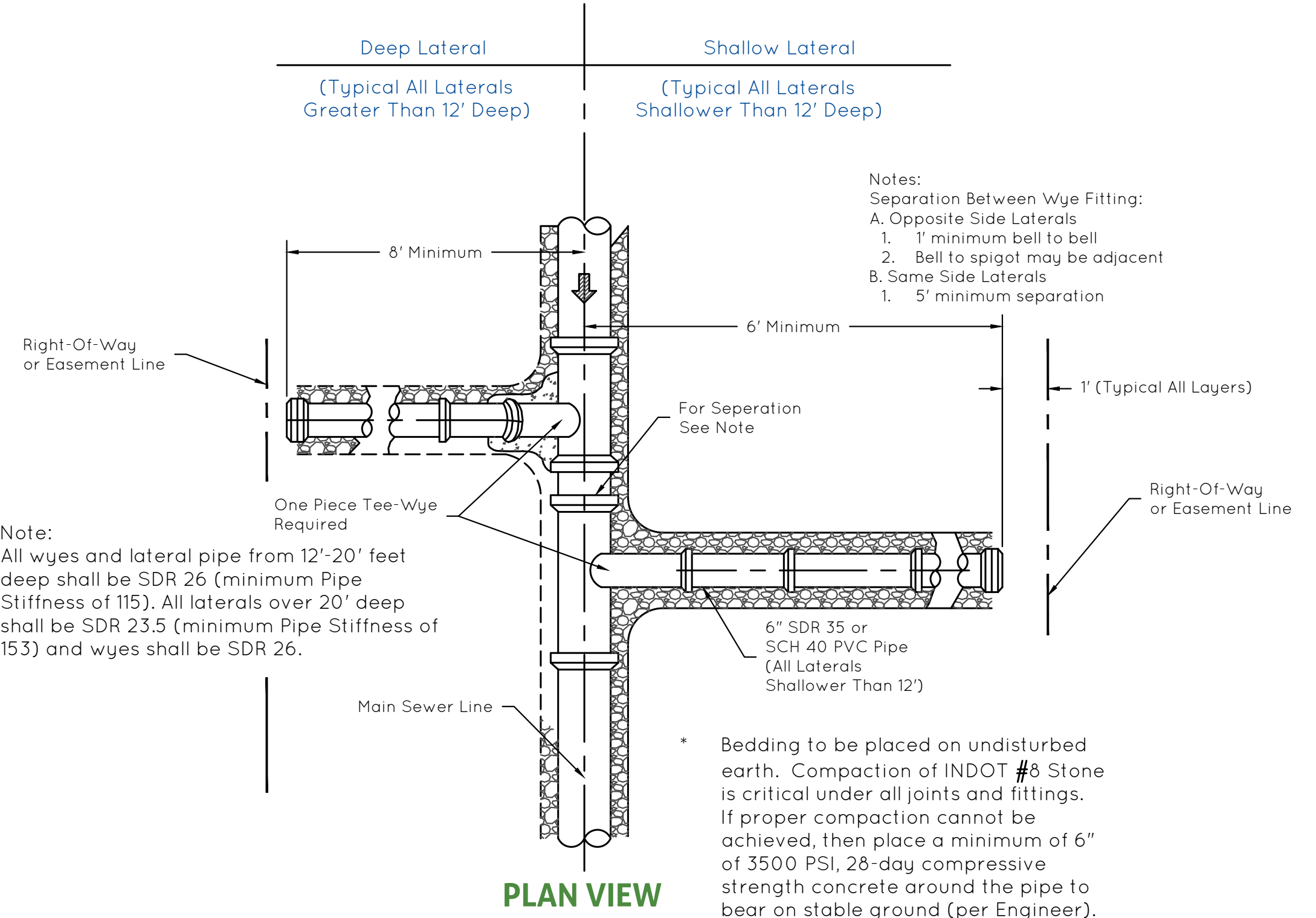
- Note:
- 1) To be used when clear distance (from exterior pipe diameter to exterior pipe diameter) between sanitary sewer piping (mains, laterals, force mains, etc.) and all other pipes is 18" or less, per Engineer's direction, or where noted on the construction plans. A minimum clear distance of 3" must be provided to maintain structural integrity of the concrete. Concrete must not come into contact with force main. At least 3" of sand must be placed as a cushion around the force main. If the conflict is between a water main and any sanitary sewer piping, 18" clearance must be maintained, or note above applies and only granular fill may be used.



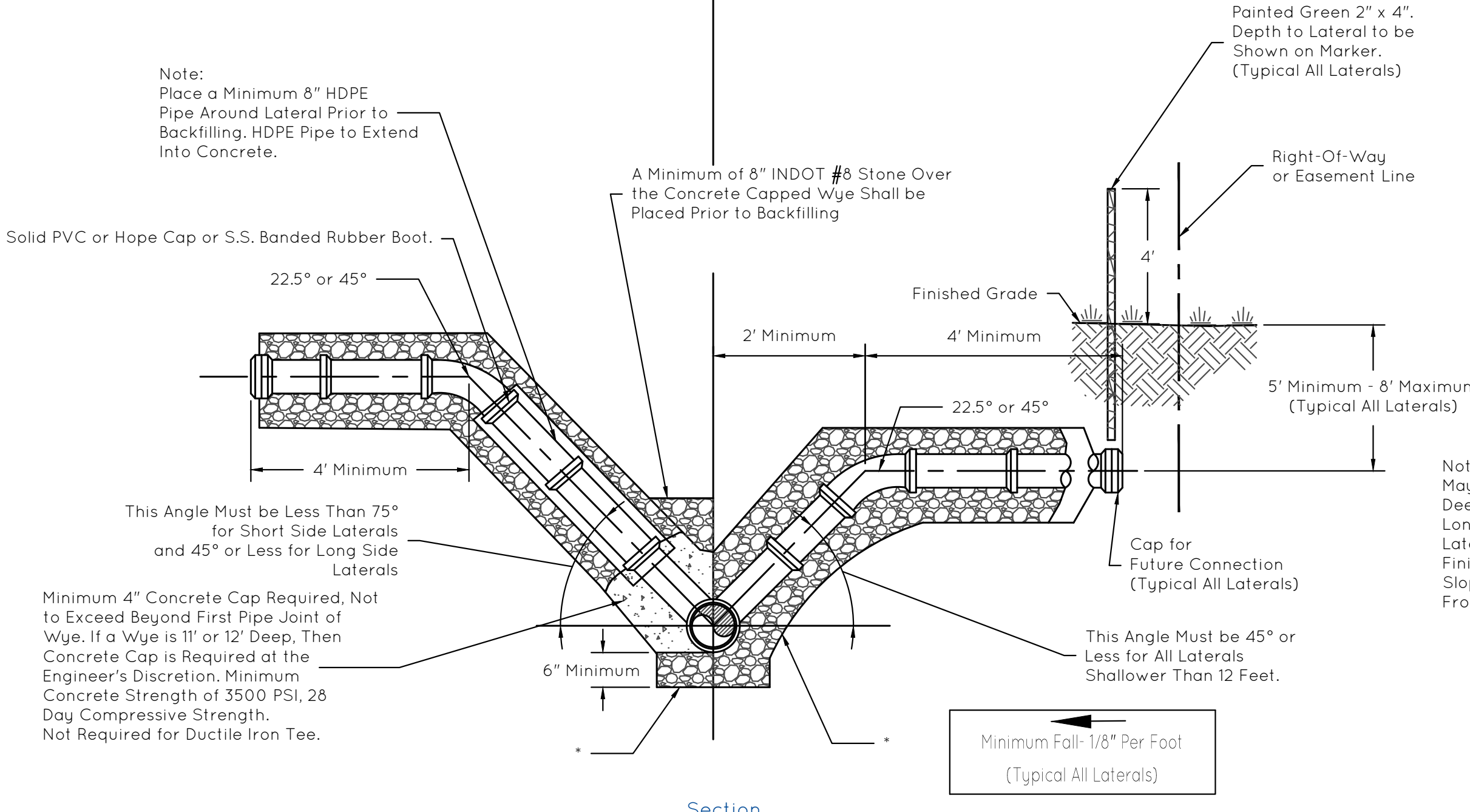
FLOW CHANNEL

Not to Scale

- Note:
- 1) If manhole has only one (1) influent pipe which is approximately 90 degrees to an effluent pipe, then contractor shall maintain a radiused channel of same width as influent pipe.
 - 2) If separation is between 8" and 18", then additional reinforcement (rebar or mesh area) shall be increased as deemed necessary by Engineer.



PLAN VIEW



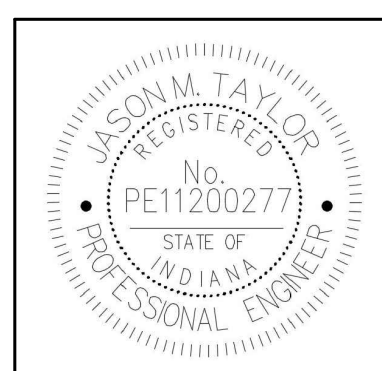
Section

SERVICE LATERAL

Not to Scale

- Notes:
- 1) Depth of service lateral shall be measured from finished grade to the top of main sewer line.
 - 2) All piping from wye to 45°/22.5° fitting at 5'-8' below grade shall be SDR 26 to 20' deep or SDR 23.5 greater than 20' deep.
 - 3) All lateral bedding shall be against undisturbed trench.

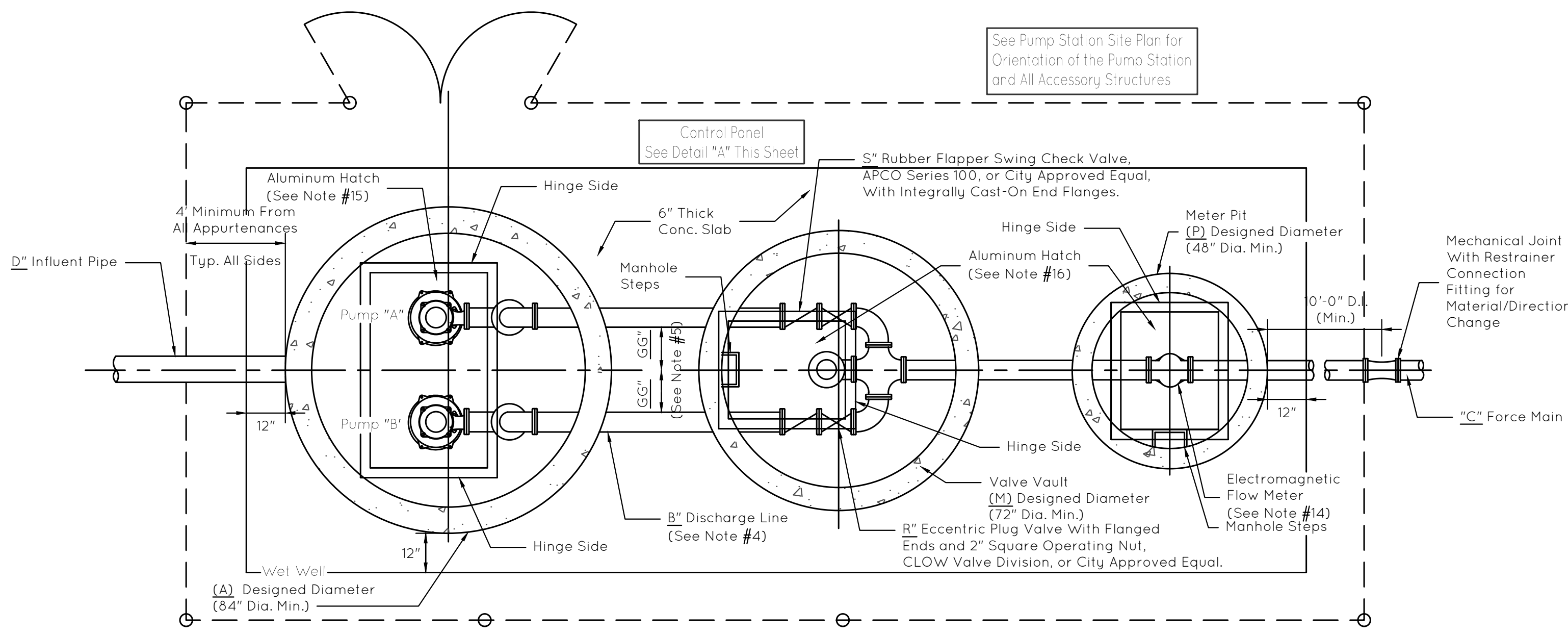
THESE SANITARY SEWER DETAILS AND FISHERS SANITARY SEWER SPECIFICATIONS ARE COMPLEMENTARY IN NATURE AND SHOULD NOT BE INTERPRETED INDIVIDUALLY WITHOUT REFERENCE TO THE OTHER.



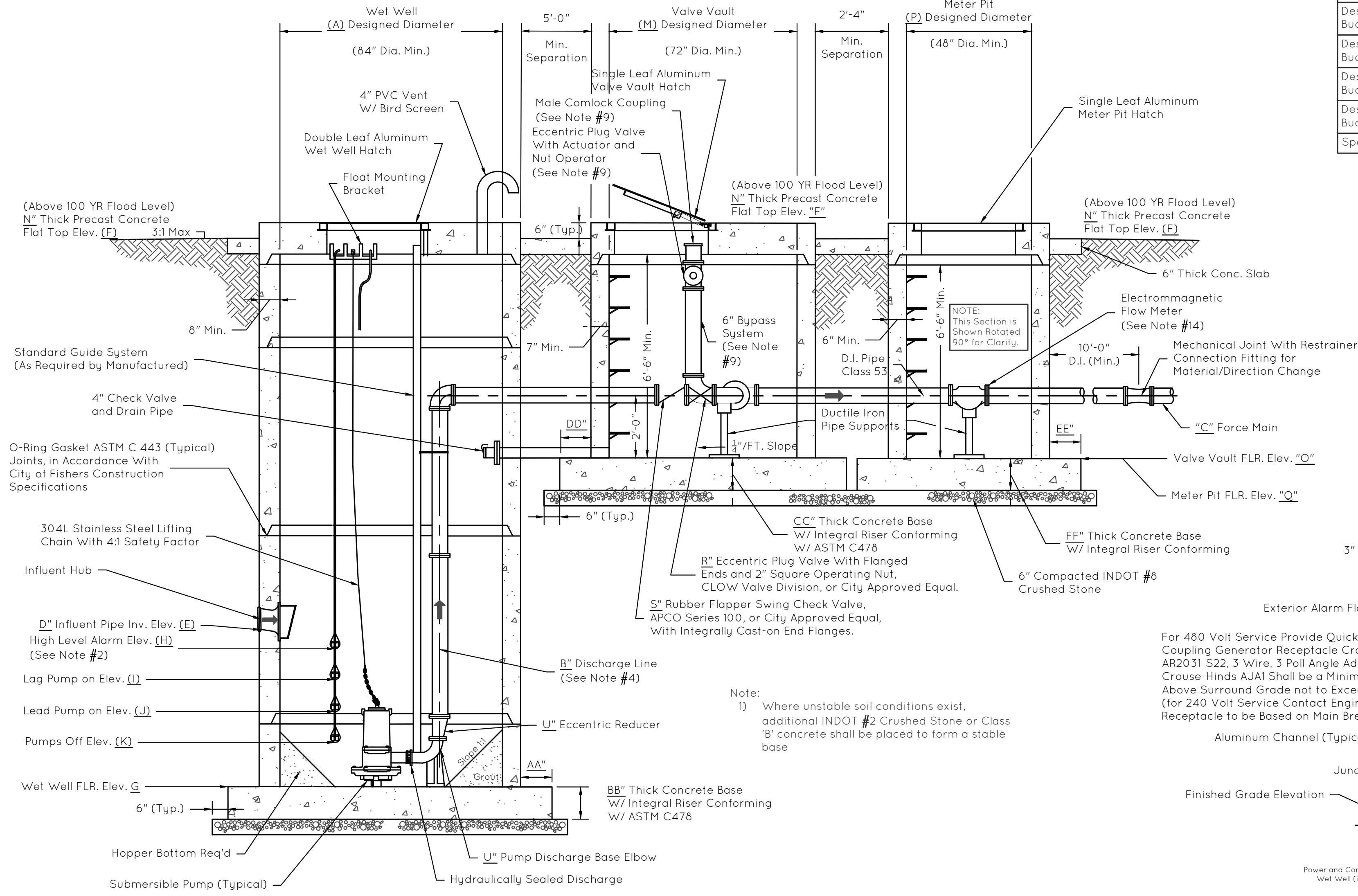
CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS
 SANITARY LATERAL CONNECTION, CLEAN OUT, & MISC. DETAILS

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NOTE: *ONLY FOR LIFT STATIONS COVERED TO FISHERS*



PLAN VIEW
Not to Scale



SECTION VIEW
Not to Scale

SUBMERSIBLE PUMP STATION SCHEDULE			
DESCRIPTION	SYMBOL	DATA (1)	ADDITIONAL INFORMATION
Pump Model Number			
Pump Capacity - GPM Each			
Total Dynamic Head - FT.			
Pump Discharge Size Ø			
Motor H.P.			
Motor RPM			
Wet Well Diameter	A		
Discharge Pipe Diameter	B		
Force Main Diameter	C		
Gravity Influent Pipe Diameter	D		
Gravity Influent Inv. EL. - FT.	E		
Wet Well, Valve Vault, & Meter Pit Top of Str. EL.	F		
Wet Well Floor EL.	G		
High Water Alarm EL. Level	H		
Lag Pump Start EL. Level	I		
Lead Pump Start EL. Level	J		
Pumps Off EL. Level	K		
(Not Used)	L		
Valve Vault Diameter	M		
Precast Concrete Flat Top (Min. 12")	N		
Valve Vault Floor EL.	O		
Meter Pit Diameter	P		
Meter Pit Floor EL.	Q		
Plug Valve	R		
Check Valve	S		
(Not Used)	T		
Eccentric Reducer	U		
Discharge Elbow Size	V		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	AA		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	BB		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	CC		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	DD		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	EE		
Design Engineer to Set Dimension, Supported by Buoyancy Calculations	FF		
Spacing Between Discharge Piping	GG		

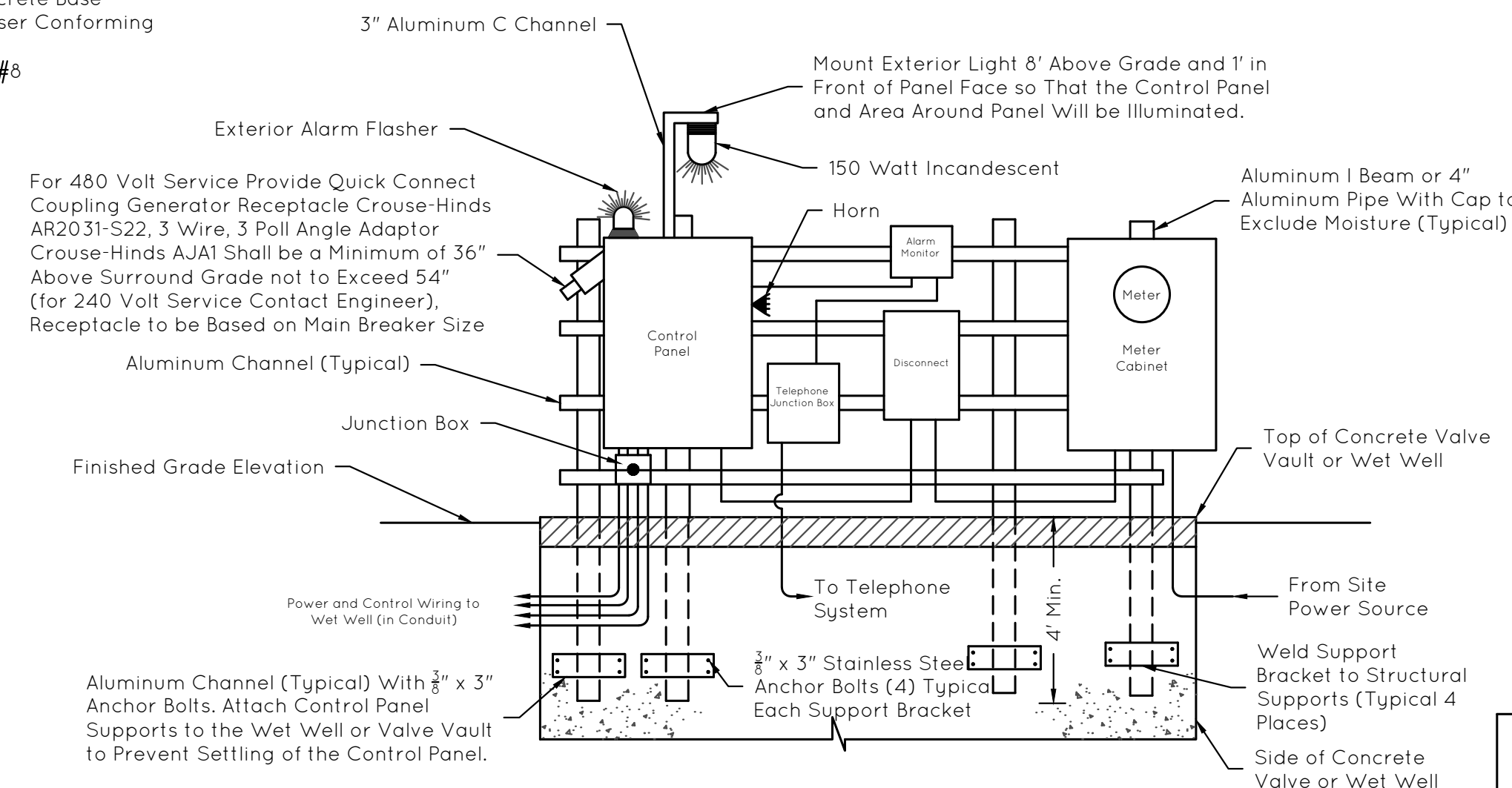
Design Engineers Certification of Actual Pump Station Dimensions, Control Settings, & Pump Selection as Indicated on Pump Station Schedule.

Reminder - For Pump Station Site Plan Data Project Engineer Shall Provide:

- 1) Wet Well and Valve Vault Orientation
- 2) Control Panel Location
- 3) Fencing and Gate Locations
- 4) Asphalt Access Drive from Public Right-of-Way
- 5) Parking Stops
- 6) Grading and Drainage Arrows
- 7) Boundary of Pump Station Parcel to be Granted to Fishers'
- 8) Area for Emergency Generator
- 9) All Other Information That Will Allow for a Detailed Review of the Site Plan

DATE _____

Notice: This certification is limited to those standards and guidelines per this sheet, and does not include information written into Pump Station Schedule. Construction is subject to construction drawings, shop drawings, and Design Engineer's design data written into Pump Station Schedule, and its certification thereof.



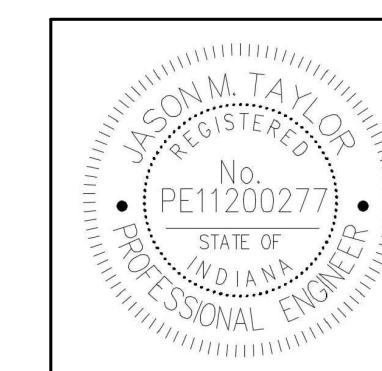
CONTROL PANEL DETAIL "A"
Not to Scale

STANDARD PUMP STATION NOTES

- 1) Actual pump station dimensions, control settings, and pump selection to be as indicated by the design engineer's certification of the data written into the Submersible Pump Station Schedule, this sheet.
- 2) High level alarm elevation shall be set at least 6" below the lowest incoming gravity pipe.
- 3) Glycerin-filled pressure gauges shall be provided as manufactured by Ashcroft, or equal. The gauges shall have an operating range appropriate for the system pressure and shall display in both feet and psi. Each gauge shall be provided with an in-line snubber and a shut-off valve. The pipe shall be drilled and tapped wherever possible.
- 4) Piping in and within the zone of influence of the excavation of the wet well, valve vault, and meter pit structure, shall be Class 53 flanged D.I. pipe or Class 50 D.I. pipe for direct bury. The minimum dimension for D.I. pipe outside of a structure is ten (10) feet. All fasteners within pump station structures, shall be 316 S.S.
- 5) Design engineer shall space discharge piping in accordance with pump and piping dimensions and pump manufacturer's recommendations.
- 6) Piping and fittings in wet well, valve vault, and meter pit shall be in accordance with City of Fishers construction specifications.
- 7) Butyl rubber shall be applied to all exterior structure joints that are below grade. The Butyl rubber shall extend six (6) inches above and below the joint.
- 8) Pump Station wet well, valve vault, and meter pit manholes shall be pre-cast concrete in accordance with ASTM C-478, with rubber gaskets, in accordance with the City of Fishers Construction Specifications.
- 9) Comlock coupling and eccentric plug valve on by-pass line shall be 6 inch diameter with transition to force main size occurring with concentric reducer placed on the top of base elbow. The plug valve's operating nut shall be directly accessible with a standard tee wrench. Show location on the structure layout sketch required in Note 15.
- 10) Sewer connections and force main penetrations of wet well, valve vault, and meter pit structure shall be KOR-N-SEAL, A-LOK, or Dura-Seal, in accordance with the City of Fishers Construction Specifications. Portland cement grout may be used to seal penetrations on non-sewer connections.
- 11) Generator receptacle, with factory sealed switch, shall match to receive of the City of Fishers' portable generator set.
- 12) Provide an Allen Bradley or "Engineer Approved" SCADA System that incorporates: 1 spare input/output, 1 input for flowmeter 4-20mA signal, 5 outputs to control being lead remote on, lead remote off, lag remote on, lag remote off and remote alarm acknowledgement, and 10 inputs from control being hatch(es) open alarm, panel(s) open alarm, Pump "A" on, Pump "B" on, Pump "A" fail, Pump "B" fail, phase fail alarm, power fail alarm, high water alarm and pump(s) seal failure, remote lead pump override and remote lag pump override.
- 13) Electromagnetic Flowmeter shall be a Siemens series 5100W or "Engineer Approved", flanged, with remote transmitter and accidental submergence kit. Interconnecting cable for power to transmitter shall be provided of appropriate length for application. Flowmeter transmitter shall be integral mounted and shall produce a 4-20mA signal for use by the SCADA System. Flowmeter size shall be based upon the projected flow through the force main, the force main size, and per the manufacturer's recommendation for highest accuracy over the operational range of the lift station.
- 14) Provide an aluminum double-door access hatch and frame assembly with safety man catches for pump station wet well to be installed in concrete top. Pump manufacturer shall size door opening in order to facilitate ease in removing pumps from wet well. Contractor and pump manufacturer shall coordinate to match size and location of opening in concrete top to dimensions of hatch provided by pump manufacturer.
- 15) Provide an aluminum single-door access hatch and frame assembly with safety man catches for valve vault and meter pit, respectively, to be installed in concrete top. The contractor and pump manufacturer shall provide a dimensionally accurate sketch of the valve vault and meter pit showing all valves, piping, and equipment to confirm the proper location and size of the access hatch for the structure.

- Notes:
- 1) See Fishers' Pump Station and Force Main Specifications Sheet for details of equipment.
 - 2) This plan is for design purposes only.
 - 3) Access drive from nearest public Right-of-Way to pump station must be provided.
 - 4) The access drive must have a minimum of 14 feet of clearance from all utility or power poles.
 - 5) All station piping must be Ductile Iron.
 - 6) A "live" yard hydrant shall be installed inside fence area (if possible) and close to fence, to provide water service for pump station maintenance purposes. Backflow preventer as required by water company

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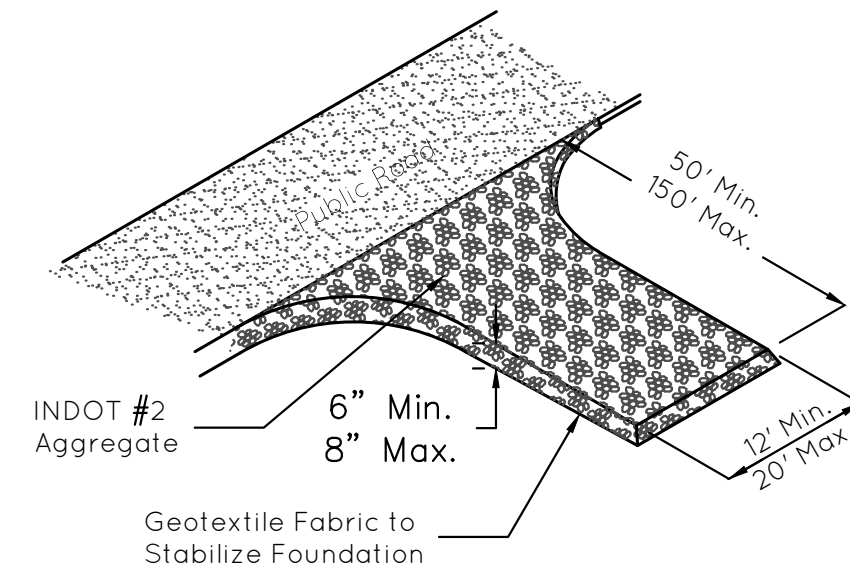
1/18/2022

GENERAL SWWP NOTES FOR INDIVIDUAL LOTS

- All storm water quality measures, including erosion and sediment control, necessary to comply with the requirements for 327 IAC 15-5, Rule 5, City of Fishers, and/or general construction practices must be implemented in accordance with the plan and sufficient to satisfy Chapter 7 of the City of Fishers STSM.
- Provisions for erosion and sediment control on individual building lots regulated under the original permit of a project site owner must include the following requirements:
 - The individual lot operator, whether owning the property or acting as the agent of the property owner, shall be responsible for erosion and sediment control requirements associated with activities on individual lots.
 - Installation and maintenance of a stable construction site access.
 - Installation and maintenance of appropriate perimeter erosion and sediment control measures prior to land disturbance.
 - Sediment discharge and tracking from each lot must be minimized throughout the land disturbing activities on the lot until permanent stabilization has been achieved.
 - Clean-up of sediment must be redistributed or disposed of in a manner that is in compliance with all applicable statutes and rules.
 - Adjacent lots disturbed by an individual lot operator must be repaired and stabilized with temporary or permanent surface stabilization.
- In accordance with Chapter 7 of the City of Fishers STSM, final stabilization of an individual lot project site is achieved when:
 - All land disturbing activities have been completed
 - The establishment, at a uniform density of seventy percent (70%) across one-hundred percent (100%) of the disturbed area, of vegetative cover or permanent non-erosive material that will ensure the resistance of the soil to erosion, sliding, or other movement.

CONSTRUCTION SEQUENCE FOR INDIVIDUAL LOTS

- Clearly delineate areas of trees, shrubs, and vegetation that are to be undisturbed. To prevent root damage, the areas delineated for tree protection should be at least the same diameter as the crown.
- Install perimeter silt fence at construction limits. Position the fence to intercept runoff prior to entering drainage swales.
- Avoid disturbing drainage swales if vegetation is established. If drainage swales are bare, install erosion control blankets or sod to immediately stabilize.
- Install appropriate inlet protection for all inlets on the property.
- Install curb inlet protection, on both sides of the road, for all inlets along the property frontage and along the frontage of adjacent lots, or install temporary catch basin inserts in each inlet and frequently clean.
- Install gravel construction entrance flush with the back of existing curb, extending from the street to the building pad.
- Perform primary grading operations.
- Contain erosion from any soil stockpiles created on-site with silt fence around the base.
- Establish temporary seeding and straw mulch on disturbed areas.
- Construct the home and install utilities.
- Install downspout extenders once the roof and gutters have been constructed. Extenders should outlet to a stabilized area.
- Re-seed any areas disturbed by construction and utilities installation with temporary seed mix that will be left inactive for seven (7) days.
- Grade the site to final elevations. Add topsoil as needed to minimize erosion of underlying soil and to quickly establish grass.
- Install permanent seeding or sod.

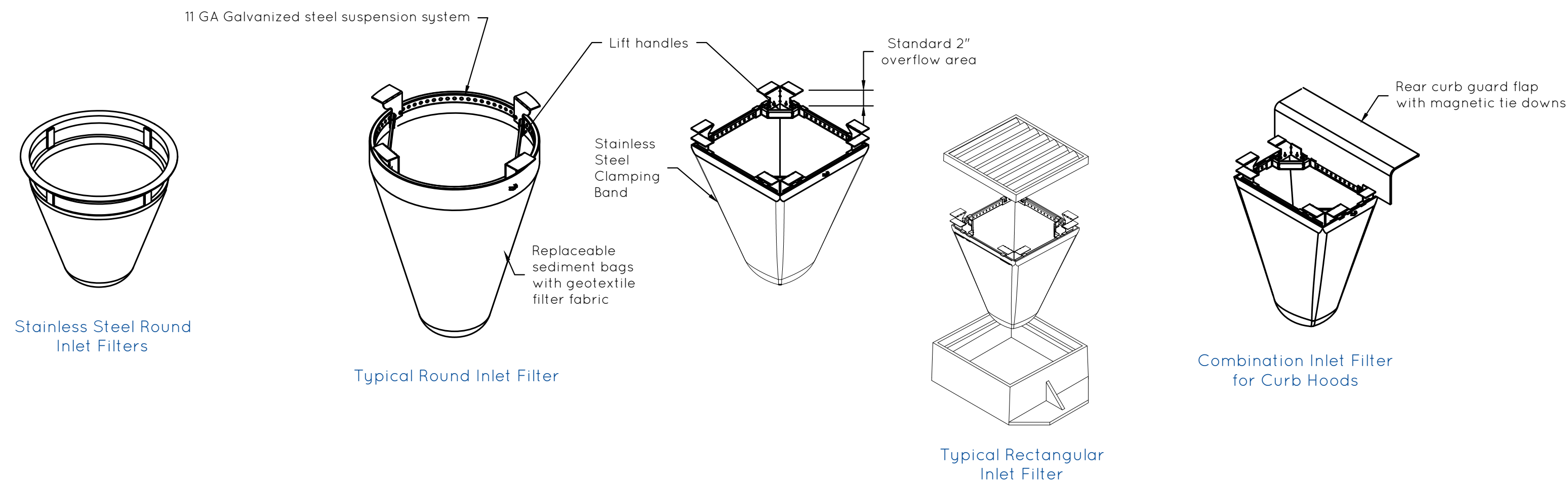


- Notes:
- Must keep top of stone at road elevation.
 - Width to be adjusted to match wider entrance, if required.

Site Size	Entrance Width	Entrance Length	Stone Depth
Less than 2 acres	12' min	50' min	6" min
2 acres or more	20' min	150' min	8" min

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

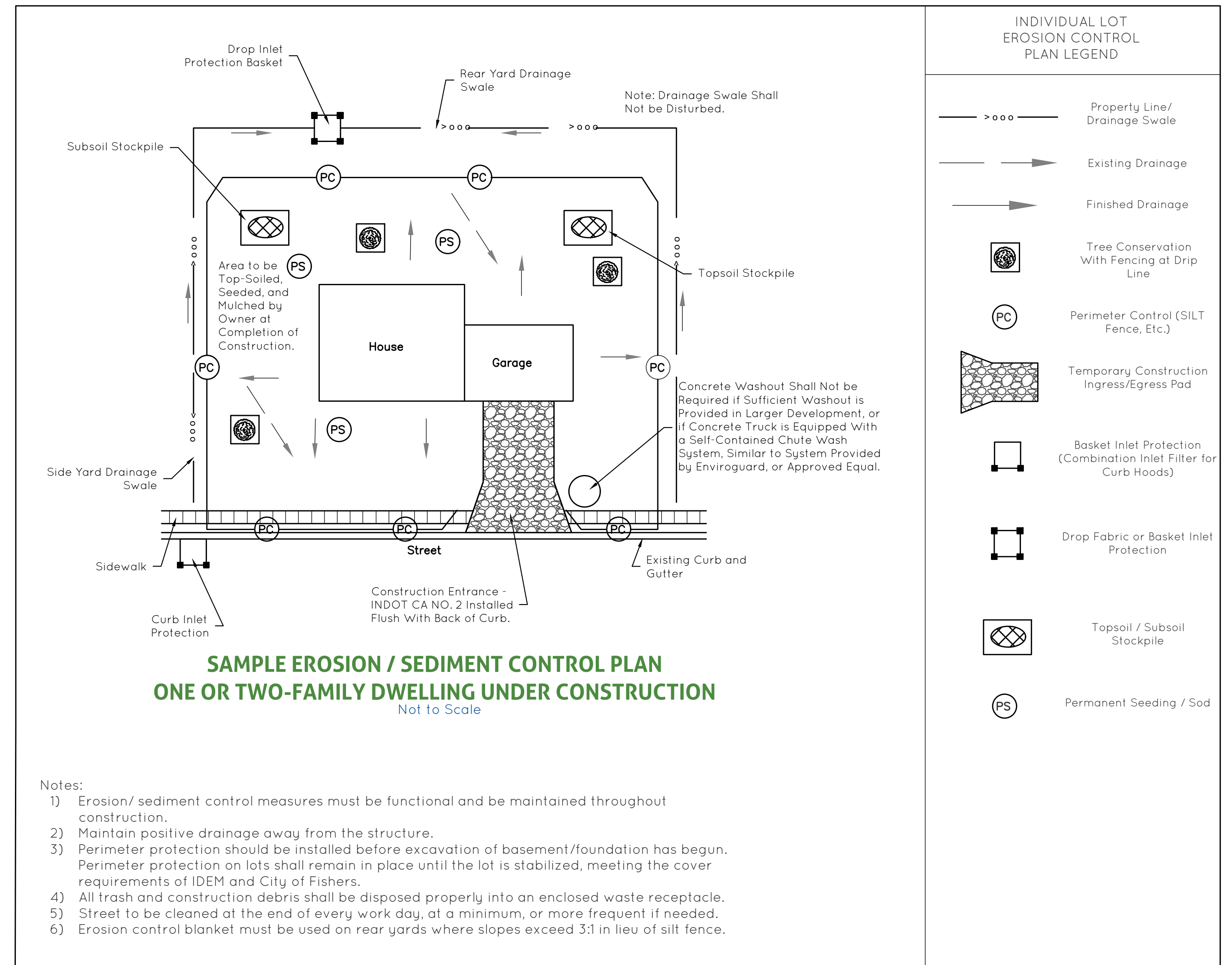
Not to Scale



- Note:
- Measures to be used in accordance with manufacturer's stated installation and maintenance specifications, and limitations

BASKET INLET PROTECTION

Not to Scale



SAMPLE EROSION / SEDIMENT CONTROL PLAN ONE OR TWO-FAMILY DWELLING UNDER CONSTRUCTION

Not to Scale

Notes:

- Erosion/ sediment control measures must be functional and be maintained throughout construction.
- Maintain positive drainage away from the structure.
- Perimeter protection should be installed before excavation of basement/foundation has begun. Perimeter protection on lots shall remain in place until the lot is stabilized, meeting the cover requirements of IDEM and City of Fishers.
- All trash and construction debris shall be disposed properly into an enclosed waste receptacle.
- Street to be cleaned at the end of every work day, at a minimum, or more frequent if needed.
- Erosion control blanket must be used on rear yards where slopes exceed 3:1 in lieu of silt fence.

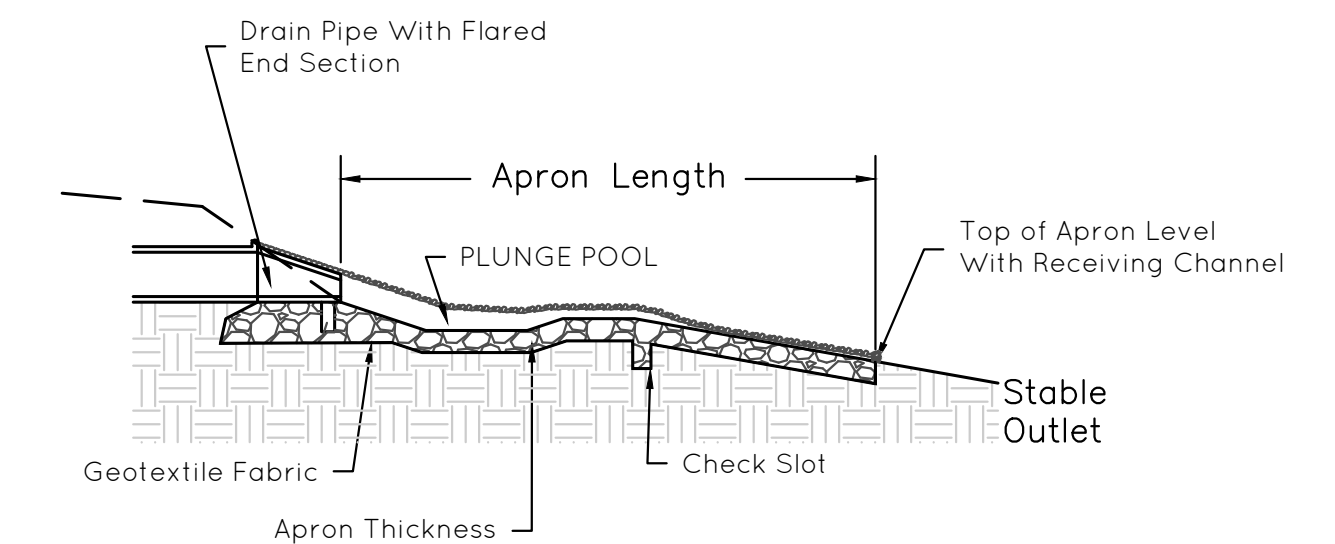
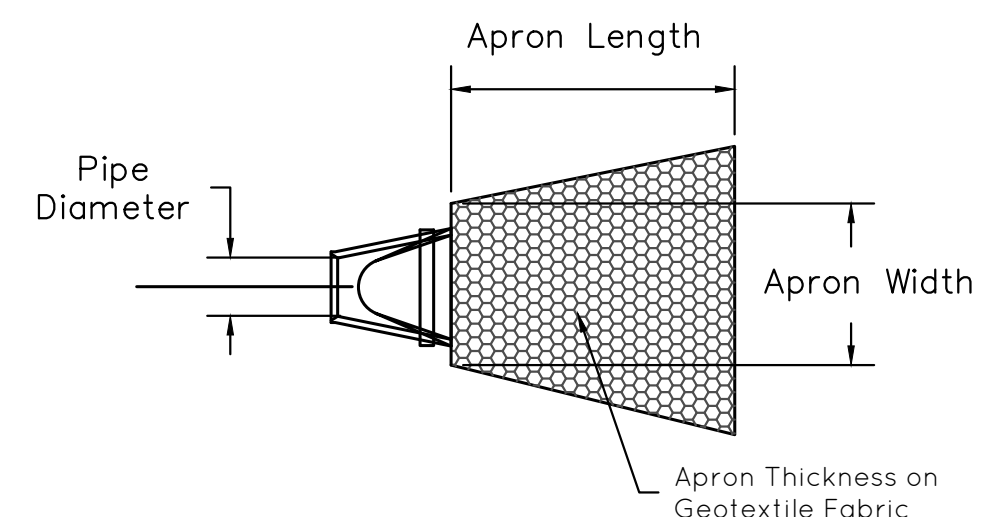
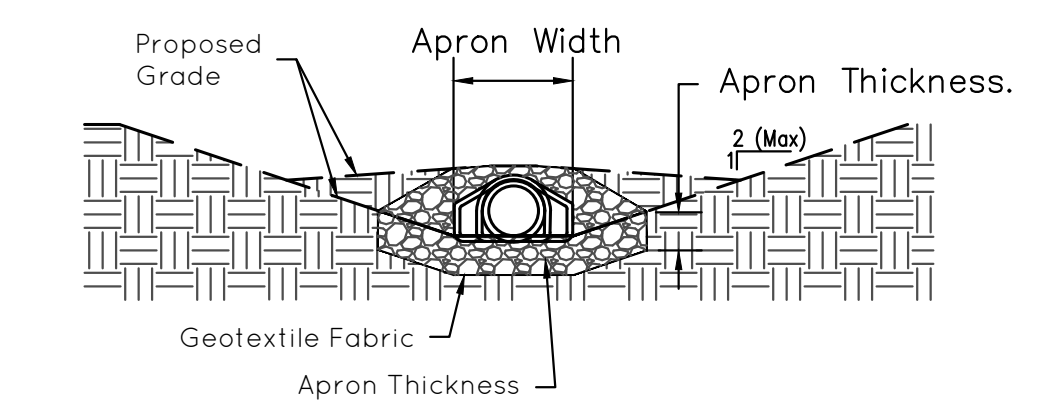


Table 1. Sizing for Flow Dissipaters at end Sections¹

PIPE SIZE	AVG. RIPRAP DIAMETER	APRON ² WIDTH	APRON ³ LENGTH
8 in.	3 in.	2 to 3 ft.	5 to 7 ft.
12 in.	5 in.	3 to 4 ft.	6 to 12 ft.
18 in.	8 in.	4 to 6 ft.	8 to 18 ft.
24 in.	10 in.	6 to 8 ft.	12 to 22 ft.
30 in.	12 in.	8 to 10 ft.	14 to 28 ft.
36 in.	14 in.	10 to 12 ft.	16 to 32 ft.



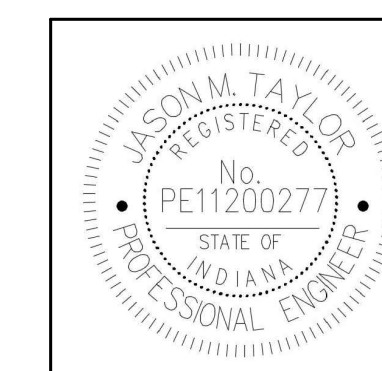
Apron Thickness = 1.2 Times the Max Stone Diameter for a D50 Stone Size of 15 Inches or Larger
Apron Thickness = 1.5 Times the Max Stone Diameter for a D50 Stone Size of 15 Inches or Less

ENERGY DISSIPATER (OUTLET PROTECTION)

Not to Scale

- For Larger or Higher Flows Consult a Registered Engineer
- Apron Width at the Narrow End of Apron (Pipe or Channel Outlet)
- Select Length Taking Into Consideration the Low Flow (Nor Pressure Head) or High Flow (Pressure Head) Conditions of the Culvert Pipe.

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STANDARD CONSTRUCTION DETAILS

EROSION CONTROL DETAILS

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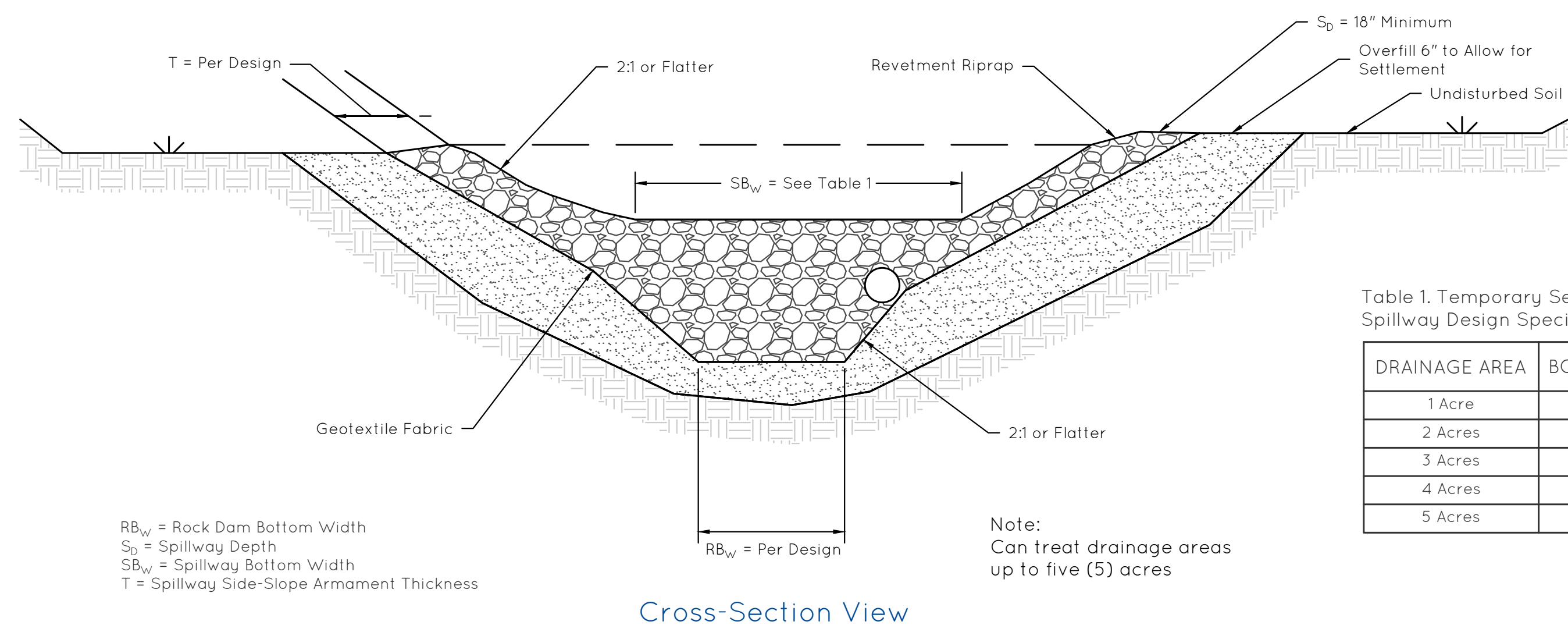
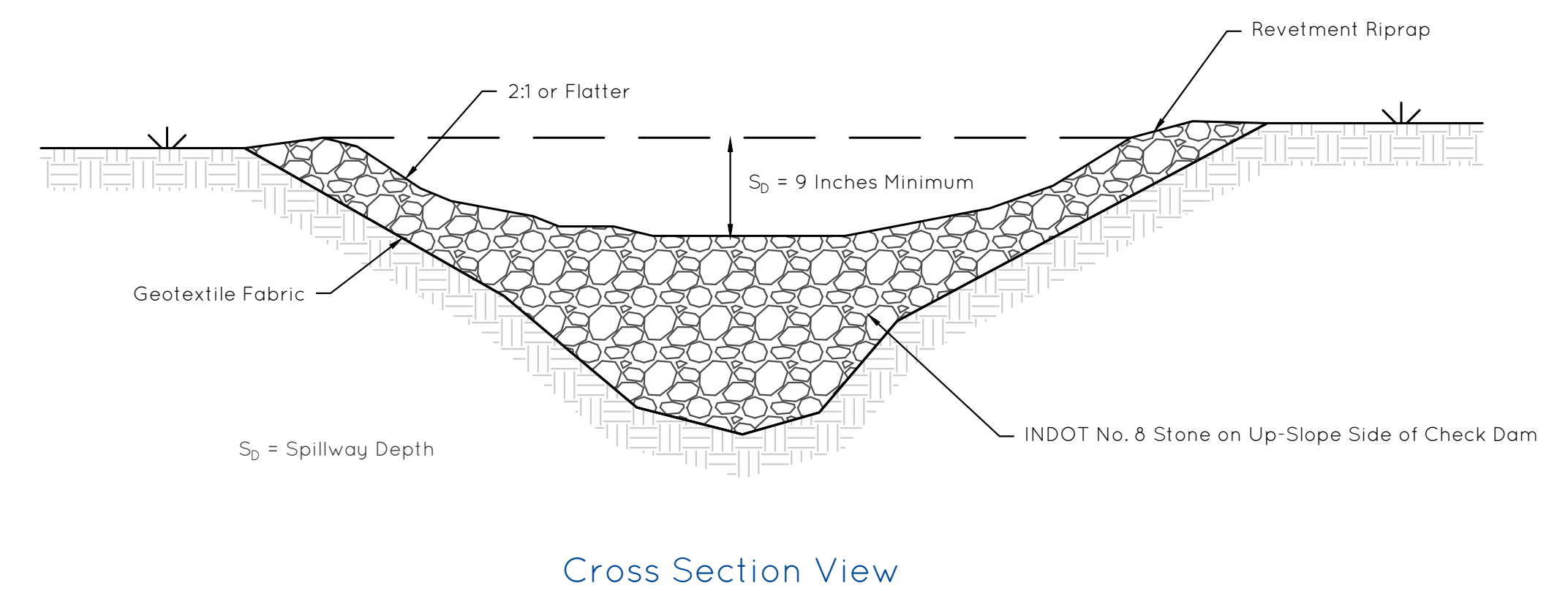
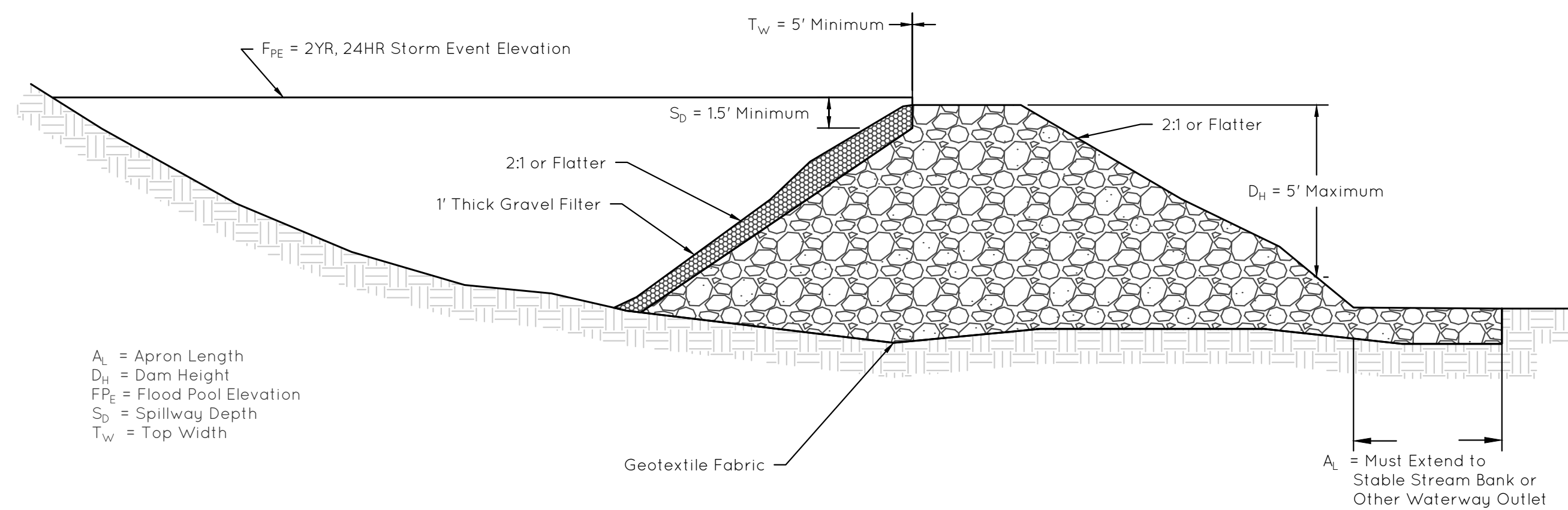
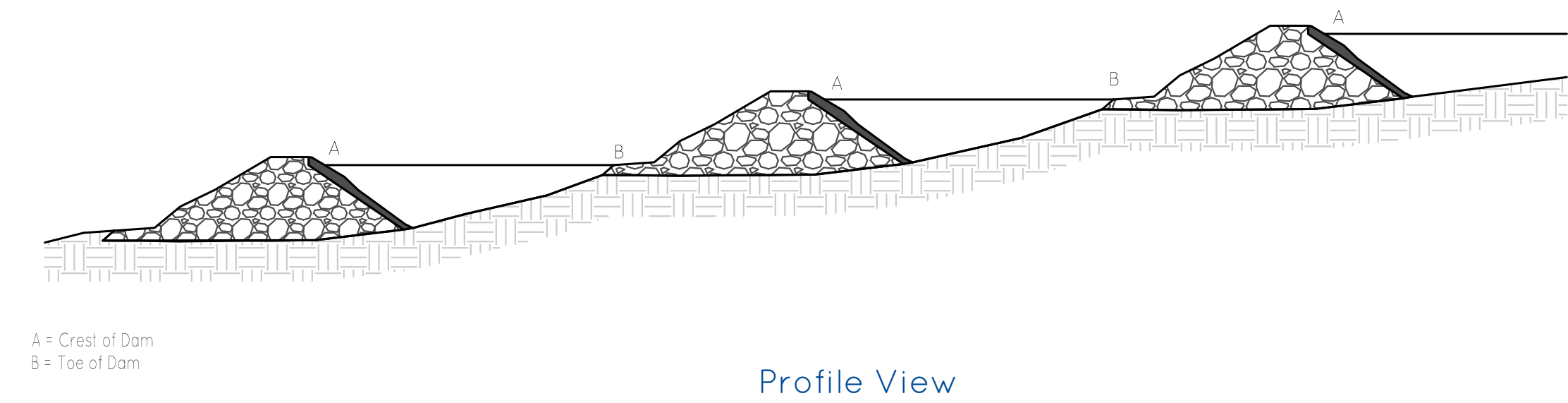
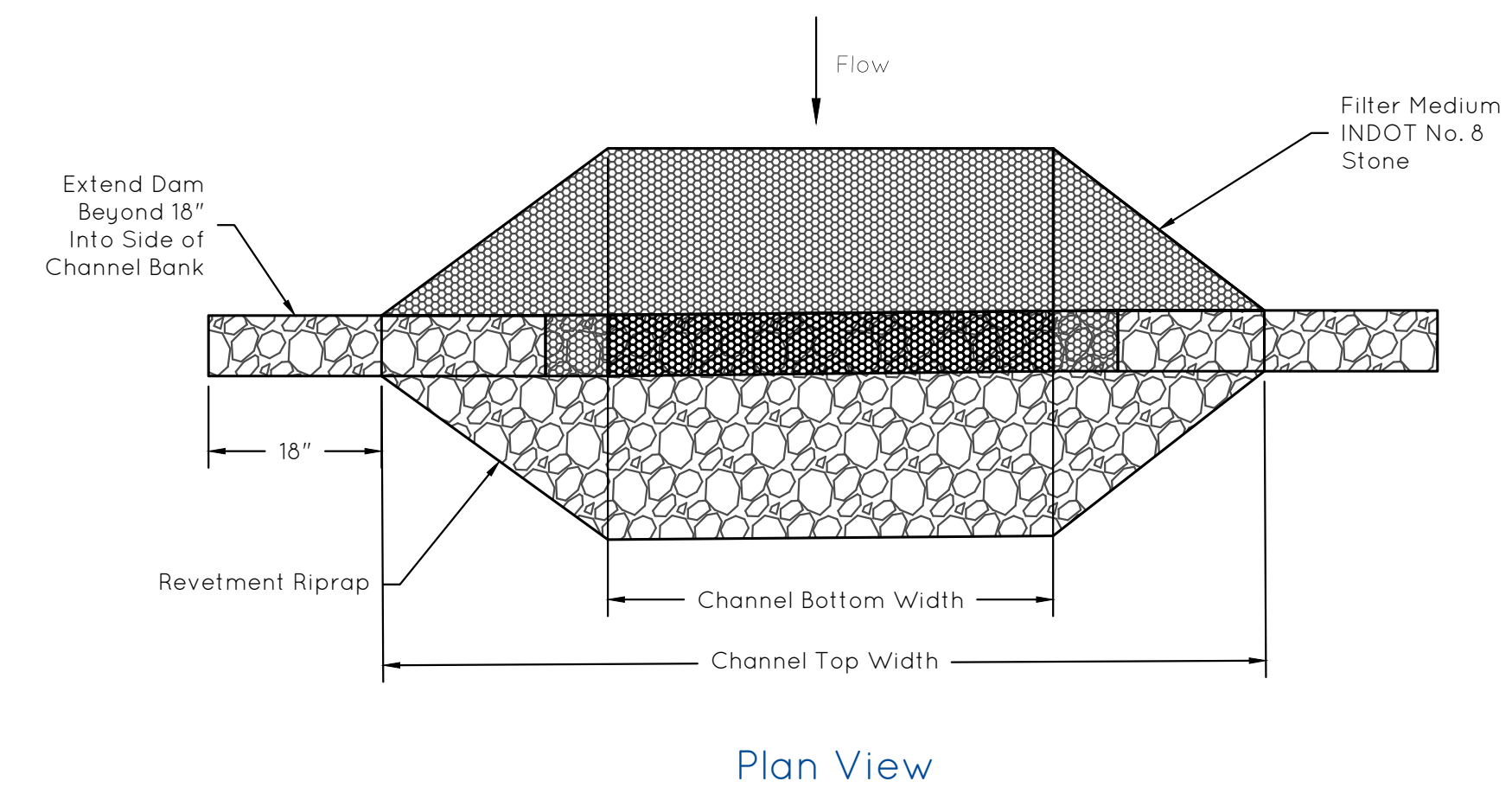
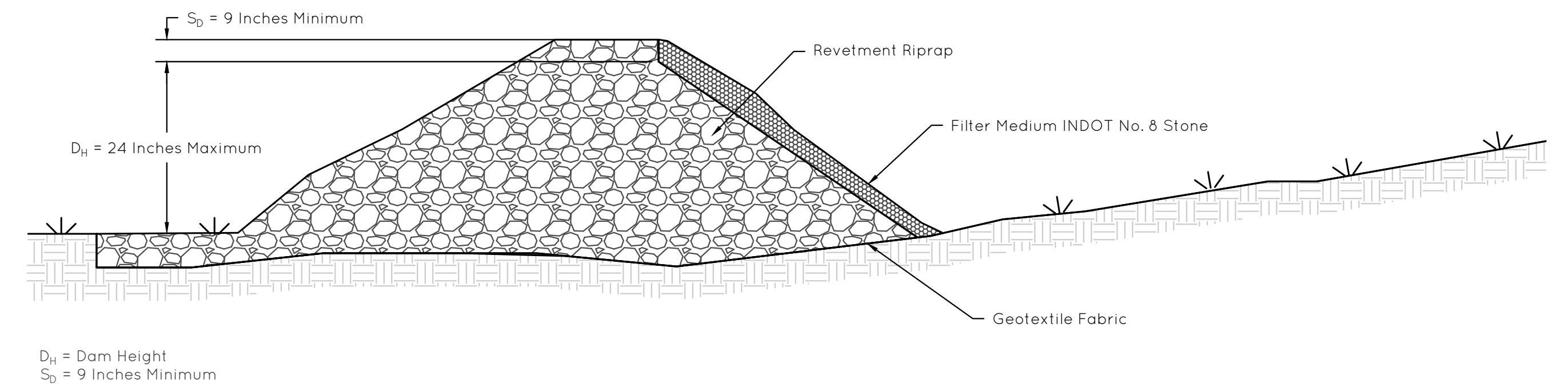
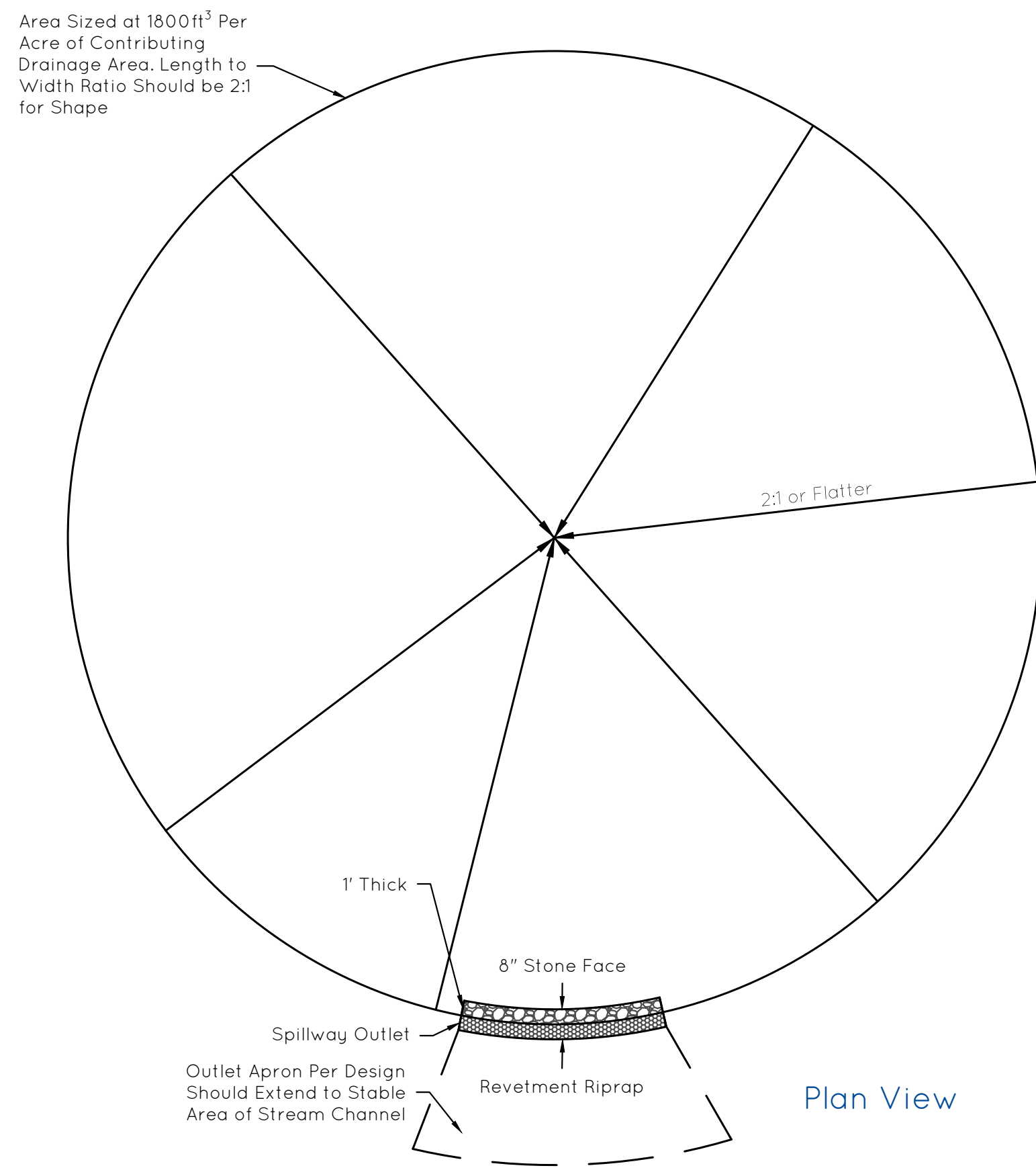


Table 1. Temporary Sediment Trap Spillway Design Specifications

DRAINAGE AREA	BOTTOM WIDTH
1 Acre	4 Feet
2 Acres	6 Feet
3 Acres	8 Feet
4 Acres	10 Feet
5 Acres	12 Feet

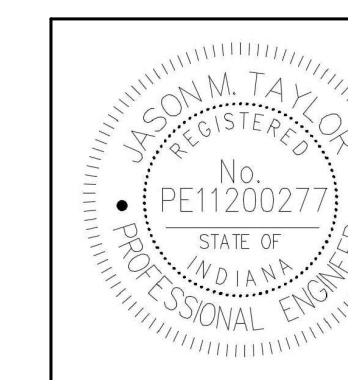
Note:
Can treat drainage areas up to five (5) acres

TEMPORARY ROCK CHECK DAM
Not to Scale

TEMPORARY SEDIMENT TRAP
Not to Scale

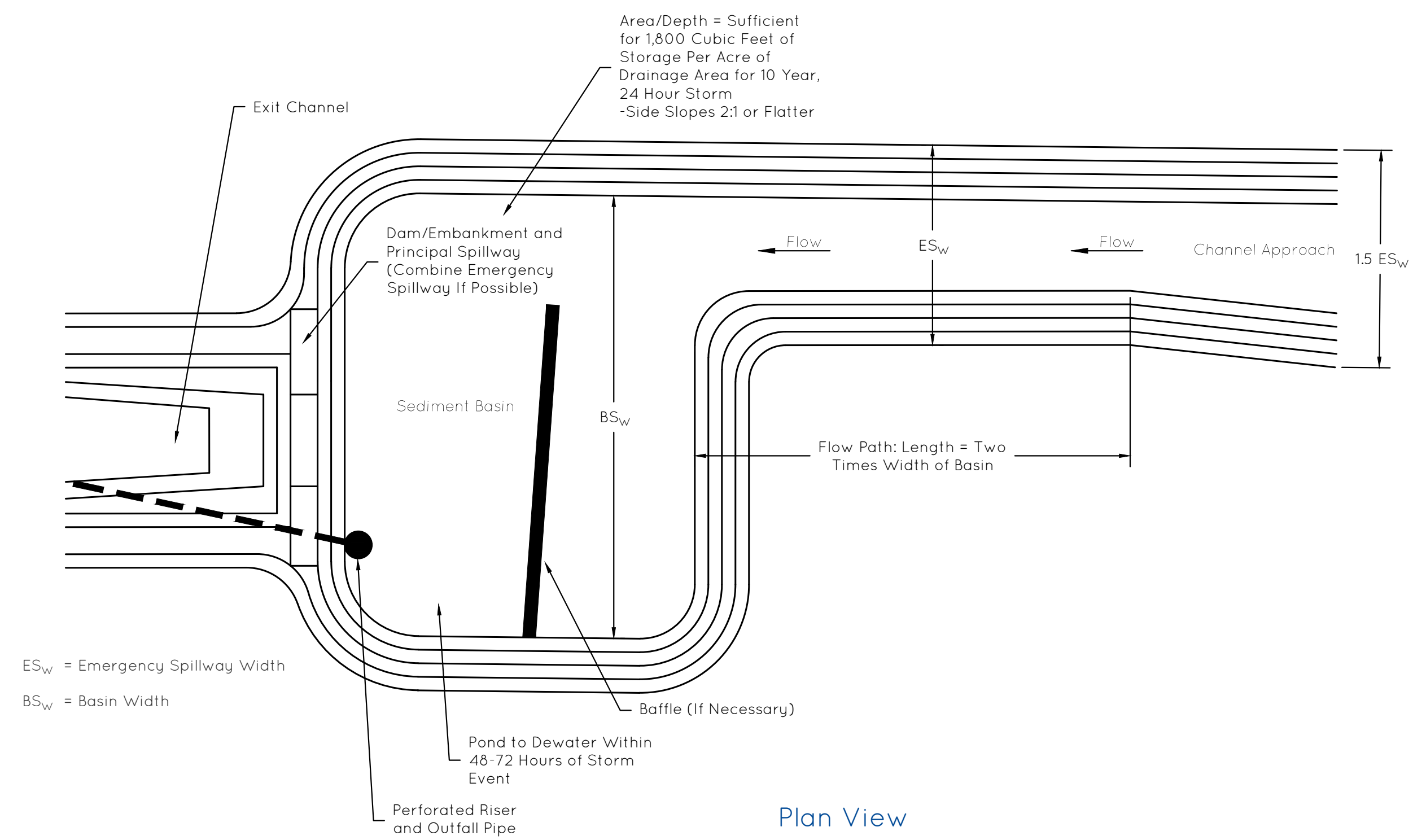
J. Taylor

1/18/2022



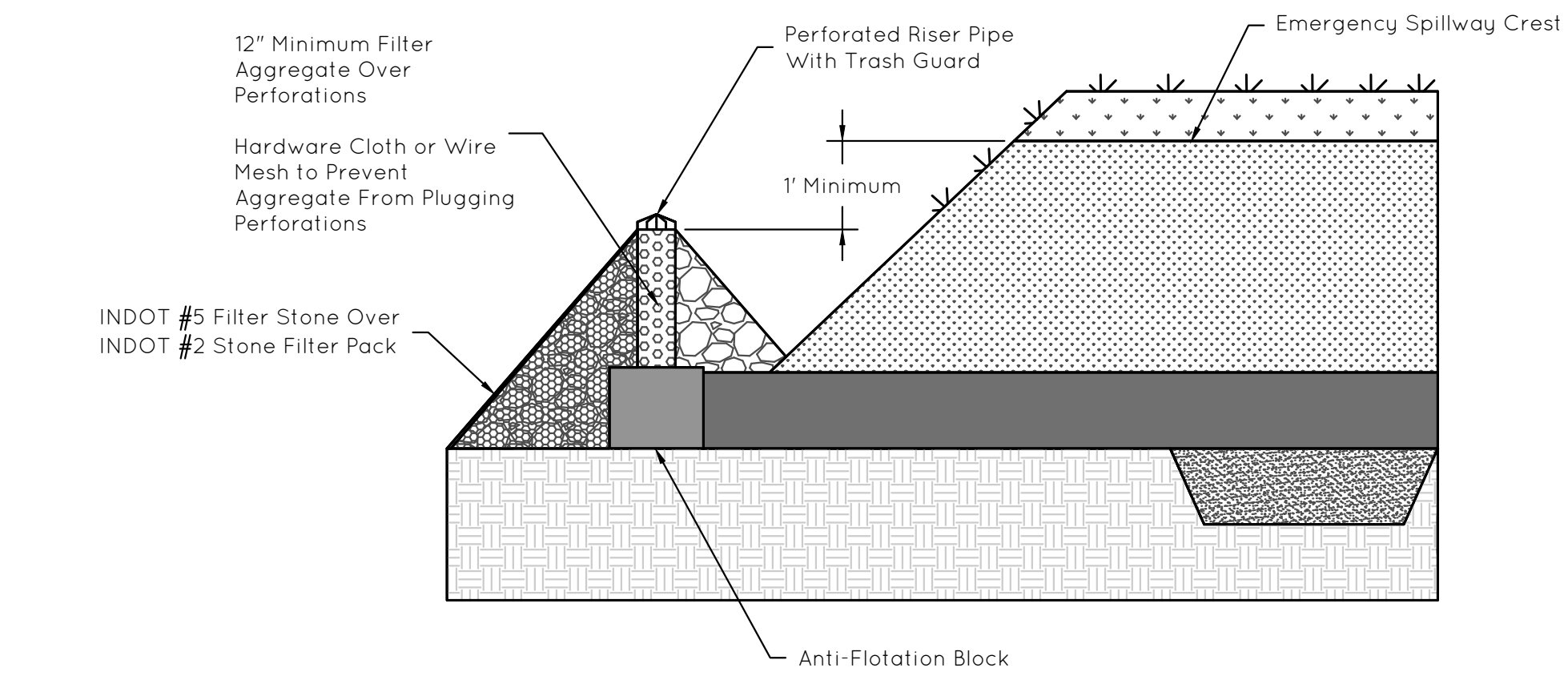
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STANDARD CONSTRUCTION DETAILS
EROSION CONTROL DETAILS

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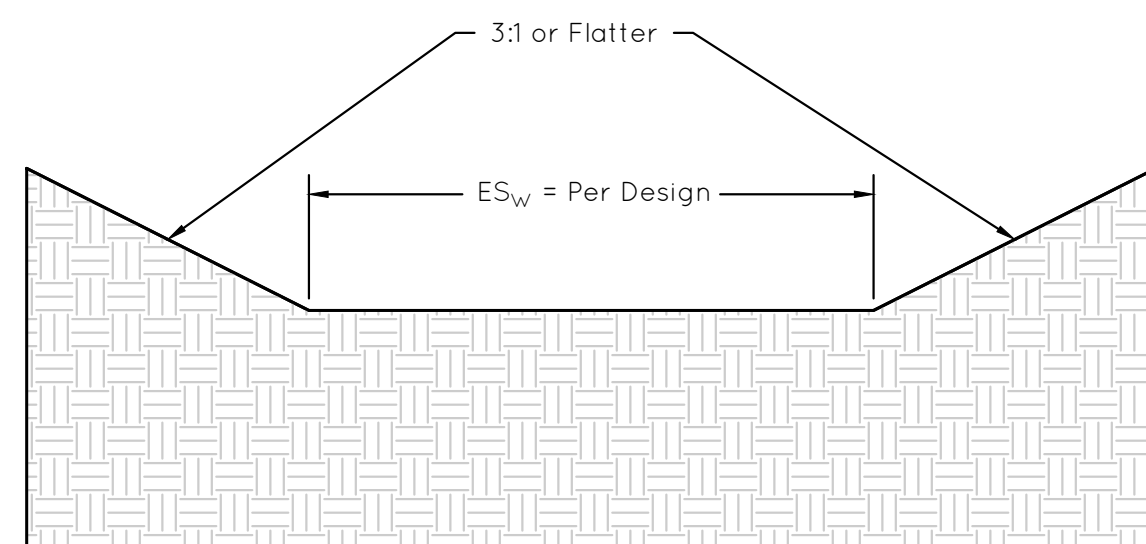


Plan View

TEMPORARY SEDIMENT BASIN
Not to Scale

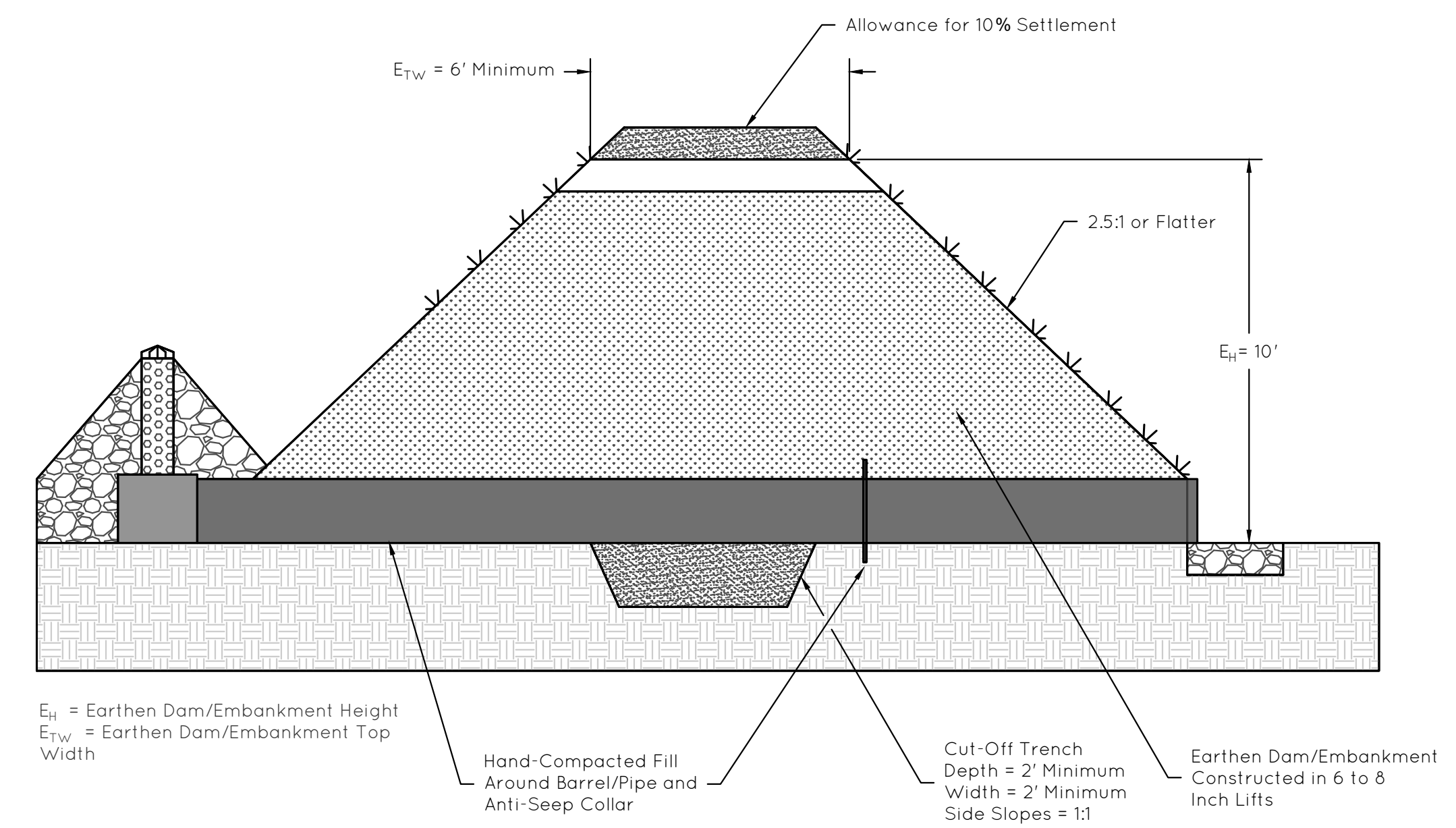


Riser Pipe Profile View

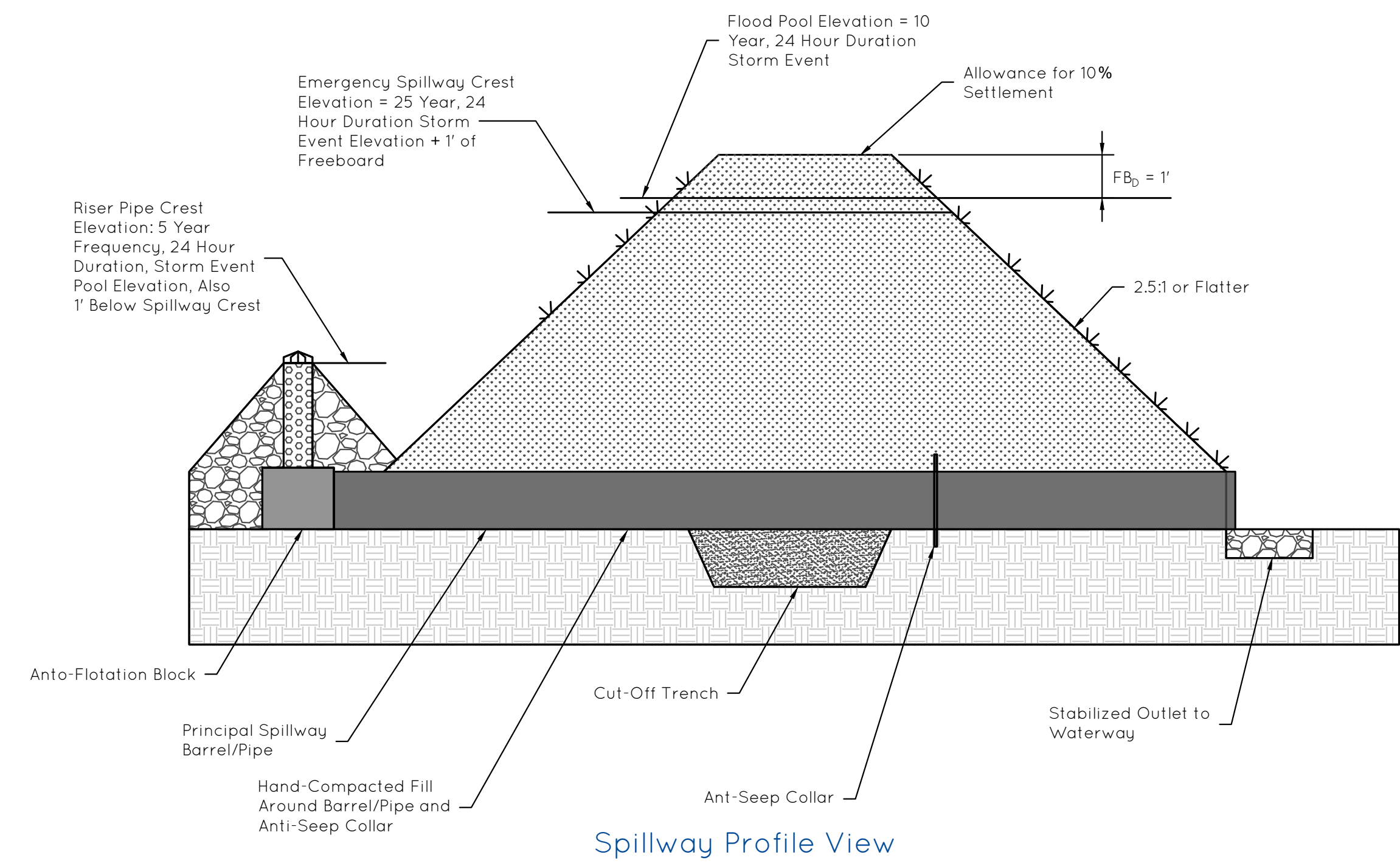


ES_w = Emergency Spillway Width
FB₀ = Free Board Depth

Spillway Cross Section View

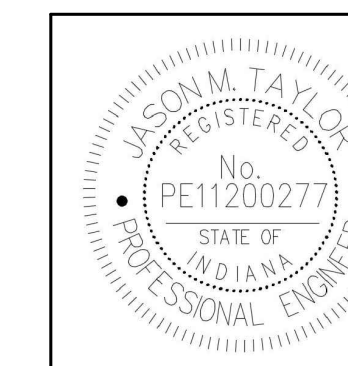


Earthen Dam/Embankment Profile View



Spillway Profile View

J. Taylor
1/18/2022

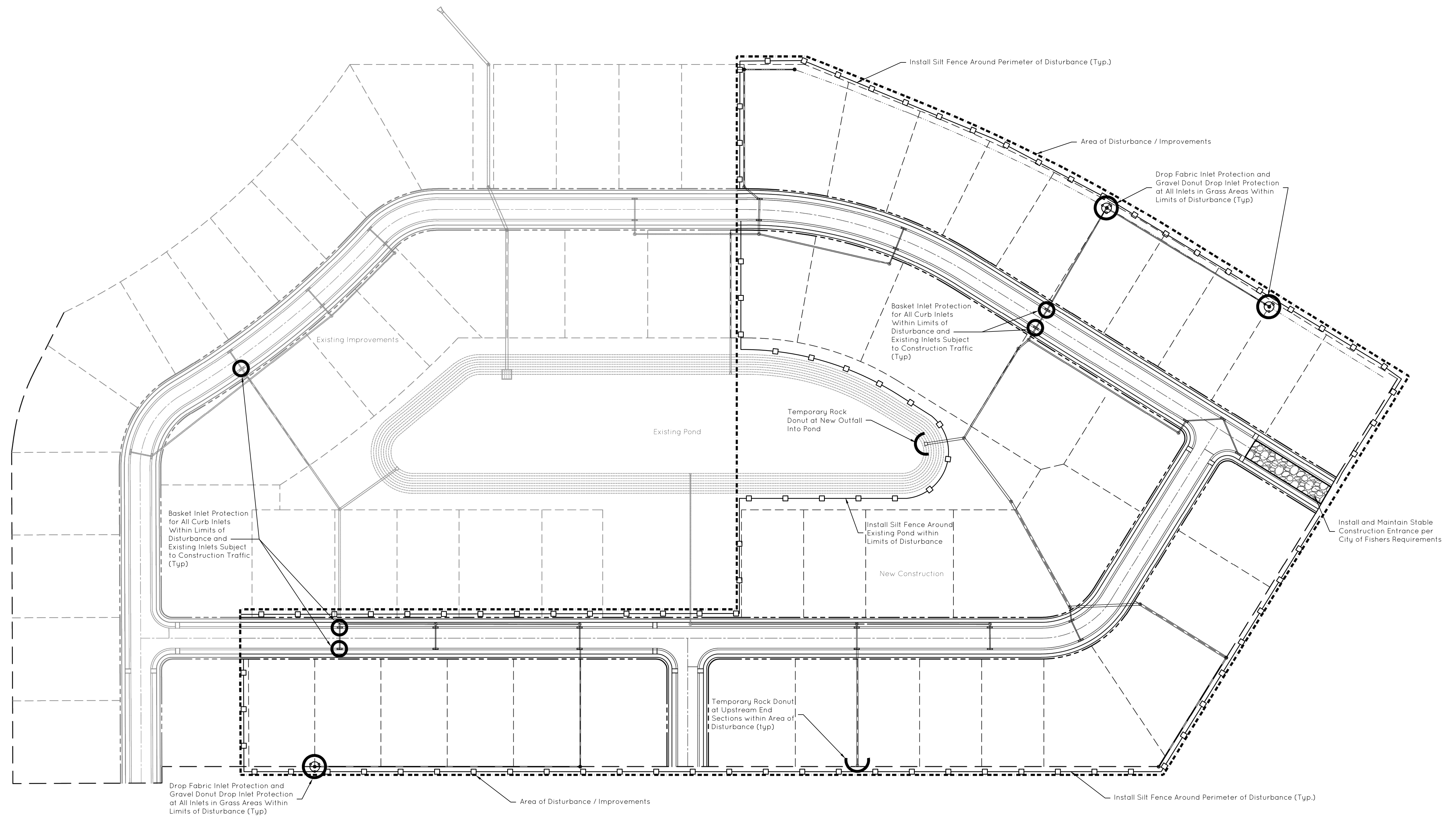


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STANDARD CONSTRUCTION DETAILS

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Notes:

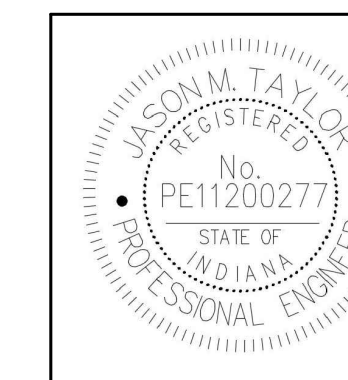
- 1) Individual lot erosion control measures to be installed per details on Sheet 24, and in accordance with Indiana Stormwater Quality Manual.
- 2) Measures to be used in accordance with manufacturer's stated installation and maintenance specifications, and limitations.
- 3) Temporary and permanent stabilization to be installed as soon as possible. Re-seed any areas disturbed by construction and utilities installation that will be left inactive for seven (7) days with temporary seed mix.
- 4) Pond protection measures shown are example only. Additional measures may be required. Site specific SWPPP to be prepared and approved by the City of Fishers.

**PROTECTION OF EXISTING DETENTION POND -
EXAMPLE MEASURES**

Not to Scale

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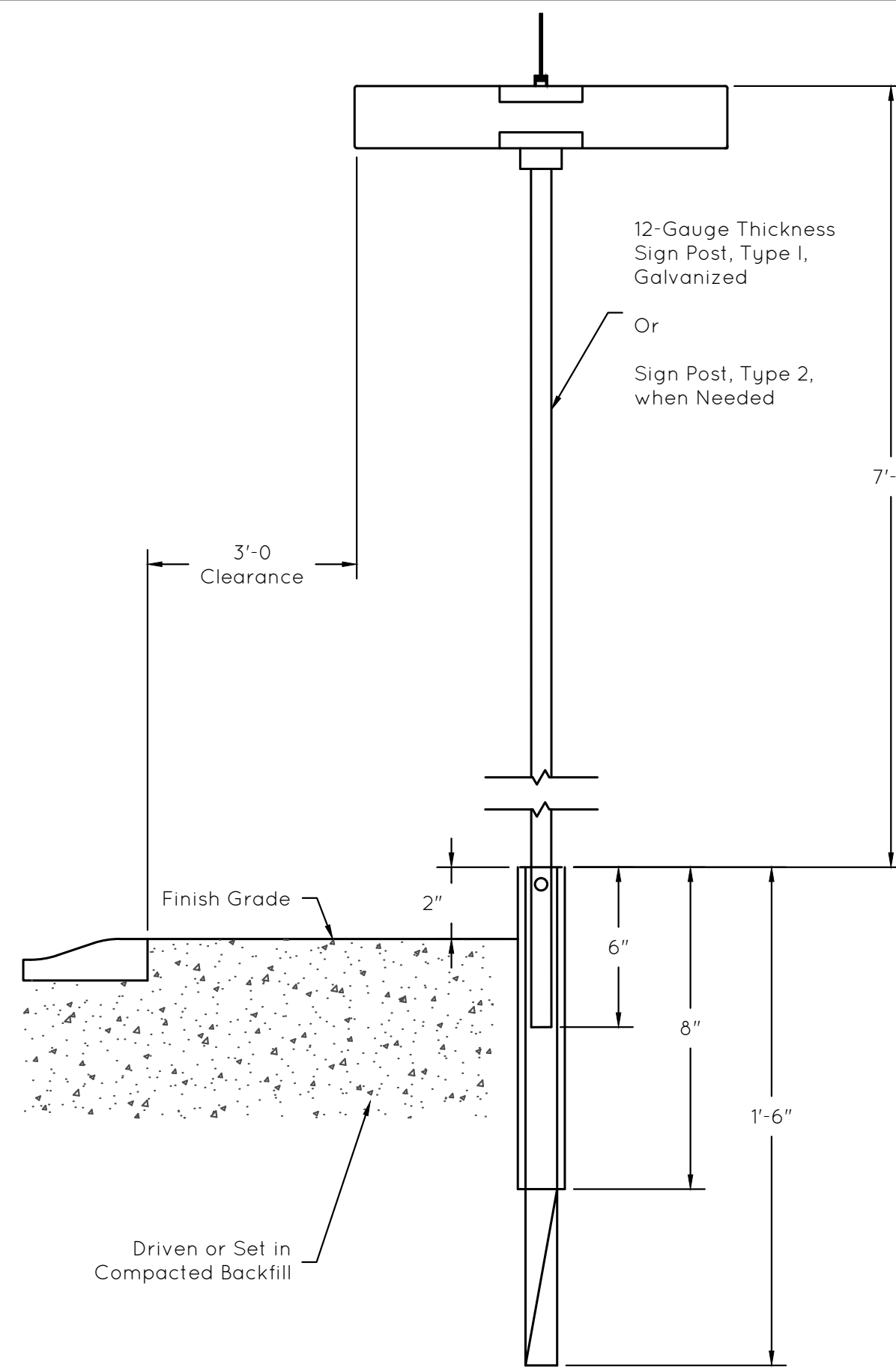


**CITY OF FISHERS
STANDARD CONSTRUCTION DETAILS**

EROSION CONTROL DETAILS

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- Notes:
- Streets shall be signed per latest approved edition of IMUTCD.
 - Street name signs shall be 8" tall 0.1 gauge extruded aluminum sign blanks. The sign face material shall be Diamond grade retroreflective green background with white letters and shall be mix-cased in accordance with the IMUTCD.
 - All public regulatory street signs shall be diamond grade retroreflective background, including letters and border where appropriate.
 - Font and letter height shall be in accordance with IMUTCD and FHWA Standard Highway Signs.
 - Street signs shall have rounded corners and be tall enough to accommodate the above noted minimum letter heights.
 - Supr-lok cap shall be model #91UX-NU180 or equal. Supr-lok cross shall be model #990X or equal.
 - Street name signs shall be mounted on Type 1 or 2 12-gauge steel galvanized post. Whichever is required according to INDOT Standard Drawings.
 - Street name signs on roundabouts shall be on decorative 2 1/8" round post with finial, with Fishers Green finish, and with Z238 aluminum interlocking bracket set by Hall Signs or approved equal.
 - Private streets must include a vertical "PVT" symbol in 3" white lettering to the left of the street name.
 - Public street signs must include City of Fishers logo (does not have to be multi-colored) to the left of the street name.
 - Optional white privately owned/maintained signs on public roads:
 - White retroreflective background with black font may be used for street name signs, however, a maintenance agreement must be signed and submitted as these are considered privately owned and maintained signs. These signs will not be maintained by the City.
 - The City of Fishers logo is still required to the left of the street name.
 - No other logo or picture is permitted.
 - Optional black/green or decorative post/poles on public roads:
 - Any painted or coated street name or regulatory sign post/pole is permitted; however, a maintenance agreement must be signed and submitted as these are considered privately owned and maintained posts/poles. These posts/poles will not be maintained by the City.

STREET NAME AND PUBLIC STREET SIGNS

Not to Scale

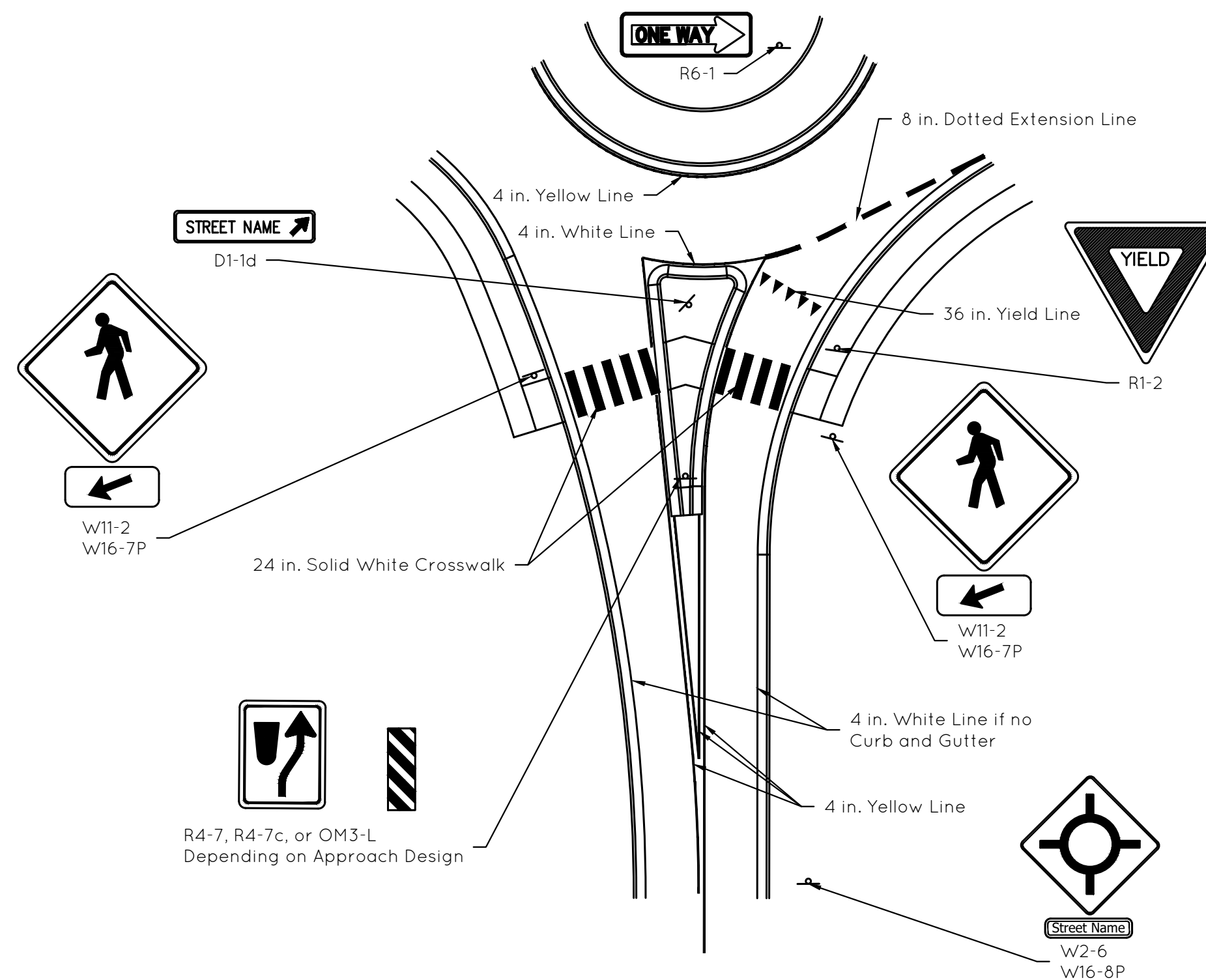


Public street signs must include City of Fishers logo (white lettering and green background) to the left of the street name. The logo size should be based on the following table:

Sign Lettering Height	Max Logo Dimension
12"	10"X10"
9"	7"X7"
8"	6"X6"
6"	4"X4"
4"	3"X3"

CITY LOGO FOR STREET SIGNS

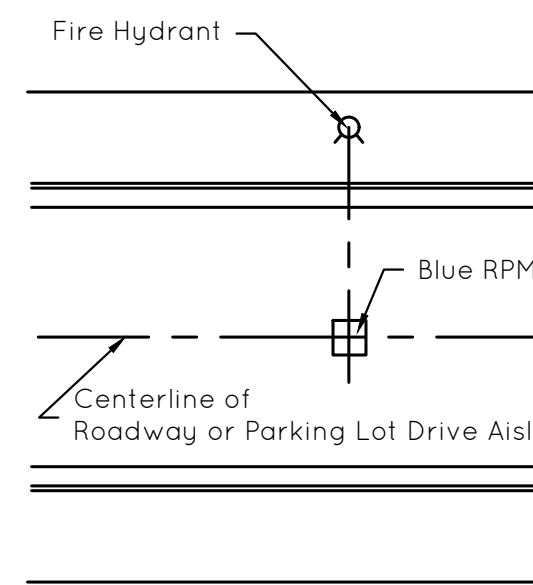
Not to Scale



- Notes:
- Signs and striping shown for only one leg of single-lane roundabout.
 - Striping and signs indicated may be optional per the latest IMUTCD, but shall be required for all roundabouts designed in the City of Fishers unless prior approval has been given by the Dept. of Engineering.
 - All striping shall be thermoplastic on asphalt pavement and multi-component on concrete pavement.
 - All white striping on concrete pavement shall have black contrast border.
 - Sign post heights and lateral offsets shall be in accordance with latest IMUTCD guidance. R6-4a signs shall not exceed 4 feet from bottom of sign to edge of circulatory roadway traveled way.
 - Lighting adjacent to roundabouts shall be per the "LAMP POSTS AND LUMINAIRES ADJACENT TO ROUNDABOUTS" detail on next sheet.

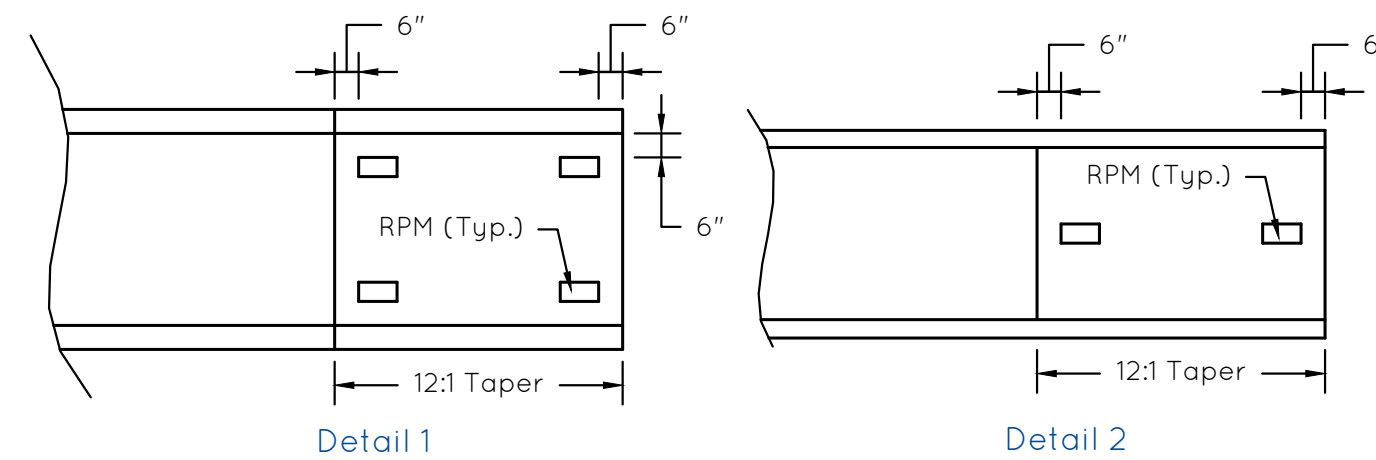
SINGLE-LANE ROUNDABOUT STRIPING EXAMPLE

Not to Scale



RAISED PAVEMENT MARKERS FOR HYDRANTS

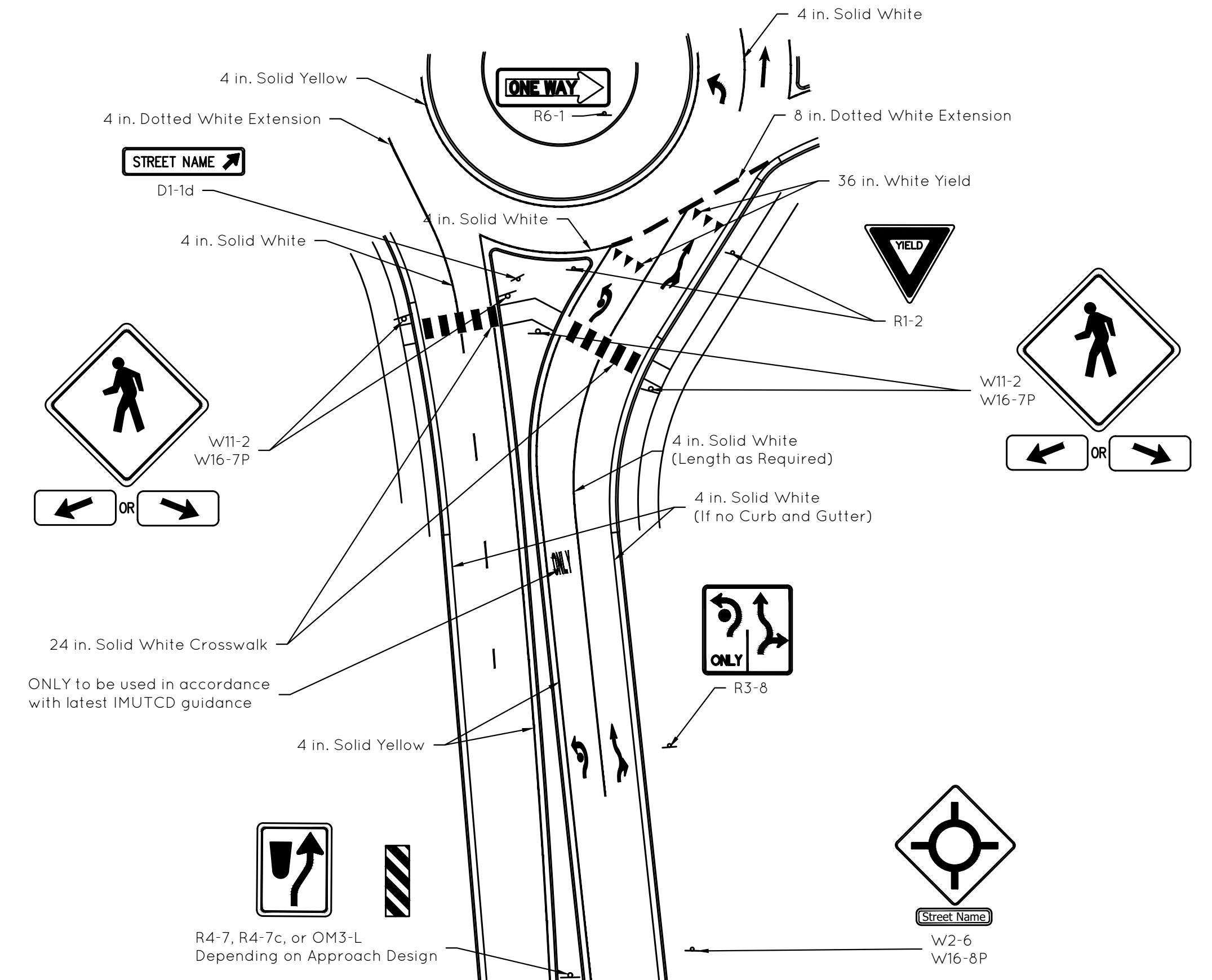
Not to Scale



- Notes:
- Width greater than 3 feet requires 4 RPMs per Detail 1. Width less than 3 feet requires 2 RPMs per Detail 2 centered on width of median.
 - RPMs shall be yellow and Ennis Flint model 101LP or approved equal.
 - RPMs on top of concrete shall be epoxied and RPMs in pavement shall be grooved and epoxied according to manufacturer specifications.

RAISED PAVEMENT MARKERS

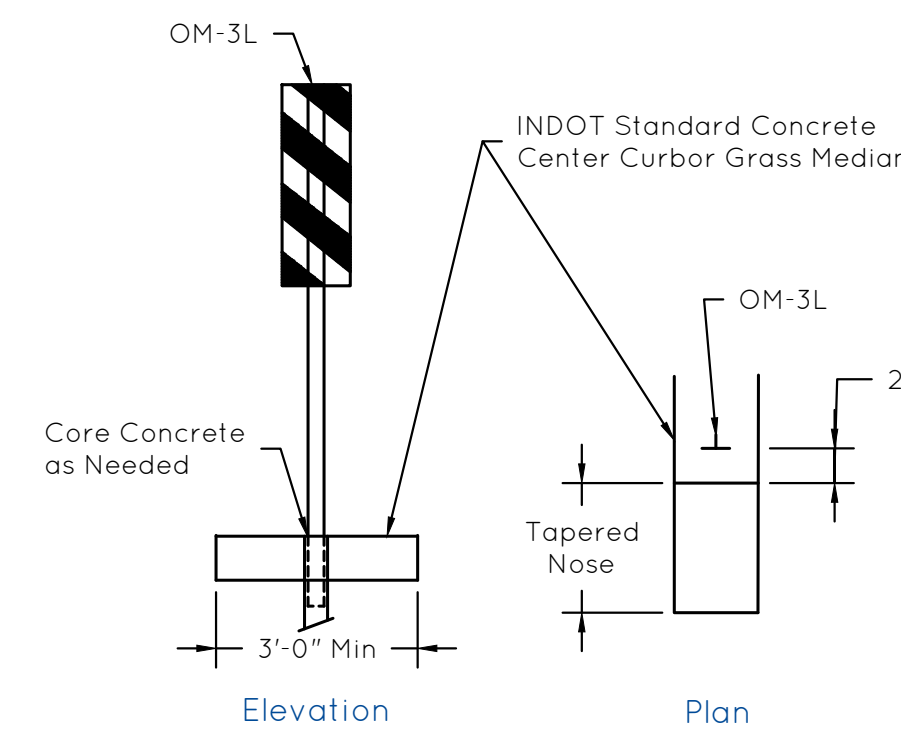
Not to Scale



- Notes:
- Signs and striping shown for only one leg of multi-lane roundabouts.
 - Striping and signs indicated may be optional per the latest IMUTCD, but shall be required for all roundabouts designed in the City of Fishers unless prior approval has been given by the Dept. of Engineering.
 - Lane Indication Arrows and circulatory roadway striping are for example. Actual lane configurations may vary.
 - All striping shall be thermoplastic on asphalt pavement and multi-component on concrete pavement.
 - All white striping on concrete pavement shall have black contrast border.
 - Sign post heights and lateral offsets shall be in accordance with latest IMUTCD guidance. R6-4a signs shall not exceed 4 feet from bottom of sign to edge of circulatory roadway traveled way.
 - Lighting adjacent to roundabouts shall be per the "LAMP POSTS AND LUMINAIRES ADJACENT TO ROUNDABOUTS" detail on next sheet.

TWO-LANE ROUNDABOUT STRIPING EXAMPLE

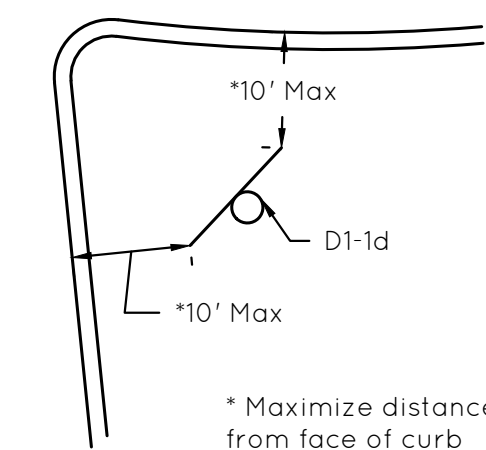
Not to Scale



- Notes:
- All medians shall have an end treatment.
 - Medians greater than four feet in width may contain approved landscaping or grass.

MEDIAN END TREATMENT

Not to Scale

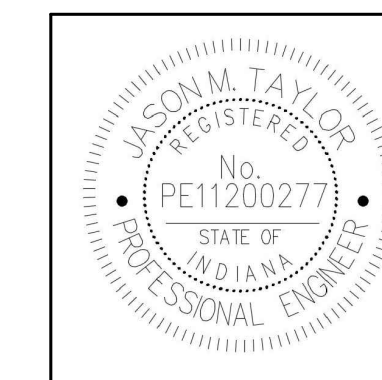


ROUNDABOUT D1-1d SPLITTER ISLAND PLACEMENT

Not to Scale

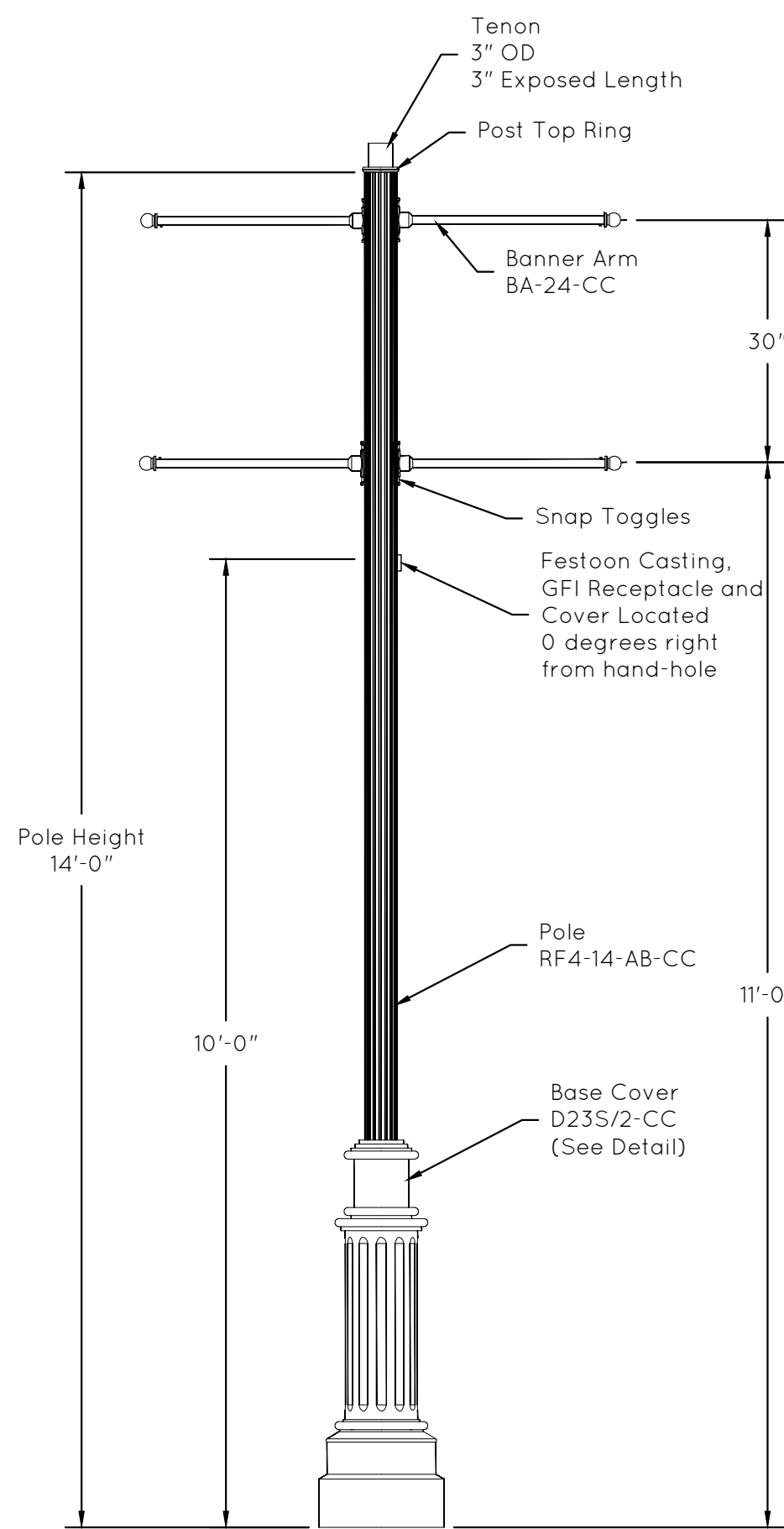
[Signature]

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STANDARD CONSTRUCTION DETAILS
 SIGN, PAVEMENT MARKING AND RPM DETAILS

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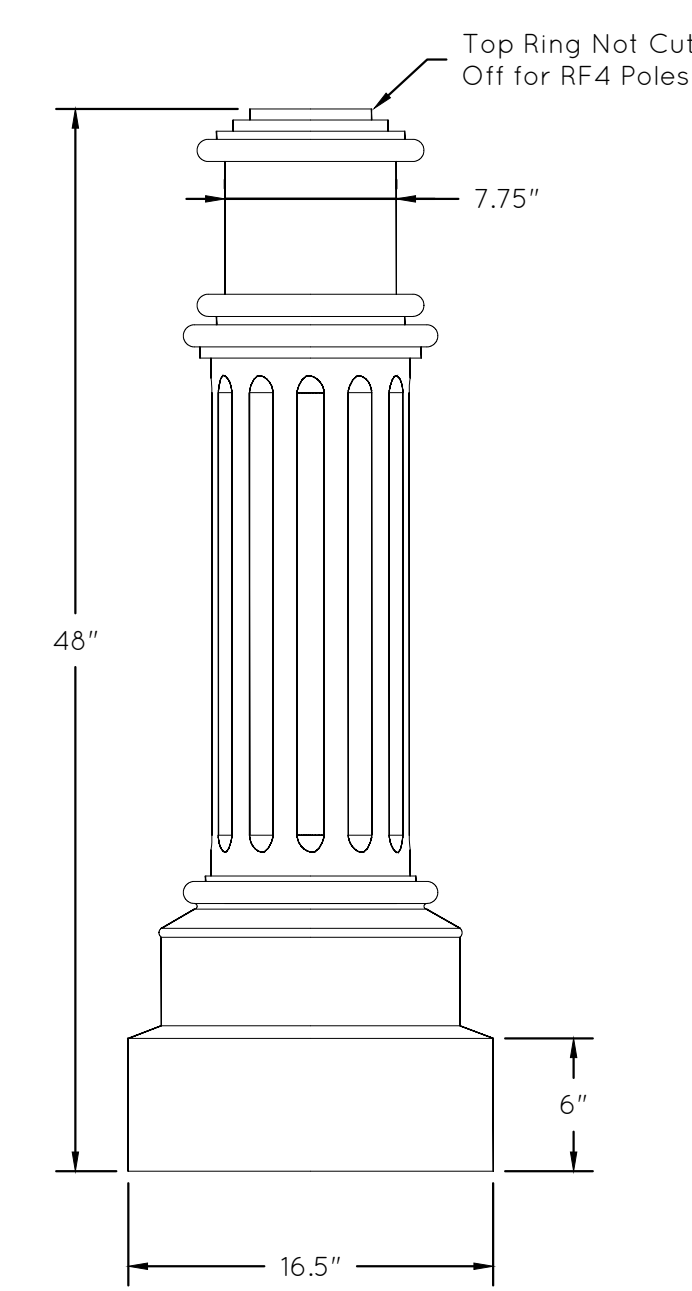
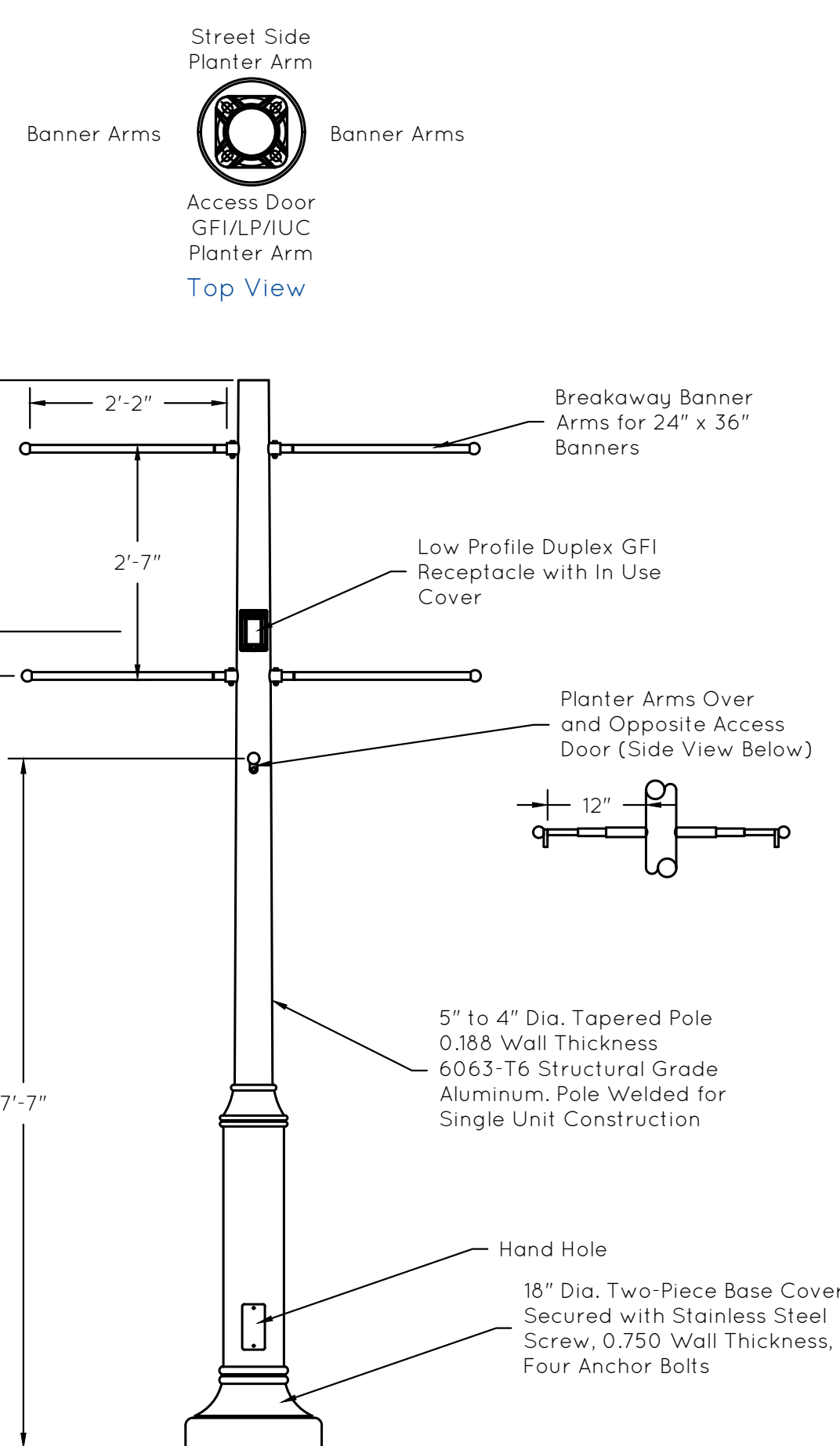


POLE
 Model: FR4
 Top Dia: 4"
 Taper: None
 Construction: Pultruded fiberglass reinforced isophthalic polyester resin utilizing longitudinal glass roving, continuous strand mat and off-axis fibers.
 Anchor Base: Custom Top Hat Plate-ASTM A36
 Tenon: 3" OD 3" Exposed 6061-T6 Alum
 Post Top Ring: Cast Alum
 Bolt Circle: 11 1/2"
 Hand Hole: 5"x6" in anchor base.
 Cover to match
 Paint: UV & Cleaning chemical resistant
 Color: CC-Fishers Green
 MAX Attachment Weight: 100 lbs
 MAX Attachment EPA: 15.2
 Pole Weight: 72 lbs approx

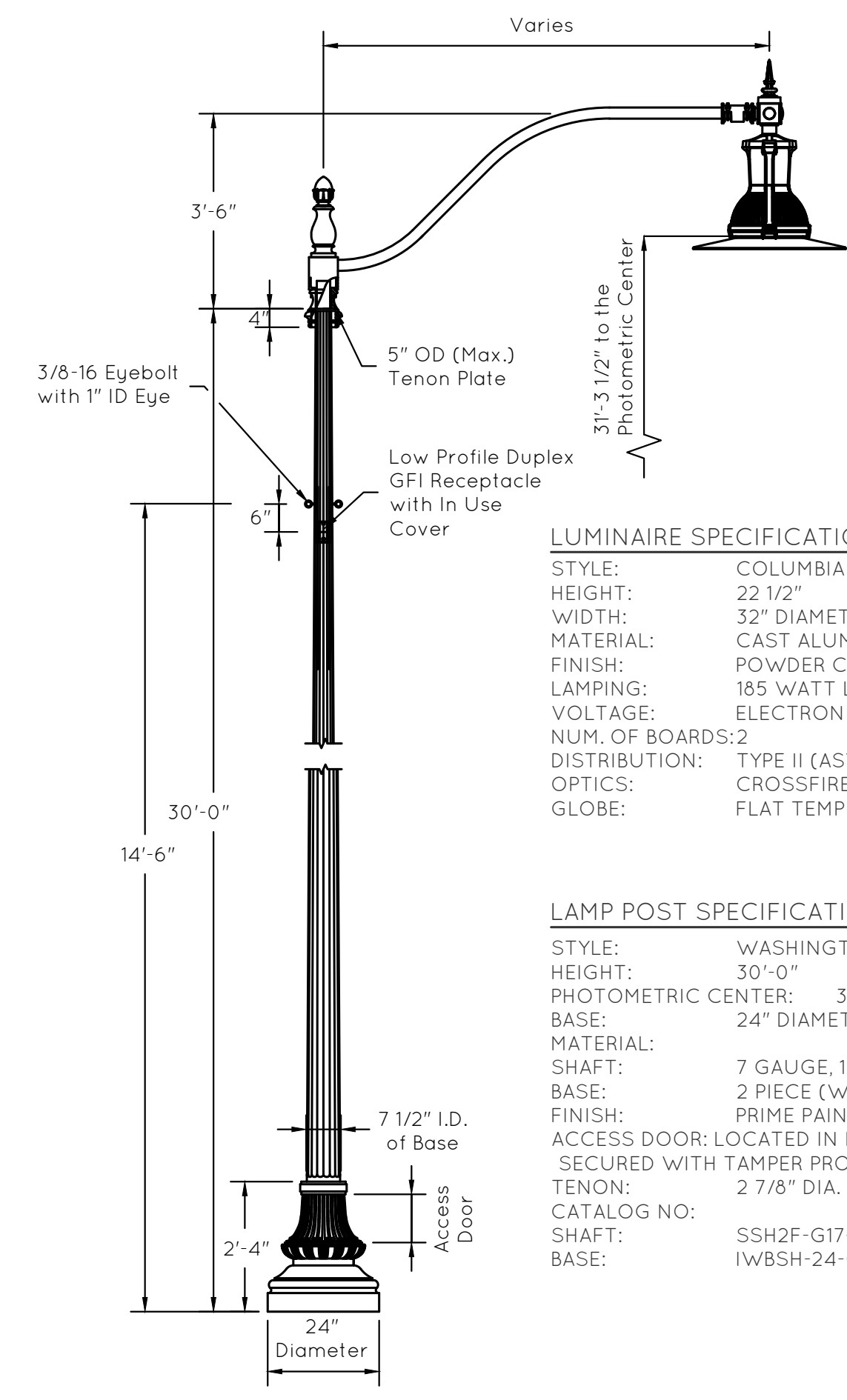
BASE COVER
 Model: D23S/2
 Style: 2-Piece Clamshell
 Material: Elastomeric Urethane
 Color: CC-Fishers Green
 Height: 48"
 Width: 16.38"
 Weight: 52 lbs approx

- Notes:
 1) All poles to be Fishers Green RAL 6004
 2) Outlet wiring on lamp posts shall be such that the top outlet to be on only when lights are on. Bottom outlet shall remain on continuously

LAMP POSTS
 Not to Scale



BASE COVER
 Not to Scale



LUMINAIRE SPECIFICATIONS
 STYLE: COLUMBIA WITH EDGEWATER FINIAL
 HEIGHT: 22 1/2"
 WIDTH: 32" DIAMETER
 MATERIAL: CAST ALUMINUM ALLOY ANSI 356, PER A.S.T.M. B26-95
 FINISH: POWDER COAT - CUSTOM BLUE GREEN RAL # 6004
 LAMPING: 185 WATT LED
 VOLTAGE: ELECTRONIC WIRED AT 120-277 VOLTS
 NUM. OF BOARDS: 2
 DISTRIBUTION: TYPE II (ASYMMETRIC DISTRIBUTION)
 OPTICS: CROSSFIRE REFRACTIVE
 GLOBE: FLAT TEMPERED GLASS

LAMP POST SPECIFICATIONS
 STYLE: WASHINGTON STEEL
 HEIGHT: 30'-0"
 PHOTOMETRIC CENTER: 31'-3 3/4"
 BASE: 24" DIAMETER WRAP BASE
 MATERIAL: 7 GAUGE, 12 FLAT FLUTE, STEEL MONOTUBE CONSTRUCTION
 SHAFT: 2 PIECE (WRAP AROUND) CAST IRON PER A.S.T.M. A48-83 CLASS 30
 FINISH: PRIME PAINT THEN FINISH CUSTOM BLUE GREEN RAL # 6004
 ACCESS DOOR: LOCATED IN BASE, TO COINCIDE WITH HAND HOLE IN STEEL SHAFT, SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
 TENON: 2 7/8" DIA. X 6" HIGH (TO ACCEPT CROSS ARM)
 CATALOG NO: SSH2F-G17-07.60-30.00-TN2.88/6.00-GFWN-(2)EB-CB
 SHAFT: IWBSH-24-CB
 BASE:

- Note:
 1) Outlet wiring on lamp posts shall be such that the top outlet to be on only when lights are on while the bottom outlet shall remain on continuously.

LAMP POSTS AND LUMINAIRES ADJACENT TO ROUNDABOUTS
 Not to Scale

POLE
 MODEL: RF4
 TOP: DIA: 4"
 TAPER: NONE
 CONSTRUCTION: Pultruded fiberglass reinforced isophthalic polyester resin utilizing longitudinal glass roving, continuous strand mat and off-axis fibers.

ANCHOR BASE:
 Custom Top Hat Plate-ASTM A36

TENON:
 3" OD 3" Exposed 6061-T6 Alum

POST TOP RING:
 Cast Alum

BOLT CIRCLE:
 11 1/2"

HAND HOLE:
 5"x6" in Anchor Base; Cover to Match

PAINT:
 UV & Cleaning chemical resistant

COLOR:
 CC-Fishers Green

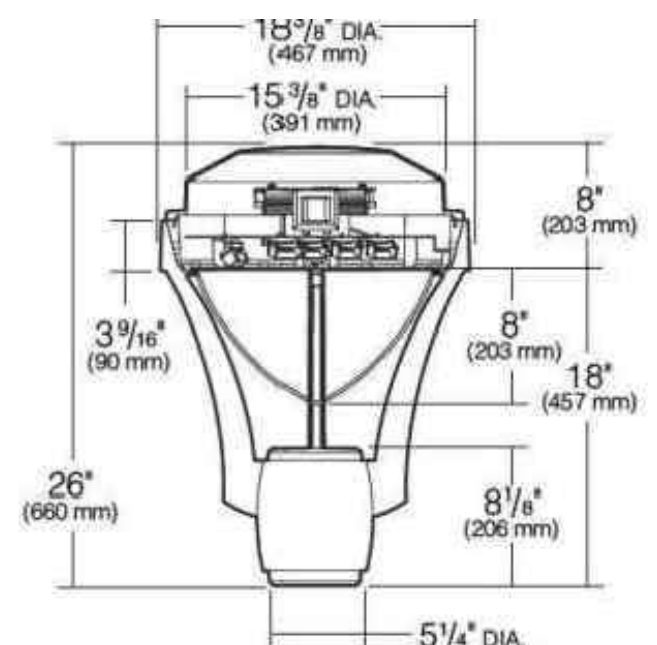
MAX ATTACHMENT WEIGHT: 100 LBS
MAX ATTACHMENT EPA: 15.2
POLE WEIGHT: 72 LBS approx

BASE COVER
 MODEL: D23S/2
 STYLE: 2-Piece Clamshell
 MATERIAL: Elastomeric Urethane
 COLOR: CC-Fishers Green
 HEIGHT: 48"
 WIDTH: 16.38"
 WEIGHT: 52 lbs approx

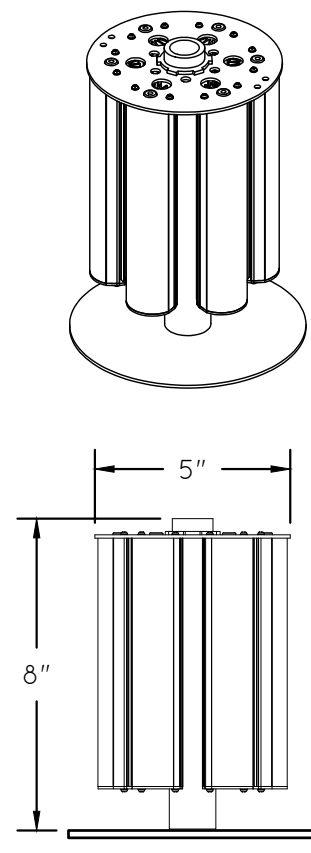
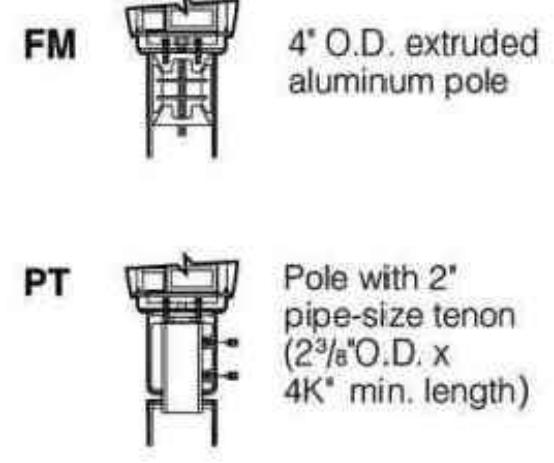
SPECIFICATIONS



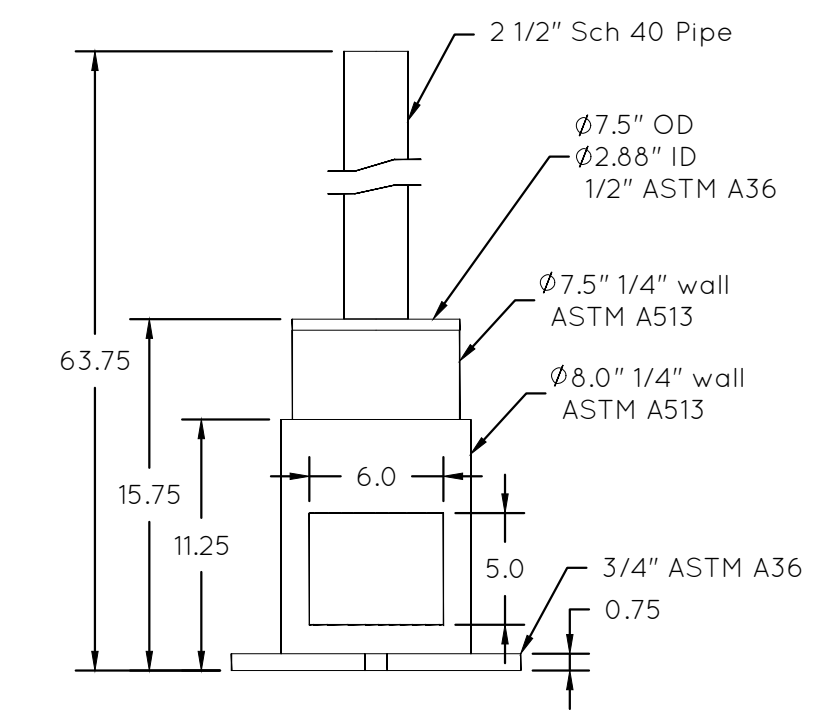
Approx. Weight = 45 lbs EPA 2.5 for 15A
 See Configuration for Additional EPAs.



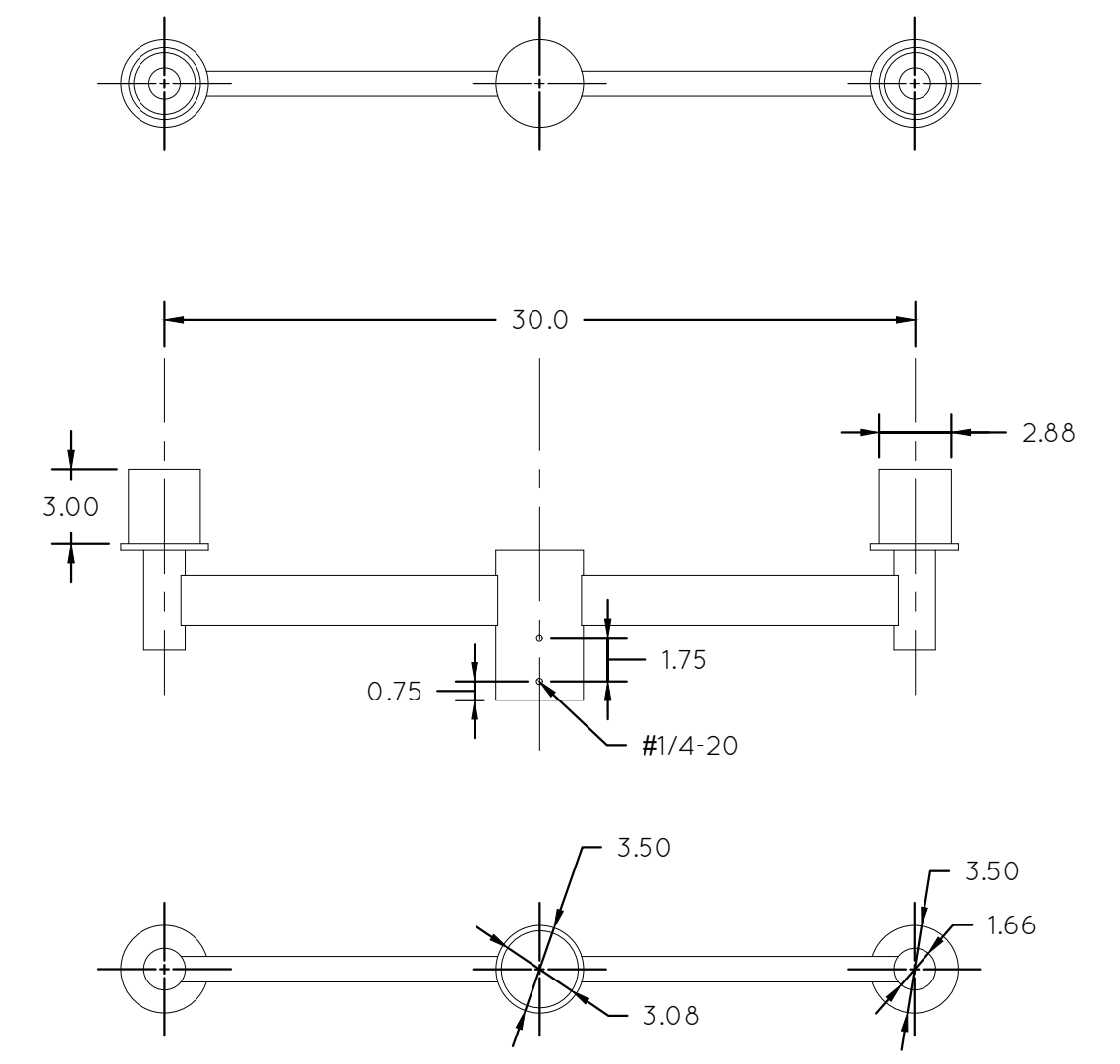
KIM LIGHTING-SOLITAIRE
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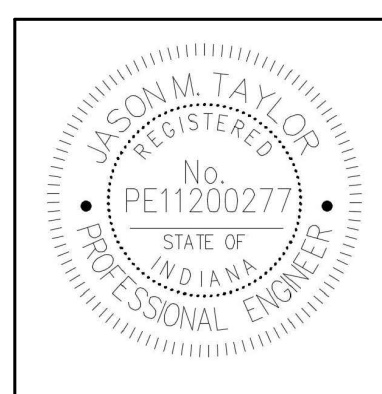
LED FIXTURES
 Not to Scale



CUSTOM HAT BASE ASSEMBLY
 Not to Scale



CROSS ARM
 Not to Scale



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STANDARD CONSTRUCTION DETAILS
 LAMP POST & LED FIXTURE DETAILS

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**PLAN NOTES - REFLECTED
CEILING PLAN**

- EXISTING BULKHEAD TO REMAIN. PAINT EP-1
- PROVIDE FRAME MOUNTED ROLLER SHADE TO COVER FULL DIMENSION OF WINDOW STOREFRONT - BOD DRAPER INC. CLUTCH-OPERATED FLEX SHADE. REFER A2.8 SHEET FOR (TYP.) EXTERIOR WINDOW SHADE- OR (TYP.) INTERIOR WINDOW SHADE- ACCORDINGLY
- GYP CONTROL JOINT AT PAINT TRANSITION
- NEW GYP. BD. BULKHEAD ON 6" METAL STUD. ALIGN AND MATCH SLOP AND HEIGHT TO EXISTING IN VESTIBULE 001. PAINT P-7.
- NEW BULKHEAD. PAINT EP-1.
- SKYLIGHT. PAINT ETR WALLS P-7.
- PAINT ETR STRUCTURAL FRAMING, DUCT RUNS, AND EXPOSED DECK P-3
- NEW WALL MOUNTED PROJECTOR SCREEN. COORDINATE LOCATION WITH EXISTING PROJECTOR. SCREEN TO HAVE 4-6" EXTRA DROP. REFER TO ELEVATIONS.
- EXISTING GYP. BD. BUMP OUT TO REMAIN. PAINT P-1.
- CEILING MOUNTED TRACK AND PRIVACY CURTAIN.
- PAINT BULKHEAD EP-5.
- PAINT BULKHEAD P-7.
- CONTROL JOINT
- PAINT EXISTING CEILING P-7.
- PAINT BULKHEAD EP-4 TO MATCH ADJACENT WALL. BULKHEAD TO BE PAINTED P-5.
- CLEAN AND PAINT STEEL LINTEL
- ALIGN FACE OF BULKHEAD WITH FACE OF WALL.
- PATCH BULKHEAD WHERE DEMOLITION OCCURRED.
- EXISTING TO REMAIN GYP. BD. ABOVE BAFFLES TO BE PAINTED P-7.
- PAINT BULKHEAD P-4
- PATCH EIES AS REQUIRED DUE TO DEMOLITION. MATCH FINISH AND TEXTURE. PAINT HORIZONTAL AND VERTICAL FACES OF SOFFIT EPF-1.
- ETR EQUIPMENT. PROTECT DURING CONSTRUCTION.
- MASONRY OPENING - INSTALL BOTTOM OF LINTEL AT 7'-4" A.F.F. COORDINATE WITH FOOD SERVICE EQUIPMENT.
- EXISTING COOLER CEILING TO REMAIN
- ACCESS PANEL LOCATION. REFER TO CEILING MANUFACTURERS STANDARD DETAILS.
- MATCH EXISTING VERTICAL DRYWALL REVEAL AND EXTEND TO 4" ABOVE NEW CEILING. EXTEND, PATCH, AND REPAIR DRYWALL AS NECESSARY TO LEVEL 4 FINISH.

EQUIPMENT SCHEDULE

TAG	ACCESSORY NOTES	FURNISHED BY	INSTALLED BY
E1	8'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E2	10'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E3	12'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E4	FULL WALL BACK PAINTED GLASS MARKERBOARD	CONTRACTOR	CONTRACTOR
E5	2'-0" W x 3'-6" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E6	3'-0" W x 3'-6" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E7	9'-0" W x 4'-0" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E8	4'-0" H TACKABLE PANEL DP-1. WIDTH VARIES. REFER TO ELEVATION	CONTRACTOR	CONTRACTOR
E9	4'-0" x 4'-0" TACK BOARD	CONTRACTOR	CONTRACTOR
E10	CEILING MOUNTED PROJECTOR	OWNER	OWNER
E11	14'-0" W AUTOMATIC PROJECTION SCREEN. CEILING RECESSED UNO. COORDINATE INSTALLATION WITH SCHOOL AV COMPANY	CONTRACTOR	CONTRACTOR
E12	12'-0" W MANUAL PROJECTION SCREEN. CEILING MOUNT	CONTRACTOR	CONTRACTOR
E13	8'-0" W MANUAL PROJECTION SCREEN. CEILING MOUNT	CONTRACTOR	CONTRACTOR
E14	ICE MACHINE	CONTRACTOR	CONTRACTOR
E15	POPCORN MACHINE	OWNER	OWNER
E16	WARM PASS THROUGH	OWNER	OWNER
E17	MICROWAVE	OWNER	OWNER
E18	VENDING MACHINE	OWNER	OWNER
E19	REFRIGERATOR	OWNER	OWNER
E20	MINI FRIDGE	OWNER	OWNER
E21	DRINK COOLER	OWNER	OWNER
E22	TV	OWNER	CONTRACTOR
E23	DIGITAL MENU BOARD	CONTRACTOR	CONTRACTOR
E24	EYEWASH STATION. REFER TO M.E.P.	ETR	ETR
E25	PRINTER/ COPIER	OWNER	OWNER
E26	EXISTING SHREDDER	OWNER	CONTRACTOR
E27	FIRE EXTINGUISHER	ETR	ETR
E28	EXISTING LAMINATOR	OWNER	OWNER
E29	DIE CUT MACHINE	OWNER	OWNER
E30	EXISTING SAFE	OWNER	OWNER
E31	EXISTING GLOWFORGE	OWNER	OWNER
E32	30 PRINTER	OWNER	OWNER
E33	EXISTING ROLL STORAGE	OWNER	OWNER
E34	WASHER	OWNER	OWNER
E35	DRYER	OWNER	OWNER

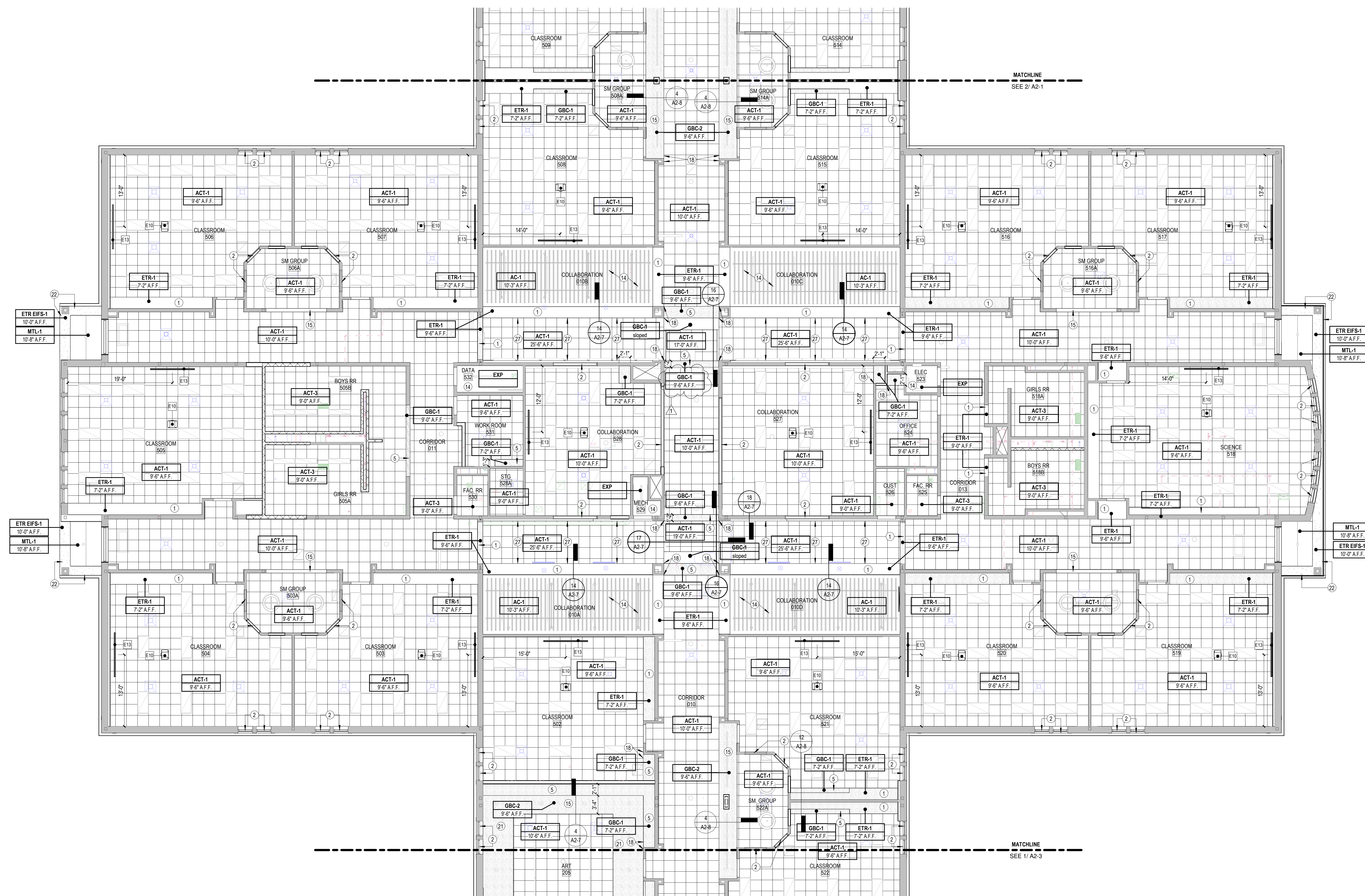
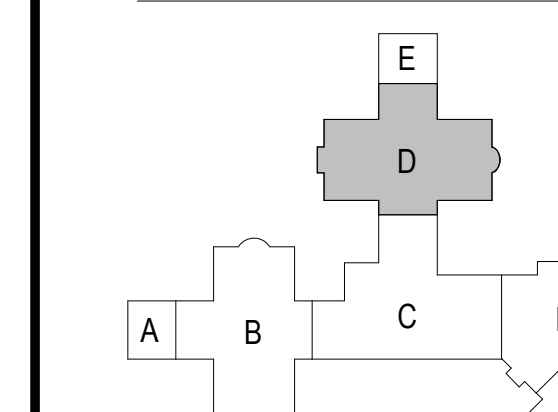
CEILING SCHEDULE

ACT-1	ACOUSTIC BAFFLE CEILING. BASIS OF DESIGN - TURF WEDGE BAFFLE SPACED 9'-0". FELT FLOOR TO UNSUBSTRUT ATTACHMENTS. COLOR TO BE SELECTED FROM MANUFACTURERS FULL RANGE
ACT-2	2x2 SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ACT-3	2x6 HIGH NRC SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ACT-3	2x2 SCRUBBABLE SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ETR	EXISTING EIFS TO REMAIN PAINT
EPF-1	EXISTING GYP. BD. ON METAL STUD TO REMAIN. PAINT. REFER TO FINISH SCHEDULE
EXP	EXPOSED CEILING
GBC-1	5/8" GYP. BD. ON METAL STUD - PAINT. REFER TO FINISH SCHEDULE
GBC-2	5/8" GYP. BD. ON SUSPENDED TRACK. BOD ARMSTRONG FRAMEALL DRYWALL GRID - PAINT. REFER TO FINISH SCHEDULE
MTL-1	INSULATED METAL SOFFIT SYSTEM. REFER TO SPECIFICATIONS
WDC-1	SUSPENDED WOOD CEILING SYSTEM. REFER TO SPECIFICATIONS

RCP LEGEND

XXX-1	CEILING TYPE
1'-0" A.F.F.	CEILING HEIGHT
---	GYP. EXP. JOINT REFER TO STANDARD DETAIL

KEY PLAN



FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

krM Architecture+

kbsd CONSULTING

HB Lynch, Harrison & Brumfiel, Inc.

REVISIONS

NO.	DATE	DESCRIPTION
1	07/29/24	Addendum 1

23055 - FALL CREEK INTERMEDIATE RENOVATIONS

HAMILTON SOUTHEASTERN SCHOOLS
12011 Ohio Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS

07.12.24

10600161
STATE OF INDIANA
REGISTERED PROFESSIONAL ARCHITECT

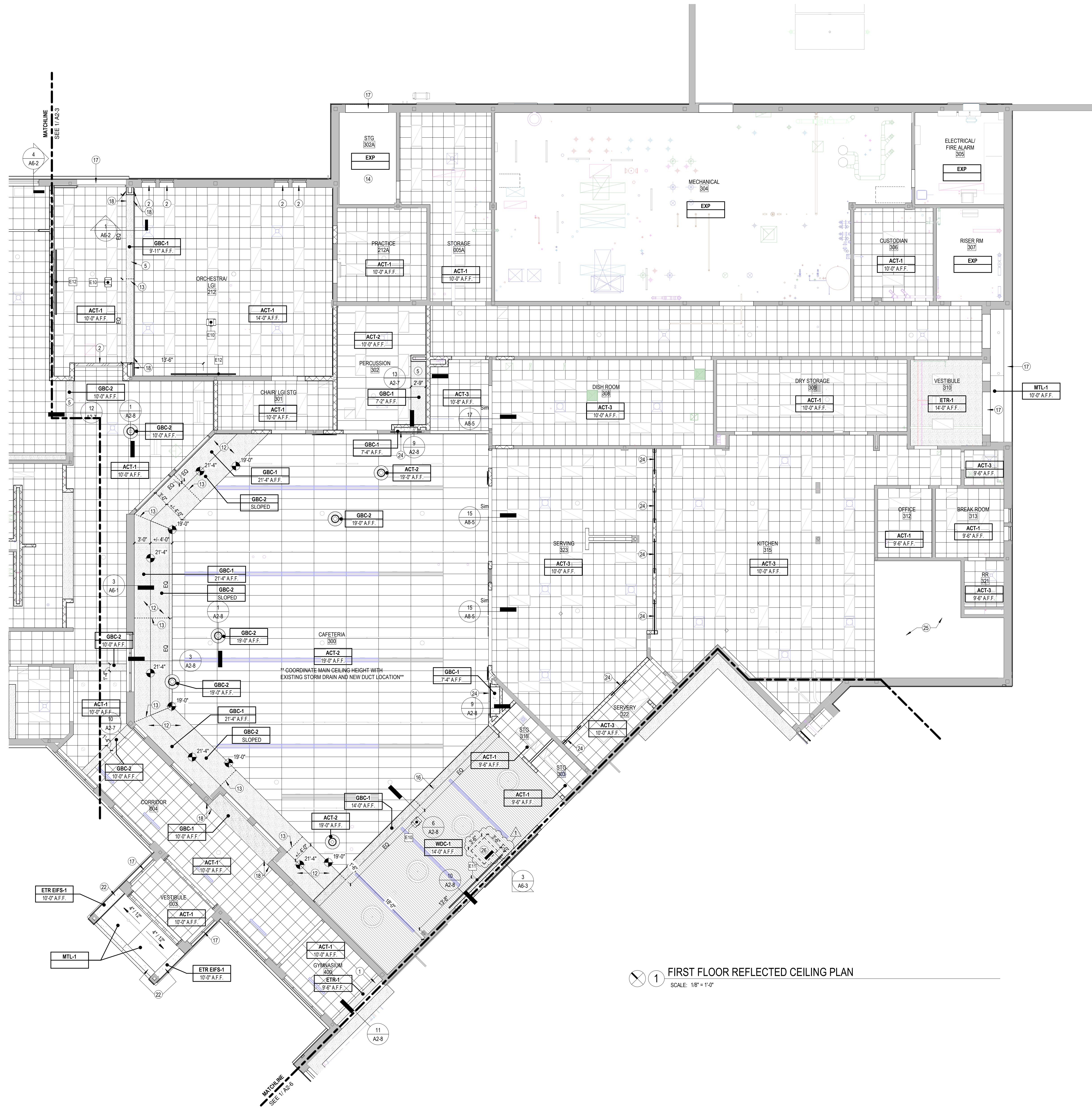
Wendell Williams

CONSTRUCTION DOCUMENTS
07.12.24
WJL JOB NO.
23055
DRAWN BY
Cg

DRAWING NAME
**REFLECTED
CEILING PLAN -
AREA D**

DRAWING NO.
A2-4

SET TO BE PRINTED IN COLOR



1 FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

PLAN NOTES - REFLECTED CEILING PLAN

- EXISTING BULKHEAD TO REMAIN. PAINT EP-1
- PROVIDE FRAME MOUNTED ROLLER SHADE TO COVER FULL DIMENSION OF WINDOW STOREFRONT - BCD DRAPER INC. CLUTCH-OPERATED FLEX SHADE. REFER A2.8 SHEET FOR (TYP.) EXTERIOR WINDOW SHADE OR (TYP.) INTERIOR WINDOW SHADE ACCORDINGLY
- GYP CONTROL JOINT AT PAINT TRANSITION
- NEW GYP. BD. BULKHEAD ON 6" METAL STUD. ALIGN AND MATCH SLOP AND HEIGHT TO EXISTING IN VESTIBULE 001. PAINT P-7.
- NEW BULKHEAD. PAINT EP-1.
- SKYLIGHT. PAINT ETR WALLS P-7.
- PAINT ETR STRUCTURAL FRAMING, DUCT RUNS, AND EXPOSED DECK P-7
- NEW WALL MOUNTED PROJECTOR SCREEN. COORDINATE LOCATION WITH EXISTING PROJECTOR. SCREEN TO HAVE 1-5/8" EXTRA DROP. REFER TO ELEVATIONS
- EXISTING GYP. BD. BUMP OUT TO REMAIN. PAINT P-1
- CEILING MOUNTED TRACK AND PRIVACY CURTAIN
- PAINT BULKHEAD EP-5
- PAINT BULKHEAD P-7
- CONTROL JOINT
- PAINT EXISTING CEILING P-7.
- PAINT BULKHEAD EP-4 TO MATCH ADJACENT WALL. BULKHEAD TO BE PAINTED P-5
- CLEAN AND PAINT STEEL LINTEL
- ALIGN FACE OF BULKHEAD WITH FACE OF WALL
- PATCH BULKHEAD WHERE DEMOLITION OCCURRED.
- EXISTING TO REMAIN GYP BD. ABOVE BAFFLES TO BE PAINTED P-7
- PAINT BULKHEAD P-4
- PATCH EPS AS REQUIRED DUE TO DEMOLITION. MATCH FINISH AND TEXTURE. PAINT HORIZONTAL AND VERTICAL FACES OF SOFFIT EPF-1
- ETR EQUIPMENT. PROTECT DURING CONSTRUCTION
- MASONRY OPENING. INSTALL BOTTOM OF LINTEL AT 7'-4" A.F.F. COORDINATE WITH FOOD SERVICE EQUIPMENT.
- EXISTING COOLER CEILING TO REMAIN
- ACCESS PANEL LOCATION. REFER TO CEILING MANUFACTURER'S STANDARD DETAILS
- MATCH EXISTING VERTICAL DRYWALL REVEAL AND EXTEND TO 4" ABOVE NEW CEILING. EXTEND, PATCH, AND REPAIR DRYWALL AS NECESSARY TO LEVEL 4 FINISH

EQUIPMENT SCHEDULE

TAG	ACCESSORY NOTES	FURNISHED BY	INSTALLED BY
E1	8'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E2	10'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E3	12'-0" x 4'-0" WHITEBOARD	CONTRACTOR	CONTRACTOR
E4	FULL WALL BACK PAINTED GLASS MARKERBOARD	CONTRACTOR	CONTRACTOR
E5	2'-0" W x 3'-6" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E6	3'-0" W x 3'-6" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E7	9'-0" W x 4'-0" H TACKABLE PANEL DP-1	CONTRACTOR	CONTRACTOR
E8	4'-0" H TACKABLE PANEL DP-1. WIDTH VARIES. REFER TO ELEVATION	CONTRACTOR	CONTRACTOR
E9	4'-0" x 4'-0" TACK BOARD	CONTRACTOR	CONTRACTOR
E10	CEILING MOUNTED PROJECTOR	OWNER	OWNER
E11	14'-0" W AUTOMATIC PROJECTION SCREEN. CEILING RECESSED UNO. COORDINATE INSTALLATION WITH SCHOOL AV COMPANY	CONTRACTOR	CONTRACTOR
E12	12'-0" W MANUAL PROJECTION SCREEN. CEILING MOUNT	CONTRACTOR	CONTRACTOR
E13	8'-0" W MANUAL PROJECTION SCREEN. CEILING MOUNT	CONTRACTOR	CONTRACTOR
E14	ICE MACHINE	CONTRACTOR	CONTRACTOR
E15	POPCORN MACHINE	OWNER	OWNER
E16	WARM PASS THROUGH	OWNER	OWNER
E17	MICROWAVE	OWNER	OWNER
E18	VENDING MACHINE	OWNER	OWNER
E19	REFRIGERATOR	OWNER	OWNER
E20	MINI FRIDGE	OWNER	OWNER
E21	DRINK COOLER	OWNER	OWNER
E22	TV	CONTRACTOR	CONTRACTOR
E23	DIGITAL MENU BOARD	CONTRACTOR	CONTRACTOR
E24	EYEWASH STATION. REFER TO MEP	ETR	ETR
E25	PRINTER/ COPIER	OWNER	OWNER
E26	EXISTING SHREDDER	OWNER	CONTRACTOR
E27	FIRE EXTINGUISHER	ETR	ETR
E28	EXISTING LAMINATOR	OWNER	OWNER
E29	DIE CUT MACHINE	OWNER	OWNER
E30	EXISTING SAFE	OWNER	OWNER
E31	EXISTING GLOWFORGE	OWNER	OWNER
E32	3D PRINTER	OWNER	OWNER
E33	EXISTING ROLL STORAGE	OWNER	OWNER
E34	WASHER	OWNER	OWNER
E35	DRYER	OWNER	OWNER

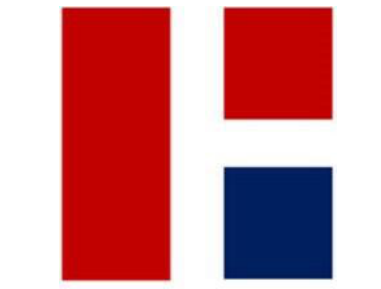
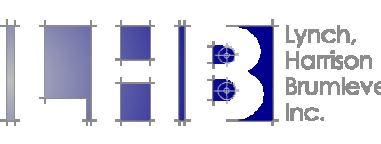
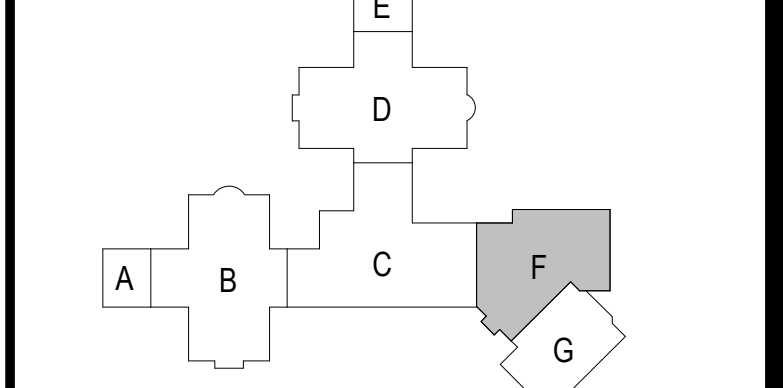
CEILING SCHEDULE

AC-1	ACOUSTIC BAFFLE CEILING. BASIS OF DESIGN - TURF WEDGE BAFFLE SPACED 9" OC. FELT LOCK TO UNISTRUT ATTACHMENTS. COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE
ACT-1	2x2 SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ACT-2	2x4 HIGH RUC SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ACT-3	2x2 SCRUBBABLE SUSPENDED ACOUSTICAL CEILING TILE. REFER TO SPECIFICATIONS
ETR	EXISTING EPS TO REMAIN PAINT
ETR-1	EXISTING GYP. BD. ON METAL STUD TO REMAIN. PAINT. REFER TO FINISH SCHEDULE
EXP	EXPOSED CEILING
GBC-1	6" GYP. BD. ON METAL STUD - PAINT-REFER TO FINISH SCHEDULE
GBC-2	5/8" GYP. BD. ON SUSPENDED TRACK. BCD ARMSTRONG FRAMMALL DRYWALL GRID - PAINT. REFER TO FINISH SCHEDULE
MTL-1	INSULATED METAL SOFFIT SYSTEM. REFER TO SPECIFICATIONS
WDC-1	SUSPENDED WOOD CEILING SYSTEM. REFER TO SPECIFICATIONS

RCP LEGEND

xxx-1	CEILING TYPE
1'-0" A.F.F.	CEILING HEIGHT
---	GYP. EXP. JOINT REFER TO STANDARD DETAIL

KEY PLAN



REVISIONS

NO.	DATE	DESCRIPTION
1	07/29/24	Addendum 1

HAMILTON SOUTHEASTERN SCHOOLS
 23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 07.12.24
 12011 Ohio Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS
 SET TO BE PRINTED IN COLOR

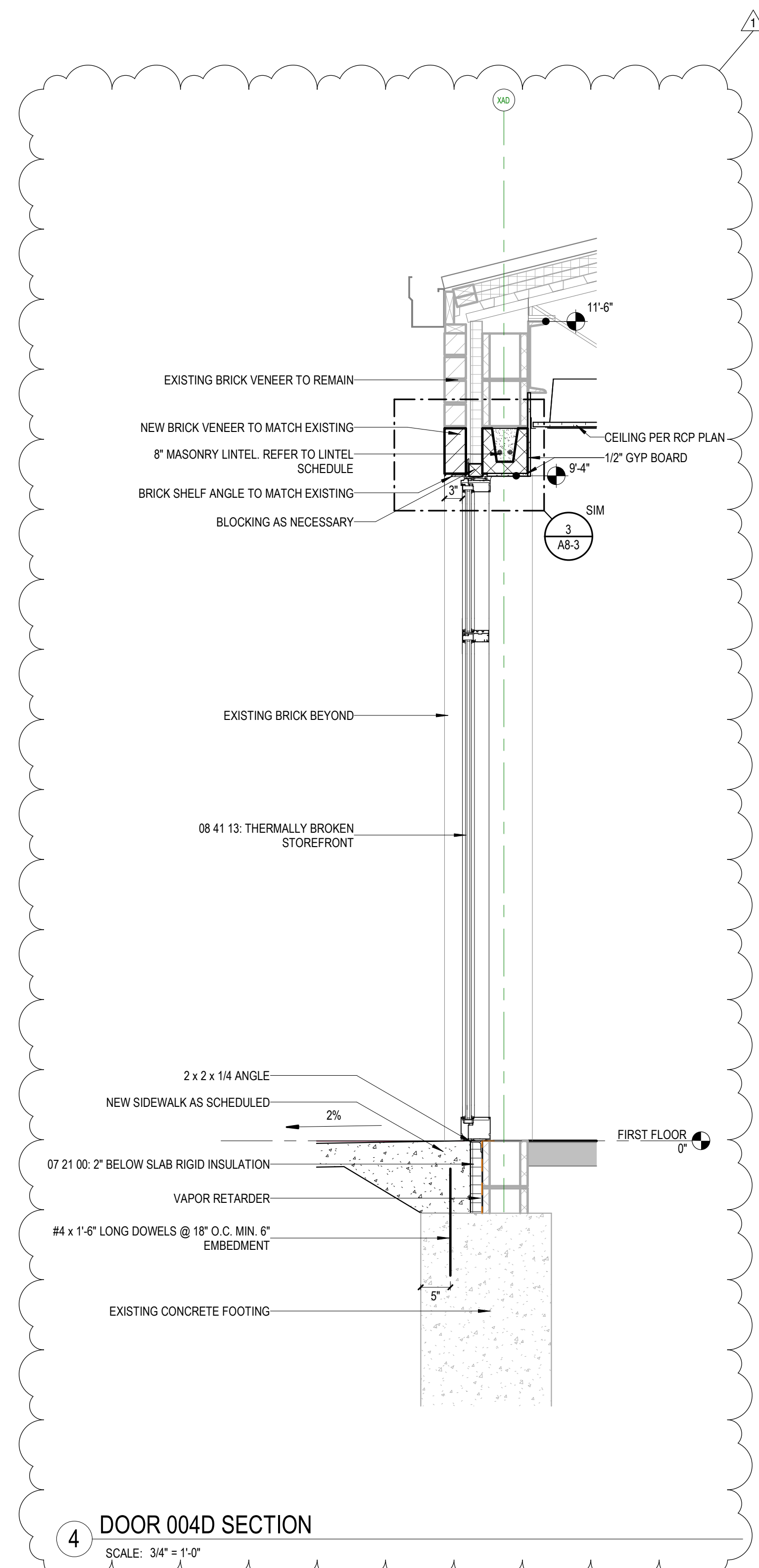


Wendell Williams

CONSTRUCTION DOCUMENTS
07.12.24
HW JOB NO.
23055
DRAWN BY
Cg

DRAWING NAME
REFLECTED CEILING PLAN - AREA F

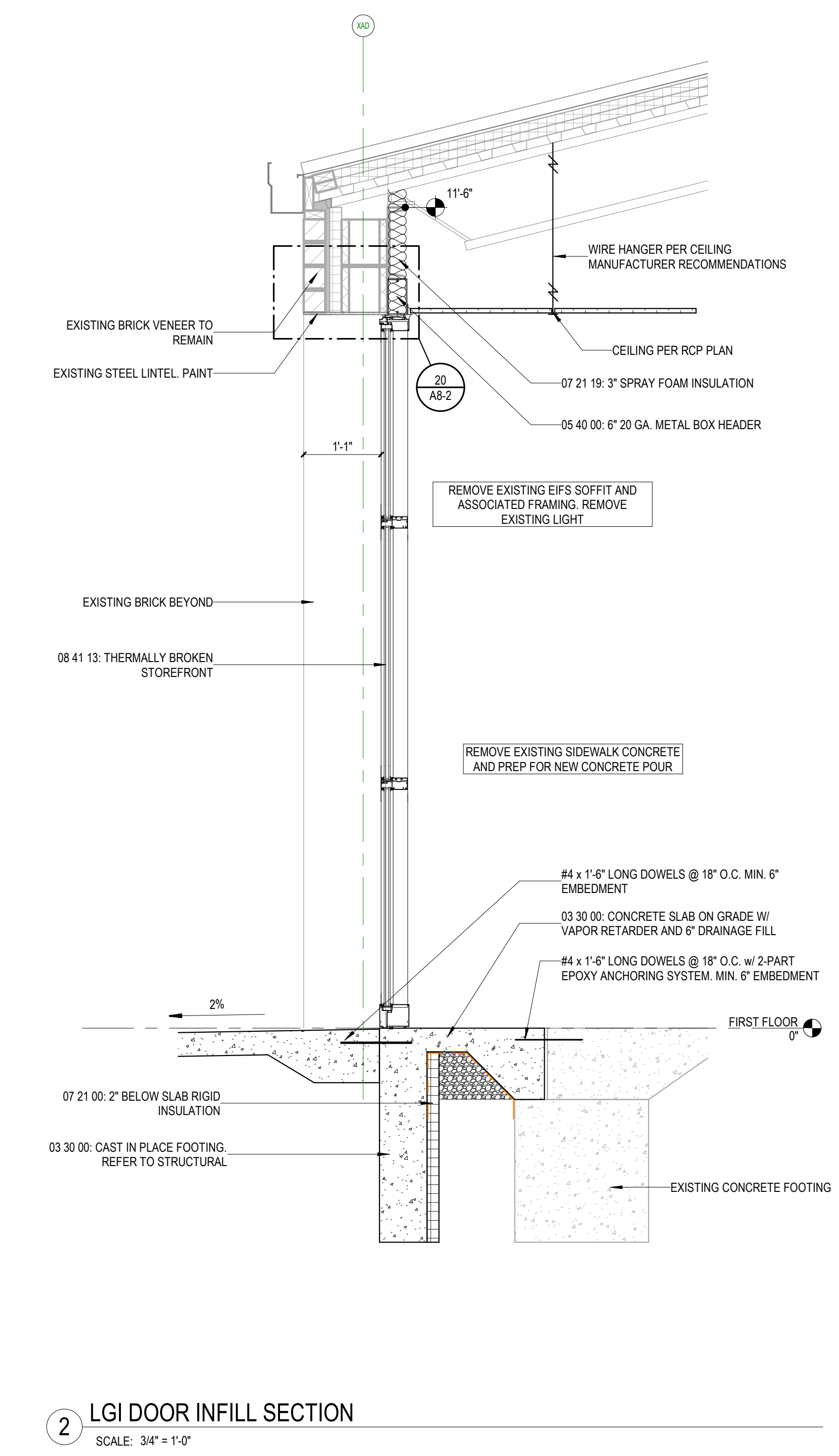
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A2-5



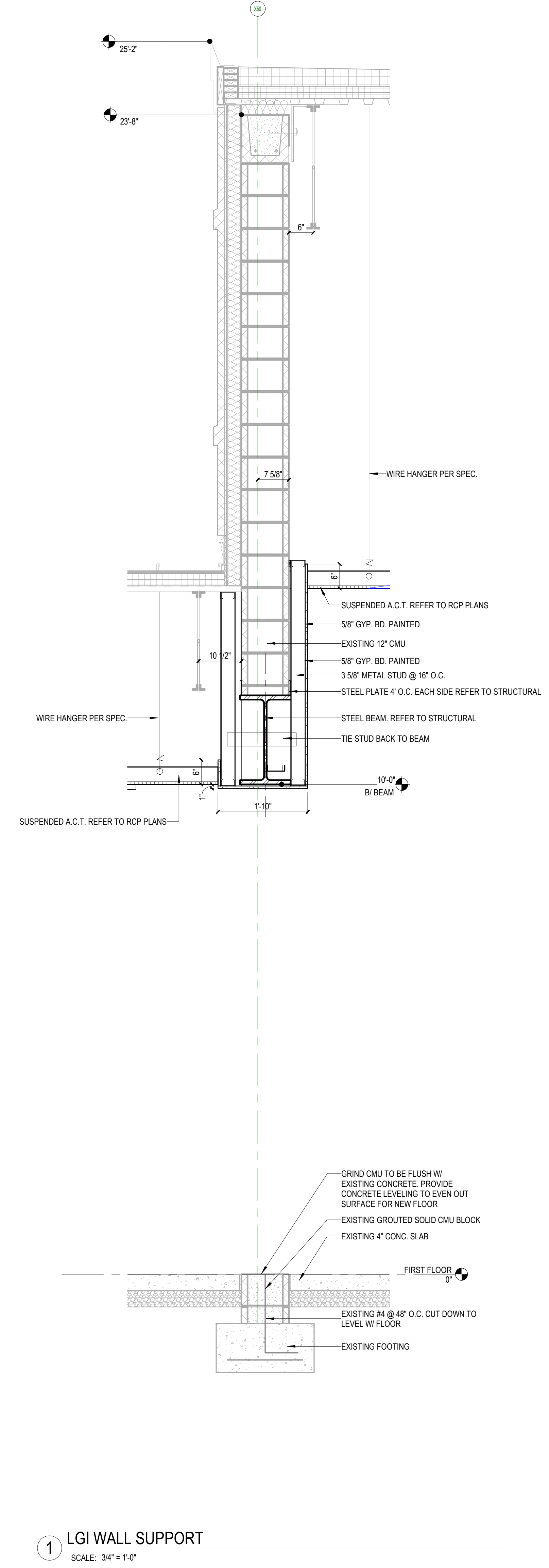
4 DOOR 004D SECTION
SCALE: 3/4" = 1'-0"



3 FRONT ENTRY SECTION
SCALE: 3/4" = 1'-0"



2 LGI DOOR INFILL SECTION
SCALE: 3/4" = 1'-0"

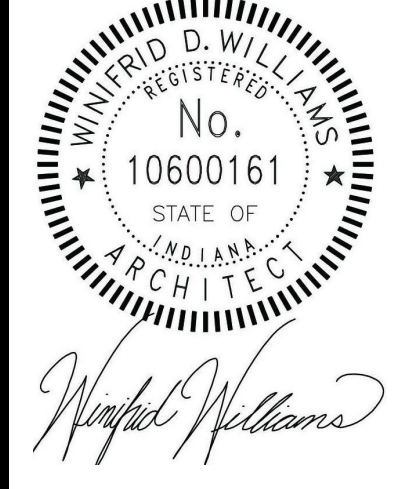


1 LGI WALL SUPPORT
SCALE: 3/4" = 1'-0"

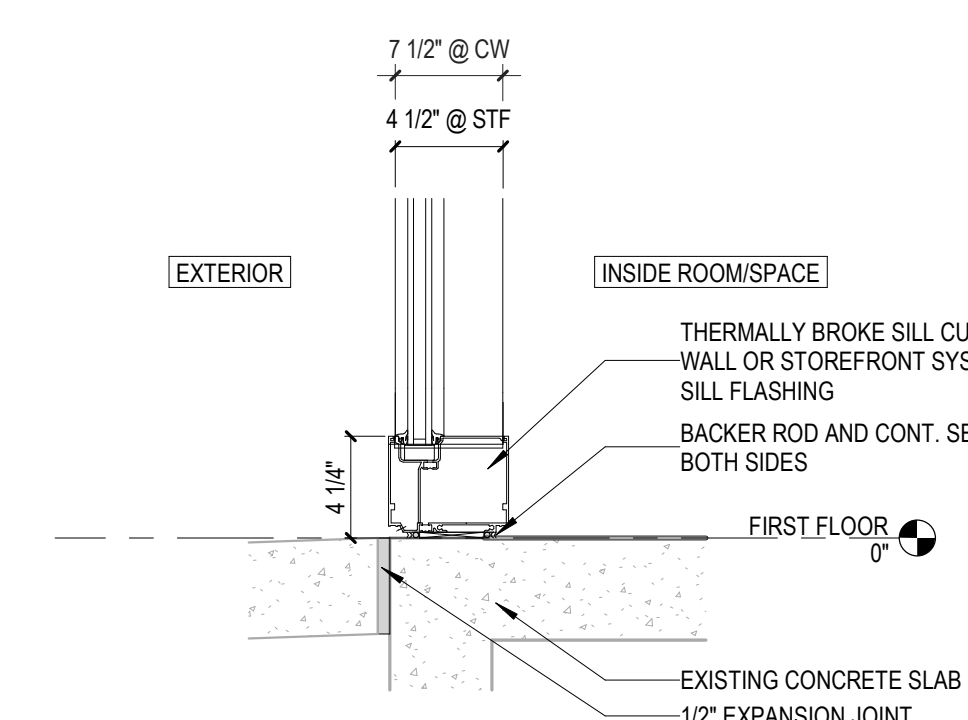
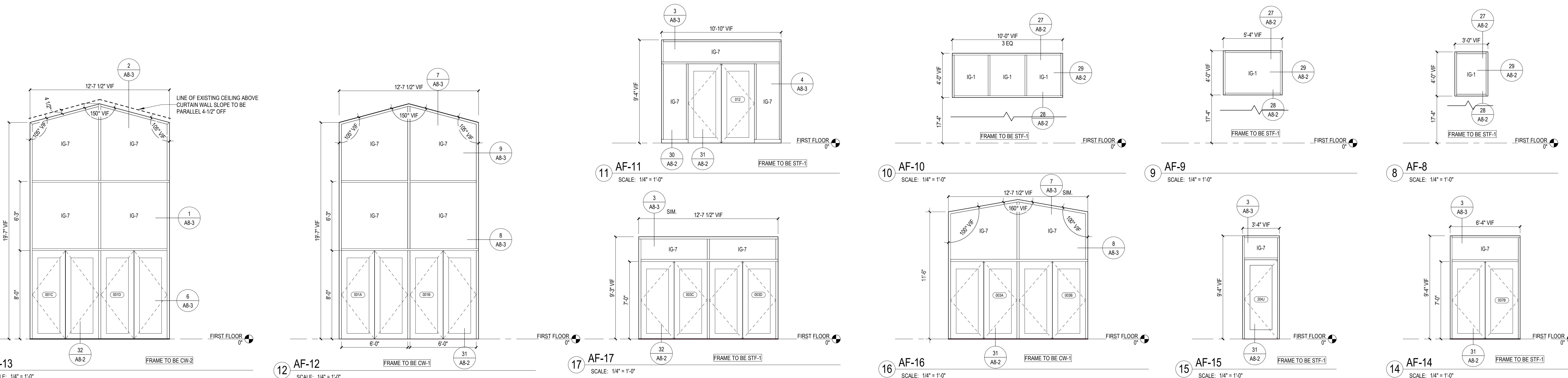
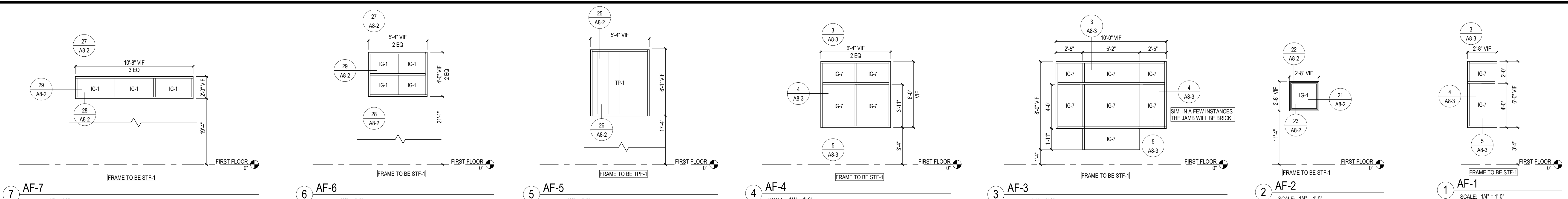
REVISIONS

1	07/29/24	Addendum 1
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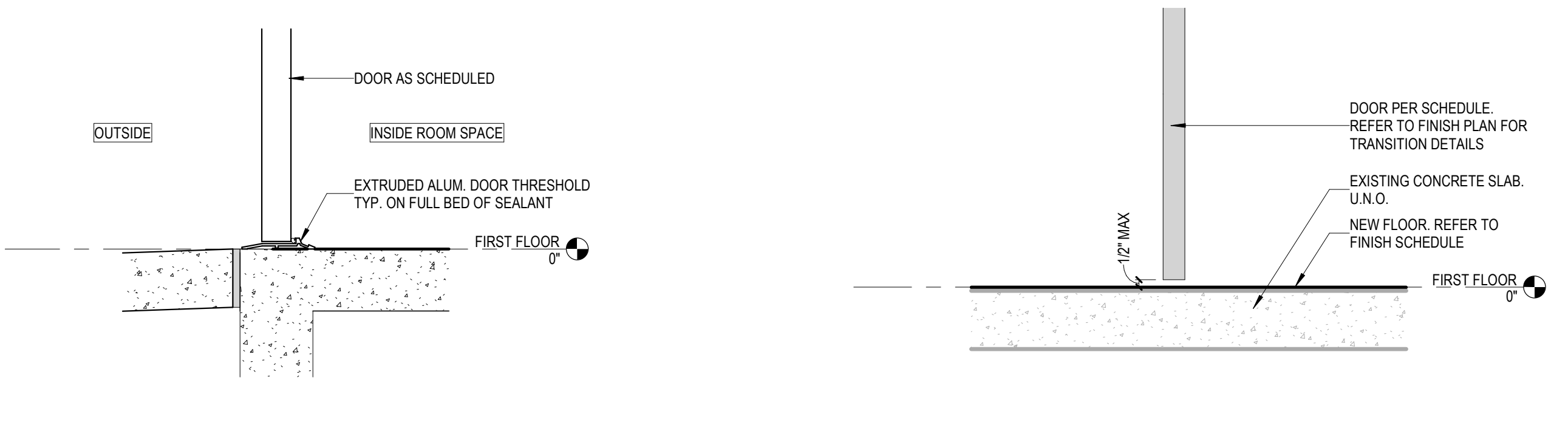
07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Ohio Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS
SET TO BE PRINTED IN COLOR



CONSTRUCTION DOCUMENTS
07.12.24
HWL JOB NO.
23055
DRAWN BY
MRY
DRAWING NAME
WALL SECTIONS & DETAILS

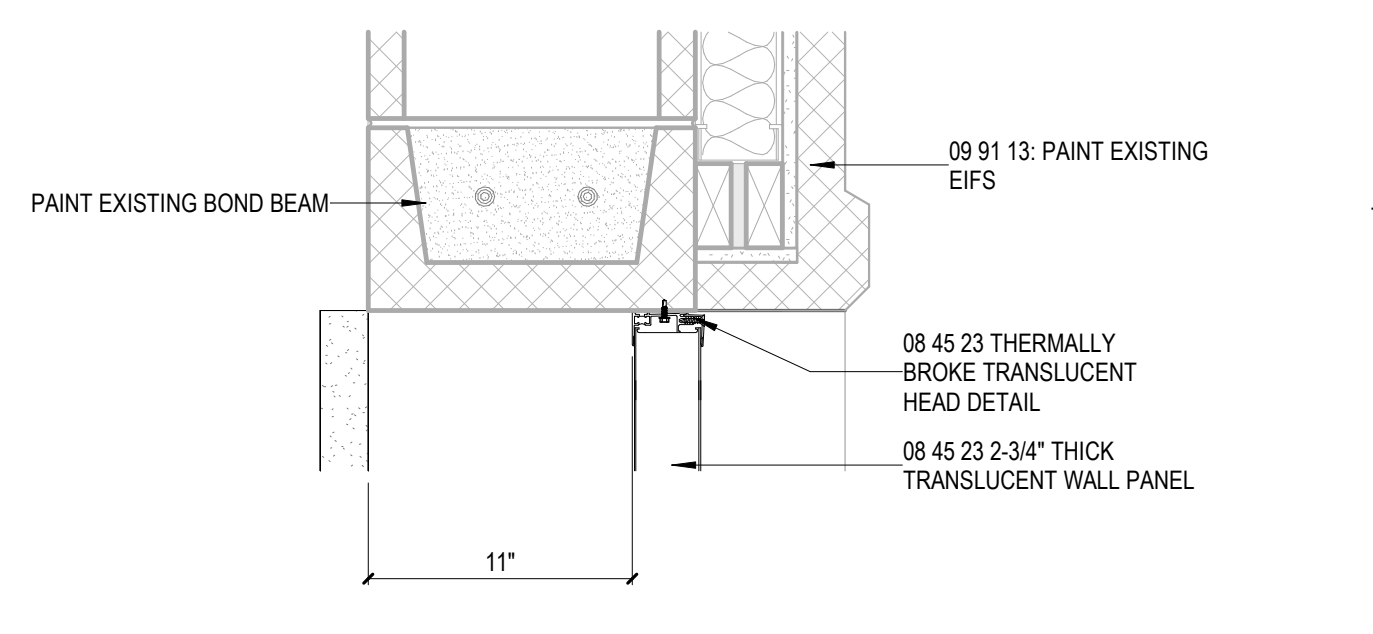


30 SILL DETAIL #1
SCALE: 1 1/2" = 1'-0"

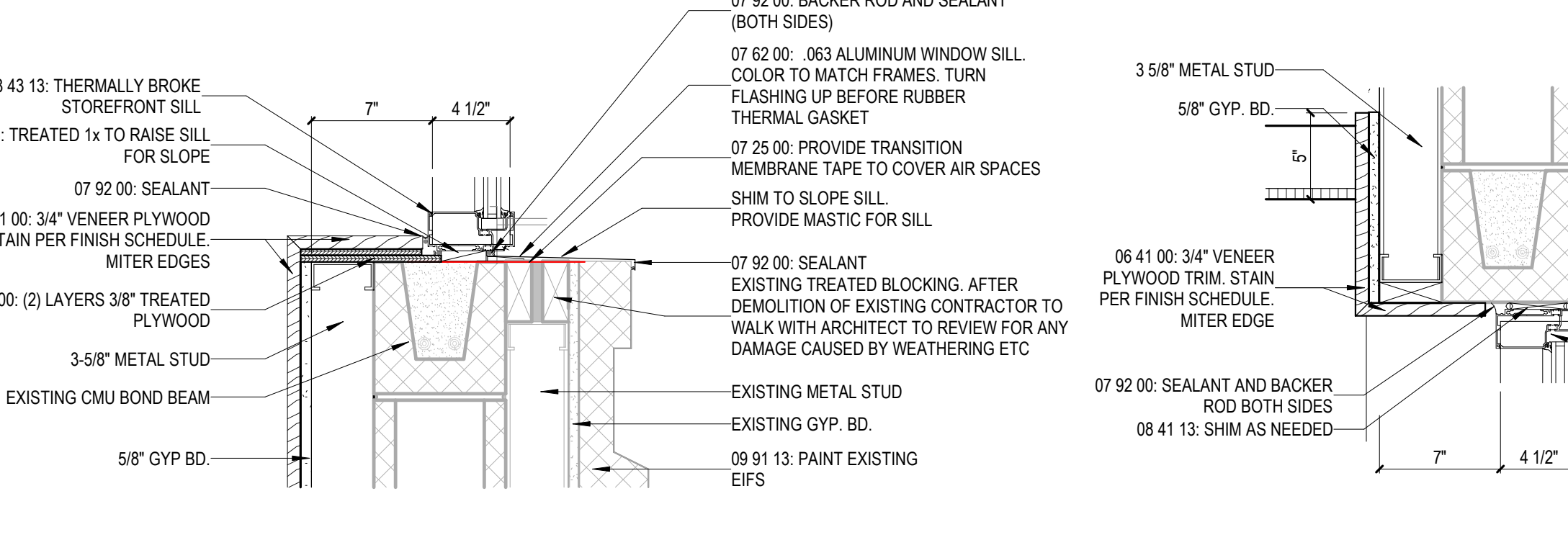


31 EXT DOOR SILL DETAIL
SCALE: 1 1/2" = 1'-0"

32 INTERIOR DOOR SILL TYP.
SCALE: 1 1/2" = 1'-0"

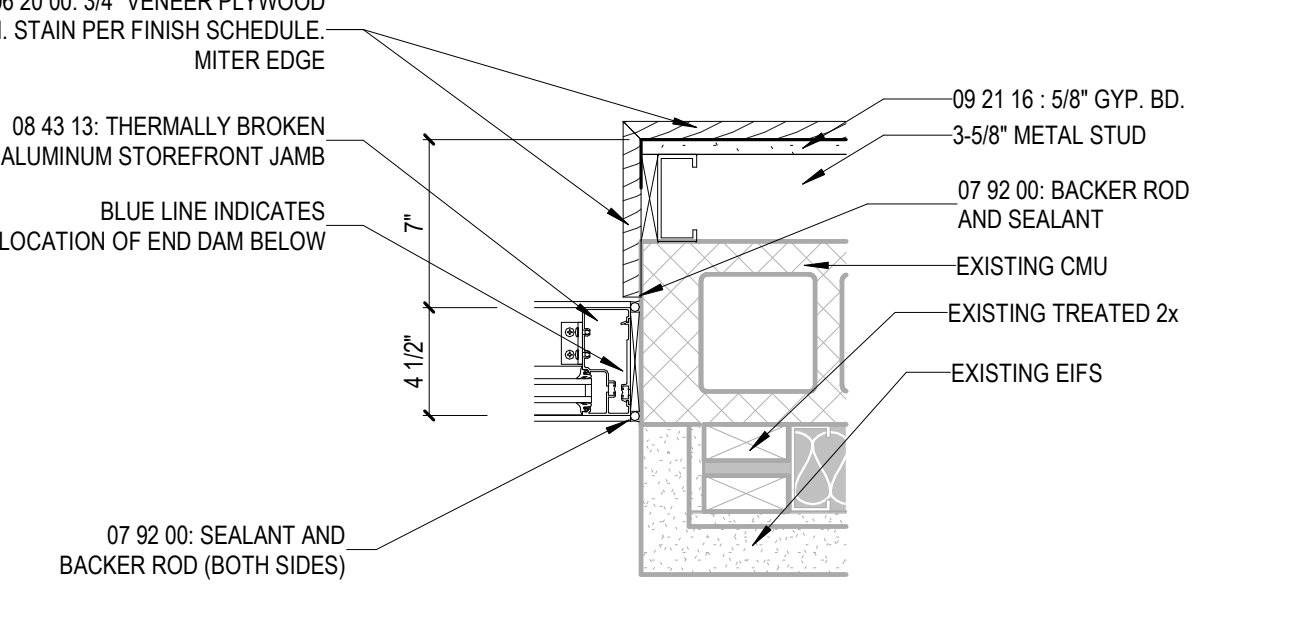


25 TRANSLUCENT HEAD DETAIL
SCALE: 1 1/2" = 1'-0"

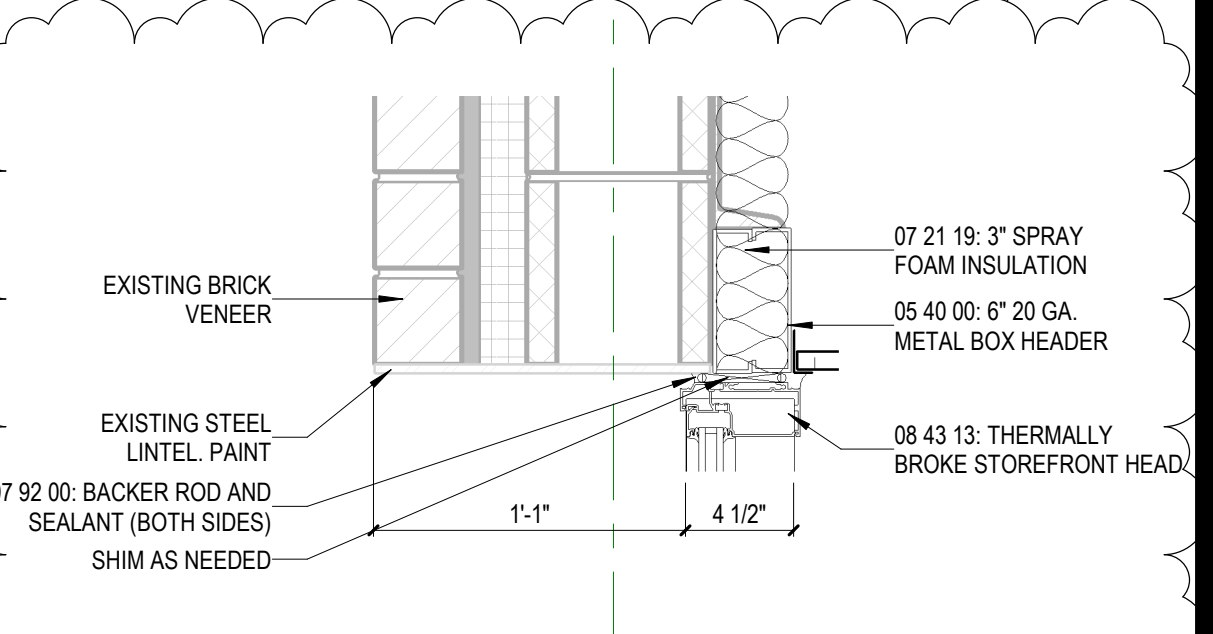


23 EIFS SILL DETAIL #1
SCALE: 1 1/2" = 1'-0"

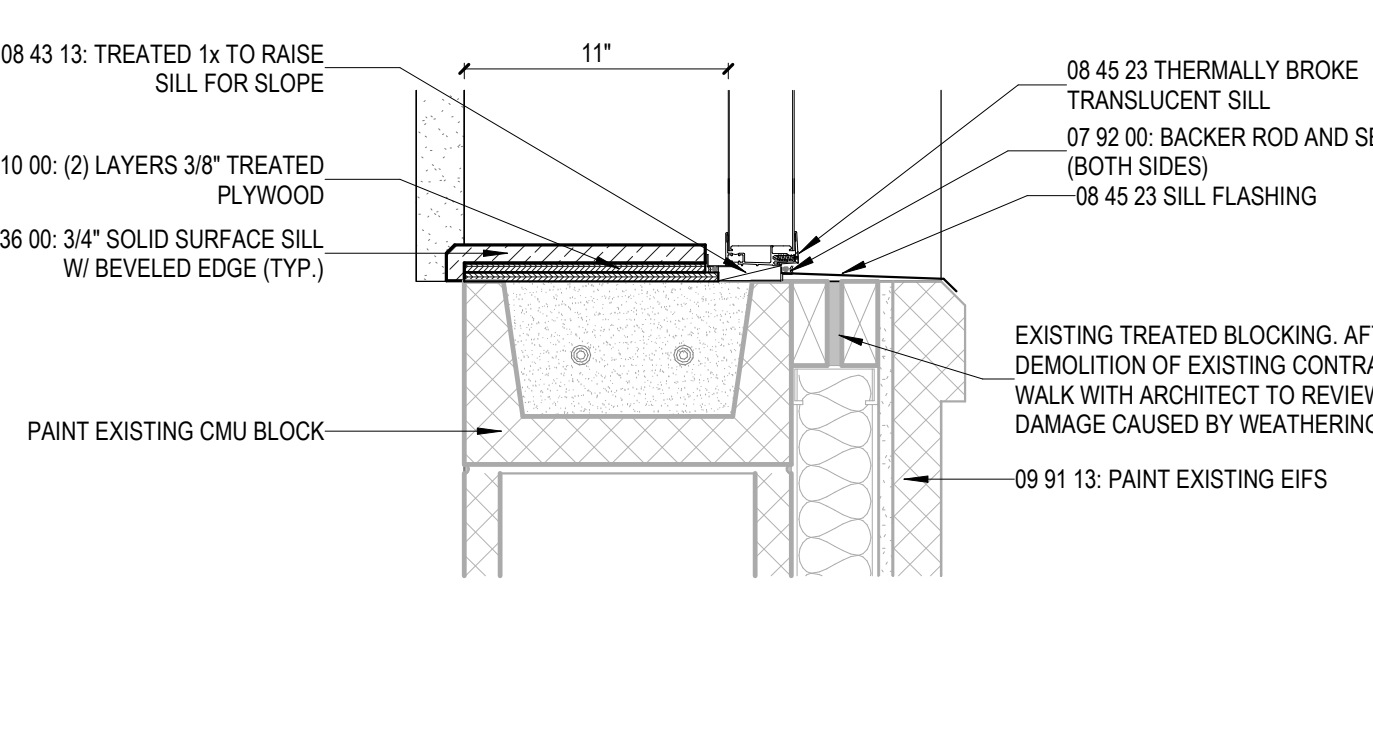
22 EIFS HEAD DETAIL #1
SCALE: 1 1/2" = 1'-0"



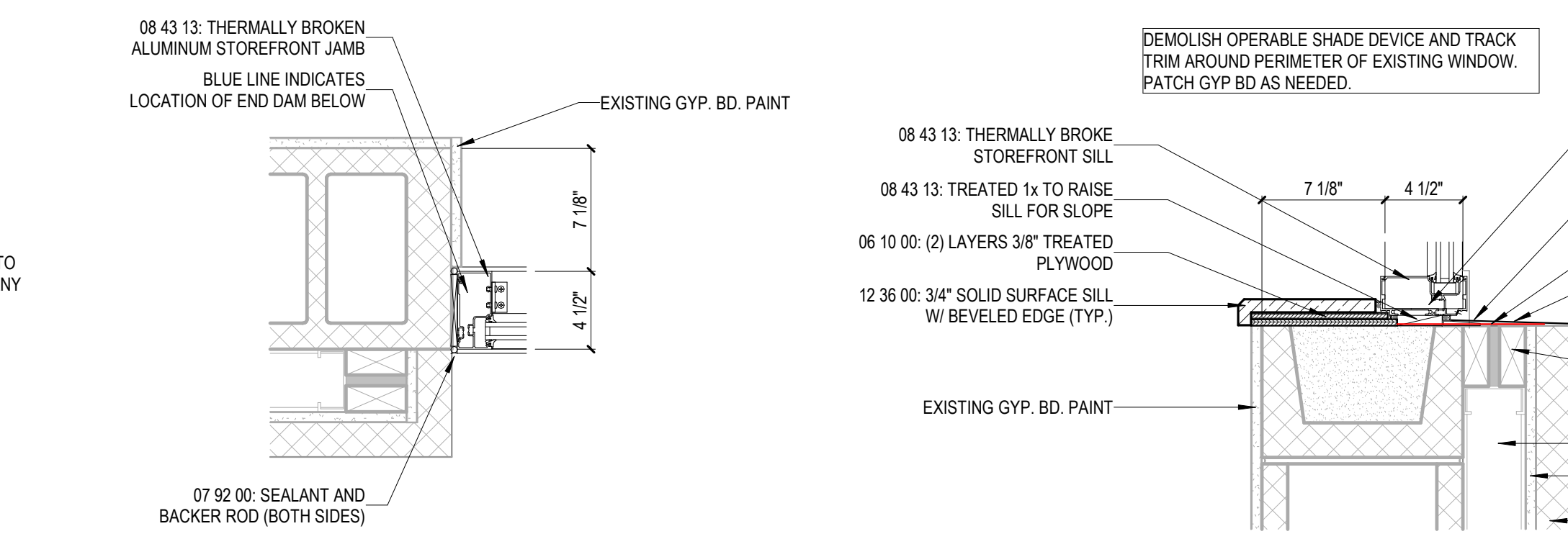
21 EIFS JAMB DETAIL #1
SCALE: 1 1/2" = 1'-0"



20 STF THERMAL HEAD DETAIL #1
SCALE: 1 1/2" = 1'-0"

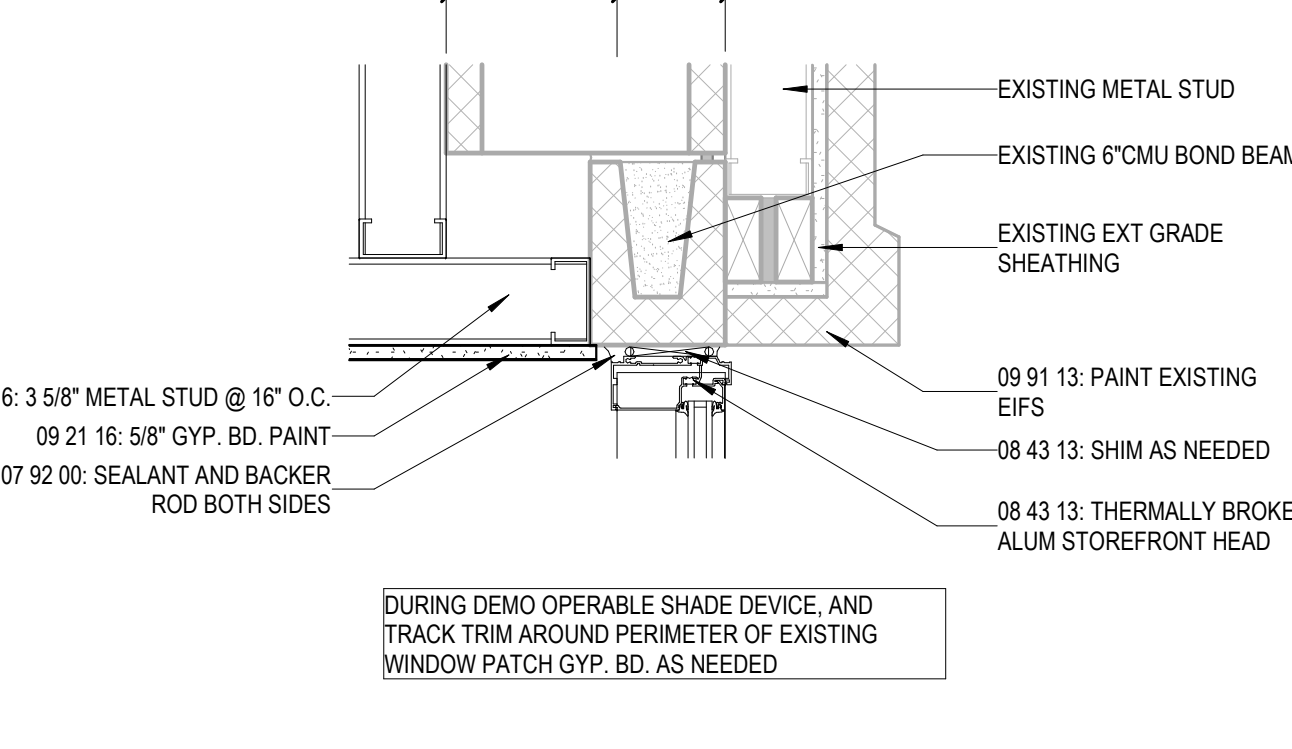


26 TRANSLUCENT SILL DETAIL
SCALE: 1 1/2" = 1'-0"



29 EIFS JAMB DETAIL #2
SCALE: 1 1/2" = 1'-0"

28 EIFS SILL DETAIL #2
SCALE: 1 1/2" = 1'-0"



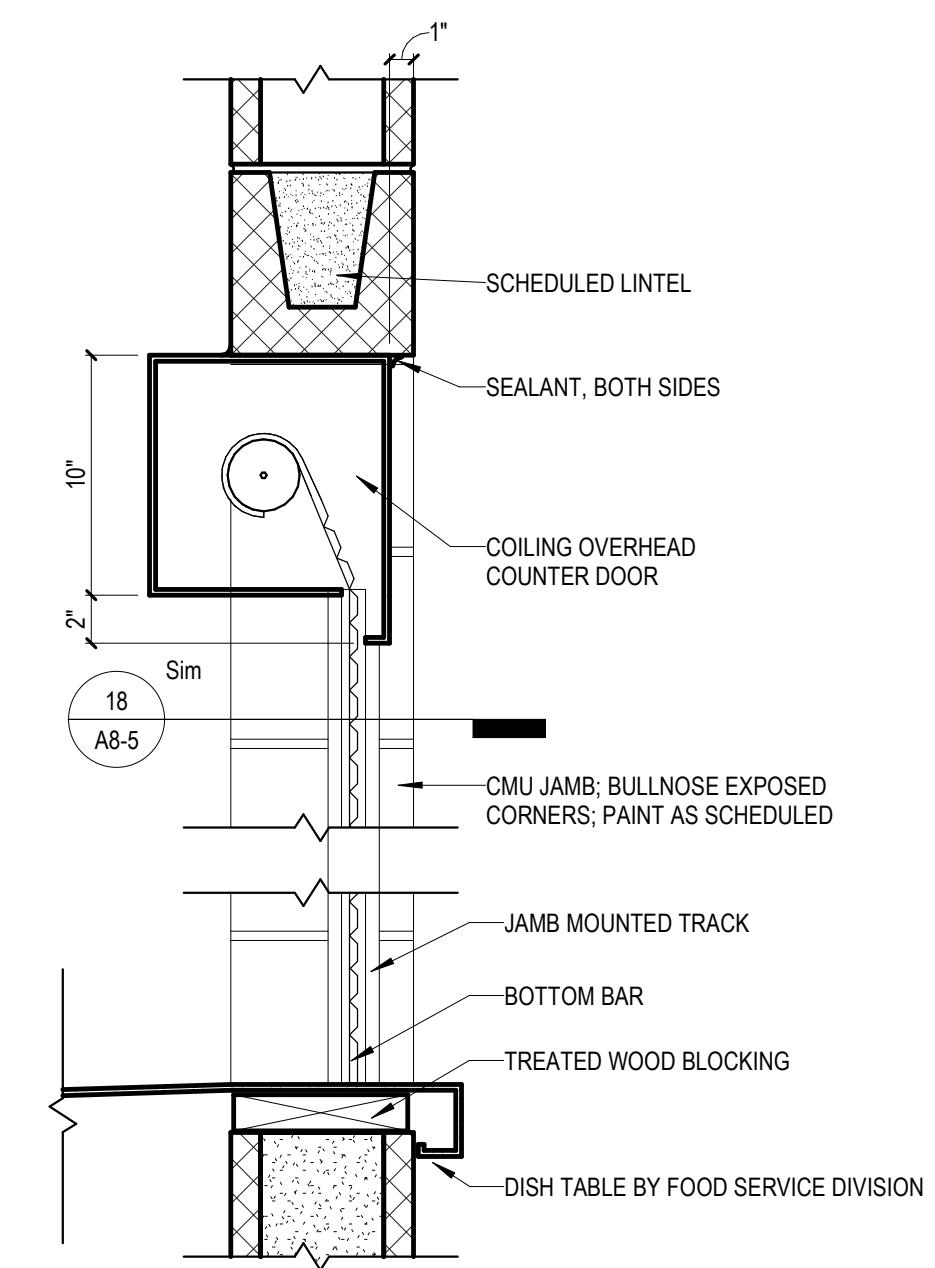
27 EIFS HEAD DETAIL #2
SCALE: 1 1/2" = 1'-0"

GLAZING SCHEDULE

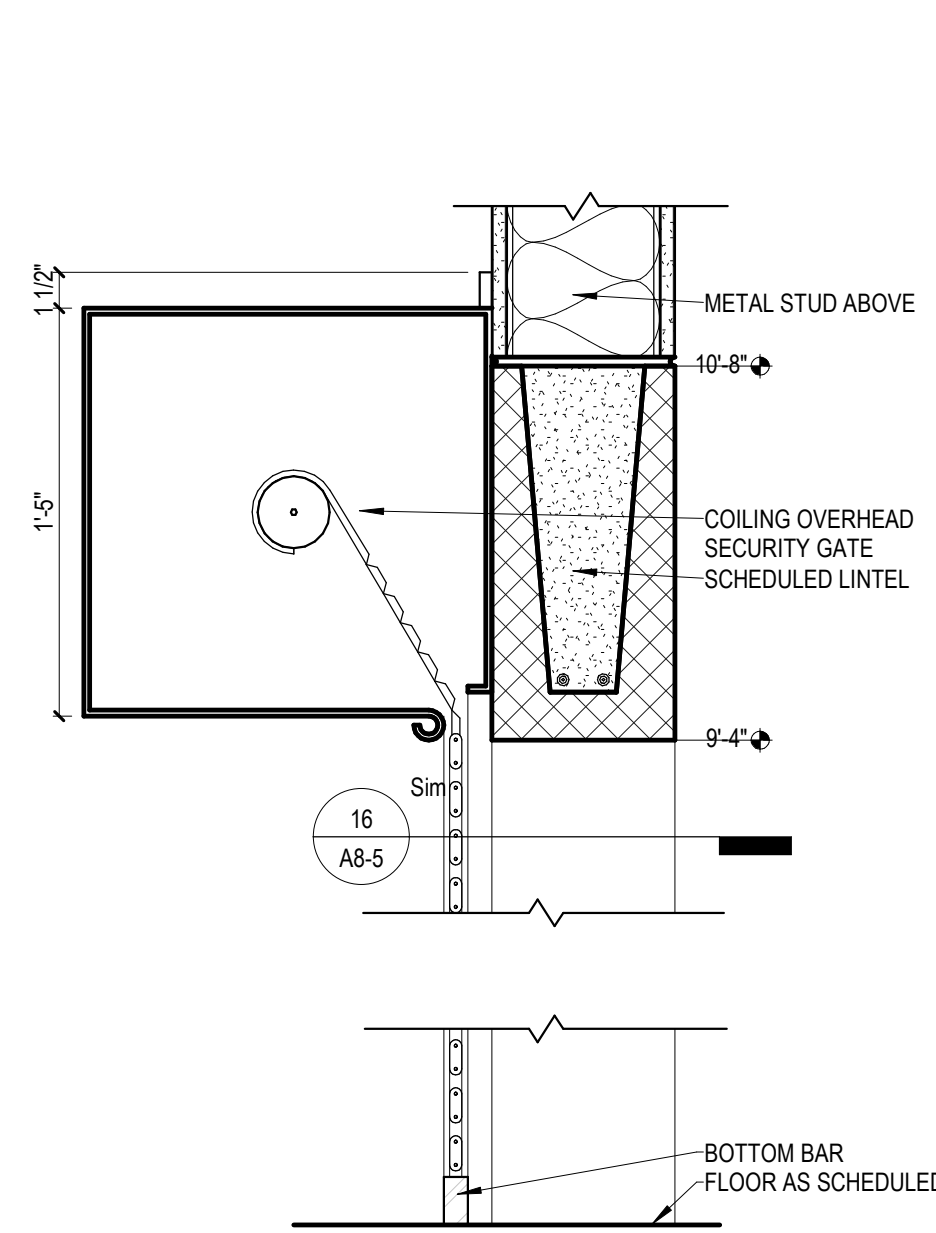
GLZ	DESCRIPTION
G-2	1/4" VISION GLASS, TEMPERED
G-2VF-1	1/4" VISION GLASS, TEMPERED WITH VF-1 WINDOW FILM
G-6	1/2" LAMINATED SECURITY GLAZING
IG-1	1" LOW-E INSULATED GLAZING
IG-4	SLOPED SKYLIGHT GLAZING, 1-5/16" LAMINATED INSULATED GLAZING UNIT
IG-7	1" LOW-E LAMINATED INSULATED GLAZING
IG-8	SLOPED SKYLIGHT GLAZING, 1-5/16" LAMINATED INSULATED GLAZING UNIT WITH WHITE TRANSLUCENT INTERLAYER
IG-9	1" LOW-E LAMINATED INSULATED GLAZING WITH GRADIENT FRIT PATTERN
TP-1	2-3/4" THERMALLY BROKEN TRANSLUCENT SANDWICH PANEL ASSEMBLY

FRAME NOTES

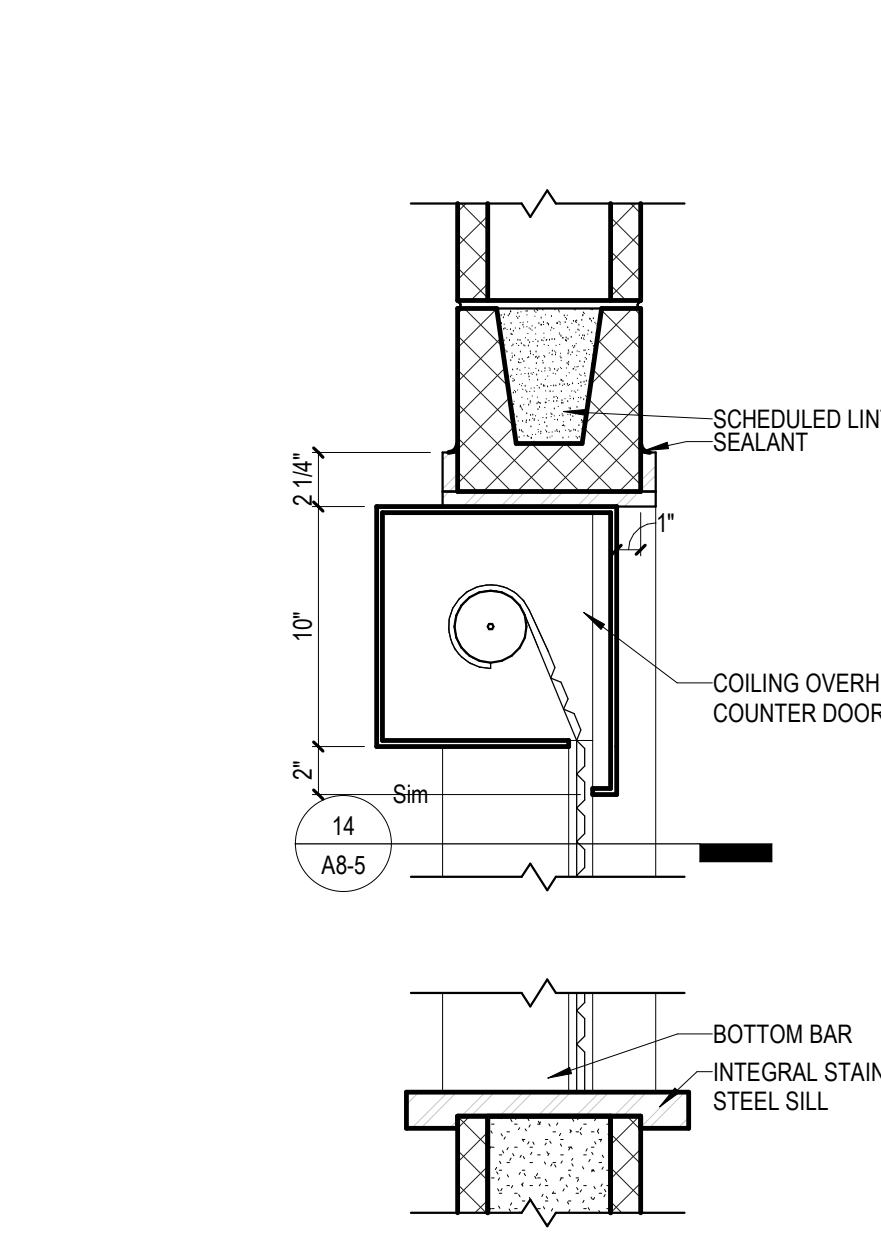
TAG	SECTION	DESCRIPTION
STF-1	08 43 13	4-1/2" DEEP THERMALLY BROKEN ALUMINUM STOREFRONT
STF-2	08 43 13	4-1/2" DEEP ALUMINUM STOREFRONT
CW-1	08 44 13	7-1/2" DEEP THERMALLY BROKEN CURTAIN WALL
CW-2	08 44 13	7-1/2" DEEP CURTAIN WALL
TPF-1	08 45 23	2-3/4" DEEP THERMALLY BROKEN ALUMINUM FRAME



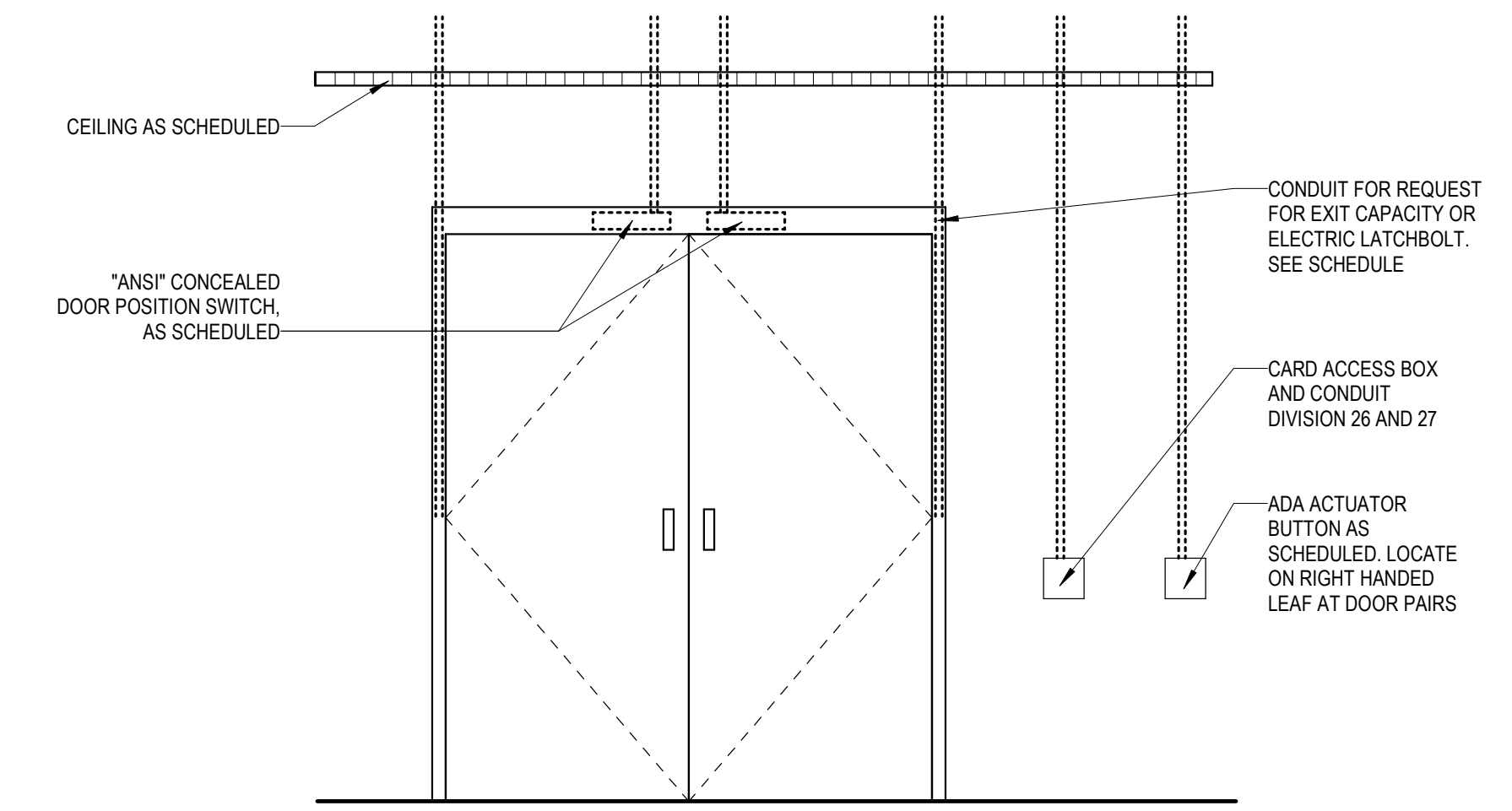
17 OVERHEAD COUNTER DOOR HEAD & SILL
SCALE: 1 1/2" = 1'-0"



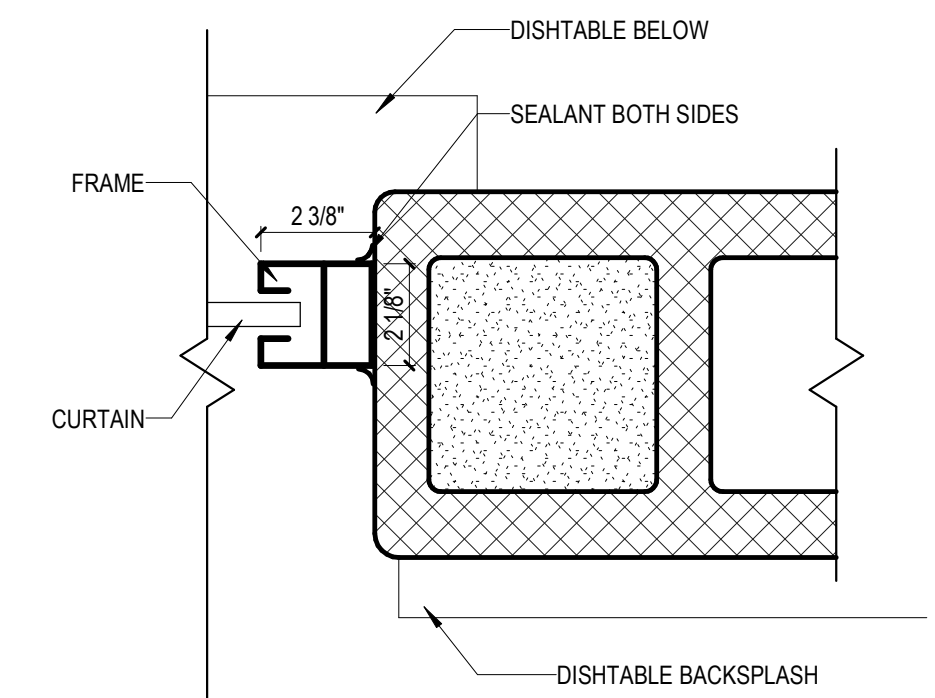
15 OVERHEAD SECURITY GRILLE HEAD & SILL
SCALE: 1 1/2" = 1'-0"



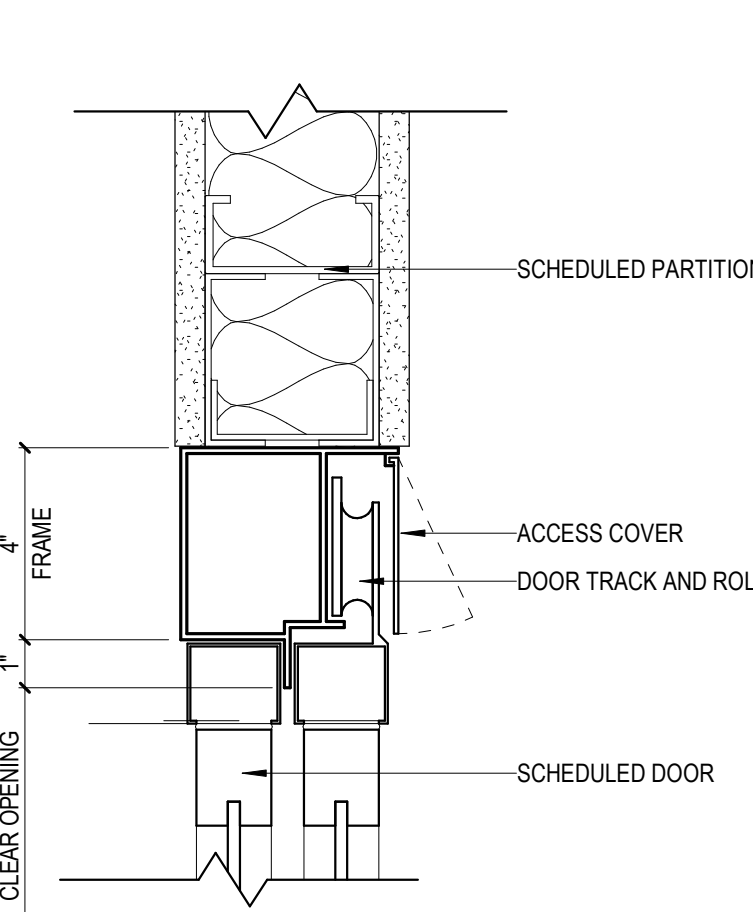
13 INTEGRAL FRAME OVERHEAD COUNTER DOOR HEAD & SILL
SCALE: 1 1/2" = 1'-0"



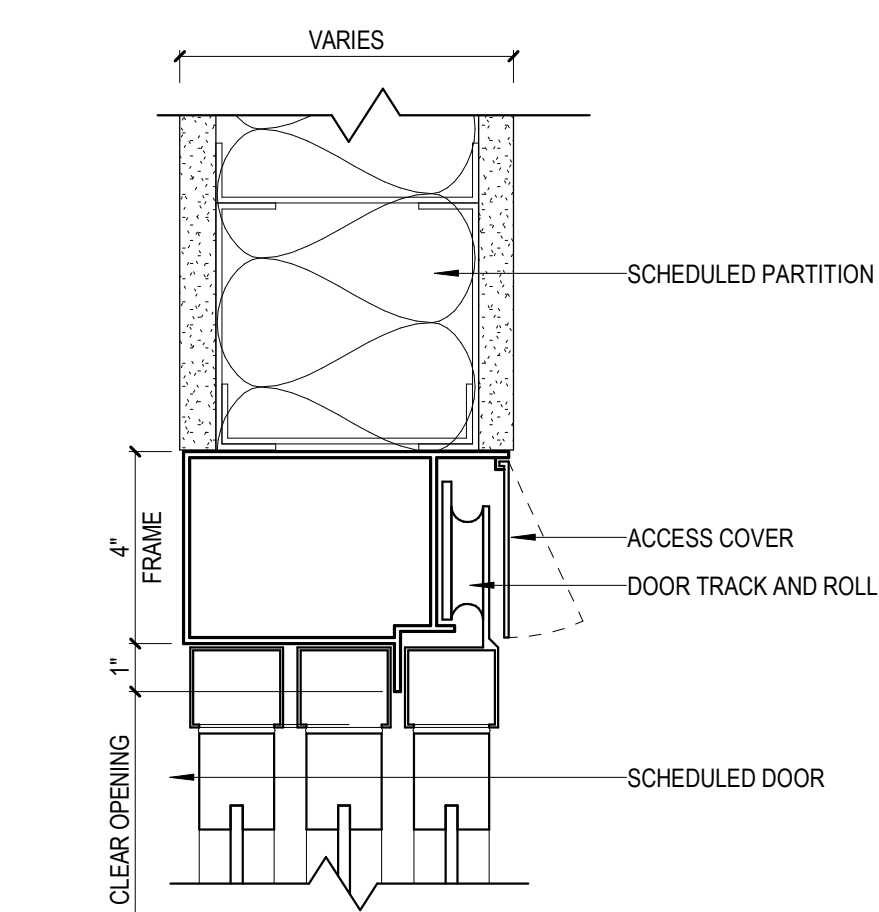
19 ELECTRICAL ROUGH IN AT DOOR FRAMES
SCALE: 1/2" = 1'-0"



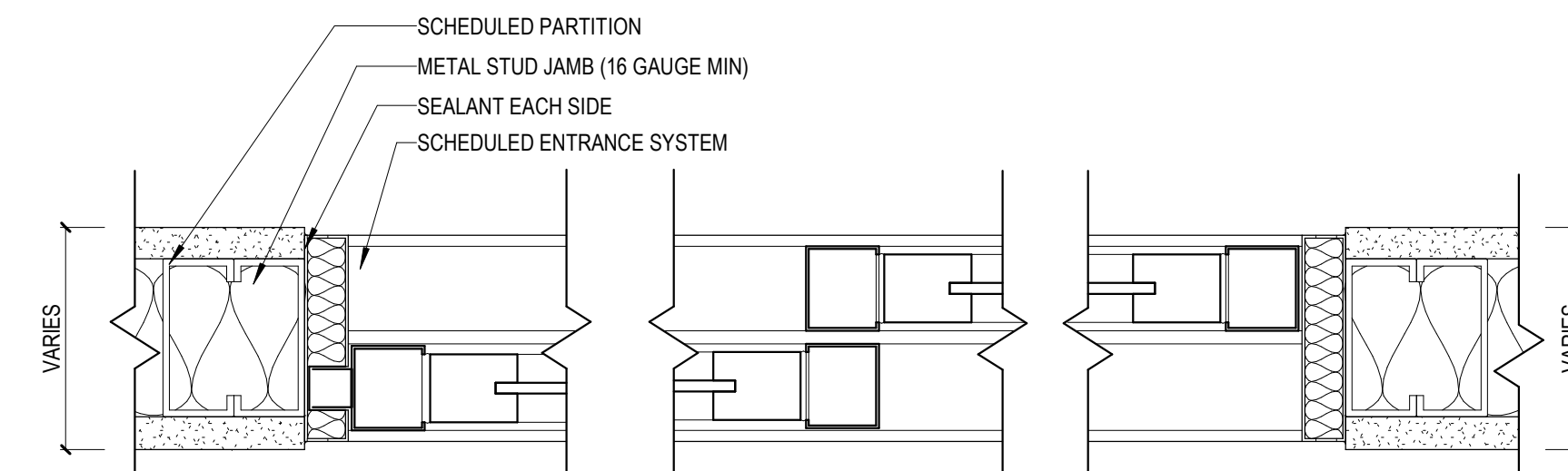
18 OVERHEAD COUNTER DOOR JAMB MOUNT
SCALE: 3" = 1'-0"



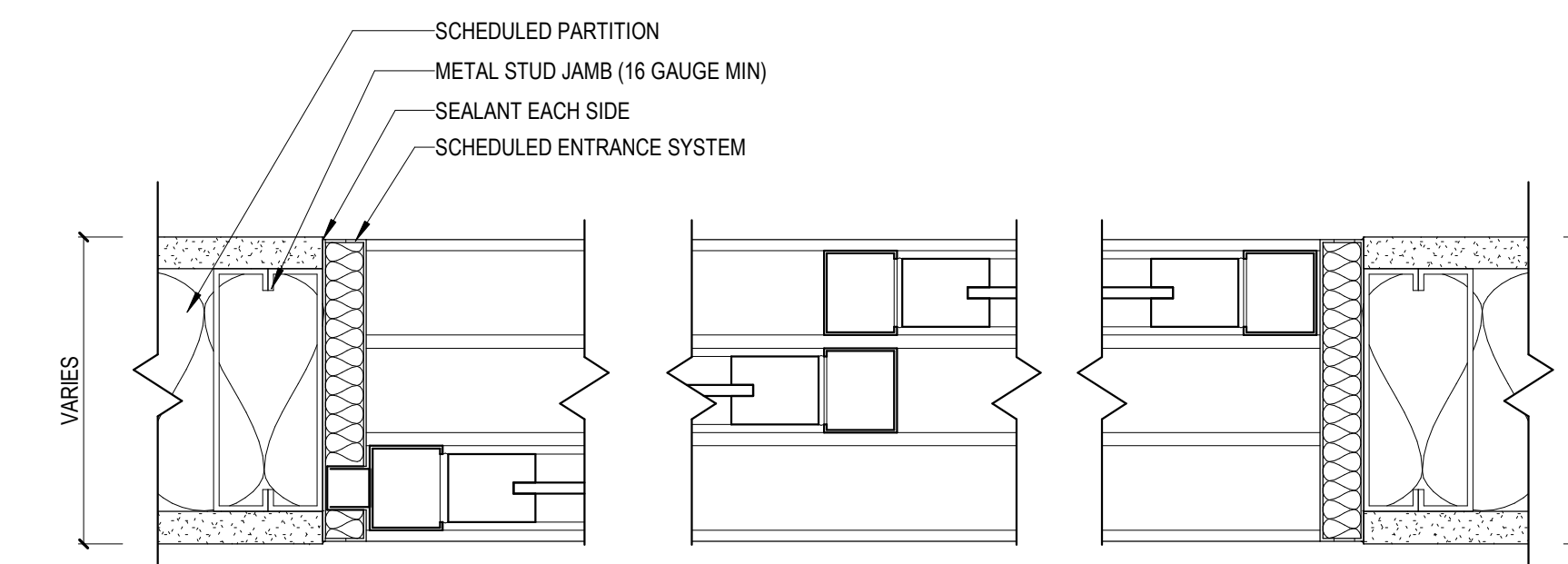
9 INSET FRAME SLIDING GLASS DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



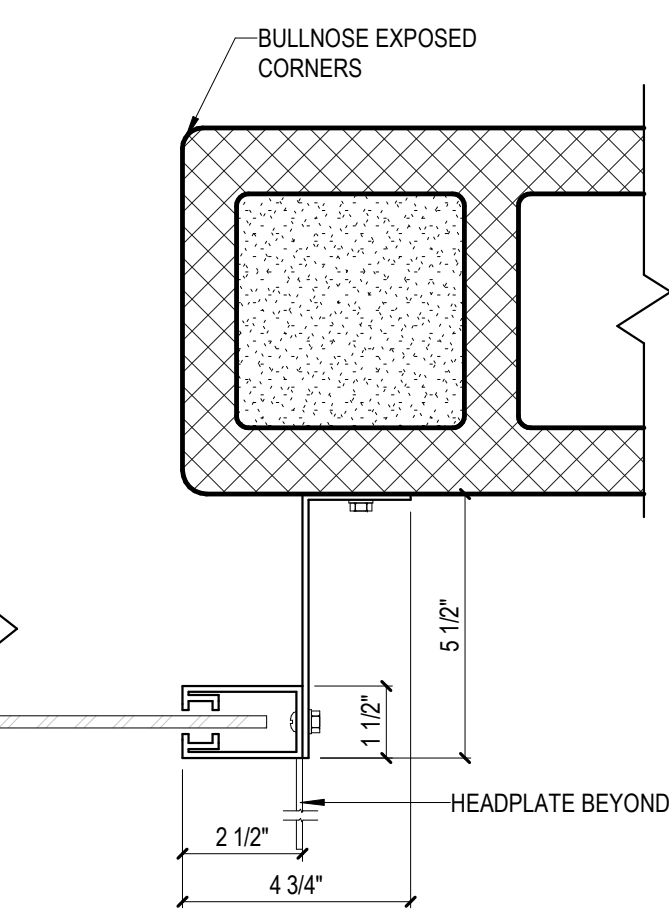
11 TELESCOPING SLIDING DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



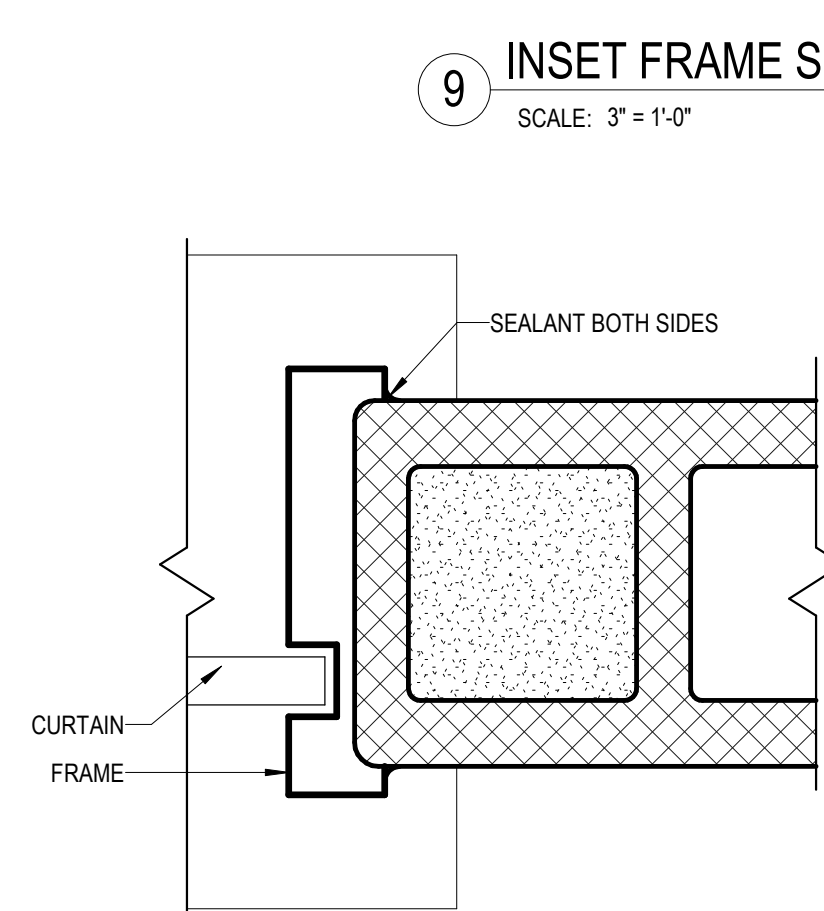
10 INSET FRAME SLIDING GLASS DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



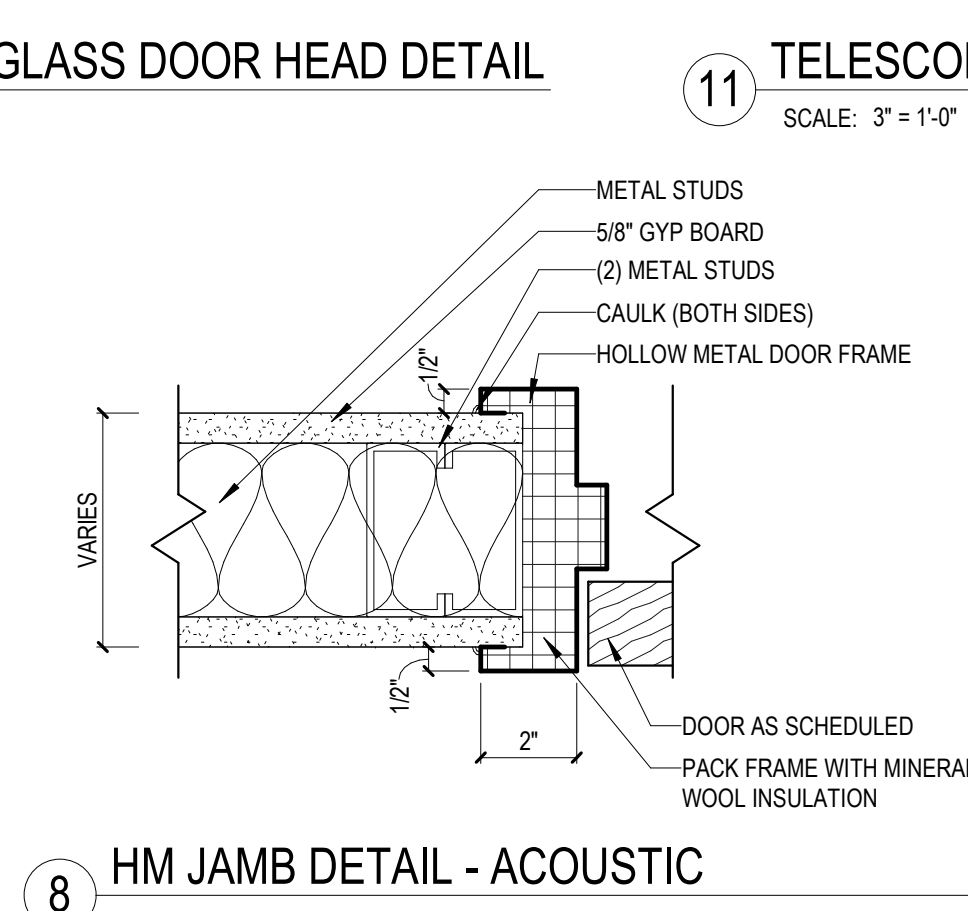
12 TELESCOPING SLIDING DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



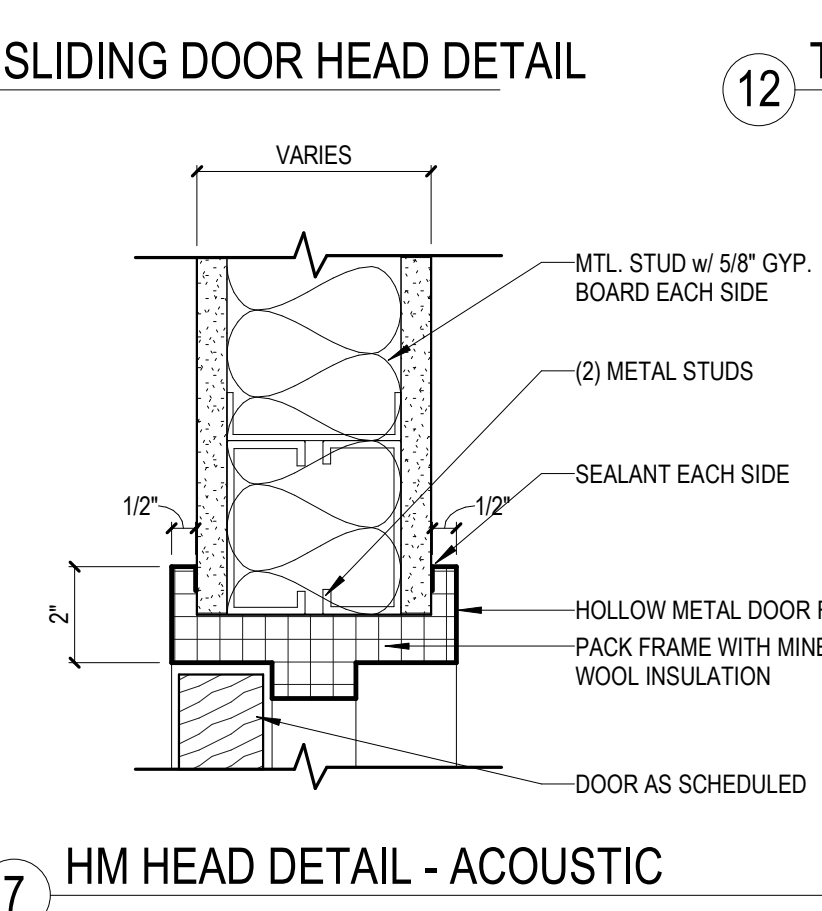
16 OVERHEAD SECURITY GRILLE JAMB - FACE MOUNT
SCALE: 3" = 1'-0"



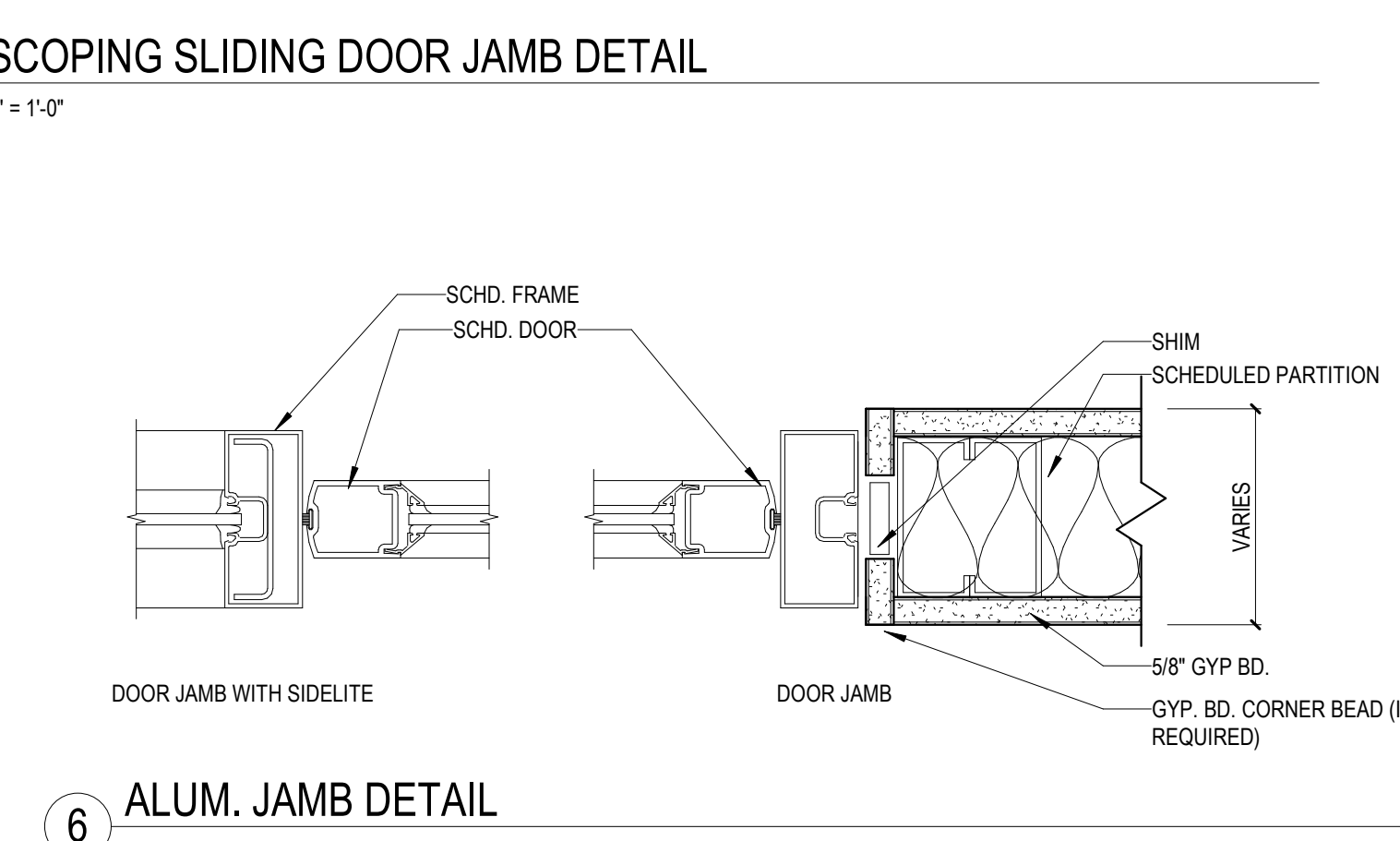
14 INTEGRAL FRAME OVERHEAD COUNTER DOOR JAMB
SCALE: 3" = 1'-0"



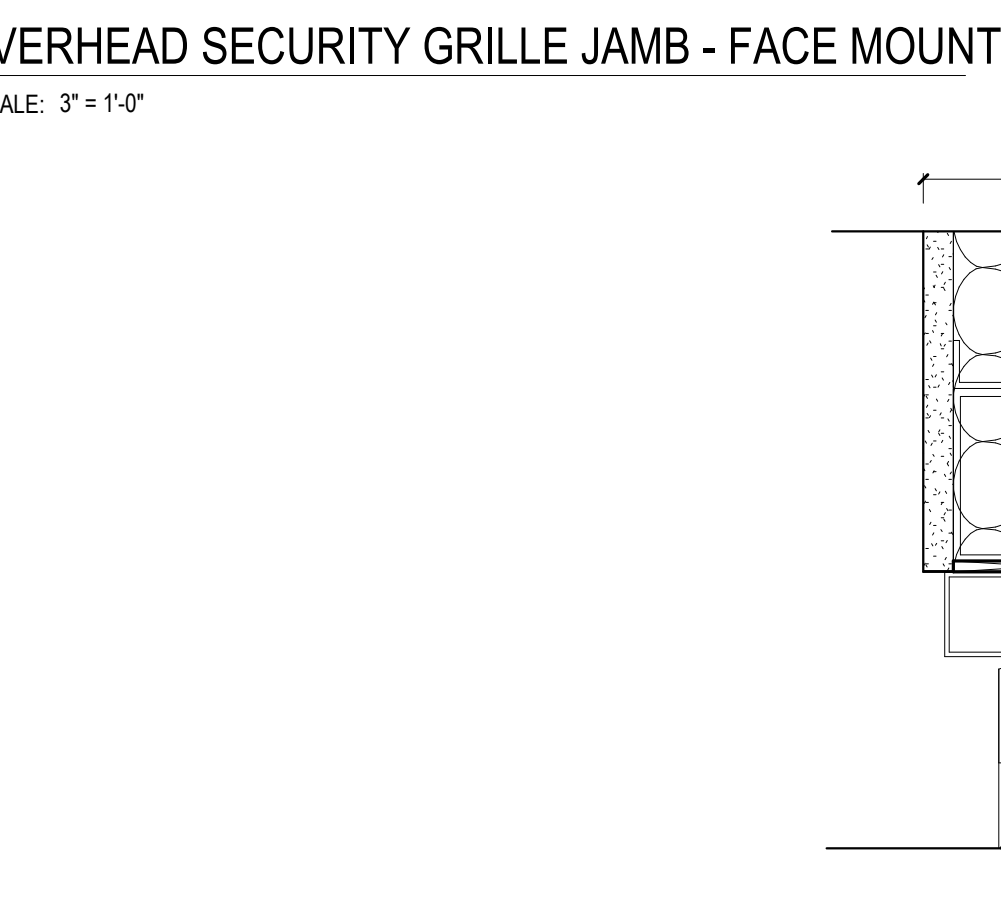
8 HM JAMB DETAIL - ACOUSTIC
SCALE: 3" = 1'-0"



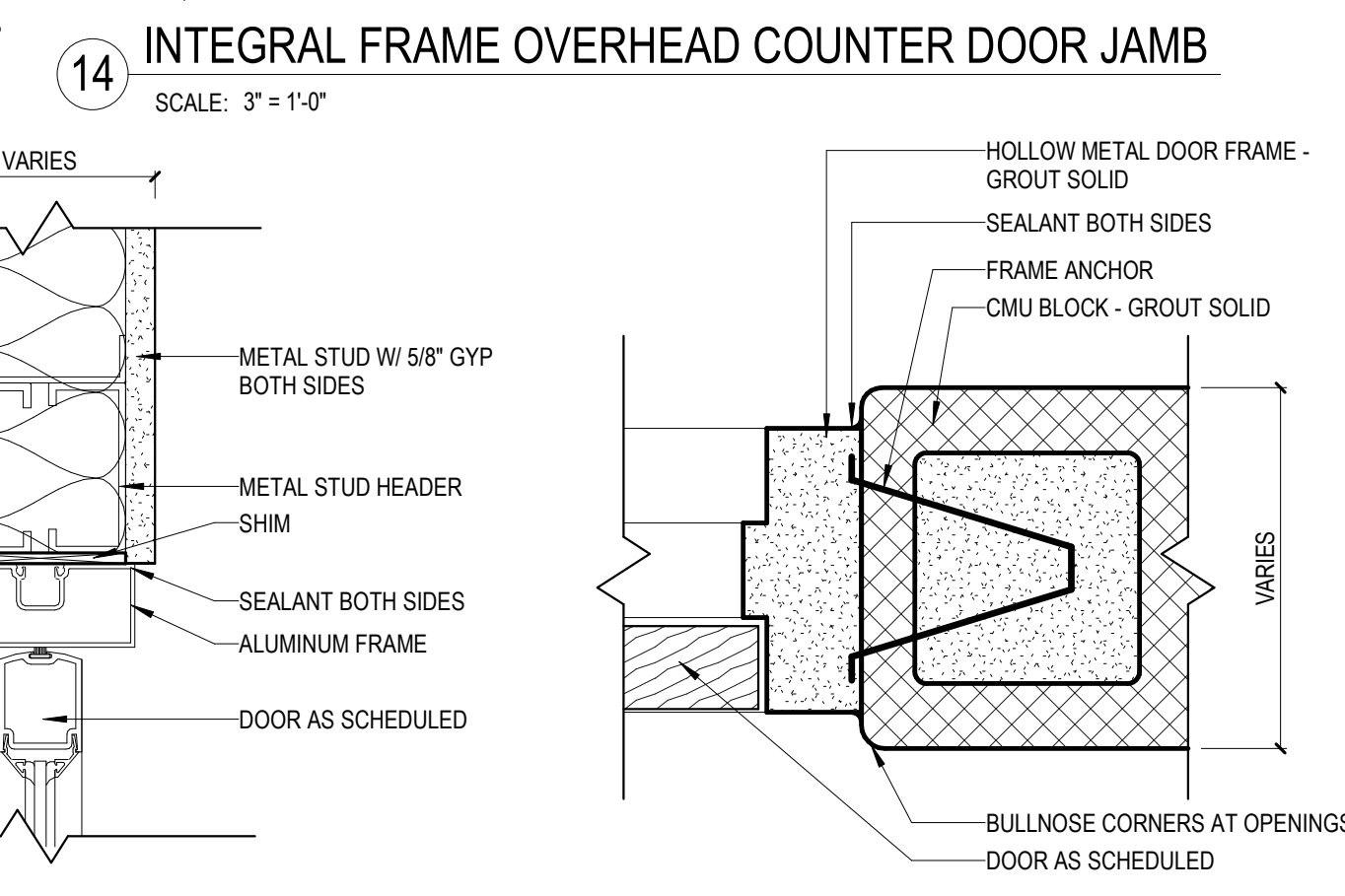
7 HM HEAD DETAIL - ACOUSTIC
SCALE: 3" = 1'-0"



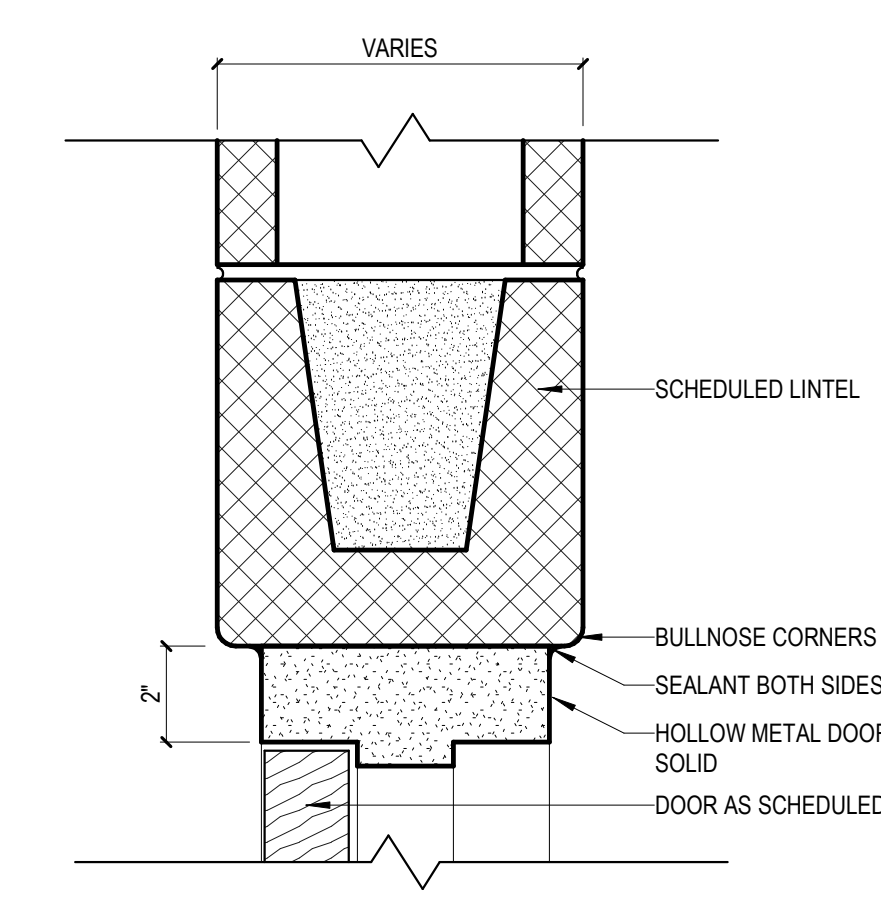
6 ALUM. JAMB DETAIL
SCALE: 3" = 1'-0"



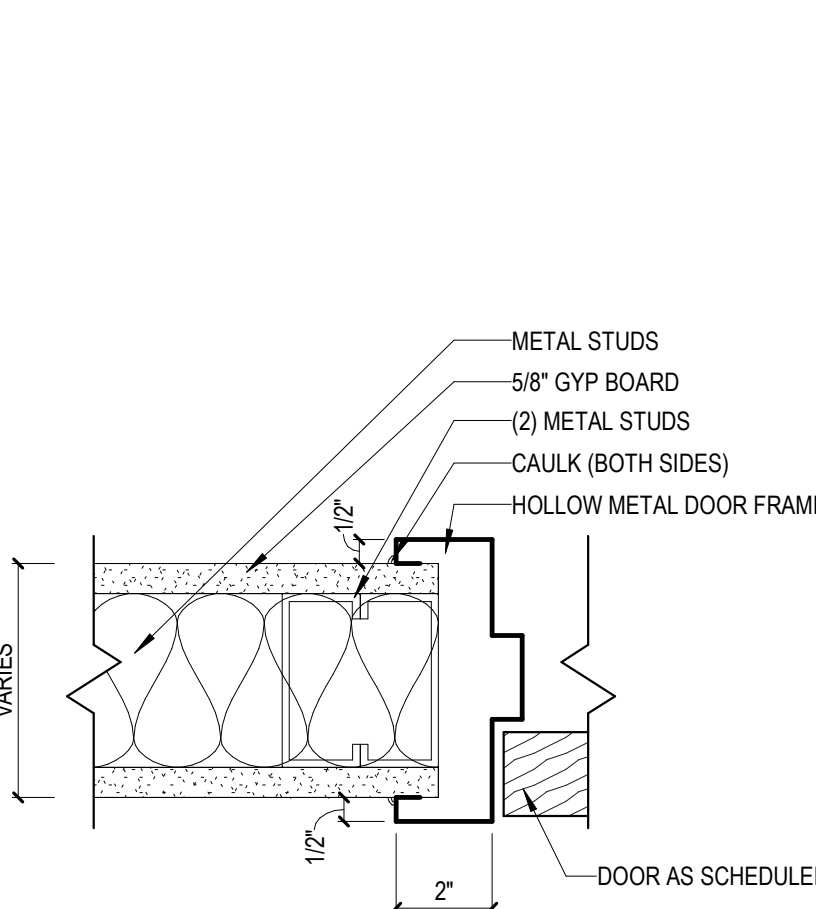
5 ALUM. HEAD DETAIL
SCALE: 3" = 1'-0"



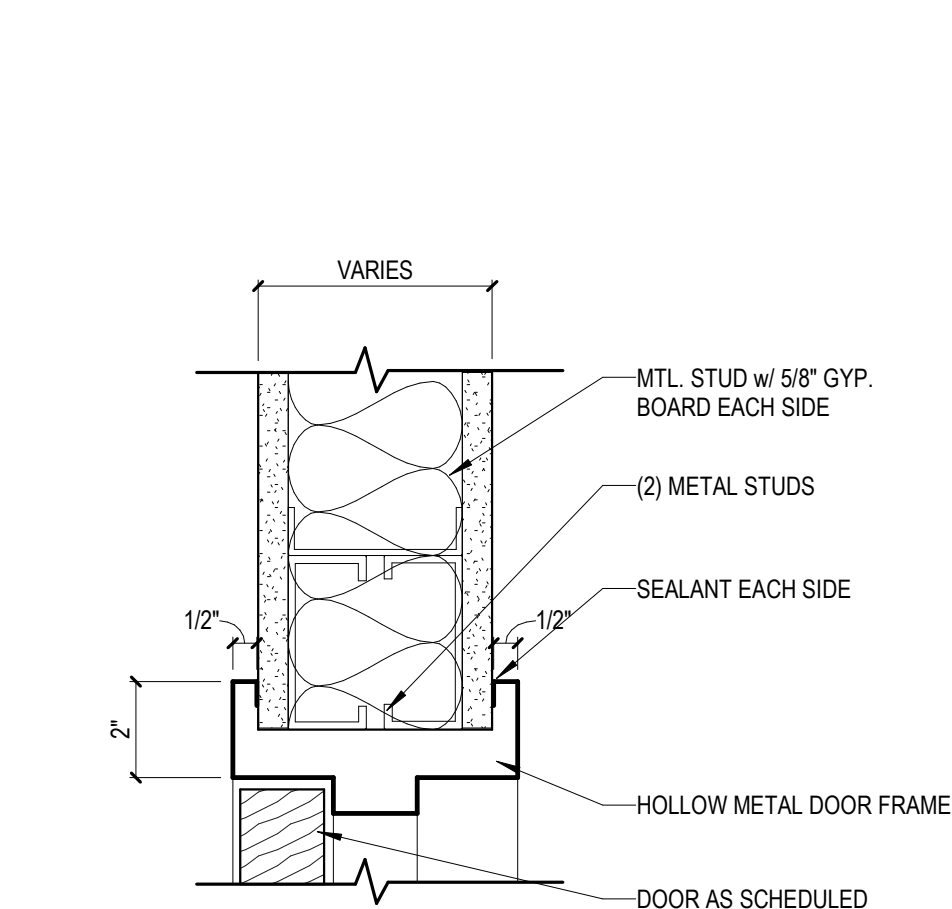
4 CMU JAMB DETAIL
SCALE: 3" = 1'-0"



3 2" HM HEAD - CMU
SCALE: 3" = 1'-0"



2 HM JAMB DETAIL
SCALE: 3" = 1'-0"

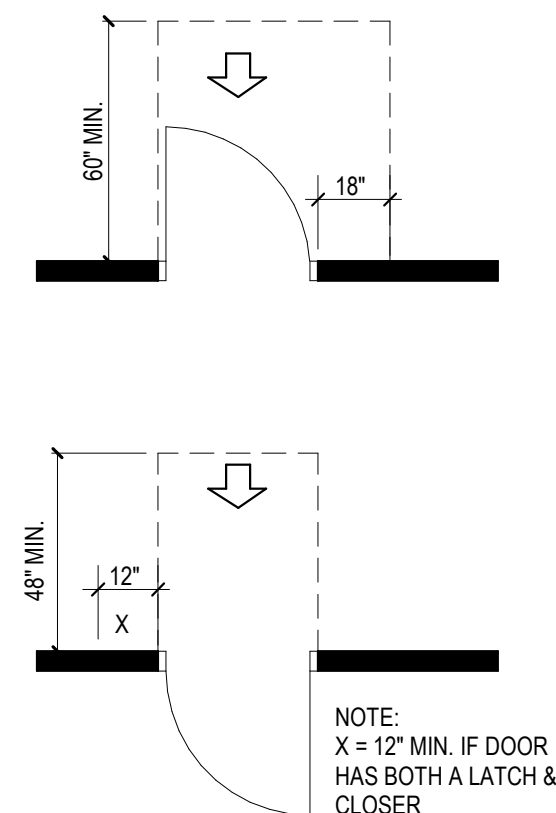


1 HM HEAD DETAIL
SCALE: 3" = 1'-0"

ADA APPROACH LEGEND

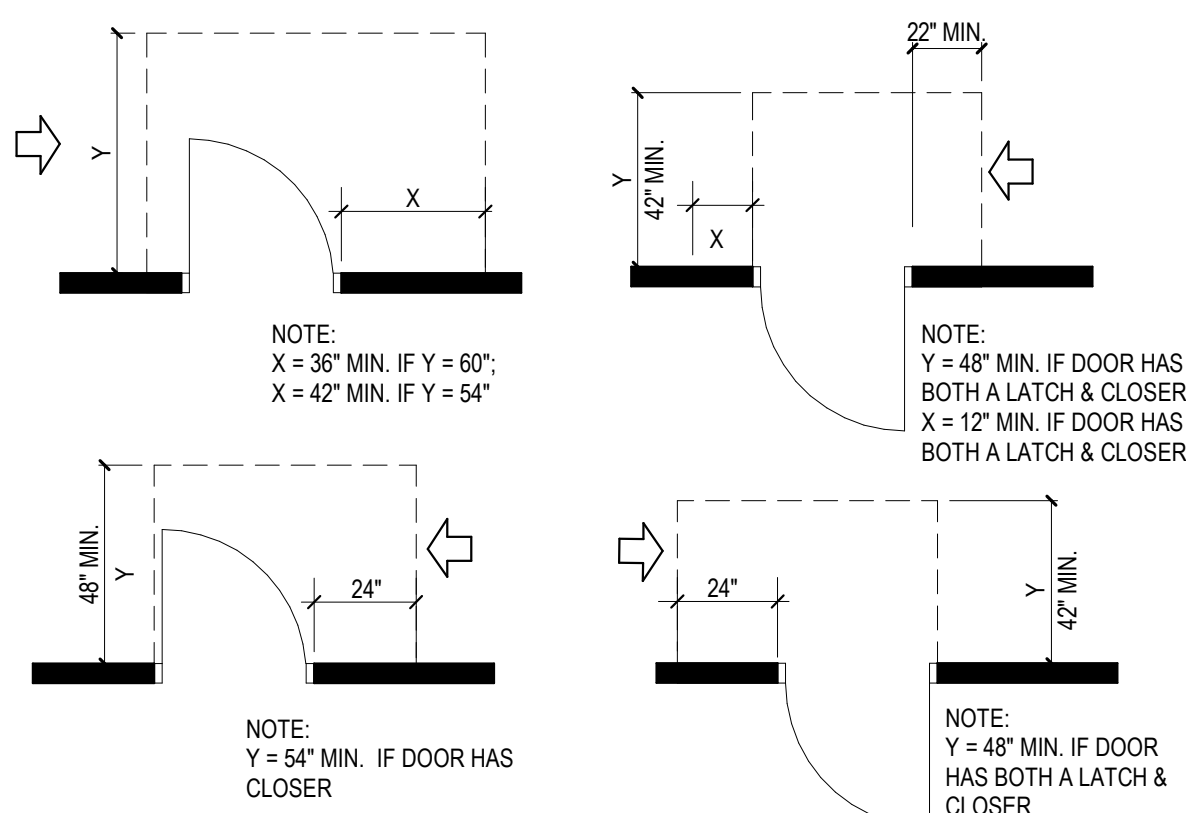
ADA ACTUATOR PUSH PLATES ARE TO BE LOCATED AT LEAST 12" OUTSIDE THE FOOTPRINT OF THE DOOR SWING, AT 38-44" A.F.F., UNLESS NOTED OTHERWISE ON DRAWINGS

FRONT APPROACHES



NOTE:
X = 12" MIN. IF DOOR HAS BOTH A LATCH & CLOSER

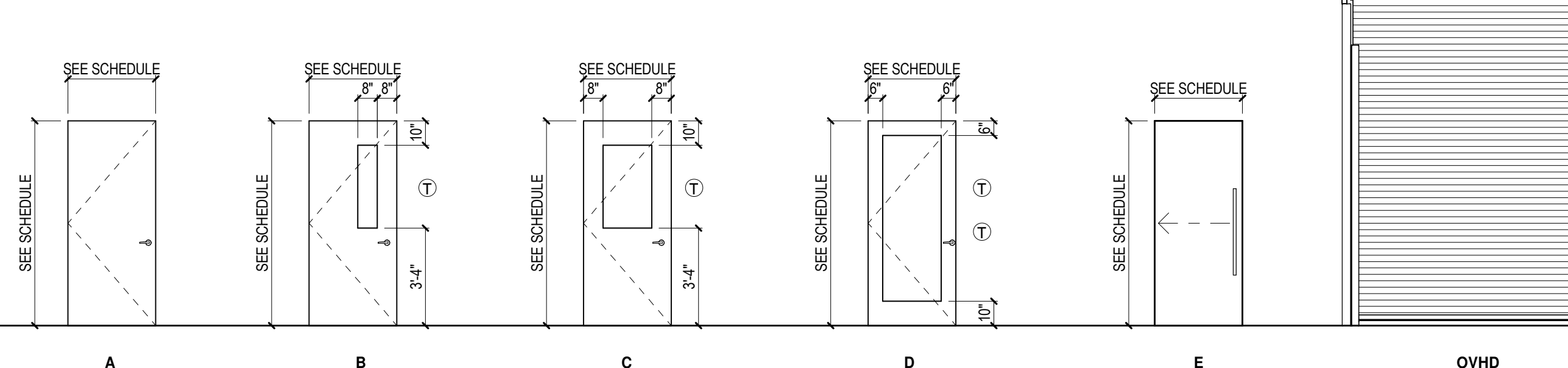
HINGE SIDE APPROACHES



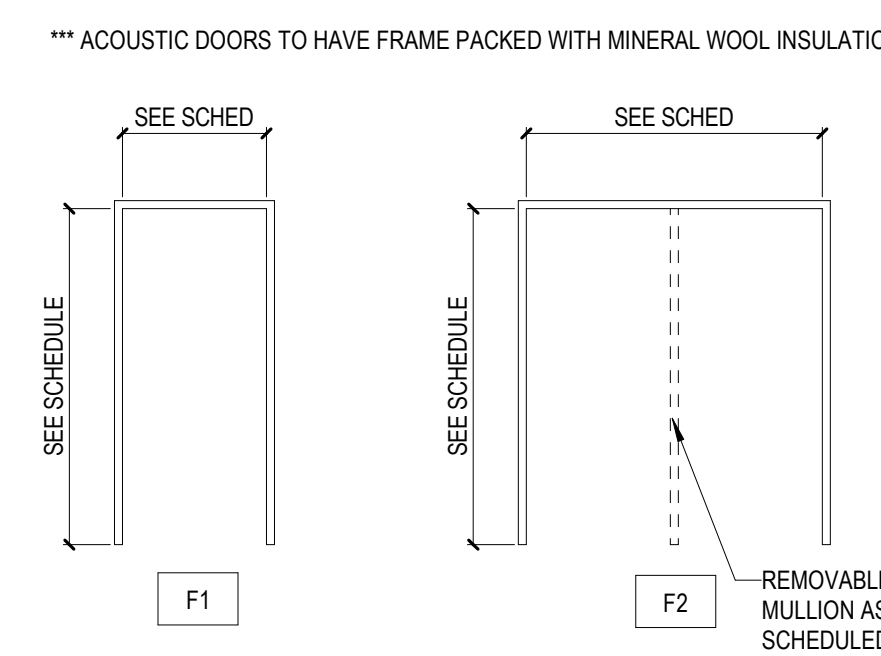
NOTE:
Y = 54" MIN. IF DOOR HAS CLOSER

NOTE:
Y = 48" MIN. IF DOOR HAS BOTH A LATCH & CLOSER

DOOR PANEL TYPES



DOOR FRAME TYPES



DOOR & WINDOW ABBREVIATIONS

SCW	=	SOLID CORE WOOD
WD	=	WOOD
GLZ	=	GLAZING
HM	=	HOLLOW METAL
ALUM	=	ALUMINUM
T	=	TEMPERED
PNT	=	PAINT
SSV	=	SAND, STAIN, AND VARNISH
PFN	=	PREFINISHED
MTL	=	METAL
ETR	=	EXISTING TO REMAIN

GLAZING SCHEDULE

G-2	1 1/4" VISION GLASS, TEMPERED
G-2VF-1	1 1/4" VISION GLASS, TEMPERED WITH VF-1 WINDOW FILM
G-6	1/2" LAMINATED SECURITY GLAZING
IG-1	1" LOW-E INSULATED GLAZING
IG-4	SLOPED SKYLIGHT GLAZING, 1-5/16" LAMINATED INSULATED GLAZING UNIT
IG-7	1" LOW-E LAMINATED INSULATED GLAZING
IG-8	SLOPED SKYLIGHT GLAZING, 1-5/16" LAMINATED INSULATED GLAZING UNIT WITH WHITE TRANSLUCENT INTERLAYER
IG-9	1" LOW-E LAMINATED INSULATED GLAZING WITH GRADIENT FRIT PATTERN
TP-1	2 3/4" THERMALLY BROKEN TRANSLUCENT SANDWICH PANEL ASSEMBLY

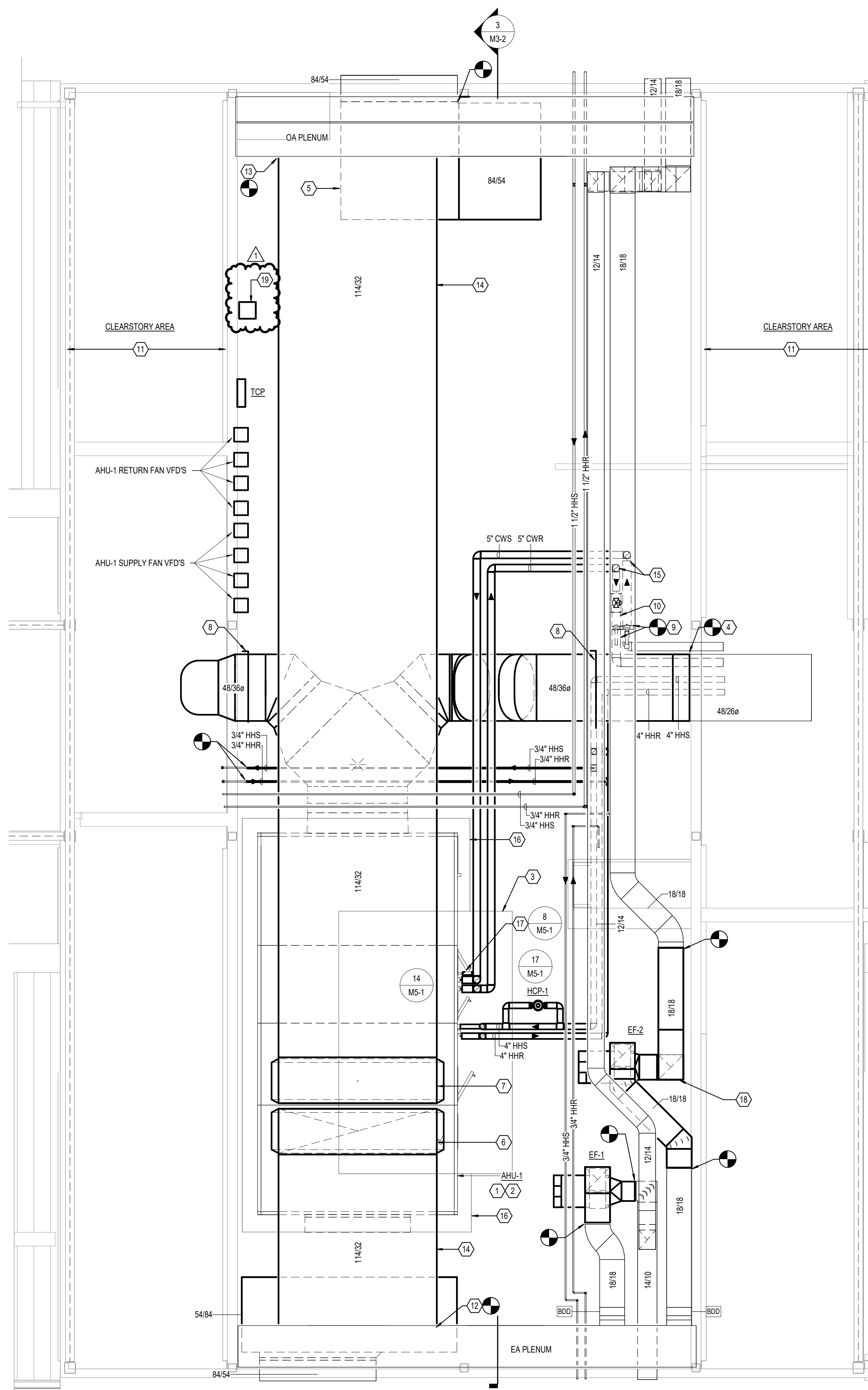
TYP. VF-1 ON FULL HEIGHT GLASS
VF-1 WINDOW FILM SPACED 3" OC. REFER TO FRAME ELEVATIONS FOR MOUNTING LOCATION

GENERAL NOTES

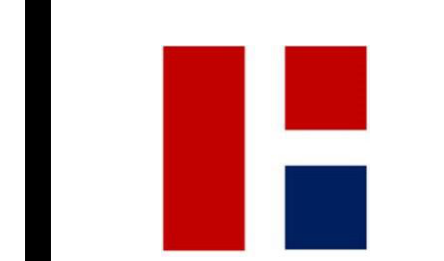
- A REFER TO SHEET M-100 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.
- C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.

SHEET KEYNOTES

- 1 NEW AIR HANDLING UNIT MUST BE INSTALLED THROUGH 9'x7' DOOR AND WINDOW SECTION THAT IS BEING DEMOLISHED ON THE FIRST FLOOR. AIR HANDLER MUST BE BROUGHT THROUGH IN SECTIONS AND BUILT BACK TOGETHER IN ROOM. REFER TO AHU DETAIL PLANS FOR AHU SECTION SPLITS.
- 2 NEW AIR HANDLING UNIT TO SIT ON 4" EQUIPMENT RAILS.
- 3 EXISTING CONCRETE PAD TO REMAIN.
- 4 CONNECT TO EXISTING SUPPLY AIR DUCT.
- 5 RE-INSTALL 84"x54" LINED ELBOW.
- 6 CONNECT TO EXHAUST AIR OPENING ON TOP OF UNIT AS REQUIRED.
- 7 CONNECT 11"x20" OUTSIDE AIR DUCT TO OUTSIDE AIR CONNECTION ON TOP OF AIR HANDLING UNIT.
- 8 VOLUME DAMPER.
- 9 CONNECT NEW CWS/CWR PIPING TO EXISTING CWS/CWR. ROUTE TO AHU COOLING COIL.
- 10 NEW 2-WAY TEMPERATURE CONTROL VALVE.
- 11 CONTRACTOR TO DECIDE WHICH SIDE IS BETTER TO LIFT NEW AIR HANDLING UNIT FROM FIRST FLOOR UP INTO MEZZANINE. USE CLEARSTORY SPACE AS INDICATED. LIFT SECTIONS OF UNIT THROUGH WALL THAT HAS BEEN REMOVED ON MEZZANINE. UNITS SHALL BE BROUGHT THROUGH ENTRANCE DOORS OF SCHOOL. CONTRACTOR TO REMOVE ANY DOOR FRAMES AS REQUIRED TO FIT UNIT THROUGH DOORS. COORDINATE WITH UNIT MANUFACTURER FOR SPLIT SIZES.
- 12 CONNECT TO EXISTING RELIEF AIR PLENUM.
- 13 CONNECT OUTSIDE AIR DUCT TO PLENUM.
- 14 ROUTE DUCTWORK AS TIGHT TO BOTTOM OF STRUCTURE AS POSSIBLE.
- 15 OFFSET PIPING UP INTO TRUSS SPACE AS REQUIRED AND ROUTE TO AIR HANDLING UNIT COOLING COIL.
- 16 PROVIDE NEW 4" CONCRETE HOUSEKEEPING PAD AS REQUIRED FOR NEW AIR HANDLING UNIT.
- 17 ROUTE 2" CONDENSATE DRAIN LINE TO FLOOR DRAIN.
- 18 ALL NEW PIPING SHALL BE INSTALLED IN TRUSS SPACES.
- 19 LOW VOLTAGE TRANSFORMER FOR PHL-5, 6, 7 & 8 ONLY. THIS TRANSFORMER TO BE ON EMERGENCY POWER.



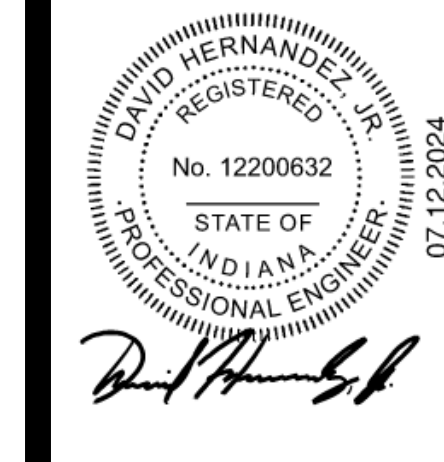
1 ENLARGED - MECHANICAL MEZZANINE - AREA B
1/4" = 1'-0"



REVISIONS

1	7/30/24	Addendum #1
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07.12.2024
HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Olio Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS



CONSTRUCTION DOCUMENTS
07.12.2024
W/J JOB NO.
23055
DRAWN BY
CME

DRAWING NAME
ENLARGED MECHANICAL PLANS

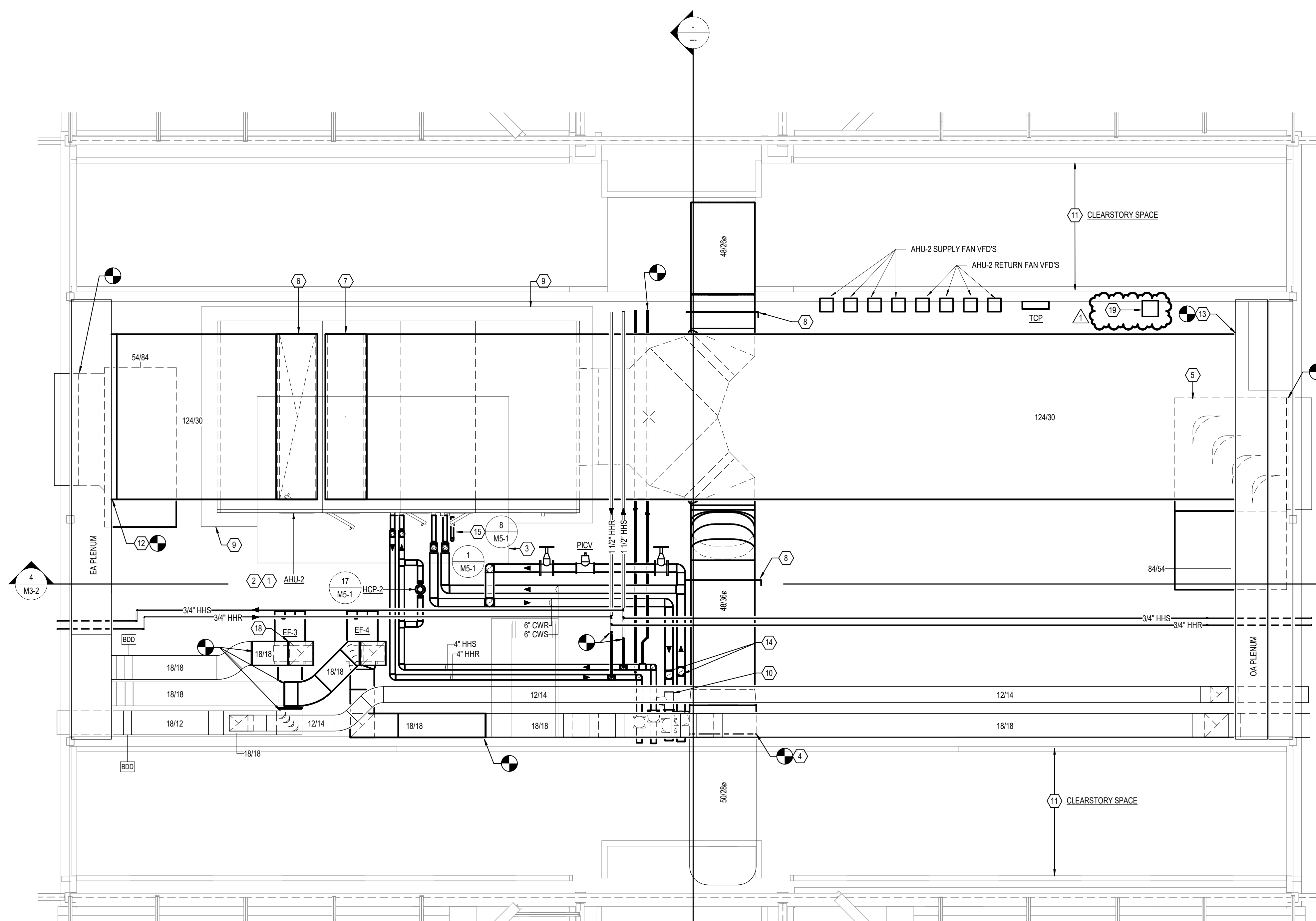
DRAWING NO.
M4-1

GENERAL NOTES

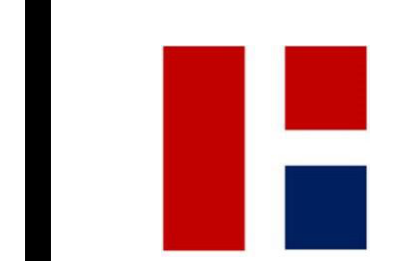
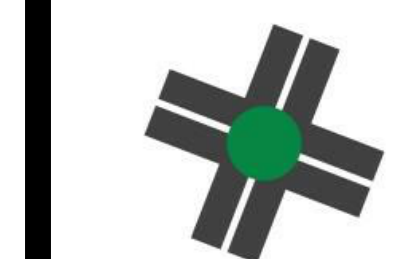
- A REFER TO SHEET M-00 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.
- C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.

SHEET KEYNOTES

- 1 NEW AIR HANDLING UNIT MUST BE INSTALLED THROUGH EXISTING OUTSIDE AIR LOUVERS. AIR HANDLER MUST BE BROUGHT THROUGH LOUVER IN SECTIONS AND BUILT BACK TOGETHER IN ROOM. REFER TO AHU DETAIL PLANS FOR AHU SECTION SPLITS.
- 2 NEW AIR HANDLING UNIT TO SIT ON 4" EQUIPMENT RAILS.
- 3 EXISTING CONCRETE PAD TO REMAIN.
- 4 CONNECT TO EXISTING SUPPLY AIR DUCT.
- 5 RE-INSTALL 84"x64" LINED ELBOW.
- 6 CONNECT TO EXHAUST AIR OPENING ON TOP OF UNIT AS REQUIRED.
- 7 CONNECT 12"x30" OUTSIDE AIR DUCT TO OUTSIDE AIR CONNECTION ON TOP OF AIR HANDLING UNIT.
- 8 VOLUME DAMPER.
- 9 PROVIDE NEW 4" CONCRETE HOUSEKEEPING PAD AS REQUIRED FOR NEW AIR HANDLING UNIT.
- 10 NEW 2-WAY TEMPERATURE CONTROL VALVE.
- 11 CONTRACTOR TO DECIDE WHICH SIDE IS BETTER TO LIFT NEW AIR HANDLING UNIT FROM FIRST FLOOR UP INTO MEZZANINE. USE CLEARSTORY SPACE AS INDICATED. LIFT SECTIONS OF UNIT THROUGH WALL THAT HAS BEEN REMOVED ON MEZZANINE. UNITS SHALL BE BROUGHT THROUGH ENTRANCE DOORS OF SCHOOL. CONTRACTOR TO REMOVE ANY DOOR FRAMES AS REQUIRED TO FIT UNIT THROUGH DOORS. COORDINATE WITH UNIT MANUFACTURER FOR SPLIT SIZES.
- 12 CONNECT TO EXISTING RELIEF AIR PLENUM.
- 13 CONNECT OUTSIDE AIR DUCT TO PLENUM.
- 14 OFFSET PIPING UP TO BOTTOM OF TRUSS AND ROUTE TO AIR HANDLING UNIT COOLING COIL.
- 15 ROUTE 2" CONDENSATE DRAIN LINE TO FLOOR DRAIN.
- 16 ALL CONDENSATE PIPING TO INCLUDE TRAPPING UNLESS OTHERWISE NOTED.
- 17 LOW VOLTAGE TRANSFORMER FOR PUMPS 1, 2, 3 & 4 ONLY. THIS TRANSFORMER TO BE ON EMERGENCY POWER.



1 ENLARGED - MECHANICAL MEZZANINE - AREA D
1/4" = 1'-0"



REVISIONS

1	7/30/24	Addendum #1
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07.12.2024
HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Chic Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS



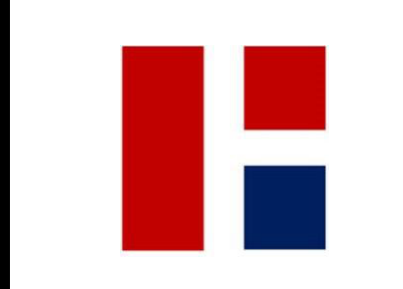
CONSTRUCTION DOCUMENTS
07.12.2024
WFL JOB NO.
23055
DRAWN BY
CME
DRAWING NAME
ENLARGED MECHANICAL PLANS
DRAWING NO.
M4-2

GENERAL NOTES

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.
- C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.

SHEET KEYNOTES

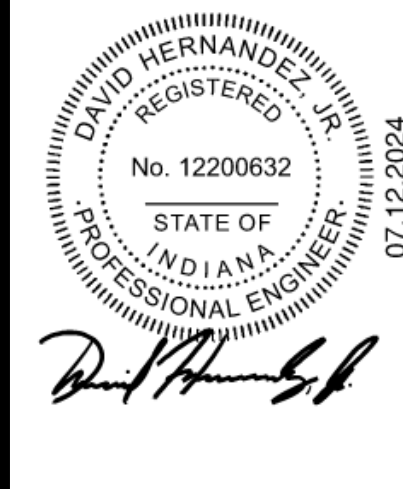
- 1 EXTEND EXISTING 4" CONCRETE PAD AS REQUIRED TO ACCOMMODATE NEW CHILLER.
- 2 EXTEND EXISTING 4" CONCRETE PAD AS REQUIRED TO ACCOMMODATE NEW PUMPS.
- 3 EXTEND EXISTING 4" CONCRETE PAD AS REQUIRED TO ACCOMMODATE NEW AIR HANDLING UNIT.
- 4 NEW 4" CONCRETE HOUSE KEEPING PAD FOR BOILER.
- 5 ALL NEW EQUIPMENT IN THIS ROOM MUST BE BROUGHT INTO BUILDING THROUGH DOUBLE DOORS IN COOLING TOWER YARD OR ADJACENT CORRIDOR.
- 6 AIR HANDLING UNIT MUST BE BROUGHT THROUGH OUTSIDE AIR LOUVER IN SECTIONS.
- 7 PROVIDE AND INSTALL NEW REFRIGERANT MONITORING SYSTEM SIMILAR TO AGS HUNGARO CONTROLLER. AGSRTFT SERIES MONITOR, AGSAB8 ALARM, AND BMS TIE-IN FOR PRE-ALARM AND HIGH-ALARM RELAYS.
- 8 COOLING TOWER CONTROL PANEL SHALL BE LOCATED INSIDE MECHANICAL ROOM.
- 9 12" DIAMETER INTAKE FOR BOILER UP THROUGH ROOF. CONFIRM SIZE REQUIRED WITH BOILER MANUFACTURER. TERMINATE WITH MANUFACTURER APPROVED INTAKE TERMINATION KIT.
- 10 12" DIAMETER DOUBLE WALL STAINLESS STEEL FLUE FOR BOILER UP THROUGH ROOF. CONFIRM SIZE REQUIRED WITH BOILER MANUFACTURER. TERMINATE WITH MANUFACTURER APPROVED TERMINATION KIT.
- 11 LAKOS SOLIDS RECOVERY VESSEL, MODEL SRV-816.
- 12 PIPING TO AHU ON MEZZANINE.
- 13 COOLING TOWER BYPASS VALVE.
- 14 COOLING TOWER CHEMICAL INJECTION STORAGE TANKS.
- 15 PATCH EXISTING HOLES THROUGH ROOF FROM REMOVAL OF BOILER INTAKE/FLUES TO MATCH CURRENT ROOF STRUCTURE.
- 16 NEW FIRE DAMPER IN DUCTWORK.
- 17 WATER FILTER MOUNTED ON FLOOR FOR CHILLED AND HEATING WATER SYSTEMS. CHILLED WATER SYSTEM FILTER LIKE HARRISCO HURRICANE FILTER MODEL HC175-50 WITH 50 MICRON, MIN. 170 SQ. FT. PLATED MEDIA FILTER. MAX 8.0 PSI P.D. FLOW THRU FILTER TO BE 154 GPM. HEATING WATER SYSTEM FILTER LIKE HARRISCO HURRICANE FILTER MODEL HC190-50 WITH 50 MICRON, MIN. 80 SQ. FT. PLATED MEDIA FILTER. MAX 6.0 PSI P.D. FLOW THRU FILTER TO BE 88 GPM.
- 18 2" SOFT COLD WATER MAKE-UP FOR COOLING TOWERS. SEE PLUMBING DRAWINGS FOR PIPING CONTINUATION.
- 19 CLEAN AND EPOXY PAINT CONDENSER WATER SLUMP PIT. PIT IS APPROXIMATELY 11'-0" L x 10'-0" W x 11'-0" D.
- 20 NEW LOCATION OF 4" SLUMP VENT. TERMINATE OUTSIDE WITH ELBOW DOWN AND WIRE MESH SCREEN.
- 21 ROUTE NEW OVERFLOW DRAIN DOWN IN PIT WHERE OLD VENT PIPE WAS LOCATED. EXPAND EXISTING HOLE IN PIT LID AS REQUIRED FOR LARGER PIPE.
- 22 ROUTE NEW CONDENSER WATER PIPE DOWN IN PIT AS REQUIRED.
- 23 1" SOFT COLD WATER MAKE-UP. SEE PLUMBING DRAWINGS FOR PIPING CONTINUATION.
- 24 3" PVC WATER HEATER FLUE AND INTAKE UP THROUGH ROOF. VERIFY ALL FLUE AND INTAKE REQUIREMENTS WITH WATER HEATER MANUFACTURER. TERMINATE INTAKE WITH GOOSENECK AT 3'-0" ABOVE ROOF. TERMINATE FLUE WITH MANUFACTURER APPROVED FLUE VENT CAP AS REQUIRED.
- 25 PROVIDE AND INSTALL NEW MOTORIZED DAMPER TO BE INTERLOCKED WITH THE OPERATION OF VF-2.
- 26 EXHAUST AIR DUCT UP THROUGH ROOF TO GRAVITY HOOD.
- 27 SUPPLY AIR DUCT UP THROUGH ROOF TO GRAVITY HOOD.
- 28 RETURN AIR DUCT DOWN TO RETURN AIR PLENUM OFF BACK OF UNIT.
- 29 RETURN AIR PLENUM AS REQUIRED.
- 30 ROUTE 1-1/2" CONDENSATE DRAIN FOR FLOOR DRAIN.
- 31 ROUTE 2" CONDENSATE DRAIN LINE TO FLOOR DRAIN.
- 32 SUPPORT CONDENSER WATER PIPING FROM COOLING TOWER SUPPORT STEEL.
- 33 PROVIDE AND INSTALL NEW SLUMP PIT ACCESS DOOR. DOOR SHALL BE POLYMER CORROSION RESISTANT AND WALKABLE.
- 34 FLOW METER ALLOW FOR UPSTREAM AND DOWNSTREAM STRAIGHT PIPE LENGTH REQUIRED BY FLOW METER MANUFACTURER.
- 35 BUTTERFLY VALVE, TYPICAL.
- 36 DISCHARGE ISOLATION VALVE, CHECK VALVE AND PRESSURE GAUGE ON WATER HEATER FLUE AND INTAKE PIPE, TYPICAL.
- 37 LOW VOLTAGE CONTROLS TRANSFORMER FOR AHU-3 ONLY. THIS TRANSFORMER TO BE ON EMERGENCY POWER.
- 38 LOW VOLTAGE CONTROLS TRANSFORMER FOR AHU-4 ONLY. THIS TRANSFORMER TO BE ON EMERGENCY POWER.
- 39 LOW VOLTAGE CONTROLS TRANSFORMER FOR AHU-5 ONLY. THIS TRANSFORMER TO BE ON EMERGENCY POWER.



REVISIONS

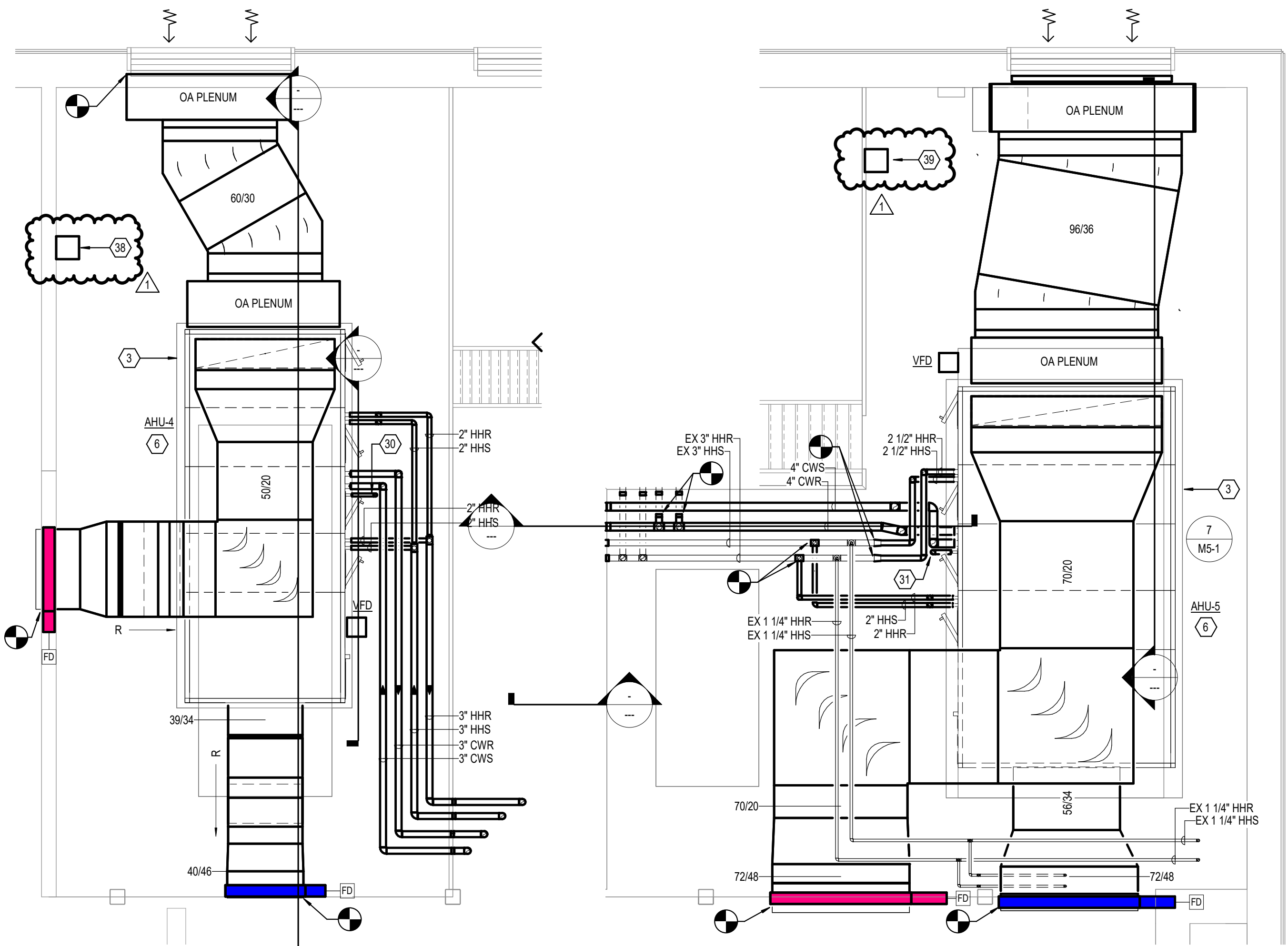
1	7/30/24 Addendum #1
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07.12.2024
 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Old Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS



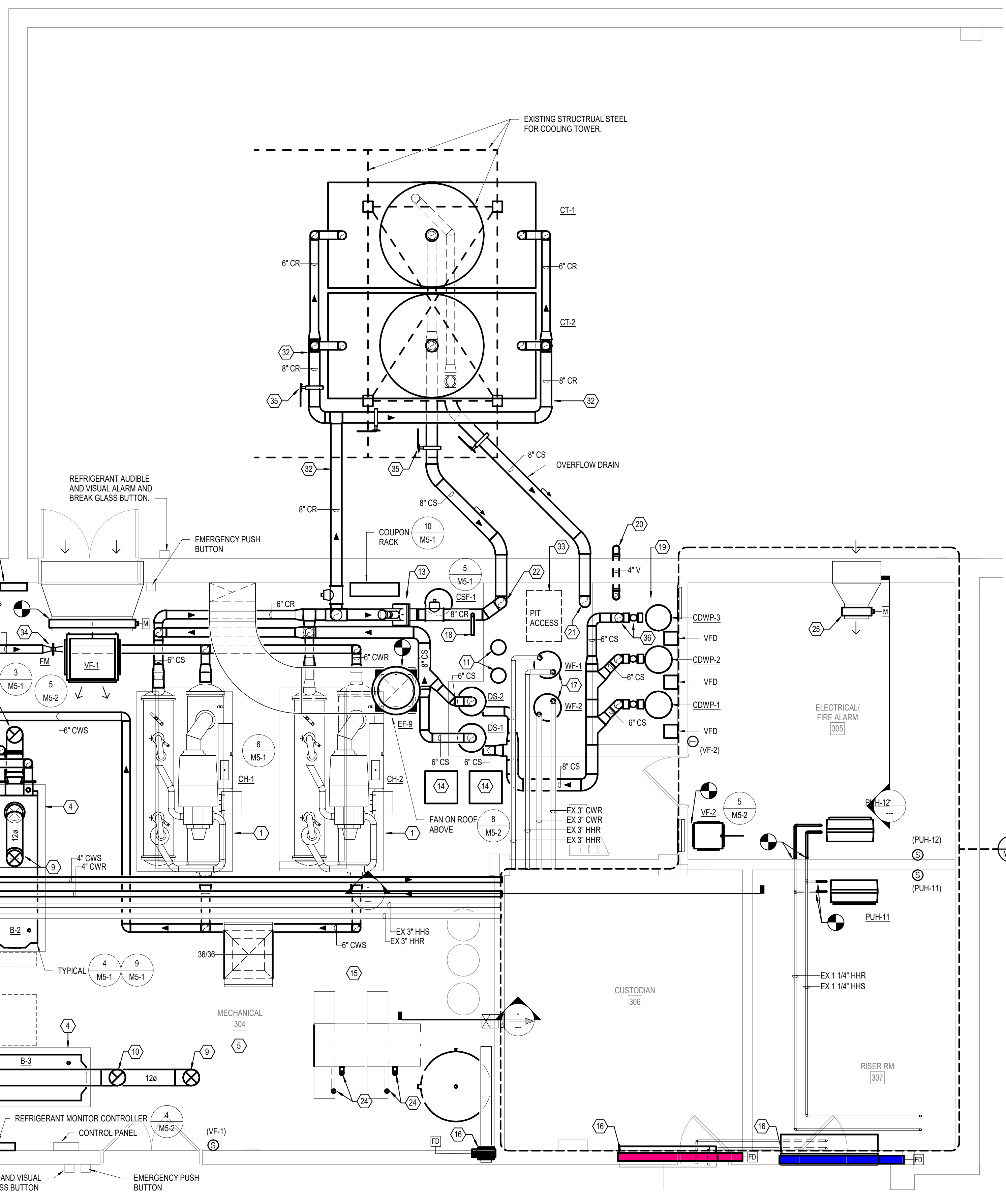
CONSTRUCTION DOCUMENTS
 07.12.2024
 WITH JOB NO.
 23055
 DRAWN BY
 CME
 DRAWING NAME
ENLARGED MECHANICAL PLANS

DRAWING NO.
M4-3

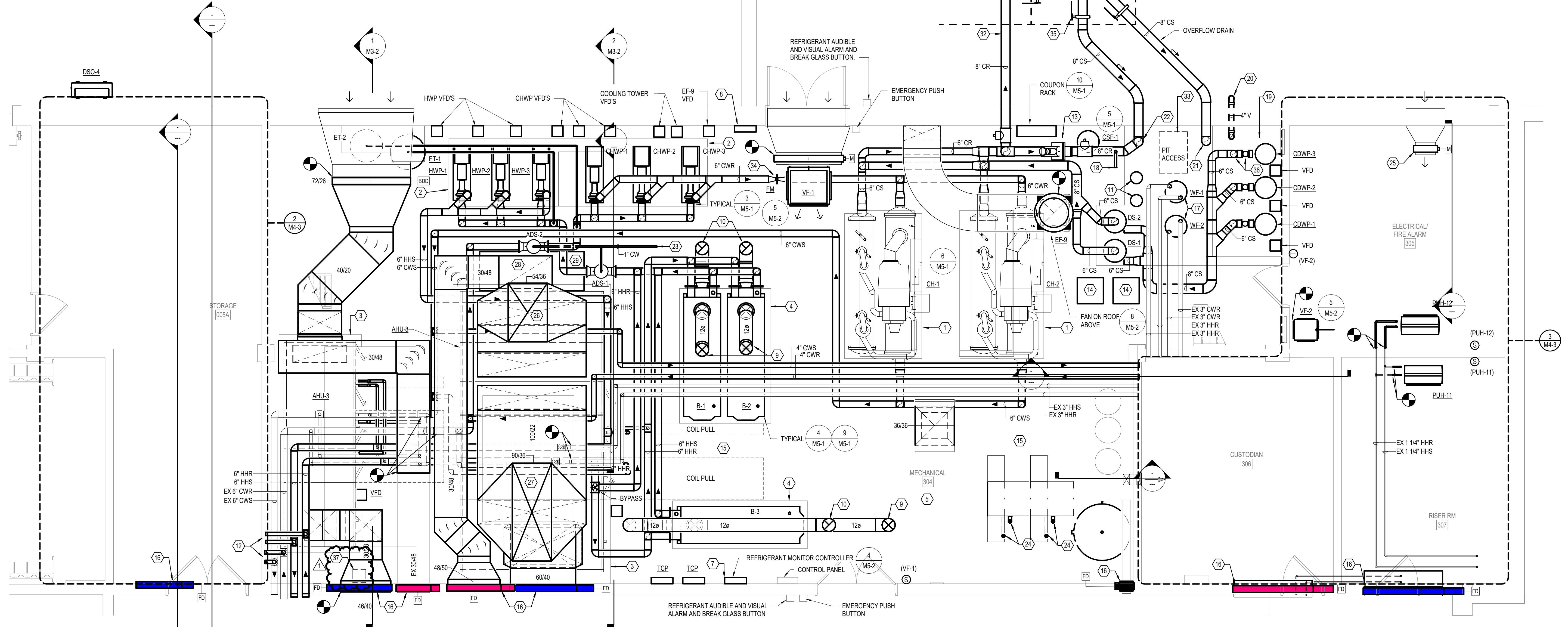


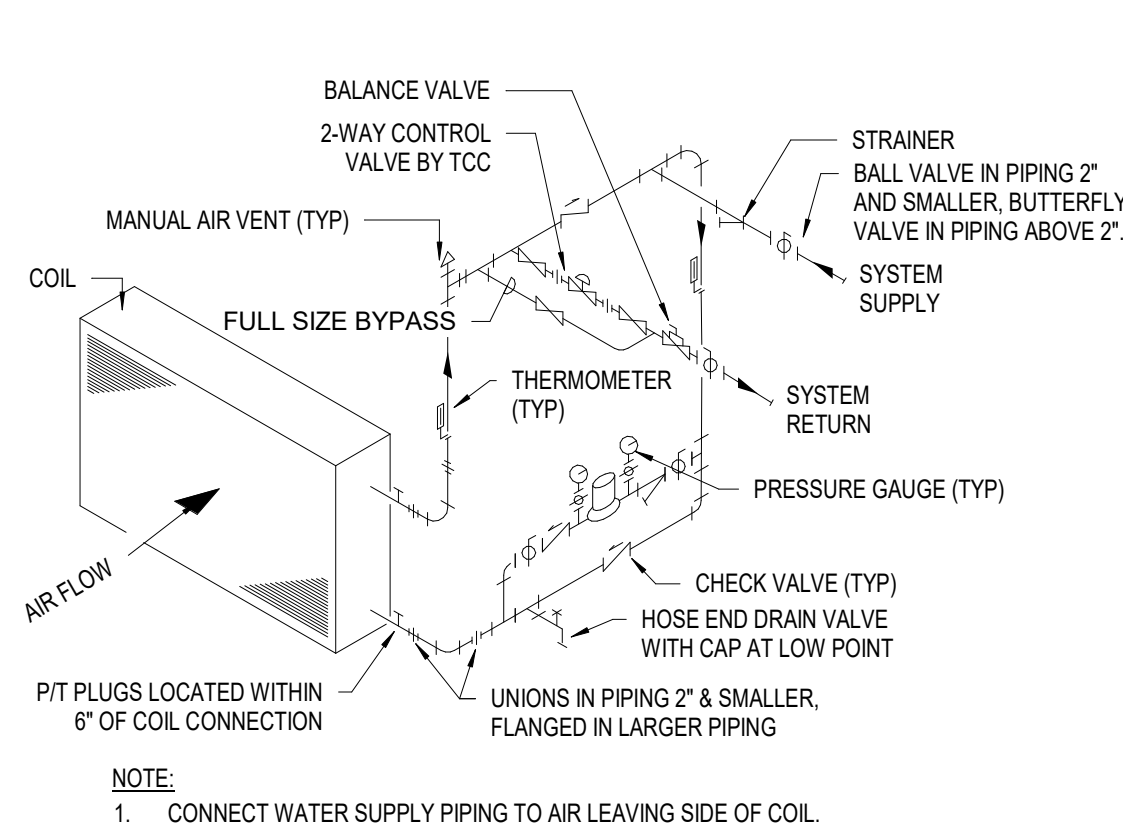
MECHANICAL ROOM MEZZANINE A
2 MECHANICAL PLAN
 1/4" = 1'-0"

MECHANICAL ROOM MEZZANINE B
3 MECHANICAL PLAN
 1/4" = 1'-0"

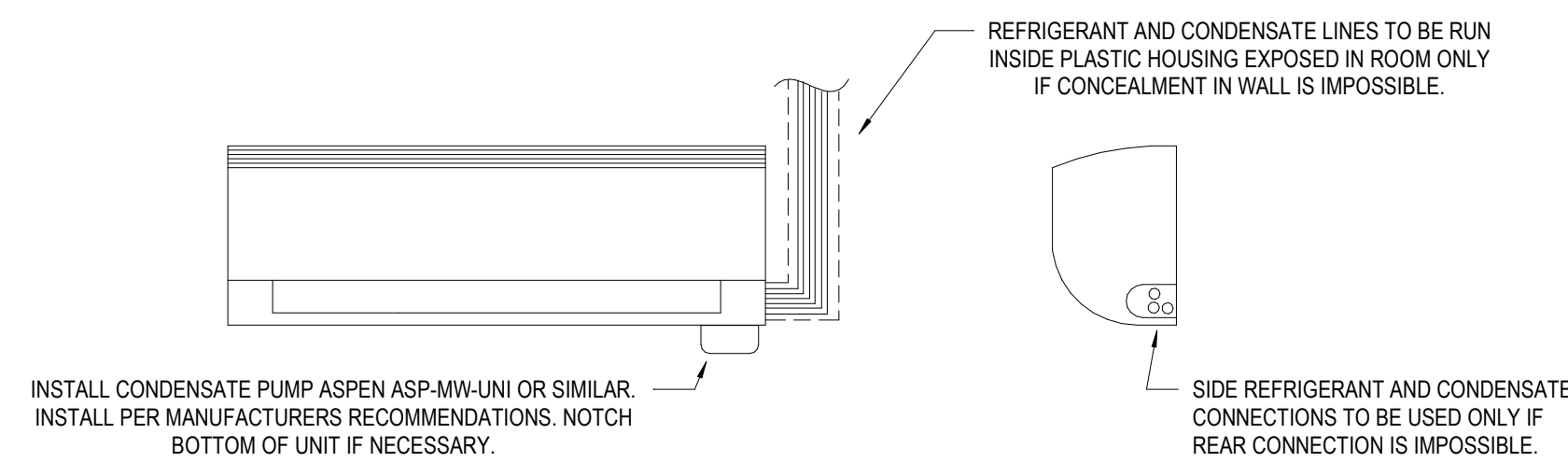


1 ENLARGED - MECHANICAL ROOM PLAN
 1/4" = 1'-0"





17 PUMPED COIL PIPING DETAIL
NOT TO SCALE



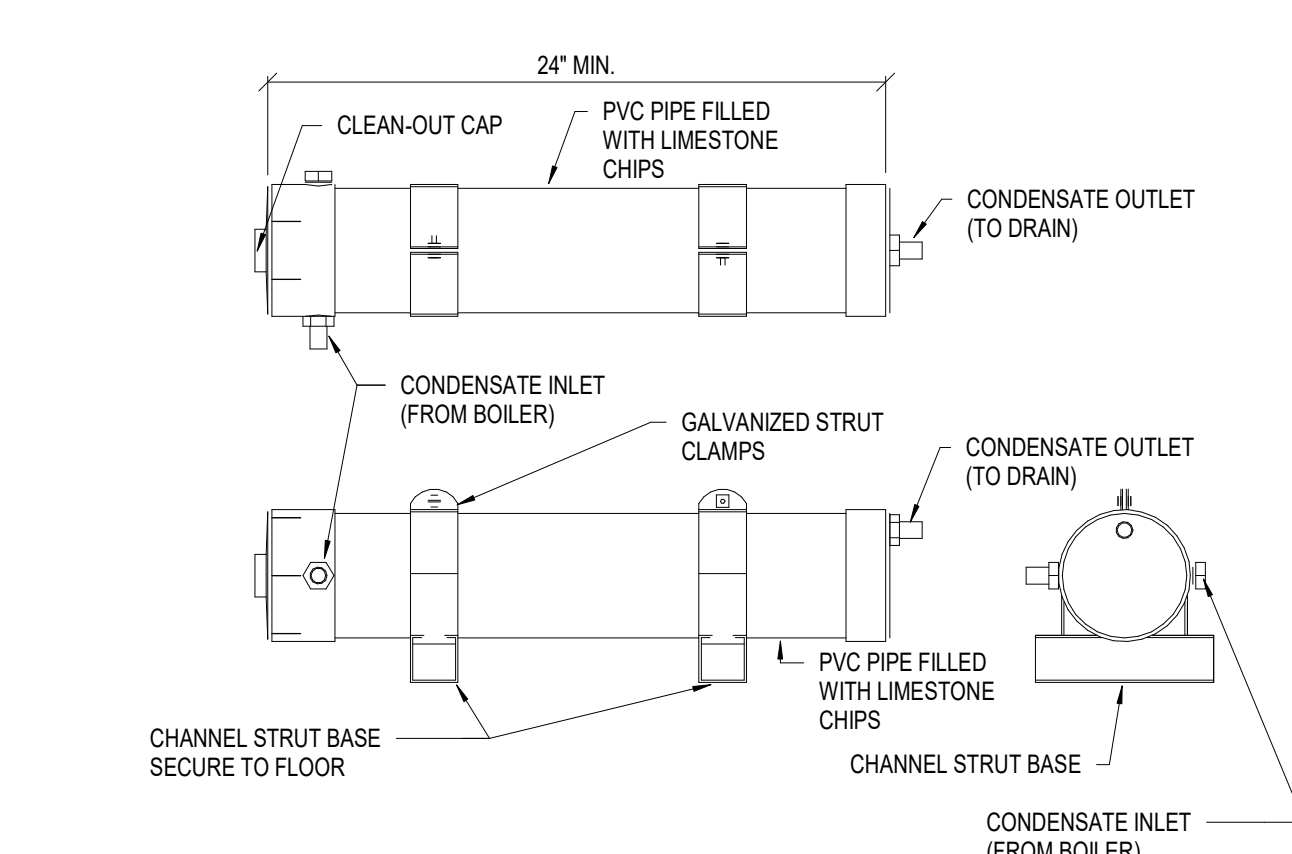
13 MINI-SPLIT WALL CASSETTE MOUNTING DETAIL
NOT TO SCALE

REFRIGERANT AND CONDENSATE LINES TO BE RUN INSIDE PLASTIC HOUSING EXPOSED IN ROOM ONLY IF CONCEALMENT IN WALL IS IMPOSSIBLE.

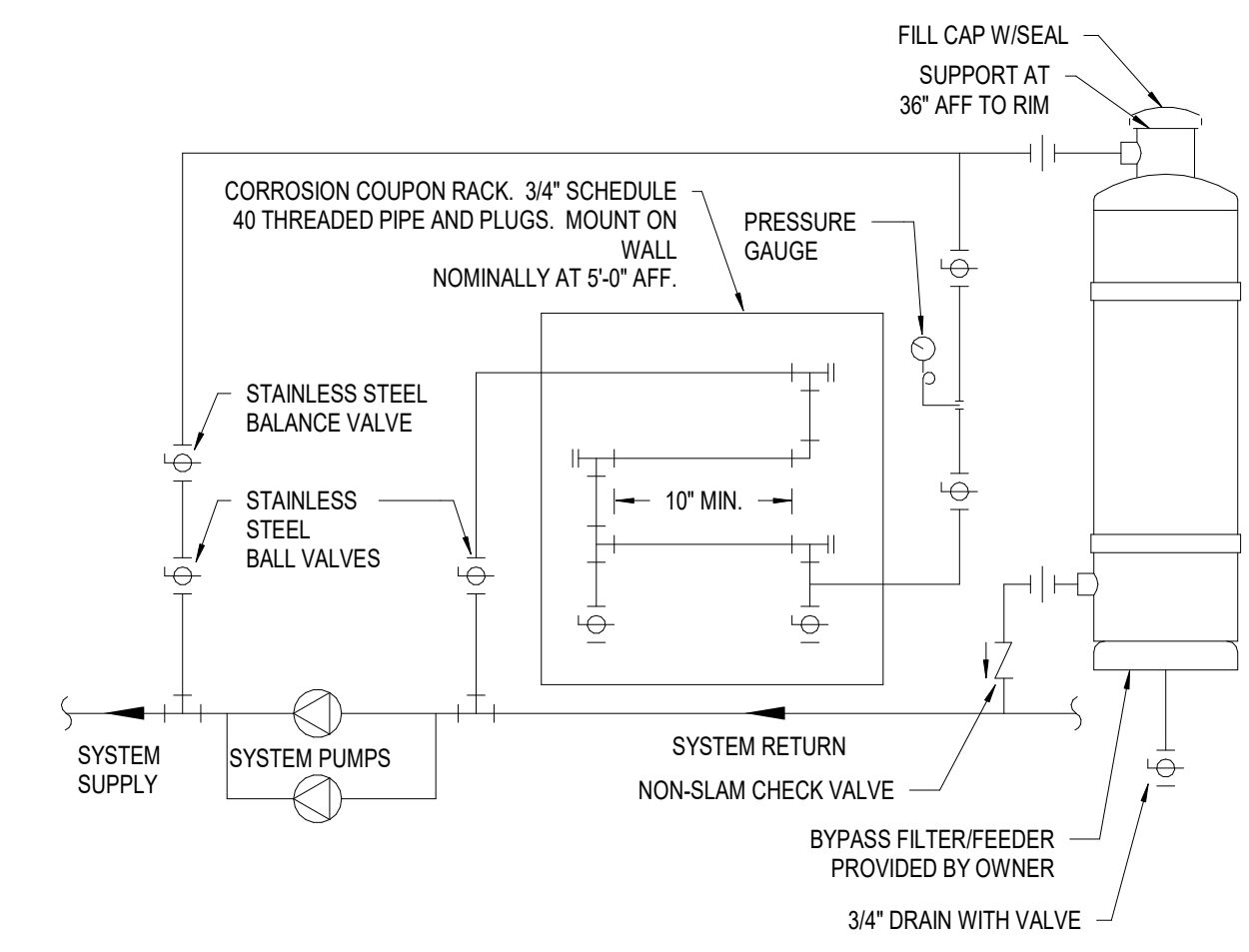
INSTALL CONDENSATE PUMP ASPEN ASP-MW-UNI OR SIMILAR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. NOTCH BOTTOM OF UNIT IF NECESSARY.

GENERAL NOTES

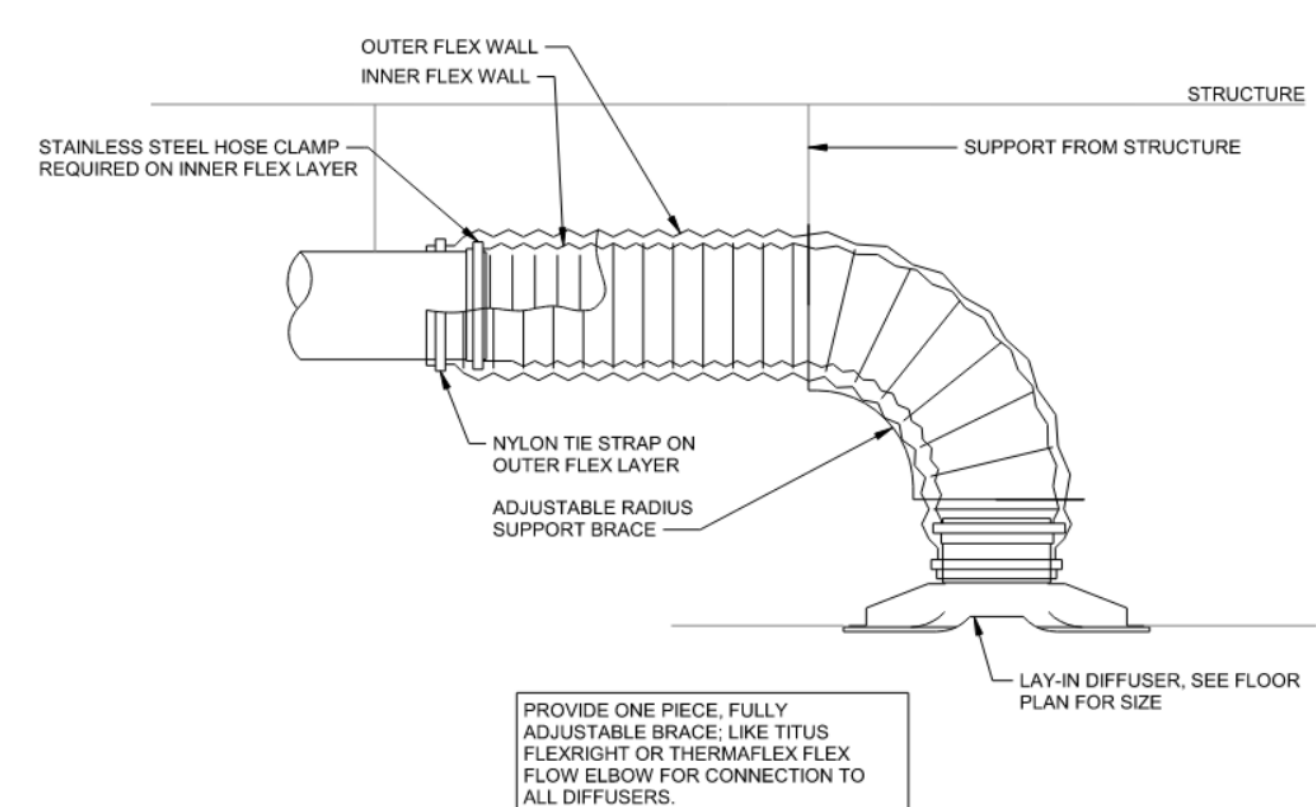
- CONTRACTOR TO INSTALL ALL REFRIGERANT PIPING, POWER CORDS, AND DRAIN PIPING BEHIND WALL IF APPLICABLE. UTILIZE DETAIL IF BEHIND WALL IS NOT APPLICABLE.
- ALL REFRIGERANT LINES, POWER CORDS, AND DRAIN LINES SHALL BE RAN LEVEL, PARALLEL, AND NOT TO BE EXPOSED.
- CLOSED CELL FOAM INSULATION IS REQUIRED TO BE MINIMUM 1-INCH FOR LIQUID AND SUCTION LINES.
- NO TAPE IS ALLOWED FOR INSULATION. ARMAFLEX GLUE ONLY.
- CONTRACTOR TO INSTALL OVER DOOR IN ALL ITIMDF OR ELECTRICAL ROOMS UNLESS OTHERWISE NOTED.
- CONNECTION TO MAIN DRAIN TO BE ON THE OUTSIDE OF THE ITIMDF OR ELECTRICAL ROOM IF APPLICABLE.
- IF UNIT CANNOT GRAVITY DRAIN, PROVIDE CONDENSATE PUMP.



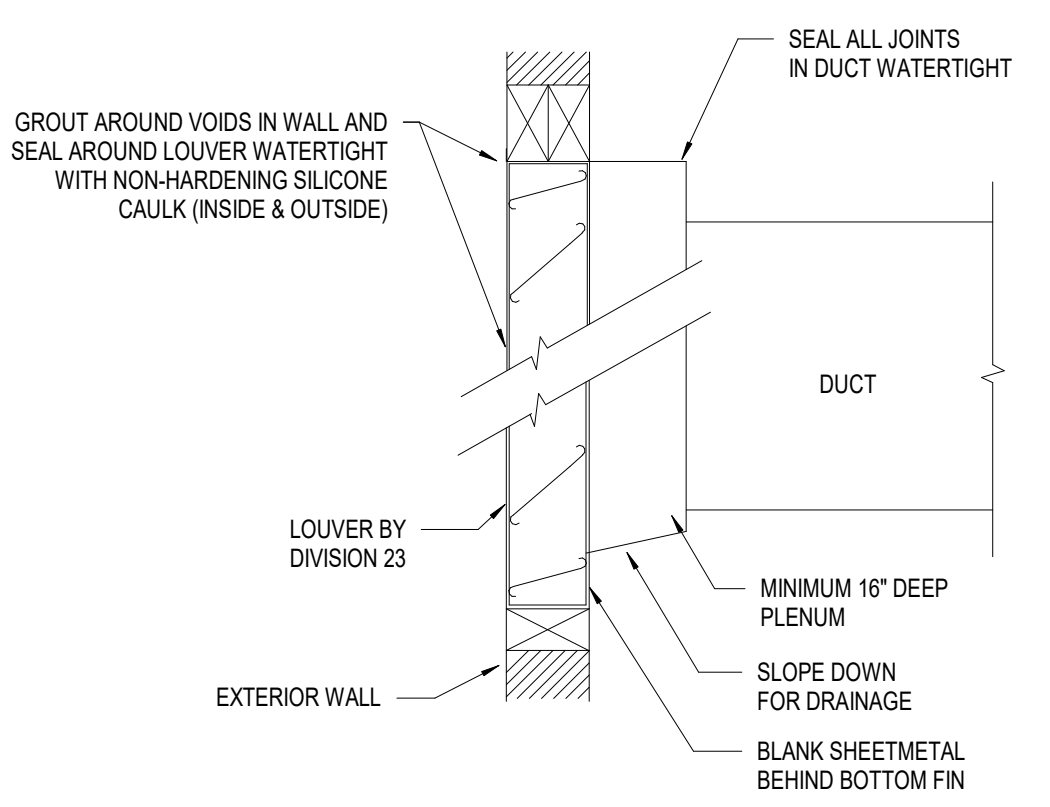
9 CONDENSATE NEUTRALIZER DETAIL
NOT TO SCALE



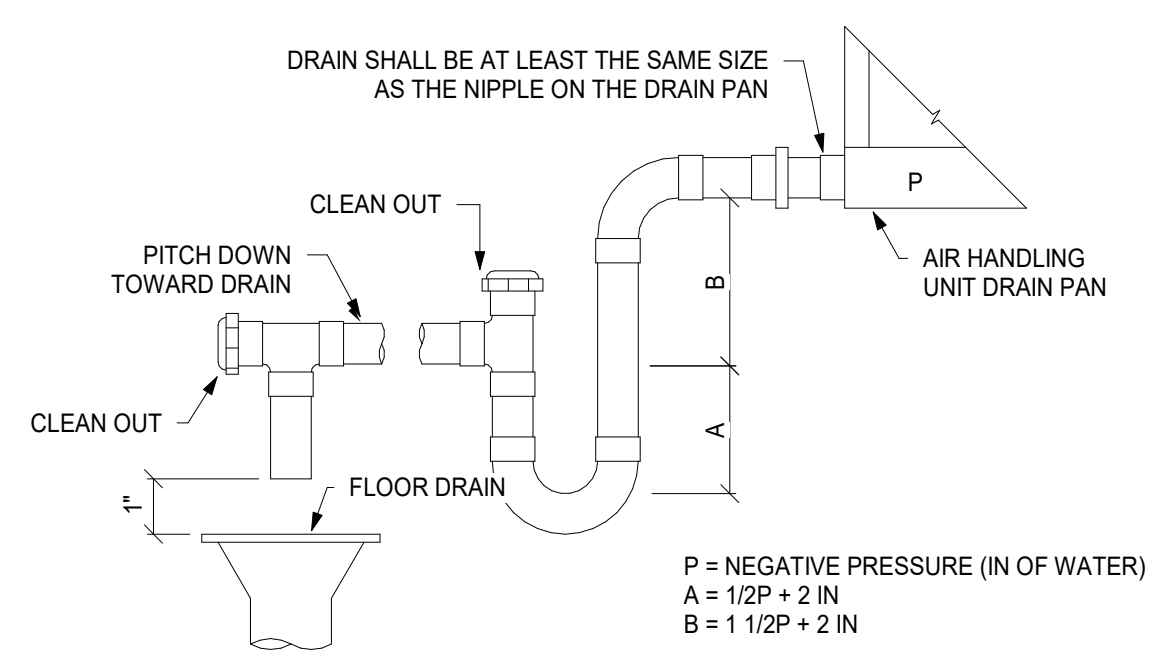
5 CHEMICAL FILTER/FEEDER DETAIL
NOT TO SCALE



16 TYPICAL SUPPLY DIFFUSER INSTALLATION
NOT TO SCALE



12 LOUVER INSTALLATION DETAIL
NOT TO SCALE

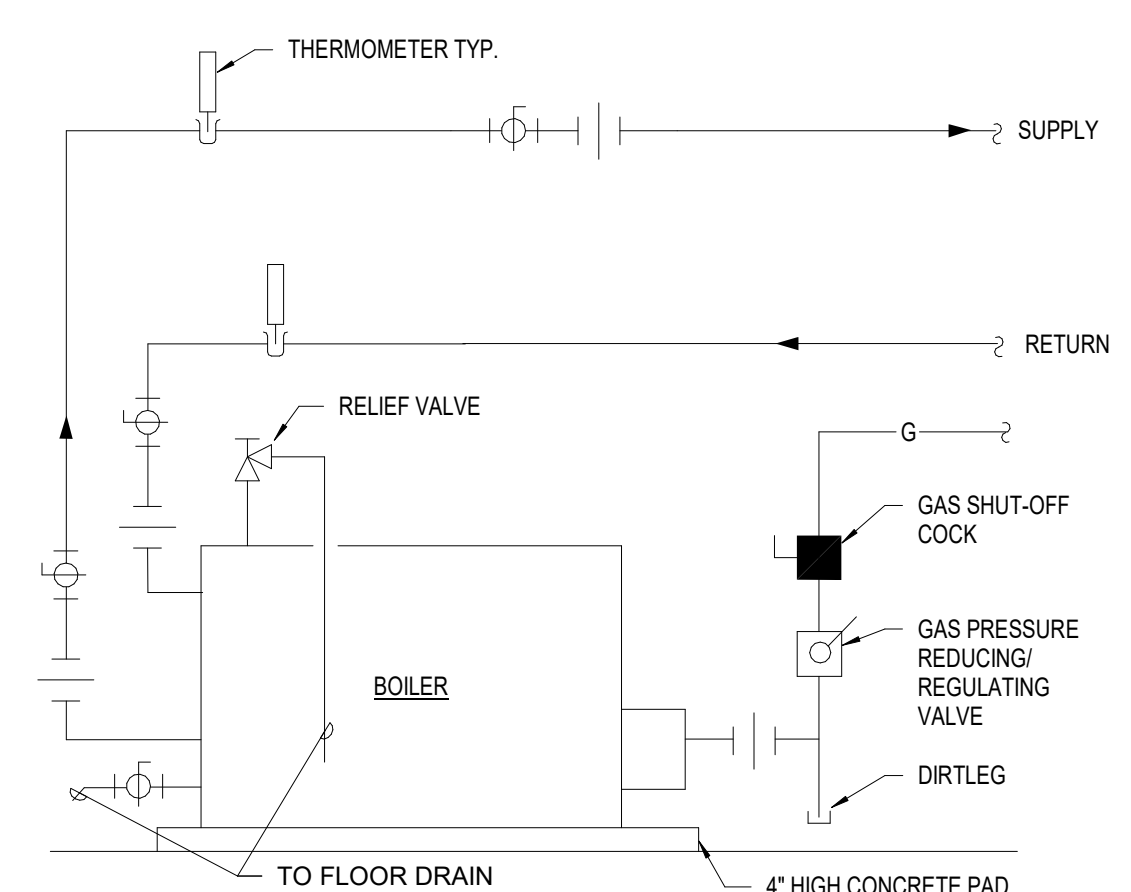


DRAIN PAN TRAP SIZING

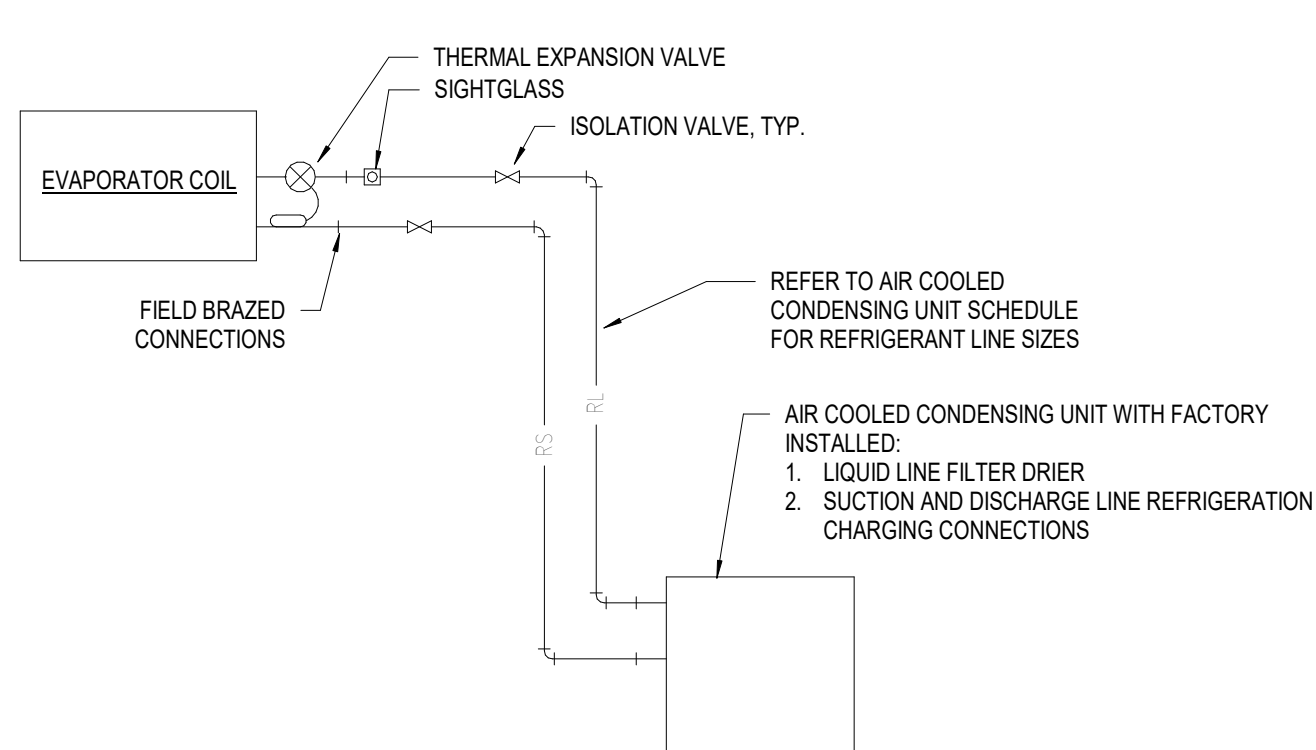
STATIC PRESSURE AT DRAIN	NEGATIVE PRESSURE (IN OF WATER)	
	A	B
0.50	2.25	2.75
1.00	2.50	3.50
1.50	2.75	4.25
2.00	3.00	5.00
2.50	3.25	5.75
3.00	3.50	6.50
3.50	3.75	7.25
4.00	4.00	8.00
4.50	4.25	8.75
5.00	4.50	9.50
5.50	4.75	10.25
6.00	5.00	11.00
6.50	5.25	11.75
7.00	5.50	12.50
7.50	5.75	13.25
8.00	6.00	14.00
8.50	6.25	14.75
9.00	6.50	15.50
9.50	6.75	16.25
10.00	7.00	17.00

P = NEGATIVE PRESSURE (IN OF WATER)
A = 1/2" + 2 IN
B = 1 1/2" + 2 IN

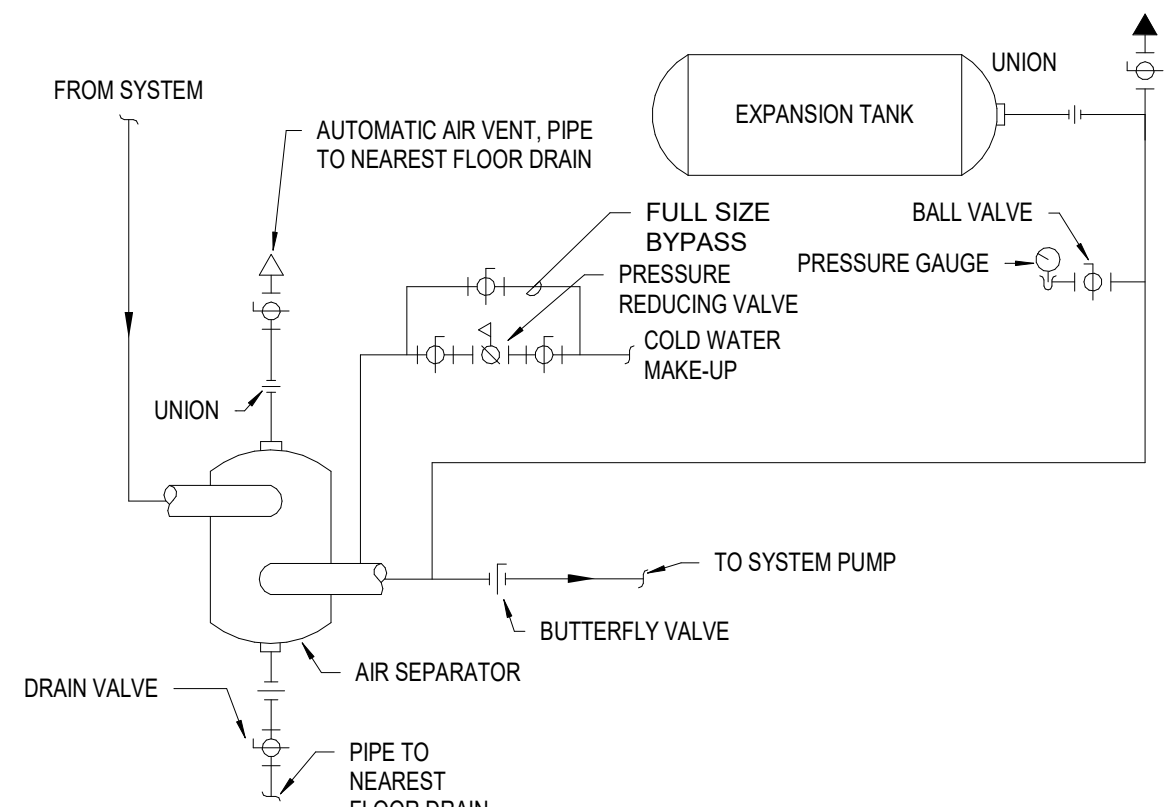
8 CONDENSATE DRAIN TRAP DETAIL
NOT TO SCALE



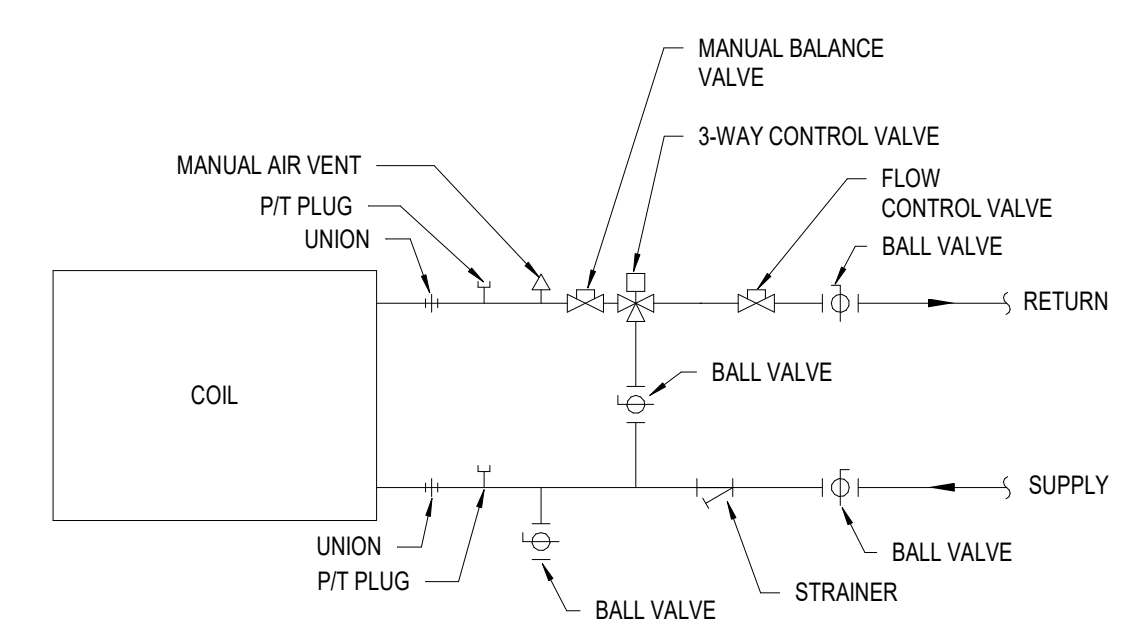
4 BOILER PIPING DETAIL
NOT TO SCALE



15 REFRIGERATION PIPING DETAIL
NOT TO SCALE

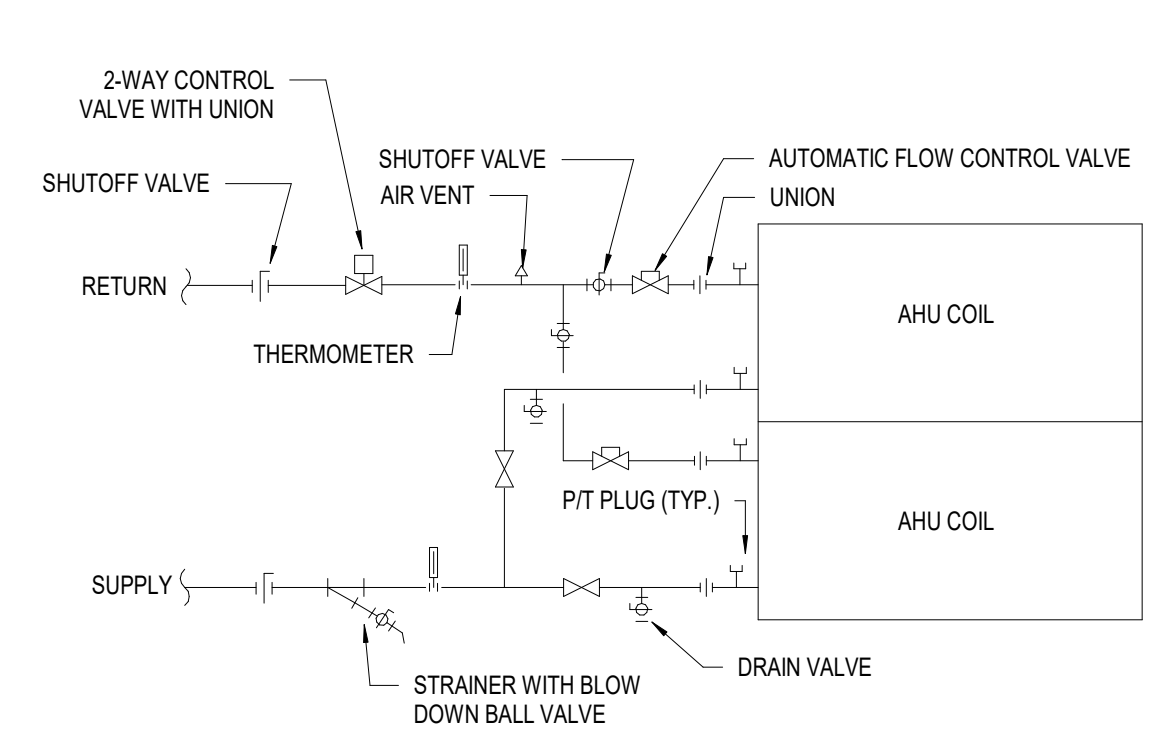
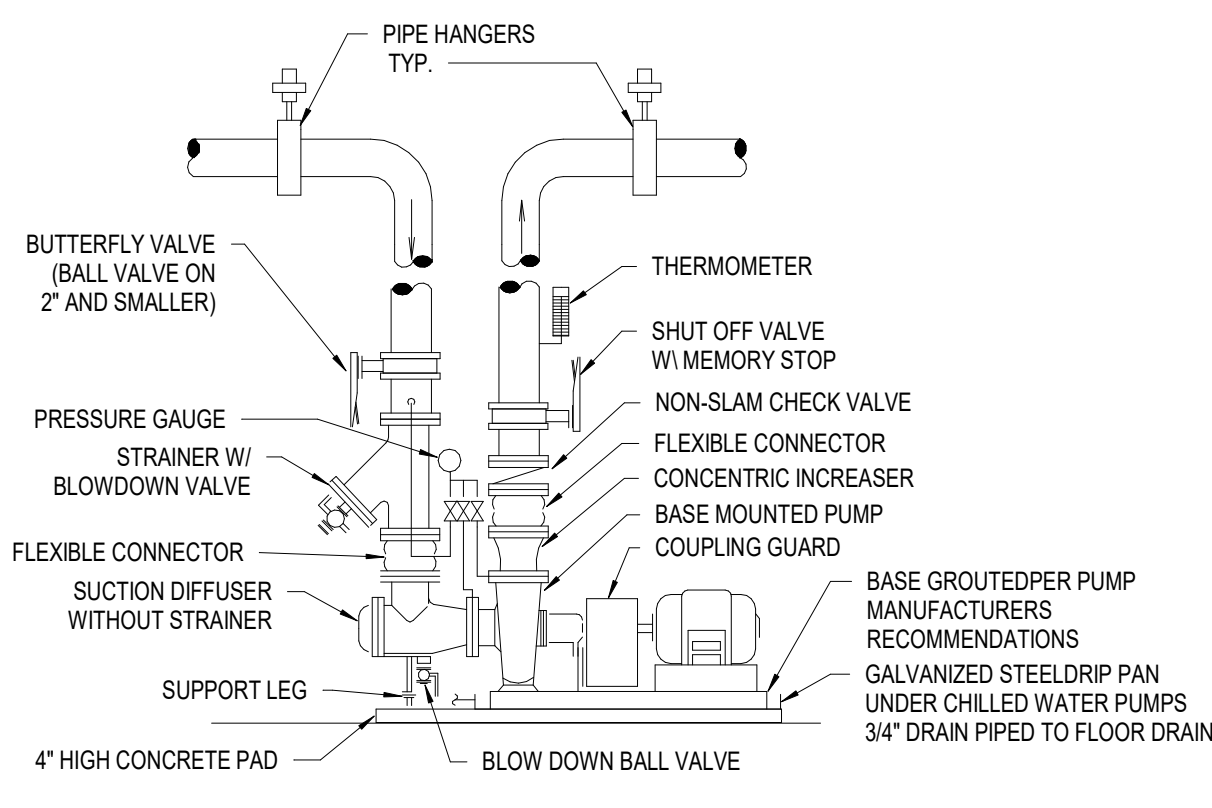


11 HORIZONTAL AIR SEPARATOR PIPING DIAGRAM
NOT TO SCALE

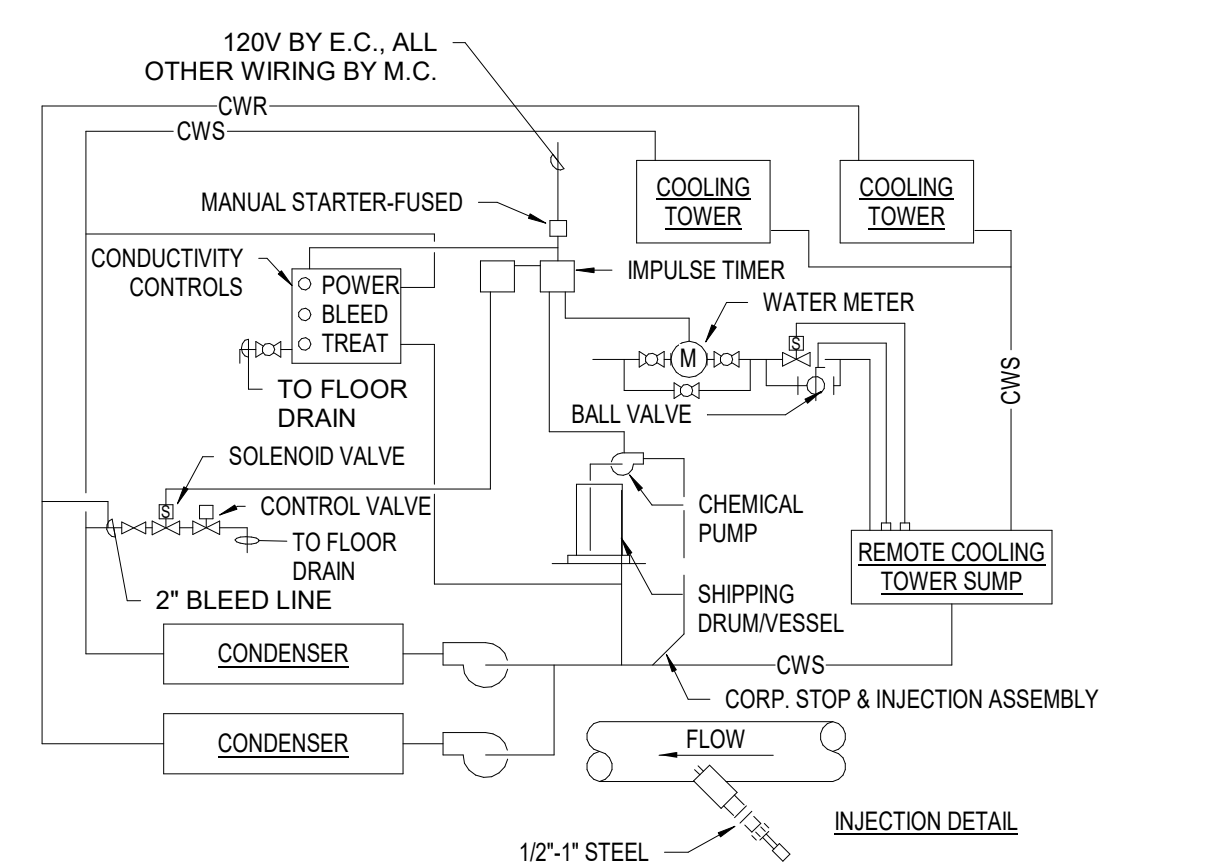


7 COIL PIPING DETAIL - 3-WAY
NOT TO SCALE

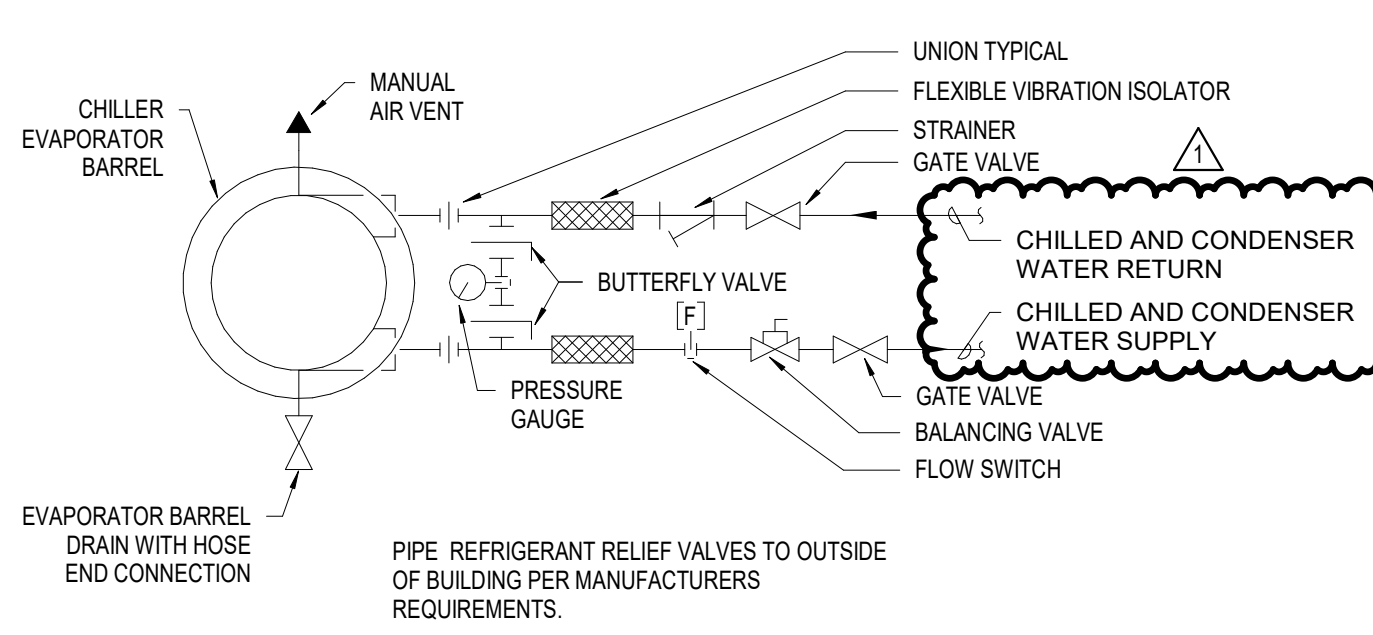
3 BASE MOUNTED, END-SUCTION PUMP DETAIL
NOT TO SCALE



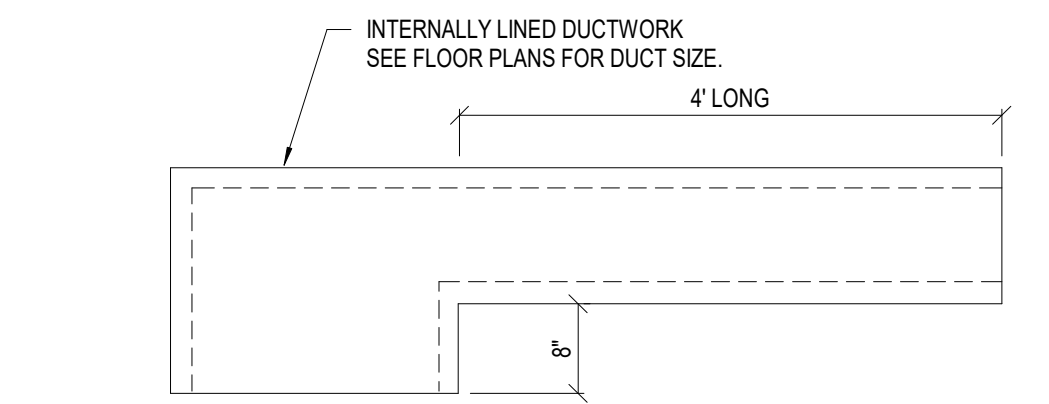
14 MULTIPLE AHU COIL 2-WAY PIPING DETAIL
NOT TO SCALE



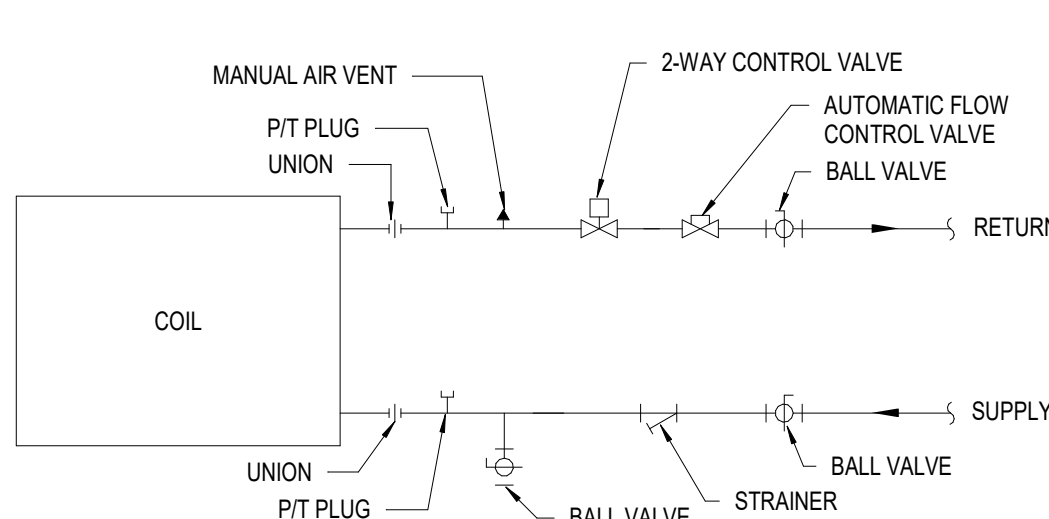
10 COOLING TOWER CHEM. TREATMENT DETAIL
NOT TO SCALE



6 CHILLER PIPING DETAIL
NOT TO SCALE



2 AIR TRANSFER DUCT DETAIL
NOT TO SCALE



1 2-WAY COIL PIPING DETAIL
NOT TO SCALE

krM Architecture+

kbso CONSULTING

REVISIONS

1	7/30/24	Addendum #1
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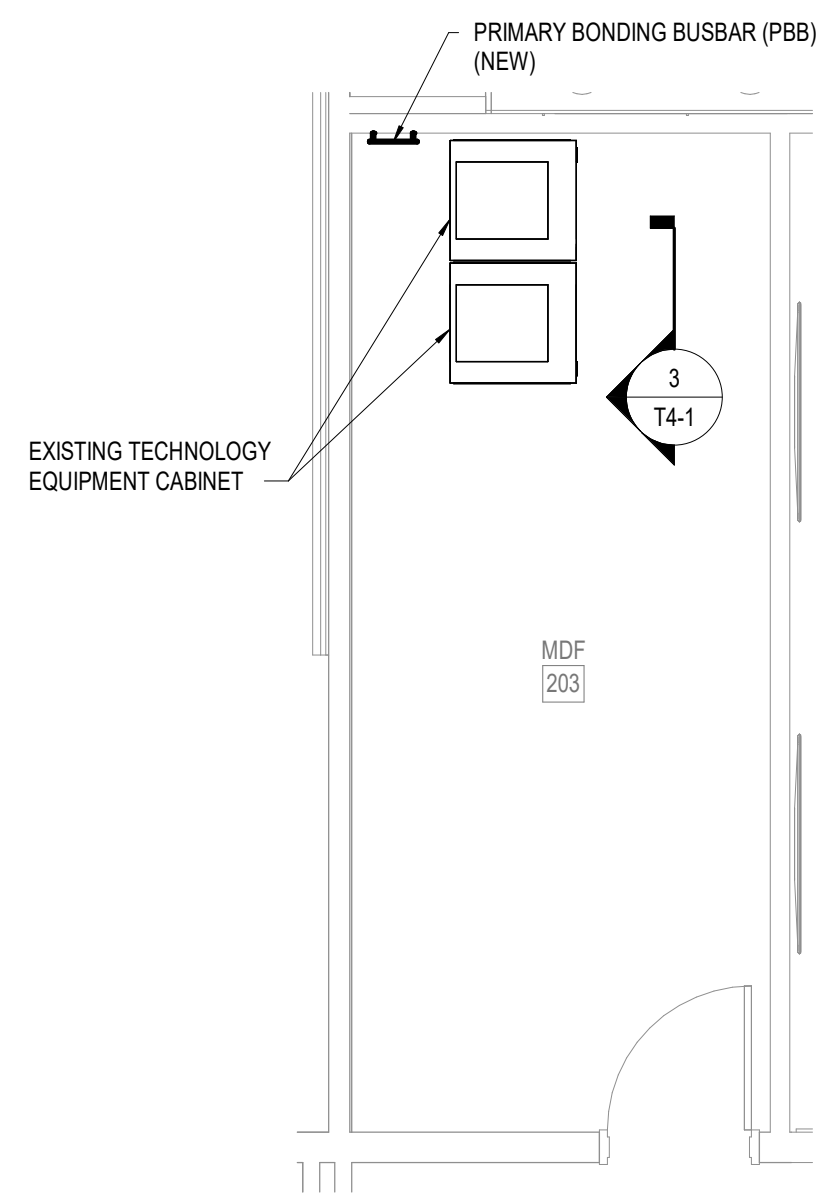
23055 - FALL CREEK INTERMEDIATE RENOVATIONS

HAMILTON SOUTHEASTERN SCHOOL CORPORATION
12011 Old Rd., Fishers, IN 46037

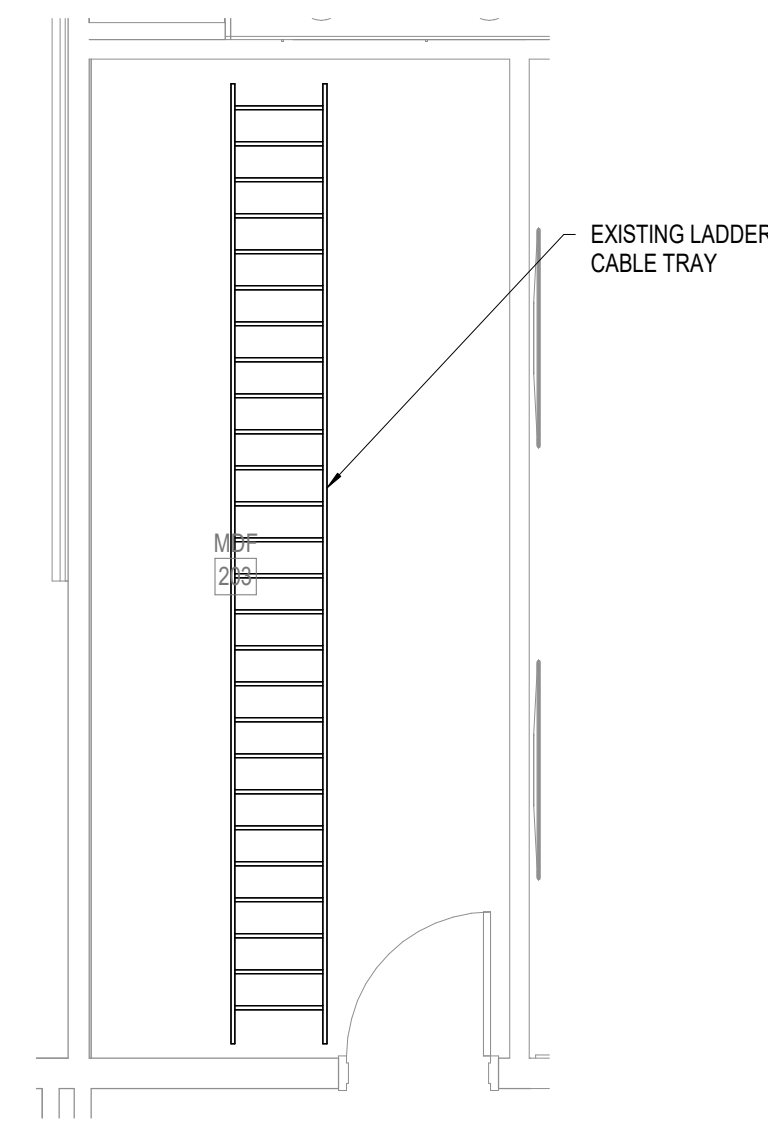
07.12.2024
CONSTRUCTION DOCUMENTS

DAVID HERNANDEZ
REGISTERED PROFESSIONAL ENGINEER
No. 12200632
STATE OF INDIANA

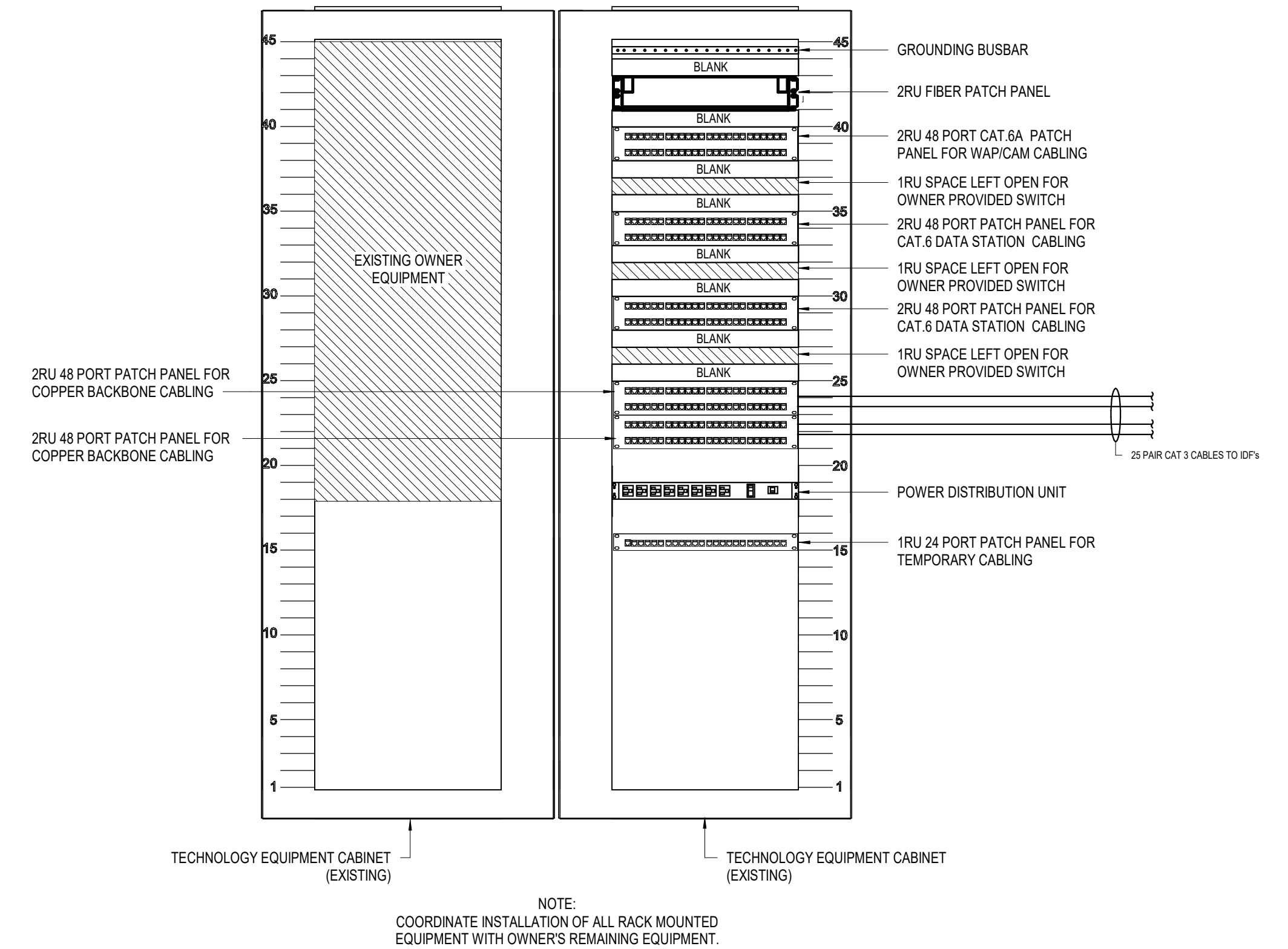
CONSTRUCTION DOCUMENTS
07.12.2024
W/J JOB NO. 23055
DRAWN BY CME
MECHANICAL DETAILS
DRAWING NO. **M5-1**



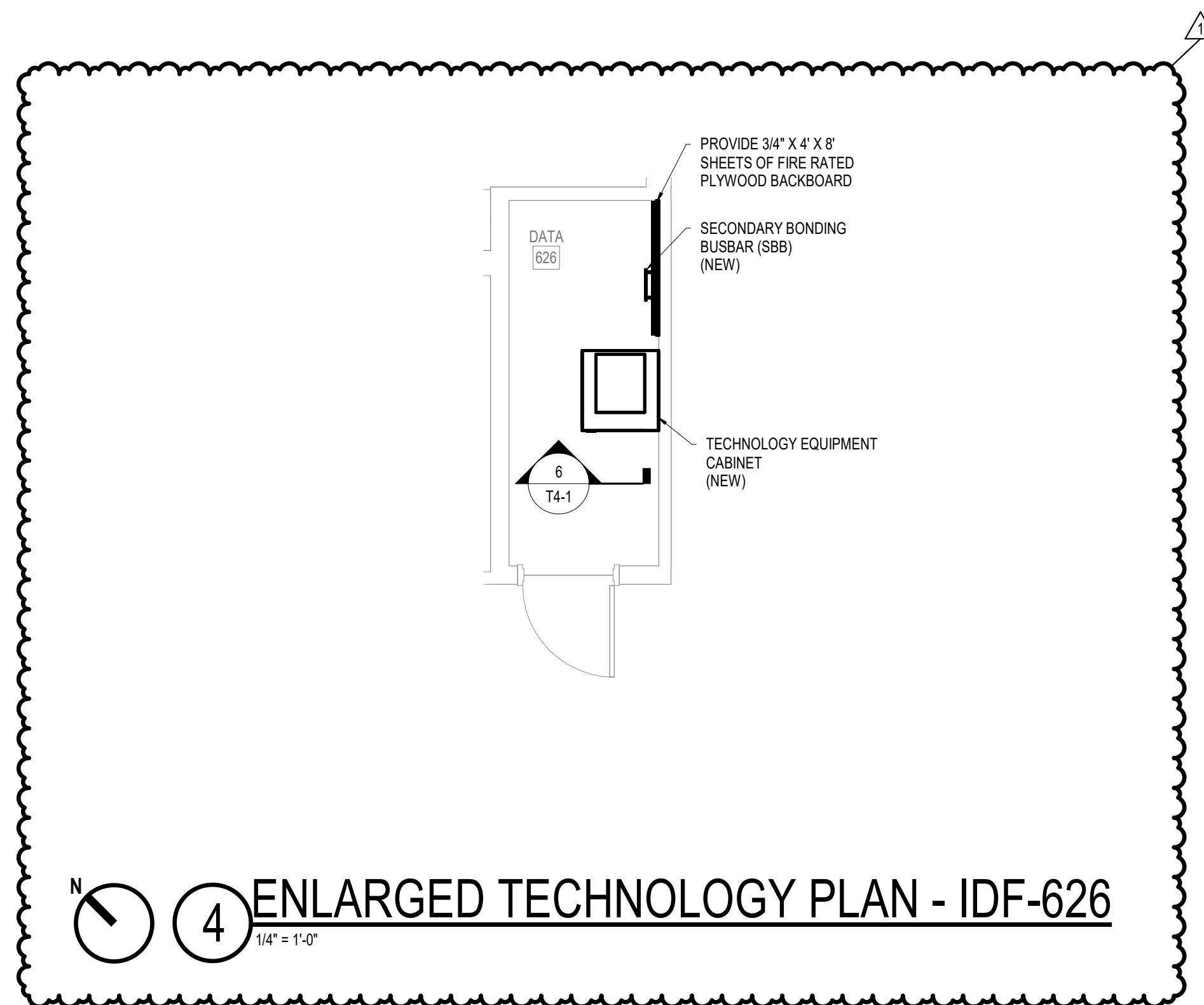
1 ENLARGED TECHNOLOGY PLAN - MDF-203
1/4" = 1'-0"



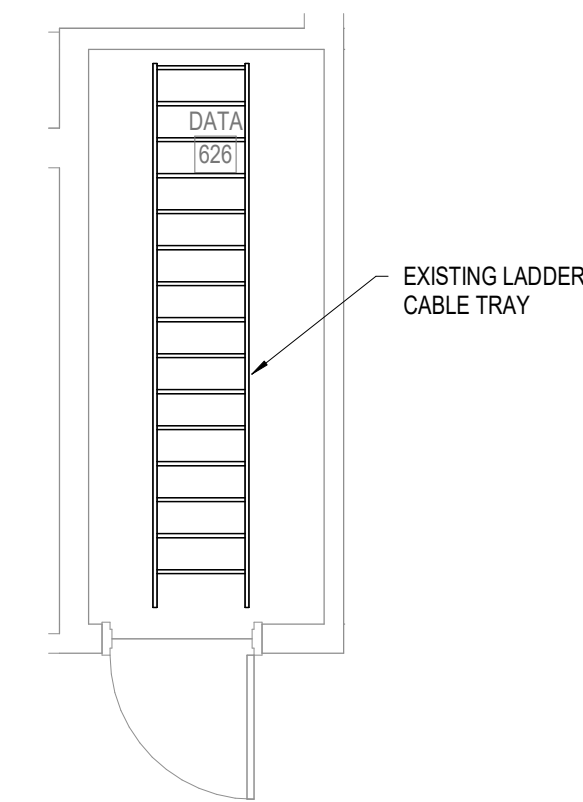
2 ENLARGED TECHNOLOGY PATHWAY PLAN - MDF-203
1/4" = 1'-0"



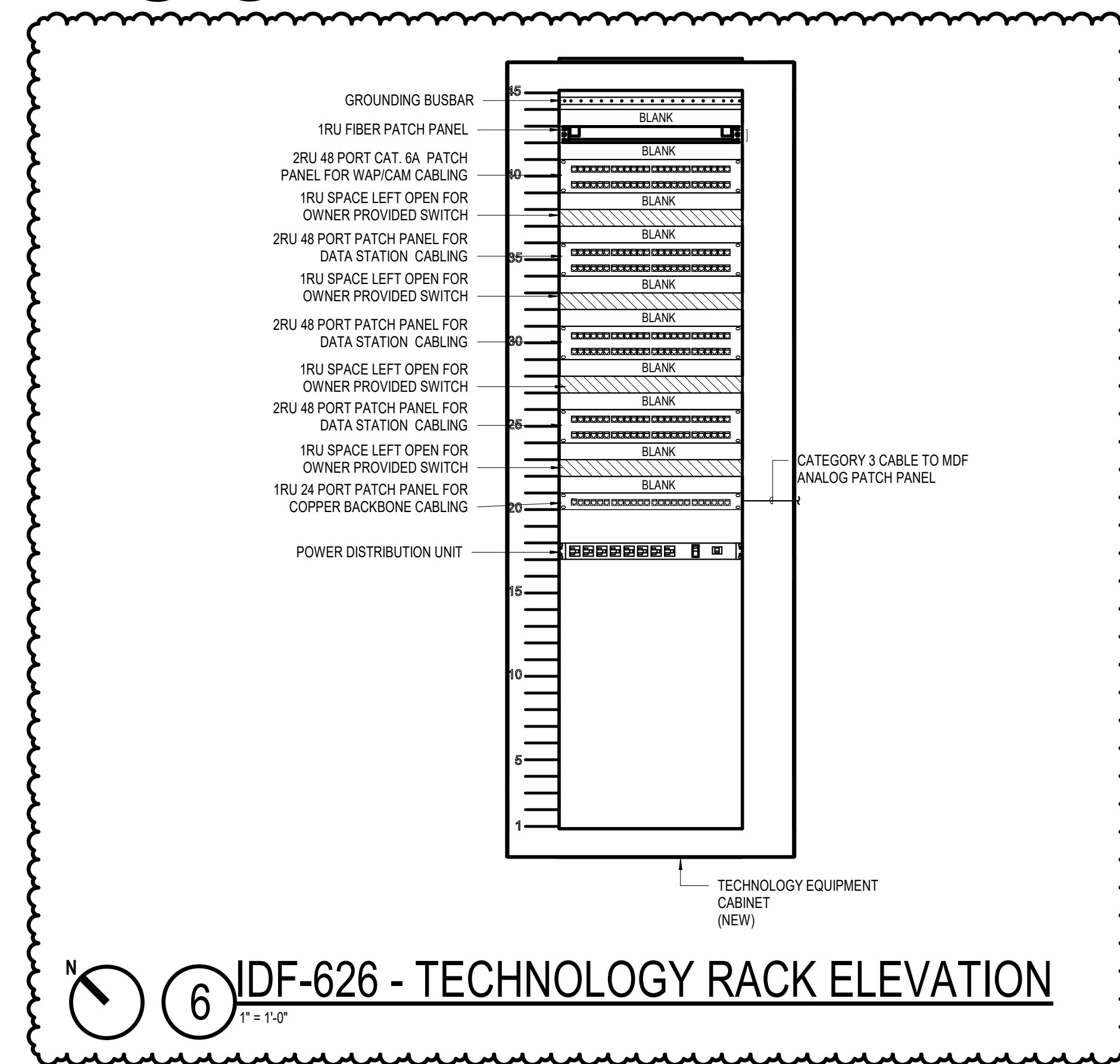
3 MDF-203 - TECHNOLOGY CABINET ELEVATION
1" = 1'-0"



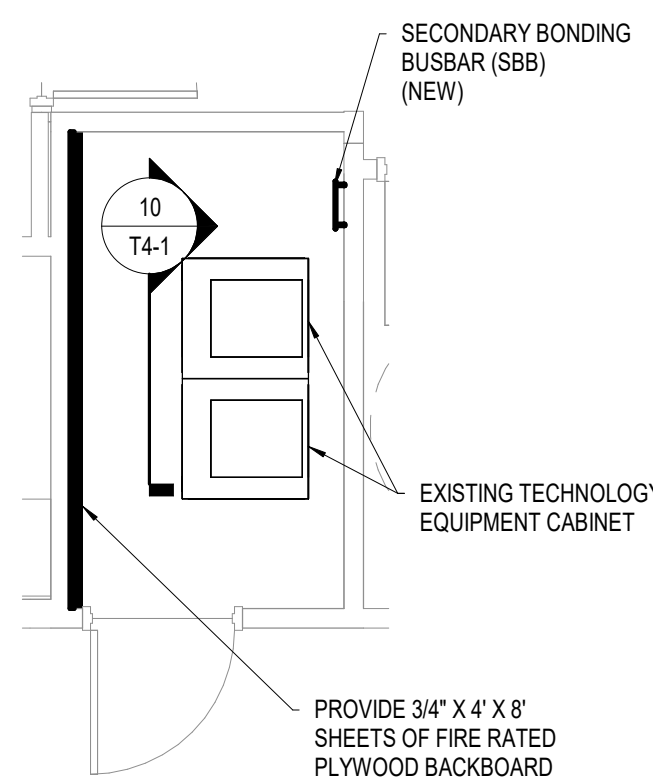
4 ENLARGED TECHNOLOGY PLAN - IDF-626
1/4" = 1'-0"



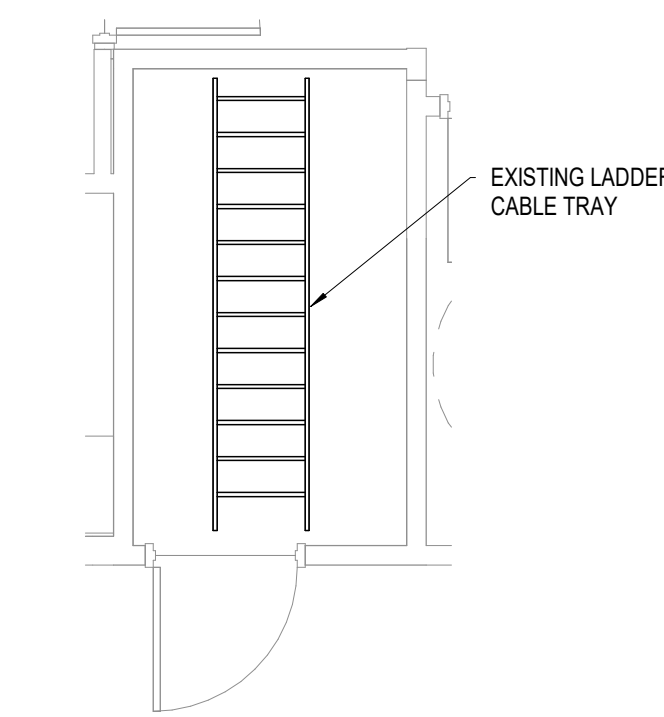
5 ENLARGED TECHNOLOGY PATHWAY PLAN - IDF-626
1/4" = 1'-0"



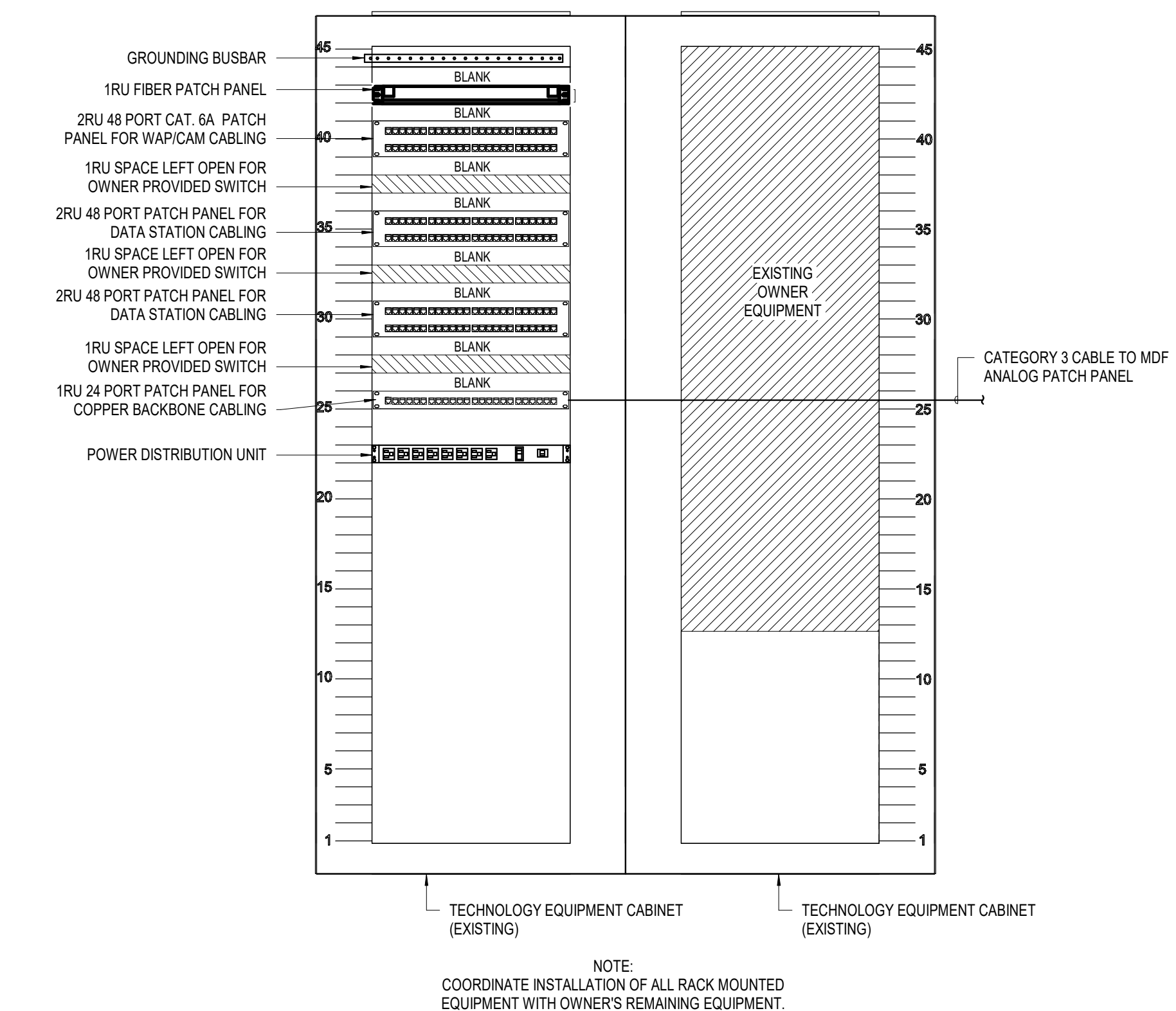
6 IDF-626 - TECHNOLOGY RACK ELEVATION
1" = 1'-0"



8 ENLARGED TECHNOLOGY PLAN - IDF-108
1/4" = 1'-0"



9 ENLARGED TECHNOLOGY PATHWAY PLAN - IDF-108
1/4" = 1'-0"



10 IDF-108 - TECHNOLOGY RACK ELEVATION
1" = 1'-0"



REVISIONS

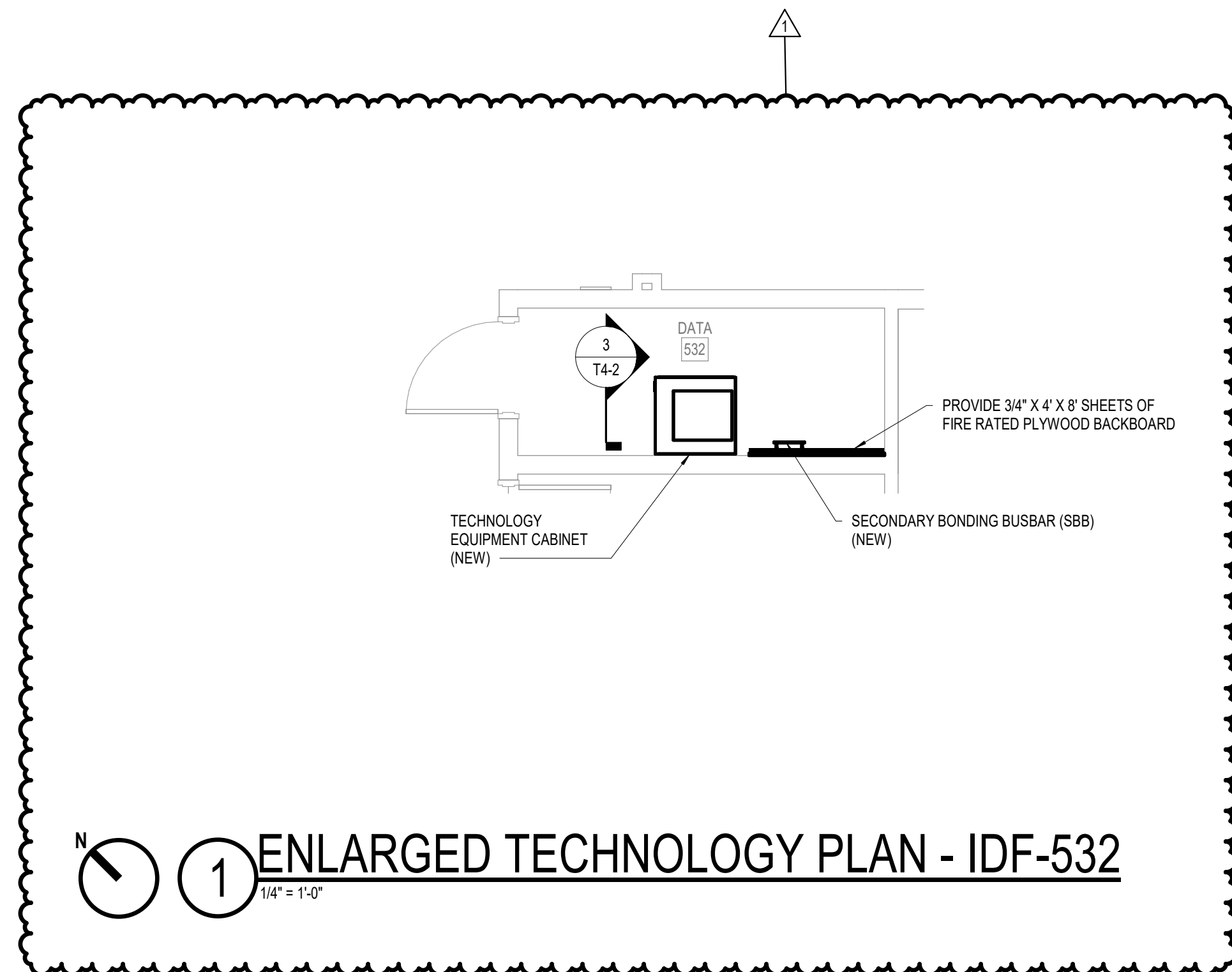
1	7/29/24	Addendum #1
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HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Chic Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS

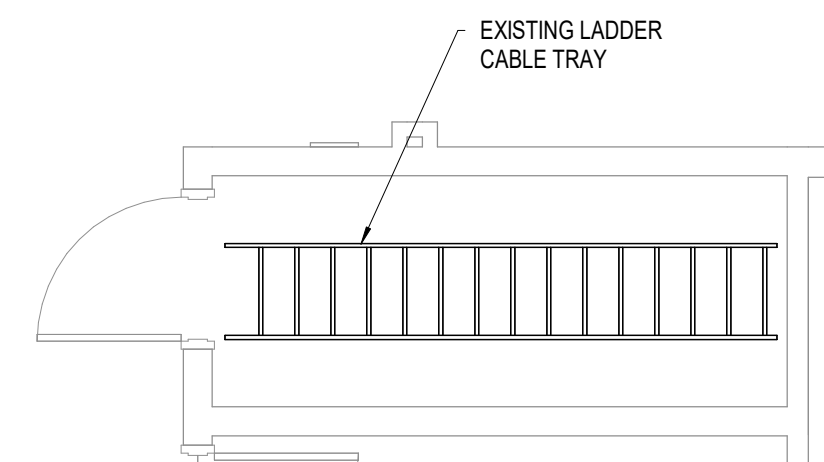


CONSTRUCTION DOCUMENTS
07.12.2024
W/J JOB NO.
23055
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EAG

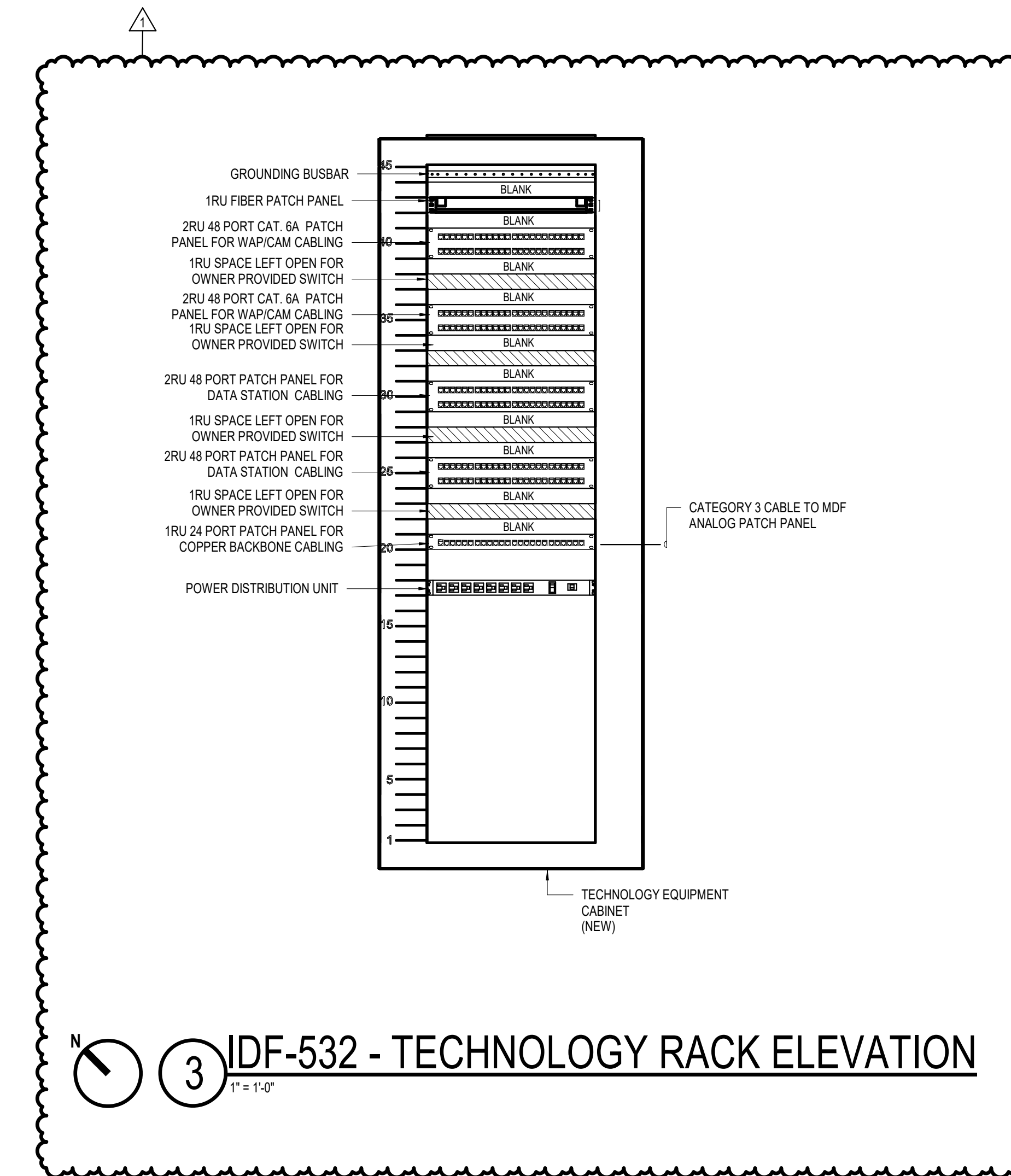
DRAWING NAME
TECHNOLOGY
ENLARGED PLANS
DRAWING NO.
T4-1



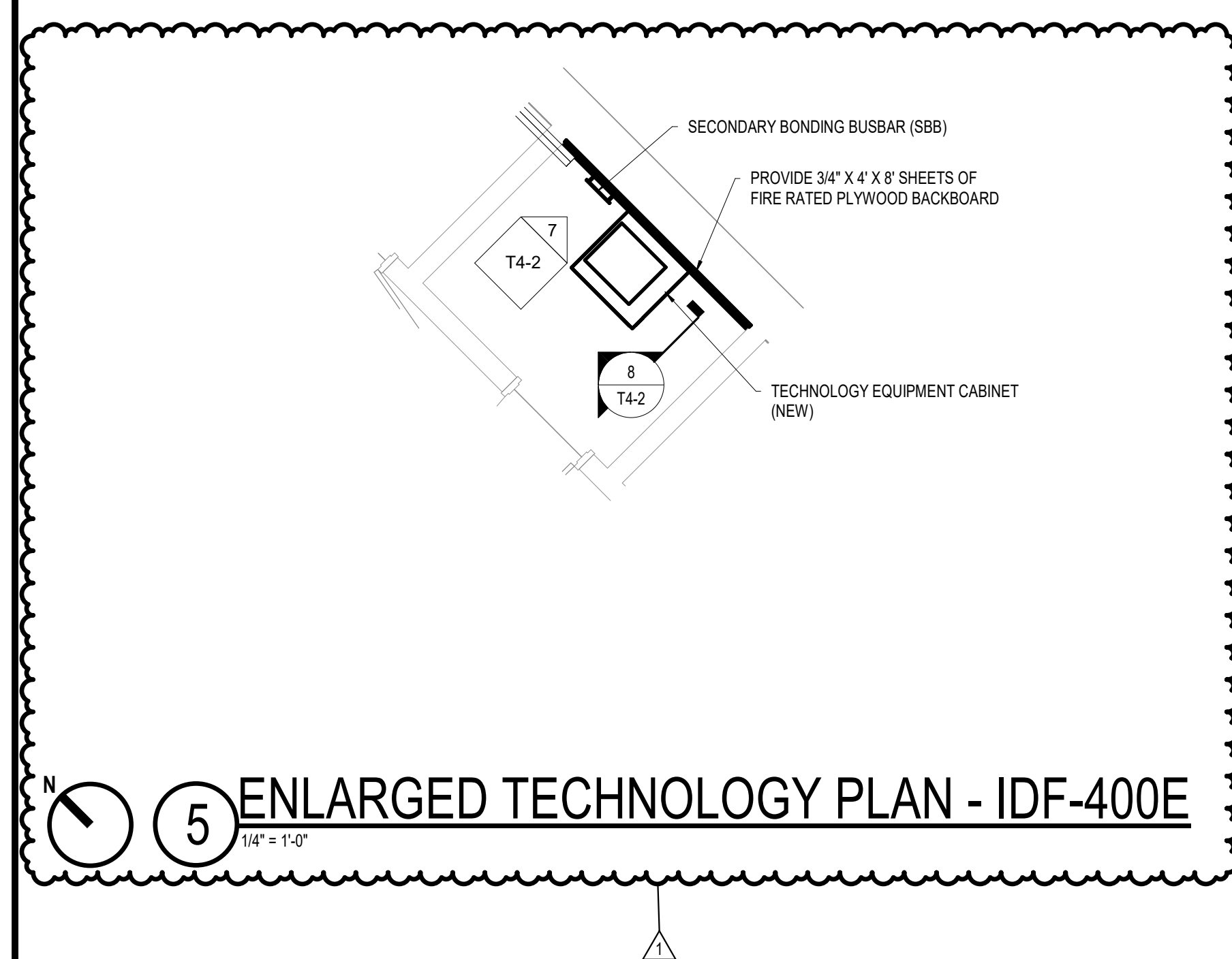
1 ENLARGED TECHNOLOGY PLAN - IDF-532
1/4" = 1'-0"



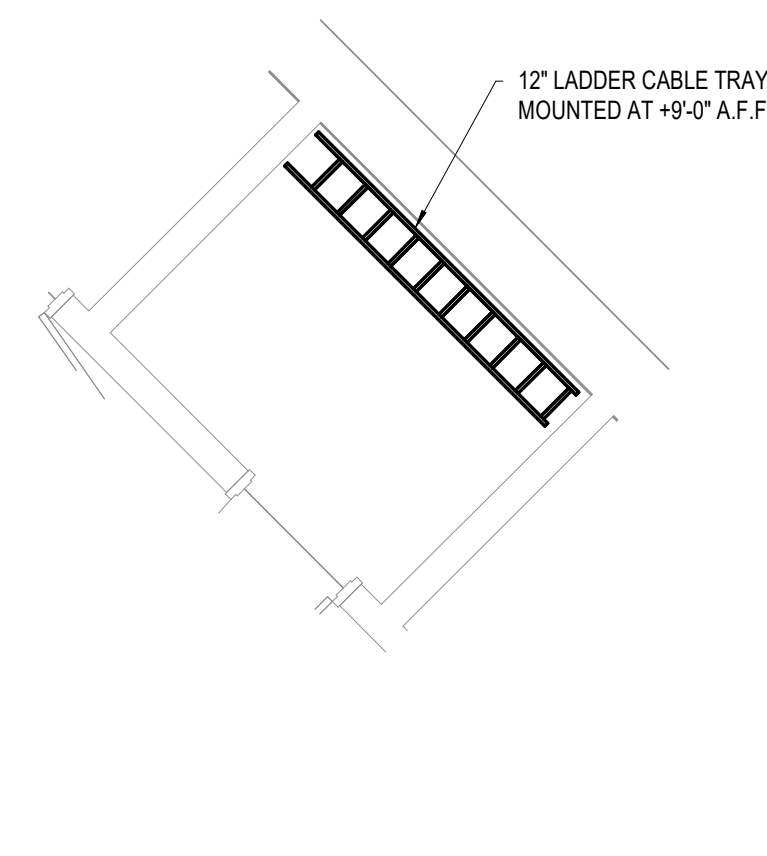
2 ENLARGED TECHNOLOGY PATHWAY PLAN -
IDF-532
1/4" = 1'-0"



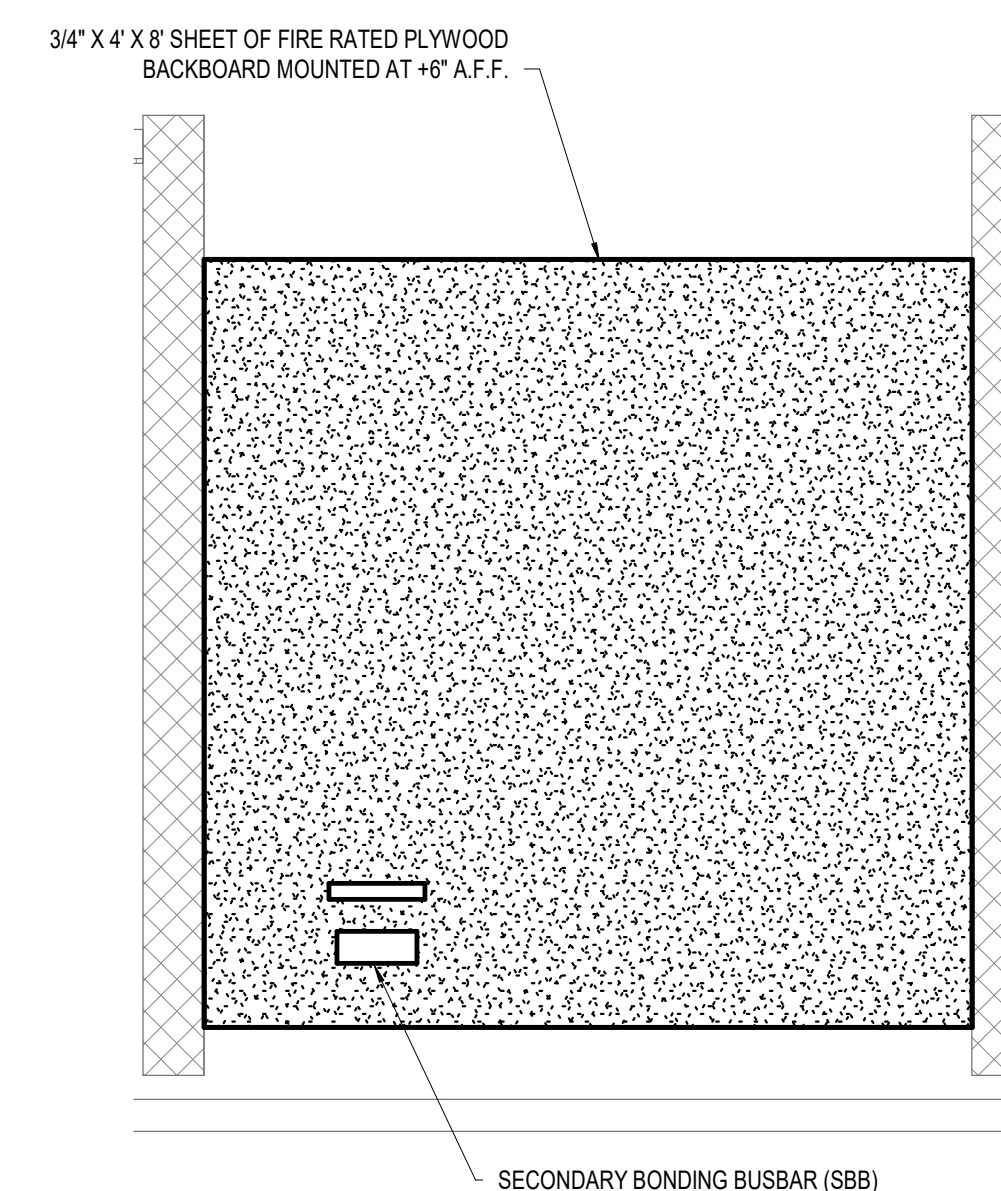
3 IDF-532 - TECHNOLOGY RACK ELEVATION
1" = 1'-0"



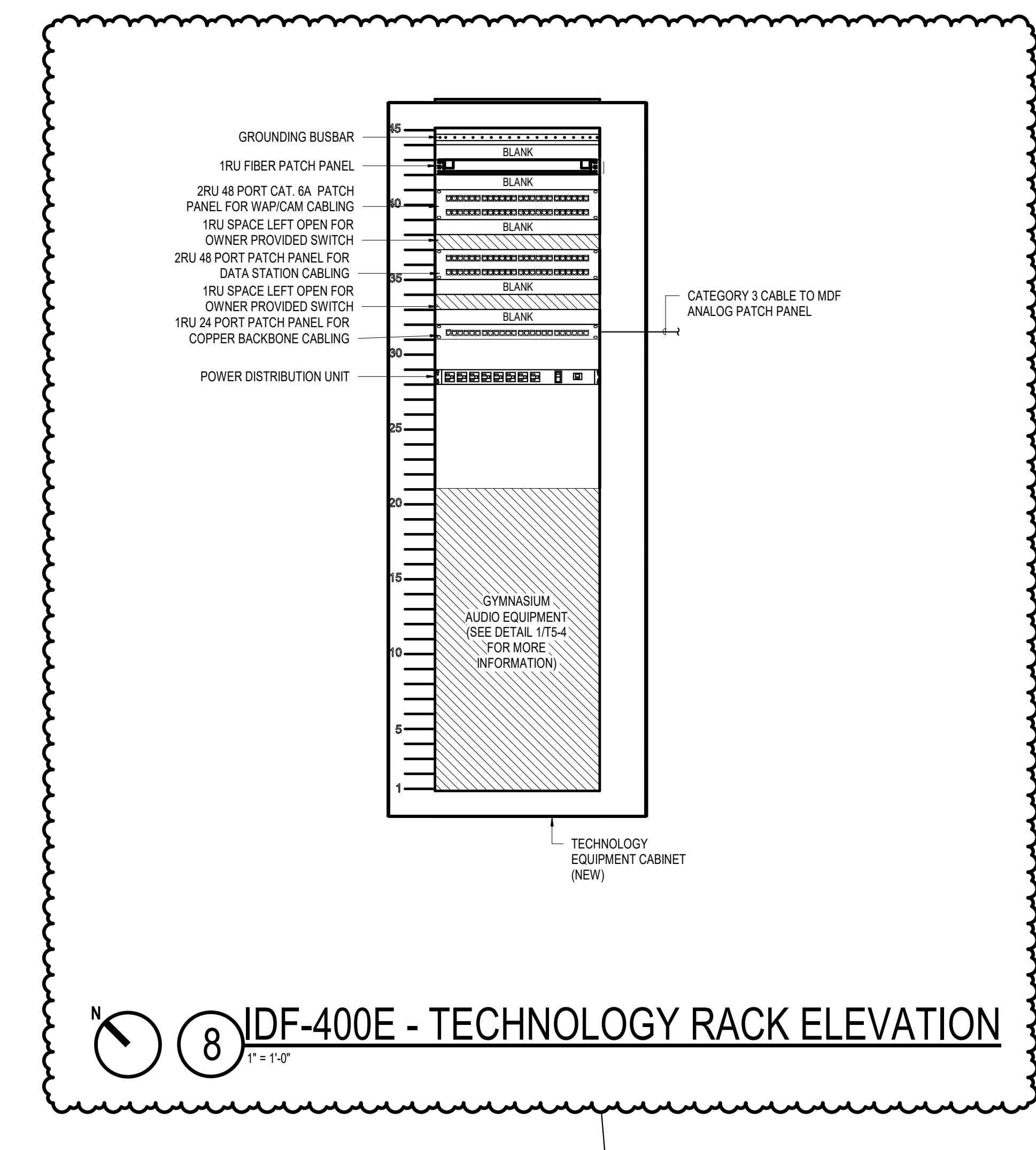
5 ENLARGED TECHNOLOGY PLAN - IDF-400E
1/4" = 1'-0"



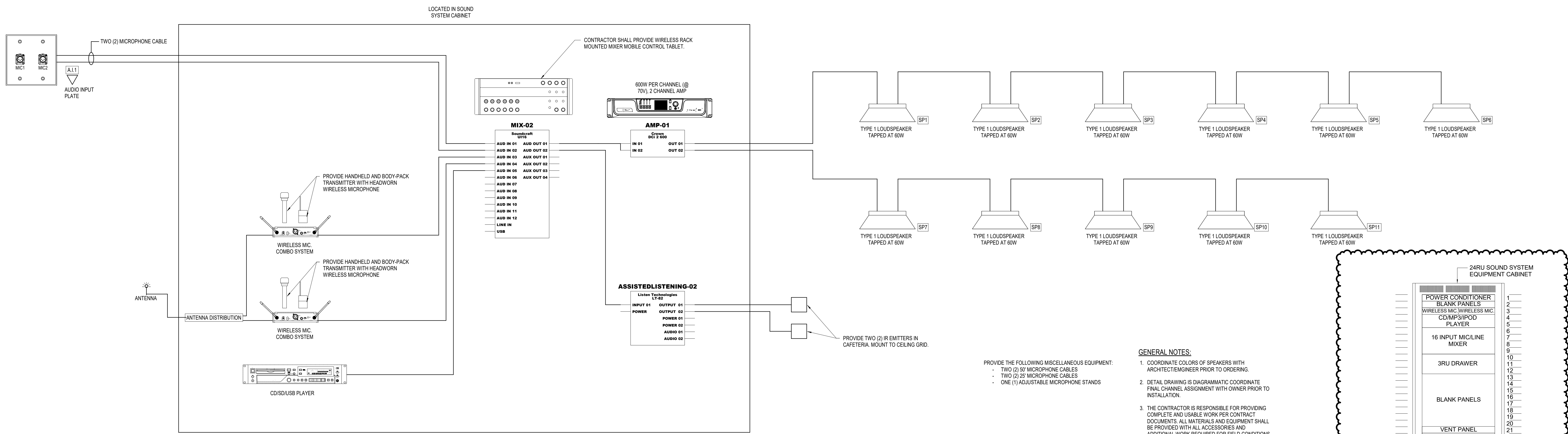
6 ENLARGED TECHNOLOGY PATHWAY PLAN -
IDF-400E
1/4" = 1'-0"



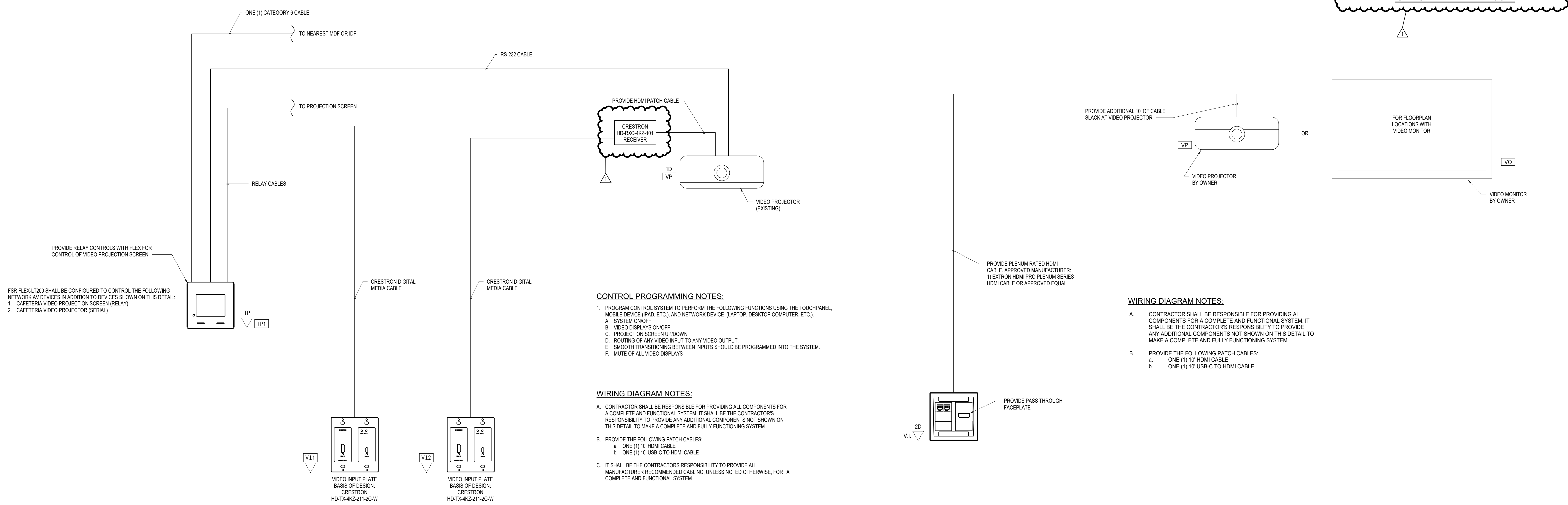
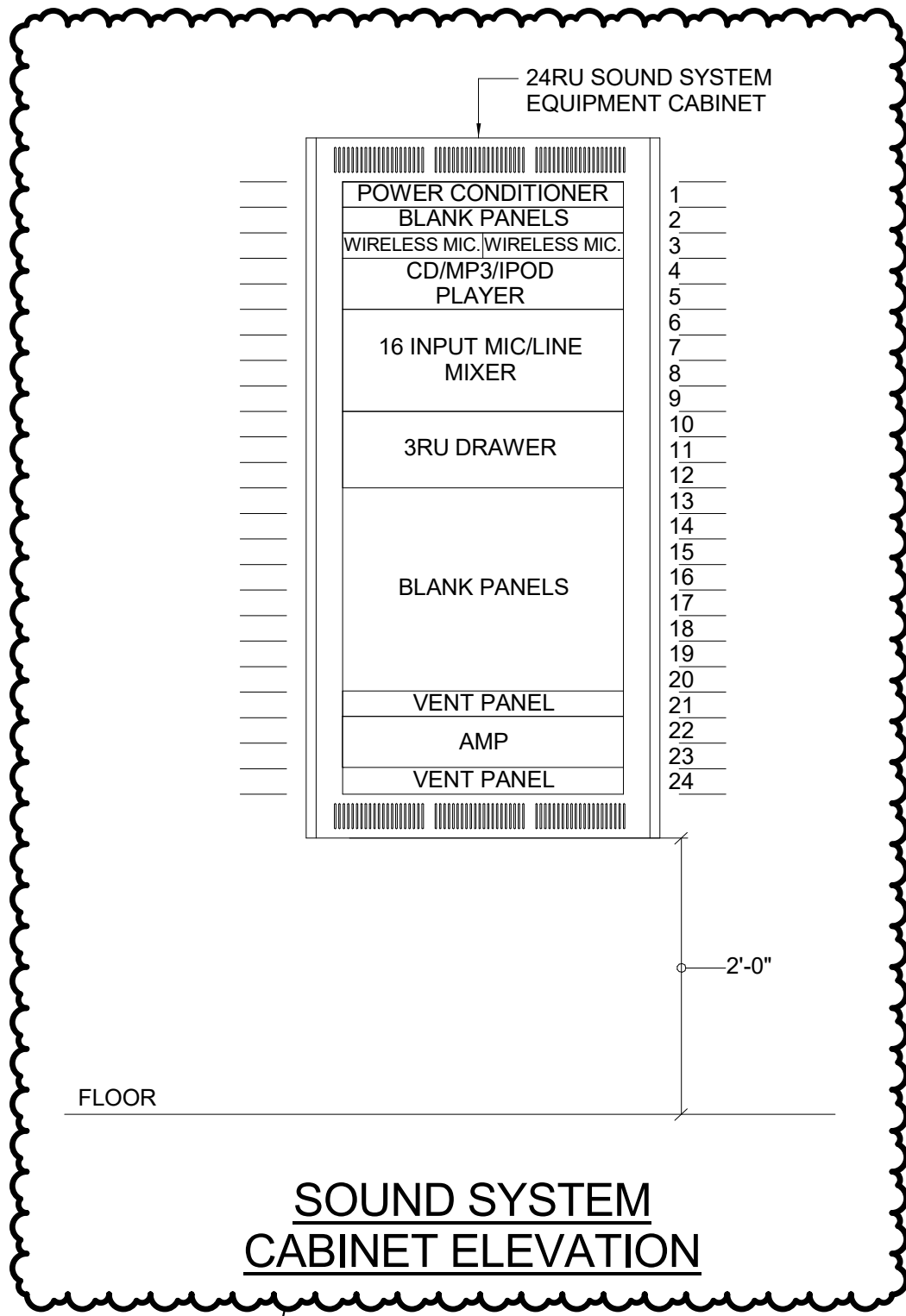
7 IDF-400E - NORTH ELEVATION
1/2" = 1'-0"



8 IDF-400E - TECHNOLOGY RACK ELEVATION
1" = 1'-0"



1 CAFETERIA SOUND SYSTEM
NOT TO SCALE

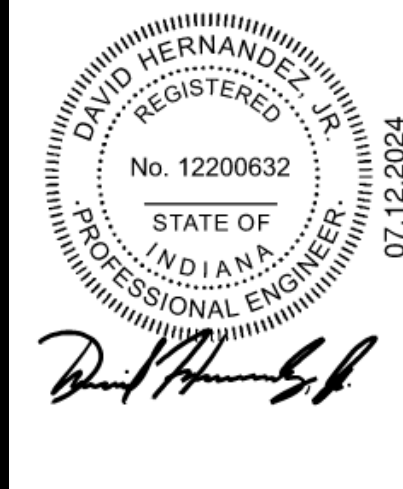


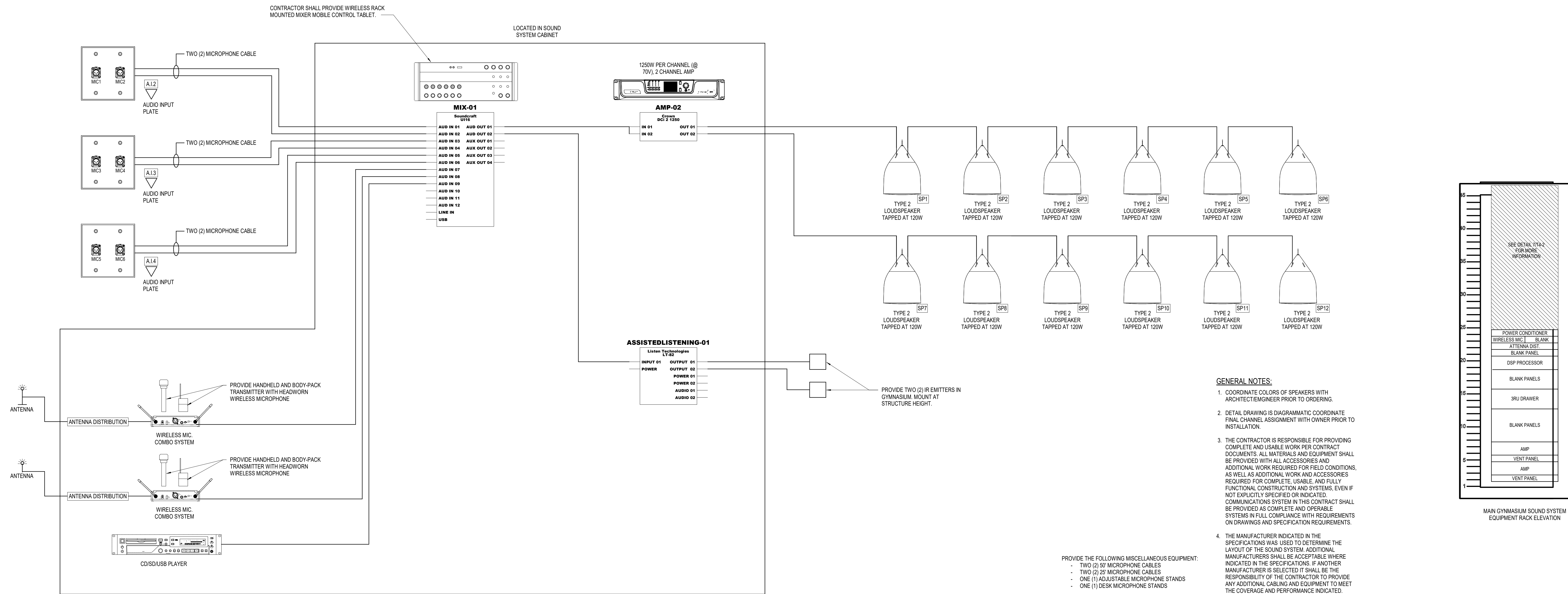
2 CAFETERIA VIDEO DETAIL
NOT TO SCALE

3 TYPICAL VIDEO INPUT AND VIDEO DISPLAY DETAIL
NOT TO SCALE

REVISIONS

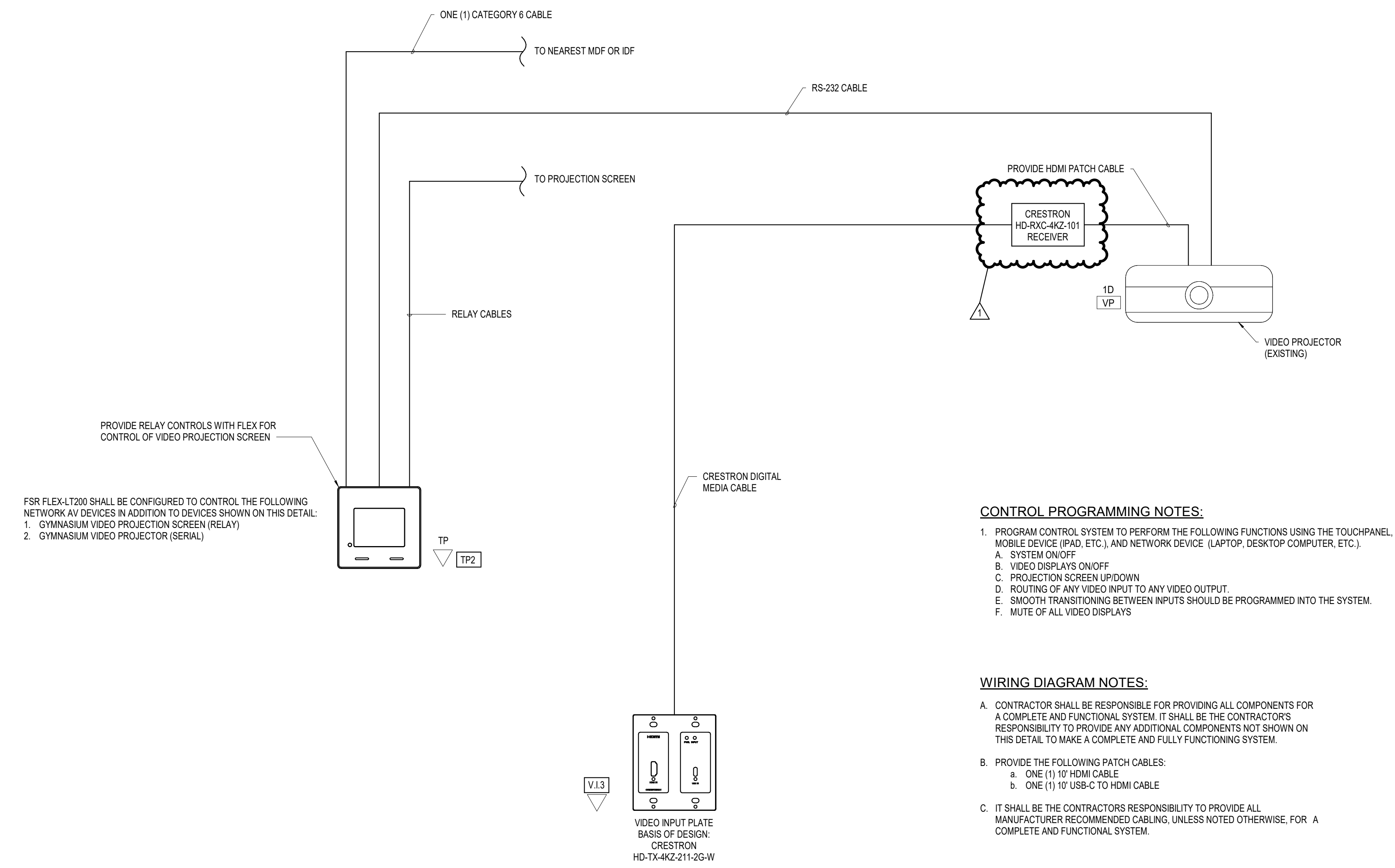
1	7/30/24 Addendum #1
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1 GYMNASIUM SOUND SYSTEM

NOT TO SCALE



2 GYMNASIUM VIDEO DETAIL

NOT TO SCALE



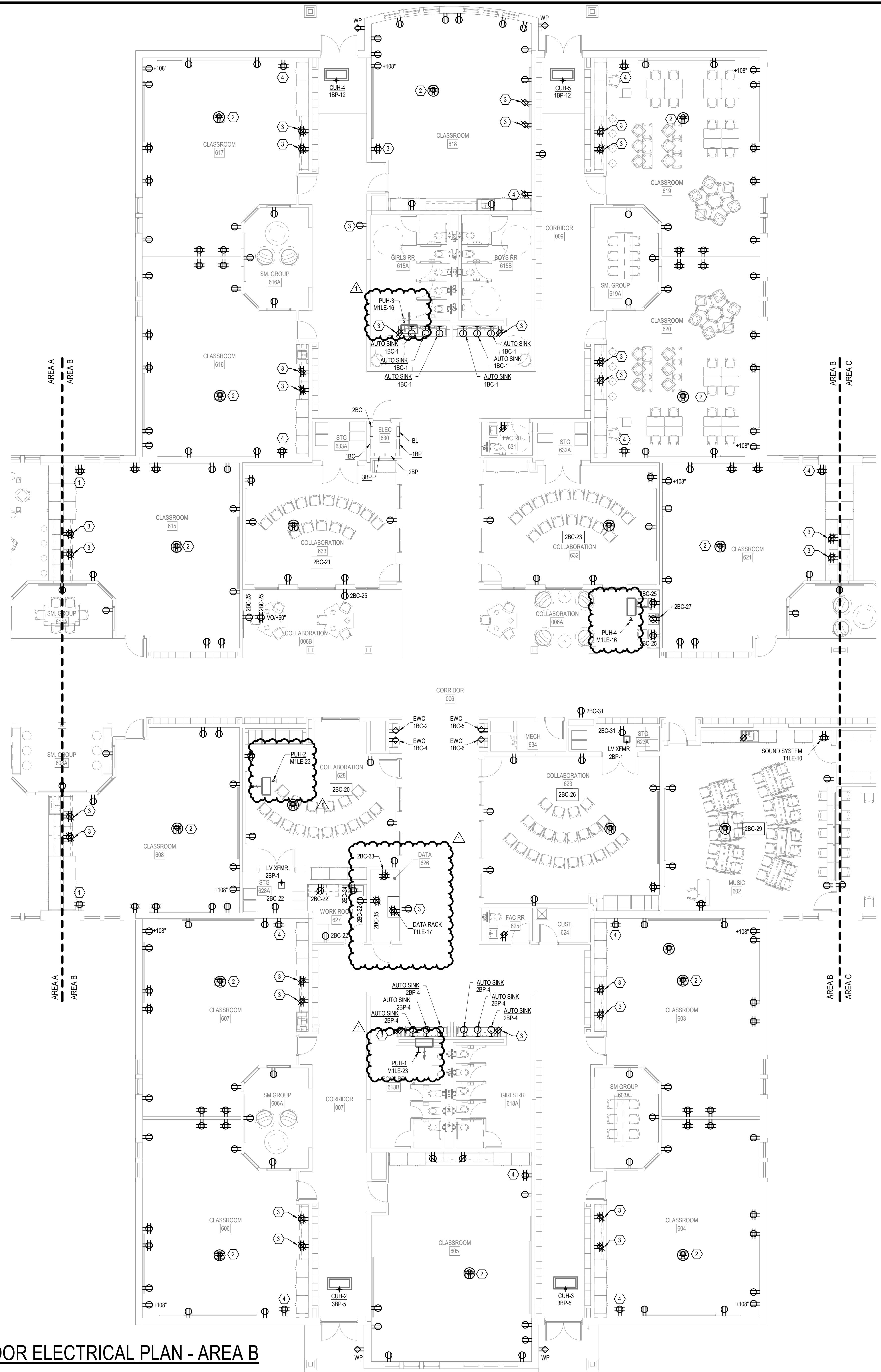
REVISIONS

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 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Chic Rd., Fishers, IN 46037
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CONSTRUCTION DOCUMENTS
 07.12.2024
 W&J JOB NO. 23055
 DRAWN BY EAG
 DRAWING NAME
TECHNOLOGY DETAILS
 DRAWING NO.
T5-5



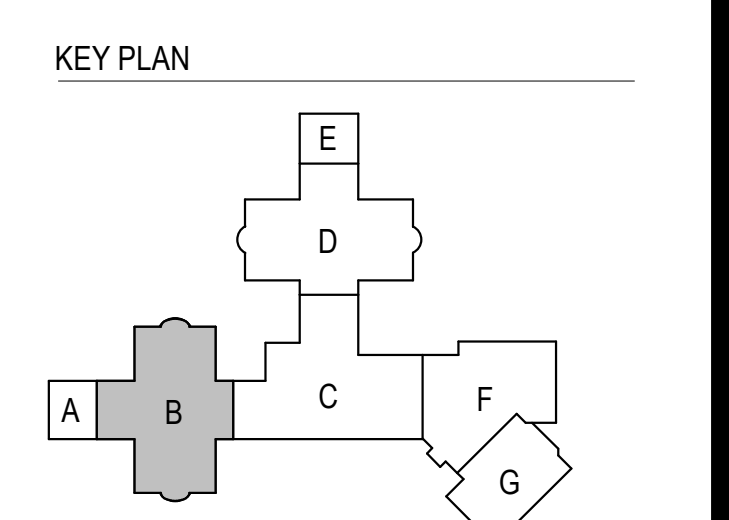
1 FIRST FLOOR ELECTRICAL PLAN - AREA B
1/8" = 1'-0"

GENERAL NOTES

- A REFER TO SHEET ED-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO ES SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH FB-1, PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET TS-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH FB-2, PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

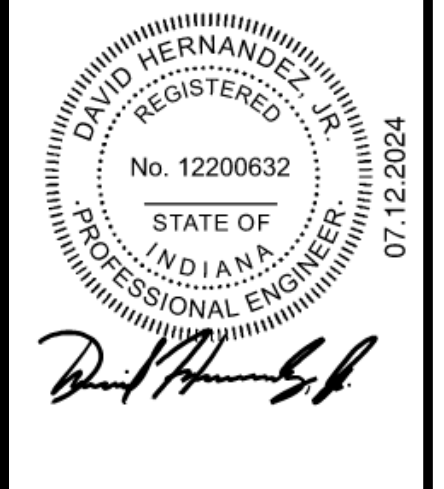
- 1 REPLACE EXISTING DUPLEX RECEPTACLE WITH NEW DOUBLE DUPLEX RECEPTACLE IN SAME LOCATION AND CONNECT TO EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED DUPLEX RECEPTACLE.
- 2 REPLACE EXISTING CEILING MOUNTED DUPLEX RECEPTACLE IN NEW LOCATION SHOWN WITH NEW DOUBLE DUPLEX RECEPTACLE. EXTEND EXISTING CIRCUIT TO NEW LOCATION. COORDINATE FINAL LOCATION OF RELOCATED CEILING MOUNTED PROJECTOR PRIOR TO ROUGH-IN.
- 3 CONNECT NEW RECEPTACLE TO EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED RECEPTACLES IN THIS ROOM.
- 4 CONNECT NEW RECEPTACLE TO EXISTING LOCAL RECEPTACLE CIRCUIT SERVING THIS ROOM.



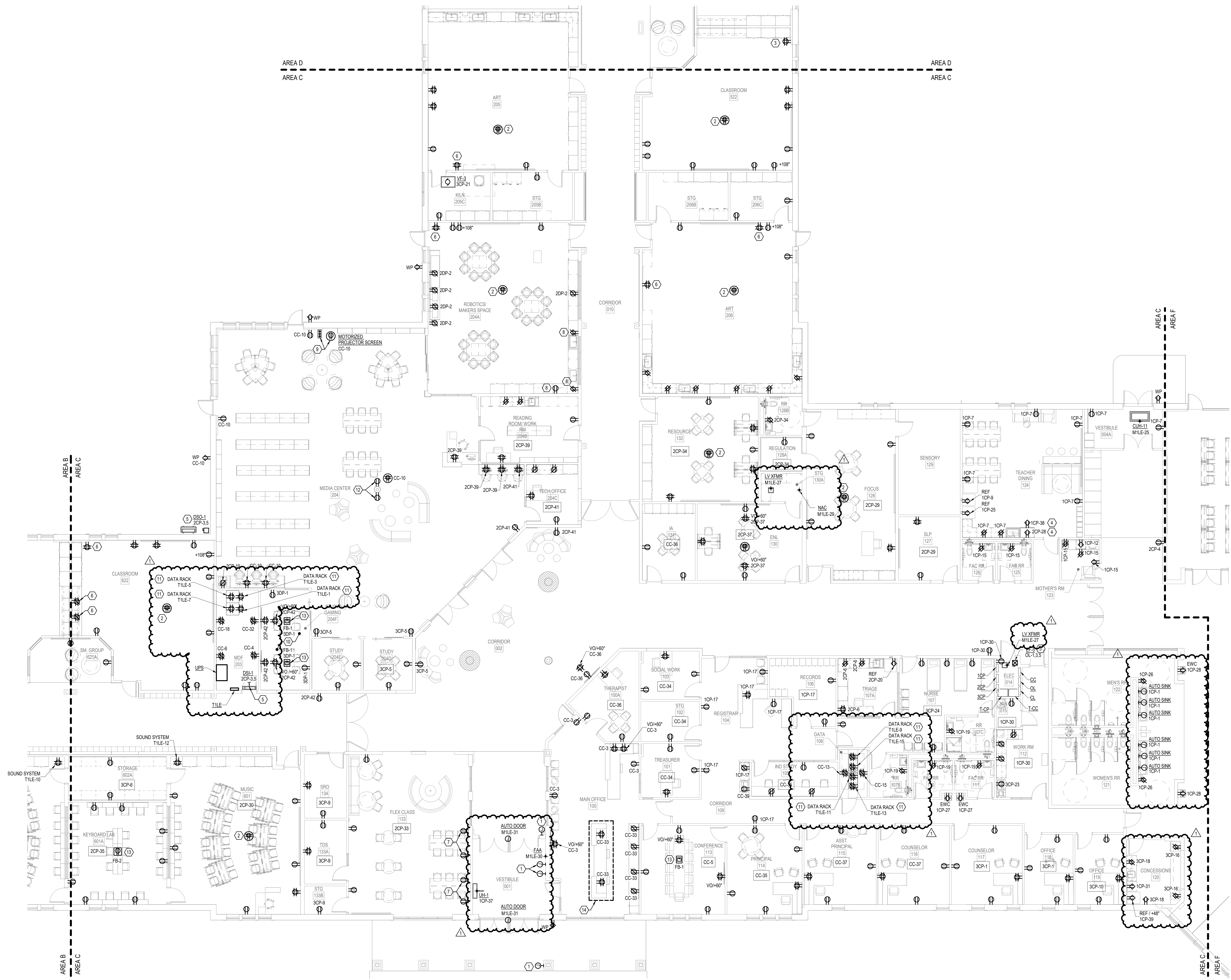
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HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Chic Rd., Fishers, IN 46037
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CONSTRUCTION DOCUMENTS
07.12.2024
W/J JOB NO.
23055
DRAWN BY
MHS
DRAWING NAME
**FIRST FLOOR
ELECTRICAL PLAN -
AREA B**
DRAWING NO.
EP1-2



1 FIRST FLOOR ELECTRICAL PLAN - AREA C
1/8" = 1'-0"

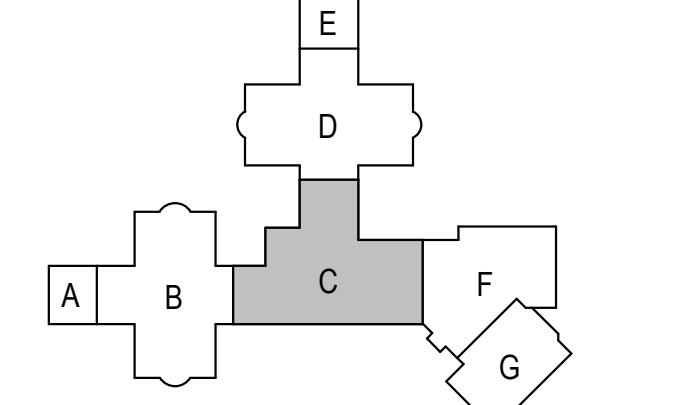
GENERAL NOTES

- A REFER TO SHEET ED-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO ES SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET T-5.3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

- 1 PROVIDE ROUGH-IN FOR WALL MOUNTED ADA PUSH BUTTONS. COORDINATE FINAL LOCATION WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
- 2 REPLACE EXISTING DUPLEX RECEPTACLE WITH NEW DOUBLE DUPLEX RECEPTACLE IN SAME LOCATION AND CONNECT TO EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED DUPLEX RECEPTACLE.
- 3 PROVIDE FINAL CONNECTION FROM MOTOR STARTER TO EF-5 LOCATED ON ROOFTOP.
- 4 COORDINATE ELEVATION OF MICROWAVE DUPLEX RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- 5 PROVIDE ALL WIRING REQUIRED TO INTERLOCK DSI WITH CORRESPONDING DSI SHOWN ON THE PLANS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS.
- 6 CONNECT NEW RECEPTACLE TO EXISTING LOCAL RECEPTACLE CIRCUIT SERVING THIS ROOM.
- 7 PROVIDE EXTENSION RINGS FOR RECEPTACLES INSTALLED IN WALL WITH DECORATIVE WOOD PANELING.
- 8 EXTEND EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED RECEPTACLES TO NEW RECEPTACLE.
- 9 INSTALL 3-POSITION CONTROLLER PROVIDED WITH MOTORIZED PROJECTOR SCREEN MANUFACTURER. COORDINATE ALL ELECTRICAL AND INTERCONNECTION REQUIREMENTS WITH THE MANUFACTURER PRIOR TO ROUGH-IN.
- 10 ALL RECEPTACLES AND COVER PLATES IN THIS ROOM SHALL BE BLACK IN COLOR.
- 11 RECEPTACLE SHALL BE FEED FROM ABOVE AND INSTALLED IN DATA RACK. COORDINATE FINAL LOCATION WITH IT GROUP PRIOR TO INSTALLATION.
- 12 INSTALL NEW DUPLEX RECEPTACLE IN COLUMN. CONNECT TO EXISTING RECEPTACLE CIRCUIT SERVING PREVIOUSLY DEMOLISHED COLUMN MOUNTED RECEPTACLES.
- 13 INSTALL NEW FLOOR BOX WITH TWO DUPLEX RECEPTACLES. ROUTE 1" CONDUIT FROM NEAREST WALL UNDER CONCRETE SLAB TO FLOOR BOX LOCATION. INCLUDE ALL MATERIALS AND LABOR TO CUT EXISTING CONCRETE SLAB. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- 14 INSTALL RECEPTACLES IN CASEWORK AT ISLAND. ROUTE 1" CONDUIT FROM NEAREST WALL UNDER CONCRETE SLAB TO FLOOR BOX LOCATION. INCLUDE ALL MATERIALS AND LABOR TO CUT EXISTING CONCRETE SLAB. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.

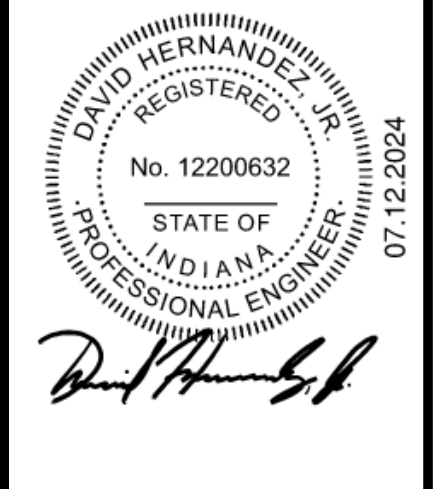
KEY PLAN



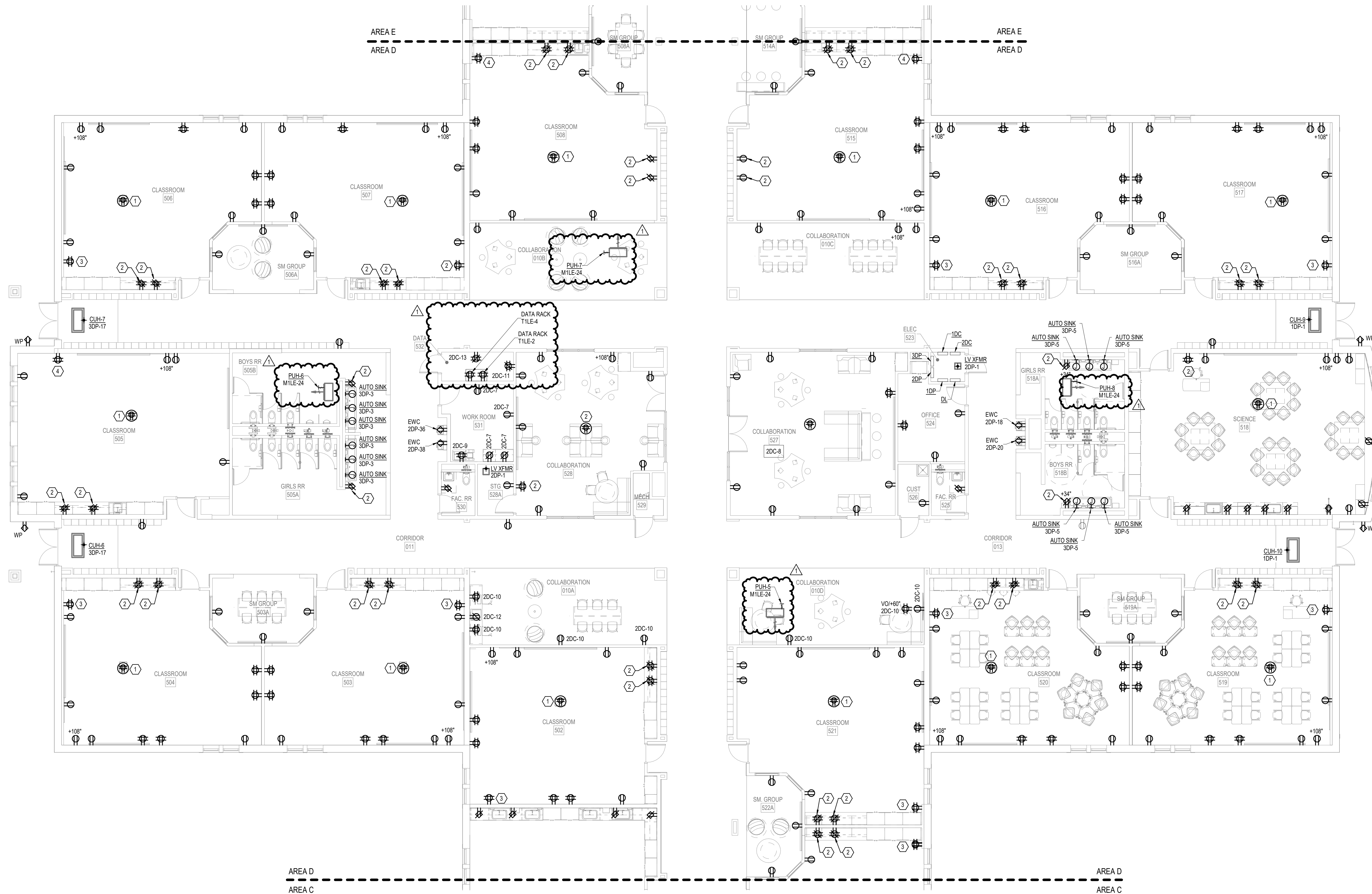
REVISIONS

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 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Old Rd., Fishers, IN 46037
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 07.12.2024
 MWJ JOB NO.
 23055
 DRAWN BY
 MHS
 DRAWING NAME
**FIRST FLOOR
 ELECTRICAL PLAN -
 AREA C**
 DRAWING NO.
EP1-3



1 FIRST FLOOR ELECTRICAL PLAN - AREA D
1/8" = 1'-0"

GENERAL NOTES

- A REFER TO SHEET ED-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO ES SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET TS-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

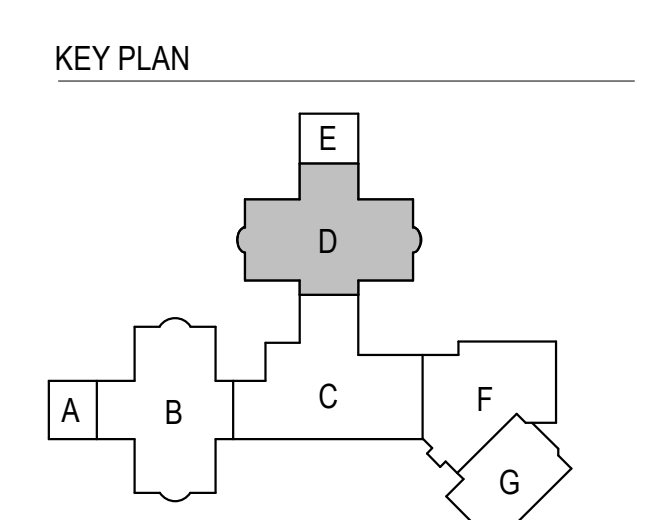
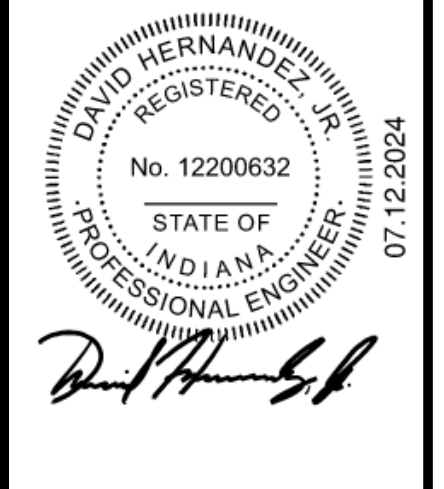
- 1 REPLACE EXISTING CEILING MOUNTED DUPLEX RECEPTACLE IN NEW LOCATION SHOWN WITH NEW DOUBLE DUPLEX RECEPTACLE. EXTEND EXISTING CIRCUIT TO NEW LOCATION. COORDINATE FINAL LOCATION OF RELOCATED CEILING MOUNTED PROJECTOR PRIOR TO ROUGH-IN.
- 2 CONNECT NEW RECEPTACLE TO EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED RECEPTACLES IN THIS ROOM.
- 3 CONNECT NEW RECEPTACLE TO EXISTING LOCAL RECEPTACLE CIRCUIT SERVING THIS ROOM.
- 4 REPLACE EXISTING DUPLEX RECEPTACLE WITH NEW DOUBLE DUPLEX RECEPTACLE IN SAME LOCATION AND CONNECT TO EXISTING CIRCUIT SERVING PREVIOUSLY DEMOLISHED DUPLEX RECEPTACLE.



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23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Old Rd., Fishers, IN 46037
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 W/J JOB NO.
 23055
 DRAWN BY
 MHS
 DRAWING NAME
**FIRST FLOOR
 ELECTRICAL PLAN -
 AREA D**
 DRAWING NO.
EP1-4

GENERAL NOTES

- A REFER TO SHEET ED-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO ES SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
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- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET TS-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL, 2-BAY FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

KITCHEN NOTES

- A MOUNT ALL DEVICES AT HEIGHT NOTED ON FOOD SERVICE POWER PLANS.
- B ALL POWER REQUIREMENTS SHALL BE CONFIRMED WITH ORDERED EQUIPMENT. ALL DEVIATIONS IN POWER REQUIREMENTS FROM BASIS OF DESIGN SHALL BE COMPILED AND REPORTED TO ENGINEER FOR APPROPRIATE MODIFICATION.
- C ALL RECEPTACLES IN KITCHEN SPACES TO BE GFCI TYPE IF RECEPTACLE DOES NOT COME WITH INTEGRAL GFCI THE PANEL BREAKER SHALL BE GFCI TYPE.
- D IF DEVICES NOTED WITH NON RECEPTACLE DISCONNECT ARE MANUFACTURER INSTALLED, THEN DISCONNECTSWITCH NOTED SHALL BE OMITTED.
- E ALL DISCONNECTING MEANS SHALL BE LOCATED IN A MANNER SUCH THAT THEY ARE NOT ACCESSIBLE TO THE PUBLIC.
- F REFER TO SHEET FOODSERVICE EQUIPMENT SHOP DRAWINGS FOR ADDITIONAL INFORMATION ON ALL CONNECTIONS AND WORK ASSOCIATED WITH THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WORK NOTED ON THE FOODSERVICE K-SERIES DRAWINGS SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S BID PROPOSAL.
- G ALL WIRE CALLOUTS ARE SIZED WITH COPPER (CU) CONDUCTORS UNLESS OTHERWISE NOTED WITH ALUMINUM (AL).

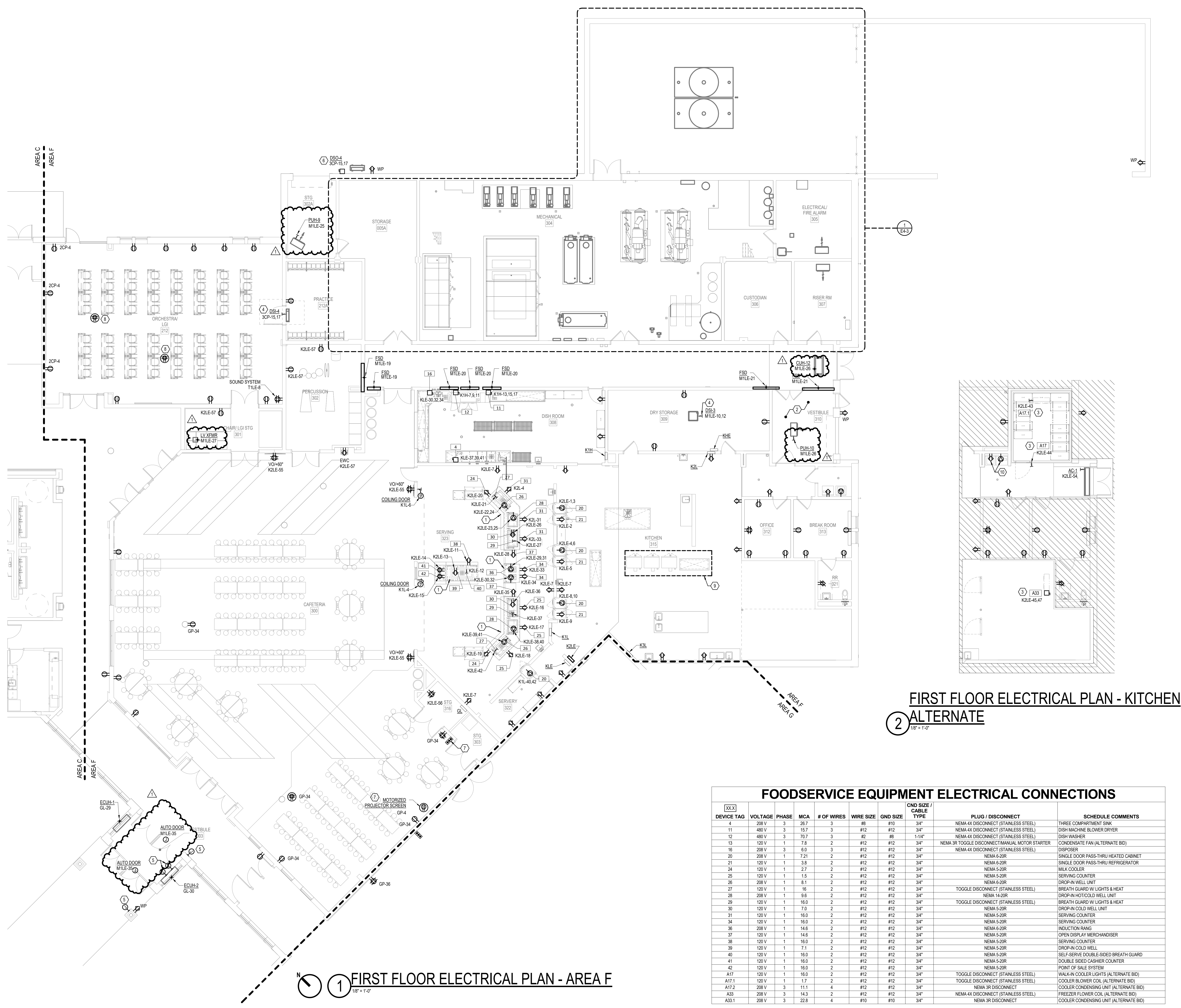
SHEET KEYNOTES

- 1 FOR BRANCH CIRCUITS TO ALL ELECTRICAL DEVICES AT THIS ISLAND, ROUTE CONDUIT AS INDICATED ON THE KITCHEN EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULE ON THIS SHEET FROM PANEL INDICATED, DOWN TO THE NEAREST WALL UNDER THE CONCRETE SLAB, AND STUB UP AT THIS POINT IN THE ISLAND, INCLUDE ALL CONCRETE CUTTING AND PATCHING IN BID PROPOSAL. COORDINATE ALL WORK WITH KITCHEN EQUIPMENT VENDOR DRAWINGS PRIOR TO INSTALLATION.
- 2 BASE BID - OTHER THAN EXISTING LIGHTING AND LIGHTING CONTROLS, ALL EXISTING ELECTRICAL SHALL REMAIN IN THIS ROOM. PROVIDE ALL ELECTRICAL ASSOCIATED WITH PUM-10.
- 3 ALTERNATE BID - PROVIDE ALL ELECTRICAL ASSOCIATED WITH NEW COOLER AND OTHER FOODSERVICE EQUIPMENT SHOWN IN THIS PLAN.
- 4 PROVIDE ALL WIRING REQUIRED TO INTERLOCK DSO WITH CORRESPONDING DSO SHOWN ON THE PLANS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS.
- 5 PROVIDE ROUGH-IN FOR WALL MOUNTED ADA PUSH BUTTONS. COORDINATE FINAL LOCATION WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
- 6 PROVIDE ALL WIRING REQUIRED TO INTERLOCK DSO WITH CORRESPONDING DSO SHOWN ON THE PLANS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS.
- 7 INSTALL 3-POSITION CONTROLLER PROVIDED WITH MOTORIZED PROJECTOR SCREEN MANUFACTURER. COORDINATE ALL ELECTRICAL AND INTERCONNECTION REQUIREMENTS WITH THE MANUFACTURER PRIOR TO ROUGH-IN.
- 8 REPLACE EXISTING CEILING MOUNTED DUPLEX RECEPTACLE IN NEW LOCATION SHOWN WITH NEW DOUBLE DUPLEX RECEPTACLE. EXTEND EXISTING CIRCUIT TO NEW LOCATION. COORDINATE FINAL LOCATION OF RELOCATED CEILING MOUNTED PROJECTOR PRIOR TO ROUGH-IN.
- 9 INCLUDE ALL LABOR AND MATERIALS TO RECONFIGURE AND EXTEND EXISTING ELECTRICAL ASSOCIATED WITH REVISED LAYOUT OF FOODSERVICE MICROWAVES AND OVEN'S AT THIS LOCATION. COORDINATE ALL WORK WITH FOODSERVICE VENDOR DRAWINGS.
- 10 ALTERNATE BID - PROVIDE NEW DUPLEX RECEPTACLE FOR RELOCATION OF EXISTING WASHER AND NEW NEMA-14-30R RECEPTACLE FOR RELOCATION OF EXISTING DRYER. COORDINATE EXACT REQUIREMENTS WITH EXISTING EQUIPMENT PRIOR TO ROUGH-IN.



REVISIONS

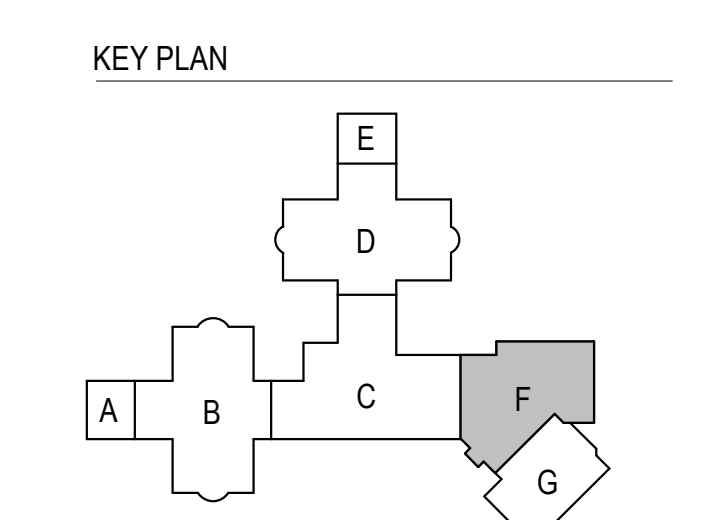
1	7/30/24	Addendum #1
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FIRST FLOOR ELECTRICAL PLAN - KITCHEN
ALTERNATE
 1/8" = 1'-0"

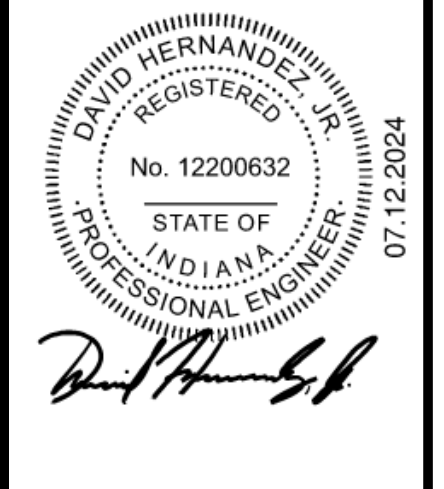
FOODSERVICE EQUIPMENT ELECTRICAL CONNECTIONS

DEVICE TAG	VOLTAGE	PHASE	MCA	# OF WIRES	WIRE SIZE	GND SIZE	CND SIZE / CABLE TYPE	PLUG / DISCONNECT	SCHEDULE COMMENTS
4	208 V	3	26.7	3	#8	#10	3/4"	NEMA 4X DISCONNECT (STAINLESS STEEL)	THREE COMPARTMENT SINK
11	480 V	3	15.7	3	#12	#12	3/4"	NEMA 4X DISCONNECT (STAINLESS STEEL)	DISH MACHINE BLOWER DRYER
12	480 V	3	70.7	3	#2	#8	1-1/4"	NEMA 4X DISCONNECT (STAINLESS STEEL)	DISH WASHER
13	120 V	1	7.8	2	#12	#12	3/4"	NEMA 3R TOGGLE DISCONNECT/MANUAL MOTOR STARTER	CONDENSATE FAN (ALTERNATE BID)
16	208 V	3	6.0	3	#12	#12	3/4"	NEMA 4X DISCONNECT (STAINLESS STEEL)	DISPOSER
20	208 V	1	7.21	2	#12	#12	3/4"	NEMA 5-20R	SINGLE DOOR PASS-THRU HEATED CABINET
21	120 V	1	3.8	2	#12	#12	3/4"	NEMA 5-20R	SINGLE DOOR PASS-THRU REFRIGERATOR
24	120 V	1	2.7	2	#12	#12	3/4"	NEMA 5-20R	MILK COOLER
25	120 V	1	1.5	2	#12	#12	3/4"	NEMA 5-20R	SERVING COUNTER
26	208 V	1	8.1	2	#12	#12	3/4"	NEMA 6-20R	DROP-IN WELL UNIT
27	120 V	1	1.6	2	#12	#12	3/4"	TOGGLE DISCONNECT (STAINLESS STEEL)	BREATH GUARD W/ LIGHTS & HEAT
28	208 V	1	9.8	2	#12	#12	3/4"	NEMA 14-20R	DROP-IN HOT/COLD WELL UNIT
29	120 V	1	14.6	2	#12	#12	3/4"	TOGGLE DISCONNECT (STAINLESS STEEL)	BREATH GUARD W/ LIGHTS & HEAT
30	120 V	1	7.0	2	#12	#12	3/4"	NEMA 5-20R	DROP-IN COLD WELL UNIT
31	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	SERVING COUNTER
34	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	SERVING COUNTER
36	208 V	1	14.6	2	#12	#12	3/4"	NEMA 5-20R	INDUCTION RANG
37	120 V	1	14.6	2	#12	#12	3/4"	NEMA 5-20R	OPEN DISPLAY MERCHANDISER
38	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	SERVING COUNTER
39	120 V	1	7.1	2	#12	#12	3/4"	NEMA 5-20R	DROP-IN COLD WELL
40	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	SELF-SERVE DOUBLE-SIDED BREATH GUARD
41	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	DOUBLE SIDED CASHIER COUNTER
42	120 V	1	16.0	2	#12	#12	3/4"	NEMA 5-20R	POINT OF SALE SYSTEM
A17	120 V	1	1.6	2	#12	#12	3/4"	TOGGLE DISCONNECT (STAINLESS STEEL)	WALK-IN COOLER LIGHTS (ALTERNATE BID)
A17.1	120 V	1	1.7	2	#12	#12	3/4"	TOGGLE DISCONNECT (STAINLESS STEEL)	COOLER BLOWER COIL (ALTERNATE BID)
A17.2	208 V	3	11.1	4	#12	#12	3/4"	NEMA 3R DISCONNECT	COOLER CONDENSING UNIT (ALTERNATE BID)
A33	208 V	3	14.3	2	#12	#12	3/4"	NEMA 4X DISCONNECT (STAINLESS STEEL)	FREEZER FLOWER COIL (ALTERNATE BID)
A33.1	208 V	3	22.8	4	#10	#10	3/4"	NEMA 3R DISCONNECT	COOLER CONDENSING UNIT (ALTERNATE BID)

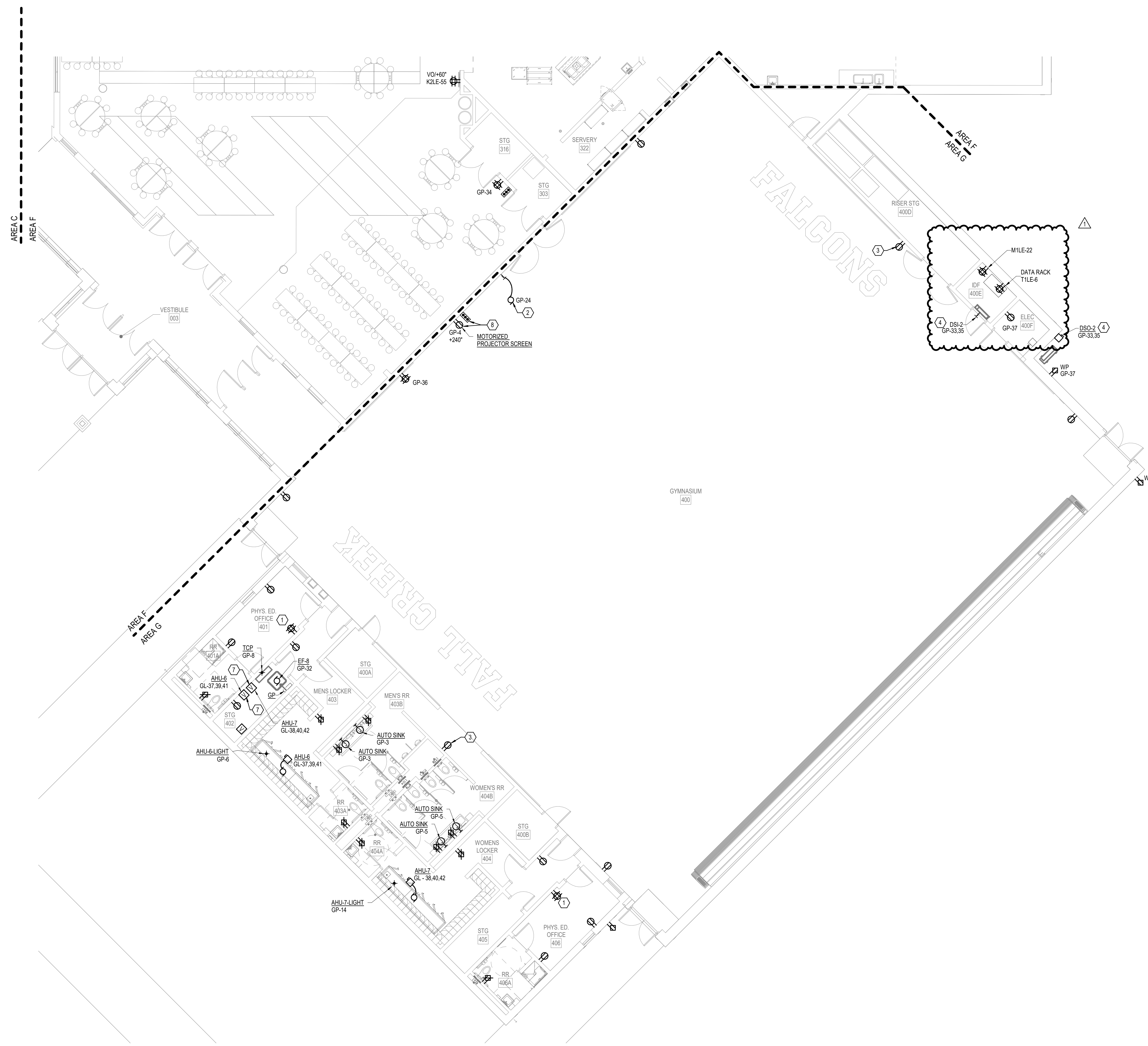


FIRST FLOOR ELECTRICAL PLAN - AREA F
 1/8" = 1'-0"

HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 07.12.2024
 12011 Ohio Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS



CONSTRUCTION DOCUMENTS
 07.12.2024
 W/L JOB NO.
 23055
 DRAWN BY
 DCH
 DRAWING NAME
FIRST FLOOR ELECTRICAL PLAN - AREA F
 DRAWING NO.
EP1-5



1 FIRST FLOOR ELECTRICAL PLAN - AREA G
1/8" = 1'-0"

GENERAL NOTES

- A REFER TO SHEET ED-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO ES SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET TS-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

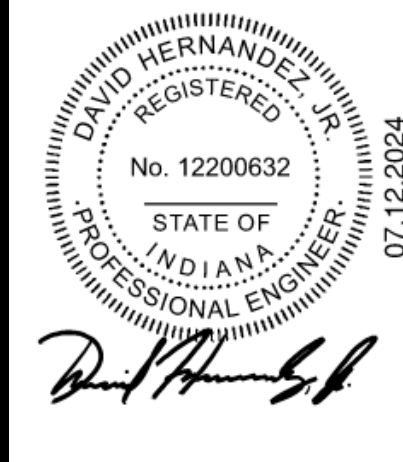
- 1 REPLACE EXISTING DUPLEX RECEPTACLE WITH NEW DOUBLE DUPLEX RECEPTACLE IN SAME LOCATION AND CONNECT TO EXISTING CIRCUITRY.
- 2 ALTERNATE BID - PROVIDE 120V, 20A, 3/4HP MOTOR AND MOTOR CONTROLLER KEY SWITCH FOR GYM DIVIDER CURTAIN. ROUTE 2#12 & #12G IN 3/4" CONDUIT.
- 3 EXTEND EXISTING CIRCUIT FROM EXISTING FLOOR MOUNTED RECEPTACLE TO NEW DUPLEX RECEPTACLE.
- 4 PROVIDE ALL WIRING REQUIRED TO INTERLOCK DSI WITH CORRESPONDING DSO SHOWN ON THE PLANS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS.
- 7 PROVIDE NEW VFD AND MAKE FINAL CONNECTION TO CORRESPONDING MOTOR TAG INDICATED AS SHOWN ON THIS PLAN.
- 8 INSTALL 3-POSITION CONTROLLER PROVIDED WITH MOTORIZED PROJECTOR SCREEN MANUFACTURER. COORDINATE ALL ELECTRICAL AND INTERCONNECTION REQUIREMENTS WITH THE MANUFACTURER PRIOR TO ROUGH-IN.



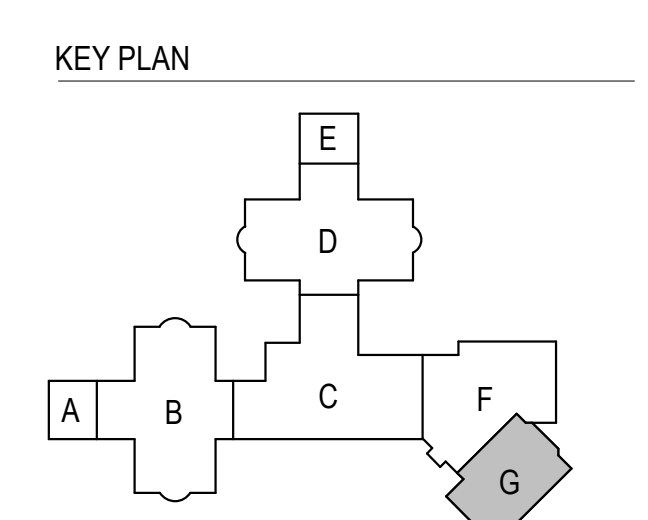
REVISIONS

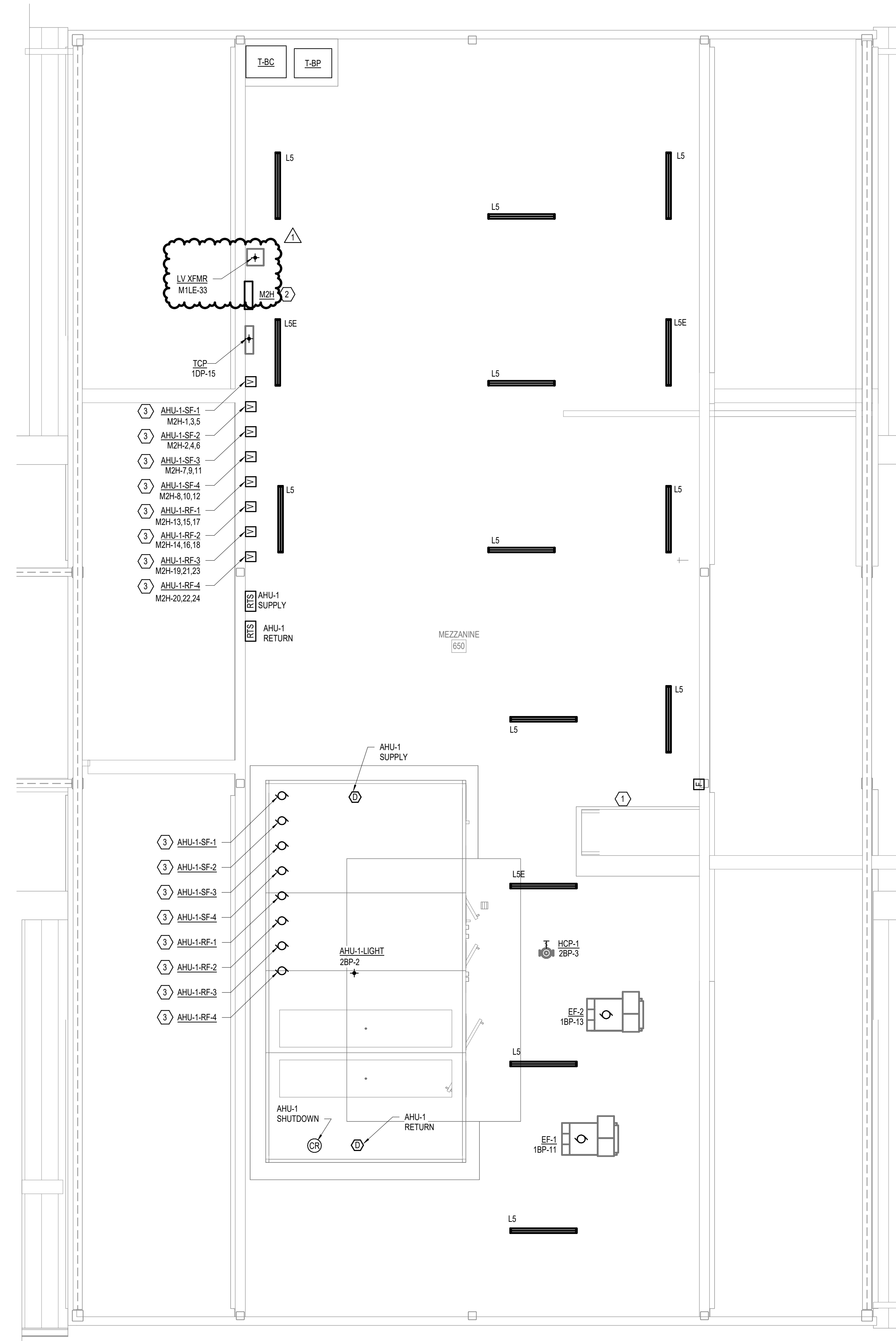
1	7/29/24	Addendum #1
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07.12.2024
HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Olio Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS



CONSTRUCTION DOCUMENTS
07.12.2024
WNL JOB NO.
23055
DRAWN BY
MHS
DRAWING NAME
FIRST FLOOR ELECTRICAL PLAN - AREA G
DRAWING NO.
EP1-6





1 ENLARGED ELECTRICAL PLAN - MEZZANINE - AREA B
1/4" = 1'-0"

GENERAL NOTES

- A REFER TO SHEET E0-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E6 SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET T-5.3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

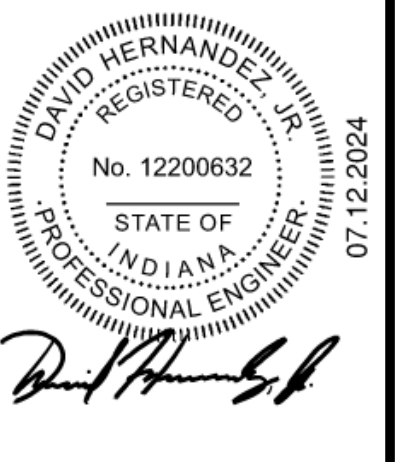
- 1 PROVIDE 1 FOR 1 REPLACEMENT OF ALL LIGHT FIXTURES WITH TYPE L5 / LSE LINEAR STRIP AND LIGHTING CONTROL LOCATED WITHIN MEZZANINE. COORDINATE FINAL PLACEMENT WITH EQUIPMENT LOCATIONS.
- 2 PROVIDE NEW 480/277V, 200A PANEL. SEE RISER DIAGRAMS FOR ADDITIONAL INFORMATION.
- 3 PROVIDE NEW VFD AND MAKE FINAL CONNECTION TO CORRESPONDING MOTOR TAG INDICATED AS SHOWN ON THIS PLAN.



REVISIONS

1	7/29/24	Addendum #1
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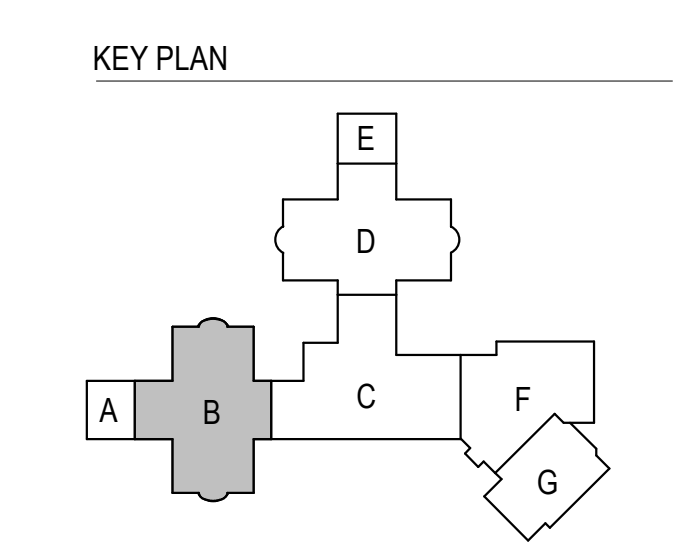
07.12.2024
 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Chic Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS

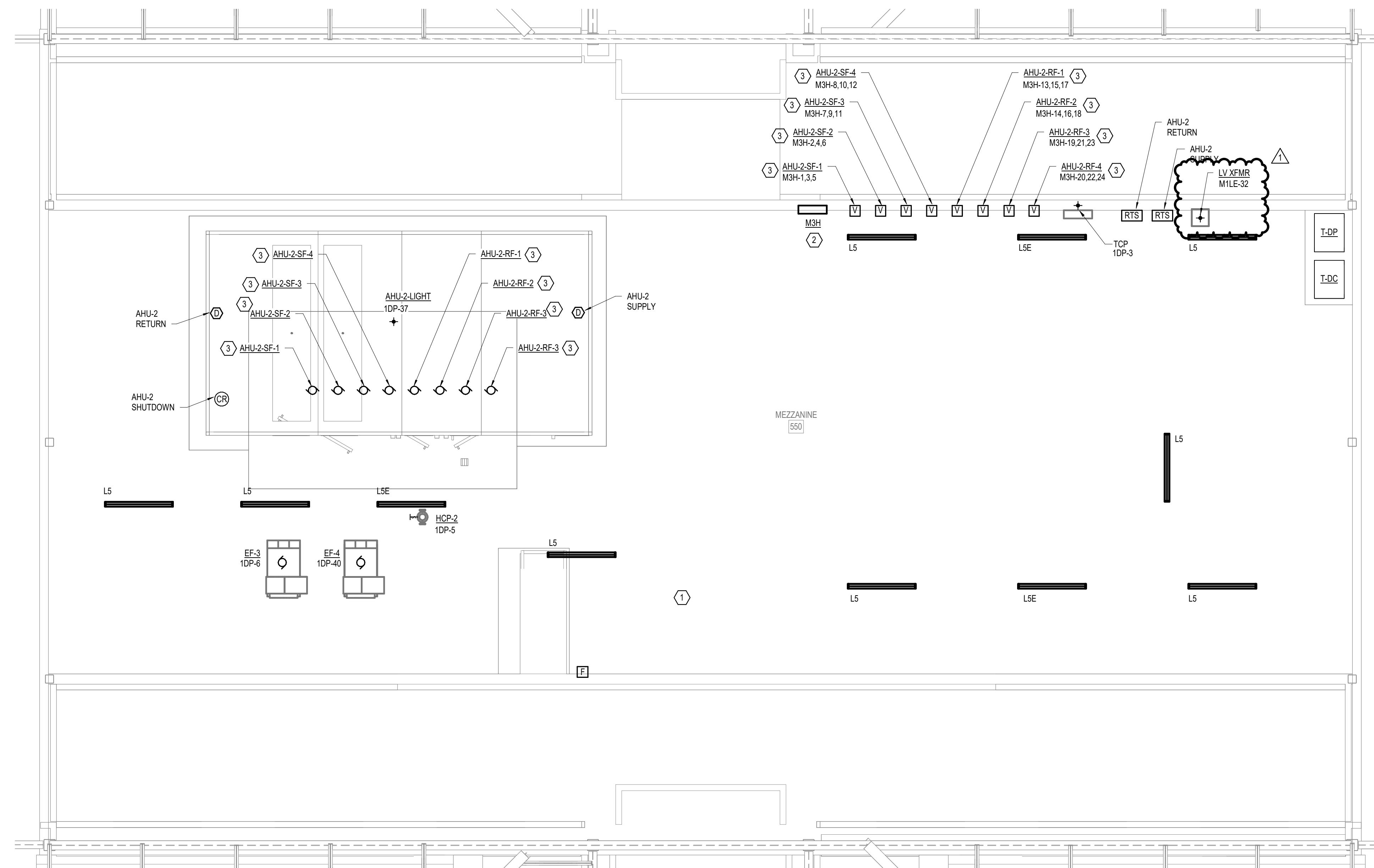


CONSTRUCTION DOCUMENTS
 07.12.2024
 WFL JOB NO.
 23055
 DRAWN BY
 MHS/MLL

DRAWING NAME
ENLARGED ELECTRICAL PLANS

DRAWING NO.
E4-1





1 ENLARGED ELECTRICAL PLAN - MEZZANINE - AREA D
1/4" = 1'-0"

GENERAL NOTES

- A REFER TO SHEET E4-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E6 SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
- E CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN THE ROOM ARE ON THE INDICATED PANEL AND CIRCUIT UNLESS OTHERWISE NOTED.
- F EXISTING WALL OPENINGS MAY BE REUSED FOR REPLACEMENT OF EXISTING RECEPTACLES IN THE SAME LOCATION.
- G UNLESS NOTED OTHERWISE, REPLACE ALL EXISTING RECEPTACLES IN THE ENTIRE BUILDING ON A 1-FOR-1 BASIS WITH NEW COVER PLATES. CONNECT TO EXISTING CIRCUITRY.
- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH 'FB-1', PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET T5-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH 'FB-2', PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

- 1 PROVIDE 1 FOR 1 REPLACEMENT OF ALL LIGHT FIXTURES WITH TYPE L5 / LSE LINEAR STRIP AND LIGHTING CONTROL LOCATED WITHIN MEZZANINE. COORDINATE FINAL PLACEMENT WITH EQUIPMENT LOCATIONS.
- 2 PROVIDE NEW 480/277V, 200A PANEL. SEE RISER DIAGRAMS FOR ADDITIONAL INFORMATION.
- 3 PROVIDE NEW VFD AND MAKE FINAL CONNECTION TO CORRESPONDING MOTOR TAG INDICATED AS SHOWN ON THIS PLAN.



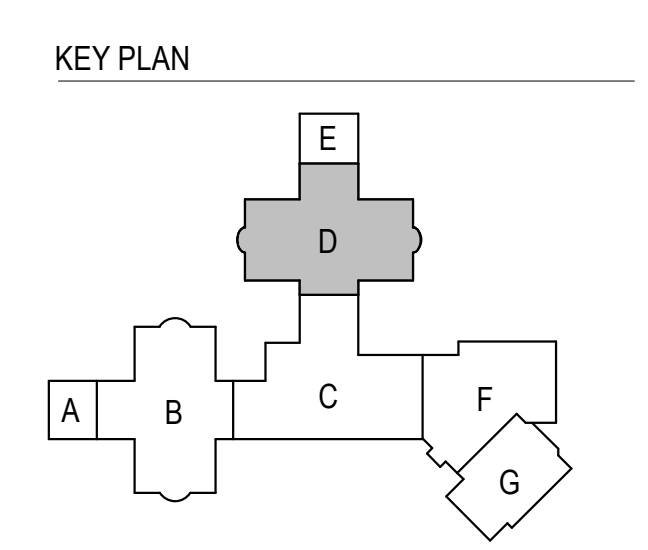
REVISIONS

1	7/29/24	Addendum #1
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07.12.2024
 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Chic Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS



CONSTRUCTION DOCUMENTS
 07.12.2024
 WFL JOB NO.
 23055
 DRAWN BY
 MHS/MLL
 DRAWING NAME
ENLARGED ELECTRICAL PLANS
 DRAWING NO.
E4-2



GENERAL NOTES

- A REFER TO SHEET E4-0 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E6 SERIES SHEETS FOR PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D RECEPTACLES TAGGED WITH 'VO' TO BE INSTALLED INSIDE VIDEO OUTPUT BOX. COORDINATE INSTALLATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
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- H ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS LABELED WITH 'EWC' SHALL BE FEED FROM A GFCI BREAKER FROM THE PANEL INDICATED ON THE PLANS.
- I FOR ALL FLOORBOXES LABELED WITH FB-1, PROVIDE FLOOR BOX AS LISTED IN DETAIL 4, SHEET TS-3. COORDINATE ALL CONDUIT REQUIREMENTS WITH THIS DETAIL AND FINAL LOCATION WITH ARCHITECT PRIOR TO ALL WORK.
- J FOR ALL FLOORBOXES LABELED WITH FB-2, PROVIDE FLUSH MOUNTED HUBBELL OR APPROVED EQUAL 2-GANG FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND BRASS COVER PLATE.
- K REFER TO EQUIPMENT ELECTRICAL CONNECTIONS SCHEDULES ON E-6 SERIES SHEETS FOR ADDITIONAL INFORMATION.

SHEET KEYNOTES

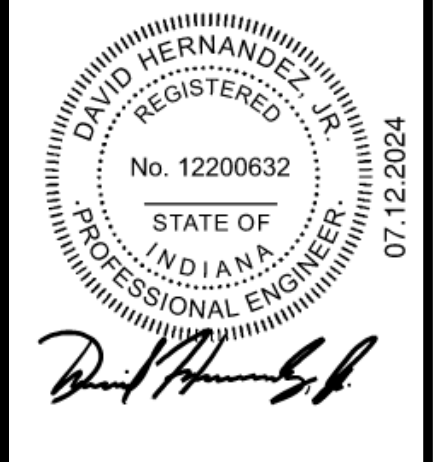
- 1 PROVIDE NEW FLOOR MOUNTED STRUT RACK FOR VFDs SHOWN IN THIS AREA.
- 2 PROVIDE NEW VFD AND MAKE FINAL CONNECTION TO CORRESPONDING MOTOR TAG INDICATED AS SHOWN ON THIS PLAN.
- 3 PROVIDE NEW VFD AND MAKE FINAL CONNECTION TO CORRESPONDING MOTOR TAG INDICATED AS SHOWN ON SHEET EPC-1.
- 4 PROVIDE 40A/80V/3P NEMA-1 DISCONNECT FOR COOLING TOWER. COOLING TOWER IS TO BE POWERED FROM THE CORRESPONDING VFD LOCATED IN MECHANICAL ROOM. PROVIDE FINAL CONNECTION FROM VFD.
- 5 PROVIDE 1 FOR 1 REPLACEMENT OF ALL LIGHT FIXTURES WITH TYPE LS/1 LEE LINEAR STRIP AND LIGHTING CONTROL, LOCATED WITHIN MEZZANINE. COORDINATE FINAL PLACEMENT WITH EQUIPMENT LOCATIONS.



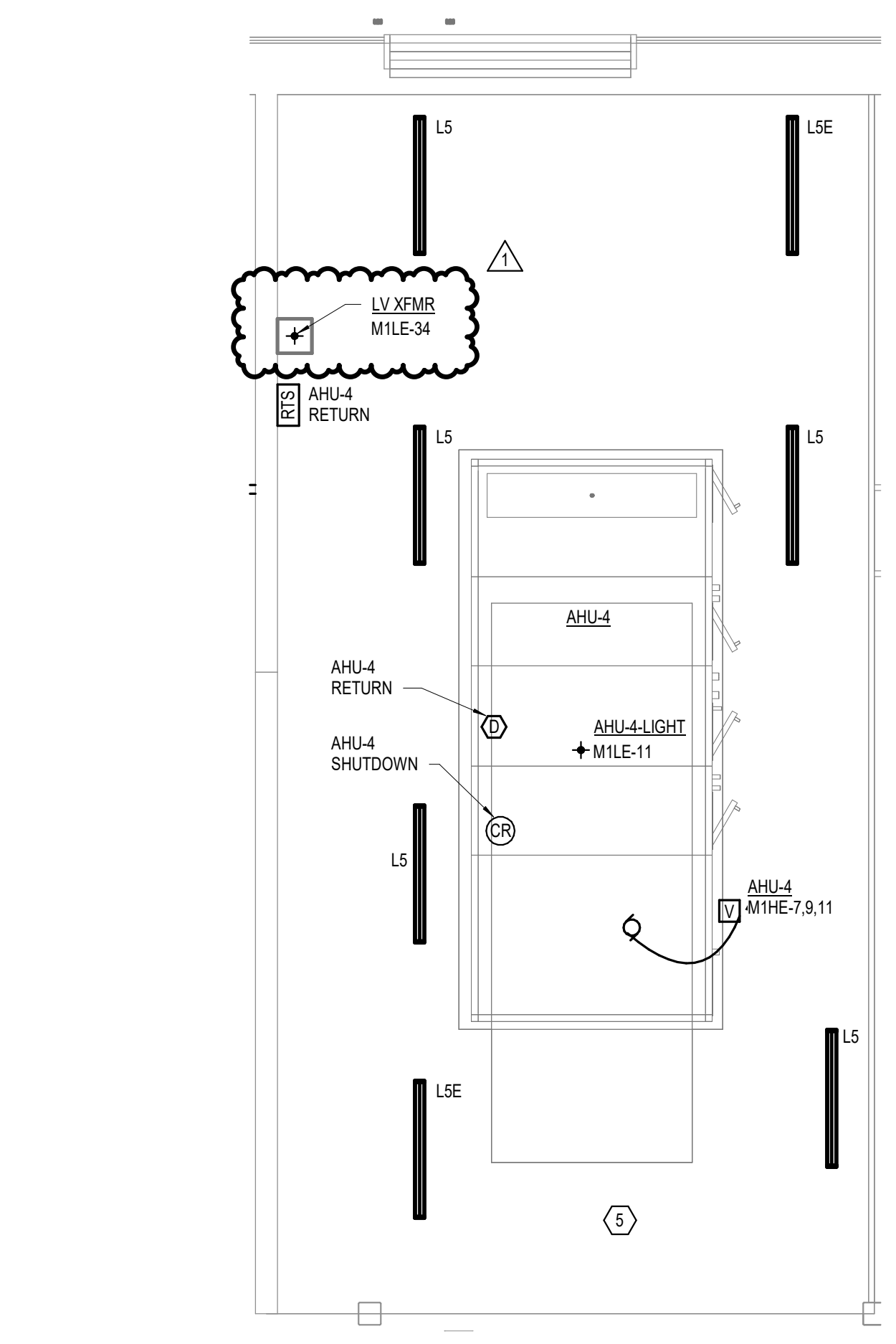
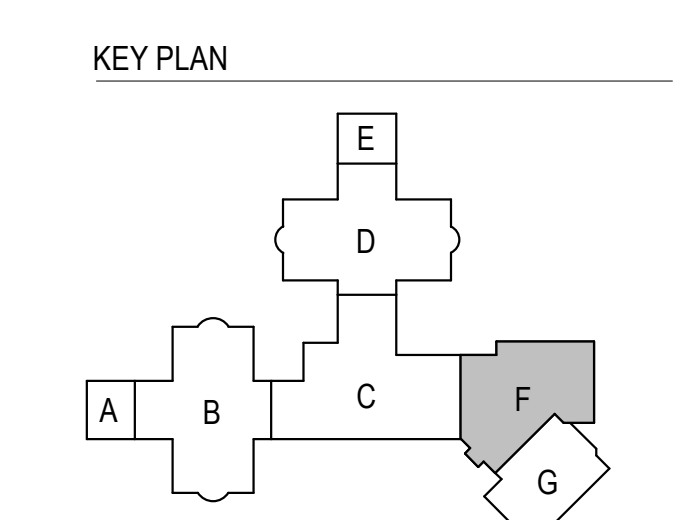
REVISIONS

1	7/29/24	Addendum #1
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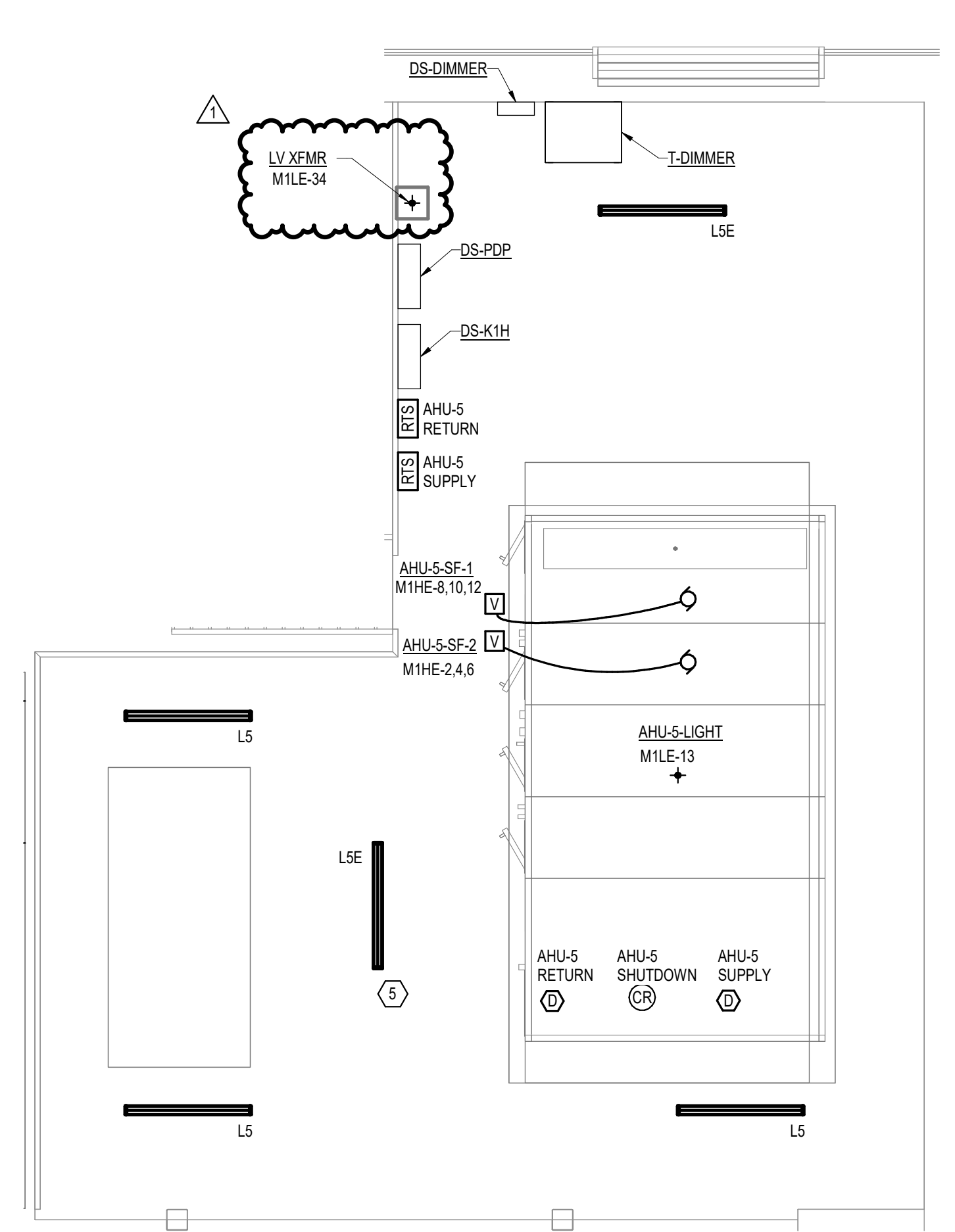
07.12.2024
 HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
 12011 Chic Rd., Fishers, IN 46037
 CONSTRUCTION DOCUMENTS



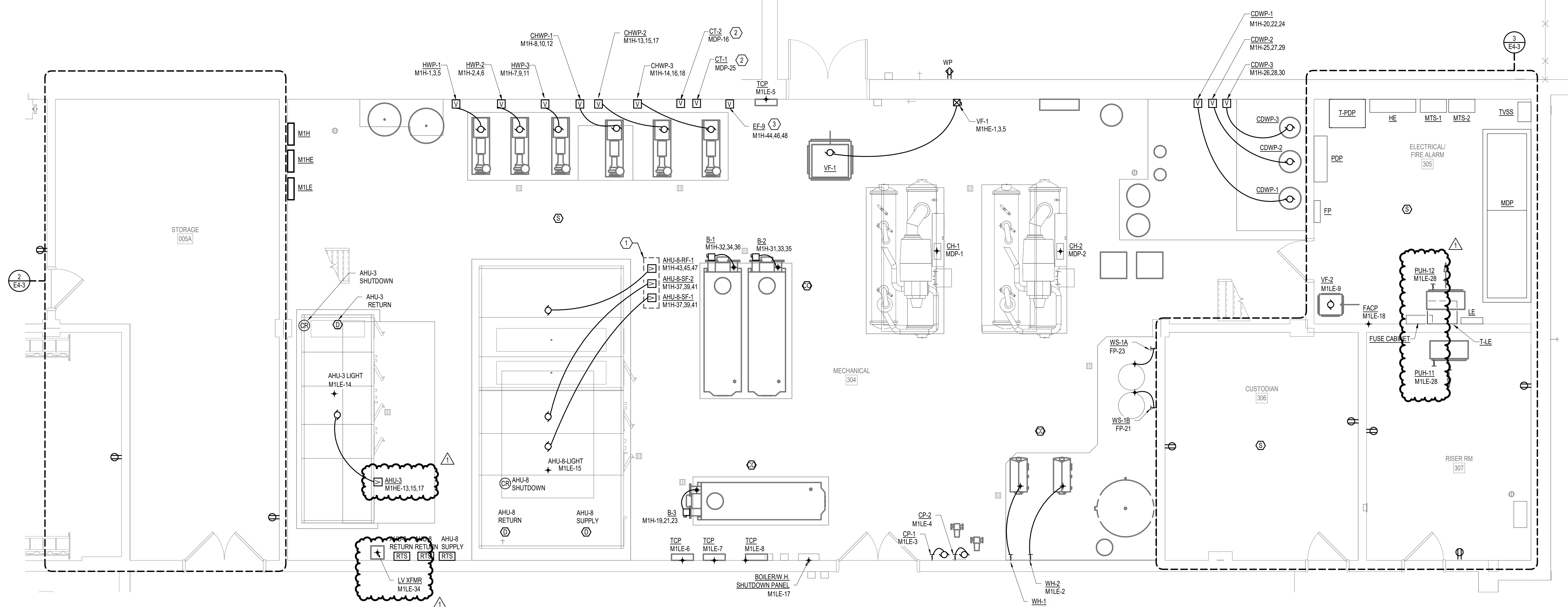
CONSTRUCTION DOCUMENTS
 07.12.2024
 WFL JOB NO.
 23055
 DRAWN BY
 MHS/DCH
 DRAWING NAME
ENLARGED ELECTRICAL PLANS
 DRAWING NO.
E4-3



2 ENLARGED ELECTRICAL PLAN - MECHANICAL ROOM MEZZANINE A
 1/4" = 1'-0"



3 ENLARGED ELECTRICAL PLAN - MECHANICAL ROOM MEZZANINE B
 1/4" = 1'-0"



1 ENLARGED ELECTRICAL PLAN - MECHANICAL ROOM PLAN
 1/4" = 1'-0"

REVISIONS

1	7/30/24 Addendum #1
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23055 - FALL CREEK INTERMEDIATE RENOVATIONS

HAMILTON SOUTHEASTERN SCHOOL CORPORATION

07.12.2024

12011 Chic Rd., Fishers, IN 46037

CONSTRUCTION DOCUMENTS



CONSTRUCTION DOCUMENTS
07.12.2024
M/J JOB NO.
23055
DRAWN BY
MHS

DRAWING NAME
ELECTRICAL
SCHEDULES

DRAWING NO.
E6-2

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	CH-1-MECH RM	3	400 A	400 A	178000 VA	
2	CH-2-MECH RM	3	400 A	400 A	178000 VA	
3	TVSS	3	60 A	60 A	0 VA	
4	PANEL BL	3	200 A	200 A	0 VA	
5	MTS-1	3	400 A	400 A	0 VA	
6	PANEL DL	3	200 A	200 A	0 VA	
7	M2H	3	200 A	200 A	102000 VA	
8	SPARE	3	60 A	60 A	0 VA	
9	SPARE	3	60 A	60 A	0 VA	
10	SPARE	3	60 A	60 A	0 VA	
11	DIMMER PANEL	3	200 A	200 A	0 VA	
12	M2H	3	200 A	200 A	102000 VA	
13	75 KVA XMFR T-2	3	200 A	200 A	0 VA	
14	M1H	3	600 A	600 A	317680 VA	
15	SPARE	3	30 A	30 A	0 VA	
16	CT-2 - MECHANICAL RM	3	60 A	40 A	16700 VA	
17	KITCHEN FEEDER	3	400 A	400 A	0 VA	
18	SPACE	1	--	--	--	
19	SPACE	1	--	--	--	
20	SPACE	1	--	--	--	
21	SPACE	1	--	--	--	
22	SPACE	3	30 A	30 A	0 VA	
23	MTS-2	3	400 A	20 A	0 VA	
24	SPACE	3	30 A	30 A	0 VA	
25	CT-1 - MECHANICAL RM	3	60 A	40 A	16700 VA	
26	COMPACTOR	3	30 A	30 A	0 VA	
					Total Conn. Load:	911280 VA
					Total Amps:	1096 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	36000 VA	100.00%	36000 VA	
Motor	519100 VA	101.30%	525850 VA	Total Conn. Load: 911280 VA
Other	386180 VA	100.00%	386180 VA	Total Est. Demand: 919030 VA
Miscellaneous Power	0 VA	0.00%	0 VA	Total Conn.: 1096 A
FRACTIONAL HP MOTOR	0 VA	0.00%	0 VA	Total Est. Demand: 1104 A
INTEGRAL HP MOTOR	0 VA	0.00%	0 VA	

Notes: EXISTING GE SPECTRA SERIES - SWITCHBOARDS TO REMAIN. PROVIDE NEW BREAKERS/FUSED SWITCHES FOR NEW CIRCUITS AS REQUIRED.

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	M1HE	3	200 A	200 A	74000 VA	
2	TRANSFORMER-1 PANEL-LE	3	100 A	100 A	0 VA	
3	PANEL-KHE	3	60 A	60 A	0 VA	
4	AIR COMPRESSOR	3	30 A	30 A	0 VA	
5	PANEL-GL	3	200 A	200 A	0 VA	
6	SPARE	1	60 A	60 A	0 VA	
7	BOILER-1	3	20 A	20 A	0 VA	
8	SPACE	1	--	--	--	
9	SPACE	1	--	--	--	
10	SPACE	1	--	--	--	
					Total Conn. Load:	74000 VA
					Total Amps:	89 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Motor	74000 VA	107.26%	79375 VA	Total Conn. Load: 74000 VA
FRACTIONAL HP MOTOR	0 VA	0.00%	0 VA	Total Est. Demand: 79375 VA
				Total Conn.: 89 A
				Total Est. Demand: 95 A

Notes: EXISTING GE SPECTRA SERIES- APN HEAT RATED PLUG IN STYLE PANEL TO REMAIN. PROVIDE NEW BREAKERS/FUSED SWITCHES FOR NEW CIRCUITS AS REQUIRED.

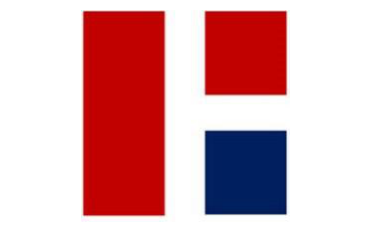
CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	COLLEGE PARK CHURCH DISCONNECT	3	200 A	200 A	0 VA	
2	K2L & K3L	3	200 A	200 A	0 VA	
3	FP	3	100 A	100 A	0 VA	
4	K2LE	3	200 A	200 A	58928 VA	
5	K1L	3	200 A	200 A	0 VA	
6	M1LE	3	100 A	100 A	21470 VA	
7	UPS	3	100 A	100 A	4500 VA	
8	SPACE	3	--	--	--	
					Total Conn. Load:	82898 VA
					Total Amps:	230 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	11620 VA	100.00%	11620 VA	
LIGHTING	540 VA	125.00%	675 VA	Total Conn. Load: 82898 VA
Motor	4320 VA	108.68%	4695 VA	Total Est. Demand: 67152 VA
Other	3790 VA	100.00%	3790 VA	Total Conn.: 230 A
RECEPT	36067 VA	63.88%	23034 VA	Total Est. Demand: 1186 A
Miscellaneous Power	500 VA	100.00%	500 VA	
FRACTIONAL HP MOTOR	0 VA	0.00%	0 VA	
Kitchen	26121 VA	87.66%	22899 VA	

Notes: EXISTING GE SPECTRA SERIES- APN HEAT RATED PLUG IN STYLE PANEL TO REMAIN. PROVIDE NEW BREAKERS/FUSED SWITCHES FOR NEW CIRCUITS AS REQUIRED.

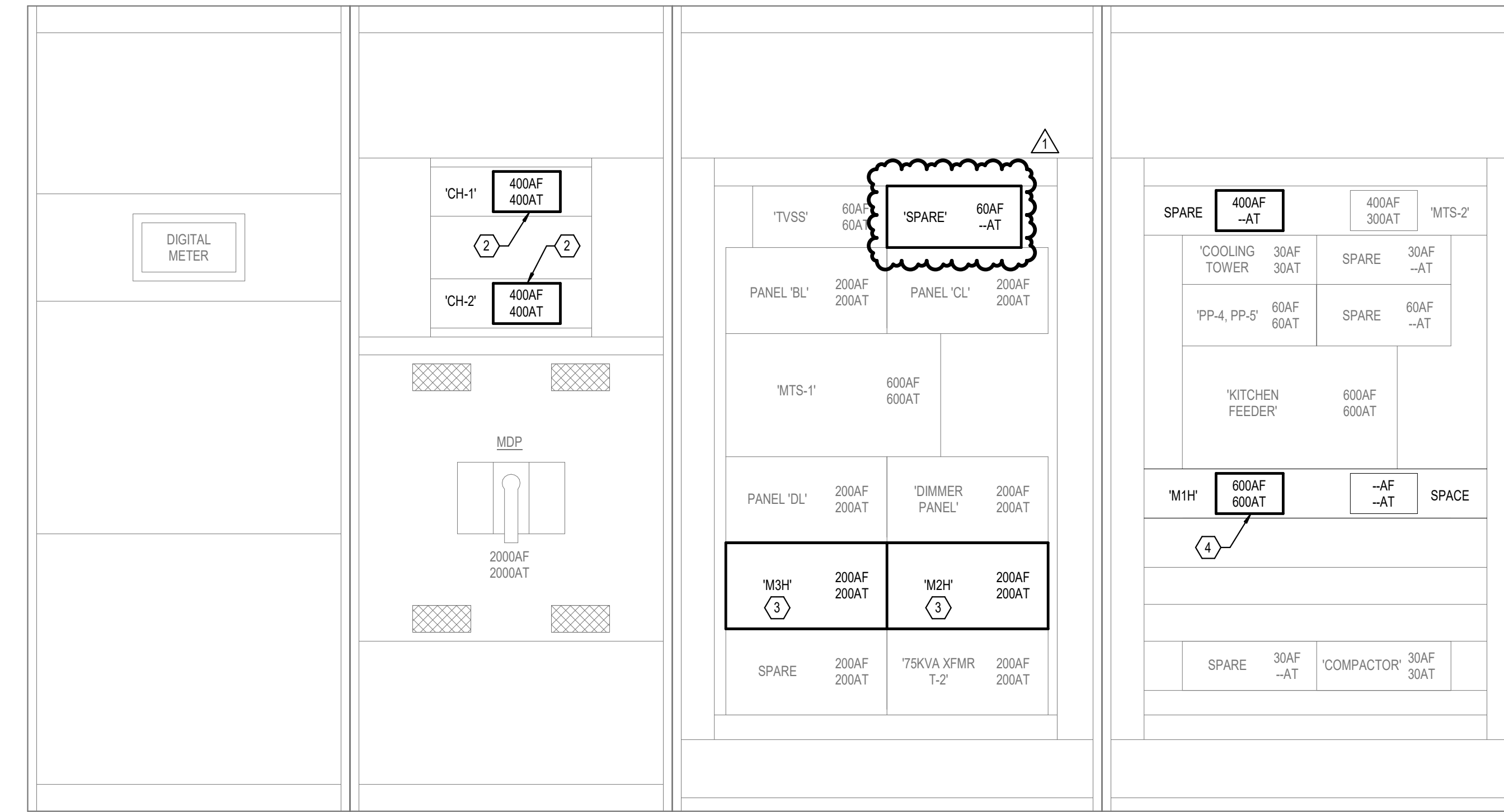
GENERAL NOTES

- A REFER TO SHEET E-000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E-000 SERIES SHEETS FOR PANEL SCHEDULES.
- C ALL NOTED WIRE SIZES ARE COPPER CONDUCTORS UNLESS OTHERWISE NOTED.

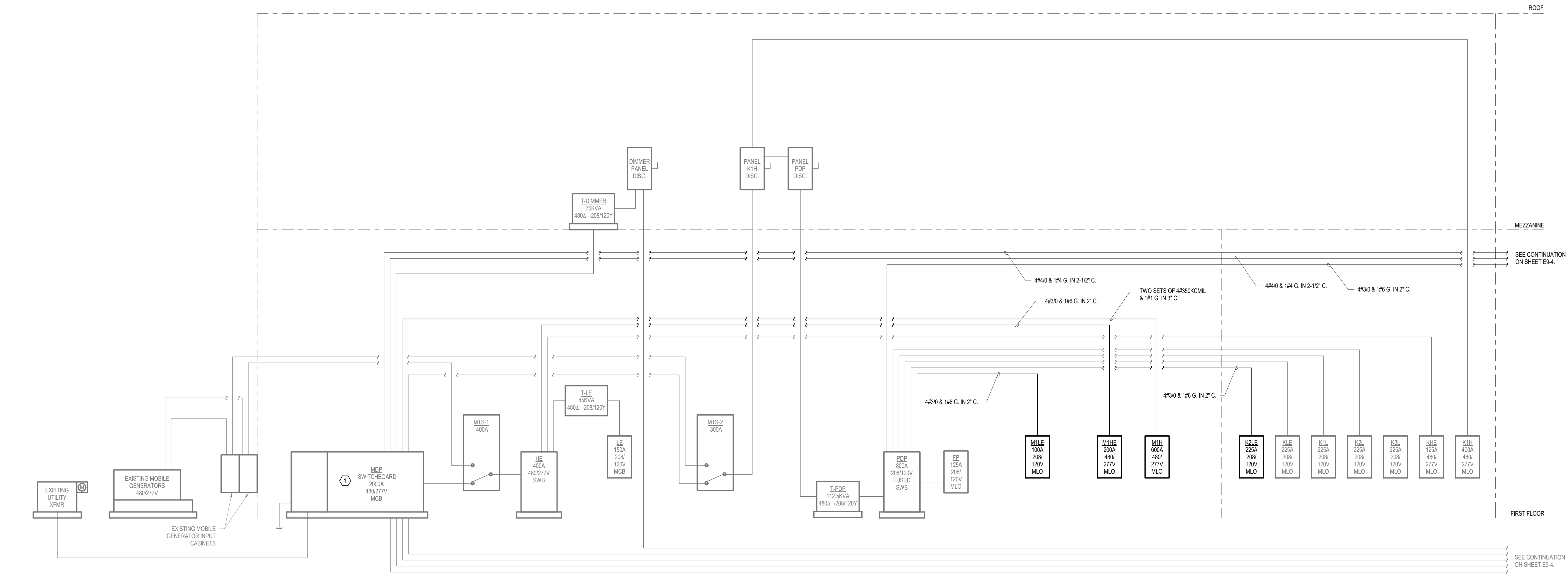


SHEET KEYNOTES

- 1 SEE DETAIL 2 ON THIS SHEET FOR ELEVATION VIEW OF EXISTING SWITCH-BOARD 'MDP'.
- 2 REPLACE EXISTING BREAKER WITH NEW IN SAME LOCATION AS INDICATED.
- 3 PROVIDE NEW FUSES IN EXISTING FUSED SWITCH AS INDICATED.
- 4 PROVIDE NEW BREAKER AS INDICATED.



2 NEW ELECTRICAL RISER DIAGRAM - MDP
NOT TO SCALE



1 NEW ELECTRICAL RISER DIAGRAM
1/2" = 1'-0"

REVISIONS

1	7/29/24	Addendum #1
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07.12.2024
HAMILTON SOUTHEASTERN SCHOOL CORPORATION
23055 - FALL CREEK INTERMEDIATE RENOVATIONS
12011 Chic Rd., Fishers, IN 46037
CONSTRUCTION DOCUMENTS

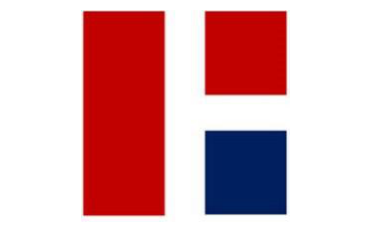


CONSTRUCTION DOCUMENTS
07.12.2024
W/J JOB NO.
23055
DRAWN BY
DCH
DRAWING NAME
ELECTRICAL RISER DIAGRAMS

DRAWING NO.
E9-3

GENERAL NOTES

- A REFER TO SHEET E-000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E-000 SERIES SHEETS FOR PANEL SCHEDULES.
- C ALL NOTED WIRE SIZES ARE COPPER CONDUCTORS UNLESS OTHERWISE NOTED.



REVISIONS

1	7/30/24 Addendum #1
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23055 - FALL CREEK INTERMEDIATE RENOVATIONS

07.12.2024

HAMILTON SOUTHEASTERN SCHOOL CORPORATION



D. Hernandez

CONSTRUCTION DOCUMENTS

07.12.2024

WNL JOB NO.

23055

DRAWN BY

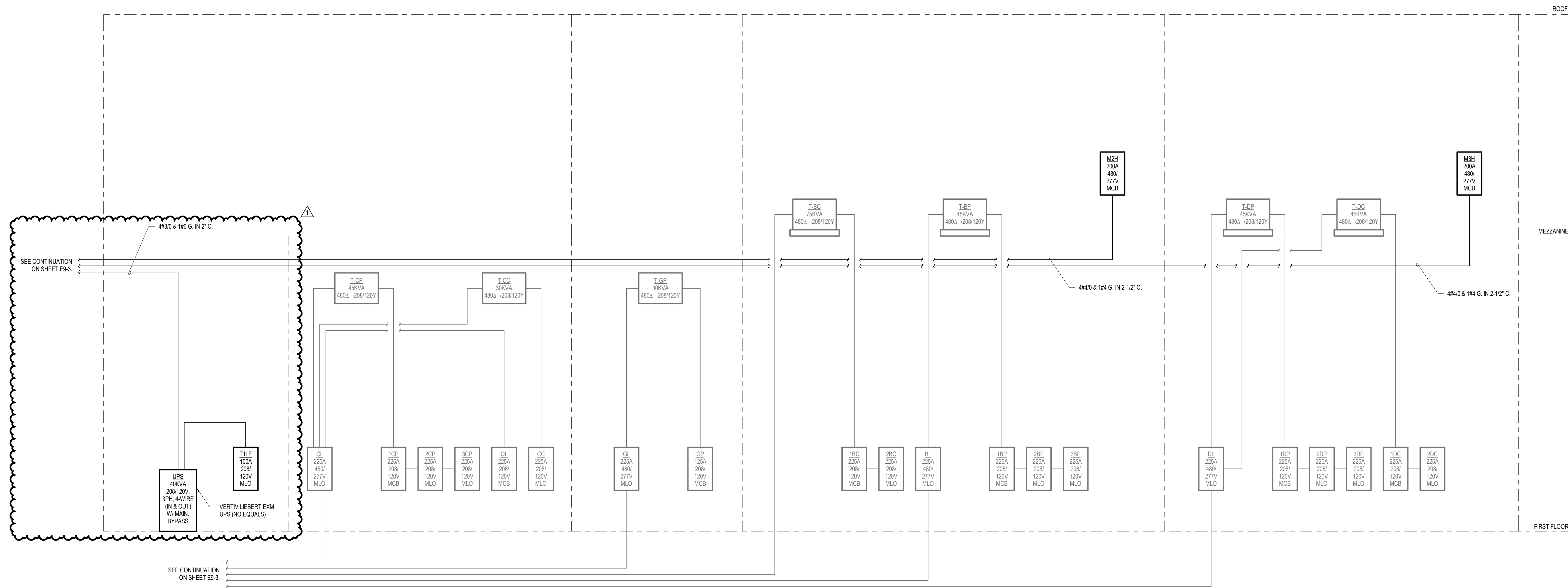
DCH

DRAWING NAME

ELECTRICAL RISER DIAGRAMS

DRAWING NO.

E9-4



1 NEW ELECTRICAL RISER DIAGRAM (CONT.)
1/2" = 1'-0"