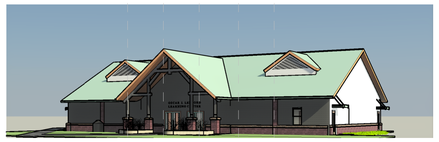
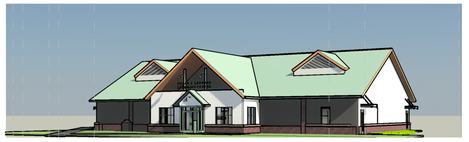
CORRECTIVE PACKAGE FOR:
MACON COUNTY EARLY COLLEGE

77 SILER FARM ROAD
FRANKLIN, NC 28734



2 / A001 BASE BID- PORTICO RESTORATION

REFER TO SCOPE OF WORK BELOW FOR FULL PROJECT DESCRIPTION



1 / A001 ALT-1 CONDITIONED PORTICO ENCLOSURE

OWNER:

MACON COUNTY

CONTACT:

JOE ALLEN, DIR. MACON CO. PLANNING & CODE ENFORCEMENT
1834 LAKESIDE DR.
FRANKLIN, NC 28734

ARCHITECT:

LOOPER ARCHITECTURAL DESIGN & PLANNING

CONTACT:

PETER LOOPER, AIA, NCARB
28 KATHERINE PLACE
ASHEVILLE, NC 28801

STRUCTURAL ENGINEER:

KLOESEL ENGINEERING, PA

CONTACT:

BEN POSS, PE
8 MAGNOLIA AVENUE, SUITE 100
ASHEVILLE, NC 28801

MECHANICAL & ELECTRICAL ENGINEER:

B. AUGUSTUS SIMS ENGINEERS, PLLC

CONTACT:

B. AUGUSTUS SIMS, PE
P.O. BOX 18263
ASHEVILLE, NC 28814

LIST OF DRAWINGS

G001	BUILDING CODE DATA	08/20/25
A001	COVER	08/20/25
D101	DEMOLITION	08/20/25
D102	DEMOLITION- ENLARGED PLANS, DETAILS & NOTES	08/20/25
S-101	ENLARGED PLANS	08/20/25
S-001	STRUCTURAL NOTES	08/20/25
S-401	MISC. DETAILS SHEET	08/20/25
S-301	ROOF FRAMING DETIALS	08/20/25
S-201	FOUNDATION DETAILS	08/20/25
A101	SITE PLAN & ENLARGED PLANS- NEW	08/20/25
A102	SECTIONS AND DETAILS	08/20/25
A104	SECTIONS AND DETAILS	08/20/25
A201	BUILDING ELEVATIONS- NEW	08/20/25

LIST OF DRAWINGS (CONTINUED)

ALTERNATE-1	D101a	PORTICO ENCLOSURE PLANS	08/20/25
	A102a	PLAN, DETAILS, SCHEDULES	08/20/25
	A101a	PORTICO ENCLOSURE PLANS	08/20/25
	A201a	BUILDING ELEVATIONS- ALT-1	08/20/25
	A301a	SECTIONS	08/20/25
	A202a	INTERIOR ELEVATIONS & NOTES	08/20/25
	A302a	NOTES AND DETAILS	08/20/25
	A402a	NOTES AND DETAILS	08/20/25
	A404a	NOTES AND DETAILS	08/20/25
	A401a	WINDOW SPECIFICATIONS	08/20/25
	A403a	SPECIFICATIONS	08/20/25
	M101	KEY PLAN- MECHANICAL- EXISTING	08/20/25

LIST OF DRAWINGS

M102	KEY PLAN-MECHANICAL- PROPOSED	08/20/25
M103	MECHANICAL PLANS	08/20/25
M201	MECHANICAL SCHEDULES AND LEGENDS	08/20/25
M301	MECHANICAL SPECIFICATIONS	08/20/25
E101	KEY PLAN- ELECTRIC- EXISTING	08/20/25
E102	ELECTRIC PLANS	08/20/25
E103	ELECTRICAL ELEVATIONS	08/20/25
E201	ELECTRICAL SCHEDULES AND LEGENDS	08/20/25
E202	ELECTRICAL SCHEDULES AND LEGENDS	08/20/25
E301	ELECTRICAL SPECIFICATIONS	08/20/25

SCOPE OF WORK

THE BUILDING WILL BE OCCUPIED DURING THE CONSTRUCTION PERIOD. THE GENERAL CONTRACTOR MUST PROVIDE TEMPORARY EXIT MEASURES. PROVIDE 8' CONSTRUCTION FENCE PER CODE AND OSHA REQUIREMENTS.

BASE BID- INCLUDES CORRECTIVE WORK ADDRESSING TWO PRIMARY AREAS OF WORK:

1. **MODIFICATIONS TO THE TIMBER FRAME ENTRANCE PORTICO:**

TIMBER POSTS, SUPPORTING THE PORTICO ROOF STRUCTURE, WERE ORIGINALLY EMBEDDED IN MASONRY WHICH HAS FOSTERED MOISTURE DAMAGE TIMBER POST BASES TO BE DISASSEMBLED. LOWER PORTION OF TIMBER POSTS, PREVIOUSLY EMBEDDED IN THE MASONRY, TO BE REMOVED. CONSTRUCT NEW CONCRETE CORES, INSTALL BRICK VENEER AND PRE-CAST CONCRETE CAPS.

2. **PERIMETER GRADE MODIFICATIONS:**

BUILDING'S PERIMETER GRADE WILL BE LOWERED SO THE FINAL, MULCHED, SURFACE IS 3" BELOW THE FINISH FLOOR LEVEL MIN.. **(3) DOWNSPOUTS** WILL BE BOOTED AND PIPED TO ROCK BASED DRY WELLS REMOTE FROM THE BUILDING.

SOME REMOVAL OF VEGETATION & SUBSEQUENT PLANTING WILL BE REQUIRED.

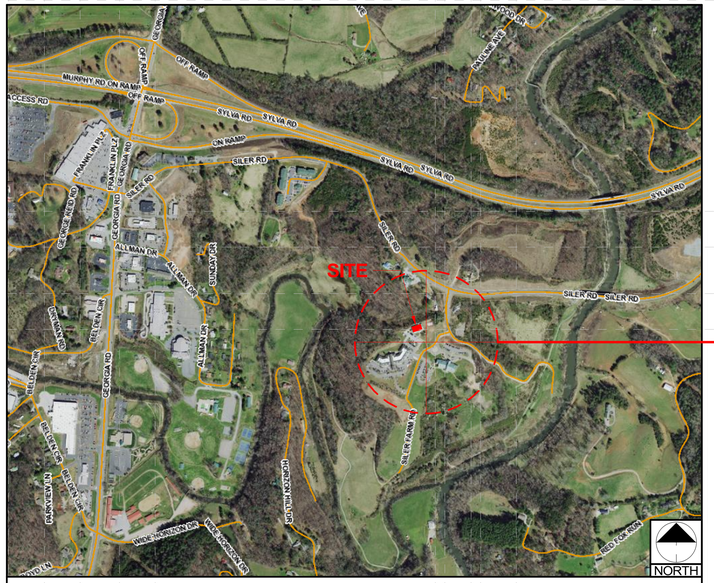
ALTERNATE-1 (ALT-1)-
ALT-1 MODIFIES THE PORTICO WORK TO CREATE ADDITIONAL CONDITIONED SPACE FOR (2) OFFICES, A VESTIBULE AND CIRCULATION.

REPLACE CONCRETE SLAB, CONSTRUCT INSULATED & CONDITIONED ENCLOSURE BELOW THE PORTICO ROOF LINE. THE ENCLOSURE TO HAVE AN INSULATED HIGH CEILING AND LOWER FINISH CEILINGS. MINI-SPLIT MECH. UNITS WILL PROVIDED CONDITIONED AIR FOR THE ADDED SPACE.\

THE TIMBER FRAME (INCLUDES THE (4) MOISTURE DAMAGED POSTS, TO BE REMOVED AND REPLACED WITH NEW EXTERIOR BEARING WALL IN LIEU OF THE TIMBER FRAME CURRENTLY SUPPORTING THE ROOF STRUCTURE.

CONCRETE WALK RESTORATION AND THE ADDITION OF A NEW CONCRETE PATIO.

RELOCATE MASONRY PLANTER, AMEND SOIL AND RE-PLANT.



SITE LOCATION MAP: MACON COUNTY EARLY COLLEGE SCALE: NOT TO SCALE

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N.C.

08/20/25

SHEET NAME:
COVER

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A001

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: CORRECTIVE PACKAGE FOR: MACON COUNTY EARLY COLLEGE
Address: 77 SILER FARM ROAD / FRANKLIN, NC Zip Code 28734
Owner/Authorized Agent: Mr. Joe Allen Phone # (828) 371 - 4422 E-Mail JAllen@MaconNC.com
Owned By: Macon County
Code Enforcement Jurisdiction: : Macon County

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	LAD&P	Peter S. Looper	11444	(828)216-9753	Looper-Architect@Charter.net
Civil				( )	
Electrical	B. Augustus Sims, Engineer, PLLC	Gus Sims	014566	(828)776-6145	GSims@BASimsEngineer.com
Fire Alarm				( )	
Plumbing	B. Augustus Sims, Engineer, PLLC	Gus Sims	014566	(828)776-6145	GSims@BASimsEngineer.com
Mechanical	B. Augustus Sims, Engineer, PLLC	Gus Sims	014566	(828)776-6145	GSims@BASimsEngineer.com
Sprinkler-Standpipe				( )	
Structural	Kloesel Engineering, PA	Ben Poss	029499	(828)255-0780	Ben@Kloesel-engineering.com
Retaining Walls >5' High				( )	
Other				( )	

2018 NC BUILDING CODE: Select one

2018 NC EXISTING BUILDING CODE: Select one Select one Select one

CONSTRUCTED: (date) UNKNOWN **CURRENT OCCUPANCY(S)** (Ch. 3): E

RENOVATED: (date) UNKNOWN **PROPOSED OCCUPANCY(S)** (Ch. 3): E

RISK CATEGORY (Table 1604.5): **Current:** II V **Proposed:** II V

BASIC BUILDING DATA
Construction Type: V-B
Sprinklers: NO
Standpipes: N/A
Primary Fire District: SOUTH FRANKLIN **Flood Hazard Area:** N/A ct ons
Special Inspections Required: NO

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor **Base Bid**	6,000+/-	-0- BASE BID	6,000
1st Floor **Alt-1**	6000+/-	385 ALT-1	6,385
TOTAL			

Total Conditioned Area After Enclosing Portico 6,385

ALLOWABLE AREA

Primary Occupancy Classification(s):
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☒
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s):
Incidental Uses (Table 509):
Special Uses (Chapter 4 – List Code Sections):
Special Provisions: (Chapter 5 – List Code Sections):
Mixed Occupancy: ☐ No ☐ Yes Separation: Hr. Exception:

☒ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided b the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} + \ldots\ldots = \frac{\quad}{\quad} \leq 1.00$$

6,385 / 9,000 = 0.7094
0.7094 Is Less Than 1.00 / Total Conditioned Area Acceptable for **Type V-B Construction**

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior	>30'	NO					
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions Exterior walls	>30'	NO					
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors		NO					
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation		N/A					
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENING PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ✓
Exit Signs: ✓
Fire Alarm: Provided / Not Req'd
Smoke Detection Systems:
Carbon Monoxide Detection:

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan 1\G001

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☐ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☒ Occupant loads for each area
- ☒ Exit sign locations (1013)
- ☐ Exit access travel distances (1017)
- ☒ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- ☐ Dead end lengths (1020.4)
- ☐ Clear exit widths for each exit door
- ☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☐ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☐ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

SHEET LOCATIONS FOR CONSULTANT SUMMARIES:
STRUCTURAL: SHEET S-001
MECHANICAL: SHEET M201
ELECTRICAL: SHEET E202

TEMPORARY EXITING:

VERIFY FINAL TEMPORARY LIFE SAFETY AND EXITING REQUIREMENTS WITH LOCAL BUILDING OFFICIAL.

EXIT DOOR REQUIREMENTS:

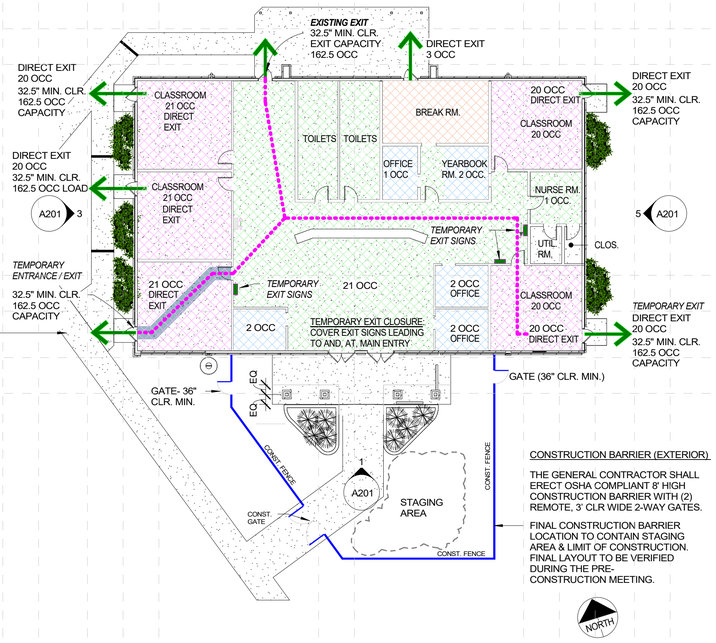
- ACCESSIBLE HARDWARE
- EXITS MUST INCLUDE ACCESSIBLE PATH TO THE PUBLIC WAY.
- EXIT DOOR MUST BE UNLOCKED AT ALL TIMES OR
- EXIT DOOR MUST HAVE CODE COMPLIANT PANIC HARDWARE
- EXIT SIGNAGE MUST BE PROVIDED AT THE TEMPORARY DOOR LOCATION OR LOCATIONS.
- CLEAR DIRECTIONAL EXIT SIGNAGE MUST BE PROVIDED AS REQUIRED BY THE NC STATE BUILDING CODE.

TEMPORARY PUBLIC ENTRANCE / EXIT:

MAINTAIN WITH TEMPORARY DIRECTIONAL SIGNAGE AND EGRESS LIGHT AT FACE OF EXTERIOR WALL ADJACENT TO THE TEMPORARY EXIT. MAINTAIN UNTIL THE MAIN ENTRANCE IS REOPENED AFTER SUBSTANTIAL COMPLETION.

TEMPORARY EGRESS SIGNAGE AND MOUNTING HEIGHT SHALL BE COMPLIANT WITH ADA STANDARDS AND ICC A117.1.

PROVIDE 4' x 6' JOB SIGN WITH GRAPHICS PROVIDED BY THE ARCHITECT WITHIN (1) WEEK OF MOBILIZATION.



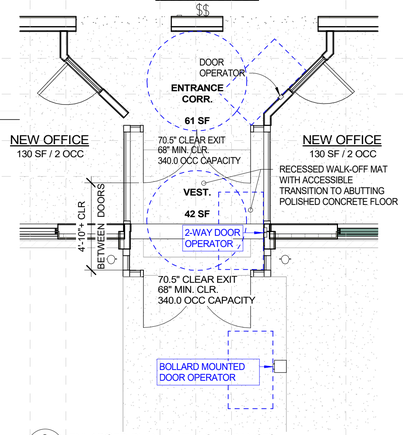
CONSTRUCTION BARRIER (EXTERIOR)

THE GENERAL CONTRACTOR SHALL ERECT OSHA COMPLIANT 8' HIGH CONSTRUCTION BARRIER WITH (2) REMOTE, 3' CLR WIDE 2-WAY GATES.

FINAL CONSTRUCTION BARRIER LOCATION TO CONTAIN STAGING AREA & LIMIT OF CONSTRUCTION. FINAL LAYOUT TO BE VERIFIED DURING THE PRE-CONSTRUCTION MEETING.

1 G001 LIFE SAFETY PLAN
1/16" = 1'-0"

4 G001 ACCESSIBLE ENTRY DIAGRAM
12" = 1'-0"



2 G001 ENLARGED PLAN- ALT-1 CLEARANCES
1/4" = 1'-0"

LEGEND- ALT-1 ACCESS

67" CLEARANCE REQUIREMENT	ø 67"
CLEAR FLOOR SPACE	30" x 25"
2-WAY DOOR OPERATOR	
DOOR OPERATOR	

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE

08/20/25

SHEET NAME:
BUILDING CODE DATA

PHASE:
CONSTRUCTION DOCUMENTS

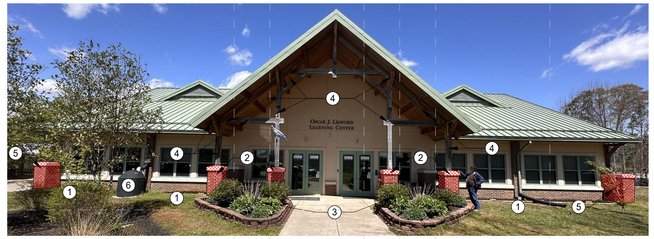
REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **Author**

SHEET NUMBER
G001

7 D101 PHOTO- FRONT FROM SOUTH-WEST
12" = 1'-0"



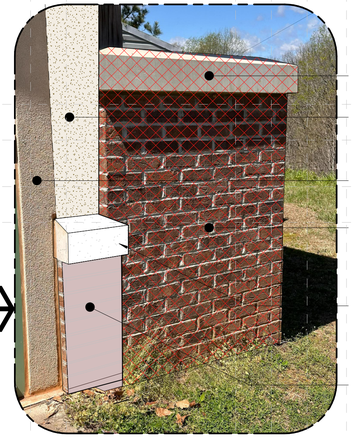
5 D101 PHOTO- FRONT (SOUTH) ELEVATION- DEMOLITION
1" = 1'-0"

9 D101 PHOTO- PARTIAL NORTH VIEW FROM EAST
12" = 1'-0"

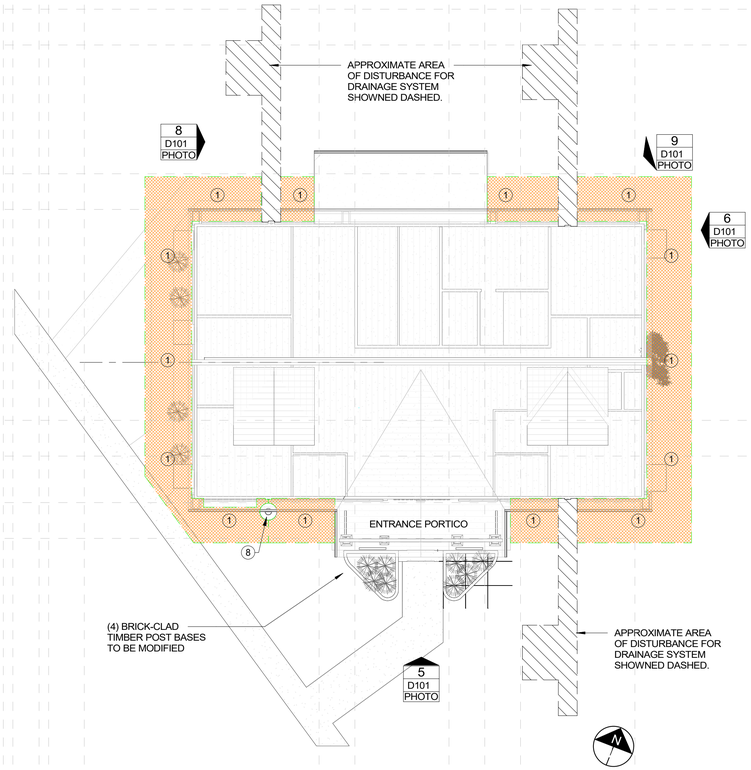
8 D101 PHOTO- PARTIAL NORTH VIEW FROM WEST
12" = 1'-0"

DEMOLITION NOTE LEGEND	
1	LOWER GRADE (APPROX. AREA SHOWN HATCHED - REFER TO DETAILS & NOTES
2	REMOVE BRICK AND TIMBER POST BELOW THE EXISTING PRE-CAST CONC. CAP.
3	PROTECT ADJACENT VEGETATION DURING DURATION OR THE PROJECT
4	CLEAN & PREPARE EXPOSED WOOD FOR NEW FINISH
5	REMOVE BRICK VENEER, SUPPORT CONSTRUCTION & PREPARE FOR CORNER RE-CONSRTCTION
6	EXISTING STORAGE TANK TO REMAIN. INSPECT AND CLEAN DOWNSPOUT AND PIPING TO TANK

2 D101 PHOTO- TYP. BRICK CORNER PIER
12" = 1'-0"



6 D101 PHOTO- TYP. BRICK CORNER PIER ENLARGED
12" = 1'-0"



1 D101 SITE PLAN- DEMOLITION
1/16" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE

08/20/25

SHEET NAME:
DEMOLITION

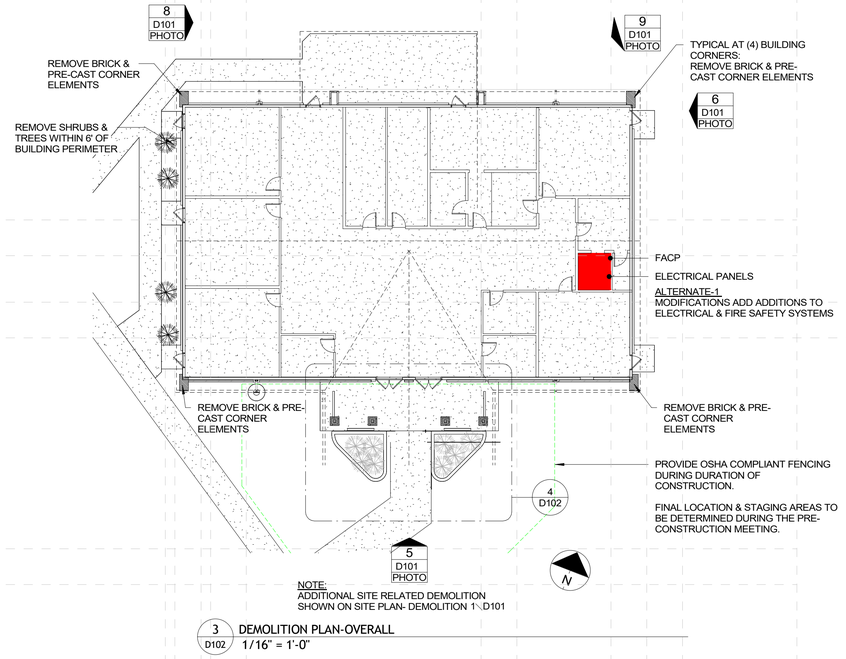
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

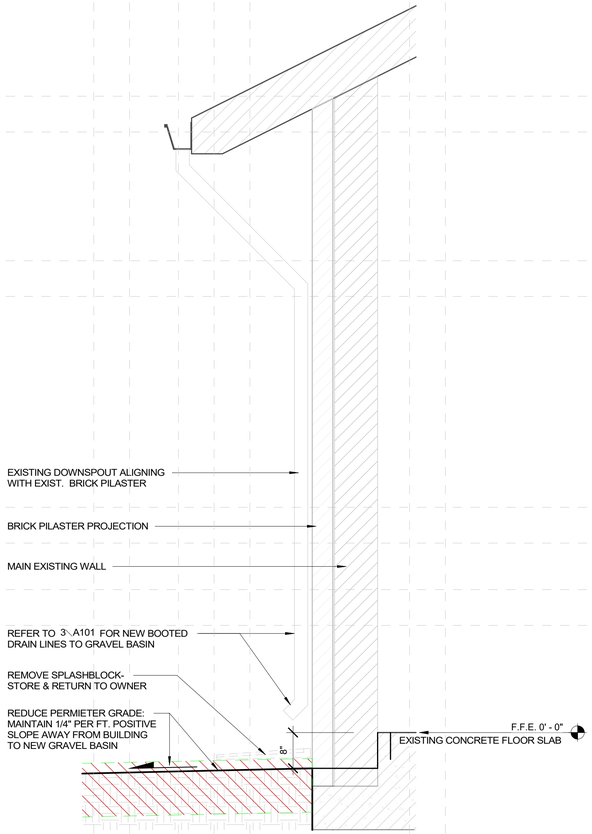
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

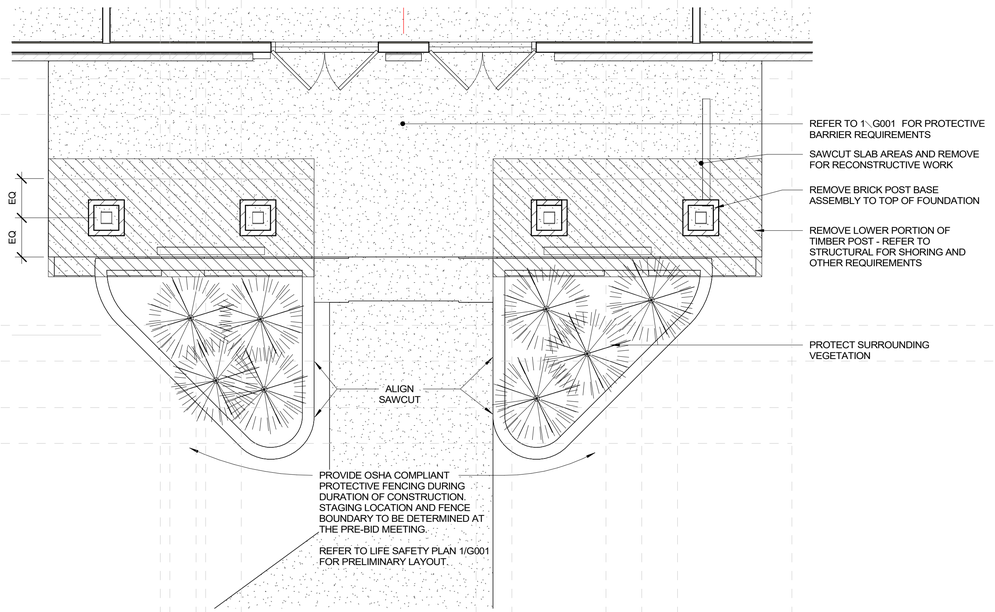
SHEET NUMBER
D101



3 D102 DEMOLITION PLAN-OVERALL
1/16" = 1'-0"



2 D102 WALL SECTION AT PILASTER- EXISTING
3/4" = 1'-0"



4 D102 DEMOLITION PLAN @ TIMBERFRAME PORCH
1/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE N C

08/20/25

SHEET NAME:
DEMOLITION- ENLARGED PLANS, DETAILS & NOTES

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
D102

STRUCTURAL NOTES

GE - GENERAL

1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE - 2018 EDITION (2015 INTERNATIONAL BUILDING CODE WITH CURRENT NORTH CAROLINA AMENDMENTS).

2. THE DESIGN LOADS ARE AS FOLLOWS:

LIVE LOAD
ROOF _____ 20 PSF

SNOW LOAD
GROUND SNOW LOAD P_G _____ 15 PSF
FLAT ROOF SNOW LOAD P_f _____ 15 PSF
SNOW EXPOSURE FACTOR C_E _____ 1.0
SNOW LOAD IMPORTANCE FACTOR I_E _____ 1.0
THERMAL FACTOR C_T _____ 1.1

WIND LOAD
BASIC WIND SPEED V_{ULT} (ASCE 7-10)_____ 115 MPH
V_{ASD} (ASCE 7-10)_____ 90 MPH
RISK CATEGORY _____ II
WIND EXPOSURE _____ C
INTERNAL PRESSURE COEFFICIENT GC_{Pi} _____ ± 0.18
COMPONENTS AND CLADDING _____ PER ASCE 7-10
DESIGN CODE REFERENCE PUBLICATION _____ ASCE 7-10

SEISMIC LOAD
SEISMIC RISK CATEGORY _____ II
SEISMIC DESIGN CATEGORY _____ C
SPECTRAL RESPONSE ACCELERATION S_S ____ 33%G
S_1 ____ 11%G
SPECTRAL RESPONSE COEFFICIENTS S_{MS} ____ 51%G
S_{M1} ____ 27%G
S_{DS} ____ 34%G
S_{D1} ____ 18%G
SITE CLASS _____ D
SEISMIC IMPORTANCE FACTOR I_E ____ 1.0
BASIC SEISMIC-FORCE-RESISTING SYSTEM _____ LIGHT FRAMED WALL SHEATHING WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
RESPONSE MODIFICATION FACTOR R ____ 6.5
SEISMIC RESPONSE COEFFICIENT C_S ____ 0.05
DESIGN BASE SHEAR _____ N/A
ANALYSIS PROCEDURE _____ EQUIVALENT LATERAL FORCE PROCEDURE (ELF) PER SECTION12.8 ASCE 7-10
LATERAL DESIGN CONTROL _____ WIND

PRE-ENGINEERED SYSTEMS AND COMPONENTS SHALL BE DESIGNED BASED ON THE MINIMUM LOAD REQUIREMENTS PER ASCE-7 AND THE ABOVE BASIC LOAD PARAMETERS.

3. THE STRUCTURE HAS BEEN DESIGNED TO WITHSTAND IN-SERVICE LOADS ONLY. METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, AND DRAWINGS OF OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH THE STRUCTURAL WORK.

5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE TOTAL CONTRACT DOCUMENTS. DO NOT SCALE THE DRAWINGS. FOLLOW WRITTEN DIMENSIONS ONLY.

6. ANYTHING WHICH, IN THE OPINION OF THE CONTRACTOR, APPEARS TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES IN THE PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE CONSTRUCTION OF THE AFFECTED WORK MAY PROCEED.

7. DETAILS ARE MARKED AT THE SPECIFIC LOCATION WHERE THEY APPLY, BUT ALSO INDICATE GENERAL CONSTRUCTION REQUIREMENTS FOR OTHER LOCATION WITH SIMILAR CONDITIONS. DETAILS NOTED AS "TYPICAL" MAY NOT BE REFERENCED ON THE DRAWINGS. TYPICAL DETAILS APPLY AT ALL LOCATIONS WHERE THE TYPE OF CONSTRUCTION SHOWN IN THE TYPICAL DETAIL OCCURS.

8. WHERE CONFLICTS OCCUR BETWEEN NOTES, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR SHALL NOT PROCEED WITH THE AFFECTED WORK UNTIL THE STRUCTURAL ENGINEER ISSUES A CLARIFICATION.

9. UNIFORM LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 1607.9 OF THE NC STATE BUILDING CODE.

10. HORIZONTAL AND VERTICAL CLEARANCES FROM THE EXISTING ADJACENT STRUCTURE SHALL BE VERIFIED BEFORE CONSTRUCTION IS BEGUN. VARIATIONS FROM THE DIMENSIONS INDICATED ON THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER.

FO - FOUNDATION

1. FOUNDATION DESIGN IS BASED ON A PRESUMPTIVE ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.

2. ALL FOOTINGS SHALL BE FOUNDED ON UNDISTURBED SOIL OR A CONTROLLED FILL HAVING A BEARING CAPACITY OF 2000 PSF, AT THE ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

CO - CONCRETE

1. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH (F'C) AT 28 DAYS:
FOOTINGS _____ 3000 PSI w/ NO ENTRAINED AIR (FLY ASH OPTIONAL)
INTERIOR SLAB ON GRADE _____ 3000 PSI w/ NO ENTRAINED AIR (FLY ASH OPTIONAL)
EXTERIOR SLABS AND WALKS _____ 4500 PSI w/ 5% ENTRAINED AIR AND FLY ASH

2. ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH APPROVED DESIGN MIXES AS REQUIRED FOR THE JOB.

3. ALL CONCRETE SHALL CONTAIN ENTRAINED AIR IN ACCORDANCE WITH ACI 318, TABLE 4.2.1, U.O.N.

4. CONCRETE THAT ARRIVES AT THE JOBSITE WITH A SLUMP GREATER THAN 5" SHALL BE REJECTED. CONCRETE WITH A SLUMP LESS THAN 3" SHALL HAVE AN APPROVED SUPER-PLASTICIZER ADDED SUCH THAT THE MINIMUM 3" SLUMP MAY BE ACHIEVED. THE ADDITION OF WATER AT THE JOBSITE, BEYOND THAT HELD-BACK AT THE CONCRETE PLANT, FOR THE PURPOSE OF INCREASING THE SLUMP IS PROHIBITED.

5. THE UNDER-SLAB ON GRADE VAPOR RETARDER SHALL BE 10 MILS THICK AND MEET THE REQUIREMENTS OF ASTM E 1745, CLASS B. PROVIDE THE MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE-SENSITIVE TAPE. PRODUCT SHALL BE EQUIVALENT TO STEGO WRAP, 10 MILS, MANUFACTURED BY STEGO INDUSTRIES, LLC.

6. CONCRETE WALL FORM TIES SHALL BE FACTORY-FABRICATED, REMOVABLE OR SNAP-OFF METAL OR GLASS-FIBER-REINFORCED PLASTIC FORM TIES DESIGNED TO RESIST LATERAL PRESSURE OF FRESH CONCRETE ON FORMS AND TO PREVENT SPALLING OF CONCRETE ON REMOVAL. FURNISH UNITS THAT WILL LEAVE NO CORRODIBLE METAL CLOSER THAN 1 INCH (25 MM) TO THE PLANE OF EXPOSED CONCRETE SURFACE. FURNISH TIES THAT, WHEN REMOVED, WILL LEAVE HOLES NO LARGER THAN 1 INCH (25 MM) IN DIAMETER IN CONCRETE SURFACE.

7. AT THE INTERFACE OF THE CONCRETE SLAB ON GRADE AND VERTICAL STRUCTURAL MEMBERS (E.G. WALLS, COLUMNS), APPLY A BOND-BREAKER TO THE VERTICAL MEMBER FOR THE FULL DEPTH OF THE SLAB. SATISFACTORY PRODUCTS INCLUDE CURING COMPOUND, FORM RELEASE, AND OTHER SIMILAR PRODUCTS. DO NOT USE ASPHALT IMPREGNATED FIBERBOARD OR FELT.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS, AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING THE CONCRETE.

SCHEDULE OF CONCRETE FINISHES:
INTERIOR SLAB ON GRADE _____ TROWEL FINISH.
ELEVATED SLABS _____ TROWEL FINISH.
SLABS TO RECEIVE SETTING BEDS _____ SCRATCH FINISH.
EXTERIOR STEPS AND SIDEWALKS _____ NON-SLIP BROOM FINISH
ALL UNEXPOSED CONCRETE SURFACES, U.O.N. _____ ROUGH FORM FINISH.
ALL EXPOSED CONCRETE SURFACES, U.O.N. _____ SMOOTH RUBBED FINISH.
TOPS OF EXPOSED WALL SURFACES _____ TROWEL FINISH.

CURING METHOD AND TIME: WET CURE INTERIOR SLABS FOR 7 DAYS USING 'ULTRACURE NCF' CURING BLANKET MANUFACTURED BY MCTECH GROUP, OR APPROVED EQUIVALENT.

CR - CONCRETE REINFORCEMENT

1. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCEMENT DESIGNATED AS CONTINUOUS SHALL LAP 36 BAR DIAMETERS AT SPLICES, UNLESS NOTED OTHERWISE. SEE MASONRY SECTION BELOW FOR LAP REQUIREMENTS IN CMU WALLS.

2. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185. REINFORCEMENT SHALL BE FURNISHED IN FLAT SHEETS. LAP ONE FULL MESH.

3. ALL CONCRETE REINFORCEMENT BARS AND WWR SHALL BE ACCURATELY AND SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE CONCRETE PLACEMENT OPERATION.

4. PROVIDE CORNER REINFORCEMENT, 36 BAR DIAMETERS x 36 BAR DIAMETERS, AT EACH CONTINUOUS FOOTING CHANGE IN DIRECTION.

5. CONCRETE SLAB ON GRADE SHALL BE THE THICKNESS INDICATED ON PLAN OR DETAILS AND REINFORCED WITH A MINIMUM OF 6X6 W2.1XW2.1 W.W.R.

6. PROVIDE (1) #4 REINFORCEMENT BAR x 4'-0" AT RE-ENTRANT CORNERS AND AROUND THE PERIMETER OF RECTANGULAR HOLES IN THE SLAB, UNLESS OTHERWISE NOTED. PLACE BAR DIAGONAL TO THE CORNER WITH 1" CLEARANCE FROM THE TOP AND THE SIDE OF THE SLAB AT THE CORNER.

7. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE COMMITTEE 318, SECTION 7.7, UNLESS NOTED OTHERWISE.

MA - MASONRY

1. CONCRETE MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'M) OF 2,000 PSI AT 28 DAYS. CONCRETE MASONRY UNITS (CMU) SHALL HAVE MINIMUM UNIT STRENGTH OF 2,000 PSI AT 28 DAYS FOR THE AVERAGE NET AREA.

2. MORTAR FOR CMU WALLS SHALL BE TYPE 'S" AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. MORTAR FOR MASONRY VENEERS SHALL BE TYPE 'N" AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 750 PSI AT 28 DAYS.

3. ALL CMU CELLS CONTAINING REINFORCEMENT OR OTHERWISE INDICATED TO BE GROUTED SHALL BE FILLED WITH GROUT CONFORMING TO ASTM C-476 "GROUT FOR MASONRY". THE GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI. THE GROUT DESIGN MIX SHALL BE PROPORTIONED SUCH THAT THE SPECIFIED SLUMP RANGE IS 8"-11". IF THE SLUMP IS LESS THAN THE MINIMUM, ADDITIONAL SLUMP MAY BE ATTAINED AT THE JOBSITE BY THE ADDITION OF AN APPROVED SUPER-PLASTICIZER. NO ADDITIONAL WATER MAY BE ADDED TO THE MIX AT THE JOBSITE TO INCREASE THE SLUMP.

4. THE MASONRY GROUT IN THE CELLS SHALL BE CONSOLIDATED IN ACCORDANCE WITH ACI SPECIFICATIONS. FOR POUR HEIGHTS GREATER THAN 4'-0", CONSOLIDATE USING A MECHANICAL VIBRATOR. FOR POUR HEIGHTS UP TO 4'-0", THOROUGH RODDING MAY BE USED IN LIEU OF THE VIBRATOR. ALL VERTICAL BARS ARE TO BE PLACED IN THE VOIDS BEFORE FILLING THE CELLS WITH CONCRETE.

5. PER ACI-530.1, SECTION 3.5D, MAXIMUM GROUT LIFT HEIGHT SHALL BE 5'-0" FOR WALLS WITH CONTINUOUS BOND BEAMS BETWEEN THE TOP AND BOTTOM OF THE POUR HEIGHT. FOR WALLS WHERE THERE ARE NO BOND BEAMS WITHIN THE POUR HEIGHT, THE MAXIMUM GROUT LIFT SHALL BE 8'-0".

6. FOR GROUT POUR HEIGHTS GREATER THAN 5'-0", CLEAN-OUTS SHALL BE PROVIDED IN THE BOTTOM COURSE OF MASONRY. ALL DEBRIS SHALL BE COMPLETELY REMOVED FROM REINFORCED CELLS.

7. FOR CANTILEVERED WALLS WITH POUR HEIGHTS GREATER THAN 5'-0", CLEAN-OUTS SHALL BE PROVIDED AT THE BASE OF THE WALL FOR CLEANING AND INSPECTION. ALL DEBRIS SHALL BE COMPLETELY REMOVED FROM REINFORCED CELLS.

8. ALL VERTICAL REINFORCEMENT IN MASONRY WALLS SHALL BE LATERALLY STABILIZED BY REBAR POSITIONERS - WIRE-BOND MODEL 3401 OR 3402, OR APPROVED EQUIVALENT. THE POSITIONERS SHALL BE INSTALLED SUCH THAT EACH REINFORCEMENT BAR IS SUPPORTED AT THE TOP AND AT THE BOTTOM.

9. BOND BEAMS SHALL BE REINFORCED WITH (2) #4, CONTINUOUS, U.O.N., AND SHALL CONSIST OF AN OPEN-BOTTOM BOND BEAM BLOCK REINFORCED WITH (2) #4 EXTENDING 24" BEYOND THE EDGE OF THE OPENING, UNLESS NOTED OTHERWISE. THE BOND BEAM REINFORCEMENT EXTENDS CONTINUOUSLY THROUGH ALL WALL CONTROL JOINTS. PROVIDE A CONTINUOUS POLYPROPYLENE GROUT-STOP BENEATH THE BOND BEAM, WIRE-BOND GROUT STOP, OR APPROVED EQUIVALENT.

10. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AT 16"o.c., U.O.N. THE REINFORCEMENT SHALL BE STANDARD DUTY LADDER-TYPE WITH 9 GAUGE DIAMETER SIDE RODS AND 9 GAUGE CROSS RODS. FINISH SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION (ASTM A 153, CLASS B/2, 1.50 OZ./SQ. FT).
ALL CORNERS AND INTERSECTIONS SHALL BE REINFORCED WITH PRE-FABRICATED 'L' AND 'T' SHAPED ASSEMBLIES. NO SITE-CUT REINFORCEMENT IS ALLOWED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

11. REINFORCEMENT IN CMU DESIGNATED AS CONTINUOUS SHALL LAP 48 BAR DIAMETERS, U.O.N.

12. PROVIDE CORNER BARS, 48 BAR DIAMETERS x 48 BAR DIAMETERS, AT EACH BOND BEAM CHANGE OF DIRECTION.

13. UNLESS OTHERWISE SHOWN, MASONRY WALLS SHALL HAVE CONTROL JOINTS AT A MAXIMUM SPACING OF 25'-4" ON CENTER. THE JOINT SHALL BE FORMED USING PVC MATERIAL CONFORMING TO ASTM D2287, TYPE PVC 654-4. COORDINATE LOCATION OF JOINTS WITH THE ARCHITECTURAL ELEVATIONS.

SL - STRUCTURAL LUMBER

1. ALL STRUCTURAL LUMBER SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.

2. ALL STRUCTURAL LUMBER SHALL BE A MINIMUM OF NO. 2, SOUTHERN YELLOW PINE (SYP#2), WITH MAXIMUM MOISTURE CONTENT OF 19%, UNLESS OTHERWISE NOTED. WALL STUDS MAY BE NO. 2, SPRUCE-PINE-FIR (SPF#2), UNLESS OTHERWISE NOTED.

3. ALL LUMBER NOTED "PRESSURE TREATED" (P.T.) SHALL BE PRESSURE TREATED WITH WATER-BORNE PRESERVATIVES. PRESSURE TREATMENT SHALL COMPLY WITH REQUIREMENTS AWPA STANDARD U1.

4. METAL CONNECTORS USED TO SUPPORT PRESSURE-TREATED WOOD MEMBERS SHALL HAVE A ZINC COATING CONFORMING TO THE REQUIREMENTS OF A G185 COATING (1.85 OZ/FT^2). THIS CONFORMS TO THE SIMPSON TYPE ZMAX FINISH. ALL FASTENERS USED WITH THESE CONNECTORS SHALL CONFORM TO THE EQUIVALENT G185 COATING.

5. PROVIDE NAILING PATTERN IN COMPLIANCE WITH THE NORTH CAROLINA STATE BUILDING CODE RECOMMENDED FASTENING SCHEDULE WHEN JOINING TWO OR MORE FRAMING MEMBERS. PROVIDE FLOOR AND ROOF BRIDGING IN ACCORDANCE WITH THE NCSBC.

6. STRUCTURAL FLOOR SHEATHING SHALL BE A MINIMUM OF 23/32 APA RATED T&G SHEATHING. SECURE TO SUPPORTING FRAMING WITH SCREWS & CONSTRUCTION ADHESIVE IN ACCORDANCE WITH SHEATHING MANUFACTURERS INSTRUCTIONS.

7. STRUCTURAL WALL SHEATHING SHALL BE A MINIMUM OF 7/16 OSB 'ZIP R-SHEATHING'. INSTALL SHEATHING WITH 0.131"x 3 1/2" NAILS AT 3"o.c. EDGES AND 6"o.c. FIELD. FURNISH 2X HORIZONTAL BLOCKING AT PANEL JOINTS.

8. STRUCTURAL ROOF SHEATHING SHALL BE A MINIMUM OF 19/32 APA RATED SHEATHING, EXPOSURE 1. INSTALL SHEATHING WITH 8d (0.113"x 2-1/2") NAILS AT 6"o.c. EDGES AND FIELD. FURNISH 2X HORIZONTAL BLOCKING AT PANEL JOINTS. ALLOW 1/8" SPACE BETWEEN PANEL ENDS & EDGES TYP.

9. THE CONTINUOUS '2x' SILL PLATE AT THE BASE OF THE WOOD STUD WALL SHALL BE ATTACHED TO THE SUPPORTING CONCRETE/STEEL USING POWDER-ACTUATED FASTENERS: RAMSET MODEL 1524SDE WITH 7/8" WASHER, 3" LENGTH, 0.145 SHANK DIAMETER, 1-1/2" PENETRATION, OR AN APPROVED EQUIVALENT.

10. TYPICAL NOTE FOR STUD PACKS IN WALLS & STRUCTURAL BLOCKING:
STUD PACKS SHALL BE PROVIDED AT EACH LEVEL DOWN TO THE FOUNDATION WALL INCLUDING THE BAND REGION AT EACH FLOOR LEVEL. PROVIDE 2x SOLID BLOCKING IN FLOOR CAVITIES DIRECTLY UNDER POINT LOADS AND TERMINATING AT STRUCTURAL BEAMS, HEADERS OR FOUNDATION WALLS.

11. ENGINEERED STRUCTURAL WOOD PRODUCTS (i.e. PSL, LVL) SHALL HAVE THE MINIMUM STRUCTURAL PROPERTIES:

	PSL	LVL	PSL COL
• FLEXURAL STRESS (F_B):	2,900 PSI	2,600 PSI	2,400 PSI
• MODULUS OF ELASTICITY (E):	2,000 KSI	2,000 KSI	1,800 KSI
• F_C PERPENDICULAR:	750 PSI	750 PSI	425 PSI
• F_C PARALLEL	2,900 PSI	2,510 PSI	2,500 PSI
• F_V:	290 PSI	285 PSI	190 PSI.

PA - POST INSTALLED ANCHORS

1. UNLESS OTHERWISE INDICATED ON PLANS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES, OR APPROVED EQUAL:

BASE MATERIAL	ADHESIVE ANCHOR	MECHANICAL ANCHOR
SOLID CONCRETE	HILTI -RE 500 V3 HILTI HY 200 SAFE SET SYSTEM	HILTI KWIK HUS EZ SCREW ANCHOR HILTI KWIK BOLT TZ EXPANSION ANCHOR
GROUTED MASONRY	HILTI HY 70	HILTI KWIK HUS EZ SCREW ANCHOR HILTI KWIK BOLT III EXPANSION ANCHOR
HOLLOW MASONRY	HILTI HY 70 WITH APPROPRIATE SCREEN TUBE	HILTI HY HLC SLEEVE ANCHOR

2. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE.

3. INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

4. ANCHOR CAPACITY IS DEPENDANT ON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

CS - COLD-FORMED STEEL FRAMING

1. STEEL USED IN THE MANUFACTURE SHALL BE HOT-DIPPED GALVANIZED STEEL, G-90/Z275 (G-60/Z180) MINIMUM COATING WEIGHT AND SHALL CONFORM TO ASTM A653/A653M, GRADE D, MINIMUM YIELD POINT OF 50,000 PSI FOR 12,14 AND 16 GAUGE MEMBERS AND ASTM A446, GRADE A, MINIMUM YIELD POINT OF 33,000 PSI FOR 18 AND 20 GAUGE MEMBERS.

2. ALL METAL STUD WALLS RESISTING DEAD, LIVE, OR WIND LOADS SHALL BE LATERALLY BRACED BEFORE APPLYING ANY LOADS TO THE TOP PLATES. SEE "LATERAL BRACING FOR METAL STUD WALLS" DETAIL IN THIS SET OF DRAWINGS.

3. LIGHT-GAUGE STEEL FRAMING MEMBERS AND CONNECTIONS SHALL CONFORM TO THE MOST CURRENT VERSION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE.

4. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE – SHEET METAL: AWS D.1.3, CURRENT EDITION, OF THE AMERICAN WELDING SOCIETY.

5. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.

6. ALL FIELD-CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH-CUTTING OF COLD-FORMED MEMBERS IS NOT ACCEPTABLE.

7. NO SPLICES IN STRUCTURAL COLD-FORMED MEMBERS MAY BE MADE WITHOUT PRIOR REVIEW BY THE STRUCTURAL ENGINEER, AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).

8. PROVIDE DOUBLE STUDS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, WHICH EXCEED 24" HORIZONTAL WIDTH, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

MI - MISCELLANEOUS ITEMS

1. GROUT FOR SETTING BEARING SURFACES SHALL BE NON-SHRINK, EQUAL TO "MASTERFLOW 928" AS MANUFACTURED BY BASF.

2. WALLS RETAINING EARTH, OTHER THAN WALLS DESIGNED AS CANTILEVERS, SHALL BE ADEQUATELY BRACED UNTIL CONCRETE FOR THE SUPPORTING SLABS HAS BEEN PLACED AND SUFFICIENTLY CURED.

3. UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, BORED, OR OTHERWISE WEAKENED WITHOUT THE PERMISSION OF THE STRUCTURAL ENGINEER.

4. CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE MECHANICAL EQUIPMENT SUPPLIER'S DRAWINGS AND ARCHITECTURAL DRAWINGS.

TA - TYPICAL ABBREVIATIONS

1. THE FOLLOWING ARE TYPICAL ABBREVIATIONS USED IN THE STRUCTURAL DRAWINGS:

A.B.	-ANCHOR BOLT	H.S.	-HEADED STUD
ADD'L	-ADDITIONAL	JST.	-JOIST
ARCH'L	-ARCHITECTURAL	JT.	-JOINT
BM	-BEAM	LT.	-LIGHT
BP	-BASE PLATE	MAS.	-MASONRY
BRG.	-BEARING	MAX.	-MAXIMUM
BSMT.	-BASEMENT	MECH.	-MECHANICAL
C.I.P.	-CAST IN PLACE	MFR	-MANUFACTURER
C.J.	-CONTROL OR CONSTRUCTION JOINT	MIN.	-MINIMUM
CLR.	-CLEAR	NOM.	-NOMINAL
CMU	-CONCRETE MASONRY UNIT	NTS	-NOT TO SCALE
COL.	-COLUMN	O.H.	-OPPOSITE HAND
CONC.	-CONCRETE	O.C.	-ON CENTER
CONST.	-CONSTRUCTION	PC	-PRECAST OR PILE CAP
CONT.	-CONTINUOUS	PREFAB.	-PREFABRICATED
COORD.	-COORDINATE	REF.	-REFERENCE
DET.	-DETAIL	REINF.	-REINFORCEMENT
DIA	-DIAMETER	SECT.	-SECTION
DWG.	-DRAWING	SIM.	-SIMILAR
E.B.	-EXPANSION BOLT	STD.	-STANDARD
EL.	-ELEVATION	STRUCT.	-STRUCTURAL
F.F.	-FINISHED FLOOR	T.O.S.	-TOP OF SLAB OR STEEL
FIN.	-FINISH(ED)	TYP.	-TYPICAL
FLR.	-FLOOR	U.O.N.	-UNLESS OTHERWISE NOTED
FOUND.	-FOUNDATION	V.I.F.	-VERIFY IN FIELD
FTG.	-FOOTING	VERT.	-VERTICAL
GALV.	-GALVANIZE (D) (ING)	W.P.	-WORK POINT
H.C.	-HOLLOW-CORE	WT.	-WEIGHT
HORIZ.	-HORIZONTAL	W.W.R.	-WELDED WIRE REINF.
HDG	-HOT-DIP GALVANIZED		

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

STRUCTURAL DESIGN
(Provide on sheet 1 or 2 of the structural sheets)

DESIGN LOADS:

Importance Factors: Wind (I_W) 1.0; Snow (I_S) 1.0; Seismic (I_E) 1.0

Live Loads: Roof 20 psf; Mezzanine _____ psf; Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed 115 mph (ASCE-7); Exposure Category C

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☒ C ☐ D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5): I ☐ II ☒ III ☐ IV ☐

Spectral Response Acceleration: S_S 33 %g S_1 11 %g

Site Classification: (ASCE 7) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F
Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data

Basic structural system: (check one)
☐ Bearing Wall ☐ Dual w/ Special Moment Frame
☒ Building Frame ☐ Dual w/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☒ No

LATERAL DESIGN CONTROL: Earthquake ☒ Wind ☐

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 2000 psf
Pile size, type, and capacity _____

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:
MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

KLOESEL Engineering, PA
License C-1207
8 Magnolia Avenue, Suite 100
Asheville, North Carolina 28801
(828) 255-0780

8/20/2025

SHEET NAME:
STRUCTURAL NOTES

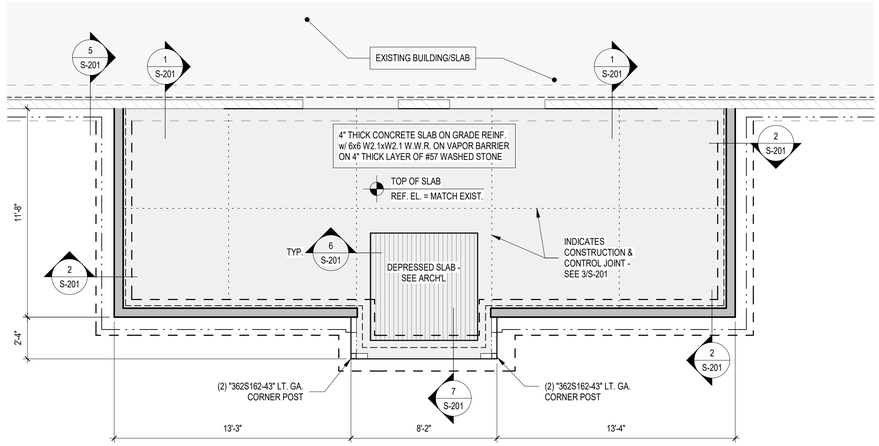
PHASE
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

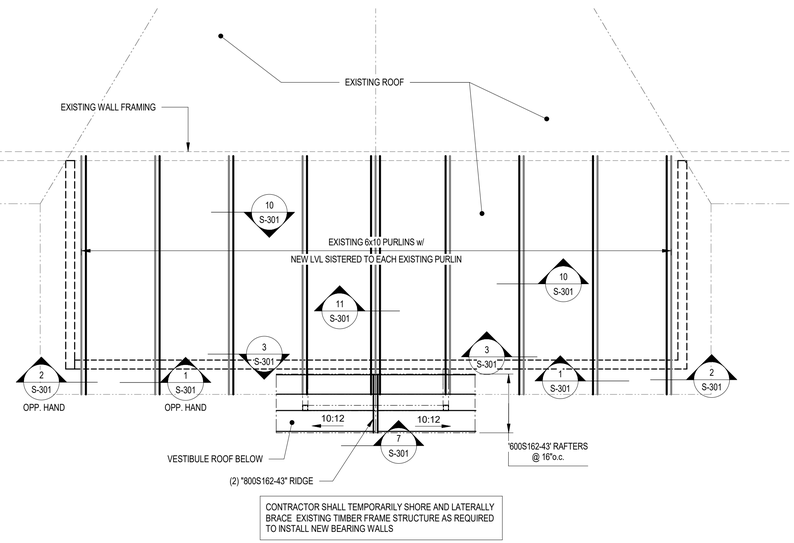
ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **GKA**

SHEET NUMBER
S-001



1 S-101 ENLARGED FOUNDATION PLAN - PORTICO
1/4" = 1'-0"

2 S-101 PORTICO CEILING JOIST FRAMING PLAN
1/4" = 1'-0"



3 S-101 ENLARGED ROOF FRAMING PLAN
1/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

KLOESEL
Engineering, PA
License C-1207
8 Magnolia Avenue, Suite 100
Asheville, North Carolina 28801
(828) 255-0780

8/20/2025

08/20/25

SHEET NAME:
ENLARGED PLANS

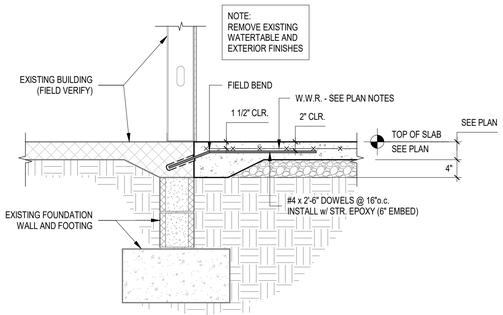
PHASE
CONSTRUCTION DOCUMENTS

REVISIONS:

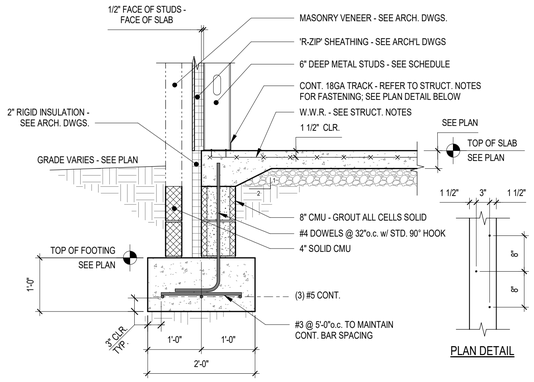
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **GKA**

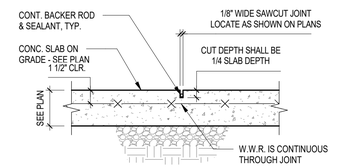
SHEET NUMBER
S-101



1 S-201 SECTION @ EXISTING BUILDING
3/4" = 1'-0"



2 S-201 SECTION @ NEW FOUNDATION
3/4" = 1'-0"

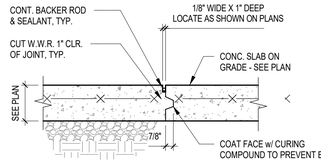


SAWCUT CONTROL JOINT

CONTROL AND CONSTRUCTION JOINT NOTES:

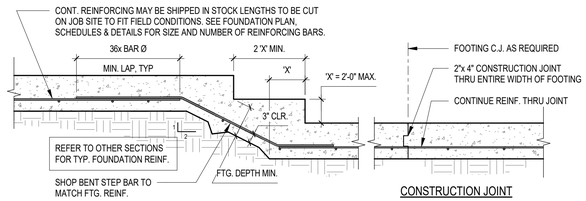
1. SAWCUT JOINTS AT CONTROL JOINTS SHALL BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT RAVELING OUT OF THE AGGREGATE AND DAMAGE TO THE EDGES, BUT NO LATER THAN 24 HOURS AFTER FINISHING OF THE SLAB SURFACE HAS BEEN COMPLETED.
2. SAWCUT JOINTS SHALL BE AT ALL CONSTRUCTION JOINTS. JOINTS SHALL BE SAWCUT WHEN CONTROL JOINTS ARE SAWCUT.

3 S-201 SLAB ON GRADE JOINT DETAILS
1 1/2" = 1'-0"



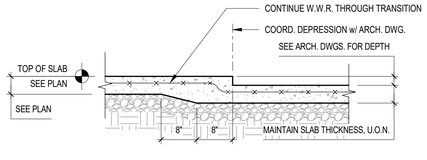
CONSTRUCTION JOINT

NOTE:
FORM KEYWAY USING WOOD FORM NAILED
TO BULKHEAD "DO NOT USE METAL KEYWAY"

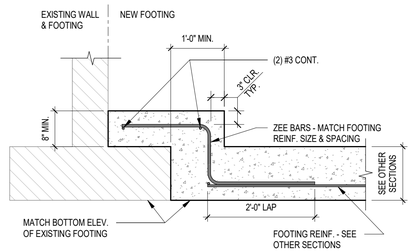


FOOTING STEP

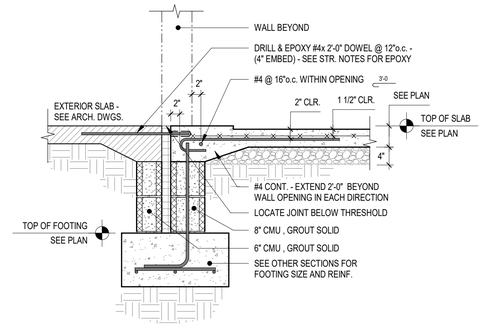
4 S-201 TYP. FOOTING STEP & FOOTING CONSTRUCTION JOINT
1/2" = 1'-0"



6 S-201 SLAB ON GRADE DEPRESSION
3/4" = 1'-0"



5 S-201 NEW FOOTING PERP. TO EXISTING FOUNDATION
3/4" = 1'-0"



7 S-201 EXT. DOOR SECTION
3/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

KLOESEL
Engineering, PA
License C-1207
8 Magnolia Avenue, Suite 100
Asheville, North Carolina 28801
(828) 255-0780

08/20/25

SHEET NAME:
FOUNDATION DETAILS

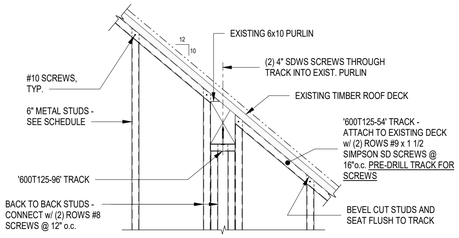
PHASE
CONSTRUCTION DOCUMENTS

REVISIONS:

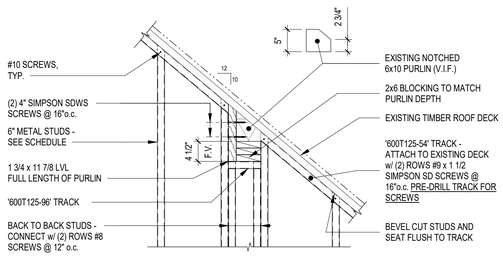
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **GKA**

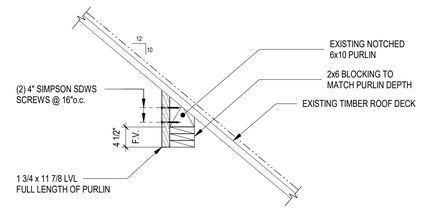
SHEET NUMBER
S-201



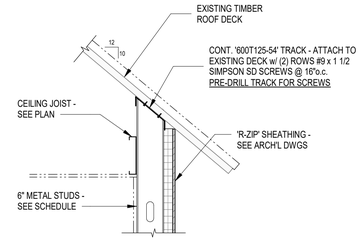
1 S-301 ROOF SECTION
3/4" = 1'-0"



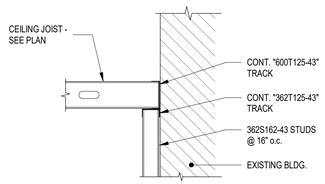
2 S-301 ROOF SECTION
3/4" = 1'-0"



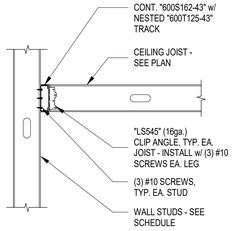
3 S-301 ROOF SECTION
3/4" = 1'-0"



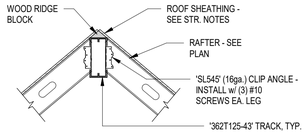
4 S-301 ROOF SECTION
3/4" = 1'-0"



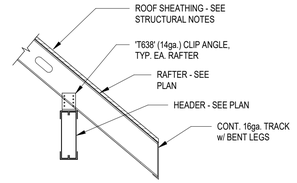
5 S-301 SECTION @ NEW CEILING TO EXIST. BLDG.
3/4" = 1'-0"



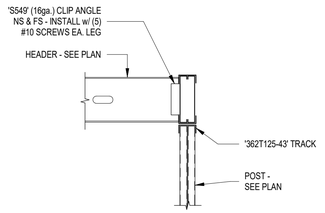
6 S-301 SECTION @ NEW ENTRY WALL
3/4" = 1'-0"



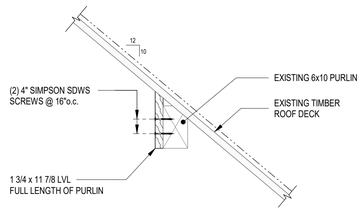
7 S-301 SECTION @ VESTIBULE RIDGE
3/4" = 1'-0"



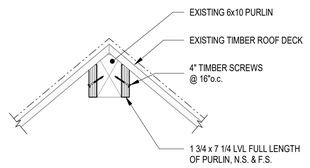
8 S-301 SECTION @ VESTIBULE WALL
3/4" = 1'-0"



9 S-301 SECTION @ CORNER POST
3/4" = 1'-0"



10 S-301 ROOF SECTION
3/4" = 1'-0"



11 S-301 SECTION @ RIDGE
3/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

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Franklin, NC 28734-3005

KLOESEL
Engineering, PA
License C-1207
8 Magnolia Avenue, Suite 100
Asheville, North Carolina 28801
(828) 255-0780

08/20/25

SHEET NAME:
ROOF & WALL FRAMING DETAILS

PHASE
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
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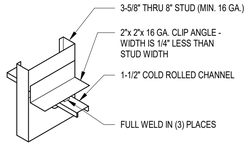
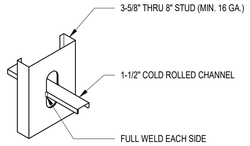
DRAWN BY: **GKA**

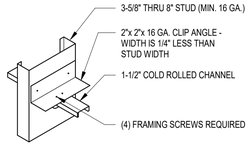
SHEET NUMBER
S-301



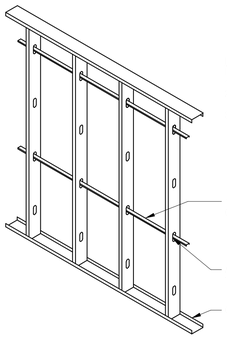
LATERAL BRACING
WELD ATTACHMENT



LATERAL BRACING
WELD ATTACHMENT



LATERAL BRACING
SCREW ATTACHMENT

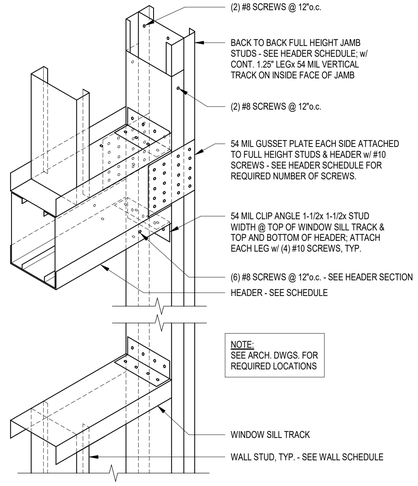


NOTE:
INSTALL LATERAL BRACING AS INDICATED AT:
1. ALL EXTERIOR WALLS.
2. INTERIOR PARTITIONS w/ GYPSUM WALL SHEATHING ON (1) SIDE ONLY.
3. INTERIOR PARTITIONS WHERE STUDS w/o SHEATHING EXTEND ABOVE CEILING HEIGHT.

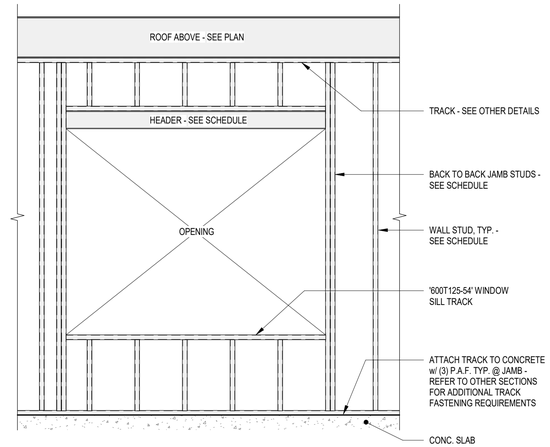
LATERAL BRACING w/
COLD ROLLED CHANNELS

1 S-401 LATERAL BRACING FOR METAL STUD WALLS, TYP. U.O.N.
1 1/2" = 1'-0"

HEADER SECTION



2 S-401 METAL STUD HEADER TO JAMB CONNECTION
1 1/2" = 1'-0"



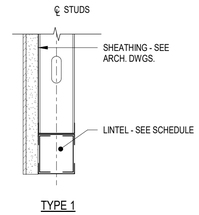
3 S-401 TYP. COLD FORMED STEEL HEADER ELEVATION
1/2" = 1'-0"

COLD FORMED METAL WALL STUD SCHEDULE				
STUD LENGTH	STUD DESIGNATION	STUD SPACING NON-CORNER	STUD SPACING CORNER	COMMENTS
< 13'-0"	600S162-43 (33)	16"o.c.	16"o.c.	
< 16'-0"	600S162-54 (50)	16"o.c.	16"o.c.	
< 20'-0"	600S162-68 (50)	16"o.c.	16"o.c.	
< 24'-0"	600S200-68 (50)	16"o.c.	16"o.c.	

NOTES:

1. REFER TO WALL SECTIONS FOR STUD DEPTH (6", 8", ETC.)
2. U.O.N., PROVIDE DEFLECTION TRACK OF SAME GAUGE AS STUDS AT TOP OF WALL.
3. STUD SIZES ARE FOR ESTIMATING PURPOSES. REFER TO STRUCTURAL NOTES SHEET AND SPECIFICATIONS FOR DELEGATED DESIGN REQUIREMENTS.

COLD FORMED STEEL HEADER SCHEDULE						
MARK	HEADER TYPE	HEADER SIZE	TRACK SIZE	GUSSET PL. SCREWS	JAMB STUDS	COMMENTS
H1	TYPE 1	(2) 600S162-43	600T125-43	(10) #10	(2) 600S162-54	
H2	TYPE 1	(2) 800S162-43	600T125-43	(10) #10	(2) 600S200-68	
H3	TYPE 1	(2) 1000S162-54	600T125-54	(20) #10	(2) 600S250-97	
H4	TYPE 1	(2) 1000S162-43	362T125-43	(10) #10	(2) 362S162-43	



TYPE 1

LINTEL TYPE
1" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

KLOESEL
Engineering, PA
License C-1207
8 Magnolia Avenue, Suite 100
Asheville, North Carolina 28801
(828) 255-0780

08/20/2025

SHEET NAME:
MISC. DETAILS SHEET

PHASE
CONSTRUCTION DOCUMENTS

REVISIONS:

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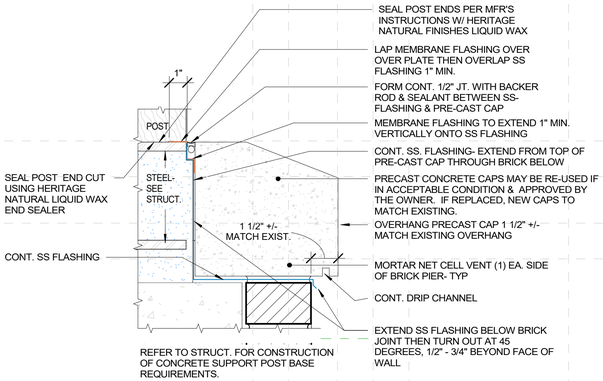
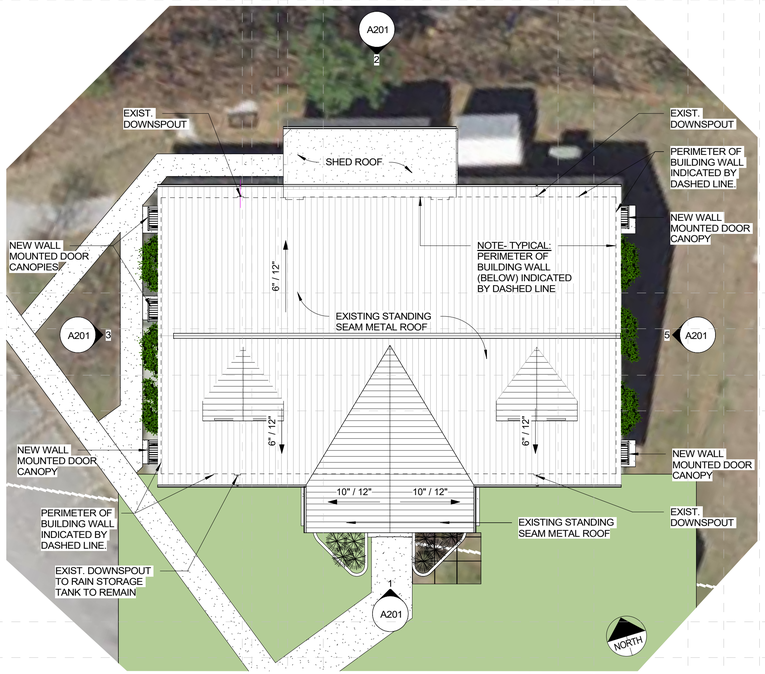
ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **GKA**

SHEET NUMBER
S-401



10 A101 ENLARGED DETAIL AT TIMBER BASE CAP
3" = 1'-0"



1z A101 ROOF LEVEL PLAN- NEW
1/16" = 1'-0"

SITE MEETING REQUIREMENT:
AFTER CORRECTING THE TIMBER STRUCTURE LEVELNESS THE GENERAL CONTRACTOR SHALL SCHEDULE AND COORDINATE A SITE MEETING WITH THE OWNER & ARCHITECT, OWNER TO ASSESS CONDITIONS OF THE TIMBER STRUCTURE, ROOF PANELS, FLASHING, RIDGE & VALLEYS, SPRINKLER PIPE AND, OTHER DEVICES MOUNTED TO THE PORCH ROOF STRUCTURE.

LEGEND- RESTORATION WORK

DRY WELL SYSTEM & CONNECTED DRAIN SYSTEM:

BASIS OF DESIGN:

NDS DRY WELL SYSTEM- INSTALL PER MFR'S REQUIREMENTS. INSTALL SERVICE ACCESS ABOVE. REFER TO DRY WELL SYSTEM DIAGRAM: 4- A104 FOR COMPONENTS & REQUIREMENTS. SHEET A103 INCLUDES ADDITIONAL REQUIREMENTS FOR THE DRY-WELL / DRAINAGE SYSTEM.

ASSOCIATED COMPONENTS
FILTER FABRIC, WASHED GRAVEL &, OTHER ITEMS, RECOMMENDED, AND / OR REQUIRED BY NDS, FOR A WARRANTED & WORKMANLIKE INSTALLATION, SHALL BE FURNISHED & INSTALLED IN DIRECT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION FOR A COMPLETE SYSTEM :THE SYSTEM INCLUDES (3) SEPARATE SYSTEMS EXTENDING FROM EACH OF (3) EXISTING DOWNSPOUTS. THE FOURTH DOWNSPOUT CURRENTLY FLOWS INTO AN EXISTING RAIN STORAGE TANK.

SUBMIT SHOP DRAWINGS & COMPONENT DATA SHEETS TO THE ARCHITECT FOR REVIEW & APPROVAL PRIOR TO PURCHASE OF THE DRAINAGE SYSTEM SYSTEM COMPONENTS SHALL BE PROVIDED FROM SINGLE-SOURCE MANUFACTURER.

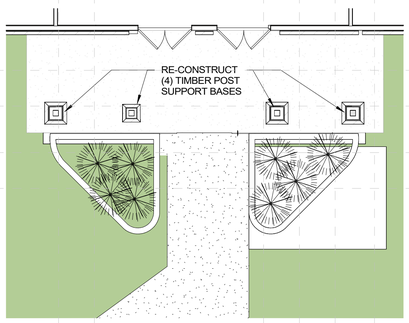
RESTORED GRADE- TOP OF NEW MULCH LAYER TO BE NO LESS THAN 3" MIN. BELOW F.F.E. LEVEL AND SLOPE AWAY FROM THE BUILDING.

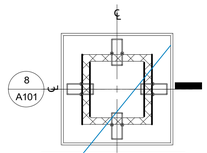
RESTORED GRADE- TOP OF NEW MULCH LAYER TO BE NO LESS THAN 3" MIN. BELOW F.F.E. LEVEL AND SLOPE AWAY FROM THE BUILDING.

LEVEL- 1
0' - 0"

7 A101 CROSS-SECTION THROUGH PORTE COCHERE
1/8" = 1'-0"

8 A101 SECTION AT TIMBERFRAME PIER SUPPORT
3/4" = 1'-0"





BRICK RE-USE & REPLACEMENT:

RECLAIMED BRICK FROM PIERS MAY BE RE-USED IF ACCEPTED BY ARCHITECT & OWNER.

MOCK-UP (1) BRICK CLAD PIER OR PROVIDE 3'X3' MOCK-UP PANEL FOR APPROVAL BEFORE PROCEEDING.

IF NEW BRICK IS REQUIRED, SUBMIT SAMPLES FOR ARCHITECT AND OWNER'S APPROVAL BEFORE PROCEEDING.

1 A101 PLAN DETAIL @ NEW TIMBERFRAME PIER
3/4" = 1'-0"

2 A101 PLAN- MODIFICATIONS @ TIMBERFRAME PORCH
1/8" = 1'-0"

3 A101 GROUND LEVEL PLAN- NEW
1/16" = 1'-0"

KEY NOTES- RESTORATION

1. RESTORE FINISH GRADE. TOP OF FINISH GRADE TO BE TOP OF 2" MULCH.- REFER TO SECTIONS AND DETAILS
1a. RESTORE FINISH GRADE. TOP OF FINISH GRADE TO BE TOP OF AMENDED, SEEDED SURFACE. INSTALL BIO-DEGRADABLE PROTECTIVE SEED MAT.
2. CONSTRUCT NEW BRICK CLAD CONCRETE-CORE TIMBER POST SUPPORTS.
3. RESTORE ADJACENT VEGETATION. REPLACE IF REQUIRED TO MATCH PRE-CONSTRUCTION CONDITIONS.
4. PREPARE EXPOSED WOOD SURFACES, INCLUDING CEILINGS, AND APPLY (2) COATS MIN. OF HERITAGE NATURAL EXTERIOR FINISH.
5. RECONSTRUCT MODIFIED BRICK VENEER CORNER WITH PRECAST CONCRETE CAP.
6. IF NEEDED, SEAL & REPAIR DOWNSPOUT & DRAINAGE COMPONENTS LEADING TO THE RAIN STORAGE TANK- GUTTER TO STORAGE TANK INLET.
7. INSTALL BOOTED DRAIN LINE FROM DOWNSPOUT TO DRY WELL INLET.
8. AMEND SOIL & PLANT SEDUM & DROUT TOLLERANT NATIVE PLANTS.
9. NEW CHANNEL DRAIN THROUGH SIDEWALK

LOOPER ARCHITECTURAL DESIGN & PLANNING
77 Siler Farm Road
Franklin, NC 28734-3005

Corrective Package for:
MACON COUNTY EARLY COLLEGE

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N.C.

08/20/25

SHEET NAME:
SITE PLAN & ENLARGED PLANS- NEW

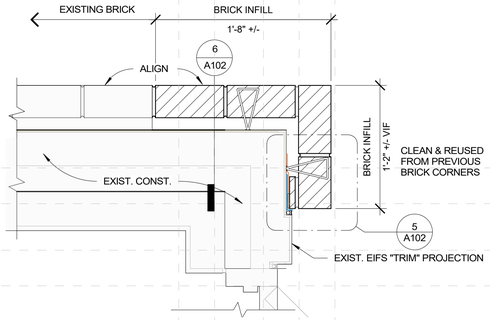
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

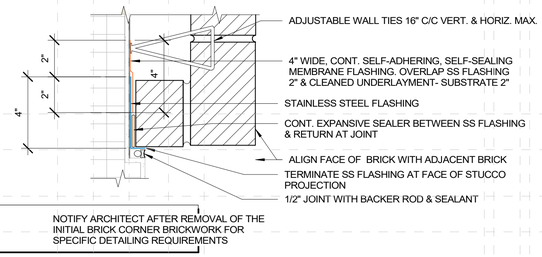
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

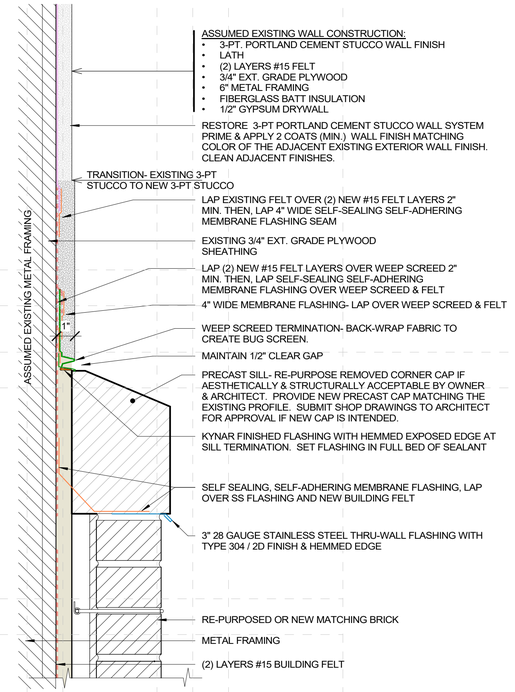
SHEET NUMBER
A101



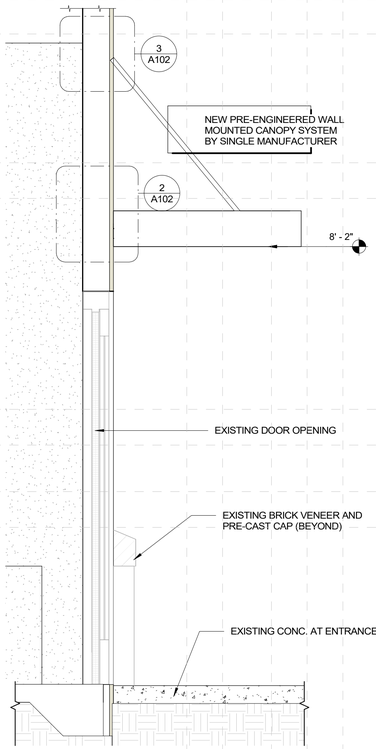
4 A102 DETAIL AT EXTERIOR BUILDING CORNER
1 1/2" = 1'-0"



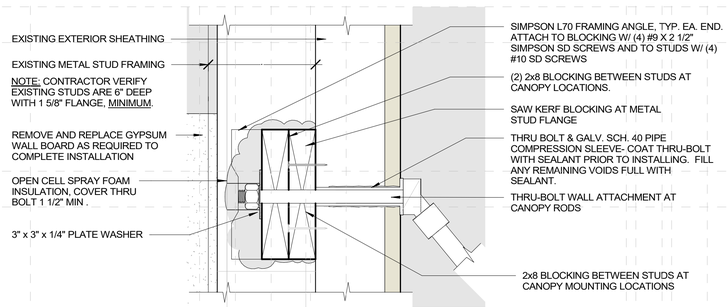
5 A102 ENLARGED DETAIL- BRICK TO STUCCO
3" = 1'-0"



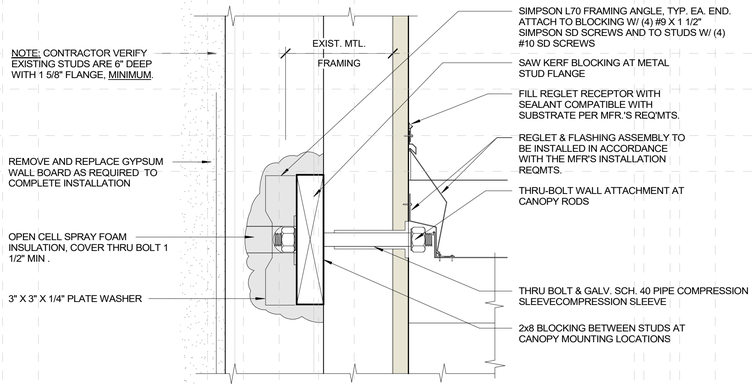
7 A102 WALL DETAIL AT CORNER MODIFICATIONS
3" = 1'-0"



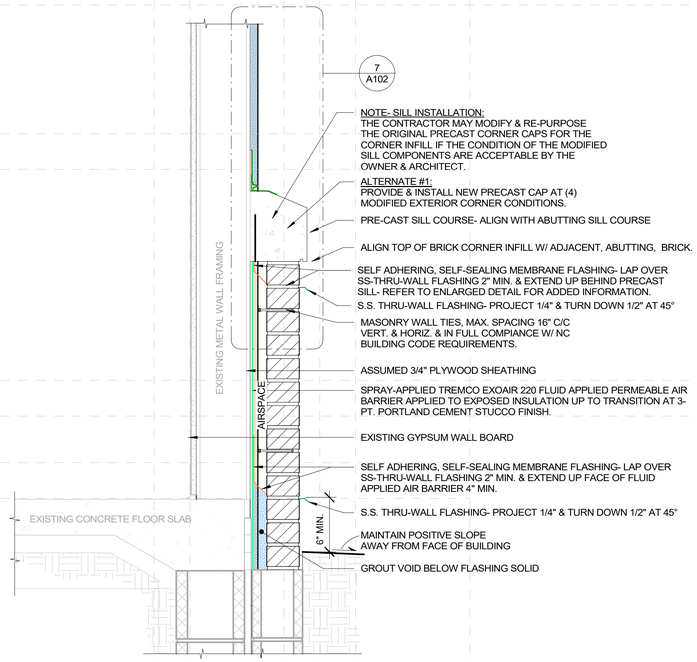
1 A102 DETAIL- ALUMINUM CANOPY
3/4" = 1'-0"



3 A102 DETAIL- ALUMINUM CANOPY
3" = 1'-0"



2 A102 DETAIL AT CANOPY
3" = 1'-0"



6 A102 Detail 3
1 1/2" = 1'-0"

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77 Siler Farm Road
Franklin, NC 28734-3005

Corrective Package for:
MACON COUNTY EARLY COLLEGE

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Registered Architect
11444
North Carolina
ASHEVILLE

08/20/25

SHEET NAME:
SECTIONS AND DETAILS

PHASE:
CONSTRUCTION DOCUMENTS

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#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A102

PROJECT NAME:		FILE #	TS_DSG FAMILY REV. 0720

NDS® TECHNICAL SPECIFICATION

We put water in its place

DIMENSION	1200DSG	900DSG
LENGTH	12”	9”
WIDTH	11-3/4”	8-7/8”
OVERALL HEIGHT	9”	6-7/16”
INSTALLED HEIGHT	7-3/4”	5-5/8”

SPECIFICATION:

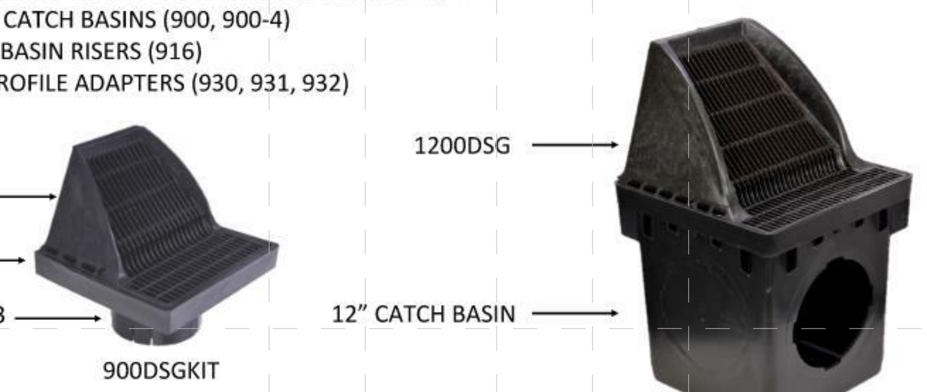
12” DOWNSPOUT DEFENDER GRATE
PART #: 1200DSG
MATERIAL: HDPE
WEIGHT: 1.5 LBS
OPEN AREA: 54.5 SQ. INCHES
FLOW CAPACITY: 247 GPM

9” DOWNSPOUT DEFENDER GRATE
PART #: 900DSG
MATERIAL: HDPE
WEIGHT: 0.8 LBS
OPEN AREA: 36.8 SQ INCHES
FLOW CAPACITY: 146 GPM

9” DOWNSPOUT DEFENDER KIT
PART #: 900DSGKIT
INCLUDES: 900DSG, 930, & 1243
930 & 1243 MATERIAL: STYRENE
KIT WEIGHT: 2.25 LBS
FLOW CAPACITY: 146 GPM

1200DSG FITS: SQUARE AND ROUND DOWNSPOUTS FROM 2” TO 6”
NDS 12” CATCH BASINS (1200, 1203, 1204, 1200NGB)
CATCH BASIN RISERS (1216, 1217)
LOW-PROFILE ADAPTERS (1230, 1221, 1222)

900DSG FITS: SQUARE AND ROUND DOWNSPOUTS FROM 2” TO 4”
NDS 9” CATCH BASINS (900, 900-4)
CATCH BASIN RISERS (916)
LOW-PROFILE ADAPTERS (930, 931, 932)



DOWNSPOUT DEFENDER GRATE

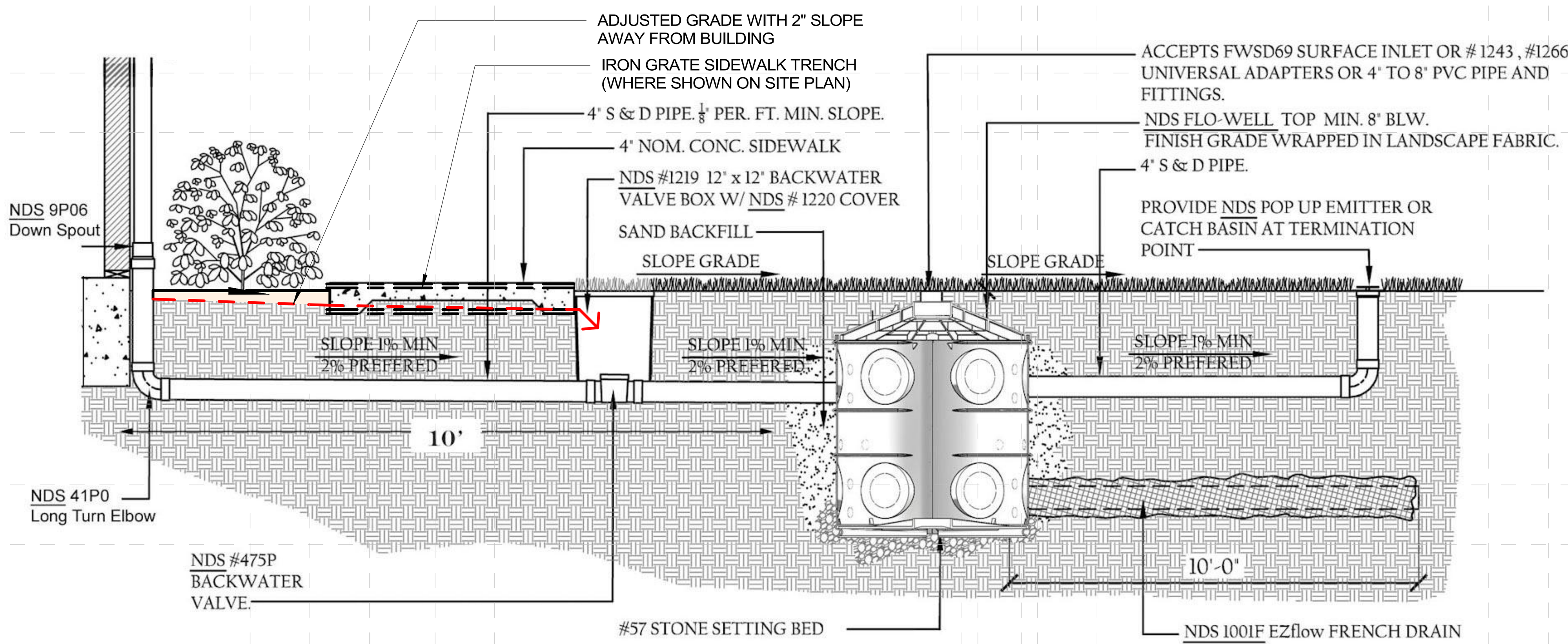
FOR PRODUCT ASSISTANCE, CONTACT NDS TECHNICAL SERVICE AT techservice@ndspro.com
851 N. HARVARD AVE. LINDSAY, CA 93247 WWW.NDSPRO.COM 1-800-726-1994

TEMPLATE: QMS-TMP-8.3-05 Rev 1.0—3/24/2020

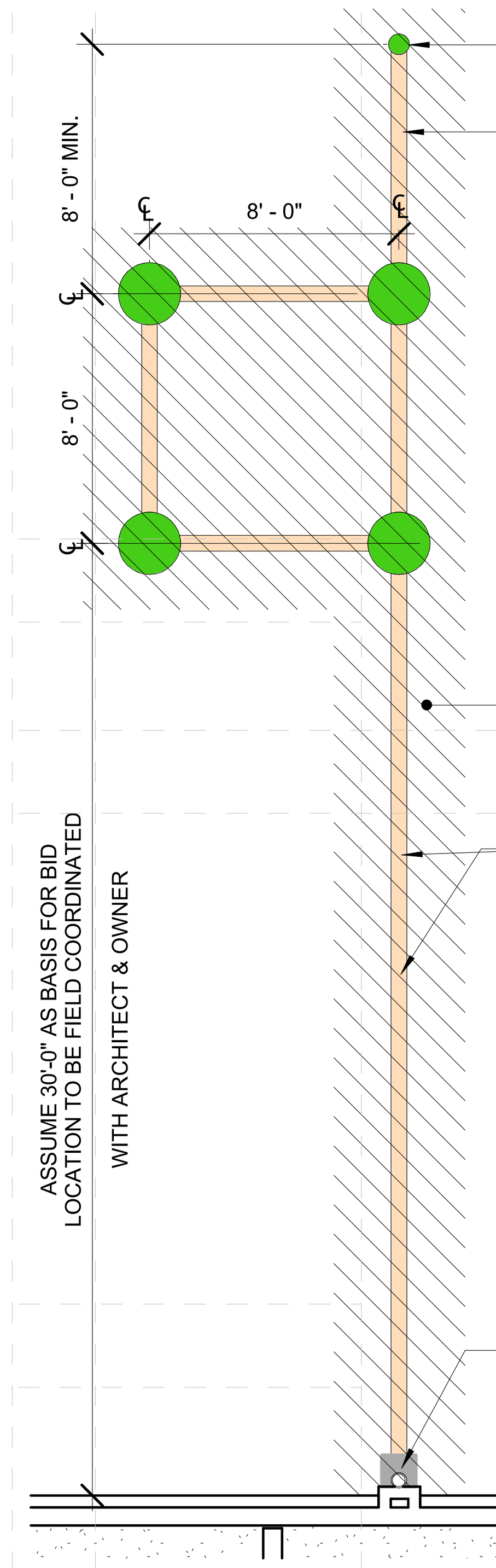
3 / A104 BASIS FOR DESIGN, DOWNSPOUT GRATE
12" = 1'-0"

NOTES: GRASSING & LANDSCAPING:

1. BASIS FOR DESIGN PROVIDED- REFER TO SHEET A103
2. INSTALLATIONTO BE IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLAITON REQUIREMENTS
3. PROVIDE GRAVEL, FILTER FABRIC & NDS DRAINAGE SYSTEM COMPONENTS REQUIRED FOR COMPLETE SYSTEM
4. SEEDING:
   A. TEMPORART SEEDING- 50% ANNUAL RYEGRASS MIXED WITH 50% TALL FESCUE (COLD WEATHER PLANTING)
   B. PERMANENT SEEDING- 100% TALL FESCUE (SPRING PLANTING)
5. LANDSCAPING:
   A. PROVIDE WATER TO SOIL AS REQUIRED TO ESTABLISH NEW GRASS AND / OR PLANTS
   B. AMEND SOIL WHERE GRASS OR OTHER PLANTS WILL BE PLANTED
   C MAINTENANCE REQUIREMENTS PROVIDE WRITTEN RECOMMENDATIONS FOR WATERING AND CARE FOR NEW GRASS & PLANTS TO THE OWNER AT FINAL COMPLETION



5 / A104 NDS- DRYWELL SYSTEM EXAMPLE
6" = 1'-0"



NOTE:
REFER TO 1\A104 (4) 50 GALLON, GANGED, NDS FLO-WELL DETENTION & INFILTRATION BASINS WITH 200 GALLON TOTAL CAPACITY.

SUBMIT SHOP DRAWINGS INDICATING PLAN, LOCATION OF COMPONENTS AND COMPONENT CUT SHEETS AND SPECIFICATIONS FOR REVIEW & APPROVAL.

BASIS OF DESIGN:
NDS FLO-WELL DRYWELL SYSTEM
PROVIDE SHOP DRAWING PLAN AND CUT SHEETS FOR COMPONENTS FOR REVIEW AND APPROVAL.

REFER TO: 3\A104
12" NDS DOWNSPOUT DEFENDER GRATE WITH 12" NDS SQUARE CATCH BASIN

4 / A104 PLAN- DRY WELL SYSTEM
3/16" = 1'-0"

NDS® Technical Specifications

MACON COUNTY EARLY COLLEGE:
PROVIDE COMPONENTS REQUIRED TO COMPLETE, STORM DRAINAGE SYSTEM, BY SAME MFR., - FROM NOTED DOWNSPOUTS TO DRY BASINS.

12 in. Square Catch Basin Drains

APPLICATION
- Collects stormwater runoff and standing water and directs to drain pipes
- Use for lawns, landscaped areas, downspouts, patios, pool decks, driveways, and walkways from pedestrian to low-speed vehicular traffic loads
- Savings over more expensive concrete basins
- Use with compatible NDS grate options

FEATURES
- Configured with 2, 3 and 4 factory pre-keyed outlets
- Reduce to 1 single outlet, order 1206 plug or buy kit
- Keyed pipe connectors for 3 in., 4 in., 6 in., or 8 in. drain pipes
- Additional cut-out guides on 2 sides and bottom for keyed adapters, 3 in. and 4 in. S&D in 2 elevations
- 4 weephole knockouts allow for standing water in basin to slowly drain into the soil following a flow event
- Supporting ribs for added grate strength and durability
- Sump collects sediment particles before they can enter the pipeline
- Guidelines on basin sides indicate correct pour depth of the concrete collar required for basins that will be subject to vehicular loading (see installation detail)
- Risers can be stacked to increase basin depth, as required
- Accepts 2 #6 screws to attach compatible grates

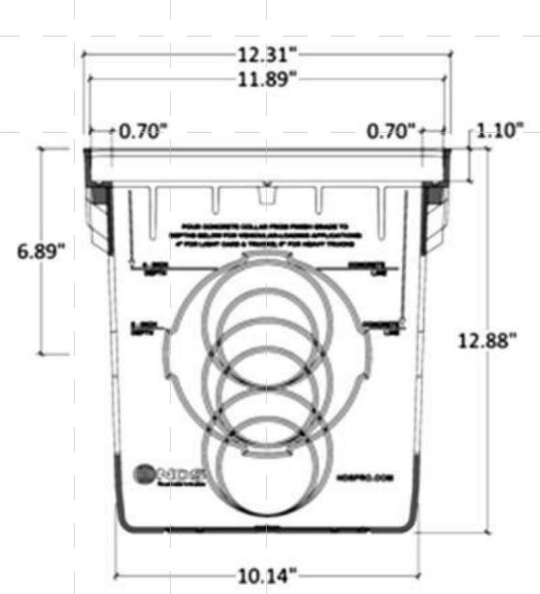
OPERATING RANGE
- Capacity up to 348 GPM (max open area grate option)

SPECIFICATIONS
- Made of black polypropylene using a combination of virgin and recycled content treated with UV inhibitors
- Soil-tight pipe connections, up to 8 in.
- Connections can be made watertight with sealant caulk
- Accommodates rigid PVC pipe and flexible corrugated HDPE pipe (see connectors or cutout sizes)
- Weight:
  - Part Number 1200: 4.25 lbs.
  - Part Number 1203: 3.75 lbs.
  - Part Number 1204: 3.20 lbs.

WARRANTY
- Limited one-year warranty

Part Number 1200 = 2 side outlets
Part Number 1203 = 3 side outlets
Part Number 1204 = 4 side outlets

Image of 1200 basin w/ 1243 pipe connector w/ 1212 slotted grate w/ 1206 plug on far side

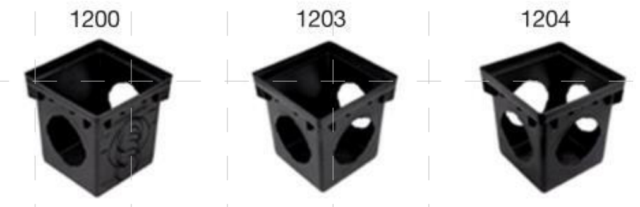


2 / A104 BASIS FOR DESIGN- CATCH BASIN
12" = 1'-0"

Technical Specifications

NDS 12 in. Tapered Catch Basins

Part Number	Pre-keyed Outlet
1200	2 openings
1203	3 openings
1204	4 openings



Compatible NDS Filter

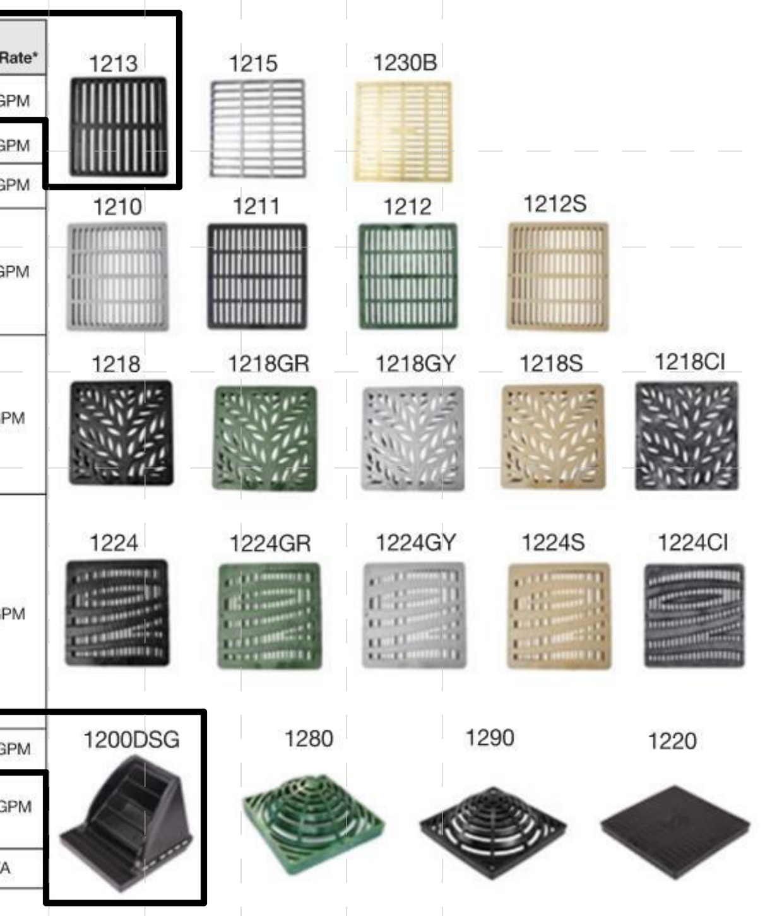
Part Number	Description
1200FF	12 in. Catch Basin Filter

Cutaway view of 1200FF in Catch Basin

Compatible NDS Grates

Part Number	Color	Material	Description	Flow Rate*
1213	Gray	Ductile iron	Slotted ADA-compliant NDS Class C load rated	114 GPM
1215	Silver	Galvanized steel	Slotted NDS Class C load rated	348 GPM
1230B	Brass	Brass	Slotted ADA-compliant NDS Class B load rated	131 GPM
1210	Gray	HDPE	Slotted ADA-compliant NDS Class B load rated	155 GPM
1211	Black			
1212	Green			
1212S	Sand			
1218	Black	HDPE	Decorative botanical design ADA-compliant NDS Class B load rated	75 GPM
1218GR	Green			
1218GY	Gray			
1218S	Sand			
1218CI	Gray	Cast iron		
1224	Black	HDPE	Decorative wave design ADA-compliant NDS Class B load rated	79 GPM
1224GR	Green			
1224GY	Gray			
1224S	Sand			
1224CI	Gray	Cast iron	Decorative wave design ADA-compliant, heel-proof NDS Class B load rated	
1200DSG	Black	HDPE	Downspout Defender®	247 GPM
1280	Green	HDPE	Domed atrium	155 GPM
1290	Black			
1220	Black	HDPE	Solid cover	N/A

*Calculated with 0.5” of head above grate top

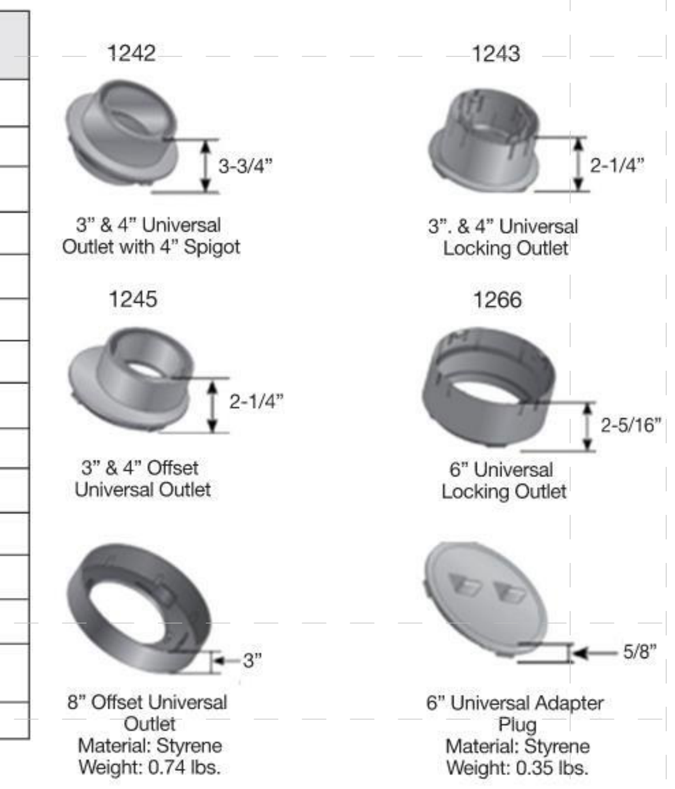


Technical Specifications

Compatible Outlet Adapters & Plug

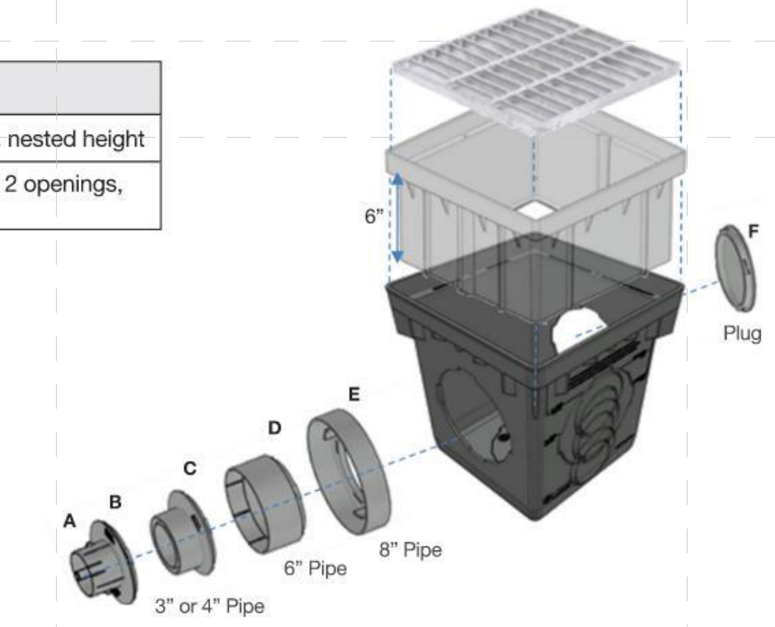
	Part Number	Flow Rate*	Pipe Diameter	Invert Depth**
A	1242	78 GPM	3 in.	8.69 in.
			4 in.	9.31 in.
B	1243	78 GPM	3 in.	8.75 in.
			4 in.	9.38 in.
C	1245 (high elevation)	70 GPM	3 in.	7.88 in.
			4 in.	8.38 in.
	1245 (left)	76 GPM	3 in.	8.94 in.
			4 in.	9.44 in.
	1245 (right)	76 GPM	3 in.	8.50 in.
			4 in.	9.00 in.
	1245 (low elevation)	83 GPM	3 in.	9.63 in.
			4 in.	10.13 in.
D	1266	247 GPM	6 in.	10.31 in.
E	1889 (low elevation)	238 GPM	8 in.	11.38 in.
F	1206	N/A	N/A	N/A

*Calculated with 0.5” of head above basin rim
** Vertical inches from basin rim to pipe invert in outlet



Compatible NDS Accessories

Part Number	Description
1216	12 in. Catch Basin Riser, 6 in. nested height
1217	12 in. Catch Basin Riser with 2 openings, 10 in. nested height



NDS®

DRAINAGE

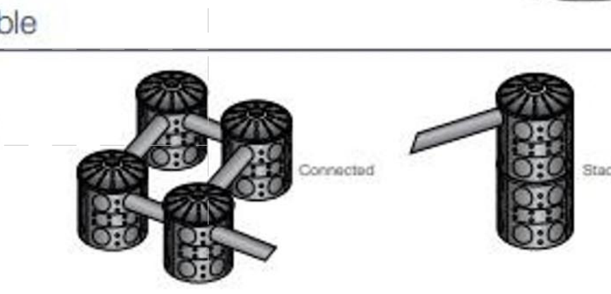
FLO-WELL®: A BETTER DRY WELL

With the Flo-Well®, water can now be infiltrated into the subsoil rapidly and easily. Unlike competitive systems, there is no need for piping systems to transport stormwater to a far-off discharge point, large heavy equipment, considerable excavation of current landscaped areas, nor large labor costs that those systems incur. With Flo-Well, water infiltration is now easier than ever.

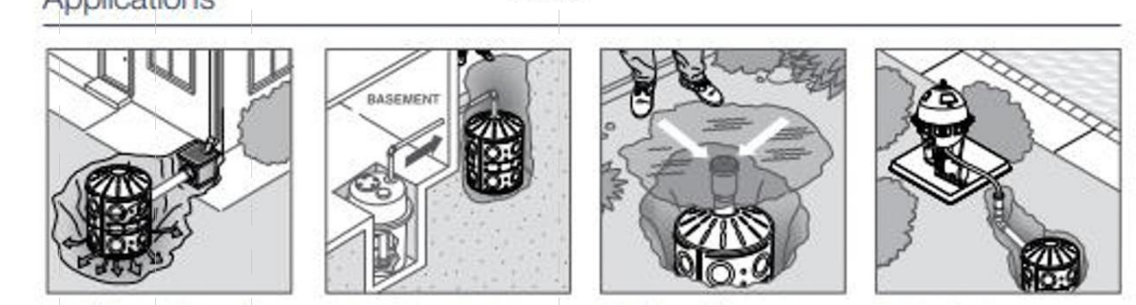
Options

Stackable & Expandable

Flo-Well® can be used individually, connected in series or in any array, and can be stacked up to 4 units high (with center support pipe).



Applications



Product Catalog 2021

1 / A104 BASIS FOR DESIGN- DRY WELL
12" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER Registered Architect 11444 ASHEVILLE, North Carolina N.C.

08/20/25

SHEET NAME:
SECTIONS AND DETAILS

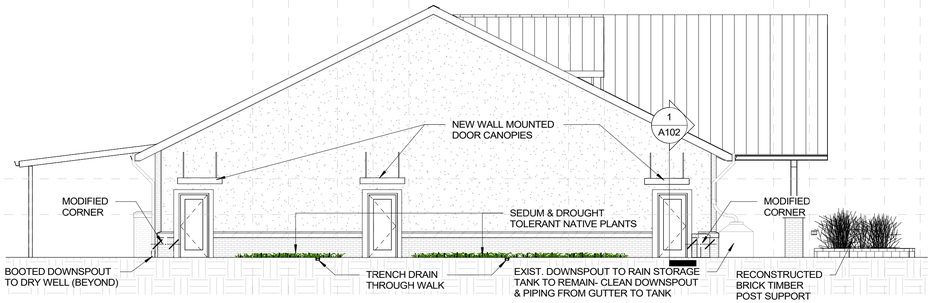
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

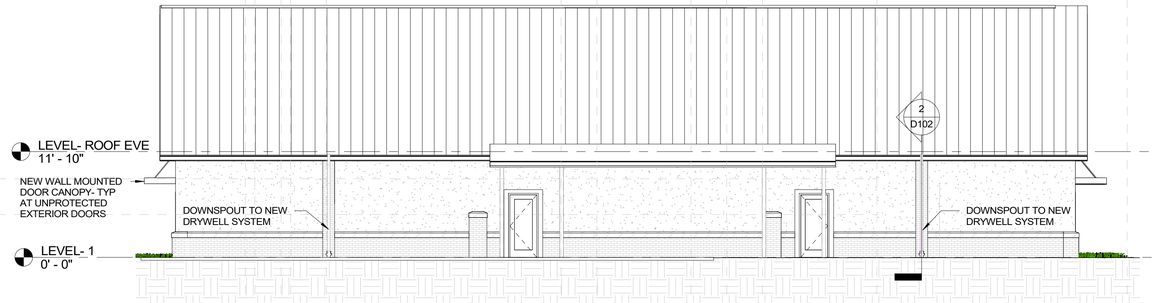
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

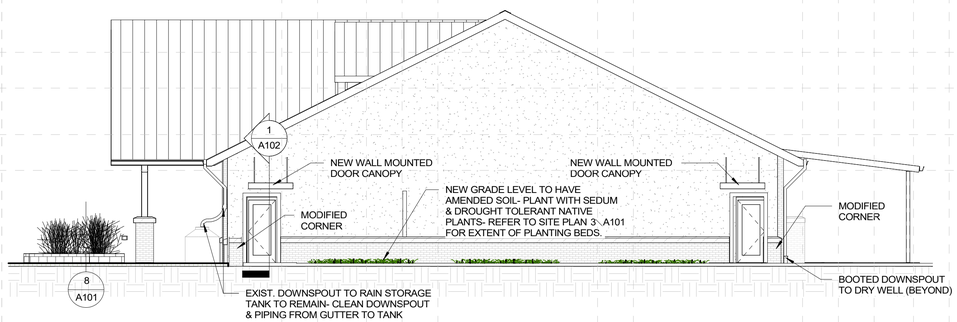
SHEET NUMBER
A104



3 A201 WEST (SIDE) ELEVATION- NEW
1/8" = 1'-0"



2 A201 North
1/8" = 1'-0"



5 A201 EAST (SIDE) ELEVATION-NEW
1/8" = 1'-0"

1 A201 SOUTH (FRONT) ELEVATION-NEW
1/8" = 1'-0"

LOOPER
ARCHITECTURAL
DESIGN &
PLANNING

Corrective Package for:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N.C.

08/20/25

SHEET NAME:
BUILDING ELEVATIONS- NEW

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

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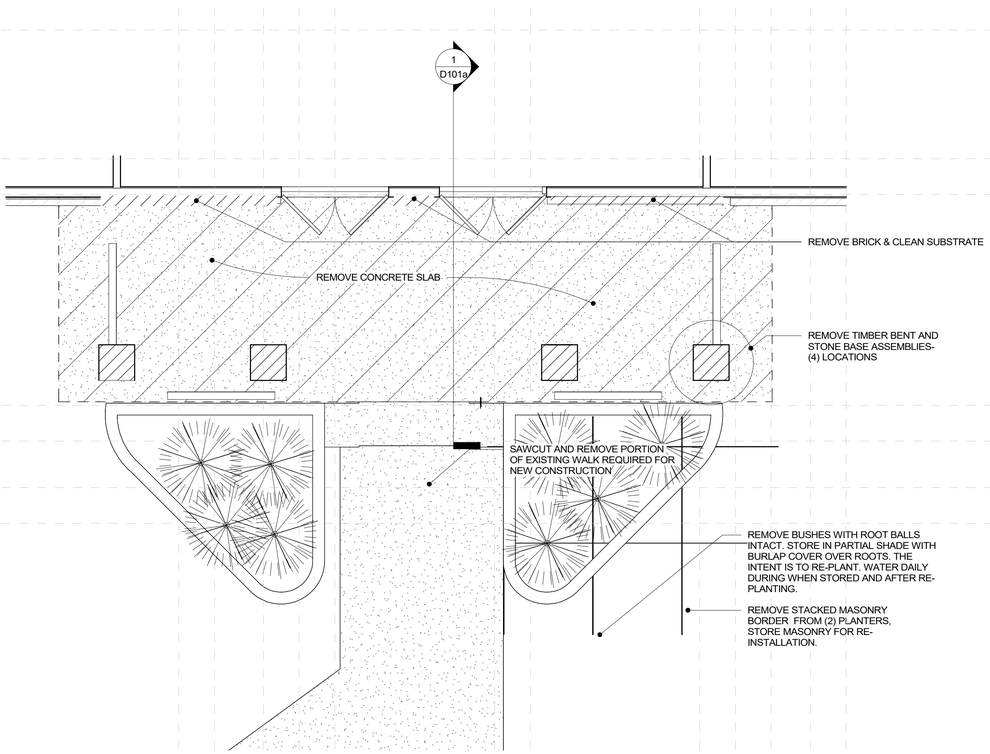
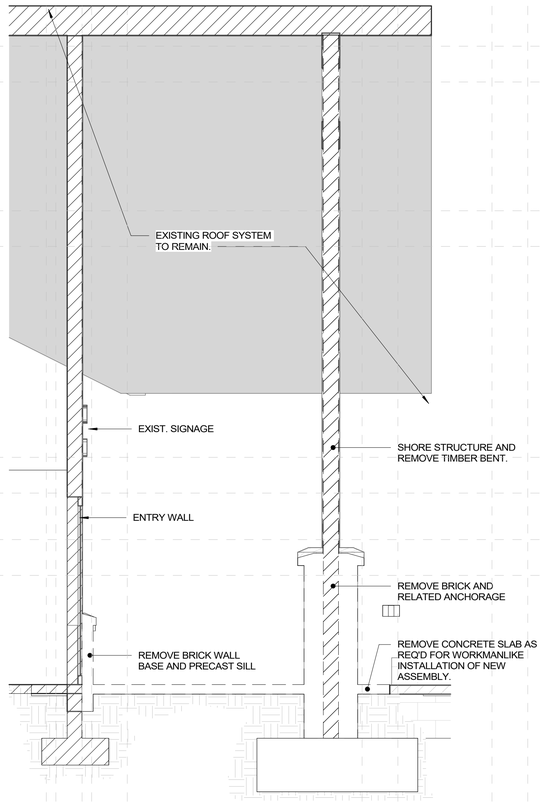
ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **Author**

SHEET NUMBER
A201



2 D101a DEMOLITION PLAN- PORTICO ALTERNATE #1
1/4" = 1'-0"



1 D101a PORTICO SECTION- DEMOLITION ALTERNATE #1
3/8" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N. C.

08/20/25

SHEET NAME:
PORTICO ENCLOSURE PLANS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

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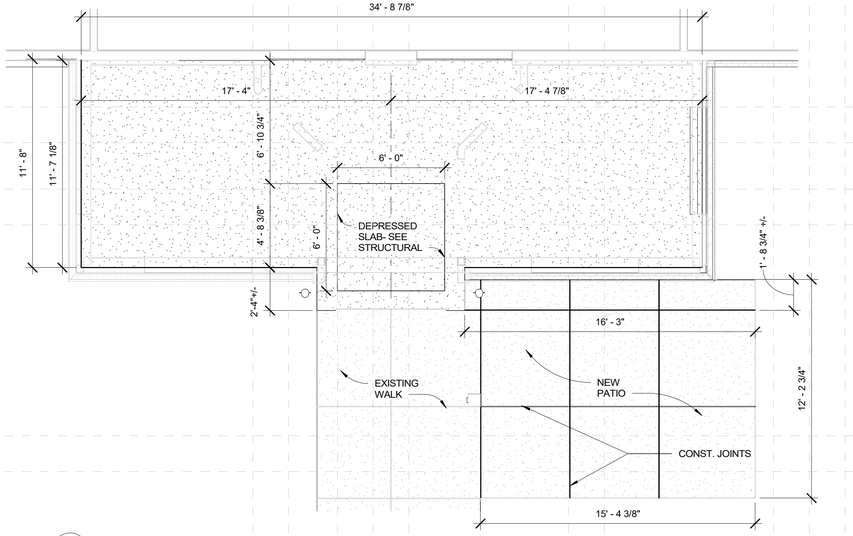
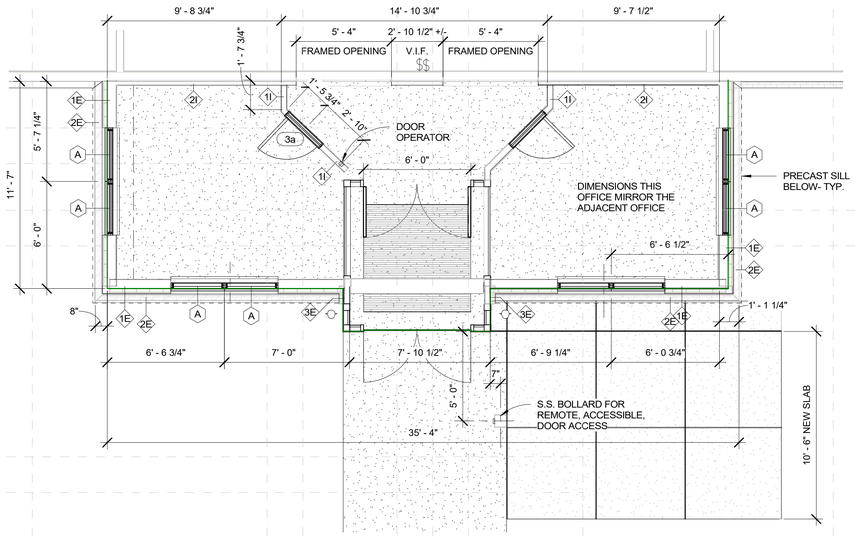
ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

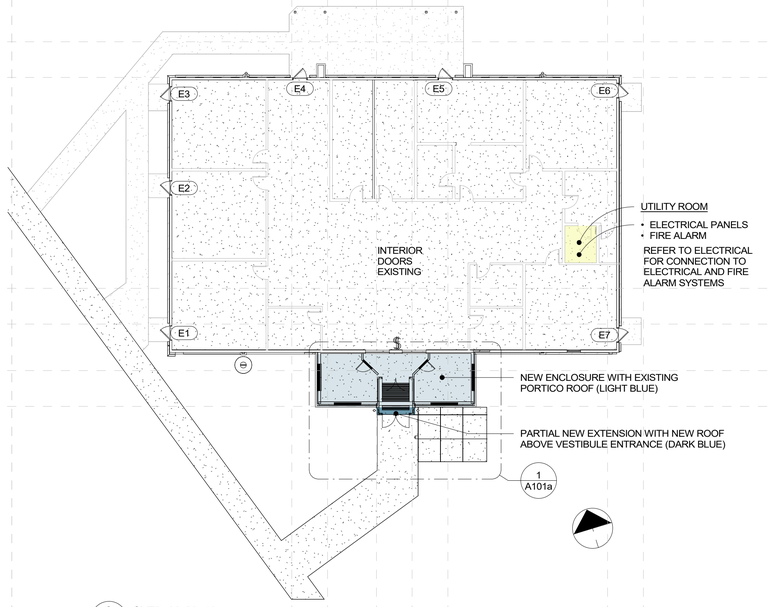
SHEET NUMBER
D101a



3 A101a ENLARGED SLAB PLAN
1/4" = 1'-0"

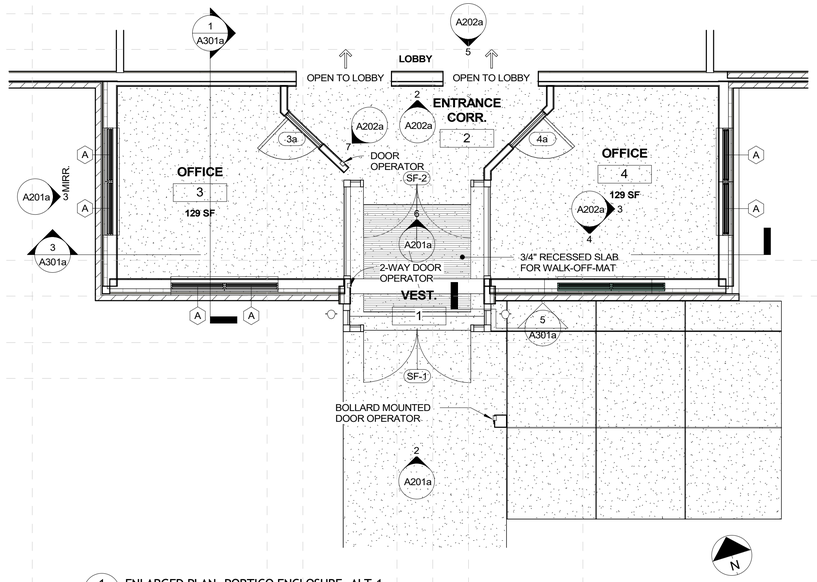


5 A101a ENLARGED DIMENSION PLAN- PORTICO
1/4" = 1'-0"



2 A101a OVERALL PLAN
1/16" = 1'-0"

MARK	WALL TYPE LEGEND
1E	5/8" GYP. BD. 6" MTL. FRAMING @ 16" O.C 2 1/2" R-ZIP SHEATHING SYSTEM 3-PART PORTLAND CEMENT STUCCO SYSTEM
2E	5/8" GYP. BD. 3 5/8" METAL FRAMING AT 16" O/C 2 1/2" R-ZIP INSUL. SHEATHING SYSTEM 1" MIN. AIRSPACE W/ CONTINUOUS MORTAR-NET BRICK VENEER (MATCH EXIST.
3E	5/8" GYP. BD. 3 5/8" MTL. FRAMING @ 16" O.C 2 1/2" R-ZIP SHEATHING SYSTEM 3-PART PORTLAND CEMENT STUCCO SYSTEM
1I	5/8" GYP. BD. 3 5/8" MTL. FRAMING @ 16" O.C- FILL VOID WITH SOUND-BATT INSULATION 5/8" GYP. BD.
2I	5/8" GYP. BD. 2 1/2" MTL. FURRING @ 16" O.C SHALLOW JUNCTION BOXES REQ'D. EXISTING WALL (BRICK VENEER REMOVED)



1 A101a ENLARGED PLAN- PORTICO ENCLOSURE- ALT-1
1/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N. C.

08/20/25

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PORTICO ENCLOSURE PLANS

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SHEET NUMBER
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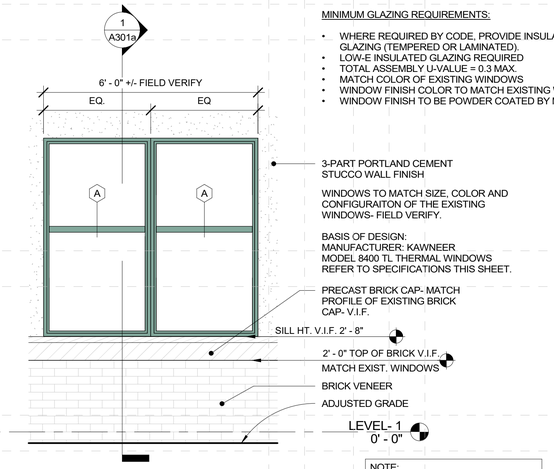
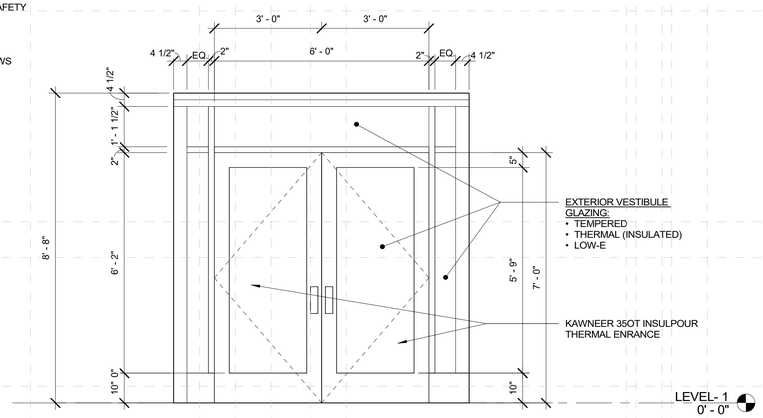


MINIMUM GLAZING REQUIREMENTS:

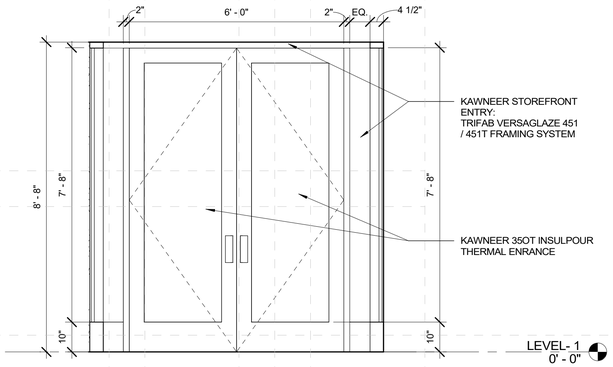
- WHERE REQUIRED BY CODE, PROVIDE INSULATED SAFETY GLAZING (TEMPERED OR LAMINATED).
- LOW-E INSULATED GLAZING REQUIRED
- TOTAL ASSEMBLY U-VALUE = 0.3 MAX.
- MATCH COLOR OF EXISTING WINDOWS
- WINDOW FINISH COLOR TO MATCH EXISTING WINDOWS
- WINDOW FINISH TO BE POWDER COATED BY MFR.

NOTE:
REFER TO SPECIFICATION SECTION
085113 THERMAL WINDOWS

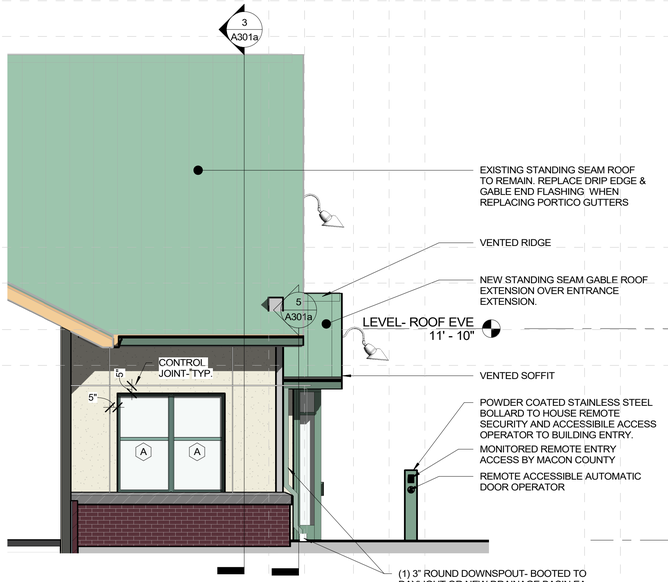
4 A201a WINDOW ELEVATION & CONFIGURATION
1/2" = 1'-0"



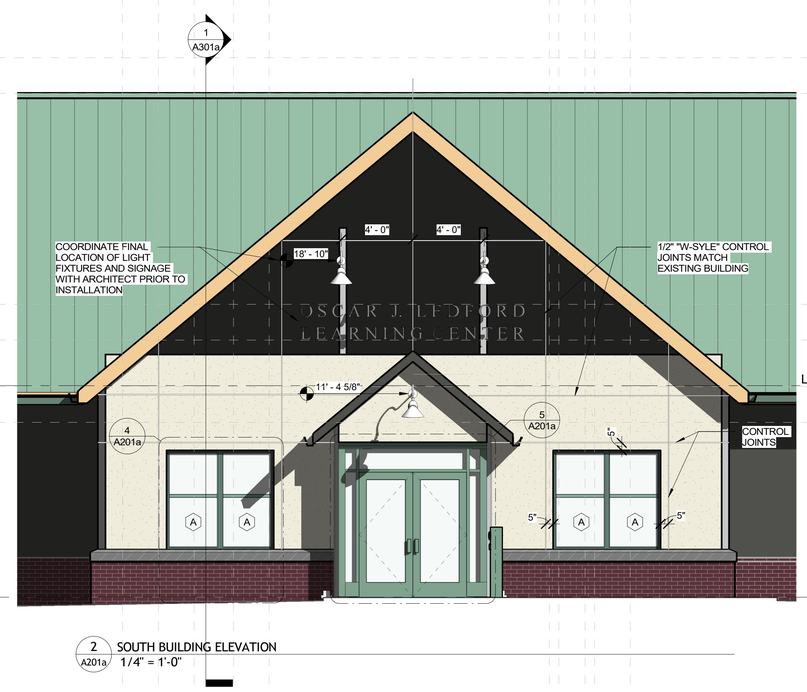
5 A201a SF-1 ELEVATION VESTIBULE EXT. PAIR DOORS
1/2" = 1'-0"



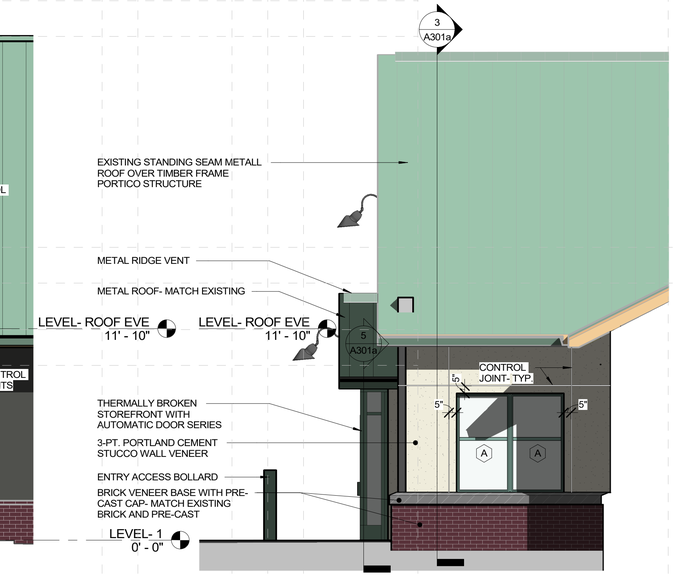
6 A201a SF-2 ELEVATION VESTIBULE INT. PAIR DOORS
1/2" = 1'-0"



1 A201a WEST BUILDING ELEVATION
1/4" = 1'-0"



2 A201a SOUTH BUILDING ELEVATION
1/4" = 1'-0"



3 A201a EAST BUILDING ELEVATION
1/4" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE

08/20/25

SHEET NAME:
BUILDING ELEVATIONS- ALT-1

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

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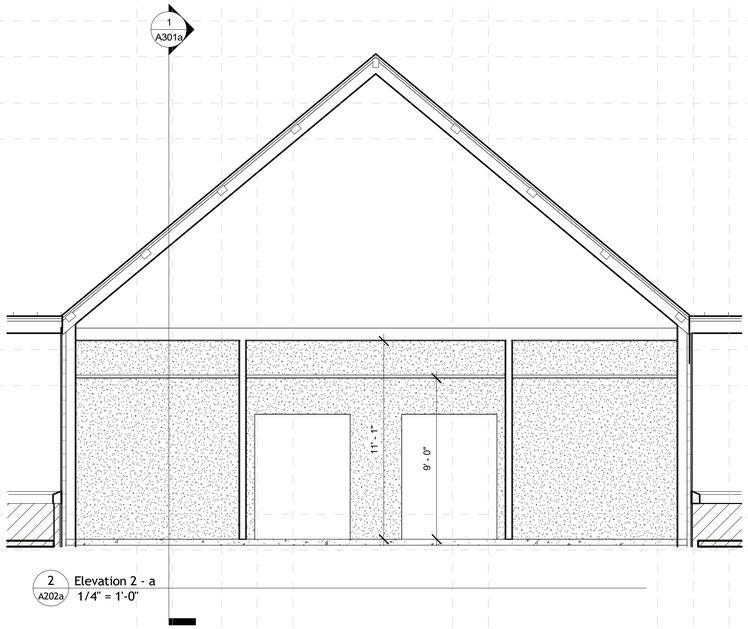
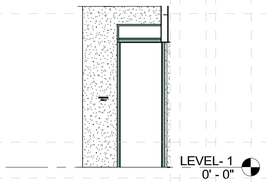
ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A201a

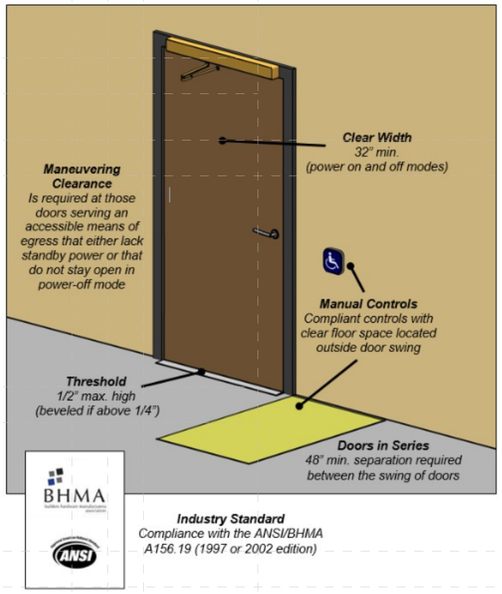


2 A202a Elevation 2 - a
1/4" = 1'-0"

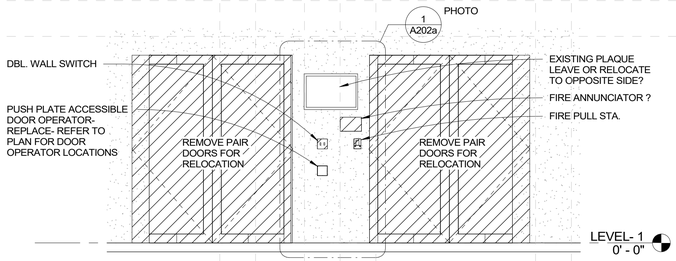


7 A202a INTERIOR ELEVATON
1/4" = 1'-0"

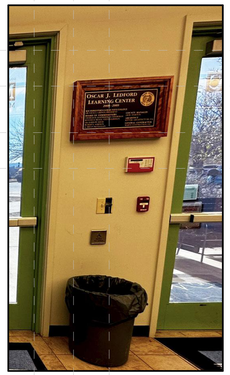
Automated Door (Low Energy)



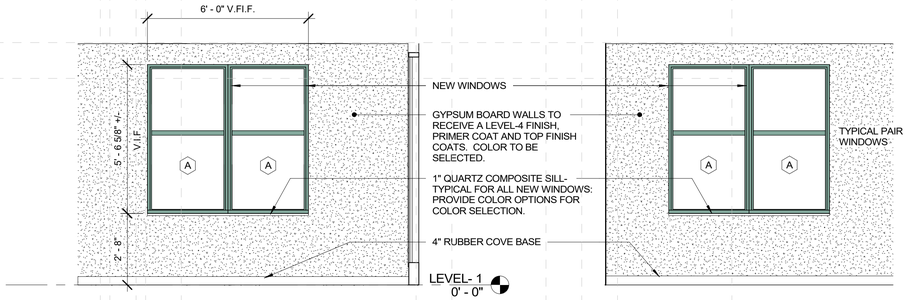
6 A202a CLEARANCE REQUIREMENTS- AUTOMATED DOORS
12" = 1'-0"



5 A202a DEMOLITION AT EXISTING LOBBY WALL
3/8" = 1'-0"



1 A202a PHOTO- EXISTING LOBBY WALL
12" = 1'-0"



4 A202a Elevation 3 - a
3/8" = 1'-0"

3 A202a Elevation 2 - d
3/8" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:

MACON COUNTY EARLY COLLEGE

77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER
Registered Architect
11444
North Carolina
ASHEVILLE, N. C.

08/20/25

SHEET NAME:
INTERIOR ELEVATIONS & NOTES

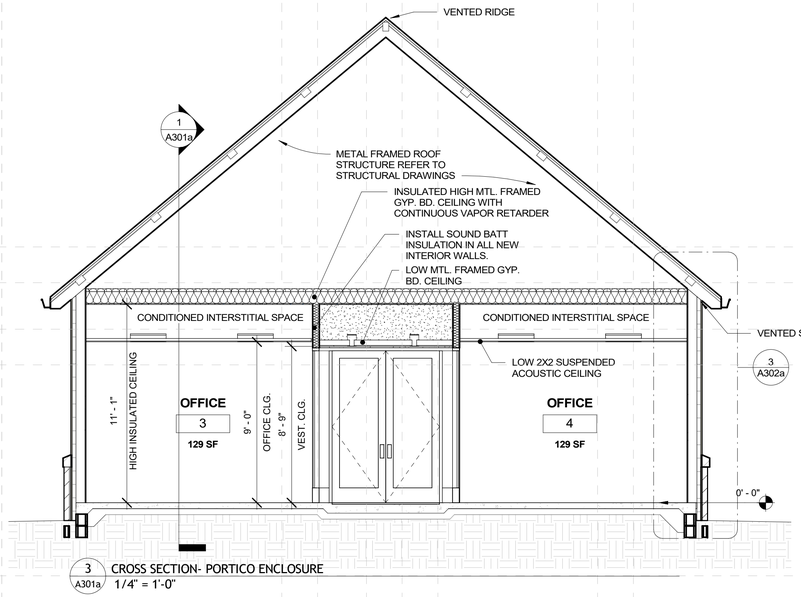
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

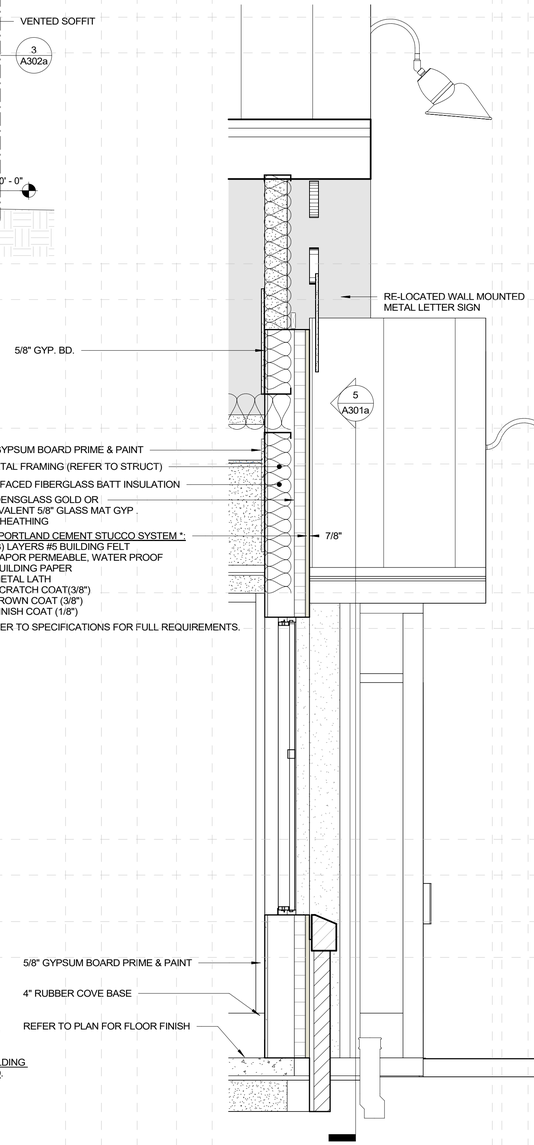
#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A202a

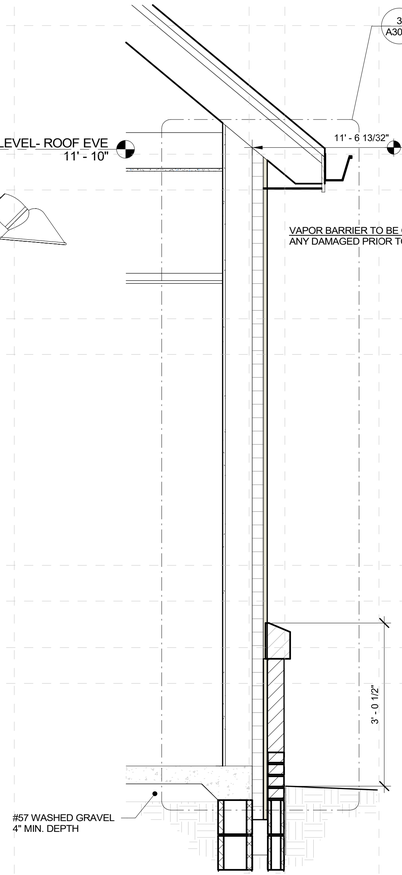


3 A301a CROSS SECTION- PORTICO ENCLOSURE
1/4" = 1'-0"

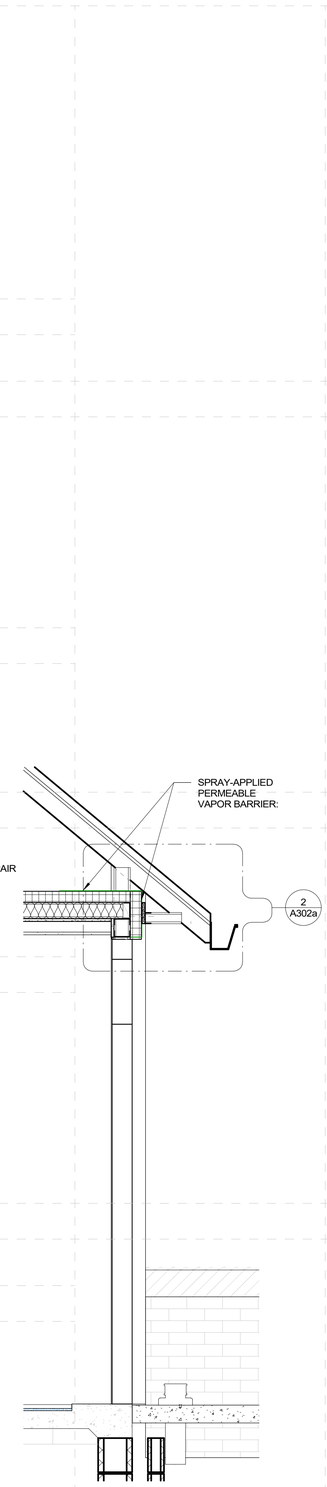


2 A301a WALL SECTION AT ENTRY WALL
3/4" = 1'-0"

1 A301a BUILDING SECTION THROUGH PORTICO ENCLOSURE
1/4" = 1'-0"



4 A301a WALL SECTION
3/4" = 1'-0"



5 A301a CROSS SECTION- PORTICO ENCLOSURE
3/4" = 1'-0"

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11444
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SECTIONS

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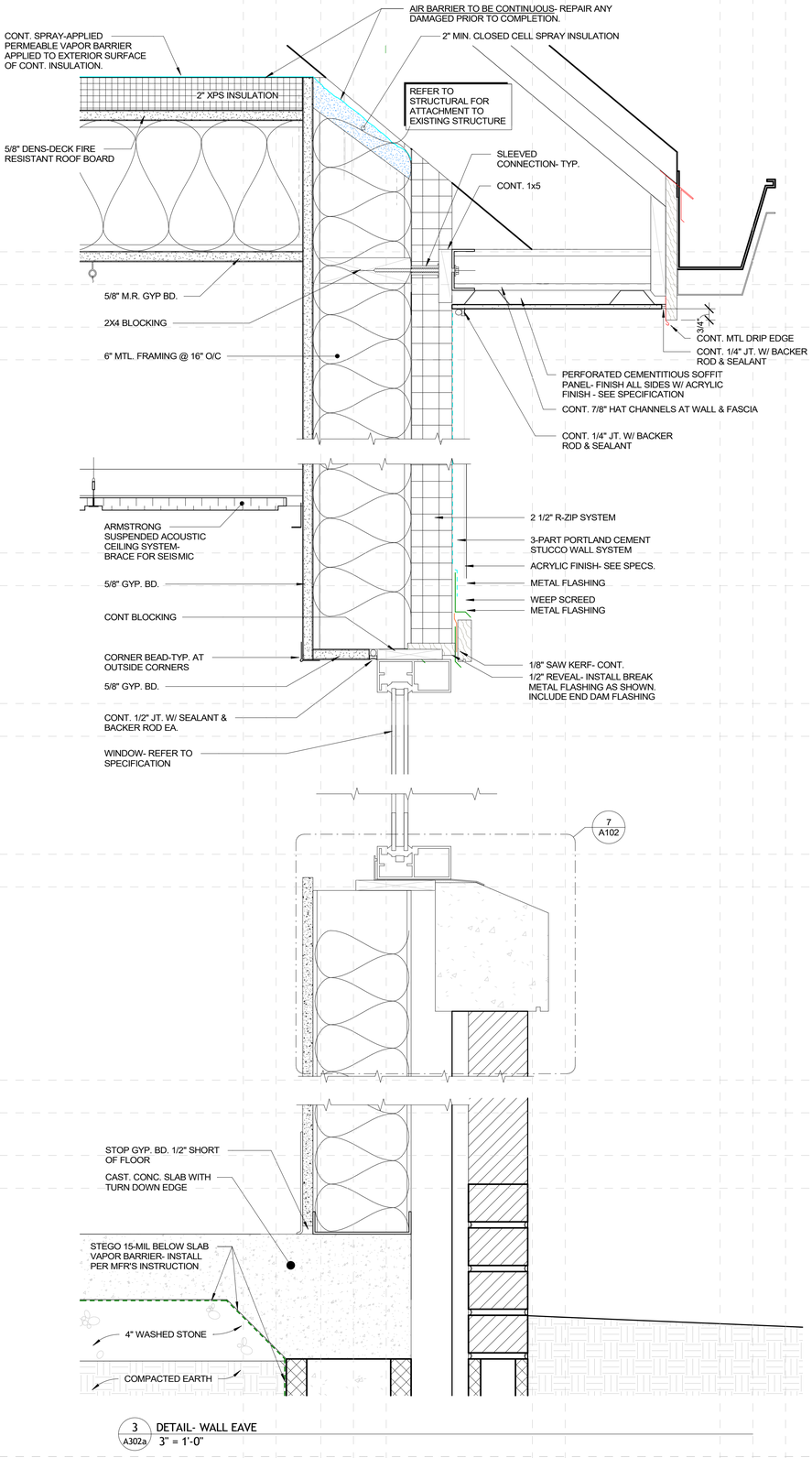
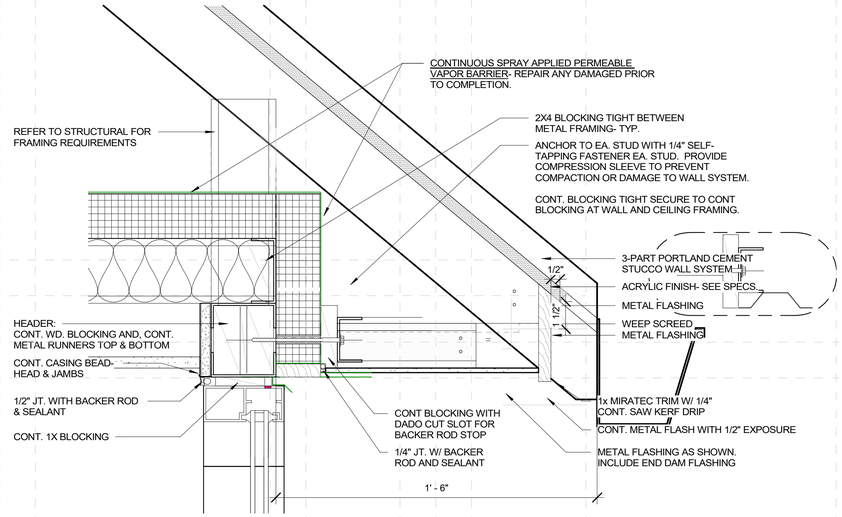
A301a



3 A302a DETAIL- WALL EAVE
3" = 1'-0"



2 A302a ENLARGED DETAIL- EAVE AT VESTIBULE
3" = 1'-0"

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Registered Architect
11444
North Carolina
ASHEVILLE, N.C.

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DRAWN BY: **PSL**

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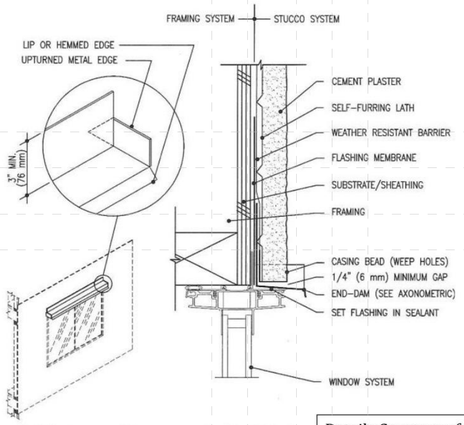
A302a



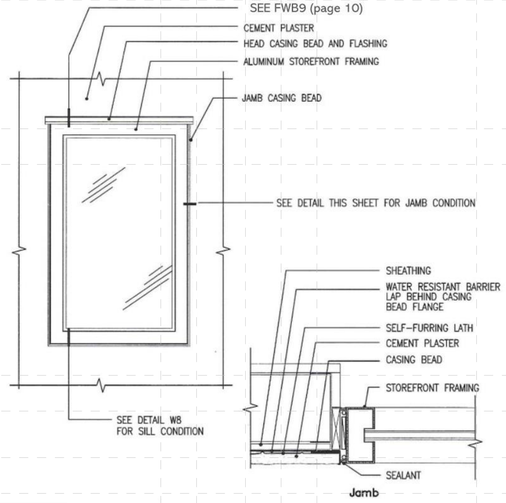
End–Dam Axonometric (Not to Scale)

Section at Head (Not to Scale)

Details Courtesy of the Northwest Wall & Ceiling Bureau

NOTE:
END–DAMS ARE RECOMMENDED ON HEAD FLASHINGS TO PREVENT MOISTURE FROM ENTERING THE STUCCO AT JAMB AREA. END–DAMS SHALL BE COMPATIBLE WITH THE HEAD FLASHING MATERIAL. THIS EXAMPLE IS AN END–DAM AS AN UPTURNED METAL EDGE.

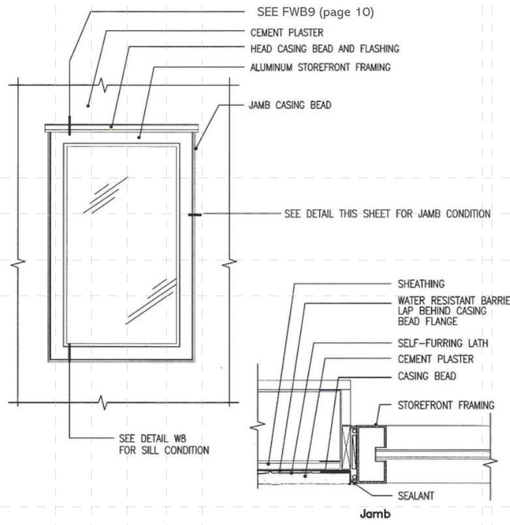
FWB9 – Window Head Flashing Assembly



NWCB Detail

W7 – Storefront Window

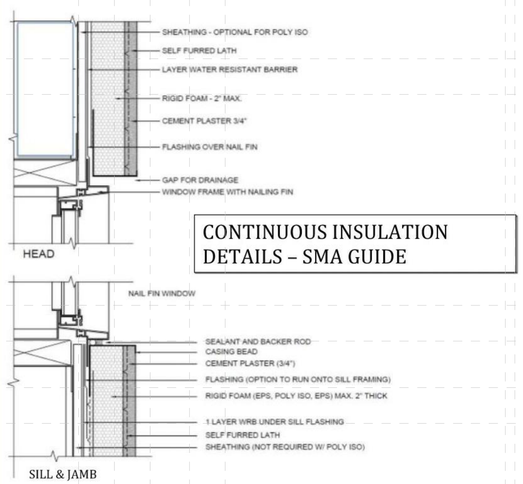
SMA NOTE: This is a basic stucco detailing method for all non-flanged style windows. Head flashing is not always required and a sealant joint is acceptable in low and mid rise structures in Dry zones (B) per the 2015 IECC climate zone map C 301.1. Moist (A) and Marine (C) should have head flashings if not protected by overhangs or above a single story in height. Flangeless windows require a selant around sill and jambs in all zones unless protected from rain.



NWCB Detail

W7 – Storefront Window

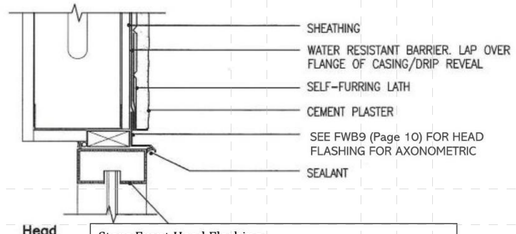
SMA NOTE: This is a basic stucco detailing method for all non-flanged style windows. Head flashing is not always required and a sealant joint is acceptable in low and mid rise structures in Dry zones (B) per the 2015 IECC climate zone map C 301.1. Moist (A) and Marine (C) should have head flashings if not protected by overhangs or above a single story in height. Flangeless windows require a selant around sill and jambs in all zones unless protected from rain.



CONTINUOUS INSULATION DETAILS – SMA GUIDE

SMA NOTES:

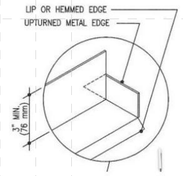
- Flashing for the Nail Flange (Fin) style window to be per the SMA technical bulletin ***" Flashing a Nail Flange Style Window for Stucco".***
- Single layer WRB may be used under rigid foam if the the foam has drainage channels or drain mat
- Metal Head Flashing (Optional) may be added to window head.
- Using a one-coat stucco system, with larger window frames and following SMA Flashing guidelines may eliminate need for a casing bead and sealant joints, if allowed by the one-coat stucco manufacturer



Head Store Front Head Flashing

SMA NOTES :

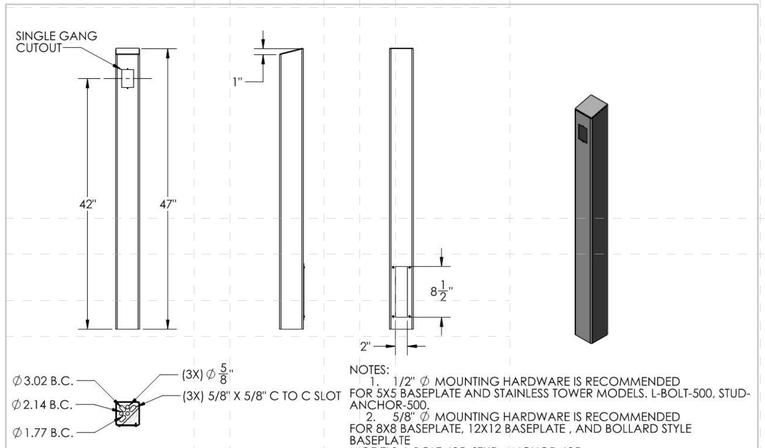
- Casing bead should have weep (drip) holes. If no weep holes, WRB should be behind casing bead flange and over head flashing flange
- Head Flashing & Casing may be a one-piece trim accessory



END DAMS FOR HEAD FLASHING

GENERAL NOTES- COORDINATION ENTRY ACCESS BOLLARD

1. BUILDING ACCESS CONTROLS TO BE MOUNTED IN BASE-MOUNTED WEATHERTIGHT BRUSHED STAINLESS STEEL ENCLOSURE PROVIDED BY THE G.C.
2. MACON COUNTY'S SECURITY PROVIDER SHALL FURNISH CUTOUT & OTHER MOUNTING REQUIREMENTS FOR THE BOLLARD MOUNTED ACCESS CONTROL UNIT AND RELATED COMPONENTS TO BE INSTALLED FOR THE G.C.'S USE.
3. THE G.C. SHALL PROVIDE SUBMITTALS, INCLUDING SHOP DRAWINGS, REFLECTING THE REQUIRED CUTOUTS & MOUNTING HEIGHTS FOR THE ARCHITECT'S REVIEW AND APPROVAL.
4. INSTALLATION OF THE BOLLARD MOUNTED DEVICES SHALL BE WEATHER TIGHT. GASKETS, SEALANTS & OTHER MANUFACTURER RECOMMENDED INSTALLATION COMPONENTS LISTED OR UNLISTED HERE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5. THE G.C WILL INSTALL (2) 3/4" CONDUITS, WITH PULL STRINGS, BETWEEN THE NEW ENCLOSURE, ROUTED BELOW GRADE AND ROUTED UP THROUGH THE BOLLARD BASE & ROUTED TO JUNCTION BOXES REQUIRED FOR CODE COMPLIANT INSTALLATION.
6. (1) CONDUIT WILL BE UTILIZED FOR THIS PROJECT.
7. (1) CONDUIT TO BE INSTALLED, THEN CAPPED, EACH END, FOR FUTURE USE.



NOTES:
1. 1/2" Ø MOUNTING HARDWARE IS RECOMMENDED FOR 5X5 BASEPLATE AND STAINLESS TOWER MODELS. L-BOLT-500, STUD-ANCHOR-500.
2. 5/8" Ø MOUNTING HARDWARE IS RECOMMENDED FOR 8X8 BASEPLATE, 12X12 BASEPLATE , AND BOLLARD STYLE BASEPLATE
MODELS. L-BOLT-625, STUD-ANCHOR-625.
3. MATERIAL OF CONSTRUCTION IS 304SS BRUSHED #4 FINISH.

PEDESTAL PRO
PEDESTALPRO.COM
1-800-660-3072

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±1/32
ANGULAR: ±2°
TWO PLACE DECIMAL ±0.010
THREE PLACE DECIMAL ±0.005
INTERPRET GEOMETRIC TOLERANCING PER: ASME Y14.5 -2009

	NAME	DATE
DRAWN		
CHECKED		

PROPRIETARY AND CONFIDENTIAL
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TITLE: INSTALLATION

Tuesday, October 23, 2018 12:52:42 PM

SIZE	PART NO.	REV
A	ADA-SS-TWR-47x4x4	A

WEIGHT: NO SCALE SHEET 1 OF 7

1 A402a STUCCO-2 12" = 1'-0"

2 A402a BOLLARD- BASIS FOR BIDS_2 12" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER Registered Architect 11444 North Carolina ASHEVILLE, N. C.

08/20/25

SHEET NAME:
NOTES AND DETAILS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A402a

GENERAL REQUIREMENTS AND GUIDELINES FOR DETAILING AND INSTALLING WEEP SCREEDS:

Installation Requirements and Guidelines:
Below are general requirements and guidelines for detailing and installing weep screeds. They mostly originate in the IBC/IRC building codes or ASTM standards that are referenced by code; where applicable, references to the code/standard section are included. Some requirements include SMA Commentary that provides additional information on the requirements and possible alternative methods. These alternative methods should be approved by the project design professional and local building department.

1. The weep screeds may be made from galvanized steel, aluminum, zinc, or plastic material. For material specifications and thickness, refer to ASTM C1861.
2. The nailing flange should be a minimum of 3 ½ inches tall[1,5].
3. The bottom edge of the weep screed lathing accessory should be located not less than 1 inch below the joint formed by the foundation and framing[1]. SMA Commentary: There are projects where meeting this requirement is not possible based on the location of the foundation. The SMA supports alternative details where the weep screed can be moved up to be less than 1 inch when flashing and/or waterproofing is used behind the weep screed that extends down not less than 1 inch below the joint formed by the foundation and framing.
4. The weep point should be 4 inches above raw earth or 2 inches above paved surfaces[1,3]. SMA Commentary: There are projects where meeting these clearances is not possible. Figure 3 shows an alternate design when a 2-inch clearance above paved surfaces is unavailable. Note, in general, plaster should not be run below grade because the plaster will absorb moisture and salts from the soil and will eventually be damaged (pop off).
5. Intersection joints of the weep screeds may be spliced, overlapped, or abutted; sealing the joint is not required.
6. Lathing accessory flanges shall be attached at 7-inch maximum intervals along framing members[4]. SMA Commentary: It may not be possible to attach the weep screed at 7 inches. The SMA allows wider attachment spacing as long as the weep screed does not move during the application of plaster.
7. Water-resistant barrier(s) shall lap the nailing flange unless an alternate design is approved[1,5].
8. Weep screed is not required on masonry or concrete walls when plaster is direct applied. Note, an expanded metal flanged casing bead or weep screed could be used as a screed point at the bottom of the wall.
9. Weep screeds may be used with or without weep holes. The SMA generally advises using weep holes, especially when using a J-style screed, but they are not mandatory. Although the holes are referred to as weep holes, these holes in the typical V-style weep screed are intended for the plaster to key into during application to help hold the plaster in place while curing and are not required for drainage. Drainage will occur from the hairline gap between the plaster and weep screed nose that is created by natural plaster shrinkage during the curing process. This gap should not be sealed.

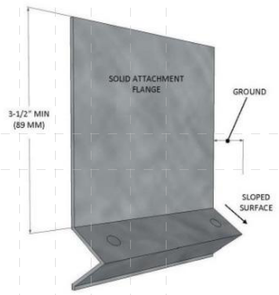
2 A404a GEN. NOTES- WEEP SCREED
12" = 1'-0"

Introduction: Cement plaster over framed walls, per IBC section 2512, requires a weep screed at the foundation plate line that will allow incidental moisture to drain to the exterior, as shown in Figure 1. A weep screed is defined in ASTM C1861 as:

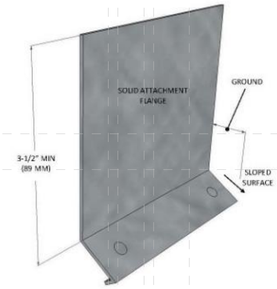
> 4.3.1 *Weep Screed*—Lathing accessory located at the bottom of exterior framed or framed and sheathed walls; used as a screed to assist in cement plaster thickness control; to facilitate drainage; and to provide an edge, end, or termination for a cement plaster panel area. Weep screed shall include a solid vertical attachment flange 3-1/2 in. (89 mm) long minimum, and a drainage surface that is sloped and either perforated or non-perforated, or non-sloped and perforated with a capture flange, or non-sloped and non-perforated without a capture flange.

Depending on the region or manufacturer, weep screeds may be known by different names. Some other names for weep screeds include foundation sill screed, FHA screed, foundation weep screed, or No. 7. There are also a few different styles of weep screed available. The most popular options are shown in Figure 2. A weep screed may either be a "V" style, like screeds A and B in Figure 2, or a casing bead style (also called a "J" style), like screed C in Figure 2.

History: The weep screed was developed jointly by the Federal Housing Administration (FHA) and the SMA in 1952 and was initially called FHA screed. Weep screed was formally made part of the building code in 1970. Subsequent codes added revisions related to placement, flange height, and material thickness.



A. FHA #7. This is the most common weep screed used in most three coat plaster systems.



B. #36. Similar to the FHA #7, but has a shorter return leg for use when the foundation is outward from the above wall.

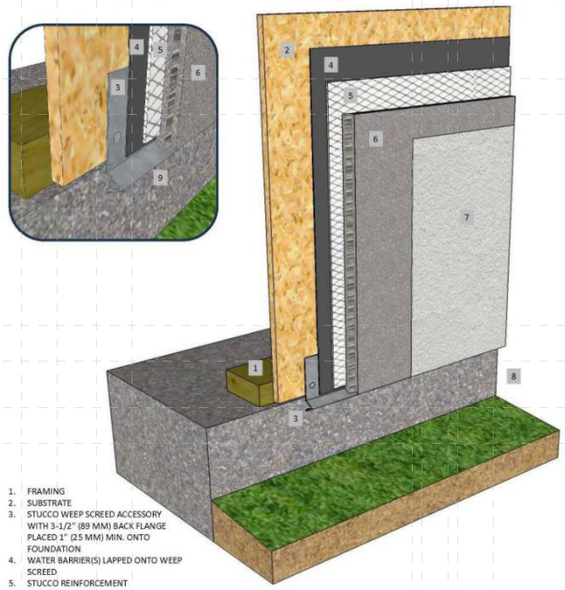


FIGURE 1: Typical foundation detail showing the cement plaster terminating with a V-style weep screed.

1 A404a STUCCO-1
12" = 1'-0"

NOTE:
THESE IMAGES ARE NOT JOB SPECIFIC.
SHEATHING WILL BE R-ZIP SHEATHING IN LIEU OF THE OSB INDICATED.

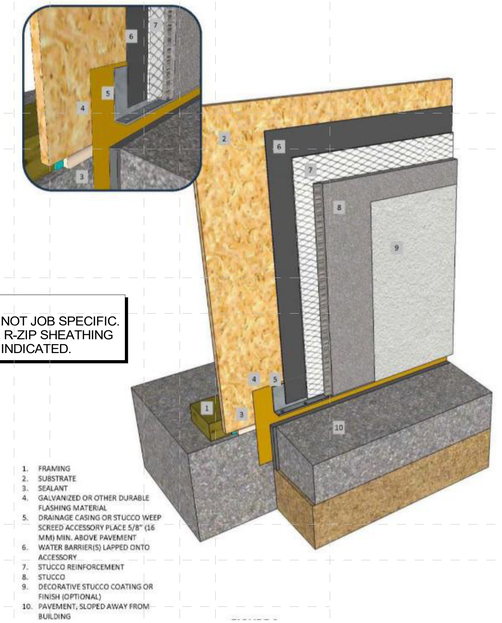


FIGURE 3. Alternate detail meeting the intent of the code for conditions where a 2-inch clearance to paved surfaces is not available or practical and must be approved by the local building department. Refer to SMA Guide Detail #203 for more information.

The SMA is an industry-wide not-for-profit trade association dedicated to the promotion and education of the stucco industry. The SMA can provide no warranty, express or implied, for the information contained herein. This is a guide paper. The local Building Department has final approval of allowed alternates.

[1] Reference: IBC 2021/2024 Section 2512.1.2
[2] Reference: ASTM C1861-23a Section 4.3.1
[3] Reference: ASTM C1063-22 7.4.4
[4] Reference: ASTM C1063-22 Section 7.4.2.1
[5] Reference: ASTM C1063-22 7.4.3.2

LOOPER ARCHITECTURAL DESIGN & PLANNING

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PETER S. LOOPER Registered Architect 11444 North Carolina ASHEVILLE, N.C.
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NOTES AND DETAILS

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DRAWN BY: **PSL**

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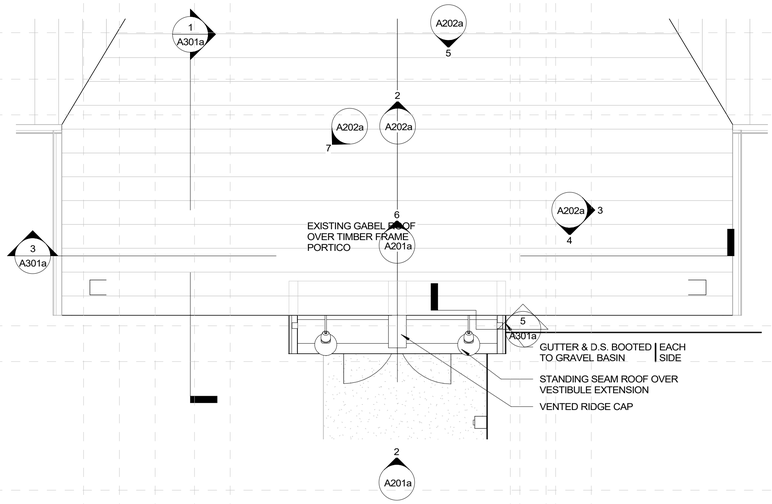
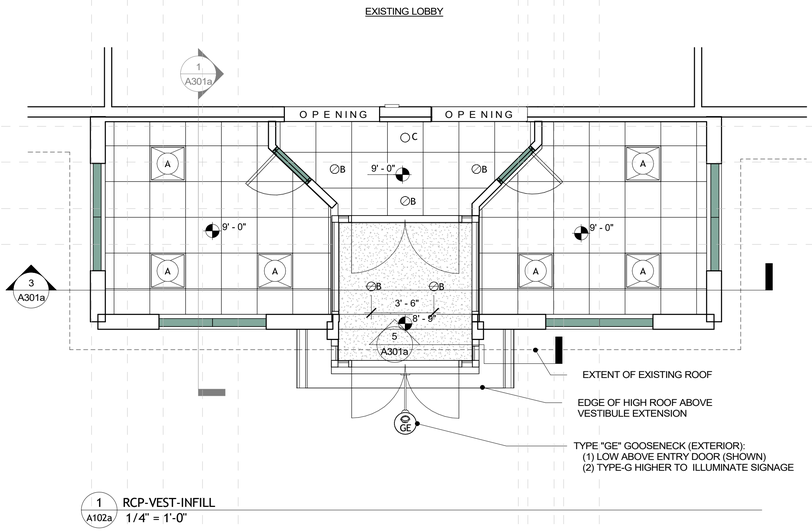


3 A102a ROOF PLAN
1/4" = 1'-0"



1 A102a RCP-VEST-INFILL
1/4" = 1'-0"

CEILING LEGEND:		
MARK	SYMBOL	DESCRIPTION
A		2'x2' RECESSED LED LIGHT FIXTURE
B		6" RECESSED CAN-TYPE LED LIGHT FIXTURE
C		6" RECESSED CAN-TYPE LED -WALL-WASH- LIGHT FIXTURE
G & GE		EXTERIOR LED, DIRECTIONAL GOOSENECK LIGHT FIXTURE- REFER TO ELECTRICAL.

NOTE:
REFER TO THE ELECTRICAL DRAWINGS. NOTIFY THE ARCHITECT WITH QUESTIONS.

LOOPER ARCHITECTURAL DESIGN & PLANNING

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11444
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ASHEVILLE

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PLAN, DETAILS, SCHEDULES

PHASE:
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DRAWN BY: **Author**

SHEET NUMBER
A102a

SECTION 085113 ALUMINUM WINDOWS

This suggested guide specification has been developed using the current edition of the Construction Specifications Institute (CSI) "Manual of Practice," including the recommendations for the CSI 3 Part Section Format and the CSI Page Format. Additionally, the development concept and organizational arrangement of the American Institute of Architects (AIA) MASTERSPEC Program has been recognized in the preparation of this guide specification. Neither CSI, AIA, USGBC nor ILFI endorse specific manufacturers and products. The preparation of the guide specification assumes the use of standard contract documents and forms, including the "Conditions of the Contract," published by the AIA.

PART 1 - GENERAL

1.1 Related Documents

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

1.2 Summary

A. Section includes Kawneer Architectural Aluminum Windows including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of window units.
1. Types of aluminum windows include:
   a. Kawneer Series 8400TL Thermal Windows
   b. Model 8410TL Fixed Window
   c. 4" (101.6 mm) frame depth
   d. AW-PG100-FW

NOTE: SINGLE SOURCE RESPONSIBILITY IS REQUIRED FOR THE FOLLOWING RELATED SECTIONS AND AS INDICATED IN PART 1.6 QUALITY ASSURANCE:

B. Related Sections:
1. 072700 "Air Barriers"
2. 079200 "Joint Sealants"
3. 084113 "Aluminum-Framed Entrances and Storefronts"

C. Definitions: For fenestration industry standard terminology and definitions refer to American Architectural Manufactures Association (AAMA) – AAMA Glossary (AAMA AG).

1.3 Performance Requirements

A. General Performance: Aluminum-framed window system shall withstand the effects of the following performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Window System Performance Requirements:

1. Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS)
   a. Performance Class and Grade: AW-PG100 - 60" x 99" (1524 mm x 2515 mm) -FW.
2. Air Leakage: The test specimen shall be tested in accordance with ASTM E 283. The air leakage rate shall not exceed 0.10 cfm/ft² (0.5 L/s·m²) at a static air pressure differential of 6.2 psf (300 Pa).
3. Water Resistance: The test specimen shall be tested in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage as defined in the test method at a static air pressure differential of 12 psf (574 Pa).
4. Uniform Load Deflection: A minimum static air pressure difference of 100 psf (4788 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 of the span of any framing member.
5. Uniform Load Structural Test: A minimum static air pressure difference of 150 psf (7182 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330. The unit shall be evaluated after each load.
6. Component Testing: Window components shall be tested in accordance with procedures described in AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS).
7. Energy Efficiency:
   a. Thermal transmittance simulation results using NFRC 100 or AAMA 507 are based on a Center of Glass (COG) U-factor of 0.24 Btu/(hr·ft²·°F) and a warm-edge spacer.
      1) U-Factor not more than .35 BTU/hr/sf/°F per AAMA 507 or NFRC 100 when using project specified glass.
   b. Condensation Resistance Test (CRF): When tested to AAMA Specification 1503, the condensation resistance factor shall not be less than (CRF) 67_{Frame} and 66_{Glass}.
8. Thermal Barrier Tests: Testing shall be in general accordance with AAMA 505 Dry Shrinkage and Composite Thermal Cycling test procedure, AAMA TIR-A8, Structural Performance of Composite Thermal Barrier systems.
9. Environmental Product Declarations (EPD): Shall have a Type III Product Specific EPD created from a Product Category Rule specific to North America.

C. Environmental Product Declarations (EPD): Shall have a Type III Product-Specific EPD created from a Product Category Rule.

1.4 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.
1. Recycled Content:
   a. Provide documentation that aluminum has a minimum of 40% mixed pre- and post-consumer recycled content with a sample document illustrating project specific information that will be provided after product shipment.
   b. Once product has shipped, provide project specific recycled content information, including:
      1) Indicate recycled content; indicate percentage of pre- and post-consumer recycled content per unit of product.
      2) Indicate relative dollar value of recycled content product to total dollar value of product included in project.
      3) Indicate location recovery of recycled content.
      4) Indicate location of manufacturing facility.
2. Environmental Product Declaration (EPD):
   a. Include a Type II Product-Specific EPD created from a Product Category Rule.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances and installation details.

C. Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.

D. Samples for Verification: For aluminum windows and components required.

E. Product Schedule: For aluminum windows. Use same designations indicated on Drawings.

F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each type, class, grade, and size of aluminum window. Test results based on use of downsized test units will not be accepted.

1.5 Quality Assurance

A. Installer Qualifications: An installer which has had successful experiences with installation of the same or similar units required for this project and other projects of similar size and scope.

B. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by inclusion of test reports, and calculations.

C. Source Limitations: Obtain aluminum windows through one source from a single manufacturer.

D. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements." Do not modify size and dimensional requirements.
1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Build mockup for type(s) of window(s) indicated, in location(s) shown on Drawings.

F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 Project Conditions

A. Field Measurements: Verify aluminum window openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 Warranty

A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty.
1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by manufacturer.

B. Insulating Glass: Warranted to be free from defects (excluding breakage) for a period of ten (10) years.

PART 2 - PRODUCTS

2.1 Manufacturers

A. Basis-of-Design Product:
1. Kawneer Company Inc.
2. Series 8400TL Thermal Windows
3. Model 8410TL Fixed Window
4. 4" (101.6 mm) frame depth
5. AW-PG100-FW

B. Subject to compliance with requirements, provide a comparable product by the following:
1. Manufacturer: (_____)
2. Series: (_____)
3. Profile dimension: (_____)
4. Performance Grade: (_____)

C. Substitutions: Refer to Substitutions Section for procedures and submission requirements.
1. Pre-Contract (Bidding Period) Substitutions: Submit written requests ten (10) days prior to bid date.
2. Post-Contract (Construction Period) Substitutions: Submit written request in order to avoid window installation and construction delays.
3. Product Literature and Drawings: Submit product literature and drawings modified to suit specific project requirements and job conditions.
4. Certificates: Submit certificate(s) certifying substitute manufacturer (1) attesting to adherence to specification requirements for window system performance criteria, and (2) has been engaged in the design, manufacturer and fabrication of aluminum windows for a period of not less than ten (10) years. (Company Name)
5. Test Reports: Submit test reports verifying compliance with each test requirement required by the project.
6. Samples: Provide samples of typical product sections and finish samples in manufacturer's standard sizes.

D. Substitution Acceptance: Acceptance will be in written form, either as an addendum or modification, and documented by a formal change order signed by the Owner and Contractor.

2.2 Materials

A. Aluminum Extrusions: Alloy and temper recommended by aluminum window manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" (1.78 mm) wall thickness at any location for the main frame and sash members.
1. Recycled Content: Shall have a minimum of 50% mixed pre- and post-consumer recycled content.
   a. Indicate recycled content; indicate percentage of pre-consumer and post-consumer recycled content per unit of product.
   b. Indicate relative dollar value of recycled content product to total dollar value of product included in project.
   c. Indicate location recovery of recycled content.
   d. Indicate location of manufacturing facility.

B. Thermal Barrier:
1. Thermal Barrier: The thermal barrier shall be Kawneer IsoLock® with a nominal 3/8" (9.53 mm) separation consisting of a two-part, chemically curing high density polyurethane which is mechanically and adhesively bonded to the aluminum.

C. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with aluminum window members, trim, hardware, anchors, and other components.

D. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.

E. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.

F. Sealant: For sealants required within fabricated windows, provide window manufacturer's standard, permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

2.3 Window System

A. Series 8400TL Thermal Windows - Fixed Window.

2.4 Glazing

A. Glass and Glazing Materials: Refer to Division 08 Section "Glazing" for glass units and glazing requirements applicable to glazed aluminum window units.

B. Glazing System: Glazing method shall be a wet/dry type in accordance with manufacturer's standards. Exterior glazing shall be silicone back bedding sealant. Interior glazing shall be snap-in type glazing beads with an interior gasket in accordance with AAMA 702 or ASTM C864.

2.5 Hardware

A. General: None required.

B. Optional Muntin Grids: Extruded aluminum profiles. 6063-T6 alloy and temper as follows:
1. True Muntins

C. Exterior Panning and Interior Trims: Extruded aluminum, 6063-T6 alloy and temper, extruded to profiles and details indicated. Seal exterior joints with manufacturer's standard sealant to assure water-tight joints.
1. Exterior Panning and Trims: All panning profiles shall be a minimum thickness of 0.062" (1.57 mm) to match the profiles as shown the drawings. Any profile variations shall be submitted to the architect and/or owner for approval 10 days prior to bid date. All panning shall be factory fabricated for field assembly. All corner joinery shall be factory cut. Joinery at the sill shall be coped and butt-type construction. All preparations for assembly shall be completed by the window manufacturer. Upon assembly, panning frame joints shall be back-sealed to prevent moisture penetration.
2. Interior Trims: The interior face trim minimum wall thickness shall be 0.062" (1.57 mm). The face trim shall snap-fit onto concealed mounting clip. Exposed fasteners shall not be accepted. The mounting clip shall be extruded aluminum of 6063-T6 alloy and temper. The minimum wall thickness shall be 0.062" (1.57 mm). The trim clips shall be provided in 4" (101.6 mm) lengths and spaced a maximum of 18" (457.2 mm) center to center.

2.6 Accessories

A. General: None required.

2.7 Fabrication

A. Framing Members, General: Fabricate components that, when assembled, have the following characteristics:
1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fit joints; make joints flush, hairline and weatherproof.
3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior.
4. Physical and thermal isolation of glazing from framing members.
5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
6. Provisions for field replacement of glazing.
7. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

B. Window Frame Joinery: Screw Spline, factory sealed frame corner joints.

C. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

D. Fabricate aluminum windows that are re-glazable without dismantling framing.

E. Mullions: Provide mullions and cover plates as shown, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, as indicated. Provide mullions and cover plates capable of withstanding design loads of window units.

F. Sub frames: Provide sub frames with anchors for window units as shown, of profile and dimensions indicated but not less than 0.093-inch (2.4 mm) thick extruded aluminum. Miter or cope corners, and join with concealed mechanical joint fasteners. Finish to match window units. Provide sub frames capable of withstanding design loads of window units.

G. Factory-Glazed Fabrication: Glaze aluminum windows in the factory where practical and possible for applications indicated. Comply with requirements in Division 08 Section "Glazing" and with AAMA/WDMA/CSA 101/I.S.2/A440-08 (NAFS).

H. Glazing Stops: Provide snap-on glazing stops coordinated with Division 08 Section "Glazing" and glazing system indicated. Provide glazing stops to match frame.

2.8 Aluminum Finishes

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Factory Finishing: Match the existing window color
1. Kawneer Permafluor™ (70% PVDF), AAMA 2605, Fluoropolymer Coating (Color to match existing window color).
2. Kawneer Permacoat™ AAMA 2604, Powder Coating (Color to match existing window color)

PART 3 - EXECUTION

3.1 Examination

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight window installation.
1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76.2 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 Installation

A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.

B. Install aluminum framed window system level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.

C. Set sill members in bed of sealant or with gaskets, as indicated, for weather tight construction.

D. Install aluminum framed window system and components to drain condensation, water penetrating joints, and moisture migrating within system to the exterior.

E. Separate aluminum from dissimilar materials to prevent corrosion or electrolytic action at points of contact.

3.3 Field Quality Control

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections and prepare test reports.
1. Testing and inspecting agency will interpret tests and state in each report whether tested work complies with or deviates from requirements.

B. Testing Services: Testing and inspecting of installed windows shall take place as follows:
1. Testing Methodology: Testing Standard shall be per AAMA 502 including reference to ASTM E 783 for Air Leakage Test and ASTM E 1105 for Water Penetration Test.
   a. Air Leakage Test: Conduct test in accordance with ASTM E 783 at a minimum uniform static test pressure of 6.2 psf (300 Pa). The maximum allowable rates of air leakage for field testing shall not exceed 1.5 times the project specifications.
   b. Water Infiltration Test: Water penetration resistance tests shall be conducted in accordance with ASTM E 1105 at a static test pressure equal to 2/3 the specified water test pressure.
2. Testing Extent: Architect shall select window units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured. Conduct tests for air infiltration and water penetration with manufacturer's representative present.
3. Test Reports: Shall be prepared according to AAMA 502.

3.4 Adjusting, Cleaning, And Protection

A. Adjust operating sashes, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather tight closure. Lubricate hardware and moving parts.

B. Clean aluminum surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

C. Clean glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.

D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

E. Protect window surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor window surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written recommendations.

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER Registered Architect 11444 North Carolina U.S.A. ASHEVILLE
08/20/25

SHEET NAME:
WINDOW SPECIFICATIONS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A401a

CORTEGA®
Square Lay-in & Tegular
medium texture

SUSTAIN® High Performance Sustainable Ceiling Systems

Cortega Angled Tegular panels with Prelude XL 15/16" suspension system

Medium-texture panels; economical solution with standard acoustical absorption.

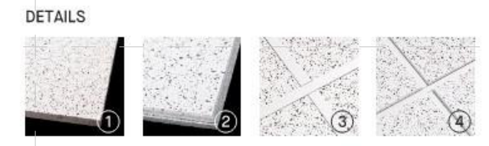
KEY SELECTION ATTRIBUTES

- Cortega® panels are part of the Sustain® portfolio, and meet the most stringent industry sustainability compliance standards today
- Economical
- Non-directional visual reduces scrap and installation time
- Made in the U.S.A. of domestic and global content
- Build America, Buy America (BABA) Act compliant

COLOR Colored ceilings are dye-lotted and should be segregated by dye lot. Do not mix.

White (WH) | Tech Black (BL) Item 769

DETAILS



1. Cortega® Square Lay-in
2. Cortega® Beveled Tegular
3. Cortega® Lay-in with Prelude 15/16" suspension system
4. Cortega® Beveled Tegular with Suprafine® 9/16" suspension system

TechLine 877 276-7876
armstrongceilings.com/mesa

Armstrong® World Industries

CORTEGA®
Square Lay-in & Tegular
medium texture

SUSTAIN® High Performance Sustainable Ceiling Systems — Declare. — LEED® WELL™ LBC — UP TO 43% RECYCLED CONTENT — Calculate sustainability with Ecomedes armstrongceilings.com/ecomedes

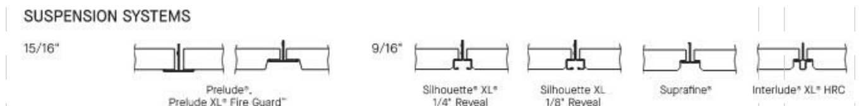
energy management | construction waste mgmt | regional materials | design for flexibility | EPD | recyclable/extended producer resp. | biobased materials | recycled content | sourcing of raw materials | material ingredient reporting | low emitting materials | lighting quality | acoustics — LOCATION DEPENDENT

VISUAL SELECTION — PERFORMANCE SELECTION Dots represent high level of performance. $$$$

	armstrongceilings.com/suspdwgs Susp. Dwg.	Item No.◆	Dimensions (Inches)	UL Classified Acoustics NRC	CAC	Total Acoustics[1]	Fire Performance	Light Reflect	Anti-Mold/Mildew	Sag Resistant	Certified Low VOC Emissions	Durability	Recycled Content	Recycle Program	Warranty
CORTEGA® 15/16" Square Lay-in	1	770	24 × 24 × 5/8"	0.55	33	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
		824	24 × 24 × 5/8"	0.55	35 •	N/A	Fire Guard™	0.80	N/A	Std	•	Std	Std	•	1-Yr
		769 _ _◆	24 × 48 × 5/8"	0.55	35 •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
		823	24 × 48 × 5/8"	0.55	35 •	N/A	Fire Guard	0.80	N/A	Std	•	Std	Std	•	1-Yr
		747	24 × 48 × 5/8"	0.55	40 •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
		773	20 × 60 × 5/8"	0.55	35 •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
		772	24 × 60 × 5/8"	0.55	35 •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
15/16" Angled Tegular	12	704	24 × 24 × 5/8"	0.55	33	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
		816	24 × 24 × 5/8"	0.55	35 •	N/A	Fire Guard	0.80	N/A	Std	•	Std	Std	•	1-Yr
		703	24 × 48 × 5/8"	0.55	35 •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
9/16" Beveled Tegular	29, 44, 48, 52, 56	2195	24 × 24 × 5/8"	0.55	35* •	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr
Made-to-Order Sizes (3-4 WEEKS order to ship)		5/8" Thick – 15/16" & 9/16" Square Lay-in or Tegular — Width 12" - 30"	Length 18" - 72"	N/A	N/A	N/A	Class A	0.80	N/A	Std	•	Std	Std	•	1-Yr

Red Numbers are Fire Guard items.
[1] Total Acoustics® ceiling panels have an ideal combination of sound absorption and sound blocking in one product.
◆ Add 2-letter color suffix to item number when specifying or ordering (e.g., 769 B L)
* Item 2195, CAC 31 when installed on 9/16" Silhouette®.

SUSPENSION SYSTEMS



PHYSICAL DATA

Material
Wet-formed mineral fiber

Surface Finish
Factory-applied latex paint

Fire Performance
Class A: ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index of 25 or less. Smoke Developed Index of 50 or less (UL® labeled).

ASTM E1264 Classification
Type A, Form A1.2, Pattern E; Fire Class A

Humidity/Sag Resistance
Standard performance ceiling panels are recommended where the building is enclosed and the HVAC is continuously functioning.

VOC Emissions
Third-party certified compliant with California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017. This standard is the guideline for low emissions in LEED®, WELL Building Standard™, Living Building Challenge® (LBC), CalGreen Title 24, ANSI/ASHRAE/USGBC/IES Standard 189; ANSI/GBI Green Building Assessment Protocol.

High Recycled Content
Contains greater than 50% total recycled content. Total recycled content based on product composition of post-consumer and pre-consumer (post-industrial) recycled content per FTC guidelines.

Insulation Value
2195, 704, 816, 703 – R Factor – 1.6 (BTU units);
R Factor – 0.28 (Watts units)
770, 772, 769, 773, 823, 824 – R Factor – 1.5 (BTU units);
R Factor – 0.26 (Watts units)
747 – R Factor – 1.5 (BTU units);
R Factor – 0.28 (Watts units)

Weight; Square Feet/Carton
769 – 0.61 LBS/SF; 96 SF/CTN
704, 2195 – 0.63 LBS/SF; 64 SF/CTN
772, 773 – 0.63 LBS/SF; 100 SF/CTN
703 – 0.65 LBS/SF; 80 SF/CTN
770 – 0.69 LBS/SF; 64 SF/CTN
816 – 1.08 LBS/SF; 48 SF/CTN
823 – 1.09 LBS/SF; 48 SF/CTN
747, 824 – 1.09 LBS/SF; 64 SF/CTN

Minimum Order Quantity
1 carton, excludes made-to-order: Cortega Square Lay-in or Tegular sizes

Metric Items Available
770M, 824M, 769M, 773M, 772M, 2195M, 704M, 703M, 823M – Metric items are subject to extended lead times and minimum quantities. Contact your representative for more details.

TechLine / 1 877 276-7876
armstrongceilings.com/cortega
BPCS-3017-924

Armstrong® World Industries

MINERAL FIBER – Standard

2 SUSPENDED ACOUSTIC CEILING SYSTEM
A403a 12" = 1'-0"

REFER TO WALL TYPES FOUND ON SHEET A101a

Gold Bond® XP® Hi-Impact® Gypsum Board

TECHNICAL DATA

Physical Properties	XP Hi-Impact
Thickness[1], Nominal	5/8" (15.9 mm)
Width[1], Nominal	4' (1,219 mm)
Length[1,4], Standard	8' – 12' (2,438 mm - 3,658 mm)
Weight, Nominal	2.8 lbs./sq. ft.(13.67 k/m²)
Edges[1]	Tapered
Flexural Strength[1], Perpendicular	≥ 147 lbf. (654 N)
Flexural Strength[1], Parallel	≥ 46 lbf. (205 N)
Humidified Deflection[1]	≤ 5/8" (16 mm)
Nail Pull Resistance[1]	≥ 87 lbf. (387 N)
Hardness[1] – Core, Edges and Ends	≥ 11 lbf. (49 N)
Bending Radius	15' (4,572 mm)
Thermal Resistance[5]	R = .56
Permeance[6]	37 perms
Water Absorption[1] (% of Weight)	< 5%
Mold Resistance[7], ASTM D3273	Score of 10
Mold Resistance[8], ASTM G21	Score of 0
Surface Abrasion[9]	Level 3
Indentation[9]	Level 1
Soft-Body Impact[9]	Level 3
Hard-Body Impact[9]	Level 3
Product Standard Compliance	ASTM C1396
Fire-Resistance Characteristics	
Core Type	Type X
UL Type Designation	FSW
Combustibility[2]	Non-combustible Core
Surface Burning Characteristics[3]	Class A
Flame Spread[3]	15
Smoke Development[3]	0

Applicable Standards and References
ASTM C473 *Standard Test Methods for Physical Testing of Gypsum Panel Products*
ASTM C518 *Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*
ASTM C840 *Standard Specification for Application and Finishing of Gypsum Board*
ASTM C1396 *Standard Specification for Gypsum Board*
ASTM C1629 *Standard Classification for Abuse Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels*
ASTM D3273 *Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*
ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*
ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials*
ASTM E119 *Standard Test Methods for Fire Tests of Building Construction and Materials*
ASTM E136 *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*
ASTM G21 *Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi*
Gypsum Association, GA-214, *Levels of Finish for Gypsum Panel Products*
Gypsum Association, GA-216, *Application and Finishing of Gypsum Panel Products*
Gypsum Association, GA-238, *Guidelines for Prevention of Mold Growth on Gypsum Board*
Gold Bond Building Products, LLC Manufacturer Standards, *NGC Construction Guide*

1. Specified values per ASTM C1396, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E136.
3. Tested in accordance with ASTM E84.
4. Special lengths may be available. Contact your local sales representative for more information.
5. Tested in accordance with ASTM C518.
6. Tested in accordance with ASTM E96.
7. Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274.
8. Tested in accordance with ASTM G21.
9. Tested in accordance with ASTM methods in ASTM C1629 – D4977 (Surface Abrasion), D5420 (Indentation), E695 (Soft-Body Impact), Annex A1 (Hard-Body Impact).

XP® HI-IMPACT®

2

1 GYPSUM BOARD- IMPACT RESISTANT
A403a 12" = 1'-0"

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

PETER S. LOOPER Registered Architect 11444 ASHEVILLE, North Carolina N.C.

08/20/25

SHEET NAME:
SPECIFICATIONS

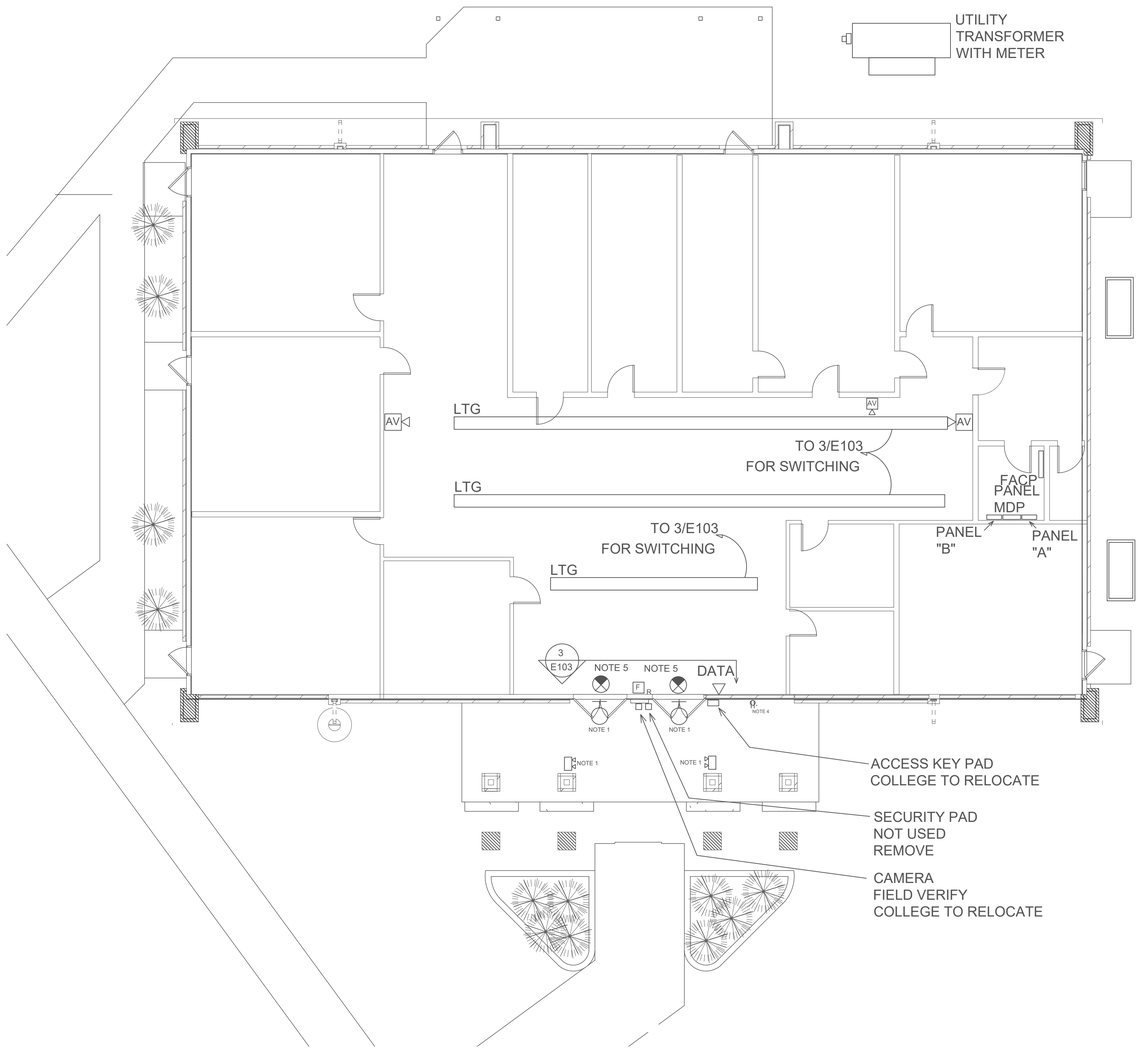
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: **08/20/25**
PROJECT #: **24-002**
DRAWN BY: **PSL**

SHEET NUMBER
A403a



1 / E101 KEY PLAN - ELECTRIC - EXISTING
1/8" = 1'-0"

NOTE 1:

1. REMOVE EXISTING LIGHTING FIXTURES FROM PORTICO OVERHEAD AND TURN OVER TO COLLEGE.
2. FIELD VERIFY WITH COLLEGE EXISTING LIGHTING TO BE REMOVED.
3. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
4. REMOVE EXISTING RECEPTACLE AND CONDUCTORS.
5. EXISTING EXIT SIGN TO REMAIN AND BE REUSED.
6. EXISTING LIGHTING TO REMAIN AND BE REUSED.
7. ACCESS CONTROL (WITH VIDEO) ON ENTRY DOORS. COLLEGE TO DIRECT RELOCATION.
8. PREBID CONFERENCE REQUIRED FOR BIDDERS. COUNTY SECURITY & DATA RESPONSIBILITIES WILL BE INVITED TO DISCUSS COUNTY, GENERAL CONTRACTOR RESPONSIBILITIES COMPONENTS BY OWNER.
9. CONDUIT TO DATA/SECURITY ENDPOINTS SHALL BE INSTALLED TO JUNCTION BOXES AT END TERMINATION POINTS, UNLESS INSTRUCTED OTHERWISE IN THE ELECTRICAL DRAWINGS, SHALL BE PROVIDED AND INSTALLED BY THE GC.
10. THE GC SHALL INSTALL AND SECURE TEMPORARY PULL STRINGS FOR INSTALLATION OF DATA AND SECURITY WIRING & CABLING BY OTHERS.

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
B. Augustus Sims
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 1010 Asheville, North Carolina, 28814
(828) 776-6143 gsims@bellsouthnet.com

SHEET NAME:
KEY PLAN – ELECTRIC – EXISTING

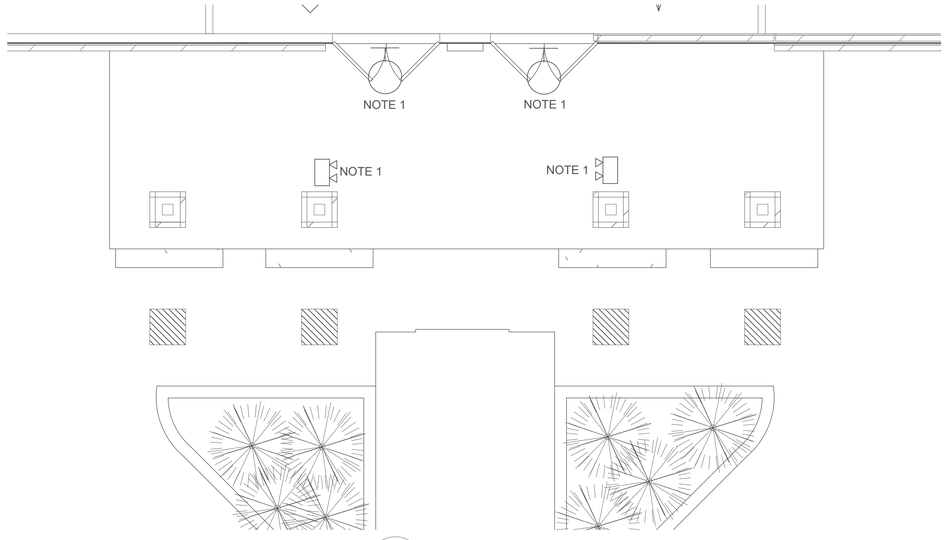
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

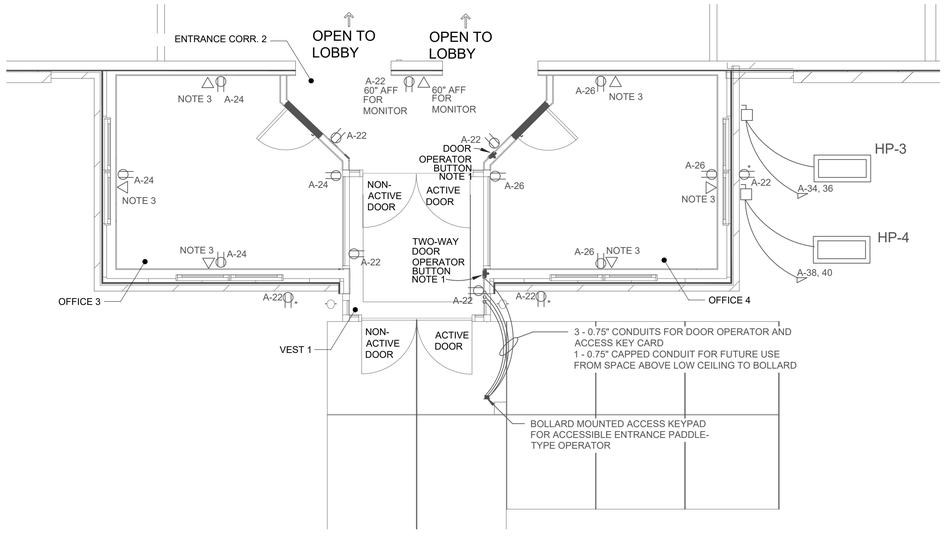
SHEET NUMBER
E101



1 / E102 LIGHTING PLAN - EXISTING
1/4" = 1'-0"

NOTES:

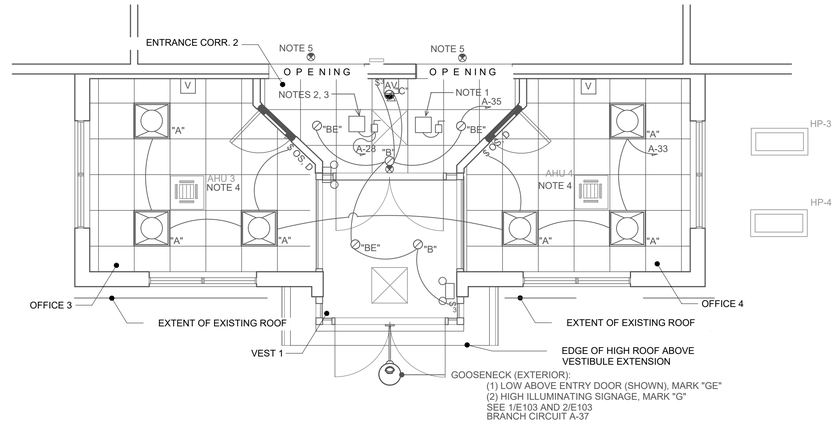
1. REMOVE EXISTING PORTICO LIGHTING FIXTURES AND TURN OVER TO COLLEGE



2 / E102 POWER PLAN - PROPOSED
1/4" = 1'-0"

NOTES:

1. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DOOR OPERATOR BUTTON LOCATIONS
   - PROVIDE BOXES AND 3 - 0.75" CONDUIT FROM BOX TO DOOR OPERATOR CONTROL PANEL PER DOOR OPERATOR MANUFACTURER INSTRUCTIONS
   - COORDINATE WITH DOOR VENDOR



3 / E102 LIGHTING PLAN - PROPOSED
1/4" = 1'-0"

NOTES:

1. FIXTURE "GE" REMOTE BATTERY IN ACCESSIBLE CEILING CAVITY LOCATION
2. DOOR OPERATOR CONTROL PANEL IN ACCESSIBLE CEILING CAVITY LOCATION
3. COORDINATE DOOR OPERATOR LINE VOLTAGE AND CONTROL CONDUITS WITH DOOR OPERATOR CONTRACTOR
4. AHU FED FROM HP UNIT
   COORDINATE ELECTRICAL WITH MECHANICAL CONTRACTOR
5. EXISTING EXIT SIGN TO REMAIN AND BE REUSED.

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 18283 Asheville, North Carolina, 28814
(828)-776-6145 gsims@bsimsengineer.com

SHEET NAME:
ELECTRICAL PLANS

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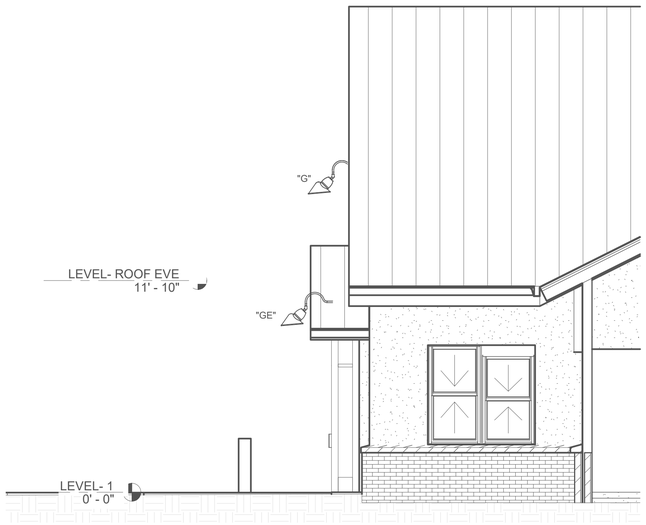
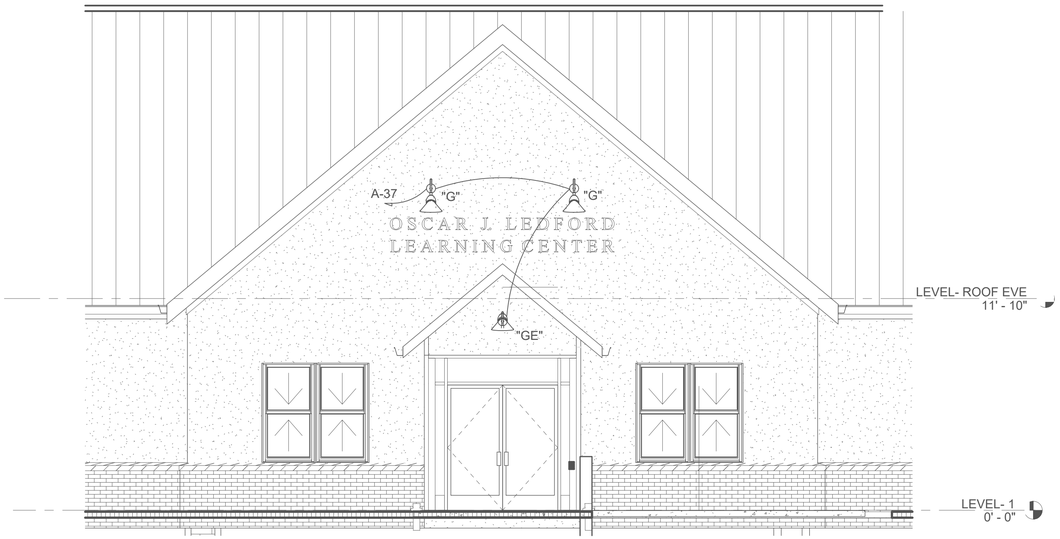
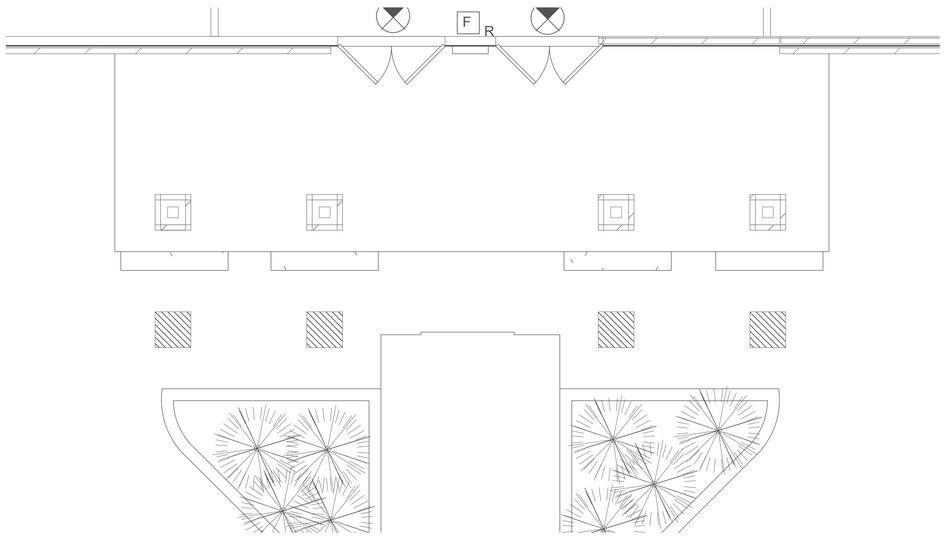
E102



1 E103 LIGHTING SIDE ELEVATION - PROPOSED
1/4" = 1'-0"



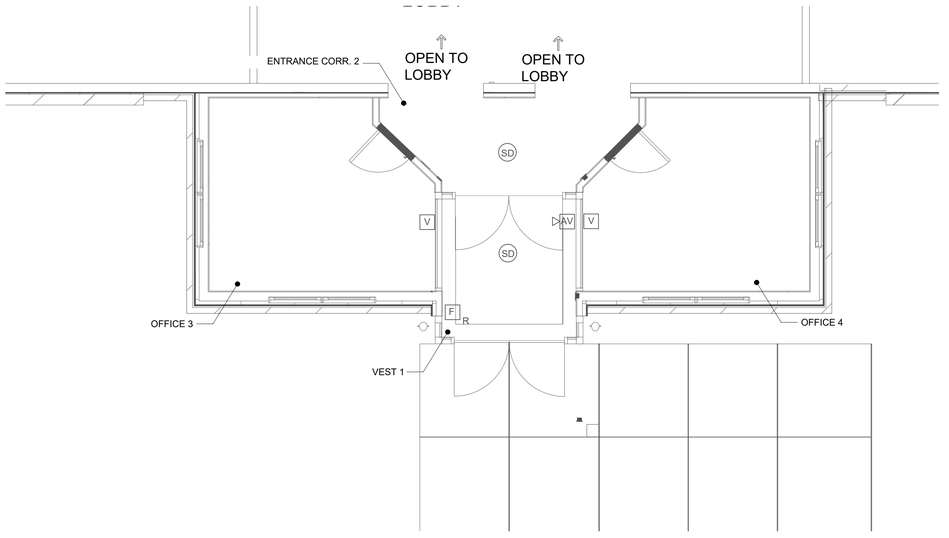
2 E103 LIGHTING FRONT ELEVATION - PROPOSED
1/4" = 1'-0"



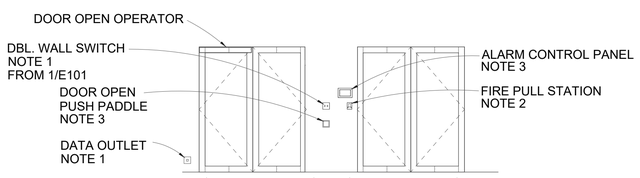
3 E103 FIRE ALARM PLAN - EXISTING
1/4" = 1'-0"

NOTES:

1. EXISTING FIRE ALARM SYSTEM AND DEVICES TO BE REUSED "AS IS" EXCEPT NOTED PULL STATION PULL STATION TO BE RELOCATED



4 E103 FIRE ALARM PLAN - PROPOSED
1/4" = 1'-0"



5 E103 INTERIOR - EXISTING
1/4" = 1' 0"

NOTES:

1. EXISTING TO BE REUSED, RELOCATE TO COORDINATE WITH CONSTRUCTION AND MACON COUNTY.
2. EXISTING TO BE RELOCATED
3. EXISTING TO BE MANAGED BY COLLEGE, RELOCATE TO COORDINATE WITH CONSTRUCTION AND MACON COUNTY.

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 15303 Asheville, North Carolina, 28814
(828)-776-6145 gsims@businessmgtassist.com

SHEET NAME:
ELECTRICAL ELEVATIONS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
E103

PANEL SCHEDULE – "MDP" EXISTING

PANEL DESIGNATION: MDP | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 600 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	SPACE	–	– / –			60	A/H ATTIC UNIT	2
3	AC COMPRESSOR	20		– / –		–	–	4
5	–	2P			– / –	30	A/H ATTIC UNIT	6
7	A/H CLOSET LEFT UNIT	30	– / –			–	–	8
9	–	2P		– / –		50	AC COPMRESSOR	10
11	A/H CLOSET LEFT UNIT	60			– / –	–	–	12
13	–	2P	– / –			40	SPARE	14
15	AC COMPRESSOR	50		– / –		–	–	16
17	–	2P			– / –	50	AC COMPRESSOR	18
19	A/H CLOSET RIGHT UNIT	60	– / –			–	–	20
21	–	2P		– / –		60	A/H ATTIC UNIT	22
23	SURGE ARRESTOR	30			– / –	–	–	24
25	–	3P	– / –			30	A/H ATTIC UNIT	26
27	–	3P		– / –		–	–	28
29	–	–			– / –	–	SPARE	30

31 — 200A 3-PHASE PANEL 'A'
32 — 200A 3-PHASE PANEL 'B'
33 — SPARE ONLY 3-PHASE
34 — SPACE ONLY 3-PHASE
MCB 600A 120/208V 3-PHASE

TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP

PANEL SCHEDULE – "PANEL A" EXISTING

PANEL DESIGNATION: A | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 200 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	CLASSROOM 5 & OFFICE LIGHTING	–	– / –			–	INFO TECH OUTLETS	2
3	CLASS 4, STORAGE, UTIL., & TECH LIGHTING	–		– / –		–	STORAGE ROOM OUTLETS	4
5	SPARE	–			– / –	–	UTILITY ROOM & HALLWAY OUTLETS	6
7	CLASSROOM 5 OUTLETS	–	– / –			–	OFFICE & HALLWAY OUTLETS	8
9	CLASSROOM 5 OUTLETS	–		– / –		–	OFFICE OUTLETS	10
11	CLASSROOM 5 PROJECTOR OUTLET	–			– / –	–	ENTRY AREA OUTLETS & 2 FRONT EXT. OUTLETS	12
13	FACULTY WORK AREA & OFFICE LIGHTING	–	– / –			–	FRONT ENTRY KITCHEN AREA CAN LIGHTING	14
15	BATHROOM LIGHTING & EXHAUST FANS	–		– / –		–	FRONT ENTRY FOYER LIGHTING	16
17	SPARE	–			– / –	–	FRONT ENTRY KITCHEN AREA & HALL LIGHTING	18
19	–	–	– / –			–	FRONT ENTRY EXT. LIGHTING & HANDICAP DOOR	20
21	FIRE ALARM CIRCUIT 1 OF 2	–		– / –		–	SPARE	22
23	GREENHOUSE	40			– / –	–	SPARE	24
25	–	2P	– / –			–	SPARE	26
27	FIRE ALARM CIRCUIT 2 OF 2	–		– / –		–	SPARE	28
29	CUBICLE POWER	–			– / –	30	WATER HEATER	30
31	CUBICAL POWER	–	– / –			2P	–	32
33	S/O	–		– / –		–	S/O	34
35	S/O	–			– / –	–	S/O	36
37	S/O	–	– / –			–	S/O	38
39	S/O	–		– / –		–	S/O	40
41	S/O	–			– / –	–	S/O	42

TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP

PANEL SCHEDULE – "PANEL B" EXISTING

PANEL DESIGNATION: B | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 200 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	CLASSROOM 4 OUTLETS	–	– / –			–	CLASSROOM 3 OUTLETS	2
3	CLASSROOM 4 OUTLETS	–		– / –		–	CLASS 3 OUTLETS & HALL OUTLET	4
5	CLASSROOM 4 PROJECTOR OUTLET	–			– / –	–	CLASSROOM 3 PROJECTOR OUTLET	6
7	FACULTY WORK AREA OUTLETS	–	– / –			–	SCC OFFICE/TUTORING OFFICE & HALL OUTLETS	8
9	FACULTY WORK AREA OUTLETS & EXT. OUTLET	–		– / –		–	SPARE	10
11	SPARE	–			– / –	–	PROJECTOR ENTRY AREA	12
13	WOMEN'S BATH OUTLETS	–	– / –			–	VENDING OUTLETS	14
15	MEN'S BATH OUTLETS & HALL OUTLET	–		– / –		–	MICROWAVE	16
17	DRINKING FOUNTAIN	–			– / –	–	KITCHEN COUNTER OUTLETS	18
19	VENDING OUTLETS	–	– / –			–	CLASSROOM 1 & 2 LIGHTING	20
21	MICROWAVE	–		– / –		–	CLASSROOM 3 & SCC OFFICE LIGHTING	22
23	KITCHEN COUNTER OUTLETS	–			– / –	–	BACK HALL & LOCKER AREA LIGHTING	24
25	FACULTY KITCHEN OUTLETS	–	– / –			–	CLASSROOM 1 OUTLETS	26
27	FACULTY KITCHEN OUTLETS	–		– / –		–	CLASSROOM 1 OUTLETS & HALL OUTLETS	28
29	FACULTY OFFICE OUTLETS	–			– / –	–	CLASSROOM 1 PROJECTOR OUTLET	30
31	FACULTY COPIER	–	– / –			–	CLASSROOM 2 OUTLETS	32
33	S/O	–		– / –		–	CLASSROOM 2 OUTLETS & HALL OUTLETS	34
35	S/O	–			– / –	–	CLASSROOM 2 PROJECTOR OUTLET	36
37	S/O	–	– / –			50	STOVE	38
39	S/O	–		– / –		2P	–	40
41	S/O	–			– / –	–	S/O	42

TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP

PANEL SCHEDULE – "MDP" PROPOSED

PANEL DESIGNATION: MDP | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 600 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	SPACE	–	– / –			60	A/H ATTIC UNIT	2
3	AC COMPRESSOR	20		– / –		–	–	4
5	–	2P			– / –	30	A/H ATTIC UNIT	6
7	A/H CLOSET LEFT UNIT	30	– / –			–	–	8
9	–	2P		– / –		50	AC COPMRESSOR	10
11	A/H CLOSET LEFT UNIT	60			– / –	–	–	12
13	–	2P	– / –			40	SPARE	14
15	AC COMPRESSOR	50		– / –		–	–	16
17	–	2P			– / –	50	AC COMPRESSOR	18
19	A/H CLOSET RIGHT UNIT	60	– / –			–	–	20
21	–	2P		– / –		60	A/H ATTIC UNIT	22
23	SURGE ARRESTOR	30			– / –	–	–	24
25	–	3P	– / –			30	A/H ATTIC UNIT	26
27	–	3P		– / –		–	–	28
29	–	–			– / –	–	SPARE	30

31 — 200A 3-PHASE PANEL 'A'
32 — 200A 3-PHASE PANEL 'B'
33 — SPACE ONLY 3-PHASE
34 — SPACE ONLY 3-PHASE
MCB 600A 120/208V 3-PHASE

TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP

PANEL SCHEDULE – "PANEL A" PROPOSED

PANEL DESIGNATION: A | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 200 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	CLASSROOM 5 & OFFICE LIGHTING	–	– / –			–	INFO TECH OUTLETS	2
3	CLASS 4, STORAGE, UTIL., & TECH LIGHTING	–		– / –		–	STORAGE ROOM OUTLETS	4
5	SPARE	–			– / –	–	UTILITY ROOM & HALLWAY OUTLETS	6
7	CLASSROOM 5 OUTLETS	–	– / –			–	OFFICE & HALLWAY OUTLETS	8
9	CLASSROOM 5 OUTLETS	–		– / –		–	OFFICE OUTLETS	10
11	CLASSROOM 5 PROJECTOR OUTLET	–			– / –	–	ENTRY AREA OUTLETS & 2 FRONT EXT. OUTLETS	12
13	FACULTY WORK AREA & OFFICE LIGHTING	–	– / –			–	FRONT ENTRY KITCHEN AREA CAN LIGHTING	14
15	BATHROOM LIGHTING & EXHAUST FANS	–		– / –		–	FRONT ENTRY FOYER LIGHTING	16
17	SPARE	–			– / –	–	FRONT ENTRY KITCHEN AREA & HALL LIGHTING	18
19	–	–	– / –			–	FRONT ENTRY EXT. LIGHTING & HANDICAP DOOR	20
21	FIRE ALARM CIRCUIT 1 OF 2	–		– / 800		–	RECEPT, VEST 1, ENT 2, HP	22
23	GREENHOUSE	40			800 / –	–	RECEPT, OFFICE 3	24
25	–	2P	– / 800			–	RECEPT, OFFICE 4	26
27	FIRE ALARM CIRCUIT 2 OF 2	–		– / 1000		–	DOOR OPERATOR	28
29	CUBICLE POWER	–			– / –	30	WATER HEATER	30
31	CUBICAL POWER	–	– / –			2P	–	32
33	LTG, OFFICE 3,4	–		– / 936		15	HP-3 / AHU-3	34
35	LTG, VESTIBULE	–			– / 936	2P	2-#12, 1-#12 GRD 0.75" C	36
37	LTG, EXTERIOR	–	– / 936			15	HP-4 / AHU-4	38
39	S/O	–		– / 936		2P	2-#12, 1-#12 GRD 0.75" C	40
41	S/O	–			– / –	–	S/O	42

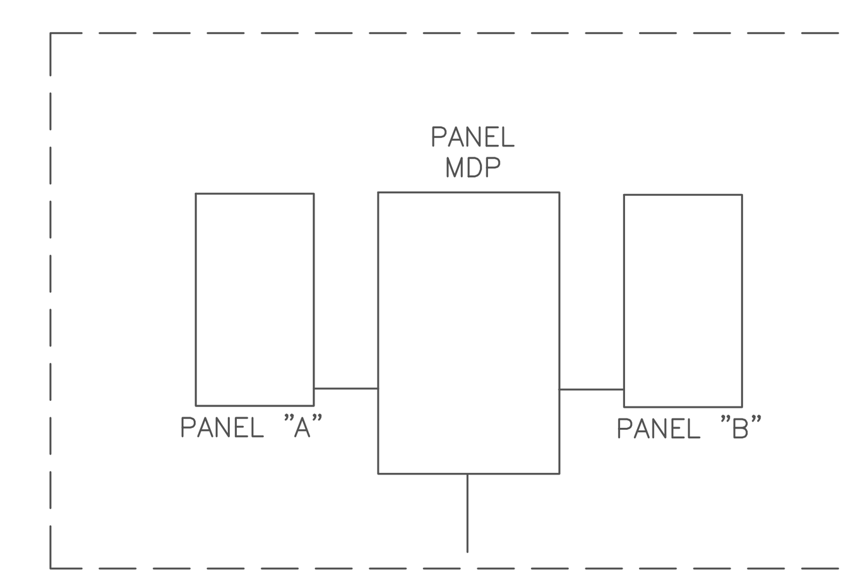
TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP

PANEL SCHEDULE – "PANEL B" PROPOSED

PANEL DESIGNATION: B | LOCATION: – | ENCLOSURE: ☒ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/208 | BUS RATING: 200 AMPS | ☐ MLO ☒ MCB | PHASE: 3 | NO. OF WIRES: 4
TYPE: ☒ NQOD ☐ NEHB ☐ I-LINE | MOUNTING: ☒ SURFACE ☐ FLUSH | INTERRUPTING RATING: – AMPS RMS FULLY RATED
SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY
OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	PHASE C VA	CB	LOAD	CIRC. NO
1	CLASSROOM 4 OUTLETS	–	– / –			–	CLASSROOM 3 OUTLETS	2
3	CLASSROOM 4 OUTLETS	–		– / –		–	CLASS 3 OUTLETS & HALL OUTLET	4
5	CLASSROOM 4 PROJECTOR OUTLET	–			– / –	–	CLASSROOM 3 PROJECTOR OUTLET	6
7	FACULTY WORK AREA OUTLETS	–	– / –			–	SCC OFFICE/TUTORING OFFICE & HALL OUTLETS	8
9	FACULTY WORK AREA OUTLETS & EXT. OUTLET	–		– / –		–	SPARE	10
11	SPARE	–			– / –	–	PROJECTOR ENTRY AREA	12
13	WOMEN'S BATH OUTLETS	–	– / –			–	VENDING OUTLETS	14
15	MEN'S BATH OUTLETS & HALL OUTLET	–		– / –		–	MICROWAVE	16
17	DRINKING FOUNTAIN	–			– / –	–	KITCHEN COUNTER OUTLETS	18
19	VENDING OUTLETS	–	– / –			–	CLASSROOM 1 & 2 LIGHTING	20
21	MICROWAVE	–		– / –		–	CLASSROOM 3 & SCC OFFICE LIGHTING	22
23	KITCHEN COUNTER OUTLETS	–			– / –	–	BACK HALL & LOCKER AREA LIGHTING	24
25	FACULTY KITCHEN OUTLETS	–	– / –			–	CLASSROOM 1 OUTLETS	26
27	FACULTY KITCHEN OUTLETS	–		– / –		–	CLASSROOM 1 OUTLETS & HALL OUTLETS	28
29	FACULTY OFFICE OUTLETS	–			– / –	–	CLASSROOM 1 PROJECTOR OUTLET	30
31	FACULTY COPIER	–	– / –			–	CLASSROOM 2 OUTLETS	32
33	S/O	–		– / –		–	CLASSROOM 2 OUTLETS & HALL OUTLETS	34
35	S/O	–			– / –	–	CLASSROOM 2 PROJECTOR OUTLET	36
37	S/O	–	– / –			50	STOVE	38
39	S/O	–		– / –		2P	–	40
41	S/O	–			– / –	–	S/O	42

TOTAL CONNECTED LOAD VA: – | – | –
TOTAL CONNECT LOAD AMP



1 / E201 POWER RISER DIAGRAM – EXISTING & PROPOSED
NOT TO SCALE

NOTES:
1. PEAK DEMAND PER DUKE ENERGY: 63.92 kVA

L O O P E R ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:
MACON COUNTY EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 18263 Asheville, North Carolina, 28814
(828)-776-6145 gsims@basimsengineer.com

SHEET NAME: ELECTRICAL SCHEDULES & LEGENDS

PHASE: CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
E201

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
$	SINGLE POLE TOGGLE SWITCH, BRASS TERMINAL SCREWS, 20 A HUBBLE CS 120
$3	3-WAY TOGGLE SWITCH, BRASS TERMINAL SCREWS 20 A HUBBLE
$SL	DIMMING SWITCH FOR LED, 0-10 VOLTS 20 A HUBBLE
$OS, D	SWITCH, OCCUPANT SENSOR CONTROL AND DIMMER
$$	TWO$ OR $3 FOR DUAL-LEVEL SWITCHING.
	RECEPTACLE, BRASS STRAP AND BRASS SCREWS, 20 AMP, PASS & SEYMOUR # PS5362
GF	RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING, 20 AMP. AUTO SELF TEST HUBBELL # GFR5362
*	RECEPTICALE, WEATHER RESISTANT, GFI 20 AMP. SELF TEST HUBBLE # HBL-8300
	EQUIPMENT HARD-WIRED CONNECTION, FIELD VERIFY TO MATCH EQUIPMENT
	SPECIAL PURPOSE RECEPTACLE FIELD VERIFY TO MATCH PLUG PROVIDED WITH EQUIPMENT
	DATA/COMM OUTLET. INSTALL BOX AND 0.75" CONDUIT NOTE 2, AND SPECIFICATION 3.3-DATA
$3D	SWITCH, LED DIMMER, 1 AND 3 WAY, 0-10 VOLTS LUTRON NTSTV-DV
	FUSED DISCONNECT, NEMA 3R EXTERIOR

NOTES:

1. RECEPTACLE AND SWITCH FACE PLATES TO BE STAINLESS STEEL
2. STUB 0.75" CONDUIT INTO CEILING CAVITY, LOCATION TO BE DETERMINED BY MACON COUNTY. TERMINATE WITH BUSHING. COLLEGE WILL PROVIDE DATA CABLE AND FACEPLATES. SEE SPECIFICATION 3.3-DATA
3. ALL DEVICES TO BE SPECIFICATION GRADE.

2018 APPENDIX B

BUILDING CODE SUMMARY

ELECTRICAL SYSTEM AND SUMMARY

METHOD OF COMPLIANCE:
ENERGY CODE: [X] PRESCRIPTIVE [ ] PERFORMANCE
ASHRAE 90.1: [ ] PRESCRIPTIVE [ ] PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE):
LAMP TYPE REQUIRED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF LAMPS IN FIXTURE (SEE FIXTURE SCHEDULE)
BALLAST TYPE USED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF BALLASTS IN FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL WATTAGE PER FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED 0.83 VS. 1.26
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED VS. 720

METHOD OF COMPLIANCE:

506.2.1	MORE EFFICIENT MECHANICAL EQUIPMENT	[X] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.2	REDUCED LIGHTING POWER DENSITY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.3	ENERGY RECOVERY VENTILATION SYSTEM	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.4	HIGHER EFFICIENY SERVICE WATER HEATING	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.5	ON-SITE SUPPLY OF RENEWABLE ENERGY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.6	AUTOMATIC DAYLIGHTING CONTROL SYSTEMS	[ ] PRESCRIPTIVE	[ ] PERFORMANCE

2018 APPENDIX B

BUILDING CODE SUMMARY

ELECTRICAL SYSTEM AND SUMMARY

METHOD OF COMPLIANCE:
ENERGY CODE: [X] PRESCRIPTIVE [ ] PERFORMANCE
ASHRAE 90.1: [ ] PRESCRIPTIVE [ ] PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE):
LAMP TYPE REQUIRED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF LAMPS IN FIXTURE (SEE FIXTURE SCHEDULE)
BALLAST TYPE USED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF BALLASTS IN FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL WATTAGE PER FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED 0.78 W/SF VS. 0.82 W/SF
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED 150.0W SPECIFIED VS. 180W ALLOWANCE

METHOD OF COMPLIANCE:

506.2.1	MORE EFFICIENT MECHANICAL EQUIPMENT	[X] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.2	REDUCED LIGHTING POWER DENSITY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.3	ENERGY RECOVERY VENTILATION SYSTEM	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.4	HIGHER EFFICIENY SERVICE WATER HEATING	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.5	ON-SITE SUPPLY OF RENEWABLE ENERGY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.6	AUTOMATIC DAYLIGHTING CONTROL SYSTEMS	[ ] PRESCRIPTIVE	[ ] PERFORMANCE

2018 APPENDIX B

BUILDING CODE SUMMARY

ELECTRICAL SYSTEM AND SUMMARY

METHOD OF COMPLIANCE:
ENERGY CODE: [X] PRESCRIPTIVE [ ] PERFORMANCE
ASHRAE 90.1: [ ] PRESCRIPTIVE [ ] PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE):
LAMP TYPE REQUIRED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF LAMPS IN FIXTURE (SEE FIXTURE SCHEDULE)
BALLAST TYPE USED IN FIXTURE (SEE FIXTURE SCHEDULE)
NUMBER OF BALLASTS IN FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL WATTAGE PER FIXTURE (SEE FIXTURE SCHEDULE)
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED 0.83 VS. 1.26
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED VS. 720

METHOD OF COMPLIANCE:

506.2.1	MORE EFFICIENT MECHANICAL EQUIPMENT	[X] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.2	REDUCED LIGHTING POWER DENSITY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.3	ENERGY RECOVERY VENTILATION SYSTEM	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.4	HIGHER EFFICIENY SERVICE WATER HEATING	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.5	ON-SITE SUPPLY OF RENEWABLE ENERGY	[ ] PRESCRIPTIVE	[ ] PERFORMANCE
506.2.6	AUTOMATIC DAYLIGHTING CONTROL SYSTEMS	[ ] PRESCRIPTIVE	[ ] PERFORMANCE

LIGHTING FIXTURE SCHEDULE

MARK	WATTS	NOMINAL LUMENS	COLOR TEMP	VOLTS	DESCRIPTION
	3.0 (MAXIMUM)	.	.	120	LED EMERGENCY LIGHT, TWO HEAD, BATTERY BACK-UP, 55' SPACING COMPASS CU2HL
	.	.	.	.	EXTERIOR EMERGENCY LIGHT SEE FIXTURE MARK "GE"
	.	.	.	.	EXIT SIGN, LED, BATTERY BACK-UP COMPASS CCE EXIT SERIES
A	30	.	.	120	LED, ARCHITECTURAL TROFFER, CENTER BASKET, 2X2, GRID CEILING INSTALLATION, DIMMABLE COLUMBIA LCAT22-35MLG-EDU
B	20	.	.	120	LED 6" DOWN LIGHT, GYP BOARD CEILING INSTALLATION PRESCOLITE LFR-6RD-M-10L35K8XW
BE	20	.	.	120	SAME AS "B" EXCEPT TO INCLUDE BATTERY EMERGENCY BACK-UP.
C	20	.	.	120	LED 6" DOWN LIGHT, WALL WASH TRIM, GRID CEILING INSTALLATION PRESCOLITE LFR-6RD-M-10L35K8XW
G	30	.	.	120	LED, EXTERIOR WET LABEL, GOOSE-NECK, NO UP LIGHT, DARK SKIES LABEL, ANGLED SHADE, TIME CLOCK CONTROL RAB FAMILY "GN"
GE	30	.	.	120	LED, REMOTE EMERGENCY BATTERY, EXTERIOR WET LABEL, GOOSE-NECK, ANGLED SHADE, NO UP LIGHT, DARK SKIES LABEL, TIME CLOCK CONTROL, WITH CONSTANT FIXTURE HOT RAB FAMILY "GN"

NOTES:

1. ARCHITECT TO SELECT ALL COLORS
2. ARCHITECT TO PROVIDE FINAL LIGHTING FIXTURE REVIEW AND APPROVAL
3. COORDINATE LOCATION FOR "G" AND "GE" TIME CLOCK WITH COLLEGE

FIRE ALARM LEGEND	
SYMBOL	DESCRIPTION
FR	PULL STATION EXISTING TO BE RELOCATED
AV	AUDIO VISUAL ALARM COORDINATE STROBES EQUIVALENT TO EXISTING, CONNECT TO EXISTING BUILDING FIRE ALARM SYSTEM
V	VISUAL ALARM COORDINATE STROBES EQUIVALENT TO EXISTING, CONNECT TO EXISTING BUILDING FIRE ALARM SYSTEM
SD	SMOKE DETECTOR, CEILING MOUNTED, EQUIVALENT TO EXISTING, CONNECT TO EXISTING BUILDING FIRE ALARM SYSTEM

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
PO. Box 18263 Asheville, North Carolina, 28814
(828)-774-6145 gsims@buildingsmart.com

SHEET NAME:
ELECTRICAL SCHEDULES & LEGENDS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
E202

SECTION 16010

BASIC ELECTRICAL REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Basic Electrical Requirements specifically applicable to Division 16 in addition to Division 1 - General Requirements.

1.2 SCOPE OF WORK

A. Provide power distribution equipment, conductors, luminaires, wiring devices, fire alarm system, and other required materials and labor to produce a complete and operating electrical system. Coordinate service with utility and advise owner of service application procedure. Provide conductors and conduit for all equipment in project. Provide conduit with pull cords for HVAC control circuits and door operation system.
B. Obtain all permits, pay all fees, and request inspection from authority having jurisdiction.
C. All work and materials shall be guaranteed for one year from date of substantial completion.
D. Provide temporary power during construction.
E. provide demolition of all materials made obsolete by this renovation and remove from site.
F. All work to be done in workmanlike manor.

1.3 WORK SEQUENCE

A. Coordinate construction and utility outages (if any) with Owner, all other trades, and utility companies. After-hours work may be required to interrupt service.
B. Notify Engineer of discrepancies in the Contract Documents.
C. E-Mail questions or comments to gsims@basimsengineer.com or call (828)-776-6145.

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable State and Local Building Codes.
B. Fire Alarm: NFPA 72.
C. Electrical: NFPA 70.
D. Life Safety Code, NFPA 101.
E. The Contractor shall install all materials in accordance with State and Local Building Code. Any work that does not comply shall be made to comply at the contractor's expense.
F. All equipment shall be UL or ETL listed for purpose specified.

1.5 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
B. Prepare record drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding. Submit all changes on Record Documents as a requirement of Project Closeout.
C. Refer to Architectural Drawings for dimensions, locations, cabinets, etc. Do not scale Electrical Drawings.
D. Conceal all materials except where the Architect grants specific permission to do otherwise.
E. Arrange electrical work in a neat, well organized manner. Conduit shall run parallel with primary lines of the building construction.
F. Locate operating and control equipment with adequate access for operation and maintenance.
G. Give right-of-way to piping which must slope for drainage.
H. Advise other trades of openings required in their work for the subsequent move-in of large electrical equipment.
I. Coordination Drawings: For locations where several elements of electrical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings showing the actual dimensions required for the installation.

1.6 SUBSTITUTIONS:

The purpose of specifying equipment by catalog number is to establish quality standards, not necessarily to limit submittals. Substitutions may be accepted if approved as equivalent. Contact engineer prior to bid with any questions. If substitutes are not submitted within 14 days after the bid is accepted, then the equipment shall be provided as specified. Contractor submitting substitutions shall be responsible for any additional cost resulting from the substitution.

1.7 EXCAVATING FOR ELECTRICAL WORK

A. General: The work of this article is defined to include whatever excavating and backfilling is necessary to install the electrical work. The contractor shall coordinate the work with other excavating and backfilling in the same area, including dewatering, floor protection provisions, and other temporary facilities. Coordinate the work with other work in the same area, including other underground services, landscape development, paving, and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
B. General Standards: Except as otherwise indicated, comply with the applicable provisions of the Division 2 sections, for plumbing work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
C. Rock Excavation shall be defined as the removal of a formation that cannot be excavated without systematic drilling and blasting or without the use of pneumatic tools. All rock excavation/removal shall be performed by the General Contractor. The Electrical subcontractor shall lay out his work and perform all normal excavation. If rock is encountered, it shall be removed by the General Contractor. The General Contractor shall be responsible for providing backfill material.
D. Sequencing: Delay backfill and encasement of conduit until testing of conductors has been completed.

2. PART 2 GENERAL DESCRIPTION OF WORK

2.1 Coordinate work with other Trades.

2.2 General:

A. Provide all luminaires, wiring devices, conductors, switches, disconnects, fuses, fire alarm system, and other required materials. Coordinate electrical requirements for equipment supplied by other trades prior to ordering electrical materials.
B. Provide UL. listed Fire-Stop penetrations through rated assemblies. See Architectural life safety plans to locate rated assemblies.
C. Identify major equipment with engraved Lamacoid labels.
D. Provide typed panelboard directories.
E. Gang mount switches. Provide continuous switchplate.
F. Electrical Contractor shall provide all penetrations and patching required to install electrical work.
G. Support all luminaires, materials, and equipment from building structure.
H. Install all materials and equipment in accordance with manufacturer's instructions.
I. Telephone service shall meet the requirements of and be coordinated with Utility.
J. Electrical service shall meet the requirements of and be coordinated with Utility.
K. Panelboards shall have copper bus unless otherwise noted.
L. Electrical circuits shall not share neutrals unless otherwise noted.

2.3 Design Requirements vs. Code Minimum Requirements.

A. Some of the design requirements stated for this project exceed the minimum requirements of the NEC. These decisions are usually made in order to:

1. Increase reliability of the system.
2. Increase service life of system components.
3. Enhance system safety beyond the minimum requirements of the NEC.

B. Design requirements that may exceed NEC minimum are most often associated with the following:

1. Insulation type.
2. Conductor size.
3. Conduit type.
4. Conduit couplings.
5. Size of equipment grounding conductor. See NEC section 250.4A5.

3. PART 3 CONDUCTORS & CONDUIT

3.1 Conductors:

A. Unless otherwise noted on plans:

1. Conductors above grade shall be THWN-2 copper.
2. Conductors underground or under slab shall be XHHW copper.

B. All conductors shall be in conduit or other approved raceway.
C. Provide EGC (equipment grounding conductor) with all circuits. Some EGCs are sized larger than the NEC minimum. This is done in order to reduce the probability of EGCs being damaged during ground faults.
D. Conductors smaller than #8 AWG shall be solid.
E. Approved manufacturers. (No other manufacturer's products are permitted.)

ENCORE WIRE
SOUTHWIRE
AFC
GENERAL CABLE
OKONITE
CERROWIRE

F. Line-voltage conductors shall not be smaller than #12 AWG.
G. Branch circuits longer than 75 feet shall be wired with conductors #10 AWG or larger.
H. Provide conductors from electrical devices to noted, existing panels. coordinate with Macon County.

3.2 Conduit and Raceway:

A. Above grade: EMT with compression-type steel couplings and connectors.
B. Below grade: Schedule 40 PVC with Schedule 80 PVC risers, to 12" above slab.
C. Raceway Seal: Where a raceway enters a building or structure from an underground distribution system, it shall be sealed in accordance with NEC 300.5(G). Spare or unused raceways shall also be sealed. Sealant shall be American Polywater FST or equivalent.
D. Conduit shall be trade size 3/4" minimum unless otherwise noted. Exceptions: control wiring, and switches may use trade size 1/2" if sized per NEC.
E. Type MC Cable with copper conductors and green ground may be used for concealed 120 Volt branch circuits in wall and ceiling cavities above grade. Redhead bushings shall be provided at each termination.
F. Support conduit from building structure with threaded rods and hangers, trapeze hangers, channel and clamps, or other approved method.
G. provide conduit from electrical devices to noted, existing panels. Coordinate routes with Macon County. Provide conduit for data outlets, security outlets, and fire alarm devices.

3.3 Data

A. Data outlets, security outlets and fire alarm devices shall have 0.75" conduit with pull-string to concealed location in building to be determined by Macon county. Electrical Contractor to provide conduits and pull-strings.
B. Macon county will provide security and data cable, face-plates and additional components.
C. See fire alarm plan-proposed for fire alarm devices locations.
D. Paint and/or identify fire alarm raceway per codes.
E. See architectural plans for data outlets, security outlets, etc. locations.

4. PART 4 DOCUMENTS AND SUBMITTALS

4.1 SUBMITTALS

A. Submit under provisions of Contract Documents.
B. Identify items with marks to match those shown on drawings.
C. Architect shall approve all colors.
D. All submittals shall have the Contractor's stamp with approval signature.
E. Highlight deviations from specified materials.
F. Product Data: 6 sets, including 3 sets for maintenance manuals. Data shall include the following:

Luminaires
Wiring Devices
Panelboards
Safety Switches
Surge Protective Devices
(SPDs) Fire Alarm System

G. Test Reports (if required): 3 copies
H. Warranties: 6 copies, including 3 for maintenance manuals.
I. Maintenance Manuals: 3 complete sets in loose-leaf 3-ring binders, with rigid permanent vinyl covered back and front. Separators with index tabs shall be provided. One set shall have all sheets individually encased in clear, plastic document protectors.

4.2 CONTROL DATA: Provide control diagrams and wiring diagrams where applicable; include description of control systems, catalog data, and calibration instructions for all components.
Provide name and address of Controls manufacturer and installer.

4.3 MAINTENANCE INSTRUCTION: Typewritten instructions for maintenance of the systems in itemized form and with time schedule shall be furnished.
The instructions shall list each item of equipment requiring inspection, lubrication, or other service.
The operating personnel shall be instructed regarding each maintenance procedure.

5. PART 5 ELECTRICAL WORK CLOSEOUT

5.1 General: Refer to the Division 1 sections for general closeout requirements. Maintain a daily log of operational data on electrical equipment and systems through the closeout period; record hours of operation, assigned personnel, fuel consumption, etc. Submit copy to Owner.

5.2 Record Drawings: Give special attention to the complete and accurate recording of underground circuits, and other concealed or non-accessible work. Record change orders where not shown accurately by contract documents. Submit to Architect/Engineer at end of project one set of reproducible sepias that show all changes in the electrical work.

5.3 Closeout Equipment/Systems Operations: Contractor shall demonstrate sustained, satisfactory performance of all equipment and systems in a test run of appropriate duration.
The Owner's operating personnel shall be present. Adjust or correct equipment as required for proper performance. Clean equipment and luminaires.

5.4 Operating Instructions: Conduct a walk-through instruction seminar for the Owner's personnel. Explain the identification system, operation diagrams, emergency and alarm provisions, and sequencing requirements. Also explain requirements related to seasonal provisions, security, safety, and efficiency.

5.5 Training: Contractor shall provide training on all major equipment, controls, etc, as part of the contract.

5.6 Turn-Over of Operations: At the time of substantial completion, turn over the prime responsibility for operation of the electrical equipment and systems to the Owner's operating personnel. However, until the time of final acceptance, provide one electrician, who is completely familiar with the work, to consult with and continue training the Owner's personnel.

END OF SECTION

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

SHEET NAME:
ELECTRICAL SPECIFICATIONS

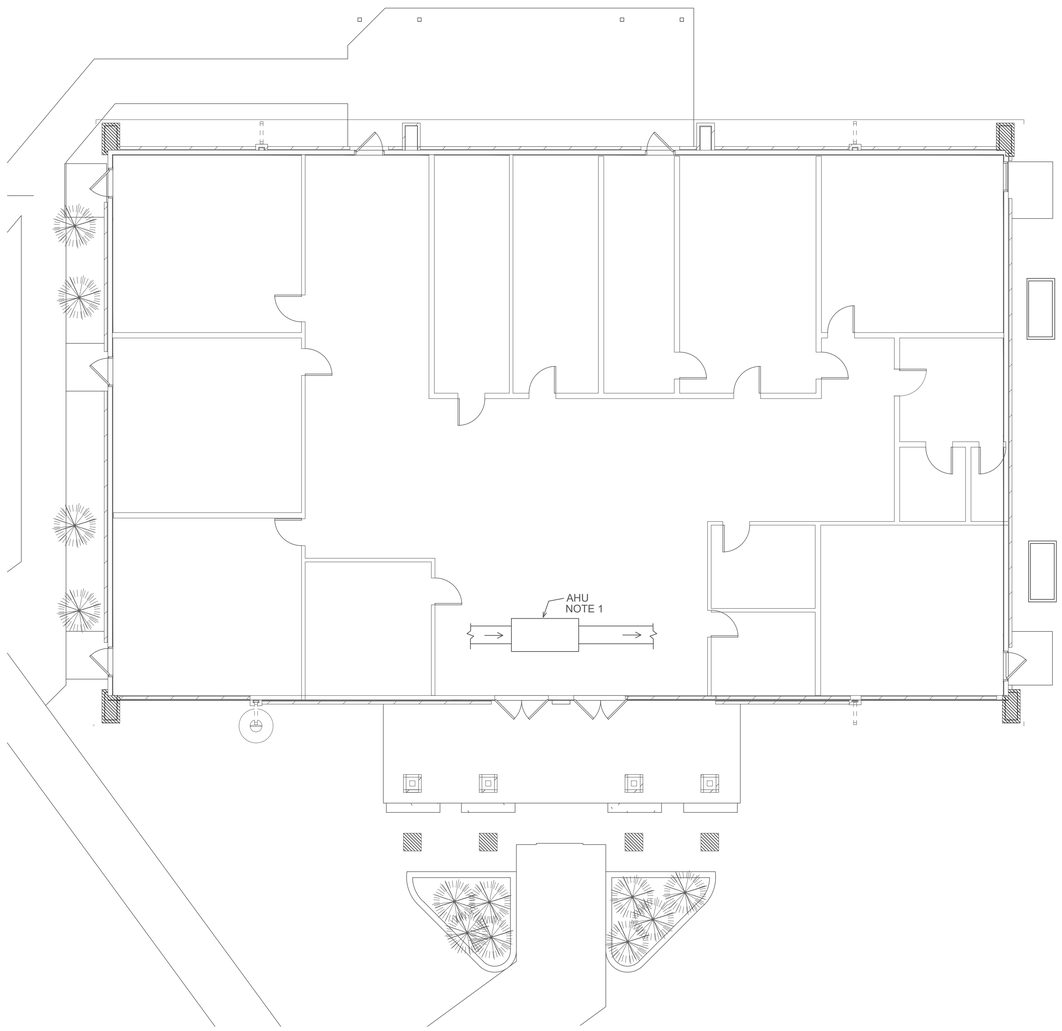
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
E301



1 M101 KEY PLAN - MECHANICAL - EXISTING
1/8" = 1'-0"

NOTES:

1. EXISTING AHU LOCATED IN ATTIC
   FIELD VERIFY
   COORDINATE ATTIC ACCESS WITH COLLEGE
2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 18265 Asheville, North Carolina, 28814
(828)-776-6145 gsims@bsimsengineer.com

SHEET NAME:
KEY PLAN – MECHANICAL – EXISTING

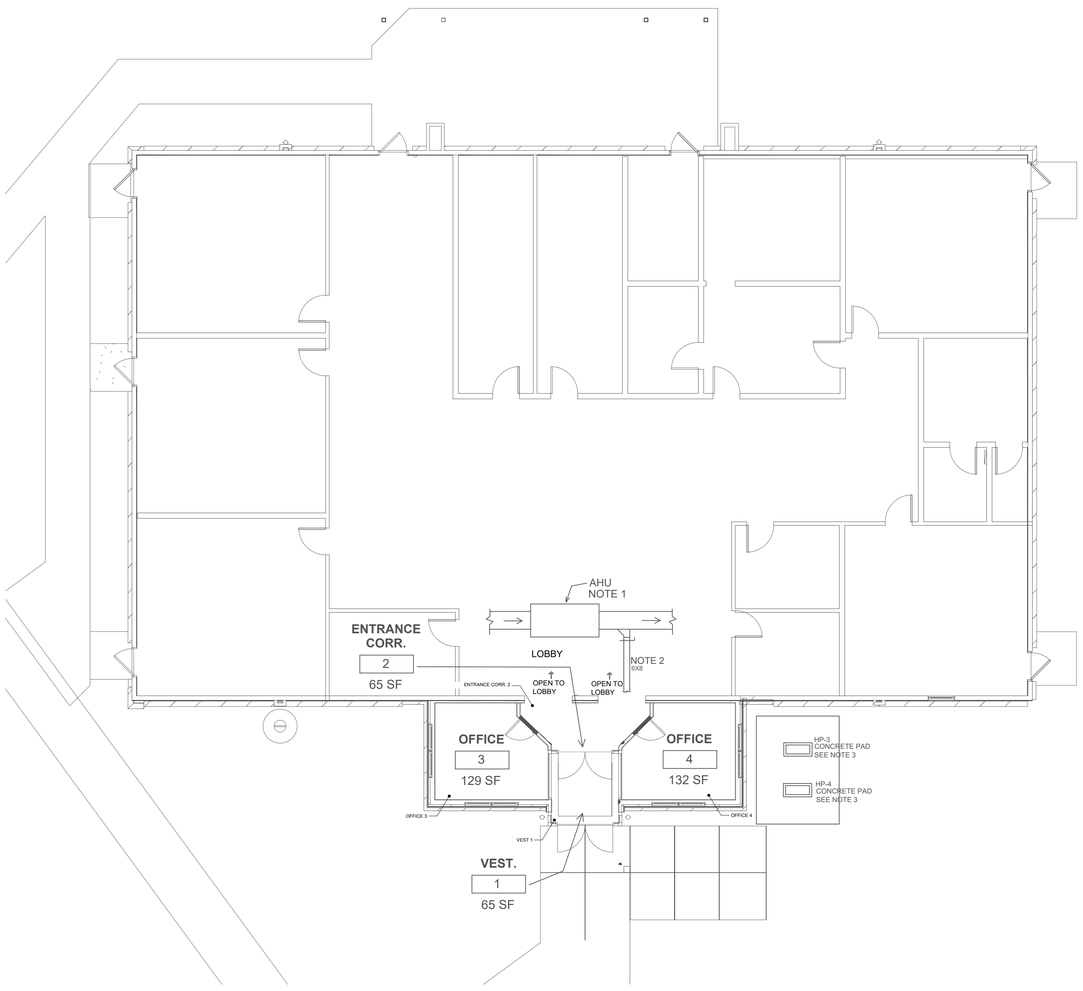
PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

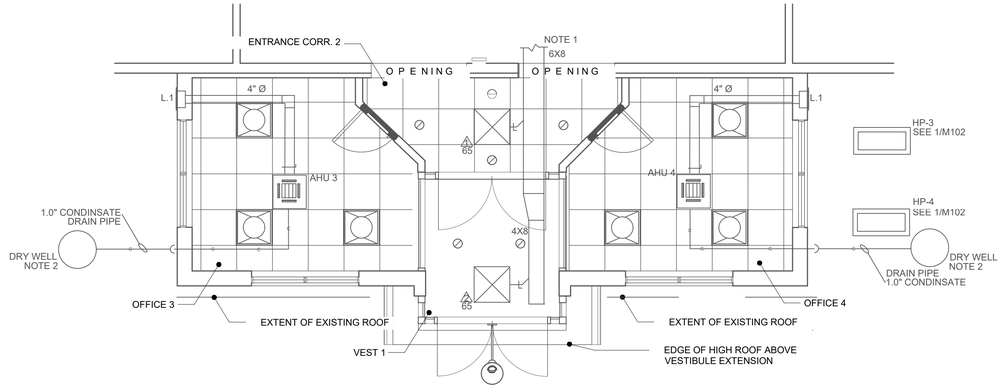
SHEET NUMBER
M101



1 M102 KEY PLAN - MECHANICAL - PROPOSED
1/8" = 1'-0"

NOTES:

1. EXISTING AHU LOCATED IN ATTIC
   FIELD VERIFY
2. DUCT CONTINUED ON 1/M103
3. PROVIDE 4.0" CONCRETE PAD WITH WASHED STONE BASE FOR HP-3 AND HP-4
   PADS TO EXTEND 3.0" BEYOND HP FOOTPRINT
   PAD TOPS TO BE 2.0" ABOVE GRADE
4. DUCT PENETRATES NO KNOWN FIRE RATED ASSEMBLIES



2 M102 MECHANICAL PLAN - PROPOSED
1/4" = 1'-0"

NOTES:

1. DUCT CONTINUES ON 1/M102
2. DRYWELL TO BE CONCRETE PIPE 18" Ø BY 24" DEEP
   WITH COVER FILLED WITH WASH STONE

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:

MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
PO Box 19243 Asheville, North Carolina, 28814
(828)-776-6147 gustus@bsimsengineer.com

SHEET NAME:
MECHANICAL PLANS – PROPOSED

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
M102

SCHEDULE	
MARK	DESCRIPTION
L.1	LOUVER, 4.0" DEEP, WALL MOUNT, 12"X12", EXTRUDED ALUMINUM NAILOR 1604D

AIR SUPPLY SCHEDULE				
MARK	NECK	SQUARE TO ROUND	CFM	DESCRIPTION
1	9"X9"	9"X9" TO 6" ø	1-225	STAMPED SQUARE, STEEL, LAY-IN, WHITE, OPPOSED BLADE DAMPER, T-BAR, CEILING, SQUARE TO ROUND FITTING NAILOR MODEL 6500-0
2	9"X9"	9"X9" TO 6" ø	1-225	STAMPED SQUARE, STEEL, SURFACE MOUNT, WHITE, OPPOSED BLADE DAMPER, T-BAR, GYP BD CEILNG NAILOR MODEL 6500-0

AIR RETURN SCHEDULE			
MARK	NECK	CFM	DESCRIPTION
A	16" ø	800	EGG CRATE RETURN, LAY-IN, 24X24, STEEL, WHITE, OPPOSED BLADE DAMPER NAILOR 4260

HVAC LEGEND	
MARK	DESCRIPTION
1 RTU-1	THERMOSTAT, PROGRAMABLE FOR 5-1-1 DAY WEEKS, NIGHT SET BACK, AUTO HEAT TO COOL, "RTU-1" DENOTES UNIT CONTROLLED PROVIDE THERMOSTAT FOR EACH HVAC SYSTEM. COORDINATE LOCATION WITH ARCHITECT.
12x6	DUCTWORK, RECTANGULAR, GALVANIZED, INTERNAL INSULATION, SEE NOTE 1, 12" DENOTES WIDTH, "6" DEPTH. DIMENSIONS SHOWN ARE FREE AND CLEAR PROVIDE WITH EPA REGISTERED BIOCIDE.
	DUCT TEE, BEND, ELBOW, RADIUS TO CENTER LINE NOT LESS THAN 1.5 TIMES THE WIDTH OR PROVIDE RECTANGULAR ELBOWS WITH DOUBLE THICKNESS (AIR FOIL) TURNING VANES
EF	EXHAUST GRILLE, SEE SCHEDULE
	VOLUME CONTROL DAMPER WITH LOCKING QUADRANT
2 200	DIFFUSER, "2" DENOTES TYPE, SEE SCHEDULE, "200" DENOTES CFM, MAY USE FLEX DUCT TO CONNECT, 5 FEET MAX.
A	RETURN GRILLE, "A" DENOTES TYPE, SAME AS ABOVE
2	DUCT SMOKE DETECTOR WITH AUDIO/VISUAL ALARM PROVIDED BY M.C., SHUTS DOWN UNIT IN ALARM PROVIDE REMOTE KEY TEST STATION W/"ALARM" & "TEST" IN OFFICE
C	CONDENSATE PIPING, SCHEDULE 40 PVC, SUPPORT 5'-0" O.C. INSULATE ABOVE GRADE
SDR	SPLITTER DAMPER/ TURNING VANES ASSEMBLY
OBD	OPPOSED BLAD DAMPER

NOTES:
1.

DUCTLESS MINI SPLIT HEAT PUMP EQUIPMENT SCHEDULE							
UNIT NO.	HEAT PUMP CAPACITY (BTU/h)					POWER	VENTALATION AIR	EQUIPMENT DESCRIPTION
	COOLING CAP			HEATING CAP				
	TOTAL (BTU/HR)	SENSIBLE (BTU/HR)	EER SEER	TOTAL (BTU/HR) 17 DEGREES	COP 17 DEGREES			
HP.3 AHU.3	9000	7200	22.5	6900	2.50	208/240V 1-PHASE	25 CFM	HP: HYPER HEAT INVERTER DRIVEN COMPRESSOR MITSUBISHI SLZ-KF09NA1 AHU: 4-WAY CEILING CASSETTE FOR 24"X24" GRID CEILING, WALL MOUNT AND WIRED, THERMOSTAT, CONDENSATE PUMP MITSUBISHI SUZ-KA09NA2
HP.4 AHU4	9000	7200	22.5	6900	2.50	208/240V 1-PHASE	25 CFM	HP: HYPER HEAT INVERTER DRIVEN COMPRESSOR MITSUBISHI SLZ-KF09NA1 AHU: 4-WAY CEILING CASSETTE FOR 24"X24" GRID CEILING, WALL MOUNT AND WIRED, THERMOSTAT, CONDENSATE PUMP MITSUBISHI SUZ-KA09NA2

APPENDIX B

2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)
MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone 4A
winter dry bulb: 11°F
summer dry bulb: 88°F

Interior design conditions
winter dry bulb: 68°F
summer dry bulb: 74°F
relative humidity: 50

Building heating load: 17760 BTUH

Building cooling load: 1.26 TONS

Mechanical Spacing Conditioning System
Unitary
description of unit: SPLIT SYSTEM HEAT PUMP
heating efficiency: COP @ 17° 2.5
cooling efficiency: 22.4 SEER
size category of unit: < 65,000
Boiler
Size category. If oversized, state reason.: N/A
Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: AS NOTED ABOVE

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:
MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 16263 Asheville, North Carolina, 28816
(828) 776-6140 gussims@bellsouthpanet.com

SHEET NAME:
MECHANICAL
SCHEDULES & LEGENDS

PHASE:
CONSTRUCTION DOCUMENTS

REVISIONS:

#	DESC:	DATE

ISSUE DATE: 08/20/25
PROJECT #: 24-002
DRAWN BY: Author

SHEET NUMBER
M201

SECTION 15010H
BASIC HVAC REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Basic HVAC Requirements specifically applicable to Division 15 Sections, in addition to Division 1 - General Requirements.

1.2 SCOPE OF WORK

A. Provide central HVAC equipment including, but not limited to, controls, thermostats, ventilators, piping, ducting, air distribution equipment, etc., and other required materials to produce complete and operating HVAC system as shown on drawing.
B. Obtain all permits, pay all fees and request inspection from authority having jurisdiction.
C. Provide demolition of all Mechanical materials made obsolete by this project and remove from site. Owner retains salvage rights.
D. All work and materials shall be guaranteed for one year from date of substantial completion.

1.3 WORK SEQUENCE

A. Coordinate construction and utility outages (if any) with Owner, Engineer, all other trades and utility companies.
B. Visit site before submitting bid to confirm existing conditions. Notify Engineer of discrepancies in the Contract Documents and existing conditions.
C. Please E-Mail questions and or comments to gsims@basimsengineer.com or call (828)-776-6145.

1.4 SUBMITTALS

A. Submit under provisions of Contract Documents.
B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal. Identify items with marks to match those shown on drawings.
C. Mark dimensions and values in units to match those specified.
D. Architect shall approve all colors.
E. All submittals shall have the General Contractor's stamp, with approval signature.
F. Highlight deviations from specified materials.
G. Shop Drawings: 6 sets, including 3 for maintenance manuals.
H. Product Data: 6 sets, including 3 sets for maintenance manuals. Data shall include the following, but not limited to:
   1. Gas fired furnaces and A/C units
   2. Insulation
   3. Air Distribution Equipment
   4. Exhaust Fans
   5. Valves
   6. Controls
I. Certifications: 3 copies
J. Test Reports: 3 copies
K. Warranties (Guarantees): 6 copies, including 3 for maintenance manuals.
L. Maintenance Manuals: 3 complete sets with individual sets each of this data bound in 10 1/2 x 11 1/2 loose-leaf 3-ring binders, 1 1/2", 2", or 3" ring size, with rigid permanent vinyl covered back and front. Separators with index tabs and loose-leaf sheet protectors shall be provided. One set shall have all sheets individually encased in clear, plastic document protectors.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable State and Local Building Codes.
B. Fire Protection: Conform to NFPA.
C. Electrical: National Electric Code.
D. Life Safety Code, NFPA 101.
E. All Codes shall be the most recent edition.
F. The Contractor shall install all materials per the State and Local Building Code. Any work that does not comply shall be made to comply at the Contractor's expense.
G. All equipment shall be UL approved for purpose specified.
H. Install all materials and equipment per manufacturer's instructions.

1.6 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
B. Prepare record drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding. Submit all changes on Record Documents as a requirement of project close out.
C. Refer to Architectural drawings for dimensions, locations, cabinets, etc. Do not scale HVAC Drawings.
D. Conceal all duct, piping, etc. except where the Architect/Engineer grants specific permission.
E. Arrange HVAC work in a neat, well organized manner with piping and similar services running parallel with primary lines of the building construction.
F. Locate operating and control equipment properly to provide easy access, and arrange entire mechanical work with adequate access for operation and maintenance.
G. Give right-of-way to piping which must slope for drainage.
H. Advise other trades of openings required in their work for the subsequent move-in of large units of mechanical work (equipment).
I. Coordination Drawings: For locations where several elements of mechanical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings (shop drawings) showing the actual dimensions (at accurate scale) required for the installation. Prepare and submit coordination drawings prior to purchase-fabrication-installation of any of the elements involved in the coordination.

1.7 SUBSTITUTIONS

All products listed are to establish design and quality standards, not to limit submittals. Substitutions may be accepted if approved as equivalent. Contact Engineer prior to bid with any questions. All substitutions must be submitted within 10 days after bid or supply as specified. Highlight substitution deviations from materials specified. Cost incurred to modify project to install substituted materials shall be the responsibility of the Contractor requesting the substitution.

1.8 Provide Valve Directory indicating number, size, manufacturer, location, function, and normal position. Valve tag numbers shall be as specified.

1.9 Mechanical Equipment: Show the following information for all mechanical equipment:
Nameplate designation
Manufacturer's nameplate data
Location of equipment
Area served
Complete parts drawing and list
Manufacturer's operating instructions
Manufacturer's maintenance instructions
Manufacturer's repair manuals
Manufacturer's installation instructions
Nearest supplier for parts and replacements with telephone number
Nearest service organization for equipment with telephone number

1.10 Control Data:
Control diagrams and wiring diagrams where applicable. Description of control systems.
Catalog data, maintenance and calibration instruction for all components.
Control supplier and address
Control installer and address

1.11 Maintenance Instruction: A typewritten form of instructions for maintenance of the systems in itemized form and with time schedule for maintenance work, shall be furnished. The instructions shall list each item of mechanical equipment requiring inspection, lubrication or service and describe the performance of such maintenance. The list shall include the type of bearings for each piece of equipment, the type of and frequency of lubrication required. The operating personnel shall be instructed in the care of the system in accordance with the typewritten instructions.

2. PART 2 DESCRIPTION OF WORK

2.1 GENERAL DESCRIPTION OF WORK

A. Coordinate work with other trades.
B. Fire stop all penetrations through rated assemblies. See Architectural sheets for locations of rated assemblies.
C. All major pieces of material shall be produced by the same manufacturer. Provide Lamicore labels.
D. HVAC Contractor shall provide all penetrations, etc. and patching required to install HVAC work.
E. Coordinate all required line voltage starters, disconnects, switches with Electrical Contractor for installation. Coordinate electrical requirements for equipment supplied with Electrical Contractor prior to ordering equipment.
F. Provide low voltage controls and control transformers.

2.2 DUCTWORK:

A. GALVANIZED STEEL LOW PRESSURE DUCT CONSTRUCTION

STL U.S. STD GAGE	DUCT DEMENSIONS IN INCHES	CONSTRUCTION TRANSVERSE JOINTS
24	UP THRU 12	S SLIP, DRIVE SLIP
	13 THRU 18 19 THRU 30	S SLIP, DRIVE SLIP BAR SLIP, DRIVE SLIP
22	31 THRU 42 43 THRU 54	POCKET LOCK ON 4' CENTERS, MECHANICAL BOLTED GASKETED, 20 GAGE MECHANICAL, GASKETED, 20 GAGE BOLTED
20	55 THRU 60	MECHANICAL BOLTED, GASKETED 18 GAGE JOINT ON 4' CENTERS 1 1/2 x 1 1/2 x 1/8 ANGELS 2 FEET FROM JOINT

1. Longitudinal joints may be either Pittsburged or snap locked.
2. Where round duct is indicated it shall be minimum 26 gage and otherwise conform to schedule for low pressure duct.
3. Branch take offs shall be throated with the area of the throat being 1.5 times the area of the branch. Takeoff shall incorporate single blade damper constructed of hemmed 24 gage steel with at least 2 galvanized strap hinges, connected to ¼ " control rod operating through a nylon bearing.
4. Suspension of duct shall consist of 24 gage galvanized strap for duct through 18 ". For duct 19 " through 30 " use ¼ " rod and 1 ½ " x 1 ½ " x ⅛ " galvanized angle on 4 ' centers, for duct through 60 " use 3/8 " rod and 2 " x 2 " x 1/8 " galvanized angle on 3 ' centers.
5. Contractor shall confirm duct routing with engineer prior to fabrication and field installation.

B. GALVANIZED STEEL MEDIUM PRESSURE DUCT CONSTRUCTION

1. Medium pressure duct, 2 " - 5 " WG, or that duct in a VAV system between fan and terminal box shall be constructed of steel at least 2 U.S. gages heavier than specified for low pressure duct.
2. Test duct for leakage by applying a static pressure of at least 7 " WG once the duct has been assembled but before terminals or fans are connected.

C. INSULATION

1. Provide wrap insulation for all ductwork with 'R' value 6.0 (minimum) foil face duct wrap.
2. Provide foil face duct wrap insulation with 'R' value 8.0 (minimum) for total 'R' value of 8.0 (minimum) for ductwork routed in attics or non-conditioned space.

2.3 CONDENSATE PIPING:
Schedule 40 PVC

2.4 REFRIGERANT PIPING:

Copper, approved for use by unit manufacturers. Insulate suction line with Armoflex. Seal and paint insulation exposed to weather. Secure 5 Feet on center.

2.5 WIRING

All control wiring (120V and less) to be complete to all motorized equipment, and control devices listed in this specification and shown on the mechanical drawings, shall be done under Division 15.
The Contractor shall refer to Electrical plans and specifications to determine the source of electrical energy for the various control circuits. All wiring shall be in conduit, shall conform with Division 16 of these specifications, all local codes, the National Electrical Code, and shall be installed by an approved licensed electrician. Wiring diagrams indicating wire sizes and conduit runs for all electrical work that is required to be installed under this contract shall be submitted to the Engineer for prior approval before work is begun. Upon completion of the work, the wiring diagrams shall be revised to incorporate any additions or corrections and two copies of the "as installed" diagrams shall be furnished to the Owner and one to the Engineer on reproducible sepia paper.
Wiring shown on electrical plans is for mechanical equipment scheduled. Any equipment provided by the Contractor that differs from that scheduled in electrical characteristics that requires additional voltage, electrical design and/or electrical cost changes shall be the responsibility of this Contractor. Any cost incurred for additional electrical design and/or electrical changes due to any equipment other than equipment scheduled, shall be the responsibility of this Contractor.
In general interlock wiring between pieces of mechanical equipment shall be done under Division 15M (Example: Exhaust fan interlock with air handling unit).

2.6 FOUNDATIONS: All concrete foundations anchor forms, or pads indicated on the drawings that may be necessary and required for the installation of equipment specified under this contract, shall be furnished and installed. Provide anchor bolts for the equipment foundations/pads. Equipment to receive pads are pumps, boiler and air cooled chiller.

2.7 MISCELLANEOUS STEEL SUPPORTS: All supporting steel grillage, steel angles, channels, pipe or structural steel stands, and anchoring devices that may be required to adequately and rigidly support either piping, insulation, or equipment installed under this contract, shall be provided and installed.

2.8 CHASES AND OPENINGS: Lay out all chases and openings, required for the execution of this work well in advance of the structural work. Provide thimbles in walls and partitions. Thimbles shall be standard weight galvanized steel pipe.

2.9 HVAC SYSTEM IDENTIFICATION:

A. Piping System: All piping installed under this division of the specifications shall be identified as follows:
B. Painting: Piping in mechanical rooms to be painted. Refer to "Painting Mechanical Work."
C. Method of Marking: Colored stencil letter that designate the material being handled, shall be applied at not more than 15 foot intervals on straight pipe runs, adjacent to valves and where pipe passes through walls and floors. Piping shall be marked at all the equipment connections. All piping shall be identified.
D. Identification: Lettering shall be stenciled in black letters, size as scheduled below. Letters on covered (insulated) pipe shall be stenciled on covering. On uncovered pipe, painted bands shall be wide enough (See Table 1) to accommodate required letters. Letters shall be positioned so that it can be easily read by a man standing on the floor. Lettering on parallel groups of lines shall be neatly lined up. Surfaces of piping or insulation finished in dark colored shall be lettered in white; and that finished in light colors shall be lettered in black. All lines also shall be marked with arrows indicating the direction of flow.

TABLE 1

Outside Diameter of Pipe or Converting (Inches)	Letter Size	Size of Letter (Inches)
1/2 to 1-1/4		1/2
1-1/2 to 2		3/4
2-1/2 to 8		1-1/4

All dimensions are given in inches.

2.10 VALVE IDENTIFICATION

A. Tags: Polished brass with 1/4" high stamp-engraved lettering, different shapes for each generic piping service.
B. Application: Tag every valve and control device in each mechanical-work piping system; exclude check valves, valves within equipment units, and valves in fan coil units.
C. Valve Schedule: Prepare and submit valve tag schedules (in duplicate), listing each tagged valve by location, service, and tag description. Install each page of one copy of the valve schedule in glazed frames, and mount where directed.

2.11 EQUIPMENT

A. Signs: Provide engraved plastic-laminate signs at locations of major equipment units and primary control devices. Provide text of sufficient clarity and lettering of sufficient size to convey adequate information at each location, and mount permanently in an appropriate and effective location. Comply with recognized industry standards for color and design.
B. Selection: Refer to instances where either a plastic-laminate sign or plasticized tag might be appropriate to the Engineer for resolution.

2.12 ACCESSIBILITY:

A. No valves, controls, unions, etc., shall be placed in any pipe line at a location that will be inaccessible after the system is completed.
B. Any dampers, controls, valves and piping controls, expansion joints, or other apparatus which must be located in an inaccessible location shall be provided with suitable access doors (fitted in a framed hole) which will permit proper operation and servicing of the apparatus. Access doors aforementioned includes access doors in walls, ceilings, ductwork, and, where required, a combination of above. Access doors to be plano hinged.

2.13 EXCAVATING FOR MECHANICAL WORK

A. General: The work of this article is defined to include whatever excavating and backfilling (but excluding insulating backfill) is necessary to install the mechanical work. Coordinate the work with other excavating and backfilling in the same area, including dewatering, floor protection provisions, and other temporary facilities. Coordinate the work with other work in the sane area, including other underground services, landscape development, paving, and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
B. General Standards: Except as otherwise indicated, comply with the applicable provisions of the Division 2 sections, for mechanical work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
C. Rock Excavation shall be defined as the removal of a formation that cannot be excavated without systematic drilling and blasting or without the use of pneumatic tools. All rock excavation/removal shall be performed by the General Contractor. The Plumbing, Mechanical, and Electrical subcontractors shall lay out their work and perform all normal or earth excavation. Should these subcontractors encounter rock (bulk or trench), it shall be removed by the General Contractor using allowable funds. The General Contractor shall be responsible for providing fill material for backfill of rock excavations. Rock may be used for structural fill provided it is broken down by the excavation and compaction equipment into particles with a maximum dimension of 6". Otherwise, it must be removed from the site and legally disposed of. Placement of rock in the fill or removal from the site shall be done by the General Contractor at no additional cost to the Owner.
D. Piping Support: Support pipe 4" and smaller directly on undisturbed soil. Support pipe 6" and larger, on compacted and shaped sub-base material of depth shown but not less than 6" deep. Compact previously disturbed and unsatisfactory subsoil to provide adequate, uniform support for mechanical work; or excavate and replace with stable sub-base material or lean concrete.
E. Sequencing: Delay backfill and encasement of piping until testing of piping system has been completed.

2.15 TESTS

A. Provide written test results to the Engineer. Provide one week notice prior to all tests.
B. Adjustments shall be coordinated with cleaning and testing to assure equipment performance as specified. The entire temperature control system shall be adjusted and placed in operation by the manufacturer. Readjustments necessary to accomplish the specified results during the first year of operation shall be made without cost to the Owner. Air duct systems shall be adjusted and balanced so that air quantities are regulated to deliver or remove the required cfm at each supply, return and exhaust terminal as specified or shown on the drawings. Distribution from air terminals shall be free from drafts, and uniform over the face of each air terminal. Adjustments shall be made so that splitters and volume adjusters close to air terminals will have the least pressure drop consistent with volume requirements. Additional pressure drop required for balancing of shorter runs shall be obtained by adjustment of the dampers at branch duct take-offs. Adjusting fan drives shall be used for making final adjustments of total air quantities. Provide all labor and/or replacement and furnishing of extra sheaves of different sizes to accomplish the scheduled specified quantities. Direct reading velocity neters may be used for comparative adjustment of individual air terminals, but air quantities in trunk ducts shall be measured by means of pitot tube traverses. Factory fabricated plugged or capped openings for pitot tubes shall be provided as required. Settings of dampers, splitters, and other volume adjusting devices shall be permanently marked so that they can be restored if disturbed at any time. Record all fan static pressures, equipment rpm's and ammeter readings at each motor.
C. General: Capacities of air handling unit, fans, and other related equipment shall be determined by operating tests of not less than eight hours duration, after stable conditions have been established. Tabulate the final readings and analysis, and deliver four typewritten copies of the completed reports to the Engineers. The Contractor shall advise the Engineers in writing not less than 10 days in advance of when final testing and balancing will begin. All labor and technical personnel, instruments and appliances for balancing and tests shall be furnished. If gauges, thermometers, etc., which are to be left permanently installed are used for tests, they shall not be installed until just prior to the tests to avoid possible changes in calibration. Water and electricity will be furnished by the Owner for the final operating tests. All unfired pressure vessels furnished under this division shall be constructed, inspected and stamped in accordance with applicable sections of the ASME Codes. Data shall include inspector's National Board registration number.

3. PART 3 HVAC WORK CLOSEOUT

3.1 General: Refer to the Division 1 sections for general closeout requirements. Maintain a daily log of operational data on mechanical equipment and systems through the closeout period; record hours of operation, assigned personnel, fuel consumption and similar information; submit copy to Owner.

3.2 Record Drawings: For HVAC work, give special attention to the complete and accurate recording of underground piping, ductwork, other concealed and non-accessible work, branching arrangement and valve location for piping systems, locations of dampers and coils in duct systems, locations of control system sensors and other control devices, and work of change orders where not shown accurately by contract documents. Submit to Engineer at end of project one set of reproducible sepias that show all recorded changes in the mechanical work.

3.3 Closeout Equipment/Systems Operations: Sequence operations properly so that work of project will not be damaged or endangered. Coordinate with seasonal requirements. Operation each item of equipment and each system in a test run of appropriate duration (with the Engineer present, and with the Owner's operating personnel present), to demonstrate sustained,satisfactory performance. Adjust and correct operations as required for proper performance. Clean and lubricate each system, and replace dirty filters, excessively worn parts and similar expendable of the systems.

3.4 Operating Instructions: Conduct a day walk-through instruction seminar for the Owner's personnel to be involved in the continued operation and maintenance of mechanical equipment and systems. Explain the identification system, operation diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety, efficiency, and similar features

3.5 Training: Contractor to provide training on all major equipment, controls, etc., as part of the personnel.

3.6 Turn-Over of Operations: At the time of substantial completion, turn over the prime responsibility for operation of the mechanical equipment and systems to the Owner's operating personnel. However, until the time of final acceptance, provide one full-time employee, who is completely familiar with the work, to consult with and continue training with the Owner's

END OF SECTION

LOOPER ARCHITECTURAL DESIGN & PLANNING

Corrective Package for the:
MACON COUNTY
EARLY COLLEGE
77 Siler Farm Road
Franklin, NC 28734-3005

NORTH CAROLINA PROFESSIONAL SEAL 14566 ENGINEER B. AUGUSTUS SIMS
08.20.2025

B. AUGUSTUS SIMS, ENGINEER, PLLC
P.O. Box 18265 Asheville, North Carolina, 28814
(828)-776-6145
gsims@basimsengineer.com

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