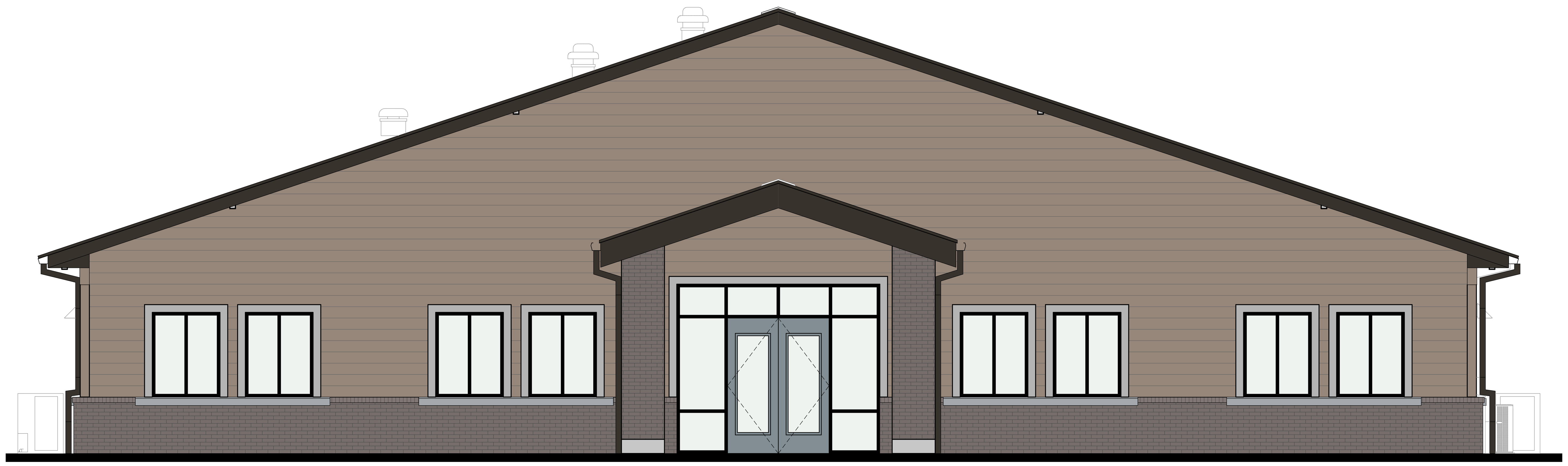
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

BGW ARCHITECTS	**ARCHITECTURAL:** BGW ARCHITECTS, 2327 GRANT AVE., OGDEN, UT 84401, CONTACT: JOSH FELIX, PHONE: 800-552-7137 X1069, E-MAIL: JFELIX@BGWSERVICES.COM
RYJ	**GENERAL CONTRACTOR:** RICHARD Y. JOHNSON & SON, INC., 18404 JOHNSON ROAD, LINCOLN, DE 19960, CONTACT: BRIAN BASSETT, PHONE: 302-542-7315, E-MAIL: BBASSETT@RYJSON.COM
DELMARVA CHRISTIAN	**OWNER:** DELMARVA CHRISTIAN SCHOOL, 21777 SUSSEX PINES RD, GEORGETOWN, DE 19947, CONTACT: MATT KWIATKOWSKI, PHONE: 302-856-4040, E-MAIL: MKWIATKOWSKI@DELMARVACHRISTIAN.COM
PILOTTOWN ENGINEERING	**STRUCTURAL:** PILOTTOWN ENGINEERING INC, 17585 NASSAU COMMONS BLVD, LEWES, DE 19958, CONTACT: JIM BAKER, PHONE: 302-650-5207, E-MAIL: N/A
ELEN CONSULTING	**ELECTRICAL:** ELEN CONSULTING INC., 9150 CHESAPEAKE DR. SUITE 220, SAN DIEGO, CA 92123, CONTACT: ANTON NATHANSON, PHONE: 619-550-1085, E-MAIL: ANATHANSON@ELENCONSULTING.COM
Shakespeare ENGINEERING	**MECH/ELEC/PLUMB:** SHAKESPEARE ENGINEERING, 4241 SOUTH RIVER RD., STE. B, ST. GEORGE, UT 84790, CONTACT: BRAD SHAKESPEARE, PHONE: 801-613-1419, E-MAIL: BRAD@SHAKESPEARE-ENG.COM
Pennoni	**CIVIL:** PENNONI, 18072 DAVIDSON DRIVE, MILTON, DE 19968, CONTACT: MARK DAVIDSON, PHONE: 302-684-8030, E-MAIL: MDAVIDSON@PENNONI.COM
CORNERSTONE BUILDING SUPPLY	CORNERSTONE BUILDING SUPPLY IS PROVIDING A WIDE VARIETY OF BUILDING MATERIALS, FURNISHINGS, CLASSROOM SUPPLIES, AND RECREATIONAL EQUIPMENT FOR THIS PROJECT. SEE SHEET A401 FOR MORE DETAILS. 2327 GRANT AVE., OGDEN, UT 84401, CONTACT: ERNIE ARCHULETA, PHONE: 800-552-7137 X1388, E-MAIL: EARCHULETA@MYCORNERSTONESUPPLY.COM



EXTERIOR ELEVATION

REV0 FOR PRICING 4/4/2025

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NOTE TO ALL CONTRACTORS:
THE MATERIALS AND LABOR COVERED BY THIS CONTRACT MUST CONFORM TO THE SAFETY ORDERS OF THE STATE, OSHA, AND THE DIVISION OF WORKER'S COMPENSATION.

SUBCONTRACTOR RESPONSIBILITY:
ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR MEETING THE REQUIREMENTS OF ALL CURRENT APPLICABLE BUILDING CODES AND ENFORCEMENT AGENCIES. FURTHER, TO MEET THE REQUIREMENTS OF ANY BUILDING DEPARTMENT, FIRE MARSHAL, OR ANY OTHER BUILDING CODE ENFORCEMENT OFFICER.

RECORD DRAWINGS AND MAINTENANCE MANUALS:
CONTRACTOR AND MAJOR SUBCONTRACTORS SHALL PROVIDE AND MAINTAIN A COMPLETE AND ACCURATE "AS BUILT" SET OF PRINTS FOR THEIR PARTICULAR TRADE. INDICATE CLEARLY AND CORRECTLY ALL WORK INSTALLED DIFFERENTLY FROM THAT SHOWN ON THE CONTRACT DRAWINGS AND WORK WHICH MAY BE ADDED TO OR DELETED FROM THE CONTRACT. KEEP RECORD DRAWINGS UP TO DATE AS WORK PROGRESSES. LOCATE ALL STUB OUTS, SERVICE, OR FEEDER CONDUITS IN OR BELOW SLABS OR GRADE, BY PLAN DIMENSIONS AND ELEVATION. SHOW INVERT ELEVATIONS AT ALL BREAKS IN GRADE AND PIPE SIZES FOR ALL WATER AND GAS LINES. SHOW ALL MAIN SHUT OFF VALVES PLAINLY. ALL CHANGES ARE TO BE SHOWN ON BLUE PRINTS AND TRANSMITTED TO THE ARCHITECT VIA THE GENERAL CONTRACTOR. GENERAL AND MAJOR SUBCONTRACTORS SHALL PROVIDE TO OWNER A MANUAL OF ALL REQUIRED MAINTENANCE INSTRUCTIONS FOR THIS PRODUCT OR EQUIPMENT ALONG WITH THE SUPPLIER OR SUBCONTRACTOR NAME, ETC. THE RECORD DRAWINGS AND MAINTENANCE MANUALS ARE REQUIRED PRIOR TO FINAL PAYMENT TO THE GENERAL CONTRACTOR OR HIS SUBCONTRACTORS.

CHANGES IN WORK - NOTE TO ALL CONTRACTORS:
CONTRACTOR SHALL BEAR ALL RESPONSIBILITY FOR MODIFICATIONS REQUIRED IN ARCHITECTURAL, STRUCTURAL, ELECTRICAL, OR PLUMBING SYSTEMS DUE TO SUBSTITUTION OF EQUIPMENT.

NOTE TO ALL CONTRACTORS:

A WORD ABOUT BUILDING GOD'S WAY AND HOW THE CONSTRUCTION IS BEING COMPLETED:
THE BGW PROGRAM IS FAR DIFFERENT THAN ANY OTHER PROCESS FOR CONSTRUCTING BUILDINGS. CHURCHES AND CHRISTIAN SCHOOLS ARE THE FOUNDATION AND FABRIC OF OUR COMMUNITIES AND WE MUST DO EVERYTHING POSSIBLE TO "STRETCH" THE DOLLARS GOD HAS GIFTED TO US IN ORDER TO BE THE BEST STEWARDS POSSIBLE OF THE MONEY THAT IS GIVEN OR BORROWED FOR THE PURPOSE OF CONSTRUCTION OF THIS PROJECT.

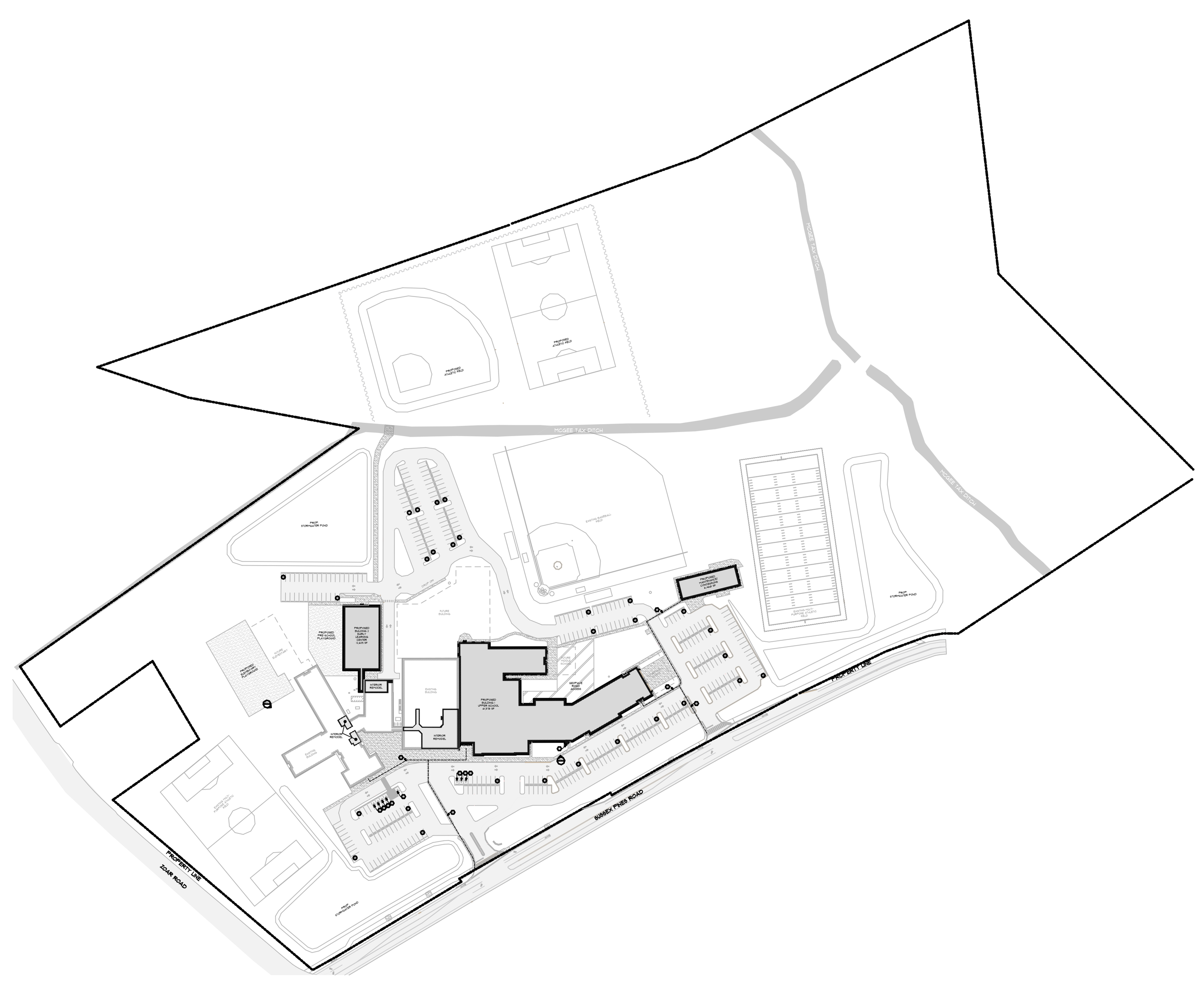
THIS PROJECT IS BEING COMPLETED WITH DONATED FUNDS AND GIFT IN KIND FROM THE CONSTRUCTION COMMUNITY. NATIONAL SUPPLIERS ARE HELPING ON THIS MATTER BY REDUCING THEIR COSTS SIGNIFICANTLY ON MANY OF THE MATERIALS. THESE MATERIALS WILL BE SOLD DIRECTLY TO THE OWNER AND ARE SHOWN IN THIS SET OF DRAWINGS AS SUPPLIED BY OWNER OR SUPPLIED BY CORNERSTONE SUPPLY. MANY FIRMS IN THE CONSTRUCTION INDUSTRY ARE HELPING WITH THIS PROJECT BY REDUCING THEIR FEES SUBSTANTIALLY. AS WE ALL WORK TOGETHER, WE ARE GIVING THIS PROJECT THE OPPORTUNITY TO CONSTRUCT THIS BUILDING WITHIN AVAILABLE FUNDS.

AS CONSTRUCTION IS UNDERWAY IT IS THE INTENT OF THE MINISTRY TO BE A STRONG WITNESS FOR CHRIST ON THE JOB SITE WITH MANY PROGRAMS DURING THE CONSTRUCTION TIME FRAME THAT IMPACT THOSE THAT ARE PARTICIPATING IN THIS PROJECT. IT IS THE DESIRE OF ALL INVOLVED TO HONOR GOD IN ALL DECISIONS THAT ARE MADE CONCERNING THIS PROJECT.

ABBREVIATIONS	
A.F.F.	ABOVE FINISHED FLOOR
B.O.	BOTTOM OF
B.O.B.	BOTTOM OF BEAM
℄	CENTERLINE
COL	COLUMN
EL	ELEVATION
E.O.S.	EDGE OF STUD
E.W.C.	ELECTRIC WATER COOLER
F.F.	FINISHED FLOOR
F.F. EL	FINISHED FLOOR ELEVATION
F.H.G.B.	FUL HEIGHT GYP BOARD
F.R.P.	FIRE RESISTANT PANEL
GA	GAUGE
G.C.	GENERAL CONTRACTOR
GYP	GYPSUM BOARD
HORIZ	HORIZONTAL
INSUL	INSULATION
MBM	METAL BUILDING MANUFACTURE
MAX	MAXIMUM
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MIN	MINIMUM
N.T.S.	NOT TO SCALE
O/	OVER
O.C.	ON CENTER
REF	REFERENCE
SIM	SIMILAR
SL	SLAB LINE
T.O.	TOP OF
T.O.B.	TOP OF BEAM
T.O.F.F.	TOP OF FINISHED FLOOR
T.O.S.	TOP OF SLAB
T.S.	TUBE STEEL
TYP	TYPICAL
VERT	VERTICAL
W.C.	WATER CLOSET
W/	WITH
W/O	WITHOUT

SYMBOL LEGEND	
(1) DETAIL TITLE, SCALE: 1/8"=1'-0"	DETAIL LABEL
3 / A302	DETAIL ID
2 / A301	SECTION ID W/CUT LINE
1 / A201	ELEVATION ID
A	GRID ID
N	TRUE NORTH ARROW
1AA	WALL TYPE
101A	DOOR LABEL
W2	WINDOW LABEL
ROOM NAME 101	ROOM ID
1	ADDENDUM/REVISION ID
20	KEYED NOTE
MATCH LINE SEE #/A###	MATCH LINE

NOTE FOR GENERAL, MECHANICAL, ELECTRICAL, PLUMBING AND ALL OTHER SUBCONTRACTORS: ALL CONTRACTORS ARE REQUIRED TO REVIEW ALL SHEETS OF THESE DRAWINGS AND ALL SECTIONS OF THE PROJECT MANUAL AND INCLUDE THEIR PROVISIONS IN THEIR ESTIMATE. THIS SHALL INCLUDE THIS COVER SHEET, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL.



ARCHITECTURAL SITE PLAN

VICINITY PLAN

DEFERRED SUBMITTAL LIST
1. FIRE SPRINKLER SYSTEM PER 903.2.1.3
2. FIRE ALARM SYSTEM PER 907.2.1.1

NOTES:
1. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL BNOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
2. PLANS FOR THE DESIGN AND INSTALLATION OF THE FIRE PROTECTION SYSTEM(S) ARE A SEPARATE SUBMITTAL AND SHALL BE SUBMITTED AND APPROVED, PRIOR TO ANY INSTALLATION WORK.

BGW ARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

PROJECT: DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER
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BGW ARCHITECTS | 2327 GRANT AVE. - OGDEN, UT 84401 | PH: 800-552-7137 | WWW.BGWSERVICES.COM

SEAL:

SHEET TITLE: COVER SHEET

ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER: G001

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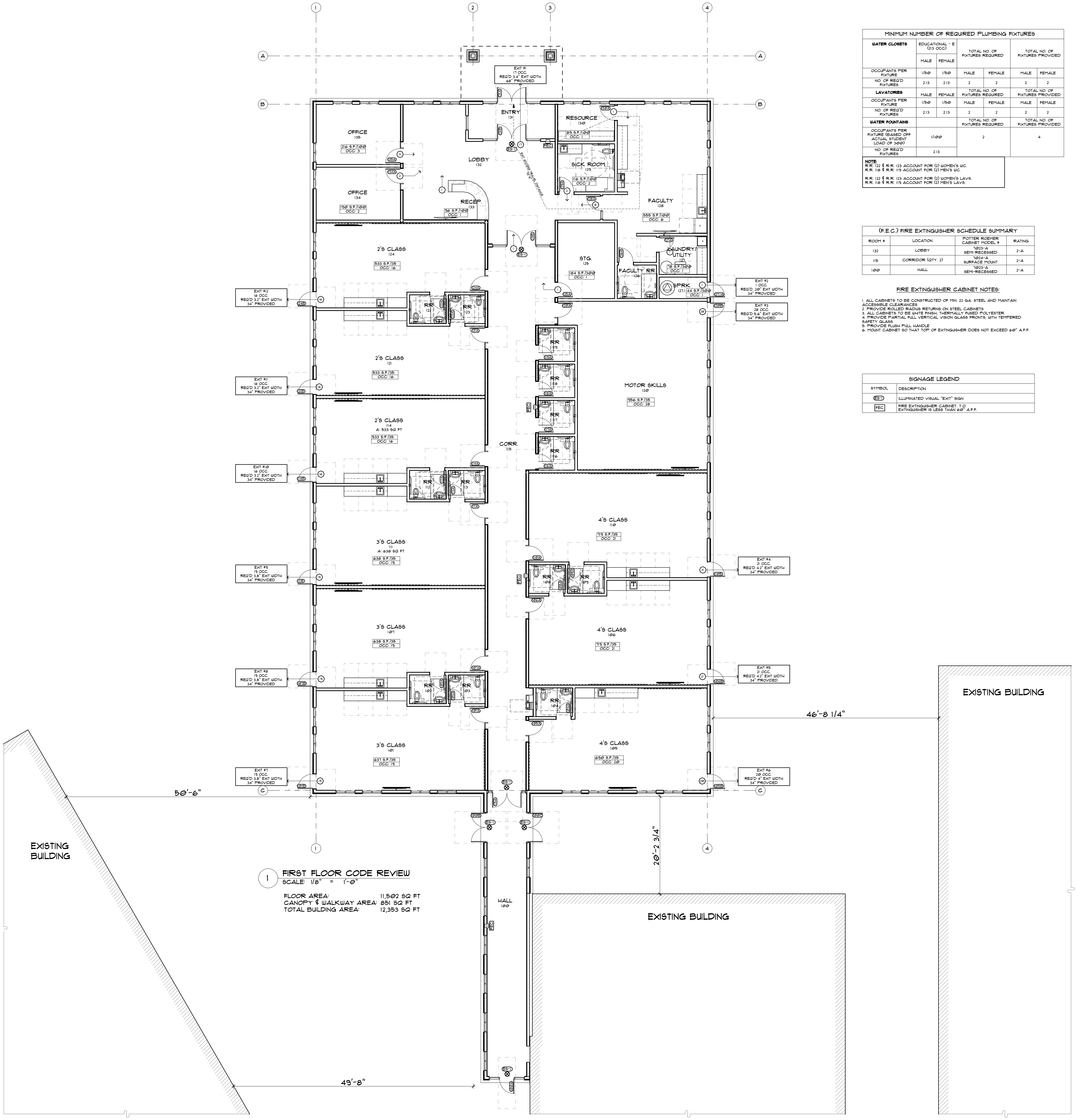

1 FIRST FLOOR CODE REVIEW

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

FLOOR AREA: 11,502 SQ FT
CANOPY & WALKWAY AREA: 851 SQ FT
TOTAL BUILDING AREA: 12,353 SQ FT

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

WATER CLOSETS	EDUCATIONAL - E (213 OCC)		TOTAL NO. OF FIXTURES REQUIRED		TOTAL NO. OF FIXTURES PROVIDED	
	MALE	FEMALE				
OCCUPANTS PER FIXTURE	1/50	1/50	MALE	FEMALE	MALE	FEMALE
NO. OF REQ'D FIXTURES	2.13	2.13	2	2	2	2
LAVATORIES	MALE	FEMALE	TOTAL NO. OF FIXTURES REQUIRED		TOTAL NO. OF FIXTURES PROVIDED	
OCCUPANTS PER FIXTURE	1/50	1/50	MALE	FEMALE	MALE	FEMALE
NO. OF REQ'D FIXTURES	2.13	2.13	2	2	2	2
WATER FOUNTAINS			TOTAL NO. OF FIXTURES REQUIRED		TOTAL NO. OF FIXTURES PROVIDED	
OCCUPANTS PER FIXTURE (BASED OFF ACTUAL STUDENT LOAD OF 300)	1/100		2		4	
NO. OF REQ'D FIXTURES	2.13					

NOTE:
R.R. 122 & R.R. 123 ACCOUNT FOR (2) WOMEN'S WC.
R.R. 118 & R.R. 119 ACCOUNT FOR (2) MEN'S WC.

R.R. 122 & R.R. 123 ACCOUNT FOR (2) WOMEN'S LAVS.
R.R. 118 & R.R. 119 ACCOUNT FOR (2) MEN'S LAVS.

(F.E.C.) FIRE EXTINGUISHER SCHEDULE SUMMARY

ROOM #	LOCATION	POTTER ROEMER CABINET MODEL #	RATING
132	LOBBY	7023-A SEMI-RECESSED	2-A
115	CORRIDOR (QTY. 2)	7024-A SURFACE MOUNT	2-A
100	HALL	7023-A SEMI-RECESSED	2-A

FIRE EXTINGUISHER CABINET NOTES:

1. ALL CABINETS TO BE CONSTRUCTED OF MIN. 22 GA. STEEL AND MAINTAIN ACCESSIBLE CLEARANCES
2. PROVIDE ROLLED RADIUS RETURNS ON STEEL CABINETS
3. ALL CABINETS TO BE WHITE FINISH, THERMALLY FUSED POLYESTER.
4. PROVIDE PARTIAL FULL VERTICAL VISION GLASS FRONTS, WITH TEMPERED SAFETY GLASS.
5. PROVIDE FLUSH PULL HANDLE
6. MOUNT CABINET SO THAT TOP OF EXTINGUISHER DOES NOT EXCEED 60" A.F.F.

SIGNAGE LEGEND

SYMBOL	DESCRIPTION
ES-1	ILLUMINATED VISUAL "EXIT" SIGN
FEC	FIRE EXTINGUISHER CABINET. T.O. EXTINGUISHER IS LESS THAN 60" A.F.F.

BUILDING CODES AND DESIGN CRITERIA

APPLICABLE CODES	
2021 INTERNATIONAL BUILDING CODE (IBC)	
2021 INTERNATIONAL MECHANICAL CODE (IMC)	
2021 INTERNATIONAL PLUMBING CODE (IPC)	
2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)	
2021 DELAWARE FIRE CODE (IFC)	
2020 NATIONAL ELECTRICAL CODE (NEC)	
2010 ACCESSIBILITY STANDARDS (A117.1)	
2021 DELAWARE LIFE SAFETY CODE (NFPA 101, 2021)	
BUILDING COMPONENTS	
BUILDING AREA	12,353 SF
CONSTRUCTION TYPE	II-B
AUTOMATIC SPRINKLER SYSTEM	YES
FIRE ALARM SYSTEM	YES
OCCUPANCY CLASSIFICATION	E OCCUPANCY
NUMBER OF STORIES	1 STORY
ALLOWABLE HEIGHT	75'-0"
PROPOSED HEIGHT	26'-4"
ALLOWABLE AREA	E: 58,000 SF
*SEE STRUCTURAL DESIGN COVER SHEET FOR STRUCTURAL CRITERIA	

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SEAL:

SHEET TITLE:

CODE REVIEW PLAN

PROJECT#: AS170
ORIGINAL ISSUE: PRELIMINARY

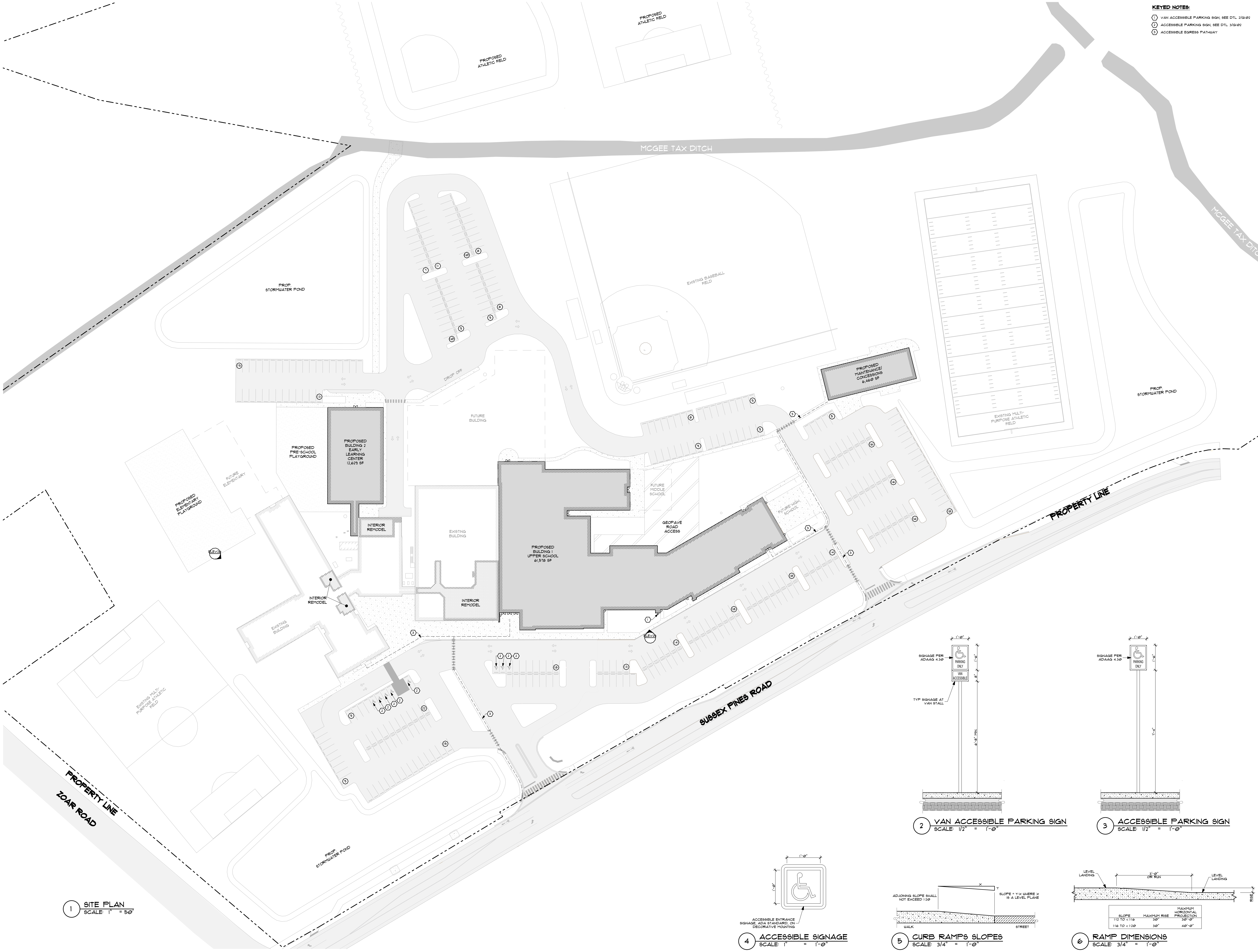
SHEET NUMBER:

G101

DO NOT SCALE DRAWING

KEYED NOTES:

1. VAN ACCESSIBLE PARKING SIGN, SEE DTL. 2/G102
2. ACCESSIBLE PARKING SIGN, SEE DTL. 3/G102
3. ACCESSIBLE EGRESS PATHWAY



1 SITE PLAN
SCALE: 1" = 50'

SIGNAGE PER ADAAG 4.30
PARKING ONLY
VAN ACCESSIBLE
TYP SIGNAGE AT VAN STALL

2 VAN ACCESSIBLE PARKING SIGN
SCALE: 1/2" = 1'-0"

SIGNAGE PER ADAAG 4.30
PARKING ONLY

3 ACCESSIBLE PARKING SIGN
SCALE: 1/2" = 1'-0"

ACCESSIBLE ENTRANCE SIGNAGE, ADA STANDARD, ON DECORATIVE MOUNTING

4 ACCESSIBLE SIGNAGE
SCALE: 1" = 1'-0"

ADJOINING SLOPE SHALL NOT EXCEED 1:20
SLOPE = Y:X WHERE X IS A LEVEL PLANE
WALK
STREET

5 CURB RAMPS SLOPES
SCALE: 3/4" = 1'-0"

LEVEL LANDING
LEVEL LANDING
RISE

SLOPE	MAXIMUM RISE	MAXIMUM HORIZONTAL PROJECTION
1:12 TO < 1:16	30"	30'-0"
1:16 TO < 1:20	30"	40'-0"

6 RAMP DIMENSIONS
SCALE: 3/4" = 1'-0"

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SHEET TITLE:
ACCESSIBLE SITE PLAN

PROJECT#: AS170
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G102

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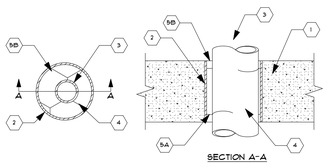

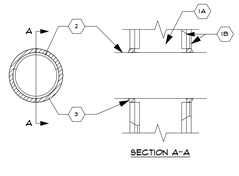

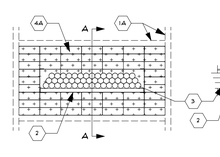

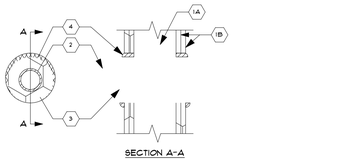

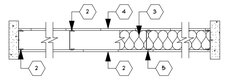

SECTION A-A

UL (XHEZ), SYSTEM NO. C-AJ-5087
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 2-HOUR
T RATING - 1-HOUR

1. **FLOOR OR WALL ASSEMBLY** - MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE FLOOR OR MIN 5 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE WALL. FLOOR MAY ALSO BE CONSTRUCTED OF ANY MIN 6 IN. THICK UL CLASSIFIED HOLLOW-CORE PRECAST CONCRETE UNITS* . WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS* MAX DIAM OF OPENING IS 30 IN. MAX DIAM OF OPENING IN FLOOR CONSTRUCTED OF HOLLOW-CORE PRECAST CONCRETE UNITS IS 7 IN.

   SEE CONCRETE BLOCKS (CAZT) AND PRECAST CONCRETE UNITS (CFTV) CATEGORIES IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. **STEEL SLEEVE** - (OPTIONAL) - NOMINAL 30 IN. DIAM (OR SMALLER) SCH 10 (OR HEAVIER) STEEL PIPE SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES.
3. **THROUGH PENETRANTS** - ONE METALLIC PIPE TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES MAY BE USED:
   A. **STEEL PIPE** - NOM 24 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. **IRON PIPE** - NOM 24 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. **COPPER TUBING** - NOM 6 IN. DIAM (OR SMALLER) TYPE M (OR HEAVIER) COPPER TUBING.
   D. **COPPER PIPE** - NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. **PIPE COVERINGS** - ONE OF THE FOLLOWING TYPES OF PIPE COVERINGS SHALL BE USED:
   A. **PIPE AND EQUIPMENT COVERING MATERIALS*** - NOM 2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. ANNULAR SPACE SHALL BE MIN 1/2 IN. THICK TO MAX 1-1/2 IN. WHEN THE NOM PIPE DIAM IS LESS THAN 2 IN., ANNULAR SPACE MAY BE MIN 1/4 IN.

      SEE **PIPE AND EQUIPMENT COVERING-MATERIALS** (BRGU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

   B. **PIPE COVERING MATERIALS*** - NOM 2 IN. THICK UNFACED MINERAL FIBER PIPE INSULATION HAVING A NOM DENSITY OF 3.5 PCF (OR HEAVIER) AND SIZED TO THE OUTSIDE DIAM OF PIPE OR TUBE. PIPE INSULATION SECURED WITH MIN NO. 8 AWG STEEL WIRE SPACED MAX 12 IN. O.C..

      IIG MINWOOL L L C - HIGH TEMPERATURE PIPE INSULATION 1200, HIGH TEMPERATURE PIPE INSULATION BWT OR HIGH TEMPERATURE PIPE INSULATION THERMALOC.

   C. **SHEATHING MATERIAL*** - USED IN CONJUNCTION WITH ITEM 4B . FOIL-SCRIM-KRAFT OR ALL SERVICE JACKET MATERIAL SHALL BE WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE INSULATION (ITEM 4B) WITH THE KRAFT SIDE EXPOSED. LONGITUDINAL JOINTS AND TRANSVERSE JOINTS SEALED WITH METAL FASTENERS OR BUTT TAPE. ANNULAR SPACE SHALL BE MIN 1/2 IN. THICK TO MAX 1-1/2 IN. WHEN THE NOM PIPE DIAM IS LESS THAN 2 IN., ANNULAR SPACE MAY BE MIN 1/4 IN.

      SEE **SHEATHING MATERIALS*** - (BVDV) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY SHEATHING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.
5. **FIRESTOP SYSTEM** - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. **PACKING MATERIAL** - MIN 4 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION COMPRESSED AND FIRMLY PACKED WITHIN ANNULAR SPACE. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL (ITEM 5B).
   B. **FILL, VOID OR CAVITY MATERIAL* - SEALANT** - MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL. WHEN MIN ANNULAR SPACE IS LESS THAN 1/2 IN., FILL MATERIAL TO BE INSTALLED TO MIN 1 IN. THICKNESS.

      SPECIFIED TECHNOLOGIES INC - SPECSEAL 100, 102, 105, 120 OR 129 SEALANT

***BEARING THE UL CLASSIFICATION MARK**

SECTION A-A

UL (XHEZ), SYSTEM NO. W-L-2093
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 1 AND 2 HOUR (SEE ITEM 1)
T RATING - 1 AND 1-1/2 HOUR (SEE ITEM 2)

1. **WALL ASSEMBLY** - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STUDS** - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. O.C.
   B. **GYPSUM BOARD*** - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 3 IN.

      THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **THROUGH PENETRANTS** - ONE NONMETALLIC PIPE, CONDUIT OR RACEWAY TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOM ANNULAR SPACE OF 5/16 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR RACEWAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES, CONDUITS OR RACEWAY MAY BE USED:
   A. **POLYVINYL CHLORIDE (PVC) PIPE** - NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR OR SOLID CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.
   B. **RIGID NONMETALLIC CONDUIT+** - NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH ARTICLE 347 OF THE NATIONAL ELECTRICAL CODE (NFPA NO. 70).
   C. **CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE** - NOM 2 IN. DIAM (OR SMALLER) SDR17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.
   D. **OPTICAL FIBER RACEWAY+** - NOM 2 IN. DIAM (OR SMALLER) OPTICAL FIBER RACEWAY FORMED FROM POLYVINYL CHLORIDE (PVC) OR NOM 1-1/4 IN. DIAM (OR SMALLER) OPTICAL FIBER RACEWAY FORMED FROM POLYVINYLIDENE FLUORIDE (PVDF). RACEWAY TO BE INSTALLED IN ACCORDANCE WITH ARTICLE NO. 770 OF THE NATIONAL ELECTRICAL CODE. RACEWAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

      SEE OPTICAL FIBER RACEWAY (QAZM) CATEGORY IN THE ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS.
   E. **ELECTRICAL NONMETALLIC TUBING+** - NOM 2 IN. DIAM (OR SMALLER) PVC TUBING INSTALLED IN ACCORDANCE WITH ARTICLE 331 OF THE NATIONAL ELECTRICAL CODE (NFPA NO. 70). SEE **ELECTRICAL NONMETALLIC TUBING** (FKHU) CATEGORY IN THE ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS.

      THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL AND THE DIAM OF THE THROUGH-PENETRANT AS SHOWN BELOW:

WALL HR	MAX DIAM OF THROUGH PENETRANT IN.	T RATING HR
1	2"	1
1	1- 1/4"	1
2	2"	1
2	1-1/4"	1/2

3. **FILL, VOID OR CAVITY MATERIAL*** - SEALANT MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 IN. THICK CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1 IN. BEYOND THE PERIPHERY OF THE OPENING.

+BEARING THE UL LISTING MARK
***BEARING THE UL CLASSIFICATION MARKING**

SECTION A-A

UL (XHEZ), SYSTEM NO. W-L-2100
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 1 AND 2 HOUR (SEE ITEM 1)
T RATING - 0, 1/4, 1 AND 1-1/2 HOUR (SEE ITEM 2)

1. **WALL ASSEMBLY** - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STUDS** - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. O.C..
   B. **GYPSUM BOARD*** - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 3-1/2 IN.

      THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **NONMETALLIC PIPE** - ONE NONMETALLIC PIPE OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES OF NONMETALLIC PIPES OR TUBING MAY BE USED:
   A. **POLYBUTYLENE PIPE** - NOM 1 IN DIAM (OR SMALLER) SDR 11 (OR HEAVIER) POLYBUTYLENE (PB) PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS. A NOM ANNULAR SPACE OF 1/4 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM.
   B. **CROSS LINKED POLYETHYLENE (PEX) TUBING** - NOM 1 IN. DIAM (OR SMALLER) SDR 9 PEX TUBING FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS. A NOM ANNULAR SPACE OF 1/4 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM.
   C. **ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE** - NOM 1-1/2 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. THE ANNULAR SPACE SHALL BE MIN 1/4 IN. TO MAX 1 IN.
   D. **POLYVINYL CHLORIDE (PVC) PIPE** - NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR OR SOLID CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. THE ANNULAR SPACE SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1 IN.
   E. **CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE** - NOM 2 IN. DIAM (OR SMALLER) SDR 17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. THE ANNULAR SPACE SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1 IN.

      THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT ON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED AND THE TYPE OF THROUGH PENETRANT, AS SHOWN IN THE TABLE BELOW:

RATING OF WALL HR	TYPE OF THROUGH PENETRANT	T RATING HR
2	PB PIPE	1-1/2
2	PEX TUBING	1-1/2
2	PVC OR CPVC PIPE	1/4
2	ABS PIPE	0
1	PB PIPE	1
1	PEX TUBING	1
1	PVC OR CPVC PIPE	1/4
1	ABS PIPE	0

3. **FILL, VOID OR CAVITY MATERIAL*** - SEALANT MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 IN. THICK CROWN IS FORMED AROUND THE PENETRATING ITEM.

***BEARING THE UL CLASSIFICATION MARK**

SECTION A-A

UL (XHEZ), SYSTEM NO. W-L-4008
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 1 AND 2 HOUR (SEE ITEM 1B)
T RATING - 1/2 HOUR

1. **WALL ASSEMBLY** - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STUDS** - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. O.C.. ADDITIONAL FRAMING MEMBERS TO BE INSTALLED IN STUD CAVITY CONTAINING THE THROUGH-PENETRATING ITEM TO FORM A RECTANGULAR BOX AROUND THE PENETRANT.
   B. **GYPSUM BOARD*** - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX AREA OF OPENING IS 273 SQ IN. WITH MAX DIMENSIONS OF 22-3/4 IN. MAX WIDTH OF OPENING IN WOOD STUD WALLS IS LIMITED TO 14-1/2 IN.

      THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **CABLE TRAY*** - MAX 18 IN. WIDE BY MAX 5 IN. DEEP OPEN LADDER CABLE TRAY WITH CHANNEL-SHAPED SIDE RAILS FORMED FROM 0.060 THICK (NO. 16 MSG) GALV STEEL WITH NOM 1 IN. DIAM RUNGS SPACED 9 IN. O.C. OR MAX 18 IN. WIDE BY MAX 5 IN. DEEP OPEN LADDER CABLE TRAY WITH CHANNEL-SHAPED SIDE RAILS FORMED FROM 0.060 THICK ALUMINUM WITH NOM 1 IN. DIAM RUNGS SPACED 9 IN. O.C.. ONE CABLE TRAY TO BE CENTERED IN THE OPENING. THE ANNULAR SPACE BETWEEN THE CABLE TRAY AND EACH SIDE OF OPENING SHALL BE A NOM 2-5/16 IN. THE ANNULAR SPACE BETWEEN THE CABLE TRAY AND TOP AND BOTTOM OF OPENING SHALL BE A NOM 3-1/2 IN. CABLE TRAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. **CABLES** - AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN CABLE TRAY TO BE MAX 30 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CABLE TRAY BASED ON A MAX 3-7/8 IN. CABLE LOADING DEPTH WITHIN THE CABLE TRAY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR CABLES MAY BE USED:
   A. MAX 200 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR CABLE WITH POLYVINYL CHLORIDE (PVC) JACKETING AND INSULATION.
   B. MAX 1/C -750 KCMIL (OR SMALLER) COPPER CONDUCTOR CABLE WITH XLPE OR PVC INSULATION AND XLPE OR PVC JACKET.
   C. MAX RG59/U (OR SMALLER) COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
   D. MAX 3/C - NO. 2 AWG (OR SMALLER) COPPER CONDUCTOR CABLE WITH PVC INSULATION AND JACKETING.
   E. MAX 7/C - NO. 12 AWG (OR SMALLER) COPPER CONDUCTOR CABLE WITH PVC-NYLON INSULATION AND PVC JACKETING.
   F. MAX 62.5/125 MICRON FIBER OPTIC CABLE WITH PVC INSULATION AND JACKETING.
   G. MAX 4 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR DATA CABLE WITH HYLAR INSULATION AND JACKETING.
   H. MAX 4/C NO. 10 AWG (OR SMALLER) COPPER OR ALUMINUM CONDUCTOR ALUMINUM OR STEEL METAL-CLAD# OR ARMORED-CLAD# CABLE.
4. **FIRESTOP SYSTEM** - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. **FILL, VOID OR CAVITY MATERIAL*** - PILLOWS MAX 9 IN. LONG BY 6 IN. WIDE BY 3 IN. THICK PLASTIC COVERED INTUMESCENT PILLOWS. PILLOWS TO BE INSTALLED LENGTHWISE THROUGH THE OPENING AND POSITIONED TO EXTEND EQUALLY IN BOTH DIRECTIONS FROM THE APPROXIMATE CENTER LINE OF THE WALL. PILLOWS TIGHTLY PACKED INTO OPENING TO FILL THE ANNULAR SPACE BETWEEN CABLES AND PERIPHERY OF OPENING AND BETWEEN CABLE TRAY AND PERIPHERY OF OPENING.
   B. **FILL, VOID OR CAVITY MATERIAL*** - PUTTY (NOT SHOWN) - AFTER INSTALLATION OF PILLOWS (ITEM 4A), PUTTY APPLIED TO SEAL ANY VOIDS BETWEEN THE CABLES, BETWEEN THE CABLES AND THE PILLOWS AND BETWEEN THE CABLE TRAY AND THE PILLOWS ON BOTH SIDES OF THE WALL ASSEMBLY.

***BEARING THE UL CLASSIFICATION MARKING**

SECTION A-A

UL (XHEZ), SYSTEM NO. W-L-5014
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 1 AND 2 HOUR (SEE ITEM 1)
T RATING - 1 HOUR

1. **WALL ASSEMBLY** - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STUDS** - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C.. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. O.C..
   B. **GYPSUM BOARD*** - 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 18 IN.

      THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **THROUGH PENETRANTS** - ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. **STEEL PIPE** - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. **IRON PIPE** - NOM 12 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. **COPPER TUBING** - NOM 4 IN. (OR SMALLER) TYPE M (OR HEAVIER) COPPER TUBE.
   D. **COPPER PIPE** - NOM 4 IN. (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. **PIPE COVERINGS*** - ONE OF THE FOLLOWING TYPES OF PIPE COVERINGS SHALL BE USED:
   A. **PIPE AND EQUIPMENT COVERING MATERIALS*** - MAX 2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. THE ANNULAR SPACE BETWEEN INSULATED PENETRATING ITEM AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN 0 IN. (CONTINUOUS POINT CONTACT) TO MAX 1-1/4 IN.

      SEE **PIPE AND EQUIPMENT COVERING-MATERIALS*** - (BRGU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.
   B. **PIPE COVERING MATERIALS*** - MAX 2 IN. THICK UNFACED MINERAL FIBER PIPE INSULATION SIZED TO THE OUTSIDE DIAM OF PIPE OR TUBE. PIPE INSULATION SECURED WITH MIN 8 AWG STEEL WIRE SPACED MAX 12 IN. O.C.. THE ANNULAR SPACE BETWEEN INSULATED PENETRATING ITEM AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN 0 IN. (CONTINUOUS POINT CONTACT) TO MAX 1-1/4 IN.

      IIG MINWOOL L L C - HIGH TEMPERATURE PIPE INSULATION 1200, HIGH TEMPERATURE PIPE INSULATION BWT OR HIGH TEMPERATURE PIPE INSULATION THERMALOC.
   C. **SHEATHING MATERIAL*** - USED IN CONJUNCTION WITH ITEM 3B. FOIL-SCRIM-KRAFT OR ALL SERVICE JACKET MATERIAL SHALL BE WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE INSULATION (ITEM 3B) WITH THE KRAFT SIDE EXPOSED. LONGITUDINAL JOINTS AND TRANSVERSE JOINTS SEALED WITH METAL FASTENERS OR BUTT TAPE.

   SEE **SHEATHING MATERIALS** (BVDV) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY SHEATHING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.
4. **FILL, VOID OR CAVITY MATERIAL* - SEALANT** - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT POINT CONTACT LOCATION BETWEEN INSULATED THROUGH PENETRANT AND GYPSUM BOARD, A MIN 3/8 IN. BEAD OF FILL MATERIAL SHALL BE APPLIED TO THE INSULATED THROUGH PENETRANT/GYPSUM BOARD INTERFACE ON BOTH SIDES OF THE WALL.

***BEARING THE UL CLASSIFICATION MARK**

SECTION A-A

UL (XHEZ), SYSTEM NO. W-L-1086
THROUGH-PENETRATION FIRESTOP SYSTEM
F RATING - 1 AND 2 HOUR (SEE ITEM 1)
T RATING - 0 & 1/4 HOUR (SEE ITEM 2)
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400° F - LESS THAN 3 CFM/SQ FT

1. **WALL ASSEMBLY** - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STUDS** - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. O.C.
   B. **GYPSUM BOARD*** - THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 10 IN.

   THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **THROUGH-PENETRANT** - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 1-1/2 IN. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES OF PIPE, CONDUIT OR TUBING MAY BE USED:
   A. **STEEL PIPE** - NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.
   B. **COPPER TUBING** - NOM 3 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   C. **COPPER PIPE** - NOM 3 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
   D. **CONDUIT** - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR STEEL CONDUIT.
   E. **STEEL PIPE** - NOM 8 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.

      T RATING IS 1/4 HR FOR ITEMS A, D AND E, 0 HR FOR ITEMS B AND C.
3. **FILL, VOID OR CAVITY MATERIAL*** - SEALANT MIN 5/8 IN. OR 1-1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL FOR 1 OR 2 HR WALLS, RESPECTIVELY.

***BEARING THE UL CLASSIFICATION MARK**

ANSI/UL 263 (BXUV)
DESIGN NO. U465
NONBEARING WALL RATING (1-HOUR)

1. **FLOOR AND CEILING RUNNERS** (NOT SHOWN) - CHANNEL SHAPED RUNNERS, 3-5/8 IN WIDE (MIN), 1-1/4 IN. LEGS, FORMED FROM IN. NO. 25 MSG (MIN. NO. 20 MSG WHEN ITEM 4C IS USED) GALV. STEEL, ATTACHED TO FLOOR AND CEILING WITH FASTENERS SPACED 24 IN. O.C. MAX.
2. **STEEL STUDS** CHANNEL SHAPED, 3-5/8 IN. WIDE (MIN.), 1-1/4 IN. LEGS, 3/8 IN. FOLDED BACK RETURNS, FORMED FROM MIN. NO. 25 MSG (MIN. NO. 20 MSG WHEN ITEM 4C IS USED) GALV. STEEL SPACED 24 IN. O.C. MAX.
3. **BATTS AND BLANKETS*** (OPTIONAL) - MINERAL WOOL OR GLASS FIBER BATTS PARTIALLY OR COMPLETELY FILLING STUD CAVITY.
   A. **FIBER, SPRAYED*** AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 3) - SPRAY APPLIED CELLULOSE INSULATION MATERIAL. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. NOMINAL DRY DENSITY OF 3.0 LB./FT3.
   B. **FIBER, SPRAYED*** AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 3) - SPRAY APPLIED CELLULOSE INSULATION MATERIAL. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WIT THE PRODUCT. APPLIED TO COMPLETELY FILL THE ENCLOSED CAVITY. MINIMUM DRY DENSITY OF 4.2 POUNDS PER CUBIC FT.
4. **GYPSUM BOARD*** 5/8 IN. THICK, 4 FT. WIDE, ATTACHED TO STEEL STUDS AND FLOOR AND CEILING RACK WITH 1 IN. LONG, TYPE S STEEL SCREWS SPACED 8 IN. O.C. ALONG EDGES OF BOARD AND 12 IN. O.C. IN THE FIELD OF THE BOARD . JOINTS ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF THE ASSEMBLY. WHEN ATTACHED TO ITEM 6 (RESILIENT CHANNELS) OR 6A (FURRING CHANNELS), WALLBOARD IS SCREW ATTACHED TO FURRING CHANNELS WITH 1 IN. LONG, TYPE S STEEL SCREWS SPACED 12 IN. O.C.
   A. **GYPSUM BOARD*** (AS ALTERNATE TO ITEM 4) - NOMINAL 5/8 IN. THICK GYPSUM PANELS WITH BEVELED, SQUARE OR TAPERED EDGES, APPLIED VERTICALLY OR HORIZONTALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED OR BACKED. PANELS ATTACHED TO STEEL SUDS AND FLOOR RUNNER WITH 1 IN. LONG TYPE S STEEL SCREWS SPACED 8 IN. O.C. WHEN APPLIED HORIZONTALLY, OR 8 IN. O.C. ALONG VERTICAL AND BOTTOM EDGES AND 12 IN. O.C. IN THE FIELD WHEN PANELS ARE APPLIED VERTICALLY.
   B. **GYPSUM BOARD*** (AS AN ALTERNATE TO ITEMS 4 OR 4A) - - NOMINAL 3/4 IN. THICK, 4 FT WIDE, INSTALLED AS DESCRIBED IN ITEM 4A WITH SCREW LENGTH INCREASED TO 1-1/4 IN.
   C. **GYPSUM BOARD*** (AS AN ALTERNATE TO ITEMS 4, 4A AND 4B) - 5/8 IN. THICK GYPSUM PANELS , INSTALLED AS DESCRIBED IN ITEM 4A WITH TYPE S-12 STEEL SCREWS. THE LENGTH AND SPACING OF THE SCREWS AS SPECIFIED UNDER ITEM 4A.
5. **JOINT TAPE AND COMPOUND** VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS; PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS. AS AN ALTERNATE, NOMINAL 3/32 IN. THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD. JOINTS REINFORCED.
6. **RESILIENT CHANNEL** (OPTIONAL - NOT SHOWN) - 25 MSG GALV. STEEL RESILIENT CHANNELS SPACED VERTICALLY MAX. 24 IN. O.C., FLANGE PORTION ATTACHED TO EACH INTERSECTING STUD WITH 1/2 IN. LONG TYPE S-12 PANHEAD STEEL SCREWS. NOT FOR USE WITH TYPE FRX GYPSUM PANELS.
   A. **STEEL FRAMING MEMBERS (NOT SHOWN)*** AS AN ALTERNATE TO ITEM 3, FURRING CHANNELS AND RESILIENT SOUND ISOLATION CLIP AS DESCRIBED BELOW;
      I. **FURRING CHANNEL** FORMED OF NO. 25 MSG GALV. STEEL. 2-3/8 IN. WIDE BY 7/8 IN. DEEP, SPACED 24 IN. O.C. PERPENDICULAR TO STUDS. CHANNELS SECURED TO STUDS AS DESCRIBED IN ITEM B.
      II. **STEEL FRAMING MEMBERS*** USED TO ATTACH FURRING CHANNELS (ITEM A) TO STUDS (ITEM 1). CLIPS SPACED 48 IN. O.C. AND SECURED TO STUDS WITH 1-5/8 IN. WAFER OR HEX HEAD TYPE S STEEL SCREW THROUGH THE CENTER GROMMET. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS.

***BEARING THE UL CLASSIFICATION MARKING**

ELEVATION
PARALLEL TO ROOF
PURLINS

SECTION A-A
PERPENDICULAR TO
ROOF PURLINS (FOR
WALLS NOT DIRECTLY
UNDER A MAIN FRAME)

ASTM E119-00
VINYL COVERED GLASS FIBER INSULATION
PENETRATING A WALL/ROOF INTERFACE
OMEGA LABORATORIES TESTING (16343-108145)
FIRE RATED WALL AND NON-FIRE RATED ROOF ASSEMBLY JOINT DETAIL

1. METAL ROOF PANELS -- NO. 26 MSG MIN. GALVANIZED, "GALVALUME", OR PAINTED STEEL.

2. INSULATION BATTS OR BLANKETS -- VINYL FACED COMPRESSIBLE GLASS FIBER INSULATION WEIGHING BETWEEN .6 AND .7 PCF. INSTALLED AT THE BOTTOM SIDE OF ROOF DECK PANELS OVER TO OF PURLINS. NOTE: FIBERGLASS INSULATION WITH ALTERNATE FACING MATERIALS CAN BE USED, IF FLAME SPREAD IS LESS THAN OR EQUAL TO 25, AND HAS SMOKE DEVELOPED RATING OF LESS THAN OR EQUAL TO 50 PER ASTM E84

3. MINERAL WOOL BATTS -- 2 INCHES THICK, 8-9 PCF DENSITY, FIRE STOP ACROSS TOP OF WALL

4. STEEL ROOF PURLIN -- C OR Z SHAPED, MINIMUM 8" DEEP, NO. 16 MSG MIN. GALVANIZED OR PAINTED STEEL

5. WALLBOARD, GYPSUM -- 5/8" INCH THICK, TYPE X GYPSUM WALLBOARD

6. STEEL STUDS -- CHANNEL SHAPED MIN. 2-1/2" INCH WIDE, 1-1/4" INCH FLANGES, AND 1/4" INCH RETURN STEEL STUDS OF NO. 25 MSG MIN. STEEL SPACED 24" O.C. MAX (REF. UL DESIGN NO. U425)

7. FLOOR & CEILING RUNNERS ACCOMMODATE -- FLOOR AND CEILING RUNNERS - CHANNEL SHAPED OF 25 MSG MIN. STEEL WITH MIN. 1-INCH LONG LEGS TO MAIN WALL STUDS. RUNNERS AT TOP OF THE WALL ATTACHED AT THE BOTTOM OF THE PURLINS. INVERTED RUNNER ATTACHED AT THE TOP OF THE WALL RUNNER BETWEEN PURLINS IN ORDER TO SUPPORT THE SHORT LENGTH OF STEEL STUDS CAPPED WITH A RUNNER TO COMPRESS THE MINERAL WOOL BATTS AND THE GLASS FIBER INSULATION UNDER THE ROOF PANELS.

8. FIRE CAULKING -- BEAD OF FIRE CAULK ALONG HE JOINT FORMED BY GYPSUM WALLBOARD AND THE GLASS FIBER INSULATION APPLIED ALONG THE TOP OF THE WALL AND ON BOTH SIDES OF THE WALL IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. FIRE CAULKING OF ALL OPENINGS BETWEEN THE GYPSUM WALLBOARD AND THE PURLINS ON BOTH SIDES OF THE WALL.

ANSI/UL 263 (BXUV)
DESIGN NO. U469
NONBEARING WALL RATING (1-HOUR)

1. FLOOR AND CEILING RUNNERS — "J" - SHAPED, 2-1/2 IN. WIDE WITH UNEQUAL LEGS OF 1 IN. AND 2 IN., FABRICATED FROM 24 MSG GALV STEEL. RUNNERS ATTACHED TO STRUCTURAL SUPPORTS WITH STEEL FASTENERS LOCATED NOT GREATER THAN 2 IN. FROM ENDS AND NOT GREATER THAN 24 IN. O.C.

2. STEEL STUDS — "C-H" SHAPED STUDS, 2-1/2 IN. WIDE BY 1-1/2 IN. DEEP, FABRICATED FROM MIN 25 MSG GALV STEEL (MIN 20 MSG STEEL REQUIRED WHEN ITEM 4A IS USED), SPACED 24 IN. OR 600 MM O.C. VERTICALLY RESTRAINED WALLS REQUIRE STUDS TO BE CUT 3/8 IN. LESS THAN FLOOR TO CEILING HEIGHT.

3. GYPSUM BOARD* — 1 IN. THICK GYPSUM WALLBOARD LINER PANELS, SUPPLIED IN NOMINAL 24 IN. OR 600 MM WIDTHS. VERTICAL EDGES INSERTED IN "H" SHAPED SECTION OF "C-H" STUDS. FREE EDGE OF END PANELS ATTACHED TO LONG LEG OF "J" RUNNERS WITH 1-5/8 IN. LONG TYPE S HEAD STEEL SCREWS SPACED NOT GREATER THAN 12 IN. O.C.

4. GYPSUM WALLBOARD* — 5/8" IN. THICK, 4FT. WIDE, APPLIED VERTICALLY AND ATTACHED TO STUDS WITH 1 IN. LONG TYPE S STEEL SCREWS SPACED 12 IN. O.C. ALONG THE EDGES AND IN THE FIELD OF BOARDS.

4A. WALLBOARD, GYPSUM* — (AS AN ALTERNATE TO ITEM 4) — 5/8 IN. THICK GYPSUM PANELS, INSTALLED AS DESCRIBED IN ITEM 4 WITH TYPE S-12 STEEL SCREWS. THE LENGTH AND SPACING OF THE SCREWS AS SPECIFIED UNDER ITEM 4.

5. BATTS AND BLANKETS* — (OPTIONAL) — MINERAL WOOL BATTS PARTIALLY OR COMPLETELY FILLING STUD CAVITY.

6. BATTS AND BLANKETS* — (OPTIONAL) — MINERAL WOOL BATTS PARTIALLY OR COMPLETELY FILLING STUD CAVITY

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REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
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GEORGETOWN, DE 19947

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SEAL:

SHEET TITLE:
U.L. DETAILS

PROJECT#: AS170
ORIGINAL ISSUE: PRELIMINARY

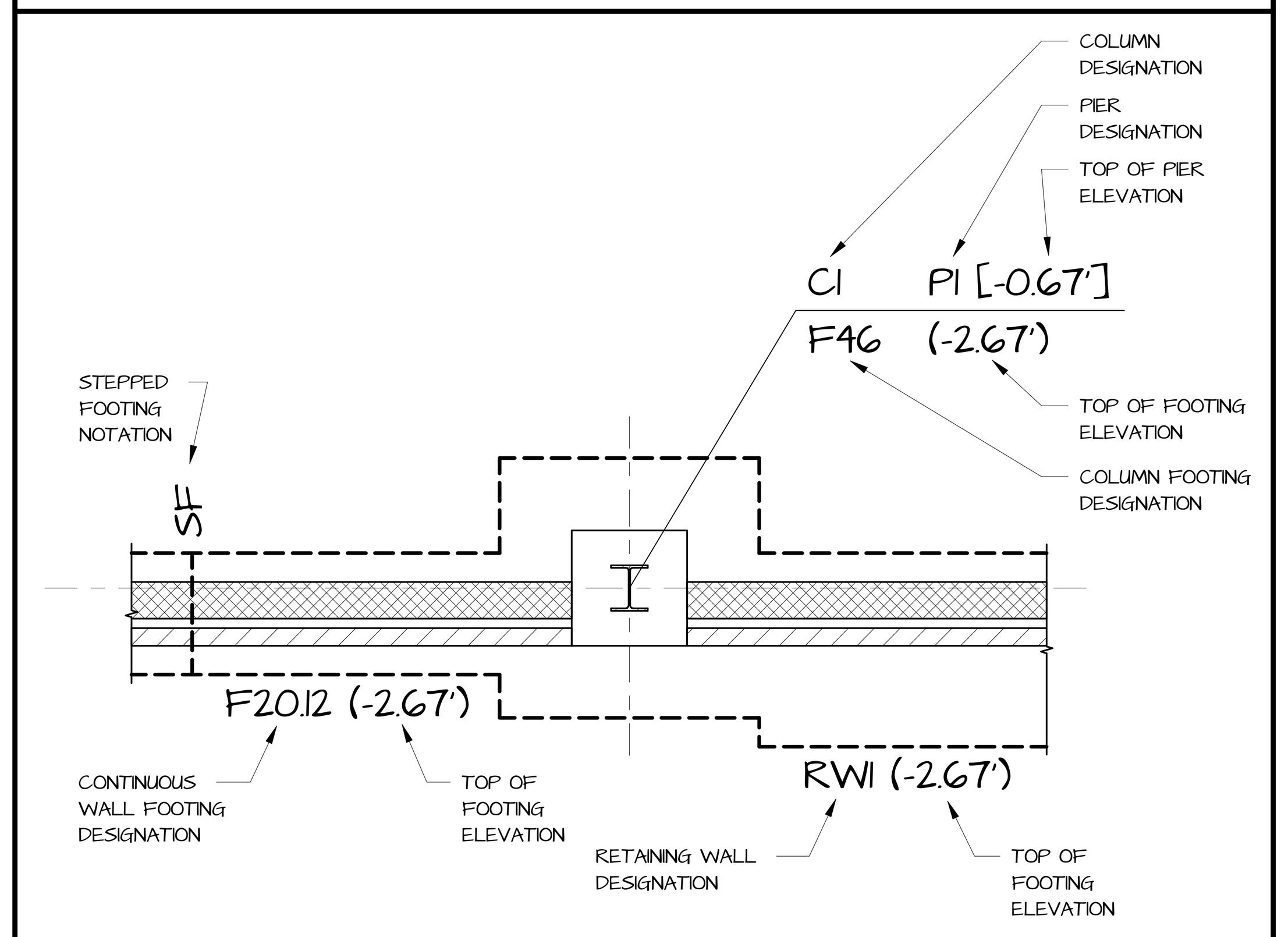
SHEET NUMBER:
G103

DO NOT SCALE DRAWING

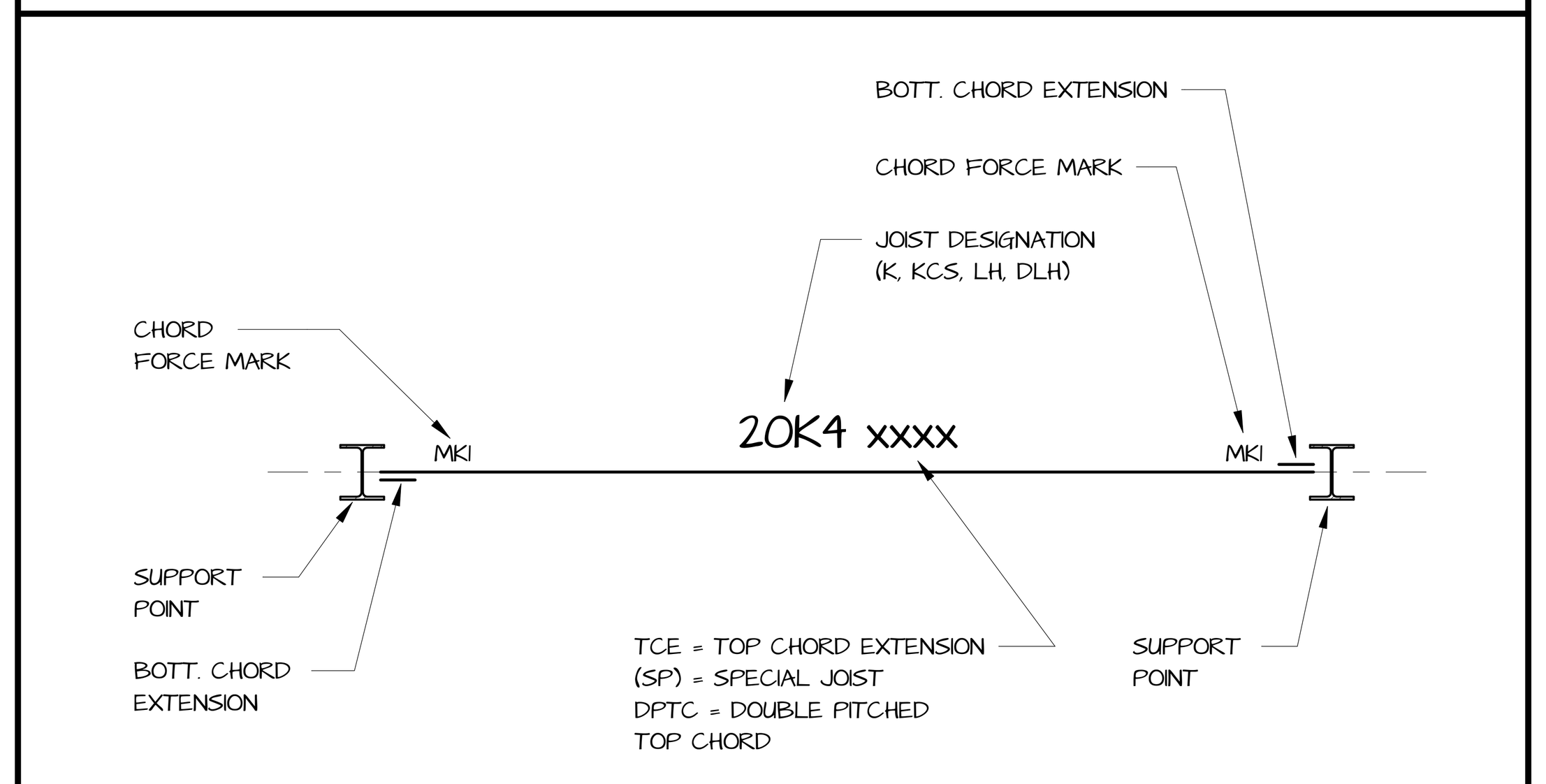
PROJECT TITLE

271.001 - DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER

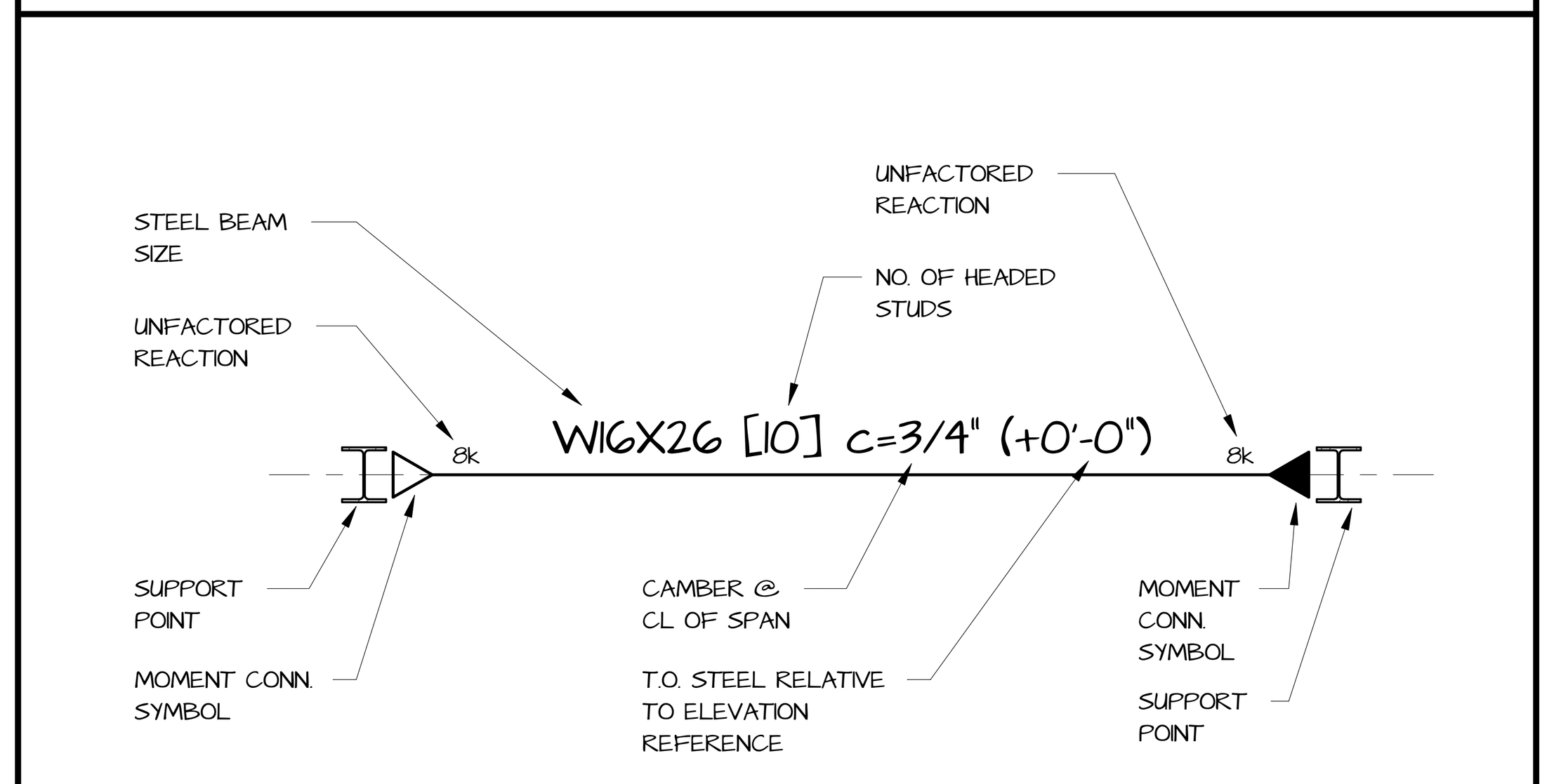
FOUNDATION NOTATION



JOIST NOTATION



STEEL BEAM NOTATION



DRAWING ABBREVIATIONS

ADD'L	ADDITIONAL	LG	LONG
ADJ	ADJACENT	LL	LIVE LOAD
AFF	ABOVE FINISHED FLOOR	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE	LLV	LONG LEG VERTICAL
APPROX	APPROXIMATE	LP	LOW POINT
ARCH	ARCHITECTURAL	LW	LIGHT WEIGHT CONCRETE
B.O.	BOTTOM OF	MAX	MAXIMUM
BLDG	BUILDING	MECH	MECHANICAL
BM	BEAM	MEP	MECHANICAL, ELECTRICAL, PLUMBING
BOTT	BOTTOM	MFR, MANUF	MANUFACTURER
BP	BEARING PLATE	MIN	MINIMUM
BRG	BEARING	MISC	MISCELLANEOUS
BS	BOTH SIDES	N/A	NOT AVAILABLE
CANT	CANTILEVER	NBL	NON-BEARING LINTEL
CANT LE	CANTILEVER LEFT END	NBMH	NON-BEARING METAL HEADER
CANT RE	CANTILEVER RIGHT END	NBWH	NON-BEARING WOOD HEADER
CC	CONCRETE COLUMN	NIC	NOT IN CONTRACT
CIP	CAST IN PLACE	NOM	NOMINAL
CJ	CONTROL JOINT/ CONSTRUCTION JOINT	NS	NEAR SIDE
CL	CENTER LINE	NTS	NOT TO SCALE
CLR	CLEAR	NW	NORMAL WEIGHT CONCRETE
CMU	CONCRETE MASONRY UNIT	o/c	ON CENTER
COL	COLUMN	OD	OUTSIDE DIAMETER
CONC	CONCRETE	OPNG	OPENING
CONN	CONNECTION	OPP	OPPOSITE
CONT	CONTINUOUS	P/C	PRECAST CONCRETE
COORD	COORDINATE	PCF	POUNDS PER CUBIC FOOT
D	DEPTH, DEEP	PL	PLATE
DBL	DOUBLE	PREFAB	PREFABRICATED
DIA, Ø	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DIM	DIMENSION	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PT	PRESSURE TREATED
DN	DOWN	RAD	RADIUS
DWG	DRAWING	RD	ROOF DRAIN
DWLS	DOWELS	REBAR	REINFORCING BAR
EF	EACH FACE	REF	REFER OR REFERENCE
EIFS	EXTERIOR INSULATION FINISH SYSTEM	REINF	REINFORCING
EJ	EXPANSION JOINT	REQ'D	REQUIRED
EL	ELEVATION	RR	ROOF RAFTER
ELEV	ELEVATOR	RW	RETAINING WALL
EOS	EDGE OF SLAB	SF	STEPPED FOOTING
EQ	EQUAL	SIM	SIMILAR
EQUIP	EQUIPMENT	SOG	SLAB ON GRADE
EW	EACH WAY	SPEC	SPECIFICATION
EWEF	EACH WAY EACH FACE	SQ	SQUARE
EXIST / (E)	EXISTING	SS	STAINLESS STEEL
EXT	EXTERIOR	STD	STANDARD
FD	FLOOR DRAIN	STIFF	STIFFENER
FF	FINISH FLOOR	STL	STEEL
FIN	FINISH	T&B	TOP & BOTTOM
FLR	FLOOR	T.O.	TOP OF
FND	FOUNDATION	T.O.B.	TOP OF BEAM
FRM	FRAMING	T.O.C.	TOP OF CONCRETE
FT	FOOT	T.O.F.	TOP OF FOOTING
GA	GAUGE	T.O.P.	TOP OF PARAPET
GALV	GALVANIZED	T.O.S.	TOP OF SLAB
GB	GRADE BEAM	T.O.STL.	TOP OF STEEL
GT	GIRDER TRUSS	T.O.W.	TOP OF WALL
HB	HOIST BEAM	TDS	TURNED DOWN SLAB
HEF	HORIZONTAL EACH FACE	THK	THICK, THICKNESS
HIF	HORIZONTAL INSIDE FACE	TS	THICKENED SLAB
HK	HOOK	TSF	THICKENED SLAB FOOTING
HOF	HORIZONTAL OUTSIDE FACE	TYP	TYPICAL
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HP	HIGH POINT	VERT	VERTICAL
HS	HAUNCHED SLAB	W	WIDTH, WIDE
IBC	INTERNATIONAL BUILDING CODE	w/	WITH
k	KIPS (1000lbs)	w/o	WITHOUT
KSF	KIPS PER SQUARE FOOT	WD	WOOD
L_	ANGLE	WF	WIDE FLANGE
LBS	POUNDS	WWF	WELDED WIRE FABRIC

DRAWING SYMBOLS

SYMBOL	DESCRIPTION
	MOMENT CONNECTION - BEAM TO BEAM OR BEAM TO COLUMN - SEE PLAN FOR REQUIRED CONNECTION MOMENT CAPACITY, IF NO LOAD SHOWN, PROVIDE FULL CAPACITY OF BEAM IN ADDITION TO FULL DEPTH SHEAR CONNECTION
	FLEXIBLE MOMENT CONNECTION (FMC) - BEAM TO COLUMN CONNECTION. SEE PLAN FOR REQUIRED CONNECTION MOMENT. IF NO LOAD SHOWN, SEE TYPICAL DETAILS.
	SLIDING CONNECTION @ EXPANSION JOINT
	CRIPPLE POINT IN STEEL MEMBER - SEE TYPICAL DETAIL FOR ADDITIONAL INFORMATION.
	CHANGE IN SLAB ELEVATION
[...]	SPOT ELEVATION LOCATION
S_/ D_	SLAB/ DECK CONSTRUCTION TAG - SEE SCHEDULE ON DRAWING FOR ADDITIONAL INFORMATION
	UTILITY LINE - COORDINATE SIZE & INVERT w/ UTILITY DRAWINGS
	SLAB CONTROL/ CONSTRUCTION JOINT - SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION
FD	FLOOR DRAIN - COORDINATE SIZE & LOCATION w/ ARCHITECTURAL & PLUMBING DRAWINGS
TD	TRENCH DRAIN - COORDINATE SIZE & LOCATION w/ ARCHITECTURAL & PLUMBING DRAWINGS
SL	SLOPE OF FLOOR/ ROOF/ SLAB
1 / A101	SECTION MARK
1 / S-101	BUILDING ELEVATION
1 / A101	DETAIL/ ENLARGED PLAN CALLOUT
	MECHANICAL UNIT ID & WEIGHT
H	WALL TAG
LEVEL ELEVATION	LEVEL DESIGNATION
0	STRUCTURAL GRID DESIGNATION
0	EXISTING STRUCTURAL GRID DESIGNATION

DRAWING MATERIALS

CONCRETE/ PRECAST CONCRETE	SHEAR WALLS
COMPACTED EARTH / SITEWORK	RIGID INSULATION
CRUSHED STONE	GROUT
CONCRETE MASONRY UNIT	IVANY CONCRETE MASONRY UNIT
AREA OF OVERFRAMING	MECHANICAL UNIT
BRICK VENEER	WOOD
STONE VENEER	STEEL
PLYWOOD SHEATHING/ DECKING	METAL DECKING

DRAWING LIST

SHEET NUMBER	SHEET NAME
S001	COVER SHEET
S003	PROJECT SCHEDULES
S101	FOUNDATION PLAN
S102	ROOF FRAMING PLAN
S501	FOUNDATION DETAILS & SECTIONS
S511	FRAMING DETAILS & SECTIONS

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JOB NUMBER: 271.001
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REV	DATE	DESCRIPTION

PRELIMINARY DRAWING!
NOT FOR CONSTRUCTION!

PROJECT:
DELMARVA CHRISTIAN SCHOOL
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SEAL:

SHEET TITLE:
COVER SHEET

PROJECT #: AS170
ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:
S001

SCALE: AS INDICATED

PROJECT SPECIFICATIONS AND GENERAL NOTES

GENERAL

1. COMPLETE ALL WORK PER THE DRAWINGS AND SPECIFICATIONS CONTAINED HEREIN.
2. MEANS AND METHODS INCLUDING ALL WORK RELATED TO THE STAGING, CONSTRUCTION PRACTICES, AND SAFETY OF THE PROJECTS WORKERS AND PROPERTY SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE AND ALL CODES AND STANDARDS. ENGINEER SITE VISITS ARE FOR THE REVIEW OF THE STRUCTURAL WORK FOR GENERAL CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS AND ARE NOT FOR THE REVIEW OF CONTRACTOR RESPONSIBILITIES, INCLUDING BUT NOT LIMITED TO PROJECT SAFETY AND MEANS AND METHODS OF CONSTRUCTION.
3. ALL DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE EVALUATION AND COMPLIANCE WITH LOADING RESTRICTIONS FOR MEANS AND METHODS OF CONSTRUCTION AS WELL AS STAGING FOR OTHER TRADES.
5. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE REFERENCED INTERNATIONAL BUILDING CODE. SUBMIT ALL REPORTS TO THE ENGINEER OF RECORD FOR REVIEW. AT THE COMPLETION OF THE PROJECT, THE SPECIAL INSPECTION REPORT SHALL BE COMPLETED AND SUBMITTED TO THE ENGINEER OF RECORD.
6. CONTRACTOR SHALL NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS OF ELEMENTS.
7. STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED TO CREATE SHOP DRAWINGS OR SHORING DOCUMENTATION WITHOUT THE EXPRESS WRITTEN CONSENT OF PILOTTOWN ENGINEERING.
8. DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH THE OTHER DISCIPLINE DRAWINGS. THE HORIZONTAL AND VERTICAL DIMENSIONS CONTAINED ON THE STRUCTURAL DRAWINGS WERE DEVELOPED BY OTHER DISCIPLINES FOR THE PURPOSE OF THIS PROJECT.
9. THE STRUCTURAL DOCUMENTS ARE TO BE USED IN COORDINATION WITH ALL OTHER DISCIPLINES INCLUDING THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
10. UNLESS SPECIFICALLY APPROVED, ALL REQUESTED CHANGES IN WORK BY THE CONTRACTOR ARE CONSIDERED TO BE COMPLETED AT NO ADDITIONAL COST AND ARE SUBJECT TO THE APPROVAL OF THE DESIGN TEAM AND OWNER.
11. REFER TO THE ARCHITECTURAL DOCUMENTS FOR ALL WATERPROOFING AND FIREPROOFING LOCATIONS AND DETAILS.

SHOP DRAWING REQUIREMENTS

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY PILOTTOWN ENGINEERING AND THE DESIGN TEAM FOR THE FOLLOWING ITEMS FOR THIS THE PROJECT:
   a. CONCRETE MIX DESIGNS INCLUDING ALL LABORATORY TESTING, MATERIALS, ETC.
   b. REINFORCING SHOP DRAWINGS
   c. ANCHOR BOLT AND CONCRETE EMBEDDED ASSEMBLIES
   d. STEEL FRAMING
   e. OPEN WEB STEEL BAR JOISTS
   f. METAL DECK ASSEMBLIES
   g. STAIRS, HANDRAILS, AND GUARDRAILS
   h. COLD FORMED METAL FRAMING
   i. MASONRY PRODUCTS
   j. ALL ADMIXTURES, SEALANTS, HARDENERS, AND COATINGS
2. CONTRACTORS TO ALLOW FOR A 10 BUSINESS DAY REVIEW PERIOD BY THE DESIGN TEAM FOR ALL SHOP DRAWINGS NOTED ABOVE. CONTRACTOR RESPONSIBLE TO SUBMITTED SHOP DRAWINGS IN A TIMELY MANNER AND ALL SUBMITTED DRAWINGS SHALL BE REVIEWED BY THE CONSTRUCTION MANAGER PRIOR TO SUBMISSION.
3. DELEGATED DESIGN SUBMITTALS REQUIRE THE REVIEW AND APPROVAL FROM A PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED WITH CALCULATIONS AND SIGNED AND SEALED DRAWINGS PRIOR TO REVIEW.

EXISTING CONSTRUCTION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, COORDINATION, AND INSTALLATION OF SHORING AND STABILIZATION OF EXISTING CONSTRUCTION AS REQUIRED TO PERFORM THE WORK CONTAINED IN THE DRAWINGS AND SPECIFICATIONS.
2. DIMENSIONS SHOWN REFERRING TO EXISTING STRUCTURES ARE FOR REFERENCE ONLY. ALL DIMENSIONS RELATED TO EXISTING BUILDINGS AND FRAMING SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY INFORMATION RELATING TO THE EXISTING STRUCTURE THAT HAS BEEN UNCOVERED DUE TO DEMOLITION AND REMOVAL OF FINISHES.

FOUNDATIONS

1. ALL FOUNDATION PREPARATION, EXCAVATION, PLACEMENT OF STRUCTURAL FILL, AND / OR SOIL IMPROVEMENT WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC. (PROJECT NO. 312231819, DATED NOVEMBER 10TH, 2023).
2. FOUNDATION DESIGN AND SHOWN ON THE CONTRACT DOCUMENTS WAS DETERMINED WITH BOTTOM OF FOUNDATIONS BEARING ON SOIL CAPABLE OF SAFELY SUPPORTING 1,500 PSF IN ACCORDANCE WITH THE ABOVE REFERENCED GEOTECHNICAL REPORT.
3. ALL SOILS SUPPORTING FOOTINGS AND SLABS SHOULD BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY OR AS DETERMINED BY A REGISTERED GEOTECHNICAL ENGINEER.
4. BOTTOM OF FOOTING SUBGRADE MUST BE INSPECTED AND APPROVED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO PLACING ANY CONCRETE FOUNDATIONS. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN THE SPECIFIED BEARING PRESSURE AND ALL REPORTS TO BE SUBMITTED TO THE ENGINEER OR RECORD.
5. BOTTOM OF ALL FOOTINGS SUBJECTED TO FREEZE THAW CONDITIONS SHALL BE A MINIMUM 2 FEET, 4 INCHES BELOW FINISHED GRADE.
6. CONTROL JOINTS FOR SITE RETAINING WALLS, LOADING DOCK WALLS, BASEMENT WALLS, AND EXPOSED CONCRETE WALLS SHALL BE SPACED A MAXIMUM OF 20 FEET ON CENTER UNLESS OTHERWISE NOTED ON THE DRAWINGS. MASONRY OR CONCRETE WALLS WITH INTEGRAL COLUMN PIERS OR PILASTERS SHALL HAVE A FORMED CONTROL JOINT ON ONE SIDE OF EACH PIER ON THE EXPOSED FACE OF THE WALL. ALL CONTROL JOINTS SHALL BE FILLED WITH SEALANT AS NOTED ON THE ARCHITECTURAL DRAWINGS.

CONCRETE

1. ALL CONCRETE SHALL BE READY-MIX AND PROPORTIONED ON THE BASIS OF LABORATORY TRIAL MIXTURE OR FIELD TEST DATA OR BOTH ACCORDING TO ACI 301 AND ACI 318. DESIGN MIXTURES SHALL MEET THE REQUIREMENTS BELOW BASED ON CONCRETE PLACEMENT LOCATIONS:
   a. INTERIOR SLABS ON GRADE:
      1. MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS
      2. EXPOSURE CATEGORY: F0
   b. EXTERIOR SLABS ON GRADE:
      1. MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS
      2. EXPOSURE CATEGORY: F2
      3. 6% AIR-ENTRAINMENT (+/- 1.5%)
   c. FOOTINGS AND FOUNDATION WALLS
      1. MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS
      2. EXPOSURE CATEGORY: F0
   d. ELEVATED SLABS ON METAL DECK
      1. MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS
      2. EXPOSURE CATEGORY: F0
2. CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION OF DESIGN MIXTURES FOR EACH APPLICATION/LOCATION USED IN CONSTRUCTION AS NOTED ABOVE AND ON THE DRAWINGS.
3. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:
   a. ACI BUILDING CODE (ACI 318),
   b. ACI DETAILING MANUAL (MNL-66),
   c. SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).
4. ALL REINFORCING STEEL SHALL BE MANUFACTURED AND CONFORM TO ASTM DESIGNATION A615 GRADE 60. ALL BARS TO BE LAPPED A MINIMUM 48 BAR DIAMETERS UNLESS OTHERWISE NOTED.
5. ALL WWF SHALL BE MANUFACTURED FROM HIGH STRENGTH STEEL CONFORMING TO ASTM A1064/A1064M. ALL WWF SHALL LAP A MINIMUM OF 6 INCHES.
6. LOCATE CONSTRUCTION JOINTS IN STRUCTURAL SLABS AND GRADE BEAMS AT MID-SPAN AND KEY JOINTED WITH REINFORCING CONTINUOUS ACROSS JOINT.
7. CONCRETE SLAB ON GRADE SHALL BE FINISHED TO TOLERANCE FOR FLOOR FLATNESS (Ff) OF 25 AND FLOOR LEVELNESS (Fl) OF 20 UNLESS OTHERWISE MANDATED BY ARCHITECTURAL FINISH REQUIREMENTS.
8. ALL CONCRETE SLAB ON GRADE SHALL BE TESTED FOR FLOOR FLATNESS AND LEVELNESS WITHIN 48 HOURS OF THE SLAB ON GRADE PLACEMENT. CONTRACTOR SHALL SUBMIT REPORTS TO THE ENGINEER AND ARCHITECT OF RECORD AND ALL SPECIALTY FLOORING SUB-CONTRACTORS FOR REVIEW.
9. PLACE TRANSVERSE REINFORCING (SWB) IN BOTTOM LAYER OF CONTINUOUS FOOTINGS. PROVIDE CORNER BARS IN FOOTINGS TO MATCH CONTINUOUS REINFORCEMENT. EXTEND WALL FOOTING REINFORCING INTO COLUMN FOOTINGS A MINIMUM OF 2 FEET.
10. PROVIDE KEYS IN CONCRETE WALLS, PIERS, GRADE BEAMS, AND FOOTINGS AT INTERSECTIONS UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT AT WALL CORNERS AND TEE INTERSECTIONS.
11. CONCRETE SHALL ACHIEVE A MINIMUM OF 70% OF THE DESIGN STRENGTH PRIOR TO STEEL ERECTION. WRITTEN CONFIRMATION OF THIS STRENGTH SHOULD BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF STEEL ERECTION.

STEEL

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE. ALL STRUCTURAL STEEL SHAPES AND GRADES SHALL BE AS FOLLOWS (UNLESS NOTED OTHERWISE):
   a. WIDE FLANGE (W) SHAPES, ASTM A992/A992M GRADE 50
   b. S, M, AND HP SHAPES, ASTM A572 GRADE 50
   c. HSS STRUCTURAL SECTIONS, ASTM A500 GRADE B, Fy = 46 KSI.
   d. HSS ROUND SECTIONS, ASTM A500 GRADE C, Fy = 46 KSI.
   e. STEEL PIPE SECTIONS, ASTM A53, GRADE B, Fy = 35 KSI.
   f. ALL OTHER STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED.
   g. ANCHOR BOLTS, ASTM F1554
2. CLEAN ALL STEEL IN ACCORDANCE WITH SSPC-SP3 AND PROVIDE A SHOP COAT OF RUST INHIBITIVE PAINT. STEEL CONTRACTOR TO COORDINATE PRIMER LOCATION WITH SLIP CRITICAL BOLTED CONNECTION LOCATIONS AS REQUIRED.
3. STEEL TO RECEIVE SPRAYED-ON FIREPROOFING OR CONCRETE ENCASEMENT SHALL REMAIN CLEANED AND UNPAINTED.
4. ALL LINTELS SHALL BE GALVANIZED AND PAINTED.
5. ALL VENEER SHELF ANGLES SHALL BE HOT DIP GALVANIZED.
6. ALL EXPOSED STEEL TO THE WEATHER ELEMENTS (DUNNAGE FRAMING, SCREEN WALL FRAMING, CANOPY FRAMING, ETC.) SHALL BE GALVANIZED AND PAINTED.
7. ANY POINTS OF WELDING ON GALVANIZED MEMBERS SHALL BE TOUCHED UP IN THE FIELD WITH A ZINC-RICH PAINT AS REQUIRED BY THE STEEL ERECTOR.
8. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS, LEVEL 2) SHALL BE FABRICATED AND ERECTED AS FOLLOWS:
   a. ALL STEEL SHALL BE THOROUGHLY CLEANED IN ACCORDANCE WITH SSPC-SP6 PRIOR TO PAINTING.
   b. ALL WELDS SHALL BE GROUND SMOOTH TO THE APPROVAL OF THE ENGINEER OF RECORD AND THE ARCHITECT.
   c. ALL PAINT SHALL BE TOUCHED UP TO THE APPROVAL OF THE ARCHITECT.
   d. STEEL SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PAINT COMPATIBLE WITH THE FINISH PAINT PRODUCT.
9. ORIENT ALL BEAMS MILL CAMBER UPWARD DURING FABRICATION AND ERECTION.
10. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED, AS DESCRIBED IN "LATEST EDITION OF THE AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE", AWS D1.1, TO PERFORM THE TYPE OF WORK REQUIRED.
11. ALL BEAM TO GIRDER CONNECTIONS SHALL BE AS DESIGNED BY THE FABRICATOR SUBJECT TO THE ENGINEER'S APPROVAL. THE FOLLOWING CONNECTIONS ARE PERMITTED:
   a. DOUBLE ANGLE
   b. SHEAR PLATE
   c. SINGLE ANGLE
   d. FABRICATOR SHALL ADHERE TO ALL OSHA FEDERAL REGISTER STANDARDS WITH REGARD TO CONNECTION DESIGN
12. UNLESS NOTED OTHERWISE ON THE DRAWINGS, BEAM TO GIRDER CONNECTIONS SHALL BE DESIGNED FOR THE FOLLOWING:
   a. NON-COMPOSITE BEAM TO GIRDER, A MINIMUM OF 150% OF THE MAXIMUM BEAM END REACTION INDICATED BY THE AISC MAXIMUM TOTAL UNIFORM LOAD TABLES.
13. ALL CONNECTIONS TO BE DESIGNED BY THE STEEL FABRICATOR AND TO CONSIST OF THE FOLLOWING:
   a. BOLTED WITH A MINIMUM OF 3/4" A325N HIGH STRENGTH BOLTS
   b. WELDED CONNECTIONS
14. ALL GIRDER AND BEAM CONNECTIONS TO COLUMNS SHALL BE AS DESIGNED BY THE FABRICATOR SUBJECT TO THE ENGINEERS APPROVAL. THE FOLLOWING CONNECTIONS ARE REQUIRED:
   a. FULL DEPTH DOUBLE ANGLE CONNECTIONS. BOLTS SHALL BE AT 3-INCH O/C VERT.
   b. AISC TYPE 2 PR / FLEXIBLE MOMENT CONNECTIONS (LOCATIONS SHOWN ON DRAWINGS): FULL DEPTH DOUBLE ANGLE CONNECTIONS WITH TOP AND BOTTOM CLIP ANGLES AS INDICATED IN THE DRAWINGS.
15. PIPE AND TUBE COLUMN CONNECTIONS:
   a. PROVIDE A MINIMUM 3/8 INCH THICK, FULL DEPTH THRU-PLATE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
16. PROVIDE TYPICAL BOLTED CONNECTIONS WITH TENSION CONTROLLED BOLTS CONFORMING TO THE REQUIREMENTS OF ASTM F1852 AND F2280.
17. SEPARATE ALL ALUMINUM AND STEEL MEMBERS AS REQUIRED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
18. ALL STEEL WELDING RODS SHALL BE AS FOLLOWS:
   a. E70XX FOR STEEL CONNECTIONS
   b. E60XX FOR STEEL TO METAL STUD CONNECTIONS
19. CONTRACTOR TO SUBMIT ALL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.
20. STEEL FABRICATOR IS SOLELY RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR FOR THE PURPOSE OF SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATION, AND DIMENSIONS OF WALLS AND FRAMING THAT EXIST AT THE TIME OF THE STEEL ERECTION.
21. PERIMETER ANGLES AND BENT PLATES SHALL BE ADJUSTABLE AND SHALL BE WELDED AFTER ADJUSTMENT IN THE FIELD.
22. SPANDREL ANGLES SHALL BE ADJUSTABLE. SHIP ANGLES LOOSE AND SET WITH STRING LINE IN THE FIELD FOR VERTICAL AND HORIZONTAL ALIGNMENT, AFTER STEEL IS FULLY ERECTED, TO A MAXIMUM TOLERANCE OF 1/4 " HORIZONTAL PER BAY/PER FLOOR. THE VERTICAL LEG OF THE ANGLE MUST BE SET PLUMB BY STEEL ERECTOR PRIOR TO STUD ERECTION. ANGLE MUST BE INSTALLED IN ONE LENGTH PER BAY AND WELDED AFTER ADJUSTMENT IN THE FIELD.

OPEN WEB STEEL BAR JOISTS

1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND ERECTED AS PER THE REQUIREMENTS OF THE STEEL JOIST INSTITUTE AND THE JOIST MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.
2. ALL STEEL JOISTS SHALL BE THOROUGHLY CLEANED IN ACCORDANCE WITH SSPC-SP3 AND SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PAINT.
3. ALL STEEL JOISTS THAT ARE TO RECEIVE SPRAYED-ON FIREPROOFING OR CONCRETE ENCASEMENT SHALL REMAIN CLEANED AND UNPAINTED.
4. ALL SPECIAL JOISTS TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STEEL JOIST INSTITUTE FOR THE JOIST DESIGNATION SHOWN ON THE DRAWINGS. DESIGN SPECIAL JOISTS AS REQUIRED FOR ALL SPECIAL JOIST LOADING DIAGRAMS AND ADDITIONAL LOADING INFORMATION AS INDICATED ON DRAWINGS.
5. ALL BRIDGING AND BRACING OF JOISTS SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE AND OSHA STANDARDS UNLESS OTHERWISE NOTED ON THE DRAWINGS AND SHALL BE SUPPLIED IN ACCORDANCE WITH ALL OSHA REQUIREMENTS.
6. PROVIDE ADDITIONAL BRIDGING AND BRACING AS REQUIRED FOR ALL JOISTS LOCATED ON COLUMNS LINES AS REQUIRED TO DEVELOP CHORD FORCES AND MOMENTS AS NOTED ON THE DRAWINGS.
7. EXTEND, CONNECT, AND WELD BOTTOM CHORDS OF JOISTS AT ALL COLUMN LINES AND WHERE NOTED ON DRAWINGS AFTER ALL DEAD LOADS ARE APPLIED. JOIST MANUFACTURER SHALL DESIGN THE JOISTS FOR THE CHORD DESIGN FORCES, MOMENTS, AND OTHER LOADING REQUIREMENTS NOTED ON THE DRAWINGS.
8. PROVIDE TOP CHORD EXTENSIONS OF STEEL JOISTS AS REQUIRED AND JOIST MANUFACTUR TO DESIGN EXTENSION PER LOADING INDICATED IN DRAWINGS.
9. ALL JOIST SHALL BE DESIGNED AND BRACED TO RESIST THE FOLLOWING NET UPLIFT FORCES:
   a. FIELD NET UPLIFT = 10 PSF
   b. EDGE NET UPLIFT = 17 PSF
   c. CORNER NET UPLIFT = 17 PSF

   FOR AN EDGE DIMENSION OF 24 FEET.

METAL FLOOR AND ROOF DECK

1. STEEL ROOF DECK FOR THE PROJECT SHALL BE AS SHOWN ON THE DRAWINGS.
2. ALL ROOF DECK SHALL BE AS MANUFACTURED BY VULCRAFT, INC. OR APPROVED EQUAL. MANUFACTURER. MANUFACTURER AND INSTALLER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE AND MUST COMPLY WITH THE STEEL DECK INSTITUE STANDARDS.
3. ALL ROOF DECK SHALL BE DESIGNED, MANUFACTURED, AND INSTALLED IN ACCORDANCE WITH THE LATEST FACTORY MUTUAL STANDARDS.
4. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.
5. FOR ROOF DECK THINNER THAN 22 GA., USE WELDING WASHERS ON ALL CONNECTIONS OF STEEL TO STRUCTURAL STEEL SUPPORTS.
6. WARPING OF ROOF DECK MAY BE REQUIRED AS INDICATED ON DRAWINGS. CONNECT DECK USING SELF DRILLING SCREWS OR POWDER ACTUATED FASTENERS (PAFs) FOR CONNECTIONS OF ROOF DECK TO ALL SUPPORTING STRUCTURAL STEEL (JOISTS AND BEAMS) SUPPORTS. SCREW OR PAF SIZES SHALL COMPLY WITH MANUFACTURER REQUIREMENTS.
7. ATTACH METAL ROOF DECK TO STRUCTURAL STEEL SUPPORTS WITH ONE OF THE APPROVED FOLLOWING METHODS:
   a. 5/8" DIAMETER PUDDLE WELDS (36/4 FASTENING PATTERN UNLESS OTHERWISE NOTED).
   b. DECK TO STEEL BAR JOISTS, HILTI DECK FASTENER X-HSNK24 (36/4 FASTNENING PATTERN UNLESS OTHERWISE NOTED)
   c. DECK TO STRUCTURAL STEEL, HILTI DECK FASTENER X-ENP-19 (36/4 FASTENING PATTERN UNLESS OTHERWISE NOTED).
   d. ALL SIDE LAPS SHALL BE FASTENED TOGETHER WITH #12 SELF DRILLING SCREWS AT 36 INCHES ON CENTER.
8. FLOOR DECK FOR THE PROJECT SHALL BE AS NOTED ON THE DRAWINGS.
9. ALL FLOOR DECK SHALL BE MANUFACTURED BY VULCRAFT, INC. OR APPROVED EQUAL. FLOOR DECK FABRICATION AND INSTALLATION MUST COMPLY WITH THE STEEL DECK INSTITUTE STANDARDS.
10. ALL FLOOR DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS HOWEVER IF LESS THAN THREE SPANS, DECK SHALL BE SUPPORTED SO THAT THE MAXIMUM LENGTH DOES NOT EXCEED THAT PERMITTED BY THE MANUFACUTER'S LOAD TABLES AND SDI STANDARDS.
11. ATTACH METAL FLOOR DECK TO STRUCTURAL STEEL SUPPORTS WITH ONE OF THE APPROVED FOLLOWING METHODS:
   a. 5/8" DIAMETER PUDDLE WELDS (36/4 FASTENING PATTERN UNLESS OTHERWISE NOTED).
   b. FLOOR DECK TO STEEL JOISTS, HILTI DECK FASTENER X-HSNK24 (36/4 FASTNENING PATTERN UNLESS OTHERWISE NOTED).
   c. FLOOR DECK TO STRUCTURAL STEEL, HILTI DECK FASTENER X-ENP-19 (36/4 FASTENING PATTERN UNLESS OTHERWISE NOTED)
   d. ALL SIDE LAPS TO BE FASTENED TOGETHER WITH #12 SELF DRILLING SCREWS AT 36 INCHES ON CENTER.

MASONRY

1. ALL MASONRY UNITS SHALL BE NORMAL WEIGHT MASONRY UNITS MEETING ASTM C90 WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI (f'm) (AVERAGE OF 3 TESTS).
2. ALL MASONRY UNITS TO BE GROUTED SOLID BELOW GRADE, AT ALL VERTICAL REINFORCING LOCATIONS, AND WHERE INDICATED IN DRAWINGS.
3. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR.
4. CONTRACTOR TO CONSTRUCT COLUMN PIERS INTEGRALLY WITH FOUNDATION AND ABOVE GRADE WALLS AND CONTINUE HORIZONTAL WALL REINFORCEMENT THROUGH THE PIER.
5. THE FOLLOWING BLOCK STRENGTHS ARE REQUIRED UNLESS ASSEMBLY STRENGTH IS JUSTIFIED VIA THE PRISM TEST:
   a. 2800 PSI ON GROSS AREA FOR SOLID INDIVIDUAL UNITS.
   b. 1900 PSI ON NET AREA OF HOLLOW INDIVIDUAL UNITS.
6. ALL MASONRY MORTAR SHALL BE ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
7. ALL MORTAR SHALL BE FIELD-TESTED PER ASTM C780.
8. COMPRESSIVE STRENGTH VALUES DETERMINED THROUGH ASTM C780 IN THE FIELD ARE NOT EXPECTED TO ACHIEVE THE COMPRESSIVE STRENGTHS OF LABORATORY TESTED ASTM C270 SPECIFICATION MORTARS.
9. GROUT SHALL BE A HIGH SLUMP MIX, PROPORTIONED IN ACCORDANCE WITH ASTM C476, THAT ACHIEVES THE COMPRESSIVE STRENGTH OF THE MASONRY (f'm), NOT LESS THAN 2000 PSI AT 28 DAYS.
10. ALL GROUT SHALL BE TESTED USING FIELD OBTAINED CYLINDERS IN ACCORDANCE WITH ASTM C1019.
11. ALL CONCRETE MASONRY SHALL BE CONSTRUCTED IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530/ASCE 5/TMS 402" AND THE "SPECIFICATION FOR MASONRY STRUCTURES ACI 530.1/ASCE 6/TMS 602"
12. ALL BRICK MASONRY UNITS SHALL BE GRADE SW IN ACCORDANCE WITH ASTM C216 WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, BONDED TOGETHER WITH TYPE S MORTAR.
13. PROVIDE HOT-DIPPED GALVANIZED TRUSS TYPE HORIZONTAL JOINT REINFORCEMENT, MIN. 9 GA, AT 16" ON CENTER VERTICAL IN ALL MASONRY WALLS. SPACE HORIZONTAL JOINT REINFORCEMENT AT 8 INCHES ON CENTER IN ALL PARAPETS. USE SHOP FABRICATED SPECIAL PIECES AT ALL CORNERS AND TEES.

COLD FORMED STRUCTURAL METAL FRAMING

1. COLD FORMED METAL FRAMING SIZING & SPACING INFORMATION IS PROVIDED ON STRUCTURAL DRAWINGS. CONTRACTOR TO PROVIDE INFORMATION INDICATING FRAMING DETAILS, CONNECTIONS, BRACING, AND BRIDGING OF MEMBERS CONFORM TO LOAD CRITERIA. SUBMISSION OF UNMARKED PRODUCT CATALOG PAGES AND FULL PRODUCT CATALOGS IS NOT PERMITTED.
2. ALL STRUCTURAL METAL STUDS SHALL BE HOT-DIPPED GALVANIZED (G60) IN ACCORDANCE WITH ASTM A924. COLD FORMED METAL STUDS SHALL BE DESIGNED, MANUFACTURED, AND INSTALLED IN ACCORDANCE WITH THE AISI SPECIFICATIONS AND SHALL COMPLY WITH STEEL SHEET ASTM A1003 STRENGTH AS FOLLOWS:
   a. 16 GA AND THICKER - FY = 50KSI
   b. 18 GA AND 20 GA - FY = 33KSI
3. ALL WELDING OF LIGHT GAUGE STEEL FRAMING MUST BE DONE UTILIZING E60XX ELECTRODES AND SHALL BE COMPLETED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.3, STRUCTURAL WELDING CODE-SHEET STEEL.
4. ALL CONNECTIONS SHALL BE MADE WITH SELF-TAPPING SCREWS OR WELDING SO THAT THE CONNECTIONS MEET OR EXCEED THE DESIGN LOADS. ALWAYS USE WELDS WHERE SHOWN ON DRAWINGS.
5. CUT ALL LIGHT GAUGE STEEL FRAMING MEMBERS WITH SAWS OR SHEARS. FLAME CUTTING IS NOT PERMITTED.
6. THE LIGHT GAUGE STEEL FRAMING SUPPLIER AND ERECTOR SHALL HAVE A MINIMUM OF 5 YEARS OF EXPERIENCE IN THE FABRICATION AND ERECTION OF LIGHT GAUGE STEEL FRAMING SYSTEMS.

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PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21771 SUSSEX PINES RD
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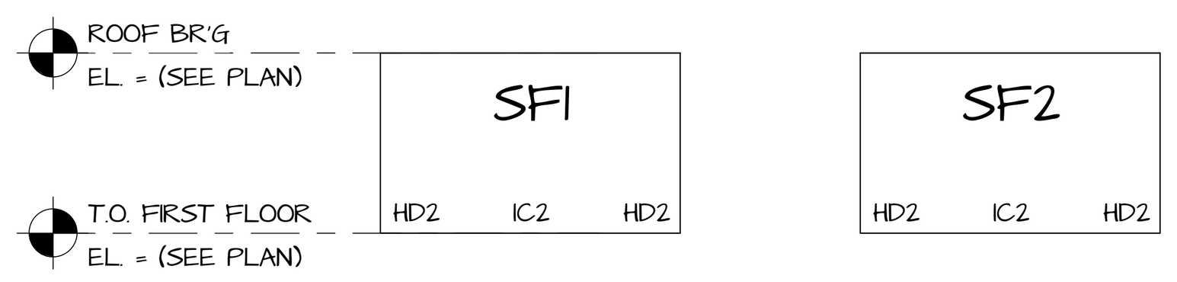
SHEET TITLE:
GENERAL NOTES

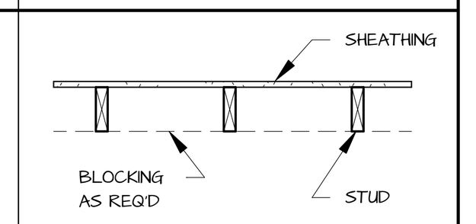
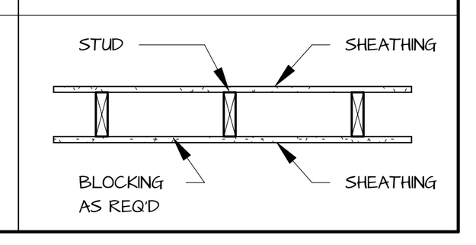


SW1 SW2

SHEAR WALL ELEVATIONS

NOTES:
1. 'SW_' INDICATES SHEAR TYPE. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
2. 'HD_' INDICATES HOLD DOWN TYPE. SEE SCHEDULE FOR ADDITIONAL INFORMATION.

SHEATHING & FASTENER SCHEDULE

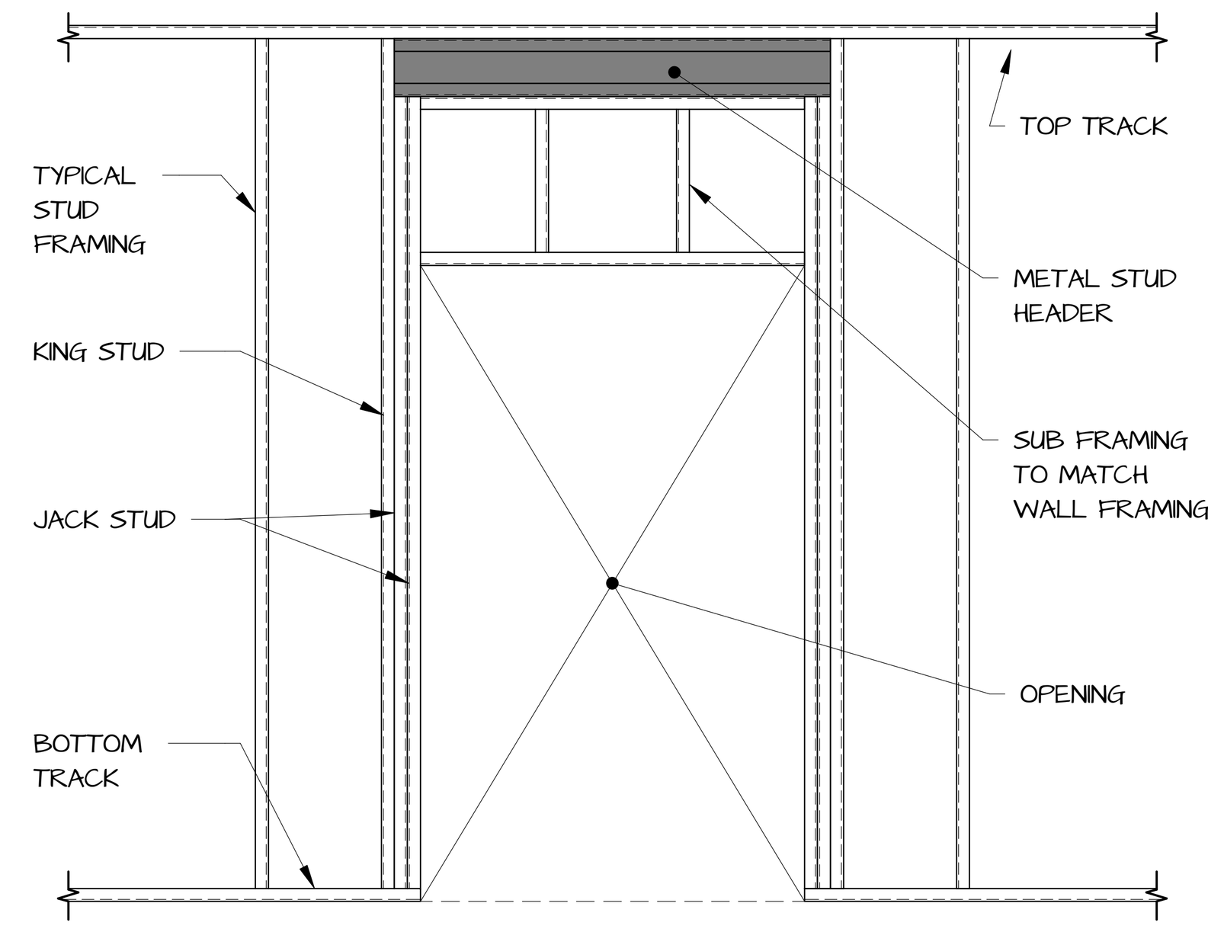
MARK	SHEATHING	FASTENER	PLAN VIEW
SF1	1/2" WOOD SHEATHING w/ BLOCKING (ONE SIDE)	8d NAILS @ 6" o/c SPACING @ EDGES, 12" o/c IN FIELD	 SHEATHING; BLOCKING AS REQ'D; STUD
SF2	1/2" GYPSUM SHEATHING w/ BLOCKING (BOTH SIDES)	6d NAILS @ 4" o/c SPACING @ EDGES, 12" o/c IN FIELD	 STUD; SHEATHING; BLOCKING AS REQ'D; SHEATHING

INTERMEDIATE CONNECTION SCHEDULE

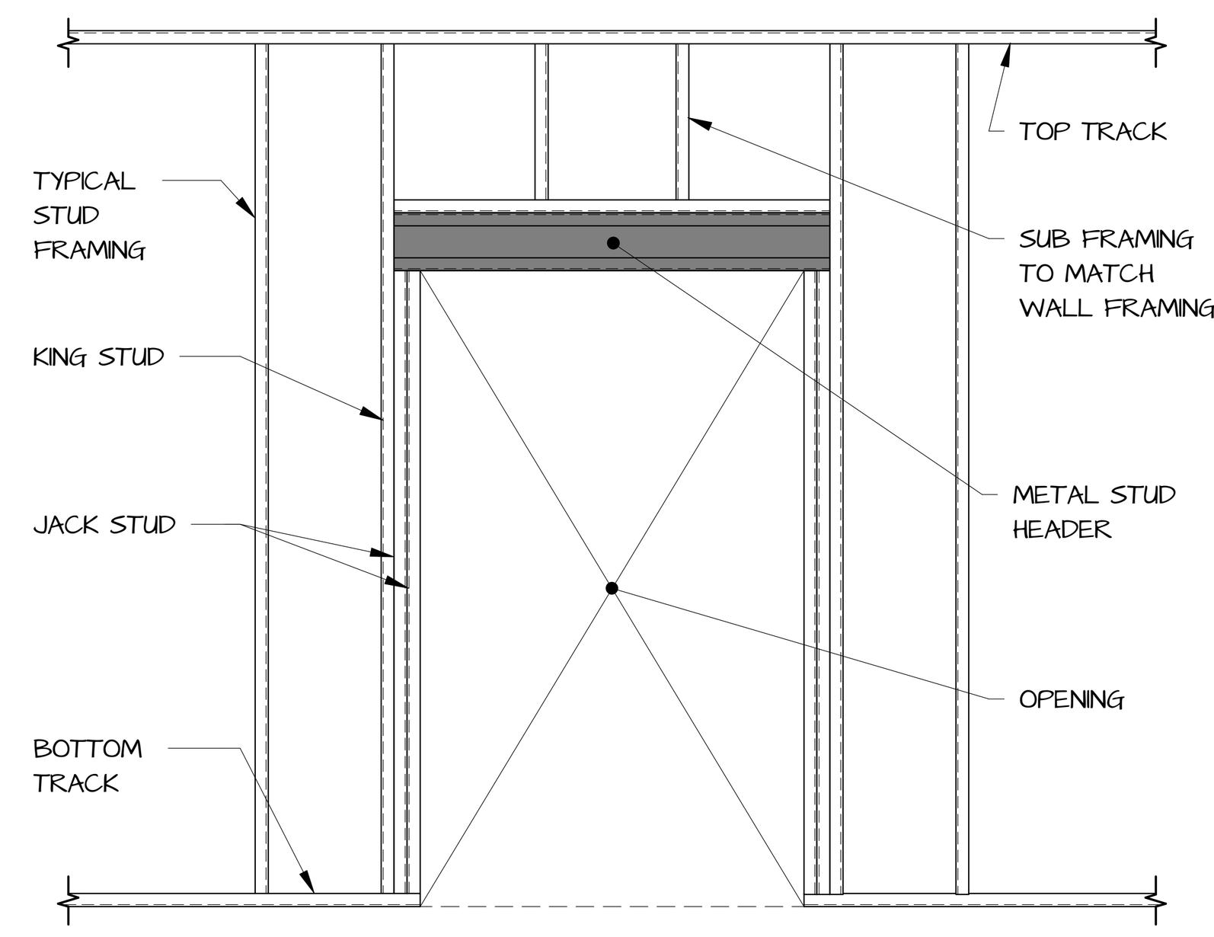
MARK	TYPE	SPACING	NOTES
IC1	1/4"Ø SDS SCREW w/ 2" EMBEDMENT TOP & BOTTOM	16" o/c	CONNECTION THRU-FLOOR (SEE DETAIL)
IC2	1/2"Ø ANCHOR BOLT w/ 3"x3"x3GA. WASHER PLATES	48" o/c	CONNECTION TO FOUNDATION WALL

HOLD DOWN SCHEDULE

MARK	SIMPSON TYPE	FASTENERS	CAPACITY	NOTES
HD1				
HD2				
HD3				



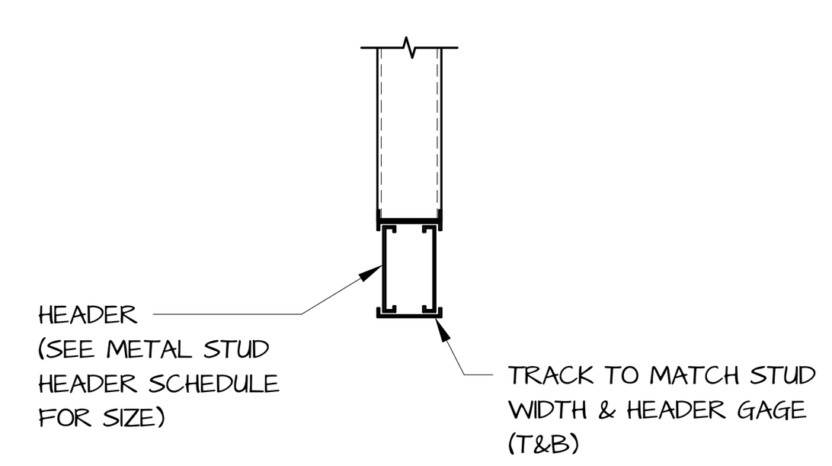
ALTERNATE METAL STUD HEADER CONSTRUCTION



TYPICAL METAL STUD HEADER CONSTRUCTION

METAL STUD HEADER SCHEDULE

MARK	DESCRIPTION	JACK STUDS	KING STUDS	SECTION	REMARKS
MH1	-	-	-		-
MH2	-	-	-		-
MH3	-	-	-		-



METAL STUD HEADER SCHEDULE
(NON-BEARING WALLS)

WIDTH OF OPENING	METAL STUD LINTEL SIZE	JAMB STUDS
UP TO 7'-0"	(2) 600S162-54	(2) STUDS
7'-0" TO 10'-0"	(2) 800S162-68	(2) STUDS
10'-0" TO 12'-0"	(2) 1000S162-68	(2) STUDS

COLUMN FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING	REMARKS
	WIDTH	LENGTH	THICKNESS		
F30	3' - 0"	3' - 0"	1' - 0"	(4) #4 EWB	

WALL FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCING		REMARKS
	WIDTH	THICKNESS	LONGITUDINAL	TRANSVERSE	
F20.12	2' - 0"	1' - 0"	3 - #4	#4 @ 24"	

CONCRETE PIER SCHEDULE

MARK	DIMENSIONS		REINFORCING		REMARKS
	WIDTH	LENGTH	VERTICAL	TIES	
P1	1' - 2"	1' - 2"	-	-	

WOOD POST SCHEDULE

MARK	TYPE	BASE	REMARKS
WP1	6x6		

DESIGN LOAD SCHEDULE (psf)

DEAD LOAD COMPONENT / LOCATION	--	--	--	--	--	--	--	--
4" CONCRETE SLAB ON GRADE	-							
ROOFING & INSULATION								
FRAMING								
CEILING								
COLLATERAL								
MECHANICAL								
TOPPING								
SOLAR								
GREEN ROOF								
PARTITIONS								
-								
-								
TOTAL DEAD LOAD	-	-	-	-	-	-	-	-
TOTAL LIVE LOAD	-	-	-	-	-	-	-	-
TOTAL LOAD	-	-	-	-	-	-	-	-

WIND LOAD DESIGN CRITERIA
2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
ULTIMATE WIND SPEED	V_{ULT}	?
ALLOWABLE WIND SPEED	V_{ASD}	?
RISK CATEGORY	-	?
WIND EXPOSURE CATEGORY	-	?
INTERNAL PRESSURE COEFFICIENT	GC_{PI}	?

SEISMIC LOAD DESIGN CRITERIA
2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
SITE CLASS	-	?
SPECTRAL RESPONSE ACCELERATION (0.2 SEC.)		
MAPPED	S_S	?
DESIGN	S_{DS}	?
SPECTRAL RESPONSE ACCELERATION (1 SEC.)		
MAPPED	S_1	?
DESIGN	S_{D1}	?
RISK CATEGORY		?
IMPORTANCE FACTOR	I_E	?
SEISMIC DESIGN CATEGORY	-	?
ANALYSIS PROCEDURE	-	? ?
SEISMIC FORCE RESISTING SYSTEM	-	?
RESPONSE MOD. FACTOR	R	?
SEISMIC RESPONSE COEFFICIENT	C_S	?
DESIGN BASE SHEAR	V	?

SNOW LOAD DESIGN CRITERIA
2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
GROUND SNOW LOAD	P_G	?
RISK CATEGORY	-	?
EXPOSURE FACTOR	C_E	?
IMPORTANCE FACTOR	I	?
THERMAL FACTOR	C_T	?
FLAT-ROOF SNOW LOAD	P_F	?

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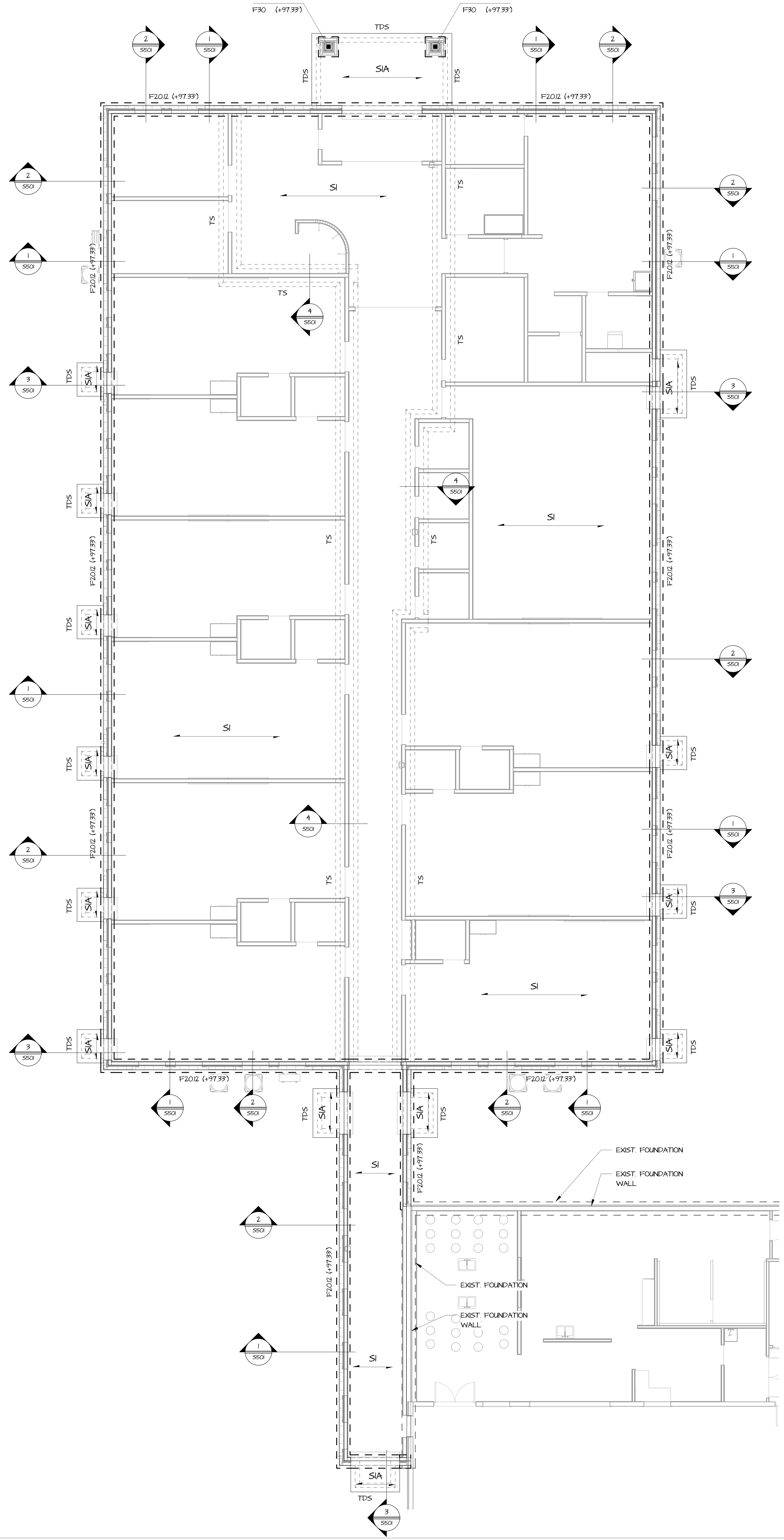
SEAL:

SHEET TITLE:
PROJECT SCHEDULES
PROJECT #: AS170
ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:
S003

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



1 / S101 FOUNDATION PLAN

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

NOTES:

1. TOP OF SLAB EL. = DATUM EL. (0.00') UNLESS NOTED OTHERWISE THUS (...).
2. SEE PLAN FOR TOP OF FOOTING ELEVATION BELOW DATUM ELEVATION.
3. TOP OF PIER EL. = [-0.67'] BELOW DATUM UNLESS NOTED OTHERWISE THUS [...].
4. 'TS' INDICATES THICKENED SLAB. SEE TYPICAL DETAIL FOR ADDITIONAL INFORMATION.
5. 'SF' INDICATES STEPPED FOOTING. SEE TYPICAL DETAIL FOR ADDITIONAL INFORMATION.
6. 'TDS' INDICATES TURNED DOWN SLAB. SEE TYPICAL DETAIL FOR ADDITIONAL INFORMATION.
7. 'S_/D_' INDICATES FLOOR/ ROOF CONSTRUCTION. SEE SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.
8. COORDINATE ALL UNDER SLAB PIPING WITH ARCHITECTURAL/ MECHANICAL DRAWINGS.
9. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO BUILDING LAYOUT.

SLAB/ DECK CONSTRUCTION SCHEDULE

MARK	SECTION	DESCRIPTION
S1		4" CONCRETE SLAB ON GRADE w/ 6x6-W1.4xW1.4 WWF OVER 4" CRUSHED STONE
S1A		4" CONCRETE (w/ 6% AIR ENTRAINMENT) SLAB ON GRADE w/ 6x6-W1.4xW1.4 WWF OVER 4" CRUSHED STONE
D2		5/8" T&G PLYWOOD ROOF SHEATHING

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DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

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SEAL:

SHEET TITLE:

FOUNDATION PLAN

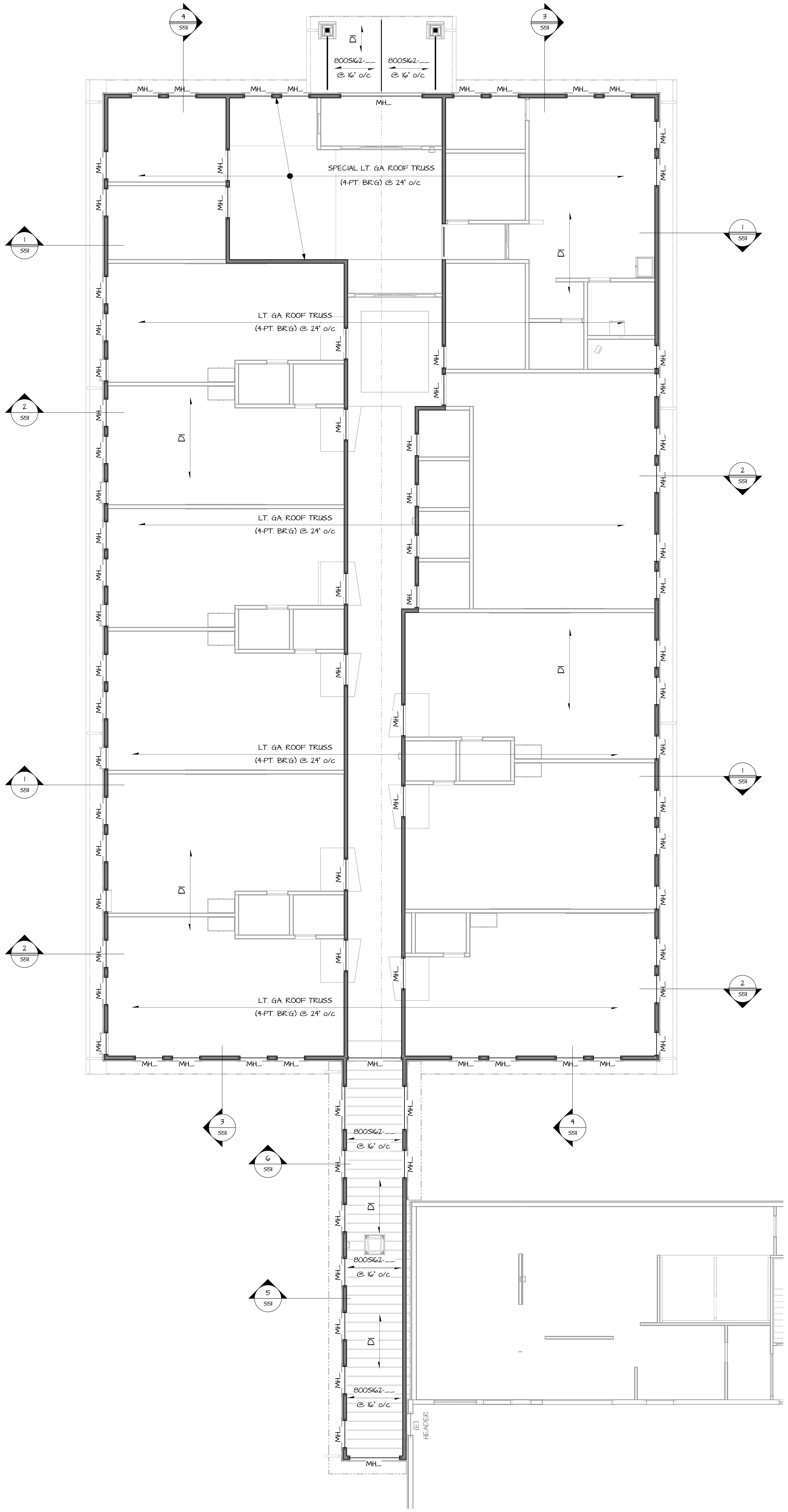
PROJECT #: A9170

ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:

S101

SCALE: AS INDICATED



ROOF FRAMING PLAN

1 / S102 — SCALE: 1/8" = 1'-0"

NOTES:

1. TRUSS BEARING EL. = (   ) ABOVE DATUM EL.
2. 'S_/D_' INDICATES FLOOR/ ROOF CONSTRUCTION. SEE SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.
3. 'L_' INDICATES LINTEL. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
4. COORDINATE ROOF TOP UNIT LOCATIONS & DUCT PENETRATIONS WITH ARCHITECTURAL/ MECHANICAL DRAWINGS. SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
5. PROVIDE TRIPLE JAMB STUDS @ ALL LVL, GLB, & GIRDER TRUSS BEARING LOCATIONS UNLESS NOTED OTHERWISE.
6. PROVIDE MINIMUM (2) JAMB STUDS @ EACH END OF HEADER UNLESS NOTED OTHERWISE.
7. 'SW_' INDICATES SHEARWALL. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
8. [shaded box] INDICATES SHEARWALL LOCATION.

SLAB/ DECK CONSTRUCTION SCHEDULE

MARK	SECTION	DESCRIPTION
S1		4" CONCRETE SLAB ON GRADE w/ 6x6-W1.4xW1.4 WWF OVER 4" CRUSHED STONE
S1A		4" CONCRETE (w/ 6% AIR ENTRAINMENT) SLAB ON GRADE w/ 6x6-W1.4xW1.4 WWF OVER 4" CRUSHED STONE
D2		5/8" T&G PLYWOOD ROOF SHEATHING

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PROJECT: DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER
21771 SUSSEX PINES RD
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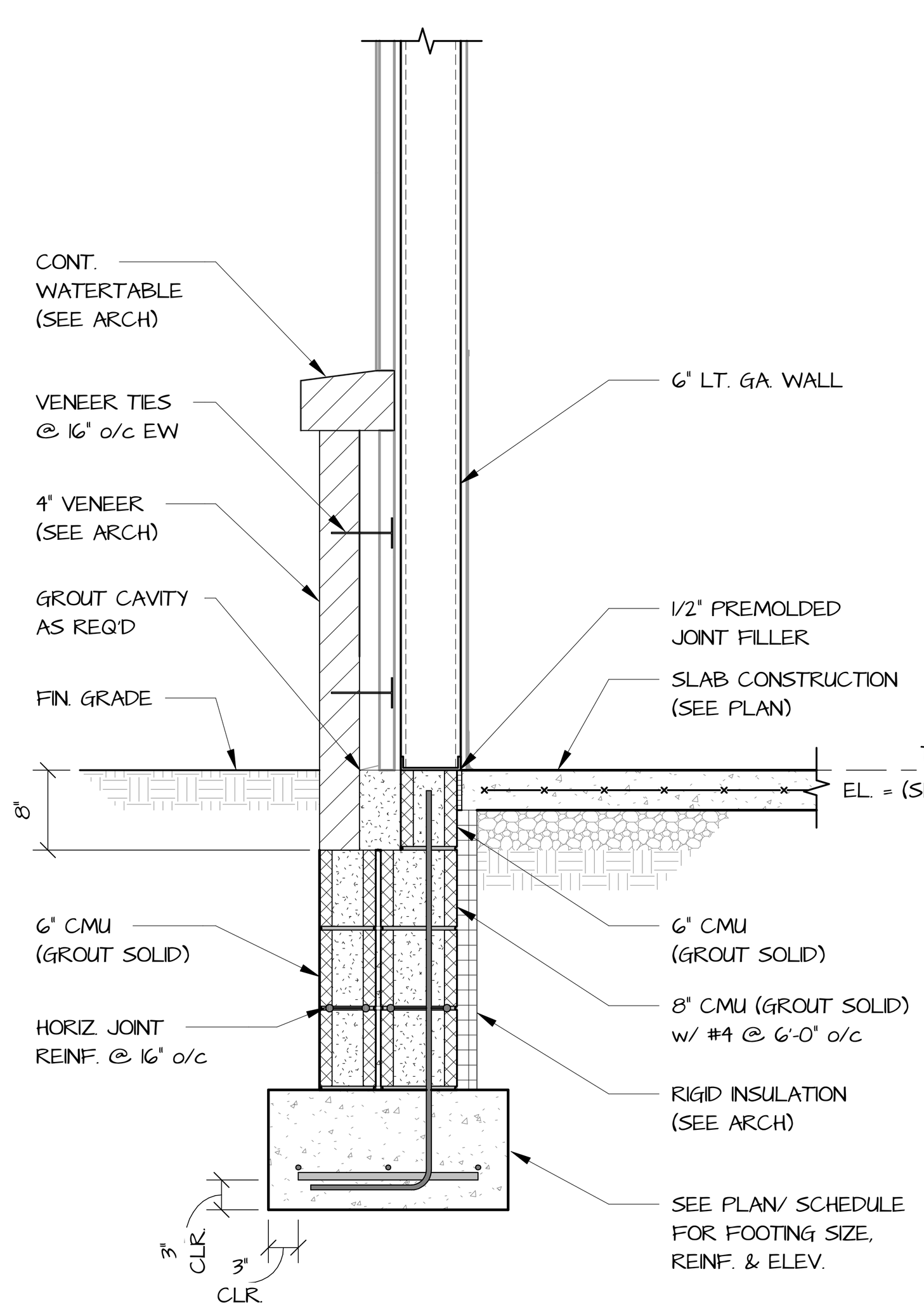
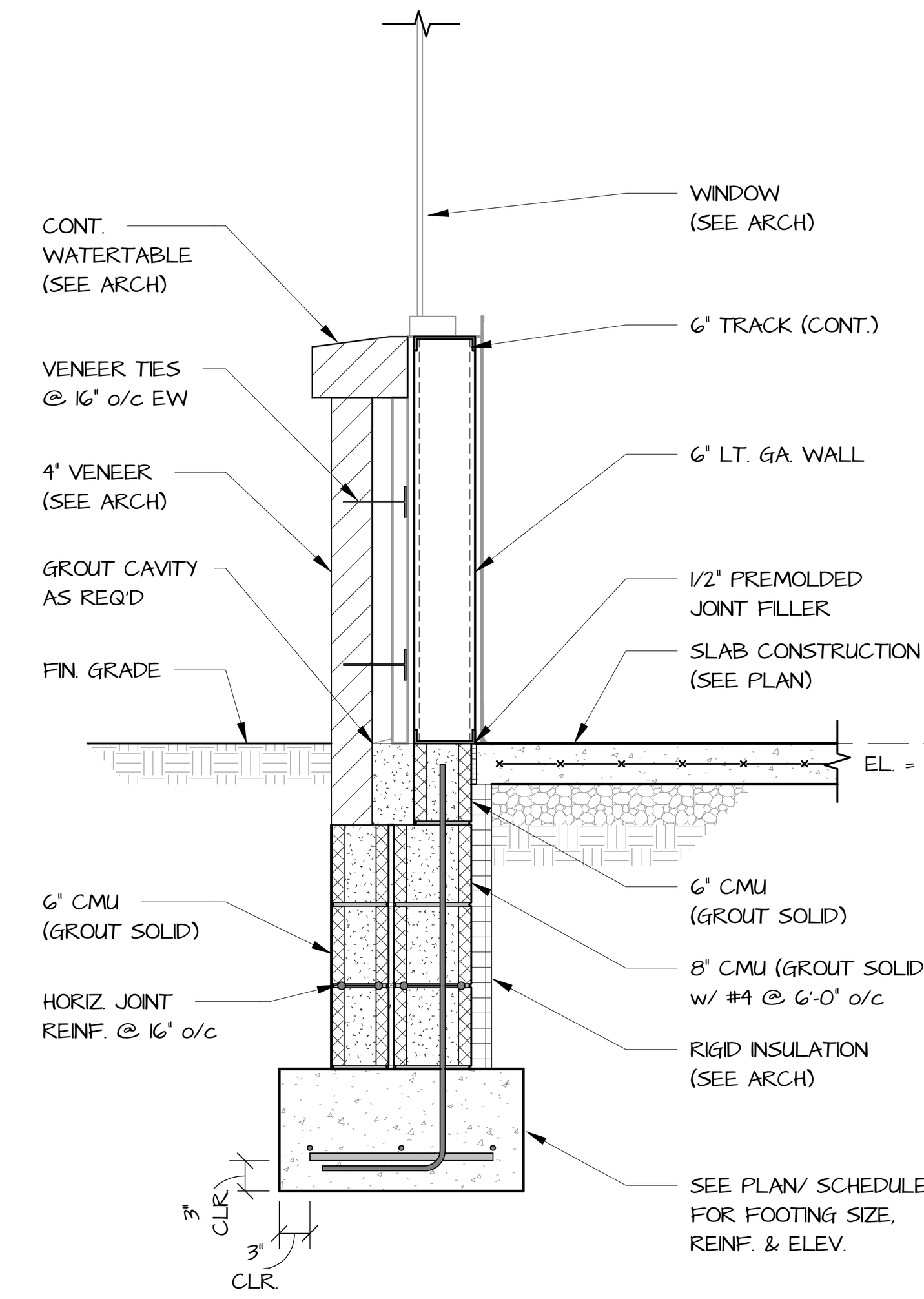
SHEET TITLE: ROOF FRAMING PLAN

SHEET NUMBER: S102

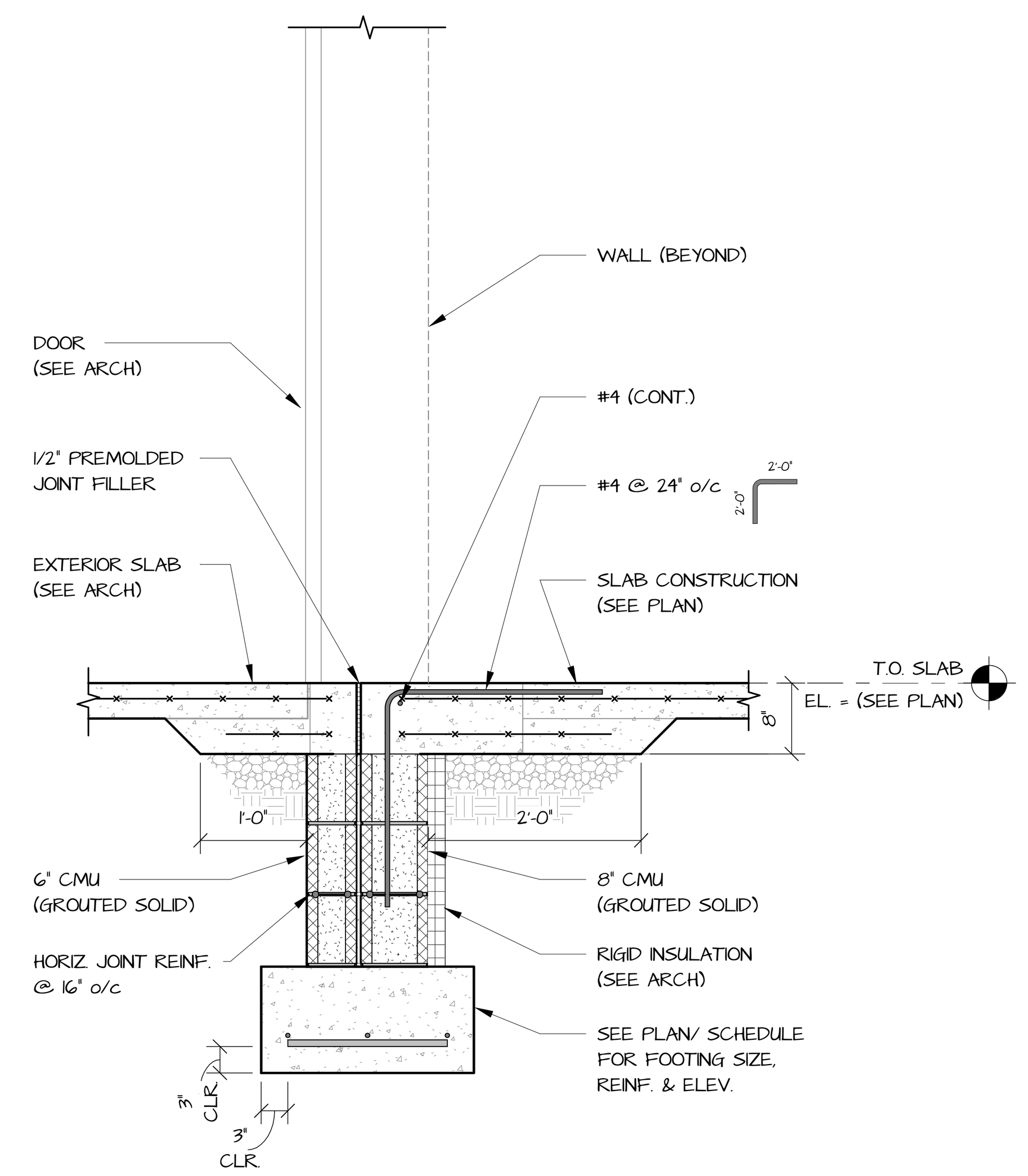
SCALE: AS INDICATED



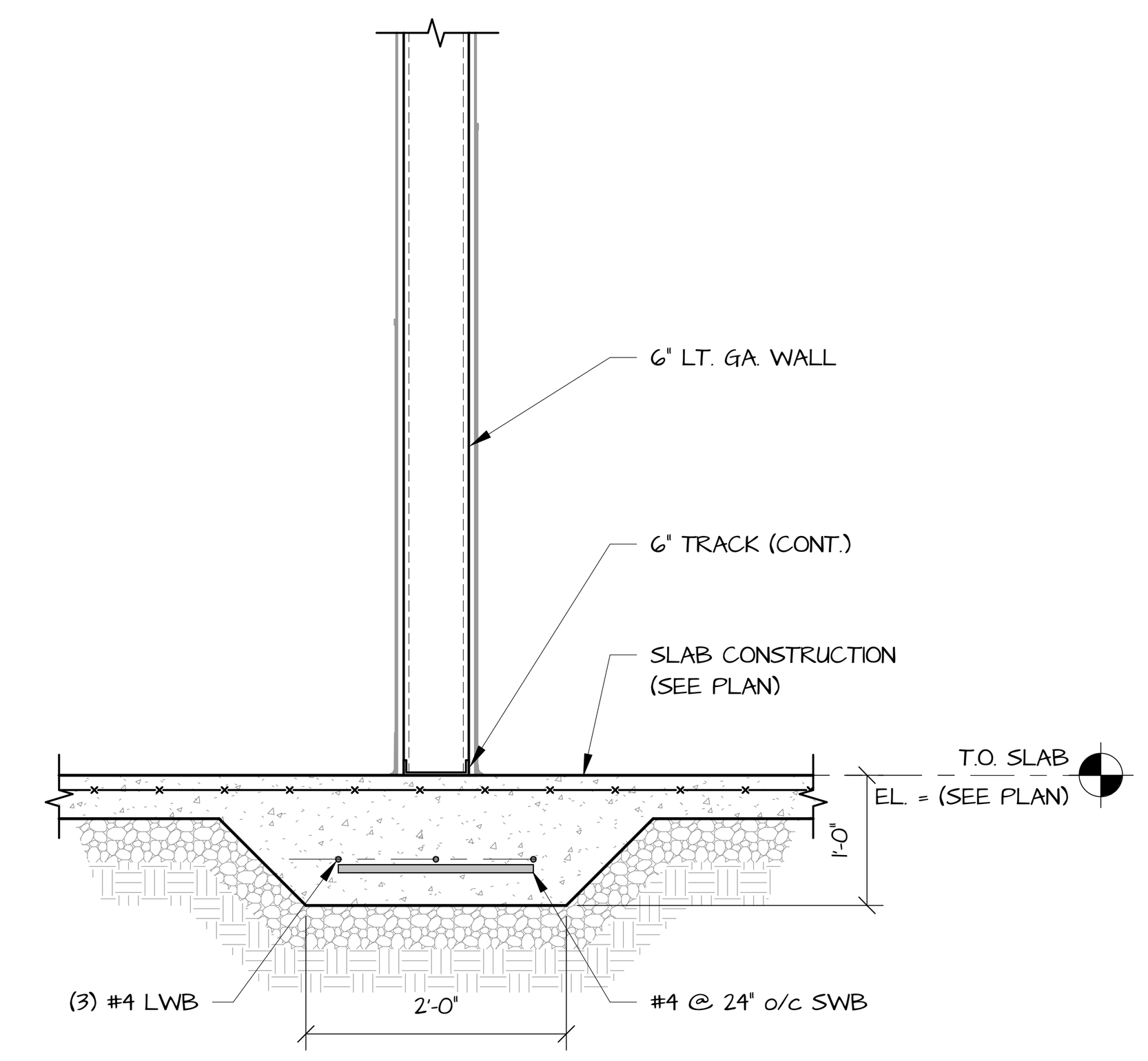
SECTION 1 S501



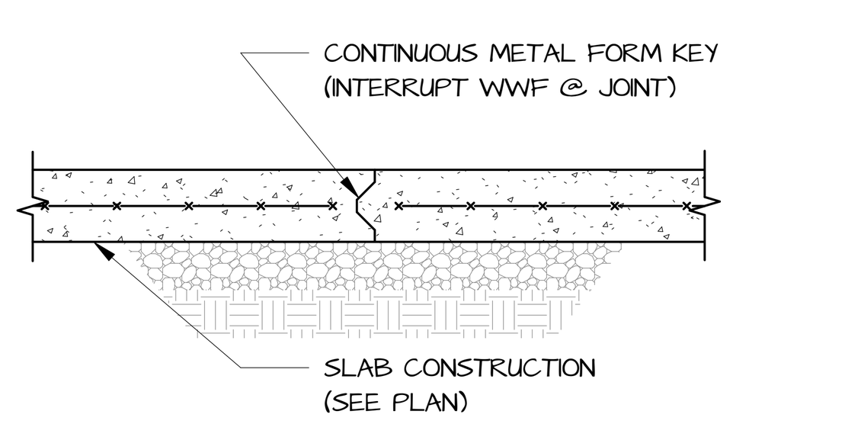
SECTION 2 S501



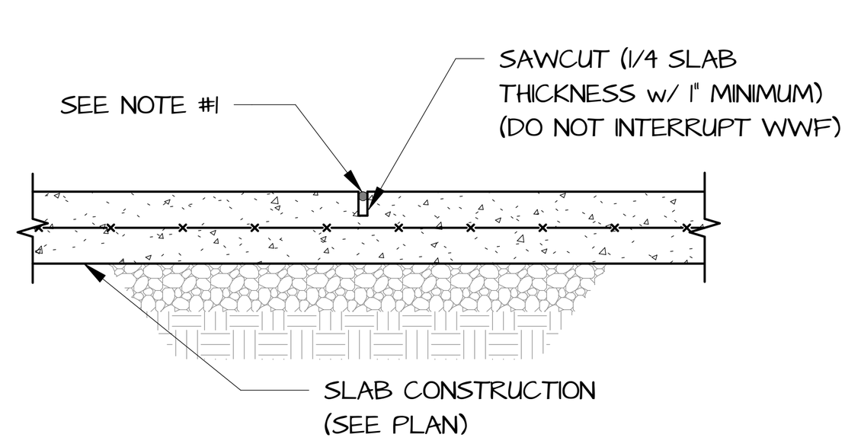
SECTION 3 S501



SECTION 4 S501



CONSTRUCTION JOINT

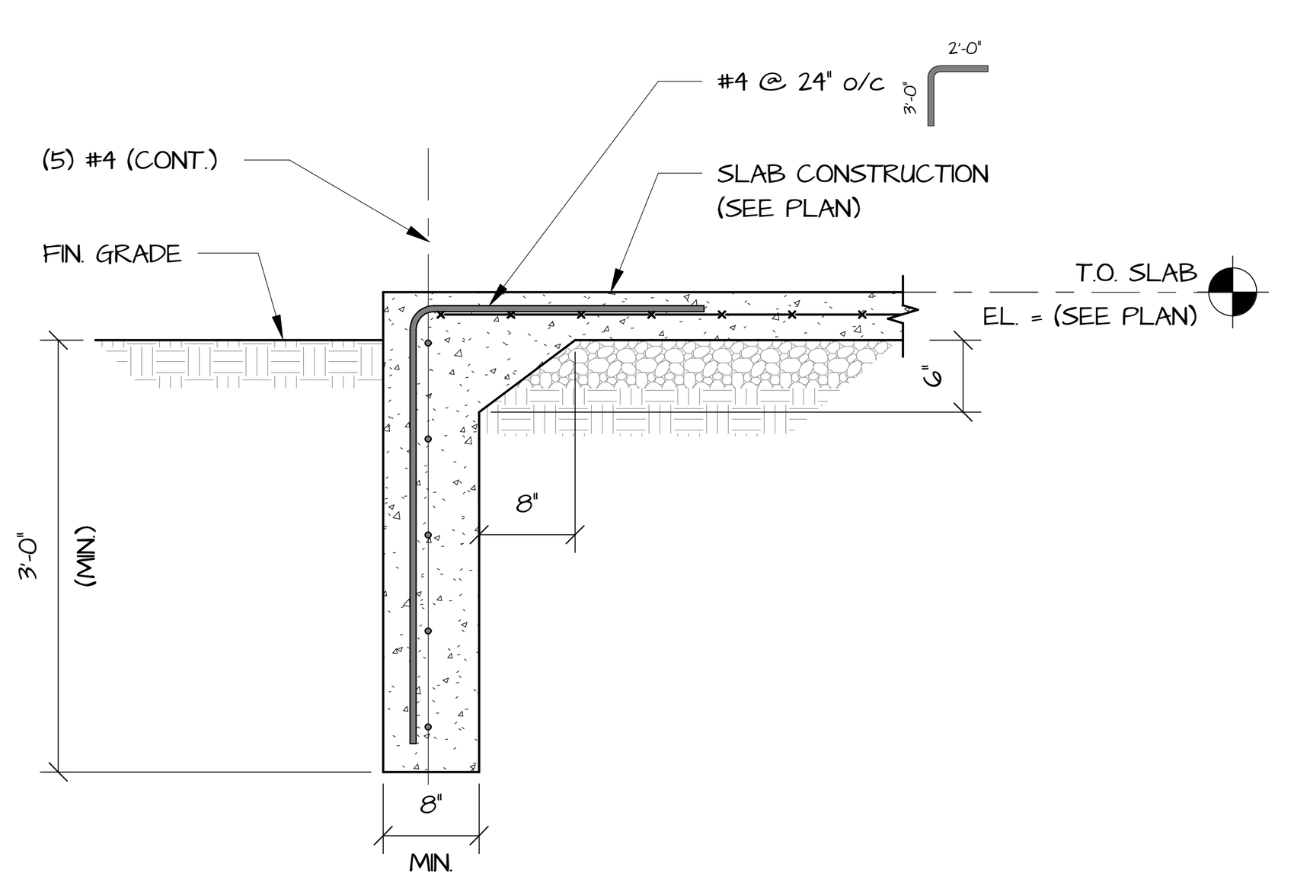


CONTROL JOINT

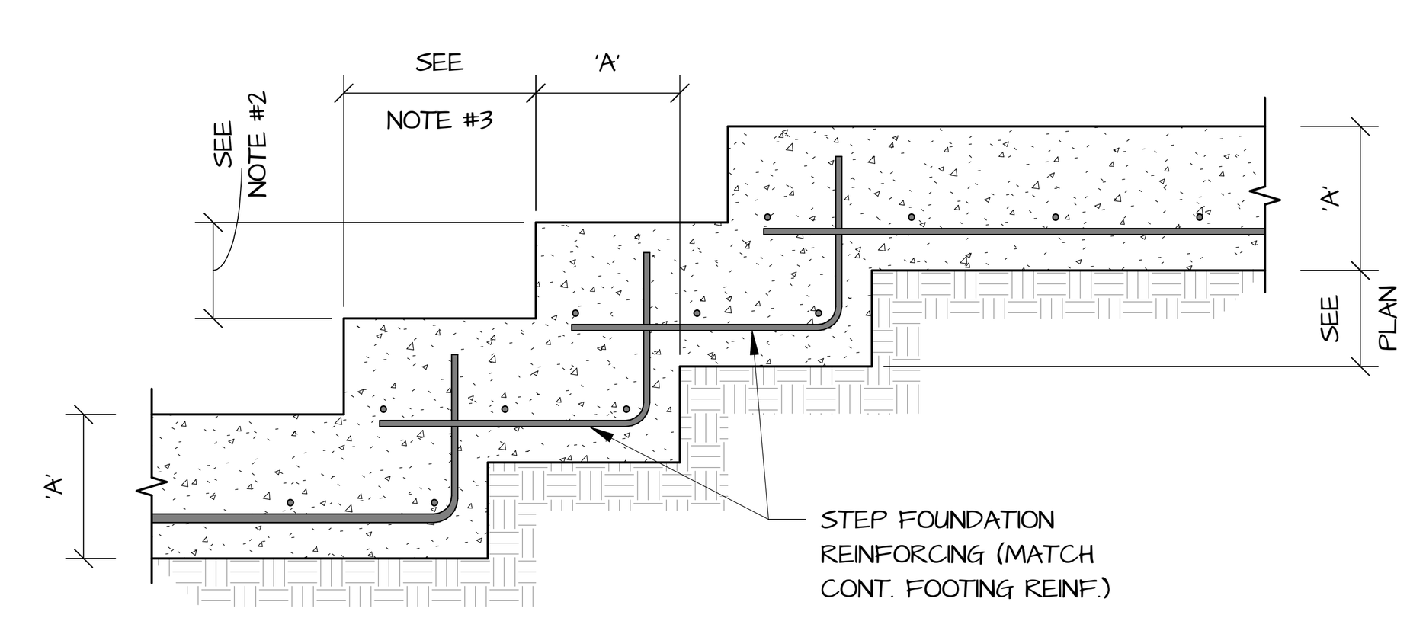
TYPICAL SLAB ON GRADE JOINT DETAILS

NOTES:

1. PROVIDE SEMI-RIGID FILLER @ HIGH VEHICLE TRAFFIC AREAS.
2. CONSTRUCTION JOINTS & CONTROL JOINTS SHALL CREATE PANELS OF 225sqft (MAX); LENGTH TO WIDTH RATIO NOT TO EXCEED 1-1/2 : 1.
3. SAWCUT INTERIOR SLABS WITHIN 24 HOURS OF CONCRETE POUR. SAWCUT EXTERIOR SLABS WITHIN 12 HOURS OF CONCRETE POUR OR COVER TO PREVENT EXCESSIVE MOISTURE EVAPORATION.



TYPICAL TURNED DOWN SLAB DETAIL



TYPICAL STEPPED FOOTING DETAIL

NOTES:

1. 'A' INDICATES FOOTING THICKNESS. (SEE PLAN/ SCHEDULE).
2. SEE PLAN FOR FOOTING STEP HEIGHT (MAX 24").
3. DIMENSION = 2 TIMES STEP HEIGHT.

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SHEET TITLE:

FOUNDATION DETAILS & SECTIONS

PROJECT #: 48110 ORIGINAL ISSUE: PRELIMINARY

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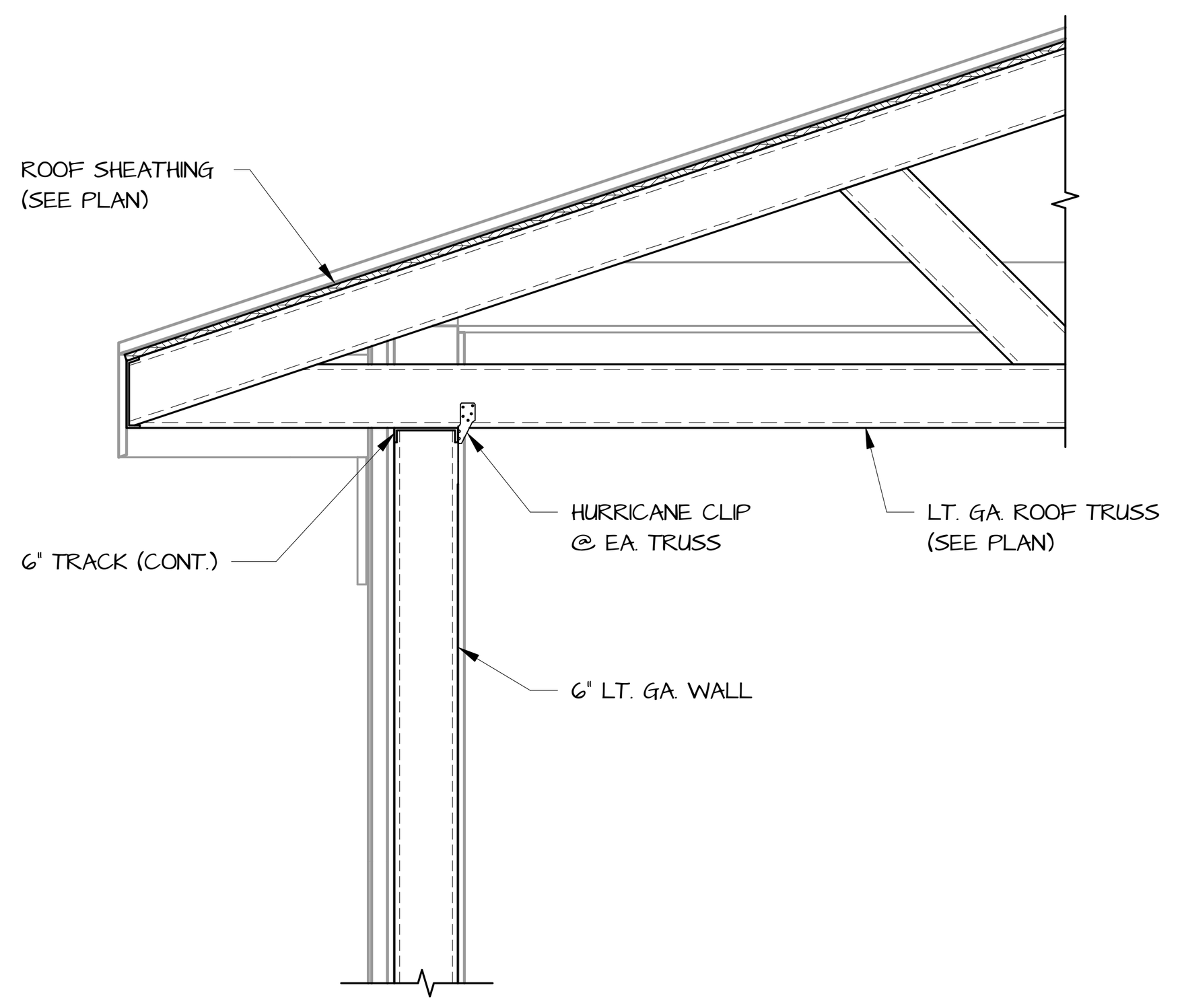
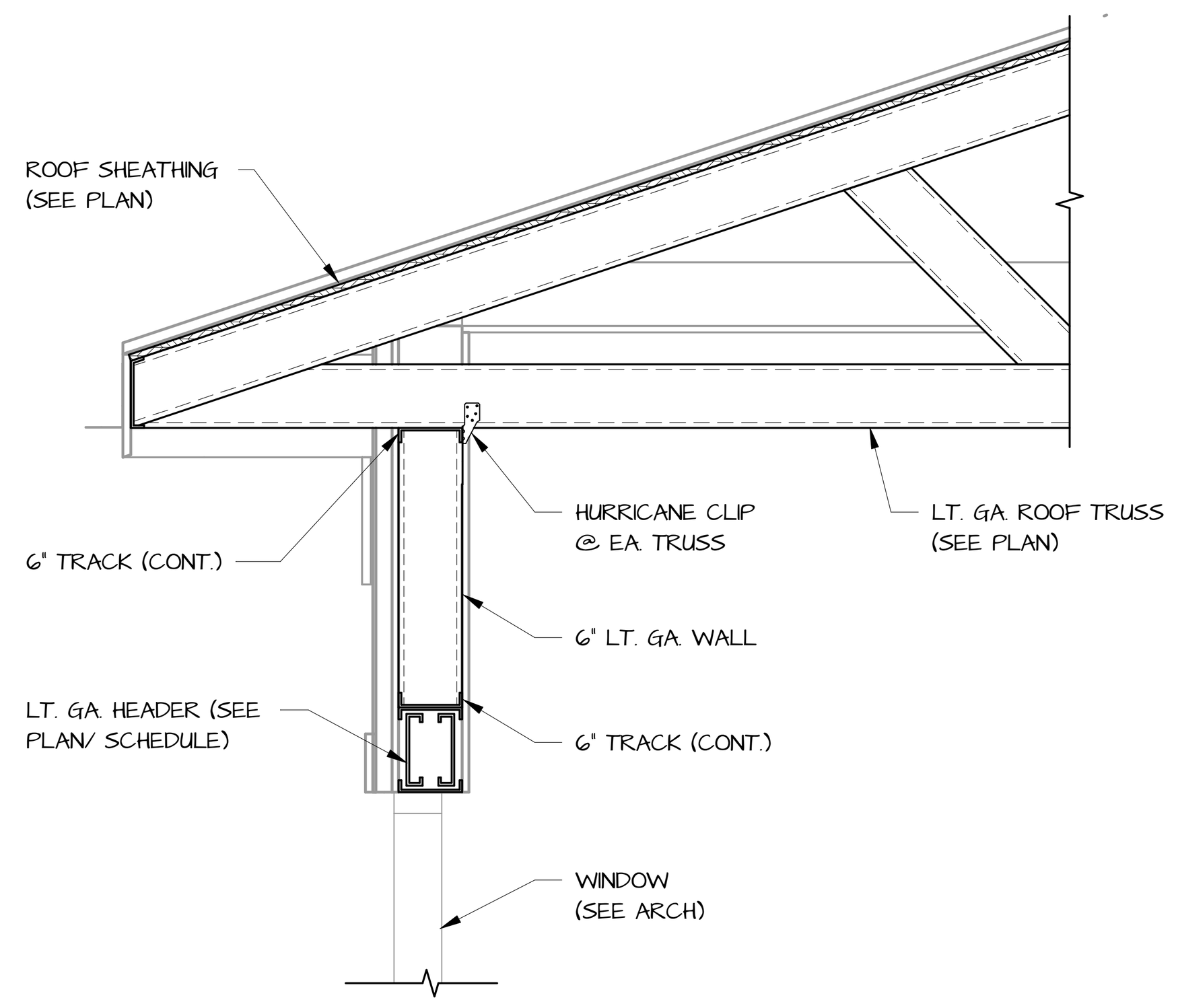
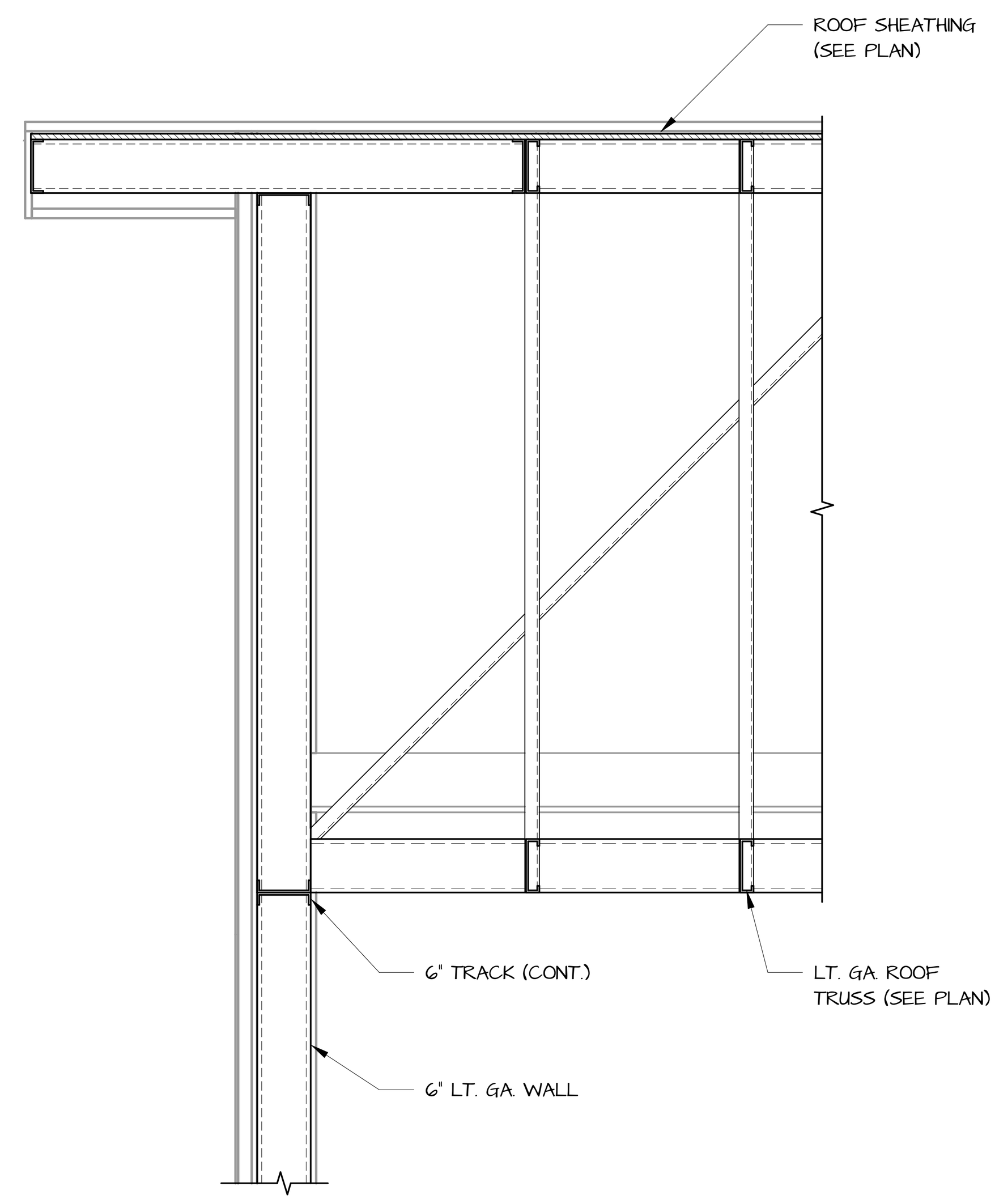
SCALE: 3/4" = 1'-0"



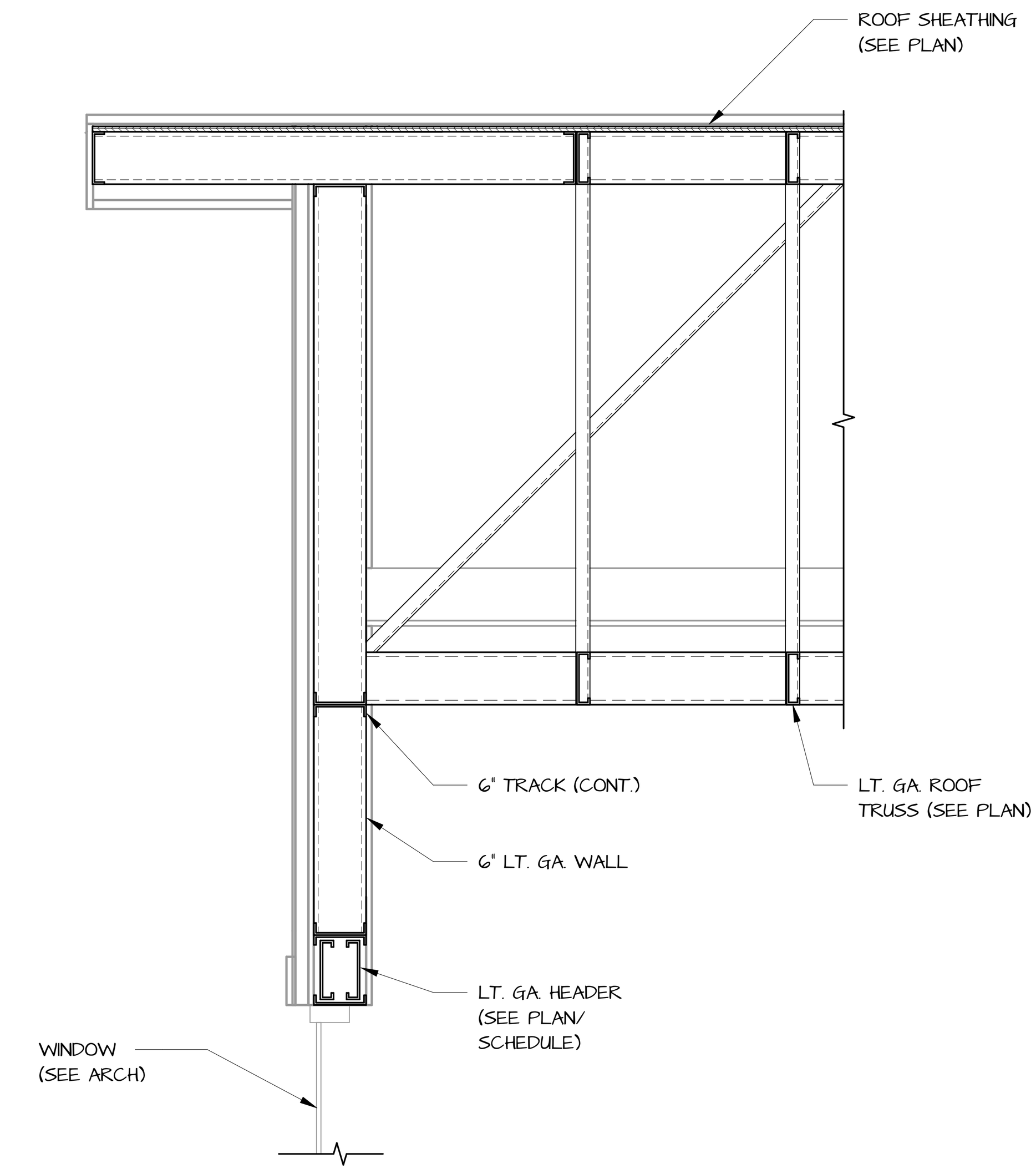
SECTION 1 / S511



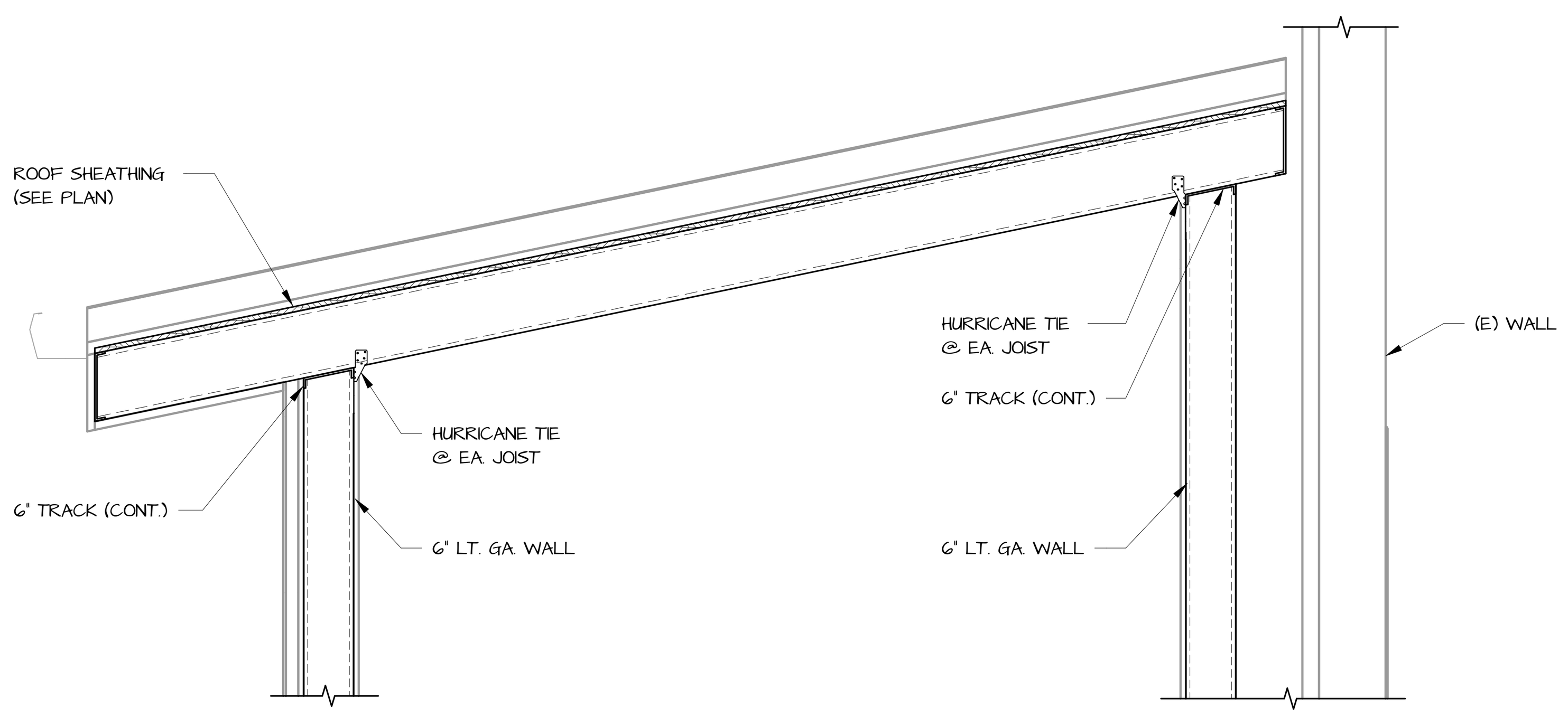
SECTION 2 / S511



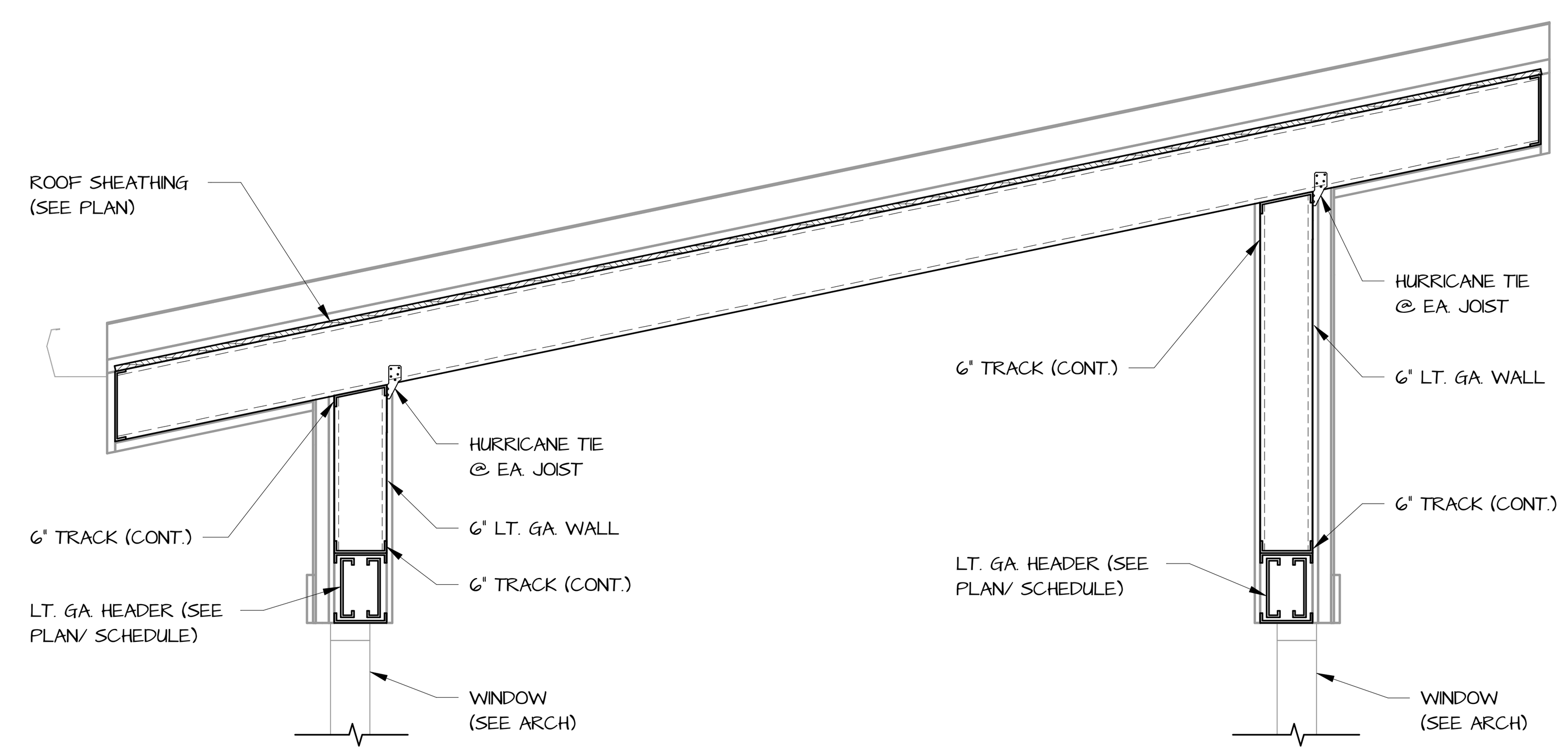
SECTION 3 / S511



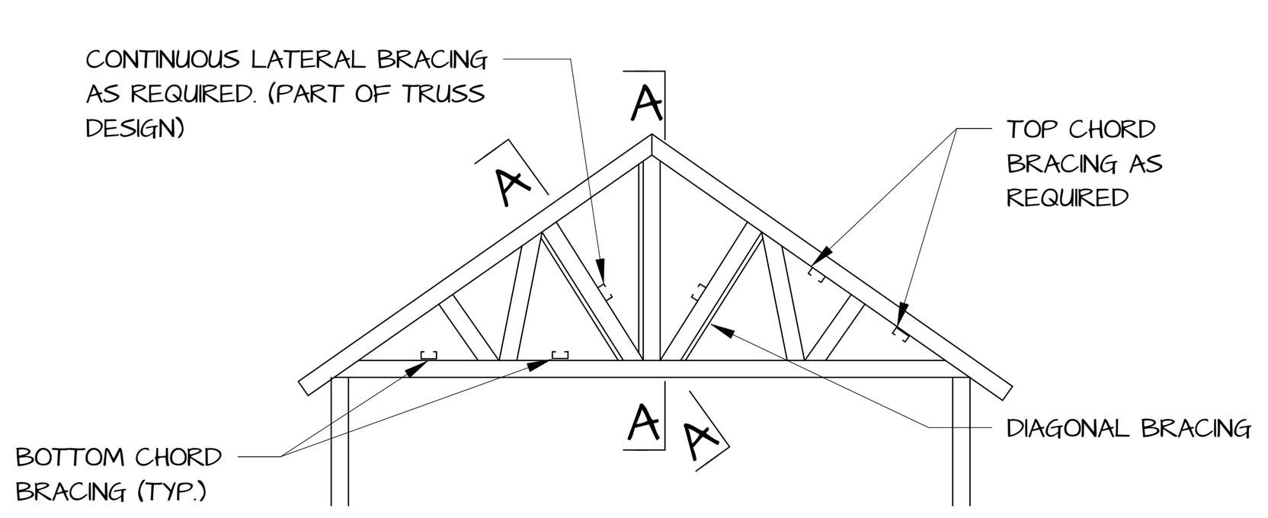
SECTION 4 / S511



SECTION 5 / S511



SECTION 6 / S511



TYPICAL TRUSS ELEVATION

TRUSS NOTES:

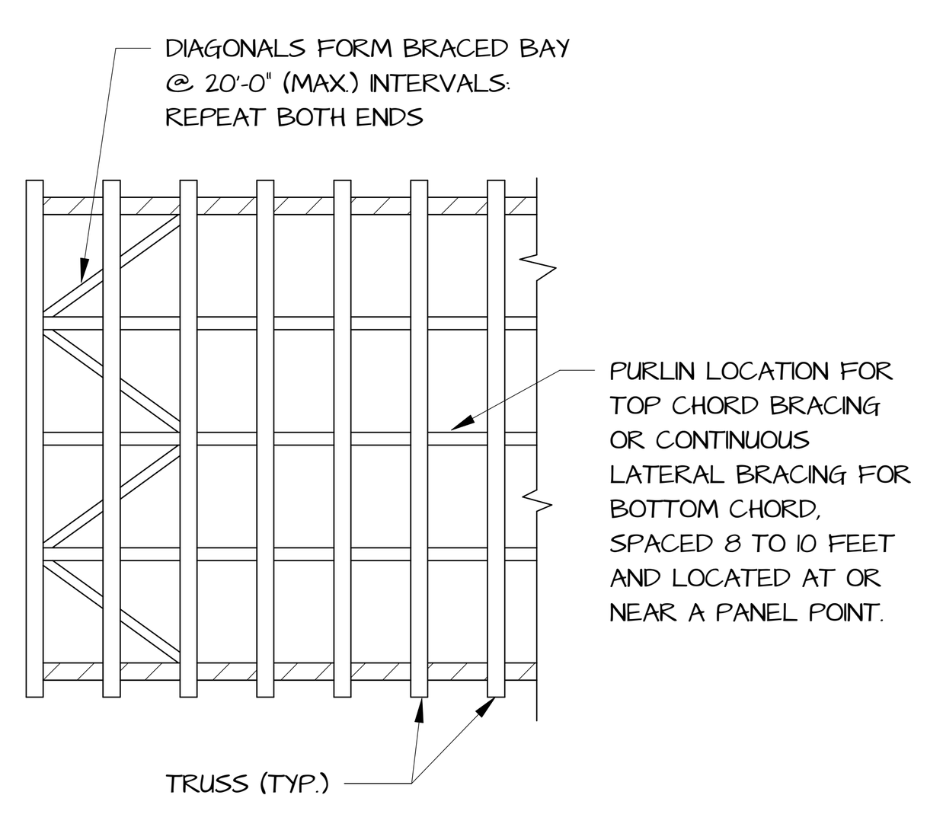
1) TRUSSES SHALL BE BRACED AND ERECTED IN ACCORDANCE WITH THE LIGHTGAGE STEEL ENGINEERS ASSOCIATION (LGSEA). TECH NOTE 551d: DESIGN GUIDE FOR CONSTRUCTION BRACING OF COLD-FORMED STEEL TRUSSES TECH NOTE 551E: DESIGN GUIDE FOR PERMANENT BRACING OF COLD-FORMED STEEL TRUSSES, AND TECHNICAL NOTE FIELD INSTALLATION GUIDE FOR COLD-FORMED STEEL ROOF TRUSSES.

2) BRACING IN THE PLANE OF WEB MEMBERS;
a. THE TRUSS FABRICATOR SHALL PROVIDE AND LOCATE CONTINUOUS LATERAL BRACING FOR EACH TRUSS WEB MEMBER AS REQUIRED.
b. LATERAL BRACING SHALL BE RESTRAINED BY DIAGONAL BRACING. THIS IS TO BE CONTINUOUS.
c. A MINIMUM OF TWO ROWS OF DIAGONAL BRACING IS REQUIRED. ONE AT EACH VERTICAL WEB MEMBER CLOSEST TO BEARING LOCATIONS.

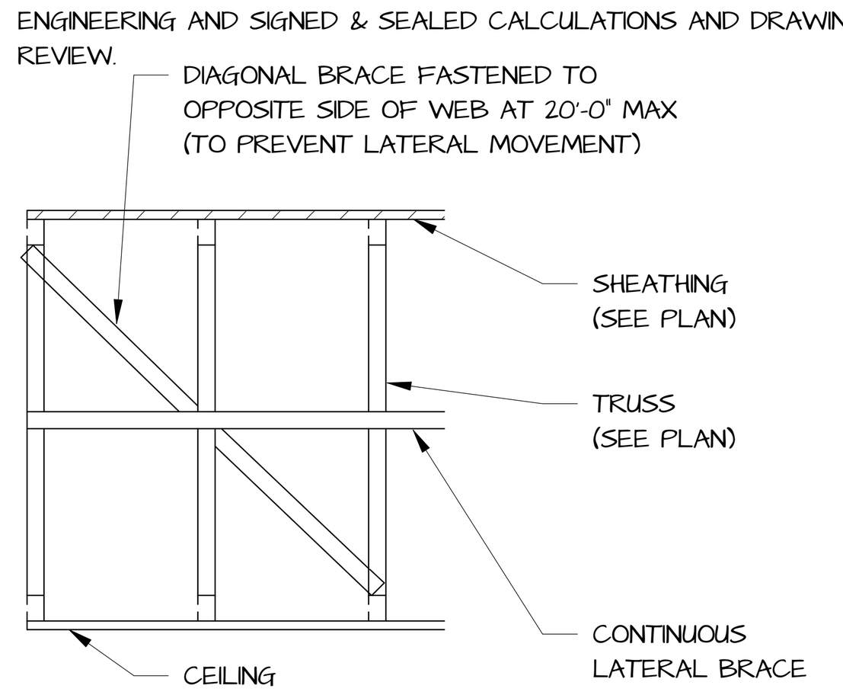
3) THE BOTTOM CHORDS SHALL BE BRACED BY CONTINUOUS LATERAL BRACING SPACED AT 8 TO 10 FEET FASTENED TO TOP OF THE BOTTOM CHORD. DIAGONALS PLACED AT 45° TO THE LATERAL BRACES SHALL BE LOCATED AT EACH END, IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20 FOOT INTERVALS.

4) TOP CHORD BRACING
a. IF PLYWOOD DECKING IS APPLIED DIRECTLY TO TOP CHORD, PROPERLY LAPPED AND FASTENED TO DEVELOP DIAPHRAGM ACTION, BRACING IS NOT REQUIRED.
b. IF PURLINS ARE USED, DIAGONAL TOP CHORD BRACING IS REQUIRED AT EACH END. IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20 FOOT INTERVALS.

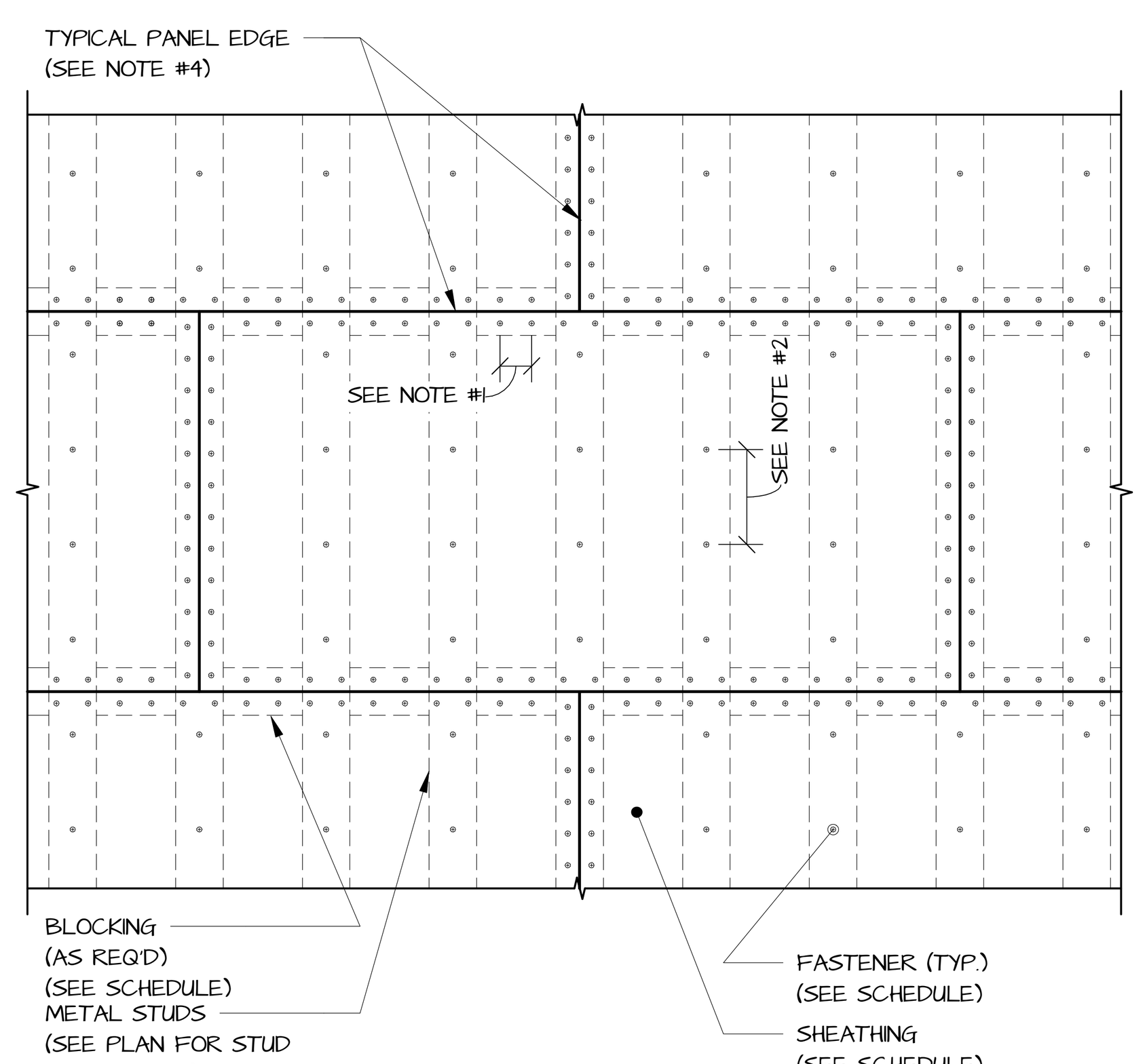
5) ROOF TRUSSES ARE TO BE DESIGNED FOR THE FABRICATOR BY A PROFESSIONAL ENGINEERING AND SIGNED & SEALED CALCULATIONS AND DRAWINGS ARE TO BE SUBMITTED FOR REVIEW.



TOP/BOTTOM CHORD BRACING



SECTION A-A



TYPICAL METAL STUD SHEAR WALL PANEL FASTENING PATTERN

NOTES:
1. SEE SCHEDULE FOR FASTENER SPACING @ PANEL EDGES ON ALL SHEAR WALLS.
2. SEE SCHEDULE FOR FASTENER SPACING IN THE PANEL FIELD ON ALL SHEAR WALLS.
3. SHEATHING REQUIREMENTS SHOWN ARE REQUIRED AS NOTED IN THE SCHEDULE.
4. SHEATHING SHALL BE FASTENED DIRECTLY TO WALL STUDS & BLOCKING AS NOTED. PANEL EDGES INCLUDE EDGES AROUND WINDOW & DOOR OPENINGS.
5. SHEATHING SHALL BE APPLIED HORIZONTALLY w/ STAGGERED JOINTS.

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PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21111 SUSSEX PINES RD
GEORGETOWN, DE 19947

SEAL:

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FRAMING DETAILS &
SECTIONS

ORIGINAL ISSUE: PRELIMINARY

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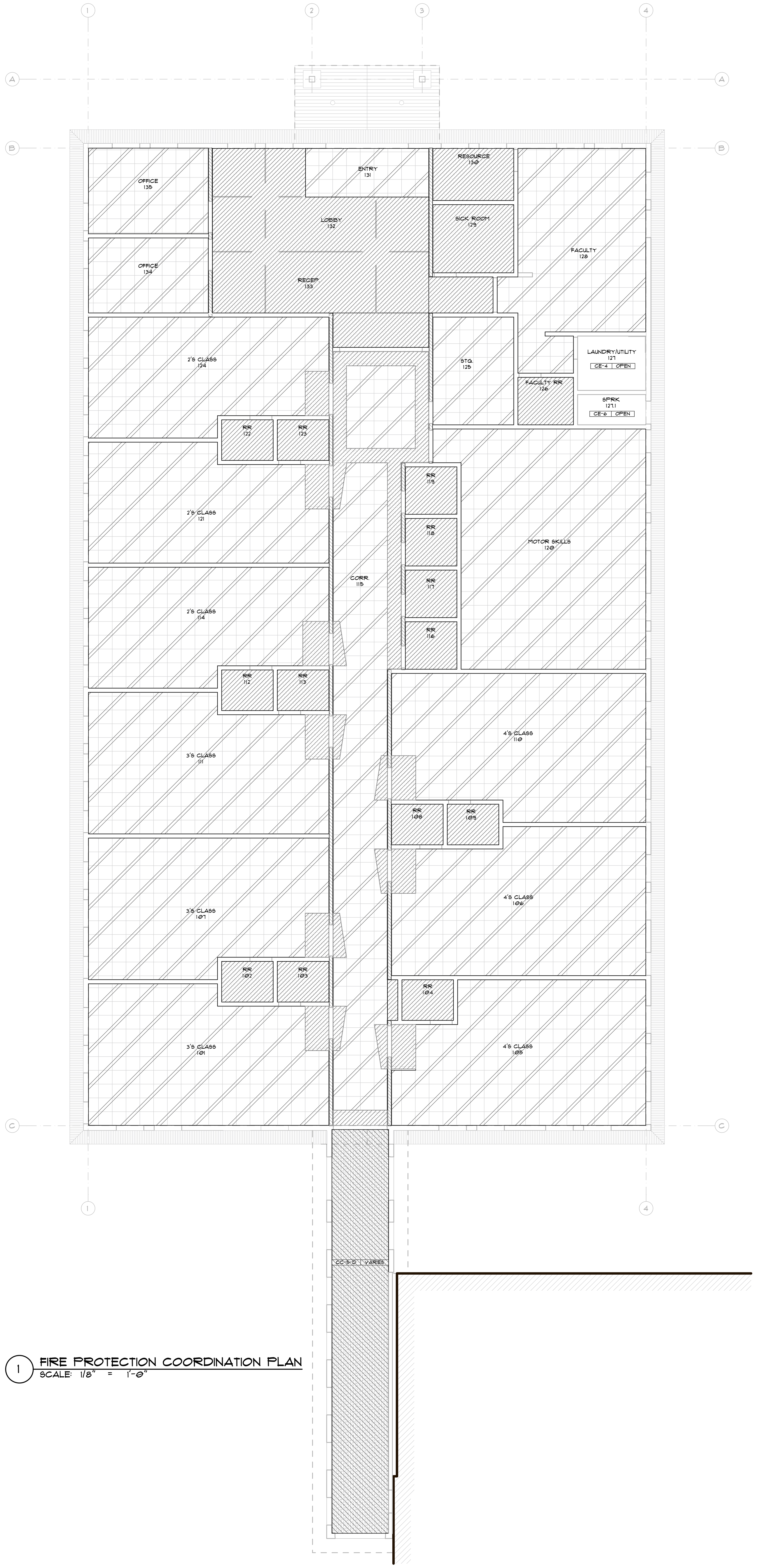

1 FIRE PROTECTION COORDINATION PLAN
SCALE: 1/8" = 1'-0"

FIRE PROTECTION LEGEND

(diagonal hatch)	LAY-IN CEILINGS - EXPOSED SPRINKLER HEADS TO BE WHITE FINISH W/ WHITE ESCUTCHEON. ALARMS & STROBES TO HAVE WHITE FINISH.
(blank)	OPEN CEILINGS W/ AND W/OUT CEILING BAFFLES - EXPOSED SPRINKLER HEADS W/ BLACK FINISH. ALARMS AND STROBES TO HAVE WHITE FINISH
(dense hatch)	HARD-LID CEILINGS (GYP, CHAMCLAD) - CONCEALED SPRINKLER HEADS TO BE WHITE FINISH W/ WHITE COVER ALARMS & STROBES TO HAVE WHITE FINISH
(dotted hatch)	HARD-LID CEILINGS (GYP, CHAMCLAD) - CONCEALED SPRINKLER HEADS TO BE BLACK FINISH W/ BLACK COVER ALARMS & STROBES TO HAVE BLACK FINISH
(dashed hatch)	CEILINGS CLOUDS - CONCEALED SPRINKLER HEADS TO BE WHITE FINISH W/ WHITE COVER. ALARMS & STROBES TO HAVE WHITE FINISH.

FIRE SPRINKLER COORDINATION GENERAL NOTES

1. **FIRE SPRINKLER - DELEGATED (DEFERRED) DESIGN.** THE FIRE SPRINKLER DESIGN TO BE COMPLETED AND PERMITTED UNDER SEPARATE COVER.
   A. FIRE SPRINKLER SYSTEM COMPLYING WITH NFPA 13 SHALL BE PROVIDED.
   B. INSTALLING CONTRACTOR SHALL PROVIDE STAMPED, ENGINEERED DESIGN DIRECTLY TO THE AUTHORITY HAVING JURISDICTION (AHJ).
   C. REGISTERED DESIGN PROFESSIONAL/INSTALLING CONTRACTOR RESPONSIBLE FOR OBTAINING PERMIT FROM AHJ.
   D. INSTALLING CONTRACTOR TO PROVIDE SUBMITTAL TO ARCHITECT FOR COORDINATION PURPOSES ONLY.
2. **PROTECTION AREA.** NFPA 13 COMPLIANT SYSTEM SHALL BE INSTALLED THROUGHOUT WITH QUICK RESPONSE HEADS.
   A. ALL AREAS TO BE CONSIDERED LIGHT HAZARD, EXCEPT KITCHEN/SCIENCE LAB AREAS.
3. **WATER SOURCE.** NEW INCOMING FIRE WATER SERVICE SHOWN ON CIVIL DESIGN. FIRE SPRINKLER DESIGNER TO CONFIRM SIZE AND FLOW.
4. **EXISTING SYSTEM.** THERE IS AN EXISTING SPRINKLER SYSTEM IN THE EXISTING ADJOINING BUILDING. FIRE SPRINKLER DESIGNER TO COORDINATE SERVICE MONITORING WITHIN THEIR DESIGN.
5. **FREEZE PROTECTION SYSTEM.** PORTIONS OF THE SCOPE INCLUDE EXTERIOR CANOPIES WHICH MAY REQUIRE FIRE SPRINKLER SYSTEM. IF REQ'D, UTILIZE DRY TYPE SPRINKLER SYSTEM FOR FREEZE PROTECTION.
6. **DESIGNATION OF PIPING HEIGHT & TRANSITIONS.** FIRE SPRINKLER DESIGN MUST INCLUDE ALL PRIMARY AND LATERAL PIPING HEIGHTS, CLEARLY SHOWN FOR ALL ROOMS/SPACES.
   A. PIPING TRANSITION HEIGHTS MUST BE CLEARLY SHOWN ON PLANS. VERTICAL PIPE RUNS TO BE DESIGNATED ON PLANS WITH HEIGHT DIFFERENCE NOTED.
7. **VERTICAL PIPING ENCLOSURES.** ALL VERTICAL PIPING TRANSITIONS TO BE ENCLOSED BY FRAMING. FIRE SPRINKLER DESIGNER TO NOTIFY ARCHITECT PRIOR TO PERMIT SUBMITTAL IF ANY FRAMING ENCLOSURES ARE NEEDED. EXPOSED PIPING MAY BE REJECTED BY ARCHITECT. STORAGE ROOMS, UTILITY ROOMS, ETC. ARE EXEMPT FROM THIS REQUIREMENT.
8. **FIRE ALARM CONTROL PANEL (FACP).** FACP LOCATION SHOWN ON PLANS SHALL BE CONSIDERED "PROPOSED" BY ARCHITECT. FINAL LOCATION TO BE DETERMINED BY FIRE SPRINKLER DESIGNER AND AHJ. NOTIFY ARCHITECT IF LOCATION DIFFERS FROM PROPOSED.

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REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
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PROJECT:
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FIRE PROTECTION COORDINATION PLAN
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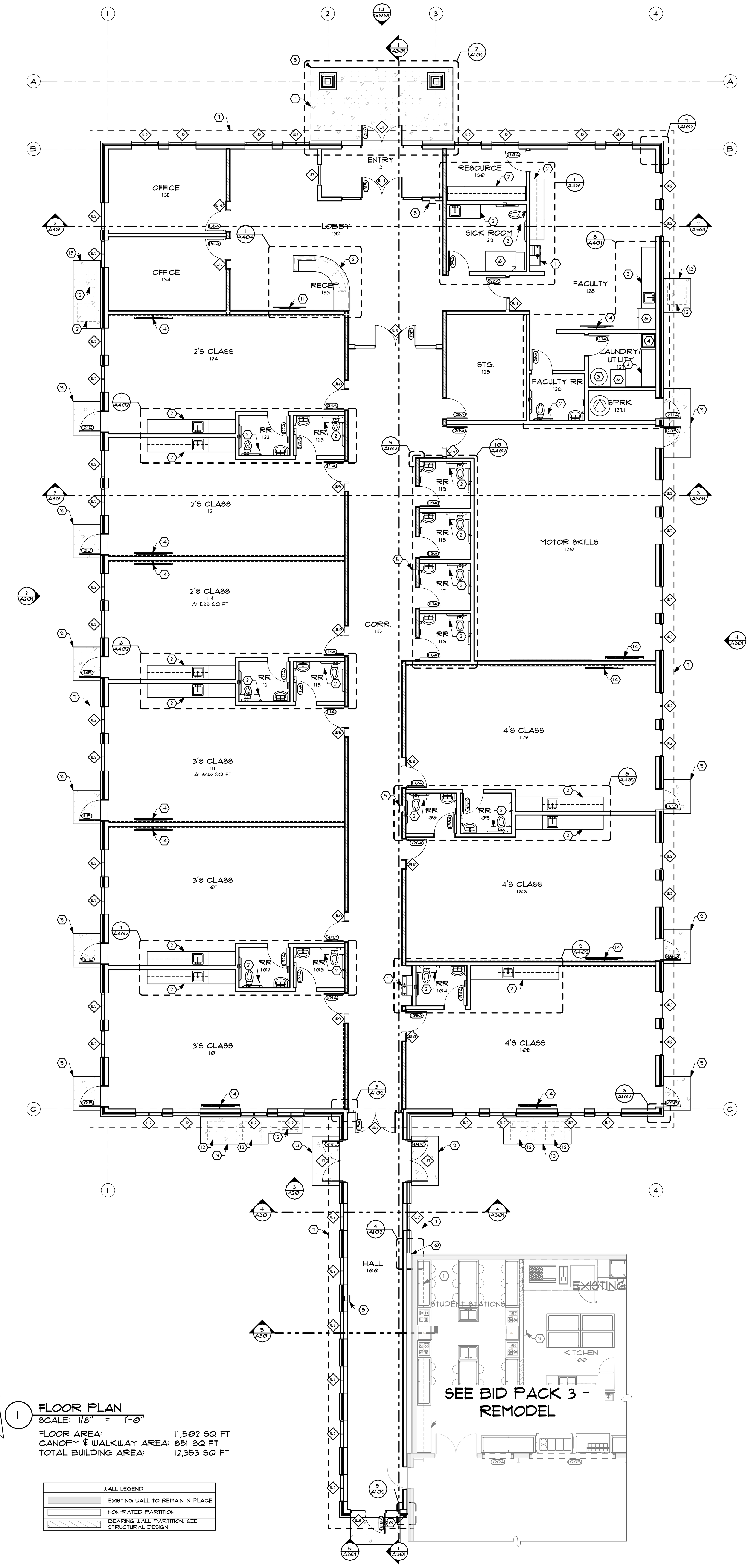
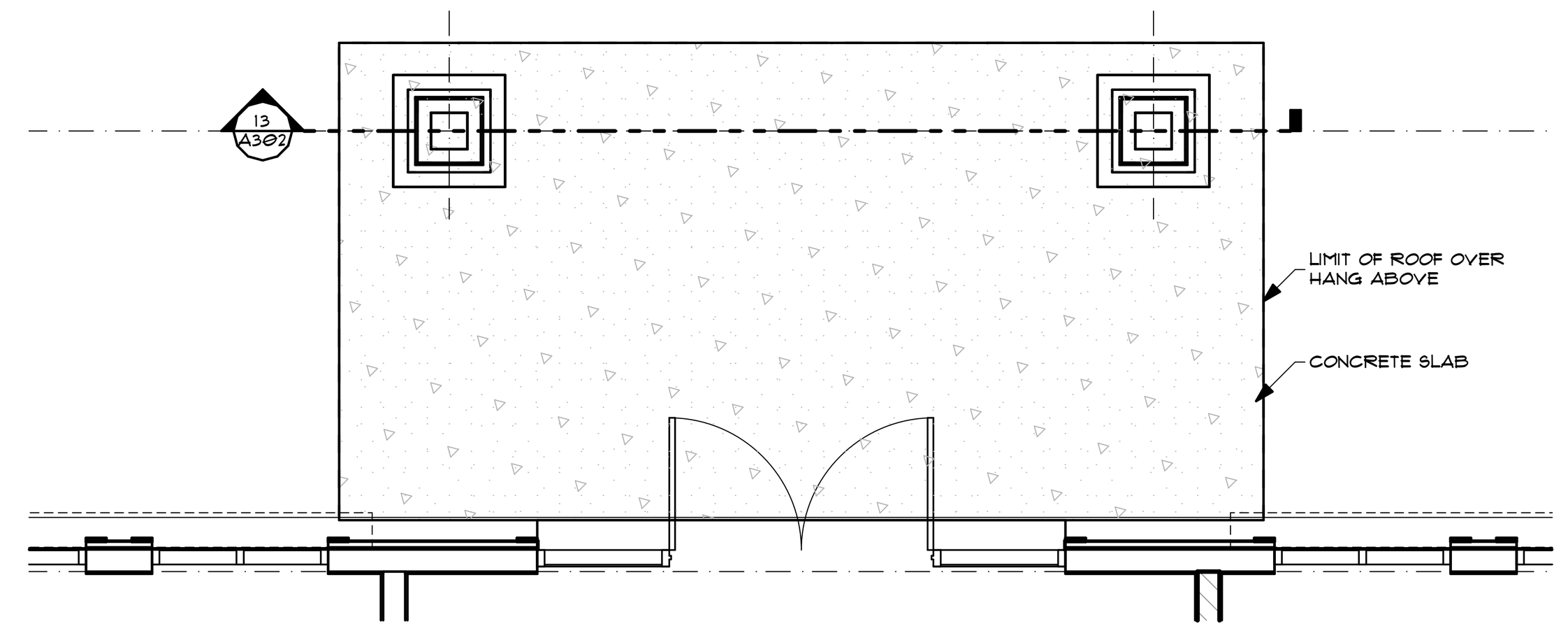
DO NOT SCALE DRAWING



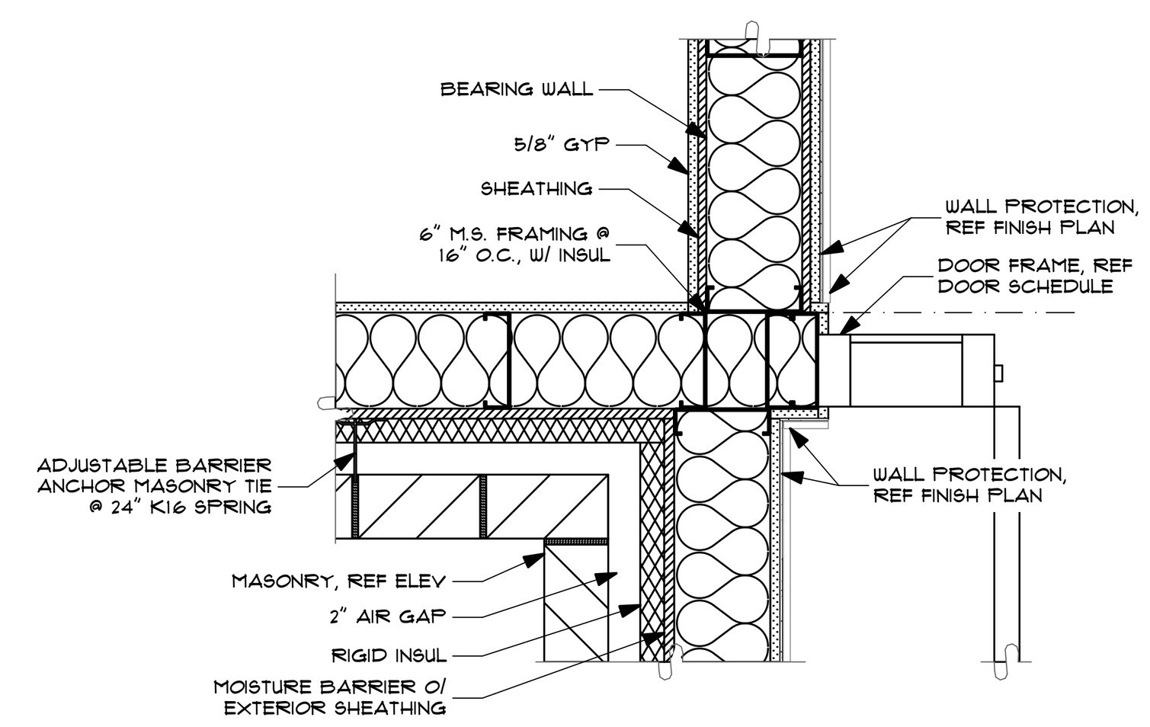
1 FLOOR PLAN
SCALE: 1/8" = 1'-0"

FLOOR AREA: 11,502 SQ FT
CANOPY & WALKWAY AREA: 851 SQ FT
TOTAL BUILDING AREA: 12,353 SQ FT

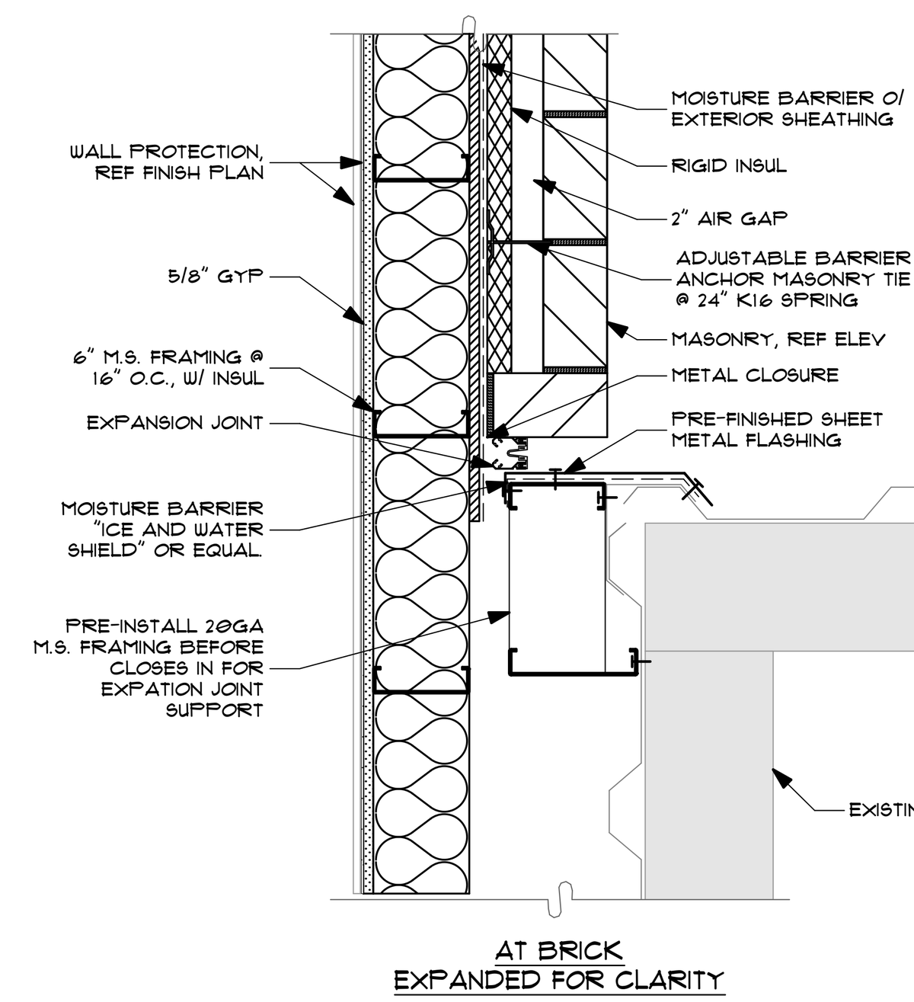
WALL LEGEND
EXISTING WALL TO REMAIN IN PLACE
NON-RATED PARTITION
BEARING WALL PARTITION. SEE STRUCTURAL DESIGN

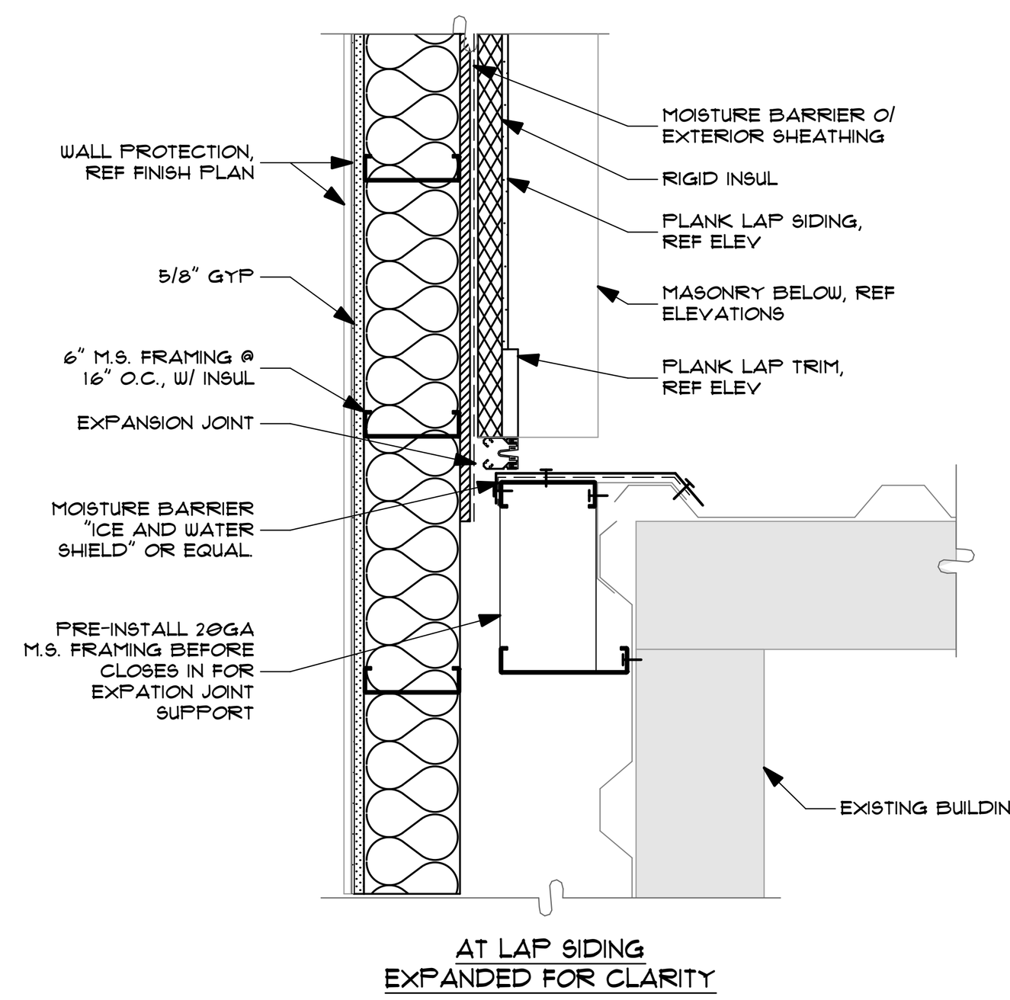


2 ENTRY CANOPY PLAN
SCALE: 1/4" = 1'-0"



3 PLAN DETAIL
SCALE: 1" = 1'-0"





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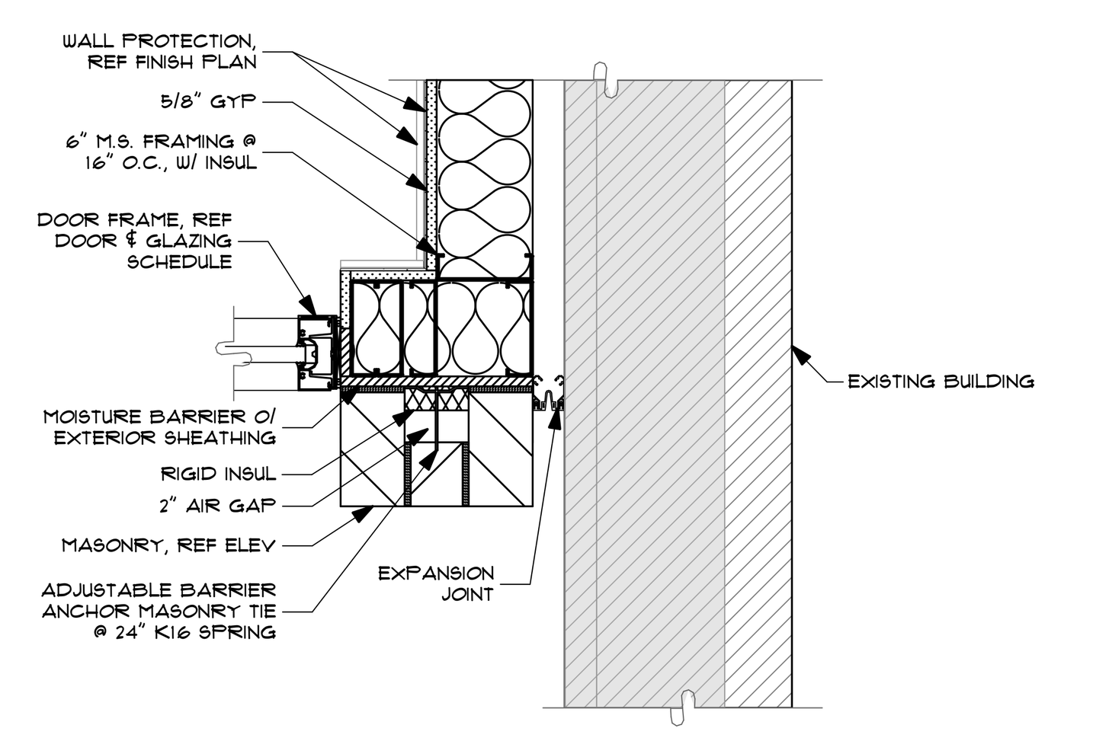

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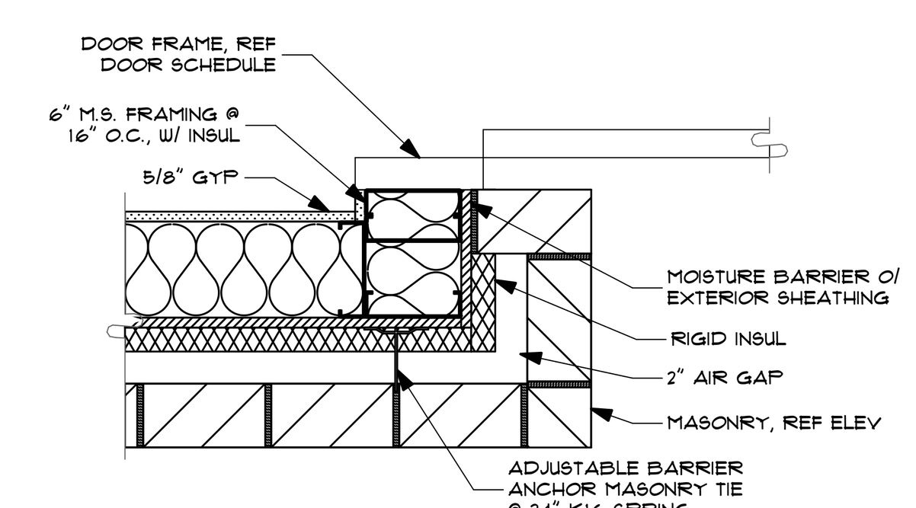

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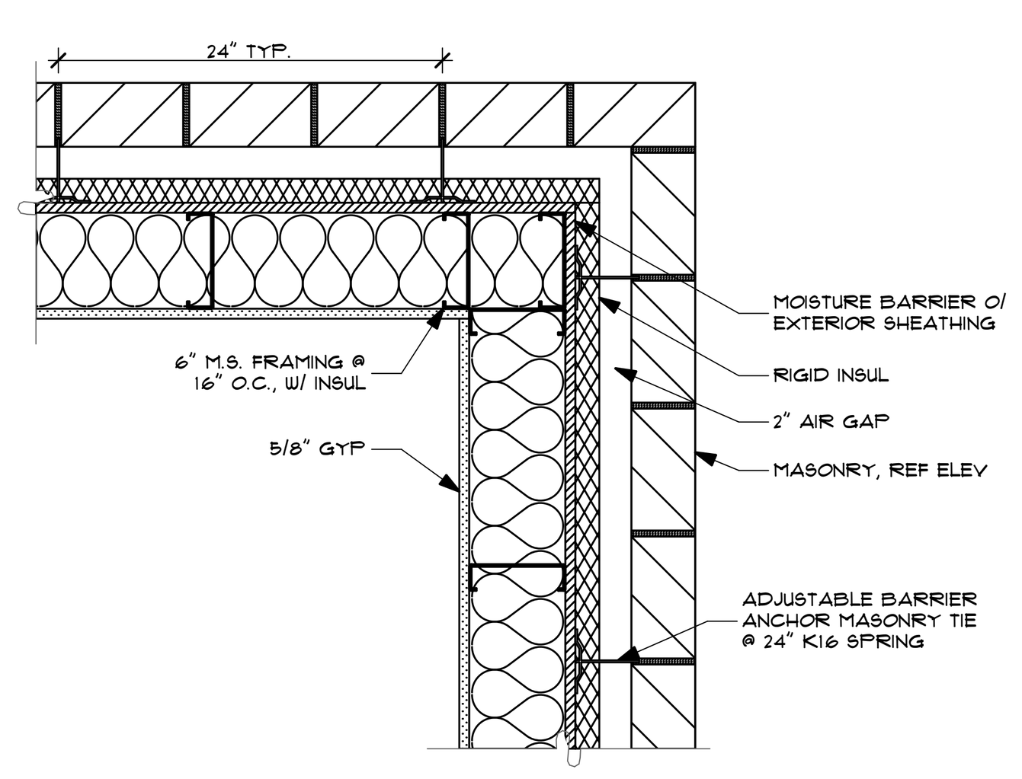

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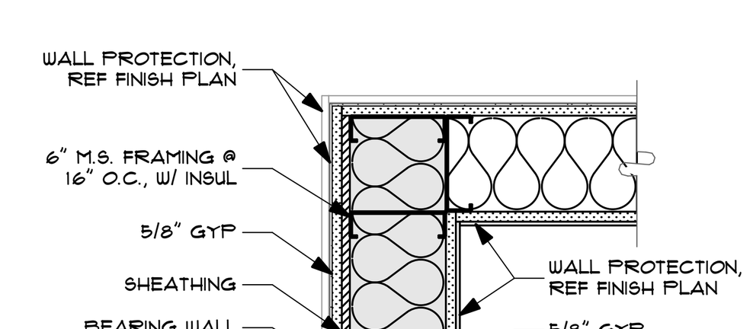

8 PLAN DETAIL
SCALE: 1" = 1'-0"

FLOOR PLAN GENERAL NOTES:

1. **REFERENCE.**
   A. REFERENCE STRUCTURAL DESIGN FOR ALL FOUNDATION AND STRUCTURAL STEEL DESIGN INFORMATION.
   B. REFERENCE GEOTECHNICAL REPORT FOR ALL SUBGRADE PREPARATION.
   C. REFERENCE MEP DESIGNS FOR ALL SPECIFIC MECHANICAL, ELECTRICAL AND PLUMBING DESIGNS REFERENCED ON FLOOR PLANS.
2. **DIMENSIONING.**
   A. SEE FRAMING PLAN FOR ALL DIMENSIONS.
   B. ANY STRUCTURAL/ARCHITECTURAL DIMENSIONAL DISCREPANCIES TO BE BROUGHT TO THE ARCHITECT'S ATTENTION VIA RFI FOR IMMEDIATE CLARIFICATION. PROCEEDING WITH CONFLICTING DIMENSIONAL INFORMATION WITHOUT ARCHITECT'S APPROVAL, SHALL BE DONE AT CONTRACTOR'S RISK.
3. **WALL FRAMING.**
   A. SEE FRAMING PLAN FOR ALL LIGHT GAUGE FRAMING LAYOUTS.
   B. SEE WALL TYPES SHEET FOR ALL WALL TYPES AND CONTROL JOINT DETAILS.
   C. SEE WALL FRAMING SHEETS FOR ALL BRACING DETAILS.
4. **GYPSUM DRYWALL.**
   A. CORRIDOR GYPSUM PANELS. PROVIDE 5/8" IMPACT RESISTANT "TYPE "X" GYPSUM WALLBOARD COMPLYING WITH ASTM C1629 (USG "MOLD TOUGH VH-1" OR EQUAL) TO 4'-0" A.F.F. AT ALL CORRIDOR/HALLWAY LOCATIONS.
   B. RESTROOM GYPSUM PANELS. PROVIDE 5/8" MOISTURE AND MOLD RESISTANT "TYPE X" GYPSUM WALL BOARD COMPLYING WITH ASTM C1396 AT ALL RESTROOM, KITCHEN AND WET ROOM APPLICATIONS (USG SHEETROCK "MOLD TOUGH FIRECODE X" OR EQUAL).
   C. TILE BACKER. PROVIDE 5/8" GLASS-MAT TILE BACKER BOARD AT ALL TILE APPLICATIONS COMPLYING WITH ASTM D3273. (USG DUROCK OR EQUAL).
   D. SEE WALL TYPES SHEET FOR ALL CONTROL JOINT DETAILS. HORIZONTAL AND VERTICAL CONTROL JOINTS WILL BE REQ'D.
5. **SOUND INSULATION.** ALL INTERIOR WALLS, EXCEPT STORAGE AREAS, SHALL BE SOUND INSULATED. 3-5/8" AND 4" FRAMED WALLS TO HAVE R-11 AND 6" FRAMED WALLS TO HAVE R-19, UNFACED BATT SOUND INSULATION.
6. **EXTERIOR WALL ASSEMBLIES.** SEE BUILDING SECTION GENERAL NOTES FOR ALL EXTERIOR WALL INSULATION, SHEATHING AND MOISTURE BARRIER INFORMATION.
7. **FIRE EXTINGUISHERS.** FIRE EXTINGUISHERS SHALL BE INSTALLED IN SEMI-RECESSED CABINETS. CONTRACTOR RESPONSIBLE FOR ALL FIRE EXTINGUISHER SIGNAGE.
8. **BUILDING EXPANSION JOINTS.**
   A. ALL GAPS BETWEEN BUILDINGS SHALL HAVE APPROVED EXPANSION GAP MATERIALS.
   B. PLANS CALL SPECIFIC MANUFACTURER AND MODEL #. ALTERNATES WILL BE ACCEPTED, PENDING ARCHITECT'S REVIEW AND APPROVAL.
   C. PROVIDE COVER PLATE FINISH OPTIONS FOR ARCHITECT'S REVIEW AND APPROVAL.
   D. PROVIDE COMPLETE PRODUCT SUBMITTAL ON ALL EXPANSION JOINT MATERIALS FOR ARCHITECT'S REVIEW AND APPROVAL.

KEYED NOTES:

1. ACCESSIBLE HI/LO DRINKING FOUNTAIN, WITH BOTTLE FILLER. SEE PLUMBING PLAN AND FINISH PLANS FOR WALL PROTECTION DESIGN.
2. CASEWORK, REFERENCE ENLARGED PLANS AND ENLARGED INTERIOR ELEVATIONS FOR ADDITIONAL DETAILS.
3. WATER HEATER, REFERENCE PLUMBING DESIGN.
4. JANITOR/UTILITY SINK, REFERENCE PLUMBING DESIGN.
5. FIRE EXTINGUISHER, REFERENCE FIRE EXTINGUISHER SCHEDULE.
6. RECOVERY COUCH. "INWOOD HPL/VINYL" OR EQUAL 18" HIGH X 27" W X 72" L. CONTRACTOR PROVIDED.
7. ROOF OUTLINE ABOVE. REFERENCE ROOF PLAN FOR DETAILS. SEE RCP PLAN FOR SOFFIT FINISH.
8. OWNER PROVIDED APPLIANCE, SEE MEP DESIGNS FOR CONTRACTOR PROVIDED ROUGH-IN REQ'S.
9. EXTERIOR CONCRETE STOOP/DOOR LANDING. MAINTAIN MIN. SLOPE (1/8":12") AWAY FROM BUILDING. SEE STRUCTURAL DESIGN FOR STOOP CONSTRUCTION. SEER CIVIL DESIGN FOR CONCRETE HARDSCAPE CONTINUATION.
10. EXPANSION JOINT. WABO COMPRESSION SEAL
11. LED VIDEO DISPLAY, OWNER PROVIDED. SEE ELECTRICAL DESIGN FOR CONTRACTOR PROVIDED INFRASTRUCTURE. CONTRACTOR TO PROVIDE SOLID F.T. WOOD BLOCKING (2'X2' AREA), B.O. DISPLAY @ 60" AFF.
12. MECHANICAL EQUIPMENT. REF. MECHANICAL DESIGN.
13. MECHANICAL EQUIPMENT CONCRETE SLAB. REF. SLAB PLAN.
14. LED VIDEO DISPLAY, OWNER PROVIDED. SEE ELECTRICAL DESIGN FOR CONTRACTOR PROVIDED INFRASTRUCTURE. CONTRACTOR TO PROVIDE SOLID F.T. WOOD BLOCKING (2'X2' AREA), B.O. DISPLAY @ 48" AFF.

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REV	DATE	DESCRIPTION
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PROJECT:

DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

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SEAL:

SHEET TITLE: FLOOR PLAN

PROJECT#: AS170

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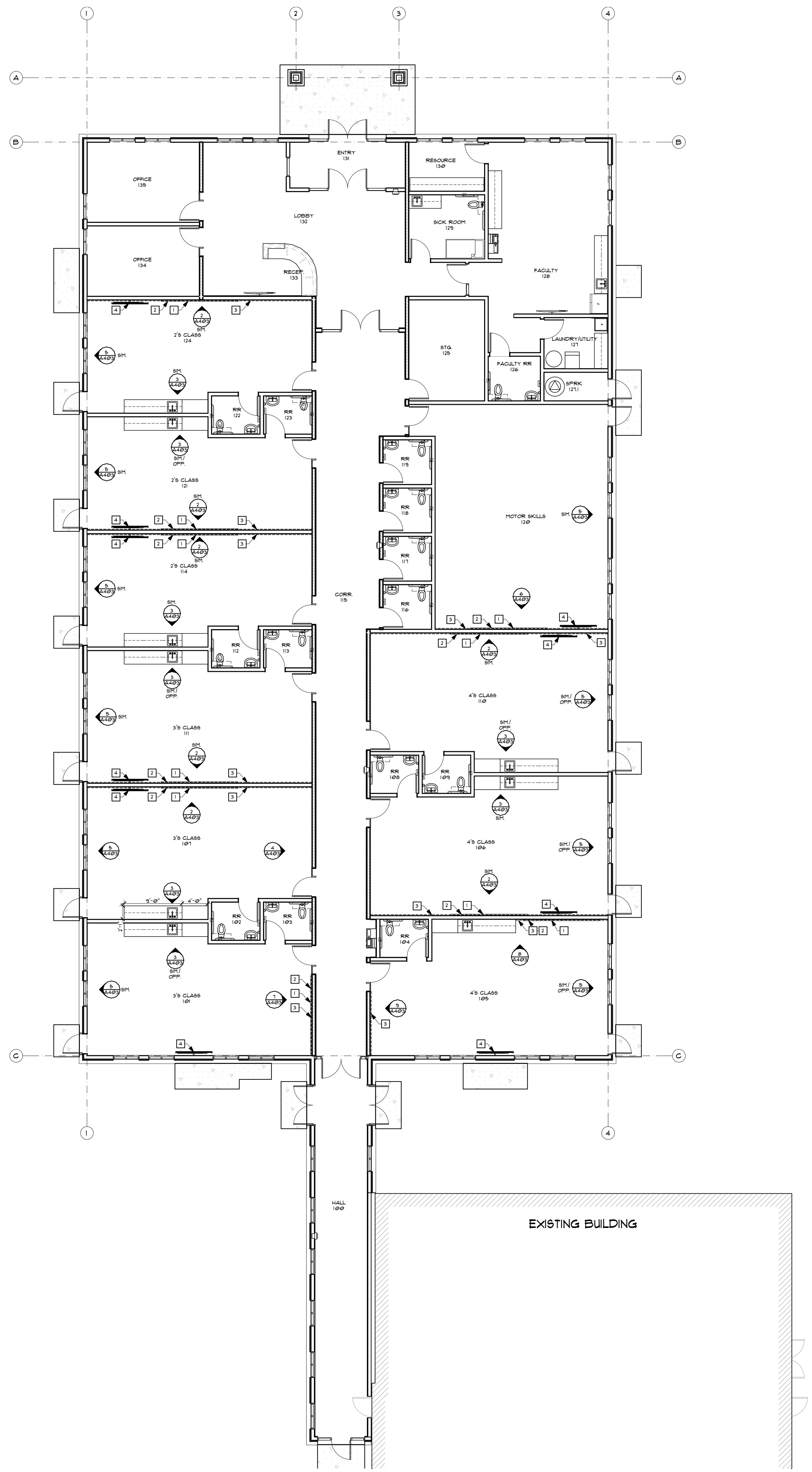
DO NOT SCALE DRAWING



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

FURNISHING LEGEND	
1	ASI ANGLED MARKER BOARD TRAY
2	ASI 4' X 6' 9800 SERIES MARKER BOARD
3	ASI 1" DISPLAY RAIL
4	LED DISPLAY, BY OWNER.

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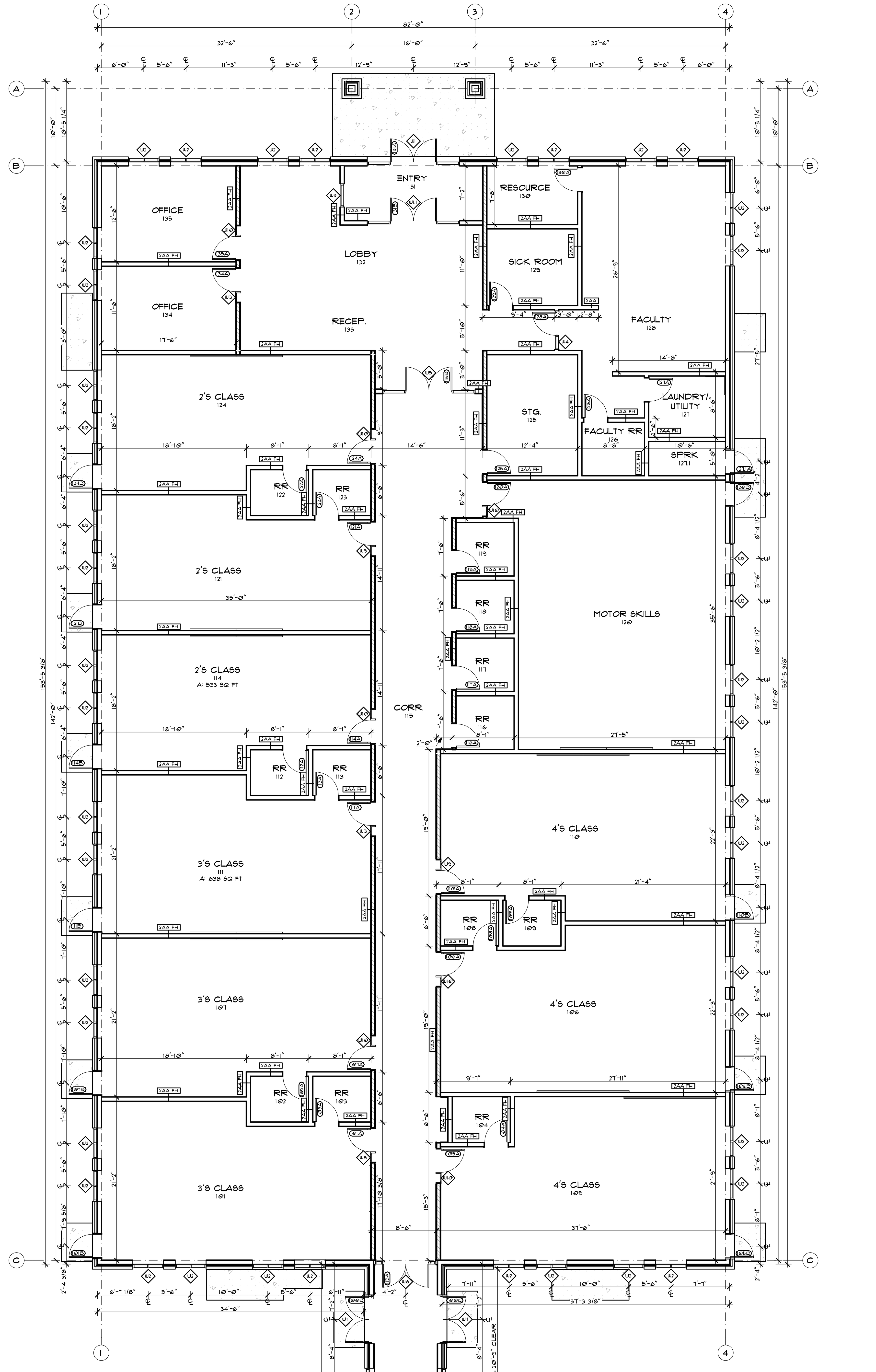
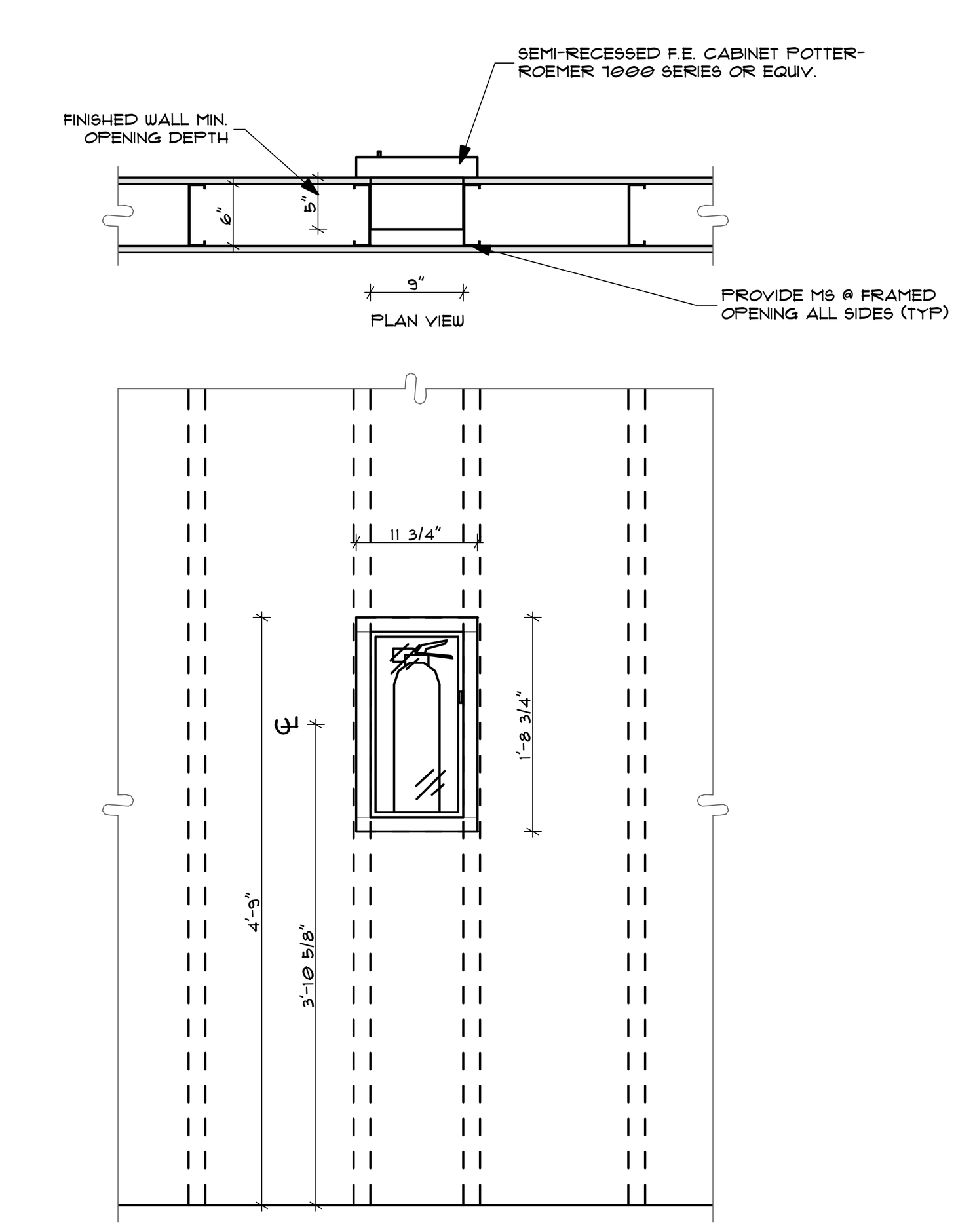


1 FRAMING PLAN
SCALE: 1/8" = 1'-0"

FRAMING PLAN GENERAL NOTES:

1. **DIMENSIONING.**
   A. ALL WALLS ARE DIMENSIONED TO EDGE OF STUD U.N.O.
   B. ALL EXTERIOR OPENINGS DIMENSIONED FROM OUTSIDE EDGE OF FRAMED WALL WALL TO CENTERLINE OF OPENING.
   C. ANY STRUCTURAL/ARCHITECTURAL DIMENSIONAL DISCREPANCIES TO BE BROUGHT TO THE ARCHITECT'S ATTENTION VIA RFI FOR IMMEDIATE CLARIFICATION. PROCEEDING WITH CONFLICTING DIMENSIONAL INFORMATION WITHOUT ARCHITECT'S APPROVAL, SHALL BE DONE AT CONTRACTOR'S RISK.
2. **FULL HEIGHT WALLS.** WALLS TAGGED AS F.H. (FULL HEIGHT) OR F.H.G.B (FULL HEIGHT GYPSUM WALL BOARD) ARE FULL HEIGHT WALLS. WALL EXTENDS TO BOTTOM OF LIGHT GAUGE TRUSSES ABOVE.
3. **WALL FRAMING.**
   A. SEE WALL TYPES SHEET FOR ALL WALL TYPES AND CONTROL JOINT DETAILS.
   B. SEE WALL FRAMING SHEETS FOR ALL BRACING DETAILS.
   C. ALL HEAD OF WALL CONNECTIONS TO STEEL STRUCTURE TO BE MADE WITH SLOTTED DEFLECTION TRACK WITH MIN. 2-1/2" SLOTTED DEFLECTION LEG. NO FIXED CONNECTIONS ALLOWED.
   D. TYPICAL WALL HEIGHT 10'-0" A.F.F. UNLESS NOTED OTHERWISE.
4. **SILL SEAL.** PROVIDE 5.5" SILL SEAL, FLEXIBLE POLYETHYLENE FOAM GASKET BETWEEN METAL STUD TRACK AND CONCRETE SLAB AT ALL EXTERIOR WALLS.
5. **GYPSUM DRYWALL.**
   A. CORRIDOR GYPSUM PANELS. PROVIDE 5/8" IMPACT RESISTANT "TYPE "X" GYPSUM WALLBOARD COMPLYING WITH ASTM C1629 (USG "MOLD TOUGH VH-1" OR EQUAL) TO 4'-0" A.F.F. AT ALL CORRIDOR/HALLWAY LOCATIONS.
   B. RESTROOM GYPSUM PANELS. PROVIDE 5/8" MOISTURE AND MOLD RESISTANT "TYPE X" GYPSUM WALL BOARD COMPLYING WITH ASTM C1396 AT ALL RESTROOM, KITCHEN AND WET ROOM APPLICATIONS (USG SHEETROCK "MOLD TOUGH FIRECODE X" OR EQUAL).
   C. TILE BACKER. PROVIDE 5/8" GLASS-MAT TILE BACKER BOARD AT ALL TILE APPLICATIONS COMPLYING WITH ASTM D3273. (USG DUROCK OR EQUAL).
   D. SEE WALL TYPES SHEET FOR ALL CONTROL JOINT DETAILS. HORIZONTAL AND VERTICAL CONTROL JOINTS WILL BE REQ'D.
6. **DRYWALL FINISH LEVEL.** ALL AREAS OF THE BUILDING SHALL RECEIVE A LEVEL 4 DRYWALL FINISH (PER GA-214), EXCEPT
   1. STORAGE AREAS.
   2. EQUIPMENT ROOMS.
   3. JANITOR'S CLOSETS.
   WHICH SHALL RECEIVE A LEVEL 2 FINISH.
7. **SOUND INSULATION.** ALL INTERIOR WALLS, EXCEPT STORAGE AREAS, SHALL BE SOUND INSULATED. 3-5/8" AND 4" FRAMED WALLS TO HAVE R-11 AND 6" FRAMED WALLS TO HAVE R-19, UNFACED BATT SOUND INSULATION.
8. **EXTERIOR WALL ASSEMBLIES.** SEE BUILDING SECTION GENERAL NOTES FOR ALL EXTERIOR WALL INSULATION, SHEATHING AND MOISTURE BARRIER INFORMATION.
9. **OPENINGS.** SEE WINDOW AND DOOR SCHEDULES FOR ALL OPENING INFORMATION. FRAMING CONTRACTOR TO REVIEW SPECIALTY OPENING R.O.'S WITH CM OPENING SUBMITTALS PRIOR TO FINISH FRAMING.



2 FIRE EXTINGUISHER
SCALE: 3/4" = 1'-0"

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EARLY LEARNING CENTER
21777 SUSSEX PINES RD
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SHEET TITLE:
FRAMING PLAN

SHEET NUMBER:
A104

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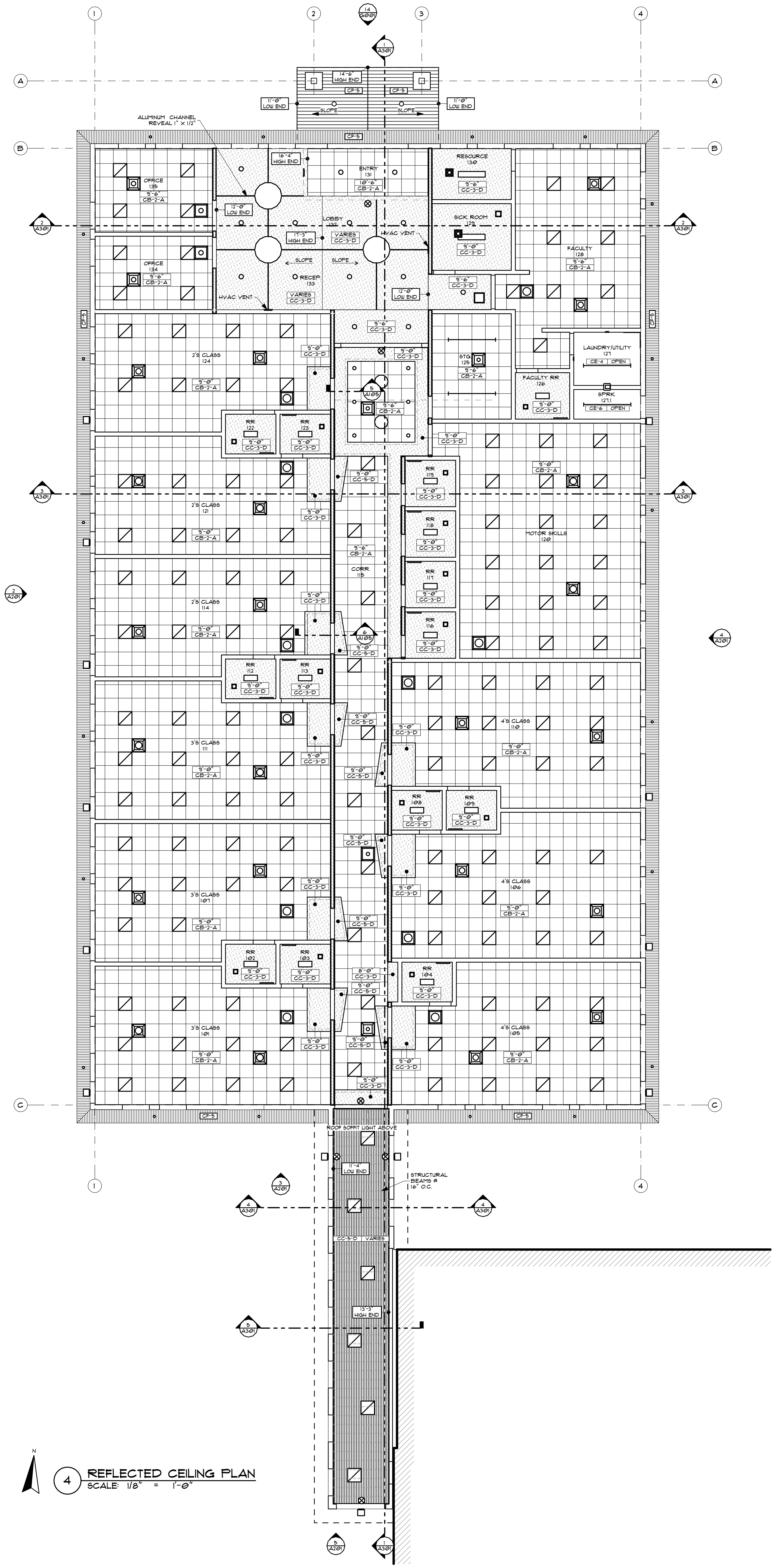


4 REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

RCP GENERAL NOTES

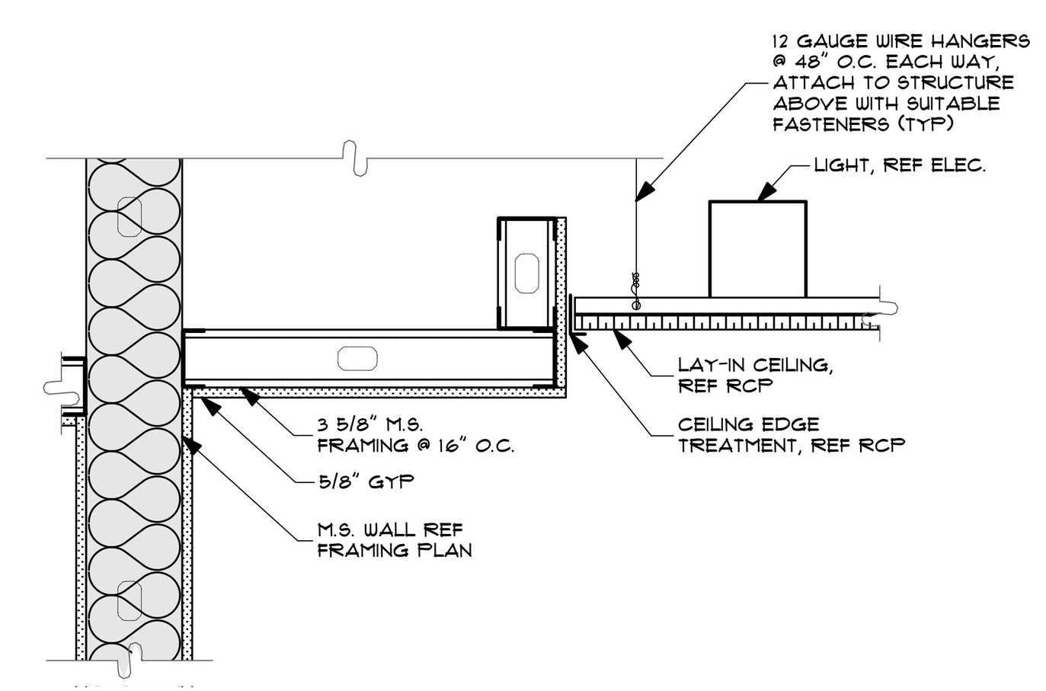
1. **ELECTRICAL/MECHANICAL INTEGRATION.** REFER TO ELECTRICAL AND MECHANICAL DESIGN FOR ALL FIXTURE/DIFFUSER TYPES. INSTALLING CONTRACTOR TO ALERT G.C./ARCHITECT IF GENERAL LOCATION SHOWN ON RCP PLANS CONFLICTS WITH FIELD CONDITIONS.
2. **CEILING TILE ALIGNMENT.** INSTALLING CONTRACTOR TO ALIGN CEILING TILES TO THE ROOM OR CLOUD CEILING ASSEMBLY. DESIGN PATTERNS MAY SHIFT AND BE OUT OF SQUARE OR UNEVENLY CUT, CONTRACTOR TO ALIGN IN FIELD.
   - A. ALL CEILING TILES TO BE PARALLEL TO WALLS, OR CLOUD EDGES.
   - B. IN CASES OF ANGLED WALLS, HOLD CEILING LINE PARALLEL WITH STRAIGHT ROOM WALL (U.N.O.).
   - C. BALANCE CUT TILES IN THE ROOM OR CLOUD, EVENLY ON BOTH SIDES OF THE ROOM OR CLOUD.
   - D. IN CASES WHERE THE ABOVE ITEMS DO NOT CLARIFY ALIGNMENT OF GRID, INSTALLING CONTRACTOR TO SEEK DIRECTION FROM THE ARCHITECT.
3. **PLENUM CEILINGS.** ALL AREAS ABOVE CEILING ARE OPEN PLENUM. MAINTAIN PLENUM RATING FACING ON ALL INSULATION MATERIALS AND FINISHES ABOVE THE CEILING LINE.
4. **GYP. WRAPPED COLUMNS.** TERMINATE APPEARANCE WRAP ON GYP. WRAPPED COLUMNS 1'-0" ABOVE CEILING U.N.O. GYP. WRAPPED COLUMNS IN OPEN CEILING AREAS (EXCEPT STORAGE AND UTILITY ROOMS) SHALL EXTEND TIGHT TO ROOF DECK.
5. **BULKHEAD FRAMING.** ALL FRAMED BULKHEADS TO BE FRAMED BH5-1 (U.N.O.) AND EXTEND MIN. 1" BELOW ADJOINING CEILING U.N.O.
6. **STANDARD CEILINGS.** ALL STANDARD ROOM CEILINGS AT 9'-6" U.N.O. STORAGE / UTILITY ROOMS OPEN TO STRUCTURE U.N.O..
7. **LIGHT GAUGE BOX HEADERS.** SEE BOX HEADER FRAMING SHEET FOR FRAMED BOX HEADER DETAILS. ALL OPENINGS IN WALLS GREATER THAN 5' IN WIDTH OR WITH MORE THAN 5' OF SUPPORTING WALL ABOVE WILL REQUIRE A METAL STUD BOX HEADER.
   - A. SEE STRUCTURAL DESIGN FOR EXTERIOR HEADER FRAMING DETAILS.
8. **CLOUD CEILINGS.** PROVIDE PERIMETER EDGE TRIM ON ALL CLOUDS, OVERALL HEIGHT TO BE 4". ELEMENT CAN BE RIVET ATTACHED TO THE PERIMETER ANGLE. ALL EXPOSED ENDS, VISIBLE TO SPACE, TO BE HEMMED EDGE. ALL CLOUD CEILINGS TO HAVE 4" BATT INSULATION PLACED ABOVE CLOUD.
9. **EXPOSED PAINT FINISH.** ALL AREAS DESIGNATED AS EXPOSED PAINT FINISH SHALL BE DRYFALL BLACK. PIPING, WIRING, DUCTING INSTALLED AFTER PAINT APPLICATION MAY REQUIRE REPAINTING OR TOUCH UP TO SPECIFIC AREAS. NO EXPOSED METAL, PIPING, WIRING SHALL BE VISIBLE.
10. **CEILING SUPPORT.** CABLE TRAYS, ELECTRICAL, DUCTWORK AND PIPING SHALL BE SUPPORTED INDEPENDENT OF CEILING SUPPORT.
11. **SPRAY ACOUSTICAL CEILING.** SPRAY ACOUSTICAL CEILING TO BE INTERNATIONAL CELLULOSE CORP. "K-13" SPRAY INSULATION.
    - A. SEE PLAN FOR THICKNESS AND PIGMENT COLOR.
    - B. CONTRACTOR TO PROVIDE NO PAINT COVERINGS OVER THE SPRAY CELLULOSE INSTALLATION.
    - C. SEE SPECIFICATION SECTION FOR FURTHER DETAILS.
    - D. PROVIDE MATERIAL ALTERNATES FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO INSTALLATION.

SYMBOL LEGEND

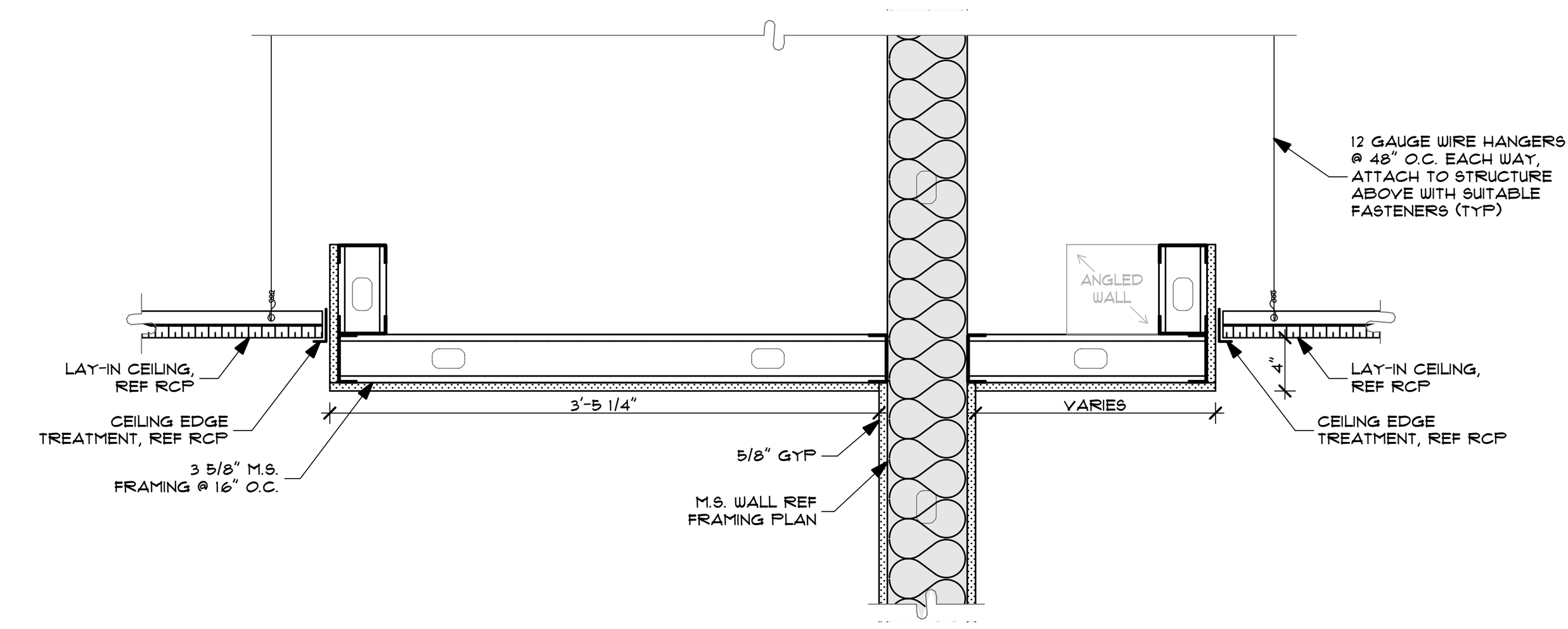
- RECESSED CAN LIGHT
- TROFFER
- TRACK LIGHT
- EXTERIOR WALL LIGHT
- PENDANT (HEIGHT A.F.F. +2'-10"; STEM LENGTH +3'-0")
- WALL SCONCE
- EXIT LIGHT (DIRECTIONAL)
- EXIT/EMERGENCY LIGHT
- EMERGENCY LIGHT W/ BATTERY
- SURFACE MOUNTED LINEAR LIGHT
- 2 LAMP WALL MOUNTED DOWNLIGHT
- STRIP LIGHT
- THEATRICAL LIGHTING BAR
- EXHAUST
- SUPPLY DIFFUSER
- RETURN DIFFUSER
- 2'X4' LAY-IN TILE CEILING PATTERN U.N.O.
- 2'X2' LAY-IN TILE CEILING PATTERN U.N.O.
- 5/8" TYPE "X" GYP. BOARD LID ATTACHED TO UNDERSIDE OF STRUCTURE ABOVE

NOTE:
SEE MECHANICAL AND ELECTRICAL SHEETS FOR EQUIPMENT SCHEDULES & DETAILS.

TYPE	DESCRIPTION	MATERIAL	DESCRIPTION	SUSPENSION SYSTEM	
CA	NOT USED	1	NOT USED	A	ARMSTRONG "PRELUDE XL" 15/16"
CB	2' X 2' NON- RATED CEILING TILE	2	ARMSTRONG "FINE FISSURED" TEGULAR EDGE, WHITE	B	NOT USED
CC	GYPSUM WALL BOARD CEILING (NON-RATED)	3	PRIMER AND 2 COATS PAINT	C	NOT USED
CD	NOT USED	4	EXPOSED STRUCTURE PAINT FINISH, COLOR: SW6258 "TRICORN BLACK"		
CE	NO CEILING - OPEN TO STRUCTURE	5	CHAMCLAD LAMINATED PANEL, COLOR: "MOUNTAIN PINE"	D	LIGHT GA. FRAMING / SUSPENSION WIRE
CF	CHAMCLAD SOFFIT PANEL SYSTEM	6	NO FINISH		



5 BS06 CEILING SECTION
SCALE: 1" = 1'-0"



6 BS07 CEILING SECTION
SCALE: 1" = 1'-0"

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REFLECTED CEILING PLAN

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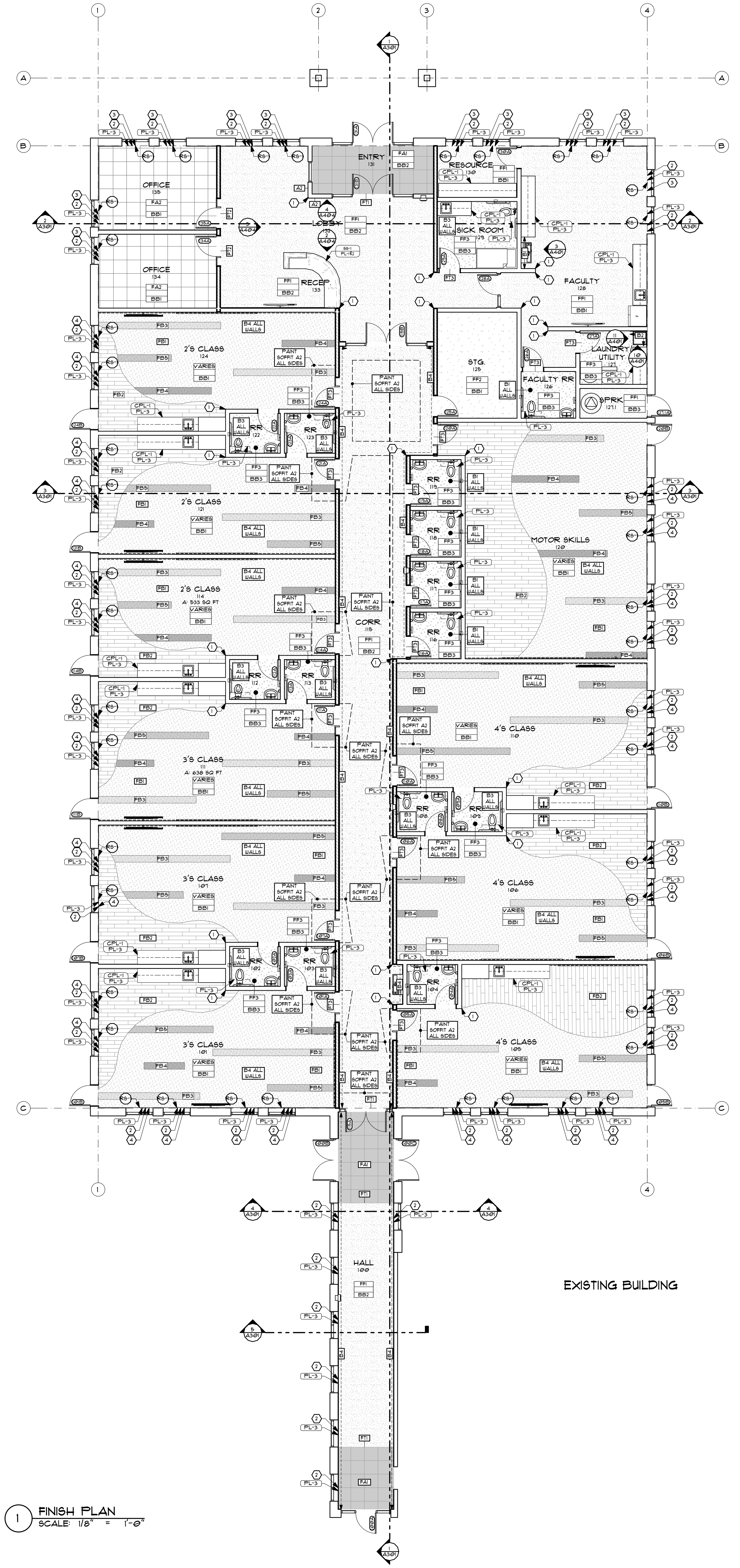

FINISH PLAN
SCALE: 1/8" = 1'-0"

FINISH PLAN GENERAL NOTES

1. **CORNERSTONE BUILDING SUPPLY (MATERIAL SUPPLY).** MANY OF THE FLOORING ITEMS LISTED IN FINISH SCHEDULE MAY BE PROVIDED BY CORNERSTONE BUILDING SUPPLY, SEE "SPECIFIC NOTES" COLUMN IN SCHEDULE. REFERENCE CORNERSTONE SUPPLY PURCHASE ORDERS FOR SPECIFIC ADDITIONAL PRODUCT INFORMATION.
   A. FLOORING INSTALLER RESPONSIBLE FOR QUANTITY TAKEOFFS.
   B. INSTALLER TO PURCHASE DIRECTLY FROM CORNERSTONE BUILDING SUPPLY, INSTALLER TO COORDINATE WITH GENERAL CONTRACTOR.
   C. ALTERNATES TO FLOORING/FINISHES WILL BE ACCEPTED, BUT SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO CONTRACT ISSUANCE.
2. **WALL PAINT**
   A. ALL WALLS TO BE A1 PAINT FINISH U.N.O.
   B. ALL WALL PAINT FINISH SHEEN TO BE "EGGSHELL" U.N.O.
   C. ALL PAINT COLORS LISTED ARE SHERWIN WILLIAMS DESIGNATIONS. SEE FINISH SCHEDULE FOR DETAILS. ALTERNATE PAINT MANUFACTURERS WILL BE CONSIDERED WITH SW PAINT DESIGNATION COLOR MATCH.
   D. INSTALLING CONTRACTOR TO PROVIDE 4'X4' MOCK-UP OF ALL PAINT SELECTIONS, WITHIN BUILDING UPON DRYWALL COMPLETION. COORDINATE LOCATION AND TIMING WITH ARCHITECT.
3. **EXPOSED CEILING SPACES (OPEN TO STRUCTURE).** ALL EXPOSED CEILING SPACES TO BE "DRYFALL" PAINT FINISH. REFERENCE CEILING PLANS FOR DETAILS. PROVIDE TOUCH-UP PAINT ALLOWANCE IN CONTRACTOR'S BUDGET TO MAINTAIN DRYFALL CEILINGS THROUGH CONSTRUCTION.
   A. DRYFALL PAINT SHEEN TO BE FLAT OR MATTE FINISH.
4. **FIRE FINISH CLASSIFICATION.** REFERENCE CODE REVIEW SHEETS (G100-G102) FOR FIRE FINISH CLASSIFICATIONS. ALL CORRIDOR AREAS TO HAVE MINIMUM FIRE CLASSIFICATION "B", ALL OTHER SPACES TO HAVE FIRE CLASSIFICATION "C". PROVIDE FIRE CLASSIFICATION RATING CONFIRMATION IN PRODUCT SUBMITTALS.
5. **PLASTIC LAMINATE WALL PANELS**. ALL PLASTIC LAMINATE WALL PANELS TO BE HIGH PRESSURE LAMINATE, SHOP LAMINATED ON SUITABLE 3/4" SUBSTRATE. SUITABLE SUBSTRATE SHALL BE DEFINED BY LAMINATE MANUFACTURER REQ'S.
   A. PROVIDE 12" X 12" MOCK-UP OF ALL PLASTIC LAMINATE WALL PANELS (INCLUDING PERFORATED PANELS) FOR ARCHITECT'S REVIEW AND APPROVAL.
   B. ALL LAMINATE COLORS BASED ON "WILSONART" DESIGNATIONS. ALTERNATES WILL BE ACCEPTED, BUT MUST BE APPROVED PRIOR TO CONTRACT BY ARCHITECT.
   C. ALL WALL PANELS TO BE ATTACHED WITH Z-CLIPS TO WALL.
6. **FLOORING TRANSITIONS.** CHANGES TO FLOORING TRANSITIONS LISTED SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
7. **DRYWALL REVEALS.** ALL DRYWALL REVEALS TO BE FRY SATIN ALUMINUM FINISH.

FINISH PLAN KEYED NOTES:

1. 1-1/2" X 1-1/2" S.S. CORNER GUARD TO 48" AFF (BRUSHED FINISH)
2. PROVIDE P-LAM WINDOW SILL SEE FINISH PLAN FOR P-LAM DESIGNATION. SEE WINDOW DETAILS FOR SILL DETAIL.
3. PROVIDE WINDOW ROLLER SHADE AT THIS LOCATION. JAMB MOUNT "MECHOSHADE CLASSIC 5" MANUALLY OPERATED WINDOW ROLLER SHADE. PROVIDE STANDARD FINISHED FOR ARCHITECTS FINAL SELECTION. (SEE FINISH PLAN & SCHEDULE FOR FABRIC)
4. PROVIDE WINDOW ROLLER SHADE AT THIS LOCATION. JAMB MOUNT "MECHOSHADE CLASSIC 5" MANUALLY OPERATED WINDOW ROLLER SHADE. PROVIDE STANDARD FINISHED FOR ARCHITECTS FINAL SELECTION. INSTALL WITH CHILD SAFETY CHAINS. (SEE FINISH PLAN & SCHEDULE FOR FABRIC)

DELMARVA CHRISTIAN SCHOOL - EARLY LEARNING CENTER

GEORGETOWN, DE

DATE: 1/15/25 — **REVISION: 100%**

FINISH SCHEDULE LEGEND

		INSTALL PATTERN	SPECIFIC NOTES	DESCRIPTION (STYLE|COLOR)
	FLOORS			
	WALK OFF CARPET TILE, CARPET TILE			
FA1	MILLIKEN WALK-OFF CARPET TILE	E	Z1	STYLE: **50CM X 50CM OBEX TILE, STYLE: CUTX / THREAD**| COLOR: **"GREY" TDX5-27** | INSTALL: **STAGGERED BRICKWORK**
FA2	SHAW CONTRACT CARPET TILE	E	Z1	STYLE: **24"X24" 5T123 PRIMARY TILE** COLOR: **"SLATE" 17760**| INSTALL: **STAGGERED BRICKWORK**
	SHEET VINYL			
FB1	SHAW CONTRACT SHEET VINYL		Y1	STYLE: **TATAMI SHEET VINYL 0796V** | COLOR: **96216 "TEA GARDEN"**
FB2	SHAW CONTRACT SHEET VINYL		Y1	STYLE: **INHABIT SHEET VINYL 4106V** | COLOR: **06220 "BARLEY OAK"**
FB3	SHAW CONTRACT SHEET VINYL		Y1	STYLE: **VITALITY HUES SHEET VINYL 4376V** | COLOR: **00675 "FERVOR"**
FB4	SHAW CONTRACT SHEET VINYL		Y1	STYLE: **VITALITY HUES SHEET VINYL 4376V** | COLOR: **00405 "GUSTO"**
FB5	SHAW CONTRACT SHEET VINYL		Y1	STYLE: **VITALITY HUES SHEET VINYL 4376V** | COLOR: **00325 "VIGOR"**
	CONCRETE/EPOXY FLOORING			
FF1	POLISHED CONCRETE W/ CLEAR COAT FINISH			H&C CONCRETE SEALER CLEAR GLOSS SOLVENT BASED
FF2	EPOXY FLOOR PAINT O/ CONCRETE	—	U1	**SHERWIN WILLIAMS** |COLOR: **SW9170 "ACIER"** | FINISH: **SEMI-GLOSS**
FF3	STONHARD EPOXY FLOORING	—		STYLE: **STONESHIELD SLT** | COLOR: **"DRIFTWOOD"**
	BASE			
BB1	JOHNSONITE THERMOSET RUBBER (TS) COVE BASE		Y1	STYLE: **4.5" BASEWORKS** COLOR: **"CHARCOAL" 20**
BB2	TARKETT THERMOPLASTIC RUBBER BASE		Y1	STYLE: **5.25" "INFLECTION" PROFILE** COLOR: **"CHARCOAL" 20**
BB3	STONHARD POURED EPOXY/URETHANE COVE BASE		Y1	STYLE: **4" STONESHIELD SLT** COLOR: **"DRIFTWOOD"** NOTE: **INCLUDE METAL CAP TRANSITION**
	FLOORING TRANSITIONS			
	CONDITION	MANUF.	NOTES	
FT1	WALK-OFF CARPET TILE TO CONCRETE	TARKETT		STYLE: **CRS-20-D** COLOR: **CHARCOAL 20**
FT2	CARPET TILE TO CONCRETE	TARKETT		STYLE: **SLT-20-L** COLOR: **CHARCOAL 20**
FT3	CONCRETE TO EPOXY/SHEET VINYL FLOOR	TARKETT		STYLE: **SLT-20-J** COLOR: **CHARCOAL 20**
	WALLS			
	PAINT *(NOT SUPPLIED BY CORNERSTONE BUILDING SUPPLY)*			
A1	PRIMER AND TWO COATS PAINT			**SHERWIN WILLIAMS** |COLOR: **SW1015 "SKYLINE STEEL** | FINISH: **EGGSHELL/SEMI-GLOSS**
A2	PRIMER AND TWO COATS PAINT			**SHERWIN WILLIAMS** |COLOR: **SW7024 "FUNCTIONAL GRAY"** | FINISH: **EGGSHELL/SEMI-GLOSS**
	PORCELAIN TILE			
C1	FLORIDA TILE WALL TILE		X0, X1, X2, X3, X4, X5, X6, X7	STYLE: **12"X24" RHYME** | COLOR: **"ALMOND NOTE"** | GROUT: **MAPEI "ALABASTER" 5001 (HAIRLINE GROUT LINE)**
	TILE/SHEET/METAL WALL PROTECTION TREATMENTS *(NOT SUPPLIED BY CORNERSTONE BUILDING SUPPLY)*			
B1	C1 & TWO COATS EPOXY PAINT ABOVE	DRINKING FTNS	T2	**C1 AS DESIGNATED ON INTERIOR ELEVATIONS. PROVIDE SCHLUTER TRANSITION STRIP (SATIN ANODIZED ALUMINUM FINISH) AT ALL OUTSIDE CORNERS AND EDGES. PROVIDE SCHLUTER COVE BASE AT ALL WALL TO FLOOR TRANSITIONS.** *SEE ARCHITECTURAL DRAWINGS FOR WALL DESIGN LAYOUT* PAINT: **SHERWIN WILLIAMS** | COLOR: **A1** | FINISH: **SEMI-GLOSS OR EGGSHELL**
B2	FRP WALL COVERING- UTILITY	JAN.	T1, T2	**ALL WALL STANDARD FRP FINISH (CRANE COMPOSITES - VARIETEX, SANDSTONE FINISH, "COTTON WHITE" OR EQUAL) TO 48" VERTICALLY A.F.F. PROVIDE STANDARD TRANSITION STRIPS AND CAP.** *SEE ARCHITECTURAL DRAWINGS FOR WALL DESIGN LAYOUT* PAINT ABOVE: **SHERWIN WILLIAMS** | COLOR: **A1** | FINISH: **SEMI-GLOSS**
B3	INPRO WALL COVERING	SMALL R.R.'S/ DRINKING FTN	T2	**INPRO WALL COVERING (COLOR: "YARD" WVN-07 STYLE: WOVEN).** *SEE ARCHITECTURAL DRAWINGS FOR WALL DESIGN LAYOUT* PAINT ABOVE: **SHERWIN WILLIAMS** | COLOR: **A1** | FINISH: **SEMI-GLOSS**
B4	INPRO WALL COVERING	CORRIDORS & CLASSROOMS	T2	**INPRO WALL COVERING (COLOR: "YARD" WVN-07 STYLE: WOVEN) W/ PALLADIUM 3D TRIM HORIZONTAL BOARD (COLOR: "NATURAL MAPLE" 0531).** *SEE ARCHITECTURAL DRAWINGS FOR WALL DESIGN LAYOUT* PAINT ABOVE: **SHERWIN WILLIAMS** | COLOR: **A1** | FINISH: **SEMI-GLOSS**
	COUNTERS			
	SOLID SURFACE/QUARTZ			
SS-1	CORIAN QUARTZ			COLOR: **"GEO GRIGIO"** PROFILE THICKNESS: **2 CM (OR STANDARD)** EDGE: **STRAIGHT/ EASED**

	LAMINATE			
	PLASTIC LAMINATE *(NOT SUPPLIED BY CORNERSTONE BUILDING SUPPLY)*			
PL-1	WILSONART PLASTIC LAMINATE			COLOR: **7939K-18 "BLOND ECHO"**
PL-2	WILSONART PLASTIC LAMINATE			COLOR: **4939K-18 "VAPOR STRANDZ"**
PL-3	WILSONART PLASTIC LAMINATE			COLOR: **8220-38 "FRENCH PEAR"**
CPL-1	WILSONART PLASTIC LAMINATE			COLOR: **4939K-60 "VAPOR STRANDZ"**

INSTALLATION PATTERN TYPES

A	INSTALL IN MONOLITHIC PATTERN.
B	INSTALL IN QUARTER TURN PATTERN.
C	INSTALL IN PINWHEEL PATTERN.
D	INSTALL IN TRADITIONAL PLANK
E	INSTALL IN STAGGERED BRICKWORK (STAGGERED BOND) PATTERN
F	INSTALL IN DIAMOND PATTERN
G	INSTALL IN BASKETWEAVE PATTERN
H	INSTALL PATTERN HORIZONTALLY
I	INSTALL PATTERN VERTICALLY
J	INSTALLED ASHLAR

SPECIFIC NOTES:

SPECIFIC NOTES BELOW APPLY ONLY WHEN CALLED OUT IN THE GENERAL NOTES COLUMN ABOVE.

CARPET NOTES (Z):	
Z1	CARPET TILE, BROADLOOM CARPET AND ADHESIVES SUPPLIED BY CORNERSTONE BUILDING SUPPLY UNDER NATIONAL CONTRACT. INSTALLING CONTRACTOR RESPONSIBLE FOR ALL QUANTITY TAKEOFFS AND ORDERING THROUGH CORNERSTONE BUILDING SUPPLY.
LUXURY VINYL PLANK, TILE / SHEET VINYL, BASE, STAIR NOSING, STAIR TREAD AND RISERS, NOTES (Y):	
Y1	ALL LVT, LVP, LVT, RUBBER/CARPET BASE, STAIR NOSING, STAIR TREAD AND RISERS, AND SHEET VINYL PRODUCTS SUPPLIED BY CORNERSTONE BUILDING SUPPLY UNDER NATIONAL CONTRACT. INSTALLING CONTRACTOR RESPONSIBLE FOR ALL QUANTITY TAKEOFFS AND ORDERING THROUGH CORNERSTONE BUILDING SUPPLY.
Y2	ALL TRANSITIONS WITH 5MM PRODUCT TO BE "TRANSITIONLESS" INSTALLER TO PROVIDE SMOOTH, CONSISTENT CUTS FOR ALL FLOORING TRANSITIONS.
Y3	ALL 5MM "FREELAY" PRODUCT TO HAVE ADHESIVE APPLIED AT BORDERS ONLY. NO ADHESIVES TO BE USED IN FIELD TILES/PLANKS, EXCEPT IN CORRIDORS.
PORCELAIN TILE/CERAMIC AND GLASS TILE NOTES (X):	
X0	ALL PORCELAIN/CERAMIC TILE SUPPLIED BY CORNERSTONE BUILDING SUPPLY. INSTALLING CONTRACTOR RESPONSIBLE FOR ALL QUANTITY TAKEOFFS AND ORDERING THROUGH CORNERSTONE BUILDING SUPPLY. INSTALLING CONTRACTOR TO PROVIDE ALL TILE ACCESSORIES AND GROUT.
X1	PROVIDE OUTSIDE CORNERS AT ALL OUTSIDE TILE CORNERS, SCHLUTER "ECK-E" OR SIMILAR. COORDINATE FINISH COLOR W/ARCHITECT PRIOR TO INSTALLATION.
X2	PROVIDE ALUMINUM RADIUS CAP AT ALL EXPOSED TILE EDGES, SCHLUTER "RONDEC" OR SIMILAR. COORDINATE FINISH COLOR W/ARCHITECT PRIOR TO INSTALLATION.
X3	PROVIDE ALUMINUM COVE BASE AT ALL FLOOR TO WALL TILE TRANSITIONS, SCHLUTER "DILEX -EHK" OR SIMILAR. COORDINATE FINISH COLOR W/ARCHITECT PRIOR TO INSTALLATION.
X4	ALL HORIZONTAL & VERTICAL SURFACES TO RECEIVE EPOXY GROUT.
X5	INSTALL TILE WITH MINIMAL GROUT LINES. NO LESS THAN 1/8" WIDE, 3/16" IDEALLY.
X6	WALL TILE WILL RUN VERTICALLY AND 33% OFFSET
X7	SEE ENLARGED ELEVATIONS FOR WALL TILE TRIM, BASE AND BULLNOSE DETAILS.
CONCRETE FLOORING NOTES (U):	
U1	PROVIDE H&C SHARK'S GRIP ANTI-SLIP ADDITIVE, BROADCAST APPLIED DURING FINISH
WALL FINISH NOTES (T):	
T1	PROVIDE FRP PANELS AT ALL JANITOR'S AND UTILITY SINKS. SEE INTERIOR ELEVATIONS. NOT SUPPLIED BY CORNERSTONE BUILDING SUPPLY.
T2	SEE ARCHITECTURAL DRAWINGS FOR SPECIFIC ELEVATION AND DESIGN.

	DOORS/ FRAMES/HARDWARE			
	NAME/MANUFACTURER		SPECIFIC NOTES	DESCRIPTION (STYLE|COLOR)
	HOLLOW METAL DOORS & FRAMES			PRIME & PAINT FINISH, COLOR: SW6258 **"TRICORN BLACK"**
	ARCHITECTURAL HARDWARE- DORMA			LEVERS: **DULL CHROME** FINISH HARDWARE (KICK PLATES, PULLS, DOOR/WALL STOPS, DOOR CLOSERS: **DULL CHROME/STAINLESS STEEL** PANICS (INSIDE) **POWDER COATED-ALUMINUM** OUTSIDE PANIC TRIM: **STAINLESS** HINGES: **DULL CHROME** CYLINDRICAL LOCKS: **DULL CHROME**

GENERAL NOTES: SUPPLIED BY CORNERSTONE BUILDING SUPPLY.

	ROLLER SHADES			
	MANUFACTURER	LOCATION	SPECIFIC NOTES	DESCRIPTION (STYLE|COLOR)
RS-1	MECHO			STYLE: **MECHO/5 MANUAL SHADE SYSTEM** FABRIC: **ECOVEIL 1550 SERIES - COLOR: "EGGSHELL" 3% OPENNESS** *SEE ARCHITECTURAL DRAWINGS FOR WALL DESIGN LAYOUT*

APPROVED BY: ____________

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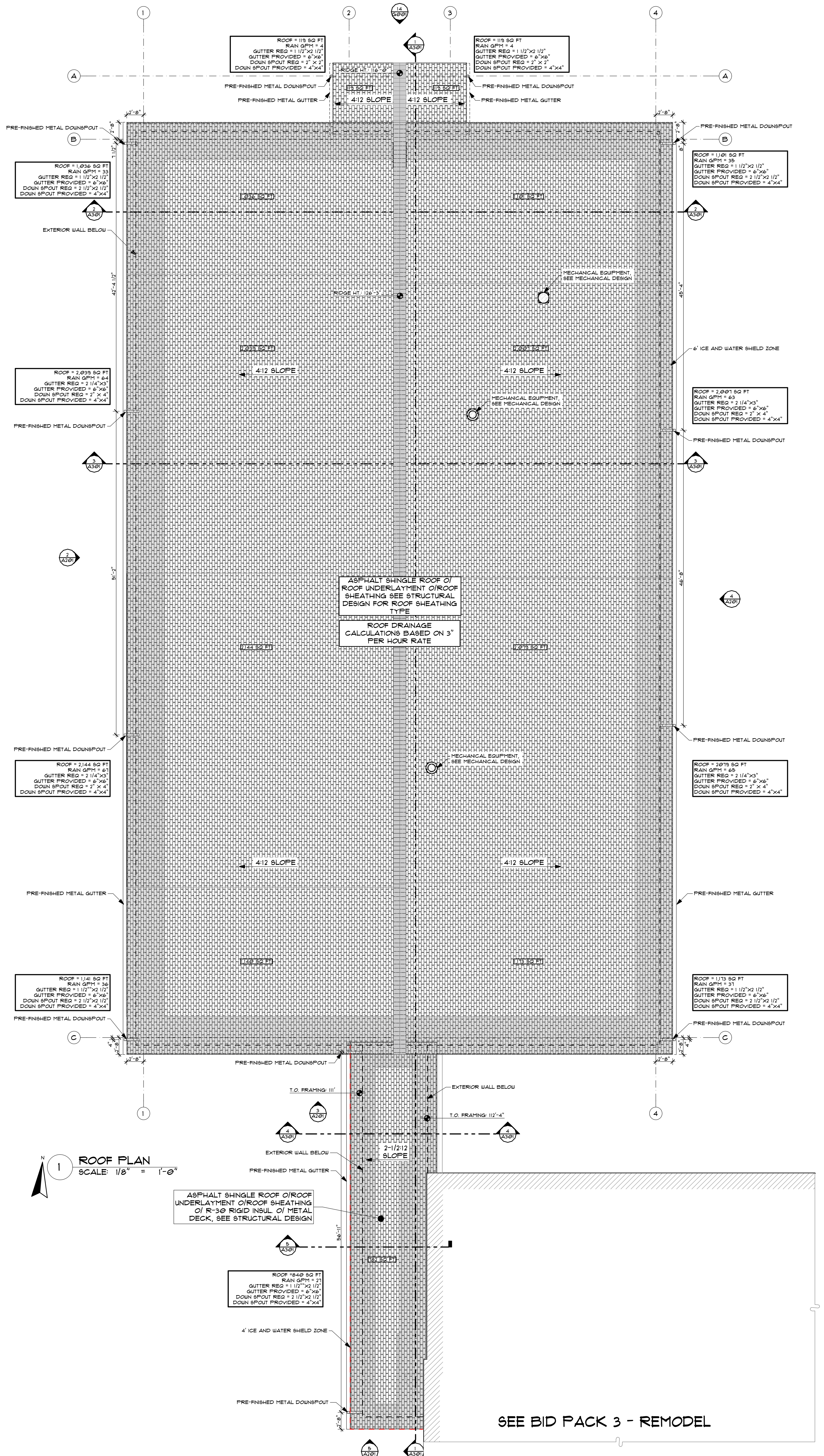

ROOF PLAN GENERAL NOTES

1. **ASPHALT COMPOSITION SHINGLES.** AS A BASIS OF PRODUCT ALL ASPHALT SHINGLES SHALL BE 40 YR ARCHITECTURAL SHINGLES, GAF "TIMBERLINE" ULTRA HD OR EQUAL. INSTALLING CONTRACTOR TO PROVIDE "-OR-EQAUL" PRODUCT FOR ARCHITECT'S REVIEW AND APPROVAL. FINAL COLOR SELECTION TO BE BASED ON CONTRACTOR SUPPLIED PHYSICAL COLOR SAMPLES. SEE SPECIFICATIONS FOR ASPHALT SHINGLE SPECIFICATIONS.
2. **GUTTERS AND DOWNSPOUTS.** ALL GUTTERS AND DOWNSPOUTS TO BE PREFINISHED SHEETMETAL, FIRESTONE UNACLAD OR EQUAL. MATCH EXISTING BUILDING GUTTER AND DOWNSPOUT PROFILE.
3. **RAIN WATER LEADERS.** ALL ROOF DRAIN LEADERS OUTLET TO GRADE. PROVIDE CONCRETE SPLASH BLOCK AND ROCK RIP RAP AT OUTFALL. MAINTAIN GRADED LANDSCAPE DRAINAGE WAY AWAY FROM BUILDING AT 1/4":12" MIN. SLOPE.
4. **ROOF INSULATION.** PROVIDE MIN. R-30 POLYISO ROOF INSULATION CONTINUOUS ABOVE STEEL DECK.
5. **ROOF TRANSITIONS.** PROVIDE ADDITIONAL WEATHER RESISTIVE BARRIER (ICE & WATER SHIELD) TO ALL RIDGES, VALLEYS AND HIPS. EXTEND SELF ADHERED ADDITIONAL WATER BARRIER MIN. 4' ON BOTH SIDES OF TRANSITION.
6. **ROOF STRUCTURE AND SLOPE**. SEE STRUCTURAL DRAWINGS FOR ALL ROOF STRUCTURE DESIGN.
7. **ROOF SHEATHING.** PROVIDE MIN. 1/2" OSB SHEATHING OVER RIGID INSULATION.
8. **ROOF PENETRATIONS.** ALL ROOF PENETRATIONS TO BE APPROVED BY ROOFING CONTRACTOR PRIOR TO INSTALLATION.
9. **ROOF TO WALL FLASHING.** PROVIDE MIN. 6" VERTICAL HEIGHT ROOF TO WALL FLASHING AT ALL ROOF TO WALL TRANSITIONS.

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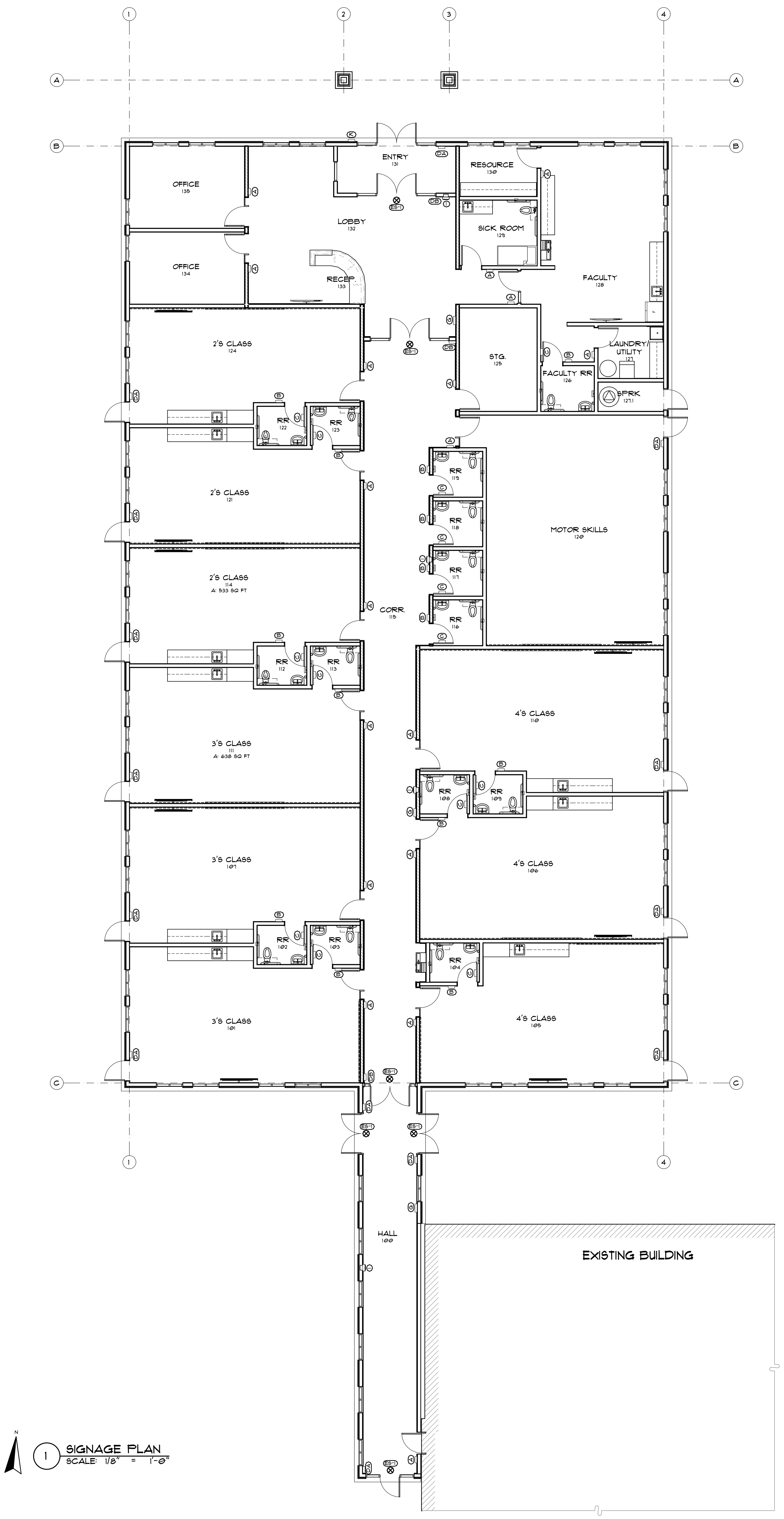

INTERIOR SIGNAGE PLAN GENERAL NOTES

1. **SIGNAGE MATERIAL**
   - A. ALL INTERIOR SIGNS TO BE 3/8" THICK ACRYLIC, P95 FINISH.
   - B. VINYL COLOR APPLIED TO SECOND SURFACE, COLOR T.B.D. INSTALLING CONTRACTOR TO PROVIDE STANDARD COLOR SELECTIONS FOR ARCHITECT'S REVIEW AND APPROVAL VIA SHOP DRAWING PROCESS.
   - C. ALL GRAPHICS TO BE DIRECT PRINT, CONTRASTING COLOR, T.B.D.
   - D. ALL BRAILLE TO BE GRADE 2.
   - E. ALL CODE REQUIRED SIGNAGE TO BE OF A CONTRASTING COLOR TO THE WALL.
2. **MOUNTING**
   - A. SIGNS TO BE MOUNTED WITH DOUBLE SIDED VHB TAPE AND SILICONE
   - B. MOUNTING LOCATIONS TO BE VERIFIED THROUGH SHOP DRAWING SUBMITTAL.
   - C. SEE SHEET A603 FOR ACCESSIBLE MOUNTING HEIGHTS.
   - D. TYPICAL ROOM SIGNAGE MOUNTING HEIGHT SHALL BE 54" TO B.O. SIGN FROM FINISHED FLOOR AND 4" OFF THE DOOR FRAME.
3. **EMERGENCY SIGNAGE**
   - A. ILLUMINATED SIGNAGE PROVIDED AND INSTALLED BY ELECTRICIAN.
   - B. SEE ELECTRICAL DESIGN FOR POWER SOURCE.
4. **SUBMITTAL**
   - A. FULL SIGNAGE SUBMITTAL WILL BE REQUIRED SHOWING:
     - I. ALL SIGNAGE TYPES
     - II. FULLY DIMENSIONED, INCLUDING MOUNTING HEIGHTS
     - III. ALL MATERIALS SHOWN
     - IIII. COLOR OPTIONS PROVIDED FOR ARCHITECT'S REVIEW AND SELECTION
5. **ADDITIONAL SIGNAGE**
   - A. ADDITIONAL SIGNAGE MAY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION AT PERMIT ISSUANCE OR AT CERTIFICATE OF OCCUPANCY.

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SIGNAGE PLAN

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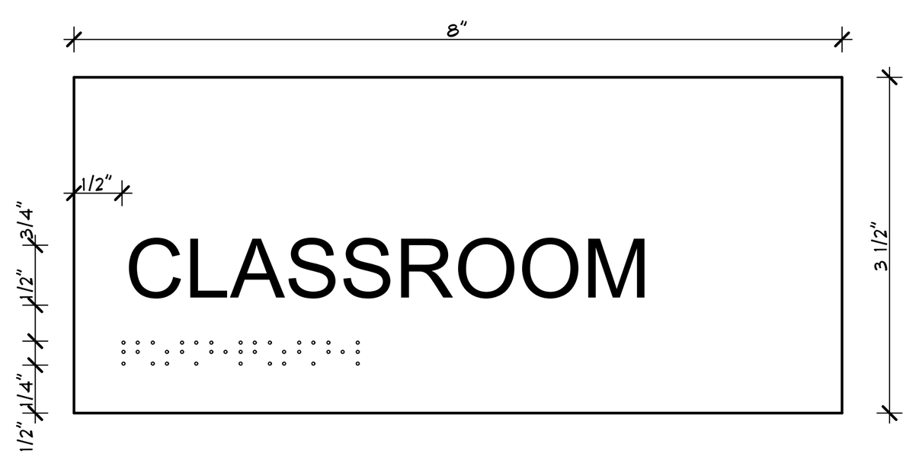
INTERIOR SIGNAGE PLAN GENERAL NOTES

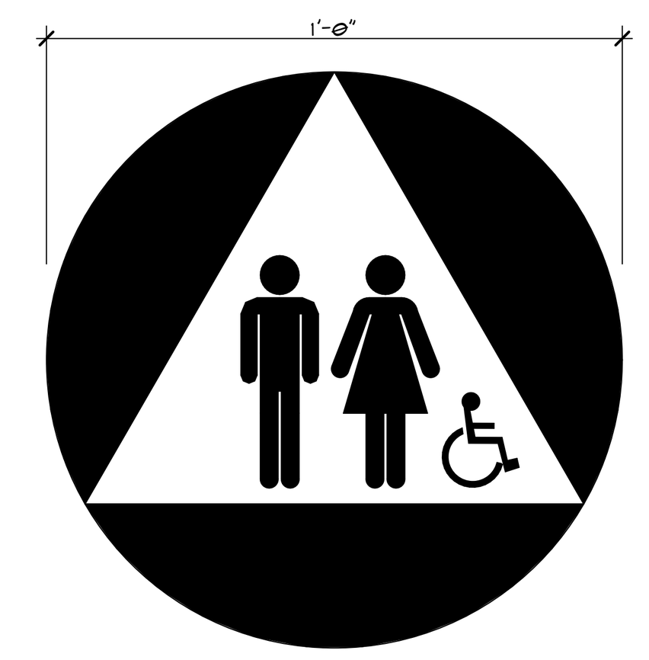
1. **SIGNAGE MATERIAL**
   A. ALL INTERIOR SIGNS TO BE 3/8" THICK ACRYLIC, P95 FINISH.
   B. VINYL COLOR APPLIED TO SECOND SURFACE, COLOR T.B.D. INSTALLING CONTRACTOR TO PROVIDE STANDARD COLOR SELECTIONS FOR ARCHITECT'S REVIEW AND APPROVAL VIA SHOP DRAWING PROCESS.
   C. ALL GRAPHICS TO BE DIRECT PRINT, CONTRASTING COLOR, T.B.D.
   D. ALL BRAILLE TO BE GRADE 2.
   E. ALL CODE REQUIRED SIGNAGE TO BE OF A CONTRASTING COLOR TO THE WALL.
2. **MOUNTING**
   A. SIGNS TO BE MOUNTED WITH DOUBLE SIDED VHB TAPE AND SILICONE
   B. MOUNTING LOCATIONS TO BE VERIFIED THROUGH SHOP DRAWING SUBMITTAL.
   C. SEE SHEET A603 FOR ACCESSIBLE MOUNTING HEIGHTS.
   D. TYPICAL ROOM SIGNAGE MOUNTING HEIGHT SHALL BE 54" TO B.O. SIGN FROM FINISHED FLOOR AND 4" OFF THE DOOR FRAME.
3. **EMERGENCY SIGNAGE**
   A. ILLUMINATED SIGNAGE PROVIDED AND INSTALLED BY ELECTRICIAN.
   B. SEE ELECTRICAL DESIGN FOR POWER SOURCE.
4. **SUBMITTAL**
   A. FULL SIGNAGE SUBMITTAL WILL BE REQUIRED SHOWING:
      I. ALL SIGNAGE TYPES
      II. FULLY DIMENSIONED, INCLUDING MOUNTING HEIGHTS
      III. ALL MATERIALS SHOWN
      IIII. COLOR OPTIONS PROVIDED FOR ARCHITECT'S REVIEW AND SELECTION
5. **ADDITIONAL SIGNAGE**
   A. ADDITIONAL SIGNAGE MAY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION AT PERMIT ISSUANCE OR AT CERTIFICATE OF OCCUPANCY.



1 SIGNAGE DETAIL - A
SCALE: 6" = 1'-0"

TO BE PLACED ON THE WALL ADJACENT THE DOOR HANDLE DEPENDING ON WHETHER RESTROOM IS FOR MEN OR WOMEN (REVIEW PER DETAILS ON SHEET A603)

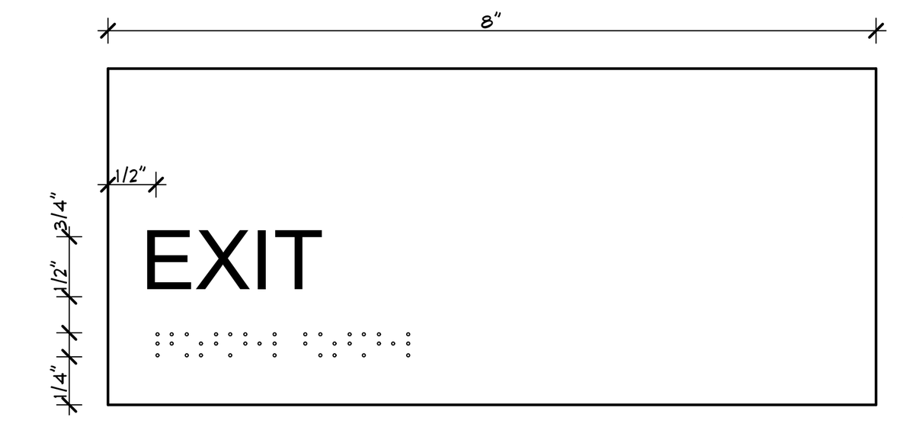
2 SIGNAGE DETAIL - B
SCALE: 6" = 1'-0"



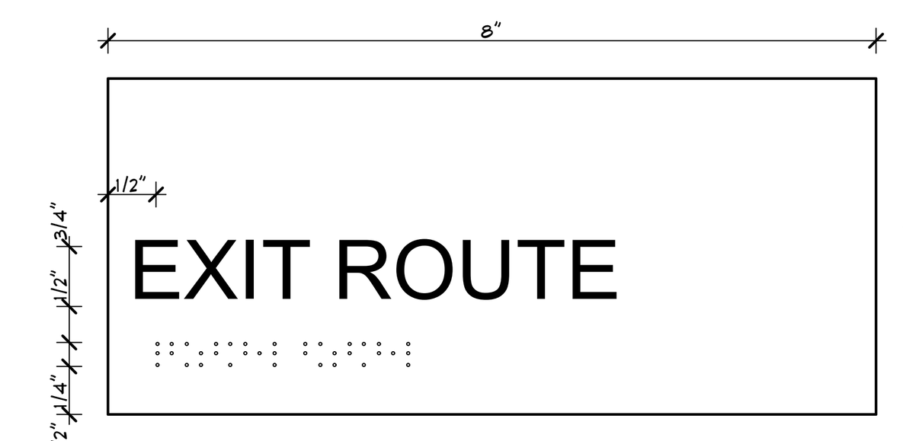
NOTE: SIGN MUST BE A CONTRASTING COLOR FROM THE DOOR

SIGNAGE LOCATION: TO BE PLACED CENTERED ON RESTROOM DOOR PER DETAIL ON SHEET A603

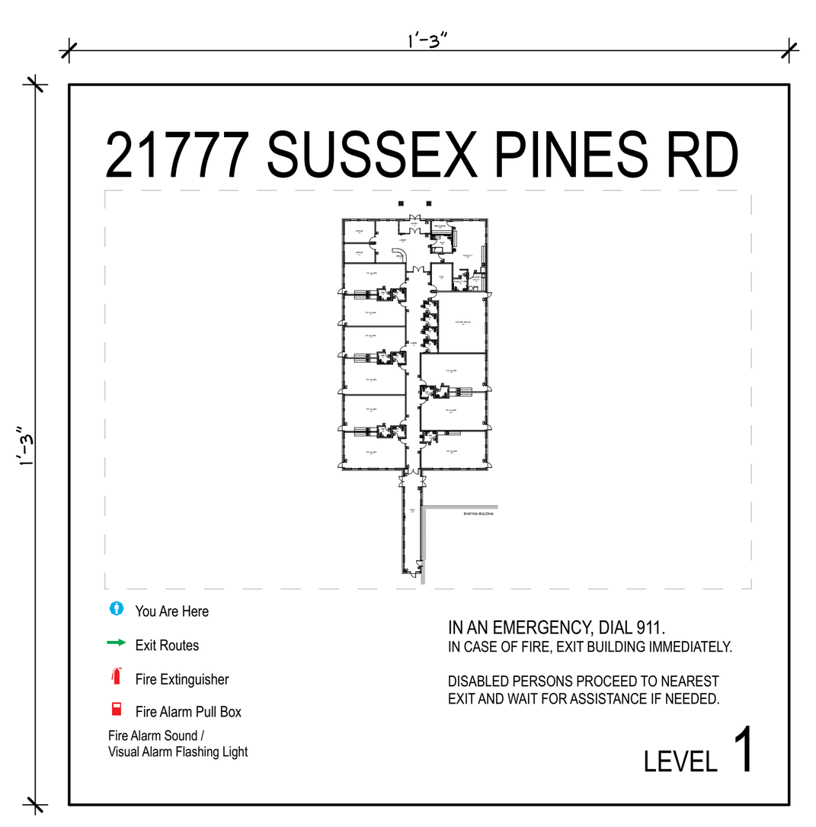
3 SIGNAGE DETAIL - C
SCALE: 3" = 1'-0"



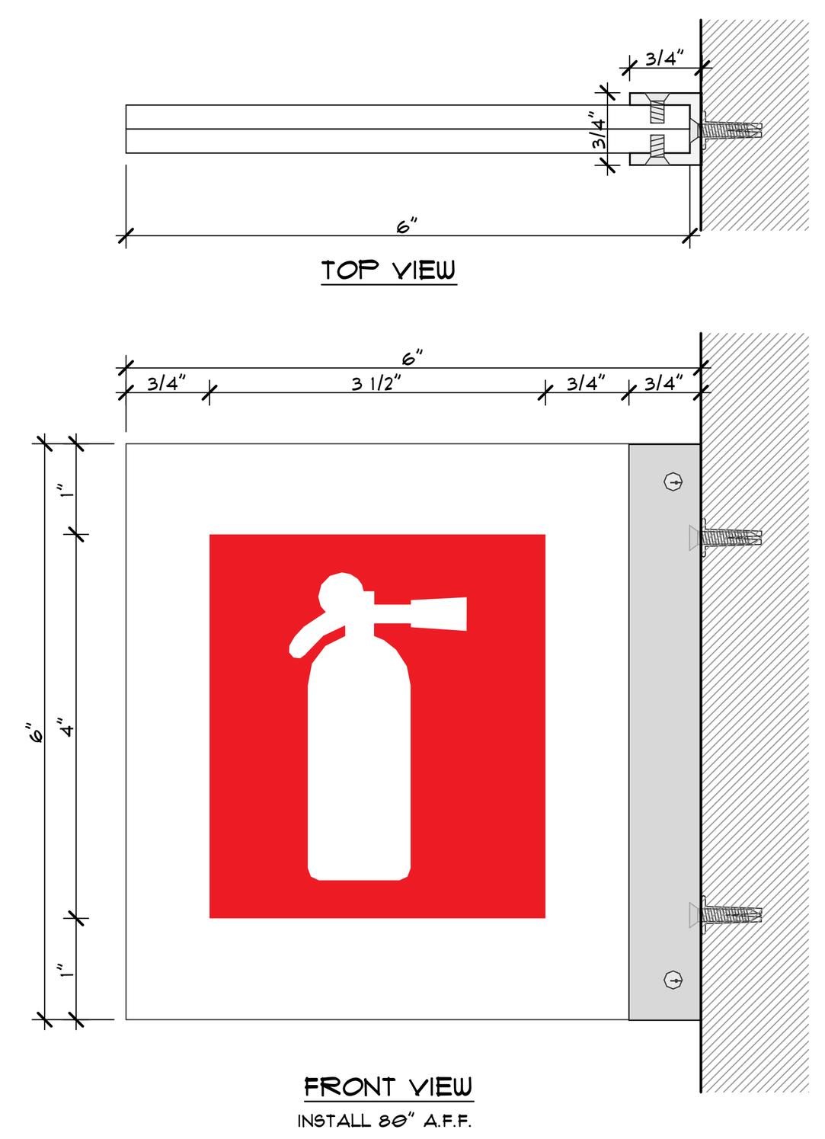
4 SIGNAGE DETAIL - DA
SCALE: 6" = 1'-0"



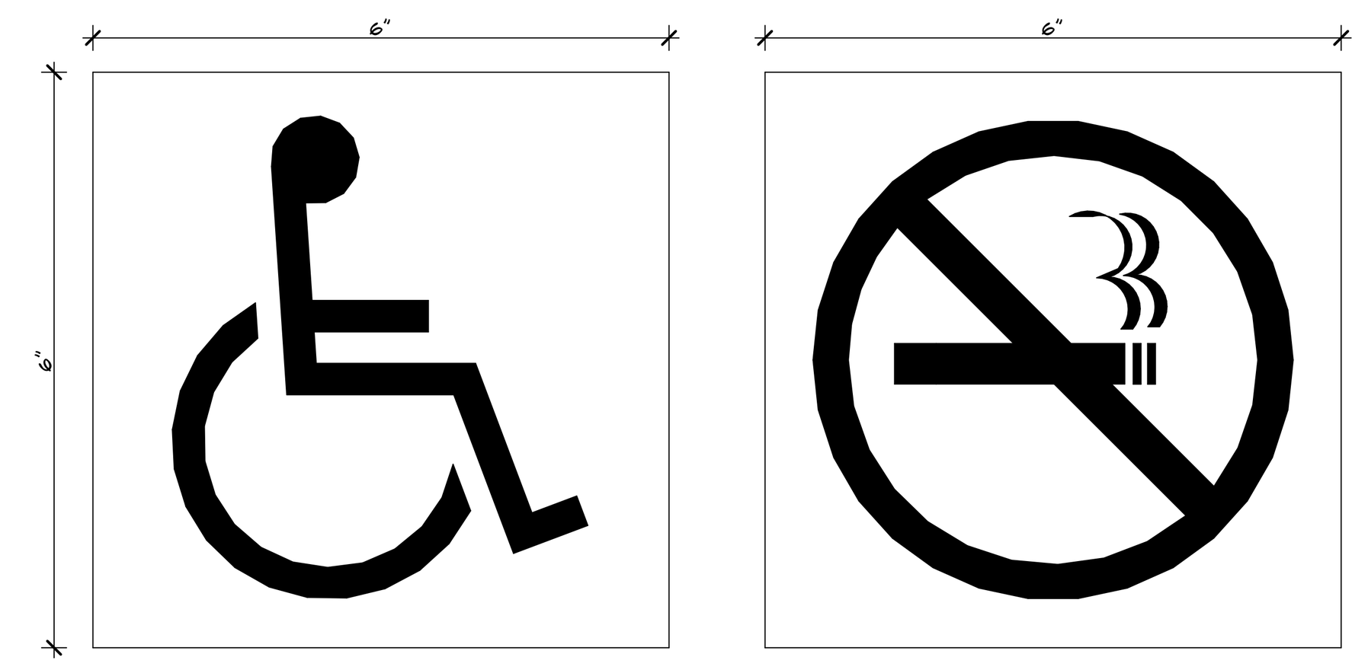
5 SIGNAGE DETAIL - DB
SCALE: 6" = 1'-0"



8 SIGNAGE DETAIL - G
SCALE: 3" = 1'-0"



10 SIGNAGE DETAIL - I
SCALE: 6" = 1'-0"



LOCATION: TO BE PLACED OUTSIDE AT MAIN ENTRY FOR EVERY BUILDING TO INDICATE THAT THE BUILDING IS ACCESSIBLE AND NO SMOKING

12 SIGNAGE DETAIL - K
SCALE: 6" = 1'-0"

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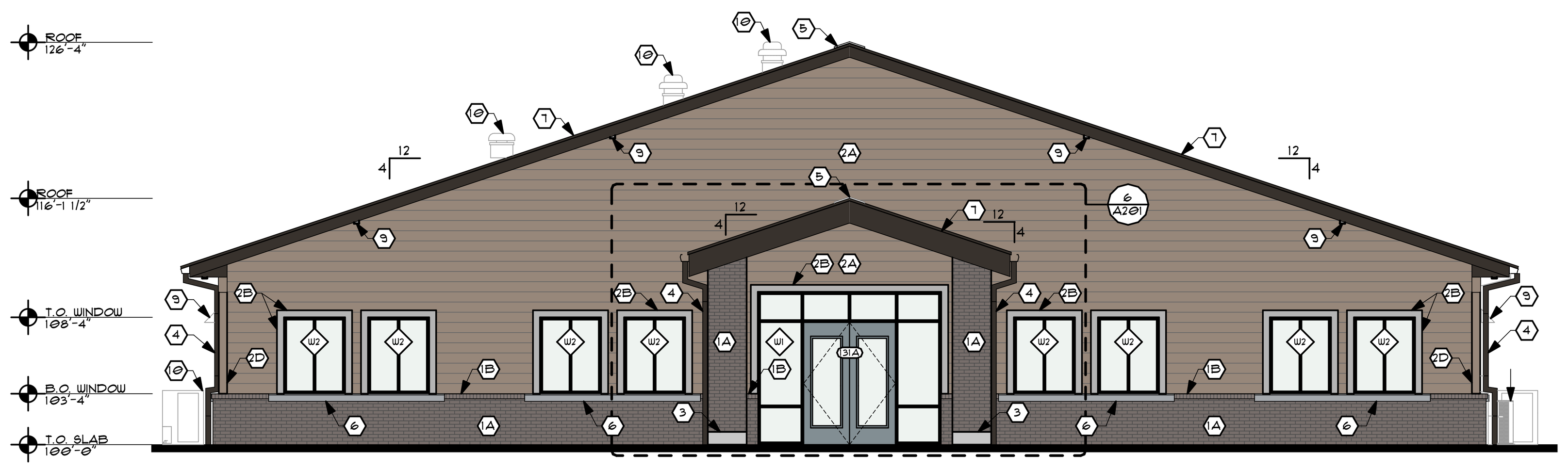
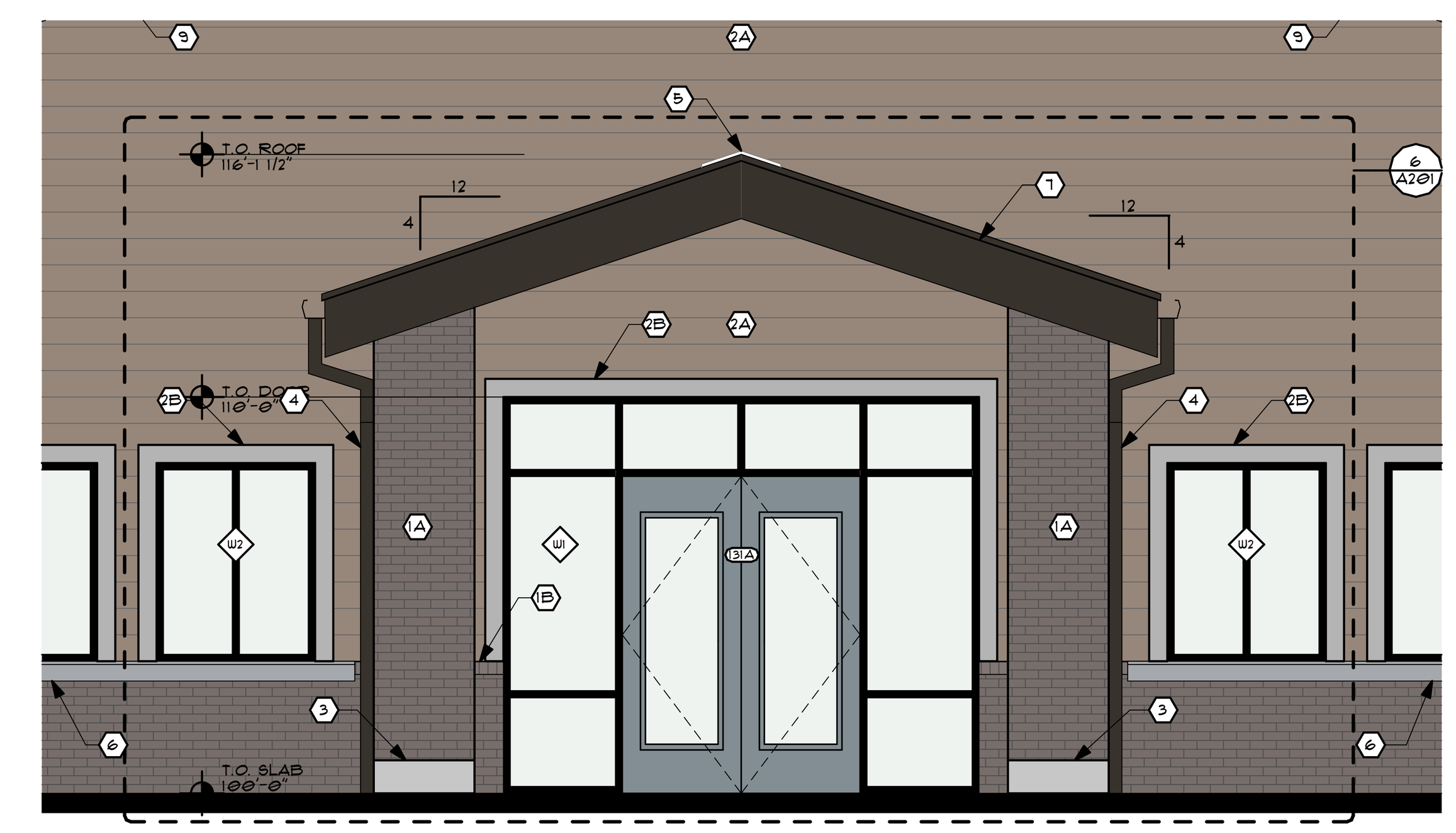
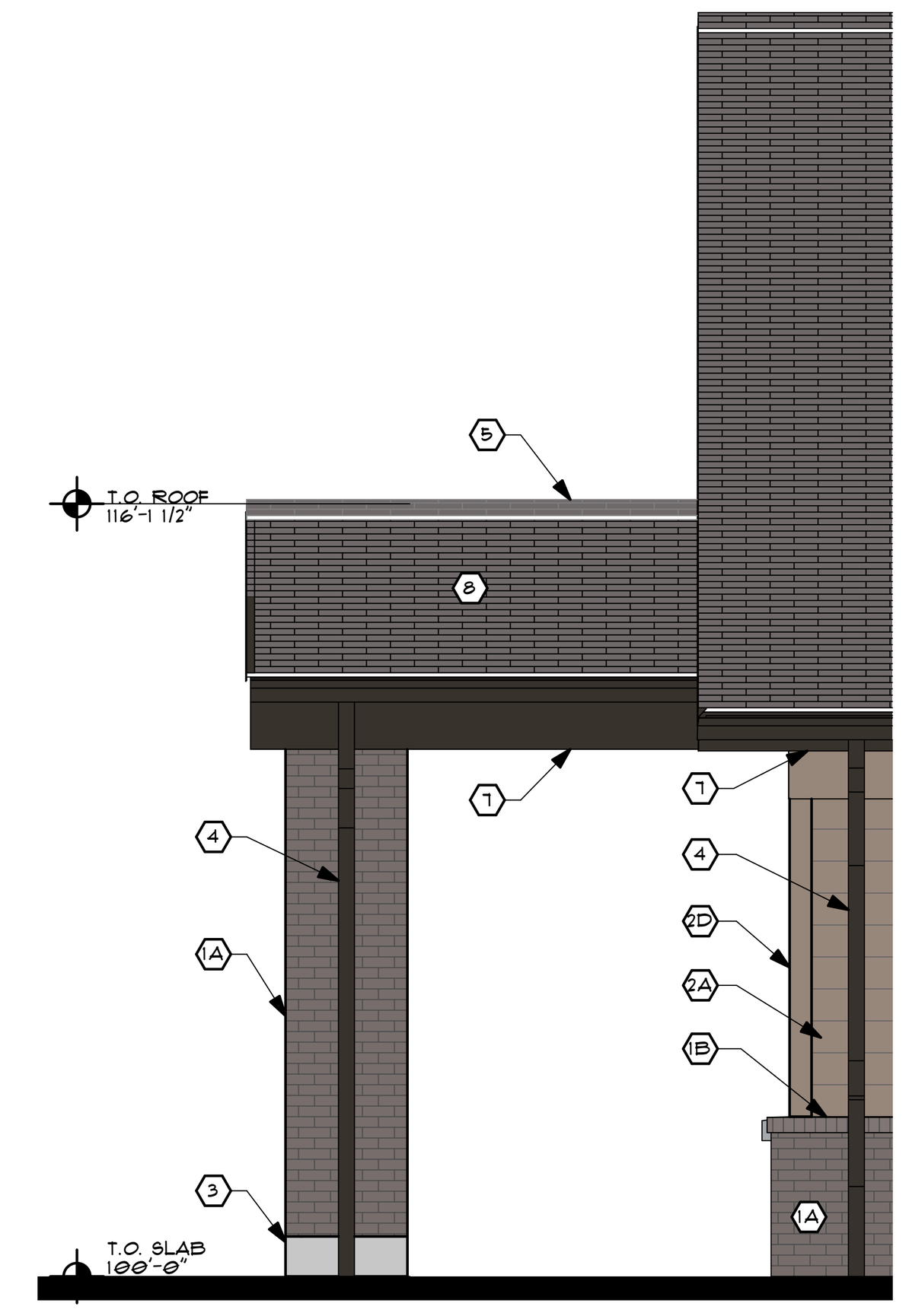


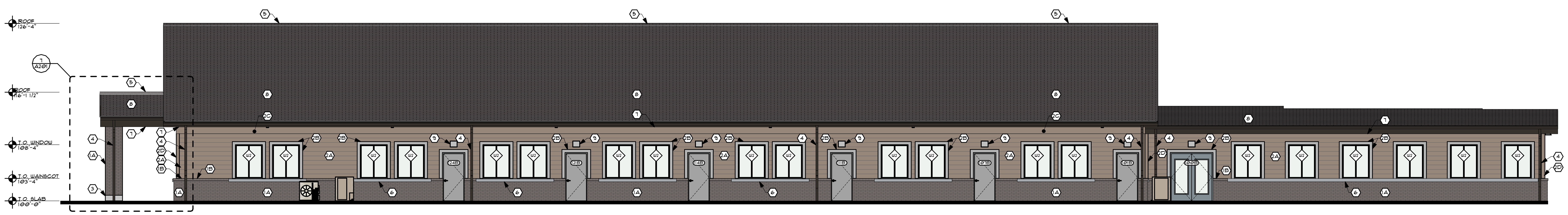
1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



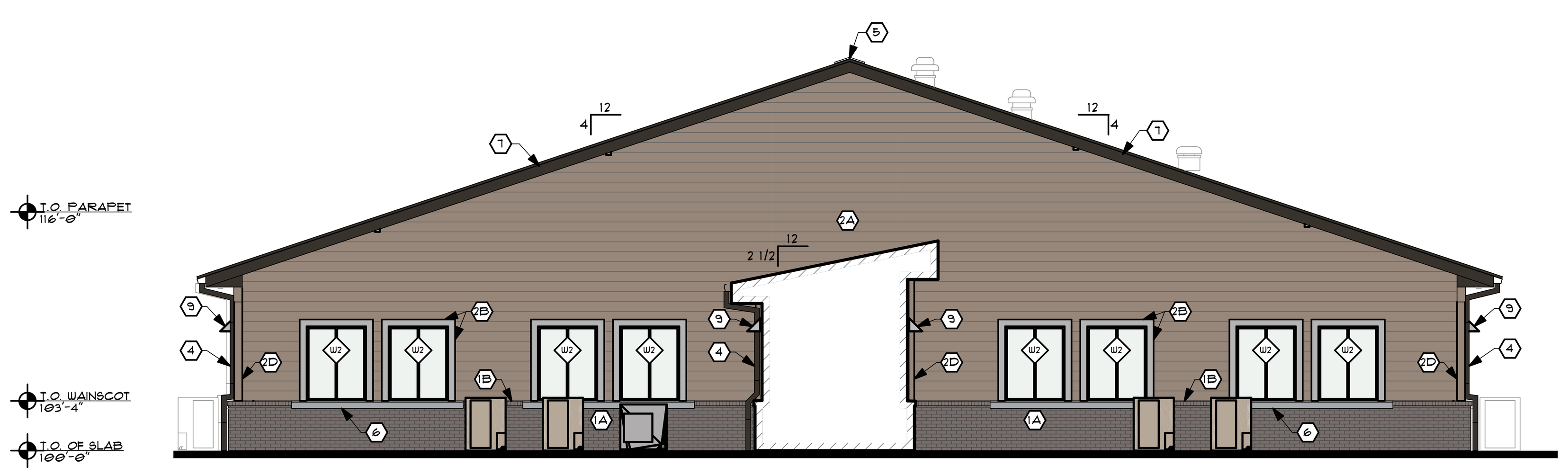
6 ENLARGED SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



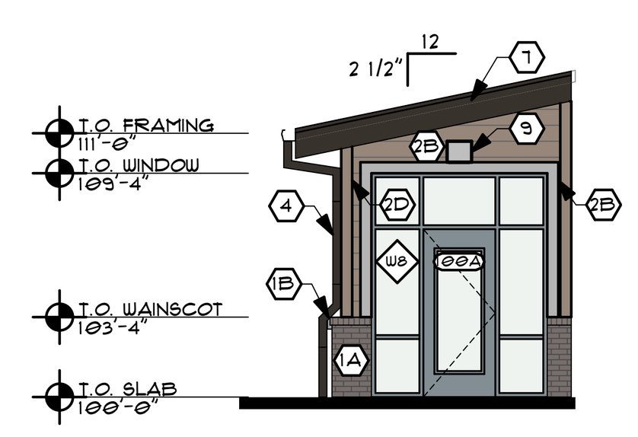
7 ENLARGED WEST ELEVATION
SCALE: 1/4" = 1'-0"



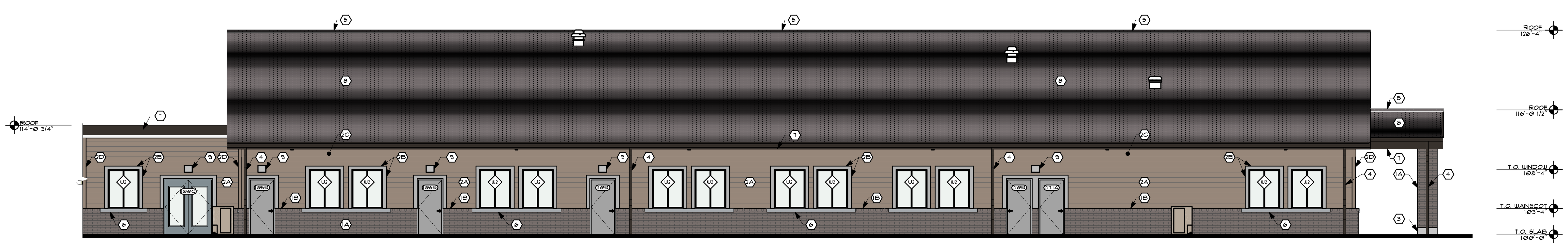
2 WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



5 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



4 EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR FINISH SCHEDULE

1A	GLEN GERY FACEBRICK, RUNNING BOND, SIZE: MODULAR, COLOR: "URBAN GRAY KLAYCOAT"
1B	GLEN GERY FACEBRICK, ROWLOCK COURSE, SIZE: MODULAR, COLOR: "URBAN GREY KLAYCOAT"
2A	HARDIE PLANK LAP SIDING, SMOOTH & PRIMED FOR PAINT, SIZE: 8.25" WIDTH (7" EXPOSURE), COLOR: SW6073 "PERFECT GREIGE"
2B	HARDIE PLANK TRIM BOARD, SMOOTH & PRIMED FOR PAINT, SIZE: 5.5" WIDTH, COLOR: SW7029 "AGREEABLE GRAY"
2C	HARDIE PLANK TRIM BOARD, SMOOTH & PRIMED FOR PAINT, SIZE: 11.25" WIDTH, COLOR: SW6073 "PERFECT GREIGE"
2D	HARDIE PLANK TRIM BOARD, SMOOTH & PRIMED FOR PAINT, SIZE: 5.5" WIDTH, COLOR: SW6073 "PERFECT GREIGE"
3	CONCRETE BASE
4	MBCI METAL DOWNSPOUT / GUTTER/ SCUPPER, COLOR: "MEDIUM BRONZE"
5	RIDGE CAP
6	SEALED CONCRETE SILL
7	MBCI FASCIA, COLOR: "MEDIUM BRONZE"
8	ARCHITECTURAL SHINGLE ROOFING, COLOR: T.B.D.
9	LIGHT FIXTURE, REF. ELECTRICAL DESIGN.
10	MECHANICAL EQUIPMENT, REF MECHANICAL DESIGN

ELEVATION GENERAL NOTES

1. **CEMENTITIOUS SIDING.** ALL SIDING TO BE JAMES HARDIE ARTISAN PLANK, FIELD PAINTED. PROVIDE JAMES HARDIE TRIM A ALL WINDOWS AND CORNERS, SEE PLANS FOR SIZES. FOLLOW MANUFACTURER STANDARD INSTALLATION DETAILS FOR SIDING INSTALLATION OVER 1" CONTINUOUS RIGID INSULATION.
2. **SAMPLES.** PROVIDE JOBSITE MOCK-UP ALL STUCCO, MASONRY VENEER, PRECAST LEDGERS AND NATURAL STONE FOR ARCHITECT'S REVIEW AND APPROVAL. PROVIDE 12" X 12" STUCCO SAMPLES FOR PRELIMINARY APPROVAL.
3. **BRICK.** BRICK TO MATCH EXISTING BUILDING, COLOR, STYLE AND SHAPE. COLOR MATCH GROUT AND PROVIDE SMAPLE VIA MOCK-UP FOR ARCHITECT'S REVIEW AND APPROVAL.
4. **BRICK TIES.** MASONRY TIES TO BE ADJUSTABLE BARREL ANCHOR TYPE. PROVIDE WASHER AT BARREL HEAD PENETRATION OF RIGID INSULATION. MASONRY TIE INSTALLATION TO BE IN ACCORDANCE WITH 2022 TMS 402.
   A. BRICK TIES TO BE INSTALLED IN A BASIC 24"X16" PATTERN.
   B. BRICK TIES TO BE INSTALLED WITHIN 16" OF SUPPORTED EDGES, OPENINGS AND JOINTS AND 12" OF UNSUPPORTED EDGES, OPENINGS AND JOINTS.
   C. INSTALL TIES WITHIN 12" OF THE TOP OF ALL WALLS.
5. **ARCHITECTURAL LIGHTING.** REFER TO ELECTRICAL DESIGN FOR EXTERIOR WALL PACK LIGHTING INFORMATION. COORDINATE BACK-BOX AND ROUGH IN REQ'S WITH ELECTRICIAN PRIOR TO EXTERIOR CLADDING INSTALL.
6. **STOREFRONT.** SEE GLAZING SHEET FOR ALUMINUM STOREFRONT SYSTEM DETAILS, INCLUDING GLASS COLOR AND ALUMINUM FINISH.
7. **ELEVATION CLEARANCE.** MAINTAIN MIN. 4" CLEARANCE TO ALL SURROUNDING FINISH GRADE, LANDSCAPING OR MULCH.
8. **SIGNAGE.** ALL BUILDING SIGNAGE TO BE PROVIDED AND INSTALLED BY CONTRACTOR. SIGN PERMIT PROCESS TO BE INCLUDED IN CONTRACTOR'S SCOPE.
9. **ROOF RAINWATER LEADERS.** ALL GUTTERS AND DOWNSPOUTS TO BE PRE-FINISHED METAL 4" BOX.
10. **CONTROL JOINTS.** PROVIDE CONTROL JOINTS AT STUCCO AND CMU WALLS. CONTROL JOINTS NOT TO EXCEED 25' O.C. HORIZONTALLY. CONTRACTOR TO PROVIDE LAYOUT OF ALL CONTROL JOINTS FOR ARCHITECT'S REVIEW AND APPROVAL PRIOR TO INSTALLATION.
11. **MASONRY FOUNDATION WALLS.** EXPOSED MASONRY (CMU) FOUNDATION WALLS TO BE SPLIT FACE CMU FINISH. ALL EXPOSED MASONRY WALLS TO HAVE CLEAR SEALER FINISH.
12. **MOISTURE BARRIER.** SEE BUILDING SECTION GENERAL NOTES FOR FLUID APPLIED CONTINUOUS EXTERIOR WALL MOISTURE BARRIER REQ'S.
13. **PRECAST COMPONENTS.** CONTRACTOR TO PROVIDE SHOP DRAWINGS DETAILING PRECAST COMPONENT SIZES, WITH PLAN LOCATION VERIFICATION, PRIOR TO INSTALL.
14. **EXPOSED CAP AND METAL FLASHING.** ALL EXPOSED PROJECT FLASHING TO BE PRE-FINISHED. CONTRACTOR TO PROVIDE STANDARD COLOR SELECTIONS, "MBCI" OR EQUAL, TO ARCHITECT FOR FINAL SELECTION.

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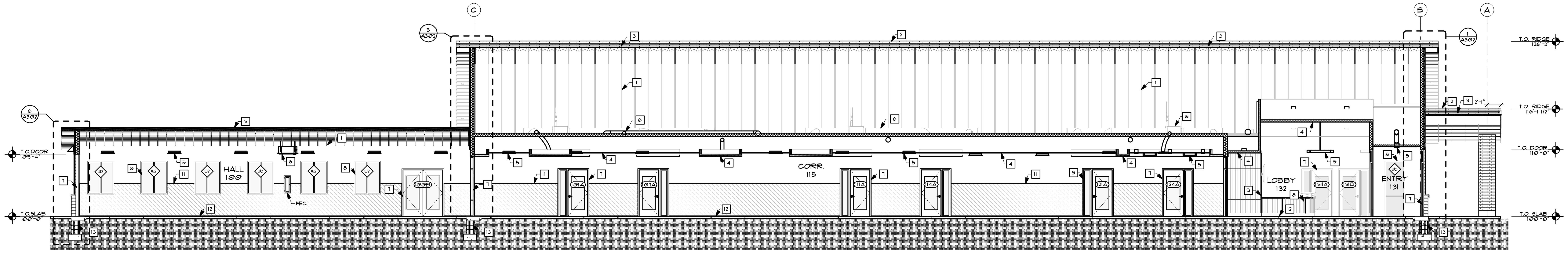
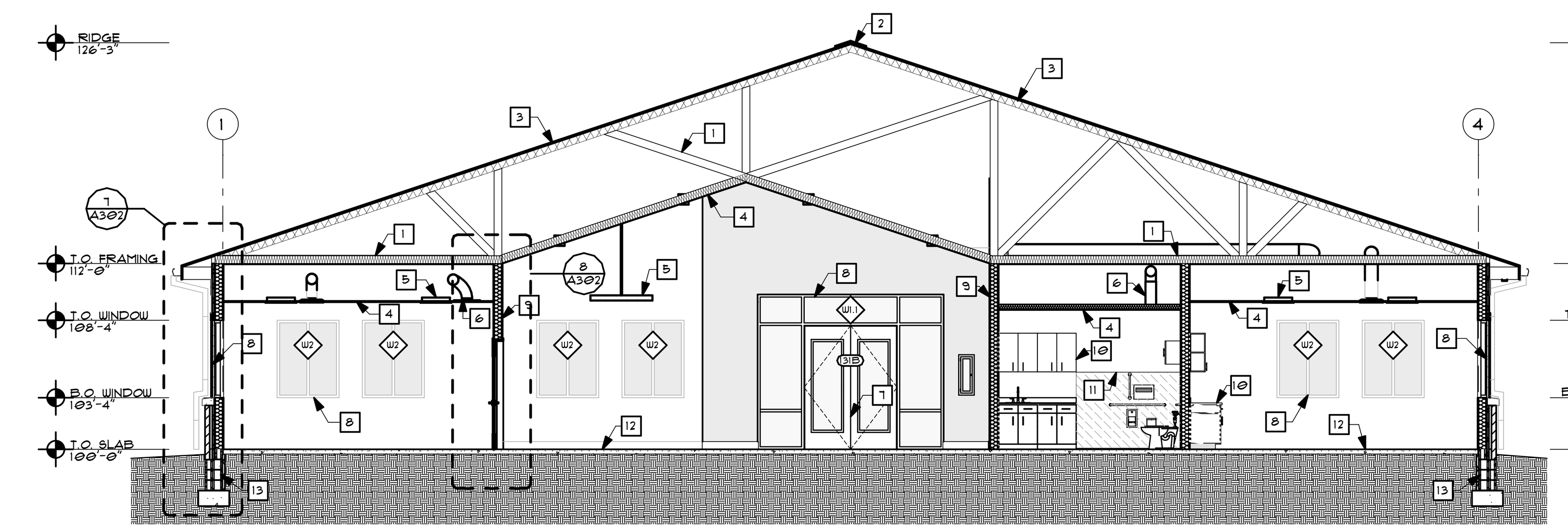


1 BUILDING SECTION
SCALE: 1/8" = 1'-0"



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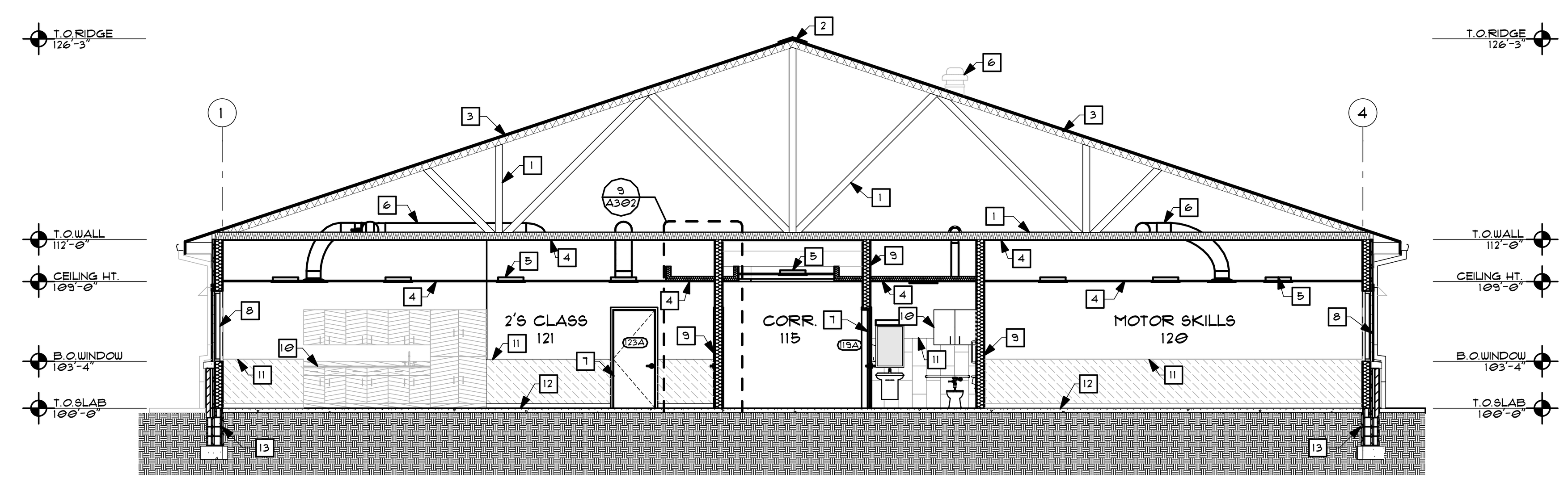

3 BUILDING SECTION
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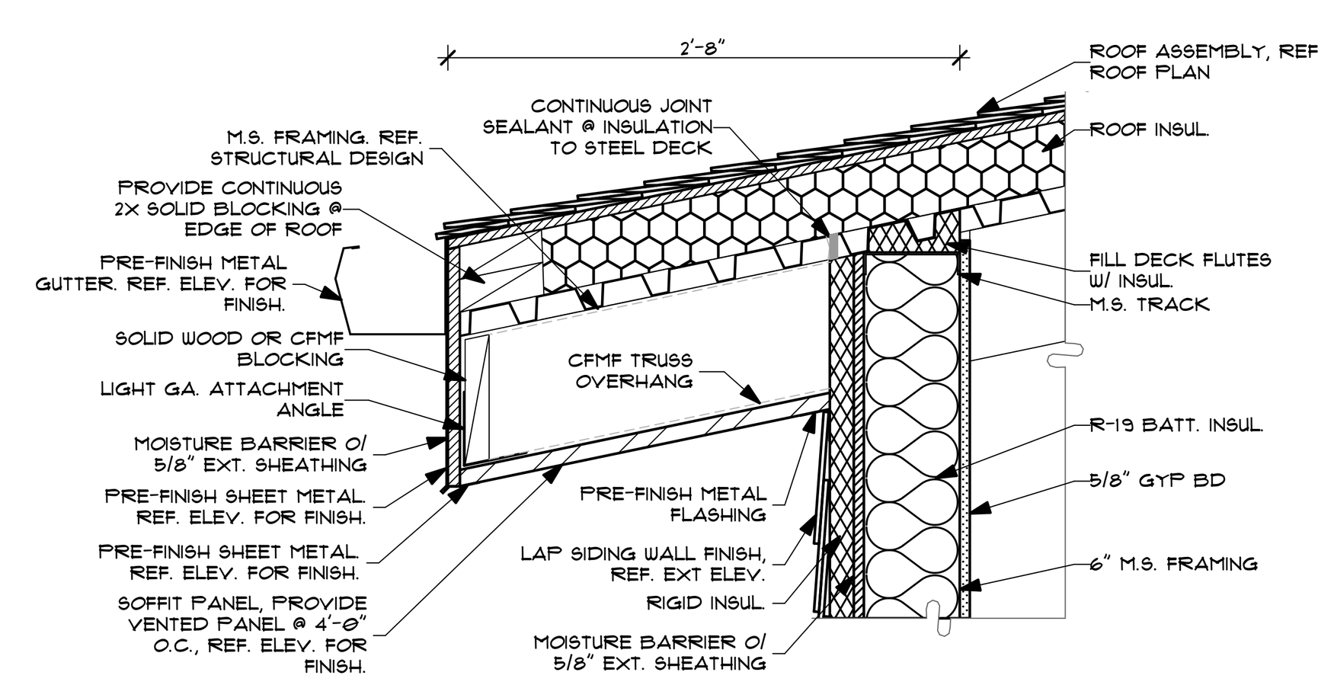
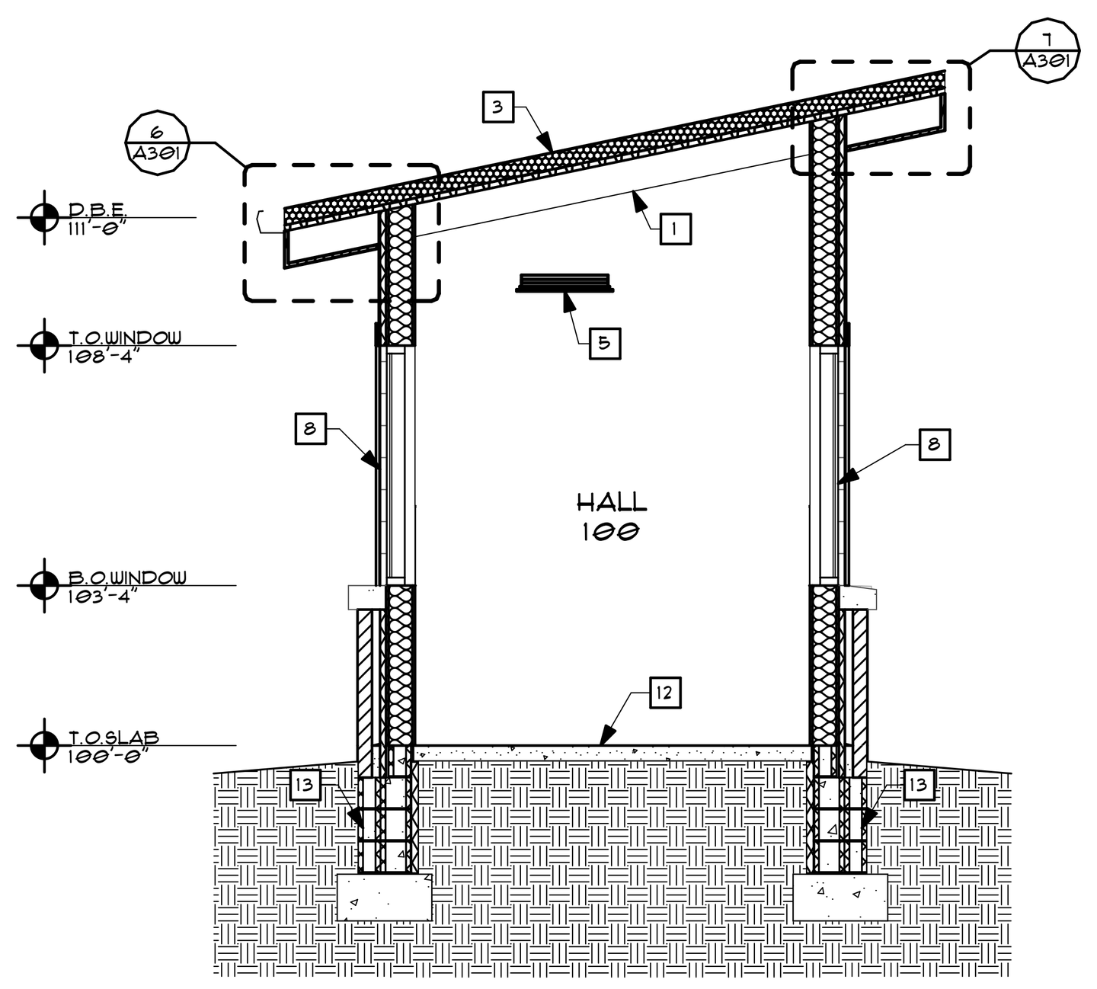
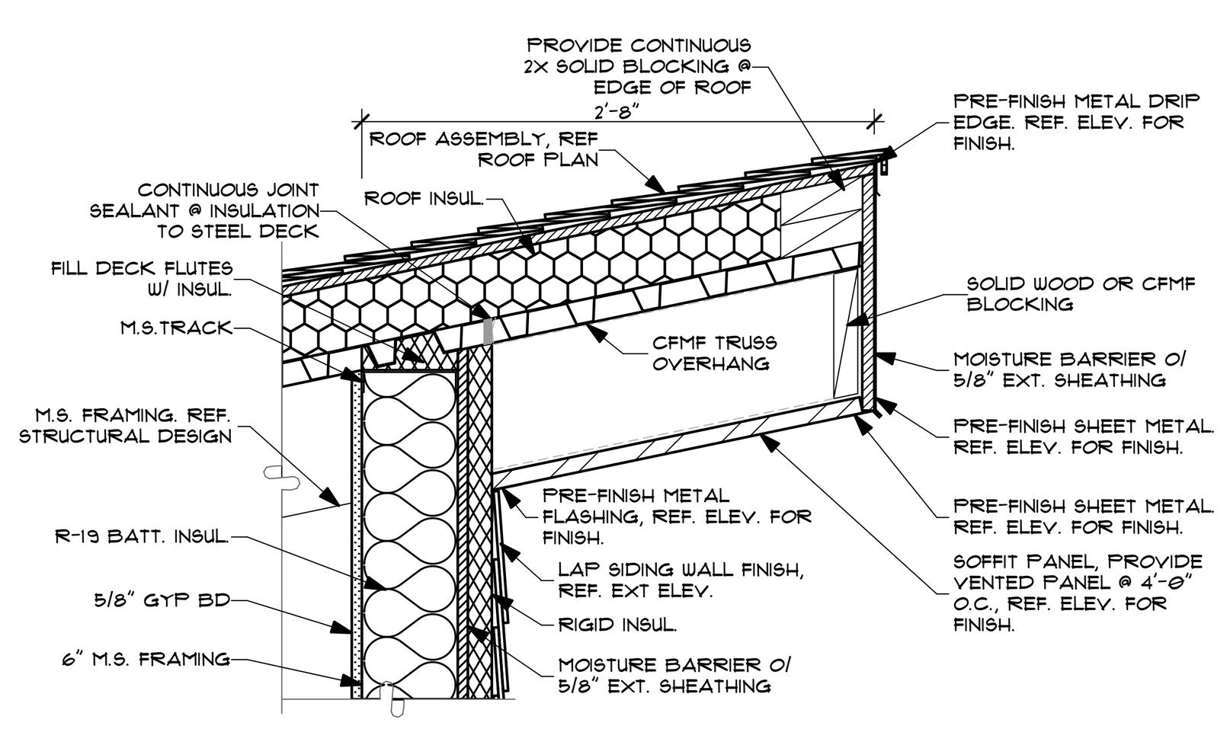


6 SOFFIT DETAIL
SCALE: 1" = 1'-0"



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



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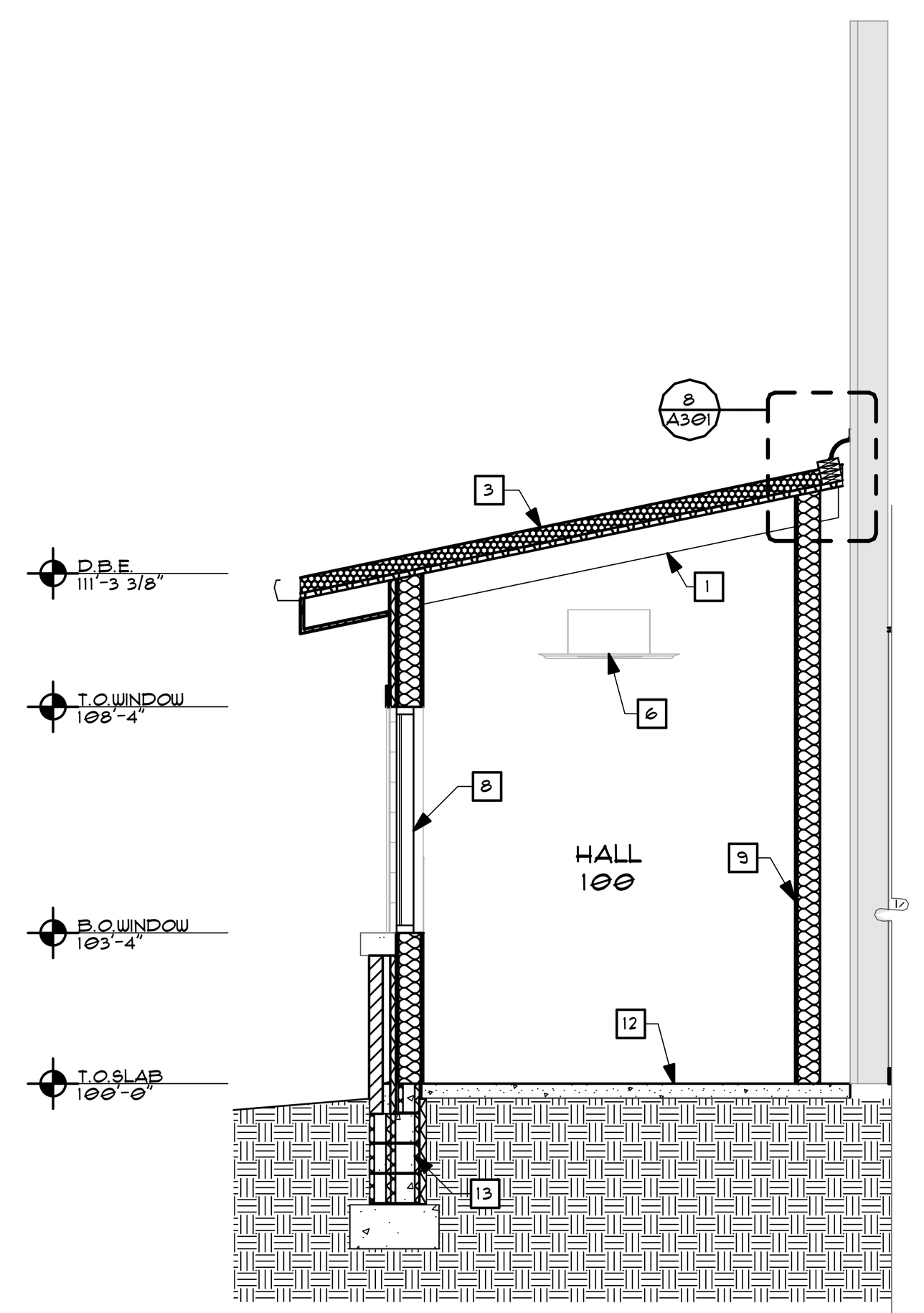

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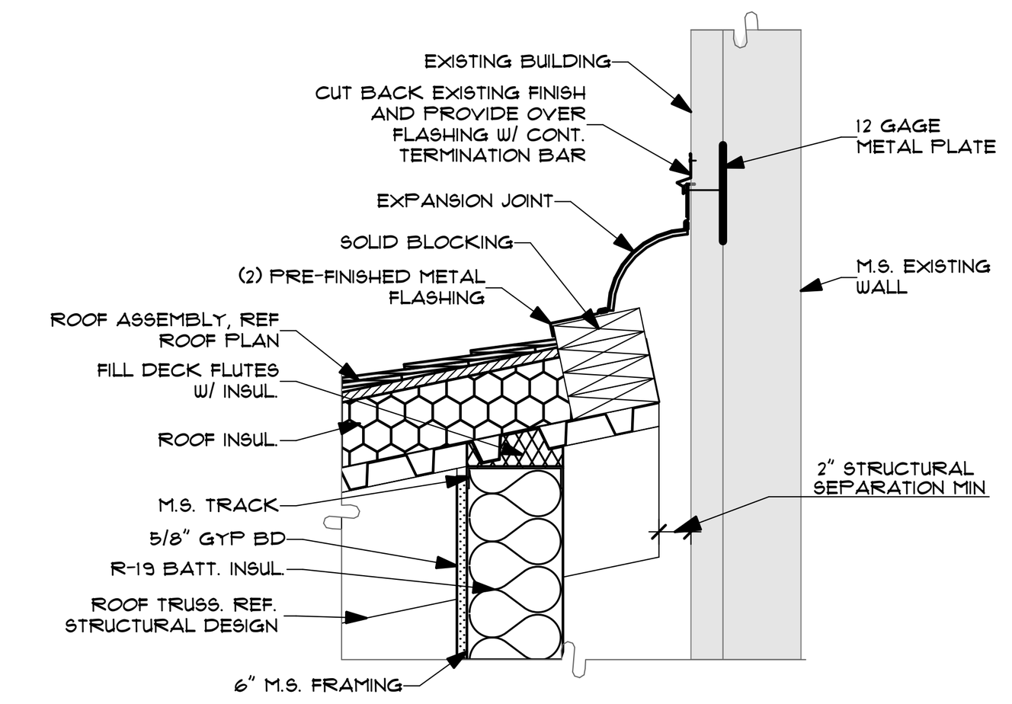

8 SOFFIT DETAIL
SCALE: 1" = 1'-0"

SECTION KEYED NOTES:

1	ROOF TRUSS, REF STRUCTURAL
2	RIDGE CAP
3	ROOF ASSEMBLY, REF ROOF PLAN
4	CEILING, REF RCP
5	LIGHT FIXTURE, REF ELECTRICAL
6	MECH. DUCT/EQUIPMENT, REF MECHANICAL
7	DOOR, REF. DOOR SCHEDULE
8	WINDOW, REF. WINDOW SCHEDULE
9	INTERIOR PARTITION WALL, REF PARTITION PLAN
10	CASEWORK/APPLIANCE/FIXTURE, REF LARGE PLAN/INTERIOR ELEVATIONS
11	WALL PROTECTION, SEE FINISH SCHEDULE
12	CONCRETE SLAB ON GRADE, REF STRUCTURAL
13	FOOTING AND FOUNDATION, REF STRUCTURAL

BUILDING SECTION GENERAL NOTES

1. **REFERENCE.** REFERENCE PILOTTOWN STRUCTURAL DESIGN FOR ALL STRUCTURAL MEMBER SIZING AND CONNECTION INFORMATION, CONCRETE SLAB AND POURED CONCRETE FOUNDATION DESIGNS.
2. **GEOTECHNICAL.** REFERENCE GEOTECHNICAL REPORT FOR ALL SUBGRADE SECTION DETAILS AND REQUIRED TESTING.
3. **MOISTURE BARRIER.** PROVIDE "STO GOLD COAT" FLUID APPLIED AIR BARRIER ON ENTIRE EXTERIOR WALL SURFACE. FOLLOW SPECIFICATION SECTION AND MANUFACTURER'S INSTRUCTIONS. ALL OPENINGS TO HAVE "STOGUARD REDICORNER" OPENING PROTECTION. ANY ALTERNATES TO THIS SYSTEM TO BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
4. **OUTBOARD RIGID INSULATION.** PROVIDE 1" (MIN R 6.0) POLYISO RIGID INSULATION DIRECTLY OVER THE FLUID APPLIED MOISTURE BARRIER.
5. **BASE OF WALL FLASHING.** PROVIDE CONTINUOUS 18 GA "L" GALVANIZED "L" FLASHING WITH HEMMED DRIP EDGE AT ALL BASE OF WALL CONDITIONS. VERTICAL LEG TO EXTEND MINIMUM 6" UP WALL. OVERLAP BASE OF WALL FLASHING WITH "STOGUARD" TRANSITIONS TO MAINTAIN STO "EMERALD COAT" SYSTEM. PROVIDE END DAMS AT INSIDE WALL CORNERS. ANY ALTERNATES TO THIS SYSTEM TO BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
6. **DRAINAGE CAVITY.** MAINTAIN 2" AIR GAP/DRAINAGE CAVITY THROUGH CONSTRUCTION. ALL MOISTURE BARRIER TO BE FREE OF PUNCTURES AND MAINTAIN MIN. 4" OVERLAP AT ALL JOINTS. PROVIDE FLEXIBLE SELF ADHERED FLASHING AT ALL OPENINGS TO COMPLETELY SEAL OPENINGS AND MOISTURE BARRIER. ALL MORTAR AND CONSTRUCTION DEBRIS TO BE CLEANED TO MAINTAIN DRAINAGE CAVITY THROUGH TO WEEP VENTS.
7. **EXTERIOR SHEATHING.** ALL EXTERIOR SHEATHING TO BE 5/8" TYPE "X" FIBERGLASS MAT GYPSUM SHEATHING, G.P. "DENSGLASS" OR EQUAL.
1. **BRICK TIES.** MASONRY TIES TO BE ADJUSTABLE BARREL ANCHOR TYPE. PROVIDE WASHER AT BARREL HEAD PENETRATION OF RIGID INSULATION TO MAINTAIN MOISTURE PROTECTION. MASONRY TIE INSTALLATION TO BE IN ACCORDANCE WITH 2022 TMS 402.
   - A. BRICK TIES TO BE INSTALLED IN A BASIC 24"X16" PATTERN.
   - B. BRICK TIES TO BE INSTALLED WITHIN 16" OF SUPPORTED EDGES, OPENINGS AND JOINTS AND 12" OF UNSUPPORTED EDGES, OPENINGS AND JOINTS.
   - C. INSTALL TIES WITHIN 12" OF THE TOP OF ALL WALLS.
8. **BRICK - CONTROL JOINTS.** PROVIDE VERTICAL CONTROL JOINTS AT MAXIMUM 25' O.C. LOCATIONS LISTED ON ELEVATIONS. CONTROL JOINTS TO EXTEND TO T.O. BRICKWORK, THROUGH PARAPETS (WHERE APPLICABLE). PROVIDE HORIZONTAL CONTROL JOINTS AT ALL LINTELS/SHELF ANGLES. PROVIDE MIN 1/4" SPACING WITH COMPRESSABLE FILL MATERIAL INSTALLED DIRECTLY BELOW SHELF ANGLE. ALL CONTROL JOINTS TO BE CONSTRUCTED WITH PREMOLDED FOAM THROUGH ENTIRE WYTHE. PROVIDE BACKER ROD AND SEAL USING ASTM C 920 CLASS 50 SEALANT. NO BRICK TIES OR ANCHORAGE TO BE INSTALLED IN VERTICAL CONTROL JOINTS.
9. **BRICK - WEEPS.** PROVIDED VENTED WEEP SCREENS AT 24" O.C. MAXIMUM.
10. **OUTSIDE GRADE.** PROVIDE MIN. 4" VERTICAL SEPARATION FROM OUTSIDE FINISHED GRADE (INCLUDING LANDSCAPING & GROUND COVER) TO FINISHED FLOOR OF BUILDING. SLOPE ALL FINISHED EXTERIOR GRADE/CONCRETE AWAY FROM BUILDING AT 1/4" PER FOOT MINIMUM.
11. **STRUCTURAL SEPARATION (EXPANSION) COVER.** SEE PLANS FOR SPECIFIC "WABO" EXPANSION JOINT COVERS. CONTRACTOR TO VERIFY "WABO" JOINT AND PROVIDE CUTSHEETS/SHOP DRAWINGS FOR ARCHITECT'S REVIEW AND APPROVAL. CONTRACTOR RESPONSIBLE FOR FIELD DIMENSIONS AND COORDINATION BETWEEN TRADES.
12. **INTERIOR METAL STUD FRAMING.** PROVIDE 2-1/2" SLOTTED DEFLECTION TOP TRACK AT ALL WALL FRAMING CONNECTIONS TO STEEL BUILDING, CLARK DIETRICH "MAX TRACK" OR EQUAL. ALL FASTENERS TO BE SNUG TIGHT. EXTEND GYPSUM DRYWALL TO WITHIN 3/4" OF STEEL DECK AND PROVIDE ACOUSTICAL CAULK CLOSURE TO DECK. SEE A501 FOR ADDITIONAL INFORMATION.
13. **EXTERIOR METAL STUD FRAMING.** SEE STRUCTURAL DESIGN FOR ALL CFMF DETAILS. **FOUNDATION INSULATION.** PROVIDE MIN R.6 POLYISO RIGID INSULATION ON INSIDE FOUNDATION WALL. MIN 24" VERTICAL INSTALLATION.

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REV	DATE	DESCRIPTION
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PROJECT:
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21777 SUSSEX PINES RD
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SEAL:

SHEET TITLE: SECTIONS
PROJECT#: AS170
ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER: A301

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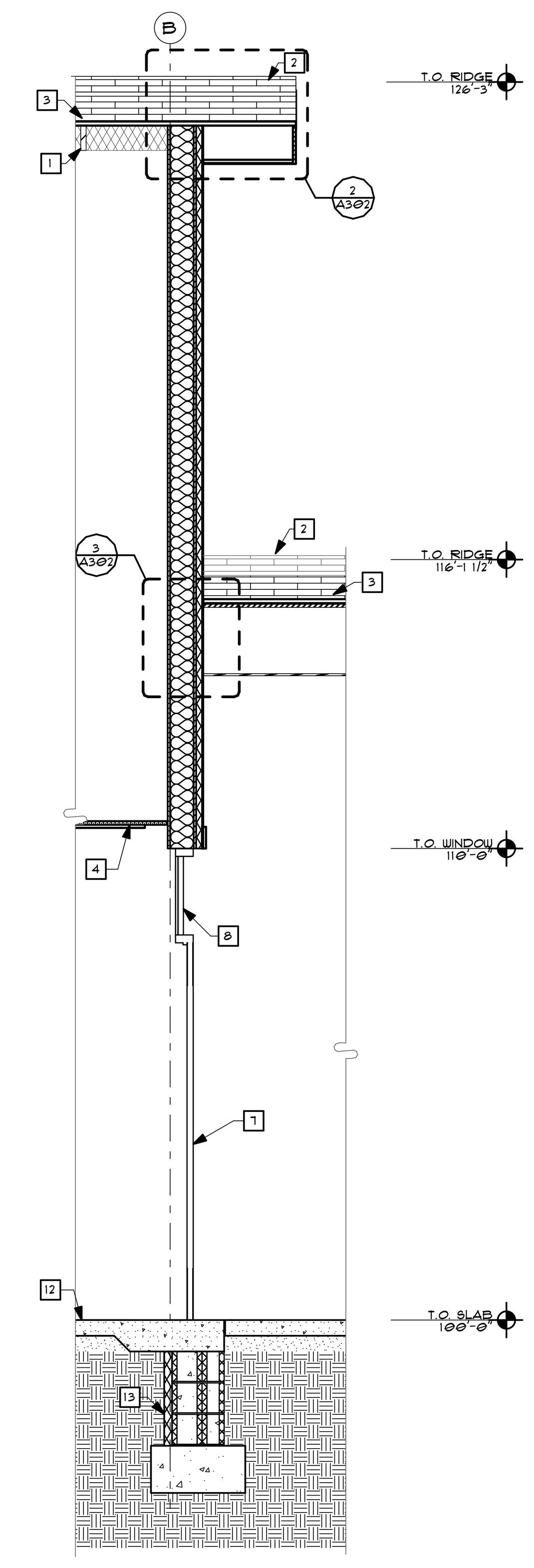
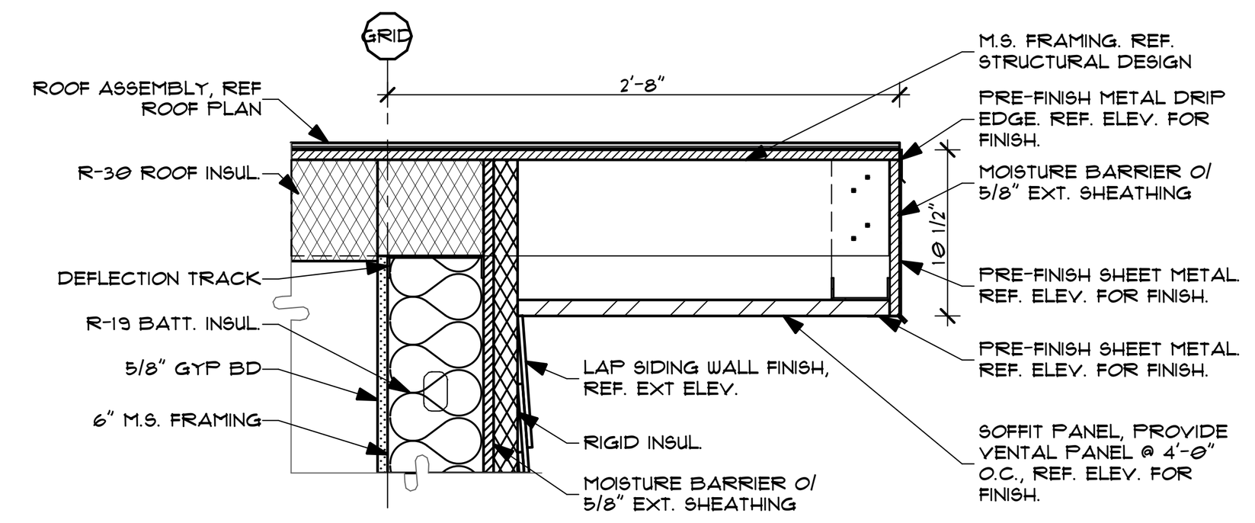


1 WALL SECTION
SCALE: 3/8" = 1'-0"



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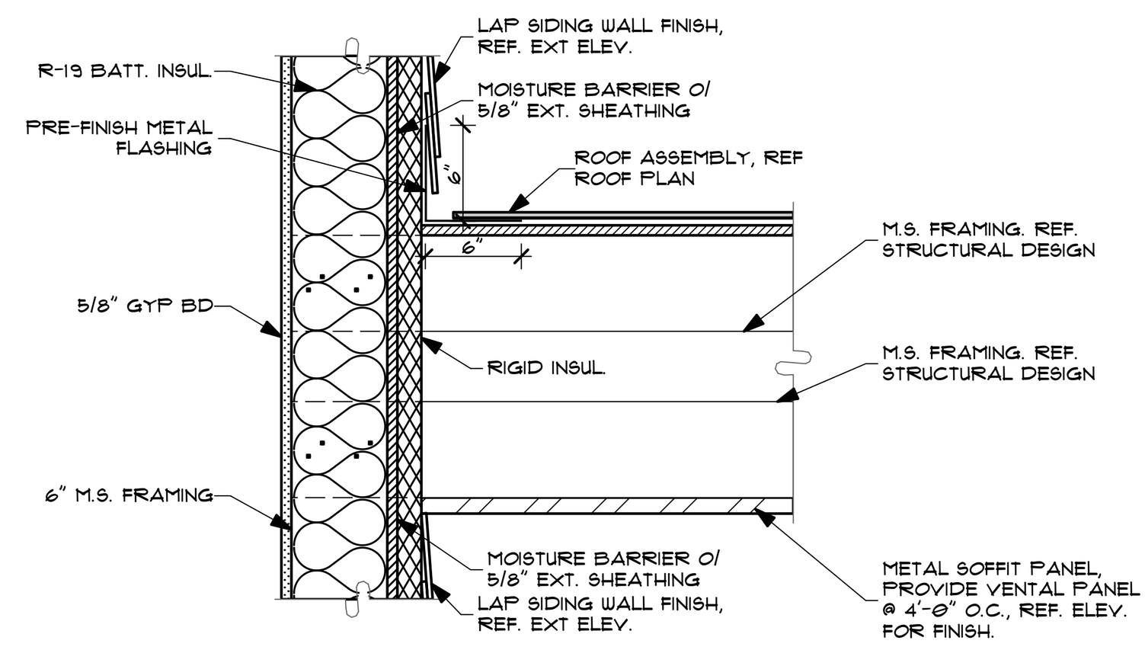

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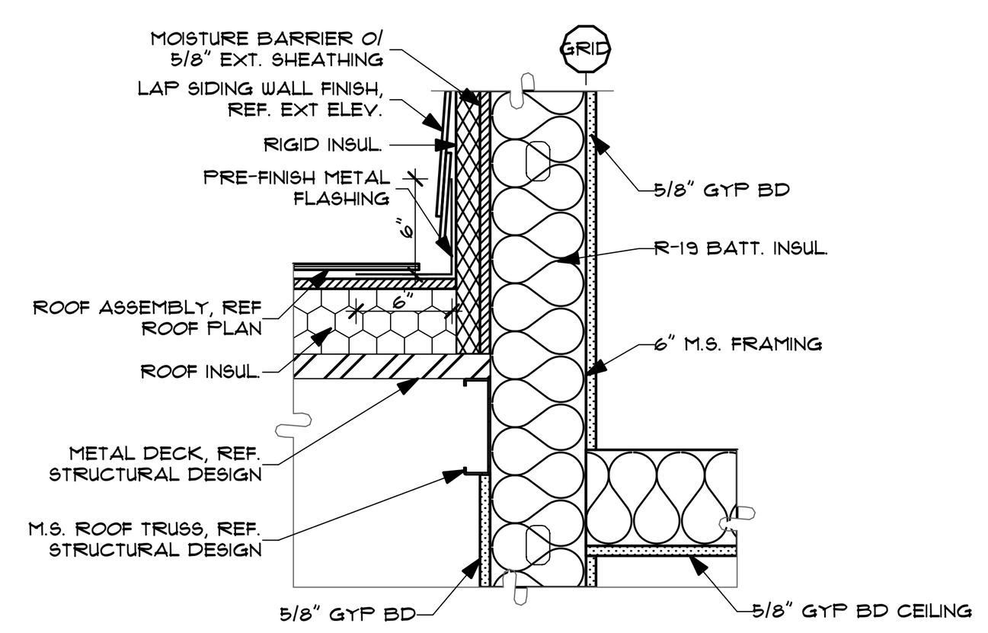

4 WALL DETAIL
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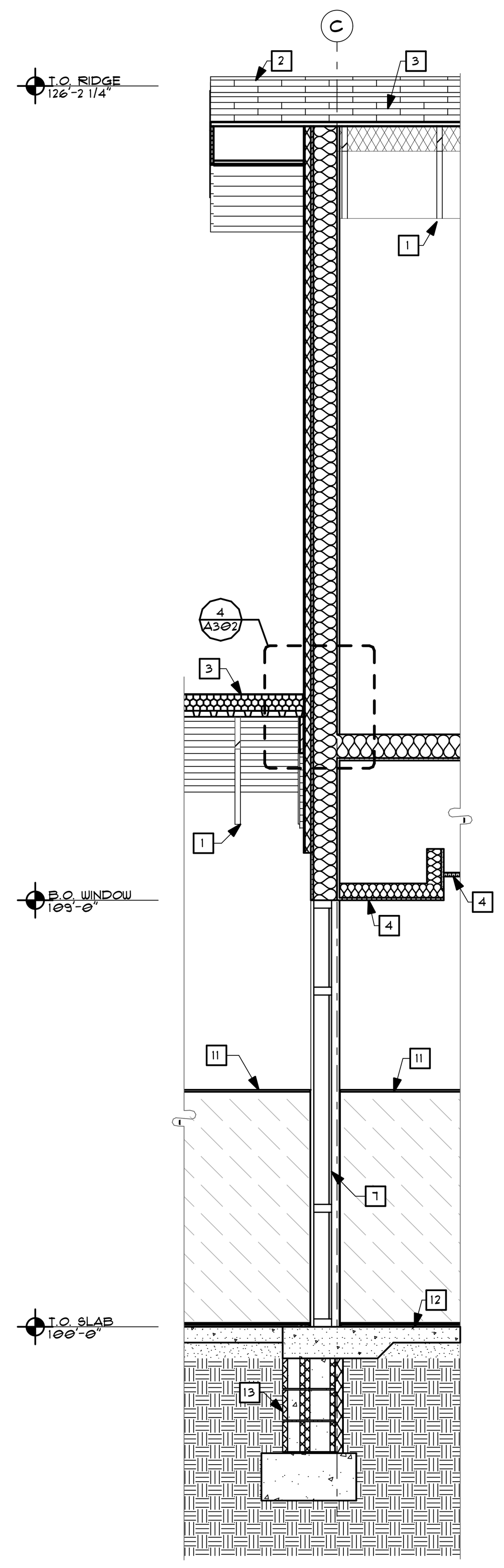

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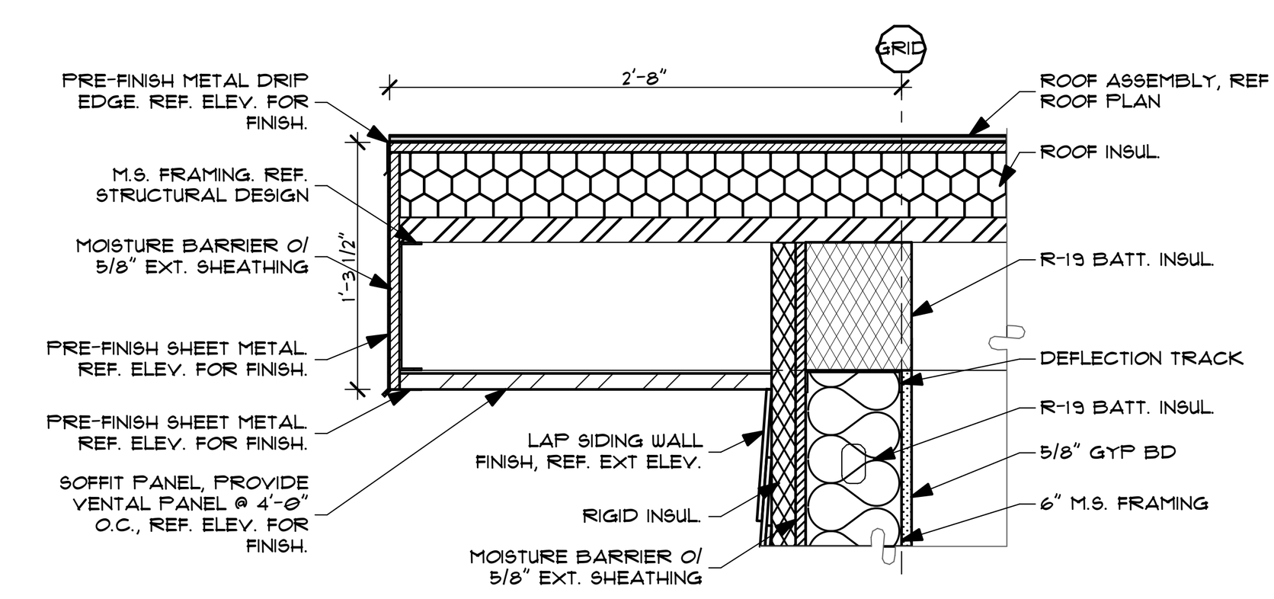

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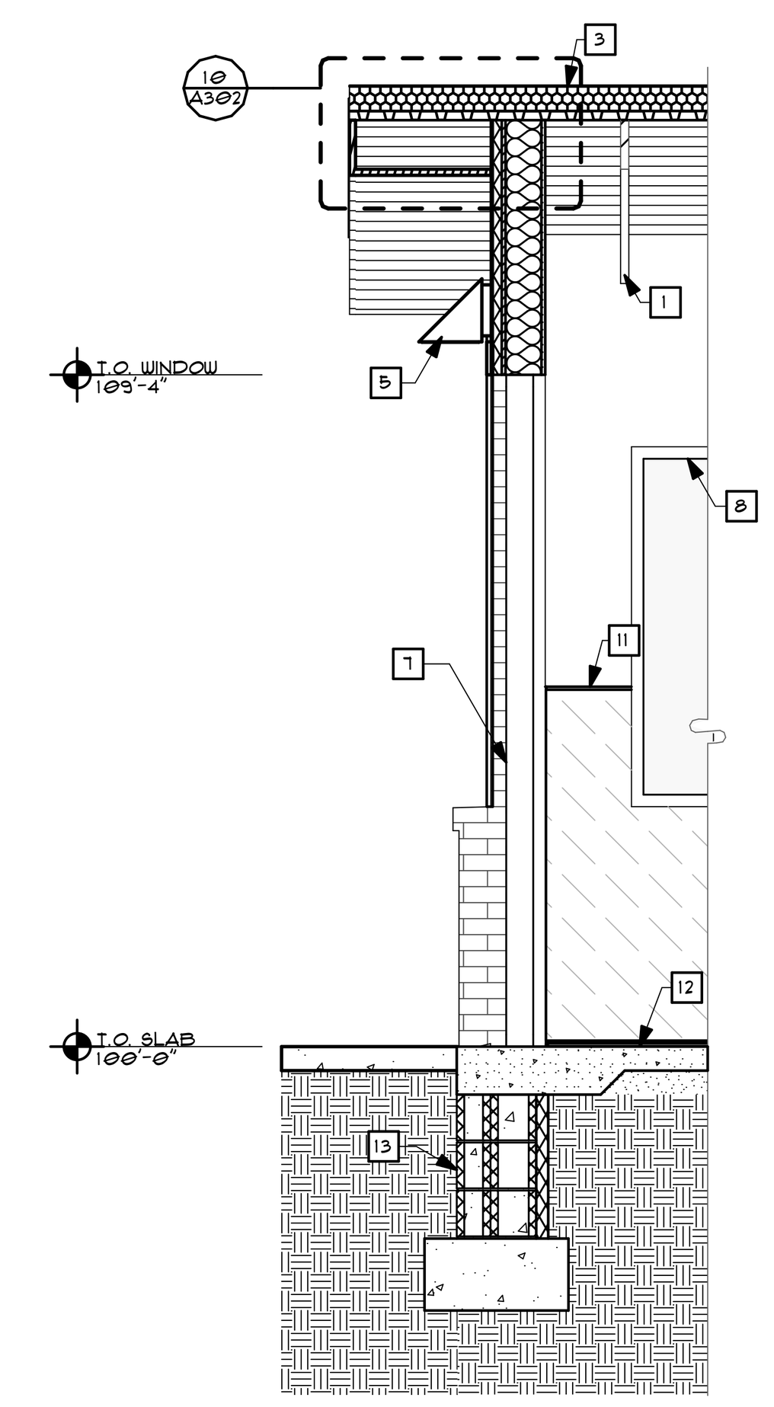
SCALE: 1" = 1'-0"



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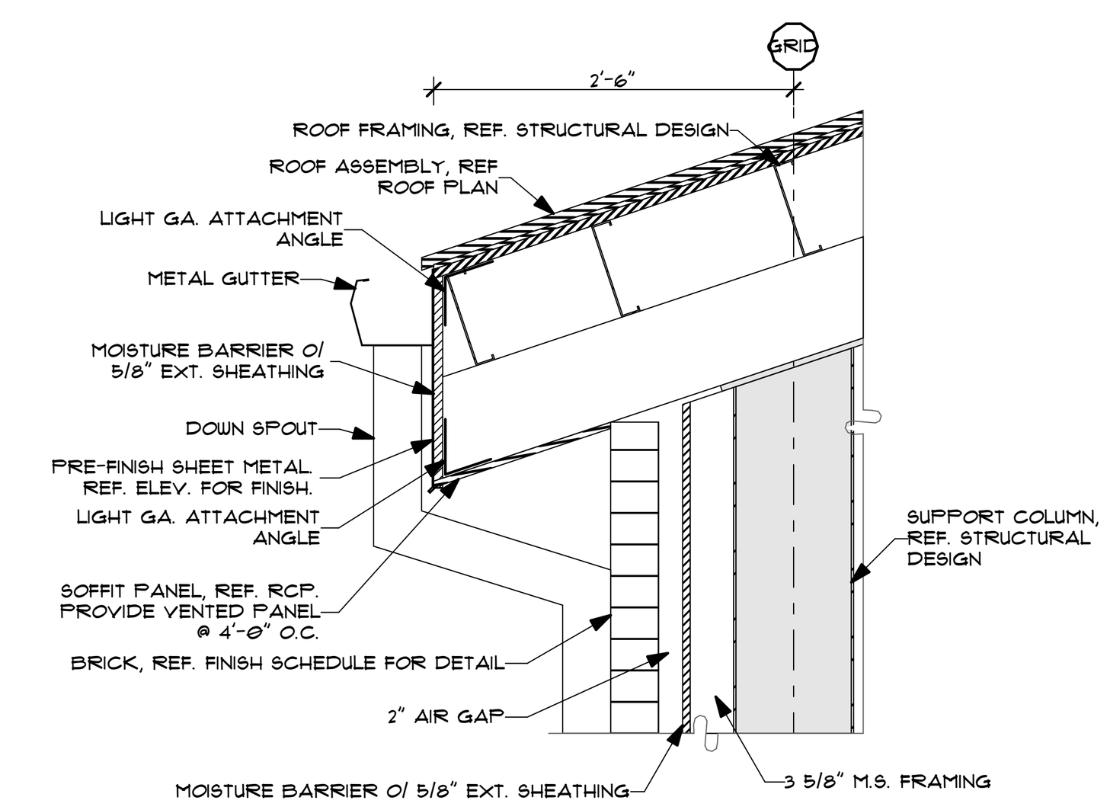
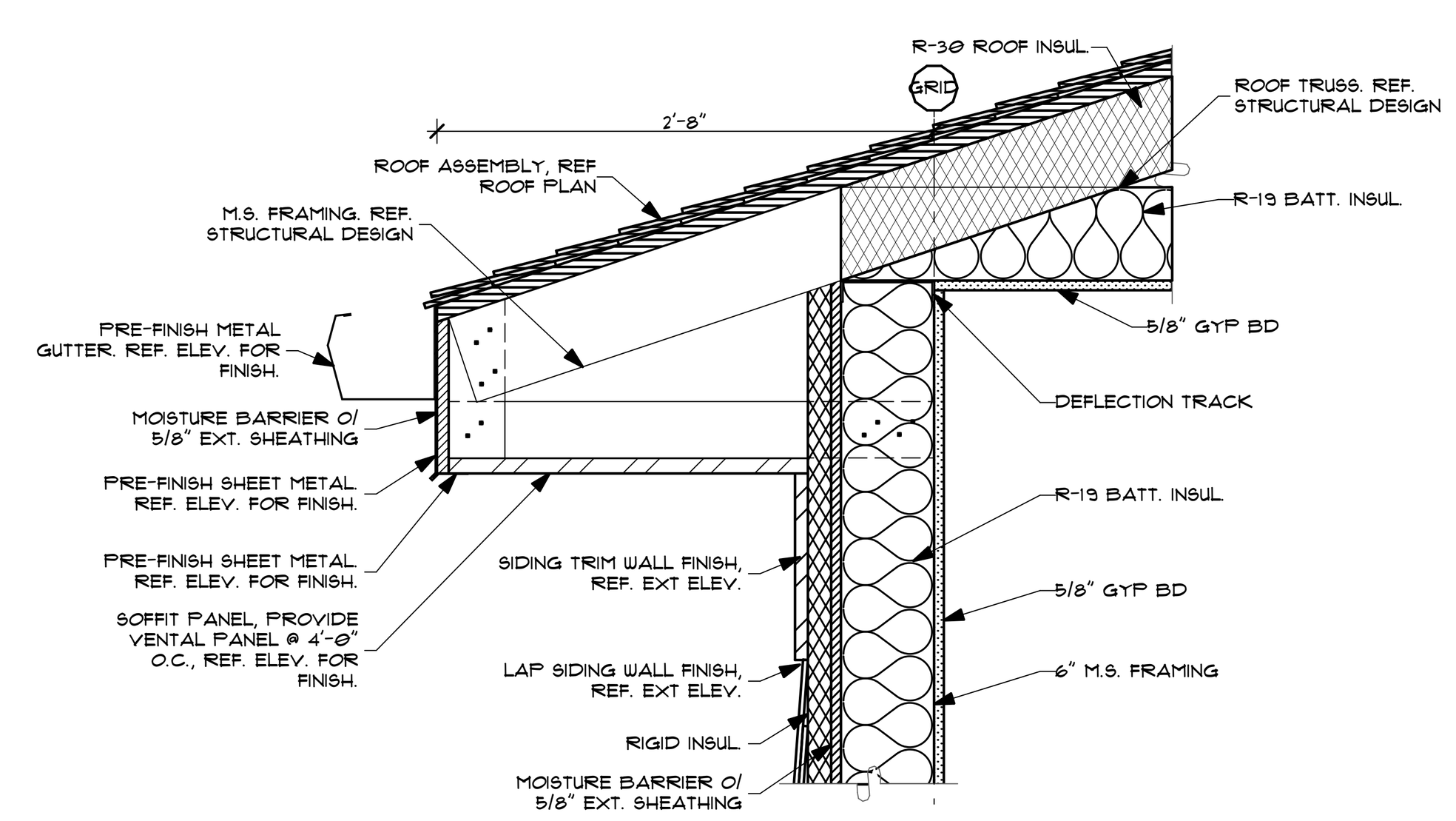
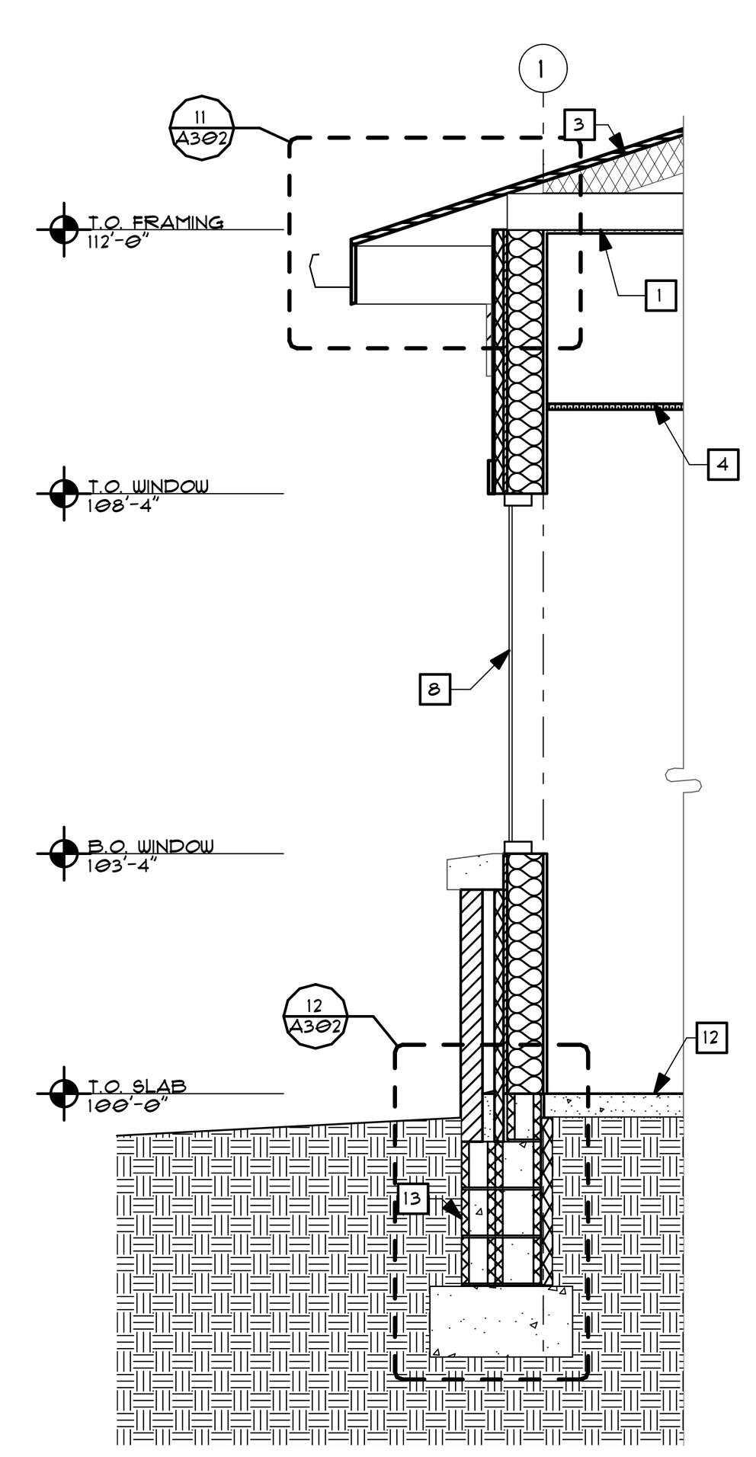
SCALE: 3/8" = 1'-0"



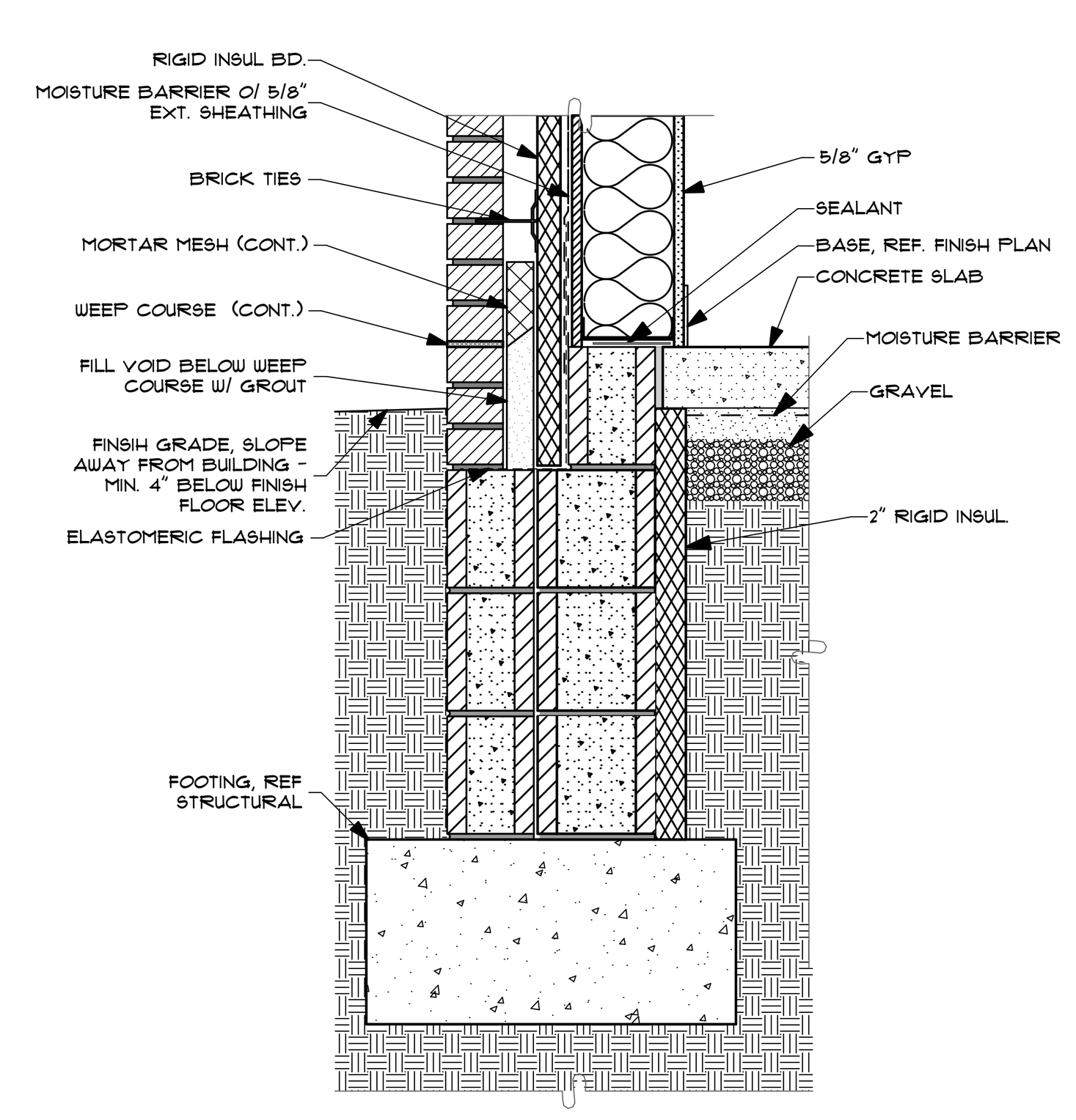
14 CANOPY SOFFIT DETAIL
SCALE: 3/4" = 1'-0"



11 SOFFIT DETAIL
SCALE: 1" = 1'-0"

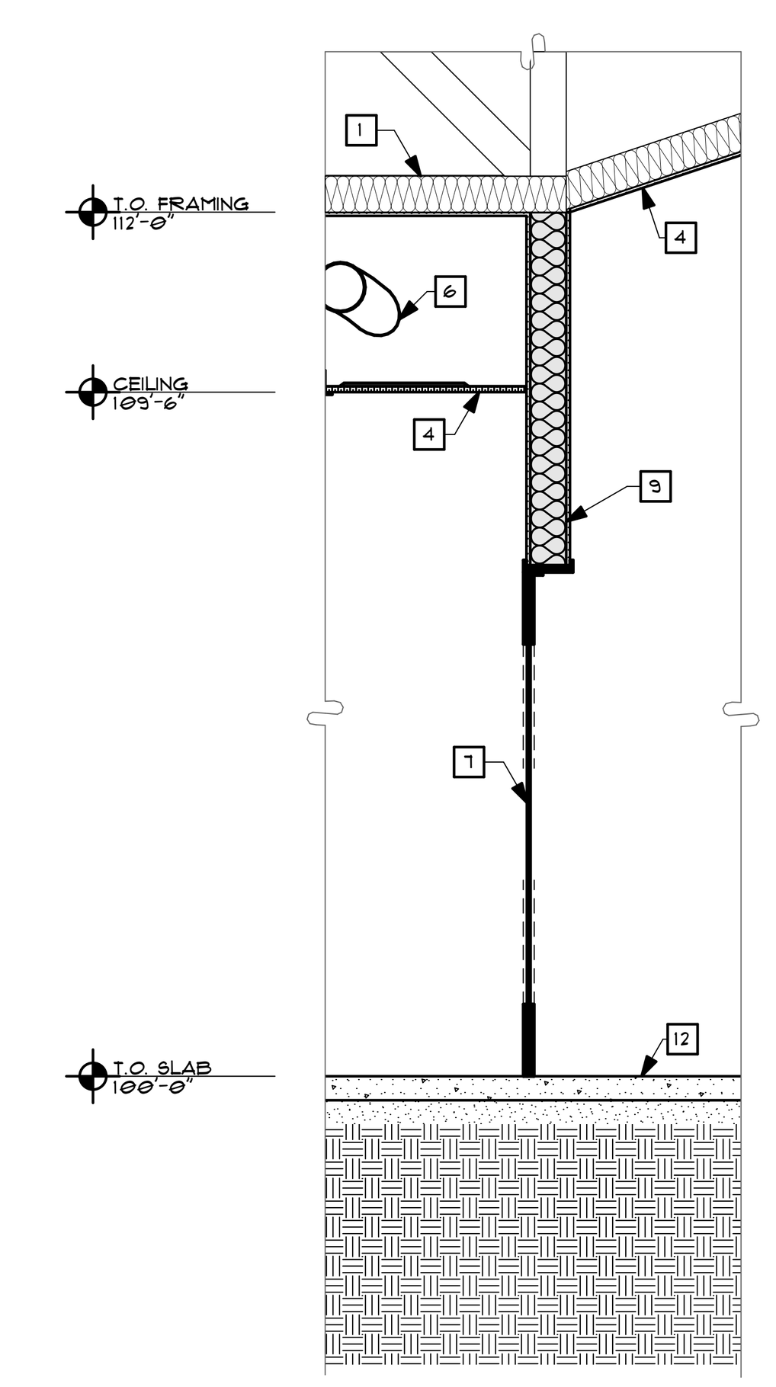


7 WALL SECTION
SCALE: 3/8" = 1'-0"



EXPANDED FOR CLARITY

12 WALL BASE DETAIL
SCALE: 1" = 1'-0"



8 WALL SECTION
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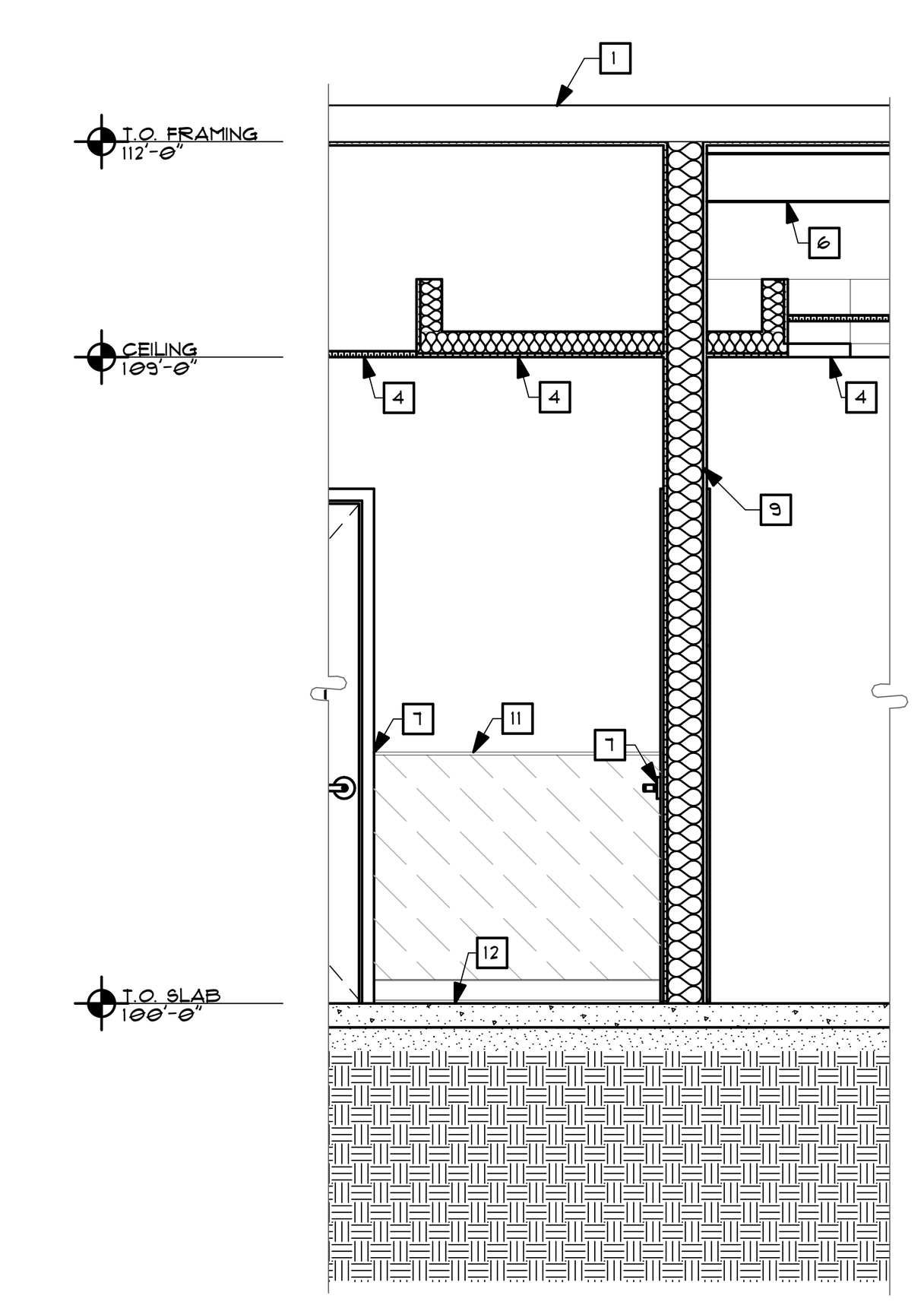
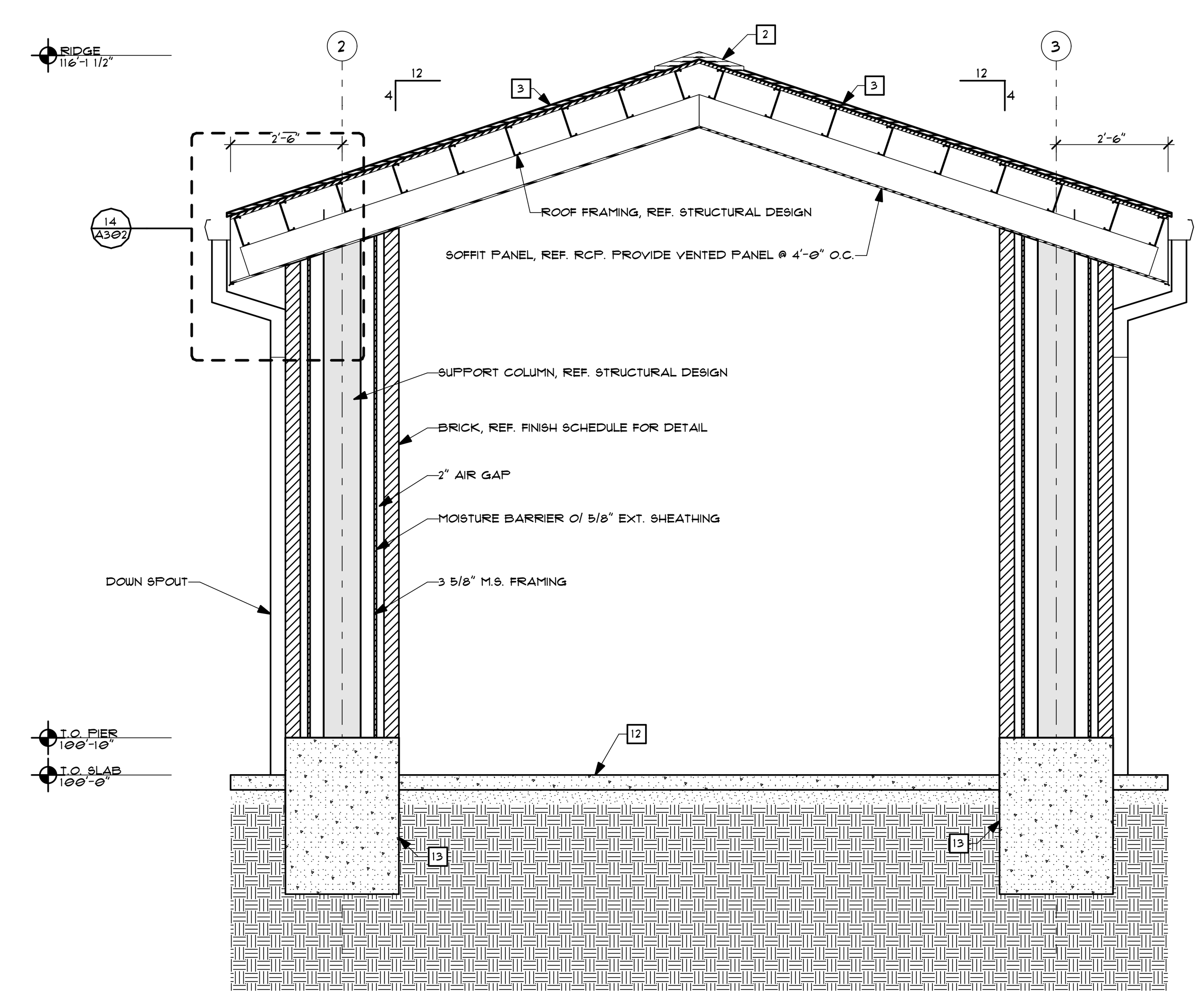


9 WALL SECTION
SCALE: 3/8" = 1'-0"



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SCALE: 3/8" = 1'-0"

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PROJECT:

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21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

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SEAL:

SHEET TITLE:

SECTIONS

PROJECT#: AS170

ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:

A302

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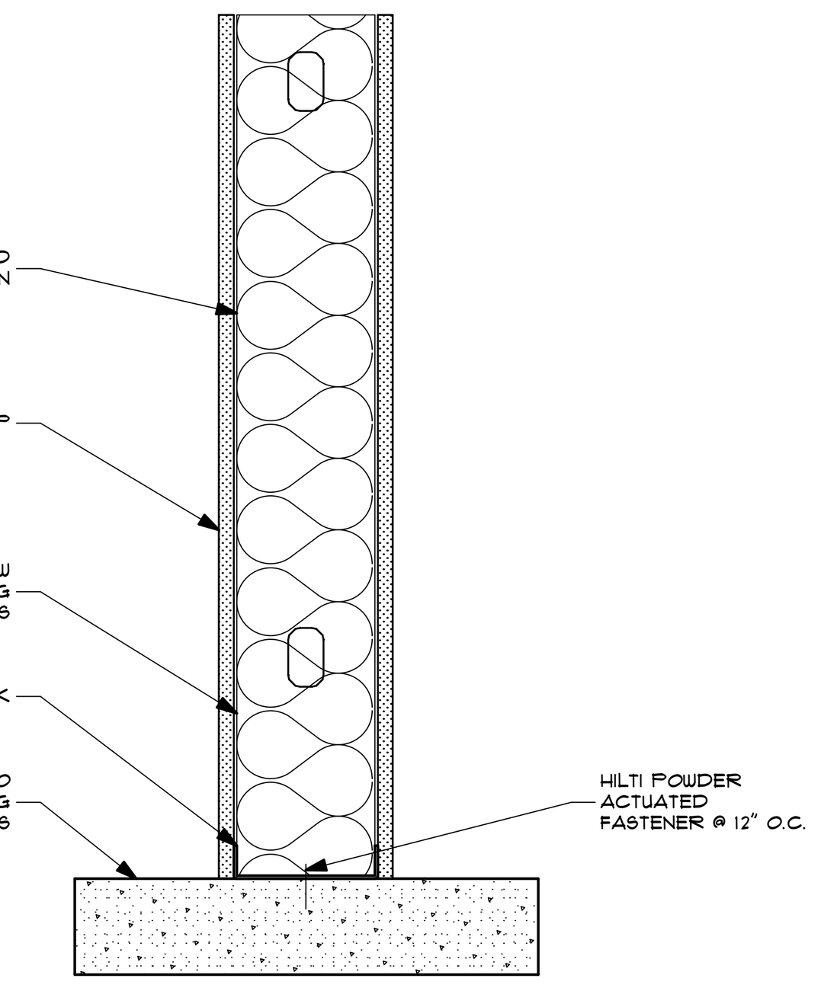


			MAX UNBRACED WALL HEIGHT	
STUD WIDTH		6"		
FIRE RATING		NON-RATED		
SOUND RATING		STC 49 MAX	HEIGHT	FY
2AA*	1	6" X 18 MILS (25 GA.) STEEL STUDS AT 16" O.C.	19'-9"	33 KSI
	2	6" X 33 MILS (20S GA.) STEEL STUDS AT 16" O.C.	24'-6"	33 KSI
	3	6" X 43 MILS (18 GA.) STEEL STUDS AT 16" O.C.	28'-3"	33 KSI
	4	6" X 54 MILS (16 GA.) STEEL STUDS AT 16" O.C.	30'-0"	50 KSI
	5	6" X 18 MILS (25 GA.) STEEL STUDS AT 12" O.C.	22'-1"	33 KSI
	6	6" X 33 MILS (20S GA.) STEEL STUDS AT 12" O.C.	26'-9"	33 KSI
	7	6" X 43 MILS (18 GA.) STEEL STUDS AT 12" O.C.	30'-7"	33 KSI
*STUD GAUGE AND SPACING REQUIRED	8	6" X 54 MILS (16 GA.) STEEL STUDS AT 12" O.C.	32'-6"	50 KSI
WALL DESCRIPTION: STANDARD NON-RATED INTERIOR WALL				
SCALE: 1-1/2"=1'-0"				

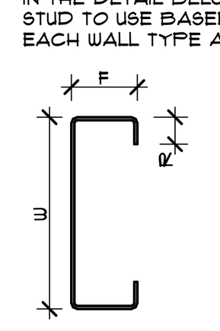
WALL TAG LEGEND

CORE MATERIAL — 2BA — CONSTRUCTION METHOD
FIRE RATING

CORE TYPES	
1	3 5/8" METAL STUD
2	6" METAL STUD
3	2"X4" WOOD STUD
4	8" METAL STUD
5	2"X6" WOOD STUD
6	6" METAL STUD
7	7 1/4" CONCRETE TILT WALL
8	8" CMU WALL
9	6" TEK-R WALL PANEL
12	(2) 6" METAL STUD WALL
FIRE RATING	
A	NON RATED
B	1 HOUR RATED
C	2 HOUR RATED
CONSTRUCTION METHOD	
A	DRYWALL ON BOTH SIDES
B	DRYWALL ON ONE SIDE, DRYWALL W/RACQUETBALL PANEL UP TO 8' W/TECTUM PANEL ABOVE
C	DRYWALL ON BOTH SIDES OF PLUMBING CHASE WALL
D	TWO LAYERS OF NON RATED DRYWALL
J	DRYWALL ON ONE SIDE ONLY
R	RESILIENT CHANNEL W/SINGLE LAYER DRYWALL
S	RESILIENT CHANNEL W/TWO LAYERS OF DRYWALL

WALL TYPE NOTES:

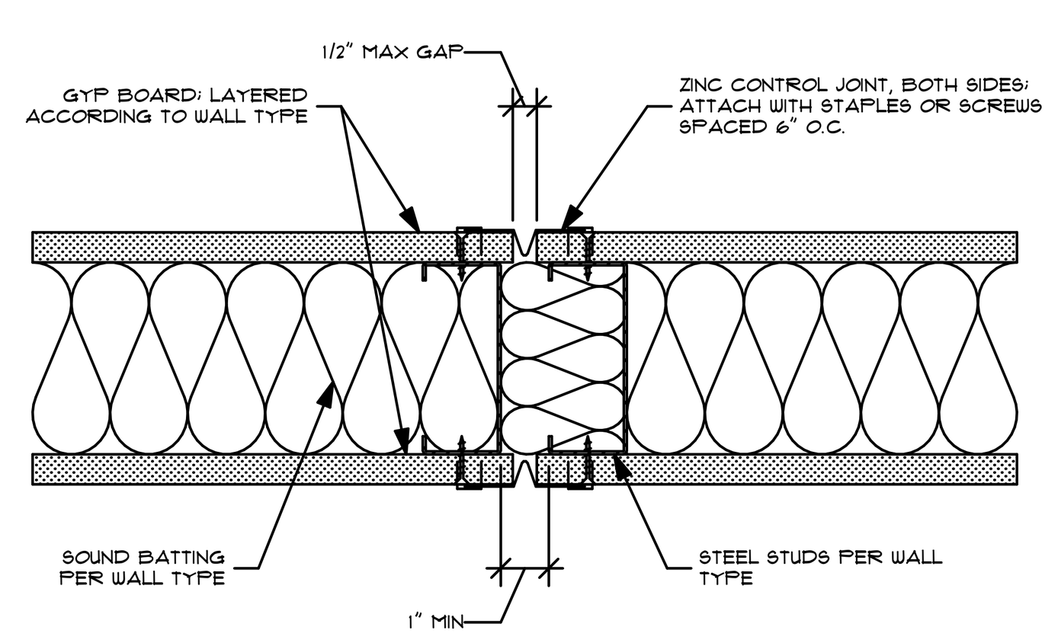
1. MAXIMUM UNBRACED HEIGHT LISTED FOR EACH STUD/GAUGE/ SPACING ARE BASED ON THE STUD FLANGE SIZE (F) SHOWN IN THE DETAIL BELOW. CONTRACTOR MAY CHOOSE WHICH STUD TO USE BASED ON THE MAXIMUM HEIGHT SHOWN FOR EACH WALL TYPE AND STUD AVAILABILITY/COST.



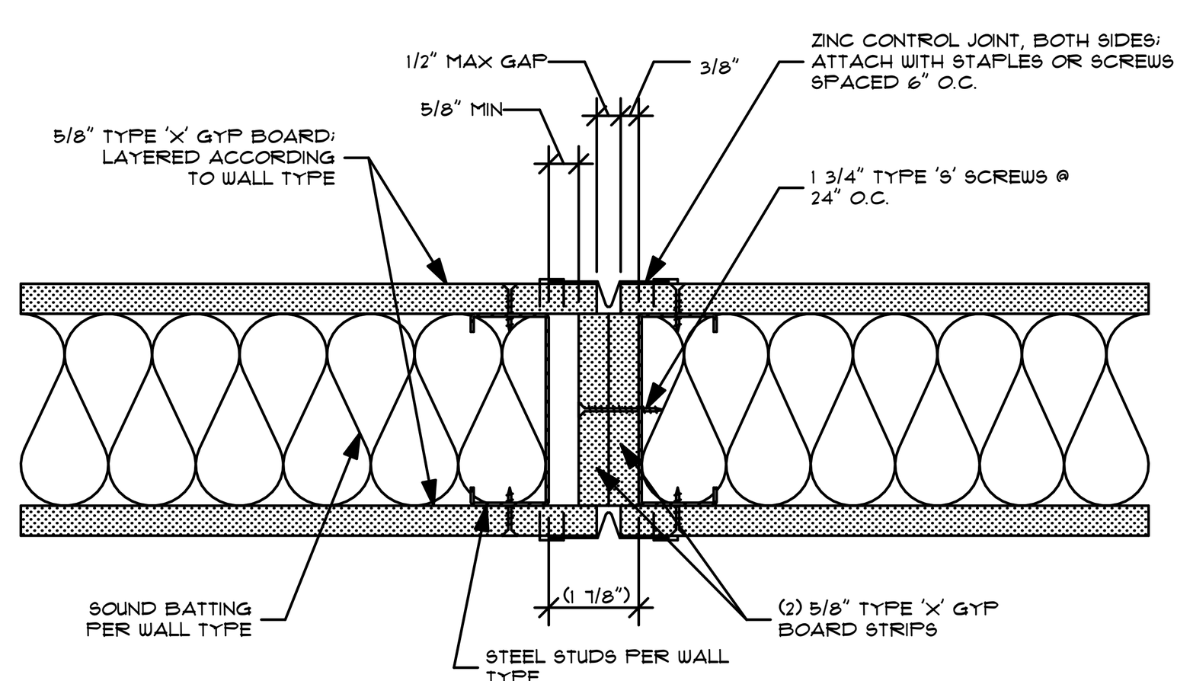
	STUD TYPE		
	'A'	'B'	'C'
DIM (F)	1 1/4"	1 3/8"	1 5/8"
DIM (R)	9/16"	9/16"	9/16"

WALL TYPE NOTES:

1. PROVIDE BLOCKING FOR ALL WALL MOUNTED FIXTURES SUCH AS: BEHIND ALL DOOR HARDWARE AT DOOR STOPS, WHITEBOARDS, SHELVING, ETC.
2. PROVIDE ABUSE-RESISTANT GYP BOARD THAT MEETS OR EXCEEDS ASTM C1278 FROM FLOOR TO 8'-0" IN ALL CORRIDORS, FOYERS, AND ON ALL WRAPPED STEEL COLUMNS.
3. PROVIDE WATER-RESISTANT GYP BOARD ON ALL "WET" WALLS.
4. PROVIDE CEMENTITIOUS GYP BOARD AT ALL SHOWERS AND NEAR EMERGENCY EYE WASH STATIONS.



NON-RATED CONTROL JOINT



1- OR 2-HOUR RATED CONTROL JOINT

CONTROL JOINT NOTES

1. CONTROL JOINTS ARE LOCATED SPECIFICALLY ON DRAWINGS AS NOTED.
2. WHERE NOT SPECIFICALLY SHOWN GYPSUM BOARD CONTROL JOINTS SHALL BE LOCATED:
   2A. SO THAT NO SINGLE SPAN IN ANY DIRECTION IN EITHER CEILING, SOFFIT OR WALL CONSTRUCTION SHALL EXCEED 30' MAX DISTANCE.
   2B. AT THE TOP CORNER OF EACH DOOR FRAME, WITHOUT EXCEPTION, EXTENDING FROM THE TOP OF THE FRAME TO THE CEILING LINE GYPSUM TERMINATION.
3. CONTROL JOINTS SHALL BE PLACED TO MEET THE SPECIFICATION REQUIREMENTS OF THE GYSPUM MANUFACTURER AND SHALL BE PLACED USING JOINT MATERIALS SPECIFICALLY DESIGNED FOR SIZE OF GYPSUM BOARD UTILIZED AT EACH WALL OR CEILING LOCATION.
4. UNDER NO CIRCUMSTANCES SHALL THE LACK OF DRAWING LOCATIONS RELIEVE THE GYPSUM BOARD INSTALLER FROM FOLLOWING THESE REQUIREMENTS.

1 CONTROL JOINTS

SCALE: N.T.S.

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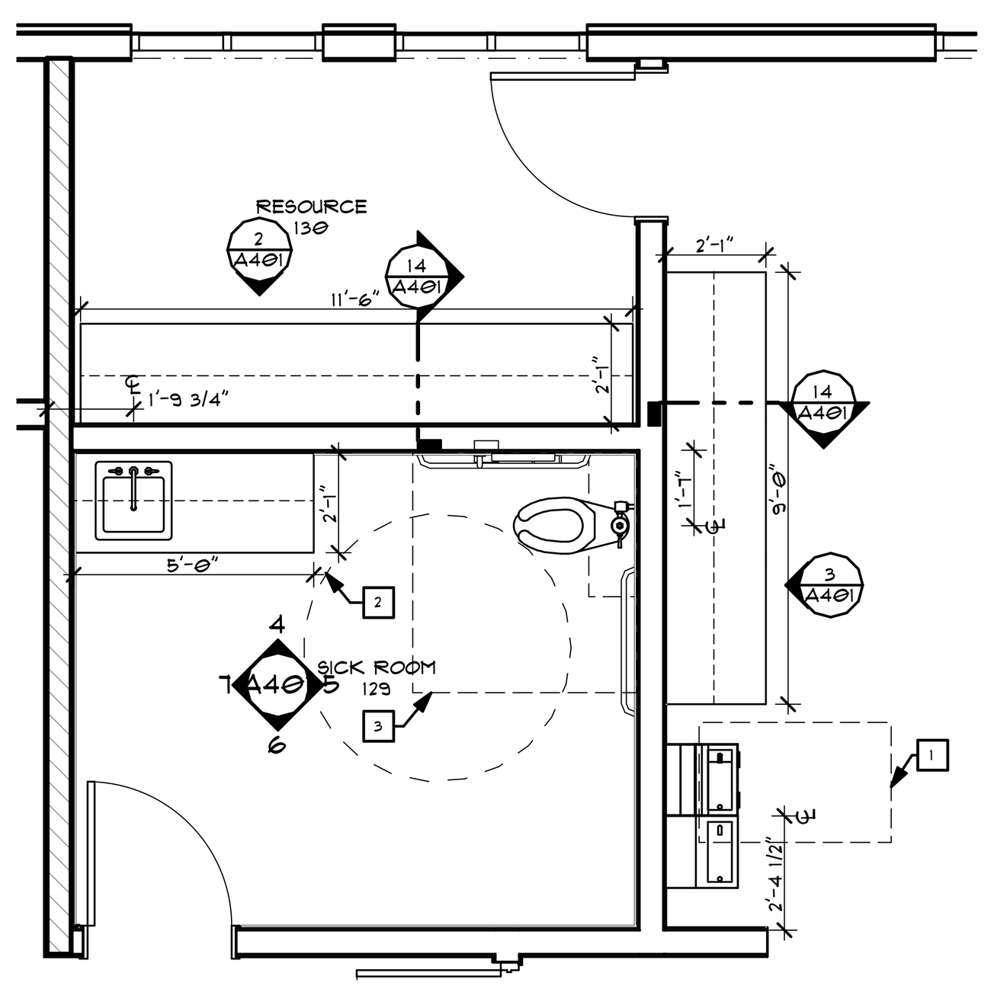
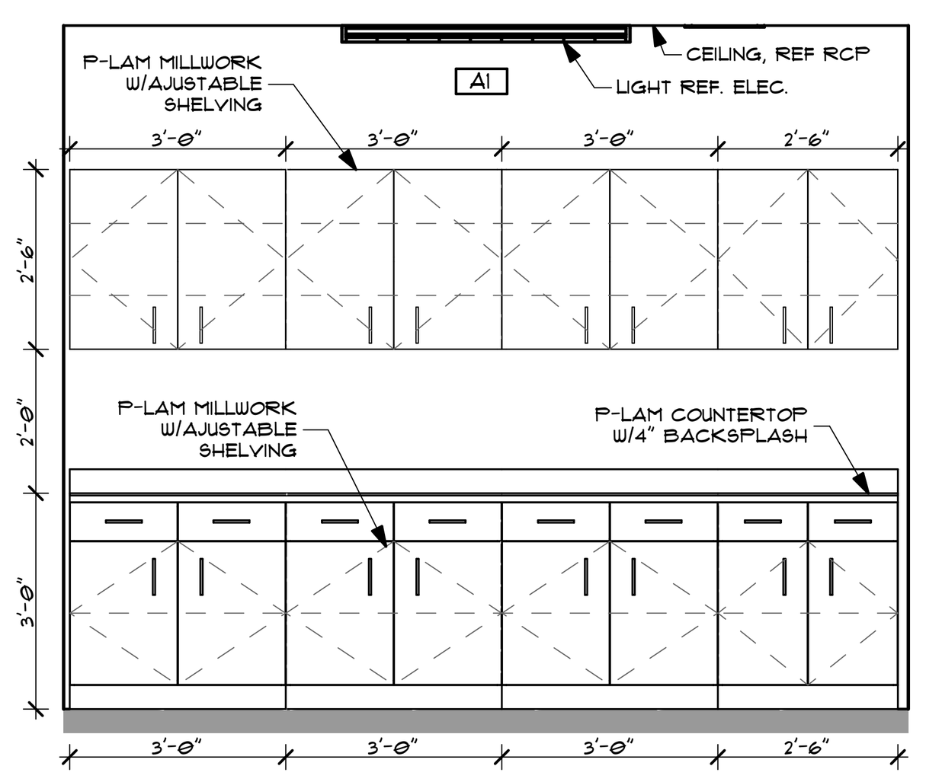
WALL TYPES
PROJECT#: AS170
ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:
A303

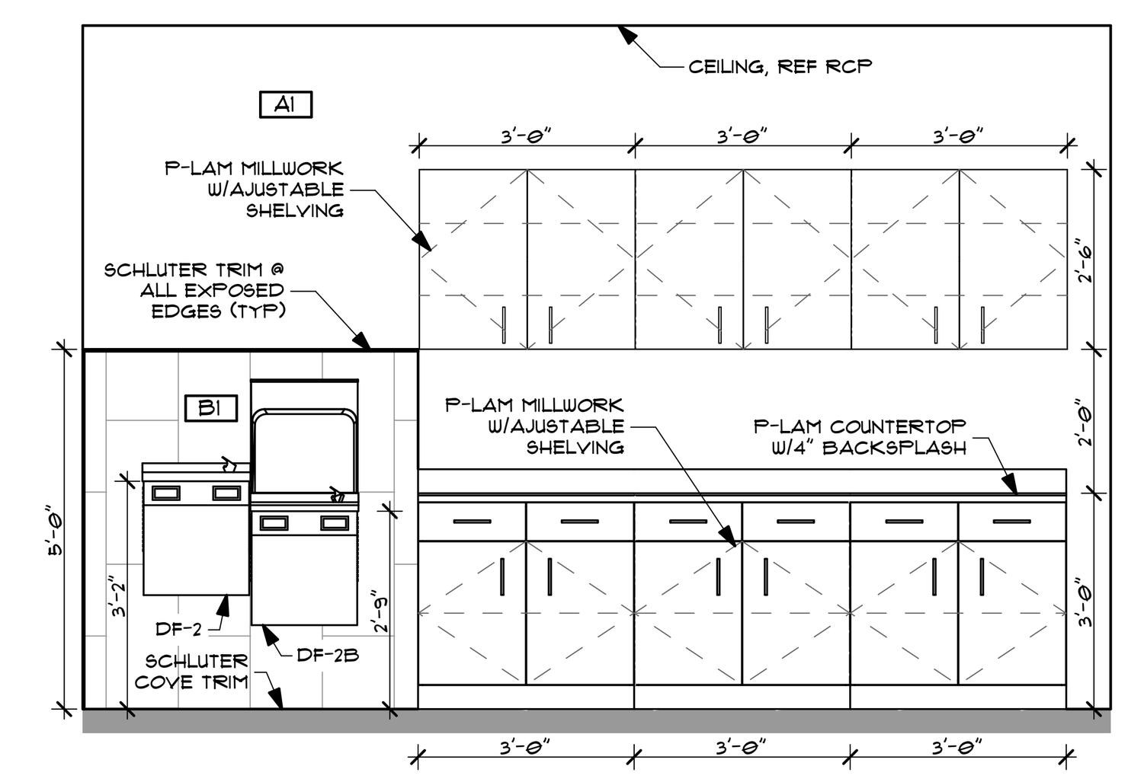
DO NOT SCALE DRAWING



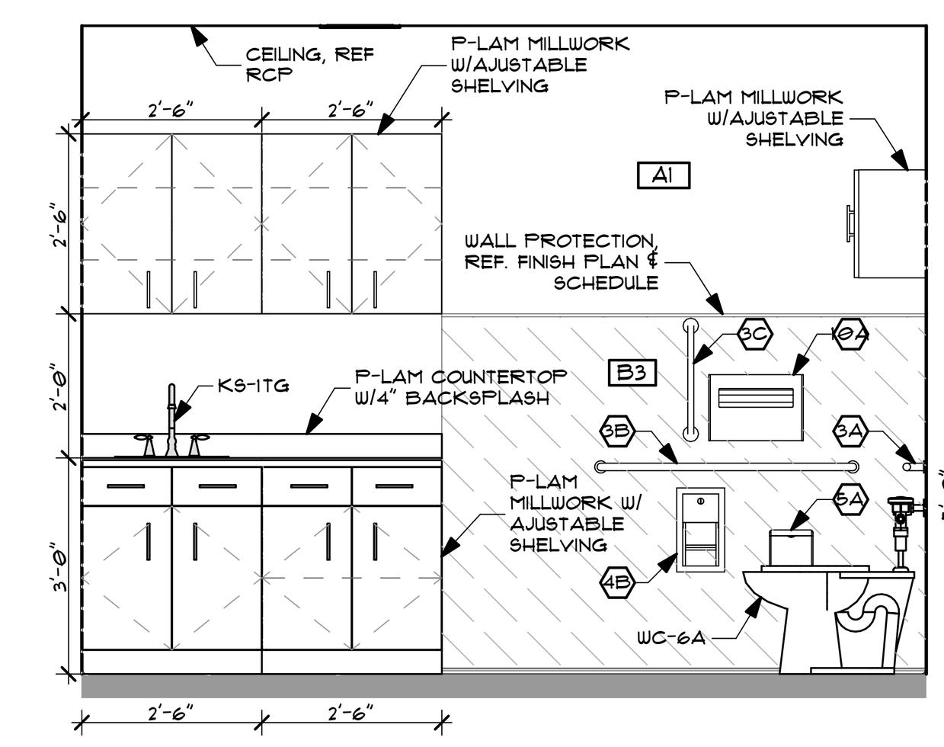
1 LARGE PLAN
SCALE: 1/4" = 1'-0"



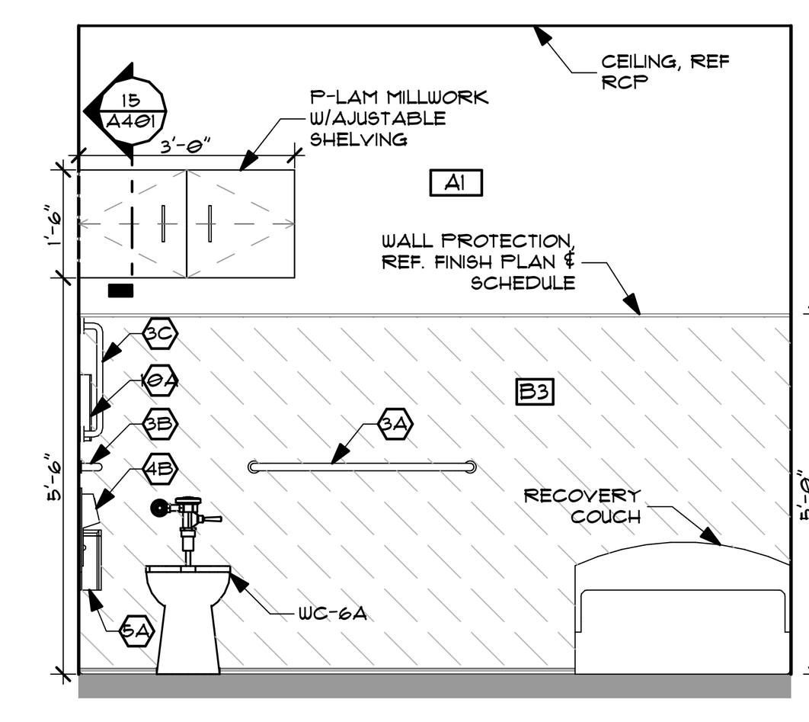
2 RESOURCE 130 S
SCALE: 3/8" = 1'-0"



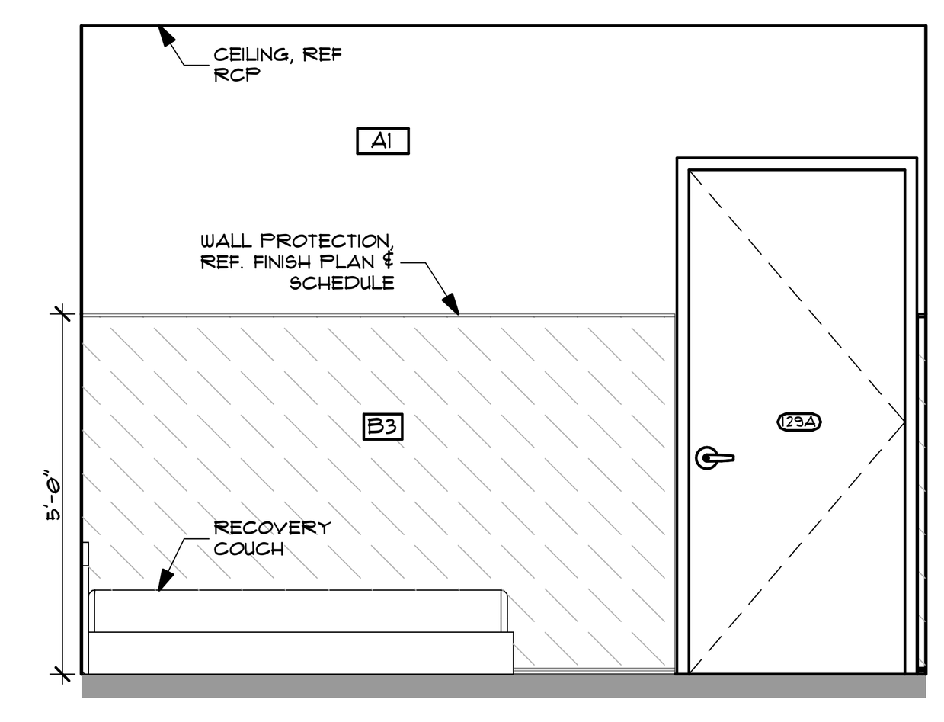
3 FACULTY 128 W
SCALE: 3/8" = 1'-0"



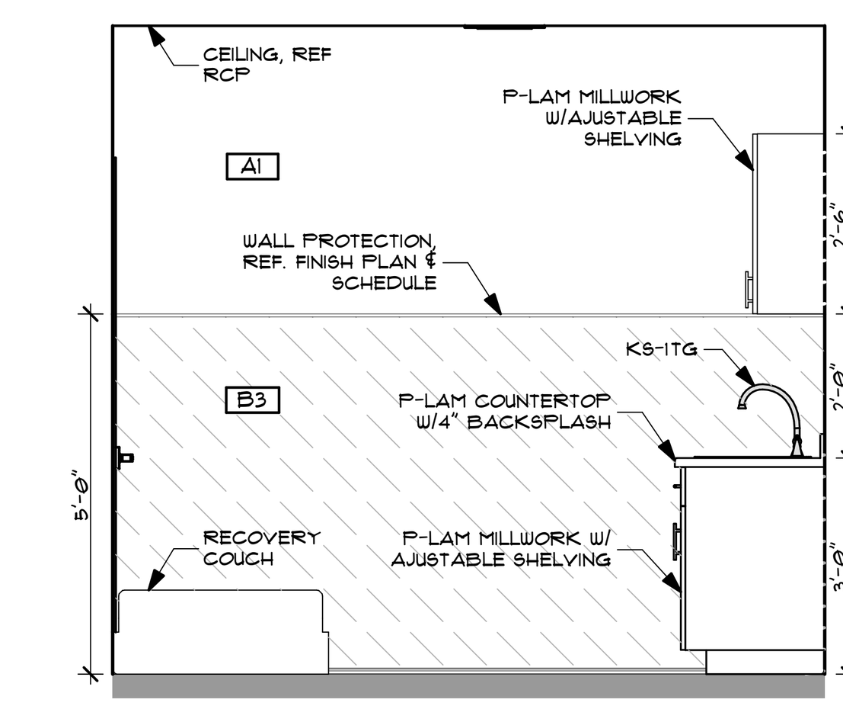
4 SICK ROOM 129 N
SCALE: 3/8" = 1'-0"



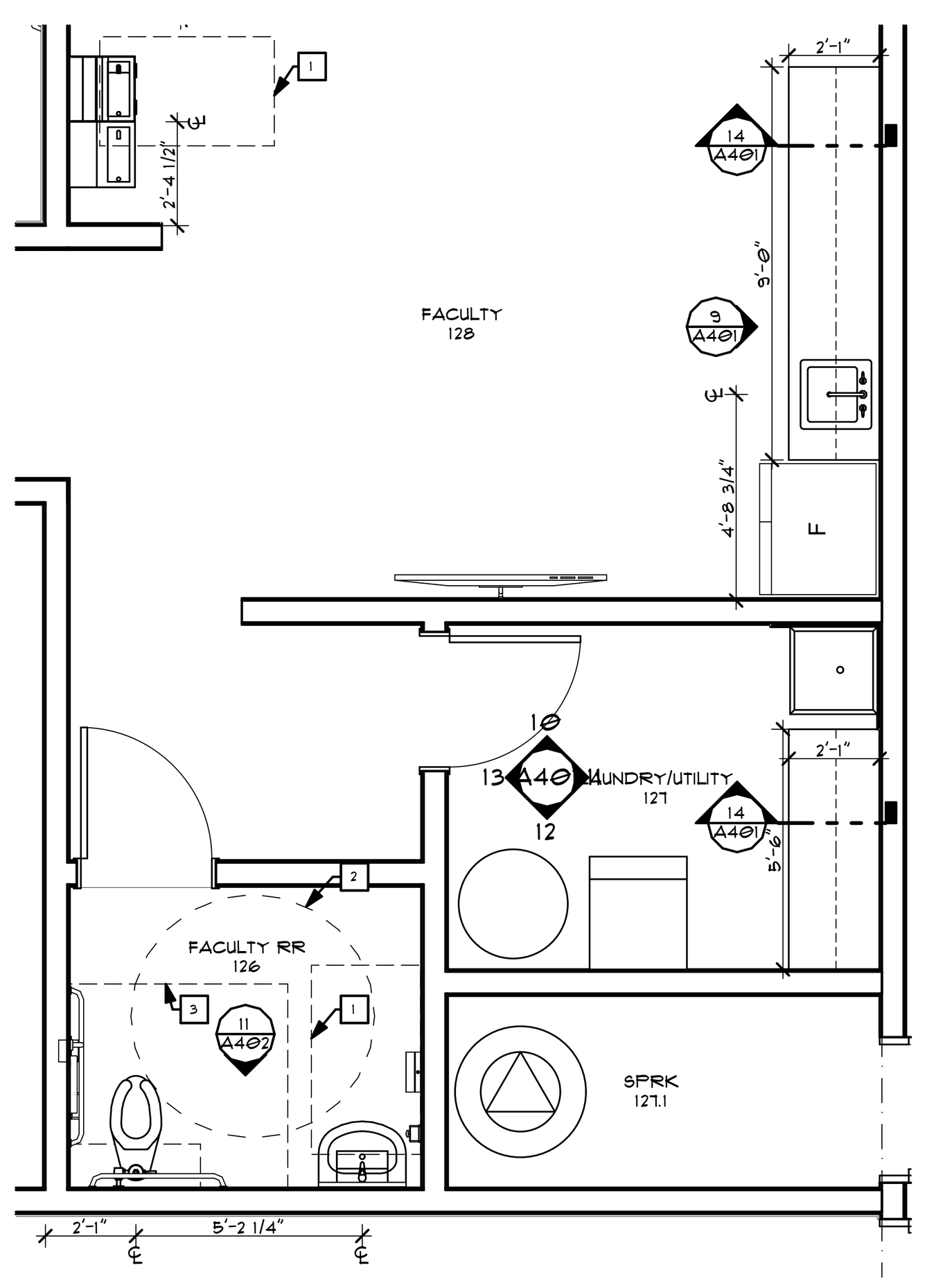
5 SICK ROOM 129 E
SCALE: 3/8" = 1'-0"



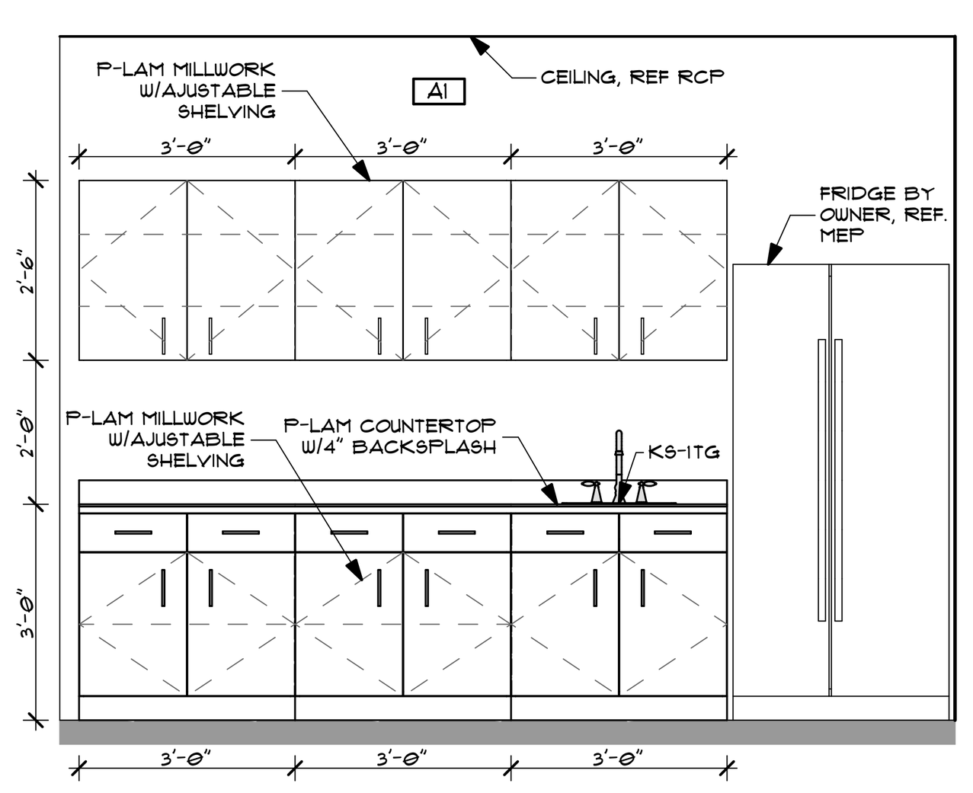
6 SICK ROOM 129 S
SCALE: 3/8" = 1'-0"



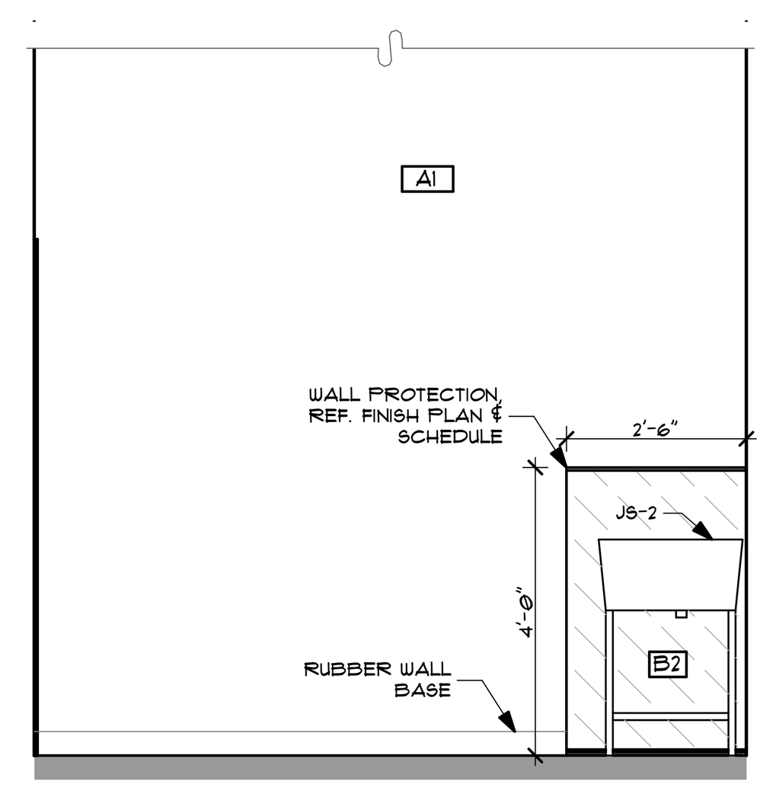
7 SICK ROOM 129 W
SCALE: 3/8" = 1'-0"



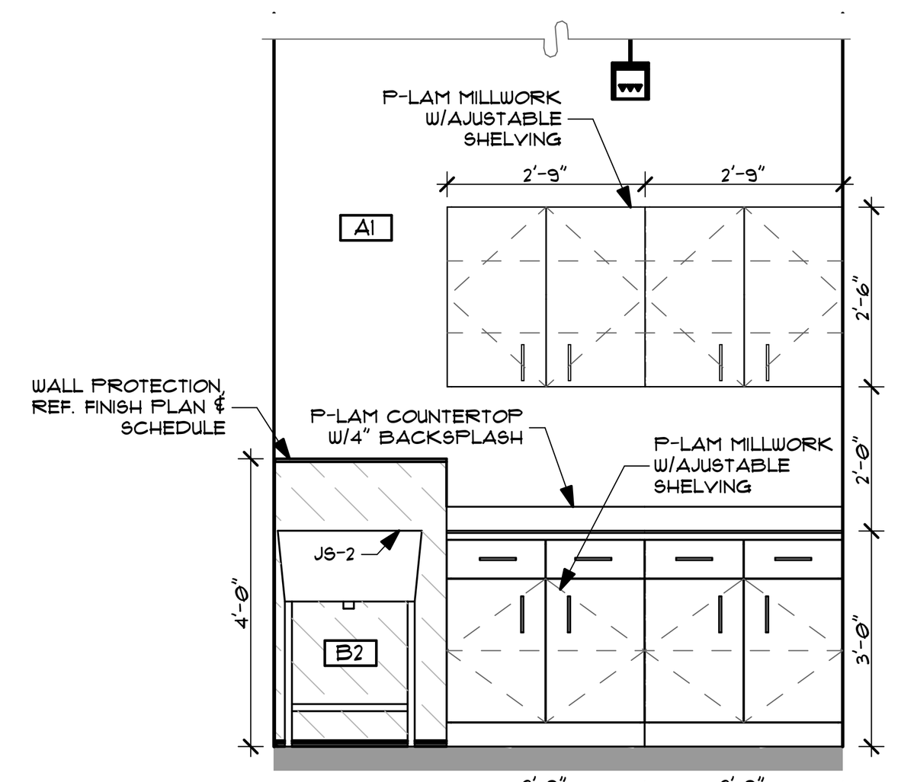
8 LARGE PLAN
SCALE: 1/4" = 1'-0"



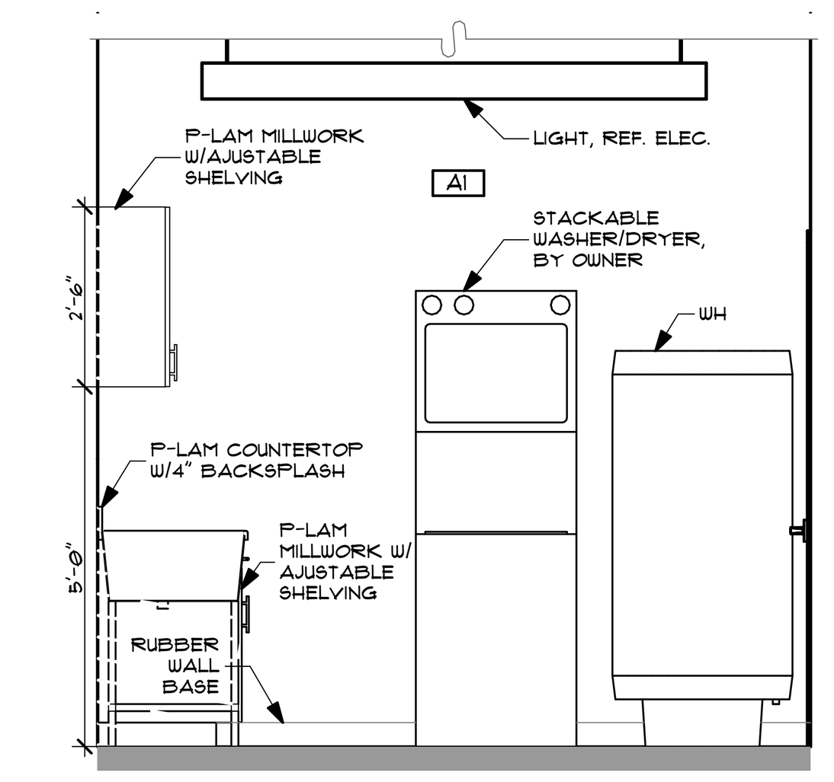
9 FACULTY 128 E
SCALE: 3/8" = 1'-0"



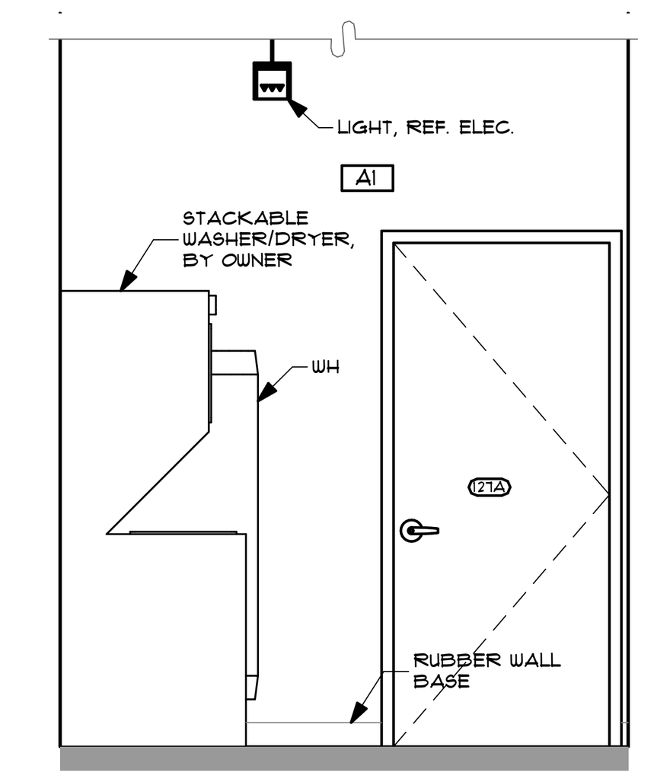
10 LAUNDRY/UTILITY 127 N
SCALE: 3/8" = 1'-0"



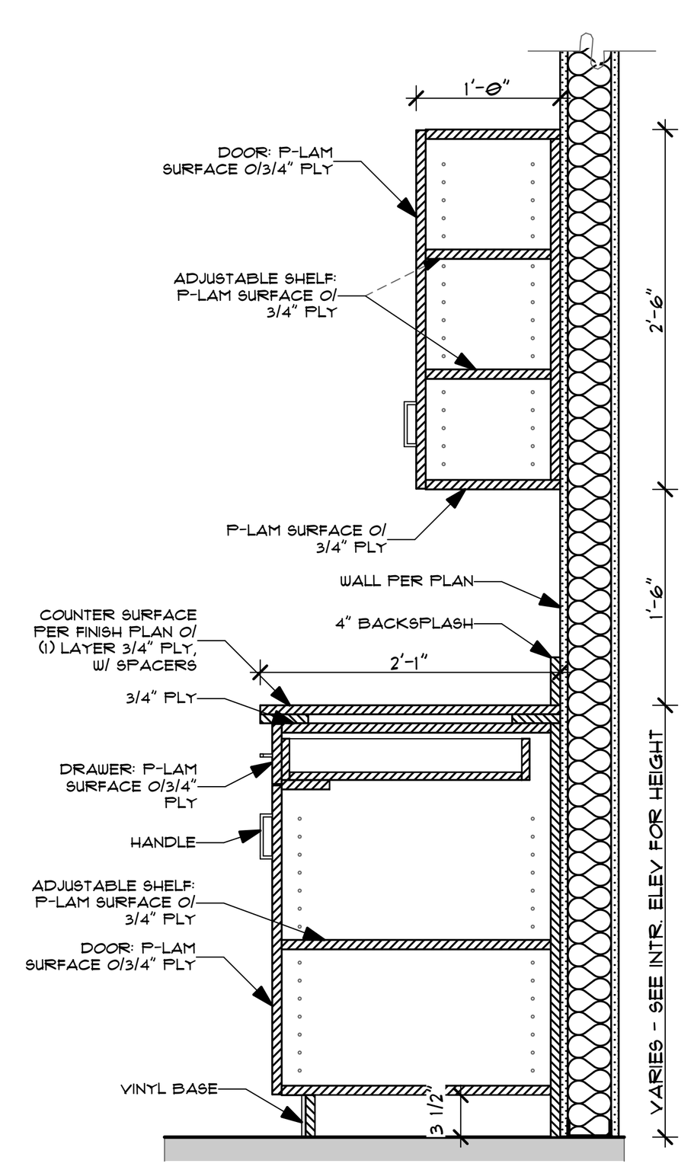
11 LAUNDRY/UTILITY 127 E
SCALE: 3/8" = 1'-0"



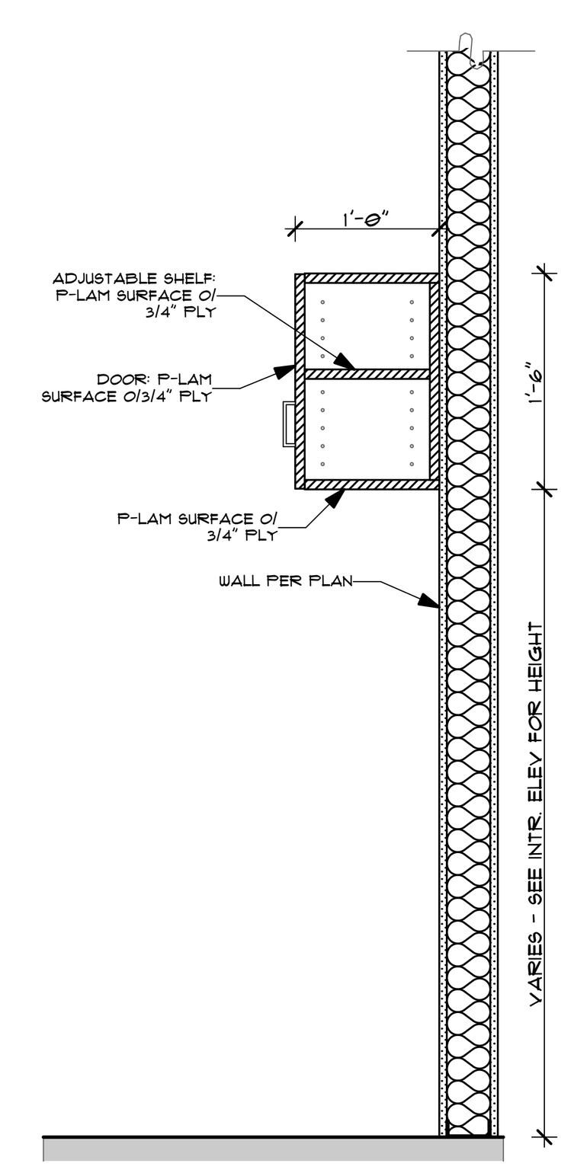
12 LAUNDRY/UTILITY 127 S
SCALE: 3/8" = 1'-0"



13 LAUNDRY/UTILITY 127 W
SCALE: 3/8" = 1'-0"



14 CASEWORK DETAILS
SCALE: 3/4" = 1'-0"



15 CASEWORK DETAILS
SCALE: 3/4" = 1'-0"

ENLARGED FLOOR PLAN KEYED NOTES

1 30" X 48" CLEAR SPACE
2 60" MIN. DIA. CLEAR TURNING SPACE
3 56" X 60" CLEAR SPACE
4 T-SHAPED TURNING SPACE

RESTROOM FIXTURE SCHEDULE

ID	DESCRIPTION	MODEL NUMBER
2A	MIRROR, 24"X36"	ASI MODEL #0620-2436
3A	GRAB BAR, 36"	ASI MODEL #3701-36
3B	GRAB BAR, 42"	ASI MODEL #3701-42
3C	VERTICAL GRAB BAR, 18"	ASI MODEL #3701-18
4A	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, SURFACE MOUNTED	ASI MODEL #0030
4B	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, RECESSED	ASI MODEL #0031
4C	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, PARTITION MOUNTED	ASI MODEL #0032
5A	WASTE DISPOSAL - 1 GAL - SURFACE MOUNTED	ASI MODEL #20852
6A	PAPER TOWEL DISPENSER - MULTI, C-FILD - SURFACE MOUNTED	ASI MODEL #0210
7A	SOAP DISPENSER - LIQUID, VERTICAL, VALVE - 40 OZ. - SURFACE MOUNTED	ASI MODEL #0347
10A	TOILET SEAT COVER DISPENSER - SURFACE MOUNTED	ASI MODEL #0477-SM

PLUMBING FIXTURE SCHEDULE (REF PLUMBING)

ID	DESCRIPTION
DF-2	WATER COOLER (BI-LEVEL, ADA)
DF-2B	WATER COOLER W/BOTTLE FILLER
JS-2	MOP SINK
KS-1TG	SINK
LV-3MA	WALL HUNG LAVATORY
LV-3MA	
WC-6	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6A	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6C	CHILDS MANUAL FLUSH VALVE WATER CLOSET
WH	WATER HEATER

BGW ARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

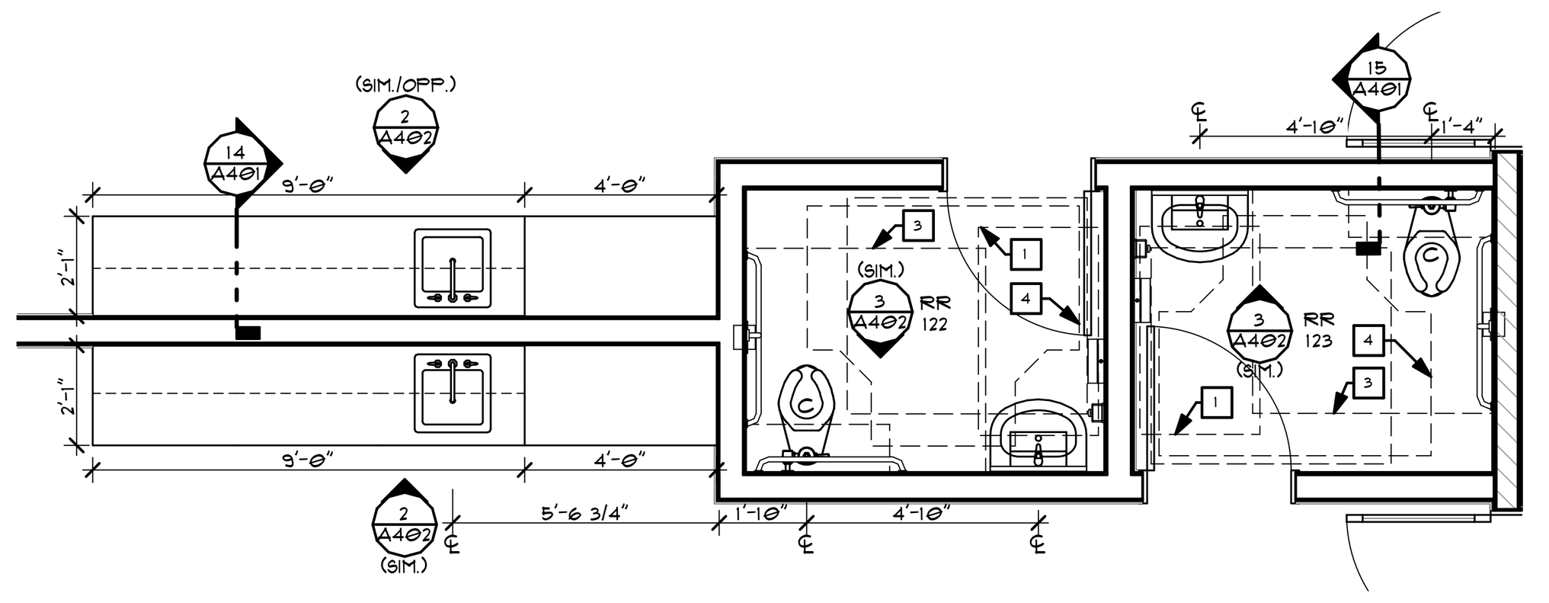
PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SEAL:

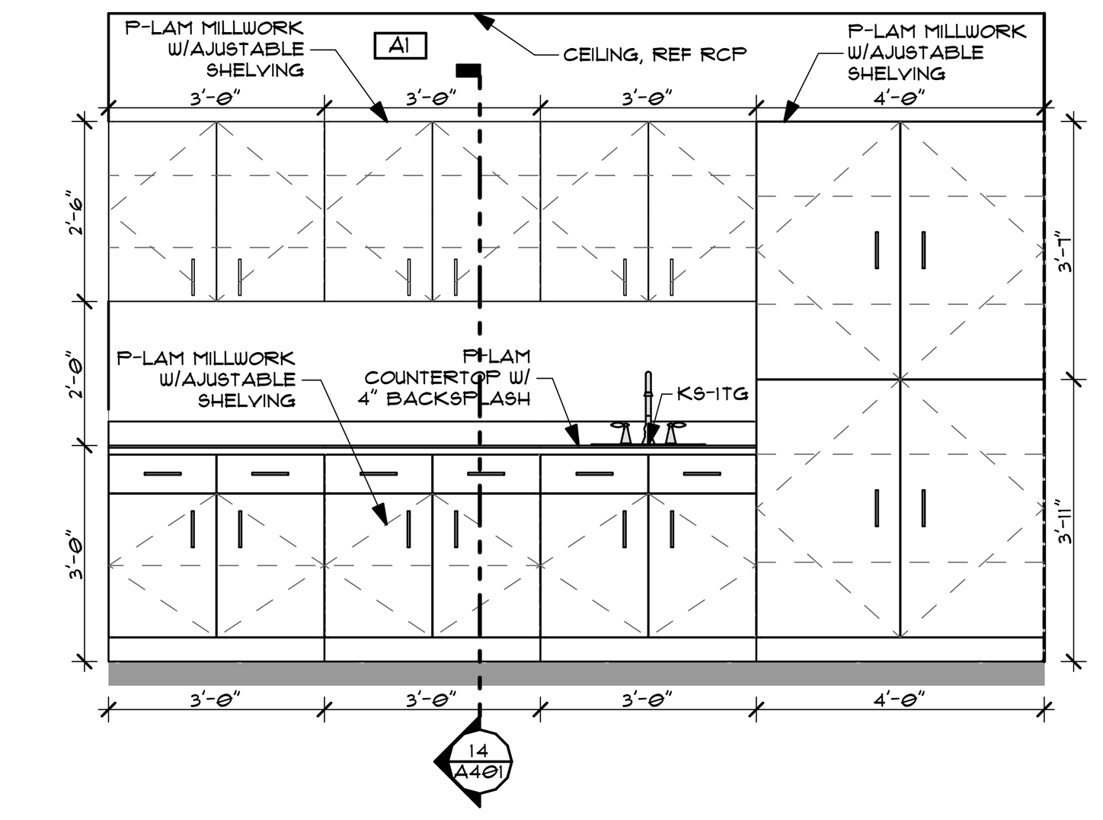
SHEET TITLE:
LARGE CASEWORK PLANS AND ELEVATIONS

SHEET NUMBER:
A401

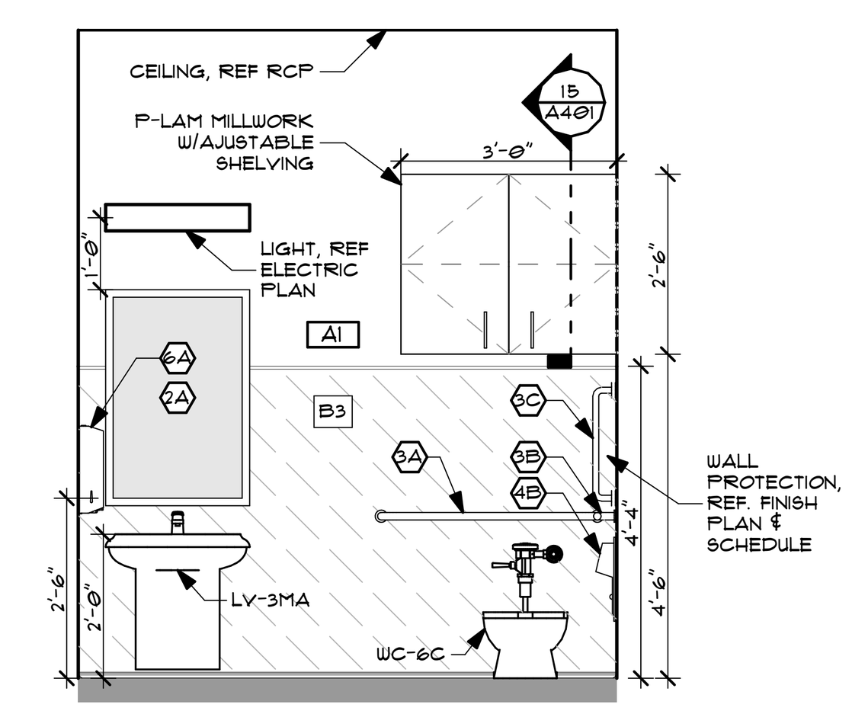
DO NOT SCALE DRAWING



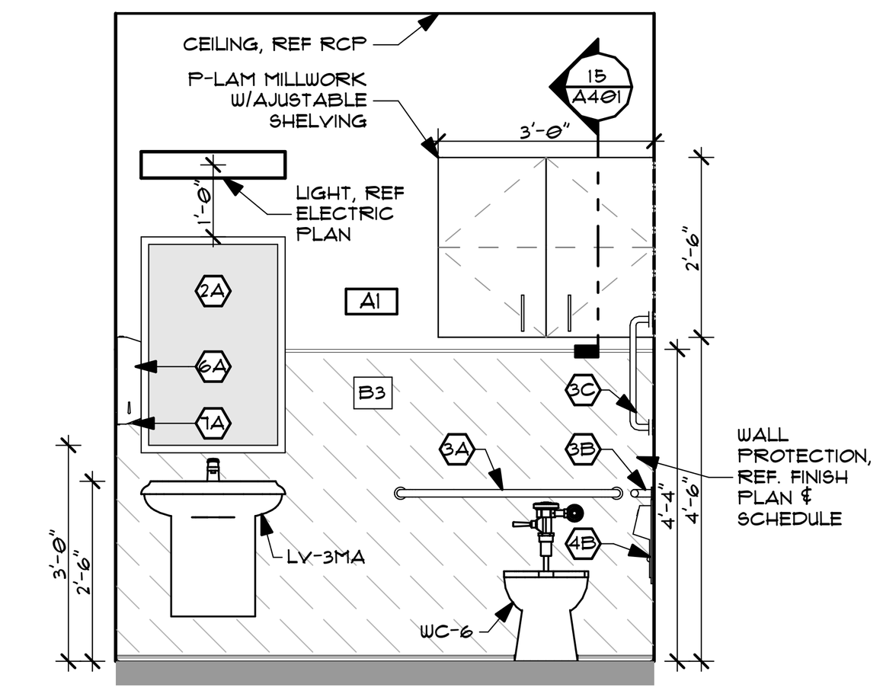
1 2'S CLASS 124/121
SCALE: 1/4" = 1'-0"



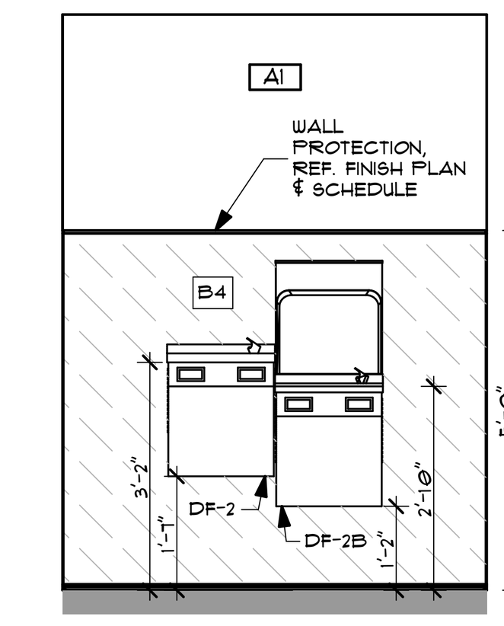
2 TYP CLASSROOM CASEWORK
SCALE: 3/8" = 1'-0"



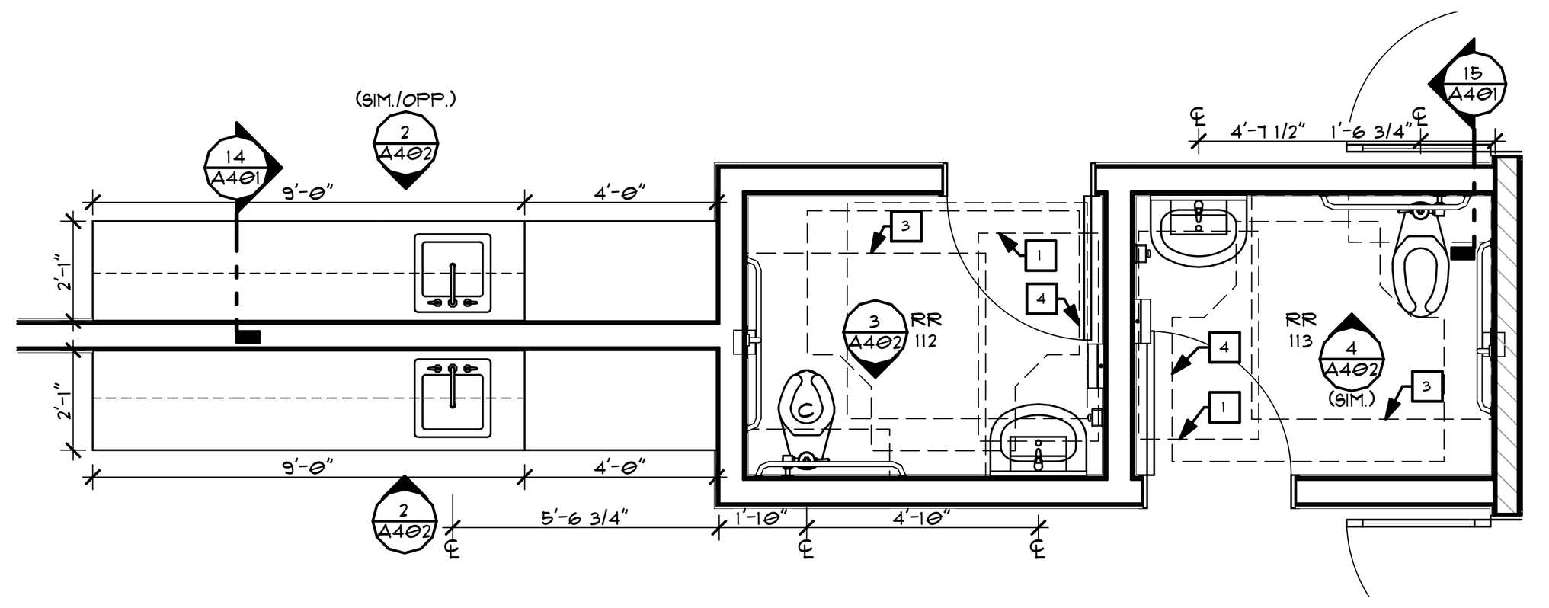
3 TYPICAL CHILD RESTROOM
SCALE: 3/8" = 1'-0"



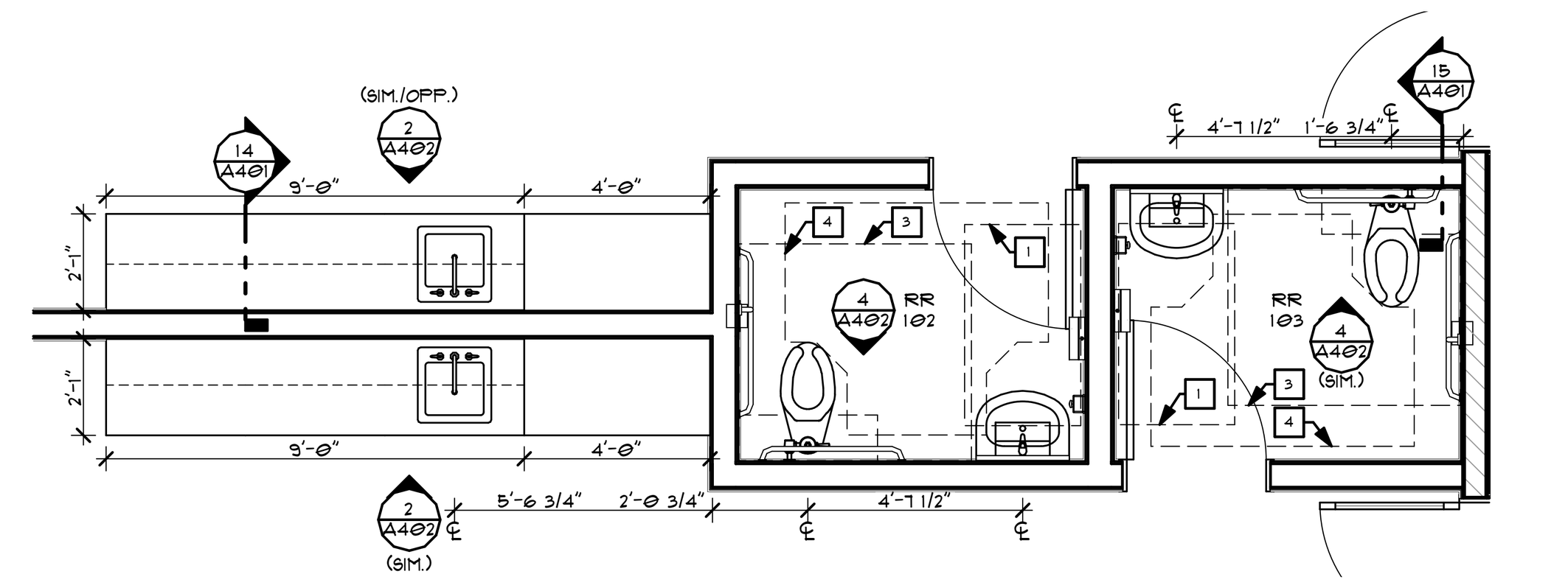
4 TYPICAL KIDS RESTROOM
SCALE: 3/8" = 1'-0"



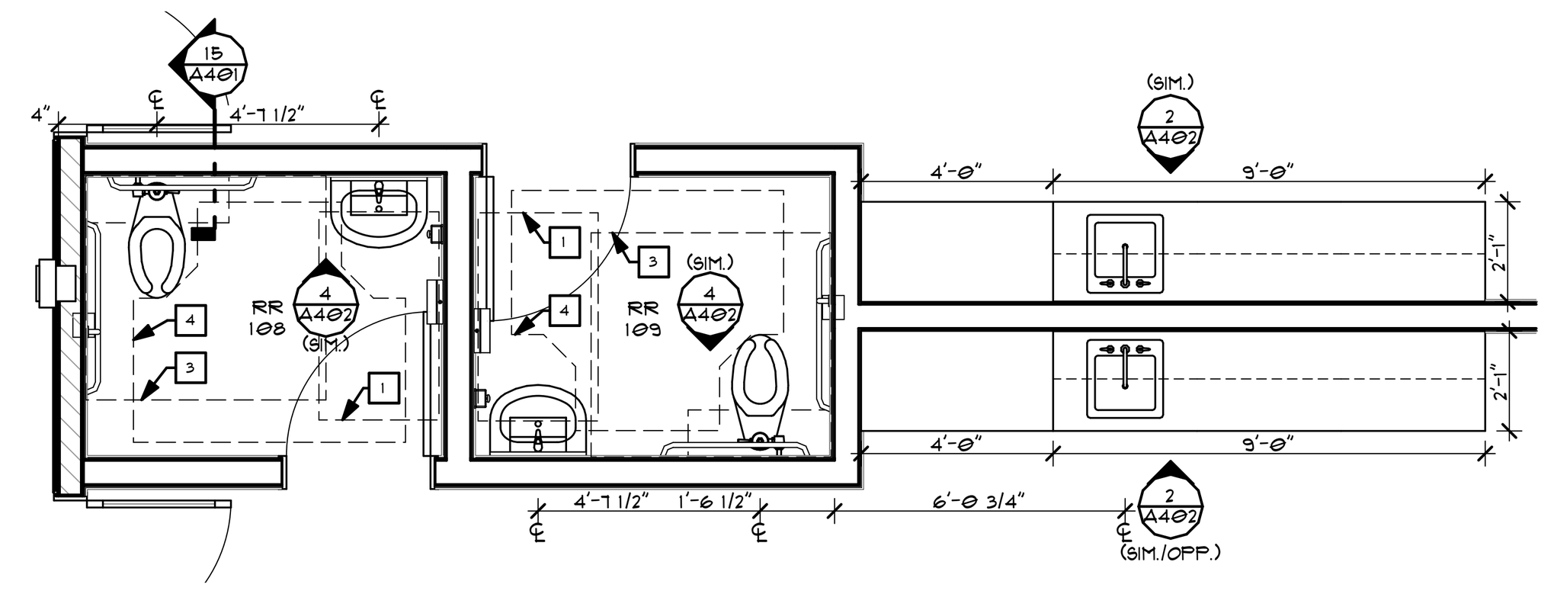
5 DRINKING FOUNTAIN
SCALE: 3/8" = 1'-0"



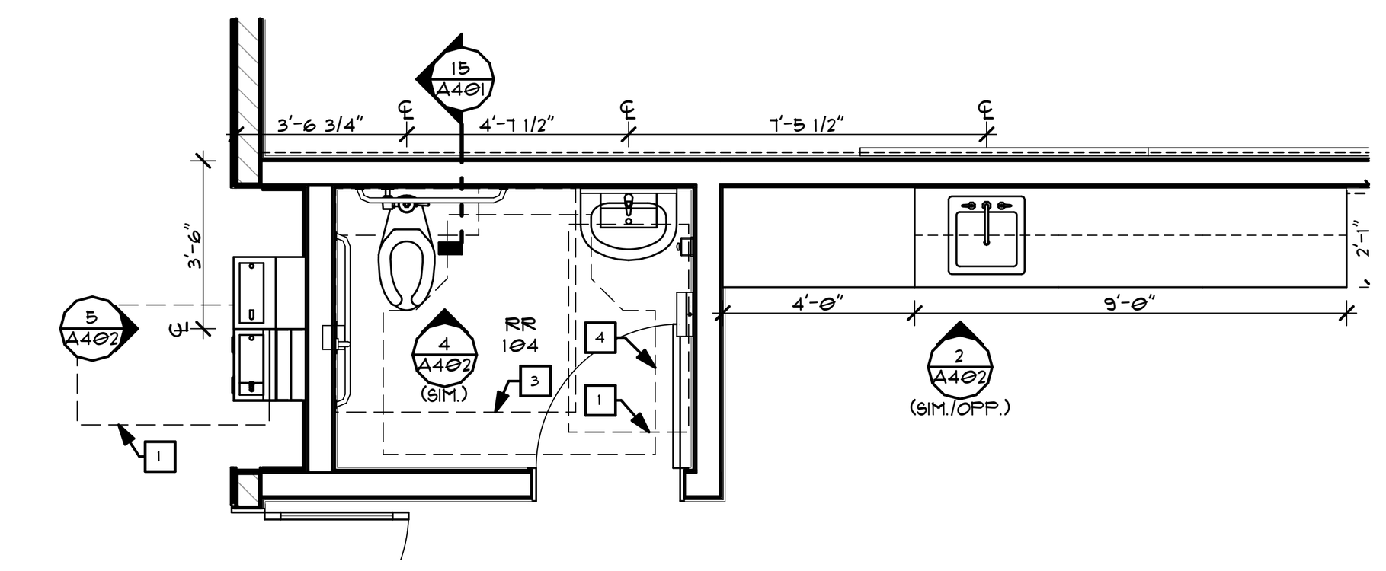
6 2'S 3'S CLASS 114/111
SCALE: 1/4" = 1'-0"



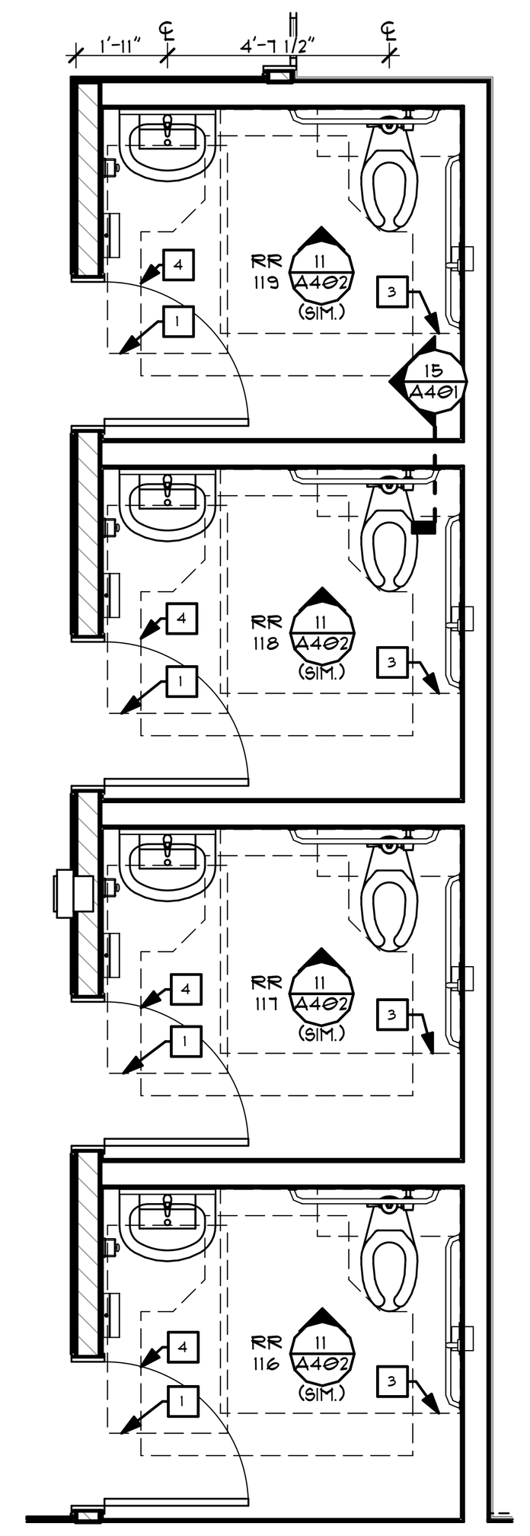
7 3'S CLASS 107/101
SCALE: 1/4" = 1'-0"



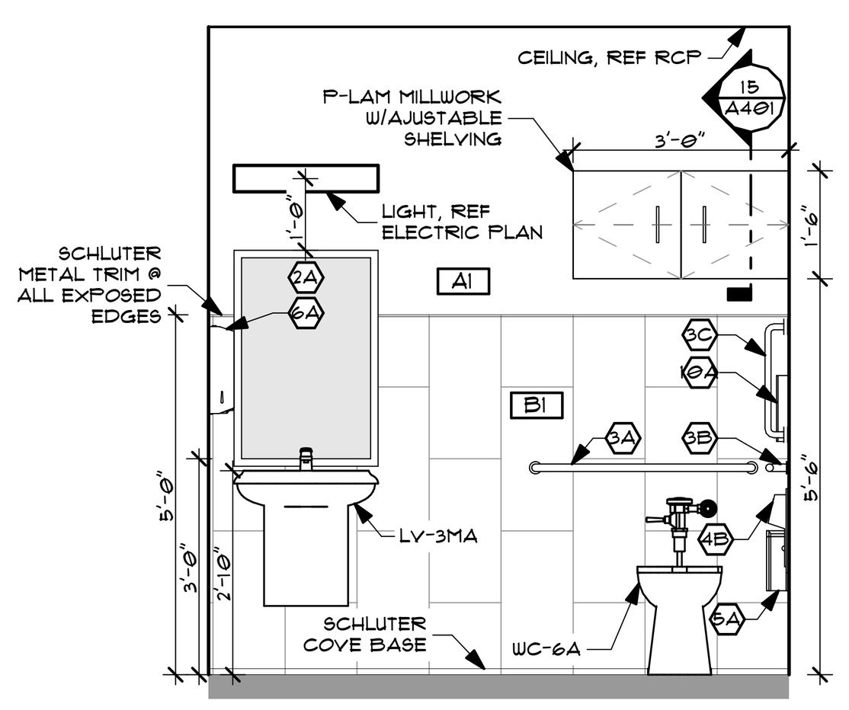
8 4'S CLASS 110/106
SCALE: 1/4" = 1'-0"



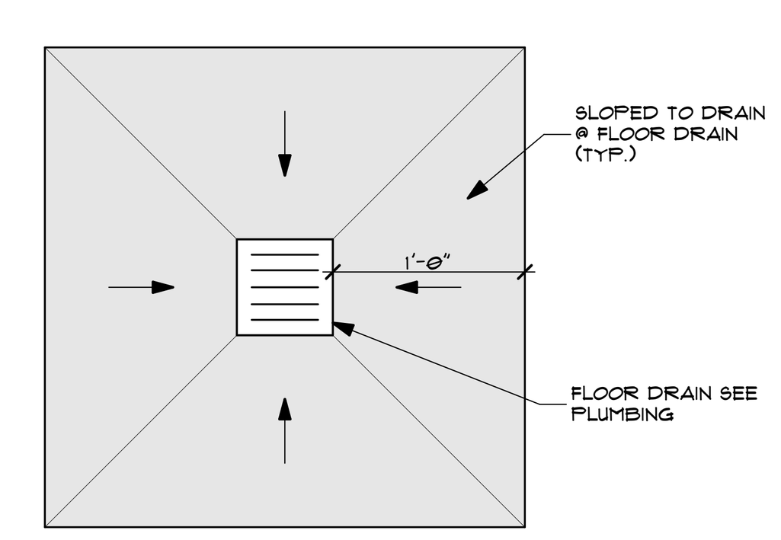
9 4'S CLASS 105
SCALE: 1/4" = 1'-0"



10 LARGE PLAN
SCALE: 1/4" = 1'-0"



11 TYPICAL ADULT RESTROOM
SCALE: 3/8" = 1'-0"



12 FLOOR DRAIN DETAIL
SCALE: 1" = 1'-0"

ENLARGED FLOOR PLAN KEYED NOTES

1. 30" X 48" CLEAR SPACE
2. 60" MIN. DIA. CLEAR TURNING SPACE
3. 56" X 60" CLEAR SPACE
4. T-SHAPED TURNING SPACE

RESTROOM FIXTURE SCHEDULE

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3B	GRAB BAR, 42"	ASI MODEL #3701-42
3C	VERTICAL GRAB BAR, 18"	ASI MODEL #3701-18
4A	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, SURFACE MOUNTED	ASI MODEL #0030
4B	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, RECESSED	ASI MODEL #0031
4C	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, PARTITION MOUNTED	ASI MODEL #0032
5A	WASTE DISPOSAL - 1 GAL - SURFACE MOUNTED	ASI MODEL #20852
6A	PAPER TOWEL DISPENSER - MULTI, C-FILD - SURFACE MOUNTED	ASI MODEL #0210
7A	SOAP DISPENSER - LIQUID, VERTICAL, VALVE - 40 OZ. - SURFACE MOUNTED	ASI MODEL #0347
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PLUMBING FIXTURE SCHEDULE (REF PLUMBING)

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DF-2B	WATER COOLER W/BOTTLE FILLER
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KS-1TG	SINK
LV-3MA	WALL HUNG LAVATORY
LV-3MA	
WC-6	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6A	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6C	CHILDS MANUAL FLUSH VALVE WATER CLOSET
WH	WATER HEATER

BGW ARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/1/2025	REV'D FOR PRICING

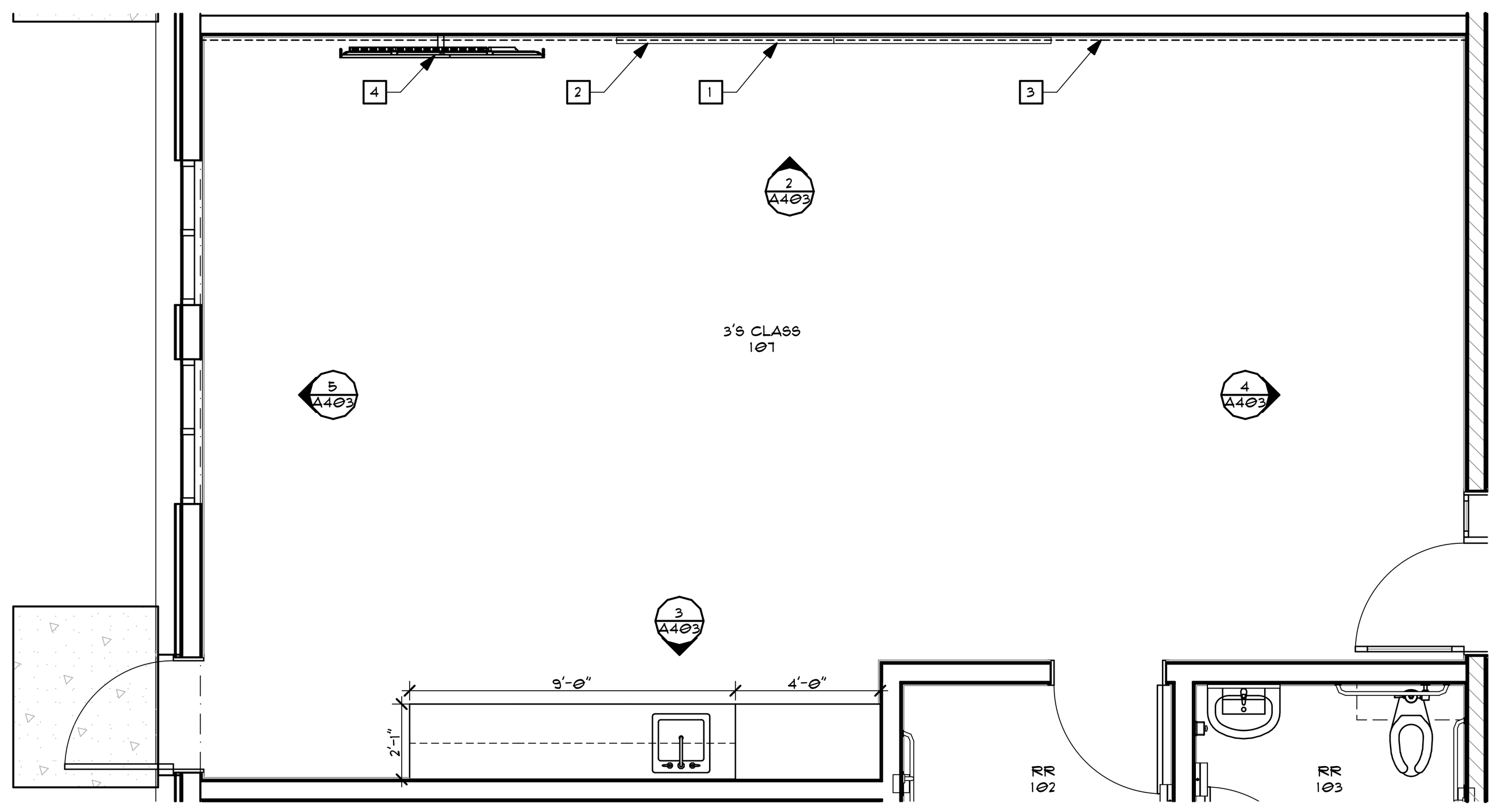
PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SEAL:

SHEET TITLE:
LARGE RESTROOM PLANS & INTERIOR ELEVATIONS

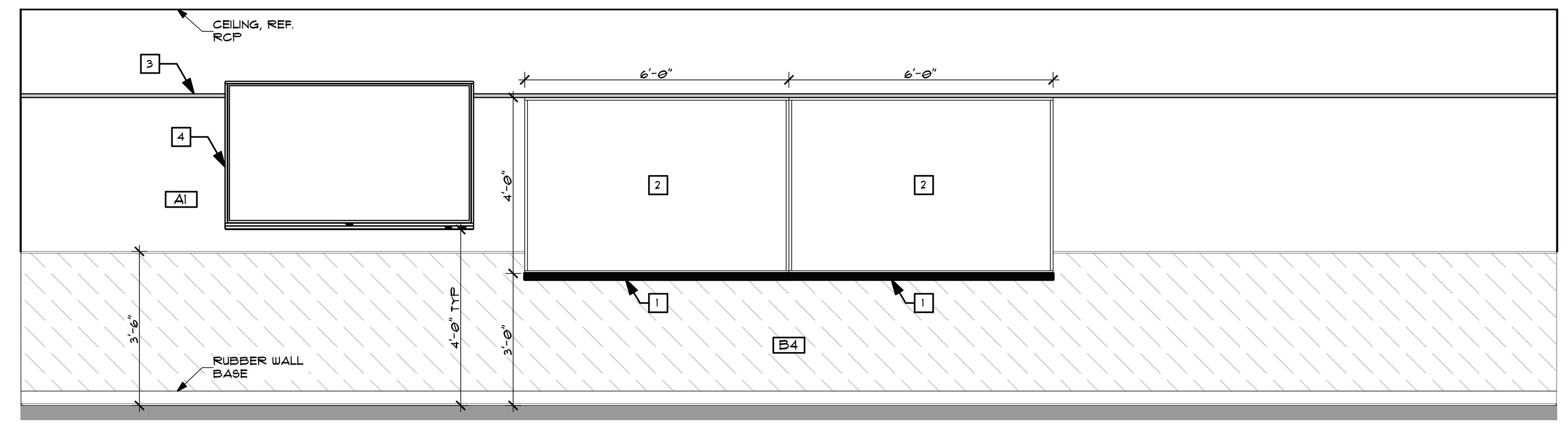
SHEET NUMBER:
A402

DO NOT SCALE DRAWING

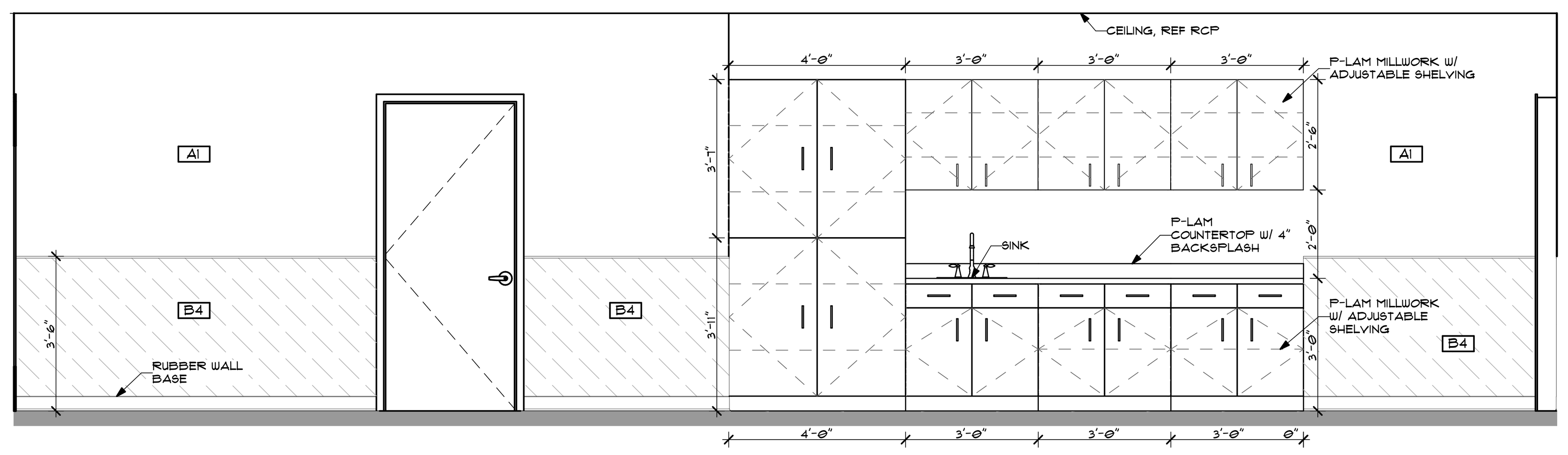


1 LARGE FURNISHING PLAN
SCALE: 1/4" = 1'-0"

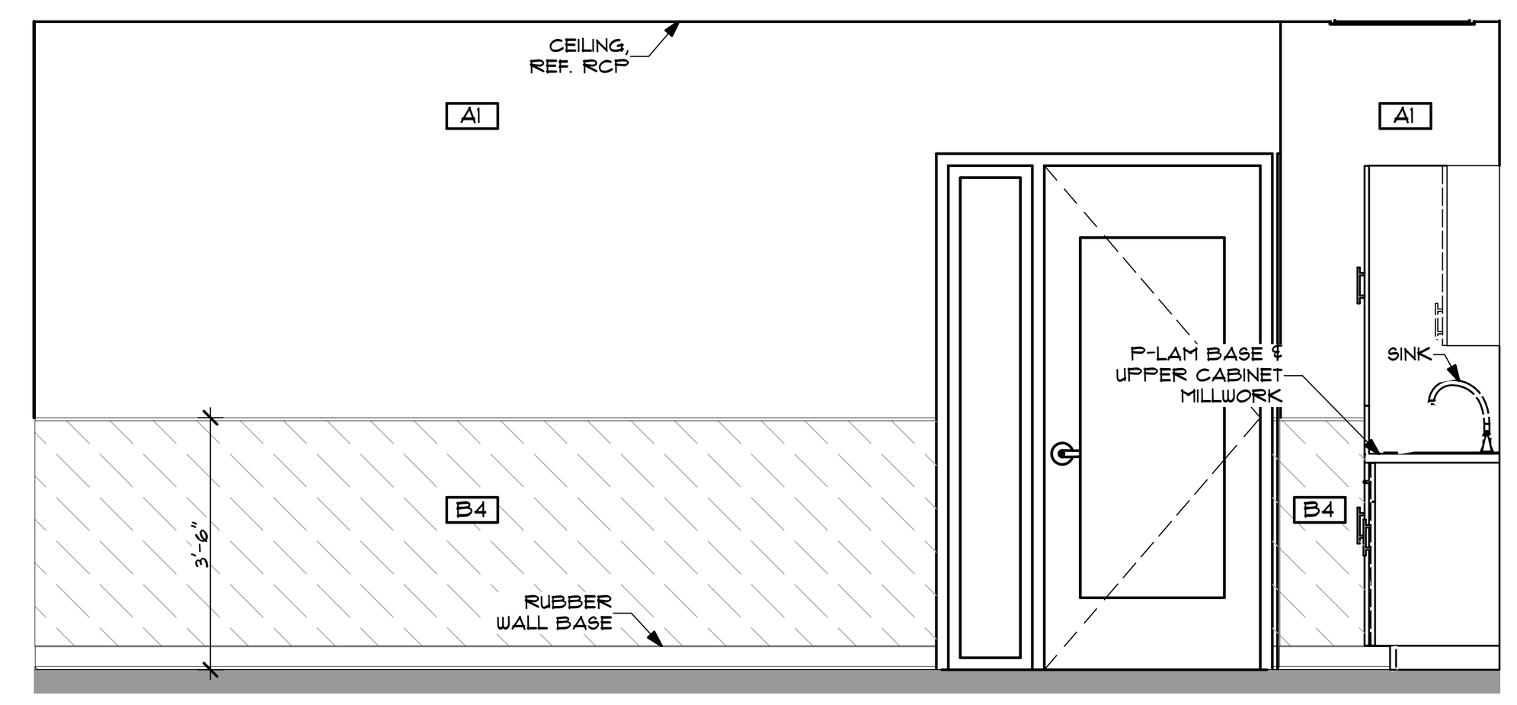
FURNISHING LEGEND	
1	ASI ANGLED MARKER BOARD TRAY
2	ASI 4' X 6' 9800 SERIES MARKER BOARD
3	ASI 1" DISPLAY RAIL
4	LED DISPLAY, BY OWNER.



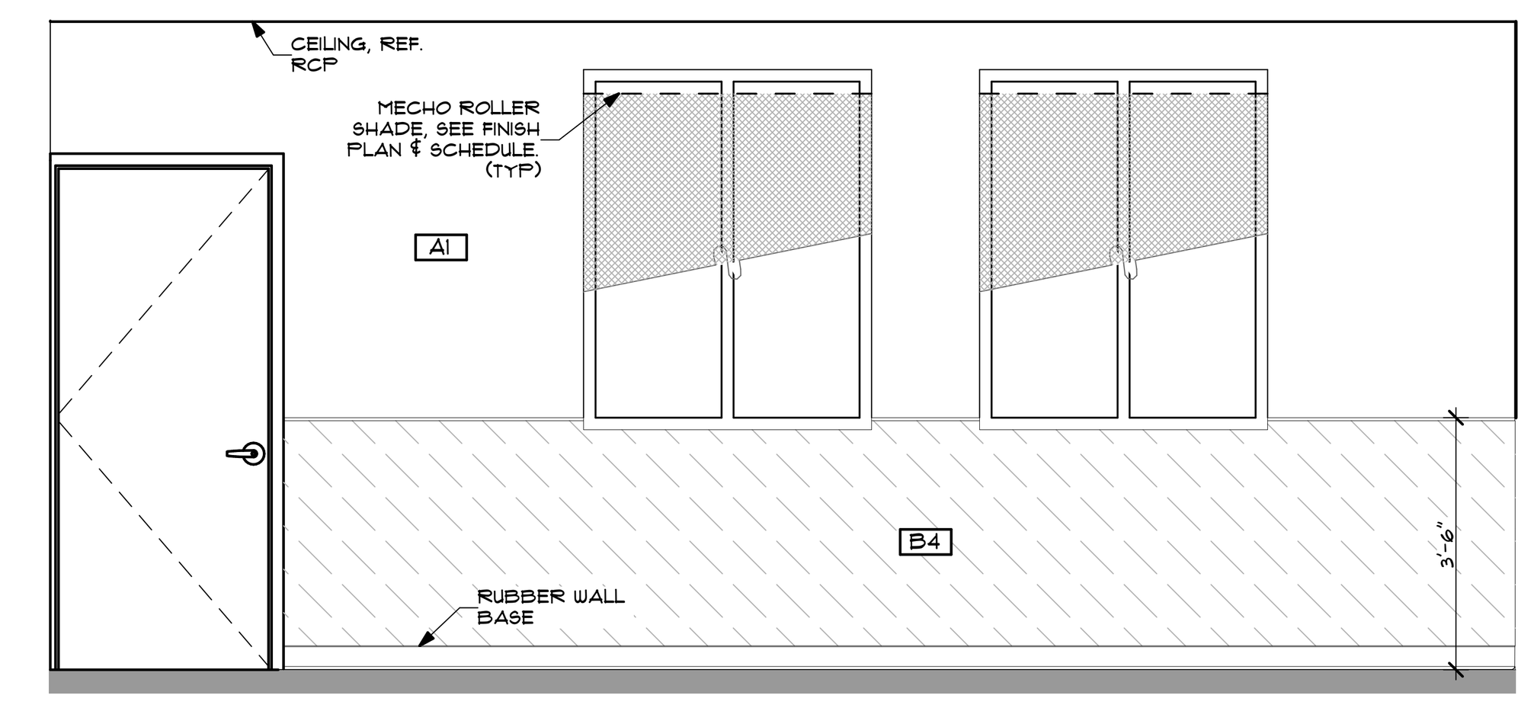
2 NORTH CLASSROOM 120
SCALE: 3/8" = 1'-0"



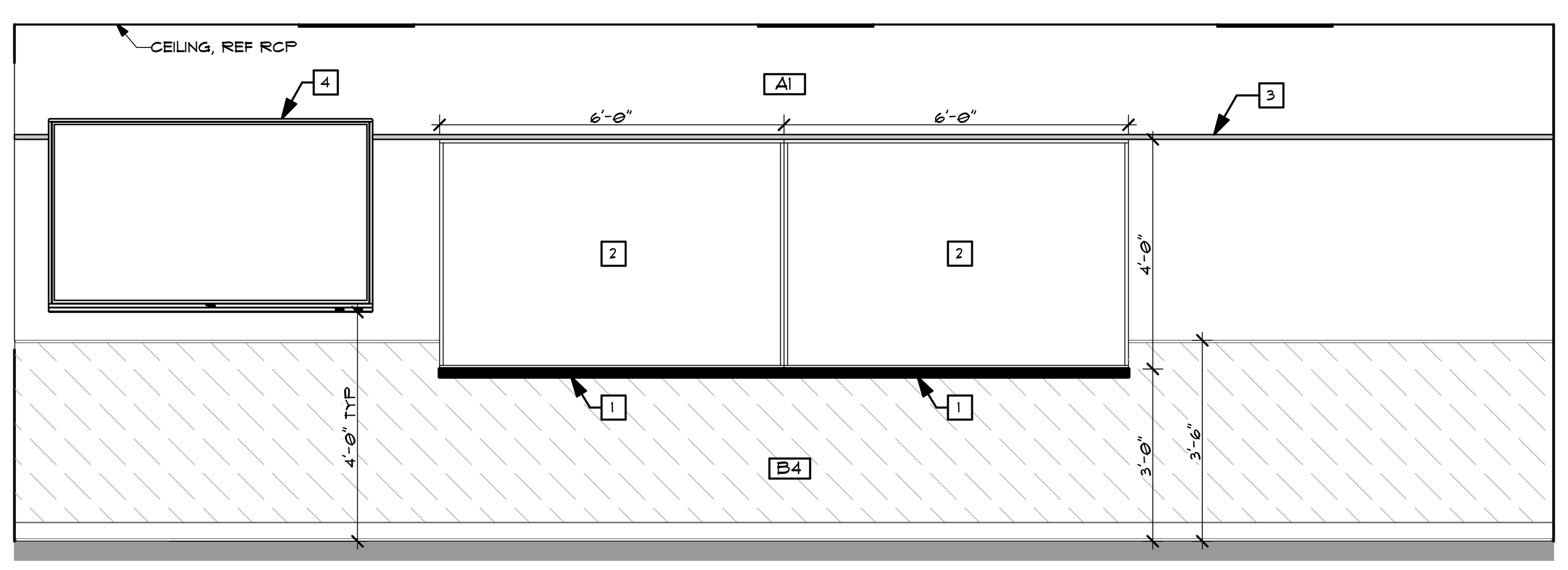
3 SOUTH CLASSROOM 120
SCALE: 3/8" = 1'-0"



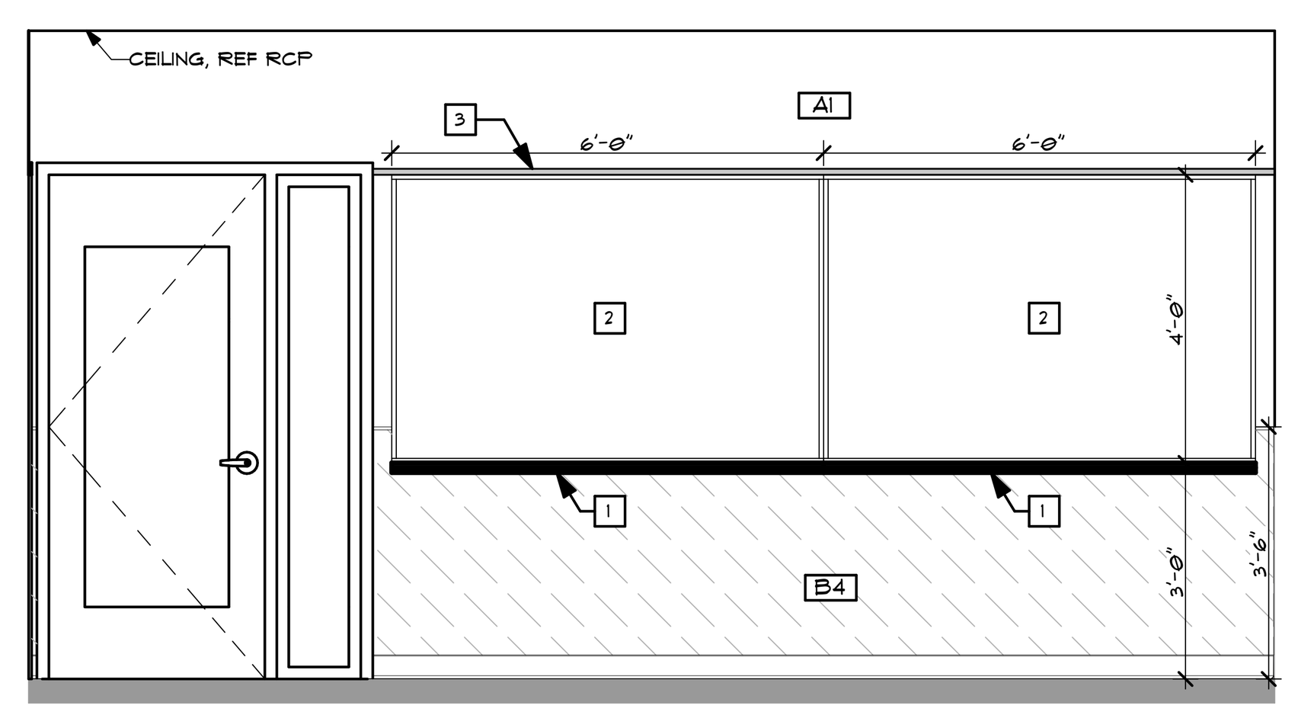
4 WEST CLASSROOM 120
SCALE: 3/8" = 1'-0"



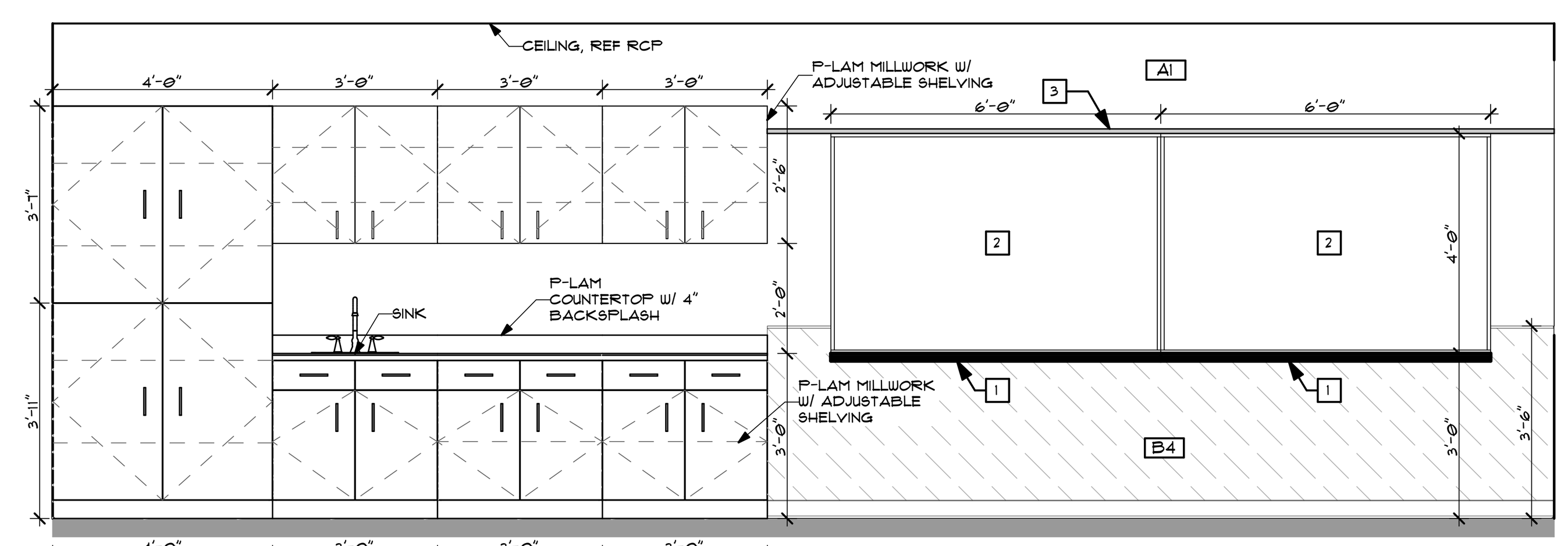
5 EAST CLASSROOM 120
SCALE: 3/8" = 1'-0"



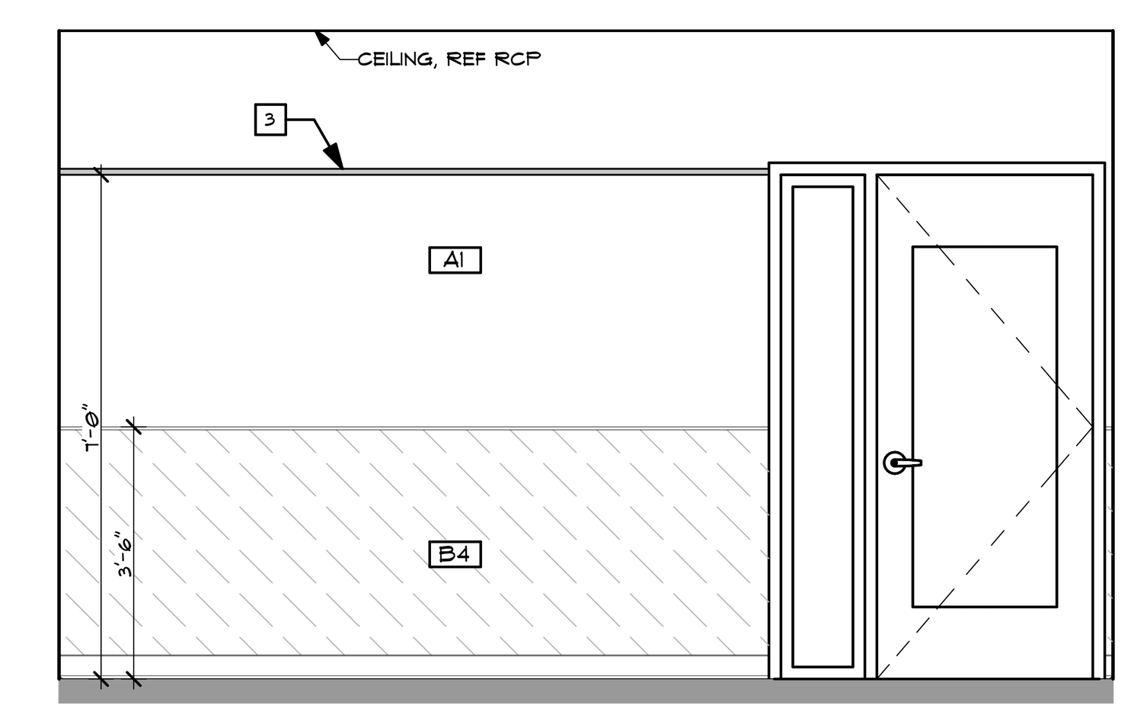
6 MOTOR SKILLS 120 S
SCALE: 3/8" = 1'-0"



7 3'S CLASS 101 E
SCALE: 3/8" = 1'-0"



8 4'S CLASS 105 N
SCALE: 3/8" = 1'-0"



9 4'S CLASS 105 W
SCALE: 3/8" = 1'-0"

BGW ARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

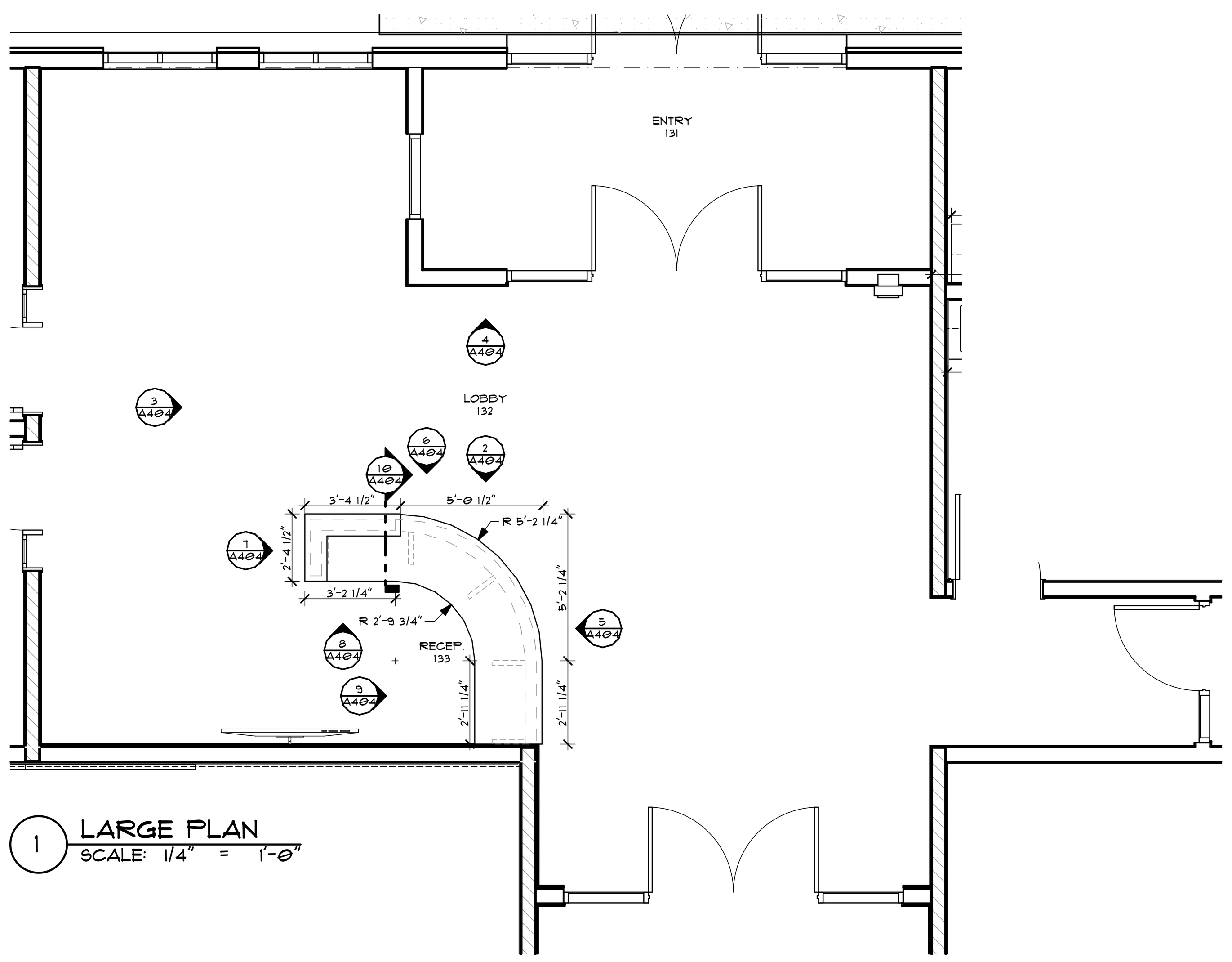
BGW ARCHITECTS | 2327 GRANT AVE. - OGDEN, UT 84401 | PH: 800-552-7137 | WWW.BGWSERVICES.COM

SEAL:

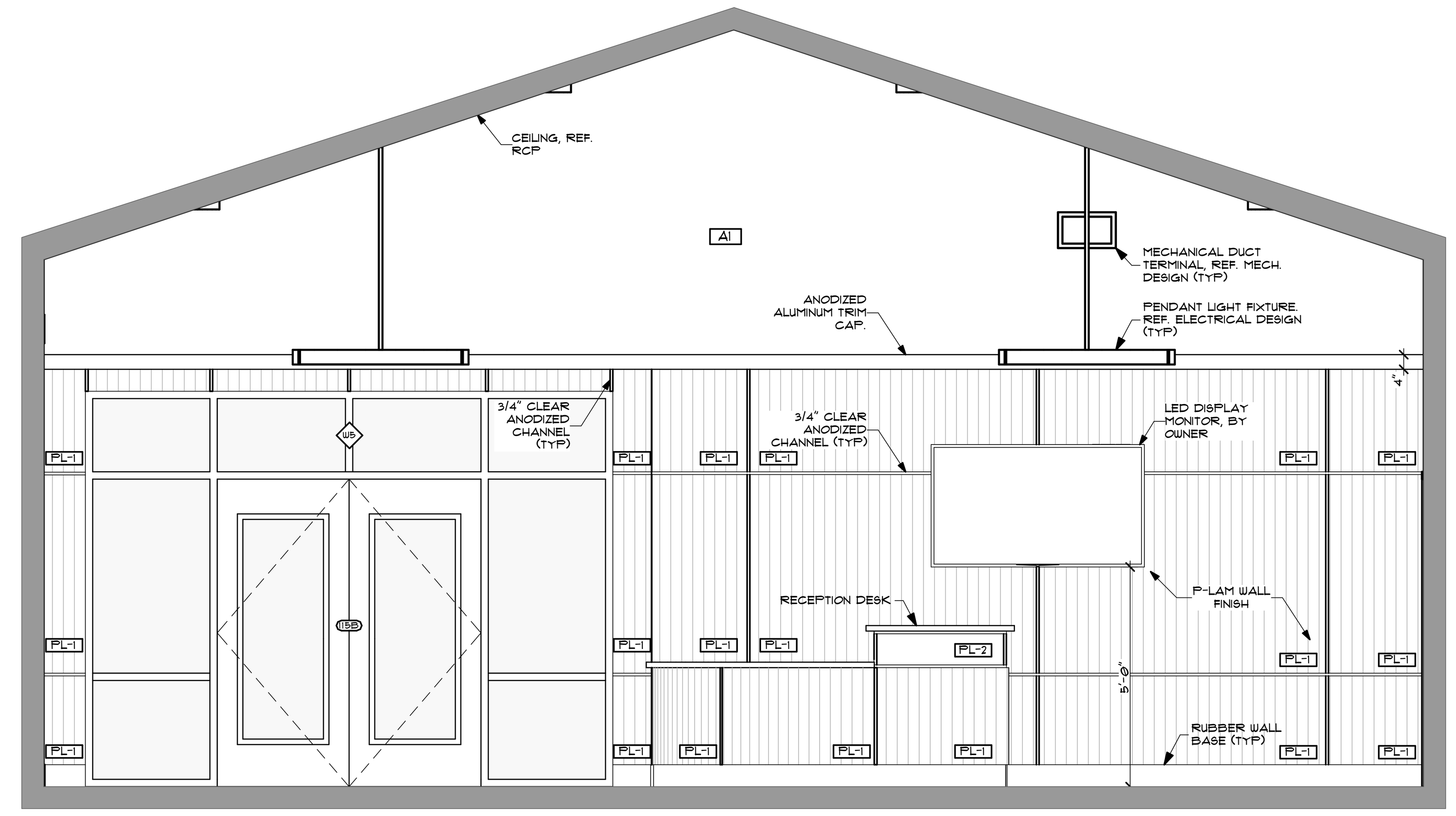
SHEET TITLE:
LARGE CLASSROOM PLAN

SHEET NUMBER:
A403

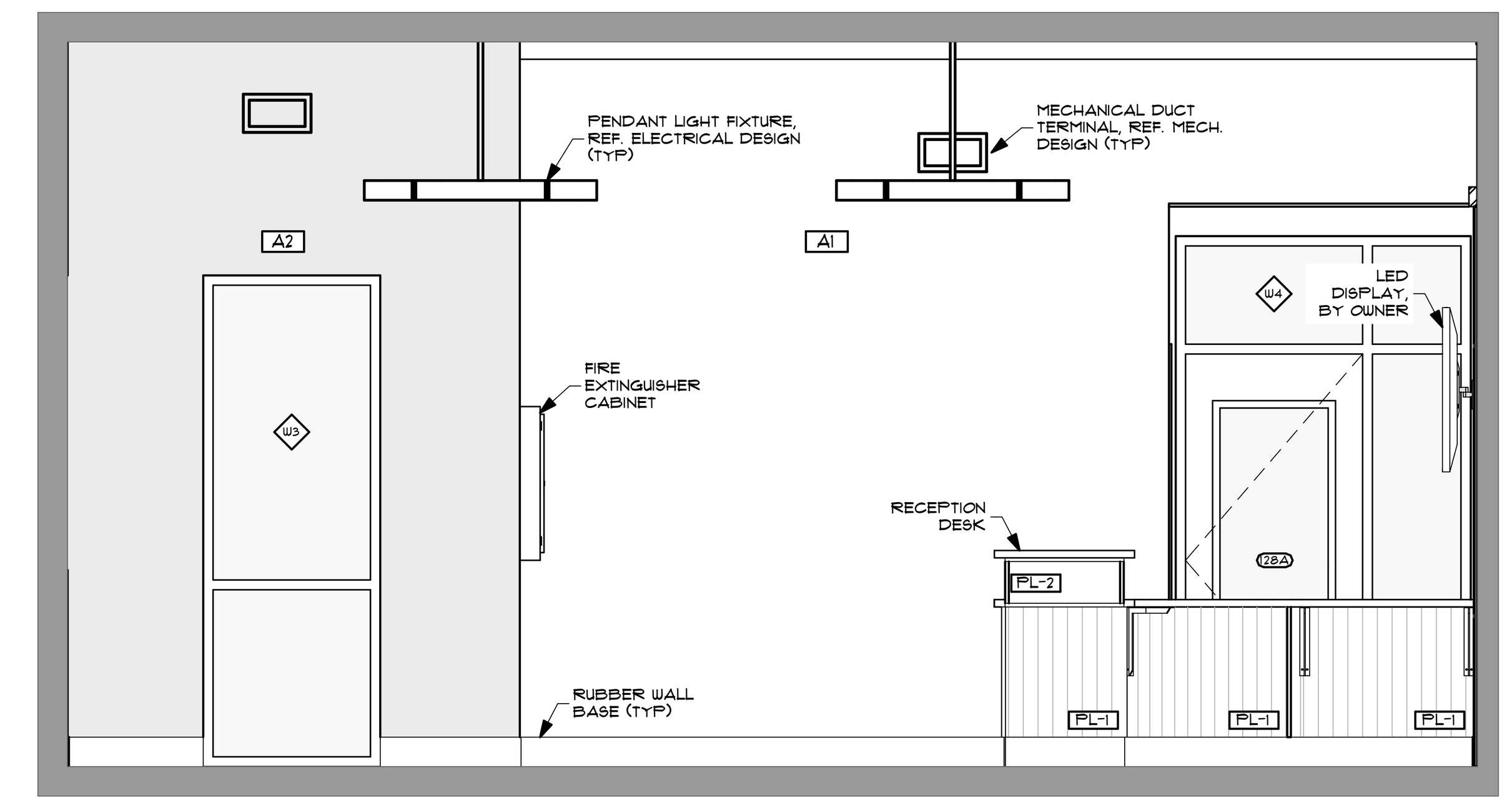
DO NOT SCALE DRAWING



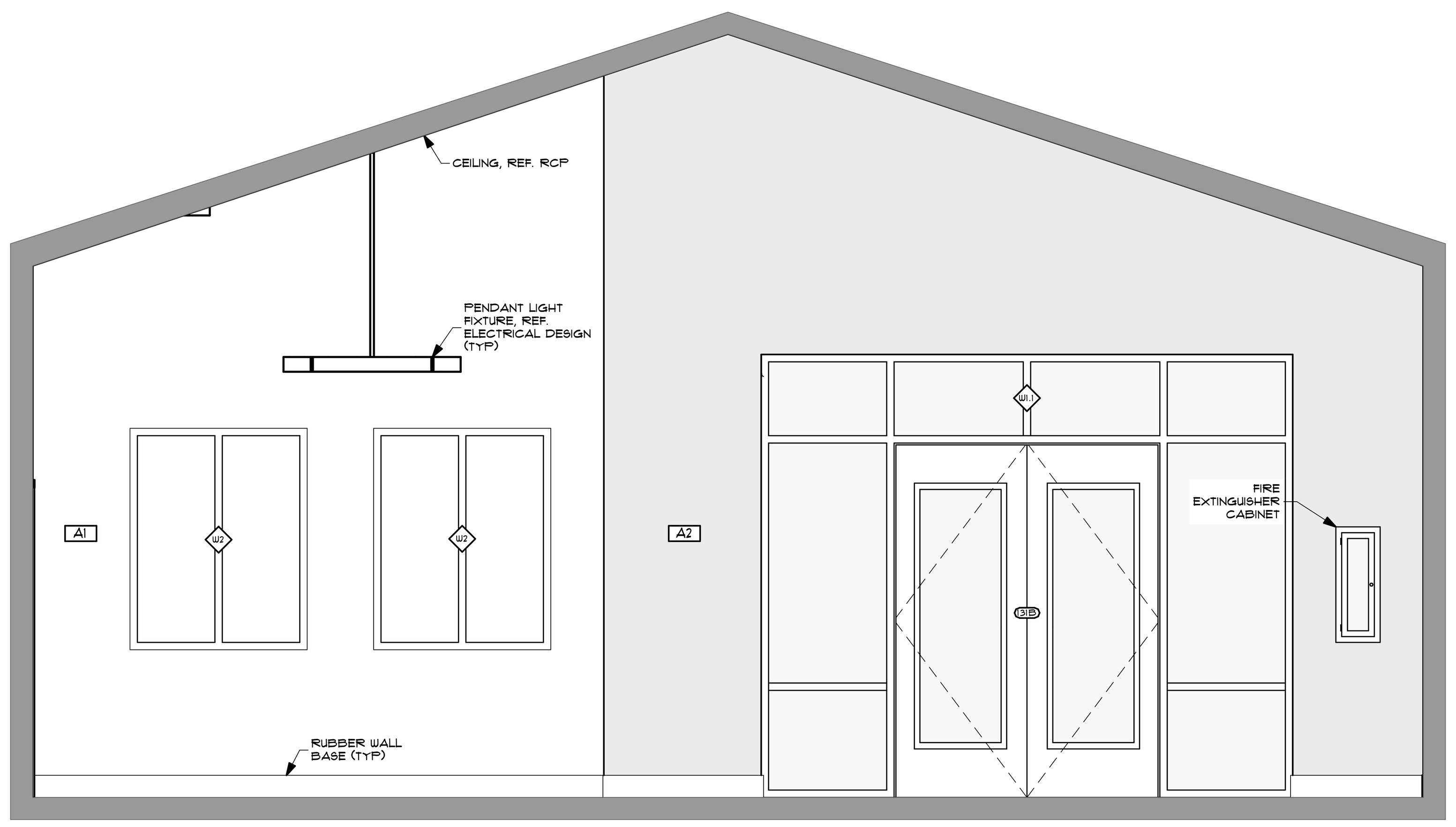
1 LARGE PLAN
SCALE: 1/4" = 1'-0"



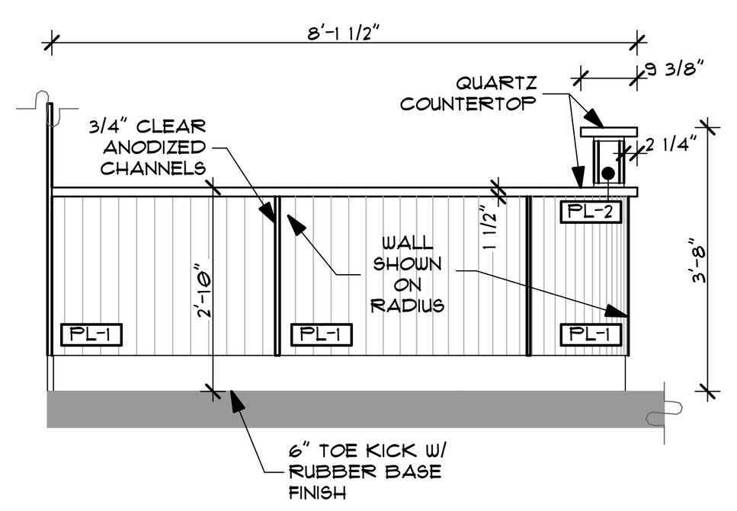
2 LOBBY 132 S
SCALE: 3/8" = 1'-0"



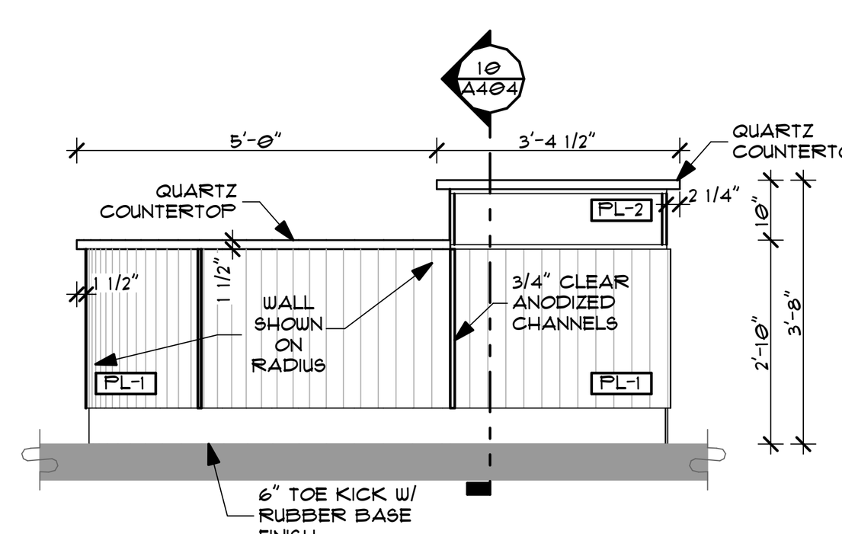
3 LOBBY 132 E
SCALE: 3/8" = 1'-0"



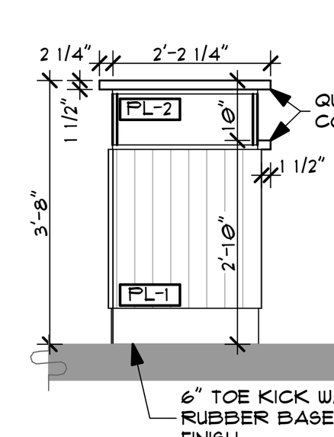
4 LOBBY 132 N
SCALE: 3/8" = 1'-0"



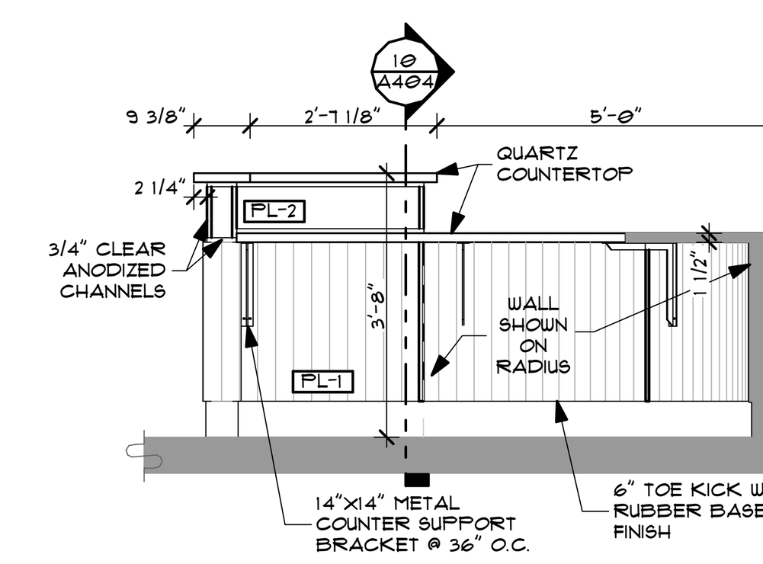
5 RECEP. 133 W
SCALE: 3/8" = 1'-0"



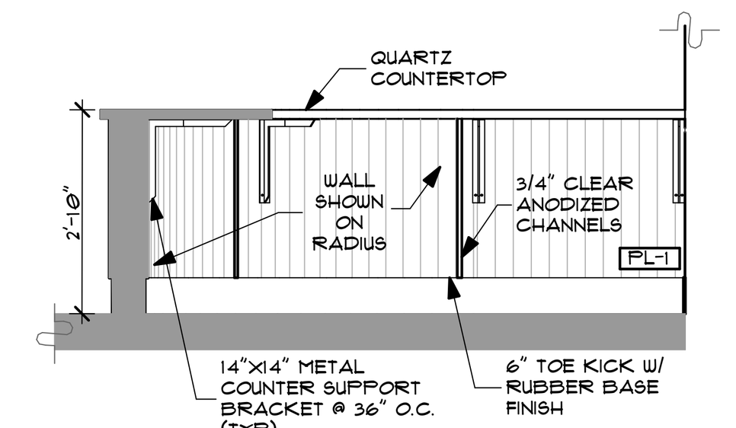
6 RECEP. 133 S
SCALE: 3/8" = 1'-0"



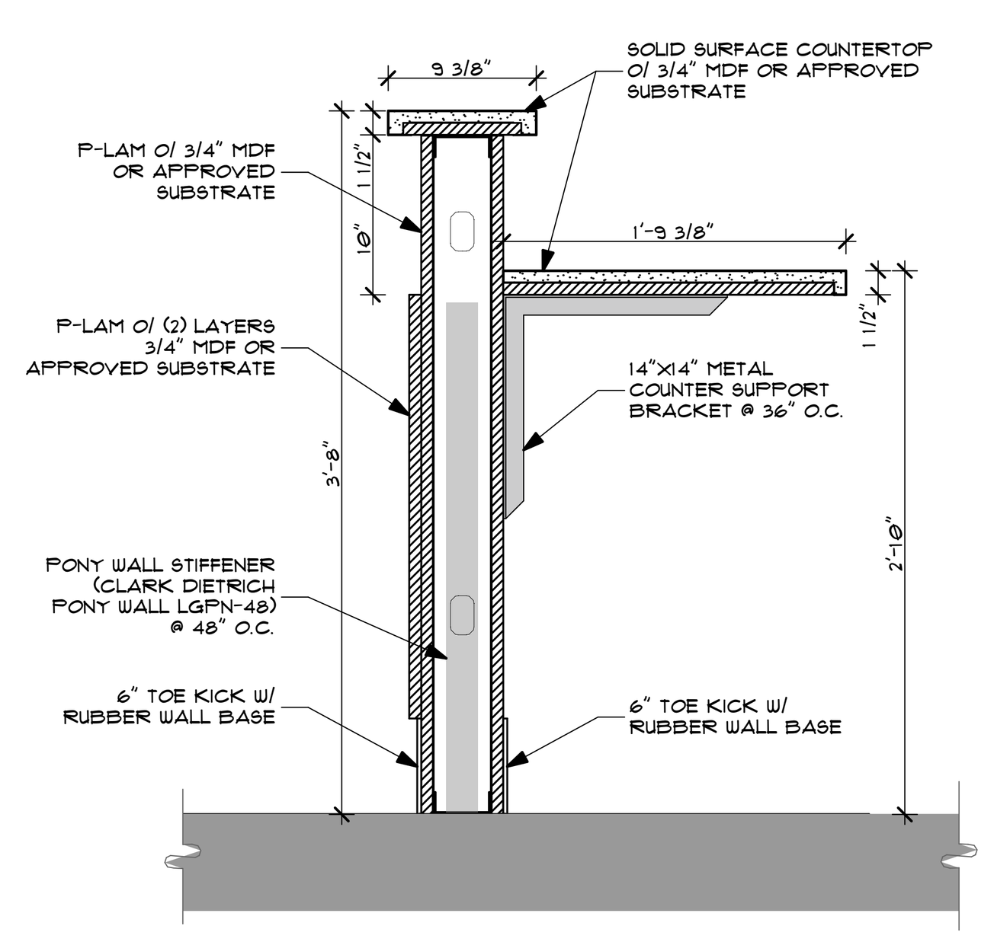
7 RECEP. 133 E
SCALE: 3/8" = 1'-0"



8 RECEP. 133 N
SCALE: 3/8" = 1'-0"



9 RECEP. 133 E
SCALE: 3/8" = 1'-0"



10 LARGE PLAN SECTION
SCALE: 1" = 1'-0"

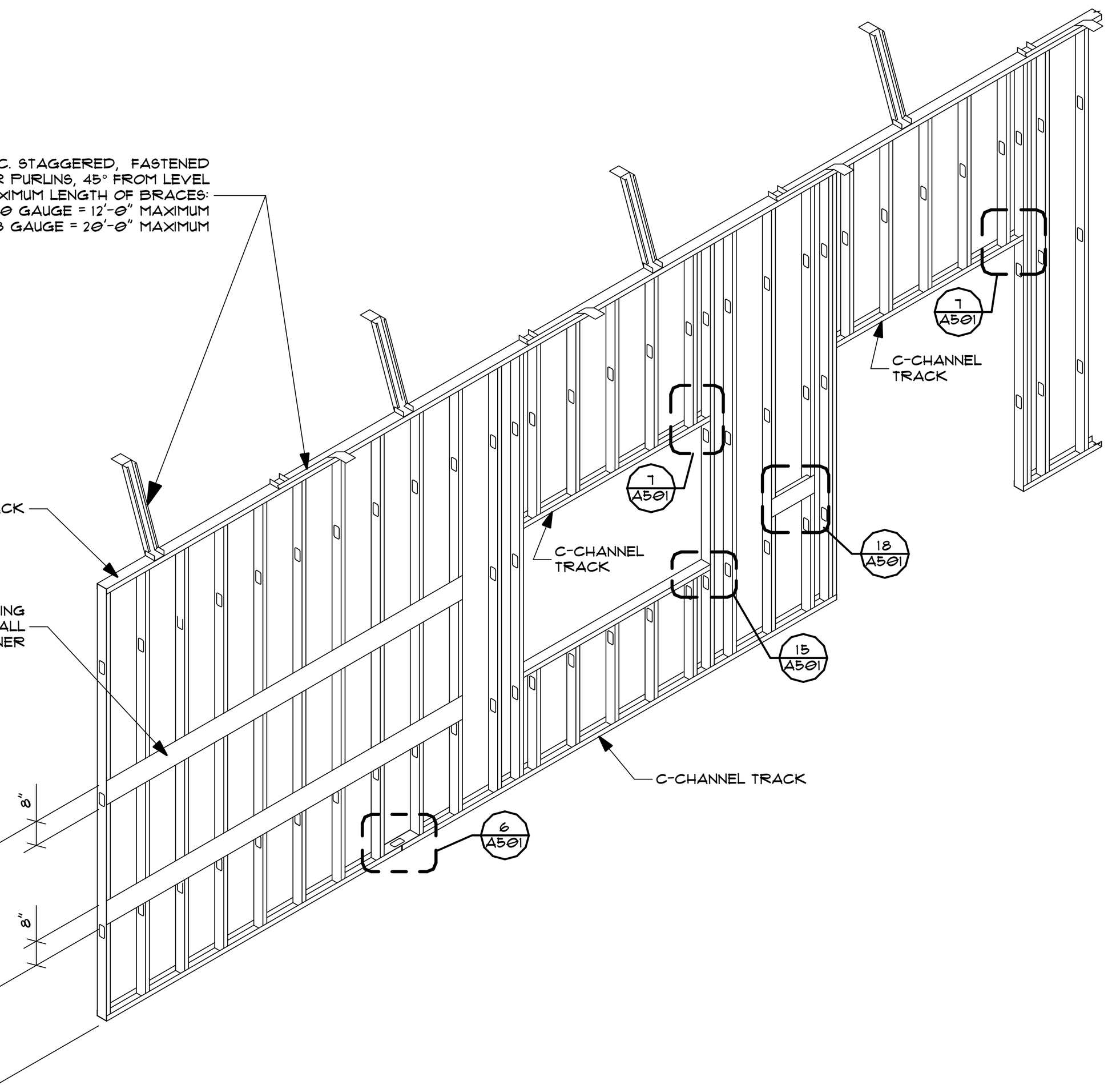
BGWARCHITECTS
Innovative design. Stewardship driven.

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

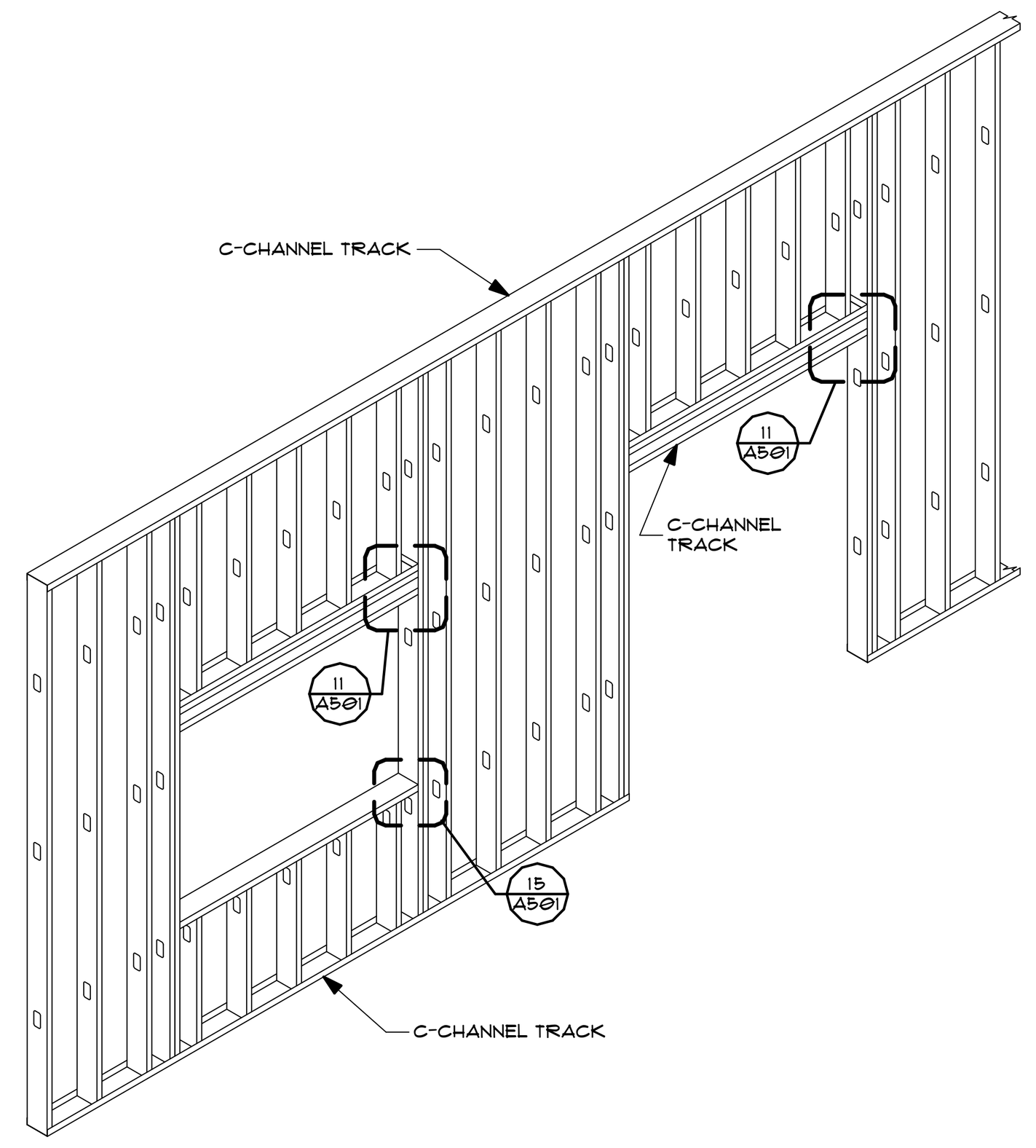
SHEET TITLE:
LARGE LOBBY PLAN

SHEET NUMBER:
A404

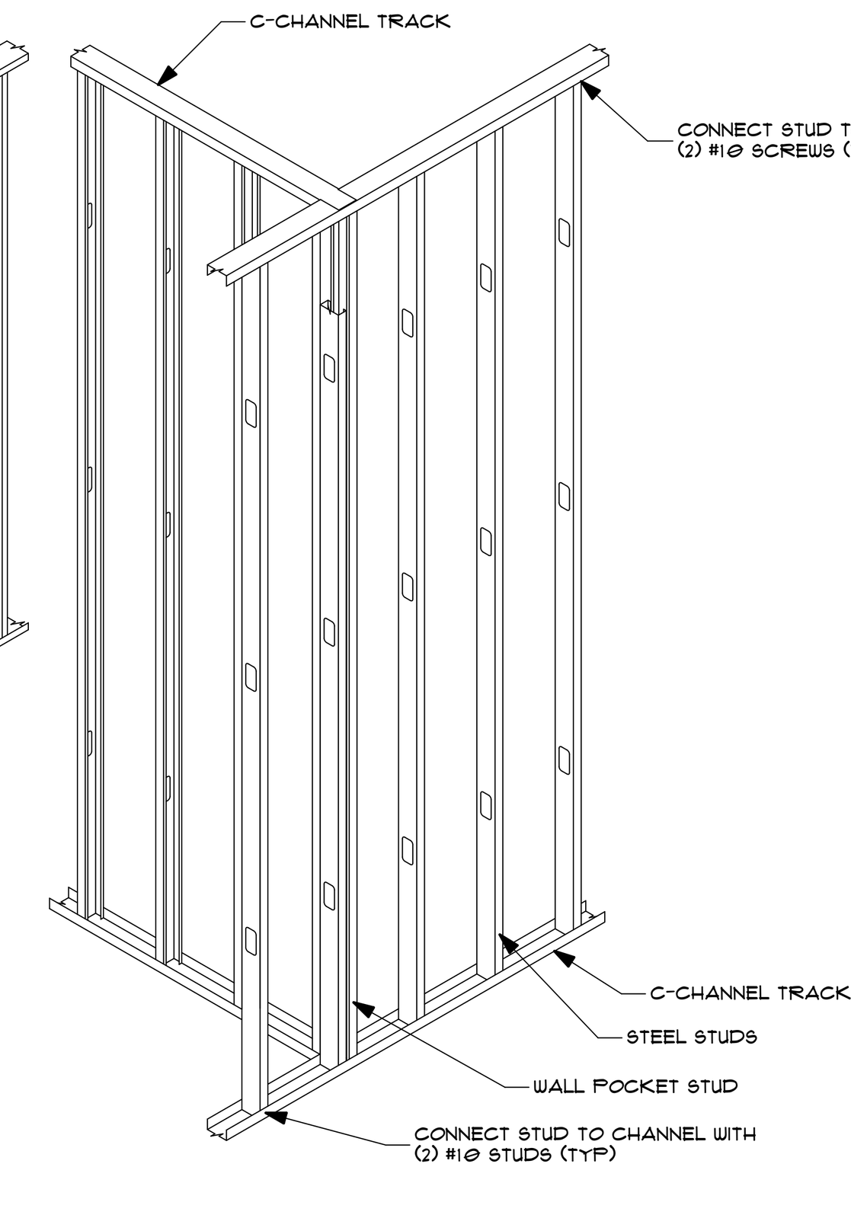
DO NOT SCALE DRAWING



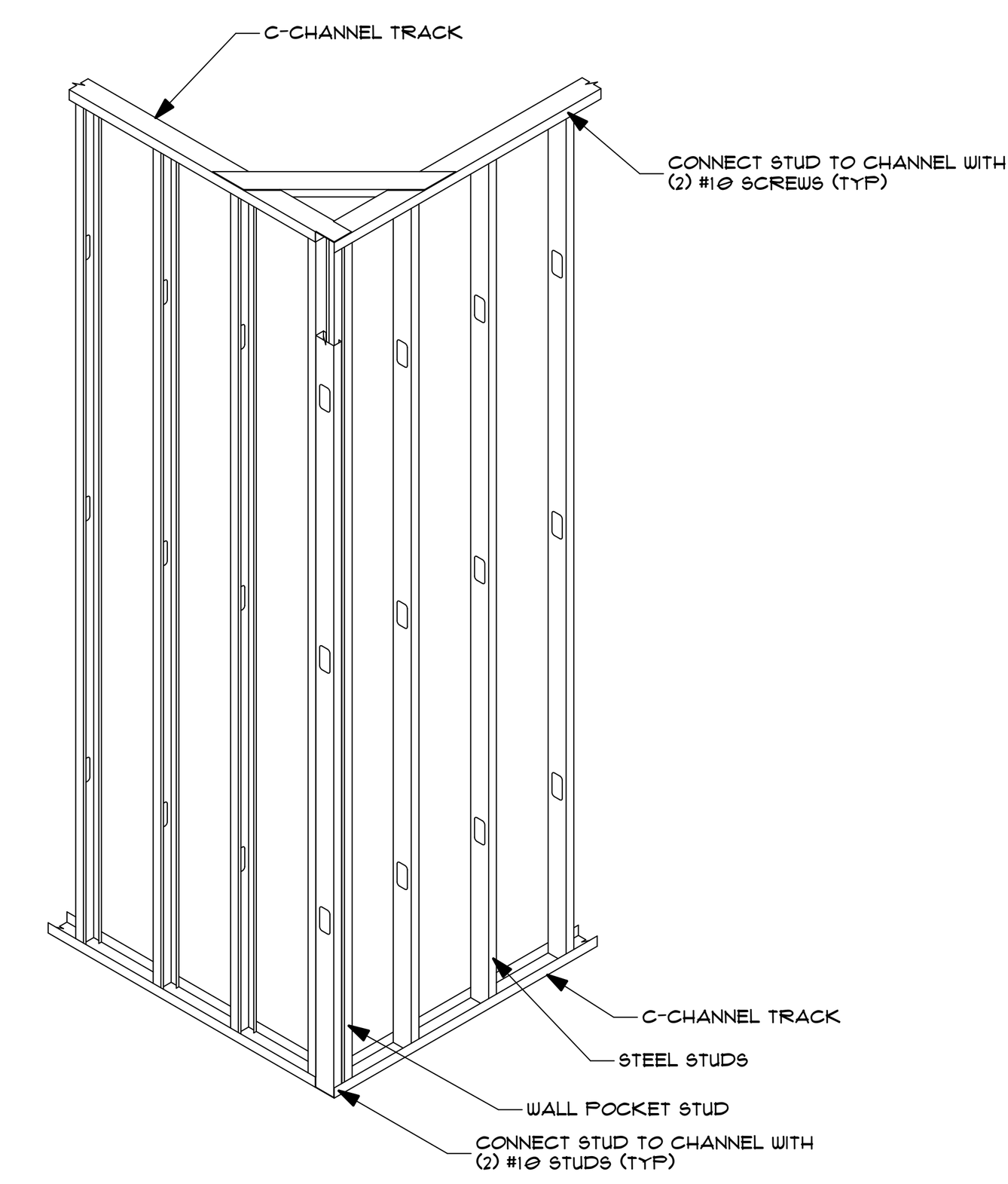
1 INTERIOR WALL SECTION
SCALE: N.T.S.



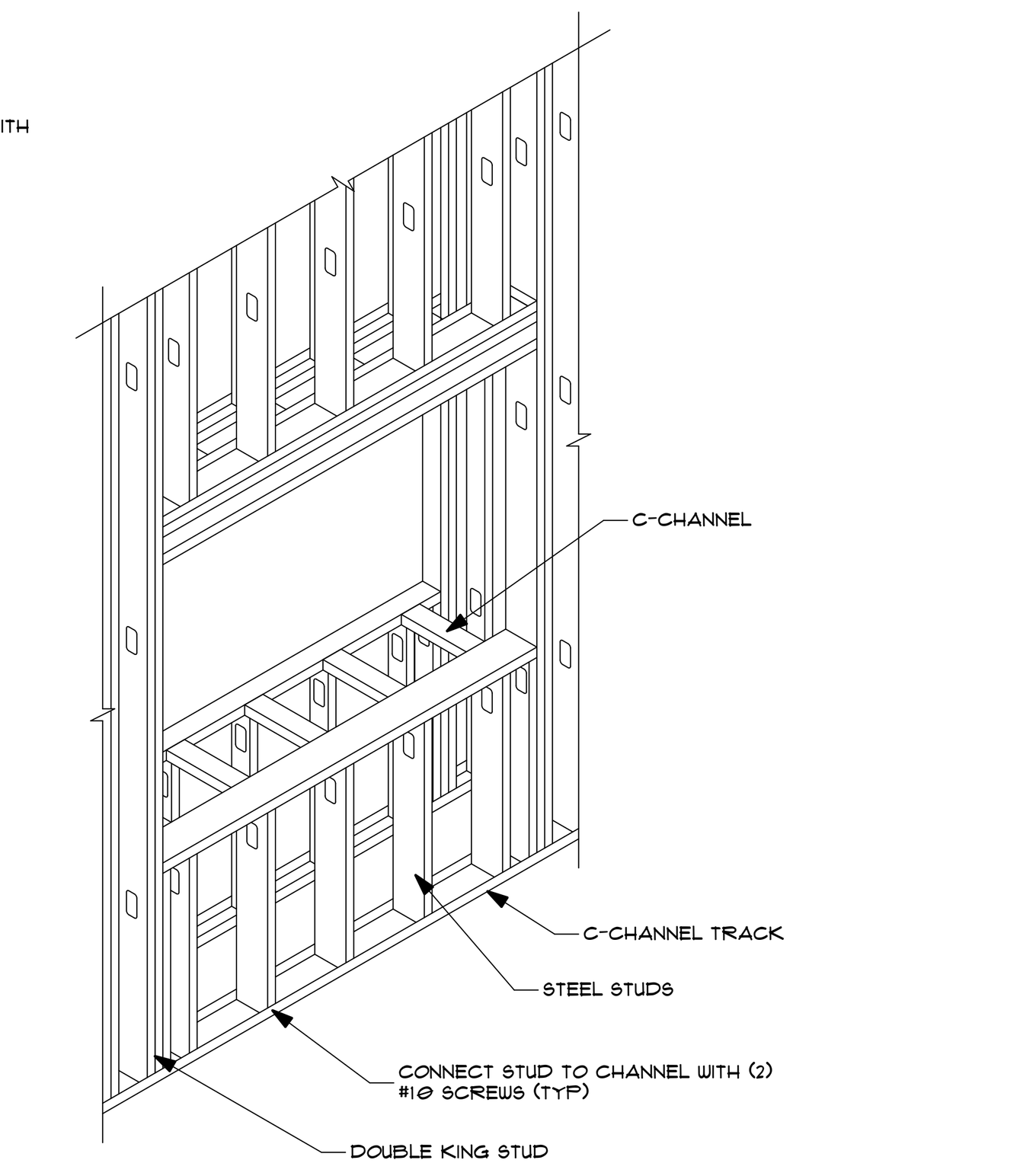
2 EXTERIOR WALL SECTION
SCALE: N.T.S.



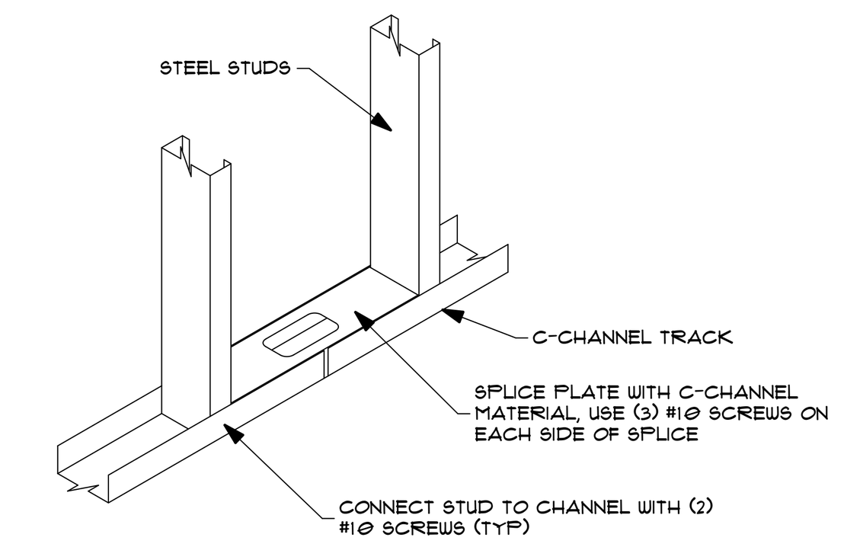
3 INTERSECTING WALL DETAIL
SCALE: N.T.S.



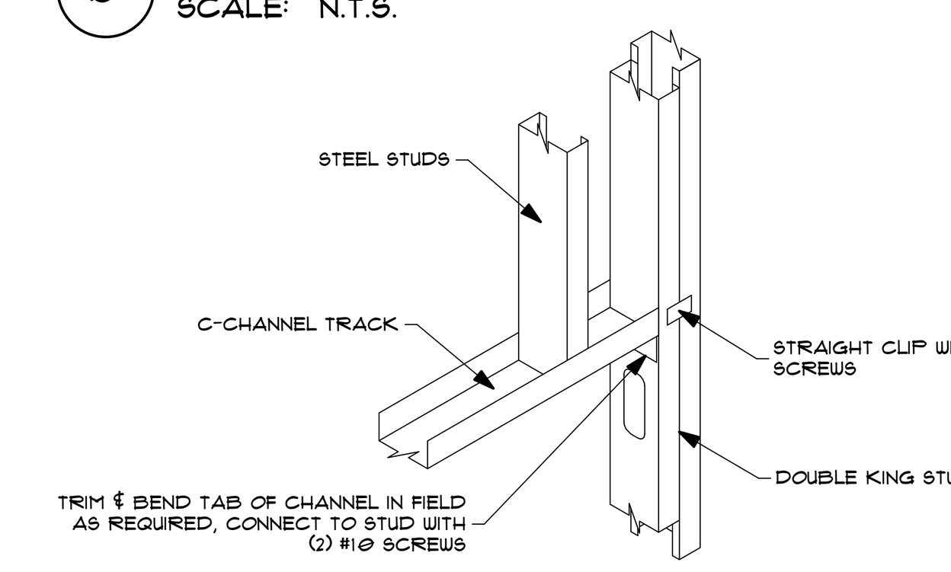
4 END WALL DETAIL
SCALE: N.T.S.



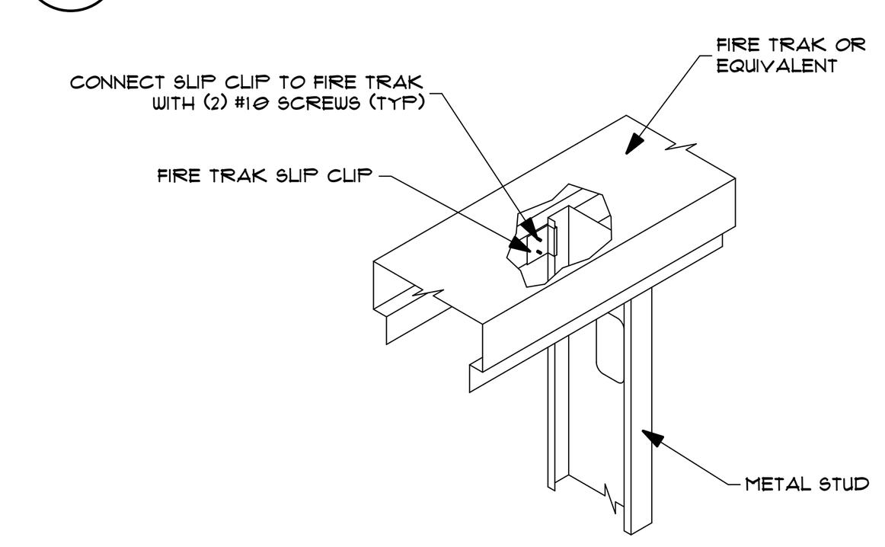
5 WINDOW DETAIL AT CROSS BRACING
SCALE: N.T.S.



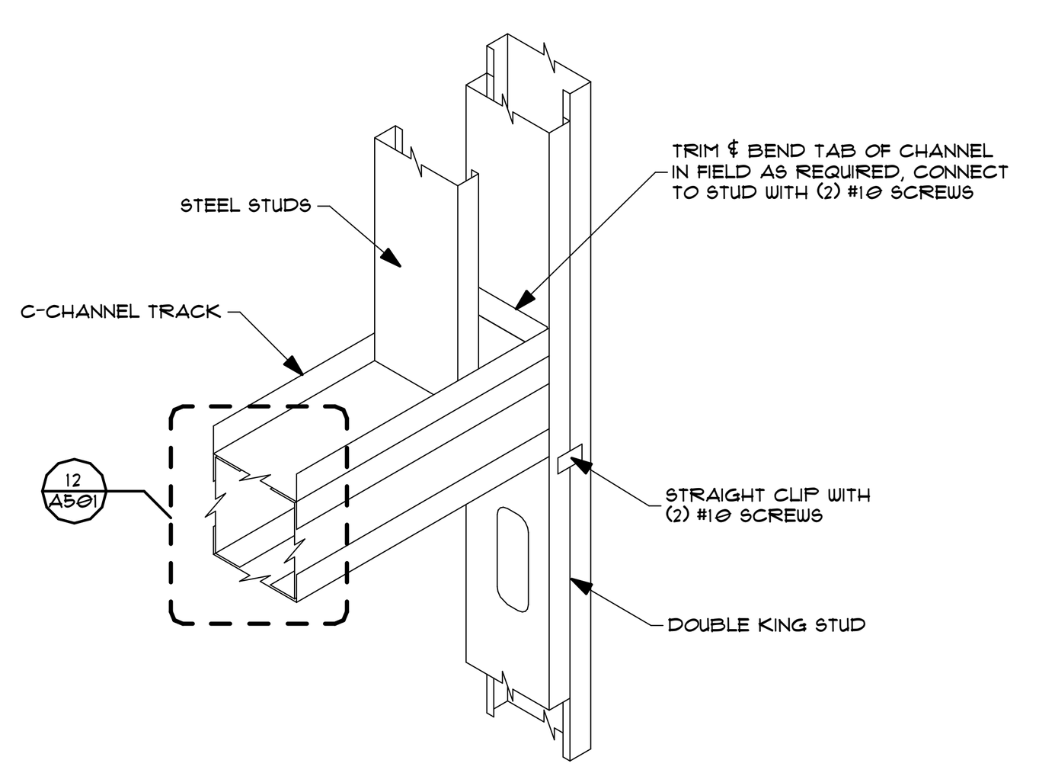
6 TRACK SPLICE
SCALE: N.T.S.



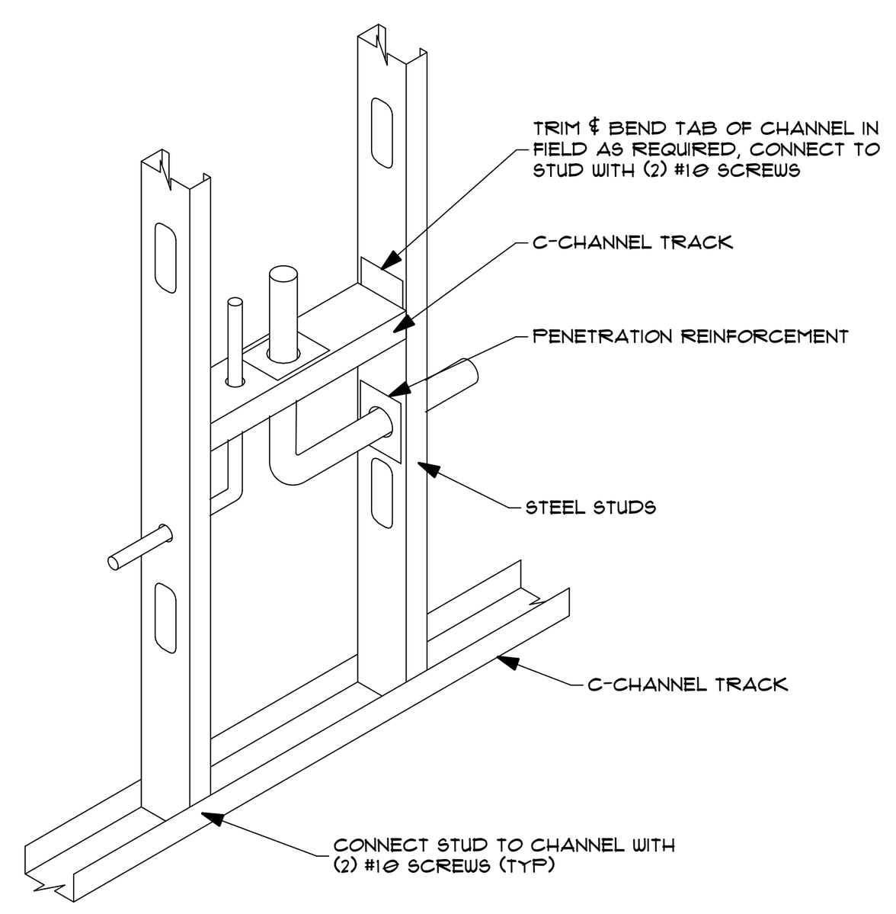
7 HEADER DETAIL
SCALE: N.T.S.



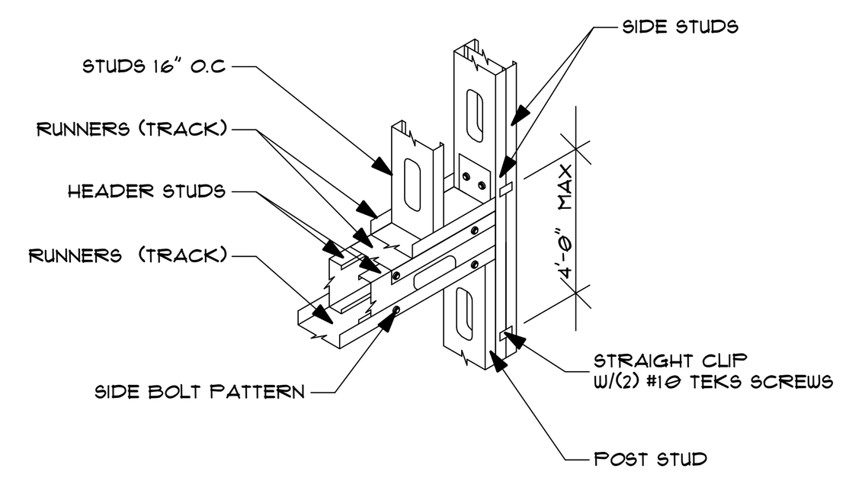
8 FIRE TRACK AT WALL HEAD
SCALE: N.T.S.



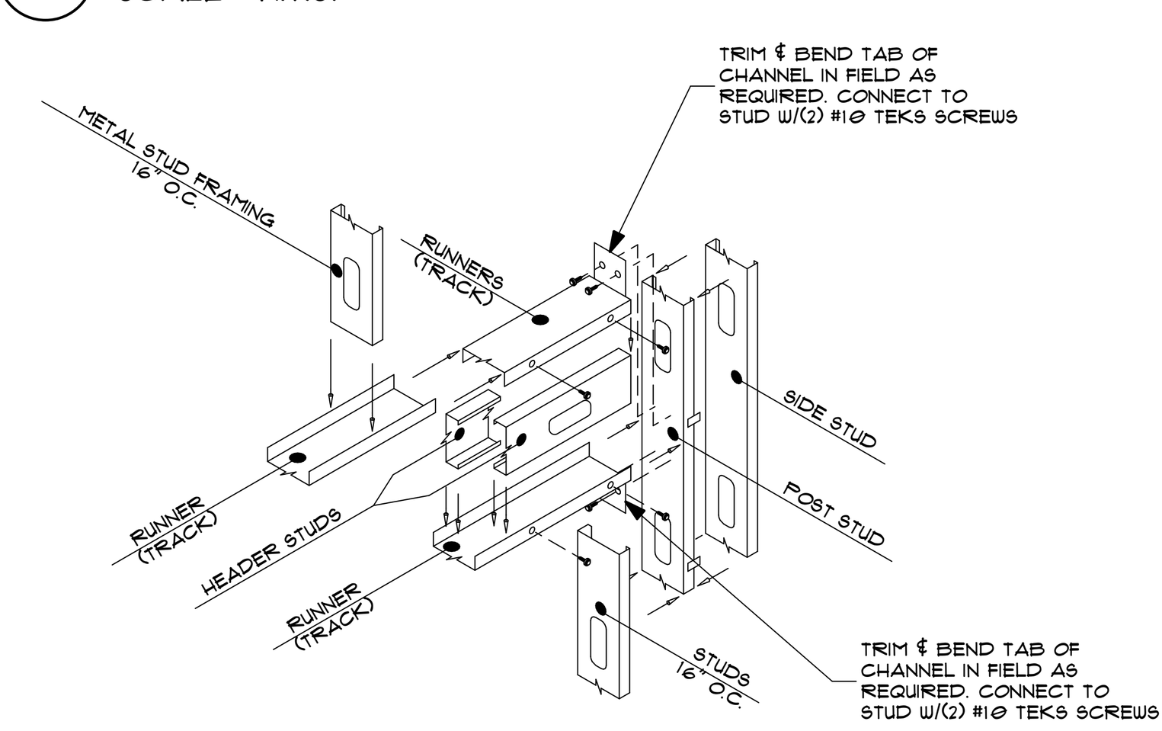
9 HEADER DETAIL
SCALE: N.T.S.



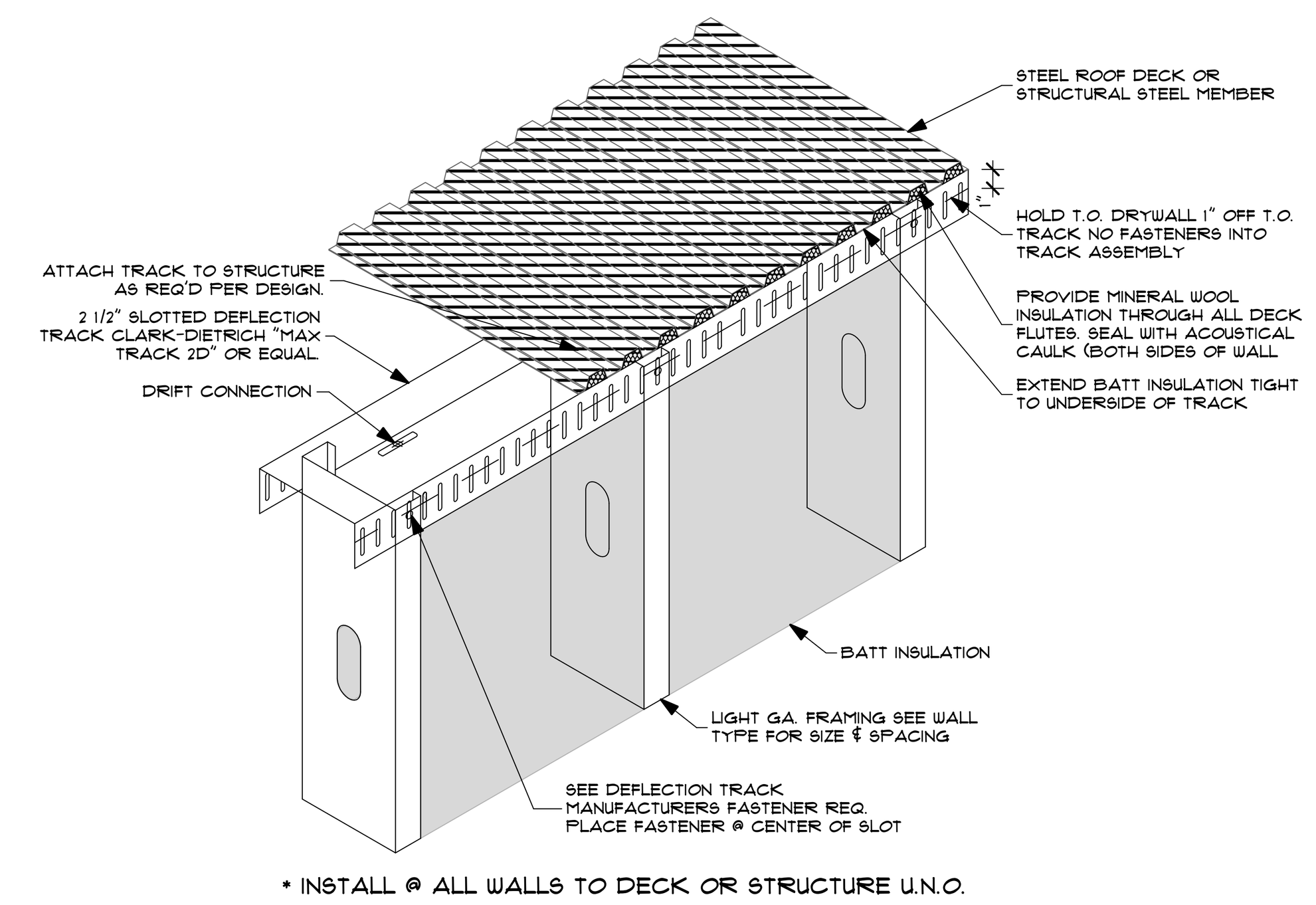
10 TYPICAL FRAMING PENETRATION
SCALE: N.T.S.



11 HEADER ASSEMBLY
SCALE: N.T.S.

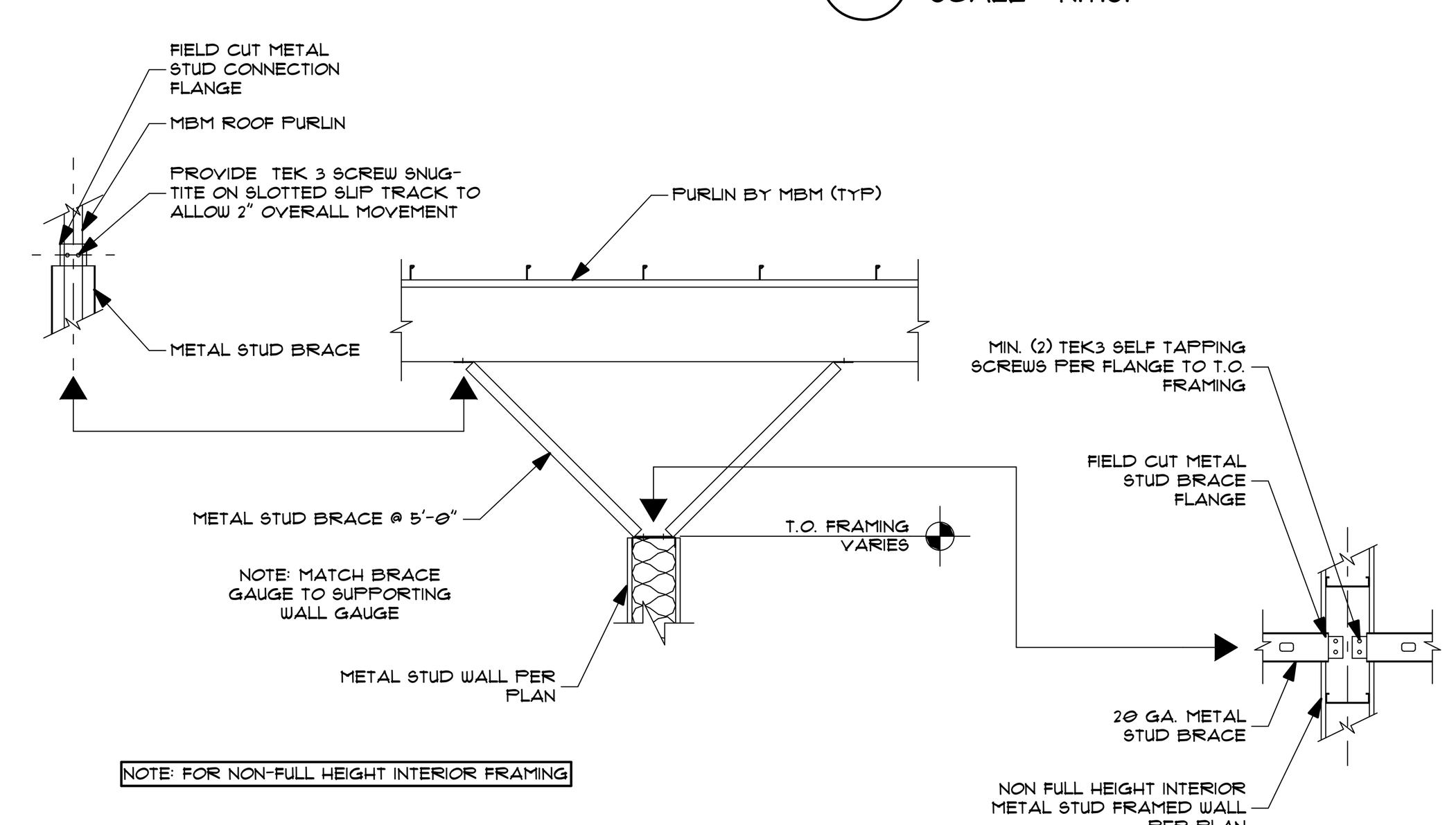


12 HEADER ASSEMBLY, EXPLODED
SCALE: N.T.S.

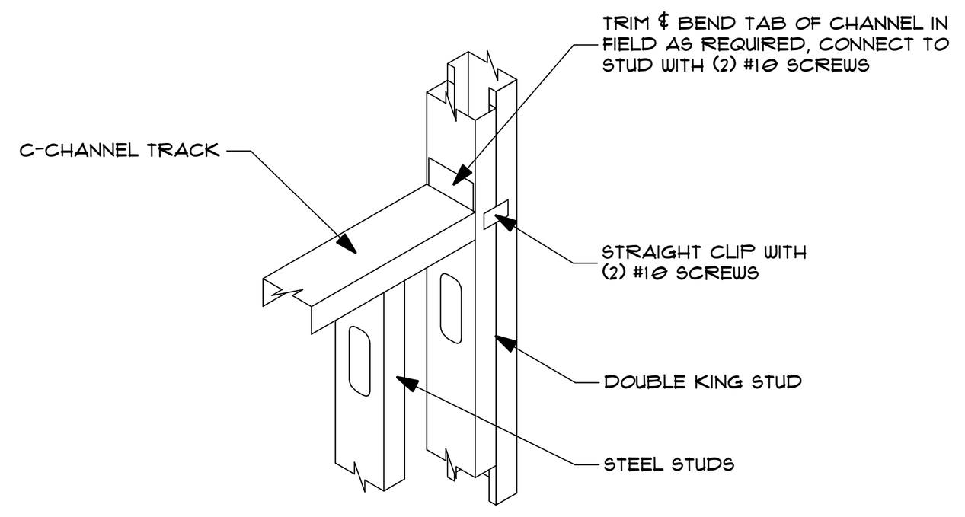


* INSTALL @ ALL WALLS TO DECK OR STRUCTURE U.N.O.

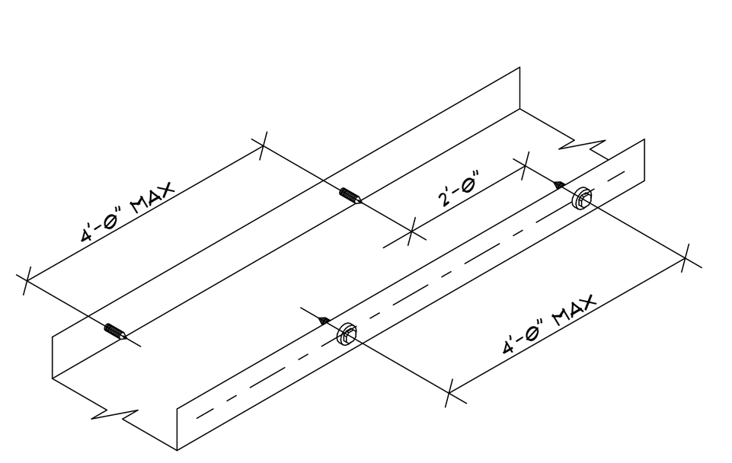
13 HEAD OF WALL DEFLECTION CLIP
SCALE: 1/8" = 1'-0"



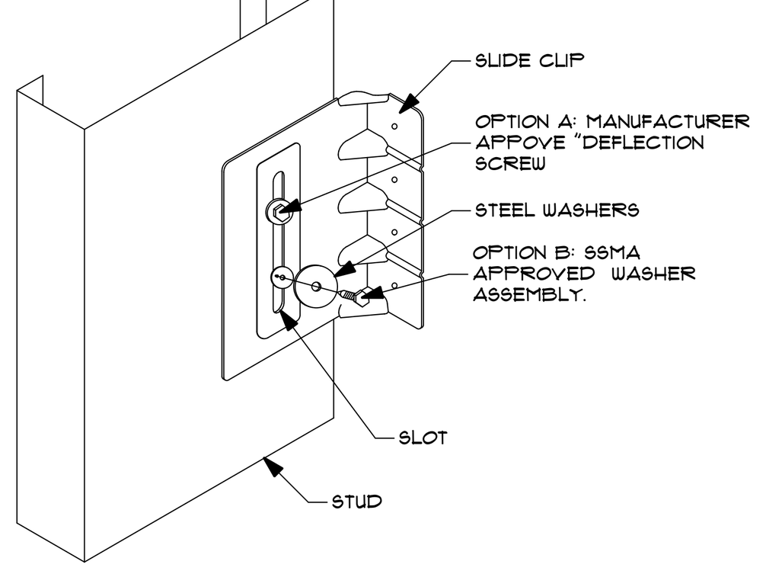
14 VERT BRACE (NON-FULL HEIGHT)
SCALE: N.T.S.



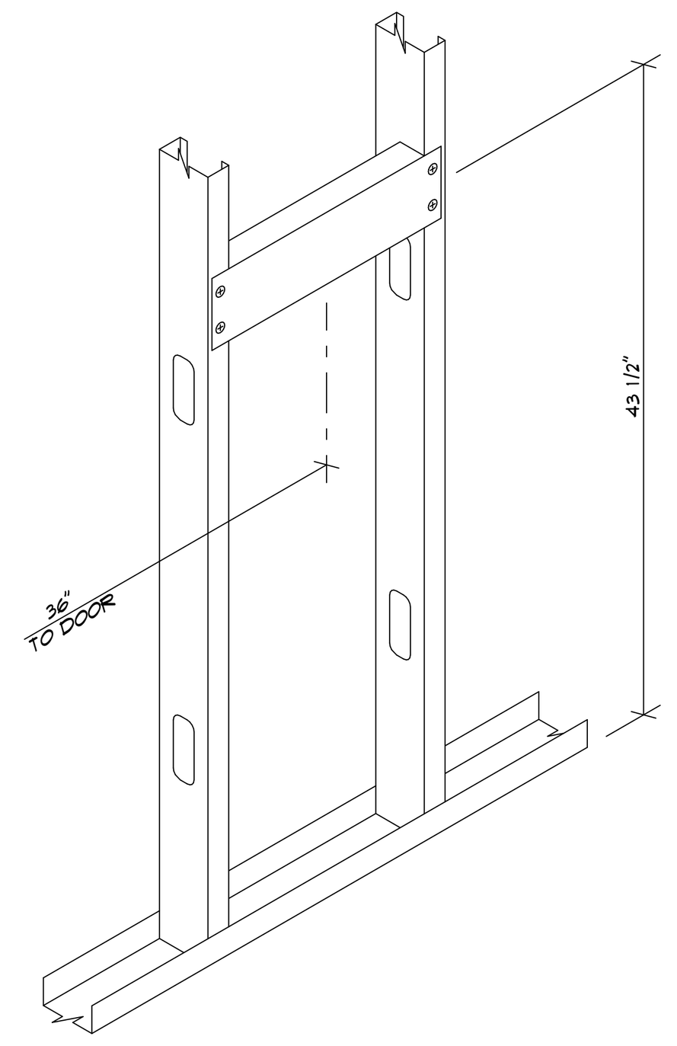
15 SILL DETAIL
SCALE: N.T.S.



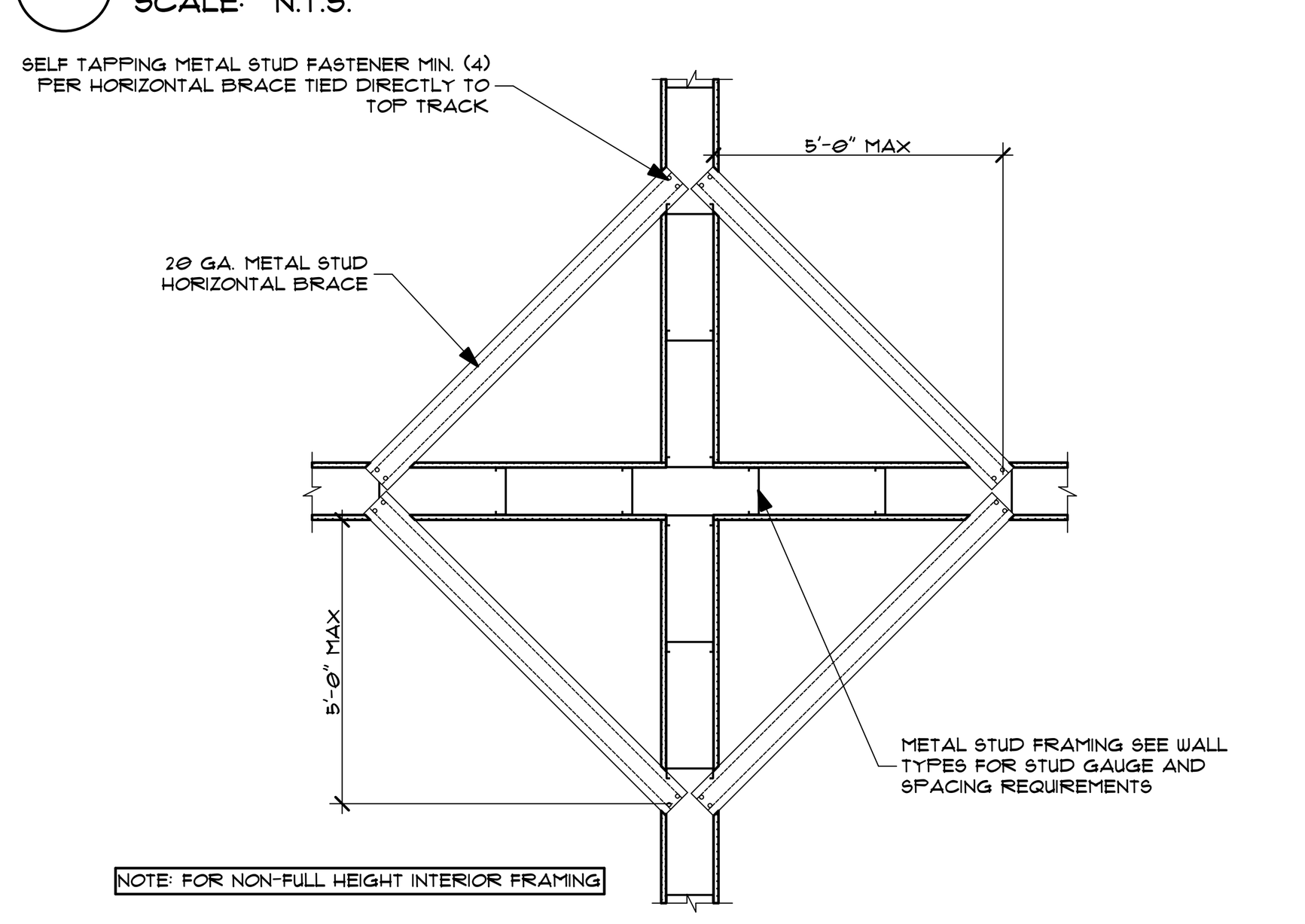
16 BOLT PATTERN
SCALE: N.T.S.



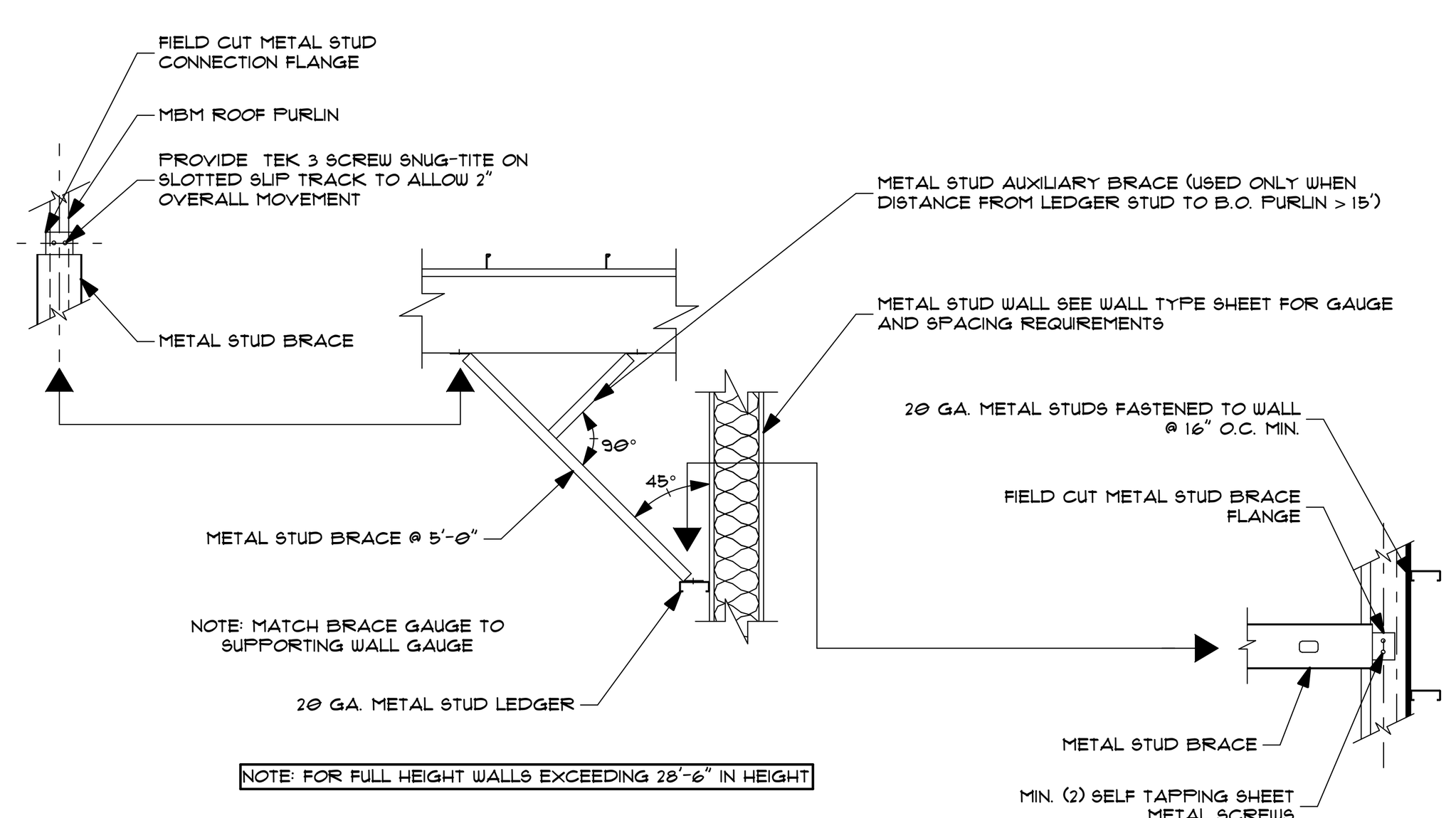
17 DEFLECTION CLIP
SCALE: 3" = 1'-0"



18 DOOR KNOB BLOCKING DETAIL
SCALE: N.T.S.

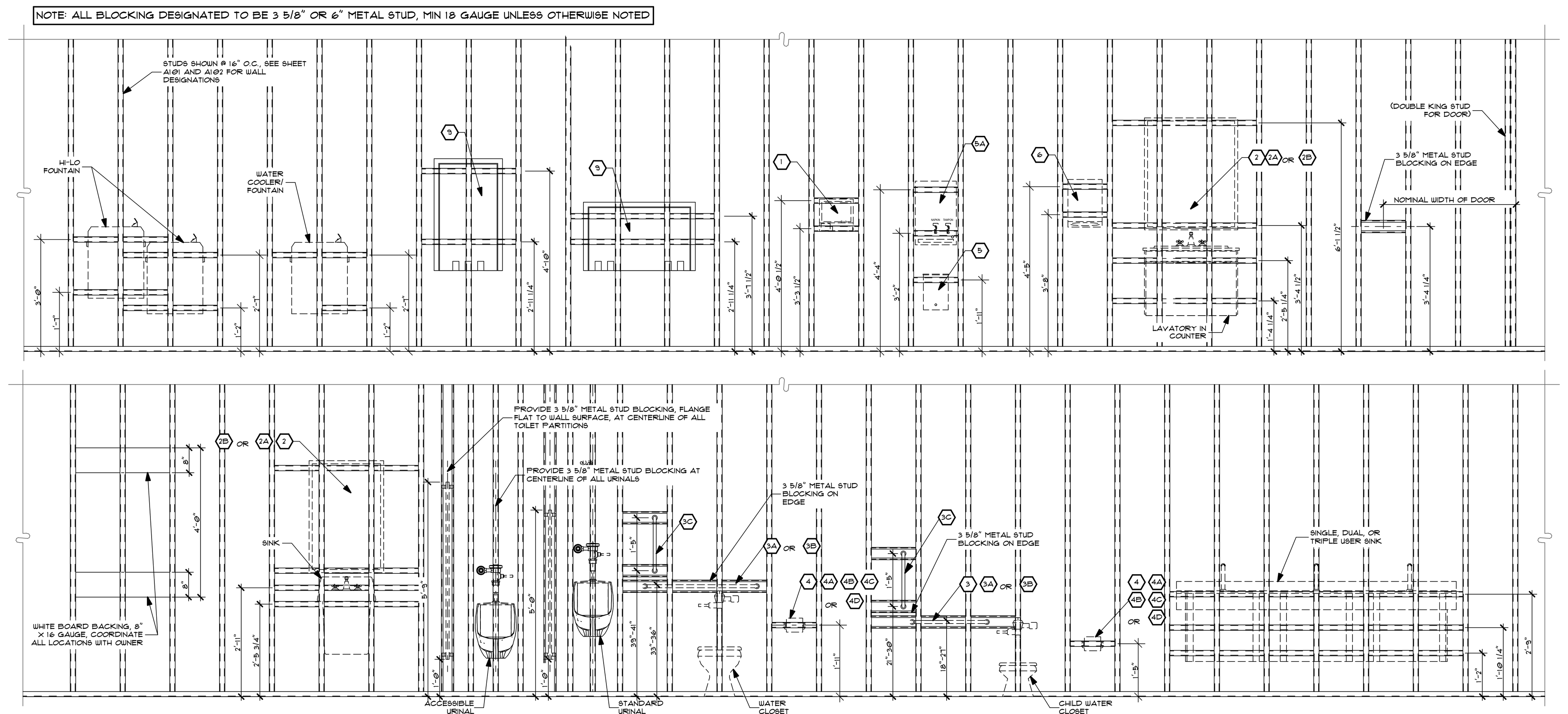


19 HORIZ BRACE (NON-FULL HEIGHT)
SCALE: N.T.S.



20 VERT BRACE (FULL HEIGHT)
SCALE: N.T.S.

NOTE: ALL BLOCKING DESIGNATED TO BE 3 5/8" OR 6" METAL STUD, MIN 18 GAUGE UNLESS OTHERWISE NOTED



21 FIXTURE BLOCKING REQUIREMENTS
SCALE: 3/8" = 1'-0"

RESTROOM FIXTURE SCHEDULE		
ID	DESCRIPTION	MODEL NUMBER
2A	MIRROR, 24"X36"	ASI MODEL #0620-2436
3A	GRAB BAR, 36"	ASI MODEL #3701-36
3B	GRAB BAR, 42"	ASI MODEL #3701-42
3C	VERTICAL GRAB BAR, 18"	ASI MODEL #3701-18
4A	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, SURFACE MOUNTED	ASI MODEL #0030
4B	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, RECESSED	ASI MODEL #0031
4C	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, PARTITION MOUNTED	ASI MODEL #0032
5A	WASTE DISPOSAL - 1 GAL - SURFACE MOUNTED	ASI MODEL #20852
6A	PAPER TOWEL DISPENSER - MULTI, C-FILD - SURFACE MOUNTED	ASI MODEL #0210
7A	SOAP DISPENSER - LIQUID, VERTICAL, VALVE - 40 OZ. - SURFACE MOUNTED	ASI MODEL #0347
10A	TOILET SEAT COVER DISPENSER - SURFACE MOUNTED	ASI MODEL #0477-SM

PLUMBING FIXTURE SCHEDULE (REF PLUMBING)	
ID	DESCRIPTION
DF-2	WATER COOLER (BI-LEVEL, ADA)
DF-2B	WATER COOLER W/BOTTLE FILLER
JS-2	MOP SINK
KS-1TG	SINK
LV-3MA	WALL HUNG LAVATORY
LV-3MA	
WC-6	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6A	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6C	CHILDS MANUAL FLUSH VALVE WATER CLOSET
WH	WATER HEATER

BH5-* DOOR OPENINGS WITH 5'-0" OF WALL ABOVE (WALL WT. = 15PSF X 5'-0" = 75PLF)

		HEADER STUDS				RUNNERS			4" SIDE MEMBERS				6" SIDE MEMBERS				# POST STUDS
MARK	SPAN	NO.	DEPTH	GAGE	FLANGE	NO.	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	4" OR 6"
BH5-0	0' - 3'	NO BOX HEADER WITH THIS SPAN JUST A SINGLE TRACK															
BH5-1	3' - 6'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-2	6' - 8'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-3	8' - 10'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-4	10' - 12'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-5	12' - 14'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-6	14' - 16'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-7	16' - 18'	2	6	14	1 5/8"	3	14	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1
BH5-8	19'	2	6	14	1 5/8"	3	14	1 1/2"	1	4	20	1 3/8"	1	6	20	1 3/8"	1

BH10-* DOOR OPENINGS WITH 10'-0" OF WALL ABOVE (WALL WT. = 15PSF X 10'-0" = 150PLF)

		HEADER STUDS				RUNNERS			4" SIDE MEMBERS				6" SIDE MEMBERS				# POST STUDS
MARK	SPAN	NO.	DEPTH	GAGE	FLANGE	NO.	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	4" OR 6"
BH10-0	0' - 3'	NO BOX HEADER WITH THIS SPAN JUST A SINGLE TRACK															
BH10-1	3' - 6'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	18	1 3/8"	1	6	20	1 3/8"	1
BH10-2	6' - 8'	2	6	16	1 5/8"	3	16	1 1/2"	1	4	16	1 5/8"	1	6	20	1 3/8"	1
BH10-3	8' - 10'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	1 5/8"	1	6	20	1 3/8"	1
BH10-4	10' - 12'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	1 5/8"	1	6	20	1 3/8"	1
BH10-5	12' - 14'	2	6	14	1 5/8"	3	14	1 1/2"	2	4	16	1 5/8"	1	6	18	1 3/8"	1
BH10-6	14' - 16'	2	8	14	1 5/8"	3	14	1 1/2"	2	4	16	1 5/8"	1	6	18	1 3/8"	1
BH10-7	16' - 18'	2	8	12	1 5/8"	3	12	1 1/2"	2	4	16	1 5/8"	1	6	18	1 3/8"	1
BH10-8	19'	2	8	12	1 5/8"	3	12	1 1/2"	2	4	16	1 5/8"	1	6	18	1 3/8"	1

BH15-* DOOR OPENINGS WITH 15'-0" OF WALL ABOVE (WALL WT. = 15PSF X 15'-0" = 225PLF)

		HEADER STUDS				RUNNERS			4" SIDE MEMBERS				6" SIDE MEMBERS				# POST STUDS
MARK	SPAN	NO.	DEPTH	GAGE	FLANGE	NO.	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	4" OR 6"
BH15-0	0' - 3'	NO BOX HEADER WITH THIS SPAN JUST A SINGLE TRACK															
BH15-1	3' - 6'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	1 5/8"	1	6	20	1 3/8"	1
BH15-2	6' - 8'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	1 5/8"	1	6	16	1 3/8"	1
BH15-3	8' - 10'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	2"	1	6	16	1 5/8"	1
BH15-4	10' - 12'	2	6	14	1 5/8"	3	14	1 1/2"	3	4	16	2"	1	6	16	1 5/8"	1
BH15-5	12' - 14'	2	8	14	1 5/8"	3	14	1 1/2"	3	4	16	2"	2	6	16	1 5/8"	1
BH15-6	14' - 16'	2	8	12	1 5/8"	3	12	1 1/2"	3	4	14	2"	2	6	16	1 5/8"	1
BH15-7	16' - 18'	2	10	12	1 5/8"	3	12	1 1/2"	3	4	14	2"	2	6	16	1 5/8"	1
BH15-8	19'	2	12	12	1 5/8"	3	12	1 1/2"	3	4	12	2"	2	6	16	1 5/8"	1

BH20-* DOOR OPENINGS WITH 20'-0" OF WALL ABOVE (WALL WT. = 15PSF X 20'-0" =300PLF)

		HEADER STUDS				RUNNERS			4" SIDE MEMBERS				6" SIDE MEMBERS				# POST STUDS
MARK	SPAN	NO.	DEPTH	GAGE	FLANGE	NO.	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	4" OR 6"
BH20-1	0' - 6'	2	6	16	1 5/8"	3	16	1 1/2"	2	4	16	2"	1	6	16	1 3/8"	1
BH20-2	6' - 8'	2	6	16	1 5/8"	3	16	1 1/2"	3	4	16	2"	2	6	16	1 3/8"	1
BH20-3	8' - 10'	2	6	14	1 5/8"	3	14	1 1/2"	3	4	14	2"	2	6	16	1 3/8"	1
BH20-4	10' - 12'	2	8	14	1 5/8"	3	14	1 1/2"	3	4	12	2"	2	6	16	1 3/8"	1
BH20-5	12' - 14'	2	8	12	1 5/8"	3	12	1 1/2"	3	4	12	2"	2	6	16	1 5/8"	1
BH20-6	14' - 16'	2	10	12	1 5/8"	3	12	1 1/2"	3	4	12	2"	3	6	16	1 5/8"	1
BH20-7	16' - 18'	2	12	12	1 5/8"	3	12	1 1/2"	4	4	12	2"	3	6	16	2"	1
BH20-8	19'	2	12	12	2"	3	12	1 1/2"	4	4	12	2"	3	6	16	2"	1

BH25-* DOOR OPENINGS WITH 25'-0" OF WALL ABOVE (WALL WT. = 15PSF X 25'-0" =375PLF)

		HEADER STUDS				RUNNERS			4" SIDE MEMBERS				6" SIDE MEMBERS				# POST STUDS
MARK	SPAN	NO.	DEPTH	GAGE	FLANGE	NO.	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	NO.	DEPTH	GAGE	FLANGE	4" OR 6"
BH25-1	0' - 6'	2	6	16	1 5/8"	3	16	1 1/2"	3	4	14	1 5/8"	2	6	16	1 3/8"	1
BH25-2	6' - 8'	2	6	14	1 5/8"	3	14	1 1/2"	4	4	14	1 5/8"	2	6	16	1 5/8"	1
BH25-3	8' - 10'	2	8	14	1 5/8"	3	14	1 1/2"	4	4	12	2"	3	6	16	1 5/8"	1
BH25-4	10' - 12'	2	8	12	1 5/8"	3	12	1 1/2"	4	4	12	2"	3	6	16	1 5/8"	1
BH25-5	12' - 14'	2	10	12	1 5/8"	3	12	1 1/2"	5	4	12	2"	3	6	14	1 5/8"	1
BH25-6	14' - 16'	2	12	12	1 5/8"	3	12	1 1/2"	5	4	12	2"	3	6	14	1 5/8"	1
BH25-7	16' - 18'	2	12	12	2"	3	12	1 1/2"	6	4	12	2"	3	6	12	1 5/8"	1
BH25-8	19'	2	12	12	2 1/2"	3	12	1 1/2"	6	4	12	2"	3	6	12	1 5/8"	1

BGW ARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

BGW ARCHITECTS | 2327 GRANT AVE. - OGDEN, UT 84401 | PH: 800-552-1131 | WWW.BGWSERVICES.COM

SEAL:

SHEET TITLE:
STUD FRAMING, FIXTURE BLOCKING, HEADER SCHEDULE

PROJECT#: A9170
ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:
A501

DO NOT SCALE DRAWING

DOOR SCHEDULE											
DOOR ID	LOCATION	SGL/PR	WIDTH	HEIGHT	DOOR MATERIAL	DOOR TYPE	FRAME TYPE	RATING	HARDWARE GROUP	ACCESS CONTROL	MISC. (KEYNOTES AND LEGEND)
100A	HALL	SGL	7'-4"	9'-4"	AL	FG	AL	--	2	☒	GROUP B
100B	HALL	PR	6'-0"	7'-0"	AL	FG	AL	--	3.1	☒	GROUP B
100C	HALL	PR	6'-0"	7'-0"	AL	FG	AL	--	3.1	☒	GROUP B
101A	3'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
101B	3'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
102A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
103A	R.R	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
104A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
105A	4'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
105B	4'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
106A	4'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
106B	4'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
107A	3'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
107B	3'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
108A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
109A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
110A	4'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
110B	4'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
111A	3'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
111B	3'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
112A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
113A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
114A	2'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
114B	2'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
115A	CORR.	PR	6'-0"	7'-0"	HM	FG	HM	--	6	☒	GROUP A
115B	CORR.	PR	6'-0"	7'-0"	AL	FG	AL	--	6	☒	GROUP A
116A	R.R.	SGL	3'-0"	7'-0"	HM	FG	HM	--	9	☐	
117A	R.R.	SGL	3'-0"	7'-0"	HM	FG	HM	--	9	☐	
118A	R.R.	SGL	3'-0"	7'-0"	HM	FG	HM	--	9	☐	
119A	R.R.	SGL	3'-0"	7'-0"	HM	FG	HM	--	9	☐	
120B	MOTOR SKILLS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
120A	MOTOR SKILLS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
121A	2'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
121B	2'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
122A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
123A	R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
124A	2'S CLASS	SGL	3'-0"	7'-0"	AL	FG	AL	--	4	☒	GROUP A
124B	2'S CLASS	SGL	3'-0"	7'-0"	AL	F	AL	--	2	☒	GROUP B
125A	STG.	SGL	3'-0"	7'-0"	HM	F	HM	--	5	☒	GROUP A
126A	FACULTY R.R.	SGL	3'-0"	7'-0"	HM	F	HM	--	9	☐	
127.1A	MOTOR SKILLS	SGL	3'-0"	7'-0"	AL	F	AL	--	3	☐	
127A	LAUNDRY/UTILITY	SGL	3'-0"	7'-0"	HM	F	HM	--	10	☐	
128A	FACULTY	SGL	3'-0"	7'-0"	AL	FG	AL	--	5	☒	GROUP A
129A	SICK	SGL	3'-0"	7'-0"	HM	F	HM	--	5	☒	GROUP A
130A	RESOURCE	SGL	3'-0"	7'-0"	HM	NL	HM	--	7	☐	
131A	VEST.	PR	6'-0"	8'-0"	AL	FG	AL	--	1	☒	GROUP B
131B	VEST.	PR	6'-0"	8'-0"	AL	FG	AL	--	8	☐	
134A	OFFICE	SGL	3'-0"	7'-0"	AL	FG	AL	--	5	☒	GROUP A
135A	OFFICE	SGL	3'-0"	7'-0"	AL	FG	AL	--	5	☒	GROUP A

ACCESS CONTROL HARDWARE

GROUP A — CARD READER
ELECTRIC STRIKE (UNLESS THERE IS A PANIC)

GROUP B — CARD READER
CAMERA
MOTORIZED LATCH RETRACTION PANIC

Manufacturer List

Code Name
AB ABH Manufacturing Inc.
BE Best Access Systems
BY By Others
DM Dorma Door Controls
NA National Guard
RC RCI
ST BEST Hinges and Sliding
TR Trimco

Option List

Code Description
1/4-20 SSMS/EA Stainless Machine Screws w/Expansion Anchors
B4E Beveled 4 Edges
BSHD Blade Stop Spacer - Heavy Duty Arms
CD Cylinder Dogging
CMK Construction Master Keyed
CSK Counter Sunk Screw Holes
DP89 Drop Plate
LB Less Bottom Rod
LM/MS Latch & Touchbar Monitor
MLR Motorized Latch Retraction
N Stainless Steel Components
PT Power Transfer
SIA Abrasive Coating

Finish List

Code Description
15 Satin Nickel Plate
32D Satin Stainless Steel
619 Satin Nickel Plated, Clear Coated
626 Satin Chromium Plated
689 Aluminum Painted
AL Aluminum
US28 Aluminum - Clear Anodized
US32D Stainless Steel, Dull

Hardware Sets

Set #1.0
Doors: 131A
2 Continuous Hinge A150HDC PT AB
1 Exit Device 9600AA LB LM/MS MLR 619 DM
1 Exit Device 9600AA CD LB LM/MS 619 DM
1 Exit Device Trim ZR02R 619 DM
1 Exit Device Trim ZR03R 619 DM
1 Mortise Cylinder 1E-74 PATD 619 BE
1 Rim Cylinder 12E-72 PATD 619 BE
2 Door Closer 8916 SPA BSHD DP89 689 DM
2 Overhead Stop N9024 RA US32D AB
1 Card Reader by Owners Security Integrator BY
1 Integral Weatherstripping Provided by Door/Frame Mfg. BY
2 Power Transfer PT1000EZ US28 AB
2 Wire Harness EZDK-12-1 AB
2 Wire Harness EZDK-44-1 AB
1 Power Supply DKPS-2A RC
1 Drip Cap 16A - 4" ODW NA
1 Handicap Threshold 713A 1/4-20 SSMS/EA SIA AL NA
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #2.0
Doors: 100A, 101B, 105B, 106B, 107B, 110B, 111B, 114B, 120B, 121B, 124B
1 Continuous Hinge A150HDC PT AB
1 Exit Device 9700AA LM/MS MLR 619 DM
1 Exit Device Trim ZR03R 619 DM
1 Rim Cylinder 12E-72 PATD 619 BE
1 Door Closer 8916 SPA BSHD DP89 689 DM
1 Overhead Stop N9024 RA US32D AB
1 Card Reader by Owners Security Integrator BY
1 Integral Weatherstripping Provided by Door/Frame Mfg. BY
1 Power Transfer PT1000EZ US28 AB
1 Wire Harness EZDK-12-1 AB
1 Wire Harness EZDK-44-1 AB
1 Power Supply DKPS-2A RC
1 Drip Cap 16A - 4" ODW NA
1 Handicap Threshold 713A 1/4-20 SSMS/EA SIA AL NA
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #3.0
Doors: 127.1A
3 Hinges FBB191 4.5" x 4.5" NRP 32D ST
1 Storeroom Lockset M1980T LRB 619 DM
1 Permanent Core 1C-7A2 626 BE
1 Overhead Stop N9024 RA US32D AB
1 Drip Cap 16A - 4" ODW NA
1 Weatherstrip 160SA Head & Jambs NA
1 Door Sweep 200NA NA
1 Handicap Threshold 713A 1/4-20 SSMS/EA SIA AL NA

Set #3.1
Doors: 100B, 100C
3 Hinges FBB191 4.5" x 4.5" NRP 32D ST
1 Exit Device 9300AA LM/MS MLR 619 DM
1 Exit Device Trim YR03R 619 DM
1 Rim Cylinder 12E-72 PATD 619 BE
1 Door Closer 8916 SPA 689 DM
1 Overhead Stop N9024 RA US32D AB
1 Card Reader by Owners Security Integrator BY
1 Power Transfer PT1000EZ US28 AB
1 Wire Harness EZDK-12-1 AB
1 Wire Harness EZDK-44-1 AB
1 Power Supply DKPS-2A RC
1 Drip Cap 16A - 4" ODW NA
1 Weatherstrip 160SA Head & Jambs NA
1 Door Sweep 200NA NA
1 Handicap Threshold 713A 1/4-20 SSMS/EA SIA AL NA
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #4.0
Doors: 101A, 105A, 106A, 107A, 110A, 111A, 114A, 120A, 121A, 124A
1 Continuous Hinge A150HDC PT AB
1 Office/Entry Lockset M1953T LRB CMK 619 DM
1 Permanent Core 1C-7A2 626 BE
1 Electric Strike 2364 32D RC
1 Door Closer 8916 AF89P 689 DM
1 Overhead Stop N9024 RA US32D AB
1 Card Reader by Owners Security Integrator BY
1 Integral Weatherstripping Provided by Door/Frame Mfg. BY
1 Power Supply DKPS-2A RC
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #5.0
Doors: 125A, 128A, 129A, 134A, 135A
3 Butt Hinge FBB179 4.5" x 4.5" 15 ST
1 Storeroom Lockset C180T LRC CMK 619 DM
1 Permanent Core 1C-7A2 626 BE
1 Electric Strike 2364 32D RC
1 Door Closer 8916 AF89P 689 DM
1 Overhead Stop N9024 RA US32D AB
1 Kick Plate K0050 10" X 2" LDW B4E CSK 619 TR
1 Card Reader by Owners Security Integrator BY
1 Power Supply DKPS-2A RC
1 Gasketing 5050B Head & Jambs NA
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #6.0
Doors: 115A, 115B
2 Continuous Hinge A150HDC PT AB
1 Exit Device 9600AA LB LM/MS MLR 619 DM
1 Exit Device 9600AA CD LB LM/MS 619 DM
1 Exit Device Trim ZR02R 619 DM
1 Exit Device Trim ZR03R 619 DM
1 Mortise Cylinder 1E-74 PATD 619 BE
1 Rim Cylinder 12E-72 PATD 619 BE
2 Door Closer 8916 SPA BSHD DP89 689 DM
2 Overhead Stop N9024 RA US32D AB
1 Card Reader by Owners Security Integrator BY
1 Integral Weatherstripping Provided by Door/Frame Mfg. BY
2 Power Transfer PT1000EZ US28 AB
2 Wire Harness EZDK-12-1 AB
2 Wire Harness EZDK-44-1 AB
1 Power Supply DKPS-2A RC
NOTE: Doors are normally closed and locked. Access is gained with key or valid credentials. Free egress is allowed at all times without use of keys, credentials, special knowledge or effort.

Set #7.0
Doors: 130A
3 Butt Hinge FBB179 4.5" x 4.5" 15 ST
1 Lockset C153T LRC CMK 619 DM
1 Permanent Core 1C-7A2 626 BE
1 Door Closer 8916 AF89P 689 DM
1 Overhead Stop N 4424 RA US32D AB
1 Kick Plate K0050 10" X 2" LDW B4E CSK 619 TR
1 Gasketing 5050B Head & Jambs NA

Set #8.0
Doors: 131B
2 Continuous Hinge A150HDC AB
2 Exit Device 9600AA CD LB 619 DM
1 Exit Device Trim ZR02R 619 DM
1 Exit Device Trim ZR08C 619 DM
3 Mortise Cylinder 1E-74 PATD 619 BE
2 Door Closer 8916 SPA BSHD DP89 689 DM
2 Overhead Stop N9024 RA US32D AB
1 Integral Weatherstripping Provided by Door/Frame Mfg. AB01

Set #9.0
Doors: 102A, 103A, 104A, 108A, 109A, 112A, 113A, 116A, 117A, 118A, 119A, 122A, 123A, 126A
3 Butt Hinge FBB179 4.5" x 4.5" 15 ST
1 Mortise Lockset M1047 LRB 619 DM
1 Floor Stop RM446 US32D AB
1 Gasketing 5050B Head & Jambs NA

Set #10.0
Doors: 127A
3 Butt Hinge FBB179 4.5" x 4.5" 15 ST
1 Passage Set C110 LRC 619 DM
1 Overhead Stop N 4424 RA US32D AB
1 Gasketing 5050B Head & Jambs NA

END OF SECTION

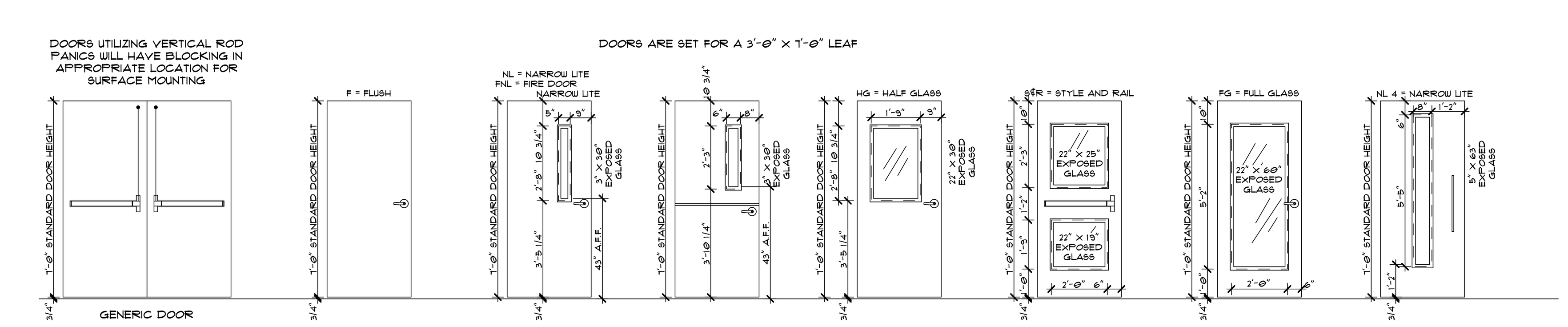
DOOR AND HARDWARE GENERAL NOTES

1. **DOOR SPECIFICATION.** SEE DOOR/HARDWARE SPECIFICATIONS FOUND IN PROJECT MANUAL FOR FULL PRODUCT DESCRIPTION AND HARDWARE SCOPE.
2. **DOOR HARDWARE MOUNTING.** DOOR HARDWARE TO BE CENTERED BETWEEN 30" AND 44" AFF.
3. **MAXIMUM OPENING FORCE.** ALL DOORS TO HAVE A MAXIMUM OPENING FORCE OF 5 LB. CONTRACTOR TO VERIFY THAT OPENING FORCE IS MAINTAINED THROUGH CONSTRUCTION.
4. **THRESHOLDS (ALL).** ALL THRESHOLDS TO BE:
   A. 1/2" MAXIMUM OVERALL PROJECTION AFF.
   B. ANY CHANGE IN LEVEL BETWEEN 1/4" TO 1/2" AFF TO BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 (RISE:RUN).
   C. CONTRACTOR TO PROTECT ALL THRESHOLDS THROUGH CONSTRUCTION. DAMAGED THRESHOLDS WILL BE BE FLAGGED FOR REPLACEMENT AT FINAL PUNCHLIST.
5. **THRESHOLDS (EXTERIOR).** ALL EXTERIOR THRESHOLDS TO BE:
   A. EMBEDDED IN CONTINUOUS SEALANT TO THE CONCRETE BUILDING SLAB.
   B. IF THRESHOLD IS USED TO SPAN BUILDING SLAB AND SITE SLAB, THE THRESHOLD SIZE TO BE INCREASED TO 8" MIN. TO PROVIDE FULL COVERAGE. INSTALLING CONTRACTOR TO MAKE DETERMINATION IN THE FIELD.
   C. IF BUILDING SLAB TO SITE SLAB IS NOT LEVEL, CONTRACTOR TO GRIND AND PREPARE SLABS FOR LEVEL THRESHOLD INSTALLATION.
   D. CONTRACTOR TO PROTECT ALL THRESHOLDS THROUGH CONSTRUCTION. DAMAGED THRESHOLDS WILL BE BE FLAGGED FOR REPLACEMENT AT FINAL PUNCHLIST.
6. **DOOR/FRAME PROTECTION.** ALL DOORS AND FRAMES TO BE PROTECTED DURING CONSTRUCTION. DAMAGED DOORS AND FRAMES TO BE REPAIRED/REPLACED AS NOTED IN FINAL PUNCHLIST.
7. **FRAME HEIGHT OFF FINISHED FLOOR**. ALL DOOR FRAMES TO BE SET AT A HEIGHT NO GREATER THAN 1/8" ABOVE FINISHED FLOOR. CONTRACTOR TO SHIM FRAMES IF FINISHED FLOORING NOT PRESENT. FOLLOW FRAME MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. **FRAME DEPTH.** CONTRACTOR RESPONSIBLE FOR PROVIDING FRAME DEPTHS.
9. **STOREFRONT ASSEMBLIES.** ALL STOREFRONT HARDWARE TO BE PROVIDED BY STOREFRONT INSTALLING CONTRACTOR. DOOR SCHEDULE AND SPECIFICATIONS SET BASIS OF DESIGN.

MAGNETIC DOOR HOLDER SCHEDULE	
1	SDC MFG. MODEL # EH-40 MULTI VOLT FLOOR MOUNT SINGLE UNIT MAGNETIC DOOR RELEASE
2	SDC MFG. MODEL # EH-42 MULTI VOLT FLOOR MOUNT DOUBLE UNIT MAGNETIC DOOR HOLDER
3	SDC MODEL # EH-20 SEMI-FLUSH MULTI VOLT WALL MOUNT MAGNETIC DOOR HOLDER
4	SDC MFG. EXTENSION ROD CONTRACTOR TO FIELD VERIFY PRIOR TO INSULATION SIZE VERIES FROM 1/2" TO 5"
5	2-3/4" X 4-1/2" X 1-1/2" OUTLET BOX (CONTRACTOR FURNISHED)
6	SDC MFG. MODEL # 602RF 1 AMP POWER SUPPLY

GENERAL NOTES

A. ALL SDC MFG. COMPONENTS SUPPLIED BY CORNERSTONE SUPPLY, CONTRACTOR TO INSTALL.
B. WALL MOUNT MAGNETIC DOOR HOLDER LOCATIONS TO BE DETERMINED USING MANUFACTURER'S INSTALLATION CHARTS AND DIAGRAMS.
C. FLOOR MOUNT MAGNETIC DOOR HOLDER LOCATIONS SHOWN ON THIS PLAN DERIVED FROM SDC MFG. LOCATION DIAGRAMS AND INCLUDE ALLOWANCES FOR GYPSUM WALLBOARD & DOOR HARDWARE. DIMENSIONS SHOWN TO GRIDLINES CONTRACTOR TO COORDINATE WITH CONCRETE CONTRACTOR AND G.C. PRIOR TO FINAL PLACEMENT.
D. WALL MOUNT UTILITY BOXES TO HAVE BLOCKING PROVIDED TO WITHSTAND 50LBS. PULL FORCE.
E. COORDINATE ELECTRICAL CONNECTIONS WITH FIRE ALARM DESIGNER/CONTRACTOR.
F. SEE DOOR SCHEDULE FOR DOOR DESIGNATIONS AND DOOR & HARDWARE SCHEDULES



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DOOR SCHEDULE & DETAILS

ORIGINAL ISSUE: PRELIMINARY
PROJECT#: A9/10

SHEET NUMBER:
A601

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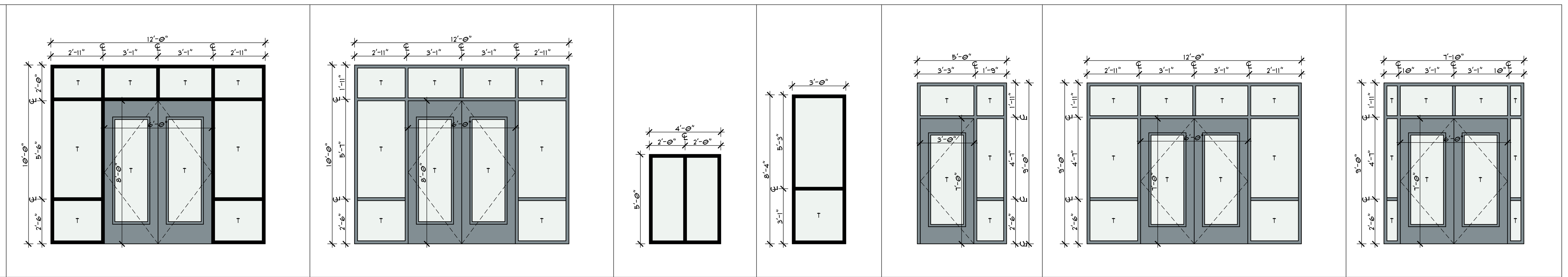
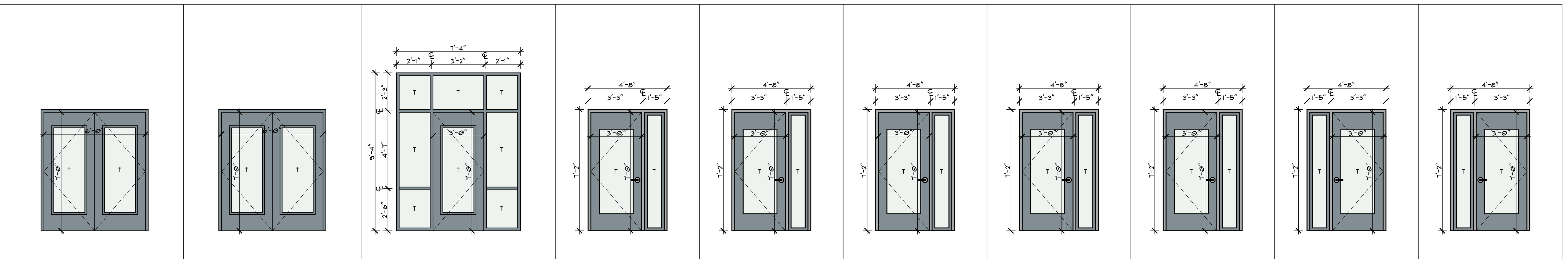
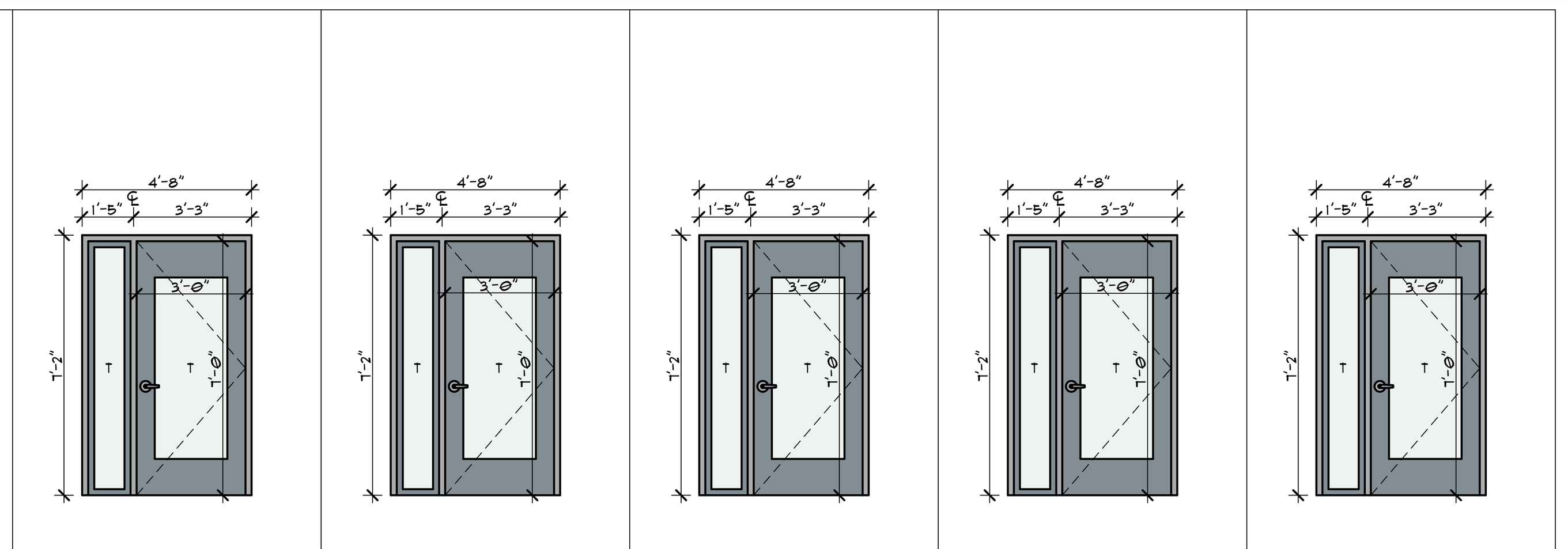


WINDOW ID	W1	W1.1	W2	W3	W4	W5	W6
DOOR ID	131A	131B	--	W1	128A	115B	115A
UNIT DIMENSIONS	12'-0"x10'-0"	12'-0"x10'-0"	4'-0"x5'-0"	3'-0"x8'-4"	5'-0"x9'-0"	12'-0"x9'-0"	7'-10"x9'-0"
POSITION	EXTERIOR	EXTERIOR	EXTERIOR	EXTERIOR	EXTERIOR	EXTERIOR	EXTERIOR
CLASSIFICATION	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT
FRAME FINISH			ANODIZED ALUM.	ANODIZED ALUM.			
GLAZING TYPE							

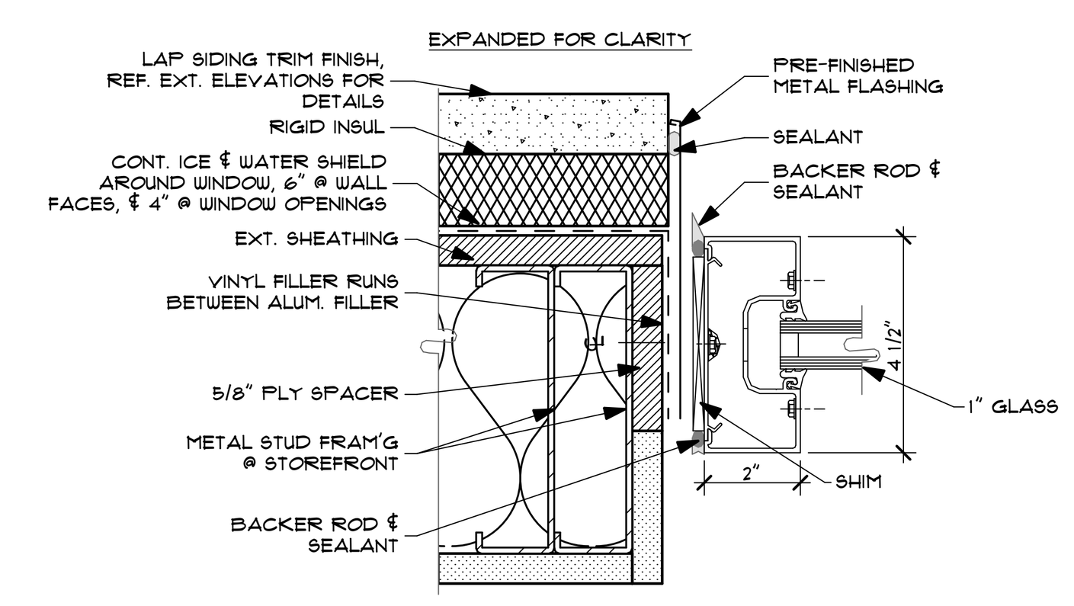


WINDOW ID	W7	W7	W8	W9	W9	W9	W9	W9	W10	W10
DOOR ID	100C	100B	100A	110A	121A	111A	101A	134A	106A	105A
UNIT DIMENSIONS	6'-4"x7'-2"	6'-4"x7'-2"	7'-4"x9'-4"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"
POSITION	EXTERIOR	EXTERIOR	EXTERIOR	INTERIOR	INTERIOR	INTERIOR	INTERIOR	INTERIOR	INTERIOR	INTERIOR
CLASSIFICATION	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT
FRAME FINISH										
GLAZING TYPE										

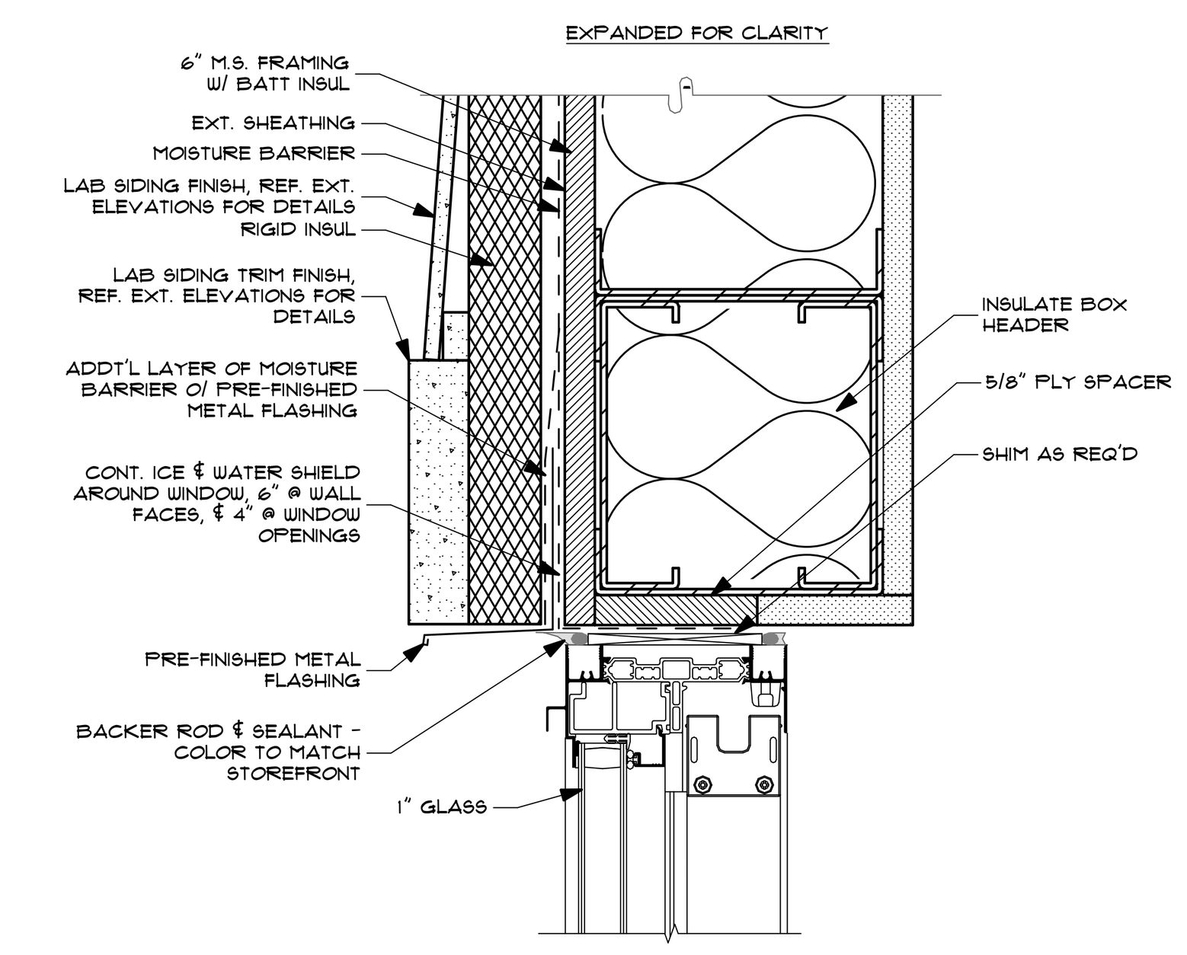


WINDOW ID	W10	W10	W10	W10	W10
DOOR ID	124A	114A	107A	135A	120A
UNIT DIMENSIONS	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"	4'-8"x7'-2"
POSITION	INTERIOR	INTERIOR	INTERIOR	INTERIOR	INTERIOR
CLASSIFICATION	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT	STOREFRONT
FRAME FINISH					
GLAZING TYPE					

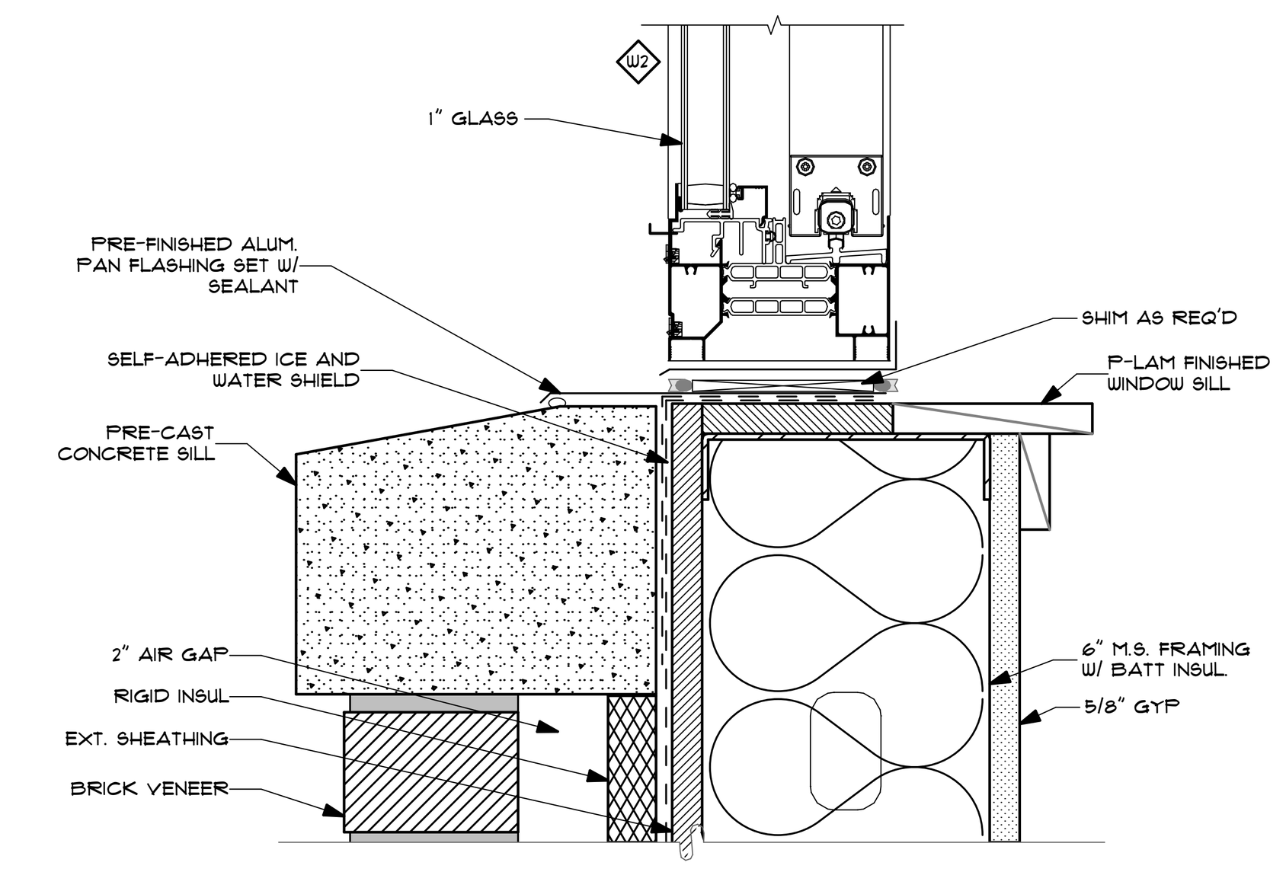
1 GLAZING SCHEDULE
SCALE: 1' = 1'-0"



LAP SIDING JAMB

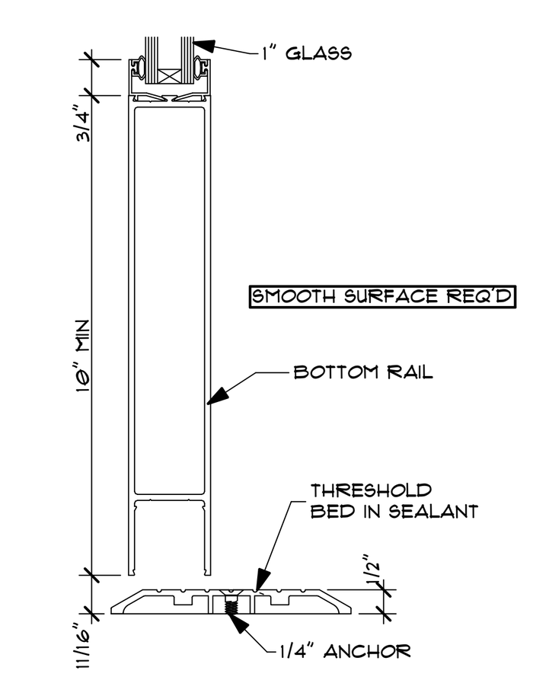


LAP SIDING HEADER

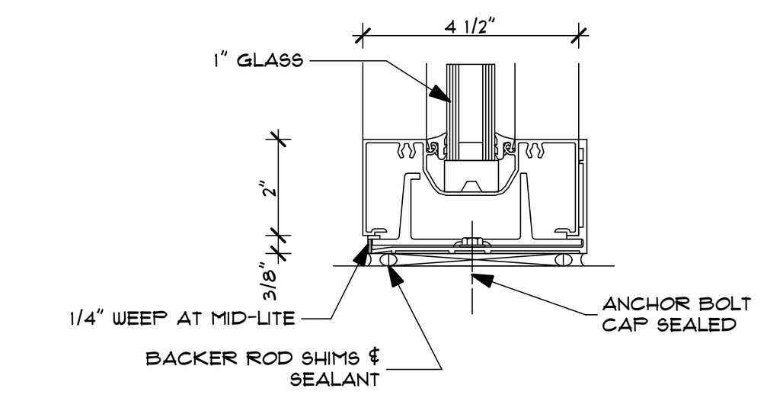


BRICK VENEER W/ PRECAST SILL

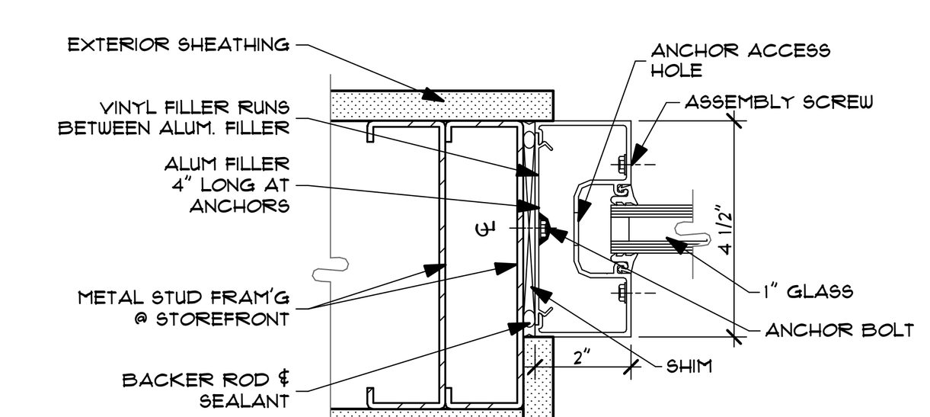
2 STOREFRONT HEAD DETAIL
SCALE: 3" = 1'-0"



3 STOREFRONT DOOR-THRESHOLD DETAIL
SCALE: 3" = 1'-0"



4 STOREFRONT GLAZING-SILL DETAIL
SCALE: 3" = 1'-0"



5 STOREFRONT JAMB DETAIL
SCALE: 3" = 1'-0"

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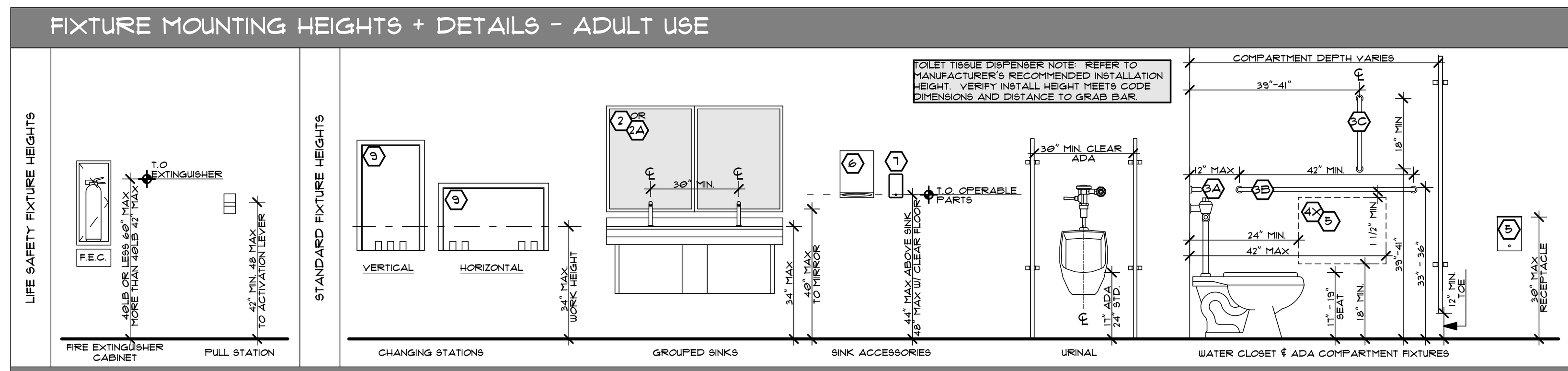
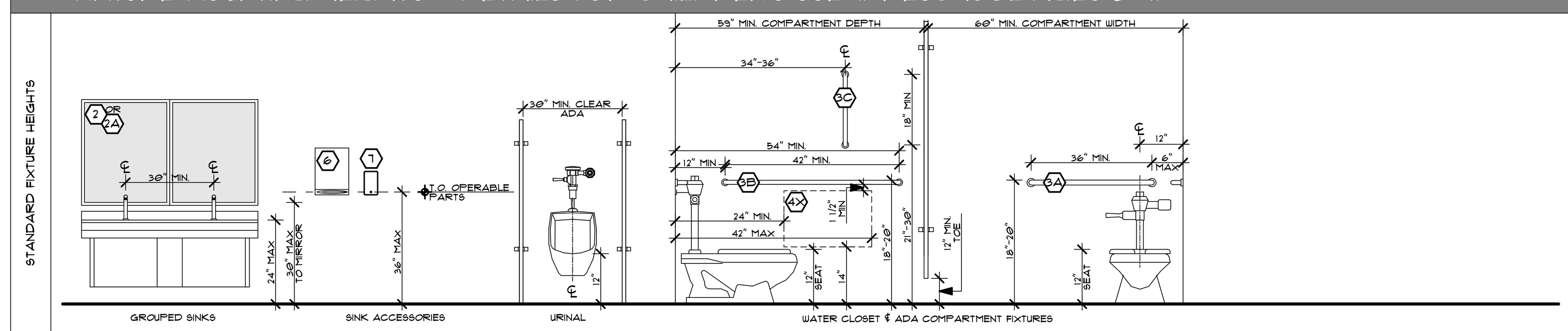
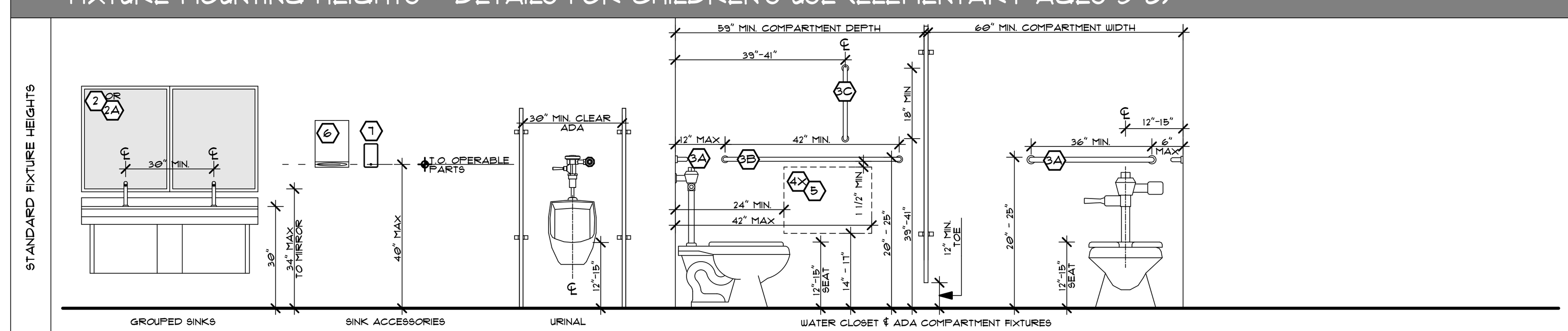
FIXTURE MOUNTING HEIGHTS + DETAILS - ADULT USE



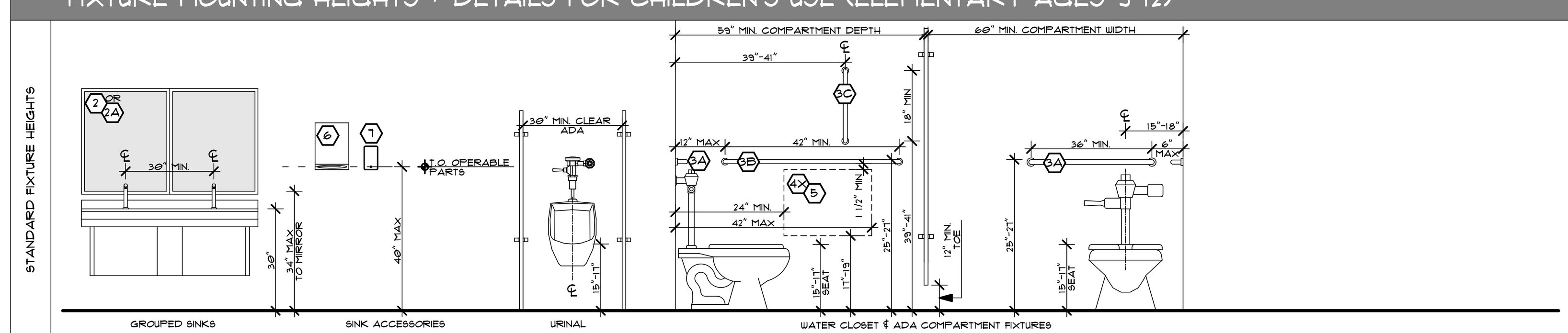
FIXTURE MOUNTING HEIGHTS + DETAILS FOR CHILDREN'S USE (PRESCHOOL AGES 3-4)



FIXTURE MOUNTING HEIGHTS + DETAILS FOR CHILDREN'S USE (ELEMENTARY AGES 5-8)



FIXTURE MOUNTING HEIGHTS + DETAILS FOR CHILDREN'S USE (ELEMENTARY AGES 9-12)



604.9 WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE

ADVISORY SPECIFICATIONS FOR WATER CLOSETS SERVING CHILDREN AGES 3 THROUGH 12

	WATER CLOSET CENTERLINE	TOILET SEAT HEIGHT	GRAB BAR HEIGHT	DISPENSER HEIGHT (MEASURED FROM FLOOR TO DISPENSER OUTLET)
AGES 3 - 4	12"	11" - 12"	18" - 20"	14"
AGES 5 - 8	12" - 15"	12" - 15"	20" - 25"	14" - 17"
AGES 9 - 12	15" - 18"	15" - 17"	25" - 27"	17" - 19"

RECOMMENDED LAVATORY HEIGHTS

RECOMMENDED SINK HEIGHT FOR CHILDREN 3-12

	SINK HEIGHT
AGES 3 - 4	24"
AGES 5 - 8	30"
AGES 9 - 12	34"

308.1 ADVISORY (CHILD REACH RANGES)

RECOMMENDED REACH RANGES FOR CHILDREN 3-12

	HIGH	LOW
AGES 3 - 4	36"	20"
AGES 5 - 8	40"	18"
AGES 9 - 12	44"	16"

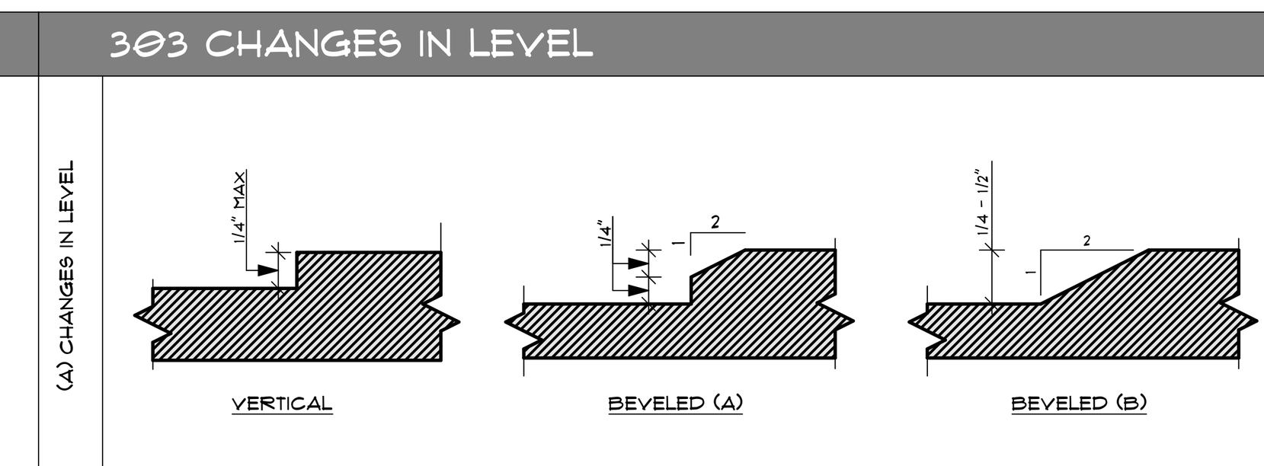
RESTROOM FIXTURE SCHEDULE

ID	DESCRIPTION	MODEL NUMBER
2A	MIRROR, 24"X36"	ASI MODEL #0620-2436
3A	GRAB BAR, 36"	ASI MODEL #3701-36
3B	GRAB BAR, 42"	ASI MODEL #3701-42
3C	VERTICAL GRAB BAR, 18"	ASI MODEL #3701-18
4A	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, SURFACE MOUNTED	ASI MODEL #0030
4B	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, RECESSED	ASI MODEL #0031
4C	TOILET TISSUE DISPENSER - TWIN HIDE-A-ROLL, PARTITION MOUNTED	ASI MODEL #0032
5A	WASTE DISPOSAL - 1 GAL - SURFACE MOUNTED	ASI MODEL #20852
6A	PAPER TOWEL DISPENSER - MULTI, C-FILD - SURFACE MOUNTED	ASI MODEL #0210
7A	SOAP DISPENSER - LIQUID, VERTICAL, VALVE - 40 OZ. - SURFACE MOUNTED	ASI MODEL #0347
10A	TOILET SEAT COVER DISPENSER - SURFACE MOUNTED	ASI MODEL #0477-SM

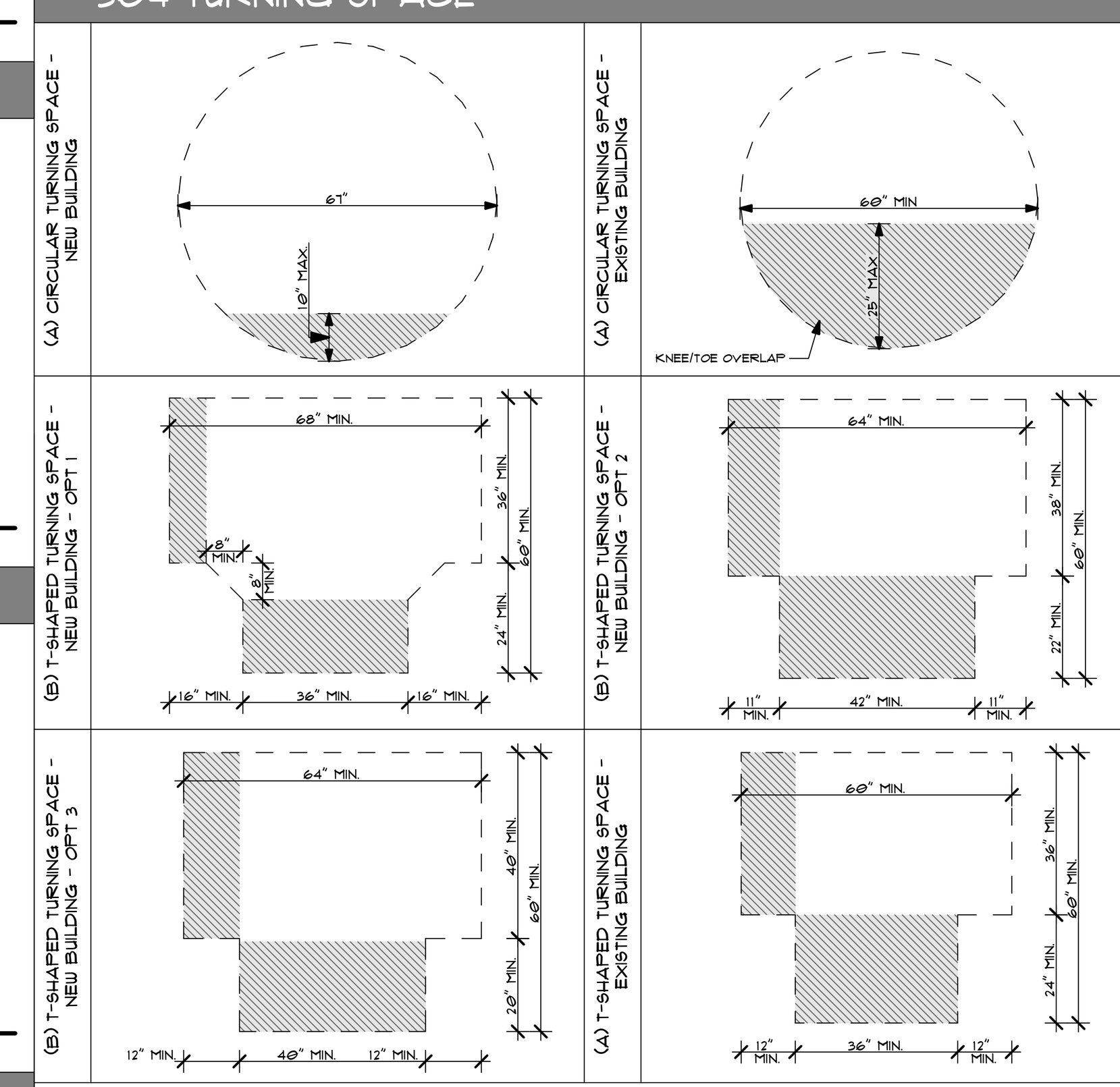
PLUMBING FIXTURE SCHEDULE (REF PLUMBING)

ID	DESCRIPTION
DF-2	WATER COOLER (BI-LEVEL, ADA)
DF-2B	WATER COOLER W/BOTTLE FILLER
JS-2	MOP SINK
KS-1TG	SINK
LV-3MA	WALL HUNG LAVATORY
LV-3MA	
WC-6	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6A	ADA MANUAL FLUSH VALVE WATER CLOSET
WC-6C	CHILDS MANUAL FLUSH VALVE WATER CLOSET
WH	WATER HEATER

303 CHANGES IN LEVEL

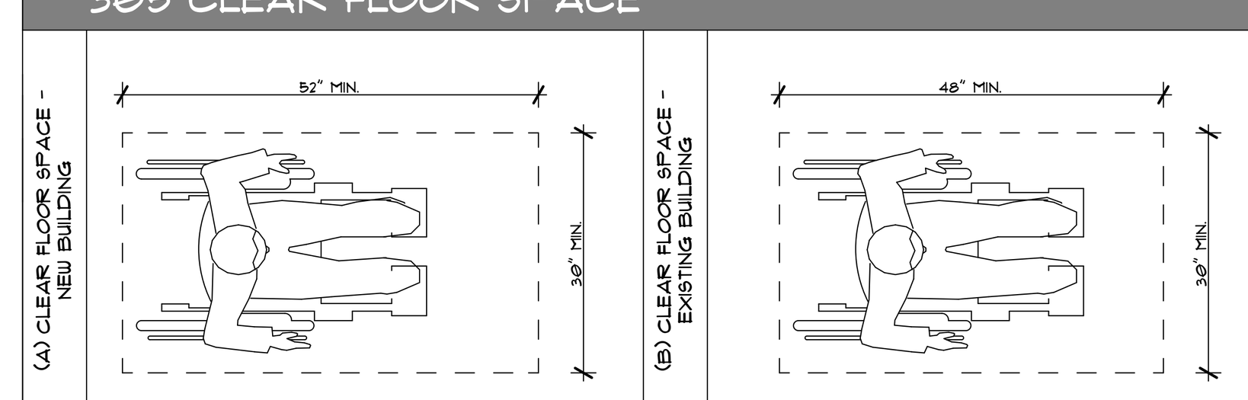


304 TURNING SPACE

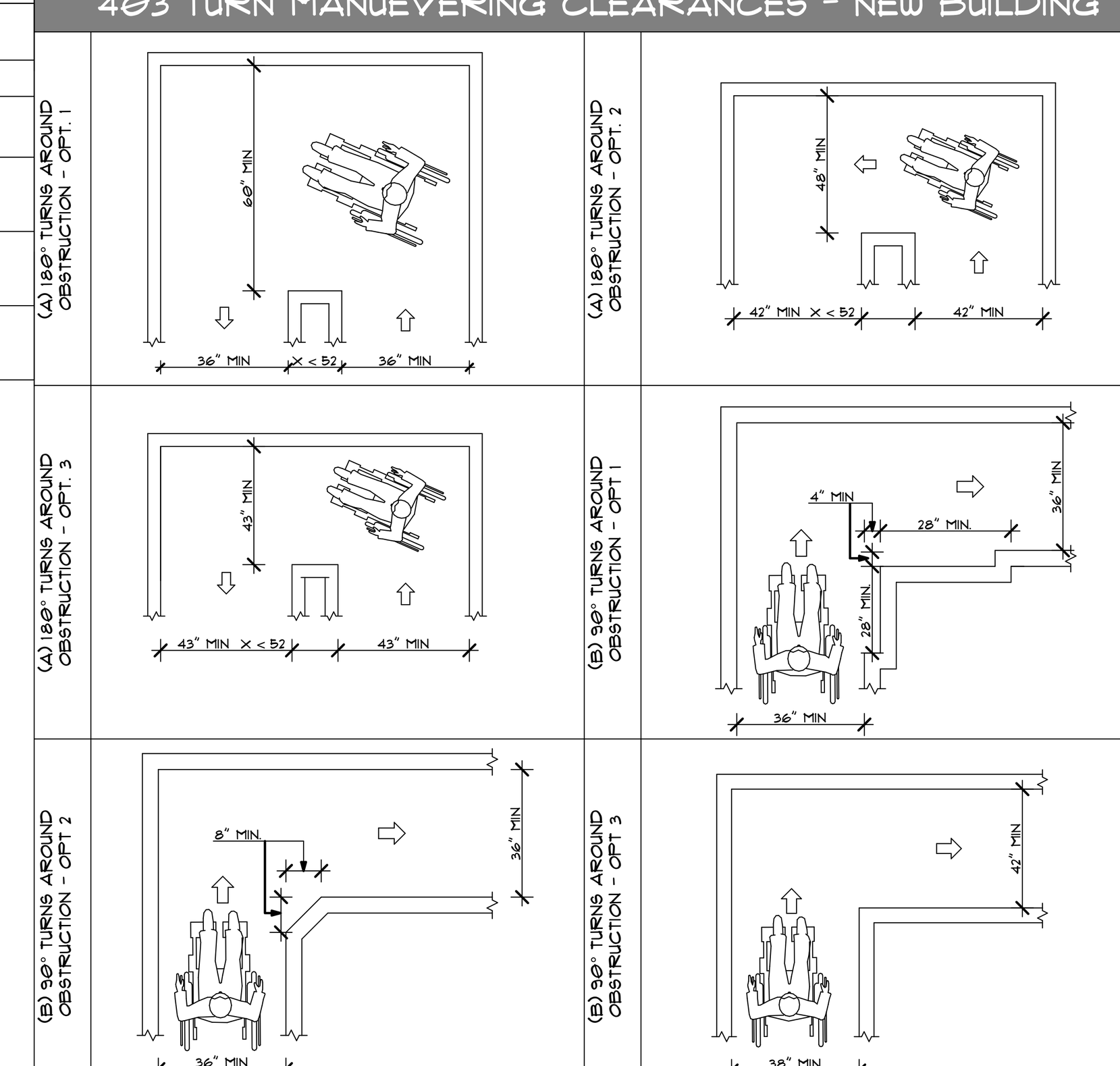


KNEE/TOE OVERLAP PERMITTED FOR ONE ARM OR BASE

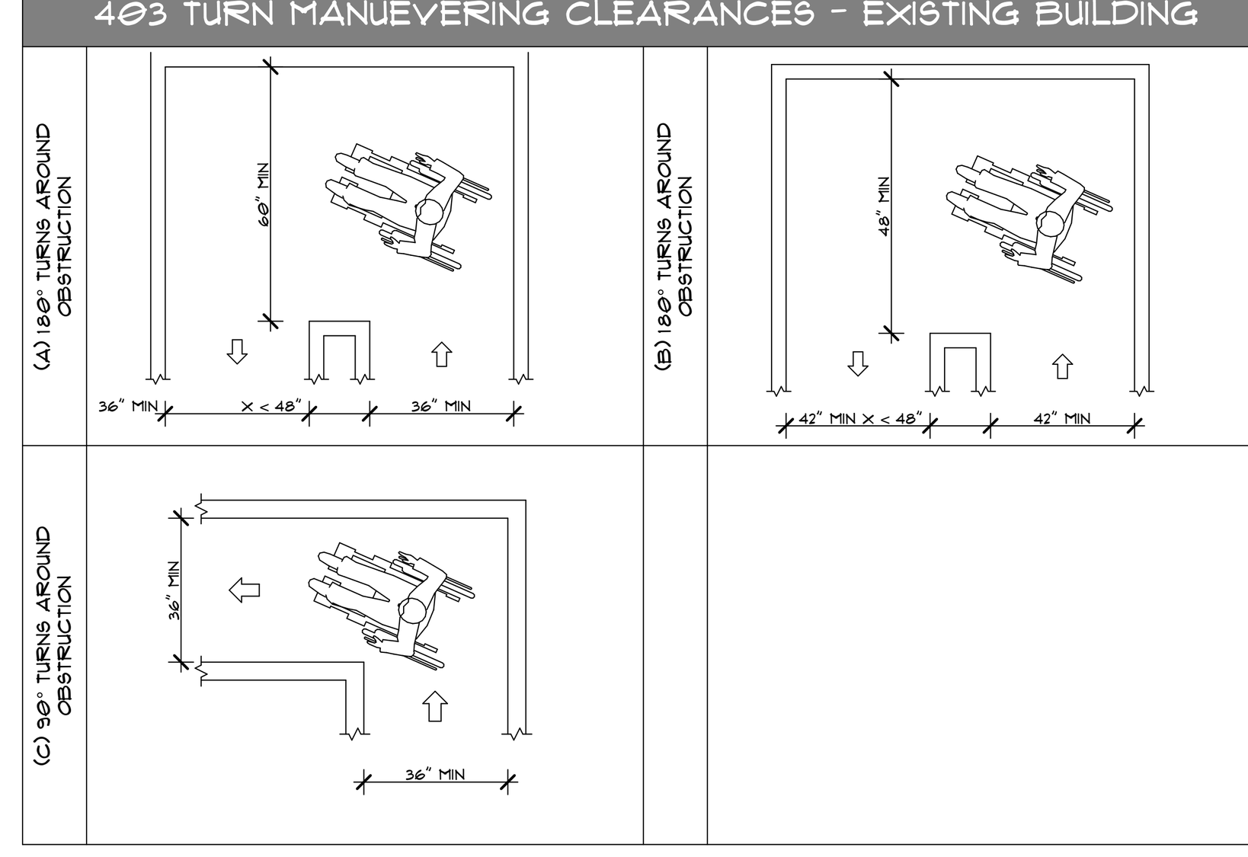
305 CLEAR FLOOR SPACE



403 TURN MANUEVERING CLEARANCES - NEW BUILDING



403 TURN MANUEVERING CLEARANCES - EXISTING BUILDING



404 DOOR MANUEVERING CLEARANCES

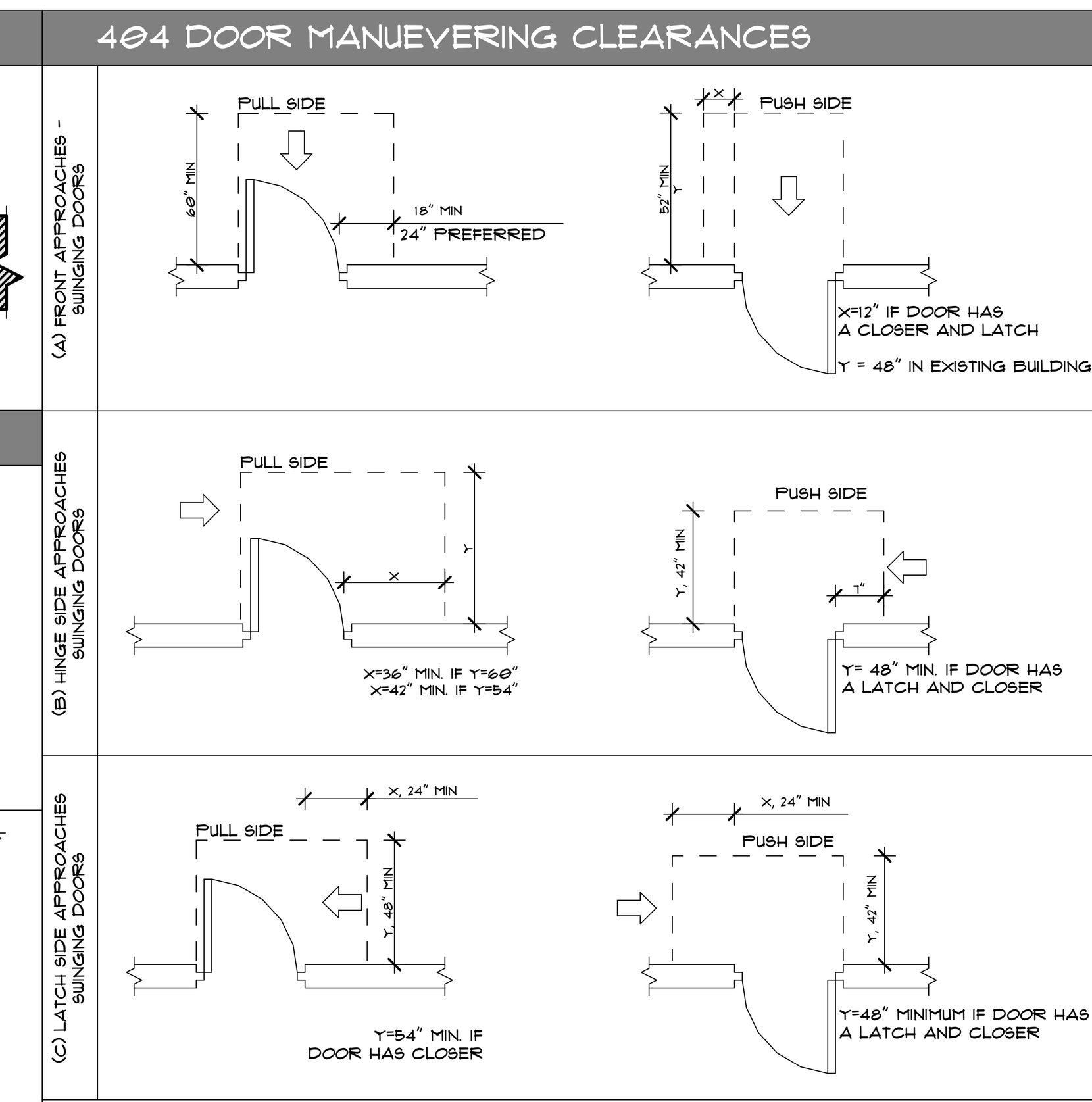
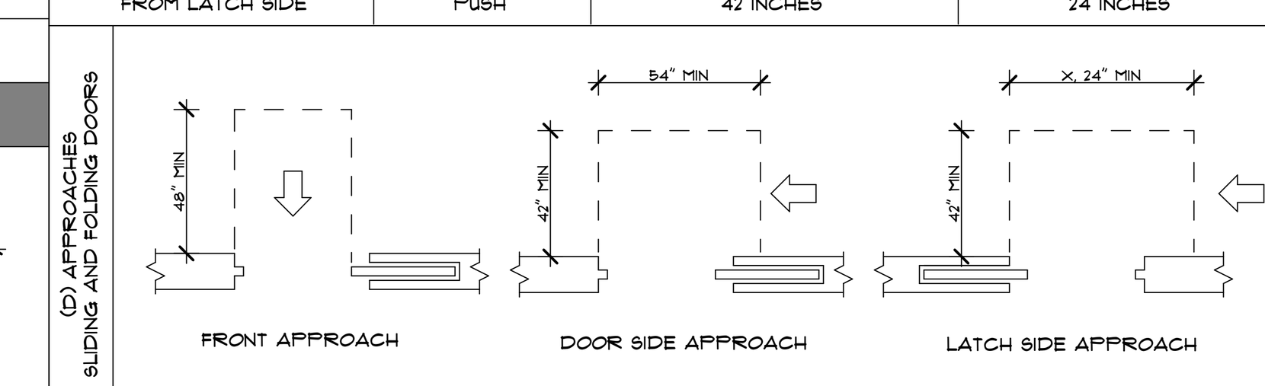


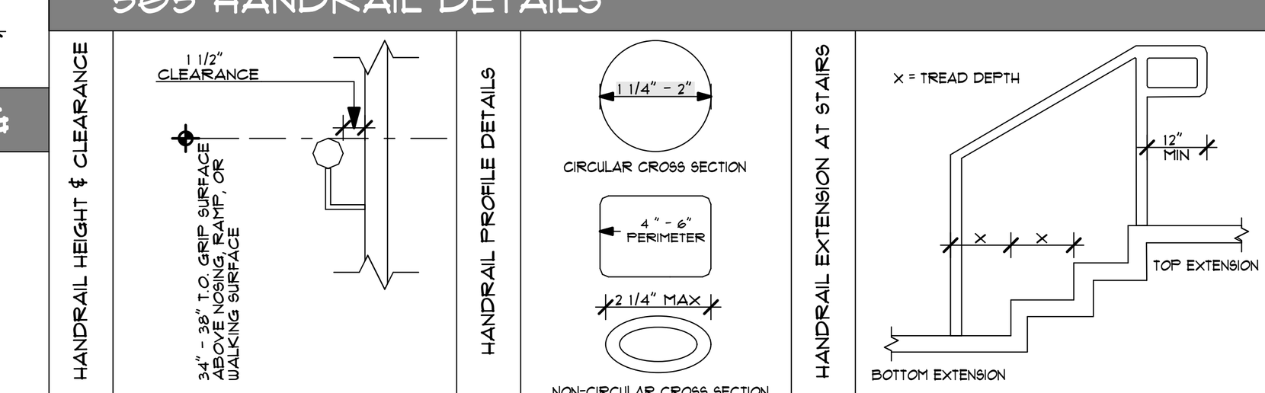
TABLE 404.2.3.2 MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES

TYPE OF USE		*MINIMUM MANEUVERING CLEARANCES*	
APPROACH DIRECTION	DOOR SIDE	PERPINDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND LATCH UNO)
FROM FRONT	PULL	60 INCHES	18 INCHES
FROM FRONT	PUSH	52 INCHES	0 INCHES
FROM HINGE SIDE	PULL	60 INCHES	36 INCHES
FROM HINGE SIDE	PULL	54 INCHES	42 INCHES
FROM HINGE SIDE	PUSH	42 INCHES	22 INCHES
FROM LATCH SIDE	PULL	48 INCHES	24 INCHES
FROM LATCH SIDE	PUSH	42 INCHES	24 INCHES

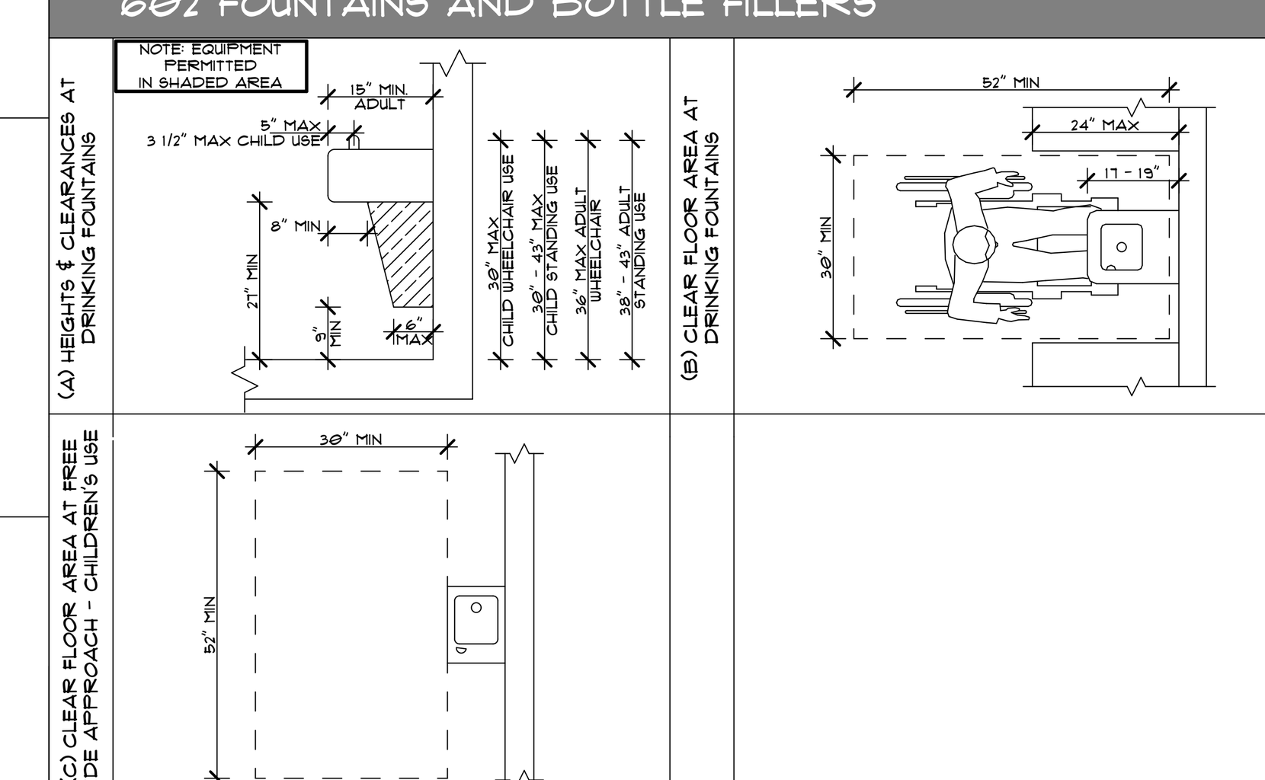


NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCES FOR FRONT APPROACHES

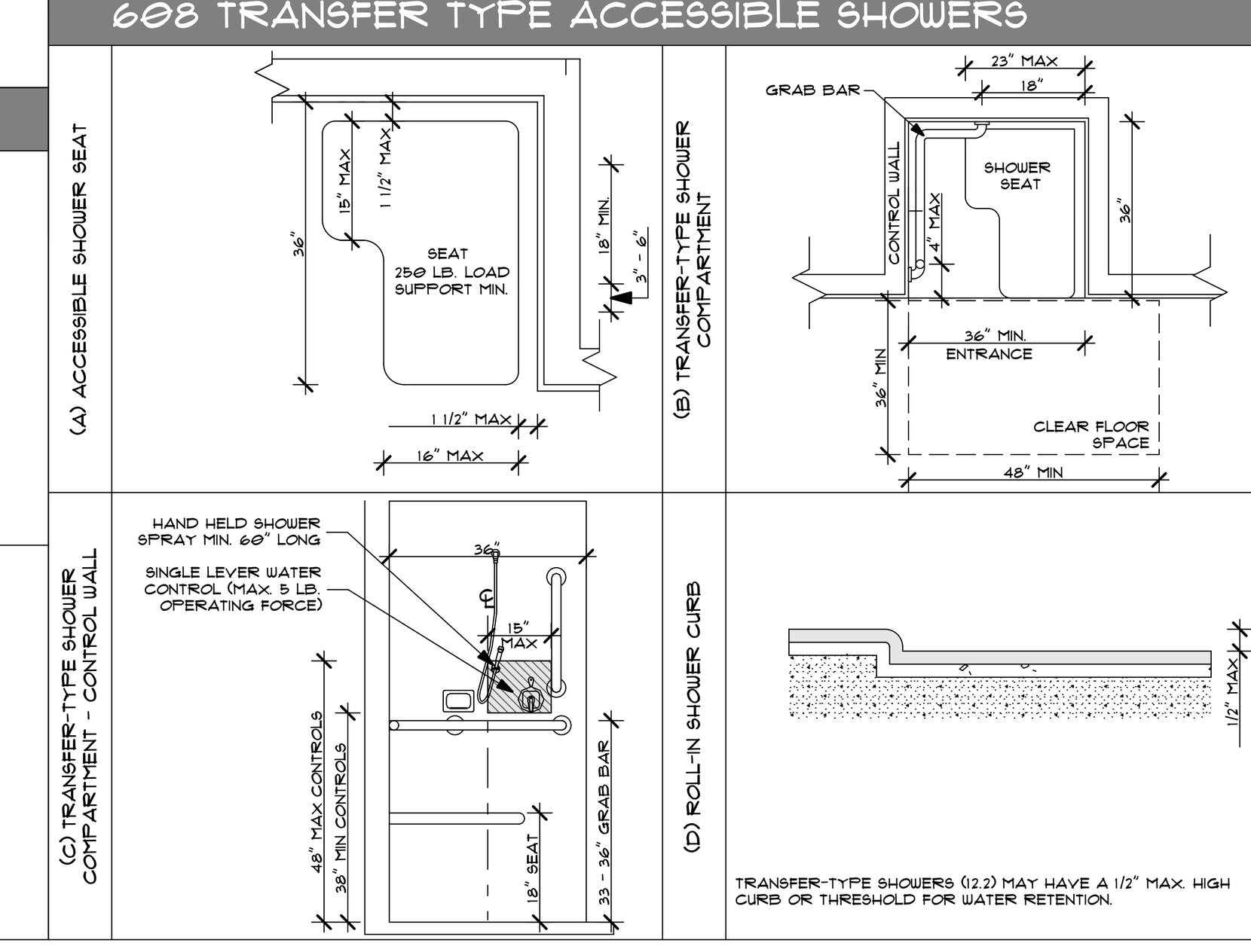
505 HANDRAIL DETAILS



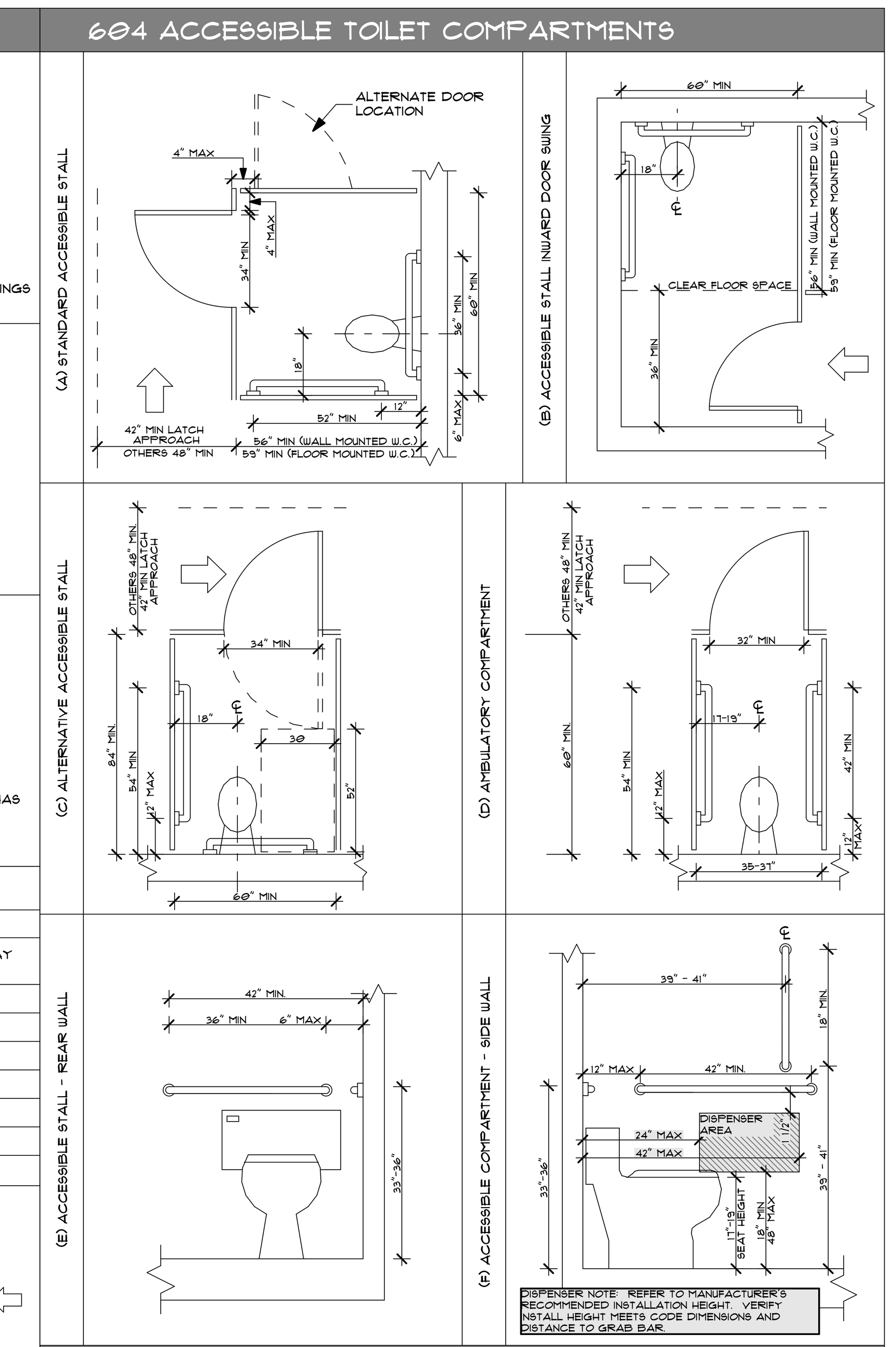
602 FOUNTAINS AND BOTTLE FILLERS



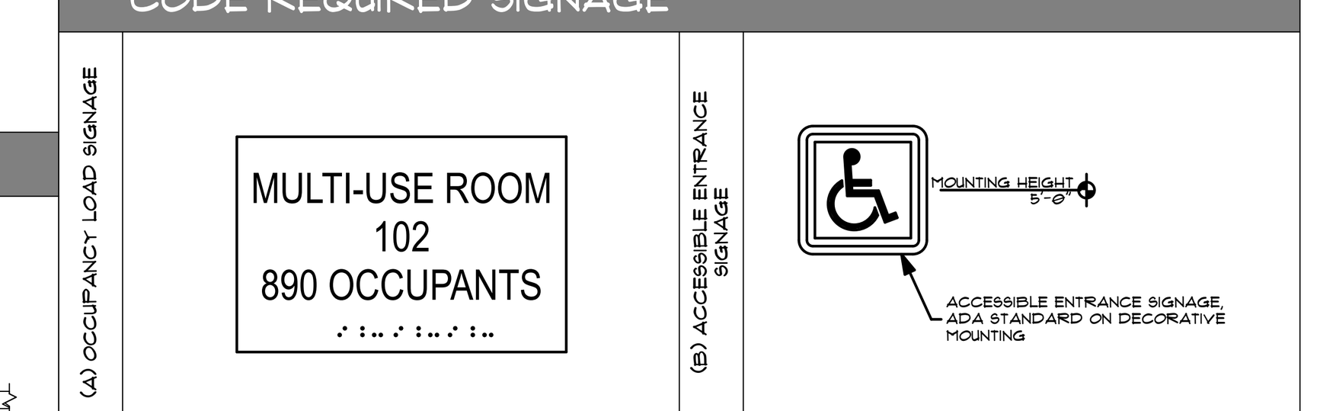
608 TRANSFER TYPE ACCESSIBLE SHOWERS



604 ACCESSIBLE TOILET COMPARTMENTS



CODE REQUIRED SIGNAGE

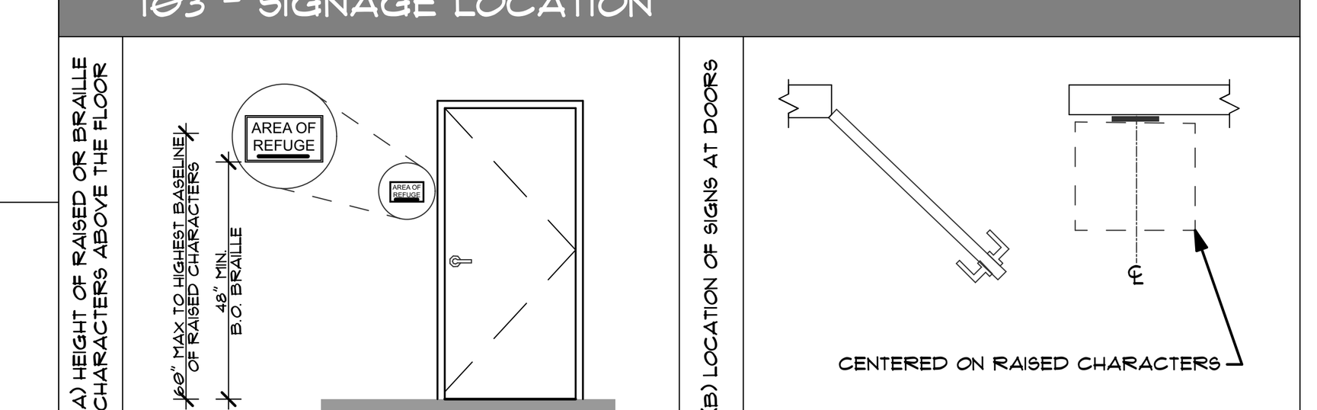


703 - VISUAL CHARACTER HEIGHT

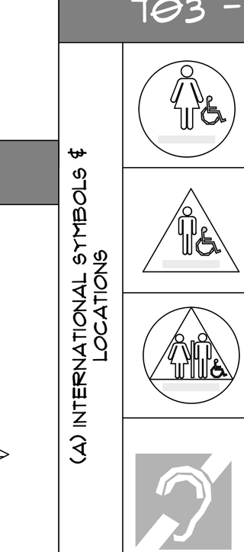
HEIGHT ABOVE FLOOR TO BASELINE OF CHARACTERS	HORIZONTAL VIEWING DISTANCE	MIN. CHARACTER HEIGHT
40 INCHES TO 70 INCHES	LESS THAN 6 FEET	5/8 INCH
	6 FEET OR GREATER	5/8 INCH *
70 INCHES TO 120 INCHES	LESS THAN 15 FEET	2 INCHES
	15 FEET OR GREATER	2 INCHES *
GREATER THAN 120 INCHES	LESS THAN 21 FEET	3 INCHES
	21 FEET AND GREATER	3 INCHES *

NOTES: * - ADD 1/8 INCH TO CHARACTER HEIGHT FOR EACH FOOT OF VIEWING DISTANCE BEYOND CATEGORY MINIMUM

703 - SIGNAGE LOCATION



703 - SYMBOLS



WOMEN'S SIGNAGE W/BRAILLE

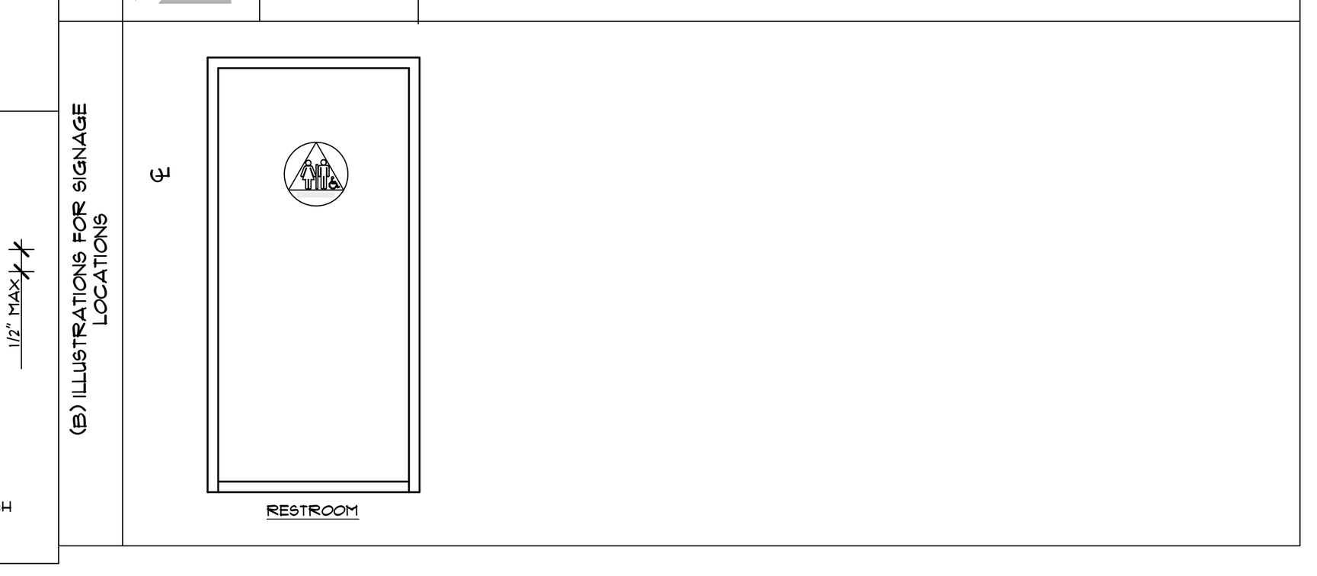
MEN'S SIGNAGE W/ BRAILLE

UNISEX SIGNAGE W/ BRAILLE

INT. SYMBOL OF ACCESS FOR HEARING LOSS

SIGNAGE NOTES

1. DOORWAYS LEADING TO WOMENS SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE, 1/4" THICK AND 12" IN DIAMETER.
2. DOORWAYS LEADING TO MENS SANITARY FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE 1/4" THICK WITH EDGES 12" LONG AND A VERTEX POINTING UPWARD.
3. DOORWAYS LEADING TO UNISEX SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 1/4" THICK, 12" IN DIAMETER WITH A 1/4" THICK TRIANGLE SUPERIMPOSED ON THE CIRCLE AND WITHIN THE 12" DIAMETER.
4. THESE GEOMETRIC SYMBOLS SHALL BE CENTERED ON THE DOOR AND THEIR COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM THE COLOR AND CONTRAST OF THE DOOR.
5. ROOM IDENTIFICATION AND ACCESSIBILITY SIGNAGE SHALL BE MOUNTED 60" A.F.F. TO THE CENTERLINE OF SIGN U.N.O.



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REV	DATE	DESCRIPTION
0	12/20/2024	ORIGINAL ISSUE
0	4/4/2025	REV0 FOR PRICING

SEAL:

PROJECT:

DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER

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SHEET TITLE:

ADA STANDARDS & SIGNAGE

PROJECT#: A5170 ORIGINAL ISSUE: PRELIMINARY

SHEET NUMBER:

A603

DO NOT SCALE DRAWING

ABBREVIATIONS

(NOTE: ALL ABBREVIATIONS MAY NOT BE USED)

(E)	EXISTING
(F)	FUTURE
AAV	AIR ADMITTANCE VALVE
AD	ACCESS DOOR
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLER UNIT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ATC	AUTO TEMPERATURE CONTROL
AUTO	AUTOMATIC
AW	AIR WASHER
B	BOILER
B	BOTTOM
BAS	BUILDING AUTOMATION SYSTEM
BB	BASEBOARD
BC	BRANCH CONTROLLER
BD	BALANCING DAMPER
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSE POWER
BOD	BOTTOM OF DUCT
BOE	BOTTOM OF EQUIPMENT
BOP	BOTTOM OF PIPE
BP	BOOSTER PUMP
BS	BRANCH SELECTOR
BT	BATH TUB
BTH	BTU PER HOUR
BTU	BRITISH THERMAL UNITS
CA	COMBUSTION AIR
CA	COMPRESSED AIR LINE
CAV	CONSTANT AIR VOLUME
CC	COOLING COIL
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTER LINE ELEVATION
CLG	CEILING
CLG	COOLING
CO	CLEAN OUT
COMP	COMPONENT
COND	CONDENS(-ER, -ING, -ATION)
CONN	CONNECTION
CT	COOLING TOWER
CU	CONDENSING UNIT
CU	COPPER
CV	CONTROL VALVE
CWR	CONDENSER WATER RETURN
CWS	CONSDENSER WATER SUPPLY
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DCWS	DOMESTIC COLD WATER SOFTENED
DF	DRINKING FOUNTAIN
DH	DUCT HEATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DIA	DIAMETER
DN	DOWN THROUGH FLOOR
DP	DIFFERENTIAL PRESSURE
DSN	DOWN SPOUT NOZZLE
DTW	DOMESTIC TEMPERED WATER
DV	DRYER VENT
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EC	EVAPORATIVE COOLER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	ETHYLENE GLYCOL
EH	ELECTRIC HEATER
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EOR	ENGINEER OF RECORD
ES	EMERGENCY SHOWER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVAP	EVAPORATI(-E, -ING, -ED, -OR)
EW	EMERGENCY EYE WASH
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EXT	EXTERNAL
F	FAHRENHEIT
F	FURNACE

ABBREVIATIONS

(NOTE: ALL ABBREVIATIONS MAY NOT BE USED)

FC	FAN COIL UNIT
FD	FIRE DAMPER
FD	FLOOR DRAIN
FDR	FLOOR DRAIN ROUND
FDS	FLOOR DRAIN SQUARE
FH	FIRE HYDRANT
FL	FILTER
FLA	FULL LOAD AMPERAGE
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FSD	FIRE SMOKE DAMPER
FT	FOOT/FEET
FU	FIXTURE UNIT
GA	GAUGE
GAL	GALLON(S)
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
GV	GREASE VENT
GW	GREASE WASTE
HB	HOSE BIBB
HD	HEAD
HDR	HEADER
HG	MERCURY
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HP	HIGH PRESSURE
HP	HORSE POWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HU	HUMIDIFIER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HX	HEAT EXCHANGER
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
IM	ICE MAKER BOX
IN	INCHES
INSUL	INSULATION
JS	JANITOR SINK
KS	KITCHEN SINK
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS	POUNDS
LH	LATENT HEAT
LI	LIQUID
LI/SU	LIQUID/SUCTION
LP	LOW PRESSURE
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MA	MAKE UP AIR
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MD	MANUAL DAMPER
MFR	MANUFACTUR(-ER, -ED)
MH	MANHOLE
MIN	MINIMUM
MP	MEDIUM PRESSURE
N/A	NOT APPLICABLE
N/C	NOT CONDITIONED
NC	NOISE CRITERION
NC	NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NEG	NEGATIVE
NEUT	NEUTRAL
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
ORD	OVERFLOW ROOF DRAIN
OS	OIL/SAND
OST	OUNCES PER SQUARE INCH

ABBREVIATIONS

(NOTE: ALL ABBREVIATIONS MAY NOT BE USED)

OZ	OUNCE
P	PUMP
P&TV	PRESSURE & TEMPERATURE VALVE
PD	PRESSURE DROP OF DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
POS	POSITIVE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
PVC	POLYVINYL CHLORIDE
QD	QUICK DISCONNECT
R	THERMAL RESISTANCE
RA	RETURN AIR
RD	ROOF DRAIN
RF	RELIEF AIR
RH	RELATIVE HUMIDITY
RH	RELIEF HOOD
RI	ROUGH-IN
RLA	RATED LOAD AMPS
RP	RECIRCULATION PUMP
RPM	REVOLUTIONS PER MINUTE
RQD	REQUIRED
RTU	ROOF TOP UNIT
RV	RELIEF VENT
SA	SUPPLY AIR LOW PRESSURE
SA-MP	SUPPLY AIR MEDIUM PRESSURE
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SD	STORM DRAIN
SF	SQUARE FOOTAGE
SF	SUPPLY FAN
SH	SENSIBLE HEAT
SH	SHOWER
SHWR	SNOWMELT HOT WATER RETURN
SHWS	SNOWMELT HOT WATER SUPPLY
SL	SEA LEVEL
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
SS	SANITARY SEWER
SS	STAINLESS STEEL
ST	SOUND TRAP
ST	STORAGE TANK
STD	STANDARD
SU	SUCTION
SW	SOIL, WASTE
TA	TRANSFER AIR
TAB	TESTING, ADJUSTING, AND BALANCING
TD	TEMP. DROP OR DIFF.
TD	TRENCH DRAIN
THERM	THERMAL
TMV	TEMPERATURE MIXING VALVE
TOD	TOP OF DUCT
TP	TRAP PRIMER ASSEMBLY
TRW	TEMPERED RECIRC WATER
TSTAT	THERMOSTAT
TWU	THROUGH WALL UNIT
TYP	TYPICAL
UH	UNIT HEATER
UP	UP THROUGH FLOOR
UR	URINAL
V	VENT, VENTALTION
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
VTR	VENT THROUGH ROOF
W/	WITH
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WC	WATER COLUMN
WCO	WALL CLEAN OUT
WF	WASH FOUNTAIN
WG	INCHES WATER GAUGE
WG	WATER GAUGE
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER
WM	WASHING MACHINE
WPD	WATER PRESSURE DROP
WT	WEIGHT

DEFINITIONS

(NOTE: ALL DEFINITIONS MAY NOT BE USED)

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

SYMBOL LEGEND

- AØ — ROUND DUCT
- AxB — RECTANGULAR DUCT, SIDE SHOWN IS "A" DIMENSION
- INSULATED DUCT
- LINED DUCT
- SUPPLY DIFFUSER
- (15°) — DUCT DIFFUSER
- LINEAR SLOT DIFFUSER
- SIDE WALL DIFFUSER
- EXHAUST/RETURN GRILLE
- U-TRANSFER
- GRILLE, REGISTER, & DIFFUSER TAG — SERVICE: S-SUPPLY, E-EXHAUST, RETURN, OR TRANSFER; SURFACE TYPE: L-LAY IN, G-GYPSUM, D-DUCT, W-WALL, S-LINEAR SLOT; GRD IDENTIFIER; AIRFLOW, RAG, OR TAG (ST-XXXX-1000 CFM)
- AIRFLOW ARROW
- U.C. 1/2" — TRANSFER AIR DOOR UNDERCUT INDICATOR
- WC-10 — PLUMBING FIXTURE TAG
- PIPE FLOW ARROW
- 1/8" / 1'-0" — PIPE SLOPE INDICATOR
- RTU-301 — MECHANICAL EQUIPMENT TAG
- Room name 101 — ROOM TAG
- 1 A101 SIM — DETAIL INDICATOR
- B.1 — REVISION INDICATOR
- 1 — KEYNOTE INDICATOR
- NEW CONNECTION POINT TO EXISTING
- DEMO EXISTING SERVICES
- T — THERMOSTAT
- S — SWITCH
- LC — LIGHTING CONTROL OVERRIDE SWITCH
- CO — CO2 SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- SP — STATIC PRESSURE SENSOR
- J — JUNCTION BOX
- H — HUMIDISTAT

DRAWING INDEX

SHEET #	SHEET NAME	REV.	REV. NAME	DATE
M001	TITLE SHEET (Legend & Abbreviations)	0	REV0	03/11/2025
M002	MECHANICAL NOTES & SPECIFICATIONS	D	100% CD SET	12/18/2024
M003	MECHANICAL COMCHECK & CALCULATIONS	D	100% CD SET	12/18/2024
M100	FIRST FLOOR MECHANICAL ZONE PLAN	D	100% CD SET	12/18/2024
M101	FIRST FLOOR MECHANICAL PLAN	D	100% CD SET	12/18/2024
M102	ROOF MECHANICAL PLAN	D	100% CD SET	12/18/2024
M501	MECHANICAL DETAILS	D	100% CD SET	12/18/2024
M601	MECHANICAL SCHEDULES	D	100% CD SET	12/18/2024
P001	PLUMBING NOTES & SPECIFICATIONS	D	100% CD SET	12/18/2024
P100	UNDERGROUND PLUMBING PLAN	0	REV0	03/11/2025
P101	FIRST FLOOR PLUMBING PLAN	0	REV0	03/11/2025
P102	ROOF PLUMBING PLAN	D	100% CD SET	12/18/2024
P501	PLUMBING DETAILS	D	100% CD SET	12/18/2024
P601	PLUMBING SCHEDULES	D	100% CD SET	12/18/2024

HVAC BASIS OF DESIGN

CLIMATE ZONE: 4A

OUTSIDE DESIGN TEMPS.: 93°F Db SUMMER, 76°F Wb SUMMER, 16°F Db WINTER — DESIGN ALTITUDE: 46 FT.

INTERIOR DESIGN DATA	SUMMER		WINTER	
	T DB (°F)	MAX RH (%)	T DB (°F)	MIN RH (%)
ALL	75	65	70	5

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For Questions Contact
Bradley Shakespeare, PE
brad@shakespeare-eng.com

REV	DATE	DESCRIPTION
A	04/26/2024	50% CD SET
B	06/04/2024	75% CD SET
C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET
0	03/11/2025	REV0

PROJECT:

DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
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GEORGETOWN, DE 19947

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SEAL:

BRADLEY SHAKESPEARE — LICENSE — No. 29257 — DEC-18-2024 — DELAWARE — PROFESSIONAL ENGINEER

SHEET TITLE:

TITLE SHEET (Legend & Abbreviations)

PROJECT #23033

SHEET NUMBER:

M001

DO NOT SCALE DRAWING

3/11/2025 11:38:15 AM

PENETRATION FIRESTOP NOTES

1. FIRE-RATED PENETRATIONS DETAILS SHOWN ON THE CONSTRUCTIONS DOCUMENTS SHOW GENERAL METHOD OF MECHANICAL (HVAC) AND PLUMBING PENETRATION FIRESTOPPING.
2. THE CONTRACTOR SHALL REVIEW CONSTRUCTION DOCUMENTS AND PROVIDE SPECIFIC FIRESTOPPING DETAILS FROM A SPECIFIC FIRESTOPPING MANUFACTURER FOR EACH MECHANICAL (HVAC) AND PLUMBING PIPE OR DUCT PENETRATION FOR EACH FIRE RATED ASSEMBLY.
3. PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED.
4. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH PENETRATING ITEMS IF ANY.
5. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH W.G.
6. PENETRATION FIRESTOPPING PRODUCTS SHALL BEAR UL, ETL OR FM GLOBAL CLASSIFICATION MARKING OF QUALIFIED TESTING AND INSPECTING AGENCY.
7. DO NOT INSTALL PENETRATION FIRESTOPPING WHEN AMBIENT OR SUBSTRATE TEMPERATURES ARE OUTSIDE LIMITS PERMITTED BY PENETRATION FIRESTOPPING MANUFACTURERS OR WHEN SUBSTRATES ARE WET BECAUSE OF RAIN, FROST, CONDENSATION, OR OTHER CAUSES.
8. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT PENETRATION FIRESTOPPING IS INSTALLED ACCORDING TO SPECIFIED REQUIREMENTS.
9. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE PENETRATION FIRESTOPPING.
10. INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.
11. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
12. IDENTIFY PENETRATION FIRESTOPPING WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN 6 INCHES OF FIRESTOPPING EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE PENETRATING ITEMS OR FIRESTOPPING.

230010 - BASIC MECHANICAL REQUIREMENTS

1. COORDINATE LOCATIONS OF ALL NEW ROOF OPENINGS AND ROOF MOUNTED EQUIPMENT WITH STRUCTURAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION.
2. V-BELT DRIVES SHALL BE OF FABRIC AND RUBBER CONSTRUCTION. BELT GUARDS SHALL BE PROVIDED FOR ALL EXPOSED BELTS AND DRIVES.
3. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT.
4. PROPERLY LUBRICATE ALL PIECES OF EQUIPMENT BEFORE TURNING THE SYSTEM OVER TO OWNER.
5. INSTALL DUCT MOUNTED SUPPLY AND RETURN AIR SMOKE DETECTORS IN ALL ROOFTOP, FAN-COIL, AIR-HANDLING, AND OTHER SUPPLY AIR SYSTEMS WITH CAPACITY GREATER THAN 2000 CFM. SMOKE DETECTORS ARE PURCHASED AND WIRED BY DIVISION 26 CONTRACTOR.

230011 - BASIC PIPING MATERIALS & METHODS

1. CORE CUT ALL PIPE PENETRATION OF MASONRY OR CONCRETE WALLS AND FLOORS. SLEEVE ALL PENETRATIONS THROUGH NEW WALLS AND FLOORS. SEAL ALL PENETRATIONS WATER TIGHT WITH SILICONE SEALANT. USE FIRE RATED SEALANT (3M "FIRE BARRIER" OR EQUAL) FOR 1 HOUR OR 2 HOUR PENETRATIONS.
2. CAULK AROUND ALL PIPING THAT PASSES THROUGH FIRE-RATED PARTITIONS WITH A NON-HARDENING CAULKING SIMILAR TO 3M "FIRE BARRIER".
3. SEAL ALL PIPING THROUGH WALLS AIRTIGHT.

230523 - VALVES

1. PROVIDE VALVES OF TYPE AND QUANTITY SHOWN ON DRAWINGS. VALVES OF THE SAME TYPE SHALL BE BY ONE MANUFACTURER.

230593 - TESTING, ADJUSTING AND BALANCING

1. OBTAIN SERVICES OF AN INDEPENDENT TESTING AND BALANCING AGENCY TO BALANCE AND ADJUST SYSTEMS. THIS SHALL BE DONE BY PERSONS FULLY FAMILIAR WITH SYSTEMS OF THIS TYPE. BALANCING SHALL BE DONE IN ACCORDANCE WITH AABC OR NEBB STANDARDS. ALL DATA SHALL BE RECORDED AND A REPORT SUBMITTED TO THE ENGINEER PRIOR TO JOB CLOSE OUT.

DUCT CONSTRUCTION NOTES

1. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL, EXCEPT WHERE INDICATED OTHERWISE.
2. SHEET METAL DUCT STATIC PRESSURE CLASSIFICATION:

SUPPLY AIR DUCT:	2" W.C.
RETURN AIR DUCT:	2" W.C. (NEGATIVE)
EXHAUST AIR DUCT:	2" W.C. (NEGATIVE)
OUTSIDE AIR DUCT:	2" W.C.

3. SEAL ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS TO SMACNA SEAL CLASS B.
4. DO NOT USE GRAY DUCT TAPE, FOIL BACKED TAPE, OIL BASED CAULKING AND GLAZING COMPOUNDS TO SEAL METAL DUCTS.
5. CROSS-BREAK DUCT SURFACES 19" THROUGH 60". USE ANGLE REINFORCING FOR DUCTS SURFACES OF 60".
6. ALL METAL LONGITUDINAL SEAMS SHALL BE PITTSBURGH OR OTHER LISTED SMACNA LISTED SEAM. DO NOT USE BUTTON PUNCH SNAP-BACK SEAMS.
7. SUSPEND METAL DUCTWORK NOT EXCEEDING 30" LONGEST SIDE AT EVERY JOINT. DO NOT EXCEED 10'-0" HANGER SPACING. USE 1" X 18 GAGE GALVANIZED STRAPS (MINIMUM) ATTACHED TO BOTTOM AND SIDES OF DUCT.
8. SUSPEND METAL DUCTWORK EXCEEDING 30" LONGEST SIDE AT MAXIMUM 8'-0" SPACING USING ANGLES AND RODS.
9. SUPPORT DUCTWORK FROM STRUCTURAL MEMBERS. ATTACHMENT TO ROOF DECK IS NOT ACCEPTABLE.
10. DUCT SIZES SHALL BE VERIFIED FOR CLEARANCES AT THE JOB SITE PRIOR TO FABRICATION. DIMENSIONS MAY BE CHANGED TO ACCOMMODATE CONSTRUCTION CLEARANCES. FREE AREA OF DUCT SHALL BE MAINTAINED.
11. DUCT TRANSITIONS SHALL BE CONSTRUCTED WITH SLOPE OF 1/4.
12. PROVIDE ELBOWS AND CHANGES IN DIRECTION WITH SINGLE VANE TURNING VANES.
13. ALL JOINTS SHALL BE MADE AIRTIGHT BY APPROVED METHODS, INCLUDING TAPES, MASTICS, GASKETING OR OTHER APPROVED CLOSURE SYSTEMS.
14. TAPE ALONE CANNOT BE SUBSTITUTED FOR MECHANICAL FASTENERS.
15. TAPES AND MASTICS USED TO SEAL DUCTWORK MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A AND SHALL BE MARKED "181A-P" FOR PRESSURE-SENSITIVE TAPE, "181A-M" FOR MASTIC OR "181A-H" FOR HEAT SENSITIVE TAPE.
16. TAPES AND MASTICS USED TO SEAL FLEXIBLE AIR DUCTS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-FX" FOR PRESSURE SENSITIVE TAPE, OR "181B-M" FOR MASTIC.
17. MECHANICAL FASTENERS USED WITH FLEXIBLE NON-METALLIC AIR DUCTS SHALL COMPLY WITH UL 181 AND SHALL BE MARKED "181B-".
18. FLEXIBLE CONNECTORS SHALL NOT BE USED.
19. HIGH EFFICIENCY TAKE-OFF FITTINGS WITH MANUAL DAMPER SHALL HAVE 2" STAND OFF BRACKET.
20. ALL BRANCH TAKE-OFFS TO INDIVIDUAL AIR INLET ORAIR OUTLET SHALL BE PROVIDED WITH MANUAL DAMPER.
21. ALL DUCTWORK SHALL BE A MINIMUM 26 GAUGE GALVANIZED SHEET METAL.

230700 - MECHANICAL INSULATION

1. PIPE INSULATION TO BE SNAP-ON GLASS FIBER TYPE WITH VAPOR JACKET. SEAL ALL ENDS AND JOINTS TO PROVIDE A COMPLETELY SEALED SYSTEM. ALTERNATIVELY, USE FLEXIBLE UNICELLULAR ASTM 534 TYPE 1 INSULATION. ALL PIPE INSULATION SHALL BE LISTED AND LABELED.
2. INDOOR PIPE INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTED TO ASTM E 84.
3. ALL PIPE INSULATION SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACORDANCE WITH ASTM C411.

MINIMUM PIPE INSULATION THICKNESS (INCHES)

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	CONDUCTIVITY Btu x in./(h x ft^2 x °F)	Mean Rating Temperature, °F	< 1	1 to < 1 1/2	1 1/2 to < 4	4 to < 8	> 8
>350	0.32-0.34	250	4.5	5	5	5	5
251-350	0.29-0.32	200	3	4	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3	3
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1	1	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1	1	1
< 40	0.20-0.26	50	0.5	1	1	1	1.5

230700 - MECHANICAL INSULATION

4. PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH THE MINIMUM PIPE INSULATION THICKNESS TABLE.

   NOTE: FOR PIPING SMALLER THAN 1 1/2 INCHES AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH SHALL BE PERMITTED BUT NOT TO A THICKNESS LESS THAN 1 INCH.
5. WRAP ALL SUPPLY AND RETURN DUCTWORK WITH FOIL FACED FIBERGLASS INSULATION. WRAP INSULATION TIGHTLY ON THE DUCT WITH ALL CIRCUMFERENTIAL JOINTS BUTTED AND LONGITUDINAL JOINTS OVERLAPPED A MIN. OF 2". COVER ALL JOINTS WITH FOIL-REINFORCED 'KRAFT' TAPE, 3" WIDE.
6. DUCT INSULATION IN CONDITIONED AREAS IS NOT REQUIRED IN CLIMATES B OR C.
7. DUCT INSULATION IN EXPOSED CONDITIONED AREAS IS NOT REQUIRED IN CLIMATES 4-7 A.
8. DUCT INSULATION SHALL BE MECHANICALLY FASTENED TO DUCT WIDER THAN 24" AND SHALL BE AFFIXED TO BOTTOM OF DUCT WITH WELDED METAL PINS AND 2" WASHERS AT 18" MAXIMUM SPACING.
9. OUTDOOR DUCTWORK EXPOSED TO THE WEATHER SHALL HAVE THE REQUIRED WRAP INSULATION TO MEET THE MINIMUM THERMAL RESISTANCE OF THE CLIMATE AND SHALL BE FITTED WITH 0.016 EMBOSSED ALUMINUM JACKET MECHANICALLY FASTENED FOR A TIGHT WEATHERPROOF FIT.

DUCT SYSTEM	DUCT LOCATION	MINIMUM THERMAL RESISTANCE ("R")
SUPPLY, RETURN, & OUTSIDE AIR	BUILDING INTERIOR, (CONDITIONED)	4
	BUILDING INTERIOR, (UNCONDITIONED)	6
	BUILDING EXTERIOR (OUTSIDE BUILDING INSULATION)	8 (CLIMATE ZONES 1-4) 12 (CLIMATE ZONES 5-8)
EXHAUST AIR	ALL	0

230700 - MECHANICAL INSULATION

10. INDOOR DUCT INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTED TO ASTM E 84.
11. OUTDOOR DUCT INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 75 OR LESS, AND SMOKE-DEVELOPED INDEX OF 150 OR LESS WHEN TESTED TO ASTM 84.
12. ALL DUCT COVERINGS AND LININGS SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACORDANCE WITH ASTM C411.
13. ALL DUCT INSULATION SHALL BE LISTED AND LABELED.
14. INSULATE DUCTWORK PER MINIMUM THERMAL RESISTANCE REQUIREMENTS, SEE BASIS OF DESIGN ON SHEET M001 FOR PROJECT CLIMATE ZONE.
15. SEE 233113 FOR LINED RECTANGULAR DUCTWORK.

TEST ADJUST & BALANCE NOTES

1. THE MINIMUM REQUIRMENT FOR TESTING, ADJUSTING, AND BALANCING (TAB) OF THE HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) DISTRIBUTION SYSTEMS AND DOMESTIC HOT WATER RECIRCULATION SYSTEMS SHALL BE AS FOLLOWS.
2. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TESTING ADJUSTING AND BALANCING FOR THIS PROJECT
3. THE SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED (WHERE APPLICABLE): SUPPLY AIR SYSTEM, RETURN AIR SYSTEM, EXHAUST AIR SYSTEM, OUTSIDE AIR SYSTEM, ,HYDRONIC SYSTEM, REFRIGERANT SYSTEM, DOMESTIC HOT WATER RECIRCULATION SYSTEM, AND ALL ASSOCIATED EQUIPMENT.
4. CONTRACTOR PERFORMING TESTING ADJUSTING AND BALANCING WORK SHALL BE EITHER AABC OR NEBB CERTIFIED.
5. TESTING ADJUSTING AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE NEBB OR AABC TEST PROCEDURES.
6. TESTING ADJUSTING AND BALANCING REPORT FORMS SHALL BE STANDARD FORMS FROM EITHER AABC OR NEBB.
7. CONTRACTOR SHALL VERIFY QUANTITIES AND LOCATIONS OF ALL BALANCING DEVICES. CONTRACTOR SHALL VERIFY THAT THESE BALANCING DEVICES ARE ACCESSIBLE AN APPROPRIATE FOR BALANCING AND FOR EFFICIENT SYSTEM AND EQUIPMENT OPERATION PRIOR TO COMMENCING WORK.
8. MECHANICAL AND HYDRONIC SYSTEMS SHALL BE ADJUSTED TO WITHIN THE FOLLOWING TOLERANCES.

SUPPLY AIR AND RETURN AIR:	(-) 10% TO (+) 10%
EXHAUST FANS:	(-) 5% TO (+) 10%
EQUIPMENT WITH FANS:	(-) 5% TO (+) 5%
AIR OUTLETS AND INLETS:	(-) 10% TO (+) 10%
PUMPS:	(-) 10% TO (+) 10%
HYDRONIC BALANCE DEVICES:	(-) 10% TO (+) 10%

9. FINAL BALANCE REPORT SHALL INCLUDE THE FOLLOWING (WHERE APPLICABLE): TEST CONDITIONS FOR FANS, SYSTEM DIAGRAMS, AIR CONDITIONING UNIT TEST REPORTS, FAN TEST REPORTS, AIR TERMINAL DEVICE REPORTS, PUMP REPORTS, AND HYDRONIC BALANCE DEVICE REPORTS.
10. SUBMIT FINAL BALANCING REPORT TO THE DESIGN ENGINEER AND OWNER. IF INCLUDED IN PROJECT SCOPE, CONTRACTOR SHALL REQUEST THAT A FINAL INSPECTION BE MADE BY THE DESIGN ENGINEER. DURING THE FINAL INSPECTION, DESIGN ENGINEER MAY SELECT MEASUREMENTS DOCUMENTED IN THE FINAL REPORT TO BE VERIFIED BY THE CONTRACTOR.
11. APPROXIMATELY 90 DAYS AFTER SUBMISSION OF THE FINAL BALANCING REPORT, CONTRACTOR SHALL PERFORM ADDITIONAL TESTING ADJUSTING AND BALANCING TO VERIFY THAT BALANCED CONDITIONS ARE BEING MAINTAINED THROUGHOUT EACH SYSTEM AND TO CORRECT UNUSUAL CONDITIONS.
12. ADDITIONAL TESTING ADJUSTING AND BALANCING SHALL BE MADE AS DIRECTED BY THE DESIGN ENGINEER TO CORRECT UNUSUAL CONDITIONS. ADDITIONAL TESTING WILL NOT EXCEED THREE (3) DAYS DURING THE FIRST SIX MONTHS OF OPERATION.
13. IF INITIAL TESTING ADJUSTING AND BALANCING PROCEDURES WERE NOT PERFORMED DURING NEAR-PEAK SUMMER AND WINTER CONDITIONS, PERFORM ADDITIONAL TESTING ADJUSTING AND BALANCING DURING NEAR PEAK SUMMER AND WINTER CONDITIONS.

233113 - METAL DUCTWORK

1. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS AND PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, (SMACNA).
2. TRANSITION ALL DUCTWORK TO CONNECT WITH EQUIPMENT SIZES AS REQUIRED.

DUCT LOCATION	DUCT TYPE			
	SUPPLY		EXH.	RET.
	<2in. Wg.	>2in. Wg.		
OUTDOORS	A	A	A	A
UNCONDITIONED SPACES	B	A	B	B
CONDITIONED SPACES	C	B	B	B
(CONCEALED DUCTWORK) CONDITIONED SPACES (EXPOSED DUCTWORK)	A	A	B	B

233113 - METAL DUCTWORK

3. DUCTWORK SHALL BE GALVANIZED STEEL THROUGHOUT, FABRICATED AND INSTALLED SO THAT NO VIBRATION OR NOISE RESULTS. IT SHALL BE MADE FROM THE BEST GRADE OF GALVANIZED MILLED STEEL SHEETS OF U.S. STANDARD GAUGE AND BE FREE FROM BLISTERS, SLIVERS, AND PITS. ALL SEAMS SHALL BE AIRTIGHT, THE CONSTRUCTION OF ALL DUCTWORK, INCLUDING GAUGES OF METAL, BRACING LAYOUT, ETC., SHALL BE IN ACCORDANCE WITH SMACNA. SLEEVES FOR FIRE DAMPERS AND DUCT SECTIONS FORMING AN EXTENSION OF THE FIRE WALL SHALL BE 10 GAUGE STEEL.
4. SEAL DUCTWORK ACCORDING TO THE FOLLOWING SMACNA DUCT SEALING CLASS:
5. HANGERS FOR DUCTS UP TO 18" IN WIDTH OR DIAMETER SHALL BE PLACED ON NOT MORE THAN 8 FOOT CENTERS. DUCTS 19" AND OVER IN WIDTH OR DIAMETER SHALL BE SUPPORTED ON NOT MORE THAN 4 FOOT CENTERS. DUCT HANGERS SHALL BE CONSTRUCTED OF GALVANIZED BAND IRON 1-1/8" FOR DUCTS UP TO 36" IN WIDTH OR DIAMETER. HANGERS SHALL EXTEND DOWN SIDES AND A MINIMUM OF 1" UNDER RECTANGULAR DUCTS, AND WRAP COMPLETELY AROUND ROUND DUCTS. ALL DUCTS SHALL BE RIGIDLY SUPPORTED.
6. ALL DUCTWORK SHALL BE CLEANED PRIOR TO THE INSTALLATION OF CEILING AND DIFFUSERS. OPERATE FANS TO BLOW OUT DUCTWORK.
7. RECTANGULAR LOW-PRESSURE SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1" FACED FIBERGLASS INSULATION SECURELY BUTTONED OR LAPPED AND SEALED. INSULATION SHALL BE 1-1/2 POUND DENSITY.
8. DUCT LINER MAY BE SUBSTITUTED FOR DUCT WRAP INSULATION IF THE REQUIRED MINIMUM THERMAL RESISTANCE IS SATISFIED WITH THE LINER.
9. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE CLEAR AREA AND SHALL BE INCREASED TO ACCOMMODATE INSULATION. DUCT LINER TO BE BY KNAUF GmbH, JOHN-MANSVILLE OR SCHULLER INTERNATIONAL.
10. 1.ALL MATERIALS USED AS INTERNAL LINER AND EXPOSED TO THE AIR STREAM IN DUCTS SHALL BE SHOWN TO BE DURABLE WHEN TESTED IN ACCORDANCE WITH UL 181.

GENERAL MECHANICAL NOTES

1. MECHANICAL DRAWINGS SHOW GENERAL DESIGN, ARRANGEMENT AND EXTENT OF MECHANICAL SYSTEMS. DRAWINGS DO NOT SHOW ALL THE OFFSETS, BENDS OR ELBOWS NECESSARY FOR COMPLETE INSTALLATION IN THE SPACE PROVIDED. THE CONTRACTOR SHALL MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE SYSTEMS COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY DESIGN ENGINEER.
2. DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND SHALL BE INTERPRETED AS IN INTEGRAL UNIT WITH ITEMS SHOWN ON ONE AND NOT OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.
3. ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT.
4. ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS OF OWNER.
5. PRIOR TO FABRICATION AND INSTALLATION OF ANY MECHANICAL COMPONENT, CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL MECHANICAL WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
6. SPACE ABOVE ALL CEILINGS IS LIMITED. CAREFUL COORDINATION IS REQUIRED WITH ALL TRADES BEFORE ANY PIPE, DUCT, OR EQUIPMENT IS ORDERED AND OR INSTALLED. ANY CONFLICTS AND OR CHANGES FOUND DURING INSTALLATION THAT RESULT FROM LACK OF COORDINATION BY THE CONTRACTORS DURING SHOP DRAWING PROCESS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW AND USE, WHERE APPROPRIATE, ALL MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. STRUCTURE SHOWN ON DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE ALL MOUNTING REQUIREMENTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
9. ANY PART OF THE MECHANICAL INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
10. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS AND GRILLES.
11. CONTRACTOR SHALL OPERATE SYSTEMS AND DEMONSTRATE ALL ASPECTS OF SYSTEMS TO ENGINEER AND OR OWNER TO PROVE ALL SYSTEMS ARE OPERATIONAL.
12. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAWINGS AT THE PROJECT SITE. ALL CHANGES IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, AND ACCESSORIES SHALL BE RECORDED. THESE REDLINED DRAWINGS SHALL BE GIVEN TO THE ARCHITECT/ENGINEER AFTER FINAL INSPECTION IN ACCORDANCE WITH SPECIFICATIONS.

233300 - DUCTWORK ACCESSORIES

1. FLEXIBLE DUCTWORK: THE FINAL 5 FOOT CONNECTION TO GRILLES AND DIFFUSERS IN LAY-IN CEILINGS, OR TO FLOOR MOUNTED GRILLES, MAY BE MADE WITH FLEXIBLE DUCT, FLEXMASTER TYPE 5M ONLY. ENDS SHALL BE SEALED.
2. SQUARE AND/OR RECTANGULAR ELBOWS SHALL BE PROVIDED WITH TURNING VANES.
3. PROVIDE FLEXIBLE CONNECTIONS NOT LESS THAN 4" WIDE CONSTRUCTED OF HEAVY, WATERPROOF, WOVEN PLASTIC-COATED GLASS FABRIC AT SUPPLY AND RETURN CONNECTIONS TO FURNACES, AIR HANDLING, ROOFTOP, MAKE-UP AIR OR FAN-COIL UNITS. CORNERS SHALL BE SEWN TIGHT. CONNECTIONS SHALL BE 20 OUNCE VENTFABRICS OR EQUAL.
4. COMBINATION FIRE AND SMOKE DAMPERS OR FIRE DAMPERS IN DUCTWORK THROUGH ALL FLOORS AND FIRE WALLS SHALL BE FURNISHED AND INSTALLED AS REQUIRED TO CONFORM TO THE LATEST NFPA BULLETIN CONCERNING THIS TYPE OF BUILDING AND SHALL BEAR THE UL LABEL. DAMPERS, COMPLETE WITH MOUNTING ANGLES, SHALL BE MULTI-BLADE, FUSIBLE LINK, SPRING ACTING WITH 11 GAUGE SLEEVE. FUSIBLE LINK SHALL BE RATED AT 165°F.
5. DUCT MOUNTED BALANCING DAMPERS SHALL BE USED TO CONTROL SUPPLY AIR TO EACH DIFFUSER AND GRILLE. AN OPERATING HEAD SHALL BE PLACED ON THE SIDE OF THE DUCT WITH A POSITIVE LOCKING QUADRANT. DAMPERS SHALL BE PROVIDED IN RETURN AND EXHAUST AIR DUCTS WHERE SHOWN ON DRAWINGS. COORDINATE THE LOCATION OF CEILING ACCESS PANELS.
6. PROVIDE CEILING ACCESS DOORS AT ALL LOCATIONS OF BALANCING DAMPERS, FIRE DAMPERS, FIRE/SMOKE DAMPERS, VALVES, ETC., WHERE THERE IS NOT A LIFT-OUT TYPE CEILING. ACCESS DOORS SHALL BE HINGED OF METAL CONSTRUCTION WITH SCREWDRIVER LATCHES.
7. AT FIRE DAMPERS, A DUCT MOUNTED SHEET METAL HINGED DOOR SHALL BE PROVIDED AND INSTALLED WITH POSITIVE LOCKING HANDLE. WHERE DUCTS ARE INSULATED, COVERS SHALL BE INSULATED.
8. GRAVITY OR BACKDRAFT DAMPERS SHALL BE ALL ALUMINUM CONSTRUCTION, INTERCONNECTED AND BLADED, PRESSURE DROP THROUGH DAMPERS SHALL NOT EXCEED 0.04 INCH W.G.

GENERAL EQUIPMENT NOTES

1. ALL CAPACITES ARE AT JOB SITE CONDITIONS AND ARE MINIMUM CAPACITY.
2. ALL AIR CONDITIONING EQUIPMENT SHALL BE A.R.I. CERTIFIED AND U.L. LISTED.
3. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED TO CONFORM WITH LOCAL SEISMIC REQUIREMENTS AND THE REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS.
4. VERIFY ALL REQUIRED SERVICE CONNECTIONS, INCLUDING ELECTRICAL CHARACTERISTICS FOR ALL EQUIPMENT PRIOR TO ORDERING EQUIPMENT.
5. ALL EQUIPMENT SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS.
6. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
7. ALL SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.
8. AIR INLETS AND OUTLETS SHALL BE OF THE SAME MANUFACTURER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, AND DAMAGE
10. ALL SYSTEM COMPONENTS, WHERE REQUIRED, SHALL BE CERTIFIED AND LISTED BY A THIRD PARTY.
11. SEE ARCHITECTRURAL ADA DRAWINGS/DETAILS FOR WALL SWITCHES OR CONTROL SENSORS (I.E. THERMOSTATS) MOUNTING HEIGHTS, BUT NOT GREATER THAN 48" AFF.
12. THERMOSTAT SENSORS TO BE LOCATED TO AVOID DIRECT SUNLIGHT AND DIRECT AIRFLOW FROM AIR DEVICES. THERMOSTATS LOCATED ON BUILDING EXTERIOR WALLS TO HAVE ALL WIRING HOLES SEALED AND TO BE THERMALLY INSULATED FROM THE WALL SYSTEM.

233423 - FANS AND ROOF HOODS

1. ROOF MOUNTED EXHAUST FANS SHALL BE COMPLETE WITH BACKDRAFT DAMPERS. A DISCONNECT SWITCH SHALL BE PROVIDED AT FAN LOCATIONS. PROVIDE FAN ASSEMBLY COMPLETE WITH INSECT SCREEN AND PREFABRICATED ROOF CURB MATCHING THE FAN SIZE AND ROOF SLOPE.
2. CEILING MOUNTED EXHAUST FANS SHALL BE COMPLETE WITH LOUVERED GRILLE, BACKDRAFT DAMPER, AND WALL CAP OR ROOF CAP, SEE PLANS.
3. ROOF MOUNTED HOODS SHALL BE COMPLETE WITH BACKDRAFT DAMPERS, INSECT SCREEN AND PREFABRICATED ROOF CURB MATCHING THE HOOD SIZE AND ROOF SLOPE.

233713 - GRILLES, DIFFUSERS AND LOUVERS

1. ALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE COMPLETE WITH FRAMES AND RUBBER GASKETS. FINISH FOR ALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE WHITE.
2. COORDINATE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ELEVATIONS.
3. LOUVERS SHALL HAVE MINIMUM FREE AREA AND MAXIMUM PRESSURE DROP AS LISTED IN THE SCHEDULES. LOUVERS SHALL HAVE FRAME AND SILLS COMPATIBLE WITH ADJACENT SUBSTRATE AND FIT ACCURATELY FOR WEATHERPROOF INSTALLATION. LOUVERS SHALL BE COMPLETE WITH 1/2" MESH ANODIZED ALUMINUM BIRD SCREEN.

235400 - FORCED AIR FURNACES

1. FACTORY ASSEMBLED CONDENSING GAS FURNACE WITH 100% OUTDOOR COMBUSTION AIR, SEALED COMBUSTION MINIMUM 90% AFUE. FURNACE SHALL CONSIST OF CASING, HEAT EXCHANGERS, BLOWER, AIR FILTER, REDUNDANT GAS VALVE, HOT SURFACE IGNITOR, AND CONTROLS. UNITS TO HAVE 20 YEAR HEAT EXCHANGER WARRANTY.
2. PIPING FOR FURNACE VENT/INTAKE AIR AND FOR CONDENSATE DRAINS SHALL BE PVC SCHEDULE 40, SECURELY SUPPORTED AT NO MORE THAN 5 FT CENTERS. INSULATE ALL VENTS AND AIR INTAKES LOCATED IN TRUSS SPACES AND IN ATTICS.
3. PROVIDE FURNACE MANUFACTURER'S STANDARD A-FRAME OR N- FRAME DX COOLING COIL. COIL TO BE COMPLETE WITH GALVANIZED DRAIN PAN WITH DRAIN CONNECTION, DX EXPANSION VALVE, LIQUID SOLENOID VALVE, AND LIQUID LINE SIGHT GLASS/MOISTURE INDICATOR. MOUNT COOLING COIL IN FURNACE SUPPLY PLENUM IN LOCATION SHOWN ON DRAWINGS.
4. INSTALL 3/4" COPPER CONDENSATE DRAIN LINE FROM COOLING COIL DRAIN PAN AT INDOOR UNIT OF SPLIT SYSTEMS AND EXTEND TO OUTSIDE, TIE TO TAILPIECE OF NEAREST SINK, RUN TO NEAREST FAN ROOM FLOOR DRAIN OR RUN TO NEAREST SERVICE SINK.

236300 - CONDENSING UNITS

1. FACTORY ASSEMBLED AND TESTED AIR COOLED CONDENSING UNITS, CONSISTING OF CASING, COMPRESSOR, CONDENSER COIL, CONDENSER FAN AND MOTOR, REFRIGERANT RESERVOIR, AND OPERATING CONTROLS. UNITS TO BE COMPLETE WITH HIGH AND LOW PRESSURE CUTOUTS, SERVICE SHUTOFF VALVES, AND HAVE 5 YEAR COMPRESSOR WARRANTY.

238126 - SPLIT SYSTEM A/C UNITS

1. PROVIDE FACTORY ASSEMBLED AND TESTED SPLIT TYPE AIR CONDITIONING UNIT WITH INDOOR UNIT CONSISTING OF CASING, EVAPORATOR COIL, EVAPORATOR FAN, AND DRAIN PAN: AND OUTDOOR UNIT CONSISTING OF COMPRESSOR, CONDENSER COIL, AND CONDENSER FAN. PROVIDE UNIT COMPLETE WITH CONDENSATE PUMP, MICROPROCESSOR CONTROLS AND 5 YEAR COMPRESSOR WARRANTY.

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For Questions Contact:
Sean Jones (385.489.1638)
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REV	DATE	DESCRIPTION
A	04/26/2024	50% CD SET
B	06/04/2024	75% CD SET
C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

BGW ARCHITECTS | 2909 WASHINGTON BLVD - OGDEN, UT 84401 | PH: 800-552-7137 | WWW.BGWSERVICES.COM

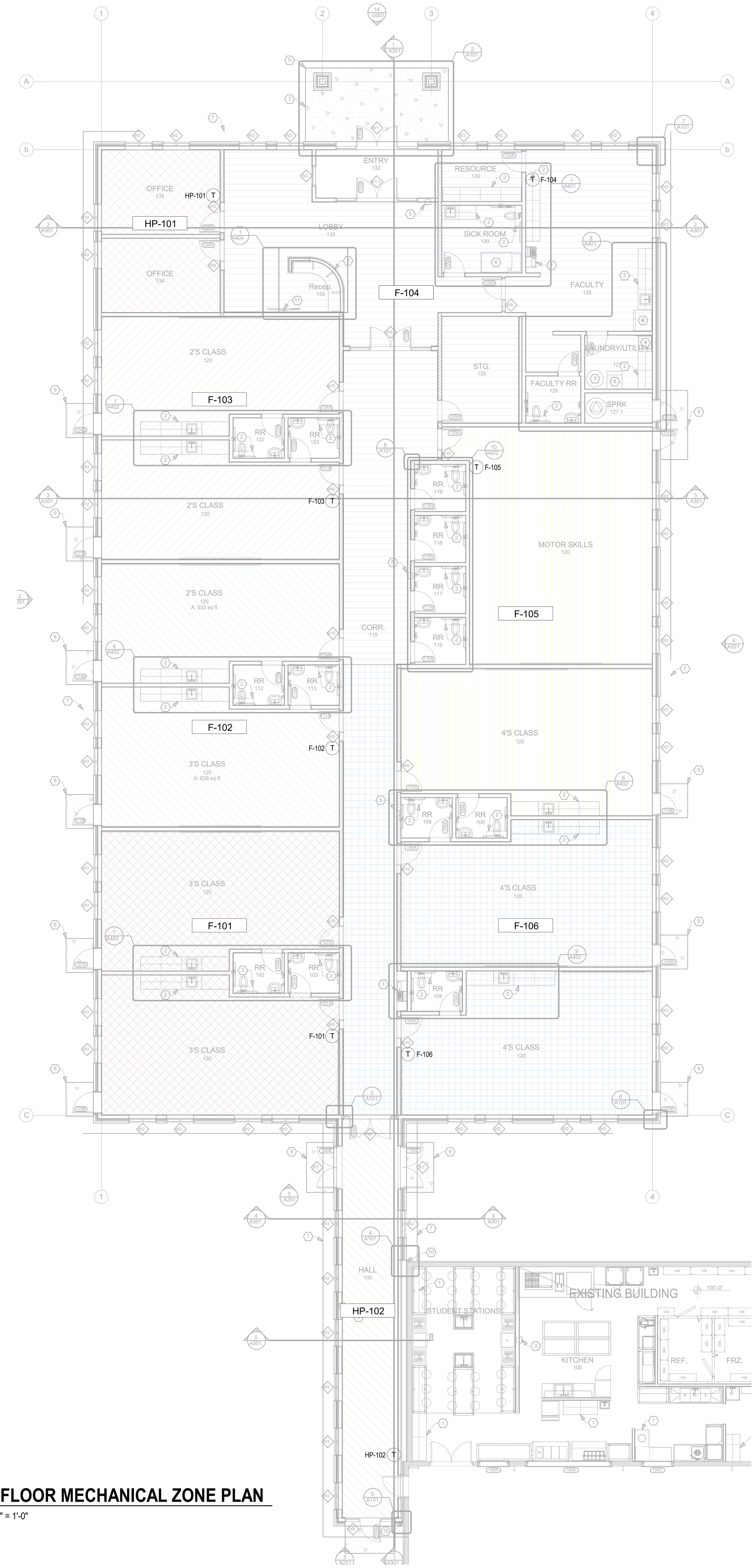
SEAL:
T. BRADLEY SHAKESPEARE
No. 29257
DEC-18-2024

SHEET TITLE:
MECHANICAL NOTES & SPECIFICATIONS

SHEET NUMBER:
M002

DO NOT SCALE DRAWING

3/11/2025 11:38:18 AM



HVAC ZONES

- F-101
- F-102
- F-103
- F-104
- F-105
- F-106
- HP-101
- HP-102

1 **FIRST FLOOR MECHANICAL ZONE PLAN**

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

PLAN NORTH

BGWARCHITECTS
Innovative design. Stewardship driven.

SHAKESPEARE ENGINEERING
4241 SOUTH RIVER RD. STE. B
ST. GEORGE, UT 84790
For Questions Contact:
Sean Jones (385.489.1638)
sean@shakespeare-eng.com

REV	DATE	DESCRIPTION
A	04/26/2024	50% CD SET
B	06/04/2024	75% CD SET
C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET

PROJECT:

DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

BGW ARCHITECTS | 2909 WASHINGTON BLVD - OGDEN, UT 84401 | PH: 800-552-7137 | WWW.BGWSERVICES.COM

SEAL:

T. BRADLEY SHAKESPEARE
LICENSE
No. 29257
DEC-18-2024
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:

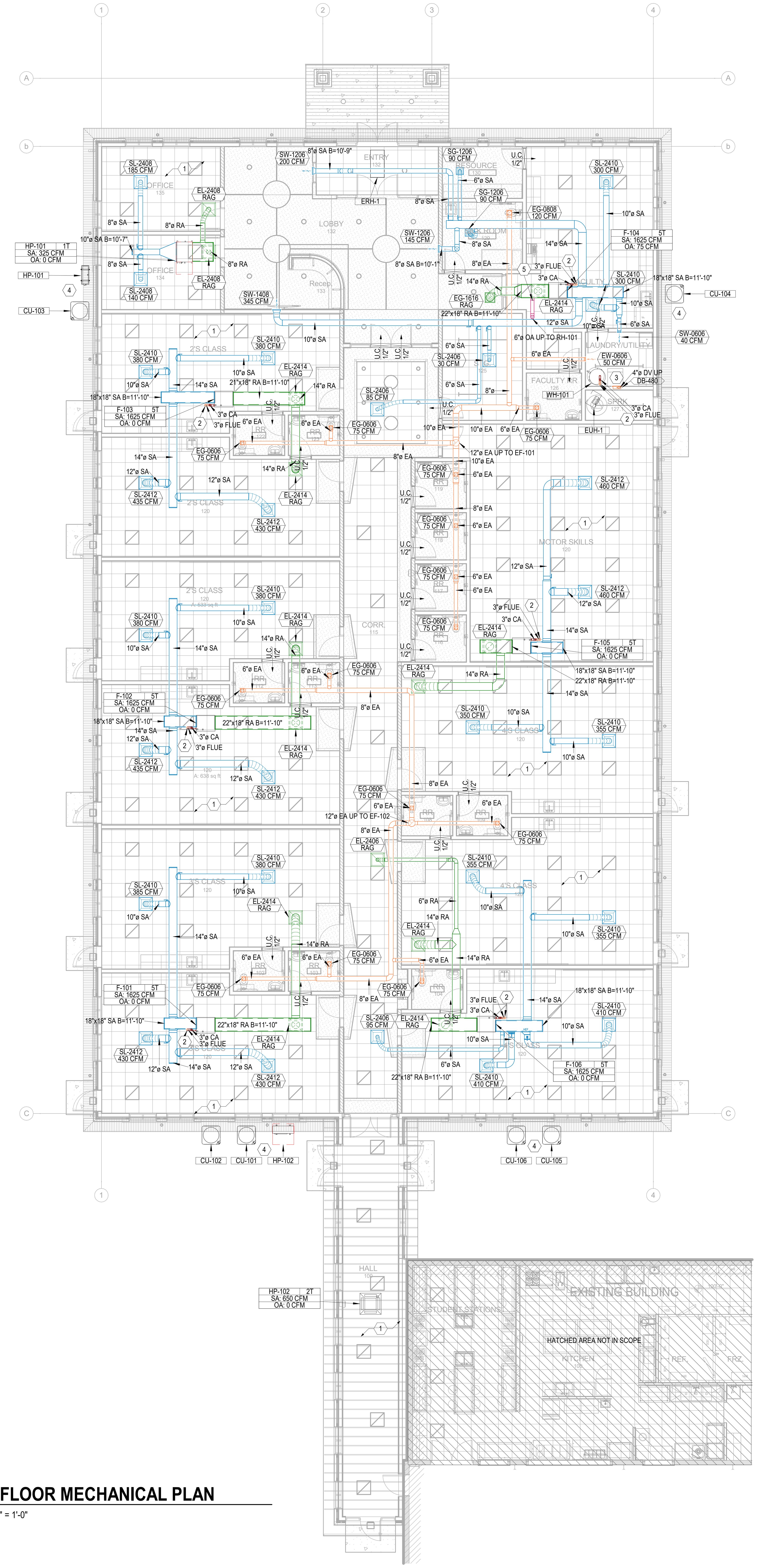
FIRST FLOOR MECHANICAL ZONE PLAN

SHEET NUMBER:

M100

DO NOT SCALE DRAWING

3/11/2025 11:38:19 AM



SHEET KEYNOTES

1. NATURAL VENTILATION PROVIDED VIA DOORS TO THE OUTDOORS WITH A MINIMUM OPENABLE AREA NOT LESS THAN 4 PERCENT OF THE FLOOR AREA.
2. 3" CONCENTRIC VENT UP
3. DV DUCTS SHALL CONFORM TO THE REQUIREMENTS OF 2021 IMC 504.9.1 THROUGH 504.9.6.
4. INSTALL CONDENSING UNITS PER MANUFACTURER'S REQUIREMENTS. FIELD VERIFY OPERATIONAL CLEARANCES ARE MET.
5. CONNECT OA DUCT TO RA DUCT SERVICE IN THIS APPROXIMATE LOCATION. PROVIDE AIR BALANCE DAMPER AND BALANCE TO MIN. OA FLOW RATE INDICATED ON FURNACE SCHEDULE.

PLAN NORTH

1 FIRST FLOOR MECHANICAL PLAN

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

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sean@shakespeare-eng.com

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PROJECT:

DELMARVA CHRISTIAN SCHOOL EARLY LEARNING CENTER

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GEORGETOWN, DE 19947

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SEAL:

T. BRADLEY SHAKESPEARE LICENSE No. 29257 DEC-18-2024 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE:

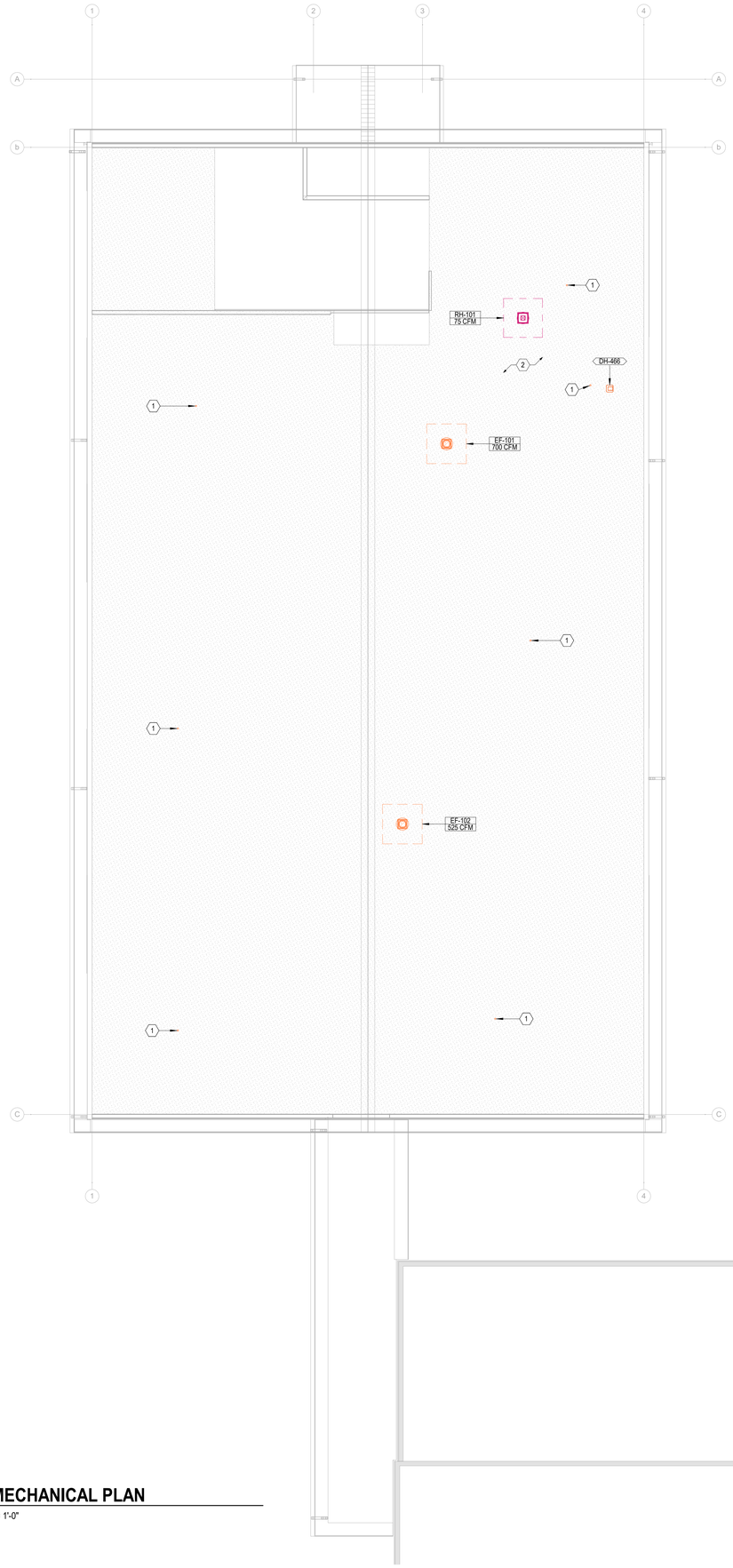
FIRST FLOOR MECHANICAL PLAN

SHEET NUMBER:

M101

DO NOT SCALE DRAWING

3/11/2025 11:38:33 AM



SHEET KEYNOTES

1 3" CONCENTRIC VENT DN

2 KEEP EA AND SEWER VENT TERMINATIONS NOT LESS THAN 10' FROM OA INTAKES (TYP).

PLAN NORTH

1 ROOF MECHANICAL PLAN

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

BGW ARCHITECTS
Innovative design. Stewardship driven.

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ST. GEORGE, UT 84790
For Questions Contact
Bradley Shakespeare, P.E.
brad@shakespeare-eng.com

REV	DATE	DESCRIPTION
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C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET

PROJECT:

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EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

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SEAL:

BRADLEY SHAKESPEARE
No. 29257
DEC-18-2024
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:

ROOF MECHANICAL PLAN

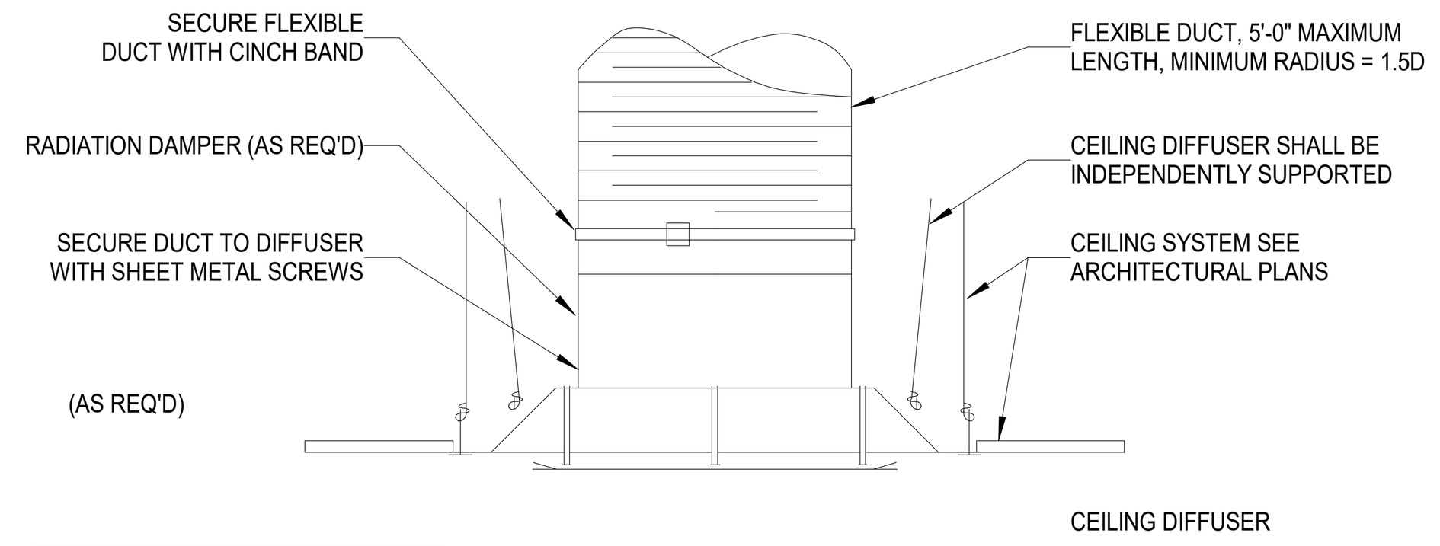
PROJECT #:2303

SHEET NUMBER:

M102

DO NOT SCALE DRAWING

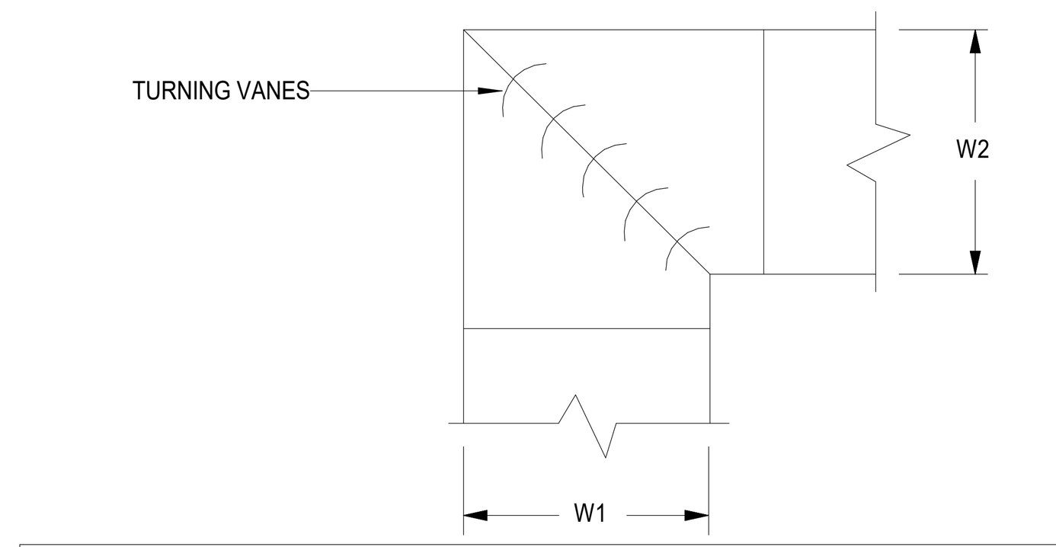
3/17/2025 11:38:29 AM



NOTE: BALANCING DAMPER TO BE PROVIDED FOR EACH DIFFUSER

1 DIFFUSER - CEILING MOUNT

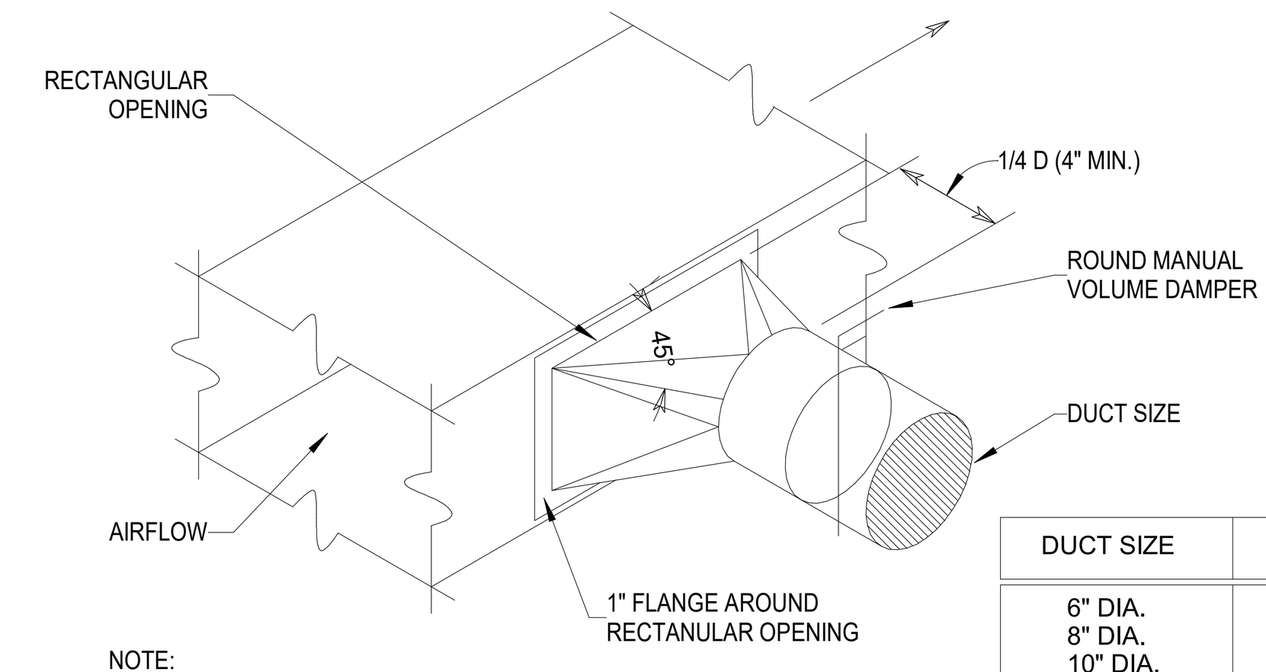
NTS



NOTES:
1. ALL TURNING VANES SHALL BE SINGLE VANE TYPE REGARDLESS OF DIMENSION.
2. ALL SINGLE VANES SHALL HAVE A 2 INCH RADIUS, 1 INCH MAXIMUM SPACE BETWEEN VANES AND A 3/4 INCH TRAILING EDGE.

2 DUCT ELBOW - SQUARE

NTS

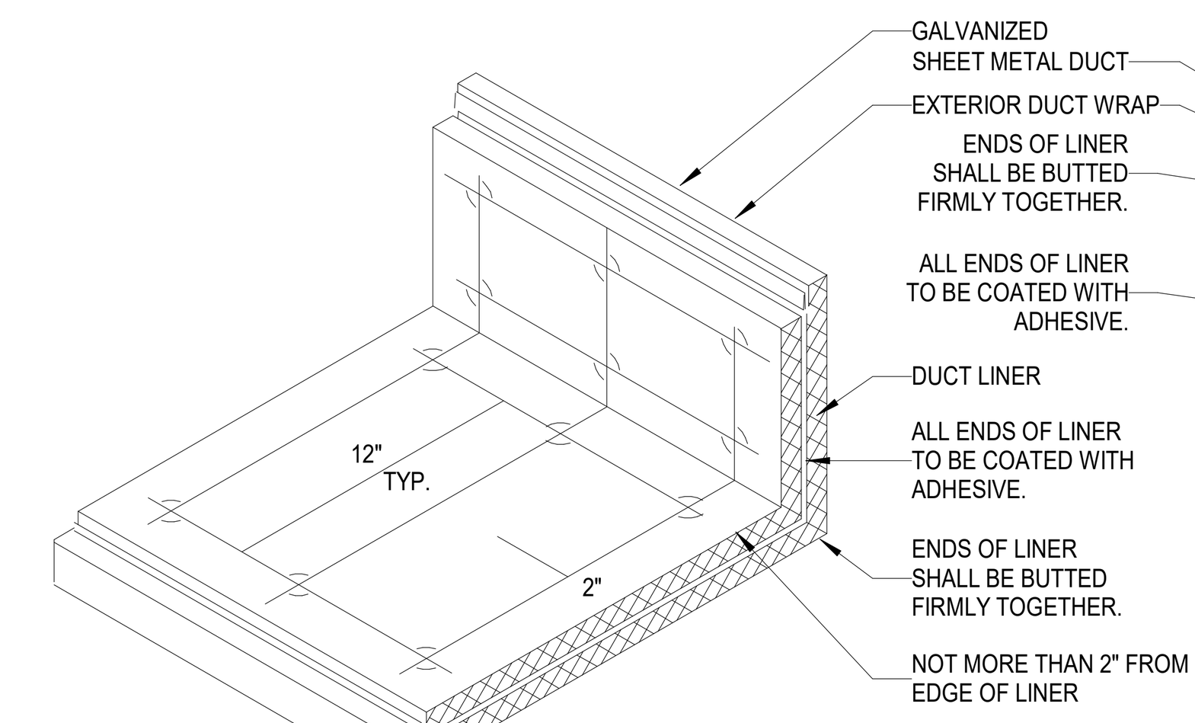


NOTE:
CONSTRUCT FITTING PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE FIGURE 2-6.

DUCT SIZE	RECT. OPNG.
6" DIA.	6" X 9"
8" DIA.	8" X 12"
10" DIA.	10" X 14"
12" DIA.	12" X 16"
14" DIA.	14" X 18"

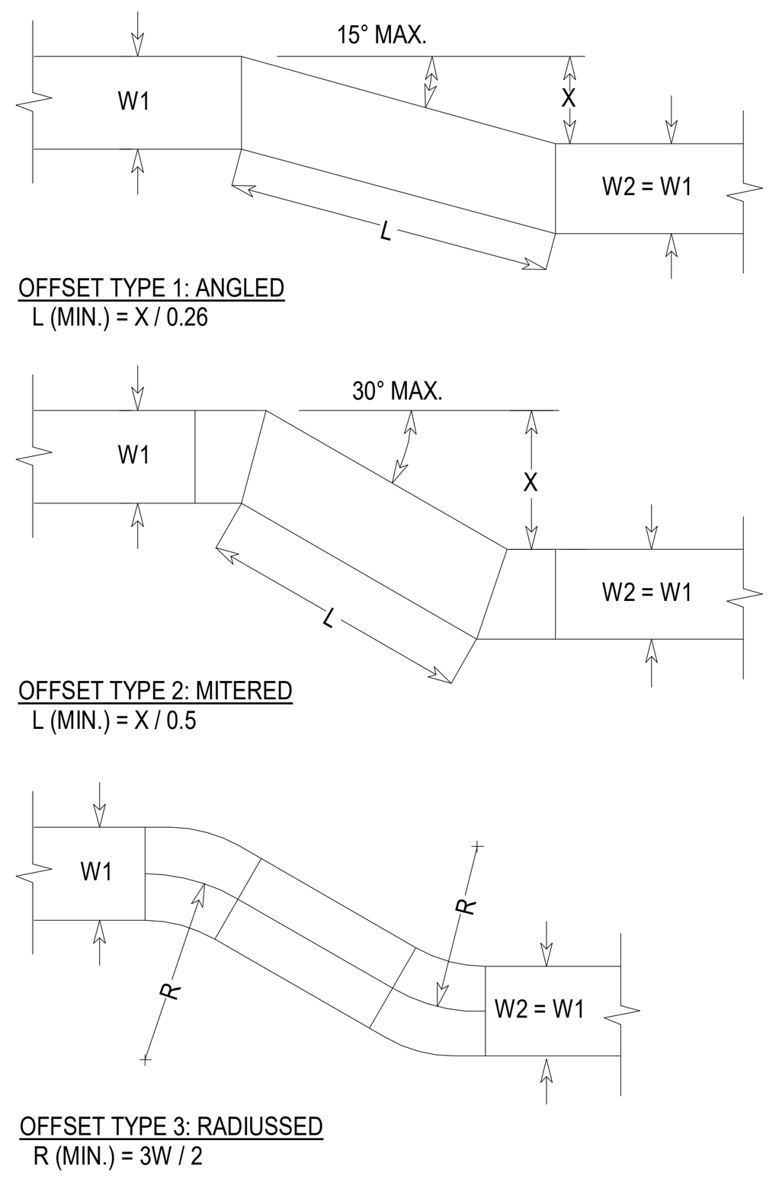
3 DUCT HIGH EFFICIENCY TAKE-OFF

NTS



4 DUCT LINER AND INSULATION

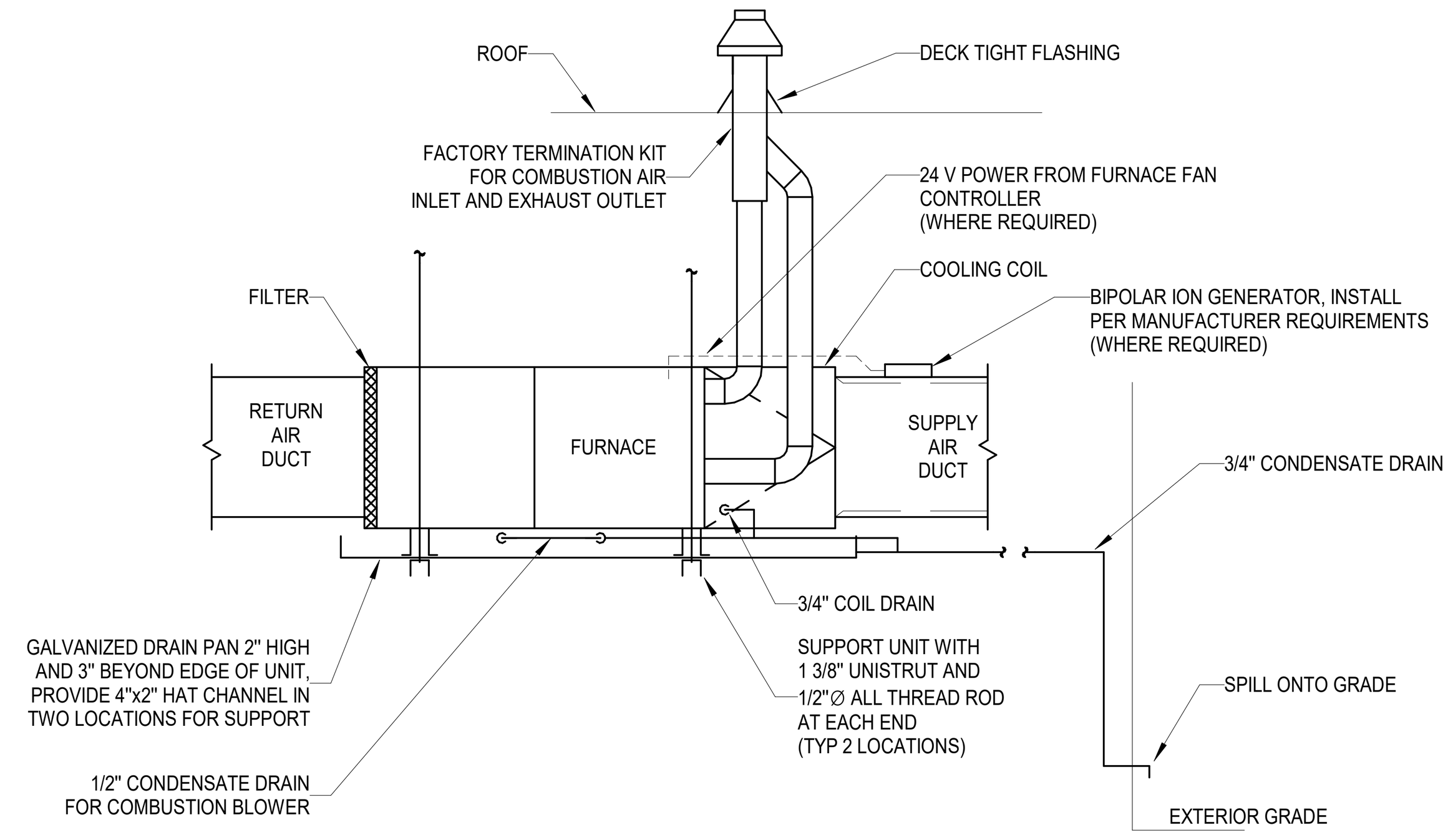
NTS



NOTES:
1. UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.
2. ALL OFFSETS SHOWN ON DRAWINGS MADE BE MADE WITH ANY OF THE 3 OFFSET TYPES ABOVE.

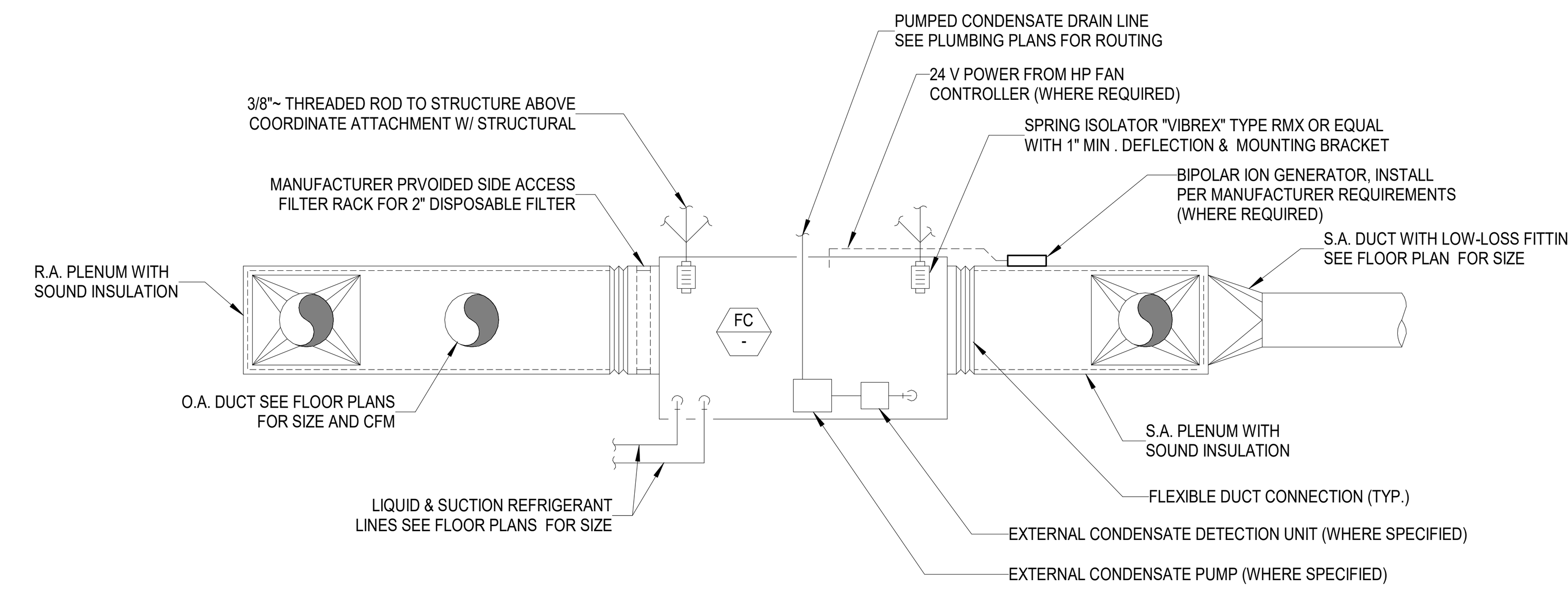
5 DUCT OFFSETS

NTS



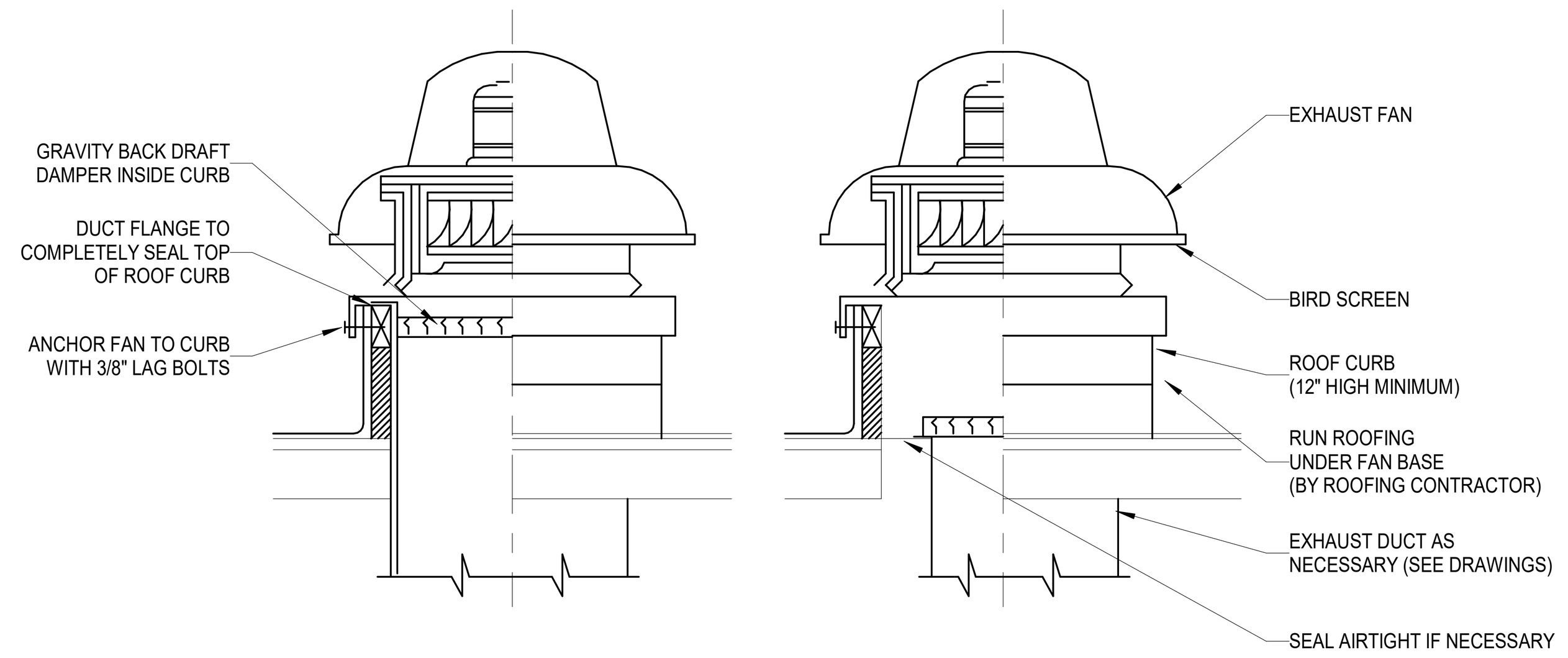
6 FURNACE - HORIZONTAL

NTS



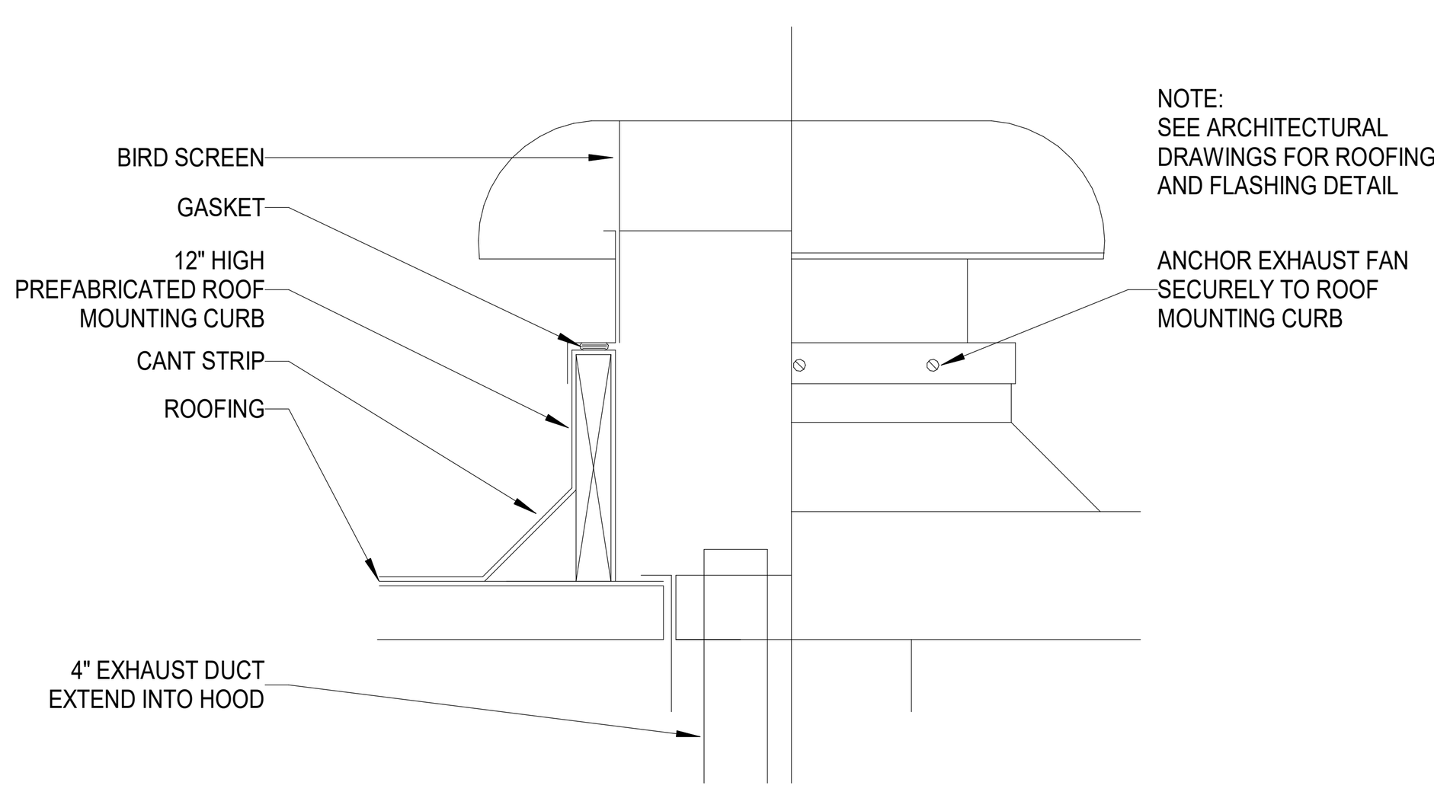
7 HORIZONTAL SPLIT SYSTEM FAN COIL

NTS



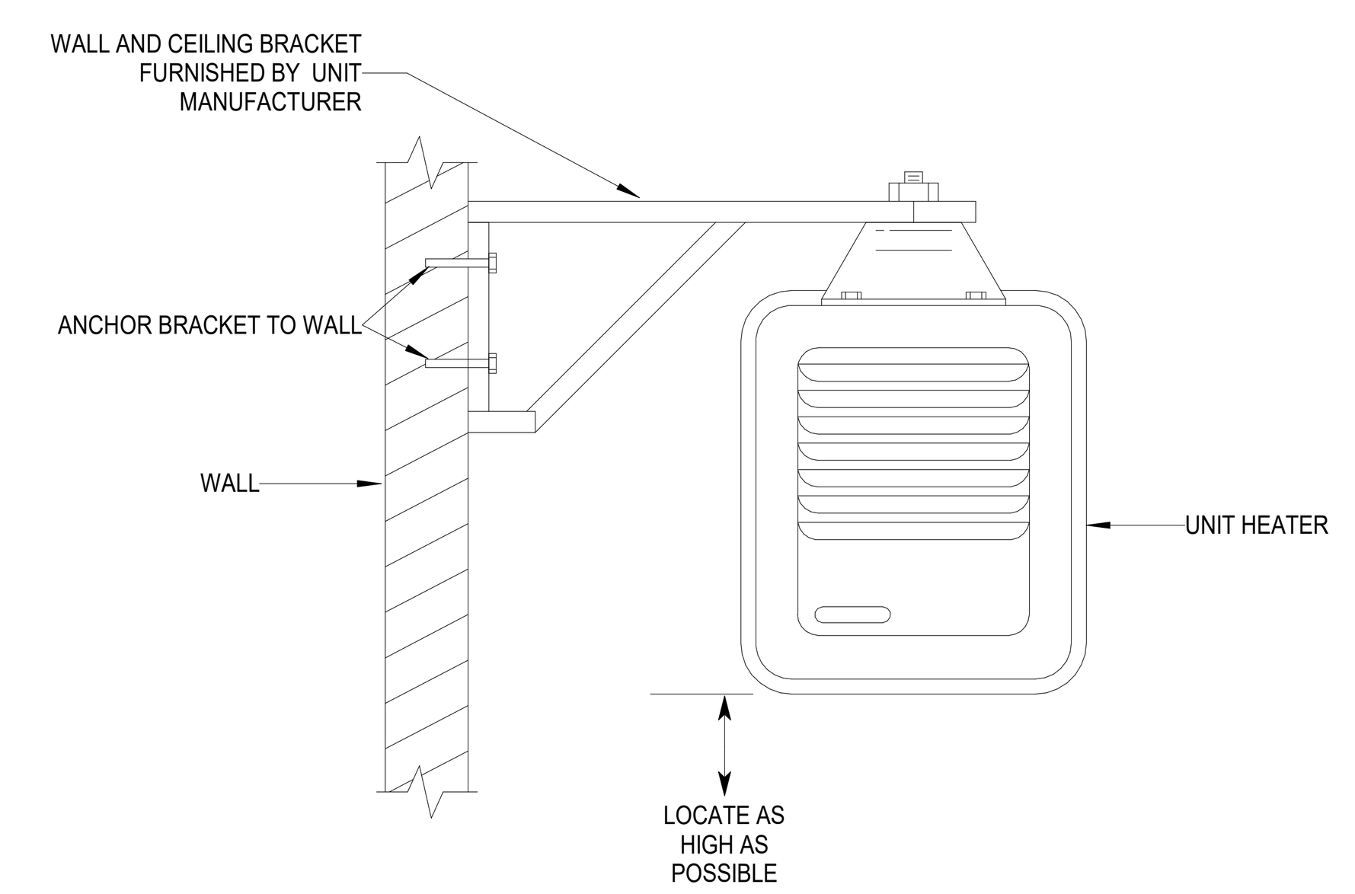
8 EXHAUST FAN/ROOF CURB

NTS



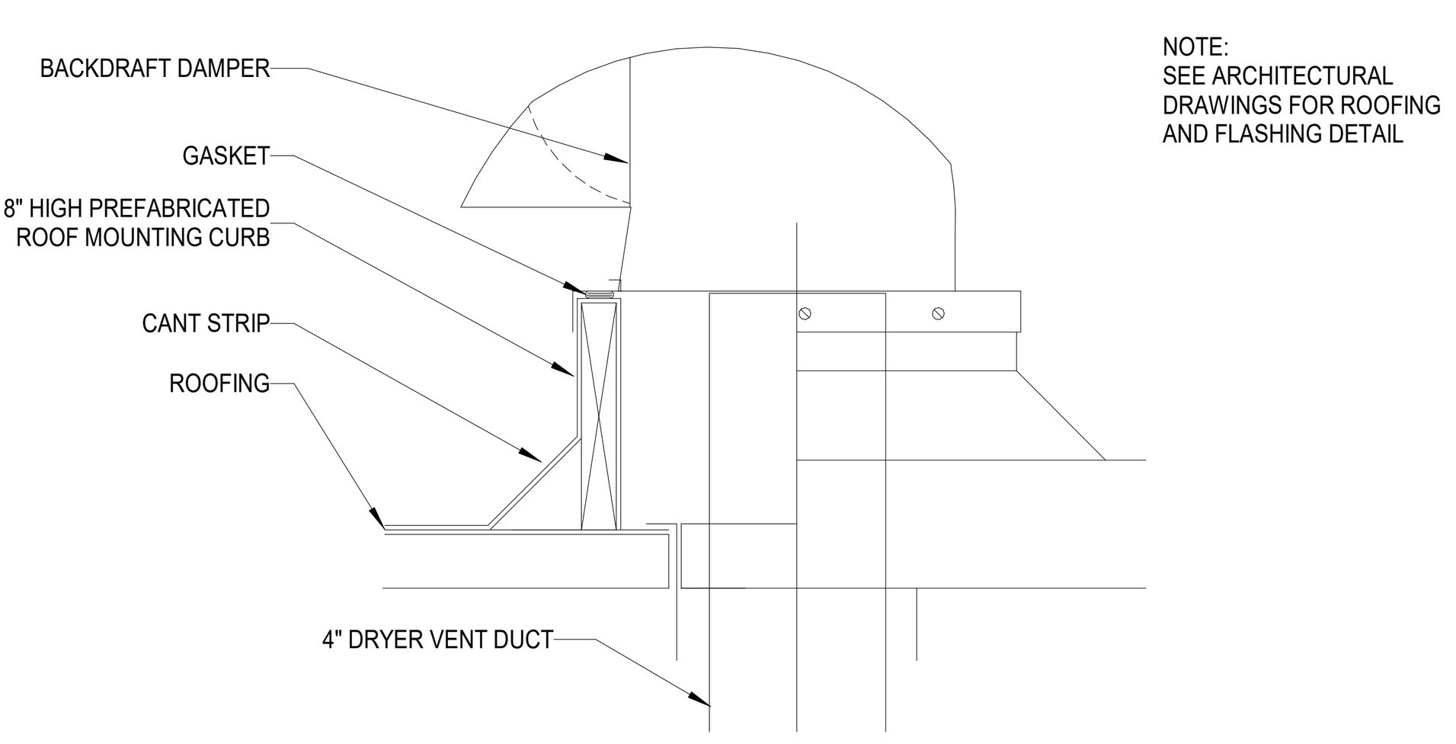
9 ROOF HOOD

NTS



10 ELECTRIC UNIT HEATER - WALL BRACKET

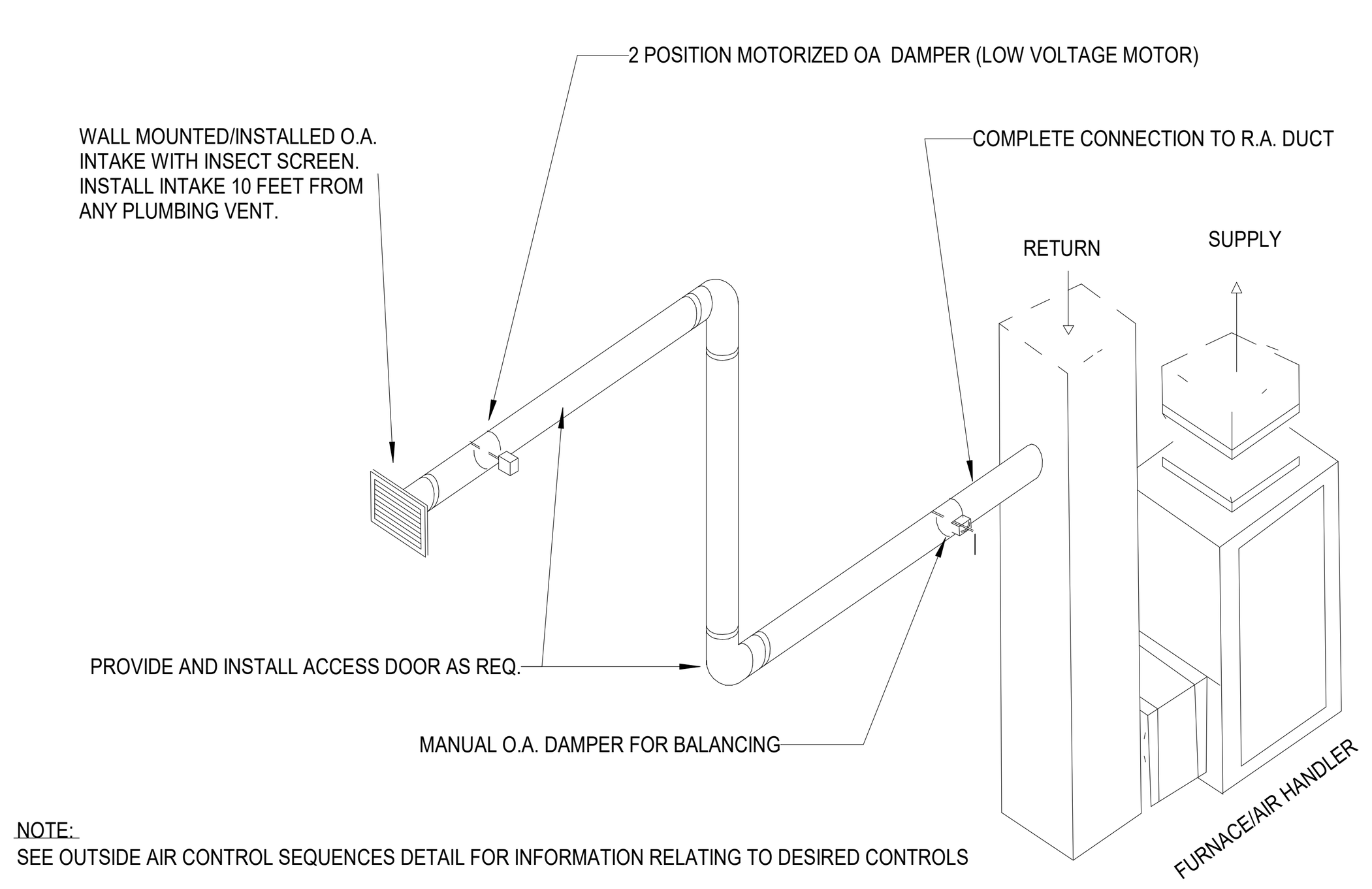
NTS



NOTE:
SEE ARCHITECTURAL DRAWINGS FOR ROOFING AND FLASHING DETAIL

11 DRYER VENT - FLAT ROOF

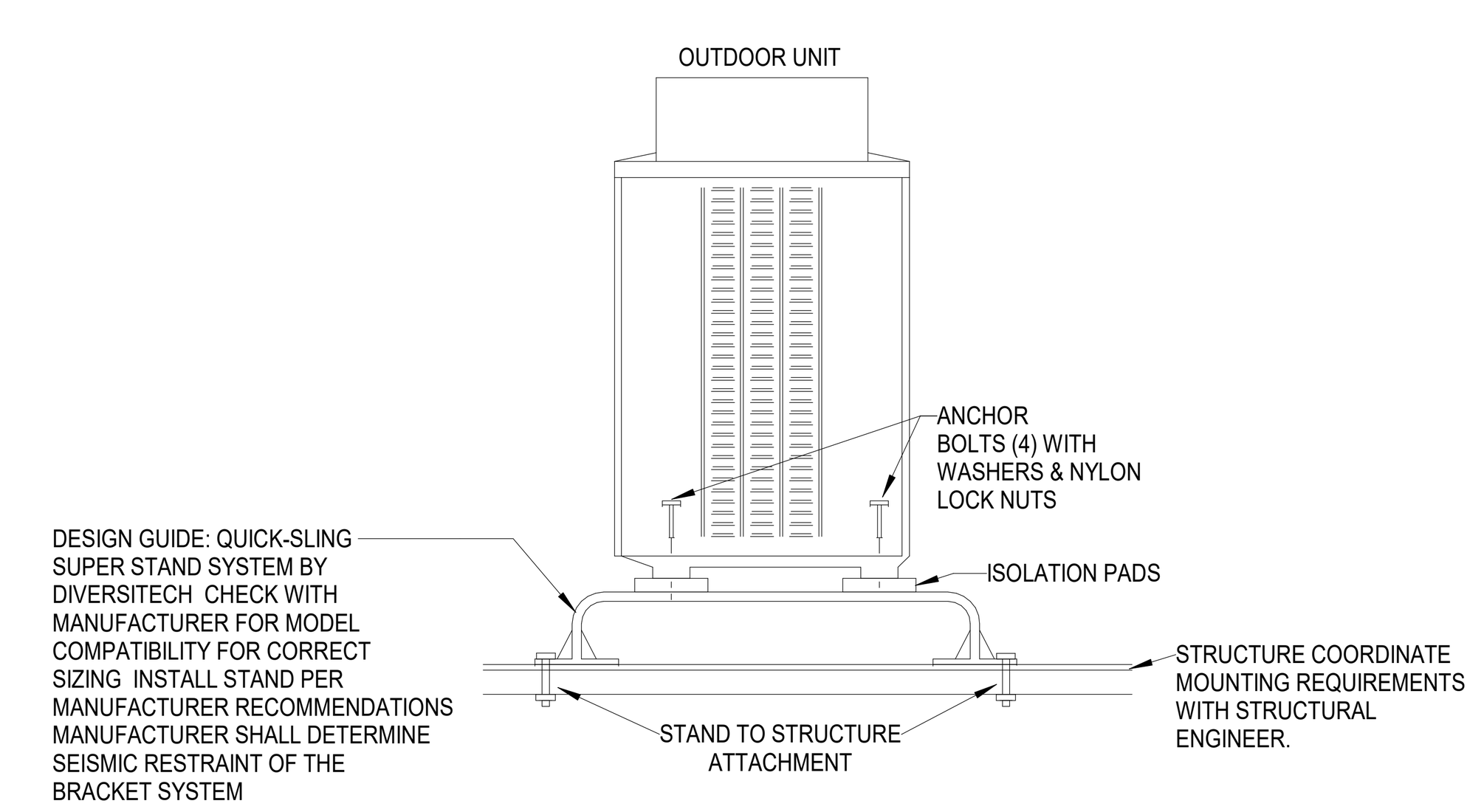
NTS



NOTE:
SEE OUTSIDE AIR CONTROL SEQUENCES DETAIL FOR INFORMATION RELATING TO DESIRED CONTROLS

12 TYPICAL WALL MOUNTED OA INTAKE

NTS



NOTES:
1. INSTALL UNIT LEVEL OR, IF ON A SLOPE, MAINTAIN SLOPE TOLERANCE OF 2 DEGREES (OR 2 INCHES PER 5 FEET)
2. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT REQUIREMENTS
3. PROTECT ADJACENT SURFACE(S) TO AVOID EXPOSURE OF ADJACENT SURFACE TO UNIT REFRIGERANT AND OIL DURING INSTALLATION
4. FOLLOW ALL MANUFACTURER RECOMMENDATIONS
5. VERIFY STAND LOCATION(S) WITH STRUCTURAL AND ARCHITECTURAL PLANS
6. INSTALL UNIT WITH MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL SIDES OF THE UNIT SEE UNIT MANUFACTURER INSTALLATION MANUAL FOR RECOMMENDED DISTANCES
7. SECURE STAND TO STRUCTURE UNDER THE DIRECTION OF THE STRUCTURAL ENGINEER AND PER MANUFACTURER -RECOMMENDAIONS

13 TYPICAL OUTDOOR UNIT ON STAND

NTS

BGW ARCHITECTS
Innovative design. Stewardship driven.
SHAKESPEARE ENGINEERING

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SEAL:
T. BRADLEY SHAKESPEARE
LICENSE No. 29257
DEC-18-2024
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:
M501

DO NOT SCALE DRAWING

SPLIT HEAT PUMP & FAN COIL SYSTEM SCHEDULE (SINGLE ZONE)

ACCEPTABLE MANUFACTURERS: ANY EQUAL

ACCESSORIES AND REMARKS:

1) INDOOR UNIT POWERED THROUGH OUDOOR UNIT
2) PRE-INSULATED REFRIGERANT LINESET - FLD
3) BACNET CONTROL ADAPTOR - FLD INSTALLED
4) THERMOSTATIC EXPANSION VALVE - FAC INSTALLED

INDOOR UNIT

20) THERMOSTAT - WALL MOUNT PROGRAMMABLE LCD DISPLAY (1H, IC)
21) THERMOSTAT – WALL-MOUNT PROGRAMMABLE SMART WIFI ENABLED LCD DISPLAY (1H, 1C)
22) RUN CONDENSATE TO INDIRECT DRAIN W/ AIR GAP
23) CONDENSATE LIFT PUMP - FLD INSTALLED
24) FILTER BOX (MANUFACTURE) - 2" MERV 8 - FLD INSTALLED
25) LINED FILTER BOX (CUSTOM) - (1) 24"x24"x2" MERV 8 FILTER, TOP MOUNT
26) DUCT SMOKE DETECTOR (RA) - FLD INSTALLED
27) CO2 SENSOR - WALL MOUNT WITH LCD
28) MOTORIZED 2-POS OA DAMPER, OPEN 100% WEHN CO2 SENSOR EXCEEDS LIMIT, OTHERWISE CLOSED, FAIL CLOSED.
29) BI-POLAR ION GENERATOR (PLASMA AIR 7200), INTERLOCK WITH FAN CIRCUIT (120/1/60; 2W) - FLD INSTALLED

OUTDOOR UNIT

40) AIR OUTLET GUIDE - FLD INSTALLED
41) WIND BAFFLE - FLD INSTALLED
42) 12" TALL STAND WITH RUBBERIZED BASE RATED FOR 130MPH WINDS - FLD INSTALLED
43) COMPOSITE BASE PAD WITH RUBBERIZED BASE RATED FOR 130 MPH WINDS - FLD INSTALLED
44) HIGH HEAT UNIT RATED FOR NOT LESS THAN 80% HTG CAPACITY AT -22*F

SYMBOL	AREA SERVED	MANUFACTURER	OUTDOOR HEAT PUMP							INDOOR FAN COIL																				REFR. TYPE	ACCESSORIES AND REMARKS
						ELECTRICAL						AIRFLOW				COOLING				HEATING				ELECTRICAL							
			MODEL	NOM. TONS	CONTROL	POWER	MCA	SOUND dB(A)	WEIGHT (LBS)	MODEL	TYPE	CONTROL	SA (CFM)	ESP (WG)	MIN. OA (CFM)	TOTAL (MBH)	SENSIBLE (MBH)	LAT DB (°F)	SEER	HEAT PUMP @17°F OUTPUT (MBH)	HEAT PUMP @17°F COP	AUX. RESISTANCE INPUT (kW)	AUX. RESISTANCE OUTPUT (MBH)	POWER	MCA	SOUND dB(A)	WEIGHT (LBS)				
HP-101		MITSUBISHI	PUZ-A12	1	VARIABLE	208-1-60	11	46	100	PKA-A12	WALL MOUNT	CAV	325	0	0	12	12	-	20.8	11.1	2.64	NA	NA	208-1-60	1	43	30			R-410A	1,2,4,20,22,23,42,44
HP-102		MITSUBISHI	PUZ-HA24NHA1	2	VARIABLE	208-1-60	17	52	190	PLA-A24E48	CEILING CASSETTE	CAV	650	0	0	24	24	-	21.6	26	2.5	NA	NA	208-1-60	1	36	57			R-410A	1,2,4,20,22,23,42,44

UNITARY SPLIT FURNACE SCHEDULE

ACCEPTABLE MANUFACTURERS: ANY EQUAL

ACCESSORIES AND REMARKS

GENERAL

1) SEE HVAC BASIS OF DESIGN CRITERIA
2) ANTI-CYCLE RELAY
3) REFRIGERANT LINESET BY MANUFACTURER

OUTDOOR UNIT

10) LOW AMBIENT KIT - FIELD INSTALLED
11) GFCI OUTLET, FIELD WIRED
12) MOUNT TO 6" CONCRETE PAD (BY GC) WITH VIBRATION ISOLATORS.
13) ROOF MOUNT ON 12" STAND OR CURB WITH VIBRATION AND NOISE ISOLATION

INDOOR UNIT

20) HORIZONTAL SUSPENSION KIT
21) FLOOR MOUNT 12" STAND WITH SOUND BAFFLE.
22) DRAIN PAN OVERFLOW SWITCH
23) ROUTE CONDENSATE DRAIN LINE FULL SIZE TO NEAREST DRAIN.
24) 2" PLEATED MERV 8 FILTERS
25) DUCT SMOKE DETECTOR (SA (>2,000 CFM) – FIELD INSTALLED
26) CONCENTRIC DIRECT VENT ASSEMBLY
27) ECONOMIZER WITH DUAL ENTHALPY CONTROL
28) ECONOMIZER WITH DIFFERENTIAL SENSIBLE CONTROL
29) HIGH PERFORMANCE ECONOMIZER WITH CONTROL MODULE
30) RUN FAN CONTINIOUSLY DURING OCCUPIED HOURS.
31) BI-POLAR ION GENERATOR (PLASMA AIR 7200), INTERLOCK WITH FAN CIRCUIT (120/1/60; 2W) - FLD INSTALLED

CONTROLS AND SENSORS

50) CO2 SENSOR – WALL-MOUNT WITH LCD
51) DEHUMIDIFICATION SYSTEM WITH WALL-MOUNT WITH LCD HUMIDISTAT
52) THERMOSTAT – WALL-MOUNT PROGRAMMABLE SMART WIFI ENABLED LCD DISPLAY (1H, 1C)
53) THERMOSTAT – WALL-MOUNT PROGRAMMABLE LCD DISPLAY (1H, 1C)
54) ICON LENNOX BAS WITH SENSORS
55) BACNET MODULE AND SENSORS

SYMBOL	MANUFACTURER	MODEL	UNIT TYPE	ARRANGEMENT	FAN SELECTION (1)						DESIGN COOLING CAPACITY (1)					DESIGN HEATING CAPACITY (1)			ELECTRICAL				SOUND		WEIGHT (LBS)	ACCESSORIES AND REMARKS
					MODUL-ATION	AIRFLOW (CFM)	MIN. OA (CFM)	ESP (WG)	MOTOR SIZE (HP/BHP)	MOTOR SPEED (RPM)	NOM. (TONS)	TOTAL (MBH)	SENSIBLE (MBH)	REFR.	SEER	INPUT/ OUTPUT (MBH)	AFUE (%)	STAGES	MCA	AMPS	MOCP	POWER	dB	SONES		
F-101	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	0	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-101	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12
F-102	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	0	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-102	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12
F-103	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	0	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-103	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12
F-104	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	75	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-104	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12
F-105	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	0	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-105	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12
F-106	LENNOX	ML195UH090XP60C	INDOOR	HORIZONTAL SUSPENDED	CAV	1625	0	0.5	1	-	5	-	-	-	-	90.0 / 85.0	95	1	-	11.5	15	120-1-60			160	1,2,3,20,22,23,24,26,30,51,52
CU-106	LENNOX	14ACX-060	OUTDOOR	TOP DISCHARGE		-		-	1/3	-	5	54	51.3	R410A	14	-	-	-	34.8	-	50	208-1-60			255	1,2,3,12

EXHAUST FAN SCHEDULE

ACCEPTABLE MANUFACTURERS:

PENN BARRY
LOREN COOK
TWIN CITY
GREENHECK

CONTROLS:

A) WALL SWITCH (BY DIVISION 26)
B) RUN CONTINUOUSLY DURING OCCUPIED HOURS (8A-5P ADJ.).
C) INTERLOCK FAN WITH POOL DEHUMIDIFIER
D) LINE VOLTAGE THERMOSTAT, ENERGIZE <85°F WITH 5°F DEADBAND
E) CONSTANT PRESSURE CONTROL WITH INTEGRAL PRESSURE TRANSDUCER.
F) INTERLOCK WITH LIGHTING

ACCESSORIES AND REMARKS:

1) ALL ALUMINUM CONSTRUCTION
2) BACKDRAFT DAMPER
3) RADIANT DAMPER
4) INTEGRAL THERMAL OVERLOAD PROTECTION
5) SPRING CEILING MOUNTED VIBRATION ISOLATOR
6) DIRECT DRIVE MOTOR WITH SPEED CONTROLLER
7) 14" TALL ROOF CURB WITH DAMPER TRAY
8) CAPACITY AT JOB SITE ELEVATION

SYMBOL	AREA SERVED	MANUFACTURER	MODEL	TYPE	AIRFLOW (CFM)	ESP (WG)	FAN SPEED (RPM)	ELECTRICAL			SOUND		WEIGHT (LBS)	CONTROLS	ACCESSORIES AND REMARKS	QTY
								HP	WATTS	POWER	dB	SONES				
EF-101		GREENHECK	G-090-VG	ROOF	700	0.3	1709	1/10	-	120-1-60	57	8.6	30	B	2,4,6,7,8	1
EF-102		GREENHECK	G-090-VG	ROOF	525	0.3	1709	1/10	-	120-1-60	57	8.6	30	B	2,4,6,7,8	1

ELECTRIC RADIANT HEATER SCHEDULE

ACCEPTABLE MANUFACTURERS:

QMARK
MARLEY
BERKO

ACCESSORIES AND REMARKS:

1) LINE VOLTAGE THERMOSTAT, ENERGIZE <85°F WITH 5°F DEADBAND

SYMBOL	MANUFACTURER	MODEL	DIMENSIONS (L x W x H) (IN)	HEATING CAPACITY BTUH	WATTS	POWER	AMPS	WEIGHT (LBS)	ACCESSORIES AND REMARKS	QTY
ERH-1	QMARK	CP758F	24 x 48	2559	750	208-1-60	3.6	28	1	1

ELECTRIC UNIT HEATER SCHEDULE

ACCEPTABLE MANUFACTURERS:

QMARK
MARLEY
BERKO

ACCESSORIES AND REMARKS:

1) UNIT MOUNTED LINE VOLTAGE T-STAT, ENERGIZE <55°F WITH 5°F DEADBAND
2) DISCONNECT SWITCH
3) CEILING MOUNTING BRACKET
4) WALL MOUNTED UNIT

SYMBOL	MANUFACTURER	MODEL	AIR FLOW DIRECTION	AIRFLOW (CFM)	HEATING CAPACITY		MOTOR		POWER	WEIGHT (LBS)	ACCESSORIES AND REMARKS
					BTUH	KW	POWER (HP)	SPEED (RPM)			
EUH-1	QMARK	MUH03-81	HORIZONTAL	350	10236	3	1/100	1600	208-1-60	27	1,2,3

ROOF HOOD SCHEDULE

ACCEPTABLE MANUFACTURERS:

LOREN COOK
GREENHECK
PENN BARRY

ACCESSORIES AND REMARKS:

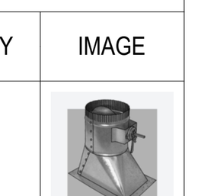
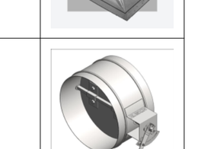
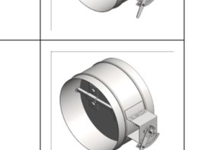
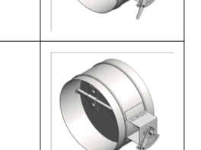
1) AUTOMATIC DAMPER INTERLOCKED WITH DRYER(S) OPERATION
2) 12" ROOF CURB
3) BIRD SCREEN
4) BAROMETRIC BACK DRAFT DAMPER

SYMBOL	MANUFACTURER	MODEL	SERVICE	THROAT SIZE W x D (inches)	AIRFLOW (CFM)	THROAT AREA (SF)	THROAT VELOCITY (FPM)	dP (WG)	WEIGHT (LBS)	ACCESSORIES AND REMARKS	QTY
RH-101	GREENHECK	GRSI-8	INTAKE	8"	75	0.44	203	0.007	7	1,2,3	1

DAMPER SCHEDULE

ACEPTABLE MANUFACTURERS:

AIR BALANCE
GREENHECK
LOUVERS & DAMPERS
RUSKIN

SYMBOL	MANUFACTURER	MODEL	DESCRIPTION	DIMENSIONS (INCHES) WIDTH	HEIGHT	DEPTH	DIA. (Ø)	ACCESSORIES AND REMARKS	QTY	IMAGE
HEF	DUCTMATE	SHTS15	HIGH EFFICIENCY FITTING: 24 GAGE GALVANIZED CONSTRUCTION, 18 GA. GALV. STEEL BLADE, SOLID ROD, MOLDED SYNTHETIC BEARING, 1" FLANGE, EPDM RUBBER GASKET, INLET SIZE TO CONFORM TO SMACNA FIGURE 2-6 "BRANCH CONNECTIONS"	15 1/4"	10"	15 1/2"	10"	2" STAND-OFF BRACKET WITH HEAVY DUTY LOCKING QUATRANT (DURA-DYNE8177)	1	
RMVD	RUSKIN	MDRS25	MANUAL VOLUME DAMPER: ROUND, SINGLE BLADE, 22 GAUGE GALVANIZED STEEL BLADE, MOLDED SYNTHETIC BEARING, (20" MAXIMUM DUCT)			6"	6"	2" STAND-OFF BRACKET WITH HEAVY DUTY LOCKING QUATRANT (DURA-DYNE8177)	2	
RMVD	RUSKIN	MDRS25	MANUAL VOLUME DAMPER: ROUND, SINGLE BLADE, 22 GAUGE GALVANIZED STEEL BLADE, MOLDED SYNTHETIC BEARING, (20" MAXIMUM DUCT)			6"	8"	2" STAND-OFF BRACKET WITH HEAVY DUTY LOCKING QUATRANT (DURA-DYNE8177)	2	
RMVD	RUSKIN	MDRS25	MANUAL VOLUME DAMPER: ROUND, SINGLE BLADE, 22 GAUGE GALVANIZED STEEL BLADE, MOLDED SYNTHETIC BEARING, (20" MAXIMUM DUCT)			6"	10"	2" STAND-OFF BRACKET WITH HEAVY DUTY LOCKING QUATRANT (DURA-DYNE8177)	11	
RMVD	RUSKIN	MDRS25	MANUAL VOLUME DAMPER: ROUND, SINGLE BLADE, 22 GAUGE GALVANIZED STEEL BLADE, MOLDED SYNTHETIC BEARING, (20" MAXIMUM DUCT)			6"	12"	2" STAND-OFF BRACKET WITH HEAVY DUTY LOCKING QUATRANT (DURA-DYNE8177)	7	

AIR DEVICE SCHEDULE

ACCEPTABLE MANUFACTURERS:

ANEMOSTAT
TITUS
KRUEGER
TUTTLE AND BAILEY

ACCESSORIES AND REMARKS:

1) VAV THERMOSTATIC DIFFUSER WITH RELIEF AIR COLLAR AND INTEGRAL THERMOSTAT
2) LONGEST LENGTH FRONT LOUVER
3) AIR BALANCE DEFLECTOR
4) OPPOSED BLADE DAMPER
5) BUTTERFLY DAMPER
6) THERMAL BLANKET
7) 1HR RADIATION DAMPER
8) PLENUM BOX-INSULATED
9) AIR VOLUME CONTROL VANE
10) DRYER VENT HOSE RECEPTACLE
11) 2 3/4" CURB FOR FLAT ROOF ELEMENTS PROTECTION
12) WATERTIGHT EXTENDED COLLAR FOR SECURE DOCKING
13) HIGH PROFILE
14) LOW PROFILE
15) RECESSED GRAVITY DAMPER & INTEGRATED MAGNETS
16) BUILT-IN DRIP EDGE

SYMBOL	SERVICE	SURFACE TYPE	MOUNTING LOCATION	NECK SIZE	FACE SIZE	FACE TYPE	MATERIAL	FINISH	MANUFACTURER - MODEL	ACCESSORIES AND REMARKS	QTY
DB-480	DV	GYP	WALL	4Ø	18x24	-	STEEL	WHITE ENAMEL	THE DRYER BOX DB-480	10	1
DH-466	DV	PITCHED	ROOF	4Ø	6x6	-	GALVALUME	GALVALUME	DRYER JACK DJK466	12,14	1
EG-0606	EA, RA, TA	GYP	CEILING	6x6	NECK+1.75"	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3P		14
EG-0808	EA, RA, TA	GYP	CEILING	8x8	NECK+1.75"	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3P		1
EG-1616	EA, RA, TA	GYP	CEILING	16x16	NECK+1.75"	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3P		1
EL-2406	EA, RA, TA	LAY-IN	CEILING	6Ø	24x24	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3PDL		1
EL-2408	EA, RA, TA	LAY-IN	CEILING	8Ø	24x24	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3PDL		2
EL-2414	EA, RA, TA	LAY-IN	CEILING	14Ø	24x24	PERFORATED	STEEL	WHITE ENAMEL	ANEMOSTAT - 3PDL		11
EW-0606	EA, RA, OR TA	GYP	WALL	6x6	NECK+2"	45° LOUVER	STEEL	WHITE ENAMEL	ANEMOSTAT - S30H	2,4	1
SG-1206	SA	GYP	CEILING	6Ø	12x12	PLAQUE	STEEL	WHITE ENAMEL	ANEMOSTAT - PGF-11	5	2
SL-2406	SA	LAY-IN	CEILING	6Ø	24x24	PLAQUE	STEEL	WHITE ENAMEL	ANEMOSTAT - PGL		3
SL-2408	SA	LAY-IN	CEILING	8Ø	24x24	PLAQUE	STEEL	WHITE ENAMEL	ANEMOSTAT - PGL		2
SL-2410	SA	LAY-IN	CEILING	10Ø	24x24	PLAQUE	STEEL	WHITE ENAMEL	ANEMOSTAT - PGL		14
SL-2412	SA	LAY-IN	CEILING	12Ø	24x24	PLAQUE	STEEL	WHITE ENAMEL	ANEMOSTAT - PGL		8
SW-0606	SA	GYP	WALL	6x6	NECK+2"	DOUBLE DEFLECTION	STEEL	WHITE ENAMEL	ANEMOSTAT - S2H	2,4	1
SW-1206	SA	GYP	WALL	12x6	NECK+2"	DOUBLE DEFLECTION	STEEL	WHITE ENAMEL	ANEMOSTAT - S2H	2,4	2
SW-1408	SA	GYP	WALL	14x8	NECK+2"	DOUBLE DEFLECTION	STEEL	WHITE ENAMEL	ANEMOSTAT - S2H	2,4	1

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For Questions Contact:
Sean Jones (385.489.1638)
sean@shakespeare-eng.com

REV	DATE	DESCRIPTION
A	04/26/2024	50% CD SET
B	06/04/2024	75% CD SET
C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET

PROJECT:

DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

BGW ARCHITECTS | 2909 WASHINGTON BLVD - OGDEN, UT 84401 | PH: 800-552-7137 | WWW.BGWSERVICES.COM

SEAL:

T. BRADLEY SHAKESPEARE
LICENSE
No. 29257
DEC-18-2024
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:

MECHANICAL SCHEDULES

PROJECT #:23203

SHEET NUMBER:

M601

DO NOT SCALE DRAWING

3/11/2025 11:38:38 AM

PLUMBING PIPE MATERIAL SPECIFICATIONS

SERVICE	PIPE MATERIAL	FITTINGS	JOINTS	NOTES
DOMESTIC WATER (BELOW GRADE)	ASTM 88 TYPE "K" COPPER TUBING	ASME B16.18 CAST COPPER-ALLOY SOLDER JOINT OR ASME B16.22 WROUGHT COPPER SOLDER JOINT	ASTM B32 SILVER SOLDER BRAZE	PERMITTED FOR 1/2" THROUGH 3" TUBING
	UL/FM APPROVED 304 SST STAILNESS STEEL RISER	PRE-FABFRICATED SINGLE EXTENDED 90 DEGREE BUTT WELDED RISER.	AWWA C900 (INLET) AWWA C606 (OUTLET)	PERMITTED FOR 4" THROUGH 10" TUBING
DOMESTIC WATER (ABOVE GRADE)	ASTM B88 TYPE 'L' COPPER TUBING	ASME B16.18 CAST COPPER-ALLOY SOLDER JOINT OR ASME B16.22 WROUGHT COPPER SOLDER JOINT	ASTM B32 LEAD FREE SOLDER	
	ASTM F876 AND OR F877 CROSS-LINKED POLYETHYLENE (PEX) SDR 9	ASTM F877 LEAD FREE BRASS INSERT OR ASTM F 1960 ENG. PLASTIC INSERT	ASTM F877 COPPER CRIMP RING OR ASTM F1960 COLD EXPANSION	NOT PERMITTED IN RETURN AIR PLENUMS FITTING AND JOINING METHOD APPROVED BY PIPE MANUFACTURER PROVIDE A 2-FT. X 3-FT. THERMAL EXPANSION LOOP FOR EVERY 60 FT. OF LINEAR HOT WATER PIPE SECTION.
	ASTM F2389 POLYPROPYLENE (PP-R) TUBING AQUATHERM "GREENPIPE" SDR 11	ASME F 2389 POLYPROPYLENE (PP-R) AQUATHERM "GREENPIPE" SOCKET FUSION WELD	SOCKET FUSION WELD OR BUT FUSION WELD	NOT PERMITTED IN RETURN AIR PLENUMS FITTING AND PIPE BY SAME MANUFACTURER PROVIDE A 2-FT. X 3-FT. THERMAL EXPANSION LOOP FOR EVERY 60 FT. OF LINEAR HOT WATER PIPE SECTION.
	ASTM D2646 CHLORINATED POLYVINYL CHLORIDE (CPVC) CTS (SDR 11)	ASTM D2846 CTS FITTINGS	LISTED PRIMER & SOLVENT CEMENT OR ASTM F 493 YELLOW ONE-STEP SOLVENT CEMENT	SINGLE STEP SOLVENT CEMENT PERMITTED FOR 1/2" THROUGH 2" PIPE SIZES. PROVIDE A 2-FT. X 3-FT. THERMAL EXPANSION LOOP FOR EVERY 60 FT. OF LINEAR HOT WATER PIPE SECTION.
DRAIN WASTE AND VENT (BELOW GRADE)	ASTM D1785 SCHEDULE 40 SOLID CORE PVC	ASTM AD 2665 DRAINAGE PATTERN	ASTM D 2564 SOLVENT CEMENT	
DRAIN WASTE AND VENT (ABOVE GRADE)	ASTM F 891 SCHEDULE 40 CELLULAR CORE PVC	ASTM AD 2665 DRAINAGE PATTERN	ASTM D 2564 SOLVENT CEMENT	NOT PERMITTED IN RETURN AIR PLENUMS
	ASTM A 74 STANDARD WEIGHT CAST IRON NO-HUB	ASTM A74 STANDARD WEIGHT CAST IRON NO-HUB, DRAINAGE PATTERN.	ASTM C 1277 COMPRESSION TYPE NEOPRENE GASKETS, STAINLESS STEEL BANDS.	
NATURAL GAS (BELOW GRADE)	ASTM D2513 POLYETHYLENE (PE) MEDIUM DENSITY	ASTM D3350	FUSION (SOCKET, BUTT, SADDLE, OR ELECTRO) OR MECHANICAL RATED FOR DIRECT BURIAL	BURY NOT LESS THAN 24" BELOW GRADE CONTINUOUS LINE TRACE WIRE CONTINIOUS WARNING LABEL 12" ABOVE
NATURAL GAS (ABOVE GRADE)	ASTM A53 SCHEDULE 40 BLACK STEEL	ASTM B16.3 CLASS 150 MALLEABLE IRON OR ASTM B16.9 BUTT WELDED STEEL	THREADED TEFLON TAPE	
CONDENSATE DRAIN	ASTM D 1785 SCHEDULE 40 POLYVINYL CHLORIDE (PVC)	ASTM D 2466 PVC SOCKET JOINT	ASTM F 656 PURPLE PRIMER ASTM D 2664 SOLVENT CEMENT	NOT PERMITTED IN RETURN AIR PLENUMS
	ASTM B88 TYPE 'M' COPPER TUBING	ASME B16.18 CAST COPPER-ALLOY SOLDER JOINT OR ASME B16.22 WROUGHT COPPER SOLDER JOINT	ASTM B32 LEAD FREE SOLDER	
ROOF DRAIN (BELOW GRADE)	ASTM D1785 SCHEDULE 40 SOLID CORE PVC	ASTM AD 2665 DRAINAGE PATTERN	ASTM D 2564 SOLVENT CEMENT	
ROOF DRAIN (ABOVE GRADE)	ASTM F 891 SCHEDULE 40 CELLULAR CORE PVC	ASTM AD 2665 DRAINAGE PATTERN	ASTM D 2564 SOLVENT CEMENT	NOT PERMITTED IN RETURN AIR PLENUMS
	ASTM A 74 STANDARD WEIGHT CAST IRON NO-HUB	ASTM A74 STANDARD WEIGHT CAST IRON NO-HUB, DRAINAGE PATTERN.	ASTM C 1277 COMPRESSION TYPE NEOPRENE GASKETS, STAINLESS STEEL BANDS.	

220500 - BASIC PIPING MATERIALS AND METHODS

1. CORE CUT ALL PIPE PENETRATIONS OF MASONRY OR CONCRETE WALLS AND FLOORS. SLEEVE ALL PENETRATIONS THROUGH NEW WALLS AND FLOORS. SEAL ALL PENETRATIONS WATERTIGHT WITH SILICONE SEALANT. USE FIRE RATED SEALANT (3M "FIRE BARRIER" OR EQUAL) FOR 1 HOUR OR 2 HOUR PENETRATIONS.
2. CAULK AROUND ALL PIPING THAT PASSES THROUGH FIRE-RATED PARTITIONS WITH A NON-HARDENING CAULKING SIMILAR TO 3M "FIRE BARRIER".
3. SEAL ALL PIPING THROUGH WALLS AIRTIGHT.

220700 - PLUMBING INSULATION

1. PIPE INSULATION: SNAP-ON GLASS FIBER TYPE WITH VAPOR JACKET. SEAL ALL ENDS AND JOINTS TO PROVIDE A COMPLETELY SEALED SYSTEM. ALTERNATIVELY, FOR INTERIOR WATER PIPING, USE FLEXIBLE UNICELLULAR ASTM 534 TYPE 1 INSULATION. USE THE FOLLOWING MIN. PIPE INSULATION THICKNESS BY SERVICE AND SIZE:

   a. DCW: ALL SIZES (1/2")
   b. DHW: 1/2"-1-1/4" (1")
   c. DHW: 1-1/2"+ (1-1/2")
   d. RD & ORD: ALL SIZES (1")
2. FOR PIPING SMALLER THAN 1-1/2" AND LOCATED IN PARTITIONS WITHIN CONTIDIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1" SHALL BE PERMITTED BUT NOT TO A THICKNESS LESS THAN 1".
3. INDOOR PIPE INSULATION AND RELATED MATERIALS SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTED TO ASTM E 84.
4. ALL PIPE INSULATION SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACORDANCE WITH ASTM C411.
5. PROVIDE ADA COMPLIANT FIXTURES WITH SNAP ON ADA ARTICLE 4.19 22FF COMPLIANT WHITE INSULATION. TRUEBRO LAV GUARD, BASIN GUARD OR LAV SHIELD.
6. FOR RD AND ORD PIPING IN DRY ASHRAE CLIMATE B ZONES, INSULATION ONLY REQUIRED ON HORIZONTAL PIPING AND FIRST 10' FROM SOURCE.

221116 - WATER DISTRIBUTION PIPING

1. INSTALL PIPE HANGERS WITH MINIMUM ROD SIZES AND MAXIMUM SPACING AS SHOWN IN DRAWING SCHEDULES.
2. ALL PIPE HANGERS AND EQUIPMENT SUPPORTS SHALL BE LOCATED A MINIMUM OF 2" FROM ANY REFRIGERANT PIPE.
3. ALL PLUMBING FIXTURES CONNECTED TO THE POTABLE WATER SYSTEM WITH HOSE CONNECTIONS ON THE OUTLET SIDE SHALL BE PROVIDED WITH BACKFLOW PREVENTION.

221316 - DRAINAGE AND VENT SYSTEMS

1. INSTALL SANITARY DRAIN LINES 2-1/2" AND SMALLER WITH A MIN. SLOPE OF 2%. INSTALL SANITARY DRAIN LINES 3" AND LARGER WITH A MIN. SLOPE OF 1%.
2. PROVIDE ACCESSIBLE WALL CLEAN-OUT WITH FLAT CHROME COVER PLATE AT ALL SEWER STACKS AND URINAL FIXTURES.

221416 - NATURAL GAS SYSTEMS

1 SEE GAS UTILITY CALUCLATIONS AND/OR ISOMETRIC FOR SYSTEM PRESSURE. WHERE GREATER THAN 1/2" PSIG (7" W.C.), LOCATE PRESSURE REGULATORS AS SHOWN ON THE DRAWINGS TO REDUCE PRESSURE TO 7" W.C. PROVIDE FULL SIZE VENT LINES FROM GAS PRESSURE REGULATORS AND EXTEND TO OUTSIDE OR THROUGH ROOF (AS REQUIRED). FLASH PENETRATIONS AND MAKE WATERTIGHT.

2 PROVIDE GAS SHUT OFF VALVE AT EACH PIECE OF GAS UTILIZING EQUIPMENT.

3 1.THE EQUIPMENT INSTALLER SHALL APPLY AND SIGN A CERTIFICATION LABEL TO EACH GAS-FIRED APPLIANCE, STATING THE APPLIANCE HAS BEEN ADJUSTED OR MODIFIED PER MANUFACTURER'S REQUIREMENTS FOR OPERATION AT THE PROJECT ALTITUDE AND WITH THE BTU-CONTENT OF THE AVAILABLE FUEL-GAS.

223400 - WATER HEATERS

1. INSTALL UNITS PLUMB AND LEVEL AND FIRMLY ANCHORED PER SEISMIC REQUIREMENTS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. ORIENT SO CONTROLS AND DEVICES NEEDING SERVICING ARE ACCESSIBLE.
2. CONNECT HOT AND COLD-WATER PIPING TO UNITS WITH SHUT-OFF VALVES AND UNIONS. CONNECT HOT WATER CIRCULATING PIPING TO UNIT WITH SHUT-OFF VALVE, CHECK VALVE AND UNION.
3. USE DIELECTRIC FITTINGS AND UNIONS WHERE PIPING CONNECTIONS ARE DISSIMILAR METALS.
4. INSTALL VACUUM RELIEF VALVE IN COLD WATER INLET PIPING. EXTEND RELIEF VALVE DISCHARGE TO CLOSEST FLOOR DRAIN. INSTALL DRAIN AS INDIRECT WASTE TO SPILL INTO OPEN DRAIN OR OVER FLOOR DRAIN.
5. PROVIDE AND INSTALL EXPANSION TANK AS SCHEDULED IN DRAWINGS. EXPANSION TANK: DIAPHRAGM TYPE, PRE- PRESSURIZED STEEL TANK WITH RELIEF VALVE SETTING @ 120 PSI MAXIMUM PRESSURE.
6. CONNECT GAS SUPPLY PIPING TO BURNER WITH DRIP LEG, TEE, GAS COCK, AND UNION, MINIMUM SIZE SAME AS INLET CONNECTION. INSTALL GAS PRESSURE REGULATORS WHERE INDICATED.
7. ELECTRICAL CONNECTIONS: POWER WIRING AND DISCONNECT SWITCHES ARE SPECIFIED IN DIVISION 26. CONNECT UNIT COMPONENTS TO GROUND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
8. VENT CONNECTIONS: CONNECT GAS FIRED WATER HEATER DRAFT HOOD TO THE VENT SYSTEM. UNLESS OTHERWISE INDICATED, PROVIDE VENT SAME SIZE AS OUTLET ON HEATER. COMPLY WITH GAS UTILITY REQUIREMENTS.
9. PROVIDE SEALED COMBUSTION SYSTEMS WITH CONNECTIONS FOR OUTSIDE COMBUSTION AIR.
10. PROVIDE CONCENTRIC VENT TERMINATION KIT FOR ROOF OR WALL APPLICATIONS.
11. PROVIDE PVC COMBUSTION AIR AND VENT PIPING FROM WATER HEATER TO TERMINATION KIT.
12. PROVIDE CONDENSATE DRAIN FROM WATER HEATER OR VENT AS REQUIRED.

224213 - PLUMBING FIXTURES

1. PROVIDE CARRIERS AS REQUIRED FOR FLOOR OR WALL MOUNTED PLUMBING FIXTURES. INSTALL ALL FIXTURES WITH ACCESSORIES AS REQUIRED TO PROVIDE A COMPLETE, WORKABLE INSTALLATION.
2. PLUMBING FIXTURES SHALL INCLUDE COMPRESSION STOPS ABOVE FLOOR IN SUPPLIES TO ALL FIXTURES AND A MINIMUM 17 GAUGE P- TRAP.
3. ALL LAVATORIES AND HAND SINKS WILL HAVE A COMBINATION FAUCET OR PREMIXING FAUCET CAPABLE OF SUPPLYING WARM WATER FOR A MINIMUM OF 10 SECONDS.
4. ALL JANITORIAL SINK FAUCETS MUST BE PROVIDED WITH AN APPROVED BACKFLOW PREVENTION DEVICE.
5. FLOOR DRAINS AND FLOOR SINKS ARE SHOWN IN THE APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH EQUIPMENT AND DRAINAGE REQUIREMENTS. PROVIDE BLOCKOUTS AS NECESSARY.
6. SEE REFRIGERATION OR ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF FLOOR DRAINS AND FLOOR SINKS.

PLUMBING FIXTURE NOTES

1. SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.
2. ALL EQUIPMENT SHALL PROVIDE SCHEDULED PERFORMANCE AT JOB SITE ELEVATION.
3. FIXTURE AND EQUIPMENT MODEL NUMBERS SHOWN IN PLUMBING FIXTURE SCHEDULE AND PLUMBING EQUIPMENT SCHEDULES ARE SHOWN TO ESTABLISH TYPE OF PRODUCT THAT SHALL BE USED. SUBMITTED PRODUCTS SHALL MEET SCHEDULED PERFORMANCE DATA SHOWN ON THE DRAWINGS EVEN IF A DIFFERENT MODEL IS SUPPLIED.
4. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL NECESSARY FITTINGS, TRANSITIONS, VALVES AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.
5. ALL MOTOR STARTING EQUIPMENT, NOT PROVIDED AS A PART OF THE PLUMBING EQUIPMENT, SHALL BE PROVIDED BY DIVISION 26.
6. SEE "PLUMBING FIXTURE SCHEDULE" FOR INDIVIDUAL TRAPS, WASTE, VENT, AND DOMESTIC WATER PIPING SIZES FOR INDIVIDUAL FIXTURES.
7. ALL PLUMBING EQUIPMENT SHALL BE LISTED AND LABELED BY AN APPROVED THIRD-PARTY TESTING AGENCY.
8. FIXTURES, EQUIPMENT AND PIPING INSTALLATION SHALL MEET NSF STANDARDS.
9. PROVIDE WATER HAMMER ARRESTERS (WHA) AT ALL PIPING CONNECTIONS TO PLUMBING FIXTURES AND PLUMBING EQUIPMENT PROVIDED WITH QUICK CLOSING VALVES AND INSTALLATIONS WHICH RESULT IN EXCESS PIPE VIBRATION OR MOVEMENT.
10. ALL OWNER FURNISHED EQUIPMENT WITH DIRECT CONNECTION TO THE DOMESTIC WATER SYSTEM SHALL BE PROVIDED WITH AN APPROVED BACKFLOW DEVICE.
11. INSTALLATION AND FINAL CONNECTION OF ALL-OWNER-FURNISHED EQUIPMENT SHALL BE BY DIVISION 22.

DRAIN, WASTE & VENT NOTES

1. ALL EXPOSED DRAINAGE PIPING ON OCCUPIED SPACES INCLUDING TRAPS UNDER SINKS SHALL BE POLISHED CHROME PLATED.
2. DRAWINGS SHOW GENERAL ARRANGEMENT OF DRAIN, WASTE AND VENT SYSTEM. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL CLEANOUTS AS REQUIRED BY PLUMBING CODE.
3. INVERT ELEVATIONS AS SHOWN ON DRAWINGS ARE REFERENCED FROM FINISHED FLOOR ELEVATION. COORDINATE ALL INVERTS WITH BOTH CIVIL AND ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
4. ALL VENTS THROUGH ROOF SHALL BE A MINIMUM OF 10 FEET FROM ANY AIR INTAKES.
5. SLOPE VENT SYSTEM TOWARDS DRAINAGE SYSTEM.
6. INSTALL ALL SANITARY DRAINAGE PIPING 3" AND LARGER WITH SLOPE IN DIRECTION OF FLOW OF 1/8" PER FOOT MINIMUM.
7. INSTALL ALL SANITARY DRAINAGE PIPING 2-1/2" AND SMALLER AND ALL GREASE WASTE PIPING WITH SLOPE IN DIRECTION OF FLOW AT 1/4" PER FOOT.
8. DRAINAGE PATTERN FITTINGS SHALL BE USED ON ALL VENT PIPING LOCATED BELOW THE FLOOD LEVEL RIM OF FIXTURES.

FUEL GAS PIPING GENERAL NOTES

1 NATURAL GAS PIPING IS SIZED AT 2.0 PSI.

2 PROVIDE GAS SHUT OFF VALVES AT ALL GAS FIRED EQUIPMENT.

3 ALL EXTERIOR FUEL GAS PIPING SHALL BE PAINTED WITH TWO COATS OF PAINT:

a.ONE COAT: 2.5 MIL (DRY) 5.0 MIL (WET) 4160-7100 (RED) DEVGUARD EXTERIOR, MULTI-PURPOSE TANK & STRUCTURAL ALKYD PRIMER. SEE SPEC. 15195.

b. ONE COAT: 1486-XXXX (GRAY) UNIGRIP WATER BASED AQUACRYLIC DRY FALL SEMI-GLOSS PAINT.

4 FUEL GAS PIPING SHALL BE PURGED OF ALL AIR PRIOR TO THE PIPING SYSTEM BEING PUT INTO OPERATION.

5 THE OPEN END OF FUEL GAS PIPING SYSTEM BEING PURGED SHALL DISCHARGE TO THE OUTDOORS.

6 THE OPEN END OF THE GAS PIPING SYSTEM SHALL BE CONTINUOUSLY MONITORED DURING PURGING.

DOMESTIC WATER GENERAL NOTES

1. ALL EXPOSED DOMESTIC WATER PIPE IN OCCUPIED SPACES SHALL BE POLISHED CHROME PLATED.
2. PROVIDE ISOLATION VALVES IN DOMESTIC WATER PIPING TO EACH SET OF RESIDENT ROOMS OR BATHROOM GROUPS.
3. INSTALL PIPING SO THAT VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND ALL OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
4. VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING PIPE SIZE TO MAKE CONNECTIONS TO EQUIPMENT.
5. VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
6. PROVIDE DOMESTIC WATER BOOSTER PUMP IF WATER PRESSURE FROM LOCAL UTILITY IS INADEQUATE TO SERVE BUILDING. BOOSTER PUMP SHALL BE INCLUDED IF REQUIRED.
7. PROVIDE MANIFOLD PIPING AT WATER HEATERS PER MANUFACTURER'S WRITTEN RECOMMENDATIONS. BALANCE WATER FLOW THROUGH WATER HEATERS AFTER INSTALLATION.
8. INSTALL DOMESTIC WATER PIPING ABOVE OR BEHIND WATER HEATERS TO ALLOW FOR WATER HEATER REMOVAL
9. SOFTENED WATER SHALL SERVE DOMESTIC COLD-WATER SERVICE TO WATER HEATERS ONLY.

DOM. H.W. TEMP. CHART

SYSTEM OR FIXTURE	HOT WATER TEMP. (°F)
RESIDENT GUEST ROOMS	120-125
RESIDENT GUEST ROOM SHOWER	120
ACCESSIBLE RESIDENT GUEST ROOM SHOWER	120
ACCESSIBLE RESIDENT GUEST ROOM LAVATORY	120
ACCESSIBLE RESIDENT GUEST ROOM SINK	120
PUBLIC RESTROOM LAVATORY	105
PUBLIC CLOTHES WASHERS	120
COMMERCIAL LAUNDRY	140

PLUMBING GENERAL NOTES

1. THE DRAWINGS SHOW GENERAL DESIGN, ARRANGEMENT AND EXTENT OF PLUMBING SYSTEMS. BECAUSE OF THE SMALL SCALE, THE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS OR ELBOWS NECESSARY FOR COMPLETE INSTALLATION IN SPACES PROVIDED. THIS CONTRACTOR SHALL MAKE SUCH MINOR ALTERATIONS AS MAY BE NECESSARY TO MAKE PLUMBING SYSTEMS COMPLETE AND OPERATIONAL IN ACCORDANCE WITH DESIGN INTENT.
2. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY DESIGN ENGINEER.
3. DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.
4. ENTIRE PLUMBING INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT.
5. PRIOR TO FABRICATION AND INSTALLATION OF ANY PLUMBING COMPONENTS THE CONTRACTOR SHALL COORDINATE ALL PLUMBING WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW AND USE, WHERE APPROPRIATE, ALL PLUMBING DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL PLUMBING SYSTEMS WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. 1.ANY PART OF THE PLUMBING INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.

PLUMBING PIPING GENERAL NOTES

1. PROVIDE PROPER PROVISIONS FOR EXPANSION, CONTRACTION, OR MOVEMENT OF ALL PIPING.
2. INSTALL PIPING WITHOUT FORCING OR SRINGING.
3. INSTALL PIPING TO CLEAR DOORS AND WINDOWS.
4. PROVIDE LARGE ENOUGH PIPE SLEEVES THROUGH WALL OR FLOOR TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENT.
5. ALL EXPOSED PIPING SHALL INSTALLED NEATLY; ARRANGED PARALLEL TO BUILDING STRUCTURAL ELEMENTS.
6. COPPER PIPING SHALL NOT COME IN CONTACT WITH FIRE TREATED LUMBER. PROVIDE ½" THICK SLIP-ON CLOSED CELL INSULATION WHERE COPPER PIPING IS ADJACENT TO FIRE TREATED LUMBER. CLOSED CELL INSULATION SHALL EXTEND A MINIMUM OF 1-1/2" PAST LUMBER.
7. INSTALL EXTERIOR WATER PIPING, SEWER AND WASTE PIPING AND ROOF DRAINAGE BELOW FROST LEVEL (4'-0" MINIMUM). VERIFY EXACT LOCAL REQUIREMENTS WITH AND CIVIL ENGINEER AND SITE UTILITY DRAWINGS PRIOR TO INSTALLATION.

PIPE HANGERS GENERAL NOTES

1. SUPPORT ALL PIPING WITH CLEVIS OR LOOP HANGERS (MSS TYPE 1). PERFORATED METAL STRAPS OR PLASTIC STRAPPING (PLUMBER TAPE) SHALL NOT BE USED TO SUPPORT OR BRACE ANY PIPE.
2. PROVIDE PIPE HANGERS WITHIN 18 INCHES OF ALL CHANGES OF DIRECTION.
3. ALL STEEL HANGERS USED TO SUPPORT COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COATED.
4. ALL STEEL HANGERS USED TO SUPPORT PLASTIC PIPING SHALL BE PLASTIC COATED.
5. PROVIDE ELASTOMERIC CUSHION (COOPER B-LINE B1999 "VIBRA CUSHION") BETWEEN COPPER PIPING AND GALVANIZED CHANNEL SUPPORT CLAMPS. PLASTIC PIPE WRAP TAPE IS NOT ACCEPTABLE.
6. PROVIDE ELASTOMERIC INSERT (COOPER B-LINE BVP "VIBRA- CLAMPS") BETWEEN PLASTIC PIPE AND GALVANIZED CHANNEL SUPPORT CLAMPS. PLASTIC PIPE WRAP TAPE IS NOT ACCEPTABLE.
7. PROVIDE SWAY BRACING FOR ALL PIPING 4" AND LARGER AT ALL CHANGES IN DIRECTION GREATER THAN 45 DEGREES.

DISINFECT POTABLE WATER NOTES

1. DOMESTIC COLD WATER AND DOMESTIC HOT WATER SYSTEMS (I.E. POTABLE WATER) SHALL BE PURGED OF DELETEROUS MATTER AND DISINFECTED PRIOR TO UTILIZATION.
2. FOLLOW METHOD PRESCRIBED THE LOCAL HEALTH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTIONS.
3. IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652 OR AS DESCRIBED SHALL BE FOLLOWED.
4. THESE PROCEDURES SHALL APPLY TO "ON-SITE" OR "IN-PLANT" FABRICATION OF A SYSTEM OR TO A MODULAR PORTION OF A SYSTEM.
5. DISINFECTION PROCEDURE:

a.THE PIPING SYSTEM, INCLUDING FIXTURES AND EQUIPMENT, SHALL BE FLUSHED WITH CLEAR, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT THE POINTS OF OUTLET.

b.THE SYSTEM OR PARTS THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF CHLORINE, AND THE SYSTEM OR PART THEREOF SHALL BE VALVES OFF AND ALLOWED TO STAND FOR 24-HOURS;

OR

c.THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 200 PARTS PER MILLION OF CHLORINE AND ALLOWED TO STAND FOR 3-HOURS

d.FOLLOWING THE REQUIRED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM.

e.THE PROCEDURE SHALL BE REPEATED WHERE SHOWN BY A BACTERIOLOGICAL EXAMINATION THAT CONTAMINATION REMAINS PRESENT IN THE SYSTEM.

f.DURING THE DISINFECTION PROCEDURE, WARNING SIGNS SHALL BE PLACED AT BUILDING ENTRANCES, ROOM ENTRANCES AND WATER OUTLETS INDICATING THAT POTABLE WATER HAS A HIGH CONCENTRATION OF CHLORINE AND IS NOT SAFE TO DRINK OR USE.

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A	04/26/2024	50% CD SET
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BRADLEY SHAKESPEARE — LICENSE — No. 29257 — DEC-18-2024 — DELAWARE — PROFESSIONAL ENGINEER

SHEET TITLE:
PLUMBING NOTES & SPECIFICATIONS

PROJECT #23203

SHEET NUMBER:
P001

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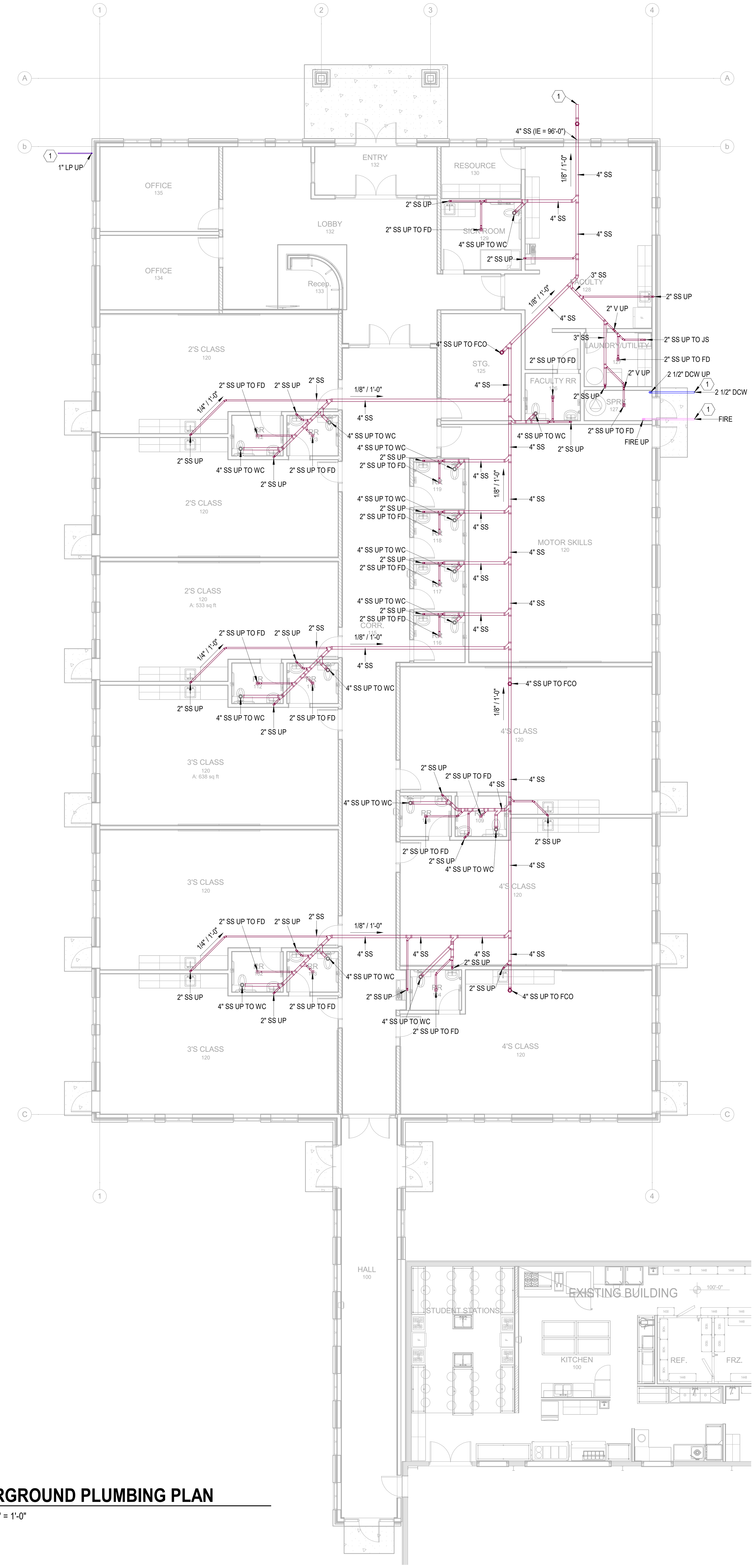
SHEET KEYNOTES

1 CONTINUATION BY SITE UTILITY CONTRACTOR, SEE CIVIL DESIGN.



1 UNDERGROUND PLUMBING PLAN

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

PLAN NORTH

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SHEET TITLE: UNDERGROUND PLUMBING PLAN

PROJECT #:23203

SHEET NUMBER: P100

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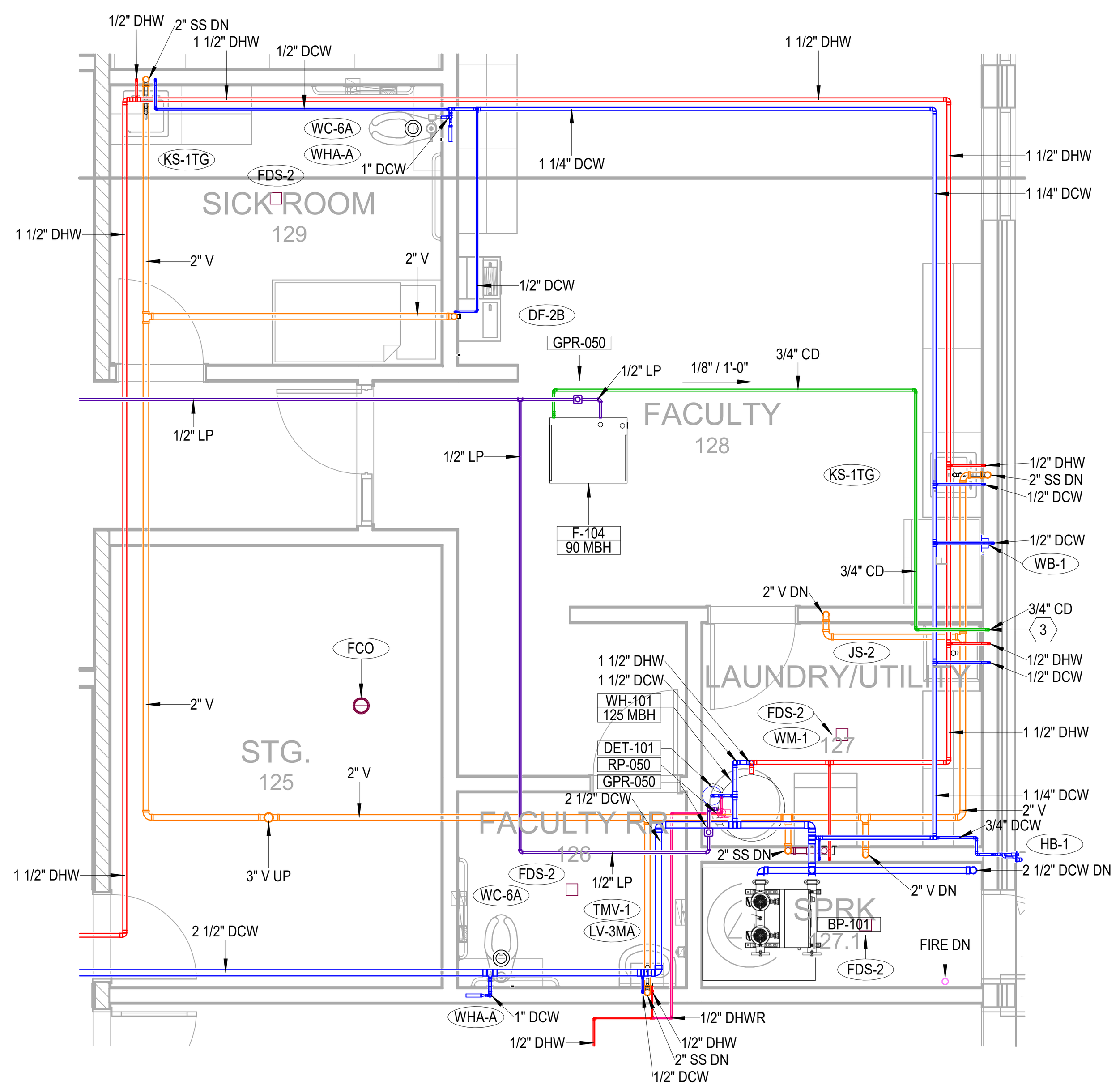
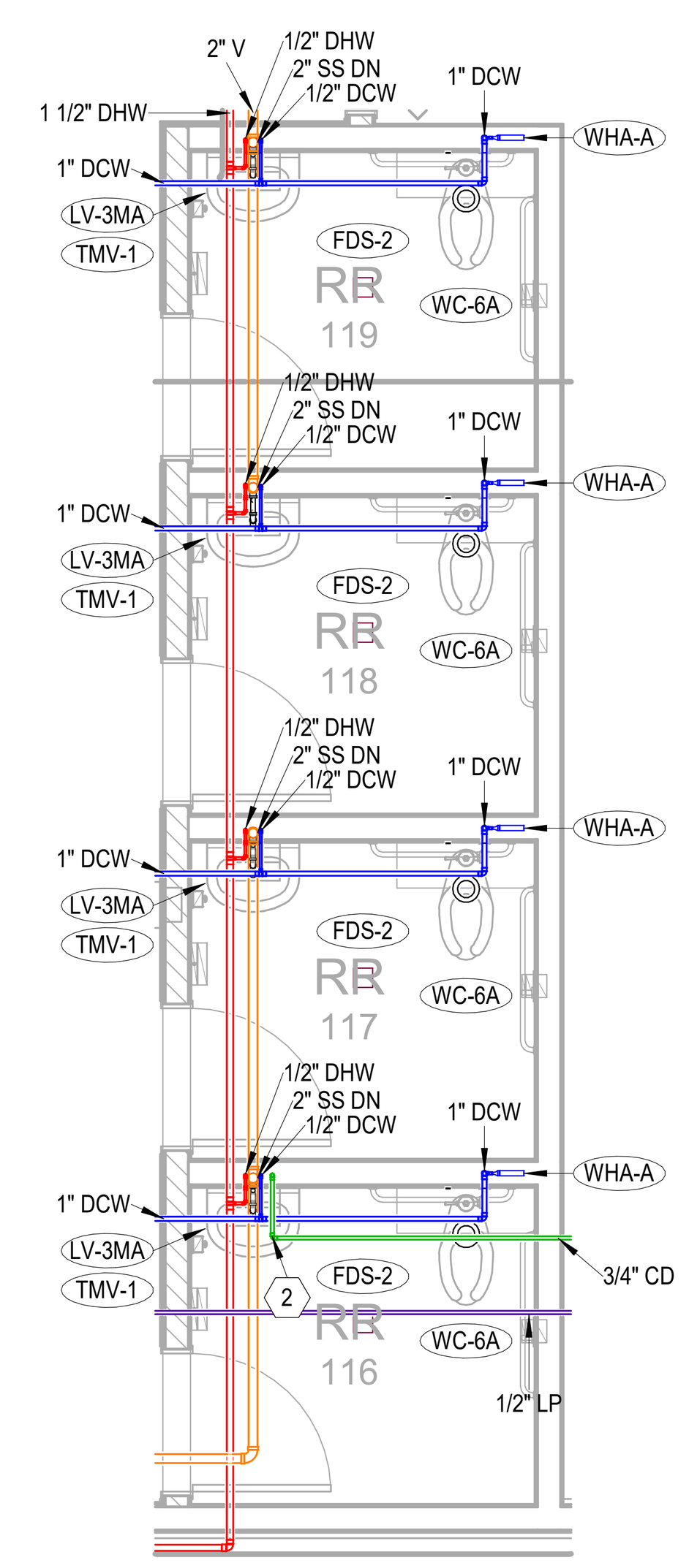


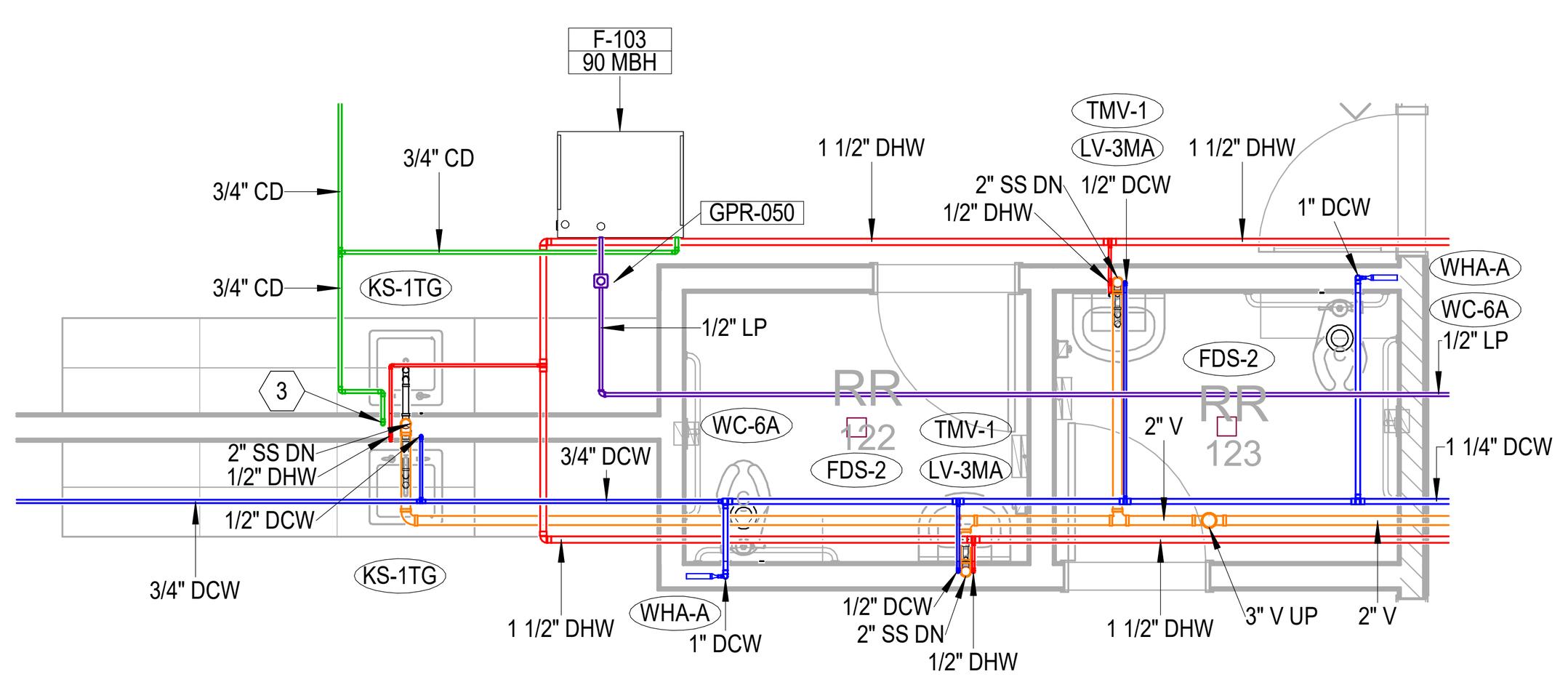
2 ENLARGED PLUMBING PLAN 2

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



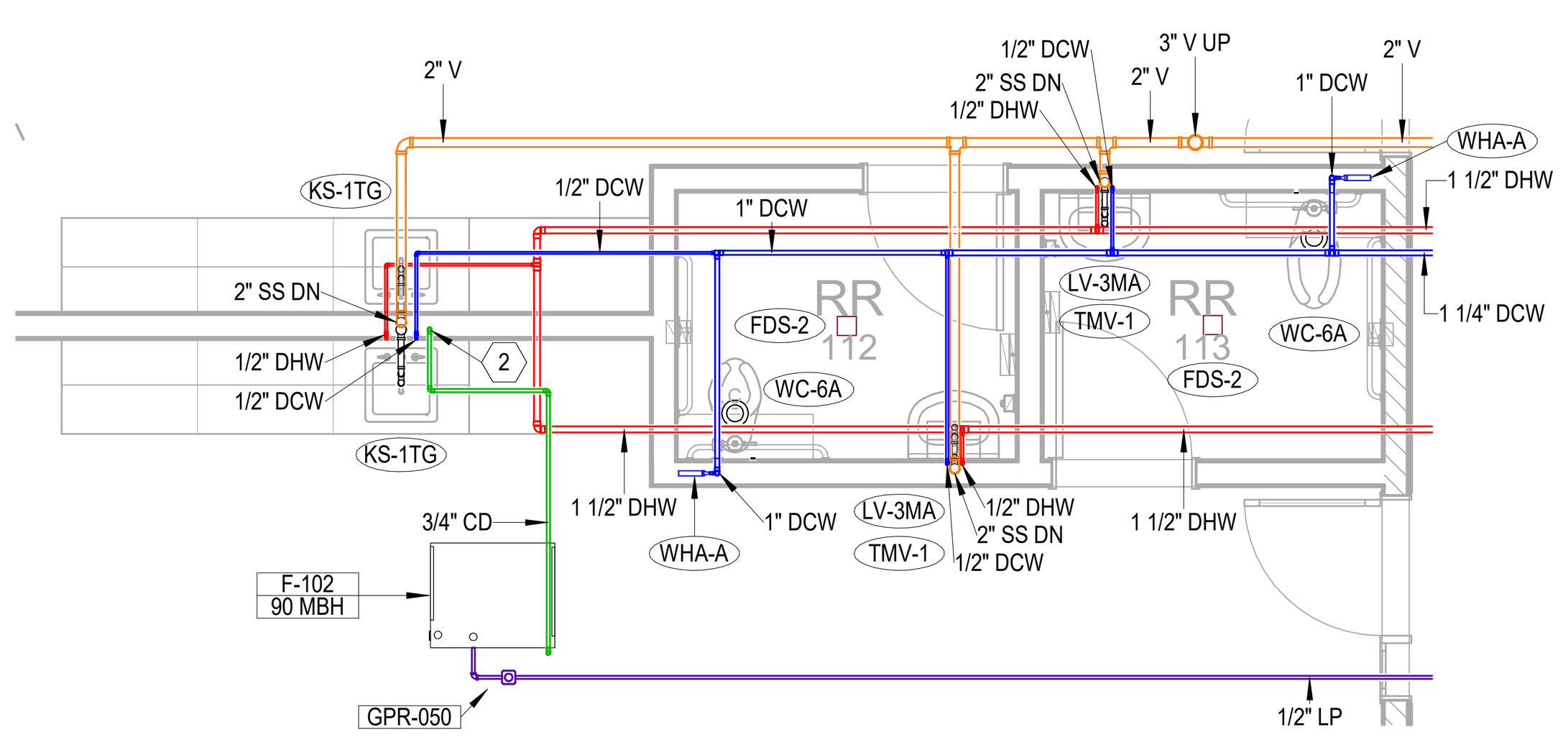
3 ENLARGED PLUMBING PLAN 3

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



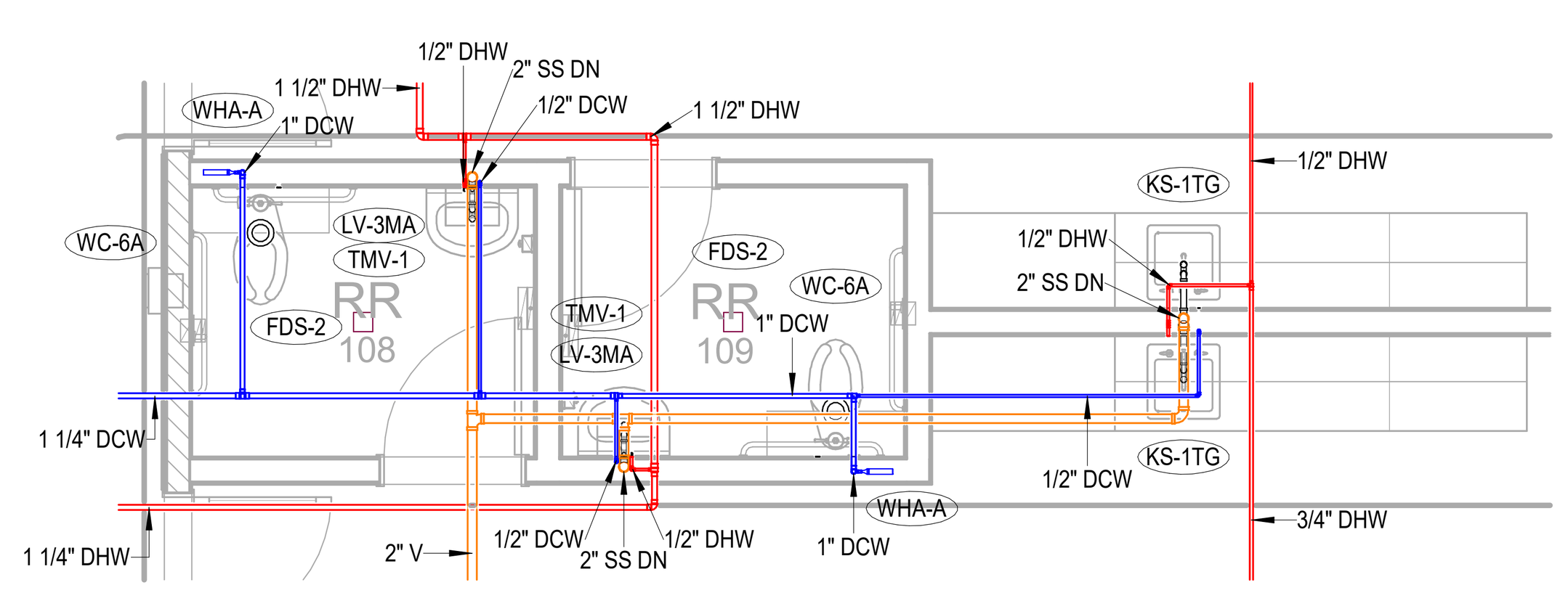
4 ENLARGED PLUMBING PLAN 4

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



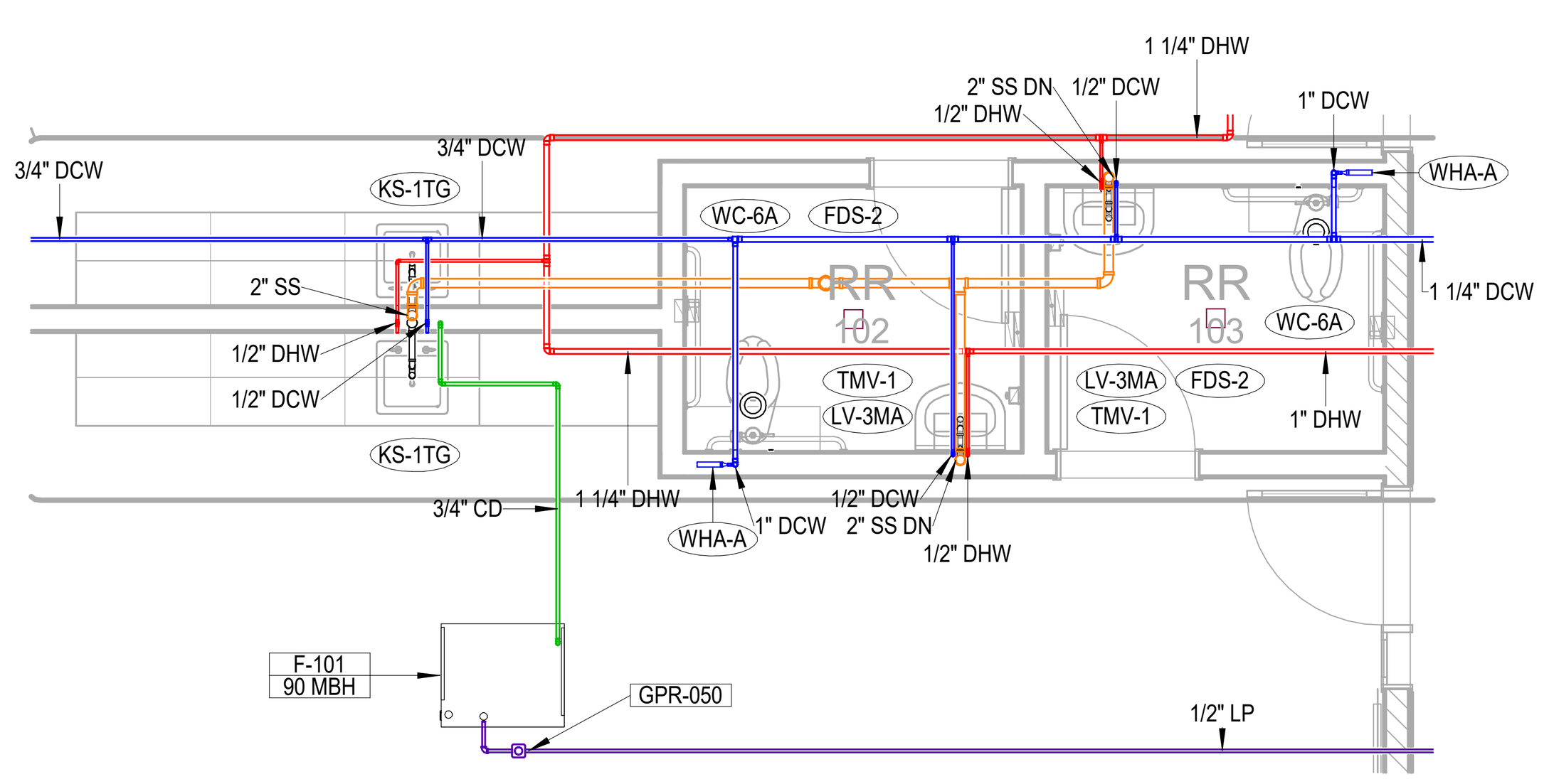
5 ENLARGED PLUMBING PLAN 5

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



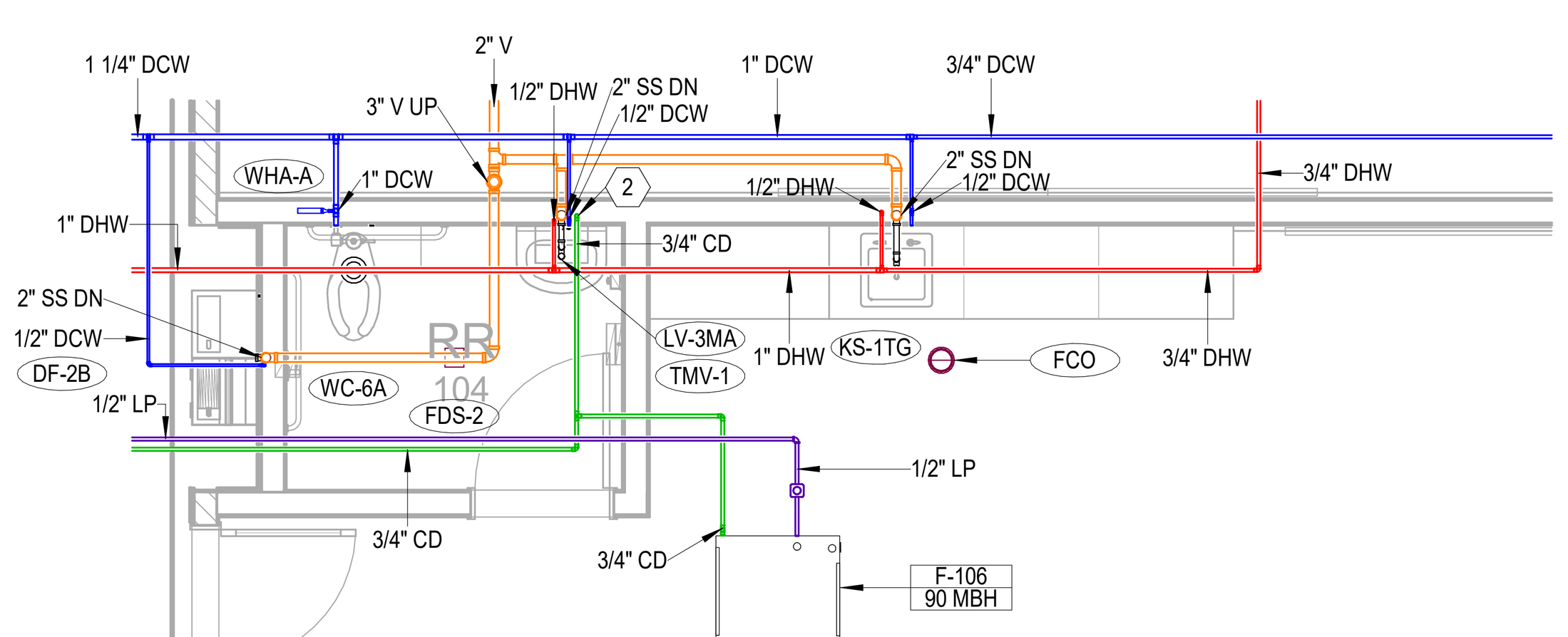
8 ENLARGED PLUMBING PLAN 8

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



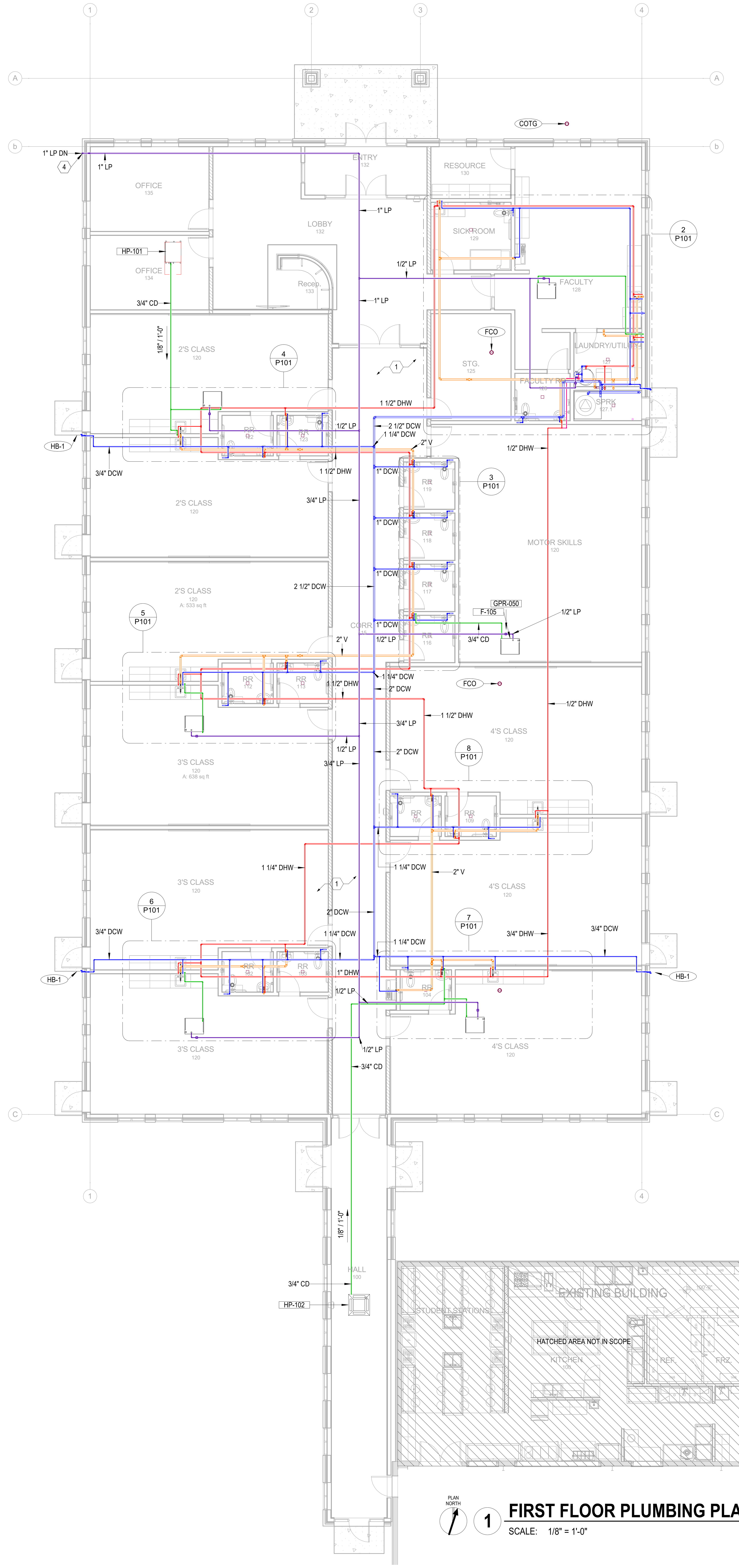
6 ENLARGED PLUMBING PLAN 6

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



7 ENLARGED PLUMBING PLAN 7

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



1 FIRST FLOOR PLUMBING PLAN

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

SHEET KEYNOTES

1 ROUTE ALL PLUMBING THROUGH STRUCTURE WHERE POSSIBLE, COORDINATE AROUND OTHER TRADES. (TYP).
2 ROUTE 3/4" CD SERVICE TO FLOOR SINK OR TO TAILPIECE WITH AIR BREAK.
3 CD TO INDRECTLY DRAIN INTO FD/FS/JS.
4 PROVIDE LOCKABLE FULL PORT ISOLATION VALVE ON GAS SERVICE AND ENTER BUILDING 12" AFG.

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SHEET TITLE:

FIRST FLOOR PLUMBING PLAN

SHEET NUMBER:

P101

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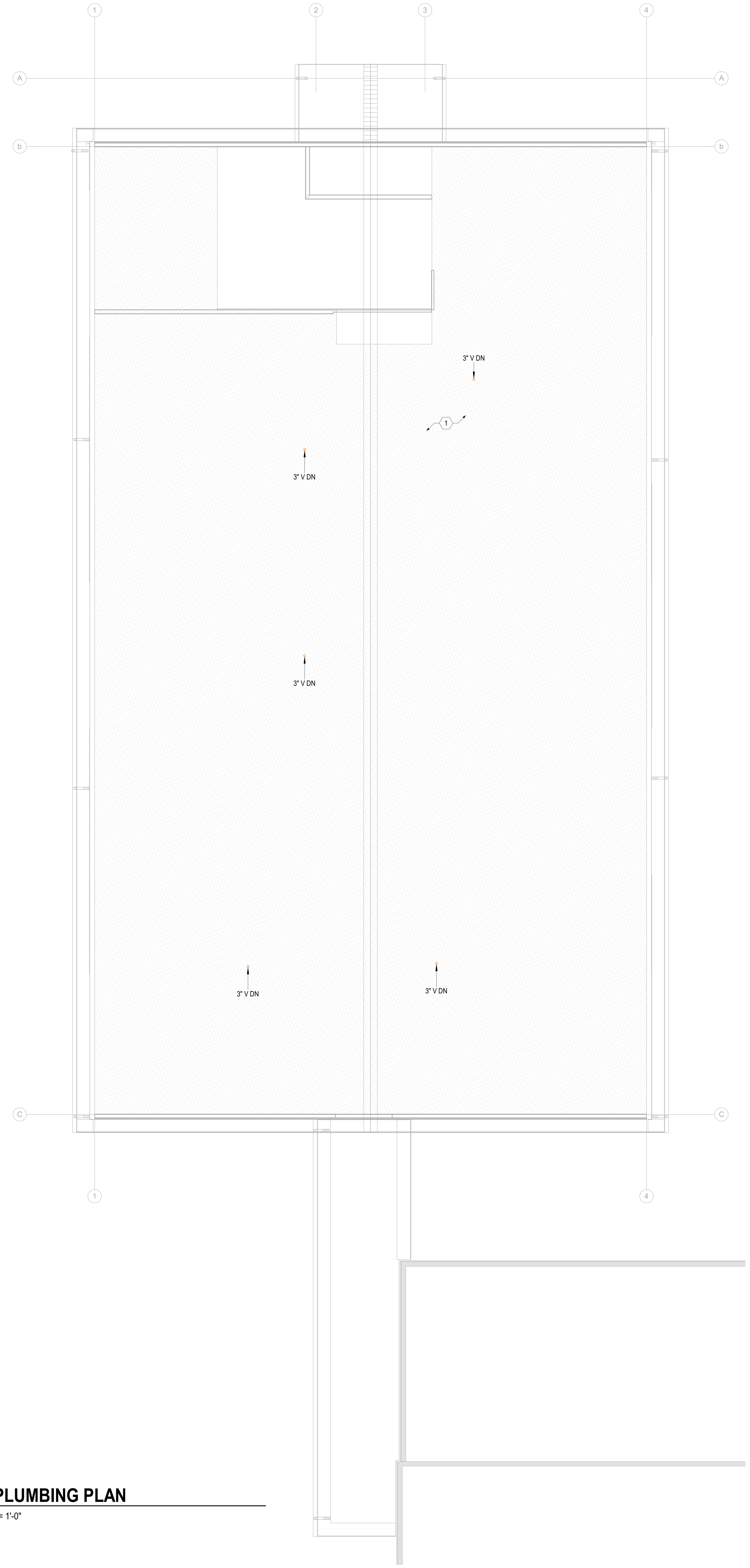

1 ROOF PLUMBING PLAN

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

SHEET KEYNOTES

1 KEEP EA AND SEWER VENT TERMINATIONS NOT LESS THAN 10' FROM OA INTAKES (TYP).

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SHEET TITLE:

ROOF PLUMBING PLAN

SHEET NUMBER:

P102

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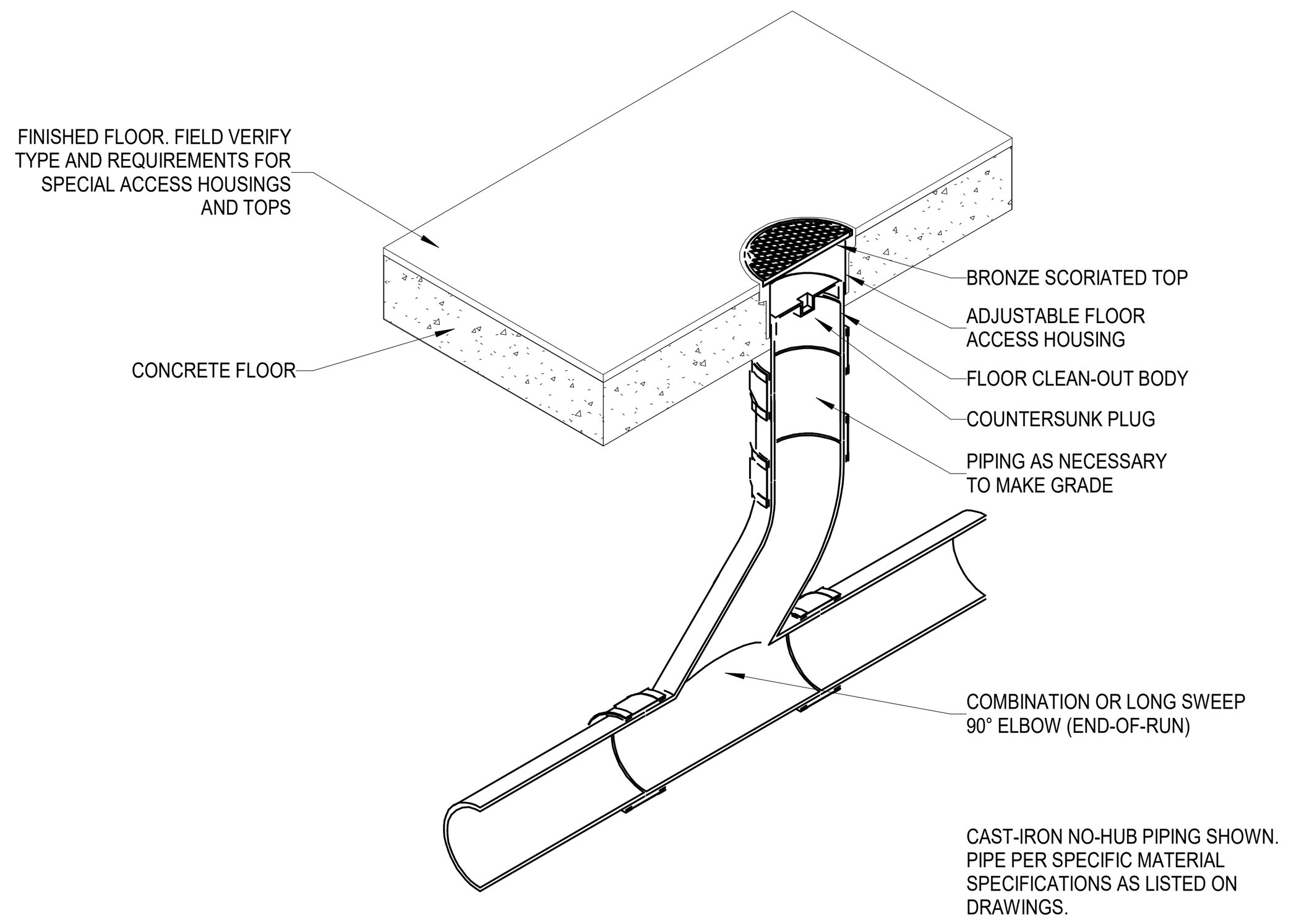
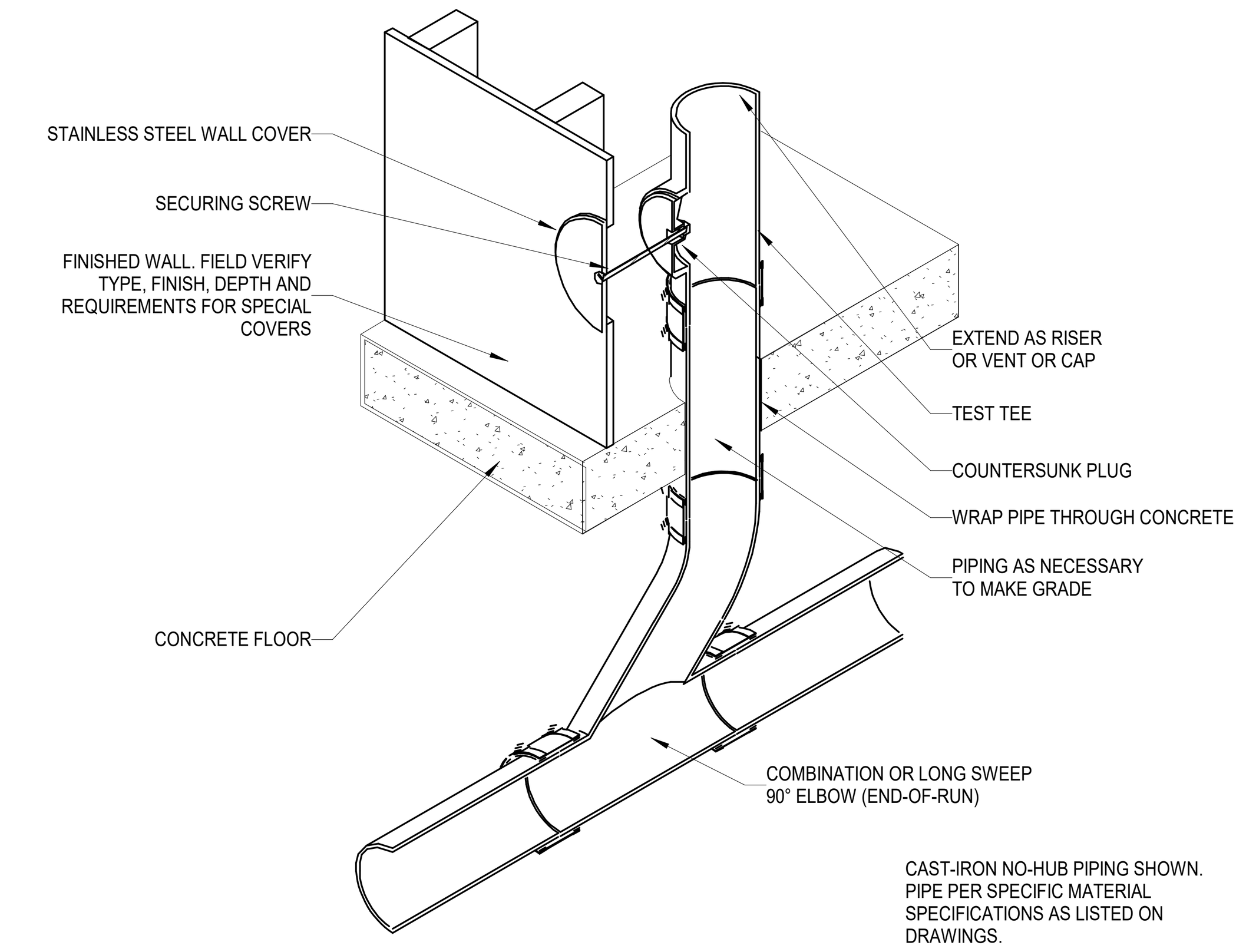
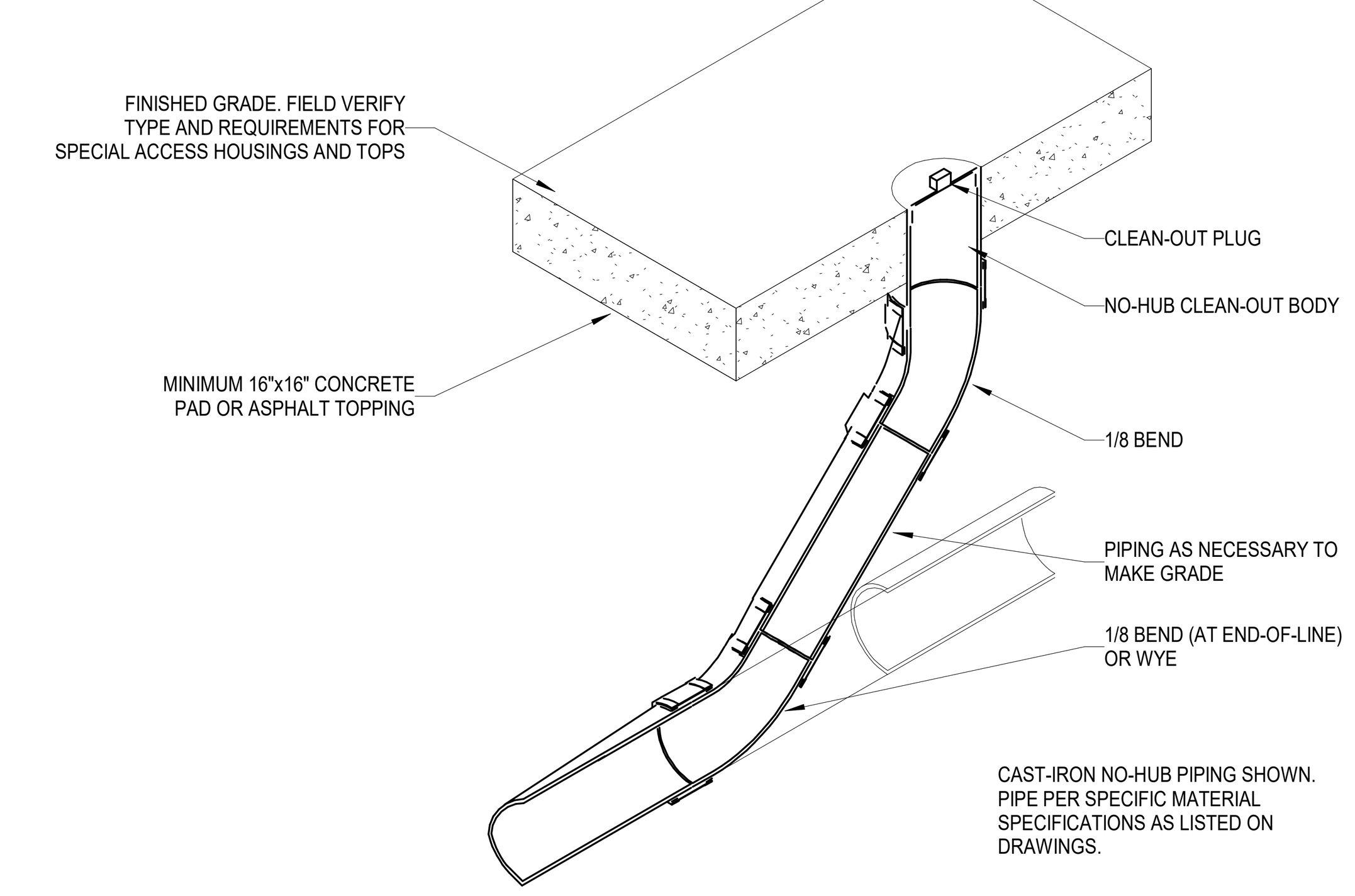


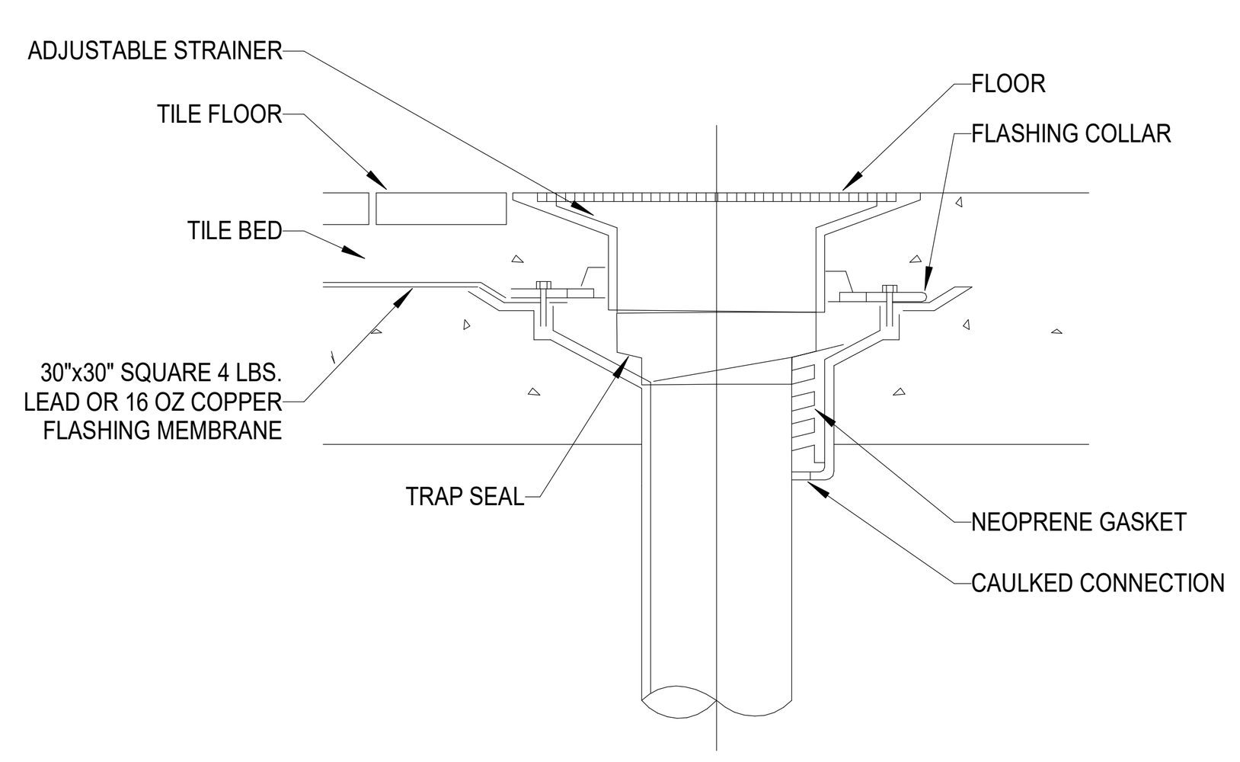
1 CLEAN OUT - FLOOR
NTS



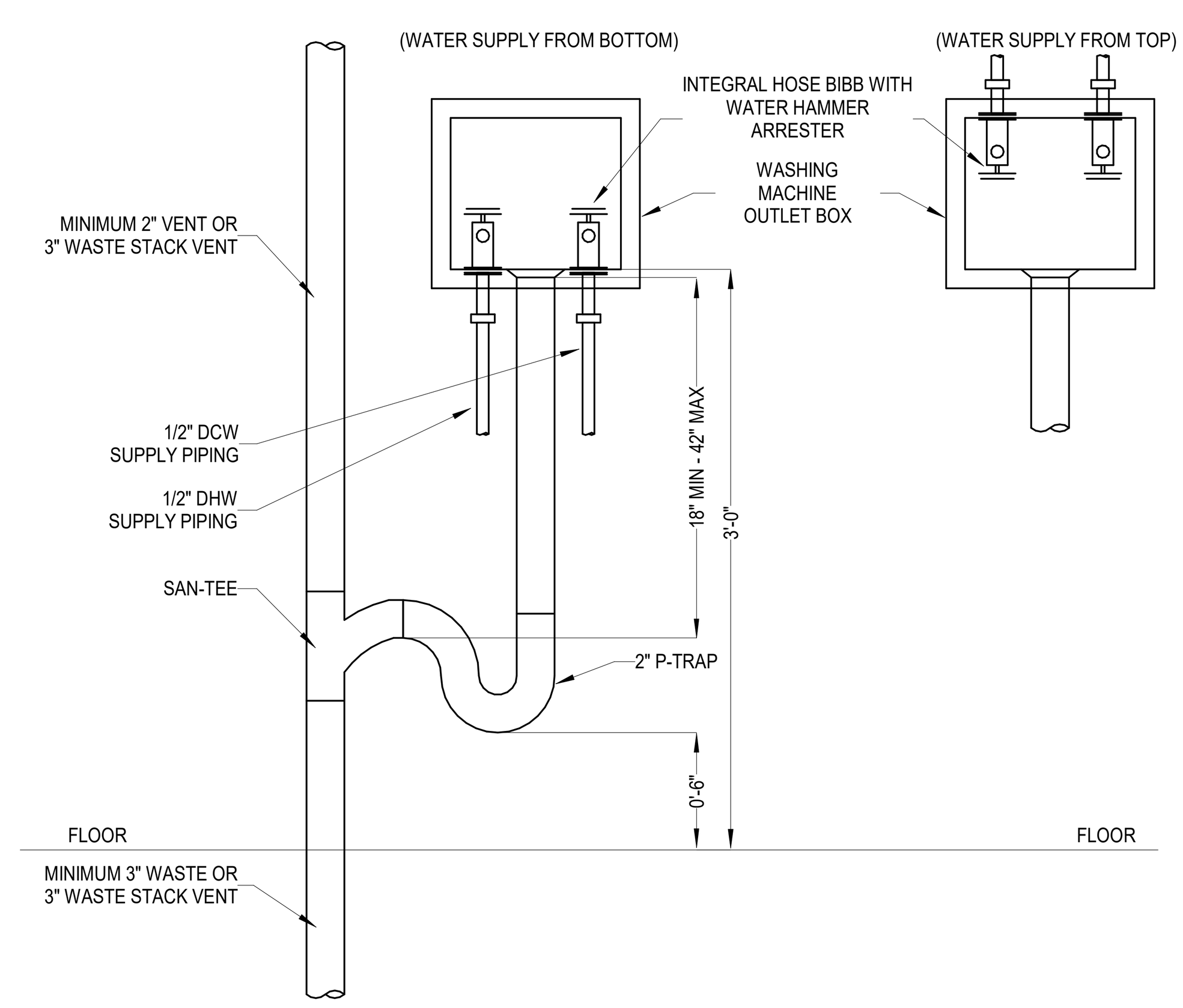
2 CLEAN OUT - WALL
NTS



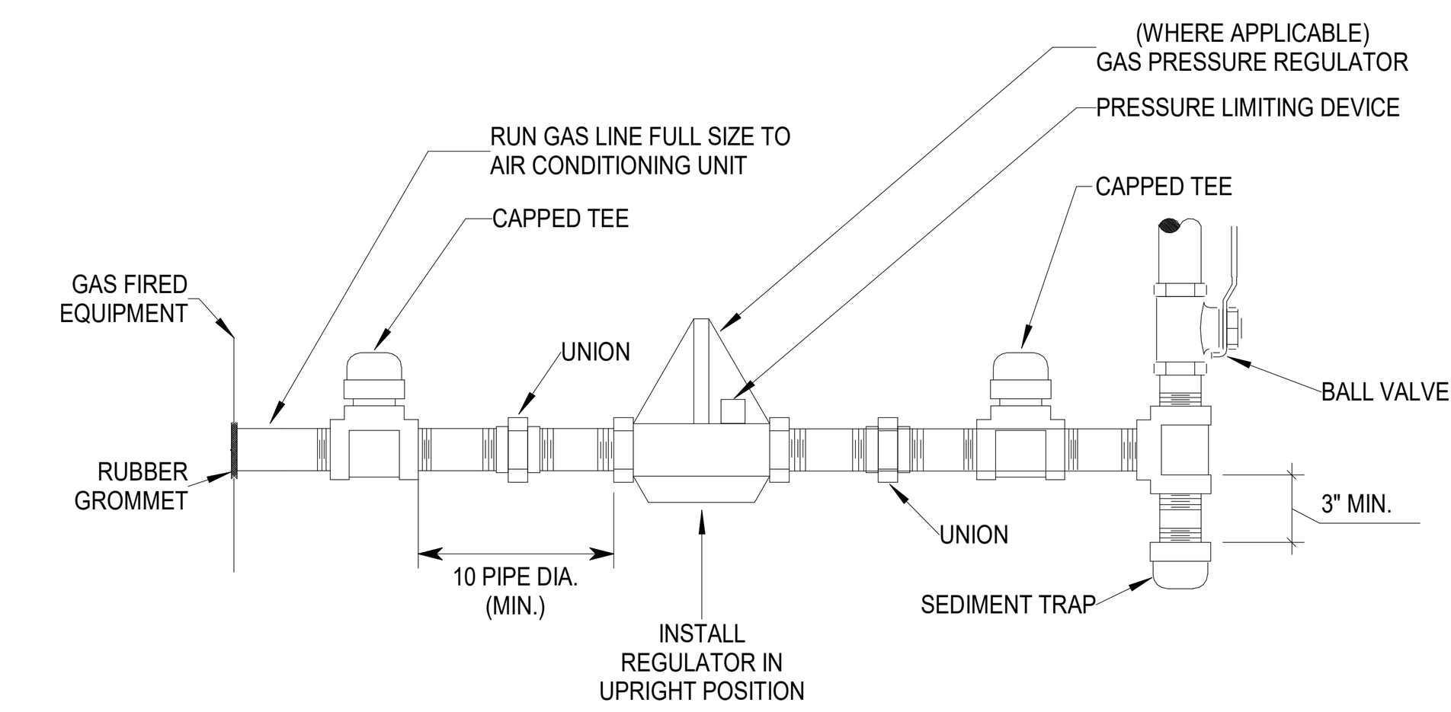
3 CLEAN OUT TO GRADE
NTS



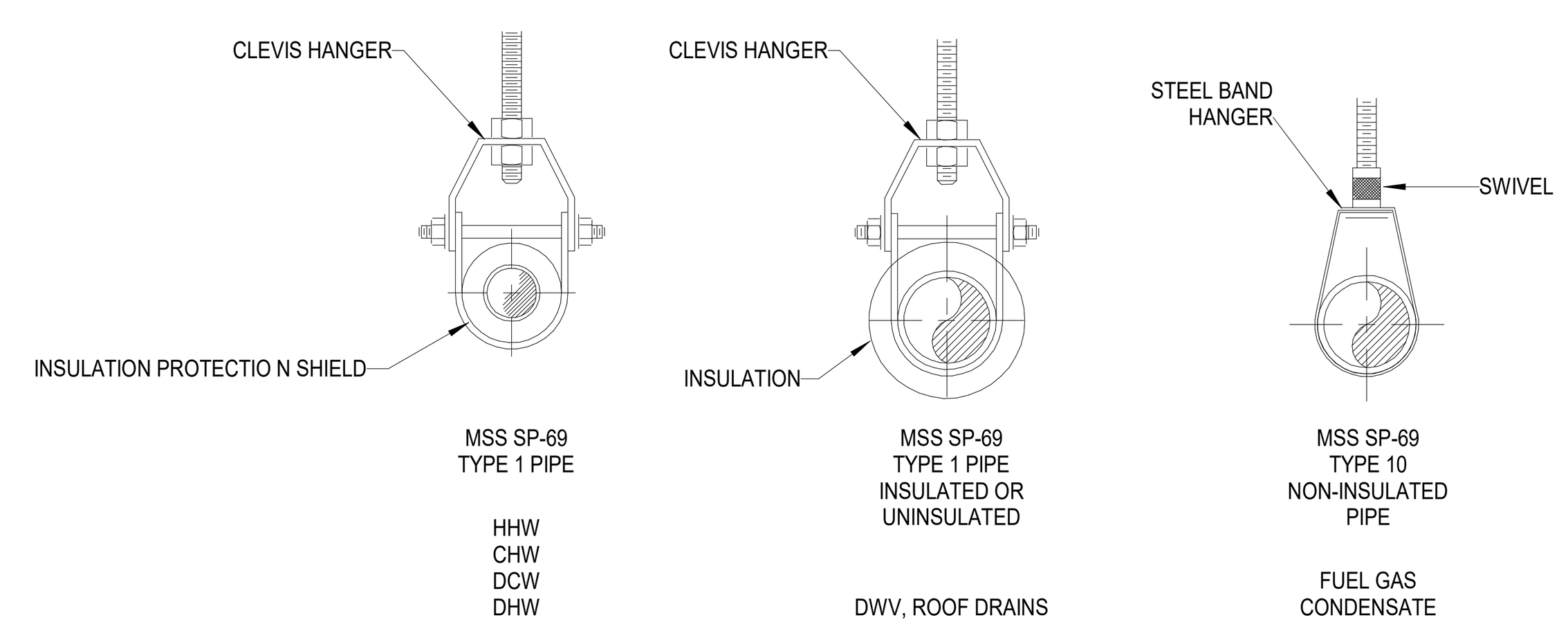
4 FLOOR DRAIN - TRAP SEAL
NTS



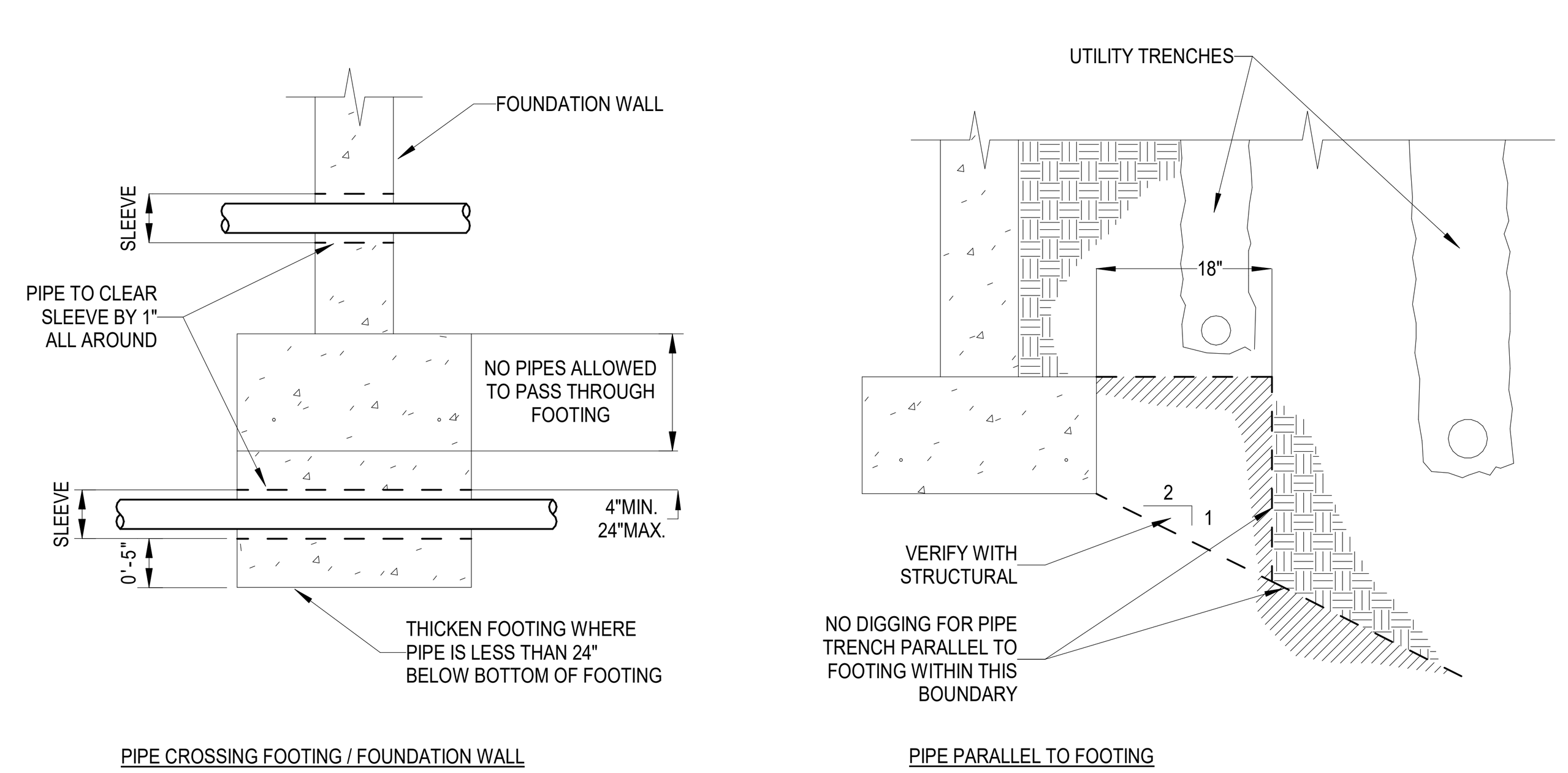
5 WASHING MACHINE PIPING
NTS



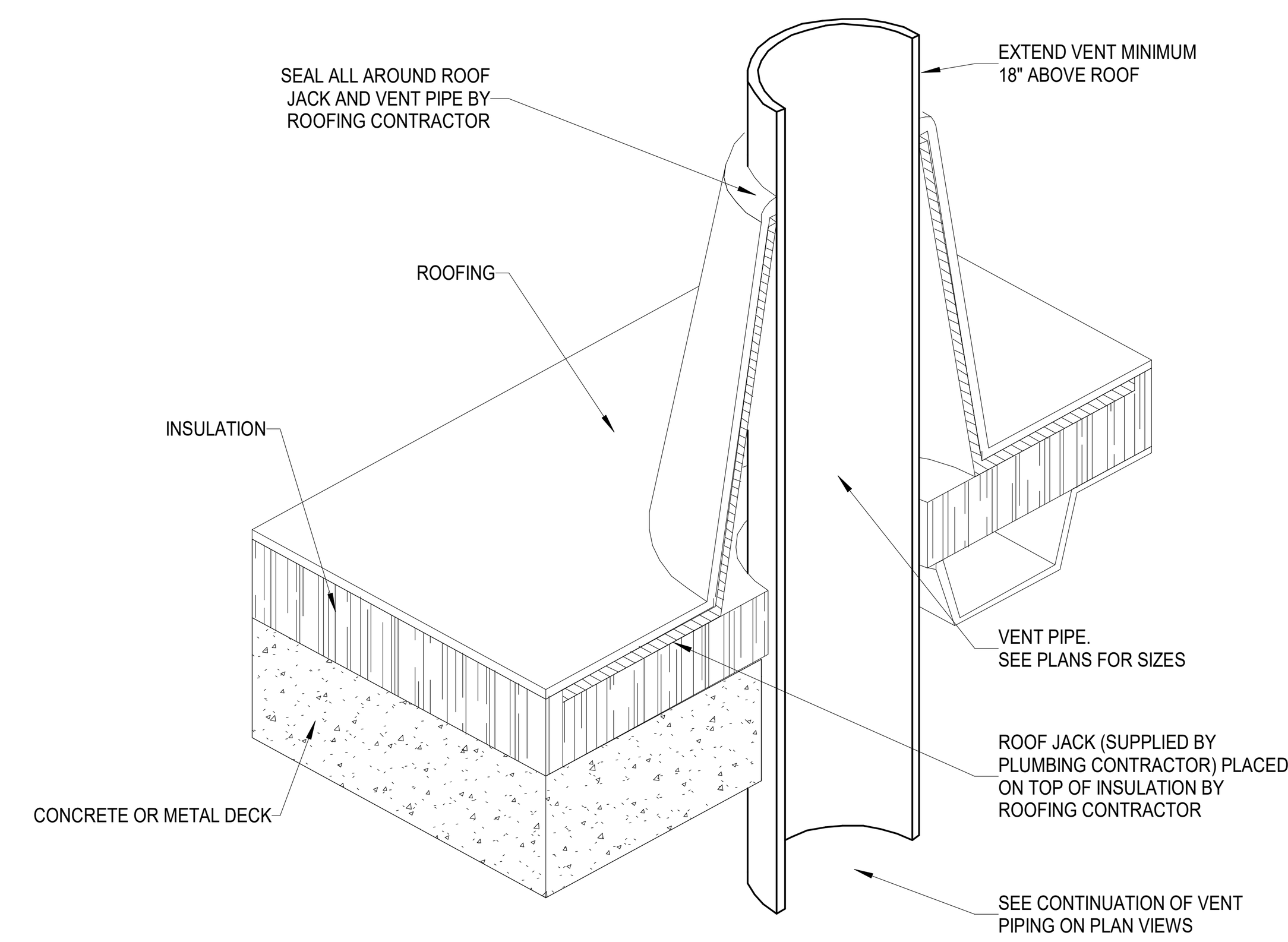
6 GAS PRES. REG.
NTS



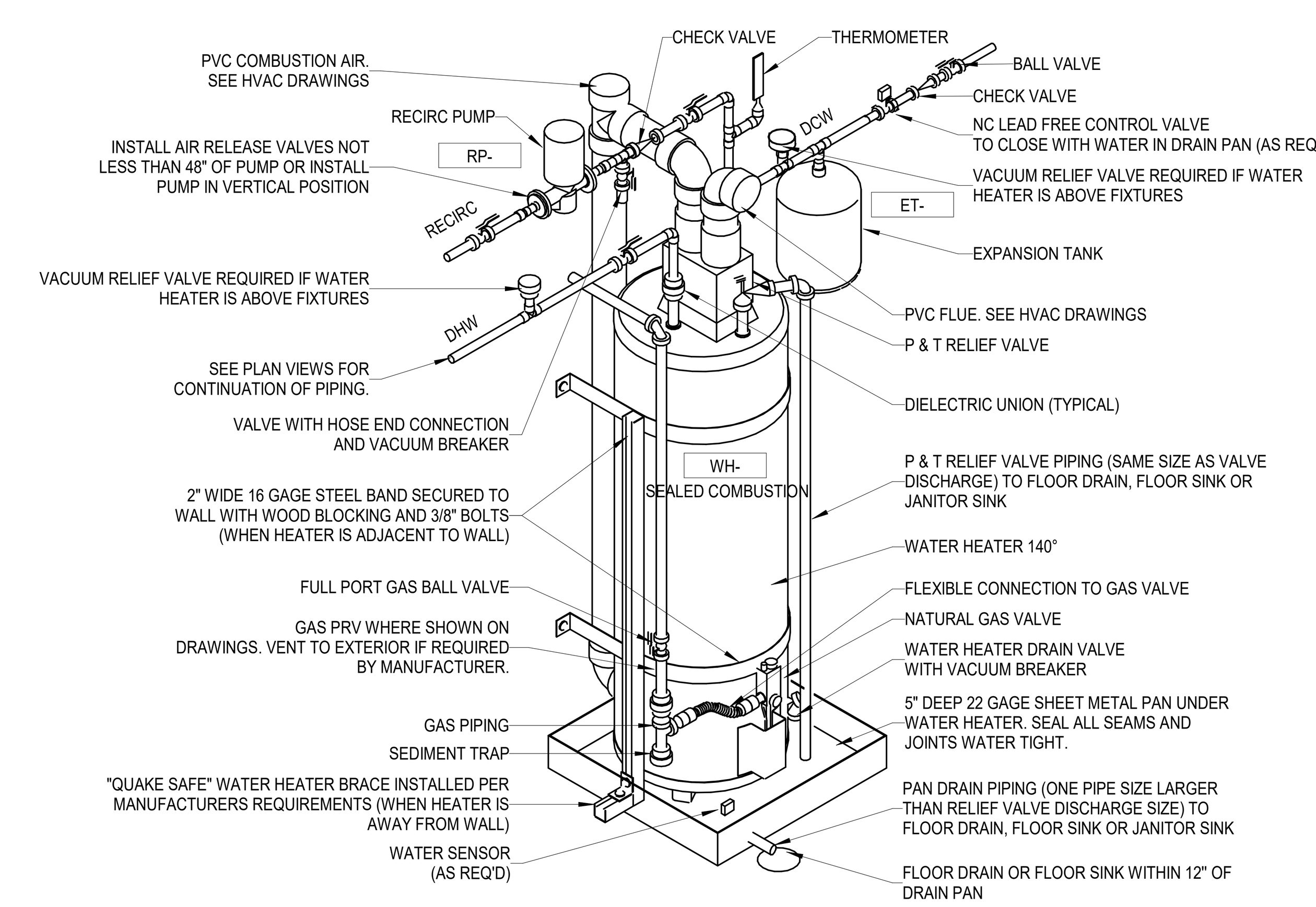
7 PIPE HANGERS
NTS



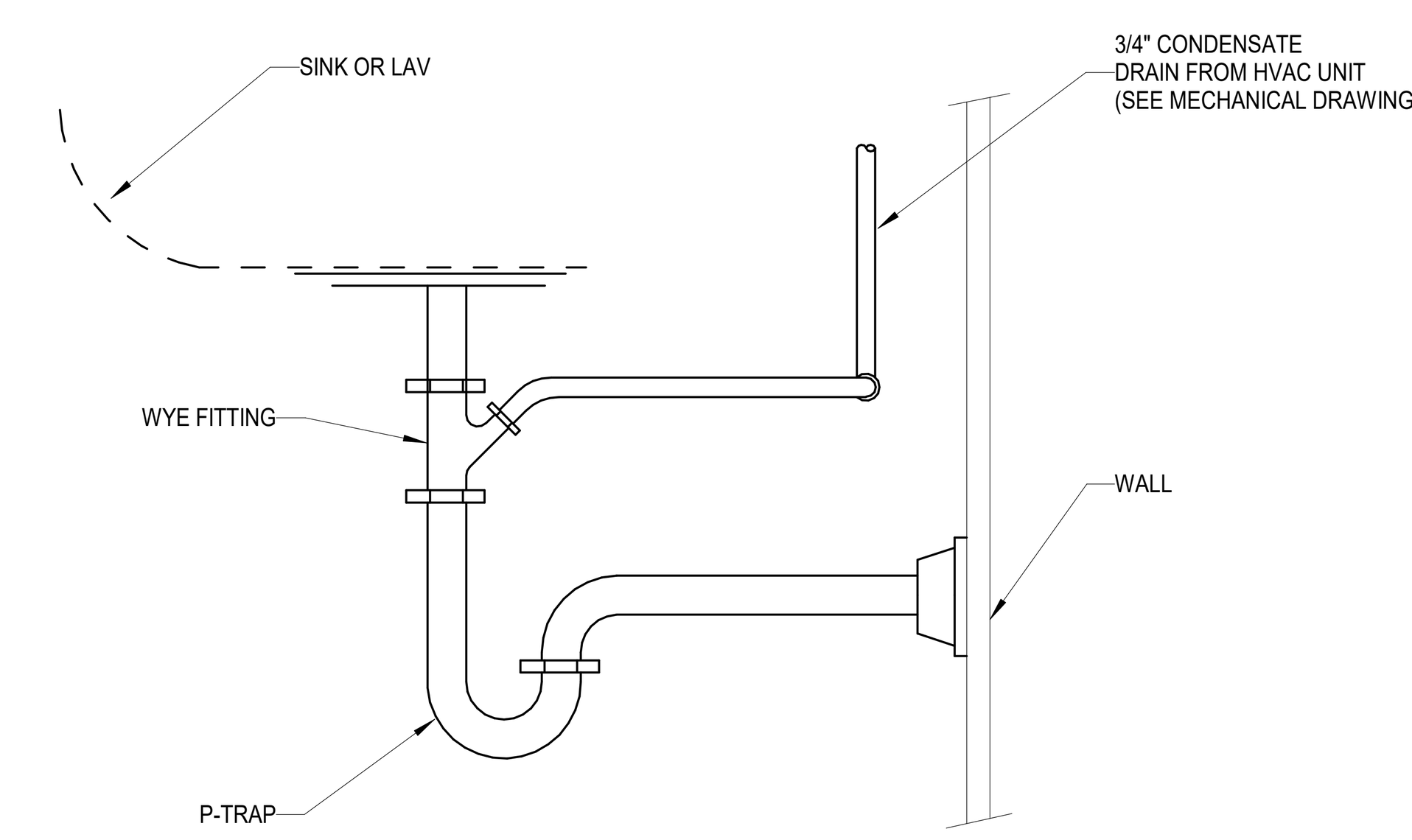
8 PIPE LOCATIONS RELATIVE TO FOOTINGS
NTS



9 VENT THROUGH ROOF
NTS



10 WATER HEATER - SEALED, GAS W/RECIRC
NTS



11 SINK DRAIN - TAIL PIECE AIR BREAK DRAIN
NTS

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SEAL:
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SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER:
P501

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PLUMBING BUILDING UTILITY CALCULATIONS

Fixture	Quantity	Waste Fixtures		Total Water Fixtures	
Fixture	Quantity	Units (A)	Total Units	Units (A)	Total Units
Water Closet (Valve)	15	4.0	60.0	10.0	150.0
Lavatory	15	1.0	15.0	2.0	30.0
Sink (Bar)	10	1.0	10.0	2.0	20.0
Sink (Kitchen)	1	2.0	2.0	1.4	1.4
Sink (Janitor)	1	2.0	2.0	3.0	3.0
Hose Bibb	1	0.0	0.0	2.0	2.0
Emergency Floor Drain 2"	15	0.0	0.0	0.0	0.0
Floor Drain 2"	1	2.0	2.0	0.0	0.0
Washing Machine (8lb Private)	1	2.0	2.0	1.4	1.4
		DFU:	**94.0**	WSFU:	**208.3**
		Slope (In/Ft):	**1/2**	GPM (A):	**92**
				GPM (B):	**0**
Suggested Water Meter Size (in):	**1 1/2"**	SIZE:	**4"**	SIZE:	**2 1/2"**

(A) Based on IPC 2018
(B) Based on ASHRAE MOD. HUNTER (No Hunter Curve)
Valve

DOMESTIC WATER PRESSURE CALCULATIONS

CITY MAIN TO WATER PRESSURE REDUCING VALVE		
PRESSURE IN CITY MAIN:	45.0	PSI
PRESSURE SETTING AT PRESSURE REDUCING VALVE:	45.0	PSI
PRESSURE LOSS IN PIPING:		
DISTANCE FROM CITY MAIN TO PRESSURE REDUCING VALVE:	85.0	FT
ALLOWANCE FOR VALVES AND FITTINGS (25%):	21.3	FT
PIPE FRICTION RATE:	4.0	PSI/100 FT
CALCULATED EQUIVALENT PIPE FRICTION:	4.3	PSI
WATER METER (2")	7.0	PSI
REDUCED PRESSURE BACK FLOW PREVENTER:	0.0	PSI
PRESSURE REDUCING VALVE FALL OFF:	0.0	PSI
SUBTOTAL:	11.3	PSI
PRESSURE REDUCING VALVE TO MOST REMOTE FIXTURE		
PRESSURE IN BUILDING:	33.8	PSI
PRESSURE GAIN:		
BOOSTER PUMP:	30.0	PSI
PRESSURE LOSS:		
DISTANCE FROM PRESSURE REDUCING VALVE TO MOST REMOTE FIXTURE:	175.0	FT
ALLOWANCE FOR VALVES AND FITTINGS (50%):	87.5	
PIPE FRICTION RATE:	4.0	PSI/100 FT
CALCULATED EQUIVALENT PIPE FRICTION:	10.5	PSIG
ELEVATION:	5.0	FTHD
SUBTOTAL:	12.7	PSI
PRESSURE AVAILABLE TO MOST REMOTE FIXTURE:	51.1	PSI
PRESSURE REQUIRED TO MOST REMOTE FIXTURE (IF AVAILABLE > REQUIRED; PASS):	35.0	PSI

BASED ON IPC, CHAPTER 6, APPENDIX E

LIQUID PROPANE BUILDING UTILITY

Equipment Serving Building:

TAG	QTY	INPUT (MBH)	TOTAL (MBH)	TAG	QTY	INPUT (MBH)	TOTAL (MBH)	TAG	QTY	INPUT (MBH)	TOTAL (MBH)
FURN	6	90	540	-	-	-	-	-	-	-	-
WH-101	1	125	125	-	-	-	-	-	-	-	-
MISC	1	90	90	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

TOTAL BUILDING INPUT (MBH): **755** LP Heating Value (BTU/CF): **890**
MAX LIQUID PROPANE LINE LENGTH (FT): **275**
BUILDING MAIN SYSTEM PRESSURE (PSI): **2** BUILDING MAIN SYSTEM SIZE (IN): **1**

HIGH-PRESSURE GAS PIPING (1.5 PSI AND ABOVE) CALCULATIONS

Elevation =	46	feet	Elevation	Y =	0.9992		Flow factor (0.9992)
L =	275	feet	Length of branch in feet	Cr =	0.6094		Specific Gravity factor (0.6094)
P =	2	psi	Regulator pressure in psi	P1 =	16.7	psi	Upstream pressure, absolute
DP =	1	psi	Maximum allowable pressure drop in psi	P2 =	15.7	psi	Downstream pressure, absolute
Q =	848	cfh	Max flow rate at allowed pressure drop	p =	14.7	psi	Altitude pressure in psi

Pipe Size	**1/4**	**3/8**	**1/2**	**3/4**	**1**	**1 1/4**	**1 1/2**	**2**	**2 1/2**	**3**	**4**	**5**	**6**	**8**	**10**
***Inside Diam.**	0.364	0.493	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026	5.047	6.065	7.981	10.020
Max CFH	**65**	**144**	**266**	**556**	**1,047**	**2,151**	**3,223**	**6,211**	**9,902**	**17,511**	**35,732**	**64,669**	**104,747**	**215,313**	**391,215**
					^										
Actual DP (psi)			15.8	2.3	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Inside Diameter shown used as 'D' in the equations for diameter
2018 IFGC A.4-1 (Equation 4-2)

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	CONNECTION SIZES (IN) TRAP	WASTE	VENT	DCW	DHW	DESCRIPTION	MODEL	QTY
COTG	CLEANOUT TO GRADE	-	VARIES	-	-	-	HEAVY DUTY NICKEL BRONZE TOP, BRASS PLUG 3" CO FOR 3" DRAINS, 4" CO FOR 4" - 6" DRAINS, 6" CO FOR 8" DRAINS, 8" CO FOR 10"+ DRAINS -	J.R. SMITH 4113S-NB	1
DF-2B	DRINKING FOUNTAIN (BI-LEVEL) COOLER-WALL MOUNT-BOTTLE FILLER (ADA)	1.5	2	2	1/2	-	BODY: LIGHT GRAY GRANITE, FILTERED, 8.0 GPH CHILLING CAPACITY WITH ADJUSTABLE THERMOSTAT, R-134A, BUBLER, FRONT PUSHBAR ACTIVIATION, UL 399 LISTED, LEAD FREE, (120-1-60, 370 W, 104 LBS) FITTINGS: STOPS, TRAP, TAILPIECE, MOUNTING BRACKET	ELKAY LZSTL8WSLK	2
FCO	FLOOR CLEANOUT	-	VARIES	-	-	-	HEAVY DUTY NICKEL BRONZE TOP, BRASS PLUG 3" CO FOR 3" DRAINS, 4" CO FOR 4" - 6" DRAINS, 6" CO FOR 8" DRAINS, 8" CO FOR 10"+ DRAINS -	J.R. SMITH 4113S-NB	3
FDS-2	FLOOR DRAIN-SQUARE	2	2	2	-	-	POLYVINYL CHLORIDE (PVC) BODY, ADJUSTABLE, ANCHOR FLANGE, 5"x5" NICKEL BRONZE STRAINER, LIGHT DUTY BARRIER TYPE FLOOR DRAIN TRAP SEAL PROTECTION DEVICE, ASSE STANDARD 1072 -	JR SMITH 212 (DRAIN) PROSET (TRAPGUARD)	17
HB-1	HOSE BIBB - FREEZELESS KEYED	-	-	-	3/4	-	CHROME PLATED BRONZE BODY, WALL FLANGE, AUTOMATIC DRAINABLE, INTEGRAL ANTI-SIPHON VACUUM BREAKER, KEY OPERATED, 3/4" HOSE CONNECTION FIELD VERIFY WALL DEPTH -	WOODFORD 65	4
JS-2	JANITOR SINK FLOOR MOUNT	2	2	2	1/2	1/2	BODY: WHITE, 24"x24"x10", COMPOSIT FAUCET: CHROME, 8" CENTERSET, INTEGRAL STOPS, 3/4" HOSE END, VACUUM BREAKER, PAIL HOOK FITTINGS: STRAINER, SERVICE HOSE	MUSTEE 63M (BASIN) MAINLINE XD-141RC (FAUCET)	1
KS-1TG	KITCHEN SINK (1.5 GPM) 1 COMP TOP MOUNT, GOOSENECK	1 1/2	2	2	1/2	1/2	BODY: LUSTERSTONE, 19-1/2"x19"x10-1/8", 18GA. STAINLESS STEEL, CENTER DRAIN, SOUND PADS; FAUCET: CHROME, GOOSENECK, 3 HOLE 8" CENTERSET, 1 LEVER HANDLE, LEAD FREE, WATER SENSE FITTINGS: TAIL PIECE, TRAP, STOP/SUPPLY, TRAP PROTECTOR, STRAINER	ELKAY DLR1919103 (SINK) DELTA 140-WE-DST (FAUCET)	11
LV-3MA	LAVATORY (0.5 GPM) WALL MOUNT MANUAL VALVE (ADA)	1 1/4	2	2	1/2	1/2	BODY: WHITE, 20"x18", 6 1/2" DEEP, VITREOUS CHINA, OVERFLOW DRAIN FAUCET: POLISHED CHROME, 4" CENTERSET, SINGLE CONTROL, 5" SPOUT, LEVEL HANDLE, LEAD FREE, WATER SENSE FITTINGS: TAIL PIECE, TRAP, STOP/SUPPLY, TRAP PROTECTOR.	ZURN Z5340 (BASIN) ZURN Z7440-XL (FAUCET)	14
TMV-1	THERMOSTATIC MIXING VALVE POINT OF USE - LOW FLOW	-	-	-	1/2	1/2	LEAD FREE, BRONZE BODY, VANDAL RESISTANT ADJUSTMENT TEMPERATURE FACTORY SET TO 105°F, INTEGRAL CHECK VALVES ON INLETS. MIN FLOW RATE: 0.25 GPM, RATED FLOW RATE@5PSI: 0.7 GPM, MAX HOT WATER TEMPERATURE: 180°F, MAX OPERATING PRESSURE: 125PSI ASSE 1070 CERTIFIED.	POWERS LFG480	14
WB-1	WATER BOX	-	-	-	1/2	-	WHITE, 5-3/4"x5"x3-1/2", PVC, RECESSED WALL BOX,QUARTER TURN VALVE, SNAP-ON FRAME ASME A112.18.1 COMPLIANT -	WATER-TITE AB97**	1
WC-6A	WATER CLOSET (1.28 GPF) FLOOR MOUNT-MANUAL VALVE (ADA)	INT	4	2	1	-	BODY: WHITE, VITREOUS CHINA, ELONGATED BOWL, EXTRA HEAVY DUTY OPEN FRONT SEAT, SIPHON JET ASME A112.19.2 VALVE: CHROME PLATE, FLUSHOMETER, VACUUM BREAKER, WATER SENSE FITTINGS: WAX RING, WALL ESCUTCHEON	ZURN Z5665-BWL (BODY) ZURN Z6000PL-HET (VALVE)	15
WHA-A	WATER HAMMER ARRESTER (1-11 FIXTURE UNITS)	-	-	-	1/2	-	TYPE L COPPER TUBE BODY, POLY PISTON-TYPE WITH TWO EPDM O-RINGS, MAILE MIP, NO LEAD, ASSE 1010 2004 CERTIFIED	SIOUX CHIEF 652-AS	15
WM-1	Washing Machine Box	2	2	2	1/2	1/2	WHITE, 8 1/4"x6"x3-3/4", PVC, RECESSED WALL BOX, DUAL DRAIN, QUARTER TURN HAMMER ARRESTER VALVES, SNAP-ON FRAME	Water-Tite 857**	1

WATER HEATER SCHEDULE (GAS FIRED STORAGE)

ACCEPTABLE MANUFACTURERS: ANY EQUAL

ACCESSORIES AND REMARKS:
1) SEALED COMBUSTION, 90% MINIMUM THERMAL EFFICIENCY.
2) GLASS LINED STORAGE TANK.
3) CONCENTRIC VENT KIT AND 3" PVC PIPE.
4) AGA/ASME TEMPERATURE & PRESSURE RELIEF VALVE.
5) INTEGRATED SOLID-STATE TEMPERATURE AND IGNITION CONTROLS.
6) ULTRA LOW NOX.
7) SCHEDULE 40 ASTM F-411 CPVC VENT PIPE.
8) SCHEDULE 40 ASTM D-2241 PVC AIR INTAKE PIPE.

SYMBOL	MANUFACTURER	MODEL	FUEL	CAPACITY BURNER (MBH)	CAPACITY STORAGE (GAL)	VENT TYPE	RECOVERY CAPACITY RATE (GPH)	TEMPERATURE (°F) IN	TEMPERATURE (°F) OUT	EFFICIENCY (UEF)	ELECTRICAL POWER	ELECTRICAL AMPS	WEIGHT (LBS)	ACCESSORIES AND REMARKS	QTY
WH-101	BRADFORD WHITE	EF-60T-125E-3N	LP	125	60	POWER DIRECT	145	50	140	-	120-1-60	1.8	1160	1,2,3,4,5,6,7,8	1

DOMESTIC WATER CIRCULATING PUMP

ACCEPTABLE MANUFACTURERS:

NOTES:
(1) WET ROTOR; 3-SPEED MOTOR
(2) LEAD-FREE BRONZE CONSTRUCTION
(3) AQUASTAT, SET AT 110°F

SYMBOL	MANUFACTURER	MODEL	FLOW RATE (GPM)	HEAD (FT)	MOTOR SPEED (RPM)	ELECTRICAL HP	ELECTRICAL POWER	ACCESSORIES AND REMARKS
RP-050	BELL & GOSSETT	PL-30	2.0	12.0	2650	1/12	120-1-60	1,2,3

DOMESTIC HOT WATER EXPANSION TANK

ACCEPTABLE MANUFACTURERS:
WATTS DET
AMTROL ST
BELL & GOSSETT PT

ACCESSORIES AND REMARKS:
(1) BUTL DIAPHRAGM
(2) RIGID POLYPROPYLENE LINER

SYMBOL	MANUFACTURER	MODEL	TOTAL VOLUME (GALLONS)	INITAL ACCEPTANCE VOLUME (GALLONS)	INITAL FILL PRESSURE (PSIG)	ACCESSORIES AND REMARKS
DET-101	BACKSTOP	A-101	2.0	1.2	55	1,2

GAS PRESSURE REGULATOR SCHEDULE

ACCEPTABLE MANUFACTURERS:
PEITRO FIORENTINI
MAXITROL

ACCESSORIES AND REMARKS:
(1) 2.0 PSIG INLET PRESSURE, 850 BTU PER CF
(2) 4 OZ (7" W.C.) OULET PRESSURE
(3) DIE CAST ALUMINUM BODY, NITRILE DIAPHRAGM
(4) NPT THREADED INLET & OUTLET
(5) BALL CHECK AUTOMATIC VENT LIMITING DEVICE
(6) LPG RATED

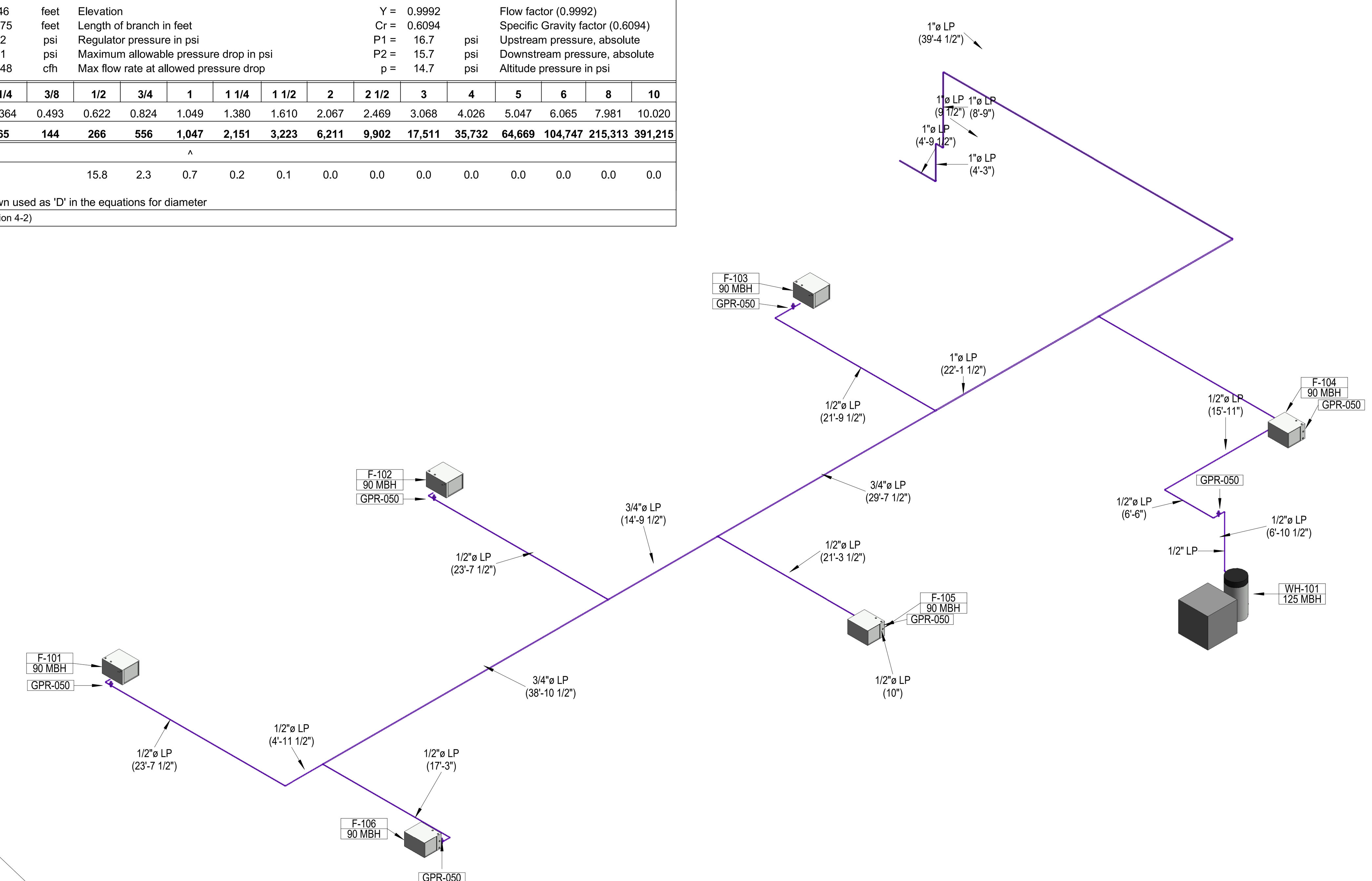
SYMBOL	LOCATION	MANUFACTURER	MODEL	REGULATOR SIZE (INCHES)	RATED CAPACITY (BTUH)	ACCESSORIES AND REMARKS	QTY
GPR-050		PF REGULATOR	F30051	1/2	928	1-6	7

DOMESTIC WATER BOOSTER PUMP (DUPLEX) SCHEDULE

ACCEPTABLE MANUFACTURERS:

ACCESSORIES AND REMARKS:
(1) STAINLESS STEEL HEADERS
(2) VFD'S AND CONTROLS AS PART OF PACKAGE. MOTORS TO BE RATED FOR VFD APPLICATION. SINGLE POINT POWER CONNECTION
(3) PRESSURE SENSOR PROVIDED AS PART OF PACKAGE. "SMART" AQUALOGIC CONTROLS SHALL CONTROL THE VARYING PUMP SPEEDS
(4) INDIVIDUAL CHECK VALVE PER PUMP
(5) DUPLEX PUMPS TO BE SIZED AT 70% REDUNDANCY

SYMBOL	MANUFACTURER	MODEL	FLOW RATE (GPM)	SUCTION PRESSURE (PSIG)	DISCHARGE PRESSURE (PSIG)	MOTOR SPEED (RPM)	ELECTRICAL HP	ELECTRICAL FLA	ELECTRICAL POWER	ACCESSORIES AND REMARKS
BP-101	QUANTUMFLO	PRODIGY-DUPLEX	92	33.8	63.8	3600	1.5	11.4	208-3-60	1-5



CONTINUATION TO SITE PROPONE TANK NOT MORE THAN 75 FT BEYOND THIS POINT. SEE SITE UTILITY PLAN FOR EXACT LOCATION.

3 **GAS ISOMETRIC**
SCALE:

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SHAKESPEARE ENGINEERING

REV	DATE	DESCRIPTION
A	04/26/2024	50% CD SET
B	06/04/2024	75% CD SET
C	10/22/2024	95% CD SET
D	12/18/2024	100% CD SET

PROJECT:
DELMARVA CHRISTIAN SCHOOL
EARLY LEARNING CENTER
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SEAL:

SHEET TITLE:
PLUMBING SCHEDULES

SHEET NUMBER:
P601

DO NOT SCALE DRAWING

SINGLE LINE LEGEND

- GROUND
- CIRCUIT BREAKER
- TRANSFORMER DELTA PRIMARY, WYE SECONDARY WITH kVA RATING
- SPD — SURGE PROTECTION DEVICE
- GFP — GROUND FAULT PROTECTION
- CB — ENCLOSED CIRCUIT BREAKER
- TC — TIME CLOCK
- M — KILOWATT-HOUR METER
- FUSED SWITCH
- NON-FUSIBLE DISCONNECT SWITCH (RATINGS AS NOTED)
- FUSIBLE DISCONNECT SWITCH (RATINGS AS NOTED)
- MOTOR STARTER (NEMA SIZE AS NOTED)
- COMBINATION FUSIBLE DISCONNECT SWITCH AND MOTOR STARTER, (NEMA SIZE AS NOTED), 3P, 600 VAC MAXIMUM RATING.
- $T — TOGGLE TYPE FRACTIONAL HP MANUAL MOTOR STARTER WITH THERMAL OVERLOADS (DELETED IF FOR DISCONNECT USE ONLY) AND HANDLE GUARD/LOCK-OFF, 2 POLES (VERIFY WITH BRANCH CIRCUIT).
- EPO - EMERGENCY POWER OFF BUTTON
- MOTOR
- AUTOMATIC TRANSFER SWITCH
- PANEL BOARD

CIRCUIT BREAKER CALLOUT

225 -TRIP SIZE
3 -POLE

FUSE CALLOUT

150 -FUSE SIZE
3 -POLE

POWER LEGEND

COORDINATE THE EXACT MOUNTING AND LOCATION OF ALL WIRING DEVICES AND ALL CONDUITS WITH OTHER TRADES PRIOR TO ROUGH-IN. SEE ARCH PLANS FOR EXACT DEVICE LOCATIONS. GENERATOR OUTLETS TO BE RED AND UPS OUTLETS TO BE ORANGE.

DUPLEX — QUAD — GFI DUPLEX — GFI QUAD — DUPLEX WITH USB

RECEPTACLE, NON-LOCKING TYPE, GROUNDING, 120V - 20A. MOUNTED AT +15" AFF TO BOTTOM OF BOX UNO. SHADED REPRESENTS ABOVE COUNTER OR +42" AFF.

DUPLEX — QUAD — GFI DUPLEX — GFI QUAD — DUPLEX WITH USB

SPLIT YOLK HALF CONTROLLED RECEPTACLE NON-LOCKING TYPE 120V-20A. TO BE LOCATED WITHIN 6' OF AN UNCONTROLLED RECEPTACLE. CONNECT SWITCH LEG BETWEEN RELAY POWER PACK AND OCCUPANCY CONTROLS FOR AUTOMATIC SHUT OFF. CONTROLLED RECEPTACLES SHALL HAVE PERMANENT MARKING TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES. (CEC TITLE 24 SECTION 130.5(D)). PROVIDE FACEPLATE PER NEC 406.3(E).

- CEILING MOUNTED DUPLEX OR QUAD RECEPTACLE, NON-LOCKING TYPE, GROUNDING.
- POWER FLOOR BOX.
- WALL OR FLOOR POWER CONNECTION TO MODULAR FURNITURE. VERIFY EXACT LOCATION WITH FURNITURE SUPPLIER.
- J — JUNCTION BOX

EQUIPMENT SIZES SHOWN ON PLANS ARE NOT EXACT. CONTRACTOR IS RESPONSIBLE FOR ENSURING EQUIPMENT CLEARANCES ARE MET BASED ON ACTUAL SIZE OF EQUIPMENT.

- T — TRANSFORMER
- SWITCHBOARD OR MCC
- PANEL BOARD (SURFACE)
- PANEL BOARD (FLUSH)
- LOW VOLTAGE PANEL
- LCP — LIGHTING CONTROL PANEL
- TELEPHONE BACKBOARD. 3/4" PLYWOOD, LENGTH AND WIDTH AS NOTED.

SPECIAL POWER LEGEND

- NEMA L5-30R SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING, 120V - 1PH - 30A.
- A — NEMA L6-30R SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING, 208V - 1PH - 30A, NOTE: CAP AND STOW HOMERUN NEUTRAL WIRE FOR FUTURE USE.
- B — NEMA L14-30R SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING, 120/208V - 1PH - 30A.
- C — NEMA L21-20R SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING, 120/208V - 3PH - 20A.
- D — HUBBELL #CS6369 (CALIF. STD.) SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING,120/208V - 1PH - 50A.
- E — NEMA L5-20R SINGLE RECEPTACLE, LOCKING TYPE, GROUNDING, 120V - 1PH - 20A.
- DUPLEX RECEPTACLE (NEMA 5-20R IN LAB AREAS), NON-LOCKING TYPE, GROUNDING, 120V - 20A. SHADED REPRESENTS ABOVE COUNTER.
- RECEPTACLE OUTLETS MOUNTED IN ISODUCT RACEWAY AT +15" UNO. SEE ELECTRICAL DETAILS.

SITE SYMBOLS LEGEND

- —— OHP —— OHP —— NEW CONDUIT AND/OR CONDUCTOR LINE. SEE BELOW FOR TYPICAL DESIGNATIONS
- –X– OHP –X– OHP –X– EXISTING TO BE DEMOLISHED CONDUIT AND/OR CONDUCTOR. SEE BELOW FOR TYPICAL DESIGNATIONS
- — — OHP — — OHP — — EXISTING CONDUIT AND/OR CONDUCTOR LINE TO REMAIN. SEE BELOW FOR TYPICAL DESIGNATIONS

TYPICAL DESIGNATIONS TO BE USED IN CONJUNCTION WITH CONDUIT SYMBOLS

- UP - UNDERGROUND PRIMARY
- US - UNDERGROUND SECONDARY
- UC - UNDERGROUND COMMUNICATIONS
- USL - UNDERGROUND STREET LIGHTING
- OHP - OVERHEAD PRIMARY
- OHS - OVERHEAD SECONDARY
- OHC - OVERHEAD COMMUNICATIONS

NEW MANHOLE	EXISTING MANHOLE
NEW HANDHOLE	EXISTING HANDHOLE
NEW TRANSFORMER	EXISTING TRANSFORMER
SW — NEW MV SWITCH	SW — EXISTING MV SWITCH
NEW OH POLE	EXISTING OH POLE
NEW GUY	EXISTING GUY
NEW OH XFMR	EXISTING OH XFMR

GENERAL SYMBOLS LEGEND

- 1 — SHEET NOTE REFERENCE
- 3 — DETAIL NUMBER DESIGNATION
- E1 — SHEET ON WHICH DETAIL IS FOUND
- CONDUIT STUBOUT
- CONDUIT RISING UP
- CONDUIT CONCEALED IN WALLS OR CEILING.
- CONDUIT DROP DOWN
- CONDUIT CONCEALED IN FLOOR, UNDERFLOOR, OR BELOW GRADE
- FLEXIBLE CONDUIT
- #8 — CROSSMARKS DENOTE QUANTITY OF NEUTRAL (LONG), PHASE (SHORT), AND GROUND (DOT) CONDUCTORS IN BRANCH CIRCUIT CONDUIT. NO CROSSMARKS DENOTES PHASE, NEUTRAL, AND GROUND WIRES. NUMBER ADJACENT TO CROSSMARKS DENOTES WIRE SIZE OTHER THAN #12 FOR ALL CONDUCTORS UNO.
- A-1 — HOMERUN TO PANEL AND CIRCUITS INDICATED.

FIRE ALARM LEGEND

- FACP — FIRE ALARM CONTROL PANEL
- ANN — ANNUNCIATOR
- FATC — TERMINAL CABINET
- MMX — ADDRESSABLE MONITOR SCHEDULE
- VISUAL ALARM
- AUDIO/VISUAL ALARM
- SD — SMOKE DETECTOR - CEILING MOUNTED
- HD — HEAT DETECTOR - CEILING MOUNTED
- CO — CARBON MONOXIDE DETECTOR - CEILING MOUNTED
- SD D — DUCT SMOKE DETECTOR
- F — PULL STATION - WALL MOUNTED AT +48".
- B — SPRINKLER BELL
- FS — FLOW SWITCH
- TS — TAMPER SWITCH
- J — JUNCTION BOX
- TELEPHONE BACKBOARD. 3/4" PLYWOOD, LENGTH AND WIDTH AS NOTED.

SECURITY SYSTEM LEGEND

(VERIFY EXACT LOCATION AND MOUNTING OF ALL SYSTEM DEVICES WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.)

- CR — CARD READER ROUGH-IN WITH TOP OF BOX AT +48" AFF AND 12" FROM DOOR EDGE, UNO PROVIDE 1" C.O. INTO ACCESSIBLE CEILING SPACE UNO
  NOTE: THE ROUGH-IN BOX SHALL HAVE A BLANK METAL PLATE UNDER THE DRYWALL. DRILL HOLES FOR CABLE AND MOUNTING THE DEVICE PER MANUFACTURER.
- DR — DOOR LOCK/STRIKE ROUGH-IN. PROVIDE 3/4" C., INTO ACCESSIBLE CEILING SPACE UNO
- CM — SECURITY CAMERA ROUGH-IN. PROVIDE 3/4" C., INTO ACCESSIBLE CEILING SPACE UNO
- DC — DOOR CONTACT ROUGH-IN. PROVIDE 3/4" C. INTO ACCESSIBLE CEILING SPACE UNO
- SR — STRIKE RELEASE ROUGH-IN. PROVIDE 3/4" C. INTO ACCESSIBLE CEILING SPACE UNO
- IR — INFRARED DETECTOR (REQUEST TO EXIT) PROVIDE 3/4" C.O. INTO ACCESSIBLE CEILING SPACE UNO
- I — ROUGH-IN FOR INTERCOM STATION (VERIFY).
- ID — INTRUSION DETECTOR (GLASS BREAK).
- M — CCTV MONITOR
- DVR — CCTV DIGITAL VIDEO RECORDER
- BALANCED MAGNETIC SWITCH (BMS)
- F — CCTV FIXED CAMERA

SUBSCRIPT ADJACENT TO CCTV INDICATES:

- F = FIXED
- PTZ = PAN TILT ZOOM
- WP = WEATHERPROOF

COMMUNICATION LEGEND

- COMBINATION VOICE/DATA OUTLET MOUNTED AT 18" UNO.
- WALL MOUNTED VOICE OUTLET AT +18" UNO.
- WALL MOUNTED DATA OUTLET AT +18" UNO.
- CEILING MOUNTED DATA OR VOICE/DATA OUTLET.
- FLOOR DATA OR VOICE/DATA OUTLET.
- WALL OR FLOOR VOICE/DATA CONNECTION TO MODULAR FURNITURE. VERIFY EXACT LOCATION WITH FURNITURE SUPPLIER.
- TV — WALL MOUNTED TELEVISION OUTLET.
- AV — WALL MOUNTED AUDIO/VISUAL OUTLET.
- S — SPEAKER - CEILING MOUNTED.
- 12" WIDE MONO-TRAY, 4" DEEP (NOMINAL), 6" RUNG SPACING. TYPICAL UNO
- 12" WIDE CABLE TRAY, 4" DEEP (NOMINAL) TYPICAL UNO.

COORDINATE THE EXACT MOUNTING OF ALL CABLE TRAY SUPPORTS AND ALL CONDUITS WITH OTHER TRADES PRIOR TO ROUGH-IN.

LIGHTING LEGEND

LIGHTING CONTROL ACCEPTANCE TESTING SHALL BE COMPLETED BY THE CONTRACTOR PER TITLE 24 REQUIREMENTS.

COORDINATE THE EXACT MOUNTING AND LOCATION OF ALL LIGHTING, SUPPORTS AND ALL CONDUITS WITH OTHER TRADES PRIOR TO ROUGH-IN. SEE ARCH PLANS FOR EXACT GRID, FLUSH AND SURFACE MOUNTING LOCATIONS.

LIGHTING FIXTURES. SEE FIXTURE SCHEDULE FOR MODEL/PART NUMBERS AND ADDITIONAL DETAILS.

EMERGENCY LIGHTING FIXTURES. SEE FIXTURE SCHEDULE FOR MODEL/PART NUMBERS AND ADDITIONAL DETAILS.

- LUMINAIRE(S) POLE MOUNTED WITH ARM. TYPE AS NOTED.
- LUMINAIRE(S) POLE MOUNTED ON TOP. TYPE AS NOTED.
- EMERGENCY BUGEYE FIXTURE.
- LIGHTED EXIT SIGN. TOP MOUNTED ON CEILING OR STEM MOUNTED. SHADED SIDE INDICATES FACE. PROVIDE ARROWS TO MATCH ARCHITECTURAL OR LIFE SAFETY PLANS.

SUBSCRIPT ADJACENT TO LIGHTING FIXTURE INDICATES:

- L# = FIXTURE DESIGNATION
- 1,2,3 etc. = BRANCH CIRCUIT NUMBERS
- a,b,c etc. = SWITCH-LEG REFERENCE
- NL = NIGHT/SECURITY LIGHTING FIXTURE

SWITCH LEGEND

MOUNT WALL SWITCHES AT 48" AFF. TO TOP OF HOUSING UNO. VERIFY ALL CONTROL LOCATIONS AND TYPES WITH CONTROLS SHOP DRAWINGS.

- $ — TOGGLE SWITCH.
- DIMMER SWITCH.
- OCCUPANCY SENSOR SWITCH.
- DIMMER/OCCUPANCY SENSOR SWITCH.
- LV — GRAPHICAL LOW VOLTAGE SWITCH.
- M — MOTION SENSOR - CEILING MOUNTED.
- PC — PHOTOCELL - CEILING MOUNTED.
- DS — DAYLIGHT SENSOR - CEILING MOUNTED.

SUBSCRIPT ADJACENT TO SWITCH INDICATES:

- K = KEYED SWITCH
- a,b,c etc. = MULTIPLE SWITCHES/CONTROL LEGS IN A GANGED BOX WITH A COMMON COVER PLATE.

ELECTRICAL ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFL	COMPACT FLUORESCENT LAMP
CKT.	CIRCUIT
C.O.	CONDUIT ONLY
CONC.	CONCRETE
CU	COPPER
DIST.	DISTRIBUTION
DWG.	DRAWING
EM	EMERGENCY SERVICE
EG	EQUIPMENT GROUND
EXIST.	EXISTING
EX	EXISTING
FA	FIRE ALARM
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
HORIZ.	HORIZONTALLY MOUNTED
HP	HORSEPOWER
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
JB	JUNCTION BOX
L	LOCKABLE
LTG.	LIGHTING
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD.	MOUNTED
MTG. HT.	MOUNTING HEIGHT
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
P	POLE
PB	PULL BOX
PH	PHASE
PNL	PANEL
POC	POINT OF CONNECTION
RCP	REFLECTED CEILING PLAN
RECEPT	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SEC	SECURITY
S.N.	SOLID NEUTRAL
SWGR.	SWITCHGEAR
TC	TERMINAL CABINET
TEL.	TELEPHONE
T.I.	TENANT IMPROVEMENT
TR	TAMPER RESISTANT
TYP	TYPICAL
U.C.	UNDER COUNTER
UL	UNDERWRITERS LABORATORY
UNO, UON	UNLESS NOTED OTHERWISE
V	VOLTS
WH	WATER HEATER
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER
X	EXISTING TO REMAIN
XD	EXISTING TO BE DEMOLISHED
XR	EXISTING TO BE RELOCATED
XL	NEW LOCATION OF EXISTING ITEM

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PROJECT: DELMARVA CHRISTIAN EARLY LEARNING CENTER
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

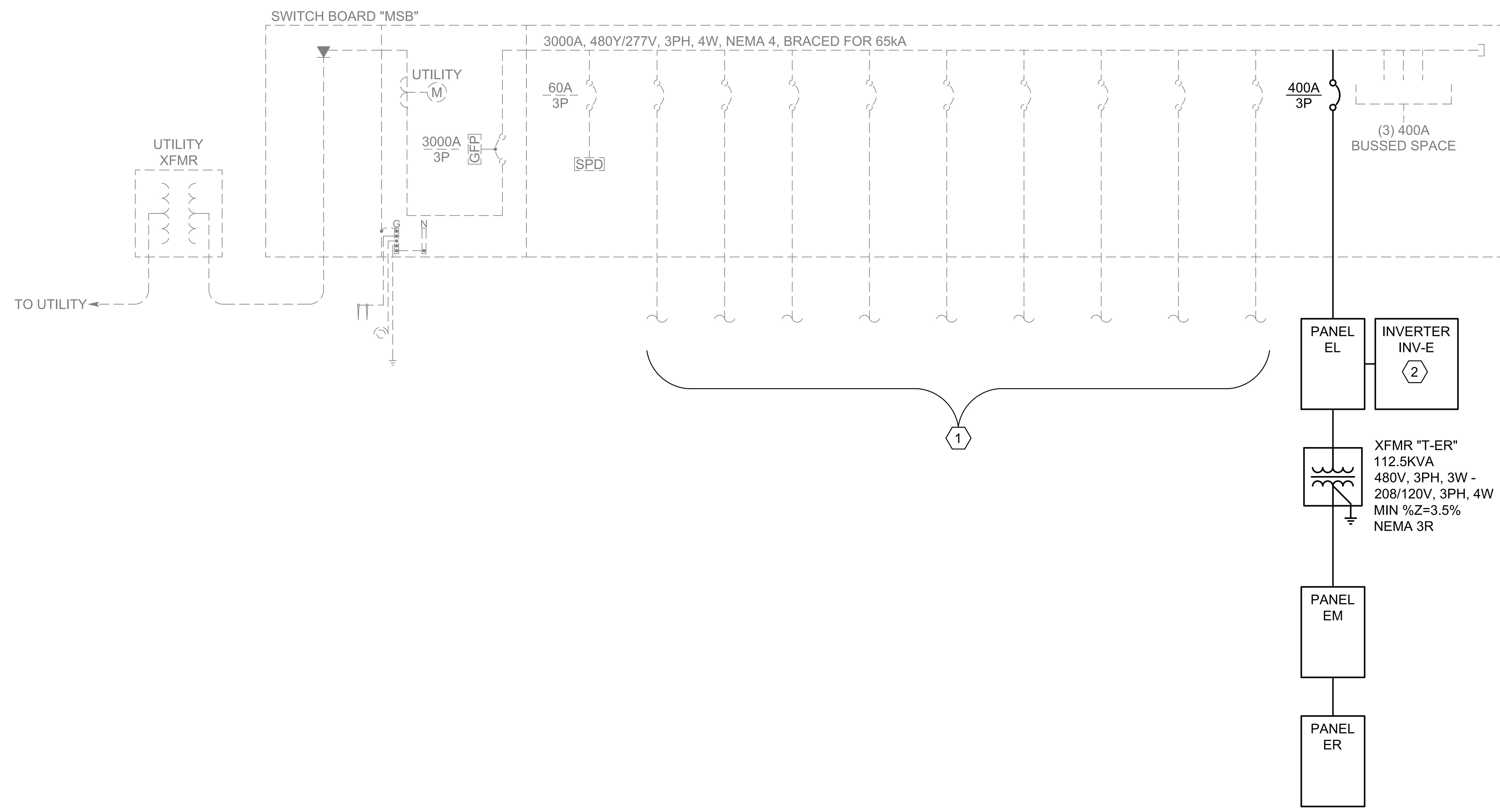
291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: SYMBOLS AND ABBREVIATIONS

SHEET NUMBER: E001

DO NOT SCALE DRAWING



SINGLE LINE DIAGRAM

SCALE: NTS

SHEET GENERAL NOTES

A. ALL EQUIPMENT SHALL BE FULLY RATED FOR THE AVAILABLE FAULT. SERIES RATING NOT ACCEPTABLE.
B. ALL DASHED EQUIPMENT IS EXISTING.

SHEET KEYED NOTES

1. ADDITIONAL SECTIONS ARE OUTSIDE EARLY LEARNING CENTER SCOPE.
2. INVERTER FOR EMERGENCY LIGHTING. REFER TO E700 FOR MANUFACTURER CUTSHEET.

FEEDER SCHEDULE

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
20	1/2"C,1#12,#12N,#12G	INV-E
125	1-1/2"C,3#1/0,#1/0N,#6G	ER
175	2"C,3#2/0,#2/0N,#6G	T-ER
300	3"C,3#350kcmil,#350kcmil N,#2G	EM
400	3-1/2"C,3#600kcmil,#600kcmil N,#2G	EL

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER		BRANCH CIRCUIT		TOTAL VOLTAGE DROP
	VOLTAGE DROP	WIRE SIZE	MAX VOLTAGE DROP	WIRE SIZE	
MSB	0%	(8)#500kcmil	-	-	0%
EL	0.74%	#600kcmil	1.5% (CKT 1)	#10	2.23%
INV-E	0.81%	#12	0.3% (CKT 1)	#10	1.11%
T-ER	0.83%	#2/0	-	-	0.83%
EM	0.21%	#350kcmil	2.51% (CKT 18)	#10	2.73%
ER	0.34%	#1/0	4.23% (CKT 27)	#10	4.57%

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY			FED FROM				FEEDER					
				FAULT	X	R	DEVICE	FAULT	X	R	SIZE	X / 1000'	R / 1000'	LENGTH	X	R
MSB	63,222	65,000	277V	63,000	0.004311	0.0008623					(8)#500kcmil	0.0049	0.0034		0	0
EL	12,184	14,000	277V	11,958	0.02065	0.0105	MSB	63,000	0.004311	0.0008623	#600kcmil	0.039	0.023	419'	0.0163	0.0096
INV-E	6,842	10,000	277V	6,775	0.02131	0.0349	EL	11,958	0.02065	0.0105	#12	0.054	2	12'	0.0007	0.0244
T-ER	10,375		120V	9,833	0.01157	0.003867	EL	11,958	0.02065	0.0105	#2/0	0.043	0.1	21'	0.0009	0.0021
EM	9,681	14,000	120V	9,137	0.01231	0.004569	T-ER	9,833	0.01157	0.003867	#350kcmil	0.04	0.038	18'	0.0007	0.0007
ER	8,902	10,000	120V	8,439	0.01286	0.006064	EM	9,137	0.01231	0.004569	#1/0	0.044	0.12	12'	0.0005	0.0015

DEVICE	TRANSFORMER						TOTAL MOTOR	DIRECTLY CONNECTED MOTOR LOAD			
	KVA	Z%	XR RATIO	FAULT AT PRIMARY	X	R	FAULT	KVA	FAULT	X	R
MSB							222				
EL							226				
INV-E							67				
T-ER	112.5	2	5	11,102	0.007531	0.001506	542				
EM							544	48.8	541	0.215	0.05375
ER							463	0.264	3	39.72	9.929

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PROJECT:
DELMARVA CHRISTIAN EARLY LEARNING CENTER
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

291-004

SEAL:
ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE:
SINGLE LINE DIAGRAM

SHEET NUMBER:
E002

DO NOT SCALE DRAWING

SHEET GENERAL NOTES

A. --

SHEET KEYED NOTES

1 --

EL

ROOM
MOUNTING FLUSH
FED FROM MSB
NOTE

VOLTS 480Y/277V 3P 4W
BUS AMPS 400
NEUTRAL 100%

AIC 14,000
MAIN BKR 400
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	LIGHTING	4.32			2	20/1	EXTERIOR LIGHTING	0.328		
3	20/1	SPARE		0		4	20/1	PANEL INV-E		1.1	
5	20/1	SPARE			0	6	20/1	SPARE			0
7	20/1	SPARE	0			8	20/1	SPARE	0		
9	20/1	SPARE		0		10	20/1	SPARE		0	
11	20/1	SPARE			0	12	20/1	SPARE			0
13	-/3	SPACE	0			14	-/3	SPACE	0		
15	|			0		16	|			0	
17	|				0	18	|				0
19	-/3	SPACE	0			20	-/3	SPACE	0		
21	|			0		22	|			0	
23	|				0	24	|				0
25	-/3	SPACE	0			26	-/3	SPACE	0		
27	|			0		28	|			0	
29	|				0	30	|				0
31	-/3	SPACE	0			32	-/3	SPACE	0		
33	|			0		34	|			0	
35	|				0	36	|				0
37	-/3	SPACE	0			38	175/3	XFMR T-ER	33.1		
39	|			0		40	|			29.5	
41	|				0	42	|				29.8
								TOTAL CONNECTED KVA BY PHASE	37.8	30.6	29.8
								TOTAL CONNECTED AMPS BY PHASE	137	110	108

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	5.75	7.18	(125%)	RECEPTACLES	18.6	14.3	(50%>10)
LARGEST MOTOR	5.79	1.45	(25%)	CONTINUOUS	16.1	20.2	(125%)
MOTORS	49	49	(100%)	HEATING	8.69	8.69	(100%)
				TOTAL LOAD		101	
				BALANCED 3-PHASE LOAD		121 A	

EM

ROOM HALL 100
MOUNTING FLUSH
FED FROM T-ER
NOTE NEMA 1

VOLTS 208Y/120V 3P 4W
BUS AMPS 300
NEUTRAL 100%

AIC 14,000
MAIN BKR 300
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	40/2	CU-101	2.9			2	20/2	HP-101	0.999		
3	|			2.9		4	|			0.999	
5	40/2	CU-102			2.9	6	20/2	HP-102			1.5
7	|		2.9			8	|		1.5		
9	40/2	CU-103		2.9		10	20/1	F-101		1.38	
11	|				2.9	12	20/1	F-102			1.38
13	40/2	CU-104	2.9			14	20/1	F-103	1.38		
15	|			2.9		16	20/1	F-104		1.38	
17	40/2	CU-105			2.9	18	20/1	F-105			1.38
19	|		2.9			20	20/1	F-106	1.38		
21	40/2	CU-106		2.9		22	20/1	SPARE		0	
23	|				2.9	24	20/1	SPARE			0
25	20/2	ERH-1	0.375			26	20/1	SPARE	0		
27	|			0.375		28	20/1	SPARE		0	
29	20/2	EUH-1			1.5	30	20/1	SPARE			0
31	|		1.5			32	20/1	SPARE	0		
33	20/1	SPARE		0		34	20/1	SPARE		0	
35	20/1	SPARE			0	36	20/1	SPARE			0
37	20/3	BP-101	1.83			38	125/3	PANEL ER	12.6		
39	|			1.83		40	|			11.9	
41	|				1.83	42	|				10.6
								TOTAL CONNECTED KVA BY PHASE	33.1	29.5	29.8
								TOTAL CONNECTED AMPS BY PHASE	277	246	249

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	5.79	1.45	(25%)	RECEPTACLES	18.6	14.3	(50%>10)
MOTORS	49	49	(100%)	CONTINUOUS	16.1	20.2	(125%)
				HEATING	8.69	8.69	(100%)
				TOTAL LOAD		93.6	
				BALANCED 3-PHASE LOAD		260 A	

INV-E

ROOM
MOUNTING FLUSH
FED FROM EL
NOTE

VOLTS 277V 1P 2W
BUS AMPS 20
NEUTRAL 100%

AIC 10,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A
1	20/1	LIGHTING	0.881	2	20/1	LIGHTING	0.222
3	20/1	SPARE	0	4	20/1	SPARE	0
5	20/1	SPARE	0	6	20/1	SPARE	0
						TOTAL CONNECTED KVA BY PHASE	1.1
						TOTAL CONNECTED AMPS BY PHASE	3.98

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.1	1.38	(125%)	TOTAL LOAD	1.38
				TOTAL LOAD	4.98 A

ER

ROOM HALL 100
MOUNTING FLUSH
FED FROM EM
NOTE NEMA 1

VOLTS 208Y/120V 3P 4W
BUS AMPS 125
NEUTRAL 100%

AIC 10,000
MAIN BKR 125
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	1.27			2	20/1	RECEPTACLE, TV	1.32		
3	20/1	RECEPTACLE		1.08		4	20/1	RECEPTACLE, TV		1.5	
5	20/1	RECEPTACLE, TV			1.5	6	20/1	RECEPTACLE, TV			1.32
7	20/1	RECEPTACLE, TV	1.5			8	20/1	RECEPTACLE, TV	1.32		
9	20/1	RECEPTACLE, TV		1.5		10	20/1	RECEPTACLE, TV		1.32	
11	20/1	RECEPTACLE, TV			1.32	12	20/1	RECEPTACLE			1.08
13	20/1	RECEPTACLE, TV	1.5			14	20/1	RECEPTACLE	0.72		
15	20/1	RECEPTACLE, TV		1.32		16	20/1	RECEPTACLE		0.54	
17	20/1	RECEPTACLE			1.08	18	40/2	DRYER			2.5
19	20/1	RECEPTACLE	1.08			20	|		2.5		
21	20/1	RECEPTACLE, TV		0.96		22	20/2	WASHER		0.75	
23	20/1	EXTERIOR RECEPTACLE			0.9	24	|				0.75
25	20/1	EXTERIOR RECEPTACLE	0.54			26	20/1	RP-050, WH-101	0.48		
27	20/1	CLOCK & BELL SWITCH		1.92		28	20/1	FRIDGE		0.5	
29	20/1	SPARE			0	30	20/1	RECEPTACLE			0.18
31	20/1	SPARE	0			32	20/1	RECEPTACLE	0.36		
33	20/1	SPARE		0		34	20/1	RECEPTACLE		0.54	
35	20/1	SPARE			0	36	20/1	SPARE			0
37	20/1	SPARE	0			38	20/1	SPARE	0		
39	20/1	SPARE		0		40	20/1	SPARE		0	
41	20/1	SPARE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	12.6	11.9	10.6
								TOTAL CONNECTED AMPS BY PHASE	106	99.5	89

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.264	0.066	(25%)	RECEPTACLES	18.6	14.3	(50%>10)
MOTORS	0.264	0.264	(100%)	CONTINUOUS	16.1	20.2	(125%)
				HEATING	0.216	0.216	(100%)
				TOTAL LOAD		35	
				BALANCED 3-PHASE LOAD		97.1 A	

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PROJECT:

DELMARVA CHRISTIAN
EARLY LEARNING CENTER

21777 SUSSEX PINES RD,
GEORGETOWN, DE 19947

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291-004

SEAL:

ANTON NATHANSON
LICENSE
No 29275
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:

ELECTRICAL SCHEDULES

ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

SHEET NUMBER:

E003

DO NOT SCALE DRAWING

LUMINAIRE SCHEDULE

CALLOUT	DESCRIPTION	MOUNTING	MODEL	INPUT WATTS	LUMENS / LAMP	VOLTS	NOTE
P4A	48-IN DECORATIVE PENDANT RING	PENDANT	G LIGHTING "ORBIS II" #GL-2737-IL-**-3-4	91	4909	MVOLT	(OR APPROVED EQUAL)
P11	2X2 LED TROFFER- PENDANT MOUNT	RECESSED	LITHONIA ILLUMINATION #EPANL-2X2-3400LM-80CRI-30K-MIN1-ZT-MVOLT-PAC 2DF 72	30	3291	MVOLT	(OR APPROVED EQUAL)
P11E	2X2 LED TROFFER-PENDANT MOUNT	RECESSED	LITHONIA ILLUMINATION #EPANL-2X2-3400LM-80CRI-30K-MIN1-ZT-MVOLT-PAC 2DF 72	30	3291	MVOLT	(OR APPROVED EQUAL)
R2A	2X2 LED TROFFER- CEILING MOUNT	RECESSED	MARK ARCHITECTURAL LIGHTING "WHISPER". WHSPR-2X2-80CRI-30K-3500LM-MIN1-MVOLT-SWC-ZT	16	2013	MVOLT	(OR APPROVED EQUAL)
R2A-E	2X2 LED TROFFER-CEILING MOUNT	RECESSED	MARK ARCHITECTURAL LIGHTING "WHISPER". WHSPR-2X2-80CRI-30K-3500LM-MIN1-MVOLT-SWC-ZT	16	2013	MVOLT	(OR APPROVED EQUAL)
R2B	2X2 LED TROFFER- CEILING MOUNT	RECESSED	LIGHTING "WHISPER". WHSPR-2X2-80CRI-30K-6500LM-MIN1-MVOLT-SWC-ZT	28	3468	MVOLT	(OR APPROVED EQUAL)
R2B-E	2X2 LED TROFFER- CEILING MOUNT	RECESSED	MARK ARCHITECTURAL LIGHTING "WHISPER". WHSPR-2X2-80CRI-30K-6500LM-MIN1-MVOLT-SWC-ZT	28	3468	MVOLT	(OR APPROVED EQUAL)
R4A	4-IN ROUND LED DOWNLIGHT WITH A WIDE OPTIC DISTRIBUTION	RECESSED	GOTHAM "EVO-4IN". EVO4-30-15-AR-LSS-WD-MVOLT-GZ1	13.7	1527	MVOLT	(OR APPROVED EQUAL)
R4A-E	4-IN ROUND LED DOWNLIGHT WITH A WIDE OPTIC DISTRIBUTION	CEILING	GOTHAM "EVO-4-IN". EVO4-30-15-AR-LSS-WD-MVOLT-GZ1	13.7	1527	MVOLT	(OR APPROVED EQUAL)
R5B	5-IN X 2-FT FLAT PANEL- CEILING MOUNT	RECESSED	LITHONIA LIGHTING. LSIX-2FT-1000LM-80CRI-30K-FFR-SWL-MIN1-MVOLT	8.4	997	MVOLT	(OR APPROVED EQUAL)
R6A	1-FT X 2-FT FLAT PANEL- CEILING MOUNT	RECESSED	LAUREN ILLUMINATION. LGM1230W-HE	18	2030	MVOLT	(OR APPROVED EQUAL)
S2	4-FT LED LINEAR STRIP WITH FLAT DIFFUSE LENS	SURFACE	LITHONIA LIGHTING "CLX". ZL1D-L48-3000LM-FST-MVOLT-40K-80CRI-WH	30	3880	MVOLT	(OR APPROVED EQUAL)
SR1	SITE 4-IN LED OUTDOOR DOWNLIGHT	RECESSED	INDY LIGHTING. L4-15LM-30K-120V-G4-80CRI-EZ10-HW/INSA-6	13.66	1670	MVOLT	(OR APPROVED EQUAL)
SR2	SITE 6-IN LED OUTDOOR DOWNLIGHT FOR SLOPE CEILING	RECESSED	INDY LIGHTING. L6-15LM-30K-120V-G4-80CRI-EZ10-HW/INSA-6	13.66	1670	MVOLT	(OR APPROVED EQUAL)
SW1	SITE- WALL PACK LED SCONCE	WALL	LITHONIA LIGHTING. WDGE1LED-P2-30K-80CRI-VF-MVOLT-PE-**	15	1872	MVOLT	(OR APPROVED EQUAL)
UC	LED STRIP LIGHT CHANNEL WITH A FROSTED 45 DEGREE ANGLED LENS. LENGTHS WO VARY BY APPPLICATION	SURFACE	LED LINEAS "CORNER MOUNT". VARIOLED2200-HD10-W9-30S-RO-**-E-SMC-IP20	3	300	MVOLT	(OR APPROVED EQUAL)
W2	24-IN WALL MOUNTED DECORATIVE VANITY LED SCONCE	SURFACE	BROWNLEE. 5165-24-BN-H16-30K-AMF	16	1874	MVOLT	(OR APPROVED EQUAL)

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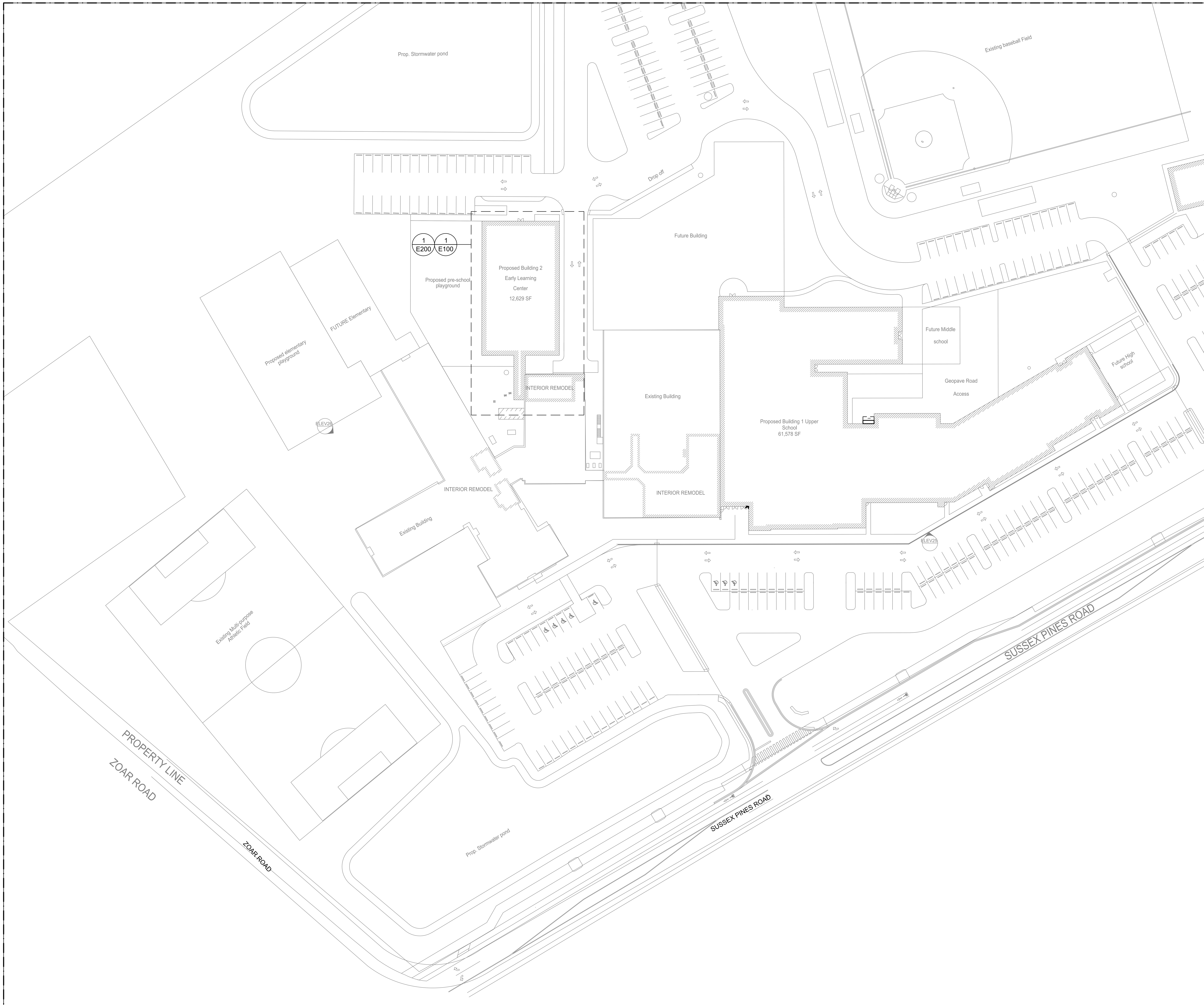
291-004

SEAL:
ANTON NATHANSON
LICENSE
No 29275
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:
LIGHTING SCHEDULE
ORIGINAL ISSUE: Preliminary

SHEET NUMBER:
E004

DO NOT SCALE DRAWING



SHEET GENERAL NOTES

A. UNDERGROUND PRIMARY AND SECONDARY ARE DIAGRAMMATIC. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL POWER UTILITY FOR INTERCEPTING EXISTING PRIMARY FOR NEW SERVICE.

SHEET KEYED NOTES

1 -

ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"

NORTH

0" 20' 60'
10' 40' 80'
SCALE: 1" = 40'-0"

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GEORGETOWN, DE 19947

291-004

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SHEET TITLE:
ELECTRICAL SITE PLAN

ORIGINAL ISSUE: Preliminary

SHEET NUMBER:
E005

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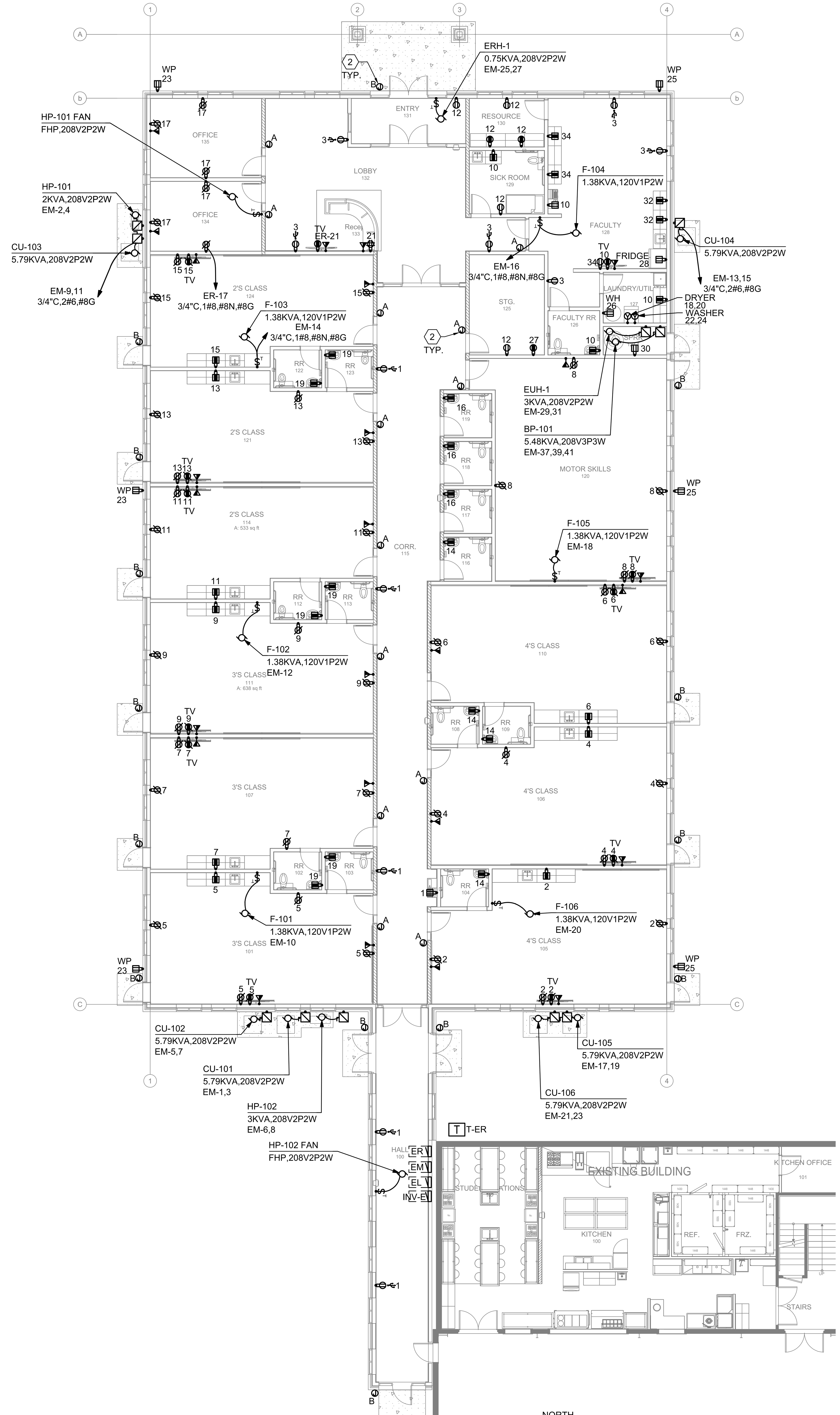

1 POWER PLAN

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

NORTH

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

SHEET GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH ARCHITECTS DIMENSION PLAN PRIOR TO ROUGH IN.

B. PROVIDE DEDICATED NEUTRALS FOR EACH CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.

C. CIRCUIT DESIGNATIONS SHOWN ARE FOR PANEL "ER" UNO.

D. PROVIDE A WEATHER PROOF GFCI RECEPTACLE WITHIN 25' OF ALL OUTDOOR MECHANICAL EQUIPMENT.

E. COORDINATE MOUNTING HEIGHT FOR TV RECEPTACLES WITH ARCHITECT PRIOR TO ROUGH-IN.

SHEET KEYED NOTES

1. NOT USED.
2. REFER TO E600 FOR LOW VOLTAGE ACCESS CONTROL DETAILING.

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PROJECT:
DELMARVA CHRISTIAN EARLY LEARNING CENTER
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

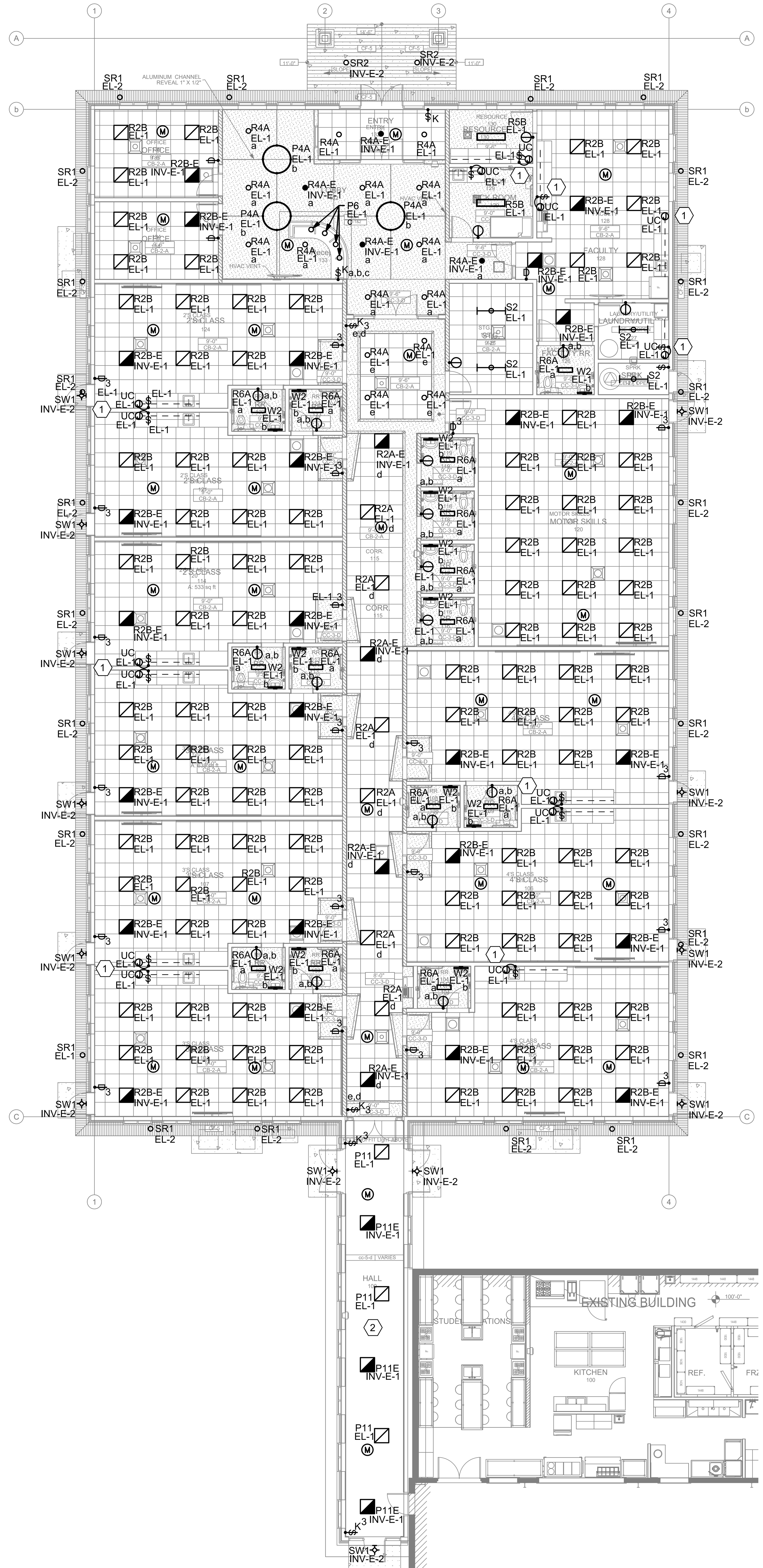
291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE:
POWER PLAN

SHEET NUMBER:
E100

DO NOT SCALE DRAWING



1 LIGHTING REFLECTED CEILING PLAN

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

0" 4' 12'
2' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET GENERAL NOTES

A. COORDINATE MOUNTING HEIGHTS, LOCATIONS, AND FINISHES OF ALL LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH IN.
B. PROVIDE LIGHTING CONTROL SHOP DRAWINGS SHOWING ALL SYSTEM SPECIFIC CONTROL DEVICES, WIRING, ECT. AS PART OF LIGHTING SUBMITTAL.
C. ADDITIONAL PURPLE AND GRAY, LOW VOLTAGE CONTROL WIRES TO INDIVIDUAL LUMINAIRES AS NECESSARY FOR 0-10 VOLT DIMMING CIRCUIT.
D. REMOTE POWER SUPPLIES TO BE IN AN ACCESSIBLE LOCATION AWAY FROM GUEST VIEW. POWER SUPPLY TO BE LOCATED THE DISTANCE SUGGESTED BY THE MANUFACTURER.
E. DECORATIVE FIXTURE LOCATIONS AND MOUNTING HEIGHTS SHALL BE COORDINATED WITH THE DESIGN TEAM PRIOR TO THE INSTALLATION.
F. ALL OUTDOOR LIGHTING TO BE CONTROLLED BY A PHOTOCELL SENSOR AND CONNECTED TO A TIME CLOCK SET UP UNDER SCHEDULE HOURS.

SHEET KEYED NOTES

1. INSTALL UC UNDERCABINET LIGHT. COORDINATE WITH ARCHITECT AND MILLWORK DESIGN DRAWINGS PRIOR TO ROUGH IN. REMOTE POWER SUPPLY TO BE LOCATED AT A DRY AND ACCESSIBLE LOCATION IF MAINTENANCE IS REQUIRED.
2. SUSPEND BOTTOM OF PENDANT PANEL AT +9'-6" A.F.F.

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REV	DATE	DESCRIPTION
0	Preliminary	ORIGINAL ISSUE
1	03/17/2025	REV0
2	####	####
3	####	####
4	####	####
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PROJECT:
DELMARVA CHRISTIAN EARLY LEARNING CENTER
21777 SUSSEX PINES RD,
GEORGETOWN, DE 19947

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291-004

SEAL:
ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

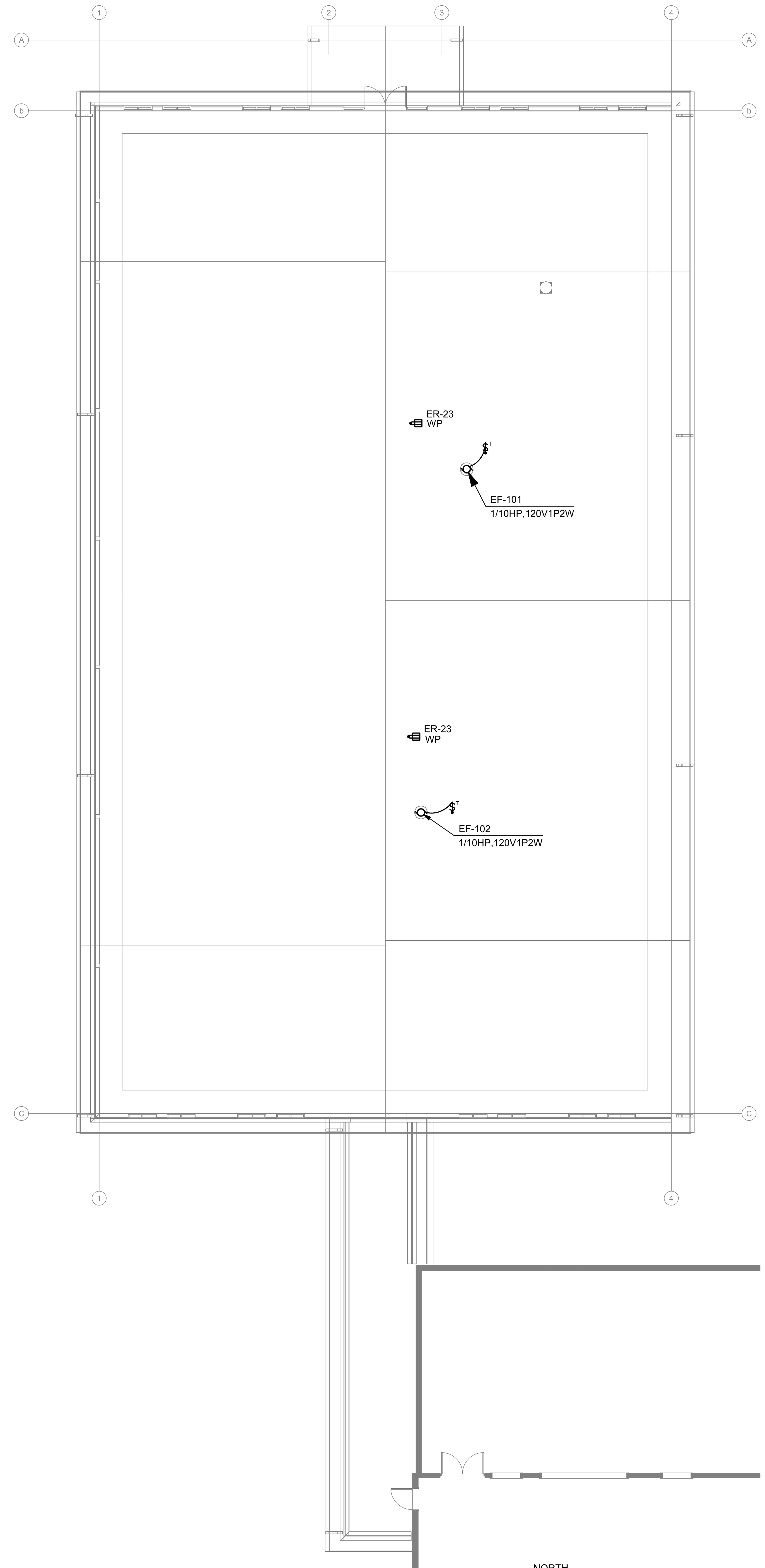
SHEET TITLE:
LIGHTING REFLECTED CEILING PLAN

ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

SHEET NUMBER:
E200

DO NOT SCALE DRAWING



POWER ROOF PLAN

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

NORTH

0" 4' 12'
2' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET GENERAL NOTES	
A.	PROVIDE WEATHER PROOF GFCI RECEPTACLES WITHIN 25' OF ALL ROOFTOP EQUIPMENT.

SHEET KEYED NOTES	
1	–

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SHEET TITLE:
POWER ROOF PLAN
ORIGINAL ISSUE: Preliminary

SHEET NUMBER:
E300

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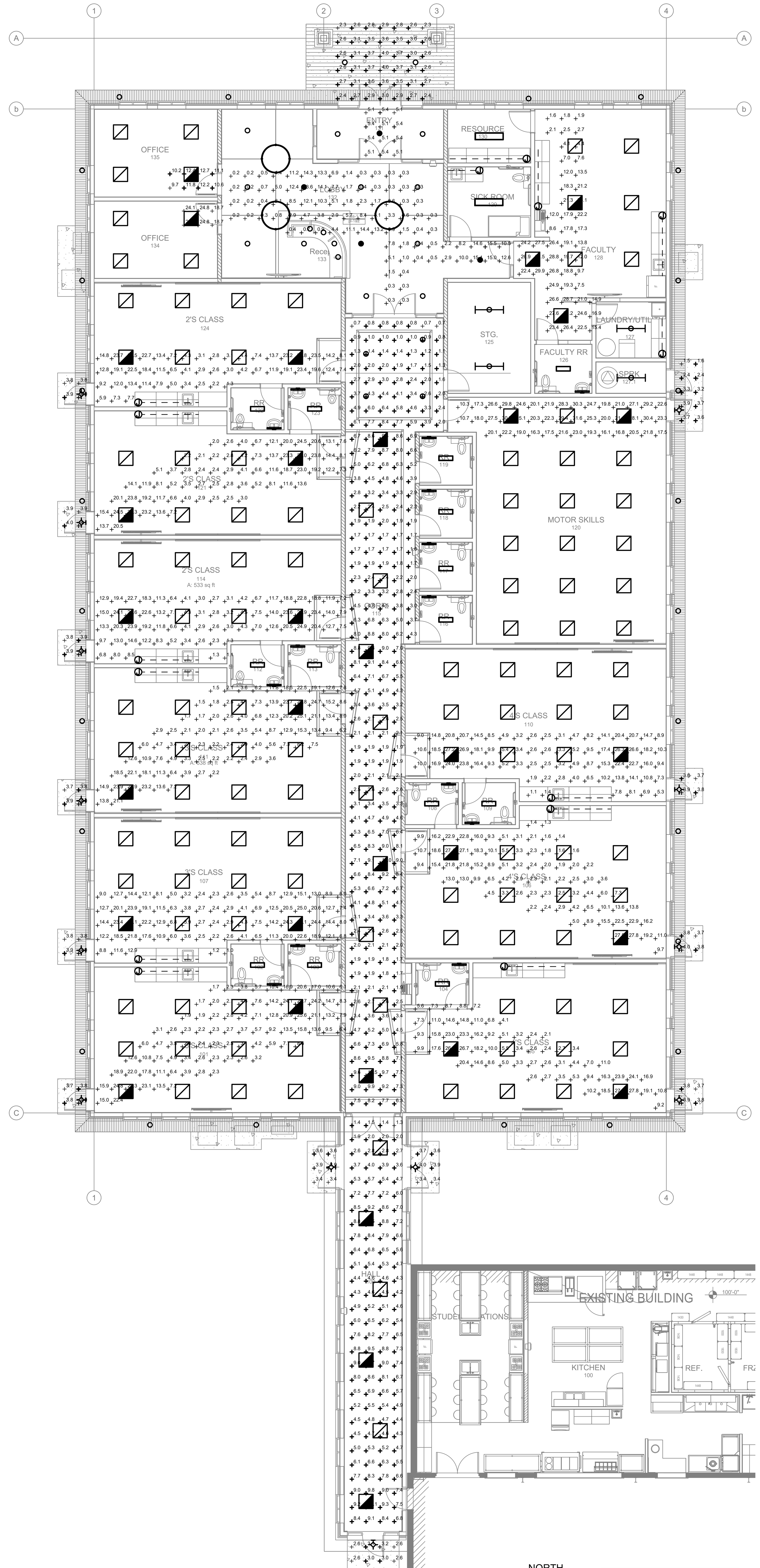

EM PHOTOMETRIC

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

NORTH

0" 4' 12'
2' 8' 16'
SCALE: 1/8" = 1'-0"

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
2'S CLASS	+	10.5 fc	29.3 fc	2.0 fc	14.7:1	5.3:1
2'S CLASS	+	11.1 fc	28.8 fc	1.3 fc	22.2:1	8.5:1
3'S CLASS	+	9.1 fc	29.8 fc	1.5 fc	19.9:1	6.1:1
3'S CLASS	+	9.2 fc	29.7 fc	1.7 fc	17.5:1	5.4:1
3'S CLASS	+	10.9 fc	30.1 fc	1.0 fc	30.1:1	10.9:1
4'S CLASS	+	10.8 fc	27.2 fc	1.1 fc	24.7:1	9.8:1
4'S CLASS	+	8.8 fc	27.8 fc	1.3 fc	21.4:1	6.8:1
4'S CLASS	+	10.8 fc	27.8 fc	2.1 fc	13.2:1	5.1:1
CORRIDOR 115	+	4.2 fc	10.5 fc	0.7 fc	15.0:1	6.0:1
ENTRY 132	+	5.3 fc	5.4 fc	5.1 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.9 fc	4.0 fc	3.8 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.9 fc	4.1 fc	3.8 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.9 fc	4.0 fc	3.8 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.8 fc	4.0 fc	3.7 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.6 fc	3.9 fc	3.4 fc	1.1:1	1.1:1
EXTERIOR DOORS	+	2.9 fc	3.9 fc	1.5 fc	2.6:1	1.9:1
EXTERIOR DOORS	+	2.8 fc	3.2 fc	2.6 fc	1.2:1	1.1:1
EXTERIOR DOORS	+	3.7 fc	4.0 fc	3.4 fc	1.2:1	1.1:1
EXTERIOR DOORS	+	3.8 fc	3.9 fc	3.7 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.8 fc	3.9 fc	3.7 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	4.0 fc	4.1 fc	3.9 fc	1.1:1	1.0:1
EXTERIOR DOORS	+	3.9 fc	4.0 fc	3.7 fc	1.1:1	1.1:1
EXTERIOR DOORS	+	3.8 fc	4.0 fc	3.7 fc	1.1:1	1.0:1
FACULTY 128	+	17.5 fc	32.5 fc	1.6 fc	20.3:1	10.9:1
HALL 100	+	6.1 fc	10.1 fc	1.3 fc	7.8:1	4.7:1
LOBBY 132	+	4.2 fc	15.5 fc	0.2 fc	77.5:1	21.0:1
MOTOR SKILLS	+	22.5 fc	31.6 fc	10.3 fc	3.1:1	2.2:1
OFFICE 134	+	22.5 fc	24.8 fc	18.7 fc	1.3:1	1.2:1
OFFICE 135	+	11.3 fc	12.7 fc	9.7 fc	1.3:1	1.2:1
OUTDOOR ENTRY	+	3.0 fc	4.0 fc	2.3 fc	1.7:1	1.3:1
2'S CLASS	+	11.2 fc	28.9 fc	1.1 fc	26.3:1	10.2:1

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ORIGINAL ISSUE: Preliminary
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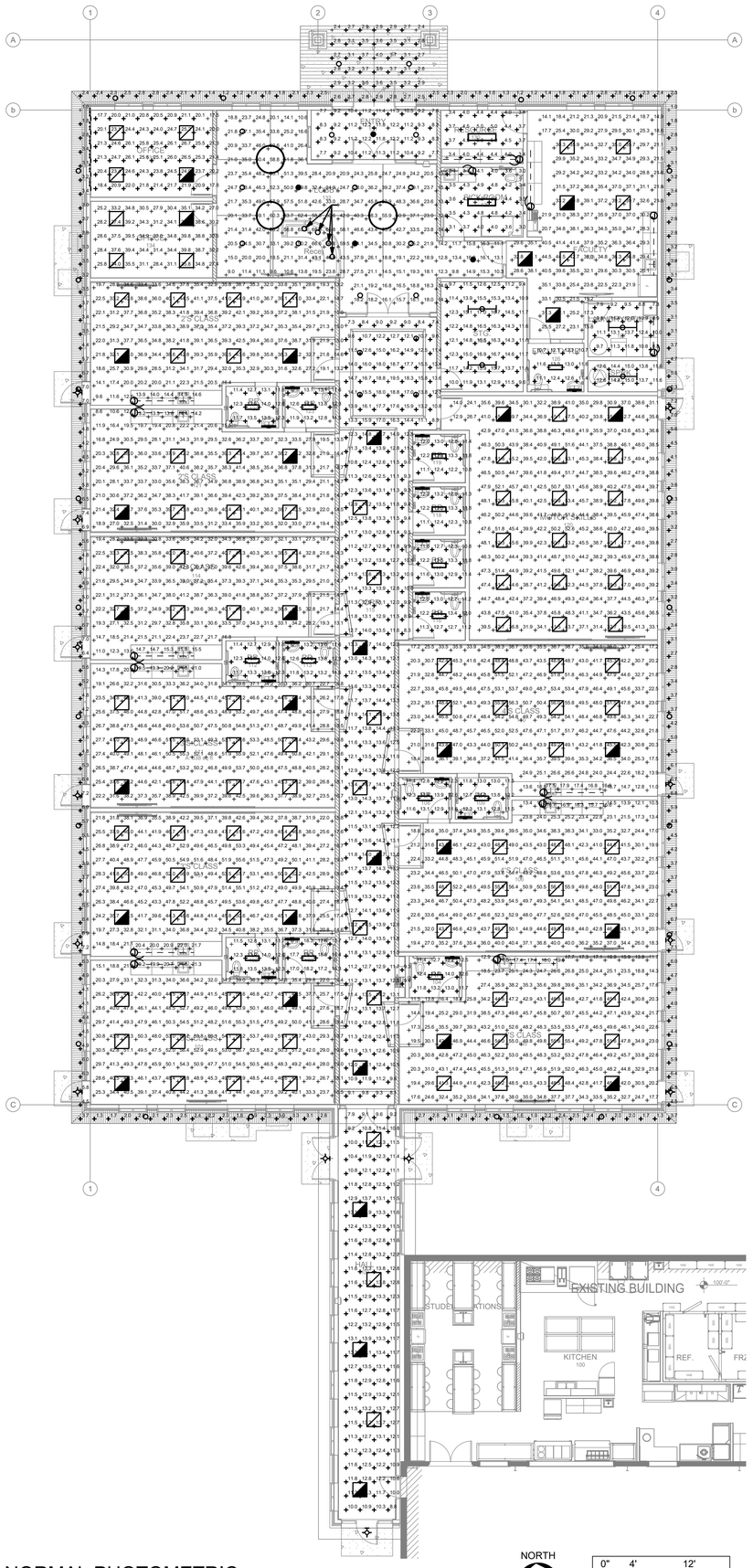

Statistics

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2'S CLASS	+	31.8 fc	44.3 fc	11.0 fc	4.0:1	2.9:1
3'S CLASS	+	41.6 fc	58.2 fc	15.1 fc	3.9:1	2.8:1
3'S CLASS	+	40.7 fc	57.6 fc	14.3 fc	4.0:1	2.8:1
3'S CLASS	+	40.7 fc	57.7 fc	14.6 fc	4.0:1	2.8:1
4'S CLASS	+	39.3 fc	56.4 fc	10.5 fc	5.4:1	3.7:1
4'S CLASS	+	39.3 fc	56.3 fc	11.0 fc	5.1:1	3.6:1
4'S CLASS	+	36.8 fc	55.6 fc	11.5 fc	4.8:1	3.2:1
CORRIDOR 115	+	12.7 fc	19.5 fc	7.3 fc	2.7:1	1.7:1
ENTRY 132	+	10.1 fc	12.2 fc	7.7 fc	1.6:1	1.3:1
FACULTY 126	+	11.9 fc	13.0 fc	10.7 fc	1.2:1	1.1:1
FACULTY 128	+	30.9 fc	44.5 fc	14.1 fc	3.2:1	2.2:1
HALL 100	+	12.1 fc	14.1 fc	7.9 fc	1.8:1	1.5:1
LAUNDRY/UTILITY	+	10.4 fc	13.7 fc	7.3 fc	1.9:1	1.4:1
LOBBY 132	+	30.9 fc	68.3 fc	9.0 fc	7.6:1	3.4:1
MOTOR SKILLS	+	42.7 fc	53.4 fc	12.9 fc	4.1:1	3.3:1
OFFICE 134	+	33.5 fc	39.8 fc	25.2 fc	1.6:1	1.3:1
OFFICE 135	+	14.4 fc	23.9 fc	7.7 fc	3.1:1	1.9:1
OFFICE 135	+	22.8 fc	26.7 fc	17.5 fc	1.5:1	1.3:1
OUTDOOR ENTRY	+	3.1 fc	4.0 fc	2.4 fc	1.7:1	1.3:1
OUTDOOR PERIMETER	+	3.8 fc	7.4 fc	1.0 fc	7.4:1	3.8:1
RESOURCE 130	+	4.2 fc	5.0 fc	3.4 fc	1.5:1	1.2:1
RR 102	+	12.8 fc	14.0 fc	11.5 fc	1.2:1	1.1:1
RR 103	+	17.4 fc	19.3 fc	15.3 fc	1.3:1	1.1:1
RR 104	+	12.7 fc	14.0 fc	11.4 fc	1.2:1	1.1:1
RR 108	+	12.7 fc	13.9 fc	11.4 fc	1.2:1	1.1:1
RR 109	+	12.6 fc	14.0 fc	11.5 fc	1.2:1	1.1:1
RR 112	+	12.7 fc	14.0 fc	11.4 fc	1.2:1	1.1:1

NORMAL PHOTOMETRIC

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

NORTH

0" 4' 12'
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SCALE: 1/8" = 1'-0"

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NORMAL PHOTOMETRIC

ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

SHEET NUMBER:
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DO NOT SCALE DRAWING

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COM*check* Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: DELMARVA ELC
Project Type: New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-EARLY LEARNING CENTER (School/University)	12592	0.72	9066
		Total Allowed Watts =	9066

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-EARLY LEARNING CENTER (School/University)				
R2B: 2X2 LED TROFFER: LED Other Fixture Unit 36W:	1	122	28	3416
R2A: RECESSED: 2X2 LED TROFFER: LED Other Fixture Unit 36W:	1	16	28	448
R4A: RECESSED: 4 IN ROUND LED DOWNLIGHT: LED Other Fixture Unit 25W:	1	18	14	247
R5B: RECESSED: 8X2 FLAT PANEL: LED Panel 33W:	1	2	18	36
P4A: PENDANT: 72 IN DECORATIVE PENDANT: LED Other Fixture Unit 95W:	1	3	91	273
R6A: 2X4 LED TROFFER/ FLAT PANEL: LED Panel 33W:	1	14	18	252
S2: SURFACE: 4 FT LED LINEAR STRIP: LED Linear 33W:	1	4	30	120
W2: WALL/SURFACE: 24 IN DECORATIVE VANITY: LED Other Fixture Unit 25W:	1	14	16	224
UC: SURFACE: LED STRIP LIGHT: LED Undercabinet Unit 24W:	1	14	24	339
P6: PENDANT: 4 IN LED CYLINDER PENDANT: LED Other Fixture Unit 16W:	1	4	14	55
			Total Proposed Watts =	5409

Interior Lighting PASSES: Design 40% 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 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: DELMARVA ELC
Project Type: New Construction
Exterior Lighting Zone 3 (Other (LZ3))

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
LEDGE EXTERIOR LIGHTS OF BUILDING (Illuminated area of facade wall or surface)	878 ft2	0.11	No	99
ENTRY WAY THAT LEADS TO HALLWAY (Entry canopy)	182 ft2	0.4	Yes	73
CF-5 ENTRY WAY CANOPY (Entry canopy)	199 ft2	0.4	Yes	80
			Total Tradable Watts (a) =	152
			Total Allowed Watts =	252
			Total Allowed Supplemental Watts (b) =	500

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 500 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LEDGE EXTERIOR LIGHTS OF BUILDING (Illuminated area of facade wall or surface, 878 ft2): Non-tradable Wattage				
SR1: DOWNLIGHT: 4 IN L SERIES: LED Other Fixture Unit 36W:	1	18	10	180
SW1: 6 INCH STEP LIGHT: LED Other Fixture Unit 6.5W:	1	10	12	120
SR2: 6 INCH CEILING ADAPTER: LED Other Fixture Unit 13W:	1	17	10	170
ENTRY WAY THAT LEADS TO HALLWAY (Entry canopy, 182 ft2): Tradable Wattage				
SW1: 6 INCH STEP LIGHT: LED Other Fixture Unit 6.5W:	1	3	12	36
CF-5 ENTRY WAY CANOPY (Entry canopy, 199 ft2): Tradable Wattage				
SR2: 6 INCH CEILING ADAPTER: LED Other Fixture Unit 13W:	1	2	10	20
			Total Tradable Proposed Watts =	56

Exterior Lighting PASSES: Design 80% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.7 [EL28][1]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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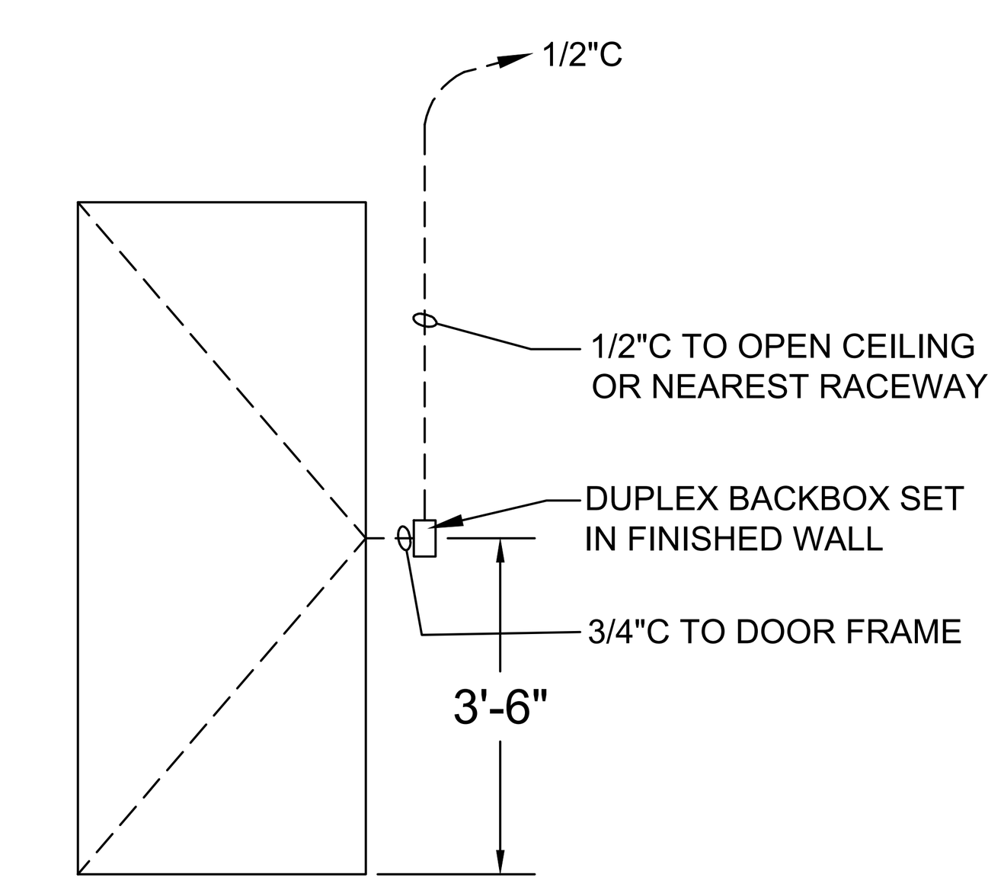
ORIGINAL ISSUE: Preliminary
PROJECT#: AC733

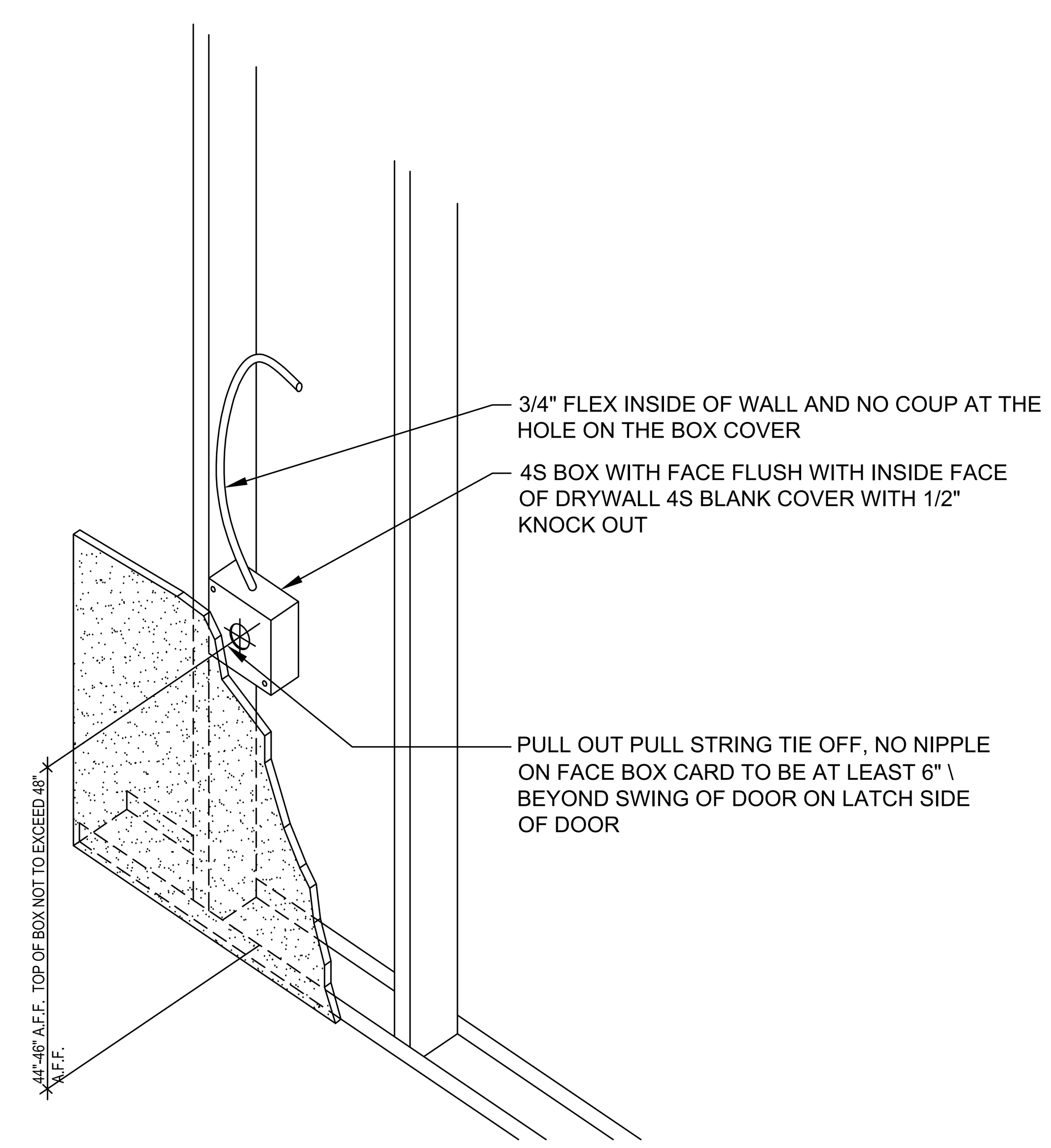
SHEET NUMBER: E500

DO NOT SCALE DRAWING



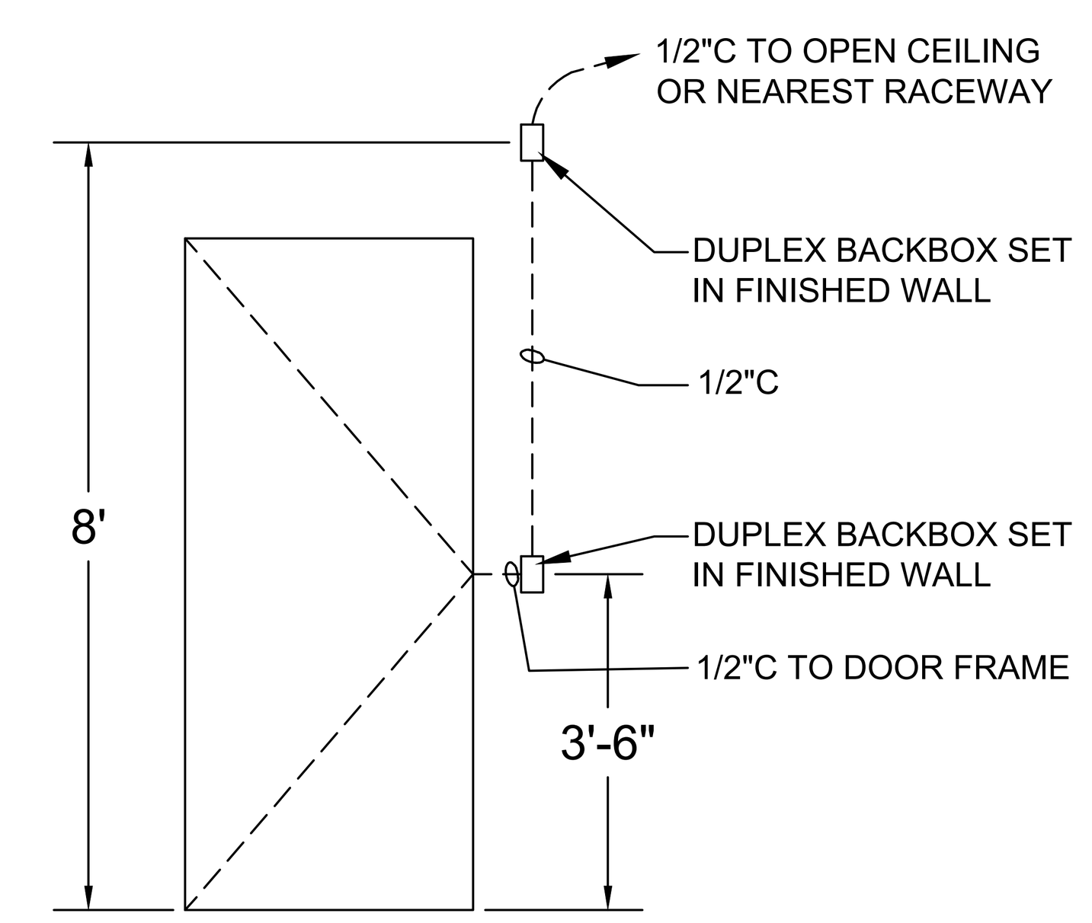
2 LOW VOLTAGE ACCESS CONTROL - TYPE "A"

SCALE: NTS



3 J-BOX DETAIL

SCALE: NTS



1 LOW VOLTAGE ACCESS CONTROL - TYPE "B"

SCALE: NTS

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BGW ARCHITECTS
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0	Preliminary	ORIGINAL ISSUE
1	03/17/2025	REV0
2	####	####
3	####	####
4	####	####
5	####	####

PROJECT:

DELMARVA CHRISTIAN EARLY LEARNING CENTER

21777 SUSSEX PINES RD,
GEORGETOWN, DE 19947

BGW ARCHITECTS | 2327 GRANT AVE. - OGDEN, UT 84401 | PH: 800-552-7137 | www.BGWSERVICES.com

SEAL:

ANTON NATHANSON
LICENSE
No 29275
DELAWARE
PROFESSIONAL ENGINEER

291-004

SHEET TITLE:

ELECTRICAL DETAILS

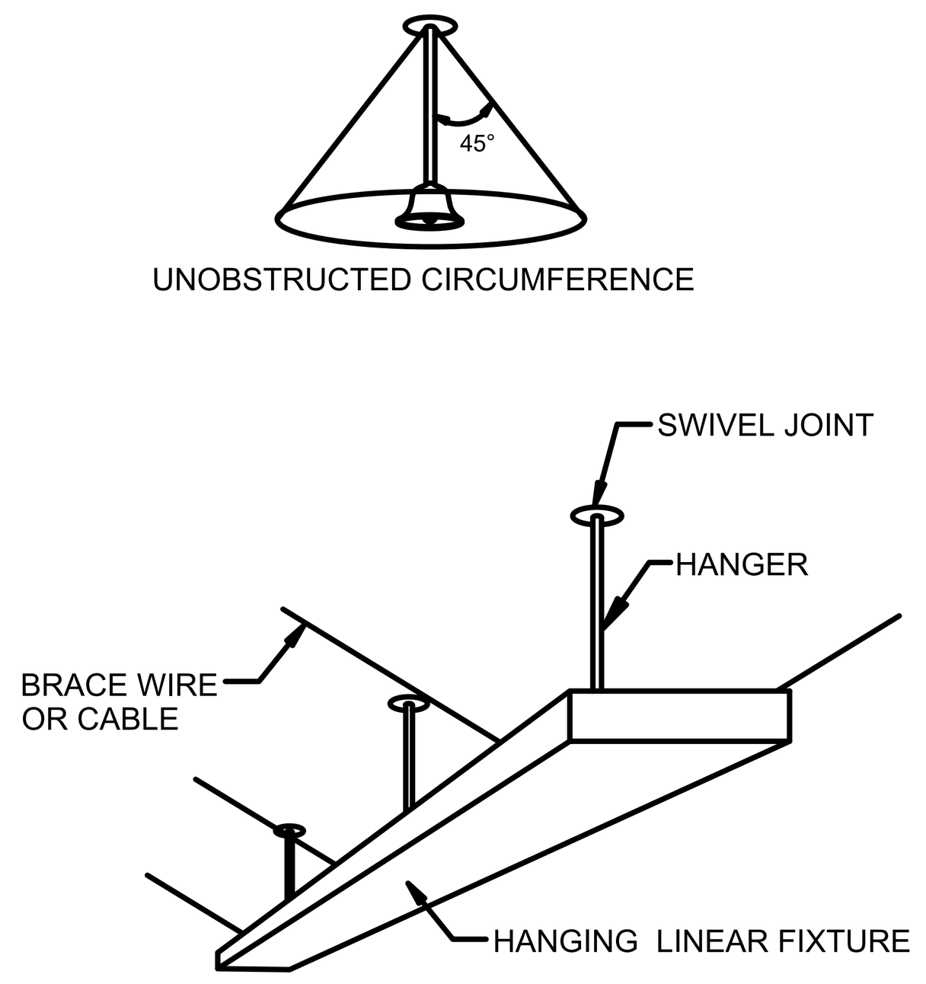
ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

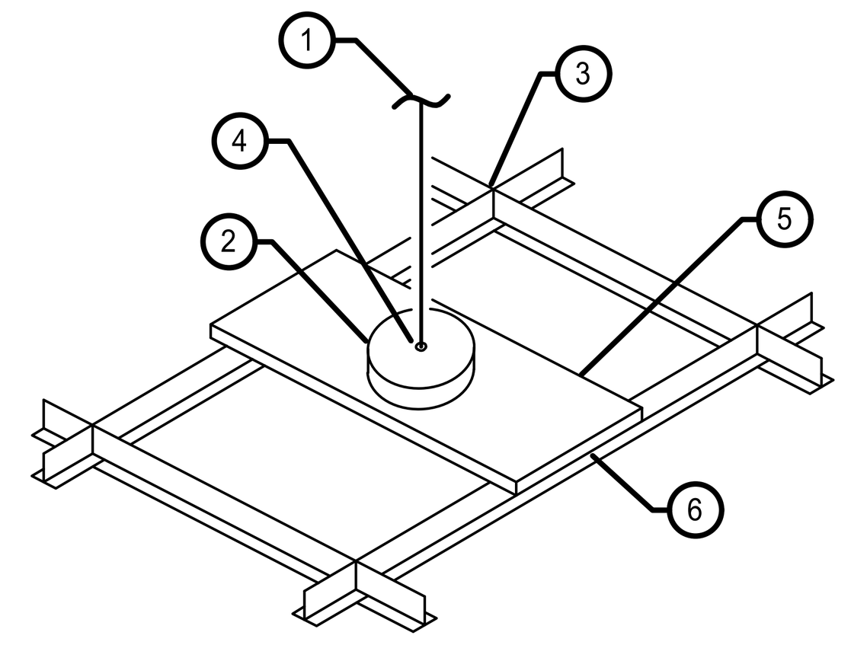
SHEET NUMBER:

E600

DO NOT SCALE DRAWING



3 PENDANT SEISMIC RESTRAINT DETAIL
SCALE: NTS

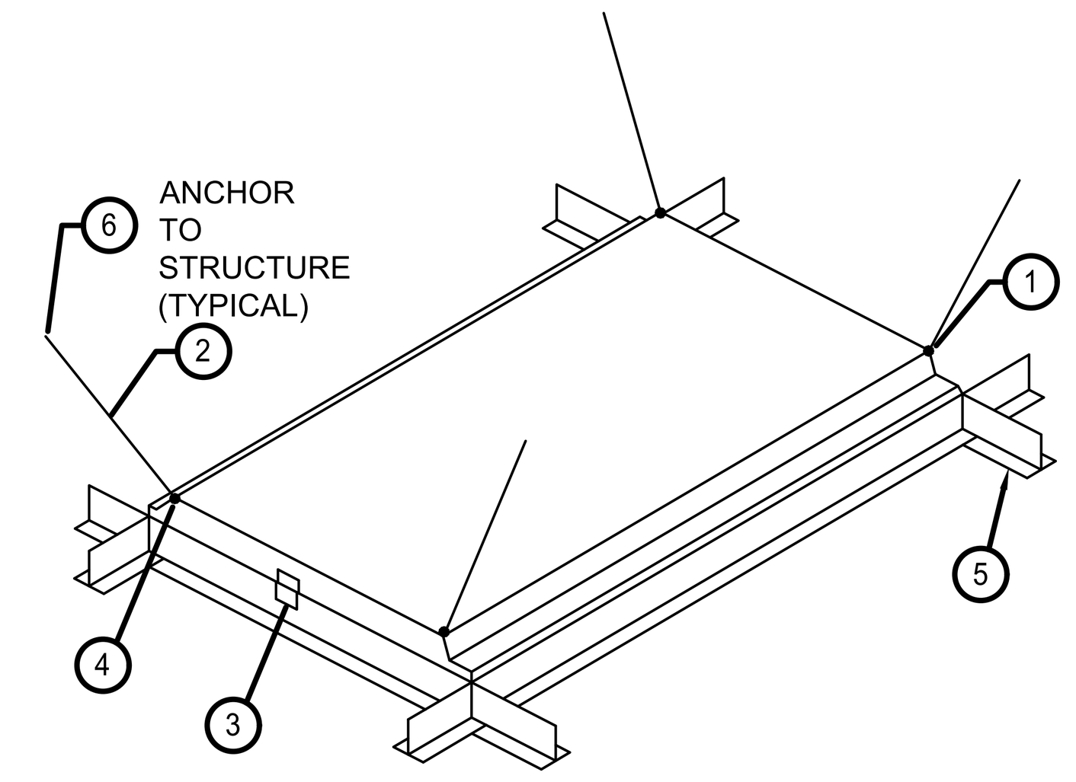


NOTES:

1. #9 SAFETY WIRE TIED TO SAFETY WIRE SUPPORT HOLE & FASTENED TO BLDG. STRUCTURE W/ |"x 2\" LONG SCREW- EYE OR EQUAL.
2. LIGHT FIXTURE OR SPEAKER ENCLOSURE.
3. EXPOSED T-BAR CEILING SYSTEM OR CONCEALED SUSPENSION SYSTEM.
4. SAFETY WIRE SUPPORT HOLE IN FIXTURE OR SPEAKER ENCLOSURE.
5. MOUNTING CHANNELS OR T-BAR BRIDGE TO SPAN CEILING SUSPENSION SYSTEM AS RECOMMENDED BY MFR.

ATTACH TO SUSPENSION SYSTEM W/CLIPS OR WIRE TIES.

2 DOWN LIGHTING SEISMIC RESTRAINT DETAIL
SCALE: NTS

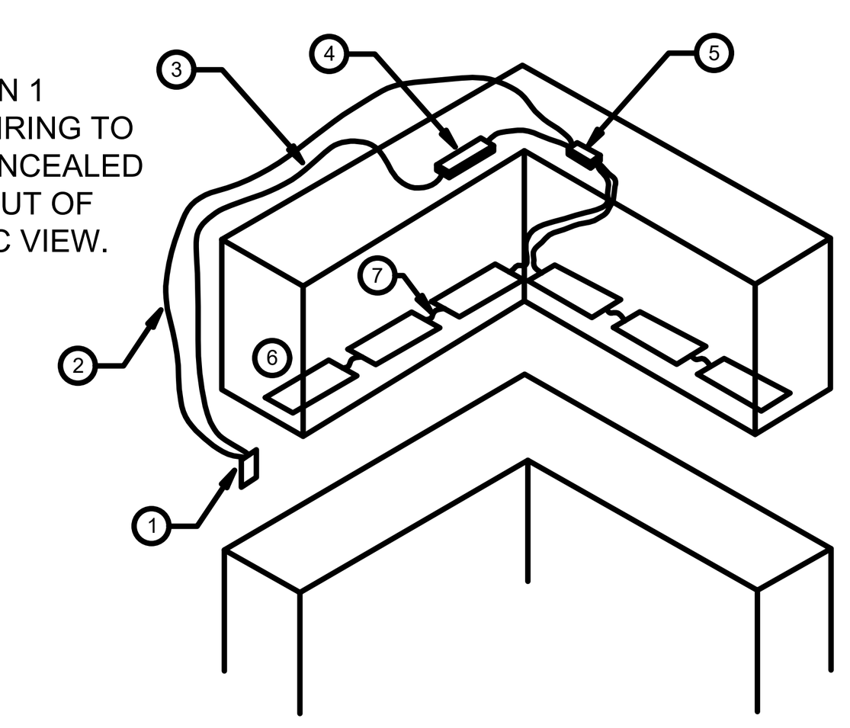


NOTES:

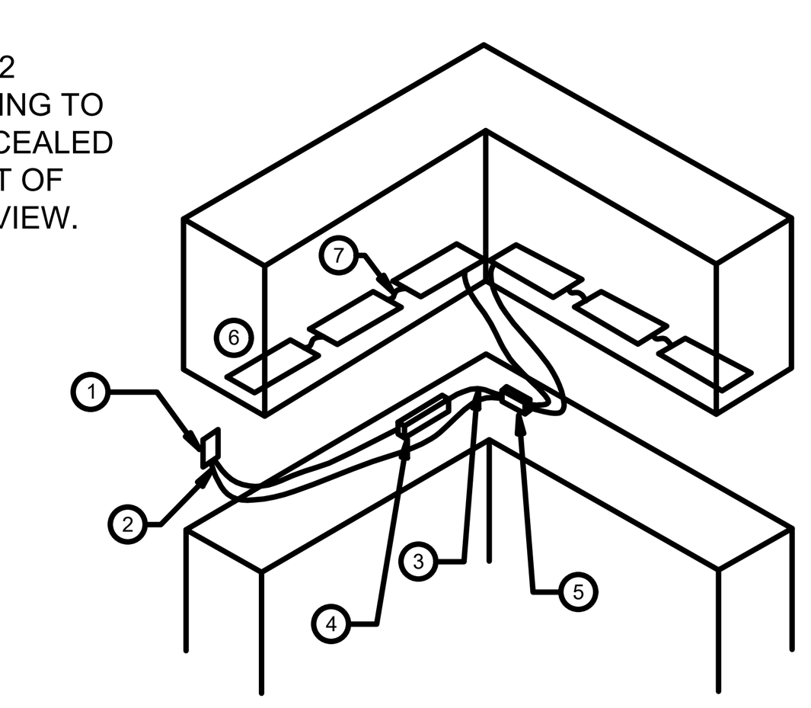
1. FASTEN SEISMIC RESTRAINT CLIPS TO LIGHT FIXTURE WITH HEX WASHER HEAD. SHEET METAL SCREWS, MINIMUM (2) TWO PER CLIP (OPTIONAL METHOD). USE IF SAFETY WIRE SUPPORT HOLES ARE NOT PROVIDED WITH FIXTURE.
2. 12 GA. SLACK SAFETY WIRE TIED TO SEISMIC CLIPS OR SAFETY WIRE SUPPORT HOLES AND ANCHOR TO BLDG. STRUCTURE. MINIMUM (2) SAFETY WIRES PER EACH LIGHT FIXTURE 1'x4, 2'x2' OR SMALLER. MINIMUM (4) SAFETY WIRES PER LIGHT FIXTURE FOR 2'x4' OR LARGER FIXTURES.
3. SEISMIC RESTRAINT CLIP MINIMUM (2) TWO PER LIGHT FIXTURE, SCREWED TO T-BAR PER SPECIFICATIONS. TYPICAL.
4. LIGHT FIXTURE SAFETY WIRE SUPPORT HOLE TYPICAL.
5. EXPOSED T-BAR CEILING SYSTEM, HEAVY DUTY GRID TYPICAL.
6. 5/16" DIA. DRILL-IN EXPANSION ANCHOR (TO CONCRETE) OR (2) #8 x 1/2" SELF-TAPPING SCREWS (TO METAL DECKING).

1 TROFFER LIGHTING SEISMIC RESTRAINT DETAIL
SCALE: NTS

OPTION 1
ALL WIRING TO BE CONCEALED AND OUT OF PUBLIC VIEW.



OPTION 2
ALL WIRING TO BE CONCEALED AND OUT OF PUBLIC VIEW.



UNDERCABINET LIGHTING DIAGRAM NOTES:

1. LIGHTING CONTROL PER DRAWINGS
2. LIGHTING FIXTURE WIRING
   CONCEAL IN WALL OR IN CABINET. NO EXPOSED WIRING.
3. LOW VOLTAGE WIRING
   PER MANUFACTURE WIRING DIAGRAM
4. DRIVER (ACCESSIBLE)
   CONCEAL EITHER ON TOP OF UPPER ABOVE CABINET OR INSIDE LOWER CABINET
5. LOW VOLTAGE DIMMING MODULE (ACCESSIBLE)
   PER MANUFACTURE WIRING DIAGRAM
6. LUMINAIRE TYPES PER LUMINAIRE SCHEDULE (TYP.)
7. JUMPER CABLE (TYP.)

4 UNDERCABINET LIGHTING DETAIL
SCALE: NTS

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PROJECT:
DELMARVA CHRISTIAN
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21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

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291-004

SEAL:
ANTON NATHANSON
LICENSE
No 29275
DELAWARE
PROFESSIONAL ENGINEER

SHEET TITLE:
LIGHTING DETAILS
ORIGINAL ISSUE: Preliminary
PROJECT#: AC733

SHEET NUMBER:
E601

DO NOT SCALE DRAWING

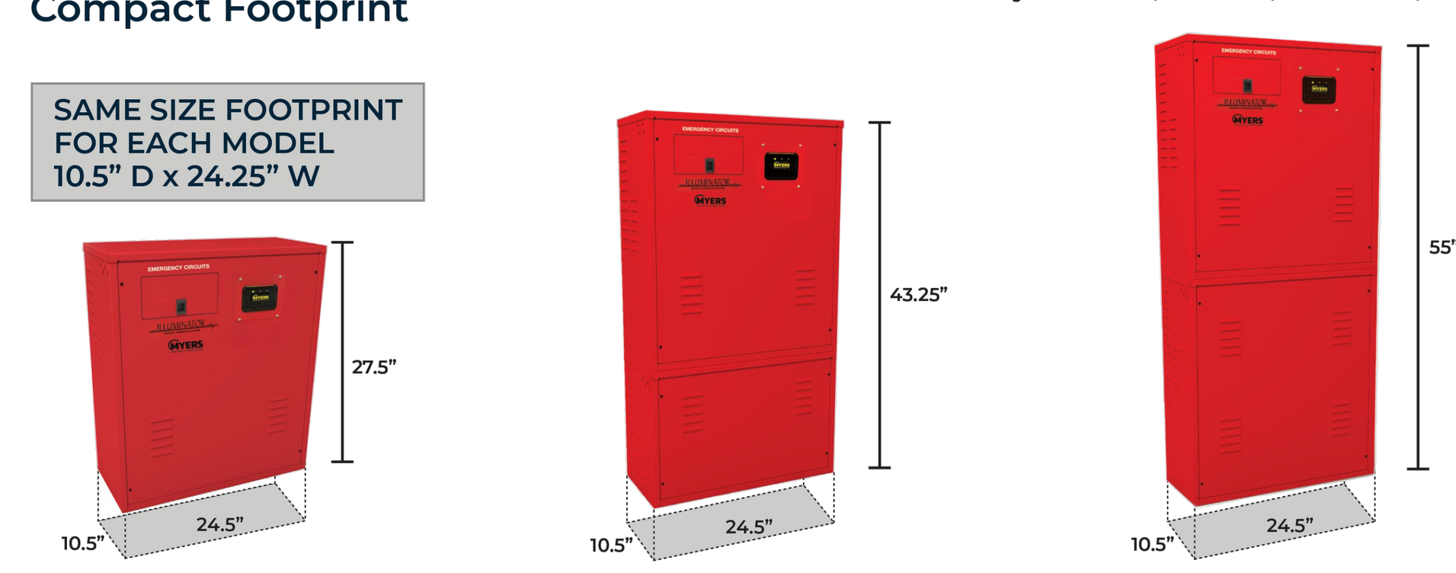
ILLUMINATOR EM
Emergency Lighting Inverter System

MYERS EMERGENCY & POWER SYSTEMS

SINGLE PHASE SYSTEMS 1.0kVA/kW to 2.8kVA/kW
Designed with Industry Leading Compact Footprint

UL 924 Listed Self-Testing Self-Diagnostic | BABA Build America Buy America Act Compliant | BAA Buy American Act Compliant | TAA Trade Agreements Act Compliant

SAME SIZE FOOTPRINT FOR EACH MODEL 10.5" D x 24.25" W



EM-1 | 1000VA/W — EM-2 | 1600VA/W & EM-3 | 2200VA/W — EM-4 | 2800VA/W

STANDARD FEATURES
- 98% Efficient Typical
- Automatic Event, Test, and Alarm Log
- User Programmable With Password Protection
- Input Circuit Breaker
- One Output Circuit Breaker
- RS232 Communications Port
- Space-Saving Design
- No Break 2ms Transfer Time
- NFPA 101 Self Testing and Data Logging
- Code Compliant : 90 Min. Runtime
- 65 KAIC Input Rating
- NEMA Type 1 Cabinet

OPTIONAL FEATURES
- Enhanced Communications
  - Expanded Building Management Protocols
  - BACnet or Modbus Communications Interface
  - NEW IoT Connect Cloud Software
- Internal or External Maintenance Bypass
- Summary Alarm
- Output Circuit Breakers
- Status Monitoring & Summary Form C Contacts
- Normally Off Output With Variable Time Delay
- Output Trip Alarms
- Wall Bracket, Floor Bracket, or Seismic
- Factory Startup & Training
- Extended Maintenance & Factory Warranty

SPECIFICATIONS
- Input Voltage: 120 or 277VAC | 1-Phase 2-Wire Plus Ground
- Output Voltage: 120 or 277VAC | 1-Phase 2-Wire Plus Ground
- Output Load Power Factor .5 Lag to .5 Lead
- Output Voltage Distortion Less Than 3% THD for Linear Loads
- Forced Air Cooling Only During Emergency Operation; No Filters Required
- Compatible With All Lighting Including LED Drivers
- Generator/Motor Compatibility
- Custom Voltage Available (Contact Factory)

ILLUMINATOR EM
Emergency Lighting Inverter
Single Phase Systems 1.0kVA/kW to 2.8kVA/kW

MYERS EMERGENCY & POWER SYSTEMS

ORDERING GUIDE
EXAMPLE MODEL # 1-EM-4-S-BA2006-T-S-M-2YW

VOLTAGE INPUT/OUTPUT [1]
- 1 - 120 - 120
- 2 - 120 - 120/277 [8]
- 3 - 208 - 120 [8]
- 4 - 240 - 120/240 [8]
- 5 - 277 - 120 [8]
- 6 - 277 - 277
- 7 - 277 - 277/120 [8]
- 8 - 208 - 120/240 [8]
- 9 - 208 - 120/208 [8]
- Z - Other Voltages [8] (may require UL Testing)

SYSTEM TYPE
- EM - Illuminator EM

KVA / KW [2]
- 1 - 1.0
- 2 - 1.6
- 3 - 2.2
- 4 - 2.8

BATTERY TYPE
- S - Standard 10YR Warranty Battery
- S15 - 15YR Warranty Battery
- S20 - 20YR Warranty Battery

OUTPUT BREAKERS [3]

EXAMPLE B A 20 07

OUTPUT
- B - Normally On
- N - Normally Off

VOLTAGE
- A - 120
- B - 208
- C - 240
- D - 277
- Z - Other (Contact Factory)

QUANTITY 01-10 [5] — 02

AMP RATING (Distribution Breakers) 10, 16, 20, 25, 32

OPTIONS
- A - Remote Summary Alarm Panel With One Indicator Light (Not Available With "C" Option)
- BL - Circuit Breaker Locking Mechanism
- BTM - Battery Temperature Monitor
- C - Status Monitoring Dry Form C Contacts
- DT - Drip Top (NEMA 2)
- I - Inverter on Dry Form C Contact
- M - Internal Maintenance Bypass (Make Before Break)
- M(BBM) - Internal Maintenance Bypass (Break Before Make)
- O - Output Transfer Delay (Factory Set at 3 Seconds, Adjustable .5 to 8 Seconds)
- P - Remote Status Panel (Status Alarm/Alarm Silence Switch) (Requires C Option)
- S - Summary Fault Dry Form C Contacts
- T - Output Trip (Supervised) Alarm [5]
- V - Variable Time Delay 1-15 Minutes [7]
- Y - Battery Strapping

PICK ONLY 1:
- BAC - BACnet
- BIP [4] - BACnet IP
- IOT [4] - IoT Inverter Connect Cloud Communications
- MIP [4] - Modbus TCP/IP
- MOD - Modbus RTU
- SEA - Serial to Ethernet Adapter

MOUNTING OPTIONS (PICK 1):
- (BLANK) - Standard Wall
- F - Floor Mount Bracket (Adds 4" to Total System Height)
- W - Wall Mount Bracket
- Z - Seismic / Raised Floor (Includes Y Option) (Adds 4" to Total System Height)

WARRANTY & ONSITE SERVICES [6]
- 2YW - Start Up & Same Day Training (Increases Standard 1 Year Electronics Warranty to 2 years)
- 2YWT - Start Up, Same Day Training and Full Run Test (Increases Standard 1 Year Electronics Warranty to 2 years)
- 5YP - 5-Year Maintenance Plan
- 5YW - 5-Year Extended Electronics Warranty (Includes 3 Years of Extended Electronics Warranty When Combined With 2YW)
- TR - Training (if Required on Day Other Than Start Up)

[white box] = Required feature for part number.

[grey box] = Optional feature. Not required for part number.

ACCESSORIES
- EMBP - External Maintenance Bypass Switch [A]
- SPARES - Spare Fuses & Circuit Boards
- SPAREF - Spare Fuses

A) Cannot purchase External Maintenance Bypass Switch with Internal Output Breaker options.

1. Only single phase voltages available.
2. KVA= KW
3. If no output circuit breakers are specified a single output breaker will be supplied with each unit and the current rating will vary based on the output power and voltage rating of the unit.
4. BIP/MIP/IOT: Options increase cabinet height by 8"
5. Maximum specified output breakers available: 10 unsupervised (1-pole), 6 supervised (1-pole). A 2-pole breaker occupies 2 positions.
6. One year warranty is standard.
7. Variable time delay of normally off circuit after return of utility up to 15 minutes.
8. For systems with voltages other than 120 in/out or 277 in/out system cabinet heights will vary. Contact factory.

DIMENSIONS

Electronics Module									Batteries 90 Minutes @ Full Load				Total System Weight (lbs / kg)
					Cabinet Dimensions*								
Partial Model Number	Power Rating (VA / W)	Efficiency (Typical Percent)	Audible Noise (db)	Heat Loss (BTU)	Width (in / cm)	Height (in / cm)	Depth (in / cm)	Weight (lbs)	90 Minutes Batteries (lbs / kg)	Number of Batteries	Voltage (VDC)	Current (amps)	
EM-1	1000	98	45	70	24.25 / 61.6	27.5 / 69.9	10.5 / 26.67	121 / 55	160 / 73	4	48	26	281 / 128
EM-2	1600	98	45	110	24.25 / 61.6	43.25 / 109.86	10.5 / 26.67	165 / 75	240 / 109	6	72	27	405 / 184
EM-3	2200	98	45	150	24.25 / 61.6	43.25 / 109.86	10.5 / 26.67	174 / 79	320 / 146	8	96	27	494 / 225
EM-4	2800	98	45	190	24.25 / 61.6	55 / 139.7	10.5 / 26.67	203 / 92	400 / 182	10	120	27	603 / 274

*For systems with voltages other than 120 in/out or 277 in/out system cabinet heights will vary. Contact factory.

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PROJECT: DELMARVA CHRISTIAN EARLY LEARNING CENTER
21777 SUSSEX PINES RD, GEORGETOWN, DE 19947

291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: ELECTRICAL SPECIFICATIONS

ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

SHEET NUMBER: E700

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PERFORMANCE TECHNOLOGY GROUP, LLC

4605 TIN TOP HWY
GRANBURY, TEXAS 76048
801-409-1066
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DELMARVA EARLY LEARNING CENTER

SHEET INDEX		
TA-000	COVER SHEET	
TA-001	GENERAL NOTES	
TA-002	ABBREVIATIONS/SYMBOL LEGEND/SCOPE	
TA-003	TYPICAL DETAILS	
TA-110	FIRST FLOOR PLAN POWER AND J-BOX LOCATIONS	
TA-111	FIRST FLOOR CONDUIT	
TA-610	JUNCTION BOX SCHEDULE	
TA-611	CONDUIT ONE LINE	

PERFORMANCE TECHNOLOGY GROUP, LLC

REV	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

NOTES:
1. THIS DRAWING IS A DESIGN CONCEPT ONLY AND AS SUCH ALL INFORMATION CONTAINED WITHIN IS SUBJECT TO NATIONAL, REGIONAL, AND LOCAL CODES AND REGULATIONS. ALL INFORMATIoN CONTAINED WITHIN MUST BE VERIFIED BY ELECTRICAL, MECHANICAL AND STRUCTURAL ENGINEERS, AND INSTALLED IN SUCH A MANNER.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL MEASUREMENTS AS THIS DRAWING MAY NOT BE TO SCALE.

SHEET TITLE:
COVER SHEET
PROJECT#: AS170

SHEET NUMBER:
TA-000

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GENERAL NOTES:

1. ALL ELECTRICAL SPECIFICATIONS IN THESE DRAWINGS ARE REQUIREMENTS FOR THE AUDIO, VIDEO, AND LIGHTING SYSTEMS. ALL SPECIFICATIONS HEREIN ARE SUBJECT TO APPROVAL BY THE PROJECT ELECTRICAL ENGINEER, NEC, STATE AND LOCAL CODES. ALL VARIANCE FROM THESE SPECIFICATIONS MUST BE TRANSMITTED TO PTG PRIOR TO ISSUANCE TO THE FIELD FOR COORDINATION OF THOSE ADJUSTMENTS. PTG IS NOT RESPONSIBLE FOR THE PERFORMANCE OR COMPLETION OF THE SYSTEMS WHERE UNNOTIFIED OR UNCOORDINATED CHANGES HAVE BEEN MADE.
2. ALL CONDUITS TO BE EMT ABOVE SLAB AND PVC BELOW SLAB. OBSERVE CONDUIT SEPARATION DISTANCES AT ALL TIMES. WHERE AVL CONDUIT IS WITHIN 24" OF ELECTRICAL CONDUITS UNDER GROUND, AVL CONDUIT SHOULD BE RIGID GALVANIZED STEEL RIGS.
3. WHERE CONDUITS OF DIFFERENT TYPES (TWO TYPES - DEFINED AS EITHER ABOVE 105V OR BELOW 105V) MUST BE IN CLOSE PROXIMITY, AVOID PARALLEL RUNNING OF THE CONDUIT WITHIN 12" OF EACH OTHER. TRY TO CROSS ELECTRICAL CONDUITS AT 90° ANGLES TO AV CONDUITS WHERE POSSIBLE. MAINTAIN MINIMUM SEPARATION OF 12" PER 100V FROM ANY MAJOR ELECTRICAL EQUIPMENT SUCH AS POWER TRANSFORMERS, ELECTRIC MOTORS, MAGNETIC CONTACTORS, AIR HANDLING UNITS, CHILLERS, LIFTS, ETC.
4. THE MINIMUM CONDUIT SIZE TO BE USED ON THE SYSTEMS OF THIS PROJECT IS 1/2". CONDUIT FILL IS DESIGNED TO BE 40% OR LESS.
5. CONDUIT IS TO BE INSTALLED ACCORDING TO NEC WITH NO RUN GREATER THAN 150' IN LENGTH AND WITH NO MORE THAN THE EQUIVALENT OF (4) QUARTER BENDS (360°TOTAL) BETWEEN ACCESS POINTS. WHERE CONDUIT REQUIRES PULL OR JUNCTION BOXES, THESE SHALL BE ACCESSIBLE AFTER BUILDING COMPLETION AND MARKED ON DRAWINGS AVAILABLE TO GC ON SITE.
6. FLEXIBLE METAL CONDUIT TUBING IS NOT PERMITTED FOR THE PURPOSES OF THE AVL SYSTEMS. (LOW VOLT SIGNAL/CONTROL WIRING).
7. ALL CONDUIT DESTINATIONS ARE TO BE LABLED ON THE INSIDE BACK OF THE JUNCTION BOX. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED OF GREENLEE #435, #39243 OR EQUIVALENT. PULL STRING IS TO BE INSTALLED INTO PIPE AND SECURED AT EACH END SO AS TO ENSURE IT IS NOT ACCIDENTALLY PULLED OUT.
8. THE CONDUIT/RACEWAY SYSTEM MUST BE BOUND TO EARTH.
9. EQUIPMENT RACKS WILL BE BONDED TOGETHER AND TO THEIR INTERNAL BARE COPPER BUSS BARS. THE EQUIPMENT RACKS WILL BE BONDED TO THE SPECIFICALLY PROVIDED TECHNICAL GROUND THAT HAS BEEN PROVIDED IN ALLOWANCE WITH THE NEC. EQUIPMENT RACKS ARE TO BE ELECTRICALLY ISOLATED FROM THE CONDUIT SYSTEM USING NON-CONDUCTIVE MECHANICAL CONNECTIONS. THE EQUIPMENT RACKS WILL BE ELECTRICALLY ISOLATED FROM THE FACILITY STRUCTURE BY NON-CONDUCTIVE MOUNTS OR SUPPORTS.
10. EC RESPONSIBILITIES
    A. EC IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL CONDUIT, RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, WIRE, AND ANY ITEMS NECESSARY TO MAKE A COMPLETE AC POWER CONDUIT SYSTEM,
    B. EC IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL CONDUIT, RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, WIRE, AND ANY ITEMS NECESSARY TO MAKE A COMPLETE AC POWER ISOLATED GROUND CONDUIT SYSTEM,
    C. EC IS RESPONSIBLE TO INSTALL ALL PTG PROVIDED FLOOR BOX BACK BOXES, SPEAKER BACK BOXES AND WALL MOUNTED EQUIPMENT RACKS,
    D. EC IS RESPONSIBLE TO PROVIDE AND INSTALL AC ELECTRICAL POWER DEVICES, RACEWAYS AND OUTLETS IN PTG PROVIDED EQUIPMENT RACKS,
    E. EC IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL CONDUIT (UNDERSLABS, UNDERPLATFORMS, IN WALLS AND ABOVE HARD CEILINGS) RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, GANG BOXES, ELECTRICAL CONTROL POWER DEVICES, COVER PLATES, AND ANY ITEMS NOT PROVIDED BY PTG (EXCEPT AUDIO, VIDEO, LIGHTING SYSTEMS EQUIPMENT NOTED IN THESE DOCUMENTS) NECESSARY TO MAKE A COMPLETE LOW VOLT SIGNAL/CONTROL SYSTEM SPECIFIED IN THESE DOCUMENTS UNLESS IN CONFLICT WITH LOCAL CODES WHERE NOTE-1 ABOVE WILL APPLY.
    F. EC IS RESPONSIBLE TO LABEL ALL OUTLETS, AND CIRCUITS IN AVL PANELS, FOR THE AVL SYSTEMS.
11. PTG IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL AVL SYSTEM EQUIPMENT, PANELS, PLATES, BRACKETS AND LOW VOLT WIRE/CABLE AND TERMINATE ALL SAID LOW VOLT WIRE/CABLE (PER CONTRACT).
12. GC, OR CLIENT, IS RESPONSIBLE TO INSTALL ANY AND ALL ACOUSTIC MATERIAL AS DESIGNED BY PTG AND PROVIDED BY BGW SUPPLY OR OTHERS.
13. GC, OR CLIENT, IS RESPONSIBLE TO PROVIDE ANY AND ALL MAN LIFTS OR SCAFFOLDING NECESSARY TO REACH WORKING HEIGHTS DURING THE PROJECT INSTALL FOR THE ENTIRE DURATION AS SPECIFIED BY PTG.
14. GC, OR CLIENT, IS RESPONSIBLE TO RECEIVE, STORE AND SECURE ANY AND ALL MATERIALS AND EQUIPMENT SHIPPED TO THE JOBSITE NEEDED BY PTG.
15. GC, OR CLIENT, IS RESPONSIBLE TO MAINTAIN ADEQUATE INSURANCE TO COVER LOSS OR DAMAGE OF STORED EQUIPMENT AND MATERIALS ON JOB SITE.
16. FIRE ALARM COMPANY IS RESPONSIBLE TO PULL AND TERMINATE THE SHUT OFF CABLE TO THE AUDIO SYSTEM.

PTG PERFORMANCE TECHNOLOGY GROUP, LLC

REV.	DATE:	DESCRIPTION:
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
TA-001

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AVL SYMBOLS LEGEND

POWER PLAN	
	120V DUPLEX RECEPTACLE - ISOLATED GROUND, SINGLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
	120V QUAD RECEPTACLE - ISOLATED GROUND, DOUBLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
	120V DUPLEX FLOOR RECEPTACLE - ISOLATED GROUND, SINGLE GANG JUNCTION BOX MOUNTS FLUSH W/ FINISHED FLOOR.
CLG	120V DUPLEX RECEPTACLE - CEILING MOUNTED, ISOLATED GROUND, SINGLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
CLG	120V QUAD RECEPTACLE - CEILING MOUNTED, ISOLATED GROUND, DOUBLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
	120V DUPLEX RECEPTACLE - SINGLE GANG JUNCTION BOX,SEE SHEET TA-### FOR INSTALL HEIGHT.
	120V QUAD RECEPTACLE - DOUBLE GANG JUNCTION BOX,SEE SHEET TA-### FOR INSTALL HEIGHT.
CLG	120V DUPLEX RECEPTACLE - CEILING MOUNTED, SINGLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
CLG	120V QUAD RECEPTACLE - CEILING MOUNTED, DOUBLE GANG JUNCTION BOX, SEE SHEET TA-### FOR INSTALL HEIGHT.
	SINGLE POINT CONNECTION
	JUNCTION BOX - WALL MOUNTED, SEE SHEET TA-### FOR SIZE & INSTALL HEIGHT.
CLG	JUNCTION BOX - CEILING MOUNTED, SEE SHEET TA-### FOR SIZE & INSTALL HEIGHT.
	SINGLE FLOOR POCKET - ISOLATED GROUND, 10"x10" BOX MOUNTS FLUSH W/ FINISHED FLOOR. POWER IS TO BE LANDED PER DETAIL # ON SHEET TA-###.
	DOUBLE FLOOR POCKET - ISOLATED GROUND, 10"x18" BOX MOUNTS FLUSH W/ FINISHED FLOOR. POWER IS TO BE LANDED PER DETAIL # ON SHEET TA-###.
	IN- FLOOR I/O BOX - ISOLATED GROUND, 12"x24" BOX MOUNTS FLUSH W/ FINISHED FLOOR. POWER IS TO BE LANDED PER DETAIL # ON SHEET TA-###.
	70V SPEAKER - CEILING OR PENDANT MOUNT.
	70V lay-in SPEAKER.
	70V SUBWOOFER - CEILING OR PENDANT MOUNT.
	WALL MOUNT EQUIPMENT RACK
	ISOLATION TRANSFORMER - SEE DETAIL # ON SHEET TA-### FOR SCHEMATIC.
	AVL BREAKER PANEL - SEE SHEET TA-### FOR SIZE & INSTALL HEIGHT.
	THEATRICAL CURTAIN
	KEYNOTE - SEE NOTES ON SAME SHEET FOR SPECIFICS.
### LBS	SUSPENDED WEIGHT - WEIGHT LOAD AT LOCATION INDICATED.

ABBREVIATIONS & DEFINITIONS

A	
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
A/V	AUDIO/VIDEO
A/V/L	AUDIO/VIDEO/LIGHTING
B	
BOJ	BOTTOM OF JOIST
C	
CLG	CEILING
D	
D	DISPLAY - MONITOR OR TV
E	
EC	ELECTRICAL CONTRACTOR
EE	ELECTRICAL ENGINEER
EQ	EQUIPMENT RACK
F	
FL	FLOOR
FP	SINGLE FLOOR POCKET
FOH	FRONT OF HOUSE (SOUND BOOTH)
FWC	FLUSH WITH CEILING
G	
GC	GENERAL CONTRACTOR
I	
ISO	ISOLATED GROUND
J	
J	JUNCTION BOX
L	
LB	LIGHT BAR
M	
MC	MASTER CONTROL
MDP	MAIN DISTRIBUTION PANEL
LB	LIGHT BAR
N	
NTS	NOT TO SCALE
R	
RM	ROOM
RCP	REFLECTED CEILING PLAN
S	
STD	STANDARD
SUB	SUBWOOFER
SPKR	SPEAKER
T	
TV	TELEVISION
TOW	TOP OF WALL
TYP	TYPICAL
TECH	PTG TECHNICIAN
TOBW	TOP OF BACKWALL
V	
VC	VOLUME CONTROL

DIVISION OF RESPONSIBILITIES

DESCRIPTION	GC		EC *OR RELATED		PTG	
GENERAL						
ON-SITE RECEIVING OF GEAR	X					
ON-SITE STORAGE	X					
MAN LIFTS, SCAFFOLDS, ELEVATED PLATFORMS, ETC.	X					
POWER AND CONTROL EQUIPMENT	FURNISH	INSTALL	FURNISH	INSTALL	FURNISH	INSTALL
TRANSFORMERS - ISOLATED AND STANDARD			X	X		
ELECTRICAL HARMONIC SUPPRESSION SYSTEM			X	X		
SURGE PROTECTION			X	X		
STANDARD BREAKER PANELS (HOUSE POWER)			X	X		
AVL ISOLATED SEQUENCED PANELS				X	X	
AVL ISOLATED NON-SEQUENCED PANELS				X	X	
ALV RELAY CABINETS				X	X	
AVL DIMMING CABINETS				X	X	
AVL EMERGENCY PANELS, CABINETS, ENCLOSURES, SENSE FEEDS, TRANSFER KITS, ETC.				X	X	
AC CONDUIT (LINE VOLTAGE)			X	X		
LOW VOLTAGE CONDUIT			X	X		
RACEWAYS, JUNCTION BOXES, CABLE TRAYS, GUTTERS, LADDER BARS, STANDARD BACK BOXES, GANG BOXES, PULL BOXES, ETC.			X	X		
AC WIRE (INCLUDING GROUNDING WIRES AS REQUIRED)			X	X		
AC WIRE TERMINATINS IN PANELS, CABINETS, EQUIPMENT RACKS, RECEPTACLES, MOTORS AND SPECIALTY EQUIPMENT			X	X		
AVL LOW VOLTAGE CONTROL WIRE				X	X	
EMERGENCY WIRE - PANIC, SENSE FEED, FIRE ALARM, ETC.			*X	*X		
AVL LOW VOLTAGE TERMINATIONS IN PANELS, CABINETS, EQUIPMENT RACKS, RECEPTACLES, MOTORS AND SPECIALTY EQUIPMENT				X	X	
STANDARD RECEPTACLES, ISOLATED RECEPTACLES, DUPLEXES, OUTLET BOXES, ETC.			X	X		
SPECIALTY BACK BOXES - FLOOR BOXES, WALL BOXES, TOUCH SCREEN BACK BOXES, ETC.				X	X	
SPECIALTY PLUG BOXES - FLOOR BOXES, WALL BOXES, PIPE MOUNTED BACK BOXES, CONNECTOR STRUPS, ETC.				X	X	
EQUIPMENT RACKS (ENCLOSURES)				X	X	
EQUIPMENT RACKS (COMPONENTS)					X	X
SPECIALTY NEMA BOXES / EDIN ENCLOSURES				X	X	
SPECIALTY FACE PLATES - PRESET STATIONS, ENTRY STATIONS, VOLUME CONTROLS, ROOM DIVIDES, AVL DISTRIBUTION PLATES, NETWORK CONTROL DEVICES, OUTPUT DEVICES, ETC.					X	X
ARCHITECTURAL LIGHTING (CONTROLLED BY AVL SYSTEM)						
HOUSE LIGHTING PROVIDED BY PTG - PENDANTS, RECESSED FIXTURES, SCONCES, ETC.				X	X	
ARCHITECTURAL LIGHTING PROVIDED BY PTG - LINEAR FIXTURES, EXTERIOR FIXTURES, TRACK FIXTURES COVE FIXTURES, ETC.				X	X	
EMERGENCY FIXTURES PROVIDED BY PTG -EXIT SIGNS, INVERTERS, STROBES, ETC.				*X	*X	
AC TERMINATIONS OF PTG PROVIDED FIXTURES			X	X		
ADDRESSING OF PTG PROVIDED FIXTURES					X	X
LOW VOLTAGE TERMINATIONS AT THE FIXTURES			X	X		
LOW VOLTAGE TERMINATIONS IN EQUIPMENT RACKS, PANELS, ENCLOSURES, ETC.					X	X
CONTROL WIRE AND TERMINATIONS (INCLUDES 0-10V & DMX)			X	X		
MOTORIZED SHADES						
MOTORIZED SHADES		X			X	
AC TERMINATIONS OF PTG PROVIDED SHADES			X	X		
LOW VOLTAGE TERMINATIONS AT THE MOTORS			X	X		
LOW VOLTAGE TERMINATIONS IN EQUIPMENT RACKS, PANELS, ENCLOSURES, ETC.					X	X
AVL EQUIPMENT						
LIGHTING BATTENS					X	X
PROJECTORS AND MOUNTS					X	X
CAMERAS AND MOUNTS					X	X
LINE ARRAYS, WALL SPEAKERS, SUBWOOFERS					X	X
PROJECTION SCREENS					X	X
THEATRICAL CURTAINS AND CURTAIN TRACK SYSTEMS					X	X
THEATRICAL FIXTURES					X	X
DIGITAL SIGNAGE, CONFIDENCE MONITORS, DISTRIBUTED VIDEO SCREENS, ETC.					X	X

PTG
PERFORMANCE TECHNOLOGY GROUP, LLC

REV	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

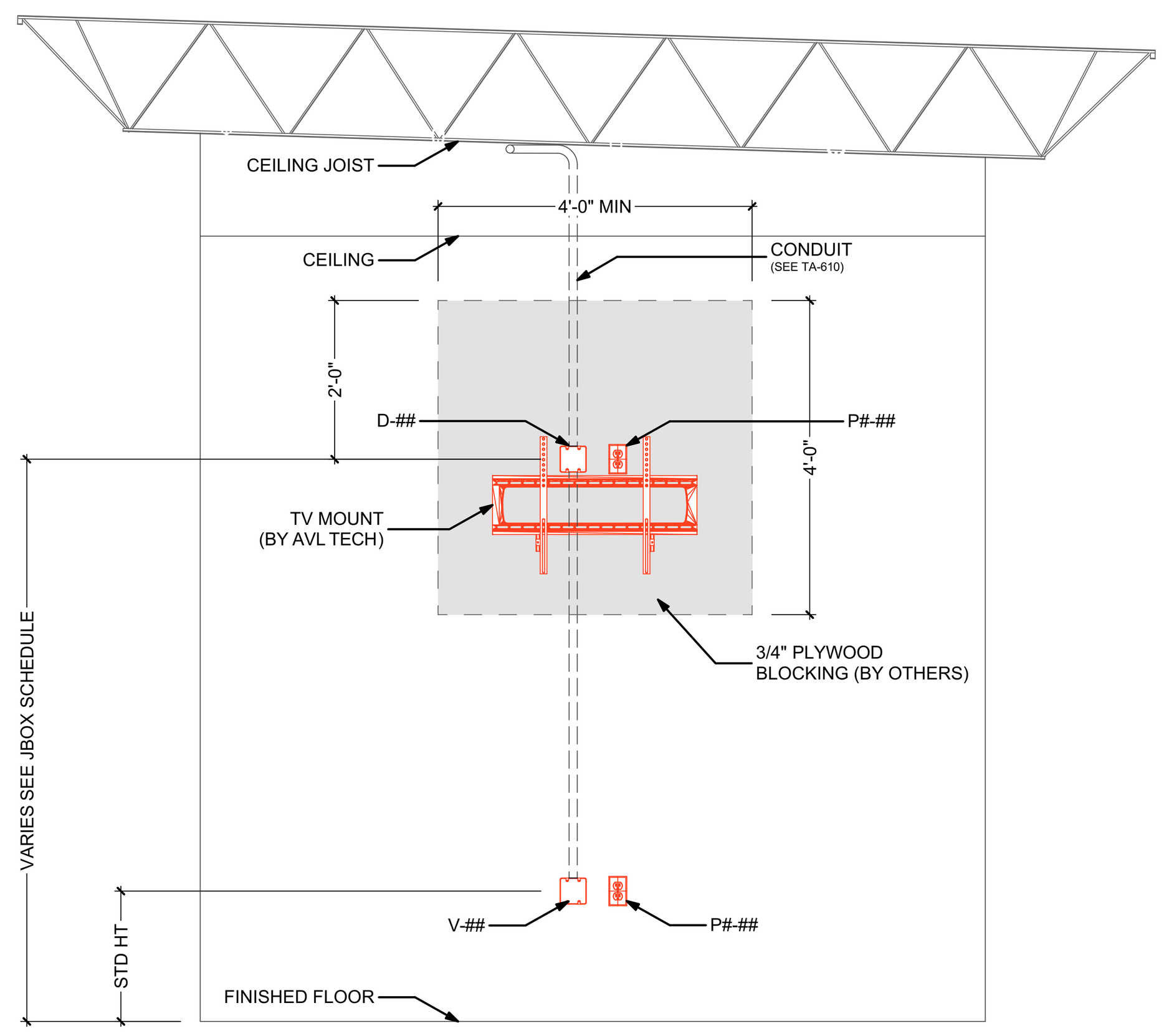
NOTES:
1. THIS DRAWING IS A DESIGN CONCEPT ONLY AND AS SUCH ALL INFORMATION CONTAINED WITHIN IS SUBJECT TO NATIONAL, REGIONAL, AND LOCAL CODES AND REGULATIONS. ALL INFORMATIoN CONTAINED WITHIN MUST BE VERIFIED BY ELECTRICAL, MECHANICAL AND STRUCTURAL ENGINEERS, AND INSTALLED IN SUCH A MANNER.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL MEASUREMENTS AS THIS DRAWING MAY NOT BE TO SCALE.

SHEET TITLE:
ABBREVIATIONS/SYMBOL LEGEND/SCOPE

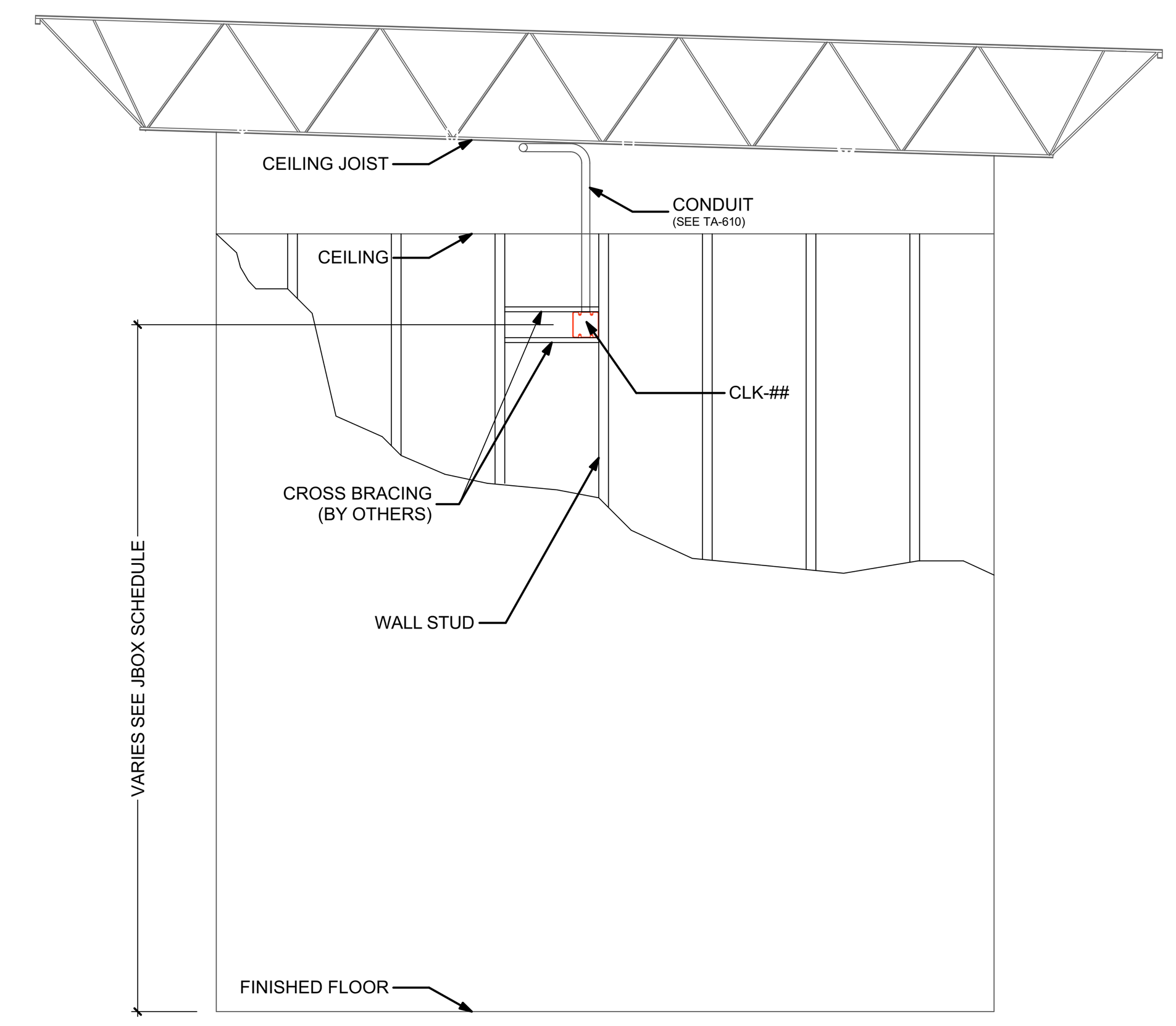
PROJECT#: AS170

SHEET NUMBER:
TA-002

DO NOT SCALE DRAWING



001 TYPICAL SIGNAL & POWER @ TV DISPLAY
SCALE: N.T.S.



002 TYPICAL BACKING @ DOUBLE SIDED WALL CLOCK
SCALE: N.T.S.

PTG
PERFORMANCE TECHNOLOGY GROUP, LLC

REV	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:

DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

NOTES:

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2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL MEASUREMENTS AS THIS DRAWING MAY NOT BE TO SCALE.

SHEET TITLE:

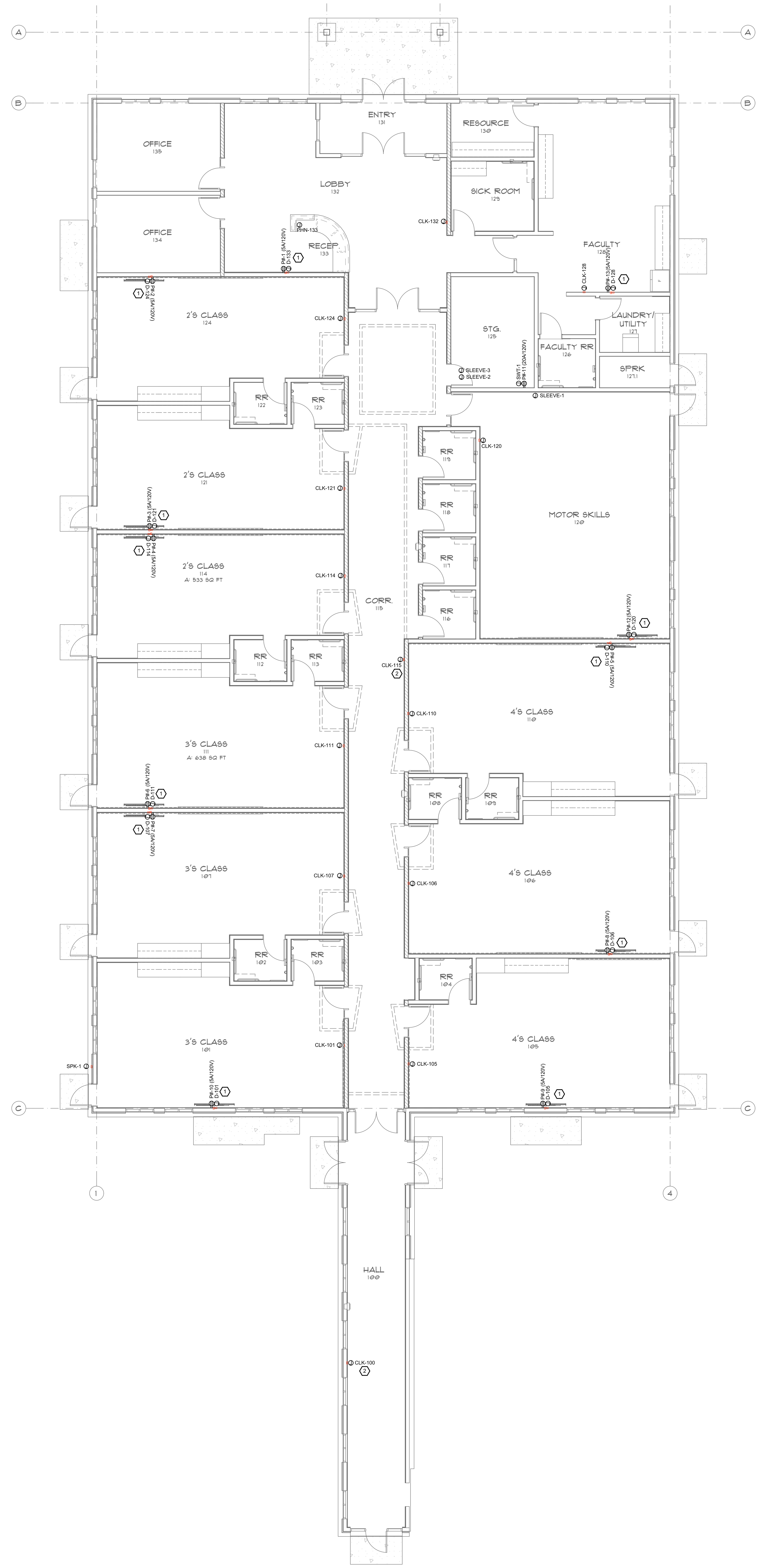
TYPICAL DETAILS

PROJECT#: AS170

SHEET NUMBER:

TA-003

DO NOT SCALE DRAWING



SHEET KEYED NOTES

1. LOCATION TO HAVE BACKING (BY OTHERS). SEE DETAIL 001 ON SHT TA-003 FOR SPECIFICS.
2. LOCATION TO HAVE CROSS BRACING (BY OTHERS). BRACING TO PROVIDE RIGID SUPPORT BETWEEN ADJACENT STUDS. SEE DETAIL 002 ON SHT TA-003 FOR SPECIFICS.

GENERAL SHEET NOTES

1. SEE JBOX SCHEDULE FOR JBOX AND CONDUIT SPECIFICATIONS AND REQUIREMENTS.
2. DIRECT ALL CONDUIT STUBS TO NEAREST CABLE TRAY.
3. ALL ELECTRICAL SPECIFICATIONS IN THESE DRAWINGS ARE REQUIREMENTS FOR THE AUDIO, VIDEO AND LIGHTING SYSTEMS. ALL SPECIFICATIONS HEREIN ARE SUBJECT TO APPROVAL BY THE PROJECT ELECTRICAL ENGINEER, NEC, STATE AND LOCAL CODES. ALL VARIANCE FROM THESE SPECIFICATIONS MUST BE TRANSMITTED TO PTG PROIOR TO ISSUANCE TO THE FIELD FOR COORDINATION OF THOSE ADJUSTMENTS. PTG IS NOT RESPONSIBLE FOR THE PERFORMANCE OR COMPLETION OF THE SYSTEMS WHERE UNNOTIFIED OR UNCOORDINATED CHANGES HAVE BEEN MADE.
4. ALL CONDUITS TO BE EMT ABOVE SLAB AND PVC BELOW SLAB. OBSERVE CONDUIT SEPARATION DISTANCES AT ALL TIMES. WHERE AVL CONDUIT IS WITHIN 24" OF ELECTRICAL CONDUITS UNDER GROUND, AVL CONDUIT SHOULD BE RIGID GALVANIZED STEEL RIGS.
5. WHERE CONDUITS OF DIFFERENT TYPES (TWO TYPES - DEFINED AS EITHER ABOVE 105V OR BELOW 105V) MUST BE IN CLOSE PROXIMITY, AVOID PARALLEL RUNNING OF THE CONDUIT WITHIN 12" OF EACH OTHER. TRY TO CROSS ELECTRICAL CONDUITS AT 90° ANGLES TO AV CONDUITS WHEREVER POSSIBLE. MAINTAIN MINIMUM SEPARATIONS OF 12" PER 100V FROM ANY MAJOR ELECTRICAL EQUIPMENT SUCH AS TRANSFORMERS, ELECTRIC MOTORS, MAGNETIC CONTACTORS, AIR HANDLING UNITS, CHILLERS, LIFTS, ETC.
6. THE MINIMUM CONDUIT SIZE TO BE USED ON THE SYSTEMS OF THIS PROJECT IS 1/2".
7. CONDUIT IS TO BE INSTALLED ACCORDING TO NEC WITH NO RUN GREATER THAN 150' IN LENGTH AND WITH NO MORE THAN THE EQUIVALENT OF (4) QUARTER BENDS (360° TOTAL) BETWEEN ACCESS POINTS. WHERE CONDUIT REQUIRES PULL OR JUNCTION BOXES, THESE SHALL BE ACCESSIBLE AFTER BUILDING COMPLETION AND MARKED ON DRAWINGS AVAILABLE TO GC ON SITE.
8. FLEXIBLE METAL CONDUIT TUBING IS NOT PERMITTED FOR THE PURPOSES OF THE AVL SYSTEMS. (LOW VOLTAGE SIGNAL/CONTROL WIRING).
9. ALL CONDUIT DESTINATIONS ARE TO BE LABELED ON THE INSIDE BACK OF THE JUNCTION BOX.
10. CONDUITS SHALL HAVE A PULL STRING INSTALLED OF GREENLEE #435, #39243 OR EQUIVALENT. PULL STRING IS TO BE INSTALLED INTO PIPE AND SECURED AT EACH END SO AS TO ENSURE IT IS NOT ACCIDENTALLY PULLED OUT.
11. THE CONDUIT/RACEWAY SYSTEM MUST BE BOUND TO EARTH.
12. EQUIPMENT RACKS WILL BE BONDED TOGETHER AND TO THEIR INTERNAL BARE COPPER BUSS BARS. THE EQUIPMENT RACKS WILL BE BONDED OT THE SPECIFICALLY PROVIDED TECHNICAL GROUND THAT HAS BEEN PROVIDED IN ALLOWANCE WITH THE NEC. EQUIPMENT RACKS ARE TO BE ELECTRIACALLY ISOLATED FROM THE CONDUIT SYSTEM USING NON-CONDUCTIVE MECHANICAL CONNECTIONS. THE EQUIPMENT RACKS WILL BE ELECTRICALLY ISOLATED FROM THE FACILITY STRUCTURE BY NON-CONDUCTIVE MOUNTS OR SUPPORTS.
13. EC RESPONSIBILITIES:
    A. EC IS RESONSIBLE TO PROVIE, SUPPORT AND INSTALL ALL CONDUIT, RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, WIRE AND ANY ITEMS NECESSARY TO MAKE A COMPLETE AC POWER CONDUIT SYSTEM.
    B. EC IS RESPONSIBLE TO PROVIE, SUPPORT AND INSTALL ALL CONDUIT, RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, WIRE AND ANY ITEMS NECESSARY TO MAKE A COMPLETE AC POWER ISOLATED GROUND CONDUIT SYSTEM.
    C. EC IS RESPONSIBLE TO INSTALL ALL PTG PROVIDED FLOOR BACK BOXES, SPEAKER BACK BOXES AND WALL MOUNTED EQUIPMENT RACKS.
    D. EC IS RESPONSIBLE TO PROVIDE AND INSTALL AC ELECTRICAL POWER DEVICES, RACEWAYS AND OUTLETS IN PTG PROVIDED EQUIPMENT RACKS.
    E. EC IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL CONDUIT (UNDER SLABS, UNDER PLATFORMS, IN WALLS AND ABOVE HARD CEILINGS) RACEWAYS, JUNCTION BOXES, POWER PANELS, PULL BOXES, GANG BOXES, ELECTRICAL CONTROL POWER DEVICES, COVER PLATES AND ANY ITEMS NOT PROVIDED BY PTG (EXCEPT AUDIO, VIDEO AND LIGHTING SYSTEMS EQUIPMENT NOTED IN THESE DOCUMENTS) NECESSARY TO MAKE A COMPLETE LOW VOLTAGE SIGNAL/CONTROL SYSTEM SPECIFIED IN THESE DOCUMENTS UNLESS IN CONFLICT WITH LOCAL CODES IN WHICH CASE NOTE 1 ABOVE WILL APPLY.
    F. EC IS RESPONSIBLE TO LABEL ALL OUTLEST AND CIRCUITS IN AVLE PANELS FOR THE AVL SYSTEMS.
14. PTG IS RESPONSIBLE TO PROVIDE, SUPPORT AND INSTALL ALL AVL SYSTEM EQUIPMENT, PANELS, PLATES, BRACKETS AND LOW VOLTAGE WIRE/CABLE AND TO TERMINATE SAID LOW VOLTAGE WIRE/CABLE (PER CONTRACT).
15. GC (OR CLIENT) IS RESPONSIBLE TO INSTALL ANY AND ALL ACOUSTIC MATERIAL AS DESIGNED BY AND/OR PROVIDED BY PTG OR ARCHITECT, OR OTHERS.
16. GC (OR CLIENT) IS RESPONSIBLE TO PROVIDE ANY AND ALL MAN LIFTS OR SCAFFOLDING NECESSARY TO REACH WORKING HEIGHTS DURING THE PROJECT INFRASTRUCTURE INSTALLATION PHASE AND GEAR INSTALLATION PHASE FOR THE DURATION NEEDED TO COMPLETE PHASE SCOPE.
17. GC (OR CLIENT) IS RESPONSIBLE TO RECEIVE, STORE AND SECURE ANY AND ALL MATERIALS AND EQUIPMENT, NEEDED BY PTD, THAT IS SHIPPED TO THE JOBSITE.
18. GC (OR CLIENT) IS RESPONSIBLE TO MAINTAIN ADEQUATE INSURANCE TO COVER LOSS OR DAMAGE TO PTG PROVIDED EQUIPMENT AND MATERIALS STORED ON THE JOBSITE.
19. FIRE ALARM COMPANY IS RESPONSIBLE TO PULL THE SHUT OFF CABLE REQUIRED FOR THE AUDIO SYSTEM POWER SEQUENCING, INTO THE FIRE ALARM PANEL. PTG WILL TERMINATE THE SHUT OFF CABLE REQUIRED FOR THE AUDIO SYSTEM POWER SEQUENCING INTO THE CONTROL BOARD LOCATED ON THE SEQUENCING POWER RELAY PANEL.

PTG
PERFORMANCE TECHNOLOGY GROUP, LLC

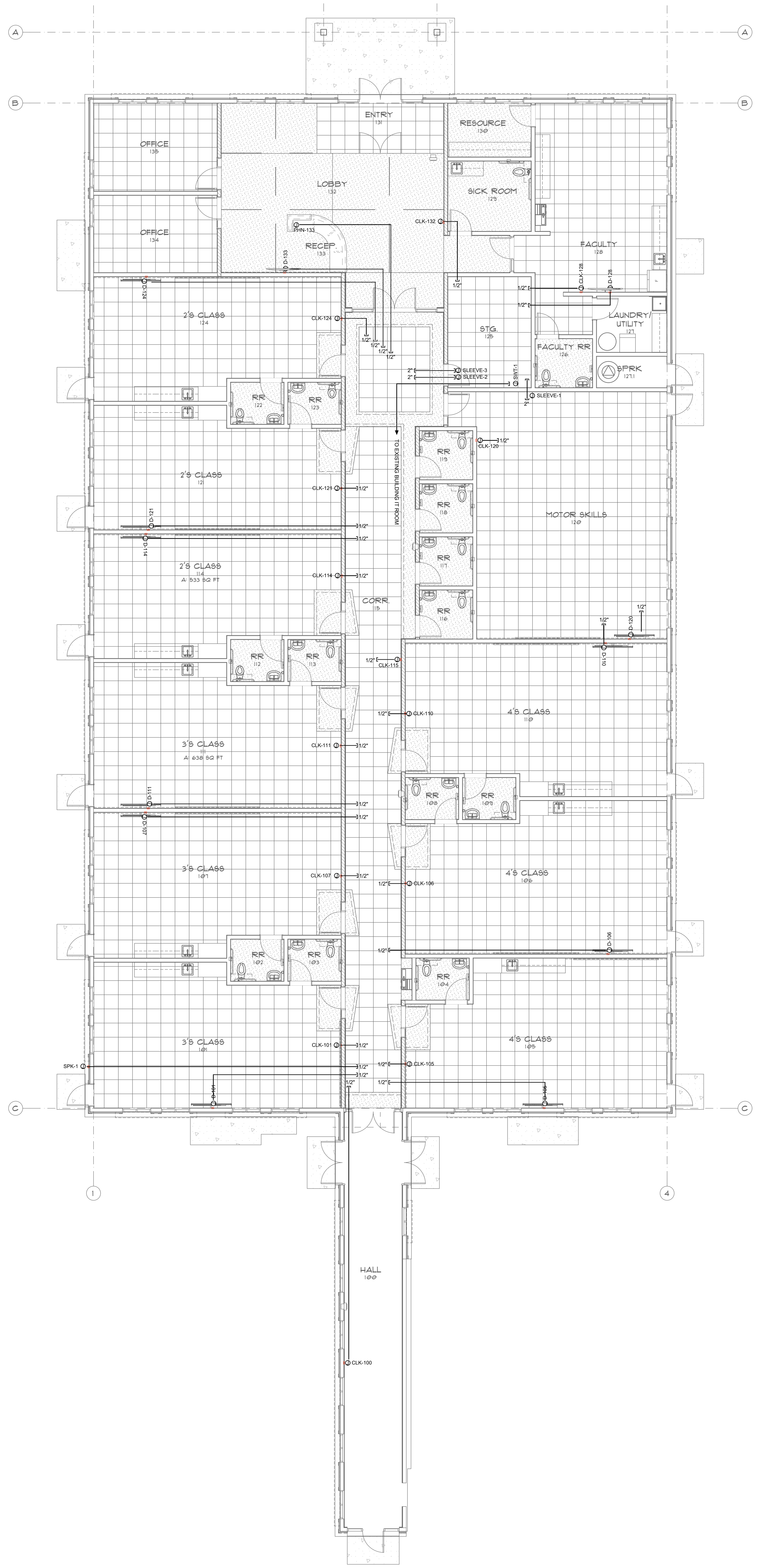
REV	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SHEET TITLE:
FIRST FLOOR PLAN POWER AND J-BOX LOCATIONS

SHEET NUMBER:
TA-110

DO NOT SCALE DRAWING



SHEET KEYED NOTES

GENERAL SHEET NOTES

1. SEE JBOX SCHEDULE FOR JBOX AND CONDUIT SPECIFICATIONS AND REQUIREMENTS.
2. DIRECT ALL CONDUIT STUBS TO NEAREST CABLE TRAY.
3. ALL ELECTRICAL SPECIFICATIONS IN THESE DRAWINGS ARE REQUIREMENTS FOR THE AUDIO, VIDEO AND LIGHTING SYSTEMS. ALL SPECIFICATIONS HEREIN ARE SUBJECT TO APPROVAL BY THE PROJECT ELECTRICAL ENGINEER, NEC, STATE AND LOCAL CODES. ALL VARIANCE FROM THESE SPECIFICATIONS MUST BE TRANSMITTED TO PTG PROIOR TO ISSUANCE TO THE FIELD FOR COORDINATION OF THOSE ADJUSTMENTS. PTG IS NOT RESPONSIBLE FOR THE PERFORMANCE OR COMPLETION OF THE SYSTEMS WHERE UNNOTIFIED OR UNCOORDINATED CHANGES HAVE BEEN MADE.
4. ALL CONDUITS TO BE EMT ABOVE SLAB AND PVC BELOW SLAB. OBSERVE CONDUIT SEPARATION DISTANCES AT ALL TIMES. WHERE AVL CONDUIT IS WITHIN 24" OF ELECTRICAL CONDUITS UNDER GROUND, AVL CONDUIT SHOULD BE RIGID GALVANIZED STEEL RIGS.
5. WHERE CONDUITS OF DIFFERENT TYPES (TWO TYPES - DEFINED AS EITHER ABOVE 105V OR BELOW 105V) MUST BE IN CLOSE PROXIMITY, AVOID PARALLEL RUNNING OF THE CONDUIT WITHIN 12" OF EACH OTHER. TRY TO CROSS ELECTRICAL CONDUITS AT 90° ANGLES TO AV CONDUITS WHEREVER POSSIBLE. MAINTAIN MINIMUM SEPARATIONS OF 12" PER 100V FROM ANY MAJOR ELECTRICAL EQUIPMENT SUCH AS TRANSFORMERS, ELECTRIC MOTORS, MAGNETIC CONTACTORS, AIR HANDLING UNITS, CHILLERS, LIFTS, ETC.
6. THE MINIMUM CONDUIT SIZE TO BE USED ON THE SYSTEMS OF THIS PROJECT IS 1/2".
7. CONDUIT IS TO BE INSTALLED ACCORDING TO NEC WITH NO RUN GREATER THAN 150' IN LENGTH AND WITH NO MORE THAN THE EQUIVALENT OF (4) QUARTER BENDS (360° TOTAL) BETWEEN ACCESS POINTS. WHERE CONDUIT REQUIRES PULL OR JUNCTION BOXES, THESE SHALL BE ACCESSIBLE AFTER BUILDING COMPLETION AND MARKED ON DRAWINGS AVAILABLE TO GC ON SITE.
8. FLEXIBLE METAL CONDUIT TUBING IS NOT PERMITTED FOR THE PURPOSES OF THE AVL SYSTEMS. (LOW VOLTAGE SIGNAL/CONTROL WIRING).
9. ALL CONDUIT DESTINATIONS ARE TO BE LABELED ON THE INSIDE BACK OF THE JUNCTION BOX.
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11. THE CONDUIT/RACEWAY SYSTEM MUST BE BOUND TO EARTH.
12. EQUIPMENT RACKS WILL BE BONDED TOGETHER AND TO THEIR INTERNAL BARE COPPER BUSS BARS. THE EQUIPMENT RACKS WILL BE BONDED OT THE SPECIFICALLY PROVIDED TECHNICAL GROUND THAT HAS BEEN PROVIDED IN ALLOWANCE WITH THE NEC. EQUIPMENT RACKS ARE TO BE ELECTRIACALLY ISOLATED FROM THE CONDUIT SYSTEM USING NON-CONDUCTIVE MECHANICAL CONNECTIONS. THE EQUIPMENT RACKS WILL BE ELECTRICALLY ISOLATED FROM THE FACILITY STRUCTURE BY NON-CONDUCTIVE MOUNTS OR SUPPORTS.
13. EC RESPONSIBILITIES:
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17. GC (OR CLIENT) IS RESPONSIBLE TO RECEIVE, STORE AND SECURE ANY AND ALL MATERIALS AND EQUIPMENT, NEEDED BY PTD, THAT IS SHIPPED TO THE JOBSITE.
18. GC (OR CLIENT) IS RESPONSIBLE TO MAINTAIN ADEQUATE INSURANCE TO COVER LOSS OR DAMAGE TO PTG PROVIDED EQUIPMENT AND MATERIALS STORED ON THE JOBSITE.
19. FIRE ALARM COMPANY IS RESPONSIBLE TO PULL THE SHUT OFF CABLE REQUIRED FOR THE AUDIO SYSTEM POWER SEQUENCING, INTO THE FIRE ALARM PANEL. PTG WILL TERMINATE THE SHUT OFF CABLE REQUIRED FOR THE AUDIO SYSTEM POWER SEQUENCING INTO THE CONTROL BOARD LOCATED ON THE SEQUENCING POWER RELAY PANEL.

PTG
PERFORMANCE TECHNOLOGY GROUP, LLC

REV.	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SHEET TITLE:
FIRST FLOOR CONDUIT

SHEET NUMBER:
TA-111

DO NOT SCALE DRAWING

LOCATION				BOX SPECIFICATIONS *NO SUBSTITUTIONS TO MANUFACTURER OR MODEL # PROVIDED*											RACEWAY						ELECTRICAL				
BOX NUMBER	DESCRIPTION	LOCATION	ROOM #	BOX SIZE	MUD RING SIZE	MOUNTING TYPE	INSTALL HEIGHT (TO MIDDLE)	SIGNAL TYPE	MANUFACTURER	MODEL #	BACK BOX PROVIDER	BACK BOX INSTALLER	PLATE PROVIDER	PLATE INSTALLER	DESTINATION	DESCRIPTION	LOCATION	ROOM #	CONDUIT SIZE	PULL STRING	OUTLET #	SIZE	INSTALL HEIGHT (TO MIDDLE)	AMP DRAW	VOLTAGE
CLK-100	HALL DOUBLE SIDED CLOCK	WALL	100	2 GANG		FLUSH W/ DRYWALL	114"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-101	CLASSROOM WALL CLOCK	WALL	101	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-105	CLASSROOM WALL CLOCK	WALL	105	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-106	CLASSROOM WALL CLOCK	WALL	106	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-107	CLASSROOM WALL CLOCK	WALL	107	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-110	CLASSROOM WALL CLOCK	WALL	110	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-111	CLASSROOM WALL CLOCK	WALL	111	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-114	CLASSROOM WALL CLOCK	WALL	114	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-115	HALL DOUBLE SIDED CLOCK	WALL	115	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-120	CLASSROOM WALL CLOCK	WALL	120	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-121	CLASSROOM WALL CLOCK	WALL	121	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-124	CLASSROOM WALL CLOCK	WALL	124	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-128	CLASSROOM WALL CLOCK	WALL	128	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
CLK-132	CLASSROOM WALL CLOCK	WALL	132	2 GANG		FLUSH W/ DRYWALL	102"	AVL LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
D-101	CLASSROOM DISPLAY	WALL	101	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-10	1 GANG	74"	5	120
D-105	CLASSROOM DISPLAY	WALL	105	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-9	1 GANG	74"	5	120
D-106	CLASSROOM DISPLAY	WALL	106	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-8	1 GANG	74"	5	120
D-107	CLASSROOM DISPLAY	WALL	107	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-7	1 GANG	74"	5	120
D-110	CLASSROOM DISPLAY	WALL	110	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-5	1 GANG	74"	5	120
D-111	CLASSROOM DISPLAY	WALL	111	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-6	1 GANG	74"	5	120
D-114	CLASSROOM DISPLAY	WALL	114	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-4	1 GANG	74"	5	120
D-120	CLASSROOM DISPLAY	WALL	120	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-12	1 GANG	74"	5	120
D-121	CLASSROOM DISPLAY	WALL	121	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-3	1 GANG	74"	5	120
D-124	CLASSROOM DISPLAY	WALL	124	2 GANG	1 GANG	FLUSH W/ DRYWALL	74"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-2	1 GANG	74"	5	120
D-128	FACULTY DISPLAY	WALL	128	2 GANG	1 GANG	FLUSH W/ DRYWALL	86"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-13	1 GANG	86"	5	120
D-133	RECEPTION DISPLAY	WALL	133	2 GANG	1 GANG	FLUSH W/ DRYWALL	86"	VIDEO LOW VOLTAGE	LeGrand Pass & Seymour	TV2MW	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES	P#-1	1 GANG	86"	5	120
PHN-133	PHONE PAGING STATION	WALL	133	2 GANG	1 GANG	FLUSH W/ DRYWALL	ABOVE COUNTER	VIDEO LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
SLEEVE-1	2" CONDUIT SLEEVE, MUST BE LONG ENOUGH TO PASS THRU WALL BETWEEN ROOM 120 & ROOM 125																								
SLEEVE-2	2" CONDUIT SLEEVE, MUST BE LONG ENOUGH TO PASS THRU WALL BETWEEN CORRIDOR 115 & ROOM 125																								
SLEEVE-3	2" CONDUIT SLEEVE, MUST BE LONG ENOUGH TO PASS THRU WALL BETWEEN CORRIDOR 115 & ROOM 125																								
SPK-1	EXTERIOR BULL HORN	WALL	EXT	2 GANG	2 GANG	FLUSH W/ DRYWALL	120"	VIDEO LOW VOLTAGE	EC DISCRETION	TBD	EC	EC	AVL TECH	AVL TECH	STUB	ABOVE DROP CEILING	CORRIDOR	115	(1) 1/2"	YES					
									MUST MEET IP65 REQUIREMENTS																
SWT-1	CLOCK & BELL NETWORK SWITCH	BOJ	125	NO JBOX NEEDED. JUST STUB REQUIRED 1/2" CONDUIT INTO ROOM 125 AND RUN TO NEW I/T ROOM DESTINATION AND STUB INTO ROOM.											TBD	NEW I/T ROOM	TBD		(1) 1/2"	YES	P#-11	1 GANG	72"	20	120

PTG

PERFORMANCE TECHNOLOGY GROUP, LLC

REV	DATE	DESCRIPTION
0	3/24/2025	100% ORIGINAL ISSUE

PROJECT:

DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING

21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

NOTES:

1. THIS DRAWING IS A DESIGN CONCEPT ONLY AND AS SUCH ALL INFORMATION CONTAINED WITHIN IS SUBJECT TO NATIONAL, REGIONAL, AND LOCAL CODES AND REGULATIONS. ALL INFORMATIoN CONTAINED WITHIN MUST BE VERIFIED BY ELECTRICAL, MECHANICAL AND STRUCTURAL ENGINEERS, AND INSTALLED IN SUCH A MANNER.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL MEASUREMENTS AS THIS DRAWING MAY NOT BE TO SCALE.

SHEET TITLE:

JUNCTION BOX SCHEDULE

PROJECT#: AS170

SHEET NUMBER:

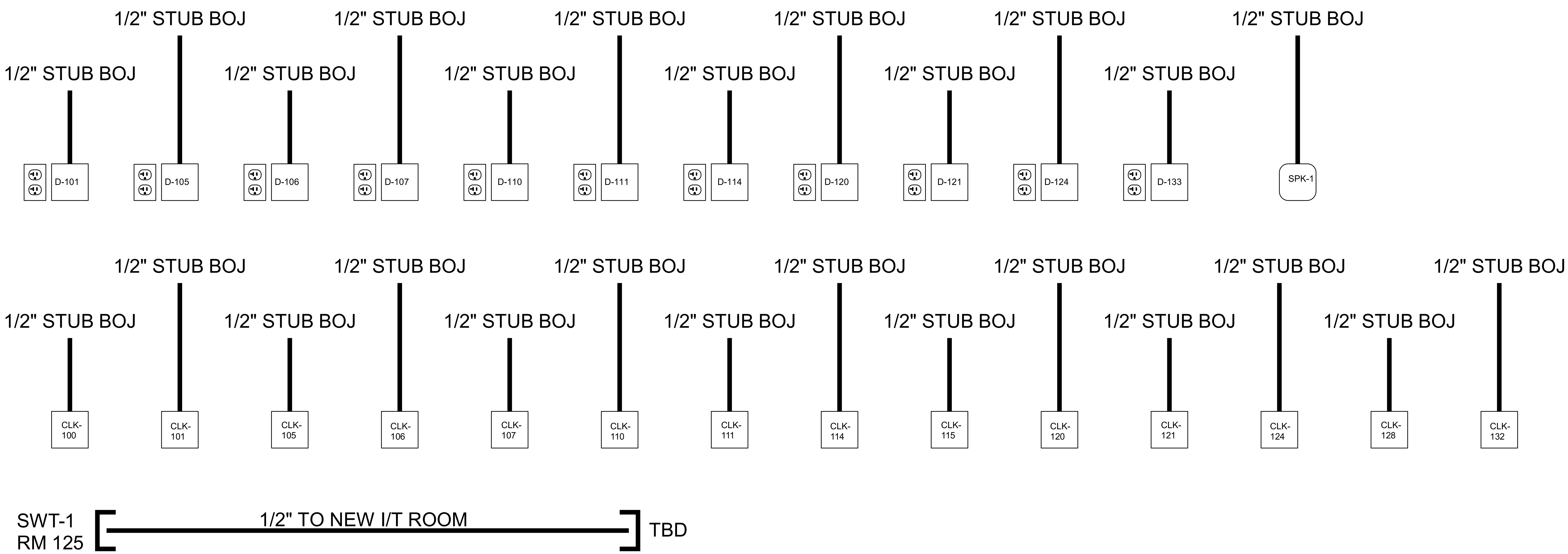
TA-610

DO NOT SCALE DRAWING

LEGEND:

NOTE: SEE JBOX SCHEDULE ON SHEETS TA-610 AND FOLLOWING FOR JBOX SPECIFICS, MOUNTING HEIGHTS AND TRADE RESPONSIBILITIES.

- STANDARD JBOX
- IP65 RATED EXTERIOR JBOX WITH WATERPROOF PLATE
- HOUSE POWER
- METAL CONDUIT



PERFORMANCE TECHNOLOGY GROUP, LLC

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PROJECT:
DELMARVA EARLY LEARNING CENTER
NEW SCHOOL BUILDING
21777 SUSSEX PINES RD
GEORGETOWN, DE 19947

SHEET TITLE:
CONDUIT ONE LINE

SHEET NUMBER:
TA-611

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