

ROANOKE COLLEGE®

Crawford Hall Renovation
221 College Lane Salem, Virginia



HUGHES ASSOCIATES

ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD | ROANOKE, VIRGINIA 24018

540.342.4002

www.HughesAE.com

ARCHITECT
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS, PC
3800 Electric Road SW | Suite 300
ROANOKE, VIRGINIA 24018
540.342.4002
PROJECT MANAGER: Earle Shumate
EMAIL: eshumate@hughesae.com

OWNER
ROANOKE COLLEGE
221 COLLEGE AVENUE
SALEM, VIRGINIA 24153
OWNER'S REP.: Benjamin Irvin
EMAIL:

MECHANICAL & PLUMBING ENGINEER
MANN & ASSOCIATES, INC.
306 MARKET STREET SE
ROANOKE, VIRGINIA 24011
540.344.5513
PROJECT ENGINEER: John M. Mann, PE
EMAIL: jmann@mannassociatesinc.com

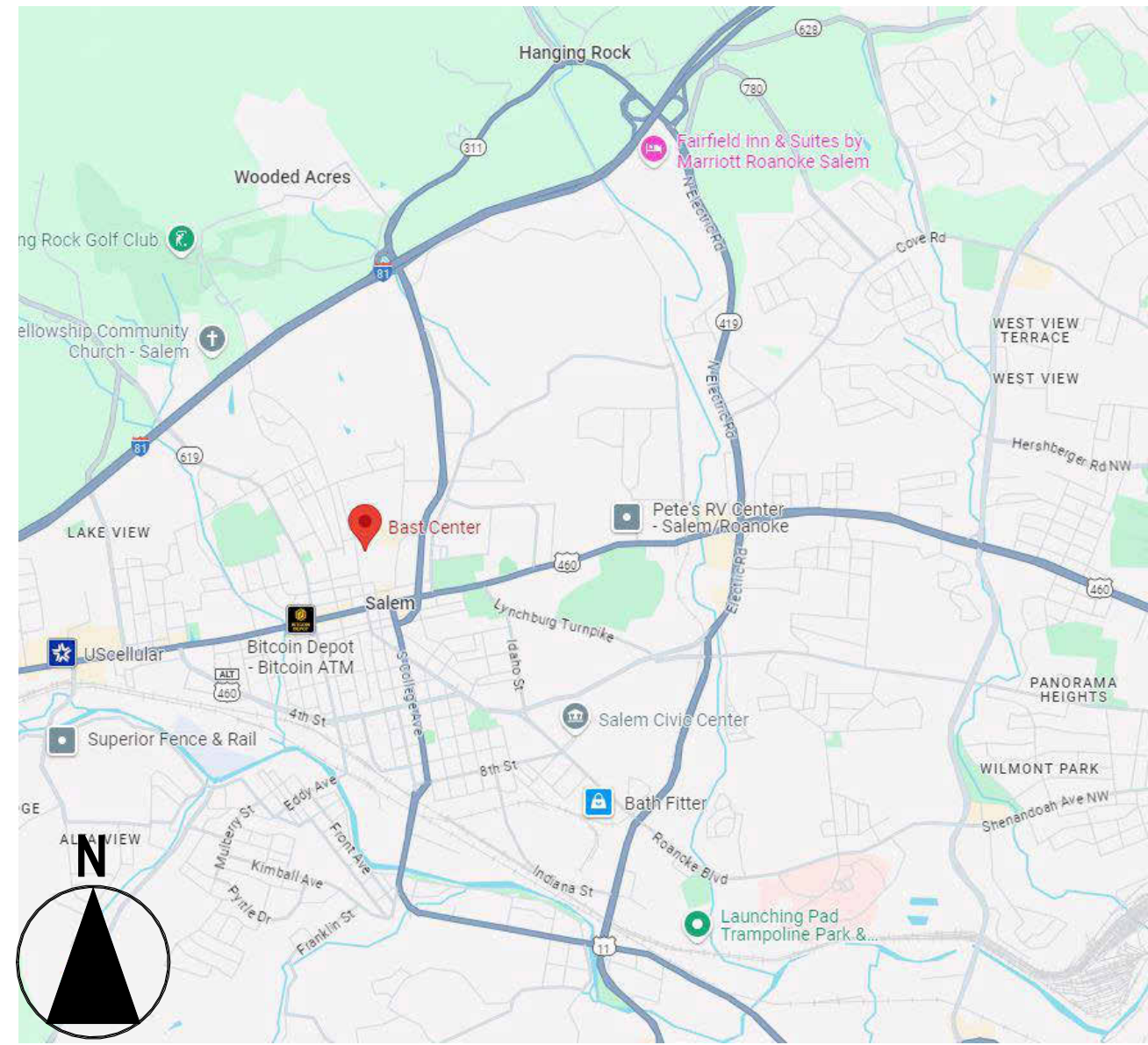
ELECTRICAL ENGINEER
CARBO, INC.
P.O. BOX 186
ROCKY MOUNT, VIRGINIA 24151
540.493.0313
PROJECT ENGINEER: Bud Blanchard, PE
EMAIL: carboinc@embarqmail.com

SHEET LIST

T-1	COVER SHEET	M1-3	ATTIC PLAN - MECHANICAL
C-100	EXISTING CONDITIONS & SITE DEMO PLAN	M2-1	BUILDING SECTION - MECHANICAL
C-200	SITE PLAN	M2-2	MECHANICAL DETAILS
C-300	GENERAL SITE CONSTRUCTION NOTES & SITE DETAILS	M2-3	MECHANICAL DIAGRAMS
		M3-1	MECHANICAL SCHEDULES
		M3-2	MECHANICAL CONTROLS AND SPECS.
AD-1	FIRST FLOOR & BASEMENT PLANS - DEMOLITION	PD-1	BASEMENT AND FIRST FLOOR PLANS - PLUMBING DEMOLITION
AD-2	SECOND/ THIRD FLOOR PLANS - DEMOLITION	PD-2	SECOND AND THIRD FLOOR PLANS - PLUMBING DEMOLITION
		PD-3	ATTIC PLAN - PLUMBING DEMOLITION
A1-1	OVERALL FIRST FLOOR PLAN - NEW WORK	P1-1	BASEMENT AND FIRST FLOOR PLANS - SANITARY
A1-2	PARTIAL FIRST FLOOR PLAN - NEW WORK - AREA 1	P1-2	SECOND AND THIRD FLOOR PLANS - SANITARY
A1-3	PARTIAL FIRST FLOOR PLAN - NEW WORK - AREA 2	P1-3	ATTIC PLAN - SANITARY
A1-4	OVERALL SECOND/ THIRD FLOOR PLAN - NEW WORK	P2-1	BASEMENT AND FIRST FLOOR PLANS - WATER
A1-5	PARTIAL SECOND/ THIRD FLOOR PLAN - NEW WORK - AREA 1	P2-2	SECOND AND THIRD FLOOR PLANS - WATER
A1-6	PARTIAL SECOND/ THIRD FLOOR PLAN - NEW WORK - AREA 2	P2-3	ATTIC FLOOR PLAN- WATER
A1-7	ALTERNATE 1 - PLANS AND ELEVATIONS	P3-1	SANITARY WASTE AND VENT DIAGRAM - PLUMBING
A2-1	DOOR SCHEDULE, DETAILS & PARTITION TYPES	P3-2	WATER RISER DIAGRAM - PLUMBING
A3-1	EXTERIOR ELEVATIONS	P4-1	PLUMBING SCHEDULES AND SPECS.
A4-1	BUILDING SECTIONS EXTERIOR ADDITIONS		
A4-2	BUILDING SECTIONS INTERIOR	ED-1	BASEMENT AND FIRST FLOOR PLANS - ELECTRICAL DEMOLITION
A4-3	SECTIONS ALTERNATE 1	ED-2	SECOND AND THIRD FLOOR PLANS - ELECTRICAL DEMOLITION
A6-1	ENLARGED FLOOR PLANS & INTERIOR ELEVATIONS	ED-3	ATTIC PLAN - ELECTRICAL DEMOLITION
A6-2	ENLARGED FLOOR PLANS & INTERIOR ELEVATIONS		
A8-1	OVERALL FIRST FLOOR REF. CLG. PLANS	E1-1	BASEMENT AND FIRST FLOOR PLANS - ELECTRICAL LIGHTING
A8-2	SECOND/ THIRD FLOOR REFLECTED CEILING PLAN	E1-2	BASEMENT AND FIRST FLOOR PLANS - ELECTRICAL POWER
		E1-3	SECOND AND THIRD FLOOR PLANS - ELECTRICAL LIGHTING
ID1-1	INTERIOR FINISHES SPECS	E1-4	SECOND AND THIRD FLOOR PLANS - ELECTRICAL POWER
ID2-1	PARTIAL FIRST FLOOR FINISH PLAN - AREA 1	E1-5	ATTIC PLAN - ELECTRICAL
ID2-2	PARTIAL FIRST FLOOR FINISH PLAN - AREA 2	E1-6	ONE LINE DIAGRAM
ID2-3	PARTIAL SECOND FLOOR PLAN - FINISH - AREA 1	E1-7	SPECIFICATION
ID2-4	PARTIAL SECOND FLOOR PLAN - FINISH - AREA 2		
ID2-5	PARTIAL THIRD FLOOR PLAN - FINISH - AREA 1		
ID2-6	PARTIAL THIRD FLOOR PLAN - FINISH - AREA 2		
MD-1	BASEMENT AND FIRST FLOOR PLANS - MECHANICAL DEMOLITION		
MD-2	SECOND AND THIRD FLOOR PLANS - MECHANICAL DEMOLITION		
MD-3	ATTIC PLAN - MECHANICAL DEMOLITION		
M1-1	BASEMENT AND FIRST FLOOR PLANS - MECHANICAL		
M1-2	SECOND AND THIRD FLOOR PLANS - MECHANICAL		

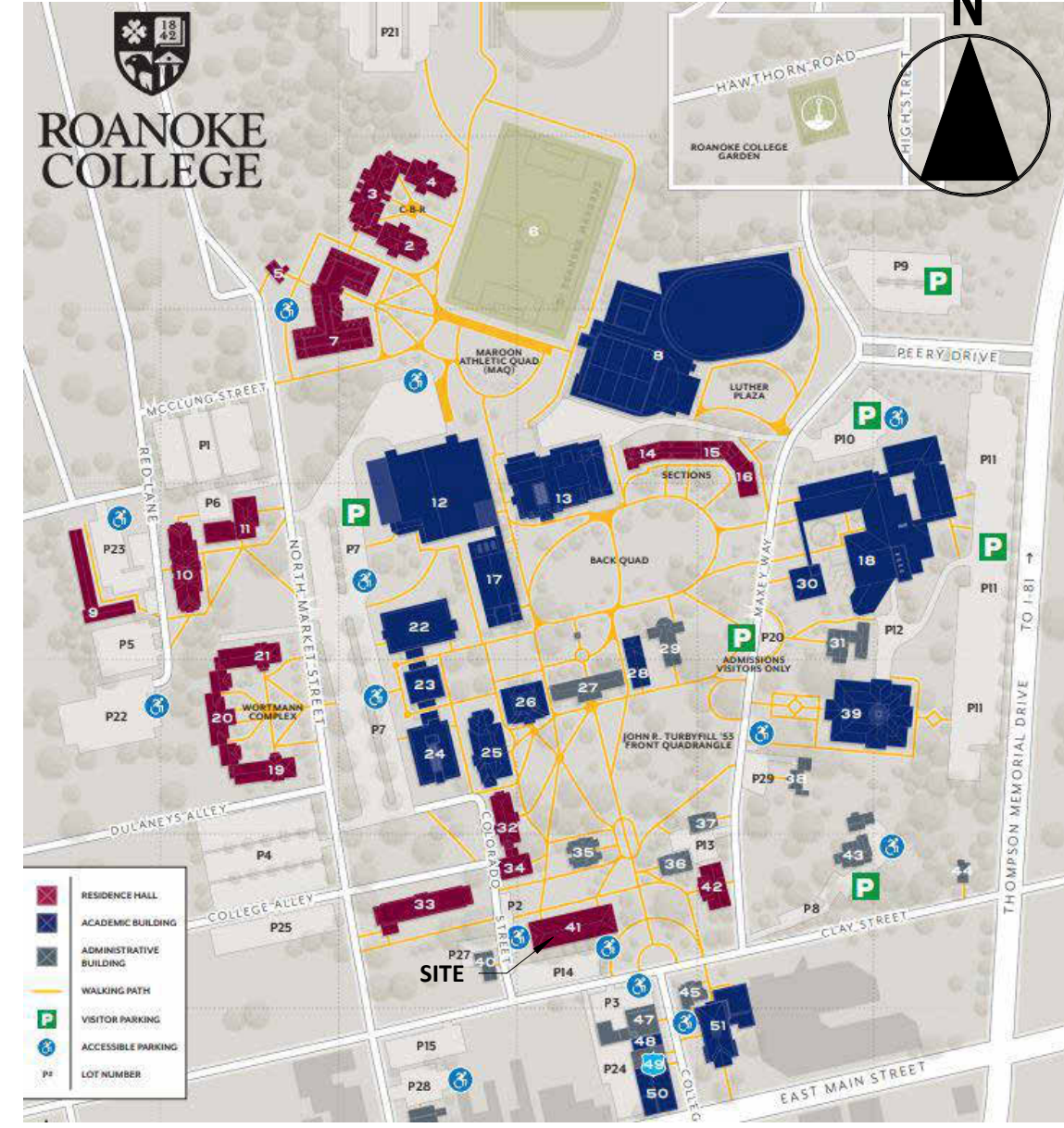
VICINITY MAP

NOT TO SCALE



CAMPUS MAP

NOT TO SCALE



DATE: Dec.18, 2024

Revisions

No.	Date	Description

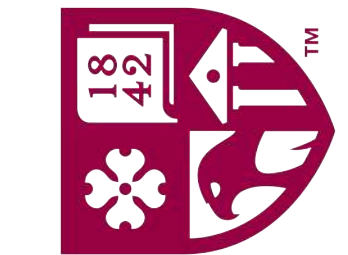


HUGHES ASSOCIATES

ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane Salem, Virginia



DRAWN BY: EHS
CHECKED BY: Checker

COVER SHEET

RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
T-1

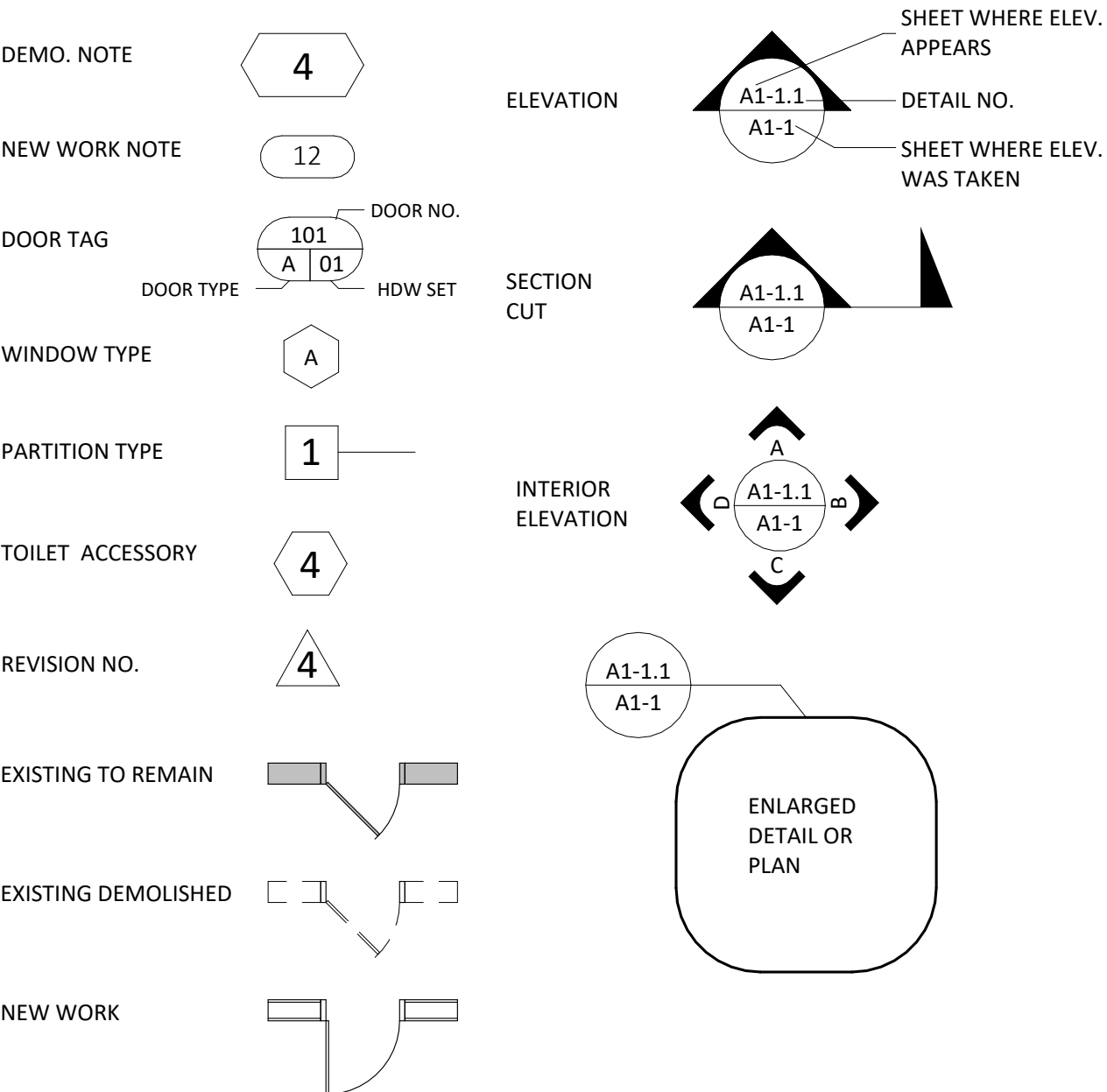
© COPYRIGHT 2023
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Crawford Hall Renovation - Central_esthmate@hughesae.com.rvt 1/30/2025 5:44:30 PM

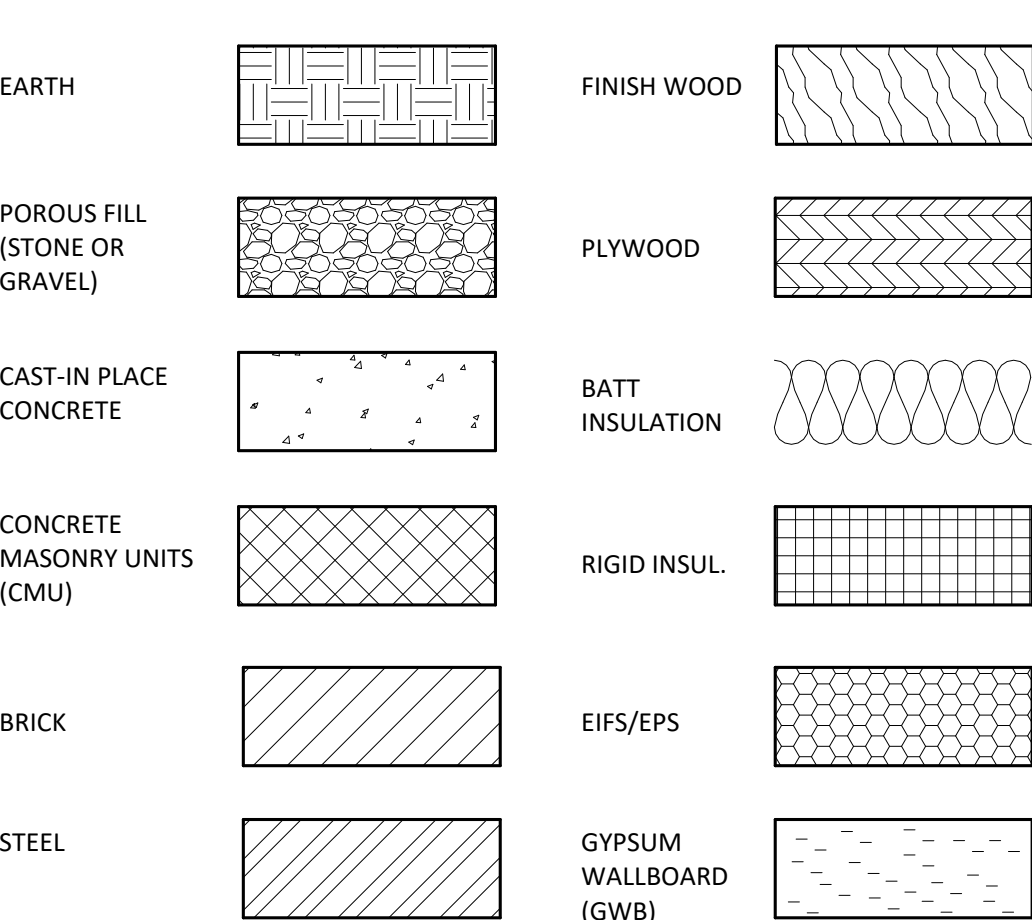
LIST OF ABBREVIATIONS

A @ ABV A/C ACT ADI ADMIN AFC AFF AHU ALUM ALT ∠ ANOD APPROX ARCH ASSY AUX AWI REGEN INSTITUTE B BD BLDG BLK BLKG BM BOS BTM BRZ BTU BUR C C CAB CI CJ CL CLG CLO CLR CMU COL CONC CONST CONT CORR CRS CT CU CUST D DBL DTL DIA, Ø DIM DISP DIV DN DR DS DWG DWR E ELEC EA EIFS	AT ABOVE AIR CONDITIONING ACOUSTICAL CEILING TILE ADJUSTABLE ADMINISTRATIVE ABOVE FINISHED CEILING ABOVE FINISHED FLOOR AIR HANDING UNIT ALUMINUM ALTERNATE ANGLE ANODIZED APPROXIMATELY ARCHITECTURAL ASSEMBLY AUXILIARY ARCHITECTURAL WOODWORK BOARD BUILDING BLOCK BLOCKING BEAM BOTTOM OF STEEL BOTTOM BRONZE BRITISH THERMAL UNIT BUILT-UP ROOF CENTIGRADE CABINET CAST IRON CONTROL JOINT CENTER LINE CEILING CLOSET CLEAR CONCRETE MASONRY UNIT COLUMN CONCRETE CONSTRUCTION CONTINUOUS CORRIDOR COURSE CERAMIC TILE CUBIC CUSTODIAN DOUBLE DETAIL DIAMETER DIMENSION DISPENSER DIVISION DOWN DOOR DOWNSPOUT DRAWING DRAWER ELECTRICAL EACH EXTERIOR INSULATED FINISH SYSTEM	EJ ELEV EPS EQ EQUIP ETC EW EWC EXH EXIST, EXG EXP EXPD EXT F F FA FD FE FEC FF FGLASS FIN FLASH FLR FOC FOM FOLD PART FRP FRT FT FUR FV G GA GALV GC GD GEN GL GFMU GND, GRND GWB GYP H HB HC HD HDW HM HORIZ,H HR,HRS HT, HGT HWD I ID IG IN INC INCL INSUL INT J JAN JT	EXPANSION JOINT ELEVATION EXTRUDED POLYSTYRENE EQUAL EQUIPMENT ET CETERA EACH WAY ELECTRIC WATER COOLER EXHAUST EXISTING EXPANSION EXPOSED EXTERIOR FAHRENHEIT FIRE ALARM FLOOR DRAIN FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FLOOR FIBERGLASS FINISH FLASHING FLOOR FACE OF CONCRETE FACE OF MASONRY FOLDING PARTITION FIBER REINFORCED PLASTIC FIRE-RETARDANT TREATED FEET FURRING FIELD VERIFY GAUGE GALVANIZED GENERAL CONTRACTOR GRADE GENERAL GLASS GROUND FACE MASONRY UNITS GROUND GYPSUM WALLBOARD GYPSUM HOSE BIBB HANDICAPPED, HOLLOW CORE HEAD, HEAVY DUTY HARDWARE HOLLOW METAL HORIZONTAL HOUR, HOURS HEIGHT HARD WOOD INSIDE DIAMETER, DIMENSION INSULATING GLASS INCH, INCHES INCANDESCENT INCLUDING INSULATION INTERIOR JANITOR JOINT	L L LAM LAV LB LF LIB LLH LLV LVR M MAS MAINT MAX MC MECH MFR MGR MH MID MIN MISC MO MPH MTL,MET MULL N NA NEG NIC NO, # NTS O OC OCC OD OFF OH OPH OPNG OPP P PA PAR PERP PL PLAM PLYWD PNL POS PR PREFAB PREFIN,PF PNT PT PTD PTN PVC PVMT Q QA QT R R RCP	ANGLESHAPE LAMINATE LAVATORY POUND LINEAR FOOT LIBRARY LONG LEG HORIZONTAL LONG LEG VERTICAL LOUVER MASONRY MAINTENANCE MAXIMUM MEDICINE CABINET MECHANICAL MANUFACTURER MANAGER MANHOLE MIDDLE MINIMUM MISCELLANEOUS MASONRY OPENING MILES PER HOUR METAL MULLION NOT APPLICABLE NEGATIVE NOT IN CONTRACT NUMBER NOT TO SCALE ON CENTER OCCUPANCY OUTSIDE DIAMETER/DIMENSION OFFICE OVERHEAD OPPOSITE HAND OPENING OPPOSITE PUBLIC ADDRESS PARALLEL PERPENDICULAR PLATE PLASTIC LAMINATE PLYWOOD PANEL POSITIVE PAIR PREFABRICATED REFINISHED PAINT, PAINTED PRESSURE TREATED PAPER TOWEL DISPENSER PARTITION POLYVINYL PAVEMENT QUALITY ASSURANCE QUARRY TILE RADIUS REINFORCED CONCRETE PIPE	RD ROOF DRAIN REINF REINFORCED, REINFORCEMENT REF REFER, REFERENCE REP REPRESENTATIVE REQD, REQ REQUIRED RO ROUGH OPENING RM ROOM S SB SC SCHED SD SEC SF SGL SHT SHR SIM SNT SPA SQ SS,S/S STD STL STOR STRUCT SUS T TEL T TECH TEMP TLT TOC TOM TOS TYP U UON UTIL V V VERT VCT VEND VEST VIF VTR VUSBC VWC W W W/ WC WD WH WDW WO WP WSTRIP WT WWF SPLASH BLOCK SOLID CORE SCHEDULE SMOKE DEECTOR SECONDARY SQUARE FEET SINGLE SHEET SHOWER SIMILAR SEALANT SPACES SQUARE STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURE, STRUCTURAL SUSPENDED TELEPHONE TOP TECHNICAL TEMPERATURE TOILET TOP OF CURB TOP OF MASONRY TOP OF STEEL TYPICAL UNLESS OTHERWISE NOTED UTILITY VOLTS VERTICAL VINYL COMPOSITION TILE VENDING VESTIBULE VERIFY IN FIELD VENT THROUGH ROOF VIRGINIA UNIFORM STATEWIDE BUILDING CODE VINYL WALL COVERING WATTS WITH WATER CLOSET WOOD WATER HEATER WINDOW WITHOUT WEATHERPROOF WEATHER-STRIP WEIGHT WELDED-WIRE FABRIC
--	--	---	---	--	--	---

DRAWING SYMBOLS



MATERIAL SYMBOLS



CODE COMPLIANCE

GENERAL BUILDING INFORMATION	
BUILDING ADDRESS:	301 Campus Lane
JURISDICTION:	City of Salem, Virginia
TAX PARCEL ID:	86-3-4
ZONING:	CUD - College/University District

APPLICABLE CODES	
2021 VIRGINIA EXISTING BUILDING CODE (VEBC)	
2021 VIRGINIA CONSTRUCTION CODE (VCC) <i>Applicable Sections</i>	
2021 VIRGINIA ENERGY CONSERVATION CODE (VECC) <i>Applicable Sections</i>	
2019 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES	

TYPE OF WORK	
INTERIOR ALTERATIONS (LEVEL 2) and EXTERIOR IMPROVEMENTS	

PROJECT SUMMARY	
Interior Alterations: Replace and re-configure toilet and shower rooms on three floors of an existing dormitory to improve privacy and accessibility. Install mini split-component HVAC units in sleeping rooms and re-configure mechanical rooms. Replace finishes in common areas.	

Exterior Alterations: Remove and replace the existing entry porch on the northeast end of the building with larger structure, including a new accessible ramp. (Entrance is not currently accessible.)	
Construct masonry screen walls at the new outdoor mechanical units on the west end of the building. Remove and replace portions of sidewalk affected by new construction. See Civil.	

Alternate: Construction of a new brick and masonry patio on the east end of building with related sitework. Access to new construction will be provided by extension of the ramp that is part of the Base Bid. New doors and accessible entrance provided in East Study Lounge.	
---	--

Renovation of the existing service elevator for passenger use and replacement of windows will occur during the project under a separate contract.	
---	--

CHAPTER 3 - GENERAL PROVISIONS AND SPECIAL DETAILED REQUIREMENTS	
301.2 Primary Use Group:	R-2 - Residential/Non-transient (Dormitory) - Existing, no change. Number of sleeping rooms reduced by 2.

CHAPTER 4 - ACCESSIBILITY	
402.1 Change of Occupancy - Not applicable. No additional accessibility features required in existing areas.	

403.1 Exterior additions (patio and porch) and interior alterations will meet accessibility requirements for new construction (Chapter 11 of VCC and ANSI A117.1).	
--	--

403.2 Accessible dwelling units and sleeping units - Not applicable, no sleeping units being added.	
---	--

404.1 Alterations are not reducing accessibility of the building.	
---	--

404.2 Exception 2 - Accessible means of egress required by Chapter 10 of the VCC are not required to be provided in existing facilities.	
--	--

404.3 Sleeping rooms not required to be made accessible as alterations in these areas are limited to window replacements, and mechanical systems (Exceptions 2 and 3).	
--	--

EXISTING BUILDING INFORMATION - VCC	
CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS	
Building Height and Area Calculations	
Use Group R-2, Non-sprinklered (Attic is equipped with and existing limited area sprinkler system)	
Table 504.3 Allowable Height = 55'-0"	Actual Height (Max.) = 36'-0"
Table 504.4 Allowable Stories = 4	Actual Stories = 3
Table 506.2 Allowable Area NS:	16,000 x 3 = 48,000
Actual Area:	9,500 x 3 = 28,500

CHAPTER 6 - TYPES OF CONSTRUCTION	
602 Construction Classification:	
3B Combustible/Non-Combustible, Unprotected	
(Existing building is steel framed with concrete covering over columns and beams; 12" solid masonry exterior bearing walls. Roof framing is 2x wood construction with non-combustible slate roof over 5/4 decking.)	
Fire Resistance Rating in Hours - Table 601	
Required	Provided
Primary Structural Frame	0
Bearing Walls	
Exterior	2
Interior	0
Nonbearing walls and partitions	
Exterior - Table 602 (≥30)	0
Interior	0
Floor Construction & Associated Members	0
Roof Construction & Associated Members	0

CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES	
Table 705.8 - Max. Area of Exterior Wall Openings based on Fire Separation Distance	
FSD = ≥30 (UP, S)	A ₀ = Unlimited
CHAPTER 8 - INTERIOR FINISHES	
(T803.11) Wall & Ceiling Finishes	
Corridors	Required: B, Provided: B
Rooms & Enclosed Spaces	Required: C, Provided: C
804 Interior Floor Finishes	
Traditional Non-Fabric: No Requirements	
Floor Covering - All Other	
Minimum critical radiant flux not less than ClassII.	
CHAPTER 9 - FIRE PROTECTION SYSTEMS	
903 Automatic Sprinkler Systems	
Not required per VEBEC 1101.12 <75' in height and <6 stories	
906 Portable Fire Extinguishers	
Table 906.3(1)	
No	Yes
907 Fire Alarm and Detection Systems	
907.2 Fire Alarm System	Required: No, Provided: Yes
907.2 Manual Fire Alarm Fire Box	No
907.2.13.1.1 Area Smoke Detection	Yes
907.2.13.1.2 Duct Smoke Detection	Yes

CHAPTER 6 - ALTERATIONS	
601.2.2 Alterations are classified as Level 2	
601.4.1 No opaque walls part of thermal envelope will be exposed.	
601.4.2 No framed floor cavities part of the thermal envelope will be exposed.	
601.4.3 Existing rafter cavity over the area of alteration - spray foam insulation applied to achieve R-49 per Table C402.1.3 of VECC	
601.4.6.1 Commercial lighting complies with Section C405 of VECC.	
601.4.8.1 Commercial HVAC equipment sized in accordance with C403.1.1 of VECC.	
603.3 Alterations comply with requirements of VCC.	
Exception 4: Minimum ceiling height of new spaces shall be 7'-0".	
603.7 No new structural elements in alterations.	
CHAPTER 8 - ADDITIONS	
803.1 Addition (new patio and porch) comply with 2021 VCC	
CHAPTER 29 - PLUMBING SYSTEMS	
Table 2902.1 - Min. Number of Required Plumbing Fixtures - Dormitories	
Occupancy based on VCC Table 1004.5	
R-2 = 9,500 sf/200 gross = 48 occupants per floor	
Water Closets:	1 per 10
Lavatories:	1 per 10
Showers:	1 per 8
Drinking Fountains:	
Service Sinks:	
403.2 Separate Facilities:	
403.3 Public Toilet Facilities:	
403.4 Signage:	
405.3.4.2 Multi-user gender neutral facilities - Complies with partition and clearance requirements.	

Revisions		
No.	Date	Description

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018

540.342.4002

www.hughesae.com

Crawford Hall Renovation

ROANOKE COLLEGE

221 College Lane

Salem, Virginia

DRAWN BY:	Author
CHECKED BY:	Checker

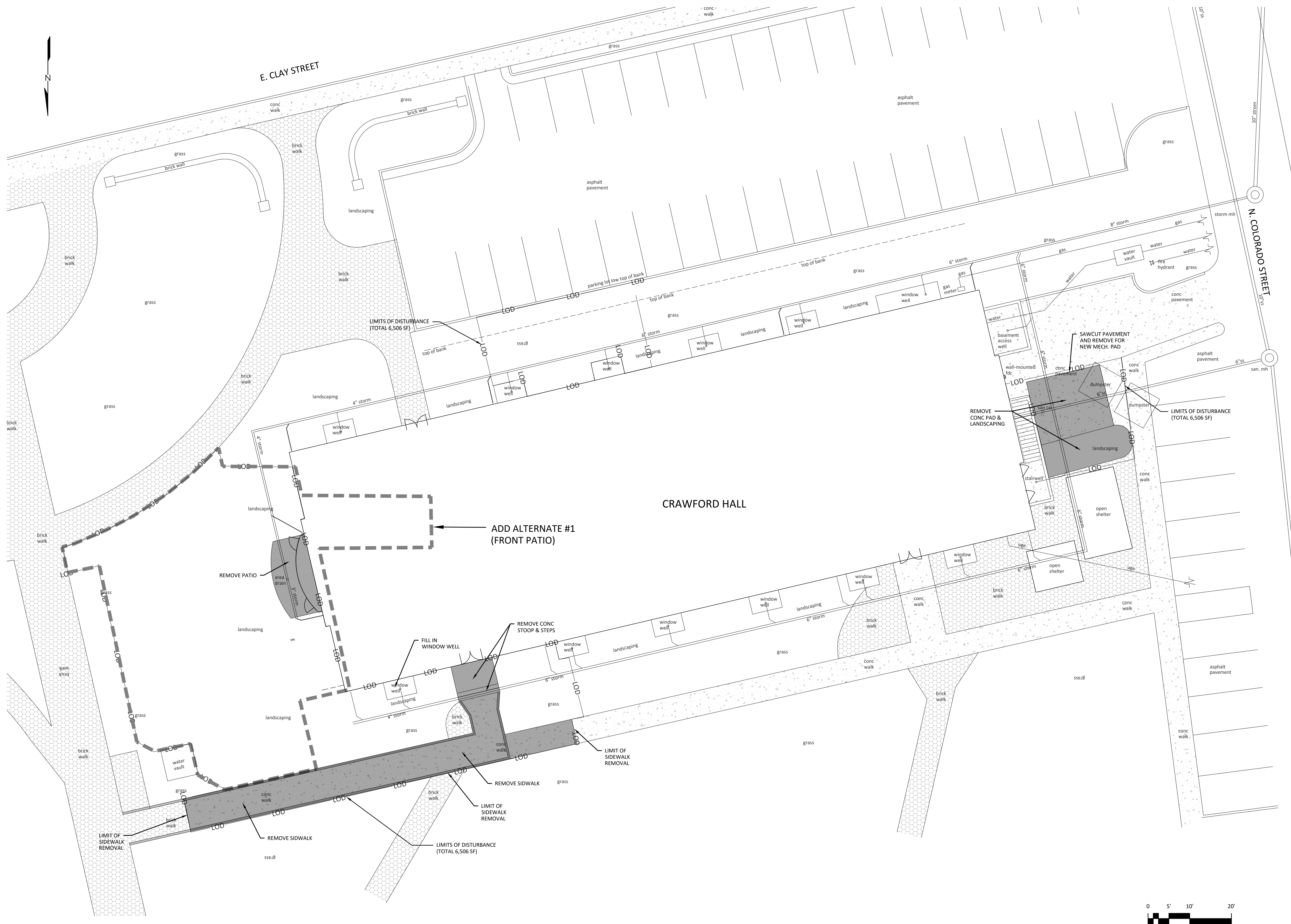
CODE COMPLIANCE ABBR. AND REFERENCE SYMBOLS

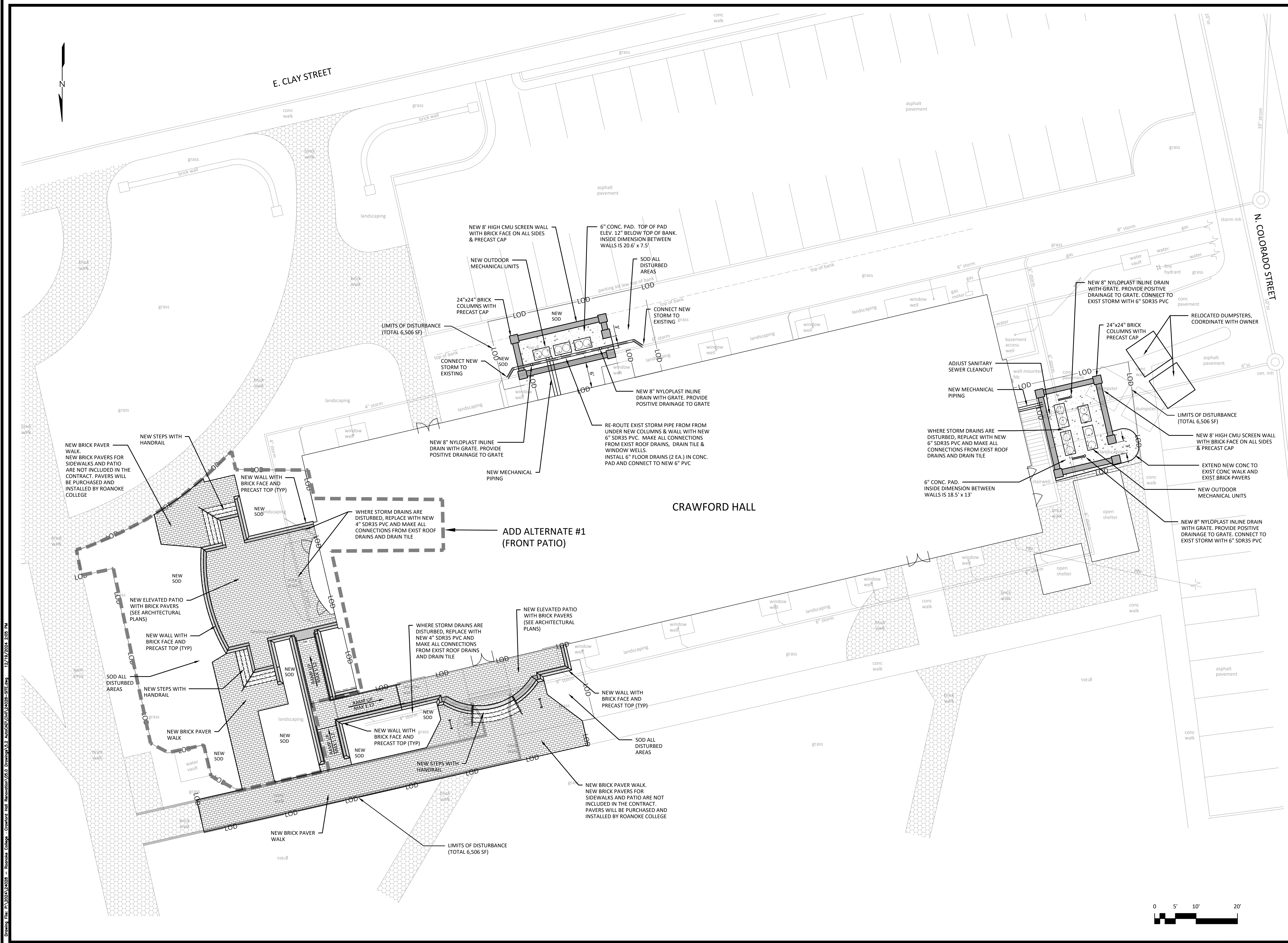
PROGRESS PRINT NOT FOR CONSTRUCTION ONLY

COMMISSION No. 24028

SHEET T-2

© COPYRIGHT 2024 HUGHES ASSOCIATES ARCHITECTS & ENGINEERS A PROFESSIONAL CORPORATION





GENERAL SITE CONSTRUCTION NOTES

SITEWORK

- THE LOCATION OF EXISTING UTILITIES ACROSS, ALONG OR IN THE VICINITY OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND WHERE SHOWN, ARE APPROXIMATE. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY.
- THE CONTRACTOR IS TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC DURING ALL PHASES OF CONSTRUCTION. PROVIDE CHAIN LINK FENCE AND/OR SAFETY FENCE AS NEEDED.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING BUILDINGS, SIDEWALKS, PAVEMENT, UTILITY POLES & PEDESTALS, ABOVE AND BELOW GROUND UTILITIES ETC., IF THOSE ITEMS ARE NOT DESIGNATED AS TO BE REMOVED.
- THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-552-7001 AND/OR A PRIVATE UTILITY LOCATION SERVICE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION AND REQUEST ALL UTILITIES TO BE LOCATED.
- ALL UNDERGROUND UTILITIES ARE TO BE CLEARLY MARKED PRIOR TO BEGINNING CONSTRUCTION, ANY POTENTIAL CONFLICTS AS A RESULT OF THE MARKINGS SHALL BE MADE KNOWN TO THE ARCHITECT/ENGINEER IMMEDIATELY.
- UTILITY LINES, UTILITY POLES AND PEDESTALS, ABOVEGROUND AND BELOW GROUND SHALL BE PROTECTED FROM DAMAGE IN ACCORDANCE WITH THE UTILITY OWNERS' INSTRUCTIONS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS TO OBTAIN THE PROPER PROTECTIVE MEASURES FOR EACH INDIVIDUAL UTILITY AND FOR PROTECTING UTILITIES FROM DAMAGE. ANY AND ALL DAMAGE CAUSED BY THE CONTRACTOR OR BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE CORRECTED BY THE CONNECTOR AT THEIR EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT SHOULD DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE SITE INSPECTOR OF ANY FIELD REVISIONS AND/OR CORRECTIONS TO THE APPROVED PLANS PRIOR TO SUCH CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXCAVATED DITCHES AND SHALL FURNISH AND INSTALL ALL NECESSARY BARRICADES FOR THE PUBLIC ARE IN PLACE.
- ALL AREAS NOT COVERED WITH PAVEMENT, SIDEWALK, OF STRUCTURES SHALL RECEIVE LANDSCAPING AND PERMANENT SEEDING OR SOD, AS SHOWN ON THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE MOST RECENT REVISION DATE OF THE PLANS PRIOR TO COMMENCING WITH CONSTRUCTION.
- ITEMS TO BE SALVAGED SHALL BE STORED IN A PROTECTED AREA.
- REMOVE ALL SIDEWALKS AND CONCRETE FROM SITE AS SHOWN ON THE PLANS AND DISPOSE OF OFF-SITE AT AN APPROVED LANDFILL. BRICK PAVERS THAT ARE REMOVED MAY BE RE-USED ON THE PROJECT IF IN SUITABLE CONDITION. IF EXCESS PAVERS ARE REMOVED, COORDINATE WITH THE OWNER ON WHERE TO SALVAGE.
- REMOVE SIDEWALKS TO THE NEAREST EXPANSION JOINT TO PROVIDE A STRAIGHT, CLEAN, AND NEAT JOINT WITH THE NEW CURBING.

EARTHWORK

- THE CONTRACTOR SHALL PERFORM MINOR, INVESTIGATIVE EXCAVATIONS TO VERIFY LOCATION OF VARIOUS EXISTING UNDERGROUND FACILITIES AT SUFFICIENT LOCATIONS TO ASSURE THAT NO CONFLICT WITH THE PROPOSED WORK EXISTS AND SUFFICIENT CLEARANCE IS AVAILABLE TO AVOID DAMAGE TO EXISTING FACILITIES.
- SUBSEQUENT TO THE CLEARING AND ROUGH GRADING OPERATIONS AND PRIOR TO THE PLACEMENT OF THE FILL, THE EXPOSED SUBGRADE SOILS SHALL BE CAREFULLY INSPECTED. IF ANY SOILS ARE DISCOVERED UNSUITABLE FOR FOUNDATIONS, PAVEMENTS OR OTHER CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AND OWNER. THE UNSUITABLE AREAS SHALL BE EXCAVATED, BACKFILLED AND COMPACTED AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THE INSPECTION OF THESE PHASES SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. DENSITY TESTING AT THE DISCRETION OF THE SOILS ENGINEER SHALL BE PERFORMED AT THIS TIME.
- CUT OFF TREES, SHRUBS, BRUSH, AND VEGETATIVE GROWTH TWELVE INCHES MAXIMUM ABOVE GROUND. GRUB OUT STUMPS AND ROOTS 12 INCHES MINIMUM BELOW ORIGINAL GROUND SURFACE.
- STRIP EXISTING VEGETATION LAYER THREE INCHES DEEP MINIMUM FROM AREAS OF SITE TO RECEIVE PAVING AND REMOVE FROM SITE BEFORE STRIPPING TOPSOIL.
- THE EMBANKMENT FOUNDATIONS AND ABUTMENTS SHALL BEAR ON FIRM AND STABLE EXISTING SUBGRADE WHICH HAS BEEN PREPARED SO AS TO REMOVE ALL ORGANIC, LOOSE, AND GENERALLY UNSUITABLE MATERIAL.
- DURING GRADING OPERATIONS, THE CONTRACTOR SHALL GRADE ALL AREAS TO DRAIN TO PREVENT THE SATURATION OF THE SOILS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STOCKPILES FROM RAIN IF THE SOIL IS NEEDED FOR BACKFILL MATERIAL.
- THE CONTRACTOR SHALL PROOF-ROLL THE CONSTRUCTION AREA WITH HEAVY-PNEUMATIC EQUIPMENT. ALL UNSUITABLE MATERIAL SHALL BE UNDERCUT AND RECOMPACTED WITH APPROVED STRUCTURAL FILL MATERIAL.
- EARTHWORK SHALL BE TO THE LINES AND GRADES SHOWN. PROOF-ROLLING AND COMPACTION TESTS SHALL BE ACCOMPLISHED IN THE FIELD TO ALL GRADED AREAS. THE GRADING SHALL CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN TO WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FEET.
- ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE TESTING COMPANY AND BE WELL GRADED MATERIAL CONFORMING TO ASTM D2487 FREE FROM DEBRIS, ORGANIC MATERIAL, FROZEN MATERIALS, BRICK, LIME, CONCRETE, STONES GREATER THAN 4 INCHES DIAMETER, AND OTHER MATERIALS WHIT WOULD PREVENT ADEQUATE PERFORMANCE OF THE BACKFILL. NINETY PERCENT MINIMUM OF FILL MATERIAL SHALL BE SMALLER THAN 1-3/4 INCH UNDER PAVED AREAS AND STRUCTURES.
- THE FILL SHALL BE PLACED IN 8 INCH LOOSE LAYERS, 4 INCH LOOSE LAYERS CLOSE TO STRUCTURES AND NARROW TRENCHES AND COMPACTED AS SPECIFIED.
- FILL MATERIALS SHALL BE ADEQUATELY KEYED ITO STRIPPED AND SCARIFIED SUBGRADE SOILS AND SHOULD, WHERE APPLICABLE, BE BENCHED INTO THE EXISTING SLOPES, THE SUBGRADE SHALL BE SCARIFIED A DEPTH OF 4" PRIOR TO FILL PLACEMENT TO ASSURE BONDING BETWEEN THE TWO SOILS.
- ALL FILL SHALL BE COMPACTED TO AT LEAST 95% OF THAT SOIL'S (STANDARD/MODIFIED) PROCTOR MAXIMUM DRY DENSITY (ASTM D698). THE COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN MAXIMUM 8 INCH LOOSE LIFTS AND COMPACTING EACH LIFT WITH HEAVY CONSTRUCTION EQUIPMENT TO THE REQUIRED DENSITY.
- THE MOISTURE CONTENT OF FILL SOILS SHALL BE MAINTAINED WITHIN 2.0 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED FROM THE STANDARD (MODIFIED) PROCTOR DENSITY TEST.
- COORDINATE WITH THE OWNER'S GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE FOR SATISFACTORY SOILS TO BE USED FOR BACKFILL.
- A SOILS ENGINEER, OR A TECHNICIAN UNDER THE ENGINEERS DIRECTION, SHALL PERFORM FIELD DENSITY TESTS ON EACH LIFT AS NECESSARY, TO ASCERTAIN THAT ADEQUATE COMPACTION HAS BEEN ACHIEVED.
- REMOVE FROM SITE TREES, SHRUBS, UPROOTED STUMPS, VEGETATIVE LAYER, AND SURFACE DEBRIS AND DISPOSE OF LEGALLY. DO NOT BURY CUTTINGS, STUMPS, ROOTS, AND OTHER VEGETATIVE MATTER OR BURN WASTE MATERIAL ON SITE.
- ENSURE THAT LAND DISTURBING PERMITS AND THE PROPER EROSION AND SEDIMENT CONTROLS ARE IN PLACE FOR THE CONSTRUCTION SITE AND THE OFF-SITE BORROW AND SPOIL SITE.

TOPSOIL MATERIAL AND PREPARATION

- TOPSOIL FURNISHED BY THE CONTRACTOR SHALL CONSIST OF A NATURAL FRIABLE SURFACE SOIL WITHOUT ADMIXTURES OF UNDESIRABLE SUBSOIL, REFUSE, OR FOREIGN MATERIALS. IT SHALL BE FREE FROM ROOTS, HARD CLAY, COARSE GRAVEL, STONES LARGER THAN ONE INCH IN ANY DIMENSION, WEEDS, SEEDS, TALL GRASS, BRUSH, STICKS, STUBBLE OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO THE PROPER DEVELOPMENT OF THE DESIRED VEGETATIVE GROWTH.

LANDSCAPING

- IN GRASS AND LANDSCAPED AREAS, PLACE THE TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES. REMOVE EXISTING SOIL IF NEEDED. RAKE THE AREAS TO REMOVE ALL ROOTS, CLUMPS, STONES AND DEBRIS 3/4" OR GREATER IN ANY DIRECTION. TRUE UP ALL OF THE DEPRESSIONS, RUTS, MOUNDS AND EDGES. SCARIFY SUBSOIL TO A DEPTH OF 2 INCHES WHERE TOPSOIL IS TO BE PLACED. ESTABLISH A SMOOTH GRADE READY TO RECEIVE LANDSCAPING, SEED AND SOD. FINISH GRADE MUST BE ACCEPTABLE TO THE OWNER OR ARCHITECT.
- WATERING AND MAINTENANCE OF ALL TREES, SHRUBS, GRASS, SOD AND PLANTINGS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE SEEDBED SHALL BE KEPT MOIST FOR TWO TO THREE WEEKS TO ALLOW FOR GERMINATION, LONGER IF NEEDED. WATER LANDSCAPING AS RECOMMENDED BY THE SUPPLIER OR AS NEEDED BASED ON THE WEATHER CONDITIONS AND SEASON.
- REPLACE LANDSCAPING, INCLUDING GRASS, THAT IS DEAD OR APPEARS NON-HEALTHY OR NON-VIGOROUS AS DIRECTED BY THE ENGINEER OR OWNER WITHIN 10 DAYS OF NOTIFICATION.
- THE CONTRACTOR SHALL APPLY FERTILIZER AND WEED KILLERS AS NECESSARY TO PROMOTE THE GRASS GROWTH.
- ALL GRASS AREAS SHALL BE THICK, UNIFORM AND FREE OF DENUDED AREAS AND WEEDS.
- THE CONTRACTOR SHALL REPLACE/ REHABILITATE ALL DEAD/DYING TREES, SHRUBS, GRASS AND SOD WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION. WHEN THESE ITEMS ARE REPLACED, THE WARRANTY PERIOD SHALL BE EXTENDED BY SIX MONTHS FROM THE TIME OF RE-PLANTING OR SOWING.

GENERAL UTILITY NOTES

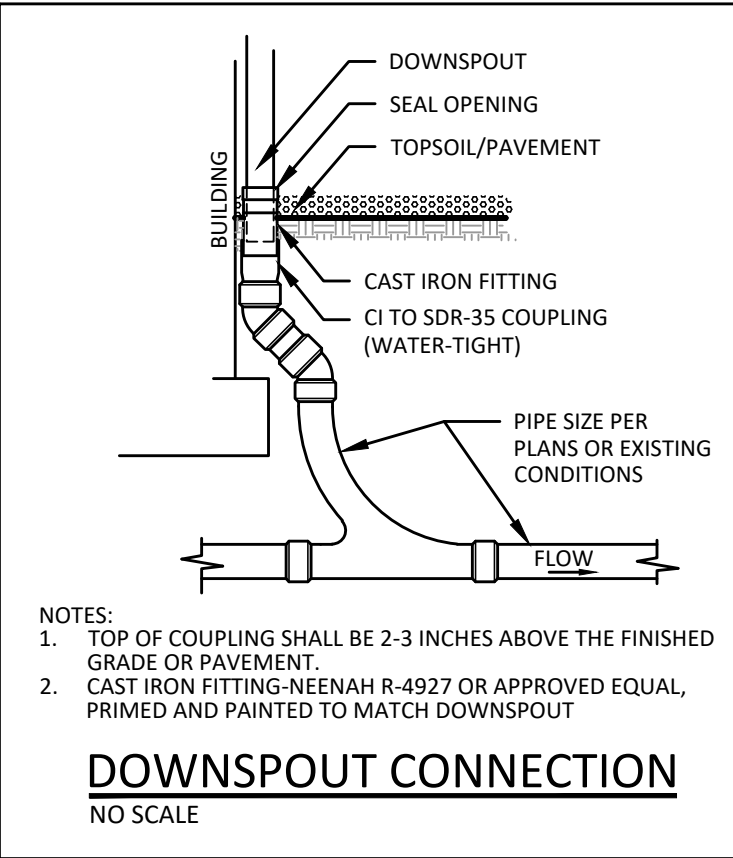
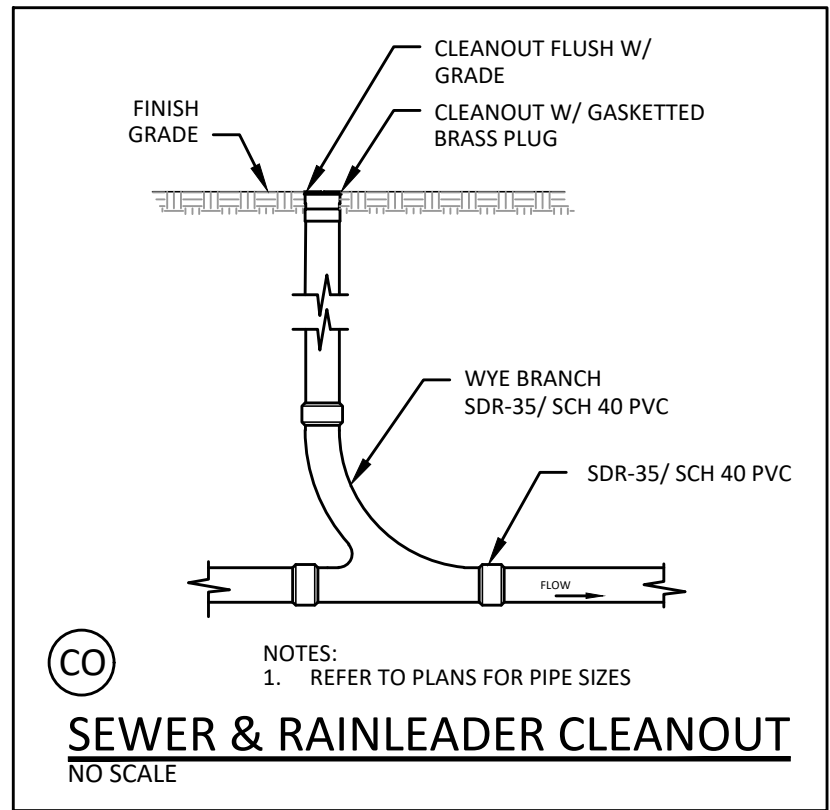
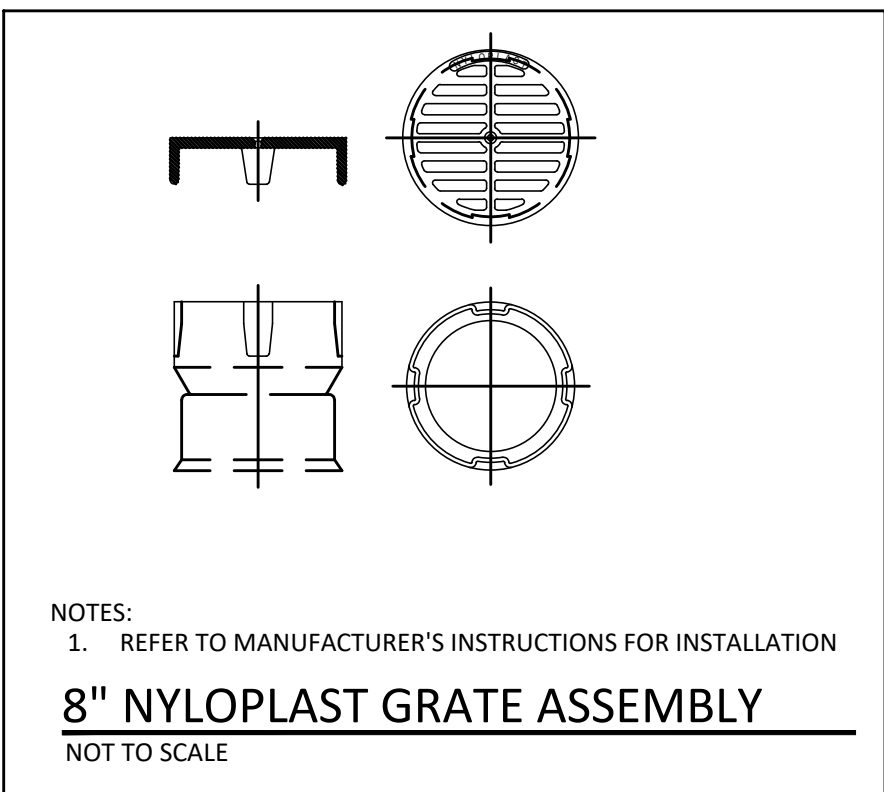
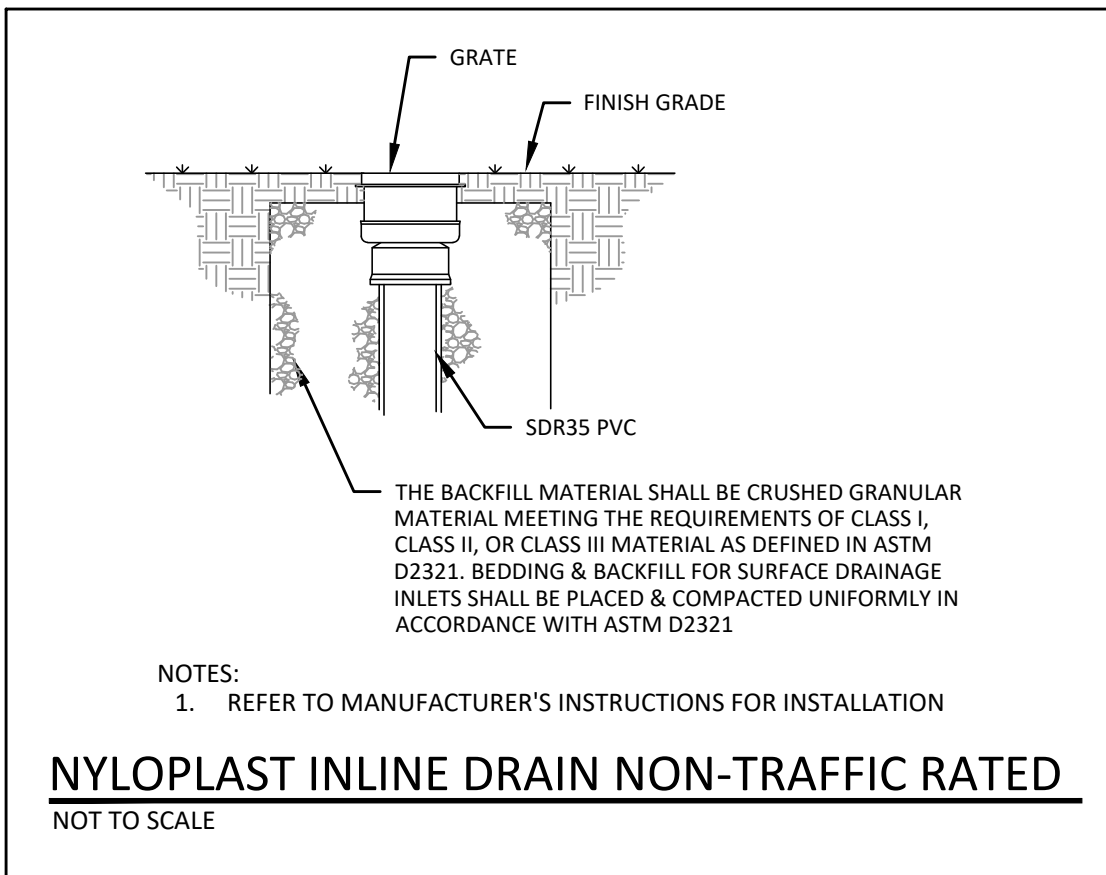
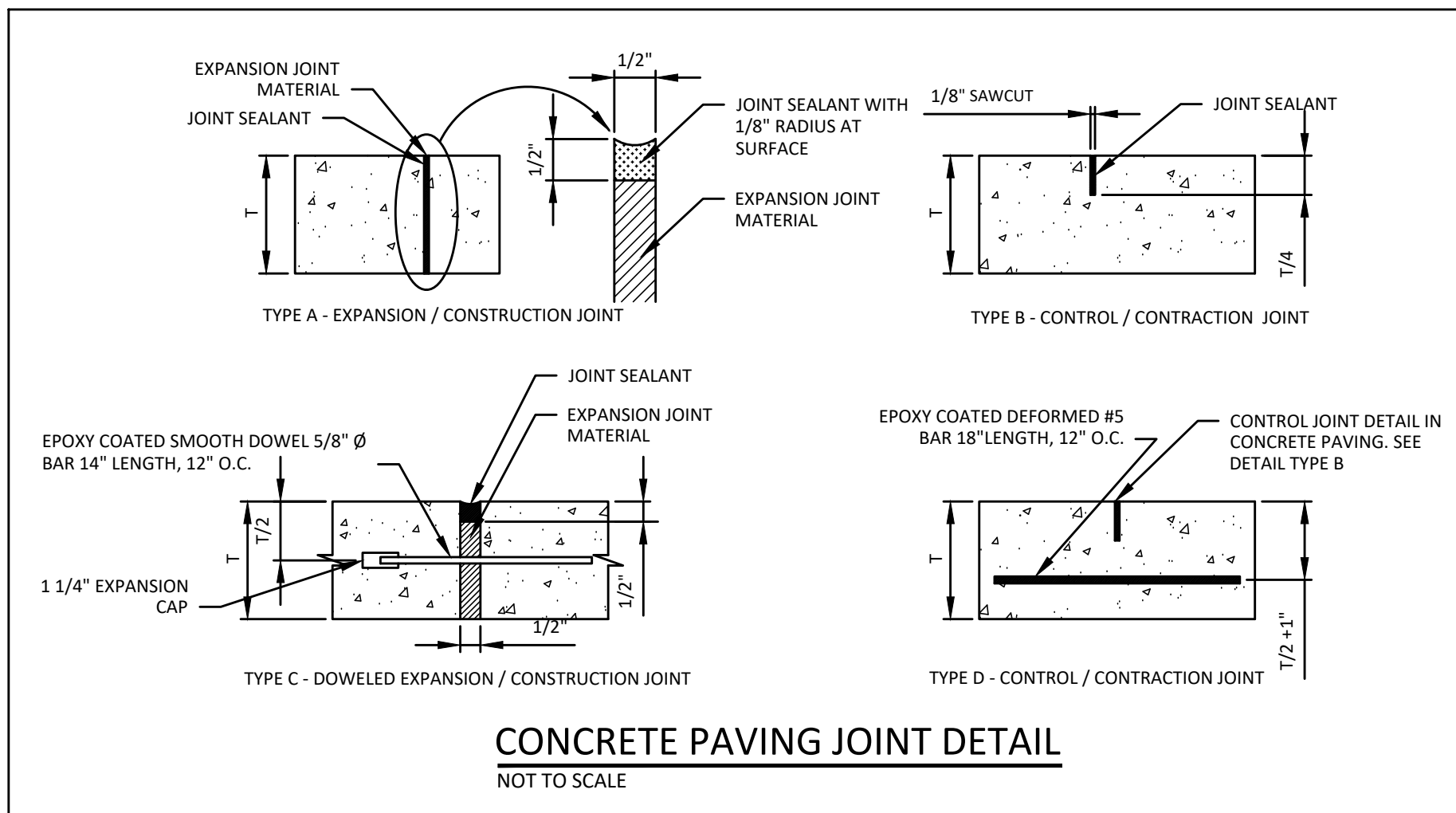
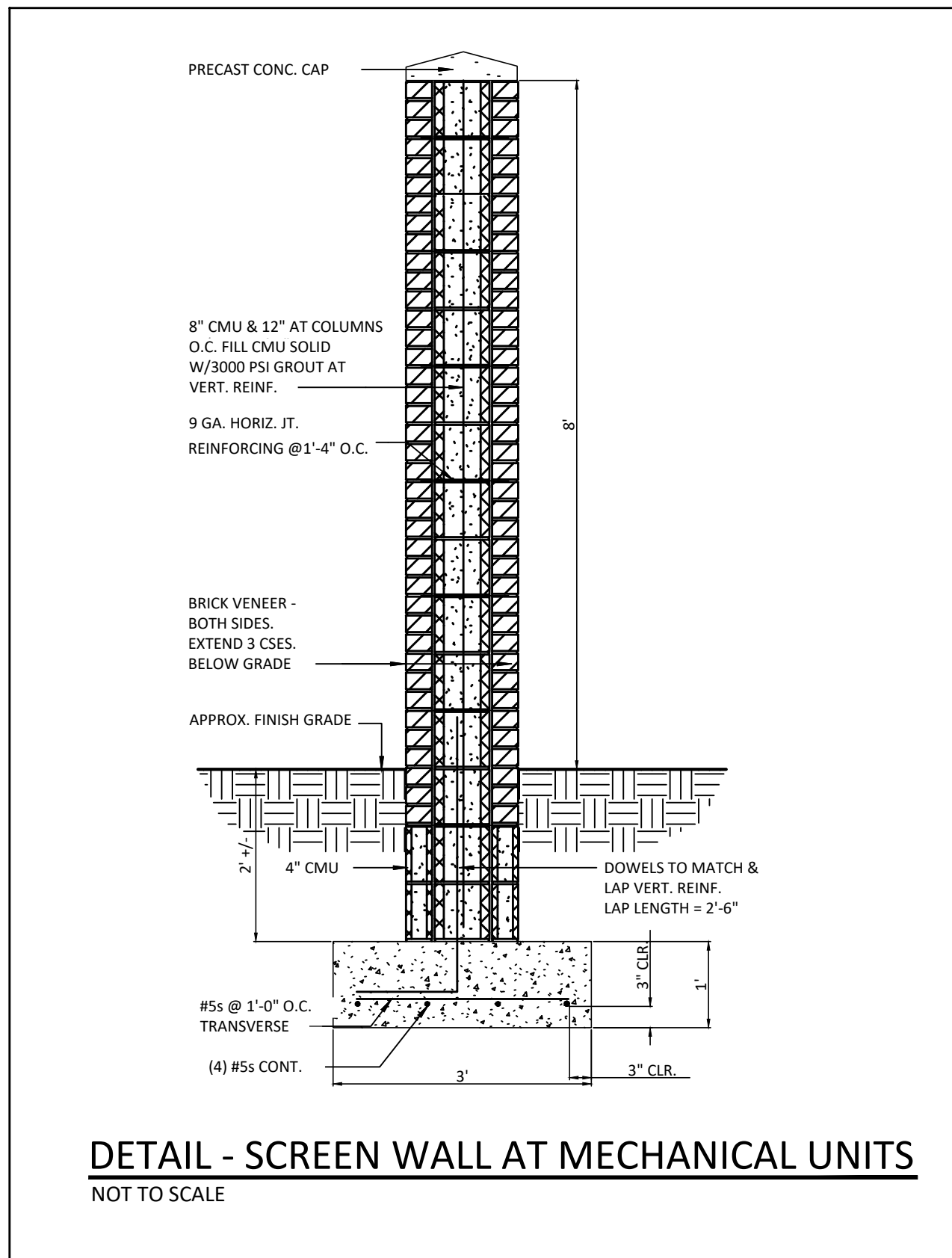
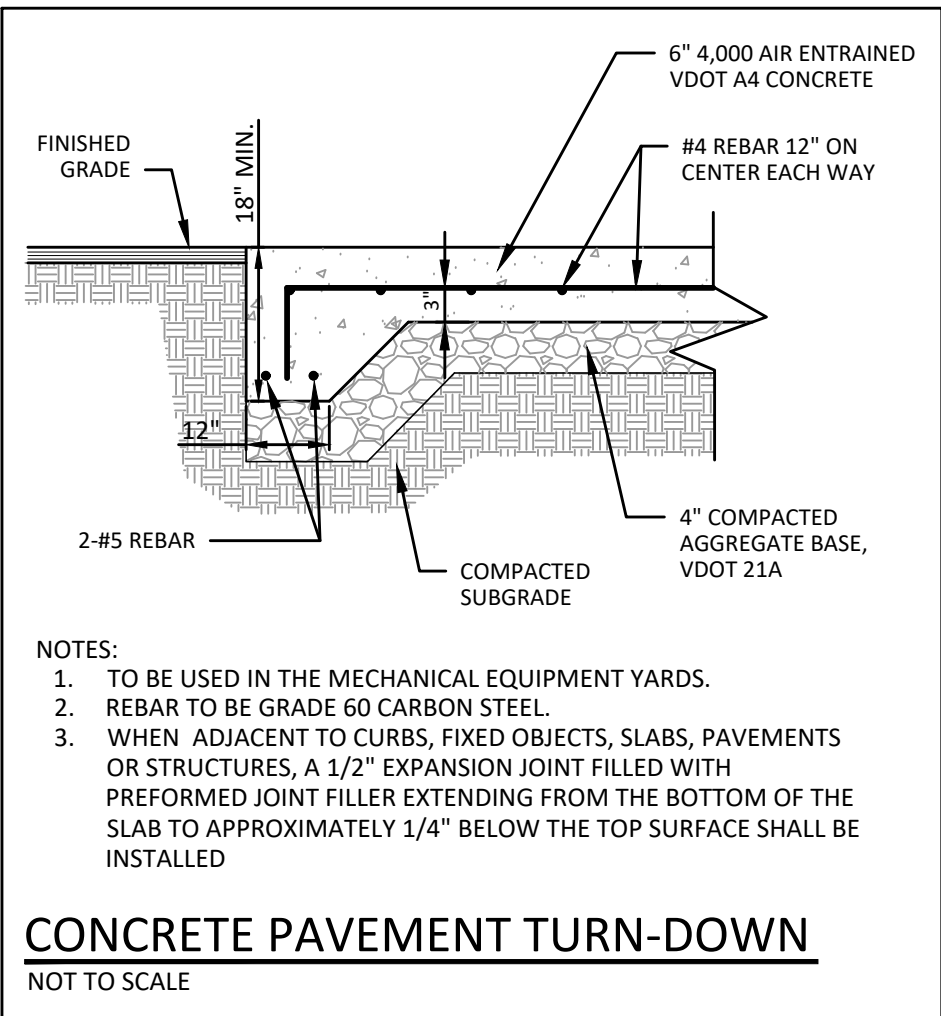
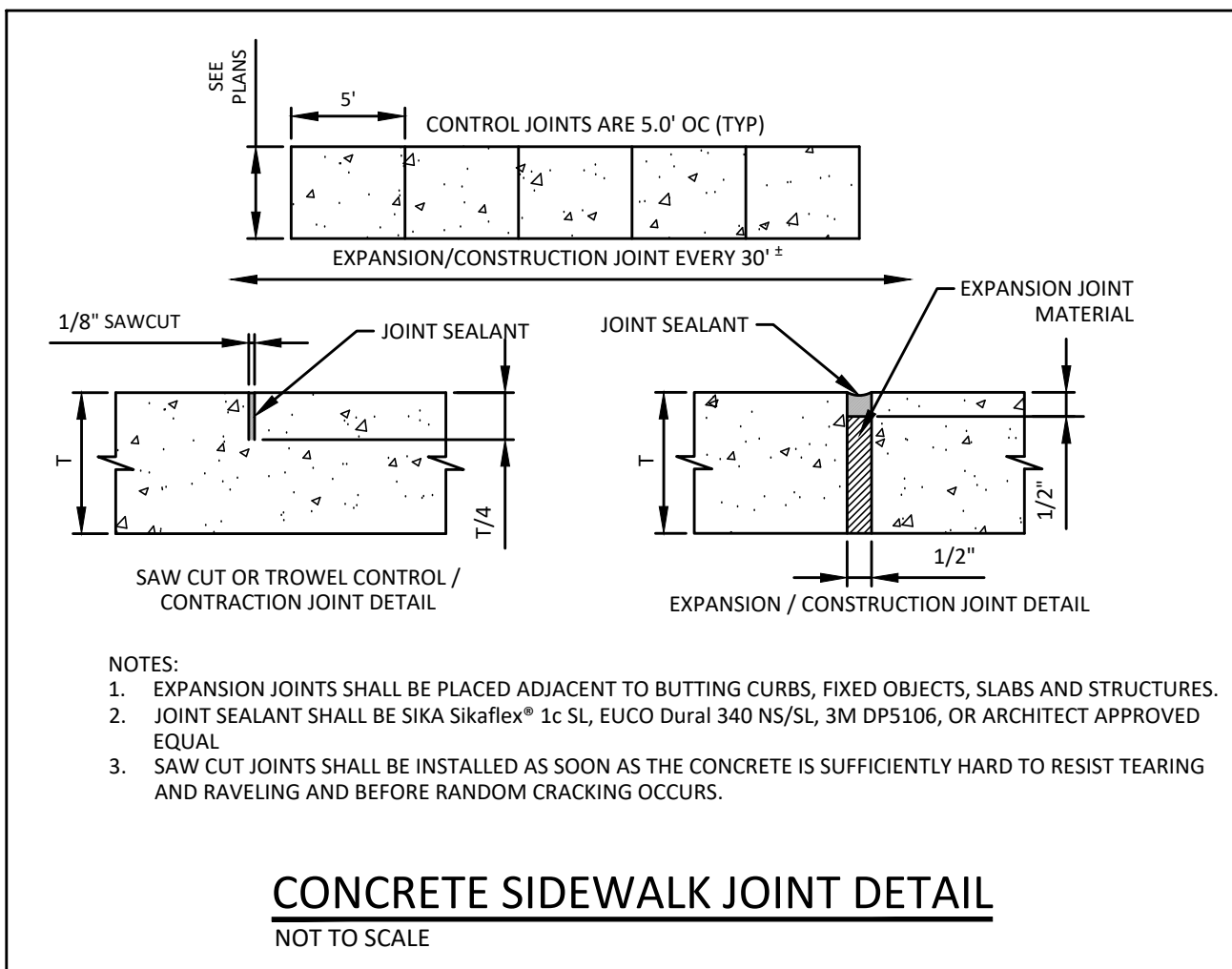
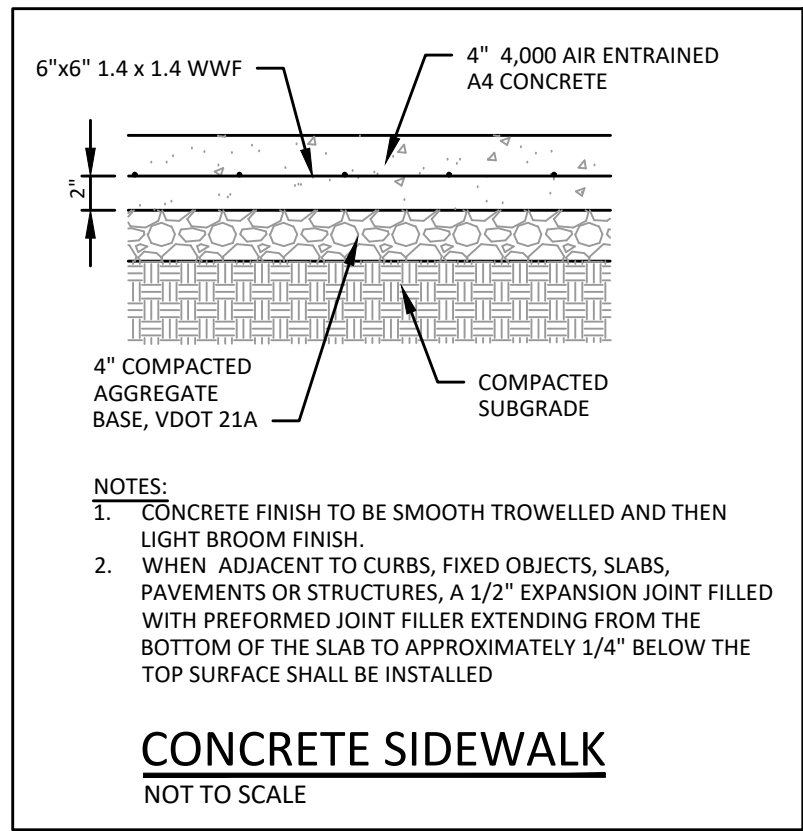
- EXCAVATE TO PROPER ALIGNMENT, DEPTH, AND GRADE. EXCAVATE TO SUFFICIENT WIDTH TO ALLOW ADEQUATE SPACE FOR PROPER INSTALLATION AND INSPECTION OF UTILITY PIPING.
- IF TRENCHES ARE EXCAVATED DEEPER THAN REQUIRED, BACKFILL UNTIL TRENCH BOTTOM IS PROPER DEPTH WITH PROPERLY COMPACTED NATIVE MATERIAL.
- WHERE ROCK EXCAVATIONS ARE REQUIRED, EXCAVATE ROCK WITH MINIMUM OVER-DEPTH OF 4 INCHES BELOW REQUIRED TRENCH DEPTHS AND BACKFILL WITH THOROUGHLY COMPACTED MATERIAL.
- IN CONFINED AREAS SUCH AS UTILITY TRENCHES, PORTABLE COMPACTION EQUIPMENT AND THIN LIFTS OF 3 TO 4 INCHES MAY BE REQUIRED TO ACHIEVE THE SPECIFIED DEGREE OF COMPACTION.

EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, OR OTHERWISE MODIFY CERTAIN MEASURES WHERE FIELD CONDITIONS WARRANT.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EVERY ERODIBLE RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP SHALL BE MADE IMMEDIATELY AND AT NO EXTRA COST TO THE OWNER.

STORM-SEWER SYSTEMS & CULVERTS

- ALL STORM-SEWER SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS, LATEST EDITION AND THE VDOT ROAD AND BRIDGE STANDARDS, LATEST EDITION/REVISION. PIPES SHALL BE BEDDED PER PB-1, METHOD A.



DATE: DEC 18, 2024

REVISIONS

△

△

△

△

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD | STE 300 | ROANOKE, VIRGINIA 24012
540.342.4002

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia

DRAWN BY: xxx
CHECKED BY: xxx

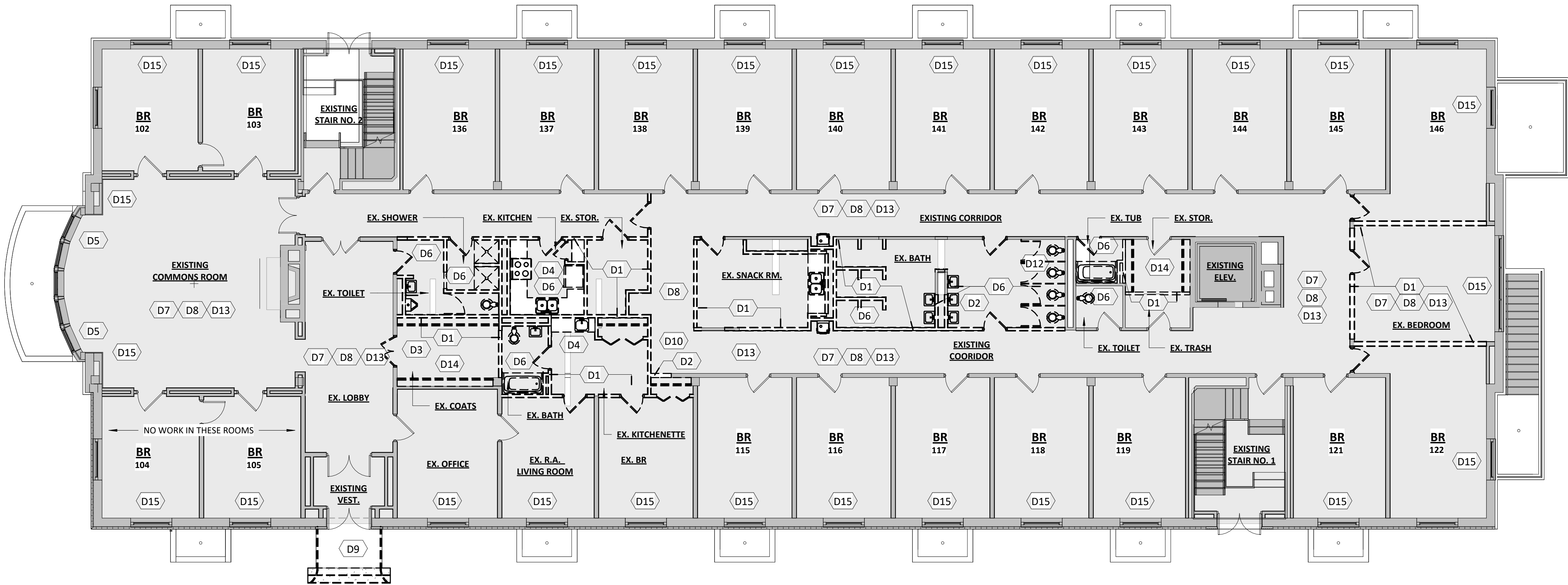
GENERAL SITE
CONSTRUCTION
NOTES & SITE
DETAILS

PRICING
NOT FOR
CONSTRUCTION
DRAWING

COMMISSION No.
24028
SHEET
C-300

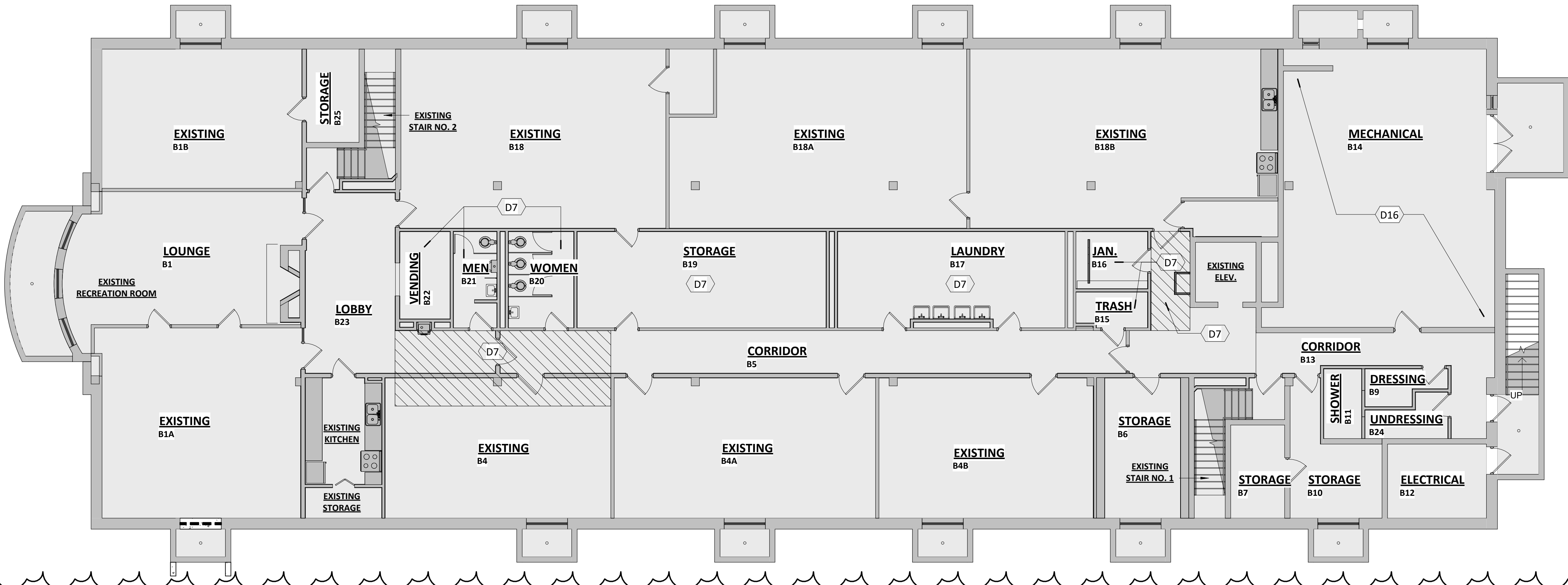
COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

Drawing File: P:\2024\24028 - Roanoke College Renovation\05.0 Drawings\05.2 AutoCAD Civil\24028-SITE.dwg 12/19/2024 2:05 PM



OVERALL FIRST FLOOR PLAN - DEMOLITION

1/8" = 1'-0"



OVERALL BASEMENT FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

DEMOLITION NOTES

- D1 REMOVE WALL. PATCH FLOOR AND PREPARE FOR NEW CONSTRUCTION.
- D2 REMOVE PORTION OF WALL OR CUT NEW OPENING IN EXISTING WALL. PREPARE FOR NEW CONSTRUCTION.
- D3 REMOVE DOOR AND FILL IN OPENING WITH CONSTRUCTION TO MATCH ADJACENT.
- D4 REMOVE CASEWORK. PATCH AND REPAIR WALLS FOR NEW CONSTRUCTION.
- D5 REMOVE WINDOW, TRIM AND PORTION OF WALL BELOW. PREPARE OPENING FOR NEW DOOR UNIT (ALTERNATE 1 ONLY).
- D6 REMOVE PLUMBING FUTURE, SUPPLY AND DRAIN. CAP PIPES THAT ARE NOT BEING REUSED. PREPARE FOR NEW INSTALLATION - SEE MECH.
- D7 REMOVE CEILING, INC. METAL SUPPORT, ELECTRICAL AND DUCTWORK. CAP CONDUITS THAT ARE NOT BEING REUSED. SEE MEP.
- D8 REMOVE FLOOR COVERING AND PREPARE SURFACE FOR NEW INSTALLATION - SEE INTERIORS.
- D9 REMOVE EXISTING PORCH, INCLUDING WALLS TO BELOW GRADE.
- D10 REMOVE EXISTING WINDOW AND FILL IN OPENING WITH CMU (ALTERNATE 1 ONLY).
- D11 CUT FLOOR IN THIS AREA FOR NEW PLUMBING OR MECHANICAL CHASE. SEE MEP.
- D12 REMOVE TOILET PARTITIONS. PATCH AND PREPARE FOR NEW CONSTRUCTION.
- D13 REMOVE WALL BASE AND PREPARE FOR NEW INSTALLATION.
- D14 REMOVE WOODS AND SHELVES.
- D15 REMOVE REMOVE CONVECTOR, PATCH AND REPAINT WALL TO MATCH EXISTING.
- D16 MECHANICAL CONTRACTOR TO CAP PLUMBING LINES. CONTRACTOR TO REMOVE EQUIPMENT. SEE MECHANICAL PLANS

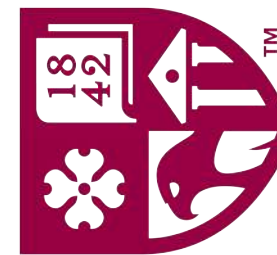
DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: KGG/EHS
CHECKED BY: Checker

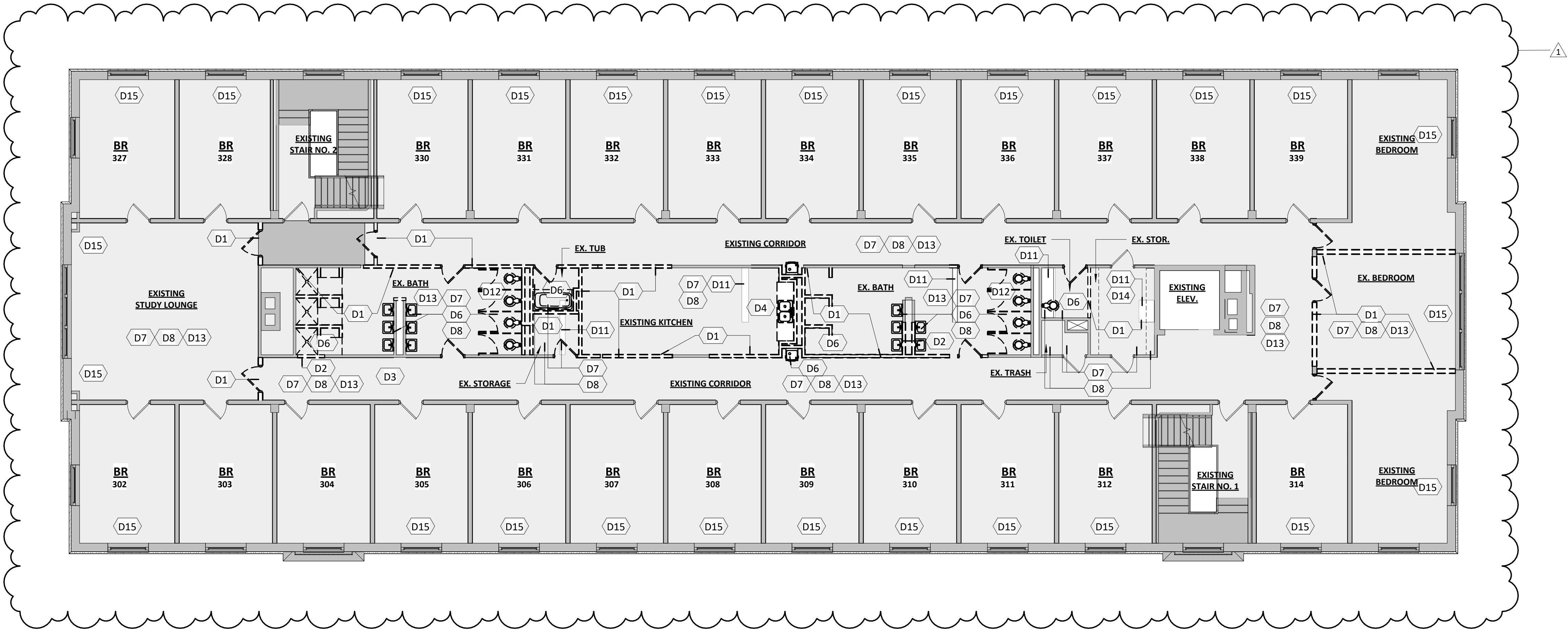
FIRST FLOOR
&
BASEMENT
PLANS -
DEMOLITION

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
AD-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt 1/30/2025 5:44:38 PM



OVERALL SECOND/ THIRD FLOOR PLAN - DEMOLITION
1/8" = 1'-0" THIRD FLOOR SHOWN - SECOND FLOOR SIMILAR

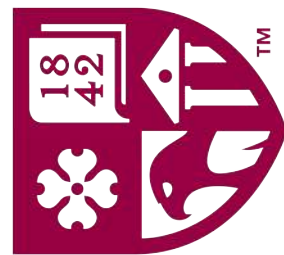
DEMOLITION NOTES

- D1 REMOVE WALL. PATCH FLOOR AND PREPARE FOR NEW CONSTRUCTION.
- D2 REMOVE PORTION OF WALL OR CUT NEW OPENING IN EXISTING WALL. PREPARE FOR NEW CONSTRUCTION.
- D3 REMOVE DOOR AND FILL IN OPENING WITH CONSTRUCTION TO MATCH ADJACENT.
- D4 REMOVE CASEWORK. PATCH AND REPAIR WALLS FOR NEW CONSTRUCTION.
- D5 REMOVE WINDOW, TRIM AND PORTION OF WALL BELOW. PREPARE OPENING FOR NEW DOOR UNIT (ALTERNATE 1 ONLY).
- D6 REMOVE PLUMBING FIXTURE, SUPPLY AND DRAIN. CAP PIPES THAT ARE NOT BEING REUSED. PREPARE FOR NEW INSTALLATION - SEE MECH.
- D7 REMOVE CEILING, INC. METAL SUPPORT, ELECTRICAL AND DUCTWORK. CAP CONDUITS THAT ARE NOT BEING REUSED. SEE MEP.
- D8 REMOVE FLOOR COVERING AND PREPARE SURFACE FOR NEW INSTALLATION - SEE INTERIORS.
- D9 REMOVE EXISTING PORCH, INCLUDING WALLS TO BELOW GRADE.
- D10 REMOVE EXISTING WINDOW AND FILL IN OPENING WITH CMU (ALTERNATE 1 ONLY).
- D11 CUT FLOOR IN THIS AREA FOR NEW PLUMBING OR MECHANICAL CHASE. SEE MEP.
- D12 REMOVE TOILET PARTITIONS. PATCH AND PREPARE FOR NEW CONSTRUCTION.
- D13 REMOVE WALL BASE AND PREPARE FOR NEW INSTALLATION.
- D14 REMOVE RODS AND SHELVES.
- D15 REMOVE REMOVE CONVECTOR, PATCH AND REPAINT WALL TO MATCH EXISTING.
- D16 MECHANICAL CONTRACTOR TO CAP PLUMBING LINES. CONTRACTOR TO REMOVE EQUIPMENT. SEE MECHANICAL PLANS

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3900 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: KGG/EHS
CHECKED BY: Checker

SECOND/
THIRD
FLOOR
PLANS -
DEMOLITION

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
AD-2

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

Revisions		
No.	Date	Description

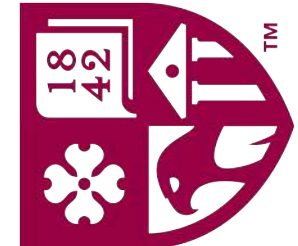
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com

Crawford Hall Renovation

ROANOKE COLLEGE

221 College Lane
Salem, Virginia

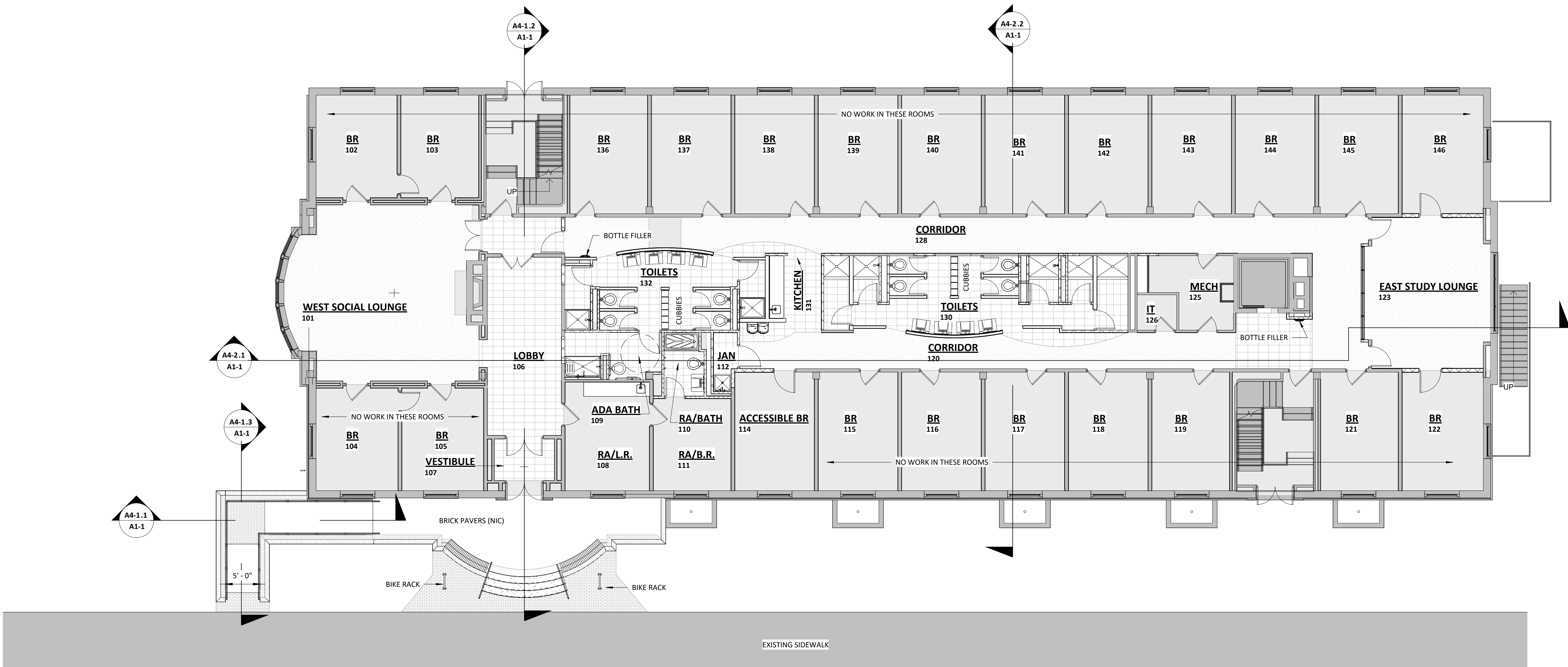


DRAWN BY:	KGG/EHS
CHECKED BY:	Checker

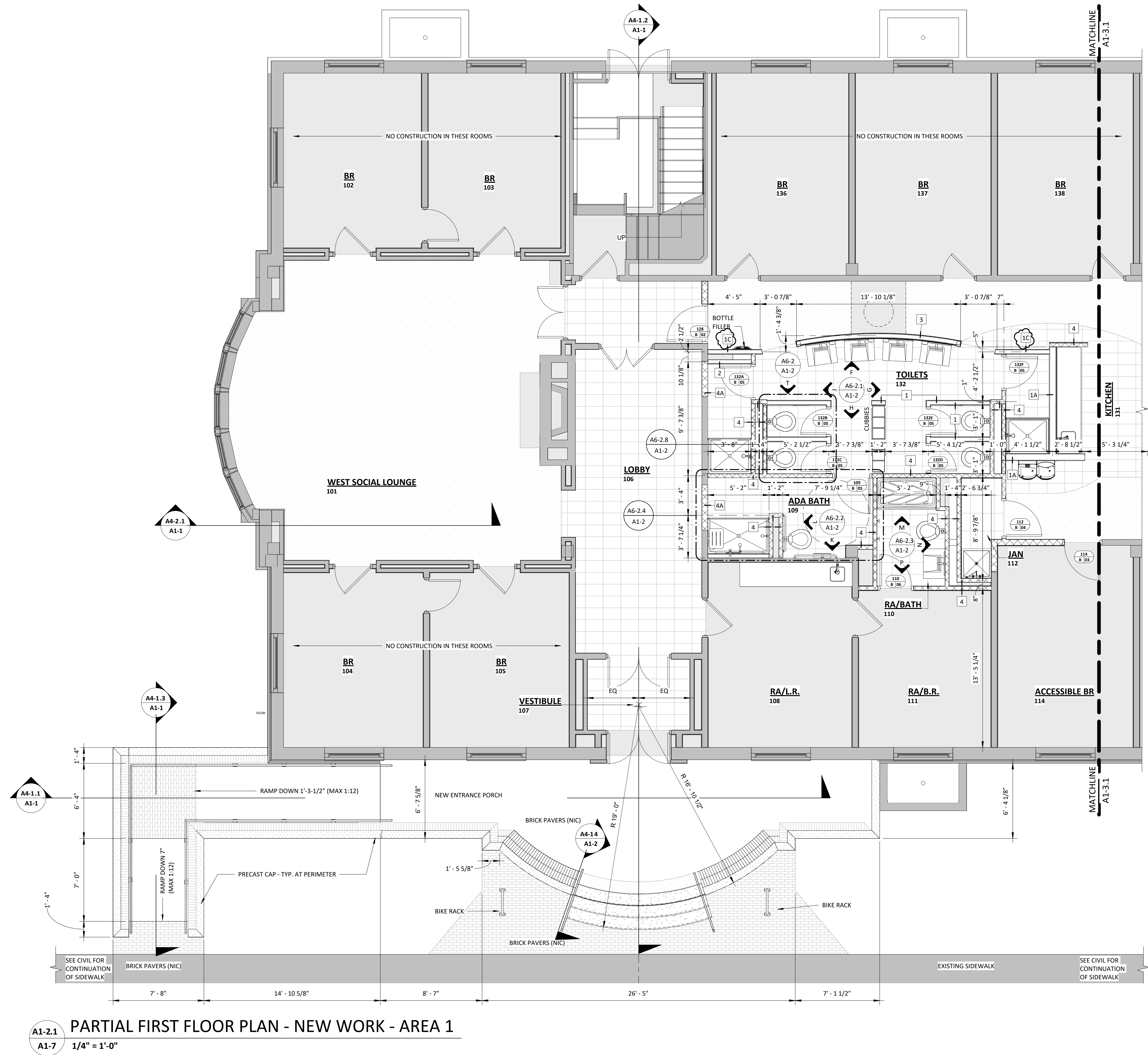
OVERALL
FIRST FLOOR
PLAN - NEW
WORK

RFP
PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A1-1
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



OVERALL FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"



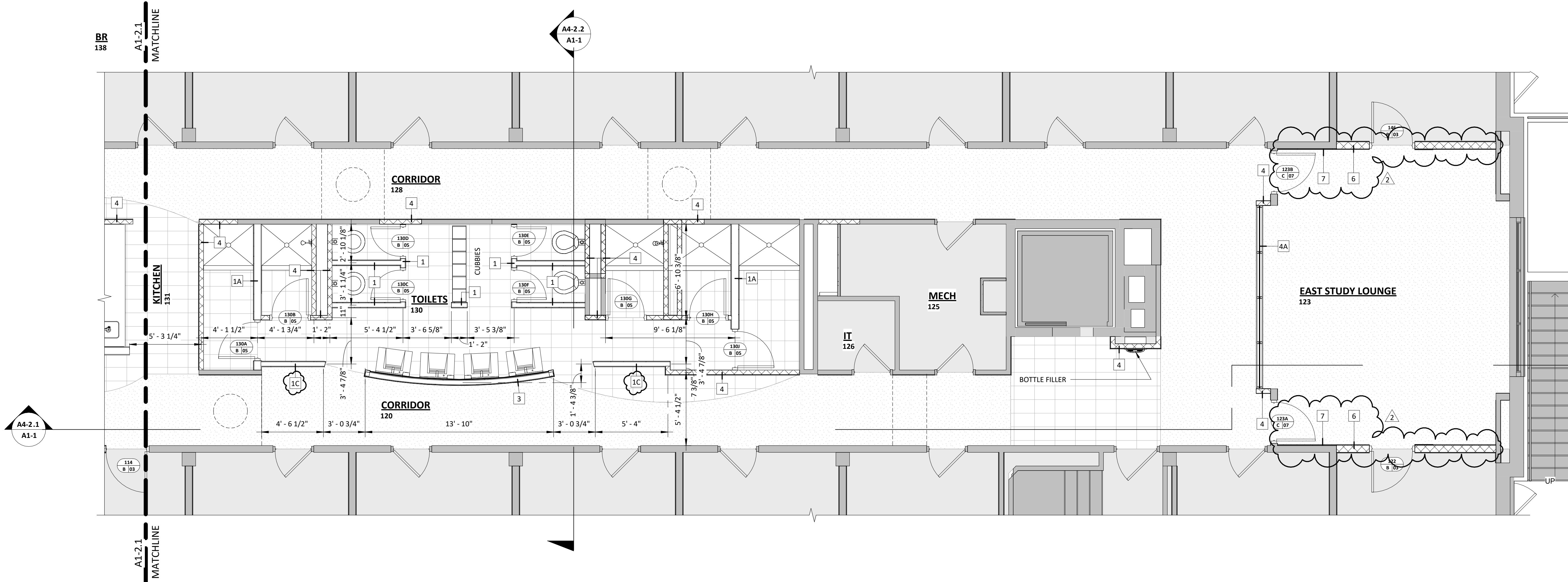
HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com



PARTIAL
FIRST FLOOR
PLAN - NEW
WORK -
AREA 1

RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A1-2
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

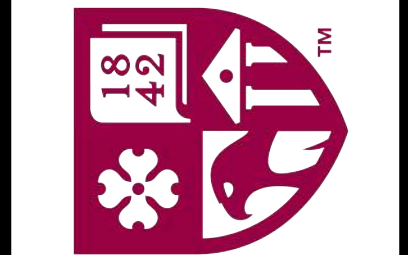


A1-3.1 PARTIAL FIRST FLOOR PLAN - NEW WORK - AREA 2
A1-7 1/4" = 1'-0"

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



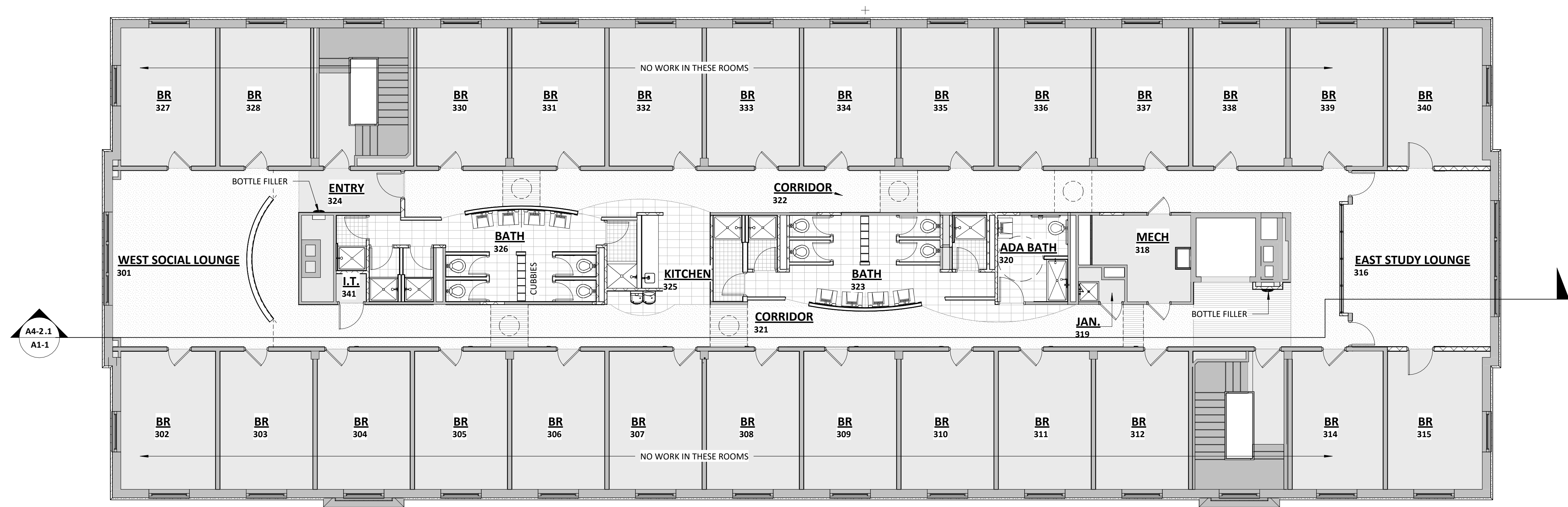
DRAWN BY: KGG/EHS
CHECKED BY: Checker

PARTIAL
FIRST FLOOR
PLAN - NEW
WORK -
AREA 2

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A1-3
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_eshumate@hughesae.com.rvt 1/30/2025 5:44:47 PM



OVERALL SECOND/ THIRD FLOOR PLAN - NEW WORK
1/8" = 1'-0"

Revisions		
No.	Date	Description



HUGHES

ASSOCIATES

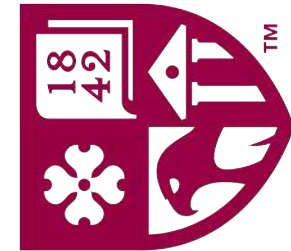
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com

Crawford Hall Renovation

ROANOKE COLLEGE

221 College Lane
Salem, Virginia



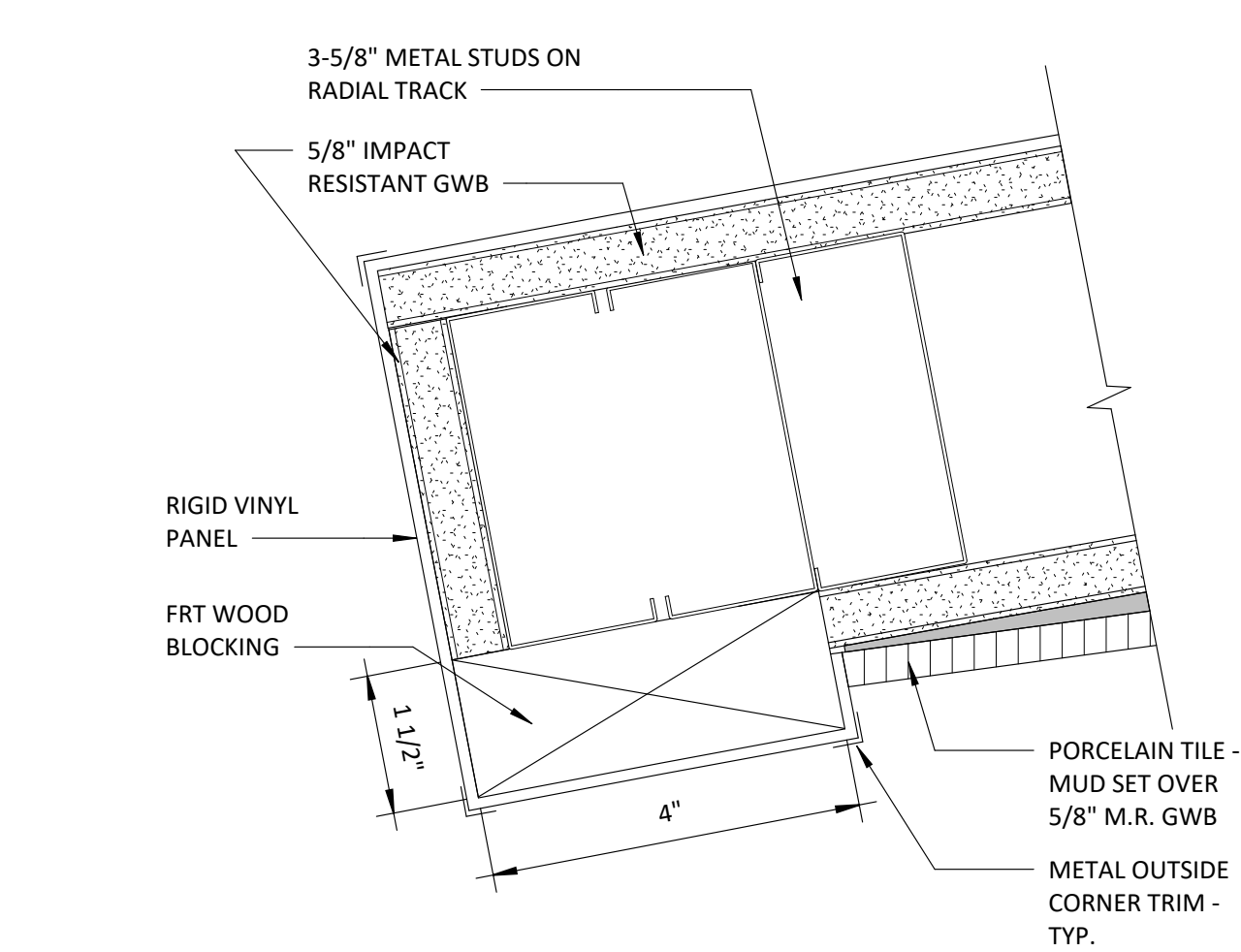
DRAWN BY:	KGG/EHS
CHECKED BY:	Checker

OVERALL
SECOND/
THIRD
FLOOR PLAN
- NEW WORK

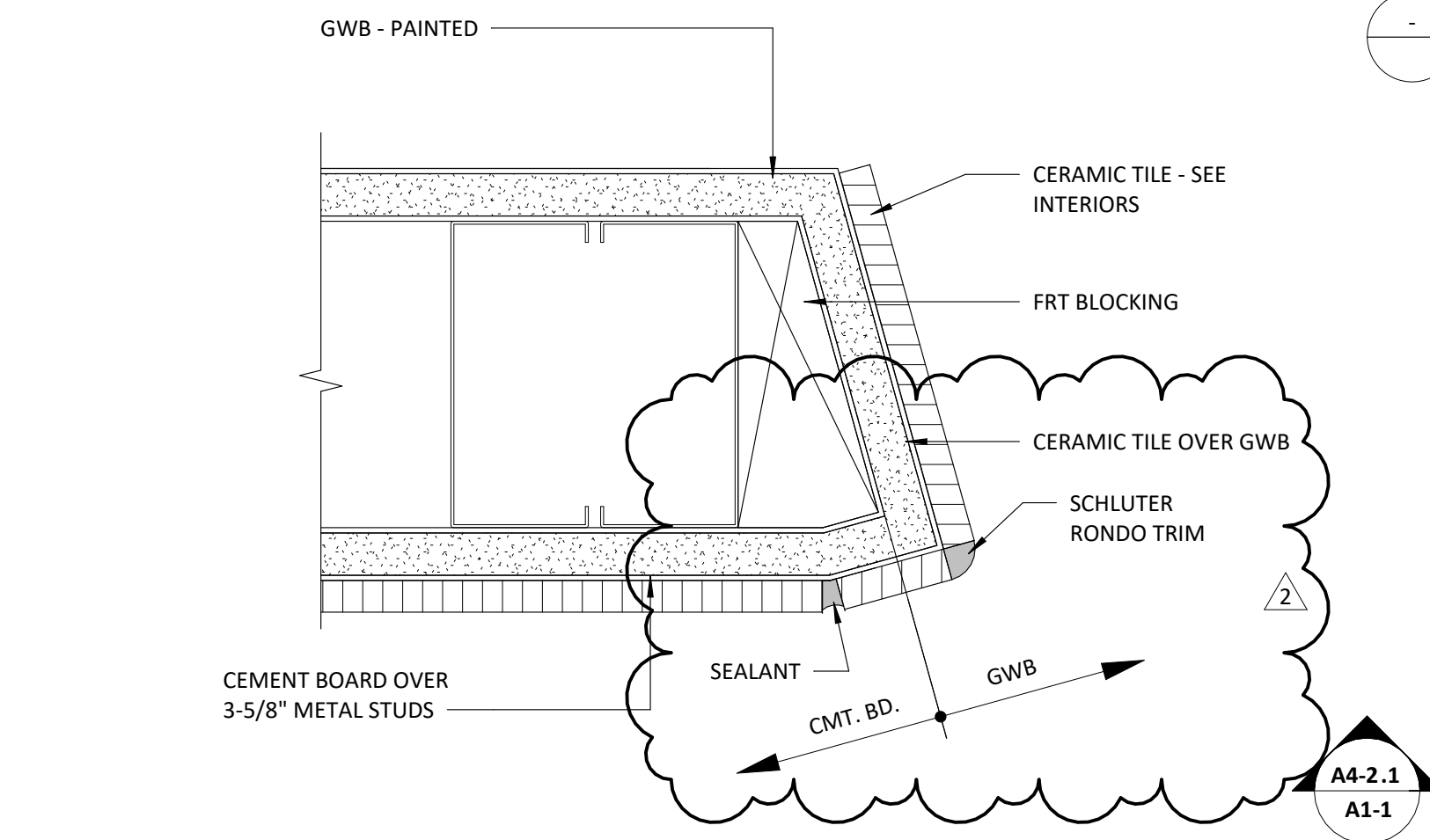
RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.	24028
SHEET	A1-4
© COPYRIGHT 2024 HUGHES ASSOCIATES ARCHITECTS & ENGINEERS A PROFESSIONAL CORPORATION	

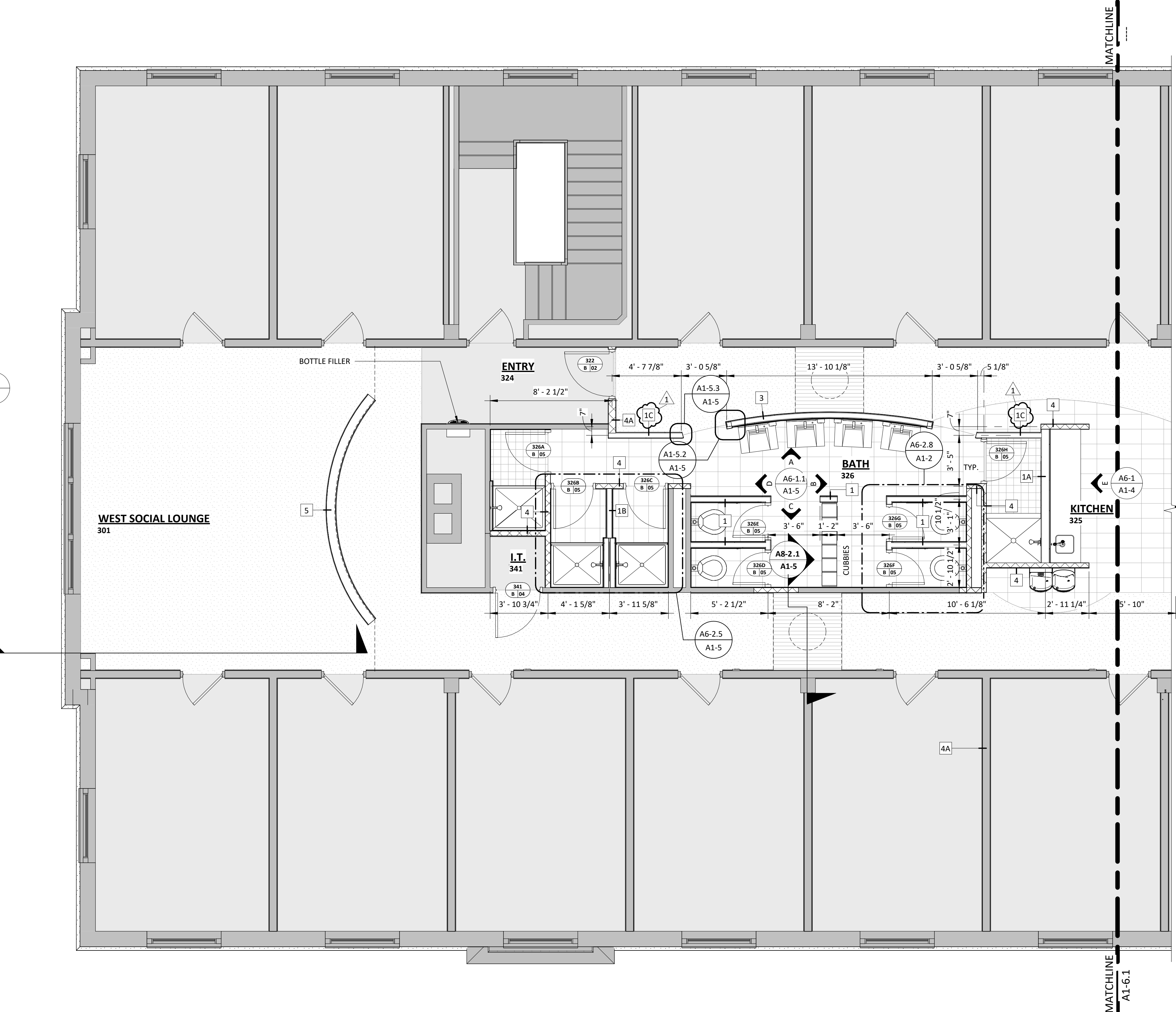
C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt 1/30/2025 5:44:50 PM



A1-5.2 PLAN DETAIL - RADIUS WALL END
A1-5 6" = 1'-0"



A1-5.3 PLAN DETAIL - TILE TERM.
A1-5 6" = 1'-0"



A1-5.1 PARTIAL SECOND/ THIRD FLOOR PLAN - NEW WORK - AREA 1
A3-1 1/4" = 1'-0"

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia

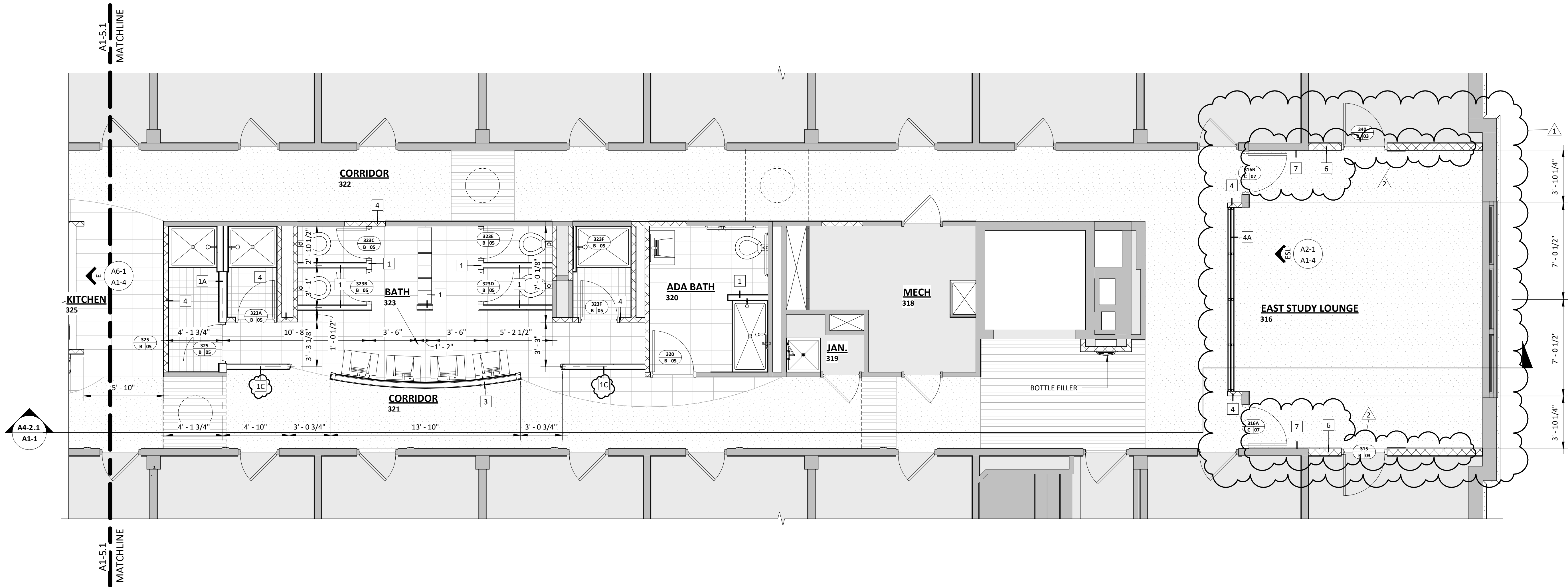


DRAWN BY: KGG/EHS
CHECKED BY: Checker

PARTIAL
SECOND/
THIRD
FLOOR PLAN
- NEW WORK
- AREA 1

RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A1-5
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



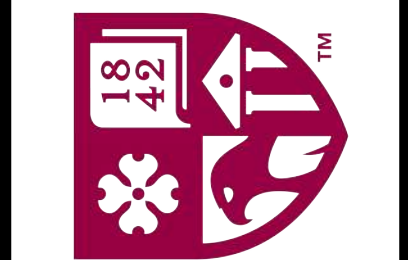
A1-6.1 PARTIAL SECOND/ THIRD FLOOR PLAN - NEW WORK - AREA 2
A3-1 1/4" = 1'-0"

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: KGG/EHS
CHECKED BY: Checker

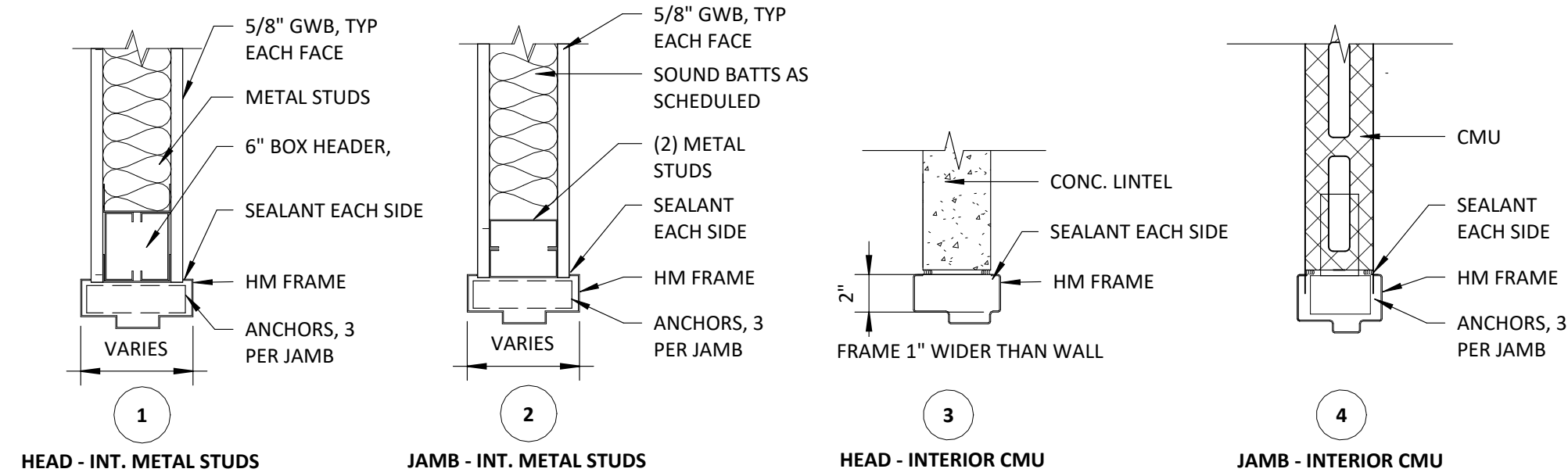
PARTIAL
SECOND/
THIRD
FLOOR PLAN
- NEW WORK
- AREA 2

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A1-6
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

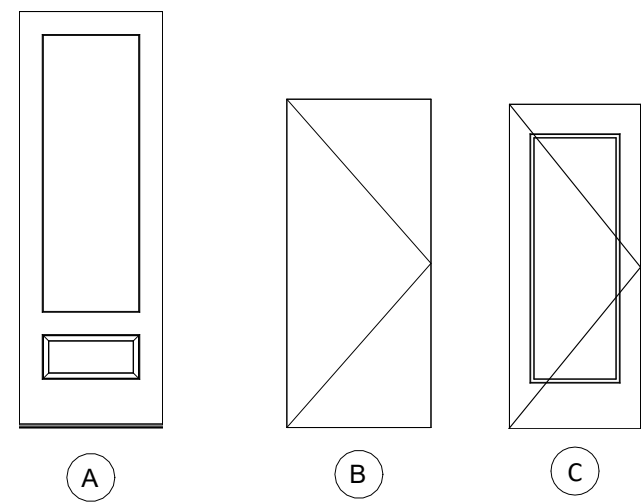
HEAD AND JAMB DETAILS

1 1/2" = 1'-0"



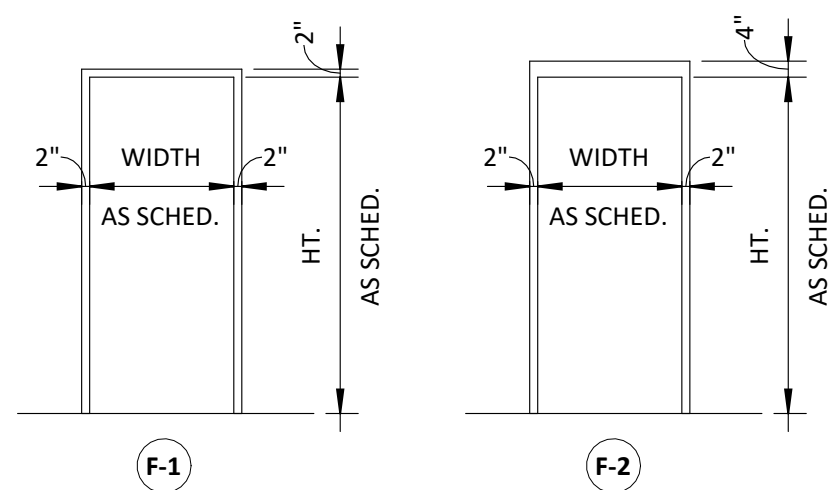
DOOR TYPES

NO SCALE



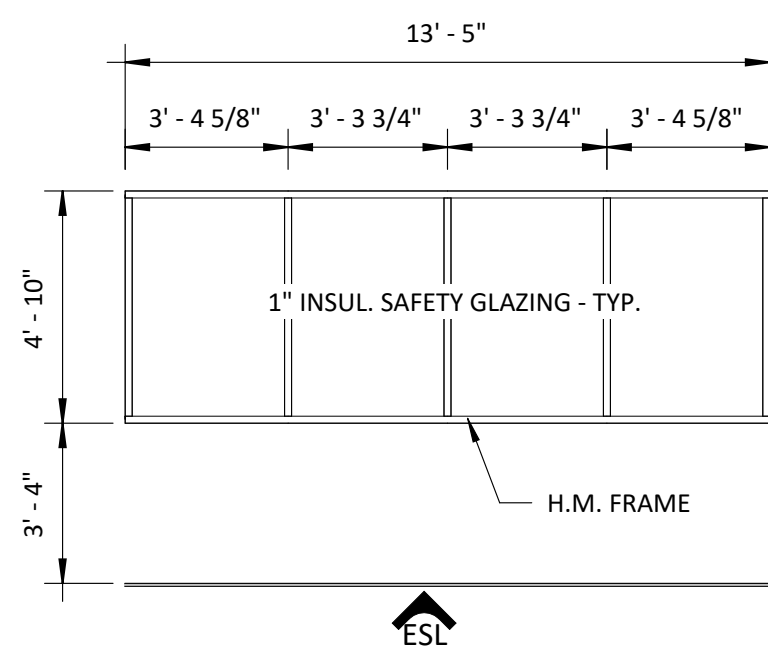
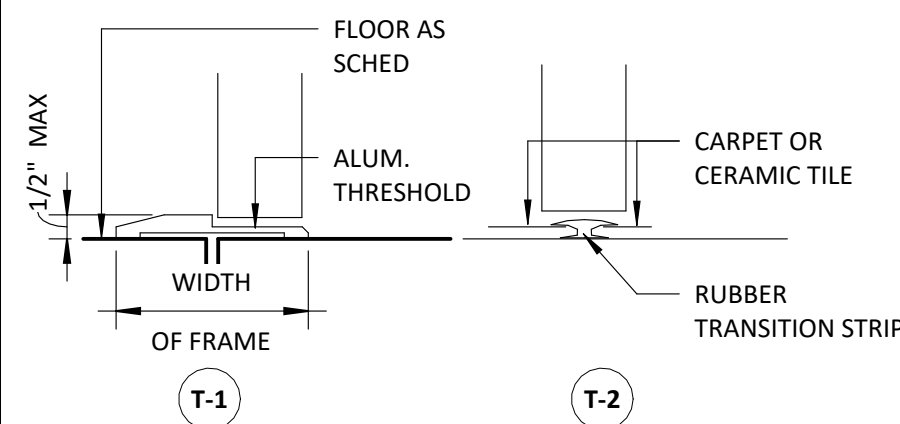
FRAME TYPES

NO SCALE



THRESHOLD TYPES

NO SCALE



BORROWED LIGHT AT EAST STUDY LOUNGE

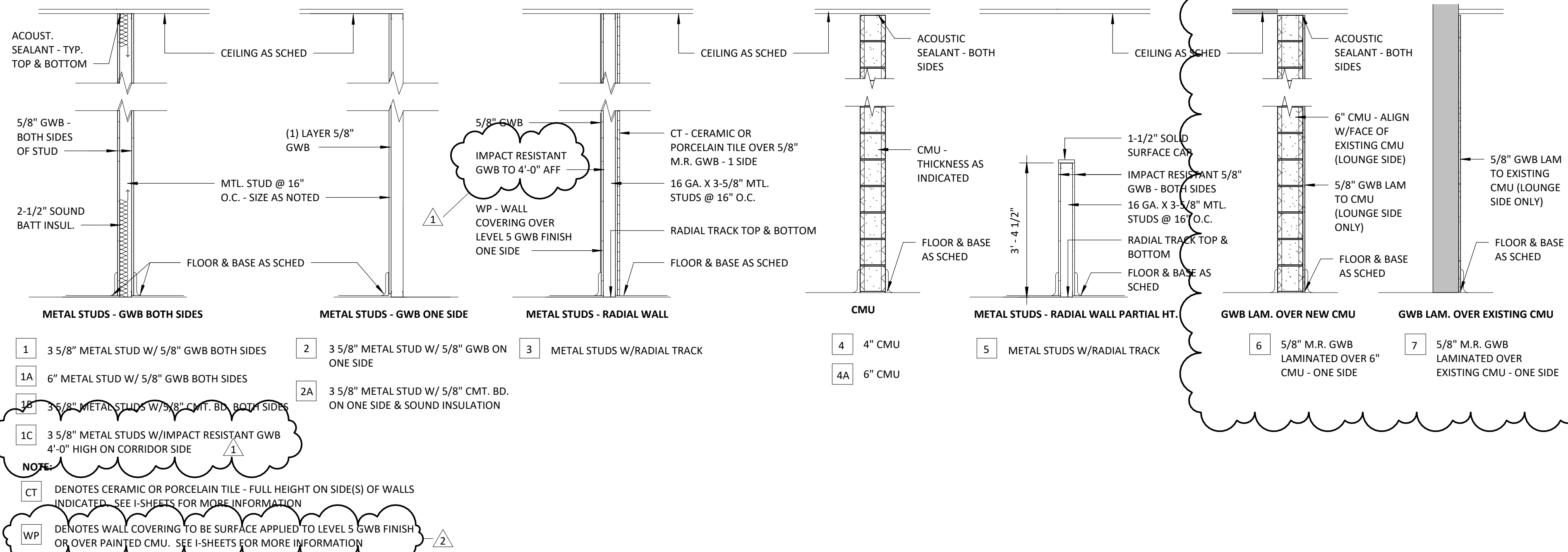
1/4" = 1'-0"

DOOR SCHEDULE

Mark	Door					Louver or U.C.	Frame					HDW	Remarks
	Size		Mat'l	Type	Glass		Frame Material	Frame Type	Detail				
	Width x Height	Thick.							H.	J.	S.		
FIRST FLOOR PLAN													
101A	3'-2" x 8'-9"		WD-CLAD	A	IG		WD-CLAD					01	ALTERNATE 1
101B	3'-2" x 8'-9"		WD-CLAD	A	IG		WD-CLAD					01	ALTERNATE 1
109	3'-0" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
110	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		06	
112	3'-0" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		04	
114	3'-0" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		03	
122	3'-0" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		03	
123A	2'-10" x 6'-10"	1 3/4"	WD-PVC	C	IG		HM	F-2	3	4		07	
123B	2'-10" x 6'-10"	1 3/4"	WD-PVC	C	IG		HM	F-2	3	4		07	
128	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		02	
130A	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
130B	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
130C	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
130D	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
130E	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
130F	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
130G	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
130H	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
130I	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
132A	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
132B	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
132C	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
132D	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
132E	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
132F	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
146	3'-0" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		03	
THIRD FLOOR PLAN							NOTE: THIRD FLOOR SHOWN, SECOND FLOOR SIMILAR						
315	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		03	
316A	2'-10" x 6'-10"	1 3/4"	WD-PVC	C	IG	-	HM	F-2	3	4		07	
316B	2'-10" x 6'-10"	1 3/4"	WD-PVC	C	IG	-	HM	F-2	3	4		07	
320	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
322	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		02	
323A	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
323B	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
323C	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
323D	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
323E	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
323F	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
325	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
326A	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
326B	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
326C	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
326D	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
326E	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
326F	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	1	2		05	
326G	2'-2" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-1	3	4		05	
326H	2'-8" x 7'-0"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		05	
340	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		03	
341	3'-0" x 6'-10"	1 3/4"	WD-PVC	B	-	-	HM	F-2	3	4		04	

PARTITION TYPES

NO SCALE



DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.hughesae.com
540.942.4002

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: KGG/EHS
CHECKED BY: Checker

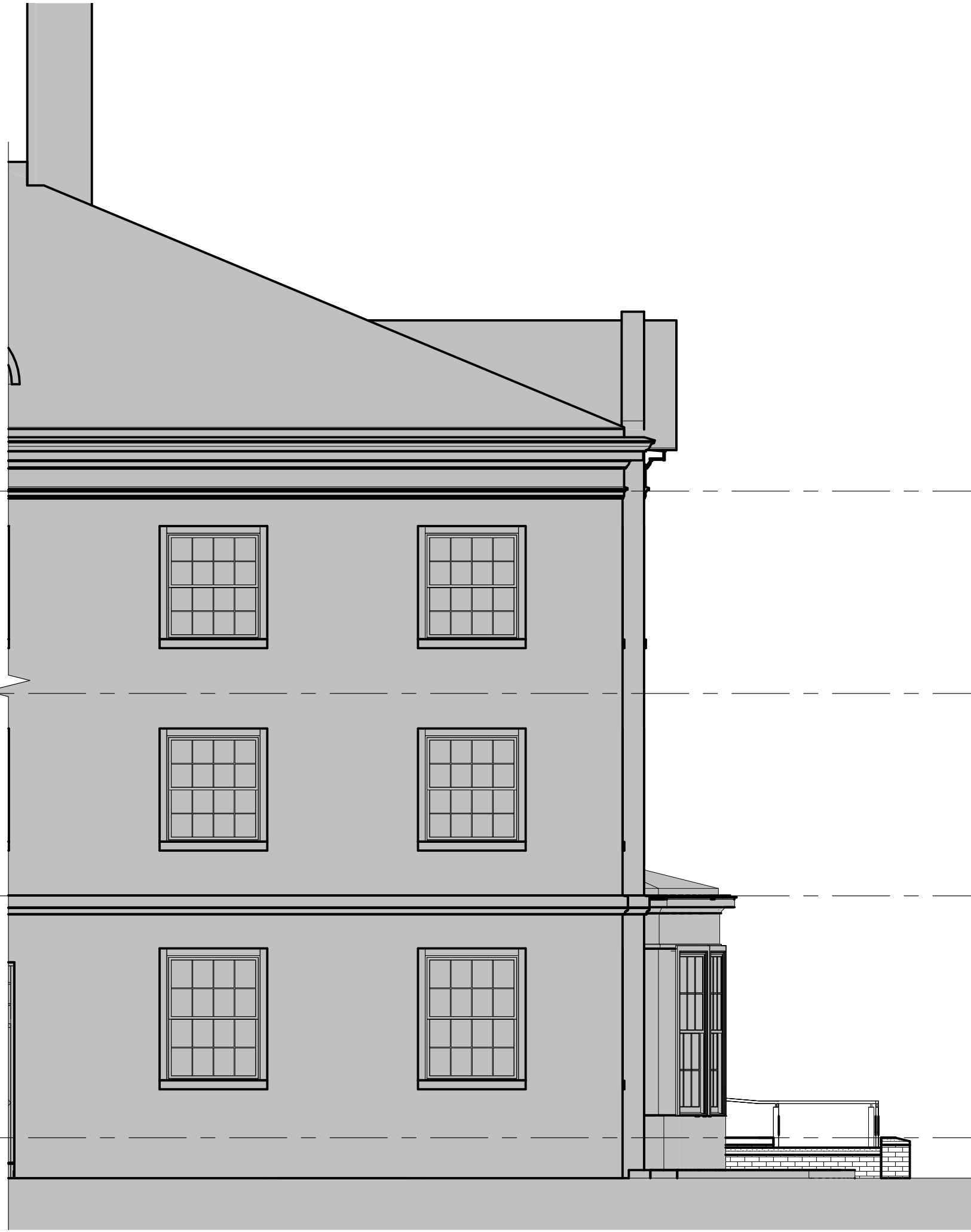
DOOR
SCHEDULE,
DETAILS &
PARTITION
TYPES

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

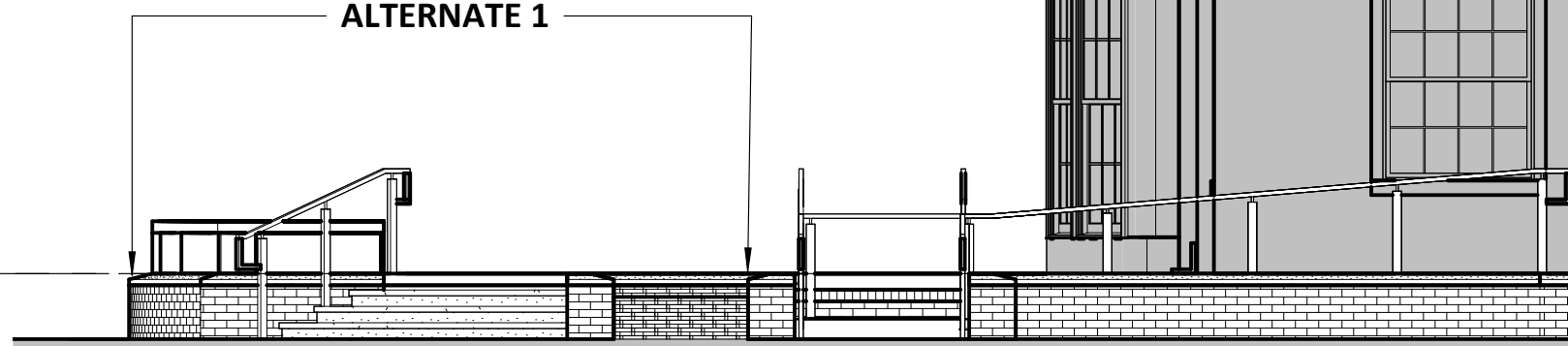
COMMISSION No.
24028
SHEET
A2-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

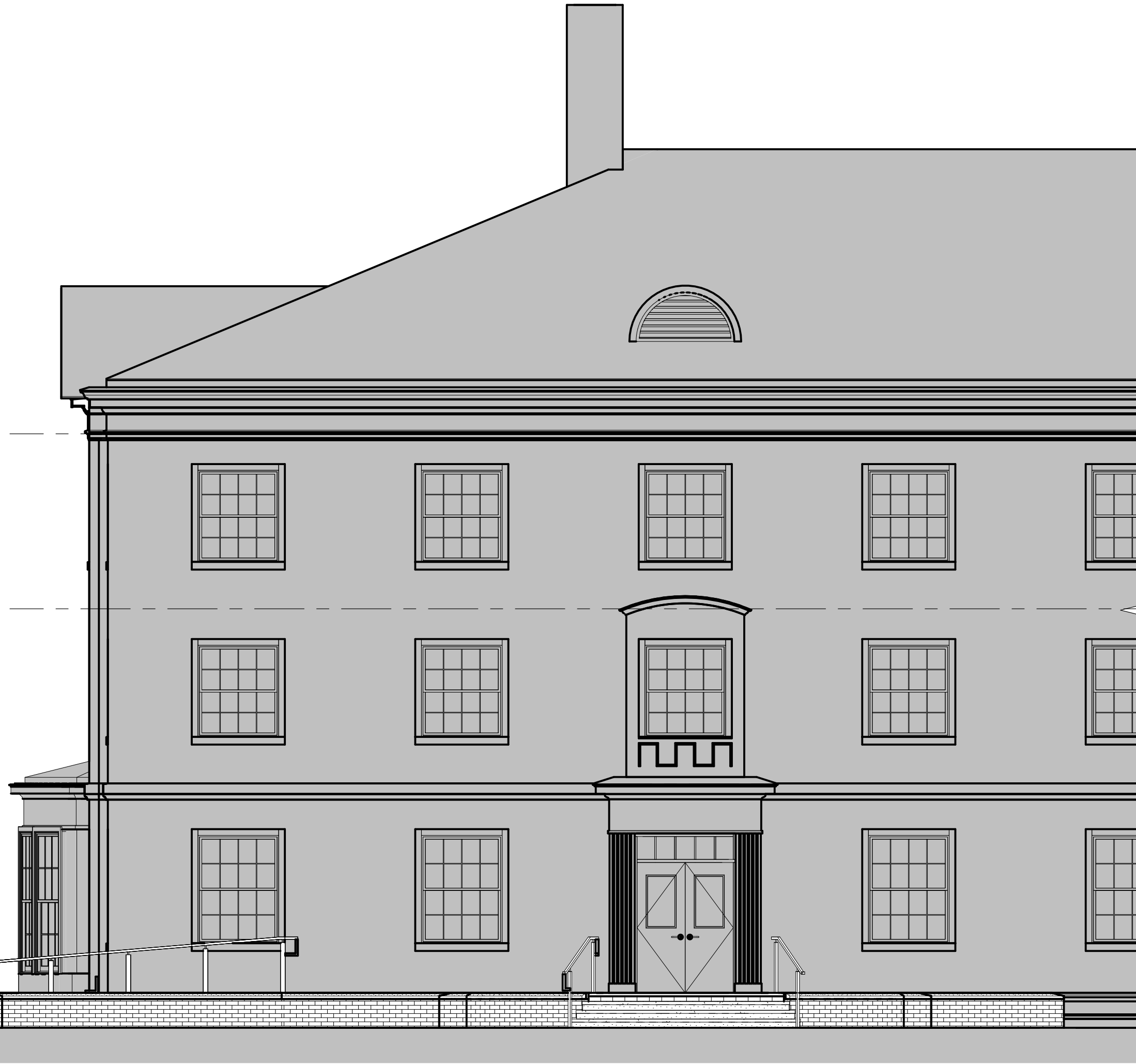
C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthmate@hughesae.com.rvt1/30/2025 5:45:01 PM



A3-1.1 PARTIAL REAR ELEVATION
3/16" = 1'-0"



A3-1.3 PARTIAL FRONT ELEVATION
A1-1 3/16" = 1'-0"



ATTIC PLAN 30.02'
THIRD FLOOR PLAN 20.63'
SECOND FLOOR PLAN 11.23'
FIRST FLOOR PLAN 0.00'

Revisions		
No.	Date	Description

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



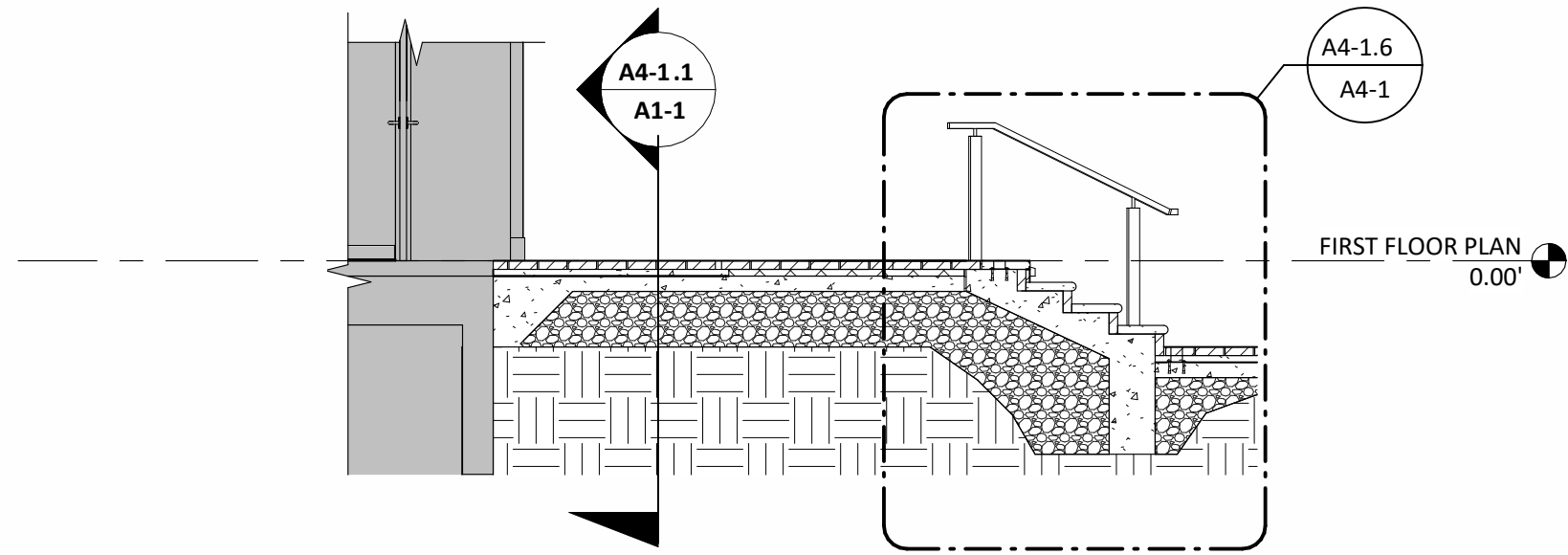
DRAWN BY: KGG/EHS
CHECKED BY: Checker

EXTERIOR
ELEVATIONS

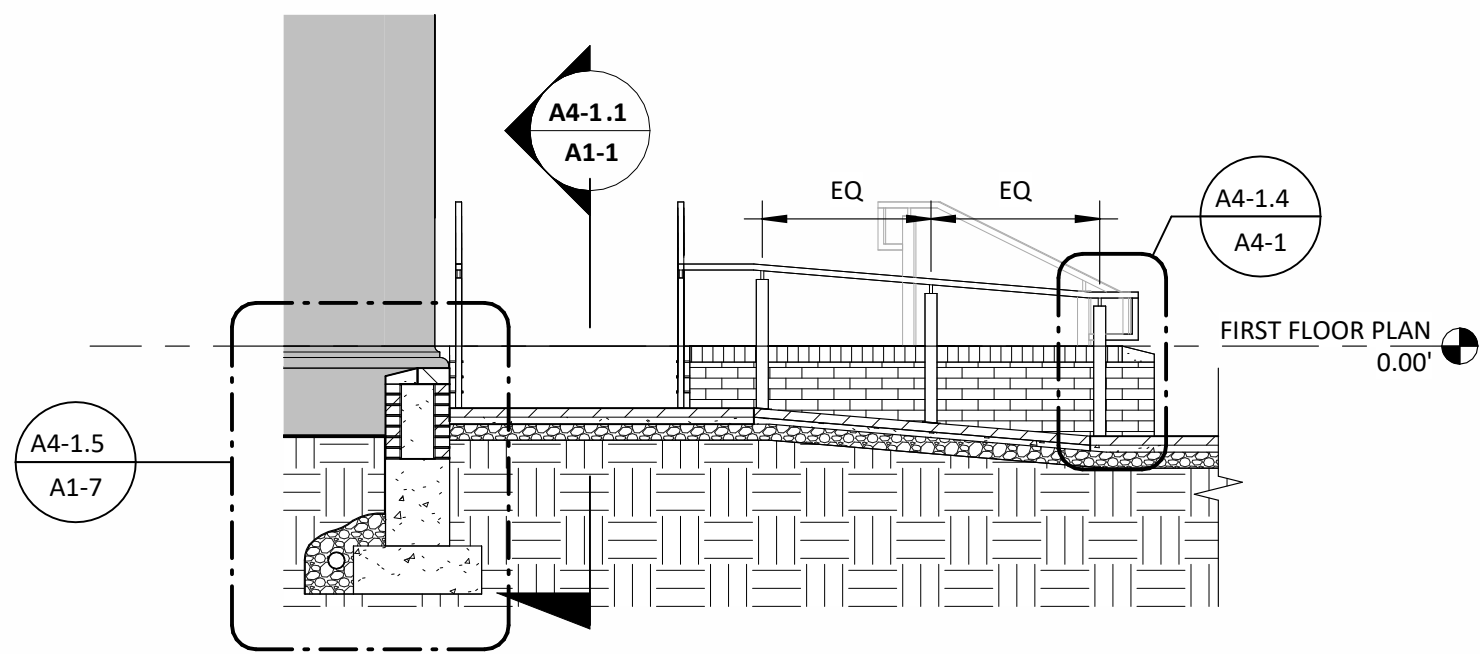
RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A3-1
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

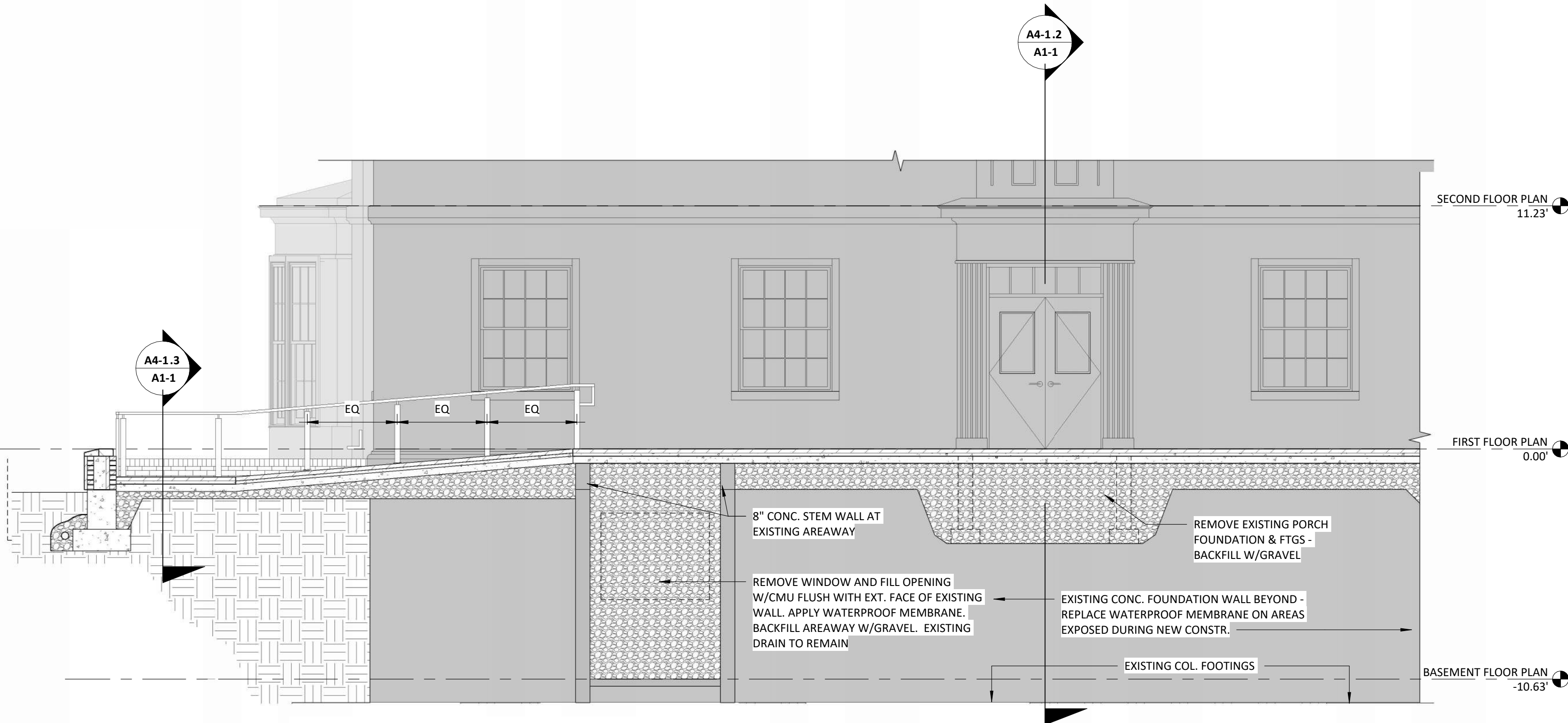
1/30/2025 5:45:10 PM
C:\Users\shumate\Documents\24028 - Crawford Hall Renovation - Central_esthmate@hughesae.com.rvt



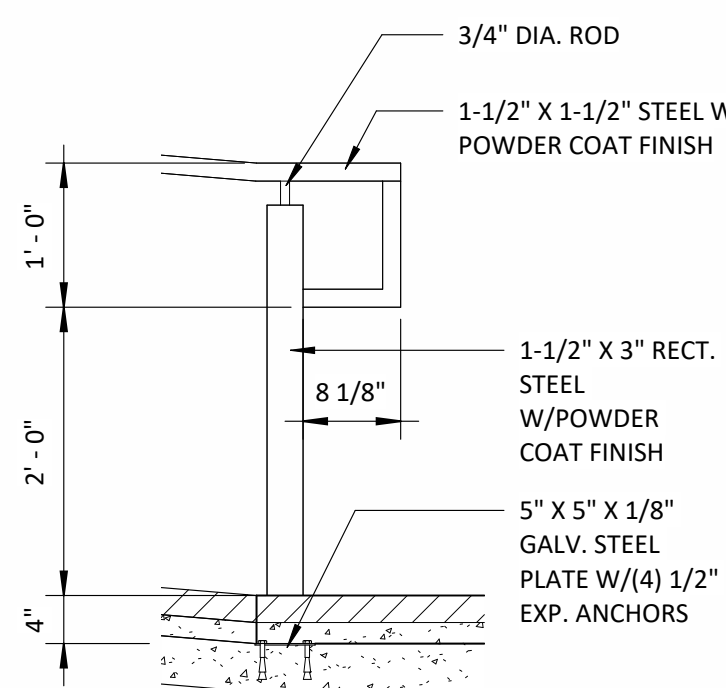
SECTION AT FRONT ENTRANCE
A4-1.2
A1-1 1/4" = 1'-0"



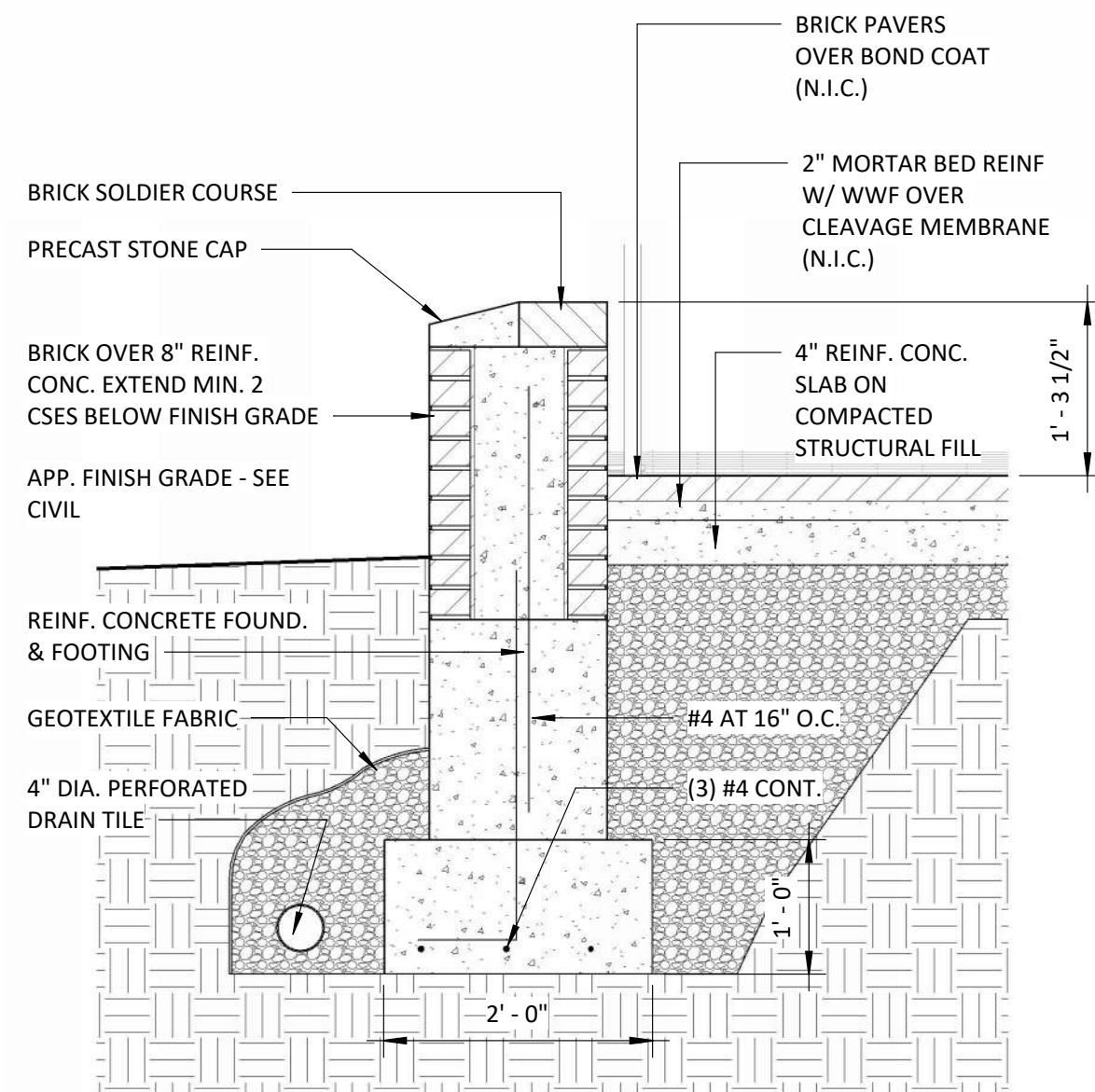
TRANSVERSE SECTION AT RAMP LANDING
A4-1.3
A1-1 1/4" = 1'-0"



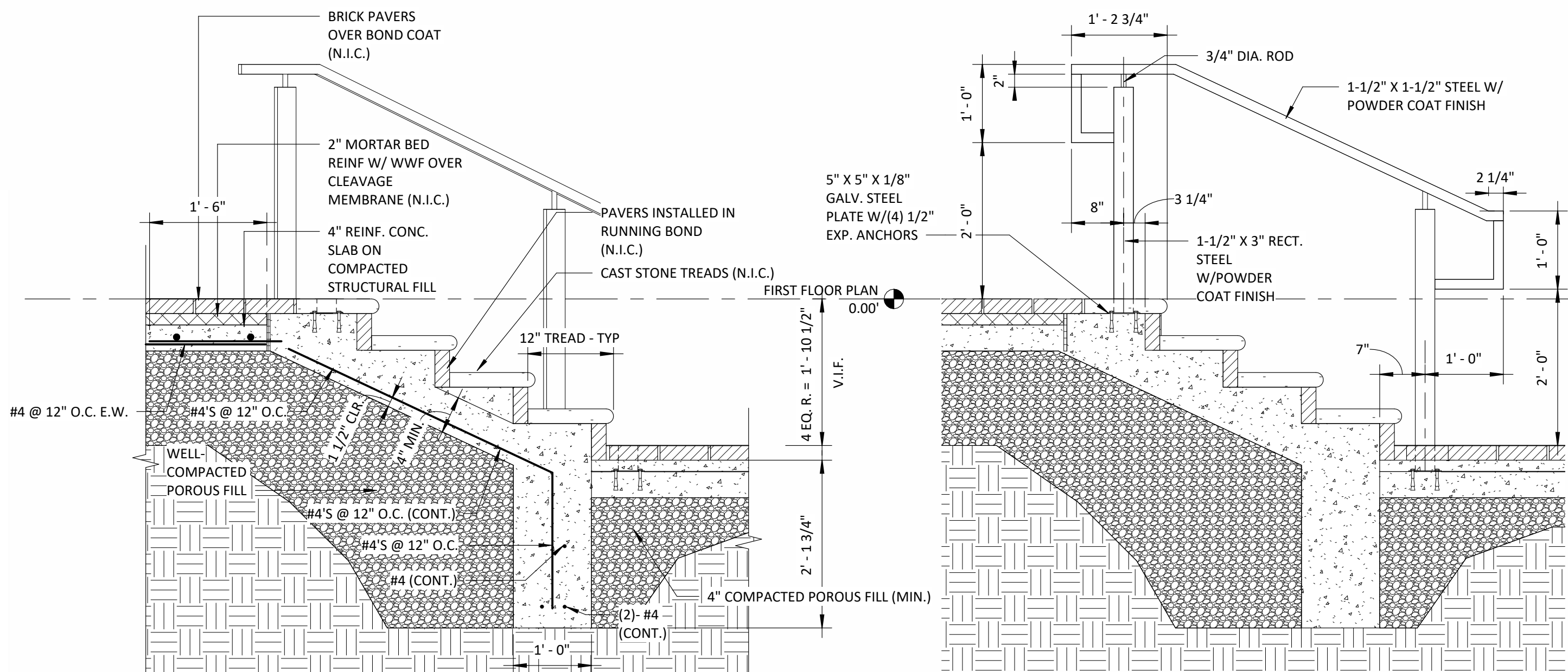
SECTION AT PORCH & RAMP
A4-1.1
A1-1 1/4" = 1'-0"



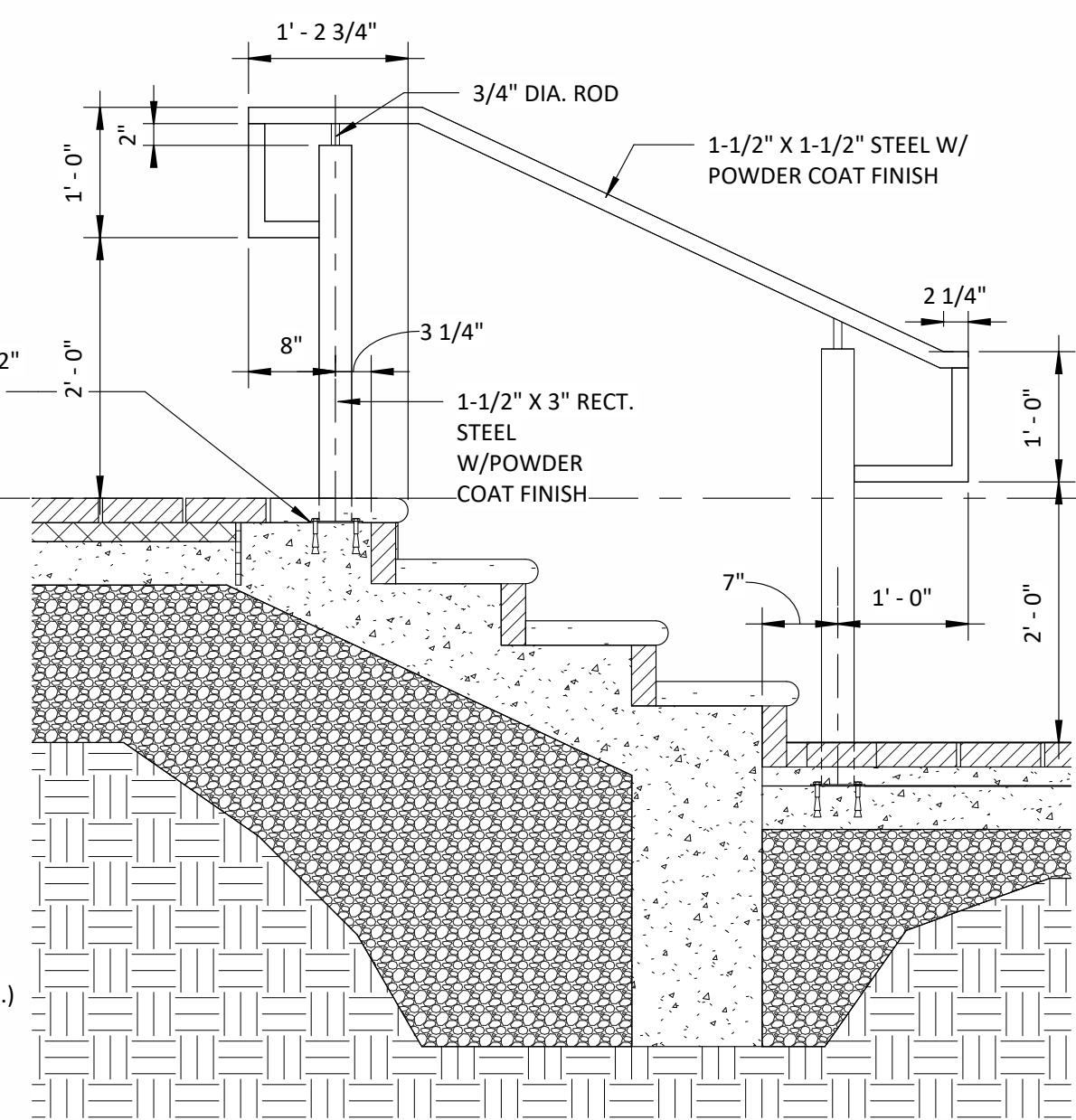
**RAMP RAILING
TYP. TERMINATION**
A4-1.4
A1-1 3/4" = 1'-0"



TYP. SECTION - RAMP WALLS
A4-1.5
A1-7 3/4" = 1'-0"



SECTION AT FRONT STEPS
A4-1.6
A1-1 3/4" = 1'-0"



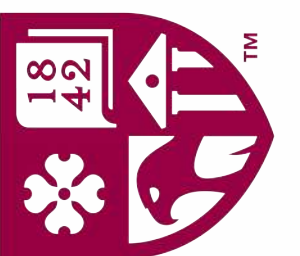
RAILING DETAIL
3/4" = 1'-0"

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



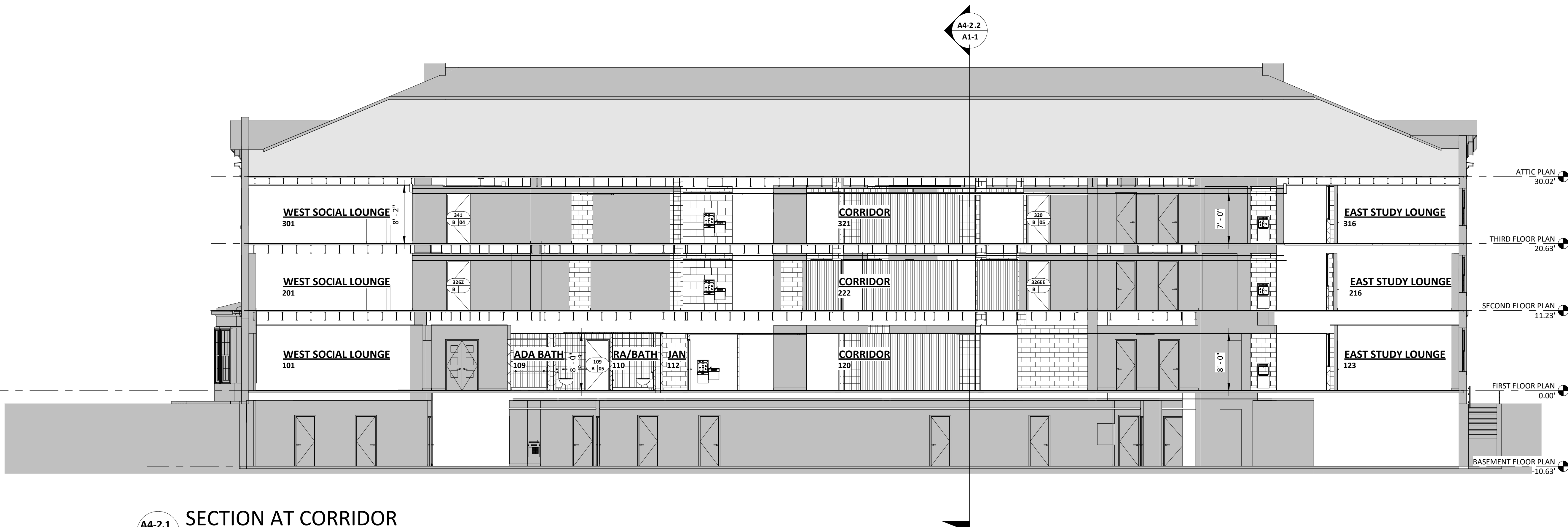
DRAWN BY: EHS
CHECKED BY: Checker

**BUILDING
SECTIONS
EXTERIOR
ADDITIONS**

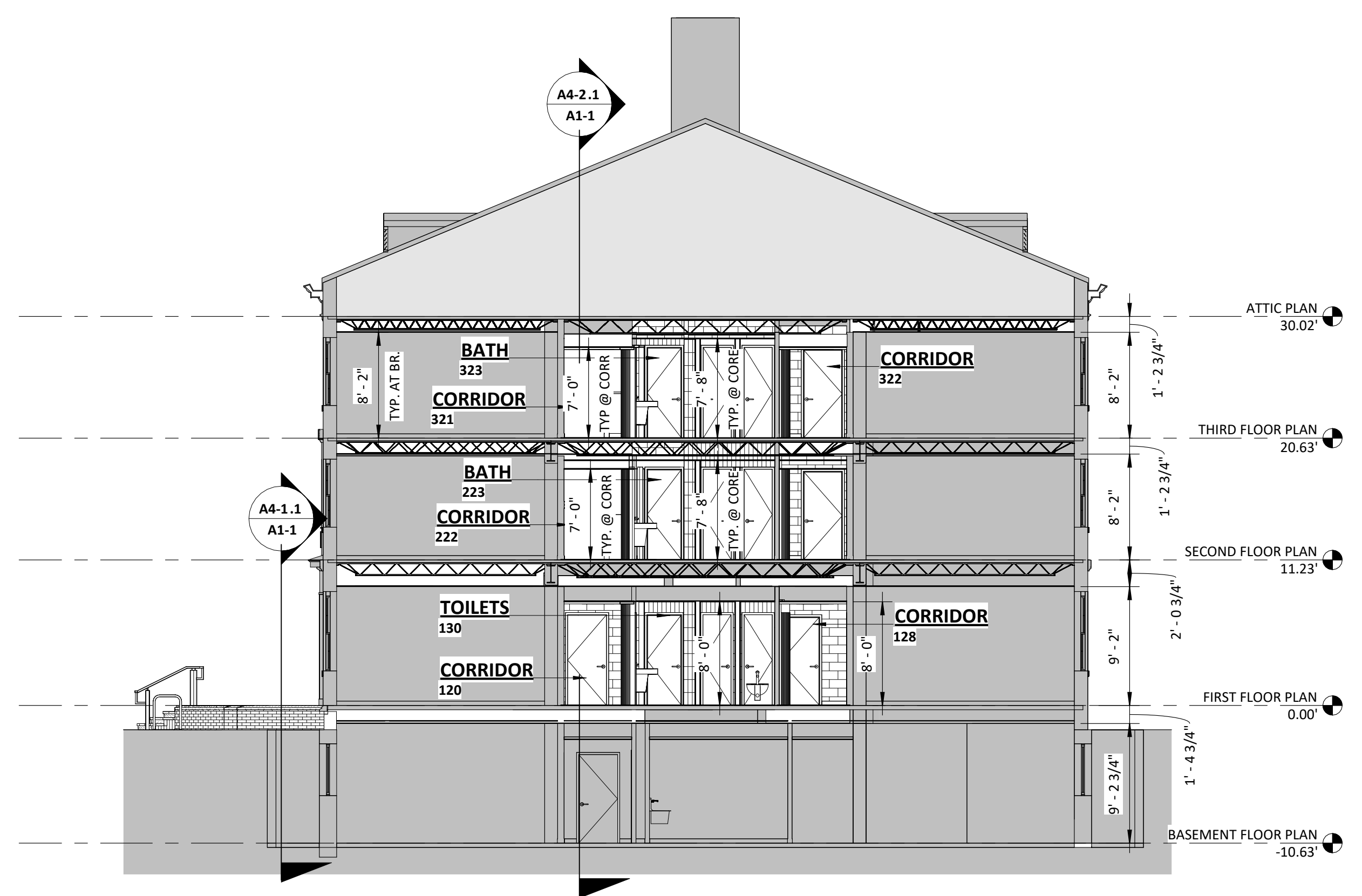
RF P R I C I N G
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A4-1
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthmate@hughesae.com.rvt 1/30/2025 5:45:19 PM



A4-2.1
A1-1 SECTION AT CORRIDOR
1/8" = 1'-0"



A4-2.2
A1-1 SECTION AT TOILET ROOMS
1/8" = 1'-0"

DATE: Dec.18, 2024

Revisions		
No.	Date	Description

H

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesae.com

Crawford Hall Renovation

ROANOKE COLLEGE

221 College Lane
Salem, Virginia



DRAWN BY: EHS

CHECKED BY: Checker

BUILDING SECTIONS INTERIOR

RFP PRICING

NOT FOR CONSTRUCTION

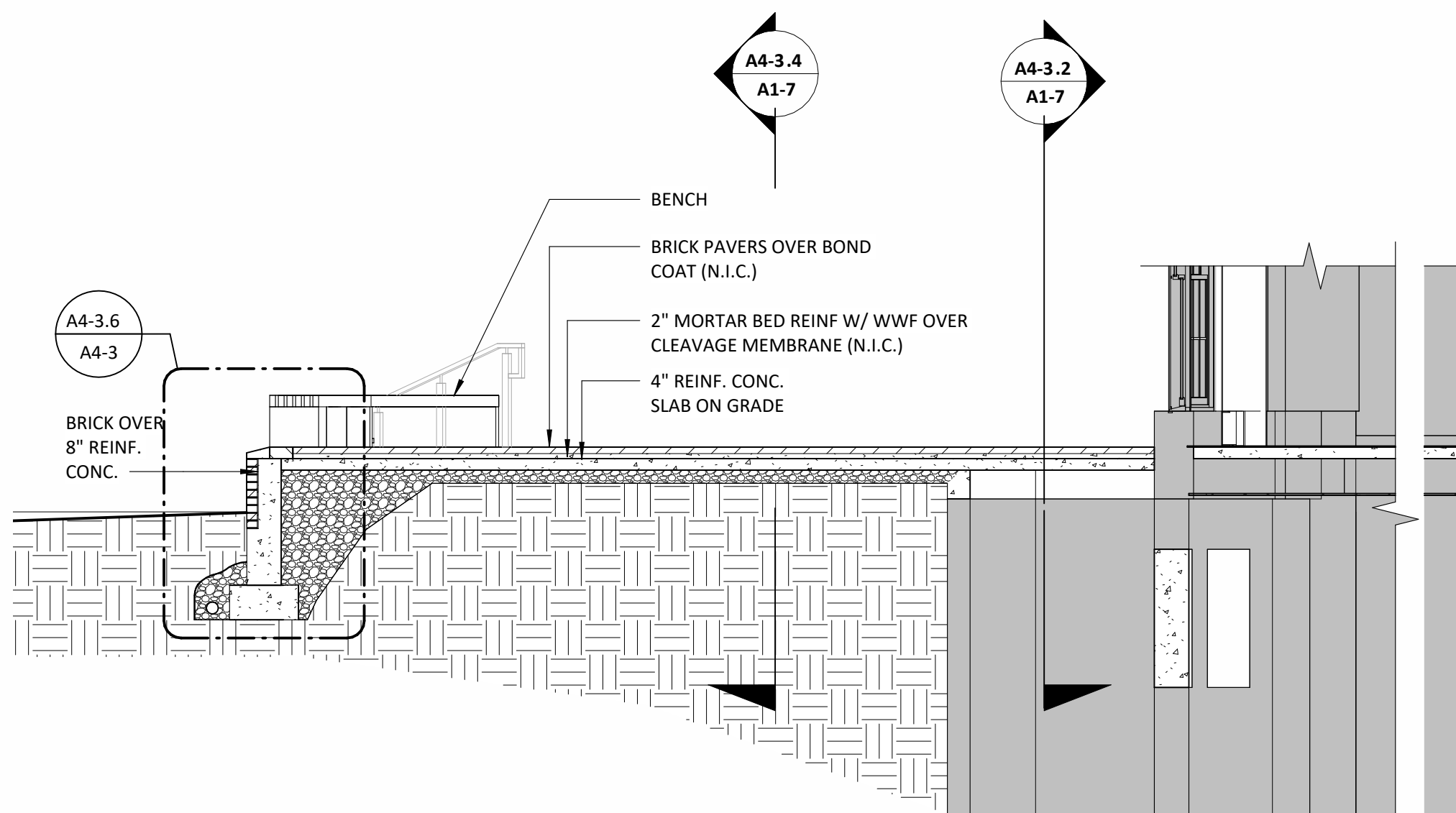
DOCUMENT

COMMISSION No. 24028

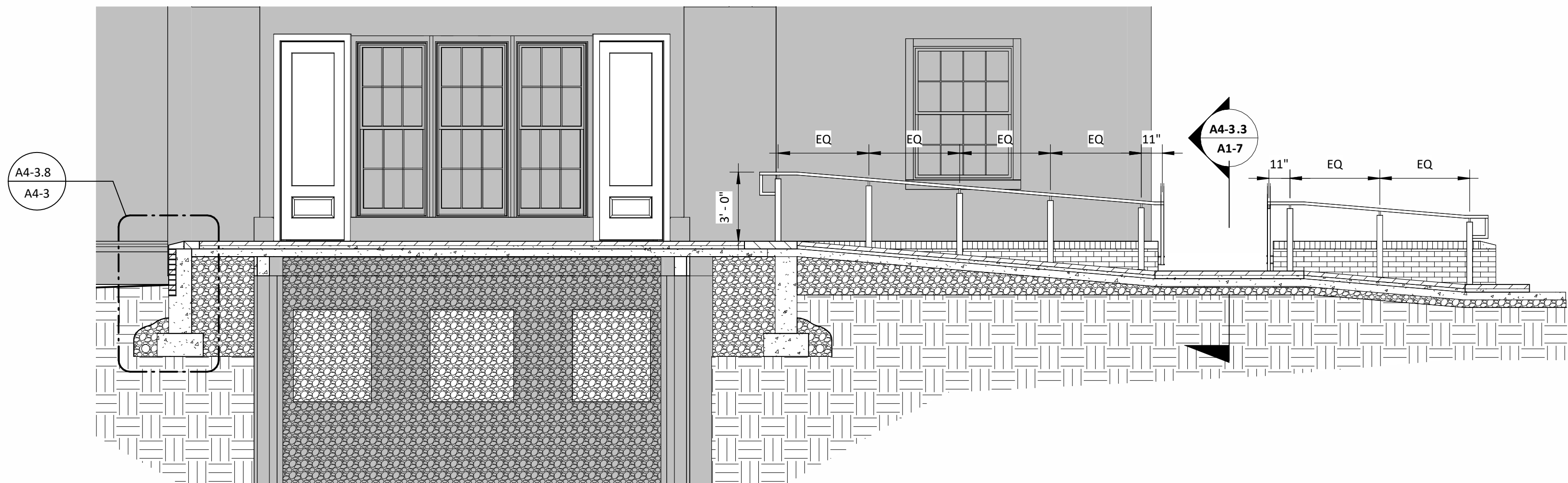
SHEET A4-2

© COPYRIGHT 2024 HUGHES ASSOCIATES ARCHITECTS & ENGINEERS A PROFESSIONAL CORPORATION

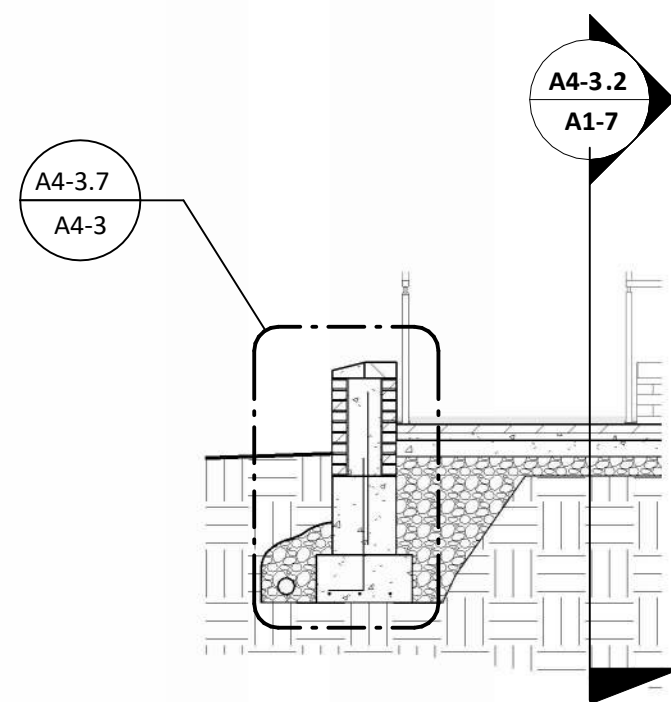
1/30/2025 5:45:27 PM
C:\Users\shumate\Documents\24028 - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt



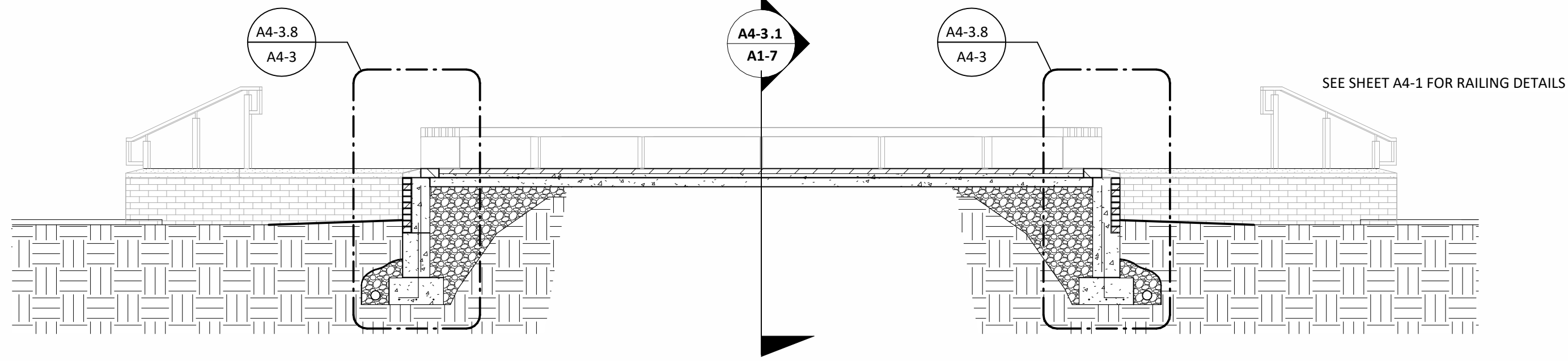
A4-3.1
A1-7 LONG. SECTION @ PATIO
1/4" = 1'-0"



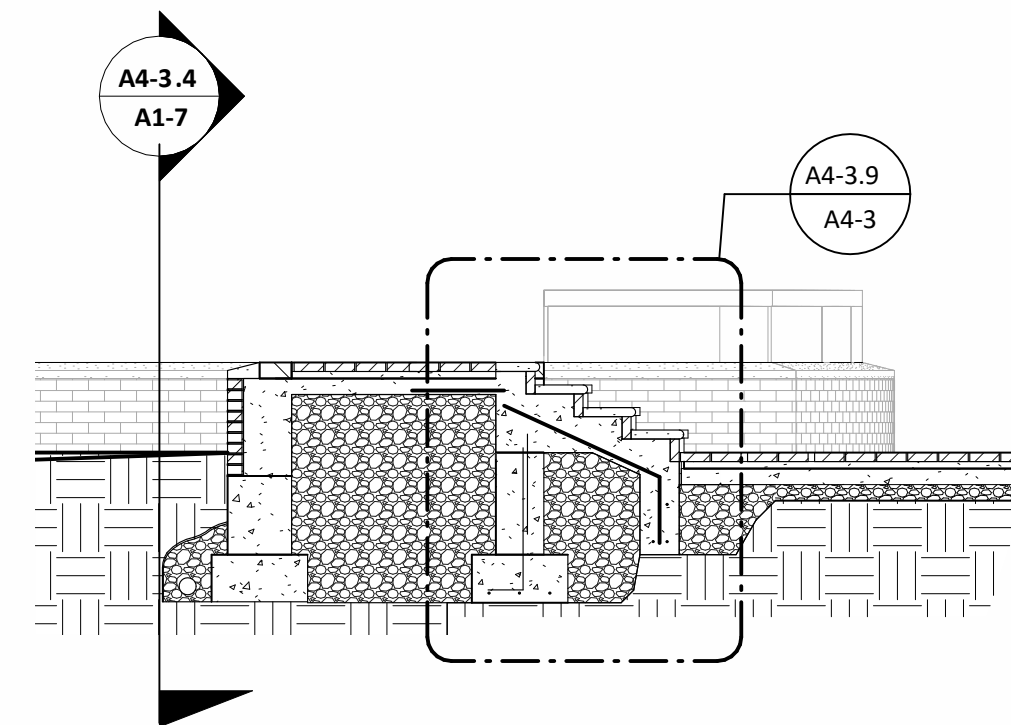
A4-3.2
A1-7 TRANSVERSE SECTION AT PATIO1
1/4" = 1'-0"



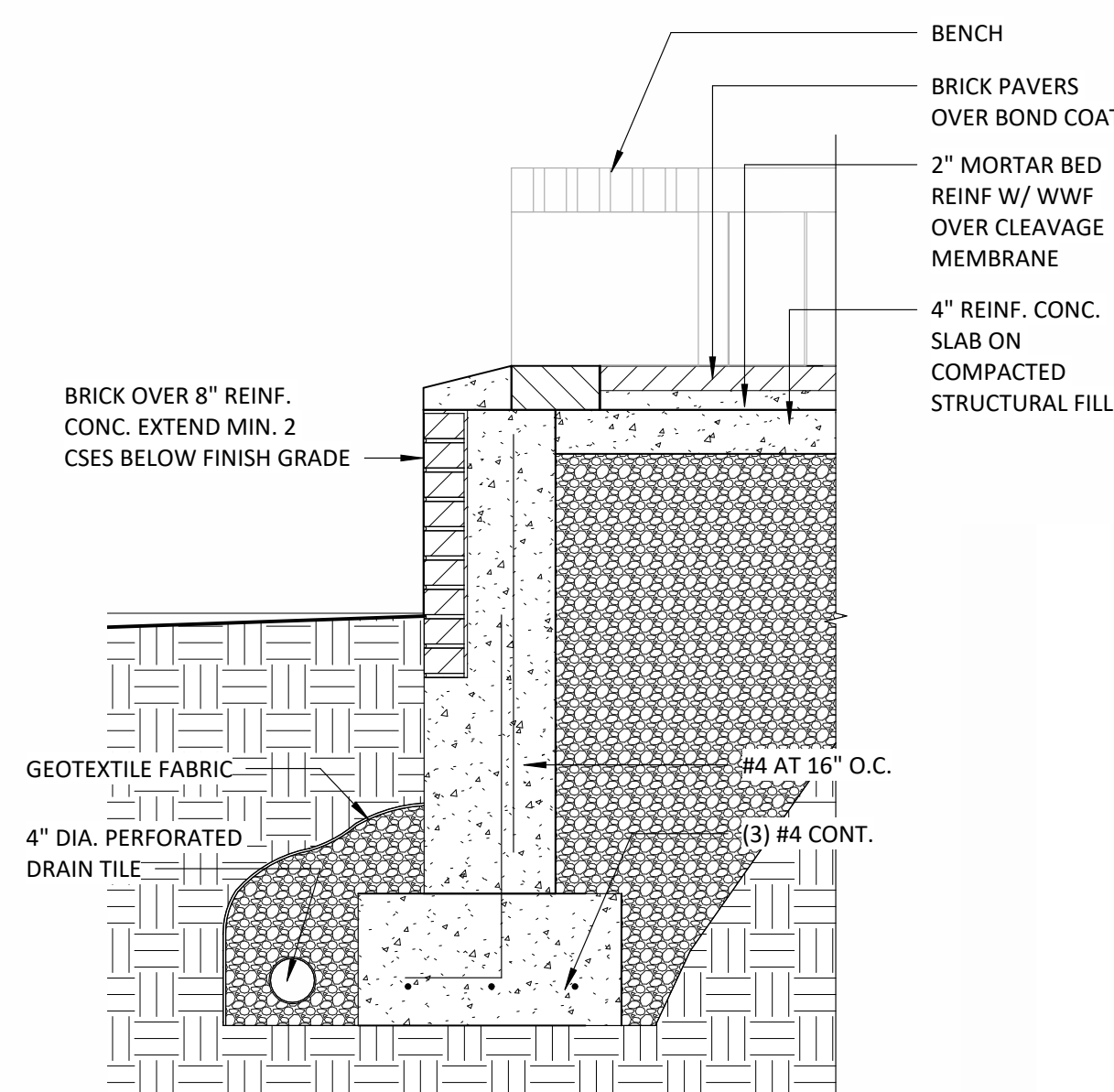
A4-3.3
A1-7 SECTION AT RAMP LANDING
1/4" = 1'-0"



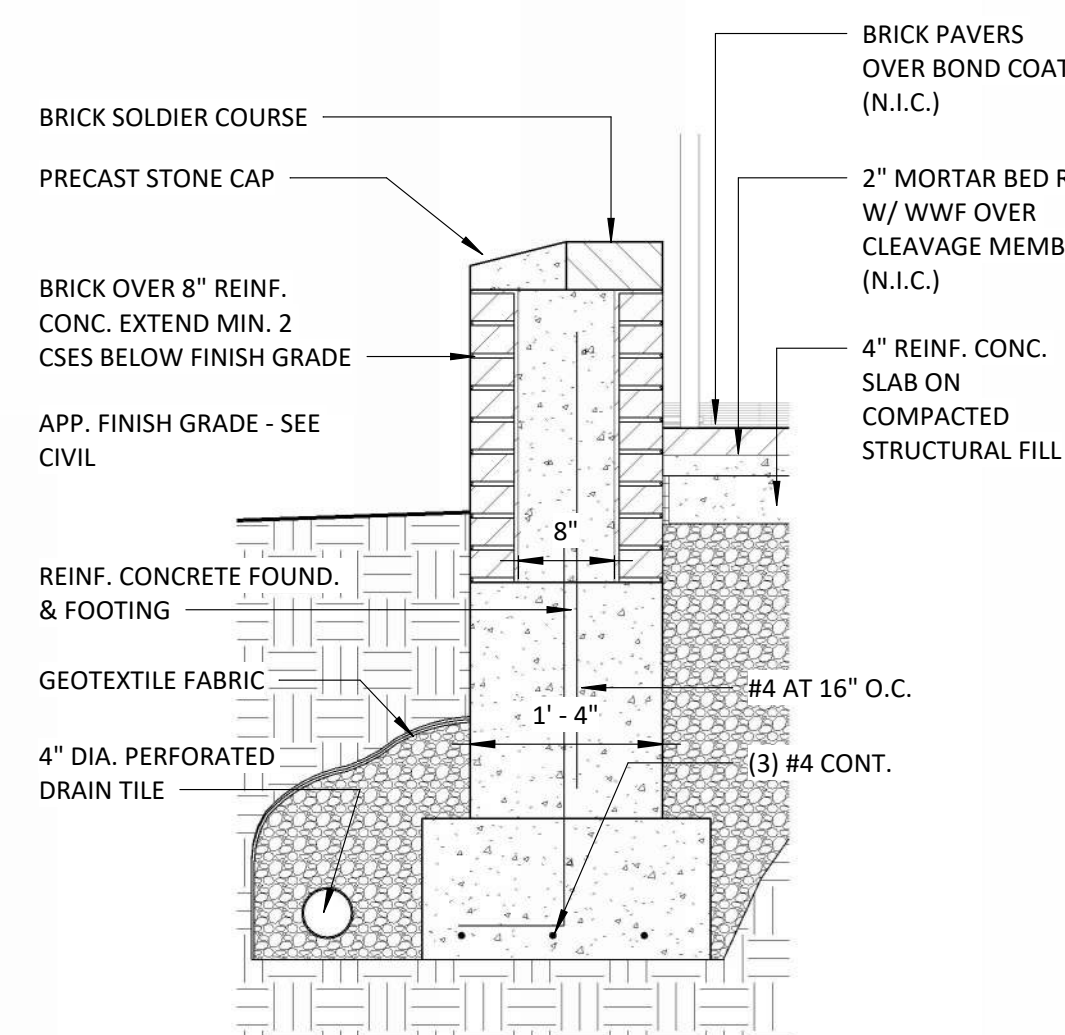
A4-3.4
A1-7 SECTION AT PATIO WALLS
1/4" = 1'-0"



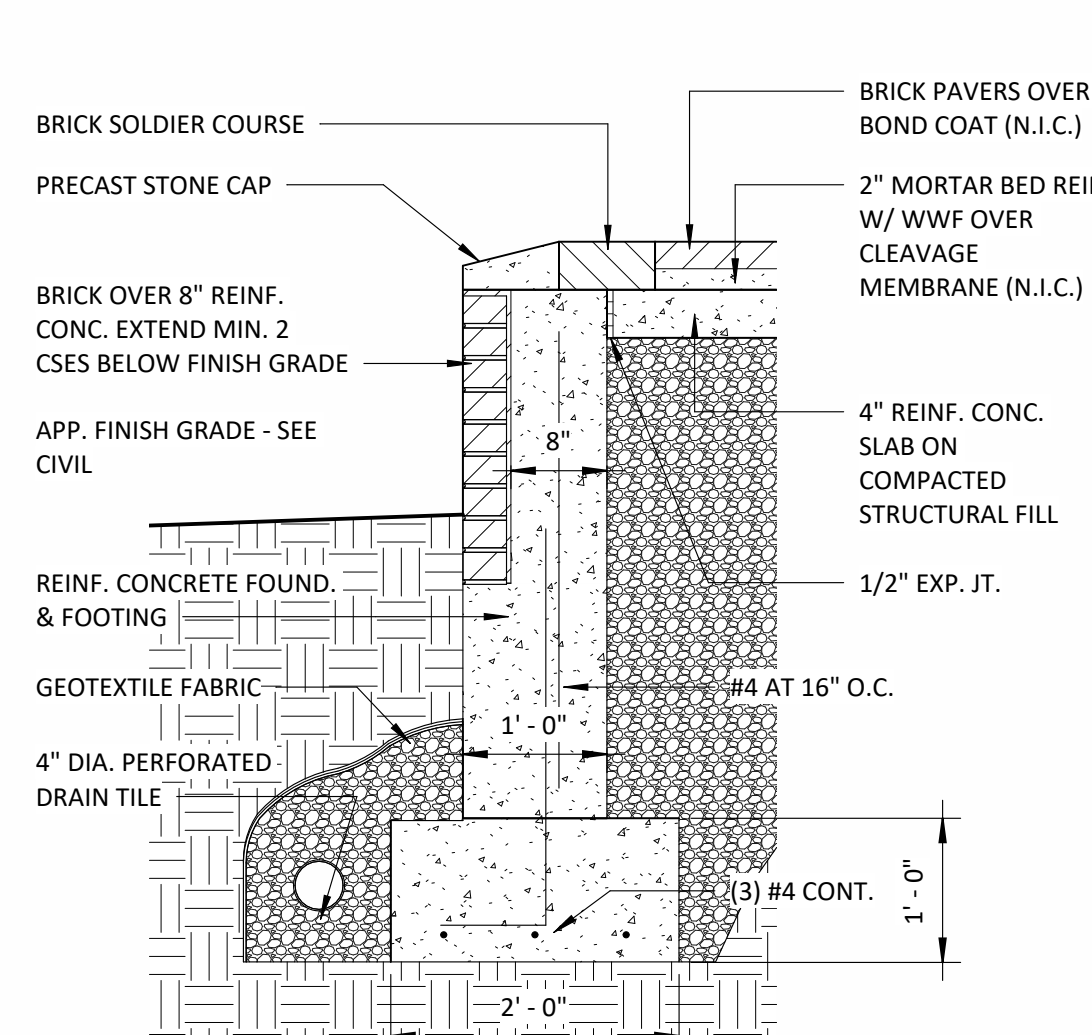
A4-3.5
A1-7 SECTION AT STAIRS
1/4" = 1'-0"



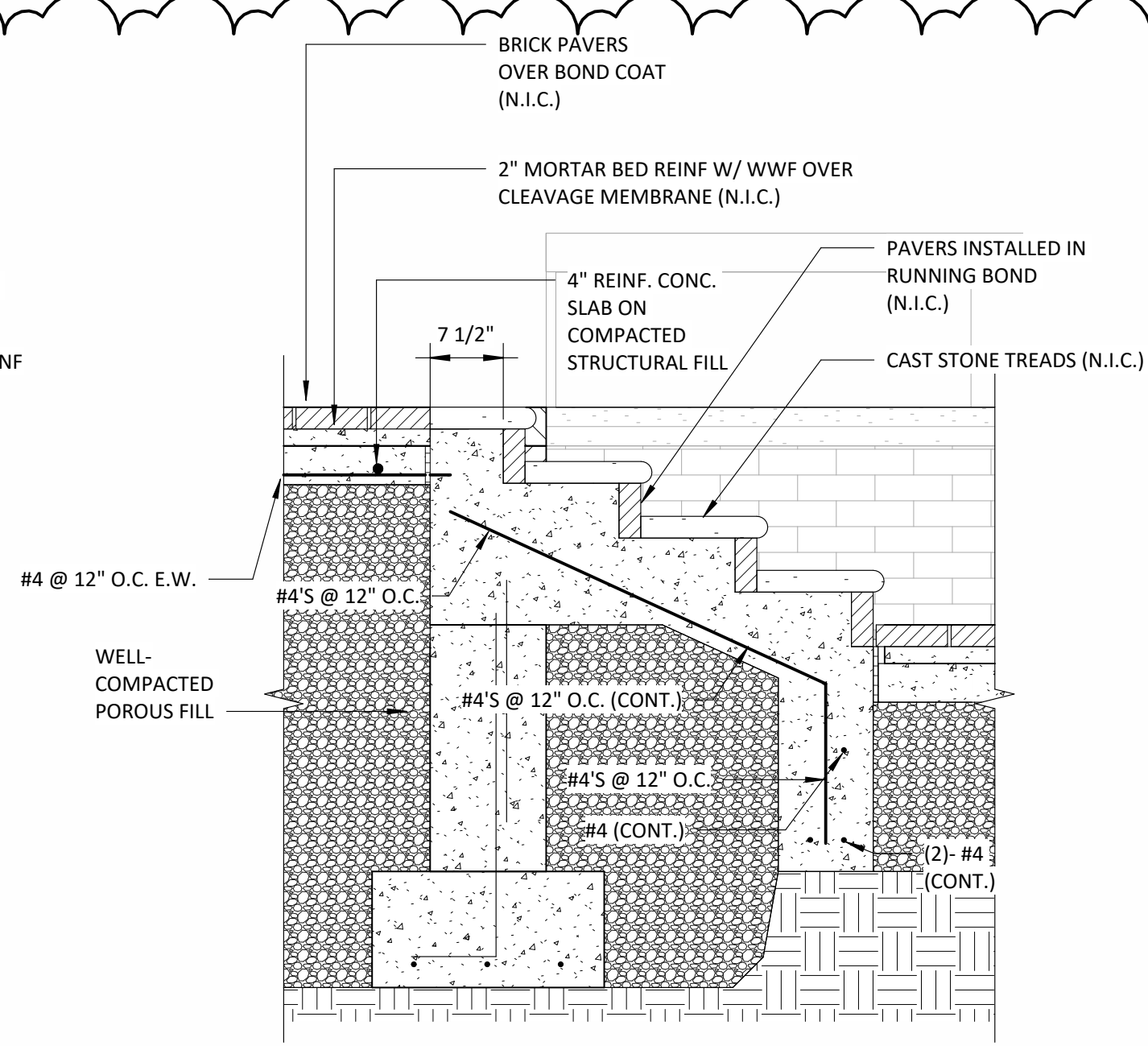
A4-3.6
A4-3 SECTION @ RADIUS WALL
3/4" = 1'-0"



A4-3.7
A4-3 TYP. SEC'N AT RAMP WALL
3/4" = 1'-0"



A4-3.8
A4-3 TYP. SEC'N AT PERIMETER WALL
3/4" = 1'-0"



A4-3.9
A4-3 SECTION DETAIL AT STAIRS
3/4" = 1'-0"

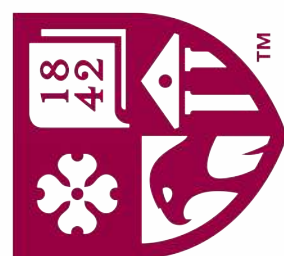
DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesaec.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



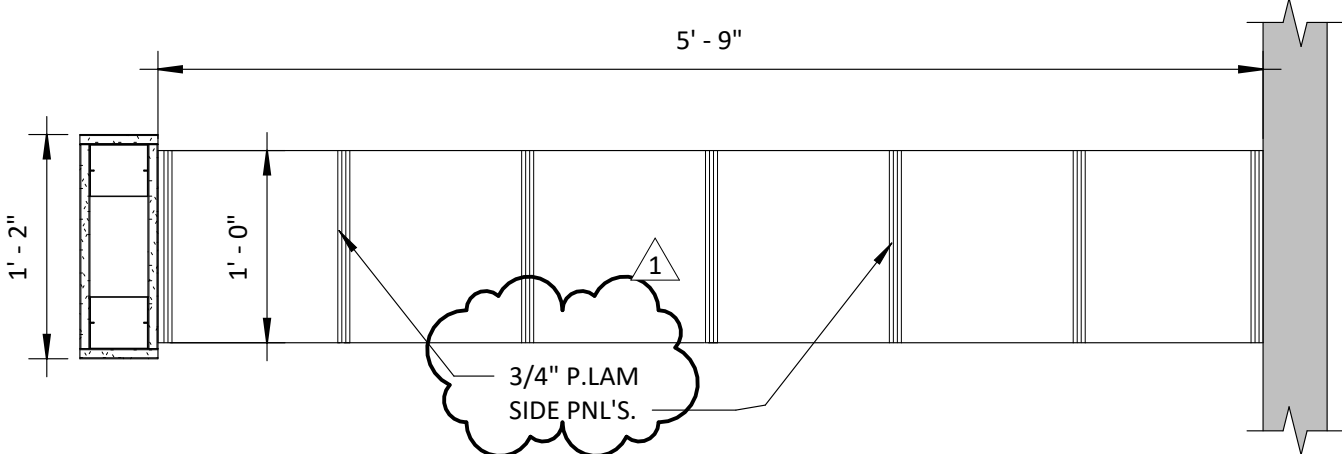
DRAWN BY: EHS
CHECKED BY: Checker

SECTIONS
ALTERNATE
1

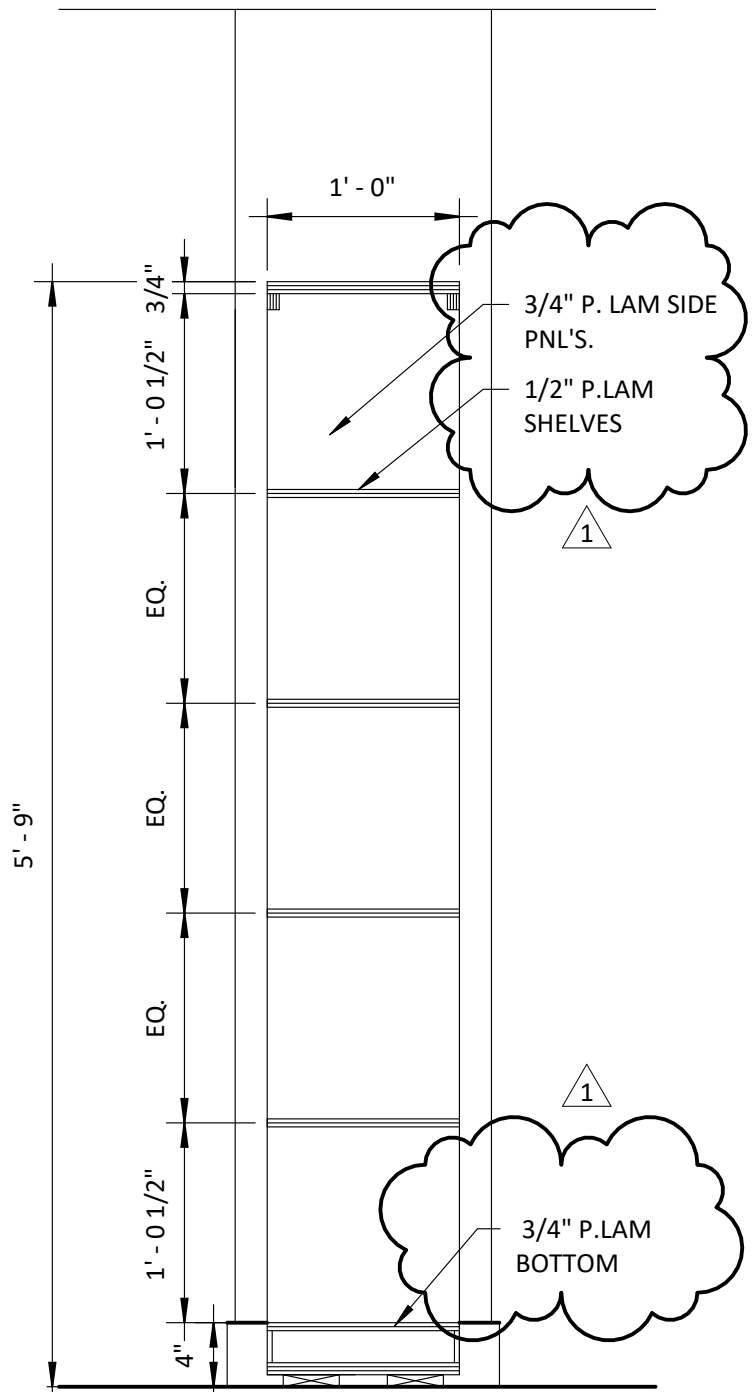
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A4-3
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

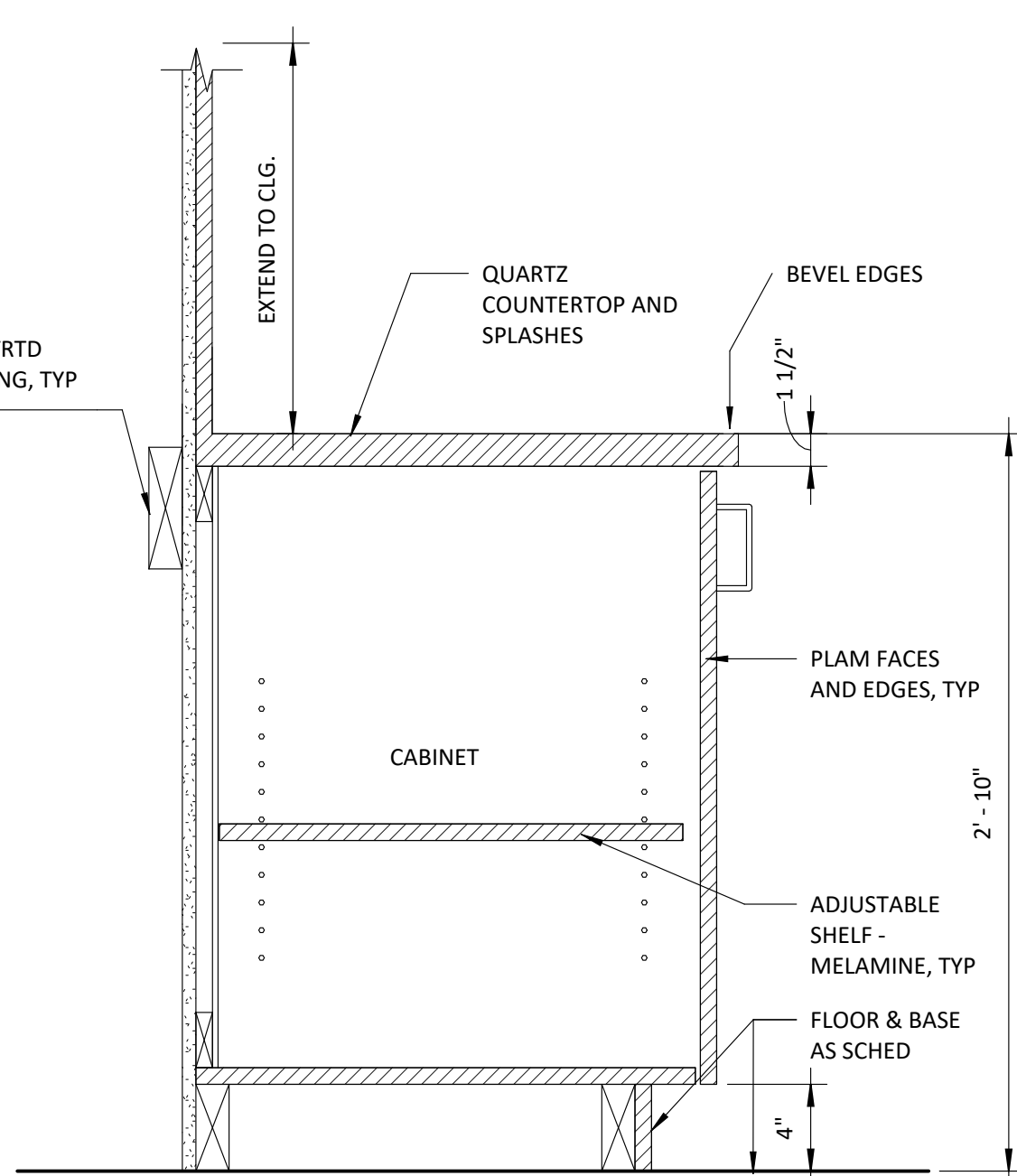
C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthurnate@hughesae.com.rvt 1/30/2025 5:45:31 PM



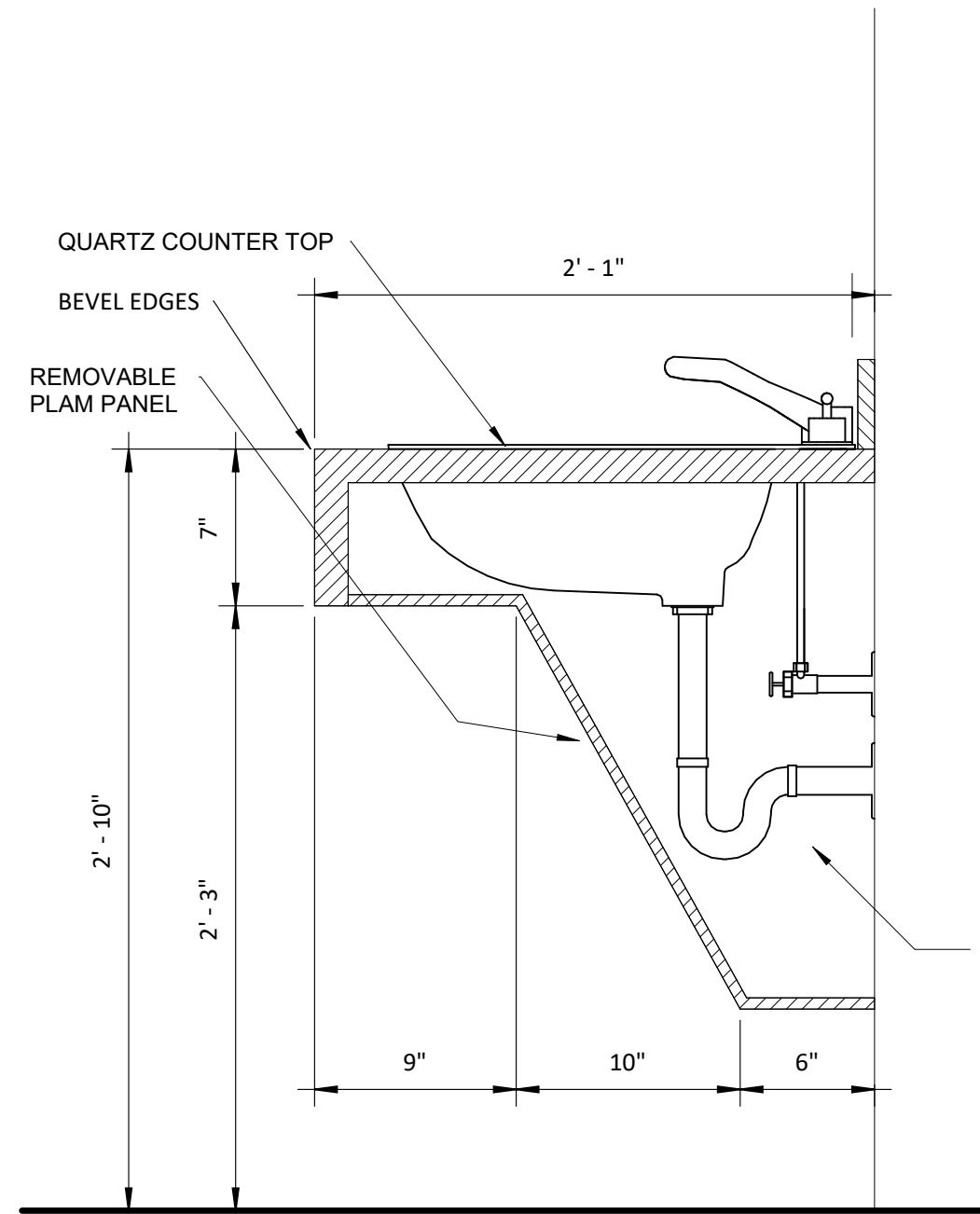
A6-1.7 CUBBIE DETAIL - PLAN
A6-1 1" = 1'-0"



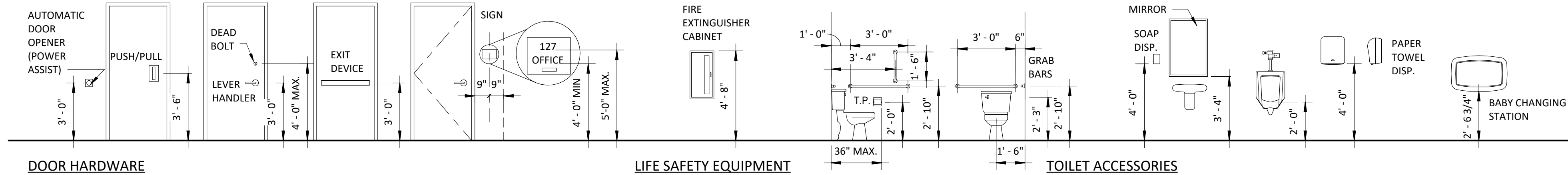
A6-1.6 CUBBIE DETAIL
A6-1 1" = 1'-0"



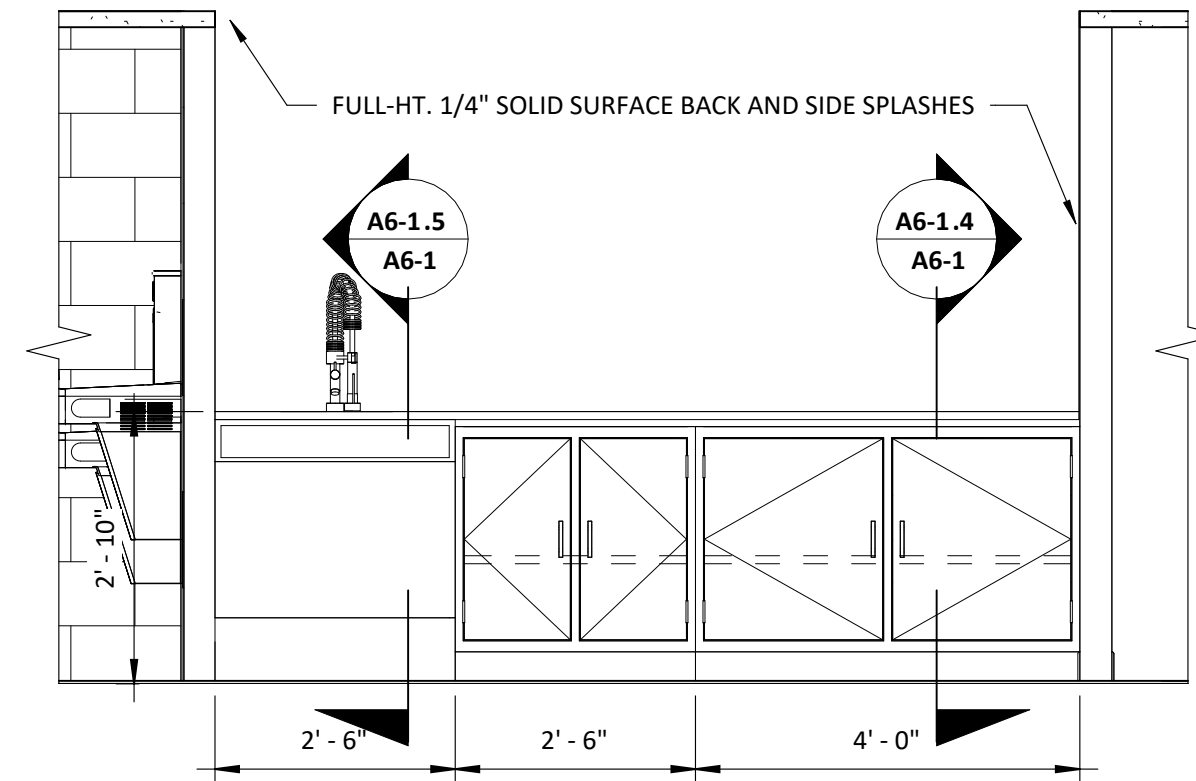
A6-1.4 CASEWORK DETAIL
A6-1 1 1/2" = 1'-0"



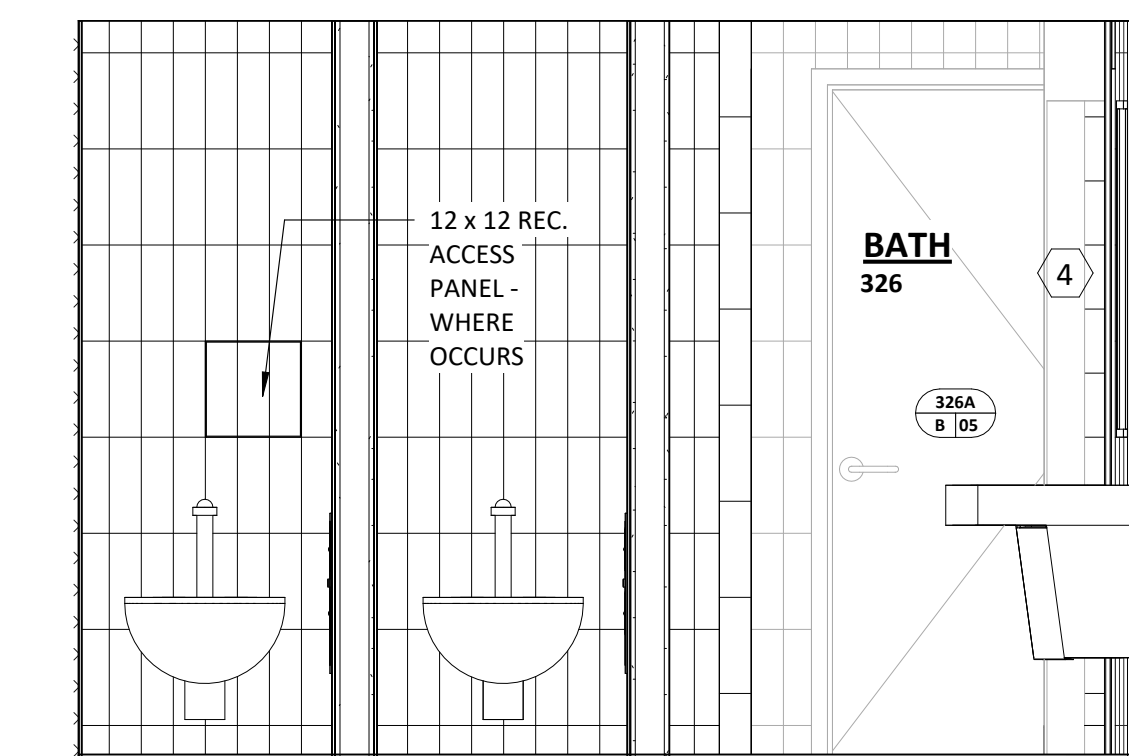
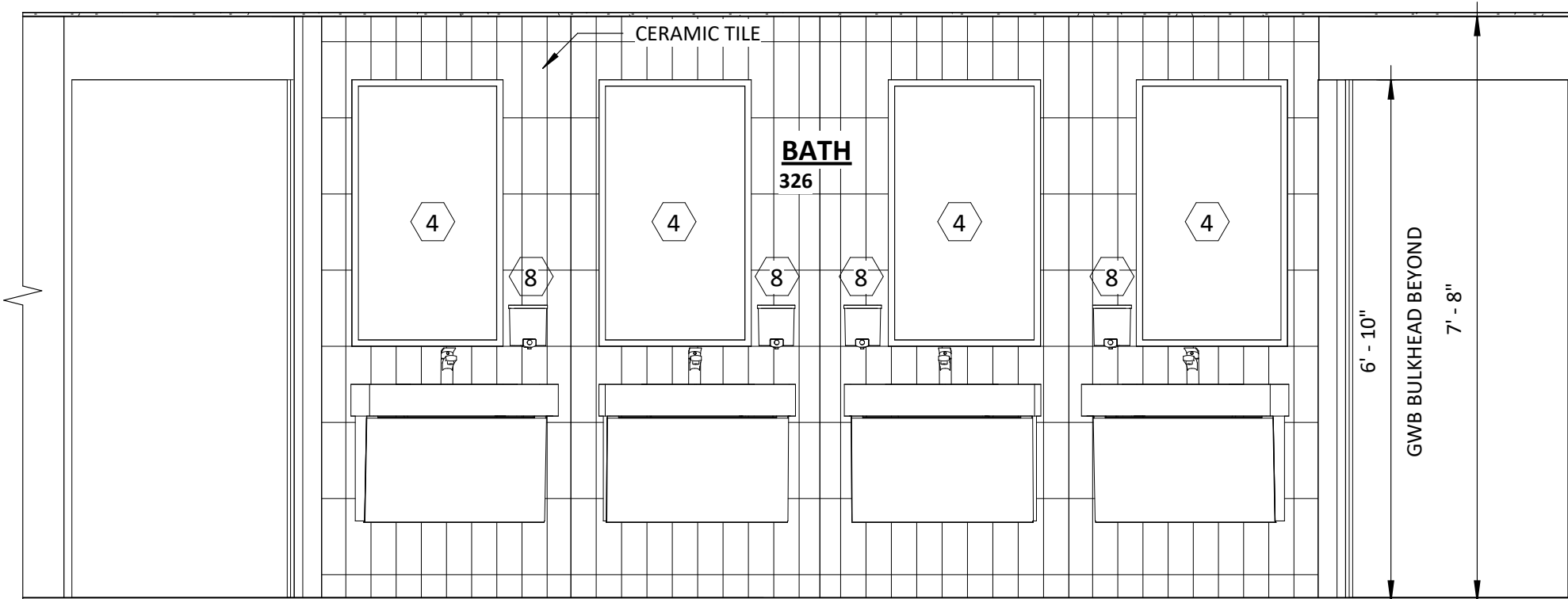
A6-1.5 CASEWORK DETAIL
A6-1 1 1/2" = 1'-0"



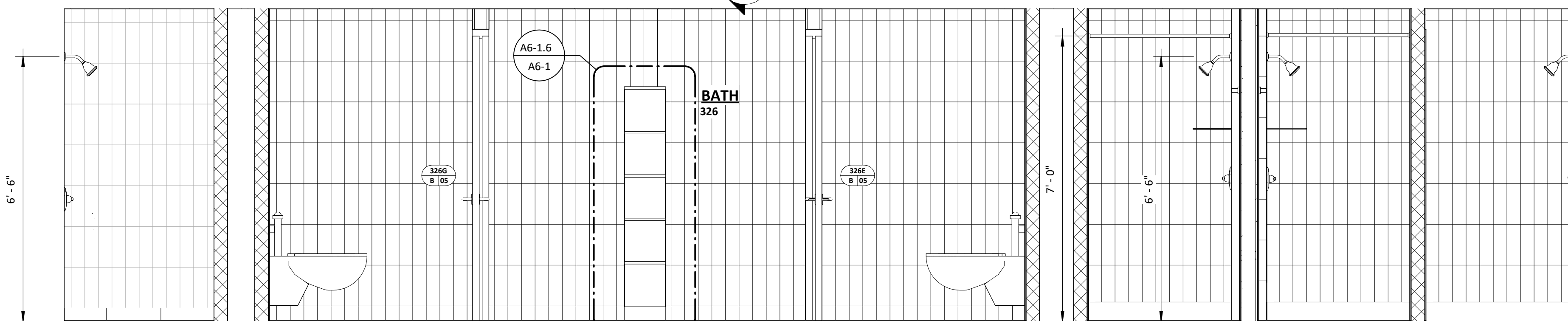
TYPICAL MOUNTING HEIGHTS
1/4" = 1'-0"



A6-1.3 INTERIOR ELEVATION - TYP. KITCHEN
A1-4 1/2" = 1'-0"



A6-1.1 INTERIOR ELEVATIONS - BATH 326
A1-5 1/2" = 1'-0"



ACCESS PANEL SCHEDULE

PROVIDE ONE 12 X 12 RECESSED ACCESS PANEL WITH DRYWALL INSERT AND CERAMIC TILE COVERING AT THE FOLLOWING LOCATIONS:

TOILET STALLS 130D, 130E, 132C, 132D, 223C, 223E, 226D, 226F, 323C, 323E, 326D, 326F,

SHOWERS 130J, 223F, 323F

CENTER OF RADIAL WALL, CORRIDOR SIDE TOILETS 130, 132, BATHS 223,226, 323, 326

ADA BATHS 220, 320

TOILET ACCESSORY SCHEDULE

WT	Description
1	42" GRAB BAR
2	36" GRAB BAR
3	18" VERTICAL GRAB BAR
4	24 x 36 MIRROR
5	S.M. DBL TOILET TISSUE HOLDER W/NAPKIN DISP.
6	S.M. DBL TOILET TISSUE HOLDER
7	SEMI-REC COMB. AUTO. PAPER TOWEL DISP. & TRASH REC.
8	S.M. SOAP DISPENSER
9	REC. DBL TOILET TISSUE HOLDER W/NAPKIN DISP.
10	S.M. FOLD DOWN SEAT
11	36" X 54" GRAB BAR
12	DOUBLE ROBE HOOK
13	<varies>
14	SCHLUTER TRAPEZOIDAL SHELF-E

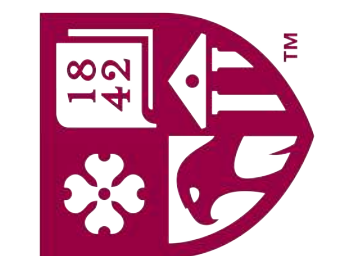
DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.hughesaec.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: KGG/EHS
CHECKED BY: Checker

ENLARGED
FLOOR
PLANS &
INTERIOR
ELEVATIONS

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A6-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



4A



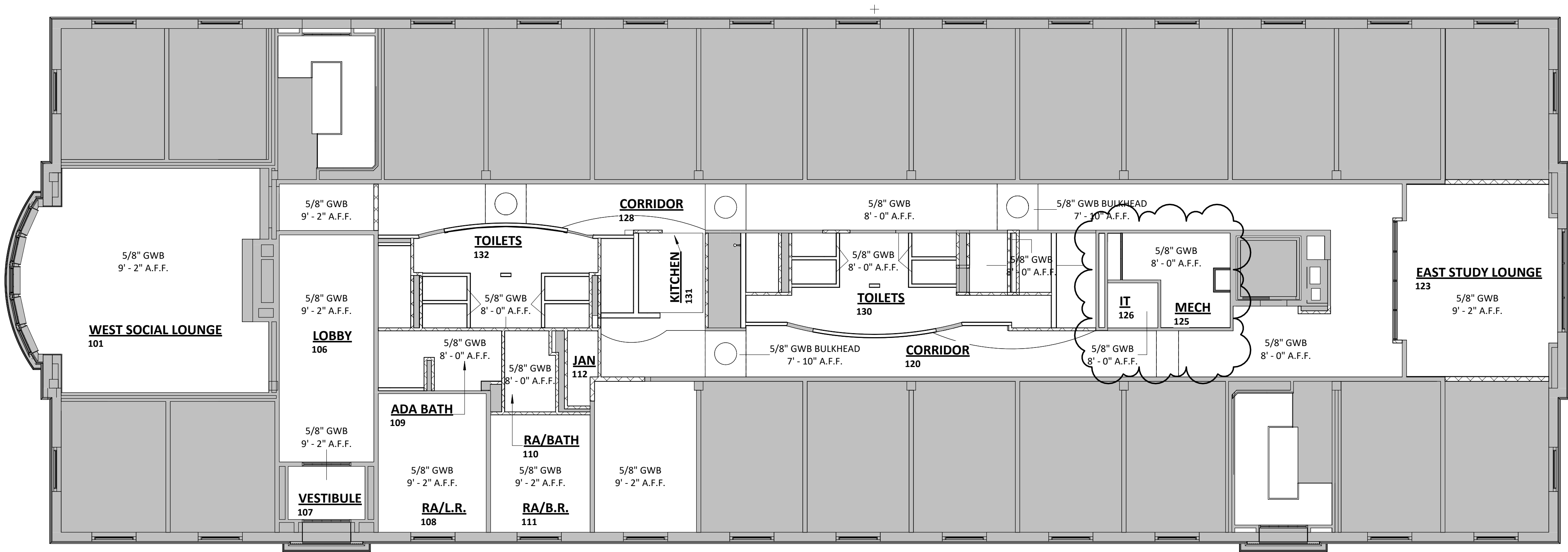


P



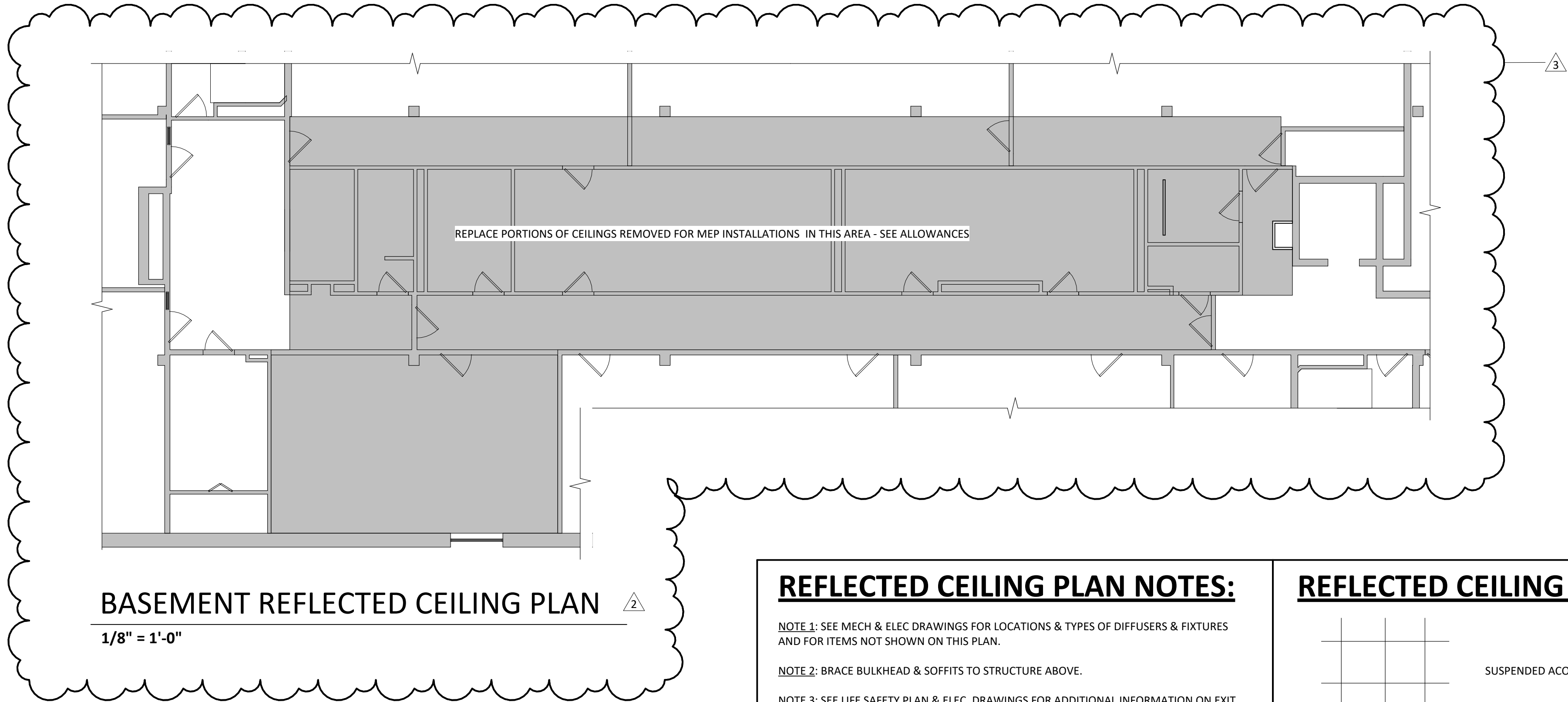
COMMISSION No.
24028
SHEET
A6-2
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt 1/30/2025 5:45:46 PM



FIRST FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"



REFLECTED CEILING PLAN NOTES:

- NOTE 1:** SEE MECH & ELEC DRAWINGS FOR LOCATIONS & TYPES OF DIFFUSERS & FIXTURES AND FOR ITEMS NOT SHOWN ON THIS PLAN.
- NOTE 2:** BRACE BULKHEAD & SOFFITS TO STRUCTURE ABOVE.
- NOTE 3:** SEE LIFE SAFETY PLAN & ELEC. DRAWINGS FOR ADDITIONAL INFORMATION ON EXIT AND EMERGENCY LIGHTS.
- NOTE 4:** COORDINATE LIGHTING LAYOUT W/ ELECTRICAL DRAWINGS.

REFLECTED CEILING PLAN LEGEND

	SUSPENDED ACOUSTICAL CLG.		SURFACE- MTD FIXTURE
	GWB CEILING, SOFFIT OR BULKHEAD		WALL OR BULKHEAD-MOUNTED LIGHTS
	EXISTING CEILING TO REMAIN		EXIT LIGHTS
	LAY-IN FIXTURE		EMERGENCY LIGHTS, BATTERY PACKS
			RECESSED CAN LIGHTS; REFER TO ELEC. DRAWINGS FOR TYPE & SIZE
			MECH. SUPPLY REGISTER
			MECH. RETURN REGISTER AND/OR EXHAUST FAN

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
2	01-27-25	Addendum 003
3	01-30-25	Addendum 004

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.HughesAE.com
540.942.4002

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: EHS
CHECKED BY: Checker

OVERALL
FIRST FLOOR
REF. CLG.
PLANS

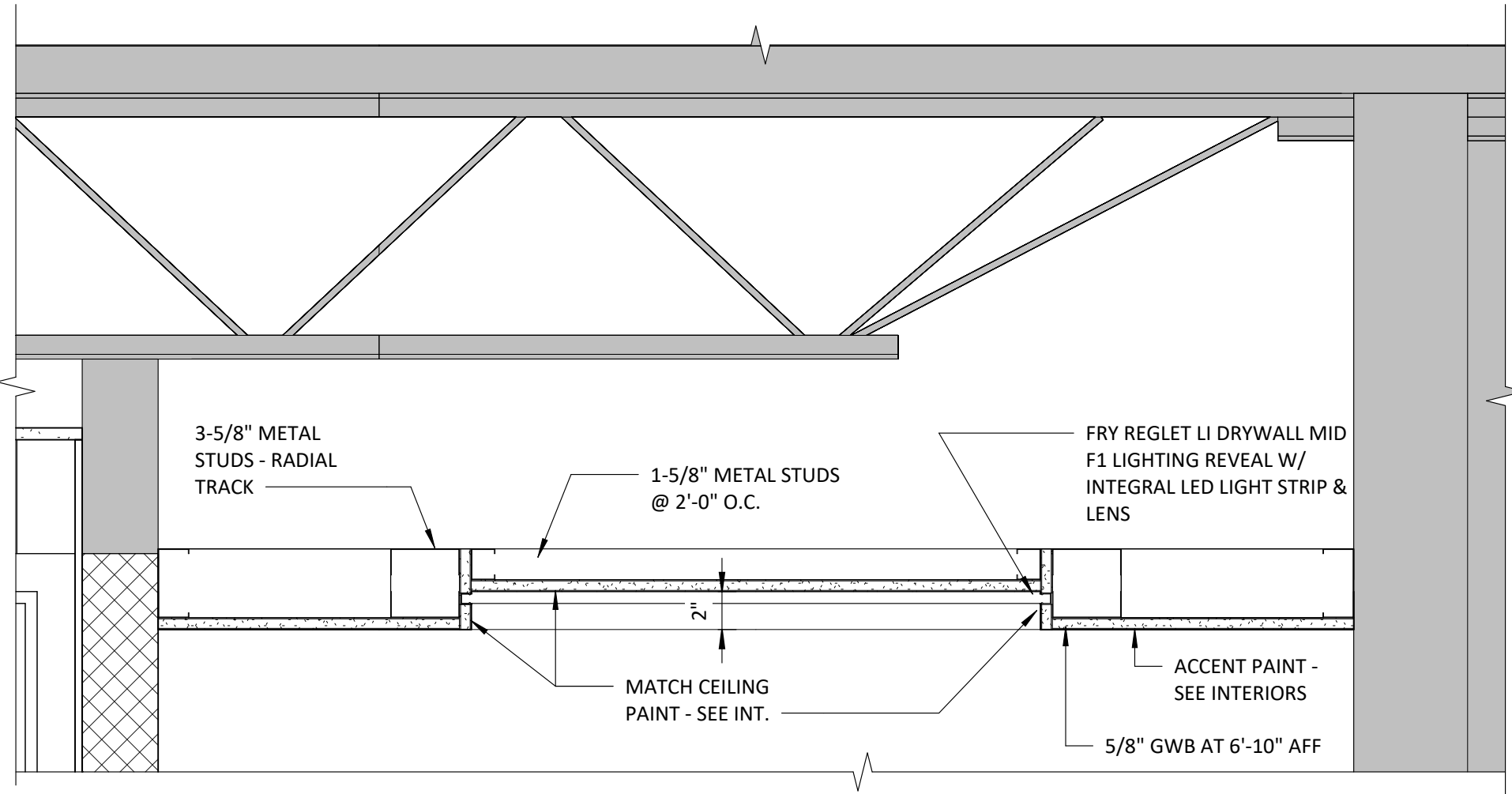
REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A8-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

1/30/2025 5:45:48 PM

C:\Users\ishumate\Documents\24028 - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt



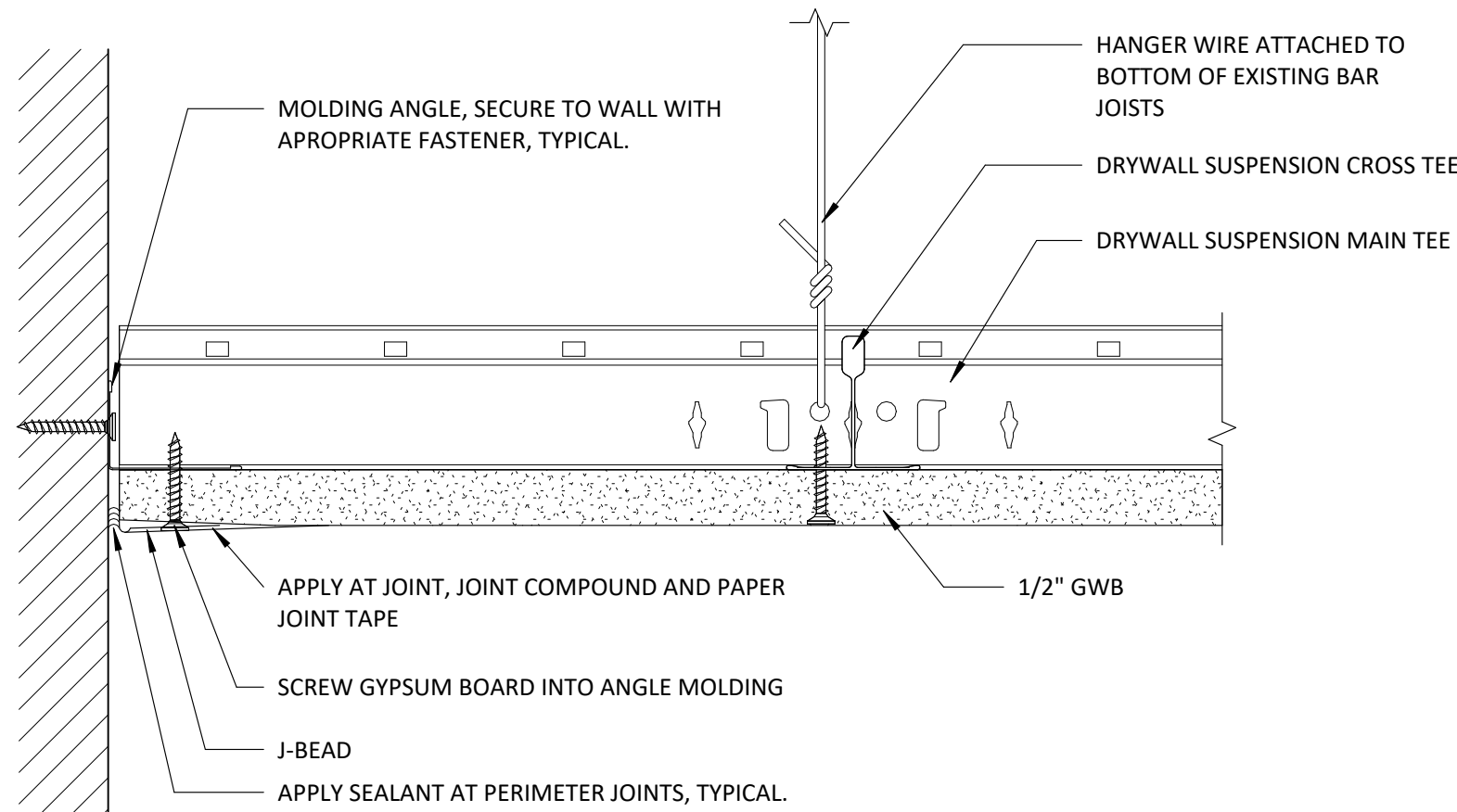
TYP. CORRIDOR BULKHEAD SECTION
A8-2.1
A1-5 1 1/2" = 1'-0"

REFLECTED CEILING PLAN NOTES:

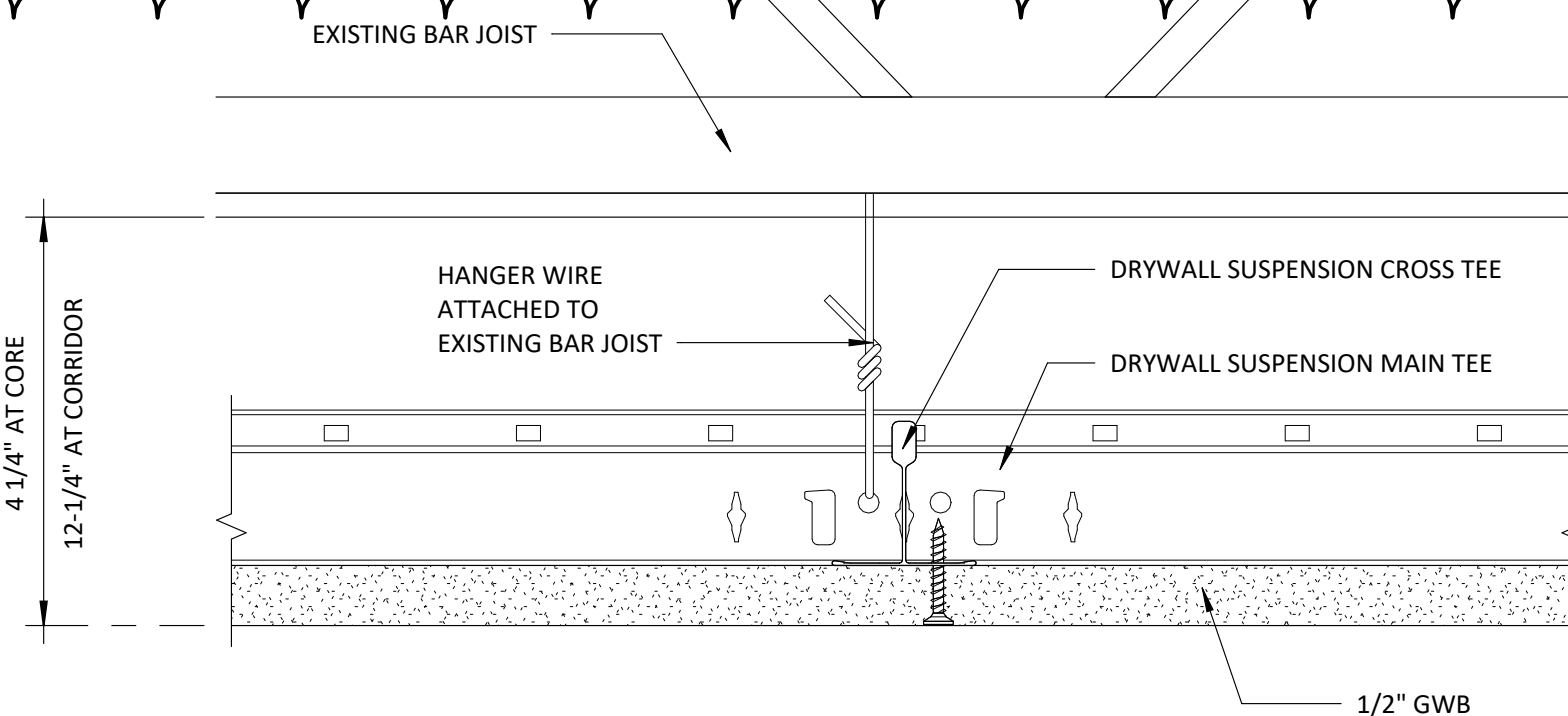
- NOTE 1:** SEE MECH & ELEC DRAWINGS FOR LOCATIONS & TYPES OF DIFFUSERS & FIXTURES AND FOR ITEMS NOT SHOWN ON THIS PLAN.
- NOTE 2:** BRACE BULKHEAD & SOFFITS TO STRUCTURE ABOVE.
- NOTE 3:** SEE LIFE SAFETY PLAN & ELEC. DRAWINGS FOR ADDITIONAL INFORMATION ON EXIT AND EMERGENCY LIGHTS.
- NOTE 4:** COORDINATE LIGHTING LAYOUT W/ ELECTRICAL DRAWINGS.

REFLECTED CEILING PLAN LEGEND

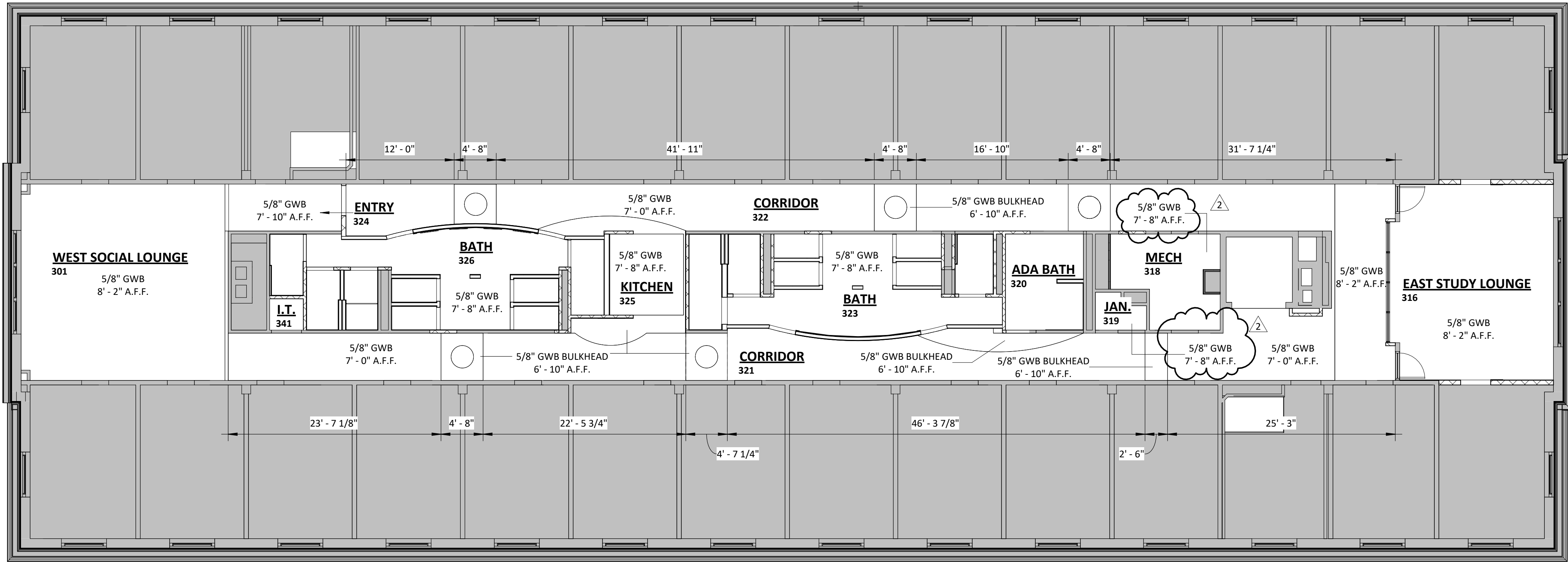
	SUSPENDED ACOUSTICAL CLG.		SURFACE- MTD FIXTURE
	GWB CEILING, SOFFIT OR BULKHEAD		WALL OR BULKHEAD-MOUNTED LIGHTS
	EXISTING CEILING TO REMAIN		EXIT LIGHTS
	LAY-IN FIXTURE		EMERGENCY LIGHTS, BATTERY PACKS
			RECESSED CAN LIGHTS; REFER TO ELEC. DRAWINGS FOR TYPE & SIZE
			MECH. SUPPLY REGISTER
			MECH. RETURN REGISTER AND/OR EXHAUST FAN



DRYWALL SUSPENSION SYSTEM EDGE DET'L
6" = 1'-0"



TYP. DRYWALL SUSPENSION DETAIL
6" = 1'-0"



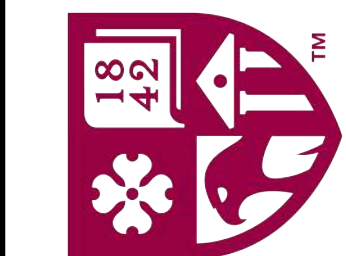
SECOND/ THIRD FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
1	01-21-25	Addendum 001
2	01-27-25	Addendum 003

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: EHS
CHECKED BY: Checker

SECOND/ THIRD FLOOR REFLECTED CEILING PLAN

REF PRICING
NOT FOR CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
A8-2

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Crawford Hall Renovation - Central_esthimate@hughesae.com.rvt1/30/2025 5:45:48 PM

INTERIOR FINISH SPECIFICATIONS

PNT-1 (Wall Paint - Field)
MFG: WolfGordon
STYLE: ScuffMaster, ScrubTough Max
COLOR: To match Sherwin Williams, SW 9109 Natural Linen

PNT-2 (Ceiling Paint)
MFG: Sherwin Williams
COLOR: SW 7566 West Highland White
SHEEN: Satin

PNT-2.1 (Ceiling Paint Accent)
MFG: Sherwin Williams
COLOR: SW 6580 Cerise
SHEEN: Flat
INSTALL: Bulkhead interior ceiling

PNT-3 (Trim Paint)
MFG: Sherwin Williams
COLOR: SW 9126 Honed Soapstone
SHEEN: Semi-gloss

PNT-4 (Wall Paint - 1st Fl Accent)
MFG: WolfGordon
STYLE: ScuffMaster, ScrubTough Max
COLOR: to match Sherwin Williams SW 6580 Cerise
INSTALL: Vestibule

PNT-5 (Wall Paint - 2nd Fl Accent)
MFG: WolfGordon
STYLE: ScuffMaster, ScrubTough Max
COLOR: to match Sherwin Williams SW 6761 Thermal Spring
INSTALL: West Study Lounge half-wall

PNT-6 (Wall Paint - 3rd Fl Accent)
MFG: WolfGordon
STYLE: ScuffMaster, ScrubTough Max
COLOR: color to match Sherwin Williams SW 6531 Indigo
INSTALL: West Study Lounge half-wall

PNT-7 (Wall Paint - Accent Kitchen)
MFG: WolfGordon
STYLE: ScuffMaster, ScrubTough Max
COLOR: to match Sherwin Williams SW 7674 Peppercorn

WP-1 (Wall Cladding Panel - Accent)
MFG: Altro
STYLE: Whiterock Wall Designs Semi-rigid PVC Sheet
COLOR: 9904 Warm Woodgrain
FINISH: Satin
SIZE: 8'-4" x 8'-2" x 2.5mm
TRIM: Edge Trim, Joint Strip, Nickel
INSTALL: Corridor Curved Wall Accent, Full height; RB-1 on face; Refer to Elevations

WP-2 (Acoustic Wall Panel - Accent)
MFG: AMQ Solutions/Barrows Office Furniture
STYLE: 3F Wall Tiles, Hexagon
COLORS: FC9 Sand, FC3 Ash, FC2 Shadow, FC5 Celestial, FC7 Tuscan, FC6 Verde
SIZE: 11.5" x 9.96" x 9mm (.35")
INSTALL: Wall-mount; Study Lounges; Refer to Plan and Elevation

CT-1 (Ceramic Wall Tile - Field)
MFG: Daltile
STYLE: Color Wheel Linear
COLOR: 0790 Arctic White
FINISH: Semi-gloss
SIZE: 4" x 12" x 3/8"
BASE: A34C1MOD 4x12 Flat Top Cove Base
GROUT: 1/8" line; GT-1
BASE: Color Wheel Classic A3401 Flat Top Cove Base, 0709 Arctic White Matte, 4x4
INSTALL: Toilet, Vertical stack

CT-2 (Ceramic Wall Tile - Accent)
MFG: Daltile
STYLE: Aesthetic Geometric
COLOR: AS23 White
FINISH: Satin
SIZE: 12" x 36" x 7/16"
GROUT: 1/16" line; GT-1
INSTALL: Toilet; Horizontal stack; floor to ceiling; provide clear silicon seal at transition to floor tile; refer Interior New Work Note #5

CT-3 (Ceramic Floor Tile)
MFG: Daltile
STYLE: Fabric Arts - Modern Linear
COLOR: ML63 Medium Gray
FINISH: Matte
SIZE: 12" x 24" x 5/16"
GROUT: 1/8" line; GT-2
BASE: P36C9TB Cove Base 6x12, Outside Corner 1x6, Modern Textile Medium Gray
INSTALL: 1st Fl. Lobby; Vertical Stagger 1/3 Offset

CT-4 (Ceramic Floor Tile)
MFG: Daltile
STYLE: Fabric Arts
COLOR: MK71 White Ash Prism
FINISH: Matte
SIZE: 12" x 24" x 5/16"
GROUT: 1/8" line; GT-2
INSTALL: Horizontal Brick; Toilet open areas: Refer to Interior Finish Plans

CT-5 (Ceramic Floor Tile - Field)
MFG: Daltile
STYLE: Fabric Arts - Modern Linear
COLOR: ML60 White
FINISH: Matte
SIZE: 12" x 24" x 5/16"
GROUT: 1/8" line; GT-2
BASE: Color Wheel Classic A3401 Flat Top Cove Base, 0709 Arctic White Matte, 4x4
INSTALL: Horizontal Stagger 1/3 offset; Toilet Stalls and Showers; Refer to Interior Finish Plans

CT-6 (Ceramic Floor Tile - Mosaic)
MFG: Daltile
STYLE: Fabric Arts - Modern Textile , Straight Joint Mosaic
COLOR: MT50 White
FINISH: Matte
SIZE: 1" x 3" x 5/16", Mesh Mount Sheet
GROUT: GT-2
BASE: Color Wheel Classic A3401 Flat Top Cove Base, 0709 Arctic White Matte, 4x4
INSTALL: Horizontal Grid; ADA Showers: Refer to Interior Finish Plans

CT-7 (Ceramic Floor Tile - Field)
MFG: Daltile
STYLE: Fabric Arts - Modern Linear
COLOR: MT54 Dark Gray
FINISH: Matte
SIZE: 12" x 24" x 5/16"
GROUT: 1/8" line; GT-2
BASE: P36C9TB Cove Base 6x12, Outside Corner 1x6, Modern Textile Dark Gray
INSTALL: Horizontal Brick; Kitchen; Janitors

CT-8 (Ceramic Tile - Accent)
MFG: Daltile
STYLE: Aesthetic Retrocube Rectangle
COLOR: AS26 White
FINISH: Satin
SIZE: 12" x 36" x 1/2"
GROUT: 1/16" line; GT-1
INSTALL: At water fountains; Horizontal stack; floor to ceiling; provide clear silicon seal at transition to floor tile; refer Interior New Work Note #5

ET-1: (Edge Trim)
MFG: Schluter Systems
STYLE: Vinpro VPROL100 ACGB
FINISH: Brushed Chrome Anodized Aluminum
SIZE: 10mm (3/8")
INSTALL: Vertical corner transitions between CT-1 and WP-1
Refer to Detail

ET-2 (Edge Trim)
MFG: Schluter Systems
STYLE: Rondex RO100 ACGB
FINISH: Brushed Chrome Anodized Aluminum
SIZE: 10mm (3/8")
INSTALL: Corner transition for CT-1 at Toilet curved wall

ET-3 (Edge Trim)
MFG: Schluter Systems
STYLE: Jolly J125 ACGB
FINISH: Brushed Chrome Anodized Aluminum
SIZE: 12.5mm (1/2")
INSTALL: Vertical edge for CT-8; Refer to Detail

ET-4 (Edge Trim)
MFG: Tarkett/Johnsontite
STYLE: SCC-85-D Cove Cap
COLOR: 85 Burgundy
INSTALL: Edges of PLAM-3; terminate above and adjacent to RB-1 Rubber Base

ET-5 (Edge Trim)
MFG: Schluter Systems
STYLE: Rondex-Step RS100 ACGB 39
FINISH: Brushed Chrome Anodized Aluminum
SIZE: 10mm (3/8")
INSTALL: Vertical edge at shower stalls; Refer to Detail

GT-1 (Grout - Wall)
MFG: Mapei
STYLE: Kerapoxy
COLOR: 5221 Moonbeam

GT-2 (Grout - Floor)
MFG: Mapei
STYLE: Kerapoxy
COLOR: 5103 Cobblestone

W-CPT (Walk Off Carpet)
MFG: ShawContract
STYLE: All Access, ST412 Jive
COLOR: 12500 Trot
SIZE: 24" x 24" x 0.294" (7.47mm)
INSTALL: Entry Vestibule; Horizontal Brick

CPT-1 (Carpet - Corridor 1st Fl)
MFG: ShawContract
COLL: Color at Work II
STYLE: Chromatone Tile ST444
COLOR: Crimson Taupe 07850
SIZE: 18" x 36" x 0.236" (5.99mm)
INSTALL: Stagger 1/3 Offset

CPT-2 (Carpet - West Lounge 1st Fl)
MFG: ShawContract
COLL: Color at Work II
STYLE: Saturate Tile ST109
COLOR: Crimson 07850
SIZE: 18" x 36" x 0.236" (5.99mm)
INSTALL: Ashlar

CPT-3 (Carpet - East Lounge 1st Fl)
MFG: ShawContract
COLL: Color at Work II
STYLE: Saturate Tile ST109
COLOR: Taupe 07515
SIZE: 9" x 36" x 0.222" (5.64mm)
INSTALL: Herringbone

CPT-4 (Carpet - Corridor 2nd Fl)
MFG: ShawContract
COLL: Assembly
STYLE: Convene Tile ST269
COLOR: Dynamic Interaction 67517
SIZE: 12" x 48" x 0.250" (6.35mm)
INSTALL: Stagger 1/3 Offset

CPT-5 (Carpet - West Lounge 2nd Fl)
MFG: ShawContract
COLL: Assembly
STYLE: Convene Tile ST269
COLOR: Vivid Link 67559
SIZE: 12" x 48" x 0.250" (6.35mm)
INSTALL: Stagger 1/3 Offset

CPT-6 (Carpet - East Lounge 2nd Fl)
MFG: ShawContract
COLL: Assembly
STYLE: Convene Tile ST269
COLOR: Vivid Link 67559
SIZE: 12" x 48" x 0.250" (6.35mm)
INSTALL: Stagger 1/3 Offset

CPT-7 (Carpet - Corridors 3rd Fl)
MFG: ShawContract
COLL: Teamwork
STYLE: Collaboration Tile ST497
COLOR: Influence Process 97855
SIZE: 9" x 36" x 0.247" (6.27mm)
INSTALL: Stagger 1/3 Offset

CPT-8 (Carpet - West Lounge 3rd Fl)
MFG: ShawContract
COLL: Teamwork
STYLE: Collaboration Tile ST497
COLOR: True Progress 97496
SIZE: 9" x 36" x 0.247" (6.27mm)
INSTALL: Stagger 1/3 Offset

CPT-9 (Carpet - East Lounge 3rd Fl)
MFG: ShawContract
COLL: Teamwork
STYLE: Collaboration Tile ST497
COLOR: Progress 97515
SIZE: 9" x 36" x 0.247" (6.27mm)
INSTALL: Stagger 1/3 Offset

LVP-1 (Luxury Vinyl Plank)
MFG: ShawContract
STYLE: Terrain II 4110V 20 mil
COLOR: Butternut 00210
SIZE: 6" x 48" x 5mm
INSTALL: Stagger Offset 33%

RB-1 (Rubber Base - 1st Fl)
MFG: Tarkett/Johnsontite
COLL: Millwork Wall Base System
STYLE: Stance MW-85-X61
COLOR: 85 Burgundy
SIZE: 6"H
INSTALL: refer to Interior New Work Note #4

T-1 (Threshold/Transition)
LOCATION: Building Entrances
NOTE: Refer to Architectural Details

T-2 (Threshold/Transition)
MFG: Schluter Systems
STYLE: RENO-TK - AETK 80
FINISH: Satin Anodized Aluminum
SIZE: 8mm - 5/16"
INSTALL: refer to Interior New Work Note #2

QTZ-1 (Quartz)
MFG: Corian Quartz
COLOR: Snow Flurry
FINISH: Polished
EDGE: Beveled
INSTALL: Kitchen Countertops & Back/Side Splashes; Half-wall caps; refer to Details

PLAM-1 (Plastic Laminate):
MFG: Formica Brand Laminate
COLOR: 6995-26 Cherry Walnut HPL
FINISH: Oiled Wood Finish
INSTALL: Kitchen Casework
PULL: CP-1

CP-1 (Cabinet Pull)
MFG: Franklin Brass
STYLE: Lombard P29521-SN-C Handle Pull
FINISH: Satin Nickel
SIZE: 3" O.C.

PLAM-2 (Plastic Laminate):
MFG: Formica Brand Laminate
COLOR: 7966-MC New Burgundy
FINISH: MC MicroDot Texture
INSTALL: Toilet Cubbies

PLAM-3 (Magnetic-Whiteboard Wall Panel)
MFG: Formica Brand Laminate
STYLE: M8202 Magnetic Dry-Erase Markerboard; Grid Points
COLOR: White
FINISH: 90 Gloss
SIZE: 48"W x 96" x 0.038" Sheet
FABRICATE: 16"W; Top edge equal to door height
INSTALL: Wall-mount adjacent to dorm room door; top ET-4 edge trim, miter corners; Refer to Elevation

FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
101	WEST SOCIAL LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall; QTZ-1 cap
101	WEST STUDY LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall
106	LOBBY	CT-3	CT-3 BASE	PNT-1	PNT-2			
107	VESTIBULE	W-CPT	CT-3 BASE	PNT-4	PNT-2			
108	RA/L.R.	LVP-1	RB-1	PNT-1	PNT-2			
109	ADA BATH	CT-5; CT-6	CT-1 BASE	CT-1	PNT-2			
110	RA/BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
111	RA/B.R.	LVP-1	RB-1	PNT-1	PNT-2			
112	JAN	CT-3	CT-3 BASE	PNT-1	PNT-2		-	
114	ACCESSIBLE BR							
120	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
123	EAST STUDY LOUNGE	CPT-3	RB-1	PNT-1	PNT-2		WP-2	
125	MECH	LVP-1	RB-1	PNT-1	PNT-2			
126	IT	LVP-1	RB-1	PNT-1	PNT-2			
128	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
130	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	
131	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1;PLAM-1	PNT-7	PNT-7 one (1) wall - East
132	TOILETS	CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	CT-2 two walls
132	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	
148	ADA BATH	CT-5;CT-6	CT-1 BASE	CT-1	PNT-2			
201	WEST SOCIAL LOUNGE	CPT-5	RB-1	PNT-1	PNT-2		PNT-5	PNT-4 half-wall; QTZ-1 cap
216	EAST STUDY LOUNGE	CPT-6	RB-1	PNT-1	PNT-2		WP-2	
218	MECH	LVP-1	RB-1	PNT-1	PNT-2		-	
219	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2		-	
221	CORRIDOR	CPT-4; LVP-1	RB-1	PNT-1	PNT-2			
222	CORRIDOR	CPT-4;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
223	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
224	ENTRY	LVP-1	RB-1	PNT-1	PNT-2		-	
225	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1;PLAM-1	PNT-7	PNT-7 one (1) wall - East
226	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two accent walls
227	TOILET	CT-5	CT-1 BASE	CT-1	PNT-2			
229	VESTIBULE	W-CPT	CT-1 BASE	PNT-4	PNT-2			
231	RA/L.R.	LVP-1	RB	PNT-1	PNT-2			
232	ADA BATH	CT-5; CT-6	CT-1 BASE	CT-1	PNT-2			
233	RA/BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
234	RA/B.R.	LVP-1	RB	PNT-1	PNT-2			
235	JAN	CT-7	RB	PNT-1	PNT-2		-	
236	EAST STUDY LOUNGE	CPT-3	RB	PNT-1	PNT-2		WP-2	
237	MECH	TBD	RB	PNT-1	PNT-2			
238	IT	LVP-1	RB	PNT-1	PNT-2			
239	CORRIDOR	CPT-1;LVP-1	RB	PNT-1	PNT-2		WP-1	WP-1 curved wall
241	I.T.	LVP-1	RB-1	PNT-1	PNT-2			
245	TOILETS	CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	CT-2 two walls
249	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	
301	WEST SOCIAL LOUNGE	CPT-8	RB-1	PNT-1	PNT-2		PNT-6	PNT-4 half-wall; QTZ-1 cap
316	EAST STUDY LOUNGE	CPT-9	RB-1	PNT-1	PNT-2		WP-2	
318	MECH	LVP-1	RB-1	PNT-1	PNT-2			
319	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2			
320	ADA BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
321	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
322	CORRIDOR	CPT-7;LVP-1	RB-1	PNT-1	PNT-2			WP-1 curved wall
323	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
324	ENTRY	LVP-1	RB-1	PNT-1	PNT-2			
325	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1;PLAM-1	PNT-7	PNT-7 one (1) wall - East
326	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
341	I.T.	LVP-1	RB-1	PNT-1	PNT-2			

MANUFACTURER'S QUOTE CONTACT

Altro
Layne Cundiff
lcundiff@sstfloor.com

Formica
Susan Honiotes
susan.honiotes@formica.com

Tarkett/Johnsontite
Kristen Inghram
kristen.ingham@tarkett.com

Corian
Cheryl Davis
cheryl.davis@ovsco.com

Schluter Systems
Tyler Herbert
therbert@schluter.com

Sherwin Williams
Matthew Smith
matthew.a.smith@sherwin.com

Daltile
Jay McCray
j.mccray@daltile.com

ShawContract
Paula Wade
paula.wade@shawcontract.com

Wolf Gordon
Susan Lynch
susan.lynch@wolfgordon.com

INTERIORS NEW WORK NOTES

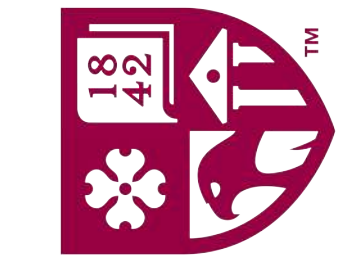
- Interior finishing materials shall be installed in accordance with manufacturer's written instructions.
- T-2 transition strips: ceramic tile-to-carpet, and ceramic tile-to-LVP
- Other flooring material transitions: the manufacturer instructs that transition strips are not required for carpet-to-carpet transitions nor carpet-to-LVP transitions; ensure materials are clean cut, and abut evenly.
- RB-1: miter inside corners; back-miter outside corners; ensure adequate adhesive at corners and joints. Heat gun use required at corridor curved walls.
- CT-2 and CT-8, 3-dimensional wall tile: specified to install floor to ceiling, intention to use full tiles, minimal/no cuts; notify if field dimensions present difficulty: may add trims or base to alter fit.
- ET Edge Trims: coordinate with Architectural Details.

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: SG/KGG
CHECKED BY: Checker

INTERIOR
FINISHES
SPECS

REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

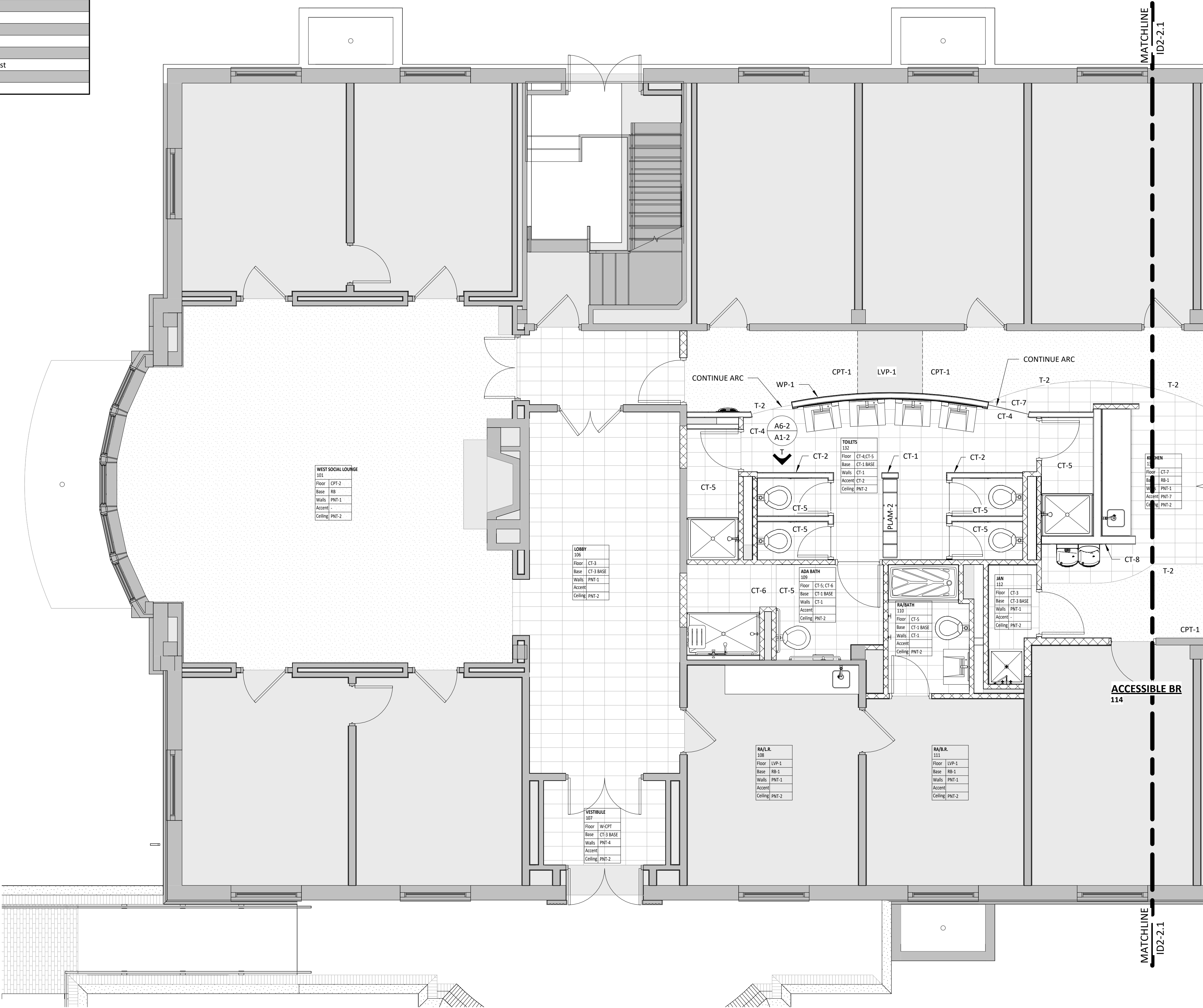
COMMISSION No.
24028
SHEET
ID1-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_estimate@hughesae.com.rvt 1/30/2025 5:45:52 PM

FINISH SCHEDULE - 1ST FLOOR

Location		Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
101	WEST SOCIAL LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall; QTZ-1 cap
101	WEST STUDY LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall
106	LOBBY	CT-3	CT-3 BASE	PNT-1	PNT-2			
107	VESTIBULE	W-CPT	CT-3 BASE	PNT-4	PNT-2			
108	RA/L.R.	LVP-1	RB-1	PNT-1	PNT-2			
109	ADA BATH	CT-5; CT-6	CT-1 BASE	CT-1	PNT-2			
110	RA/BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
111	RA/B.R.	LVP-1	RB-1	PNT-1	PNT-2			
112	JAN	CT-3	CT-3 BASE	PNT-1	PNT-2		-	
120	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
123	EAST STUDY LOUNGE	CPT-3	RB-1	PNT-1	PNT-2		WP-2	
125	MECH	LVP-1	RB-1	PNT-1	PNT-2			
126	IT	LVP-1	RB-1	PNT-1	PNT-2			
128	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
130	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	QTZ-1;PLAM-1	CT-2	PNT-7 one (1) wall - East
131	KITCHEN	CT-7	RB-1	PNT-1	PNT-2		CT-2	CT-2 two walls
132	TOILETS	CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	
132	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	



1/4" = 1'-0" PARTIAL FIRST FLOOR FINISH PLAN - AREA 1

DATE: Dec.18, 2024

Revisions

No.	Date	Description
-----	------	-------------

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018

540.342.4002

www.hughesae.com

Crawford Hall Renovation

ROANOKE COLLEGE

221 College Lane

Salem, Virginia

1842

ARCHITECTS & ENGINEERS

DRAWN BY: SG/KGG

CHECKED BY: Checker

PARTIAL FIRST FLOOR FINISH PLAN - AREA 1

RFP PRICING NOT FOR CONSTRUCTION DOCUMENT

COMMISSION No. 24028

SHEET ID2-1

© COPYRIGHT 2024 HUGHES ASSOCIATES ARCHITECTS & ENGINEERS A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthmate@hughesae.com.rvt 1/30/2025 5:45:55 PM

FINISH SCHEDULE - 1ST FLOOR

Location		Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
Number	Name							
101	WEST SOCIAL LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall; QTZ-1 cap
101	WEST STUDY LOUNGE	CPT-2	RB	PNT-1	PNT-2		-	PNT-4 half-wall
106	LOBBY	CT-3	CT-3 BASE	PNT-1	PNT-2			
107	VESTIBULE	W-CPT	CT-3 BASE	PNT-4	PNT-2			
108	RA/L.R.	LVP-1	RB-1	PNT-1	PNT-2			
109	ADA BATH	CT-5; CT-6	CT-1 BASE	CT-1	PNT-2			
110	RA/BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
111	RA/B.R.	LVP-1	RB-1	PNT-1	PNT-2			
112	JAN	CT-3	CT-3 BASE	PNT-1	PNT-2		-	
120	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
123	EAST STUDY LOUNGE	CPT-3	RB-1	PNT-1	PNT-2		WP-2	
125	MECH	LVP-1	RB-1	PNT-1	PNT-2			
126	IT	LVP-1	RB-1	PNT-1	PNT-2			
128	CORRIDOR	CPT-1;LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
130	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	
131	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1;PLAM-1	PNT-7	PNT-7 one (1) wall - East
132	TOILETS	CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	CT-2 two walls
132	TOILETS	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2		CT-2	

WP-1 COLOR KEY

- 1

SAND
- 2

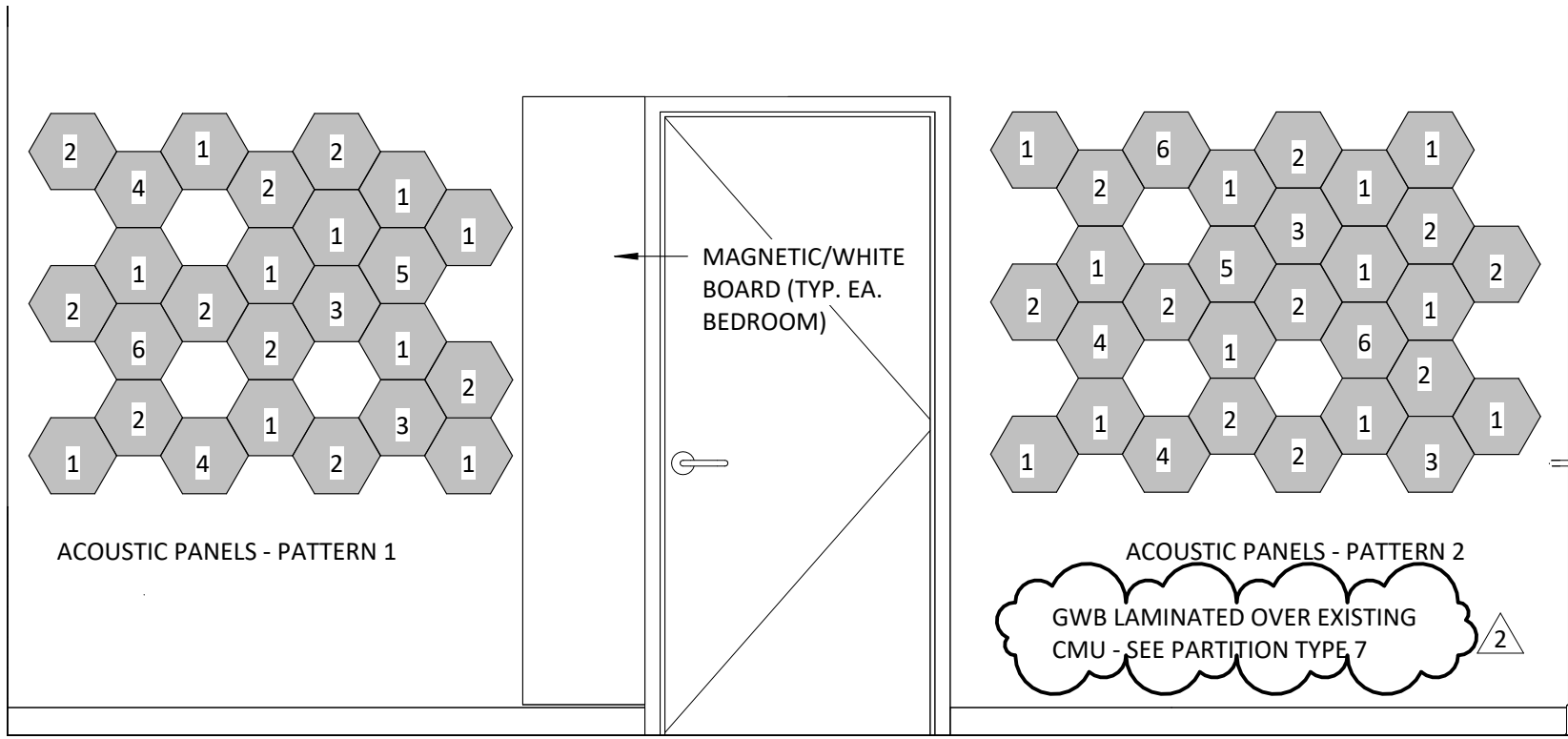
ASH
- 3

SHADOW
- 4

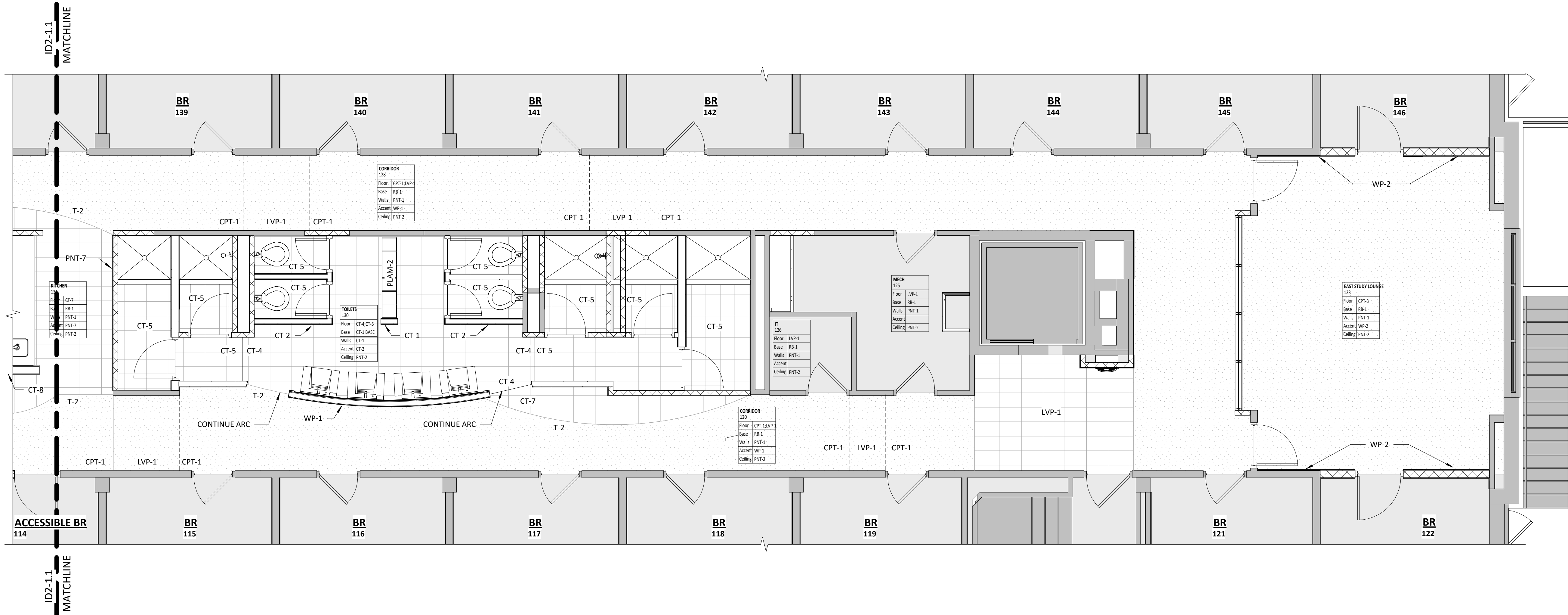
CELESTIAL
- 5

TUSCAN
- 6

VERDE



ELEV. @ EAST STUDY LOUNGE ACOUST. PANELS - TYP.
1/2" = 1'-0"



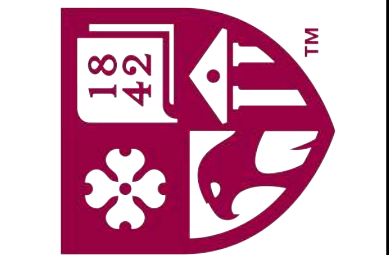
1/4" = 1'-0"
PARTIAL FIRST FLOOR FINISH PLAN - AREA 2

DATE: Dec.18, 2024

Revisions		
No.	Date	Description
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: SG/KGG
CHECKED BY: Checker

PARTIAL
FIRST FLOOR
FINISH PLAN
- AREA 2

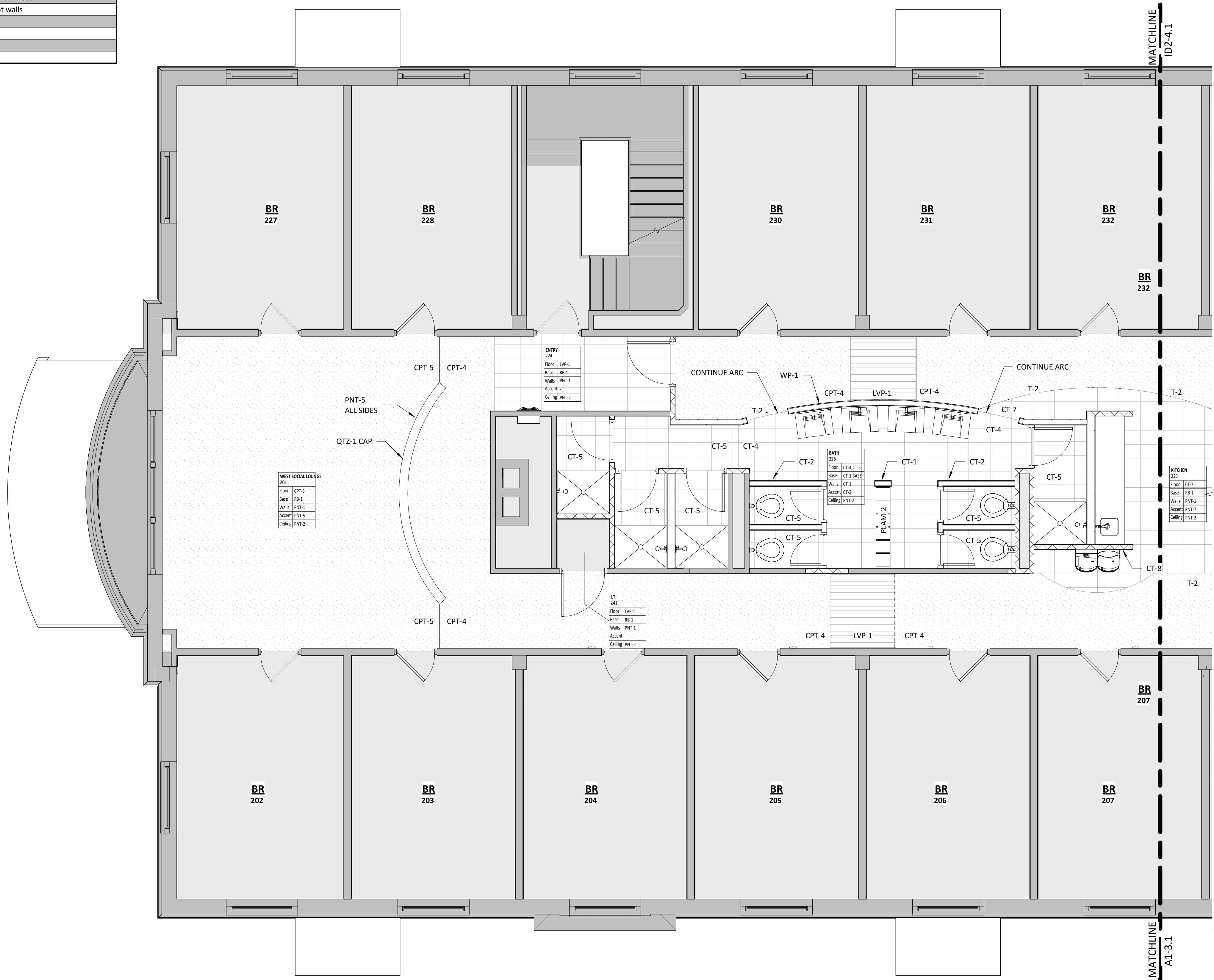
PRICE
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
ID2-2

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

FINISH SCHEDULE - 2ND FLOOR

Location		Floor	Base	Wall	Ceiling	Casework	Accent	Remarks
Number	Name	Finish	Finish	Finish	Finish			
201	WEST SOCIAL LOUNGE	CPT-5	RB-1	PNT-1	PNT-2		PNT-5	PNT-4 half-wall; QTZ-1 cap
216	EAST STUDY LOUNGE	CPT-6	RB-1	PNT-1	PNT-2		WP-2	
218	MECH	LVP-1	RB-1	PNT-1	PNT-2		-	
219	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2		-	
220	ADA BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
221	CORRIDOR	CPT-4; LVP-1	RB-1	PNT-1	PNT-2			
223	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
224	ENTRY	LVP-1	RB-1	PNT-1	PNT-2		-	
225	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1;PLAM-1	PNT-7	PNT-7 one (1) wall - East
226	BATH	CT-4;CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two accent walls
241	I.T.	LVP-1	RB-1	PNT-1	PNT-2			
246	TOILET	CT-5	CT-1 BASE	CT-1	PNT-2			
250	CORRIDOR	CPT-4; LVP-1	RB	PNT-1	PNT-2			
251	CORRIDOR	CPT-4; LVP-1	RB	PNT-1	PNT-2			



ID2-3.1
A3-1
PARTIAL SECOND FLOOR PLAN - FINISH - AREA 1
1/4" = 1'-0"

DATE: Dec.18, 2024

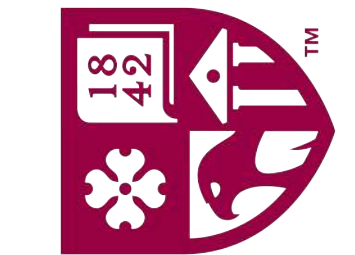
Revisions

No. Date Description

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: SG/KGG
CHECKED BY: Checker

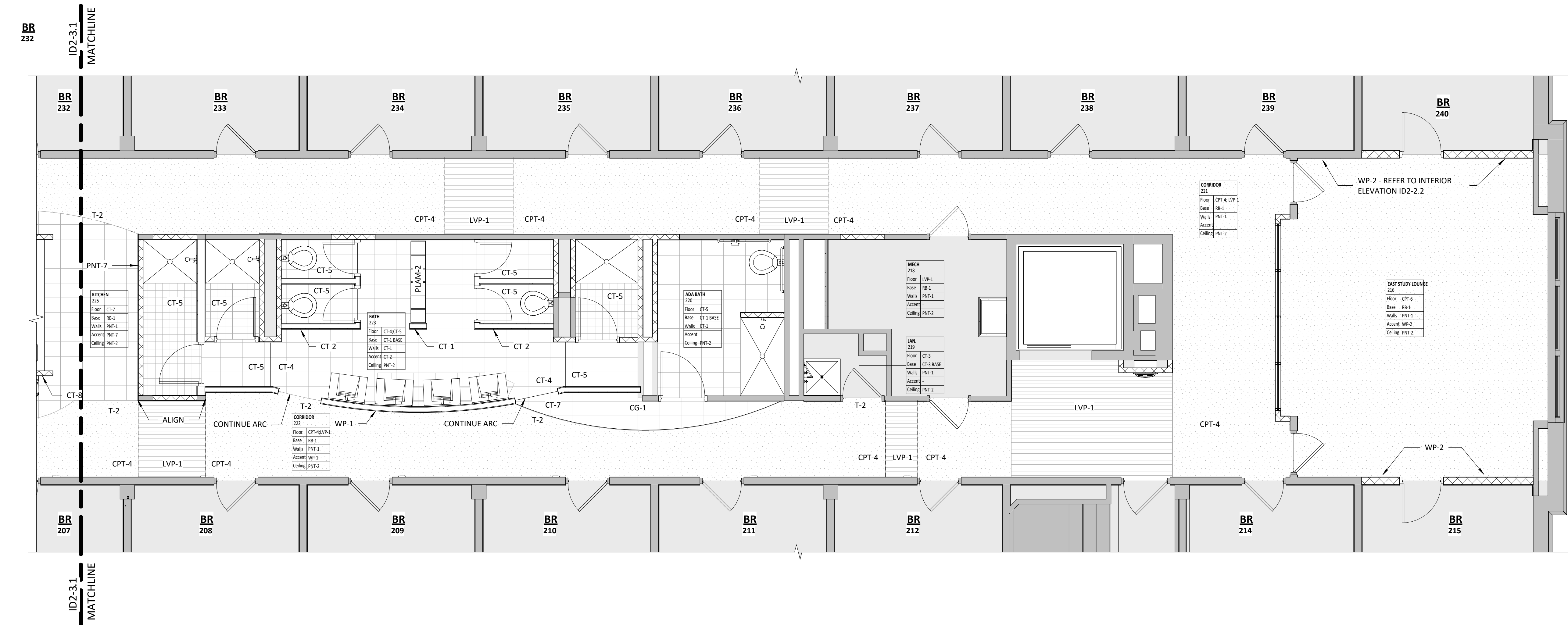
PARTIAL
SECOND
FLOOR PLAN
- FINISH -
AREA 1

RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
ID2-3

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

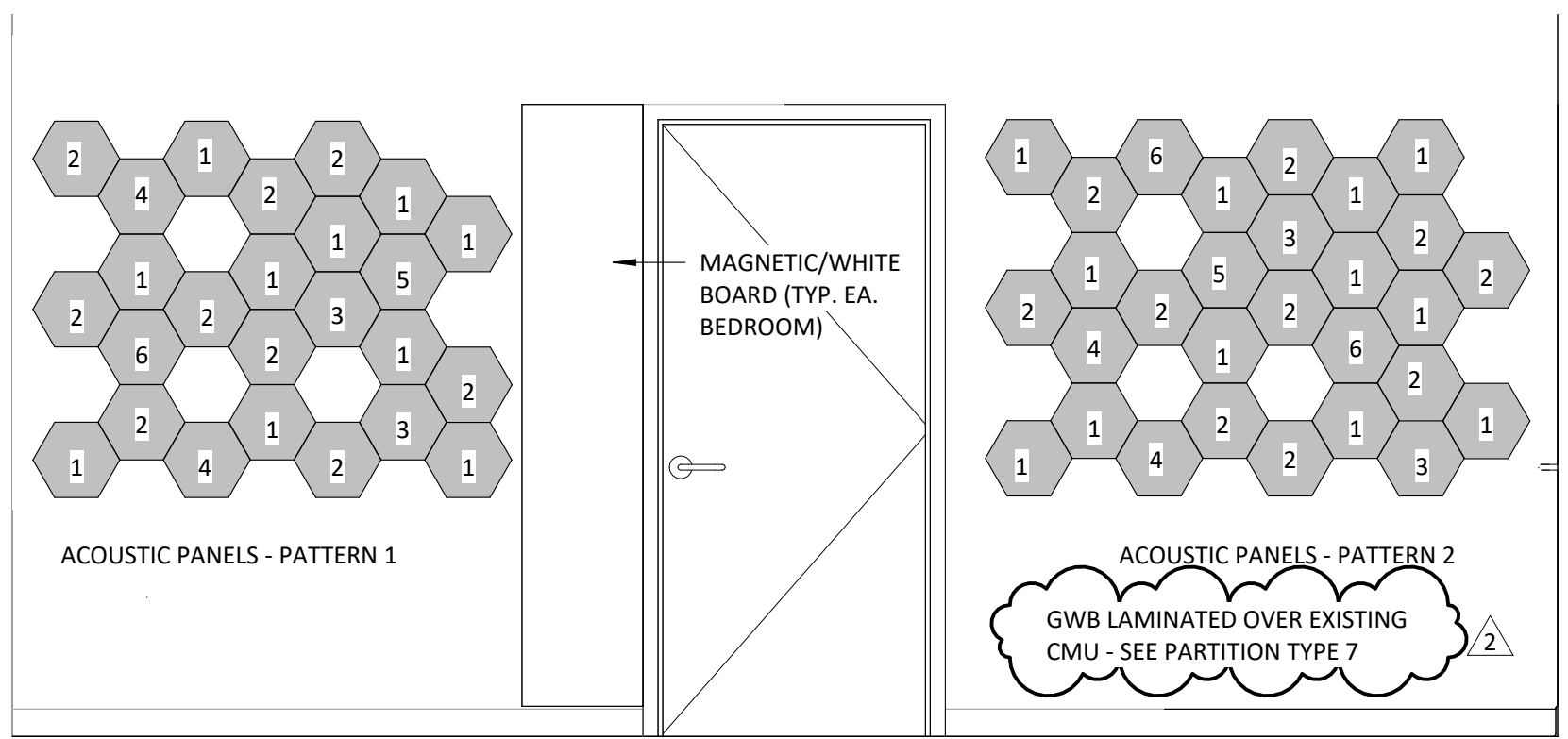
C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthurnate@hughesae.com.rvt 1/30/2025 5:46:00 PM



ID2-4.1
A3-1
PARTIAL SECOND FLOOR PLAN - FINISH - AREA 2
1/4" = 1'-0"

WP-1 COLOR KEY

- 1 SAND
- 2 ASH
- 3 SHADOW
- 4 CELESTIAL
- 5 TUSCAN
- 6 VERDE



ELEV. @ EAST STUDY LOUNGE ACOUST. PANELS - TYP.
1/2" = 1'-0"

Revisions		
No.	Date	Description
2	01-27-25	Addendum 003

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.hughesae.com
540.942.4002

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: Author
CHECKED BY: Checker

PARTIAL
SECOND
FLOOR PLAN
- FINISH -
AREA 2

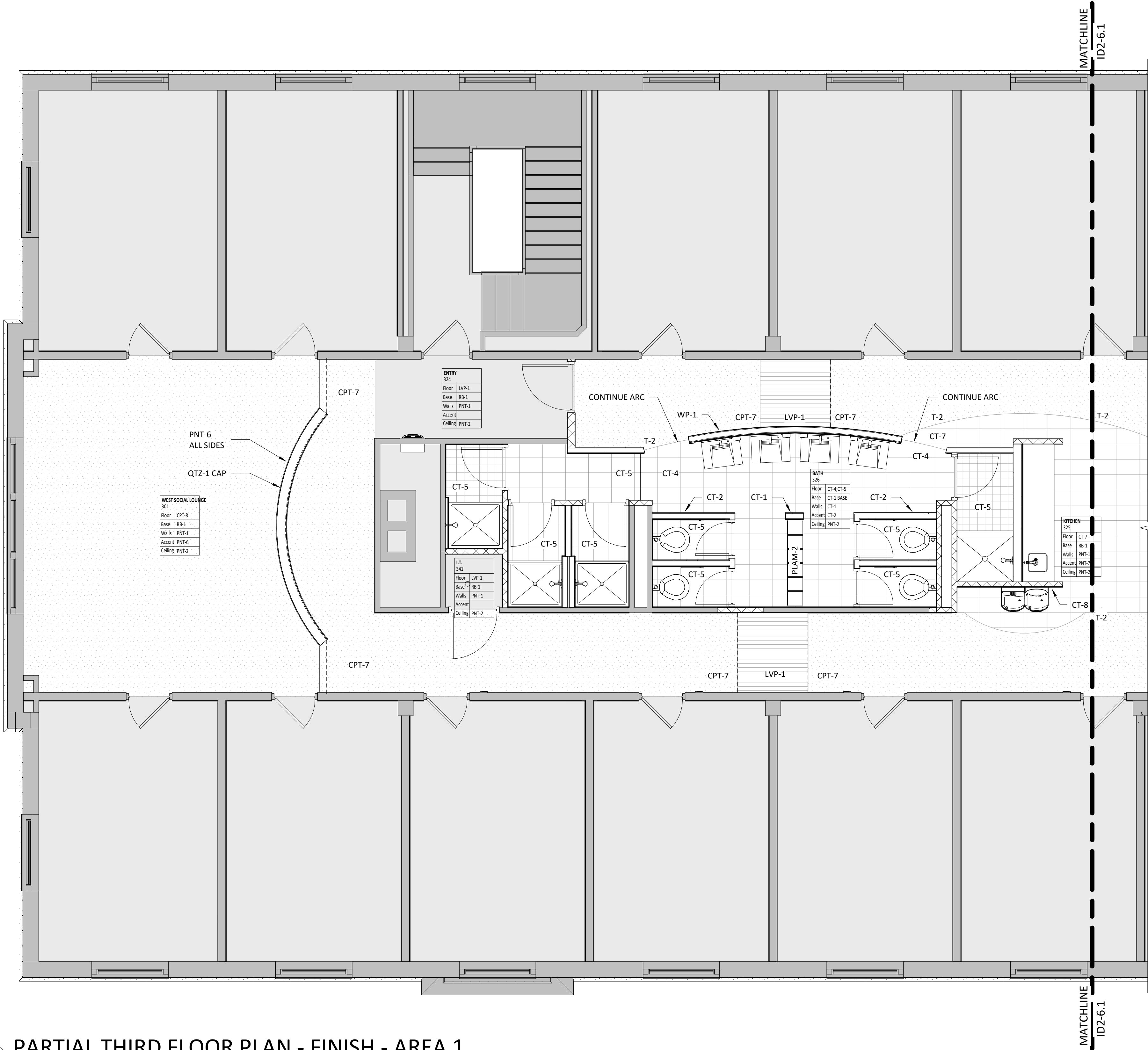
REF PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
ID2-4
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

C:\Users\shumate\Documents\24028 - Roanoke College - Crawford Hall Renovation - Central_esthurnate@hughesae.com.rvt1/30/2025 5:46:02 PM

FINISH SCHEDULE - 3RD FLOOR

Location		Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
Number	Name							
301	WEST SOCIAL LOUNGE	CPT-8	RB-1	PNT-1	PNT-2		PNT-6	PNT-4 half-wall; QTZ-1 cap
316	EAST STUDY LOUNGE	CPT-9	RB-1	PNT-1	PNT-2		WP-2	
318	MECH	LVP-1	RB-1	PNT-1	PNT-2			
319	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2			
320	ADA BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
321	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
322	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2			WP-1 curved wall
323	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
324	ENTRY	LVP-1	RB-1	PNT-1	PNT-2			
325	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1; PLAM-1	PNT-7	PNT-7 one (1) wall - East
326	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
341	I.T.	LVP-1	RB-1	PNT-1	PNT-2			



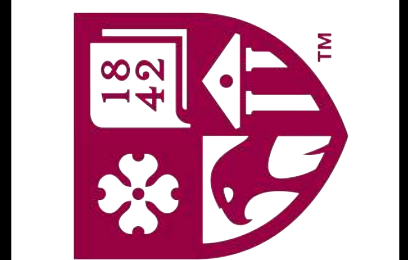
1/4" = 1'-0" PARTIAL THIRD FLOOR PLAN - FINISH - AREA 1

DATE: Dec.18, 2024

Revisions		
No.	Date	Description

HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.942.4002
www.hughesae.com

Crawford Hall Renovation
ROANOKE COLLEGE
221 College Lane
Salem, Virginia



DRAWN BY: SG/KGG
CHECKED BY: Checker

PARTIAL
THIRD
FLOOR PLAN
- FINISH -
AREA 1

RFP PRICING
NOT FOR
CONSTRUCTION
DOCUMENT

COMMISSION No.
24028
SHEET
ID2-5
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

Location		Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
Number	Name							
301	WEST SOCIAL LOUNGE	CPT-8	RB-1	PNT-1	PNT-2		PNT-6	PNT-4 half-wall; QTZ-1 cap
316	EAST STUDY LOUNGE	CPT-9	RB-1	PNT-1	PNT-2		WP-2	
318	MECH	LVP-1	RB-1	PNT-1	PNT-2			
319	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2			
320	ADA BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
321	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
322	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2			WP-1 curved wall
323	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
324	ENTRY	LVP-1	RB-1	PNT-1	PNT-2			
325	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1; PLAM-1	PNT-7	PNT-7 one (1) wall - East
326	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
341	I.T.	LVP-1	RB-1	PNT-1	PNT-2			

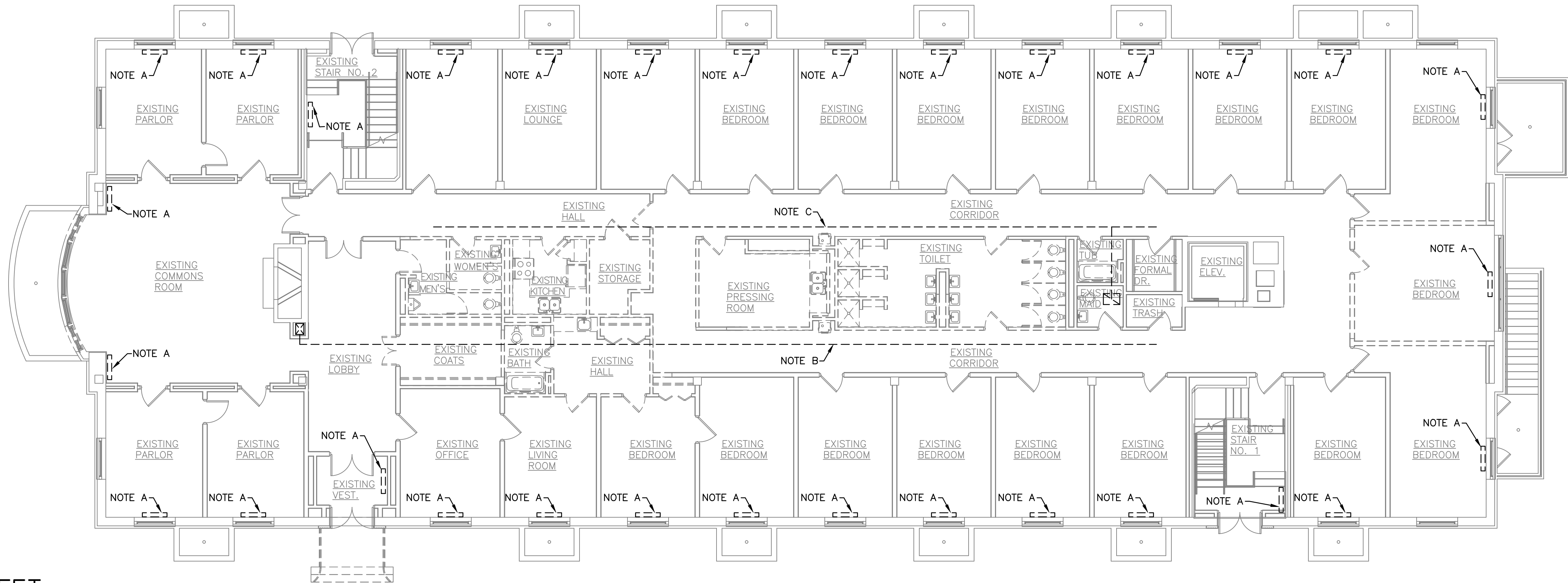
Location		Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Casework	Accent	Remarks
Number	Name							
301	WEST SOCIAL LOUNGE	CPT-8	RB-1	PNT-1	PNT-2		PNT-6	PNT-4 half-wall; QTZ-1 cap
316	EAST STUDY LOUNGE	CPT-9	RB-1	PNT-1	PNT-2		WP-2	
318	MECH	LVP-1	RB-1	PNT-1	PNT-2			
319	JAN.	CT-3	CT-3 BASE	PNT-1	PNT-2			
320	ADA BATH	CT-5	CT-1 BASE	CT-1	PNT-2			
321	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2		WP-1	WP-1 curved wall
322	CORRIDOR	CPT-7; LVP-1	RB-1	PNT-1	PNT-2			WP-1 curved wall
323	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
324	ENTRY	LVP-1	RB-1	PNT-1	PNT-2			
325	KITCHEN	CT-7	RB-1	PNT-1	PNT-2	QTZ-1; PLAM-1	PNT-7	PNT-7 one (1) wall - East
326	BATH	CT-4; CT-5	CT-1 BASE	CT-1	PNT-2	PLAM-2	CT-2	CT-2 two walls
341	I.T.	LVP-1	RB-1	PNT-1	PNT-2			

1	SAND
2	ASH
3	SHADOW
4	CELESTIAL
5	TUSCAN
6	VERDE



ID2-61

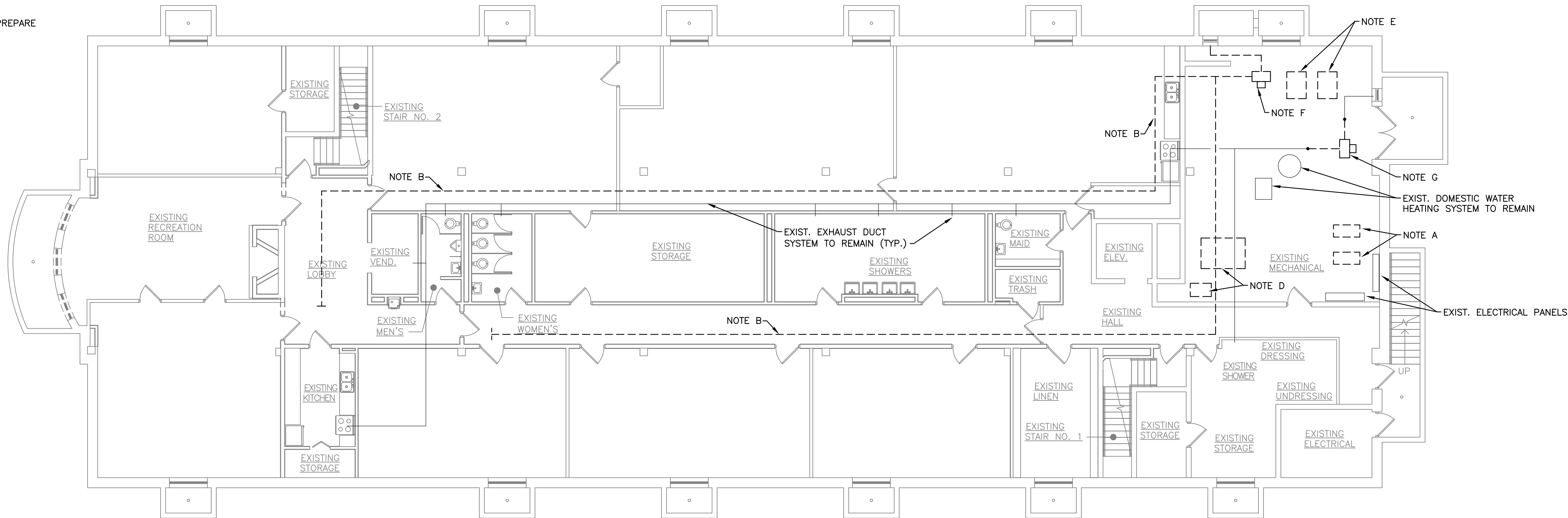




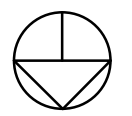
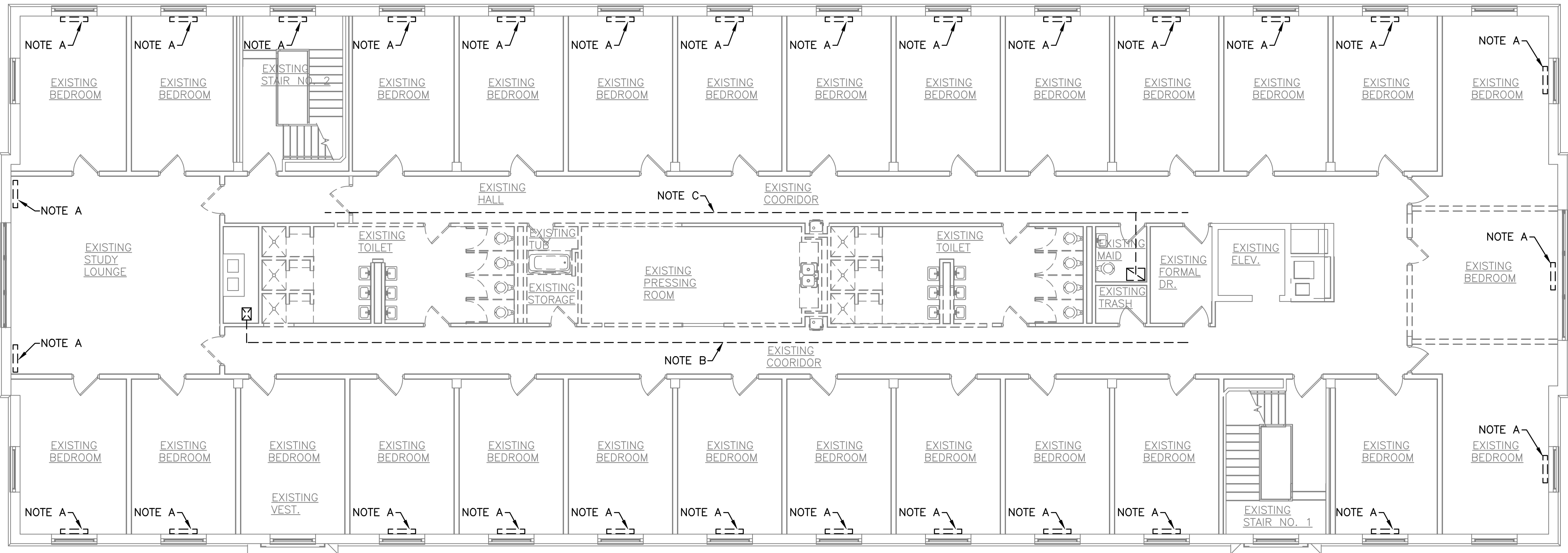
FIRST FLOOR PLAN – MECHANICAL DEMOLITION
SCALE: 1/8" = 1'-0"

DEMO NOTES THIS SHEET

- A. REMOVE HEATING SYSTEM PUMPS AND ALL HEATING PIPING IN MECHANICAL ROOM.
- B. REMOVE SUPPLY DUCT, BRANCH DUCTS, AND SUPPORTS. REMOVE ALL ASSOCIATED WALL REGISTERS. PREPARE FOR NEW DUCT SYSTEM.
- C. REMOVE EXHAUST DUCT, BRANCH DUCTS, AND SUPPORTS. REMOVE ALL ASSOCIATED WALL REGISTERS. PREPARE FOR NEW DUCT SYSTEM.
- D. REMOVE ABANDONED BOILER AND INCINERATOR. REMOVE BREECHING AND CAP AT CHIMNEY.
- E. REMOVE GAS BOILERS AND VENTS THROUGH WALL. SALVAGE AND TURNOVER BOILERS TO THE COLLEGE. CAP GAS PIPES AT MAIN.
- F. REMOVE SUPPLY FAN AND ASSOCIATED DUCTWORK.
- G. REMOVE EXHAUST FAN AND DUCT CONNECTIONS. PREPARE FOR REPLACEMENT FAN.

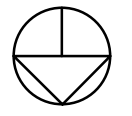
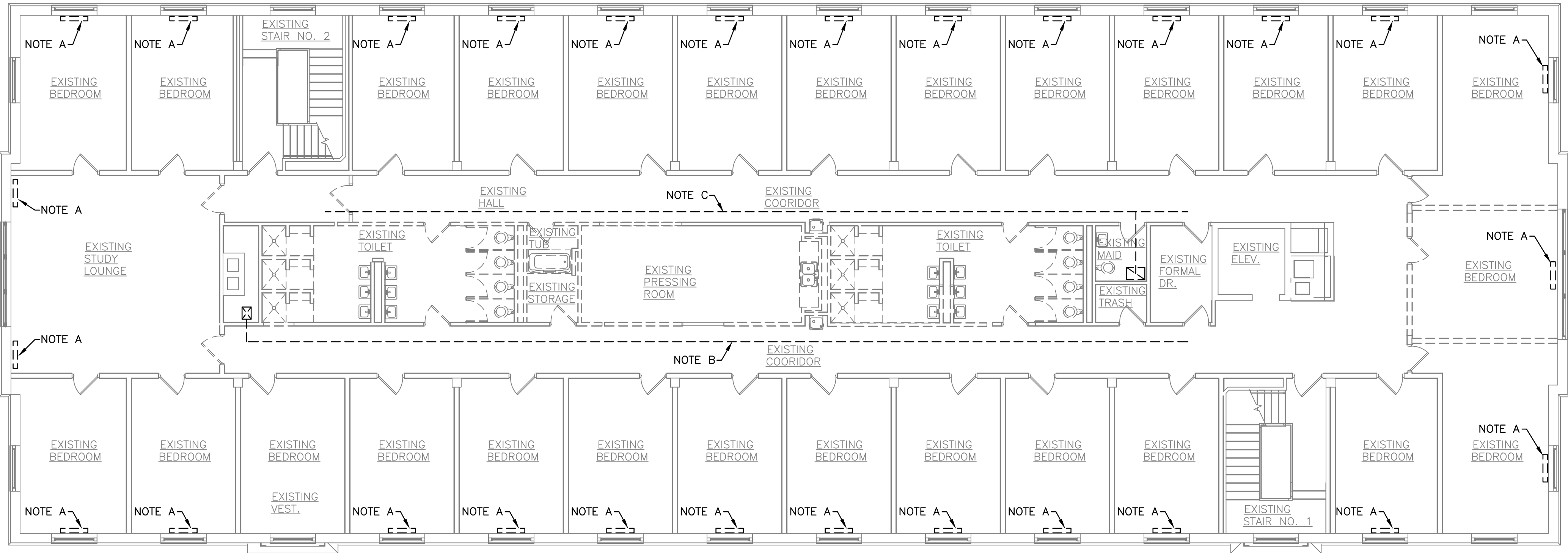


BASEMENT FLOOR PLAN – MECHANICAL DEMOLITION
SCALE: 1/8" = 1'-0"



THIRD FLOOR PLAN – MECHANICAL DEMOLITION

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



SECOND FLOOR PLAN – MECHANICAL DEMOLITION

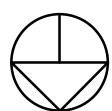
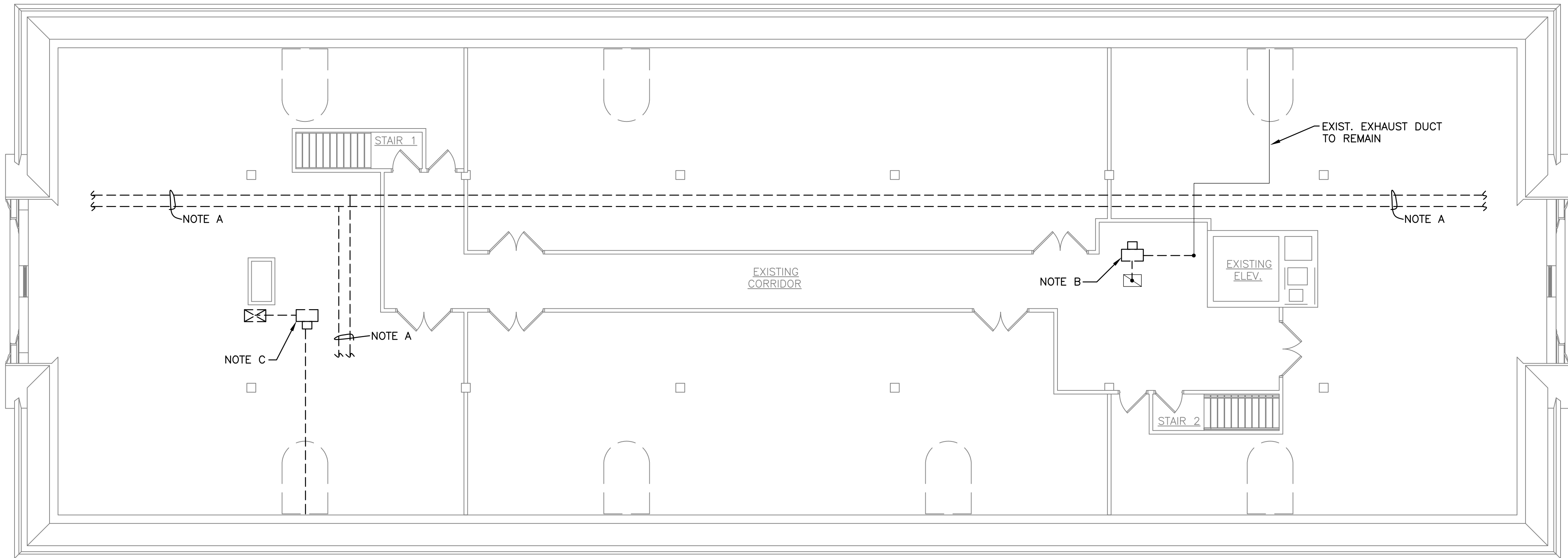
SCALE: 1/8" = 1'-0"

DEMO NOTES THIS SHEET

- A. REMOVE ALL RECESSED HEATING CONVECTORS AND ACCESSIBLE HEATING PIPES.
- B. REMOVE SUPPLY DUCT, BRANCH DUCTS, AND SUPPORTS. REMOVE ALL ASSOCIATED WALL REGISTERS. PREPARE FOR NEW DUCT SYSTEM.
- C. REMOVE EXHAUST DUCT, BRANCH DUCTS, AND SUPPORTS. REMOVE ALL ASSOCIATED WALL REGISTERS. PREPARE FOR NEW DUCT SYSTEM.

DEMO NOTES THIS SHEET

- A. REMOVE ALL HEATING PIPES IN ATTIC.
B. REMOVE EXHAUST FAN AND DUCT CONNECTIONS. PREPARE FOR REPLACEMENT.
C. REMOVE SUPPLY FAN, HYDRONIC HEATING COIL, DUCTWORK, AND ASSOCIATED COMPONENTS. PREPARE FOR NEW EQUIPMENT.



ATTIC FLOOR PLAN – MECHANICAL DEMOLITION

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

Revisions		
No.	Date	Description



Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

AWN BY: DAR
CHECKED BY: JMM

ASSESSMENT AND FIRST FLOOR PLANS - MECHANICAL

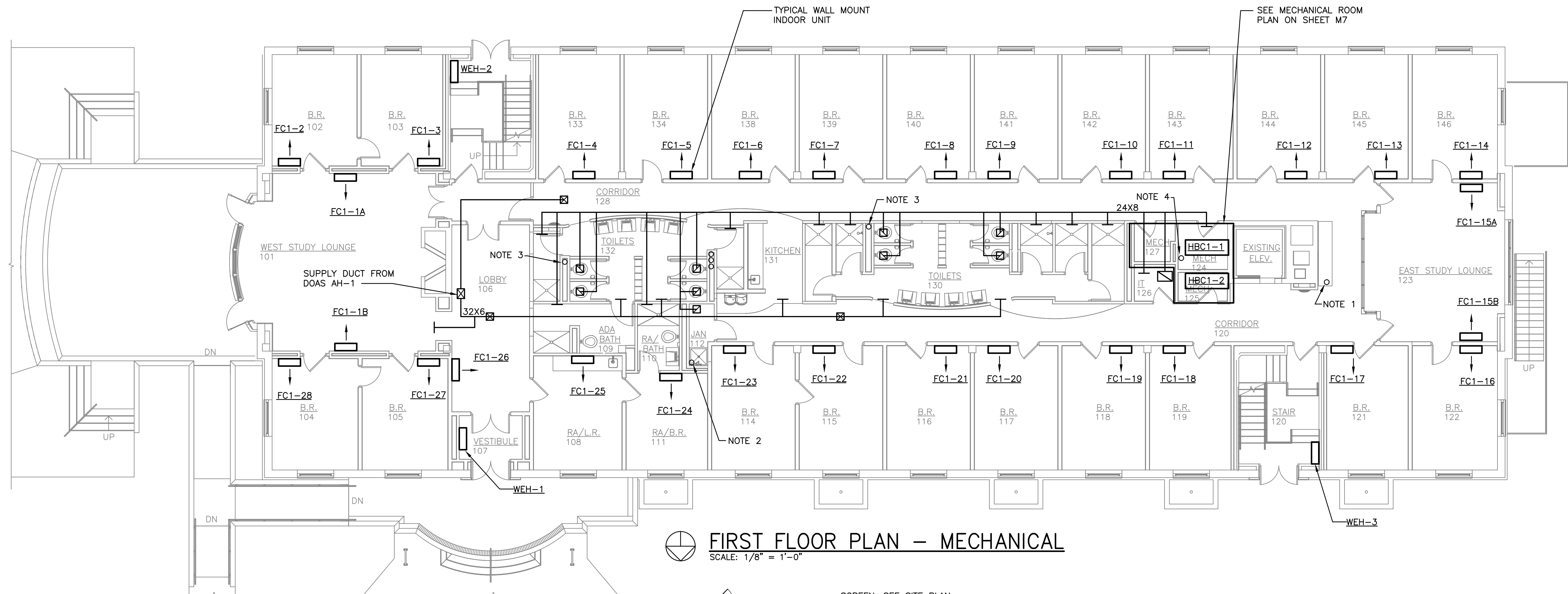
ANN & ASSOCIATES, INC. 2428
Market Street
Roanoke, VA 24011
344-5513

TE PLAN
O

COMMONWEALTH OF VIRGINIA
PRELIMINARY
JAMES M. MANNING
NOT FOR CONSTRUCTION

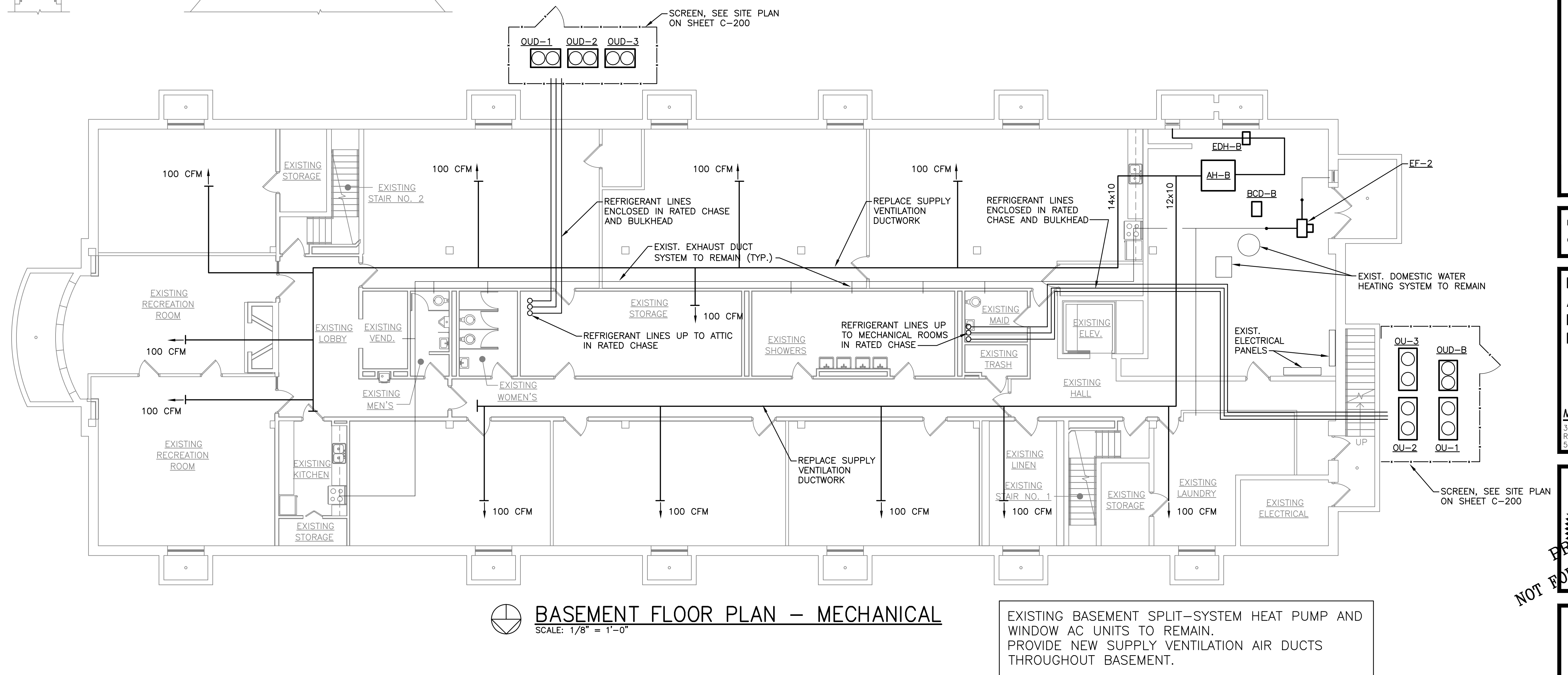
COMMISSION No.
 24028
 SHEET
 M1-1

© COPYRIGHT 2024
HES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

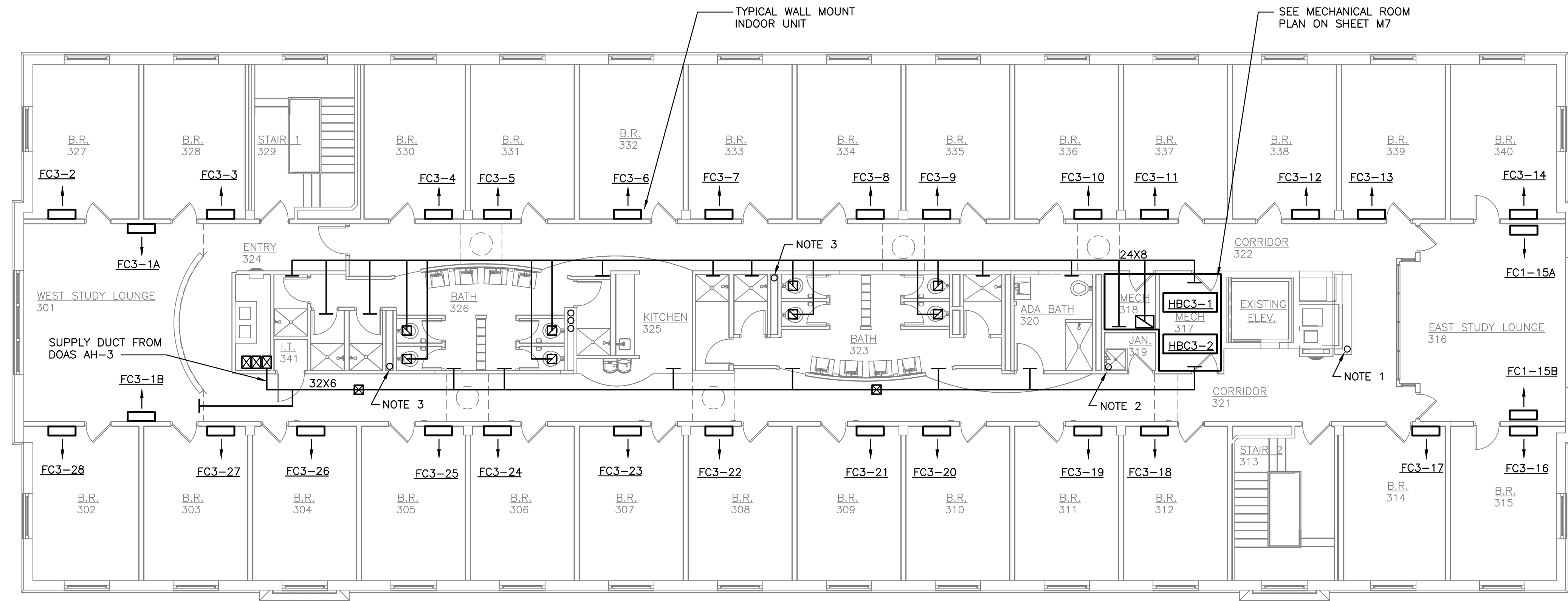


- NOTES THIS SHEET

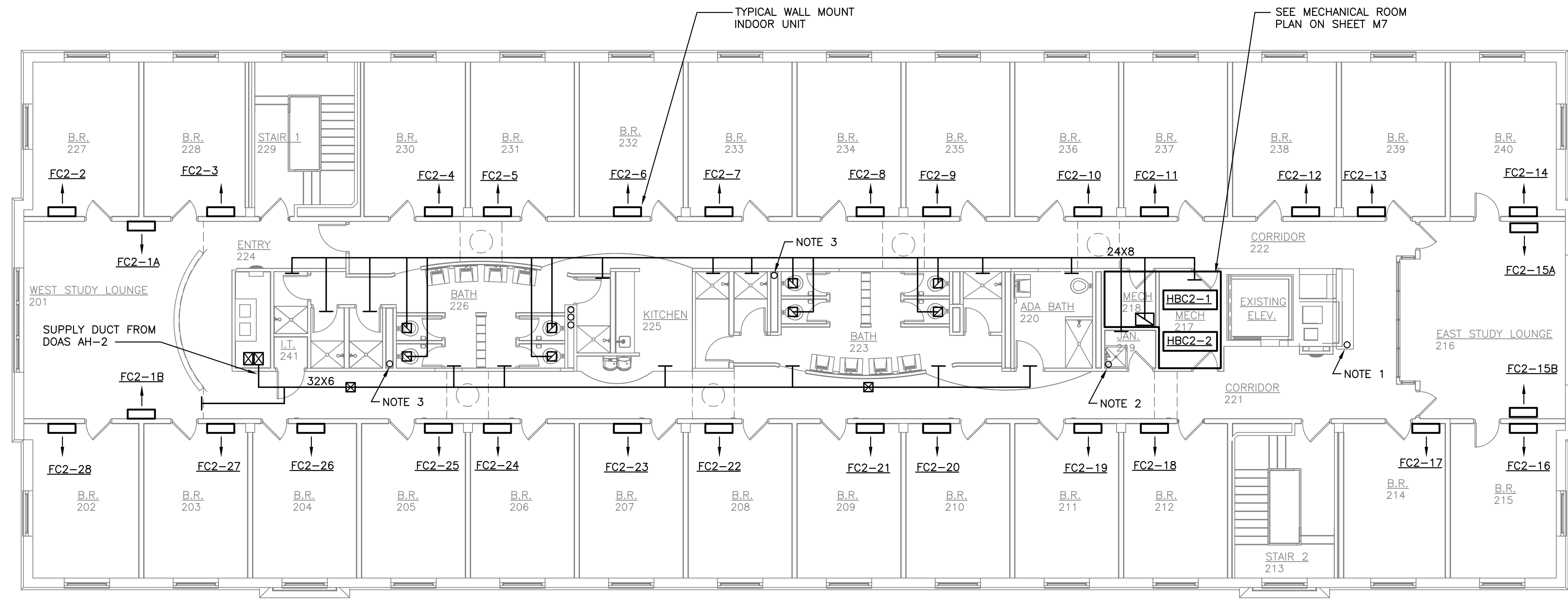
1. CONNECT INDOOR UNIT DRAINS TO CONDENSATE DRAIN RISER. ROUTE DOWN TO FLOOR DRAIN IN BASEMENT MECHANICAL ROOM.
2. ROUTE INDOOR UNIT CONDENSATE DRAINS DOWN WALL AND DISCHARGE TO MOP SINK WITH AIR GAP.
3. ROUTE INDOOR UNIT CONDENSATE DRAINS TO OPEN P-TRAP HUB DRAIN IN PLUMBING CHASE. DISCHARGE TO HUB DRAIN WITH AIR GAP.
4. ROUTE INDOOR UNIT CONDENSATE DRAINS DOWN WALL AND DISCHARGE TO FLOOR DRAIN WITH AIR GAP.



EXISTING BASEMENT SPLIT-SYSTEM HEAT PUMP AND WINDOW AC UNITS TO REMAIN.
PROVIDE NEW SUPPLY VENTILATION AIR DUCTS THROUGHOUT BASEMENT.



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



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

NOTES THIS SHEET

1. CONNECT INDOOR UNIT DRAINS TO CONDENSATE DRAIN RISER. ROUTE DOWN TO FLOOR DRAIN IN BASEMENT MECHANICAL ROOM.
2. ROUTE INDOOR UNIT CONDENSATE DRAINS DOWN WALL AND DISCHARGE TO MOP SINK WITH AIR GAP.
3. ROUTE INDOOR UNIT CONDENSATE DRAINS TO OPEN P-TRAP HUB DRAIN IN PLUMBING CHASE. DISCHARGE TO HUB DRAIN WITH AIR GAP.

Revisions		
No.	Date	Description

AWN BY: DAR
CHECKED BY: JMM

MECHANICAL

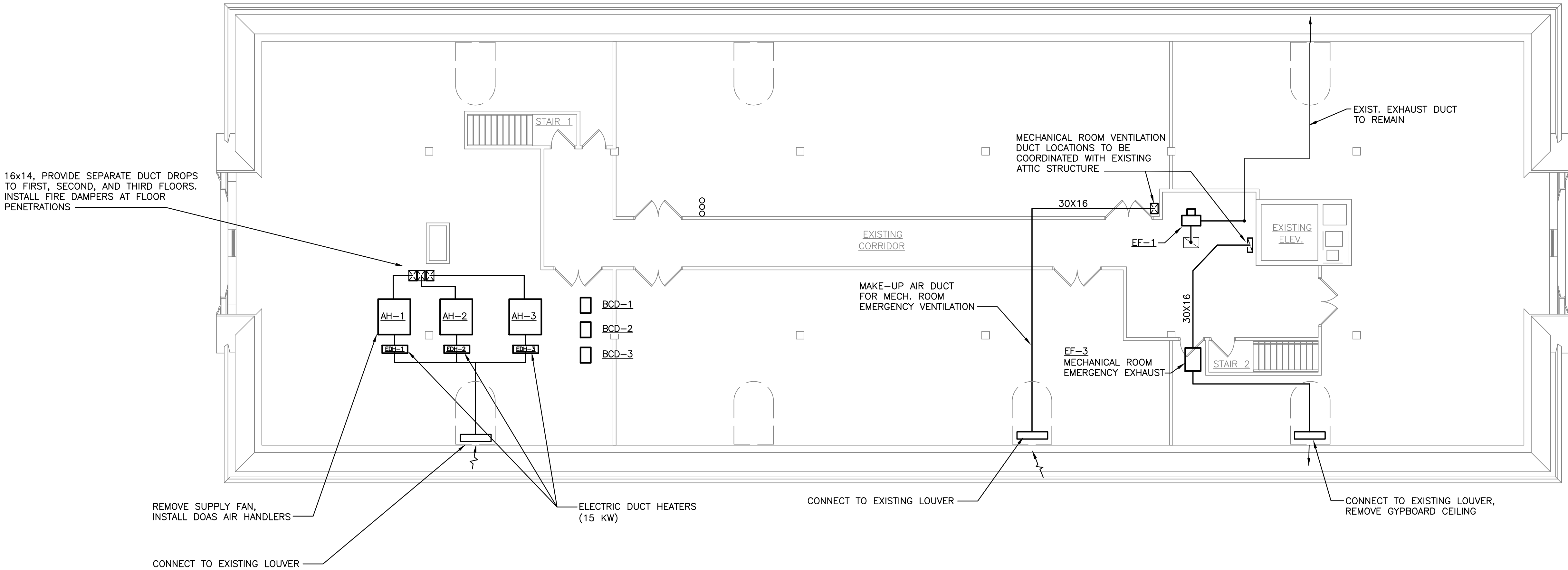
ANN & ASSOCIATES, INC.
Market Street 2428
Roanoke, VA 24011
344-5513

COMMISSION No.
24028
SHEET
M1-3

© COPYRIGHT 2024
HES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

NOTES THIS SHEET

- 1.
- 2.
- 3.



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

DATE: DEC. 16, 2024

Revisions

No.	Date	Description
-----	------	-------------

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
www.HughesAE.com
540.342.4002

Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: DAR
CHECKED BY: JMM

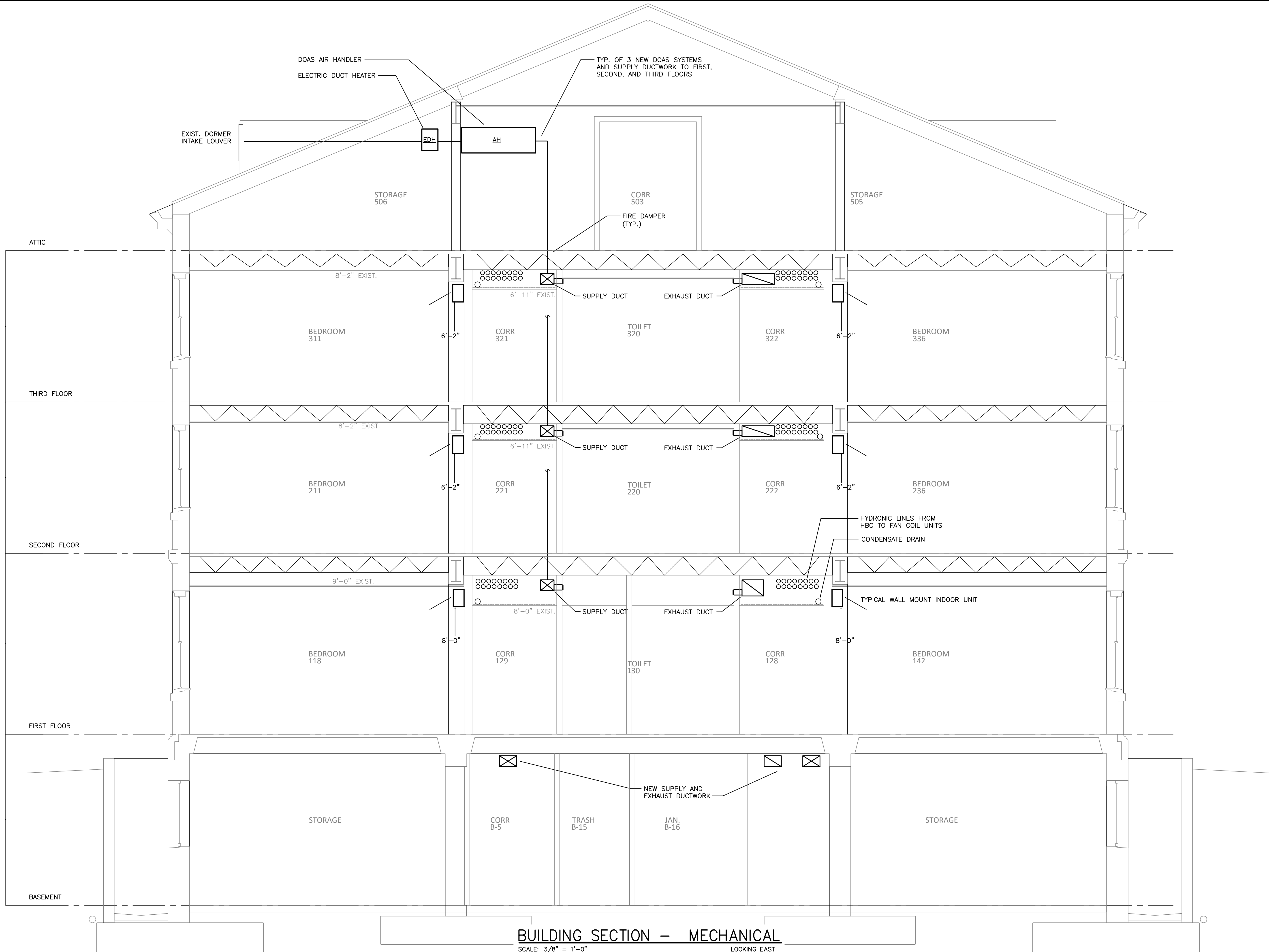
**BUILDING
SECTION -
MECHANICAL**

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513

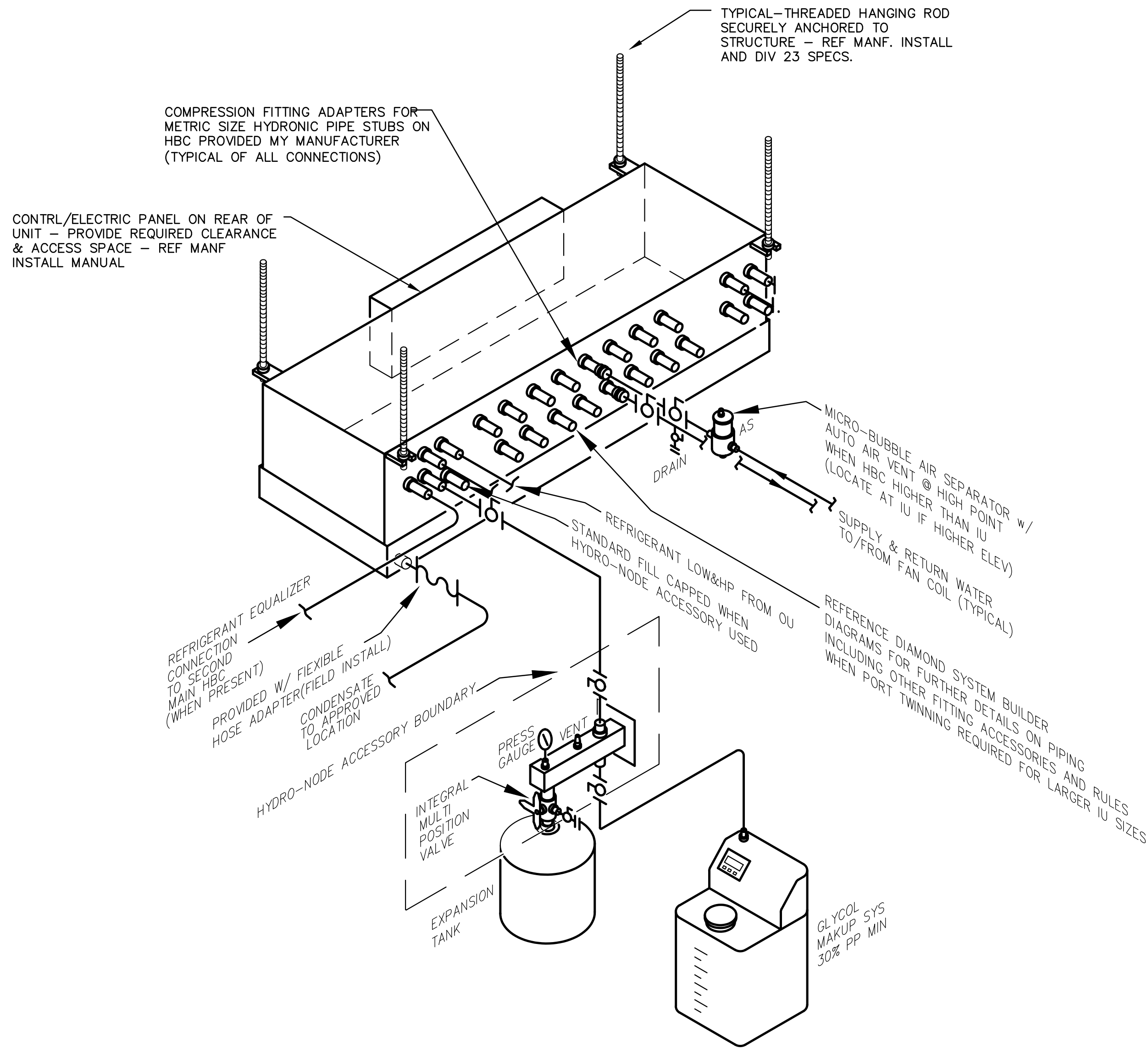
COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCTION

COMMISSION No.
24028
SHEET
M2-1

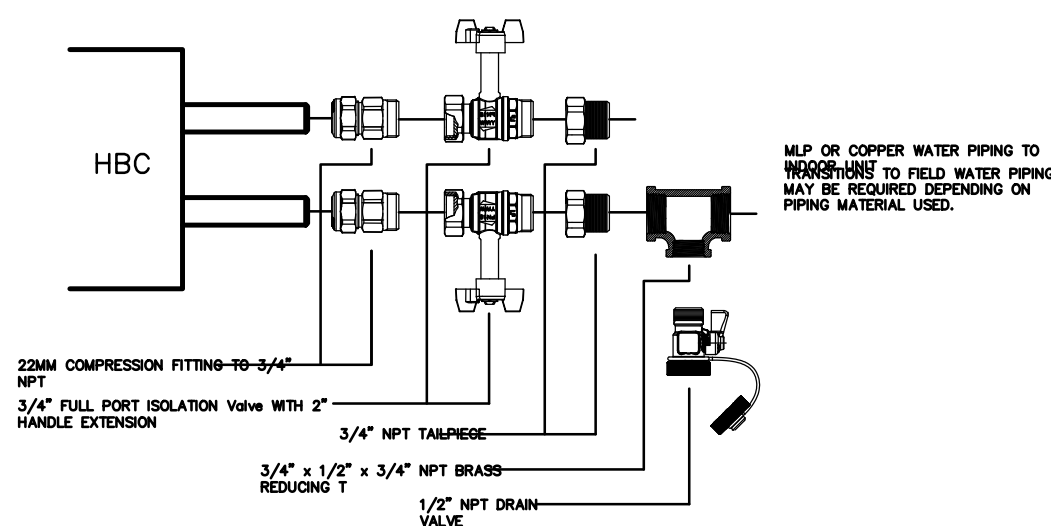
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



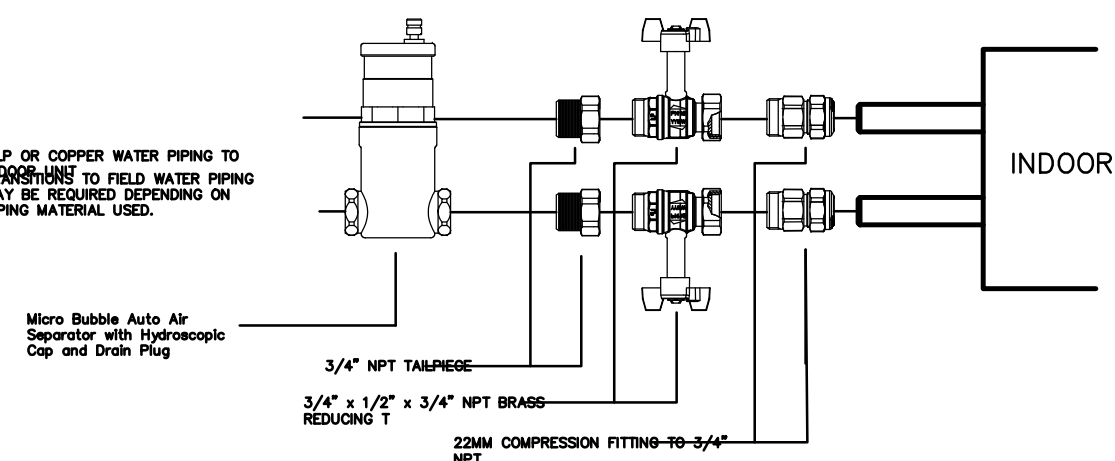
Revisions		
No.	Date	Description



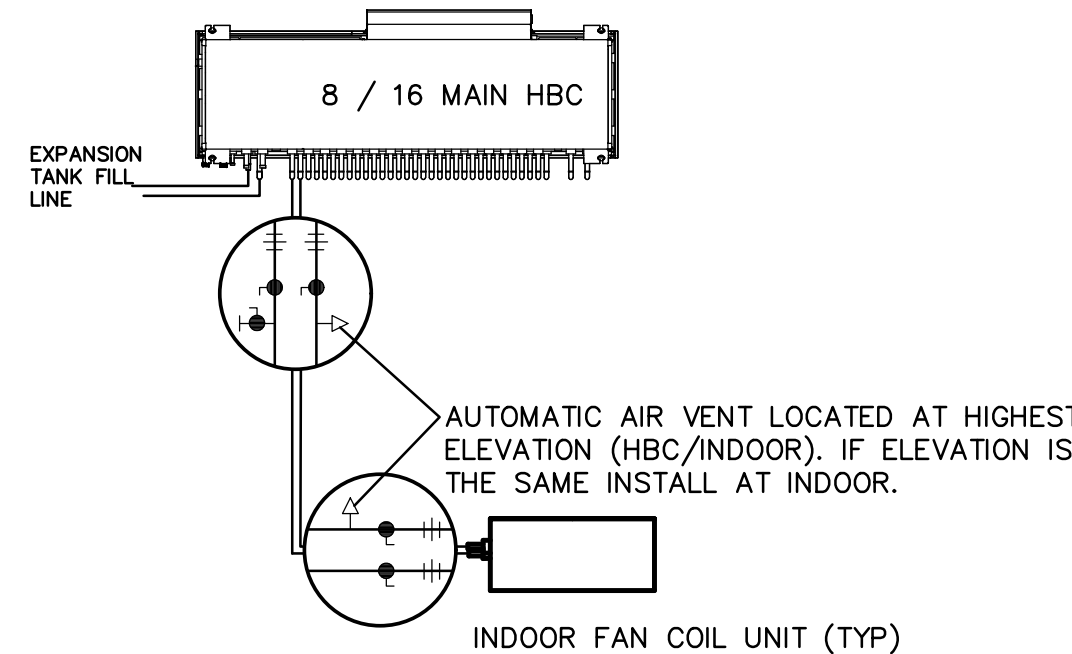
HVRF HBC DIAGRAM
SCHEMATIC



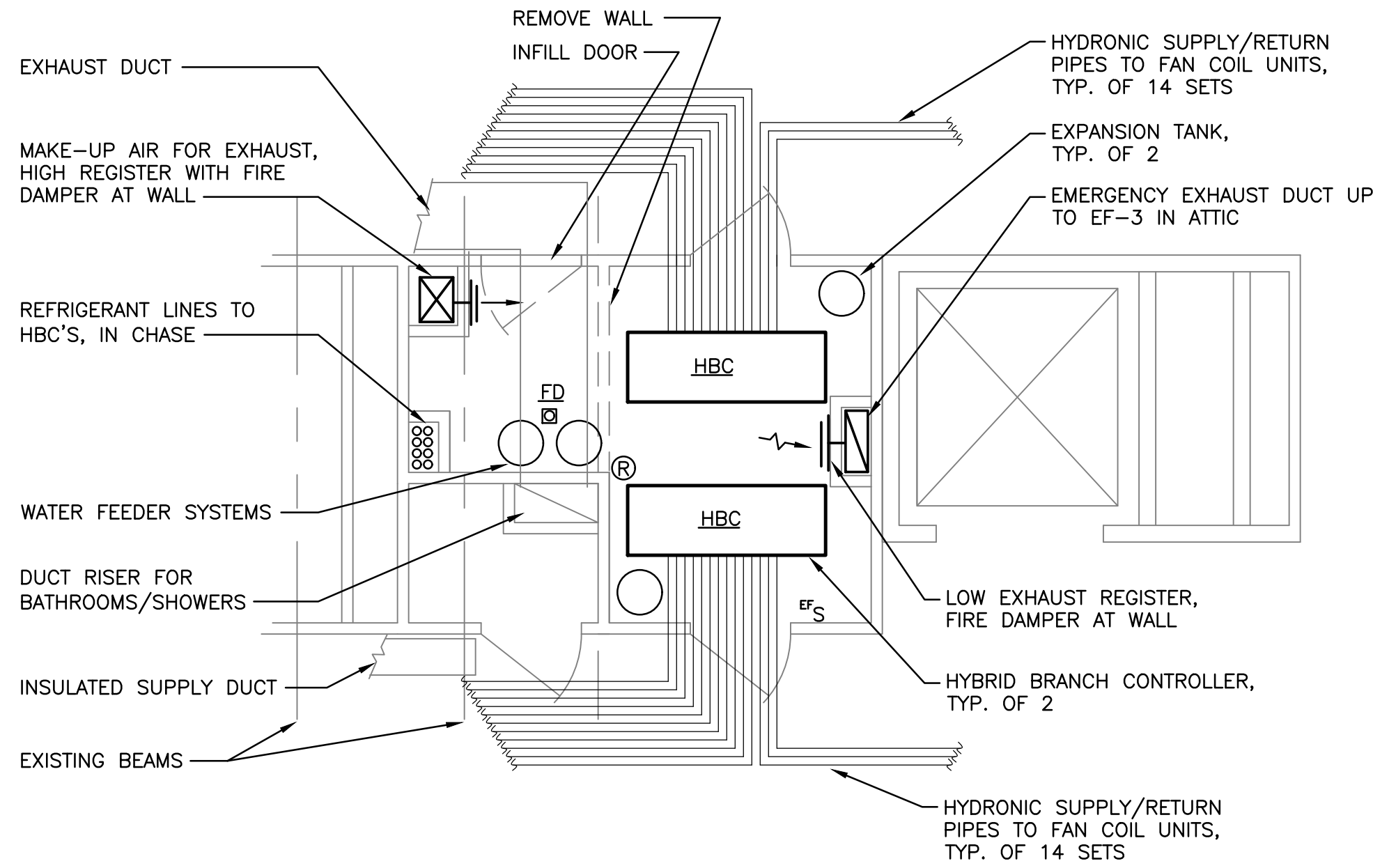
HBC PORT CONNECTION
SCHEMATIC



FAN COIL UNIT CONNECTION
SCHEMATIC



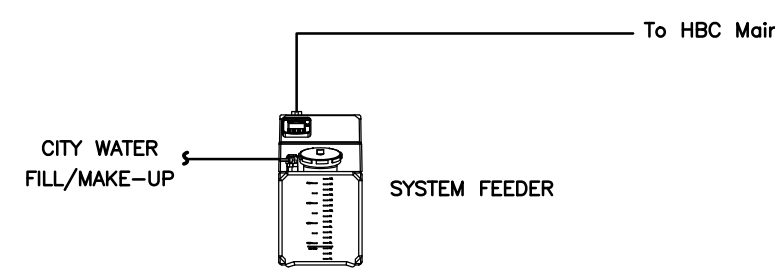
HVRF HYDRONIC DIAGRAM
SCHEMATIC



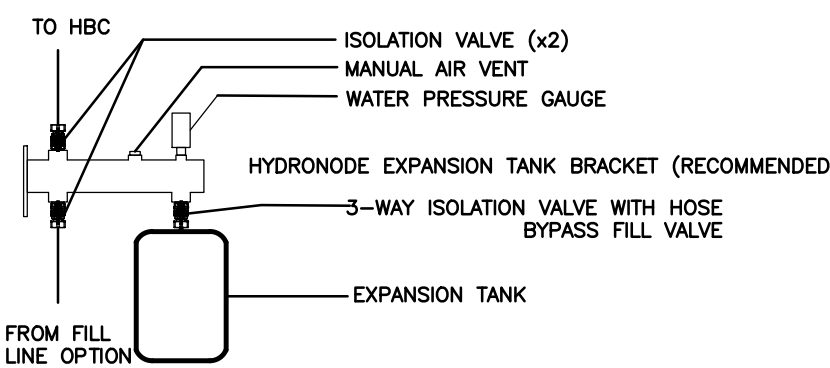
MECHANICAL ROOM PLAN
SCALE: 1/4" = 1'-0"

- NOTE:**
- EXISTING DRESS, MAID, AND TRASH ROOMS CONVERTED TO MECH. ROOM.
 - THIRD FLOOR SHOWN AND SECOND FLOOR SIMILAR.
 - FIRST FLOOR SIMILAR WITH ADDITIONAL WALL REMOVAL.

- MECHANICAL ROOM TO INCLUDE:**
- TIGHT FITTING, SELF-CLOSING DOORS.
 - RESTRICTED ACCESS AND DOOR SIGNAGE.
 - REFRIGERANT DETECTOR TO ACTIVATE ALARM AND EMERGENCY VENTILATION.
 - MANUAL WALL SWITCH FOR "VENTILATION ON".



SYSTEM FEEDER
SCHEMATIC



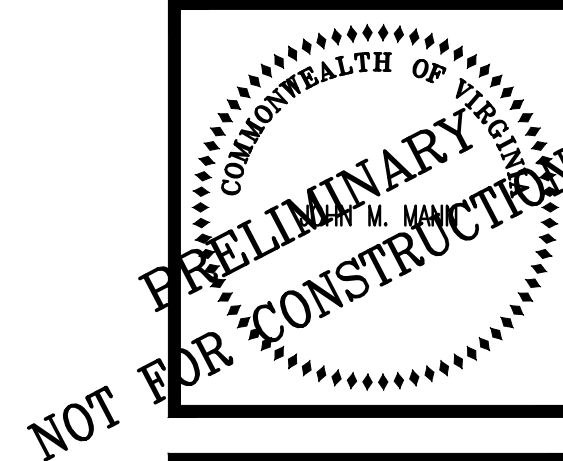
HVRF XT DIAGRAM
SCHEMATIC

Revisions		
No.	Date	Description

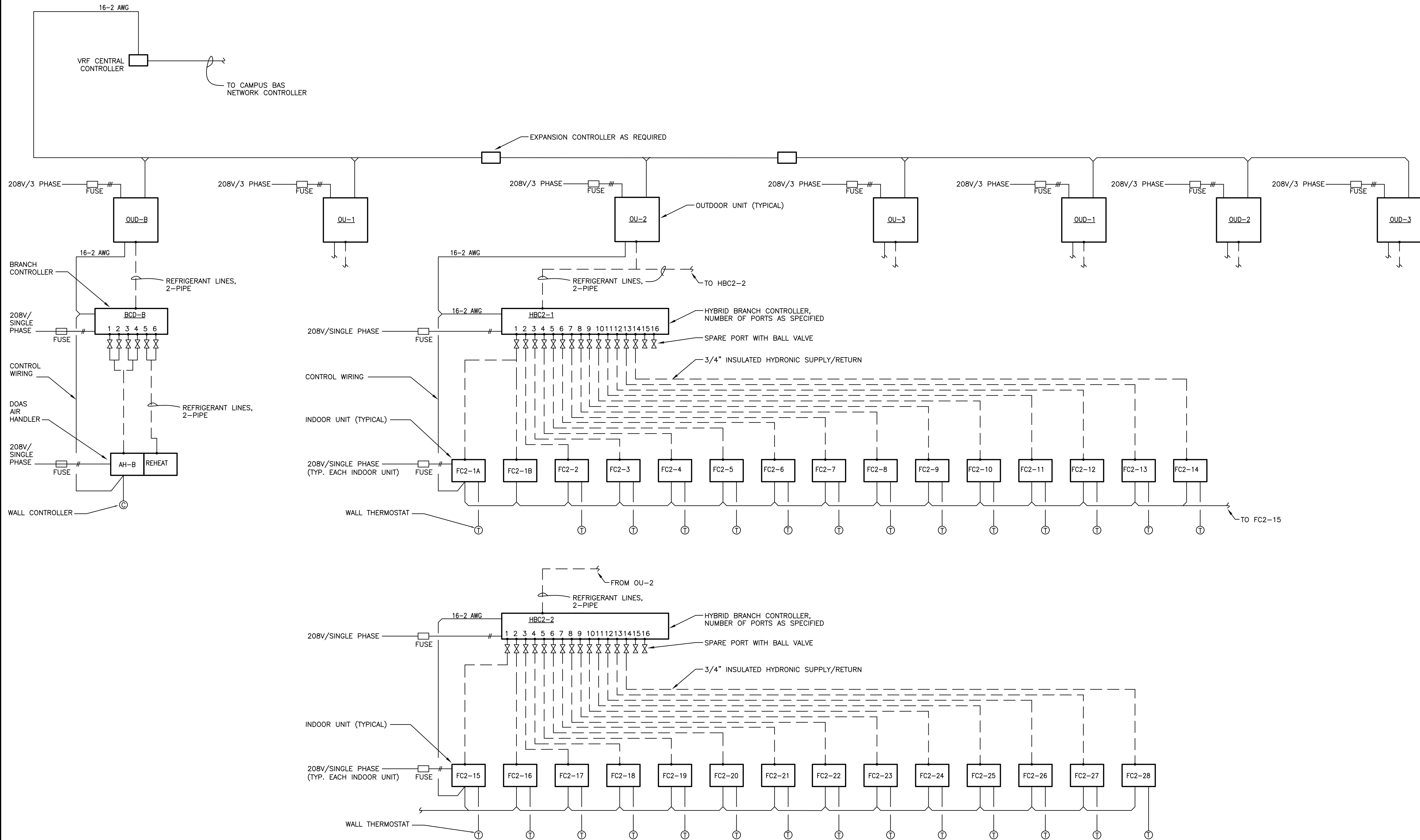
DRAWN BY: DAR
CHECKED BY: JMM

**MECHANICAL
DIAGRAMS**

MANN & ASSOCIATES, INC.
306 Market Street 248
Roanoke, VA 24011
540-344-5513



COMMISSION No.
24028
SHEET
M2-3
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



HVRF SYSTEM DIAGRAM

SCHEMATIC (HVRF SYSTEM 2 DETAIL SHOWN, SYSTEM 1 AND 3 SIMILAR)
(DOAS SYSTEM B DETAIL SHOWN, SYSTEM 1, 2 AND 3 SIMILAR)

INDOOR FAN COIL UNIT SCHEDULE													
UNIT	SUPPLY FAN						COOLING	HEATING	SELECTION BASED ON TRANE/MITSUBISHI	TYPE	WEIGHT (LBS.)	AIRFLOW	OPTIONS
	SUPPLY CFM	OUTSIDE AIR (CFM)	ESP (IN. WATER)	VOLTAGE	PHASE	MCA	TOTAL (MBH)	TOTAL (MBH)					
FC1-3 AND ALL TYPICAL DORM ROOMS WITH A SINGLE WINDOW	245	--	0.0	208	1	0.3	6.0	6.7	TPKFYW06	WALL MOUNTED	XX	1-WAY	WIRED SIMPLE MA
FC1-1A, FC1-1B, FC1-15A, FC1-15B FC2-1A, FC2-1B, FC2-15A, FC2-15B FC3-1A, FC3-1B, FC3-15A, FC3-15B	295	--	0	208	1	0.3	8.0	9.0	TPKFYW08	WALL MOUNTED	XX	1-WAY	WIRED SIMPLE MA
FC1-2, FC1-14, FC1-16, FC1-28 FC2-2, FC2-14, FC2-16, FC2-28 FC3-2, FC3-14, FC3-16, FC3-28	365	--	0	208	1	0.3	12	13.5	TPKFYW12	WALL MOUNTED	XX	1-WAY	WIRED SIMPLE MA

DOAS AIR HANDLER UNIT SCHEDULE														
UNIT	SUPPLY FAN						COOLING	HEATING	REHEAT	SELECTION BASED ON TRANE/MITSUBISHI	TYPE	WEIGHT (LBS.)	AIRFLOW	OPTIONS
	SUPPLY CFM	OUTSIDE AIR (CFM)	ESP (IN. WATER)	VOLTAGE	PHASE	MCA	TOTAL (MBH)	TOTAL (MBH)	TOTAL (MBH)					
AH-B	1200	1200	0.8	208	1	4.3	107	45	24	TPEFYP120	DOAS DUCTED	309	DUCTED	WIRED DELUXE ME
AH-1	1200	1200	0.8	208	1	4.3	107	45	24	TPEFYP120	DOAS DUCTED	309	DUCTED	WIRED DELUXE ME
AH-2	1200	1200	0.8	208	1	4.3	107	45	24	TPEFYP120	DOAS DUCTED	309	DUCTED	WIRED DELUXE ME
AH-3	1200	1200	0.8	208	1	4.3	107	45	24	TPEFYP120	DOAS DUCTED	309	DUCTED	WIRED DELUXE ME

OUTDOOR UNIT SCHEDULE														
SERVES	UNIT	COOLING	HEATING 47F	HEATING 12F	EER/IEER/COP	ELECTRICAL				SELECTION BASED ON TRANE/MITSUBISHI	TYPE	MAXIMUM SYSTEM REFRIGERANT (LBS.)	UNIT WEIGHT (LBS.)	OPTIONS
		RATED (MBH)	RATED (MBH)	INSTALLED DERATE (MBH)		VOLTAGE	PHASE	MCA/MOCP	RECOMMENDED FUSE SIZE					
FIRST FLOOR	OU-1	168	188	125	11.9/28.0/3.8	208	3	57/90	70	TURYE168	ENERGY RECOVERY HVRF	60	777	SNOW HOOD
SECOND FLOOR	OU-2	168	188	125	11.9/28.0/3.8	208	3	57/90	70	TURYE168	ENERGY RECOVERY HVRF	60	777	SNOW HOOD
THIRD FLOOR	OU-3	168	188	125	11.9/28.0/3.8	208	3	57/90	70	TURYE168	ENERGY RECOVERY HVRF	60	777	SNOW HOOD
BASEMENT DOAS	OD-B	120	135	93	12.1/23.3/3.6	208	3	43/70	50	TURYP120	ENERGY RECOVERY DOAS	45	598	SNOW HOOD
FIRST FL. DOAS	OD-1	120	135	93	12.1/23.3/3.6	208	3	43/70	50	TURYP120	ENERGY RECOVERY DOAS	45	598	SNOW HOOD
SECOND FL. DOAS	OD-2	120	135	93	12.1/23.3/3.6	208	3	43/70	50	TURYP120	ENERGY RECOVERY DOAS	45	598	SNOW HOOD
THIRD FL. DOAS	OD-3	120	135	93	12.1/23.3/3.6	208	3	43/70	50	TURYP120	ENERGY RECOVERY DOAS	45	598	SNOW HOOD

(HVRF) HYBRID VARIABLE REFRIGERANT FLOW SYSTEM

INDOOR FAN COIL UNIT SCHEDULE NOTES:

- HYBRID VRF INDOOR UNIT- WATER COIL, DIRECT DRIVE, COPPER TUBES, ALUMINUM FINS. LINEAR EXPANSION VALVE, SLOPED CONDENSATE PAN.
- FOR WALL MOUNTED UNITS, PROVIDE CONDENSATE PUMP, FASACIA KIT, DRAIN PAN SENSOR, AND LINE HIDE.
- FOR CEILING CASSETTE UNIT, INTEGRAL CONDENSATE LIFT MECHANISM, OVERFLOW DETECTION SWITCH.
- PROVIDE FILTER WITH ALL UNITS.
- WIRED WALL THERMOSTAT CONTROLLER.
- PROVIDE SINGLE THERMOSTAT TO CONTROL MULTIPLE INDOOR UNITS IN LARGE COMMON SPACES.
- FOR COMMON SPACES, PROVIDE TAMPERPROOF FLAT PLATE REMOTE WALL SENSOR.
- COORDINATE LOCATION OF UNITS WITH CEILING, STRUCTURE, LIGHTS, AND WINDOWS.

DOAS AIR HANDLER UNIT SCHEDULE NOTES:

- DUCTED UNIT- DIRECT DRIVE, HIGH-STATIC FAN, COPPER TUBES, ALUMINUM FINS. LINEAR EXPANSION VALVE, SLOPED CONDENSATE PAN.
- COOLING BASED ON 93F ENTERING AIR AND LEAVING AIR OF 54DB/54WB.
- HEATING BASED ON MINIMUM 45F ENTERING AIR FROM DUCT HEATER AND LEAVING AIR OF 78F.
- REHEAT COIL BASED ON 55F ENTERING AIR AND LEAVING AIR OF 72F.
- PROVIDE FILTER BOX AND CONDENSATE OVERFLOW DETECTION SWITCH. PROVIDE CONDENSATE PUMP IF REQUIRED.
- WIRED CONTROLLER.
- PROVIDE BAS CONTROL OF MODE (HEATING, COOLING, AND DEHUMIDIFICATION) BASED ON SPACE TEMPERATURE AND HUMIDITY. RESET LEAVING AIR TEMPERATURE SETPOINT.

OUTDOOR UNITS NOTES:

- TRANE/MITSUBISHI CITYMULTI HEAT RECOVERY TYPE AS INDICATED, VARIABLE REFRIGERANT FLOW ZONING.
- HEAT RECOVERY UNITS TO ALLOW SIMULTANEOUS HEATING AND COOLING FROM INDOOR UNITS.
- INVERTER VARIABLE SPEED COMPRESSOR.
- OPERATING RANGE TO 23 F FOR COOLING AND -4 F HEATING.
- MOUNT ON EQUIPMENT FRAME 12" MINIMUM ABOVE GRADE. ROUTE REFRIGERANT PIPING BELOW FRAME.

HBC CONTROLLERS:

- HBC1-1, HBC1-2, HBC2-1, HBC2-2, HBC3-1, HBC3-2: TCMBM1016, 16 BRANCHES, 3.78 MCA, 208 VOLTS, SINGLE PHASE, 217 LBS. HYBRID VRF BRANCH CONTROLLER, DX TO WATER HEAT EXCHANGER, PUMPS, CONTROL VALVES.
- BCD-B, BCD-1, BCD-2, BCD-3: TCMBG106, 6 BRANCHES, 0.6 MCA, 208 VOLTS, SINGLE PHASE, 64 LBS. BRANCH CONTROLLER FOR DOAS SYSTEM.
- PROVIDE ALL HYDRONIC ACCESSORIES FOR HBC TO INCLUDE BALL VALVES, DRAIN VALVES, AUTO AIR VENTS, AIR SEPARATOR, SYSTEM MAKE-UP FEEDER, EXPANSION TANK, CORROSION INHIBITOR.
- PROVIDE BALL VALVES FOR EACH PORT, CONDENSATE PUMP, AND AUXILIARY DRAIN PAN BELOW BC CONTROLLERS.

VRF SYSTEM AND CONTROLS:

- SYSTEM TO BE INSTALLED BY TRAINED AND CERTIFIED CONTRACTOR. CONTRACTOR TO HAVE MINIMUM OF TWO TECHNICIANS WITH MINIMUM 24 HOURS OF MANUFACTURER'S TRAINING.
- CENTRAL CONTROLLER TE-200 WITH DUAL SETPOINT CONTROL, 120 VOLT POWER SUPPLY, TOUCH SCREEN DISPLAY WITH SURFACE MOUNT, REMOTE INTERNET ACCESS. LOCATE IN BASEMENT MECHANICAL ROOM.
- WALL MOUNTED WIRED CONTROLLERS.
- PROVIDE TRANE SC CONTROLLER TO MONITOR THE SYSTEM AND SUPPLEMENT THE VRF CONTROLS. PROVIDE CONNECTION FOR WEB-BASED REMOTE ACCESS.
- PROVIDE PROGRAMMING, OCCUPANCY SCHEDULING AND SETPOINT ADJUSTMENT. LABEL ALL CONTROLS AND EQUIPMENT THE SAME AS IDENTIFIED ON THE DRAWINGS AND SUBMITTALS.
- SUBMIT SHOP DRAWINGS TO INCLUDE EQUIPMENT, CONTROLS, PIPING DIAGRAMS AND DETAILED SEQUENCE OF OPERATION OF CONTROL SYSTEM.
- CONTROL SYSTEM SHALL INCLUDE ALL CONTROLLERS, THERMOSTATS, SENSORS, VALVES, DAMPERS, TRANSFORMERS, WIRING, INTERLOCKS AND OTHER DEVICES TO ENABLE THE SEQUENCE OF OPERATION.
- PROVIDE START-UP AND VERIFICATION OF CONTROL SYSTEM & SEQUENCE OF OPERATION. COORDINATE WITH TEST AND BALANCE CONTRACTOR TO OPERATE EQUIPMENT IN ALL MODES AND DEVICE POSITIONS.
- COMPLETE AND SUBMIT MANUFACTURER'S COMMISSIONING REPORT. WARRANTY SHALL BE 10 YEARS FOR ALL PARTS.
- PROVIDE DOCUMENTATION AND TRAINING TO OWNER. TRAINING TO INCLUDE UP TO 3 SEPARATE VISITS TO THE SITE FOR 4 HOURS EACH.

ELECTRIC DUCT HEATER

EDH-B, EDH-1, EDH-2, EDH-3: HORIZONTAL INSERTION TYPE WITH INTEGRAL CONTROL BOX. SCR MODULATING CONTROL BY LAT AND BAS. UNIVERSAL DESIGN FOR RIGHT OR LEFT HAND INSTALLATION. SAFETIES INCLUDING AIRFLOW SWITCH, TEMPERATURE OVERLOAD. DISCONNECT SWITCH, CONTROL TRANSFORMER. UL LISTED. 15 KW, 208 VOLT/3PH, 1200 CFM, 10F EAT, 50F LAT, 16x14 DUCT.

WALL ELECTRIC HEATER

WALL ELECTRIC HEATER (WEH-1 IN VESTIBULE): SURFACE MOUNTED, 2250 WATTS, 208 VOLTS, SINGLE PHASE, 10.8 AMPS, INTEGRAL THERMOSTAT WITH DISCONNECT MEANS, MARKEL 3320 SERIES.
WALL ELECTRIC HEATER (WEH-2, WEH-3 IN STAIRS): SURFACE MOUNTED, 4000 WATTS, 208 VOLTS, SINGLE PHASE, 19.2 AMPS, INTEGRAL THERMOSTAT WITH DISCONNECT MEANS, MARKEL 3320 SERIES.

FANS

EE-1: IN ATTIC, REPLACE BATHROOM/SHOWER EXHAUST FAN. 3900 CFM, 1.2" ESP.
EE-2: IN BASEMENT MECH RM, REPLACE BASEMENT EXHAUST FAN. 1100 CFM, 1.0" ESP.
EE-3: IN ATTIC, MECHANICAL ROOM EMERGENCY EXHAUST. 2400 CFM, 1.2" ESP

DATE: DEC. 16, 2024

Revisions

No.	Date	Description
-----	------	-------------



3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation

Roanoke College

221 College Lane
Salem, Virginia

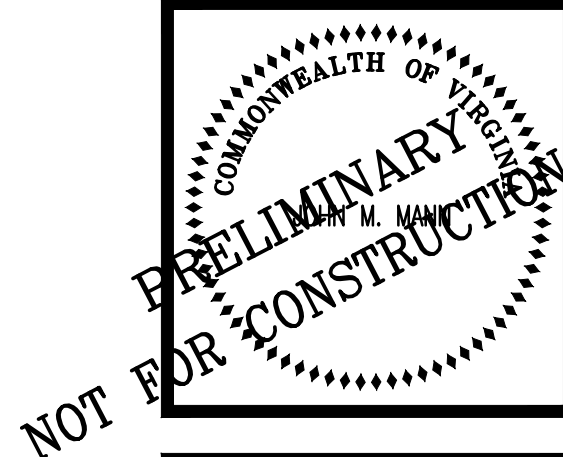
DRAWN BY: DAR

CHECKED BY: JMM

MECHANICAL SCHEDULES

MANN & ASSOCIATES, INC.

306 Market Street, 248
Roanoke, VA 24011
540-344-5513



COMMISSION No.

24028

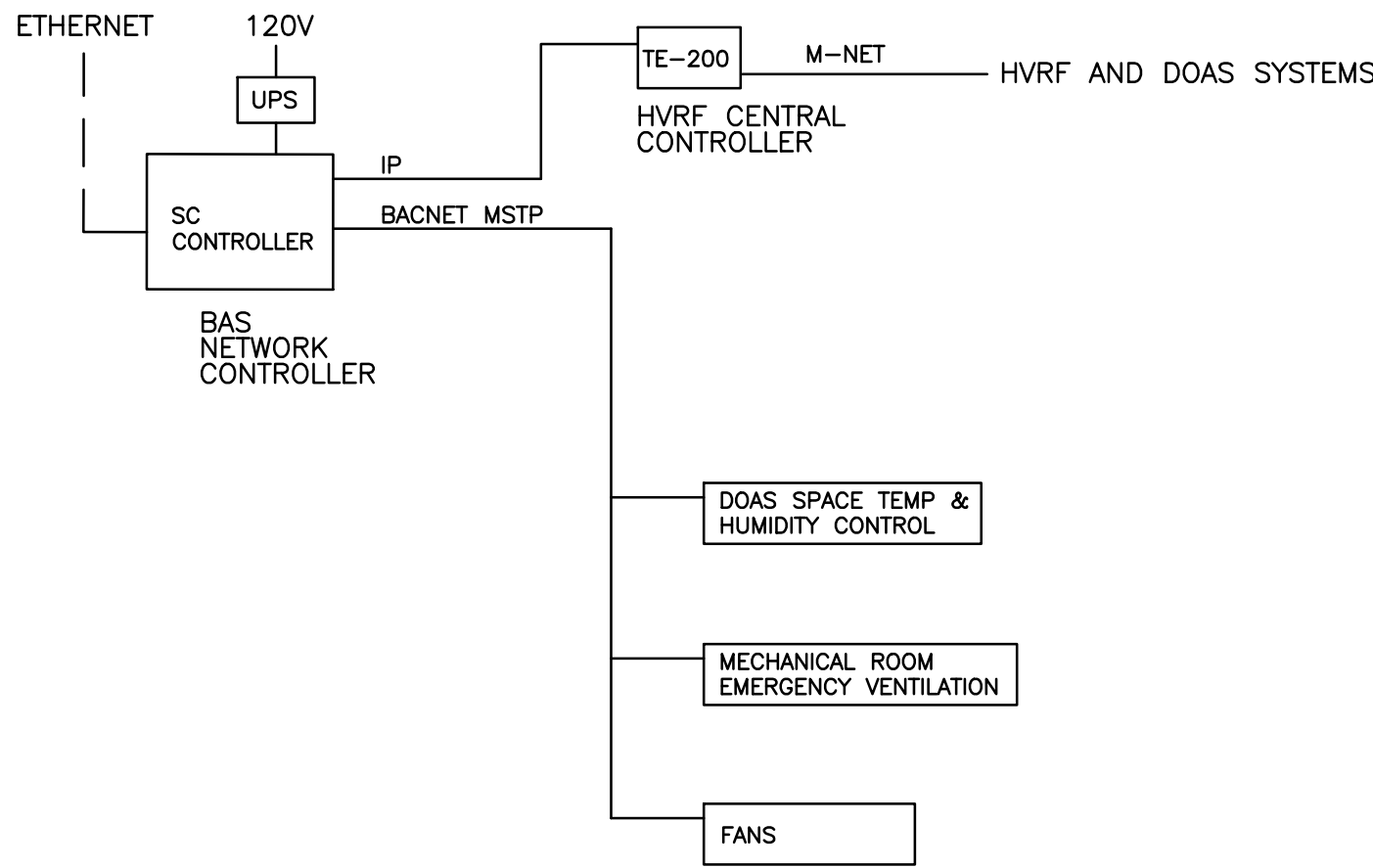
SHEET

M3-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

BUILDING AUTOMATION SYSTEM (BAS)

- PROVIDE BUILDING AUTOMATION SYSTEM WITH DIRECT DIGITAL CONTROLS (DDC). THE CONTROL SYSTEM IS BASED ON TRANE SC CONTROLLER AND MITSUBISHI CONTROL SYSTEMS. SYSTEM SHALL MEET ASHRAE 135-2004 OPEN PROTOCOL REQUIREMENTS AND BE BACNET COMPATIBLE. PROVIDE CONNECTION FOR WEB-BASED REMOTE ACCESS.
- BAS INTERFACE SHALL BE THROUGH ANY WEB BROWSER AND SHALL ALLOW SECURE CONTROL OF ALL EQUIPMENT.
- BAS CONTROLLER SHALL BE TRANE SC CONTROLLER. PROVIDE PROGRAMMING, OCCUPANCY SCHEDULING AND SETPOINT ADJUSTMENT. PROVIDE WEB ACCESS ABILITY WITH GRAPHICAL DISPLAY TO ALLOW MONITORING, ALARMING, TRENDING, SCHEDULING AND SETPOINT ADJUSTMENT THROUGH ANY DEVICE CONNECTED TO THE INTERNET.
- SYSTEMS THAT REQUIRE WORKSTATION SOFTWARE OR MODIFIED WEB BROWSERS ARE NOT ACCEPTABLE.
- PROVIDE WIRING FOR CONNECTION TO THE BUILDING LAN. COORDINATE WITH THE OWNER FOR CONNECTION TO THE INTERNET AND DEMONSTRATE WEB ACCESS.
- SYSTEM SHALL INCLUDE ALL CONTROLLERS, THERMOSTATS, SENSORS, VALVES, DAMPERS, TRANSFORMERS, WIRING, CONDUIT, INTERLOCKS, AND OTHER DEVICES TO ENABLE THE SEQUENCE OF OPERATION.
- PROVIDE DOCUMENTATION AND TRAINING TO OWNER ALONG WITH TWO YEAR WARRANTY. LABEL ALL CONTROLS AND EQUIPMENT THE SAME AS IDENTIFIED ON THE DRAWINGS AND SUBMITTALS.
- SUBMIT SHOP DRAWINGS AND DETAILED FLOW DIAGRAMS, WIRING DIAGRAMS AND SEQUENCE OF OPERATION. SUBMIT EXPERIENCE AND EXAMPLES OF LOCALLY INSTALLED PROJECTS WITH A SIMILAR SYSTEM. ATTEND MEETING WITH OWNER AND ENGINEER TO REVIEW SHOP DRAWING SUBMITTAL.
- PROVIDE PROGRAMMING, OCCUPANCY SCHEDULING AND SETPOINT ADJUSTMENT. ATTEND MEETING WITH OWNER FOR FINAL SETTINGS AND OCCUPANCY CONTROL SCHEDULING FOR EACH ROOM. COORDINATE AND SUPPORT COMMISSIONING FOR FUNCTIONAL TESTING AND ADJUSTING OF SYSTEM.
- PROVIDE START-UP AND VERIFICATION OF CONTROL SYSTEM AND SEQUENCE OF OPERATION. PROVIDE FUNCTIONAL TESTING AND SUPPORT DURING COMMISSIONING TO OPERATE EQUIPMENT IN ALL MODES AND DEVICE POSITIONS. INSTALLATION AND START-UP SHALL BE PERFORMED BY FACTORY TRAINED AND CERTIFIED TECHNICIANS.
- OWNER TRAINING SHALL INCLUDE MINIMUM FOUR SEPARATE VISITS OF 4 HOUR SESSIONS EACH, WITHIN A YEAR OF SUBSTANTIAL COMPLETION. TRAINING SHALL BE ONSITE AND SCHEDULED AT THE OWNER'S REQUEST AND CONVENIENCE.



BAS RISER

SCHEMATIC

SEQUENCE OF OPERATION

HVRF SYSTEM:

- THE HVRF/VRF SYSTEM CONSISTS OF THREE HEAT RECOVERY HVRF SYSTEMS AND FOUR HEAT RECOVERY DOAS SYSTEMS. THE HEAT RECOVERY SYSTEMS SHALL BE CAPABLE OF HEATING AND COOLING SIMULTANEOUSLY. AS INDICATED ON THE BAS RISER, THE HVRF CONTROL SYSTEM SHALL CONNECT TO AND INTEGRATE WITH THE "HEAD-END" BAS CENTRAL CONTROLLER. ALL POINTS ON THE HVRF CENTRAL CONTROLLER SHALL BE ACCESSIBLE THROUGH THE BAS.
- THE MANUFACTURER'S CONTROL SYSTEM SHALL CONTROL AND MODULATE THE INDOOR UNITS, LINEAR EXPANSION VALVES, COMPRESSOR SPEEDS, AND SAFETIES TO OPERATE THE SYSTEM.
- THE INDOOR UNITS CAN BE COMMANDED OCCUPIED/UNOCCUPIED EITHER BY A SCHEDULE IN THE VRF CENTRAL CONTROLLER, AT THE REMOTE CONTROLLER, OR BY THE BAS. IN OCCUPIED MODE, THE INDOOR UNIT FAN SHALL RUN CONTINUOUSLY AND THE UNIT CONTROLS SHALL MAINTAIN THE OCCUPIED SET POINT. IN UNOCCUPIED MODE, THE SYSTEM SHALL CYCLE ON DURING UNOCCUPIED PERIODS AS NEEDED TO MAINTAIN UNOCCUPIED TEMPERATURE SET POINT.
- IF ALL INDOOR UNITS ARE OFF, THE OUTDOOR UNIT SHALL TURN OFF.
- INDOOR UNIT SHALL MODULATE ITS INTERNAL LINEAR EXPANSION VALVE (LEV) TO MAINTAIN THE SPACE TEMPERATURE SET POINT VIA THE INDOOR UNIT'S INTERNAL CONTROLS. THE SET POINT IS ADJUSTABLE AT THE REMOTE CONTROLLER, CENTRAL CONTROLLER, OR THROUGH THE BAS INTERFACE.
- INDOOR UNIT FAN SPEED AND VANE DIRECTION (IF APPLICABLE) SHALL BE ADJUSTABLE BY THE USER AT THE REMOTE CONTROLLER, THE CENTRAL CONTROLLER OR THE BAS INTERFACE.
- VENTILATION AIR FROM THE DOAS UNITS IS DUCTED TO THE CORE AREA FOR CONDITIONING AND FOR MAKE-UP AIR FOR BATHROOM EXHAUST. THE DOAS SHALL OPERATE CONTINUOUSLY IN OCCUPIED MODE. THE ASSOCIATED EXHAUST FANS SHALL OPERATE CONTINUOUSLY ON THE SAME OCCUPIED SCHEDULE AS THE DOAS.
- THE DOAS UNITS SHALL HEAT, COOL, AND DEHUMIDIFY THE OUTSIDE VENTILATION AIR. THE DOAS SYSTEMS SHALL MAINTAIN A DUAL HEATING/COOLING SPACE TEMPERATURE SETPOINT AND DELIVER THE CONDITIONED AIR DIRECTLY TO THE SYSTEM SPACES. THE DOAS UNITS SHALL DEHUMIDIFY BY ENERGIZING FULL COOLING AND MODULATING THE HOT GAS REHEAT COIL AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE. THE DEHUMIDIFICATION MODE SHALL NOT OVERCOOL THE SPACES.
- IN UNOCCUPIED MODE, THE OUTSIDE AIR DAMPERS ARE CLOSED.
- EDH-B, EDH-1, EDH-2, EDH-3: ELECTRIC DUCT HEATERS TO PREHEAT OUTSIDE AIR PRIOR TO ENTERING THE DOAS AIR HANDLERS. SCR MODULATING CONTROL TO MAINTAIN 50F (ADJ.) LEAVING AIR TEMPERATURE.

FANS:

- EF-1 (BATHROOM EXHAUST) SHALL OPERATE CONTINUOUSLY AND BE ENERGIZED WHEN DOAS-1, DOAS-2, AND DOAS-3 ARE IN OCCUPIED MODE.
- EF-2 (BASEMENT EXHAUST) SHALL OPERATE CONTINUOUSLY AND BE ENERGIZED WHEN DOAS-B IS IN OCCUPIED MODE.
- EF-3 (MECHANICAL ROOM EMERGENCY EXHAUST) SHALL BE CONTROLLED AND HARD WIRED TO SPACE REFRIGERANT DETECTORS AND MANUAL WALL SWITCHES. THE FAN SHALL BE ENERGIZED BASED ON A SIGNAL FROM ANY OF THE THREE REFRIGERANT DETECTORS. THE FAN CAN ALSO BE ENERGIZED BY A MANUAL "VENTILATION ON" WALL SWITCH THAT REQUIRES A MANUAL RESET. THE BAS SYSTEM SHALL MONITOR THE STATUS OF THE REFRIGERANT SENSORS AND THE FAN.

MECHANICAL OUTLINE SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- MECHANICAL EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY AND TEN YEAR COMPRESSOR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING, DUCTWORK AND EQUIPMENT. THE CONTRACTOR SHALL INVESTIGATE ALL STRUCTURAL, ELECTRICAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE THE MECHANICAL WORK ACCORDINGLY. PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED TO PROPERLY COMPLETE THE WORK, WHETHER OR NOT SUCH COMPONENTS ARE INDICATED ON THE DRAWINGS.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT.
- MOST EXISTING DUCTWORK AND PIPING IS NOT SHOWN ON THESE DRAWINGS. WHERE EXISTING DUCTWORK AND PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING DRAWINGS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING DUCTWORK OR PIPING ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION, INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- PROVIDE FIRESTOPPING AT PENETRATIONS OF WALLS AND FLOORS.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR VALVES, DAMPERS, SENSORS OR OTHER DEVICES.
- DUCTWORK SHALL BE INSTALLED TO PERMIT THE INSTALLATION OF CEILINGS AND LIGHT FIXTURES AT THE INDICATED HEIGHTS.
- GALVANIZED SHEET METAL DUCTWORK CONSTRUCTION SHALL COMPLY WITH SMACNA STANDARDS WITH TURNING VANES OR LONG RADIUS ELBOWS AND MANUAL DAMPERS FOR BALANCING. INDICATED DUCT SIZES ARE INTERIOR AIRFLOW DIMENSIONS AND SHEET METAL SIZE MUST BE INCREASED ACCORDINGLY WHERE DUCT LINER IS SPECIFIED TO BE USED. AT EACH TAKEOFF TO A SUPPLY DIFFUSER, PROVIDE LOW-LOSS CONICAL OR TAPERED 45 DEGREE RECTANGULAR BRANCH TAKEOFF WITH MANUAL DAMPER. MANUAL VOLUME DAMPER TO HAVE LOCKING HANDLE WITH EXTENDED SHAFT AND STANDOFF FOR INSULATION THICKNESS. DUCTS SHALL BE FASTENED AND SEALED PER MECHANICAL CODE AND ENERGY CODE FOR 2.0 INCHES STATIC PRESSURE AND SMACNA SEAL CLASS A. EQUIVALENT AREA ROUND DUCT MAY BE INSTALLED IN LIEU OF RECTANGULAR SIZES.
- INSULATE ALL SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK. INSULATE TOP OF SUPPLY AIR CEILING DIFFUSERS. SEAL ALL INSULATION JOINTS VAPOR TIGHT. INSULATE WITH FIBERGLASS DUCT WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K-VALUE OF 0.36. MINIMUM INSTALLED R6. DUCTWORK IN ATTIC SHALL HAVE MINIMUM INSTALLED R8 INSULATION PER ENERGY CODE. PROVIDE 1" ACOUSTIC LINER WITH FUNGUS/BACTERIA RESISTANT COATING PER ASTM G21 WHERE INDICATED IN RETURN DUCTS.
- FLEXIBLE DUCTS SHALL HAVE STEEL WIRE HELIX REINFORCEMENT, CONTINUOUS INNER LINER, R6 (R8 FOR ATTICS) FIBERGLASS INSULATION AND OUTER JACKET TO COMPLY WITH UL 181, CLASS 1. DIAMETER OF FLEX DUCT SHALL MATCH DIFFUSER INLET SIZE. SUPPORT EVERY FOUR FEET WITH MAXIMUM OF 1" SAG. MAXIMUM LENGTH IS EIGHT FEET.
- RETURN GRILLES (RG) TO BE ALUMINUM RH SERIES FOR SURFACE MOUNT. SIDEWALL REGISTERS (TR) TO BE ALUMINUM MODEL V4004, DOUBLE DEFLECTION WITH ALUMINUM DAMPER, FOR WALL MOUNTING.
- FIRE DAMPERS SHALL BE 1-1/2 HR, UL LISTED, STYLE B OUT OF AIRSTREAM, DYNAMIC TYPE. PROVIDE INSULATED DUCT ACCESS DOOR ADJACENT TO ALL DAMPERS. COORDINATE MOUNTING ANGLES AND SLEEVE LENGTH WITH RATED CEILING AND WALL CONSTRUCTION AND INSTALL PER MANUFACTURER'S UL INSTALLATION INSTRUCTIONS. PROVIDE OUT-OF-WALL STYLE FIRE DAMPERS AND MOUNTING ANGLES AT SUPPLY REGISTERS OR WHERE REQUIRED. PROVIDE ACCESS TO FIRE DAMPERS AND PERMANENT LABEL WITH 1/2" HIGH LETTERS.
- PROVIDE IDENTIFICATION MARKINGS FOR EQUIPMENT, PIPING AND CONTROLS. NAMEPLATES SHALL BE PLASTIC LAMINATE WITH 1/4" LETTERS.
- CONDENSATE LINES TO BE 1" PVC MINIMUM. INSULATE WITH 3/4" PIPE WRAP. ROUTE TO NEAREST FLOOR DRAIN OR SERVICE SINK AND TERMINATE WITH AIR GAP FOR AN INDIRECT CONNECTION. PROVIDE HEAT TAPE FOR CONDENSATE PIPES LOCATED IN ATTIC OR OTHER UNHEATED SPACES.
- REFRIGERANT LINES SHALL BE RIGID COPPER TUBING SIZED PER MANUFACTURER'S INSTRUCTIONS. SUPPORT EXTERIOR LINES WITH GALVANIZED UNISTRUCT MOUNTED TO RIGID STRUCTURE OR ON CONCRETE PAD. INSULATE REFRIGERANT LINES PER ENERGY CODE WITH THICKNESS BASED ON LINE SIZE AND MAXIMUM LINE TEMPERATURE, 1" MINIMUM THICKNESS. INSULATE WITH FLEXIBLE ELASTOMERIC CELLULAR INSULATION. SEAL JOINTS WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS. APPLY TWO COATS OF UV RESISTANT PROTECTIVE FINISH ON EXTERIOR LINES. PROVIDE LOCKING CAPS ON ALL REFRIGERANT SERVICE VALVES.
- HYDRONIC WATER PIPING SHALL BE COPPER TUBING OR APPROVED MULTILAYER COMPOSITE SDR11 PIPING AND PVDF FITTINGS. INSTALL PIPING, HANGERS AND SUPPORTS PER ASME B31.9 AND VMC TABLE 305.4. PROVIDE MANUAL AIR VENTS AT HIGH POINTS, DRAINS AT LOW POINTS. INSULATE PIPING PER ENERGY CODE REQUIREMENTS WITH VAPOR BARRIER JACKET, FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM. INSULATION SHALL BE CONTINUOUS AT HANGERS.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA MECHANICAL CODE, TABLE 305.4.
- PROVIDE FLEXIBLE CONNECTORS AT CONNECTION OF DUCTWORK TO AIR HANDLING EQUIPMENT.
- DUCT SMOKE DETECTOR IN MAIN RETURN DUCT OF AIR HANDLING SYSTEMS OF 2000 CFM OR GREATER. DETECTOR SHALL BE 24 VOLT TO DEENERGIZE FAN. PROVIDE SPARE CONTACTS FOR CONNECTION TO FIRE ALARM SYSTEM.
- TEST AND BALANCE ALL EQUIPMENT FOR PROPER OPERATION, AIRFLOW, CAPACITY, ACCEPTABLE SPACE TEMPERATURES AND NOISE LEVELS. PERFORM TAB AND RECORD RESULTS PER AABC OR NEBB STANDARDS AND SUBMIT REPORT FOR REVIEW.
- START-UP EQUIPMENT AND PERFORM FUNCTIONAL TEST IN HEATING, COOLING, DEHUMIDIFICATION MODES. COMPLETE START-UP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PROVIDE REPORT IN O&M MANUALS. PROGRAM CONTROLS AND INSTRUCT OWNER'S MAINTENANCE PERSONNEL ON THE OPERATION OF EQUIPMENT AND CONTROLS. PROVIDE FINAL FILTER CHANGE.

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description

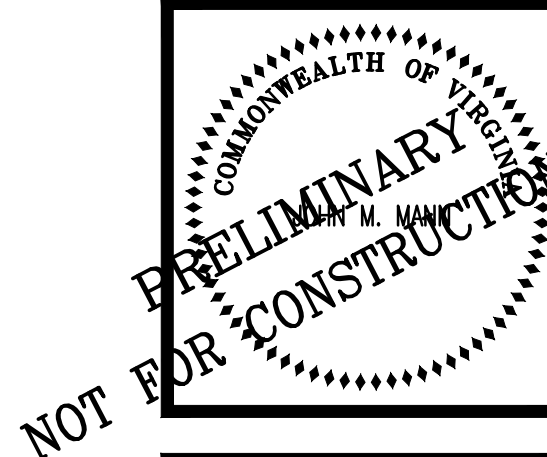


Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: DAR
CHECKED BY: JMM

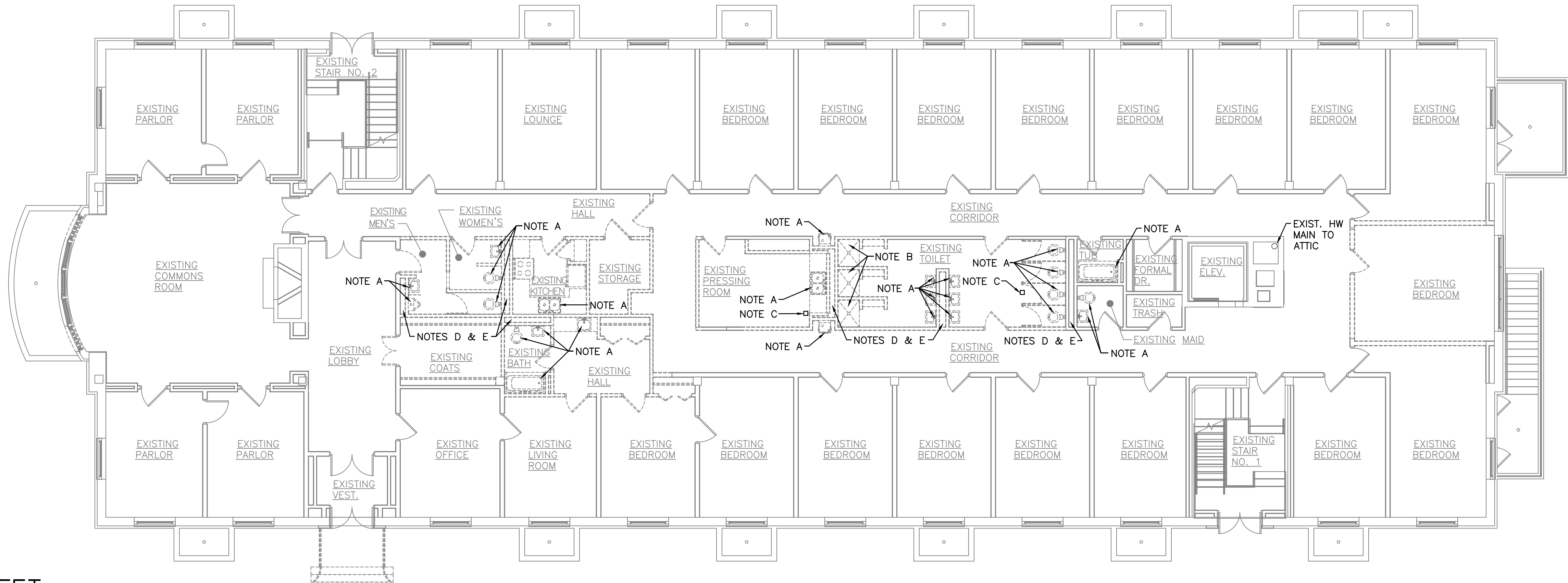
MECHANICAL
CONTROLS
AND SPECS.

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513



COMMISSION No.
24028
SHEET
M3-2

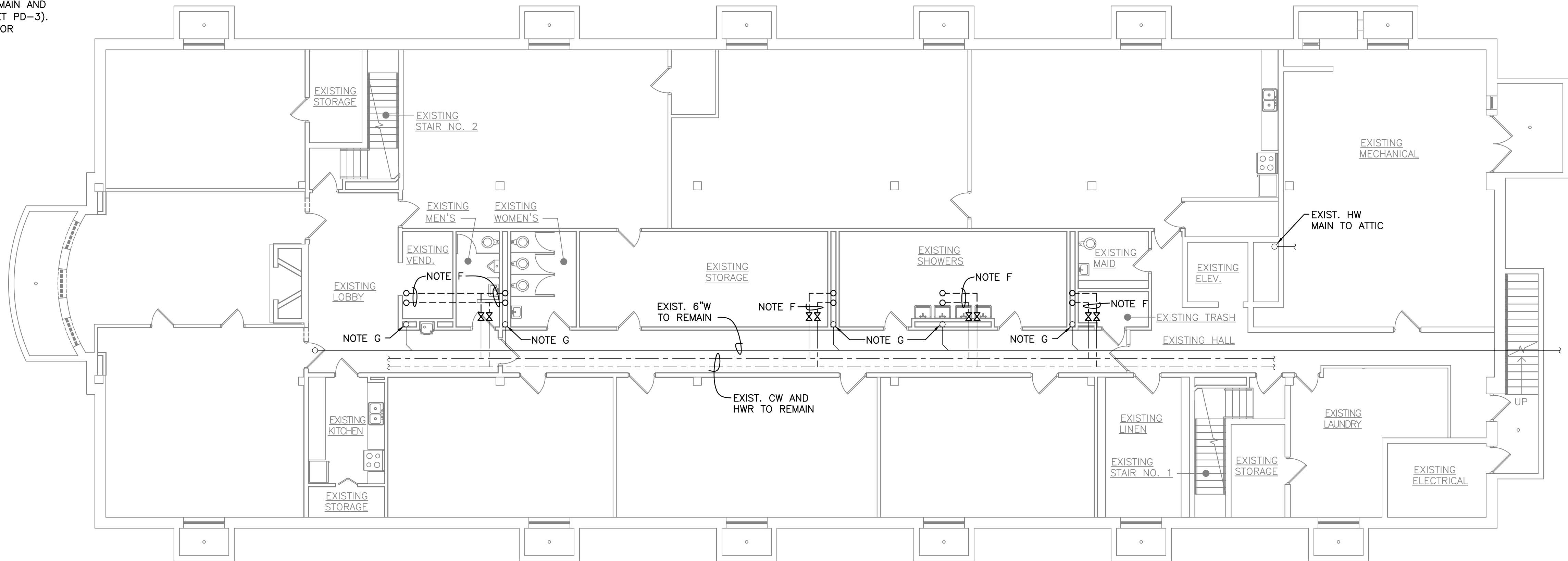
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



FIRST FLOOR PLAN – PLUMBING DEMOLITION
SCALE: 1/8" = 1'-0"

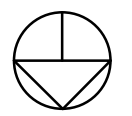
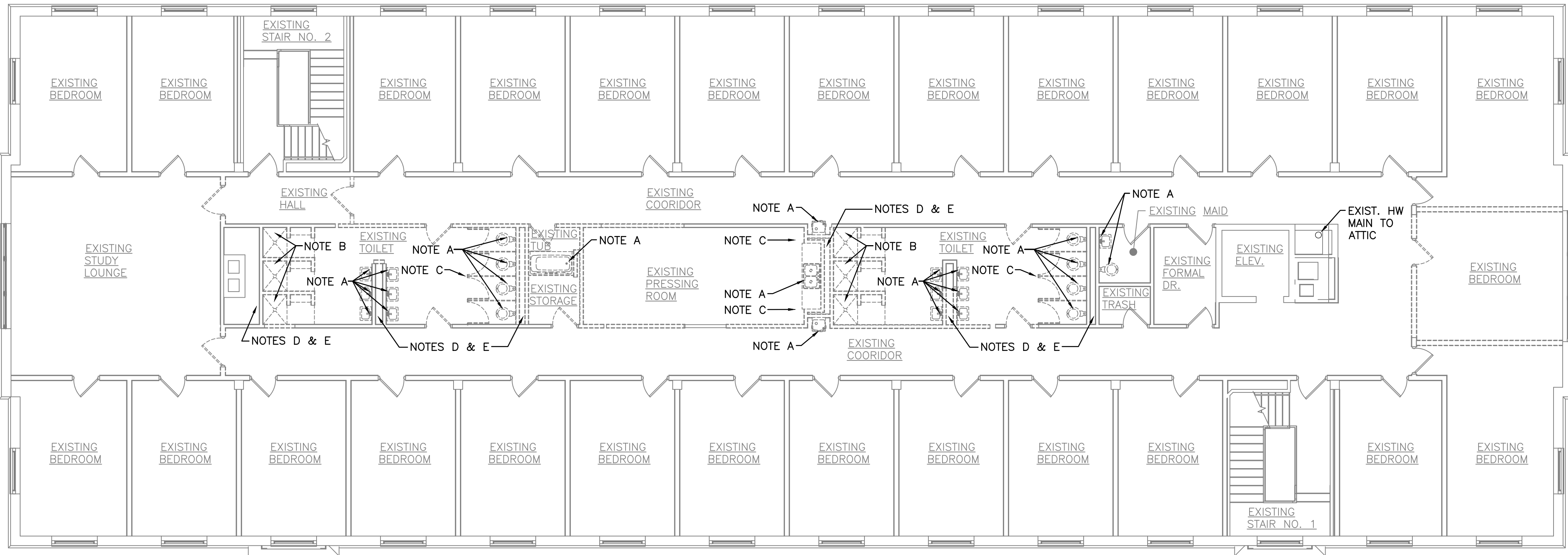
DEMO NOTES THIS SHEET

- A. REMOVE PLUMBING FIXTURE AND ASSOCIATED PIPING, CARRIERS, TRIM, AND SUPPORTS.
B. REMOVE SHOWER VALVE, DRAIN, AND ASSOCIATED PIPING, SHOWER HEADS, AND SUPPORTS.
C. REMOVE FLOOR DRAIN AND ASSOCIATED PIPING AND SUPPORTS.
D. REMOVE WASTE STACK AND ASSOCIATED VENT STACK. REMOVE ALL PIPING AND SUPPORTS IN CHASES.
E. REMOVE CW AND HW PIPING RISERS AND VALVES. REMOVE ALL WATER PIPING AND SUPPORTS IN CHASES.
F. REMOVE CW AND HWR PIPING AND ASSOCIATED RISER VALVE AT MAIN IN BASEMENT CORRIDOR CEILING. PREPARE FOR NEW VALVE AND RECONNECTION. (NOTE THAT HW MAIN AND BRANCH VALVES ARE LOCATED IN ATTIC. SEE SHEET PD-3).
G. EXISTING 4" WASTE STACK TO REMAIN. PREPARE FOR RECONNECTION.



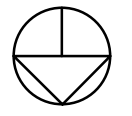
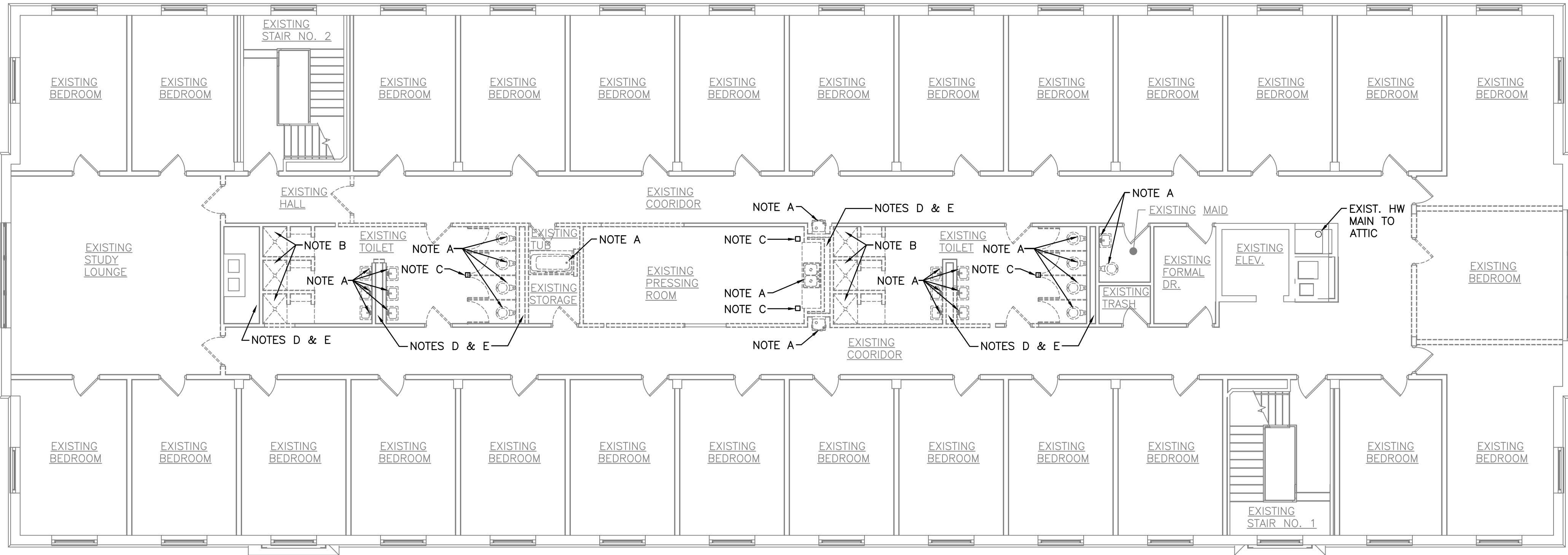
BASEMENT FLOOR PLAN – PLUMBING DEMOLITION
SCALE: 1/8" = 1'-0"

NOTE G



THIRD FLOOR PLAN – PLUMBING DEMOLITION

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



SECOND FLOOR PLAN – PLUMBING DEMOLITION

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

DEMO NOTES THIS SHEET

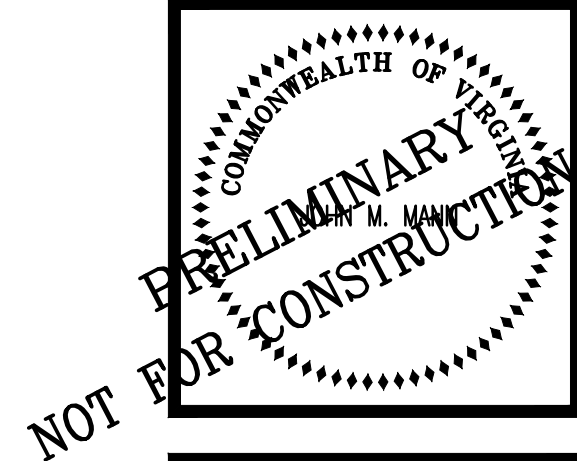
- A. REMOVE PLUMBING FIXTURE AND ASSOCIATED PIPING, CARRIERS, TRIM, AND SUPPORTS.
- B. REMOVE SHOWER VALVE, DRAIN, AND ASSOCIATED PIPING, SHOWER HEADS, AND SUPPORTS.
- C. REMOVE FLOOR DRAIN AND ASSOCIATED PIPING AND SUPPORTS.
- D. REMOVE WASTE STACK AND ASSOCIATED VENT STACK. REMOVE ALL PIPING AND SUPPORTS IN CHASES.
- E. REMOVE CW AND HW PIPING RISERS AND VALVES. REMOVE ALL WATER PIPING AND SUPPORTS IN CHASES.

Revisions		
No.	Date	Description

DRAWN BY: DAR
CHECKED BY: JMM

**ATTIC PLAN -
PLUMBING
DEMOLITION**

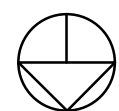
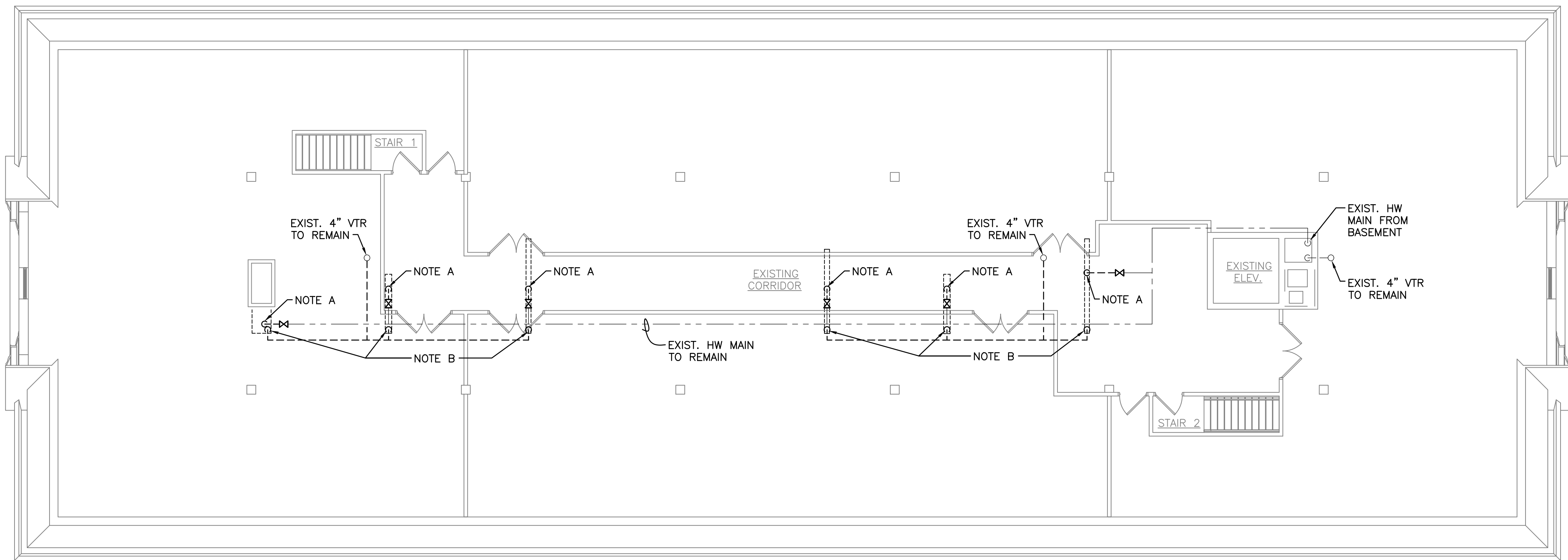
MANN & ASSOCIATES, INC.
306 Market Street 248
Roanoke, VA 24011
540-344-5513



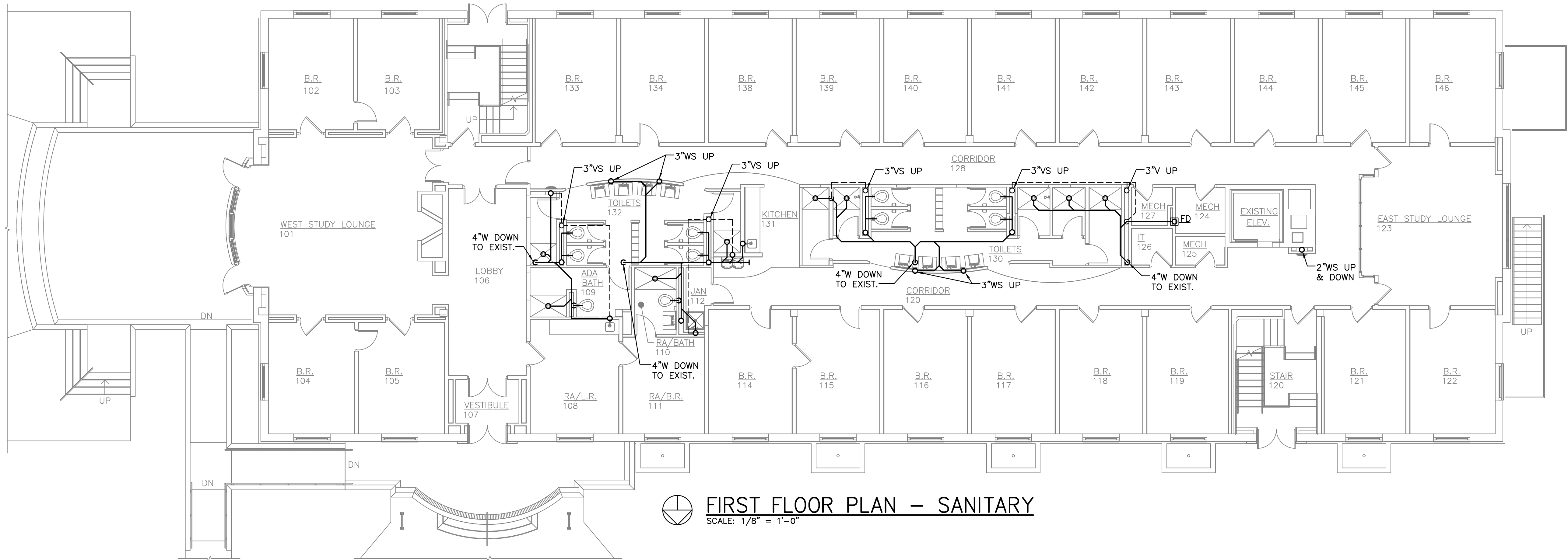
COMMISSION No.
24028
SHEET
PD-3

DEMO NOTES THIS SHEET

- A. REMOVE HW PIPING AND ASSOCIATED RISER VALVE AT MAIN IN ATTIC. PREPARE FOR NEW VALVE AND RECONNECTION. (NOTE THAT CW AND HWR MAIN AND BRANCH VALVES ARE LOCATED IN BASEMENT. SEE SHEET PD-1).
- B. REMOVE 4" VENT STACK AND VENT PIPE TO VTR. EXISTING VTR TO REMAIN.

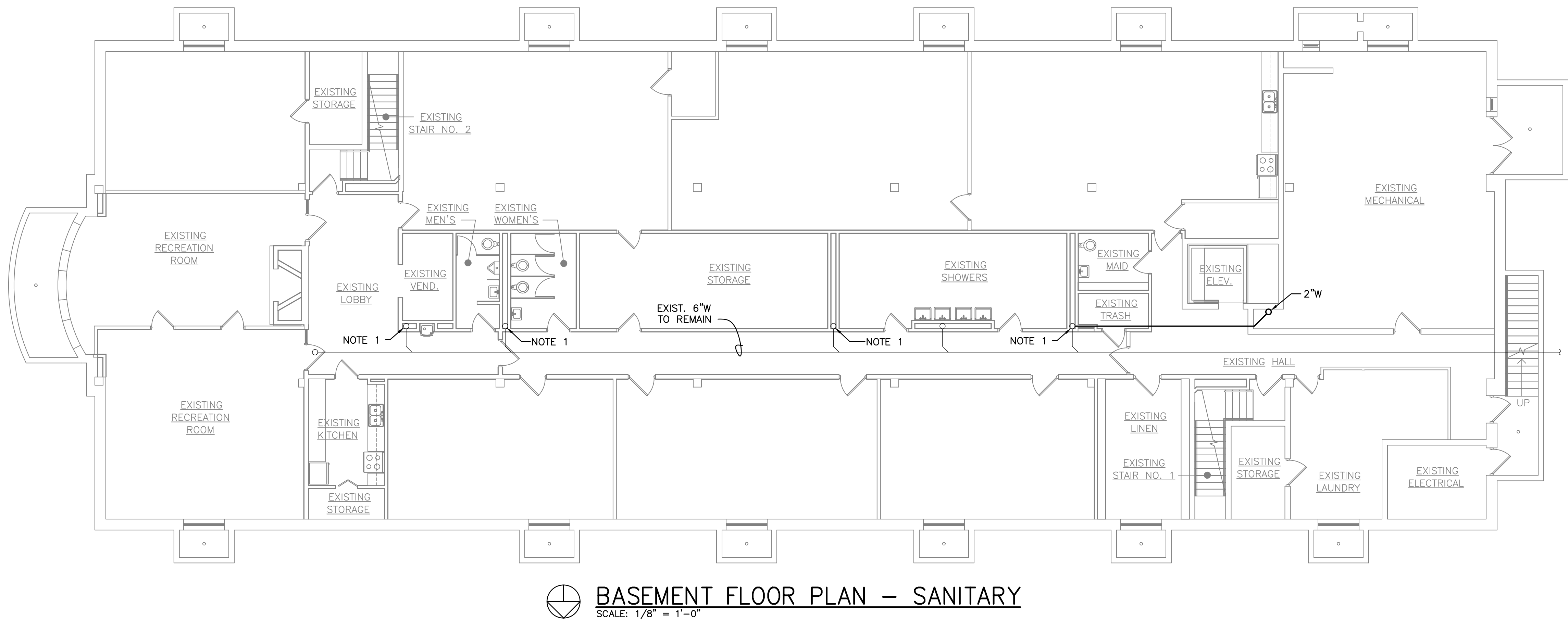


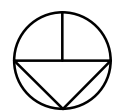
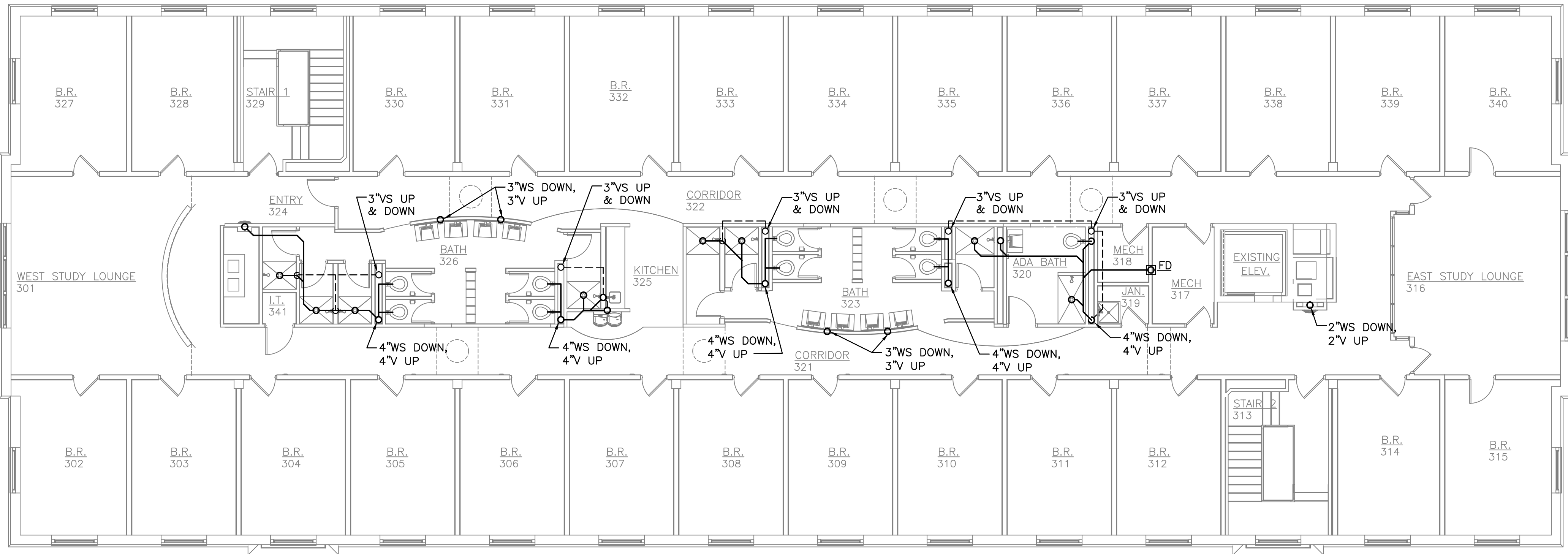
ATTIC FLOOR PLAN – PLUMBING DEMOLITION
SCALE: 1/8" = 1'-0"



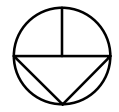
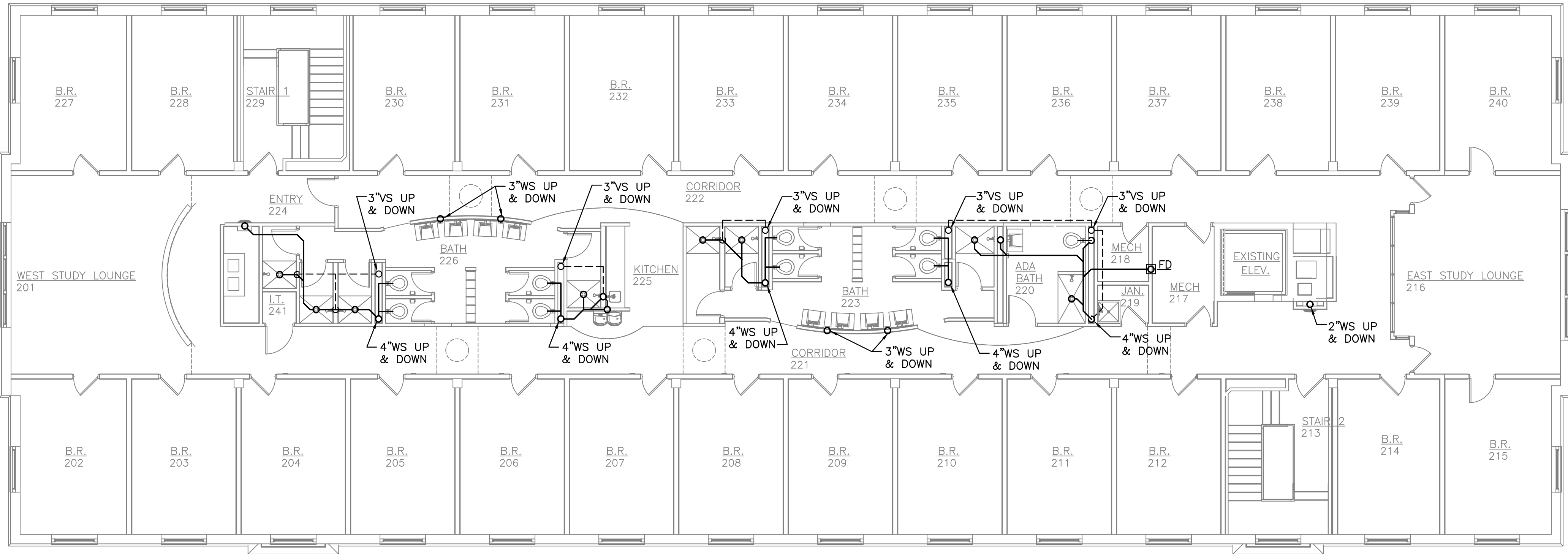
NOTES THIS SHEET

1. SEE FIRST FLOOR PLAN FOR SANITARY WASTE PIPE TURNING DOWN TO CONNECT TO EXISTING 4" WASTE STACK.





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



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

NOTES THIS SHEET

-
-
-

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description

HUGHES

ASSOCIATES

ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation

Roanoke College

221 College Lane Salem, Virginia

DRAWN BY: DAR

CHECKED BY: JMM

ATTIC PLAN -
SANITARY

MANN & ASSOCIATES, INC.
306 Market Street 248
Roanoke, VA 24011
540-344-5513

COMMONWEALTH OF VIRGINIA
PRELIMINARY
NOT FOR CONSTRUCTION

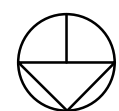
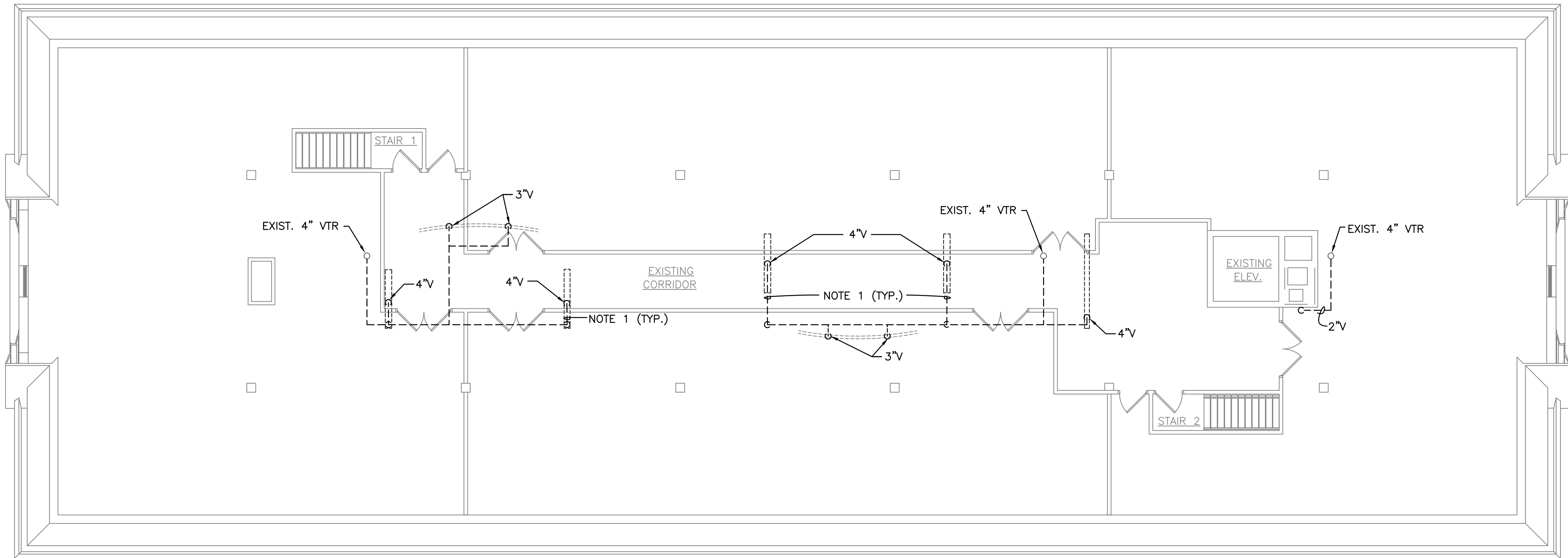
COMMISSION No.
24028

SHEET
P1-3

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

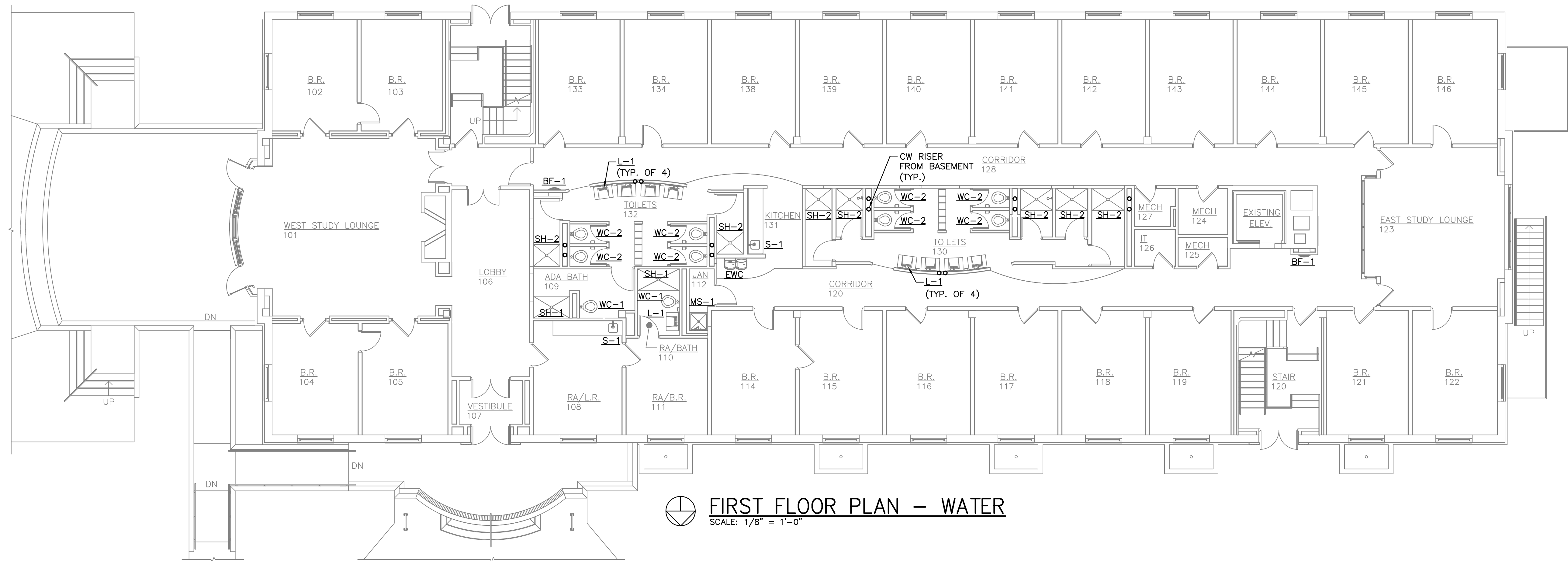
NOTES THIS SHEET

1. OFFSET VENT PIPE ABOVE THIRD FLOOR CEILING
AS REQUIRED AND PENETRATE ATTIC FLOOR AT
APPROVED LOCATION IN STORAGE SPACES.



ATTIC FLOOR PLAN – SANITARY

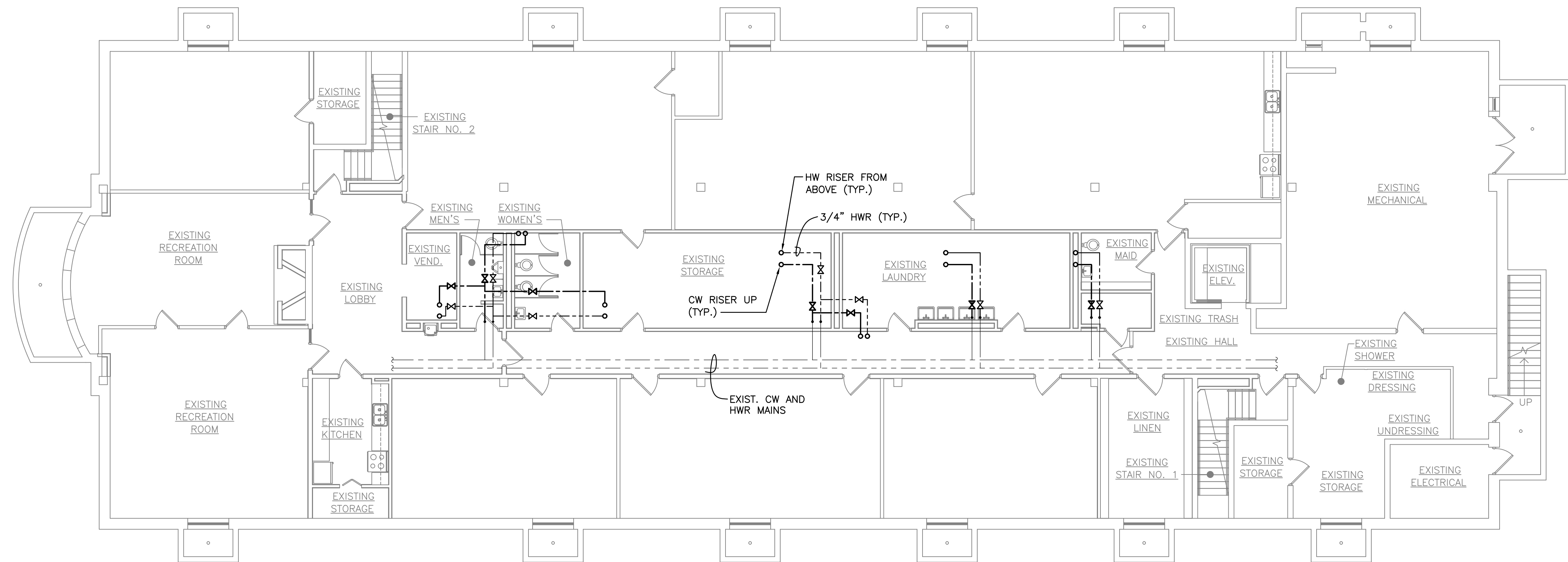
SCALE: 1/8" = 1'-0"



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

NOTES THIS SHEET

- 1.
- 2.
- 3.



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

DATE: DEC. 16, 2024		
Revisions		
No.	Date	Description



HUGHES

ASSOCIATES

ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation

Roanoke College

221 College Lane
Salem, Virginia

DRAWN BY:	DAR
CHECKED BY:	JMM

SECOND AND
THIRD FLOOR
PLANS - WATER

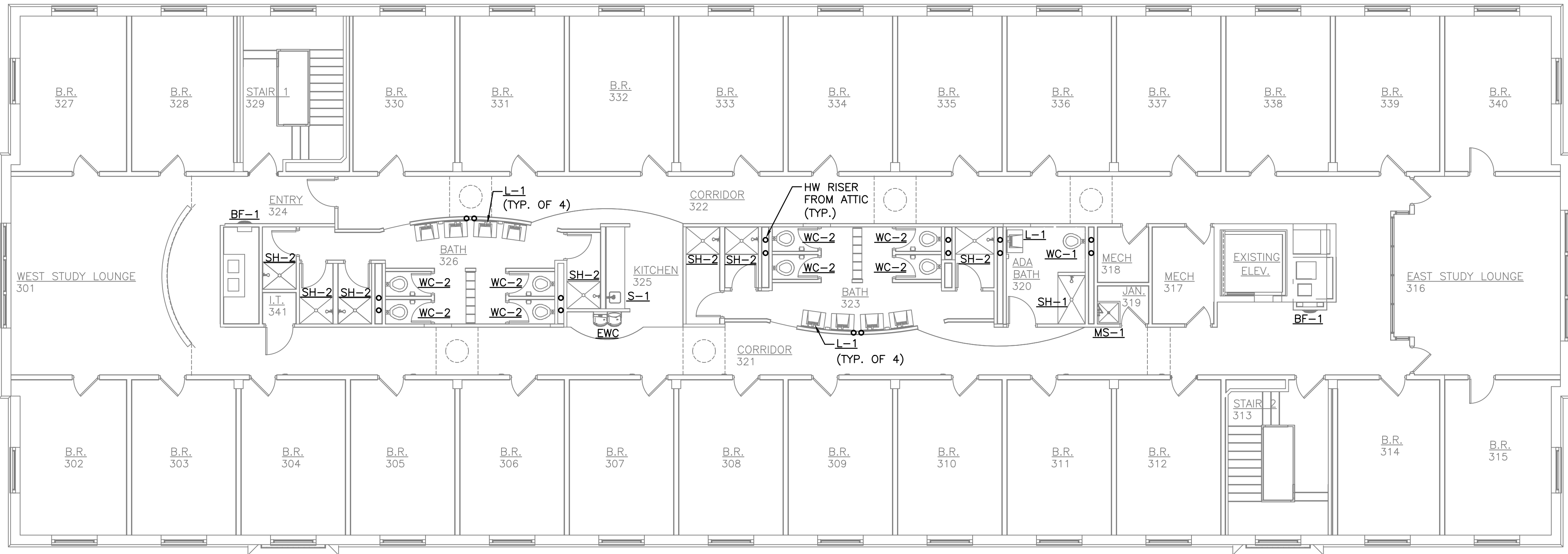
MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513

NOT FOR CONSTRUCTION

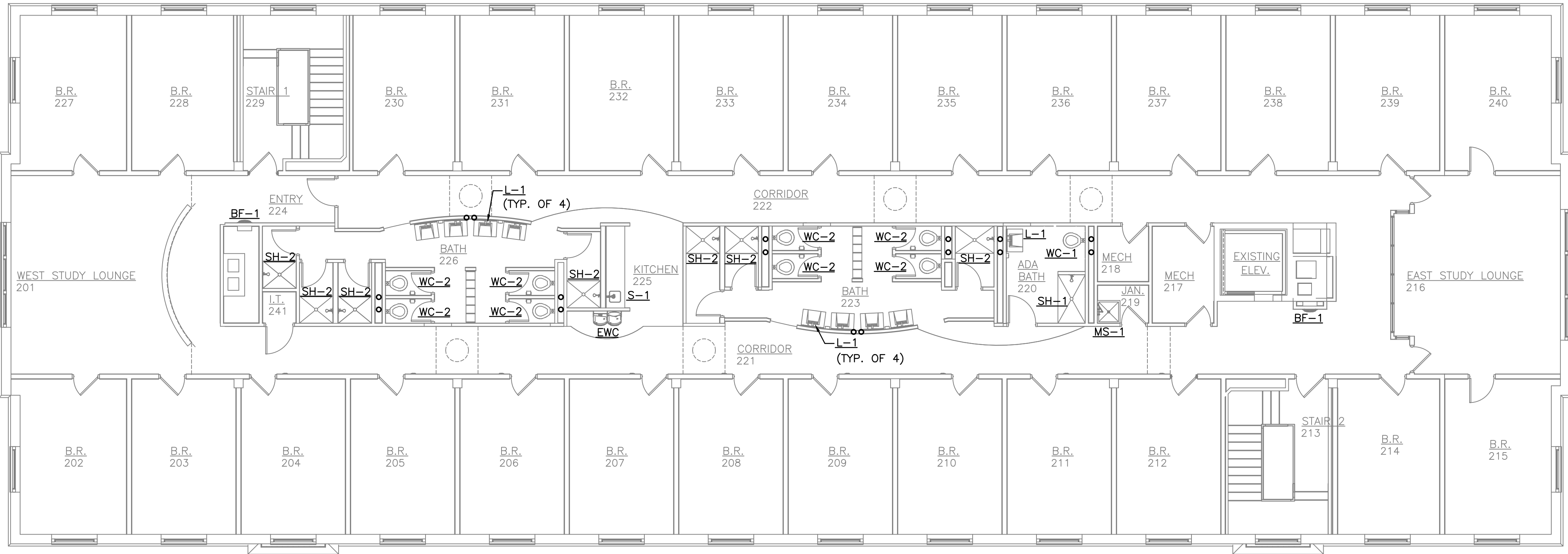
PRELIMINARY

COMMONWEALTH OF VIRGINIA

COMMISSION No.
24028
SHEET
P2-2
© COPYRIGHT 2024 HUGHES ASSOCIATES ARCHITECTS & ENGINEERS A PROFESSIONAL CORPORATION



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



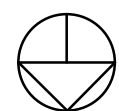
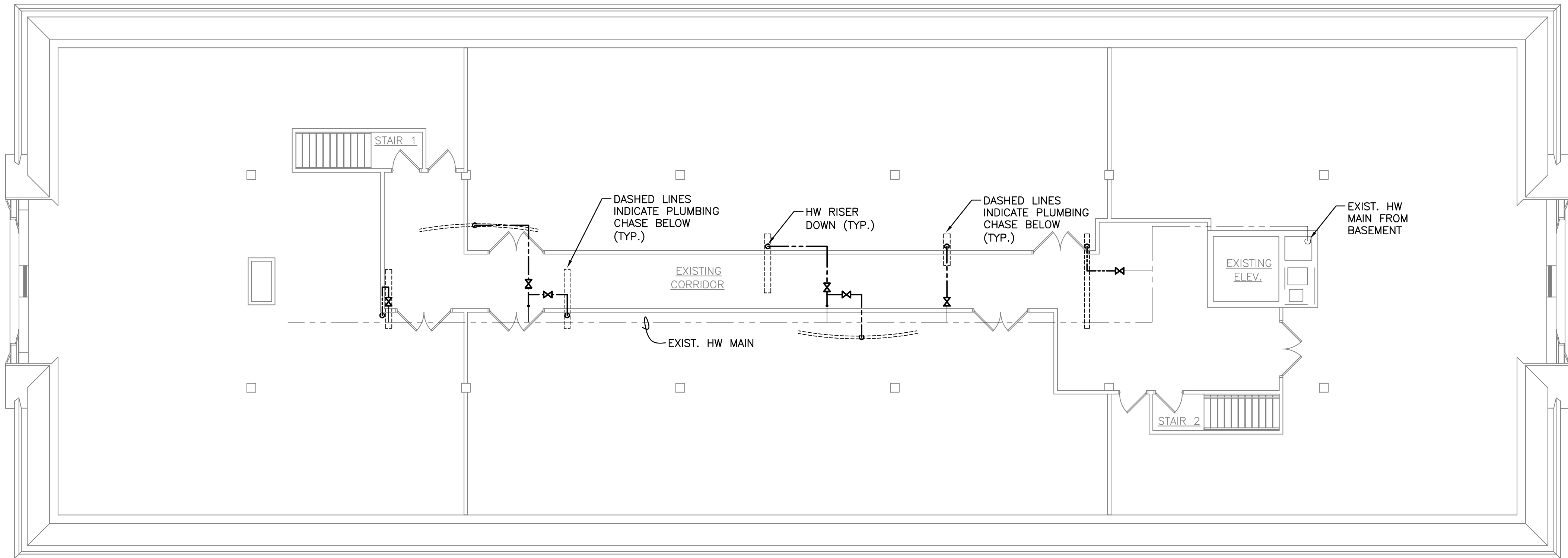
SECOND FLOOR PLAN – WATER
SCALE: 1/8" = 1'-0"

NOTES THIS SHEET

- 1.
- 2.
- 3.

NOTES THIS SHEET

- 1.
- 2.
- 3.



ATTIC FLOOR PLAN – WATER

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

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description

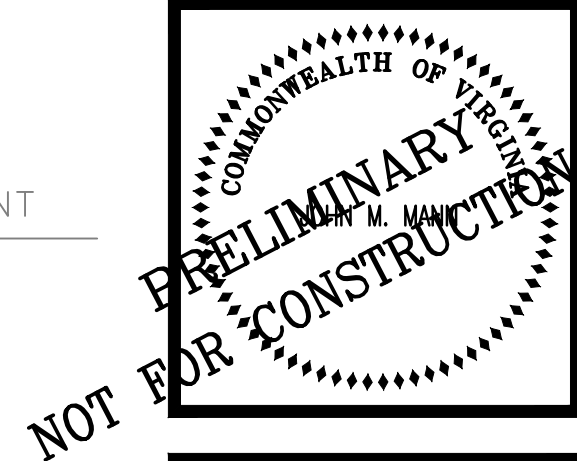


Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: DAR
CHECKED BY: JMM

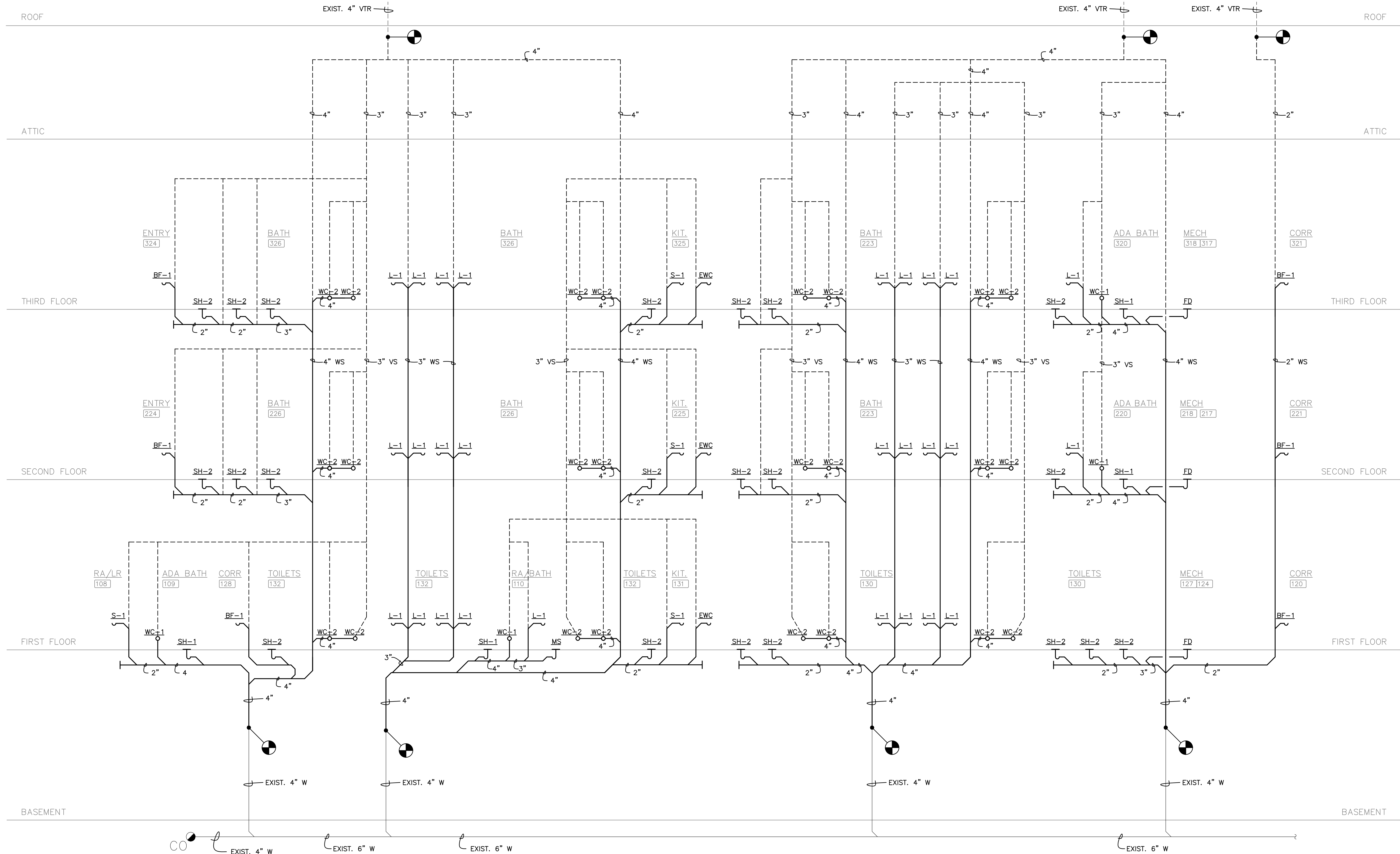
SANITARY
WASTE AND
VENT
DIAGRAM -
PLUMBING

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513



COMMISSION No.
24028
SHEET
P3-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



SANITARY WASTE & VENT DIAGRAM
SCHEMATIC

Revisions		
No.	Date	Description
2	01-27-25	Addendum 003



Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: DAR
CHECKED BY: JMM

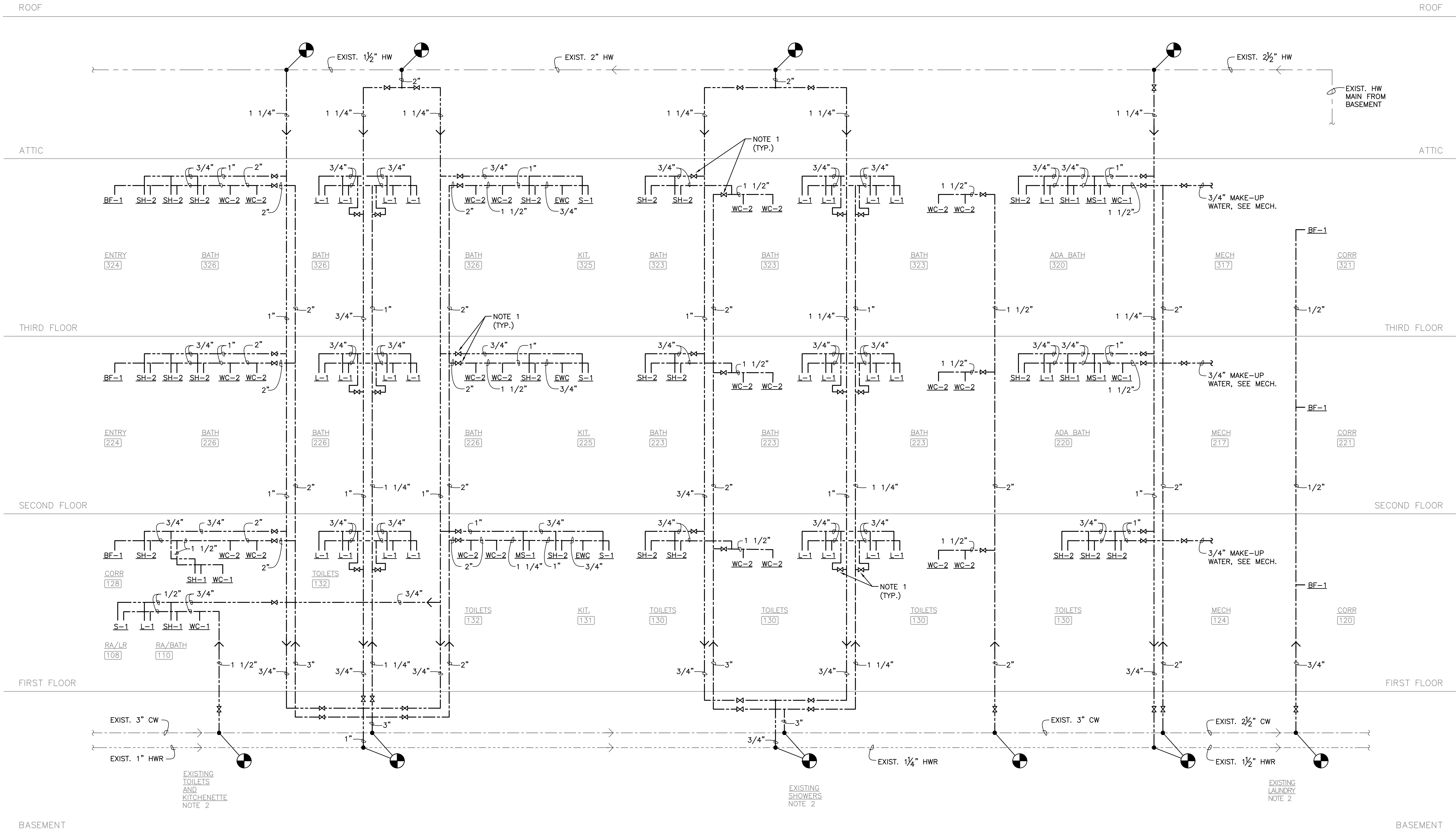
WATER RISER
DIAGRAM -
PLUMBING

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513



COMMISSION No.
24028
SHEET
P3-2

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



WATER RISER DIAGRAM

SCHEMATIC

NOTES THIS SHEET

- ROUTE PIPING AND LOCATE VALVES SUCH THAT CW VALVE AND HW VALVE CAN BE ACCESSED THROUGH A SINGLE ACCESS DOOR.
- RECONNECT COLD WATER AND HOT WATER AS REQUIRED TO EXISTING TOILET ROOMS, SHOWER ROOM, AND LAUNDRY ROOM.

PLUMBING FIXTURE SCHEDULE SEE FIXTURE SCHEDULE NOTE 1										
MARK	DESCRIPTION	FIXTURE WASTE	VENT	C.W.	H.W.	MANUFACTURER	MODEL	CATALOG NO.	REMARKS	MTG HGT
WC-1	WALL WATER CLOSET, FLUSH VALVE-ACCESSIBLE	4"	2"	1"	----	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. JOSAM 14504 CARRIER FOR NARROW CHASE, BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LA32 SENSOR TOILET FLUSH VALVE. SEE SCHEDULE NOTE 3.	16-1/2" TO RIM
WC-2	WALL WATER CLOSET, FLUSH VALVE	4"	2"	1"	----	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. JOSAM 14504 CARRIER FOR NARROW CHASE, BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LA32 SENSOR TOILET FLUSH VALVE. SEE SCHEDULE NOTE 3.	15" TO RIM
L-1	WALL LAVATORY-ACCESSIBLE	1-1/2"	1-1/2"	1/2"	1/2"	SLOAN	DECK SINK	DSWD-81000	SINGLE STATION WALL-MOUNT WEIR DECK CORIAN LAVATORY, ADA ENCLOSURE, THRU-BOLT TO BLOCKING FOR HEAVY DUTY USE, ETF 410 SENSOR FAUCET, 120V PLUG-IN GANG ADAPTER KIT AND LOW VOLTAGE WIRING TO GROUP OF LAVS, THERMOSTATIC MIXING VALVE, 0.5 GPM AERATOR, OFFSET GRID DRAIN STRAINER. ANGLE SUPPLIES & STOPS, SEE FIXTURE SCHEDULE NOTE 2.	COUNTER TOP, 34" TO RIM
S-1	SINK, SINGLE BOWL ADA PARALLEL APPROACH	1-1/2"	1-1/4"	1/2"	1/2"	ELKAY	LUSTERTONE	CR1721	KOHLER GOOSENECK FAUCET Z831B4-XL WITH WRIST BLADE HANDLES, BASKET STRAINER, ANGLE SUPPLIES AND STOPS.	COUNTER TOP MOUNTED 34" TO RIM
SH-1	ROLL-IN SHOWER ACCESSIBLE	2"	1-1/2"	1/2"	1/2"	MOEN	POSI-TEMP	8372HD(IPS) T8370 TRIM	SINGLE-HANDLE PRESSURE BALANCED SHOWER VALVES, INTEGRAL SHUT-OFF VALVES, ADA COMPLIANT. COMMERCIAL, ALL METAL CHROME TRIM KIT. PROVIDE QUANTITY OF TWO SHOWER VALVES: ONE ON LONG WALL FOR HANDSHOWER AND ONE ON SHORT WALL FOR FIXED SHOWERHEAD. MOEN MODEL 3668EP HANDSHOWER WITH 24" SLIDE BAR, 59" METAL HOSE, AND DROP ELL, 1.75 GPM, CHROME FINISH. FIXED SHOWER HEAD, NIAGARA MODEL EARTH N2915-CH WITH MOEN CL123815 CHROME SHOWER ARM. SEE SHOWER ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR MOUNTING DIMENSIONS.	
SH-2	SHOWER	2"	1-1/2"	1/2"	1/2"	MOEN	POSI-TEMP	8372HD(IPS) T8370 TRIM	SINGLE-HANDLE PRESSURE BALANCED SHOWER VALVE, INTEGRAL SHUT-OFF VALVES. COMMERCIAL, ALL METAL CHROME TRIM KIT. FIXED SHOWER HEAD, NIAGARA MODEL EARTH N2915-CH WITH MOEN CL123815 CHROME SHOWER ARM. SEE SHOWER ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR MOUNTING DIMENSIONS.	
SH-1 SH-2 FD	SHOWER DRAIN AND FLOOR DRAIN	2"	1-1/2"	----	----	SCHLUTER	----	KERDI-DRAIN	PVC BODY, 4" SQUARE STAINLESS STEEL "CLASSIC #6E" COVER. PROVIDE AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS WITH ALL ACCESSORIES, INCLUDING SEALING AND BONDING COMPONENTS, AS REQUIRED FOR A COMPLETE DRAINAGE ASSEMBLY COMPATIBLE WITH THE MEMBRANE WATERPROOFING SYSTEM. PROVIDE WITH PROSET TRAP GUARD.	
MS-1	MOP SINK	3"	2"	1/2"	1/2"	FLORESTONE	MOP RECEPTOR	MSR-2424	FLORESTONE FAUCET #MR-371, HOSE & MOP HANGER. PROVIDE STAINLESS STEEL OR FRP WALL GUARDS TO PROTECT ADJACENT WALL SURFACES.	FLOOR MOUNTED
EW-1	ELECTRIC WATER COOLER-ACCESSIBLE	1-1/2"	1-1/4"	1/2"	----	ELKAY	----	LZSTL8SC	SPLIT LEVEL, ADA COMPLIANT, STAINLESS STEEL FINISH, 115 VOLT, 8.0 GPH, 1/4 HP WITH ELECTRIC CORD & PLUG. IN-WALL CARRIER, FILTER, AND CANE APRON. PROVIDE ANGLE SUPPLY AND STOP.	36" TO NOZZLE
BF-1	BOTTLE FILLER-ACCESSIBLE	1-1/2"	1-1/4"	1/2"	----	ELKAY	----	LZW5MBK	RECESSED IN-WALL MOUNTING FRAME, ADA COMPLIANT, STAINLESS STEEL FINISH, 115 VOLT, 8.0 GPH, 1/4 HP WITH ELECTRIC CORD & PLUG. BOTTLE FILLER AND FILTER. PROVIDE ANGLE SUPPLY AND STOP.	--
HB	HOSE BIBB	----	----	1/2"	----	CHICAGO	----	293-E27CP	INSIDE SILL FITTING, POLISHED CHROME FINISH, SOLID BRASS BODY CONSTRUCTION, 2-1/4" TEE HANDLE, 1/2" NPT FEMALE INLET, 3/4" MALE HOSE THREAD OUTLET, SLOW COMPRESSION RENEWABLE CARTRIDGE, VACUUM BREAKER. PROVIDE QUICK-CONNECT FITTING PER UNIVERSITY STANDARDS.	16"

FIXTURE SCHEDULE NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS, DIMENSIONS, AND CLEARANCES.
- PROVIDE THERMOSTATIC MIXING VALVE SET AT 109°F MAX., WILKINS MODEL ZW1070, ASSE 1070. MOUNTED BELOW FIXTURE. MOUNT HIGH UNDER LAVATORY TO CONCEAL FROM VIEW.
- INSTALL FLUSH VALVES TO MAINTAIN 1-1/2" MINIMUM CLEARANCE BELOW GRAB BAR.

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
----	ITEM TO BE REMOVED
----	DOMESTIC COLD WATER PIPING
----	DOMESTIC HOT WATER PIPING
----	HOT WATER RECIRC PIPING
----	SANITARY PIPING
----	VENT PIPING
⌒	PIPE TURN DOWN
○	PIPE TURN UP
—X—	ISOLATION VALVE
FD □	FLOOR DRAIN
⊕	NEW TO EXISTING CONNECTION
↑	SHOCK ARRESTOR
CW	COLD WATER
HW	HOT WATER
EXIST.	EXISTING
W	SANITARY WASTE
V	SANITARY VENT
WS	WASTE STACK
VS	VENT STACK
CO	CLEANOUT

PLUMBING OUTLINE SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR FIXTURES, EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- PLUMBING EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING AND EQUIPMENT. COORDINATE INSTALLATION WITH OTHER TRADES AND PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR CRITICAL INSTALLATION DIMENSIONS.
- ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR N.I.C. (NOT IN CONTRACT) OR BY OWNER.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT. VERIFY SITE CONDITIONS INCLUDING LOCATION FOR CONNECTIONS OF WATER AND SANITARY WASTE PIPING.
- MOST EXISTING PIPING IS NOT SHOWN ON THESE DRAWINGS. WHERE EXISTING PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING DRAWINGS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING PIPES ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. FIRESTOP ALL DUCT AND PIPE PENETRATIONS OF FLOOR SLABS (INCLUDING ATTIC FLOOR) AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- MOUNT ALL EQUIPMENT PLUMB AND LEVEL WITH SUBSTANTIAL FASTENERS SUITABLE FOR THE LOAD. ALL COMPONENTS SHALL BE RIGIDLY ANCHORED FOR LONG LIFE UNDER HARD USE.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR CLEANOUTS, VALVES, SHOCK ARRESTORS OR OTHER DEVICES.
- THE DESIGN SHOWN IS BASED ON THE MANUFACTURERS AND MODELS SCHEDULED AND IS INTENDED ONLY TO SHOW THE GENERAL SIZE, CONFIGURATION, LOCATION, CONNECTIONS AND/OR SUPPORT FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH RELATION TO THE OTHER BUILDING SYSTEMS.
- PROVIDE SLEEVES FOR ALL PIPE PENETRATIONS IN MASONRY WALLS AND CONCRETE. ANCHOR SLEEVES TO ADJACENT STRUCTURE.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE, TABLE 308.5.
- WATER PIPING, ABOVE GROUND: COPPER, TYPE L, ASTM B 88M, SOLDER FITTINGS. FLUSH CLEAN AND DISINFECT.
- SANITARY WASTE AND VENT PIPING: SCHEDULE 40 PVC, DWV, ASTM D2665. FITTINGS SHALL BE PVC WITH SOLVENT WELD JOINTS WITH ASTM D 2564 SOLVENT CEMENT. MATCH PIPING MATERIAL WHERE CONNECTING TO EXISTING.
- INSTALL ALL PIPING ABOVE CEILINGS AS HIGH AS POSSIBLE. COORDINATE PIPING WITH DUCTS & ELECTRICAL WORK TO PERMIT INSTALLATION OF THE SUSPENDED CEILINGS AT THE SPECIFIED HEIGHTS. RELOCATE EXIST. PIPING AS REQUIRED FOR INSTALLATION OF THE SUSPENDED CEILINGS AT THE SPECIFIED HEIGHTS. ALL PIPING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS, EXCEPT IN CRAWLSPACE AND ATTIC.
- INSTALL CLEANOUTS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE. CLEANOUTS SHALL BE SAME MATERIAL AS DRAIN PIPING. LOCATE AT CHANGES OF DIRECTION GREATER THAN 45 DEGREES IN HORIZONTAL RUNS, AT BASE OF STACKS, AND NEAR THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER.
- ISOLATION VALVES FOR WATER PIPING SHALL BE QUARTER TURN BALL VALVES, MSS SP-110, CLASS 150 WITH LEVER HANDLE AND THREADED ENDS. SOLDERED ENDS SHALL NOT BE USED.
- PROVIDE SURESEAL TRAP SEALER IN ALL FLOOR DRAINS AND HUB DRAINS.
- CIRCUIT SETTERS FOR HOT WATER RECIRCULATING SYSTEM SHALL BE B&G MODEL CB. BALANCING BALL VALVE WITH INTEGRAL VALVED READ-OUT PORTS, MEMORY STOP AND CALIBRATED NAMEPLATE. START-UP AND PERFORM FUNCTIONAL TESTING OF RECIRCULATING SYSTEM AND BALANCE WATER FLOW.
- WATER HAMMER ARRESTERS: ASSE 1010, INSTALLED WHERE INDICATED AND IN LOCATION CONCEALED FROM PUBLIC VIEW. PROVIDE ACCESS TO WATER HAMMER ARRESTER.
- INSULATE ALL NEW WATER PIPING WITH FIBERGLASS PIPE WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. REPAIR EXISTING PIPE INSULATION WHERE DAMAGED DURING THIS PROJECT. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K-VALUE OF 0.24. MINIMUM THICKNESS OF 1" THICKNESS FOR HOT WATER/HOT WATER RECIRC. AND 1/2" FOR COLD WATER. SEAL COLD WATER PIPE INSULATION WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS WITH RIGID BLOCKS AND GALVANIZED INSULATION SHIELDS.
- PLUMBING FIXTURES SHALL BE WHITE VITREOUS CHINA UNLESS INDICATED OTHERWISE AND SHALL BE IN COMPLIANCE WITH ASME A112.18, ASME A112.19.2 AND ANSI A117.1, AND MEET ADA REQUIREMENTS WHERE REQUIRED. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND CAULK TO WALL AND FLOOR SURFACES WITH COLOR TO MATCH FIXTURE. FURNISH AND INSTALL FIXTURES COMPLETE WITH ALL TRIM INCLUDING SUPPLIES, CHROME ESCUTCHEONS, WASTE AND VENT CONNECTIONS, FITTINGS, CARRIERS, HANGERS AND SUPPORTS, BOLT CAPS, FAUCETS, VALVES AND TRAPS. ALL TRIM SHALL BE BRASS WITH POLISHED CHROME FINISH. TRAPS SHALL BE 17 GAUGE WITH CLEANOUT PLUG.
- WATER SUPPLY TO FIXTURES TO INCLUDE CHROME ESCUTCHEONS, ANGLE SUPPLY VALVE WITH QUARTER-TURN LOOSE KEY. FLEXIBLE SUPPLIES TO BE CHROME PLATED COPPER TUBE RISERS OR BRAIDED STAINLESS STEEL.
- PROVIDE CHROME ESCUTCHEONS AT PIPE PENETRATIONS OF WALLS AND FLOORS.
- LABEL WATER PIPES PER ASME A13.1. LABEL DIRECTION OF FLOW.
- VERIFY AND DEMONSTRATE TO OWNER THE OPERATION OF ALL EQUIPMENT AND CONTROLS.
- PERFORM TESTING OF WATER, SANITARY AND VENT PIPES PER VIRGINIA PLUMBING CODE. DISINFECT WATER PIPING PER LOCAL HEALTH DEPARTMENT REQUIREMENTS. PROVIDE ALL NECESSARY TESTS AND COORDINATE INSPECTIONS AND APPROVAL PER LOCAL AUTHORITY REQUIREMENTS.

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description

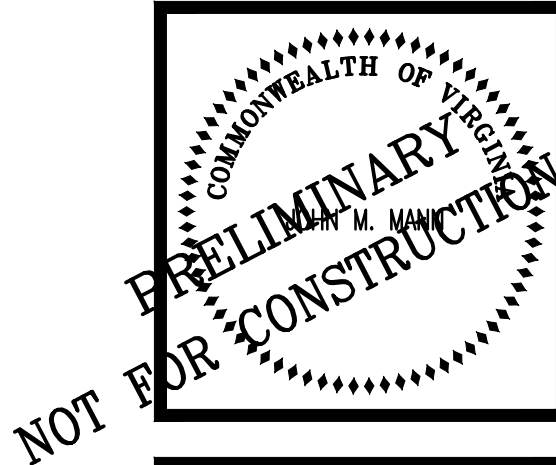


Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: DAR
CHECKED BY: JMM

PLUMBING SCHEDULES AND SPECS.

MANN & ASSOCIATES, INC.
306 Market Street 248
Roanoke, VA 24011
540-344-5513



COMMISSION No.
24028
SHEET
P4-1

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION

Revisions		
No.	Date	Description
1	01.21.25	Addendum 001
2	01.27.25	Addendum 002

DRAWN BY: WBB
CHECKED BY: WBB

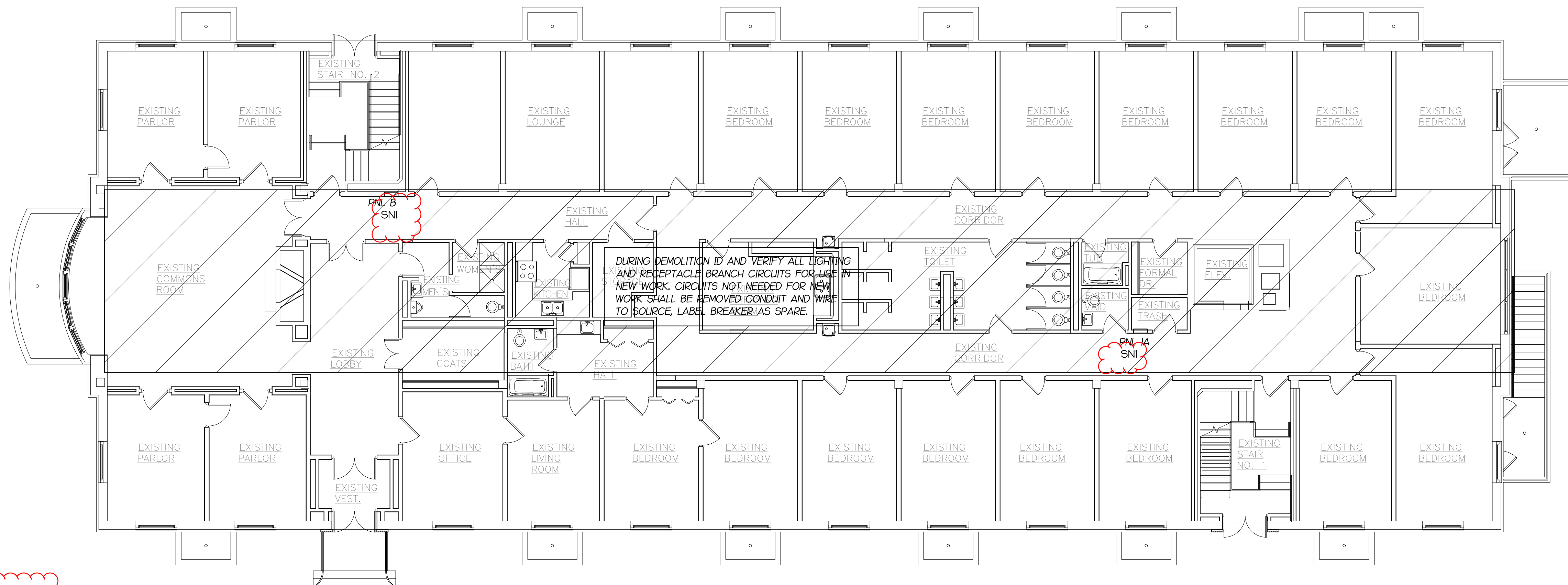
BASEMENT AND FIRST FLOOR PLANS - ELECTRICAL DEMOLITION

CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@GEMBARQMAIL.COM

Not For Construction
01/24/2025 3:14:11 PM

COMMISSION No.
24028
SHEET
ED-1

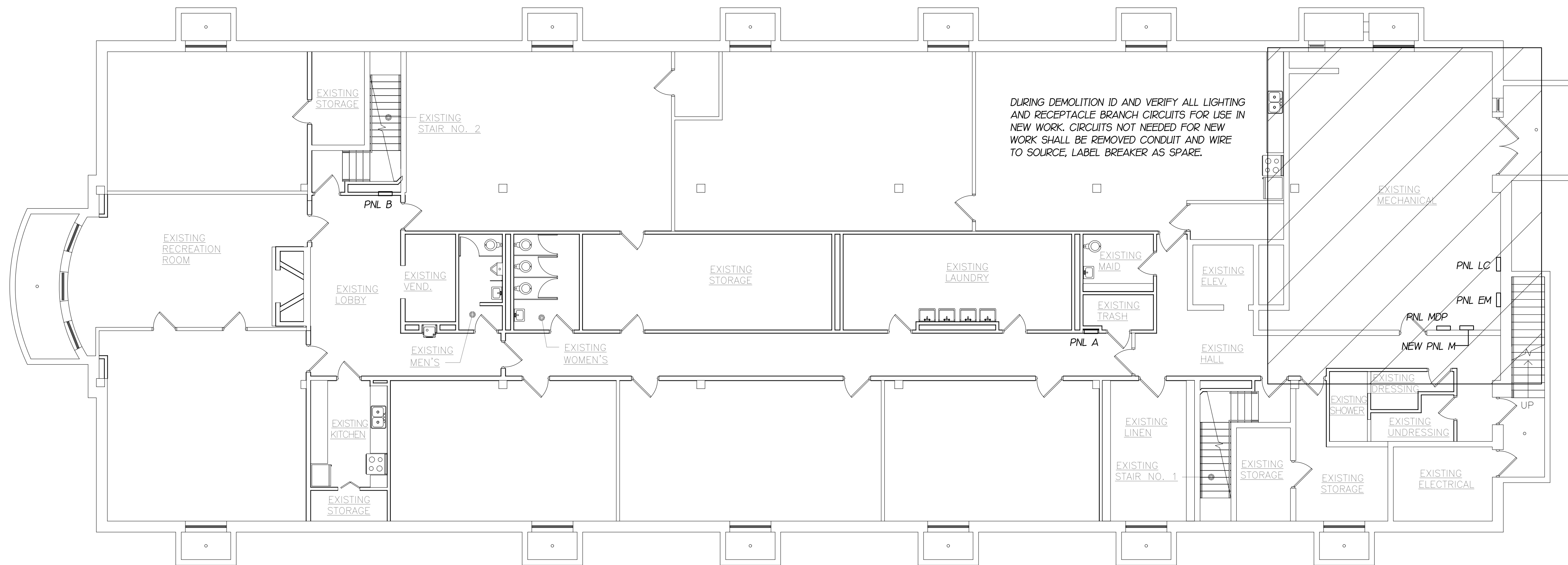
© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



FIRST FLOOR PLAN – ELECTRICAL DEMOLITION
SCALE: 1/8" = 1'-0"

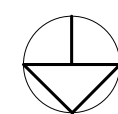
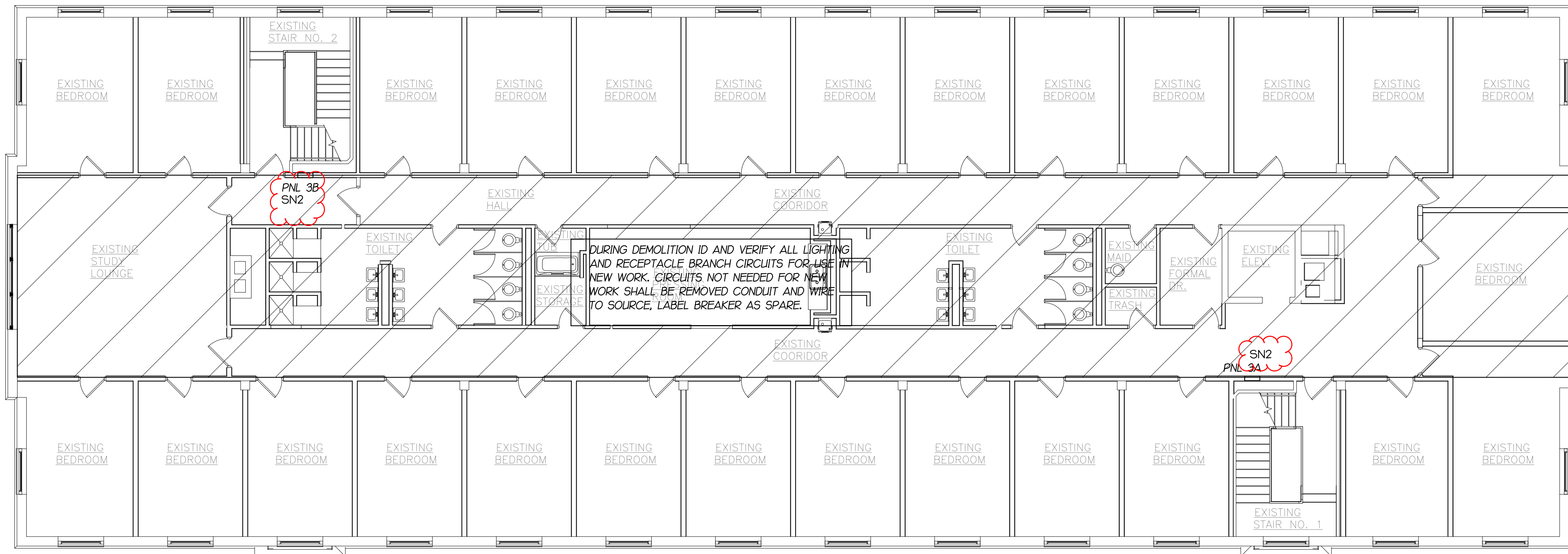
SHEET NOTES:

SNI - BASED ON THE AS BUILT DRAWINGS, DEMOLITION IN CORE AREA OF FIRST FLOOR WILL FREE-UP CIRCUITS FOR RENOVATION NEW WORK:
PANEL 1A - 5,7,9,22,24,26,27,29, & 31
PANEL 1B - 2,4,5,16,22 & 23



BASEMENT FLOOR PLAN – ELECTRICAL DEMOLITION
SCALE: 1/8" = 1'-0"

No.	Date	Description
1	01.21.25	Addendum 001
2	01.27.25	Addendum 002

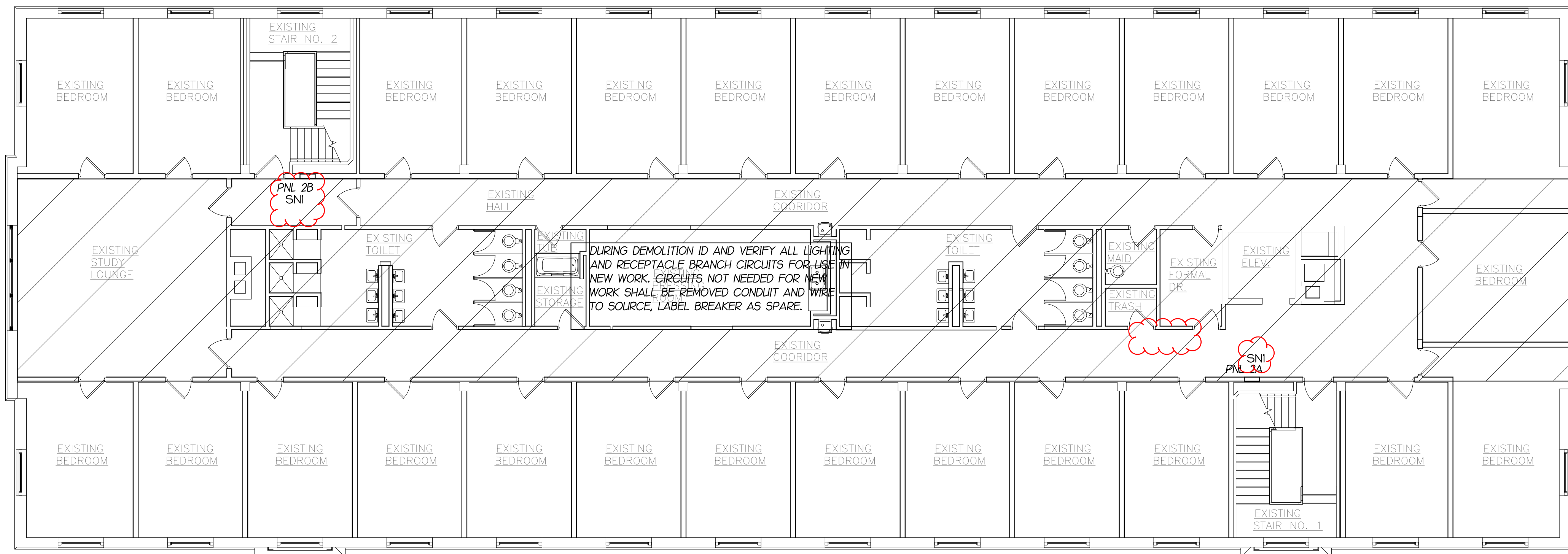


THIRD FLOOR PLAN – ELECTRICAL DEMOLITION
SCALE: 1/8" = 1'-0"

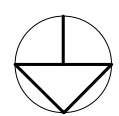
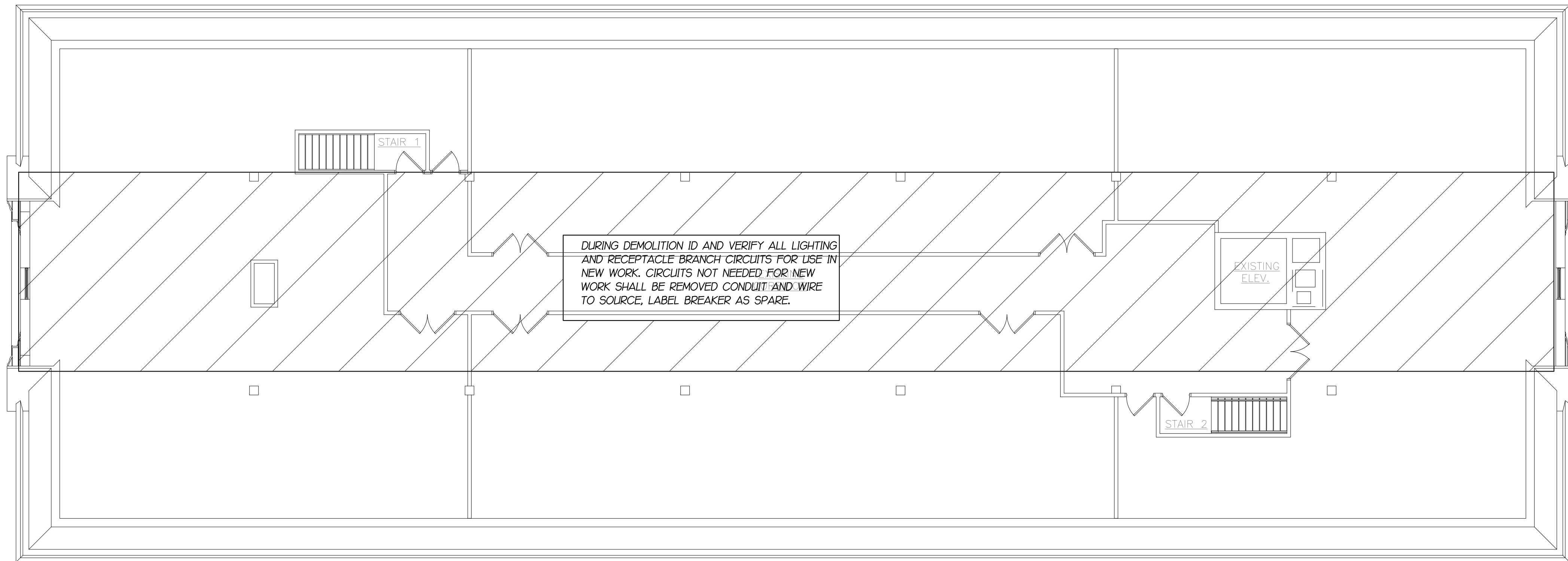
SHEET NOTES:

SN1 - BASED ON THE AS BUILT DRAWINGS, DEMOLITION IN CORE AREA OF SECOND FLOOR WILL FREE-UP CIRCUITS FOR RENOVATION NEW WORK:
PANEL 2A - 6,8
PANEL 2B - 6,8,23,24,25,26,27,28,30 & 31

SN2 - BASED ON THE AS BUILT DRAWINGS, DEMOLITION IN CORE AREA OF SECOND FLOOR WILL FREE-UP CIRCUITS FOR RENOVATION NEW WORK:
PANEL 3A - 6,8
PANEL 3B - 6,8,23,24,25,26,27,28,30,32 & 34



SECOND FLOOR PLAN – ELECTRICAL DEMOLITION
SCALE: 1/8" = 1'-0"



ATTIC FLOOR PLAN – ELECTRICAL DEMOLITION

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

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
Roanoke College
221 College Lane Salem, Virginia

DRAWN BY: WBB
CHECKED BY: WBB

ATTIC PLAN -
ELECTRICAL
DEMOLITION

CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@EMBARQMAIL.COM

**Not For
Construction**
12/13/2024 3:31:30 PM

COMMISSION No.
24028
SHEET
ED-3

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



SN1 - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 1B-22

SN2 - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 1A-22

SN3 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 1B-23

SN4 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 1A-24

SN5 - CONNECT LIGHTS ON THIS SIDE TO 1B-4 UNLESS NOTED OTHERWISE.

SN6 - CONNECT LIGHTS ON THIS SIDE TO 1A-7 UNLESS NOTED OTHERWISE.

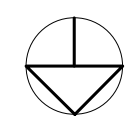
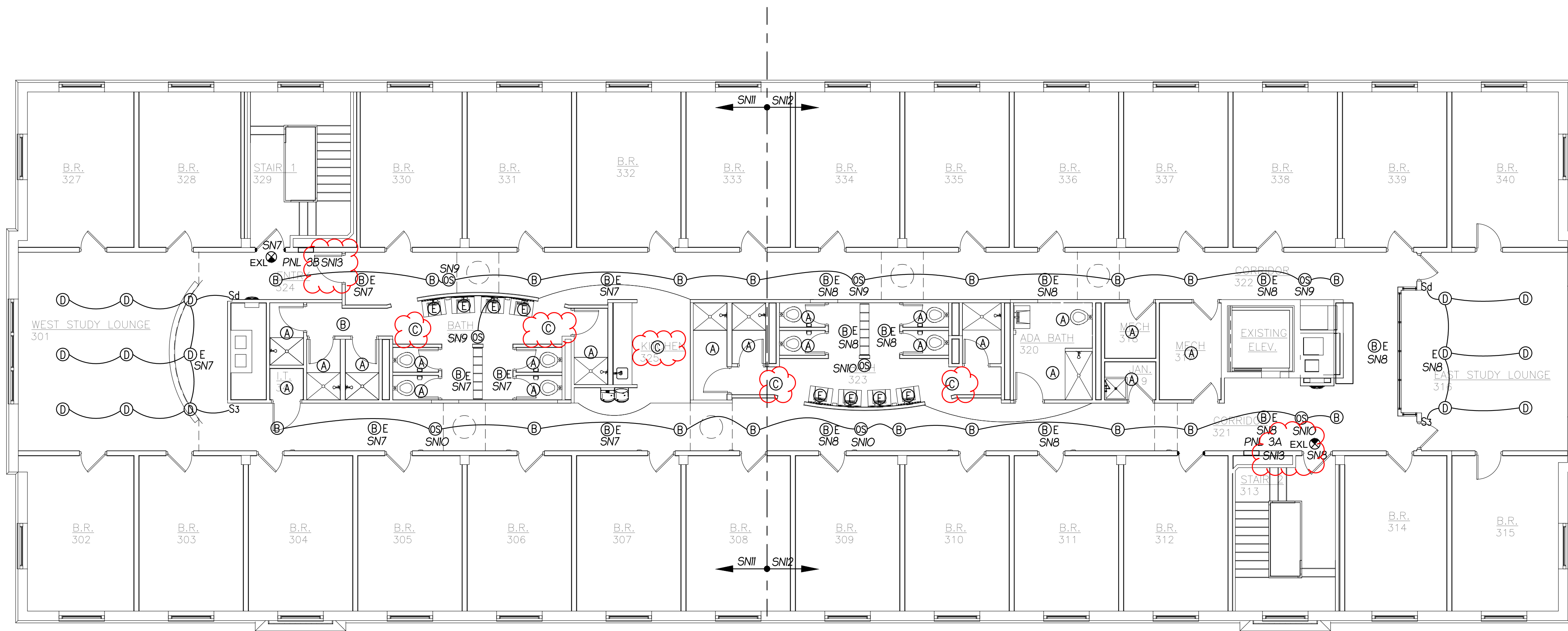
SN7 - VERIFY EXISTING PANELBOARD BRANCH CIRCUITS AND REMOVE ALL OUT OF SERVICE BRANCH CIRCUIT WIRE. LABEL AS SPARE.



COMMISSION No.
24028
SHEET
E1-1

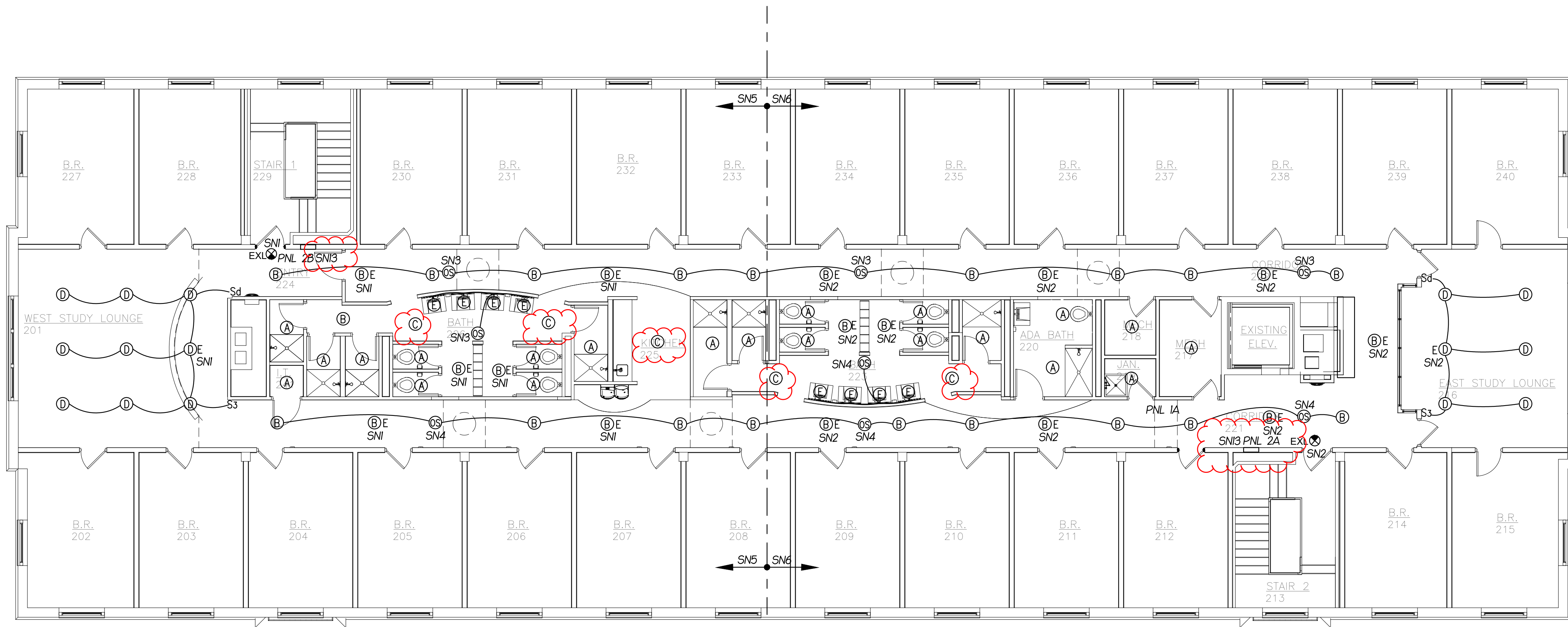


Revisions		
No.	Date	Description
1	01.21.25	Addendum 001
2	01.27.25	Addendum 002



THIRD FLOOR PLAN – ELECTRICAL LIGHTS

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



SECOND FLOOR PLAN – ELECTRICAL LIGHTS

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

SHEET NOTES:

- SNI - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 2B-25
- SN2 - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 2A-27
- SN3 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 2B-23
- SN4 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 2A-25
- SN5 - CONNECT LIGHTS ON THIS SIDE TO 2B-24 UNLESS NOTED OTHERWISE.
- SN6 - CONNECT LIGHTS ON THIS SIDE TO 2A-8 UNLESS NOTED OTHERWISE.
- SN7 - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 3B-27
- SN8 - CONNECT LIGHT WITH EM BALLAST TO CIRCUIT 3A-32
- SN9 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 3B-25
- SN10 - CONNECT CORR. LTS & OCCUPANCY SENSOR TO CIRCUIT 3A-34
- SN11 - CONNECT LIGHTS ON THIS SIDE TO 3B-8 UNLESS NOTED OTHERWISE.

~~SN12 - CONNECT LIGHTS ON THIS SIDE TO 3A-8 UNLESS NOTED OTHERWISE.~~

SN13 - VERIFY EXISTING PANELBOARD BRANCH CIRCUITS AND REMOVE ALL OUT OF SERVICE BRANCH CIRCUIT WIRE. LABEL AS SPARE.

DRAWN BY: WBB
CHECKED BY: WBB

Revisions		
No.	Date	Description
1	01.21.25	Addendum 001
2	01.27.25	Addendum 002

HUGHES ASSOCIATES
ARCHITECTS & ENGINEERS
3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018
540.342.4002
www.HughesAE.com

Crawford Hall Renovation
Roanoke College
221 College Lane
Salem, Virginia

DRAWN BY: WBB
CHECKED BY: WBB

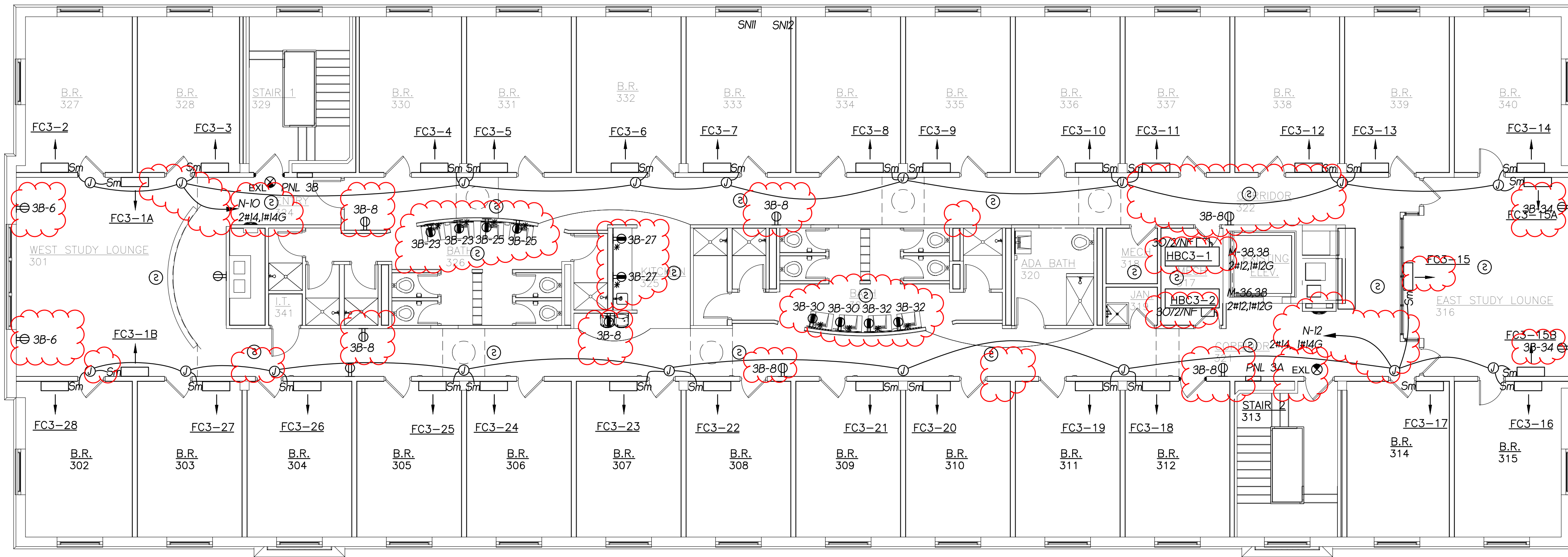
**SECOND AND
THIRD FLOOR
PLANS -
ELECTRICAL
POWER**

CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@EMBARQMAIL.COM

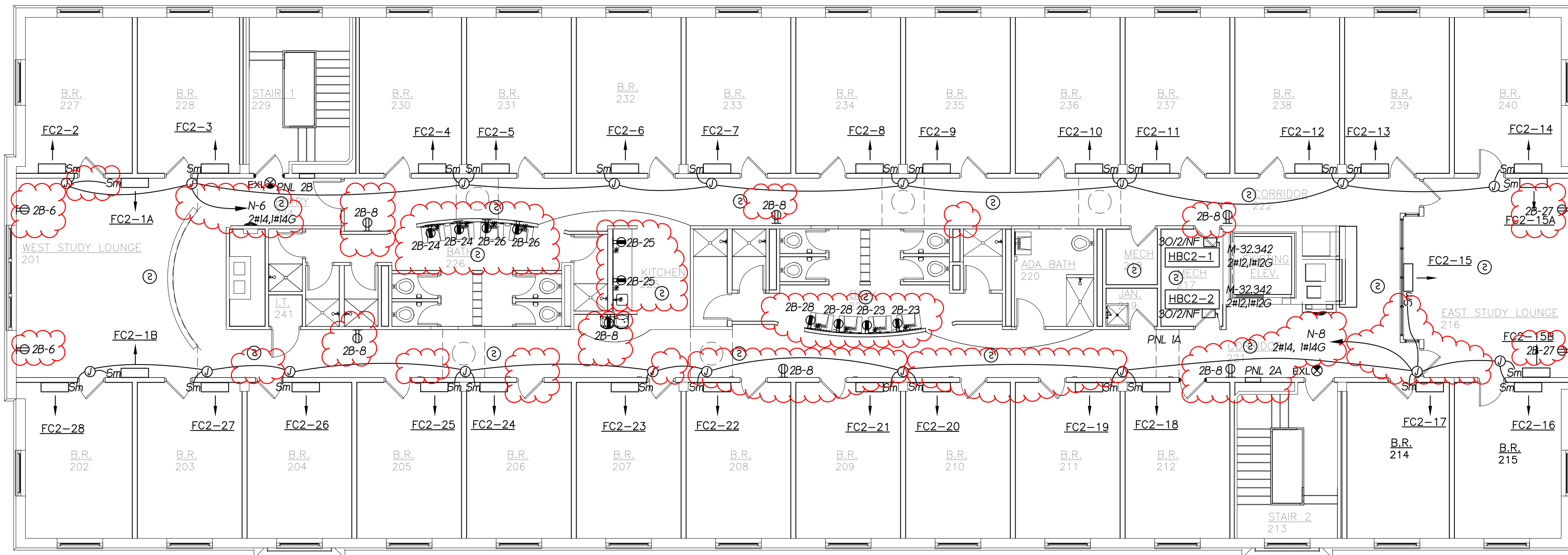
**Not For
Construction**
01/24/2025 3:13:35 PM

COMMISSION No.
24028
SHEET
E1-4

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION



 **THIRD FLOOR PLAN – ELECTRICAL POWER**
SCALE: 1/8" = 1'-0"



 **SECOND FLOOR PLAN – ELECTRICAL POWER**
SCALE: 1/8" = 1'-0"

Revisions		
No.	Date	Description

DRAWN BY: WBB
CHECKED BY: WBB

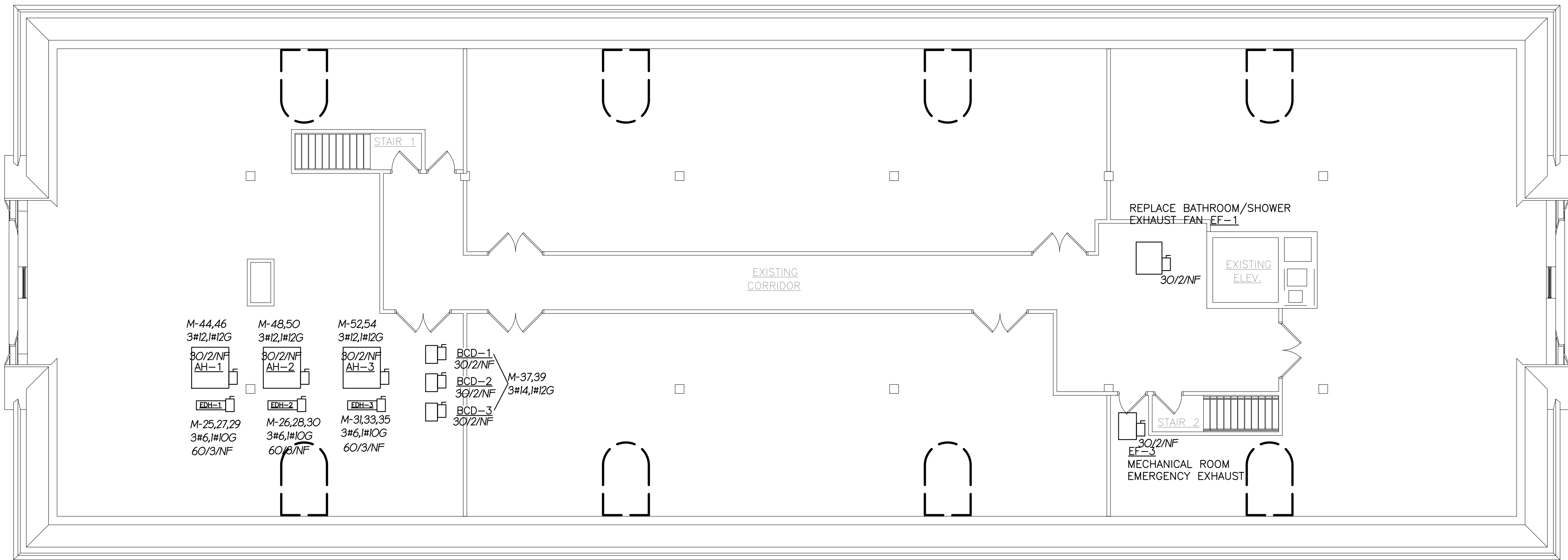
ATTIC PLAN -
ELECTRICAL

CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@EMBARQMAIL.COM

**Not For
Construction**
01/24/2025 3:13:44 PM

COMMISSION No.
24028
SHEET
E1-5

LIGHT FIXTURE SCHEDULE				
MARK	DESCRIPTION	LAMP	MOUNTING	BASIS OF DESIGN
A	6" SURFACE MOUNT LED LIGHT W/MOTION SENSOR	LED	CEILING	JUNO JSBT 6IN SWW2 90CRI PIR MW M6
B	4" RECESSED LED DOWNLIGHT	LED	CEILING	JUNO WF4 SWWS 90CRI MW
C	6" RECESSED LED DOWNLIGHT	LED	CEILING	JUNO WF6 SWWS 90CRI MW
D	8" RECESSED LED DOWNLIGHT	LED	CEILING	JUNO WF8 SWWS 90CRI MW
E	24" LED VANITY LIGHT	LED	WALL	AFX BARV2403L30D1SN
F	SMALL LED WALLPACK WITH EM BALLAST	LED	WALL	LITHONIA WPX1 LED P240K MVOLT E4WH DDBXD
G				
H				
EXL	EXIT LIGHT	LED	CEILING/WALL	LITHONIA ECBR
NOTE: FIXTURE WITH "E" ARE TO HAVE EMERGENCY BATTERY				



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

Revisions		
No.	Date	Description
3	01-30-25	Addendum 004

DRAWN BY: WBB
CHECKED BY: WBB

ONE LINE
DIAGRAM

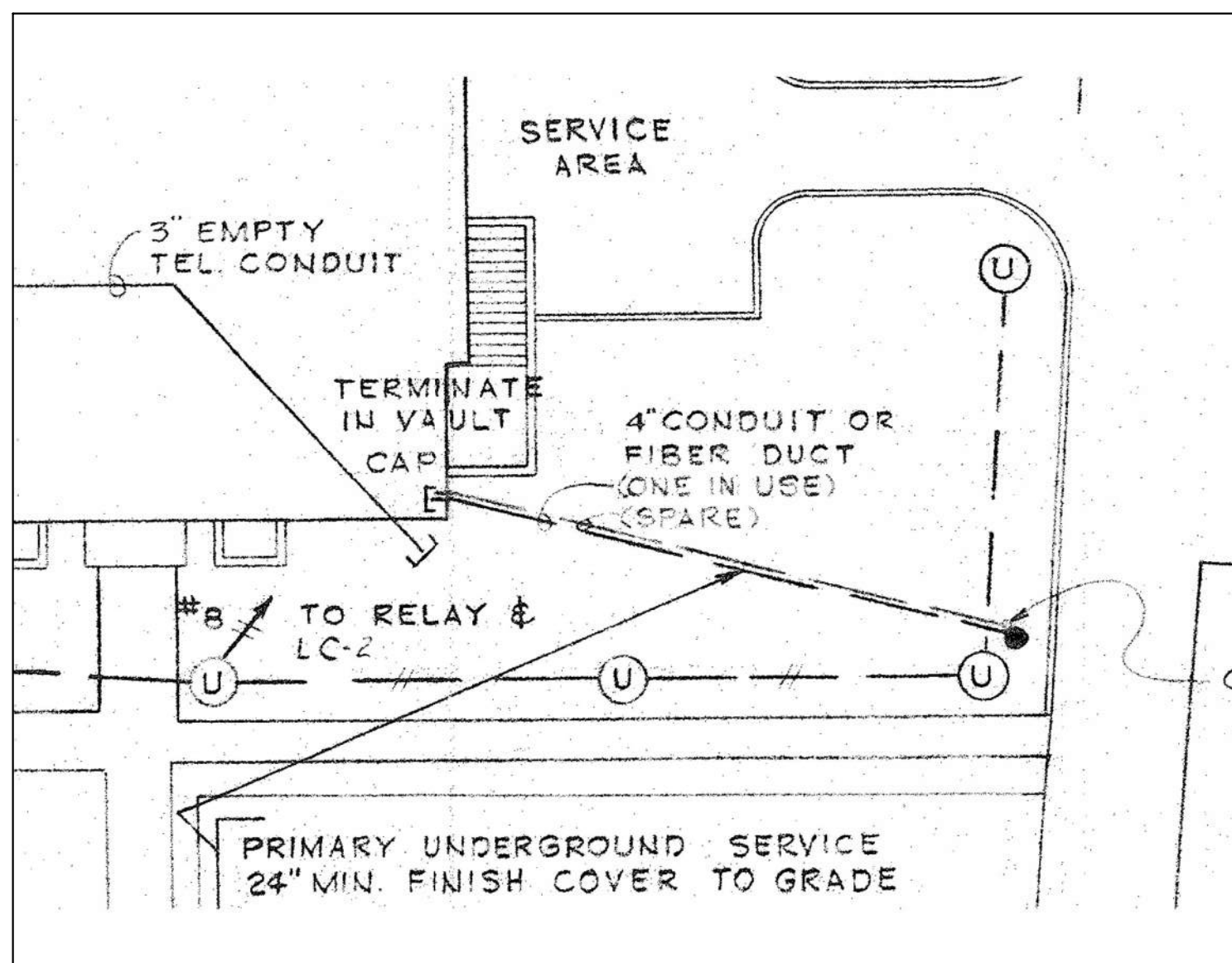
CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@GEMBARMAIL.COM

**Not For
Construction**
01/29/2025 10:35:05 AM

COMMISSION No.
24028
SHEET
E1-6

PANEL SCHEDULE						
ALL 120/208 V. 3φ, 4W.						
PANEL	MAINS	BRANCHES	CIRCUITS			MISC.
			ACTIVE	SPARE	TOT.	
3A	225A MLO	20A. 1P CIRC. BKR. 15A. 3P CIRC. BKR.	25 1	6 0	29 1	+10 SPACES SFI
3B	225A MLO	20A. 1P CIRC. BKR. 15A. 3P CIRC. BKR.	34 1	5 0	39 1	EF 1
2A	225A MLO	20A. 1P CIRC. BKR.	21	3	24	
2B	225A MLO	20A. 1P CIRC. BKR.	32	6	38	
1A	225A MLO	20A. 1P CIRC. BKR.	30	4	34	
1B	225A MLO	20A. 1P CIRC. BKR. 50A. 2P CIRC. BKR.	16 2	6 0	22 2	RANGE & UNIT KITCHEN
A	225A MLO	20A. 1P CIRC. BKR. 40A. 2P CIRC. BKR.	18 5	10 0	28 5	+4 SPACES
B	225A MLO	20A. 1P CIRC. BKR. 50A. 2P CIRC. BKR.	17 1	7 0	24 1	+10 SPACES RANGE
LC	100A MLO	20A. 1P CIRC. BKR. 15A. 3P CIRC. BKR.	4 2	4 0	8 2	+8 SPACES
EM	100A MLO	20A. 1P CIRC. BKR.	16	6	22	
MDP	800A MCB	200 A TRIP 200 A TRIP 200 A TRIP 200 A TRIP 70 A TRIP 100 A TRIP	1 1 1 1 1 1	0 0 0 0 0 0	1 1 1 1 1 1	PANEL "B" PANEL "A" PANEL "IA" PANEL "IB" PANEL "LC" ELEVATOR

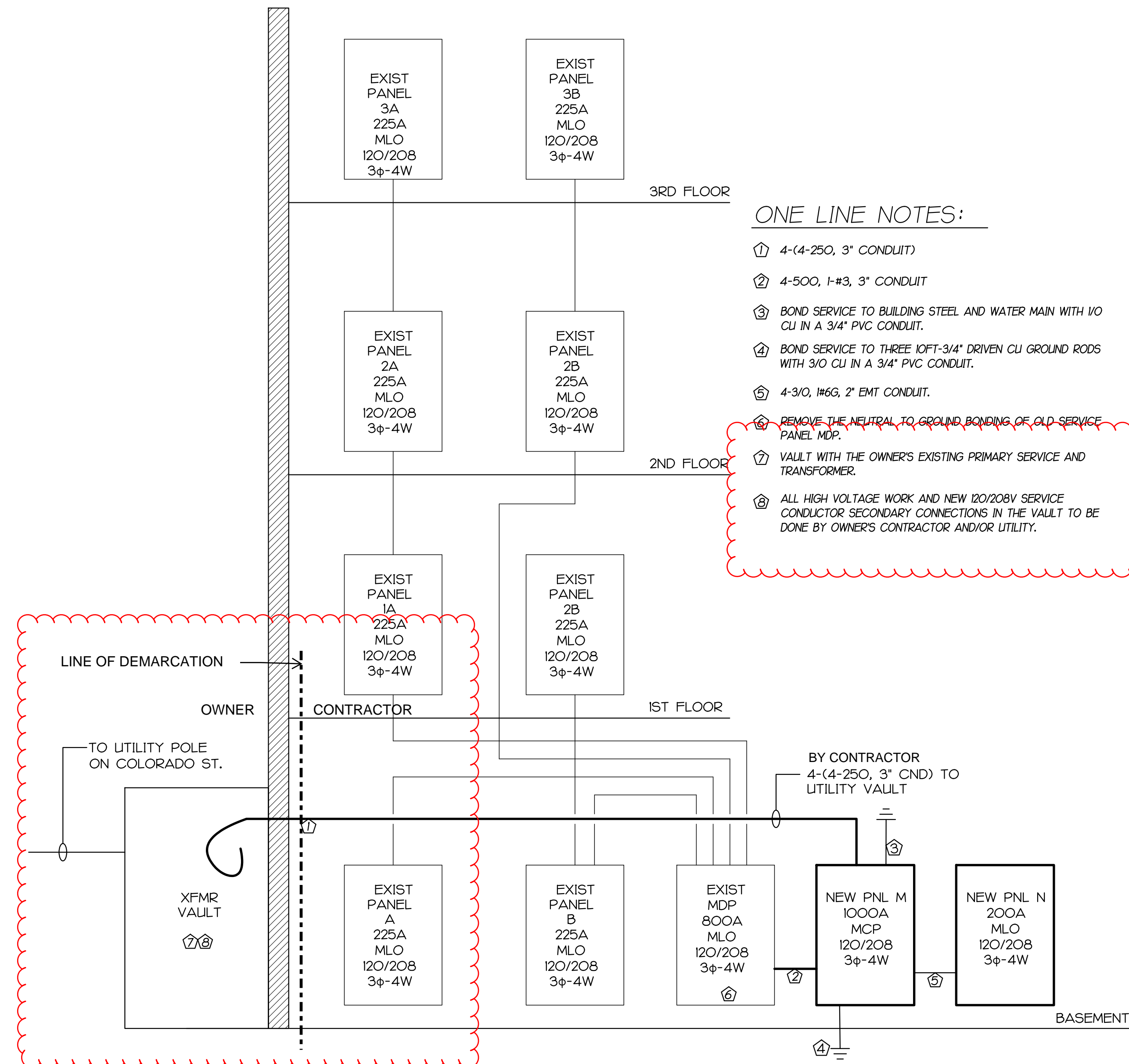
EXISTING MDP PANEL SCHEDULE
NOT TO SCALE



PARTIAL EXISTING SITE PLAN
NOT TO SCALE

NEW PANEL M						
120/208 VOLT 3 PHASE 4 WIRE			1000 AMP MCP 42 KAIC. SE RATED COPPER BUS		SQUARE D I-LINE SURFACE MOUNTED NEMA 1	
CRK	BRK	DESCRIPTION	WIRE SIZE	VA LOAD	VA LOAD	DESCRIPTION
1			3	5572	5572	
3	90/3	FIRST FLOOR OU-1	3	5572	5572	SECOND FLOOR OU-2
5			3	5572	5572	
7			3	5572	4131	
9	90/3	THIRD FLOOR OU-3	3	5572	4131	BASEMENT DOAS OUD-1
11			3	5572	4131	
13			4	4131	4131	
15	70/3	FIRST FLOOR DOAS ODU-2	4	4131	4131	SECOND FLOOR DOAS ODU-3
17			4	4131	4131	
19			4	4131	5000	
21	70/3	THIRD FLOOR DOAS ODU-3	4	4131	5000	ELECTRIC DUCT HEATER EDH-B
23			4	4131	5000	
25			6	5000	5000	
27	60/3	ELECTRIC DUCT HEATER EDH-1	6	5000	5000	ELECTRIC DUCT HEATER EDH-2
29			6	5000	5000	
31			6	5000	1259	BC CONTROLLERS HBC1-1, 2 HBC2-1, 2
33	60/3	ELECTRIC DUCT HEATER EDH-3	6	5000	1259	
35			6	5000	395	BC CONTROLLERS HBC3-1, 2
37	15/2	BC CONTROLLERS BCD-B, -1, -2, -3	14	250	395	
39			14	250	298	AH-B
41			500		298	
43	400/3	OLD PANEL MDP	500		298	AH-1
45			500		298	
47			3/0		298	AH-2
49	200/3	PANEL N	3/0		298	
51			3/0		298	AH-3
53					298	
55		SPACE (200AF)				
57						SPACE (200AF)
59						

NEW PANEL N						
120/208 VOLT 3 PHASE 4 WIRE			200 AMP MLO 22 KAIC COPPER BUS		SQUARE NQ SURFACE MOUNTED NEMA 1	
CRK	BRK	DESCRIPTION	WIRE SIZE	VA LOAD	VA LOAD	DESCRIPTION
1	20/2	WALL HEATER WH-1	12	1123		SPACE
3			12	1123		SPACE
5	30/2	WALL HEATER WH-2	10	2000		SPACE
7			10	2000		SPACE
9	30/2	WALL HEATER WH-3	10	2000		SPACE
11			10	2000		SPACE
13	20	SPARE				SPACE
15	20	SPARE				SPACE
17	20	SPARE				SPACE
19	20	SPARE				SPACE
21	20	SPARE				SPACE
23	20	SPARE				SPACE
25	20	SPARE				SPACE
27		SPACE				SPACE
29		SPACE				SPACE
31		SPACE				SPACE
33		SPACE				SPACE
35		SPACE				SPACE
37		SPACE				SPACE
39		SPACE				SPACE
41		SPACE				SPACE



NEW ONE LINE DIAGRAM
NOT TO SCALE

ONE LINE NOTES:

- ① 4-(4-250, 3" CONDUIT)
- ② 4-500, 1-#3, 3" CONDUIT
- ③ BOND SERVICE TO BUILDING STEEL AND WATER MAIN WITH 1/0 CU IN A 3/4" PVC CONDUIT.
- ④ BOND SERVICE TO THREE 10FT-3/4" DRIVEN CU GROUND RODS WITH 3/0 CU IN A 3/4" PVC CONDUIT.
- ⑤ 4-3/0, 1#6G, 2" EMT CONDUIT.
- ⑥ REMOVE THE NEUTRAL TO GROUND BONDING OF OLD SERVICE PANEL MDP.
- ⑦ VAULT WITH THE OWNER'S EXISTING PRIMARY SERVICE AND TRANSFORMER.
- ⑧ ALL HIGH VOLTAGE WORK AND NEW 120/208V SERVICE CONDUCTOR SECONDARY CONNECTIONS IN THE VAULT TO BE DONE BY OWNER'S CONTRACTOR AND/OR UTILITY.

ELECTRICAL SPECIFICATIONS

GENERAL:
THESE SPECIFICATIONS DEFINE THE BASIC REQUIREMENTS FOR THE ELECTRICAL INSTALLATION.

THE SPECIFICATIONS ARE INTENDED TO CONVEY THE SCOPE OF WORK AND TO INDICATE THE GENERAL REQUIREMENTS FOR THE EQUIPMENT AND ITS INSTALLATION. THE CONTRACTOR SHALL PROVIDE QUALIFIED SUPERVISION, LABOR, EQUIPMENT, MATERIALS AND OTHER ITEMS NECESSARY FOR A SAFE, COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM WHETHER OR NOT ALL INCIDENTAL MATERIAL OR EQUIPMENT IS INDICATED HEREIN.

PROJECT ARCHITECTURAL, SITE, ELECTRICAL, PLUMBING AND HVAC SPECIFICATIONS AND DRAWINGS SHALL BE EXAMINED BY THE CONTRACTOR, TO DETERMINE ELECTRICAL SYSTEMS INTERFACE AND CONDITIONS WHICH COULD CAUSE INTERFERENCE OR DEVIATIONS IN EQUIPMENT LOCATIONS OR ROUTING.

VERIFY ALL DIMENSION BY FIELD MEASUREMENTS. DO NOT SCALE DIMENSIONS FROM DRAWINGS.

WHEREVER THE WORD "PROVIDE" IS USED IN THESE SPECIFICATIONS OR ON THE DRAWINGS IT SHALL MEAN "THE CONTRACTOR IS TO PROVIDE AND INSTALL COMPLETE AND READY FOR INTENDED USE BY THE OWNER". THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT SHOW ALL DETAILS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM. THE CONTRACTOR (ELECTRICAL CONTRACTOR) SHALL PROVIDE ALL ITEMS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEMS.

ITEMS OF WORK SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THESE SPECIFICATIONS OR ITEMS OF WORK CALLED FOR IN THE SPECIFICATIONS BUT NOT SHOWN ON THE DRAWINGS SHALL BE CONSIDERED AS BEING SHOWN ON THE PLANS AND SPELLED OUT IN THE SPECIFICATIONS.

REGULATIONS AND ORDINANCES:
ALL ELECTRICAL WORK SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF A LICENSED VIRGINIA MASTER ELECTRICIAN IN STRICT COMPLIANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. THE INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), 2020 EDITION OF NFPA 70, AND ALL APPLICABLE STATE AND LOCAL CODES/ORDINANCES. ALL EQUIPMENT AND MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING STANDARDS, WHERE APPLICABLE:
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
UNDERWRITER'S LABORATORIES (UL)

ALL EQUIPMENT AND MATERIAL USED ON THIS PROJECT SHALL BE NEW AND LISTED BY THE UNDERWRITER'S LABORATORIES, ELECTRICAL TESTING LABORATORIES, INC. OR OTHER RECOGNIZED TESTING AGENCY AND SHALL BEAR THEIR LABEL.

ELECTRICAL REQUIREMENTS BY OTHER TRADES:
POWER (ALL VOLTAGES 120 AND GREATER) WIRING AND CONNECTIONS TO HVAC EQUIPMENT, PLUMBING EQUIPMENT AND RELATED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR. ALL HVAC CONTROL WIRING WILL BE THE RESPONSIBILITY OF THE INSTALLING TRADE.

GUARANTEE:
THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND MATERIAL FURNISHED UNDER HIS SCOPE OF WORK FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF FINAL ACCEPTANCE. EQUIPMENT MANUFACTURER'S WARRANTIES SHALL BE PASSED TO THE OWNER. SHOULD ANY DEFECTS APPEAR WITHIN THIS PERIOD, THE ELECTRICAL CONTRACTOR SHALL REPAIR OR REPLACE SAID DEFECTS OR ANY DAMAGE TO BUILDING OR CONTENTS CAUSED BY DEFECTIVE WORKMANSHIP OR EQUIPMENT, AND SHALL MAKE REQUIRED ADJUSTMENTS AT NO COST TO THE OWNER.

EQUIPMENT CONNECTIONS:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL DISTRIBUTION EQUIPMENT AND WIRING REQUIRED TO SERVE ALL EQUIPMENT SHOWN ON THE CONTRACT DOCUMENTS. CONNECTIONS SHALL BE MADE TO MECHANICAL, PLUMBING AND OWNER'S EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EQUIPMENT AND ROUGH-IN REQUIREMENTS.

PROVIDE FLEXIBLE METAL CONDUIT CONNECTIONS FOR MOTOR CONNECTIONS AND OTHER EQUIPMENT SUBJECT TO MOVEMENT AND VIBRATION. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION OF MOTORS AND OTHER EQUIPMENT SUBJECT TO MOVEMENT AND VIBRATION WHERE SUBJECT TO HUMID, DAMP OR WET CONDITIONS.

SUPPORTS AND HANGERS:
THE CONTRACTOR SHALL PROVIDE ALL SUPPORTS AND HANGER MATERIALS REQUIRED TO SUPPORT CONDUIT, BOXES, FIXTURES AND EQUIPMENT REQUIRED FOR THIS PROJECT. HANGER/SUPPORT SPACING SHALL BE AS REQUIRED IN THE NEC. MATERIALS USED SHALL BE NEW AND APPROVED FOR THE PURPOSE.

WIRE:
PROVIDE WIRE AND CABLE SUITABLE FOR THE LOCATION WHERE INSTALLED. USE BUILDING WIRE WITH 600 VOLT INSULATION. SIZE ALL CONDUCTORS TO COMPLY WITH NEC REQUIREMENTS FOR VOLTAGE DROP. MINIMUM CONDUCTOR SIZE SHALL BE NO. 14 AWG.

PROVIDE SOLID CONDUCTORS FOR POWER AND LIGHTING CIRCUITS NO. 10 AWG AND SMALLER UNLESS INDICATED OR SPECIFIED OTHERWISE. PROVIDE STRANDED CONDUCTORS FOR SIZES NO. 8 AWG AND LARGER UNLESS INDICATED OR SPECIFIED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE. PROVIDE THIN WIRE AND CABLE FOR VOLT BRANCH CIRCUIT CABLES (NO. 10 AND SMALLER). PROVIDE XHHW OR THHN WIRE AND CABLE FEEDER CIRCUIT CONDUCTORS (NO. 8 AND LARGER).

TYPE MC METAL-CLAD CABLE SHALL BE ALLOWED CONCEALED IN FINISHED AREAS. MC SHALL BE INSTALLED AND SUPPORTED IN COMPLIANCE WITH THE NEC.

TYPE NM, NMS OR NMC (NONMETALLIC-SHEATHED CABLES) IF APPROVED FOR USE BY LOCAL AUTHORITY HAVING JURISDICTION SHALL BE INSTALLED IN COMPLIANCE WITH NEC AND LOCAL CODES.

WIRE SHALL BE CODED BY THE INSULATION COLOR ON NO. 10 AWG AND SMALLER AND WITH 1" BAND OF COLORED TAPE ON NO. 6 AWG AND LARGER AS FOLLOWS:

120/208 VOLTS	
BLACK	PHASE
RED	PHASE
BLUE	PHASE
WHITE	NEUTRAL
GREEN	GROUND

CONDUIT:
CONDUITS SHALL BE SECURELY FASTENED. A MAXIMUM OF FOUR 90-DEGREE BONDS BETWEEN ANY TWO BOXES, FIXTURES OR PANELS SHALL BE PERMITTED FOR EACH CONDUIT RUN. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE ALLOWABLE FILL PERMITTED BY THE NEC.

CONDUIT FOR CONCEALED POWER AND LIGHTING SHALL BE ELECTRICAL METALLIC TUBING (EMT) WITH STEEL FITTINGS. DIE-CAST FITTING SHALL NOT BE USED ON THIS PROJECT.

HOLES THROUGH RATED SLABS AND WALLS SHALL BE FIRE STOPPED HILTI FS-ONE OR APPROVED EQUAL.

BOXES AND COVERS:
NEC-APPROVED KNOCKOUT BOXES SHALL BE FURNISHED AND INSTALLED FOR LIGHTS AND SWITCHES, AND NEC-APPROVED JUNCTION BOXES SHALL BE FURNISHED AND INSTALLED AS REQUIRED, WHETHER OR NOT SPECIFICALLY CALLED OUT ON PLANS.

BOXES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE SHOWN ON PLANS, OR UNLESS USED IN EXPOSED CONDUIT AREAS. EXPOSED BOX COVERS AND WALL PLATES IN FINISHED AREAS SHALL BE NYLON. COVERS SHALL PROVIDE PROPER MOUNTING FOR SWITCHES.

PROVIDE A GROUNDING PIGTAIL BONDING WIRE IN ALL METAL BOXES, USE STEEL CITY NO. GBC #12 OR EQUAL.

DEVICES:
DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS. DEVICES SHALL BE SPEC GRADE COOPER, P&S, HUBBELL, OR LEVITON. COLOR TO BE SELECTED BY THE ARCHITECT.

FACE PLATES SHALL BE NYLON WITH CIRCUIT ID LABEL.

ALL BRANCH CIRCUIT CONNECTIONS AT DEVICES SHALL BE MADE USING SCREW TERMINALS, THE USE OF PUSH (STAB) IN BACK WIRED PUSH-IN SPRING CAPTIVE CONNECTIONS ARE NOT ACCEPTABLE.

LIGHT FIXTURES:
LIGHT FIXTURES SHALL BE AS SPECIFIED ON THE DRAWINGS. SUBSTITUTIONS SHALL BE REVIEWED PER SPECIFICATIONS. SUPPORT LIGHTING FIXTURES AS REQUIRED BY NEC USING APPROVED MEANS.

DISTRIBUTION EQUIPMENT:
PANELBOARD, AND DISCONNECT SWITCHES SHALL BE SQUARE D OR EQUAL BY GE, SIEMENS OR CUTLER HAMMER AS SPECIFIED ON THE DRAWINGS.

GROUNDING:
PROVIDE GROUNDING AS NECESSARY TO COMPLY WITH THE NEC AND THE REQUIREMENTS OF THESE DOCUMENTS. THE NEUTRAL CONDUCTORS AND ALL METAL ENCLOSURES OF THE ELECTRICAL SYSTEM SHALL BE GROUNDED AND OR BONDED WITH COPPER CONDUCTOR IN ACCORDANCE WITH THE ARTICLE 250 OF THE NEC.

PROVIDE A GROUNDING PIGTAIL BONDING WIRE IN ALL METAL BOXES, USE STEEL CITY NO. GBC #12 OR EQUAL.

ELECTRICAL IDENTIFICATION:
PROVIDE A TYPED CIRCUIT DIRECTORY FOR ALL PANELS.

FIRE ALARM SYSTEM:
PROVIDE NEW FIRE ALARM APPLIANCES AS SHOWN ON DRAWINGS COMPATIBLE WITH THE EXISTING SIMPLEX 4100 ADDRESSABLE AUTOMATIC FIRE ALARM SYSTEM. PROVIDE APPLIANCES AND NAC EXTENDER PANEL(S) AS NEEDED. EXISTING APPLIANCES ARE TO BE RE-USED. THE SYSTEM SHALL BE TESTED AND PLACED IN SERVICE BY FACTORY TRAINED NICET CERTIFIED TECHNICIANS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND SUBMITTING TO AUTHORITY HAVING JURISDICTION BATTERY CALCULATIONS, SEQUENCE OF OPERATION/ALARM MATRIX, RISER/WIRING DIAGRAM AND EQUIPMENT SHOP DRAWINGS FOR APPROVAL. CABLES SHALL BE PLENUM RATED. SEE ALLOWANCES

ABBREVIATIONS

A, AMP - AMPERES	MCB - MAIN CIRCUIT BREAKER
AFF - ABOVE FINISHED FLOOR	MLO - MAIN LUGS ONLY
AFG - ABOVE FINISHED GRADE	MTD - MOUNTED
AL - ALUMINUM	N/A - NOT APPLICABLE
C - CONDUIT	NFSS - NO FUSE SAFETY SWITCH
CB - CIRCUIT BREAKER	NIC - NOT IN CONTRACT
CKT - CIRCUIT	NTS - NOT TO SCALE
CLG - CEILING	OFCI - OWNER FURNISHED CONTRACTOR INSTALLED
CND - CONDUIT	P - POLE
CU - COPPER	PB - PULL BOX, PUSH BUTTON
DISC - DISCONNECT	PH - PHASE
DN - DOWN	PNL - PANEL
EC - EMPTY CONDUIT	RCPT - RECEPTACLE
ELEC - ELECTRICAL	RGS - RIGID GALVANIZED STEEL
ELEV - ELEVATOR	SMR - SURFACE METAL RACEWAY
EM, EMERG - EMERGENCY	S/N - SOLID NEUTRAL
EMT - ELECTRICAL METALLIC TUBING	SS - STAINLESS STEEL
EX - EXISTING	STD - STANDARD
F - FUSE	SW - SWITCH
FBO - FURNISHED BY OTHERS	TBD - TO BE DETERMINED
FLEX - FLEXIBLE	TEL - TELEPHONE
FLUOR - FLUORESCENT	TV - TELEVISION
FSS - FUSED SAFETY SWITCH	TYP - TYPICAL
FTG - FITTING	UNO - UNLESS NOTED OTHERWISE
G, GND - GROUND	V - VOLTAGE
GFI - GROUND FAULT INTERRUPTING	WP - WEATHERPROOF
J-BOX, JB - JUNCTION BOX	XFMR - TRANSFORMER
KW - KILOWATT	

SYMBOL SCHEDULE

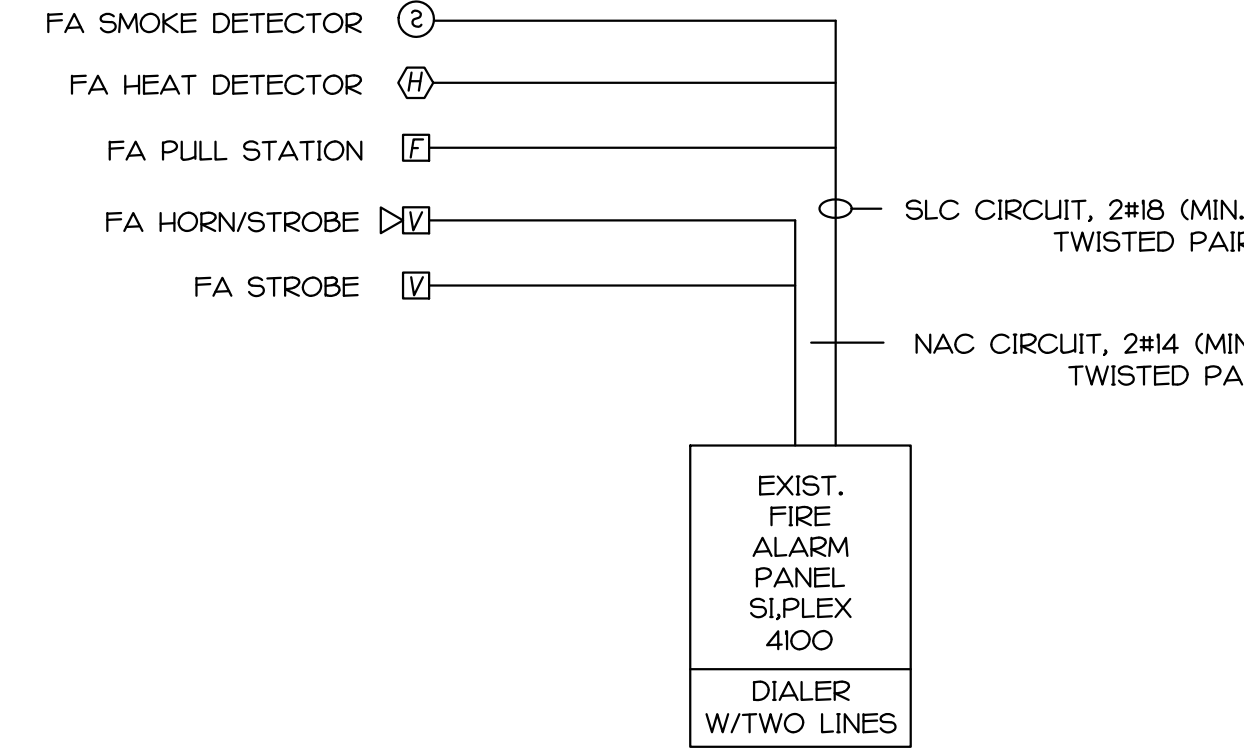
STANDARD SYMBOLS, SOME MAY NOT BE USED ON THIS PROJECT.

- 12
- ⓐ
- FLUSH MOUNTED SPEC GRADE 15A TAMPER RESISTANT DUPLEX RECEPTACLE, NUMBER INDICATES CIRCUIT NO. FROM UNIT PANEL UNLESS NOTED OTHERWISE (TYPICAL FOR ALL OUTLET/DEVICES). LABEL COVER PLATE WITH CIRC. ID. LETTER 'A' INDICATES DEVICE TO BE MOUNTED ABOVE COUNTER/BACKSPASH, TYPICAL.
- ⓑ
- FLUSH MOUNTED SPEC GRADE 15A TAMPER RESISTANT GFIC DUPLEX PLATE WITH CIRC. ID.
- ⓐ
- FLUSH MOUNTED SPEC GRADE 15A TAMPER RESISTANT WR GFIC DUPLEX RECEPTACLE WITH HEAVY DUTY WEATHERPROOF IN-USE COVER. LABEL COVER PLATE WITH CIRC. ID.
- ⓐ
- JUNCTION BOX, PROVISION FOR POWER CONNECTION TO EQUIPMENT/DEVICE.
- 5
- SINGLE POLE 20A SPEC GRADE SWITCH. LABEL COVER WITH CIRC. ID.
- 53
- THREE WAY 20A SPEC GRADE SWITCH. LABEL COVER WITH CIRC. ID.
- 54
- FOUR WAY 20A SPEC GRADE SWITCH. LABEL COVER WITH CIRC. ID.
- 5m
- 20A/2P MOTOR RATED SWITCH MOUNTED ON OR ADJACENT TO MECHANICAL UNIT. LABEL COVER WITH CIRC. ID.
- 5o
- SPEC GRADE DUAL TECH OCCUPANCY SWITCH. LABEL COVER WITH CIRC. ID.
- 5d
- SPEC GRADE LED DIMMER SWITCH. LABEL COVER WITH CIRC. ID.
- 5x
- THREE POLE 20A MOTOR RATED SWITCH, 4" SQ BOX WITH RAISED COVER MOUNTED ON OR ADJACENT TO MECHANICAL UNIT. LABEL COVER WITH CIRC. ID.
- ⓐ
- NON FUSED GENERAL DUTY DISCONNECT SWITCH NEMA 1 UNLESS NOTED OTHERWISE. LABEL COVER WITH CIRC. ID.
- ⓐ
- FLUSH MOUNTED TELEPHONE OUTLET AT 48" AFF TO CENTER, BOX, DEVICE, COVER PLATE AND WIRE. PROVIDE CAT5E CABLE TO STRUCTURED MEDIA ENCLOSURE.
- Ⓐ
- CEILING MOUNTED LIGHT FIXTURE (TYPE AS INDICATED).
- Ⓔ
- WALL MOUNTED LIGHT FIXTURE (TYPE AS INDICATED).
- ↗
- NEW HOME RUN TO PANEL 2#12, 1#12G UNLESS NOTED OTHERWISE

FIRE ALARM SYMBOL SCHEDULE

STANDARD SYMBOLS - SOME DEVICES SHOWN MAY NOT BE USED ON THIS PROJECT

- ⓐ
- FIRE ALARM CONTROL PANEL
- ⓐ
- FIRE ALARM PULL STATION (48" AFF)
- ⓐ
- FIRE ALARM HORN/STROBE (90" AFF) 30CD UNLESS NOTED OTHERWISE
- ⓐ
- FIRE ALARM HORN/STROBE CEILING MOUNTED 30CD UNLESS NOTED OTHERWISE
- ⓐ
- FIRE ALARM STROBE (90" AFF) 15CD UNLESS NOTED OTHERWISE
- ⓐ
- SMOKE DETECTOR
- ⓐ
- FIREMAN'S KNOX BOX (48" AFF)
- ⓐ
- HEAT DETECTOR



- FIRE ALARM NOTES:
- EXISTING FIRE ALARM APPLIANCE ARE TO BE USED. PROVIDE NEW DEVICES AS NEEDED.
 - PROVIDE NAC EXTENDER PANELS AS REQUIRED.
 - PRIOR TO INSTALLATION THE FA CONTRACTOR SHALL SUBMIT FOR APPROVAL: EQUIPMENT SHOP DRAWINGS, ALARM MATRIX, RISER DIAGRAM AND BATTERY CALCULATIONS TO AUTHORITY HAVING JURISDICTION.

FIRE ALARM RISER DIAGRAM

NOT TO SCALE

DATE: DEC. 16, 2024

Revisions		
No.	Date	Description
1	01.21.25	Addendum 001
2	01.27.25	Addendum 002

HUGHES

ASSOCIATES

ARCHITECTS & ENGINEERS

3800 ELECTRIC ROAD, SUITE 300 | ROANOKE, VIRGINIA 24018

540.342.4002

www.hughesae.com

Crawford Hall Renovation
Roanoke College

221 College Lane
Salem, Virginia

DRAWN BY: WBB
CHECKED BY: WBB

SPECIFICATION

CARBO, INC.
ENGINEERING SERVICES
P.O. BOX 186
ROCKY MOUNT, VA 24151
PH 540-493-0313 FAX 540-483-0356
CARBOINC@GEMBARQMAIL.COM

Not For
Construction
01/24/2025 3:14:02 PM

COMMISSION No.
24028
SHEET
E1-7

© COPYRIGHT 2024
HUGHES ASSOCIATES ARCHITECTS & ENGINEERS
A PROFESSIONAL CORPORATION