

New Classroom Addition for

North Duplin Jr.-Sr. High School

Duplin County Schools

1388 NC-403, Mt Olive, North Carolina 28365

Hite associates
ARCHITECTURE / PLANNING / TECHNOLOGY
2600 Meridian Drive / Greenville, N.C. 27834 / tel 252-757-0333

STRUCTURAL CONSULTANT:

QUEEN ENGINEERING & DESIGN, P.A.

5530 Munford Road Raleigh, North Carolina 27612 tel (919) 420-0480

MEPT ENGINEERING CONSULTANT:

ENGINEERING SOURCE, P.A.

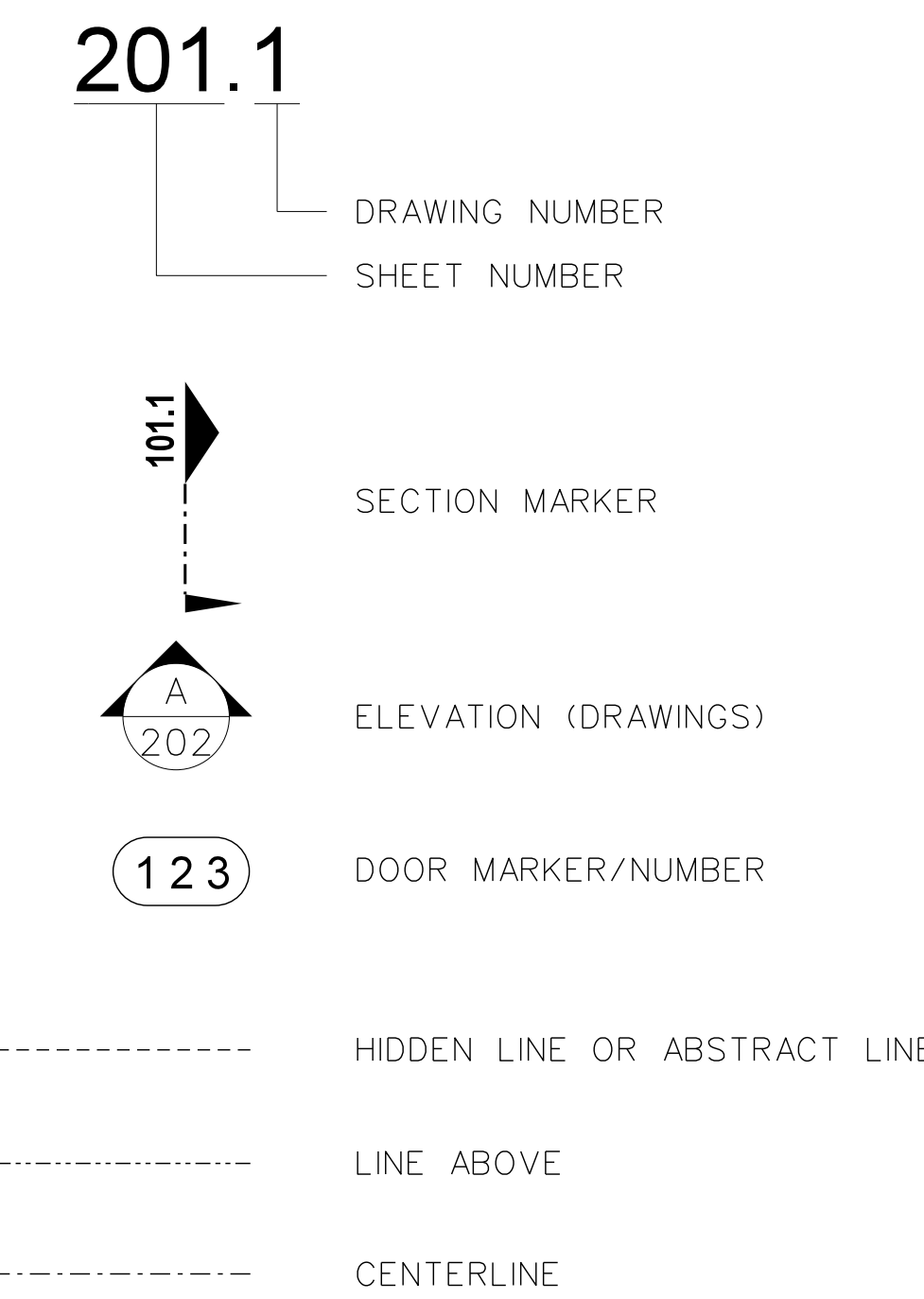
102 Regency Boulevard Greenville, North Carolina 27834 tel (252) 439-0338

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	INV	INVERT
L	ANGLE	JT	JOINT
AB	ANCHOR BOLT	LAV	LAVATORY
@	AT	MAS	MASONRY
B/B	BACK TO BACK (CURB)	MAX	MAXIMUM
BRG	BEARING	MB	MARKER BOARD
BD	BOARD	MEI	METAL
BC	BRICK COURSE	MC	MECHANICAL CONTRACTOR
BLDG	BUILDING	MT	METAL THRESHOLD
CI	CAST IRON	MT	MARBLE THRESHOLD
CPT	CARPET	MIN	MINIMUM
CB	CATCH BASIN	MSC	MISCELLANEOUS
CLG	CEILING	NSM	NOMINAL
CT	CEILING TILE	NIC	NOT IN CONTRACT
CB	CHALKBOARD	NTS	NOT TO SCALE
CJ	CONSTRUCTION JOINT	OC	ON CENTER
CONC	CONCRETE	OPG	OPENING
CMU	CONCRETE MASONRY UNIT	OPP	OPPOSITE
CG	CORNER GUARD	PC	PLUMBING CONTRACTOR
CMP	CORRUGATED METAL PIPE	PLAS	PLASTER
CONT.	CONTINUOUS	PL	PLATE
C & R	CURTAIN & ROD	PT	PRESSURE TREATED
C & T	CURTAIN & TRACK	R	RADIUS
DIA	DIAMETER	REF	REFERENCE
DIM	DIMENSION	RENIF	REINFORCED
DS	DOWNSPOUT	RCP	REINFORCE CONCRETE PIPE
DWR	DRAWER	REQ'D	REQUIRED
EA	EACH	RFS	RUBBER FASTENING STRIP
EC	ELECTRICAL CONTRACTOR	RI	RIGID INSULATION
EIFS	EXTERIOR INSULATION & FIN SYSTEM	R/W	RIGHT OF WAY
ELECT	ELECTRICAL	RD	ROOF DRAIN
EWC	ELECTRIC WATER COOLER	RDL	ROOF DRAIN LEADER
ELEV	ELEVATION	RGH	ROUGH
EQ	EQUAL	SCHED	SCHEDULED
EIR	EXISTING TO REMAIN	SH	SHELF
EXIST	EXISTING	SHTG	SHEATHING
EXP	EXPOSED, EXPANSION	SIM	SIMILAR
EJ	EXPANSION JOINT	SPEC	SPECIFIED
F/F	FACE TO FACE (CURB)	SPECS	SPECIFICATIONS
FIN	FINISH	STD	STANDARD
FE	FIRE EXTINGUISHER	SUSP	SUSPENDED
FEC	FIRE EXTINGUISHER CABINET	TB	TACKBOARD
FHC	FIRE HOSE CABINET	TYP	TYPICAL
FTG	FOOTING	TJC	TYPICAL CONTROL JOINT
FD	FLOOR DRAIN	UDN	UNLESS OTHERWISE NOTED
FL	FLOOR	UR	URINAL
FSR	FLEXIBLE SHEET ROOFING	VB	VAPOR BARRIER
GB	GYP/SUM WALLBOARD	VERT	VERTICAL
GC	GENERAL CONTRACTOR	VCT	VINYL COMPOSITION TILE
HM	HOLLOW METAL	WC	WATER CLOSET
HOR	HORIZONTAL	WWF	WELDED WIRE FABRIC
INSUL	INSULATION	W/	WITH

DRAWING SYMBOLS

DRAWING IDENTIFICATION MARKERS



MATERIAL SYMBOLS

	EARTH
	SAND
	MORTAR OR GROUT
	CONCRETE
	BRICK
	CONCRETE MASONRY UNIT
	STEEL
	ROUGH WOOD (CONTINUOUS)
	ROUGH WOOD (INTERMITTENT)
	FINISH WOOD
	PLYWOOD
	BATT OR BLOWN INSULATION
	RIGID INSULATION
	METAL STUD / GYPBOARD WALL

DRAWING INDEX

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E-001	ELECTRICAL GENERAL NOTES / SCHEDULES / DETAILS
E-101	POWER PLAN / LIGHTING PLAN / PANEL SCHEDULES
FA-101	FIRE ALARM PLAN / DETAILS / GENERAL NOTES
IT-101	TECHNOLOGY PLAN / DETAILS / GENERAL NOTES

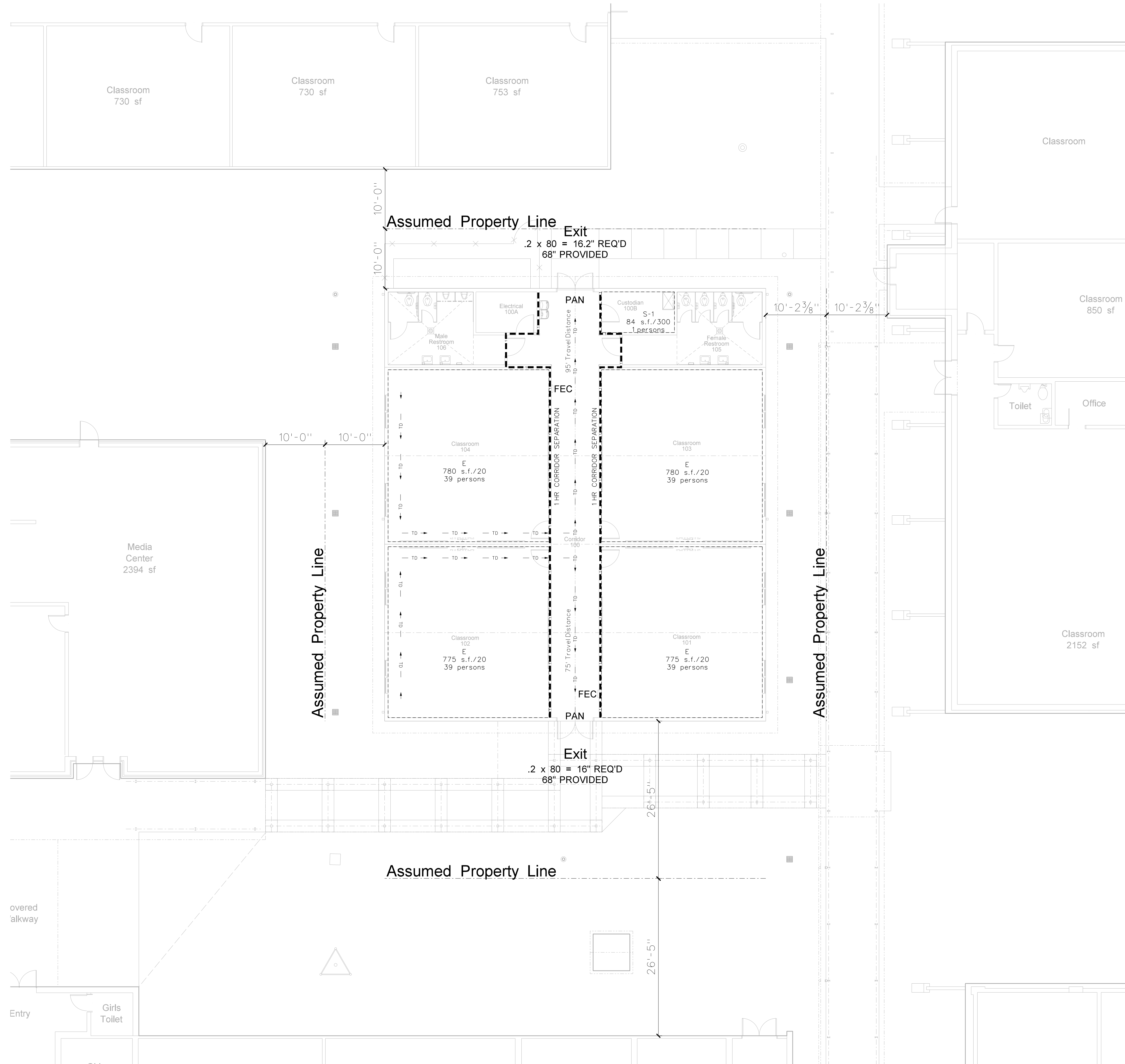
No.	Date	Revision

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New Classroom Addition for
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1388 NC-403, Mt. Olive, NC 28365
Duplin County / North Carolina

Project No.	22253
Date:	6 March 2023
Drawing no.	T-1



New Classroom Addition for
 Educational (E)
 Type V Unsprinklered
 Total Occupants: 157
 Total Area: 4,651 gross s.f.
 Total Area: 4,327 net s.f.

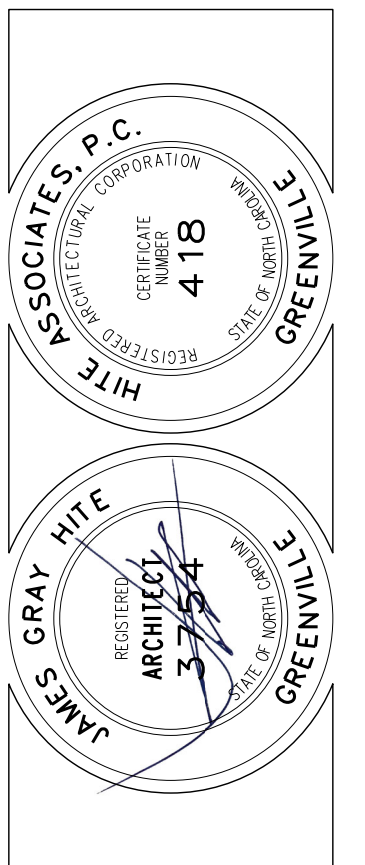
LEGEND

TO	TRAVEL DISTANCE / DIRECTION
FEC	FIRE EXTINGUISHER CABINET
PAN	PANIC HARDWARE
---	LIMIT OF AREA CALCULATIONS

001.1 LIFE SAFETY PLAN
 SCALE: 1/8" = 1'-0"

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New Classroom Addition for
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 1388 NC-403, Mt. Olive, NC 28365
 Duplin County / North Carolina

Project No. 22253

Date: 6 March 2023

Drawing no.
LS 001

No.	Date	Revision

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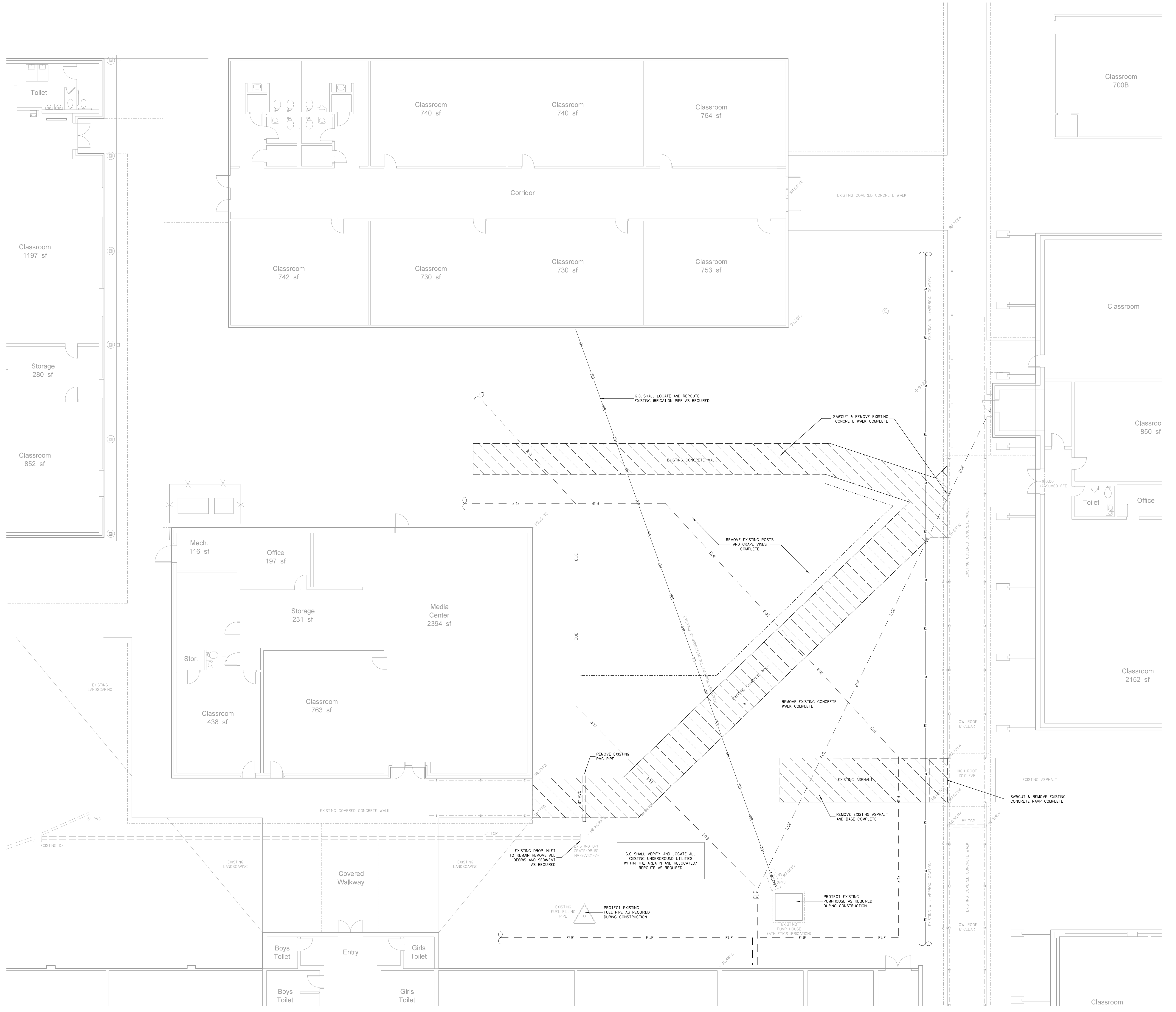
New Classroom Addition for North Duplin Jr.-Sr. High School
1398 NC-403, Mt. Olive, NC 28365
Duplin County / North Carolina

Project No.	22253
Date:	6 March 2023
Drawing no.	A 001

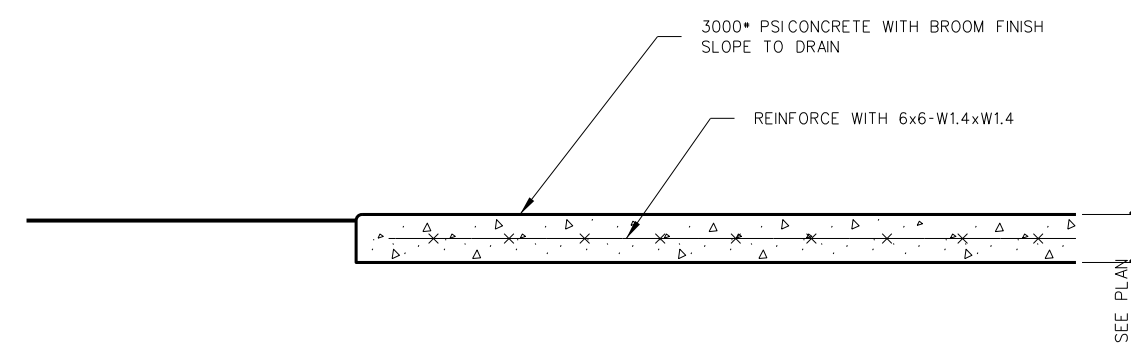
- ### GENERAL DEMOLITION NOTES
1. ALL SITE WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND OR REGULATORY AGENCIES, CODES AND REGULATIONS FOR NEW CONSTRUCTION AND DEMOLITION.
 2. REMOVE ANY CONCRETE, ASPHALT OR OTHER DEBRIS AS SPECIFIED, WHICH IS EXPOSED THROUGH DEMOLITION AND CONSTRUCTION OPERATIONS OF ANY PRIME CONTRACTOR.
 3. GENERAL CONTRACTOR SHALL REPLACE AND OR REPAIR ANY DAMAGED OR CRACKED SECTIONS OF CONCRETE CURB WALK OR ASPHALT PAVING THAT IS TO REMAIN AS REQUIRED, SAWCUT OFF BROKEN OR CRACKED SECTIONS TO PROVIDE A STRAIGHT UNIFORM EDGE, PROVIDE A SMOOTH TRANSITION TO EXISTING FINISHES.
 4. GENERAL CONTRACTOR SHALL RETAIN A PRIVATE UTILITY LOCATOR SERVICE TO LOCATE AND IDENTIFY ALL UNDERGROUND UTILITIES.
 5. G.C. SHALL REROUTE ALL UNDERGROUND STORM DRAINAGE, SANITARY SEWER SERVICES, WATER SERVICES, IRRIGATION LINES, GAS LINES, ELECTRICAL LINES, ETC. WHETHER OR WHETHER NOT SHOWN THAT HAVE BEEN IDENTIFIED BY THE PRIVATE LOCATOR SERVICE OR EXPOSED DURING DEMOLITION AND CONSTRUCTION OPERATIONS AS REQUIRED.
 6. ANY EXISTING TREES, LANDSCAPED AREAS AND BUFFERYARDS THAT ARE TO REMAIN SHALL BE PROTECTED AS REQUIRED FROM ALL DEMOLITION AND CONSTRUCTION ACTIVITIES PER CITY OF GREENVILLE PLANNING AND DEVELOPMENT REGULATIONS.
 7. SEWER MANHOLES, CATCH BASINS, VALVE BOXES, CLEAN OUTS, GRATES & COVERS THAT ARE TO REMAIN IN USE SHALL BE PROTECTED AND ADJUSTED AS REQUIRED TO MEET FINAL GRADES. CONTRACTOR SHALL IDENTIFY AND LOCATE EACH AND ADJUST AS REQUIRED TO NEW FINISH ELEVATIONS. PROVIDE HEAVY DUTY TRAFFIC RATED COVERS IN ALL TRAFFIC ASPHALT AREAS.



NOTE: FOR DEMOLITION AND RELOCATION OF ALL ONE A.G.U.S. POWER DISTRIBUTION TRANSFORMERS, POWER/LIGHT POLES, DATA, TELECOMM, ETC. SEE ELECTRICAL DEMOLITION PLANS

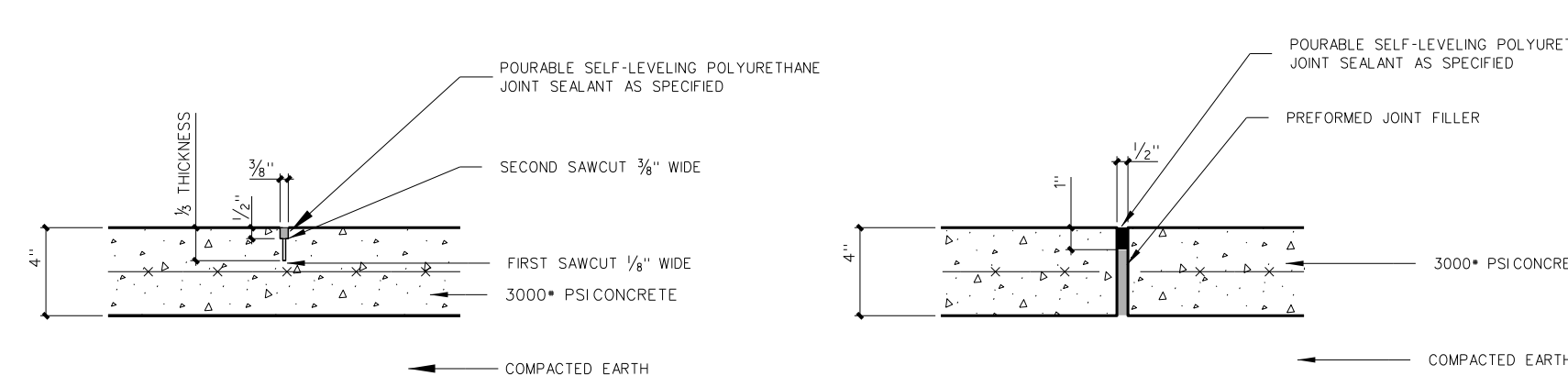


001.1 SITE DEMOLITION PLAN
SCALE: 1" = 10'-0"



NOTE:
PROVIDE SAWCUT JOINTS AT 10'-0" O.C. VERIFY LAYOUT WITH ARCHITECT.
SAWCUT JOINTS MIN 1/2" SLAB THICKNESS NO MORE THAN 24 HOURS
AFTER PLACEMENT SEE JOINT DETAILS. PROVIDE 1/2" EXPANSION JOINTS
AS SPECIFIED. 30'-0" O.C. MAX. VERIFY LAYOUT WITH ARCHITECT

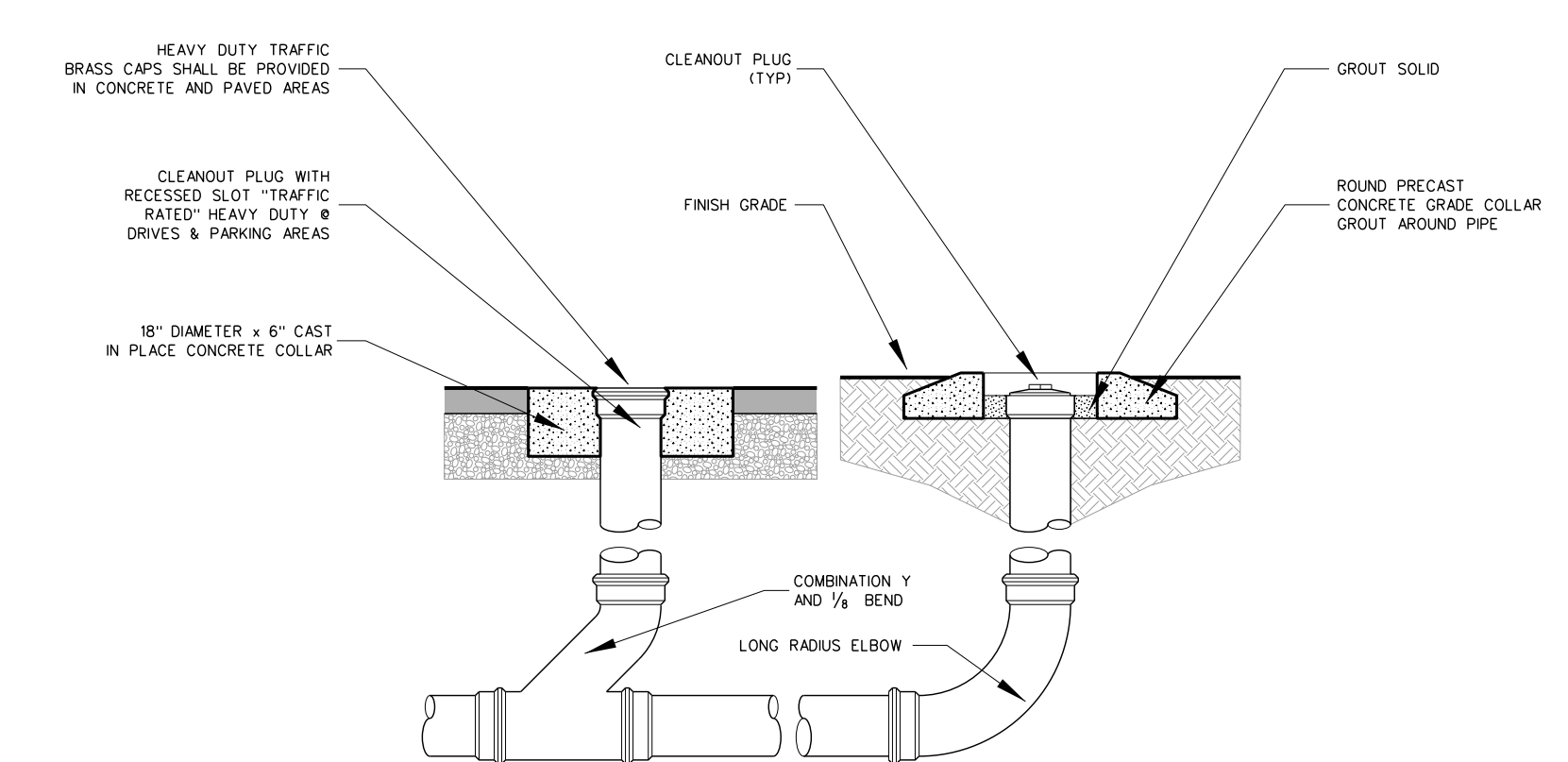
101.5 LIGHT-DUTY CONCRETE SLAB
SCALE: 3/4" = 1'-0"



(Joints not to exceed 5' o.c.)

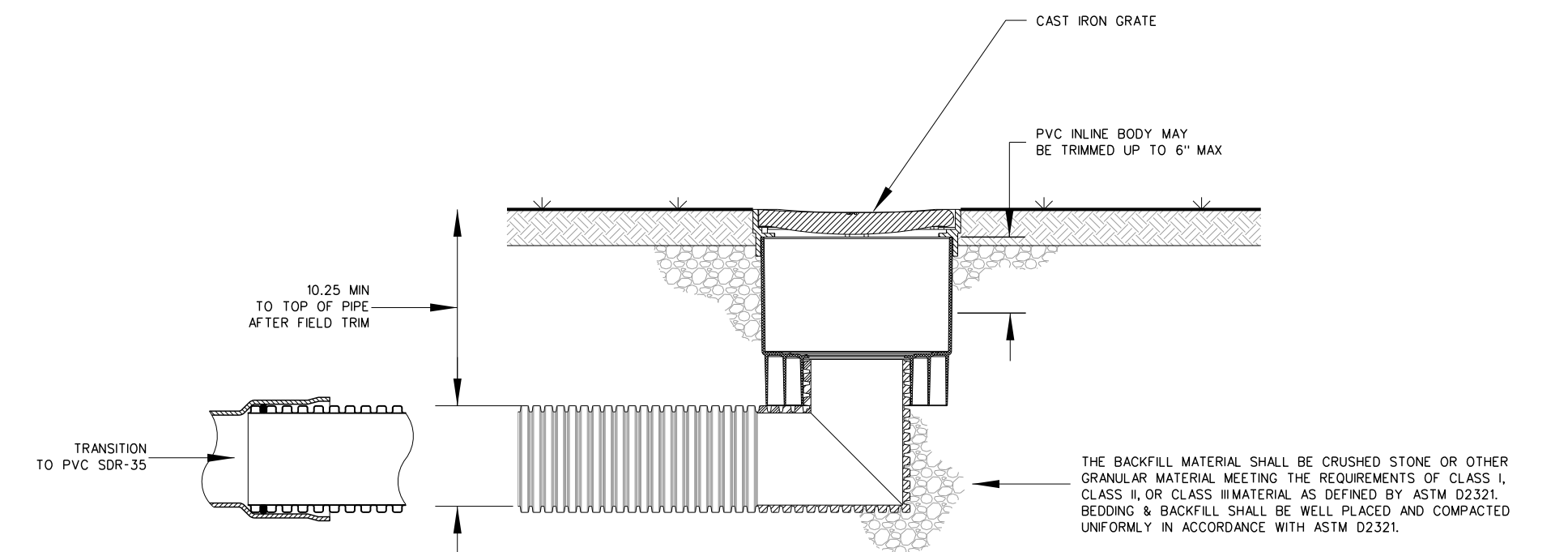
EXPANSION JOINT (E.J.)
(Joints not to exceed 20' o.c. locate at all walk intersections and inside corners)

101.4 CONCRETE JOINT DETAILS
SCALE: NONE

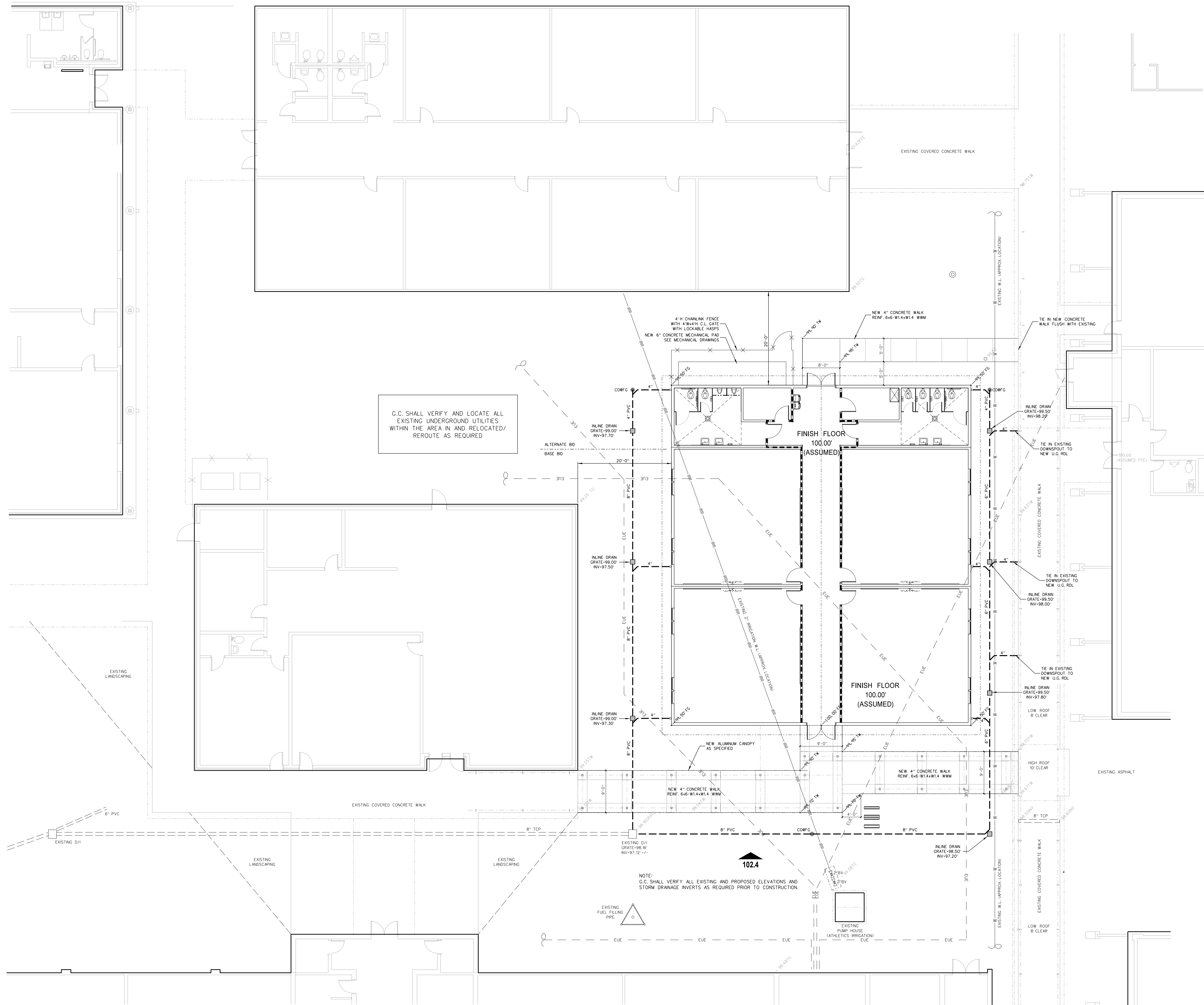


NOTE: CLEANOUT TO BE OF SAME MATERIAL AS PIPE U.O.N.

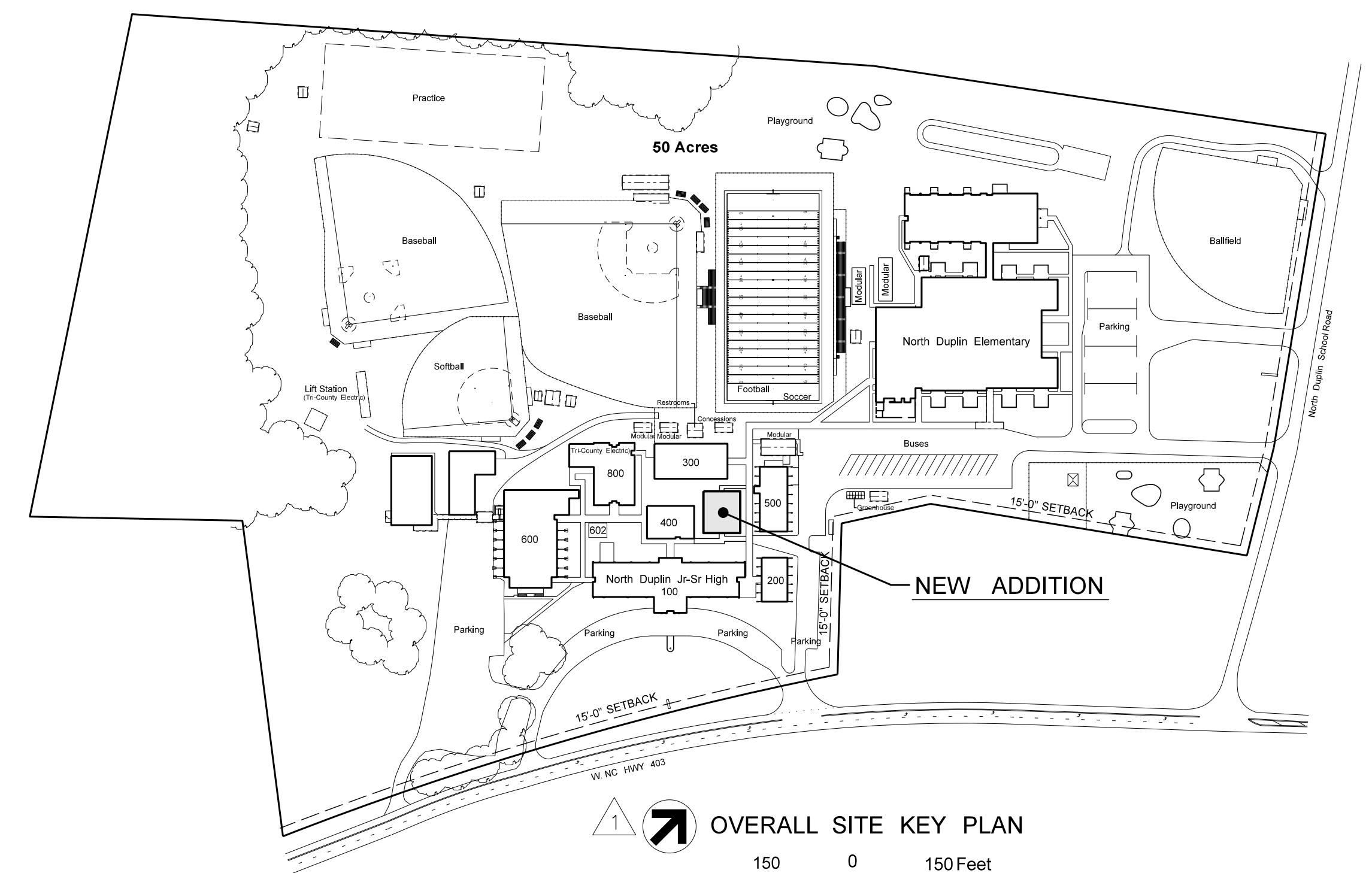
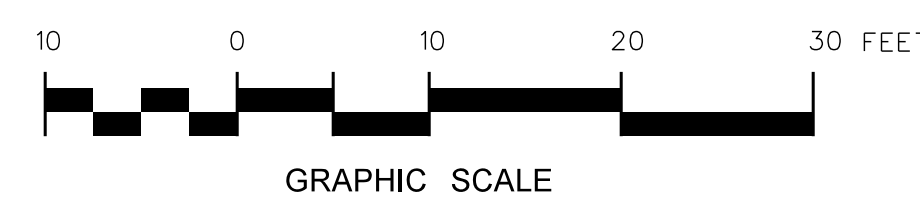
101.3 CLEANOUT DETAIL
SCALE: NTS



101.2 INLINE DRAIN DETAIL (SHALLOW INSTALLATION)
SCALE: NTS



002.1 SITE PLAN
SCALE: 1" = 10'-0"



OVERALL SITE KEY PLAN
Graphic Scale

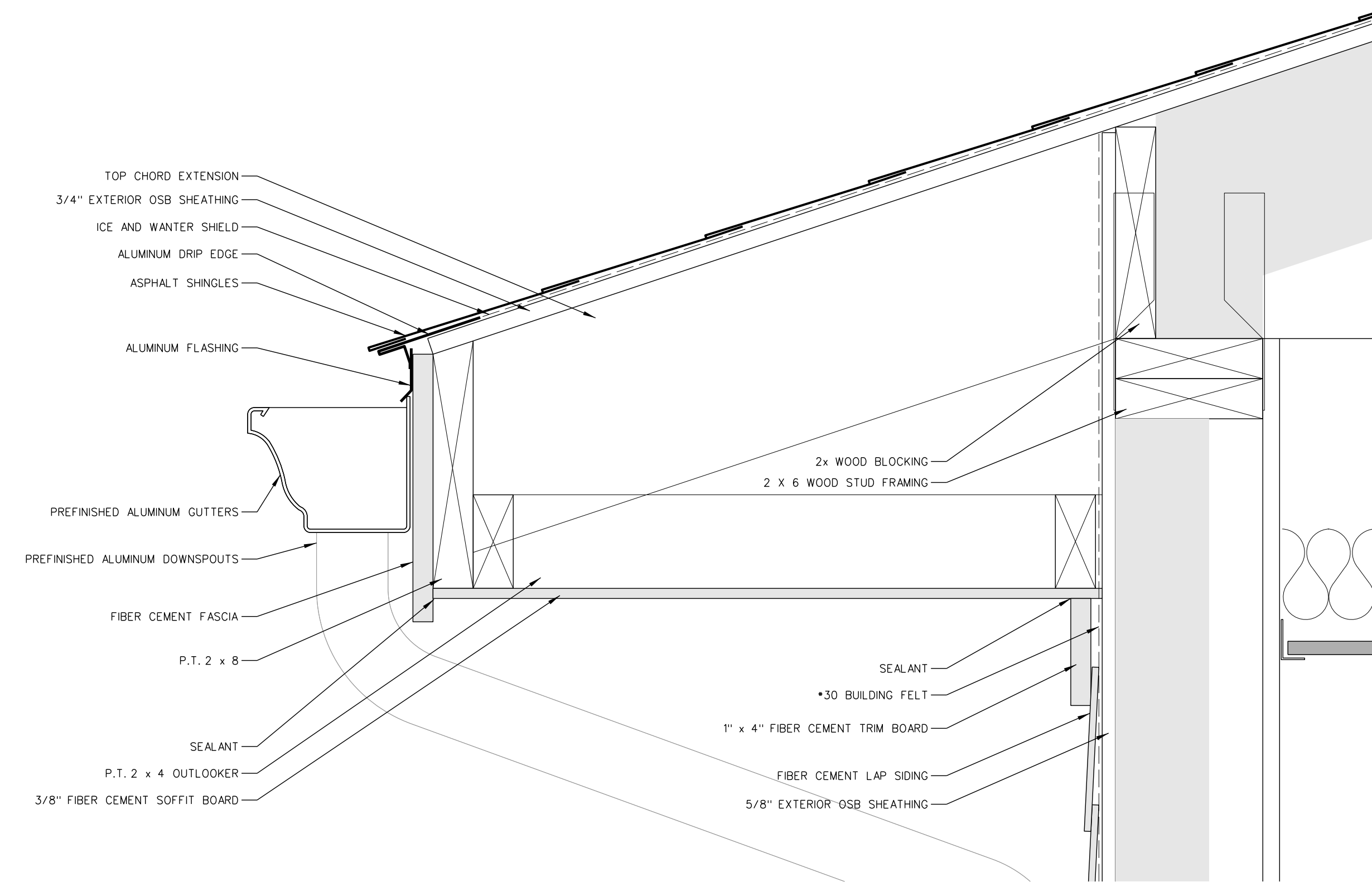
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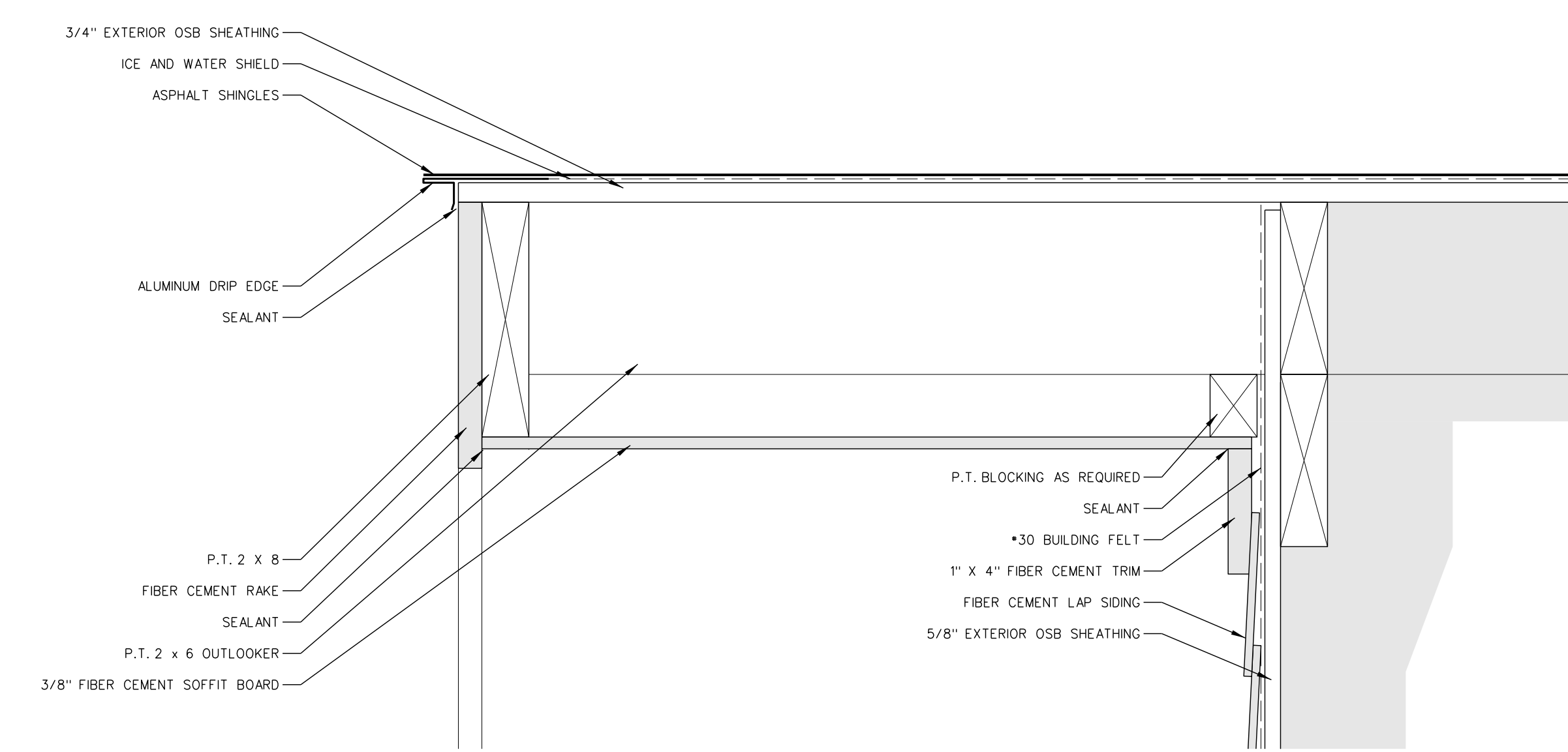


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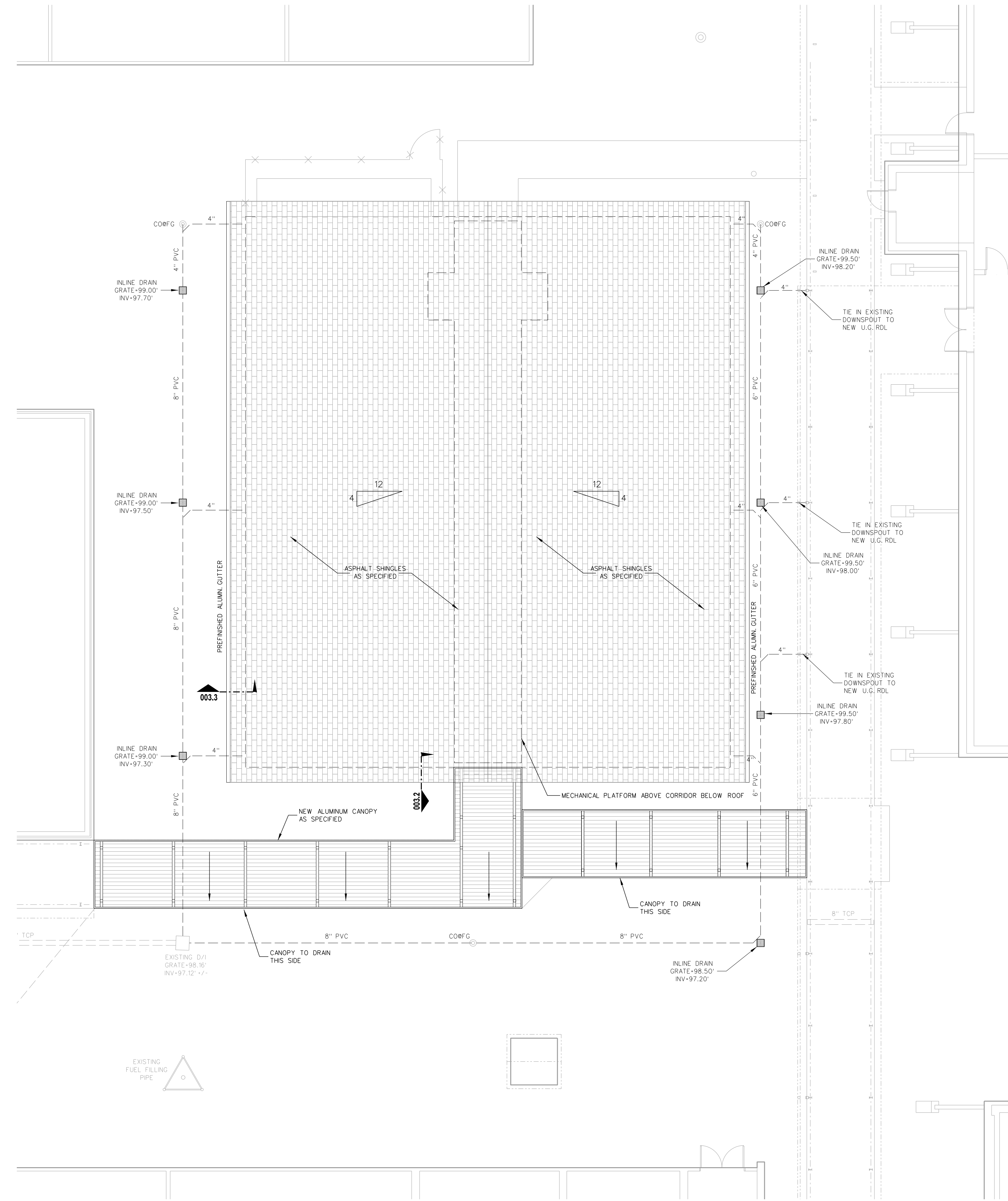
Project No: 22253
Date: 6 March 2023
Drawing no: **A 002**



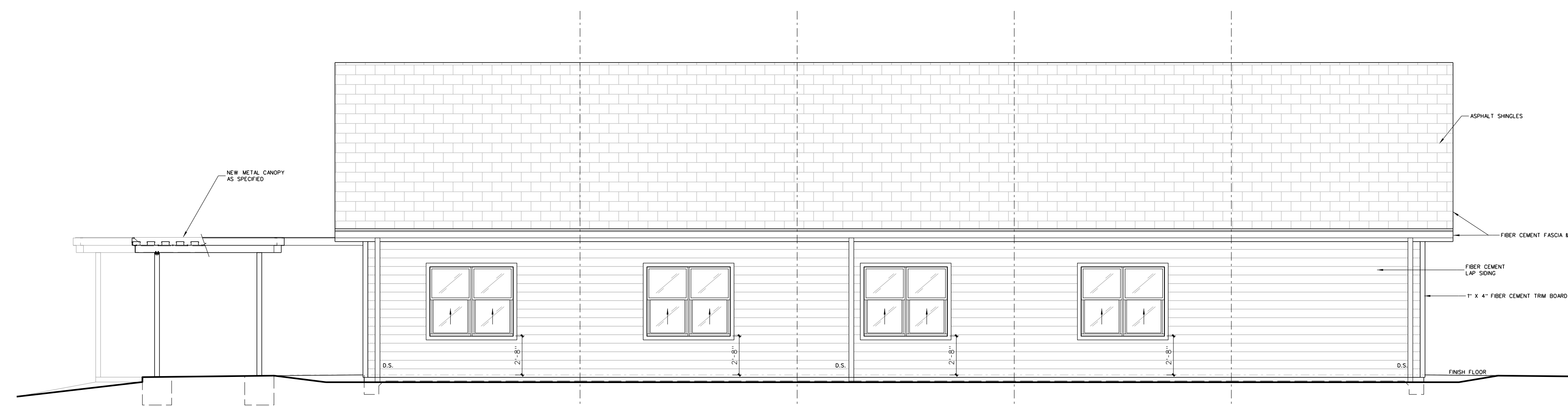
003.3 EAVE / SOFFIT DETAIL
SCALE: 3\"/>



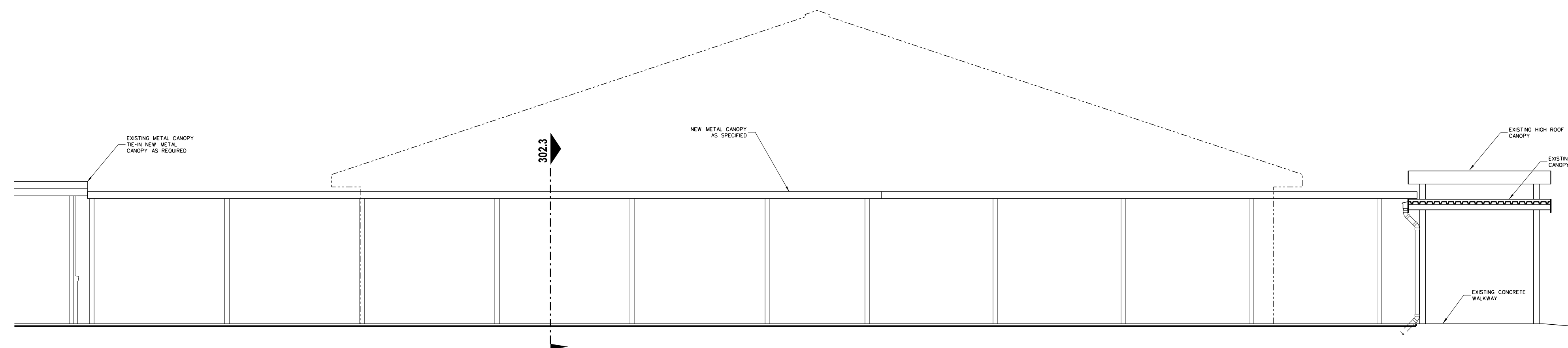
003.2 RAKE DETAIL
SCALE: 3\"/>



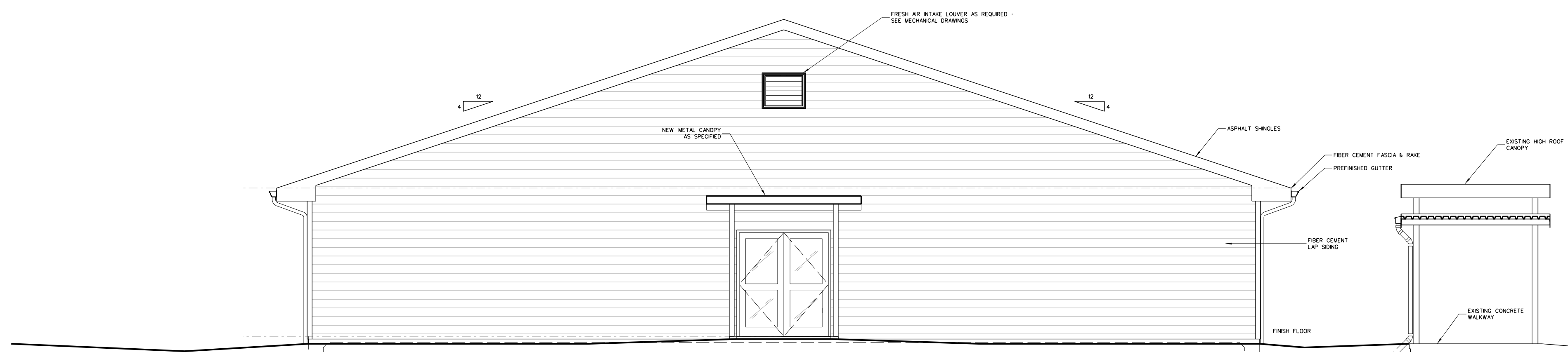
003.1 ROOF PLAN
SCALE: 1/8\"/>



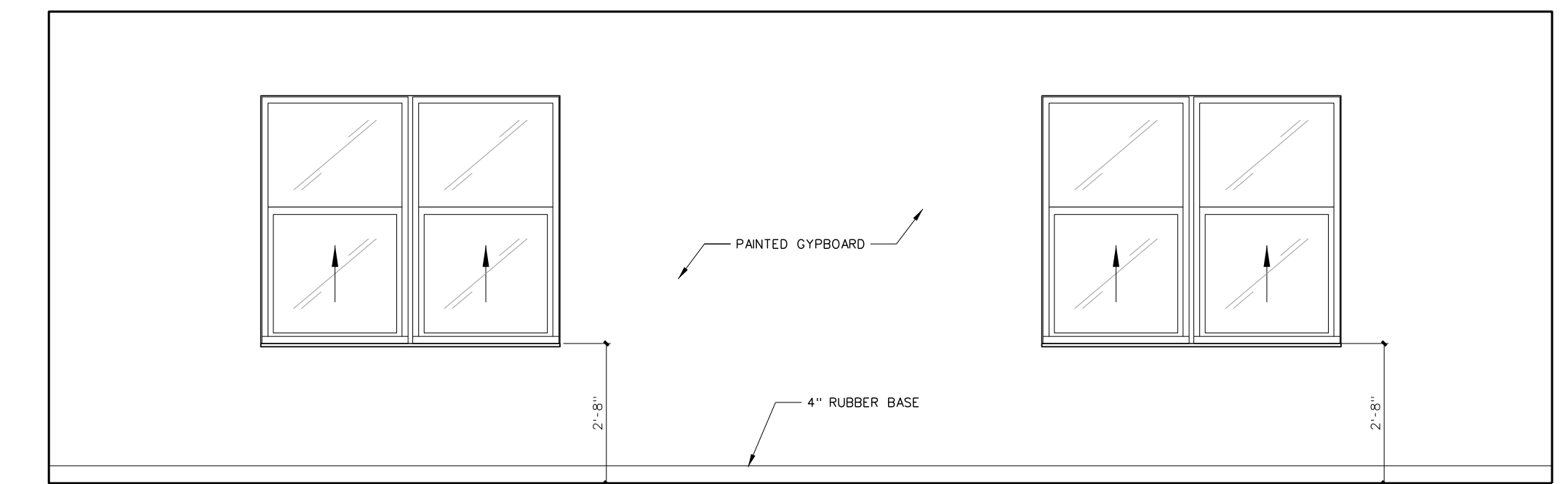
102.5 ELEVATION - SIDE WALL (MIRROR OPP. SIDE)
SCALE: 1/4" = 1'-0"



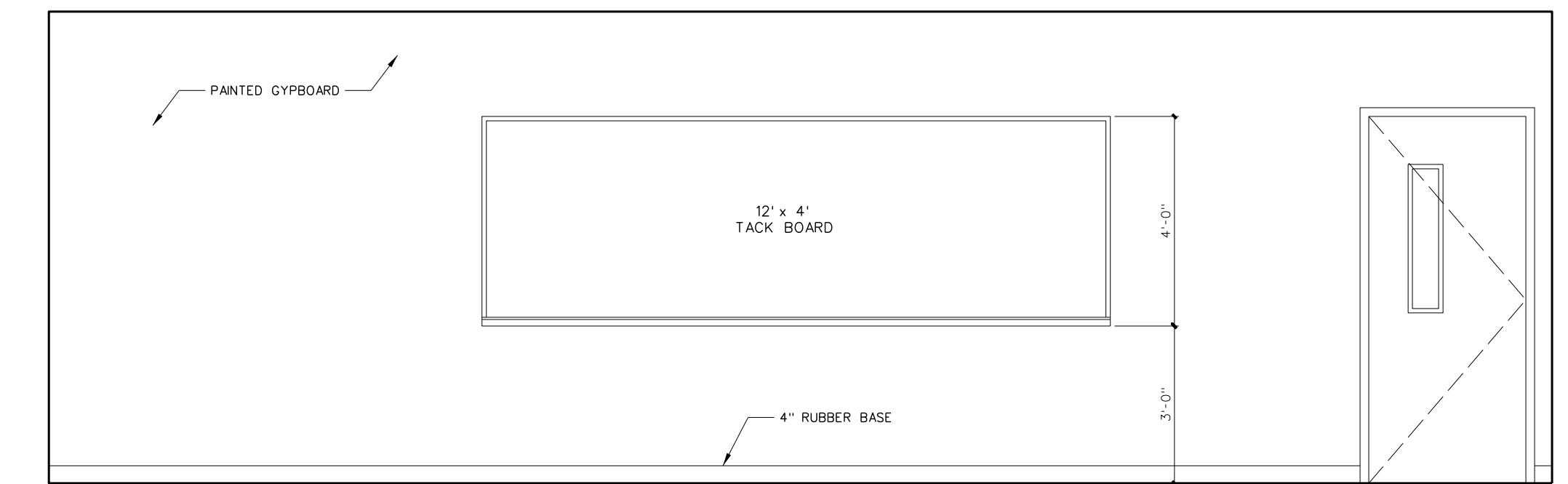
102.4 EXTERIOR ELEVATION - METAL CANOPY
SCALE: 1/4" = 1'-0"



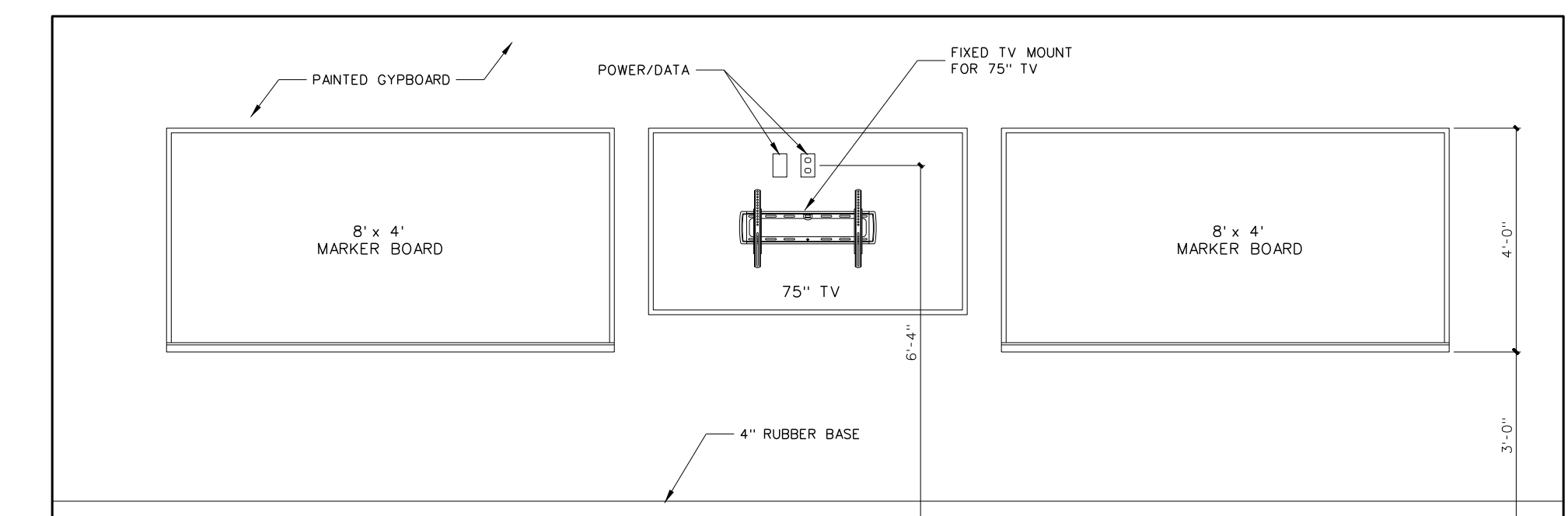
102.3 EXTERIOR ELEVATION - TYP. GABLE END
SCALE: 1/4" = 1'-0"



C101 CLASSROOM

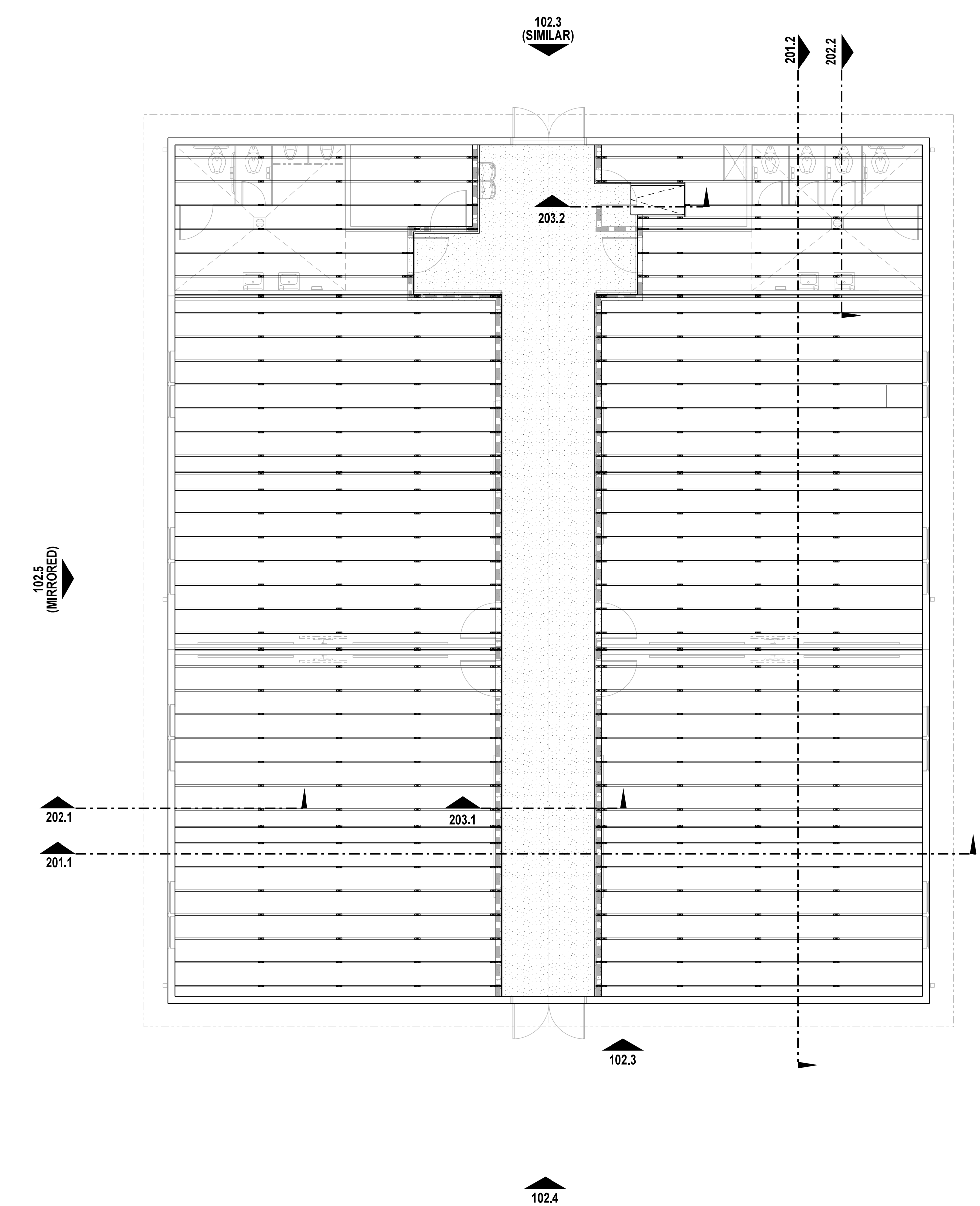


B101 CLASSROOM



A101 CLASSROOM

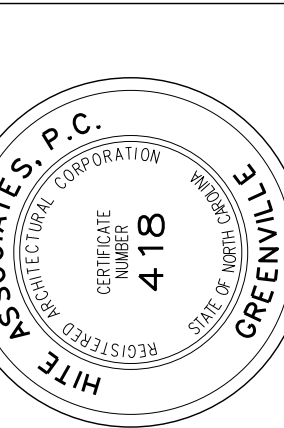
102.2 CLASSROOM INTERIOR ELEVATIONS
SCALE: 3/8" = 1'-0"



102.1 PLATFORM PLAN
SCALE: 1/8" = 1'-0"

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Drawing No. **A 102**

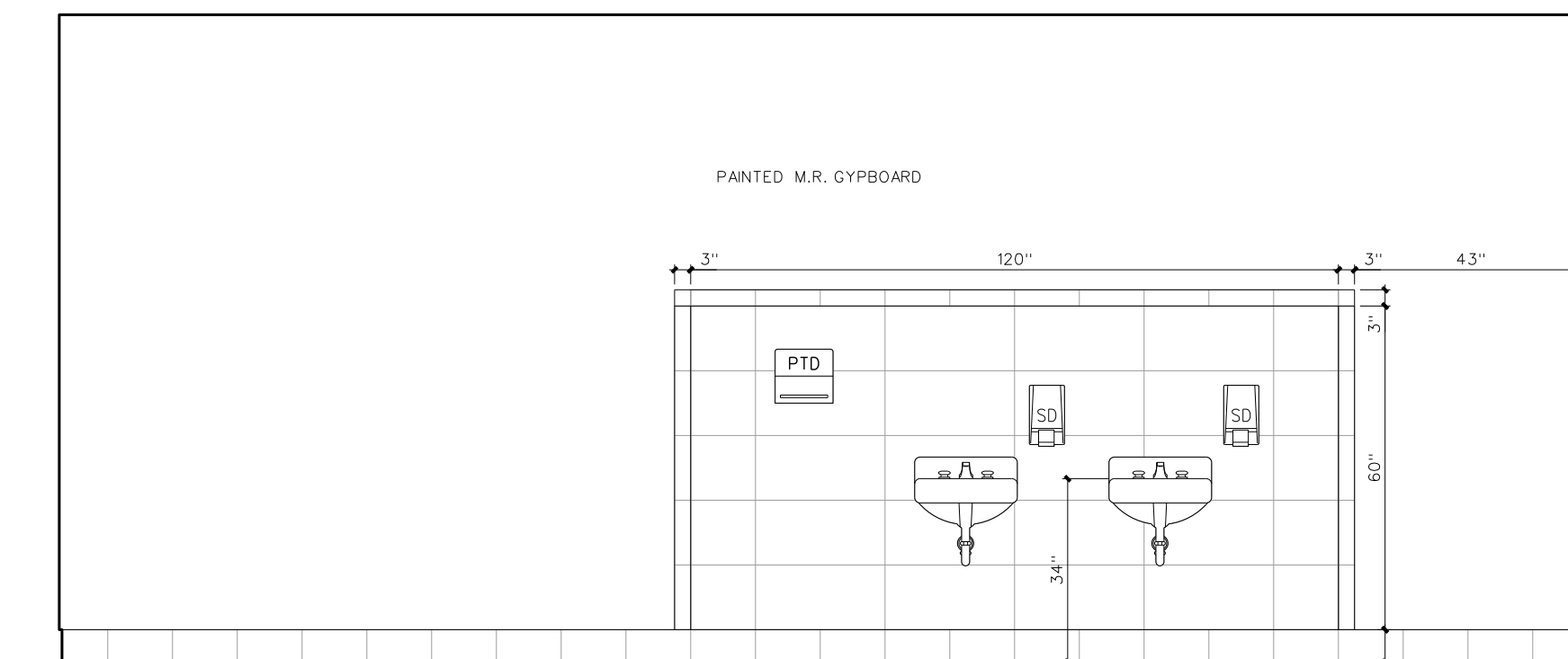
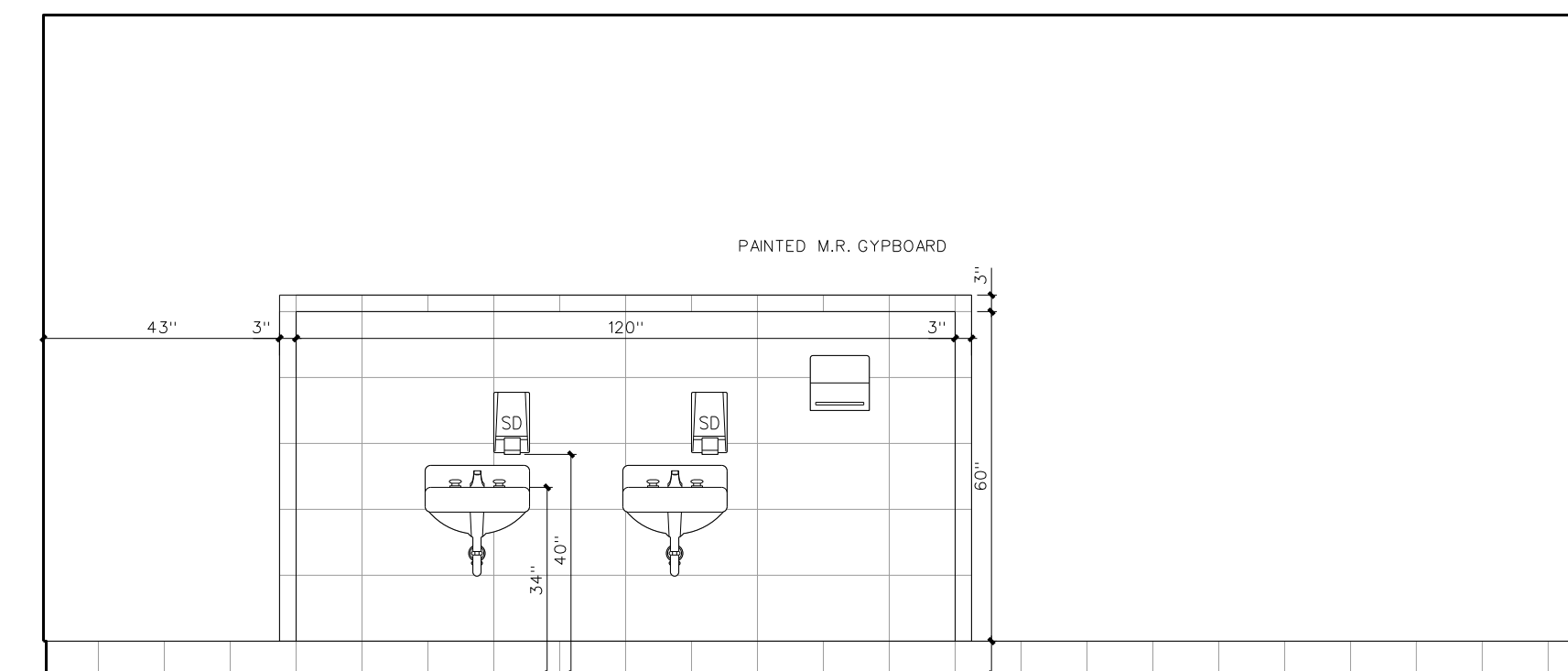
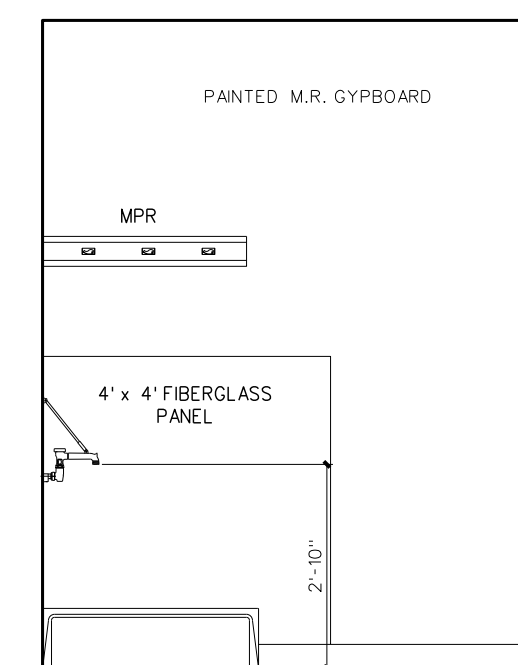
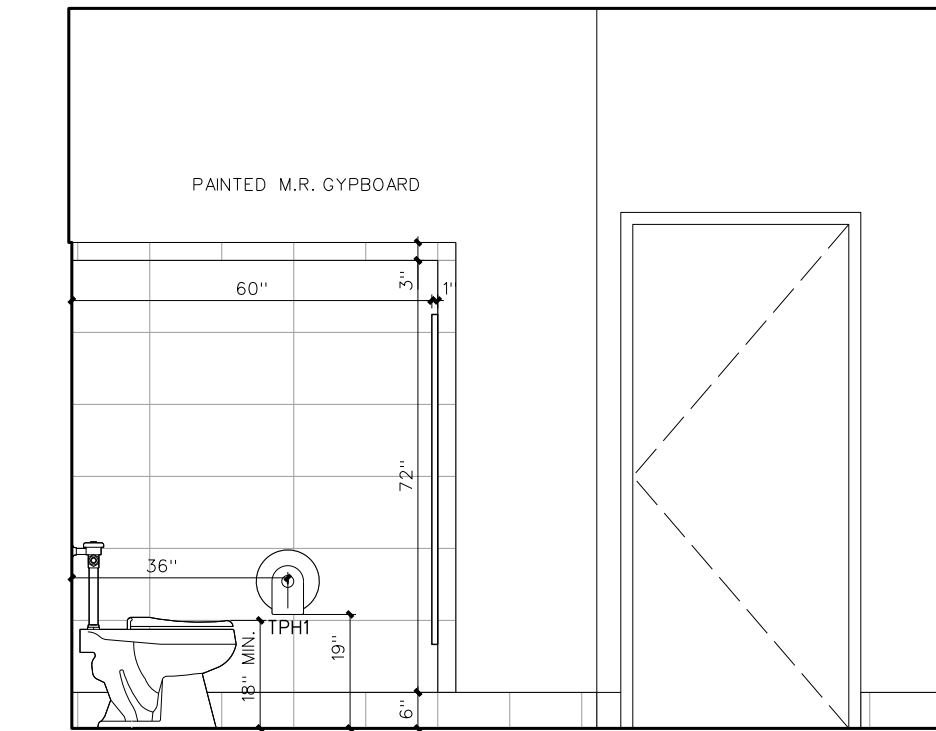
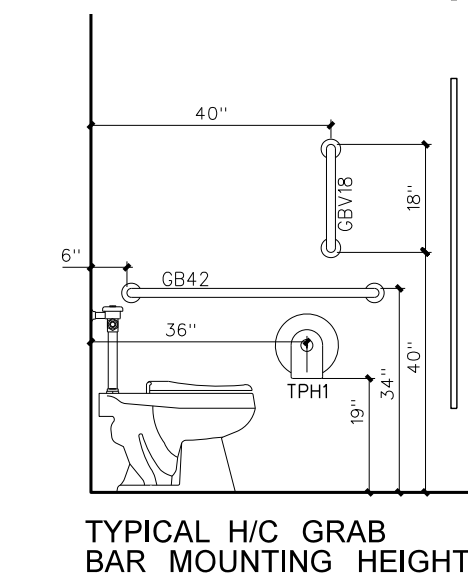
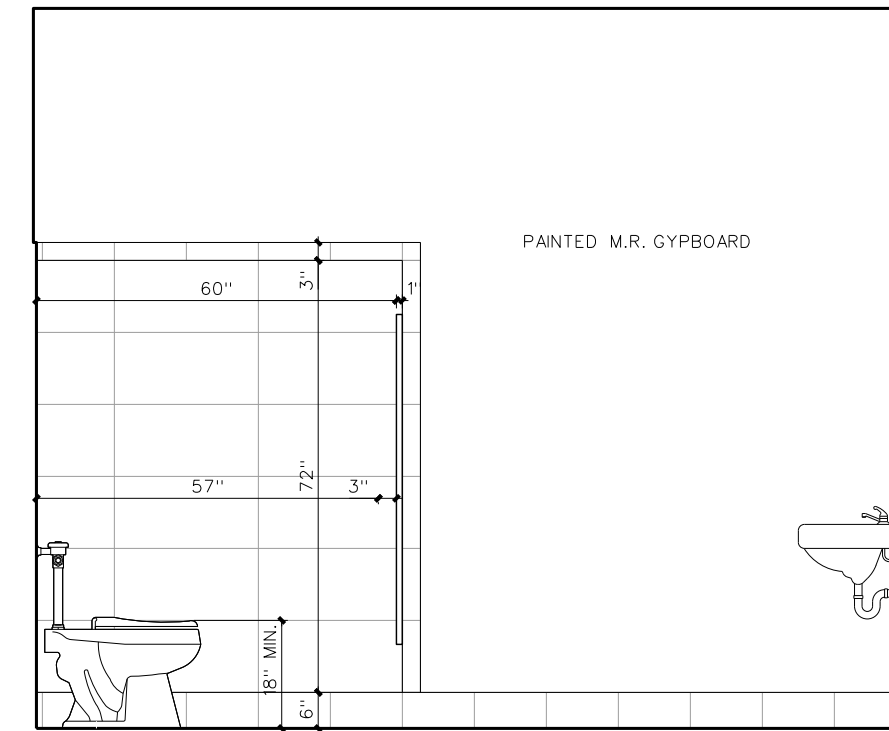
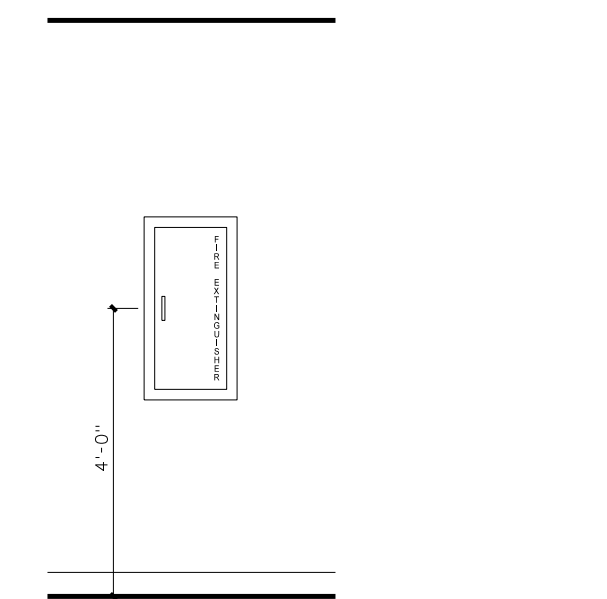
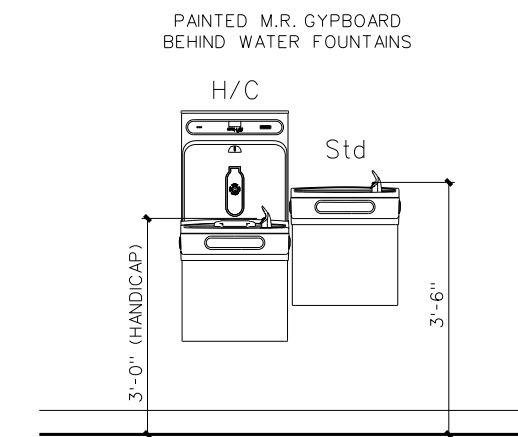
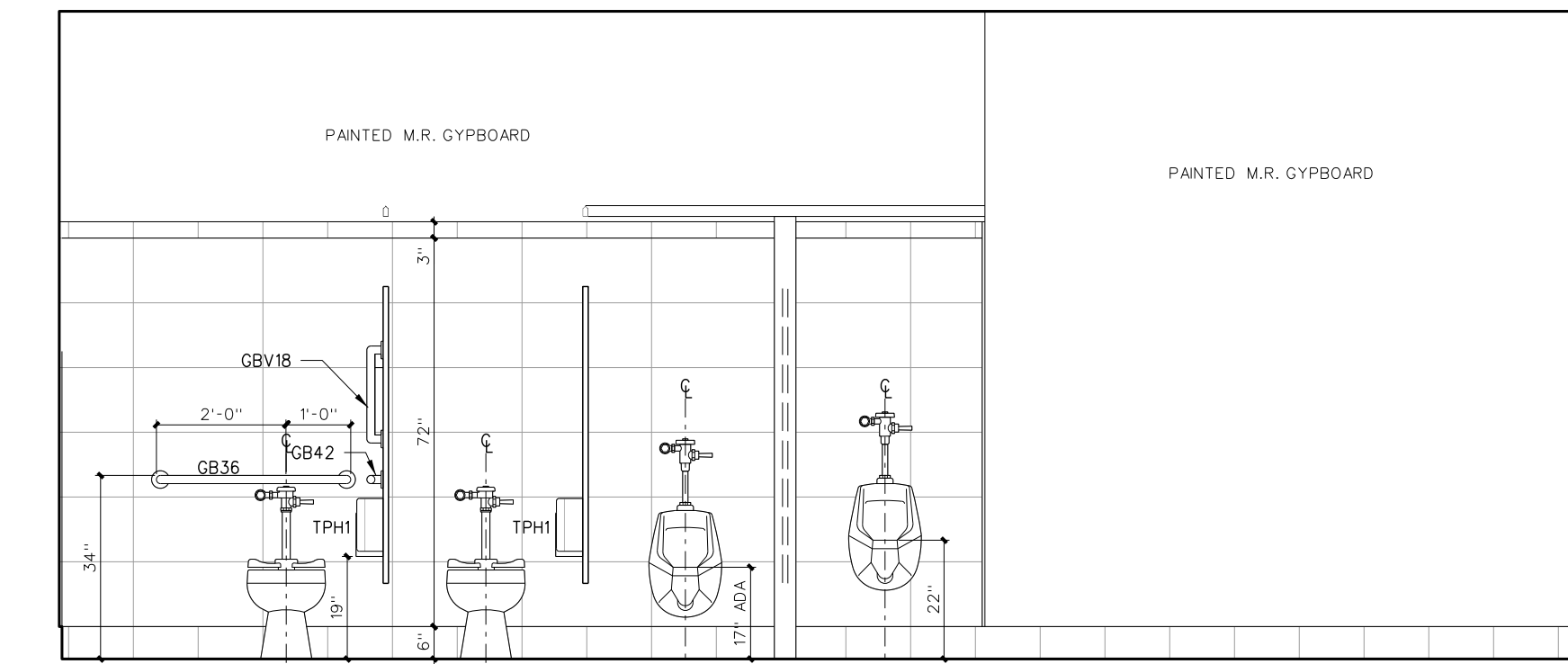
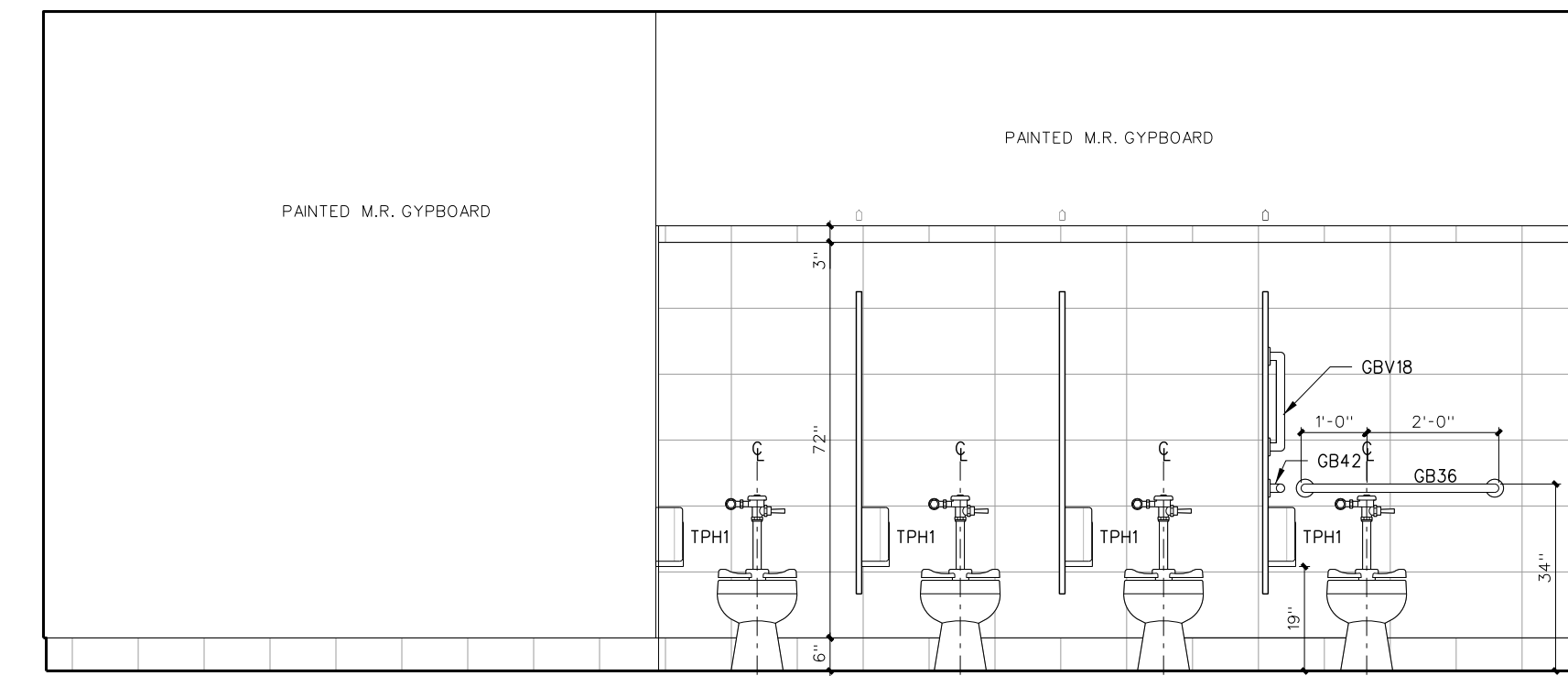
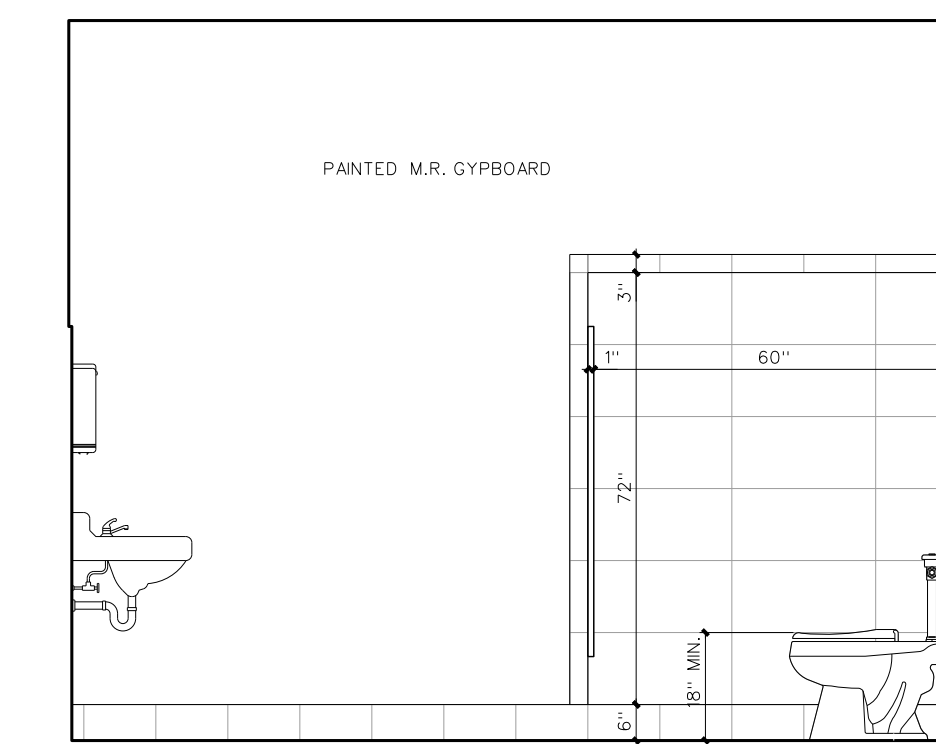
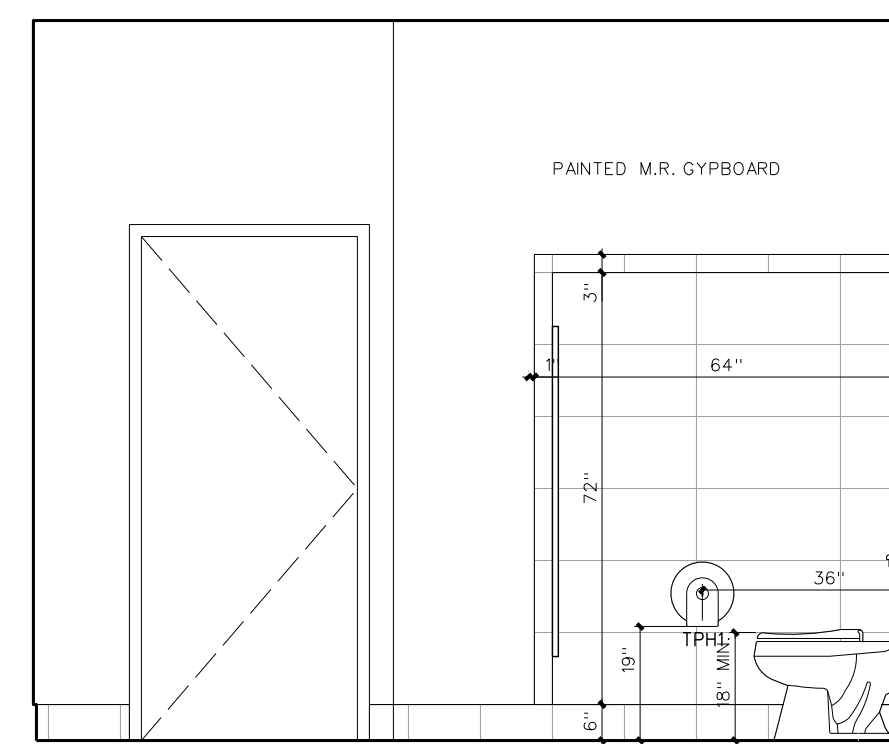
TOILET ACCESSORY SCHEDULE

MARK	MODEL	DESCRIPTION	MOUNTING HEIGHT A.F.F. ADULT	K-6	PRE-K	NUMBER REQUIRED	REMARKS
SD	BY OWNER	SOAP DISPENSER	40"	36"	31"/36"HC	AS PER PLAN	BY OWNER - G.C. TO PROVIDE BLOCKING AND INSTALL
HD	PDC-R10	PINNACLE RECESSED MOUNT TOUCHLESS HAND DRYER	40"	36"	34"	AS PER PLAN	
PTD	BY OWNER	PAPER TOWEL DISPENSER	40"	36"	34"	AS PER PLAN	BY OWNER - G.C. TO PROVIDE BLOCKING AND INSTALL
TPH1	BY OWNER	TOILET PAPER HOLDER	19"	19"	16"	AS PER PLAN	BY OWNER - G.C. TO PROVIDE BLOCKING AND INSTALL
TPH2	OPTICORE 80300	3-ROLL TOILET TISSUE DISPENSER	48" BOTTOM	39" BOTTOM	36" BOTTOM	AS PER PLAN	BY OWNER - G.C. TO PROVIDE BLOCKING AND INSTALL
SD1	BY OWNER	SANITARY NAPKIN DISPOSAL	19" BOTTOM	NA	NA	AS PER PLAN	BY OWNER - GC TO INSTALL FEMALE TOILETS
WR36	BOBRICK 165-1836	LAMINATED GLASS MIRROR W/ S.S. CHANNEL MOLD	SEE ELEV.	SEE ELEV.	SEE ELEV.	AS PER PLAN	
WR60	BOBRICK 165-2460	LAMINATED GLASS MIRROR W/ S.S. CHANNEL MOLD	SEE ELEV.	SEE ELEV.	SEE ELEV.	AS PER PLAN	
WR-C	CUSTOM	LAMINATED GLASS MIRROR W/ S.S. CHANNEL MOLD	SEE ELEV.	SEE ELEV.	SEE ELEV.	AS PER PLAN	
GB18	BOBRICK 6806-18	18" GRAB BAR	34"	27"	23"	AS PER PLAN	
GB18	BOBRICK 6806-18	18" VERTICAL GRAB BAR	40" BOTTOM	30" BOTTOM	27" BOTTOM	AS PER PLAN	
GB30	BOBRICK 6806-30	30" GRAB BAR	34"	27"	23"	AS PER PLAN	
GB36	BOBRICK 6806-36	36" GRAB BAR	34"	27"	23"	AS PER PLAN	
GB42	BOBRICK 6806-42	42" GRAB BAR	34"	27"	23"	AS PER PLAN	
GB48	BOBRICK 6806-48	48" GRAB BAR	34"	27"	23"	ONE EACH ALTERNATE H/C SHOWER	
GBR11	BOBRICK 6861	TWO WALL GRAB BAR	34"	27"	23"	AS PER PLAN	
FSS-TL/R	BOBRICK 5181	FOLDING SHOWER SEAT	18"	18"	18"	AS PER PLAN	
SSCR	BOBRICK 6047	SHOWER CURTAIN ROD	72"	72"	72"	ONE EACH SHOWER	PROVIDE VINYL SHOWER CURTAIN BOBRICK 204-2/204-3 W/ HOOPS
SDH	BOBRICK 4390	RECESSED SOAP DISH	48"/34"HC	34"	NA	AS PER PLAN	
DRH	BOBRICK 7672	DOUBLE ROSE HOOK	72"/48"HC	48"	NA	ONE EACH SHOWER	
MPR	BOBRICK 239-34	MOP RACK	72"	NA	NA	ONE EACH CUSTODIAN ROOM	PLACE OVER MOP SINK
DCS	100-SSE-5M	SURFACE MOUNT DIAPER CHANGING STATION	34"	34"	34"	AS PER PLAN	FOUNDATIONS WORLDWIDE, INC. 16 GA. TYPE 304 STAINLESS STEEL

PROVIDE SOLID 2x BLOCKING AS REQUIRED FOR TOILET ACCESSORIES AND DOOR STOPS * ACCESSORIES BY G.C. UNLESS OTHERWISE NOTED

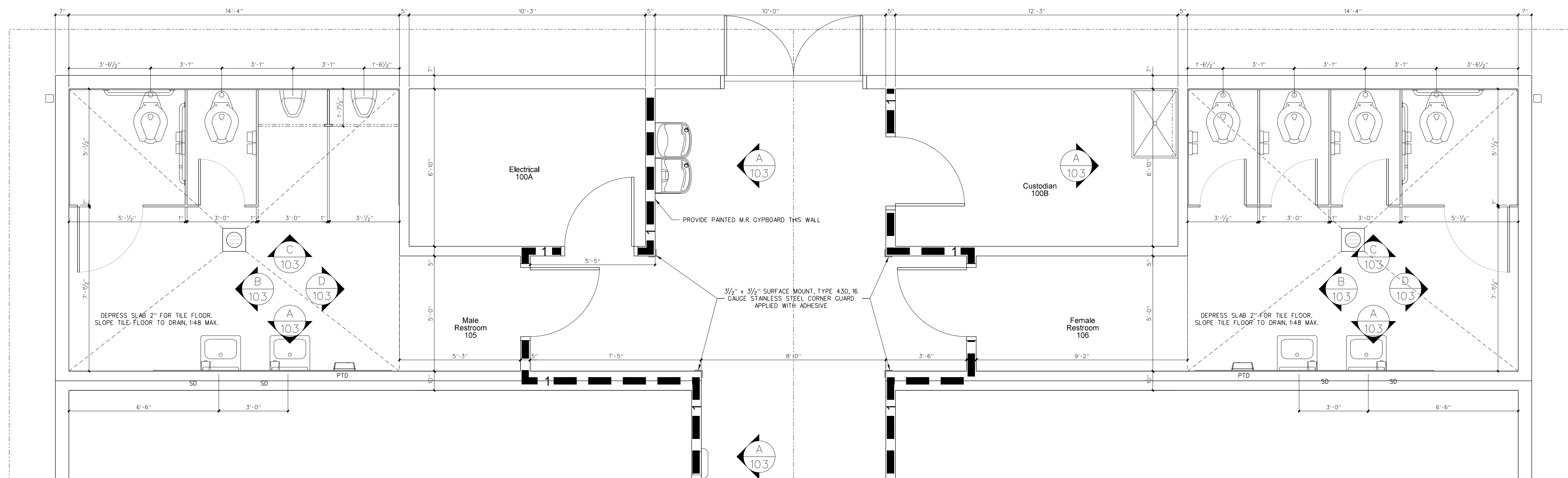
PLUMBING FIXTURE MOUNTING HEIGHTS

DESCRIPTION	MOUNTING HEIGHT A.F.F. ADULT	K-6	PRE-K	NUMBER REQUIRED	REMARKS
ELECTRIC WATER COOLER	42"/36"HC	36"	30"		MOUNTING HT. TO SPOUT
LAVATORY	34"	31"	25"/30"HC	AS PER PLAN	MOUNTING HT. TO RIM
URNAL	22"/17"HC	22"/17"HC	NA	AS PER PLAN	MOUNTING HT. TO RIM
WATER CLOSET				AS PER PLAN	SEE PLUMBING DRAWINGS



103.2 INTERIOR ELEVATIONS

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



103.1 ENLARGED TOILET PLAN

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

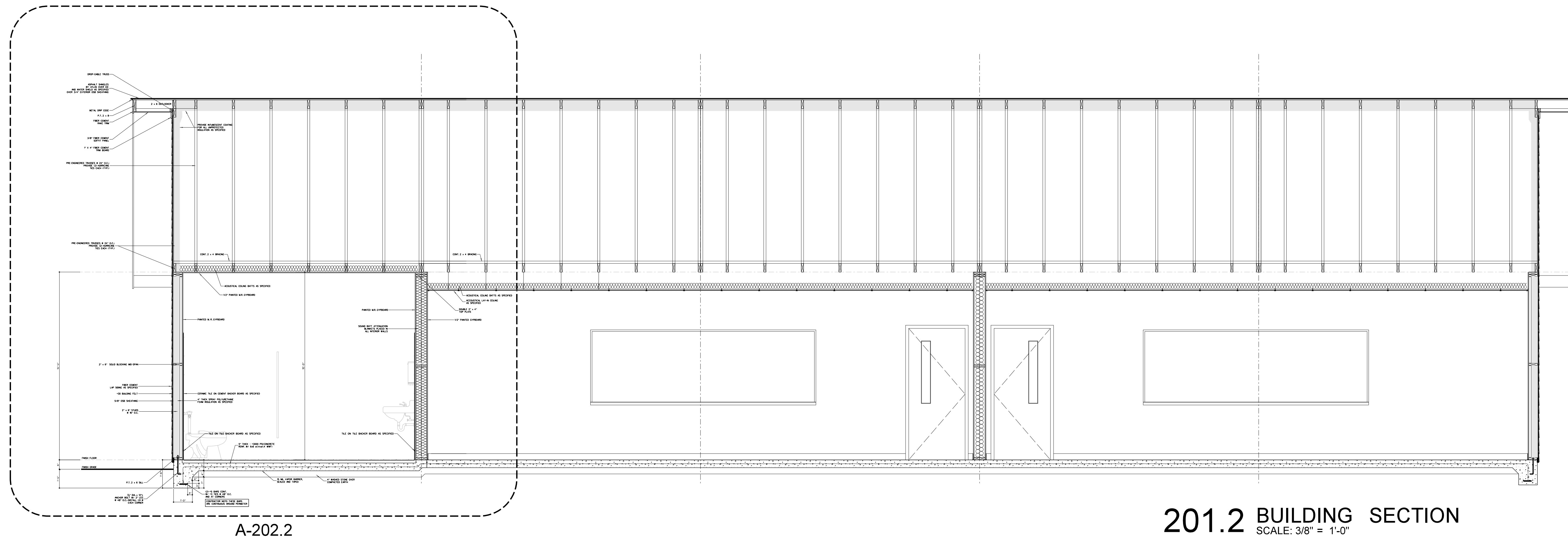
Revision	No.	Date

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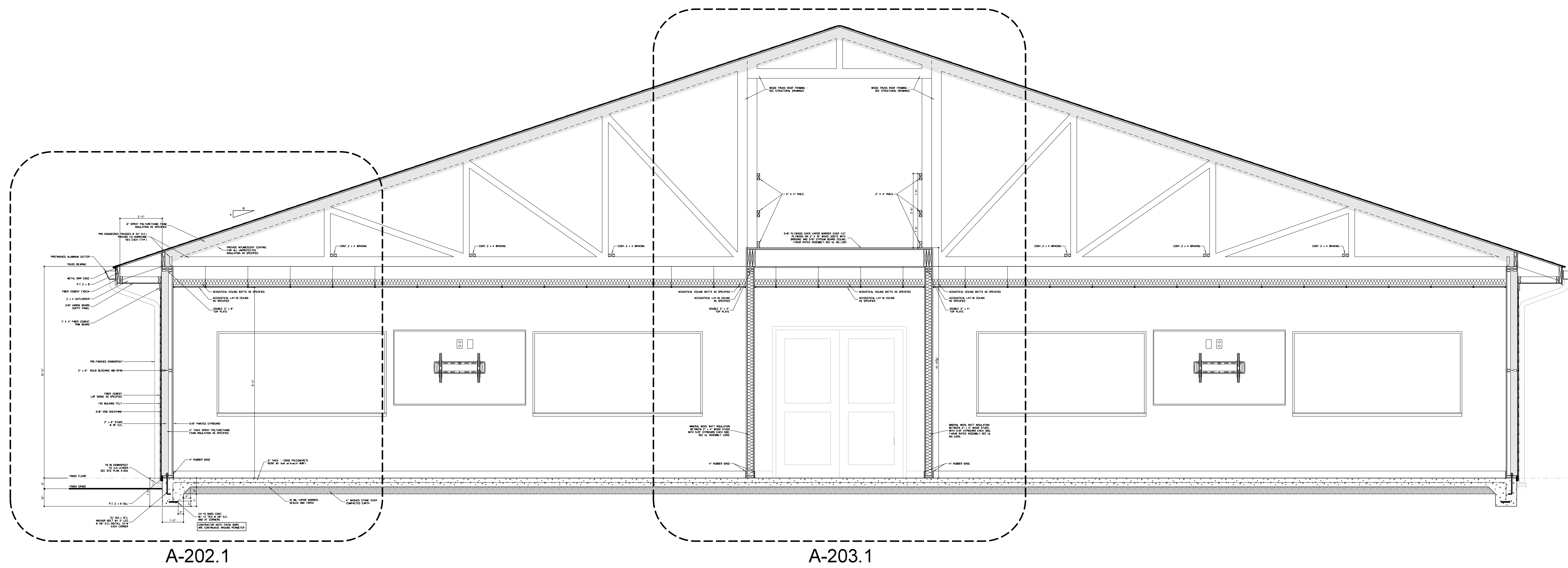
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A-202.2

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



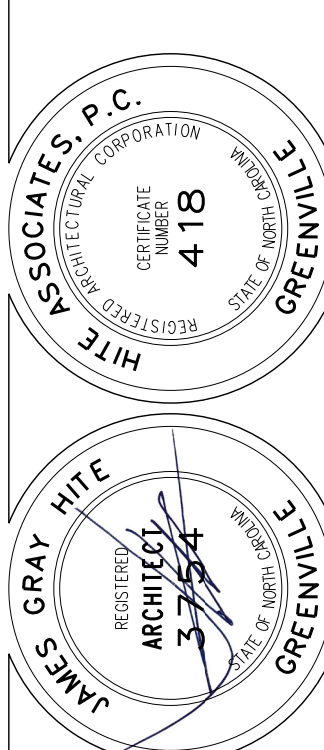
A-202.1

A-203.1

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

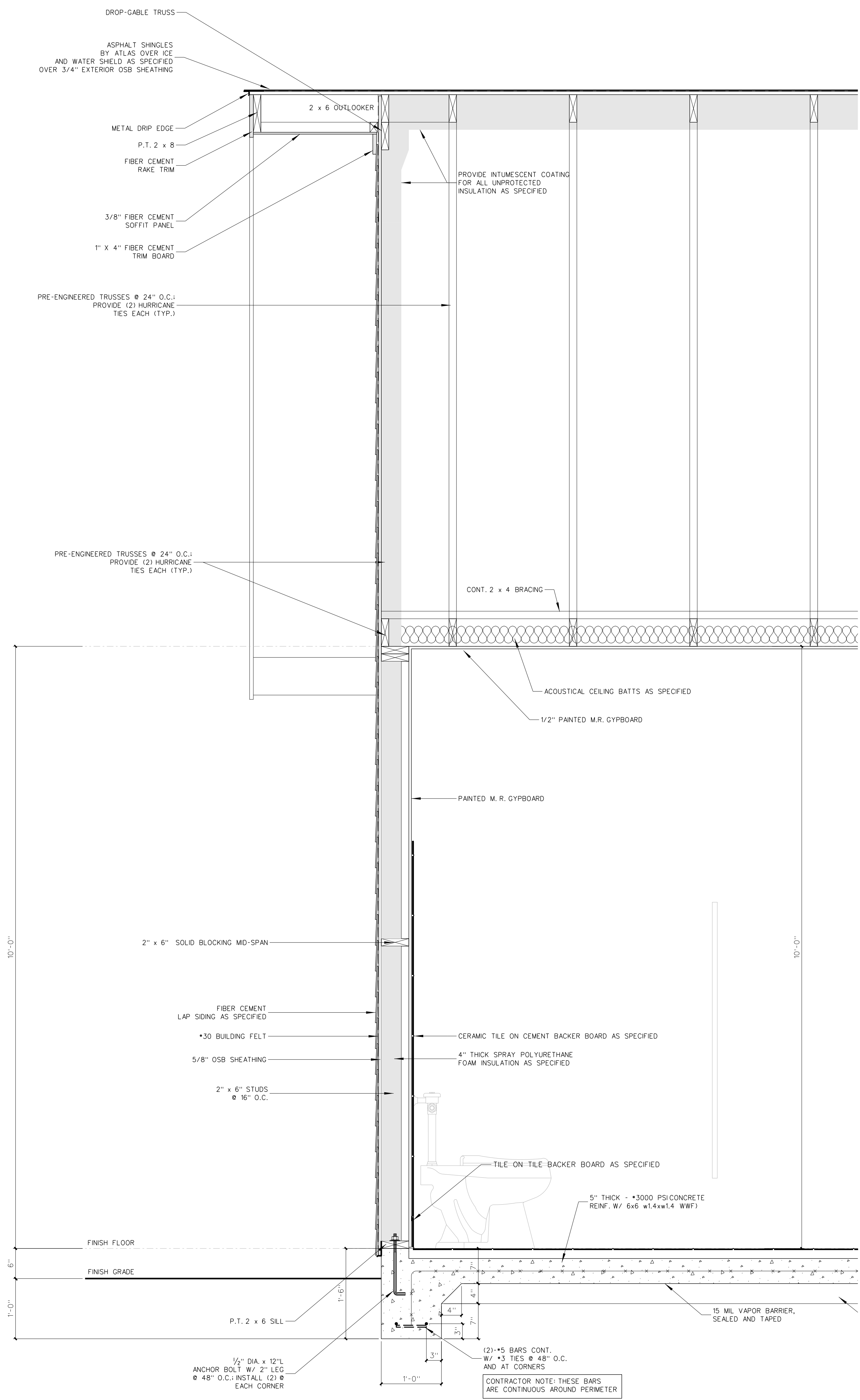
No.	Date:	Revision

Hite associates
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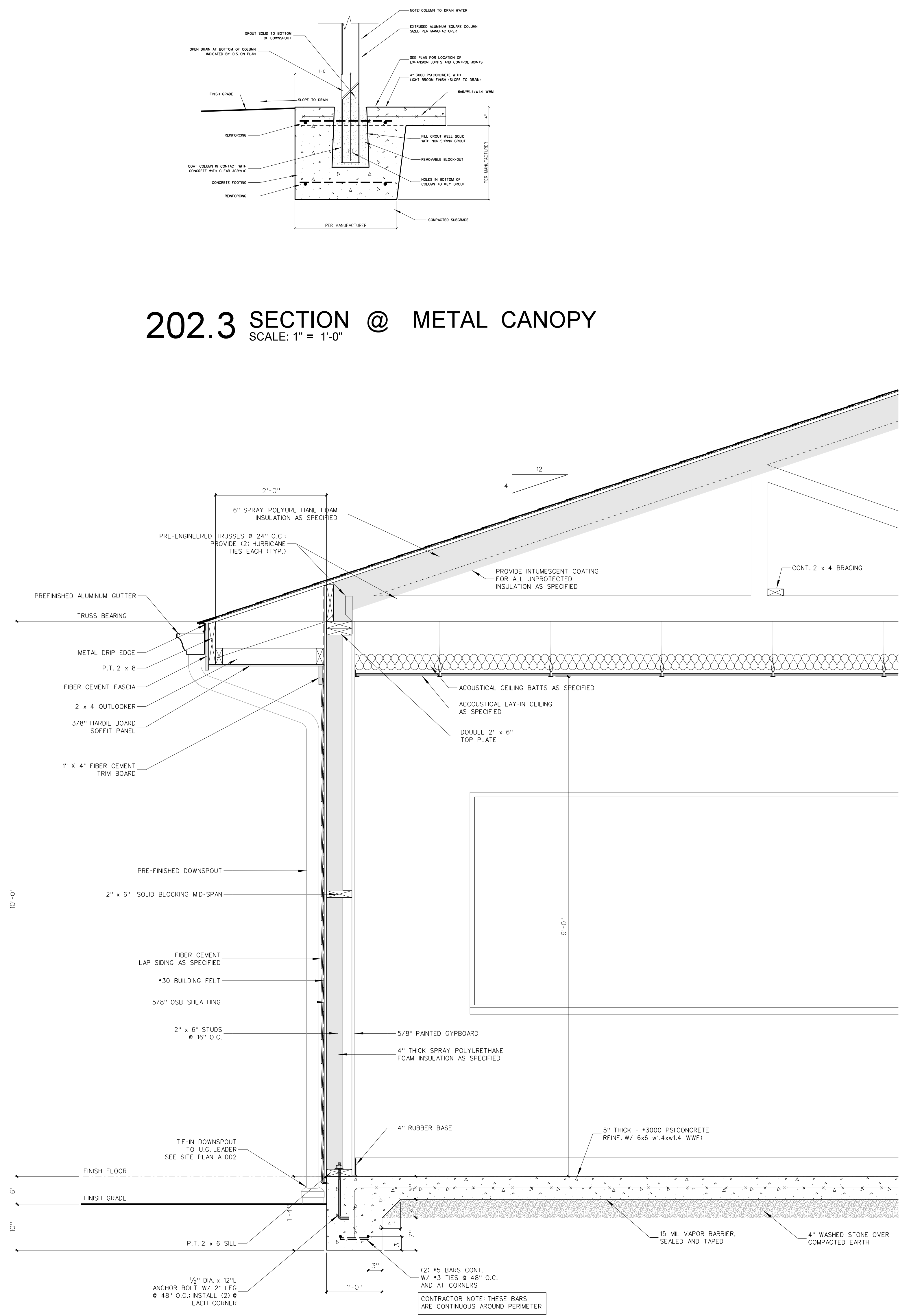


New Classroom Addition for
North Duplin Jr.-Sr. High School
 1388 NC-403, Mt. Olive, NC 28385
 Duplin County / North Carolina

Project No: 22253
 Date: 6 March 2023
 Drawing no: **A 201**

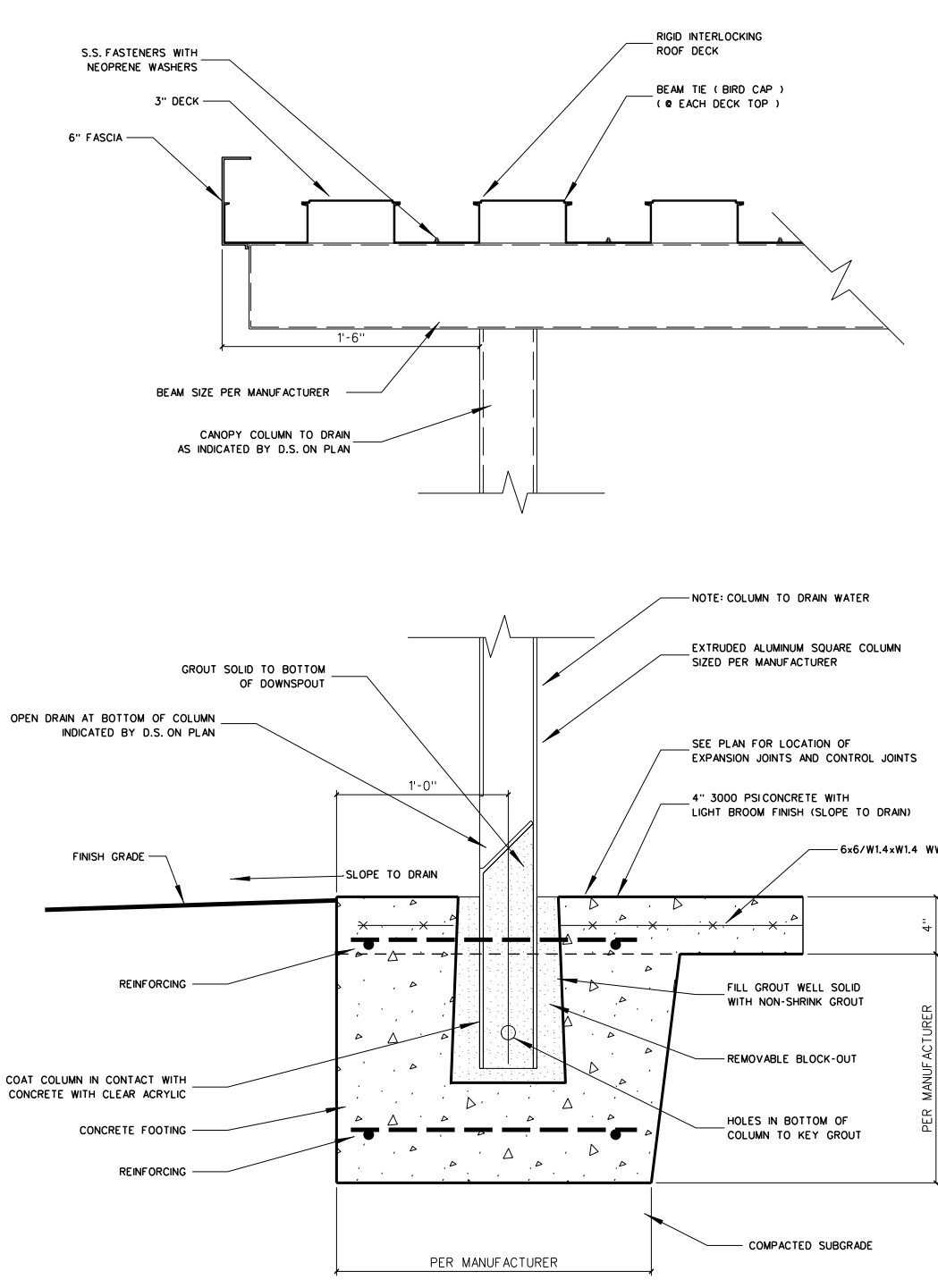


202.2 GABLE ENDWALL SECTION
SCALE: 1" = 1'-0"



202.1 WALL SECTION
SCALE: 1" = 1'-0"

202.3 SECTION @ METAL CANOPY
SCALE: 1" = 1'-0"

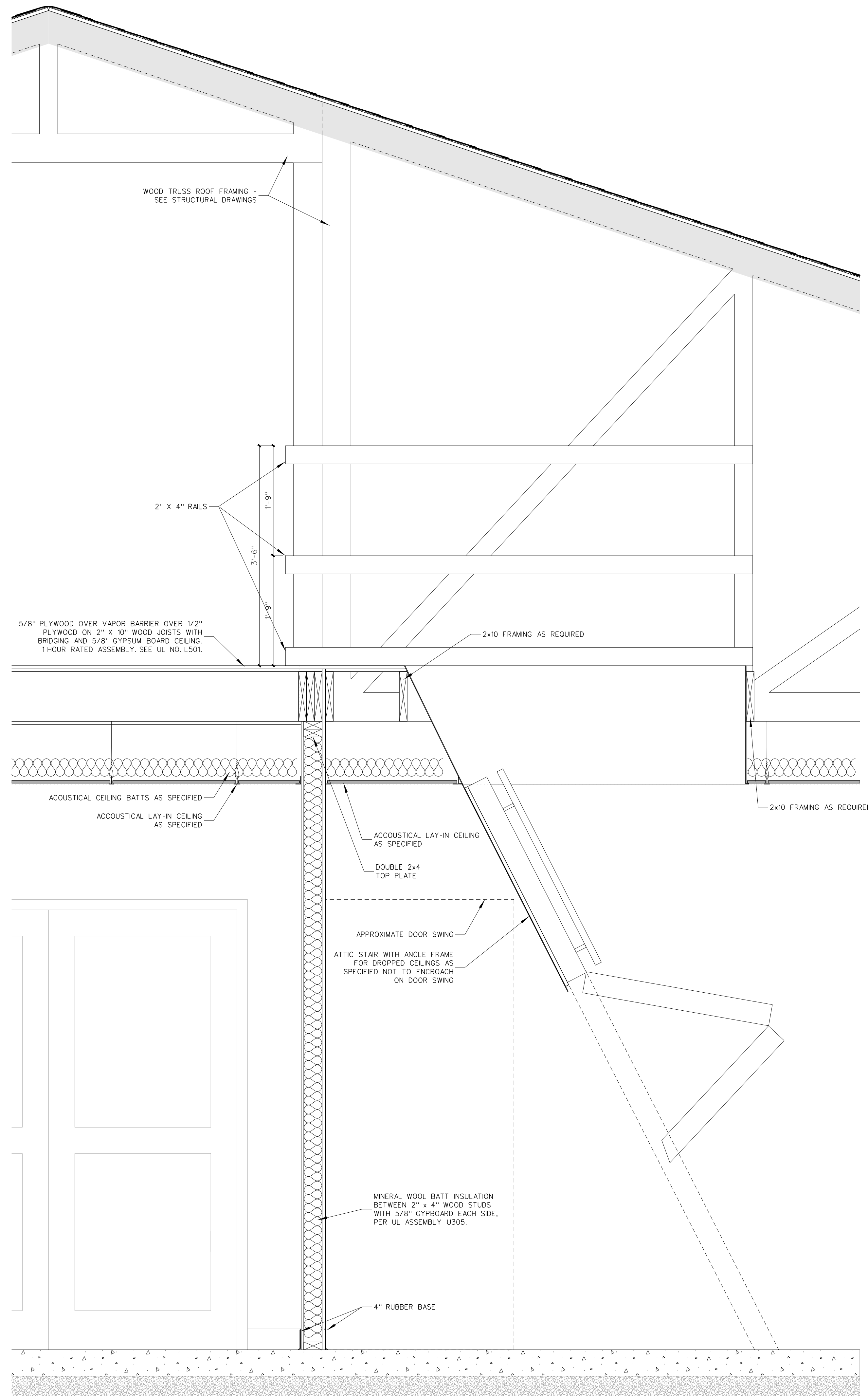


Project No. 22253
Date: 6 March 2023
Drawing No. A 202

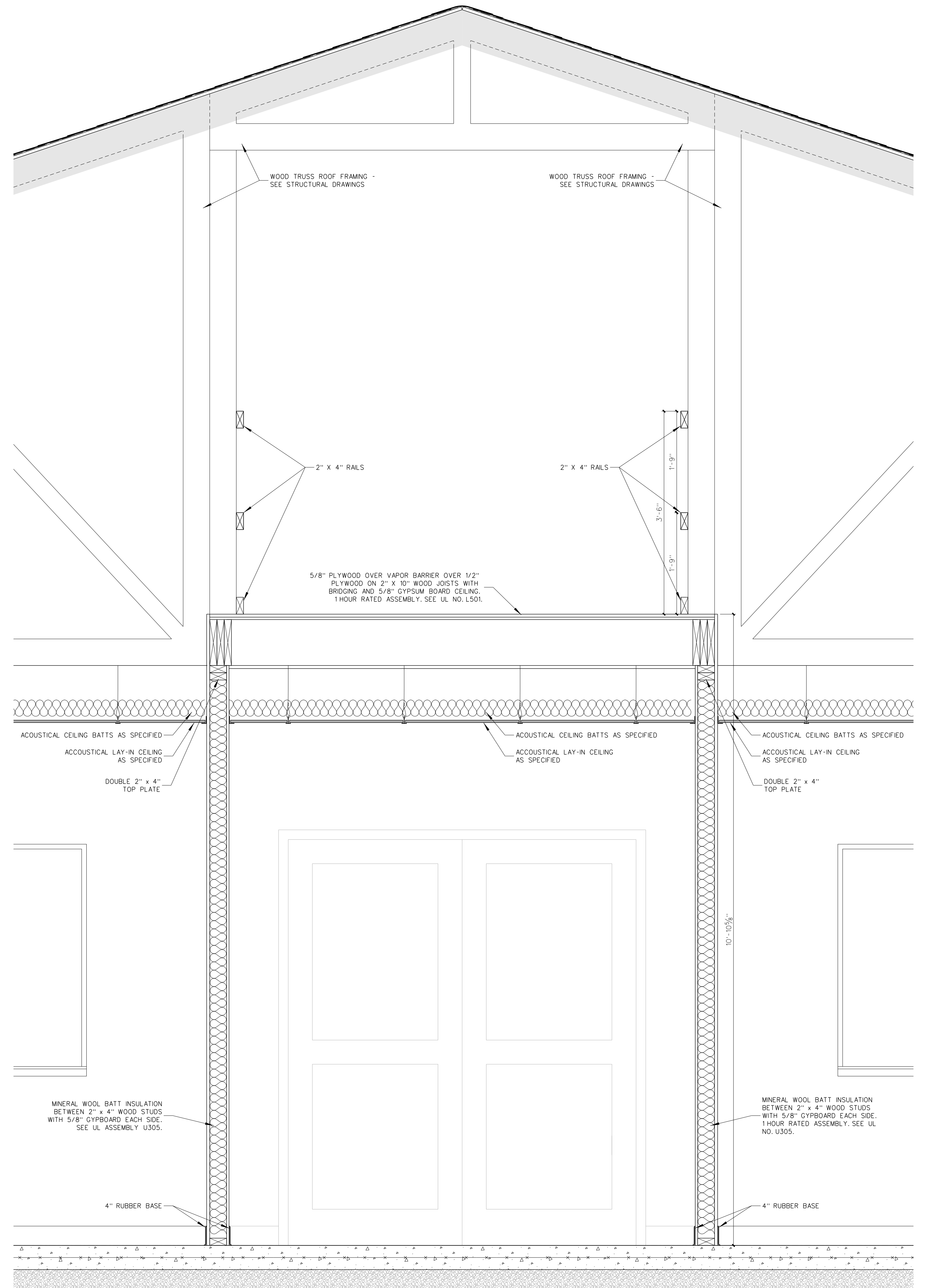
Hite associates
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2600 Meridian Drive / Greenville, NC 27834 / Tel: (252) 757-0333

NEW CAROLINA ARCHITECTURE ASSOCIATION
MEMBER NUMBER 418
JAMES GRAY HITE ARCHITECTURE GREENVILLE, NC

New Classroom Addition for
North Duplin Jr.-Sr. High School
1388 NC-403, Mt. Olive, NC 28366
Duplin County / North Carolina



203.2 SECTION AT ATTIC ACCESS
SCALE: 1" = 1'-0"



203.1 SECTION AT CORRIDOR
SCALE: 1" = 1'-0"

No.	Date	Revision

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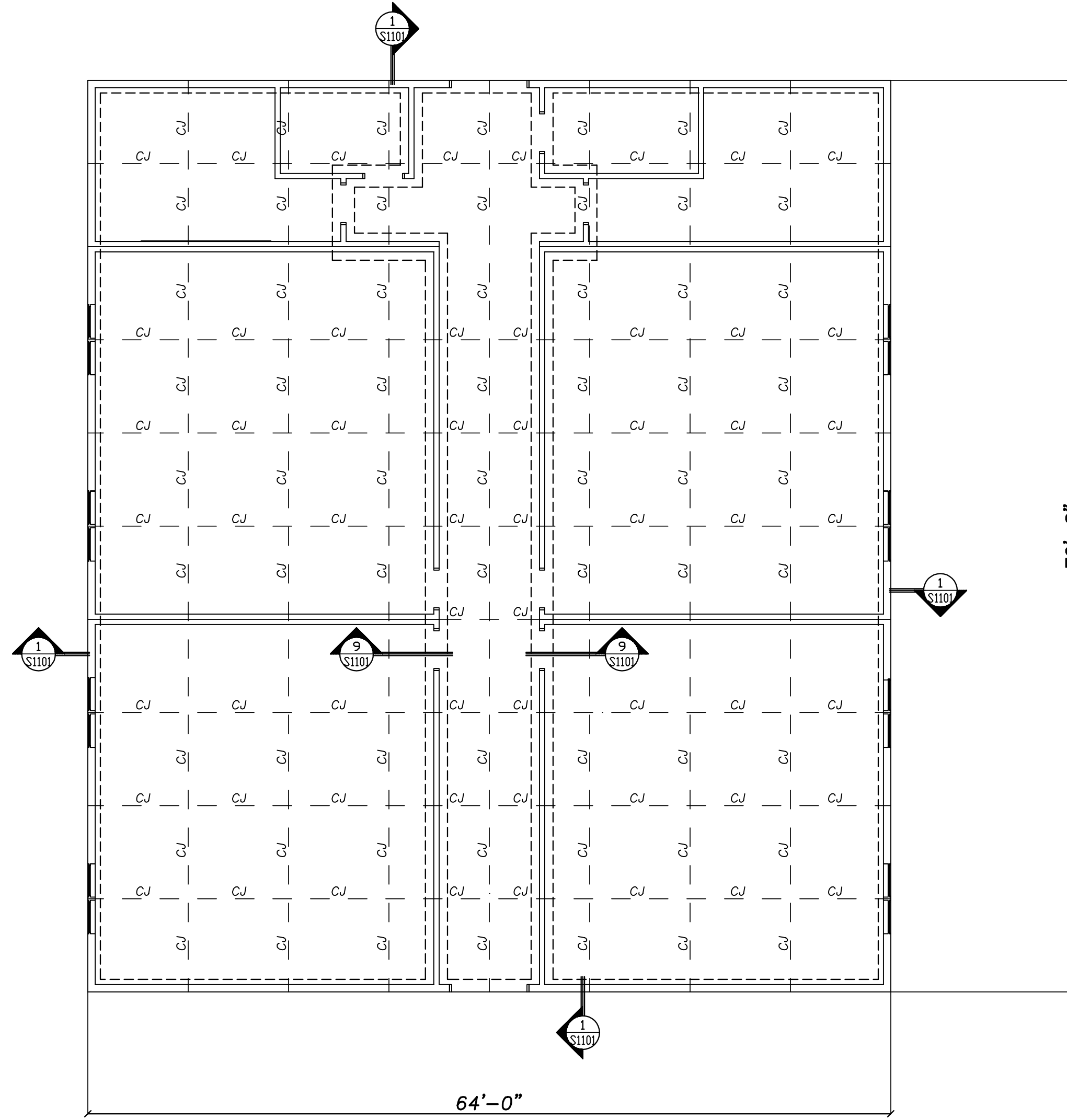


New Classroom Addition for
North Duplin Jr.-Sr. High School
1388 NC-403, Mt. Olive, NC 28386
Duplin County / North Carolina

Project No. 22253

Date: 6 March 2023

Drawing no. A 203



FOUNDATION PLAN $1/4" = 1'-0"$

- 1.) FOOTING DESIGN BASED ON ASSUMED SOIL BRG. CAPACITY OF 2000 PSF. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD IF UNSTABLE, ORGANIC, WEAK OR OTHERWISE UNACCEPTABLE SOIL CONDITIONS ARE ENCOUNTERED DURING EXCAVATIONS OR SUBSEQUENT GEOTECHNICAL INVESTIGATIONS.
- 2.) ELEV. NOTED (-) ARE BELOW REFERENCE FINISHED FLOOR TO TOP OF FOOTING. (00.00)
- 3.) SLAB ON GRADE IS NORMAL WEIGHT CONCRETE WITH REINFORCED WITH 6x6 W1.4 x W1.4 WMM ON A 4" WASHED STONE AND 15 MIL POLY VAPOR BARRIER, TYP. U.O.N.
- 4.) ALL CONCRETE SHALL BE A MINIMUM STRENGTH OF 3000 PSI MEETING ACI 301 AND ACI 318. ALL CONCRETE SHALL BE MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES SUBJECT TO PUMPING SHALL BE TAKEN AT THE EXIT END OF THE PUMP AT THE ELEVATION OF PLACEMENT. (REFERENCE ACI MANUAL OF CONCRETE PRACTICE).
- 5.) ALL REINFORCING BARS SHALL BE GRADE 60 CONFORMING TO ASTM 615. LAP BARS WHERE REQUIRED USING CLASS B TENSION LAP SPLICES, OR 40 BAR DIAMETERS. DEVELOPMENT LENGTHS SHALL BE CRSI MINIMUM UON.
- 6.) REFERENCE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COORDINATION OF SLOPED FLOORS AT FLOOR DRAINS, AND DEPRESSED FLOOR SLAB LOCATIONS.
- 7.) ARCHITECTURAL BACKGROUND IS SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WALLS.

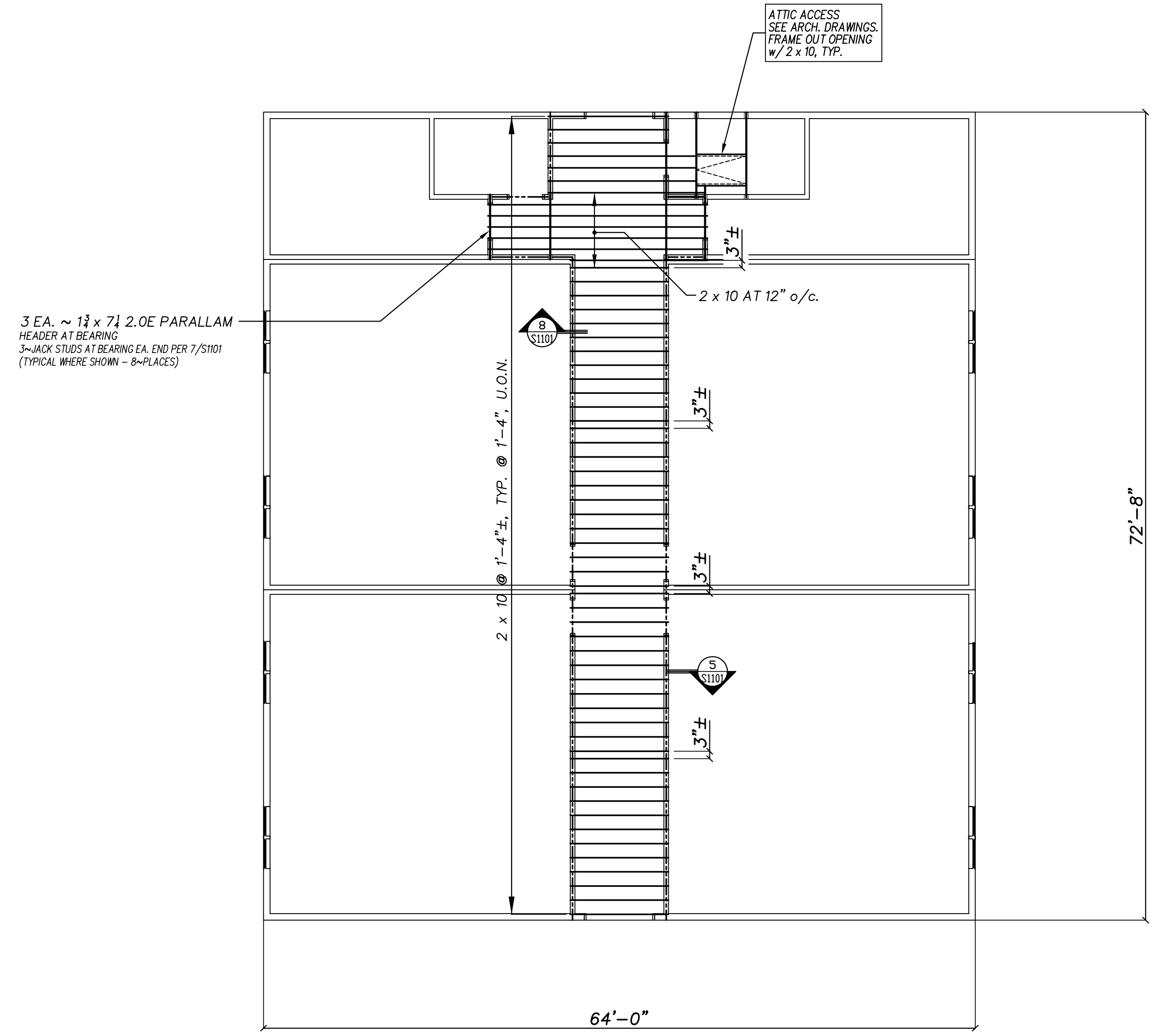
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 2600 Meridian Drive / Greenville, NC 27868 / tel (252) 757-0333

NC LIC C-1020
QED
 QUIZEN ENGINEERING & DESIGN
 2000 W. STATE ST. SUITE 200
 WILMINGTON, NC 28403
 910-341-8888
 21 AUG 2023

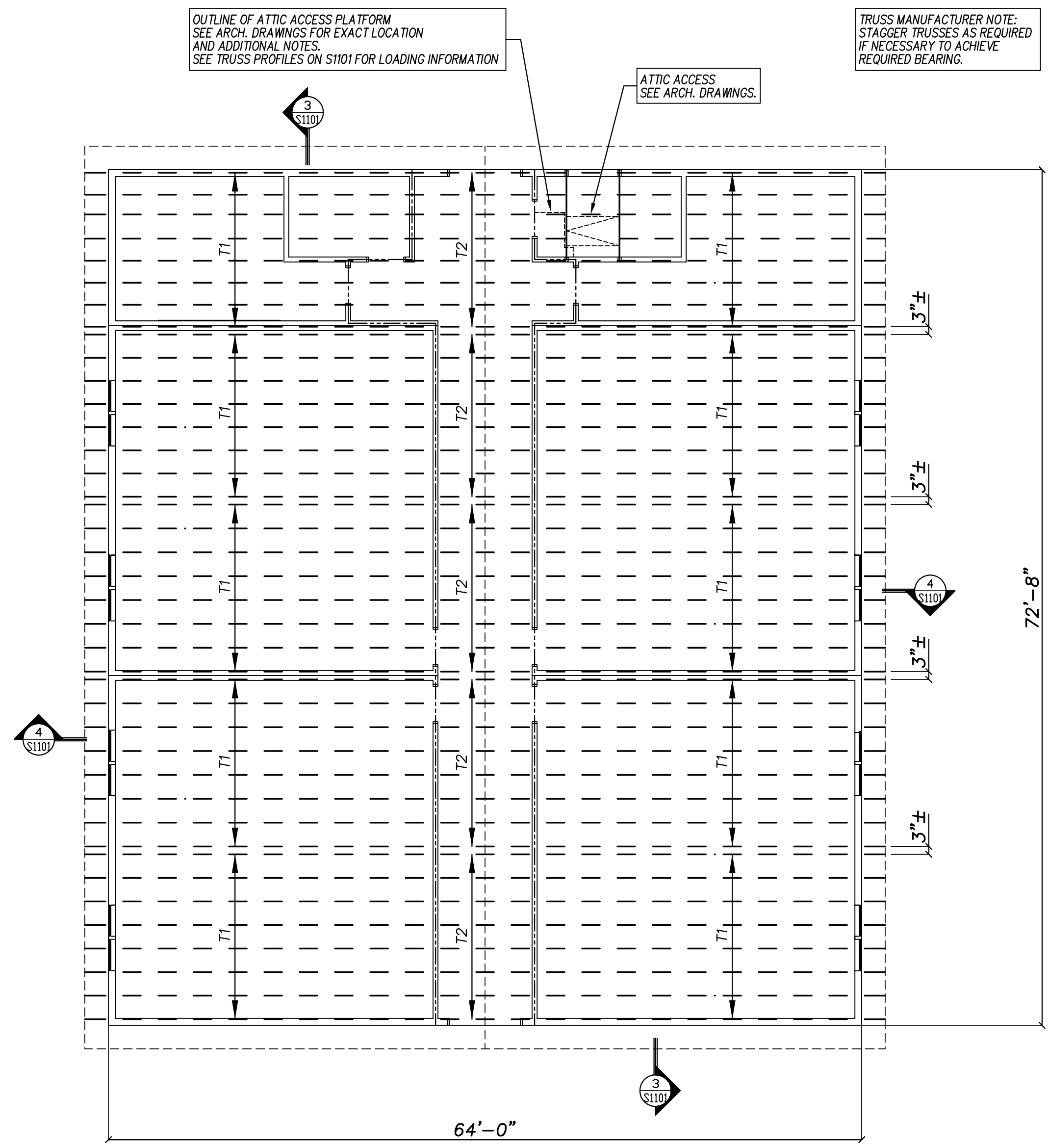
NEW CLASSROOM ADDITION FOR
NORTH DUPLIN JR.-SR. HIGH SCHOOL
 1388 NC-403, MT. OLIVE, NC 28365
 DUPLIN COUNTY / NORTH CAROLINA

Project No.
 22253
 Date:
 21 AUG 2023
 Drawing no.
 101



PLATFORM FRAMING PLAN 1/2" = 1'-0"

- 1.) SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PLATFORM CONSTRUCTION NOTES THAT APPLY.
- 2.) - - - - - INDICATES LINE OF INTERIOR CORRIDOR BEARING WALLS. SEE ARCH. DRAWINGS AND DETAILS ON S101 FOR ADDITIONAL NOTES THAT APPLY.
- 3.) ARCHITECTURAL BACKGROUND IS SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WALLS.
- 4.) LOCATE ALL WALLS PER ARCHITECTURAL DRAWINGS.



ROOF FRAMING PLAN 1/2" = 1'-0"

- 1.) TRUSS SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. HANDLING AND ERECTION OF TRUSSES SHALL BE IN ACCORDANCE WITH AISI STANDARDS. ALL CONNECTIONS OF TRUSSES SHALL BE DESIGNED BY TRUSS SUPPLIER.
- 2.) SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL ROOF CONSTRUCTION NOTES THAT APPLY.
- 3.) TRUSS SPACING SHALL BE 2'-0" o/c, MAXIMUM.
- 4.) - - - - - INDICATES LINE OF INTERIOR CORRIDOR BEARING WALLS. SEE ARCH. DRAWINGS AND DETAILS ON S101 FOR ADDITIONAL NOTES THAT APPLY.

No.	Date	Revision

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REGISTERED PROFESSIONAL ENGINEER
1999
21 AUG 2023

NEW CLASSROOM ADDITION FOR
NORTH DUPLIN JR.-SR. HIGH SCHOOL
1388 NC-403, MT. OLIVE, NC 28365
DUPLIN COUNTY / NORTH CAROLINA

Project No. 22253
Date: 21 AUG 2023
Drawing no. 102

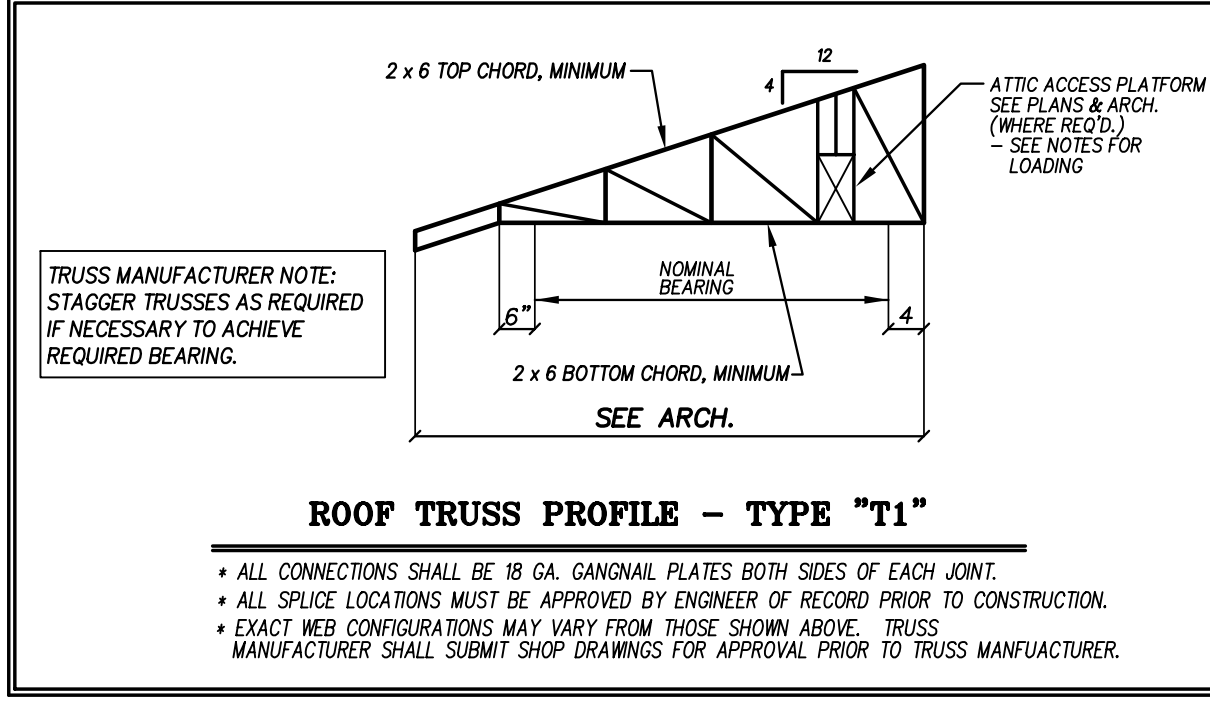
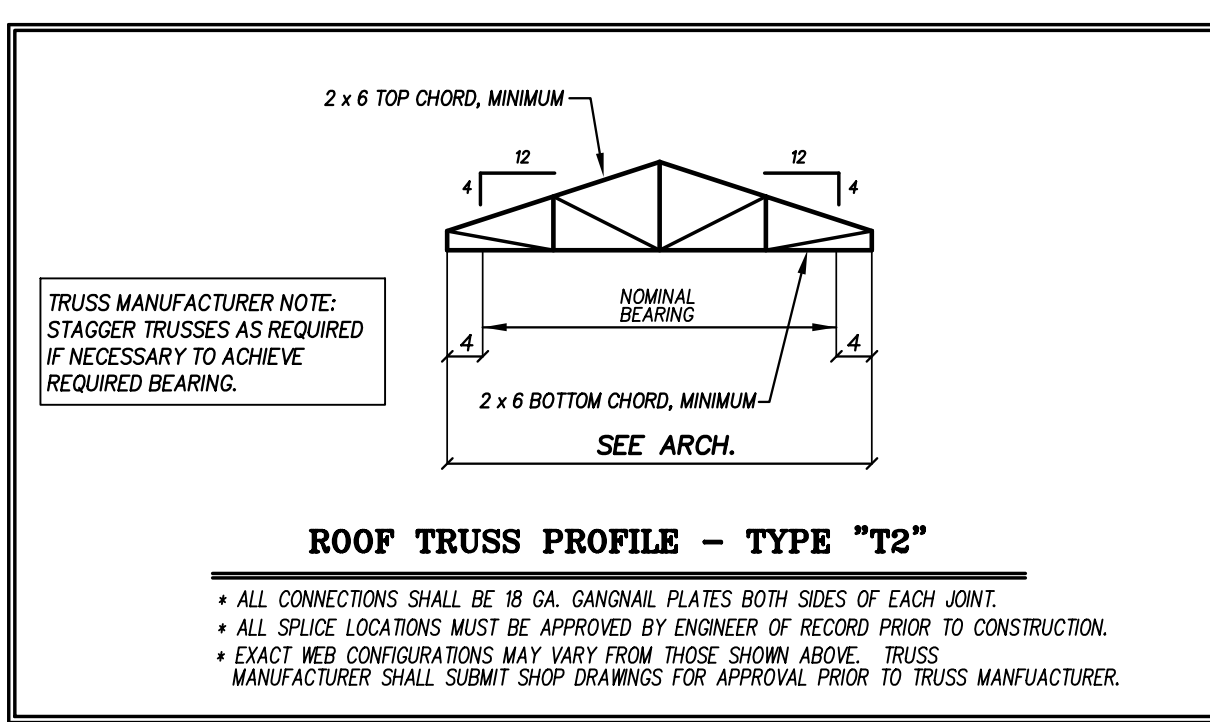
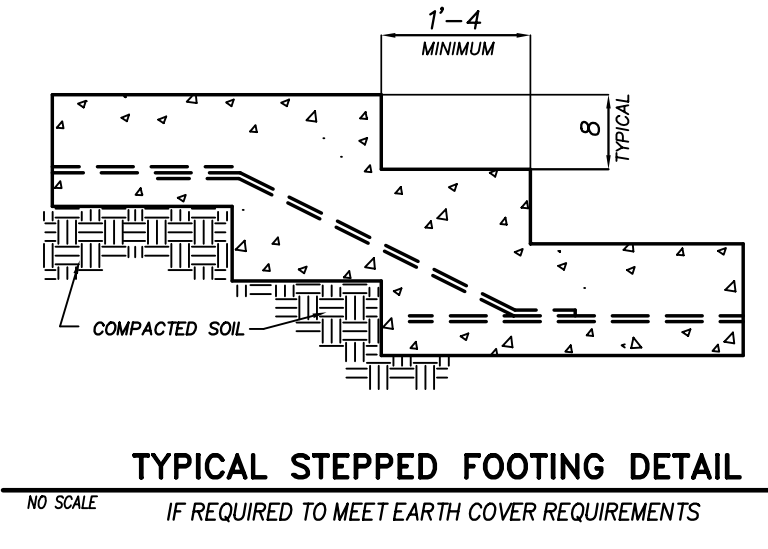
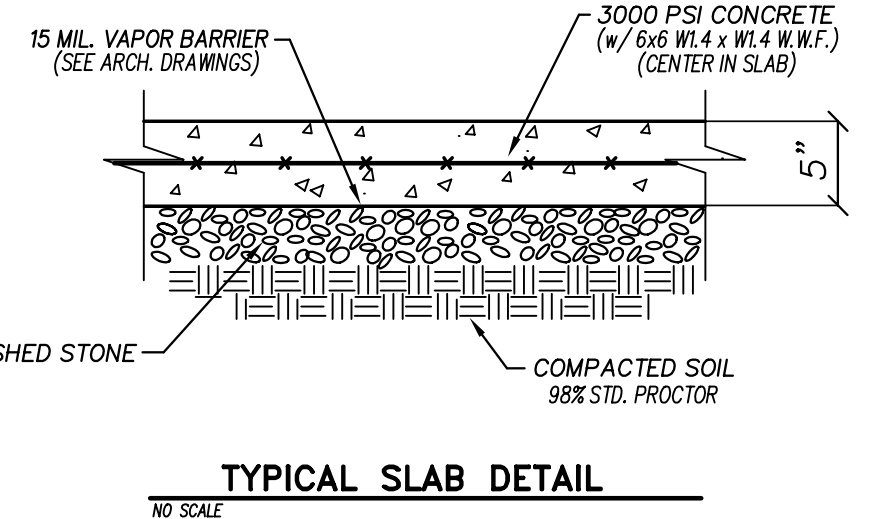
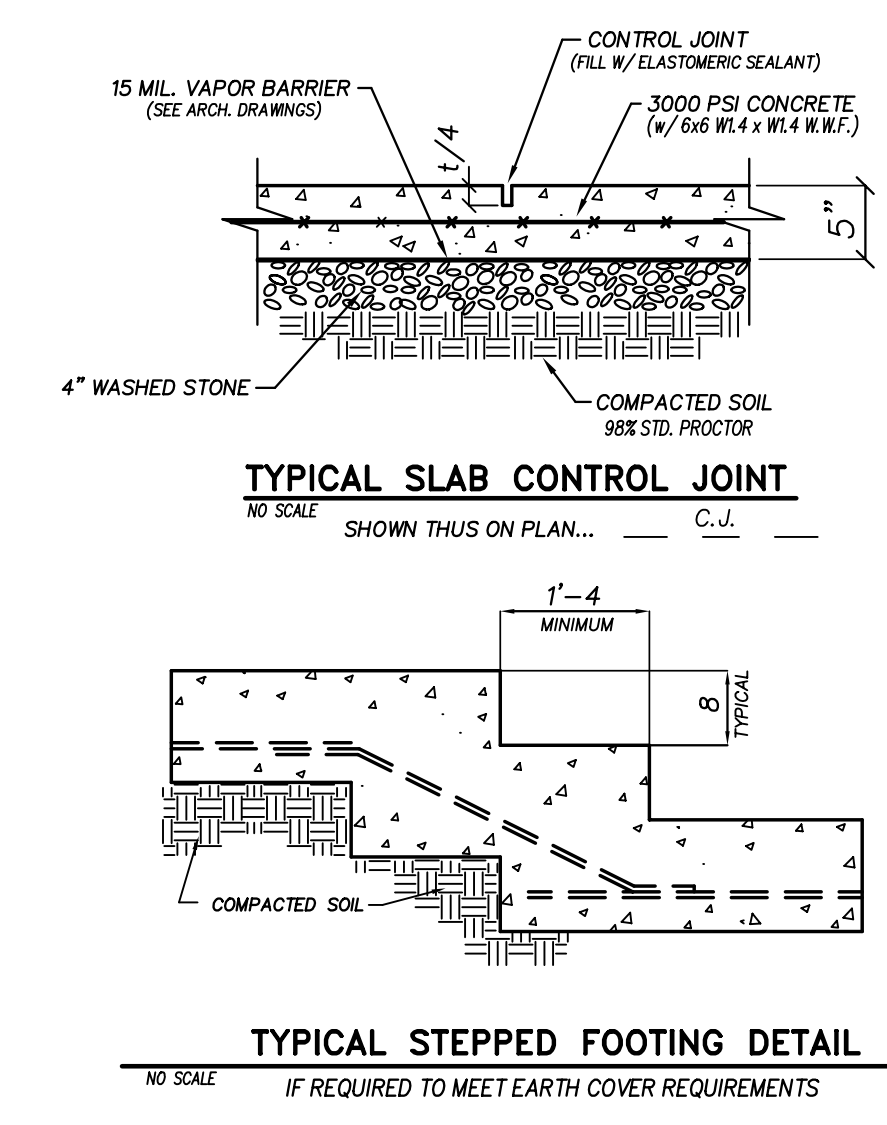
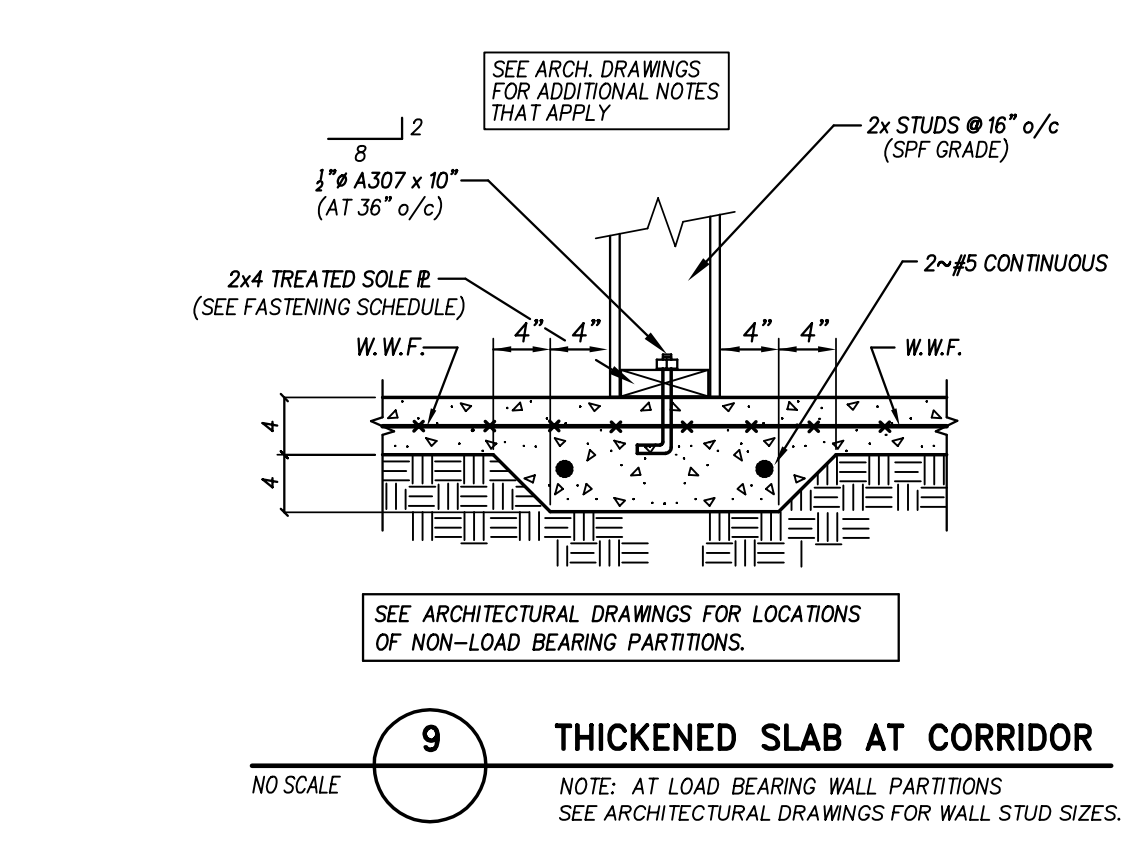
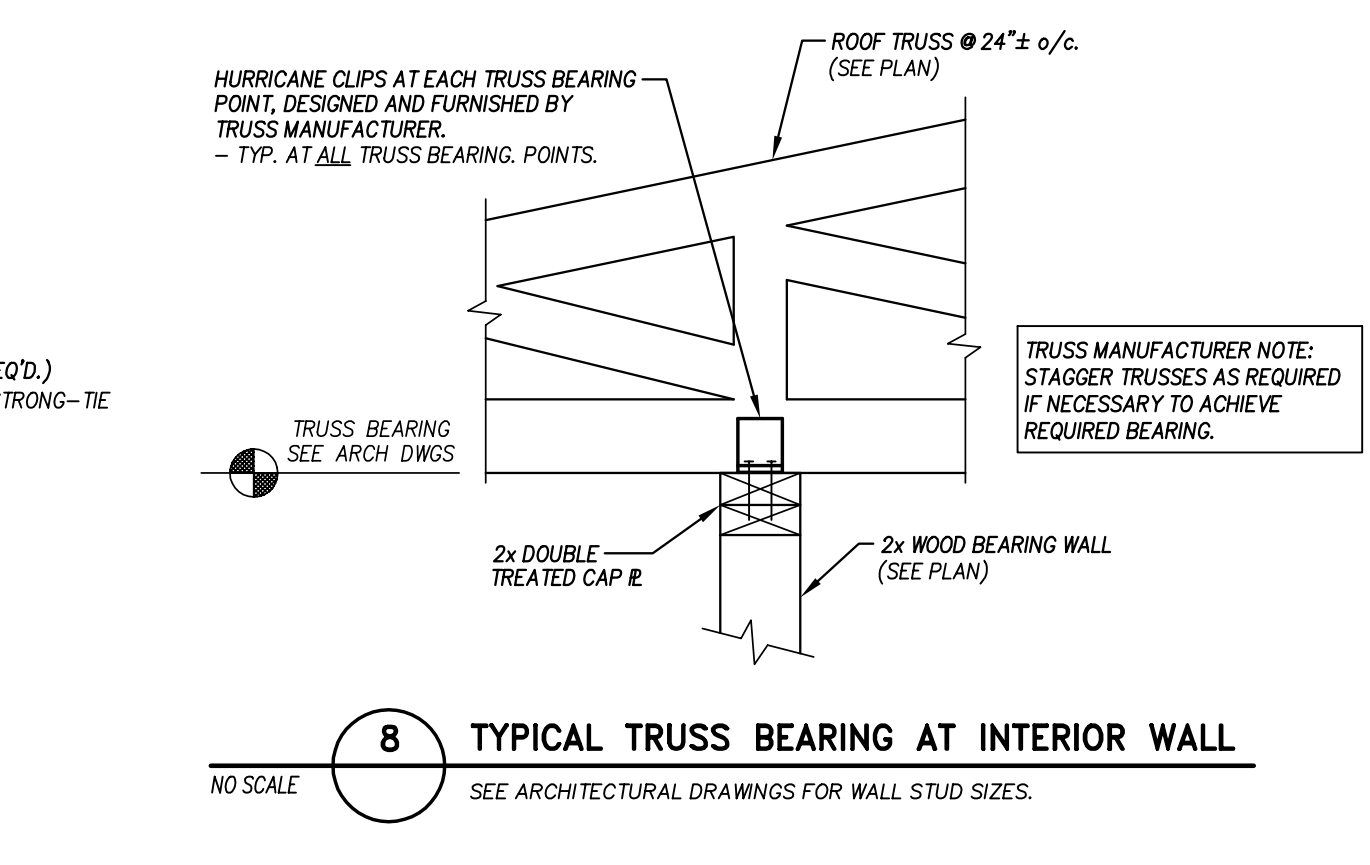
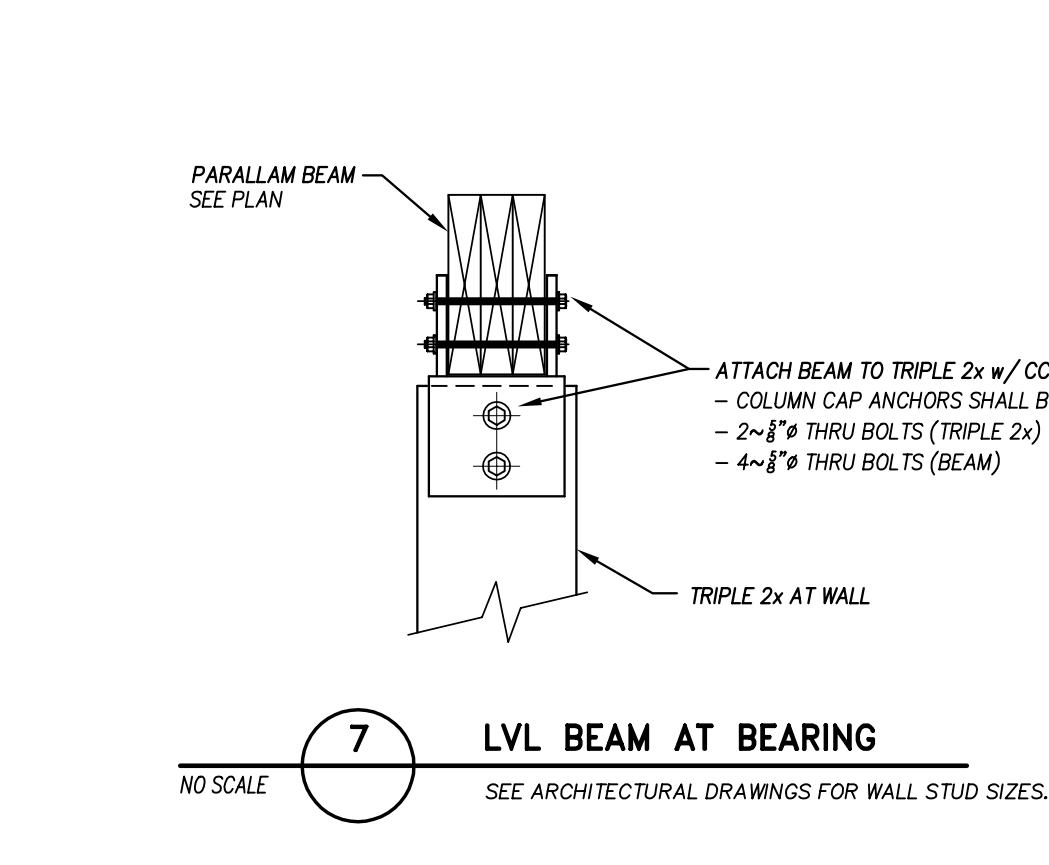
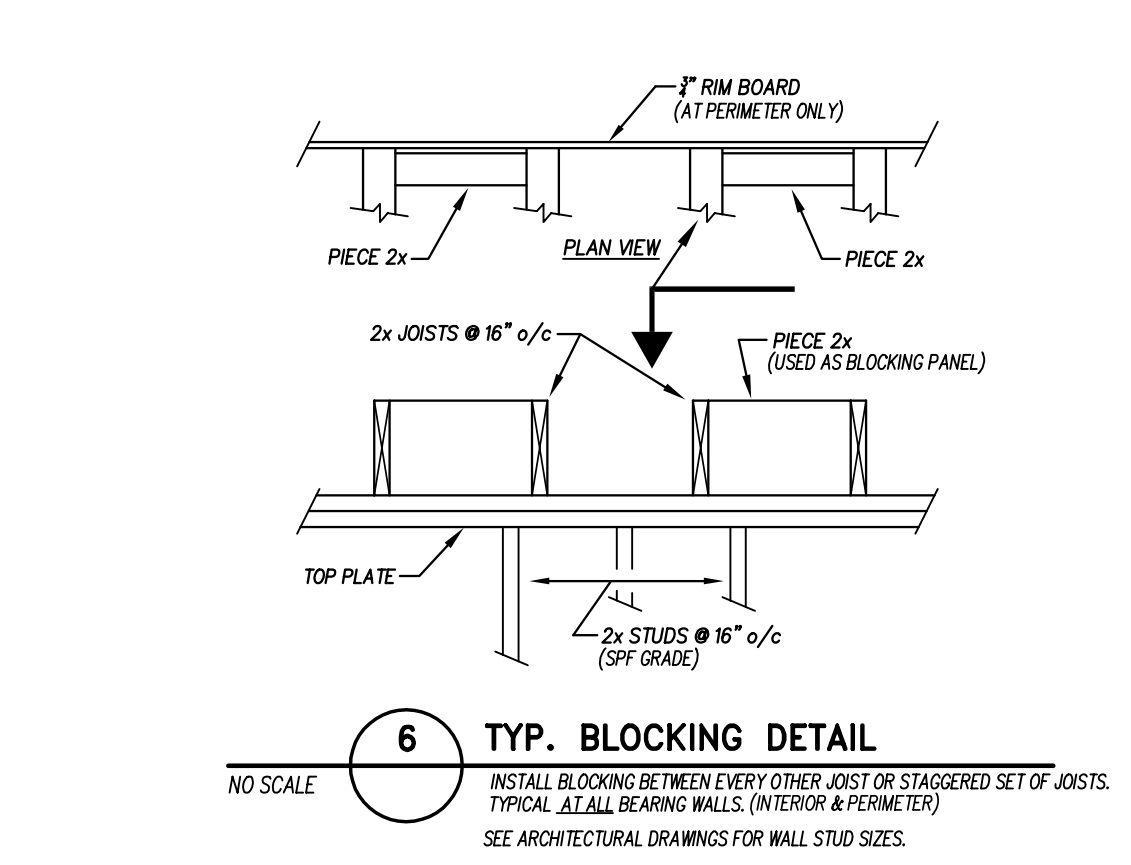
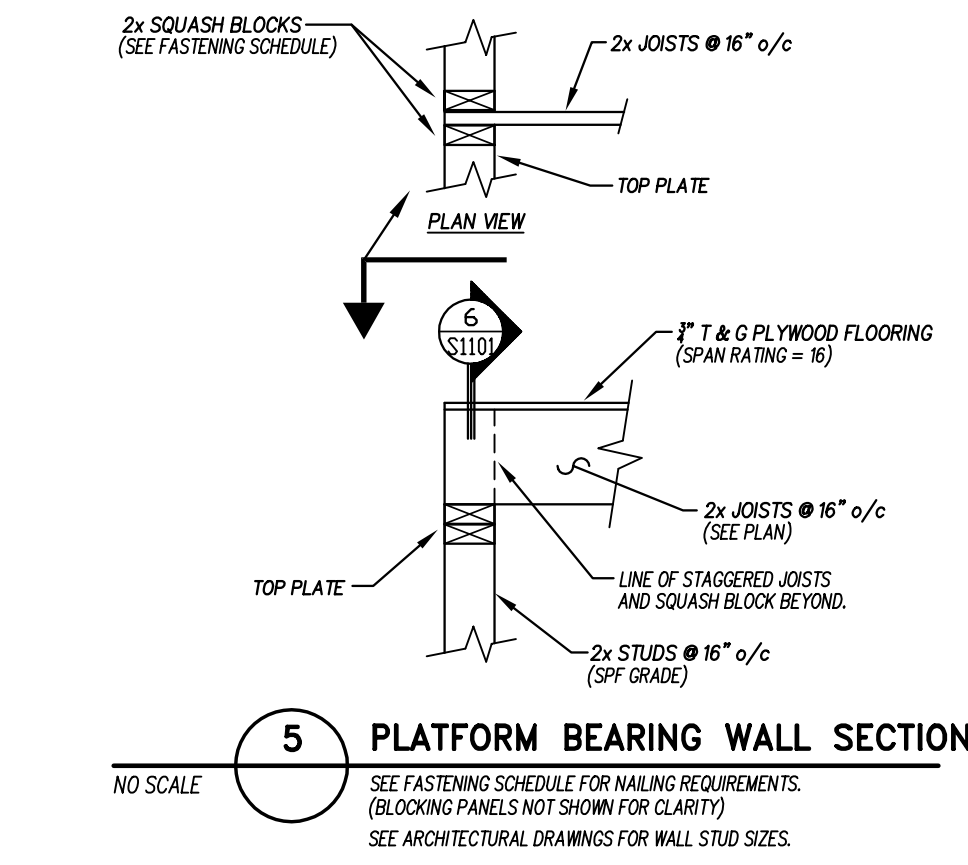
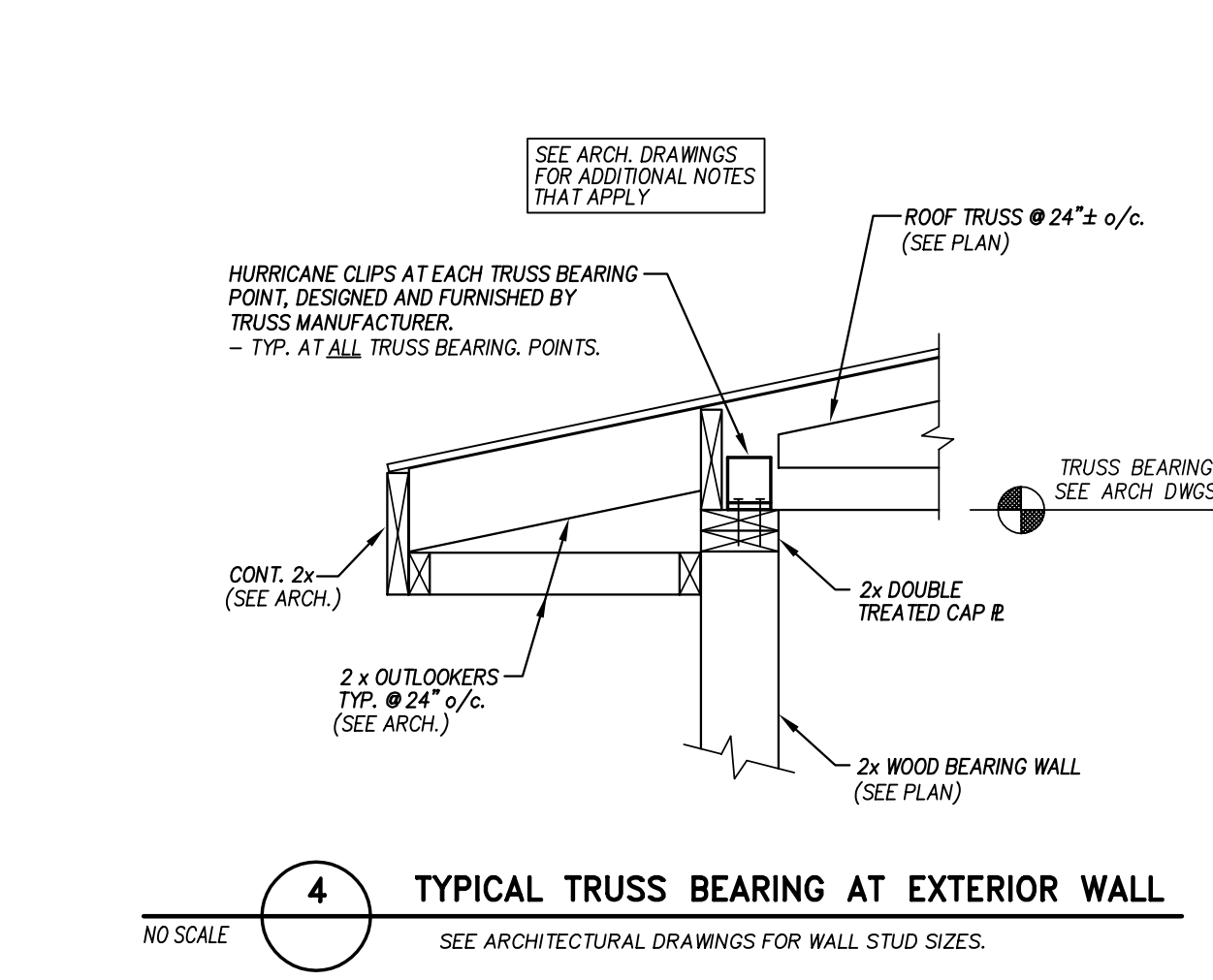
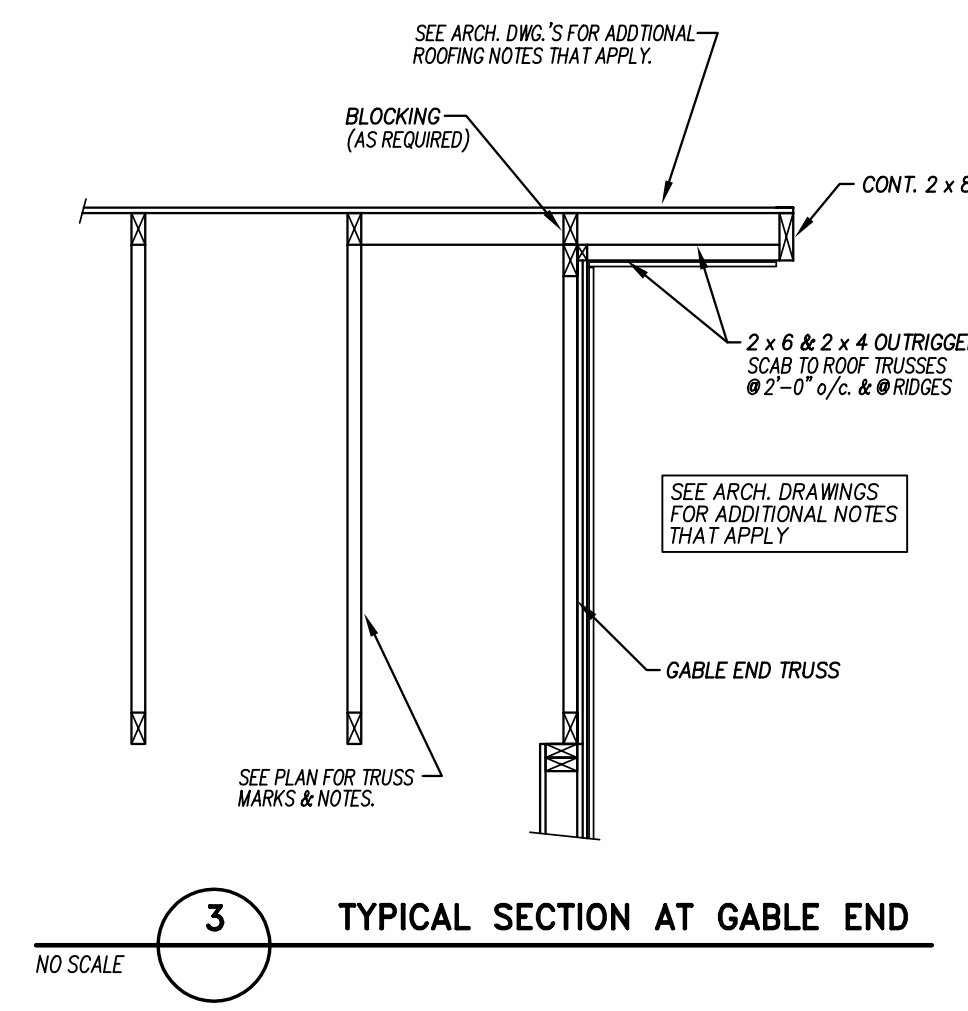
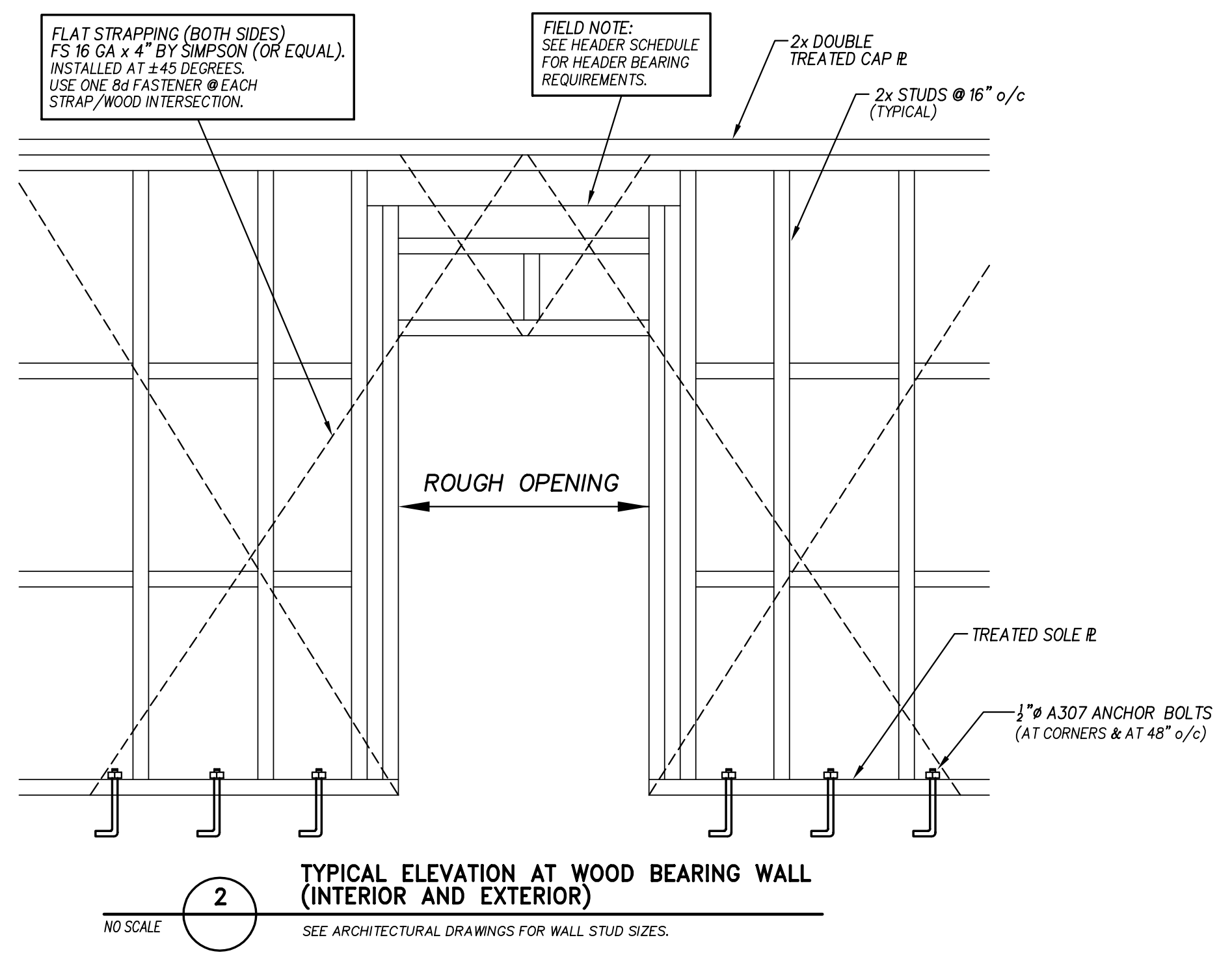
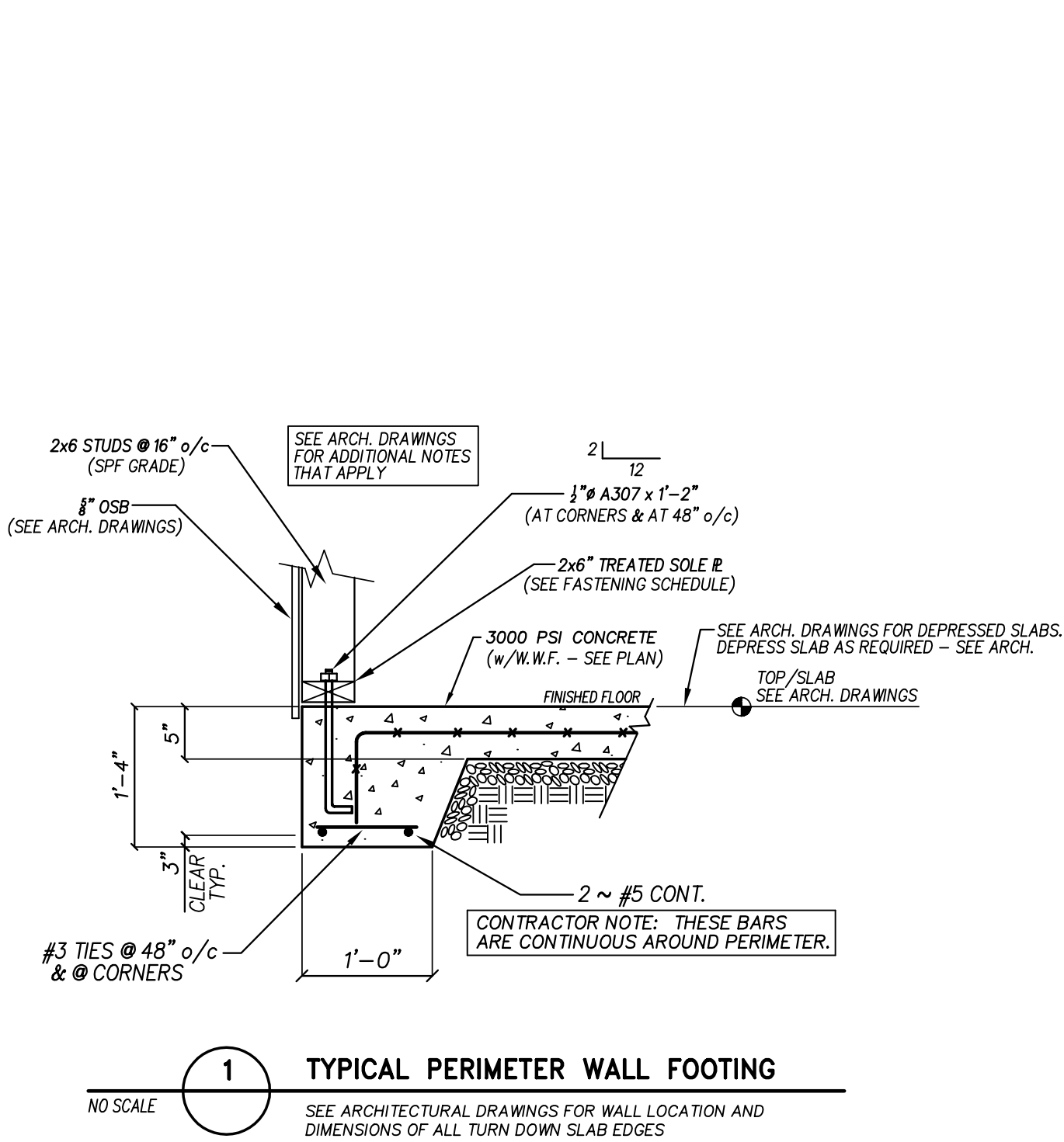
Revision
No.
Date

Hite associates
 ARCHITECTURE/ENGINEERING/TECHNOLOGY
 2600 Meridian Drive / Greenville, NC 27958 / tel (252) 757-0333

NC LIC. C-1020
QED
 QUEEN ENGINEERING & DESIGN
 2600 MERIDIAN DRIVE, SUITE 100
 GREENVILLE, NC 27958
 252-757-0333
 21 AUG 2023

NEW CLASSROOM ADDITION FOR
NORTH DUPLIN JR.-SR. HIGH SCHOOL
 1388 NC-403, MT. OLIVE, NC 28365
 DUPLIN COUNTY / NORTH CAROLINA

Project No. **22253**
 Date: **21 AUG 2023**
 Drawing No. **S 1101**



INTERIOR BEARING WALL HEADER SCHEDULE (TYPICAL, U.O.N.)

MAX. SPAN	SIZE	NO. OF JACK STUDS
5'-0"	2 ~ 2 x 10	2

EXTERIOR WALL OPENING SCHEDULE (TYPICAL, U.O.N.)

MAX. OPENING WIDTH	HEADER
8'-0"	2 EA. ~ 2 x 10

* NOTE: ALL HEADERS TO BEAR ON 3 JACK STUDS EACH END U.O.N.

WOOD MEMBER FASTENER SCHEDULE

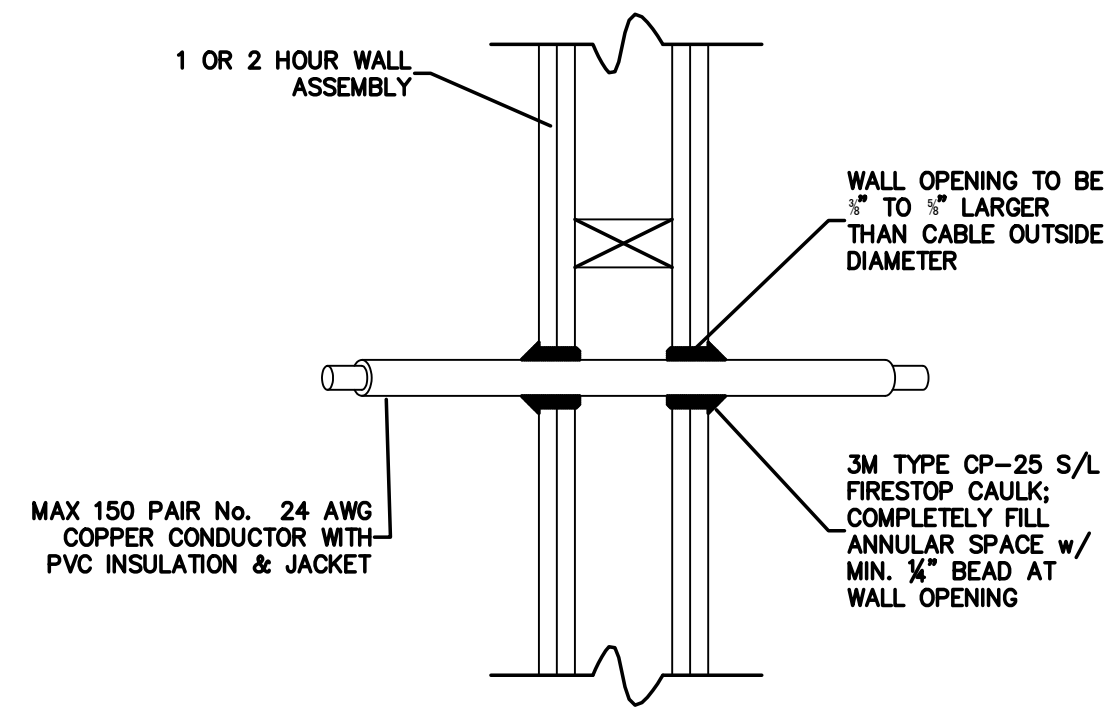
MEMBER	FASTENERS
UPPER TOP PL TO LOWER	10d AT 16" o/c.
TRUSS TO TOP PL	8d (H25)
TRUSS BRACING	SEE MANUFACTURER'S DRAWINGS
WOOD & GYP. SHEATHING & WOOD DECKING	8d, 12" o/c. AT SUPPORTS, 6" o/c. AT EDGES
WOOD BLOCKING	4~8d TOE, 4~8d END
TOP PLATE TO STUD	2 ~ 10d COMMON
STUD TO SOLE PLATE	4 ~ 8d COMMON OR (TOENAIL) (ENDNAIL)
DOUBLE STUDS	16d @ 24" o/c.
DOUBLE TOP PLATES	16d @ 16" o/c. (TYPICAL FACE NAIL) (LAP SPLICE)
TOP PLATES, LAPS AND INTERSECTIONS	2 ~ 16d COMMON (FACE NAIL)
CONTINUOUS HEADER, TWO PIECES	16d COMMON (16" o/c. ALONG EDGE)
CONTINUOUS HEADER TO STUD	4 ~ 8d COMMON
BUILT-UP CORNER STUDS	16d @ 24" o/c.

TRUSS GENERAL NOTES

- CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SUPPORT REQUIRED BEFORE PERMANENT DIAPHRAM AND BRACING MEMBERS ARE IN PLACE.
- ALL CONNECTIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

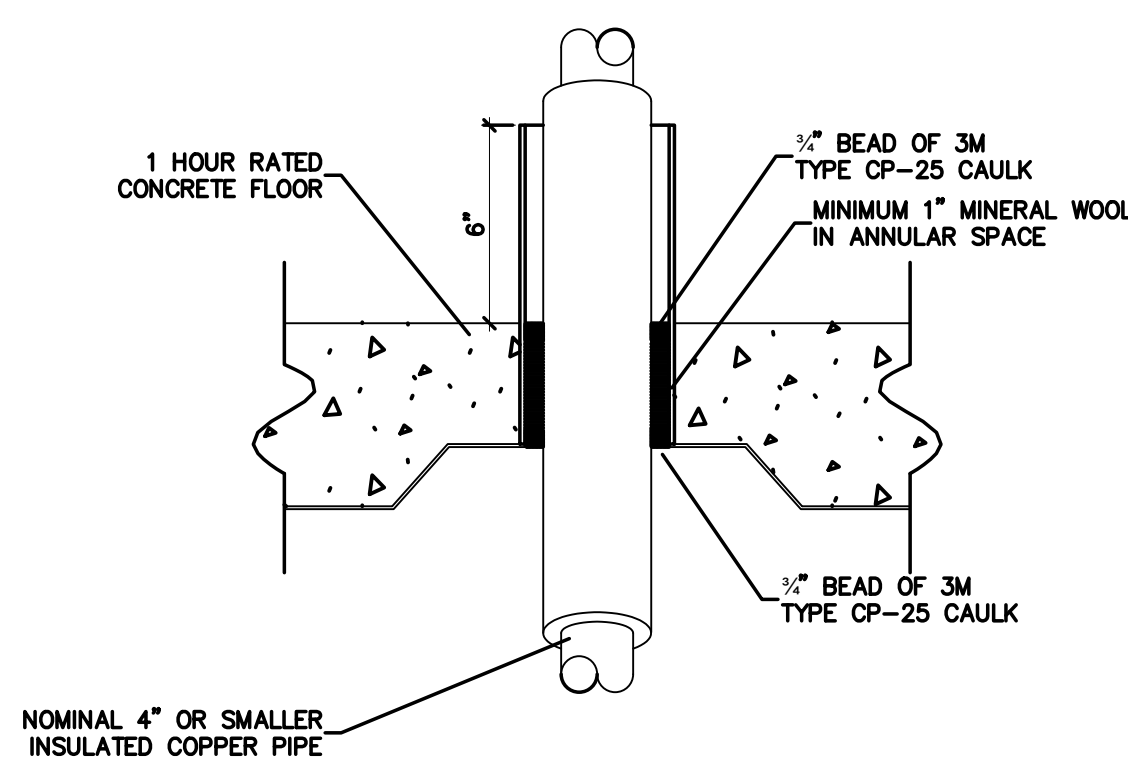
TRUSS LOADING

- DL = ACTUAL TRUSS WEIGHT + 3 PSF
- LL = 30 PSF
- LIVE LOAD REDUCTION DUE TO AREA SUPPORTED BY COMPONENT IS NOT PERMITTED.
- LIVE LOAD REDUCTION DUE TO SLOPE OF ROOF TRUSS IS PERMITTED.
- ADDITIONAL LIVE LOAD FOR ATTIC ACCESS PLATFORM = 40 PSF, WHERE REQ'D. SEE ARCH. DRAWINGS FOR ALL REQUIRED LOCATIONS.
- SEE S1201 FOR REQUIRED WIND LOAD ZONE, NOTES, AND ASCE VERSION.
- NORTH CAROLINA BUILDING CODE - LATEST RECOGNIZED VERSION - SHALL BE USED FOR WIND LOAD DETERMINATIONS.



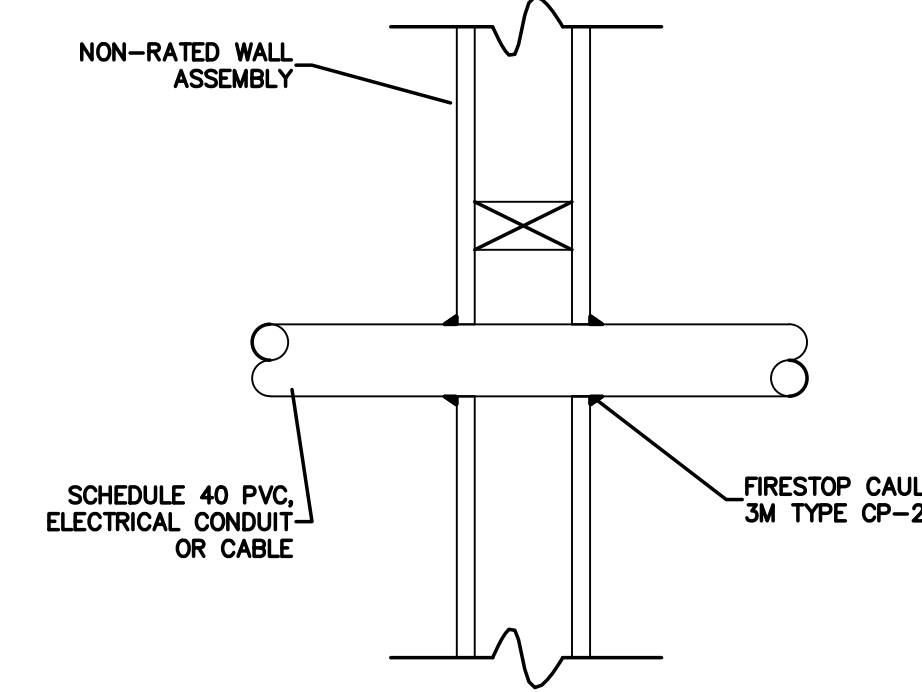
FIRESTOP PENETRATION UL # W-L-3001

001.16 CABLE THROUGH 1 OR 2 HOUR RATED GYPBOARD WALL
SCALE: none

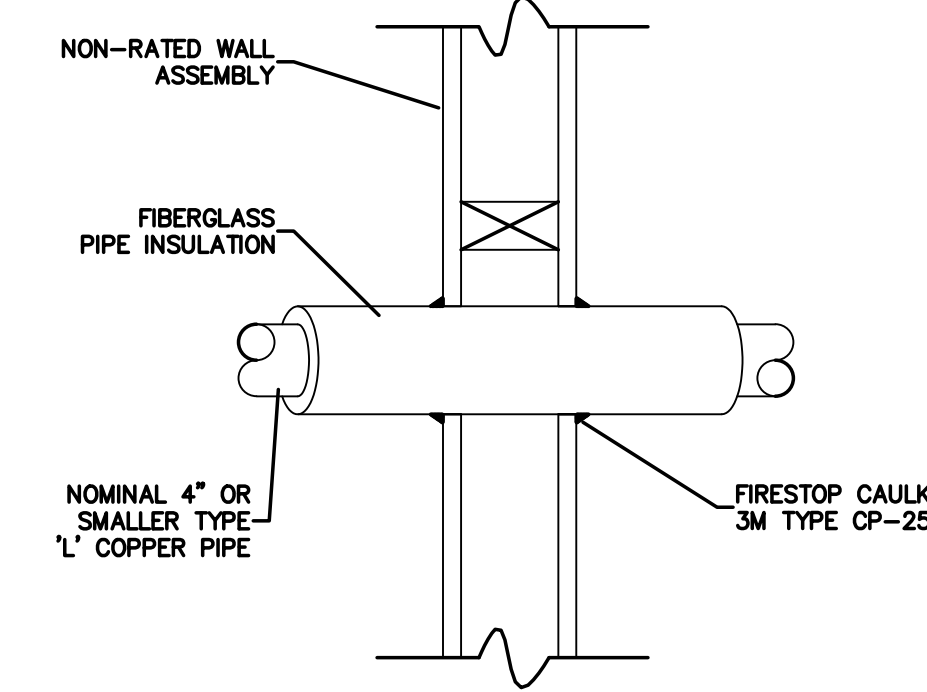


FIRESTOP PENETRATION UL # C-AJ-5001

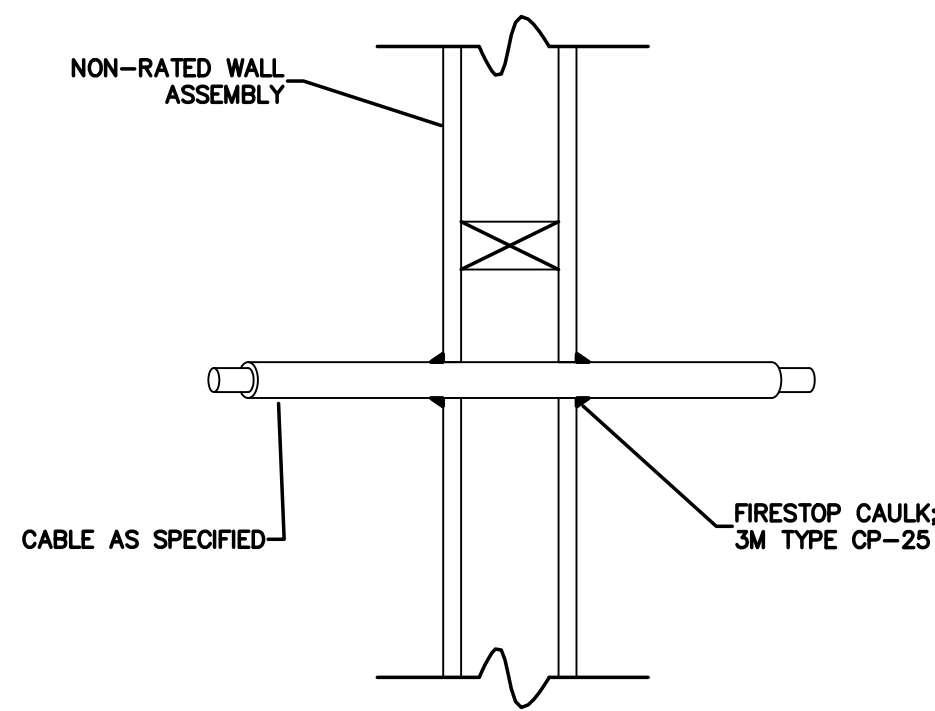
001.12 INSULATED PIPE THRU 1 HOUR RATED CONCRETE FLOOR
SCALE: none



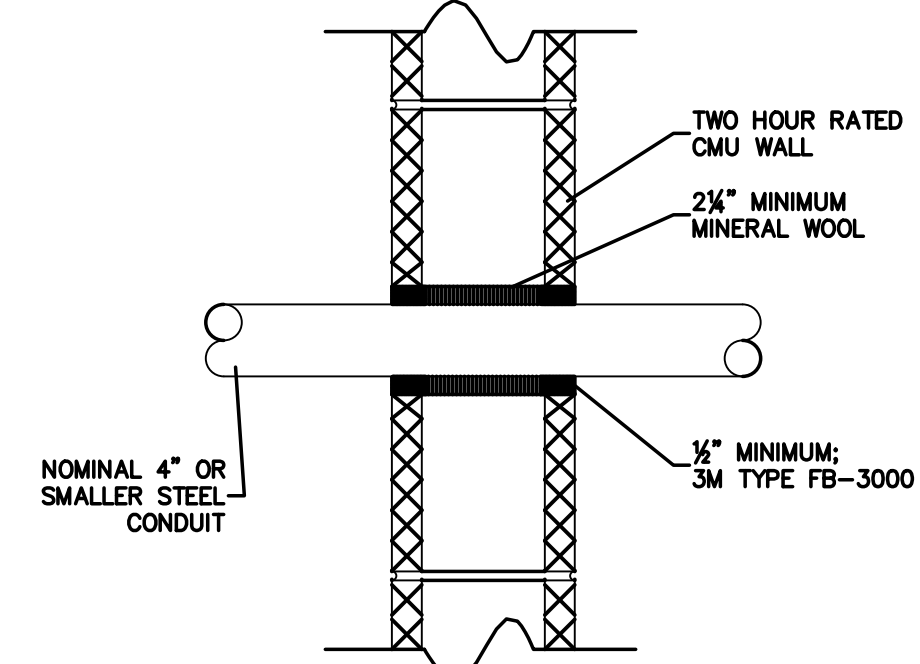
001.8 PIPE / CONDUIT / CABLE THRU NON-RATED WALL
SCALE: none



001.4 INSULATED PIPE THRU NON-RATED WALL
SCALE: none

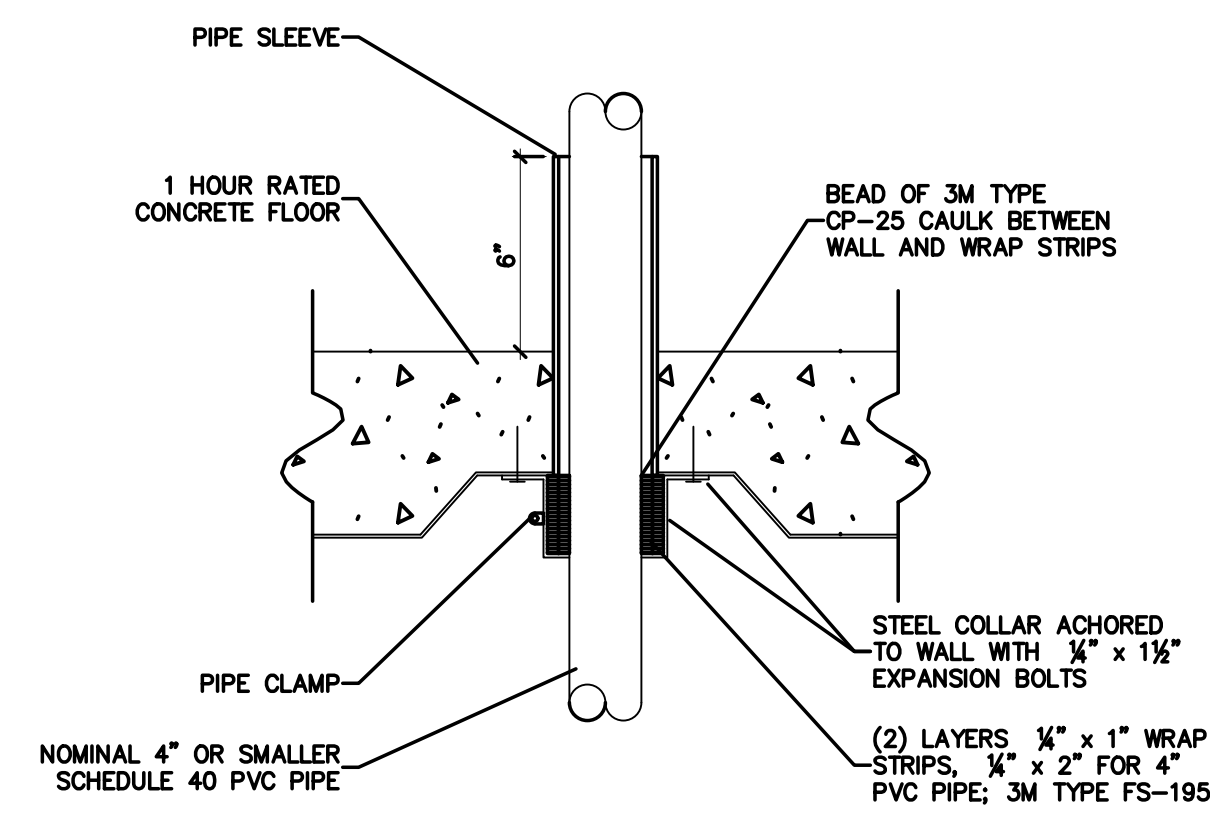


001.15 CABLE THRU NON-RATED WALL
SCALE: none



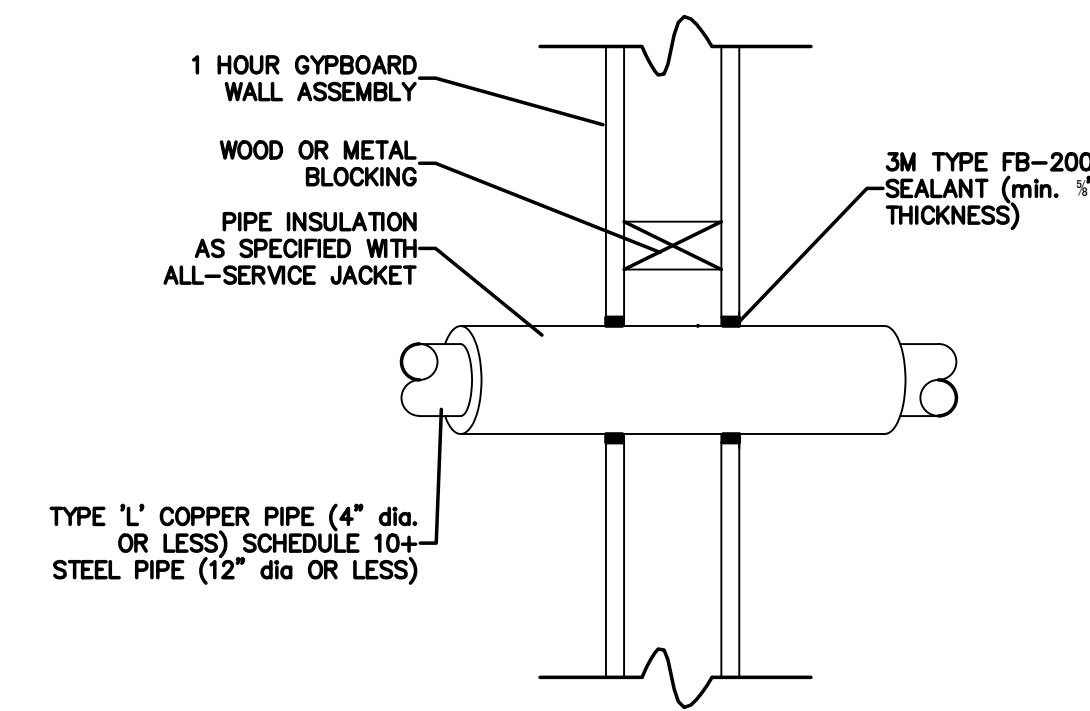
FIRESTOP PENETRATION UL # C-AJ-1014

001.11 CONDUIT THRU 2 HOUR RATED CMU WALL
SCALE: none



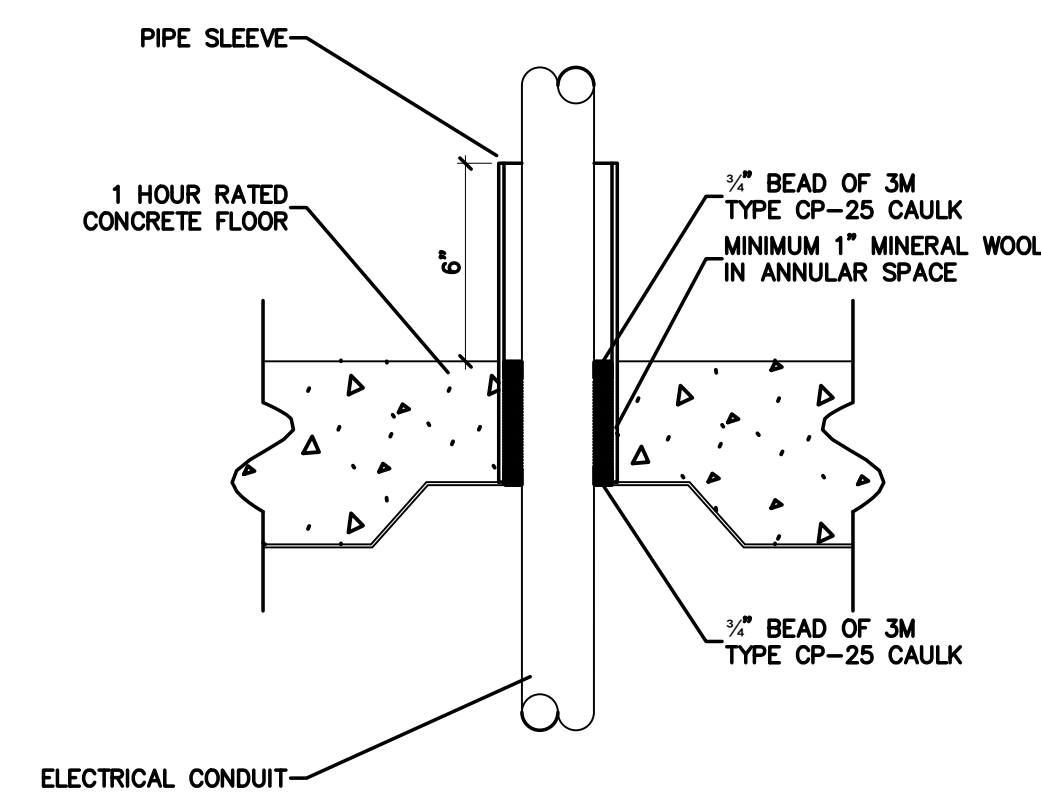
FIRESTOP PENETRATION UL # C-AJ-2001

001.7 PVC PIPE THRU 1 HOUR RATED CONCRETE FLOOR
SCALE: none



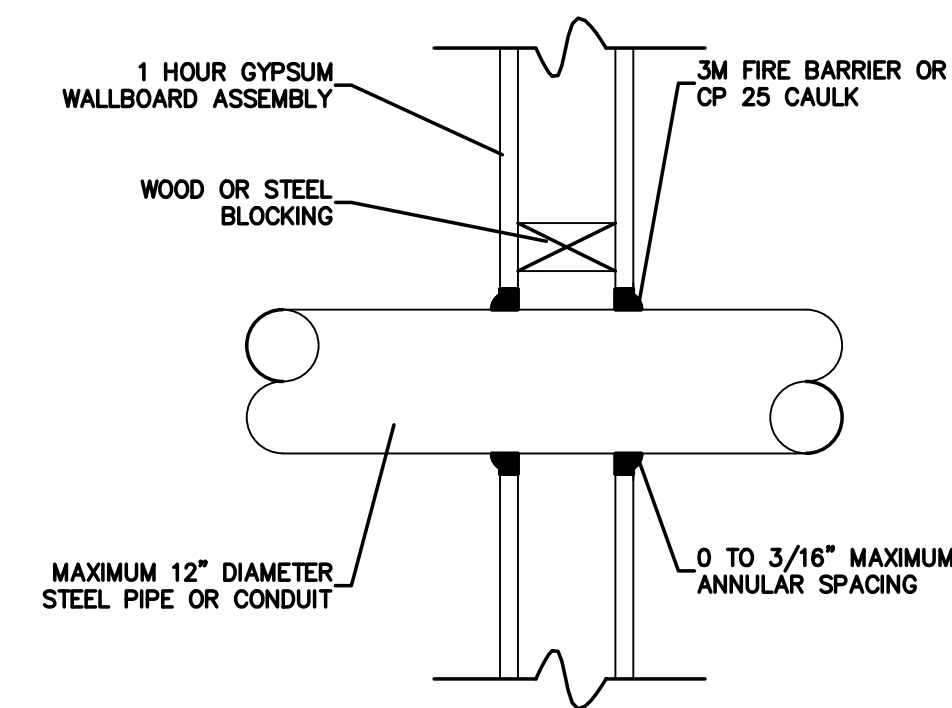
FIRESTOP PENETRATION UL # W-L-5032

001.3 INSULATED PIPE THRU 1 HOUR RATED GYPBOARD WALL
SCALE: none



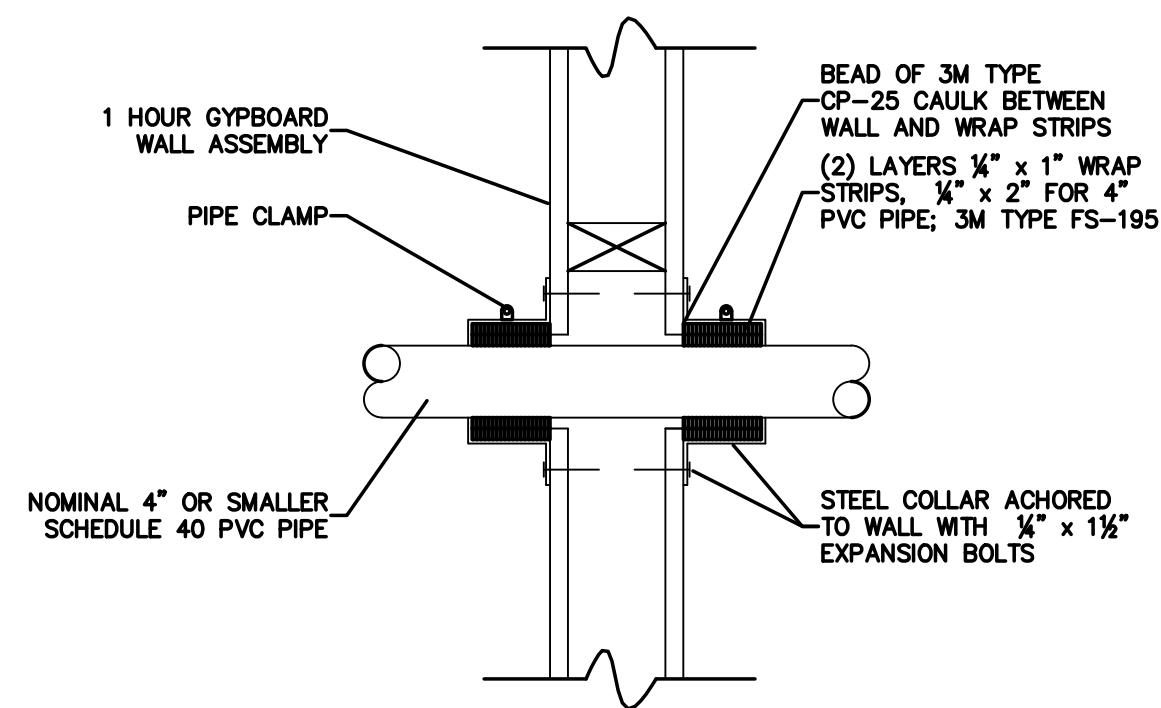
FIRESTOP PENETRATION UL # C-AJ-2001

001.14 CONDUIT THRU 1 HOUR RATED CONCRETE FLOOR
SCALE: none



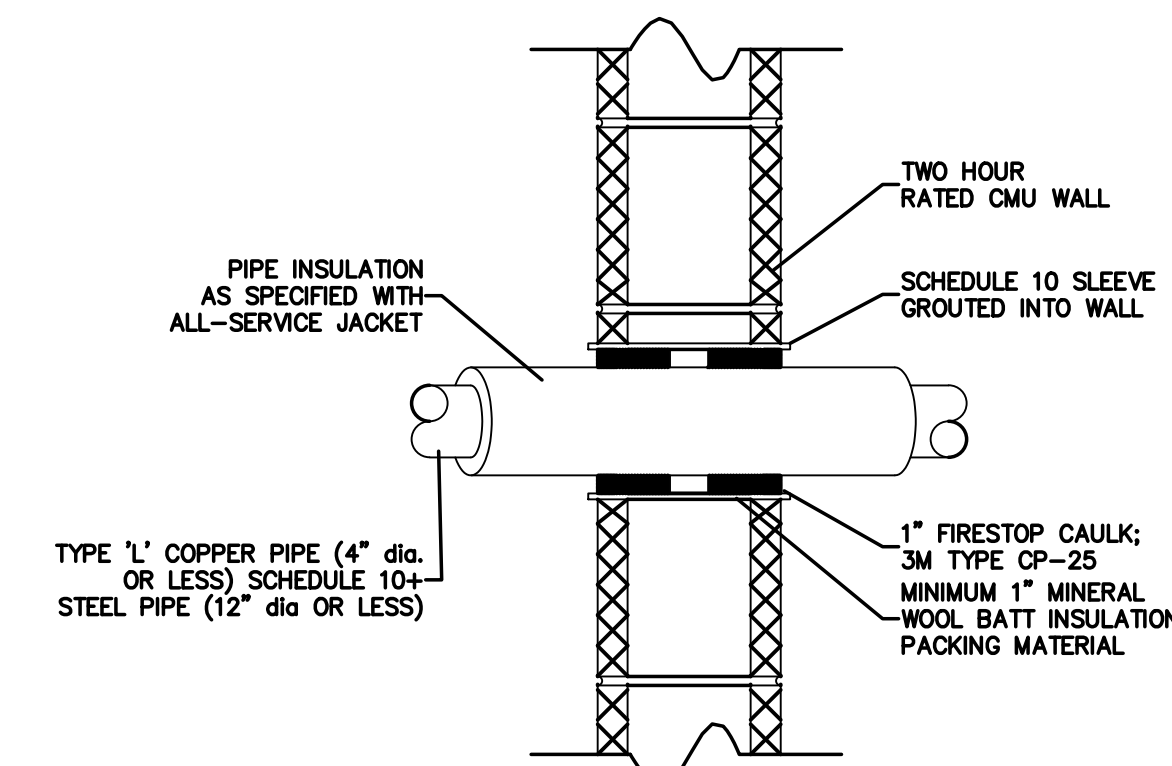
FIRESTOP PENETRATION UL # W-L-1001

001.10 CONDUIT THRU 1 HOUR RATED GYPBOARD WALL
SCALE: none



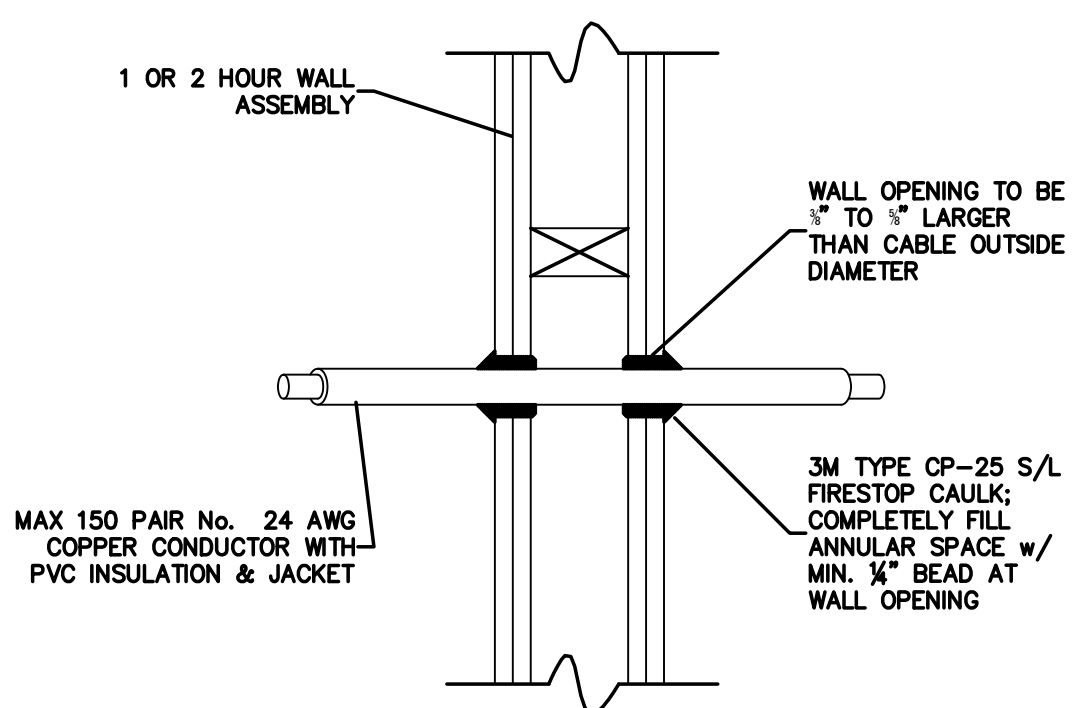
FIRESTOP PENETRATION UL # W-L-2002

001.6 PVC PIPE THRU 1 HOUR RATED GYPBOARD WALL
SCALE: none



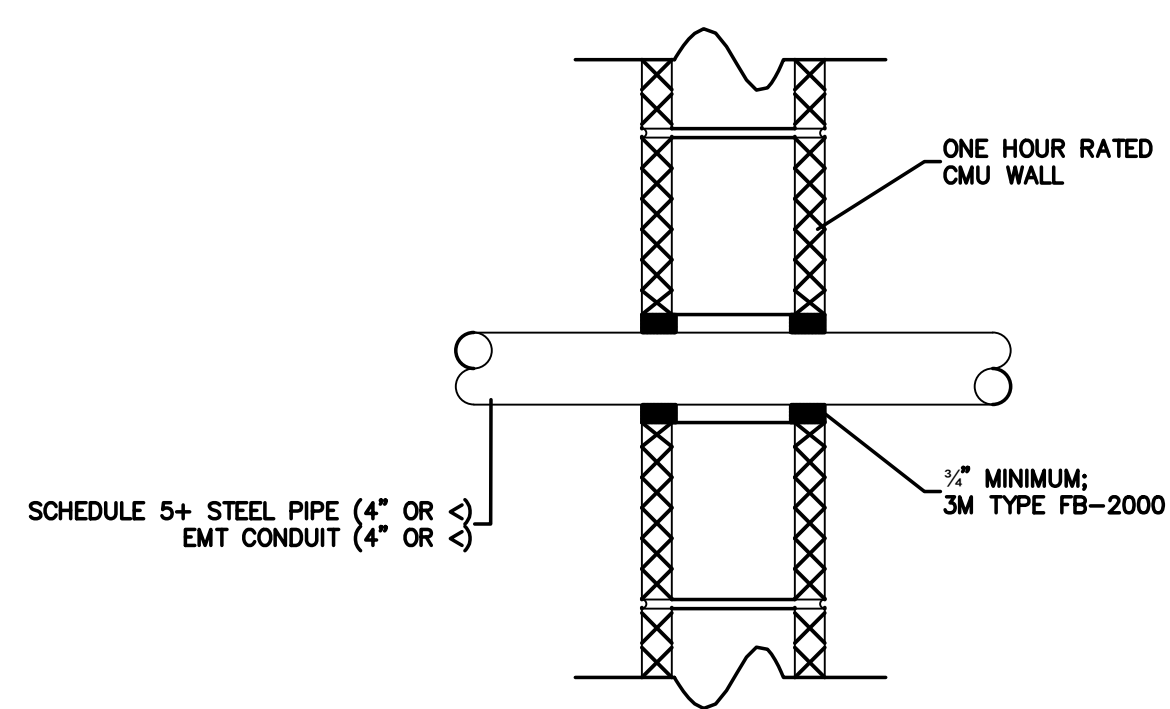
FIRESTOP PENETRATION UL # C-AJ-5001

001.2 INSULATED PIPE THRU 2 HOUR RATED CMU WALL
SCALE: none



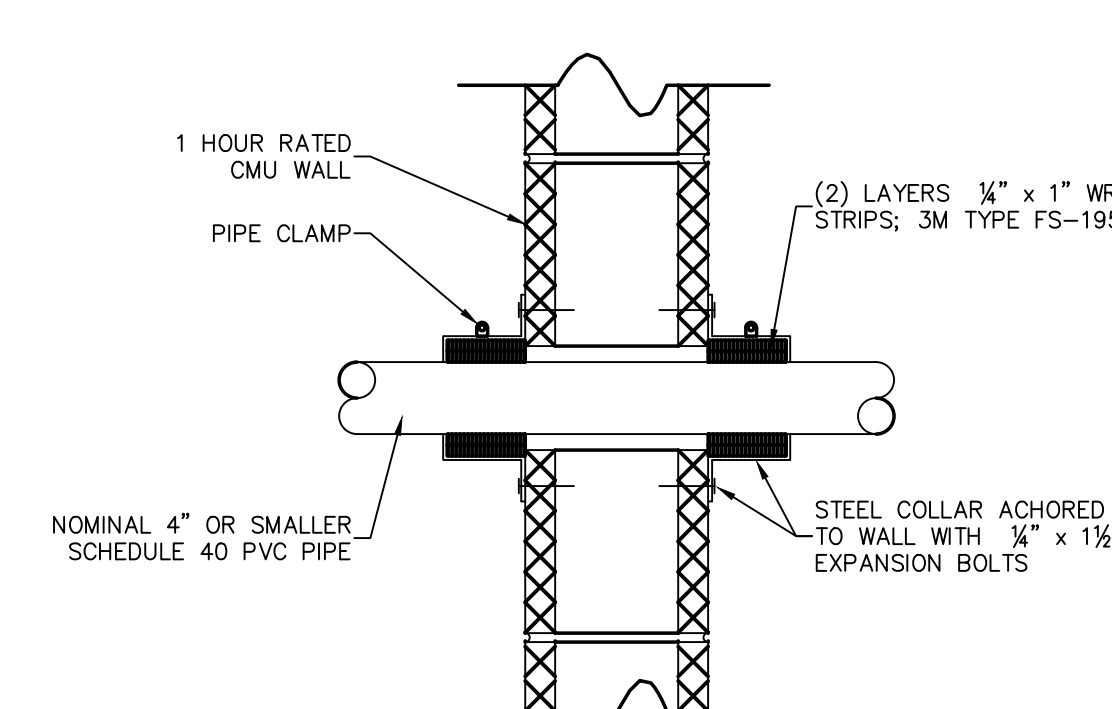
FIRESTOP PENETRATION UL # W-L-3001

001.13 CABLE THROUGH 1 OR 2 HOUR RATED GYPBOARD WALL
SCALE: none



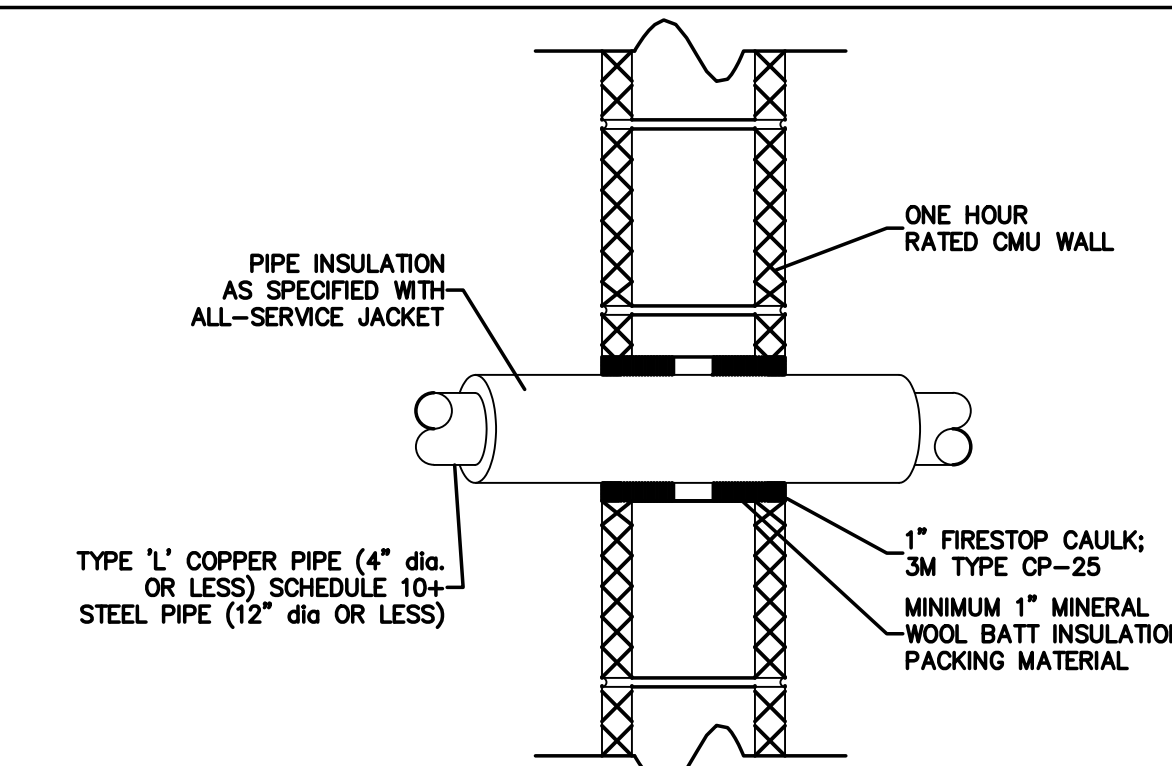
FIRESTOP PENETRATION UL # C-AJ-1013

001.9 CONDUIT THRU 1 HOUR RATED CMU WALL
SCALE: none



FIRESTOP PENETRATION UL # C-AJ-2025

001.5 PVC PIPE THRU 1 HOUR RATED CMU WALL
SCALE: none



FIRESTOP PENETRATION UL # C-AJ-5001

001.1 INSULATED PIPE THRU 1 HOUR RATED CMU WALL
SCALE: none

NOTE: ALL MEMBRANE PENETRATIONS SHALL BE SEALED PER THE CORRESPONDING THROUGH PENETRATION DETAIL PER NC BUILDING CODE.

ES Project No: ES23022
ENGINEERING
 SOURCE OF NC, PA.
 103-42 Regency Blvd. Greensboro, NC 27334
 E-Mail Address: general@hiteassociates.com
 Tel (336) 432-0228 • Fax (336) 432-0462 • Fax F-1973

D. Hite
 02/23
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Hite associates
 ARCHITECTURE / PLANNING / TECHNOLOGY
 2600 Meridian Drive / Greenville, NC 27834 / tel (252) 757-0333

REGISTERED PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 418
 HITE ASSOCIATES, P.C.
 GREENVILLE, NC

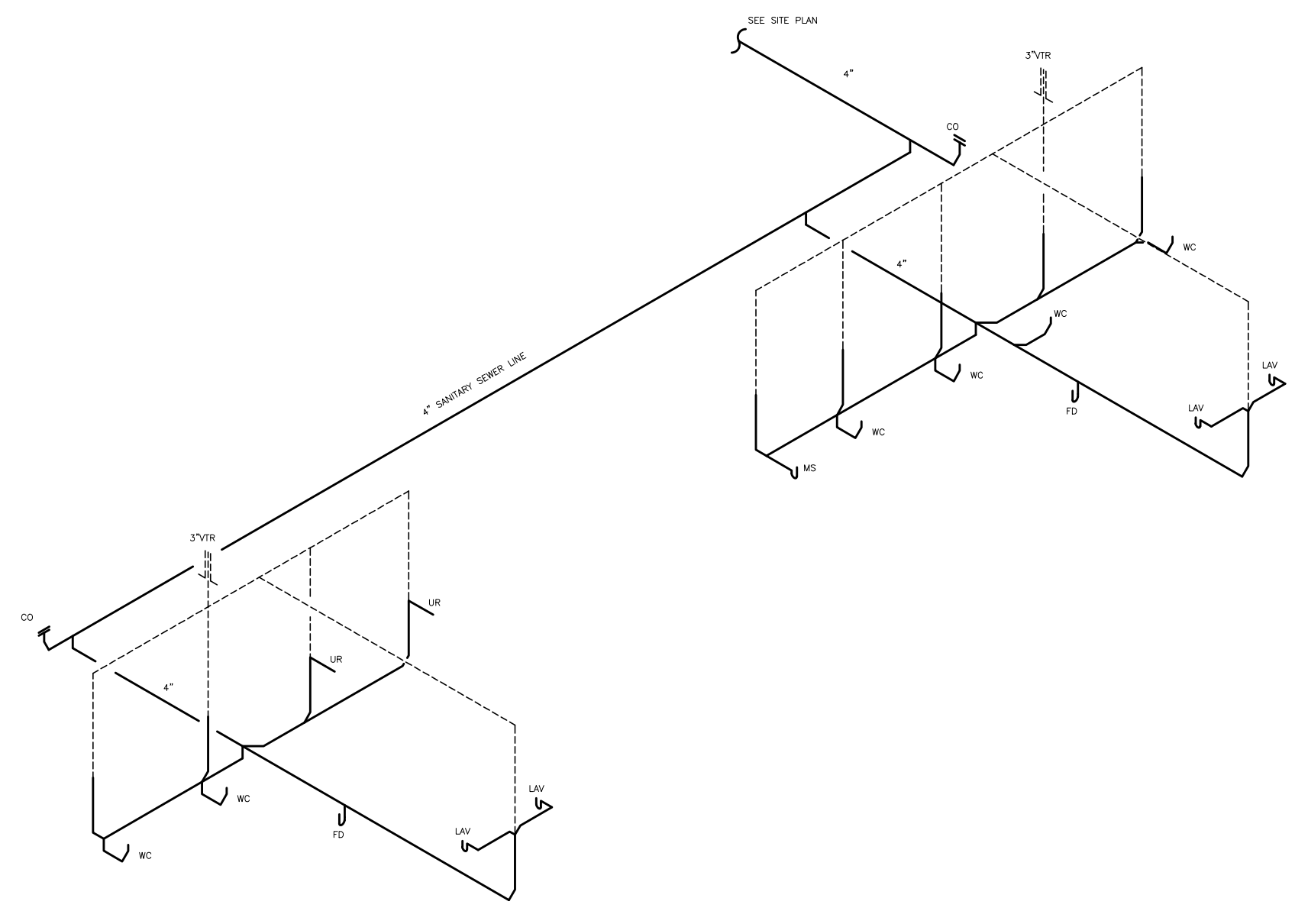
New Classroom Addition for
North Duplin Jr.-Sr. High School
 1388 NC-403, Mt Olive, NC 28365
 Duplin County / North Carolina

Project No: 22253
 Date: 6 March 2023
 Drawing No:
FP 001

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PLUMBING GENERAL NOTES:

- THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH N.C. PLUMBING CODE AND LOCAL PLUMBING INSPECTOR.
- ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, TEES, ELBOWS, ETC. FOR A COMPLETE WORKING PLUMBING SYSTEM.
- THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC. (COST SHALL BE PASSED THROUGH TO OWNER).
- CONTRACTOR SHALL COORDINATE ANY PLUMBING SYSTEM REQUIRING SHUTDOWN WITH THE OWNER 48 HOURS IN ADVANCE.
- ALL DOMESTIC WATER PIPING SHOWN IS ABOVE BETWEEN FLOOR JOIST/WITHIN WALLS, AND IN CRAWL SPACES UNLESS OTHERWISE NOTED.
- ALL DOMESTIC WATER PIPING (ABOVE SLAB) SHALL BE COPPER TUBING, CPVC OR FLEXIBLE PLASTIC TUBING (PEX). PIPING BELOW SLAB SHALL BE SOFT COPPER TUBING, 10'-0" MINIMUM, WITH NO JOINTS. COPPER TUBING BELOW GRADE SHALL BE UTILIZED AS THE ELECTRICAL SYSTEM GROUNDING ELECTRODE.
- ALL WATER PIPING SHALL BE INSULATED WITH PREFORMED FIBERGLASS TYPE INSULATION WITH THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1/2" THICK. THICKNESS FOR HOT WATER & RETURN PIPING SHALL BE 1" THICK. INSTALL SADDLES AS REQUIRED IN ALL LOCATIONS TO PREVENT COMPRESSION OF INSULATION.
- ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY, FULL PORT, CHROME PLATED BALL. TEFLON SEATS 150 # WSP. FOR SIZES 1/2" THRU 2", PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.
- ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.
- ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D 2665. ALL JOINTS SHALL BE SOLVENT WELDED TYPE CONFORMING TO ASTM D 2665/2949/3034, ASTM F 891, CSA B182.2, CSA CAN/CSA-B182.4
- ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY NC PLUMBING CODE AND MANUFACTURERS RECOMMENDATIONS.
- ALL PIPING PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL.
- ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED PER N.C. PLUMBING CODE.
- THE PLUMBING CONTRACTOR SHALL COORDINATE ALL UNDER SLAB PIPING WITH ALL STRUCTURAL FOUNDATIONS, P.C. SHALL COORDINATE ALL UNDER SLAB PLUMBING WITH ELEVATION INVERTS WITH THE SITE UTILITY INVERTS.
- ALL EXPOSED WATER SUPPLY AND WASTE LINES UNDER OPEN SINKS/LAVATORIES SHALL HAVE PROTECTIVE DEVICES INSTALLED TO MEET LATEST NCSBC AND ADA REQUIREMENTS.
- THE ENTIRE PLUMBING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH NC PLUMBING CODE.
- ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT WASTE LINES, VENT LINES, AND WATER SUPPLY LINES.
- WATER HEATERS SHALL COMPLY WITH N.C. ENERGY CODE SECTION 504 OF THE NC BUILDING CODE
- ALL FLOOR DRAINS, HUB DRAINS, AND FLOOR SINKS SHALL HAVE TRAP PRIMERS OR HOSE BIBBS, INSTALLED AS SPECIFIED IN THE N.C. PLUMBING CODE SECTION 412.6.
- P.C. SHALL VERIFY AND SET THE MAXIMUM OUTLET TEMPERATURES AT ALL NON-COMMERCIAL KITCHEN EQUIPMENT INCLUDING HAND SINKS LOCATED IN THE KITCHEN TO NOT EXCEED 120°F BY INSTALLATION OF POINT OF USE ANTI-SCALD MIXING VALVES IF NECESSARY.
- ALL ACCESS COVERS INCLUDING BUT NOT LIMITED TO IN-GRADE CLEANOUTS, MANHOLES, AND WATER METER BOXES SHALL BE FLUSH WITH FINISHED GRADE UNLESS OTHERWISE SPECIFIED
- P.C. SHALL PROTECT ALL PLUMBING PIPE AS IT COMES UP THROUGH CONCRETE PER SECTION 305.1 OF THE N.C. PLUMBING CODE.



DWV RISER DIAGRAM
SCALE: NONE

FIXTURE CALCULATIONS JUSTIFICATION			
OCCUPANCY = EDUCATION	MINIMUM PLUMBING FIXTURES FROM TABLE 403.1		
NET AREA FOR OCCUPANT CALC. CAPACITY OF MODULAR CLASSROOM = 112 PEOPLE	TOTAL REQUIRED	TOTAL PROVIDED	
DIVISION OF FACILITIES PER TABLE 403.4: MALE = 50% FEMALE = 50%	MALE 2 WC 1 LAVATORY - UR	2 WC 2 LAVATORY 2 UR	
112 x .5 = 56 FEMALE	FEMALE 3 WC 1 LAVATORY	4 WC 2 LAVATORY	
112 - 56 = 56 MALE	DRINKING FOUNTAINS 0 EWC	0 EWC	

EWH SCHEDULE								
TAG	LOCATION	CAP	ELEMENT	TEMP	RCVY @ 60° RISE	MFR / MODEL NO.	ELECT'L	NOTES
EWH	DOWN ROOM 100A	50	(2) 4000 W	110	40 GAL.	A.O. SMITH No. DEN-52	208V 1Ø 21.6A	1,3,4,5

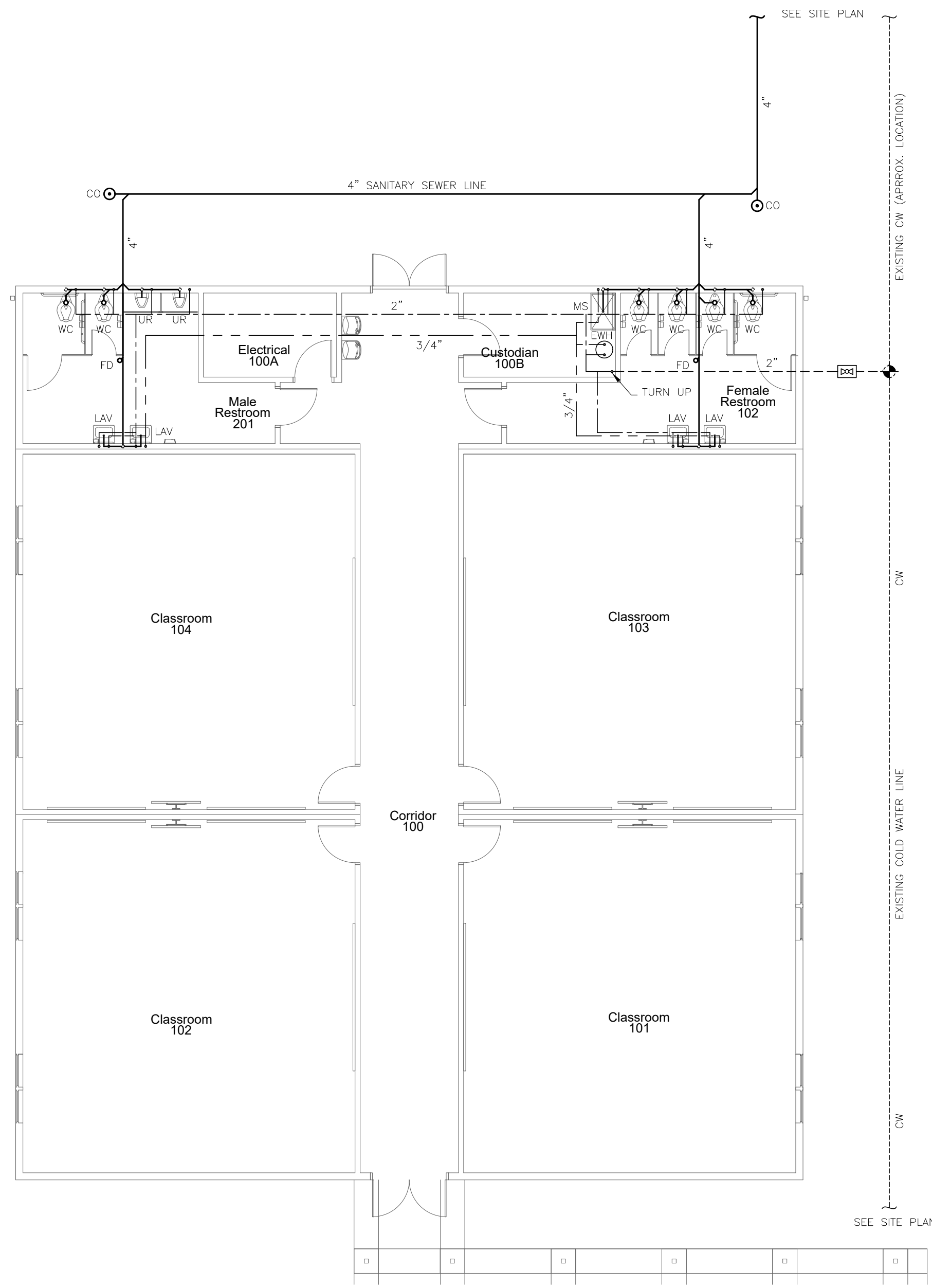
NOTES:
 1) STATE INDUSTRIES, LOCHNAR, OR RHEEM/RIJUD MEETING OR EXCEEDING SPECIFICATIONS ARE ACCEPTABLE SUBSTITUTES.
 2) PROVIDE BRASS BODY RECIRCULATION PUMP RATED FOR 8 GPM @ 10' HEAD, 1/12 hp, 115V, B&G No. LR-158 OR EQUAL BY TACO OR ARMSTRONG.
 3) PROVIDE EWH WITH NON-SIMULTANEOUS DUAL ELEMENTS SIZED AS SPECIFIED.
 4) SEE DETAIL FOR ACCESSORIES.
 5) WATER HEATER SHALL COMPLY WITH SECTION 504 OF THE NORTH CAROLINA ENERGY CODE.

ABBREVIATIONS:
 CAP = STORAGE CAPACITY (gal)
 ELEMENT = (EWH) INSTAGE
 TEMP = HW OUTLET TEMPERATURE (deg F)
 RCVY = RECOVERY @ 100 deg F RISE (gal)
 POU = POINT OF USE WATER HEATER

FIXTURE UNIT REQUIREMENTS	
POTABLE WATER SUPPLY	42.0 GPM USE 2" SERVICE
WASTE	50.0 FU USE 4" SERVICE

PLUMBING FIXTURE SCHEDULE							
ITEM	DESCRIPTION	FINISH	COLD	HOT	VENT	WASTE	ADA
CD	CLEAN-OUT IN FLOOR - ZURN MODEL # ZN-1444-BP WITH INSIDE CAULK CONNECTION (OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATIONS)	BRONZE				3"	
WC	WATER CLOSET - KOHLER HIGHCLIFF UNIVERSAL HEIGHT EL 1.6 ELONGATED FLUSH VALVE WC	WHITE			2"	4"	YES
SEAT	SEAT - KOHLER K-4666-SA ANTI-MICROBIAL OPEN FRONT SEAT W/ SELF SUSTAINING CHECK HINGE	WHITE					YES
UR	URINAL - WHITE VITREOUS CHINA, WALL HUNG, KOHLER "FRESHMAN" K-4989-T-0	CHROME	1"				YES
UR	URINAL - WHITE VITREOUS CHINA, WALL HUNG, KOHLER "FRESHMAN" K-4989-T-0	CHROME	3/4"				YES
LAV	LAVATORY - KOHLER "HUDSON" WALL HUNG LAVATORY MODEL NO. K-2867 ENAMELED CAST IRON	WHITE	-	-	1 1/2"	2"	YES
FAUCET	FAUCET - MOEN NO. 8862 TWO-HANDLE METERING OR EQUAL BY KOHLER	CHROME	1/2"	1/2"			YES
MS	TRUEBRO HANDI LAV-GUARD INSULATION KIT M# 102W (OR EQUAL FROM MANUFACTURERS SPECIFICATIONS).	WHITE					
MS	MOP SINK - EL MUSTEE 24"x36" MOP SINK M# 63M				2"	3"	
FAUCET	FAUCET - EL MUSTEE MOP SINK FAUCET M# 63.600A (OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATION.)						
FD	FLOOR DRAIN - ZURN M# ZN415B WITH TYPE "B" STRAINER (OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATION)	NICK-BRNZ		3/4"	3/4"		
						3"	

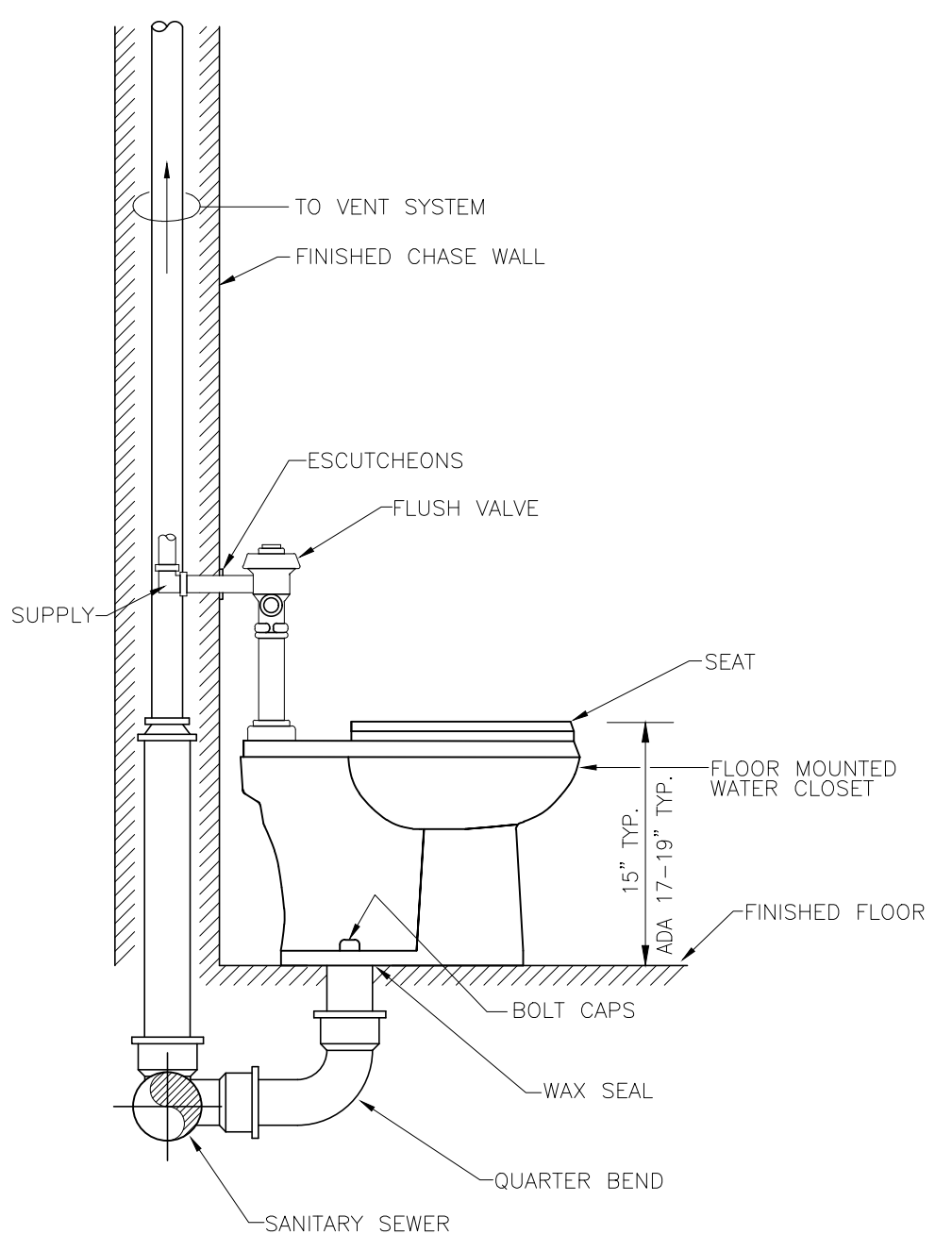
*MODEL NUMBERS ARE PROVIDED TO ESTABLISH A LEVEL OF QUALITY. EQUAL QUALITY PRODUCTS ARE ACCEPTABLE.



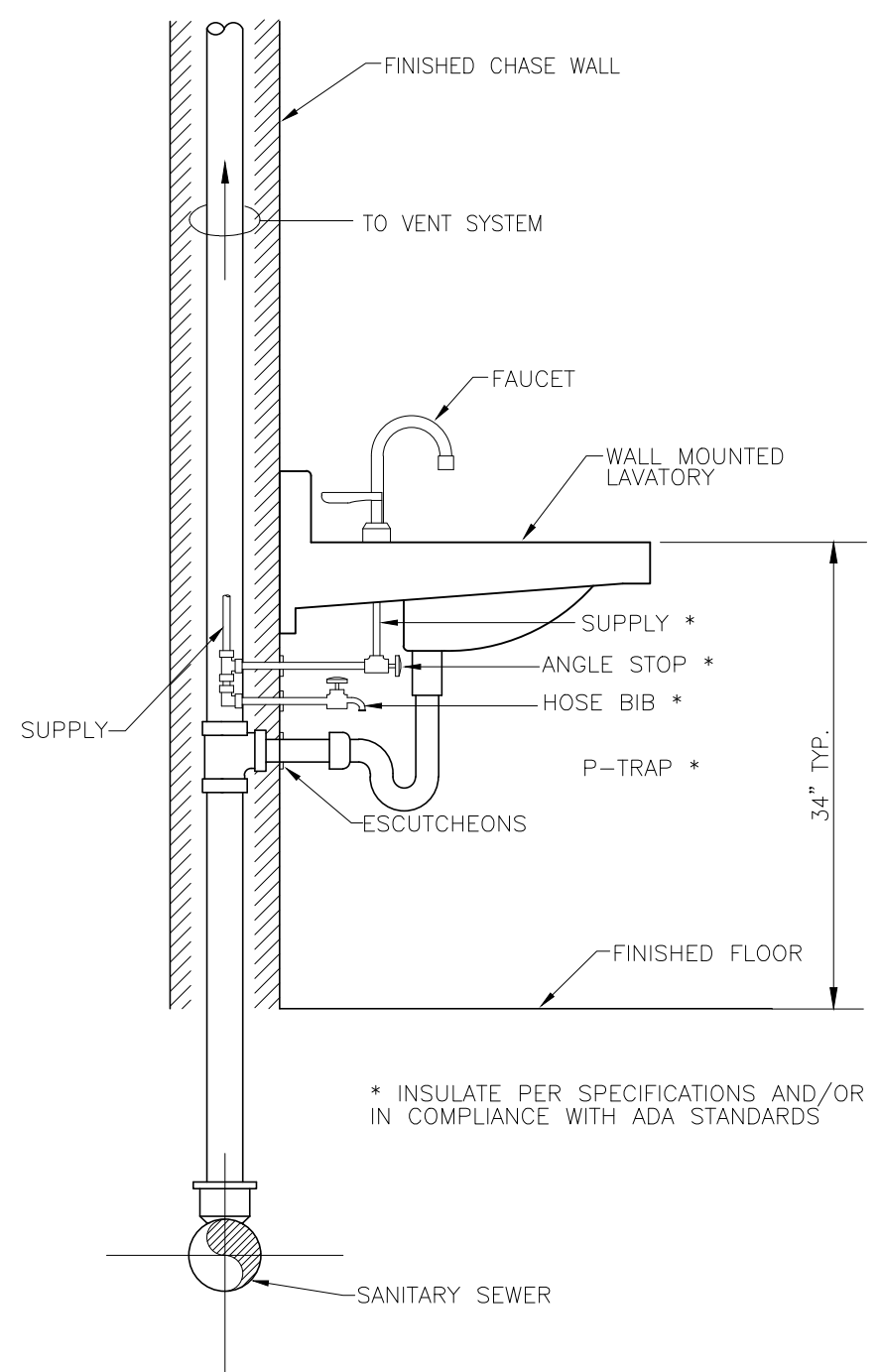
PLUMBING PLAN
SCALE: 1/8" = 1'-0"

PLUMBING LEGEND

- EXISTING SANITARY SEWER LINE
- SANITARY SEWER LINE
- GREASE WASTE LINE
- VENT
- COLD WATER
- EXISTING COLD WATER
- HOT WATER
- RECIRCULATING HOT WATER LOOP
- EXISTING HOT WATER
- VENT THROUGH ROOF
- E.C. ELECTRICAL CONTRACTOR
- M.C. MECHANICAL CONTRACTOR
- G.C. GENERAL CONTRACTOR
- CO CLEAN OUT
- WCO WALL CLEAN OUT
- BALL VALVE
- CHECK VALVE
- UNION
- ELBOW UP
- ELBOW DOWN
- POINT OF NEW CONNECTION TO EXISTING
- HOT WATER RECIRCULATION PUMP
- CIRCUIT SETTER
- WATER HAMMER ARRESTOR (WHA)
- AUTOMATIC AIR ADMITTANCE VALVE
- T.M.V. THERMOSTATIC MIXING VALVE



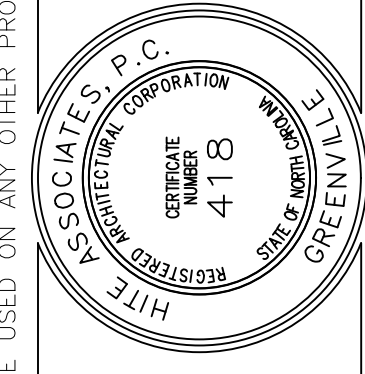
WATER CLOSET
SCALE: N.T.S.



LAVATORY - WALL MOUNTED
SCALE: N.T.S.

No.	Date	Revision

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 2600 Meridian Drive / Greenville, NC 27834 / Tel: (252) 757-0333



New Classroom Addition for
North Duplin Jr.-Sr. High School
 1388 NC-403, Mt Olive, NC 28365
 Duplin County / North Carolina

Project No: 22253
 Date: 6 March 2023
 Drawing no: P 101

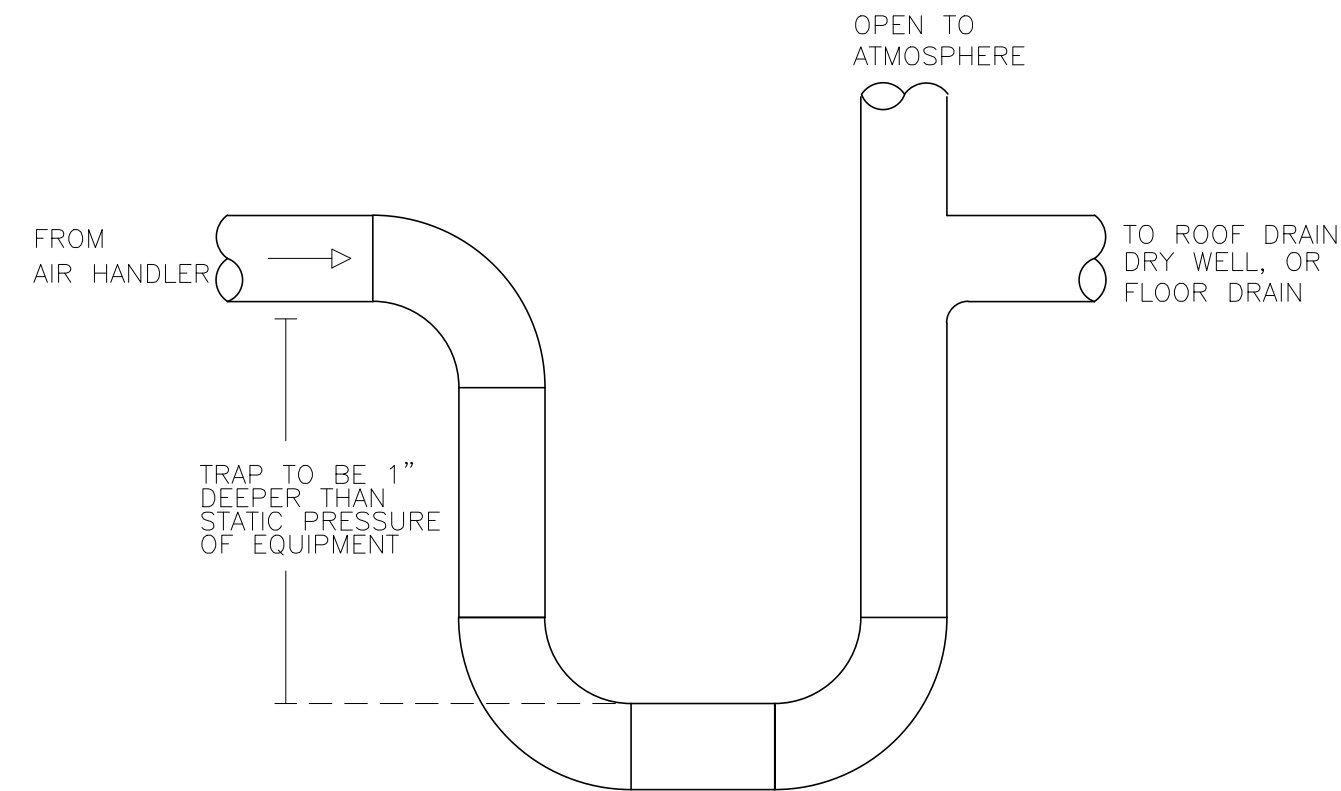
ES23022 ENGINEERING SOURCE OF NC, P.A.
 102-A2 Regency Blvd. Greenville, NC 27834
 E-Mail Address: generalinfo@engsource.com
 Tel: (252) 439-0338 • Fax: (252) 439-0462 • TDD: (252) 439-0462

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MECHANICAL GENERAL NOTES:

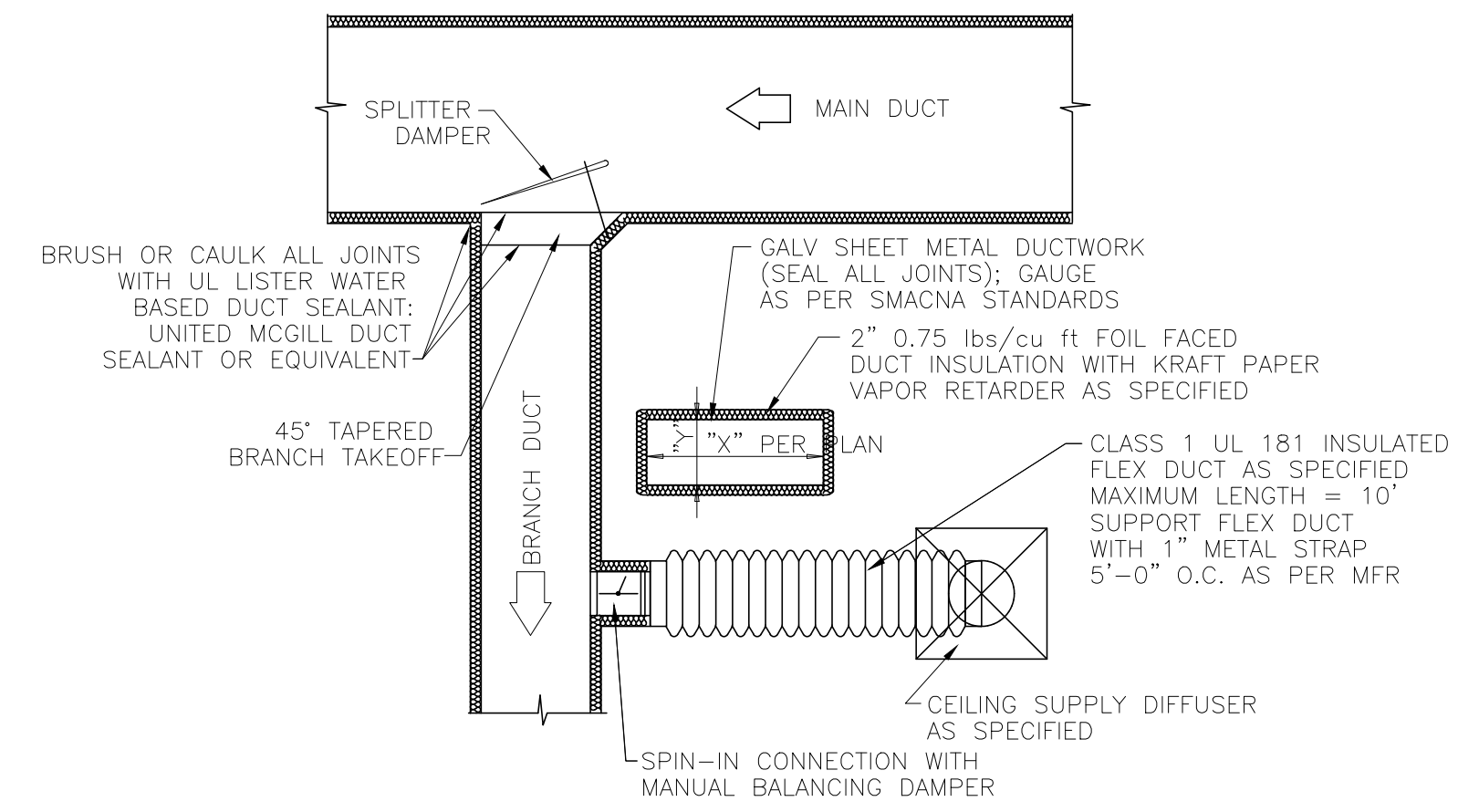
1. REFERENCE ARCHITECTURAL, STRUCTURAL, PLUMBING, & ELECTRICAL DRAWINGS, AND SPECIFICATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID.
2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE NC BUILDING CODE & CONTR. SHALL NOTIFY ENGINEER IN WRITING REGARDING ANY CODE DISCREPANCIES FOUND ON PLANS. CONTR. IS RESPONSIBLE FOR PERMITS, INSPECTIONS AND FEES. THE CONTROLS CONTRACTOR (C.C.) SHALL PROVIDE ALL CONTROL VALVES, ACTUATORS, DAMPERS, FAN COIL COMBINATION STARTERS. C.C. SHALL PROVIDE ALL LOAD SIDE WIRING ASSOCIATED WITH ALL FAN COIL COMBINATION STARTERS. VALVE TAGS AND LABELING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR (M.C.).
3. DO NOT SCALE THESE DRAWINGS; REFER TO LARGEST SCALE ARCHITECTURAL DRAWINGS. THESE DRAWINGS ARE DIAGRAMMATIC ONLY & ARE NOT INTENDED TO SHOW MINOR DETAILS & EXACT LOCATIONS. DESIGN ADJUSTMENTS SHALL BE ANTICIPATED BY THE CONTRACTORS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
4. "PROVIDE" IS DEFINED AS FURNISH & INSTALL AS PER MANUFACTURERS RECOMMENDATIONS.
5. THE MECHANICAL & CONTROLS CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HVAC EQUIPMENT & CONTROLS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICT. CONTACT ARCHITECT IF ALTERNATE INSTALLATION METHOD IS REQUIRED.
6. SYSTEMS INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL EXAMINE SITE CONDITIONS PRIOR TO DUCT CONSTRUCTION AND COORDINATE INSTALLATION WITH OTHER TRADES. CONTRACTOR SHALL PROVIDE NECESSARY HANGERS, FASTENERS ETC. TO PROVIDE A COMPLETE AND WORKING SYSTEM.
7. CONTRACTOR SHALL SEAL ALL DUCTWORK WITH A PAINT ON MASTIC. ALL WALL PENETRATIONS SHALL BE SEALED AIR TIGHT.
8. CONTRACTOR SHALL COORDINATE ALL DUCTWORK, DIFFUSER AND GRILLE LOCATION WITH OTHER CEILING MOUNTED DEVICES SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN.
9. CONTRACTOR SHALL INSTALL BALANCING DAMPERS IN EACH BRANCH DUCT TO PROVIDE PROPER AIRFLOW TO EACH ZONE.
10. LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" A.F.F. (CENTER OF BOX FOR GYP BRD, TOP OF BOX FOR MASONRY) IN LOCATIONS INDICATED ON PLANS.
11. ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS.
12. CONTRACTOR SHALL COORDINATE ALL ROOF AND FLOOR PENETRATION LOCATIONS AND SIZES.
13. FABRICATE AND INSTALL ALL DUCT WORK PER SMACNA 1.5" W.C. PRESSURE. ALL ELBOWS SHALL HAVE 1.5R CENTERLINE. ALL DUCT UNDER SLAB SHALL BE FIBERGLASS.
14. SUSPEND ALL CEILING MOUNT AIR DISTRIBUTION DEVICES FROM STRUCTURE WITH 12 GA. WIRE. ALL HANGERS AND SUPPORTS TO BE INSTALLED PRIOR TO FIREPROOFING OF ROOF STRUCTURE.
15. ALL FLEXIBLE ROUND DUCT SHALL BE PRE-INSULATED DOUBLE WALLED WITH SPIRAL METAL RIB, AND SHALL HAVE MIN. RESISTANCE VALUE OF R-6. MAXIMUM LENGTH SHALL BE 10'-0" UNLESS SHOWN SPECIFICALLY OTHERWISE IN PLAN. SECURE ENDS WITH NYLON BANDS AND TAPE.
16. ALL SUPPLY AND RETURN DUCT SHALL BE INSULATED WITH A MINIMUM OF 2-3/16" 3/4 LB. OR 2" OF 1.0 LB. DENSITY FIBERGLASS WRAP. INSULATED DOUBLE WALLED SPIRAL DUCT SHALL HAVE A MINIMUM INSULATION THICKNESS OF 2" OF 1.5 LB. DENSITY. PIPING INSULATION (REFRIGERANT OR WATER) SHALL BE A MINIMUM OF 1-1/2" THICK OR PER LATEST NC ENERGY CODE, WHICHEVER IS GREATER.
17. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALUMINUM JACKET PROTECTIVE COVERING FOR ALL REFRIGERANT PIPE INSULATION INSTALLED ON THE BUILDING EXTERIOR.
18. CABLE TRAY HAS RIGHT-OF-WAY OVER DUCTWORK; SEE ELECTRICAL DRAWINGS FOR LOCATION.
19. SIDEWALL SUPPLY REGISTERS AND RETURN GRILLES ARE TO BE INSTALLED PLUMB AND LEVEL ALONG A COMMON ELEVATION. INSULATE BACK OF ALL LAY-IN CEILING SUPPLY REGISTERS AND DIFFUSERS.
20. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN CONNECTIONS TO HVAC UNITS.
21. PROVIDE AUXILIARY CONDENSATE DRAIN PAN FOR ALL AIR HANDLING UNITS, FAN COIL UNITS, FURNACE WITH COILING COIL, ETC. CONTRACTOR SHALL PROVIDE AND INSTALL WATER LEVEL FLOAT SWITCH IN AUXILIARY DRAIN PAN. FLOAT SWITCH SHALL SHUT DOWN INDOOR AND ASSOCIATED OUTDOOR UNIT WHEN ACTIVATED.
22. CONDENSATE PIPE SHALL BE SCHEDULE 40 PVC OR HARD DRAWN COPPER. INSTALL WITH PROPER SLOPE AND NO SAGS. COPPER PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION. SCHEDULE 40 PVC PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION.
23. ALL DUCTWORK AND PIPING SHALL BE CONCEALED ABOVE CEILINGS, TRUSSES AND SOFFITS EXCEPT IN MECHANICAL ROOMS, UTILITY PLATFORMS, AREAS WITH EXPOSED STRUCTURE (NO CEILINGS), AND WHERE NOTED OTHERWISE.
24. CONTROLS CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL WIRING AND CONNECTIONS TO MECHANICAL EQUIPMENT.
25. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL EXTERNAL DISCONNECTS THAT ARE REQUIRED FOR EQUIPMENT PROVIDED UNDER THIS CONTRACT. MECHANICAL CONTRACTOR SHALL FURNISH ALL REQUIRED FUSES FOR ALL FUSED DISCONNECT SWITCHES. COORDINATE DISCONNECT AND FUSE INSTALLATION WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DISCONNECT SWITCHES AND FUSES. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL LINE SIDE WIRING AND CONDUIT TO EXTERNALLY OR INTERNALLY MOUNTED DISCONNECTS AND SHALL PROVIDE AND INSTALL LOAD SIDE WIRING AND CONDUIT FROM EXTERNALLY MOUNTED DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT. SEE "MECHANICAL EQUIPMENT ELECTRICAL CONNECTION DETAIL".

26. MECHANICAL CONTRACTOR MAY USE ROUND DUCT OF EQUIV. AREA IN LIEU OF RECTANGULAR. COOR'D. ROUND DUCT SIZES W/ ENGINEER. USE INSULATED DOUBLE WALLED SPIRAL DUCT WITH PAINT GRIP FINISH WHERE DUCT IS TO BE EXPOSED.
27. MECHANICAL CONTRACTOR SHALL PROVIDE ENGR. WITH AN AIR BALANCE REPORT INDICATING INITIAL AND FINAL READINGS AT EACH DIFFUSER AND TOTAL CFM PER UNIT. INCLUDE IN DOCUMENTS PROVIDED TO OWNER AT JOB CLOSEOUT. SEE SPECIFICATIONS
28. MECHANICAL CONTRACTOR SHALL LABEL ALL EQUIPMENT WITH ENGRAVED PLASTIC LAMINATE, SCREWED TO PIECE OF EQUIPMENT.
29. M.C. SHALL PROVIDE 3'-0" MIN. SERVICE CLEARANCE BETWEEN ALL MECHANICAL EQUIPMENT.
30. UNIT CONTROLLER OR PROGRAMMABLE THERMOSTAT SHALL HAVE 7 DAY PROGRAMING, TIMED OVER-RIDE AND THE ABILITY TO RUN FANS IN OCCUP. MODE & CYCLE FANS IN UN-OCCUP. MODE.
31. THE M.C. & C.C. SHALL PROTECT EQUIPMENT DURING CONSTRUCTION & BRAZING AS REQ'D. CLEAN ALL EQUIP. SURFACES OF GREASE, DIRT, DUST, & OTHER FOREIGN MATERIALS PRIOR TO PROJECT CLOSEOUT.
32. MECHANICAL CONTRACTOR SHALL CHANGE UNIT FILTERS AFTER EACH TWO WEEKS OF RUN TIME, AND SHALL LEAVE ONE CHANGE OF FILTERS FOR OWNER TO USE FOR NEXT FILTER CHANGE.
33. MECHANICAL CONTRACTOR SHALL NOT ALLOW DUCTWORK TO CONTACT LAY-IN LIGHT FIXTURES. ROUTE ACCORDINGLY.
34. MECHANICAL CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS WHERE INDICATED ON PLANS. IF AN EXISTING FIRE ALARM SYSTEM IS PRESENT, DUCT DETECTORS SHALL BE CONNECTED TO EXISTING FIRE ALARM SYSTEM. MECHANICAL CONTRACTOR SHALL COORDINATE CONNECTION TO FIRE ALARM SYSTEM WITH ELECTRICAL CONTRACTOR AND/OR FIRE ALARM CONTRACTOR. IF A FIRE ALARM SYSTEM IS NOT PRESENT, PROVIDE DETECTOR & ASSOCIATED HORN/STROBE ALARM (HONEYWELL RTS2-ADS MULTI-SIGNALING) AS REQUIRED BY N.C. MECHANICAL CODE SECTION 606.4.1. M.C. IS RESPONSIBLE FOR DUCT ACCESS DOORS UNDER ALL CIRCUMSTANCES.
35. PROVIDE HEAT PUMP WITH CONTROLS TO PREVENT HEAT STRIP FROM OPERATING WHEN OUTSIDE AIR TEMP. IS ABOVE 50F. (503.2.4.1.1 NCEC)



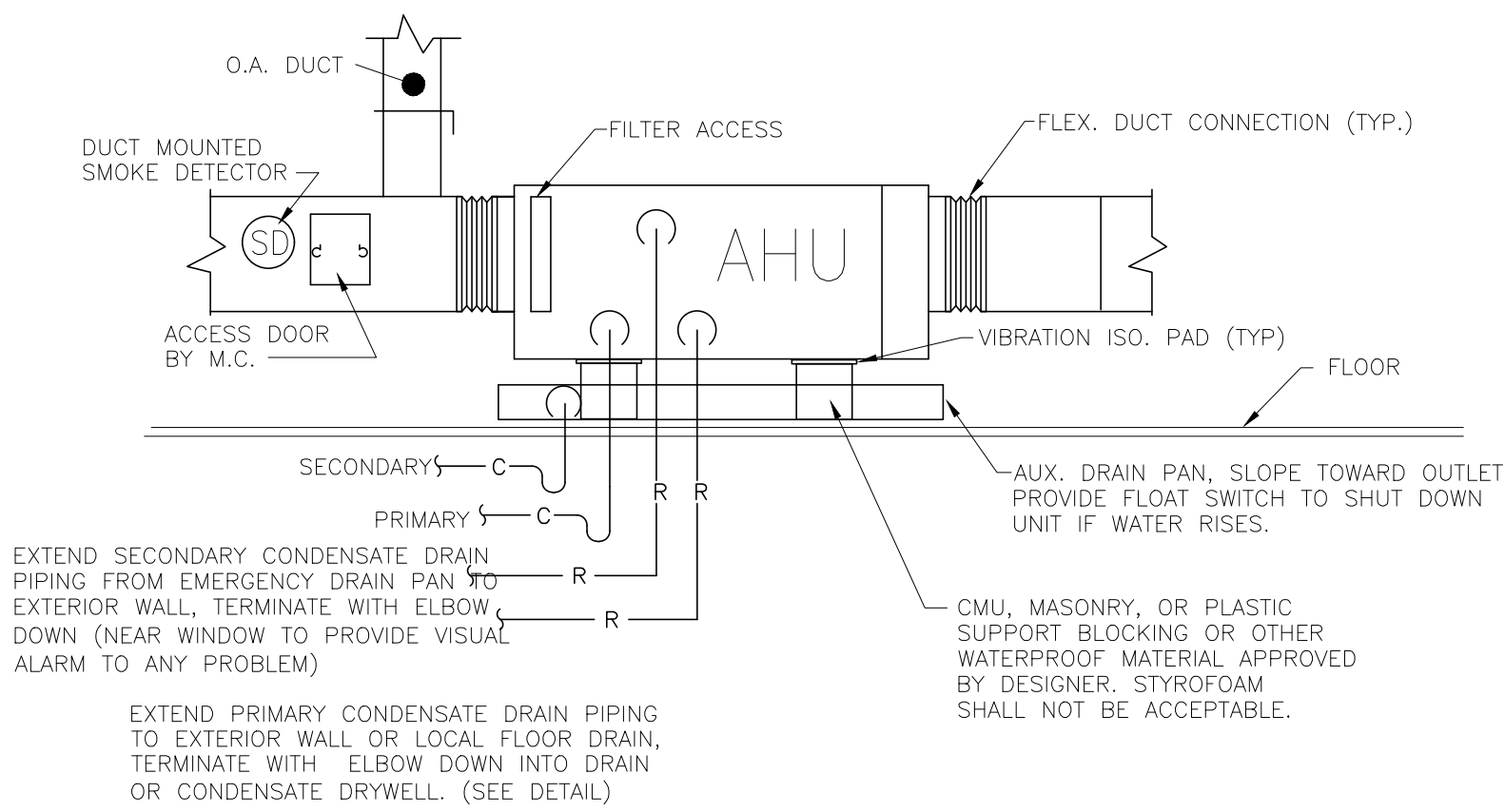
CONDENSATE TRAP DETAIL

SCALE: NTS



DUCT CONSTRUCTION DETAIL

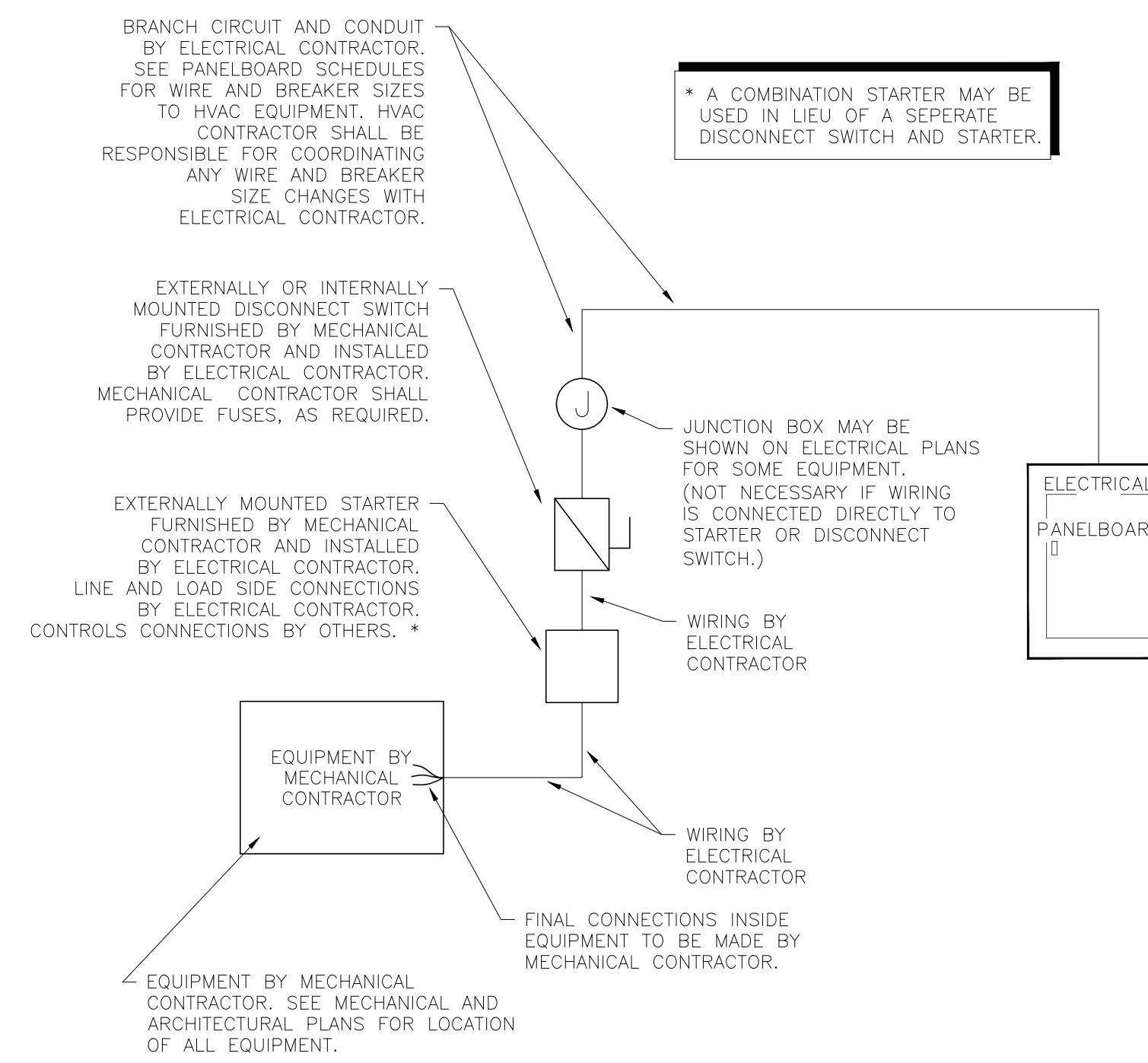
SCALE: NTS



NOTE: ALL CONDENSATE PIPING SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION FROM AIR HANDLING UNIT TO EXTERIOR WALL.

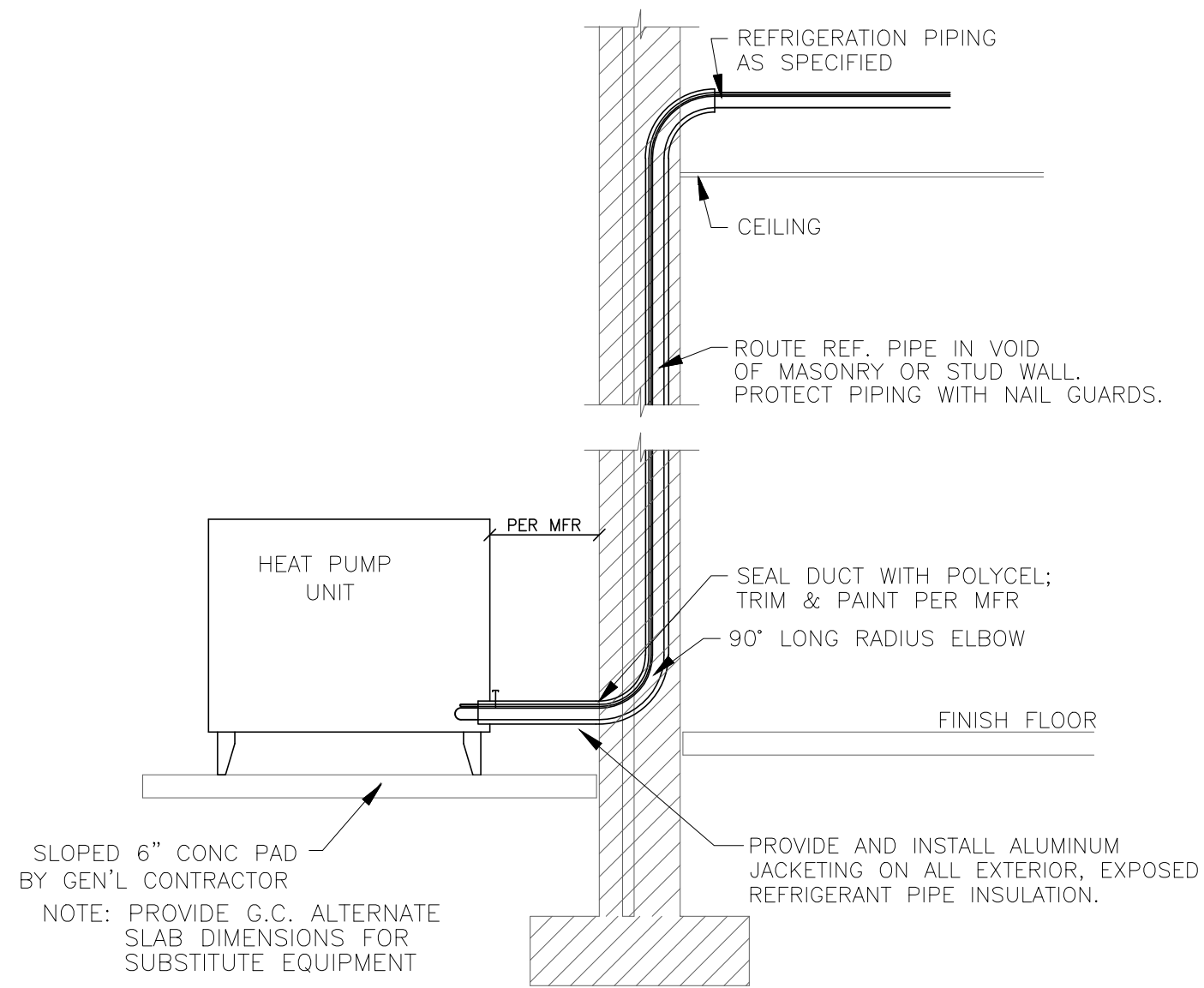
AHU CONNECTION DETAIL

SCALE: NTS



MECHANICAL EQUIPMENT ELECTRICAL CONNECTION DETAIL

SCALE: N.T.S.



HEAT PUMP INSTALLATION DETAIL

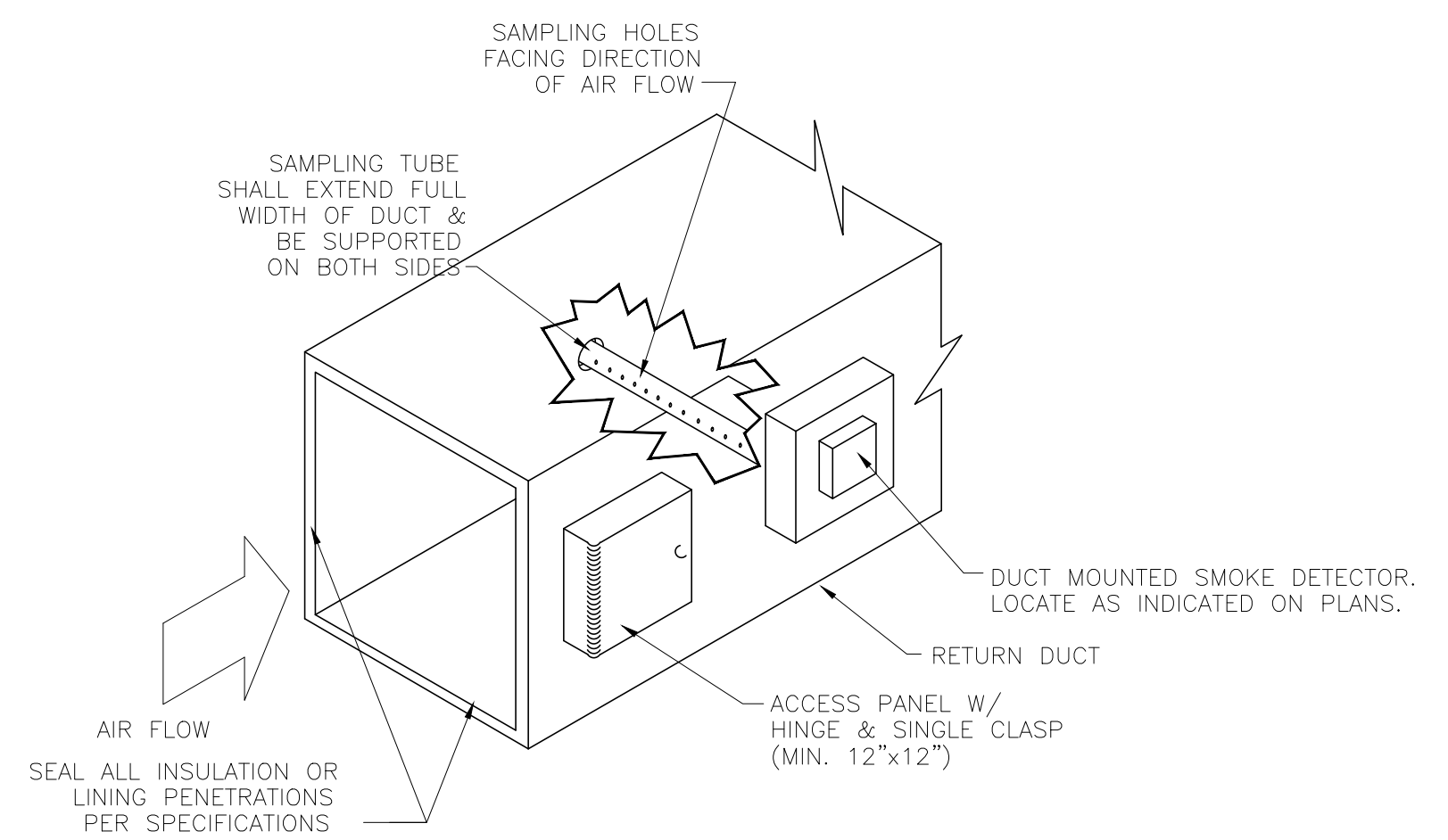
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CONDITIONING UNIT CONTROL SEQUENCE:

SYSTEM SHALL BE A SELF CONTAINED AIR COOLED DX HEAT PUMP. AN HOURS AND DAYS OF OCCUPANCY SCHEDULE SHALL BE PROVIDED BY OWNER. UNIT SHALL BE CONTROLLED BY A SPACE MOUNTED PROGRAMMABLE THERMOSTAT. FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED TIMES AND CYCLE WITH COMPRESSORS DURING UNOCCUPIED TIMES. COOLING MODE SET POINT SHALL BE 75°F AND HEATING MODE SET POINT SHALL BE 70°F DURING OCCUPIED TIMES. SET BACK TEMPERATURES SHALL BE 85°F FOR COOLING AND 55°F FOR HEATING DURING UNOCCUPIED TIMES. UNIT SHALL AUTOMATICALLY SWITCH MODES AS REQUIRED TO MAINTAIN SPACE TEMPERATURE BETWEEN HEATING AND COOLING SET POINTS FOR THE RESPECTIVE MODE OF OCCUPANCY BASED ON THE SCHEDULE PROVIDED BY OWNER.

EXHAUST FAN CONTROL SEQUENCES:

OCCUPANCY CONTROL: EXHAUST FAN SHALL BE ENERGIZED UPON ACTIVATION OF THE OCCUPANCY SENSOR AND SHALL RUN FOR A MINIMUM OF 5 MINUTES AFTER SENSOR FAILS TO SENSE MOTION/OCCUPANCY. LIGHTS SHALL STAY ENERGIZED FOR 2 MINUTES AFTER OCCUPANT HAS EXITED SPACE.

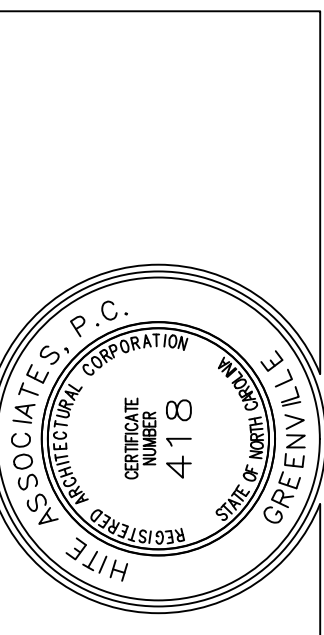


DUCT MOUNTED SMOKE DETECTOR DETAIL

SCALE: N.T.S.

Rev	Date	Revision

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New Classroom Addition for
North Duplin Jr.-Sr. High School
 1388 NC-403, Mt Olive, NC 28365
 Duplin County / North Carolina

Project No. **22253**
 Date: 6 March 2023
 Drawing no. **M 001**

ES23022
ENGINEERING
 SOURCE OF NC, P.A.
 102-42 Regency Blvd. Greenville, NC 27834
 E-Mail Address: general@engrsource.com
 Tel (252) 439-0333 • Fax (252) 439-9461 • TDD (252) 439-0333

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SPLIT-SYSTEM HEAT PUMP SCHEDULE																
MARK	OA	SUPPLY FAN				COOLING					HEATING					
		CFM	ESP (IN. W.G.)	FAN HP	VOLT/PH	MCA	MOCP	MARK	VOLT/PH	MCA	MOCP	NOM. TC (BTUH)	NOM. SC (BTUH)	SEER / EER	MIN. BTUH	STRIP KW
AHU-1	300	1,400	.5	1/2	240/1	45.0	60	HP-1	240/1	22.0	35	42,000	29,400	16.0 SEER	24,600	7.20
AHU-2	300	1,400	.5	1/2	240/1	45.0	60	HP-2	240/1	22.0	35	42,000	29,400	16.0 SEER	24,600	7.20
AHU-3	300	1,200	.5	1/2	240/1	45.0	60	HP-3	240/1	18.0	30	36,000	25,200	16.0 SEER	24,600	7.20
AHU-4	300	1,200	.5	1/2	240/1	45.0	60	HP-4	240/1	18.0	30	36,000	25,200	16.0 SEER	24,600	7.20

- HEATING AND COOLING CAPACITIES ARE MINIMUM ACCEPTABLE VALUES
- PROVIDE WITH FILTERS AND FILTER FRAMES.
- PROVIDE WITH SINGLE POINT OF CONNECTION KIT & "LOW-AMBIENT" KIT.
- SPECIFICATIONS BASED UPON "FRANZ" EQUALS BY "CARRIER" AND "LENNOX" ACCEPTABLE.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH E.C. FUSES REQUIRED FOR EQUIPMENT PURCHASED.
- AMP RATINGS GIVEN ARE MAXIMUM VALUES.
- ESP INCLUDES .35" FOR DIRTY FILTER ALLOWANCE.
- PROVIDE HEAT PUMP WITH CONTROLS TO PREVENT HEAT STRIP TO OPERATE WHEN OUTSIDE AIR TEMP. IS ABOVE 50F.

LOUVER SCHEDULE										
MARK	SERVICE	SIZE	FREE	CFM	FPM	ELECT	CONTROL	COLOR	MODEL NO./DESCRIPTION	NOTES
LV-A	BLDG OUTSIDE AIR	30x24	2.4	1,200	489	24 VOLT	EMS	TO BE DETERMINED	RUSKIN ELF375DX	1-5

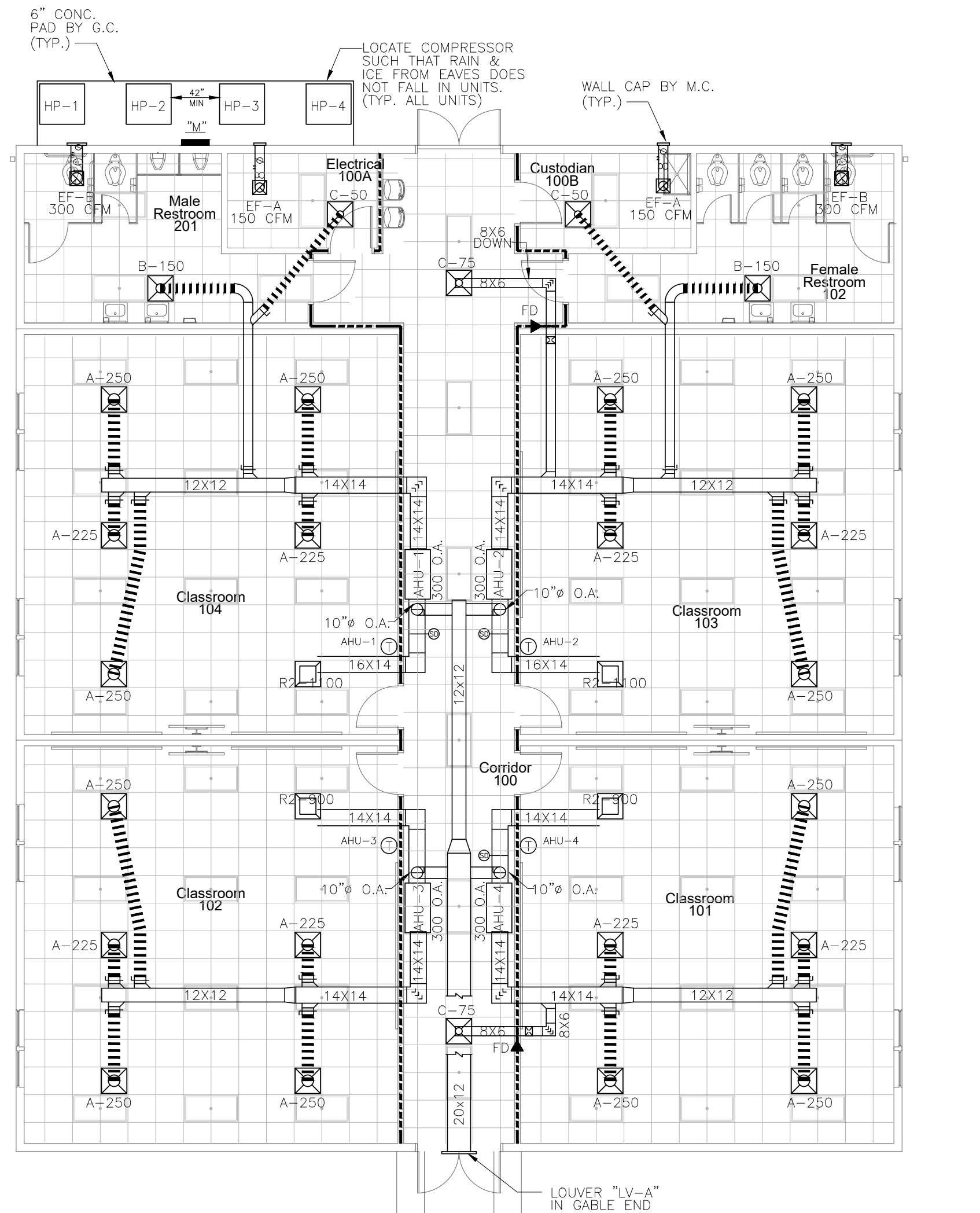
NOTES:
 (1) LOUVERS AND DAMPERS MEETING OR EXCEEDING SPECIFIED DATA, MANUFACTURED BY VENT PRODUCTS.
 NCA OR PESCO
 (2) PROVIDE EXTENDED SILL, CLIP ANGLES, & INSECT SCREEN.
 (3) SEE DETAILS.
 (4) PROVIDE FACTORY FINISH AS SPECIFIED - COLOR SELECTED BY ARCHITECT.
 (5) PROVIDE WITH MANUFACTURER'S B.L.O.

O/A = OUTSIDE AIR
 FREE = EFFECTIVE FREE AREA (SQ. FT.)
 SIZE = WIDTH X HEIGHT (INCHES)
 EMS = INSULATED BY ENERGY MANAGEMENT SYSTEM
 FPM = AIR VELOCITY (FEET/MIN)
 E.C. = ELECTRICAL CONTROL
 E.E.C. = ELECTRICAL CONTROL
 COLOR NO. 1 = BRONZE COLOR
 COLOR NO. 2 = EPS COLOR

NCBC VENTILATION CALCULATIONS					
OCCUPANCY TYPE	SQ. FT.	O/A PER SQ. FT.	# OF OCCUPANTS	O/A PER PERSON	TOTAL O.A. CFM
CLASSROOM	3,000	0.12	105	7.5	1148
CORRIDOR	466	0.06	-	-	28
TOTAL REQUIRED FOR BUILDING					1,176
TOTAL PROVIDED FOR BUILDING					1,200

FAN SCHEDULE										
SYMBOL	AREA SERVED	MANUF./MODEL	SERVICE	TYPE ASSEMBLY	CFM	SP (IN. W.G.)	DRIVE TYPE	WATTS	VOLT/PH	REMARKS
EF-A	CUSTODIAN	GREENHECK/SP-A190	EXHAUST	CABINET	150	.125	DIRECT	113	120/1	1,2,3
EF-B	REST ROOM	GREENHECK/SP-A290	EXHAUST	CABINET	300	.125	DIRECT	80.7	120/1	1,2,4

- BACKDRAFT DAMPER.
- UNIT MOUNTED DISCONNECT SWITCH.
- ROUTE 8" DUCT TO WALL CAP.
- ROUTE 10" DUCT TO WALL CAP.
- EQUALS BY CARNES, PENN, ILG AND BROAN ARE ACCEPTABLE.



MECHANICAL PLAN

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

AIR DISTRIBUTION						
MARK	MAX. CFM	FRAME	NECK SIZE	MODEL	MANUF.	REMARKS
A	400	T-BAR	10"Ø	SMD	PRICE	1,2,3,5,7
BG	200	GYP BOARD	8"Ø	SMD	PRICE	1,2,3,5,7,8
C	100	T-BAR	6"Ø	SMD	PRICE	1,2,3,5,7
R1	550	T-BAR	12x12	80TB	PRICE	1,2,4,5,6
R2	1400	T-BAR	22x22	80TB	PRICE	1,2,4,5,6

- ALL GRILLES SHALL HAVE 24"x24" FACE.
- NC SHALL NOT EXCEED NC 25.
- MAX. SP SUPPLY - 0.10" W.G.
- MAX. SP RETURN - 0.05" W.G.
- ALL RUN-OUTS AND FLEX TO BE EQUAL TO NECK SIZE FOR GRILLE.
- PAINT INSIDE FAN FLAT BLACK.
- CONTRACTOR SHALL INSULATE BACK OF SUPPLY GRILLE PAN.
- FOLLOWING THE DIFFUSER DESIGNATION LETTER INDICATES THAT DIFFUSER WILL BE INSTALLED IN A GYP. BOARD CEILING

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE:

PRESCRIPTIVE ENERGY COST BUDGET

CLIMATE ZONE: IBC - 3A
 THERMAL ZONE
 WINTER DRY BULB: 18°F
 SUMMER DRY BULB: 93°F

INTERIOR DESIGN CONDITIONS
 WINTER DRY BULB: 70°F
 SUMMER DRY BULB: 75°F
 RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: 109.2 MBH
 BUILDING COOLING LOAD: 156.0 MBH

MECHANICAL SPACE CONDITIONING SYSTEM
 UNITARY
 DESCRIPTION OF UNIT: SPLIT-SYSTEM HEAT-PUMP
 HEATING EFFICIENCY: 3.0 COP
 COOLING EFFICIENCY: 16.0 SEER
 HEAT OUTPUT OF UNIT: SEE SCHEDULE
 COOLING OUTPUT OF UNIT: SEE SCHEDULE

BOILER
 TOTAL BOILER OUTPUT: (If oversized, state reason)
 CHILLER
 TOTAL CHILLER OUTPUT: (If oversized, state reason)

LIST EQUIPMENT EFFICIENCIES
 EQUIPMENT SCHEDULES WITH MOTORS (Not used for mechanical systems)
 MOTOR HORSEPOWER
 NUMBER OF PHASES
 MINIMUM EFFICIENCY
 MOTOR TYPE
 # OF POLES:

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2012 North Carolina energy conservation code.

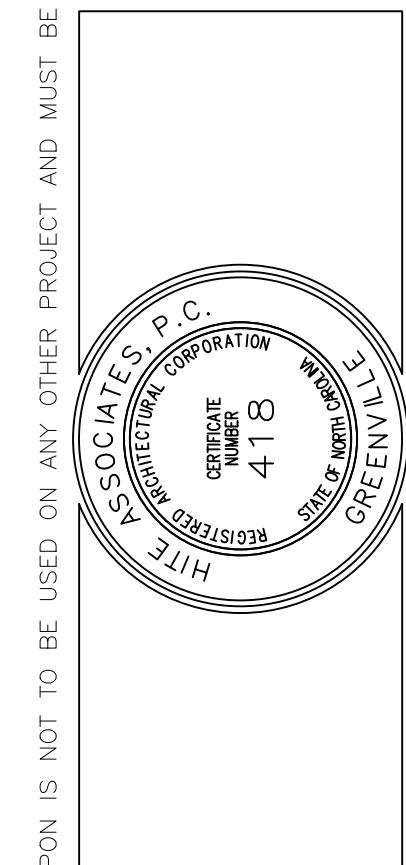
SIGNED: *D. Wilson*
 NAME: D. WILSON, P.O.U., P.E.
 TITLE: PRESIDENT

MECHANICAL LEGEND

- G.C. GEN. CONTR.
- E.C. ELEC. CONTR.
- P.C. PLUMB. CONTR.
- AFF ABOVE FINISH FLOOR
- AFG ABOVE FINISH GRADE
- 18x16 INSULATED FLEXIBLE DUCT
- 18x16 WRAPPED RIGID DUCT
- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- CEILING EXHAUST GRILLE OR FAN
- ⓐ AHU-1 THERMOSTAT & UNIT SERVED.
- ⓑ AHU-1 HUMIDISTAT & UNIT SERVED.
- A-400 DIFFUSER TYPE-CFM
- MANUAL DAMPER
- DUCT MOUNTED SMOKE DETECTOR
- CEILING MOUNTED SMOKE DETECTOR
- FIRE ALARM HORN/STROBE (SEE GENERAL NOTES)
- CONN. TO EXIST.
- G GAS PIPING
- FD SPRING LOADED FIRE DAMPER
- ⓐ AHU-1 CO2 SENSOR (800 PPM) & UNIT SERVED.
- ⓑ TWIST TIMER SWITCH
- ⓑ 120V MOTORIZED DAMPER
- ⓐ AHU-1 CO & NO SENSOR & UNIT SERVED. CONSPIC C/N50-CO/NO2

Revision	
No.	Date

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 2600 Meridian Drive / Greenville, NC 27834 / Tel: (252) 757-0533



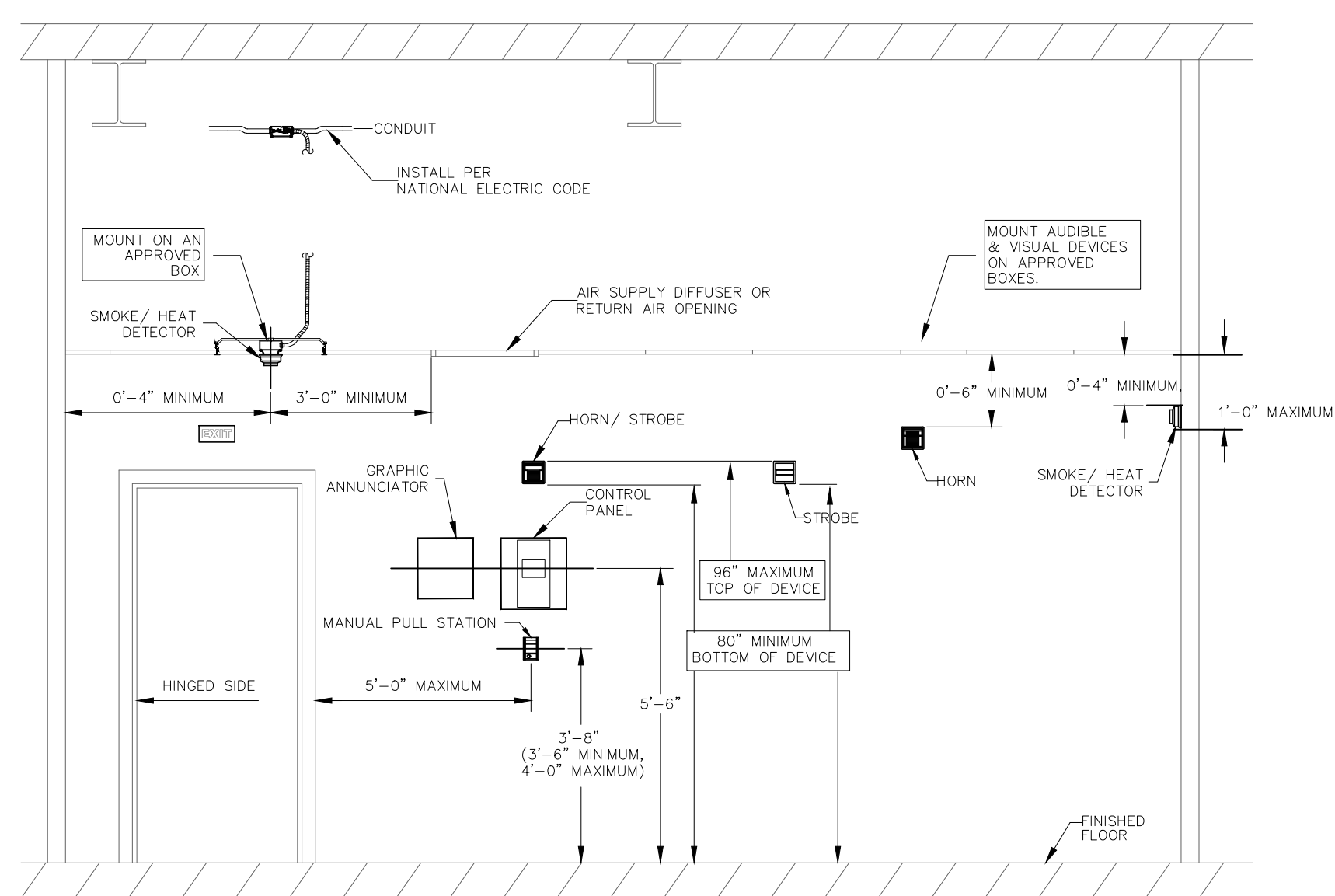
New Classroom Addition for
North Duplin Jr.-Sr. High School
 1388 NC-403, Mt Olive, NC 28365
 Duplin County / North Carolina

Project No: 22253
 Date: 6 March 2023
 Drawing no: **M 101**

ENGINEERING
 SOURCE OF NC, P.A.
 102-A2 Regency Blvd. Greenville, NC 27834
 E-Mail Address: generalmail@engsource.com
 Tel: (252) 439-0300 • Fax: (252) 439-0460 • Fax #1-193

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NFPA 72 AND ADA DEVICE
INSTALLATION REQUIREMENTS

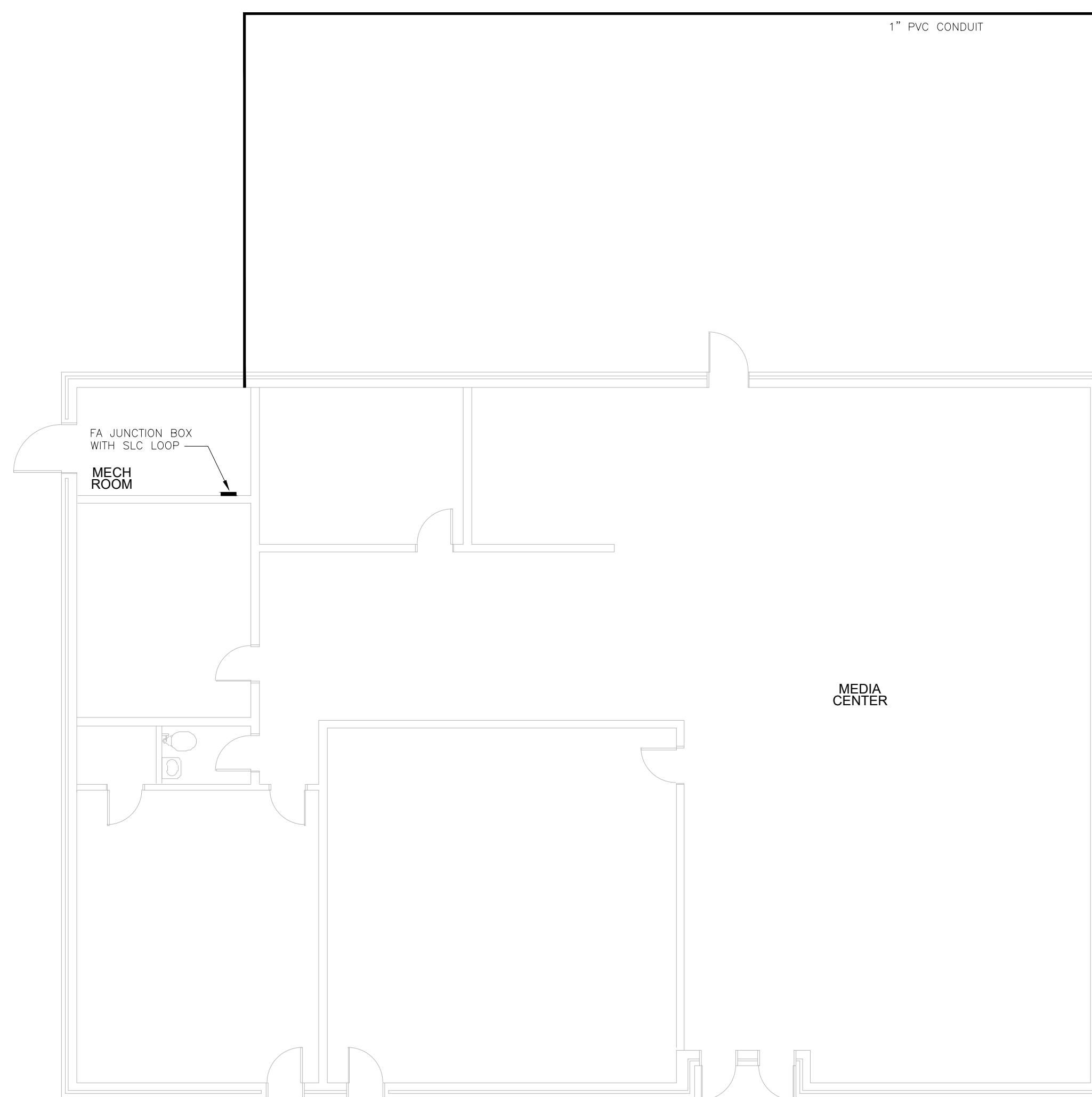


FIRE ALARM DEVICE
MOUNTING DETAIL
SCALE: N.T.S.

FIRE ALARM SYMBOL LEGEND

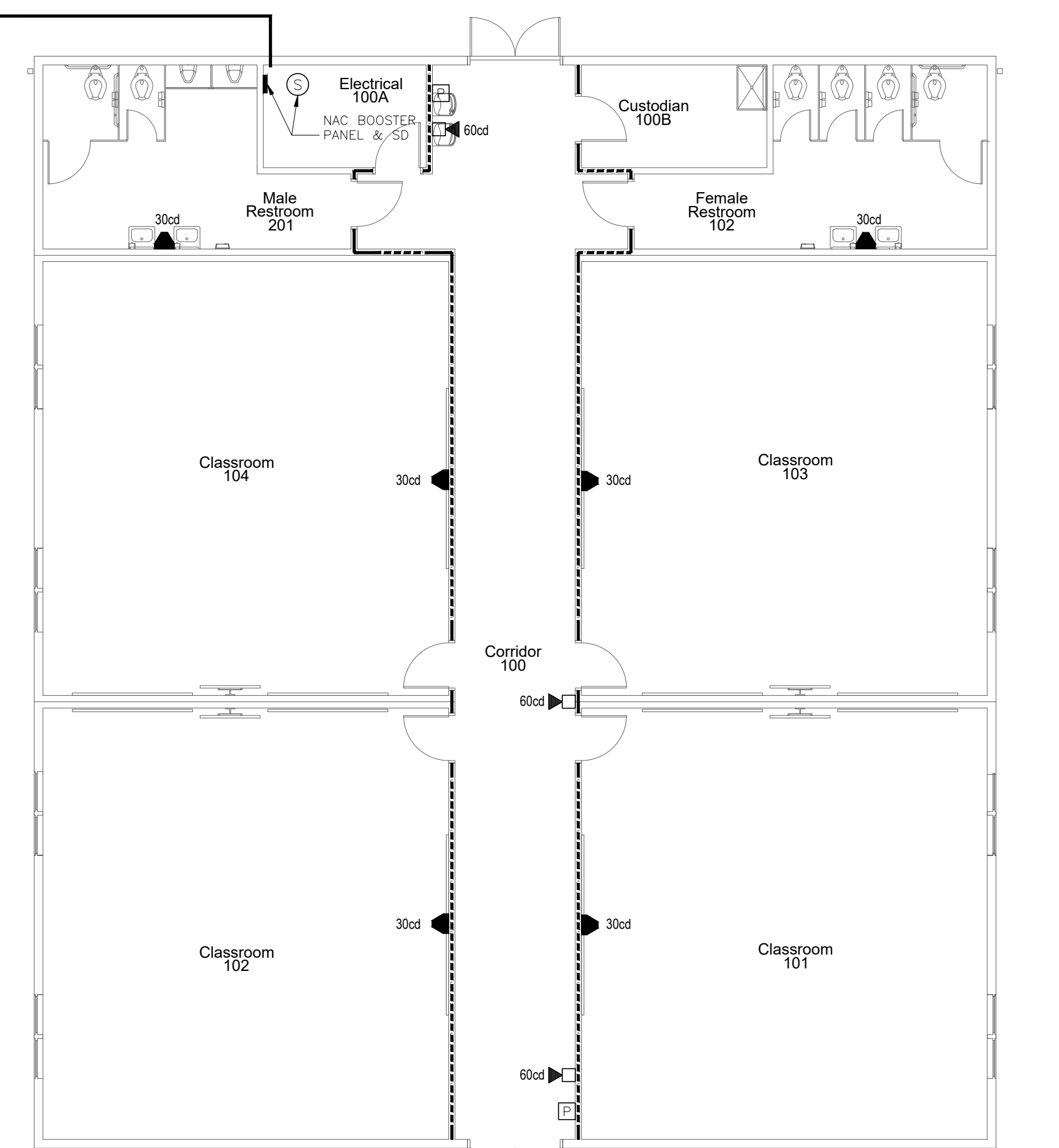
(SEE MOUNTING HEIGHT SCHEDULE FOR MOUNTING INFORMATION UNLESS NOTED OTHERWISE)

- FIRE ALARM MANUAL PULL STATION
- FIRE ALARM VOICE NOTIFICATION DEVICE
- FIRE ALARM STROBE NOTIFICATION DEVICE
- CEILING MOUNTED DEVICES
 - SMOKE DETECTOR
 - DUCT MOUNTED SMOKE DETECTOR, PROVIDED AND WIRED BY E.C., INSTALLED BY M.C.
 - HEAT DETECTOR, CEILING MOUNTED
 - DOOR MAGNET
 - CARBON MON-OXIDE DETECTOR
- FIRE ALARM CONTROL PANEL, FLUSH MOUNTED
- REMOTE ANNUNCIATOR PANEL, FLUSH MOUNTED
- KNOX BOX (COORDINATE WITH LOCAL FIRE MARSHALL)
- BOOSTER POWER SUPPLY
- WATER FLOW SENSOR
- TAMPER SWITCH
- KITCHEN HOOD RELAY
- MONITOR MODULE
- FAN SHUT DOWN RELAY
- DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATOR LIGHT MOUNTED IN CEILING PROVIDED AND INSTALLED BY E.C., LABEL ACCORDING TO MECHANICAL UNIT SERVED.

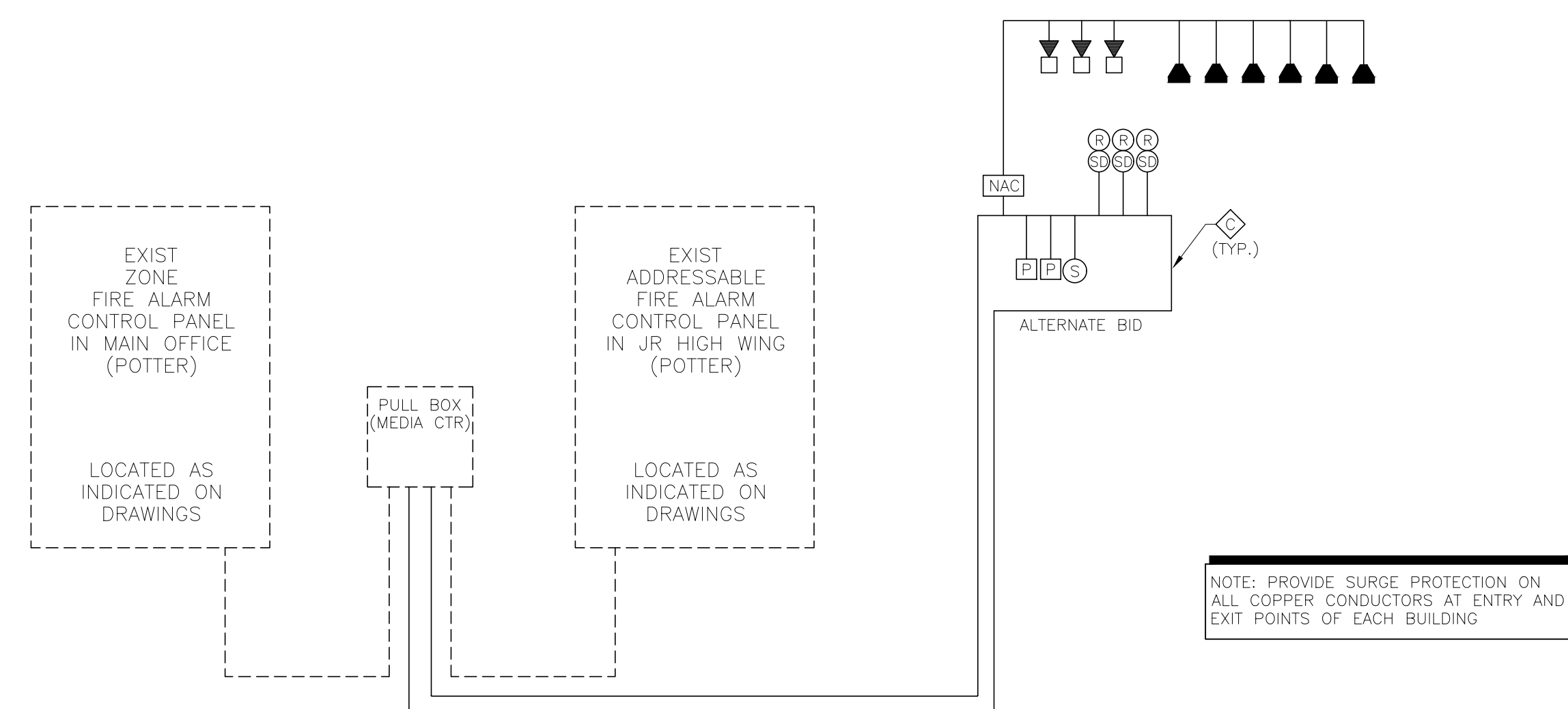


FIRE ALARM INSTALLATION NOTES:

- FIRE ALARM SHALL BE INSTALLED BY A MANUFACTURER APPROVED INSTALLATION COMPANY.
- E.C. OR E.C.'S REPRESENTATIVE SHALL PERFORM THOROUGH TRAINING WITH OWNER'S REPRESENTATIVES PRIOR TO OWNER OCCUPANCY OF THE BUILDING.
- FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS AND IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 72.
- ALARM SHALL HAVE A SOUND LEVEL MEETING THE dB REQUIREMENTS OF 907.6.2.1.1 OF THE NC FIRE PREVENTION CODE AND NOT LESS THAN 20 dB ABOVE AMBIENT NOISE LEVELS. (TYPICALLY, 55 dB AMBIENT NOISE PER BUSINESS OCCUPANCY. ADJUST FOR NOISY ENVIRONMENTS).
- ANY WIRING INSTALLED IN RETURN AIR PLENUM SHALL BE EITHER PLENUM-RATED CABLE OR IN CONDUIT.
- FIRE ALARM CONTRACTOR SHALL PROVIDE A FULL SET OF SHOP DRAWINGS, INCLUDING BATTERY CALCULATIONS, WIRING DIAGRAMS, AND DEVICE PRODUCT DATA TO THE AHJ FOR REVIEW AND APPROVAL PRIOR TO STARTING ROUGH-INS.
- E.C. SHALL PROVIDE FRAMED BUILDING LAYOUT NEXT TO REMOTE ANNUNCIATOR. BUILDING LAYOUT SHALL SHOW ALL FIRE ALARM DEVICE LOCATIONS AND THEIR RESPECTIVE ADDRESSES.
- NEW DEVICES SHALL BE COMPATIBLE WITH THE EXISTING POTTER FIRE ALARM SYSTEM LOCATED IN THE MECHANICAL ROOM OF THE JUNIOR HIGH BUILDING, CONNECT TO SLC LOOP IN THE MECHANICAL ROOM LOCATED IN THE MEDIA CENTER AS INDICATED.



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



ALTERNATE BID
FIRE ALARM RISER
SCALE: N.T.S.

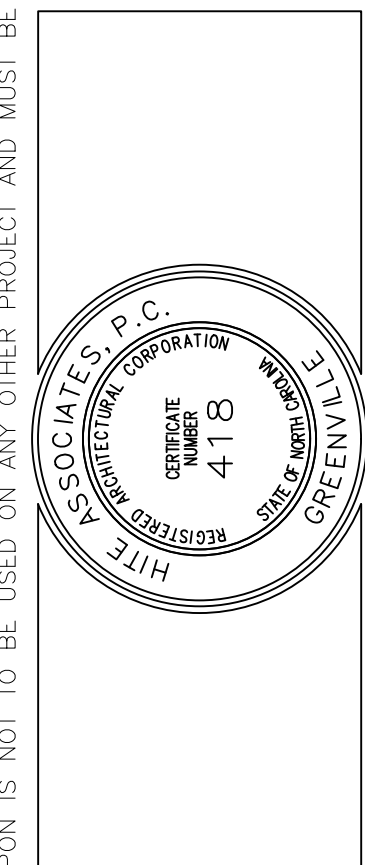
FIRE ALARM SYSTEM ACTION MATRIX	THROUGHOUT ENTIRE BUILDING														COMMENTS/REMARKS							
	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATOR	ACTUATE ALL AUDIBLE EVACUATION SIGNALS	DISPLAY / PRINT CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	FAN SHUT DOWN (UNIVERSAL)	FAN SHUT DOWN (SPECIFIC UNIT)		OPEN ELEV VENT AND RETURN CAR TO PRIMARY FLR	OPEN ELEV VENT AND RETURN CAR TO ALTERNATE FLR	TRIP SHUNTED BREAKERS (ELEV OR HT)	FIREMAN'S HAT & ALARM IN ELEV CAR	MISC. & SPECIALTY LTO SHUT DOWN	FIRE SMOKE DAMPER SHUT DOWN	RELEASE MAGNETIC DOOR HOLDERS ON RATED DOORS
MANUAL ALARM STATION	X	X					X	X	X	X			X						X	X	X	
SMOKE SENSOR / DETECTOR	X	X					X	X	X	X			X						X	X	X	
ELEV SMOKE SENSOR PRIMARY FLOOR	X	X					X	X	X	X			X		X			X	X	X	X	
ELEV SMOKE-HEAT EQUIP IN OR SHFT	X	X					X	X	X	X			X		X		X	X	X	X	X	
ELEVATOR SMOKE SENSORS (ALT FLOORS)	X	X					X	X	X	X			X		X		X	X	X	X	X	
DUCT SENSOR / DETECTOR			X	X			X				X			X								
KITCHEN HOOD SUPPRESSION SYS	X	X					X	X	X	X			X		X		X	X	X	X	X	
WATERFLOW SWITCH	X	X					X	X	X	X			X		X		X	X	X	X	X	
TAMPER SWITCH			X	X			X		X		X							X	X	X	X	
POST INDICATOR VALVE SWITCH			X	X			X		X		X											
FIRE ALARM AC POWER FAILURE					X	X			X													
FIRE ALARM SYSTEM LOW BATTERY					X	X			X													
OPEN CIRCUIT					X	X			X													
GROUND FAULT					X	X			X													
NOTIFICATION APPLIANCE CIRCUIT						X	X		X													
WIRE-TO-WIRE SHORT						X	X		X													

WIRE LEGEND

- 1 PAIR #16 SHIELDED CABLE
- 2 COND. #14 THHN
- 4 COND. #14 THHN
- 8 COND. #22
- 2 PAIR #18 SHIELDED + 2 COND. # 14 THHN

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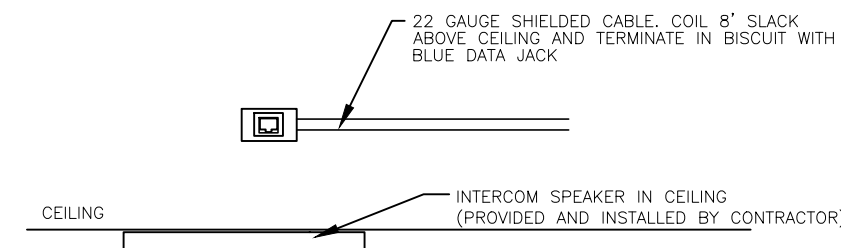


New Classroom Addition for
North Duplin Jr.-Sr. High School
1388 NC-403, Mt Olive, NC 28365
Duplin County / North Carolina

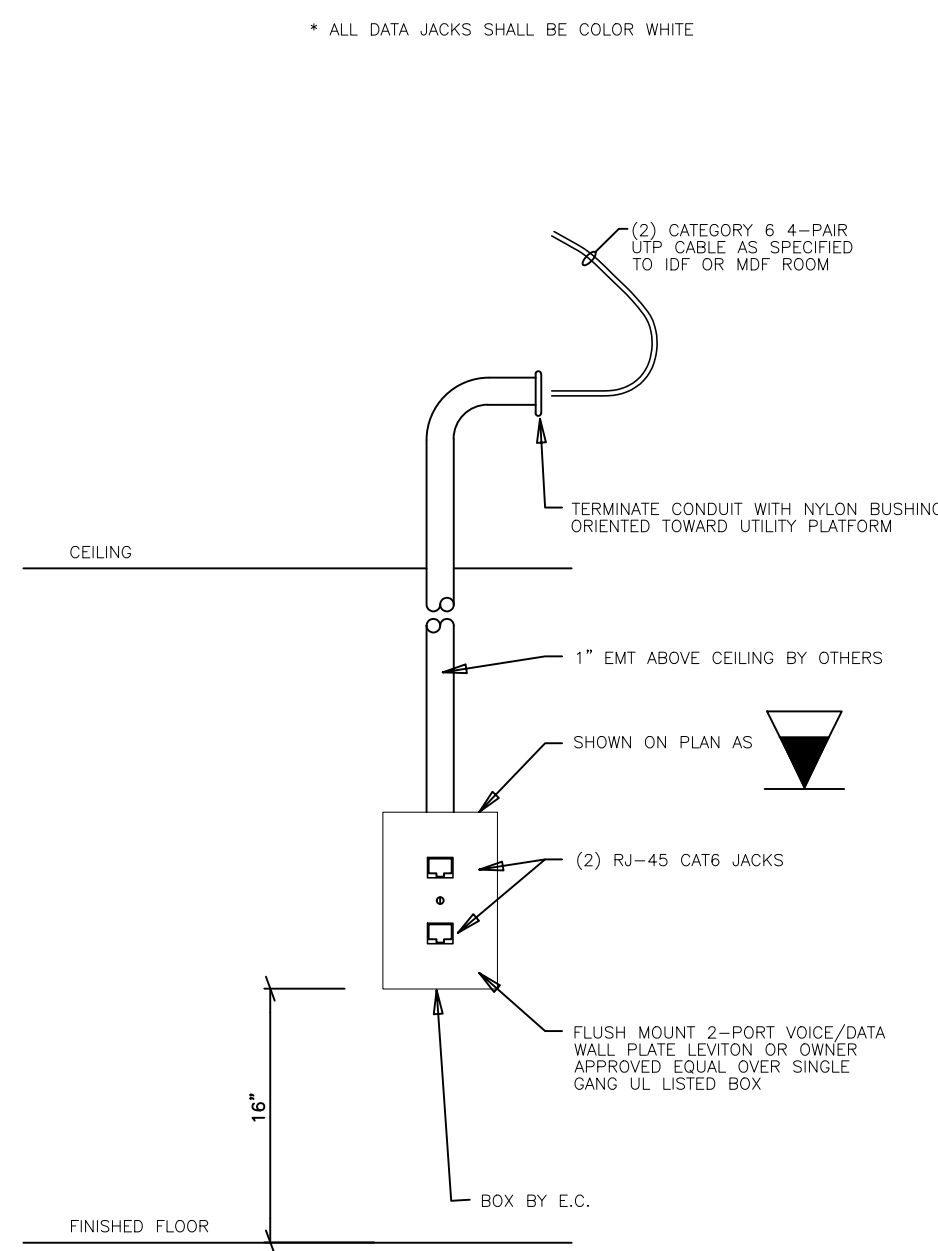
Project No: 2253
Date: 6 March 2023
Drawing No: **FA 101**

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ENGINEERING
SOURCE OF NC, P.A.
102-42 Regency Blvd. Greenville, NC 27834
E-Mail Address: generalmail@engsource.com
Tel: (252) 439-0333 • Fax: (252) 439-0462 • Fax #1-193

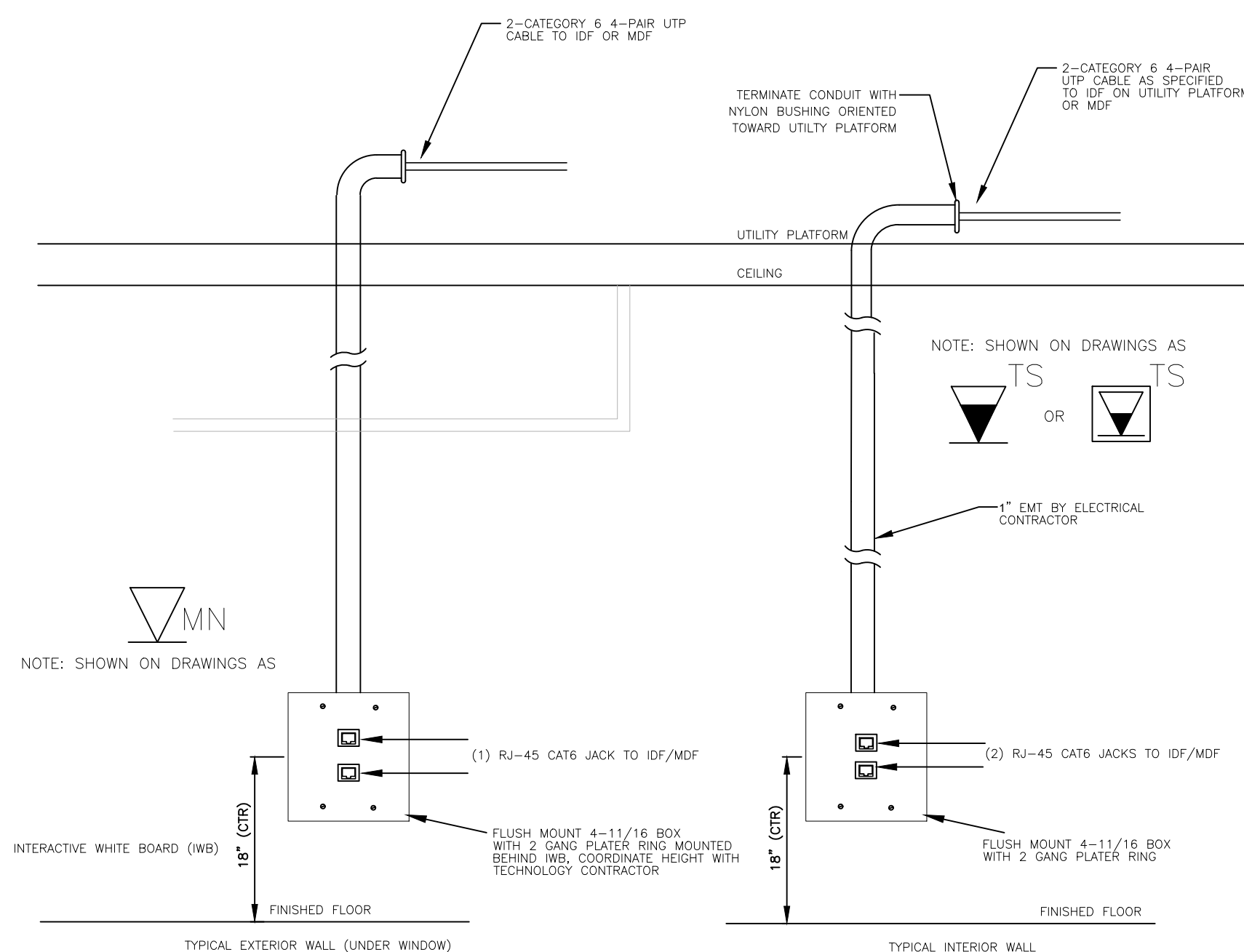
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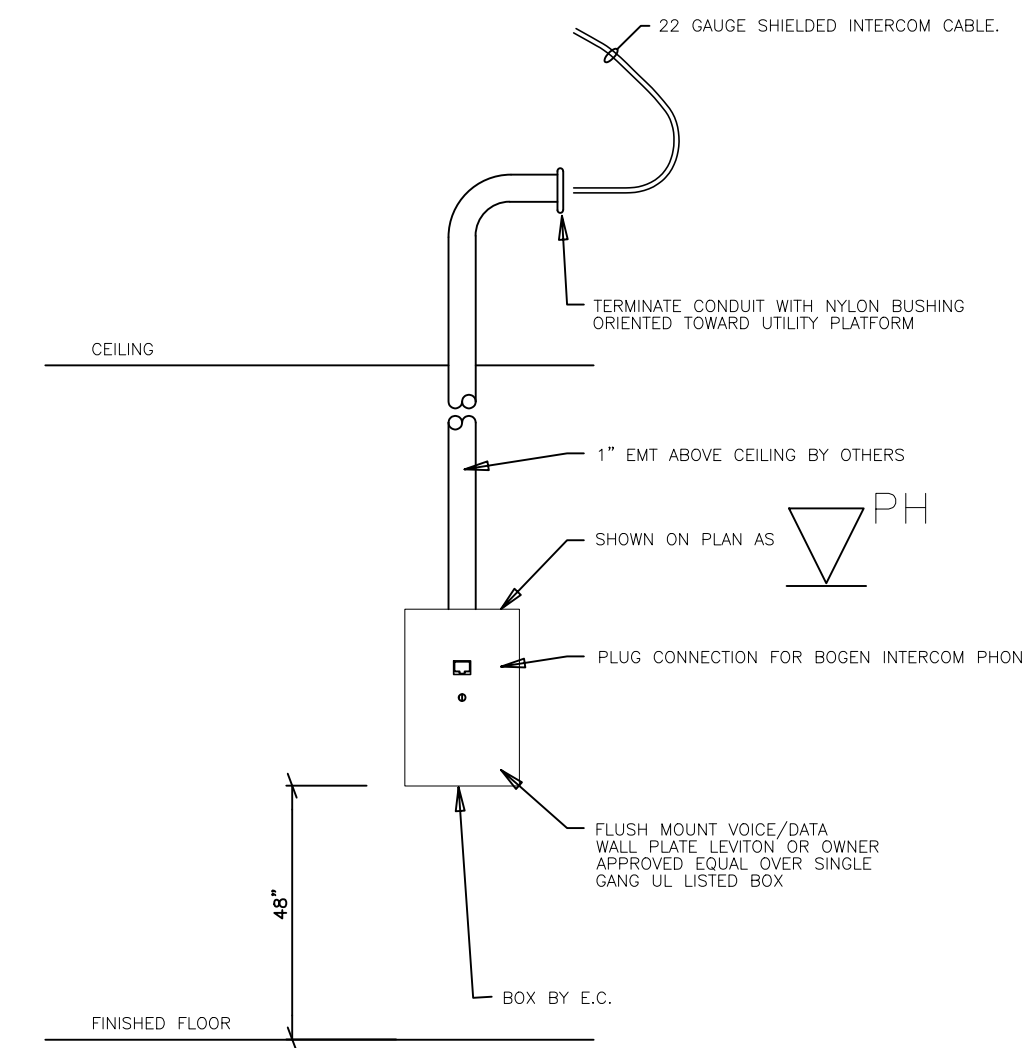
101.1 SPEAKER OUTLET DETAIL
SCALE: NONE



101.2 DUAL DATA OUTLET DETAIL
SCALE: NONE



101.3 TEACHERS STATION/IWB OUTLET DETAILS
SCALE: NONE



101.4 INTERCOM PHONE DETAIL
SCALE: NONE

DATA/COM/SECURITY GENERAL NOTES:

- ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL CONDUIT AND RACEWAY WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING, TRANSFORMERS, POWER SUPPLIES, ETC. FOR A COMPLETE WORKING SYSTEM.
- THE CONTRACTOR SHALL COORDINATE WITH THE G.C. TO OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, ETC. THAT MAY BE REQUIRED FOR A COMMERCIAL CONSTRUCTION PROJECT.
- ALL CONDUIT AND RACEWAY SYSTEMS ARE INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPPORTED AS REQUIRED BY CODE AND MANUFACTURERS RECOMMENDATIONS.
- ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT RACEWAY, CABLE TRAY, EQUIPMENT, ETC.
- ALL CONDUIT PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL.
- ALL LOW VOLTAGE DATA CABLING SHALL BE TESTED AND CERTIFIED PER SPECIFICATIONS.

CONTRACTOR SHALL PROVIDE ALL CABLING, CAT6 & 6A AS INDICATED, FROM OUTLET BACK TO IDF OR MDF ROOM. PROVIDE CONNECTIONS AT OUTLETS AS DETAILED AND TERMINATE IN PATCH PANEL AT RACK. LABEL ALL CABLES WITH ROOM NUMBER AND FUNCTION (ex: CLASSROOM 103 - TEACHER STATION)

OWNER TO MAKE FINAL CONNECTIONS FROM EQUIPMENT TO PATCH PANELS.

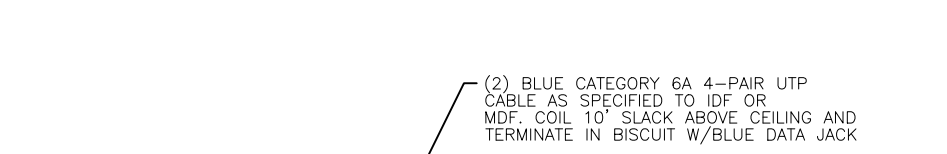
CABLE SHEATHING COLOR SCHEME SHALL BE AS FOLLOWS:

DATA CABLE	BLUE	CAT6
COMMUNICATION	BLUE	CAT6
CAMERA CABLE	BLUE	CAT6
DOOR ACCESS	BLUE	CAT6
HVAC CONTROLS	BLUE	CAT6
WIRELESS AP	BLUE	CAT6A

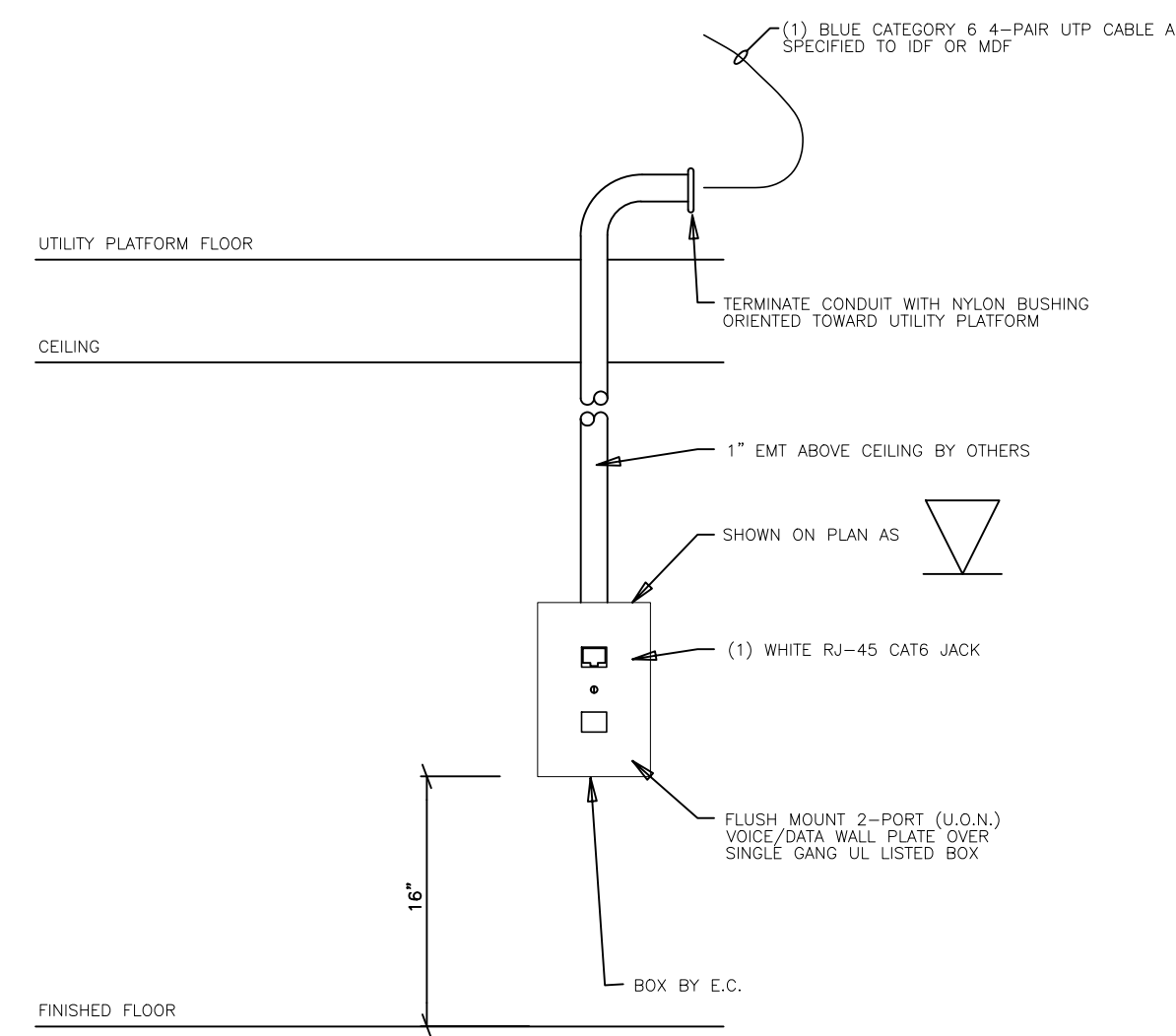
CONTRACTOR TO PROVIDE AND INSTALL SECURITY CAMERAS, RECORDING EQUIPMENT/SOFTWARE, DOOR ACCESS CONTROL EQUIPMENT/SOFTWARE, INTERCOM EQUIPMENT & ASSOCIATED SPEAKERS, CONTRACTOR TO INSTALL RACEWAY, CABLES AND OUTLETS AS DETAILED.

BASIS OF DESIGN TO MATCH EXISTING EQUIP IS AS FOLLOWS:

CAMERAS & RECORDER	WATCHDOG
DOOR ACCESS	S2
INTERCOM	BOGEN



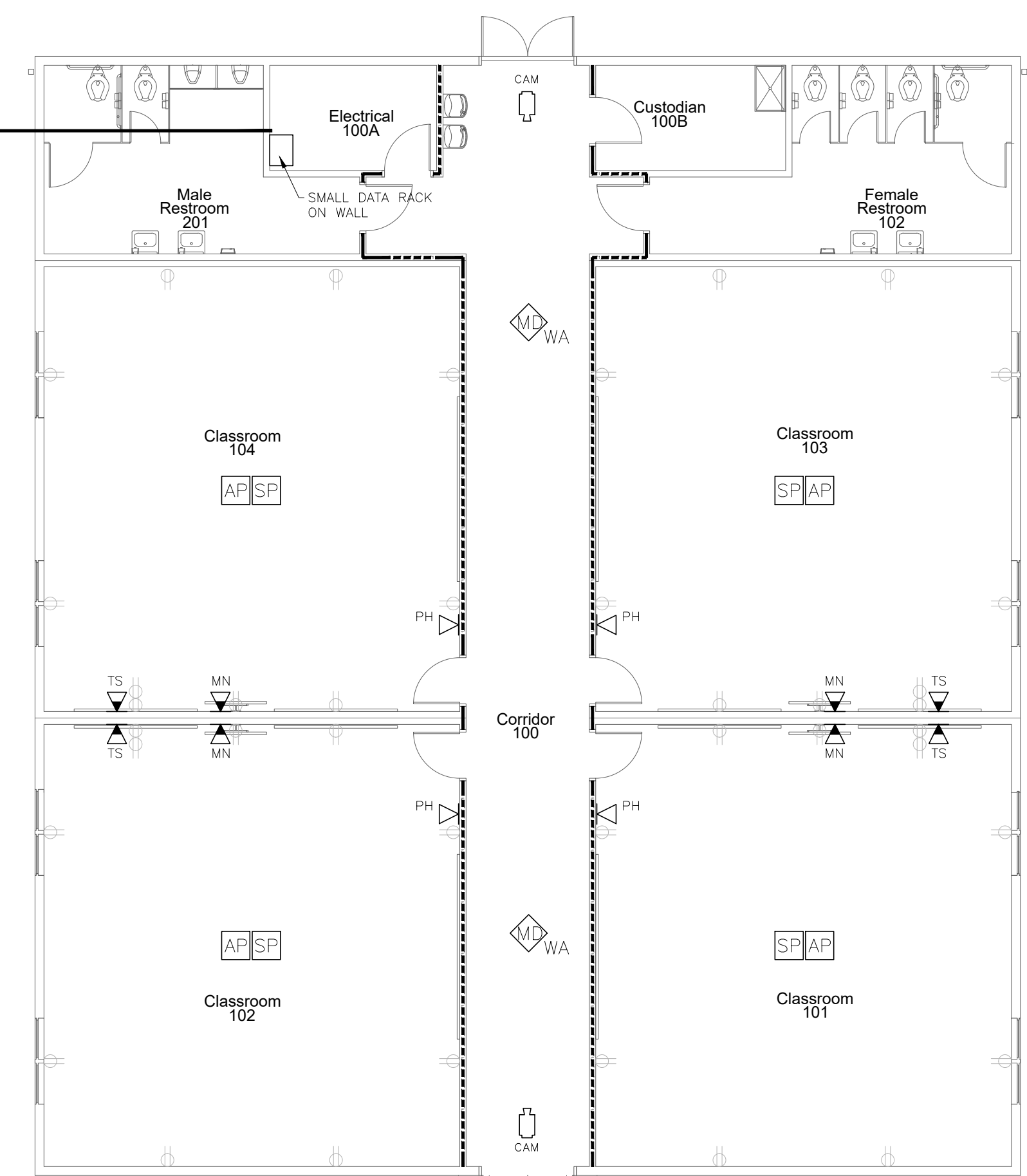
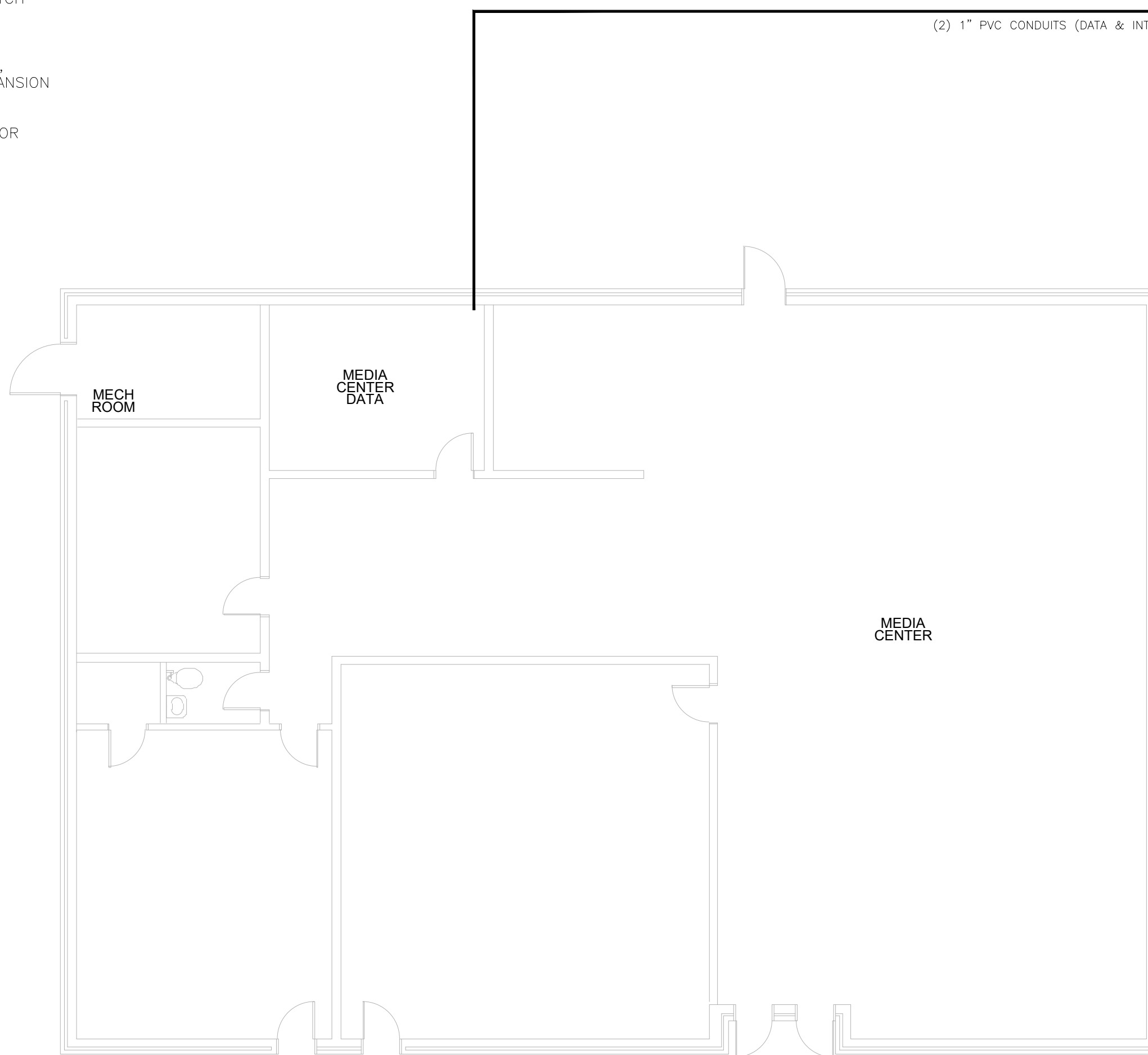
101.5 WAP OUTLET DETAIL
SCALE: NONE



101.6 SINGLE DATA OUTLET DETAIL
SCALE: NONE

DESCRIPTION OF DIVISION 17 SCOPE OF WORK:

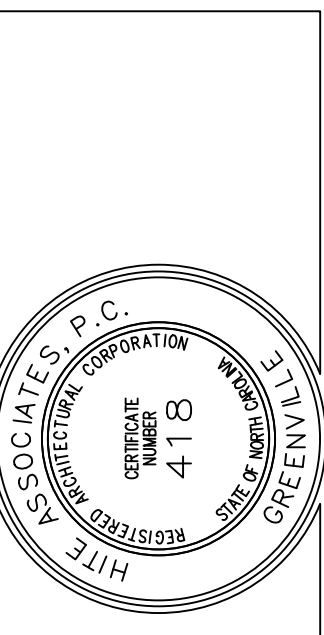
- DATA CABLING TO INCLUDE CABLES, JACKS, FACEPLATES, PATCH PANELS, PATCH CABLES, AND J HOOKS.
- WAP CABLING TO INCLUDE CABLES, JACKS, FACEPLATES, PATCH PANELS, PATCH CABLES, J HOOKS AND INSTALLATION OF OWNER PROVIDED WIRELESS ACCESS POINTS.
- INTERCOM CABLING TO INCLUDE SPEAKER CABLES, SPEAKER RISER CABLES TO INTERCOM HEAD END, INTERCOM SYSTEM EXPANSION CORD AND J HOOKS.
- SECURITY INTRUSION TO INCLUDE ALL ASSOCIATED WIRING FOR CAMERAS AND MOTION DETECTORS.



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

Rev	Date

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New Classroom Addition for
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1388 NC-403, Mt Olive, NC 28365
Duplin County / North Carolina

Project No: 22253
Date: 6 March 2023
Drawing no: IT 101

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SOURCE of NC, P.A.
102-42 Regency Blvd. Greenville, NC 27834
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