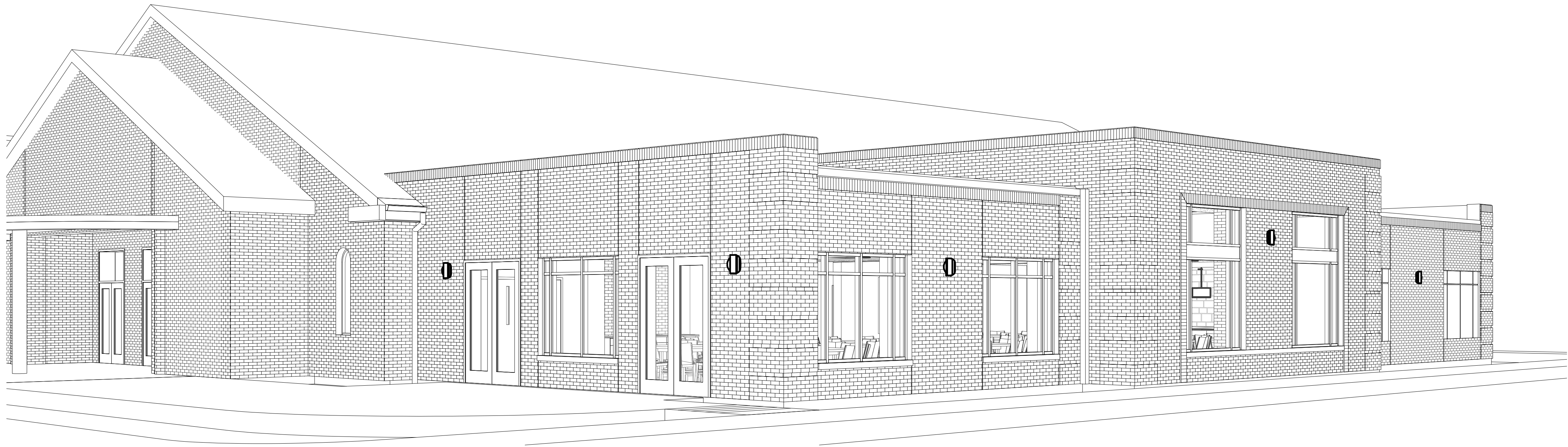


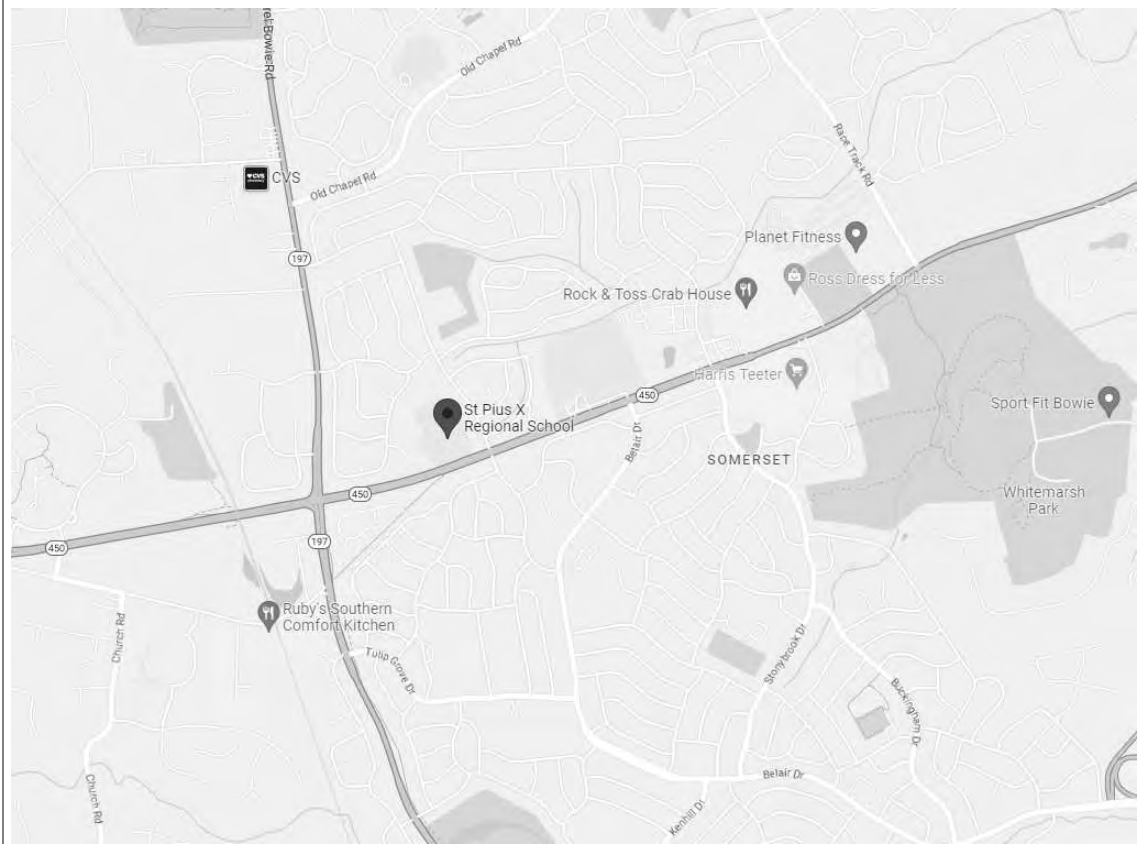
St. Pius X Catholic Church Addition

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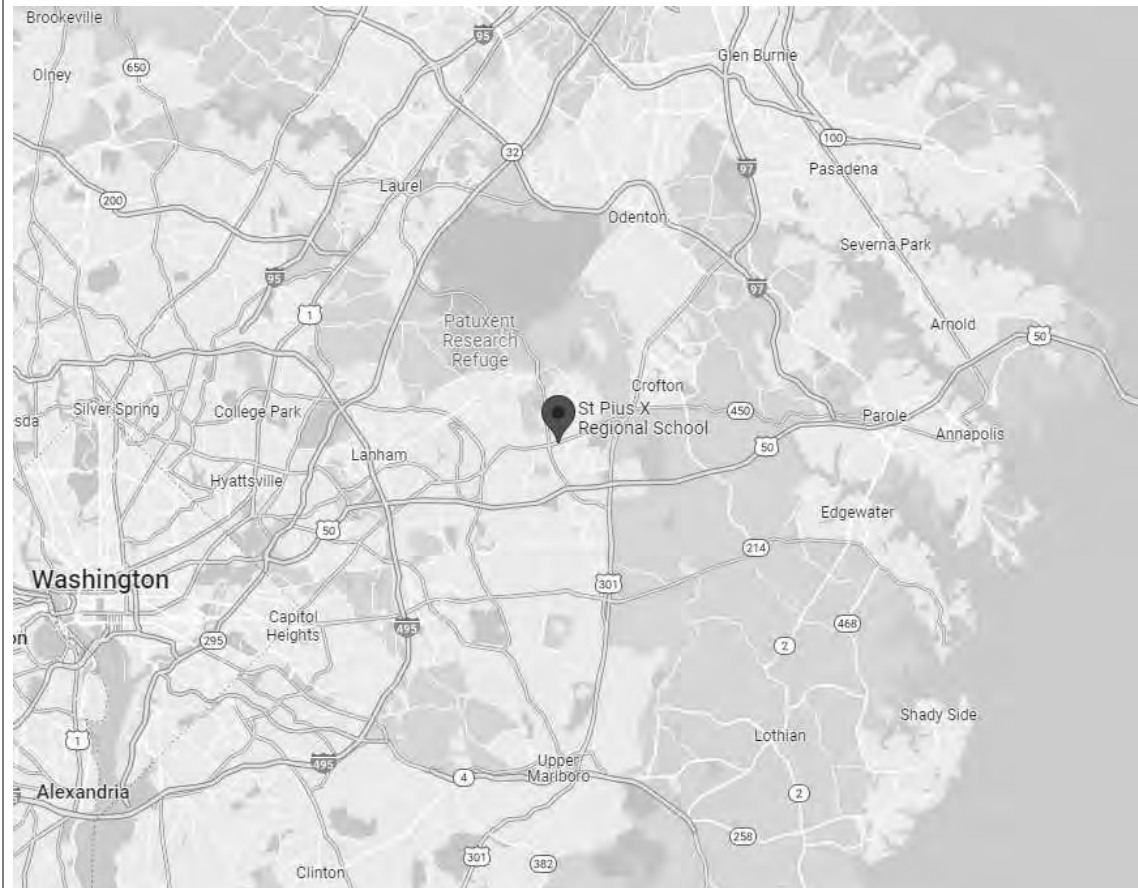
14710 Annapolis Road
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VICINITY MAP



LOCATION MAP



SHEET INDEX

| DRAWING LIST | |
|--------------|--|
| SHEET NUMBER | SHEET NAME |
| A-003 | Unnamed |
| Z-101 | Template |
| G-001 | COVER SHEET |
| A-001 | CODE ANALYSIS, GENERAL NOTES AND LEGENDS |
| A-002 | LIFE SAFETY PLAN |
| AD-101 | DEMOLITION VIEWS |
| A-101 | FLOOR PLANS |
| A-121 | FINISH AND FURNITURE PLANS |
| A-201 | BUILDING ELEVATIONS |
| A-301 | BUILDING SECTIONS |
| A-401 | ENLARGED PLANS |
| A-411 | INTERIOR ELEVATIONS |
| A-501 | DETAILS - PLAN |
| A-511 | DETAILS - SECTION |
| A-512 | DETAILS - SECTION |
| A-521 | CASEWORK DETAILS |
| A-601 | WALL, FLOOR, CEILING TYPES AND SCHEDULE |
| A-602 | DOOR INFORMATION |
| S-101 | FOUNDATION & ROOF FRAMING PLANS |
| S-200 | SECTIONS |
| S-201 | GENERAL NOTES |
| S-202 | GENERAL NOTES |
| M-001 | COVER SHEET MECHANICAL |
| M-101 | FLOOR PLAN - MECHANICAL |
| M-201 | MECHANICAL SCHEDULE AND SPECIFICATIONS |
| P-001 | COVER SHEET PLUMBING |
| P-101 | FLOOR PLAN - PLUMBING |
| P-201 | PLUMBING |
| E-001 | COVER SHEET ELECTRICAL |
| E-101 | FLOOR PLAN - POWER & LIGHTING |
| E-201 | POWER RISER DIAGRAM & SCHEDULES |
| E-301 | ELECTRICAL SPECIFICATIONS |

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PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30



PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Architect under the laws of the State of Maryland. License No. 1530; Expiration Date 12/30/2025.

SHEET TITLE

COVER SHEET

DRAWN BY

CHECKED BY

SHEET NO.

AS

SR

SET DESCRIPTION

FOR PERMIT

G-001

DATE

2024-04-23

D

C

B

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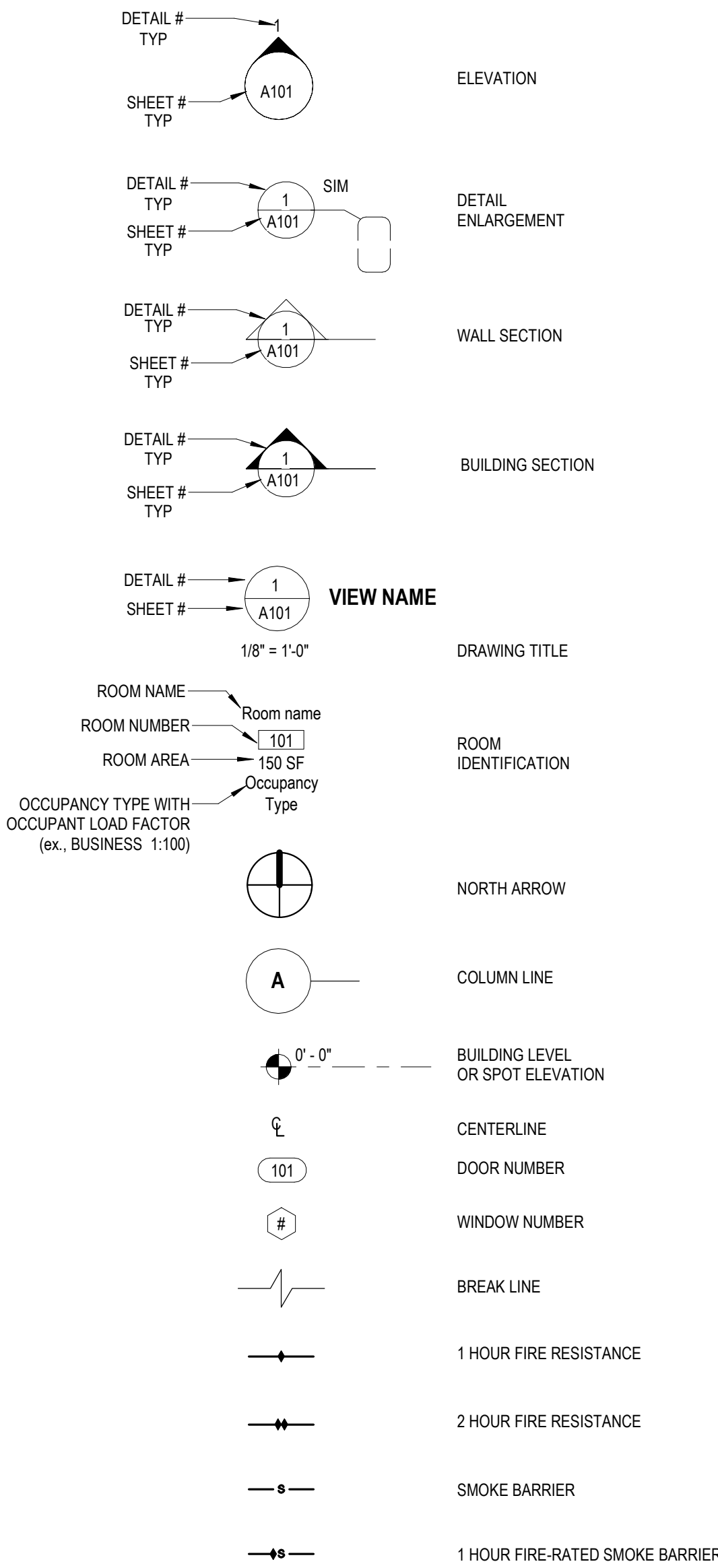
ABBREVIATIONS

| | | | | | |
|-----------|---------------------------|------------|-------------------------------------|--------|------------------------|
| ABV | ABOVE | HC | HOLLOW CORE | S | SOUTH |
| ACOUS | ACOUSTICAL | HPD | HANDICAPPED | SC | SOLID CORE |
| AFF | ABOVE FINISHED FLOOR | HW | HARDWARE | SCHED | SCHEDULE |
| AGGR | AGGREGATE | HM | HOLLOW METAL | SD | STORM DRAIN |
| AL ALUM | ALUMINUM | HORIZ | HORIZONTAL | SECT | SECTION |
| APPROX | APPROXIMATELY | HPT | HIGH POINT | SHT | SHEET |
| ARCH | ARCHITECT (URAL) | HT | HEIGHT | SIM | SIMILAR |
| | | | | SPEC | SPECIFICATION |
| BBT | BIO-BASED RESILIENT TILE | ID | INSIDE DIAMETER | SQ | SQUARE |
| BD | BOARD | INSUL | INSULATION | SQ FT | SQUARE FOOT |
| BTUM | BITUMINOUS | INTR | INTERIOR | SSK | SERVICE SINK |
| BLDG | BUILDING | JAN | JANITOR | SST | STAINLESS STEEL |
| BLK | BLOCK | JOINT | JOINT | STD | STANDARD |
| BLK | BLOCKING | JT | JT | STFT | STOREFRONT |
| BM | BEAM | KIT | KITCHEN | STL | STEEL |
| BOT | BOTTOM | KO | KNOCKOUT | STOR | STORAGE |
| BRK | BRICK | | | STRUCT | STRUCTURAL |
| BTWN | BETWEEN | | | SUSP | SUSPENDED |
| BUR | BUILT-UP ROOF | LAB | LABORATORY | | |
| | | LAM | LAMINATE | T&G | TONGUE & GROOVE |
| C&G | CURB & GUTTER | LAV | LAVATORY | TA | TOILET ACCESSORY |
| CEM | CEMENT | LH | LEFT HAND | TC | TOP OF CURB |
| CEM PLAS | CEMENT PLASTER | LPT | LOWPOINT | TEL | TELEPHONE |
| CER TILE | CERAMIC TILE | LT | LIGHT | TEMP | TEMPORARY |
| CL | CENTERLINE | LVR | LOUVER | TERP | TERPAZZO |
| CLJ | CONTROL JOINT | MACH | MACHINE | THK | THICKNESS |
| CLO | CLOSET | MAS, MSNRY | MASONRY | THRES | THRESHOLD |
| CLR | CLEAR | MATL | MATERIAL | TKBD | TACKBOARD |
| CMU | CONCRETE MAS UNIT | MAX | MAXIMUM | TP | TOP OF PAVEMENT |
| CO | CLEANOUT | MECH | MECHANICAL | TS | TOP OF STEEL |
| COL | COLUMN | MEMB | MEMBRANE | TW | TOP OF WALL |
| COMB | COMBINATION | MEP | MECHANICAL, ELECTRICAL / | UC | UNDERCUT |
| CONC | CONCRETE | MET | METAL | UNFIN | UNFINISHED |
| CONN | CONNECTION | MFR | MANUFACTURER | UNO | UNLESS NOTED OTHERWISE |
| CONSTR | CONSTRUCTION | MH | MANHOLE | | |
| CONT | CONTINUOUS | MN | MINIMUM, MINUTE | VB | VINYL BASE |
| COORD | COORDINATE | MISC | MISCELLANEOUS | VCT | VINYL COMPOSITION TILE |
| CONTR | CONTRACT (OR) | MO | MASONRY OPENING | VERT | VERTICAL |
| CORR | CORRIDOR | MTD | MOUNTED | VEST | VESTIBULE |
| CSFH | COUNT SUNK FLAT HEAD | MULL | MULLION | VT | VINYL TILE |
| CSK | COUNTER SUNK | | | VWC | VINYL WALLCOVERING |
| | | N | NORTH | | |
| DBL | DOUBLE | NA | NOT APPLICABLE | W | WEST |
| DEPT | DEPARTMENT | NC | NOT IN CONTRACT | WI | WITH |
| DET | DETAIL | NO | NUMBER | WD | WOOD, WIDTH |
| DF | DRINKING FOUNTAIN | NOM | NOMINAL | W/O | WITHOUT |
| DA | DIAMETER | NRCA | NATIONAL ROOFING COUNCIL OF AMERICA | WTRPRF | WATERPROOFING |
| DIM | DIMENSION | NTS | NOT TO SCALE | WDW | WINDOW |
| DN | DOWN | | | | |
| DWG | DRAWING | OA | OVERALL | | |
| | | OC | ON CENTER | | |
| E | EAST | OCC | OCCUPANT | | |
| E&A | E&A | OD | OUTSIDE DIAMETER | | |
| EL | ELEVATION | OFD | OVERFLOW DRAIN | | |
| ELEC | ELECTRICAL | OPNG | OPENING | | |
| ELEV | ELEVATOR | OPP | OPPOSITE | | |
| EMER | EMERGENCY | OVHD | OVERHEAD | | |
| ENCL | ENCLOSURE | PERF | PERFORATED | | |
| EP | ELECTRICAL PANEL | PLAM | PLASTIC LAMINATE | | |
| EQ | EQUAL | PLAS | PLASTER | | |
| EQUIP | EQUIPMENT | PLBG | PLUMBING | | |
| EXIST, EX | EXISTING | PLYWD | PLYWOOD | | |
| EXP, IT | EXPANSION JOINT | PNL | PANEL | | |
| EXT | EXTERIOR | PR | PAIR | | |
| | | PT | PRESSURE TREATED | | |
| FB | FLAT BAR | PTD | PAINTED | | |
| FD | FLOOR DRAIN | PTN | PARTITION | | |
| FON | FOUNDATION | R | RISER | | |
| FEC | FIRE EXTINGUISHER CABINET | RAD | RADIUS | | |
| FE | FIRE EXTINGUISHER | RD | ROOF DRAIN | | |
| PH | FLAT HEAD SCREW | REF | REFERENCE | | |
| PHC | FIRE HOSE CABINET | REIN | REINFORCEMENT (ING) | | |
| FIN | FINISH | REQD | REQUIRED | | |
| FIN FL | FINISH FLOOR | RESL | RESILIENT | | |
| FLR | FLOOR (ING) | RH | RIGHT HAND | | |
| FOW | FACE OF WALL | RM | ROOM | | |
| FT | FEET OR FOOT | RO | ROUGH OPENING | | |
| FTG | FOOTING | | | | |
| | | GA | GAGE | | |
| | | GALV | GALVANIZED | | |
| | | GEN | GENERAL | | |
| | | QL | GLAZING | | |
| | | GWS | GYPSUM WALLBOARD | | |

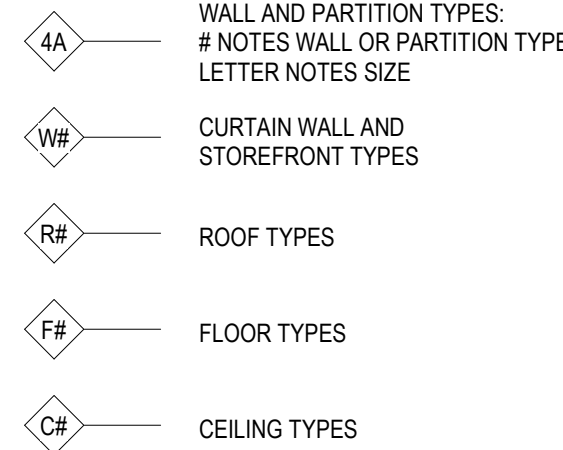
GENERAL NOTES

- ALL PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS MARKED "HOLD" OR "CLEAR" SHALL BE GIVEN PRIORITY.
- DOOR FRAMES TO BE SET 4" FROM ADJACENT WALL UNLESS NOTED OTHERWISE OR DIMENSIONED.
- LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS AND DETAILS TAKE PRECEDENCE OVER ALL DRAWINGS. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES.
- CONTRACTOR SHALL COORDINATE AND PROVIDE BLOCKING IN PARTITIONS FOR ALL MILLWORK AND WALL ATTACHED LIGHT FIXTURES, RAILINGS, SIGNAGE, ETC.
- "TYPICAL" OR "TYP" SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE. DETAILS ARE USUALLY KEYS AND NOTED "TYP" ONLY ONCE, WHERE THEY FIRST OCCUR.
- CONTRACTOR SHALL NOT MEASURE THESE DRAWINGS FOR THE PURPOSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING BIDDING OR CONSTRUCTION.
- THE CONTRACTOR SHALL APPLY, INSTALL, CONNECT, ERECT, CLEAN AND/OR CONDITION MANUFACTURED ARTICLES, MATERIALS, AND/OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. IN A CASE OF CONFLICT BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK TO THE EXTENT PRACTICAL. ANY CONFLICTS, AND DISCREPANCIES SHALL BE REPORTED IN WRITING TO THE ARCHITECT.
- IMMEDIATELY PRIOR TO THE OWNER'S OCCUPANCY, THE CONTRACTOR SHALL CLEAN ALL SURFACES OF DUST, DERRIS, LOOSE CONSTRUCTION MATERIAL AND EQUIPMENT, AND LEAVE ALL FLOORS VACUUMED CLEAN. REMAINING CONSTRUCTION MATERIAL AND EQUIPMENT, IF ANY, SHALL BE MOVED AND TEMPORARILY SECURED IN AN AREA DIRECTED BY THE TENANT.
- THE CONTRACTOR SHALL FILE, OBTAIN, AND PAY FOR ALL FEES FOR BUILDING DEPARTMENT APPROVALS AND PERMITS, WHERE REQUIRED, AND FINAL WRITE-OFFS FOR PROJECT COMPLETION. COPIES OF ALL TRANSACTIONS ARE TO BE FORWARDED TO THE OWNER.
- THE CONTRACTOR SHALL EXECUTE ALL INSPECTIONS NECESSARY TO OBTAIN A CERTIFICATE OF OCCUPANCY.
- FIRE EXTINGUISHER LOCATIONS ARE TO BE COORDINATED IN THE FIELD WITH THE FIRE MARSHAL AND COORDINATED WITH THE TENANT PRIOR TO INSTALLATION.
- ALL DIMENSIONS, NOTES, FINISHES, AND FIXTURES SHOWN ON TYPICAL FLOOR PLANS, SECTIONS, OR DETAILS SHALL APPLY TO ALL SIMILAR OR OPPOSITE HAND PLANS, SECTIONS OR DETAILS.
- PROVIDE FIRE SAFING INSULATION OR FIRE SEALANT AROUND PIPES PENETRATING RATED WALLS OR FLOORS TO MAINTAIN AN APPLICABLE FIRE RATINGS AND RO SMOKE BARRIER.
- DRAWINGS AND SPECIFICATIONS ARE AND SHALL REMAIN THE PROPERTY OF WALDON STUDIO ARCHITECTS & PLANNERS, PC AND ARE NOT TO BE USED BY CLIENT OR CONTRACTOR ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING FROM WALDON STUDIO ARCHITECTS & PLANNERS, PC.

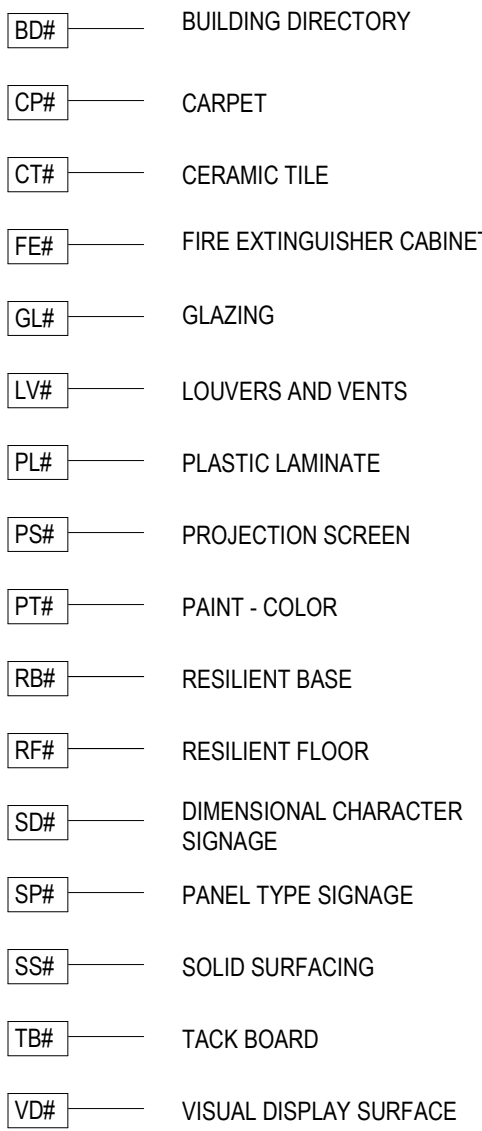
SYMBOLS LEGEND



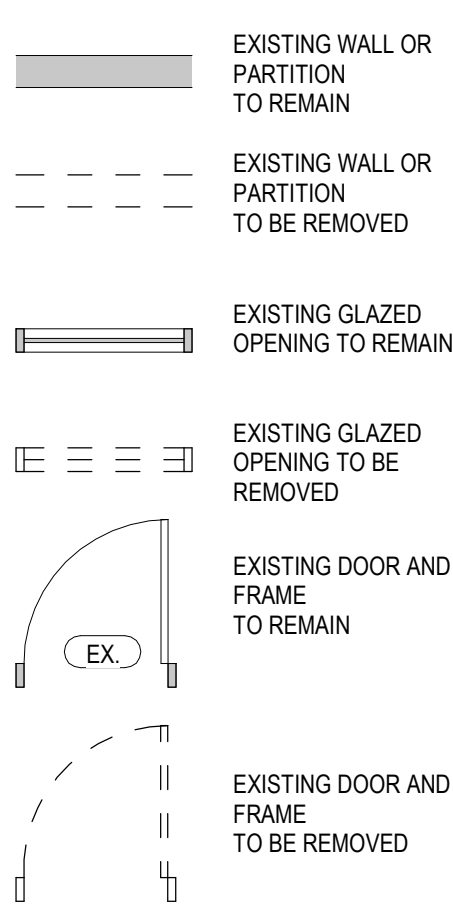
BUILDING ASSEMBLY TYPES LEGEND



FINISHES, FURNISHINGS AND EQUIPMENT TYPES LEGEND



FLOOR PLAN LEGEND



SCOPE OF WORK

This is the addition of a Banquet Room with a serving area, office and storage for the adjacent sanctuary and toilet rooms. The addition will be its own sprinklered fire area separated from the existing building by a 2 hour fire wall.

There is no change in use or occupant load for any existing space.

The area of the new addition is 3,330sf.

The fire wall is 2 hours as per IBC table 706.4 note a.

The fire wall terminates at the interior face of the exterior non-combustible brick finish as per IBC 706.5 exception 2, (NFPA 221 section 6.9.1.2).

The fire wall terminates at the underside of the non-combustible roof deck as per IBC 706.6 exception 3 (NFPA 221 section 6.6.3.1).

The existing side has asphalt shingles and the new side has standing seam metal roofing. Both are at least Class B roof coverings.

VESTIBULES: This building is exempt as per IECC C402.5.7 Exception 4

CODE ANALYSIS

A) AUTHORITIES HAVING JURISDICTION

MARYLAND
COUNTY: PRINCE GEORGES
CITY: BOWIE

B) APPLICABLE CODES

Fire Protection and Life Safety Review Codes
2018 International Building Code (IBC) and Subtitle 4
2018 International Existing Building Code (IEBC)
2018 NFPA 101 Life Safety Code and Subtitle 11
2018 NFPA 1 Fire Code
Maryland State Fire Prevention Code

Sprinkler System
2016 NFPA 13 Installation of Sprinkler Systems

Fire Alarm
2016 NFPA 72 National Fire Alarm and Signaling Code

Electrical Code
2017 NFPA 70 National Electrical Code and Subtitle 9 Prince George's County Electrical Code
2018 International Energy Conservation Code

Building/Structural Code
2018 International Building Code and Subtitle 4 Prince George's County Building Code
2018 International Existing Building Code
2018 IECC International Energy Conservation Code

Accessibility Code
Prince George's County Subtitle 4, Sec. 4-180 Chapter 11 - Accessibility.
CONMAR 12.53 Maryland Accessibility Code
2010 ADA Standards

Mechanical/Energy Code
2018 International Mechanical Code (IMC-2018) or (ASHRAE 90.1)
2018 International Energy Conservation Code (IECC-2018) or (ASHRAE 90.1)

C) OCCUPANCY AND CONSTRUCTION TYPE

CONSTRUCTION TYPE: 2B (II-000)
OCCUPANCY TYPE: NEW ASSEMBLY A-2, BANQUET

ACTUAL BUILDING HEIGHT: 16' 6"
ALLOWED BUILDING HEIGHT: 75' (COMPLIANT WITH NFPA 101 TABLE 12.1.6)

ACTUAL BUILDING AREA: 3,330 SF
ALLOWED BUILDING AREA: 38,000 SF (SPRINKLERED, SINGLE STORY A2)

ENERGY INSULATION REQUIREMENTS PER IECC

CLIMATE ZONE 4
ROOF WITH INSULATION ABOVE DECK: R-30 C.I.
METAL FRAMED WALLS: R-13 PLUS R-7 C.I.
SLAB ON GRADE FLOOR: R-10 FOR 24" EXTENDING DOWN FROM THE TOP OF THE SLAB

D) FIRE RESISTANCE RATING REQUIREMENTS

IBC TABLE 601
PRIMARY STRUCTURAL FRAME 0 HR
BEARING WALLS - EXTERIOR 0 HR
BEARING WALLS - INTERIOR 0 HR
NON BEARING WALLS AND PARTITIONS - EXTERIOR 0 HR
NON BEARING WALLS AND PARTITIONS - INTERIOR 0 HR
FLOOR CONSTRUCTION 0 HR
ROOF CONSTRUCTION 0 HR

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE
(IBC TABLE 602) FIRE SEPARATION DISTANCE GREATER THAN 0 FEET = 1 HR.

E) MEANS OF EGRESS ANALYSIS

OCCUPANT LOAD CALCULATION (IBC 1004, NFPA 101 7.3.1)
TOTAL OCCUPANTS = 242

NUMBER OF EXITS REQUIRED (IBC 1006 NFPA 101 7.4): 2
NUMBER OF EXITS PROVIDED: 3

EGRESS CAPACITY REQUIRED (IBC 1005, NFPA 101 7.3.3.1 @ 0.2' PER OCCUPANT): 48.4"
EGRESS CAPACITY PROVIDED: 288"

MINIMUM CORRIDOR WIDTH (IBC TABLE 1002.2, NFPA 101 7.3.4): 48"
CORRIDOR WIDTH PROVIDED: 78"

COMMON PATH OF EGRESS TRAVEL (IBC 1008, NFPA 101 12.2.5.1.2): 75 FEET
COMMON PATH OF EGRESS TRAVEL PROVIDED: 29 FEET

EXIT ACCESS TRAVEL DISTANCE (IBC 1011, NFPA 101 12.2.6.2): 260 FEET WITH SPRINKLER SYSTEM
EXIT ACCESS TRAVEL DISTANCE PROVIDED: 83 FEET

CORRIDOR FIRE RESISTANCE RATING (IBC 1020, NFPA 101 12.3.6 (2)): 0 HOURS WITH SPRINKLER SYSTEM

MAXIMUM DEAD END CORRIDOR LENGTH (IBC 1020.4, NFPA 101 12.2.5.1.3): 20 FEET
MAXIMUM DEAD END CORRIDOR LENGTH PROVIDED: 0 FEET

F) FIRE PROTECTION SYSTEMS

THIS ADDITION WILL BE EQUIPPED WITH THE FOLLOWING SYSTEMS:

AUTOMATIC SPRINKLER SYSTEM - IBC SECTION 903

FIRE ALARM SYSTEM (SEE ELECTRICAL DRAWINGS) - NFPA 72

PORTABLE FIRE EXTINGUISHERS - IBC SECTION 906

| MINIMUM REQUIRED PLUMBING FIXTURES FOR A2 BANQUET (100 OCCUPANTS, 15' x 8') | | | | | | |
|--|------------------|--------------------|------------------|---------------------|--------|-------------------|
| | WATER CLOSETS | | LAVATORIES | | UNISEX | SERVICE SINK |
| RATIOS | MALE 1 per 75 | FEMALE 1 per 75 | MALE 1 per 75 | FEMALE 1 per 200 | N/A | 1 per 1000 |
| REQUIRED | 1 | 1 | 1 | 0 | 1 | 1 |
| PROVIDED | 1 | 1 UNISEX | 1 UNISEX | 1 UNISEX | 2 | EXISTING PROVIDED |

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St. Pius X Catholic Church Addition

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PROFESSIONAL CERTIFICATION
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SHEET TITLE
CODE ANALYSIS, GENERAL NOTES AND LEGENDS

DRAWN BY

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SET DESCRIPTION

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A-001

DATE

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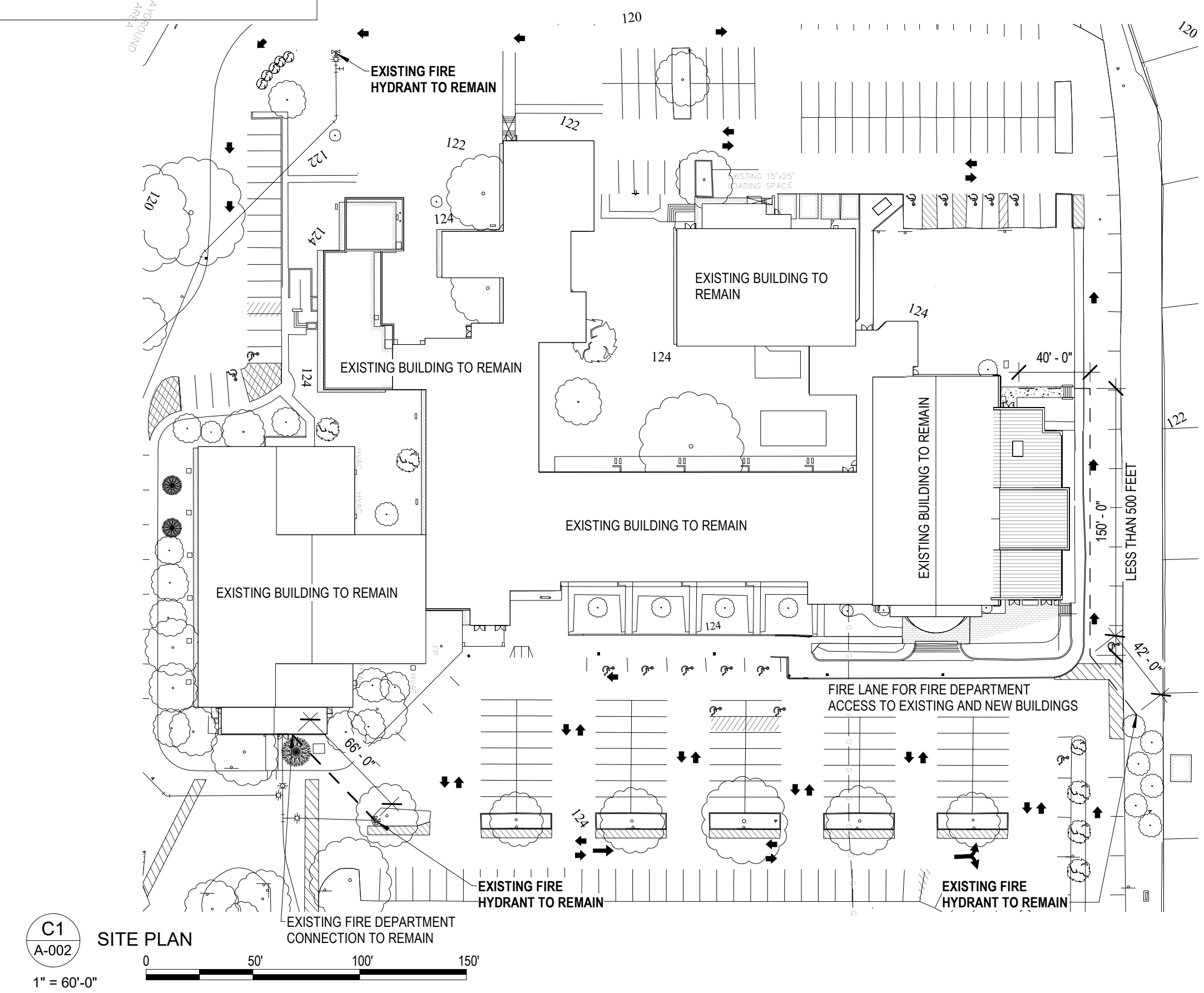
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SHEET TITLE
LIFE SAFETY PLAN

DRAWN BY: AS
CHECKED BY: SR
SHEET NO.:
FOR PERMIT: A-002
DATE: 2024-04-23



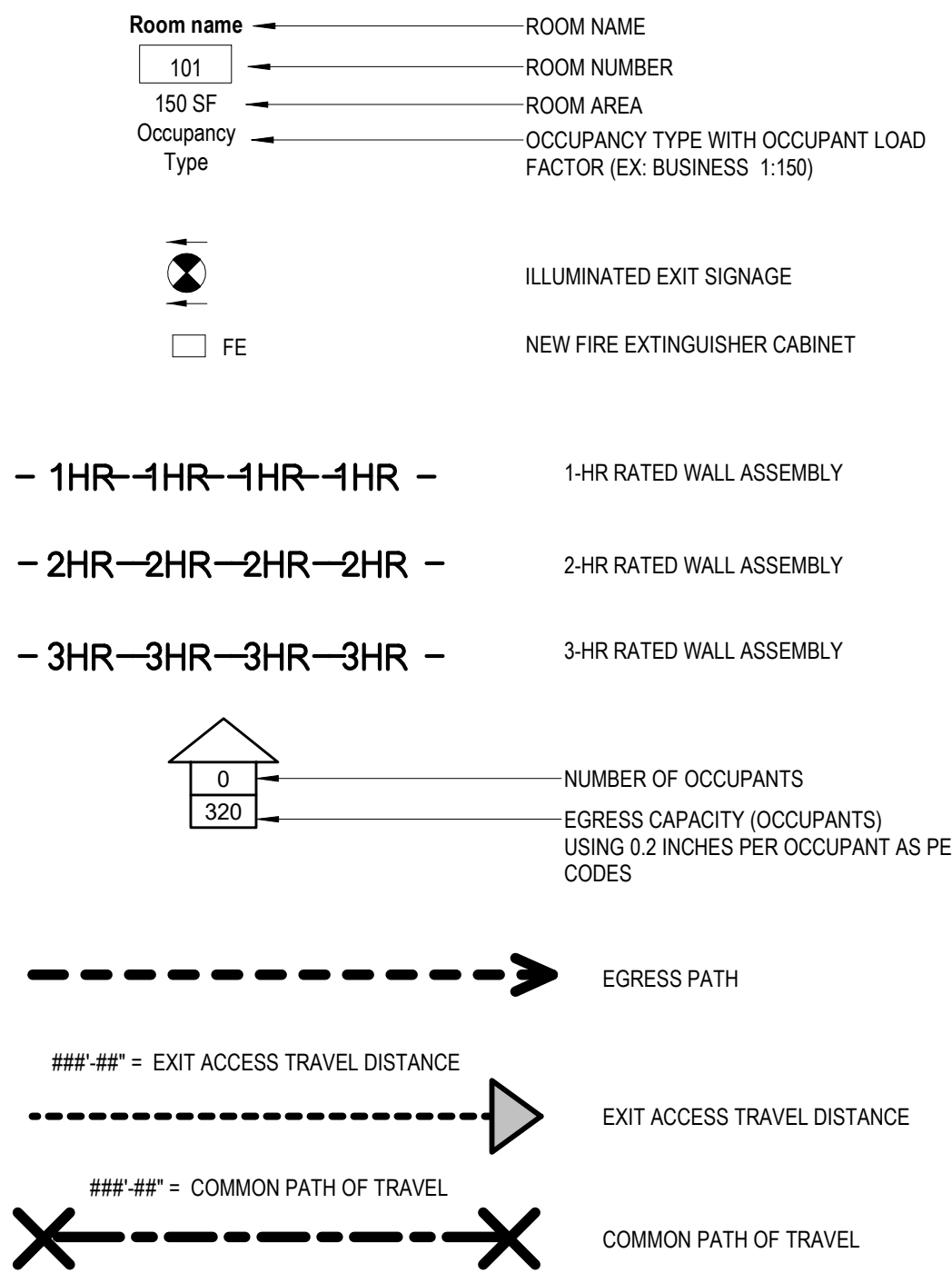
EXISTING FIRE AREA WILL BE COMPLIANT AFTER NEW ADDITION:

AS PER IBC 506:
TOTAL PERIMETER: 470 FT
OPEN PERIMETER: 192 FT
CLOSED PERIMETER: 278 FT
If: (192/470 = 0.25) (25/300)
If: (0.159) 0.993
If: 0.158
A_{sf} = 9500+(9500*0.158)
A_{sf} = 9500+1501
A_{sf} = 11,001 SF
ACTUAL AREA = 10,500 SF

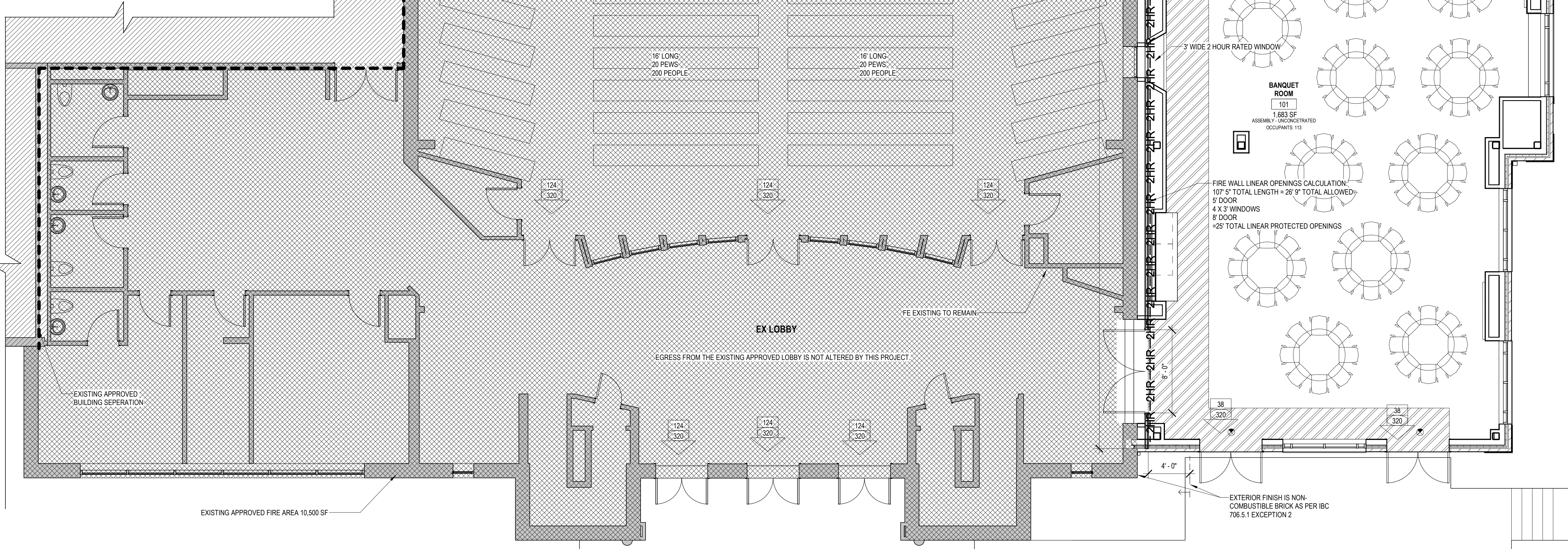
LIFE SAFETY PLAN OVERALL

| OCCUPANT LOAD SCHEDULE | | | | | |
|-------------------------------------|-------------|---------------------------|----------|--|--------------------|
| ROOM NAME | ROOM NUMBER | OCCUPANCY TYPE | AREA | OCCUPANT LOAD FACTOR - AREA PER OCCUPANT | NUMBER OF OCCUPANT |
| BANQUET ROOM | 101 | ASSEMBLY - UNCONCENTRATED | 1,683 SF | 15 | 113 |
| PANTRY | 102 | BUSINESS | 160 SF | 150 | 2 |
| OFFICE | 105 | BUSINESS | 203 SF | 150 | 2 |
| JAN | 105A | STORAGE | 11 SF | 300 | 1 |
| SANCTUARY STORAGE | 107 | STORAGE | 145 SF | 300 | 1 |
| SERVING | 108 | BUSINESS | 123 SF | 150 | 1 |
| TOTAL FROM NEW BUILDING | | | | 120 | |
| TOTAL INCLUDING SANCTUARY SIDE DOOR | | | | 242 | |

LIFE SAFETY PLAN LEGEND



A3
A-002
LIFE SAFETY PLAN
3/16" = 1'-0"



DRAWN BY: AS
CHECKED BY: SR
SHEET NO.:
FOR PERMIT: A-002
DATE: 2024-04-23

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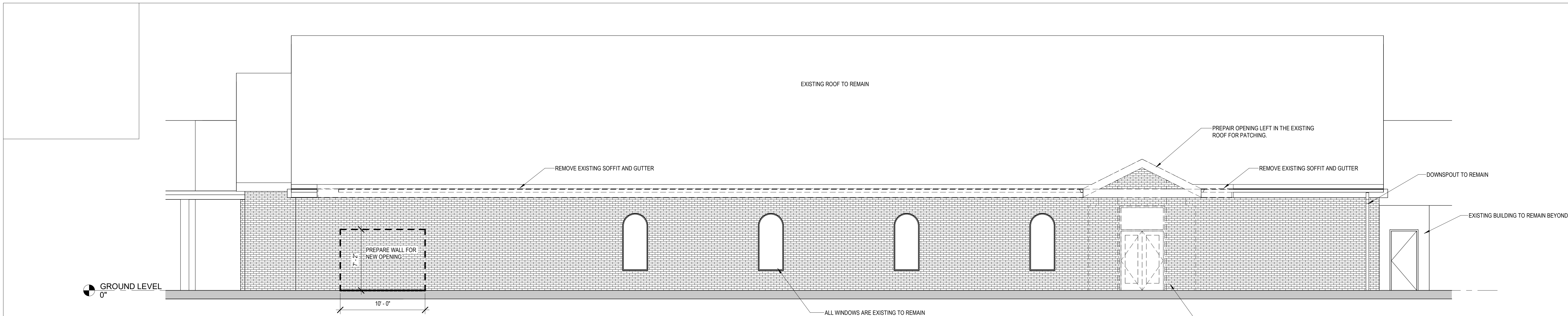
PROJECT NUMBER
MD22-30



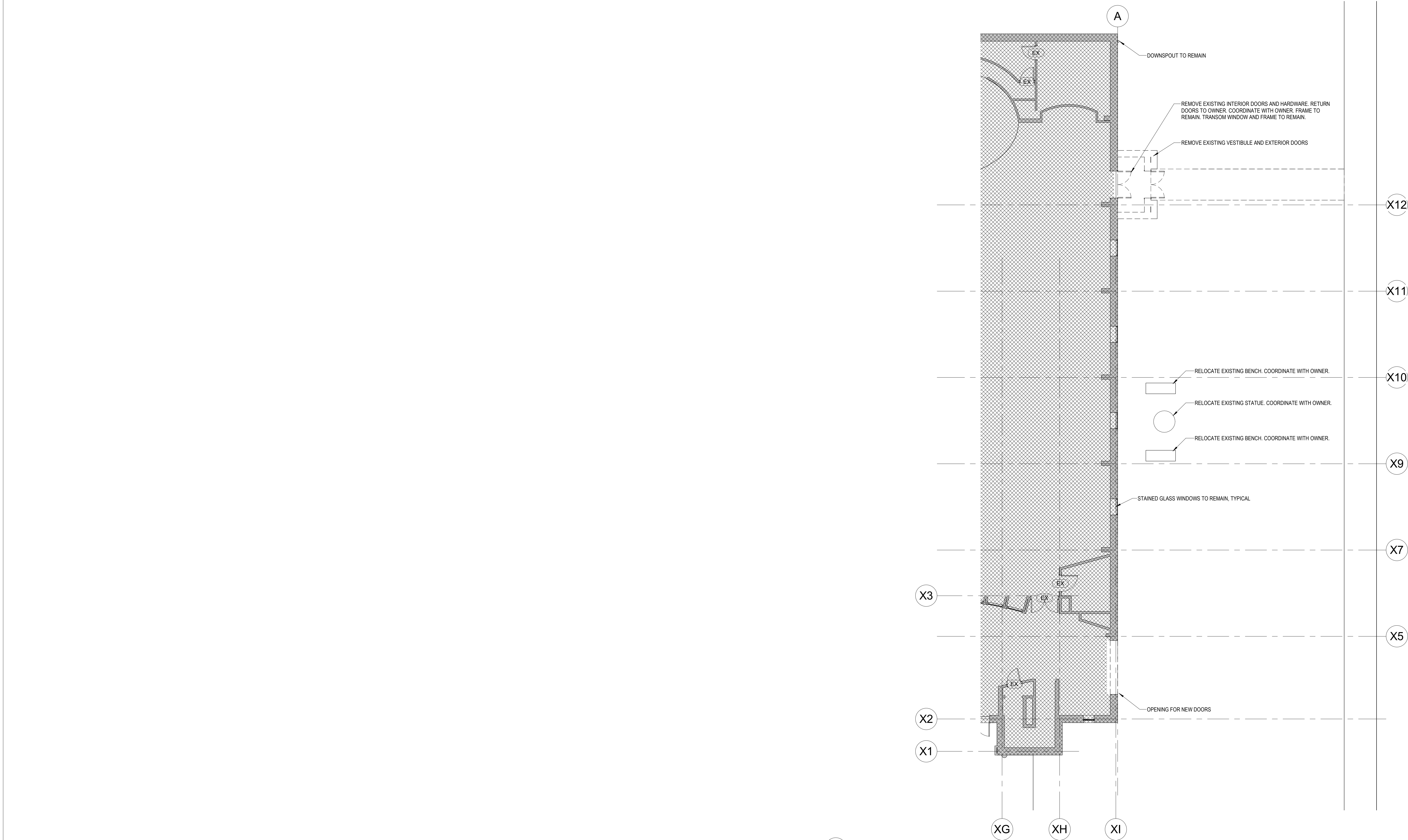
PROFESSIONAL CERTIFICATION
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SHEET TITLE
DEMOLITION VIEWS

| | | |
|--------------------|------------------|----------------------------------|
| DRAWN BY AB | CHECKED BY SR | SHEET NO. FOR PERMIT AD101 |
| DATE 2024-04-23 | | |



D1
AD101
DEMOLITION EAST ELEVATION
3/16" = 1'-0"



A4
AD101
FLOOR PLAN DEMOLITION
1/8" = 1'-0"

FINISH LEGEND

FLOORS

PT-1 PORCELAIN TILE

MANUF: DALTILE
PATTERN: DELEGATE
COLOR: OFF WHITE- DL25- SQUARE
DIMS: 24" X 24" X 5/16" GAUGE
INSTALLATION: STACKED
GROUT: MAPEI #5011 SAHARA BEIGE

RT-1 RESILIENT TILE- PLANK

MANUF: MOHAWK
PATTERN: LIVING LOCAL COLLECTION PREMIUM WOOD
COLOR: 123 WESTERN WOODS
DIMS: 7.75" X 52" X 2.5MM GAUGE
INSTALLATION: GLUE DOWN. 1/3 OFFSET BOND
LOCATION: CIRCULATION, VESITBULES, SERVING ROOM, GATHERING ROOM

RS-1 RESILIENT SHEET

MANUF: MANNINGTON
PATTERN: DISCOVERY- REVEAL
COLOR: FORTUITY DC303
DIMS: 12" WIDTH ROLL
NOTE: WITH 4"H INTEGRAL COVE BASE HEAT WELD SEAMS
LOCATION: STORAGES AND KITCHEN

TRANSITION STRIPS

TS-1 TRANSITION STRIP- PORCELAIN TO RESILIENT FLOOR- AT DOOR

MANUF: SCHLUTER
MODEL: SCHIENE
NOTE: INSTALL WITH TOP SURFACES FLUSH TO EACH OTHER
INSTALL FEATHER FLOOR UNDER RESILIENT FLOOR TO ACHIEVE THIS

TS-2 TRANSITION STRIP- PORCELAIN TO PORCELAIN WALL TILE (I/S CORNER)

MANUF: SCHLUTER
MODEL: DILEX-HKS
NOTE: INSERT TOP CAP TO WALL TILE

TS-3 TRANSITION STRIP- RESILIENT FLOOR TO RESILIENT FLOOR- LOBBY DOOR

MANUF: SCHLUTER
MODEL: VINPRO-S
NOTE: INSTALL WITH TOP SURFACES FLUSH TO EACH OTHER

WALL BASE

RB-1 RESILIENT BASE

MANUF: JOHNSONITE
COLOR: SILVER GREY 55
DIMS: 4"H COVED CONTINUOUS COIL
LOCATION: STORAGE ROOMS

WB-1 WOOD BASE

MANUF: N/A
PATTERN: N/A
COLOR: STAIN TO MATCH PL-1
DIMS: 4"H

RSB-1 RESILIENT SHEET BASE

MANUF: MANNINGTON
PATTERN: DISCOVERY- REVEAL
COLOR: FORTUITY DC303
DIMS: 4"H
NOTE: INTEGRAL COVE BASE HEAT WELD SEAMS

WALLS

PT-2 PORCELAIN TILE

MANUF: DALTILE
PATTERN: DELEGATE
COLOR: OFF WHITE- DL25- RECTANGLE
DIMS: 12" X 24"
GROUT: MAPEI #5011 SAHARA BEIGE
INSTALLATION: 1/3 OFFSET BOND
LOCATION: ALL TOILET WALLS 48" +/- HEIGHT
NOTE: TO INCLUDE ACCESSORY TOP CAP BULLNOSE- S43F9

P-1 WALL PAINT

MANUF: SHERWIN WILLIAMS
COLOR: PURE WHITE SW7005
FINISH: FLAT; SEMI-GLOSS WHEN IN TOILET ROOMS

P-2 DOOR FRAME PAINT

MANUF: SHERWIN WILLIAMS
COLOR: GOSSAMER VEIL SW9165
FINISH: SEMI-GLOSS
LOCATION: DOOR FRAMES

WALLS CONTINUED

WT-1 WALL TILE

MANUF: ARCHITESSA
PATTERN: VENEER WORLD PRO LEDGESTONE- BLUESTONE
COLOR: TUMBLE MATTE RECTIFIED FIELD TILE
DIMS: 5.8" X 24" X 3MM GAUGE
INSTALLATION: INSTALL 1/3 OFFSET BOND PATTERN.
GROUT: MAPEI #5230 ARMOR
LOCATION: SERVING ROOM ACCENT WALL

WP-1 WALL PROTECTION

MANUF: CONSTRUCTION SPECIALITIES
PATTERN: ACROVYN WALL PROTECTION- SOLID COLOR
COLOR: PEARL #934
DIMS: 4" X 8" (8" X 10") 0.60" GAUGE
INSTALL: INSTALL PARTIAL WALL AT 5'-0"H, FULL SHEETS; BUTT SEAM USING ACROVYN TRIM WC75V1 VERTICAL; COLOR MATCHING; TOP CAP: COVE
ADHESIVE MOUNT. SEE INSTALLATION GUIDE FOR FURTHER DETAILS.
CAP BY TARKETT. MODEL SCC-01-A

MILLWORK

PL-1 PLASTIC LAMINATE

MANUF: PIONITE
PATTERN: HARDROCK MAPLE WM791
FINISH: SUEDE
INSTALLATION: VERTICAL SURFACES
LOCATION: TYPICAL UNLESS NOTED OTHERWISE

PL-2 PLASTIC LAMINATE

MANUF: WILSONART
PATTERN: TRACELESS- ICECAP VELVET 15516
FINISH: MATTIE
INSTALLATION: VERTICAL SURFACES
LOCATION: SERVING ISLAND MILLWORK ONLY.
NOTE: SEE ELEVATIONS AS NOTED.

CT-1 CERAMIC WALL TILE

MANUF: ARCHITESSA
PATTERN: DAVENPORT- 2" X 2" HEXAGON MOSAIC
COLOR: BLUE- MATTIE
DIMS: 2" X 2" HEXAGON ON MOSAIC SHEET
GROUT: MAPEI #5038 AVALANCHE
LOCATION: SERVING ISLAND MILLWORK - VERTICAL FACE, VISITOR SIDE

SS-1 SOLID SURFACE

MANUF: WILSONART
PATTERN: ASPEN QUARTZITE 9245SS
INSTALLATION: SEE DETAILS
LOCATION: ALL COUNTERTOPS
STAINED GLASS ARCH SILL, BENCH

CEILING

ACT-1 ACOUSTICAL CEILING TILE

MANUF: ARNSTRONG
MODEL: CIRRIUS- SQUARE EDGE
SPECS: MEDIUM TEXTURED, NRC-.70; CAC: 35
DIMS: 24" X 24"; 3/4" GAUGE; 15/16" GRID
NOTE: TO MATCH EXISTING CEILING TILE

P-3 CEILING PAINT

MANUF: SHERWIN WILLIAMS
COLOR: CEILING BRIGHT WHITE SW7007
FINISH: FLAT
LOCATION: SOFFITS AND DRYWALL

WCB-1 "WOOD" BAFFLE

GC TO PROVIDE
WOOD: STAINED TO MATCH WB-1
DIMS:
LOCATION: ABOVE GATHERING ISLAND. SEE RCP FOR FRUTHER DETAILS.

MISCELLANEOUS

BR-1 BRICK VENEER- DARK RED

MANUF: BRICK-K
PATTERN: ATASCADERO VELOUR
DIMS: H 2 1/4" x L 7 5/8" x T 1/4"
INSTALLATION: RUNNING
MORTAR: BRICK IT POINTING MORTAR TAUPE 402

CG-1 CORNER GUARD

MANUF: ACROVYN
MODEL: SSM-20N (1/4" RADIUS CORNER)
COLOR: PEARL #934
DIMS: "L"- 6'-6"H (FROM TOP OF WALL BASE)

NOTES:

- REFER TO THE ROOM FINISH TAGS FOR FINISH LOCATIONS.
- WHERE MORE THAN 1 WALL FINISH IS NOTED FOR A ROOM, LOCATION IS CLARIFIED ON THE FINISH PLAN AND/OR WALL ELEVATIONS.
- NO APPLIED FINISH STRIPS TO BE USED EXCEPT AT PORCELAIN TILE TRANSITIONS.
- ALL INTERIOR WALLS SHALL BE PAINTED P-1 UNLESS OTHERWISE NOTED.
- WALL AND CEILING FINISHES SHALL HAVE A MAXIMUM FLAME SPREAD OF 75 (CLASS B) AND MAXIMUM SMOKE DEVELOPED OF 450 AS PER IBC TABLE 803.13 AND NFPA 101 SECTION 12.3.3.2.
- FLOOR FINISHES SHALL HAVE A MAXIMUM CRITICAL RADIANT FLUX OF CLASS II, AND COMPLY AS PER IBC 804.1 EXCEPTION AND NFPA 101 SECTION 12.3.3.2.
- ALL FINISHES SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL BEFORE PURCHASE AND INSTALLATION.

ROOM FINISH TAG LEGEND

FLOOR

BASE

WALL

CEILING

MICHAEL GRAVES

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PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
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MD22-30



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SHEET TITLE

FINISH AND FURNITURE PLANS

DRAWN BY

CHECKED BY

SHEET NO.

AB

SR

SET DESCRIPTION

FOR PERMIT

A-121

DATE

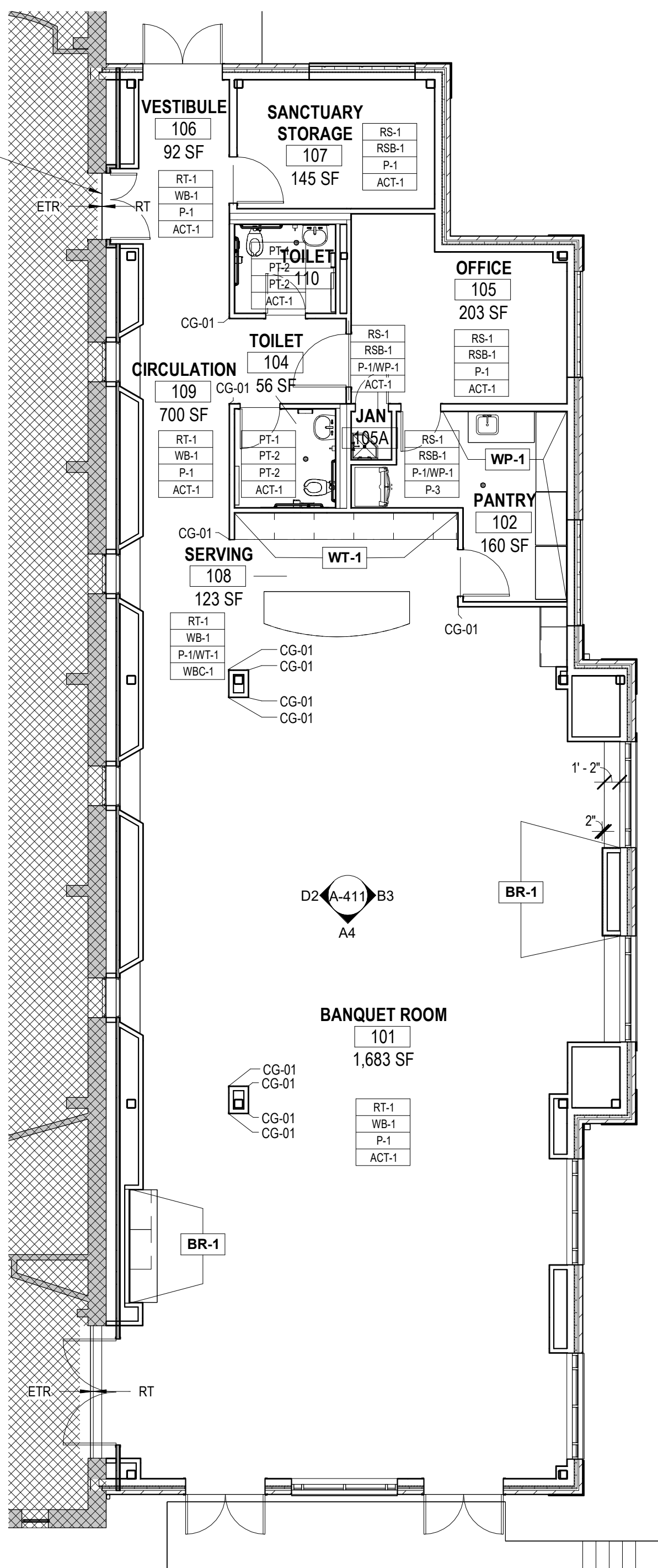
2024-04-23

A3
A-121

FINISH PLAN

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

GC TO PROVIDE TRANSITION STRIP WHERE EXISTING FINISH ABUTS TO NEW RESILIENT FLOOR. ARCHITECT RECOMMENDS SCHLUTER SYSTEMS



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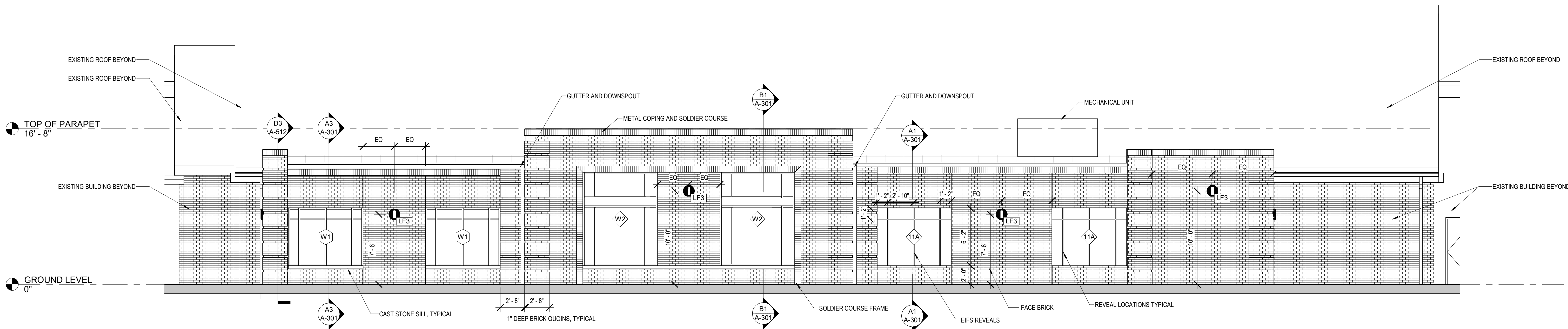
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BUILDING ELEVATIONS

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DATE

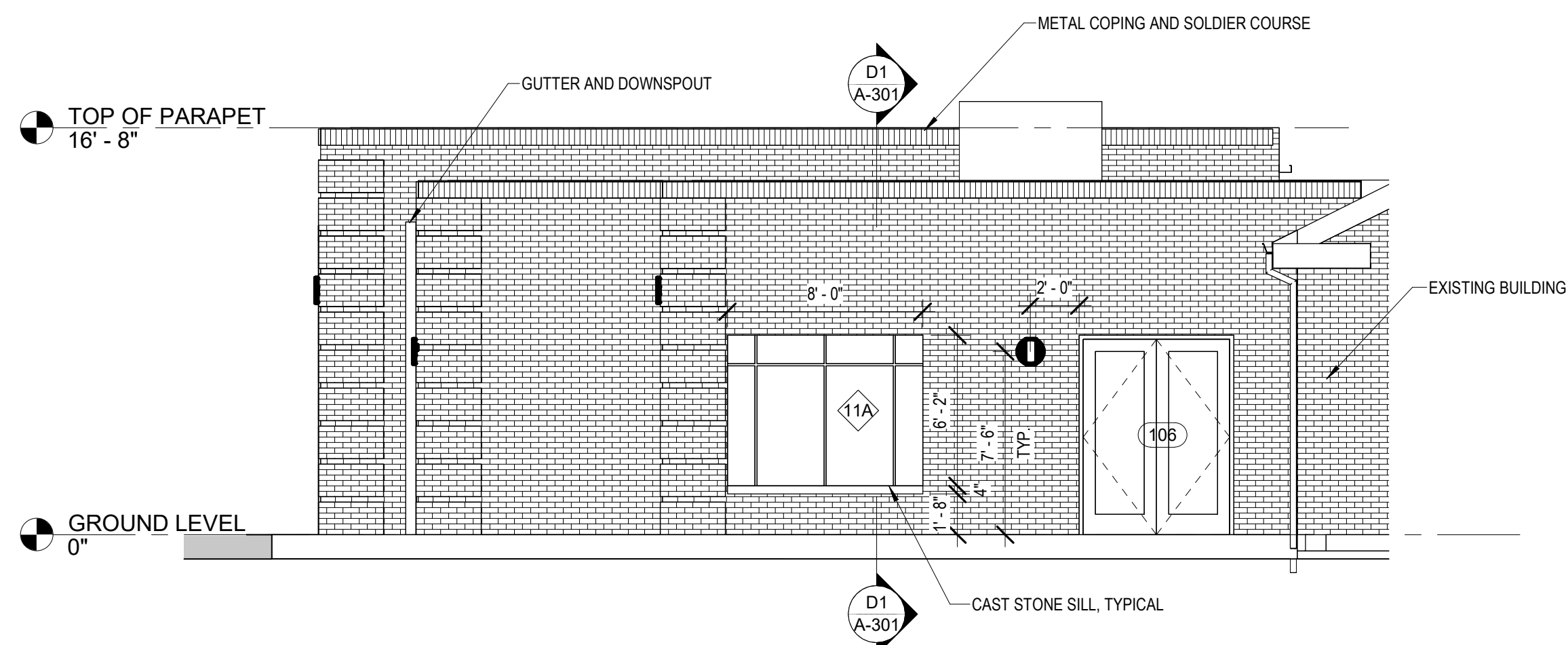
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2024-04-23

SHEET NO

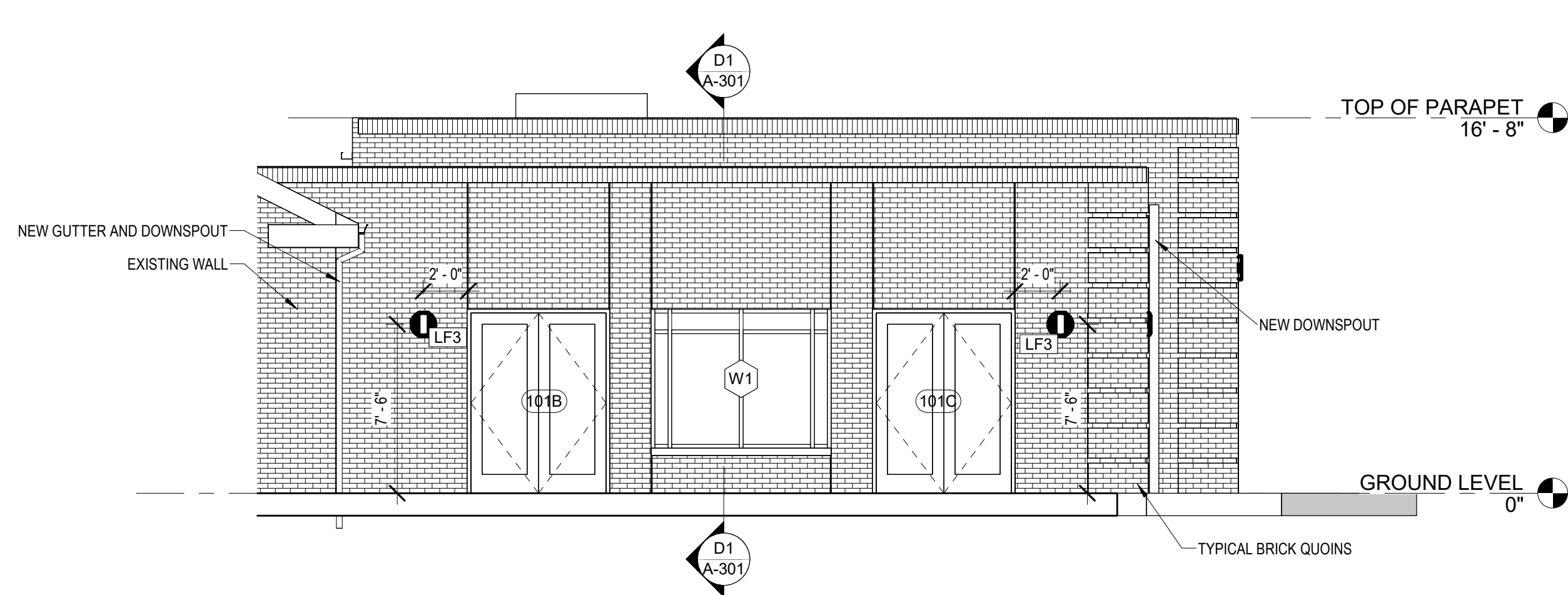
A-201



C1
A-201
EAST ELEVATION
3/16" = 1'-0"



A1
A-201
NORTH ELEVATION
3/16" = 1'-0"



A3
A-201
SOUTH ELEVATION
3/16" = 1'-0"

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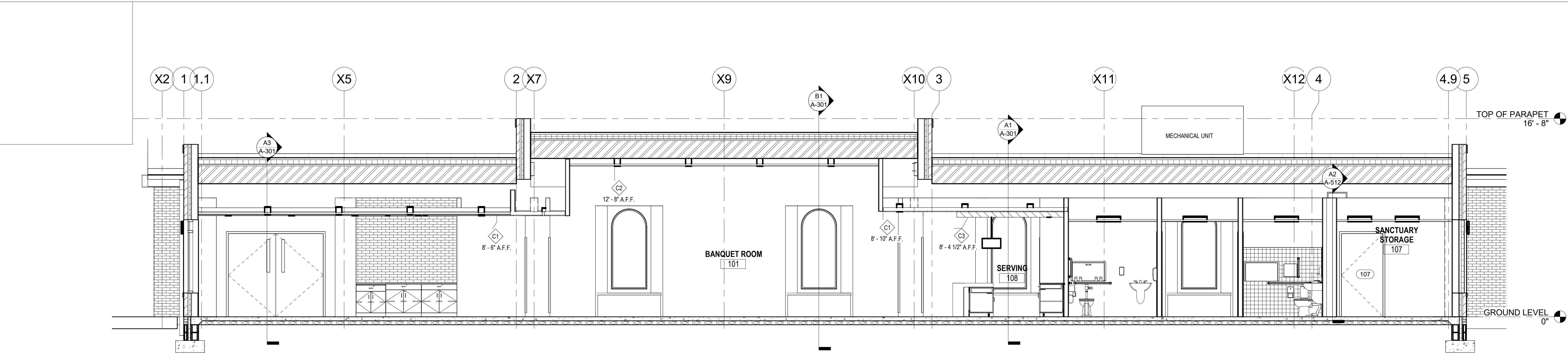


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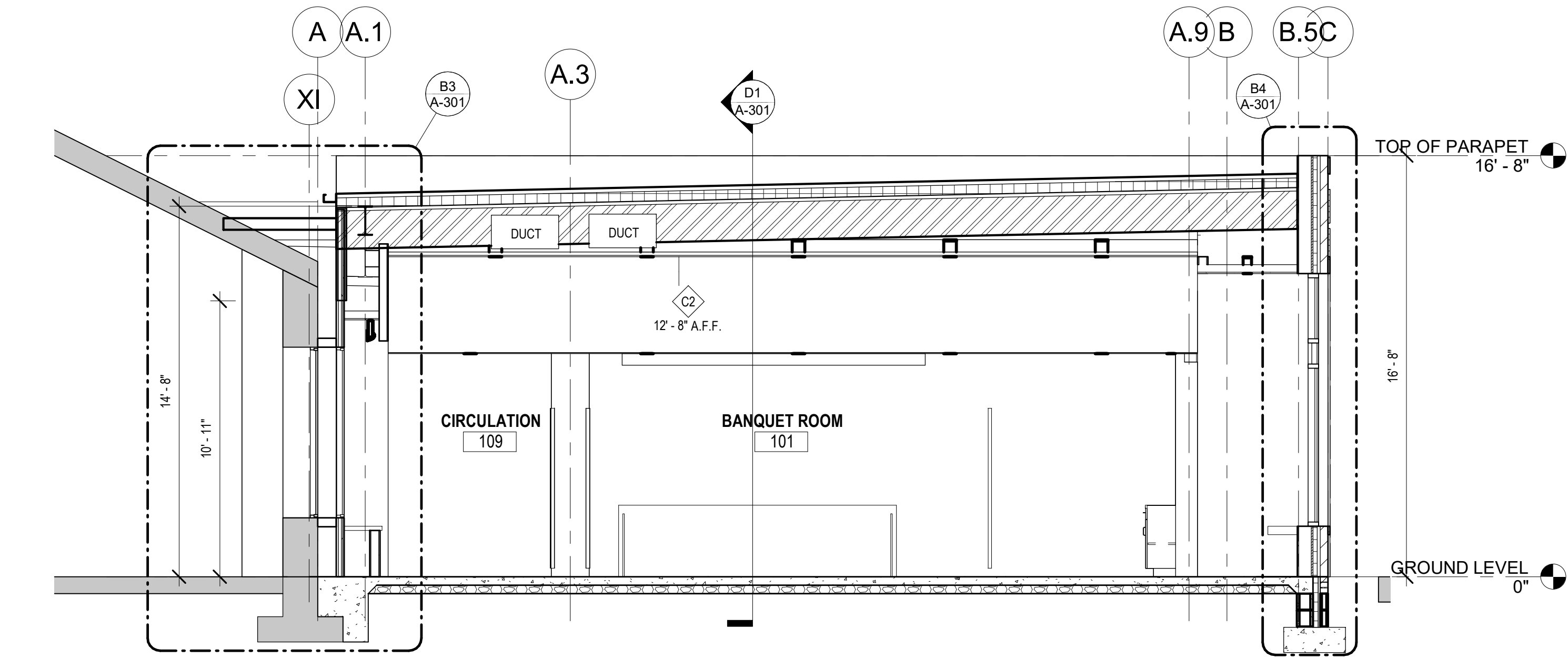
SHEET TITLE
BUILDING SECTIONS

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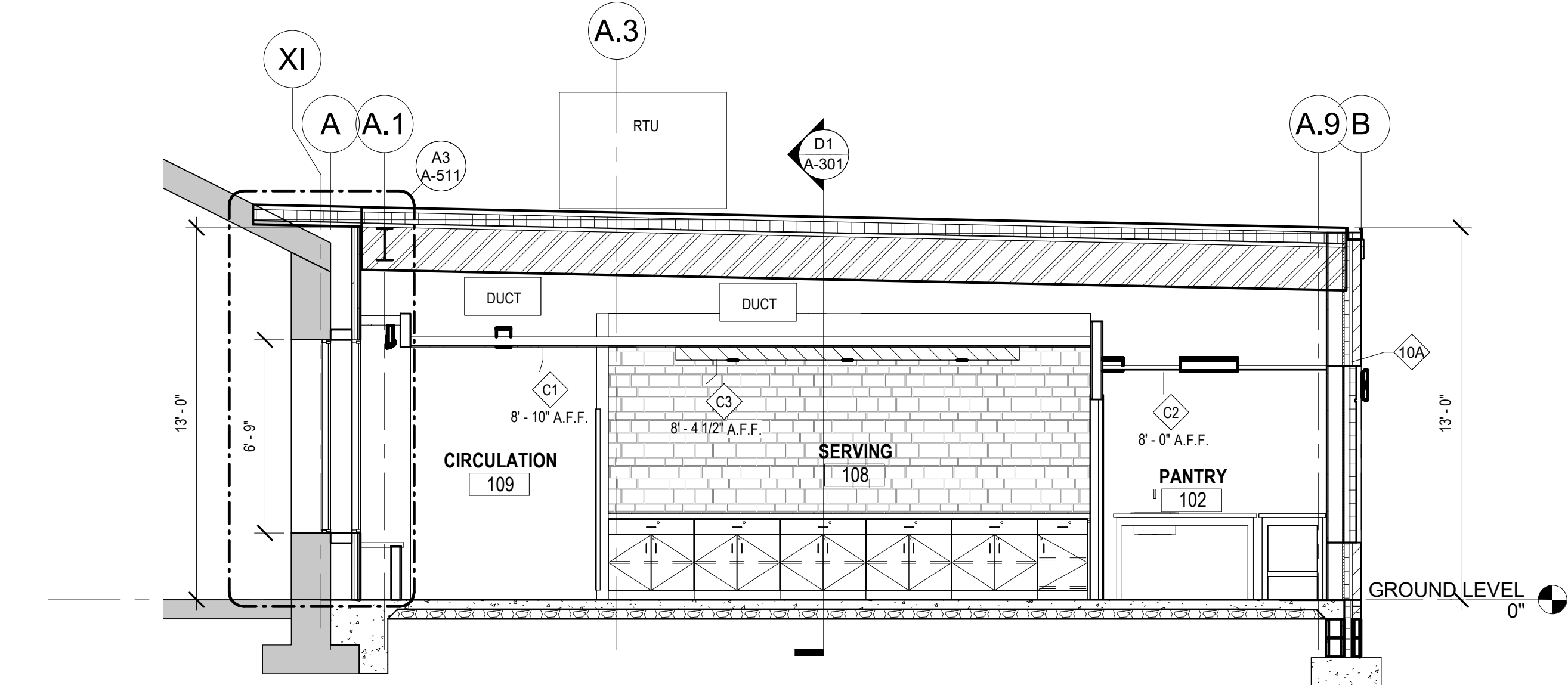
A-301



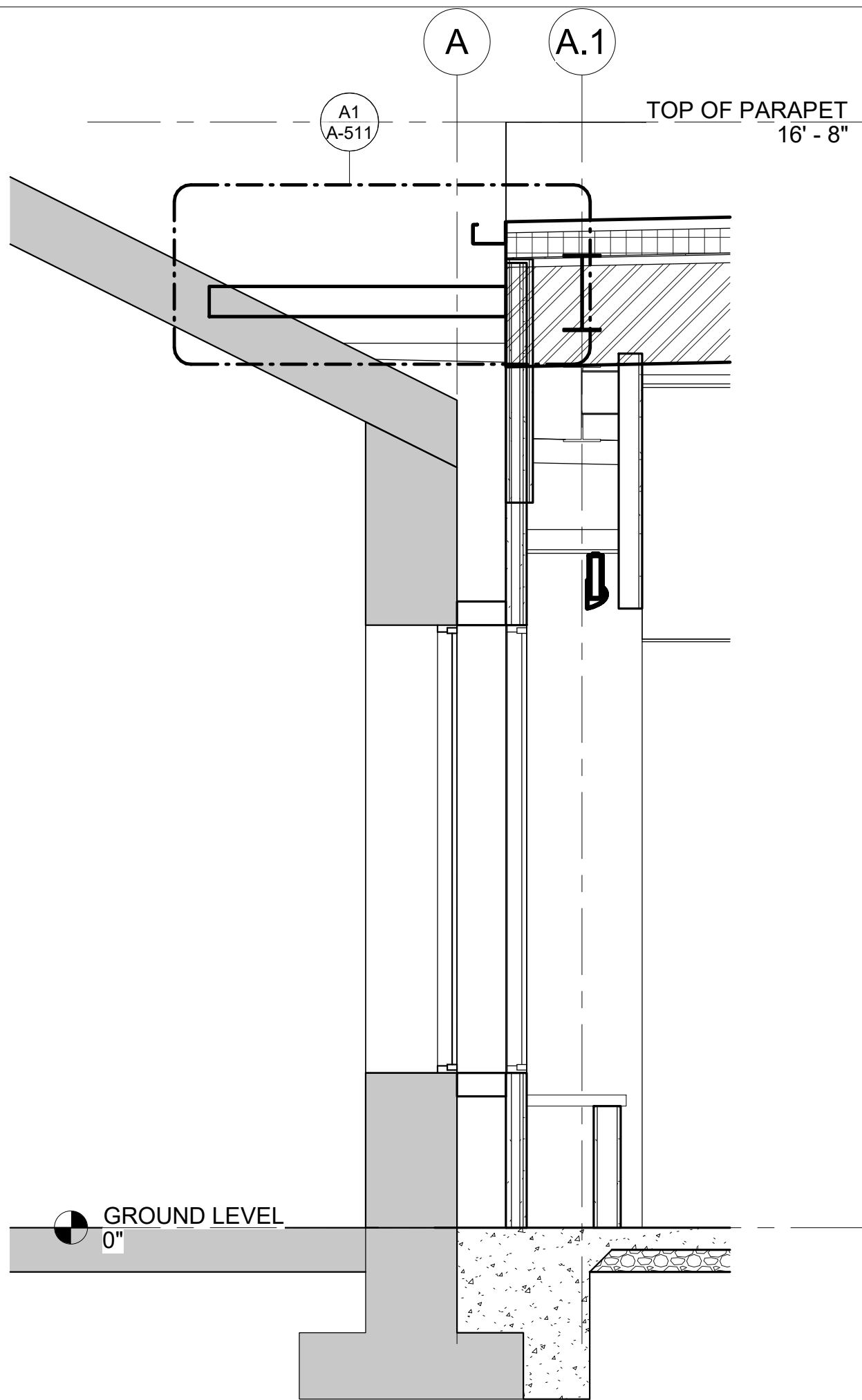
D1
A-301
LONG SECTION
1/4" = 1'-0"
0 2 4 8



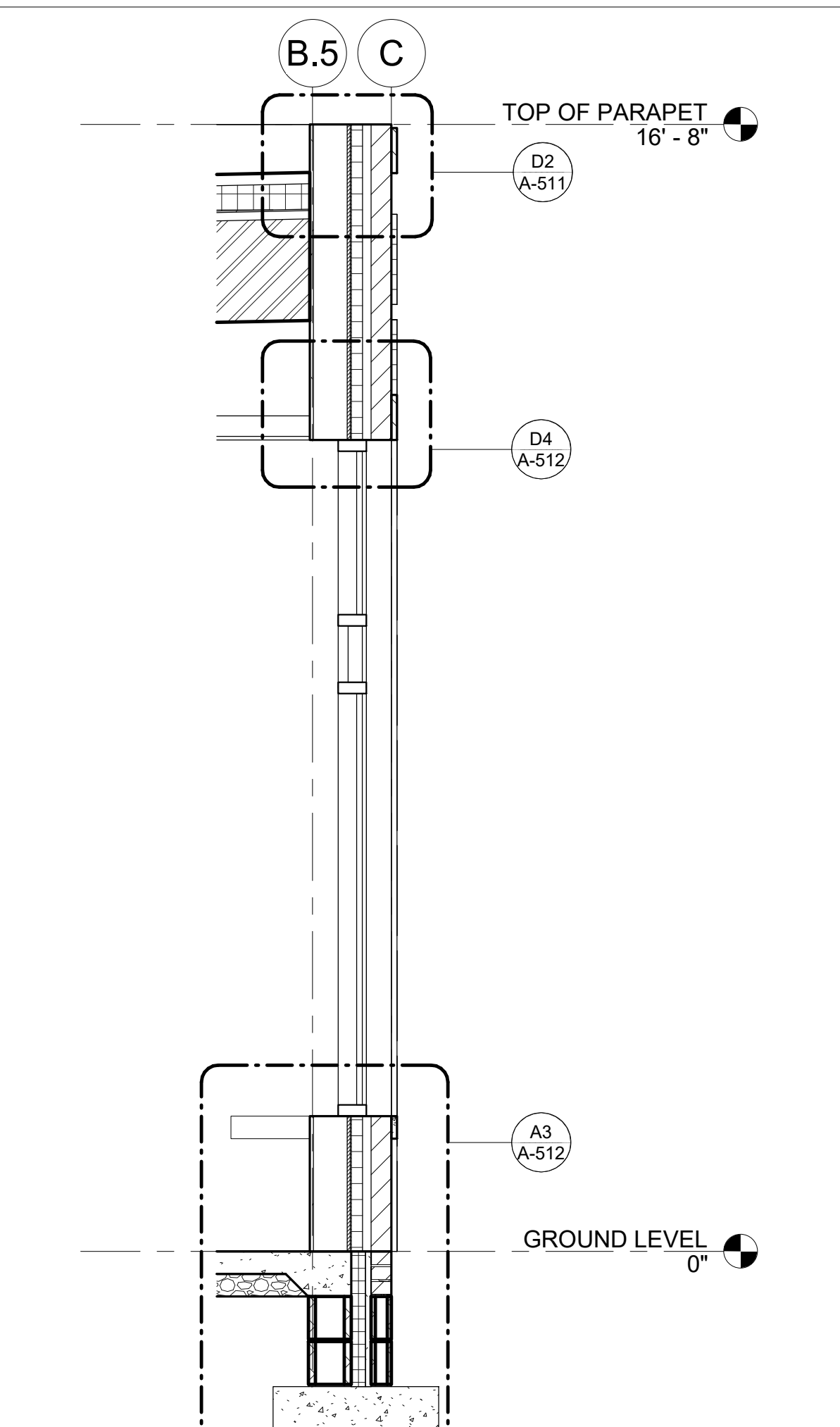
B1
A-301
HIGH SECTION
1/4" = 1'-0"
0 2 4 8



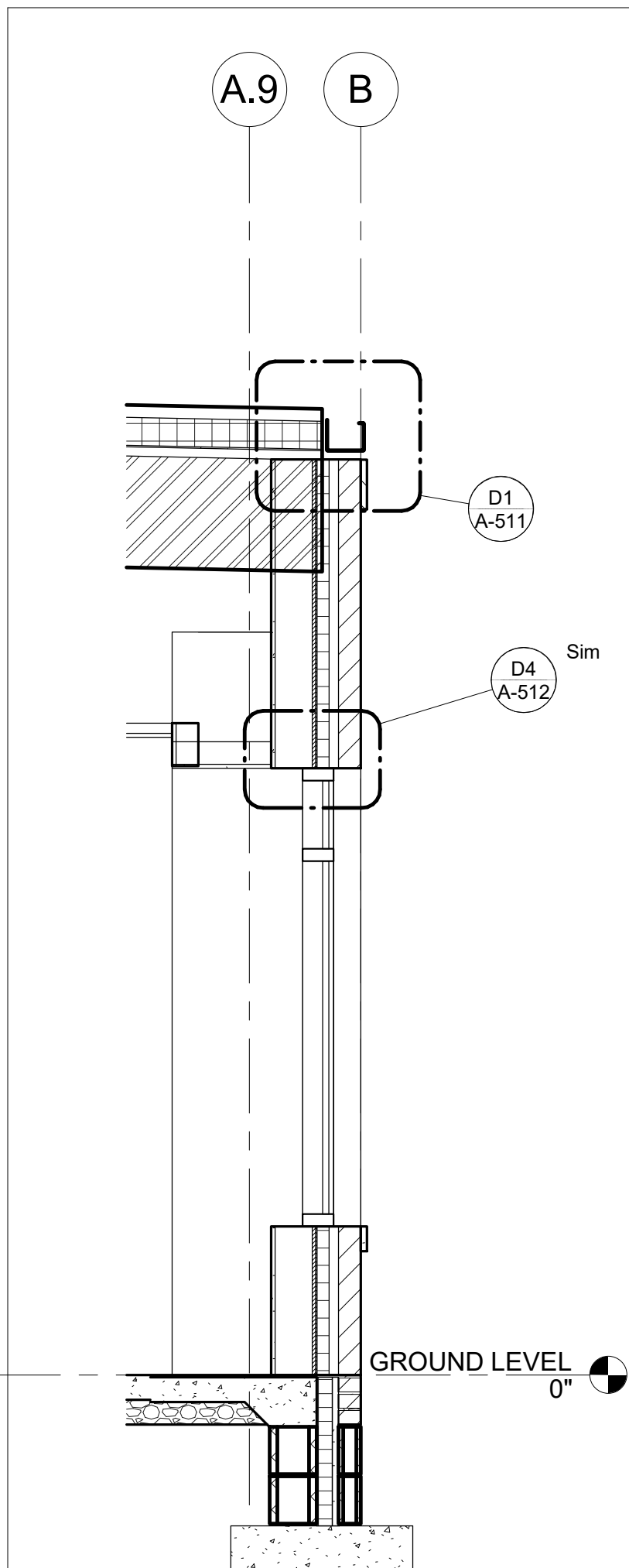
A1
A-301
LOW SECTION
1/4" = 1'-0"
0 2 4 8



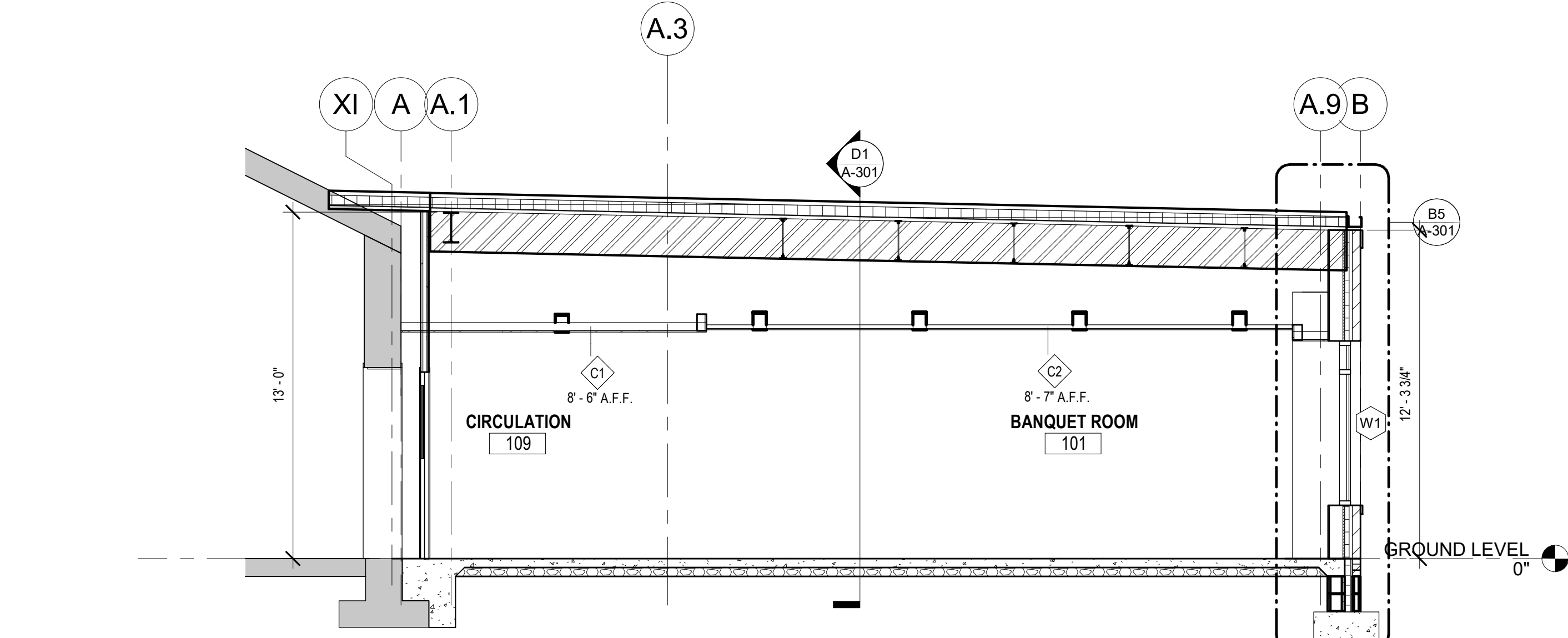
B3
A-301
CONNECTION TO EXISTING BUILDING
1/2" = 1'-0"
0 1 2 4



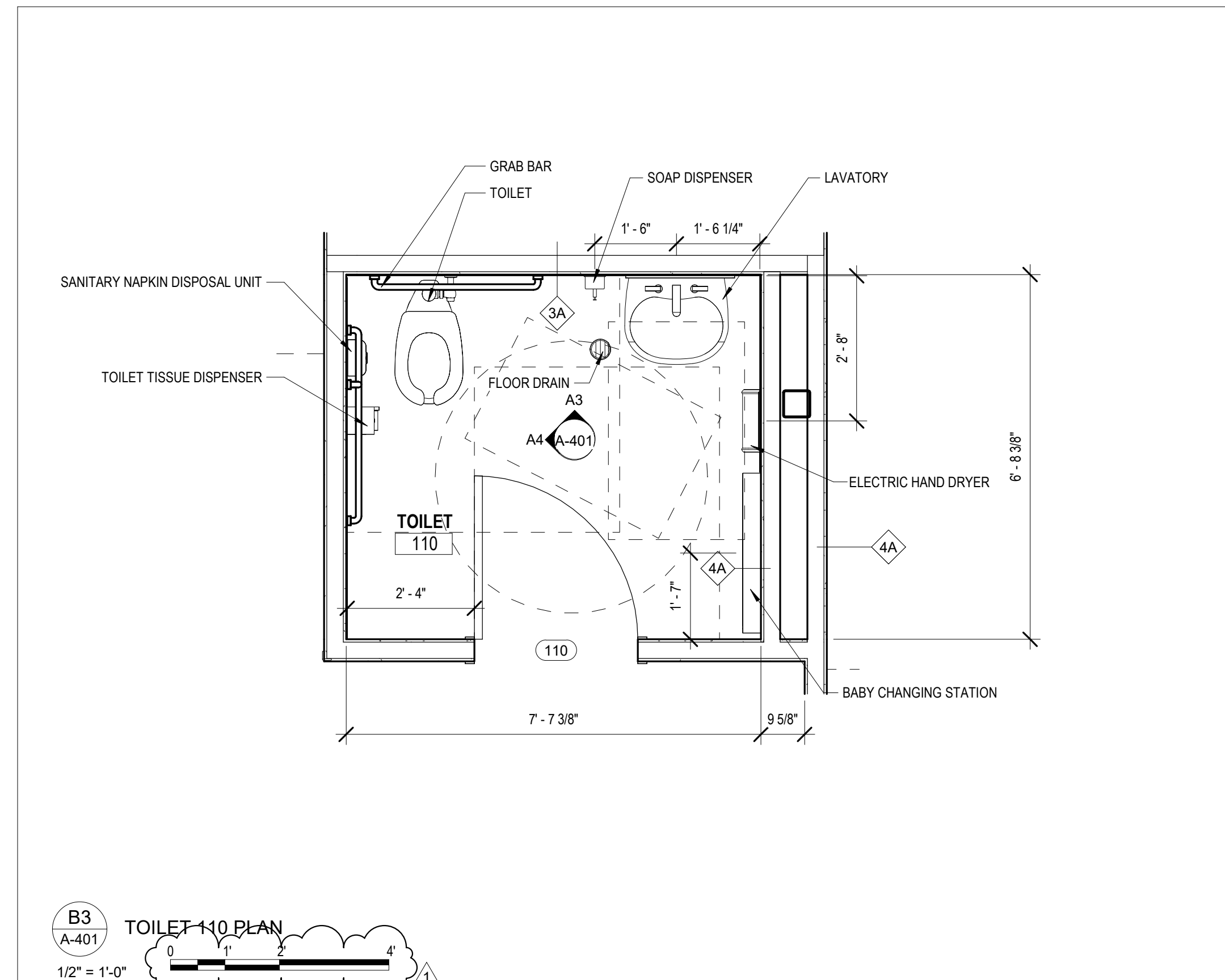
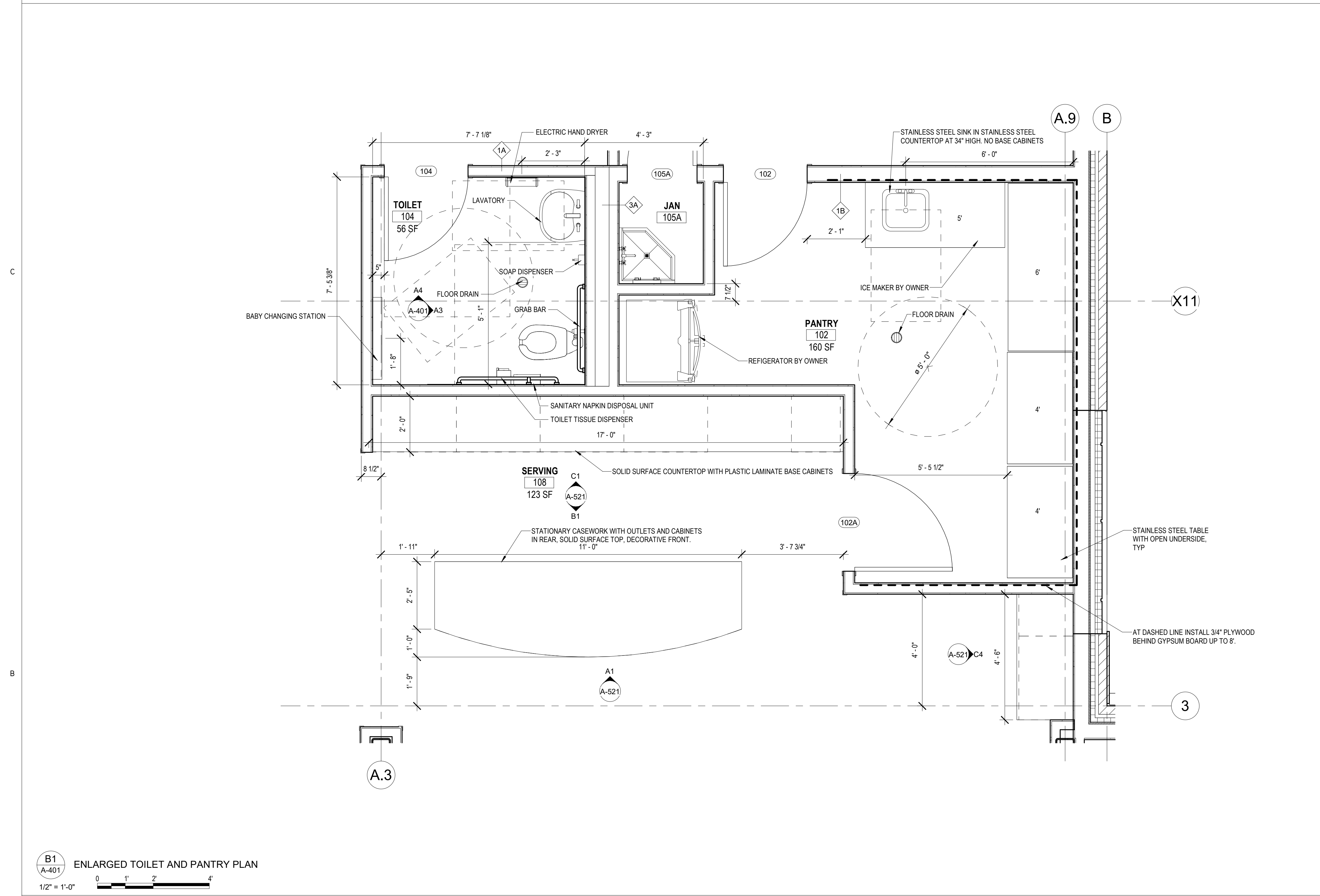
B4
A-301
PARAPET WALL SECTION
1/2" = 1'-0"
0 1 2 4



B5
A-301
GUTTER WALL SECTION
1/2" = 1'-0"
0 1 2 4



A3
A-301
LOW SECTION 2
1/4" = 1'-0"
0 2 4 8

[illegible]

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PROJECT NAME
St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER MD22-30



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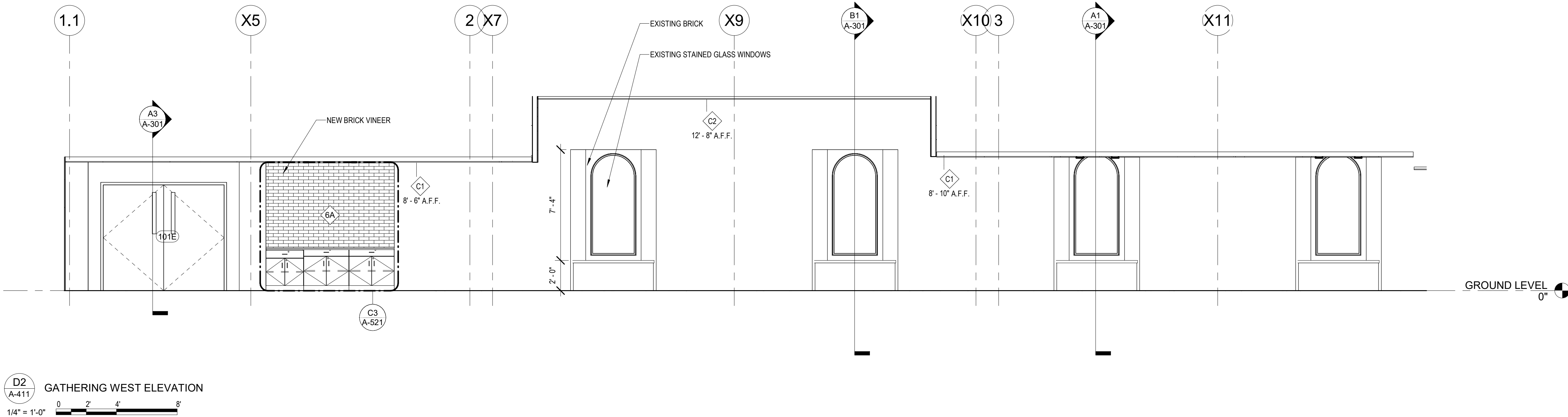
SHEET TITLE
INTERIOR ELEVATIONS

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DATE

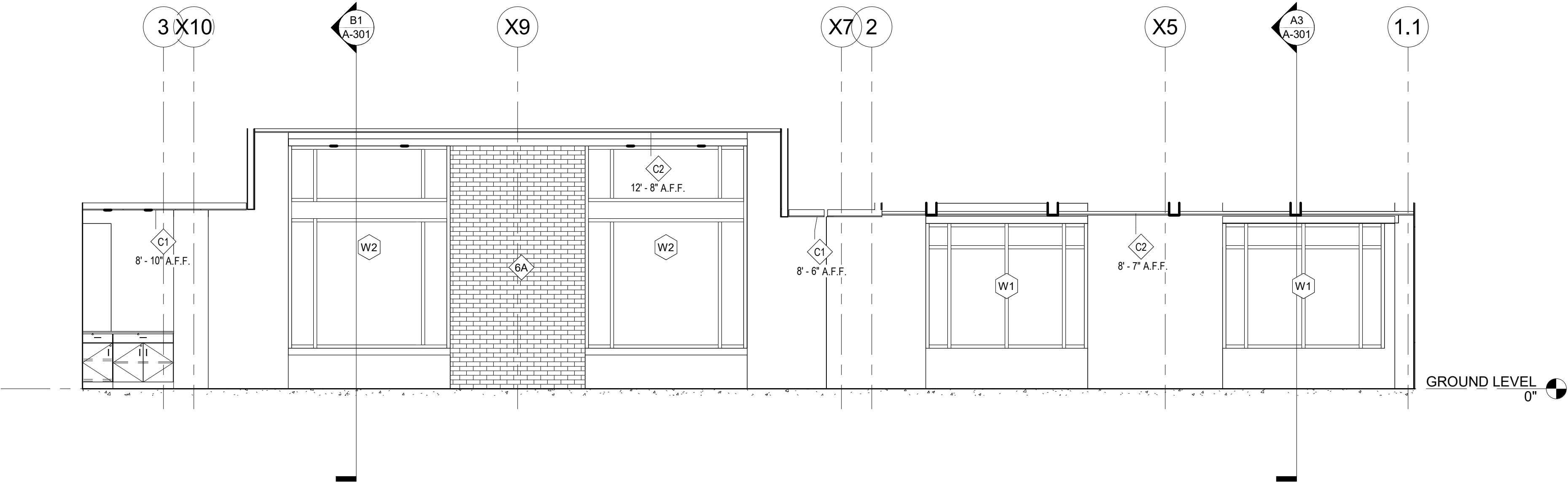
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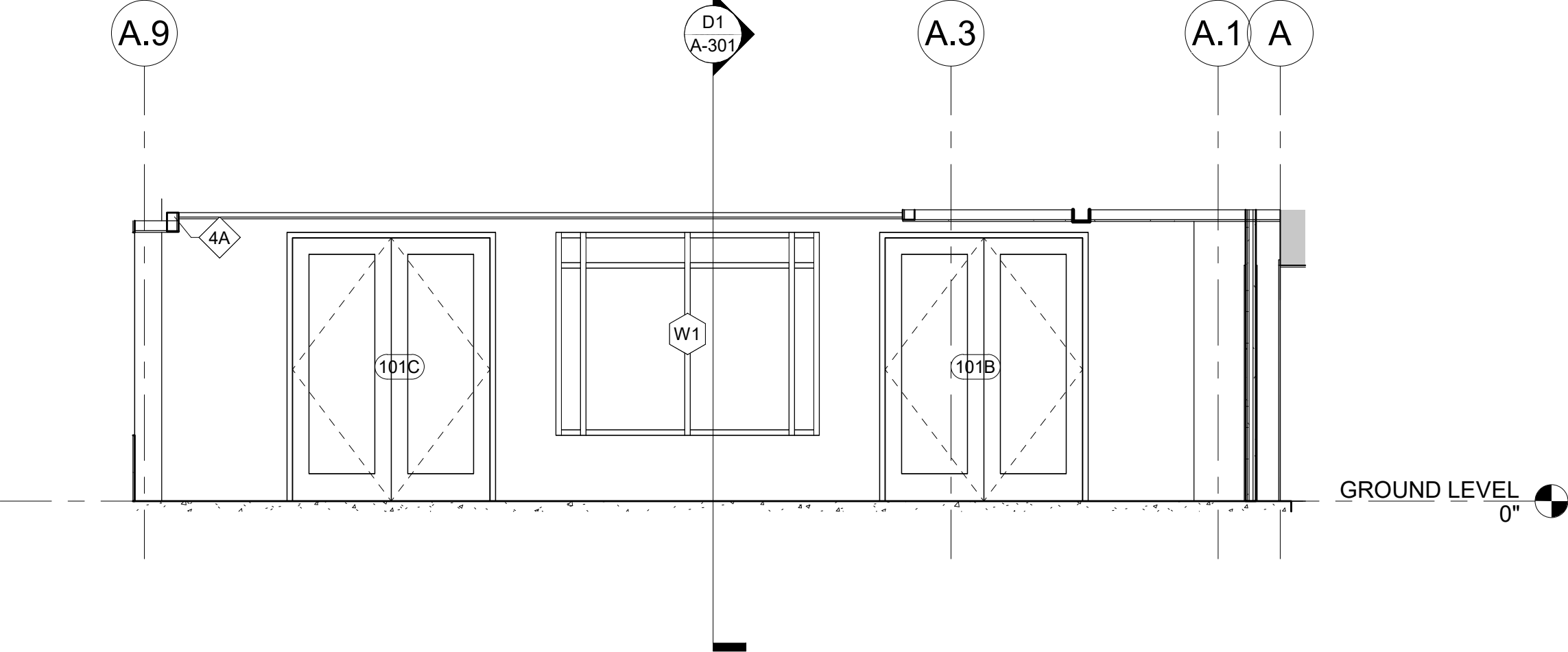
A-411



B3
A-411
1/4" = 1'-0"
GATHERING EAST ELEVATION

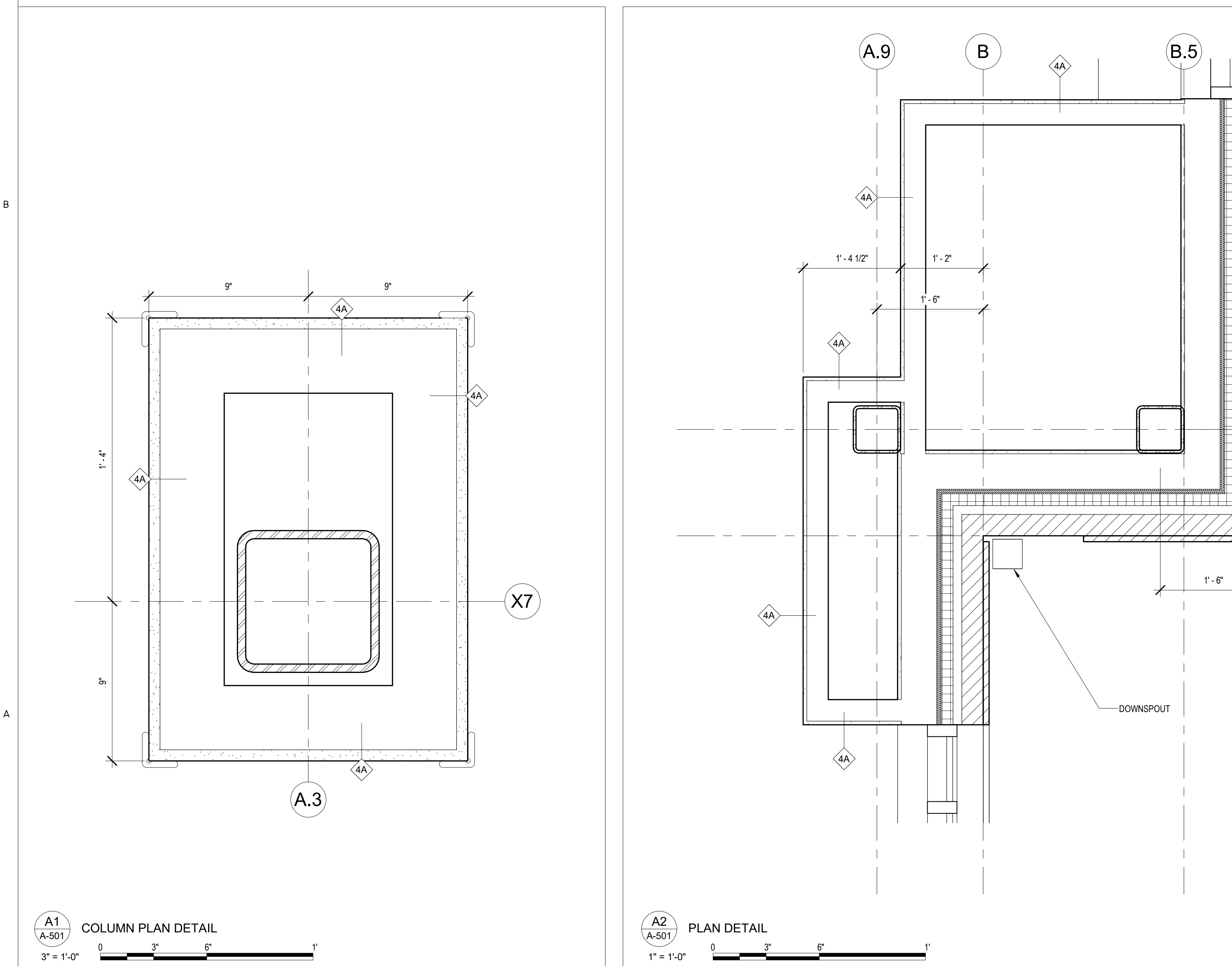
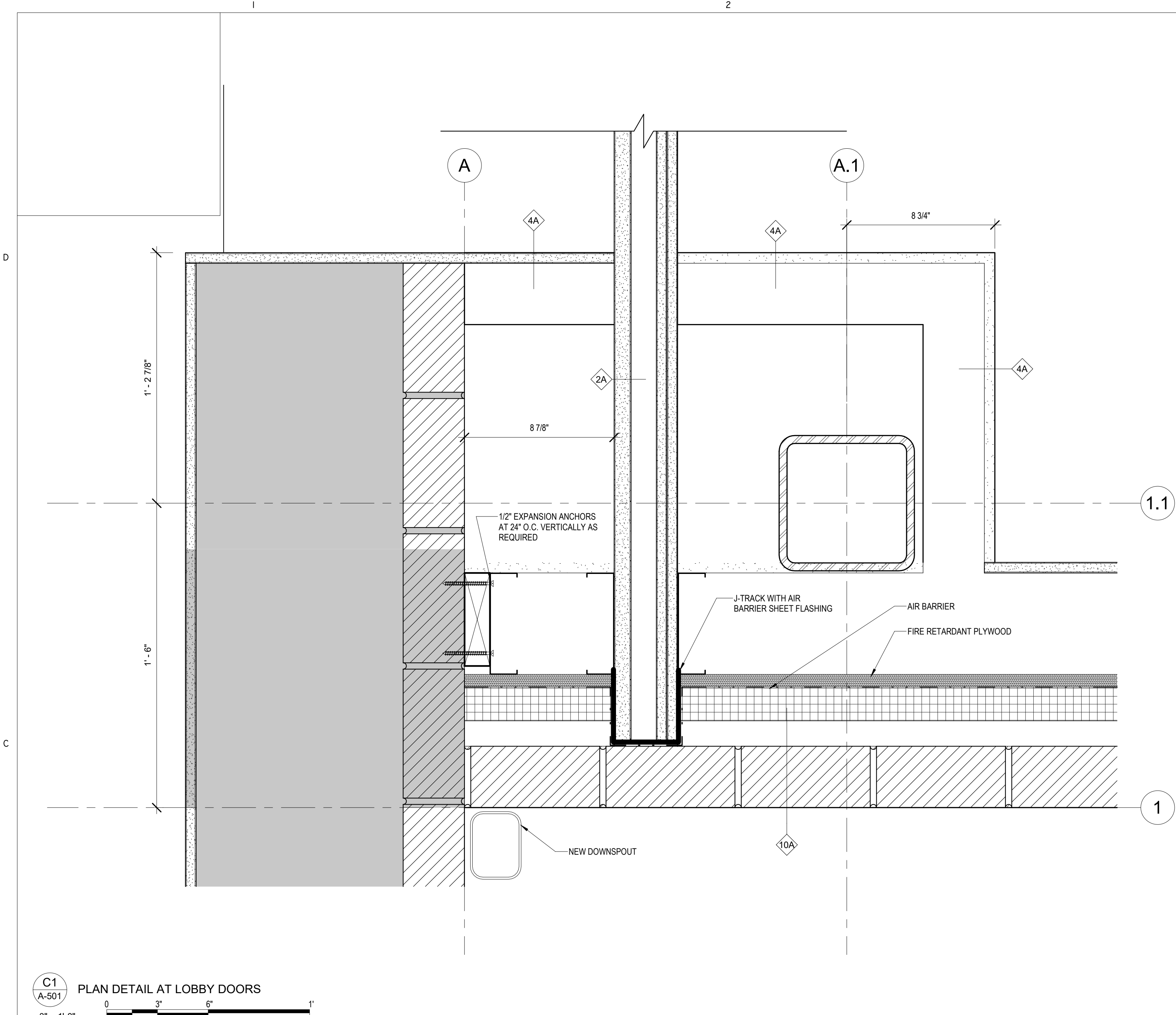
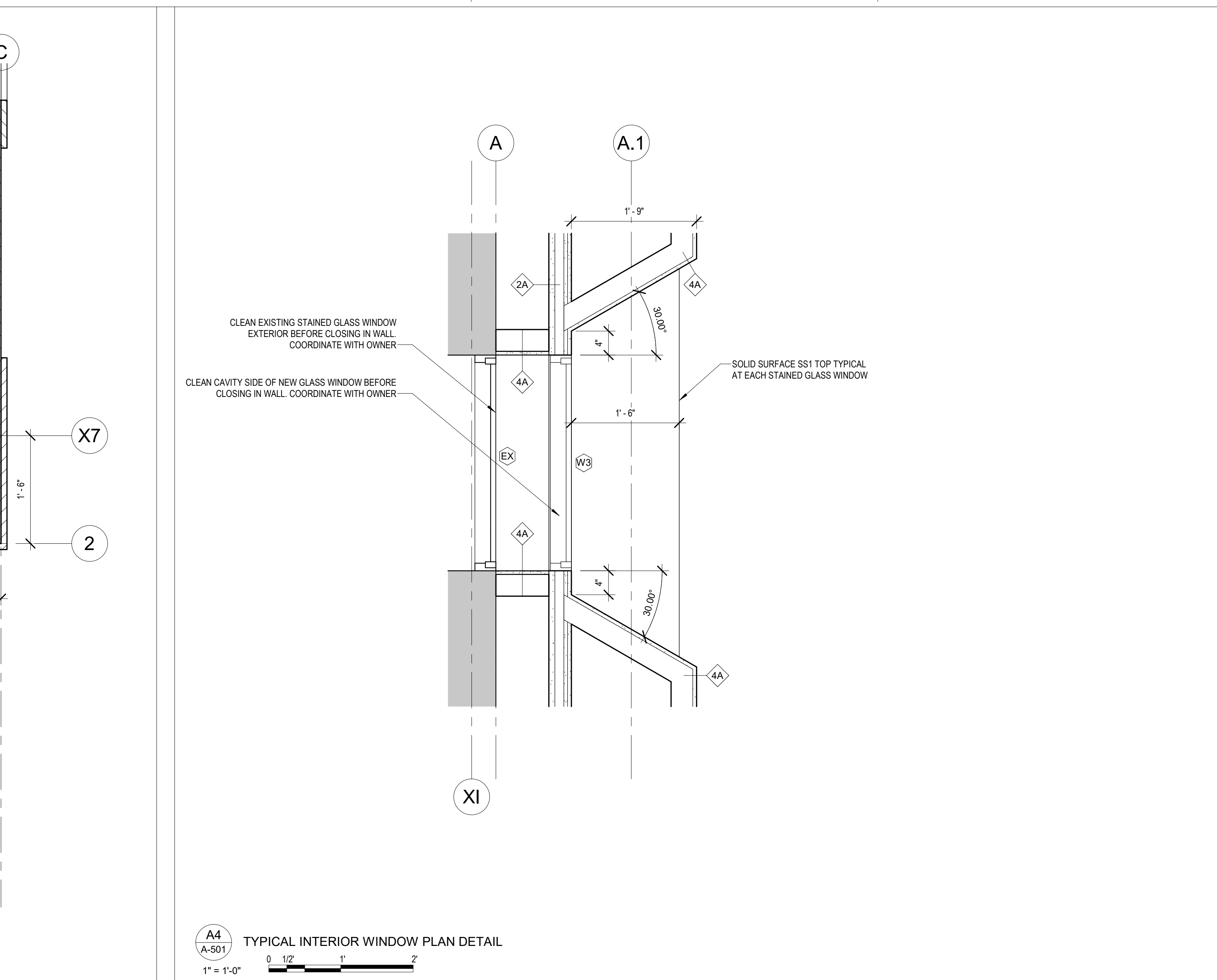
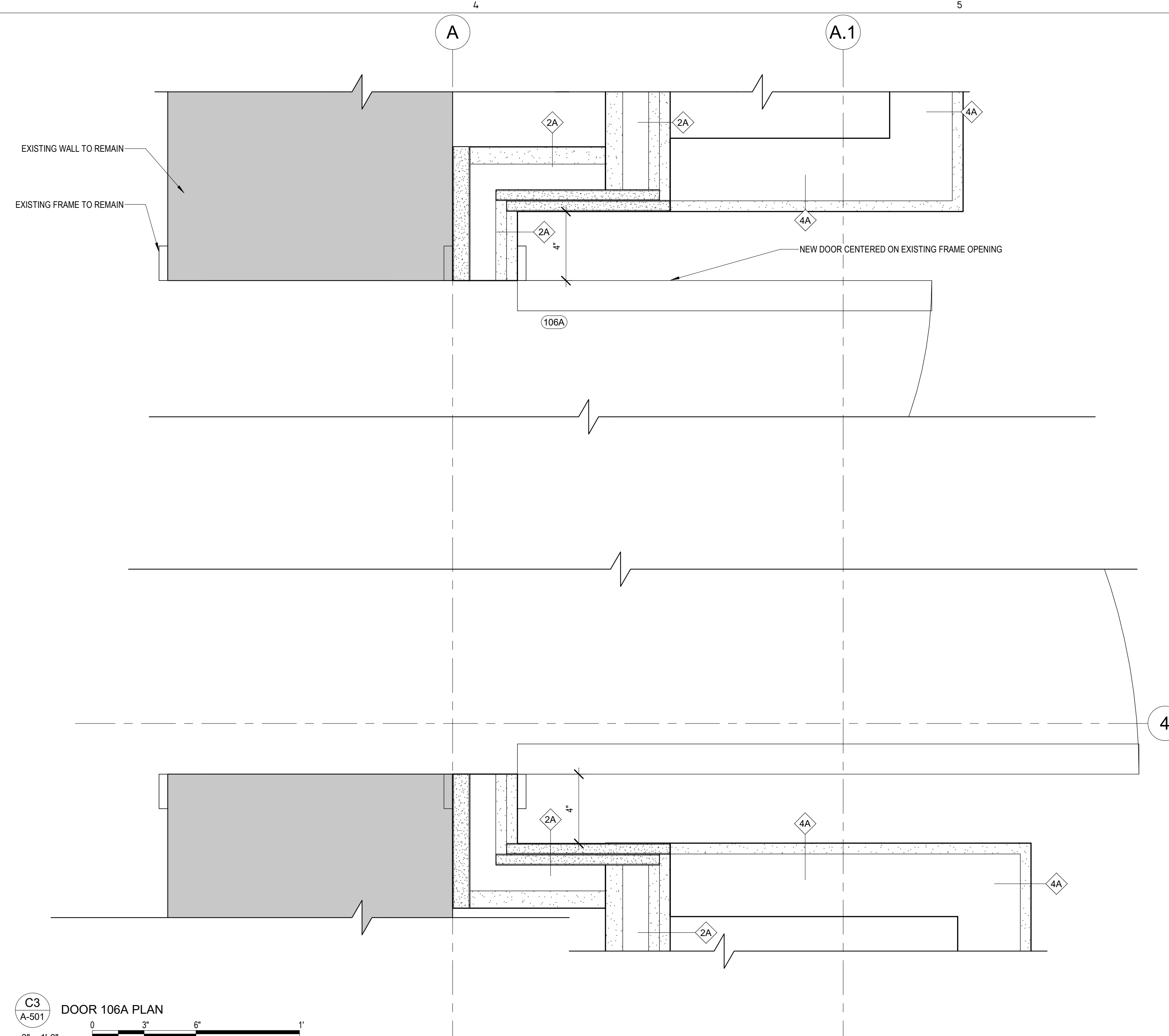


A4
A-411
1/4" = 1'-0"
GATHERING SOUTH ELEVATION



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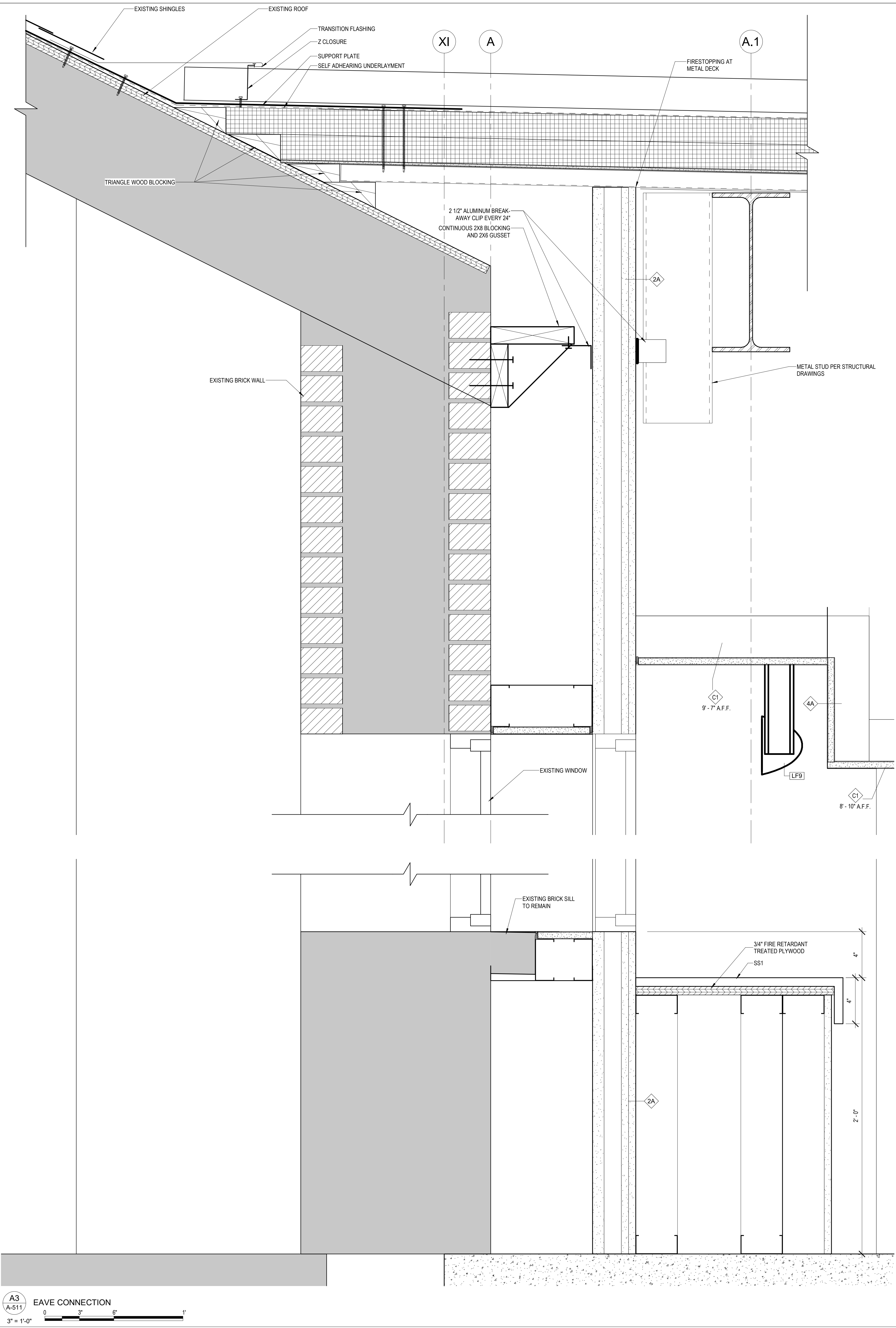
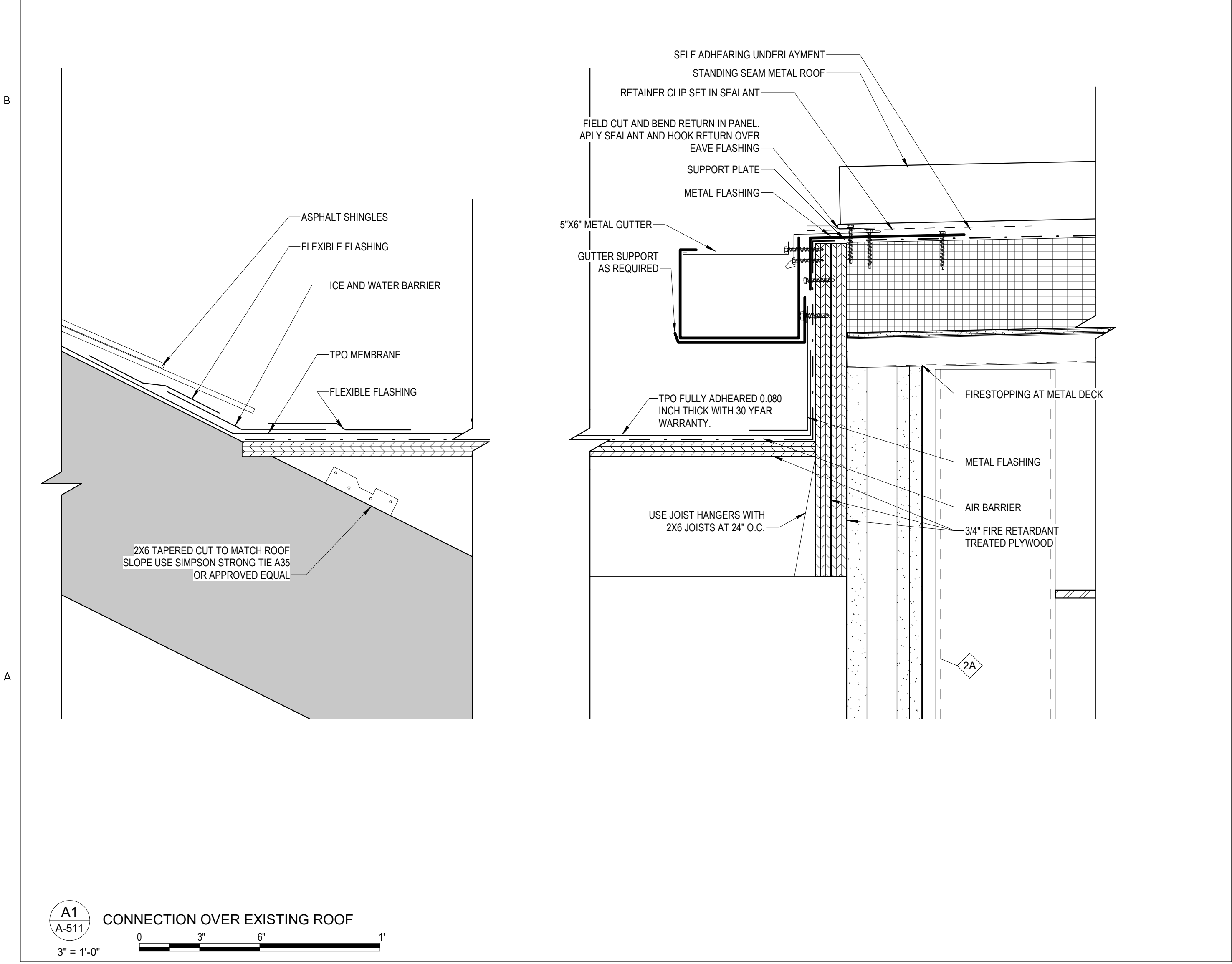
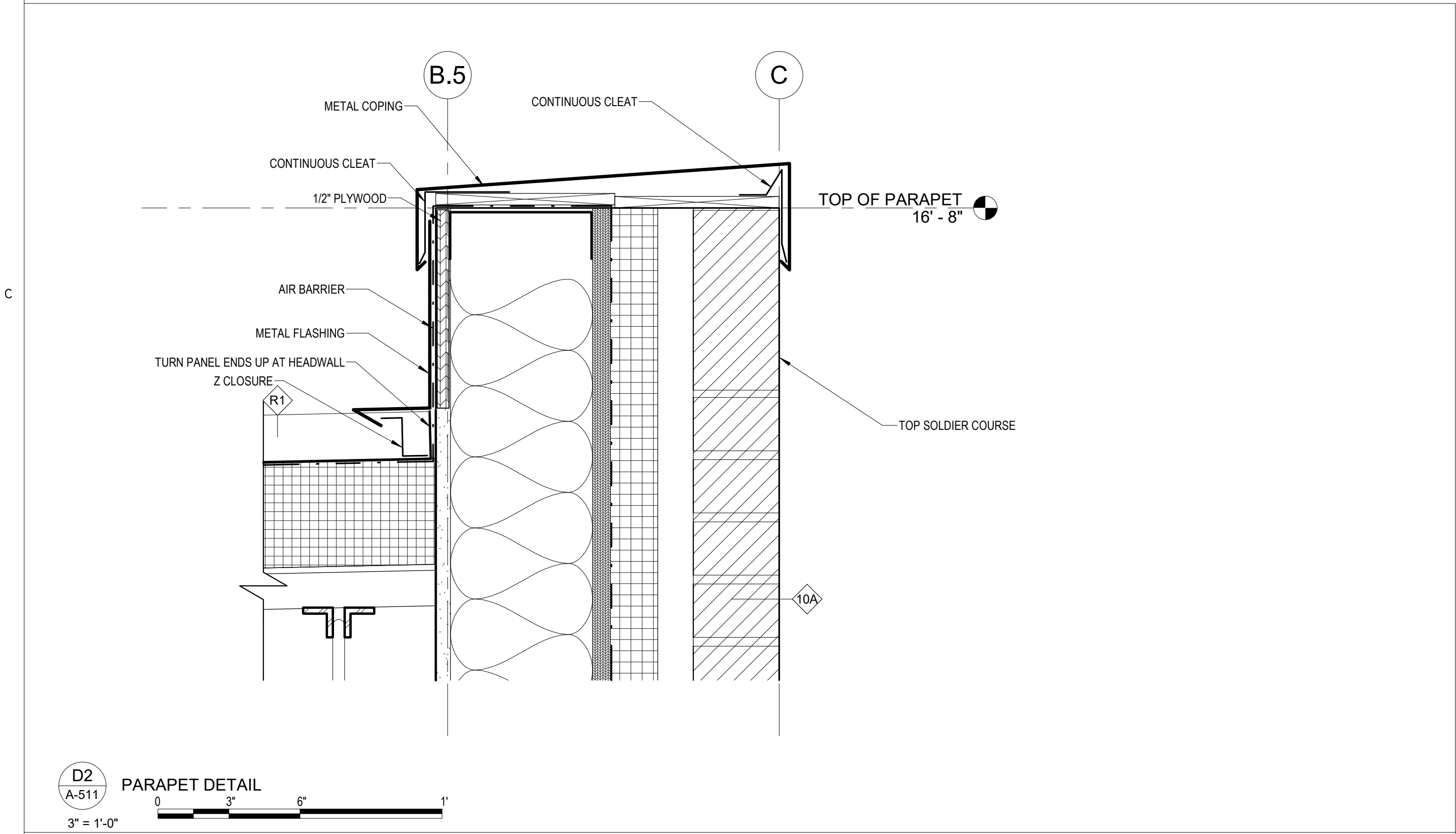
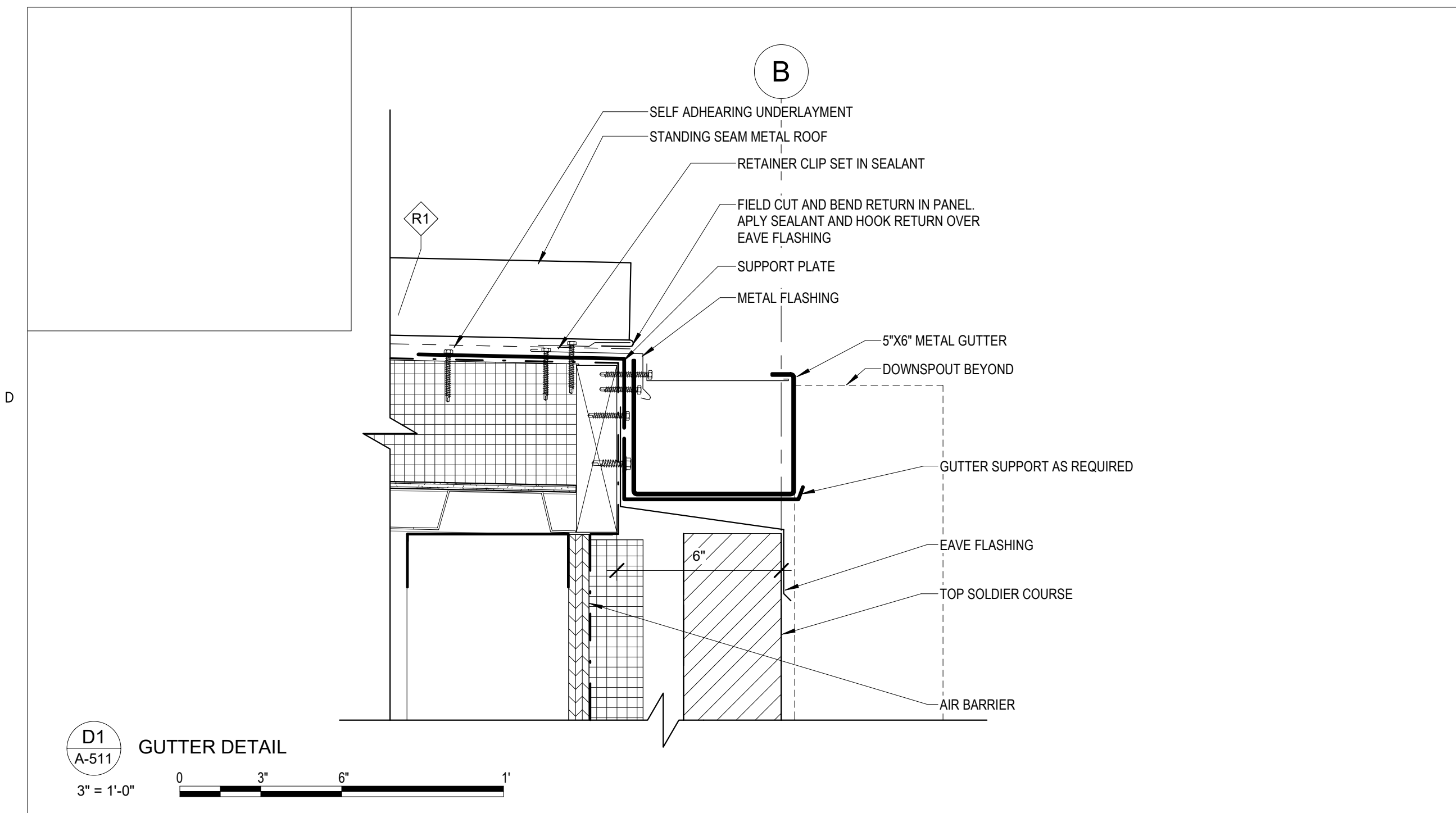
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| DATE | | | | 2024-04-23 | |



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THIS SHEET IS SCALE 1/4" = 1'-0"

STAPLE EDGE



**MICHAEL
GRAVES**

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PROJECT NAME

**St. Pius X Catholic Church
Addition**

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PROJECT NUMBER

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SHEET TITLE

DETAILS - SECTION

DRAWN BY

CHECKED BY

SHEET NO.

AB

SS

SET DESCRIPTION

FOR PERMIT

A-511

DATE

2024-04-23

D

C

B

A

D2
A-512
C2 ATTACHMENT DETAIL
3" = 1'-0"

D3
A-512
QUOINING SECTION
1" = 1'-0"

D4
A-512
WINDOW HEAD
3" = 1'-0"

A2
A-512
SANCTUARY EXIT SECTION
3/4" = 1'-0"

A3
A-512
WINDOW SILL AND FOUNDATION
3" = 1'-0"

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License No. 15330; Expiration Date 12/30/2025.

SHEET TITLE

DETAILS - SECTION

DRAWN BY

AB

SET DESCRIPTION

CHECKED BY

SR

FOR PERMIT

DATE

2024-04-23

A-512

St. Pius X Catholic Church

14710 Annapolis Rd, Bowie, MD 20715

MEP Engineer
SRBR Engineers

757 Frederick Road, Suite 300
Baltimore, MD 21228
(410) 869-7282

Structural Engineer

Watkins Partnership

3032 Mitchellville Rd
Bowie, MD 20716
301-249-0974

Civil/Site

Atwell
11721 Woodmore Rd, Suite 200
Mitchellville, MD 20721
301.430.2000

[illegible]

PROJECT NAME
**St. Pius X Catholic Church
Addition**

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

| | |
|----------------|---------|
| PROJECT NUMBER | MD22-30 |
|----------------|---------|

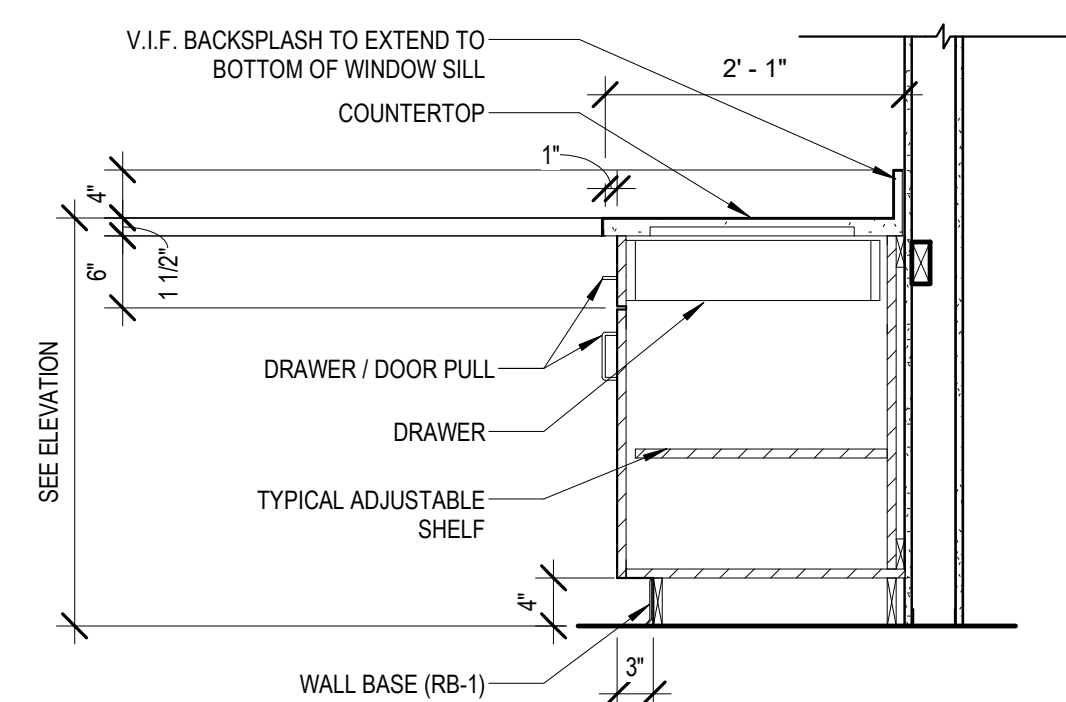
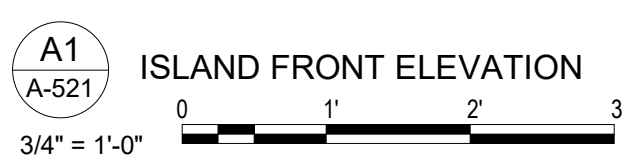
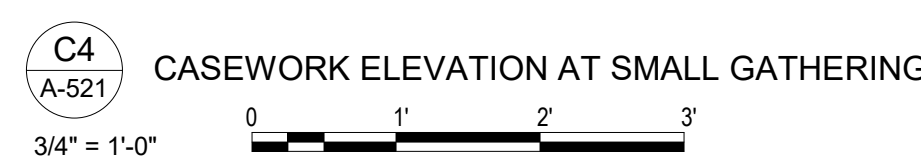
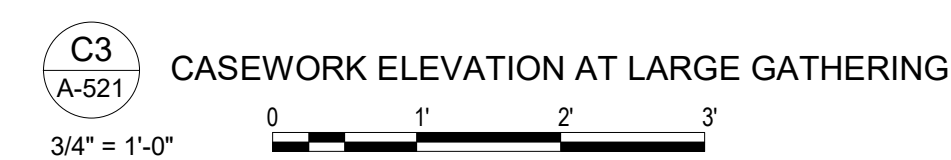
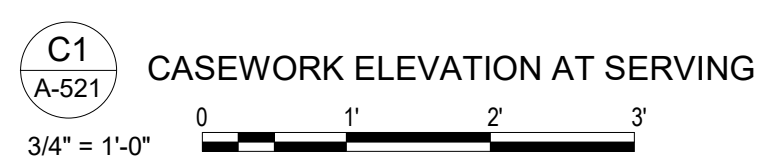


PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and
that I am a duly licensed professional Architect under the laws of the State of Maryland.
License No. 18330; Expiration Date 12/09/2025

SHEET TITLE
CASEWORK DETAILS

| | | |
|-----------------|------------------|-----------------------|
| DRAWN BY ASB | CHECKED BY SS | SHEET NO. A |
| SET DESCRIPTION | | |
| FOR PERMIT | | |
| DATE | | |

A-521



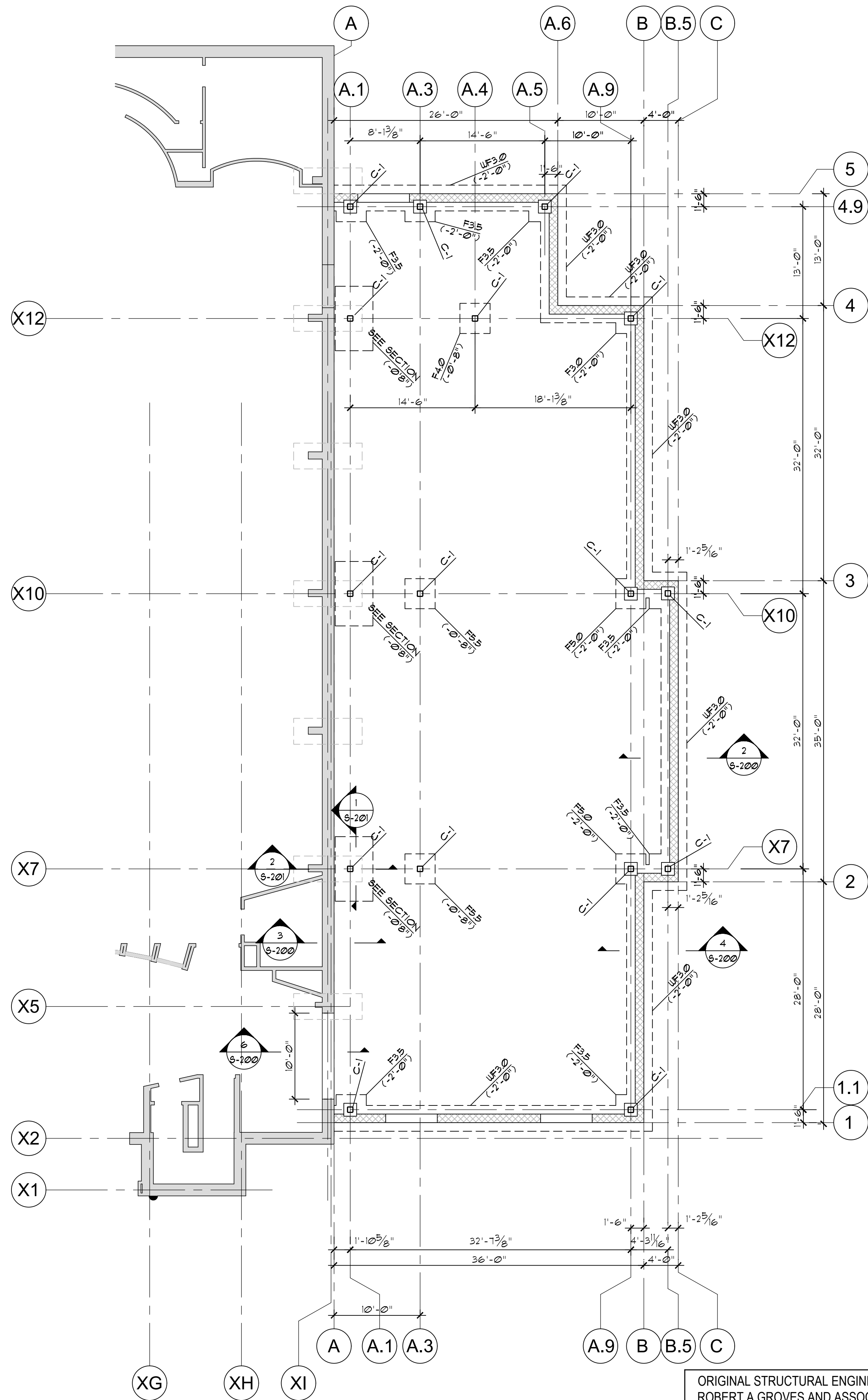
A4
A-521
3/4" = 1'-0"

12 - Casework Section - Base Cabinets

0 1' 2' 3'



A-601



FOUNDATION PLAN

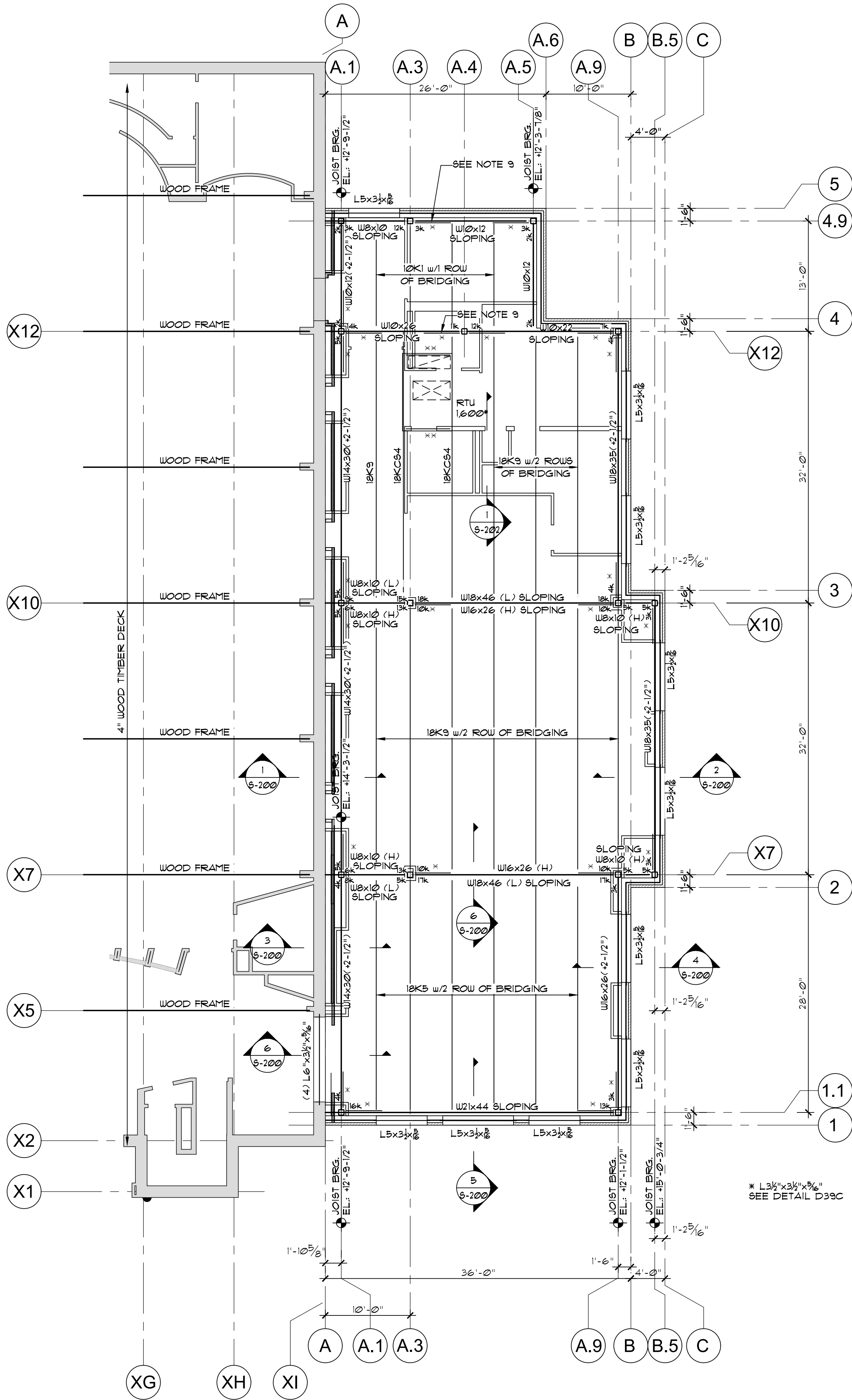
SCALE: 1/8" = 1'-0"

- SLAB TO BE 4" NORMAL WEIGHT (FC = 3,500 PSI) CONCRETE w/ 6x6-W4xW4 REINFORCING OVER 10 MIL VAPOR BARRIER ON 4" GRAVEL.
- FINISHED FLOOR ELEVATION IS AS NOTED ON PLAN.
- TOP OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED EXTERIOR GRADE. TOP OF INTERIOR FOOTINGS SHALL BE 0'-8" BELOW FINISHED FLOOR ELEVATION (UNO).
- LIVE LOAD = 100 psf.

ORIGINAL STRUCTURAL ENGINEERS
ROBERT A GROVES AND ASSOC.
DESIGNED MARCH 1982

| FOOTING SCHEDULE (SOIL PRESSURE = 1,500 PSF) | | |
|--|----------------------|---|
| MARK | SIZE | REINFORCEMENT |
| WF3.0 | 3'-0"x12"xCONTINUOUS | 4-#5 BARS CONT. w/ #4 @ 24" O.C. BOTTOM |
| F3.0 | 3'-0"x3'-0"x12" | 4-#4 BARS E.W. BOTTOM |
| F3.5 | 3'-6"x3'-6"x12" | 5-#4 BARS E.W. BOTTOM |
| F4.0 | 4'-0"x4'-0"x12" | 6-#4 BARS E.W. BOTTOM |
| F5.0 | 5'-0"x5'-0"x12" | 5-#6 BARS E.W. BOTTOM |
| F5.5 | 5'-6"x5'-6"x12" | 1-#6 BARS E.W. BOTTOM |

| COLUMN SCHEDULE | | |
|-----------------|-------------|---------------|
| MARK | SIZE | BASE PLATE |
| C-1 | H956x6x3/8" | 12"x16"x1'-0" |

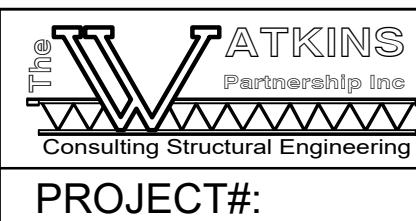


ROOF FRAMING PLAN

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

- DEAD LOAD: 3.0 PSF
ROOFING: 2.5 PSF
DECKING: 2.5 PSF
INSULATION: 0.5 PSF
JOIST: 2.0 PSF
CEILING: 3.0 PSF
MECH: 2.0 PSF
MISC: 3.0 PSF
TOTAL: 21.5 PSF

- ROOF CONSTRUCTION TO CONSIST OF 18" 22 GAGE METAL DECK HAVING 1" MIN. @ 6x6 IN. 4/FL.
- METAL DECK TO BE CONTINUOUS FOR AT LEAST 3 SPANS.
- ALL JOIST SUPPORTING DECK TO BE SPACED AS SHOWN ON PLAN.
- JOIST BRIDGING AT ALL ROOF FRAMING TO BE 1x6xW/4" (U.N.O.).
- STEEL ELEVATIONS ARE NOTED ON PLAN. ELEVATIONS NOTED THUS () ARE REFERENCED TO JOIST BEARING ELEVATION.
- REFERENCED JOIST BEARING ELEVATION AS NOTED ON PLAN.
- LIVE LOAD: 30 psf.
- PROVIDE 3/8" DIAMETER RUDDLE WELDS w/ 3/16" WELD PATTERN AT EACH SUPPORT AND #10 TEK SCREW SIDE LAP FASTENER @ MID SPAN TYPICAL.
- PROVIDE CONT. H952"x2"x2" BETWEEN JOIST FOR SHEAR TRANSFER.



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COLUMBIA, MD
WASHINGTON, DC
BALTIMORE, MD

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OWNER / CLIENT

St. Pius X Catholic Church

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MEP

SRBR Engineers

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Structural Engineer

THE WATKINS PARTNERSHIP, INC.

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Bowie, MD 20716
301-249-0974

Civil/Site

Atwell

11721 Woodmore Rd, Suite 200
Mitchellville, MD 20721
301-430-2000

| REVISIONS | | |
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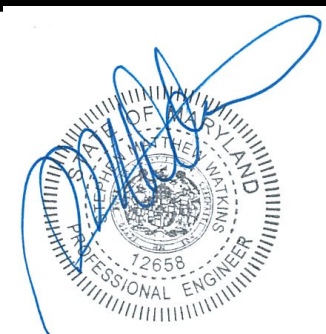
PROJECT NAME

**St. Pius X Catholic Church
Addition**

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30



PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a
Civil Engineer, License No. 12568, Expiration Date 10/1/2025.

SHEET TITLE

FOUNDATION & ROOF
FRAMING PLANS

DRAWN BY

TWP

CHECKED BY

SMW

SHEET NO.

S-101

FOR PERMIT

DATE 2024-04-23

Apr. 25, 2024 - 10:43am
G:\ADVANCE\PROJECTS\52-WALDON STUDIO\2022\2022 St. Pius X Addition\Structural Drawings\Current\20225202.dwg
The Watkins Partnership Inc.

STAPLE EDGE

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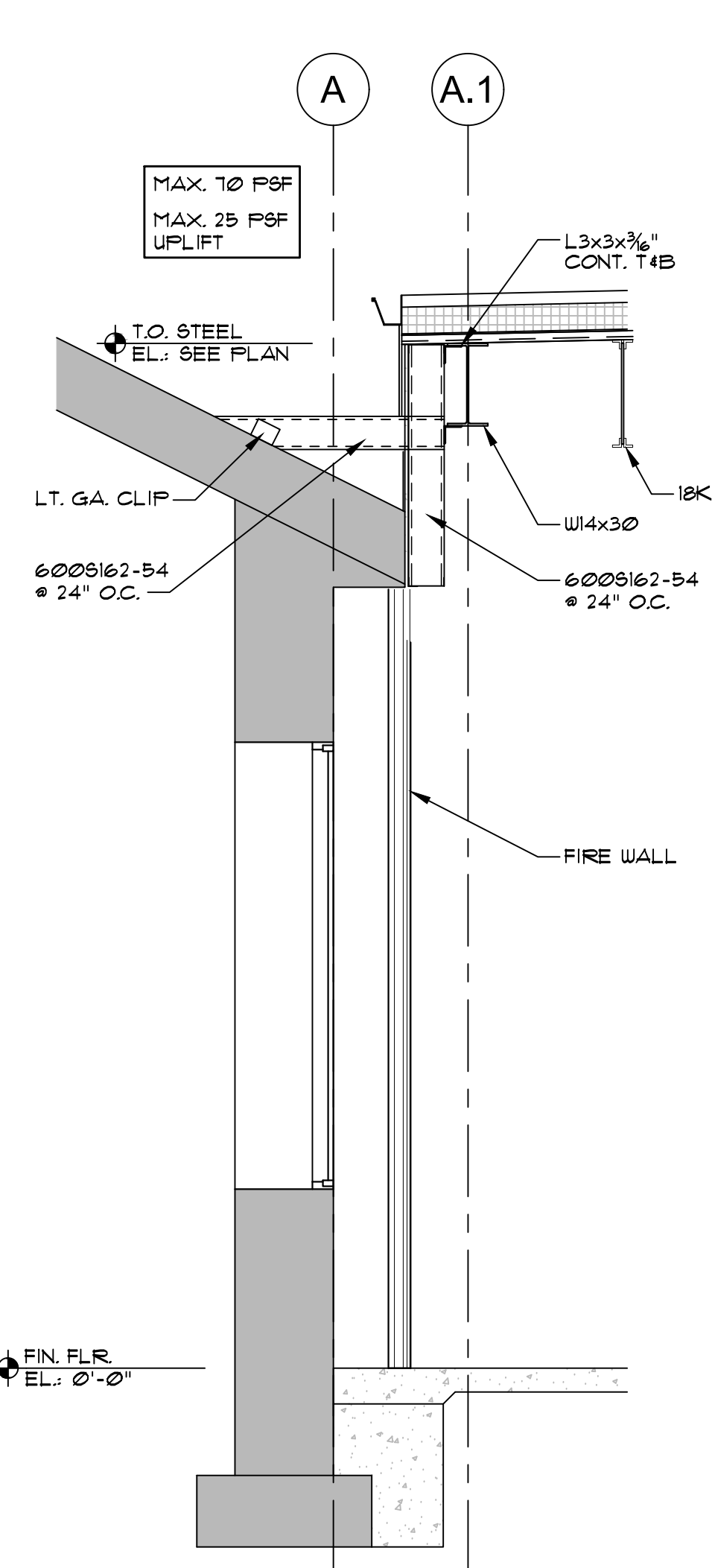
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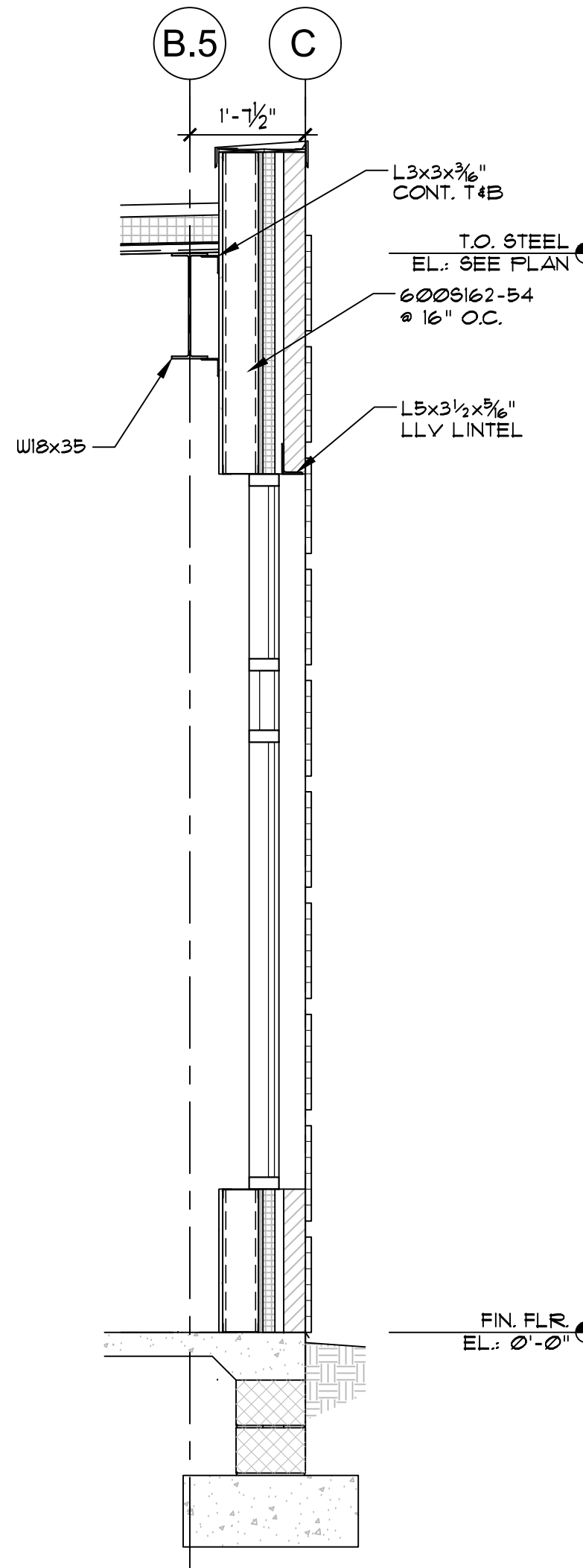
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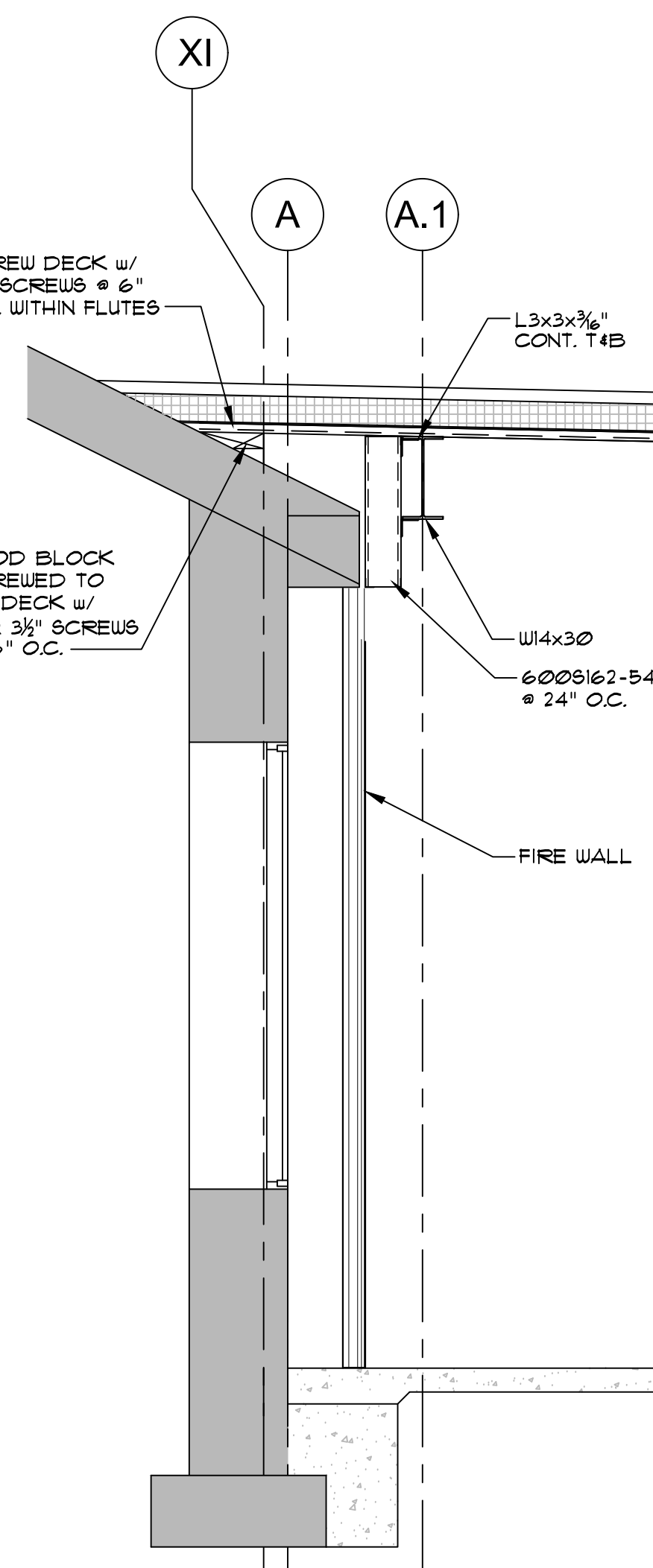
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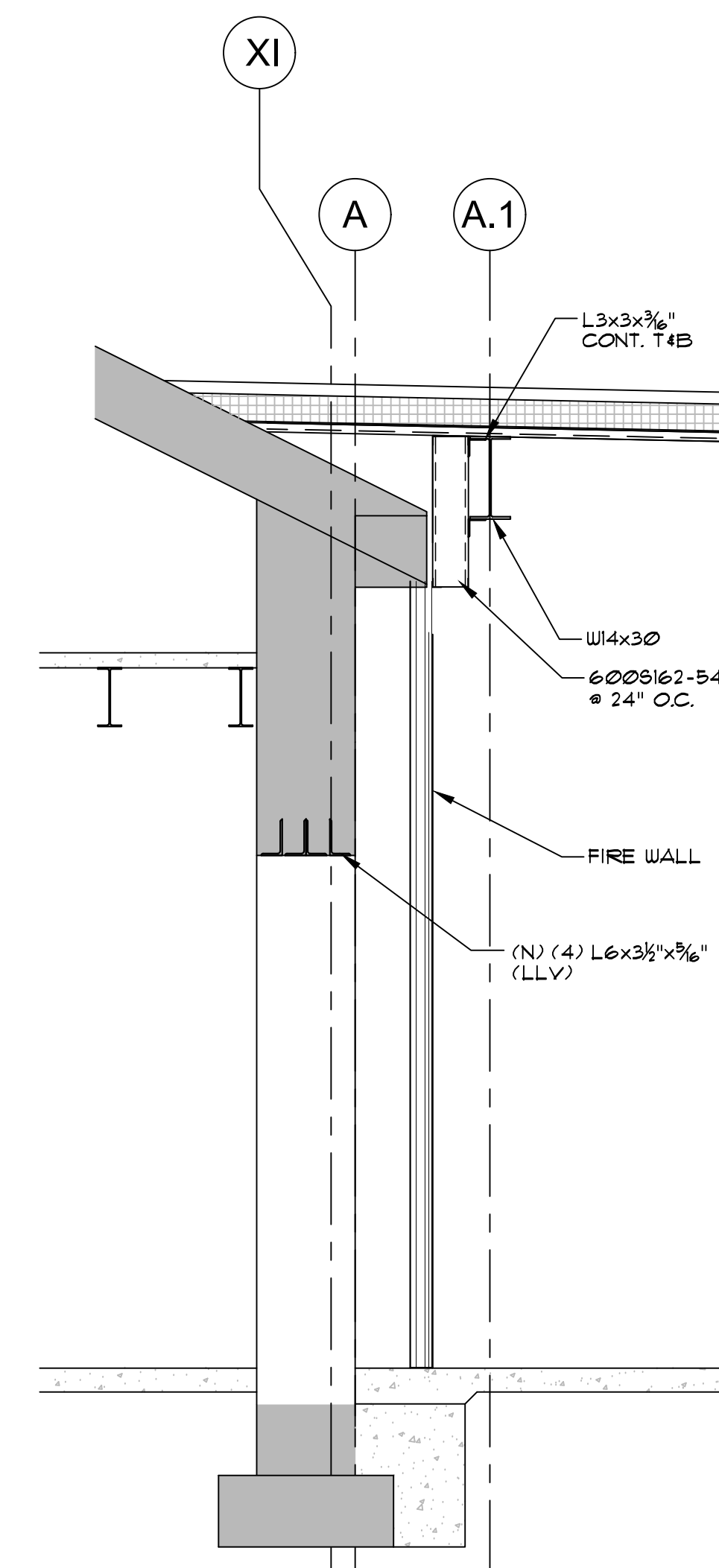
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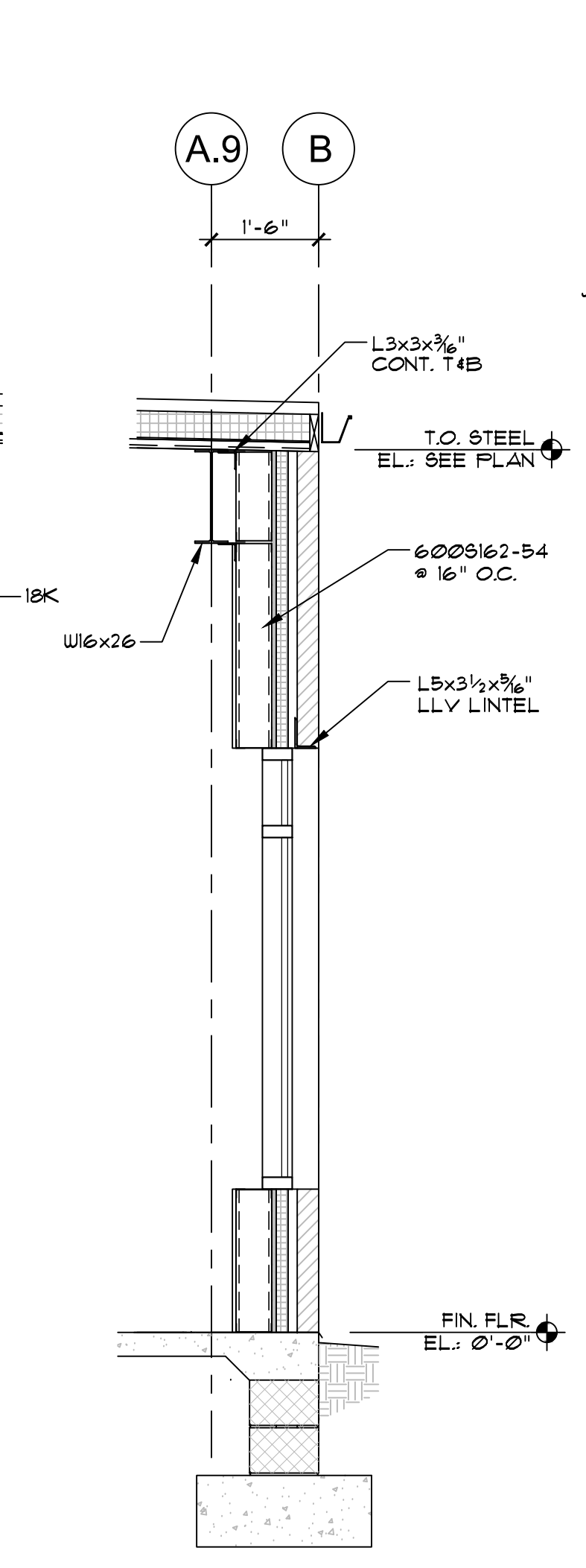
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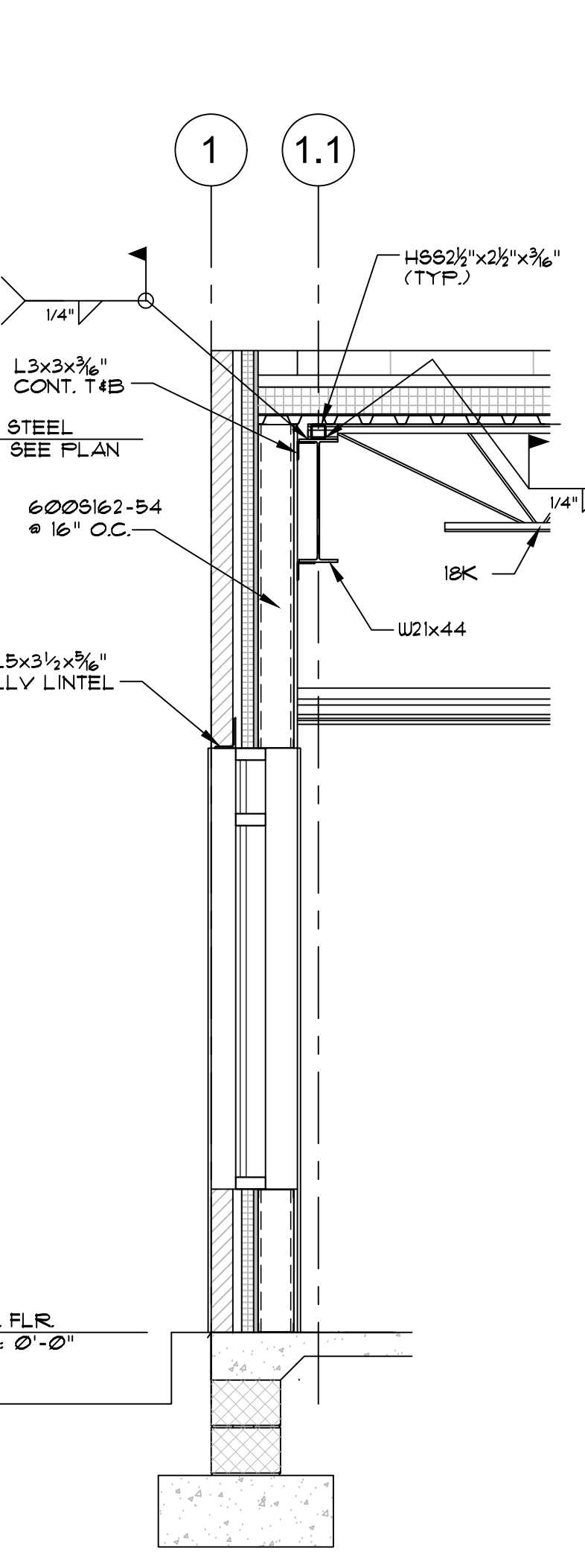
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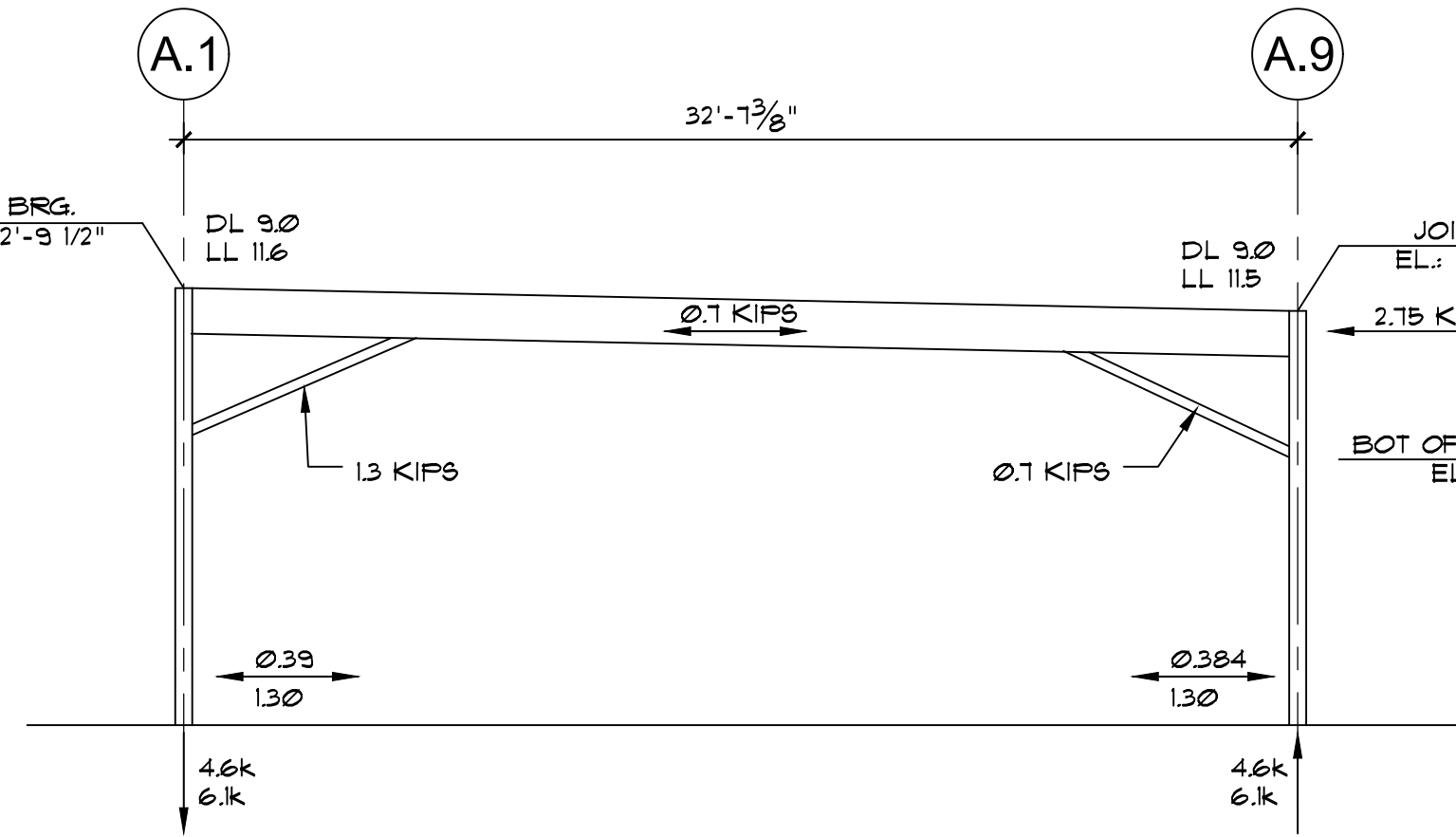
SECTION 4
SCALE: 1/2" = 1'-0"



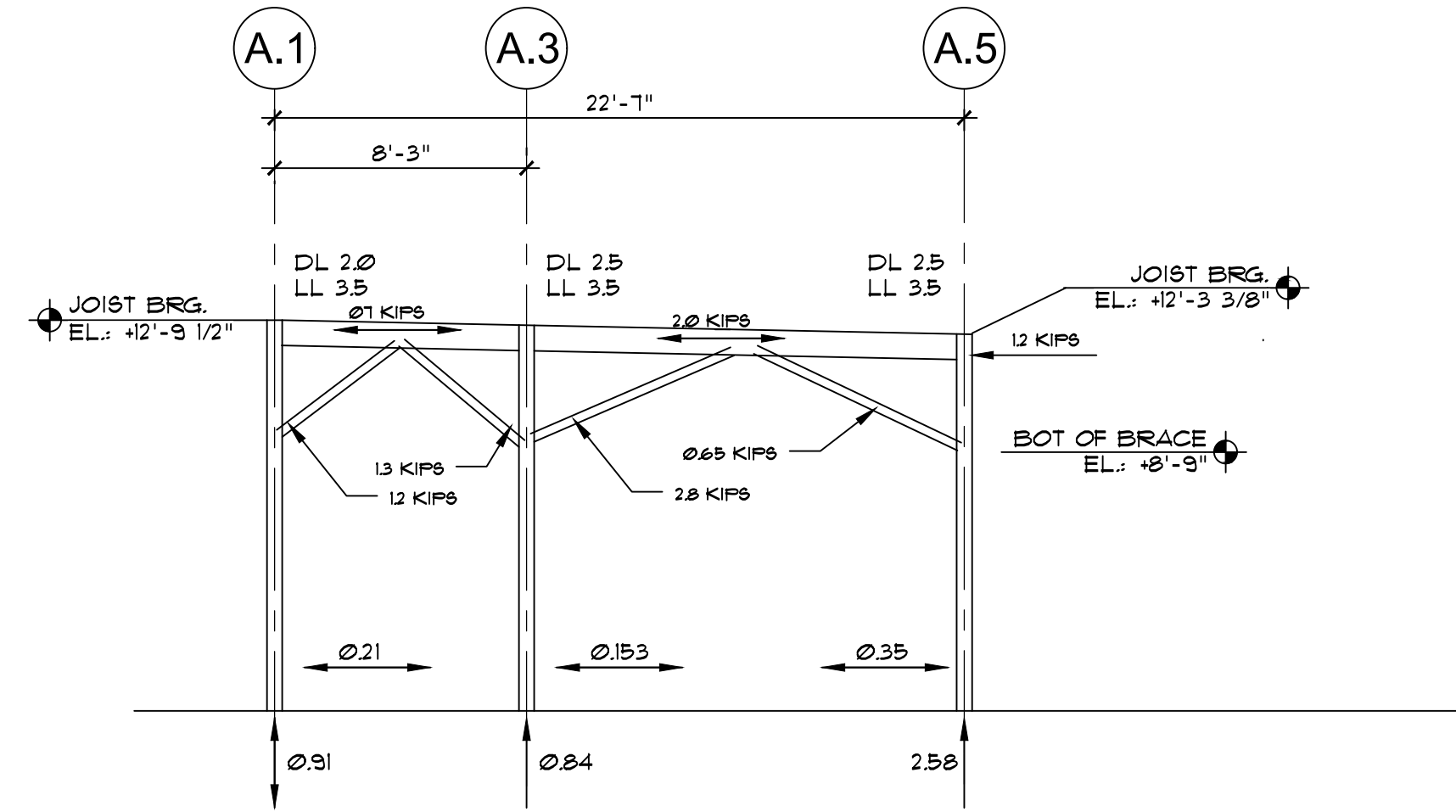
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SCALE: 1/2" = 1'-0"



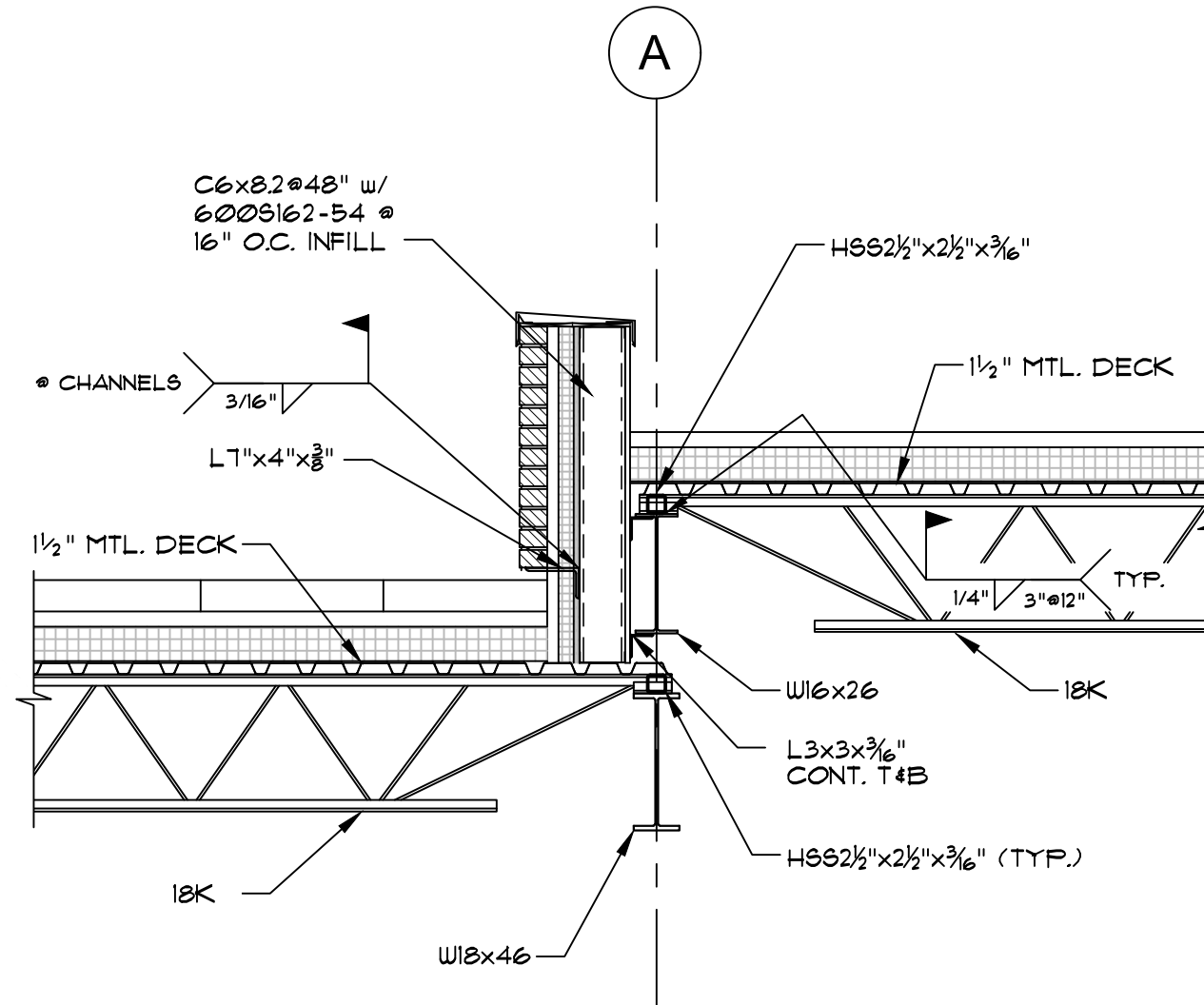
SECTION 6
SCALE: 1/2" = 1'-0"



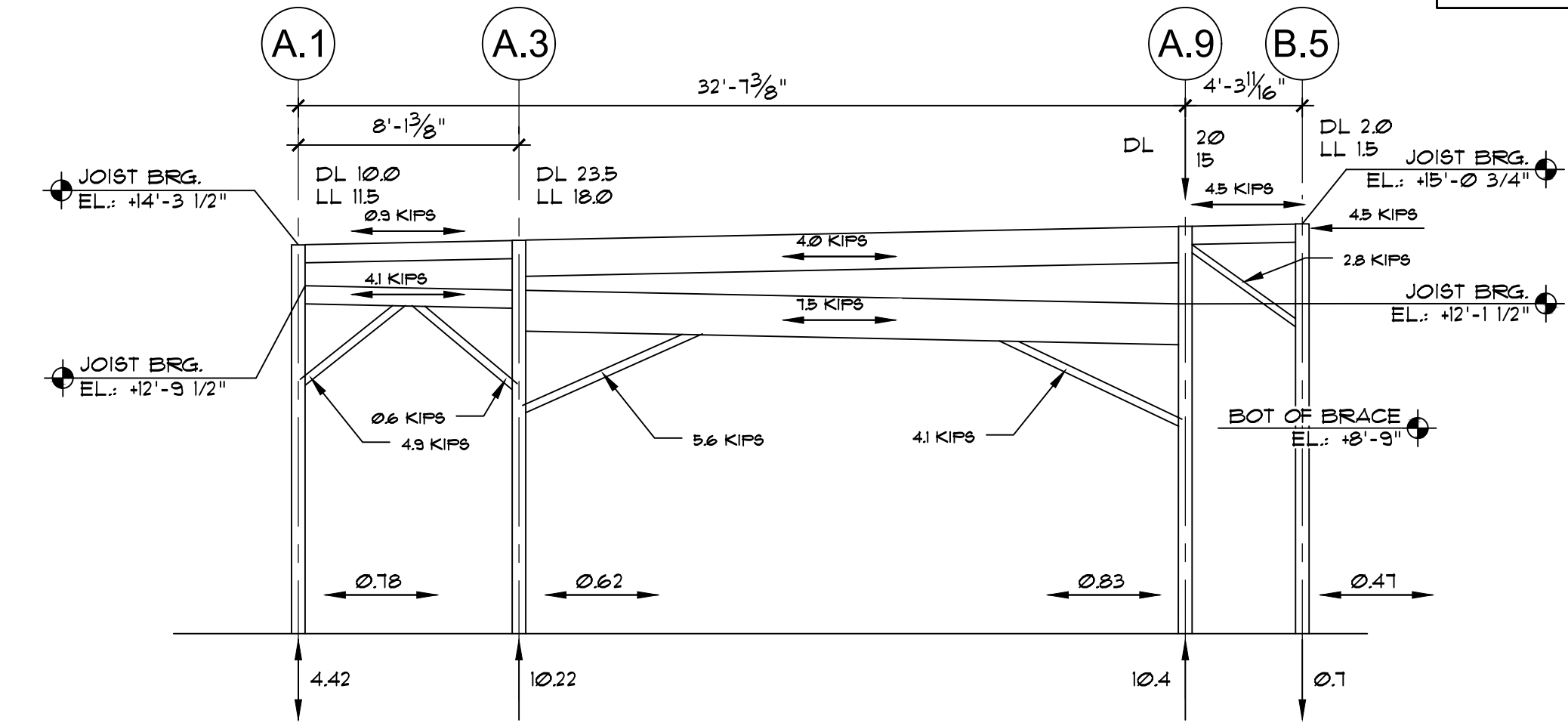
ELEVATION @ GRID LINE 1.1
SCALE: 3/16" = 1'-0"



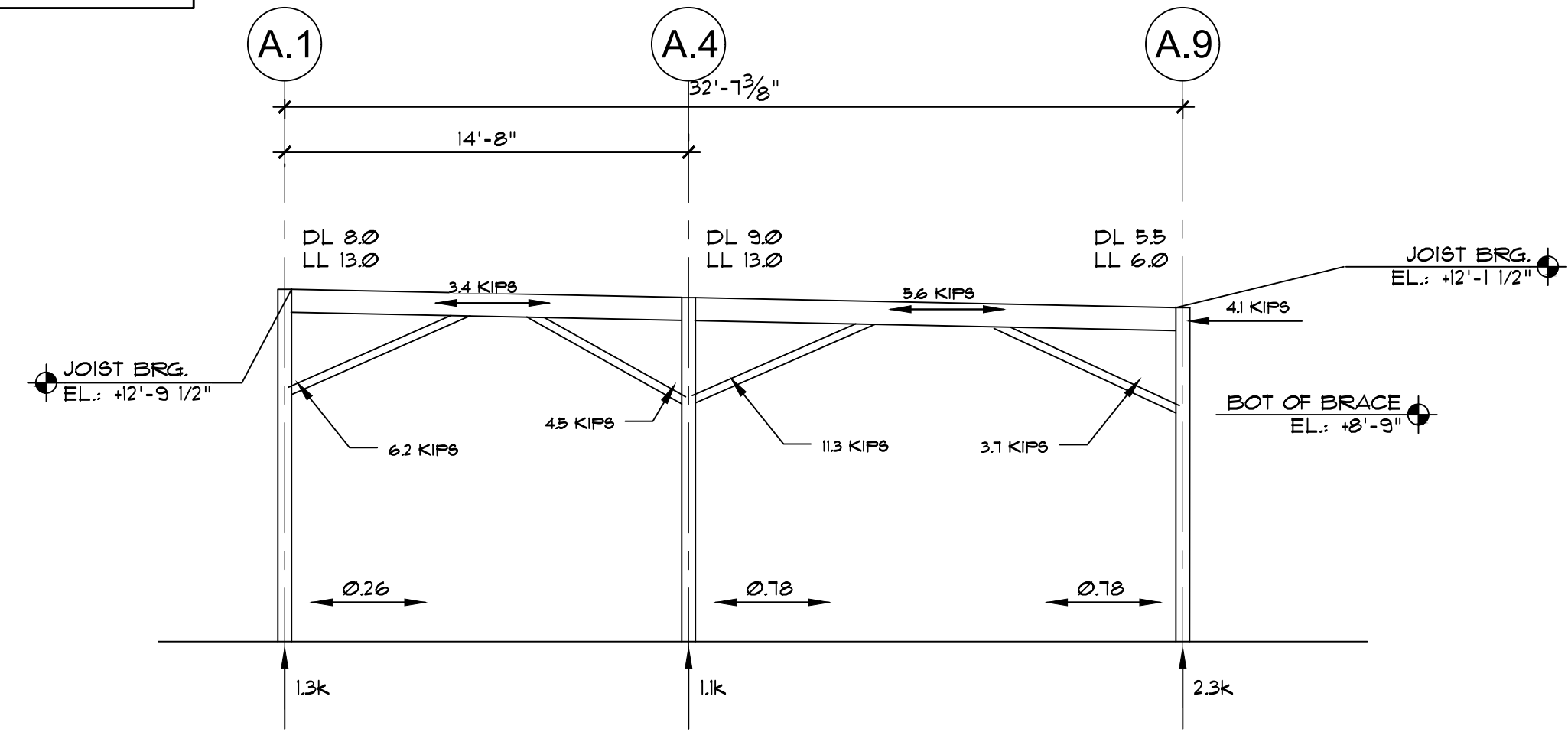
ELEVATION @ GRID LINE 4.9
SCALE: 3/16" = 1'-0"



SECTION 6
SCALE: 1/2" = 1'-0"



ELEVATION @ GRID LINE X1 & X10
SCALE: 3/16" = 1'-0"



ELEVATION @ GRID LINE X12
SCALE: 3/16" = 1'-0"

DEAD + WIND ONLY

MICHAEL GRAVES

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OWNER / CLIENT
St. Pius X Catholic Church

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SRBR Engineers

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Structural Engineer
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301-249-0974

Civil/Site
Atwell

11721 Woodmore Rd, Suite 200
Mitchellville, MD 20721
301-430-2000

| REVISIONS | | |
|-----------|-----|------------|
| DATE | NO. | ISSUED FOR |
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PROJECT NAME
St. Pius X Catholic Church Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER
MD22-30

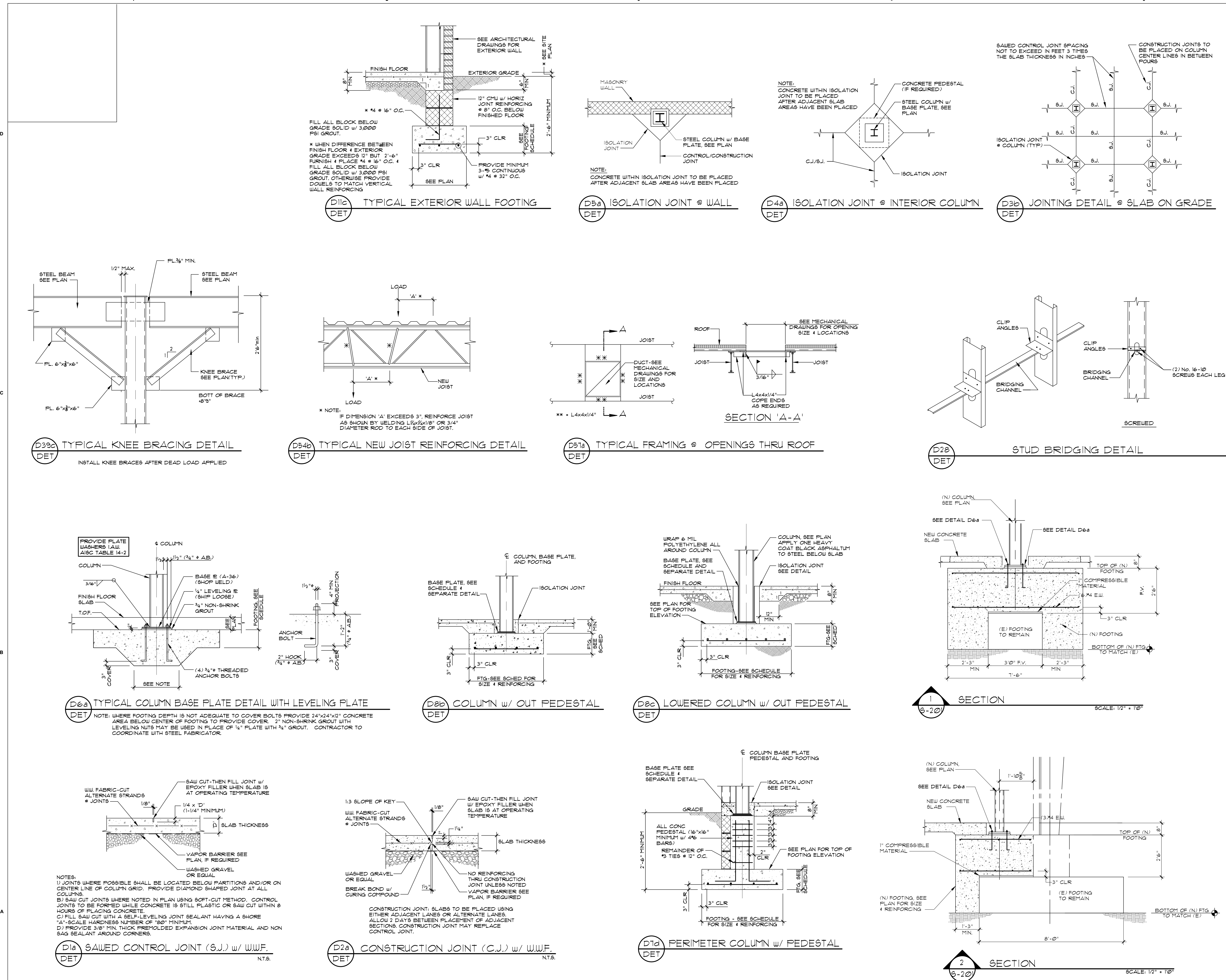
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a
 duly Licensed Professional Engineer under the laws of the State of Maryland.
 License No. 12068, Expiration Date 10/1/2026

SHEET TITLE
SECTIONS

| DRAWN BY | CHECKED BY | SHEET NO. |
|------------|------------|-----------|
| TWP | SMW | S-200 |
| FOR PERMIT | | |
| DATE | 2024-04-23 | |

WATKINS
Consulting Structural Engineering
PROJECT#:
20225202

3032 Mitchellville Road
Suite 202
Bowie, Maryland
ANNAPOLIS (410) 741-1751
WASHINGTON (202) 249-0974
FAX (301) 249-0974

[illegible]

D

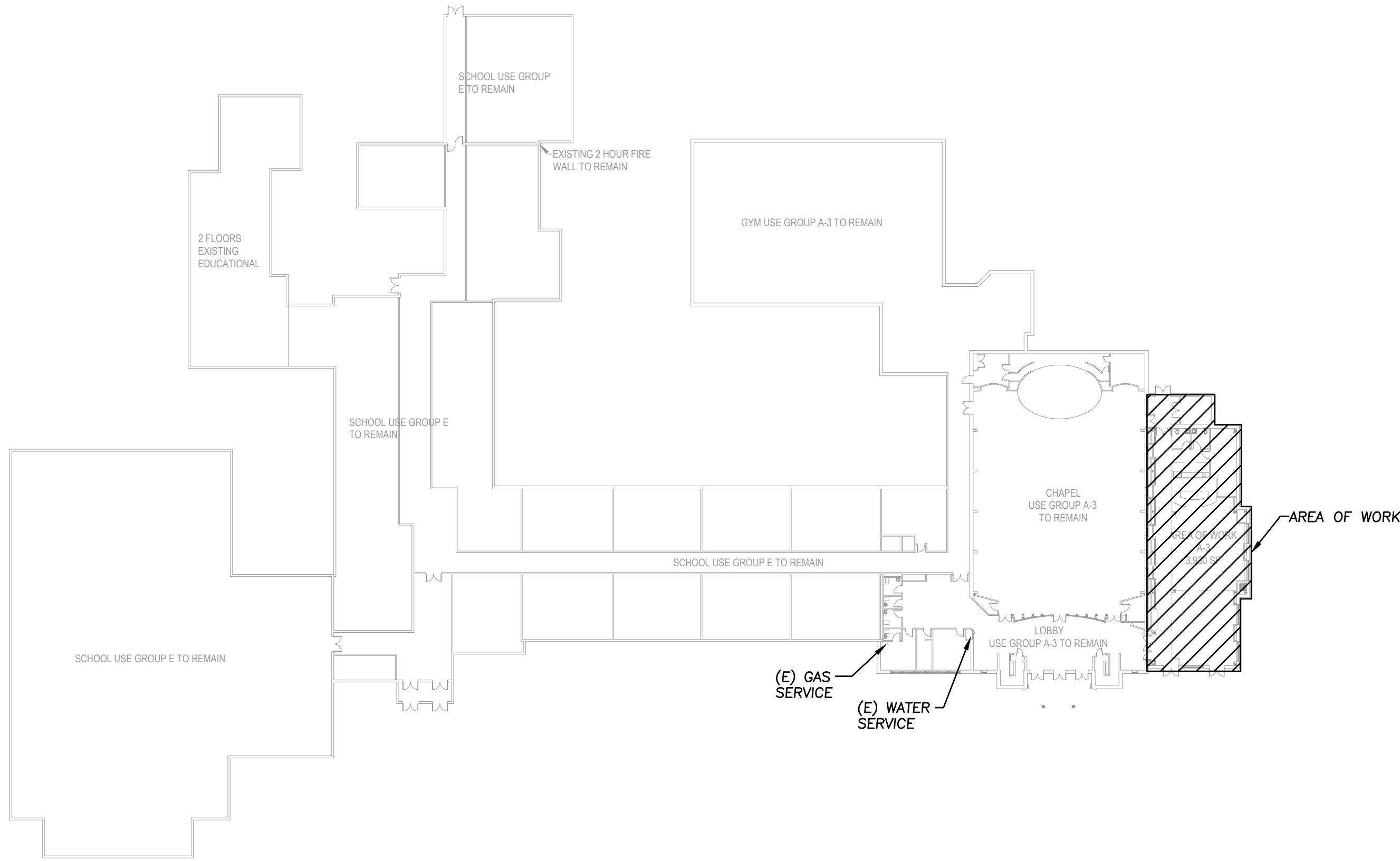
C

B

A

PLUMBING SYMBOL LIST

| SYMBOL | DESCRIPTION |
|--------|--|
| | SANITARY, S. |
| | VENT PIPE, V. |
| | COLD WATER, CW |
| | HEAT WATER, HW |
| | HEAT WATER RETURN, HWR |
| | CLEAN AIRWAY FOR CONDENSATE DRAIN |
| | CHECK VALVE |
| | BALANCING VALVE |
| | UNION |
| | SHUT OFF VALVE |
| | STRAINER |
| | PRESSURE REDUCING VALVE |
| | BACKFLOW PREVENTER |
| | GAS COCK |
| | PIPING FLOW DIRECTION |
| | RAIL VALVE |
| | C.O. CLEAN OUT, C.O. |
| | C.O. CLEAN OUT WITH UNPAID FLOOR |
| | C.O. CLEAN OUT WITH WALL |
| | WALL PENETRANT |
| | AIR/VE FINISHED FLOOR |
| | TYPICAL |
| | GALLONS PER MINUTE |
| | PLAN NOTE REFERENCE SYMBOL |
| | REMOVE FROM EXISTING |
| | CONNECT TO EXISTING |
| | PIPE UP |
| | PIPE DOWN |
| | PIPE CAP |
| | BOTTOM CONNECTION |
| | JUNI BREAK |
| | STATUS OF SYSTEM |
| | STATUS NUMBER OF THE CORRESPONDING RELATED SHEET |
| | PLUMBING EQUIPMENT DESIGNATION |



KEY PLAN/AREA OF WORK

NO SCALE

GENERAL REQUIREMENTS

- REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.
- BID PHASE:**
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DOCUMENTS TO INCLUDE PLANS AND SPECIFICATIONS FOR THE ARCHITECTURAL AND OTHER WORK. UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION, THE CONTRACTOR SHALL ISSUE A FORMAL REQUEST FOR INFORMATION FOR CLARIFICATIONS OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO FINAL BID SUBMISSION.
- PRE-CONSTRUCTION:**
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL REVISED DOCUMENTS TO INCLUDE ARCHITECTURAL PLANS AND WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THIS INCLUDES REVIEW OF ALL ADDENDUMS, REVISIONS AND SHOP DRAWINGS THAT AFFECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL NOTIFY THE A/E TEAM OF ANY DISCREPANCIES PRIOR TO FINAL ROUGH-IN.

SPECIAL CONDITIONS

- A. EQUIPMENT COORDINATION:**
- REFER TO ARCHITECTURAL EQUIPMENT PLANS, FURNITURE PLANS, ELEVATIONS, CASEWORK ELEVATIONS AND OTHER RELATED PLANS FOR ADDITIONAL MEP PROVISIONS.
- B. EXISTING SANITARY WORK:**
- CONTRACTOR SHALL VERIFY LOCATION OF EXISTING SANITARY MAINS, SIZES, AND CLEANOUTS IN THE AREA OF NEW PLUMBING WORK.
 - VERIFY LOCATION OF NEW TIE-IN POINTS TO THE MAIN SANITARY LINE. VERIFICATION WILL INCLUDE DIGGING NECESSARY TEST PITS TO VERIFY LOCATION AND APPROPRIATE DEPTH PRIOR TO COMMENCEMENT OF THE WORK AND TRENCHING NEW LINES.
 - CONTRACTOR SHALL CONFIRM MAIN LINES ARE CLEAR OF DEBRIS AND FREE FLOWING PRIOR TO TIE-IN WORK.
 - CONTRACTOR SHALL PROVIDE AN AS-BUILT SKETCH OF THE EXISTING LINES CONFIRMING INVERTS, SIZES, AND DIRECTION OF FLOW.

MICHAEL GRAVES

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PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

COVER SHEET PLUMBING

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO

SET DESCRIPTION

FOR PERMIT

P-001

DATE

2024-04-23



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 22792, Expiration Date: 08-04-2024."

FOR PERMIT 04/23/2024

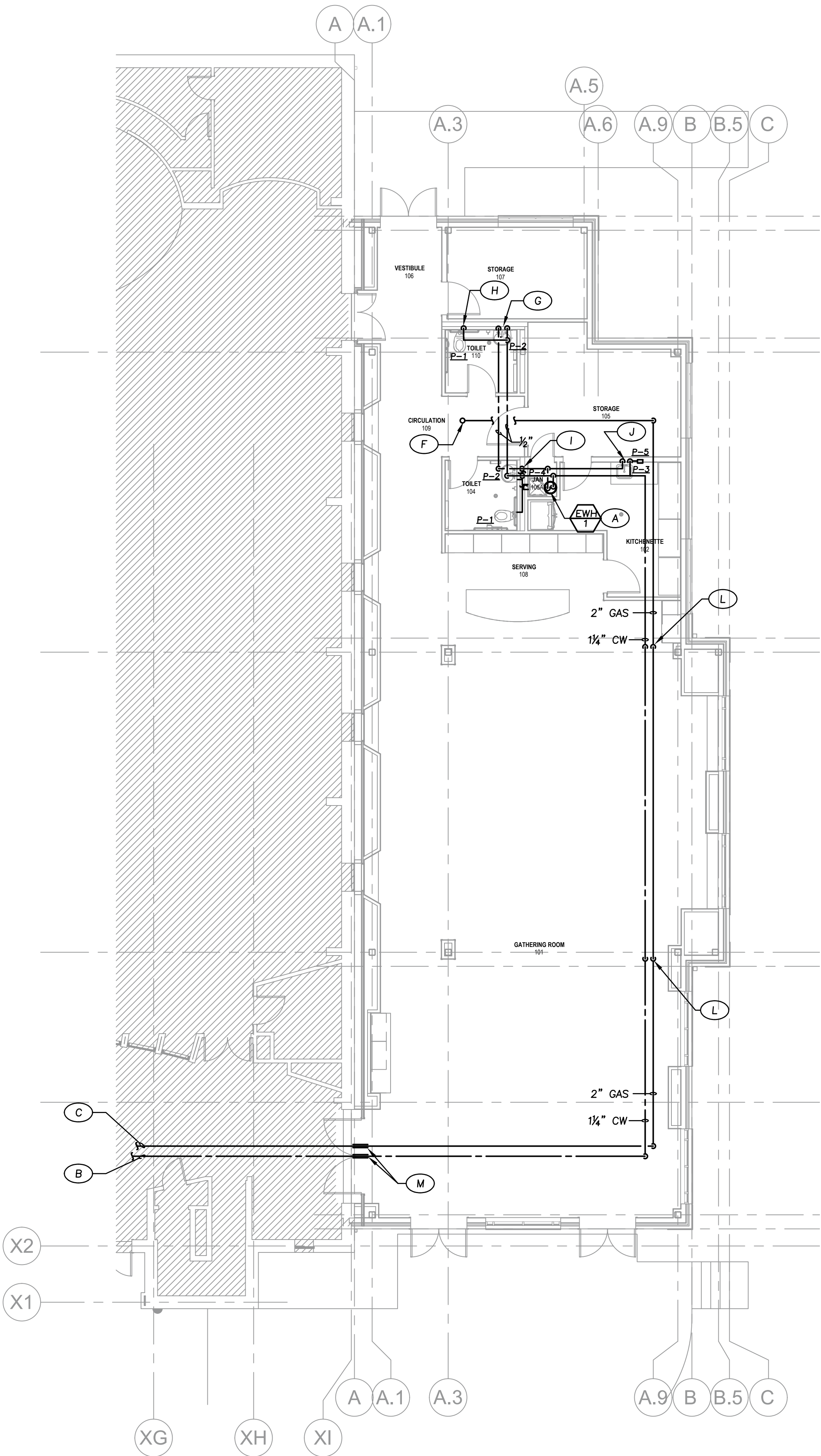
SRBR
MEP Consulting Engineers since 1939

757 Frederick Road Suite 300 - Catonsville, Maryland 21228
Phone: 410-869-7282 Web: www.SRBRengineers.com

SRBR No: 23002



FLOOR PLAN - PLUMBING - DWV
SCALE: 1/8" = 1'-0"
0 2' 4' 8' 16'



FLOOR PLAN - PLUMBING - WATER & GAS
SCALE: 1/8" = 1'-0"
0 2' 4' 8' 16'

PLAN NOTES

- (A) ELECTRIC WATER HEATER MOUNTED ON SHELF. SEE PIPING DETAILS FOR MORE INFORMATION
- (B) 1 1/2" COLD WATER TO WATER SERVICE. CONNECT TO EXISTING PIPE AND INSTALL SERVICE ISOLATION VALVE AT CONNECTION. SEE P001 FOR SERVICE LOCATION
- (C) 2" GAS. EXTEND BACK TO GAS SERVICE AND CONNECT TO EXISTING PIPE. CONTRACTOR TO CONFIRM GAS SERVICE IS ADEQUATE SIZE. SEE P001 FOR SERVICE LOCATION
- (D) 2" VENT UP, TRANSITION TO 3" BEFORE PENETRATING ROOF
- (E) 4" SANITARY. CONNECT TO SANITARY LINE IN THIS APPROXIMATE LOCATION. CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT
- (F) 2" GAS UP TO ROOFTOP UNIT. PROVIDE DRIP LEG, UNION AND SHUT-OFF VALVE. PROVIDE A PRV WITH OUTDOOR RATED VENT LIMITER
- (G) 1/2" CW AND HW DOWN IN WALL TO LAVATORY
- (H) 1 1/4" CW DOWN IN WALL TO TOILET FLUSH VALVE
- (I) 1 1/4" CW AND 3/4" HW DOWN IN WALL. EXTEND 1/2" PIPING OVER TO LAVATORY. 3/4" PIPING SERVICE SINK FAUCET AND 1 1/4" COLD WATER TO TOILET FLUSH VALVE
- (J) 1/2" CW AND HW DOWN IN WALL TO SINK. EXTEND 1/2" CW OVER TO ICE-MAKER BOX
- (K) 2" WASTE UP FROM BELOW SLAB AND 1 1/2" VENT UP IN WALL TO ABOVE CEILING
- (L) PIPES UP IN BULKHEAD TO UPPER CEILING. INSTALL DIRT LEG IN GAS PIPE AT BOTTOM OF RISER.
- (M) PROVIDE SLEEVES AND FIRE CAULK PIPES FOR 2 HOUR RATING - SEE UL-1479.



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 22792, Expiration Date: 08-04-2024."

FOR PERMIT 04/23/2024

SRBR
MEP Consulting Engineers since 1939

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Phone: 410-869-7282 Web: www.SRBRengineers.com

SRBR No: 23002

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PROJECT NAME

**St. Pius X Catholic Church
Addition**

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

FLOOR PLAN - PLUMBING

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO.

SET DESCRIPTION

FOR PERMIT

P-101

DATE

2024-04-23

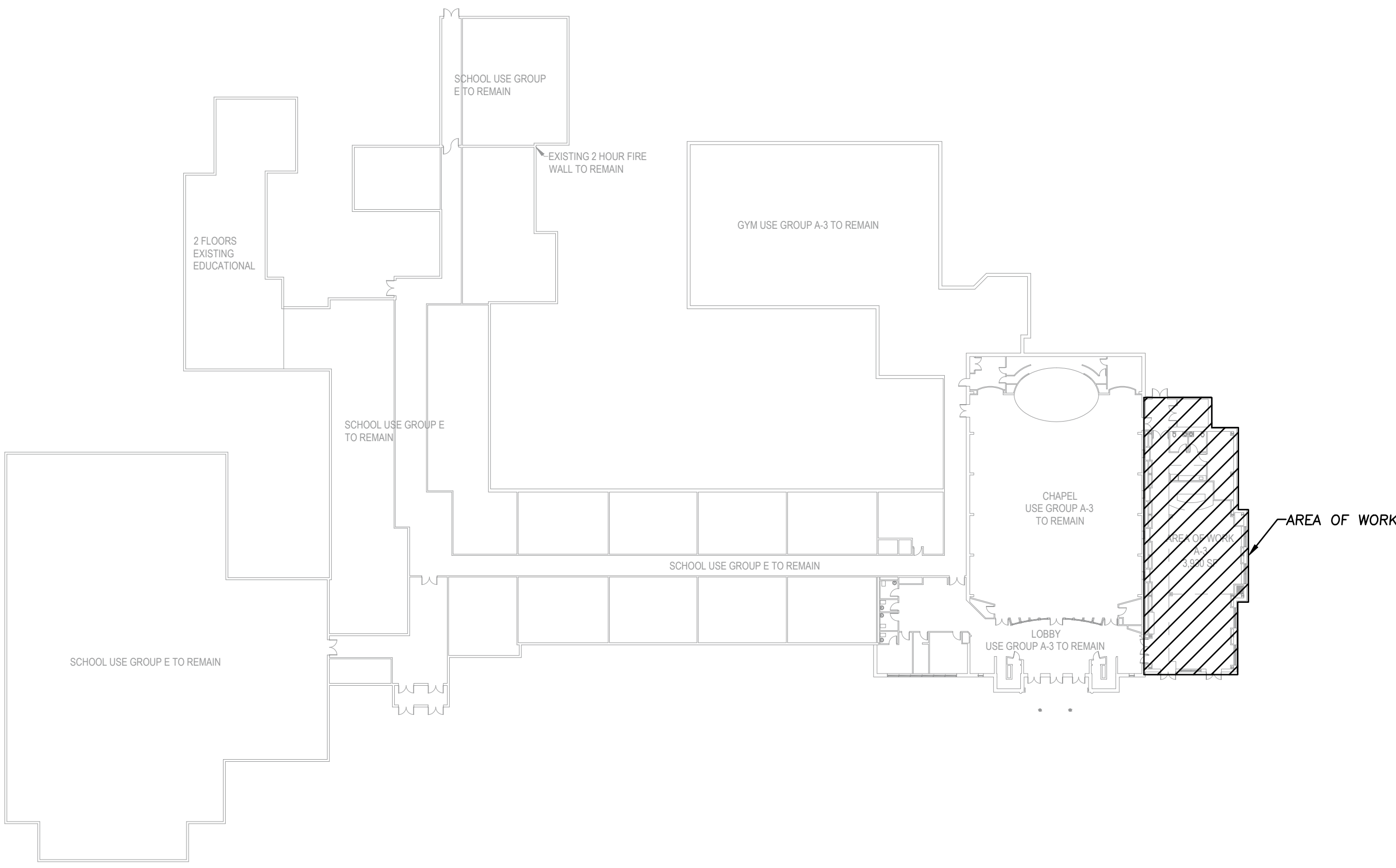
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| MECHANICAL SYMBOL LIST | |
|---|--|
| SYMBOL | DESCRIPTION |
| | DUCT DROP |
| | DUCT RUN |
| | MOTOR OPERATED DAMPER |
| | SUPPLY AIR DUCT. ARROWS INDICATE DIRECTION OF AIR FLOW |
| | MANUAL VOLUME DAMPER (M.V.D.) |
| | SMOKE DAMPER, S.D. |
| | FIRE DAMPER, F.D. |
| | COMBINATION FIRE/SMOKE DAMPER |
| | CONICAL TEE |
| | BRANCH DUCT WITH CONICAL TEE CONNECTION TO MAIN TRUNK DUCT |
| | RECTANGULAR TURN W/ TURNING VANES |
| | ELBOW ROUND DUCT |
| | ELBOW ROUND DUCT |
| | HORIZONTAL EXHAUST |
| | EXHAUST UNIT |
| | AIR HANDLING UNIT |
| | CIRCULAR FILTER PERIMETER |
| | EXHAUST AIR |
| | OUTSIDE AIR |
| | OPEN END DUCT |
| | RETURN AIR |
| | ABOVE FINISHED FLOOR |
| | PLAN NOTE REFERENCE SYMBOL |
| | CONNECT TO EXISTING |
| | TEE/DUCT HOOK |
| ABBREVIATIONS | |
| FILTER REPRESENTS MANUFACTURER & MODEL NO. | |
| ABBREVIATION | |
| AIR DUCT DESIGNATION | |
| STATUS OF SYSTEM | |
| STATUS NUMBER OF FILTER CORRESPONDING TO TABLE NUMBER | |
| MECHANICAL EQUIPMENT DESIGNATION | |



KEY PLAN/AREA OF WORK

NO SCALE

| MECHANICAL DRAWING LIST | | |
|-------------------------|-----------|---|
| No. | Sheet No. | Sheet Title |
| 1 | M001 | COVER SHEET - MECHANICAL |
| 2 | M101 | FLOOR PLAN - MECHANICAL |
| 3 | M201 | MECHANICAL SCHEDULES AND SPECIFICATIONS |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

GENERAL REQUIREMENTS

1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.

2. BID PHASE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DOCUMENTS TO INCLUDE PLANS AND SPECIFICATIONS FOR THE ARCHITECT, S.A., AND OTHER WORK. ANY OTHER CONDITIONS THAT CAN AFFECT THE WORK OF THIS DESIGN, THE CONTRACTOR SHALL ISSUE A FORMAL REQUEST FOR INFORMATION FOR CLARIFICATIONS OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO SUBMITTING BIDS.

3. PRE-CONSTRUCTION:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL REVISION DOCUMENTS TO INCLUDE ARCHITECTURAL PLANS AND WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DESIGN. THIS INCLUDES REVIEW OF ALL ADDENDUMS, REVISIONS AND SCHEDULE DRAWINGS THAT AFFECT THE WORK OF THIS DESIGN. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING.

PROJECT DESCRIPTION

FURNISH AND INSTALL A NEW HEATING, VENTILATION AND AIR CONDITIONING CONTROL SYSTEM FOR THE NEW ADDITION OF THE FACILITY.

THE NEW HVAC SYSTEM SHALL INCLUDE A NEW PACKAGED GAS FIRED ROOFTOP UNIT WITH SUPPLY AND RETURN DUCTWORK, OUTSIDE AIR INTAKE AND CONTROLS. THE UNIT SHALL BE DESIGNED TO CONDITION THE SPACE ADEQUATELY UNDER PEAK CONDITIONS AS ESTABLISHED BY ASHRAE STANDARDS.

THE ROOFTOP UNIT SHALL BE EQUIPPED WITH ECONOMIZER CONTROLS, TEMPERATURE CONTROLS, GAS HEAT AND SINGLE ZONE VARIABLE AIR VOLUME CONTROL STRATEGY.

PROVIDE MECHANICAL EXHAUST FROM THE TOILET ROOMS AND JANITOR CLOSET.

ALL WORK SHALL BE IN COMPLIANCE WITH THE INTERNATIONAL MECHANICAL AND PLUMBING CODES, THE FUEL GAS CODE AND BUILDING CODE AS WELL AS LOCAL CODES AND STANDARDS.

Table 1: Summary Calculation Used to Determine Outdoor Air Ventilation Rates - Mechanically Ventilated

Reference - 2018 IMC

St. Pius

Zone Identification

| Zone Identification | | International Mechanical Code Compliance | | | | | | | | | | | |
|---------------------|------------------|--|------------------------|---------------------------------------|---------------------------------|---|-------------------------|---|---|---------------------------------|---|--|-------------------------------------|
| System | Room Name | Occupancy Category | Area (s ²) | People Outdoor Air Rate (cfm/ person) | Area Outdoor Air Rate (cfm/sft) | Occupant Load rate per Table 403.3.1.2 (p/1000sf) | Number of Occupants (N) | Breathing Zone Outdoor Air Flow Vol (CFM) | Table 403.3.1.2 Zone Air Distributor Effectiveness E _z | Zone Outdoor Air Flow Vol (CFM) | Zone Primary Air Flow Vp _z (CFM) | Primary Outdoor Air Fraction Z _o =Vol _z /Vp _z | Actual Primary Outdoor Air Fraction |
| | Vestibule | Main Entry Lobby | 117 | 5.00 | 0.06 | 10.00 | 2 | 17 | 0.8 | 21 | 100 | 0.21 | 0.24 |
| | Storage | Storage Room | 204 | 0.00 | 0.12 | 0.00 | 0 | 24 | 0.8 | 31 | 110 | 0.28 | 0.24 |
| | Storage | Storage Room | 147 | 0.00 | 0.12 | 0.00 | 0 | 18 | 0.8 | 22 | 100 | 0.22 | 0.24 |
| | Corridor | Corridor | 244 | 0.00 | 0.06 | 0.00 | 0 | 15 | 0.8 | 18 | 100 | 0.18 | 0.24 |
| | Gathering Room A | Dining Room | 965 | 7.50 | 0.18 | 70.00 | 63 | 646 | 0.8 | 808 | 2,350 | 0.34 | 0.24 |
| | Gathering Room B | Lecture Classroom | 660 | 7.50 | 0.06 | 65.00 | 50 | 415 | 0.8 | 518 | 1,550 | 0.33 | 0.24 |
| | Kitchenette | Kitchen | 161 | 0.00 | 0.50 | 0.00 | 0 | 48 | 0.8 | 60 | 240 | 0.25 | 0.24 |
| | Serving | Mail Common Area | 176 | 7.50 | 0.06 | 40.00 | 8 | 71 | 0.8 | 88 | 350 | 0.25 | 0.24 |
| | Circulation | Corridor | 264 | 0.00 | 0.06 | 0.00 | 0 | 16 | 0.8 | 20 | 100 | 0.20 | 0.24 |
| | | | 2,938 | | | 185.00 | | 1269 | | 1587 | 5,000 | | 1776 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Notes:

Max Z_p = 0.34
Ev = 0.8
Ps = 0.25
D = 0.68
Vol = 857.62
Vol = 0.072

Table 403.3.1.1.2.3.2 (IMC)
Maximum Occupancy
Ps(Sum Ps)
D x (Sum Vol)
Vol_z/Ev

Balance RTU to maximum 1200 cfm (24% OA)



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FOR PERMIT 04/23/2024



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REVISIONS

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PROJECT NAME

St. Pius X Catholic Church Addition

PROJECT ADDRESS

14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

COVER SHEET MECHANICAL

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO.

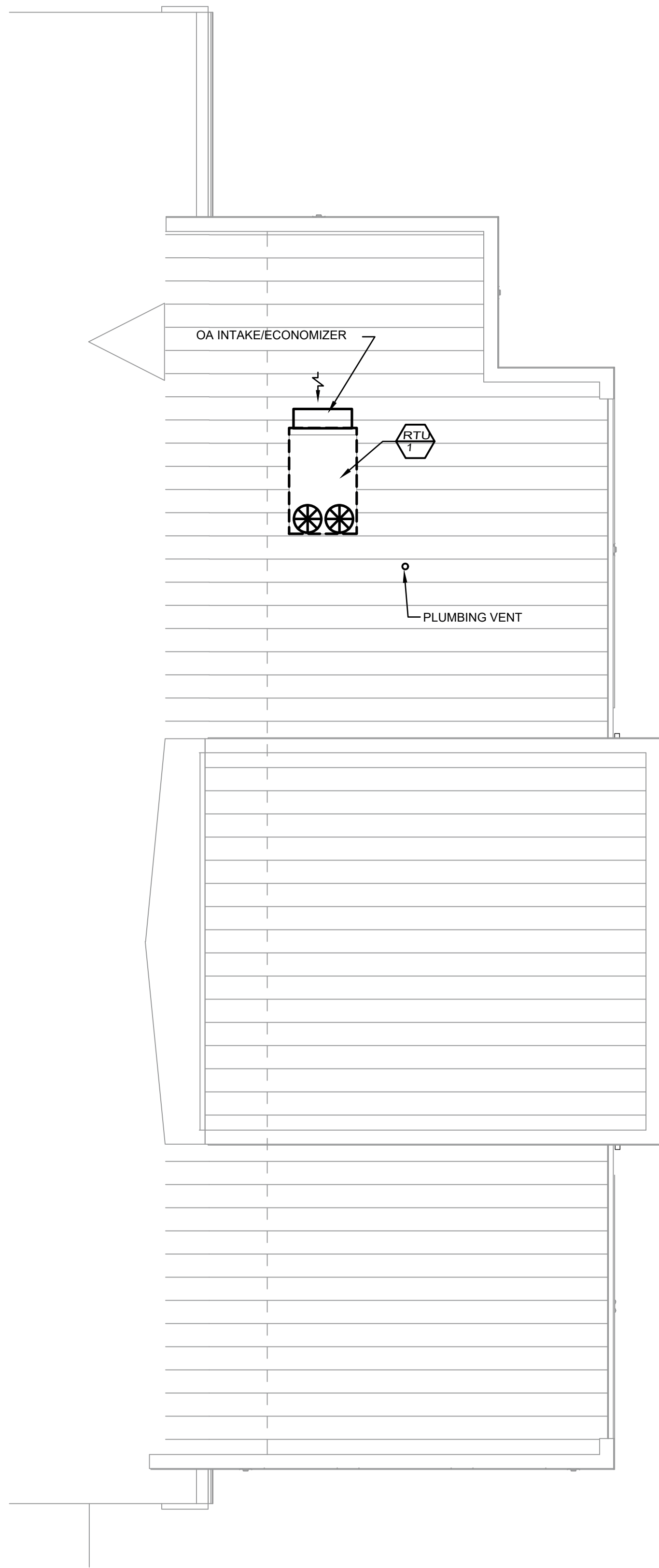
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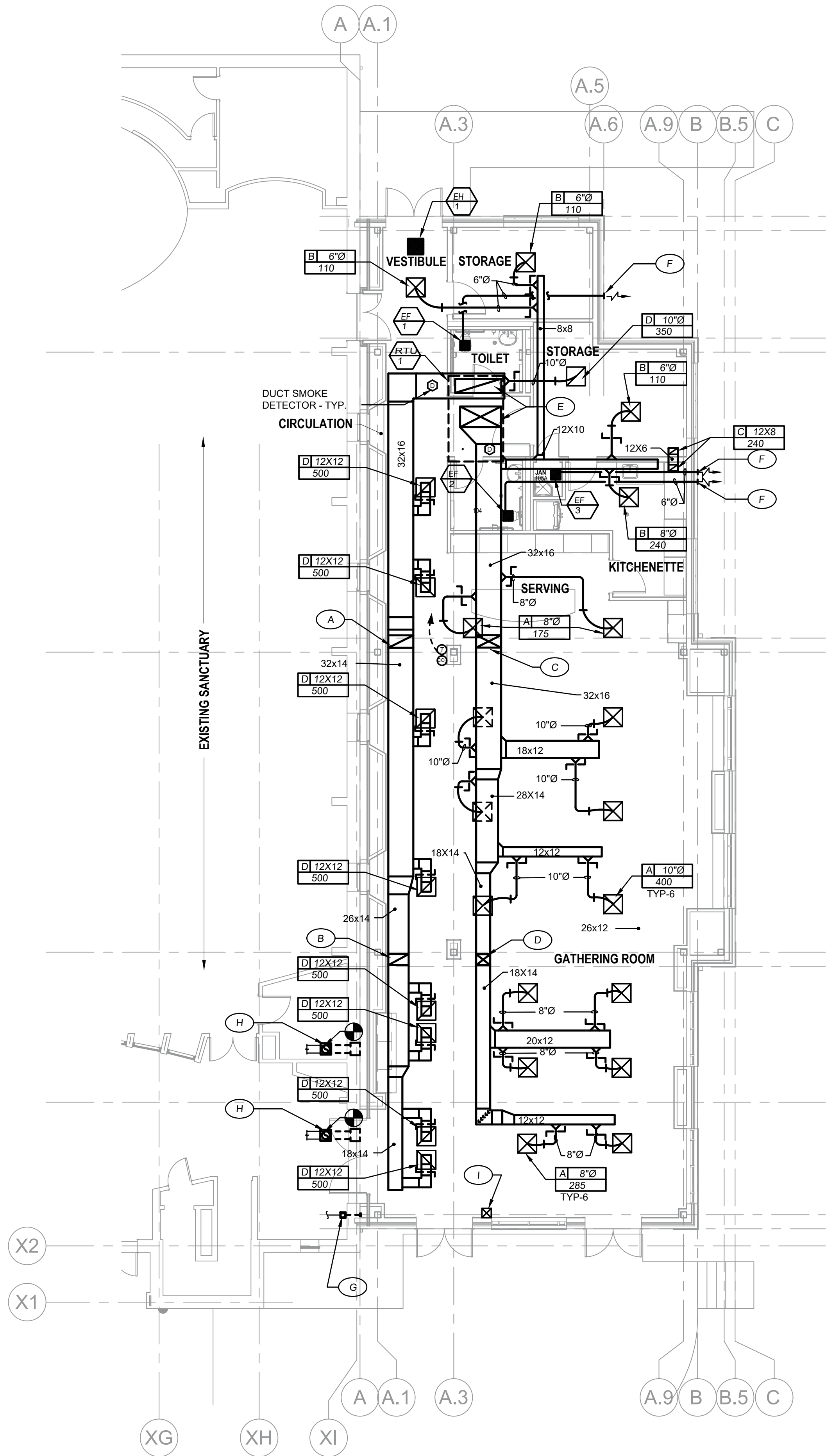
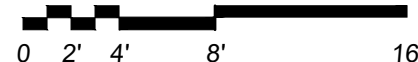
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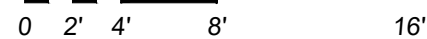
ROOF PLAN - MECHANICAL

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



FLOOR PLAN - MECHANICAL

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



PLAN NOTES

- A 32"x14" RETURN DUCT UP IN BULKHEAD TO HIGHER CEILING ELEVATION
- B 28"x14" RETURN AIR DUCT DOWN IN BULKHEAD TO LOWER CEILING AREA
- C 32"x18" SUPPLY DUCT UP IN BULKHEAD TO HIGHER CEILING ELEVATION
- D 18"x14" SUPPLY DUCT DOWN IN BULKHEAD TO LOWER CEILING ELEVATION
- E SUPPLY AND RETURN DUCT UP TO ROOFTOP UNIT FULL SIZE OF UNIT CONNECTION
- F 6"Ø EXHAUST WALL CAP WITH INSECT SCREEN
- G CUT EXISTING EXHAUST DUCT AND REMOVE WALL CAP. EXTEND EXHAUST DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF VENTILATOR EQUAL BROWN 654M WITH BUILT-IN BACKDRAFT DAMPER AND FLASHING PLATE
- H REMOVE EXISTING WALL LOUVER AND CUT EXISTING INTAKE DUCT BACK AS SHOWN. EXTEND INTAKE DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF CAP EQUAL TO GREENHECK MODEL GRSI-10 WITH BIRD SCREEN AND FLASHING PLATE
- I EMERGENCY SHUTDOWN SWITCH FOR RTU-1. REFER TO DRAWING E101 FOR MORE INFORMATION. COORDINATE EXACT LOCATION OF SWITCH WITH FIRE MARSHAL.

GENERAL NOTES:

- RELOCATE TWO (2) EXISTING OUTSIDE AIR INTAKES ON SIDE OF EXISTING BUILDING
- DEMOLISH EXISTING EXHAUST WALL CAP ON EXISTING BUILDING



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PROJECT NAME

**St. Pius X Catholic Church
Addition**

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

FLOOR PLAN - MECHANICAL

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO

SET DESCRIPTION

FOR PERMIT

M-101

DATE

2024-04-23

MECHANICAL SPECIFICATIONS

- Furnish and install a complete and operational system in accordance with drawings and these specifications. Provide all materials whether specified or not for a complete and operational system that complies with all required codes and standards. All materials and equipment shall be installed in accordance with the manufacturer's instructions and all applicable codes and standards. Equipment shall be installed complete including power, controls, supports, etc. Equipment and associated controls shall be functionally tested in all operating modes. All equipment and materials shall be new unless otherwise indicated.
- The contractor shall be responsible for visiting the site prior to bid and becoming familiar with all existing conditions that may affect his work. The contractor shall include in his bid any required labor and materials necessary to modify, remove or relocate existing work to allow for the new work to be installed. If the contractor believes the new work cannot be installed as shown in the drawings, he shall inform the project construction manager immediately. There shall be no additional compensation for failure to include coordination with existing conditions in the scope and cost.
- All work shall be done in accordance with applicable building, mechanical, plumbing, electrical and energy codes and standards. These include, but are not limited to the 2021 International Building Code (IBC), International Mechanical Code (IMC), International Plumbing Code (IPC), International Fuel Gas Code (IFGC), National Fire Protection Association (NFPA), specifically section 90A, American Society of Refrigeration and Air Conditioning Engineers (ASHRAE), Sheet Metal and Air Conditioning Contractors National Association (SMACNA), National Electrical Code. If any existing code violations are found, the contractor shall notify the project manager immediately.
- The contractor shall maintain a competent superintendent on site at all times who will oversee all work and ensure the construction is done in a safe, clean and professional manner. He shall ensure the work is done in accordance with the project specifications, all layout is correct and accurate and the quality of the workmanship meets or exceed industry standards. He shall also verify all manufacturer instructions are being followed for installation and setup.
- The contractor shall submit equipment shop drawings for all major equipment and materials including, but not limited to, rooftop unit, split systems, fans, ductwork, air devices, etc. Shop drawings shall indicate materials, dimensions, weights, performance data and warranty information.
- The contractor shall maintain a set of as-built documents on site at all times. The drawings shall maintain red-line markup of all deviations from the deign documents and include pertinent information such as critical dimensions and elevations.
- All new equipment and materials shall be reviewed by the contractor before ordering to ensure the equipment will fit in the given space, is suitable for the location, arrangement of duct, piping, etc, and can be serviced once installed. All required service access space shall be maintained and room shall be provided to remove filters. Verify equipment electrical characteristics meet the existing available power.
- Roof mounted equipment shall be set on 14" roof curbs that are flashed into the existing roofing system.
- New equipment shall be identified using industry standard methods indicating type of unit and sequential number such as RTU-1, 2, 3 or EF-1, 2, 3. Replacement equipment shall retain the original identification numbering. Install permanently engraved plastic or vinyl ID plates. Identify associated unit disconnect if not mounted directly on the unit.
- All equipment shall be started and tested by the installing contractor. The equipment shall be tested in all modes of operation. All operating set points shall be programmed in coordination with the building operating staff. Verify all peripheral components including, but not limited to, control dampers, sensors, interlocks, etc operate as intended and specified. The contractor shall provide a one year parts and labor warranty starting from the date the project is accepted and considered substantially complete by the architect. At the time the equipment is turned over to the owner, all units shall have clean filters.
- Ductwork shall be constructed of galvanized sheet metal fabricated and installed in accordance with the latest SMACNA standards. Ductwork shall be constructed to 2" wc working pressure and shall have a minimum thickness of 26 gage. Duct transitions and turns shall utilize fittings. Install flexible duct connectors at each connection to equipment with moving parts (ie fan coil units and exhaust fans, etc). All supply and return ductwork shall be insulated with 1.5" thick foil faced fiberglass duct-wrap with integral vapor barrier, minimum insulating value R-6 and constructed with a seal class A. Flexible branch ducts shall be permitted provided they are UL sited for such duty, are pre-insulated and carry a helical spring to retain its shape. Flexible branch ducts shall not exceed 8 ft in length and shall not turn more than 270 degrees.
- All new air systems shall be balanced by a third-party firm certified by AABC or NEBB. Test and Balance all supply air outlets, return air inlets, exhaust air inlets and outside air intake on the affected rooftop units and split system. All airflowws shall be set to within 10% of that prescribed on the drawings. Submit to the engineer of record a Test and Balance report at the completion of the project indicating information about each unit and fan, provide a static pressure profile of the rooftop units, provide duct traverse measurements of main supply ducts and tabulate the air balance for each air device.

CONTROLS:

The rooftop unit shall be controlled by a programmable thermostat capable of occupied/unoccpied modes and economizer operation.

In occupied mode the outside air damper shall be open to its minimum position, and the fan shall run continuously. The DX cooling and gas heating shall energize and stage as needed to maintain the cooling and heating space temperature set point respectively. In cooling mode, if the pace temperature is above the cooling set point the fan shall ramp up in sped while the refrigeration system shall maintain a set leaving air temperature off the cooling coil (55 deg F adjustable). As the space temperature falls toward set point the fan shall slow down while maintaining he leaving air temperature. Once the space temperature is satisfied or the below the cooling set point the fan shall be at minimum speed and the refrigeration system shall shut down. If the relative humidity is above set point 55% the refrigeration system shall continue to run at minimum capacity.

If there is a call for cooling and the ambient air enthalpy is in the proper range, the unit shall go into economizer mode in which the refrigeration system is locked out and the outside air damper shall open 100%.

The heating mode shall be similar to the cooling mode. If the space temperature drops below the heating space temperature set point, the fan shall ramp up and the furnace shall modulate to maintain s set leaving air temperature. As the space temperature rises the fan shall slow down while the leaving air temperature is maintained. Once the space temperature set point is satisfied the furnace shall shut down and the fan shall remain at minimum speed. The economizer damper shall always be at minimum position when operating in the heating mode.

The unit shall also be equipped with demand control ventilation logic. A CO2 sensor shall be installed in the gathering room. The outside air damper shall be set with a minimum position to introduce 200 cfm in order to pressurize the building and provide a minimal amount of ventilation air. If CO2 level rise above set point (650 ppm) the outside air damper shall open to the second ventilation set point to allow the minimal flow indicated in the equipment schedule. If the CO2 levels do not drop to the required set point the outside air damper shall continue to open. Refer to the RTU manufacturer's instruction for pre-programmed logic for more detail.

In unoccupied mode the unit shall be off, and the outside air damper shall remain closed. The DX cooling and gas heating shall energize, along with the supply fan when there is a call of cooling or heating based on the unoccupied temperature set points.


The toilet room fans shall be controlled by a walls switch.

| PACKAGED GAS FIRED / ELECTRIC COOLED ROOFTOP UNIT SCHEDULE | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------|------|-------------------|------------|-------------|--------|------------|---------|---------------------------|------------------------|-----------|-----------|-------------------|-------------------|------------------|--------------|-------------------|--------------------|----------|---------|----------|---|
| Unit Information | | | | | | | | | Direct Expansion Coil | | | | | | Heating Capacity | | Electric Data | | Remarks | | | |
| Tag | Manufacturer and Model No. | IEER | Unit Weight (lbs) | Supply Air | Outside Air | E.S.P. | Motor (HP) | Fan RPM | Sensible Cooling Capacity | Total Cooling Capacity | EAT-DB °F | EAT-WB °F | Outdoor EAT-DB °F | Outdoor EAT-WB °F | Refrigerant | Cooling Tons | Heating MBH Input | Heating MBH Output | | Voltage | Unit MCA | Unit MOC |
| RTU-1 | Trane YS1503S0MG2 | 14.5 | 1318 | 5,000 | 1,200 | 1" | 5.00 | 1531 | 109.6 | 143.3 | 80 | 67 | 95 | 77 | R410A | 12.5 | 1 | 162/113.4 | 208-3-60 | 64 | 90 | Provide 14" roof curb, weather hood, economizer with dual enthalpy control and barometric relief, Single Zone VAV control with modulating evaporator fans and lead compressor, humidistat, demand control ventilation sequence with modulating outside air damper, programmable thermostat/unit controller. Provide primary and secondary condensate drains with trap (discharge onto roof) |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

| EXHAUST FAN SCHEDULE | | | | | | | | | | |
|----------------------|-------------------------------|--------|-----|-----|-----|------------|-------|----------|---------|---|
| Tag | Manufacturer and Model Number | Weight | CFM | ESP | RPM | Drive type | Power | Voltage | Control | Remarks |
| EF-1 | Greenheck SP-A90L | 12 | 75 | 0.2 | 870 | Direct | 16W | 120-1-60 | Switch | Provide white ceiling grill, backdraft damper |
| EF-2 | Greenheck SP-A90L | 12 | 75 | 0.2 | 870 | Direct | 16W | 120-1-60 | Switch | Provide white ceiling grill, backdraft damper |
| EF-3 | Greenheck SP-A90L | 12 | 75 | 0.2 | 870 | Direct | 16W | 120-1-60 | Switch | Provide white ceiling grill, backdraft damper |
| | | | | | | | | | | |
| | | | | | | | | | | |

| AIR DEVICE SCHEDULE | | | |
|---------------------|----------------|--|--------------------------|
| MARK | SYSTEM | MANUFACTURER & MODEL NO. | Remarks |
| | TYPE | | |
| A | SUPPLY | Titus OMNI steel diffuser with plaque face and round neck, 24"x24" module | White, T-Bar border type |
| | DIFFUSER | | |
| B | SUPPLY | Titus TMS, 12"x12" module, with face border, 3 cone, steel construction round neck | White, T-Bar border type |
| | REGISTER | | |
| C | RETURN | TITUS 350RL, Steel Construction, 3/4" blade spacing, 35 deg deflection | Gypsum ceiling frame |
| | REGISTER | | |
| D | EXHAUST GRILLE | TITUS PAR, 24"x24" module, square neck perforated face | |

| ELECTRIC HEATER SCHEDULE | | | | | | | |
|--------------------------|-------------|------|-------|--------|----------|----------------------------|--|
| Mark | Heater Type | Amps | Watts | BTU/HR | V-P-H | Manufacturer and Model No. | Remarks |
| EH-1 | CEILING | 12.5 | 1,500 | 5,120 | 120-1-60 | Q-Mark EFF-1500 | Ceiling heater with integrap thermostat, steel grille and mounting hardware for grid ceiling |
| | | | | | | | |



COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: St. Pius Addition
Location: Bowie, Maryland
Climate Zone: 4a
Project Type: Addition

Construction Site:

14710 Annapolis Road
Bowie, Maryland 20715

Owner/Agent:

Designer/Contractor:

Mechanical Systems List

QuantitySystem Type & Description

1HVAC System (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 202 kBtu/h
Proposed Efficiency = 0.00% E, Required Efficiency = 80.00 % E, or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 343 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.00 IER, Required Efficiency = 10.00 IER
Proposed Part Load Efficiency = 14.50 IER, Required Part Load Efficiency = 14.00 IER
Fan System: FAN SYSTEM 1 | RTU-1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Project Title: St. Pius Addition
Data Filename:

Report date: 12/23/23
Page 1 of 9



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FOR PERMIT 04/23/2024

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PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

MECHANICAL SCHEDULE AND
SPECIFICATIONS

DRAWN BY

SRBR

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SHEET NO

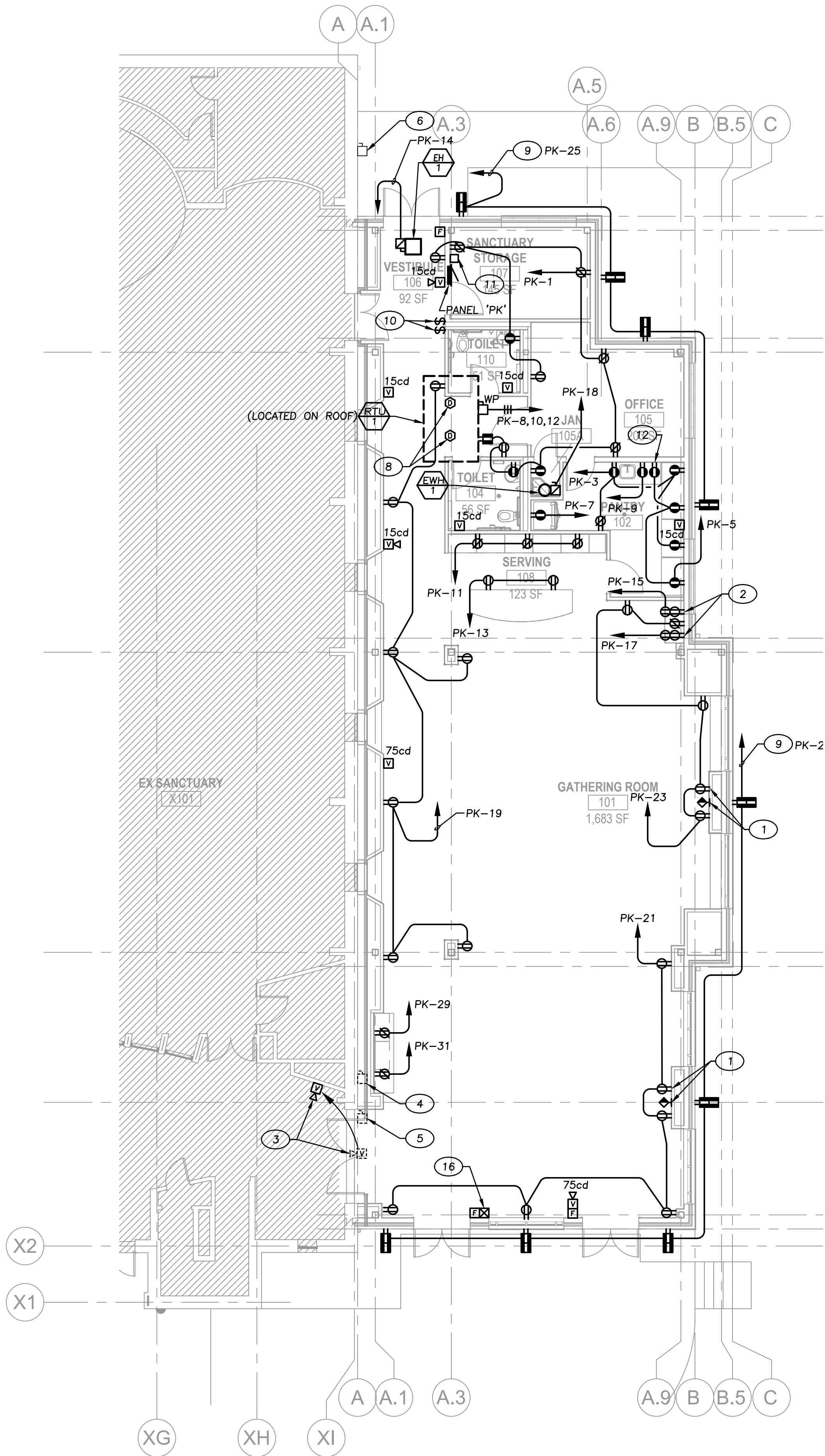
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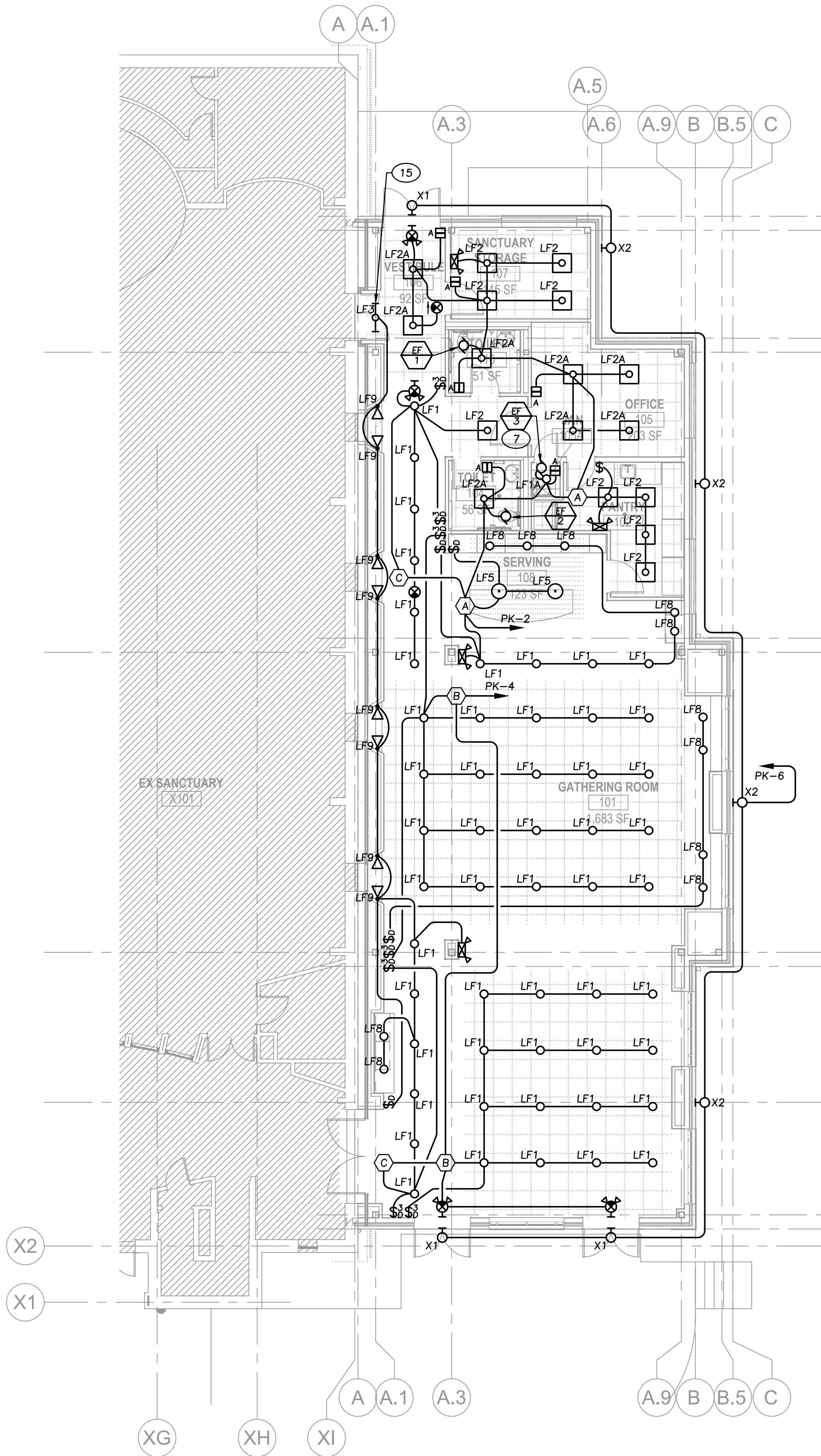
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FLOOR PLAN - POWER

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



FLOOR PLAN - LIGHTING

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

PLAN NOTES

- 1 MOUNT OUTLET 84" AFF FOR WALL MOUNTED TELEVISION.
- 2 MOUNT RECEPTACLE IN A/V CABINET BELOW COUNTERTOP.
- 3 RELOCATE AND RECONNECT EXISTING FIRE ALARM SYSTEM HORN/STROBE.
- 4 REMOVE EXISTING FUSED SAFETY SWITCH SERVING RELOCATED CONDENSING UNIT. PROVIDE NEW FSS AT RELOCATED UNIT. EXTEND EXISTING CIRCUIT AND RECONNECT AS REQUIRED. FIELD COORDINATE NEW UNIT LOCATION.
- 5 REMOVE AND RELOCATE EXISTING FUSED SAFETY SWITCH SERVING RELOCATED HEATPUMP OUTDOOR UNIT. EXTEND EXISTING CIRCUIT AND RECONNECT AS REQUIRED. FIELD COORDINATE NEW UNIT LOCATION.
- 6 EXISTING FUSED SAFETY SWITCH FOR CONDENSING UNIT.
- 7 EXHAUST FAN #EF-3. CONTROL BY DIVISION 15.
- 8 DUCT SMOKE DETECTOR - PROVIDE (1) IN THE SUPPLY AND (1) IN THE RETURN. COORDINATE EXACT REQUIREMENTS WITH AUTHORITY HAVING JURISDICTION.
- 9 CONNECT CIRCUIT VIA TOGGLE SWITCH IN VESTIBULE 106.
- 10 TOGGLE SWITCHES TO CONTROL EXTERIOR RECEPTACLES (TWO CIRCUITS).
- 11 7 DAY TIMECLOCK TO CONTROL TYPE 'X2' EXTERIOR LIGHTS, IN CONJUNCTION WITH NEW PHOTOCELL MOUNTED ON ROOF ABOVE. PROGRAM TIMECLOCK AS DIRECTED BY OWNER. TYPE 'X2' LIGHTS SHALL BE PHOTOCELL ON/TIMECLOCK OFF.
- 12 MOUNT THIS RECEPTACLE BELOW COUNTER.
- 13 CONNECT CIRCUIT VIA TIMECLOCK (PHOTOCELL ON/TIMECLOCK OFF).
- 14 CONNECT TO EXTERIOR LIGHTING CIRCUIT PK-6 AHEAD OF TIMECLOCK CONTROLS (TYPE 'X1' FIXTURES TO HAVE INTEGRAL PHOTOCELL CONTROL).
- 15 MOUNT FIXTURE ABOVE CEILING, TO ILLUMINATE STAINED GLASS TRANSLUM WINDOW.
- 16 HAND-OFF-AUTOMATIC SWITCH TO PROVIDE MANUAL CONTROL OF NEW ROOFTOP UNIT RTU-1. CONFIRM EXACT SWITCH LOCATION WITH FIRE MARSHAL.

GENERAL NOTES:

1. ALL RECEPTACLES WITHIN PANTRY SHALL BE GFCI PROTECTED IN ACCORDANCE WITH NEC 210.8. THE GROUND FAULT INTERRUPTER DEVICE SHALL BE READILY ACCESSIBLE.
2. ELECTRICAL DEVICES IN EXISTING WALLS TO REMAIN WHICH ARE NOT INDICATED ON THE PLANS SHALL REMAIN UNLESS NOTED OTHERWISE.
3. CONNECT EXIT SIGNS AND EMERGENCY LIGHTS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
4. EXHAUST FANS IN TOILET ROOMS SHALL BE CONNECTED TO CIRCUIT SERVING TOILET ROOM LIGHTS FOR POWER AND CONTROL VIA WALL SWITCH.



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REVISIONS

DATE NO. ISSUED FOR

| DATE | NO. | ISSUED FOR |
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PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

FLOOR PLAN - POWER & LIGHTING

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO.

SET DESCRIPTION



FOR PERMIT

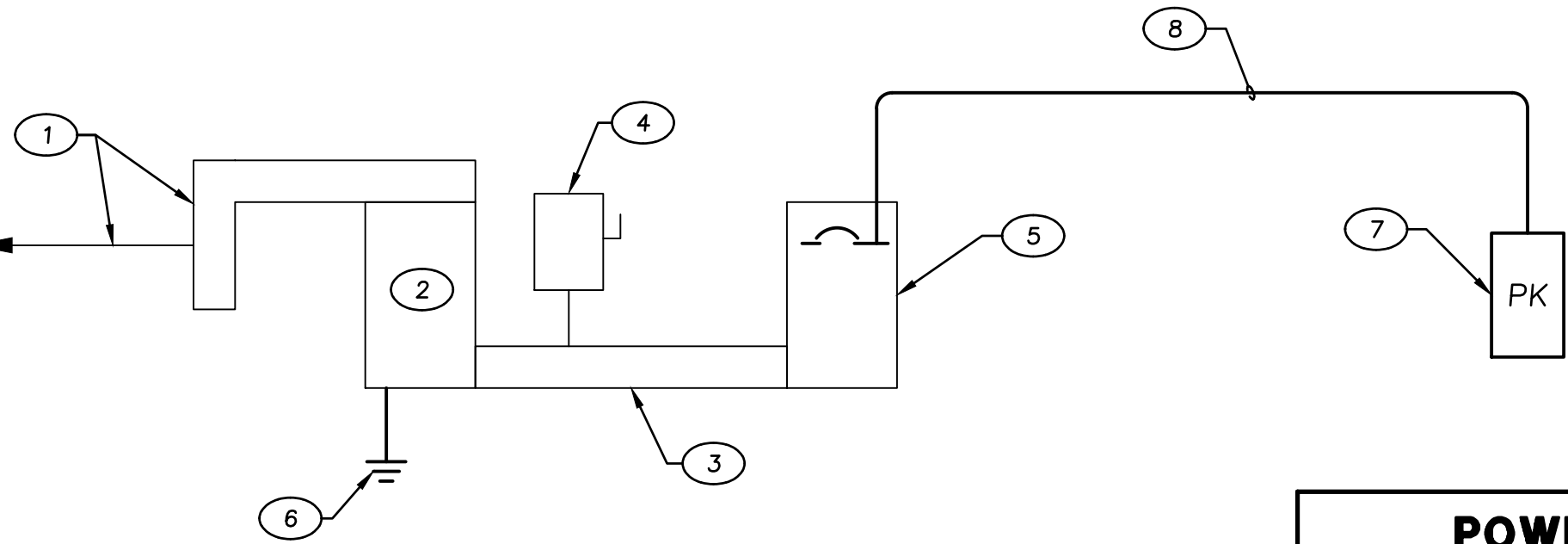
E-101

DATE

2024-04-23

| LIGHTING FIXTURE SCHEDULE | | | | | | | | | | | |
|--|---------------------|------------|----------------|--|------|-----------|-------|--------|-------------|--|-----------------------|
| MARK | FIXTURE DESCRIPTION | | | REMARKS | VOLT | MOUNTING | LAMPS | | INPUT WATTS | MANUFACTURER | TYPICAL LOCATION |
| | ILLUM | TYPE | DIFFUSER | | | | QTY | LUMENS | | | |
| LF1 | L.E.D. | DOWN LIGHT | CLEAR SPECULAR | 6" APERTURE, DIMMING | 120 | RECESSED | 1 | 3,000 | 32 | LIGHTOLIER #6R-P6R-DL-30-835-CL-Z10-U | GATHERING/ CORRIDORS |
| LF1A | L.E.D. | DOWN LIGHT | CLEAR SPECULAR | 6" APERTURE | 120 | RECESSED | 1 | 1,500 | 15 | LIGHTOLIER #6R-P6R-DL-15-835-CL-Z10-U | JANITOR'S CLOSET |
| LF2 | L.E.D. | 2' X 2" | FLAT LENS | THIN PROFILE | 120 | GRID | 1 | 2,000 | 16 | DAY-BRITE #2FP2-20L-835-5-D5-UNV-DIM | STORAGE |
| LF2A | L.E.D. | 2' X 2" | FLAT LENS | THIN PROFILE | 120 | GRID | 1 | 3,800 | 34 | DAY-BRITE #2FP2-38L-835-5-D5-UNV-DIM | PANTRY |
| LF3 | L.E.D. | 2' STRIP | LENS | | 120 | SURFACE | 1 | 2,400 | 21 | DAY-BRITE #SDS-2'-1224L-8CST-UNV | STAINED GLASS WINDOW |
| LF5 | L.E.D. | PENDANT | | REMOTE DRIVER, DIMMABLE TRIAC | 120 | SUSPENDED | 1 | 1,096 | 9 | ESTILUZ #T-3302S-LED9W-26BLK | SERVING |
| LF8 | L.E.D. | DOWN LIGHT | CLEAR SPECULAR | 3" APERTURE | 120 | RECESSED | 1 | 500 | 7 | LIGHTOLIER #3R-P3R-DL-05-935-CL-Z10-U | GATHERING |
| LF9 | L.E.D. | TRACK HEAD | | MONOPOINT, WHITE FINISH | 120 | MONOPOINT | 1 | 2,000 | 23 | LIGHTOLIER #LWW-2D-935-WH | STAINED GLASS WINDOWS |
| X1 | L.E.D. | WALL LIGHT | LENS | DARK GRAY FINISH, TYPE 4 DISTR. INTEGRAL EMERG BATTERY & PHOTOCELL | 120 | SURFACE | 1 | 2,862 | 22 | GARCOO #121-16L-400-NW-G4-4-EBPC-UNV-PCB-DGY | EGRESS DOORS |
| X2 | L.E.D. | WALL LIGHT | LENS | DARK GRAY FINISH, TYPE 2 DISTR. | 120 | SURFACE | 1 | 2,862 | 22 | GARCOO #121-16L-400-NW-G4-2-UNV-DGY | EXTERIOR WALLS |
| LIGHTING NOTES: | | | | | | | | | | | |
| 1. ALL LAMPS AND L.E.D. FIXTURES SHALL BE 80 COLOR RENDERING INDEX MINIMUM AND 3500 KELVIN TEMPERATURE RATING OR AS SELECTED BY THE ARCHITECT. CONTRACTOR SHALL SUBMIT LAMP TYPE INFORMATION WITH THE LIGHTING SHOP DRAWING SUBMITTAL. | | | | | | | | | | | |
| 2. ALL FIXTURES SHALL BE CAPABLE OF BEING DIMMED. COORDINATE METHOD OF DIMMING WITH CONTROLS PROVIDED. | | | | | | | | | | | |
| GENERAL FIXTURE NOTES: | | | | | | | | | | | |
| 1. FIXTURE MARK IN TYPICAL FOR ALL FIXTURES OF THE SAME SYMBOL TYPE WITHIN THE SAME ROOM OR AREA U.N.O. | | | | | | | | | | | |
| 2. FIXTURE CATALOG # ESTABLISHES THE MANUFACTURER'S SERIES # - COMPLETE CATALOG # SHALL BE DETERMINED BY THE SCHEDULE DESCRIPTION, PLAN NOTES AND THE SPECIFICATIONS. | | | | | | | | | | | |
| 3. THE CONTRACTOR SHALL WORK WITH THE LIGHTING AND CONTROLS MANUFACTURER TO TEST THE FINAL LIGHTING SYSTEM TO INSURE PROPER CALIBRATION AND OPERATION. | | | | | | | | | | | |

| EMERGENCY LIGHTING FIXTURE SCHEDULE | | | | | | | | | | | |
|--|-----------------|---------------------|-----------|------------------|---|------|-----------|-------|-------------------|--|------------------|
| MARK | DESIG. (NOTE 4) | FIXTURE DESCRIPTION | | | REMARKS | VOLT | MOUNTING | LAMPS | | MANUFACTURER | TYPICAL LOCATION |
| | | ILLUM | TYPE | SOURCE | | | | QTY | TYPE | | |
|  | EX1 | .ED | EX T | INTEGRAL BATTERY | HIGH IMPACT WHITE THERMO PLASTIC HOUSING, SINK FACE | | UNIVERSAL | - | FURNISHED W/ UNIT | 'EMERG-LITE' (P3EM) SERIES | EXITS |
| | EX2 | .ED | EX T | INTEGRAL BATTERY | HIGH IMPACT WHITE THERMO PLASTIC HOUSING, DOUBLE FACE | | UNIVERSAL | - | FURNISHED W/ UNIT | 'EMERG-LITE' (P3EM) SERIES | EXITS |
|  | EX3 | LED/ HALOGEN | EX T | INTEGRAL BATTERY | HIGH IMPACT WHITE THERMO PLASTIC HOUSING, SINK FACE UNIVERSAL MOUNT | | UNIVERSAL | - | FURNISHED W/ UNIT | 'EMERG-LITE' (P3EM) SERIES | EXITS |
| | EB1 | .ED | EMERGENCY | INTEGRAL BATTERY | TWIN HEAD, NO REMOTE, LEAD CALCIUM BATTERY, WHITE HOUSING. | | WALL | 2 | FURNISHED W/ UNIT | 'EMERG-LITE' (P3em) Compact #MPK10A-SEYES (6V, 10W-FEAS) | |
| EMERGENCY LIGHTING NOTES: | | | | | | | | | | | |
| 1. EXIT SIGNS SHALL HAVE DIRECTIONAL ARROWS AS INDICATED ON THE PLANS. | | | | | | | | | | | |
| 2. WEATHERPROOFING OF EXIT SIGN LETTERS WITH LOCAL CODES, EXISTING SIGN SHALL NOT EXCEED 5 WATTS PER FACE. | | | | | | | | | | | |
| 3. EXIT SIGNS AND EMERGENCY BATTERY PACKS ARE INDICATED BY SYMBOL ON THE PLANS IN LIEU OF LETTER DESCRIPTION. | | | | | | | | | | | |
| 4. EXIT SIGNS AND EMERGENCY BATTERY PACKS SHALL BE CONNECTED AHEAD OF LOCAL SWITCH CONTROL. | | | | | | | | | | | |
| 5. EXIT LIGHTS SHALL BE MOUNTED: (1) ON WALLS ABOVE DOOR WHERE POSSIBLE; (2) CEILING MOUNTED AND HIGHER THAN 9'-0" A.F.F. FOR (3) ON WALL TO THE SIDE OF THE DOOR AS HIGH AS POSSIBLE; WHEN CEILING IS TOO LOW, EXIT SHALL BE NO MORE THAN 1' 2" HORIZONTALLY FROM THE OPENING; (4) WHEN DEALING WITH H.C. CEILING, THE BOTTOM OF THE NEW EGRESS MARKINGS SHALL BE LOCATED AT THE VERTICAL DISTANCE OF NOT MORE THAN 80" ABOVE THE TOP EDGE OF THE EGRESS OPENING INTENDED FOR DESIGNATION BY THE MARKING. | | | | | | | | | | | |
| 6. TYPE 'E31' & 'E31B' EMERGENCY LIGHTING SHALL BE WALL MOUNTED AT 7'-0" A.F.F. OR 12" BELOW CEILING WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE, BUT NOT HIGHER THAN 9'-0" A.F.F.. | | | | | | | | | | | |



POWER RISER DIAGRAM

NO SCALE

NOTES:

- THIS DIAGRAM SHOWS A PORTION OF THE EXISTING DISTRIBUTION SYSTEM ONLY, AND DOES NOT INDICATE ALL EXISTING PANELS, FEEDERS, NOR DISTRIBUTION EQUIPMENT.
- EQUIPMENT AND FEEDERS INDICATED ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER RISER NOTES

- EXISTING SECONDARY SERVICE AND SERVICE WIREWAY.
- EXISTING 3 POLE, 1200 AMP MAIN SWITCH.
- EXISTING DISTRIBUTION WIRE TROUGH.
- EXISTING 3 POLE, 400 AMP FUSED SAFETY SWITCH.
- EXISTING MAIN DISTRIBUTION PANEL "MDP" (120/208 VOLT, 3 PHASE, 4 WIRE, 1200 AMP MLO). PROVIDE NEW 3 POLE, 200 AMP CIRCUIT BREAKER TO SERVE NEW PANEL "PK".
- EXISTING GROUND.
- NEW PANEL "PK" - SEE SCHEDULE ON THIS DRAWING.
- NEW FEEDER: 4 #3/0 AWG + #6 GROUND IN 2" CONDUIT.

| DISTRIBUTION PANEL MDP | | | | | | | | | | |
|------------------------|--------------|--------------|-------|-----------|---------------------|---------|----------|----------------------|------------------------|--|
| EXISTING PANEL | | | | | | | | | | |
| VOLTAGE: 120 / 208 | | | | | 1200 AMP MAIN LUGS | | | A.I.C.: 42 k | | |
| PHASE, WIRE: 3, 4 | | | | | | | | MOUNTED: SURFACE | | |
| CKT | SERVING | BREAKER POLE | FRAME | TRIP SETS | FEEDER SIZE PER SET | | | CONNECTED LOAD (KVA) | COMMENTS | |
| 1 | PANEL 'D' | 3 | 100 | 100 | | | | 14.4 | EXISTING C/B & CIRCUIT | |
| 2 | PANEL 'L' | 3 | 100 | 100 | | | | 15.1 | EXISTING C/B & CIRCUIT | |
| 3 | PANEL 'H' | 3 | 250 | 200 | | | | 29.5 | EXISTING C/B & CIRCUIT | |
| 4 | PANEL 'E1' | 3 | 250 | 200 | | | | 19.8 | EXISTING C/B & CIRCUIT | |
| 5 | BUSSED SPACE | | | | | | | | | |
| 6 | PANEL 'PK' | 3 | 250 | 200 | 1 | 4 # 3/0 | 1 # 6 2" | 41.4 | NEW C/B & CIRCUIT | |
| 7 | PANEL 'H3' | 3 | 250 | 225 | | | | 39.6 | EXISTING C/B & CIRCUIT | |
| 8 | PANEL 'B' | 3 | 250 | 225 | | | | 43.2 | EXISTING C/B & CIRCUIT | |
| 9 | PANEL 'K' | 3 | 250 | 225 | | | | 32.1 | EXISTING C/B & CIRCUIT | |
| 10 | PANEL 'A' | 3 | 250 | 225 | | | | 37.8 | EXISTING C/B & CIRCUIT | |
| 11 | SPARE | 3 | 250 | 225 | - | - | - | - | EXISTING C/B | |
| 12 | PANEL 'M' | 3 | 250 | 225 | | | | 44.3 | EXISTING C/B & CIRCUIT | |
| TOTAL KVA = 317.4 | | | | | | | | | | |
| DES/IGN AMPS = 881 | | | | | | | | | | |

| LIGHTING CONTROL SCHEDULE | | | | | |
|---|--|---------------|--------------------|-------------------|--|
| MARK | APPLICATION | LOCAL CONTROL | OCCUPANCY SENSOR | NOTES | COMMENTS |
| A | TYPICAL ROOM/ SPACE | MANUAL ON/OFF | DT (PIR/ US) | NOTES 1 THRU 4 | SYSTEM TO BE WATTSTOPPER OR APPROVED EQUIVALENT (NOTE 1) |
| B | TYPICAL ROOM/ SPACE WITH DAYLIGHT ZONE | MANUAL ON/OFF | DT W/ PHOTO-SENSOR | NOTES 1 THRU 5 | SYSTEM TO BE WATTSTOPPER OR APPROVED EQUIVALENT (NOTE 1) |
| C | CORRIDOR | AUTO ON/OFF | PIR BI-DIRECTIONAL | NOTES 1, 5, 6 & 7 | SYSTEM TO BE WATTSTOPPER OR APPROVED EQUIVALENT (NOTE 1) |
| GENERAL REQUIREMENTS AND SEQUENCE OF OPERATION NOTES: | | | | | |
| 1. LIGHTING WIRING SHOWN ON CONTRACT DRAWINGS ARE DIAGRAMMATIC FOR ESTABLISHING THE CONTROL ZONE TYPE ONLY. ALL CONTROL SYSTEMS SHALL BE COMPLETE TO INCLUDE ALL REQUIRED DEVICES, RELAYS AND CONTROL WIRING FOR A FULLY FUNCTIONING SYSTEM. ALL DEVICES AND COMPONENTS SHALL BE LOCATED IN ACCESSIBLE VENTILATED SPACES. PROVIDE FACTORY DRAWINGS OF THE SPECIFIC PROJECT LIGHTING PLANS TO INCLUDE ALL PROPOSED DEVICES, DETECTORS AND CONTROL WIRING FOR EACH SPACE. SUBMIT FACTORY LIGHTING CONTROL DRAWINGS FOR REVIEW & INCLUDE DATA SHEETS FOR EACH DEVICE TYPE TO INCLUDE DETECTION PATTERNS. OCCUPANCY CONTROL SYSTEMS SHALL BE WATTSTOPPER OR APPROVED EQUIVALENT. | | | | | |
| 2. ALL INTERIOR COMMERCIAL SPACES SHALL BE PROVIDED WITH LOCAL OCCUPANCY SENSOR CONTROLS IN ACCORDANCE WITH THE LATEST IECC AND LOCAL JURISDICTIONAL REQUIREMENTS. SYSTEM SHALL CONSIST OF TYPE AND QUANTITY OF SENSORS AS REQUIRED BY THE MANUFACTURER FOR THE RANGE OF COVERAGE REQUIRED AND TO PREVENT FALSE TRIPPING. SYSTEM SHALL BE MANUAL ON WITH AUTOMATIC OFF WITHIN 30 MINUTES OF THE LAST MOTION DETECTION. ROOMS WITH MULTIPLE SWITCH CONTROL ZONES SHALL HAVE COMMON OCCUPANCY SENSOR CONTROLS. (ALL SWITCHES PROVIDED MUST BE BACKLIT FOR VISIBILITY IN DARKENED ROOMS). | | | | | |
| 3. ALL INTERIOR SPACES SHALL HAVE LOCAL MANUAL ON/ MANUAL OFF CONTROLS. SWITCHES IN OCCUPANCY SENSOR CONTROLLED SPACES SHALL BE LOW VOLTAGE TYPE AND COMPATIBLE WITH THE OCCUPANCY SENSOR CONTROL SYSTEM. WHEN THE MANUAL SWITCH IS IN THE OFF POSITION THE OCCUPANCY SENSOR SHALL BE BYPASSED TO MAINTAIN LIGHTS OFF UNTIL MANUALLY TURNED ON. WHEN THE MANUAL SWITCH IS IN THE ON POSITION THE OCCUPANCY SENSOR SHALL ACTIVATE FOR MOTION DETECTION TO TURN LIGHTS ON IMMEDIATELY. THE LIGHTS SHALL TURN OFF AUTOMATICALLY WITHIN 30 MINUTES OF LAST MOTION DETECTION AND REMAIN OFF UNTIL MANUALLY TURNED ON TO REPEAT THE SEQUENCE (SEE NOTE 6 & 7 FOR EXCEPTIONS TO MANUAL CONTROLS). SPACES LESS THAN 800 SQUARE FEET MAY UTILIZE INTEGRAL WALL SWITCHES FOR MANUAL ON/OFF, OCCUPANCY SENSOR AND DAYLIGHT CONTROLS. | | | | | |
| 4. INTERIOR SPACES INDICATED WITH DIMMING SWITCHES SHALL BE PROVIDED WITH LOW VOLTAGE DIMMING SWITCHES COMPATIBLE WITH THE OCCUPANCY SENSOR SYSTEM. PROVIDE ALL NECESSARY CONTROL WIRING FROM CONTROLLER TO EACH FIXTURE FOR 0-10 VOLT FULL RANGE DIMMING. CONFERENCE, MEETING ROOMS, CLASSROOMS AND SPACES WHERE INDICATED SHALL INCLUDE FULL RANGE MANUAL SWITCHING CONTROL. | | | | | |
| 5. INTERIOR SPACES IN DAYLIGHT ZONES WITHIN 15 FOOT OF EXTERIOR GLAZING OR SKYLIGHT SHALL BE PROVIDED WITH PHOTOSENSOR CONTROLS WITH ADJUSTABLE SENSITIVITY. THE SYSTEM SHALL BE HOLD-OFF TYPE UNLESS REQUIRED OTHERWISE BY THE LOCAL JURISDICTION. SPACES LESS THAN 300SF IN DAYLIGHT ZONES MAY BE INTEGRAL TO THE WALL SWITCH TO INCLUDE OCCUPANCY SENSOR AND DIMMING (WHERE INDICATED). | | | | | |
| 6. NIGHTLIGHTS AND EMERGENCY BATTERY LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL CONTROLS AND AUTOMATIC CONTROLS FOR 24/7 OPERATION EXCEPT AS OTHERWISE INDICATED ON THE PLANS. | | | | | |
| 7. CORRIDORS AND GANG RESTROOMS DO NOT REQUIRE LOCAL ON/OFF CONTROLS AND WILL BE AUTOMATIC ON/OFF. | | | | | |
| ABBREVIATIONS: | | | | | |
| DS - DIMMER SWITCH FOR MANUAL ON/OFF CONTROL AND FULL RANGE 0-10 VOLT DIMMING (SEE SYMBOL LIST FOR TYPE) | | | | | |
| DT - DIAL TECHNOLOGY (PIR/ US) | | | | | |
| PIR - PASSIVE INFRARED MOTION DETECTION | | | | | |
| US - ULTRASOUND MOTION DETECTION | | | | | |
| TC - TIME CLOCK | | | | | |
| WVP - WEATHERPROOFWS | | | | | |
| WS - WALL SWITCH FOR MANUAL LOCAL ON/OFF CONTROL (SEE SYMBOL LIST FOR TYPE) | | | | | |
| UNO - UNLESS NOTED OTHERWISE | | | | | |
| SYMBOL LEGEND | | | | | |
| CONTROL SYSTEM TYPE (SEE SCHEDULE) | | | | | |
| SUBSCRIPT # INDICATES CIRCUITS TO BE CONNECTED TO ALL FIXTURES IN ZONE | | | | | |
| LETTER INDICATES MANUAL SWITCH CONTROL ZONE | | | | | |

| PANEL PK | | | | | | | | | | | | | | | |
|-------------------------------|----------------------|---|------|--|-----|-----|----|------------------|-----|------------------|---|------|--------------------|--------------|----|
| VOLTAGE: 120 / 208 | | | | 225 AMP MAIN LUGS | | | | A.I.C.: 10k | | MOUNTED: SURFACE | | | | | |
| PHASE, WIRE: 3 PH, 4 W | | | | | | | | | | | | | | | |
| CKT | SERVING | P | TRIP | QTY | AWG | KVA | PH | KVA | QTY | AWG | P | TRIP | SERVING | CKT | |
| 1 | REC - STORAGE | 1 | 20 | 2 | 12 | 1.6 | A | 0.8 | 2 | 12 | 1 | 20 | LTG - PANTRY | 4 | |
| 3 | REC - PANTRY | 1 | 20 | 2 | 12 | 0.6 | B | 1.6 | 2 | 12 | 1 | 20 | LTG - GATHERING | 4 | |
| 5 | REC - PANTRY | 1 | 20 | 2 | 12 | 0.6 | C | 0.2 | 2 | 12 | 1 | 20 | LTG - EXTERIOR | 6 | |
| 7 | REC - REFRIGERATOR | 1 | 20 | 2 | 12 | 0.8 | A | 5.6 | 3 | 3 | 3 | 10 | RTV - 1 | 8 | |
| 9 | REC - CEMAKER | 1 | 20 | 2 | 12 | 1.5 | B | 5.6 | | | | | | 12 | |
| 11 | REC - SERVING | 1 | 20 | 2 | 12 | 0.6 | C | 6.6 | | | | | | 12 | |
| 13 | REC - SERVING | 1 | 20 | 2 | 12 | 0.6 | A | 1.5 | 2 | 12 | 1 | 20 | HEATER BH-1 | 14 | |
| 15 | REC - A/V | 1 | 20 | 2 | 12 | 0.4 | B | | | | | | | SPARE | 16 |
| 17 | REC - A/V | 1 | 20 | 2 | 12 | 0.4 | C | 2.5 | 2 | 10 | 1 | 30 | WATER HEATER BWH-1 | 18 | |
| 19 | REC - GATHERING ROOM | 1 | 20 | 2 | 12 | 1.1 | A | | | | | | | SPARE | 20 |
| 21 | REC - GATHERING ROOM | 1 | 20 | 2 | 12 | 1.3 | B | | | | | | | SPARE | 22 |
| 23 | REC - GATHERING ROOM | 1 | 20 | 2 | 12 | 1.1 | C | | | | | | | SPARE | 24 |
| 25 | REC - EXTERIOR | 1 | 20 | 2 | 12 | 1.4 | A | | | | | | | BUSSED SPACE | 26 |
| 27 | REC - EXTERIOR | 1 | 20 | 2 | 12 | 1.8 | B | | | | | | | BUSSED SPACE | 28 |
| 29 | REC - GATHERING ROOM | 1 | 20 | 2 | 12 | 0.2 | C | | | | | | | BUSSED SPACE | 30 |
| 31 | REC - GATHERING ROOM | 1 | 20 | 2 | 12 | 0.2 | A | | | | | | | BUSSED SPACE | 32 |
| 33 | SPARE | 1 | 20 | | | | B | | | | | | | BUSSED SPACE | 34 |
| 35 | SPARE | 1 | 20 | | | | C | | | | | | | BUSSED SPACE | 36 |
| 37 | BUSSED SPACE | | | | | | A | | | | | | | BUSSED SPACE | 38 |
| 39 | BUSSED SPACE | | | | | | B | | | | | | | BUSSED SPACE | 40 |
| 41 | BUSSED SPACE | | | | | | C | | | | | | | BUSSED SPACE | 42 |
| TOTAL DEMAND KVA (PER PHASE): | | | | A: 12.7 B: 13.8 C: 11.9 DESIGN KVA: 41 | | | | DESIGN AMPS: 115 | | | | | | | |

ELECTRICAL SPECIFICATIONS

SECTION 16A - ELECTRICAL WORK

1. GENERAL
- A. The GENERAL and SPECIAL CONDITIONS listed under Division 1 shall govern this work where applicable.
- B. The Contractor shall provide labor, materials, equipment, and services necessary for the construction of the complete functioning electrical system.
- C. Labor and materials, although not specifically mentioned, but necessary for the completion of work and the successful operation of the electrical systems, shall be supplied as if specifically indicated.
- D. Materials and equipment installed as part of the permanent installation shall be new unless otherwise indicated or specified, and shall be approved by the Underwriter's Laboratories, Inc. for installation in each particular case where standards have been established.
- E. Wiring at finished areas shall be concealed in walls or above ceilings wherever possible. Exposed locations shall be pre-approved by the Architect prior to rough-in. Exposed wiring at finished areas shall be installed in conduit or surface metal raceway per architect's approval. Exposed surfaces shall be primed and finish painted as directed.
2. SCOPE
- A. The Contractor shall provide all labor and materials required to install a complete system of electrical work as indicated on the drawings and/or herein specified. Work includes but is not limited to the following:
- Power and lighting feeders, panelboards, safety switches.
 - Lighting system complete with lamps.
 - Final connections of mechanical equipment, electrical motors.
 - Extension of the existing Fire Alarm System.
3. REGULATIONS AND CODE REQUIREMENTS:
- A. Work shall conform to the requirements of the latest editions of the following codes, regulations and specifications:
- National Electrical Code (NFPA 70)
 - National Fire Protection Association (NFPA)
 - Underwriters Laboratories, Inc.
 - International Building Code
 - Local and state requirements
4. CERTIFICATIONS:
- A. The Contractor shall, at his expense, have an inspection made by the Electrical Inspection department of the complete electrical installation and shall deliver certificate approval of the completed work.
5. PERMITS:
- A. The contractor shall obtain and pay for all permits required for his work.
6. SHOP DRAWINGS:
- A. The Contractor shall submit shop drawings and manufacturer's catalog cuts showing all details of equipment to be furnished.
7. GUARANTEE:
- A. In addition to the guarantee obligations specified in other divisions, the Contractor shall guarantee the complete electrical system installation free from all mechanical and electrical defects for the period of one year from date of final acceptance by the Owner.
8. DRAWINGS AND SPECIFICATIONS:
- A. The drawings are intended to show the general arrangement of outlets. Door swings shall be checked for arrangement of switches, installed on the latch side. Contractor shall check structural plans, mechanical plans and specifications so that he may coordinate his work with these trades.
- B. Outlets shall be located uniformly with respect to beams, partitions, ducts, openings, etc., and the general locations shall be checked with the Architect before installing. Should there be any interference between the electrical outlets and other trades, the contractor shall notify the Architect so that the proper location may be decided upon. No outlets shall be installed in back of ducts, grilles, or inaccessible places.
9. GROUNDING:
- A. Grounding of conduit, panelboards, boxes, cabinets and equipment shall conform to the requirements of the latest edition of the National Electric Code.
10. DISTRIBUTION EQUIPMENT:
- A. Panelboards shall be equivalent to Square D as follows:
- Receptacle panels (208/120V): NQDD series Panels shall be fully rated for the indicated short circuit rating indicated. All affected panels shall be labeled & provided with a type written circuit directory.
- B. Fuses protecting motors shall be dual element time delay type as recommended by the supplier.

SECTION 16B - EXISTING CONDITIONS/DEMOLITION WORK

11. EQUIPMENT CONNECTIONS AND MOTOR STARTERS:
- A. Power wiring shall be installed and connected under this section, unless already provided on the equipment.
12. CONDUCTORS:
- A. Secondary conductors shall be copper, 98% conductivity covered with 600 volt standard type THW or THHN insulation.
- B. Conductors shall have the following information surface printed throughout the entire length of the conductors.
- Cable manufacturer
 - Trade name of wire
 - Size of wire
 - Type of insulation
 - Voltage classification
- C. Wire shall be in strict accordance with the latest edition of the National Electrical Code.
- D. Wire number 8 and larger shall be stranded.
- E. A color coding system to match the existing shall be used throughout the building network of feeders and circuits.
13. WIRING METHODS:
- A. Feeders rated 100A or greater shall be conductors ran in conduit.
- B. Branch circuit wiring shall be type MC cable minimum.
- C. Branch circuit wiring in exposed areas shall be installed in EMT conduit
- D. Circuits for computer outlets & dimming shall be connected with dedicated neutral conductors.
14. OUTLET BOXES:
- A. Outlet boxes in concealed locations shall be galvanized stamped steel of sizes required by the NEC.
- B. Boxes in exposed locations shall be cast with gasketed cover.
- C. Provide covers for boxes.
15. PULL-BOXES AND JUNCTION BOXES:
- A. Pull-boxes shall be provided as shown or wherever required to facilitate pulling of wires and cables, or as junction points. Such boxes shall be installed in accessible locations.
16. WIRING DEVICES:
- A. Receptacles & switch plates shall have ivory finish U.N.G. & furnished as follows:
- Duplex receptacles: Leviton #5362 (NEMA 5-20R)
 - GFI receptacles: Leviton #6898 (NEMA 5-20R)
 - Toggle Switches: Leviton #1221 Series
 - Wall Plates: 0.032" thick stainless steel (nonmagnetic type 302), or thermoplastic.
 - Toggle Switches: Leviton #54501-W Series
 - 3-way Toggle Switch: Leviton #54503-W Series
 - Dimming Switches: Lutron Nova NT or equivalent.
- Provide wattage required for fixtures controlled.
- B. 20 AMP rated receptacles shall be used for dedicated 20 AMP circuit connections per NFPA 70 requirements.
17. LIGHTING FIXTURES:
- A. The Contractor shall provide labor and materials, equipment and services necessary for and incidental to the installation of lighting fixtures.
- B. Provide a fixture for each outlet shown on the drawings. Fixtures shall be complete with lamps, lenses, glassware, mounting brackets, etc., for a complete assembly. Fixtures shall be UL listed.
18. STARTERS:
- A. Starters shall be Square 'D' class 8538 combination starter and fused disconnect switch. Coordinate overloads and controls with motor supplier. Manual motor starters shall be Square 'D' class 2510 with pilot lamp.
19. COMMUNICATION SYSTEM:
- A. Contractor to coordinate outlet box and conduit stubs into ceiling space with owners voice and CATV contractor.
- B. Contractor to coordinate and assure all wiring in installed ceiling space to be ran in conduit or be plenum ceiling rated.

SECTION 16C - FIRE ALARM SYSTEM

1. GENERAL
- A. The contractor shall furnish and install labor, materials, equipment and services necessary for an extension of the existing Fire Alarm System as specified herein and shown on plans. All new devices shall be completely compatible with the existing F/A system, and shall be wired, connected and left in first class operating condition. Equipment shall match the existing manufacturer, and shall be approved by the Underwriters Laboratory. All equipment and devices required for the full functioning of the system, including booster/extender panels, batteries, relays, modules, wiring, cabinets, etc., shall be approved.
- B. The System shall comply with the latest applicable sections of the following codes, regulations, and guidelines:
- National Fire Protection Association (NFPA)
 - Underwriters Laboratory, Inc. (UL)
 - Factory Mutual Approval Guide (FM)
 - American Insurance Association Fire Protection Code
 - International Building Code
 - Applicable State & Local Jurisdiction Regulations, Amendments, and Codes
 - American with Disabilities Act (ADA)
- C. The contractor shall submit fire alarm system shop drawings to the local authority having jurisdiction for complete review and approval. It shall be the contractor's responsibility to obtain approved shop drawings prior to starting fire alarm work.
2. DUCT SMOKE DETECTORS:
- A. Duct smoke detectors to be photoelectric type with sampling tube operating on the light-scattering, photo-diode principle. Detectors shall be furnished with insect screen and designed to ignore invisible airborne particles or smoke densities below the factory set alarm point (no radioactive materials shall be used).
- B. The control panel shall be capable of alarm verification of each detector in accordance with NFPA limitations. The detector operating power shall be derived from the control panel.
- C. Furnish a remote test alarm indicator station where a detector is located above a ceiling. The station shall be flush in wall closest to the detector location or as indicated on the drawings.
- D. Detectors shall be furnished and connected under Division 16 and installed in the duct under Division 15 in strict accordance with NFPA 90A & 72E. The fire alarm supplier shall verify detector locations and arrangement with local jurisdiction and state fire protection authorities prior to installation.
- E. Auxiliary contacts shall be provided for each detector to control the HVAC unit. Connections shall be coordinated with the Automatic Temperature Control (ATC) work.
3. ALARM DEVICES:
- A. Fire alarm system audible/visual signals shall be flush mounted horns with strobe lights. A common housing shall be utilized.
- B. Strobes shall be Xenon type in accordance with ADA (NFPA 72) requirements.
- C. Smoke detectors shall be photoelectric type.
- D. Flow and tamper switches shall be furnished & installed under division 15. Connection to the fire alarm system shall be completed under division 16.
4. HVAC CONTROLS:
- A. Furnish and install H-O-A switches to control all HVAC equipment in accordance with NFPA 90A.
- B. Switches shall be arranged and located adjacent to the lobby annunciator as directed by the local authorities. Switches shall be installed in a lockable cabinet with key to match fire alarm control panels and/or as acceptable by the local authorities.

MECHANICAL EQUIPMENT SCHEDULE

| MARK | SERVING | VOLT | PH | LOAD | PROVISIONS AT UNIT | | | CONTROL |
|---|-------------------|------|----|----------|--------------------|-------|-----------|-------------|
| | | | | | DEVICE | FRAME | FUSE SIZE | |
| GAS-FIRED ROOFTOP UNIT | | | | | | | | |
| RTU-1 | ADDITION (NOTE 4) | 208 | 3 | 64 MCA | FSS | 100 | 90 | DIV. 15 |
| EXHAUST FANS | | | | | | | | |
| EF-1 | TO LET ROOMS | 120 | 1 | 16 WATTS | - | - | - | WALL SWITCH |
| EF-2 | TO LET ROOMS | 120 | 1 | 16 WATTS | - | - | - | WALL SWITCH |
| EF-3 | JANITOR'S CLOSET | 120 | 1 | 16 WATTS | - | - | - | DIV. 15 |
| ELECTRIC HEATER | | | | | | | | |
| EH-1 | CEILING HEATER | 120 | 1 | 1.5 KW | NFSS | 30 | - | DIV. 15 |
| ELECTRIC WATER HEATER | | | | | | | | |
| EWH-1 | JANITOR'S CLOSET | 120 | 1 | 2.5 KW | NFSS | 30 | - | DIV. 15 |
| GENERAL NOTES: | | | | | | | | |
| 1. EQUIPMENT INDICATED ABOVE IS FURNISHED & INSTALLED UNDER ANOTHER DIVISION OF THE WORK. DIVISION 16 TO MAKE ELECTRICAL PROVISIONS AS INDICATED. | | | | | | | | |
| 2. FUSE SIZE PER MANUFACTURER'S RECOMMENDATIONS. | | | | | | | | |
| 3. ALL EXTERIOR SWITCHES AND SAFETY SWITCHES TO BE NEMA 3R TYPE. | | | | | | | | |
| 4. ADDITIONALLY CONNECT RTU-1 TO H-O-A SWITCH AT MAIN ENTRANCE OF ADDITION. | | | | | | | | |
| EQUIPMENT MARK | | | | | | | | |
| RTU ← EQUIPMENT TYPE | | | | | | | | |
| ← EQUIPMENT NUMBER | | | | | | | | |
| DC - DIRECT CONNECTION | | | | | | | | |
| DIV. 15 - MECHANICAL SCOPE OF WORK (DIVISION 15) | | | | | | | | |
| CFSS - COMBINATION FUSED STARTER SAFETY SWITCH | | | | | | | | |
| FSS - FUSED SAFETY SWITCH | | | | | | | | |
| MCA - MINIMUM CIRCUIT AMPS | | | | | | | | |
| NFSS - NON FUSED SAFETY SWITCH | | | | | | | | |
| MTS - MOTOR RATED TOGGLE SWITCH | | | | | | | | |
| SR - SIMPLEX RECEPTACLE | | | | | | | | |
| TC - TIME CLOCK | | | | | | | | |
| TMS - THERMAL MANUAL MOTOR STARTER | | | | | | | | |
| TSTAT - LINE VOLTAGE THERMOSTAT | | | | | | | | |
| WP - WEATHERPROOF | | | | | | | | |
| WS - WALL SWITCH | | | | | | | | |



COMcheck Software Version 4.1.5.1

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: St. Pius X - Addition
Project Type: Addition

Construction Site: 14710 Annapolis Road, Bowie, MD 20715
Owner/Agent:
Designer/Contractor: SRBR Engineers, Inc., 757 Frederick Road, Suite 300, Catonsville, MD 21228

Allowed Interior Lighting Power

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B X C) |
|--|-----------------------|----------------------------|----------------------------|
| 1-Church addition (Religious Building) | 3638 | 0.94 | 3694 |
| | | Total Allowed Watts = 3694 | |

Proposed Interior Lighting Power

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps / Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|----------------------|-----------------------------|--------------------|--------------|
| 1-Church addition (Religious Building) | | | | |
| LED 1: LFL LED downlight LED Other Fixture Unit 36W: | 1 | 52 | 32 | 1664 |
| LED 1 copy 1: LFLA LED downlight LED Other Fixture Unit 36W: | 1 | 1 | 15 | 15 |
| LED 3: LFL 2' x 2' LED troffer LED Panel 19W: | 1 | 9 | 16 | 144 |
| LED 3 copy 1: LFLA 2' x 2' LED troffer LED Panel 33W: | 1 | 8 | 34 | 272 |
| LED 5: LFL 2' LED strip LED Linear 20W: | 1 | 1 | 21 | 21 |
| LED 1 copy 1: LFL LED downlight LED Other Fixture Unit 6.5W: | 1 | 11 | 7 | 77 |
| LED 7: LFL LED monopoint flood LED PAR 20W: | 1 | 8 | 23 | 184 |
| | | Total Proposed Watts = 2377 | | |

Interior Lighting PASSES: Design 36% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Donald Gray, Project Engineer
Name - Title
Signature
Date: December 21, 2023

Project Title: St. Pius X - Addition
Data filename: M:\SRBR\23002\Calcs\Lighting\Interior\Ltg-COMcheck.cck
Report date: 12/21/23
Page: 1 of 6



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 22792, Expiration Date: 08-04-2024."

FOR PERMIT 04/23/2024

SRBR
MEP Consulting Engineers since 1939

757 Frederick Road Suite 300 - Catonsville, Maryland 21228
Phone: 410-869-7382 Web: www.SRBRengineers.com

SRBR No: 23002

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OWNER / CLIENT

St. Pius X Catholic Church

14710 Annapolis Rd, Bowie, MD 20715

MEP Engineer

SRBR Engineers

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Baltimore, MD 21228
(410) 869-7282

Structural Engineer

Watkins Partnership

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Bowie, MD 20716
301-249-0974

Civil/Site

Atwell

11721 Woodmore Rd, Suite 200
Mitchellville, MD 20721
301.430.2000

REVISIONS

| DATE | NO. | ISSUED FOR |
|------|-----|------------|
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| | | |

PROJECT NAME

St. Pius X Catholic Church
Addition

PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

PROJECT NUMBER

MD22-30

SHEET TITLE

ELECTRICAL SPECIFICATIONS

DRAWN BY

SRBR

CHECKED BY

SRBR

SHEET NO.

SET DESCRIPTION

FOR PERMIT

E-301

DATE

2024-04-23