SE/Coady Architects, LLC
861 North Madison Street
Rockford, Illinois 61107

P. 815.316.8776
F. 815.316.8779
www.secoady-architects.com

SE/Coady 2

ARCHITECTS

addendum

No.	01	**Project:**	WCFPD Station 1
Date:	September 16, 2025	**Project No:**	025-2125

This Addendum forms a part of the bidding and contract documents and modifies the contract documents, dated September 5, 2025. Bidders are to acknowledge receipt of this Addendum on your submitted Bid. Failure to acknowledge receipt of addendum may subject Bidder to disqualification. This Addendum is hereby made part of the Bid Documents and shall be included in the Contract.

The requirements contained in the Bidding Documents shall apply to the Addendum. The work called in this Addendum shall be the same as set forth in the applicable portions of the Bid Documents unless specified in this Addendum. All incidental work necessitated by this Addendum as required to properly complete the Work shall be included in the Bids even though not specifically stated in the Addendum.

Attachments:

General – The WCFPD Station 1 bid date has been changed to Tuesday September 23, 2025 at 2 pm.

Modifications to Project Manual:

A. Table of Contents
   1. General revisions.

B. Division 01/Section 012100 - Allowances
   1. Revisions to section.

C. Division 01/Section 012300 – Alternates
   1. Revisions to Section.

D. Division 04/ Section 042000 - Unit Masonry;
   1. Revisions to section.

E. Division 04/Section 047200 - Cast Stone Masonry
   1. Added section to Project Manual.

F. Division 06/Section 066116 - Solid Surface Toilet and Shower
   1. Revisions to section.

G. Division 07/Section 074213 – Insulated Composite Backup Panel System
   1. Replace section.

H. Division 07/Section 074213.19 – Insulated Core Metal Wall Panels
   1. Replace section.
I. Division 07/Section 075423 - Thermoplastic Polyolefin (TPO) Roofing
   1. Revisions to section.
J. Division 08/Section 083613 - Sectional Doors
   1. Added section to Project Manual.
K. Division 08/Section 085653–BR Transaction Window Hole/Backer Talk Thru
   1. Added section to Project Manual.
L. Division 10/Section 102641 – BR Fiberglass Panels
   1. Added section to Project Manual.
M. Division 10/Section 107300 - Protective Covers
   1. Added section to Project Manual.
N. Division 12/Section 123530 - Residential Casework
   1. Revisions to section.
O. Division 13/Section 133419 - Metal Building System
   1. Added section to Project Manual.

Modifications to Construction Drawings:

1) Sheet G001 – TITLE SHEET WITH CODE REVIEW
   a. REVISE the building address in the code review.
   b. REVISE the Sheet Index.
2) Civil - Updated full civil plan set with clouded revisions.
3) Sheet A101 – PARTIAL FLOOR PLAN – WEST
   a. MODIFY floor plan general notes.
   b. Revised Partition type between Lobby 101 and Kim Office 102.
   c. REMOVE hatch within Hose Tower 133 and Decon 132.
   d. REVISE size of door 133A to be 3'-6".
   e. REVISE Partition Type at Room 120 and 121.
   f. ADD remote access control of Door 101 in Office 102.
   g. REVISE the North wall of Passage 129 to wood stud framing in lieu of concrete block. Refer to wall Section 1/A324.
   h. MODIFIED location of CMU wall at Storage 122 / Tlt. 132A to coordinate with structural.
   i. ADD Partition Type P9 tags for 2 hr rated masonry walls and Partition Type P9A tags for 1 hr rated masonry walls.
   i. MODIFY Keyed Notes 15, 20, 21, 23, 24, 29, 30, 31. 37, 38, 39, 40.
   j. ADD additional wall mounted TV locations to plan.
   k. REVISE Keyed Note 16 to be 32 at windows.
   l. REVISE depth of display cases.
   m. ADD Keyed Notes 45, 46, 47, 48, 49, 50, 51, 52.
   n. ADD louver location in Hose Tower 133. Refer to HVAC and Structural.
4) Sheet A102 – PARTIAL FLOOR PLAN – EAST
   a. MODIFY floor plan general notes.
   b. REVISE the location of door 141.
   c. REVISE the swing of door 161.

d. REVISE the Hose Tower Upper Level Plan to show a rail safety gate location, (1) hose drying wheel and the rappel station location.
e. REVISE the flooring material in 3/A102 and 4/A102.
f. REVISE partition types and added cubbies to Toilets 142, 144, 145, 150, 151 and 154.
g. MODIFY Keyed Notes 15, 20, 21, 23, 24, 29, 30, 31. 37, 38, 39, 40.
h. ADD Partition Type P9A tags for 1 hr rated masonry walls.
i. ADD additional wall mounted TV locations to plan.
j. Add note for plastic laminate night stands to be part of this contract.

5) Sheet A121 – PARTIAL REFLECTED CEILING PLAN – WEST
   a. REVISE the ceiling in Decon 132 and Decon Tlt. 132A.
   b. ADD Keyed Notes C8 and C9.
   c. REMOVE ceiling fan in west bay of app bay.
6) Sheet A122 – PARTIAL REFLECTED CEILING PLAN -EAST
   a. ADD Keyed Notes C8 and C9.
   b. ADD new soffit in Kitchen / Dining 163.
   c. MODIFY ceiling in Electric 161 to be GWB on the bottom chord of trusses.
7) Sheet A141 – PARTIAL ROOF PLAN – WEST
   a. REVISE administration and hose tower roofs to be noted as shingles.
   b. ADD section cut 5/A323.
8) Sheet A142 – PARTIAL ROOF PLAN – EAST
   a. REVISE living quarters roof to be noted as shingles.
   b. ADD east roof ventilation calculations and remove roof hatch from ventilators for clarity.
9) Sheet A201 – EXTERIOR ELEVATIONS
   a. ADD Keyed Note E26 and ADD the louver locations to the elevations.
   b. REVISE Keyed Note E21 and modify the columns and piers in the elevations.
10) Sheet A202 – EXTERIOR ELEVATIONS
   a. ADD Keyed Note E26 and ADD the louver locations to the elevations.
   b. REVISE Keyed Note E21 and modify the columns and piers in the elevations.
11) Sheet A203 – EXTERIOR ELEVATIONS
   a. ADD Keyed Note E26 and ADD the louver locations to the elevations.
   b. REVISE Keyed Note E21 and Modify the columns and piers in the elevations.
12) Sheet A221 – INTERIOR ELEVATIONS
   a. REVISED Interior Elevation 1/A221.
   b. ADD Interior Elevation General Note 18.
   c. REVISE Interior Elevation 2/A221 to show detail section 10/223 through display cases
   d. ADD Keyed Notes E69 and E70.
   e. REVISE Keyed Notes E4, E25, E28. E35, E49, E55, E56, E60, E64.
13) Sheet A222: INTERIOR ELEVATIONS
   a. ADD Interior Elevation General Note 18.
   b. ADD Keyed Notes E69 and E70.
   c. REVISE Keyed Notes E4, E25, E28, E35, E49, E55, E56, E60, E64.
   d. ADD restroom toiletry cubbie cabinets to all restrooms with showers in the Living Quarters.
   e. ADD coat / robe hook to all restrooms in Living Quarters with showers.
   f. ADD Corian shower caddie to shower elevations.
   g. REVISE Countertop material in 12/A222.

h. REVISE Nightstands in 13/A222.

14) Sheet A223 – INTERIOR ELEVATIONS AND DETAILS
    a. ADD Interior Elevation General Note 18.
    b. REVISE Display Case Sections/Details 10/A223.
    c. ADD Keyed Notes E69 and E70.
    d. REVISE Keyed Notes E4, E25, E28, E35, E49, E55, E56, E60, E64.
    e. REVISE notes for detail 9/A223.
    f. REMOVED 11/A223.
15) Sheet A301 – BUILDING SECTIONS
    a. MODIFY 1/A301 and 2/A301 to accurately reflect the height of the CMU.
    b. ADD note S19 and added in 3/A301.
16) Sheet A302 – BUILDING SECTIONS
    a. ADD Building Section General Notes And Keyed Notes – Building Sections.
17) Sheet A321 – WALL SECTIONS
    a. ADD general note to sheet.
18) Sheet A322 – WALL SECTIONS
    a. ADD general note to sheet.
    b. MODIFY Wall Sections 1/A322, 2/A322 and 4/A322.
19) Sheet A323 WALL SECTIONS
    a. ADD general note to sheet.
    b. MODIFY Wall Sections 3/A323, 4/A323, 5/A323.
20) Sheet A324 – WALL SECTIONS
    a. REVISE Wall Section 1/A324 to wood stud framing in lieu of concrete block.
    b. REVISE Section 7/A324 to be 5/A324
    c. REVISE Sections 4/A324 and 5/A324.
21) Sheet A501 – PLAN DETAILS
    a. REVISE the dumpster surround gate material in elevation 15/A501.
22) Sheet A541 – SECTION DETAILS
    a. REVISE Section Details 3/A541 & 9/A541
23) Sheet A542 – SECTION DETAILS
    a. REVISE detail 5/A542, 7/A542, 12/A542, 113/A542, and 14/A542.
    b. REVISE detail numbers and ADD new detail 11/A542.
24) Sheet A601 – DOOR SCHEDULE
    a. ADD Signage Elevations to sheet.
    b. REVISE Hardware Groups 04, 10 (Door 123B), 11 (Door 123A), 12 (Door 101) and 14 (Door 100A).
    c. ADD Hardware Group 15.
    d. REVISE Door 147 to a passage function lockset.
    e. REVISE the hardware for Door 123B.
    f. ADD door undercuts for Doors 132, 132A, 140 and 157.
    g. REVISE the U-Factor and SHGC requirements for the doors.
    h. ADD Door Schedule Remark 04 to add remote access control of Door 101 in Office 102.
    i. REVISE the door type for doors 108, 129, 134E, 134F, 148, 160, 163.
25) Sheet A602 – PARTITION TYPES AND WINDOW TYPES
    a. ADD Partition Type P1E to include bulletproof wall panel.
    b. ADD the U-Factor and SHGC requirements for the windows.
    c. ADD Partition Type P9 for rated masonry walls.
    d. MODIFY Partition Types.

26) Sheet A603 – PARTIAL EQUIPMENT PLAN (WEST) AND SCHEDULE
    a. MODIFIED number of hose wheels in the Hose Tower.
    b. ADD TV locations.
27) Sheet A604 – PARTIAL EQUIPMENT PLAN (EAST) AND SCHEDULE
    a. ADD TV locations.
28) Sheet A961 – PARTIAL ROOM FINISH PLAN (WEST) AND LEGEND
    a. REVISE Meeting Room 123 flooring to LVP-2.
29) Sheet S200 – FOUNDATION PLAN
    a. ADD shower recess in Gear Room.
    b. ADD Sections F26 at the wind soldier column.
    c. ADD the canopy footing plan.
30) Sheet S210 – FOUNDATION DETAILS
    a. ADD generator foundation detail.
    b. REVISE Detail F1.
31) Sheet S211 – FOUNDATION DETAILS
    a. ADD Section F26 to include wind soldier column.
32) Sheet S300 – ROOF FRAMING PLAN
    a. ADD multiple headers.
    b. ADD Section S11A.
33) Sheet S300A – SHEAR WALL PLAN
    a. REVISE shear wall information.
34) Sheet S310 – ROOF FRAMING DETAILS
    a. REVISE Details S4 and S5.
35) Sheet S311 – ROOF FRAMING DETAILS
    a. ADD Detail S11A.
    b. REVISE Detail S13.
36) Sheet S312 – FRAMING & STANDARD CMU DETAILS
    a. ADD hose wheel detail.
37) Sheet S410 – STORM SHELTER FRAMING DETAILS
    a. REVISE elevation on Details SS6, SS7 and SS8.

End of Addendum

Division	Section Title	Pages

PROCUREMENT AND CONTRACTING DOCUMENTS GROUP

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

00 00 00	Table of Contents	4
00 11 16	Invitation To Bid	2
00 21 13	Instructions To Bidders	2
00 22 13	Supplementary Instructions to Bidders	4
00 22 13.1	A701-2018 Instruction to Bidders	8
00 80 25	Warren County Wage Order	19

SPECIFICATIONS GROUP

General Requirements Subgroup

DIVISION 01 - GENERAL REQUIREMENTS

01 10 00	Summary	4
01 21 00	***Allowances***	***6***
01 22 00	Unit Prices	2
01 23 00	Alternates	4
01 25 00	Substitution Procedures	4
01 25 00.01	Substitution Request Form	2
01 26 00	Contract Modification Procedures	2
01 31 00	Project Management And Coordination	8
01 32 00	Construction Progress Documentation	4
01 33 00	Submittal Procedures	10
01 40 00	Quality Requirements	8
01 42 00	References	14
01 50 00	Temporary Facilities And Controls	4
01 60 00	Product Requirements	6
01 73 00	Execution	6
01 74 19	Construction Waste Management And Disposal	2
01 77 00	Closeout Procedures	6
01 78 23	Operation And Maintenance Data	8
01 78 39	Project Record Documents	4
01 79 00	Demonstration And Training	4

Facility Construction Subgroup

DIVISION 02 - EXISTING CONDITIONS
02 41 19 ..... Selective Demolition 6

DIVISION 03 - CONCRETE
- Refer to Structural Drawings

DIVISION 04 - MASONRY
04 20 00 ..... Unit Masonry 18
04 72 00 ..... Cast Stone Masonry 6

DIVISION 05 - METALS
- Refer to Structural Drawings

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES
06 10 53 ..... Miscellaneous Rough Carpentry 2
06 16 00 ..... ZIP System Sheathing Wall System 6
06 40 23 ..... Interior Architectural Woodwork 4
06 61 16 ..... Solid Surface Toilet and Shower 6

DIVISION 07 - THERMAL AND MOISTURE PROTECTION
07 21 00 ..... Thermal Insulation 4
07 27 26 ..... Fluid Applied Membrane Air Barriers 8
07 31 13 ..... Asphalt Shingles 8
07 42 13 ..... Insulated Composite Backup Panel System 8
07 42 13.19 Insulated Metal Wall Panels 8
07 4653 ..... Siding 4
07 5423 ..... Thermoplastic Polyolefin (TPO) Roofing 10
07 62 00 ..... Sheet Metal Flashing And Trim 6
07 84 13 ..... Penetration Firestopping 4
07 92 00 ..... Joint Sealants 4

DIVISION 08 - OPENINGS
08 11 13 ..... Hollow Metal Doors And Frames 8
08 14 16 ..... Flush Wood Doors 4
08 36 13 ..... Sectional Doors 6
08 41 13 ..... Aluminum-framed Entrances And Storefronts 8
08 52 00 ..... Wood Windows 4
08 56 53 ..... BR Transaction Window – Hole and Backer Talk Thru 6
08 71 00 ..... Door Hardware 8
08 80 00 ..... Glazing 10
08 88 13 ..... Fire Rated Glazing 4

DIVISION 09 - FINISHES
09 05 61.13 Moisture Vapor Emission Control 6
09 22 16 ..... Non-structural Metal Framing 4

09 29 00 ..... Gypsum Board 6
09 30 00 ..... Tiling 4
09 51 13 ..... Acoustical Panel Ceilings 2
09 65 13 ..... Resilient Base And Accessories 2
09 65 66 ..... Resilient Athletic Flooring 4
09 67 23.01 Resinous Flooring – Decorative Flake Coating System 8
09 68 13 ..... Tile Carpet 6
09 91 13 ..... Exterior Painting 4
09 91 23 ..... Interior Painting 4

DIVISION 10 - SPECIALTIES
10 14 23 ..... Panel Signage 4
10 26 41 ..... BR Fiberglass Panels 4
10 28 00 ..... Toilet, Bath, And Laundry Accessories 2
10 44 13 ..... Fire Extinguisher Cabinets 4
10 44 16 ..... Fire Extinguishers 4
10 50 30 ..... Turnout Gear Lockers 4
10 73 00 ..... Protective Covers 4

DIVISION 11 - EQUIPMENT
NOT APPLICABLE

DIVISION 12 - FURNISHINGS
12 2413 ..... Roller Window Shades 6
12 35 30 ..... Residential Casework 2
12 36 61.16 Solid Surfacing Countertops 6

DIVISION 13 - SPECIAL CONSTRUCTION
13 34 19. .... Metal Building Systems 8

DIVISION 14 - CONVEYING EQUIPMENT
NOT APPLICABLE

Facility Services Subgroup

DIVISION 21 - FIRE SUPPRESSION (BY OTHERS)

DIVISION 22 - PLUMBING
- Refer to Plumbing Drawings

DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)
- Refer to HVAC Drawings

DIVISION 26 - ELECTRICAL
- Refer to Electrical Drawings

DIVISION 31 - EARTHWORK
- Refer to Civil Drawings

DIVISION 32 - EXTERIOR IMPROVEMENTS
- Refer to Civil Drawings

DIVISION 33 - UTILITIES
- Refer to Civil Drawings

DIVISION 34 - TRANSPORTATION
NOT APPLICABLE

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION
NOT APPLICABLE

END OF TABLE OF CONTENTS

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.
2. Unit-cost allowances.
3. Quantity allowances.
4. Contingency allowances.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include freight**,** and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1.8 UNIT-COST ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include [**taxes,**]freight[**,**] and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.9 QUANTITY ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include [**taxes,**]freight[**,**] and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by

Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.10 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's[overhead, profit, and] related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation[**, taxes**], insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.11 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.

2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No.1: Porcelain Tile (GMT-1) - Include an allowance of $20.00 per s.f. for tile backsplash tile in locations noted on drawings. Allowance to include materials, taxes, freight and applicable subcontractors' markups for overhead and profit. All labor and other materials required for this install is to be included within subcontractors' base scope of work and pricing. All adhesives used for this product require a warrantable system up to 99% RH.

B. Allowance No. 2: Resilient Flooring (LVP-1) – Include an allowance of $3.00 per s.f. for resilient flooring (LVP) in locations noted on drawings. Allowance to include LVP materials, taxes, freight and applicable subcontractors' markups for overhead and profit. All labor and other materials required for this install is to be included in subcontractors base scope of work and pricing. All adhesives used for this product require a warrantable system of to 99% RH.

C. Allowance No. 3: Resilient Flooring (LVP-2) – Include an allowance of $5.00 per s.f. for resilient flooring (LVP) in locations noted on drawings. Allowance to include LVP materials, taxes, freight and applicable subcontractors' markups for overhead and profit. All labor and other materials required for this install is to be included in subcontractors base scope of work and pricing. All adhesives used for this product require a warrantable system of to 99% RH.

D. Allowance No. 4: Carpet Tile (CPT 1 & CPT 2) - Include an allowance of $30.00 per sqyd for carpet tile in locations noted on drawings. Allowance to include carpet tile materials, taxes, freight and applicable subcontractors' markups for overhead and profit. All labor and other materials required for this install is to be included in subcontractors base scope of work and pricing. All adhesives used for this product require a warrantable system of to 99% RH.

E. Allowance No. 5: Exterior Signage and Building letters – Include an allowance of $25,000.00 for the supply and installation of exterior building signage. This shall include the building letters at the front entry of the admin and the hose tower station numbering.

F. Allowance No. 6: Brick Veneer: Include the sum of $800.00 per thousand for ***both face "Brick 1" and face "Brick 2"***, as specified in Section 042000 "Unit Masonry" and as shown on Drawings. Allowance is to include material cost only and all applicable taxes, freight, subcontractors' markups for overhead and profit and all labor and other materials required for this install is to be included in subcontractors base scope of work and pricing.

END OF SECTION 012100

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

1.4 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

B. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1 - Covered parking
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Concrete foundations and related reinforcing
        ii. Pre-Engineered carport structure and related design to include signed and sealed design documents by a licensed and registered engineer in the State of Missouri.
        iii. Lighting mounted below the carport structure
        iv. Block heater power located at each pier location.
B. Alternate No. 2 - Building soil remediation
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Remediate to a minimum depth of 3’ below finish floor and 2’ below bearing of the foundation/grade beams and to a 5’ horizontal distance beyond the footprint of the new structure. 1” minus rock material is to be used as the engineered fill for these remediation considerations.
C. Alternate No. 3 - Pavement soil remediation
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Remediate to a minimum depth of 1’ below finish grade of pavement. 1” minus rock material is to be used as the engineered fill for these remediation considerations.
D. Alternate No. 4 - App bay pavement snow melt system
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Provide 10'-0" wide section with snowmelt at both the North and South sides of the app bay. Provide RAYCHEM (nVent), electro melt self regulating heating cable. Provide controller inside App bay. Coordinate and provide all electrical Connections required to panel 'NP'.
E. Alternate No. 5 - Mechanical systems to traditional split systems rather than VRF
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Provide deductive pricing that switches the specified VRF mechanical systems to traditional single zone split systems.
F. Alternate No. 6 - Pavement joint sealants
    a. This alternate is to include but is not limited to the following scopes of work:
        i. Provide pavement joint sealants at all construction and contraction joints within the pavement areas. Product to be **Vulkem 45SSL** Single-Component Semi-Self Leveling Polyurethane Sealant or equivalent.
G. Alternate No. 7 - Generator to cover entire building.
    a. This alternate is to include but is not limited to the following scopes of work:

i. Provide alternate for full building backup with 800a service entrance rated transfer switch and 250kw generator. Transfer circuits from panel EL1 to EP1 and EP2 respectively.
ii. ATSL would no longer be required.

H. Alternate No. 8 - App Bay floor to receive epoxy floor system
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Provide credit for specified sealed concrete.
      ii. Install quartz epoxy system by Tnemac or equal as per specification section 096723.02.

I. Alternate No. 9 - RGB LED lighting for app bay wall lights to be programmed with soffit lights.
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Fixture type 'F1' changes to type 'F1A' to be controlled via Casambi (app based lighting controller).

J. Alternate No. 10 - Design Build - Site irrigation system.
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Complete site coverage of all grass and landscaped areas.
      ii. Backflow preventer and cage to be included.
      iii. Controller to be located at the same location on the South wall of the admin building at the Southwest corner.
      iv. Site utility contractor to provide a 10ft lateral from domestic line for irrigation meter.

K. Alternate No. 11 - Kitchen countertops to be Quartz ILO Solid Surface
   a. This alternate is to include but is not limited to the following scopes of work:
      i. At living quarters kitchen only, change the specified Solid Surface countertops to be Quartz. Manufacturer to be Cambria or equal. Provide a cost for each level of pricing offered by the manufacturer.

L. Alternate No. 12 - Tinting Windows.
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Price Factory applied colors as outlined below.
         1. Midnight gray
         2. Bronze
         3. Gray
         4. Solar cool bronze
         5. Solar cool gray

M. Alternate No. 13 - Flooring in Meeting Room
   a. This alternate is to include but is not limited to the following scopes of work:
      i. ILO installing the specified LVT within the meeting room, supply and install carpet tile. Use allowance provided for carpet tile.

N. Alternate No. 14 - Sod ILO Seed/Straw
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Credit all grass areas called to be seeded and strawed
      ii. Add sod to all specified grass areas.

O. Alternate No. 15 – Insulated roof deck panel
   a. This alternate is to include but is not limited to the following scopes of work:
      i. Credit supply and install of specified B Decking at App Bay Roof.
      ii. Credit supply and install of specified roof insulation at App Bay Roof.
      iii. Add supply and install of OneDek Insulated Roof Deck Panel.

END OF SECTION 012300

SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Decorative concrete masonry units.
3. Clay face brick.
4. Mortar and grout.
5. Masonry-joint reinforcement.
6. Ties and anchors.
7. Embedded flashing.
8. Miscellaneous masonry accessories.

B. Products Installed but not Furnished under This Section:
1. Steel lintels in unit masonry.
2. Cavity wall insulation.

C. Related Requirements:
1. Section 072100 "Thermal Insulation" for cavity wall insulation.
2. Section 076200 "Sheet Metal Flashing and Trim" for **exposed** sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 ACTION SUBMITTALS

A. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.

2. Reinforcing Steel: Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315.
3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

B. Samples for Verification: For each type and color of the following:
1. **Clay face** brick**, in the form of straps of five or more bricks**.
2. Stone trim.
3. Weep vent.

1.4 INFORMATIONAL SUBMITTALS

A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.

B. Qualification Data: For testing agency.

C. Material Certificates: For each type and size of the following:

1. Masonry units.

a. Include **material test reports substantiating compliance with requirements**.
b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
c. For exposed brick, include test report for efflorescence according to ASTM C 67.

2. Integral water repellant used in CMUs.
3. Cementitious materials. Include name of manufacturer, brand name, and type.
4. Mortar admixtures.
5. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
6. Grout mixes. Include description of type and proportions of ingredients.
7. Reinforcing bars.
8. Joint reinforcement.
9. Anchors, ties, and metal accessories.

D. Mix Designs: For each type of mortar **and grout**. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.

F. Cold-Weather **and Hot-Weather** Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for testing indicated.

B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
   1. Build mockups for **each type of exposed unit masonry construction** in sizes approximately **48 inches** long by **48 inches** high by full thickness, including face and backup wythes and accessories.
      a. Include a sealant-filled joint at least 16 inches long in **each exterior wall** mockup.
      b. Include lower corner of window opening**, framed with stone trim,** at upper corner of exterior wall mockup. Make opening approximately 12 inches wide by 16 inches high.
      c. Include through-wall flashing installed for a 24-inch length in corner of exterior wall mockup approximately 16 inches down from top of mockup, with a 12-inch length of flashing left exposed to view (omit masonry above half of flashing).
      d. Include **metal** studs, sheathing, veneer anchors, flashing**, cavity drainage material**, and weep holes in exterior masonry-veneer wall mockup.
   2. Clean exposed faces of mockups with masonry cleaner as indicated.
   3. Protect accepted mockups from the elements with weather-resistant membrane.
   4. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
      a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
      b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   5. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 FIELD CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down both sides of walls, and hold cover securely in place.

B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.

B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work **and will be within 20 feet vertically and horizontally of a walking surface**.

C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.3 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide bullnose units for outside corners unless otherwise indicated.

B. Integral Water Repellent: Provide units made with integral water repellent **for exposed decorative CMU's at the trash enclosure and building**.

1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested according to ASTM E 514/E 514M as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, shall show no visible water or leaks on the back of test specimen.

C. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of: As indicated on drawings.
2. Density Classification: **Normal weight**.
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.

D. Decorative CMUs: ASTM C 90.

1. Basis-of-Design Product: Subject to compliance with requirements, provide the following:

   a. Midwest Block & Brick or equal;
2. Density Classification: **Normal weight**.
3. Size (Width): 116” x 8” x 4”.
4. Pattern and Texture:
   a. Standard pattern, split-face finish.

5. Colors: **Integral colors as selected by Architect from manufacturer's full range.**

2.4 BRICK

A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:

1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Clay Face Brick: **Facing brick complying with ASTM C 216**.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Glen-Gery, “Aspen white smooth” or approved equal.
2. Grade: **SW**.
3. Type: **FBX**.
4. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested according to ASTM C 67.
5. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
6. Size (Actual Dimensions): **3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches**.
7. Application: Use where brick is exposed unless otherwise indicated.

2.5 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C 114.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Mortar Cement: ASTM C 1329/C 1329M.

E. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.

F. Aggregate for Grout: ASTM C 404.

G. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer.
1. Location: Trash enclosure CMU.

H. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: As indicated on structural drawings.

B. Reinforcing Bar Positioners: Refer to structural drawings.

C. Masonry-Joint Reinforcement for Single-Wythe Masonry: Ladder type with single pair of side rods.

2.7 TIES AND ANCHORS

A. General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on outside face.

B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M, with ASTM A 153/A 153M, Class B-2 coating.

C. Adjustable Masonry-Veneer Anchors:

1. General: Provide anchors that allow vertical adjustment but resist a 100-lbf load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of 1/16 inch.
2. CMU Backup with Brick Veneer:
a) “Heckman Building Products, Inc.; Ladder Pintle Eye Wall Reinforcement (#1300) with 263 double pintles (hot dipped galvanized). Minimum tie embed of one-half the thickness of brick veneer.

3. Single Wythe Masonry:

a. “Heckman Building Product, Inc.” Ladder-Type Wall Reinforcement (1100). Hot-dip Galvanized.

4. Screw-Attached, Masonry-Veneer Anchors: Wire tie and a corrosion-resistant, self-drilling, eye-screw designed to receive wire tie. Eye-screw has spacer that seats directly against framing and is same thickness as sheathing and has gasketed washer head that covers hole in sheathing.
    1) Wood Stud Backup with Brick Veneer:
        a) “Heckman Building Products, Inc.; “ Triangular Wire Tie (316)” with Screw-On Anchor Plate (315-D) (hot dipped galvanized). Minimum tie embed of one-half the thickness of brick veneer.

2.8 EMBEDDED FLASHING MATERIALS

A. Flexible Flashing: Use the following unless otherwise indicated:

1. EPDM Flashing: Sheet flashing product made from ethylene-propylene-diene terpolymer, complying with ASTM D 4637/D 4637M, 0.040 inch thick.

    a. Heckmann Building Products, Inc; No 81 EPDM Thru-Wall Flashing or approved equal.

B. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counter flashing, use stainless steel metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use stainless steel metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing **with a drip edge**.
4. Where flashing is fully concealed, use **flexible flashing**.

C. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

D. Termination Bars for Flexible Flashing: Aluminum sheet 0.064 inch by 1-1/2 inches with a 3/8-inch sealant flange at top.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from **neoprene**.

B. Preformed Control-Joint Gaskets: Made from **styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805** and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226/D 226M, Type I (No. 15 asphalt felt).

D. Weep/Cavity Vent Products: Use the following unless otherwise indicated:

1. Wicking Material: Absorbent rope, made from **UV-resistant synthetic fiber**, 1/4 to 3/8 inch in diameter, in length required to produce 2-inch exposure on exterior and 18 inches in cavity. Use only for weeps.

2. Brick and Stone Masonry: Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.

   a. Heckmann Building Products, "Weep Vent" or approved equal.

E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.

1. Configuration: Provide one of the following:

   a. Strips, full depth of cavity and 10 inches high, with dovetail-shaped notches 7 inches deep that prevent clogging with mortar droppings.

2.10 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

1. Diedrich Technologies, Inc.

2. EaCo Chem, Inc.

3. Prosoco, Inc.

2.11 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use **portland cement-lime or mortar cement** mortar unless otherwise indicated.
3. For exterior masonry, use **portland cement-lime**, **masonry cement**, **or mortar cement** mortar.
4. For reinforced masonry, use **portland cement-lime** mortar.
5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, **Proportion** Specification. Provide the following types of mortar for applications stated unless another type is indicated

1. For reinforced masonry, use **Type S**.
2. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476.
3. Provide grout with a slump of **8 to 11 inches** as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

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

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.
4. Verify that substrates are free of substances that impair mortar bond.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

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

3.2 INSTALLATION, GENERAL

A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.

B. Build chases and recesses to accommodate items specified in this and other Sections.

C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.

D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.

F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.

G. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet or 1/2-inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.

3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. **Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.**
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in **running bond;** do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than **4 inches**. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.

H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

I. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.

1. Install compressible filler in joint between top of partition and underside of structure above.
2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors **48 inches** o.c. unless otherwise indicated.

3. Wedge nonload-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078443 "Joint Firestopping."

3.5 MORTAR BEDDING AND JOINTING

A. Lay **hollow brick and CMUs** as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.

B. Lay solid masonry units **and hollow brick** with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Set **cast-stone** trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Allow cleaned surfaces to dry before setting.
3. Wet joint surfaces thoroughly before applying mortar.
4. Rake out mortar joints for pointing with sealant.

D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

E. Cut joints flush where indicated to receive **cavity wall insulation** unless otherwise indicated.

3.6 ANCHORED MASONRY VENEERS

A. Anchor masonry veneers to **wall framing** with masonry-veneer anchors to comply with the following requirements:

1. Fasten **screw-attached** anchors **through sheathing to wall framing** with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
2. Embed **tie sections** in masonry joints.
3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.

4. Space anchors as indicated, but not more than 16 inches o.c. vertically and 16 inches o.c. horizontally. Install additional anchors within 12 inches of openings and at intervals, not exceeding 36 inches, around perimeter.

B. Provide not less than **1 inch** of airspace between back of masonry veneer and face of **insulation**.

1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.

3.7 MASONRY-JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

1. Space reinforcement not more than 16 inches o.c.
2. Space reinforcement not more than 8 inches o.c. in parapet walls.
3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings **in addition to continuous reinforcement**.

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

E. Cut and bend reinforcing units as directed by manufacturer for continuity at **corners,** returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.8 CONTROL AND EXPANSION JOINTS

A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry **using one of the following methods**:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout, and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar, or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints, and remove filler when unit masonry is complete for application of sealant.

C. Form expansion joints in brick as follows:

1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
2. Build flanges of factory-fabricated, expansion-joint units into masonry.
3. Build in compressible joint fillers where indicated.
4. Form open joint full depth of brick wythe and of width indicated, but not less than **3/8 inch** for installation of sealant and backer rod specified in Section 079200 "Joint Sealants."

3.9 LINTELS

A. Install steel lintels where indicated.

B. Provide **masonry** lintels where shown and where openings of more than 12 inches for brick-size units and 24 inches for block-size units are shown without structural steel or other supporting lintels.

C. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.10 FLASHING, WEEP HOLES, AND CAVITY VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. **Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.**

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape **as recommended by flashing manufacturer**.
2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of **8 inches**, and through inner wythe to within 1/2 inch of the interior face of wall in exposed masonry. Where interior face of wall is to receive furring or framing, carry flashing completely through inner wythe and turn flashing up approximately 2 inches on interior face.
3. At masonry-veneer walls, extend flashing through veneer, across airspace behind veneer, and up face of sheathing at least 8 inches. **air barrier**, lapping at least 4 inches. **Fasten upper edge of flexible flashing to sheathing through termination bar.**
4. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
5. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.

6. Install metal **drip edges** with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
7. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
8. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.
9. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.

D. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.

1. Use **specified weep/cavity vent products** to form weep holes.
2. Use wicking material to form weep holes above flashing under brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
3. Space weep holes 24 inches o.c. unless otherwise indicated.
4. Space weep holes formed from **wicking material** 16 inches o.c.
5. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.
6. Trim wicking material flush with outside face of wall after mortar has set.

E. Install cavity vents in head joints in exterior wythes at spacing indicated. Use **specified weep/cavity vent products** to form cavity vents.

1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.11 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than **60 inches**.

3.12 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

B. Testing Prior to Construction: One set of tests.

C. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.

D. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C 67 for compressive strength.

E. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.

F. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.

G. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for **mortar air content and compressive strength**.

H. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

I. Prism Test: For each type of construction provided, according to ASTM C 1314 at **7 days and at** 28 days.

3.13

3.13 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
7. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
8. Clean stone trim to comply with stone supplier's written instructions.
9. Clean limestone units to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.14 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Crush masonry waste to less than 4 inches in each dimension.
2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
3. Do not dispose of masonry waste as fill within 18 inches of finished grade.

C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.

D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 047200 - CAST STONE MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Cast-stone trim **including the following:**

a. Window sills.
b. Coping.
c. Belt courses.

B. Related Sections:
1. Section 042000 "Unit Masonry" for installing cast-stone units in unit masonry.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For cast-stone units, include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Show fabrication and installation details for cast-stone units. Include dimensions, details of reinforcement and anchorages if any, and indication of finished faces.

1. Include building elevations showing layout of units and locations of joints and anchors.

C. Samples for Initial Selection: For colored mortar.

D. Samples for Verification:

1. For each color and texture of cast stone required, 10 inches square in size.
2. For each trim shape required, 10 inches in length.
3. For colored mortar, make Samples using same sand and mortar ingredients to be used on Project.

E. Full-Size Samples: For each **color texture and shape** of cast-stone unit required.

1. Make available for Architect's review at Project site.
2. Approved Samples may be installed in the Work.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For **manufacturer and testing agency**.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer of cast-stone units similar to those indicated for this Project, that has sufficient production capacity to manufacture required units, and is a plant certified by **the Cast Stone Institute**, **the Architectural Precast Association**, **or the Precast/Prestressed Concrete Institute for Group A, Category AT**.

B. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

C. Mockups: Furnish cast stone for installation in mockups specified in Section 042000 "Unit Masonry."

D. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects **and set quality standards for materials and execution**.

1. Build mockup of typical wall area as shown on Drawings.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Coordinate delivery of cast stone **with unit masonry work** to avoid delaying the Work **and to minimize the need for on-site storage**.

B. Pack, handle, and ship cast-stone units in suitable packs or pallets.

1. Lift with wide-belt slings; do not use wire rope or ropes that might cause staining. Move cast-stone units if required, using dollies with wood supports.
2. Store cast-stone units on wood skids or pallets with nonstaining, waterproof covers, securely tied. Arrange to distribute weight evenly and to prevent damage to units. Ventilate under covers to prevent condensation.

C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

D. Store mortar aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

1.7 PROJECT CONDITIONS

A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements in TMS 602/ACI 530.1/ASCE 6.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until cast stone has dried, but no fewer than seven days after completing cleaning.

B. Hot-Weather Requirements: Comply with hot-weather construction requirements in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Cast Stone: Obtain cast-stone units from single source from:
   1. Caliber Cast Stone
   2. Or approved equal.

2.2 CAST-STONE MATERIALS

A. General: Comply with ASTM C 1364.

B. Coarse Aggregates: Granite, quartz, or limestone complying with ASTM C 33/C 33M; gradation and colors as needed to produce required cast-stone textures and colors.

C. Fine Aggregates: Natural sand or crushed stone complying with ASTM C 33/C 33M, gradation and colors as needed to produce required cast-stone textures and colors.

D. Color Pigment: ASTM C 979/C 979M, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, **free of carbon black,** nonfading, and resistant to lime and other alkalis.

E. Admixtures: Use only admixtures specified or approved in writing by Architect.

   1. Do not use admixtures that contain more than 0.1 percent water-soluble chloride ions by mass of cementitious materials. Do not use admixtures containing calcium chloride.
   2. Use only admixtures that are certified by manufacturer to be compatible with cement and other admixtures used.
   3. Air-Entraining Admixture: ASTM C 260/C 260M. **Add to mixes for units exposed to the exterior at manufacturer's prescribed rate to result in an air content of 4 to 6 percent, except do not add to zero-slump concrete mixes.**
   4. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
   5. Water-Reducing, Retarding Admixture: ASTM C 494/C 494M, Type D.
   6. Water-Reducing, Accelerating Admixture: ASTM C 494/C 494M, Type E.

2.3 CAST-STONE UNITS

A. Cast-Stone Units: Comply with ASTM C 1364.

   1. Units shall be manufactured using the **vibrant dry tamp** method.
   2. Units shall be resistant to freezing and thawing as determined by laboratory testing according to ASTM C 666/C 666M, Procedure A, as modified by ASTM C 1364.

B. Fabricate units with sharp arris and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.

1. Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
2. Provide raised fillets at backs of sills and at ends indicated to be built into jambs.
3. Provide drips on projecting elements unless otherwise indicated.

C. Fabrication Tolerances:

1. Variation in Cross Section: Do not vary from indicated dimensions by more than 1/8 inch.
2. Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or 1/8 inch, whichever is greater, but in no case by more than 1/4 inch.
3. Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8 inch, whichever is greater.
4. Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than 1/8 inch on formed surfaces of units and 3/8 inch on unformed surfaces.

D. Cure Units as Follows:

1. Cure units in enclosed, moist curing room at 95 to 100 percent relative humidity and temperature of 100 deg F for 12 hours or 70 deg F for 16 hours.
2. Keep units damp and continue curing to comply with one of the following:

a. No fewer than five days at mean daily temperature of 70 deg F or above.
b. No fewer than six days at mean daily temperature of 60 deg F or above.
c. No fewer than seven days at mean daily temperature of 50 deg F or above.
d. No fewer than eight days at mean daily temperature of 45 deg F or above.

E. Acid etch units after curing to remove cement film from surfaces to be exposed to view.

F. Colors and Textures: **As selected by Architect from manufacturer's full range**.

G. Colors and Textures: Provide units with fine-grained texture and buff color resembling **sand-rubbed** Indiana limestone.

2.4 MORTAR MATERIALS

A. Provide mortar materials that comply with Section 042000 "Unit Masonry."

PART 3 - EXECUTION

3.1 EXAMINATION

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

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

3.2 SETTING CAST STONE IN MORTAR

A. Set cast stone as indicated on Drawings. Set units accurately in locations indicated, with edges and faces aligned according to established relationships and indicated tolerances.

1. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
2. Coordinate installation of cast stone with installation of flashing specified in other Sections.

B. Wet joint surfaces thoroughly before applying mortar or setting in mortar.

C. Set units in full bed of mortar with full head joints unless otherwise indicated.

1. Set units with joints **3/8”** wide unless otherwise indicated.
2. Build anchors and ties into mortar joints as units are set.

D. Tool exposed joints slightly concave when thumbprint hard. Use a smooth plastic jointer larger than joint thickness.

E. Provide sealant joints at head joints of copings and other horizontal surfaces; at expansion, control, and pressure-relieving joints; and at locations indicated.

1. Keep joints free of mortar and other rigid materials.
2. Build in compressible foam-plastic joint fillers where indicated.
3. Form joint of width indicated, but not less than **3/8 inch**.
4. Prime cast-stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.
5. Prepare and apply sealant of type and at locations indicated to comply with applicable requirements in Section 079200 "Joint Sealants."

3.3 ADJUSTING AND CLEANING

A. Remove and replace stained and otherwise damaged units and units not matching approved Samples. Cast stone may be repaired if methods and results are approved by Architect.

B. Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.

END OF SECTION 047200

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

SECTION 06 61 16 - SOLID SURFACE SHOWER AND TOILET COMPARTMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Solid surfacing fabrications for the following applications:
   1. Custom Fabrications Including:
      a. Shower walls.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry.

1.3 REFERENCES

A. American with Disabilities Act Accessibility Guidelines (ADAAG).

B. American National Standards Institute (ANSI):
   1. ANSI Z 124.1.2 - Plastic Bathtub and Shower Units.

C. ASTM International (ASTM):
   1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   2. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
   3. ASTM E 331 - Standard Test Method For Water Penetration Of Exterior Windows, Skylights, Doors, And Curtain Walls By Uniform Static Air Pressure Difference.
   4. ASTM F 462 - Standard Consumer Safety Specification for Slip-Resistant Bathing Facilities.
   5. ASTM G 21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
   6. ASTM G 22 - Standard Practice for Determining Resistance of Plastics to Bacteria.

D. National Fire Protection Association: NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.

E. Underwriters Laboratories: UL 723 - Test for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 013300- Submittal Procedures.

B. Product Data: Manufacturer's complete and current product data for each product required, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Complete installation methods.
   4. Product data for anchors, hardware, fastenings, and accessories.

C. Shop Drawings: Show locations of each item and installation details. Provide plan, section and elevation drawings conditions as necessary to depict correct installation procedures.

D. Shop drawings for fabrication and installation of Partition assemblies that are not fully described by architectural drawings. Provide template layouts and installation instructions for anchorage devices built into other work.

E. Selection Samples: Two color charts, consisting of actual product pieces, demonstrating full range of available colors, for initial color selection.

F. Verification Samples: For each product type specified, two samples, minimum of 3 inches (76 mm) square representing product configurations specified herein.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Primary products specified in this section will be provided by a single manufacturer with a minimum of ten years experience.

B. Installer Qualifications: Products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing products of the same type and scope as specified.

C. Field Measurements: Take field measurements prior to component fabrication to ensure proper fitting of work.

D. Coordination: Furnish inserts and anchorages that must be built into other work for installation of toilet Partitions and related items.

E. Provide test reports showing compliance with the performance specified for:
1. Fire-related properties.
2. Accessibility and safety properties.
3. Impact strength.
4. Coefficient of friction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation in an interior climate controlled location away from direct sunlight.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Manufacturer's Standard Warranty: At project closeout, provide to Owner or Owners representative an executed copy of the manufacturer's limited warranty against manufacturing defect outlining its terms, conditions and exclusions from coverage.
1. Material Warranty Period: Ten years.
2. Bath Accessories Warranty Period: Five years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Inpro, which is located at: S80 W18766 Apollo Dr.; Muskego, WI 53150; Toll Free Tel: 800-222-5556; Tel: 262-679-9010; Fax: 262-679-9127; Email:request info (jjohnson@inprocorp.com); Web:www.inprocorp.com or approved equal.

B. Substitutions: As approved by Architect.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 2500 - Substitution Procedures.

2.2 PERFORMANCE REQUIREMENTS

A. Materials:
1. Composition: Polyester/acrylic blended resins with natural filler material.
2. Compliance: Provide solid surface material that conforms to ANSI/ICPA SS-1 for workmanship and finish, structural integrity and material characteristics.
3. Performance:
    a. Color Fastness: No change, 200 hours.
    b. Wear and Cleaning: Passes.
    c. Impact resistance: Passes.
    d. Stain Resistance: Passes.
    e. Chemical Resistance: Passes.
    f. Drain Fitting Connection: Passes.
    g. Loads on Lavatory Tops: Passes.
    h. Thermal Shock Resistance: Passes.
    i. Cigarette Burn Test: Passes.
4. Fire Performance Characteristics: Provide a solid surface wall cladding conforming with the NFPA class A fire rating as determined by ASTM E 84, UL 723, NFPA 255.
5. Fungal and Bacterial Resistance: Provide solid surface that does not support fungal and bacterial growth as tested in accordance with ASTM G 21 and ASTM G 22.
6. Provide solid surface material that meets the emission level requirements of Greenguard certification, with results satisfying the chemical emissions requirement of California Section 1350.
7. Provide solid surface material that meets the requirements of Greenguard Children and School Chemical emissions level.
8. Color Variation: The composition of BioPrism produces slight color variation between production cycles due to the innate and complex blending of natural minerals and manmade resin.

B. Shower Receptors and Shower Systems: Conform to ANSI Z 124.1.2-2005 when tested for workmanship and finish, structural integrity and material characteristics. Provide Shower receptors that conform to ANSI Z457/CSA B45.5-11 when tested for load bearing.

2.3 SHOWER AND TUB SURROUNDS

A. Shower Surrounds: As manufactured by Inpro.
1. Shower System: one-piece wall panels.
    a. Panels: Back, front, right, and left wall panels.
2. Wall Height: 96 inches.
3. Grooves: None.

B. Receptors:
   1. Refer to plumbing drawings.

C. Shower and Tub Surround Accessories:
   1. Recessed Soap Caddy:
   2. Inside Corner Moldings.
   3. Panel Molding.
   4. Adhesive/Sealants: Two tubes of adhesive and one tube of silicone sealant provided.
   5. Perimeter Trim

2.4 CUSTOM FABRICATI0NS

A. Tub and Shower Walls: Provide Tub and Shower Walls from 1/4 inch (6 mm), panels of BioPrism Solid Surface as manufactured by Inpro.

B. Accessory Components: BioPrism Solid Surface as manufactured by Inpro.
   1. Outside Corner Molding: 3/4 inch x 3/4 inch x 1/4 inch x 96 inches.
   2. Batten Strips: 2-1/4 inches x 1/4 inch x 96 inches.
   3. Perimeter Trim: 2-1/4 inches x 1/2 inch x 96 inches.
   4. Panel Molding: Model DSPMP96225, 2-1/4 inches h x 7/8 inch d x 96 inches for 1/4 inch panels.
   5. L-shaped Inside Corner Molding: Model DSICPL196, 1 inch x 1inch x 96 inches .
   6. Inside Coved Corner: Model DSICCP396, 3 inches x 3 inches x 96 inches for 1/4 inch panels.

C. Accessories: For BioPrism Solid Surface as manufactured by Inpro.
   1. Solid Surface Bonding Adhesive: 9.8 ounce (278 g).
   2. Adhesive cartridge dispensers.
   3. Adhesive mixing tips.
   4. Silicone sealants.

2.5 FlNlSHES

A. Colors: Provide surfaces in colors as follows:
   1. As selected from manufacturer's standard palette of colors.

selected by Architect from Manufacturer’s full range.

2.6 FABRlCATlON

A. Fabricator shall be familiar with the cutting, machining, sanding polishing and seaming of solid surface materials. BioPrism Solid Surface material cannot be thermoformed.

B. Produce joints connecting components using manufacturer's joint adhesive.

C. Joints shall be inconspicuous in appearance. Attach 4 inches wide reinforcing strip of solid surface material under each joint.

D. Finish all surfaces uniformly.

2.7 ACCESSORIES

A. Provide appropriate fasteners and accessories as required to properly complete installation.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 ADJUSTING AND CLEANING

A. Hardware Adjustment: Adjust and lubricate hardware for proper operation. Set hinges on in-swing doors to hold open approximately 20 degrees from closed position when unlatched. Set hinges on out-swing doors (and entrance swing doors) to return to fully closed position.

B. Clean and Protect: Clean exposed surfaces of partition parts using materials and methods recommended by manufacturer, and provide protection as necessary to prevent damage during remainder of construction period.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

3.6 ADJUSTING AND CLEANING

A. Verify that surfaces are level, plumb and rigidly secured to substrate; make any adjustments required.

B. Clean finished surfaces and immediate areas of installation, using materials and methods recommended by manufacturer. Remove from project site packaging and debris caused by installation.

END OF SECTION

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

INSULATED-COMPOSITE BACKUP PANEL SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Metal wall backup panel system consisting of foamed-insulation-core metal wall panels and accessories.

1.2 RELATED REQUIREMENTS

A. Division 07 Section "Sheet Metal Flashing and Trim" for metal flashing components at openings and perimeter.

B. Division 13 Section "Metal Building Systems" for support framing for metal wall backup panels.

1.3 REFERENCES

A. Reference Standard Editions: Comply with requirements of specified standards edition cited in applicable building code, or if not cited in code, with requirements of edition current at time of issuing of specifications

B. American Architectural Manufacturer's Association (AAMA): www.aamanet.org:

1. AAMA 809.2 - Voluntary Specification Non-Drying Sealants

C. American Society of Civil Engineers (ASCE): www.asce.org/codes-standards:

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures

D. ASTM International (ASTM): www.astm.org:

1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
2. ASTM A 755 – Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products
3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
4. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants
5. ASTM C 1363 - Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus
6. ASTM D 1929 - Test Method for Determining Ignition Temperature of Plastics
7. ASTM E 72 - Test Methods of Conducting Strength Tests of Panels for Building Construction
8. ASTM E 84 - Test Methods for Surface Burning Characteristics of Building Materials
9. ASTM E 2357 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen
10. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

E. National Fire Protection Association (NFPA): www.nfpa.org:

1. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

F. Underwriters Laboratories, Inc. (UL): www.ul.com:

1. UL 263 - Fire Tests of Building Construction and Materials

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide metal wall backup panel system meeting the following performance requirements as determined by a qualified testing agency's application of specified tests on manufacturer's standard assemblies.

B. Structural Performance: Provide metal wall backup panel system fabricated to withstand effects of indicated loads and stresses within limits and under conditions indicated, when tested per ASTM E 72.

Specifier: Consult structural engineer and edit below as required by local codes.

1. Wind Load Test: Determine loads based on uniform pressure indicated on the drawings.
2. Seismic Performance Test: Comply with ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Sections 11 - 23, "Seismic".

C. Air Infiltration Test: Maximum 0.004 cfm/sq. ft. per ASTM E 283 at a static-air-pressure difference of 1.57 lb./sq. ft. .

D. Water Penetration Test: No uncontrolled water penetration at a static pressure of 15 lb./sq. ft. per ASTM E 331 and 6.24 psf for 2 hours per International Building Code – Chapter 14.

E. Thermal Performance Test: Thermal Resistance (R-value) indicated, per ASTM C 1363, corrected to 15 mph outside and still air inside, as-installed condition including fastening and joints.

F. Fire-Test-Response Characteristics: Provide metal wall backup panel system with the following fire-test-response characteristics determined by the indicated test standard as applied by UL or other testing and inspection agency acceptable to authorities having jurisdiction.

1. Surface Burning Characteristics: Not greater than the following, per ASTM E 84 or UL 723, for foam core and interior surface:

a. Flame spread index: 25 or less.
b. Smoke developed index: 450 or less.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer listed in this Section or approved for Project with a minimum 5 years of experience in manufacture of similar products in successful use in similar applications.

1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time period allowed for substitution review:

a. Product data, including certified independent test data indicating compliance with requirements.

b. Samples of each component.
c. Sample submittal from similar project.
d. Project references: Minimum of 5 installations not less than 5 years old, with owner contact information.
e. Sample warranty.

2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
3. Approved manufacturers must meet separate requirements of Submittals Article.

B. Installer Qualifications: Experienced Installer with minimum of 5 successful completed projects of similar materials and scope and employing workers trained by manufacturer to install products of this section. Installer must provide proof of training at the time of submittal. See section 1.11 for further verification and warranty requirements.

1.6 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate the installation of metal wall backup panel system structural support and exterior wall cladding panels.

B. Pre-installation Meeting: Conduct pre-installation meeting at site attended by Owner, Architect, manufacturer's technical representative, and other trade contractors.

1. Coordinate building framing in relation to metal wall backup panels.
2. Coordinate window, door, and other openings and penetrations of metal wall backup panels.

1.7 ACTION SUBMITTALS

A. Product Data: Manufacturer’s data sheets for metal wall backup panels and accessories.

B. Shop Drawings: Prepared by manufacturer or manufacturer's authorized dealer. Installation drawings for metal wall backup panels, flashing, accessories, and anchorage systems must indicate completely dimensioned structural frame and erection layouts, openings in the wall, special framing details, and construction details at corners, building intersections and flashing, location and type of mastic and metal filler strips.

1. Indicate coordination dimensions related to structural support system elements provided by others.
2. Include structural data indicating compliance with performance requirements.

1.8 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency.

B. Qualification Information: For Installer firm, Installer’s field supervisor.

1.9 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Protect metal wall backup panels during shipping, handling, and storage to prevent staining, denting, or other visible damage. Deliver, unload, store, and erect metal wall backup panels and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations. Protect from exposure to sunlight.

1.11 WARRANTY

A. **Special Manufacturer's Warranty**: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal wall backup panel assemblies that fail in materials and workmanship within [2] years from the date of substantial completion.

B. **Weathertight Wall Warranty**: Provide manufacturer's standard limited weathertight wall warranty in which manufacturer will warrant against leakage under the specified project design criteria or normal weather and atmospheric conditions for a period of ten years based on a review of final installation drawings and verification of installation by a manufacturer trained installer. Project installation inspection is at the sole discretion of the manufacturer.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. Insulated-Core Metal Wall Backup Panel System: Metal wall backup panel installation consisting of foamed-insulation-core metal-skinned wall panels and accessories, attached to metal framing with specified clips or rails, serving as combined thermal, air, and moisture barrier and support for [metal wall panel rainscreen cladding] [brick veneer] [terra cotta veneer] specified in another section.

2.2 MANUFACTURERS

A. Basis of Design: **Metl-Span, BW System**, or approved equal. Provide basis of design product [or comparable products of other manufacturer approved by Architect in accordance with Instructions to Bidders and Division 01 General Requirements].

1. Metl-Span, a Nucor company; Lewisville, Texas Tel: 972.221.6656; Email: info@metlspan.com; Web: metlspan.com.

B. Provide basis of design product [, or comparable product approved by Architect prior to bid].

2.3 METAL WALL BACKUP PANELS

A. Insulated Composite Backup Panels: Foamed-insulation-core metal-skinned panels with interlocking side joinery and butted end joints. Fabricate in factory with metal facings bonded to foamed-in-place core. Fabricate interior metal face with planking ribs. Form interlocking joinery to accept concealed fasteners for attachment to supports.

1. Basis of Design Product: **Metl-Span BW Systems Insulated Backup Wall Panel or approved equal**.

B. **BW Universal System™ Panel Faces**: [(0.014-inch/29-ga. thick aluminum-zinc alloy coated steel sheet: ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural

quality, with smooth surface. [optional: (0.019-inch/26-ga. , (0.025-inch/24-ga. , (0.031-inch/22-ga.

C. Panel Face Finish: 0.2-mil thick primer coat and 0.2-mil thick primer coat on interior face.] [Add for louver blank-off panels: 0.8-mil) thick black silicon polyester color coat on exterior face].

D. Panel Sealant/Vapor Seal: Factory-applied non-curing butyl.

E. **BW Universal System™ Horizontal Backup Panel Thickness and Thermal Resistance (75° mean core temperature)**: 2 inches ; R-13.6, U-.074 3 inches ; R-20.4, U-.051.

F. Panel Width: BW Universal System 32 inches

G. Panel Configuration: Provide metal wall backup panels configured for the following application system:
   1. Horizontal metal wall backup panels with integral pre-punched thermally isolated Z-girt (BWUH Rail) attachment system configured to serve as attachment points for manufacturer-furnished vertical sub-girts to receive horizontal cladding.

2.4 METAL WALL BACKUP PANEL ACCESSORIES

A. Sub-girts: Metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275) coating designation; structural quality, 0.054-inch/16-gage thick.

B. Panel Attachment Clips: Metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275) coating designation, of thickness indicated, configured to serve as attachment points for secondary metal framing where indicated, manufacturer-furnished.

C. Self-Adhering Flashing Tape recommended by panel manufacturer for application.

D. Joint Sealants:

   1. Concealed: Non-skinning butyl sealant, AAMA 809.2.
   2. Exposed: Elastomeric silicone sealant, ASTM C 920, as recommended by panel manufacturer.

E. Fasteners: Corrosion-resistant, self-tapping and self-drilling screws, bolts, nuts, and other fasteners as recommended by panel manufacturer for application.

   1. Size fasteners to prevent penetration of interior panel facing where required.

2.5 FABRICATION

A. General: Fabricate metal wall backup panels at the factory, using manufacturer's standard procedures and processes identical to tested units and as necessary to meet performance requirements.

   1. Fabricate metal wall backup panels with joints between panels designed to form weathertight seals.
   2. Factory form metal wall backup panels in a continuous process with no glues or adhesives between dissimilar materials. Trim and square edges of sheets with no displacement of face sheets or protrusion of core material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine building structure with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation.

B. Wall Substrate: Confirm that wall substrate is within tolerances acceptable to metal wall panel system manufacturer.

1. Maximum deviations acceptable:

a. 3/8 inch in any 20-foot length vertically or horizontally from the framing face plane.
b. 3/4 inch maximum deviation from the framing face plane on any building elevation.

C. Framing: Inspect framing that will support metal wall backup panel system to determine if support components are installed as indicated on approved shop drawings.

D. Advise G.C, in writing, of out-of-tolerance work and other deficient conditions prior to proceeding with metal wall panel system installation.

E. Correct out of tolerance work and other deficient conditions prior to proceeding with insulated composite backup panel installation.

3.2 METAL WALL BACKUP PANEL SYSTEM INSTALLATION

A. General: Install metal wall backup panel system in accordance with approved shop drawings and manufacturer's recommendations.

B. Installation: Attach backup panels to supports at each panel connection point indicated on approved shop drawings.

1. Install with drain plane of panel facing weather side of installation.
2. Fasten insulated metal wall backup panels to building framing with [continuous integral attachment sub-girts] or [manufacturer provided panel attachment clips and anchors] provided by manufacturer utilizing recommended fasteners.
3. Horizontal Joinery: Working from base to top of metal wall backup panel system installation, engage upper panel over lower panel to form a weather tight joint oriented to allow gravity drainage.
4. Vertical Joinery:

a. Install vertical butt joints tight with no gap, set against continuous supports.
b. Set panel ends in continuous bead of non-curing butyl sealant as indicated in manufacturer's installation details.
c. Seal butt joints between adjacent panels with a continuous strip of self-adhering flashing at bottom row of panels and where additionally recommended by manufacturer or architect.

3.3 ERECTION TOLERANCES

A. Installation Tolerances: Align metal wall backup panel system within installed tolerance of 1/4 inch in 20 feet , noncumulative, on level and plumb and location lines as indicated and within 1/8 inch offset of adjoining faces and of alignment of matching profiles.

END OF SECTION

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Foamed-insulation-core concealed fastener metal wall panels, with related metal trim and accessories.

1.2 RELATED REQUIREMENTS

A. Division 07 Section "Sheet Metal Flashing and Trim" for sheet metal flashing items in addition to items specified in this Section.

B. Division 07 Section "Metal Wall and Roof Panels" for factory-formed metal wall, roof, and soffit panels.

C. Division 13 Section "Metal Building Systems" for steel framing supporting metal panels.

1.3 REFERENCES

A. American Architectural Manufacturer's Association (AAMA): www.aamanet.org:

1. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

B. American Society of Civil Engineers (ASCE): www.asce.org/codes-standards:

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. ASTM International (ASTM): www.astm.org:

1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
3. ASTM A 792 - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
4. ASTM A 666 – Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
5. ASTM C 518 - Standard Test Method for Steady State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
6. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus
7. ASTM C 273 – Properties of Sandwich Core Materials
8. ASTM D 1621 - Compressive Properties of Rigid Cellular Plastics.
9. ASTM D 1622 - Apparent Density of Rigid Cellular Plastics.
10. ASTM D 1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
11. ASTM D 2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
12. ASTM D 2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
13. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
14. ASTM D 6226 - Standard Test Method for Open Cell Content of Rigid Cellular Plastics
15. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
16. ASTM E 84 - Test Methods for Surface Burning Characteristics of Building Materials.
17. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
18. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

19. ASTM E 2357 – Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies

D. National Fire Protection Association (NFPA)

1. NFPA 259 – Test Method for Potential Heat of Building Materials.
2. NFPA 285 – Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies.
3. NFPA 286 – Fire Test of Evaluating Conditions of Wall and Ceiling Finish to Roof Fire Growth.

E. FM Global (FM): www.fmglobal.com:

1. FM 4880 Examination Standard for Class 1 Fire Rating of Building Panels or Interior Finish Materials
2. FM 4881 Approval Standard for Class 1 Exterior Wall Systems.

F. Canadian Standards Association (CSA)

1. CAN/ULC S102 – Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
2. CAN/ULC S101 – Fire Endurance Tests of Building Construction and Materials.
3. CAN/ULC S134 – Fire Test of Exterior Wall Assemblies.
4. CAN/ULC S138 – Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration.

G. Green Seal (GS) www.greenseal.org

1. GS-11 – Green Seal Standard for Paints and Coatings, Edition 3.2, October 26, 2015.

H. US Green Building Council (USGBC): www.usgbc.org:

1. Leadership in Energy and Environmental Design (LEED) Green Building Rating System

1.4 QUALITY ASSURANCE

A. Manufacturer/Source: Provide metal panel assemblies and accessories from a single manufacturer approved under an accredited third-party quality control program

B. Manufacturer Qualifications: Approved manufacturer listed in this Section with minimum ten years' experience in the manufacturing of similar products and successful use in similar applications.

1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

a. Product data, including certified independent test data indicating compliance with requirements.
b. Samples of each component.
c. Sample submittal from similar project.
d. Project references: Minimum of five installations not less than five years old, with Owner and Architect contact information.
e. Sample warranty.
f. Certificate from an accredited third-party Quality Control Program.

2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements
3. Approved manufacturers must meet separate requirements of Submittals Article.

C. Installer Qualifications: Experienced Installer [certified by metal panel manufacturer] with minimum of five years' experience with successfully completed projects of a similar nature and scope.

1. Installer's Field Supervisor: Experienced mechanic [certified by metal panel manufacturer] supervising work on site whenever work is underway.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Prior to erection of framing, conduct preinstallation meeting at site attended by Owner, Architect, metal panel installer, metal panel manufacturer's technical representative, inspection agency and related trade contractors.

1. Coordinate building framing in relation to metal panel system.
2. Coordinate openings and penetrations of metal panel system.

1.6 ACTION SUBMITTALS

A. Product Data: Manufacturer’s data sheets for specified products.

B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, and special details. Make distinctions between factory and field assembled work.

1. Include data indicating compliance with performance requirements.
2. Indicate points of supporting structure that must coordinate with metal panel system installation.
3. Include structural data indicating compliance with performance requirements and requirements of local authorities having jurisdiction.

C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of manufacturer's full range of colors.

D. Samples for Verification:

1. Provide 12-inch- long section of each metal panel profile.
2. Provide color chip verifying color selection.

1.7 INFORMATIONAL SUBMITTALS

A. Product Test Results: Indicating compliance of products with requirements.

B. Qualification Information: For Installer

C. Warranty:

1. Submit manufacturer’s written two (2) year limited warranty providing panels to be free from defects in materials and workmanship, beginning from the date of substantial completion excluding coil coatings (paint finishes) that are covered under a separate warranty.
2. The installation contractor shall issue a separate warranty against defects in installed materials and workmanship, beginning from the date of substantial completion of the installation.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Manufacturer's Warranty: Executed copy of manufacturer's warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping. Protect painted surfaces with a protective covering before shipping.

1. Deliver, unload, store, and erect metal panels and accessory items without deforming panels or exposing panels to surface damage from weather or construction operations.
2. Store in accordance with Manufacturer's written instructions.
3. Shield foam insulated metal panels from direct sunlight until all components are installed.

1.10 WARRANTY

A. Special Manufacturer's Warranty: Submit Manufacturer's two (2) year limited warranty providing panels to be free from defects in materials and workmanship, beginning from the date of substantial completion excluding coil coatings (paint finishes) that are covered under a separate warranty.

B. The installation contractor shall issue a separate warranty against defects in installed materials and workmanship, beginning from the date of substantial completion of the installation.

C. Special Panel Finish Warranty: Submit Manufacturer's limited warranty on the exterior paint finish for adhesion to the metal substrate and limited warranty on the exterior paint finish for chalk and fade.

1. Modified Silicone-Polyester Two-Coat System:

a. Color fading in excess of 7 for crimson red; Hunter units per ASTM D 2244.
b. Chalking in excess of 7 for crimson red or 8 rating per ASTM D 4214.
c. Failure of adhesion, peeling, checking, or cracking.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis of Design Manufacturer: Metl-Span, a Nucor company; Lewisville, Texas Tel: 844.574.5367; Email: info@metlspan.com; Web: metlspan.com. or approved equal.

B. Provide basis of design product , or comparable product approved by Architect prior to bid.

2.2 PERFORMANCE REQUIREMENTS

A. General: Provide metal panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.

B. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated, as determined by ASTM E 72 applied in accordance with ICC AC 04, Section 4, Panel Load Test Option or Section 5, Panel Analysis Option:

1. Wind Loads: Determine loads based on applicable building code, wind speed, importance factor, exposure category, and pressure coefficients indicated on drawings.
2. Deflection Limits: As noted on structural drawings.

C. Fire Performance Characteristics: Provide metal panel systems with the following fire-test characteristics determined by indicated test standard as applied by testing and inspection agency acceptable to authorities having jurisdiction.

1. Surface-Burning Characteristics: The insulating core shall have been tested per ASTM E 84. The core shall have:

a. Flame spread index: 25 or less.
b. Smoke developed index: 450 or less.

2. Room Test Performance: FM Global 4880: The panel assembly shall meet the performance requirements cited by FM 4880, classifying the exterior building panel as Class 1 and ensuring large-scale integrity when exposed to flame.
3. Fire Propagation: The fire assembly shall meet the requirements of the standard for NFPA 285
4. Fire Growth: The fire assembly shall meet the requirements of the standard for NFPA 286
5. Potential Heat: Determined in accordance with NFPA 259
6. IBC Chapter 26: Panel Performance under the above test methods, shall meet the requirements of IBC, Chapter on foam plastics.

D. Air Infiltration, ASTM E 283: < 0.01 cfm/ft2 air infiltration rate at static pressure differential of 6.24 psf .

E. Water Penetration Static Pressure:

1. ASTM E 331: No uncontrolled water penetration at a static pressure of 15 lbf/sq. ft. for 15 minutes.
2. ASTM E 331 Modified (2-hour duration): No uncontrolled water penetration at a static pressure of 6.24 lbf/sq. ft. .

F. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.

G. Thermal Performance: When tested in accordance with ASTM C 518, Measurement of Steady State thermal Transmission, the panels shall provide a k factor of 0.112 btu-in/hr-sf-deg F at a 35° F (1.67° C) mean temperature.

2.3 INSULATED METAL WALL PANELS

A. Concealed Fastener, Insulated Metal Wall Panels with foam core: Structural metal panels consisting of exterior metal sheet with five major tapered inverted ribs 1 by 1/4 inches with a mesa profile between the inverted ribs, and interior metal sheet with a Mesa or Light Mesa profile, with factory foamed-in-place polyisocyanurate core, with tongue-and-groove panel edges, attached to supports using concealed fasteners.

1. Basis of Design: Metl-Span, CF Flute, or approved equal.
2. G-90 galvanized coated steel conforming to ASTM A 653 or AZ-50 aluminum-zinc alloy coated steel, conforming to ASTM A 792/A 792M, minimum grade 33, pre-painted by the coil-coating process per ASTM A 755/A 755M.
3. Panel Width: 42 inches
4. Panel Thickness: 2.5 inch
5. Insulating Core: Polyisocyanurate with zero ozone depletion potential blowing agent
    a. Closed Cell Content: 90% or more as determined by ASTM D 6226
    b. Compressive Strength: As required to meet structural performance requirements and with a minimum of 20 psi as determined by ASTM D 1621
    c. Shear Strength: As required to meet structural performance requirements and with a minimum of 20 psi as determined by ASTM C 273
    d. Tensile Strength: As required to meet structural performance requirements and with a minimum of 16 psi as determined by ASTM D 1623
    e. Minimum Density: 2.0 pcf as determined by ASTM D 1622
    f. Thermal Resistance R-Value: [insert corresponding value] deg. F * hr * sq. ft./Btu per ASTM C 518 at 35 degrees Fahrenheit mean temperature.
6. Thermal Transmittance (U-factor): [insert corresponding value] Btu/hr * sq. ft. * deg. F as determined by ASTM C 1363 and/or thermal modeling consistent with ASHRAE 90.1 section A9.4.7 at 35 degrees Fahrenheit mean temperature. Specimens must include at least two engaged side joints.

2.4 METAL WALL PANEL ACCESSORIES

A. General: Provide complete metal panel assemblies incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.

B. Flashing and Trim: Match material, thickness, and finish of metal panels.

C. Panel Clips: ASTM A 653/A 653M, G90 (Z180) hot-dip galvanized zinc coating, one-piece, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.

D. Panel Fasteners: Self-drilling or Self-tapping screws and other acceptable fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply corrosion-resistant fasteners with heads matching color of metal panels by means of factory-applied coating, with weathertight resilient washers.

E. Joint Sealers:

1. Sealants: Provide Tape Mastic Sealants, Non-skinning sealants, and Urethane Sealants in accordance with manufacturers' standards
2. Vertical Joint Gasket: Manufacturers standard EPDM gasket. Color: [Black] [Or custom color].

2.5 FABRICATION

A. General: Provide factory fabricated and finished metal panels, trim, and accessories meeting performance requirements, indicated profiles, and structural requirements.

B. Fabricate metal panel joints configured to accept sealant providing weathertight seal.

C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings.

2.6 FINISHES

A. Finishes, General: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.

B. Exterior Face Sheet Coil-Coated Finish System

1. Silicone-Polyester Two-Coat System: 0.20 – 0.25 mil primer with 0.7 – 0.8 mil color coat.

a. Basis of Design: Metl-Span, Silicone Polyester, or approved equal..
b. Color: Full Range of "WeatherXL" Exterior Colors or approved equal..

C. Interior Face Sheet Coil-Coated Finish System

1. Polyester Two-Coat System: 0.20 – 0.25 mil primer with 0.7 – 0.8 mil color coat

a. Basis of Design: Metl-Span, Igloo White, or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine metal panel system substrate with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panels.

1. Inspect framing that will support insulated metal panels to determine if support components are installed as indicated on approved shop drawings and are within tolerances acceptable to metal panel manufacturer and installer. Confirm presence of acceptable framing members at recommended spacing to match installation requirements of metal panels.
2. Panel Support Tolerances: Confirm that metal panel supports are within tolerances acceptable to metal panel manufacturer but not greater than the following:

a. 1/4 inch in 20 foot in any direction.
b. 3/8 inch over any single wall plane.
c. Girt Spacing 8 feet or more: 1/4 inch out only.
d. Girt Spacing Less Than 8 feet : 1/8 inch out only.
e. CF Architectural girt spacing less than 4 feet : 1/16 inch inch out only.

B. Correct out-of-tolerance work and other deficient conditions prior to proceeding with insulated metal panel installation.

3.2 METAL PANEL INSTALLATION

A. Concealed-Fastener Insulated Metal Panels with foam core: Install metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal panels in orientation, sizes, and locations indicated. Anchor panels and other components securely in place. Provide for thermal and structural movement.

B. Attach panels to metal framing using screws, fasteners, sealants, and adhesives recommended for application by metal panel manufacturer.

1. Fasten metal panels to supports with the number and type of fastener(s) at each location as indicated on approved shop drawings, and at a support spacing and material recommended by the manufacturer.
2. Cut panels in field where required using manufacturer's recommended methods.
3. Provide weatherproof jacks for pipe and conduit penetrating metal panels.
4. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by metal panel manufacturer.

C. Attach panel flashing trim pieces to supports using recommended fasteners and joint sealants.

D. Joint Sealers: Install sealants where indicated and where required for weatherproof performance of metal panel assemblies.

1. Seal panel base assembly, openings, panel head joints, and perimeter joints using sealants indicated in manufacturer's instructions.
2. Seal wall panel joints; apply continuously without gaps in accordance with manufacturer's written instructions, approved shop drawings, and project drawings.
3. Prepare joints and apply sealants per requirements of Division 07 Section.

3.3 ACCESSORY INSTALLATION

A. General: Install metal panel accessories with positive anchorage to building and weather tight mounting; provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
3. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.

3.4 CLEANING AND PROTECTION

A. Remove temporary protective films immediately in accordance with metal panel manufacturer's instructions. Clean finished surfaces as recommended by metal panel manufacturer.

B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Architect.

END OF SECTION

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Adhered thermoplastic polyolefin (TPO) roofing system.
2. Vapor retarder.
3. Roof insulation.

B. Section includes the installation of insulation strips in ribs of roof deck. Insulation strips are furnished under Section 053100 "Steel Decking."

C. Related Requirements:
1. Section 070150.19 "Preparation for Re-Roofing" for re-cover board beneath new roofing.
2. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.

1.3 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.

1.4 PREINSTALLATION MEETINGS

A. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at **Project site**.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.

6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

B. Preinstallation Roofing Conference: Conduct conference at **Project site**.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work, including:

1. Base flashings and membrane terminations.
2. Roof drainage plans.
3. Tapered insulation, including slopes.
4. Roof plan showing orientation of steel roof deck and orientation of roofing, fastening spacings, and patterns for mechanically fastened roofing.
5. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:

1. Sheet roofing, of color required.
2. Walkway pads or rolls, of color required.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and manufacturer.

B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

1. Submit evidence of compliance with performance requirements.

C. Product Test Reports: For components of roofing system, tests performed by manufacturer and witnessed by a qualified testing agency.

D. Research/Evaluation Reports: For components of roofing system, from ICC-ES.

E. Field quality-control reports.

F. Sample Warranties: For manufacturer's special warranties.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing system to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is **UL listed** for roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.

1. Special warranty includes roofing, base flashings, **roof insulation, fasteners, cover boards, substrate board, roofing accessories, roof pavers,** and other components of roofing system.
2. Warranty Period: 20> years from date of Substantial Completion.

B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roofing, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:

1. Warranty Period: **Two** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide **Elevate; "UltraPly TPO"** or comparable product by one of the following or approved equivalent:

1. Carlisle SynTec Incorporated.
2. Genflex.

B. Source Limitations: Obtain components including **roof insulation**, **fasteners** for roofing system from **same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer**.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.

1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
2. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.

B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

C. Solar Reflectance Index: Not less than **78**when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

D. Energy Star Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for **low**-slope roof products.

E. Energy Performance: Roofing system shall have an initial solar reflectance of not less than **0.70**and an emissivity of not less than **0.75** when tested according to CRRC-1.

F. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, **Class A**; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

G. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

2.3 TPO ROOFING

A. Fabric-Reinforced TPO Sheet: ASTM D 6878, internally fabric- or scrim-reinforced, uniform, flexible **fabric-backed** TPO sheet.

1. Thickness: **60 mils**, nominal.
2. Exposed Face Color: **White**.

2.4 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content:

a. Plastic Foam Adhesives: 50 g/L.
b. Gypsum Board and Panel Adhesives: 50 g/L.
c. Multipurpose Construction Adhesives: 70 g/L.
d. Fiberglass Adhesives: 80 g/L.
e. Single-Ply Roof Membrane Adhesives: 250 g/L.
f. Single-Ply Roof Membrane Sealants: 450 g/L.

g. Nonmembrane Roof Sealants: 300 g/L.
h. Sealant Primers for Nonporous Substrates: 250 g/L.
i. Sealant Primers for Porous Substrates: 775 g/L.
j. Other Adhesives and Sealants: 250 g/L.

3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, 45 thick, minimum, of same color as TPO sheet.

C. Bonding Adhesive: Manufacturer's standard**, water based**.

D. Slip Sheet: Manufacturer's standard, of thickness required for application.

E. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.

F. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched.

G. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roofing to substrate, and acceptable to roofing system manufacturer.

H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.5 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, **1/4 inch** thick.

1. ~~Products~~: Subject to compliance with requirements, **available products that may be incorporated into the Work include, but are not limited to, the following**:

a. CertainTeed Corporation; **GlasRoc Sheathing Type X**.
b. Georgia-Pacific Corporation; **Dens Deck Prime**.
c. National Gypsum Company; Gold Bond eXP Extended Exposure Sheathing.
d. USG Corporation; Securock Glass Mat Roof Board.

2.6 VAPOR RETARDER

A. Polyethylene Film: ASTM D 4397, 6 mils thick, minimum, with maximum permeance rating of 0.13 perm.

1. Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
2. Adhesive: Manufacturer's standard lap adhesive, FM Global approved for vapor-retarder application.

2.7 ROOF INSULATION

A. General: Preformed roof insulation boards manufacturedby TPO roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.

B. Polyisocyanurate Board Insulation: ASTM C 1289, **Type II, Class 1, Grade 2**, felt or glass-fiber mat facer on both major surfaces. R-Values will follow the ASTM C1289-13e1 testing methods for determining R-Value per thickness.

1. Manufacturers: Subject to compliance with requirements, **provide products by one of the following or approved equal**:
   a. Carlisle SynTec Incorporated.
   b. Genflex.

C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of **1/4 inch per 12 inches** unless otherwise indicated.

D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.8 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.

2.9 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway **pads or rolls**, approximately 3/16 inch thick and acceptable to roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

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

1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
5. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
6. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.

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

3.2 PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

C. Install insulation strips according to acoustical roof deck manufacturer's written instructions.

3.3 ROOFING INSTALLATION, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.4 INSULATION INSTALLATION

A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system and insulation manufacturer's written instructions for installing roof insulation.

C. Install tapered insulation under area of roofing to conform to slopes indicated.

A. Installation Over Metal Decking:

1. Install base layer of insulation with **joints staggered not less than 24 inches in adjacent rows**.

    a. Locate end joints over crests of decking.
    b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    c. Make joints between adjacent insulation boards not more than 1/4 inch in width.

    d. Fill gaps exceeding 1/4 inch with insulation.
    e. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    f. **(FIRST LAYER) Mechanically attach base layer** of insulation **and substrate board** using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.
        1) Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.

2. Install upper layers of insulation **and tapered insulation** with joints of each layer offset not less than 12 inches from previous layer of insulation.
    a. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
    b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

        1) Trim insulation so that water flow is unrestricted.

    e. Fill gaps exceeding 1/4 inch with insulation.
    f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    g. **(SECOND LAYER)** Adhere each layer of insulation to substrate using adhesive as follows and as recommended by manufacturer:
        1) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

3.5 BASE FLASHING INSTALLATION

A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.

B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.

E. Terminate and seal top of sheet flashings **and mechanically anchor to substrate through termination bars**.

3.6 WALKWAY INSTALLATION

A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

B. Roof-Paver Walkways: Install walkway roof pavers according to manufacturer's written instructions in locations indicated, to form walkways. Leave 3 inches of space between adjacent roof pavers.

3.7 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.8 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075423

SECTION 083613 - SECTIONAL DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sectional-door assemblies.

1.2 ACTION SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

B. Shop Drawings: For each installation and for components not dimensioned or detailed in manufacturer's product data.

C. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.

1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: **Five** years from date of Substantial Completion.

B. Finish Warranty: Manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: **10** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance, Exterior Doors: Capable of withstanding the design wind loads.

1. Design Wind Load: **As indicated on Drawings**.

B. Windborne-Debris Impact Resistance: Provide sectional doors complying with the following requirements:

1. Glazed Openings: Pass ASTM E1886 Large Missile Test and cyclic-pressure tests in accordance with ASTM E1996 for **basic** protection and Wind Zone .
2. Garage-Door Glazed Openings: Pass DASMA 115.

C. Seismic Performance: Provide sectional doors that withstand the effects of earthquake motions determined in accordance with **ASCE/SEI 7**.

1. Component Importance Factor: **1.5**.

2.2 SECTIONAL-DOOR ASSEMBLY

A. **Steel** Sectional Door: Provide sectional door formed with hinged sections and fabricated so that finished door assembly is rigid and aligned with tight hairline joints; free of warp, twist, and deformation; and complies with requirements in DASMA 102.

B. Basis-of-Design Product: Subject to compliance with requirements, provide Clopay, Model 3722 or approved equal.

C. Operation Cycles: Door components and operators capable of operating for not less than **100,000** operation cycles. One operation cycle is complete when door is opened from closed position to the open position and returned to closed position.

D. Air Infiltration: Maximum rate of **0.4 cfm/sq. ft.** when tested in accordance with ASTM E283 or DASMA 105.

E. U-Value: 0.19

F. Steel Door Sections: ASTM A653/A653M, zinc-coated (galvanized), cold-rolled, commercial steel sheet with **G60** zinc coating.

1. Door-Section Thickness: **2 inches** .
2. Section Faces:

a. Thermal-Break Construction: Provide sections with continuous thermal-break construction separating the exterior and interior faces of door.
b. Exterior Face: Fabricated from single sheets, not more than **24 inches** high; with horizontal meeting edges rolled to continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove, weather- and pinch-resistant seals and reinforcing flange return.

1) Steel Sheet Thickness: 20 gauge nominal coated thickness.
2) Surface: Manufacturer's standard, **stucco embossed**.

c. Interior Face: Enclose insulation completely within steel exterior facing and interior facing material, with no exposed insulation. Provide the following interior-facing material:

1) Zinc-Coated (Galvanized) Steel Sheet: Manufacturer's standard..
2) Plastic: **Manufacturer's standard vinyl material complying with DASMA 107 requirements.**.

3. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard insulation of type indicated below:

a. Board Insulation: **polyurethane**, secured to exterior face sheet.
b. Foamed-in-Place Insulation: Polyurethane, foamed in place to completely fill interior of section and pressure bonded to face sheets to prevent delamination under wind load.
c. Fire-Resistance Characteristics: Maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, in accordance with ASTM E84.

G. Track: Manufacturer's standard, galvanized-steel, **high-lift**] track system. Provide complete system including brackets, bracing, and reinforcement to ensure rigid support of ball-bearing roller guides.

1. Material: Galvanized steel, ASTM A653/A653M, minimum G60 zinc coating.
2. Size: **3 inches wide**.
3. Track Reinforcement and Supports: Provide galvanized-steel members to support track without sag, sway, and vibration during opening and closing of doors. Slot vertical sections of track spaced 2 inches apart for door-drop safety device.

a. Vertical Track: Incline vertical track to ensure weathertight closure at jambs.
b. Horizontal Track: Provide continuous reinforcing angle from curve in track to end of track, attached to track and supported at points by laterally braced attachments to overhead structural members.

H. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom **top and jambs** of door.

I. Windows: Manufacturer's standard window units of shape and size and in locations indicated on Drawings. Set glazing in vinyl, rubber, or neoprene glazing channel. Provide removable stops of same material as door-section frames. Provide the following glazing:
1. Insulating Glass Units: **Manufacturer's standard**.
a. Color: Gray or Broze (To Be Determined).
2. Window Option: Aluminum Full-View Windows.

J. Hardware: Heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless steel, or other corrosion-resistant fasteners, to suit door type.

1. Hinges: Heavy-duty, galvanized-steel hinges of not less than 0.079-inch nominal coated thickness at each end stile and at each intermediate stile, in accordance with manufacturer's written recommendations for door size.

    a. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is impossible.

2. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Match roller-tire diameter to track width.

    a. Roller-Tire Material: **Manufacturer's standard**.

3. Push/Pull Handles: Equip each door with galvanized-steel lifting handles on each side of door, finished to match door.

K. Locking Device:

1. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.
2. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded deadbolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.

    a. Lock Cylinders: Cylinders **standard with manufacturer**.
    b. Keying: **Keyed to building keying system**.
    c. Keys: **Three** for each cylinder.

3. Chain Lock Keeper: Suitable for padlock.
4. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

L. Counterbalance Mechanism:

1. Torsion Spring: Adjustable-tension torsion springs complying with requirements of DASMA 102 for number of operation cycles indicated, mounted on torsion shaft.
2. Cable Drums and Shaft for Doors: Cast-aluminum cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised.

    a. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.

3. Cables: Galvanized-steel, multistrand, lifting cables.
4. Cable Safety Device: Include a spring-loaded steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if lifting cable breaks.
5. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.
6. Bumper: Provide spring bumper at each horizontal track to cushion door at end of opening operation.

M. Electric Door Operator: Electric door operator assembly of size and capacity recommended by door manufacturer for door and operation cycles specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
2. Control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6; with NFPA 70, Class 2 control circuit, maximum 24 V ac or dc.
3. Safety: Listed in accordance with UL 325 by a qualified testing agency for commercial or industrial use[**; moving parts of operator enclosed or guarded if exposed and mounted at 8 ft. or lower**.
4. Usage Classification: **Heavy duty, 25 or more cycles per hour and more than 90 cycles per day**.
5. Operator Type: **Manufacturer's standard for door requirements**.
6. Motor: Reversible-type [**with controller (disconnect switch)**] for [**interior, clean, and dry**] [**exterior, dusty, wet, or humid**] <**Insert requirements**> motor exposure. Use adjustable motor-mounting bases for belt-driven operators.

    a. Motor Size: **As required to start, accelerate, and operate door in either direction from any position, at a speed not less than 24 in./secopening speed and 15 in/sec speed.**
    b. Electrical Characteristics:

        1) Phase: **Single phase**.
        2) Volts: **115**/230V.

7. Limit Switches: Equip motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.
8. Obstruction Detection: Automatic external entrapment protection consisting of automatic safety sensor capable of protecting full width of door opening. Activation of device immediately stops and reverses downward door travel.

    a. Monitored Entrapment Protection: **Photoelectric sensor** designed to interface with door-operator control circuit to detect damage to or disconnection of sensor and complying with requirements in UL 325.
    b. Unmonitored Entrapment Protection: **Retro-reflective photo sensor**.

9. Control Station: **Flush** mounted, **three-position (open, close, and stop)** control.

    a. Operation: **Push button interior and key exterior**].
    b. Interior-Mounted Unit: Full-guarded, surface-mounted, **heavy-duty type, with general-purpose NEMA ICS 6, Type 1** enclosure.
    c. Features: Provide the following:

        1) Vehicle detection operation.
        2) Radio-control operation.
        3) Card-reader control.
        4) Photocell operation.
        5) Door-timer operation.
        6) Explosion- and dust-ignition-proof control wiring.

7) Audible and visual signals that comply with regulatory requirements for accessibility.

10. Emergency Manual Operation: **Chain** type designed so required force for door operation does not exceed **25 lbf** .
11. Emergency Operation Disconnect Device: Hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
12. Motor Removal: Design operator so motor can be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.

N. Metal Finish:
1. Baked-Enamel or Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat.

a. Color and Gloss: Clopay "**Color Blast**" custom paint option, as selected by Owner from full line of colors, or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; in accordance with manufacturer's written instructions.

B. Tracks:

1. Fasten vertical track assembly to opening jambs and framing with fasteners spaced not more than 24 inches apart.
2. Hang horizontal track assembly from structural overhead framing with angles or channel hangers attached to framing by welding or bolting, or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

C. Accessibility: Install sectional doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 083613

SECTION 08 56 53 - TSS BR TRANSACTION WINDOW – HOLE AND BACKER TALK THRU

PART 1 - GENERAL

1.1 REFERENCE

A. Underwriters Laboratory UL 752-Standard for Bullet Resisting Equipment.

B. ASTM A 666-Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar.

C. ASTM E119-98- Standard Test Methods for Fire Tests of Building Construction and Materials

1.2 ACTION SUBMITTALS

A. Refer to Section
   a. 013300 Submittal Procedures
   b. 102641 BR Fiberglass Panels

B. Product Data: For each type of framing **and glass** including manufacturer recommended installation instructions.

C. Shop Drawings: Include plans, elevations, sections, details, attachment to other work.

D. Samples: For each exposed finish.

1.3 INFORMATION SUBMITTALS

A. Product Test Reports: Indicating compliance with requirements, including current UL listing verification and test results provided by Underwriters Laboratories.

B. Manufacturer's Instructions for installation and cleaning of assemblies. All required submittals shall be approved prior to installation.

C. Warranty: Sample of finish warranty

1.4 CLOSEOUT SUBMITTALS

A. Refer to Section
   a. **01 77 00 Closeout Procedures**
B. Maintenance data.

1.5 DELIVERY, STORAGE AND HANDLING

1. Refer to Section 017839 Project Record Documents

A. Protect windows and accessories in accordance with AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" until Substantial Completion.

B. Deliver materials to the project site with the manufacturer's UL Listed Labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer's recommended limits.

1.6 QUALITY ASSURANCE

A. Manufacturer shall be a company that specializes in manufacturing products of the specified type with a record of acceptable experience.

B. Installer shall be a company that specializes in product type specified and shall be certified for the installation by the manufacturer.

C. Manufacturer shall provide a mock-up, if required, for evaluation of surface preparation and application workmanship and color/finish to the Architect for approval prior to start of work.

1.7 DELIVERY, STORAGE & HANDLING

A. Handle the materials with care to prevent damage.

B. Store materials inside and under cover, stack flat and off floor.

C. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations set by manufacturer.

D. Do not begin installation of products until inadequate conditions have been corrected.

1.8 WARRANTY

A. Workmanship Warranty: All materials shall be warranted against defects for a period of **1** year for the date of receipt at the project site. Provide certificates of manufacturer's standard limited warranty with closeout documents.

B. Finish Warranty: Manufacturer's warranty against deterioration of factory finishes for the period of **10** years from the date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Basis of Design:

1. Subject to compliance with requirements, provide products by the following:

a. Total Security Solutions, Inc., 935 Garden Lane, Fowlerville, MI 48836, 866 734-6277. Attn: Sales Department, sales@tssbulletproof.com. Web: www.tssbulletproof.com or approved equal

Subject to compliance with [requirements, manufacturers of products of equivalent design may be acceptable if approved in accordance with

2.2 DESIGN PERFORMANCE

A. Though the design, manufacturing techniques and material application the TSS Hole and Backer Transaction Window shall be of the “non-ricochet” type.

B. The design is intended 1. to permit the capture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration.

C. The assembly shall provide single transaction positions utilizing an acrylic backer configuration.

D. The design shall employ an acrylic voice port in transaction glazing to complete the Hole and Backer design.

E. Each transaction position may have a stainless steel dip tray as shown on the drawings.

F. Components shall be manufactured in strict accordance with the specifications, design, and details.

G. All vision panels shall be cut to size with all exposed edges polished.

H. Necessary holes shall be predrilled and tapped where required.

I. Stainless Steel assembly screws and acrylic spacers shall be provided.

J. Clear anodized angles and channels shall be provided.

K. Anchor screws shall be provided by the installer.

L. No field alterations to the construction of the units fabricated under the acceptable standards shall be allowed unless approved by the manufacturer and the architect.

M. Standard manufacturing tolerances shall be +/- 1/16".

N. Materials shall meet or exceed UL 752 requirements.

2.3 BULLET RESISTANT HOLE AND BACKER TRANSACTION WINDOW

A. Product shall be: TSS Hole and Backer Transaction Window.

1. The Hole and Backer System shall consist of custom prefabricated bullet resistant panels with secure air passage as required for voice transmission.

2. System shall include aluminum frame with a plastic laminate base and recessed cash tray.

3. All accessories required for installation shall be included.

B. Factory-applied finish:

1. Clear Anodic Finish: Architectural Class I, clear coating AA-M10C22A41 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum"

C. Glazing Panels shall be in sizes as indicated on Drawings.

D. Bullet-Resisting Glazing Material:
   a. Bullet Resistant Level 3
      1 1/4" LP 1250 Laminated
      1 1/4" All Poly 1250
      1 1/4” TSS-003 L/S Glass Clad

E. Aluminum sections shall be manufactured in accordance with ASTM B209 and shall be extruded aluminum alloy 6063 T5 **anodized** finish and be free of sharp edges or burrs when in place.

F. Glazing Channel shall be a U-Channel specifically designed for securing glazing tightly in place.

G. Angles and shall only be acceptable for top attachment.

H. Frame shall be **anodized aluminum**

I. The bottom of the glazing shall be capped with corresponding material on the frame.

PART 3 – EXECUTION

3.1 PREPARATION

A. Prior to installing bullet resistive material, contractor shall verify that all supports have been installed as required by the contract documents, architectural drawings, and

approved shop/CAD drawings.

B. Installer shall notify architect of any unsatisfactory preparation that is responsibility of another installer.

C. Clean and prepare all surfaces per manufacturers recommendations for achieving the best results for the substrate under the project conditions.

3.2 INSTALLATION

A. Do not begin installation until openings have been verified and surfaces properly prepared in accordance with drawings.

B. Install in accordance with manufacturer's instructions and UL 752.

C. Set all equipment plumb.

D. TSS Hole and Backer Transaction Window: shall arrive on site as a completed unit. Unit shall be installed in provided opening (wall/door), secured to structure (anchors by others).

3.3 POST-INSTALLATION

A. TSS Hole and Backer Transaction Window shall be installed in accordance with manufacturer's printed recommendations, including adhering to anchoring and finishing details.

B. Inspection and Cleaning: Verify installation is complete and complies with manufacturer's requirements. Clean product and accessories, removing excess sealant, labels and protective covers.

END OF SECTION

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

SECTION 10 26 41 - TSS BR FIBERGLASS PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. TSS Total Armor Bullet Resistant Fiberglass.

1.2 REFERENCES

A. Underwriters Laboratory UL 752-Standard for Bullet Resisting Equipment.

B. ASTM C 1172 - Standard Specification for Laminated Architectural Flat Glass.

C. ASTM E119-98-Standard Test Methods for Fire Tests of Building Construction and Materials,

D. MIL-P-46593A-Numerical simulation of ballistic impact on composite laminates,

E. MIL-STD-622F-V50 Ballistic Test for Armor.

1.3 ACTION SUBMITTALS

A. Refer to Section [01 33 00 Submittal Procedures] [Insert section number and title].

B. Product Data: Including manufacturer recommended installation instructions.

C. Shop Drawings: Include plans, elevations, sections, details, attachment to other work.

D. Samples: For each exposed glazing type.

1.4 INFORMATION SUBMITTALS

A. Product Test Reports: Indicating compliance with requirements

B. Warranty: Sample of warranty

1.5 CLOSEOUT SUBMITTALS

A. Refer to Section
   a. **01 33 00 Submittal Procedures**
   b. **01 33 00 Closeout Submittals**
   c. **08 56 53 BR Transaction Window – Hole and Backer Talk Thru**

B. Maintenance data.

1.6 DELIVERY, STORAGE AND HANDLING

A. Refer to Section
   a. **01 60 00 Product Requirements**
   b. **01 78 39 Project Record Documents**

B. Deliver materials to the project site with the manufacturer's UL Listed Labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer's recommended limits.

1.7 WARRANTY

A. Workmanship Warranty: All materials shall be warranted against defects for a period of 1 year for the date of receipt at the project site. Provide certificates of manufacturer's standard limited warranty with closeout documents.

B. Finish Warranty: Manufacturer's warranty against deterioration of factory finishes for the period of 1 year from the date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Basis of Design:

1. Subject to compliance with requirements, provide products by the following:

   a. Total Security Solutions, Inc., 935 Garden Lane, Fowlerville, MI 48836, 866 734-6277. Attn: Sales Department, sales@tssbulletproof.com. Web: www.tssbulletproof.com. or approved equal.
   b. Level 3

2. Subject to compliance with requirements, manufacturers of products of equivalent design may be acceptable if approved in accordance with **Section 01 25 00 Substitution Procedures**

2.2 BULLET RESISTANT ALL GLASS GLAZING

A. Through the design, manufacturing techniques and material application, the TSS Total Armor Bullet Resistant Fiberglass panels shall be made of multiple layers of woven roving ballistic grade fiberglass cloth impregnated with a thermoset polyester resin and compressed into flat rigid sheets.

B. TSS Total Armor Bullet Resistant Fiberglass will be rated and tested for UL 752 and NIJ—0108.01 at the Level indicated by the product selected

C. TSS Total Armor Bullet Resistant Fiberglass Panels in UL 752 tested and rated Levels 4 through 8 shall be available.

2.3 FABRICATION

A. Tolerances: All joints and connections shall be tight, providing hairline joints and true alignment of adjacent members.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prior to beginning installation, verify that areas have been prepared as required by the Contract Documents and architectural drawings, and Shop Drawings have been approved.

B. Notify Architect of any unsatisfactory preparation that is responsibility of others.

C. Clean and prepare all surfaces per manufacturers recommendations as required for achieving the best results for the substrate under the project conditions.

D. Do not begin installation of material until all unsatisfactory conditions have been resolved and approved by Architect.

3.2 INSTALLATION

A. Do not begin installation until areas have been verified and surfaces properly prepared in accordance with Drawings.

B. Install in accordance with manufacturer’s instructions and UL 752. Set all equipment plumb.

C. Apply sealant in accordance with manufacturer's recommendations as indicated in installation instructions.

D. Remove excess sealant and leave exposed surfaces clean and smooth

3.3 PROTECTION

A. Clean and protect material from damage during ongoing construction operations. If damage occurs, remove and replace as required to provide voice ports in their original, undamaged condition.

B. Inspection and Cleaning: Verify installation is complete and complies with manufacturer’s requirements.

C. Provide final cleaning of product and accessories, removing excess sealant, labels and protective covers.

D. Touch-up, repair or replace damaged products prior to Substantial Completion.

END OF SECTION

SECTION 107300 - PROTECTIVE COVERS

PART 1 GENERAL

1.1 RELATED SECTIONS – CSI MASTERFORMAT 2010

A. Submittal Procedures

1.2 DESCRIPTION

A. Manufacture and install prefabricated steel carports, canopies, solar support structures, or other commercial and industrial canopy related coverings.

1.3 RELATED WORK

A. Concrete: General contractor shall provide parking closures and block out openings in concrete slab at each column location when applicable.

1.4 REFERENCES

A. Structural welding code - AWS d1.1

B. Sheet metal welding code - AWS d9.1

C. Standard shapes - ASTM a572 grade 50 (fy=50 ksi)

D. Plates and angles - ASTM a-36 (fy=36ksi)

E. Structural tubing - ASTM a-500 grade “B” (fy=46 ksi)

F. Cold formed shapes - ASTM a-653 or a-570 (fy=55ksi)

1.5 SUBMITTALS

A. Shop drawings holding the seal of a state registered structural engineer to specify proper construction in compliance with all local codes including, but not limited to, load bearings, wind ratings, seismic, footings required, spacing of columns, roof pitch and minimum clearance height.

B. Include structural calculations showing load tables, wind ratings, deflection variables, and technical data on all cold form components.

C. Furnish samples of color for roof deck selection.

1.6 QUALITY ASSURANCE

A. Manufacturer shall have a minimum of 10 years' experience in the manufacture / supply of steel canopies.

B. Installer shall have a minimum of 8 years installing pre-engineered steel canopies. Installation shall be in accordance with manufacturers engineering specifications.

C. Safety meetings shall be held each day before the start of installation work.

1.7 DELIVERY, STORAGE, AND HANDELING

A. Store and protect products prior to being delivered to job site.

B. Deliver products to job site.

C. Store materials on job site in a manner so they will not be damaged.

D. Materials shall be placed so water will drain and not accumulate.

1.8 WARRANTY

A. Provide a two year warranty on all materials and workmanship.

B. 25 year warranty against fade and chalk of walls and roof.

PART 2 PRODUCTS

2.1 PROTECTIVE COVER MANUFACTURER

A. **Premier Carports**, 620 NW 1501st Rd, Holden, MO 64040
Phone: (816) 625-5035, Email: info@premiercarports.com
Website: https://premiercarports.com or approved equal.

2.2 MATERIALS

A. All structural steel beams and columns shall be detailed, shop prime painted (optional galvanizing), piece marked, furnished, fabricated and erected according to the AISC "Specification for Structural Steel Buildings – ASD (allowable stress design)" 9th edition, and the AISC "Code of Standard Practice". Beams and columns shall conform to - ASTM a572 grade 50 (fy=50 ksi), and - ASTM a-500 grade "B" (fy=46 ksi).

B. Structural steel shall not be altered in the field from that shown on drawings. Cutting, burning, or welding not shown on drawings shall not be performed without the prior written approval of the engineer. C. Roof

deck shall be 26 gauge PBR UL 790 class A fire resistant rating. UL 2218 Class 4 hail impact resistance, with a pre-applied high-performance paint system.

D. Welding shall be in accordance with the current "structural welding code for steel" D1.1-98 AWS (American Welding Society). Electrodes for welding shall be in accordance with AWS 5.1 or 5.5, E70XX.

E. Anchoring hardware shall be galvanized, 5/8” diameter, 6” minimum embedment, Zink-coat minimum.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install canopy in a plumb manner to the highest standards of the trade and in strict accordance with the engineering drawings and manufacturer’s instructions.

B. Install columns and beams at straight and true angles, level where shown, even if there are variances in grade change.

C. Securely fasten all hardware and anchors in accordance with engineering specifications.

D. Thoroughly clean canopy and job-site prior to completion.

3.2 INSPECTION

A. City inspector is required to inspect footing holes and rebar cages, prior to pouring concrete.

B. Job foreman shall field verify all components are properly installed, and initiate “walk-through” with property manager or superintendent for approval.

C. Once prior inspections are complete, job foreman is to contact city inspector or architect for final inspection.

END OF SECTION

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

SECTION 123530 - RESIDENTIAL CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Kitchen cabinets (WD-1)

1.2 SUBMITTALS

A. Product Data: For the following:

1. Cabinets.
2. Cabinet hardware.

B. Shop Drawings: For cabinets and countertops. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, methods of joining countertops, and cutouts for plumbing fixtures.

C. Samples: For each type of material exposed to view.

D. Qualification Data: For qualified manufacturer.

PART 2 - PRODUCTS

2.1 CABINETS

A. Basis of Design Product: The design for cabinets is based on **Medallion "Gold" Line or approved equal**. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

2.2 CABINET HARDWARE

A. General: Manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish as indicated by manufacturer's designations as selected by Architect from manufacturer's full range.

B. Pulls: Refer to drawings.

C. Hinges: Soft close hardware.

D. Drawer Guides: Soft close hardware.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match cabinet face.

B. Install cabinets without distortion so doors and drawers fit openings, are aligned, and are uniformly spaced. Complete installation of hardware and accessories as indicated.

C. Install cabinets and countertop level and plumb to a tolerance of 1/8 inch in 8 feet.

D. Fasten cabinets to adjacent units and to backing.

1. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches o.c. with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips.

E. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop. Form seams using splines to align adjacent surfaces, and secure with glue and concealed clamping devices designed for this purpose.

F. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

END OF SECTION 123530

SECTION 133419 - METAL BUILDING SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural-steel framing.
2. Metal wall panels.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at **Project site**.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of metal building system component.

B. Shop Drawings: Indicate components by others. Include full building plan, elevations, sections, details and attachments to other work.

C. Samples: For units with factory-applied finishes.

D. Delegated Design Submittals: For metal building systems.

1. Include analysis data indicating compliance with performance requirements and design data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Letter of Design Certification: Signed and sealed by a qualified professional engineer. Include the following:

1. Name and location of Project.
2. Order number.
3. Name of manufacturer.
4. Name of Contractor.
5. Building dimensions including width, length, height, and roof slope.
6. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
7. Governing building code and year of edition.

8. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
9. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
10. Building-Use Category: Indicate category of building use and its effect on load importance factors.

C. Material test reports.

D. Source quality-control reports.

E. Field quality-control reports.

F. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer.

1. Accreditation: Manufacturer's facility accredited according to IAS AC472, "Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems."
2. Engineering Responsibility: Preparation of comprehensive engineering analysis and Shop Drawings by a professional engineer who is legally qualified to practice in jurisdiction where Project is located.

B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

C. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

PART 2 - PRODUCTS

MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide by one of the following:

1. Metallic Building Systems, part of the Cornerstone Building Brands or approved equal.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design metal building system.

B. Structural Performance: Metal building systems to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."

1. Design Loads: **As indicated on Drawings**.
2. Deflection and Drift Limits:

    a. Design metal building system assemblies to withstand serviceability design loads without exceeding deflections and drift limits recommended in AISC Steel Design Guide No. 3 "Serviceability Design Considerations for Steel Buildings."
    b. No greater than **as indicated on the structural drawings.**

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: **120 deg F , ambient; 180 deg F , material surfaces**.

2.3 STRUCTURAL-STEEL FRAMING

A. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings."

B. Bolted Connections: Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts."

C. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.

D. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafters and rake beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.

    a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.

E. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:

F. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:

G. Anchor Rods: Headed anchor rods as indicated in Anchor Rod Plan for attachment of metal building to foundation.

2.4 ACCESSORIES

A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

2.5 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members to be free of cracks, tears, and ruptures.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll forming or break forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

2.6 SOURCE QUALITY CONTROL

A. Special Inspection: Owner will engage a qualified special inspector to perform source quality control inspections and to submit reports.

1. Accredited Manufacturers: Special inspections will not be required if fabrication is performed by an IAS AC472-accredited manufacturer approved by authorities having jurisdiction to perform such Work without special inspection.

B. Product will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 ERECTION OF STRUCTURAL FRAMING

A. Erect metal building system according to manufacturer's written instructions and drawings.

B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.

C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.

D. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.

F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.

1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt type and joint type specified.

a. Joint Type: Snug tightened or pretensioned as required by manufacturer.

G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.

1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
2. Locate and space wall girts to suit openings such as doors and windows.
3. Provide supplemental framing at entire perimeter of openings, including doors, windows, ventilators, and other penetrations of roof and walls.

H. Steel Joists: Install joists and accessories plumb, square, and true to line; securely fasten to supporting construction according to SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders," joist manufacturer's written instructions, and requirements in this Section.

1. Before installation, splice joists delivered to Project site in more than one piece.
2. Space, adjust, and align joists accurately in location before permanently fastening.
3. Install temporary bracing and erection bridging, connections, and anchors to ensure that joists are stabilized during construction.
4. Joist Installation:

    a. Bolt joists to supporting steel framework using carbon-steel bolts unless otherwise indicated.
    b. Bolt joists to supporting steel framework using high-strength structural bolts unless otherwise indicated. Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for high-strength structural bolt installation and tightening requirements.
    c. Weld joist seats to supporting steel framework.

5. Install and connect bridging concurrently with joist erection, before construction loads are applied. Anchor ends of bridging lines at top and bottom chords if terminating at walls or beams.

I. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.

1. Tighten rod and cable bracing to avoid sag.
2. Locate interior end-bay bracing only where indicated.

J. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.

K. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.

L.

3.2 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.

3.3 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform field quality control special inspections and to submit reports.

B. Product will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION 133419

--- THIS PAGE INTENTIONALLY LEFT BLANK ---

A New Project For:

Wright City Fire Protection District - Station 1

60 Bell Road

Wright City, Missouri

- **LCS, LLC**
  Design/Builder
- **Engenuity**
  Civil Engineering
- **Engenuity**
  Electrical Engineer
- **SE/Coady Architects, LLC**
  Architects
- **Jarrell Mechanical Contractors**
  MP Design/Builder
- **Crockett Engineering Consultants**
  Structural Engineers

PLAN REVIEW INFORMATION

CODE INFORMATION:

- 2015 ICC BUILDING CODES WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ICC INTERNATIONAL EXISTING BUILDING CODE WITH WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ICC INTERNATIONAL FIRE CODE WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ICC INTERNATIONAL MECHANICAL CODE WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ICC INTERNATIONAL PLUMBING CODE WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 NATIONAL ELECTRICAL CODE WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ICC INTERNATIONAL ENERGY CONSERVATION CODE WITH WRIGHT CITY BUILDING CODE SUPPLEMENTALS
- 2015 ADA STANDARDS FOR ACCESSIBILITY DESIGN
- 2012 NFPA 101

NAME OF PROJECT: WCFPD WRIGHT CITY FIRE PROTECTION DISTRICT - STATION 1
STREET ADDRESS: 60 BELL ROAD WRIGHT CITY, MISSOURI

1. TYPE OF PROJECT: FIRE STATION 1

   TOTAL BUILDING SQUARE FOOTAGE: 19,229 S.F.

   OCCUPANCY:
   LIVING QUARTERS - 6,886 S.F. - R-2 OCCUPANCY
   APPARATUS BAY - 5,965 S.F. - S-1 OCCUPANCY
   ADMIN. AREA: 4,701 S.F. - B OCCUPANCY
   ADMIN. AREA MEETING ROOM: 1,677 S.F. - A-3 OCCUPANCY

2. HEIGHT / AREA (CHAPTER 5):

   USE GROUP: MIXED USE NON-SEPARATED OCCUPANCIES: R-2 RESIDENTIAL / S-1 STORAGE / B-BUSINESS / A-3 ASSEME
   TYPE OF CONSTRUCTION: VB

   ALLOWABLE AREA: (TYPE VB / SPRINKLERED)
   R-2: 28,000 S.F. / 3 STORIES
   S-1: 36,000 S.F. / 3 STORIES
   B: 36,000 S.F. / 3 STORIES
   A-3: 24,000 S.F. / 2 STORIES

3. FIRE SUPPRESSION (CHAPTER 9):
   THROUGHOUT (OCCUPANCY REQUIREMENT) (903.2.1 THROUGH 903.2.11): GROUP R - REQUIRED THROUGHOUT BUILDING
   THROUGHOUT (BUILDING AREA OR HEIGHT INCREASE) (504.3 AND 506.3): N/A

4. INCIDENTAL ACCESSORY OCCUPANCIES (TABLE 509)
   FURNACE ROOM WITH SINGLE PIECE OF EQUIP. . 400 K BTUH INPUT: N/A
   BOILER ROOM WITH SINGLE PIECE OF EQUIP. . 15 PSI & 10 HP: N/A
   LAUNDRY ROOMS OVER 100 SQUARE FEET: AUTOMATIC SPRINKLER SYSTEM PROVIDED
   OTHER THAN AMBULATORY CARE FACILITIES OR GROUP I-2 OCCUPANCIES, WASTE AND LINEN COLLECTION ROOMS OVER 100 S.F.: N/A
   STATIONARY STORAGE BATTERY SYSTEMS HAVING A LIQUID ELECTROLYTE CAPACITY OF MORE THAN 50 GALLONS FOR FLOODED LEAD-ACID, NICKEL CADMIUM OR VRLA, OR MORE THAN 1000 POUNDS FOR LITHIUM-ION AND LITHIUM METAL POLYMER USED FOR FACILITY STANDBY POWER, EMERGENCY POWER OR UNINTERRUPTED POWER SUPPLIES: N/A

5. MIXED USE OPTIONS: (SPECIFY ONE)
   NON-SEPARATED USES (508.3) ALLOWABLE AREA/HEIGHT CONTROLLED BY MOST RESTRICTIVE USE: R-2 / S-1 / B / A-3

6. TABLE 601 - FIRE RATINGS OF STRUCTURAL FRAME:
   STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS AND TRUSSES: 0
   BEARING WALLS
   EXTERIOR: 0 HR
   INTERIOR: 0 HR
   NON-BEARING WALLS
   EXTERIOR: 0 HR
   INTERIOR: 0 HR
   FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS: N/A
   ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS: N/A
   SEE SECTION 704 FOR REQUIREMENTS FOR PROTECTION OF STRUCTURAL MEMBERS

7. TABLE 602- FIRE RATING OF EXTERIOR WALLS BASED UPON SEPARATION DISTANCE:

	(<5')	(5'TO<10')	(10'TO<30')	(30' OR MORE)
LOAD BRG.	N/A	N/A	0 HR	N/A
NON-LOAD BRG.	N/A	N/A	0 HR	N/A

8. OTHER FIRE RESISTIVE ASSEMBLIES:
   FIRE PARTITIONS (708):
   SEPARATION WALLS AS REQUIRED BY SECTION 420.2 FOR GROUPS I-1, R-1, R-2 AND R-3 (708.1): 1/2 HOUR RATING SEPARATING R-2 SLEEPING UNITS AND WALLS SEPARATING SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING.
   CORRIDOR WALLS AS REQUIRED BY SECTION 1020.1 (708.1): (R OCCUPANCY 1/2 HR IF OCCUPANT LOAD GREATER THAN 10 - N/A - ACTUAL OCCUPANT LOAD = 6 PER SHIFT)

9. OPENINGS, PENETRATIONS AND JOINTS:

   PENETRATIONS (714) BY METAL CONDUITS AND PIPE, PLASTIC PIPE, DUCTWORK:
   VERTICAL AND HORIZONTAL FIRE RESISTANCE RATED ASSEMBLIES (714.3 AND 714.4): SAME AS ASSEMBLY RATING.
   NON-FIRE RESISTANCE RATED ASSEMBLIES (CONNECTING >2 STORIES) (714.5): SAME AS SHAFT ENCLOSURE.

   JOINTS (715) WHERE WALLS MEET WALLS, WALLS MEET FLOORS OR WALLS MEET ROOF ASSEMBLIES TESTED IN ACCORDANCE WITH UL 2079: SAME AS ASSEMBLY RATING.

OPENINGS (716) ASSEMBLY TYPE	ASSEMBLY RATING	OPENING RATING
DOORS AND SHUTTERS	N/A	N/A
FIRE WALL/FIRE BARRIER>1 HR	N/A	N/A
SHAFT/EXIT ENCLOSURE	N/A	N/A
HORIZONTAL EXITS IN FIRE WALLS	N/A	N/A
1 HR FIRE BARRIERS	1 HR	1 HR
OTHER FIRE BARRIERS	N/A	N/A
FIRE PARTITIONS: CORRIDOR WALLS	.5	1/3
OTHER FIRE PARTITIONS	.5	1/3
SMOKE BARRIERS	N/A	N/A
EXTERIOR WALLS	N/A	N/A

10. DRAFTSTOPPING IN ATTICS:

    718.4.2 / 718.4.3 - NOT REQUIRED IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH 903.3.1.1.

INTERIOR FINISHES (T803.11):

	SPRINKLERED	UNSPRINKLERED
VERTICAL EXITS AND EXIT PASSAGEWAYS	CLASS B	N/A
EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	CLASS B	N/A
ROOMS/ENCLOSED SPACES	CLASS C	N/A

11. FIRE ALARM AND DETECTION SYSTEMS (907):

	REQUIRED	NOT REQUIRED	PROVIDED
MANUAL FIRE ALARM			X
AUTOMATIC FIRE DETECTION			X
SINGLE/MULTIPLE STATION			

12. OCCUPANT LOAD (1004):

R-2 =	6,886/200 =	35 PEOPLE (ACTUAL 6 PER SHIFT)
S-1 =	5,965/300 =	20 PEOPLE
B=	4,701/100 =	47 PEOPLE
A-3=	1,677 / 15 =	112 PEOPLE
TOTAL:		214 PEOPLE CALCULATED / 6 PER SHIFT ACTUAL LIVING QUARTERS

13. EGRESS WIDTH (PER FLOOR):

		DOORS	TOTAL @ LEVEL OF EXIT DISCHARGE
CALCULATED (1005.1):	LIVING QUARTERS	(.2) x35=7 in	108 in PROVIDED
	APP BAY	(.2) x 20=4 in	108 in PROVIDED
	BUSINESS/ASSEMBLY	(.2) x 159=32 in	108 in PROVIDED

14. NUMBER OF EXITS:
    SPACES WITH 1 EXIT (T1006.2.1) : N/A

15. STORIES WITH ONE EXIT (1006.3.2(2)) # OF STORIES: N/A # OF OCC'S.: N/A TRAVEL DIST.: N/A
    >1 EXIT REQUIRED (1006.2.1): OCCUPANT LOAD: 214 NUMBER OF EXITS REQUIRED: 2
    NUMBER OF EXITS PROVIDED: 8

15. EXIT TRAVEL DISTANCE (1017):
    ACTUAL: 138'
    ALLOWED (T1017.2): 250' (with a sprinkler system)

16. ATTIC AND UNDERFLOOR VENTILATION (1203.2 AND 1203.3): YES
    AREA(S) OF ATTIC IN ADMIN: 6,981 s.f. VENTILATION NFA: YES
    AREA(S) OF ATTIC IN LIVING QUARTERS : 6886 s.f. VENTILATION NFA: YES

17. ROOF COVERING CLASS (1505): CLASS C.

18. RESTROOMS: TOTAL ACTUAL OCCUPANTS = 6 PER SHIFT / 12 TOTAL AT SHIFT CHANGE

    TYPE OF BUILDING:

	MIN. # REQUIRED FIXTURES MALE	FEMALE	ACTUAL NUMBER OF FIXTURES MALE	FEMALE	UNISEX	
WATER CLOSETS:						
R-2	1/10	1/10	N/A	N/A	1	6 @ SLEEPING ROOMS/ 1 UNISEX RESTROOM
S-1	1/100	1/100	N/A	N/A	1	1 UNISEX RESTROOM
B	1/25	1/25	N/A	N/A	2	2 UNISEX RESTROOMS
A-3	1/125	1/65	1	1		
LAVATORIES:						
R-2	1/10	1/10	N/A	N/A	1	6 @ SLEEPING ROOMS 1 UNISEX RESTROOM
S-1	1/100	1/100	N/A	N/A	1	1 UNISEX RESTROOM
B	1/40	1/40	N/A	N/A	2	2 UNISEX RESTROOMS
A-3	1/200	1/200	1	1		

    SERVICE SINK: 1 REQ'D. 1 PROVIDED

    DRINKING FOUNTAINS: REQUIRED: 1 ACTUAL: 1 WATER BUBBLERS PROVIDED

2015 ICC INTERNATIONAL ENERGY CONSERVATION CODE:
- NOTE: PRESCRIPTIVE PATH WAS FOLLOWED TO COMPLY WITH THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE

SHEET INDEX

1-ARCHITECTURAL	
G001	TITLE SHEET WITH CODE REVIEW
G002	GENERAL INFORMATION
2-CIVIL	
C000	COVER SHEET
C100	DEMOLITION PLAN
C200	SITE PLAN
C201	JOINTING PLAN
C300	OVERALL GRADING PLAN
C301	ENLARGED GRADING PLAN
C302	ENLARGED GRADING PLAN
C303	ENLARGED GRADING PLAN
C304	ENLARGED GRADING PLAN
C305	ENLARGED GRADING PLAN
C306	SOIL REMEDIATION PLAN
C400	SWPPP
C401	SWPPP DETAILS
C500	UTILITY PLAN
C501	OFF-SITE SANITARY SEWER PLAN
C600	SEWER PROFILES
C700	EXISTING DRAINAGE AREA MAP
C701	PROPOSED DRAINAGE AREA MAP
C800	SITE DETAILS
C801	SITE DETAILS
C802	SITE DETAILS
3-ARCHITECTURAL	
LS101	LIFE SAFETY PLAN
5-ARCHITECTURAL	
A101	PARTIAL FLOOR PLAN - WEST
A102	PARTIAL FLOOR PLAN - EAST
A121	PARTIAL REFLECTED CEILING PLAN - WEST
A122	PARTIAL REFLECTED CEILING PLAN - EAST
A141	PARTIAL ROOF PLAN - WEST
A142	PARTIAL ROOF PLAN - EAST
A201	EXTERIOR ELEVATIONS
A202	EXTERIOR ELEVATIONS
A203	EXTERIOR ELEVATIONS
A204	RENDERED EXTERIOR ELEVATIONS
A221	INTERIOR ELEVATIONS
A222	INTERIOR ELEVATIONS
A223	INTERIOR ELEVATIONS AND DETAILS
A301	BUILDING SECTIONS
A302	BUILDING SECTIONS
A321	WALL SECTIONS
A322	WALL SECTIONS
A323	WALL SECTIONS
A324	WALL SECTIONS
A501	PLAN DETAILS
A541	SECTION DETAILS
A542	SECTION DETAILS
A601	DOOR SCHEDULE
A602	PARTITION TYPES AND WINDOW TYPES
A603	PARTIAL EQUIPMENT PLAN (WEST) AND SCHEDULE
A604	PARTIAL EQUIPMENT PLAN (EAST) AND SCHEDULE
A801	FLOORING TRANSITION DETAILS
A961	PARTIAL ROOM FINISH PLAN (WEST) AND LEGEND
A962	PARTIAL ROOM FINISH PLAN (EAST) AND LEGEND
6-STRUCTURAL	
S100	COVER SHEET / GENERAL STRUCTURAL NOTES
S101	GENERAL STRUCTURAL DATA
S200	FOUNDATION PLAN
S210	FOUNDATION DETAILS
S211	FOUNDATION DETAILS
S300	ROOF FRAMING PLAN
S300A	SHEAR WALL PLAN
S310	ROOF FRAMING DETAILS
S311	ROOF FRAMING DETAILS
S312	ROOF FRAMING DETAILS
S400	STORM SHELTER PLAN
S410	STORM SHELTER DETAILS
S500	STAIR / MEZZANINE FRAMING PLAN
S510	STAIR / MEZZANINE FRAMING PLAN
7-PLUMBING	
P100	UNDERFLOOR PLAN - PLUMBING
P200	FIRST FLOOR PLAN - PLUMBING
P201	ROOF PLAN - PLUMBING
P400	DETAILS
P500	SCHEDULES
P600	ISOMETRIC DIAGRAMS - LIVING QUARTERS
P601	ISOMETRIC DIAGRAMS - LIVING QUARTERS
P602	ISOMETRIC DIAGRAMS - ADMINISTRATION
8-MECHANICAL	
M200	FIRST FLOOR PLAN - MECHANICAL
M201	ROOF PLAN - MECHANICAL
M300	FIRST FLOOR PLAN - MECHANICAL PIPING
M400	DETAILS
M401	SPECIFICATIONS
M402	SPECIFICATIONS
M500	SCHEDULES
9-ELECTRICAL	
E000	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E100	SITE PLAN
E101	SITE PHOTOMETRIC
E201	FLOOR PLAN
E202	ROOF PLAN
E301	CEILING PLAN
E500	ELECTRICAL SCHEDULES
E501	ELECTRICAL RISER DIAGRAM & DETAILS

ISSUE FOR BID / PERMIT SET - 2025-09-05

SE/Coady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

TITLE SHEET WITH CODE REVIEW

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

G001

9/15/2025 9:13:23 PM

CONSTRUCTION DOCUMENTS

WRIGHT CITY FIRE HOUSE #1

60 BELL ROAD

A TRACT OF LAND BEING PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 17, TOWNSHIP 47 NORTH, RANGE 1 WEST, AS RECORDED IN DEED BOOK 1171 PAGE 54 WARREN COUNTY, MISSOURI.

LEGEND

EXISTING		PROPOSED
	UTILITY POLE	
	GUY WIRE	
	LIGHT STANDARD	
	ELECTRIC BOX	
	ELECTRIC METER	
	ELECTRIC MANHOLE	
OE	OVERHEAD ELECTRIC LINE	OE
UE	UNDERGROUND ELECTRIC LINE	UE
	TELEPHONE BOX	
	TELEPHONE MANHOLE	
T	UNDERGROUND TELEPHONE LINE	T
	FIRE HYDRANT	
	WATER METER	
	WATER VALVE	
	WATER MANHOLE	
W	WATER LINE	W
	GAS METER	
	GAS VALVE	
	GAS DRIP	
G	GAS LINE	G
	STREET SIGN	
	BOLLARD OR POST	
	MAILBOX	
	SANITARY SEWER	SAN
	STORM SEWER	
	STORM DRAIN GRATE INLET	
	STORM DRAIN AREA INLET	
	STORM DRAIN MANHOLE	
	SANITARY SEWER MANHOLE	
	FLARED END SECTION	
X	FENCE: CHAIN LINK OR WIRE	X
	FENCE: WOOD CONSTRUCTION	
	GUARDRAIL	
513	MINOR CONTOUR INTERVAL	513
510	MAJOR CONTOUR INTERVAL	510
×101.5	SPOT ELEVATION	×101.50
	BUSH OR SHRUB	
D.S.	TREE W/APPROXIMATE DIAMETER SIZE	D.S.
	FOUND SURVEY MONUMENT AS NOTED	
	SET SURVEY MONUMENT AS NOTED	
C.O.	CLEAN-OUT/DOWN-SPOUT	C.O. D.S.
	SWALE	
	UTILITY EASEMENT	
	PROPERTY LINE	

ABBREVIATIONS

ADS	- ADVANCED DRAINAGE SYSTEMS, INC.
ATG	- ADJUST TO GRADE
B.M.	- BENCHMARK
C.I.	- CURB INLET
C.O.	- CLEAN OUT
CMP	- CORRUGATED METAL PIPE
CONC.	- CONCRETE
C.Y.	- CUBIC YARDS
D.C.I.	- DOUBLE CURB INLET
DIP	- DUCTILE IRON PIPE
DIA.	- DIAMETER
DS	- DOWNSPOUT
ELEV.	- ELEVATION
EX	- EXISTING
FD	- FLOOR DRAIN
FF	- FINISH FLOOR
FL	- FLOW LINE
G.I.	- GRATE INLET
GAL.	- GALLON
H.G.	- HYDRAULIC GRADE
HYD	- HYDRANT
MAX	- MAXIMUM
MH	- MANHOLE
MIN	- MINIMUM
N.T.S.	- NOT TO SCALE
O.C.	- ON CENTER
PAVT.	- PAVEMENT
P.C.	- PORTLAND CEMENT
PCC	- PRECAST CONCRETE
P.S.I	- POUNDS/SQUARE INCH
PROP.	- PROPOSED
P.U.M.I.	- PRIVATE UNDER MSD INSPECTION
R.C.	- REINFORCED CONCRETE
R.R.	- RAIL ROAD
RCP	- REINFORCED CONCRETE PIPE
S.F.	- SQUARE FOOT
S.Y.	- SQUARE YARD
SAN	- SANITARY
SCH	- SCHEDULE
SWPPP	- STORM WATER POLLUTION
TBA	- TO BE ABANDONED
TBR	- TO BE REMOVED
TYP.	- TYPICAL
UIP	- USE IN PLACE
VCP	- VITRIFIED CLAY PIPE
YD	- YARD DRAIN
WV	- WATER VALVE

Call Before you DIG
TOLL FREE
1-800-344-7483
MISSOURI ONE-CALL SYSTEM INC.

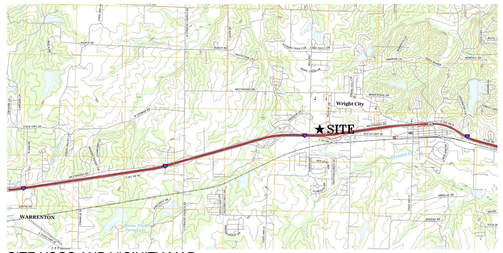
Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.

PREPARED BY:

ENGENUITY
16305 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
PH. (314) 952 - 0395

DEVELOPER:

WRIGHT CITY FIRE PROTECTION DISTRICT
396 WEST 2ND STREET NORTH
WRIGHT CITY, MO 63390
PH. (636) 745 - 2262



SITE USGS AND VICINITY MAP
U.S.G.S. 7.5 TOPOGRAPHIC MAP, WRIGHT CITY, MO, DATED 2021
SCALE 1" = 4,000'

LOCATION MAP-AERIAL
1"=1000'

SHEET INDEX	
Sheet Number	Sheet Title
C000	COVER SHEET
C100	DEMOLITION PLAN
C200	SITE PLAN
C201	JOINTING PLAN
C202	LANDSCAPE PLAN
C203	LANDSCAPE PLAN DETAILS
C300	OVERALL GRADING PLAN
C301	ENLARGED GRADING PLAN
C302	ENLARGED GRADING PLAN
C303	ENLARGED GRADING PLAN
C304	ENLARGED GRADING PLAN
C305	CUT FILL PLAN
C306	SOIL REMEDIATION PLAN
C400	SWPPP
C401	SWPPP DETAILS
C500	UTILITY PLAN
C501	OFFSITE SANITARY SEWER PLAN
C600	SEWER PROFILES
C700	EXISTING DRAINAGE AREA MAP
C701	PROPOSED DRAINAGE AREA MAP
C800	SITE DETAILS
C801	SITE DETAILS
C802	SITE DETAILS

PERTINENT INFORMATION

OWNER:	WRIGHT CITY FIRE PROTECTION DISTRICT
SITE ADDRESS:	60 BELL RD WRIGHT CITY, MISSOURI 63390
PARCEL ID:	417000001400100O
EXISTING ZONING:	RURAL
SITE AREA:	3.0 ACRES
WATER DISTRICT: FIRE DISTRICT: SEWER DISTRICT: GAS SERVICE: ELECTRIC SERVICE:	PUBIC WATER SUPPLY DISTRICT #2 WRIGHT CITY FIRE PROTECTION DISTRICT PUBLIC WATER SUPPLY DISTRICT #2 AMEREN GAS AMEREN MISSOURI ELECTRIC
BUILDING AREA:	±19,000 SQ. FT.
FLOOD MAP	29219C0115D NOVEMBER 4, 2009 FLOOD ZONE X UNSHADED (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN)
ESTIMATE SANITARY SEWER FLOW	18 BUNKS x 60 GALLONS / BUNK / DAY = 1,080 GPD

DIFFERENTIAL CALCULATIONS

EXISTING					PROPOSED				
	SQUARE FEET	ACRES	PI FACTOR	Q (cfs)		SQUARE FEET	ACRES	PI FACTOR	Q (cfs)
Roof =	0	0.00	4.20	0.000	Roof =	0	0.00	4.20	0.00
Roof (disconnected) =	0	0.00	3.54	0.000	Roof (disconnected) =	22,651	0.52	3.54	1.84
Pavement =	0	0.00	3.54	0.000	Pavement =	44,867	1.03	3.54	3.65
Pervious Pavement		0.00	1.70	0.000	Pervious Pavement		0.00	1.70	0.00
Grass =	130,681	3.00	1.70	5.100	Grass =	63,163	1.45	1.70	2.47
Total =	130,681	3.00		**5.10**	Total Q (cfs) =		3.00		**7.95**

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 400
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #: 2007001777
E-2025 01 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS PROJECT ONLY. THEY SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2025 - BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL. SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER, AND THE ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

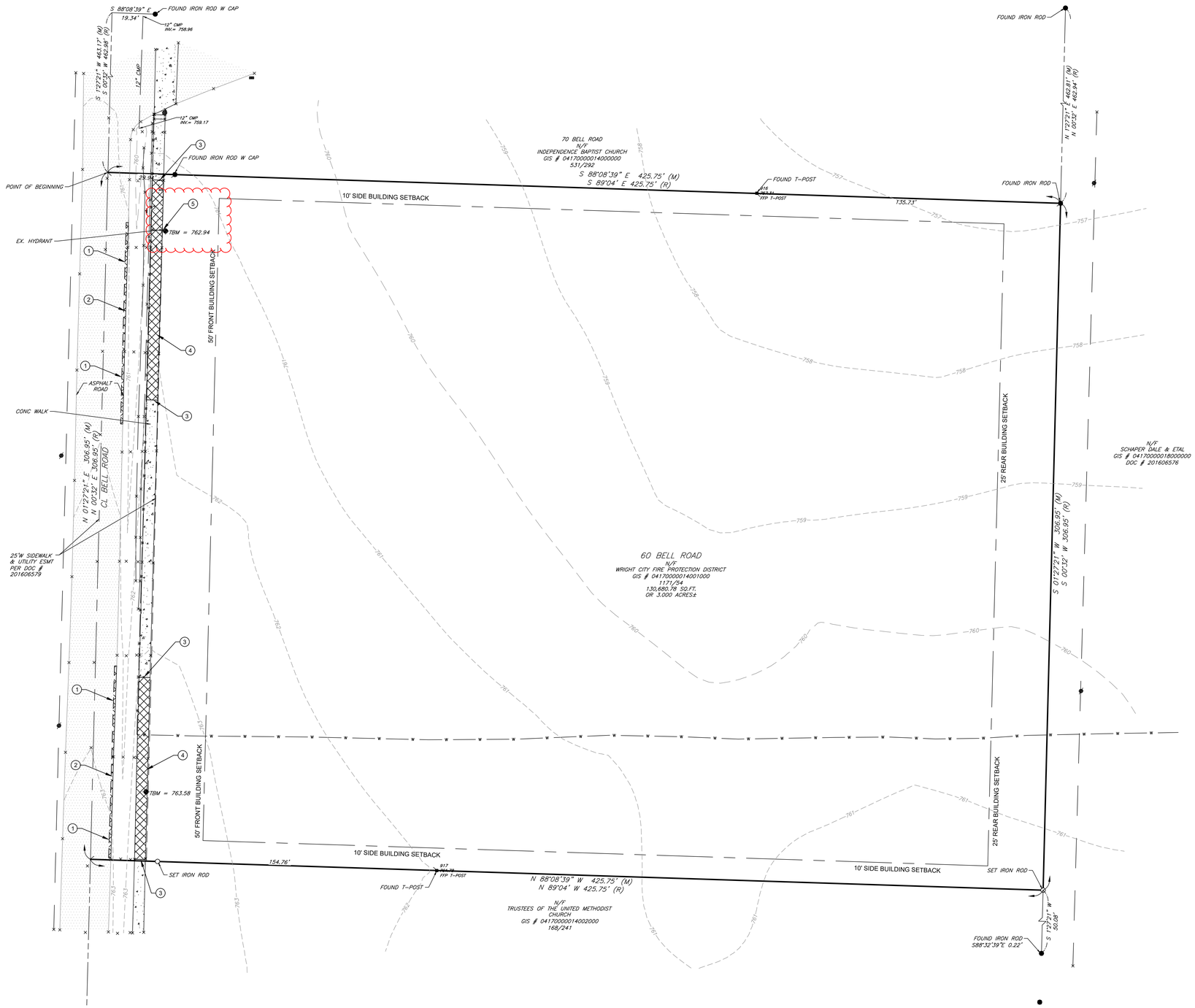
COVER SHEET

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C000

KEYED NOTES

1. SAWCUT ASPHALT PAVEMENT FULL DEPTH
2. REMOVE ASPHALT PAVEMENT
3. SAWCUT CONCRETE SIDEWALK AT NEAREST JOINT
4. REMOVE CONCRETE SIDEWALK
5. REMOVE & REPLACE FIRE HYDRANT



GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #: 2007
F-2025 (01) 7534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED IN WHOLE OR IN PART, OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS NOT BEARING A RAISED OR EMBOSSED SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

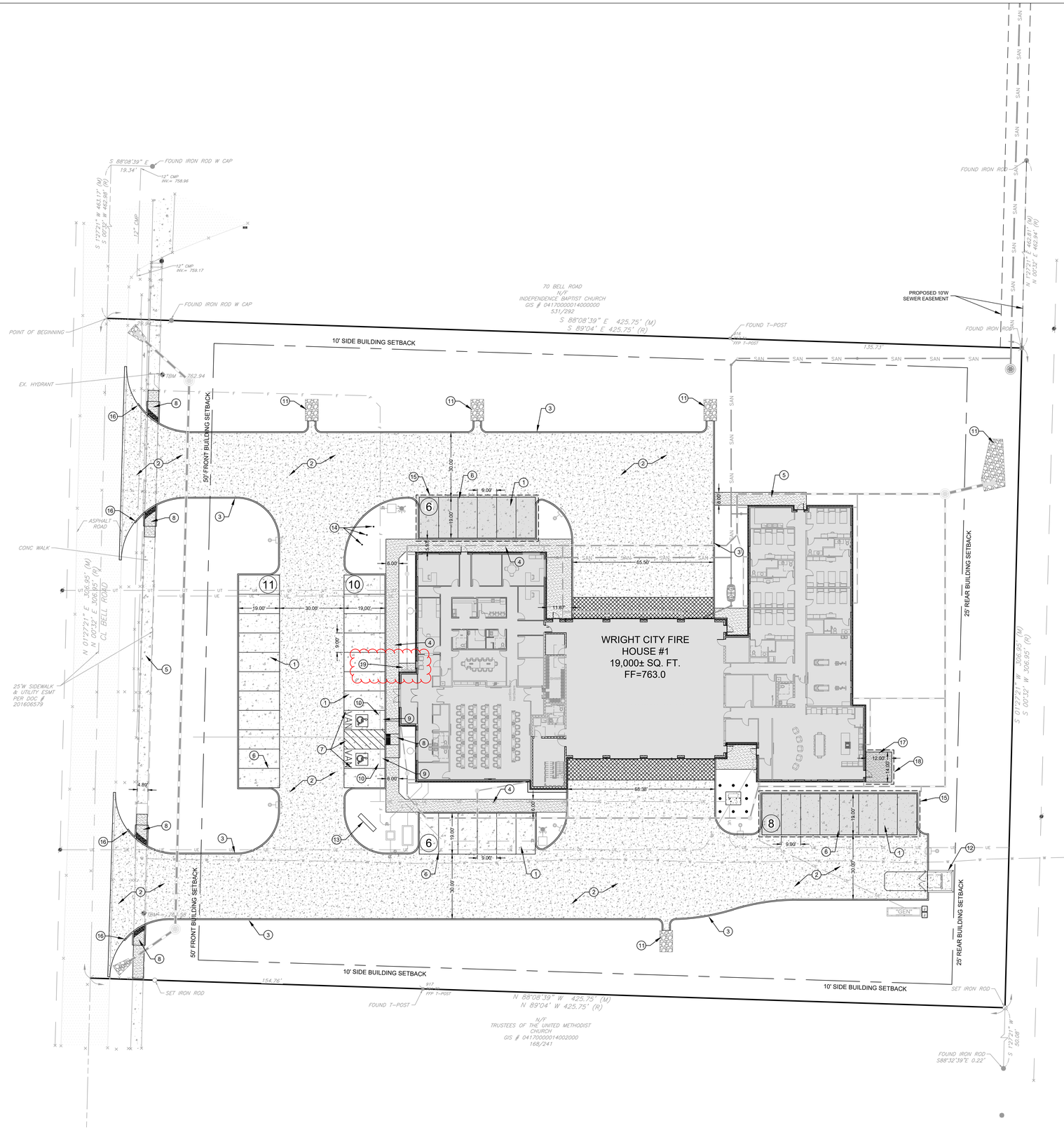
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

DEMOLITION PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C100



KEYED NOTES

1. LIGHT DUTY CONCRETE PAVEMENT (DETAIL #1, SHEET C800)
2. HEAVY DUTY CONCRETE PAVEMENT (DETAIL #2, SHEET C800)
3. INTEGRAL 6" CONCRETE CURB (DETAIL #3, SHEET C800)
4. INTEGRAL CONCRETE CURB & WALK (DETAIL #4, SHEET C800)
5. CONCRETE SIDEWALK (DETAIL #5, SHEET C800)
6. PAVEMENT MARKING - 4" WIDE WHITE PAINT
7. PAVEMENT MARKING - 4" WIDE BLUE PAINT (ADA SPACES)
8. ADA RAMP (DETAIL #7 ON SHEET C800)
9. ADA SIGN (DETAIL #8, SHEET C800)
10. WHEEL STOP (DETAIL #9, SHEET C800)
11. LIGHT STONE REVETMENT (DETAIL #10, SHEET C800)
12. TRASH ENCLOSURE (SEE ARCH. DWGS. FOR DETAILS)
13. MONUMENT SIGN (SEE PLANS BY OTHERS)
14. FLAGPOLE (SEE PLANS BY OTHERS)
15. COVERED PARKING (ADD ALTERNATE #1) (SEE ARCH. & STRUCTURAL DWGS. FOR DETAILS)
16. TAPER CURB FROM 6" to 0" IN 1'
17. CONCRETE PATIO (SEE DETAIL #6, SHEET C800)
18. COVERED PATIO (SEE ARCH. & STRUCTURAL DWGS. FOR DETAILS)
19. CONCRETE WALK FOR BABY BOX

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
COA# 2021017534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR MADE AVAILABLE TO ANY UNAUTHORIZED PERSON FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF ENGENUITY, LLC.
COPYRIGHT © 2025 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ENGINEERING DATA CONTAINED ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL ARE NOT PREPARED OR APPROVED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

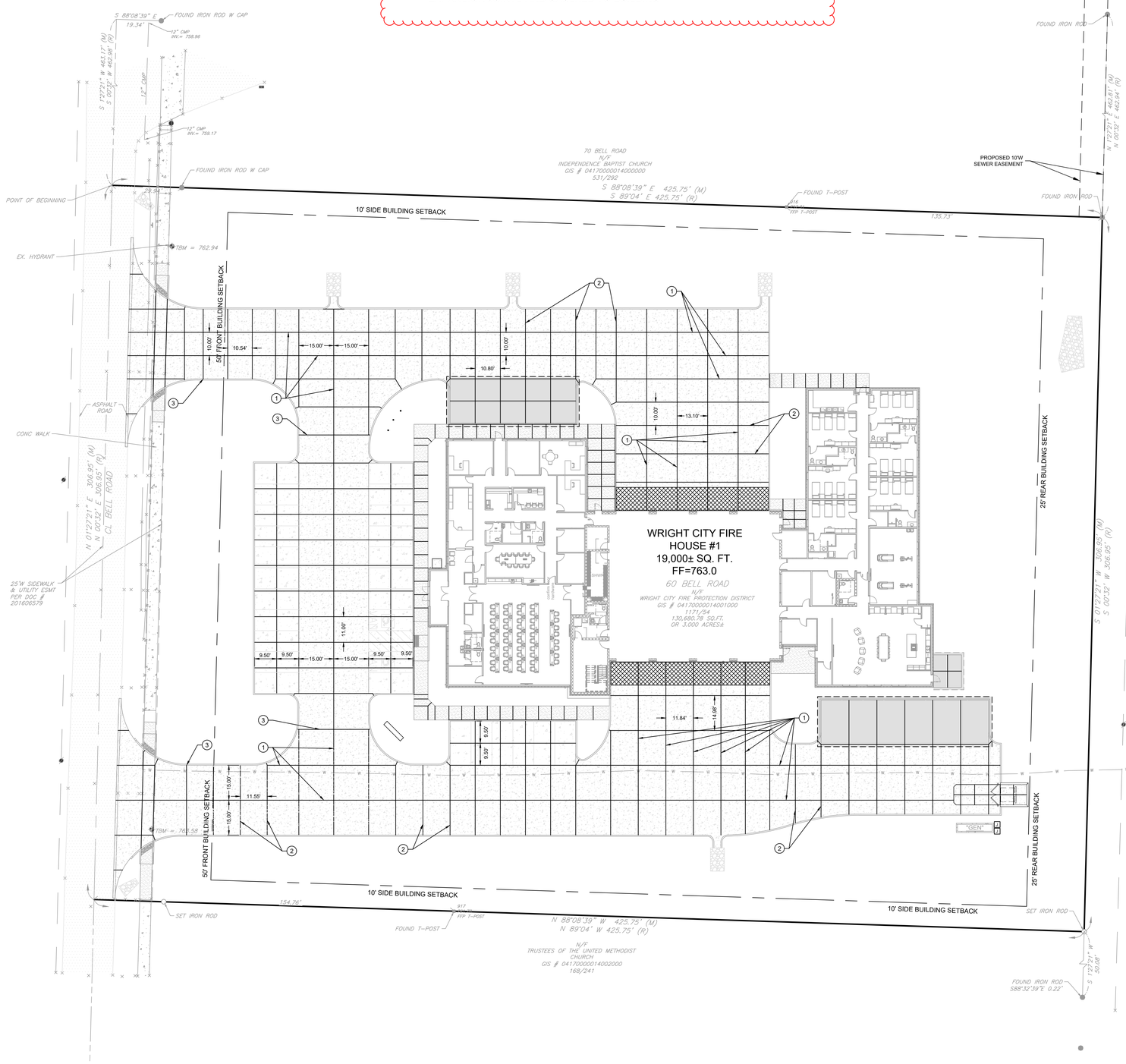
SITE PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

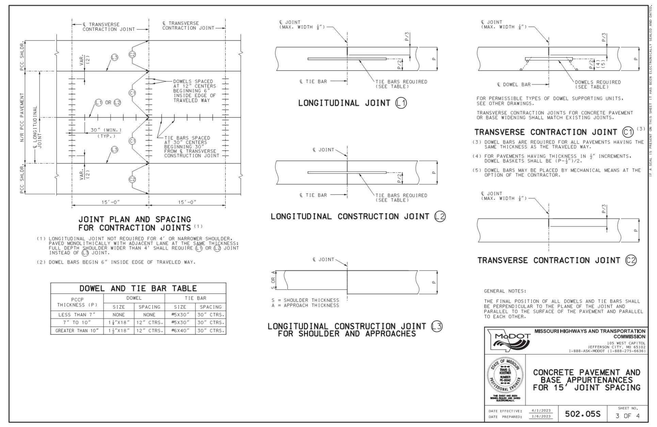
C200

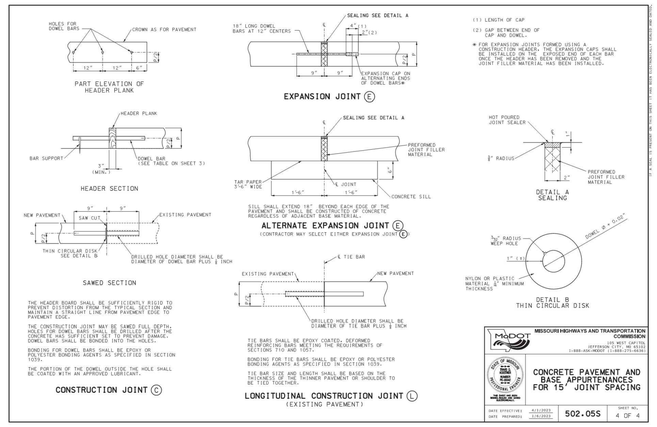
NOTE:
- ALL SIDWALK JOINTS ARE TO BE TOOLED AND NOT SAW CUT.

BASE BID:
- ALL SIDEWALK/PATIO TO BUILDING EXPANSION JOINTS ARE TO RECEIVE POP TOP EXPANSION JOINTS CAULKED TO BUILDING.
- ALL PAVEMENT TO BUILDING EXPANSION JOINTS ARE TO RECEIVE POP TOP EXPANSION JOINTS AND CAULKED TO BUILDING



KEYED NOTES
1. ALTERNATE: LONGITUDINAL CONSTRUCTION JOINT, DETAIL L1 OR L2 (TYP.)
2. ALTERNATE: TRANSVERSE CONSTRUCTION JOINT DETAIL C1 (TYP.)
3. ALTERNATE: EXPANSION JOINT, DETAIL E





GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM # E-2007
FIRM ID 017534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR USED FOR ANY OTHER PROJECT EXCEPT BY AGREEMENT WITH OR PRIOR WRITTEN PERMISSION OF THE ENGINEER.
COPYRIGHT © 2025 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER
2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCESS, CALCULATIONS ON THIS SHEET, ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL WERE NOT PREPARED OR APPROVED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH SERVICES OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

JOINTING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C201

NOTE:
- LANDSCAPED AREA ROCK TO BE COORIDNATE WITH OWNER (NOT MERAMEC GRAVEL)
- NO MULCH AREAS
- ALTERANTE: IRRIGATION
- ALTERNATE: SOD
- WARRANTY PERIOD OF 90 DAYS

"Little MO" says
CALL BEFORE YOU DIG!
1-800-DIG-RITE

UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:

Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O,S,H,A rules and regulations established for the type of construction required by these plans shall be strictly followed (ie, trenching, blasting, etc.)

0 20 40 60 feet
SCALE:1" = 20'

BELL ROAD

POINT OF BEGINNING
EX. HYDRANT

S 12°27'21" W 463.17' (M)
S 00°32' W 462.98' (R)

28.92'

HRB
(2) 10'-12'/2.5"Cal

OGRM
(1) 2.5"Cal

70 BELL ROAD
N/F
INDEPENDENCE BAPTIST CHURCH
GIS # 04170000014000000
531/292
S 88°08'39" E 425.75' (M)
S 89°04' E 425.75' (R)

CRCC
(3) 2"Cal.

HRB
(1) 10'-12'/2.5"Cal

135.73'

N 12°27'21" E 462.31' (M)
N 12°32' E 462.94' (R)

SMAG
(3) 5'-6'

NO
(1) 2.5"Cal.

BKDM
(3) 5 Gal.
GBIH
(3) 5 Gal.
LGC
(20) 1 gal
BKDM
(5) 5 Gal.

60 BELL ROAD
N/F
WRIGHT CITY FIRE PROTECTION DISTRICT
GIS # 04170000014001000
1171/34
130,680.78 SQ.FT.
OR 3.000 ACRES

GL
(1) 2.5"Cal.

N/F
SCHAPER DALE & ETAL
GIS # 04170000018000000
DOC # 201606576

OGRM
(1) 2.5"Cal

CALA
(5) 5 gal
GVB
(3) 5 gal
RCA
(3) 5 gal
SIS
(3) 5 Gal.

SIS
(3) 5 Gal.
RCA
(3) 5 gal
MN-SAL
(5) 1 gal
GVB
OGRM (1) 5 gal
(2) 2.5"Cal MN-SAL
(7) 1 gal
PKD
(1) 5'-6'
CH
(5) 5 gal
CC
(3) 5 Gal.
AJS
(24) 1 gal
DGBS
(1) 5 gal
TTA
(7) 5 Gal.
LPPH
(5) 5 Gal.

WATER MAIN

GVB
(4) 5 gal
CALA
(6) 5 gal

LPPH
(3) 5 Gal.
BAY
(5) 18"-24"
LPPH
(3) 5 Gal
CALA
(7) 5 gal

GVB
(3) 5 gal
CC
(5) 5 Gal

DJY
(5) 18"-24"
MG
(3) 5 gal
PC-M
(5) 1 gal
MRB
(1) 2"Cal.

N 12°27'21" W 306.95' (M)
N 12°32' W 306.95' (R)
S 00°32' E 306.95' (M)
S 12°27'21" E 306.95' (R)

PRFC
(3) 2"Cal

GGA
(2) 6'-7'

BAY
(6) 24"-30"

GGA
(1) 6'-7'

LSM
(3) 2.5"Cal.

NS
(2) 6'-7'

PRFC
(1) 2"Cal

SAW
(1) 2.5"Cal.
N 88°08'39" W 425.75' (M)
N 89°04' W 425.75' (R)

N/F
TRUSTEES OF THE UNITED METHODIST CHURCH
GIS # 04170000014002000
168/241

PRFC
(2) 2"Cal

OGRM
(1) 2.5"Cal

TYPICAL SITE TRIANGLE

NOTE:
ALL SHRUBS/PERENNIALS TO BE MAINTAINED @ 24" MAXIMUM HEIGHT WITHIN SIGHT TRIANGLE AREAS

REVISIONS	BY

Landscape TECHNOLOGIES
67 Jacobs Creek Drive
St. Charles, Missouri 63304
(636) 425-1250
MO Landscape Architectural Corporation #2008008782

RANDALL K. MARDIS
MISSOURI LANDSCAPE ARCHITECT #000041
DATE: 8/21/2025

MARDIS NUMBER 019

PLANTING PLAN FOR THE PROPOSED
Wright City Fire Station
60 BELL ROAD WRIGHT CITY, MO

DRAWN	R. MARDIS
CHECKED	RKM/KJB
DATE	8/21/2025
SCALE	1"=20'-0"
JOB No.	2025-131
SHEET	L-1

OF TWO SHEETS

LANDSCAPE GUIDELINE SPECS:

GENERAL:

1.) All natural vegetation shall be maintained where it does not interfere with construction or the permanent plan of operation. Every effort possible shall be made to protect existing structures or vegetation from damage due to equipment usage. Contractor shall at all times protect all materials and work against injury to public.
2.) The landscape contractor shall be responsible for any coordination and sequencing with other site related work being performed by other contractors. Refer to additional drawings for further coordination of work to be done.
3.) Underground facilities, structures and utilities must be considered approximate only. There may be others not presently known or shown. It shall be the landscape contractor's responsibility to determine or verify the existence of and exact location of the above (Call 1-800-DIG-RITE in Missouri).
4.) Plant material are to be planted in the same relationship to grade as was grown in nursery conditions. All planting beds shall be cultivated to 6" depth minimum and graded smooth immediately before planting of plants. Plant groundcover to within 12" of trunk of trees or shrubs planted within the area.
5.) It shall be the landscape contractor's responsibility to:
   A.) Verify all existing and proposed features shown on the drawings prior to commencement of work.
   B.) Report all discrepancies found with regard to existing conditions or proposed design to the landscape architect immediately for a decision.
   C.) Stake the locations of all proposed plant material and obtain the approval of the owner's representative or landscape architect ten (10) days prior to installation.
6.) Items shown on this drawing take precedence over the material list. It shall be the landscape contractor's responsibility to verify all quantities and conditions prior to implementation of this plan. No substitutions of types or size of plant materials will be accepted without written approval from the landscape architect.
7.) Provide single-stem trees unless otherwise noted in plant schedule.
8.) All plant material shall comply with the recommendations and requirements of ANSI Z60.1 "American Standards for Nursery Stock".
9.) It shall be the contractor's responsibility to provide for inspection of the plant material by the Landscape Architect (or Owners' Representative) prior to acceptance. Inspections may take place before, during or after installation. Plants not conforming exactly to the plant list will not be accepted and shall be replaced at the landscape contractor's expense.
10.) All bids are to have unit prices listed. The Owner has the option to delete any portion of the contract prior to signing the contract or beginning work. This will be a unit price contract; quotes shall be valid for 12 months.
11.) Should auger equipment be utilized in excavating any plant pits, vertical sides of plant pits shall be thoroughly scarified to avoid creation of "polished side walls" prior to plant material installation.
12.) All excess topsoil, rocks, debris and/or tainted soils shall be removed by the general contractor prior to point project is turned over to the landscape contractor to commence landscape installation.
13.) Transplanted material will not be guaranteed by the landscape contractor.
14.) Keep all plant material (except turf) a minimum of 36" clear of fire hydrants.
15.) Landscape contractor shall kill & remove all existing needs within the project site.
16.) All tags, nursery stakes, labels, etc. shall be removed by the landscape contractor at completion of all landscape installation.
17.) Landscape contractor shall be in compliance with all federal, state and local laws / regulations relating to insect infestation and/or plant diseases.

PRUNING:

1.) Lightly prune trees at time of planting. Prune only the crossover limbs, intermingled leaders and/or any broken branches. Some interior twigs and lateral branches may be pruned. However, do not remove the terminal buds of branches that extend to the edge of the crown.
2.) All pruning shall comply with ANSI A300 standards.

INSURANCE:

1.) The landscape contractor shall submit certificates of insurance for workman's compensation and general liability.

MULCH:

1.) All mulch to be ~~Meramec #9~~ gravel (over Mirafi fabric) mulch at 3" depth after compaction unless otherwise noted. Mulch shall be clean and free of all foreign materials, including weeds, mold, deleterious materials, etc.
2.) No plastic sheeting or filter fabric shall be placed beneath shredded bark mulch beds @ tree cups.
3.) Edge all beds with spade-cut edge unless otherwise noted.

SIGHT TRIANGLES:

1.) No landscape material or other obstructions shall be placed or be maintained within the sight distance area so as not to impede the vision between a height of thirty inches (30") and ten feet (10') above the adjacent street or paving surfaces.
2.) Sight triangles at the intersection of a public street and a private access way (except for single family residences) shall also be formed by measuring from the point of intersection of the street frontage curbs and the entrance curb lines a distance of 25' and connecting the points so established to form the sight triangle area.

IRRIGATION GUIDELINE SPECS:

GENERAL:

1.) System shall be designed for 30 gpm @ 80 PSI. Contractor to field verify actual conditions.
2.) Exact tap, backflow and controller location to be coordinated with owner or owner's representative.
3.) All control wiring to be 14 ga. Minimum 3 extra strands to be installed in each direction from the controller to the end of the mainline.
4.) All piping to be sleeved in SCH40 PVC when passing under hardscape. PVC Sleeve to be a minimum of twice the size of pipe(s) running through.
5.) Underground facilities, structures and utilities must be considered approximate only. There may be others not presently known or shown. It shall be the irrigation contractor's responsibility to determine or verify the existence of and exact location of the above (Call 1-800-DIG-RITE).
6.) It shall be the irrigation contractor's responsibility to:
   A.) Verify all existing and proposed features shown on the drawings prior to commencement of work.
   B.) Report all discrepancies found with regard to existing conditions or proposed design to the landscape architect immediately for a decision.
7. All landscaped areas shall have installed an automatic, permanent irrigation system - designed to cover all landscape areas. Irrigation shall be design / build.

TOPSOIL:

1.) Topsoil mix for all proposed landscape plantings shall be five (5) parts well-drained screened organic topsoil to one (1) part Canadian sphagnum peat moss as per planting details. Roto-till topsoil mix to a depth of 6" minimum and grade smooth.
2.) Provide a soil analysis, as requested, made by an independent soil-testing agency outlining the % of organic matter, inorganic matter, deleterious material, pH and mineral content.
3.) Any foreign topsoil used shall be free of roots, stumps, needs, brush, stones (larger than 1"), litter or any other extraneous or toxic material. Landscape contractor shall be fully responsible for correcting all negative soil issues prior to plant installation. Killing and removal of all needs shall be the responsibility of the landscape contractor as part of this task.
4.) Landscape contractor to apply pre-emergent herbicide to all planting beds upon completion of planting operations and before application of shredded bark mulch.
5.) Install siltation controls prior to commencement of any grading operations. Inspect and maintain all siltation fences on a weekly basis until vegetation is established.

TURF:

1.) All disturbed lawn areas to be seeded with a mixture of Turf-Type fescue (30C# per acre) and bluegrass (18# per acre). Lawn areas shall be unconditionally warranted for a period of 90 days from date of final acceptance. Bare areas more than one square foot per any 50 square feet shall be replaced.
2.) The turf contractor shall be responsible for protection of finished grade; restore and repair any erosion or water damage and obtain owners' approval prior to seeding or sod installation.
3.) Landscape contractor shall offer an alternate price for sod in lieu of seed. Sod shall be cut at a uniform thickness of 3/4". No broken pieces, irregular pieces or torn pieces will be accepted.
4.) Any points carrying concentrated water loads and all slopes of 15% or greater shall be sodded.
5.) All sod shall be placed a maximum of 24 hours after harvesting.
6.) Recondition existing lawn areas damaged by Contractor's operations including equipment/material storage and movement of vehicles.
7.) Sod Contractor to ensure sod is placed below sidewalk and all paved area elevations to allow for proper drainage.

WARRANTY:

1.) All plant material (excluding ground cover, perennials and annuals) are to be warranted for a period of 12 months after complete installation of all landscape material at 100% of the installed price.
2.) Any plant material found to be defective shall be removed and replaced within 30 days of notification or in growth season determined to be best for that plant.
3.) Only one replacement per tree or shrub shall be required at the end of the warranty period, unless loss is due to failure to comply with warranty.
4.) Lawn establishment period will be in effect once the lawn has been mowed three times. Plant establishment period shall commence on the date of acceptance and 100% completion.
5.) A written guarantee shall be provided to the owner per conditions outlined in #1 above.

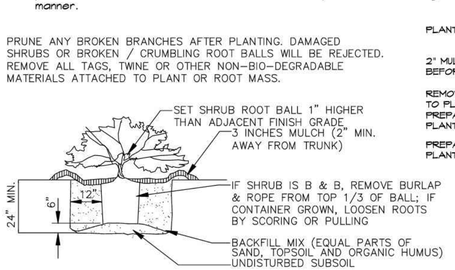
MAINTENANCE:

1.) Landscape Contractor shall provide a separate proposal to maintain all plants, shrubs, groundcover, perennials and annuals for a period of 12 months after acceptance.
2.) Contractor shall ensure that only competent and trained personnel shall provide such services and that such services be provided in a timely manner.

PLANT SCHEDULE

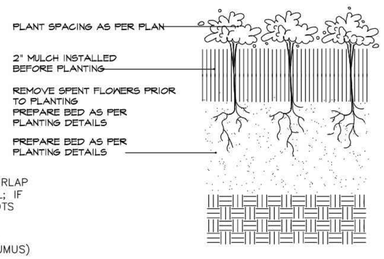
CODE	QTY	COMMON / BOTANICAL NAME	SIZE
TREES			
GL	1	GREENSPIRE LITTLELEAF LINDEN / TILIA CORDATA 'GREENSPIRE'	2.5"CAL.
HRB	3	HERITAGE RIVER BIRCH / BETULA NIGRA 'HERITAGE IMPROVED'	10'-12'/2.5"CAL
LSM	3	LEGACY SUGAR MAPLE / ACER SACCHARUM 'LEGACY'	2.5"CAL.
SAW	1	SAWTOOTH OAK / QUERCUS ACUTISSIMA	2.5"CAL.
WO	1	WILLOW OAK / QUERCUS PHELLOS	2.5"CAL.
OGRM	5	'OCTOBER GLORY' MAPLE / ACER RUBRUM 'OCTOBER GLORY'	2.5"CAL
EVERGREEN TREES			
GGA	3	GREEN GIANT ARBORVITAE / THUJA PLICATA 'GREEN GIANT'	6'-7'
NS	2	NORWAY SPRUCE / PICEA ABIES	6'-7'
FLOWERING TREES			
CRCC	3	CANADA RED CHOKECHERRY / PRUNUS VIRGINIANA 'CANADA RED'	2"CAL.
MRB	1	MERLOT REDBUD / CERCIS X 'MERLOT'	2"CAL.
PKD	1	PINK KOUSA DOGWOOD / CORNUS KOUSA 'SATOMI'	5'-6'
PRFC	6	PRAIRIE ROSE CRABAPPLE / MALUS 'PRAIRIE ROSE'	2"CAL
SMAG	3	SAUCER MAGNOLIA / MAGNOLIA X SOULANGIANA	5'-6'
SHRUBS			
BKDM	8	BABY KIM® DWARF LILAC / SYRINGA X 'SMNSDTP'	5 GAL.
BWV	5	BRANDYWINE VIBURNUM / VIBURNUM NUDUM 'BRANDYWINE'	18"-24"
CH	5	CHINA BOY/GIRL HOLLY / ILEX MESERVEAE 'CHINA BOY/GIRL' TM	5 GAL
DJY	5	DENSE JAPANESE YEW / TAXUS CUSPIDATA 'DENSIFORMIS'	18"-24"
DGBS	1	DWARF GLOBE BLUE SPRUCE / PICEA PUNGENS 'GLOBOSA'	5 GAL
GBIH	3	GEM BOX INKBERRY HOLLY / ILEX GLABRA 'GEM BOX'	5 GAL.
GVB	11	GREEN VELVET BOXWOOD / BUXUS 'GREEN VELVET'	5 GAL
LPPH	11	LIMELIGHT PRIME PANICLED HYDRANGEA / HYDRANGEA PANICULATA 'SMNHPPH' TM	5 GAL.
BAY	6	NORTHERN BAYBERRY / MYRICA PENSYLVANICA	24"-30"
RCA	6	ROSE CREEK ABELIA / ABELIA X GRANDIFLORA 'ROSE CREEK'	5 GAL
SIS	6	SCENTLANDIA SWEETSPIRE / ITEA VIRGINICA 'SMNIVDFC' TM	5 GAL.
TTA	7	TATER TOT® ARBORVITAE / THUJA OCCIDENTALIS 'SMNTOBAB'	5 GAL.
CC	8	VANILLA SPICE® SUMMERSWEET / CLETHRA ALNIFOLIA 'CALEB'	5 GAL.
GRASSES			
CALA	18	FOERSTER'S REED GRASS / CALAMAGROSTIS ACUTIFOLIA 'KARL FOERSTER'	5 GAL
MG	3	MAIDEN GRASS / MISCANTHUS SINENSIS 'GRACILLIMUS'	5 GAL
ANNUALS/PERENNIALS			
AJS	24	AUTUMN JOY SEDUM / SEDUM 'AUTUMN JOY'	1 GAL
LGC	20	LITTLE GOLDSTAR CONEFLOWER / RUDBECKIA FULGIDA SULLIVANTII 'LITTLE GOLDSTAR'	1 GAL
MN-SAL	12	MAY NIGHT SALVIA / SALVIA NEMOROSA 'MAY NIGHT'	1 GAL
PC-M	5	PURPLE CONEFLOWER / ECHINACEA PURPUREA 'MAGNUS'	1 GAL

NOTE:
- LANDSCAPED AREA ROCK TO BE COORIDNATE WITH OWNER (NOT MERAMEC GRAVEL)
- NO MULCH AREAS
- ALTERANTE: IRRIGATION
- ALTERNATE: SOD
- WARRANTY PERIOD OF 90 DAYS



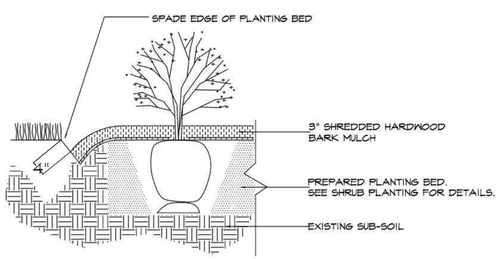
SHRUB PLANTING

N.T.S.



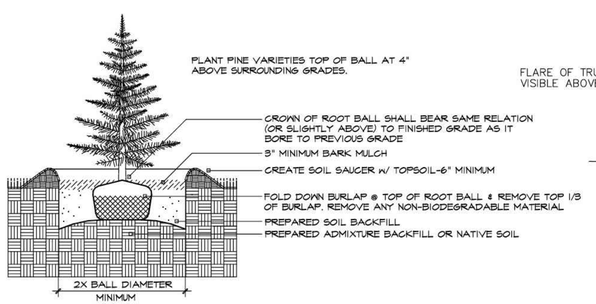
PERENNIAL / ANNUAL PLANTING

N.T.S.



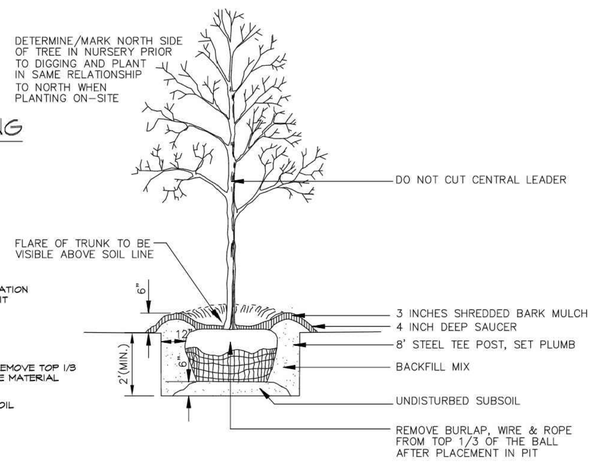
SPADE-CUT EDGE DETAIL

N.T.S.



EVERGREEN TREE PLANTING

N.T.S.



DECIDUOUS TREE PLANTING

N.T.S.

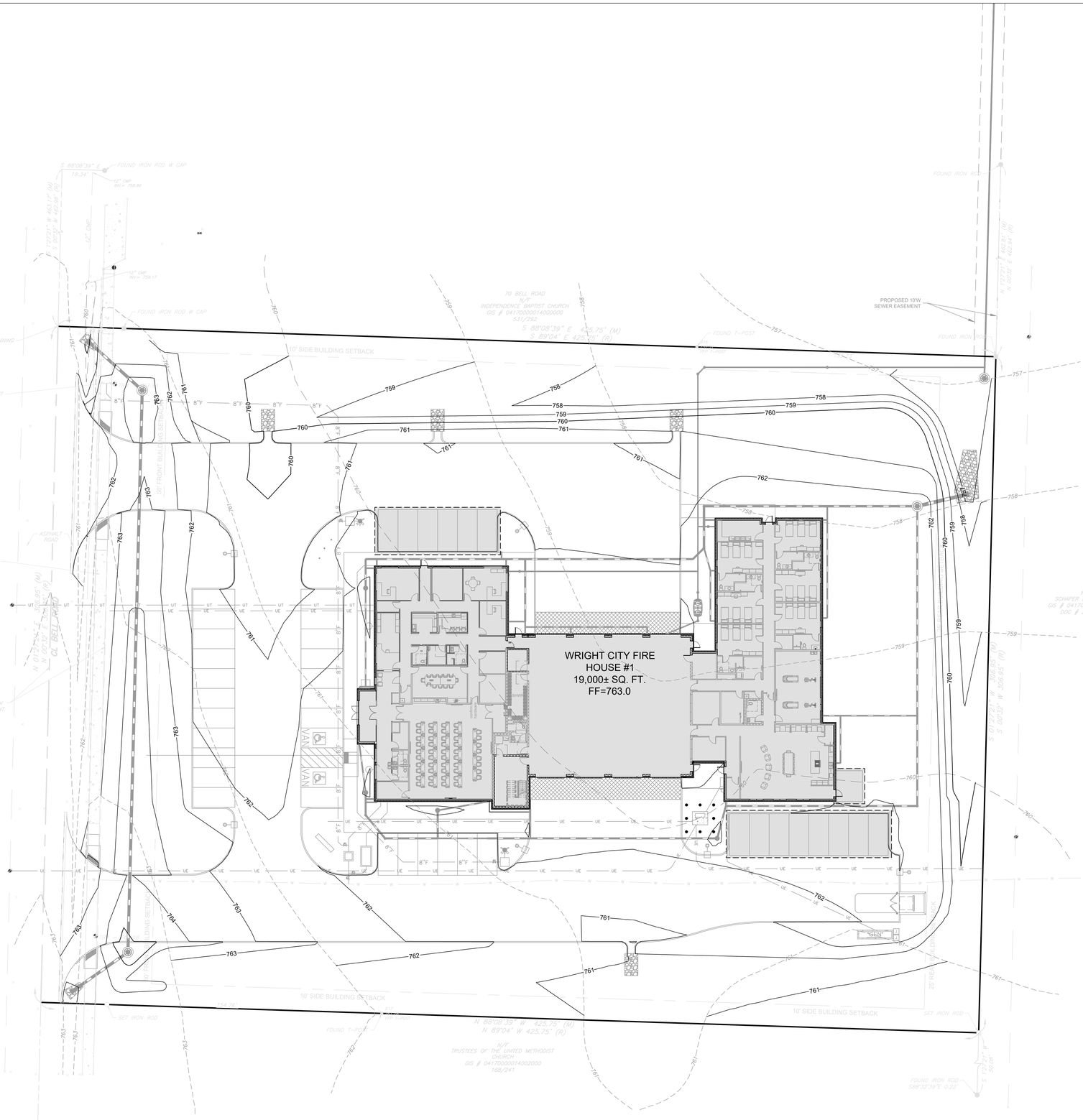
REVISIONS	BY

Landscape TECHNOLOGIES
67 Jacobs Creek Drive
St. Charles, Missouri 63304
(636) 926-1260
MO Landscape Architectural corporation #2008008782

RANDALL K. MARDIS
MISSOURI LANDSCAPE ARCHITECT #2003014
NUMBER 019
DATE: 8/21/2025

PLANTING PLAN FOR THE PROPOSED
Wright City Fire Station
60 BELL ROAD WRIGHT CITY, MO

DRAWN	R. MARDIS
CHECKED	RKM/GJB
DATE	8/21/2025
SCALE	N.A.
JOB No.	2025-131
SHEET	L-2
OF	TWO SHEETS



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE
BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 1, MO 63005
CHESTERFIELD
P: (314) 819-9189
www.thenenguity.com
FIRM #: 2007001775
F-2025 01 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PURCHASED WITHOUT THE WRITTEN CONSENT OF ENGENUITY, LLC.
COPYRIGHT © 2025 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ENGINEERING DATA CONTAINED ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL WERE NOT PREPARED OR APPROVED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

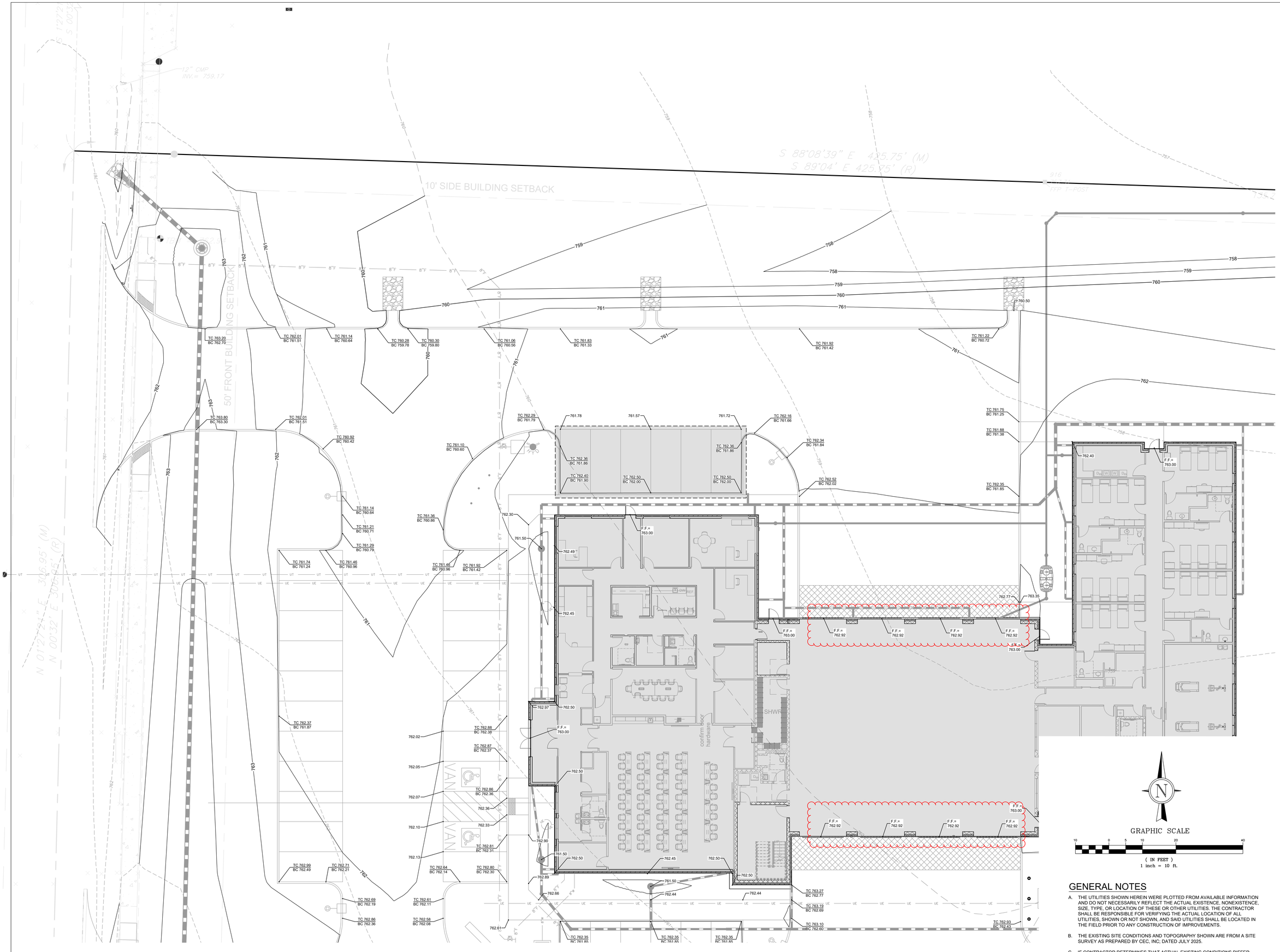
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

OVERALL
GRADING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C300



ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 1
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #2005017754

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND WERE PREPARED FOR THE SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ITEMS CONTAINED WITHIN THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS PREPARED BY THIS ENGINEER WHOSE SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER. THIS ENGINEER HEREBY EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

Revisions:

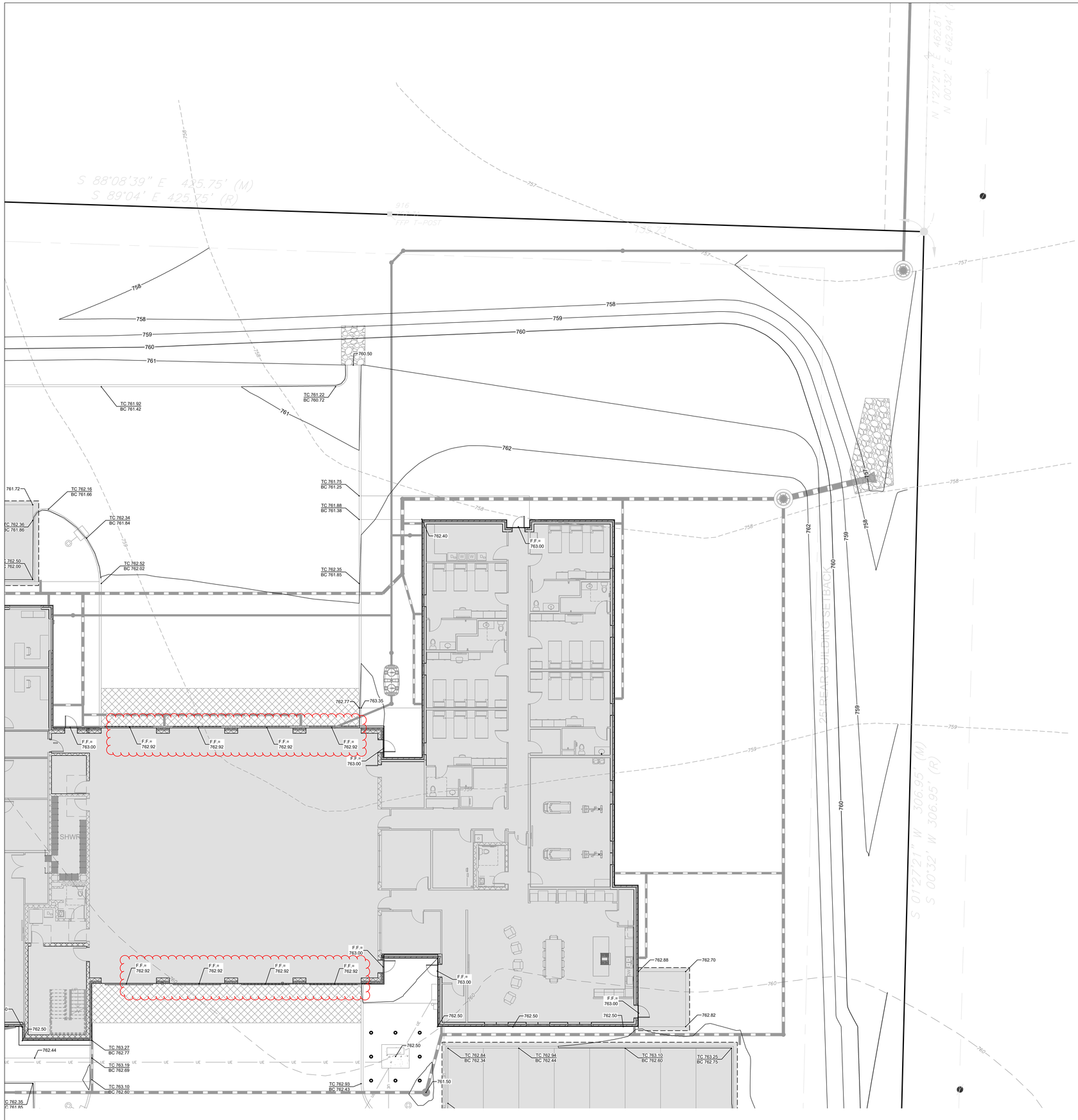
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

ENLARGED GRADING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C301



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #: 2007001777
F-2025 (01) 7534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR ONLY THE PURPOSE INTENDED BY THE ENGINEER. THEY SHALL NOT BE COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE, WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER.
Copyright © 2025 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCEDURES SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER ASSUMES NO RESPONSIBILITY FOR SUCH PLANS, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

ENLARGED GRADING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C302

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #2003017534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND ARE PREPARED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ENGINEERING DESIGN SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS NOT BEARING AN ORIGINAL SEAL SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER NAMED HEREON AND HE EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

ENLARGED GRADING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C303

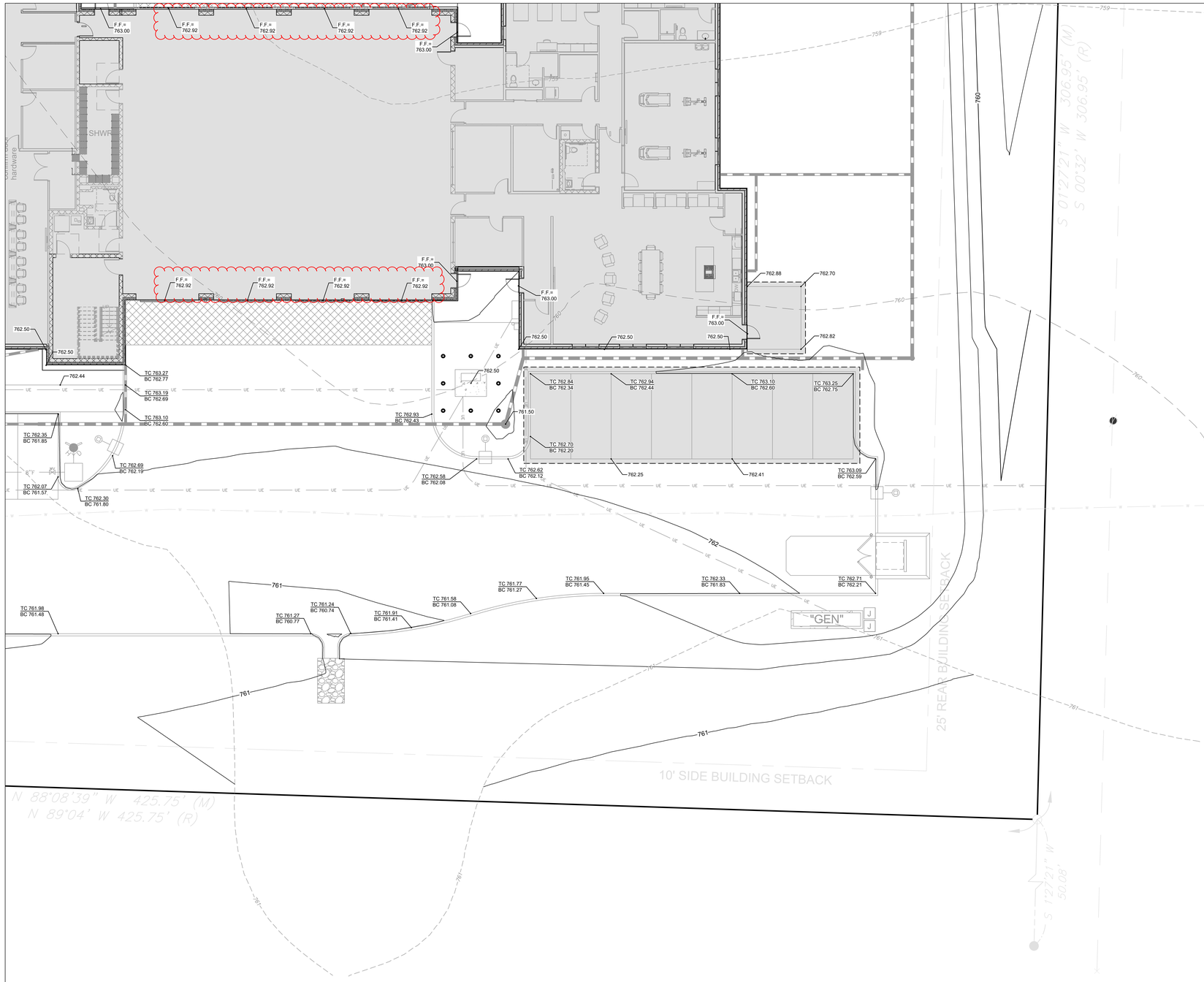
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
www.THEENGENUITY.com
Missouri Certificate of Authority
E-2025 01 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND ARE PREPARED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE CHANGED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEER'S SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROJECT DESCRIBED ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

ENLARGED GRADING PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C304

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
CUT FILL	**1.00**	**1.00**	115823.15 Sq. Ft.	219.20 Cu. Yd.	6706.20 Cu. Yd.	6487.00 Cu. Yd.<Fill>
Totals			115823.15 Sq. Ft.	219.20 Cu. Yd.	6706.20 Cu. Yd.	6487.00 Cu. Yd.<Fill>

NOTE:
BIDDING CONTRACTORS ARE REQUIRED TO PERFORM THEIR OWN ESTIMATE FOR CUT/FILL REQUIREMENTS. CUT/FILL SUMMARY IS PROVIDED FOR REFERENCE ONLY AND NOT BE USED FOR BIDDING PURPOSES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 1
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM # 2005018677
FIRM # 2025 (D) 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS PROJECT ONLY. THEY SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCEDURE IDENTIFIED ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER SHALL ASSUME NO RESPONSIBILITY FOR SUCH PLAN, DRAWING OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

CUT FILL PLAN

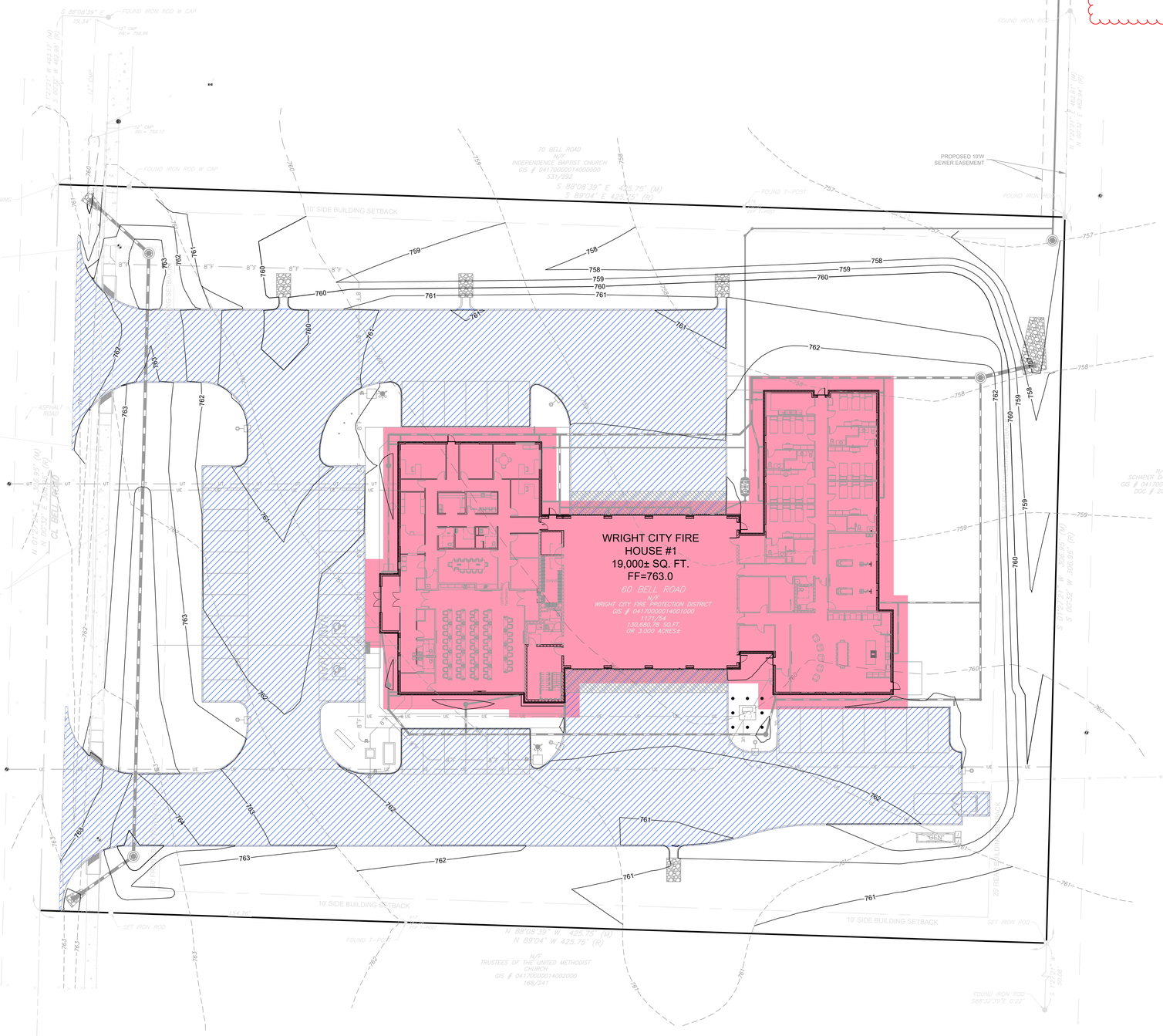
Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C305

SOIL REMEDIATION LEGEND

ALTERNATE #2: REMEDIATE SOIL 3' BELOW FINISH FLOOR, 2' BELOW BEARING OF FOUNDATION, AND 5' BEYOND THE FOOTPRINT OF THE FOUNDATION. ALL REMEDIATION MATERIALS TO BE 1" MINUS ROCK.

ALTERNATE #3: REMEDIATE SOIL 12" BELOW ALL PAVEMENT LOCATIONS WITH 1" MINUS ROCK



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM LC# 2007001777
FIRM MO# E-2025 017534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND ARE PREPARED FOR THE SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROJECT AS SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH UNSEALED OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

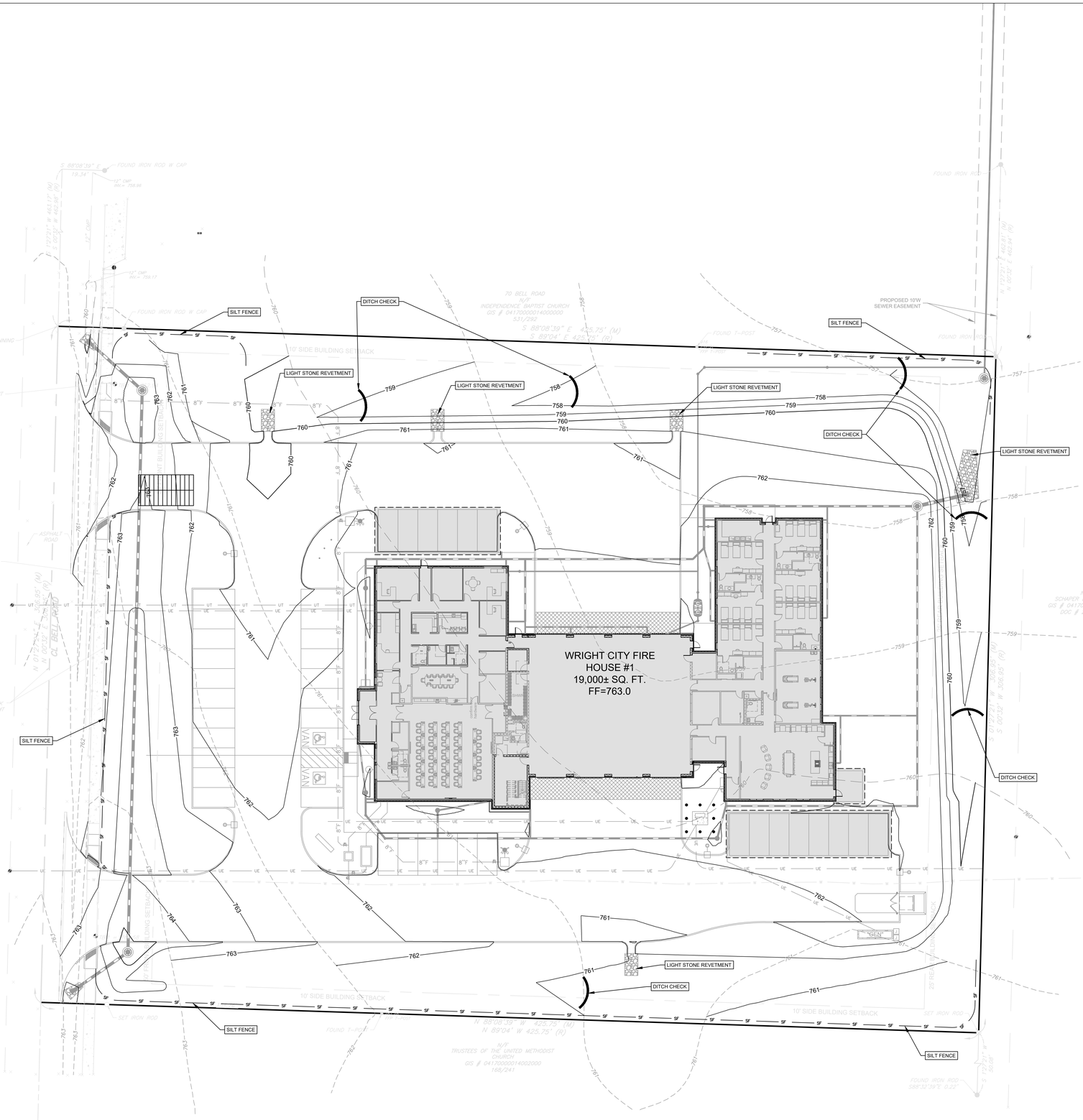
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

SOIL REMEDIATION PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C306



LIGHT STONE REVETMENT
D90 - 6" DIA.
D75 - 10" DIA.
DMAX - 16" DIA.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 1
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM #: 2007001750
F-2025 (D) 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR USED FOR ANY PURPOSE OR PROJECT WITHOUT ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
COPYRIGHT © 2025 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCESS, REPORT OR SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL OR NOT PREPARED OR APPROVED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

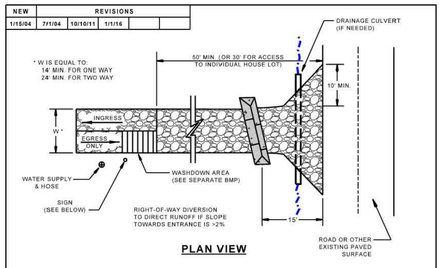
Sheet Info:

SWPPP

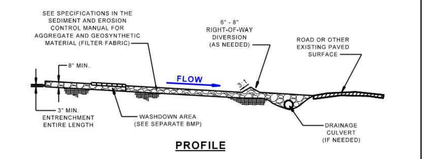
Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C400

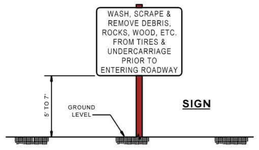
NEW	REVISIONS				
1/15/04	7/1/04	10/10/11	1/1/16		



PLAN VIEW



PROFILE



SIGN

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

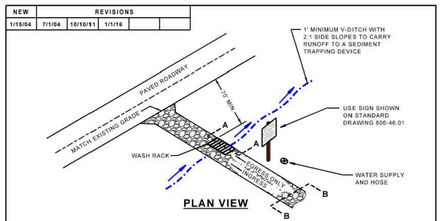
TYPICAL BMP DETAIL

CONSTRUCTION ENTRANCE

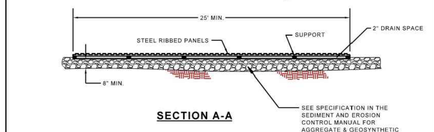
REVISION DATE: January 1, 2016

DRAWING 806-46.01

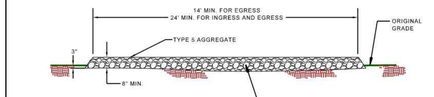
NEW	REVISIONS				
1/15/04	7/1/04	10/10/11	1/1/16		



PLAN VIEW



SECTION A-A



SECTION B-B

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

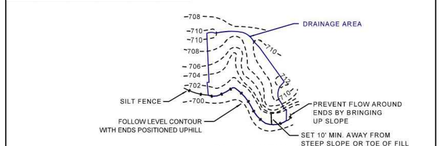
TYPICAL BMP DETAIL

WASHDOWN STATION

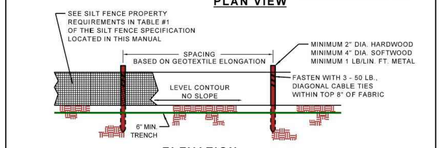
REVISION DATE: January 1, 2016

DRAWING 806-46.00

NEW	REVISIONS				
1/15/04	8/2/07	10/10/11	1/1/16		

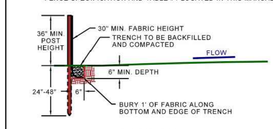


PLAN VIEW



ELEVATION

FOR ADDITIONAL INFORMATION ON SILT FENCE GEOTEXTILE REQUIREMENTS, POST SPACING, HEIGHT AND SIZE, SEE THE SILT FENCE SPECIFICATION AND TABLE #1 LOCATED IN THIS MANUAL.



SECTION

NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT NEEDED.

JOINING SECTIONS OF SILT FENCE

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

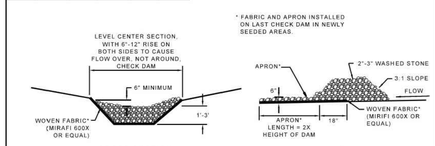
TYPICAL BMP DETAIL

SILT FENCE

REVISION DATE: January 1, 2016

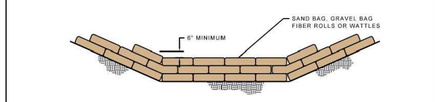
DRAWING 806-70.00

NEW	REVISIONS				
10/10/11	1/1/16				

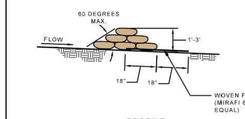


CROSS SECTION **PROFILE**

ROCK CHECK DAM



CROSS SECTION



PROFILE

GENERAL NOTES

1. NUMBER OF BAGS AND ARRANGEMENT MAY VARY WITH ON-SITE CONDITIONS.
2. SEE GRAVEL BAG OR WATTLE BMP FOR ADDITIONAL INFORMATION.
3. INSTALL GEOTEXTILE FABRIC PER MANUFACTURER'S SPECIFICATIONS.
4. SEE ADDITIONAL GEOTEXTILE REQUIREMENTS AT THE END OF THE SEDIMENT & EROSION CONTROL MANUAL.

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

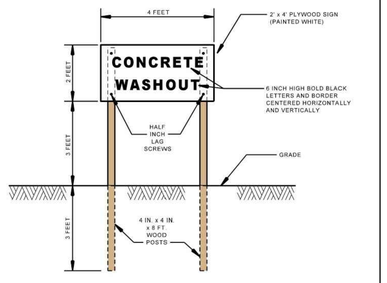
CHECK DAM

REVISION DATE: January 1, 2016

DRAWING 806-35.00

SAND BAG OR GRAVEL BAG FILTER ROLLS OR WATTLES CHECK DAM

NEW	REVISIONS				
4/15/08	10/10/11	1/1/16			



CONCRETE WASHOUT SIGN DETAIL
(OR EQUIVALENT AS APPROVED BY COUNTY)

GENERAL NOTES

1) DO NOT SCALE DRAWING. FOLLOW DIMENSIONS.
2) ACTUAL LAYOUT DETERMINED IN THE FIELD
3) THE "CONCRETE WASHOUT" SIGN SHALL BE INSTALLED WITHIN 30 FEET OF EACH TEMPORARY CONCRETE WASHOUT FACILITY.

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

CONCRETE WASTE MANAGEMENT
(CONCRETE WASHOUT SIGN)

REVISION DATE: January 1, 2016

DRAWING 806-46.03

SEEDING

PHYSICAL DESCRIPTION - Establishment of vegetation by spreading grass seed designed to protect exposed soil from erosion by eliminating direct impact of precipitation and slowing overland flow rates. Once established, the vegetative cover will also filter pollutants from the runoff. Use only perennial vegetation for final stabilization.

WHERE BMP IS TO BE INSTALLED - To exposed soil after a phase of rough or finish grading has been completed, or areas where no activity will occur for 30 days.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow:	Sheet flow
Contributing Slope Length:	30 foot maximum for 3:1 slopes 50 foot maximum for slope between 3:1 and 10:1 100 foot maximum for slopes under 10%
Minimum Rates:	See attached chart(s)
Acceptable Dates:	See attached chart

WHEN BMP IS TO BE INSTALLED - Immediately after rough or finished grading is completed.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Install upstream BMPs to protect area to be seeded.
- ✓ Rough grade area and remove all debris larger than 1-inch in diameter and concentrated areas of smaller debris.
- ✓ Install stabilization grids, if needed.
- ✓ Mix soil amendments (lime, fertilizer, etc.) into top 3 to 6 inches of soil as needed.
- ✓ Plant seed ¼ to ½ inch deep.
- ✓ Roll lightly to firm surface.
- ✓ Cover seeded area with mulch unless seeding completed during optimum spring and summer dates.
- ✓ Install additional stabilization (netting, bonded fiber matrix, etc.) as required.
- ✓ Water immediately - enough to soak 4 inches into soil without causing runoff.
- ✓ If contract / permit allows seeding to be used for final stabilization, only perennial vegetation seeds shall be used.
- ✓ For additional information see Sections 805 and 806.50 of St. Louis County's Standard Specification for Road and Bridge Construction.

O&M PROCEDURES:

- ✓ Inspect every week and after every storm
- ✓ Protect area from vehicular and foot traffic
- ✓ Reseed areas that have not sprouted within 21 days of planting.
- ✓ Repair damaged or eroded areas and reseed and stabilize as needed
- ✓ Do not mow until 4 inches of growth occurs
- ✓ During the first 4 months, mow no more than ⅓ the grass height
- ✓ Re-fertilize during 2nd growing season

SITE CONDITIONS FOR REMOVAL - Does not require removal, but temporary seeding can be removed immediately prior to work returning to an area

SEEDING REQUIREMENTS

Dates for Seeding

Permanent Seeding	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Tall Fescue			O	O	O			O	O			
Smooth Brome			O	O	O			O	O			
Fescue & Brome			O	O	O	G		O	O			
Fescue, Rye & Bluegrass	A	A	O	O	O	P	P	O	O	P	P	A

Temporary Seeding	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Rye or Sudan	A	A	O	O	O	O	O	O	O	O	A	A
Oats		A	O	O	O	O	O	O	O			

O = Optimum seeding dates
A = Acceptable seeding dates
P = Permitted seeding dates with reseeding 2 months later - Initially use 50% of seed and 75% of fertilizer. Reseed with additional 75% seed and remaining fertilizer.

Minimum Fertilizer and Seeding Rates

Permanent Seeding*	Pounds per acre	Pounds Per 1000 sq. ft.
Tall Fescue	300	7,0
Smooth Brome	200	4,6
Mixture # 1	250	5,7
Mixture # 2	210	4,8

Mixture # 1 = Tall Fescue @ 150 pounds per acre and Brome @ 100 pounds per acre.
Mixture # 2 = Tall Fescue @ 100 pounds per acre; Perennial Rye grass @ 100 pounds per acre; and Kentucky Blue grass @ 10 pounds per acre.
* = Seeding rate for slopes in excess of 20% (5:1), shall be 10 pounds per 1000 sq. ft.

Temporary Seeding	Pounds per acre	Pounds Per 1000 sq. ft.
Rye or Sudan	150	3,5
Oats	200	2,5

Fertilizer	Permanent Seeding (pounds per acre)	Temporary Seeding (pounds per acre)
Nitrogen	45	30
Phosphate	65	30
Potassium	65	30
Lime - ENM	600	600

ENM = Effective neutralizing material per State evaluation of quarried rock.

TYPICAL DETAILS - Minimum seeding rates and acceptable dates for work attached.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Excavate diversion area except for area of upstream connection.
- ✓ Compact as required to place diversion properly.
- ✓ Install pipe bedding or channel lining as required.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 310
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FIRM LICENSE NO. 2007001577

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC. IT IS ISSUED FOR USE ON THE SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCESS, DESIGN OR WORK ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL OR SIGNATURE ARE NOT TO BE CONSIDERED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

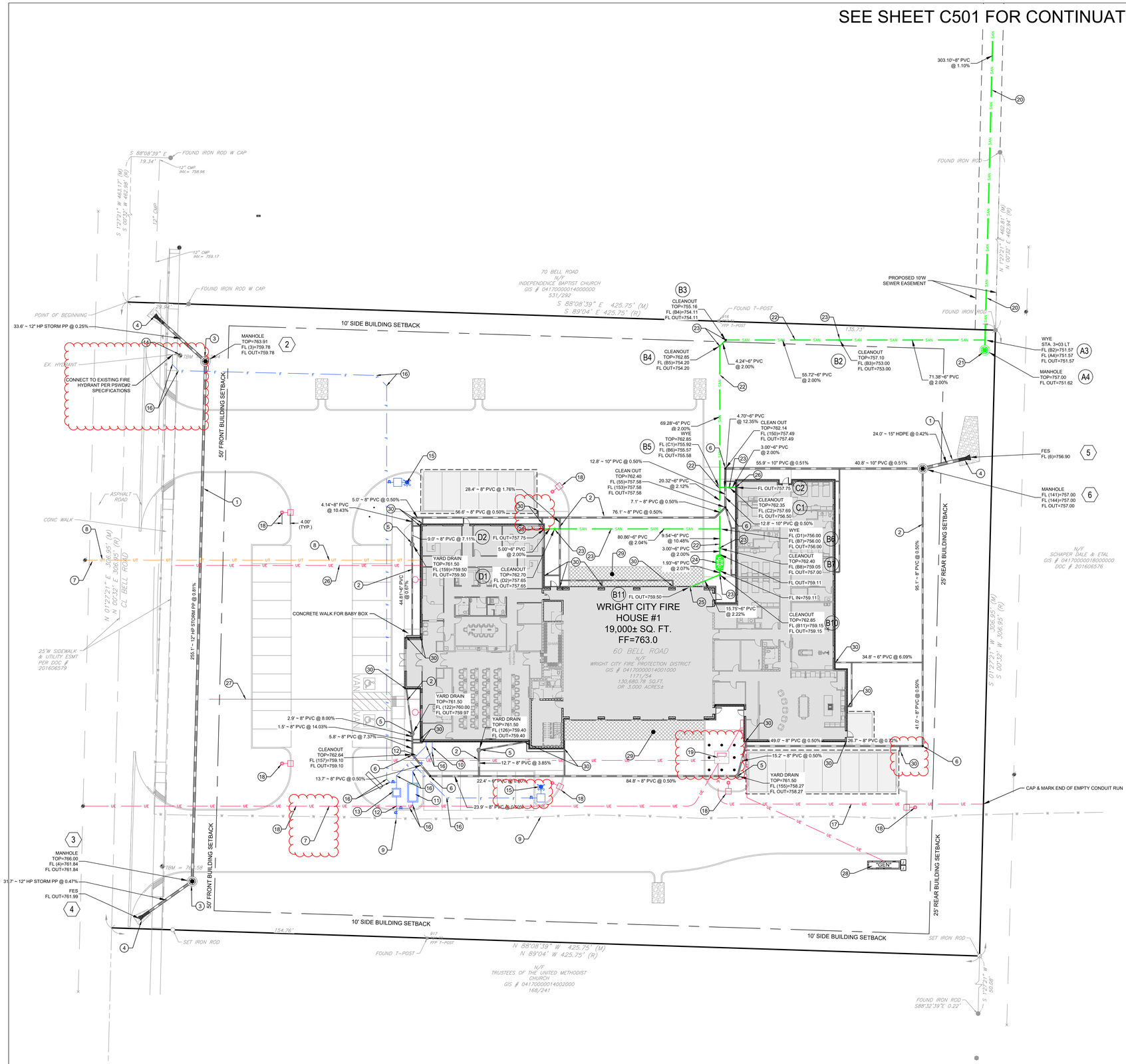
Sheet Info:

SWPPP DETAILS

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C401

SEE SHEET C501 FOR CONTINUATION



KEYED NOTES

1. STORM SEWER PIPE (HDPE)
2. STORM/ROOF LATERAL (SCH. 35 PVC)
3. STORM MANHOLE (DETAIL #11, SHEET C801)
4. FLARED END SECTION (DETAIL #12 ON SHEET C801)
5. YARD DRAIN (DETAIL #14, SHEET C801)
6. STORM CLEANOUT (DETAIL #15, SHEET C801)
7. ELECTRIC SERVICE (COORDINATE W/ AMEREN AND ELECTRICAL DWGS., ELECTRICAL TO COORDINATE W/ STRUCTURAL FOR INTERFENCE W/ FOUNDATIONS TO CONFIRM MOUNTING OF CT CABINET AND OTHER ELECTRICAL GEAR)
8. COMMUNICATION LINE (COORDINATE W/ UTILITY AND ELECTRICAL DWGS.)
9. TAP MAIN PER PWSD #2 SPECIFICATIONS
10. 3" C900 DR18 DOMESTIC WATER SERVICE (PRIVATE) PER PWSD #2 SPECIFICATIONS (COORDINATE W/ PLUMBING DWGS.
11. WATER METER PER PWSD #2 SPECIFICATIONS
12. 6" C900 DR18 FIRE LINE (PRIVATE) PER PWSD #2 SPECIFICATIONS (COORDINATE W/ PLUMBING DWGS.)
13. DETECTOR CHECK PER PWSD #2 SPECIFICATIONS
14. REPLACE EXISTING FIRE HYDRANT
15. PRIVATE FIRE HYDRANT (PAINTED RED) W/ DETECTOR CHECK IN PYRAMID BOX IN GREENSPACE PER PWSD #2 SPECIFICATIONS)
16. 45° BEND
17. 4" SCH. 40 CONDUIT PER AMEREN SPECIFCATIONS
18. LIGHT STANDARD (SEE ELECTRICAL DWGS.)
19. TRANSFORMER, 7'L X 6'W X 5'T CONCRETE PAD W/ 4" PIPE BOLLARDS (SEE DETAIL #19, SHEET C802, COORDINATE W/ AMEREN AND ELECTRICAL DWGS.)
20. SANITARY SEWER (PUBLIC) PER PWSD #2 SPECIFICATIONS
21. SANITARY MANHOLE (PUBLIC) PER PWSD #2 SPECIFICATIONS
22. 6" SANITARY LATERAL, SCH 35 PVC (PRIVATE) PER PWSD #2 SPECIFICATIONS
23. SANITARY CLEANOUT (PRIVATE) PER PWSD #2 SPECIFICATIONS
24. GREASE INTERCEPTOR (PRIVATE, DETAIL #17, SHEET C801) (SEE PLUMBING DWGS.)
25. COORDINATE HORIZONTAL AND VERTICAL LOCATION W/ PLUMBING DWGS.
26. ELECTRIC CONDUIT W/ PULL STRING FOR FUTURE SIGNAL (SEE ELECTRICAL DWGS.)
27. EMPTY CONDUIT W/ PULL STRING FOR MARQUEE SIGN (SEE ELECTRICAL DWGS.)
28. GENERATOR (SEE ELECTRICAL DWGS.)
29. ALTERNATE: 10' WIDE SECTION WITH SNOWMELT (SEE ELECTRICAL DWGS.)
30. DOWNSPOUT CONNECTION (DETAIL #16, SHEET C801) (COORDINATE W/ ARCH DWGS)

PWSD #2 NOTES

A. THE WATER DISTRICT REQUIRES ONE (1) WEEK NOTICE BEFORE THE START OF CONSTRUCTION.

B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY CITY OF MODOT PERMITS REQUIRED TO WORK ALONG THE ROADWAYS.

C. ALL SANITARY SEWER MAINS, MANHOLES, FITTINGS, AND RELATED ITEMS MUST BE INSTALLED PER THE PWSD2 GUIDELINES AND SPECIFICATIONS AS APPROVED BY MODNR ON JULY 30, 2015.

D. ANY PROPOSED CONNECTIONS TO THE EXISTING PUBLIC SANITARY SEWER MAINS MUST BE PER THE WATER DISTRICT'S SPECIFICATIONS.

E. ALL WATER SERVICE LINES, FIRE LINES, AND PRIVATE WATER MAINS MUST BE INSTALLED PER PWSD NO. 2' SPECIFICATIONS.

F. ALL "PRIVATE" FIRE HYDRANTS ARE TO BE PAINTED RED PER PWSD NO. 2 SPECIFICATIONS.

G. ALL SANITARY LATERAL CONNECTIONS MUST BE MADE PER PWSD NO. 2 SPECIFICATIONS.

H. THE ENTIRE LENGTH OF THE SANITARY LATERAL MUST BE INSPECTED BY PWSD NO. 2' PERSONNEL.

I. ALL SANITARY SEWER LATERALS ARE "PRIVATE" AND MAINTAINED BY THE PROPERTY OWNERS.

J. ALL SANITARY LATERALS ARE REQUIRED TO BE SCHEDULE 35 PVC PIPE.

K. ANY SANITARY SEWER LATERAL THAT IS INSTALLED AT A DEPTH GREATER THAN 15' DEEP IS REQUIRED TO BE A SCHEDULE 40 PVC PIPE.

L. ALL SANITARY SEWER LATERALS ARE PROHIBITED FROM CONTAINING BENDS GREATER THAN A 45 DEGREE ANGLE.

M. A CLEANOUT IS REQUIRED WITHIN A 10' DISTANCE FROM THE BUILDING'S FOUNDATION.

N. LATERALS THAT ARE IN EXCESS OF 100' MUST HAVE A CLEANOUT LOCATED AT EVERY 100' OF PIPING.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
COA: 2027000277
FIRM ID 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS PROJECT ONLY. THEY SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF ENGINEER.
Copyright © 2025 by ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. ANY REPRODUCTION OF THIS SHEET OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER. THE ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

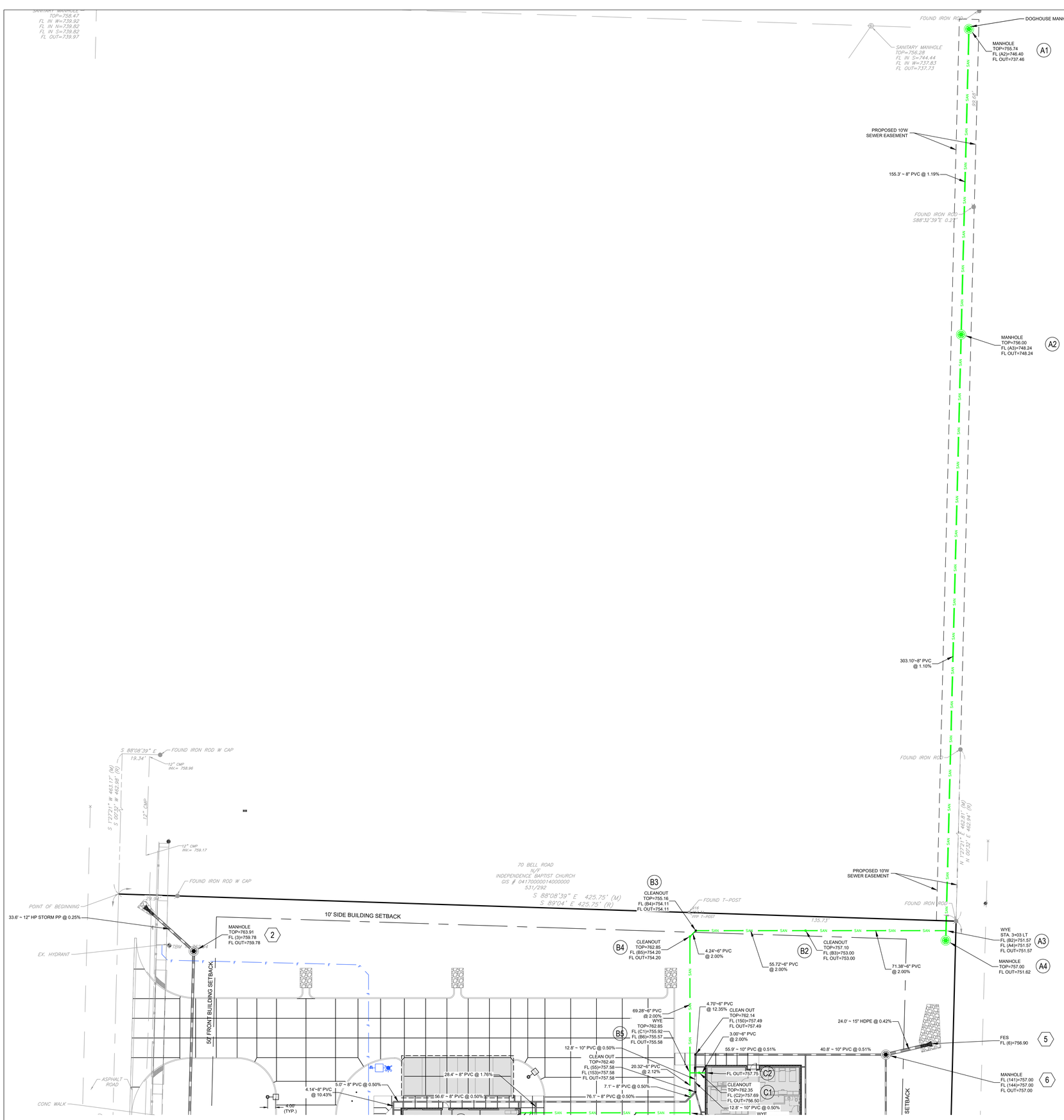
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

UTILITY PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C500



SEE SHEET C500 FOR CONTINUATION

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
FOUNDED 2017

WCFPD Station 1
City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND ARE PREPARED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ENGINEERING DESIGN SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS PREPARED BY THE ENGINEER WHOSE SEAL SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER. THE ENGINEER HEREBY EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

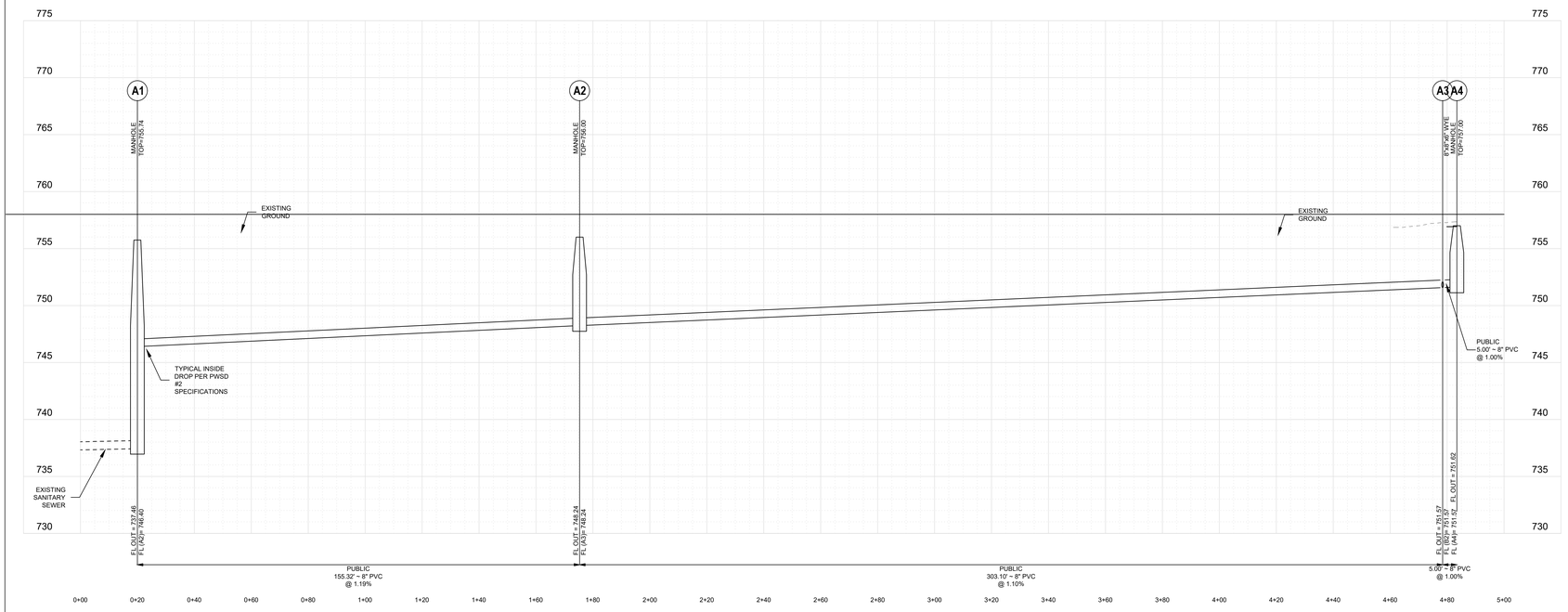
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

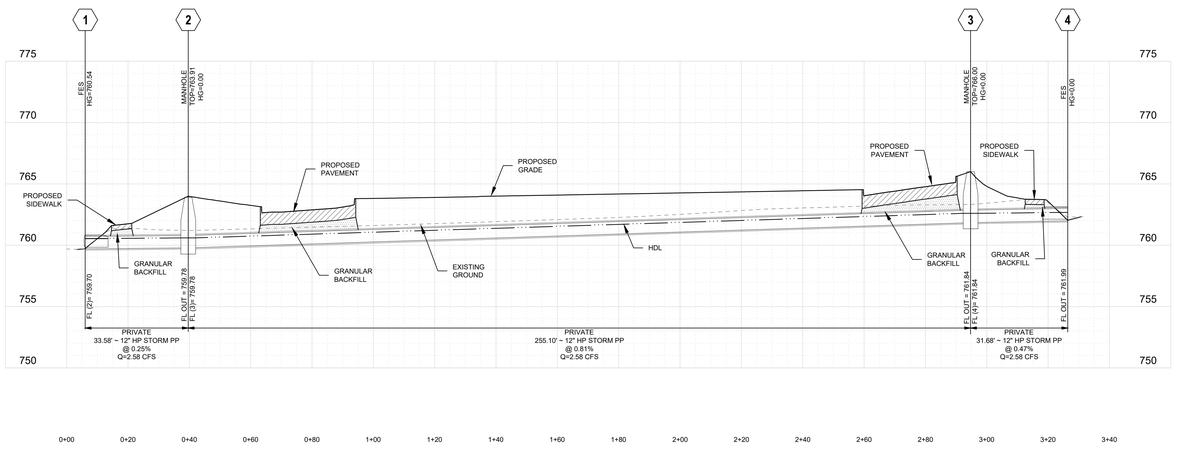
OFFSITE SANITARY SEWER PLAN

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

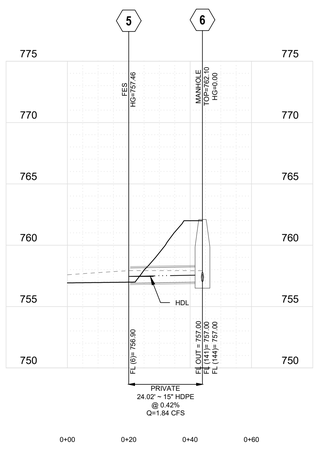
C501



SANITARY A
SCALE: 1"=20' HORZ.
1"=5' VERT.



STORM 01
SCALE: 1"=20' HORZ.
1"=5' VERT.



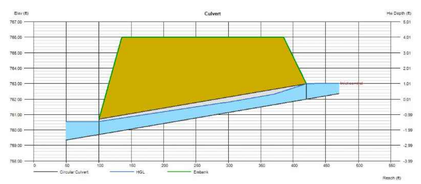
STORM 02
SCALE: 1"=20' HORZ.
1"=5' VERT.

Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Sep 3 2025

Culvert

Invert Elev Dn (ft)	= 759.70	**Calculations**	
Pipe Length (ft)	= 320.36	Qmin (cfs)	= 2.58
Slope (%)	= 0.71	Qmax (cfs)	= 2.58
Invert Elev Up (ft)	= 761.99	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 12.0		
Shape	= Circular	**Highlighted**	
Span (in)	= 12.0	Qtotal (cfs)	= 2.58
No. Barrels	= 1	Qpipe (cfs)	= 2.58
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Culvert	Veloc Dn (ft/s)	= 3.65
Culvert Entrance	= Smooth tapered inlet throat	Veloc Up (ft/s)	= 4.48
Coeff. K,M,c,Y,k	= 0.534, 0.555, 0.0196, 0.9, 0.2	HGL Dn (ft)	= 760.54
		HGL Up (ft)	= 762.68
Embankment		Hw Elev (ft)	= 763.02
Top Elevation (ft)	= 766.00	Hw/D (ft)	= 1.03
Top Width (ft)	= 250.00	Flow Regime	= Inlet Control
Crest Width (ft)	= 40.00		



ENGENUITY
BUILDING VALUE
BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 447
CHESTERFIELD, MO 63005
P: 314.813.9189
WWW.ENGENUITY.COM
MISSOURI CERTIFICATE OF AUTHORITY:
E2020107924

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC. THEY ARE NOT TO BE USED ON ANY OTHER PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET SERVES ONLY TO THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. ANY REPRODUCTION OF THIS SHEET OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER. THE ENGINEER HEREBY EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

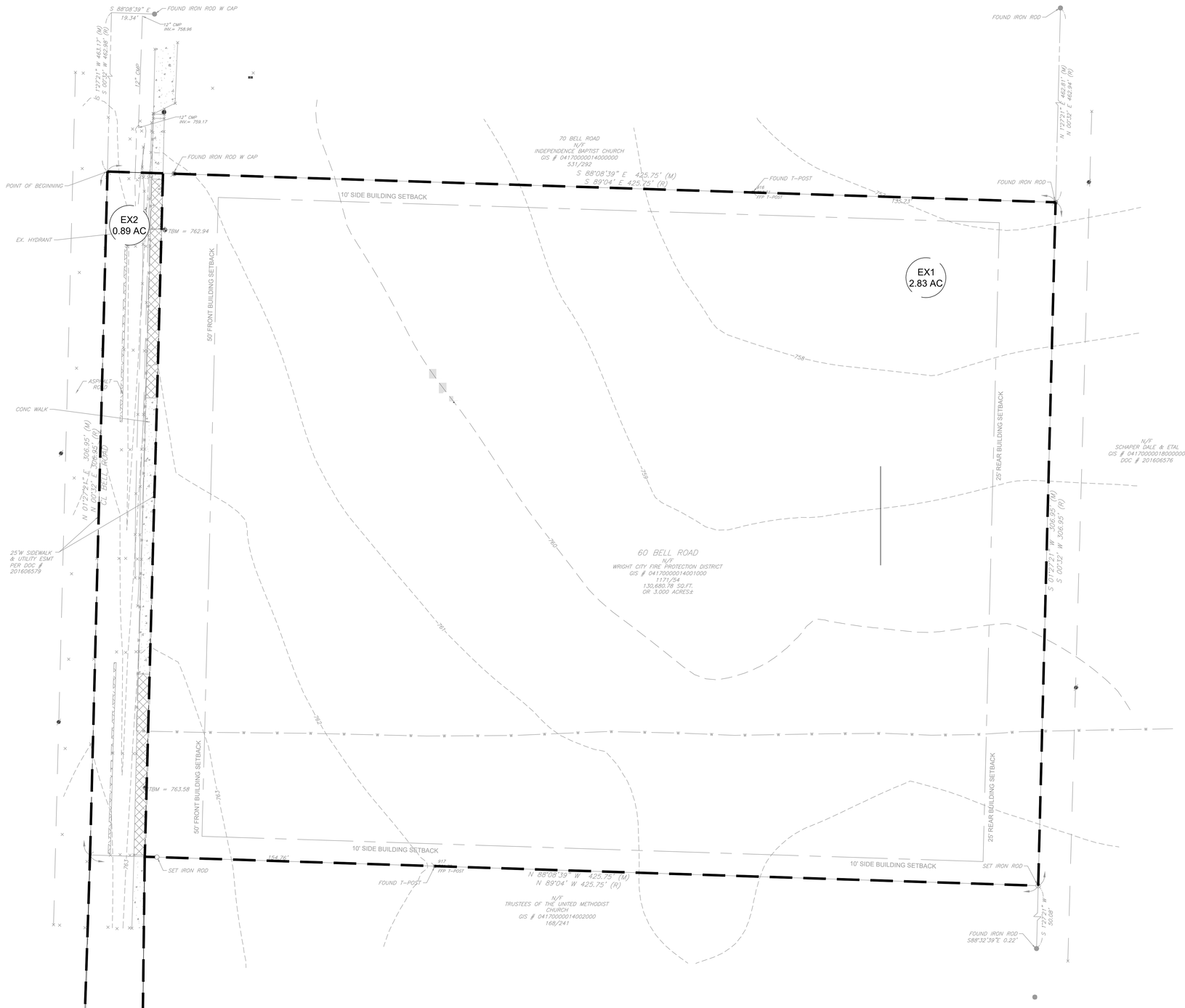
SEWER PROFILES

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C600

EXISTING DRAINAGE AREA

DRAINAGE AREA	STRUCTURE NUMBER	GRASS AREA (ACRES)	P.I. FACTOR (GRASS)	PICP AREA (ACRES)	P.I. FACTOR (PICP)	PVMT AREA (ACRES)	P.I. FACTOR (PVMT)	DISCONNECTED ROOF AREA (ACRES)	P.I. FACTOR (DISCONNECTED ROOF)	TOTAL AREA (ACRES)	TOTAL Q (CFS)
1	N/A	2.83	1.70	0.00	1.70	0.00	3.54	0.00	3.54	2.83	4.81
2	N/A	0.89	1.70	0.00	1.70	0.00	3.54	0.00	3.54	0.89	1.51
TOTAL		**3.72**		**0.00**		**0.00**		**0.00**		**3.72**	**6.32**



GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
MO CERT OF AUTH
E-2023.0177534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED IN WHOLE OR IN PART, OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL APPEARING ON THIS PLAN APPLIES ONLY TO THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS NOT BEARING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER SHALL NOT BE RESPONSIBLE FOR OR LIABLE. RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

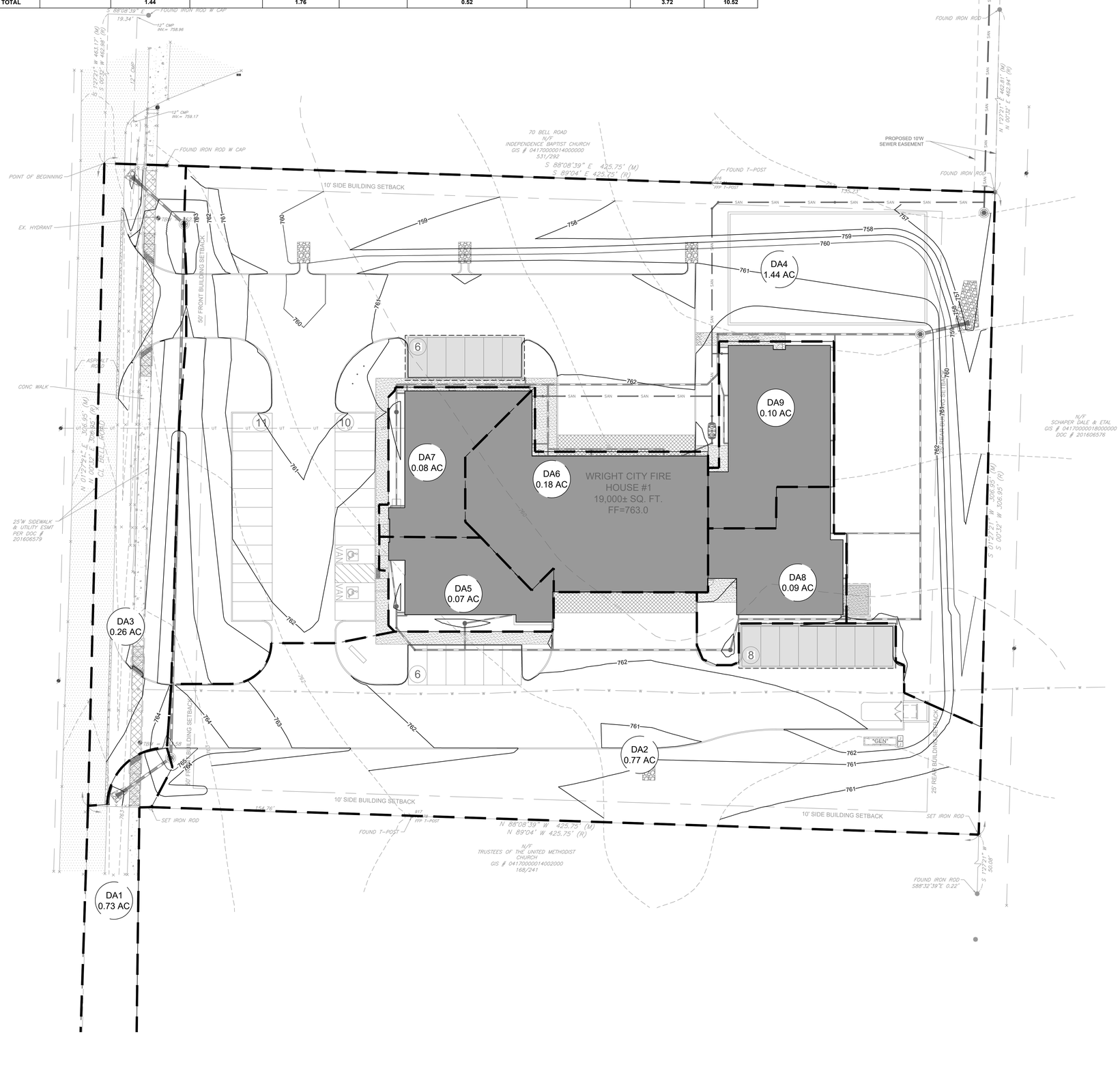
EXISTING DRAINAGE AREA MAP

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C700

DRAINAGE AREAS-15 YEAR STORM

DRAINAGE AREA	STRUCTURE NUMBER	GRASS AREA (ACRES)	P.I. FACTOR (GRASS)	PVMT AREA (ACRES)	P.I. FACTOR (PVMT)	DISCONNECTED ROOF AREA (ACRES)	P.I. FACTOR (DISCONNECTED ROOF)	TOTAL AREA (ACRES)	TOTAL Q (CFS)
1	CULVERT (OFFSITE)	0.00	1.70	0.73	3.54	0.00	3.54	0.73	2.58
2	N/A	0.35	1.70	0.42	3.54	0.00	3.54	0.77	2.08
3	N/A	0.13	1.70	0.13	3.54	0.00	3.54	0.26	0.68
4	N/A	0.96	1.70	0.48	3.54	0.00	3.54	1.44	3.33
5	DOWNSPOUT	0.00	1.70	0.00	3.54	0.07	3.54	0.07	0.25
6	DOWNSPOUT	0.00	1.70	0.00	3.54	0.18	3.54	0.18	0.64
7	DOWNSPOUT	0.00	1.70	0.00	3.54	0.08	3.54	0.08	0.28
8	DOWNSPOUT	0.00	1.70	0.00	3.54	0.09	3.54	0.09	0.32
9	DOWNSPOUT	0.00	1.70	0.00	3.54	0.10	3.54	0.10	0.35
TOTAL		**1.44**		**1.76**		**0.52**		**3.72**	**10.52**



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GENERAL NOTES

A. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.

B. THE EXISTING SITE CONDITIONS AND TOPOGRAPHY SHOWN ARE FROM A SITE SURVEY AS PREPARED BY CEC, INC; DATED JULY 2025.

C. IF CONTRACTOR DETERMINES THAT ACTUAL EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER BEFORE COMMENCING AND DEMOLITION OR CONSTRUCTION WORK.

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 710
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
CERTIFICATE OF AUTHORITY
E-2023.017534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC AND ARE TO BE USED ON THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE ITEMS AND/OR TEXT APPEARING ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH UNSEALED OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

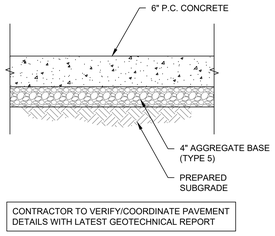
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

PROPOSED DRAINAGE AREA MAP

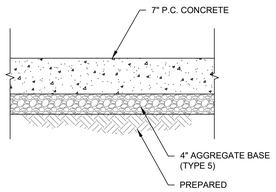
Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C701



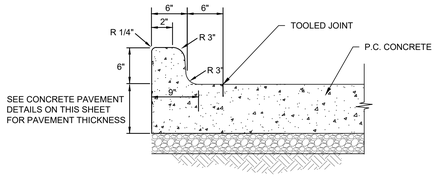
CONTRACTOR TO VERIFY/COORDINATE PAVEMENT DETAILS WITH LATEST GEOTECHNICAL REPORT

1 LIGHT DUTY CONCRETE PAVEMENT (PARKING SPACE)
NOT TO SCALE

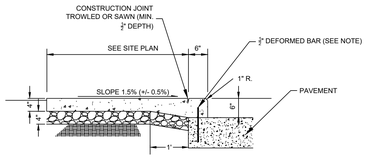


CONTRACTOR TO VERIFY/COORDINATE PAVEMENT DETAILS WITH LATEST GEOTECHNICAL REPORT

2 HEAVY DUTY CONCRETE PAVEMENT (ENTRANCE-DRIVE AISLE-TRASH ENCLOSURE)
NOT TO SCALE

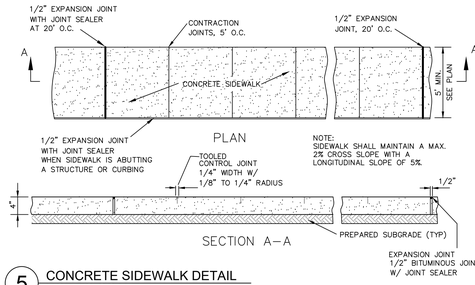


3 INTEGRAL CONCRETE CURB DETAIL
NOT TO SCALE

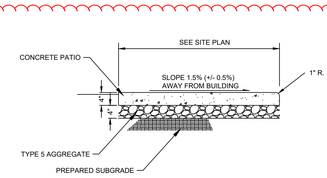


NOTE: LENGTH OF THE TIE BAR SHALL BE EQUAL TO THE THICKNESS OF PAVEMENT PLUS THE HEIGHT OF CURB LESS 2 INCHES. TIE BARS SHALL BE PLACED AT 24" CENTERS.

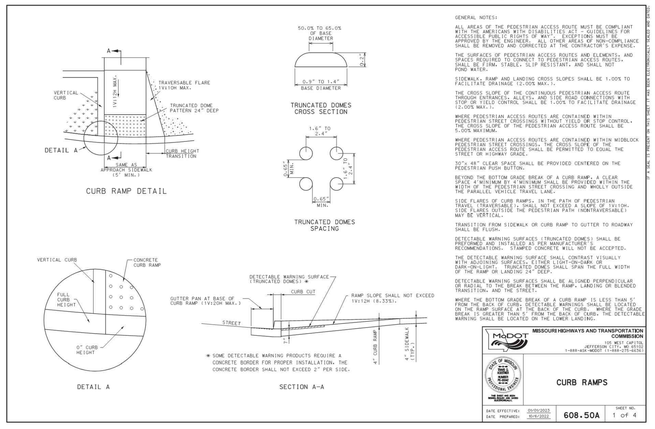
4 MONOLITHIC CURB & WALK DETAIL
NOT TO SCALE

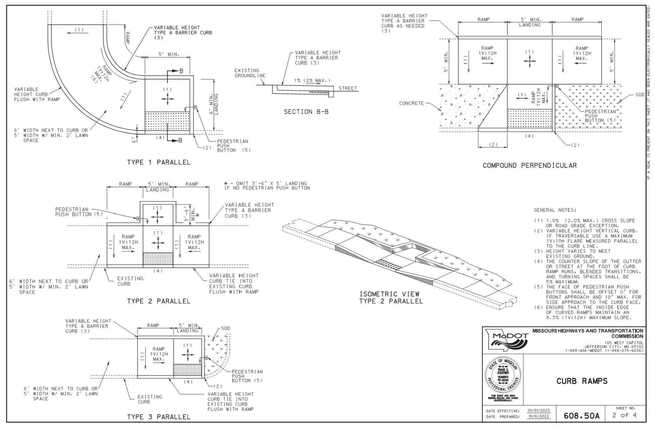


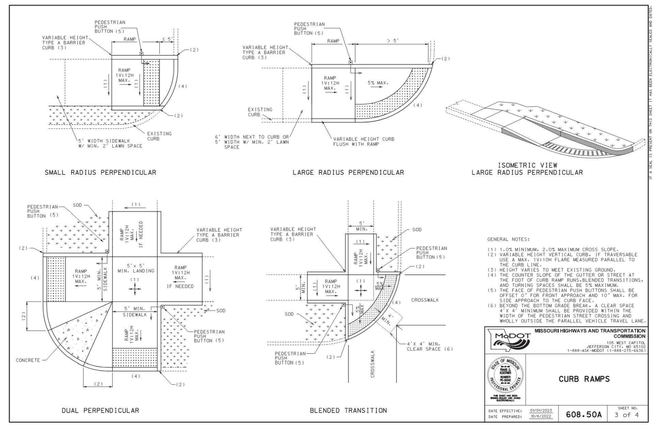
5 CONCRETE SIDEWALK DETAIL
NOT TO SCALE



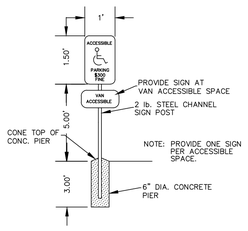
6 CONCRETE PATIO DETAIL
NOT TO SCALE



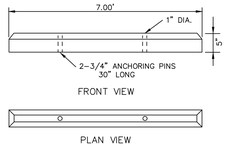




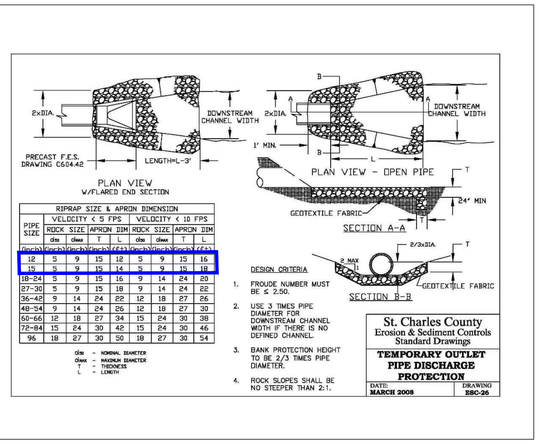
7 ADA RAMP DETAILS
NOT TO SCALE



8 ADA SIGN DETAIL
NOT TO SCALE



9 WHEEL STOP DETAIL
NOT TO SCALE



10 RIP RAP DETAIL
NOT TO SCALE

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 100
CHESTERFIELD, MO 63005
P: (314) 819-9189
WWW.THEENGENUITY.COM
CERTIFICATE OF AUTHORITY #2007001647

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF ENGENUITY, LLC. IT IS NOT TO BE USED ON THIS SPECIFIC PROJECT ONLY. IT SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN AGREEMENT OF THE ENGINEER.
COPYRIGHT © 2021 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER
2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC DETAILS SHOWN HEREON ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL AND SIGNATURE SHALL NOT BE CONSIDERED BY THIS ENGINEER, AND THIS ENGINEER EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR SUCH DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

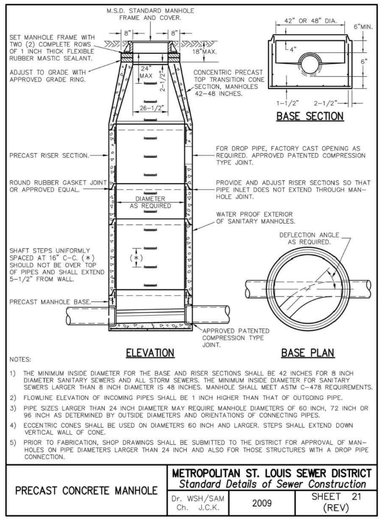
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

SITE DETAILS

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C800

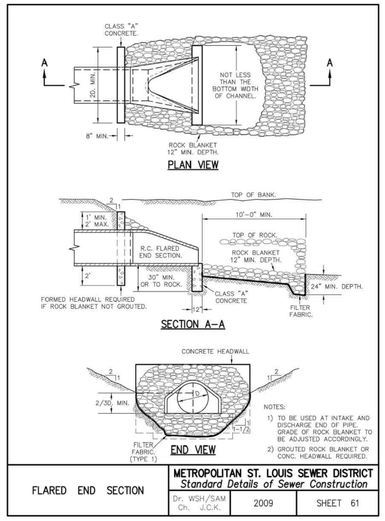


NOTES:

1) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42 INCHES FOR 8 INCH DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8 INCH DIAMETER IS 48 INCHES. MANHOLE SHALL MEET ASTM C–478 REQUIREMENTS.
2) FLOWLINE ELEVATION OF INCOMING PIPES SHALL BE 1 INCH HIGHER THAN THAT OF OUTGOING PIPE.
3) PIPE SIZES LARGER THAN 24 INCH DIAMETER MAY REQUIRE MANHOLE DIAMETERS OF 60 INCH, 72 INCH OR 96 INCH AS DETERMINED BY OUTSIDE DIAMETERS AND ORIENTATIONS OF CONNECTING PIPES.
4) ECCENTRIC CONES SHALL BE USED ON DIAMETERS 60 INCH AND LARGER. STEPS SHALL EXTEND DOWN VERTICAL WALL OF CONE.
5) PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL OF MAN–HOLES ON PIPE DIAMETERS LARGER THAN 24 INCH AND ALSO FOR THOSE STRUCTURES WITH A DROP PIPE CONNECTION.

PRECAST CONCRETE MANHOLE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. WSH/SAM Ch. J.C.K.	2009	SHEET 21 (REV)

11 STORM MANHOLE DETAIL
NOT TO SCALE



NOTES:

1) TO BE USED AT INTAKE AND DISCHARGE END OF PIPE. GRADE OF ROCK BLANKET TO BE ADJUSTED ACCORDINGLY.
2) GROUTED ROCK BLANKET OR CONC. HEADWALL REQUIRED.

FLARED END SECTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. WSH/SAM Ch. J.C.K.	2009	SHEET 61

12 FLARED END SECTION DETAIL
NOT TO SCALE

NYLOPLAST DRAIN BASIN WITH DOME GRATE

1 - 8" -30° DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-410-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 60" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-410-065.
4 – DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/MANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" – 36").
5 – ADAPTERS CAN BE MOUNTED ON ANY ANGLE AT 15° INCRIMENTS. TO DETERMINE ORIENTATION ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-410-012.
6 – 8" -30° DOME GRATES HAVE NO LOAD RATING.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREON, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.

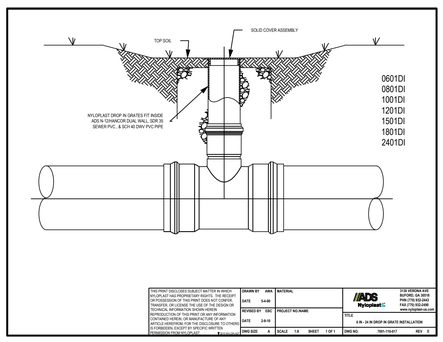
DRAWN BY	ESC	MATERIAL
DATE	03-25-15	
REVISED BY	MMK	PROJECT NO./NAME
DATE	09-13-15	
DWG SIZE	A	SCALE 1:40 SHEET 1 OF 1

ADS Nyloplast — 3128 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2453 www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-410-067 REV E

14 YARD DRAIN DETAIL
NOT TO SCALE



THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREON, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.

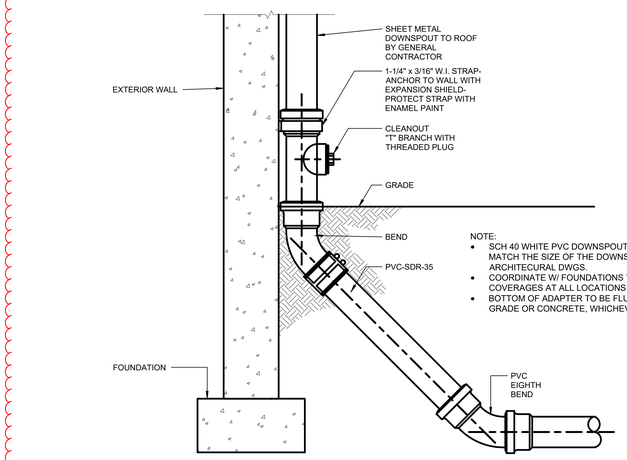
DRAWN BY	ARA	MATERIAL
DATE	5-4-05	
REVISED BY	DSC	PROJECT NO./NAME
DATE	2-8-10	
DWG SIZE	A	SCALE 1:8 SHEET 1 OF 1

ADS Nyloplast — 3128 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2453 www.nyloplast-us.com

TITLE: 6 IN - 24 IN DROP IN GRATE INSTALLATION

DWG NO. 7001-110-017 REV B

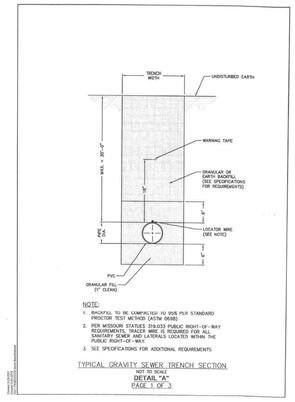
15 STORM CLEANOUT DETAIL
NOT TO SCALE



NOTE:

- SCH 40 WHITE PVC DOWNSPOUT ADAPTER TO MATCH THE SIZE OF THE DOWNSPOUTS PER ARCHITECURAL DWGS.
- COORDINATE W/ FOUNDATIONS TO PROPER PIPE COVERAGES AT ALL LOCATIONS
- BOTTOM OF ADAPTER TO BE FLUSH WITH TOP OF GRADE OR CONCRETE, WHICHEVER APPLIES.

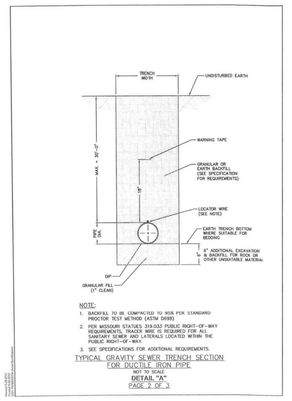
16 DOWNSPOUT DETAIL
NOT TO SCALE



NOTE:

1. BACKFILL TO BE COMPACTED TO 90% PER STANDARD PROCTOR TEST METHOD (ASTM D698)
2. PER MISSOURI STATUES 319.033 PUBLIC RIGHT–OF–WAY LOCATOR WIRE SHALL BE INSTALLED ON ALL NEW SANITARY SEWER AND LATERALS LOCATED WITHIN THE PUBLIC RIGHT–OF–WAY.
3. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

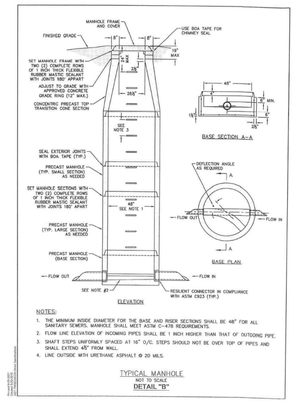
TYPICAL GRAVITY SEWER TRENCH SECTION
NOT TO SCALE
DETAIL "A"
PAGE 1 OF 3



NOTE:

1. BACKFILL TO BE COMPACTED TO 90% PER STANDARD PROCTOR TEST METHOD (ASTM D698)
2. PER MISSOURI STATUES 319.033 PUBLIC RIGHT–OF–WAY LOCATOR WIRE SHALL BE INSTALLED ON ALL NEW SANITARY SEWER AND LATERALS LOCATED WITHIN THE PUBLIC RIGHT–OF–WAY.
3. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

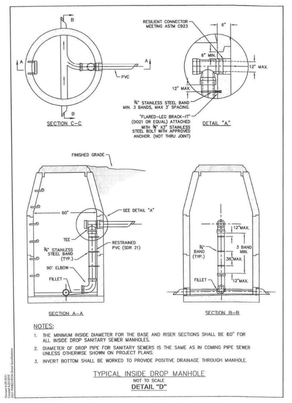
TYPICAL GRAVITY SEWER TRENCH SECTION FOR DUCTILE IRON PIPE
NOT TO SCALE
DETAIL "A"
PAGE 2 OF 3



NOTES:

1. THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 48" FOR ALL SANITARY SEWERS. MANHOLE SHALL MEET ASTM C–478 REQUIREMENTS.
2. FLOW LINE ELEVATION OF INCOMING PIPES SHALL BE 1 INCH HIGHER THAN THAT OF OUTGOING PIPE.
3. SHAFT STEPS UNIFORMLY SPACED AT 16" O/C. STEPS SHOULD NOT BE OVER TOP OF PIPES AND SHALL EXTEND 48" FROM WALL.
4. LINE OUTSIDE WITH URETHANE ASPHALT @ 20 MILS.

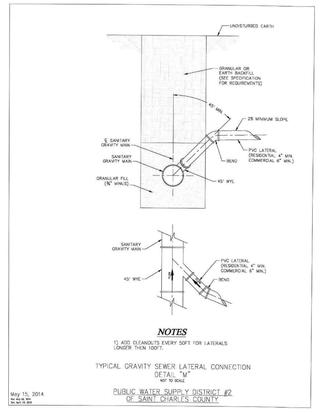
TYPICAL MANHOLE
NOT TO SCALE
DETAIL "B"



NOTES:

1. THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 60" FOR ALL INSIDE DROP SANITARY SEWER MANHOLES.
2. DIAMETER OF DROP PIPE FOR SANITARY SEWERS IS THE SAME AS IN COMING PIPE SEWER UNLESS OTHERWISE SHOWN ON REGULAR PLANS.
3. INVERT BOTTOM SHALL BE WORKED TO PROVIDE POSITIVE DRAINAGE THROUGH MANHOLE.

TYPICAL INSIDE DROP MANHOLE
NOT TO SCALE
DETAIL "D"



NOTES

1) ADD CLEANOUTS EVERY 50FT FOR LATERALS LONGER THEN 100FT.

TYPICAL GRAVITY SEWER LATERAL CONNECTION
DETAIL "V"
NOT TO SCALE

PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY

May 15, 2014
No. 34,419
No. 34,419

13 PWSD#2 SEWER DETAILS
NOT TO SCALE

SPECIFICATIONS

1. 4" Plain End inlet/outlet, 3" Plain End vents, C24-HP covers standard.
2. Certified max flow rate: 100 GPM.
3. Liquid capacity: 500 Gallons (66.8 cu. ft.).
4. Oil capacity: 125 Gallons.
5. Solids capacity: 195 Gallons.
6. Unit weight w/ standard covers: 456 lbs.; w/ C24-M covers: 336 lbs.
7. Maximum operating temperature 140 °F continuous.

NOTES

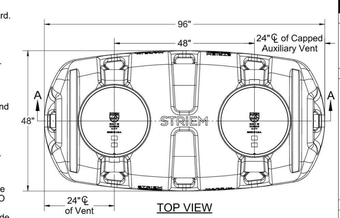
1. Engineered inlet diffuser efficiently separates oil from water.
2. Capped auxiliary vent provided to allow flexibility with vent piping and design. Provided cap can be moved to unused vent location, or discarded if two chamber vents are required per local code.
3. For gravity drainage applications only.
4. Do not use for pressure applications.
5. Cover placement allows full access to tank for proper maintenance.
6. Maximum burial depth: 106" from standard cover height.

ENGINEER SPECIFICATION GUIDE

Striem high efficiency oil/water separator model OS-500 shall be lifetime guaranteed and made in the USA. Separator shall be certified to IAPMO IGC 325 and carry a UPC listing. Separator shall be constructed of polyethylene. Separator shall be manufactured for above- or below-grade installation. Field-adjustable riser system is available as an option to bring manhole covers to grade. Separator flow rate shall be 100 GPM. Separator liquid holding capacity shall be 500 gallons and oil capacity shall be 125 gallons. Solids capacity shall be 195 gallons. Covers shall be H20 rated pickable cast iron.

IAPMO IGC 325 CERTIFICATION

The OS-500 has been third party certified by IAPMO to the IGC 325 standard. The OS-500 achieved an average 99% efficiency rating with 3.7 mg/L at 100 GPM up to the maximum oil capacity of 125 gallons. The structural design has been approved and stamped by a structural engineer for direct burial in accordance with Striem's installation instructions.



OPTIONS

Connection Options (Plain End Only)

Inlet / Outlet
- ☐ 4"
- ☐ 6"

Riser Options

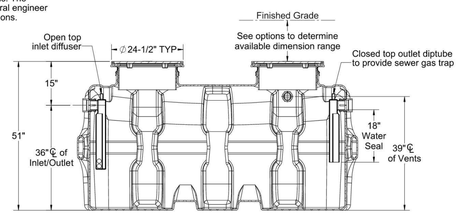
From Factory: Up to 5"
- ☐ Up to 24": **SR24** (2)
- ☐ Up to 39": **LR24** (2)
- ☐ Up to 43": **SR24** (4)
- ☐ Up to 58": **SR24** (2) + **LR24** (2)
- ☐ Up to 72": **LR24** (4)
- ☐ Up to 90": **SR24** (2) + **LR24** (4)
- ☐ Up to 106": **LR24** (6)

OR.
- ☐ **CPRK** (2): 11" - 106" (See specification for more detail.)

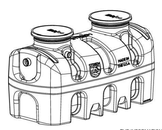
Additional Options

High Water Table Hold Down Kits (Choose One)
- ☐ **HDK-13:** With Steel Plates Included
- ☐ **HDK-14:** For Concrete Deadmen (By Others)
- ☐ **C24-M:** 2,000 lbs. Rated Bolted Composite Cover*
- ☐ **SS:** Slick Stick™ Oil Level Monitoring System**

*For above-grade installations.
**Monitoring system will raise covers by 3".



SECTION A-A



UPC ®

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF **STRIEM, LLC**. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF **STRIEM, LLC** IS PROHIBITED.

MODEL NUMBER:	OS-500		SPECIFICATION SHEET
DESCRIPTION: 100 GPM POLYETHYLENE HIGH EFFICIENCY OIL/WATER SEPARATOR			Striem Kansas City, KS Tel: 913-222-1500 orders@striemco.com www.striemco.com Made in the U.S.A
DWG BY: ENG	DATE: 7/24/2025	REV: 0	STRIEM

17 GREASE INTERCEPTOR DETAIL
NOT TO SCALE

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD SUITE 310
CHESTERFIELD, MO 63005
P: (314) 819-9189
www.theengenuity.com
Project ID 17534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS PROJECT ONLY. THEY SHALL NOT BE LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2025 - by ENGENUITY

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER

2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE MATERIAL AND ITEMS SHOWN ON THIS SHEET. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR OTHER DOCUMENTS NOT EXHIBITING THIS SEAL. SHALL NOT BE CONSIDERED PREPARED BY THE ENGINEER. THE ENGINEER HEREBY EXPRESSLY DISCLAIMS ANY ALL RESPONSIBILITY FOR SUCH PLAN, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

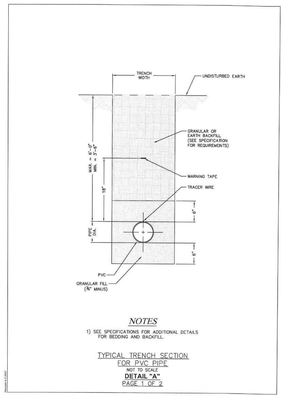
No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

SITE DETAILS

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

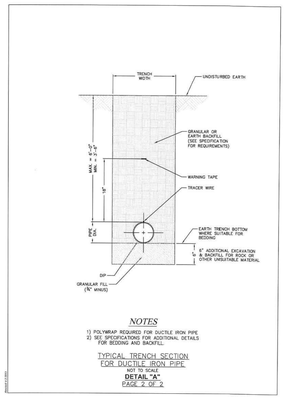
C801



NOTES

1) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

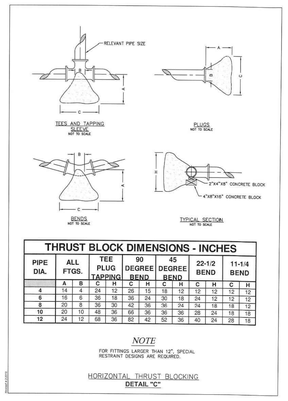
TYPICAL TRENCH SECTION
FOR PVC PIPE
NOT TO SCALE
DETAIL "A"
PAGE 1 OF 2



NOTES

1) POLYWRAP REQUIRED FOR DUCTILE IRON PIPE
2) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

TYPICAL TRENCH SECTION
FOR DUCTILE IRON PIPE
NOT TO SCALE
DETAIL "A"
PAGE 2 OF 2



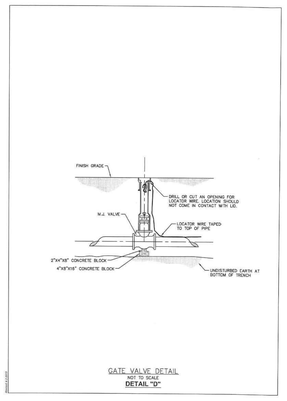
THRUST BLOCK DIMENSIONS - INCHES

PIPE DIA.	ALL FTGS.		TEE PLUG TAPPING		90 DEGREE BEND		45 DEGREE BEND		22-1/2 BEND		11-1/4 BEND	
	A	B	C	H	C	H	C	H	C	H	C	H
4	14	4	24	12	24	15	15	12	12	12	12	12
6	16	6	36	18	36	24	30	18	24	12	12	12
8	20	8	36	30	42	36	36	24	24	18	18	12
10	20	10	48	36	60	36	36	36	28	24	18	18
12	24	12	68	36	67	42	52	36	40	24	28	18

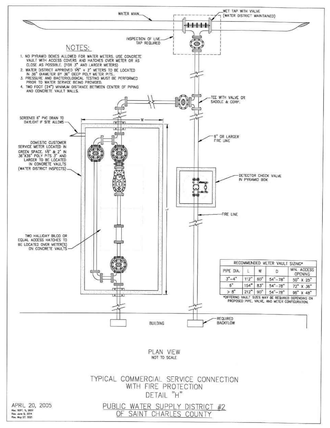
NOTE

FOR FITTINGS LARGER THAN 12", SPECIAL RESTRAINT DESIGNS ARE REQUIRED.

HORIZONTAL THRUST BLOCKING
DETAIL "C"



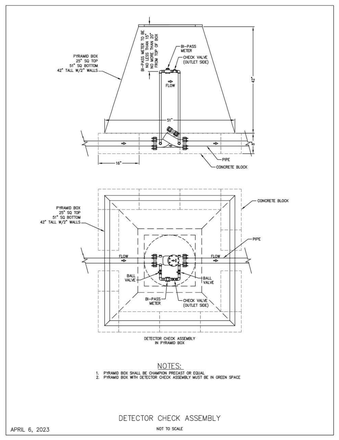
GATE VALVE DETAIL
NOT TO SCALE
DETAIL "D"



NOTES:
1. NO PYRAMID BOXES ALLOWED FOR WATER METERS. USE CONCRETE VAULT WITH ACCESS COVERS AND HANDLES OVER METER (NOT AS PICTURED) FOR METERS 4" AND LARGER.
2. WATER DISTRICT APPROVES 45° "L" 4" BETTER TO BE LOCATED OUTSIDE IN METER PIT AS SITE PLAN PERMITS.
3. PRESSURE AND BACTERIOLOGICAL TESTING MUST BE PERFORMED BEFORE ANY CONNECTIONS TO BUILDING.
4. TWO FOOT (24") MINIMUM DISTANCE BETWEEN CENTER OF PIPING AND CONCRETE VAULT WALLS.

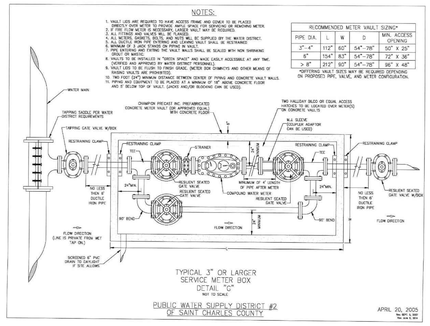
PLAN VIEW
NOT TO SCALE

TYPICAL COMMERCIAL SERVICE CONNECTION
WITH FIRE PROTECTION
DETAIL "H"
APRIL 20, 2025
PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY



NOTES:
1. PYRAMID BOX SHALL BE CHAMPION PRECAST OR EQUAL
2. PYRAMID BOX WITH DETECTOR CHECK ASSEMBLY MUST BE IN GREEN SPACE

DETECTOR CHECK ASSEMBLY
NOT TO SCALE
APRIL 6, 2023



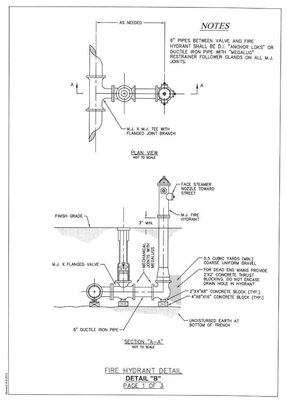
NOTES:
1. VAULT LIDS ARE REQUIRED TO HAVE ACCESS FRAME AND GRATE TO BE PLACED OVER METER AND PRESSURE TAPPED VALVE FOR SERVICING OR REMOVING METER.
2. 2" RED TUCK OR BETTER IS NOT TO BE USED ON METER PIT.
3. ALL FITTINGS AND VALVES ARE TO BE MECHANICAL JOINT.
4. ALL METERS AND METER SETTINGS SHALL BE SUPPLIED BY THE WATER DISTRICT.
5. ALL SOLDER, IRON PIPE SWEATING AND LEADING SHALL SHALL BE RESTRAINED.
6. ALL PIPE, VALVES, AND FITTINGS SHALL BE CLEANED.
7. PIPE ENTERING AND EXITING THE VAULT WALLS SHALL BE SEALED WITH NON SHRINKAGE GROUT OR MASTIC.
8. AS-BUILT INSTALLED IN "DETECTOR SPACE" AND MADE EASILY ACCESSIBLE AT ANY TIME, VERIFIED AND APPROVED BY WATER DISTRICT PERSONNEL.
9. VAULT LIDS TO BE FLUSH TO FINISH GRADE. (METER BOX DIAMETERS AND OTHER MEANS OF ACCESS TO BE APPROVED BY DISTRICT).
10. TWO FOOT (24") MINIMUM DISTANCE BETWEEN CENTER OF PIPING AND CONCRETE VAULT WALLS.
11. PIPING MUST CONFORM/ET TO BE PLACED AT A MINIMUM OF 18" ABOVE CONCRETE FLOOR AND 3" BELOW TOP OF VAULT. (UNDO HALLIDAY BUILDING DIM BE USED)

RECOMMENDED METER VAULT SIZING*

PIPE DIA	L	W	D	MIN. ACCESS OPENING
3"-4"	113"	63"	54"-78"	50" X 25"
6"	154"	83"	54"-78"	72" X 36"
>8"	213"	83"	54"-78"	96" X 48"

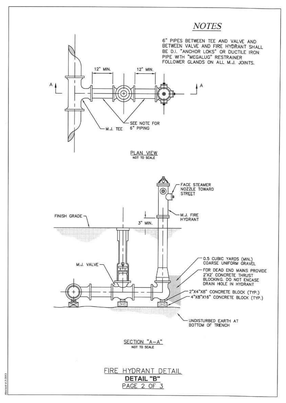
*OPTIONING VAULT SIZES MAY BE REQUIRED DEPENDING ON PROPOSED PIPE, VALVE, AND METER CONFIGURATION.

TYPICAL 3" OR LARGER
SERVICE METER BOX
DETAIL "J"
NOT TO SCALE
PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY
APRIL 20, 2025



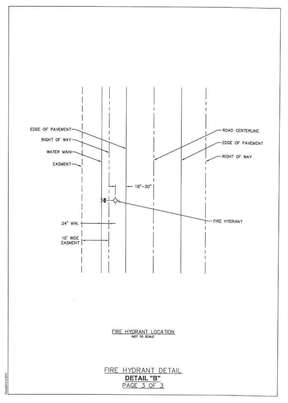
NOTES
6" PIPES BETWEEN VALVE AND FIRE HYDRANT SHALL BE D.I. "ANCHOR LOKS" OR DUCTILE IRON PIPE WITH "MEGALUG" OR EQUAL RETAINER FOLLOWER GLANDS ON ALL M.J. JOINTS.

FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 1 OF 3



NOTES
6" PIPES BETWEEN TEE AND VALVE AND BETWEEN VALVE AND FIRE HYDRANT SHALL BE D.I. "ANCHOR LOKS" OR DUCTILE IRON PIPE WITH "MEGALUG" OR EQUAL RETAINER FOLLOWER GLANDS ON ALL M.J. JOINTS.

FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 2 OF 3



FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 3 OF 3

18 PWSD#2 WATER DETAILS
NOT TO SCALE

UNDERGROUND LINES INSTRUCTION — **SPEC 23**
Customer Installed Pad Installations — Sheet 1 of 2
Protective Barrier Rail Installation for 15 kV

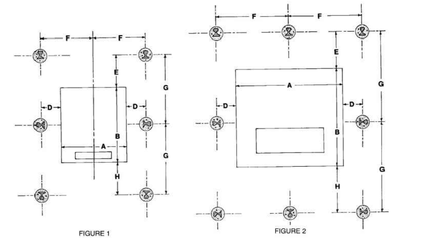


FIGURE 1 FIGURE 2

	TRANSFORMER SIZE	COMPOSITE PAD STOCK NUMBER	A	B	C	D	E	F	G	H
FIGURE 1	0-167 KVA 1Ø LIGHTWEIGHT PAD	12 06 164	42"	45"	4"	12"	15"	33"	40"	18"
FIGURE1	0-167 KVA 1Ø HEAVY PAD	12 06 198	42"	47"	4"	12"	15"	33"	40"	18"
FIGURE 2	75-750 KVA 3Ø RADIAL FEED	12 06 123	72"	66"	4"	32"	27"	68"	64"	36"
FIGURE 2	1000-2500 KVA, 3Ø RADIAL FEED	12 06 124	84"	72"	5"	32"	38"	74"	73"	36"
FIGURE 2	75-2500 KVA, 3Ø LOOP FEED	12 06 124	84"	72"	5"	32"	38"	74"	73"	36"

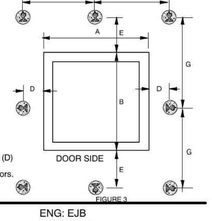


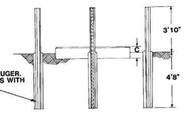
FIGURE 3

COMPOSITE SWITCH GEAR PAD STOCK NO.	FIGURE 3						
	A	B	C	D	E	F	G
12 06 109	69"	63"	36"	24"	36"	58.5"	67.5"
12 06 165	76"	74"	36"	24"	36"	62"	73"
12 06 165(Auto)**	76"	74"	36"	49"	36"	62"	73"

*C = Height or thickness of pad.
(Auto)** = Automated switchgears require larger side clearance (D) to open the doors on control boxes and motor operators.

UNDERGROUND DISTRIBUTION SPEC. Ameren ENG: EJB REV. NO: 4 REV. DATE: 07/15/14

UNDERGROUND LINES INSTRUCTION — **SPEC 23**
Customer Installed Pad Installations — Sheet 2 of 2
Protective Barrier Rail Installation for 15 kV



1. Barrier iron to be railroad rails, 8'6" long, 50–100 lbs. per yard. An acceptable alternate is 4" iron pipe, 8'6" long, concrete filled or see Dist. Std. 34 22 01 00 for a power installed bumper post.
2. Barriers on sides not accessible to vehicles may be omitted.
3. All materials and labor for protective barrier rail installation shall be provided by customer.
4. Customer is encouraged to paint barrier rails with yellow street marking lacquer.

MATERIAL INSTALLED BY CONTRACTOR
(DERIVED FROM CONSTRUCTION STANDARD 59 81 51 10)

Stk No.	Description		Qty.
68 05 024	Rail – Barrier, 8'6"	(Ea)	As Req'd.
11 04 105	Concrete – Premix	(Sk)	As Req'd.
30 57 025	Lacquer – Yellow	(Gal)	As Req'd.

CAUTION: Installation of barrier rails must be coordinated with electric conduit installation to avoid mutual interference.

UNDERGROUND DISTRIBUTION SPEC. Ameren ENG: EJB REV. NO: 4 REV. DATE: 07/15/14

19 AMEREN TRANSFORMER PAD DETAILS
NOT TO SCALE

ENGENUITY
BUILDING VALUE BY DESIGN
17057 N. OUTER FORTY ROAD
SUITE 210
CHESTERFIELD, MO 63005
P: (314) 819-9189
www.THEENGENUITY.com
Engenuity, LLC
F-2023 (01) 7534

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

THIS DRAWING AND THE DETAILS ON IT ARE THE SOLE PROPERTY OF THE ENGINEER AND MAY BE USED FOR THIS PROJECT ONLY. IT MAY NOT BE COPIED, LOANED, COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE OR PROJECT, WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
Copyright © 2023 BY ENGENUITY, LLC

STATE OF MISSOURI
SEAN M. ACKLEY
NUMBER PE-2009018679
PROFESSIONAL ENGINEER
2025-09-05
Sean M. Ackley
Civil Engineer
MO# PE-2009018679

THE PROFESSIONAL ENGINEERS SEAL AFFIXED TO THIS SHEET APPLIES ONLY TO THE SPECIFIC PROCESS, ESTIMATE OR REPORT ON THIS SHEET. ALL DRAWINGS, INSTRUMENTS OR DOCUMENTS PREPARED BY THIS ENGINEER AND THIS SEAL SHALL NOT BE CONSIDERED PREPARED BY THIS ENGINEER, AND THIS ENGINEER ASSUMES NO RESPONSIBILITY FOR SUCH PLANS, DRAWINGS OR DOCUMENTS NOT EXHIBITING THIS SEAL.

Revisions:

No.	Date	Description
1	2025-09-15	ADD. NO. 1

Sheet Info:

SITE DETAILS

Drawn By:	SMA
Checked By:	SMA
Project No.:	25-0170
Date:	2025-09-05

C802

FLOOR PLAN GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DOCUMENTS FOR ADDITIONAL INFORMATION.
3. INTERIOR WALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD.
4. REFER TO ROOM FINISH SCHEDULE, DOOR SCHEDULE AND WALL TYPES FOR ADDITIONAL INFORMATION.
5. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
6. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS TO REMAIN IN SERVICE AND TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
7. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.
8. REFER TO EQUIPMENT SCHEDULE FOR INFORMATION ON FURNITURE AND EQUIPMENT INDICATED ON PLAN.
9. PROVIDE CONTROL JOINTS ON THE STRIKE SIDE OF ALL DOOR JAMBS LOCATED IN NEW PARTITIONS.
10. PENETRATIONS THROUGH NEW FIRE RATED WALLS SHALL BE FIRESTOPPED BY THE RESPECTIVE TRADE CONTRACTOR. PROVIDE A FIRESTOPPING MATERIAL EQUAL TO THE FIRE RATING OF THE WALL, FLOOR, CEILING OR ROOF BEING PENETRATED.
11. ALL WALLS TO BE PARTITION TYPE P1 UNLESS NOTED OTHERWISE. REFER TO SHEET A601 FOR PARTITION TYPES.
12. REFER TO SPECIFICATIONS FOR REQUIRED INTERIOR SIGNAGE. COORDINATE FINAL LOCATION OF NON-ROOM SPECIFIC SIGNAGE WITH OWNER.
13. ALL PLUMBING WALLS AND EXTERIOR WINDOW HEADS/JAMBS THAT ARE TO HAVE GWB ARE TO HAVE MOISTURE RESISTANT GWB.
14. REFER TO SHEET A601 FOR TYPICAL TORNADO SHELTER INTERIOR SIGNAGE DETAILS.

KEYED NOTES - FLOOR PLAN

1	ACCESSIBLE DRINKING FOUNTAIN. REFER TO PLUMBING DOCUMENTS.
2	ACCESSIBLE WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
3	FURNITURE. N.I.C. - TYPICAL.
4	MOP BASIN. REFER TO THE PLUMBING DOCUMENTS.
5	SEMI RECESSED FIRE EXTINGUISHER CABINET (FPC-1) AND FIRE EXTINGUISHER (FE-1). AT RATED WALL LOCATIONS (REFER TO LIFE SAFETY PLANS), THE FIRE EXTINGUISHER CABINET IS TO BE A MODEL FOR USE IN RATED WALLS.
6	WALL MOUNTED FIRE EXTINGUISHER.
7	MULTI-FUNCTION DEVICE. REFER TO THE ELECTRICAL DOCUMENTS.
8	DISHWASHER. REFER TO EQUIPMENT PLAN.
9	STEEL LADDER TO ATTIC ACCESS HATCH.
10	INSTALL WALL BLOCKING AND POWER/DATA ROUGH-INS AT THE DESIGNATED LOCATION FOR TV LOCATION. VERIFY FINAL LOCATIONS/HEIGHT WITH THE OWNER PRIOR TO INSTALLATION. REFER TO ELECTRICAL DOCUMENTS.
11	ROLL-IN SHOWER. RESTROOM FLOOR TO SLOPE TO SHOWER DRAIN. REFER TO THE INTERIOR ELEVATIONS AND THE PLUMBING DOCUMENTS.
12	PROVIDE ICC 500 STORM SHELTER SIGNAGE.
13	ICE MACHINE. REFER TO EQUIPMENT PLAN.
14	REFRIGERATOR. REFER TO EQUIPMENT PLAN.
15	BUILT IN PLASTIC LAMINATE PANTRY CABINET WITH 5 ADJUATABLE SHELVES. SIZE TO PROVIDE OPENING FOR REFRIGERATOR.
16	METAL CABINETS WITH STAINLESS STEEL COUNTERTOP. REFER TO INTERIOR ELEVATIONS.
17	WINDOWS TO HAVE MOISTURE RESISTANT GYPSUM WALL BOARD AT HEADS AND JAMBS.
18	GEAR EXTRACTOR. REFER TO EQUIPMENT SCHEDULE.
19	GEAR DRYER. REFER TO EQUIPMENT SCHEDULE.
20	GEAR EXTRACTOR TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
21	SCBA. REFER TO EQUIPMENT SCHEDULE.
22	COMPRESSOR. REFER TO EQUIPMENT SCHEDULE.
23	SCBA TANKS. REFER TO EQUIPMENT SCHEDULE.
24	18" DEEP PLAM SHELF W/ COAT ROD (ON ADJUSTABLE WALL STANDARDS/BRACKETS).
25	GYM EQUIPMENT (BY OWNER). VERIFY QUANITY AND LOCATIONS WITH OWNER.
26	WASHER. REFER TO EQUIPMENT SCHEDULE.
27	DRYER. REFER TO EQUIPMENT SCHEDULE.
28	BED. REFER TO EQUIPMENT SCHEDULE.
29	PLASTIC LAMINATE WARDROBE CABINET.
30	PLASTIC LAMINATE DESK.
31	APP BAY TRENCH DRAINS. REFER TO PLUMBING DRAWINGS. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF SLOPED FLOORS.
32	SOLID SURFACE WINDOW SILL AT ALL WINDOWS.
33	RANGE. REFER TO EQUIPMENT PLAN.
34	SINK. REFER TO PLUMBING DRAWINGS.
36	DOWNSPOUTS
37	STAIRS AND STEEL PIPE RAILING. REFER TO STRUCTURAL.
38	METAL SHIPS LADDER. REFER TO STRUCTURAL.
39	METAL GRATE FLOORING. REFER TO STRUCTURAL.
40	STEEL GUARD RAILING. REFER TO STRUCTURAL.
41	HOSE RACK. REFER TO EQUIPMENT SCHEDULE.
42	DISPLAY CASE
43	BABY BOX. REFER TO EQUIPMENT SCHEDULE. VERIFY ROUGH OPENING REQUIREMENTS.
44	GATE FOR ACCESS TO REPELLING STATION.
45	RECESSED CUBBY.
46	STEEL LADDER TO ROOF ACCESS HATCH. REFER TO SHEET A141 FOR LADDER DETAILS.
47	OFFICE 102 TO HAVE REMOTE PUSH BUTTON CONTROL OF DOOR 101. VERIFY FINAL LOCATION WITH OWNER.
48	OSHA SAFETY GATE FOR RAPPEL TRAINING ACCESS. REFER TO STRUCTURAL.
49	3'-0" DIA. GALVANIZED HOSE DRYING REEL (ABOVE). VERIFY FINAL LOCATION WITH OWNER. REFER TO STRUCTURAL.
50	RAPPEL TRAINING AREA. REFER TO STRUCTURAL.
51	PLASTIC LAMINATE NIGHT STAND.
52	LOUVER. REFER TO MECHANICAL.

1 A101 PARTIAL FLOOR PLAN - WEST
3/16" = 1'-0"

sfCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

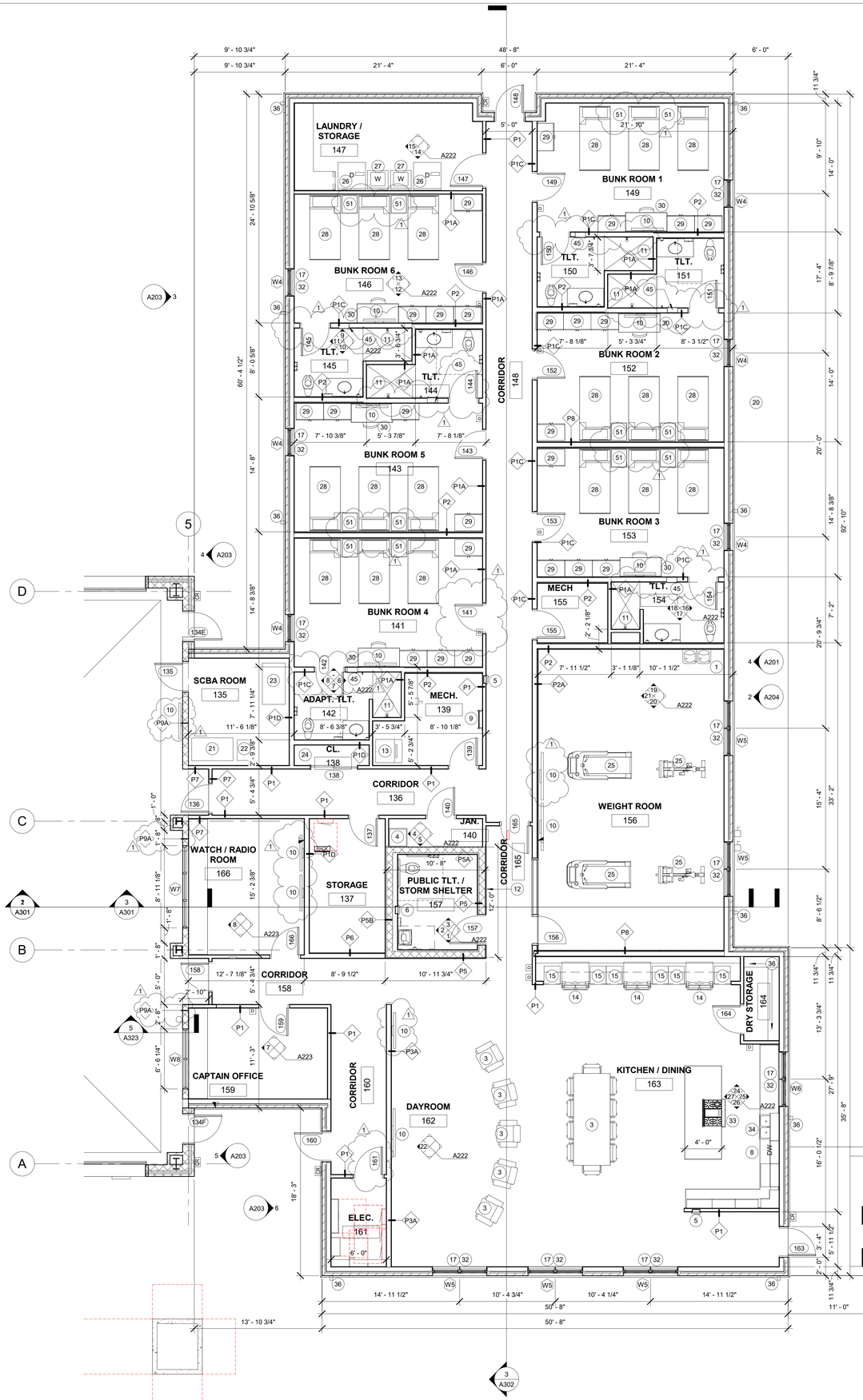
Sheet Info:

PARTIAL FLOOR PLAN - WEST

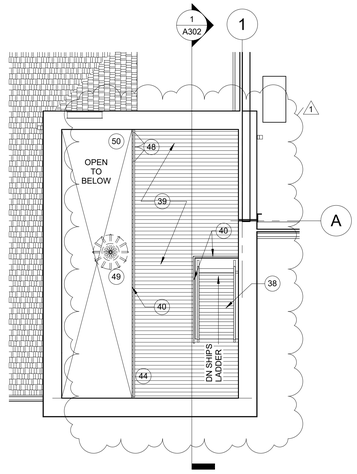
Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A101

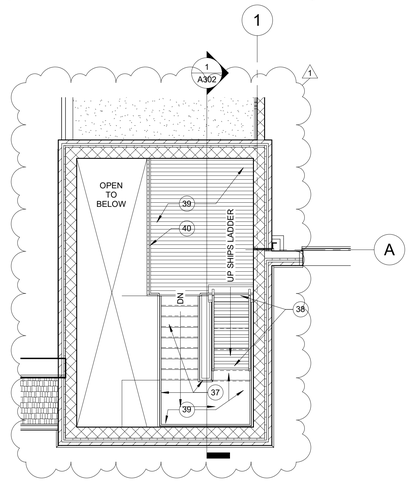
9/15/2025 9:12:09 PM



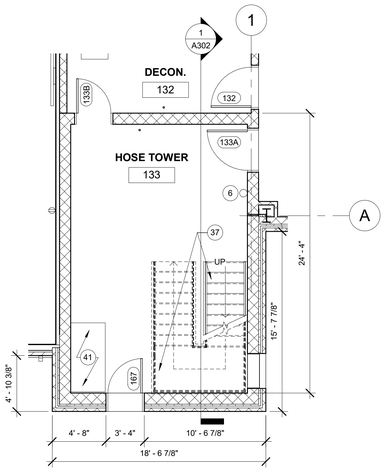
1 A102 PARTIAL FLOOR PLAN - EAST
3/16" = 1'-0"



4 A102 HOSE TOWER UPPER LEVEL
3/16" = 1'-0"



3 A102 HOSE TOWER MEZZ
3/16" = 1'-0"



2 A102 HOSE TOWER FLOOR PLAN
3/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DOCUMENTS FOR ADDITIONAL INFORMATION.
3. INTERIOR WALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD.
4. REFER TO ROOM FINISH SCHEDULE, DOOR SCHEDULE AND WALL TYPES FOR ADDITIONAL INFORMATION.
5. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
6. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS TO REMAIN IN SERVICE AND TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
7. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.
8. REFER TO EQUIPMENT SCHEDULE FOR INFORMATION ON FURNITURE AND EQUIPMENT INDICATED ON PLAN.
9. PROVIDE CONTROL JOINTS ON THE STRIKE SIDE OF ALL DOOR JAMBS LOCATED IN NEW PARTITIONS.
10. PENETRATIONS THROUGH NEW FIRE RATED WALLS SHALL BE FIRESTOPPED BY THE RESPECTIVE TRADE CONTRACTOR. PROVIDE A FIRESTOPPING MATERIAL EQUAL TO THE FIRE RATING OF THE WALL, FLOOR, CEILING OR ROOF BEING PENETRATED.
11. ALL WALLS TO BE PARTITION TYPE P1 UNLESS NOTED OTHERWISE. REFER TO SHEET A601 FOR PARTITION TYPES.
12. REFER TO SPECIFICATIONS FOR REQUIRED INTERIOR SIGNAGE. COORDINATE FINAL LOCATION OF NON-ROOM SPECIFIC SIGNAGE WITH OWNER.
13. ALL PLUMBING WALLS AND EXTERIOR WINDOW HEADS/JAMBS THAT ARE TO HAVE GWB ARE TO HAVE MOISTURE RESISTANT GWB.
14. REFER TO SHEET A601 FOR TYPICAL TORNADO SHELTER INTERIOR SIGNAGE DETAILS.

KEYED NOTES - FLOOR PLAN

1	ACCESSIBLE DRINKING FOUNTAIN. REFER TO PLUMBING DOCUMENTS.
2	ACCESSIBLE WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
3	FURNITURE. N.I.C. - TYPICAL.
4	MOP BASIN. REFER TO THE PLUMBING DOCUMENTS.
5	SEMI RECESSED FIRE EXTINGUISHER CABINET (FPC-1) AND FIRE EXTINGUISHER (FE-1). AT RATED WALL LOCATIONS (REFER TO LIFE SAFETY PLANS), THE FIRE EXTINGUISHER CABINET IS TO BE A MODEL FOR USE IN RATED WALLS.
6	WALL MOUNTED FIRE EXTINGUISHER.
7	MULTI-FUNCTION DEVICE. REFER TO THE ELECTRICAL DOCUMENTS.
8	DISHWASHER. REFER TO EQUIPMENT PLAN.
9	STEEL LADDER TO ATTIC ACCESS HATCH.
10	INSTALL WALL BLOCKING AND POWER/DATA ROUGH-INS AT THE DESIGNATED LOCATION FOR TV LOCATION. VERIFY FINAL LOCATIONS/HEIGHT WITH THE OWNER PRIOR TO INSTALLATION. REFER TO ELECTRICAL DOCUMENTS.
11	ROLL-IN SHOWER. RESTROOM FLOOR TO SLOPE TO SHOWER DRAIN. REFER TO THE INTERIOR ELEVATIONS AND THE PLUMBING DOCUMENTS.
12	PROVIDE ICC 500 STORM SHELTER SIGNAGE.
13	ICE MACHINE. REFER TO EQUIPMENT PLAN.
14	REFRIGERATOR. REFER TO EQUIPMENT PLAN.
15	BUILT IN PLASTIC LAMINATE PANTRY CABINET WITH 5 ADJUATABLE SHELVES. SIZE TO PROVIDE OPENING FOR REFRIGERATOR.
16	METAL CABINETS WITH STAINLESS STEEL COUNTERTOP. REFER TO INTERIOR ELEVATIONS.
17	WINDOWS TO HAVE MOISTURE RESISTANT GYPSUM WALL BOARD AT HEADS AND JAMBS.
18	GEAR EXTRACTOR. REFER TO EQUIPMENT SCHEDULE.
19	GEAR DRYER. REFER TO EQUIPMENT SCHEDULE.
20	GEAR EXTRACTOR TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
21	SCBA. REFER TO EQUIPMENT SCHEDULE.
22	COMPRESSOR. REFER TO EQUIPMENT SCHEDULE.
23	SCBA TANKS. REFER TO EQUIPMENT SCHEDULE.
24	18" DEEP PLAM SHELF W/ COAT ROD (ON ADJUSTABLE WALL STANDARDS/BRACKETS).
25	GYM EQUIPMENT (BY OWNER). VERIFY QUANITY AND LOCATIONS WITH OWNER.
26	WASHER. REFER TO EQUIPMENT SCHEDULE.
27	DRYER. REFER TO EQUIPMENT SCHEDULE.
28	BED. REFER TO EQUIPMENT SCHEDULE.
29	PLASTIC LAMINATE WARDROBE CABINET.
30	PLASTIC LAMINATE DESK.
31	APP BAY TRENCH DRAINS. REFER TO PLUMBING DRAWINGS. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF SLOPED FLOORS.
32	SOLID SURFACE WINDOW SILL AT ALL WINDOWS.
33	RANGE. REFER TO EQUIPMENT PLAN.
34	SINK. REFER TO PLUMBING DRAWINGS.
36	DOWNSPOUTS
37	STAIRS AND STEEL PIPE RAILING. REFER TO STRUCTURAL.
38	METAL SHIPS LADDER. REFER TO STRUCTURAL.
39	METAL GRATE FLOORING. REFER TO STRUCTURAL.
40	STEEL GUARD RAILING. REFER TO STRUCTURAL.
41	HOSE RACK. REFER TO EQUIPMENT SCHEDULE.
42	DISPLAY CASE
43	BABY BOX. REFER TO EQUIPMENT SCHEDULE. VERIFY ROUGH OPENING REQUIREMENTS.
44	GATE FOR ACCESS TO REPELLING STATION.
45	RECESSED CUBBY.
46	STEEL LADDER TO ROOF ACCESS HATCH. REFER TO SHEET A141 FOR LADDER DETAILS.
47	OFFICE 102 TO HAVE REMOTE PUSH BUTTON CONTROL OF DOOR 101. VERIFY FINAL LOCATION WITH OWNER.
48	OSHA SAFETY GATE FOR RAPPEL TRAINING ACCESS. REFER TO STRUCTURAL.
49	3'-0" DIA. GALVANIZED HOSE DRYING REEL (ABOVE). VERIFY FINAL LOCATION WITH OWNER. REFER TO STRUCTURAL.
50	RAPPEL TRAINING AREA. REFER TO STRUCTURAL.
51	PLASTIC LAMINATE NIGHT STAND.
52	LOUVER. REFER TO MECHANICAL.

sfCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014002859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL FLOOR PLAN - EAST

Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A102

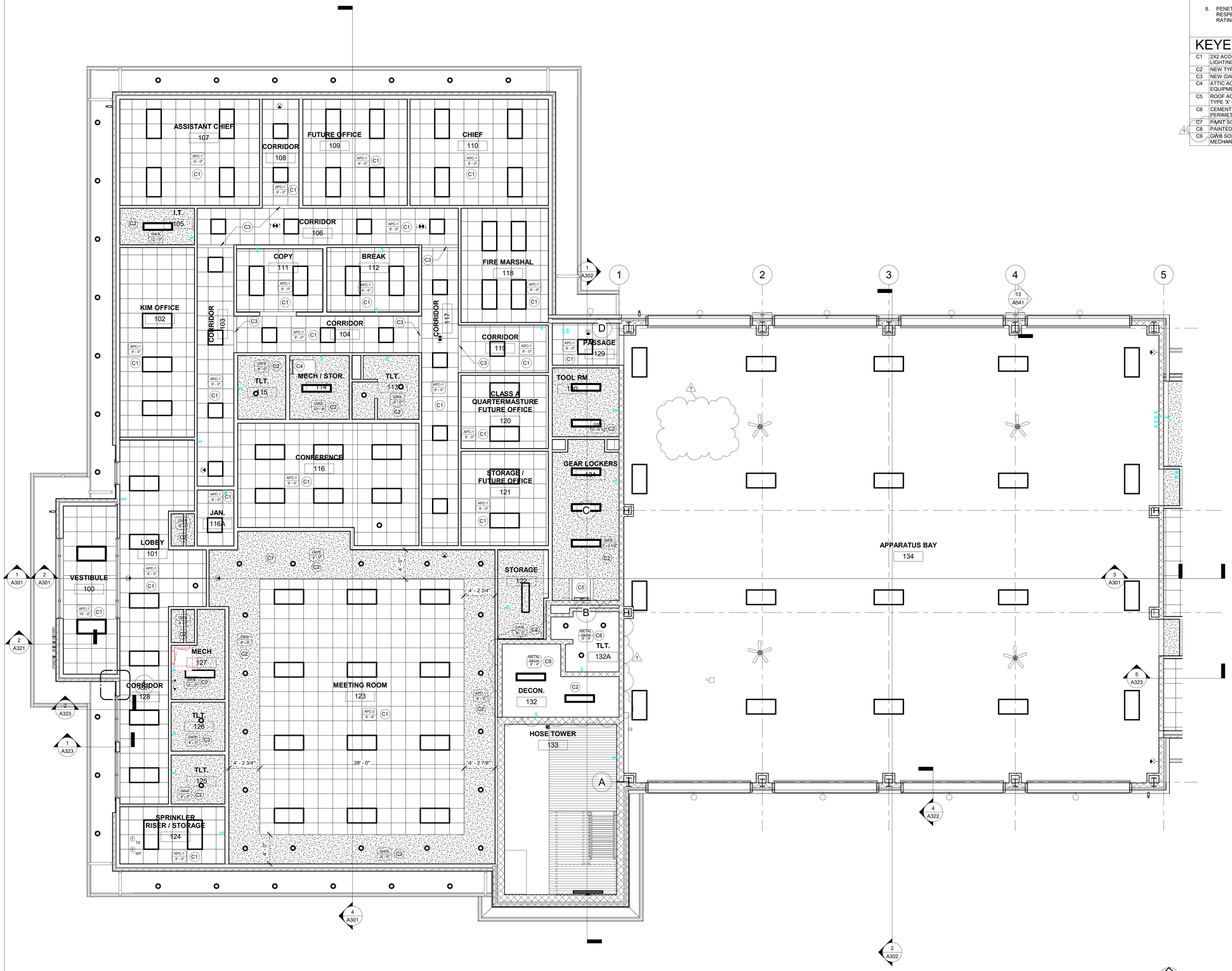
9/15/2025 9:12:14 PM

REFLECTED CEILING GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DOCUMENTS FOR ADDITIONAL INFORMATION.
   2.REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION.
3. INTERIOR WALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD.
4. REFER TO ROOM FINISH SCHEDULE FOR CEILING HEIGHTS AND TYPES.
5. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
6. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS.
7. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.
8. PENETRATIONS THROUGH NEW FIRE RATED WALLS SHALL BE FIRESTOPPED BY THE RESPECTIVE TRADE CONTRACTOR. PROVIDE A FIRESTOPPING MATERIAL EQUAL TO THE FIRE RATING OF THE WALL, FLOOR, CEILING OR ROOF BEING PENETRATED.

KEYED NOTES - REFLECTED CEILING PLAN

C1	2X2 ACOUSTIC PANEL CEILING TILES/GRID SYSTEM. REFER TO HVAC AND ELECTRICAL DOCUMENTS FOR LIGHTING AND DIFFUSER LOCATIONS.
C2	NEW TYPE "X" GWB CEILING (PAINTED).
C3	NEW GWB BULKHEAD (PAINTED). BOTTOM OF BULKHEAD TO BE 1" BELOW LOWEST ADJACENT CEILING.
C4	ATTIC ACCESS HATCH AND LADDER. PROVIDE PLYWOOD WALKWAY IN ATTIC TO ACCESS MECHANICAL EQUIPMENT. COORDINATE WITH MEP.
C5	ROOF ACCESS LADDER AND ROOF HATHC ABOVE. PROVIDE 2X6 WALLS ON SIDES OF OPENING WITH 5/8" TYPE 'X' GWB AND R-20 BATT INSULATION TO UNDERSIDE OF ROOF DECK.
C6	CEMENT BOARD SOFFIT PANELS OVER 7/16" ZIP SHEATHING. PROVIDE CEMENT BOARD TRIM AT SOFFIT PERIMETER AND AT PANEL EDGES. PAINT.
C7	PAINT SOFFIT PT-4.
C8	PAINTED METAL DECK.
C9	GWB SOFFIT AND FRAMING FOR SUPPORT OF EXHAUST HOOD. COORDINATE REQUIREMENTS WITH MECHANICAL.



1 A121 REFLECTED CEILING PLAN - WEST
3/16" = 1'-0"

seCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014039359
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL REFLECTED CEILING PLAN - WEST

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A121

9/15/2025 9:12:17 PM

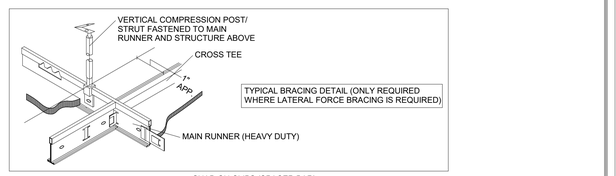
REFLECTED CEILING GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DOCUMENTS FOR ADDITIONAL INFORMATION.
   2.REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION.
3. INTERIOR WALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD.
4. REFER TO ROOM FINISH SCHEDULE FOR CEILING HEIGHTS AND TYPES.
5. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
6. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS.
7. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.
8. PENETRATIONS THROUGH NEW FIRE RATED WALLS SHALL BE FIRESTOPPED BY THE RESPECTIVE TRADE CONTRACTOR. PROVIDE A FIRESTOPPING MATERIAL EQUAL TO THE FIRE RATING OF THE WALL, FLOOR, CEILING OR ROOF BEING PENETRATED.

KEYED NOTES - REFLECTED CEILING PLAN

C1	2X2 ACOUSTIC PANEL CEILING TILES/GRID SYSTEM. REFER TO HVAC AND ELECTRICAL DOCUMENTS FOR LIGHTING AND DIFFUSER LOCATIONS.
C2	NEW TYPE "X" GWB CEILING (PAINTED).
C3	NEW GWB BULKHEAD (PAINTED). BOTTOM OF BULKHEAD TO BE 1" BELOW LOWEST ADJACENT CEILING.
C4	ATTIC ACCESS HATCH AND LADDER. PROVIDE PLYWOOD WALKWAY IN ATTIC TO ACCESS MECHANICAL EQUIPMENT. COORDINATE WITH MEP.
C5	ROOF ACCESS LADDER AND ROOF HATHC ABOVE. PROVIDE 2X6 WALLS ON SIDES OF OPENING WITH 5/8" TYPE 'X' GWB AND R-20 BATT INSULATION TO UNDERSIDE OF ROOF DECK.
C6	CEMENT BOARD SOFFIT PANELS OVER 7/16" ZIP SHEATHING. PROVIDE CEMENT BOARD TRIM AT SOFFIT PERIMETER AND AT PANEL EDGES. PAINT.
C7	PAINT SOFFIT PT-4.
C8	PAINTED METAL DECK.
C9	GWB SOFFIT AND FRAMING FOR SUPPORT OF EXHAUST HOOD. COORDINATE REQUIREMENTS WITH MECHANICAL.

1 A122 REFLECTED CEILING PLAN - EAST
3/16" = 1'-0"



NOTES (SEISMIC DESIGN CATEGORY D CEILINGS):

1. ALL GRID TO BE HEAVY DUTY.
2. ALL VERTICAL HANGER WIRES TO BE STRAIGHT, 12 GA. MINIMUM AT A MAXIMUM OF 4'-0" O.C.
3. VERTICAL HANGER WIRES MUST BE SHARPLY BENT AND WRAPPED WITH THREE TURNS IN 3" OR LESS (FOR FIELD TIED CONNECTIONS).
4. HANGER WIRES MAY NOT ATTACH TO OR BEND AROUND INTERFERING EQUIPMENT. USE TRAPEZES TO AVOID OBSTACLES.
5. LATERAL FORCE BRACING IS ONLY REQUIRED FOR CEILINGS GREATER THAN 1,000 SF.
   A. INSTALL 4-WAY DIAGONAL 12 GA. WIRE BRACING & VERTICAL STRUT EVERY 12'-0" O.C. MAXIMUM EACH WAY ON MAIN RUNNERS, 2" MAXIMUM FROM CROSS TEES, AND WITHIN 6'-0" OF WALLS. WIRES ARE NOT SHOWN HERE FOR CLARITY. POST IS MADE UP OF 3/4" STEEL TUBING WITH .049" WALL THICKNESS. MAXIMUM UNSUPPORTED LENGTH IS 5'-2". IF MORE THAN 5'-2" IS REQUIRED, NOTIFY ARCHITECT. POST TO HAVE SPRING AND CONNECTION FITTINGS AT TOP AND BOTTOM. (RIGID BRACING TO LIMIT DEFLECTION TO 1/4" UNDER SEISMIC ACTION). INSTALL ACCORDING TO MANUFACTURER'S DIRECTIONS. POST ASSEMBLIES ARE AVAILABLE FROM DONN CORPORATION.
   B. LATERAL FORCE BRACING CONNECTION STRENGTH MUST BE A MINIMUM OF 250 LBS.

NOTE: COMPLY WITH CISCA RECOMMENDATIONS AND IBC/ASTM/ASCE REQUIREMENTS FOR SEISMIC DESIGN CATEGORY D.
NOTE: PROVIDE SEISMIC BRACING FOR LIGHT FIXTURES TO MEET CODE.

2 A122 CEILING SUSPENSION DETAIL - TYPICAL.
1/8" = 1'-0"

seCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL REFLECTED CEILING PLAN - EAST

Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A122

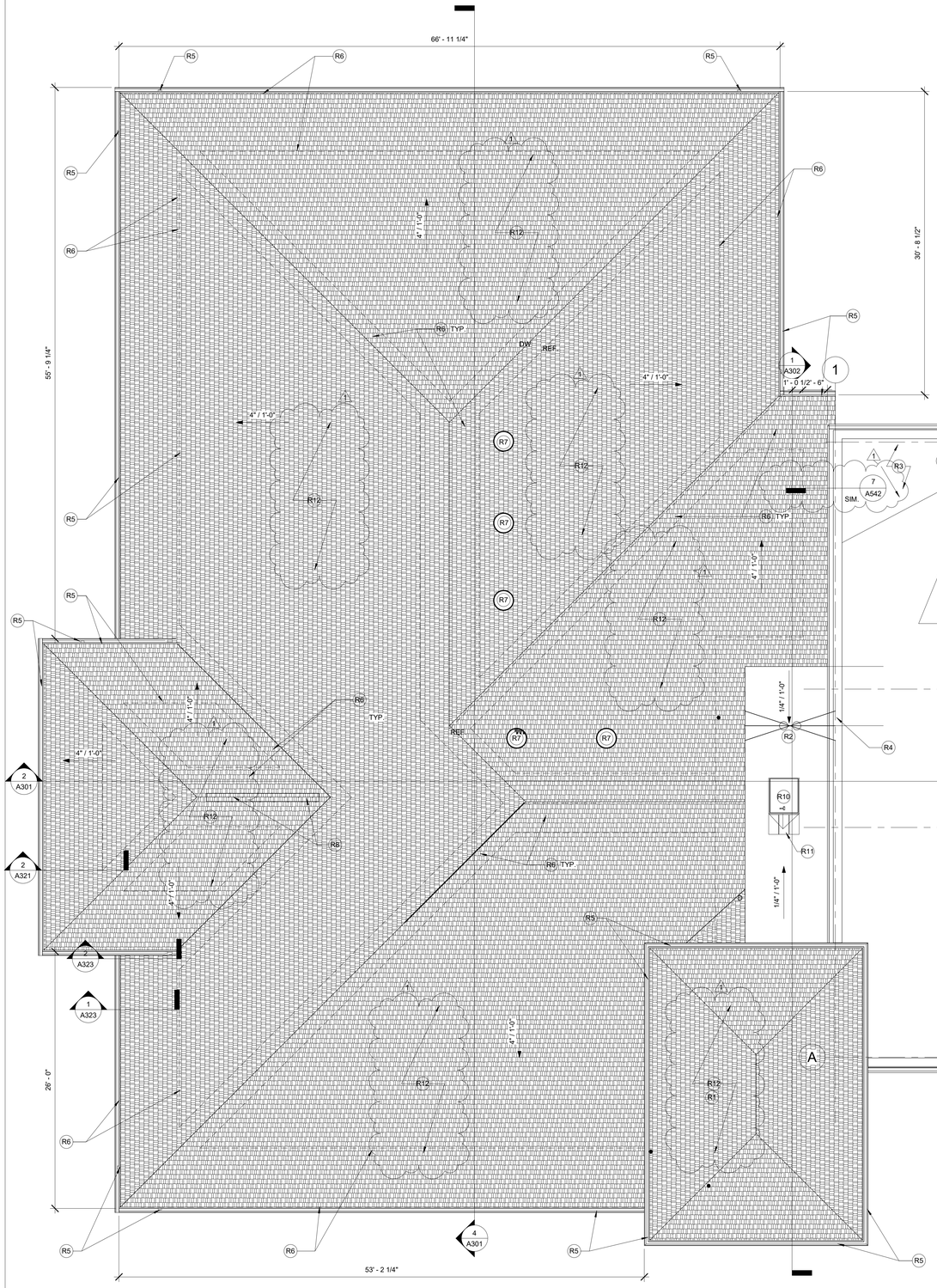
9/15/2025 9:12:20 PM

ROOF PLAN GENERAL NOTES

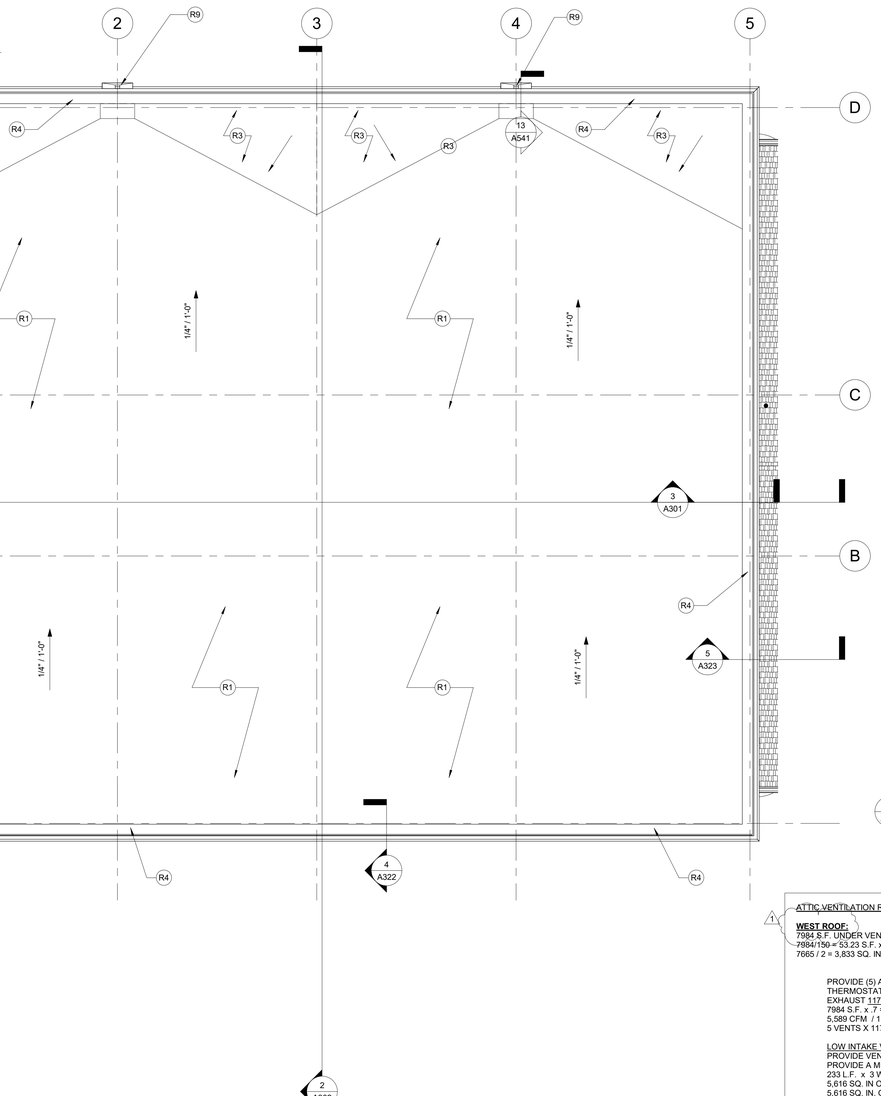
1	ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2	REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION.
3	THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
4	CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

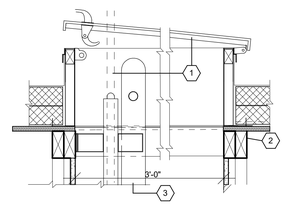
KEYED NOTES - ROOF PLAN

R1	60 MIL. FULLY ADHERED TPO ROOFING MEMBRANE OVER 2 LAYERS OF R-15 POLYISO INSULATION (BOTTOM LAYER MECHANICALLY FASTENED, TOP LAYER ADHERED - STAGGER JOINTS) OVER 6 MIL VAPOR BARRIER OVER 1/4" ROOF BOARD OVER METAL DECK OVER SLOPED ROOF STRUCTURE. REFER TO STRUCTURAL AND MEP DOCUMENTS.
R2	ROOF DRAIN AND OVERFLOW. ROOF DRAIN DROP TO BE ROUTED TO STORM SEWER PIPING. OVERFLOW DRAIN DROP TO BE PIPED TO SHEEPS TONGUE THAT SPILLS ON SITE. REFER TO PLUMBING AND CIVIL DOCUMENTS.
R3	POLYISO INSULATION ROOF CRICKET OVER BASE ROOF INSULATION (1/2" PER 1'-0" CRICKET SLOPE).
R4	PREFINISHED ALUMINUM COPING.
R5	PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS.
R6	ICE & WATER GUARD. EXTEND FROM EDGE OF EAVE AND RAKE TO MINIMUM 24" BEYOND INSIDE FACE OF EXTERIOR WALL LINE AND 36" FROM RIDGE & 18" ON EACH SIDE OF HIP/VALLEY.
R7	POWER ROOF VENTILATOR. SEE VENTILATION NOTES THIS SHEET.
R8	RIDGE VENT. SEE VENTILATION NOTES THIS SHEET.
R9	SCUPPER AND CONDUCTOR HEAD. REFER TO DETAIL
R10	ROOF HATCH. REFER TO 2/141.
R11	ROOF WALK PADS. TYPICAL.
R12	ROOF CONSTRUCTION: ASPHALT SHINGLES, 30# ROOFING FELT, 5/8" EXTERIOR GRADE PLYWOOD, PRE-ENGINEERED ROOF TRUSSES.

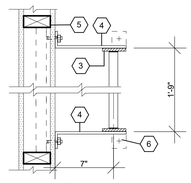


1 A141 ROOF PLAN - WEST
3/16" = 1'-0"





SECTION



PLAN

KEYED NOTES:

1. ROOF SCUTTLE - 2'-6" X 3'-0" ROOF HATCH WITH "LADDER-UP" SAFETY POST MODEL S-20 BY BILCO CO. OR EQUAL. SECURE SCUTTLE TO ROOF FRAMING WITH THRU BOLTS ACCORDING TO MANUFACTURER'S DIRECTIONS. HINGE PINS ARE TO BE WELDED NON-REMOVABLE.
2. REFER TO STRUCTURAL DOCUMENTS FOR GIRDER TRUSS FRAMING AT PERIMETER OF OPENING
3. 2 1/2" X 3/8" FLAT STEEL BAR SIDE RAILS, AND 1" DIA. STEEL RUNGS PUNCHED INTO RAILS 12" CENTERS AND WELDED RAILS TO BE CAPABLE OF WITHSTANDING 300 LB. LOAD.
4. PROVIDE 2 1/2" X 3/8" THICK FLAT BENT STEEL BRACKETS AT MAX. 4'-0" CENTERS. WELD TO SIDE RAILS. ANCHOR TOP TO GIRDER TRUSS FRAMING.
5. AT WOOD STUD WALL, PROVIDE 1 1/2" C.R. STEEL REINFORCING CHANNELS WITH WELDED 3/8" THRU BOLTS TO RECEIVE BRACKETS. ANCHOR TO STUDS W/ STELL ANGLE MOUNTING BRACKETS.
6. PROVIDE 2 1/2" X 2 1/2" X 3/8" WELDED CLIP ANGLES SECURED TO CONCRETE FLOOR WITH 1/2" X 2 3/4" WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.

2 A141 ROOF ACCESS LADDER AND HATCH DETAILS
1 1/2" = 1'-0"

1 ATTIC VENTILATION REQUIREMENTS:

WEST ROOF:
7984 S.F. UNDER VENTILATED ROOF
7984/150 = 53.23 S.F. x 144 = 7,665 SQ. IN.
7665 / 2 = 3,833 SQ. IN HIGH / 3,833 SQ. IN LOW

PROVIDE (5) ATLAS HIGHPOINT POWER VENT HT OR EQUAL (COLOR TO BE SELECTED) W/ AUTOMATIC THERMOSTAT / HUMIDISTAT PROVIDE VENTED ALUMINUM SOFFIT..ONE HIGHPOINT POWER VENT HT CAN EXHAUST 1170 CFM.
7984 S.F. x 7 = 5,589 CFM
5,589 CFM / 1170 CFM = 4.8 VENTS REQUIRED.
5 VENTS X 1170 CFM = 5,850 CFM / 150 = 39 S.F. X 144 = 5,616 SQ. IN.

LOW INTAKE VENTILATION REQUIRED
PROVIDE VENTED ALUMINUM SOFFIT.
PROVIDE A MINIMUM OF 5,616 SQ. IN. OF INTAKE AIRFLOW IN SOFFIT.
233 L.F. x 3 WIDE = 699 S.F. OF SOFFIT.
5,616 SQ. IN OF VENTILATION REQUIRED
5,616 SQ. IN. OF VENTILATION REQUIRED / 699 OF SOFFIT AREA = 8.03 NET FREE AIR PER SQ. FT REQUIRED

VESTIBULE:
202 S.F./150 = 1.35 S.F. x 144 SQ. IN. = 195 SQ. IN.
195/2 = 98 SQ. IN HIGH / 98 SQ. IN LOW

HIGH EXHAUST VENTILATION REQUIRED: 98 SQ. IN
GAF RIDGE VENTS OR EQUAL: 13 LF X 9 SQ. IN = (117 SQ. IN)

seCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

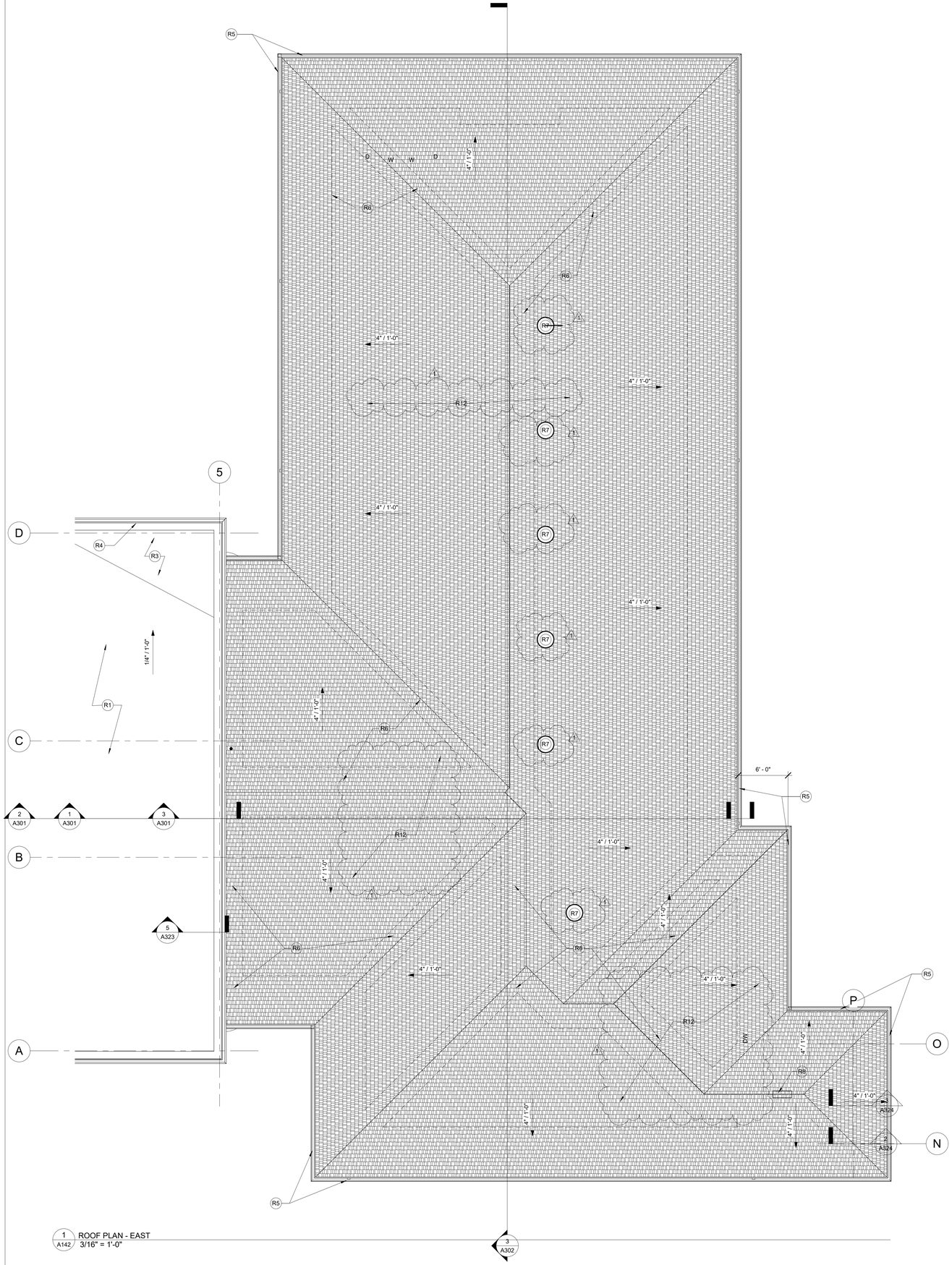
Sheet Info:

PARTIAL ROOF PLAN - WEST

Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A141

9/15/2025 9:12:23 PM



9/15/2025 9:12:25 PM

ROOF PLAN GENERAL NOTES

1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.

2 REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION.

3 THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.

4 CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - ROOF PLAN

R1	60 MIL. FULLY ADHERED TPO ROOFING MEMBRANE OVER 2 LAYERS OF R-15 POLYISO INSULATION (BOTTOM LAYER MECHANICALLY FASTENED, TOP LAYER ADHERED - STAGGER JOINTS) OVER 6 MIL VAPOR BARRIER OVER 1/4" ROOF BOARD OVER METAL DECK OVER SLOPED ROOF STRUCTURE. REFER TO STRUCTURAL AND MEP DOCUMENTS.
R2	ROOF DRAIN AND OVERFLOW. ROOF DRAIN DROP TO BE ROUTED TO STORM SEWER PIPING. OVERFLOW DRAIN DROP TO BE PIPED TO SHEEPS TONGUE THAT SPILLS ON SITE. REFER TO PLUMBING AND CIVIL DOCUMENTS.
R3	POLYISO INSULATION ROOF CRICKET OVER BASE ROOF INSULATION (1/2" PER 1'-0" CRICKET SLOPE).
R4	PREFINISHED ALUMINUM COPING.
R5	PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS.
R6	ICE & WATER GUARD. EXTEND FROM EDGE OF EAVE AND RAKE TO MINIMUM 24" BEYOND INSIDE FACE OF EXTERIOR WALL LINE AND 36" FROM RIDGE & 18" ON EACH SIDE OF HIP/VALLEY.
R7	POWER ROOF VENTILATOR. SEE VENTILATION NOTES THIS SHEET.
R8	RIDGE VENT. SEE VENTILATION NOTES THIS SHEET.
R9	SCUPPER AND CONDUCTOR HEAD. REFER TO DETAIL _____
R10	ROOF HATCH. REFER TO 2/141
R11	ROOF WALK PADS. TYPICAL.
R12	ROOF CONSTRUCTION: ASPHALT SHINGLES, 30# ROOFING FELT, 5/8" EXTERIOR GRADE PLYWOOD, PRE-ENGINEERED ROOF TRUSSES.

1

ATTIC VENTILATION REQUIREMENTS:

EAST ROOF:
8612 S.F. UNDER VENTILATED ROOF
8612/150 = 57.41 S.F. x 144 = 8,267 SQ. IN.
8,267 / 2 = 4,134 SQ. IN HIGH / 4,134 SQ. IN LOW

PROVIDE (6) POWER VENTILATORS (COLOR TO BE SELECTED). EACH VENTILATOR PROVIDES:
1170 CFM PER VENTILATOR.
8612 S.F. x .7 = 6,029 CFM
6,029 CFM / 1170 CFM = 5.15 VENTS REQUIRED.
6 VENTS X 1170 CFM = 7,020 CFM / 150 = 47 S.F. X 144 = 6,768 SQ. IN.

LOW INTAKE VENTILATION REQUIRED
PROVIDE VENTED ALUMINUM SOFFIT.
PROVIDE A MINIMUM OF 6,768 SQ. IN. OF INTAKE AIRFLOW IN SOFFIT.
365 L.F. x 3 WIDE = 1,095 S.F. OF SOFFIT:
6,768 SQ. IN OF VENTILATION REQUIRED
6,768 SQ. IN. OF VENTILATION REQUIRED / 1,095 OF SOFFIT AREA = 6.18 NET FREE AIR PER SQ. FT REQUIRED

SE/Coady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL ROOF PLAN - EAST

Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

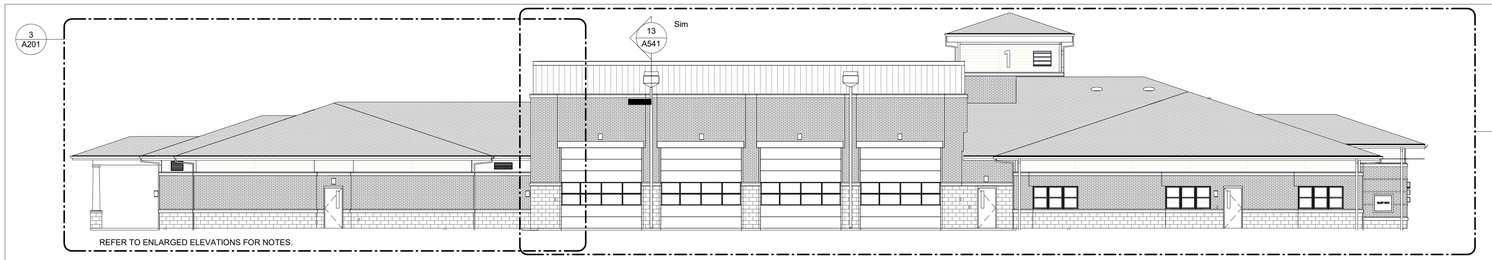
A142

EXTERIOR ELEVATION GENERAL NOTES

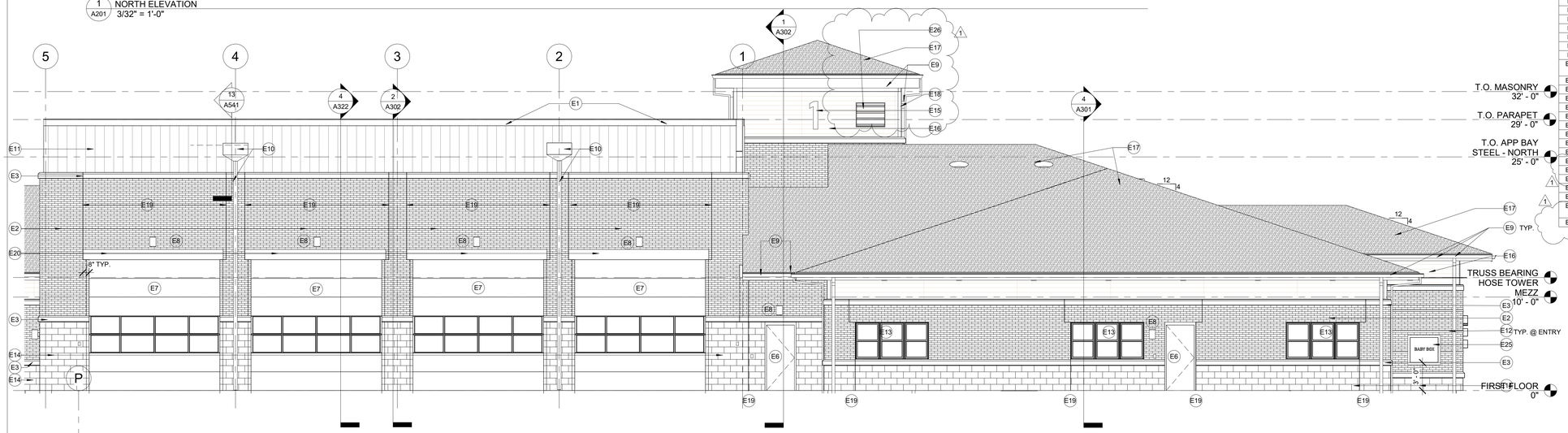
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.
3. EXTERIOR WALL DIMENSIONS ARE FROM FACE OF FOUNDATION/SHEATHING.
4. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
5. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS AND TO PROVIDE FOR THE TIMELY INSTALLATION OF EQUIPMENT, PIPING, ETC.
6. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - EXTERIOR ELEVATIONS

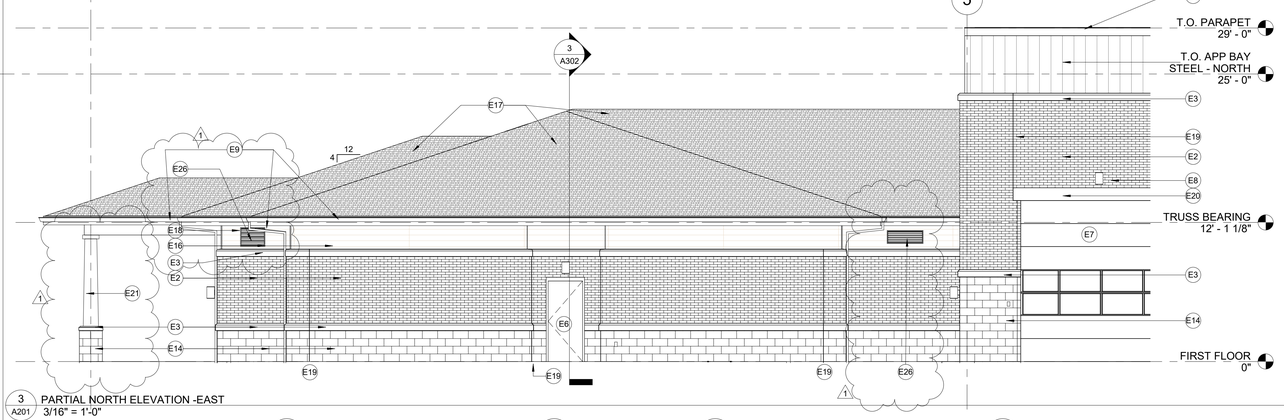
E1	PREFINISHED ALUMINUM COPING.
E2	FACE BRICK. (BRICK 1)
E3	CAST STONE SILL.
E4	ALUMINUM STOREFRONT WINDOW. REFER TO WINDOW TYPES, SHEET A601.
E5	ALUMINUM STOREFRONT ENTRANCE. REFER TO DOOR FRAME TYPES, SHEET A601.
E6	INSULATED HOLLOW METAL ENTRANCE DOOR. REFER TO FLOOR PLAN AND DOOR SCHEDULE.
E7	INSULATED OVERHEAD DOOR. REFER TO DOOR SCHEDULE.
E8	WALL MOUNTED LIGHT FIXTURE. REFER TO ELECTRICAL DOCUMENTS.
E9	PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS. REFER TO ROOF PLAN FOR SIZES.
E10	PREFINISHED SCUPPER WITH OVERFLOW AND DOWNSPOUT. REFER TO ROOF PLAN AND CIVIL DOCUMENTS.
E11	PREFINISHED INSULATED METAL WALL PANELS.
E12	PROJECTED BRICK - (BRICK 2)
E13	WINDOW. REFER TO FLOOR PLAN AND WINDOW TYPES.
E14	SPLIT FACE CMU.
E15	BACK LIT SIGNAGED. REFER TO SIGNAGE ALLOWANCE.
E16	HORIZONTAL LAP SIDING.
E17	ASPHALT SHINGLES. REFER TO ROOF PLAN.
E18	SIDING CORNER TRIM. TYP.
E19	MASONRY CONTROL JOINT.
E20	CAST STONE LINTEL AT OVERHEAD DOORS.
E21	PREFABRICATED COLUMN. REFER TO SECTIONS AND DETAILS.
E22	STORM SHELTER EMERGENCY ESCAPE DOOR. REFER TO DOOR SCHEDULE.
E23	PRE-FINISHED STEPPED FLASHING.
E24	SIGNAGE. REFER TO SIGNAGE ALLOWANCE.
E25	BABY BOX. REFER TO EQUIPMENT SCHEDULE. VERIFY ROUGH OPENING REQUIREMENTS. REFER TO STRUCTURAL FOR LINTEL / HEADER REQUIREMENTS AND ELECTRICAL DOCUMENTS.
E26	LOUVER. REFER TO MECHANICAL DOCUMENTS.



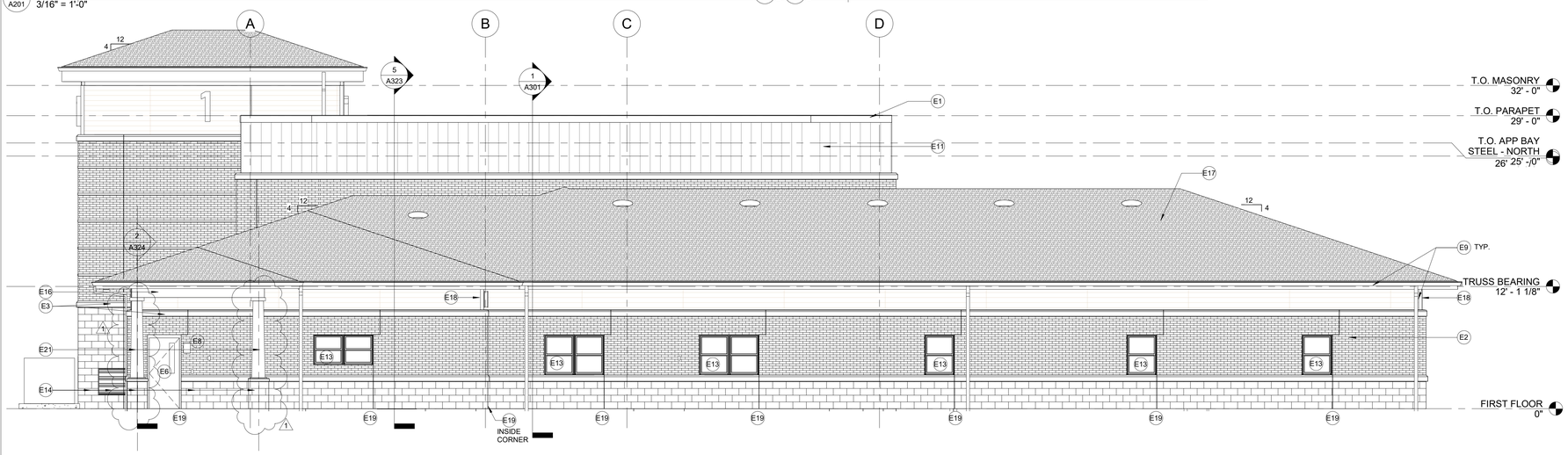
1 A201 NORTH ELEVATION
3/32" = 1'-0"



2 A201 PARTIAL NORTH ELEVATION - WEST
3/16" = 1'-0"



3 A201 PARTIAL NORTH ELEVATION -EAST
3/16" = 1'-0"



4 A201 EAST ELEVATION
3/16" = 1'-0"

9/15/2025 9:12:28 PM

stCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014023659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

EXTERIOR ELEVATIONS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

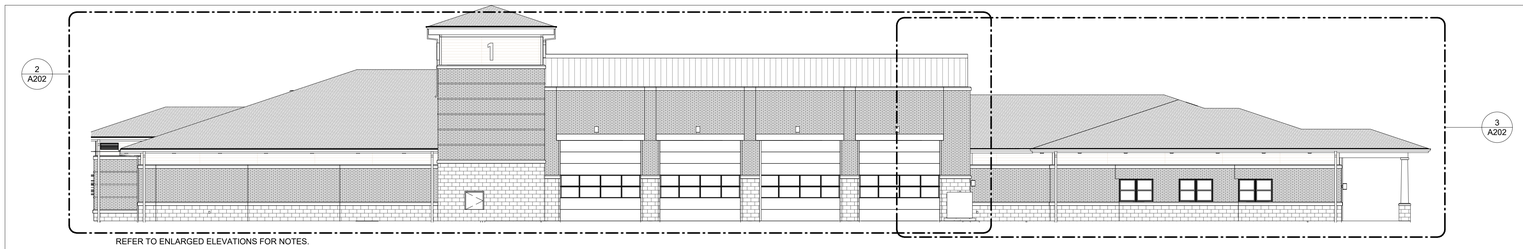
A201

EXTERIOR ELEVATION GENERAL NOTES

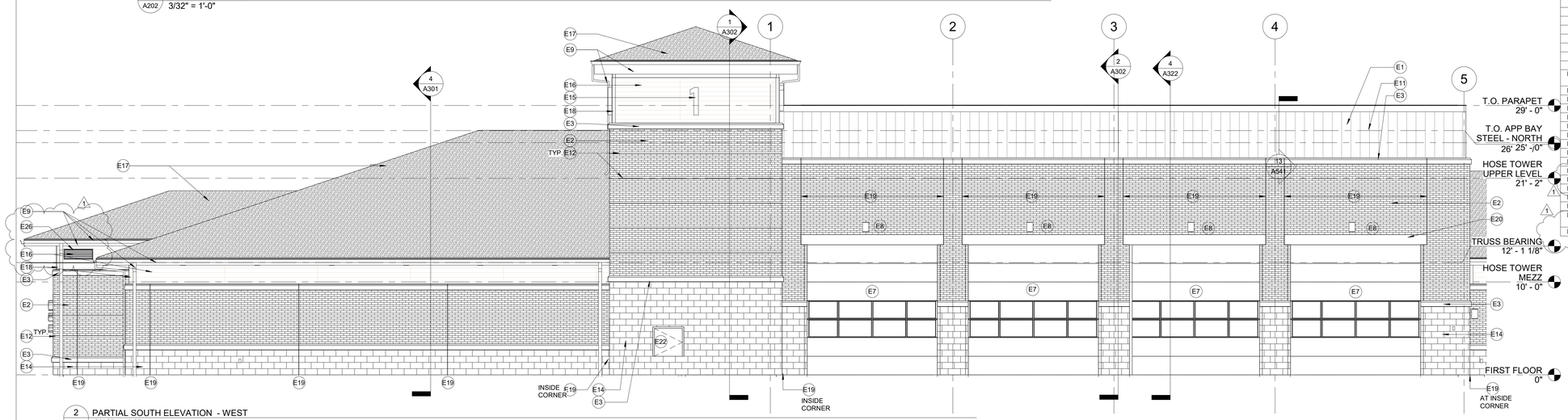
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.
3. EXTERIOR WALL DIMENSIONS ARE FROM FACE OF FOUNDATION/SHEATHING.
4. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
5. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS AND TO PROVIDE FOR THE TIMELY INSTALLATION OF EQUIPMENT, PIPING, ETC.
6. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - EXTERIOR ELEVATIONS

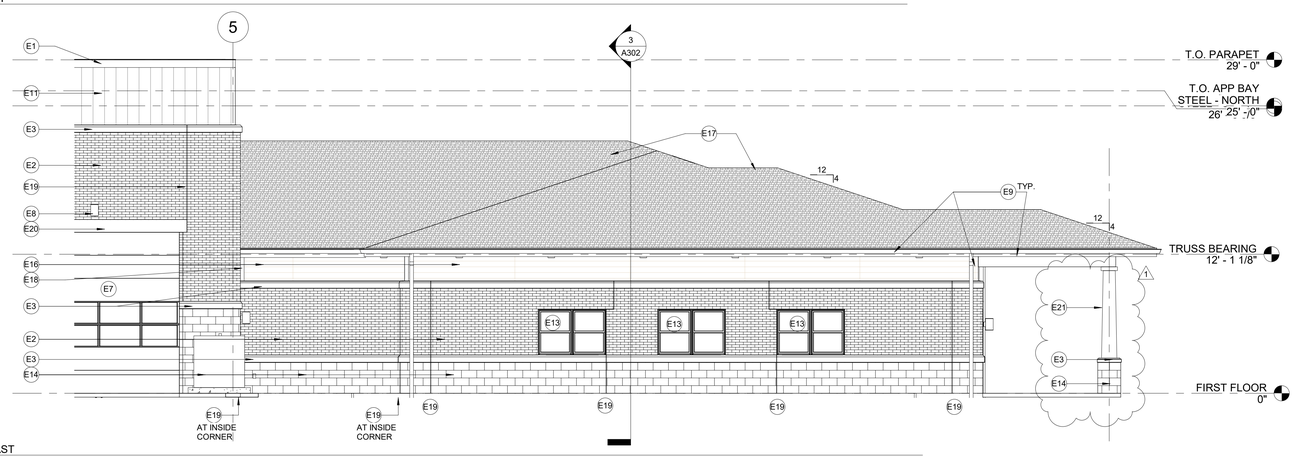
E1	PREFINISHED ALUMINUM COPING.
E2	FACE BRICK. (BRICK 1)
E3	CAST STONE SILL.
E4	ALUMINUM STOREFRONT WINDOW. REFER TO WINDOW TYPES, SHEET A601.
E5	ALUMINUM STOREFRONT ENTRANCE. REFER TO DOOR FRAME TYPES, SHEET A601.
E6	INSULATED HOLLOW METAL ENTRANCE DOOR. REFER TO FLOOR PLAN AND DOOR SCHEDULE.
E7	INSULATED OVERHEAD DOOR. REFER TO DOOR SCHEDULE.
E8	WALL MOUNTED LIGHT FIXTURE. REFER TO ELECTRICAL DOCUMENTS.
E9	PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS. REFER TO ROOF PLAN FOR SIZES.
E10	PREFINISHED SCUPPER WITH OVERFLOW AND DOWNSPOUT. REFER TO ROOF PLAN AND CIVIL DOCUMENTS.
E11	PREFINISHED INSULATED METAL WALL PANELS.
E12	PROJECTED BRICK - (BRICK 2)
E13	WINDOW. REFER TO FLOOR PLAN AND WINDOW TYPES.
E14	SPLIT FACE CMU.
E15	BACK LIT SIGNAGED. REFER TO SIGNAGE ALLOWANCE.
E16	HORIZONTAL LAP SIDING.
E17	ASPHALT SHINGLES. REFER TO ROOF PLAN.
E18	SIDING CORNER TRIM. TYP.
E19	MASONRY CONTROL JOINT.
E20	CAST STONE LINTEL AT OVERHEAD DOORS.
E21	PREFABRICATED COLUMN. REFER TO SECTIONS AND DETAILS.
E22	STORM SHELTER EMERGENCY ESCAPE DOOR. REFER TO DOOR SCHEDULE.
E23	PRE-FINISHED STEPPED FLASHING.
E24	SIGNAGE. REFER TO SIGNAGE ALLLOWANCE.
E25	BABY BOX. REFER TO EQUIPMENT SCHEDULE. VERIFY ROUGH OPENING REQUIREMENTS. REFER TO STRUCTURAL FOR LINTEL / HEADER REQUIREMENTS AND ELECTRICAL DOCUMENTS.
E26	LOUVER. REFER TO MECHANICAL DOCUMENTS.



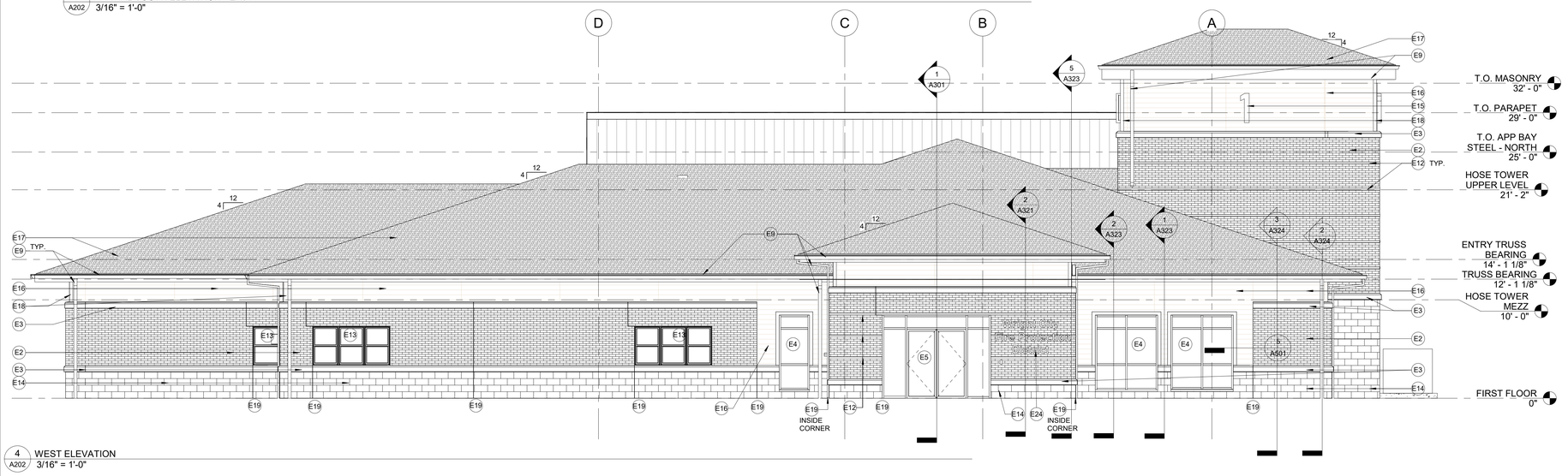
1 A202 SOUTH ELEVATION
3/32" = 1'-0"



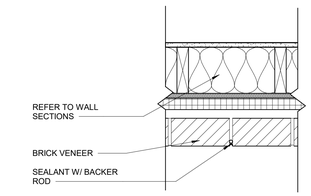
2 A202 PARTIAL SOUTH ELEVATION - WEST
3/16" = 1'-0"



3 A202 PARTIAL SOUTH ELEVATION - EAST
3/16" = 1'-0"



4 A202 WEST ELEVATION
3/16" = 1'-0"



5 A202 TYP. CONTROL JOINT DETAIL
1 1/2" = 1'-0"

ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014002859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

EXTERIOR ELEVATIONS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A202

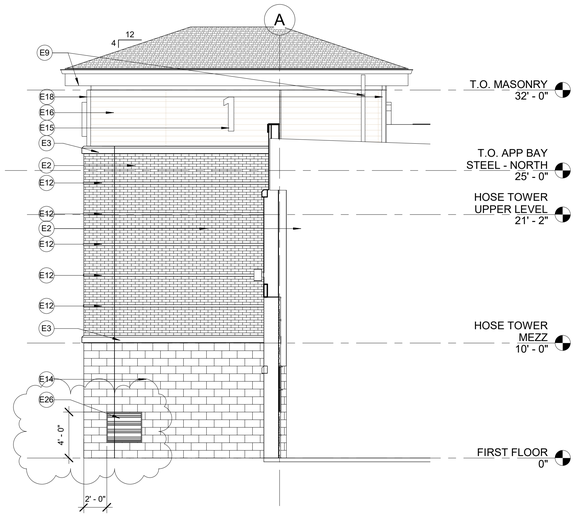
9/15/2025 9:12:32 PM

EXTERIOR ELEVATION GENERAL NOTES

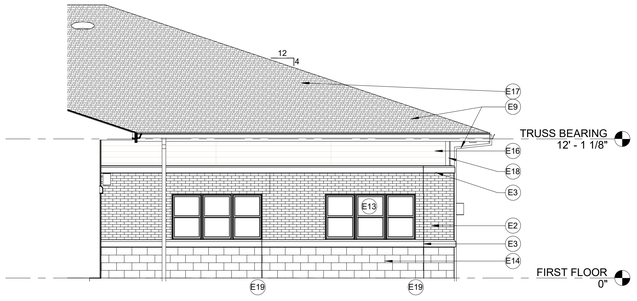
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.
3. EXTERIOR WALL DIMENSIONS ARE FROM FACE OF FOUNDATION/SHEATHING.
4. THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
5. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS AND TO PROVIDE FOR THE TIMELY INSTALLATION OF EQUIPMENT, PIPING, ETC.
6. CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - EXTERIOR ELEVATIONS

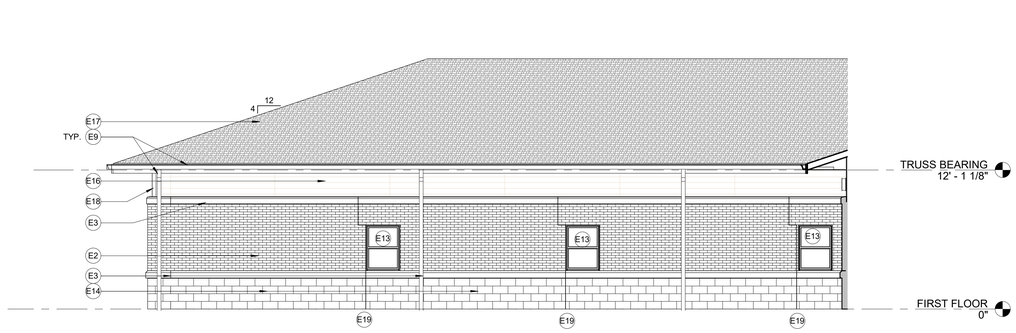
E1	PREFINISHED ALUMINUM COPING.
E2	FACE BRICK. (BRICK 1)
E3	CAST STONE SILL.
E4	ALUMINUM STOREFRONT WINDOW. REFER TO WINDOW TYPES, SHEET A601.
E5	ALUMINUM STOREFRONT ENTRANCE. REFER TO DOOR FRAME TYPES, SHEET A601.
E6	INSULATED HOLLOW METAL ENTRANCE DOOR. REFER TO FLOOR PLAN AND DOOR SCHEDULE.
E7	INSULATED OVERHEAD DOOR. REFER TO DOOR SCHEDULE.
E8	WALL MOUNTED LIGHT FIXTURE. REFER TO ELECTRICAL DOCUMENTS.
E9	PREFINISHED ALUMINUM GUTTER AND DOWNSPOUTS. REFER TO ROOF PLAN FOR SIZES.
E10	PREFINISHED SCUPPER WITH OVERFLOW AND DOWNSPOUT. REFER TO ROOF PLAN AND CIVIL DOCUMENTS.
E11	PREFINISHED INSULATED METAL WALL PANELS.
E12	PROJECTED BRICK - (BRICK 2)
E13	WINDOW. REFER TO FLOOR PLAN AND WINDOW TYPES.
E14	SPLIT FACE CMU.
E15	BACK LIT SIGNAGED. REFER TO SIGNAGE ALLOWANCE.
E16	HORIZONTAL LAP SIDING.
E17	ASPHALT SHINGLES. REFER TO ROOF PLAN.
E18	SIDING CORNER TRIM. TYP.
E19	MASONRY CONTROL JOINT.
E20	CAST STONE LINTEL AT OVERHEAD DOORS.
E21	PREFABRICATED COLUMN. REFER TO SECTIONS AND DETAILS.
E22	STORM SHELTER EMERGENCY ESCAPE DOOR. REFER TO DOOR SCHEDULE.
E23	PRE-FINISHED STEPPED FLASHING.
E24	SIGNAGE. REFER TO SIGNAGE ALLOWANCE.
E25	BABY BOX. REFER TO EQUIPMENT SCHEDULE. VERIFY ROUGH OPENING REQUIREMENTS. REFER TO STRUCTURAL FOR LINTEL / HEADER REQUIREMENTS AND ELECTRICAL DOCUMENTS.
E26	LOUVER. REFER TO MECHANICAL DOCUMENTS.



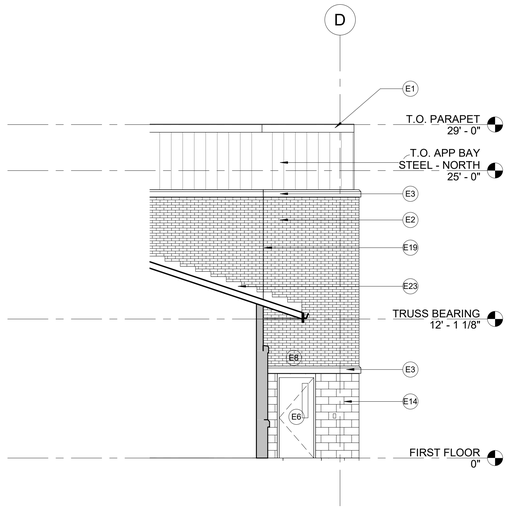
2 A203 EAST ELEVATION - PARTIAL AT HOSE TOWER
3/16" = 1'-0"



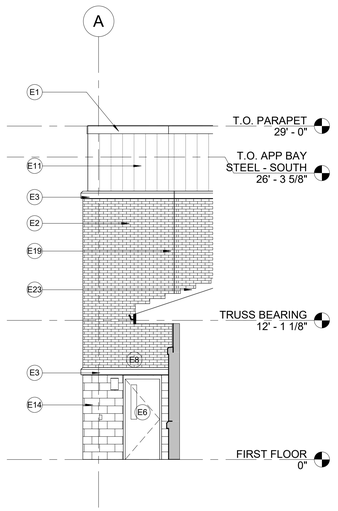
1 A203 EAST ELEVATION - PARTIAL
3/16" = 1'-0"



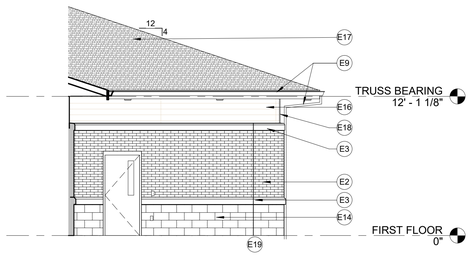
3 A203 WEST ELEVATION - PARTIAL AT LIVING QUARTERS
3/16" = 1'-0"



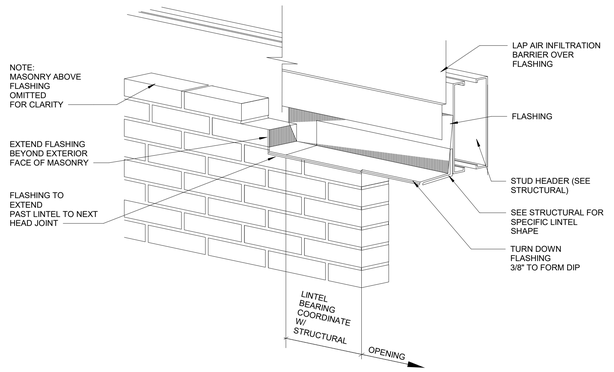
4 A203 EAST ELEVATION - PARTIAL AT APP. BAY
3/16" = 1'-0"



5 A203 EAST ELEVATION - PARTIAL AT APP. BAY 2
3/16" = 1'-0"



6 A203 WEST ELEVATION - PARTIAL AT LIVING QUARTERS
3/16" = 1'-0"



7 A203 LINTEL FLASHING DETAIL
1 1/2" = 1'-0"

seCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

EXTERIOR ELEVATIONS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A203

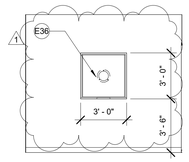
9/15/2025 9:12:34 PM

INTERIOR ELEVATION GENERAL NOTES

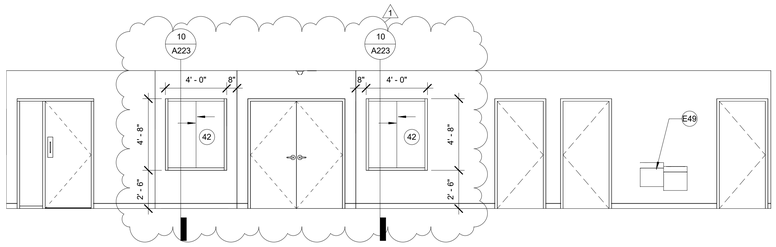
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION OF MILLWORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT.
3. ALL MILLWORK TO BE AWI "CUSTOM" GRADE.
4. ALL BASE/WALL CABINETS TO HAVE PLASTIC LAMINATE FINISH UNLESS NOTED OTHERWISE. REFER TO ROOM FINISH SCHEDULE FOR COUNTERTOP FINISH.
5. ALL FILE CABINETS ARE TO ACCOMMODATE FILE SIZE HANGING FILES. HANGING FILE RACK IS TO BE BUILT-IN.
6. ALL OUTSIDE CORNERS OF COUNTERTOPS TO HAVE A 2" RADIUS.
7. ALL BASE CABINETS AND KNEE SPACES TO HAVE VINYL BASE. PROVIDE SOLID BACKING AS REQUIRED.
8. ALL BASE CABINETS TO HAVE ONE ADJUSTABLE SHELF AND ALL WALL CABINETS TO HAVE TWO ADJUSTABLE SHELVES UNLESS NOTED OTHERWISE.
9. ALL CABINETS TO HAVE 4" WIRE PULLS.
10. PROVIDE A 3" DIA. GROMMET WITH PLASTIC INSERT AT EACH WORK SPACE / KNEE SPACE.
11. ALL OWNER PROVIDED ACCESSORIES ARE TO BE INSTALLED BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL PROVIDE FIRE RETARDANT WOOD OR HEAVY GAUGE SHEET METAL BLOCKING FOR THE INSTALLATION OF ALL MILLWORK, TOILET ACCESSORIES, HANDRAILS, ETC. AS REQUIRED.
13. PROVIDE MOLDED VINYL PIPE COVERS ON ALL EXPOSED PLUMBING AT WALL SINKS.
14. ALL COUNTERTOP SUPPORT BRACKETS TO BE PAINTED TO MATCH THE WALL COLOR UNLESS OTHERWISE NOTED.
15. OWNER PROVIDED SOAP DISPENSERS ARE TO BE INSTALLED BY THE CONTRACTOR. PROVIDE A SOAP DISPENSER AND PAPER TOWEL DISPENSER AT ALL SINKS. OTHER OWNER PROVIDED, CONTRACTOR INSTALLED ITEMS INCLUDE SHARPS CONTAINERS, PURELL DISPENSERS AND OTOSCOPES.
16. ALL COUNTERTOPS ARE TO HAVE SELF EDGE WITH COVER BACKSPLASH/ENDSPLASH.
17. REFER TO SHEET A351 FOR CASEWORK DETAILS.
18. ALL CABINET DOORS AND DRAWERS TO BE "SOFT CLOSE".

INTERIOR ELEVATION KEYED NOTES

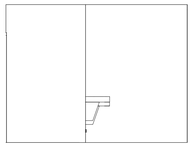
E1		PLASTIC LAMINATE WALL CABINETS.
E2		PLASTIC LAMINATE BASE CABINETS.
E3	1	DISHWASHER. REFER TO EQUIPMENT SCHEDULE.
E4	1	SOLID SURFACE COUNTERTOP/BACKSPLASH WITH UNDERMOUNT SINK REFER TO PLUMBING DOCUMENTS.
E5		RANGE. REFER TO EQUIPMENT SCHEDULE.
E6		SOLID SURFACE COUNTERTOP.
E7		FINISHED END.
E8		REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE.
E9		MICROWAVE SHELF
E10		MULTIFUNCTION DEVICE. N.I.C.
E11		INSTALL WALL BLOCKING FOR FUTRE ADA SHOWER HEAD/SLID BAR.
E12		INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BAR. REFER TO ADA TOILET ____ ELELVATIONS FOR ACCESSIBLE GRAB BAR LENGTH/LOCATION.
E13		SHOWER HEAD AND CONTROL. REFER TO PLUMBING DOCUMENTS.
E14		18" DEEP SOLID SURFACE COUNTER.
E15		SINK APRON. REFER TO DETAIL 27/A221.
E16		FILLER PANEL. TYPICAL
E17		18" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E18		42" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E19		36" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E20		ACCESSIBLE WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E21		TOILET PAPER DISPENSER - BOBRICK B-6867 OR EQUAL.
E22		MIRROR - 24" X 36" BOBRICK B165 OR EQUAL
E23		SOAP DISPENSER - GLOBAL INDUSTRIAL GOJO FMX-12 (6150-06) OR EQUAL.
E24	1	SURFACE MOUNTED ACCESSIBLE HEIGHT PAPER TOWEL DISPENSER. BOBRICK B262 OR EQUAL.
E25		SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL REFER TO 12/A223 AND PLUMBING DOCUMENTS.
E26		30" GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON SHOWER WALL.
E27	1	PROVIDE BLOCKING FOR FUTURE ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E28		SOLID SURFACE WALL PANELS IN SHOWER (ALL WALLS). PROVIDE (1) 8" W x 12" T RECESSED SHOWER CADDY IN EACH SHOWER. COORDINATE FINAL LOCATION WITH OWNER.
E29		48" GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON WALL.
E30		ACCESSIBLE WALL HUNG SINK. REFER TO PLUMBING DOCUMENTS.
E31		INSULATING PIPE COVERINGS
E32		STAINLESS STEEL COUNTERTOP.
E33		SOLID SURFACE COUNTERTOP.
E34	1	TV. PROVIDE BLOCKING FOR MOUNT. VERIFY FINAL LOCATION WITH OWNER.
E35		PLASTIC LAMINATE FINISHED END PANEL.
E36		BULLET RESISTANT HOLE AND BACKER TRANSACTION WINDOW.
E38		WASHER. REFER TO EQUIPMENT SCHEDULE.
E39		DRYER. REFER TO EQUIPMENT SCHEDULE.
E40		WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E41		PROVIDE BLOCKING FOR ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E43		INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS.
E47		RAKKS 18"X18" EH COUNTER SUPPORT BRACKETS OR APPROVED EQUAL. (OFF-WHITE)
E48		SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL AND PLASTIC LAMINATE APRON. REFER TO A/A222. (ROUGH IN TO ACCOMMODATE FUTRE ADA COMPLIANT SINK). 1
E49		STAINLESS STEEL COUNTERTOP.
E50		METAL BASE CABINETS (36" WIDE). GLOBAL INDUSTRIAL WB269873GY OR EQUAL.
E53		24" DEEP LAMINATE CABINET WITH 5 ADJUSTABLE SHELVES.
E54		SOLID SURFACE WINDOW SILL AT ALL WINDOWS. (1" THICK. EXTEND 1/2" BEYOND WINDOW JAMB.)
E55		CUSTOM BUILT 24" DEEP LAMINATE WARDROBE CABINET WITH SHELF, CLOTHES ROD AND 2 DRAWERS. ALL EXPOSED SURFACES TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE. REFER TO CASEWORK DETALS AND EQUIPMENT PLAN. WARDROBE CABINETS TO BE LOCKABLE. 1
E56		REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE. 1
E57		ARCHITECTURAL WOOD BASE AND WALL CABINETS. 1
E59		PLASTIC LAMINATE COUNTERTOP.
E60		CUSTOM BUILT22.5" DEEP PLASTIC LAMINATE NIGHT STAND TO MATCH WARDROBES.
E61		SEMI-RECESSED FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER.
E62		GEAR LOCKER. REFER TO EQUIPMENT SCHEDULE.
E63		BED. REFER TO EQUIPMENT PLAN. 1
E64		PLASTIC LAMINATE PANTRY CABINETS.
E65		MOP SINK.
E66		ROOF ACCESSS LADDER.
E67		PROVIDE END PANEL TO ALLOW FOR REMOVABLE SINK BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOWV SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E68		PROVIDE END PANEL TO ALLOW FOR REMOVABLE BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOW SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E69		RECESSED CUSTOM 6" DEEP, 3 CUBBY PLASTIC LAMINATE TOILETRY SHELF WITH INDIVIDUAL DOORS. DOORS TO HAVE PUSH MAGNETIC LATCHES. EACH SHELF TO HAVE 12" WIDE X 12" TALL CLEARANCE. DOORS TO OPEN TO THE WIDE SIDE OF THE ROOM. EXPOSED EXTERIOR FINISH TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE.
E70	1	ROBE / COAT HOOK. PROVIDE BLOCKING AS REQUIRED. BOBRICK B6827 OR EQUAL. TYPICAL AT ALL SHOWER LOCATIONS.



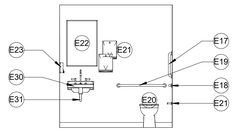
1 A221 LOBBY 101 - NORTH VIEW
1/4" = 1'-0"



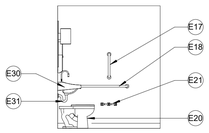
2 A221 LOBBY 101 - EAST VIEW
1/4" = 1'-0"



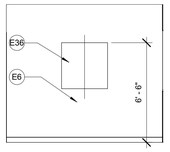
3 A221 LOBBY 101 - VIEW SOUTH
1/4" = 1'-0"



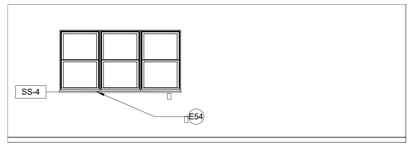
4 A221 TOILET 125 - NORTH VIEW
1/4" = 1'-0"



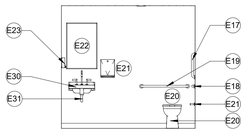
5 A221 TOILET 125 - EAST VIEW
1/4" = 1'-0"



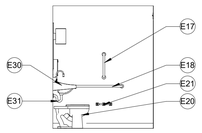
6 A221 KIM OFFICE 102 - SOUTH VIEW
1/4" = 1'-0"



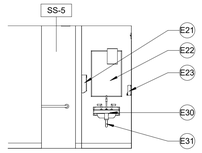
7 A221 KIM OFFICE 102 - WEST VIEW
1/4" = 1'-0"



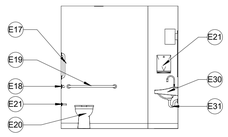
8 A221 TOILET 115 - EAST VIEW
1/4" = 1'-0"



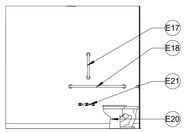
9 A221 TOILET 115 - SOUTH VIEW
1/4" = 1'-0"



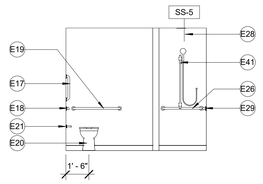
10 A221 TOILET 113 - WEST VIEW
1/4" = 1'-0"



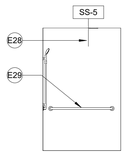
11 A221 TOILET 113 - SOUTH VIEW
1/4" = 1'-0"



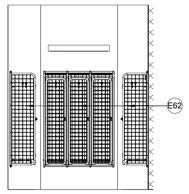
12 A221 TOILET 113 - EAST VIEW
1/4" = 1'-0"



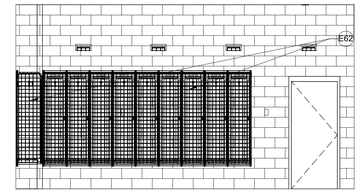
13 A221 TOILET 113 SHOWER - SOUTH VIEW
1/4" = 1'-0"



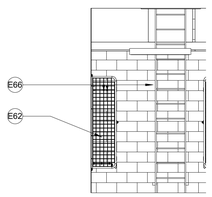
14 A221 TOILET 113 SHOWER - WEST VIEW
1/4" = 1'-0"



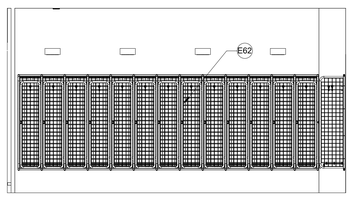
15 A221 GEAR LOCKERS 131 - NORTH VIEW
1/4" = 1'-0"



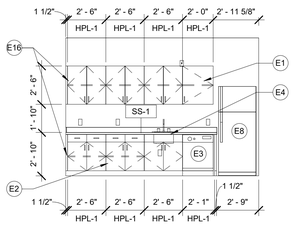
16 A221 GEAR LOCKERS 131 - EAST VIEW
1/4" = 1'-0"



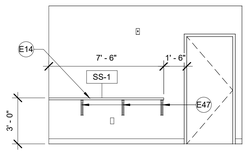
17 A221 GEAR LOCKERS 131 - SOUTH VIEW
1/4" = 1'-0"



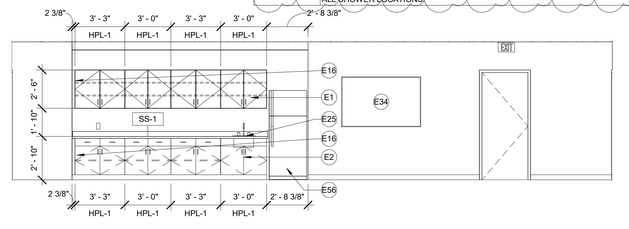
18 A221 GEAR LOCKERS 131- WEST VIEW
1/4" = 1'-0"



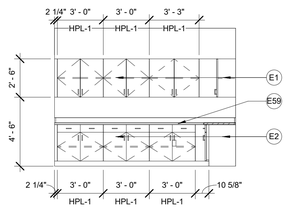
19 A221 BREAK 112 - NORTH VIEW
1/4" = 1'-0"



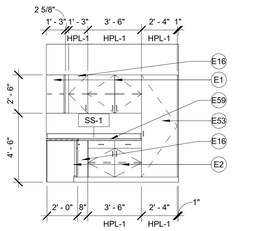
20 A221 BREAK 112 - SOUTH VIEW
1/4" = 1'-0"



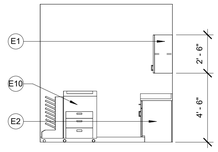
21 A221 MEETING ROOM 123 - NORTH VIEW
1/4" = 1'-0"



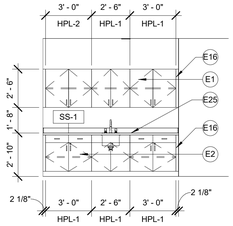
22 A221 COPY 111 - NORTH VIEW
1/4" = 1'-0"



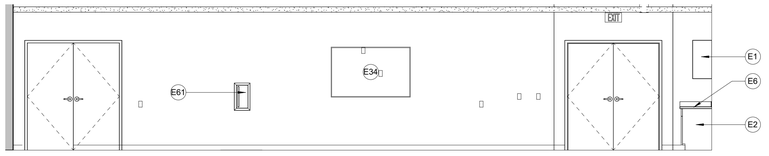
23 A221 COPY 111 - EAST VIEW
1/4" = 1'-0"



24 A221 COPY 111 - WEST VIEW
1/4" = 1'-0"



25 A221 CONFERENCE 116 - SOUTH VIEW
1/4" = 1'-0"



26 A221 MEETING ROOM 123 - WEST VIEW
1/4" = 1'-0"

SE/Coady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014023659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

INTERIOR ELEVATIONS

Drawn By:	SE/Coady
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A221

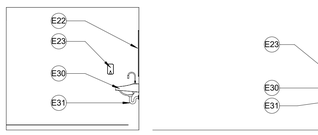
9/15/2025 9:12:38 PM

INTERIOR ELEVATION GENERAL NOTES

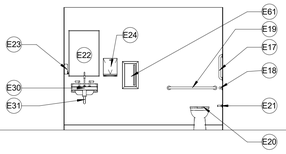
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION OF MILLWORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT.
3. ALL MILLWORK TO BE AWI "CUSTOM" GRADE.
4. ALL BASE/WALL CABINETS TO HAVE PLASTIC LAMINATE FINISH UNLESS NOTED OTHERWISE. REFER TO ROOM FINISH SCHEDULE FOR COUNTERTOP FINISH.
5. ALL FILE CABINETS ARE TO ACCOMMODATE FILE SIZE HANGING FILES. HANGING FILE RACK IS TO BE BUILT-IN.
6. ALL OUTSIDE CORNERS OF COUNTERTOPS TO HAVE A 2" RADIUS.
7. ALL BASE CABINETS AND KNEE SPACES TO HAVE VINYL BASE. PROVIDE SOLID BACKING AS REQUIRED.
8. ALL BASE CABINETS TO HAVE ONE ADJUSTABLE SHELF AND ALL WALL CABINETS TO HAVE TWO ADJUSTABLE SHELVES UNLESS NOTED OTHERWISE.
9. ALL CABINETS TO HAVE 4" WIRE PULLS.
10. PROVIDE A 3" DIA. GROMMET WITH PLASTIC INSERT AT EACH WORK SPACE / KNEE SPACE.
11. ALL OWNER PROVIDED ACCESSORIES ARE TO BE INSTALLED BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL PROVIDE FIRE RETARDANT WOOD OR HEAVY GAUGE SHEET METAL BLOCKING FOR THE INSTALLATION OF ALL MILLWORK, TOILET ACCESSORIES, HANDRAILS, ETC. AS REQUIRED.
13. PROVIDE MOLDED VINYL PIPE COVERS ON ALL EXPOSED PLUMBING AT WALL SINKS.
14. ALL COUNTERTOP SUPPORT BRACKETS TO BE PAINTED TO MATCH THE WALL COLOR UNLESS OTHERWISE NOTED.
15. OWNER PROVIDED SOAP DISPENSERS ARE TO BE INSTALLED BY THE CONTRACTOR. PROVIDE A SOAP DISPENSER AND PAPER TOWEL DISPENSER AT ALL SINKS. OTHER OWNER PROVIDED, CONTRACTOR INSTALLED ITEMS INCLUDE SHARPS CONTAINERS, PURELL DISPENSERS AND OTOSCOPES.
16. ALL COUNTERTOPS ARE TO HAVE SELF EDGE WITH COVER BACKSPLASH/ENDSPLASH.
17. REFER TO SHEET A551 FOR CASEWORK DETAILS.
18. ALL CABINET DOORS AND DRAWERS TO BE "SOFT CLOSE".

INTERIOR ELEVATION KEYED NOTES

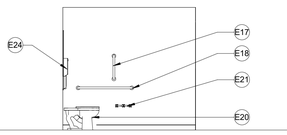
E1		PLASTIC LAMINATE WALL CABINETS.
E2		PLASTIC LAMINATE BASE CABINETS.
E3	1	DISHWASHER. REFER TO EQUIPMENT SCHEDULE.
E4	1	SOLID SURFACE COUNTERTOP/BACKSPLASH WITH UNDERMOUNT SINK REFER TO PLUMBING DOCUMENTS.
E5		RANGE. REFER TO EQUIPMENT SCHEDULE.
E6		SOLID SURFACE COUNTERTOP.
E7		FINISHED END.
E8		REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE.
E9		MICROWAVE SHELF
E10		MULTIFUNCTION DEVICE. N.I.C.
E11		INSTALL WALL BLOCKING FOR FUTRE ADA SHOWER HEAD/SLID BAR.
E12		INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BAR. REFER TO ADA TOILET ___ ELELVATIONS FOR ACCESSIBLE GRAB BAR LENGTH/LOCATION.
E13		SHOWER HEAD AND CONTROL. REFER TO PLUMBING DOCUMENTS.
E14		18" DEEP SOLID SURFACE COUNTER.
E15		SINK APRON. REFER TO DETAIL 27/A221.
E16		FILLER PANEL. TYPICAL
E17		18" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E18		42" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E19		36" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E20		ACCESSIBLE WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E21		TOILET PAPER DISPENSER - BOBRICK B-6867 OR EQUAL.
E22		MIRROR - 24" X 36" BOBRICK B165 OR EQUAL.
E23		SOAP DISPENSER - GLOBAL INDUSTRIAL GOJO FMX-12 (6150-06) OR EQUAL.
E24	1	SURFACE MOUNTED ACCESSIBLE HEIGHT PAPER TOWEL DISPENSER. BOBRICK B262 OR EQUAL.
E25		SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL REFER TO 12/A223 AND PLUMBING DOCUMENTS.
E26		30" GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON SHOWER WALL.
E27	1	PROVIDE BLOCKING FOR FUTURE ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E28		SOLID SURFACE WALL PANELS IN SHOWER (ALL WALLS). PROVIDE (1) 8" W x 12" T RECESSED SHOWER CADDY IN EACH SHOWER. COORDINATE FINAL LOCATION WITH OWNER.
E29		48" GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON WALL.
E30		ACCESSIBLE WALL HUNG SINK. REFER TO PLUMBING DOCUMENTS.
E31		INSULATING PIPE COVERINGS
E32		STAINLESS STEEL COUNTERTOP.
E33		SOLID SURFACE COUNTERTOP.
E34	1	TV. PROVIDE BLOCKING FOR MOUNT. VERIFY FINAL LOCATION WITH OWNER.
E35		PLASTIC LAMINATE FINISHED END PANEL.
E36		BULLET RESISTANT HOLE AND BACKER TRANSACTION WINDOW.
E38		WASHER. REFER TO EQUIPMENT SCHEDULE.
E39		DRYER. REFER TO EQUIPMENT SCHEDULE.
E40		WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E41		PROVIDE BLOCKING FOR ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E43		INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS.
E47		RAKKS 18"X18" EH COUNTER SUPPORT BRACKETS OR APPROVED EQUAL. (OFF-WHITE)
E48	1	SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL AND PLASTIC LAMINATE APRON. REFER TO 4/A222. (ROUGH IN TO ACCOMMODATE FUTRE ADA COMPLIANT SINK).
E49		STAINLESS STEEL COUNTERTOP
E50		METAL BASE CABINETS (36" WIDE). GLOBAL INDUSTRIAL WB269873GY OR EQUAL.
E53		24" DEEP LAMINATE CABINET WITH 5 ADJUSTABLE SHELVES.
E54		SOLID SURFACE WINDOW SILL AT ALL WINDOWS. (1 " THICK, EXTEND 1/2" BEYOND WINDOW JAMB.)
E55		CUSTOM BUILT 24" DEEP LAMINATE WARDROBE CABINET WITH SHELF, CLOTHES ROD AND 2 DRAWERS. ALL EXPOSED SURFACES TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE. REFER TO CASEWORK DETALS AND EQUIPMENT PLAN. WARDROBE CABINETS TO BE LOCKABLE. 1
E56		REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE. 1
E57		ARCHITECTURAL WOOD BASE AND WALL CABINETS. 1
E59		PLASTIC LAMINATE COUNTERTOP.
E60		CUSTOM BUILT22.5" DEEP PLASTIC LAMINATE NIGHT STAND TO MATCH WARDROBES.
E61		SEMI-RECESSED FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER.
E62		GEAR LOCKER. REFER TO EQUIPMENT SCHEDULE.
E63		BED. REFER TO EQUIPMENT PLAN. 1
E64		PLASTIC LAMINATE PANTRY CABINETS.
E65		MOP SINK.
E66		ROOF ACCESSS LADDER.
E67		PROVIDE END PANEL TO ALLOW FOR REMOVABLE SINK BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOWV SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E68	1	PROVIDE END PANEL TO ALLOW FOR REMOVABLE BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOW SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E69		RECESSED CUSTOM 6" DEEP, 3 CUBBY PLASTIC LAMINATE TOILETRY SHELF WITH INDIVIDUAL DOORS. DOORS TO HAVE PUSH MAGNETIC LATCHES. EACH SHELF TO HAVE 12" WIDE X 12" TALL CLEARANCE. DOORS TO OPEN TO THE WIDE SIDE OF THE ROOM. EXPOSED EXTERIOR FINISH TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE.
E70		ROBE / COAT HOOK. PROVIDE BLOCKING AS REQUIRED. BOBRICK B6827 OR EQUAL. TYPICAL AT ALL SHOWER LOCATIONS.



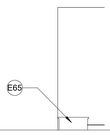
1 A222 STORM SHELTER 157 - SOUTH VIEW
1/4" = 1'-0"



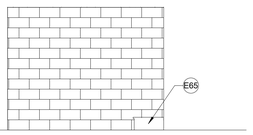
2 A222 STORM SHELTER 157 - WEST VIEW
1/4" = 1'-0"



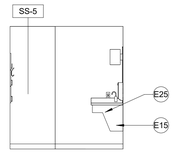
3 A222 STORM SHELTER 158 - NORTH VIEW
1/4" = 1'-0"



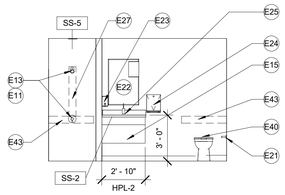
4 A222 JANITOR 140 - WEST WALL
1/4" = 1'-0"



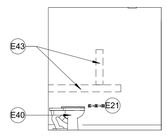
5 A222 JANITOR 140 - SOUTH VIEW
1/4" = 1'-0"



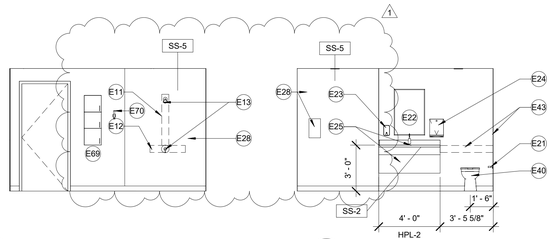
6 A222 ADAPT TOILET 142 - EAST VIEW
1/4" = 1'-0"



7 A222 ADAPT TOILET 142 - SOUTH VIEW
1/4" = 1'-0"

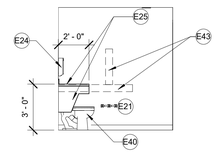


8 A222 ADAPT TOILET 142 - WEST VIEW
1/4" = 1'-0"

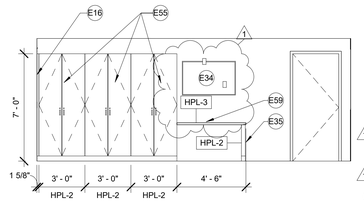


9 A222 TOILET 145 - NORTH VIEW
1/4" = 1'-0"

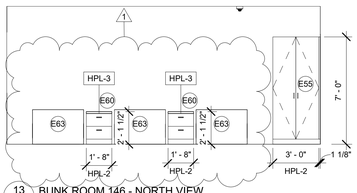
10 A222 TOILET 145 - SOUTH VIEW
1/4" = 1'-0"



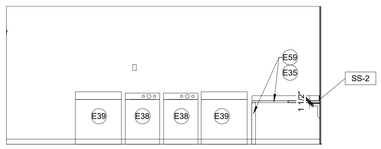
11 A222 TOILET 145 - WEST VIEW
1/4" = 1'-0"



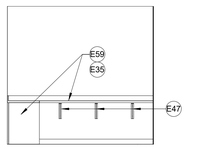
12 A222 BUNK ROOM 146 - SOUTH VIEW
1/4" = 1'-0"



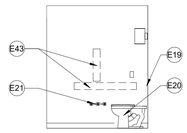
13 A222 BUNK ROOM 146 - NORTH VIEW
1/4" = 1'-0"



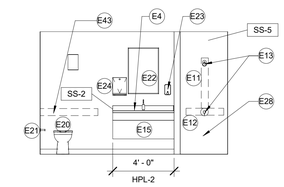
14 A222 LAUNDRY/STORAGE 147 - SOUTH VIEW
1/4" = 1'-0"



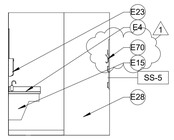
15 A222 LAUNDRY / STORAGE 147 - WEST VIEW
1/4" = 1'-0"



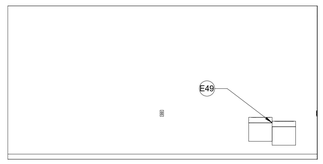
16 A222 TOILET 154 - EAST VIEW
1/4" = 1'-0"



17 A222 TOILET 154 - SOUTH VIEW
1/4" = 1'-0"

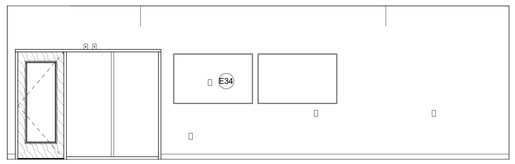


18 A222 TOILET 154 - WEST VIEW
1/4" = 1'-0"

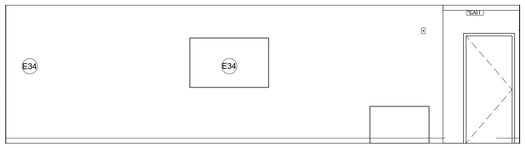


19 A222 WEIGHT ROOM 156 - NORTH VIEW
1/4" = 1'-0"

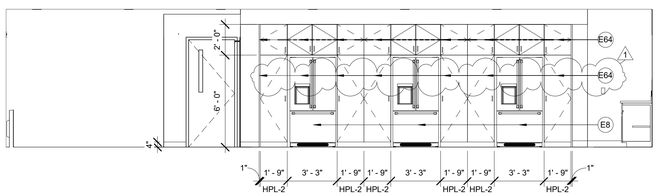
20 A222 WEIGHT ROOM 156 - SOUTH VIEW
1/4" = 1'-0"



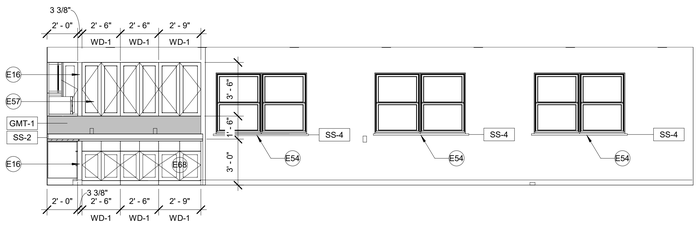
21 A222 WEIGHT ROOM 156 - WEST VIEW
1/4" = 1'-0"



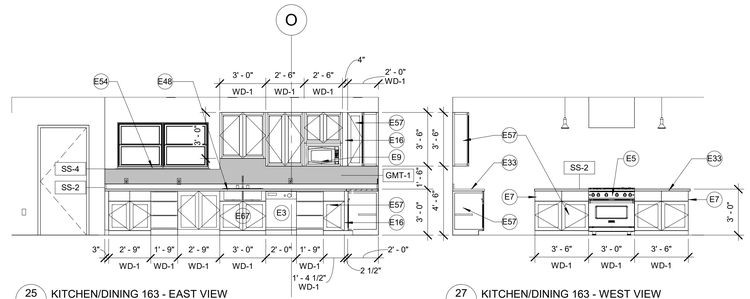
22 A222 DAYROOM 162 - WEST VIEW
1/4" = 1'-0"



24 A222 KITCHEN/DINING 163 - NORTH VIEW
1/4" = 1'-0"



26 A222 KITCHEN/DINING 163 - SOUTH VIEW
1/4" = 1'-0"



25 A222 KITCHEN/DINING 163 - EAST VIEW
1/4" = 1'-0"

27 A222 KITCHEN/DINING 163 - WEST VIEW
1/4" = 1'-0"

stCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014023859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

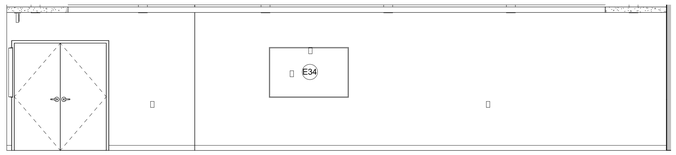
Sheet Info:

INTERIOR ELEVATIONS

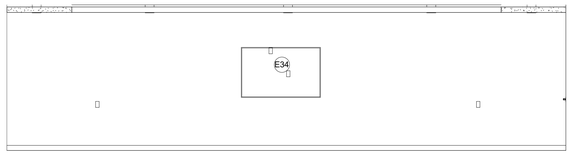
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A222

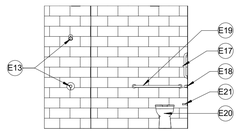
9/15/2025 9:12:42 PM



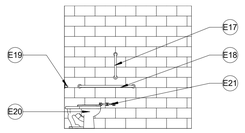
1 A223 MEETING ROOM 123 - EAST VIEW
1/4" = 1'-0"



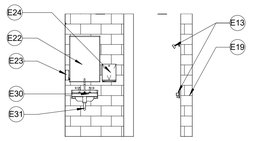
2 A223 MEETING ROOM 123 - SOUTH VIEW
1/4" = 1'-0"



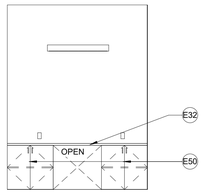
3 A223 TOILET 132A - NORTH VIEW
1/4" = 1'-0"



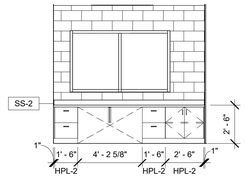
4 A223 TOILET 132A - EAST VIEW
1/4" = 1'-0"



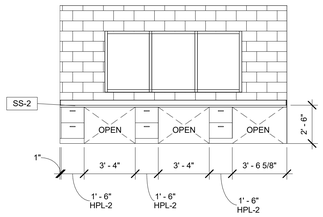
5 A223 TOILET 132A - WEST VIEW
1/4" = 1'-0"



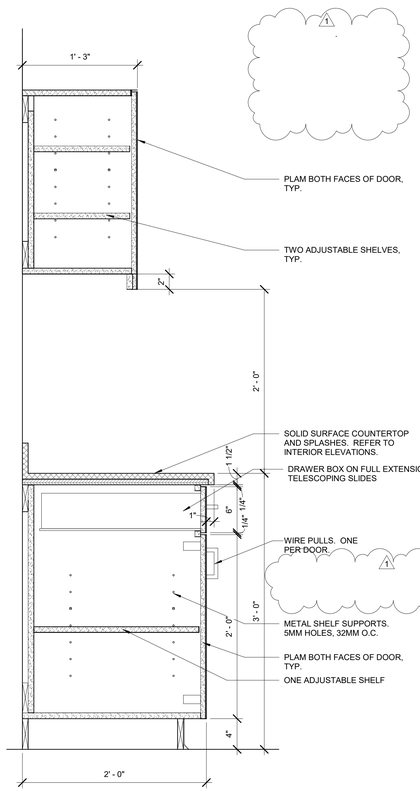
6 A223 TOOL ROOM - NORTH VIEW
1/4" = 1'-0"



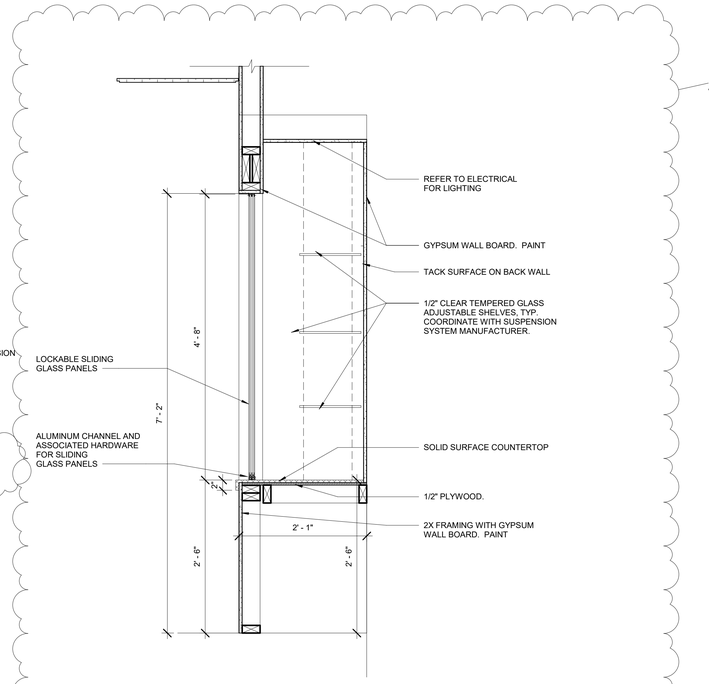
7 A223 CAPTAIN'S OFFICE 159 - WEST VIEW
1/4" = 1'-0"



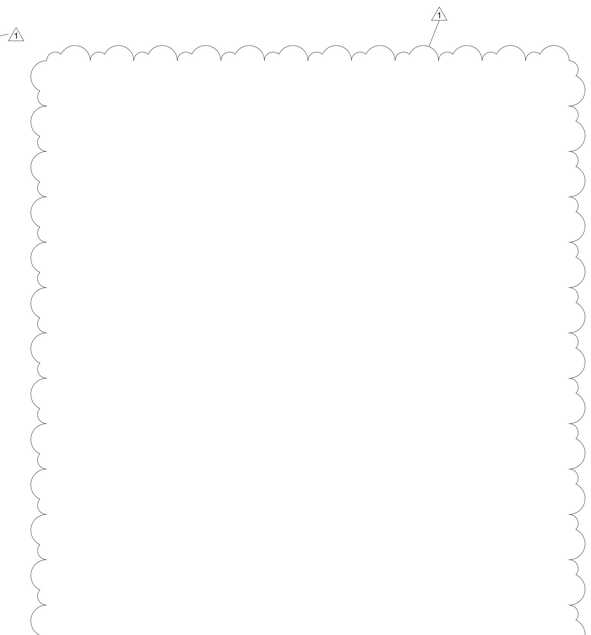
8 A223 WATCH/RADIO ROOM 166 - EAST VIEW
1/4" = 1'-0"

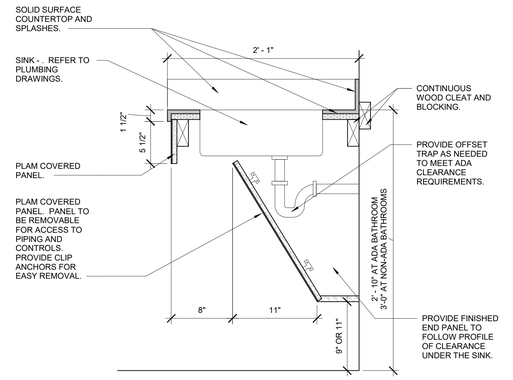


9 A223 TYPICAL CASEWORK
1 1/2" = 1'-0"



10 A223 DISPLAY CASE SECTION/DETAILS
1" = 1'-0"





12 A223 SINK APRON CASEWORK SECTION
1 1/2" = 1'-0"

INTERIOR ELEVATION GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION OF MILLWORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT.
3. ALL MILLWORK TO BE AWI "CUSTOM" GRADE.
4. ALL BASE/WALL CABINETS TO HAVE PLASTIC LAMINATE FINISH UNLESS NOTED OTHERWISE. REFER TO ROOM FINISH SCHEDULE FOR COUNTERTOP FINISH.
5. ALL FILE CABINETS ARE TO ACCOMMODATE FILE SIZE HANGING FILES. HANGING FILE RACK IS TO BE BUILT-IN.
6. ALL OUTSIDE CORNERS OF COUNTERTOPS TO HAVE A 2" RADIUS.
7. ALL BASE CABINETS AND KNEE SPACES TO HAVE VINYL BASE. PROVIDE SOLID BACKING AS REQUIRED.
8. ALL BASE CABINETS TO HAVE ONE ADJUSTABLE SHELF AND ALL WALL CABINETS TO HAVE TWO ADJUSTABLE SHELVES UNLESS NOTED OTHERWISE.
9. ALL CABINETS TO HAVE 4" WIRE PULLS.
10. PROVIDE A 3" DIA. GROMMET WITH PLASTIC INSERT AT EACH WORK SPACE / KNEE SPACE.
11. ALL OWNER PROVIDED ACCESSORIES ARE TO BE INSTALLED BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL PROVIDE FIRE RETARDANT WOOD OR HEAVY GAUGE SHEET METAL BLOCKING FOR THE INSTALLATION OF ALL MILLWORK, TOILET ACCESSORIES, HANDRAILS, ETC. AS REQUIRED.
13. PROVIDE MOLDED VINYL PIPE COVERS ON ALL EXPOSED PLUMBING AT WALL SINKS.
14. ALL COUNTERTOP SUPPORT BRACKETS TO BE PAINTED TO MATCH THE WALL COLOR UNLESS OTHERWISE NOTED.
15. OWNER PROVIDED SOAP DISPENSERS ARE TO BE INSTALLED BY THE CONTRACTOR. PROVIDE A SOAP DISPENSER AND PAPER TOWEL DISPENSER AT ALL SINKS. OTHER OWNER PROVIDED, CONTRACTOR INSTALLED ITEMS INCLUDE SHARPS CONTAINERS, PURELL DISPENSERS AND OTOSCOPES.
16. ALL COUNTERTOPS ARE TO HAVE SELF EDGE WITH COVER BACKSPLASH/ENDSPLASH.
17. REFER TO SHEET A561 FOR CASEWORK DETAILS.
18. ALL CABINET DOORS AND DRAWERS TO BE "SOFT CLOSE".

INTERIOR ELEVATION KEYED NOTES

E1	PLASTIC LAMINATE WALL CABINETS.
E2	PLASTIC LAMINATE BASE CABINETS.
E3	DISHWASHER. REFER TO EQUIPMENT SCHEDULE.
E4	SOLID SURFACE COUNTERTOP/BACKSPLASH WITH UNDERMOUNT SINK RBFER. TO PLUMBING DOCUMENTS.
E5	RANGE. REFER TO EQUIPMENT SCHEDULE.
E6	SOLID SURFACE COUNTERTOP.
E7	FINISHED END.
E8	REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE.
E9	MICROWAVE SHELF
E10	MULTIFUNCTION DEVICE. N.I.C.
E11	INSTALL WALL BLOCKING FOR FUTRE ADA SHOWER HEAD/SLID BAR.
E12	INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BAR. REFER TO ADA TOILET ____ ELELVATIONS FOR ACCESSIBLE GRAB BAR LENGTH/LOCATION.
E13	SHOWER HEAD AND CONTROL. REFER TO PLUMBING DOCUMENTS.
E14	18" DEEP SOLID SURFACE COUNTER.
E15	SINK APRON. REFER TO DETAIL 27/A221.
E16	FILLER PANEL. TYPICAL
E17	18" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E18	42" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E19	36" GRAB BAR. BOBRICK B6806.99 OR EQUAL.
E20	ACCESSIBLE WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E21	TOILET PAPER DISPENSER - BOBRICK B-6867 OR EQUAL.
E22	MIRROR - 24" X 36" BOBRICK B165 OR EQUAL
E23	SOAP DISPENSER - GLOBAL INDUSTRIAL GOJO FMX-12 (5150-06) OR EQUAL.
E24	SURFACE MOUNTED ACCESSIBLE HEIGHT PAPER TOWEL DISPENSER. BOBRICK B362 OR EQUAL.
E25	SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL REFER TO 12/A223 AND PLUMBING DOCUMENTS.
E26	90° GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON SHOWER WALL
E27	PROVIDE BLOCKING FOR FUTURE ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E28	SOLID SURFACE WALL PANELS IN SHOWER (ALL WALLS). PROVIDE (1) 8" W x 12"H RECESSED SHOWER CADDY IN EACH SHOWER. COORDINATE FINAL LOCATION WITH OWNER.
E29	48" GRAB BAR. BOBRICK B6806.99 OR EQUAL. CENTER ON WALL
E30	ACCESSIBLE WALL HUNG SINK. REFER TO PLUMBING DOCUMENTS.
E31	INSULATING PIPE COVERINGS
E32	STAINLESS STEEL COUNTERTOP.
E33	SOLID SURFACE COUNTERTOP.
E34	TV. PROVIDE BLOCKING FOR MOUNT. VERIFY FINAL LOCATION WITH OWNER.
E35	PLASTIC LAMINATE FINISHED END PANEL.
E36	BULLET RESISTANT HOLE AND BACKER TRANSACTION WINDOW.
E38	WASHER. REFER TO EQUIPMENT SCHEDULE.
E39	DRYER. REFER TO EQUIPMENT SCHEDULE.
E40	WATER CLOSET. REFER TO PLUMBING DOCUMENTS.
E41	PROVIDE BLOCKING FOR ACCESSIBLE SHOWER CONTROLS/HEAD ASSEMBLY. REFER TO PLUMBING DOCUMENTS.
E43	INSTALL WALL BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS.
E47	RAKKS 18"X18" EH COUNTER SUPPORT BRACKETS OR APPROVED EQUAL. (OFF-WHITE)
E48	SOLID SURFACE COUNTERTOP WITH UNDERMOUNT BOWL AND PLASTIC LAMINATE APRON. REFER TO 4/A222. (ROUGH IN TO ACCOMMODATE FUTRE ADA COMPLIANT SINK).
E49	STAINLESS STEEL COUNTERTOP.
E50	METAL BASE CABINETS (36" WIDE). GLOBAL INDUSTRIAL WB269873GY OR EQUAL.
E53	24" DEEP LAMINATE CABINET WITH 5 ADJUSTABLE SHELVES,
E54	SOLID SURFACE WINDOW SILL AT ALL WINDOWS. (1 " THICK, EXTEND 1/2" BEYOND WINDOW JAMB.)
E55	CUSTOM BUILT 24" DEEP LAMINATE WARDROBE CABINET WITH SHELF, CLOTHES ROD AND 2 DRAWERS. ALL EXPOSED SURFACES TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE. REFER TO CASEWORK DETALS AND EQUIPMENT PLAN. WARDROBE CABINETS TO BE LOCKABLE.
E56	REFRIGERATOR. REFER TO EQUIPMENT SCHEDULE.
E57	ARCHITECTURAL WOOD BASE AND WALL CABINETS.
E59	PLASTIC LAMINATE COUNTERTOP.
E60	CUSTOM BUILT22.5" DEEP PLASTIC LAMINATE NIGHT STAND TO MATCH WARDROBES.
E61	SEMI-RECESSED FIRE EXTINGUISHER CABINET AND FIRE-EXTINGUISHER.
E62	GEAR LOCKER. REFER TO EQUIPMENT SCHEDULE.
E63	BED. REFER TO EQUIPMENT PLAN.
E64	PLASTIC LAMINATE PANTRY CABINETS.
E65	MOP SINK.
E66	ROOF ACCESSS LADDER.
E67	PROVIDE END PANEL TO ALLOW FOR REMOVABLE SINK BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOWW SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E68	PROVIDE END PANEL TO ALLOW FOR REMOVABLE BASE CABINET. EXTEND FLOORING INTO FUTURE KNEE SPACE. FINISH WALLS AND SIDE PANELS IN FUTURE KNOW SPACE. COUNTERTOP TO BE ADJUSTABLE TO 34" IN THE FUTURE.
E69	RECESSED CUSTOM 6" DEEP, 3 CUBBY PLASTIC LAMINATE TOILETRY SHELF WITH INDIVIDUAL DOORS. DOORS TO HAVE PUSH MAGNETIC LATCHES. EACH SHELF TO HAVE 12" WIDE X 12" TALL CLEARANCE. DOORS TO OPEN TO THE WIDE SIDE OF THE ROOM. EXPOSED EXTERIOR FINISH TO BE PLASTIC LAMINATE. INTERIOR TO BE WHITE MELAMINE.
E70	ROBE / COAT HOOK. PROVIDE BLOCKING AS REQUIRED. BOBRICK B6827 OR EQUAL. TYPICAL AT ALL SHOWER LOCATIONS.

stCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.stcoady-architects.com

© 2025 stC/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

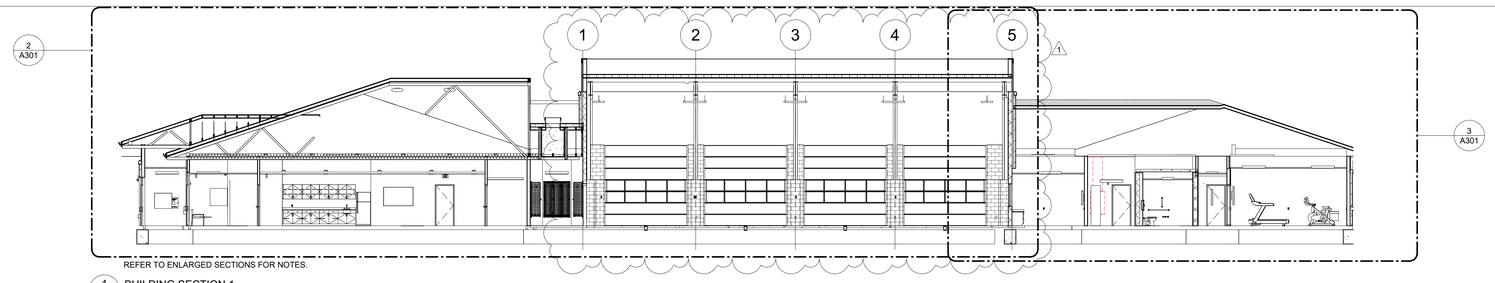
Sheet Info:

INTERIOR ELEVATIONS AND DETAILS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

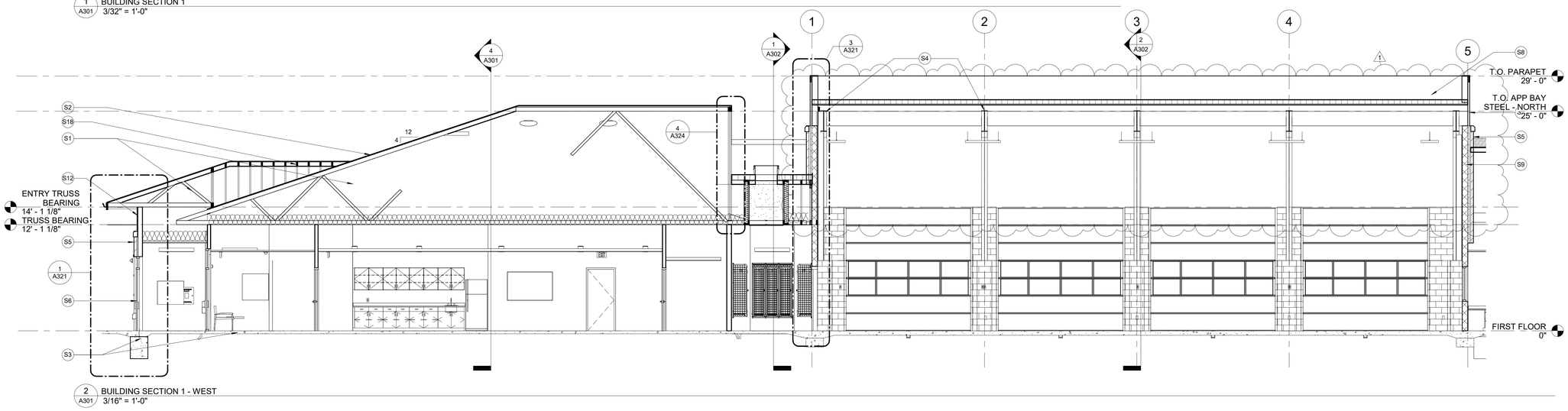
A223

9/15/2025 9:12:43 PM

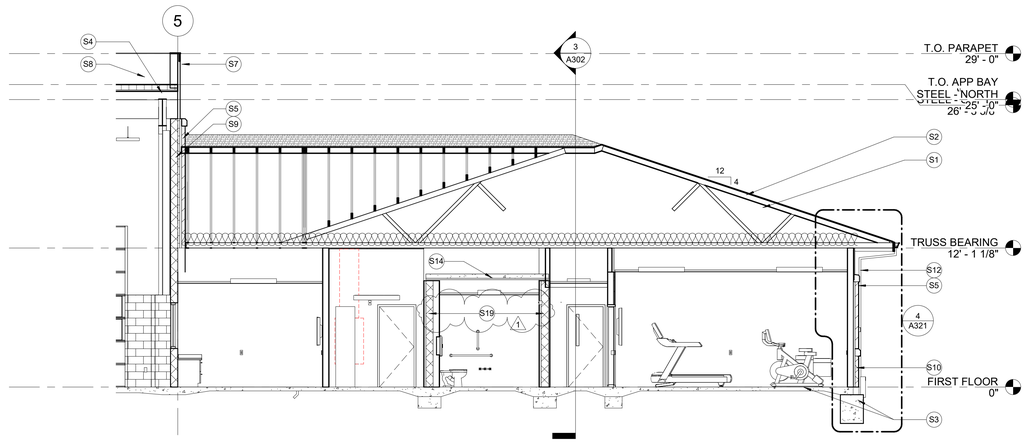


REFER TO ENLARGED SECTIONS FOR NOTES.

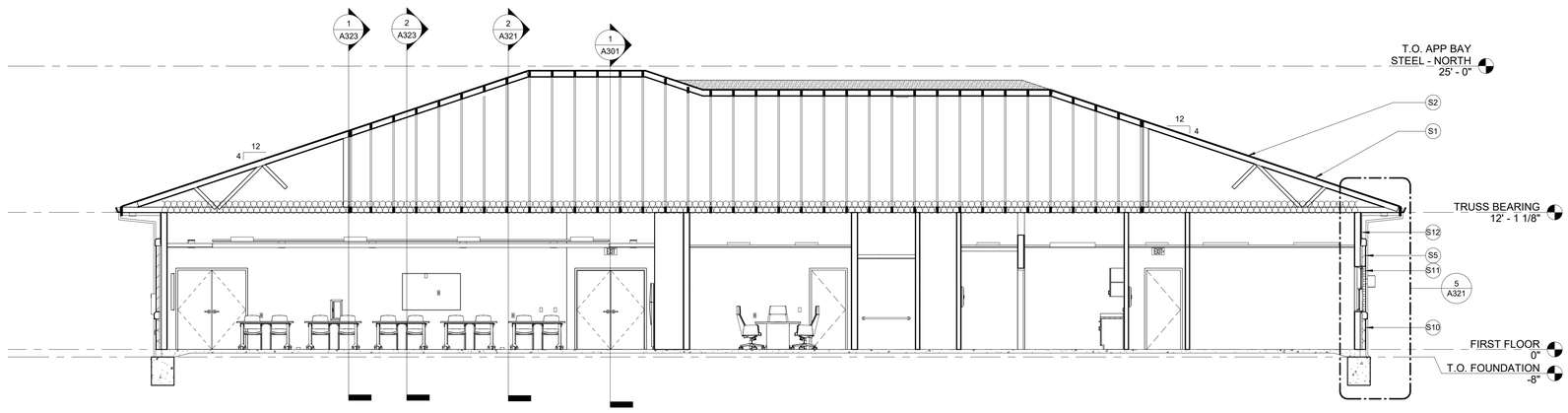
1 A301 BUILDING SECTION 1
3/32" = 1'-0"



2 A301 BUILDING SECTION 1 - WEST
3/16" = 1'-0"



3 A301 BUILDING SECTION 1 - EAST
3/16" = 1'-0"



4 A301 BUILDING SECTION 2
3/16" = 1'-0"

BUILDING SECTION GENERAL NOTES

1.	ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2.	REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.
3.	EXTERIOR WALL DIMENSIONS ARE FROM FACE OF MASONRY.
4.	THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
5.	EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS AND TO PROVIDE FOR THE TIMELY INSTALLATION OF EQUIPMENT, PIPING, ETC.
6.	CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - BUILDING SECTIONS

S1	PRE-ENGINEERED WOOD TRUSSES. REFER TO STRUCTURAL DOCUMENTS.
S2	ASPHALT SHINGLES. REFER TO ROOF PLAN.
S3	CONCRETE FOUNDATION AND FLOOR SLAB. REFER TO STRUCTURAL DOCUMENTS.
S4	PRE-ENGINEERED METAL BUILDING. REFER TO STRUCTURAL DOCUMENTS.
S5	BRICK VENEER. REFER TO ELEVATIONS AND WALL SECTIONS.
S6	ALUMINUM STOREFRONT. REFER TO FLOOR PLAN, ELEVATIONS, AND WINDOW TYPES.
S7	INSULATED METAL WALL PANEL. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS.
S8	SINGLE-PLY MEMBRANE ROOFING OVER INSULATION AND SLOPED METAL DECK. REFER TO ROOF PLAN.
S9	REINFORCED CMU BACK-UP. REFER TO STRUCTURAL, FLOOR PLAN AND WALL SECTIONS.
S10	SPLIT FACE CMU. REFER TO FLOOR PLAN AND WALL SECTIONS.
S11	WINDOW. REFER TO FLOOR PLAN, ELEVATIONS AND WINDOW TYPES.
S12	LAP SIDING. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS.
S13	DOOR. REFER TO FLOOR PLAN AND DOOR TYPES.
S14	STORM SHELTER STRUCTURAL ROOF. REFER TO STRUCTURAL.
S15	MEZZANINE FRAMING. REFER TO FLOOR PLAN AND STRUCTURAL PLANS.
S16	SHIP LADDER. REFER TO FLOOR PLAN AND SPECIFICATIONS.
S17	MEZZANINE STAIR. REFER TO FLOOR PLAN.
S18	2x FRAMING. REFER TO STRUCTURAL.
1 S19	REINFORCED STORM SHELTER WALLS. REFER TO STRUCTURAL.
S20	SINGLE-PLY MEMBRANE ROOFING OVER TAPERED INSULATION. REFER TO ROOF PLAN.
S21	ROOF HATCH. REFER TO ROOF PLAN.

seCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014023659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

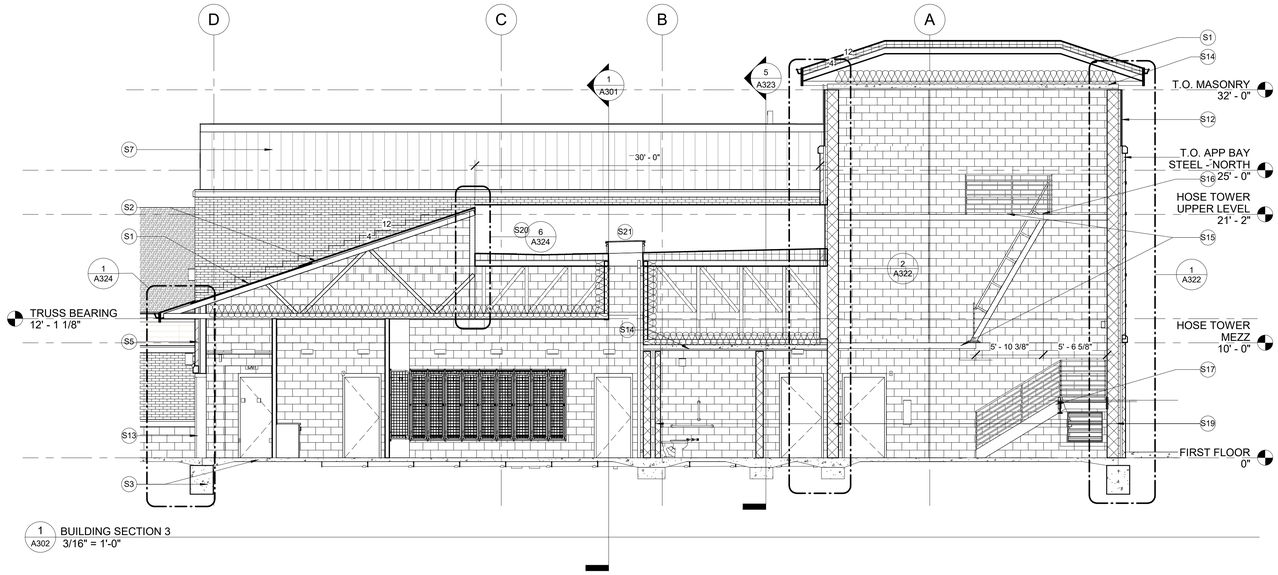
Sheet Info:

BUILDING SECTIONS

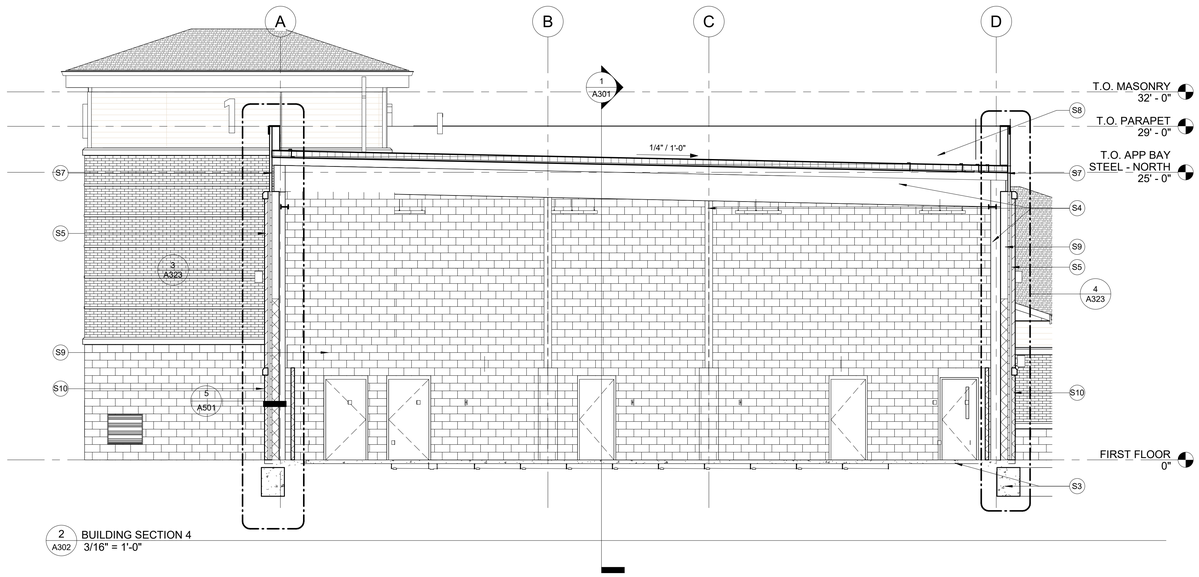
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A301

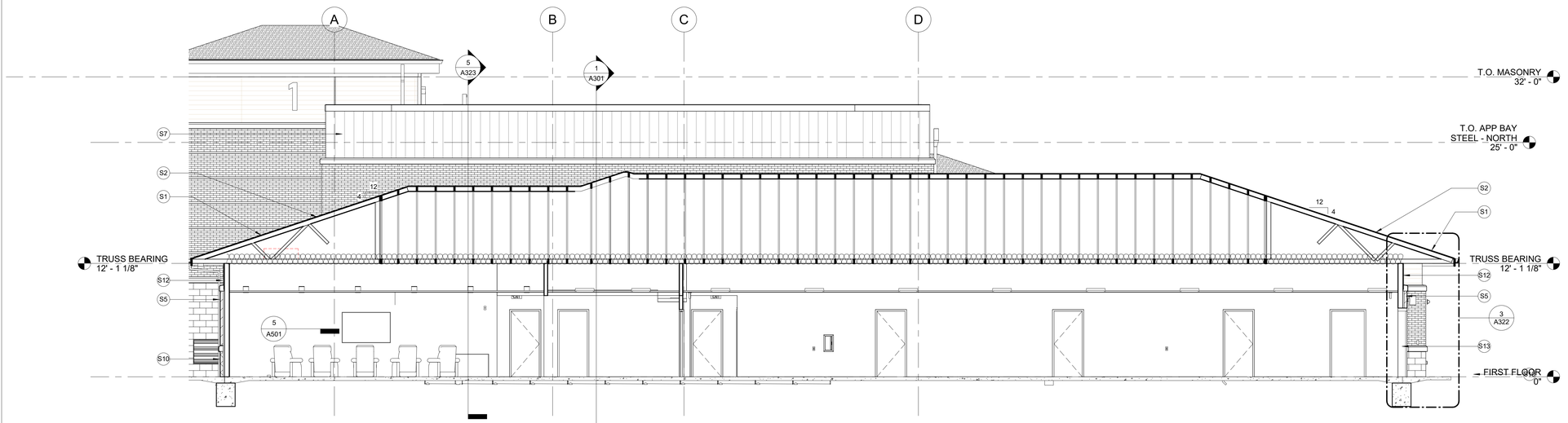
9/15/2025 9:12:46 PM



1 A302 BUILDING SECTION 3
3/16" = 1'-0"



2 A302 BUILDING SECTION 4
3/16" = 1'-0"



3 A302 BUILDING SECTION 5
3/16" = 1'-0"

9/15/2025 9:12:52 PM

BUILDING SECTION GENERAL NOTES

1 A

1.	ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES, LAWS, AND REGULATIONS.
2.	REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.
3.	EXTERIOR WALL DIMENSIONS ARE FROM FACE OF MASONRY.
4.	THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL PAINT AND TOUCH UP WORK WHICH SHALL BE COMPLETED AFTER THE INSTALLATION OF ALL EQUIPMENT.
5.	EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS AND TO PROVIDE FOR THE TIMELY INSTALLATION OF EQUIPMENT, PIPING, ETC.
6.	CONTRACTOR TO COORDINATE WITH THE OWNER FOR THE INSTALLATION OF EQUIPMENT SUPPLIED UNDER A SEPARATE CONTRACTS.

KEYED NOTES - BUILDING SECTIONS

S1	PRE-ENGINEERED WOOD TRUSSES. REFER TO STRUCTURAL DOCUMENTS.
S2	ASPHALT SHINGLES. REFER TO ROOF PLAN.
S3	CONCRETE FOUNDATION AND FLOOR SLAB. REFER TO STRUCTURAL DOCUMENTS.
S4	PRE-ENGINEERED METAL BUILDING. REFER TO STRUCTURAL DOCUMENTS.
S5	BRICK VENEER. REFER TO ELEVATIONS AND WALL SECTIONS.
S6	ALUMINUM STOREFRONT. REFER TO FLOOR PLAN, ELEVATIONS, AND WINDOW TYPES.
S7	INSULATED METAL WALL PANEL. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS.
S8	SINGLE-PLY MEMBRANE ROOFING OVER INSULATION AND SLOPED METAL DECK. REFER TO ROOF PLAN.
S9	REINFORCED CMU BACK-UP. REFER TO STRUCTURAL, FLOOR PLAN AND WALL SECTIONS.
S10	SPLIT FACE CMU. REFER TO FLOOR PLAN AND WALL SECTIONS.
S11	WINDOW. REFER TO FLOOR PLAN, ELEVATIONS AND WINDOW TYPES.
S12	LAP SIDING. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS.
S13	DOOR. REFER TO FLOOR PLAN AND DOOR TYPES.
S14	STORM SHELTER STRUCTURAL ROOF. REFER TO STRUCTURAL.
S15	MEZZANINE FRAMING. REFER TO FLOOR PLAN AND STRUCTURAL PLANS.
S16	SHIP LADDER. REFER TO FLOOR PLAN AND SPECIFICATIONS.
S17	MEZZANINE STAIR. REFER TO FLOOR PLAN.
S18	2x FRAMING. REFER TO STRUCTURAL.
S19	REINFORCED STORM SHELTER WALLS. REFER TO STRUCTURAL.
S20	SINGLE-PLY MEMBRANE ROOFING OVER TAPERED INSULATION. REFER TO ROOF PLAN.
S21	ROOF HATCH. REFER TO ROOF PLAN.

stCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

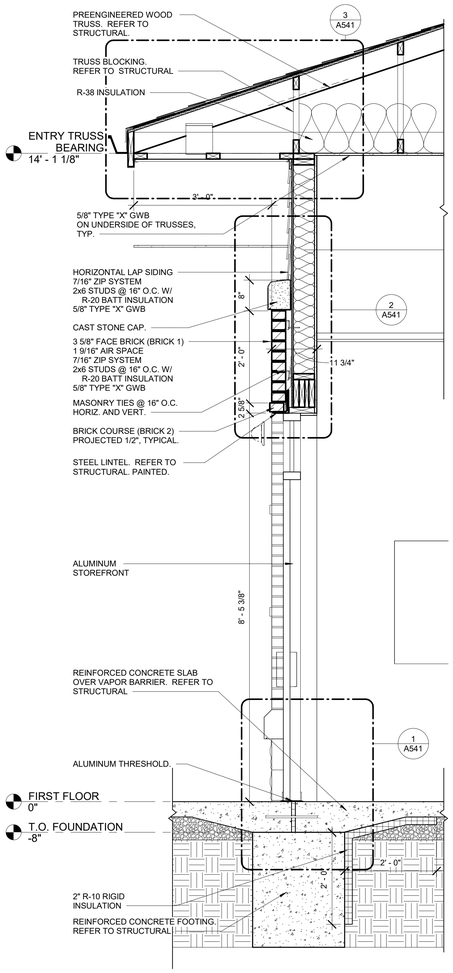
Sheet Info:

BUILDING SECTIONS

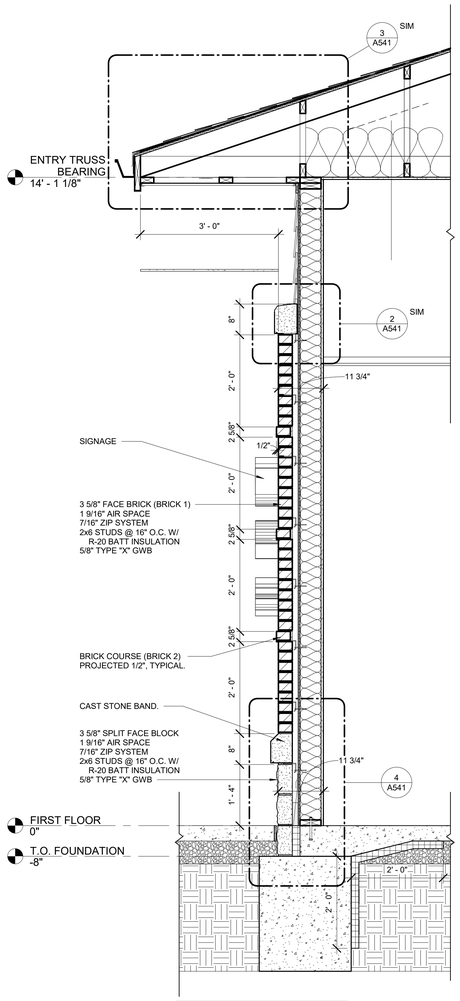
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A302

NOTE: REFER TO STRUCTURAL FOR MASONRY REINFORCEMENT

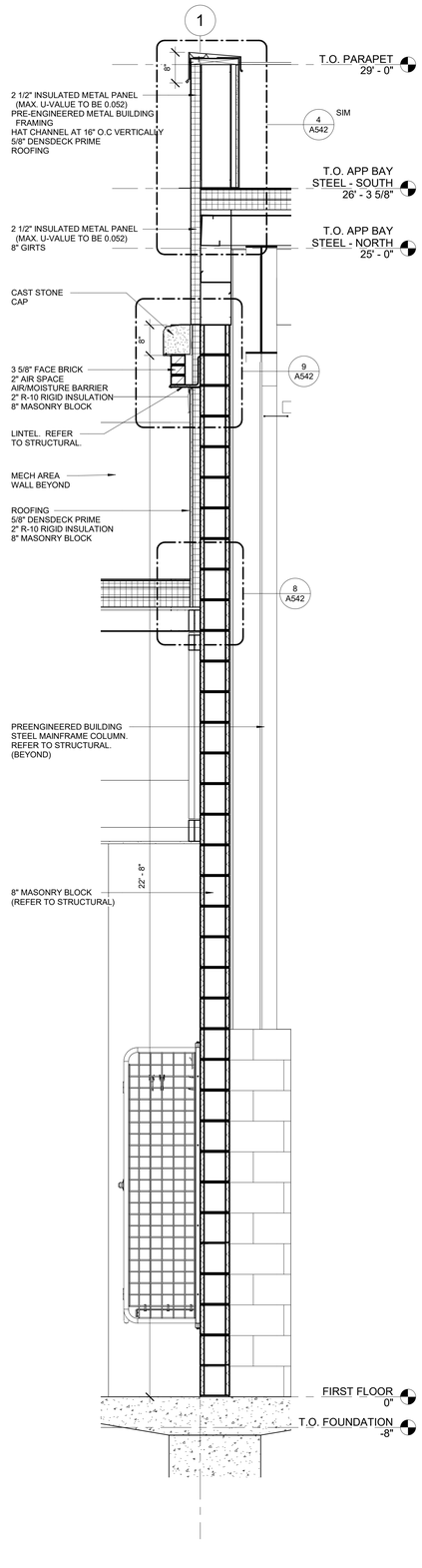


1 A321 WALL SECTION 3/4" = 1'-0"

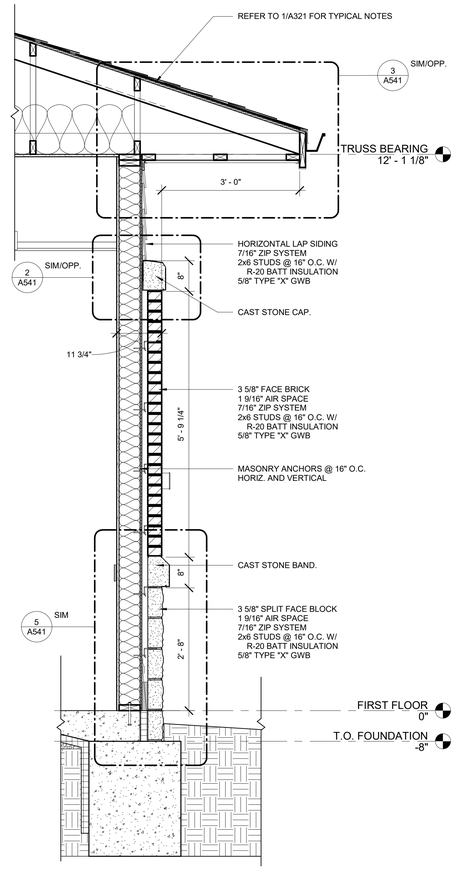


REFER TO 1/A321 FOR TYPICAL NOTES

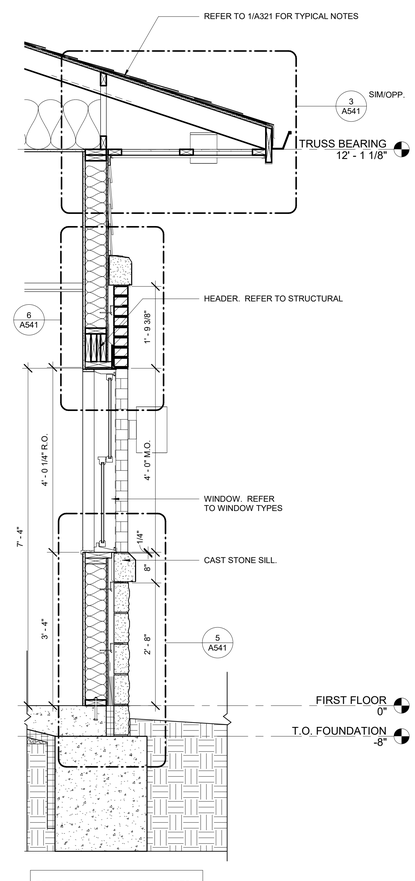
2 A321 WALL SECTION 3/4" = 1'-0"



3 A321 WALL SECTION 3/4" = 1'-0"



4 A321 WALL SECTION 3/4" = 1'-0"



REFER TO 4/A321 FOR TYPICAL NOTES

5 A321 WALL SECTION 3/4" = 1'-0"

SE/Coady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

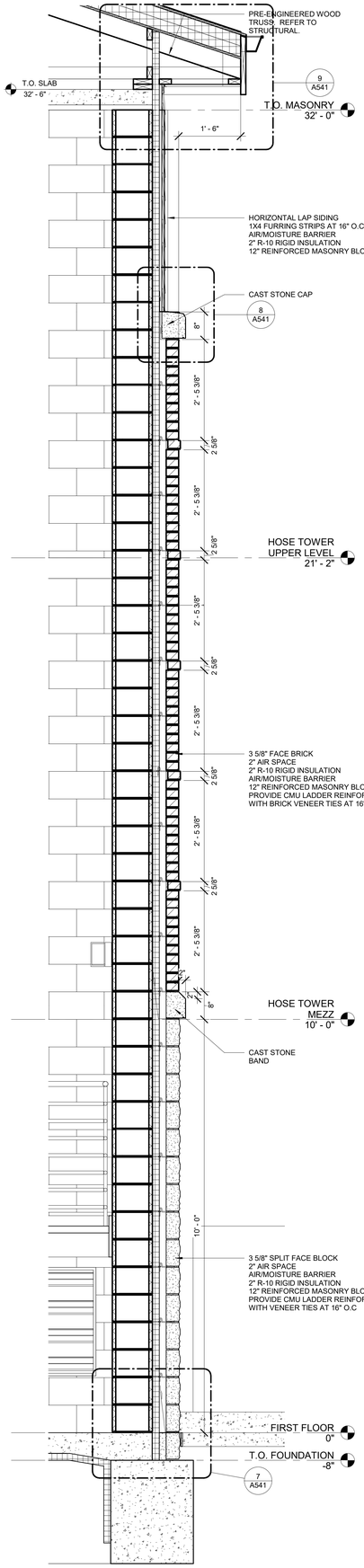
Sheet Info:

WALL SECTIONS

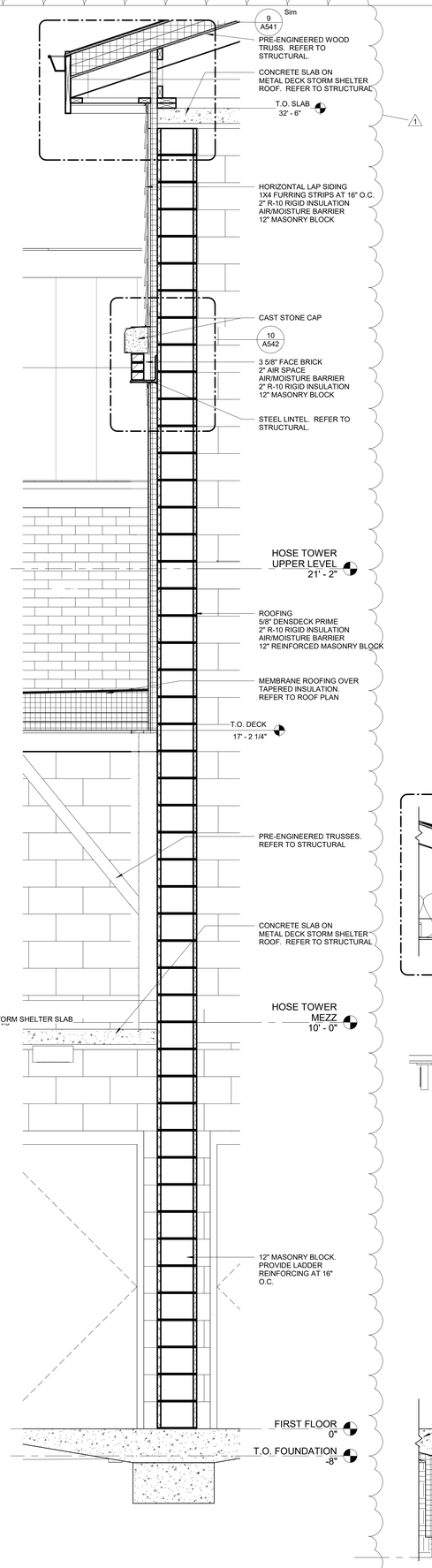
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A321

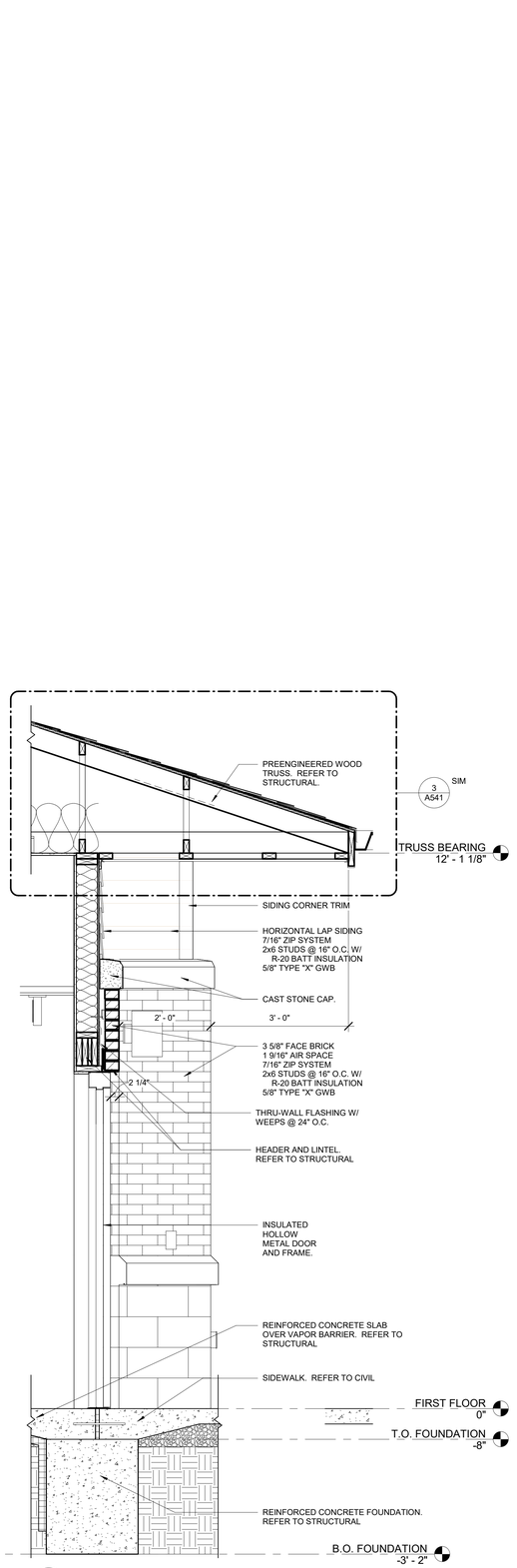
9/16/2025 5:52:34 PM



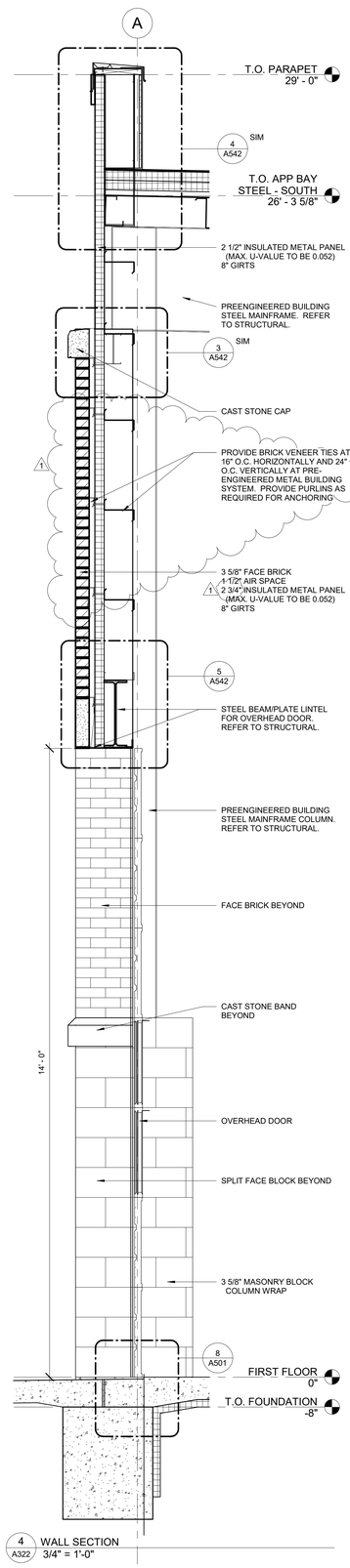
1 WALL SECTION A322 3/4" = 1'-0"



2 WALL SECTION A322 3/4" = 1'-0"



3 WALL SECTION A322 3/4" = 1'-0"



4 WALL SECTION A322 3/4" = 1'-0"

1 NOTE: REFER TO STRUCTURAL FOR MASONRY REINFORCEMENT. WHERE MASONRY IS OVER PRE-ENGINEERED METAL BUILDING FRAMING, MASONRY TIES SHALL BE ANCHORED BACK THROUGH THE BACKER PANEL TO THE METAL BUILDING FRAMING. METAL BUILDING FRAMING TO BE SPACED TO MEET THE MASONRY TIE SPACING REQUIREMENTS AS NOTED.

sfCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

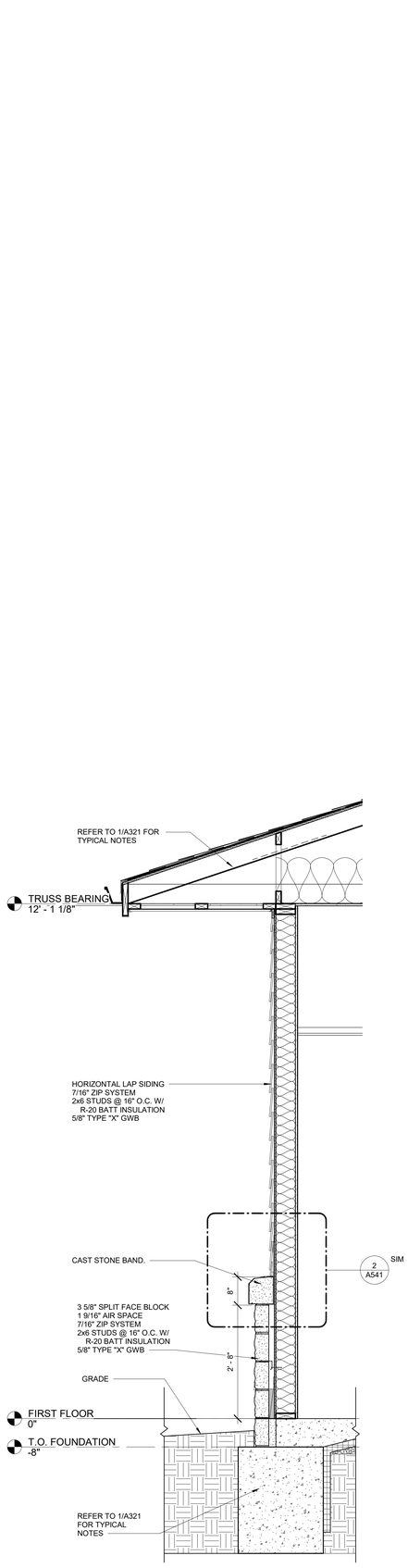
Sheet Info:

WALL SECTIONS

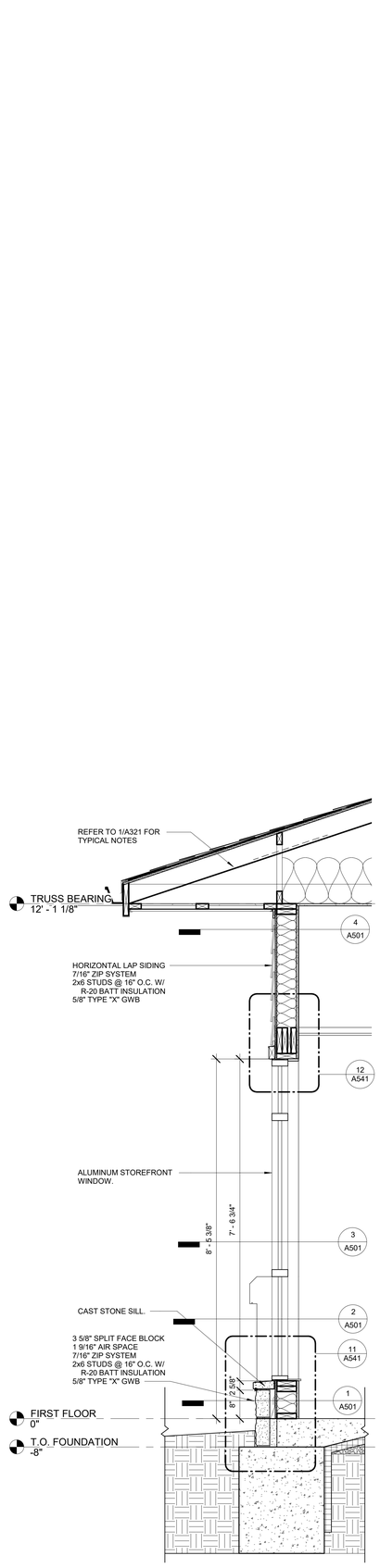
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A322

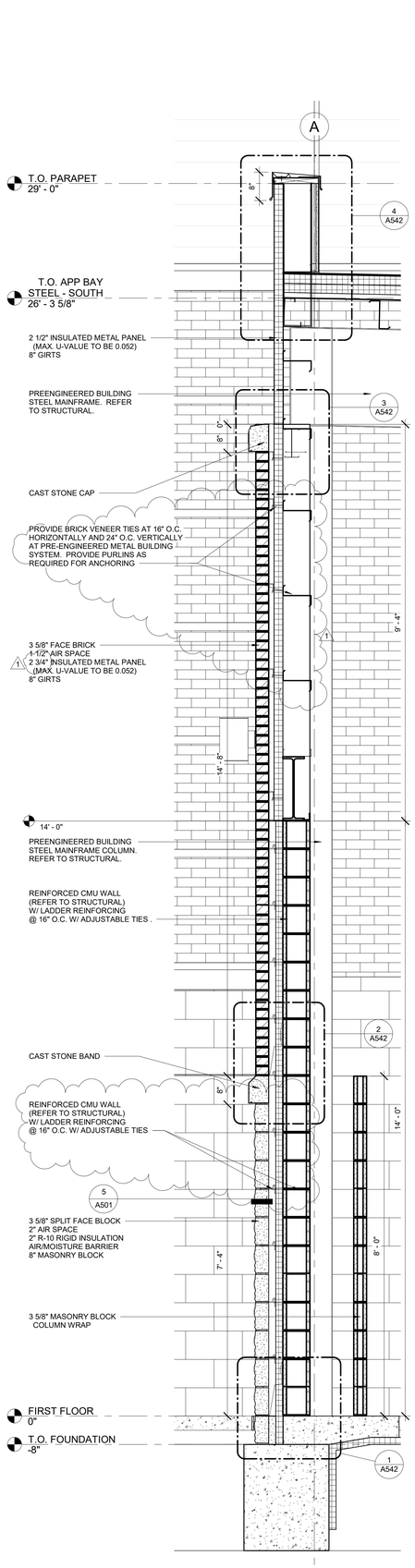
9/16/2025 5:52:36 PM



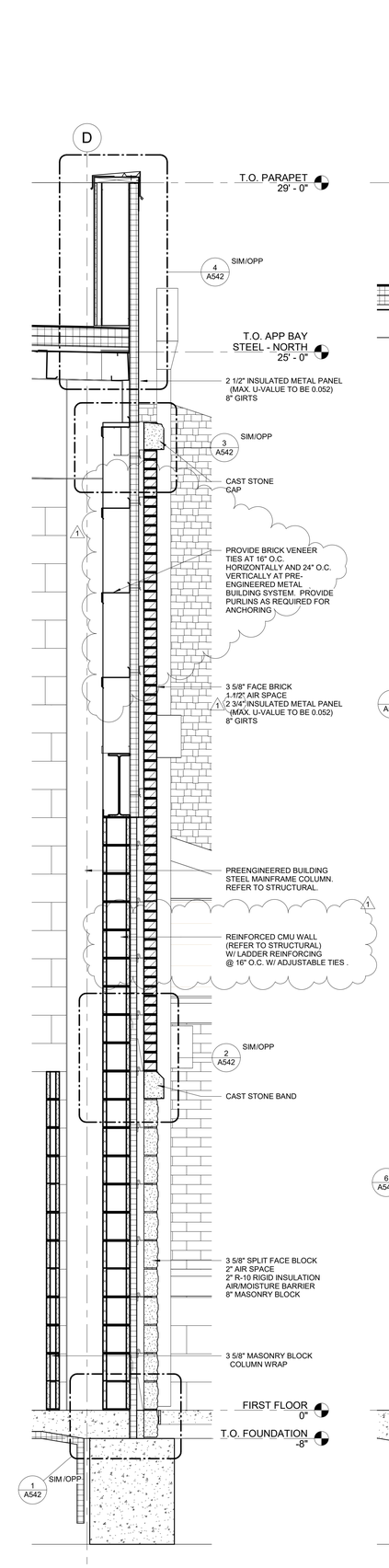
1 A323 WALL SECTION 3/4" = 1'-0"



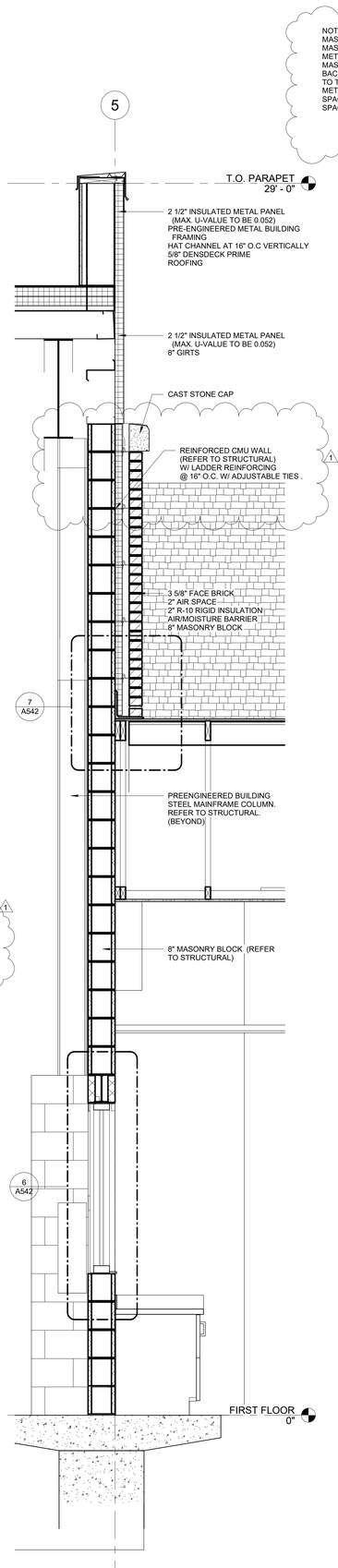
2 A323 WALL SECTION 3/4" = 1'-0"



3 A323 WALL SECTION 3/4" = 1'-0"



4 A323 WALL SECTION 3/4" = 1'-0"



5 A323 WALL SECTION 3/4" = 1'-0"

NOTE: REFER TO STRUCTURAL FOR MASONRY REINFORCEMENT. WHERE MASONRY IS OVER PRE-ENGINEERED METAL BUILDING FRAMING, MASONRY TIES SHALL BE ANCHORED BACK THROUGH THE BACKER PANEL TO THE METAL BUILDING FRAMING. METAL BUILDING FRAMING TO BE SPACED TO MEET THE MASONRY TIE SPACING REQUIREMENTS AS NOTED.

SE/Coady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

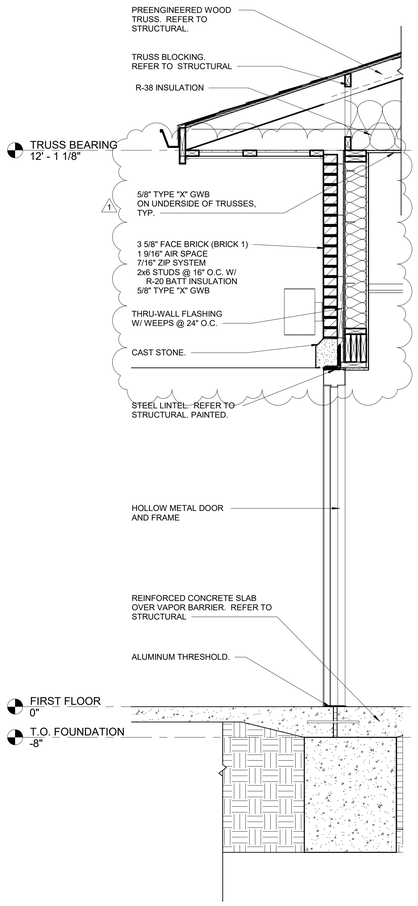
WALL SECTIONS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

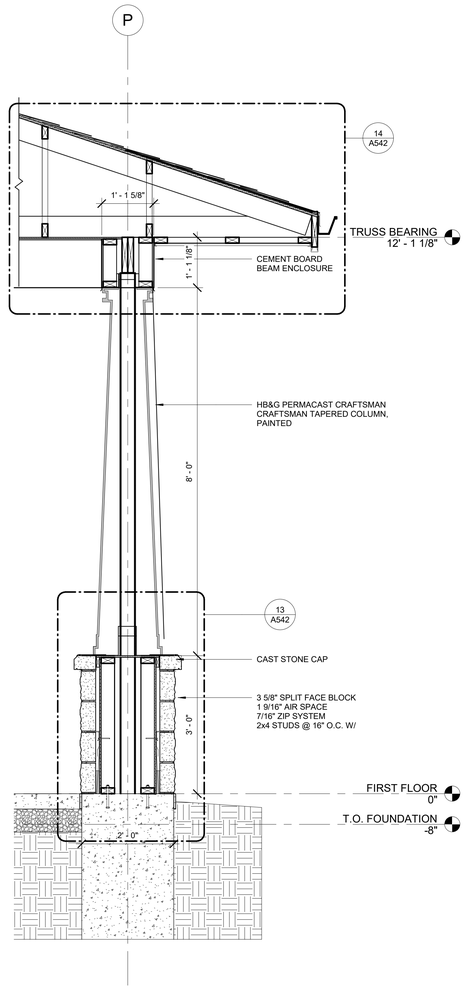
A323

9/16/2025 5:52:37 PM

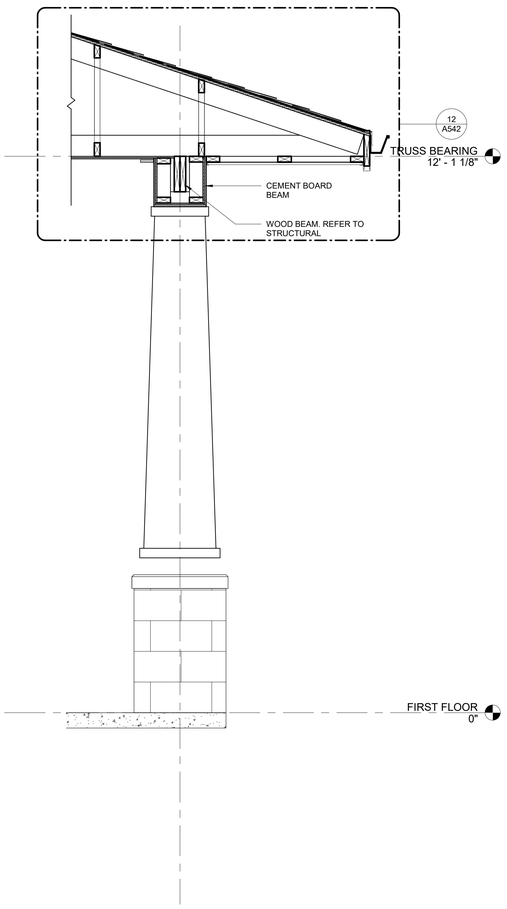
NOTE: REFER TO STRUCTURAL FOR MASONRY REINFORCEMENT



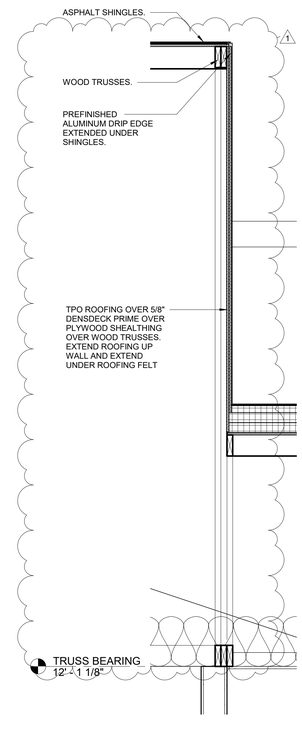
1 A324 WALL SECTION
3/4" = 1'-0"



2 A324 WALL SECTION
3/4" = 1'-0"



3 A324 WALL SECTION
3/4" = 1'-0"



4 A324 WALL SECTION AT MECH ROOF
3/4" = 1'-0"

5 A324 WALL SECTION AT MECH ROOF
3/4" = 1'-0"

ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

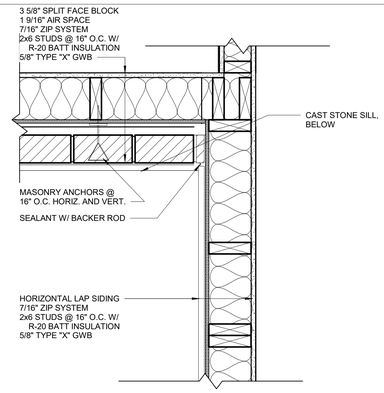
Sheet Info:

WALL SECTIONS

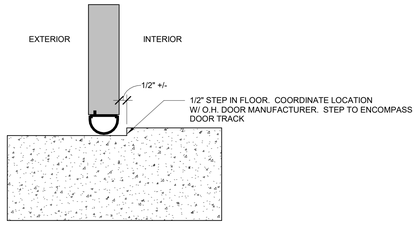
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A324

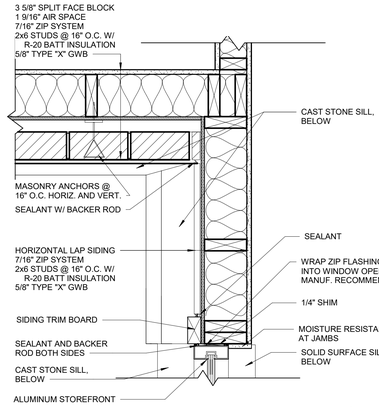
9/18/2025 5:52:38 PM



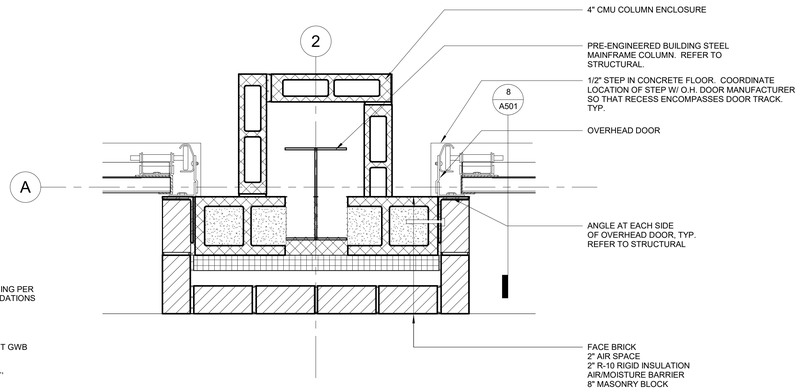
4 A501 PLAN DETAIL
1 1/2" = 1'-0"



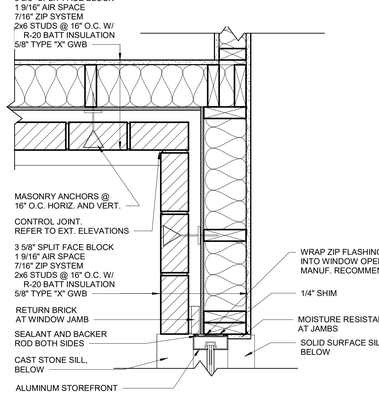
8 A501 OVERHEAD DOOR SILL DETAIL
3" = 1'-0"



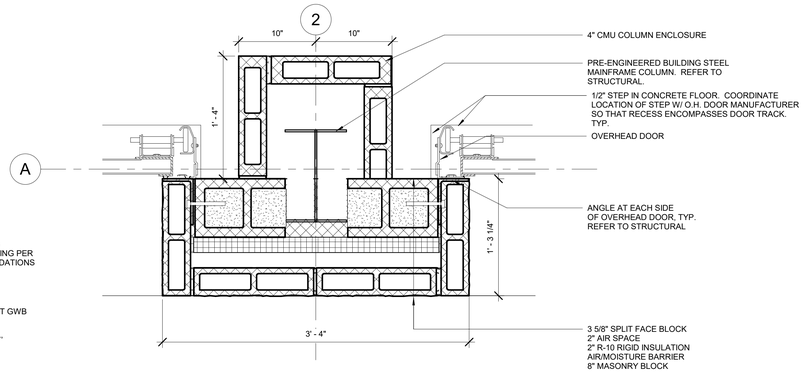
3 A501 PLAN DETAIL
1 1/2" = 1'-0"



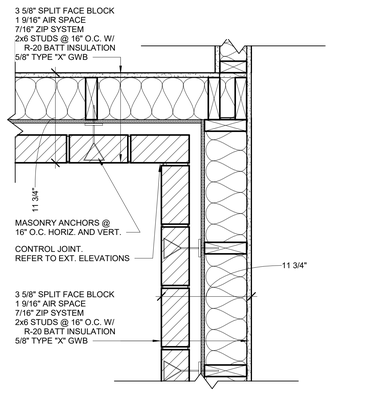
7 A501 OVERHEAD DOOR UPPER PIER DETAIL
1 1/2" = 1'-0"



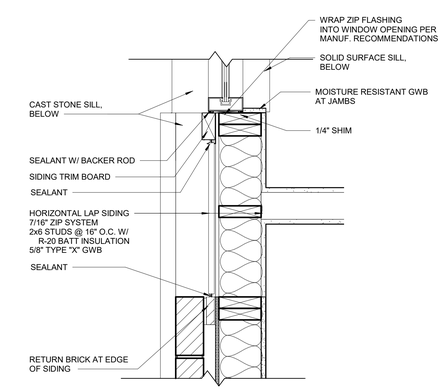
2 A501 PLAN DETAIL
1 1/2" = 1'-0"



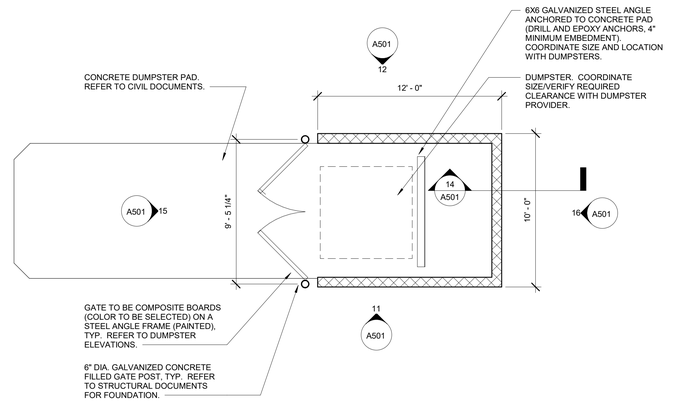
6 A501 OVERHEAD DOOR LOWER PIER DETAIL
1 1/2" = 1'-0"



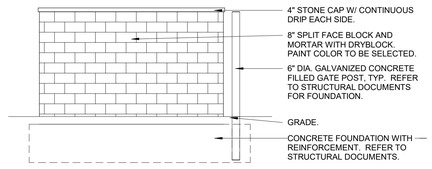
1 A501 PLAN DETAIL
1 1/2" = 1'-0"



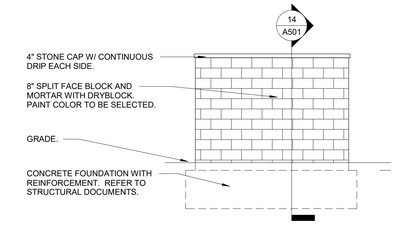
5 A501 PLAN DETAIL 5 - 5/A501
1 1/2" = 1'-0"



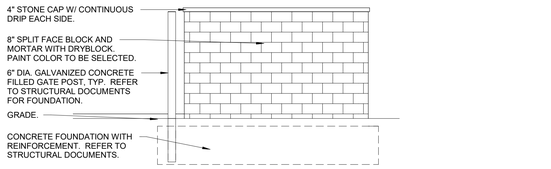
13 A501 DUMPSTER PLAN
1/4" = 1'-0"



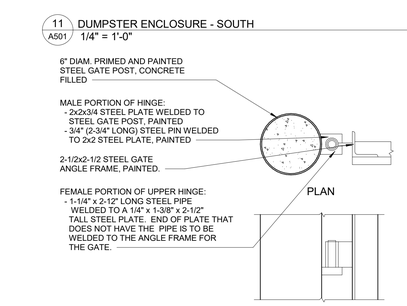
12 A501 DUMPSTER ENCLOSURE ELEVATION - NORTH
1/4" = 1'-0"



16 A501 DUMPSTER ENCLOSURE - EAST
1/4" = 1'-0"

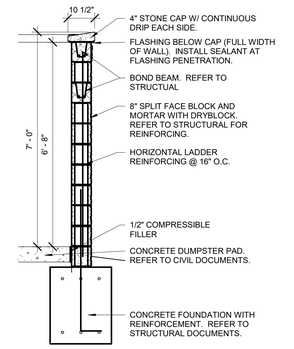


11 A501 DUMPSTER ENCLOSURE - SOUTH
1/4" = 1'-0"



10 A501 GATE DETAILS
NOT TO SCALE

15 A501 DUMPSTER ENCLOSURE - WEST
1/4" = 1'-0"



14 A501 DUMPSTER ENCLOSURE WALL SECTION
1/2" = 1'-0"

stCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014002659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

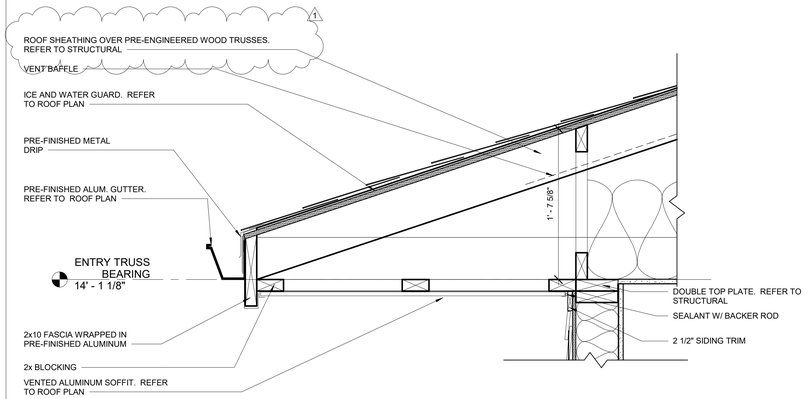
Sheet Info:

PLAN DETAILS

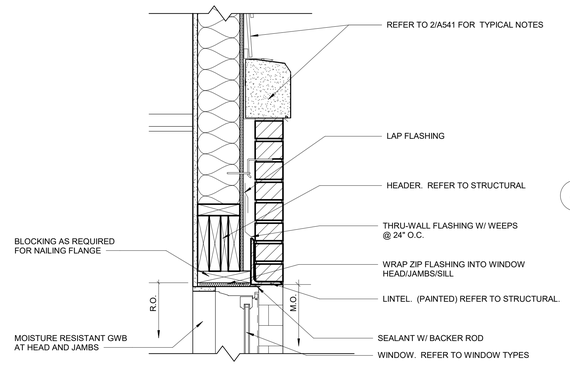
Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A501

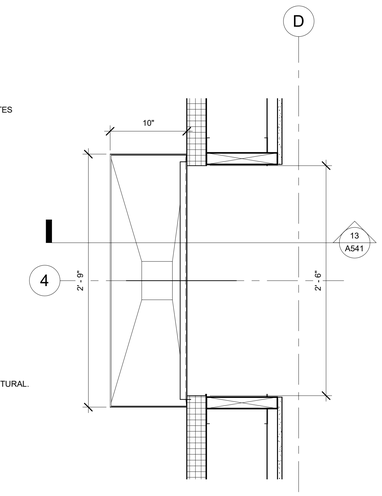
9/15/2025 9:13:05 PM

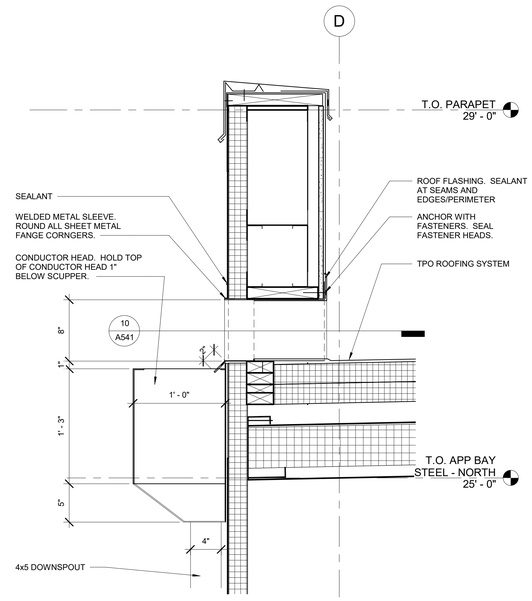


3 A541 SECTION DETAIL
1 1/2" = 1'-0"



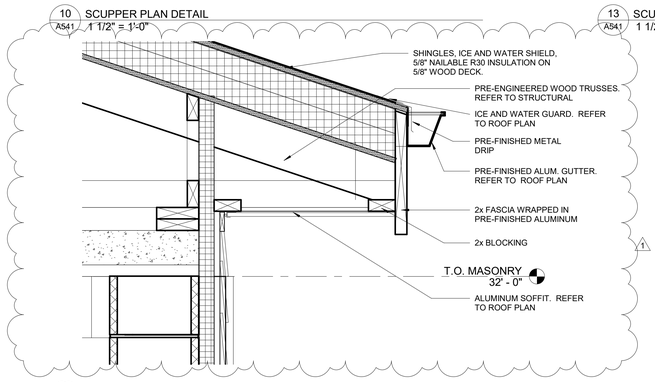
6 A541 SECTION DETAIL
1 1/2" = 1'-0"





10 A541 SCUPPER PLAN DETAIL
1 1/2" = 1'-0"

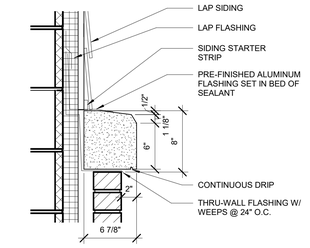
13 A541 SCUPPER SECTION
1 1/2" = 1'-0"



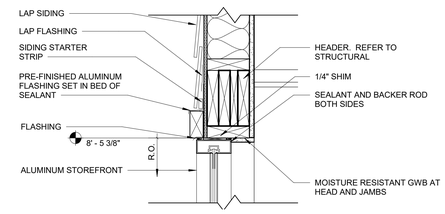
9 A541 SECTION DETAIL
1 1/2" = 1'-0"

2 A541 SECTION DETAIL
1 1/2" = 1'-0"

5 A541 SECTION DETAIL
1 1/2" = 1'-0"



8 A541 SECTION DETAIL
1 1/2" = 1'-0"



12 A541 SECTION DETAIL
1 1/2" = 1'-0"

1 A541 SECTION DETAIL
1 1/2" = 1'-0"

4 A541 SECTION DETAIL
1 1/2" = 1'-0"

7 A541 SECTION DETAIL
1 1/2" = 1'-0"

11 A541 SECTION DETAIL
1 1/2" = 1'-0"

ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:		
No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

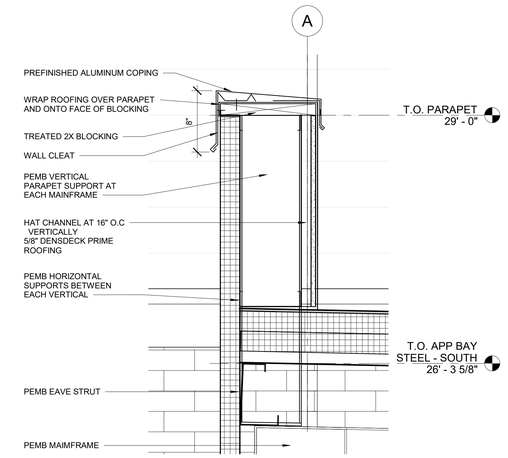
Sheet Info:

SECTION DETAILS

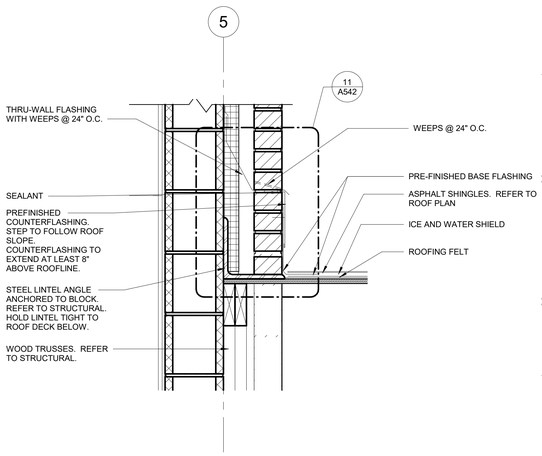
Drawn By:	Author
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A541

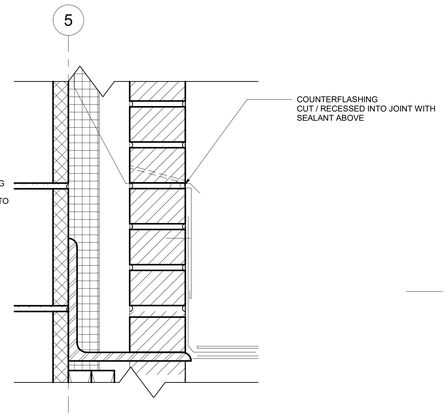
9/15/2025 9:13:08 PM



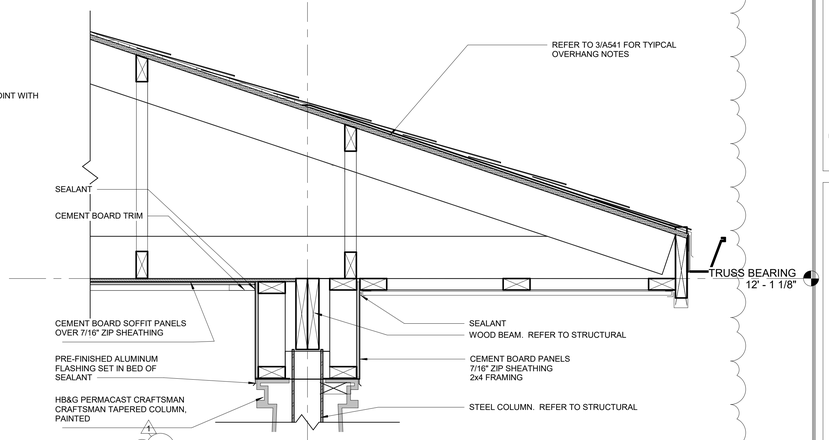
4 A542 SECTION DETAIL
1 1/2" = 1'-0"



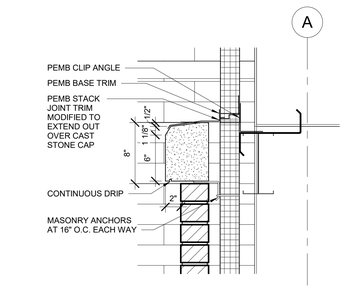
7 A542 SECTION DETAIL
1 1/2" = 1'-0"



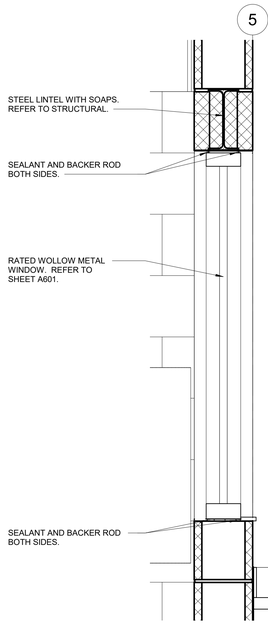
11 A542 ENLARGED COUNTERFLASHING DETAIL
3" = 1'-0"



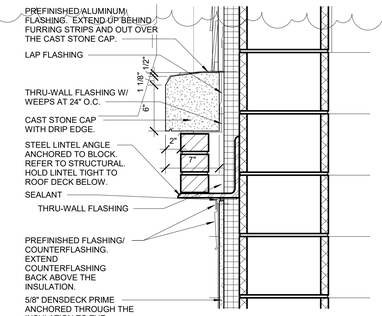
14 A542 SECTION DETAIL
1 1/2" = 1'-0"



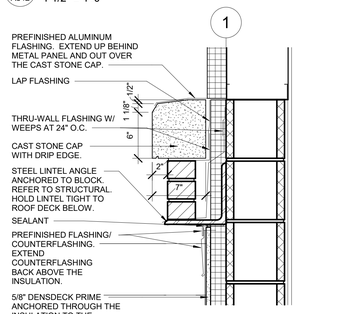
3 A542 SECTION DETAIL
1 1/2" = 1'-0"



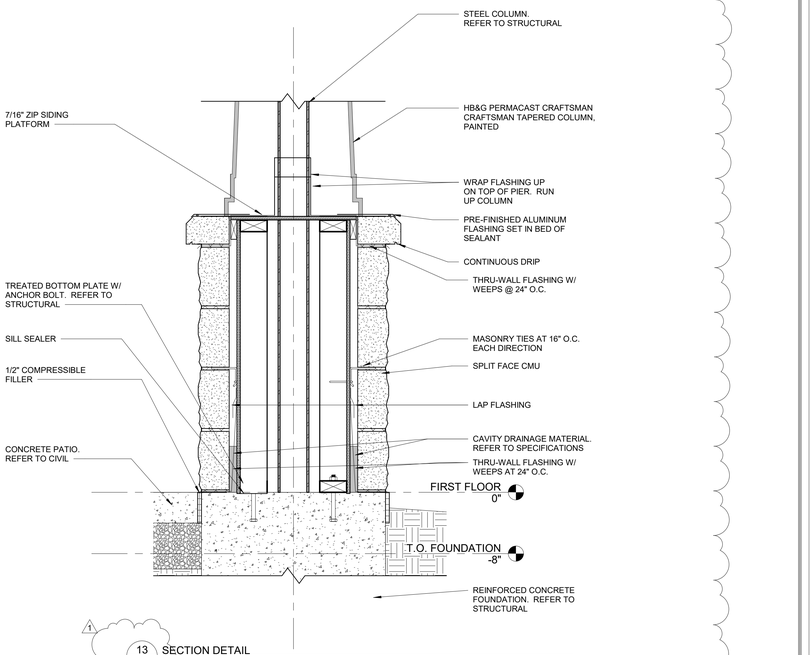
6 A542 SECTION DETAIL
1 1/2" = 1'-0"



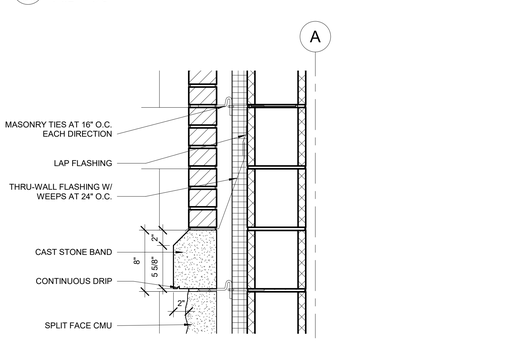
10 A542 SECTION DETAIL
1 1/2" = 1'-0"



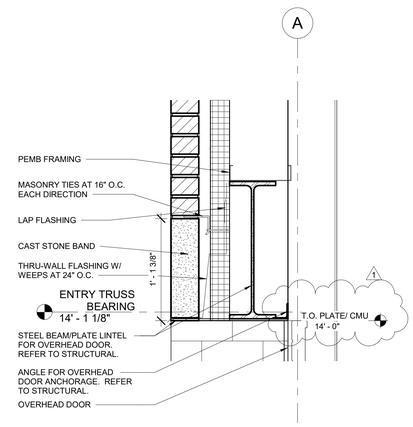
9 A542 SECTION DETAIL
1 1/2" = 1'-0"



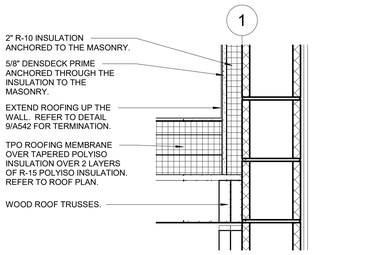
13 A542 SECTION DETAIL
1 1/2" = 1'-0"



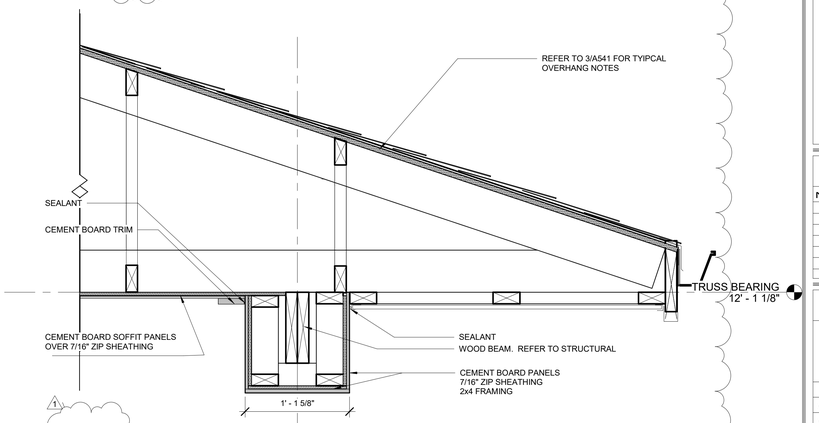
2 A542 SECTION DETAIL
1 1/2" = 1'-0"



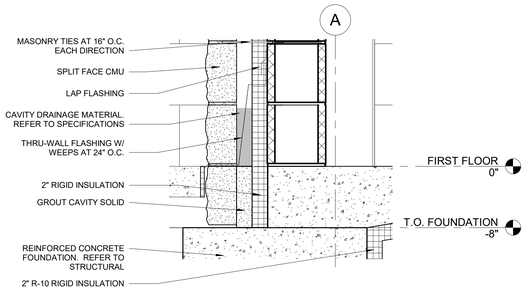
5 A542 SECTION DETAIL
1 1/2" = 1'-0"



8 A542 SECTION DETAIL
1 1/2" = 1'-0"



12 A542 SECTION DETAIL
1 1/2" = 1'-0"



1 A542 SECTION DETAIL
1 1/2" = 1'-0"

sfCoady
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SfC/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

SECTION DETAILS

Drawn By:	Author
Checked By:	Checker
Commission:	025-2125
Date:	2025-09-05

A542

9/15/2025 9:13:11 PM

DOOR SCHEDULE

DOOR NUMBER	DOOR TYPE	DOOR MATERIAL	DOOR WIDTH	DOOR QUANTITY	DOOR HEIGHT	DOOR THICKNESS	GLASS TYPE	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FIRE RATING	DOOR HARDWARE	REMARKS
100A	D7	ALUM	6' - 0"	2 - 3'-0"	7' - 0"	1 3/4"	FG	F5	ALUM	---	---	--	14	
100B	D7	ALUM	6' - 0"	2 - 3'-0"	6' - 10"	1 3/4"	FG	F5	ALUM	---	---	--	13	
101	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F2	HM	---	---	--	12	04 1
102	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
105	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
107	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
108	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F1	HM	---	---	--	09	
109	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
110	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
112	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	04	
113	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
114	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
115	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
116-1	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
116-2	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
116A	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	04	01
118	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
119	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F1	HM	---	---	45 MIN	08	
120	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
121	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
122	D4	WD	6' - 0"	2 - 3' - 0"	7' - 0"	1 3/4"	---	F3	HM	---	---	---	07	
123A	D6	WD	6' - 0"	2 - 3' - 0"	7' - 0"	1 3/4"	VG	F3	HM	---	---	---	11	
123B	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	10	
124	D4	WD	6' - 0"	2 - 3' - 0"	7' - 0"	1 3/4"	---	F3	HM	---	---	---	07	
125	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
126	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
127	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
129	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
130	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	45 MIN	04	
131	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	45 MIN	04	
132	D1	HM	3' - 6"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	90 MIN	06	01
132A	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	--	02	01 1
133A	D1	HM	3' - 6"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	90 MIN	06	
133B	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	--	04	
134A	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134B	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134C	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134D	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134E	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
134F	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
134G	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134H	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134J	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
134K	D8	METAL	14' - 0"	SINGLE	14' - 0"	2"	PARTIAL							02
135	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F6	HM	---	---	45 MIN	04	
136	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F1	HM	---	---	45 MIN	08	
137	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
138	D10	WD	5' - 0"	2 - 2' - 6"	7' - 0"	1 3/4"	---	F8	HM	---	---	---	01	
139	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
140	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	04	01 1
141	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
142	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
143	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
144	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
145	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
146	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
147	D1	WD	3' - 6"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	04 1	
148	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
149	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
150	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
151	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
152	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
153	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	20 MIN	02	
154	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	02	01
155	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
156	D3	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	FG	F4	HM	---	---	--	04	
157	D1	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	90 MIN	06	01 1
158	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F1	HM	---	---	45 MIN	08	
159	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
160	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
161	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	15 1	
163	D2	HM	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F6	HM	---	---	--	09	
164	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	05	
165	D2	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	VG	F1	HM	---	---	--	04	
166	D1	WD	3' - 0"	SINGLE	7' - 0"	1 3/4"	---	F1	HM	---	---	--	03	
167	D9	HM	3' - 0"	SINGLE	3' - 0"	1 3/4"	---	F7	HM	---	---	--	--	03

DOOR SCHEDULE REMARKS

01	PROVIDE 3/4" DOOR UNDERCUT.
02	OVERHEAD DOOR. CLOPAY, MODEL 3722, COLOR BLAST FOR RED DOORS, FULL VIEW VISION LITES PER ELEVATIONS, 100K CYCLE SPRINGS, 3" TRACK, TINTED INSLUATED GLASS – GRAY OR BRONZE TBD.
03	EMERGENCY ESCAPE HATCH TO MEET ALL ICC 500 REQUIREMENTS. VAULTPRO EXECUTIVE PRO WALL HATCH OR APPROVED EQUAL. FRAME TO HAVE TRIM FLANGES ON BOTH SIDES OF THE WALL. FRAME TO BE EXTENDED TO FIT DEPTH OF EXTERIOR WALL DOOR TO HAVE WEATHER GASKETING DUE TO EXTERIOR EXPOSURE.
1 04	DOOR 101 CAN BE REMOTELY CONTROLLED BY A PUSH BUTTON IN OFFICE 102.

DOOR SCHEDULE ABBREVIATIONS

ALUM	ALUMINUM	HM	HOLLOW METAL	VG	VISION GLASS
EX	EXISTING	PLAM	PLASTIC LAMINATE	WOOD	WOOD

DOOR SCHEDULE NOTES

1. REFER TO FLOOR PLAN FOR DOOR SWING DIRECTIONS.
2. EXIT DOORS: DURING BUSINESS HOURS EXIT DOORS SHALL BE OPERABLE FROM INSIDE WITHOUT USE OF A KEY. HARDWARE FOR HANDICAPPED SHALL CONFORM TO LOCAL BUILDING CODES AND ANSI 4.13.10 AS RULES APPLY.
3. DOOR SIGNAGE (ALL INTERIOR DOORS) SHALL BE "ASI TACTILE PLAQUE SIGNS" OR EQUIVALENT. SIGNAGE SHALL BE 8"x8" WITH THE ROOM NAME AND NUMBER SHOWN. REFER TO THE ROOM FINISH SCHEDULE FOR ROOM NAMES AND NUMBERS. ROOM NUMBERS ARE TO BE COORDINATED WITH THE OWNER. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. MOUNTING HEIGHT SHALL BE 60" AFF TO THE CENTERLINE OF THE SIGN.
4. ALL LOCKS ARE TO BE KEYED TO THE OWNER'S REQUIREMENTS.
5. KICK PLATES SHALL BE STAINLESS STEEL 16 GAUGE WITH US26D FINISH. 10" HIGH AND 2" LESS THAN THE DOOR WIDTH.
6. ALL HOLLOW METAL DOORS AND FRAMES TO BE PRIMED AND PAINTED.
7. HOLLOW METAL DOOR FRAMES TO BE 16 GA. MINIMUM THICKNESS, FULL PROFILE WELDED, PRIMED FOR PAINTING.

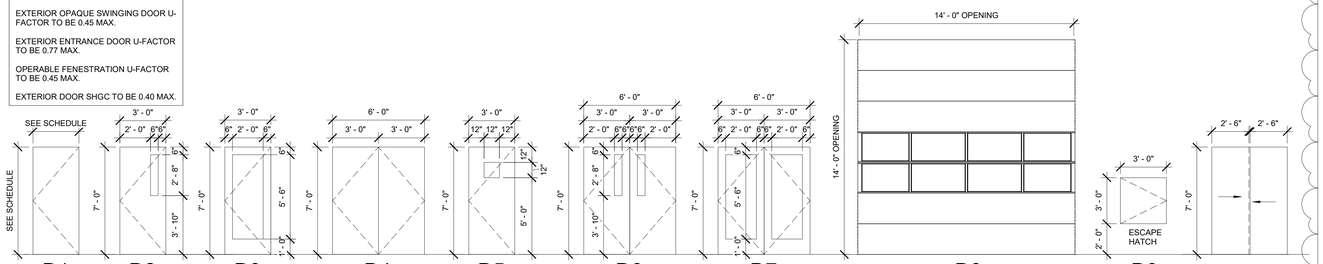
NOTE: TEMPERED GLASS AS REQUIRED BY CODE.

EXTERIOR OPAQUE SWINGING DOOR U-FACTOR TO BE 0.45 MAX.

EXTERIOR ENTRANCE DOOR U-FACTOR TO BE 0.77 MAX.

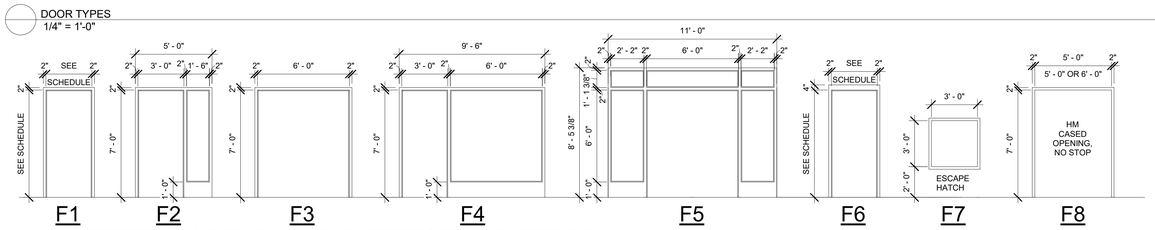
OPERABLE FENESTRATION U-FACTOR TO BE 0.45 MAX.

EXTERIOR DOOR SHGC TO BE 0.40 MAX.



NOTE: PROVIDE TEMPERED GLASS IN DOORS AS REQUIRED BY CODE. PROVIDE REFLECTIVE/MIRRORED GLASS IN EXTERIOR DOORS.
NOTE: ESCAPE HATCH MANUFACTURER NOTES HATCH AS 36" X 36". VERIFY ACTUAL ROUGH-IN DIMENSIONS. SET BOTTOM OF ROUGH OPENING AT 2'-0" AFF.

DOOR TYPES
1/4" = 1'-0"



NOTE: PROVIDE TEMPERED GLASS IN DOORS AS REQUIRED BY CODE. PROVIDE REFLECTIVE/MIRRORED GLASS IN EXTERIOR DOORS.
NOTE: ESCAPE HATCH MANUFACTURER NOTES HATCH AS 36" X 36". VERIFY ACTUAL ROUGH-IN DIMENSIONS. SET BOTTOM OF ROUGH OPENING AT 2'-0" AFF.

DOOR FRAME TYPES
1/4" = 1'-0"

9/15/2025 9:13:14 PM

HARDWARE GROUP NO. 01

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
1 EA.	BYPASS SLIDING DOOR HDWR	9611CS 60"	ALUM	HAGER
2 EA.	ADA DOOR PULL	27N	US32D	HAGER

HARDWARE GROUP NO. 02

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	PRIVACY LOCK (ADA LEVER)	3540 WTN	US26D	HAGER
1 EA.	CLOSER (DOORS 113, 115, 125, 126, AND 132A ONLY)	5200 MLT FC (MOUNT ON PULL SIDE)	ALUM	HAGER
1 EA.	CLOSER W/ STOP ARM (DOORS 141, 143, 146, 149, 152 AND 153 ONLY)	5200 HDS MLT FC (MOUNT ON PULL SIDE)	ALUM	HAGER
1 EA.	CONCAVE WALL STOP (DOORS 113, 1115, 125, 126, 132A, 144, 145, 147, 150, 151 AND 154 ONLY)	236W	US32D	HAGER
1 EA.	OVERHEAD STOP	6016S SZ2	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER
	GASKETING (DOORS 141, 143, 146, 149, 152 AND 153 ONLY)	722	CHAR	HAGER

DOORS 141, 143, 146, 149, 152 AND 153 ARE 20 MIN. RATED DOORS

HARDWARE GROUP NO. 03

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	OFFICE LOCK (ADA LEVER)	3550 WTN	US26D	HAGER
1 EA.	CLOSER W/ HOLD OPEN ARM	5200 MLT HO FC (MOUNT ON PULL SIDE)	US32D	HAGER
1 EA.	CLOSER W/ HOLD OPEN STOP ARM	5200 MLT HDHOS FC (MOUNT ON PULL SIDE)	US32D	HAGER
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 04

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 3 EA.	HEAVY WEIGHT HINGE (147 ONLY)	BB1199 4-1/2X4-1/2	US26D	HAGER
1 EA.	PASSAGE LOCK (ADA LEVER)	3510 WTN	US26D	HAGER
1 EA.	CLOSER (112, 116A, 130, 131, 133B, 147 & 156 ONLY)	5200 MLT FC (MOUNT ON PULL SIDE)	ALUM	HAGER
1 EA.	CLOSER (165 ONLY)	5200 MLT FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
1 EA.	CLOSER (135 & 140 ONLY)	5200 MLT HDHOS FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
	GASKETING (130, 131 & 135 ONLY)	722	CHAR	HAGER
1 EA.	KICKPLATE (116A ONLY)	190S 10"X34"	US32D	HAGER
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 05

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	CLASSROOM LOCK (ADA LEVER)	3570 WTN	US26D	HAGER
1 EA.	CLOSER	5200 MLT FC (MOUNT ON PULL SIDE)	ALUM	HAGER
1 EA.	CLOSER W/ STOP ARM (164 ONLY)	5200 MLT FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
1 EA.	CONCAVE WALL STOP (ALL EXCEPT 164)	236W	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 06

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
4 EA.	TORNADO RESISTANT HINGE	SP3386 4-1/2X4-1/2	US32D	MCK
1 EA.	THREE POINT PRIVACY LOCK (ADA LEVER)	FM7366 LNL (90 MIN. RATING) (PRIVACY FUNCTION - DOOR 157) FM7314 LNL (90 MIN. RATING) (PASSAGE FUNCTION - DOORS 132 AND 133A)	US32D	SAR
1 EA.	CLOSER	281 O TB (PULL SIDE MOUNT)	EN	SAR
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER
	SMOKE SEAL	S773	BLACK	PEMKO
	WEATHERSTRIPPING	305 BS	BLACK	PEMKO

SHELTER DOOR/FRAME/HARDWARE ASSEMBLY TO BE ICC 500 COMPLIANT. PROVIDE DOOR AND FRAME PER THE HARDWARE MANUFACTURER'S REQUIREMENTS.

HARDWARE GROUP NO. 07

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
6 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	STOREROOM LOCK (ADA LEVER)	3580 WTN	US26D	HAGER
1 EA.	MANUAL FLUSH BOLT	283D	US26D	HAGER
4 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 08

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	KEYPAD EXIT DEVICE	12 43 DG160 KP 8877 F ETL	US32D	SAR
1 EA.	CYLINDER	DG1 6300 DO NOT DUPLICATE MK VK KEYS	15	SAR
1 EA.	CLOSER	5200 MLT FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
	GASKETING	722	CHAR	HAGER
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER

HARDWARE GROUP NO. 09

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2 NRP	US26D	HAGER
1 EA.	KEYPAD EXIT DEVICE	16 43 DG160 KP 8877 F ETL	US32D	SAR
1 EA.	CYLINDER	DG1 6300 DO NOT DUPLICATE MK VK KEYS	15	SAR
1 EA.	CLOSER	5200 MLT HD FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
	WEATHERSTRIPPING	721	CHAR	HAGER
1 EA.	DOOR SWEEP	750S	ALUM	HAGER
1 EA.	THRESHOLD	412S	ALUM	HAGER

HARDWARE GROUP NO. 10

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
2 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	ELECTRIC HINGE	BB1279 ETW-8 4-1/2X4-1/2	US26D	HAGER
1 EA.	ELECTRIC PANIC DEVICE W/ ADA LEVER (FAIL SAFE AND TIED INTO THE FIRE ALARM SYSTEM)	56 88 CLL	US32D	SAR
1 EA.	CARD READER (NORTH SIDE OF THE DOOR)			
1 EA.	CLOSER	5200 MLT FC (MOUNT ON PULL SIDE)	ALUM	HAGER
1 EA.	KICK PLATE	190S 10"X34"	US32D	HAGER
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 11

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
6 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
2 EA.	PANIC DEVICE	4501 CLB 36" 45CE WTN	US26D	HAGER
2 EA.	CYLINDER	3902	US26D	HAGER
2 EA.	CLOSER W/ HOLD OPEN STOP ARM	5200 MLT HDHOS FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
2 EA.	KICK PLATE	190S 10"X34"	US32D	HAGER
4 EA.	SILENCERS	307D	GREY	HAGER
2 EA.	DUSTPROOF STRIKE	280X	US26D	HAGER

HARDWARE GROUP NO. 12

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	CLASSROOM LOCK (ADA LEVER)	3570 WTN	US26D	HAGER
1 EA.	ELECTRIC STRIKE (FAIL SAFE)	2928	US32D	HAGER
1 EA.	CLOSER	5200 MLT FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
1 EA.	KICK PLATE	190S 10"X34"	US32D	HAGER
1 EA.	OVERHEAD STOP	6016S SZ2	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

HARDWARE GROUP NO. 13

QTY	DESCRIPTION
2 SETS	OFFSET PIVOTS WITH INTERMEDIATE OFFSET PIVOT (ALUM. MANUFACTURER'S STANDARD)
2 EA.	PUSH / PULLS (ALUM. MANUFACTURER'S STANDARD)
2 EA.	HEAVY DUTY CLOSERS WITH STOP ARM (ALUM. MANUFACTURER'S STANDARD)

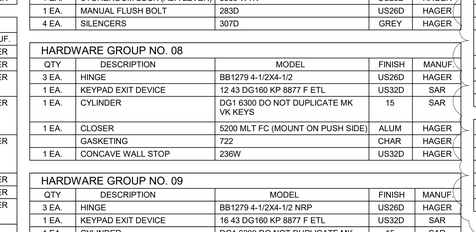
HARDWARE GROUP NO. 14

QTY	DESCRIPTION			
2 SETS	OFFSET PIVOTS WITH INTERMEDIATE OFFSET PIVOT (ALUM. MANUFACTURER'S STANDARD)			
1 EA.	PANIC DEVICE	4601 CVR 36" 46DT WTN	US26D	HAGER
1 EA.	PANIC DEVICE	4601 CVR 36" 46NL WTN	US26D	HAGER
1 EA.	CYLINDER	3901	US26D	HAGER
2 EA.	CLOSER W/ STOP ARM	5200 MLT HDCS FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
1 EA.	THRESHOLD	412S	ALUM	HAGER
2 EA.	SWEEP (ALUM. MANUFACTURER'S STANDARD)			
	WEATHERSTRIPPING (ALUM. MANUFACTURER'S STANDARD)			
2 EA.	TOP AND BOTTOM STRIKES (INCLUDED WITH PANIC DEVICE)			

HARDWARE GROUP NO. 15

QTY	DESCRIPTION	MODEL	FINISH	MANUF.
3 EA.	HINGE	BB1279 4-1/2X4-1/2	US26D	HAGER
1 EA.	PANIC DEVICE (ADA LEVER)	4701 RIM 47KN WTN TW	US26D	HAGER
1 EA.	CLOSER	5200 MLT FC (MOUNT ON PUSH SIDE)	ALUM	HAGER
1 EA.	CONCAVE WALL STOP	236W	US32D	HAGER
3 EA.	SILENCERS	307D	GREY	HAGER

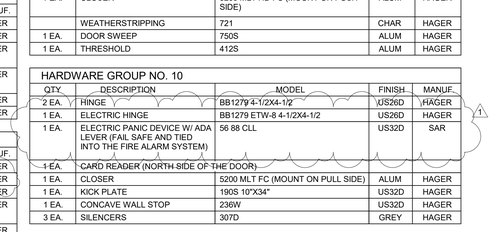
INTERIOR SIGNAGE ELEVATIONS



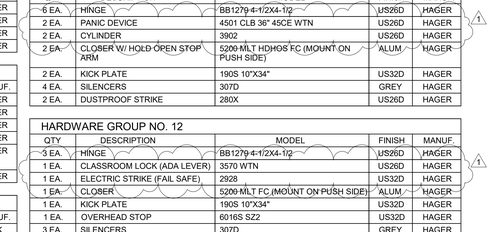
SIGN BACKGROUND SHALL BE NON-REFLECTIVE. "TORNADO SAFE ROOM" AND LOGO SHALL BE REFLECTIVE USING 3M SCOTCHLITE DIAMOND-GRADE REFLECTIVE SHEETING, YELLOW IN COLOR. VERIFY WITH MANUFACTURER THAT SIGN WILL GLOW FOR A MINIMUM OF 6 HOURS IN THE EVENT OF POWER LOSS.

THE IDENTIFYING SIGNAGE FOR THE TORNADO SAFE ROOM SHALL BE POSTED IN A PROMINENT LOCATIONS 60 INCHES (1524 mm) ABOVE THE FINISHED FLOOR TO THE CENTERLINE OF THE SIGN.

TYPE F1 (18" X 12") SOLID PLASTIC



TYPE F2 (18" X 12") SOLID PLASTIC

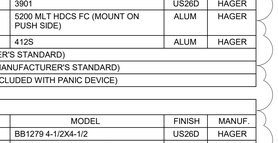


SIGN BACKGROUND SHALL BE NON-REFLECTIVE. "TORNADO SAFE ROOM" AND LOGO SHALL BE REFLECTIVE USING 3M SCOTCHLITE DIAMOND-GRADE REFLECTIVE SHEETING, YELLOW IN COLOR. VERIFY WITH MANUFACTURER THAT SIGN WILL GLOW FOR A MINIMUM OF 6 HOURS IN THE EVENT OF POWER LOSS.

THE IDENTIFYING SIGNAGE FOR THE TORNADO SAFE ROOM SHALL BE POSTED IN A PROMINENT LOCATIONS 60 INCHES (1524 mm) ABOVE THE FINISHED FLOOR TO THE CENTERLINE OF THE SIGN.

NOTE: DIRECTIONAL ARROW WILL VARY AND SHALL DIRECT OCCUPANTS TOWARD THE STORM SHELTER

TYPE F3 (18" X 12") SOLID PLASTIC



INTERNATIONAL MALE OR FEMALE GENDER SYMBOL

INTERNATIONAL WHEELCHAIR SYMBOL

TEXT AS REQUIRED. "MEN" OR "WOMEN" "BOYS" OR "GIRLS" "RESTROOM" "FACULTY RESTROOM"

TYPE 2
(8" X 8")
SOLID PLASTIC

stlCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014003659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

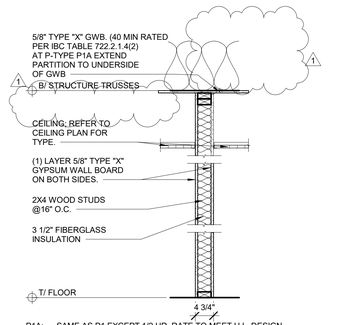
No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

DOOR SCHEDULE

Drawn By:	SGW
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A601



P1A: SAME AS P1 EXCEPT 1/2 HR. RATE TO MEET U.L. DESIGN U407
STC RATING = 33

P1B: SAME AS P1A EXCEPT 2X6 STUDS, 1/2 HR. RATE TO MEET U.L. DESIGN U407

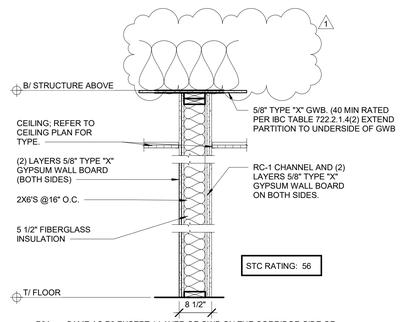
P1C: SAME AS P1B EXCEPT A LOAD-BEARING WALL. REFER TO STRUCTURAL. LOAD-BEARING WALLS EXTEND TO THE BOTTOM OF THE TRUSSES. STOP GWB CEILINGS SHORT OF THE STUDS.

P1D: SAME AS P1B EXCEPT NO RATING REQUIRED.

P1E: SAME AS PI EXCEPT PROVIDE LEVEL 3 BULLETPROOF WALL PANEL BEHIND GYPSUM BOARD.

*PROVIDE ACOUSTIC SEALANT AT PERIMETER AND AT PENETRATIONS.

1 A602 PARTITION TYPE "P1"
3/4" = 1'-0"

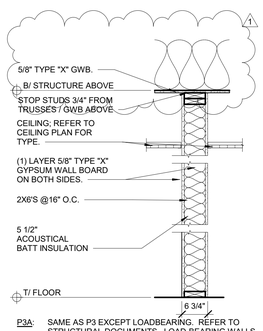


P2A: SAME AS P2 EXCEPT 1 LAYER OF GWB ON THE CORRIDOR SIDE OF THE WALL SO THE STUDS ALIGN WITH THE REST OF THE WALL TO THE NORTH. LOAD-BEARING WALL. REFER TO STRUCTURAL. LOAD-BEARING WALLS EXTEND TO THE BOTTOM OF THE TRUSSES. STOP GWB CEILINGS SHORT OF THE STUDS.

*PROVIDE ACOUSTIC SEALANT AT PERIMTER AND AT PENETRATIONS.

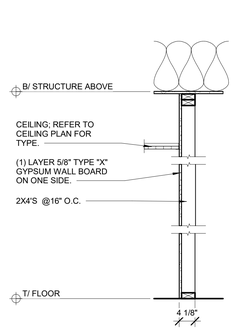
WALL TO MEET UL DESIGN NO. U301 - 2 HR RATED
(REQUIRED WALL RATING IS 1/2 HOUR)

2 A602 PARTITION TYPE "P2"
3/4" = 1'-0"

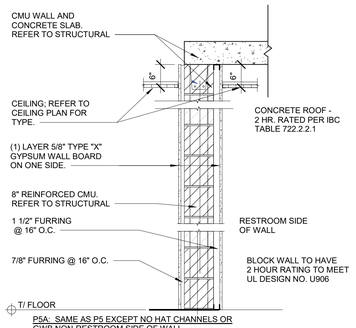


P3A: SAME AS P3 EXCEPT LOADBEARING. REFER TO STRUCTURAL DOCUMENTS. LOAD-BEARING WALLS EXTEND TO THE BOTTOM OF THE TRUSSES. STOP GWB CEILINGS SHORT OF THE STUDS.

3 A602 PARTITION TYPE "P3"
3/4" = 1'-0"



4 A602 PARTITION TYPE "P4"
3/4" = 1'-0"



P5A: SAME AS P5 EXCEPT NO HAT CHANNELS OR GWB NON-RESTROOM SIDE OF WALL

P5B: SAME AS P5 EXCEPT 2x6'S ON RESTROOM SIDE OF WALL AND 1 1/2" FURRING ON NON-RESTROOM SIDE OF WALL

5 A602 PARTITION TYPE "P5"
3/4" = 1'-0"

6 A602 PARTITION TYPE "P6"
3/4" = 1'-0"

1 HOUR FIRE RATED PARTITION
UL DESIGN NO. U305

7 A602 PARTITION TYPE "P7"
3/4" = 1'-0"

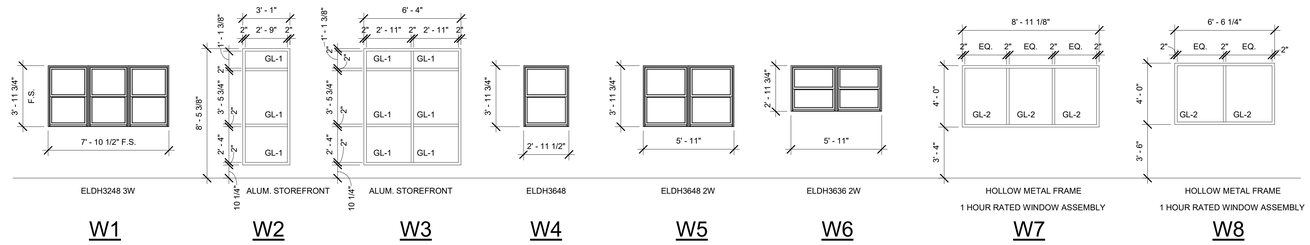
*PROVIDE ACOUSTIC SEALANT AT PERIMTER AND AT PENETRATIONS.

WALL TO MEET UL DESIGN NO. U301 - 2 HR RATED
(REQUIRED WALL RATING IS 1/2 HOUR)

8 A602 PARTITION TYPE "P8"
3/4" = 1'-0"

P9A: SAME AS P9 EXCEPT 8" WALL EXTENDS TO ROOF DECK ABOVE AND THE WALL IS ONLY REQUIRED TO BE RATED 1 HR.

9 A602 PARTITION TYPE "P9"
3/4" = 1'-0"



W1 W2 W3 W4 W5 W6 W7 W8

WINDOW TYPES
1/4" = 1'-0"

NOTE: TEMPERED GLASS AS REQUIRED BY CODE.

OPERABLE FENESTRATION U-FACTOR TO BE 0.45 MAX.

SHGC TO BE 0.4 MAX. - SOUTH/EAST/WEST SIDES
.53 MAX NORTH SIDE

stlCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014002859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTITION TYPES AND WINDOW TYPES

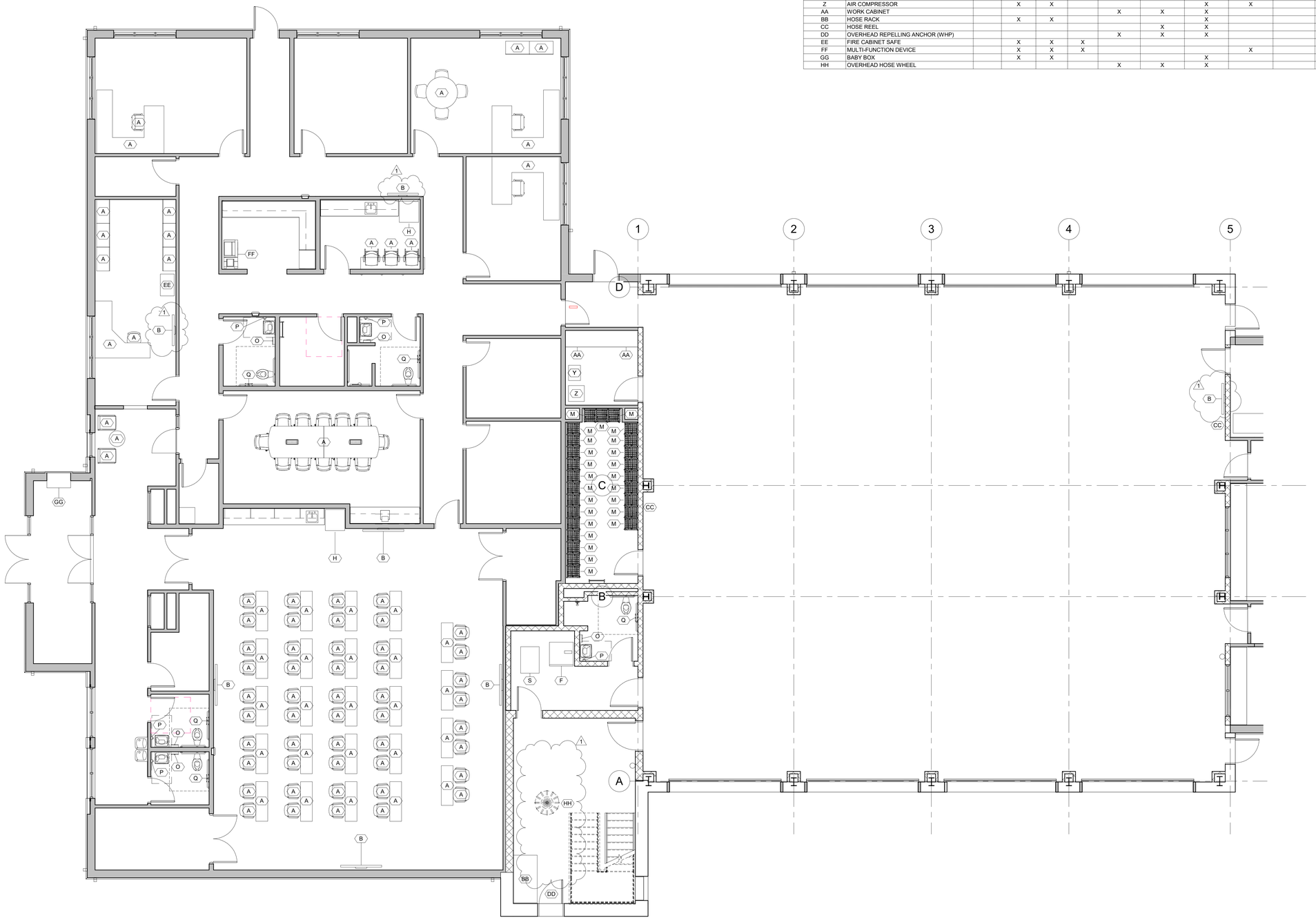
Drawn By:	CEC
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A602

9/15/2025 9:13:15 PM

EQUIPMENT/FURNITURE SCHEDULE

ITEM	ITEM DESCRIPTION	EXISTING	OWNER SPEC	OWNER FURNISH	OWNER INSTALL	ARCH/MEP SPEC	CONTRACTOR FURNISH	CONTRACTOR INSTALL	UTILITIES ELECTRIC	UTILITIES DATA	UTILITIES WATER/DRAIN	UTILITIES VENT	UTILITIES GAS	COMMENTS
A	FURNITURE		X	X	X									
B	TV AND SUPPORT BRACKET		X	X				X	X	X				CONTRACTOR TO PROVIDE BLOCKING.
C	BED		X	X	X									
D	KITCHEN SHELVING					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
E	WASHER - RESIDENTIAL		X	X				X	X		X			
F	DRYER - RESIDENTIAL		X	X				X	X			X	X	
G	ICE MACHINE - RESIDENTIAL													
H	REFRIGERATOR - RESIDENTIAL		X	X				X	X		X			
I	DINING TABLE / CHAIRS		X	X	X									
J	RECLINER		X	X	X									
K	RANGE - COMMERCIAL		X	X				X	X				X	
L	MICROWAVE		X	X				X	X					
M	GEAR LOCKERS					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
N	TALL WARDROBE					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
O	PAPER TOWEL DISPENSER					X	X	X						
P	SOAP DISPENSER					X	X	X						
Q	TOILET PAPER DISPENSER					X	X	X						
R	HOOD					X	X	X	X			X		
S	GEAR EXTRACTOR		X	X				X	X		X			
T	DISHWASHER		X	X				X	X		X			
U	WORKOUT EQUIPMENT		X	X	X				X					
V	SCBA COMPRESSOR		X	X	X				X					
W	SCBA CASCADE		X	X	X				X					
X	SCBA TANK RACK		X	X	X									
Y	FLAMMABLE CABINET - GLOBAL INDUSTRIAL WB237607					X	X	X						
Z	AIR COMPRESSOR		X	X				X	X					
AA	WORK CABINET					X	X	X						
BB	HOSE RACK		X	X				X						
CC	HOSE REEL						X	X						
DD	OVERHEAD REPELLING ANCHOR (WHP)					X	X	X						
EE	FIRE CABINET SAFE		X	X	X									
FF	MULTI-FUNCTION DEVICE		X	X	X				X					
GG	BABY BOX		X	X				X						
HH	OVERHEAD HOSE WHEEL					X	X	X						



1 A603 PARTIAL EQUIPMENT PLAN - WEST
3/16" = 1'-0"

seCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014002659
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

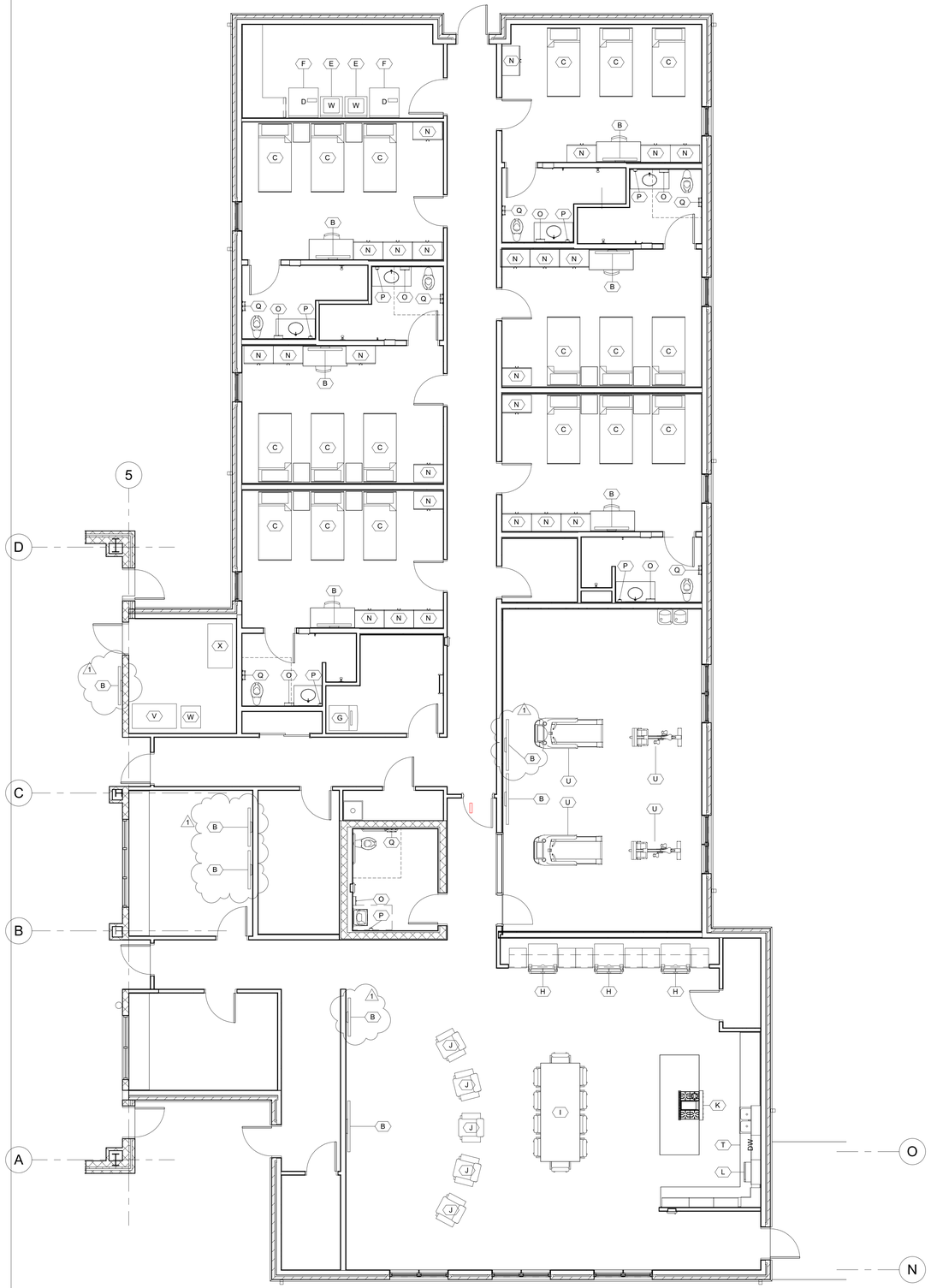
Sheet Info:

PARTIAL EQUIPMENT PLAN (WEST) AND SCHEDULE

Drawn By:	CEC
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A603

9/15/2025 9:13:20 PM



1 A604 PARTIAL EQUIPMENT PLAN - EAST
3/16" = 1'-0"

EQUIPMENT/FURNITURE SCHEDULE

ITEM	ITEM DESCRIPTION	EXISTING	OWNER SPEC	OWNER FURNISH	OWNER INSTALL	ARCH/MEP SPEC	CONTRACTOR FURNISH	CONTRACTOR INSTALL	UTILITIES ELECTRIC	UTILITIES DATA	UTILITIES WATER/DRAIN	UTILITIES VENT	UTILITIES GAS	COMMENTS
A	FURNITURE		X	X	X									
B	TV AND SUPPORT BRACKET		X	X				X	X	X				CONTRACTOR TO PROVIDE BLOCKING.
C	BED		X	X	X									
D	KITCHEN SHELVING					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
E	WASHER - RESIDENTIAL		X	X				X	X		X			
F	DRYER - RESIDENTIAL		X	X				X	X			X	X	
G	ICE MACHINE - RESIDENTIAL													
H	REFRIGERATOR - RESIDENTIAL		X	X				X	X		X			
I	DINING TABLE / CHAIRS		X	X	X									
J	RECLINER		X	X	X									
K	RANGE - COMMERCIAL		X	X				X	X				X	
L	MICROWAVE		X	X				X	X					
M	GEAR LOCKERS					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
N	TALL WARDROBE					X	X	X						CONTRACTOR TO PROVIDE BLOCKING.
O	PAPER TOWEL DISPENSER					X	X	X						
P	SOAP DISPENSER					X	X	X						
Q	TOILET PAPER DISPENSER					X	X	X						
R	HOOD					X	X	X	X			X		
S	GEAR EXTRACTOR		X	X				X	X		X			
T	DISHWASHER		X	X				X	X		X			
U	WORKOUT EQUIPMENT		X	X	X				X					
V	SCBA COMPRESSOR		X	X	X				X					
W	SCBA CASCADE		X	X	X				X					
X	SCBA TANK RACK		X	X	X									
Y	FLAMMABLE CABINET - GLOBAL INDUSTRIAL WB237607					X	X	X						
Z	AIR COMPRESSOR		X	X				X	X					
AA	WORK CABINET					X	X	X						
BB	HOSE RACK		X	X				X						
CC	HOSE REEL						X	X						
DD	OVERHEAD REPELLING ANCHOR (WHP)					X	X	X						
EE	FIRE CABINET SAFE		X	X	X									
FF	MULTI-FUNCTION DEVICE		X	X	X				X					
GG	BABY BOX		X	X				X						
HH	OVERHEAD HOSE WHEEL					X	X	X						

sfCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 201400036S9
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL EQUIPMENT PLAN (EAST) AND SCHEDULE

Drawn By:	CEC
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

A604

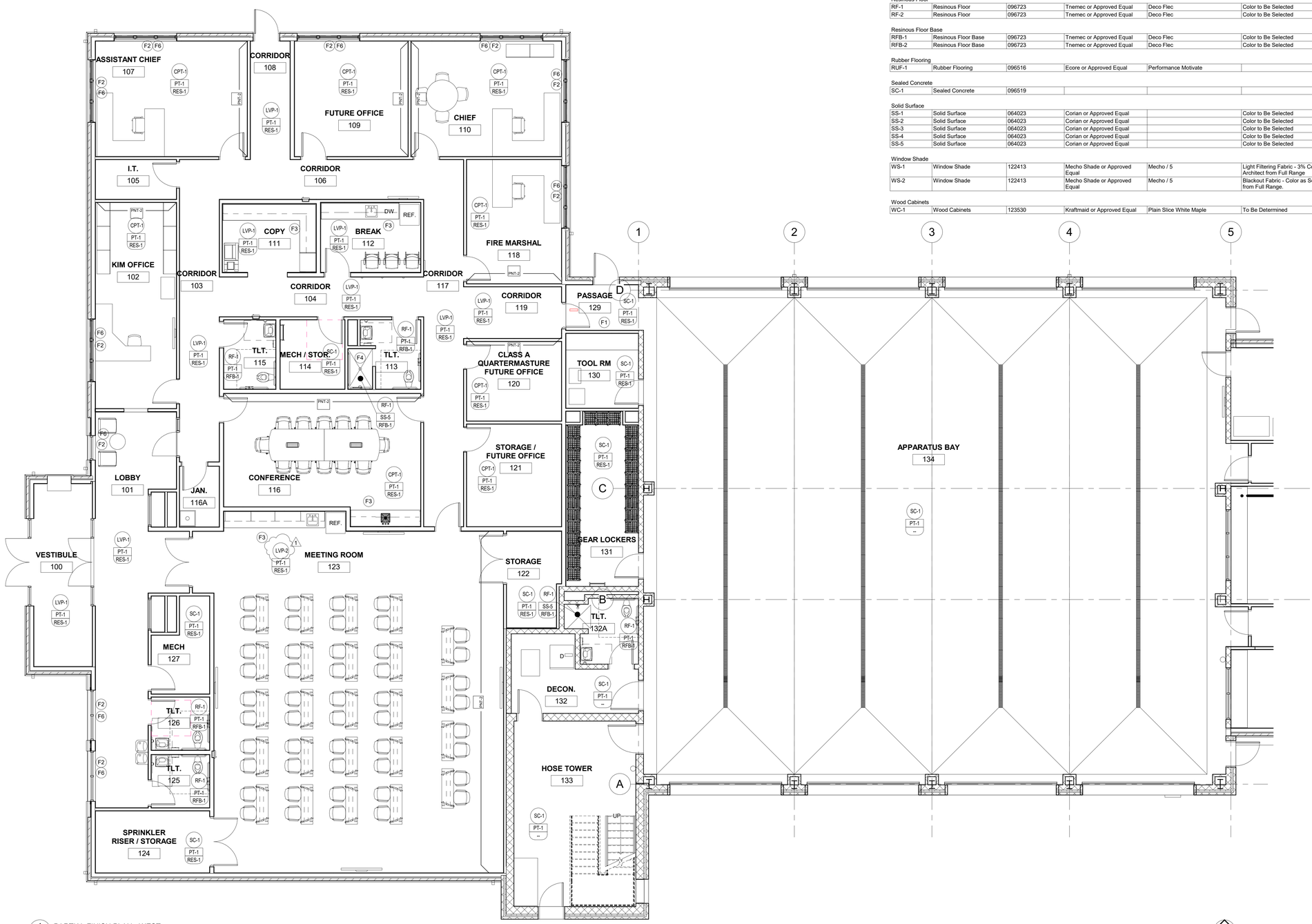
9/16/2025 8:50:43 AM

FINISH PLAN GENERAL NOTES

1	REFER TO FINISH PLANS FOR EXTENT AND TYPE OF FLOOR AND WALL FINISHES.
2	REFER TO REFLECTED CEILING PLANS FOR EXTENT OF CEILING TYPES.
3	REFER TO INTERIOR ELEVATIONS FOR EXTENT AND TYPE OF MILLWORK FINISHES.
4	WHERE FLOOR FINISHES CHANGE AT CASED OPENINGS, THE FINISH CHANGE SHALL OCCUR AT THE CENTERLINE OF THE CASED OPENING. WHERE FLOOR FINISHES CHANGE AT DOORWAYS, THE FINISH CHANGE SHALL OCCUR AT THE CENTERLINE OF THE DOOR IN THE CLOSED POSITION.
5	FLOOR TRANSITIONS BETWEEN MATERIALS SHOULD BE FLUSH. FEATHER SUBFLOOR TO MAKE FLUSH TRANSITION AS REQUIRED..
6	ALL HOLLOW METAL FRAMES TO BE PAINTED. COLOR TO MATCH ADJACENT WALL PAINT.
7	PROVIDE MOISTURE MITIGATION IN BASE COST OF RESINOUS FLOORING.
8	ALL PLUMBING WALLS AND ALL WALLS/PARTITIONS WITHIN 2 FEET OF SERVICE SINKS, URINALS AND WATER CLOSETS TO HAVE MOISTURE RESISTANT GWB. EXTERIOR WINDOW HEADS/JAMBS THAT ARE TO HAVE GWB ARE TO HAVE MOISTURE RESISTANT GWB.

KEYED NOTES - FINISH PLAN

F1	NO RESILIENT BASE REQUIRED AT CMU WALLS.
F2	1/2" SOLID SURFACE WINDOW SILL. (SS-4) NOTE THAT SILL TO RETURN DOWN 1" AND TO EXTEND BEYOND WINDOW JAMBS BY 1/2".
F3	INSTALL PROFILE RESILIENT BASE (RES-2) AT ALL CABINETS.
F4	SEAL ALL PERIMETER EDGES OF SS WALL PANELS WITH CLEAR SEALANT. FLOOR TO SLOPE TO DRAIN. RESINOUS FLOOR TO HAVE ADDED NO SLIP TEXTURE IN SHOWER AREA.
F5	WINDOW SHADE WS-2.
F6	WINDOW SHADE WS-1.



1 / A961 PARTIAL FINISH PLAN - WEST
3/16" = 1'-0"

FINISH LEGEND

Symbol		Specification Section	Manufacturer	Series/Pattern	Color	Remarks
Acoustical Panel Ceiling						
APC-1	Acoustical Panel Ceiling	095113	USG	Frost - 440	White	24"x24"x3/4" SLB, 15/16" USG DX Grid or Approved Equal
APC-2	Acoustical Panel Ceiling	095113	Armstrong	Ultima High NRC - 2081		24X24X1 Beveled Tegular 15/16" Grid or Approved Equal
Carpet Tile						
CPT-1	Carpet Tile	096813	To be Determined		Color to Be Selected	Admin. Flooring
CPT-2	Carpet Tile	096813	To be Determined		Color to Be Selected	Living Quarters Flooring
Glass mosaic Tile						
GMT-1	Glass mosaic Tile	093000	To be Determined			Kitchen Backsplash
High Pressure Laminate						
HPL-1	High Pressure Laminate	064023	Wilsonart or Approved Equal		Color to Be Selected	Admin. Casework
HPL-2	High Pressure Laminate	064023	Wilsonart or Approved Equal		Color to Be Selected	Living Quarters Casework
HPL-3	High Pressure Laminate	064023	Wilsonart or Approved Equal		Color to Be Selected	
Luxury Vinyl Plank						
LVP-1	Luxury Vinyl Plank	096519	To be Determined		Color to Be Selected	Admin. Flooring
LVP-2	Luxury Vinyl Plank	096519	To be Determined		Color to Be Selected	Living Quarters Flooring
Paint						
PT-1	Paint	099123	Sherwin Williams or Approved Equal			Field Paint
PT-2	Paint	099123	Sherwin Williams or Approved Equal			Admin. Accent Paint
PT-3	Paint	099123	Sherwin Williams or Approved Equal			Living Quarters Accent Paint
PT-4	Paint	099123	Sherwin Williams or Approved Equal			Soffit Paint
Resilient Base						
RES-1	Resilient Base	096513	Tarkett or Approved Equal	4" Vinyl Coved Base		Typical Base
RES-2	Resilient Base	096513	Tarkett or Approved Equal.	Profile Base - Monument MW-XX-S4		Base at Kitchen Casework
Resinous Floor						
RF-1	Resinous Floor	096723	Tnemec or Approved Equal	Deco Flec	Color to Be Selected	Admin. Toilet Rooms
RF-2	Resinous Floor	096723	Tnemec or Approved Equal	Deco Flec	Color to Be Selected	Living Quarters Toilet Rooms
Resinous Floor Base						
RFB-1	Resinous Floor Base	096723	Tnemec or Approved Equal	Deco Flec	Color to Be Selected	Admin. Toilet Rooms
RFB-2	Resinous Floor Base	096723	Tnemec or Approved Equal	Deco Flec	Color to Be Selected	Living Quarters Toilet Rooms
Rubber Flooring						
RUF-1	Rubber Flooring	096516	Ecore or Approved Equal	Performance Motivate		Weight Room
Sealed Concrete						
SC-1	Sealed Concrete	096519				
Solid Surface						
SS-1	Solid Surface	064023	Corian or Approved Equal		Color to Be Selected	Admin. Countertops
SS-2	Solid Surface	064023	Corian or Approved Equal		Color to Be Selected	Living Quarters Countertops
SS-3	Solid Surface	064023	Corian or Approved Equal		Color to Be Selected	Living Quarters Kitchen Countertops
SS-4	Solid Surface	064023	Corian or Approved Equal		Color to Be Selected	Window Sills
SS-5	Solid Surface	064023	Corian or Approved Equal		Color to Be Selected	Shower Walls
Window Shade						
WS-1	Window Shade	122413	Mecho Shade or Approved Equal	Mecho / 5	Light Filtering Fabric - 3% Color as selected by Architect from Full Range	Non-Bunk Room Windows
WS-2	Window Shade	122413	Mecho Shade or Approved Equal	Mecho / 5	Blackout Fabric - Color as Selected by Architect from Full Range.	Bunk Rooms
Wood Cabinets						
WC-1	Wood Cabinets	123530	Kraftmaid or Approved Equal	Plain Slice White Maple	To Be Determined	Living Quarters Kitchen Cabinets

sfCoady 2
ARCHITECTS
861 North Madison Street
Rockford, Illinois 61107
T: 815.316.8776
MO License No. 2014023859
www.secoady-architects.com

© 2025 SE/Coady Architects, LLC

WCFPD Station 1
Wright City Fire Protection District
60 Bell Road
Wright City, MO 63390

Revisions:

No:	Date:	Description:
1	2025-09-15	ADD. NO. 1

Sheet Info:

PARTIAL ROOM FINISH PLAN (WEST) AND LEGEND

Drawn By:	CEC
Checked By:	DGC
Commission:	025-2125
Date:	2025-09-05

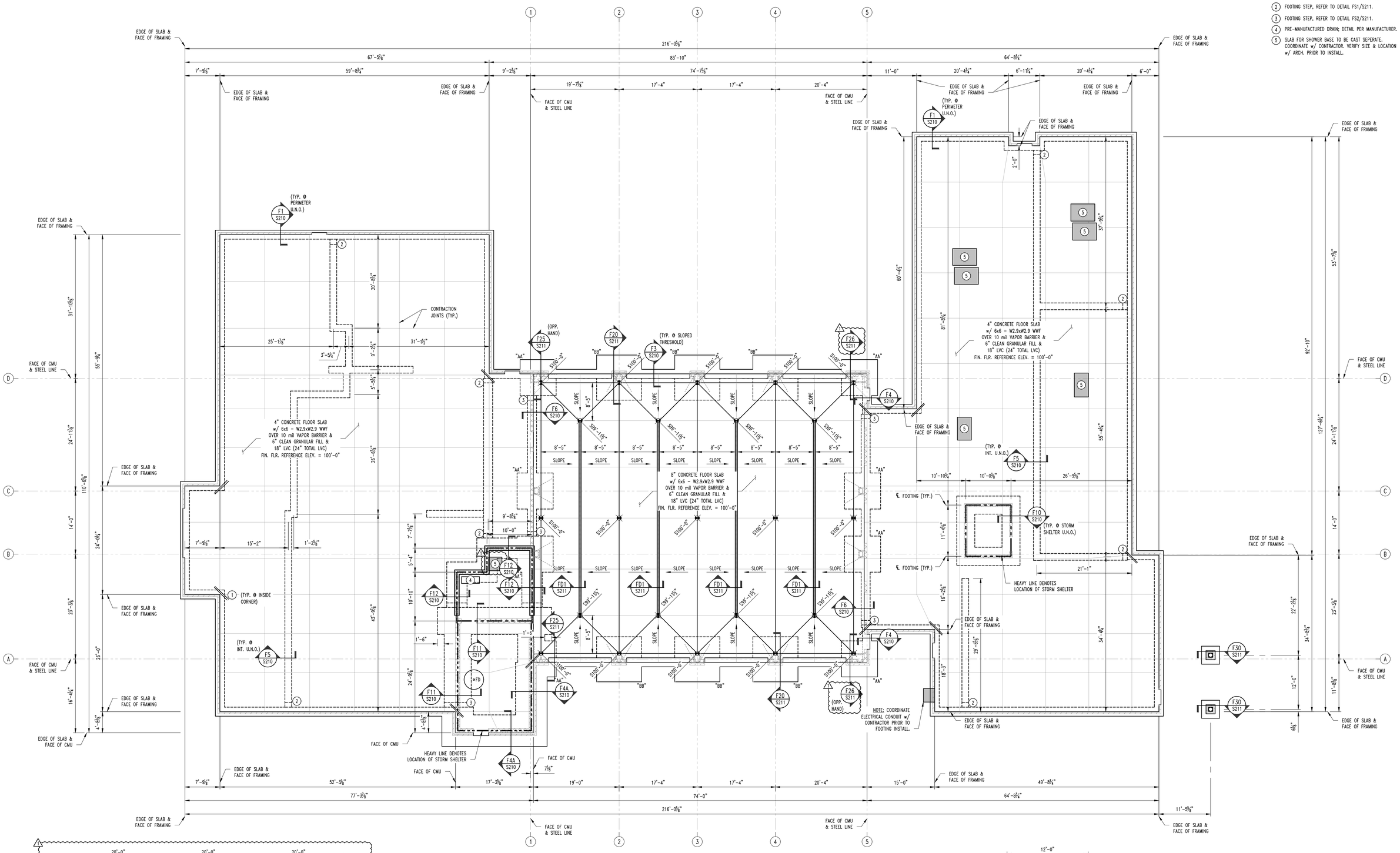
A961

9/16/2025 2:13:57 PM

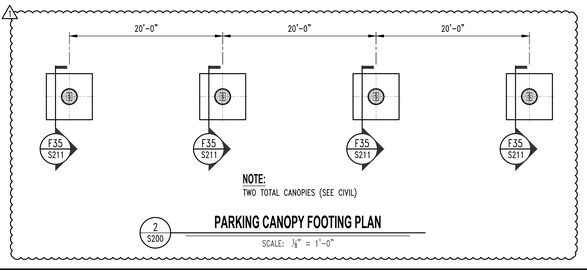
NOTE:
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.

FOUNDATION NOTES

1. REENTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET S210.
2. FOOTING STEP, REFER TO DETAIL FS1/S211.
3. FOOTING STEP, REFER TO DETAIL FS2/S211.
4. PRE-MANUFACTURED DRAIN; DETAIL PER MANUFACTURER.
5. SLAB FOR SHOWER BASE TO BE CAST SEPERATE. COORDINATE w/ CONTRACTOR. VERIFY SIZE & LOCATION w/ ARCH. PRIOR TO INSTALL.

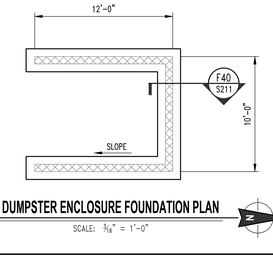


1 S200 **FOUNDATION PLAN**
SCALE: 3/32" = 1'-0"



NOTE:
TWO TOTAL CANOPIES (SEE CIVIL)

2 S200 **PARKING CANOPY FOOTING PLAN**
SCALE: 3/32" = 1'-0"



NOTE:
REFER TO CIVIL DRAWING FOR REMAINING INFO

3 S200 **DUMPSTER ENCLOSURE FOUNDATION PLAN**
SCALE: 3/16" = 1'-0"

FOOTING SCHEDULE

MARK	WIDTH (W)	LENGTH (L)	DEPTH (D)	REINFORCING
"AA"	8'-0" SQ.	---	3'-0"	9 - #5 x 7'-6" EACH WAY, TOP & BOTTOM
"BB"	10'-0" SQ.	---	3'-0"	11 - #5 x 9'-6" EACH WAY, TOP & BOTTOM

REVISIONS:

No.		Date
	PERMIT SET	09/04/2025
1	ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25
GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

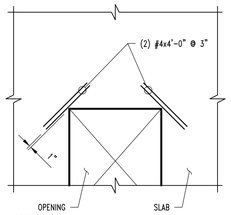
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O'FALLON, MO

Wright City Fire Department - House #1

60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

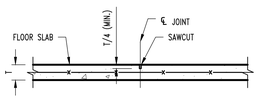
DRAWING INCLUDES:
FOUNDATION PLAN

DESIGNED: GLL
DRAWN: JWV
PROJECT NO.: 250264
SHEET: S200

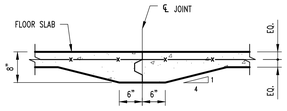


NOTE:
TYPICAL AT ALL REENTRANT CORNERS FOR SLAB-ON-GRADE & STRUCTURAL SLAB. REINFORCING TO BE CENTERED IN SLAB THICKNESS.

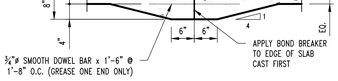
CRACK CONTROL REINFORCING



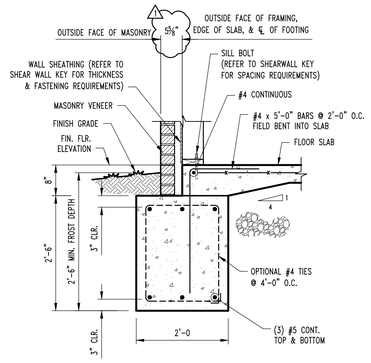
CONTRACTION JOINT



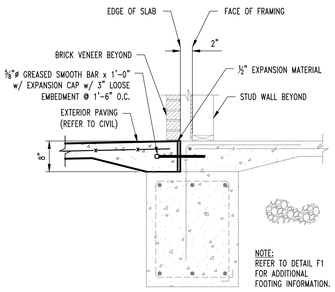
CONSTRUCTION JOINT



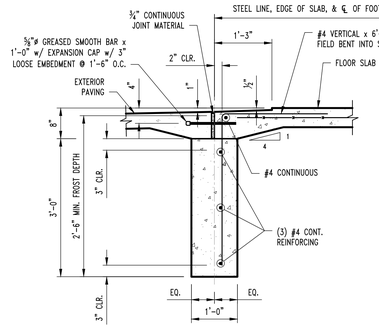
CONSTRUCTION JOINT



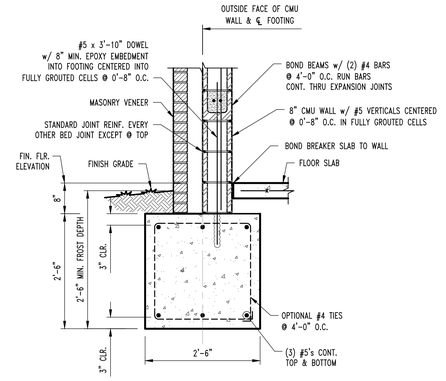
F1 S200 **CONT. FOOTING SECTION**
SCALE: ¾" = 1'-0"



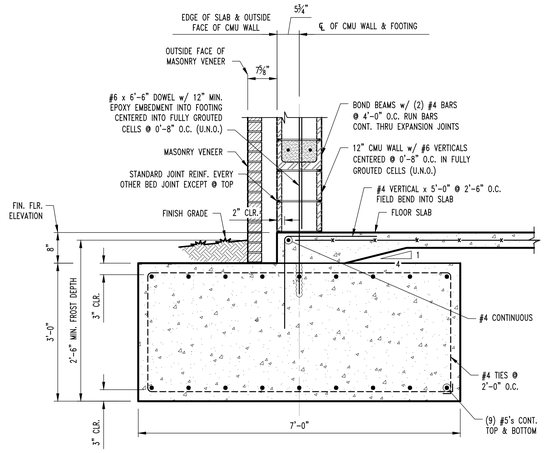
F2 S200 **CONT. FOOTING SECTION @ WALK DOORS**
SCALE: ¾" = 1'-0"



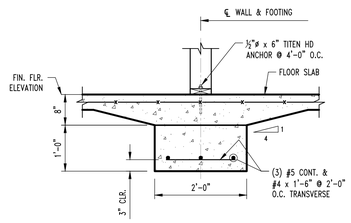
F3 S200 **SLOPED THRESHOLD SECTION @ OVHD DOOR**
SCALE: ¾" = 1'-0"



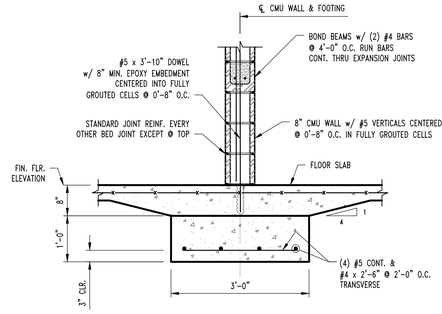
F4 S200,S210 **CONT. FOOTING SECTION**
SCALE: ¾" = 1'-0"



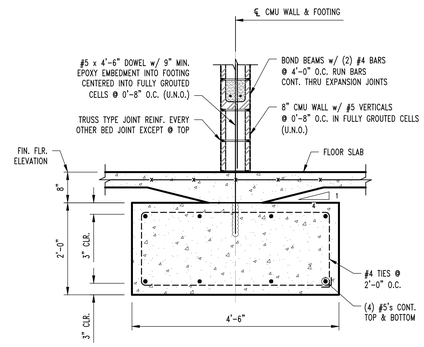
F4A S200 **CONT. FOOTING SECTION**
SCALE: ¾" = 1'-0"



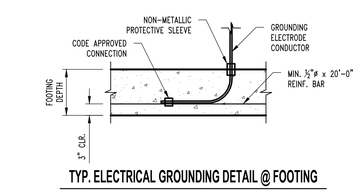
F5 S200 **CONT. INTERIOR FOOTING SECTION**
SCALE: ¾" = 1'-0"



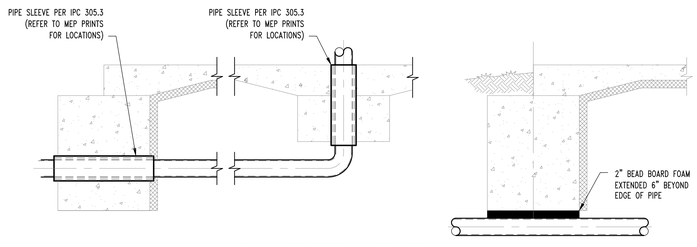
F6 S200 **CONT. FOOTING SECTION**
SCALE: ¾" = 1'-0"



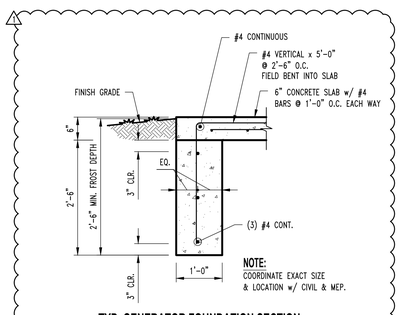
F10 S200 **CONT. INTERIOR FOOTING SECTION @ STORM SHELTER**
SCALE: ¾" = 1'-0"



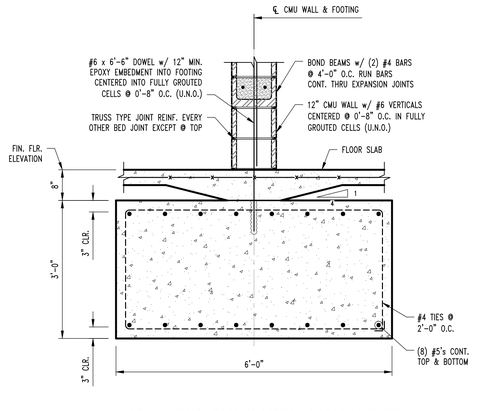
TYP. ELECTRICAL GROUNDING DETAIL @ FOOTING



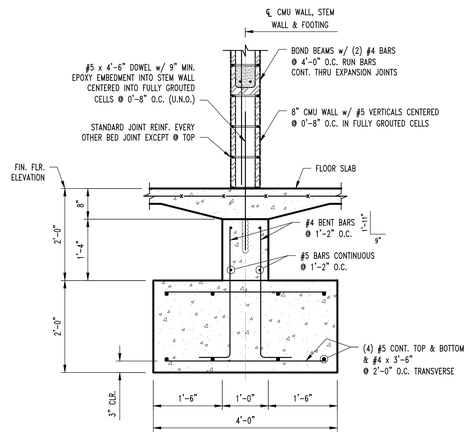
TYP. PLUMBING COORDINATION DETAILS



TYP. GENERATOR FOUNDATION SECTION



F11 S200 **CONT. INTERIOR FOOTING SECTION @ STORM SHELTER**
SCALE: ¾" = 1'-0"



F12 S200 **CONT. INTERIOR FOOTING SECTION @ STORM SHELTER**
SCALE: ¾" = 1'-0"

REVISIONS:

No.	Date
1 PERMIT SET	09/04/2025
2 ADDENDUM #1	09/15/2025

THE SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority #2006013501

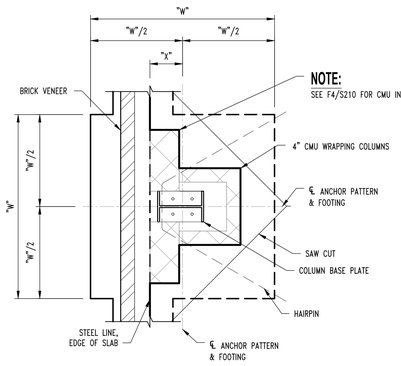
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O'FALLON, MO

Wright City Fire Department - House #1

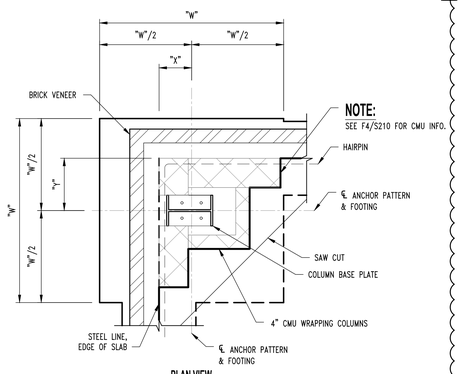
60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION DETAILS

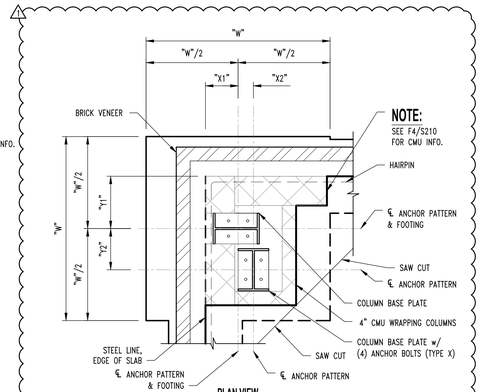
DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S210



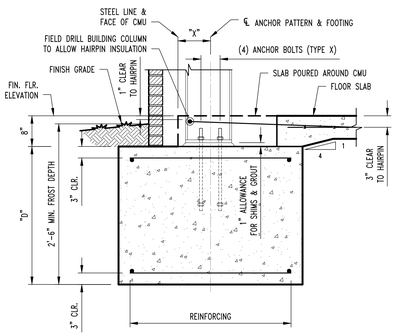
PLAN VIEW



PLAN VIEW

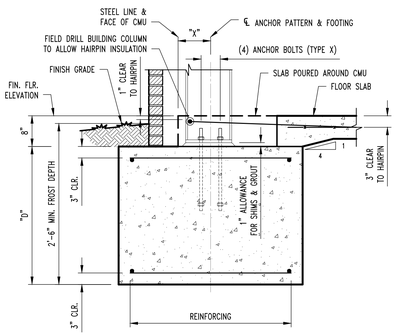


PLAN VIEW



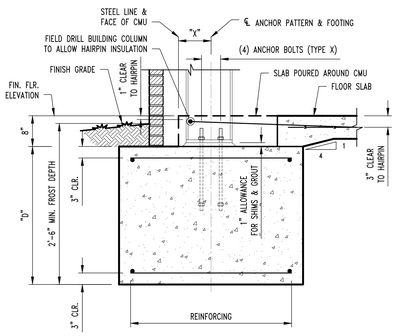
F20 S200 **COLUMN FOOTING SECTION**
SCALE: ¾" = 1'-0"

NOTE:
DIMENSIONS & ANCHOR INFO
PENDING FINAL PEMB REACTIONS



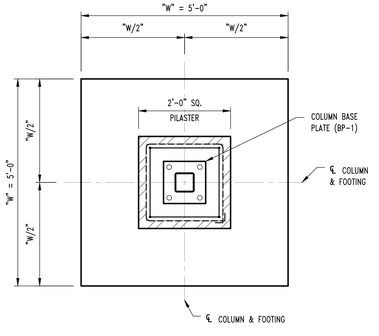
F25 S200 **COLUMN FOOTING SECTION**
SCALE: ¾" = 1'-0"

NOTE:
DIMENSIONS & ANCHOR INFO
PENDING FINAL PEMB REACTIONS

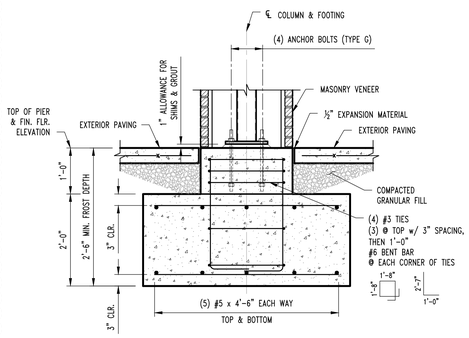


F26 S200 **COLUMN FOOTING SECTION @ SOLDIER COLUMN**
SCALE: ¾" = 1'-0"

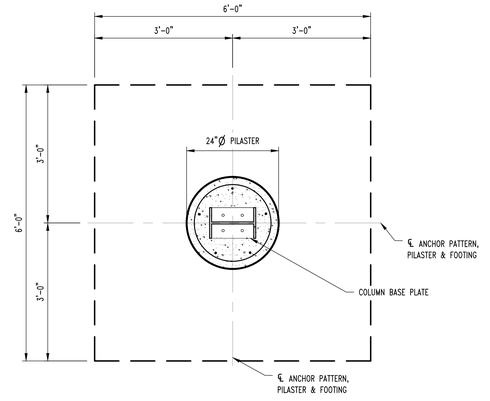
NOTE:
DIMENSIONS & ANCHOR INFO
PENDING FINAL PEMB REACTIONS



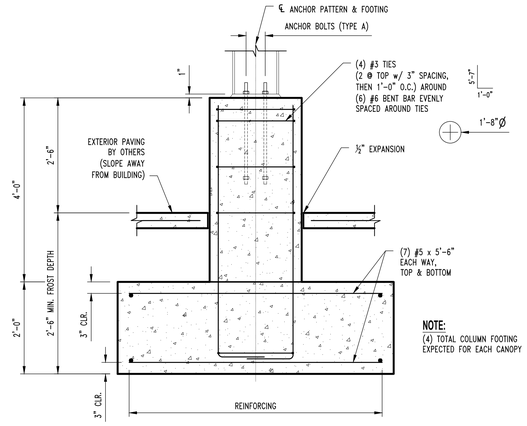
PLAN VIEW



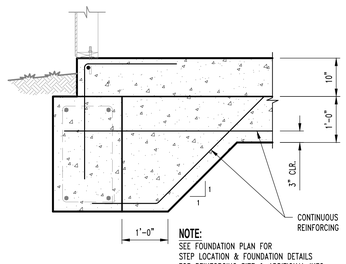
F30 S200 **EXTERIOR COLUMN SECTION @ CANOPY**
SCALE: ¾" = 1'-0"



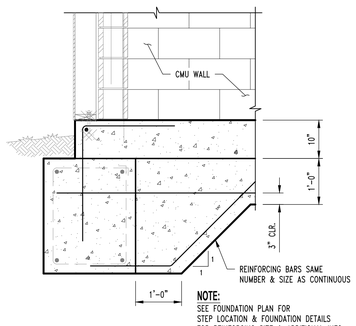
PLAN VIEW



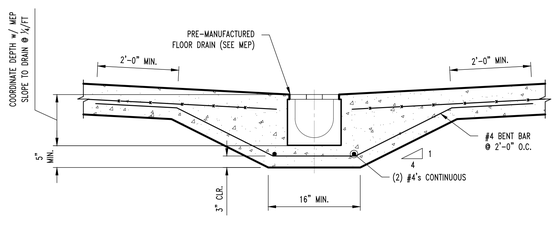
F35 S200 **TYPICAL PARKING CANOPY FOOTING SECTION**
SCALE: ¾" = 1'-0"



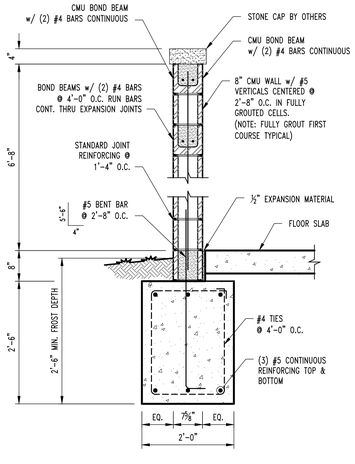
FS1 S200 **FOOTING STEP DETAIL**
SCALE: ¾" = 1'-0"



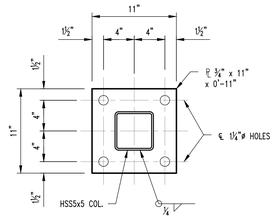
FS2 S200 **FOOTING STEP DETAIL**
SCALE: ¾" = 1'-0"



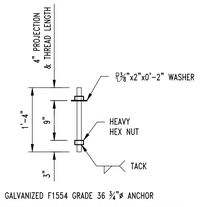
FD1 S200 **CONT. TRENCH DRAIN SECTION**
SCALE: ¾" = 1'-0"



F40 S200 **DUMPSTER WALL SECTION**
SCALE: ¾" = 1'-0"



BASE PLATE (BP-1)



GALVANIZED F1554 GRADE 36 ¾"ø ANCHOR

GALVANIZED ANCHOR BOLT DETAIL (TYPE G)

REVISIONS:

No.	Date
1 PERMIT SET	09/04/2025
2 ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR.
O'FALLON, MO

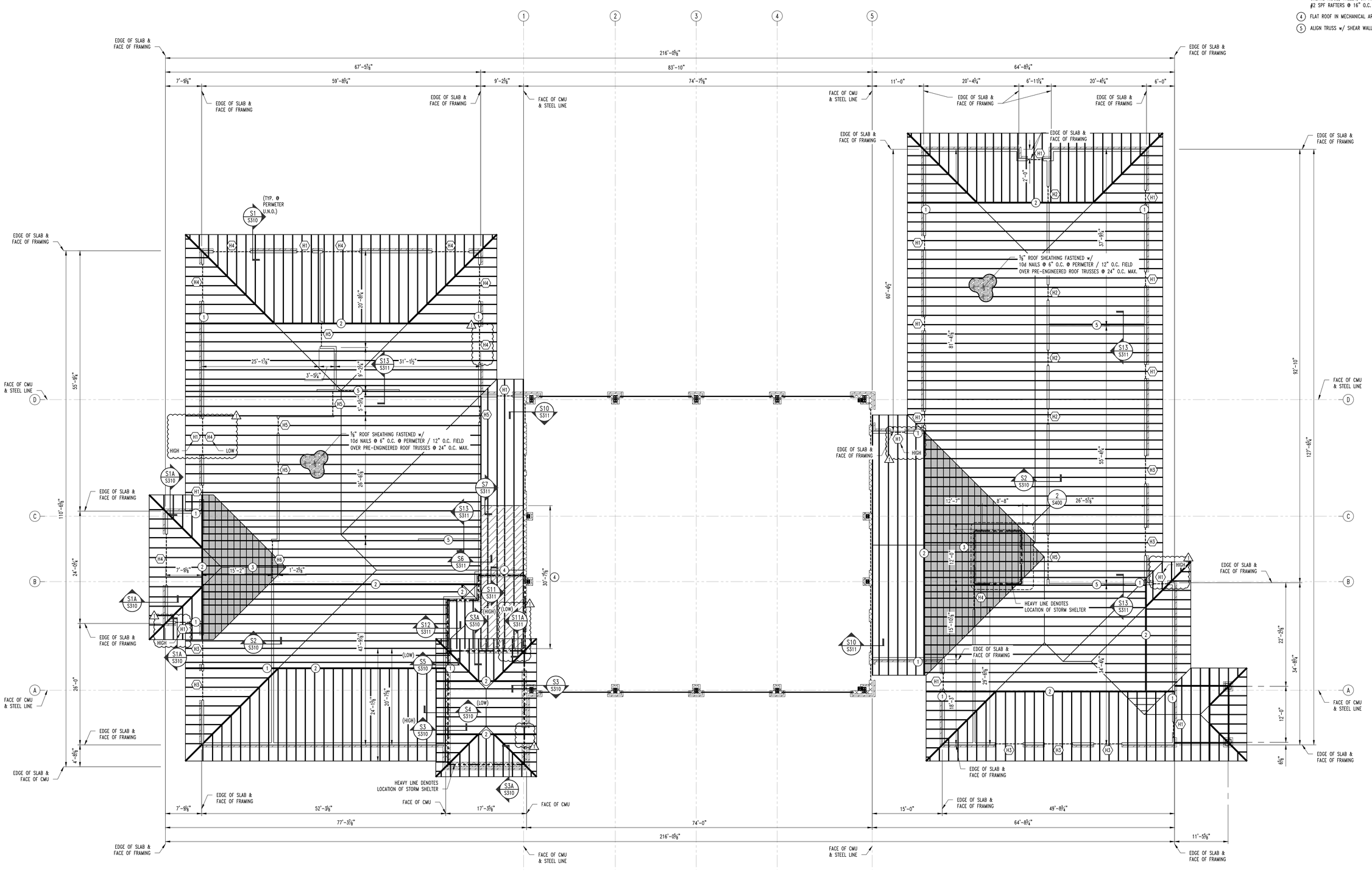
Wright City Fire Department - House #1

60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION DETAILS

DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S211

NOTE:
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1 S300 **ROOF FRAMING PLAN**
SCALE: ⅛" = 1'-0"

PLAN NORTH

ROOF FRAMING NOTES

1. 3-PLY BUILT-UP POST BENEATH GIRDER TRUSS FASTENED w/ SIMPSON LGT3 @ TOP & SIMPSON LTTP2 @ BOTTOM
2. GIRDER TRUSS
3. FRAME ROOF OVER PRE-ENGINEERED TRUSSES TO CREATE RIDGE, VALLEY, OR HIP AS SHOWN w/ 2x #2 SPF RAFTERS @ 16" O.C. MAX.
4. FLAT ROOF IN MECHANICAL AREA. (CROSS HATCHED AREA)
5. ALIGN TRUSS w/ SHEAR WALL. SEE SECTION S13/S311.

LINTEL SCHEDULE

LENGTH OF SPAN	MEMBER SIZE (GALVANIZED)
4'-0" & LESS	L4x4x1/4 WITH 6" BEARING EACH END
6'-0" & LESS	L6x4x3/8 (LLV) WITH 6" BEARING EACH END
8'-0" & LESS	L6x4x3/8 (LLV) WITH 6" BEARING EACH END
12'-0" & LESS	L8x4x1/2 (LLV) WITH 12" BEARING EACH END*

* REQUIRES LINTEL TO BE FASTENED BACK TO LIGHT GAGE JAMB W GALVANIZED 1/2" A325 BOLT AT EACH END

HEADER SCHEDULE

LABEL	HEADER	CRIPPLE/JACK	JAMB/KING
"H1"	2 Ply 2x6 SPF #2	Single Ply 2x6 SPF #2	2 Ply 2x6 SPF #2
"H2"	2 Ply 2x8 Doug Fir #2	2 Ply 2x4 SPF #2	Single Ply 2x6 SPF #2
"H3"	2 Ply 2x8 Doug Fir #2	2 Ply 2x6 SPF #2	4 Ply 2x6 SPF #2
"H4"	2 Ply 2x10 Doug Fir Sel. Struct.	2 Ply 2x6 SPF #2	4 Ply 1.75x5.5 MicroLam 2.0E
"H5"	2 Ply 2x10 Doug Fir Sel. Struct.	3 Ply 2x6 SPF #2	2 Ply 2x6 SPF #2
"H6"	2 Ply 1.75x11.25 Microlam 2.0E	3 Ply 2x6 SPF #2	2 Ply 2x6 SPF #2

REVISIONS:

No.	Date
PERMIT SET	09/04/2025
1 ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd. Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013301

CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O FALLON, MO

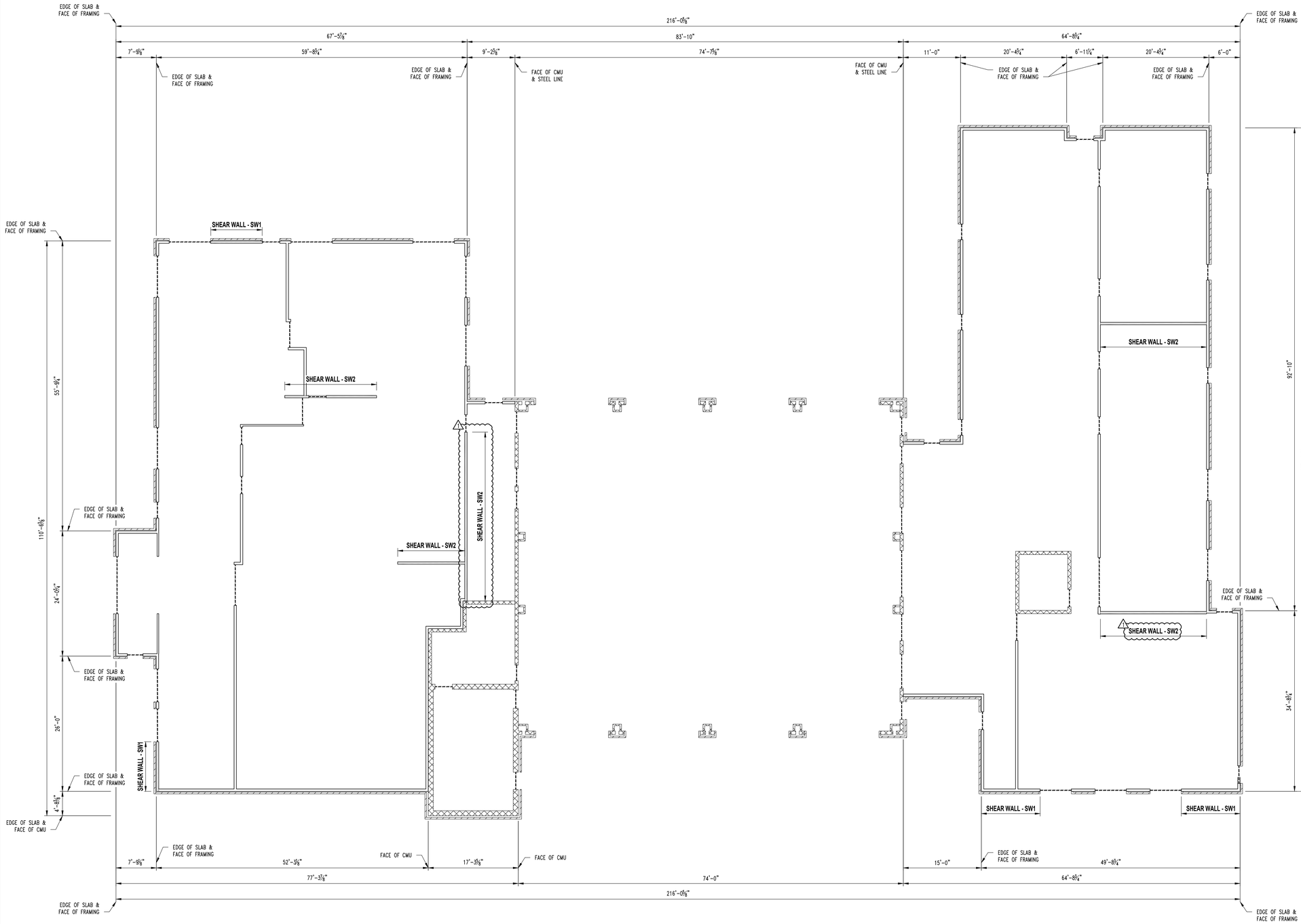
Wright City Fire Department - House #1

60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
ROOF FRAMING PLAN

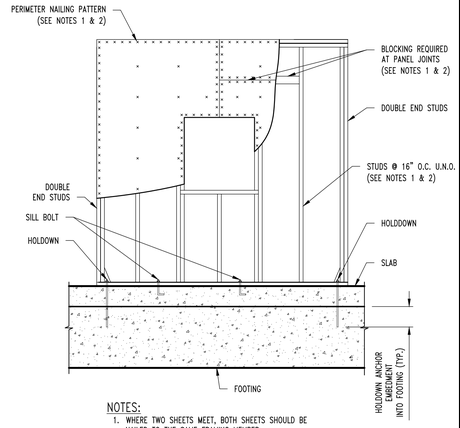
DESIGNED: GLL
DRAWN: JWV
PROJECT NO.: 250264
SHEET: S300

NOTE:
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1 S300A **SHEAR WALL PLAN**
SCALE: ⅛" = 1'-0"

PLAN NORTH



NOTES:
1. WHERE TWO SHEETS MEET, BOTH SHEETS SHOULD BE NAILED TO THE SAME FRAMING MEMBER.
2. WHEN SHEATHING NAILS ARE SPACED AT 2" O.C. FOR 8d NAILS OR 3" O.C. FOR 10d NAILS, 3x OR DOUBLE 2x FRAMING MEMBERS ARE REQUIRED WHERE SHEETS MEET. FACE NAIL DOUBLE 2x MEMBERS TOGETHER w/ 16d NAILS @ 2½" O.C. STAGGERED EACH FACE OF STUD.
3. SEE WALL SECTIONS FOR ADDITIONAL INFORMATION.

TYP. SHEAR WALL DETAIL

SHEAR WALL KEY

SW1 SHEAR WALL
- 7/16" ZIP SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
- 1/2" DIAMETER F1554 GRADE 36 STANDARD "J" BOLTS W/ 7" EMBEDMENT @ 3'-0" O.C.
- REQUIRES SIMPSON LTTP2 HOLDOWN FASTENED TO 2-PLY STUDS W/ (12) 0.148" X 2½" NAILS & W/ 5/8" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-XP" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL

SW2 SHEAR WALL
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
- 1/2" DIAMETER F1554 GRADE 36 STANDARD "J" BOLTS W/ 7" EMBEDMENT @ 1'-6" O.C.
- REQUIRES SIMPSON HDUB-SDS2.5 HOLDOWN FASTENED TO 3-PLY STUDS W/ (20) ¼" X 2½" SDS SCREWS & W/ 5/8" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-XP" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL

TYPICAL WALL UNLESS NOTED
- 7/16" ZIP SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
- 1/2" DIAMETER F1554 GRADE 36 STANDARD "J" BOLTS W/ 7" EMBEDMENT @ 3'-0" O.C.
- NO HOLDDOWNS REQUIRED

REVISIONS:

No.		Date
1	PERMIT SET	09/04/2025
2	ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25
GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000131501

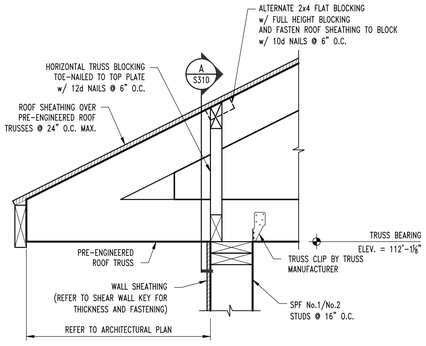
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O'FALLON, MO

Wright City Fire Department - House #1

60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

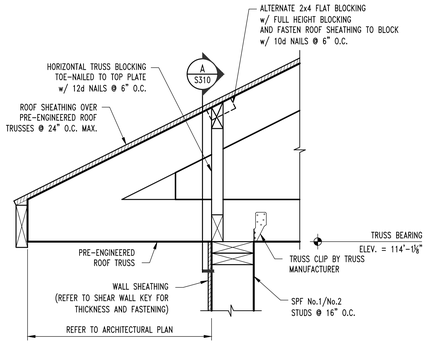
DRAWING INCLUDES:
SHEAR WALL PLAN

DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S300A



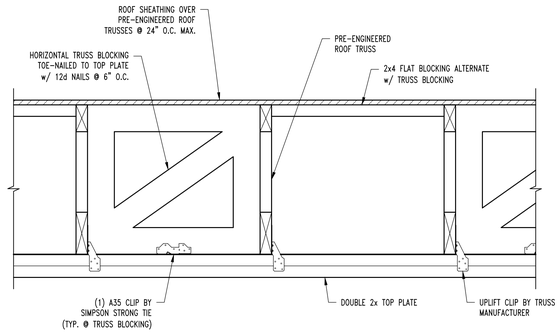
S1 / S300 **TYP. ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"



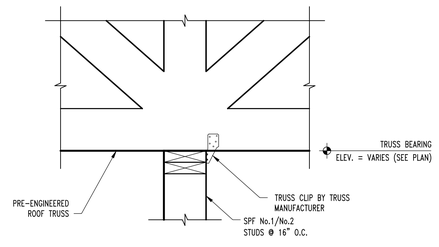
S1A / S300 **TYP. ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"



A / S310 **TYP. TRUSS BLOCKING SECTION**

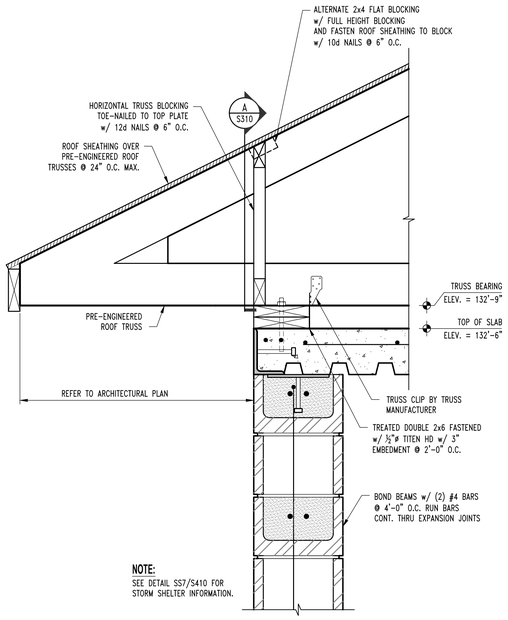
SCALE: 1½" = 1'-0"



S2 / S300 **ROOF FRAMING SECTION**

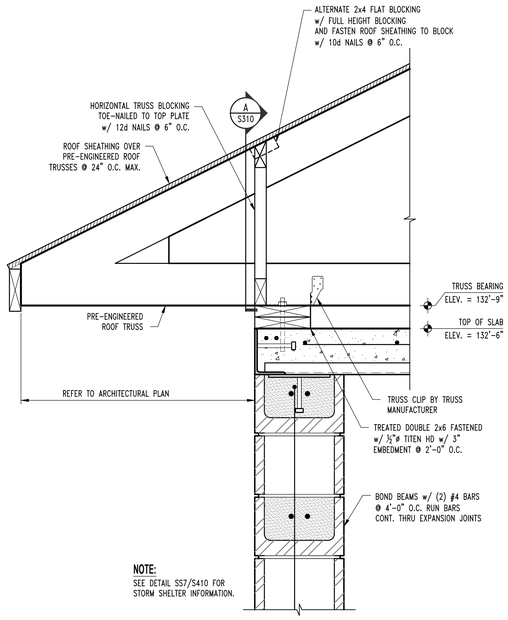
SCALE: 1½" = 1'-0"

NOTE:
STABILITY BRIDGING BY
TRUSS MANUFACTURER



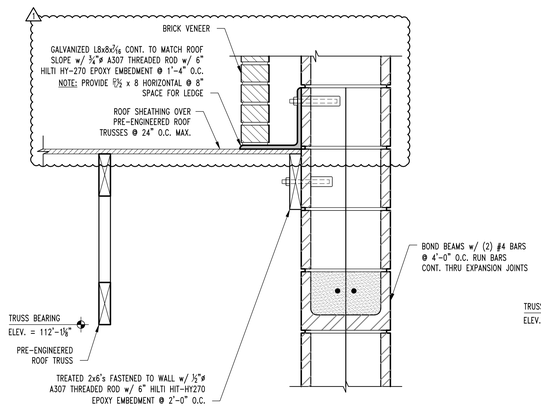
S3 / S300 **ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"



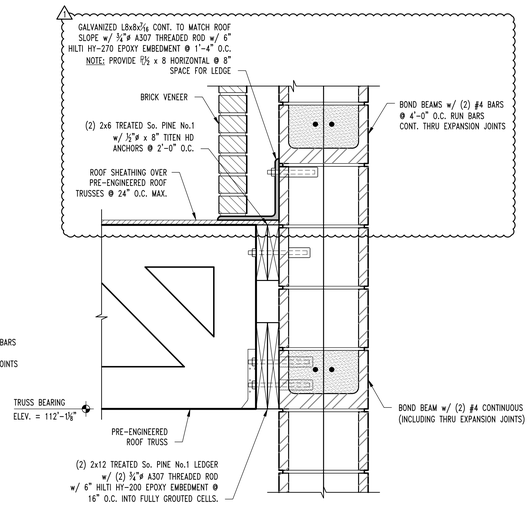
S3A / S300 **ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"



S4 / S300 **ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"



S5 / S300 **ROOF FRAMING SECTION**

SCALE: 1½" = 1'-0"

REVISIONS:

No.		Date
1	PERMIT SET	09/04/2025
2	ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd. Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

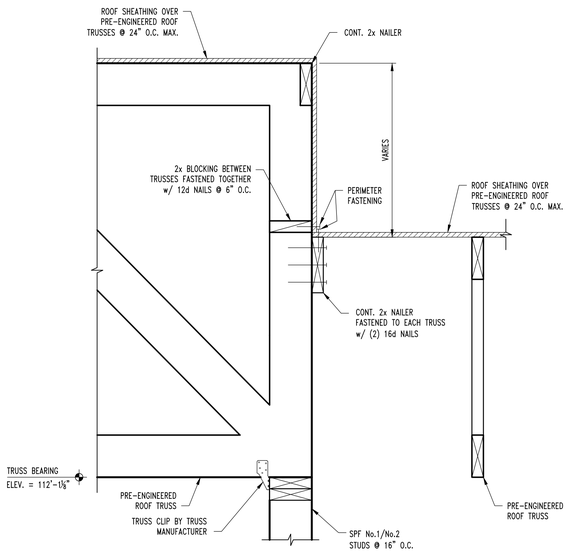
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O FALLON, MO

Wright City Fire Department - House #1

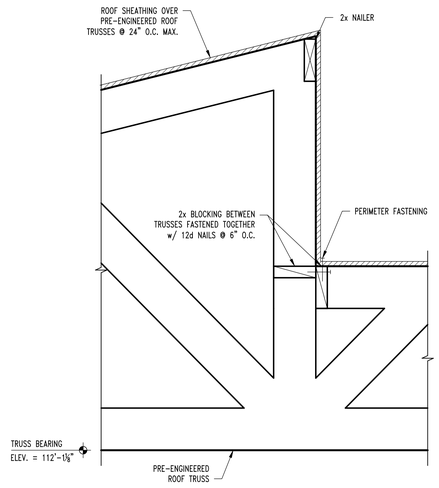
60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
ROOF FRAMING DETAILS

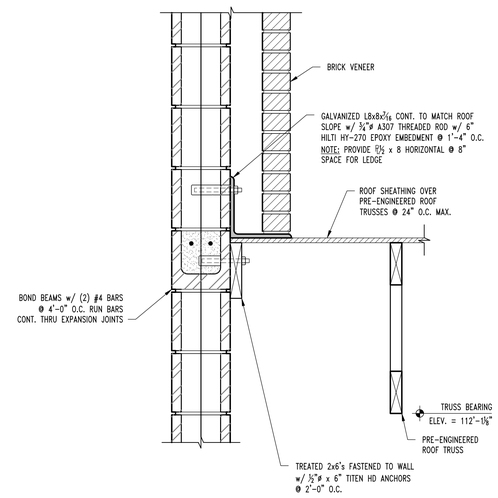
DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S310



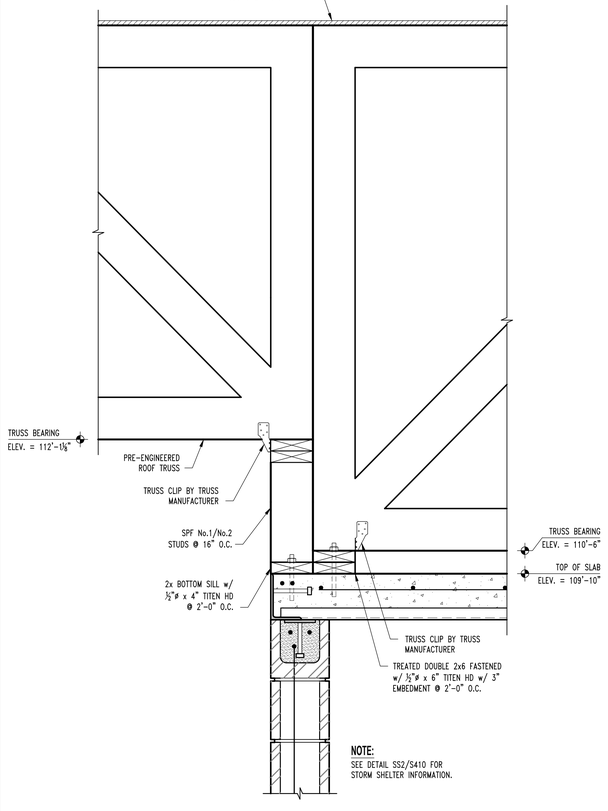
S6 / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



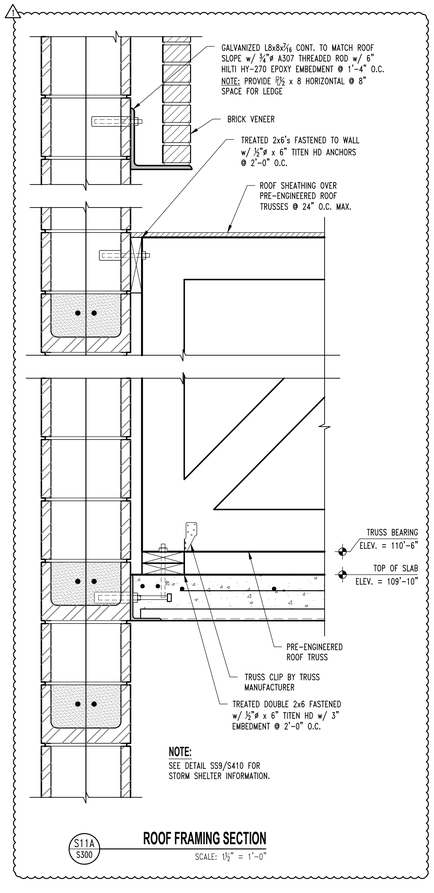
S7 / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



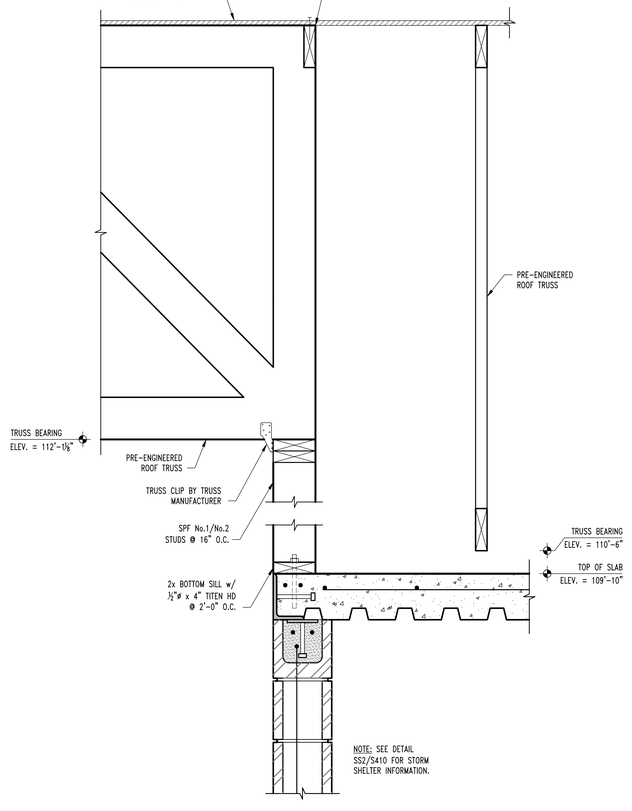
S10 / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



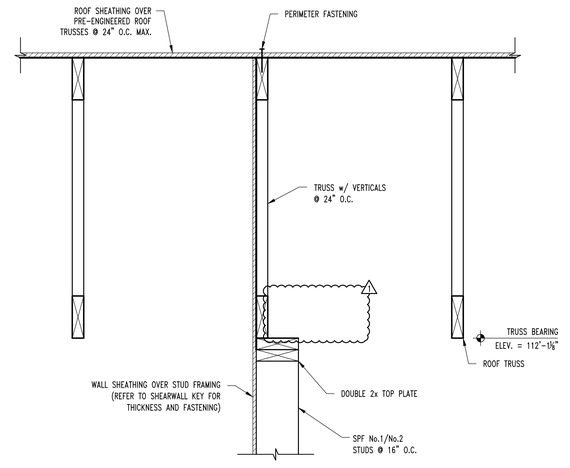
S11 / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



S11A / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



S12 / S300 **ROOF FRAMING SECTION**
SCALE: 1½" = 1'-0"



S13 / S300 **SHEAR WALL SECTION**
SCALE: 1½" = 1'-0"

REVISIONS:

No.		Date
1	PERMIT SET	09/04/2025
2	ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd. Bldg 1
Columbia, MO 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority #2006013501

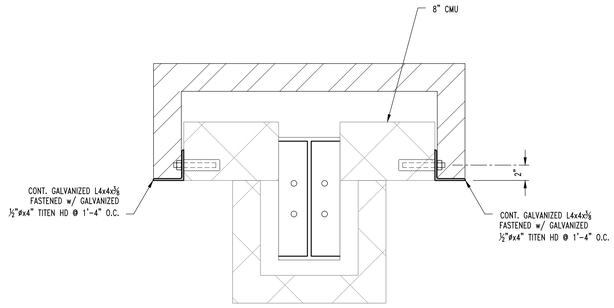
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O FALLON, MO

Wright City Fire Department - House #1

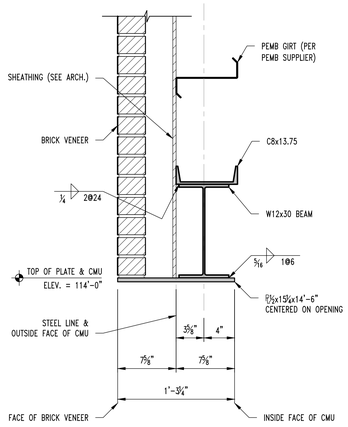
60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
ROOF FRAMING DETAILS

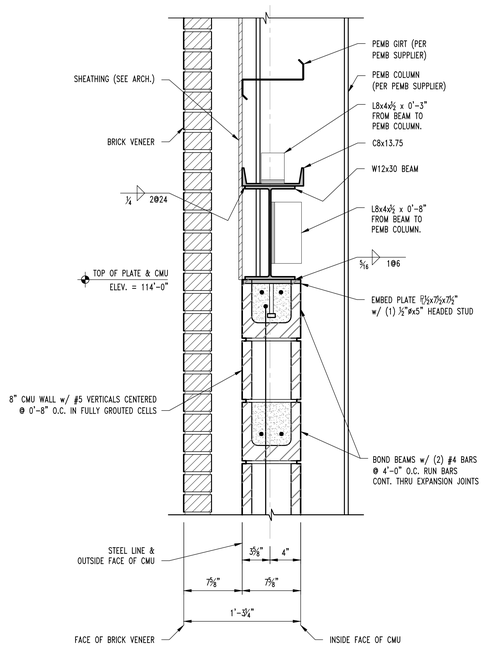
DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S311



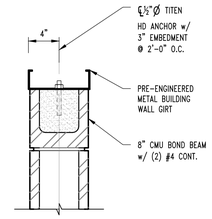
TYP. JAM @ OVERHEAD DOOR



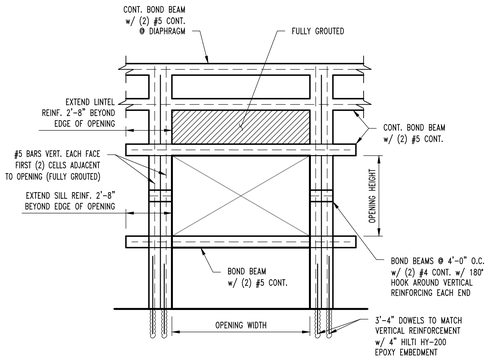
TYP. LINTEL @ OVHD DOORS



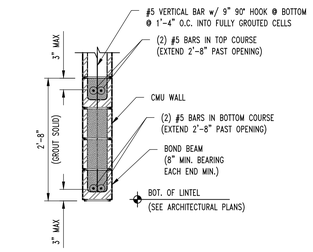
TYP. OVHD HEADER



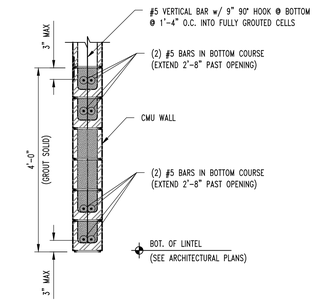
TYPICAL CMU TO GIRT CONNECTION



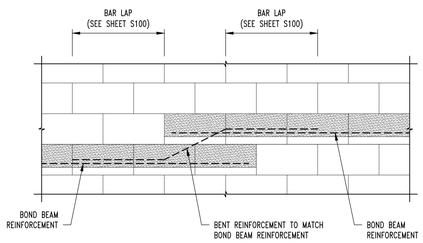
TYPICAL MASONRY OPENING REINFORCEMENT



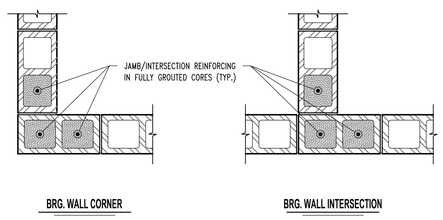
TYPICAL CMU LINTEL DETAIL UNDER 6'-0" WIDE



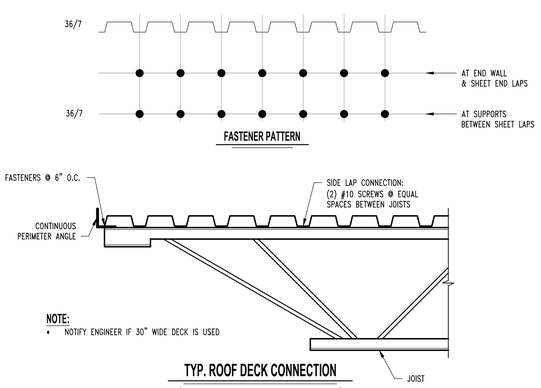
TYPICAL CMU LINTEL DETAIL OVER 6'-0" WIDE



TYP. STEP IN BOND BEAM



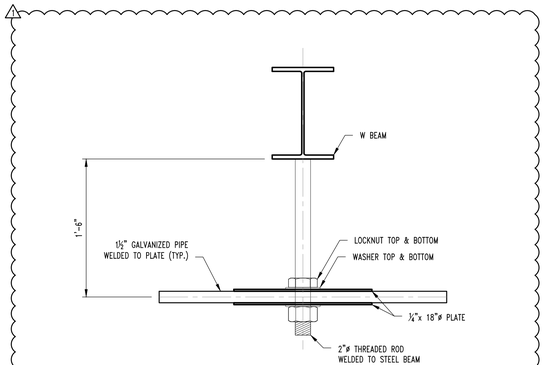
TYPICAL CMU WALL VERT REINFORCING



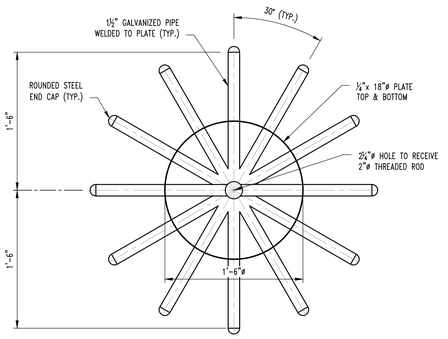
NOTE:
- NOTIFY ENGINEER IF 30" WIDE DECK IS USED

TYP. ROOF DECK CONNECTION

(HILTI X-HSN24 FASTENER CONFIRMED BY HILTI)



ELEVATION



PLAN VIEW

TYP. HOSE WHEEL DETAIL

NOTE:
PROVIDE FOR (1) HOSE WHEELS IN THE HOSE TOWER

REVISIONS:

No.	Date
1 PERMIT SET	09/04/2025
2 ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd. Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

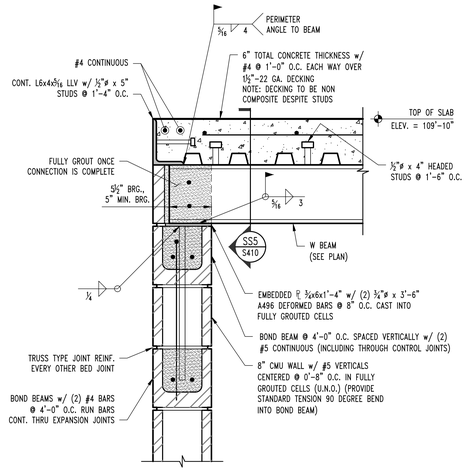
CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR.
O'FALLON, MO

Wright City Fire Department - House #1

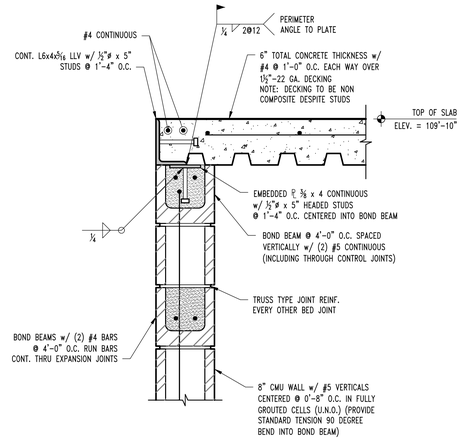
60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
FRAMING & STANDARD CMU DETAILS

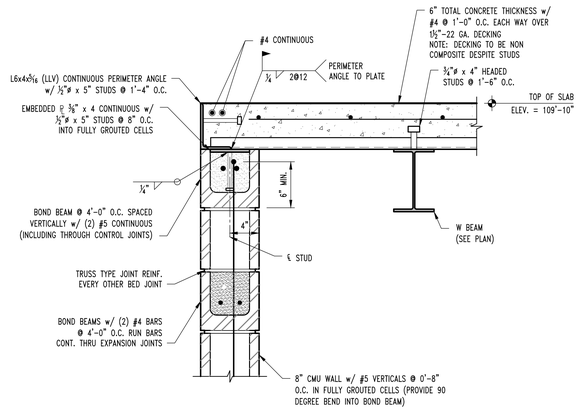
DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S312



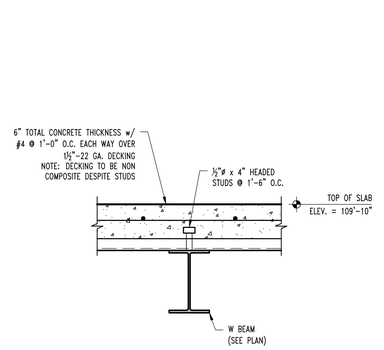
SS1 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"



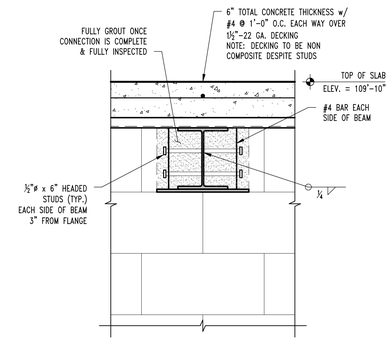
SS2 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"



SS3 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"



SS4 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"



SS5 S410 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS6 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS7 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS8 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS9 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS10 S400 **STORM SHELTER SECTION**
SCALE: 1½" = 1'-0"

SS11 S400 **STORM SHELTER BEAM WELDED CROSS BRIDGING**
SCALE: 1½" = 1'-0"

NOTE:
REFER TO TYPICAL STORM SHELTER MASONRY OPENING DETAIL ON SHEET S410 FOR ADDITIONAL REQUIREMENTS

NOTE:
NO EXPANSION JOIST MAY OCCUR WITHIN HEADER REINFORCING

SS12 S410 **TYPICAL STORM SHELTER CMU LINTEL DETAIL**

NOTE:
REFER TO TYPICAL STORM SHELTER MASONRY OPENING DETAIL ON SHEET S410 FOR ADDITIONAL REQUIREMENTS

NOTE:
NO EXPANSION JOIST MAY OCCUR WITHIN HEADER REINFORCING

SS13 S410 **TYPICAL STORM SHELTER CMU LINTEL DETAIL**

NOTE:
NO EXPANSION JOIST MAY OCCUR WITHIN HEADER REINFORCING

TYPICAL HARDENED SPACE MASONRY OPENING REINFORCEMENT w/ NO STEEL HEADER

TYPICAL CMU WALL VERT REINFORCING

REVISIONS:

No.		Date
1	PERMIT SET	09/04/2025
2	ADDENDUM #1	09/15/2025

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
GREGORY L. LINNEMAN
NUMBER PE-2005001013
9/15/25
GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority #2006013501

CLIENT:
LCS LLC
1027 COOL SPRINGS INDUSTRIAL DR
O FALLON, MO

Wright City Fire Department - House #1

60 BELL ROAD
WRIGHT CITY, WARREN COUNTY, MISSOURI

DRAWING INCLUDES:
STORM SHELTER FRAMING DETAILS

DESIGNED:	GLL
DRAWN:	JWV
PROJECT NO.:	250264
SHEET:	S410